

DWG: F:\2021\04001-04500\021-04210-G-40-Design\AutoCAD\Final Plans\Sheets\WTR\W_GEN-NOTES_G2104210.dwg
DATE: Nov 01, 2023 11:04am
USER: eshelton

GENERAL NOTES

- 1. ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF BENTONVILLE MINIMUM STANDARD SPECIFICATIONS FOR STREETS IN EFFECT ON THE CITY'S APPROVAL DATE SHOWN ON THESE PLANS.
- 2. ALL WORKMANSHIP AND MATERIALS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY CITY PERSONNEL OR THE OWNER'S REPRESENTATIVE.
- 3. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL PROPERTY CORNERS, PERMANENT BENCHMARKS, AND SECTION CORNERS. ANY PROPERTY CORNER, PERMANENT BENCHMARK, OR SECTION CORNER DISTURBED OR DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE RESET BY A REGISTERED LAND SURVEYOR LICENSED IN THE STATE OF ARKANSAS, AT THE CONTRACTOR'S EXPENSE, UNLESS OTHERWISE NOTED.
- 4. THE CONTRACTOR SHALL PRESERVE ALL SURVEY CONTROL.
- 5. THE CONTRACTOR SHALL NOT CHANGE OR DEVIATE FROM THESE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE OWNER AND THE ENGINEER.
- 6. PRIOR TO MOVING OFF THE JOB THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND REQUEST A FINAL WALK-THROUGH OF THE CONSTRUCTION SITE.
- 7. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS. ANY DISCREPANCY BETWEEN THE DIMENSIONS AND ELEVATIONS SHOWN ON THE PLANS AND THOSE FOUND BY THE CONTRACTOR SHALL BE SUPPLIED TO THE ENGINEER FOR APPROVAL PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
- 8. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY COMPANIES TO COORDINATE CONNECTIONS.
- 9. ALL UTILITY EXTENSIONS AND CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE APPLICABLE UTILITY COMPANIES.
- 10. THE EXISTING UTILITY LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE AND MAY NOT INCLUDE ALL LINES PRESENT. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT ANY EXISTING UTILITIES OR STRUCTURES LOCATED ON OR ADJACENT TO THE WORK SITE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT UNDERGROUND SERVICE ALERT @ 811 IN ADVANCE OF ANY EXCAVATION FOR THE MARK-OUT OF THE LOCATION OF UTILITIES AND THE NOTIFICATION OF COMMENCEMENT OF WORK.
- 11. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES. THE CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS AND LOCATE EXISTING UNDERGROUND UTILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO ALLOW PLAN REVISIONS TO BE MADE. THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE ENGINEER FOR INSTRUCTIONS IF ANY CONFLICTS ARE DISCOVERED.
- 12. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT ALL UTILITY LINES SHOWN AND ANY OTHER EXISTING LINES NOT OF RECORD INCLUDING THOSE NOT SHOWN ON THESE PLANS. EXISTING UTILITY LINES, EITHER OVERHEAD OR UNDERGROUND, AND PERMANENT STRUCTURES WITHIN THE PROPERTY LINES SHALL BE KEPT FREE OF DAMAGE BY CONTRACTOR'S OPERATIONS. IF A UTILITY LINE OR STRUCTURE IS DAMAGED, IT SHALL BE RESTORED AT THE CONTRACTOR'S EXPENSE.
- 13. A PORTABLE RESTROOM FACILITY WILL BE REQUIRED ON-SITE DURING CONSTRUCTION ACTIVITIES.
- 14. ALL ON-SITE FUELING WILL COMPLY WITH LOCAL, STATE AND FEDERAL REQUIREMENTS.
- 15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND PAYING ALL FEES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITY.
- 16. FOLLOW WRITTEN DIMENSIONS ALWAYS. DO NOT SCALE. DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED.
- 17. THE CONTOUR LINES, SPOT ELEVATIONS, AND BUILDING FLOOR ELEVATIONS SHOWN ARE TO FINISH GRADE. REFER TO CROSS SECTIONS, PROFILES, AND TYPICAL SECTIONS FOR GRADING DETAILS. REFER TO TYPICAL SECTIONS FOR PAVING, SLAB, AND AGGREGATE BASE THICKNESS TO DETERMINE GRADING LINE ELEVATIONS.
- 18. THE SEQUENCE AS SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS IS A GENERAL OUTLINE FOR THE CONSTRUCTION OF THIS PROJECT AND IN NO WAY IS IT INTENDED TO COVER EVERY ITEM IN THE PROJECT. ITEMS NOT CRITICAL TO THE CONSTRUCTION SEQUENCE MAY BE CONSTRUCTED IN ANY STAGE AS APPROVED BY THE OWNER OR ENGINEER.
- 19. THE TRAFFIC CONTROL REQUIREMENTS SHOWN ON THESE PLANS ARE MINIMUM REQUIREMENTS ONLY AND DO NOT ATTEMPT TO ADDRESS IN DEPTH THE VARIETY OF SITUATIONS THAT MAY OCCUR ONCE CONSTRUCTION HAS STARTED. IN NO WAY DO THE REQUIREMENTS SHOWN ON THESE PLANS RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY FOR SELECTING THE PROPER TRAFFIC CONTROL DEVICES AND IMPLEMENTATION PROCEDURES THAT WILL ENSURE THE SAFETY OF MOTORISTS, PEDESTRIANS, AND WORKERS AT ALL TIMES. ALL PERMANENT AND TEMPORARY TRAFFIC CONTROL SHALL BE IN CONFORMANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- 20. THE CONTRACTOR IS RESPONSIBLE FOR THE PLACEMENT AND MAINTENANCE OF ALL TRAFFIC CONTROL & SAFETY MEASURES. THIS WORK IS SUBSIDIARY TO OTHER BID ITEMS.
- 21. THE CONTRACTOR SHALL PROVIDE TEMPORARY WALKS, FENCING, BARRICADES, AND OTHER PROTECTIVE MEASURES AS NECESSARY TO ENSURE THE SAFETY OF THE PUBLIC TRAVERSING THE CONSTRUCTION SITE. THIS WORK IS SUBSIDIARY TO OTHER BID ITEMS.
- 22. EQUIPMENT STORAGE AREAS AND MATERIAL STOCKPILES SHALL BE LOCATED ON SITES PROVIDED BY THE CONTRACTOR WITH DUE REGARD TO LOCATION, APPEARANCE, AND HAZARD POTENTIAL TO THE TRAVELING PUBLIC.
- 23. ALL ADA ACCESSIBLE ROUTES SHALL BE IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (FEDERAL REGISTER/ VOL. 58 NO. 144/ RULES AND REGULATIONS) AND THE PROPOSED ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY (PROWAG).
- 24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EROSION, SEDIMENT, AND DUST CONTROL. ANY DAMAGE FROM BLOWING DUST OR EROSION AND RUNOFF FROM THE SITE SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

- 25. ALL TREES TO BE GRUBBED ARE MARKED THUS "X" ON THE DEMOLITION SHEETS. SPARE ALL TREES THAT ARE NOT MARKED AT ALL. EXCEPTIONALLY GOOD TREES SHALL BE SPARED BY ADJUSTING BACKSLOPE LINES DURING CONSTRUCTION, AS DIRECTED BY THE ENGINEER. ALL TREES WITHIN THE CONSTRUCTION LIMITS TO REMAIN SHALL HAVE THEIR TRUNKS AND ROOT ZONE PHYSICALLY PROTECTED PRIOR TO CONSTRUCTION ACTIVITIES BY METHODS APPROVED BY THE ENGINEER.
- 26. THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES TO MINIMIZE INTERRUPTIONS IN ACCESS TO ADJOINING PROPERTIES.
- 27. THE CONTRACTOR SHALL NOTIFY ALL PROPERTY OWNERS A MINIMUM 48 HOURS IN ADVANCE OF ALL WORK PERTAINING TO THEIR ENTRANCES.
- 28. IF THE CONTRACTORS OPERATIONS REQUIRE WORK ON OR ACCESS ACROSS PRIVATE PROPERTY, IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN WRITTEN PERMISSION FROM THE PROPERTY OWNER TO ENTER THE PROPERTY AND TO REPAIR ANY DAMAGE TO PRIVATE PROPERTY CAUSED BY HIS OPERATIONS. A COPY OF THE WRITTEN AGREEMENT SHALL BE SENT TO THE CITY.
- 29. THE CONTRACTOR SHALL MAINTAIN MAILBOXES FOR UNINTERRUPTED MAIL SERVICE.
- 30. SAWCUTS SHALL BE FULL DEPTH.
- 31. DRIVEWAYS AND SIDEWALKS SHALL BE REMOVED AND REPLACED TO EXISTING JOINTS, UNLESS OTHERWISE NOTED.
- 32. EXISTING TOPSOIL SHALL BE STRIPPED TO A POINT WHERE ALL VEGETATION IS REMOVED. THIS WORK IS SUBSIDIARY TO OTHER BID ITEMS.
- 33. ALL WASTE MATERIAL RESULTING FROM THE PROJECT SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR. THIS WORK IS SUBSIDIARY TO OTHER BID ITEMS.
- 34. THE CITY OF BENTONVILLE SHALL HAVE THE FIRST RIGHT OF REFUSAL ON DEMOLITION AND REMOVAL ITEMS.
- 35. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL BY THE DESIGN PROFESSIONAL. THE DESIGN PROFESSIONAL SHALL REVIEW THE SHOP DRAWINGS OR SAMPLES FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPTS ON THE PROJECT AND FOR COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THIS REVIEW SHALL NOT EXTEND TO MEANS OR METHODS OF CONSTRUCTION. THE DESIGN PROFESSIONAL'S REVIEW SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR ANY VARIATION FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS UNLESS THE CONTRACTOR HAS, IN WRITING, CALLED THE DESIGN PROFESSIONAL'S ATTENTION TO EACH SUCH VARIATION AT THE TIME OF SUBMISSION AND THE DESIGN PROFESSIONAL HAS GIVEN WRITTEN APPROVAL OF EACH SUCH VARIATION BY SPECIFIC WRITTEN NOTATION THEREOF INCORPORATED INTO OR ACCOMPANYING THE SHOP DRAWING OR SAMPLE. APPROVAL BY THE DESIGN PROFESSIONAL SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR ERRORS OR OMISSIONS IN SHOP DRAWINGS WITH CONFORMANCE TO CONTRACT DOCUMENTS.

BEFORE SUBMITTING EACH SHOP DRAWING OR SAMPLE, THE CONTRACTOR SHALL HAVE DETERMINED AND VERIFIED:
 - a. ALL FIELD MEASUREMENTS, QUANTITIES, DIMENSIONS, SPECIFIED PERFORMANCE CRITERIA, INSTALLATION REQUIREMENTS, MATERIALS, CATALOG NUMBERS, AND SIMILAR INFORMATION WITH RESPECT THERETO.
 - b. ALL MATERIALS WITH RESPECT TO INTENDED USE, FABRICATION, SHIPPING, HANDLING, STORAGE, ASSEMBLY, AND INSTALLATION PERTAINING TO THE PERFORMANCE OF THE WORK.
 - c. ALL INFORMATION RELATIVE TO MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF CONSTRUCTION, AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENT THERETO.
 - d. THE CONTRACTOR SHALL HAVE REVIEWED AND COORDINATED EACH SHOP DRAWING OR SAMPLE WITH OTHER SHOP DRAWINGS AND SAMPLES, AND WITH THE REQUIREMENTS OF THE WORK AND THE CONTRACT DOCUMENTS.THESE ITEMS ARE SUBSIDIARY TO OTHER BID ITEMS.

ALL SUBMITTED SHOP DRAWINGS SHALL BEAR A STAMP OR SPECIFIC WRITTEN INDICATION AND SIGNATURE THAT THE CONTRACTOR HAS FULLY REVIEWED THE SUBMISSION AND CHECKED ALL DATA AND DETAILS. BY THE CONTRACTOR'S SIGNATURE, THE CONTRACTOR CERTIFIES SHOP DRAWING CONFORMANCE AND ACCURACY TO THE CONTRACT DOCUMENTS.
- 37. IF PRECAST CONCRETE STORM SEWER STRUCTURES ARE TO BE USED ON THIS PROJECT, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND HAVE THEM APPROVED BY THE ENGINEER PRIOR TO FABRICATION OF THE STRUCTURES. FAILURE TO DO SO SHALL BE CAUSE FOR REJECTION. THIS ITEM IS SUBSIDIARY TO OTHER BID ITEMS.
- 38. ANY CONTRACTOR BIDDING ANY PORTION OF THIS WORK SHALL HAVE IN HIS OR HER POSSESSION A COMPLETE SET OF CONSTRUCTION DOCUMENTS AND BE FAMILIAR WITH ALL SCOPES OF WORK AND TRADES TO UNDERSTAND THEIR INTERACTIONS.
- 39. ALL EXISTING STORM SEWER WITHIN THE LIMITS OF CONSTRUCTION SHALL BE EXCAVATED AND REMOVED UNLESS OTHERWISE NOTED IN THE PLANS.
- 40. ALL PAVEMENT, CURB & GUTTER, FENCING AND OTHER SURFACE FEATURES WITHIN THE LIMITS OF CONSTRUCTION SHALL BE REMOVED UNLESS OTHERWISE NOTED IN THE PLANS. THESE ITEMS SHALL BE REPLACED AS INDICATED ON THE PLANS.
- 41. UNLESS SPECIFICALLY STATED OTHERWISE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL EXISTING METERS, VALVES, VALVE BOXES, BUILDING DRAINS, STORM AND SANITARY MANHOLES, ETC., AS SPECIFIED IN BENTONVILLE WATER UTILITIES WATER SEWER SPECIFICATION. CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL SANITARY SERVICE LINES WHERE REQUIRED TO MAINTAIN CONTINUOUS SERVICE. THE CONTRACTOR SHALL CONTACT CITY OF BENTONVILLE TO COORDINATE THE ADJUSTMENT OF EXISTING WATER FACILITIES.
- 42. CONTRACTOR SHALL KEEP A SURFACED BIKE PATH OPEN FOR THE DOWNTOWN BIKE TRAIL. ALL ROADWAYS AND SIDEWALKS SHALL REMAIN OPEN TO THE PUBLIC EXCEPT FOR LIMITED CLOSURES OF NO MORE THAN 5 DAYS. TEMPORARY PAVEMENT MAY BE USED AT CONTRACTOR'S DISCRETION TO RESTORE ACCESS PRIOR TO PERMANENT PAVING. ONE ADDITIONAL CLOSURE OF NO MORE THAN 24 HOURS WILL BE ALLOWED FOR PERMANENT PAVEMENT REPLACEMENT (SEE JSP 1001-09).

- 43. EXCEPT FOR TREES AND TREE GROUPINGS SPECIFICALLY CALLED OUT FOR REMOVAL, ALL TREES SHALL BE PRESERVED UNLESS APPROVED BY THE DIRECTOR OF COMMUNITY DEVELOPMENT PURSUANT TO ARTICLE 1300.07 OF THE MUNICIPAL CODE.
- 44. ALL REINFORCED BOX CULVERTS AND WINGWALLS SHALL BE PRECAST DESIGNED FOR HL-93 LOADING. CONTRACTOR TO SUBMIT SHOP DRAWINGS SEALED BY STRUCTURAL ENGINEER. CAST-IN-PLACE CONSTRUCTION OF CONCRETE WINGWALLS AND APRONS MAY BE ALLOWED, IF THE CONTRACTOR PROVIDES SEALED SHOP DRAWINGS SHOWING REINFORCEMENT AND DETAIL OF CONNECTION TO PRECAST BOX CULVERT.

1

SUMMARY OF QUANTITIES

	Item	Unit	Quantity
1	Mobilization	LS	1
2	Demolition	LS	1
3	Erosion Control Mat	SY	1930
4	Sediment Control Barrier	LF	1561
5	Inlet Protection	EA	38
6	Stabilized Gravel Construction Entrance/Exit	SY	167
7	Concrete Washout	EA	2
8	Clearing & Grubbing (by group)	AC	0.34
9	Clearing and Grubbing Trees (individual)	EA	19
10	Unclassified Excavation	CY	2472
11	Linear Grading	LF	2667
12	Modified Curb	LF	424
13	Type A Curb	LF	703
14	Concrete Gutter	LF	161
15	Asphalt Street	SY	2323
16	Asphalt Pavement Repair	SY	31
17	Concrete Trail	SY	420
18	Concrete Street	SY	276
19	Commercial Driveway Replacement	SY	134
20	Residential Driveway Replacement	SY	120
21	Gravel Driveway Replacement	SY	152
22	Brick Walk Replacement	SY	5
23	Sidewalk	SY	484
24	Wheelchair Ramps	SF	331
25	Detectable Warning Strip	LF	20
26	10 Foot Concrete Channel with Curb	SY	700
27	Excavation for Utility Point Repair by BWUD	LF	53
28	4" Tapping Sleeve & Valve	EA	1
29	4" DI Spool Piece 8"x4" Reducer	EA	1
30	8" Tapping Sleeve & Valve	EA	5
31	8" 11.25 Degree Bend	EA	1
32	8" 45 Degree Bend	EA	7
33	8" 90 Degree Bend	EA	5
34	8" Gate Valve	EA	3
35	8" MJ TEE	EA	1
36	8" C900/D14 Pipe	LF	519
37	16" Steel Encasement	LF	44
38	Connection of Relocated Water Meter & Service Line	EA	10
39	Fire Hydrant Assembly	EA	1
40	Type 1 Riprap	CY	60
41	Flowable Select Material	CY	26
42	Seeding, Mulching, and Fertilizer	AC	1
43	Sod	SF	31258

	Item	Unit	Quantity
44	Flared End Sections for 18" Pipe Culverts	EA	2
45	Flared End Sections with Toewall for 18" Pipe Culverts	EA	1
46	Flared End Sections for 30" Pipe Culverts	EA	1
47	Flared End Sections with Toewall for 30" Pipe Culverts	EA	2
48	Concrete Collar	EA	4
49	3' x 3' Junction Box	EA	2
50	4' x 3' Area Inlet	EA	1
51	4' x 4' Area Inlet	EA	4
52	4' x 4' Combination Inlet (Neenah R-3067-L Grate)	EA	3
53	4' x 4' Curb Inlet (Non-Setback)	EA	1
54	4' x 4' Grate Inlet (Neenah R-2560-E2 Grate)	EA	10
55	4' x 4' Grate Inlet (Neenah R-3408-L Grate)	EA	3
56	4' x 4' Junction Box	EA	7
57	4' x 4' Grate Inlet (Neenah R-2560-E1 Grate)	EA	1
58	5' x 5' Junction Box	EA	1
59	6' x 4' Combination Inlet (Neenah R-3295-2L Grate)	EA	3
60	6' x 4' Combination Inlet (Neenah R-3408-BL Grate)	EA	2
61	8' x 4' Junction Box	EA	1
62	8' x 8' Junction Box	EA	1
63	8' x 8' Junction Box with Manhole Riser	EA	1
64	8' x 10' Junction Box with Neenah R-2560-E2 Grate	EA	1
65	9' x 10' Combination Inlet (Neenah R-3067-L Grate)	EA	1
66	9' x 4' Combination Inlet (Neenah R-3295-3L Grate)	EA	1
67	9' x 4' Grate Inlet (Neenah R-2560-E2 Grate and Open 1 Side)	EA	1
68	12' x 9' Junction Box	EA	1
69	9' x 3.5' Reinforced Concrete Box Culvert Wingwalls and Apron	EA	1
70	12" Reinforced Concrete Pipe	LF	6
71	15" Reinforced Concrete Pipe	LF	11
72	18" Reinforced Concrete Pipe	LF	1020
73	24" Reinforced Concrete Pipe	LF	409
74	30" Reinforced Concrete Pipe	LF	80
75	23" x 14" Reinforced Concrete Horizontal Elliptical Pipe	LF	13
76	30" x19" Reinforced Concrete Horizontal Elliptical Pipe	LF	69
77	38" x 24" Reinforced Concrete Horizontal Elliptical Pipe	LF	38
78	6' x 3' Reinforced Concrete Box Culvert	LF	158
79	6' x 3.5' Reinforced Concrete Box Culvert	LF	950
80	9' x 3.5' Reinforced Concrete Box Culvert	LF	693
81	Sanitary Sewer Lateral Adjustment	EA	2
82	Mailbox Replacement	EA	2



olsson
302 East Milligan Road
Fayetteville, AR 72703
TEL 479.443.3404
www.olsson.com

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 19111
11.01.2023
ERIC JOSEPH SHELTON

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	10.31.2023	Miscellaneous updates	EM/MS

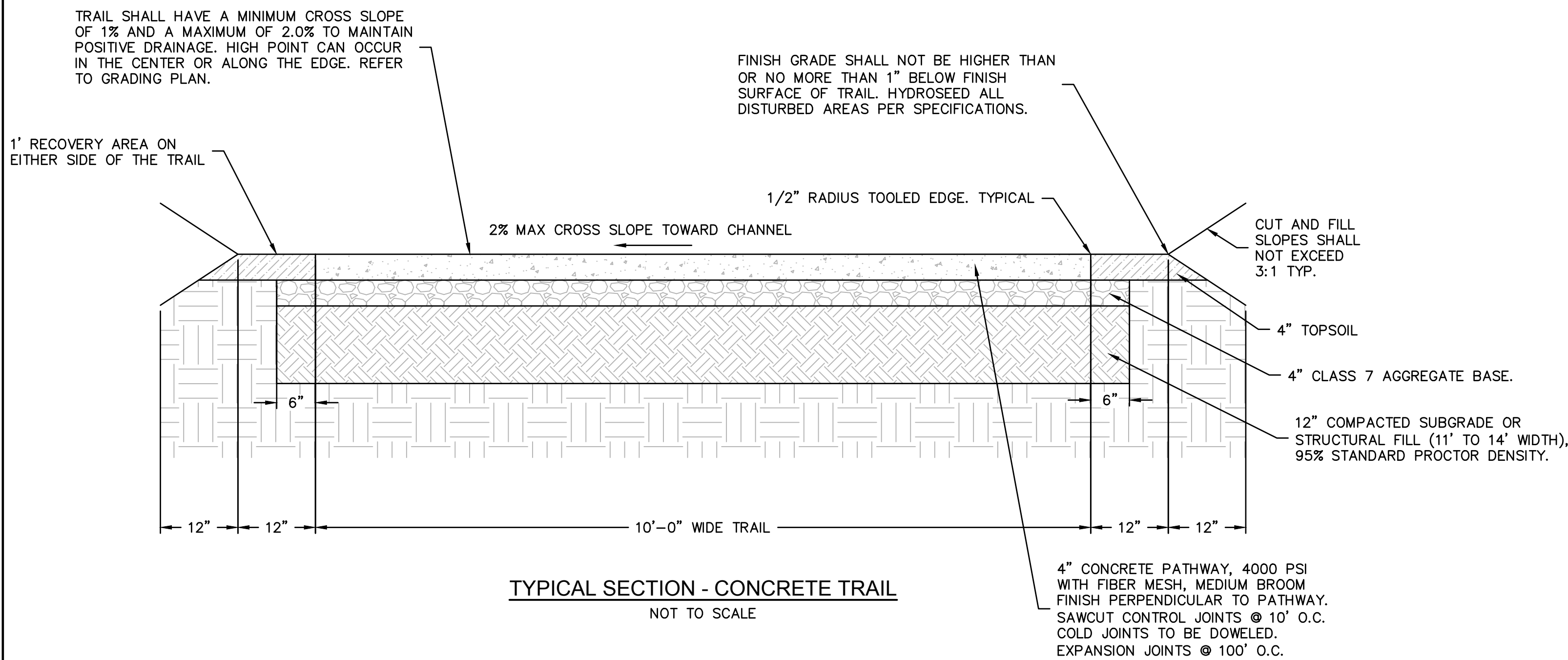
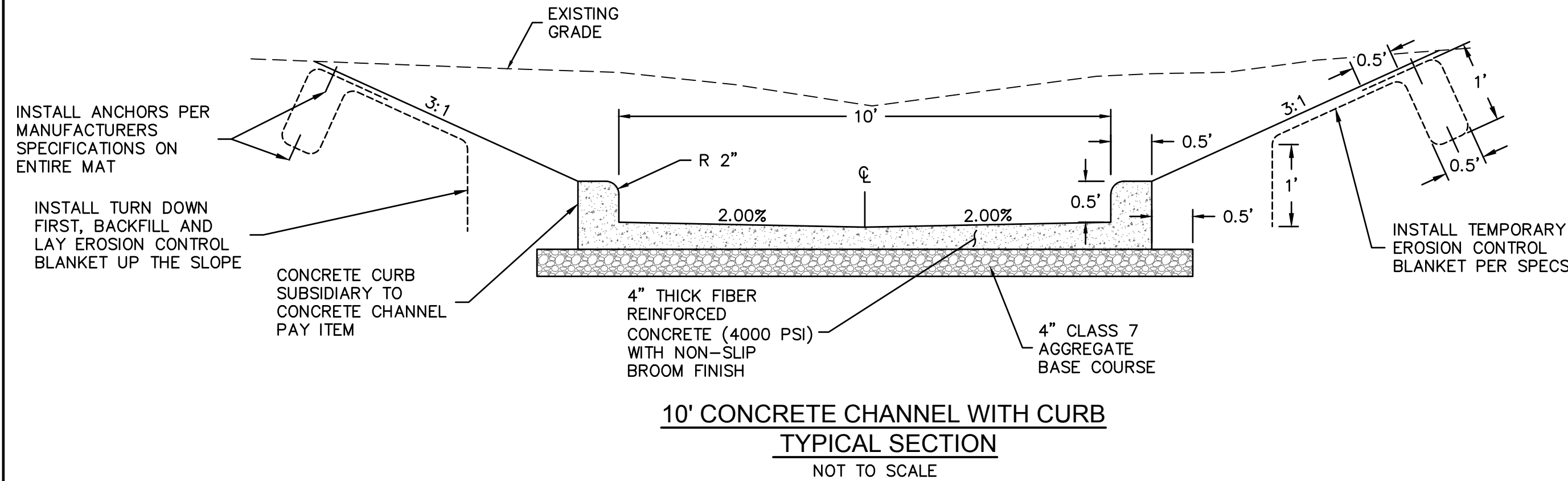
GENERAL NOTES
SW 10TH STREET & SW F STREET
STORMWATER IMPROVEMENTS
BENTONVILLE, AR

2023
REVISIONS

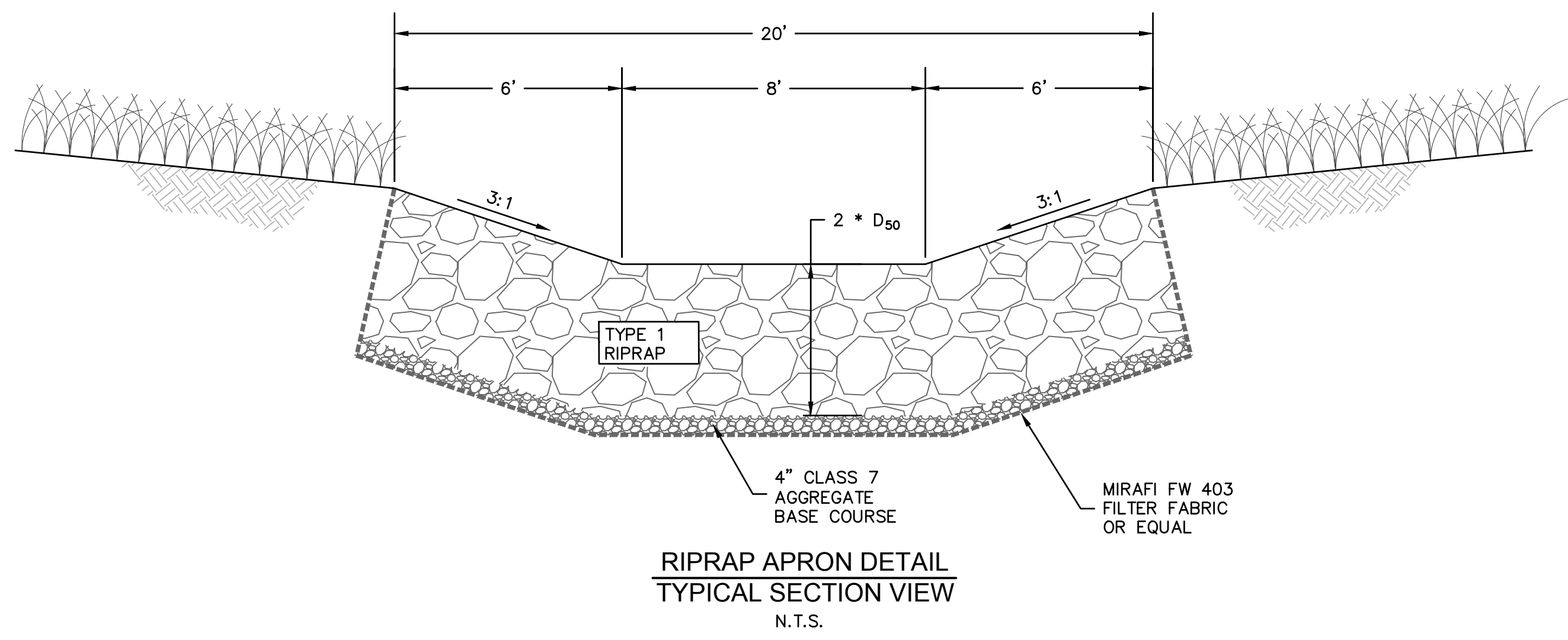
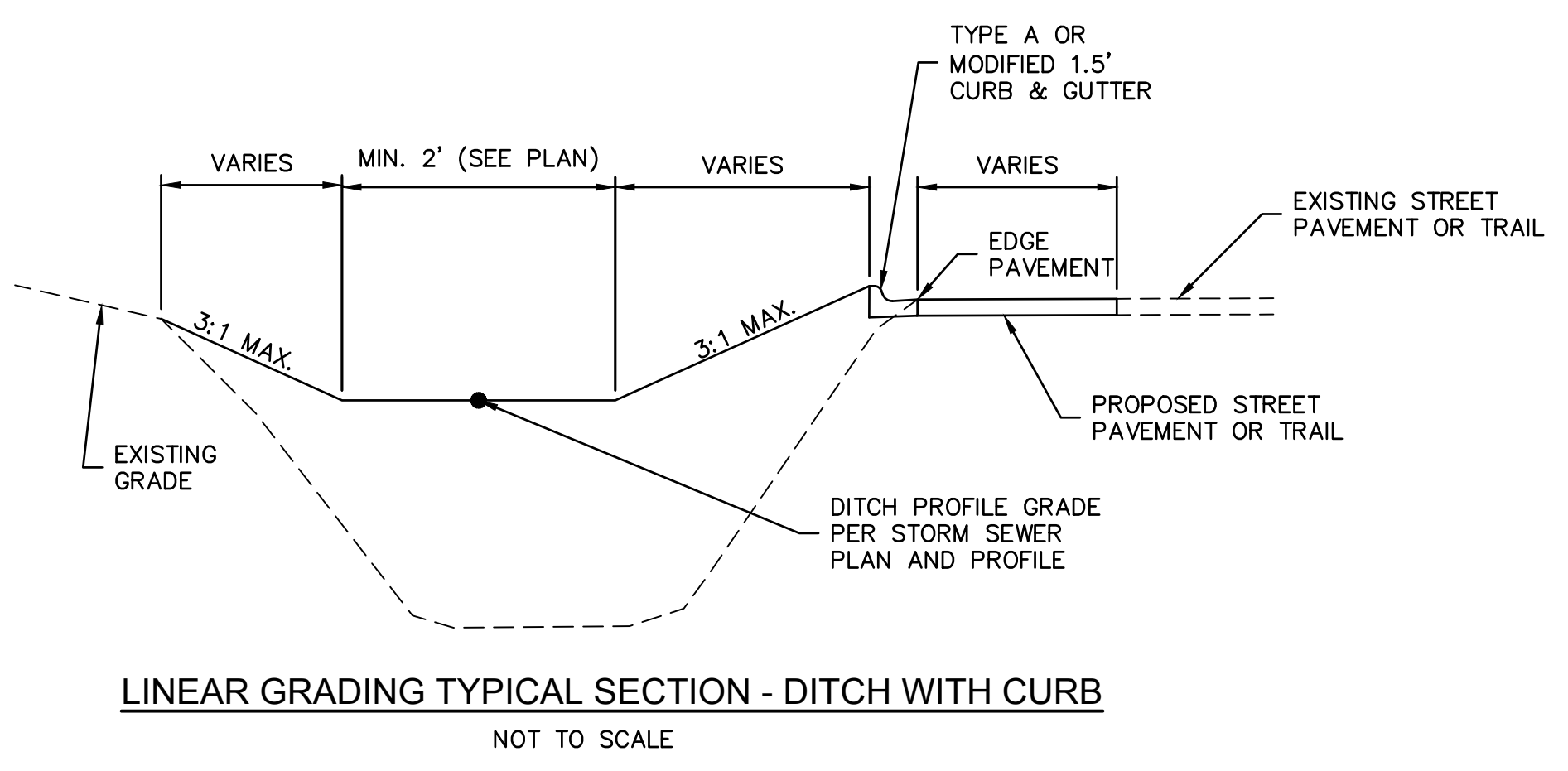
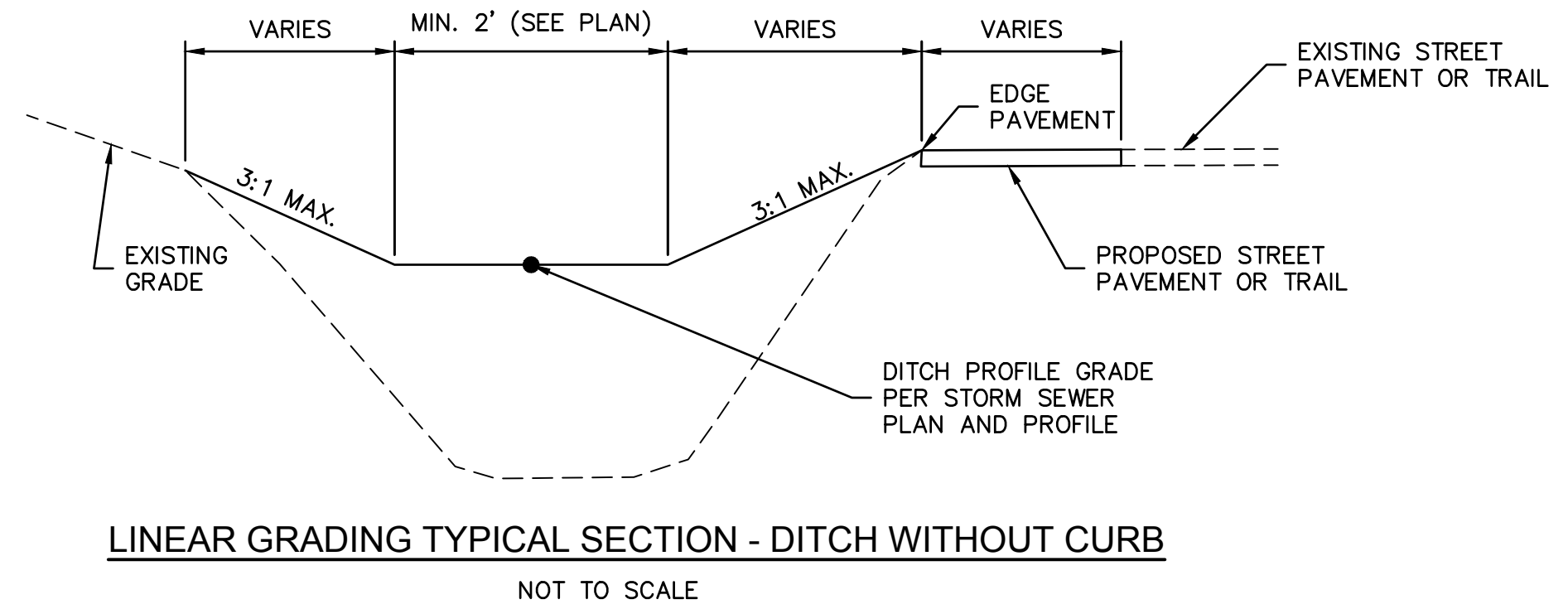
drawn by: KTF
checked by: JDA
approved by: EJS
QA/QC by: EJS
project no.: 021-04210-G
drawing no.: W_GEN-NOTES_G2104210
date: 09.13.2023

SHEET
2 of 71

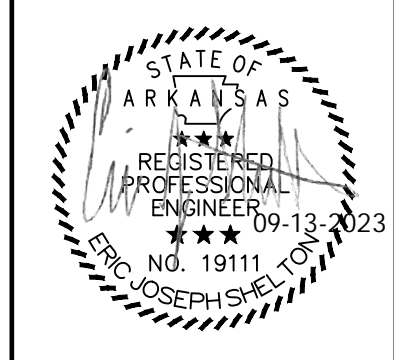
DWG: F:\2021\04001-04500\021-04210-G\40-Design\AutoCAD\Final Plans\Sheets\WTRS\W_TYPSPEC_G2104210.dwg
 DATE: Sep 13, 2023 10:50am
 USER: nmncneal
 XREFS: W_PTBK_G2104210



- NOTES FOR CONCRETE TRAIL:
1. IF COMPACTED SUBGRADE DOES NOT PASS DENSITY TESTING, UNDERCUT USING A MINIMUM OF 8" STRUCTURAL FILL AS REQUIRED BY ENGINEER
 2. VERTICAL CLEARANCE TYP. 8" MIN.
 3. SLOPES BEYOND 36° MIN. CLEAR AREA SHALL NOT EXCEED 3:1
 4. MAXIMUM RUNNING SLOPE SHALL BE 5% UNLESS NOTED ON PLANS.
 5. DOWELS ARE TO BE 1/2" X 16" DOWEL W/ EXPANSION CAP OR SLEEVE AT ONE END AT 18" O.C.
 6. FILLER SHALL CONFORM TO AASHTO M213-81 AND BE 1/2" X 6" & HAVE A FILLER CAP



olsson
 302 East Millisp Road
 Fayetteville, AR 72703
 TEL 479.443.3404
 www.olsson.com

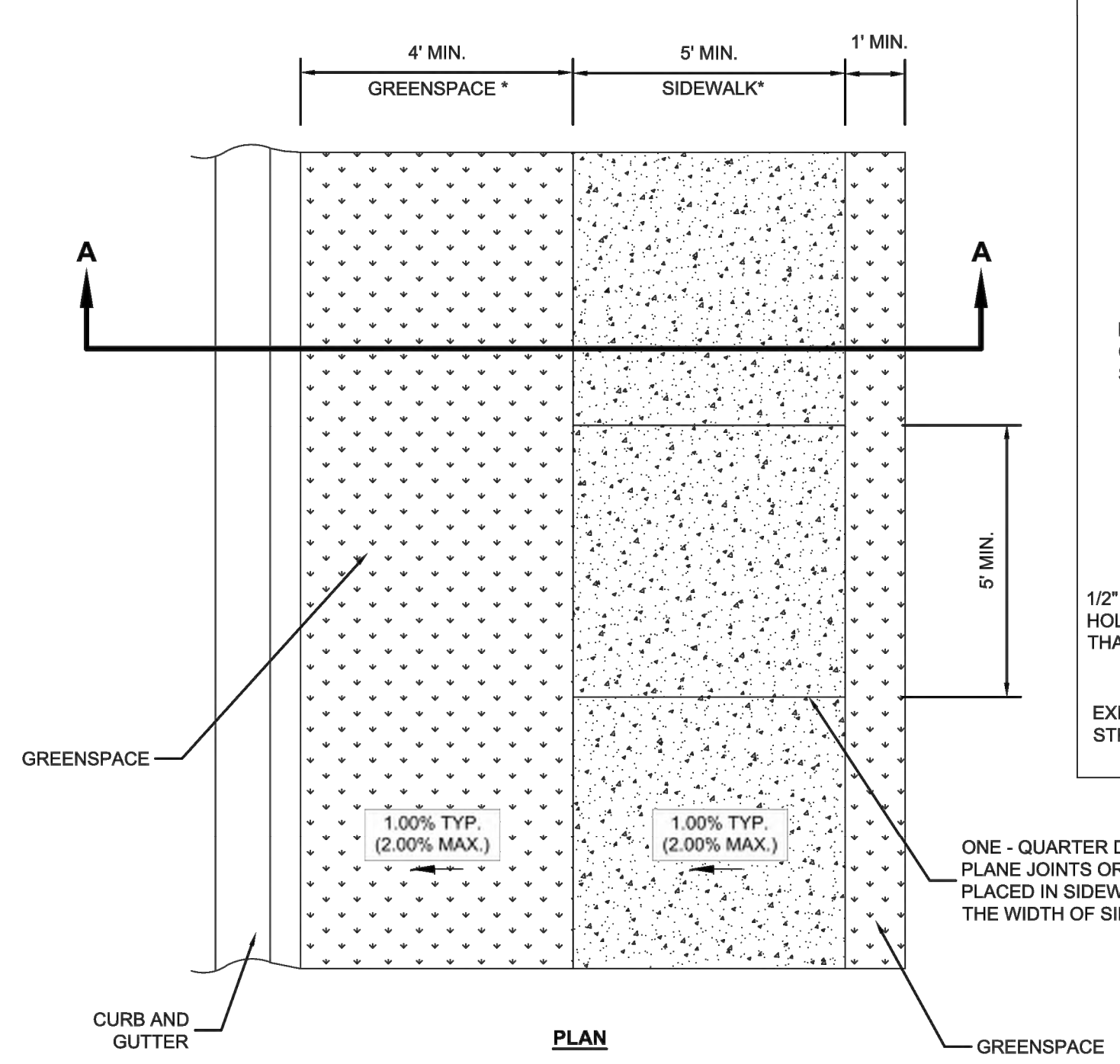


REV. NO.	DATE	REVISIONS DESCRIPTION	BY

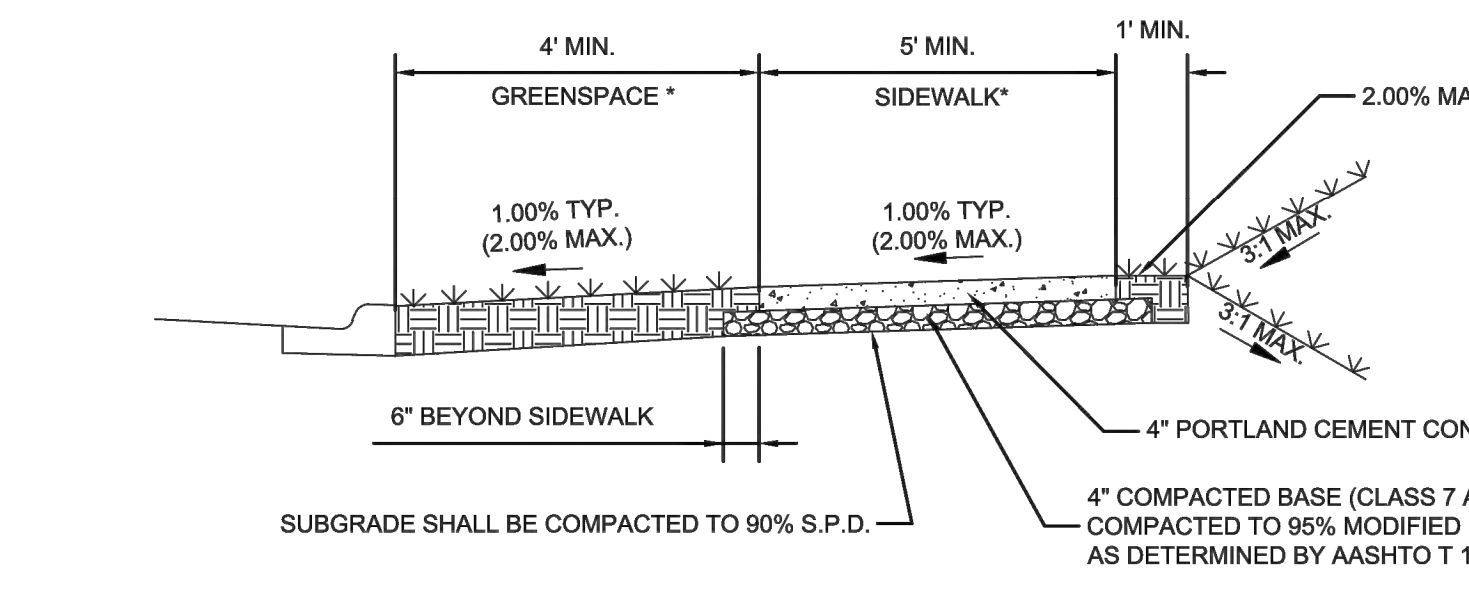
TYPICAL SECTIONS	2023
SW 10TH STREET & SW F STREET STORMWATER IMPROVEMENTS	
BENTONVILLE, AR	
drawn by: KTF	checked by: JDA
approved by: EJS	QA/QC by: EJS
project no.: 021-04210-G	drawing no.: W_TYPSPEC_G2104210
date: 09.13.2023	

USER: nmcneal

DWG: F:\2021\04001-04500\021-04210-G-40-Design\AutoCAD\Final Plans\Sheets\WTRS\W_DTL01_G2104210.dwg
DATE: Sep 13, 2023 10:51am XREFS: W_P_TBLK_G2104210

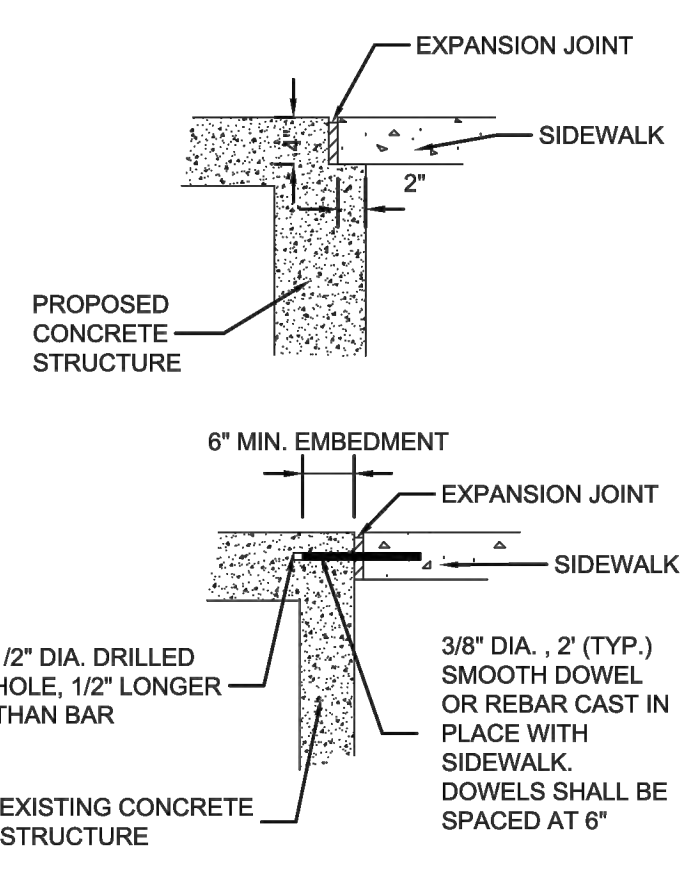


PLAN



SECTION A-A

CONNECTION TO CONCRETE STRUCTURES

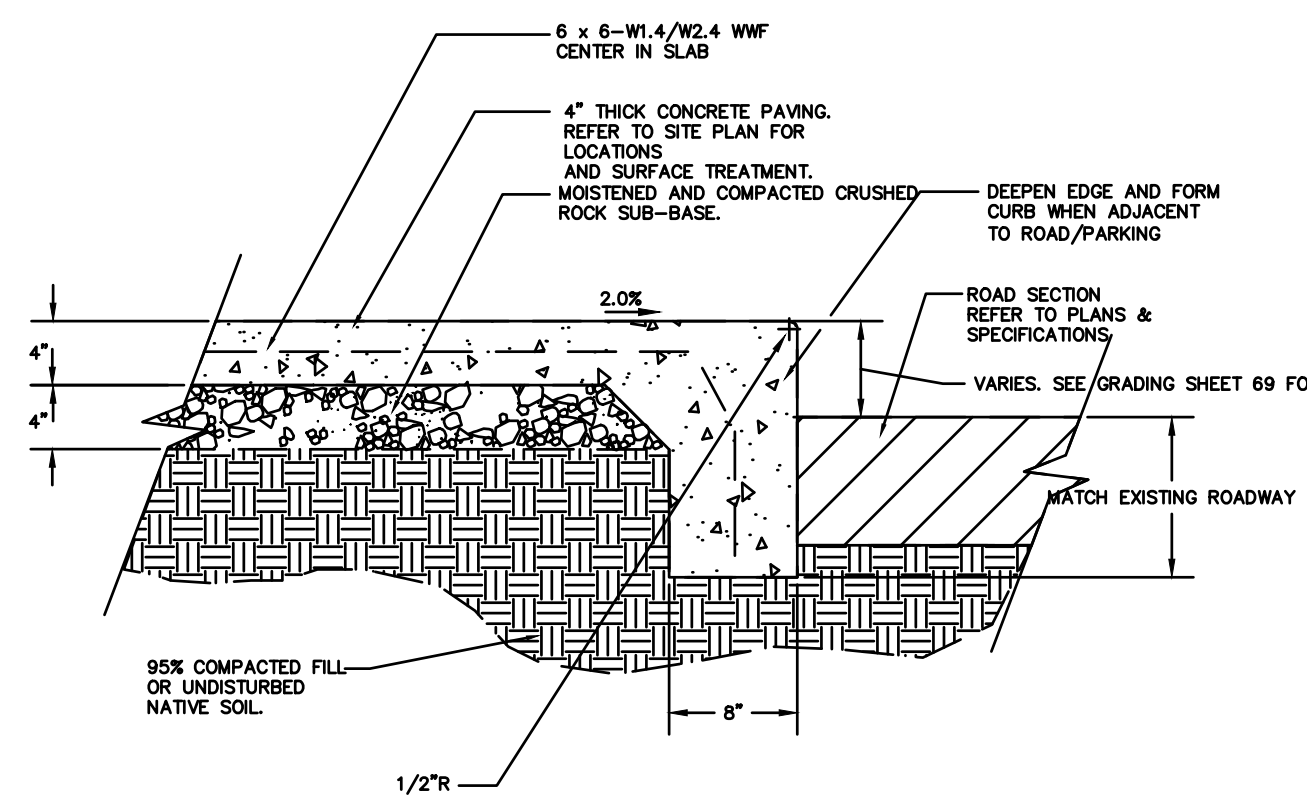


ONE-QUARTER DEPTH (1 INCH) WEAKENED PLANE JOINTS OR SAW-CUT JOINTS SHALL BE PLACED IN SIDEWALK INTERVALS EQUAL TO THE WIDTH OF SIDEWALK

* SEE MASTER STREET PLAN TYPICAL SECTIONS FOR WIDTHS REQUIRED FOR EACH ROADWAY CLASSIFICATION.

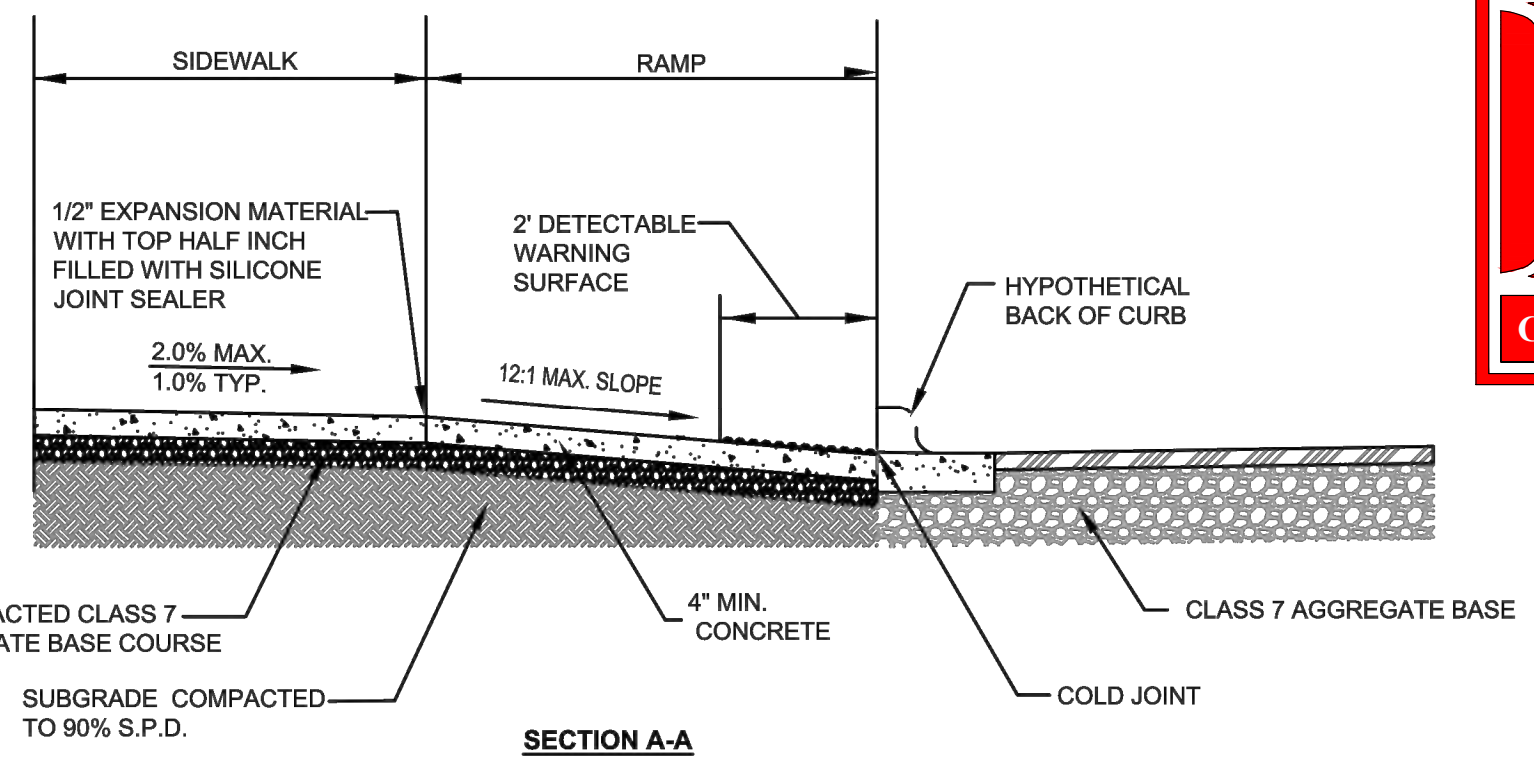
SIDEWALK DETAILS

NOT TO SCALE

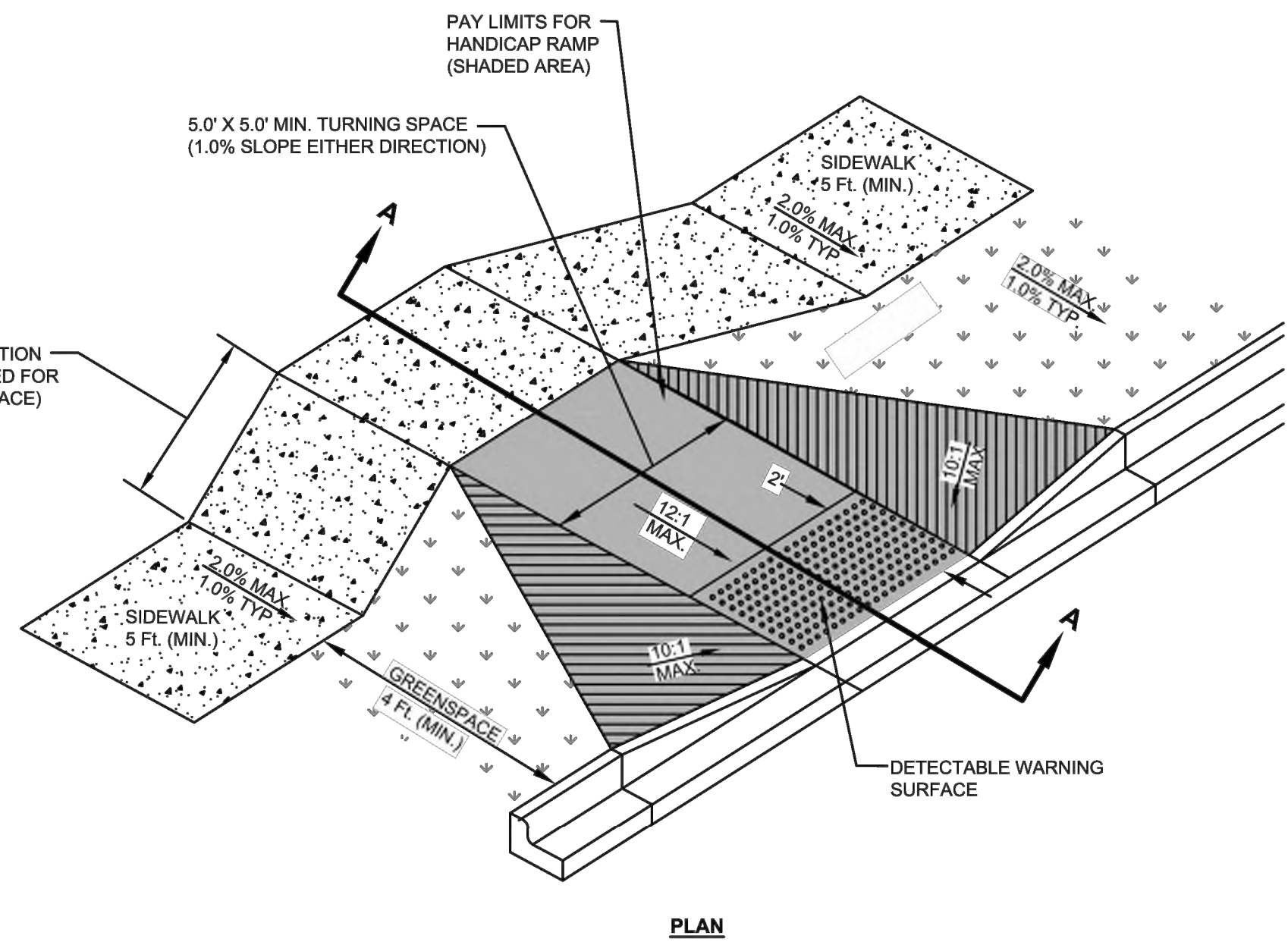


SIDEWALK DETAILS

NOT TO SCALE



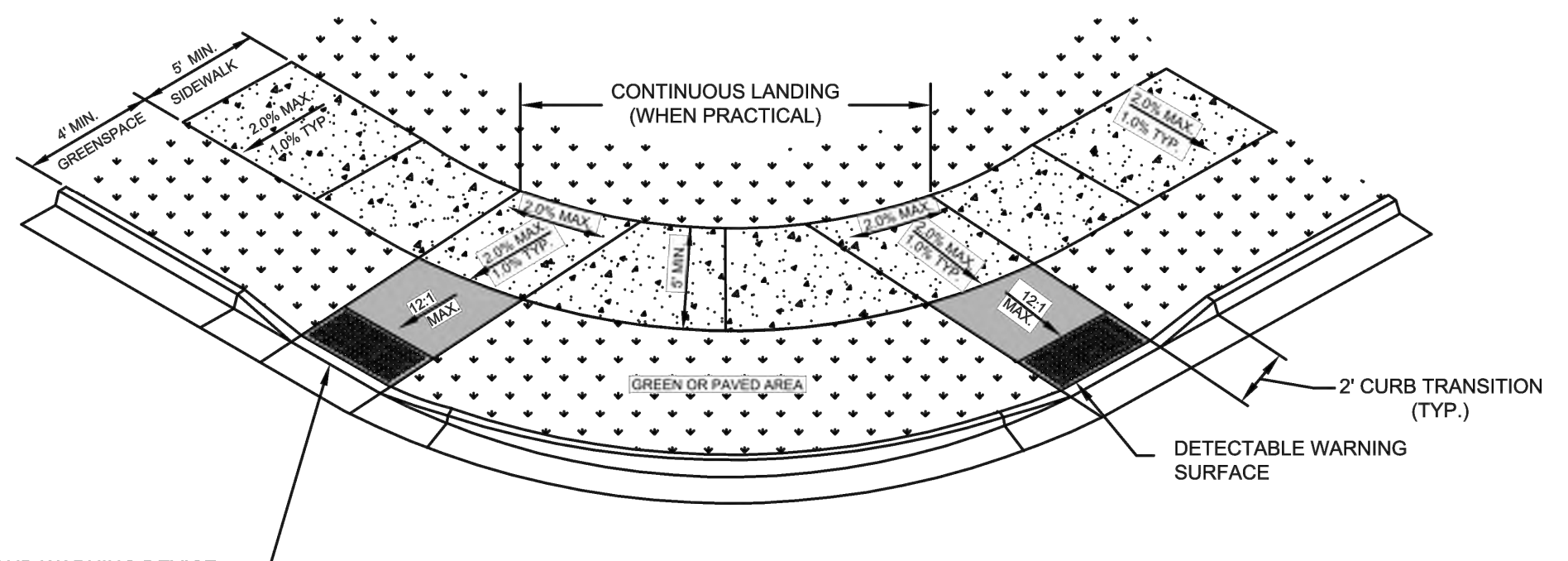
SECTION A-A



PLAN

SIDEWALK RAMP DETAILS

NOT TO SCALE



SIDEWALK RAMP DETAIL

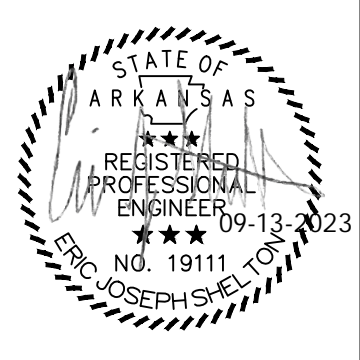
NOT TO SCALE

- SIDEWALK CONSTRUCTION NOTES:
- CONTRACTION (WEAKENED PLAN) JOINTS SHALL HAVE TOOLED OR SAW-CUT TRANSVERSE JOINTS WITH JOINT SPACING MATCHING SIDEWALK WIDTH. THE CONTRACTION JOINTS SHALL BE CONSTRUCTED TO 1/4 DEPTH OF THE SIDEWALK THICKNESS AND SHALL BE 1/8\"/>
 - EXPANSION JOINT MATERIAL SHALL MEET AASHTO M213 FOR AN ASPHALTIC FIBER EXPANSION JOINT MATERIAL AND BE INSTALLED WITH A ZIP STRIP WHICH IS REMOVED AFTER THE CONCRETE HAS CURED AND SEALED WITH A MASTIC SEALER. EXPANSION JOINT MATERIAL SHALL BE LEFT 1/2\"/>
 - ALL SIDEWALKS SHALL RECEIVE A BROOM FINISH AND ALL EDGES SHALL HAVE A 1/2\"/>
 - CONCRETE FOR SIDEWALK SHALL CONFORM TO ARDOT CLASS "S", 3500 PSI, 6.5 BAG MIX WITH 4-7% AIR ENTRAINMENT.
 - ALL CONTRACTION JOINTS AND COLD JOINTS SHALL BE FILLED TO FINISHED GRADE WITH SELF-LEVELING SEALANT SUCH AS SONNEBORN SL-1 OR EQUIVALENT MEETING THE REQUIREMENTS OF ASTM C 920, TYPE S.
 - CLOSED CELL BACKER ROD SHALL BE USED IN DEEP JOINTS, AS NEEDED, ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.
 - WHEN PLACING SIDEWALK AGAINST AN EXISTING CONCRETE STRUCTURE WHERE IT IS DESIRABLE THAT THE SIDEWALK REMAIN FLUSH, THE SIDEWALK SHALL BE DOWELED INTO THE STRUCTURE.

- NOTES:
- CONCRETE FOR SIDEWALK RAMPS SHALL CONFORM TO ARDOT CLASS "S", 3500 PSI, 6.5 BAG MIX WITH 4-7% AIR ENTRAINMENT. ALL SIDEWALK RAMPS SHALL RECEIVE A BROOM FINISH AND ALL EDGES SHALL HAVE A 1/2\"/>
 - DETECTABLE WARNING SURFACES SHALL BE PLACED AT ALL LOCATIONS WHERE RAMPS CROSS A STREET OR A SIGNALIZED COMMERCIAL DRIVEWAY FOR THE FULL WIDTH OF THE RAMP. THE DETECTABLE WARNING SURFACE SHALL BE LOCATED SO THAT THE NEAREST EDGE OF THE DEVICE IS LOCATED AT THE BACK OF CURB AND PERPENDICULAR TO THE EDGE OF THE SIDEWALK RAMP. AT CURB RADI WHERE THE DISTANCE FROM THE PERPENDICULAR DETECTABLE WARNING SURFACE TO THE BACK OF CURB EXCEEDS 5-FT., THE DETECTABLE WARNING SURFACE SHALL BE PLACED AT THE BACK OF CURB.
 - ALL SIDEWALK RAMPS REQUIRE A CITY INSPECTION PRIOR TO CONCRETE PLACEMENT.



olsson
302 East Millisp Road
Fayetteville, AR 72703
TEL 479.443.3404
www.olsson.com



REV. NO.	DATE	REVISIONS DESCRIPTION

BY: _____
DATE: _____
REV. NO.: _____
DATE: _____
DATE: _____

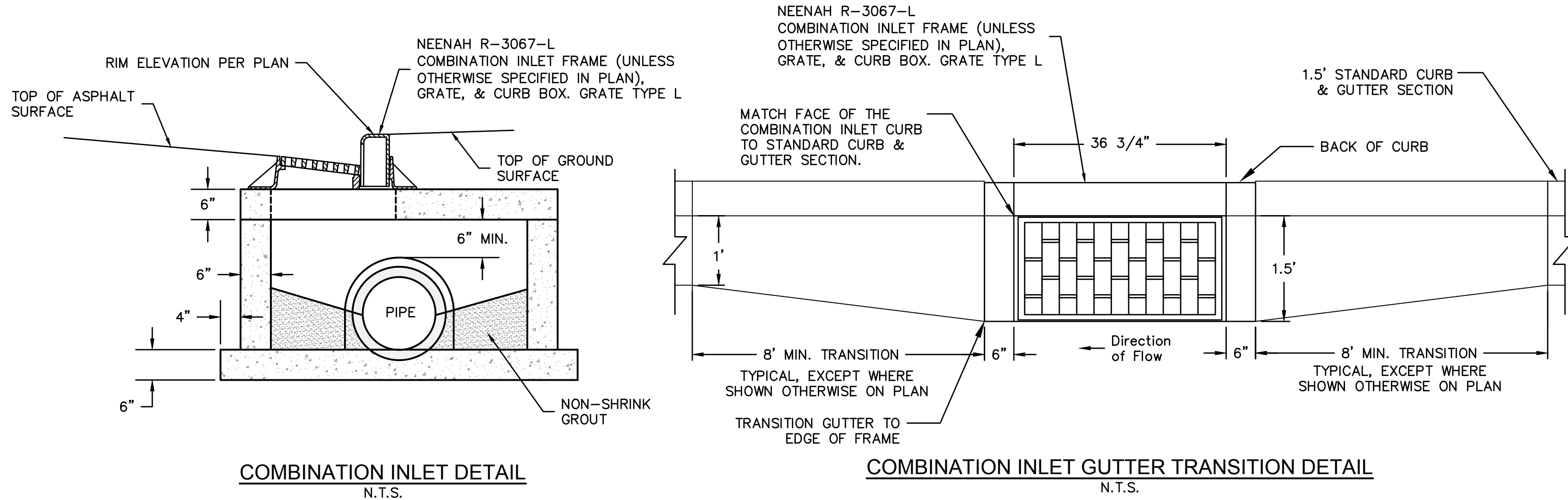
DETAIL SHEET
SW 10TH STREET & SW F STREET
STORMWATER IMPROVEMENTS
BENTONVILLE, AR

2023

drawn by: _____ KTF
checked by: _____ JDA
approved by: _____ EJS
QA/QC by: _____ EJS
project no.: 021-04210-G
drawing no.: W_DTL01_G2104210
date: 09.13.2023

USER: nmcneal

DWG: F:\2021\04001-04500\021-04210-G-40-Design\AutoCAD\Final Plans\Sheets\WTR\W_DTL01_G2104210.dwg
 DATE: Sep 13, 2023 10:51am
 XREFS: W_PTBK_G2104210



COMBINATION INLET DETAIL
N.T.S.

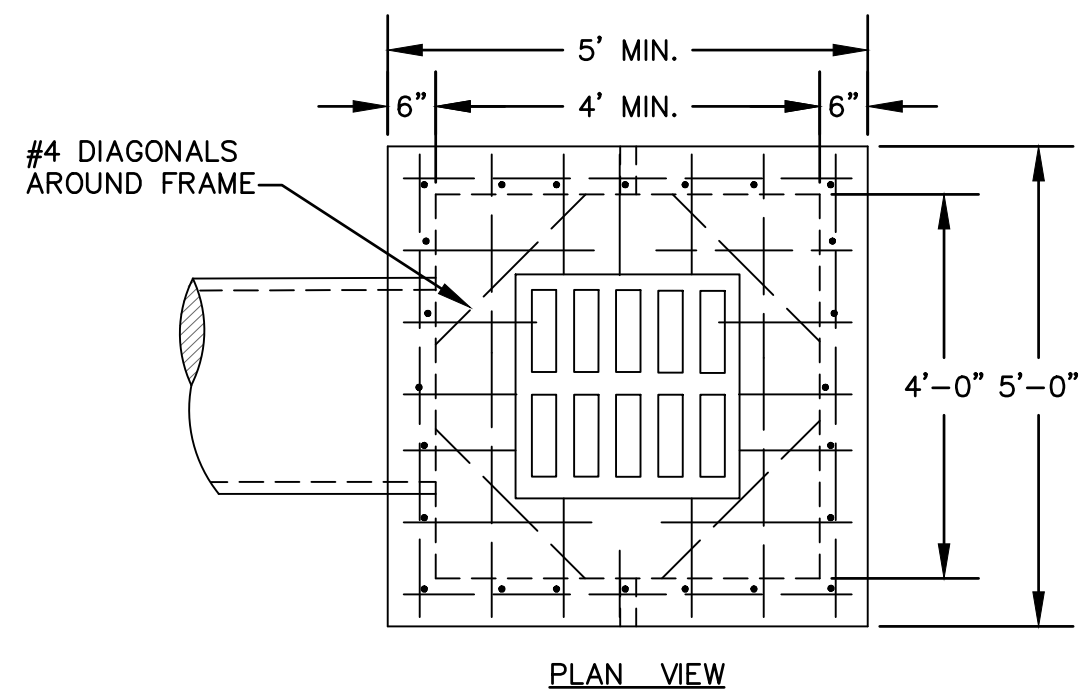
COMBINATION INLET GUTTER TRANSITION DETAIL
N.T.S.

JUNCTION BOX/AREA INLET/ CURB INLET NOTES

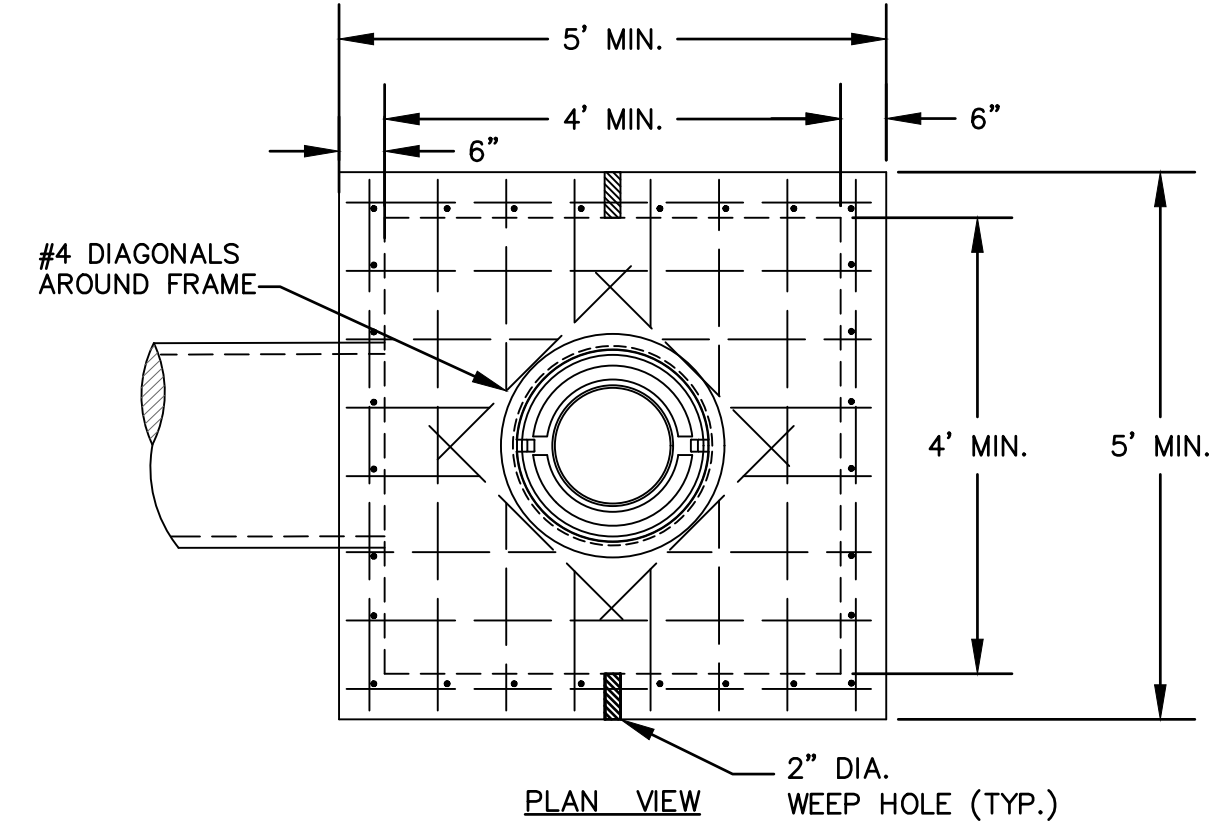
1. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
2. ALL REINFORCEMENT BARS SHALL BE GRADE 60 AND SHALL HAVE A MINIMUM 2" COVER UNLESS OTHERWISE NOTED.
3. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI -TOP 18" SHALL BE CAST-IN-PLACE.
4. PIPES MAY ENTER BOX FROM ANY ANGLE OF ELEVATION AS DIRECTED BY THE ENGINEER. REINFORCING BARS SHALL BE CUT TO CLEAR PIPE BY 2".
5. STEPS ARE REQUIRED IN STORM DRAIN MANHOLES THAT ARE AT 4 FT OF DEPTH AND GREATER (FROM INVERT TO RIM). CENTERLINE OF MANHOLE LID SHALL BE 2 FT FROM THE WALL WHERE STEPS ARE LOCATED. STEPS (6" x 12") SHALL BE COPOLYMER POLYPROPYLENE PLASTIC WITH STEEL CORE AT 16" APART.
6. LIMIT DEFLECTION TO 60 DEGREES. IF GREATER, USE NEXT LARGER MANHOLE DIAMETER/SIZE.
7. FOR STRUCTURE SIZES NOT COVERED BELOW, CONTRACTOR SHALL SUBMIT SHOP DRAWINGS WITH STRUCTURAL CALCULATIONS SEALED BY A PROFESSIONAL ENGINEER IN THE STATE OF ARKANSAS.

INSIDE DIMENSION	DIAMETER OF OUTLET PIPE	MIN. WALL THICKNESS	TOP CONCRETE SLAB REINFORCING	MIN. WALL THICKNESS
4'	15" - 18"	6"	# 4'S @ 8" O.C. E.W.	6"
5'	24" - 42"	8"	# 4'S @ 7" O.C. E.W.	8"
6'	48" - 54"	8"	# 5'S @ 9" O.C. E.W.	8"

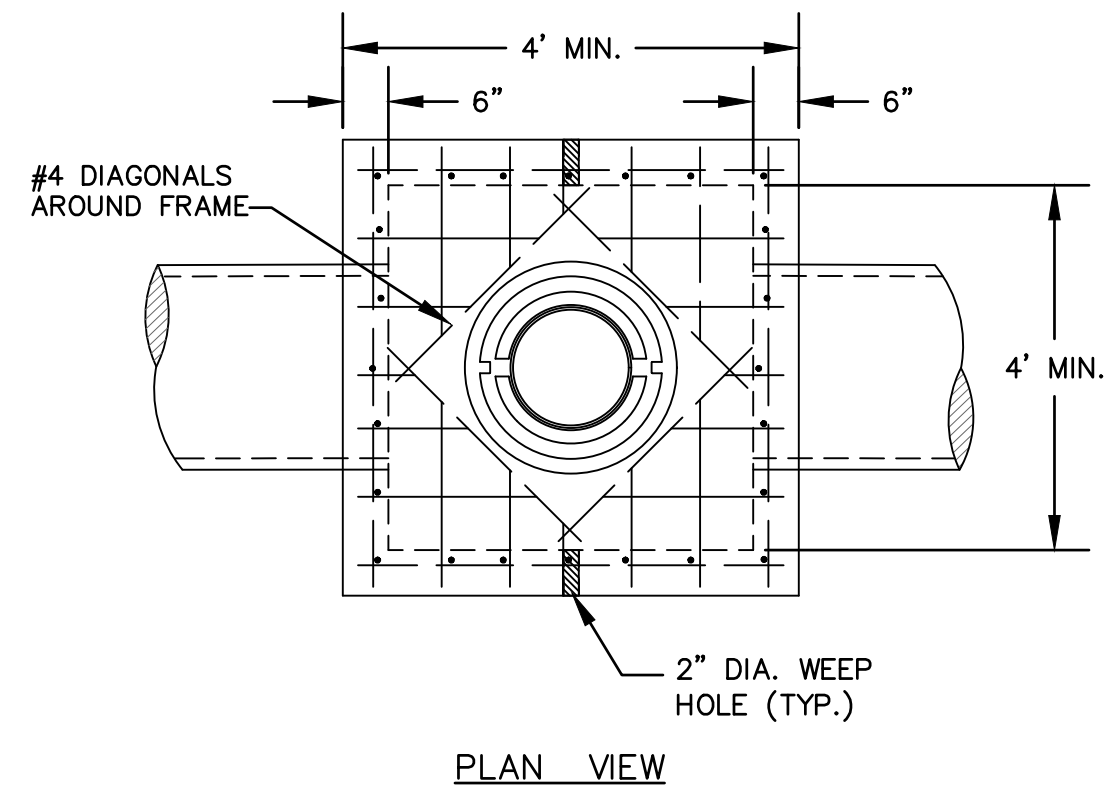
* WHEN UNDER TRAFFIC, USE # 5'S @ 6" O.C. E.W.



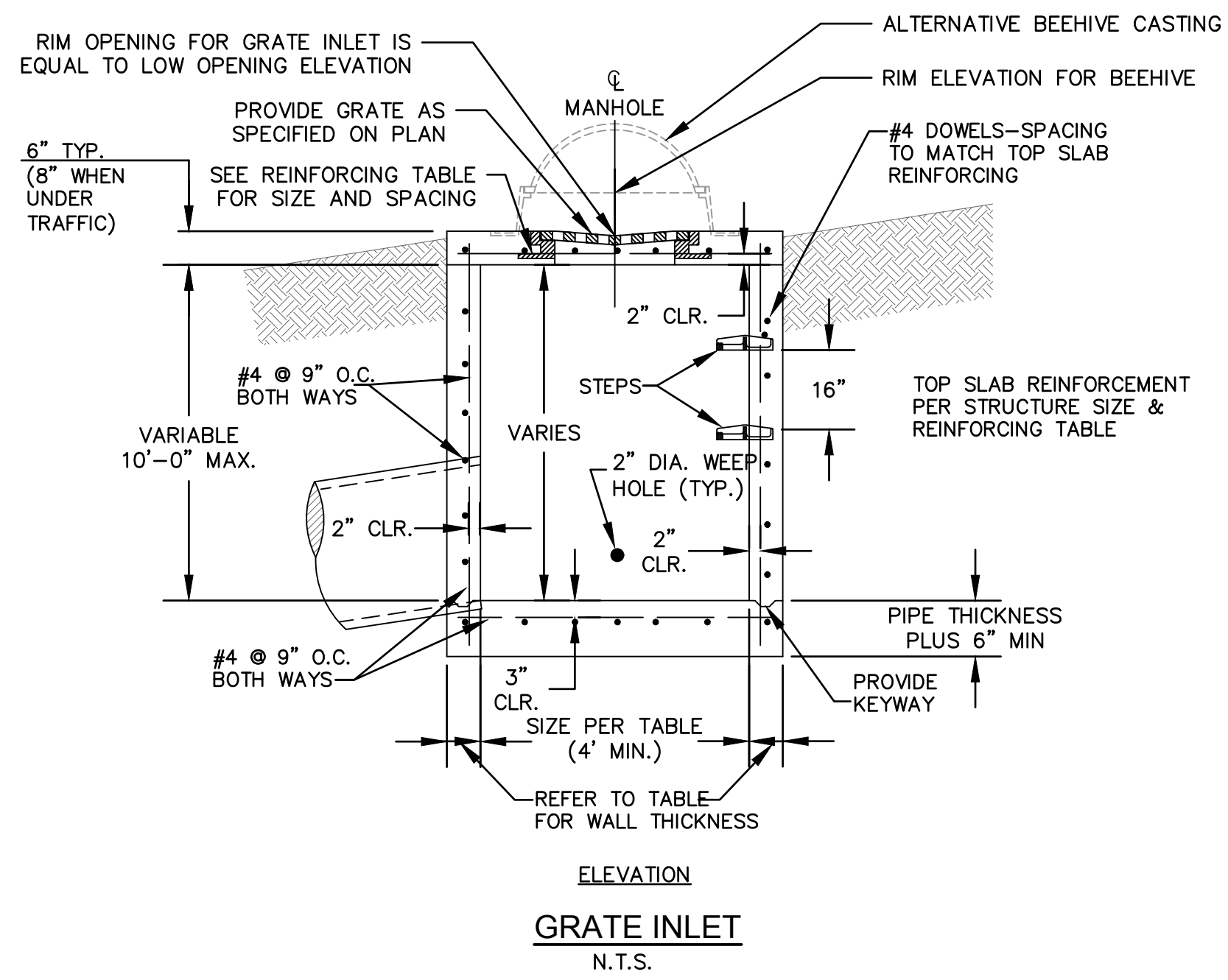
PLAN VIEW



PLAN VIEW

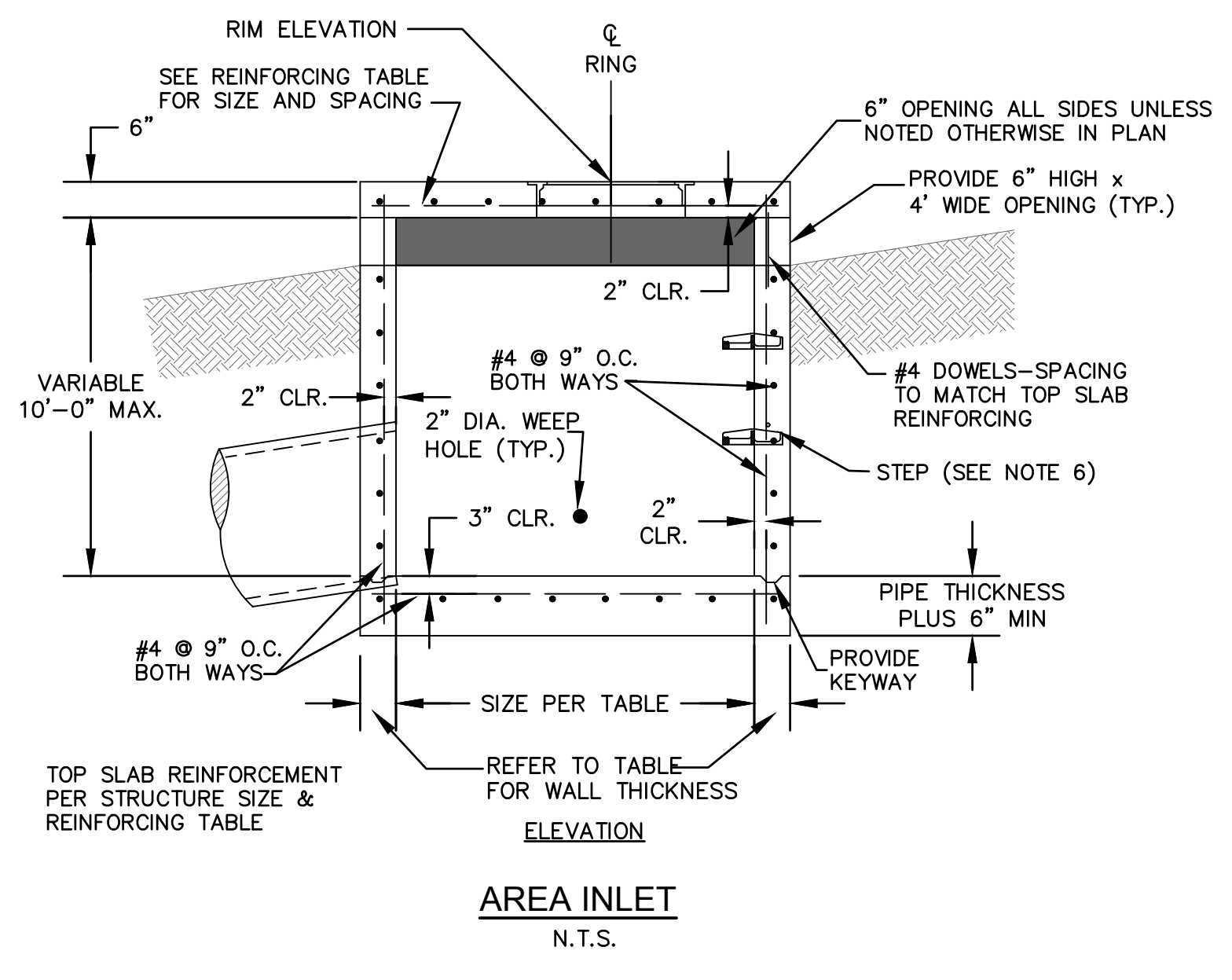


PLAN VIEW

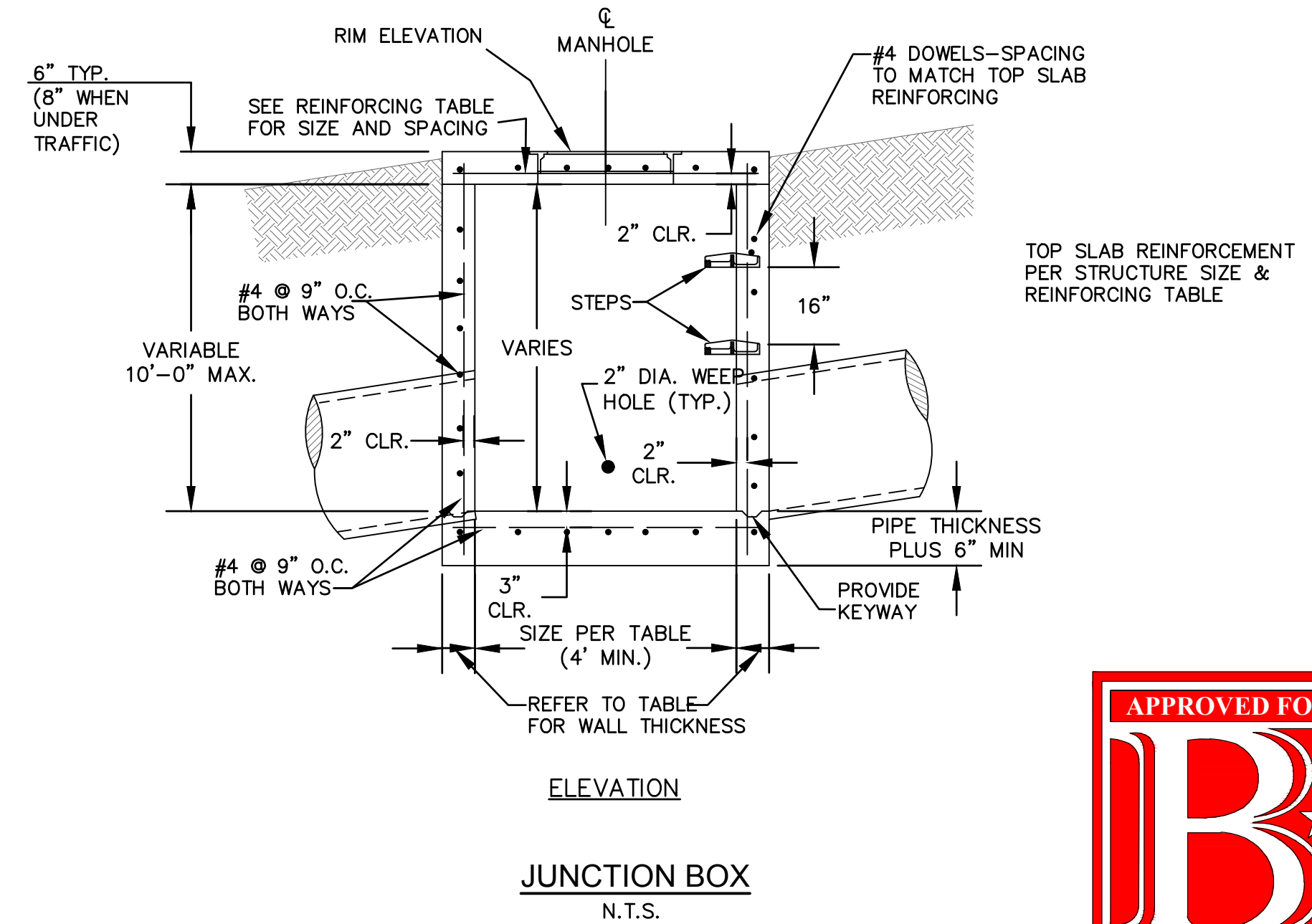


GRATE INLET
N.T.S.

NOTE: GRATES AND CASTINGS TO BE CONNECTED ON TOP OF LID WITH FLANGE, WHERE POSSIBLE, TO RECESS TOP OF CONCRETE STRUCTURE BELOW PAVEMENT OR FINISHED GRADE.



AREA INLET
N.T.S.



JUNCTION BOX
N.T.S.

NOTE: GRATES AND CASTINGS TO BE CONNECTED ON TOP OF LID WITH FLANGE, WHERE POSSIBLE, TO RECESS TOP OF CONCRETE STRUCTURE BELOW PAVEMENT OR FINISHED GRADE.



REV. NO.	DATE	REVISIONS DESCRIPTION	BY

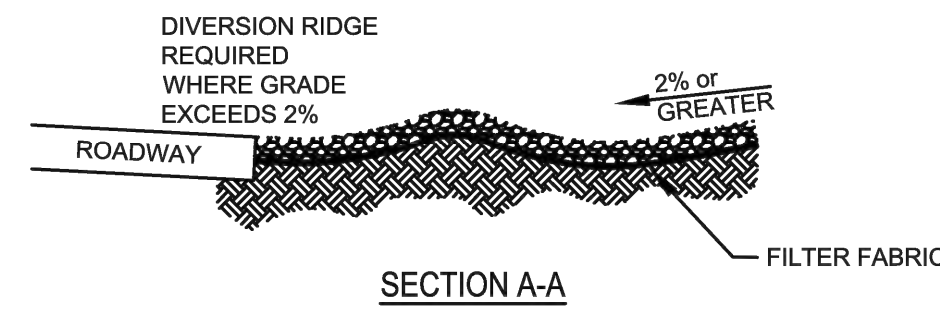
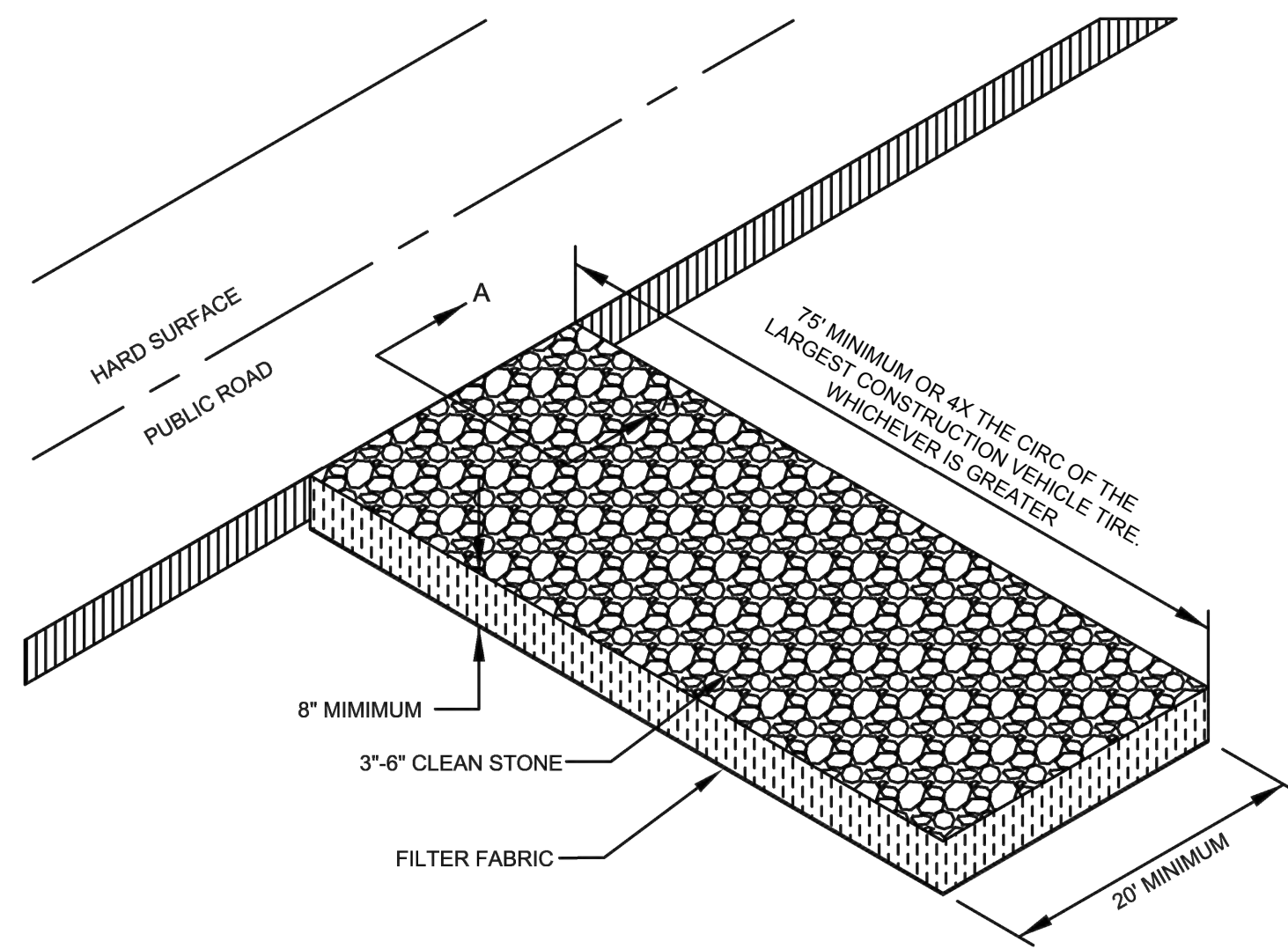
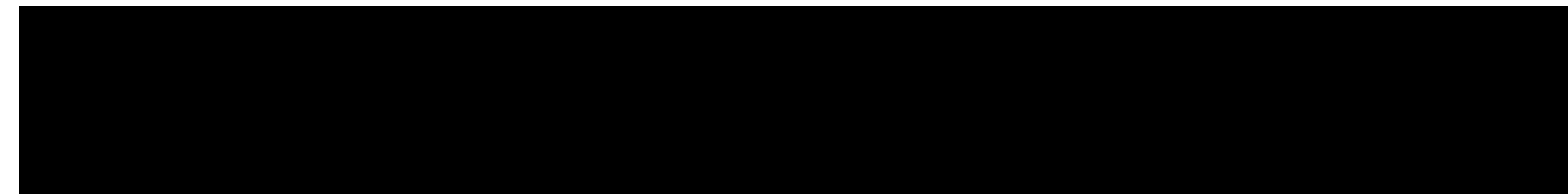
DETAIL SHEET
 SW 10TH STREET & SW F STREET
 STORMWATER IMPROVEMENTS
 BENTONVILLE, AR
 2023



drawn by: KTF
 checked by: JDA
 approved by: EJS
 QA/QC by: EJS
 project no.: 021-04210-G
 drawing no.: W_DTL01_G2104210
 date: 09.13.2023

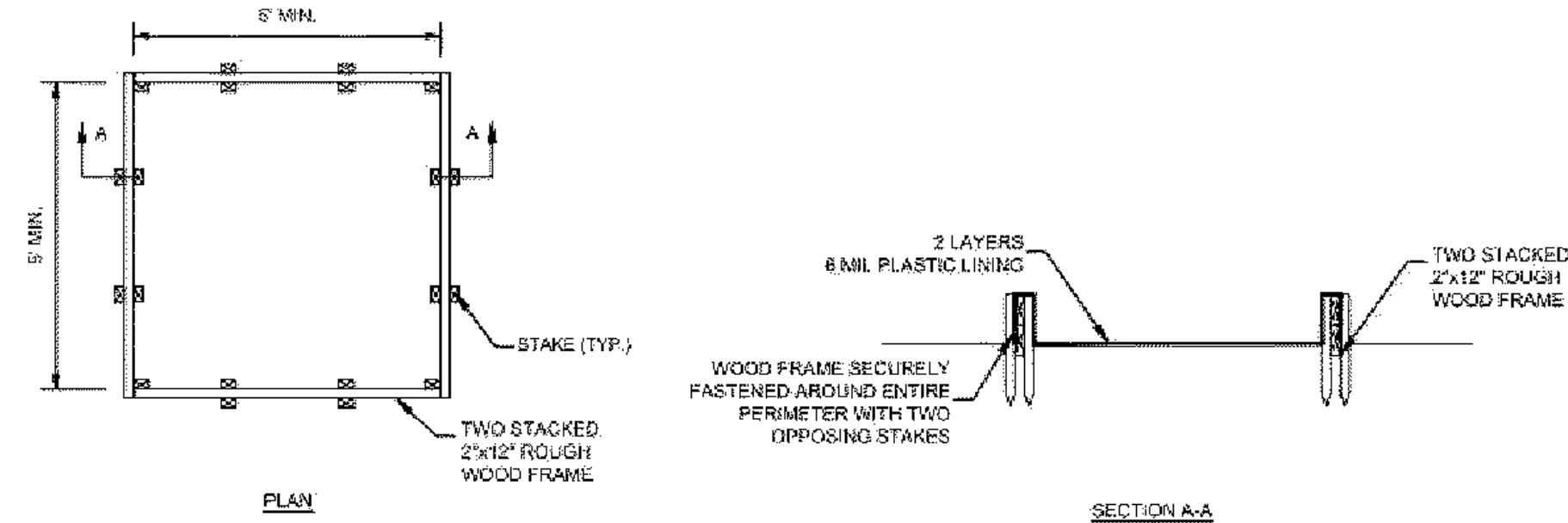
DWG: F:\2021\04001-04500\021-04210-G\40-Design\AutoCAD\Final Plans\Sheets\WTR\W_DTL_ERC_G2104210.dwg
 DATE: Sep 13, 2023 10:51am XREFS: W_P_TBLK_G2104210

USER: nmenead

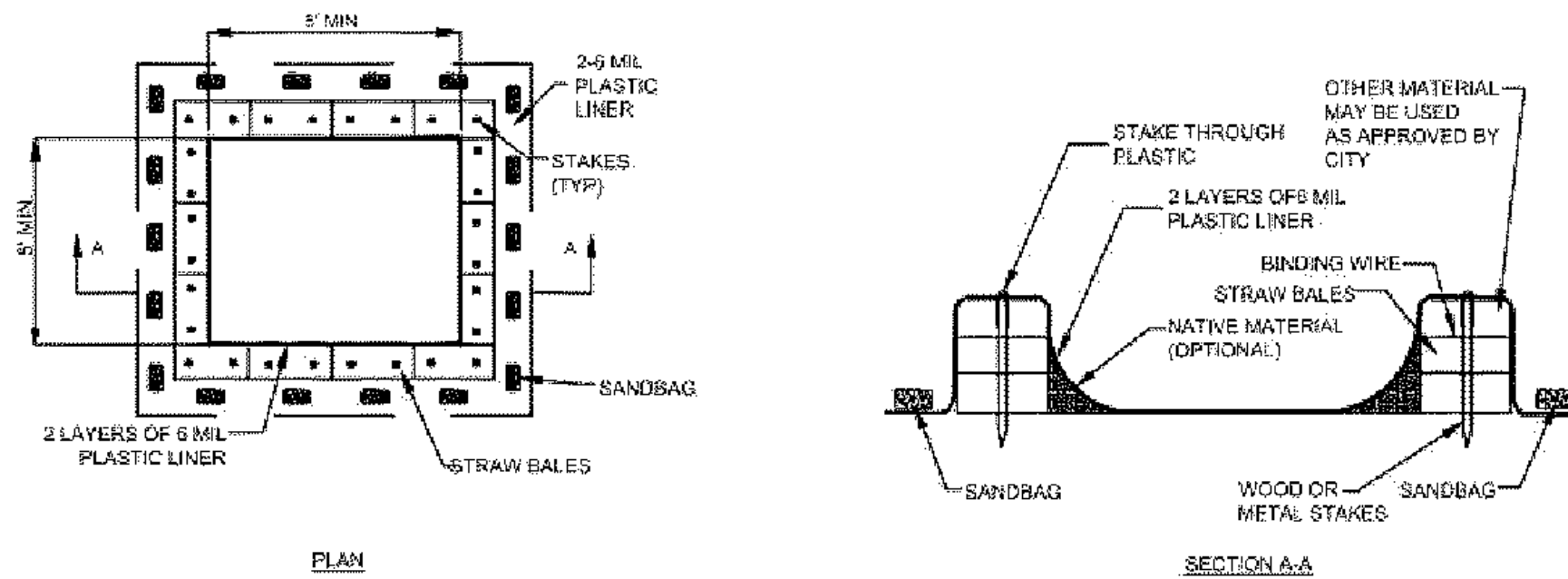


- NOTES:**
1. REPLACE CONTAMINATED STONE AS REQUIRED TO PREVENT TRACKING OF SEDIMENT OR MUD ON PUBLIC STREETS.
 2. CLEAN STREETS DAILY WITH BROOM (NO POWER BROOM) AND SHOVEL. THE USE OF WATER IS PROHIBITED.
 3. ALL VEHICLES MUST USE CONSTRUCTION EXIT.
 4. IF WHEEL WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

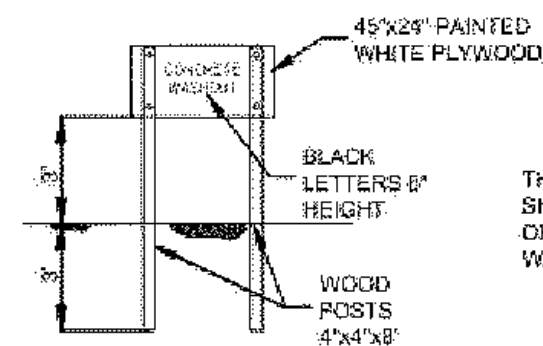
STABILIZED CONSTRUCTION EXIT
NOT TO SCALE



TIMBER CONCRETE WASHOUT

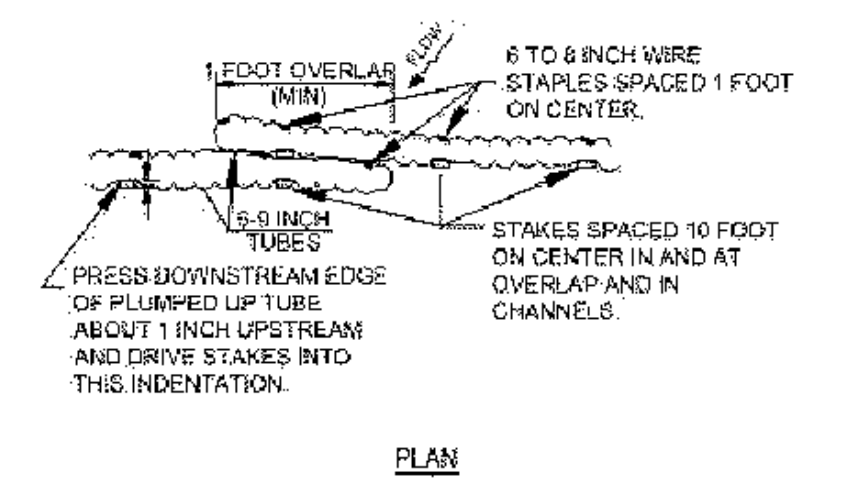
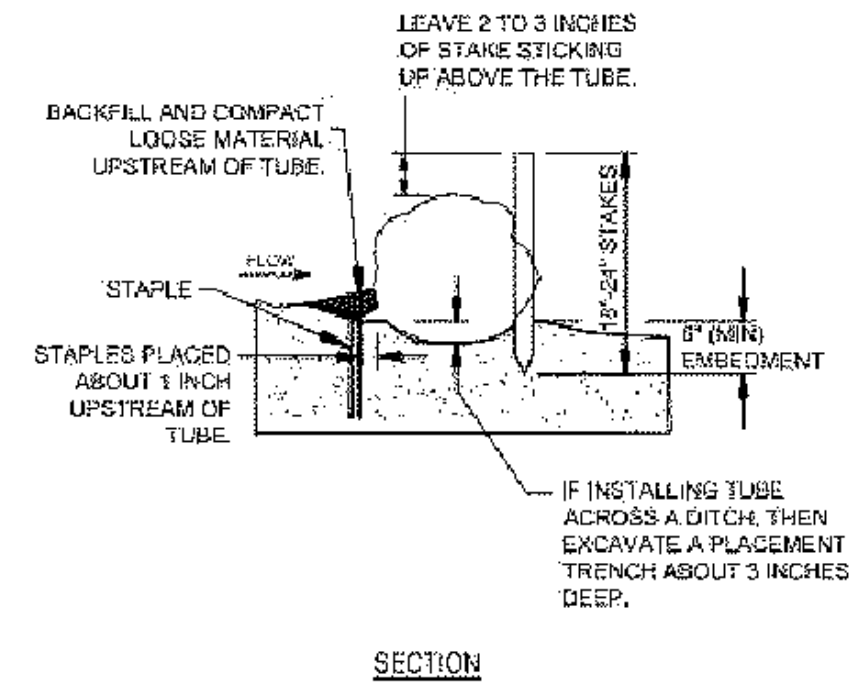


STRAW CONCRETE WASHOUT



CONCRETE WASHOUT SIGN DETAIL

CONCRETE WASHOUT
NOT TO SCALE



GENERAL GUIDELINES FOR SPACING OF TUBES FOR CHANNEL INSTALLATIONS	
SLOPE	TUBE INTERVAL
1% - 1V	15 FEET
2% - 1V	25 FEET
3% - 1V	35 FEET
4% - 1V	50 FEET

GENERAL GUIDELINES FOR SPACING OF TUBE TRENCHES FOR CHANNEL INSTALLATIONS	
SLOPE	TUBE INTERVAL
2%	25 FEET

EXAMPLES OF ACCEPTABLE COMMERCIALY AVAILABLE SEDIMENT LOGS ARE:

1. SALT SOCK
2. BIO RED
3. EROSION EEL

SEDIMENT LOG MAINTENANCE AND INSTALLATION NOTES:

1. SEDIMENT LOGS SHALL BE INSPECTED ALONG ITS ENTIRETY AND MUST BE CLEANED WHEN SEDIMENT HAS ACCUMULATED TO ONE-THIRD THE HEIGHT OF THE SEDIMENT LOG. MAINTENANCE CLEANOUT MUST BE CONDUCTED REGULARLY TO PREVENT ACCUMULATED SEDIMENTS FROM REACHING ONE-THIRD THE HEIGHT OF THE SEDIMENT LOG.
2. SPECIAL ATTENTION SHOULD BE PAID TO ENSURE THAT NO UNDERMINING OF SEDIMENT LOG HAS OCCURRED AND THAT NO BYPASS IS OCCURRING AT JOINING SECTIONS.
3. IF EXCESS SEDIMENT IS ACCUMULATING IN ANY SECTION OF A SEDIMENT LOG, THE CONTRACTOR SHOULD IMPLEMENT ADDITIONAL UPSTREAM STABILIZATION MEASURES OR ADDITIONAL BMPs TO PREVENT EXCESSIVE BUILDUP ON SEDIMENT LOG.
4. SEDIMENT LOG SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED (RUN OVER OR FLATTENED).
5. TUBES MAY BE INSTALLED BEFORE OR AFTER THE INSTALLATION OF ROLLED EROSION CONTROL PRODUCTS. BEFORE INSTALLATION OF TUBE, SMOOTH AND SHAPE EARTH SURFACE AND REMOVE ALL STONES, ROOTS, OR OTHER DEBRIS GREATER THAN 2 INCHES IN DIAMETER.
6. SEDIMENT LOGS SHALL HAVE A MIN. WEIGHT PER LINEAR FOOT OF 4.5 LBS AND SHALL EXCLUDE STRAW OR SAND MEDIA.

SEDIMENT LOG DETAIL
NOT TO SCALE



11/28/2023 8:38:43 AM



olsson

307 East Millisp Road
Fayetteville, AR 72703
TEL 479.443.3404
www.olsson.com

REV. NO.	DATE	REVISIONS DESCRIPTION

DETAIL SHEET
 SW 10TH STREET & SW F STREET
 STORMWATER IMPROVEMENTS
 BENTONVILLE, AR
 2023

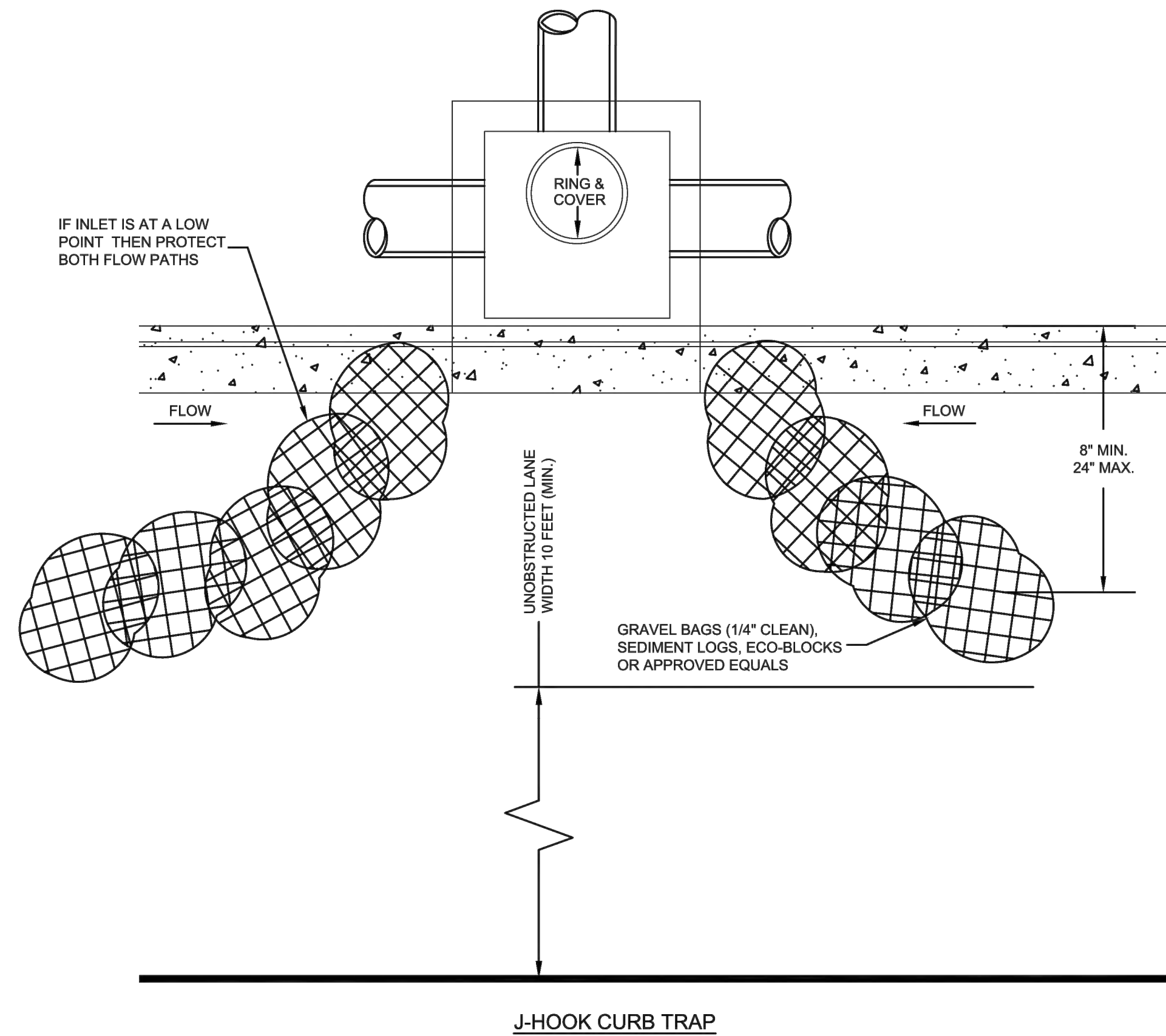
drawn by: KTF
 checked by: JDA
 approved by: EJS
 QA/QC by: EJS
 project no.: 021-04210-G
 drawing no.: W_DTL_ERC_G2104210
 date: 09.13.2023

DWG: F:\2021\04001-04500\021-04210-G-40-Design\AutoCAD\Final Plans\Sheets\WTRS\W_DTL_ERC_G2104210.dwg
 DATE: Sep 13, 2023 10:51am
 USER: nmenead
 XREFS: W_P_TBLK_G2104210



olsson

302 East Millers Road
 Fayetteville, AR 72703
 TEL 479.443.3404
 www.olsosn.com

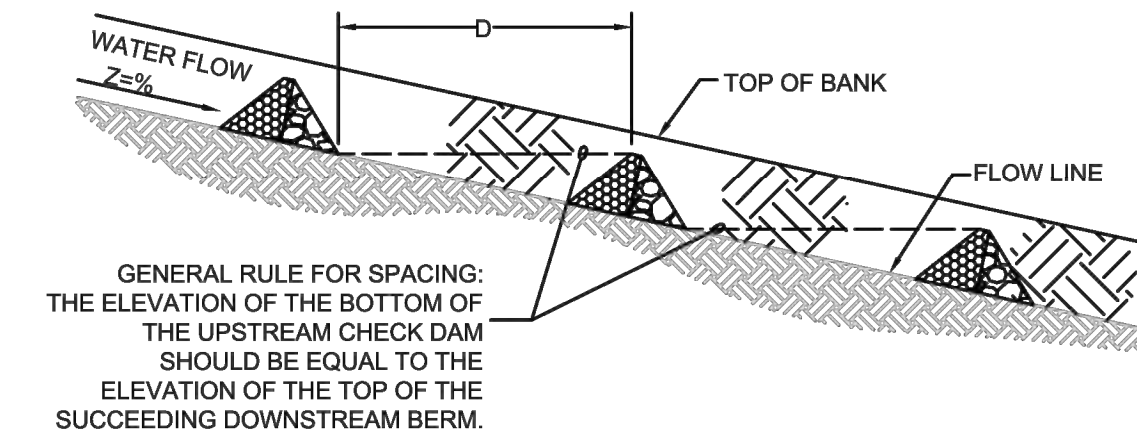


MAINTENANCE NOTES:

1. INLET PROTECTION DEVICES MUST BE INSPECTED FOR SEDIMENT ACCUMULATION WITHIN THE CATCH BASIN OR UPGRADIENT OF THE INLET.
2. ANY SEDIMENT ACCUMULATED IN OR ADJACENT TO A STORM DRAIN INLET MUST BE REMOVED AS SOON AS PRACTICABLE BUT NOT LATER THAN 3 DAYS AFTER DISCOVERY.
3. INLET PROTECTION DEVICES SHALL BE INSPECTED FOR UNINTENDED BYPASS OR IMPROPER FLOW-RATES THAT MAY CAUSE DOWNSTREAM FLOODING.
4. CONTACT THE CITY INSPECTOR FOR ALTERNATE INLET PROTECTION IF THE DESIGNED PROTECTION MAY IMPACT DOWNSTREAM BMPS, ADJACENT SLOPES, ETC., DUE TO PONDING ISSUES. ENSURE THAT NO UNDERMINING OF INLET PROTECTION DEVICES HAS OCCURRED.
5. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING OR DETERIORATION.

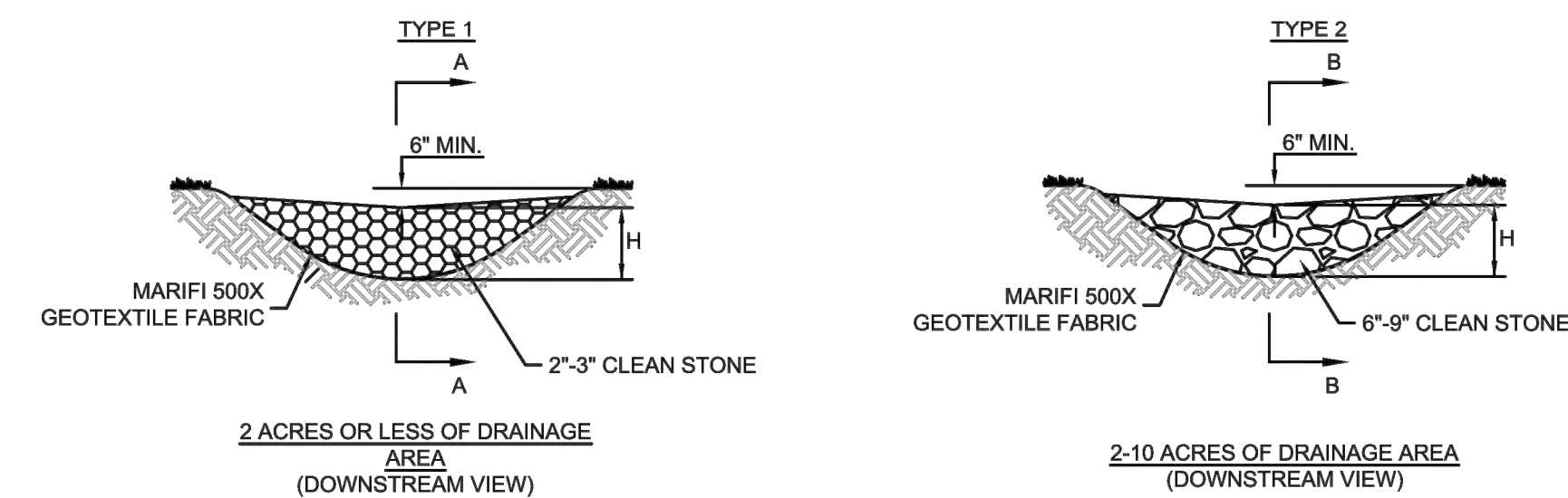
J-HOOK CURB INLET PROTECTION DEVICE

NOT TO SCALE



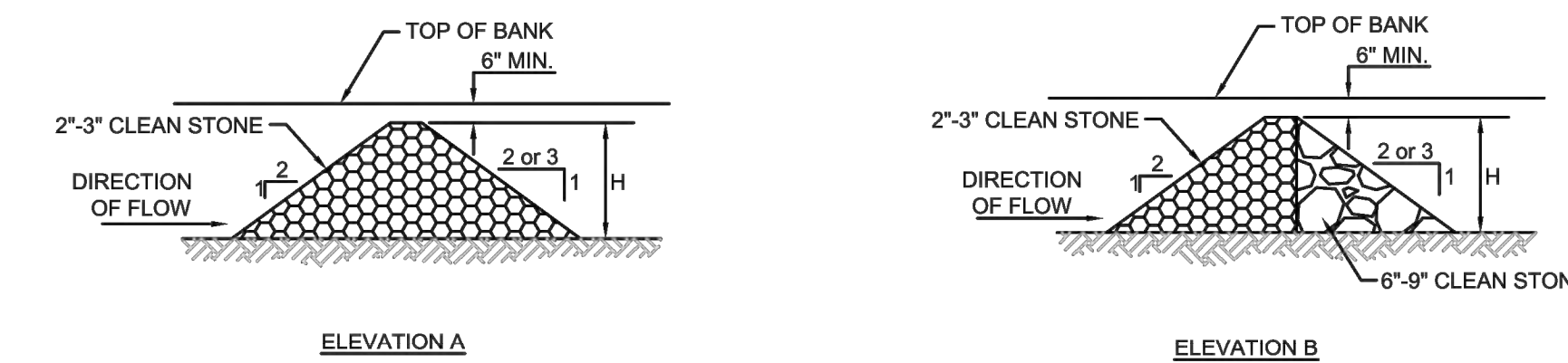
GENERAL RULE FOR SPACING:
 THE ELEVATION OF THE BOTTOM OF
 THE UPSTREAM CHECK DAM
 SHOULD BE EQUAL TO THE
 ELEVATION OF THE TOP OF THE
 SUCCEEDING DOWNSTREAM BERM.

CHECK DAMS IN SWALE



2 ACRES OR LESS OF DRAINAGE AREA (DOWNSTREAM VIEW)

2-10 ACRES OF DRAINAGE AREA (DOWNSTREAM VIEW)



ELEVATION A

ELEVATION B

INSTALLATION NOTES:

1. STONES SHOULD BE PLACED UP THE CHANNEL BANKS TO PREVENT WATER FROM CUTTING AROUND THE DITCH CHECK.
2. INSTALLATION SHALL BE PLACED EITHER BY HAND OR MECHANICALLY (NOT JUST DUMPED) TO ACHIEVE COMPLETE COVERAGE OF THE DITCH AND ENSURE THE CENTER OF THE DAMN IS LOWER THAN THE EDGES.
3. MAXIMUM SPACING BETWEEN MULTIPLE DAMS SHOULD BE SUCH THAT THE TOE OF THE UPSTREAM CHECK IS THE SAME AS THE TOP OF THE DOWNSTREAM CHECK.

INSPECTION NOTES:

4. SEDIMENT SHOULD BE REMOVED WHEN IT REACHES 1/2 THE ORIGINAL CHECK HEIGHT.
5. IN THE CASE OF GRASS-LINED DITCHES OR SWALES, ROCK DITCH CHECKS SHOULD BE REMOVED WHEN THE GRASS HAS MATURED SUFFICIENTLY TO PROTECT THE DITCH OR SWALE, IF THE SLOPE IS 4% OR LESS.
6. THE AREA BENEATH THE ROCK DITCH CHECKS SHOULD BE SEEDED AND MULCHED IMMEDIATELY AFTER THE CHECK DAM REMOVAL.

ROCK CHECK DAM

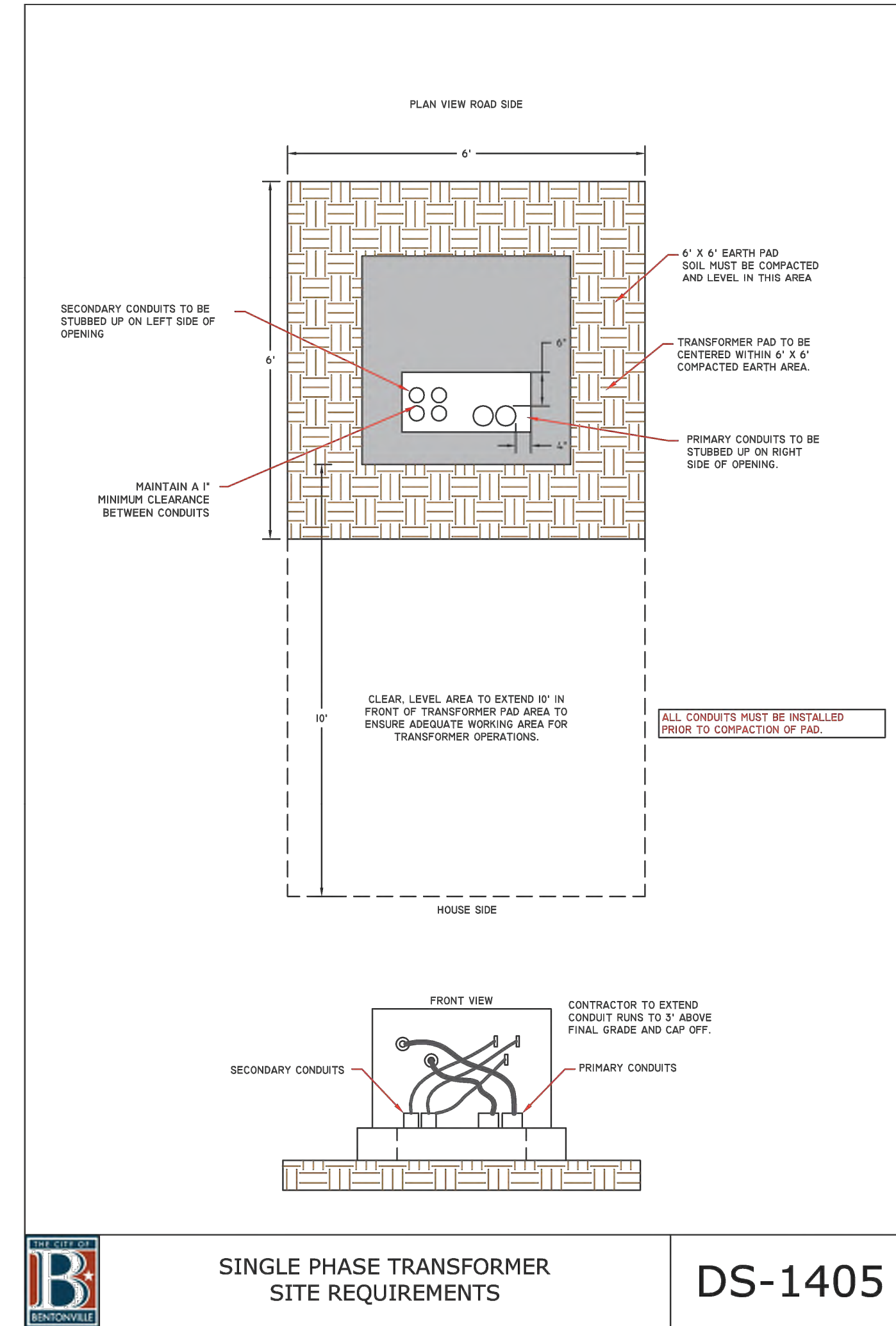
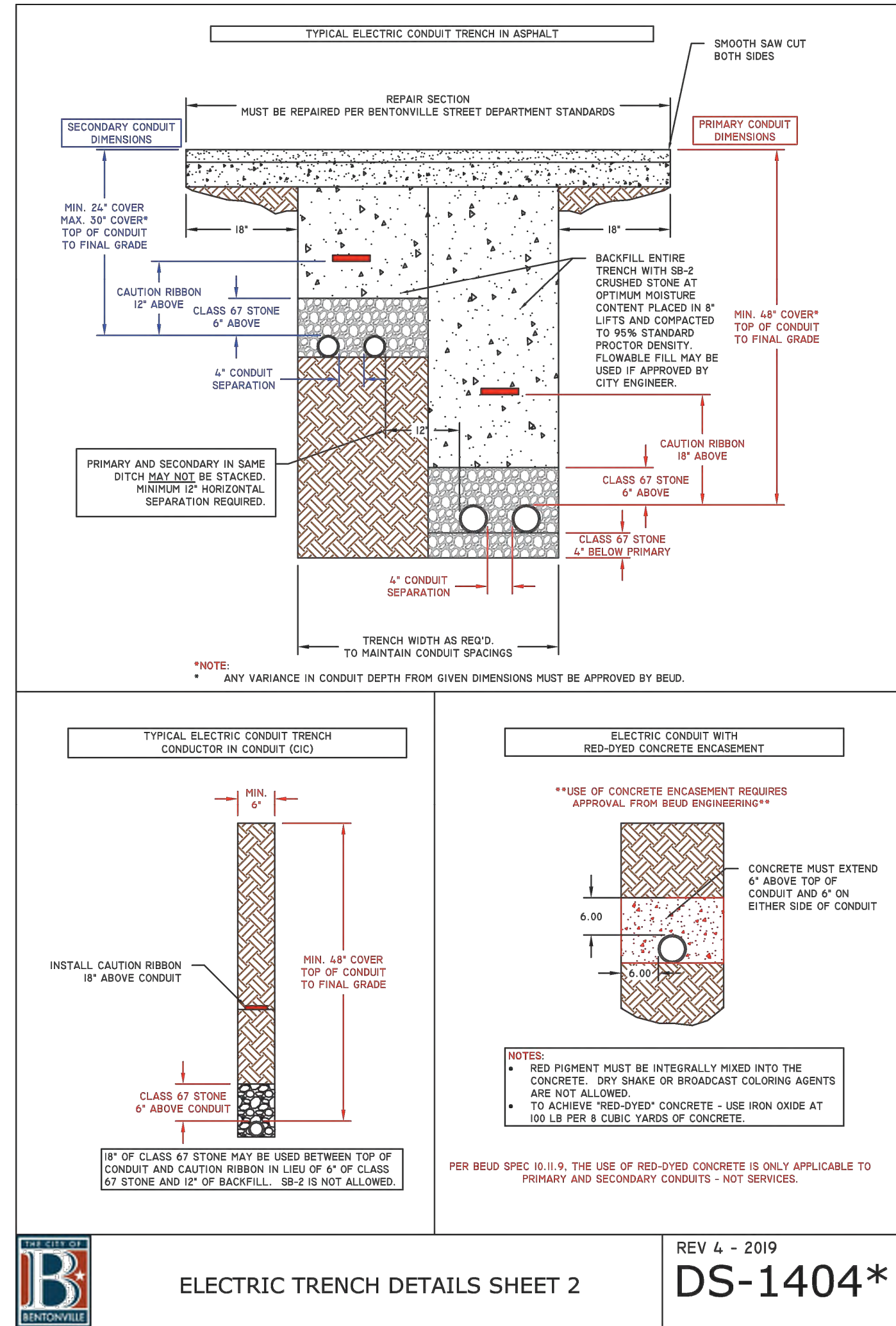
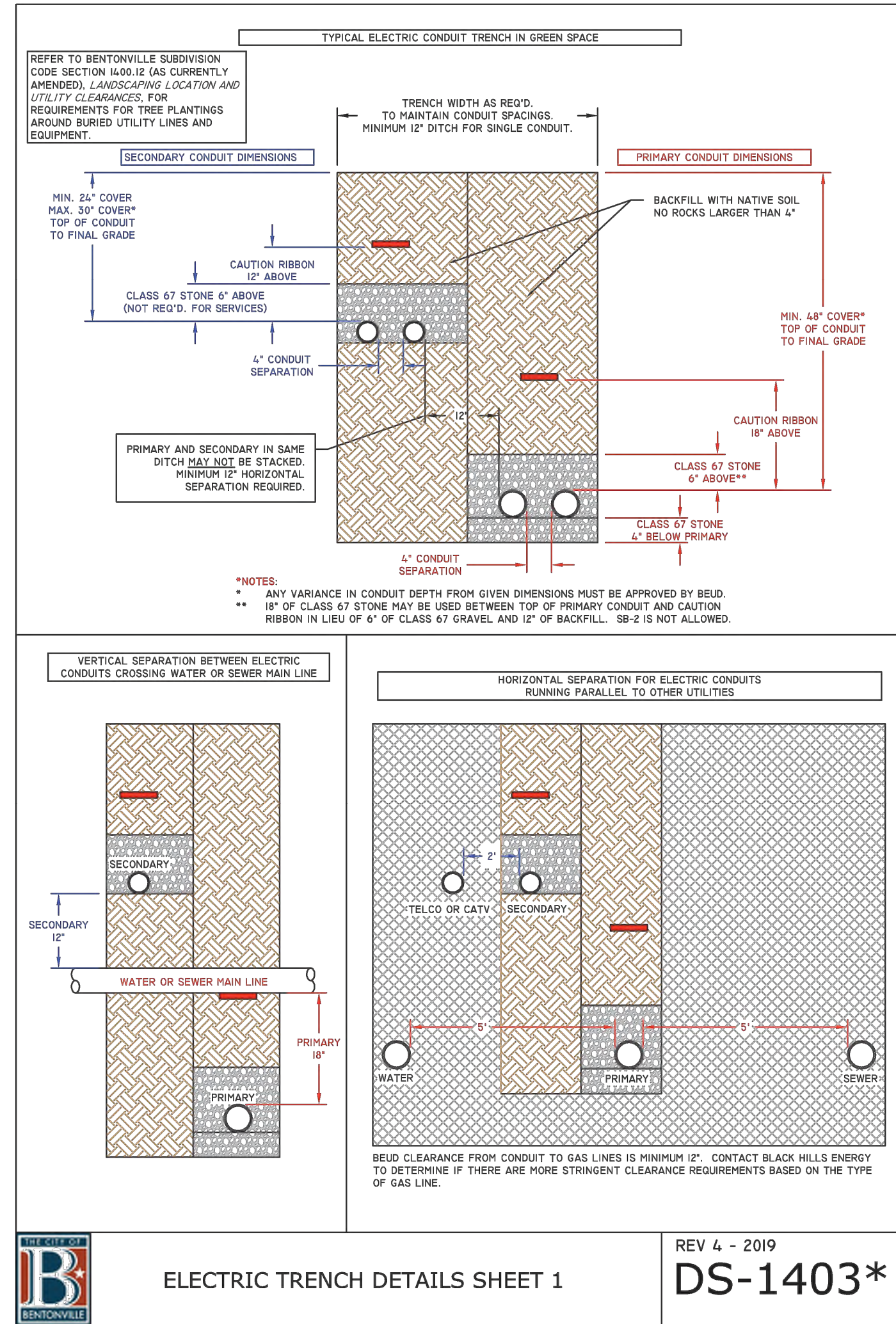
NOT TO SCALE

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

DETAIL SHEET	SW 10TH STREET & SW F STREET STORMWATER IMPROVEMENTS	2023
	BENTONVILLE, AR	REVISIONS

drawn by:	KTF
checked by:	JDA
approved by:	EJS
QA/QC by:	EJS
project no.:	021-04210-G
drawing no.:	W_DTL_ERC_G2104210
date:	09.13.2023

DWG: F:\2021\04001-04500\021-04210-G\40-Design\AutoCAD\Final Plans\Sheets\WTRS\W_ELC01_G2104210.dwg
 DATE: Sep 13, 2023 10:52am XREFS: E_PTBK_G2104210 USER: nmcneal



REFERENCE DOCUMENTS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

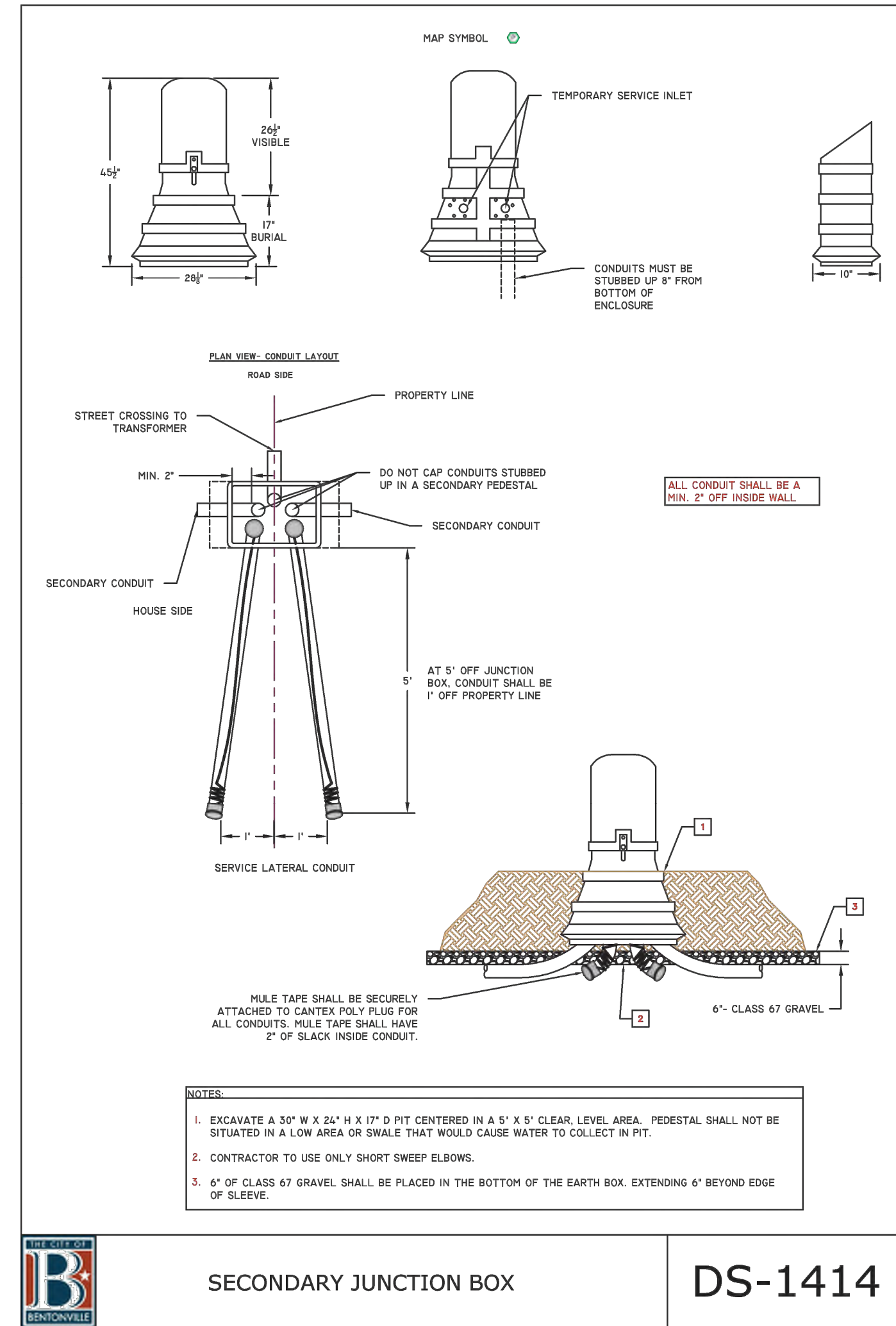
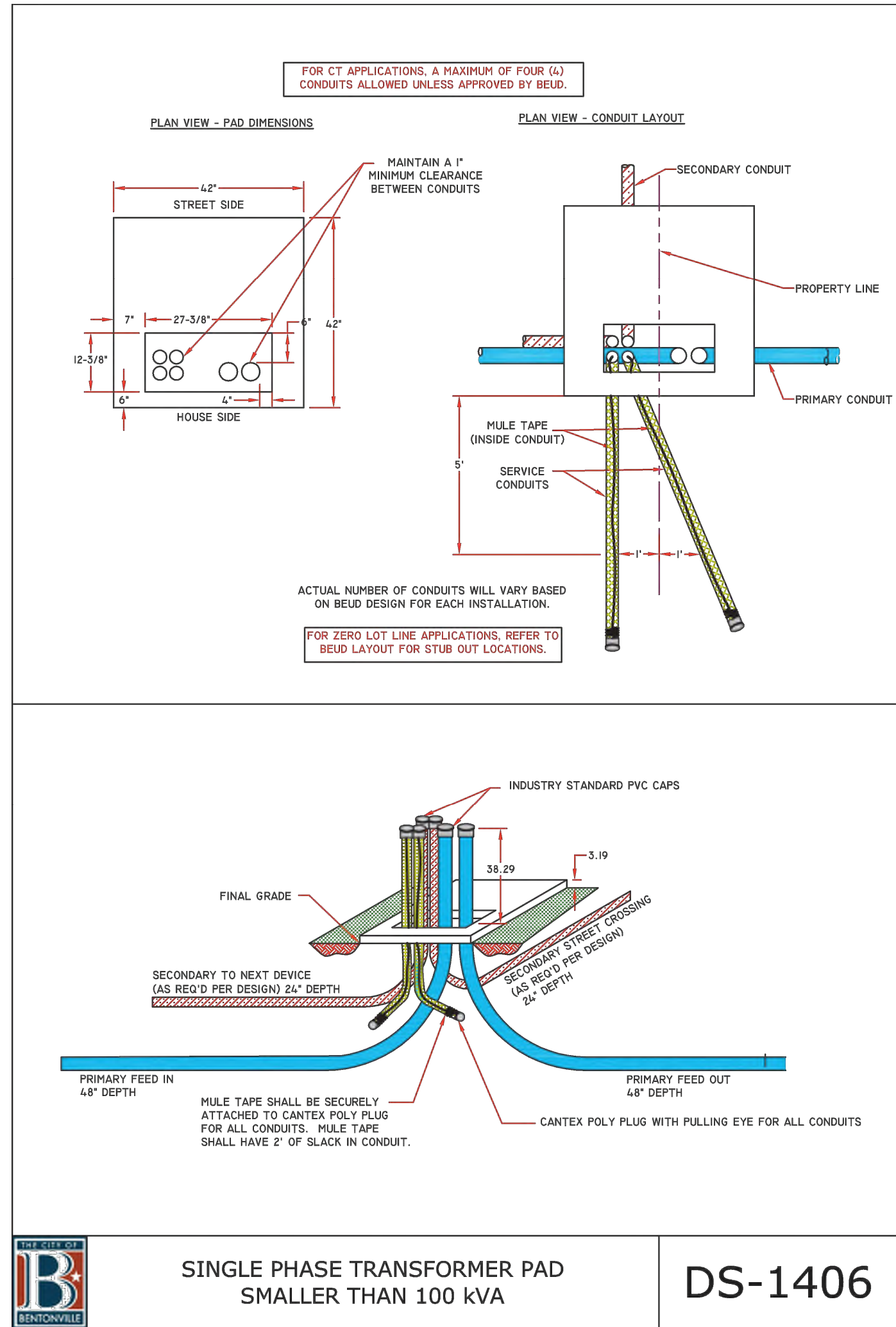
ELC DETAIL SHEET

SW 10TH STREET & SW F STREET
 STORMWATER IMPROVEMENTS

BENTONVILLE, AR

2023

drawn by: _____
 checked by: _____
 approved by: _____
 QA/QC by: _____
 project no.: 021-04210-G
 drawing no.: W_ELC01_G2104210
 date: 03.10.2023



olsson

302 East Millisp Road
 Fayetteville, AR 72703
 TEL 479.443.3404
 www.olsson.com

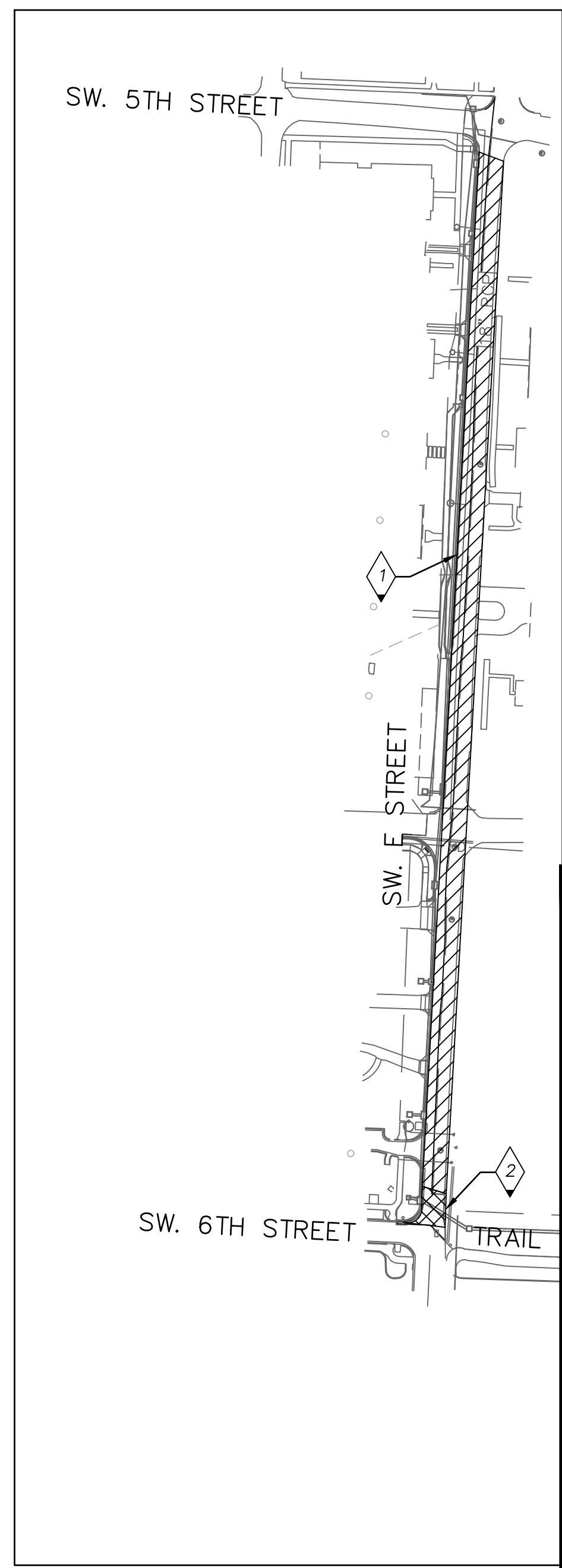
REFERENCE DOCUMENTS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

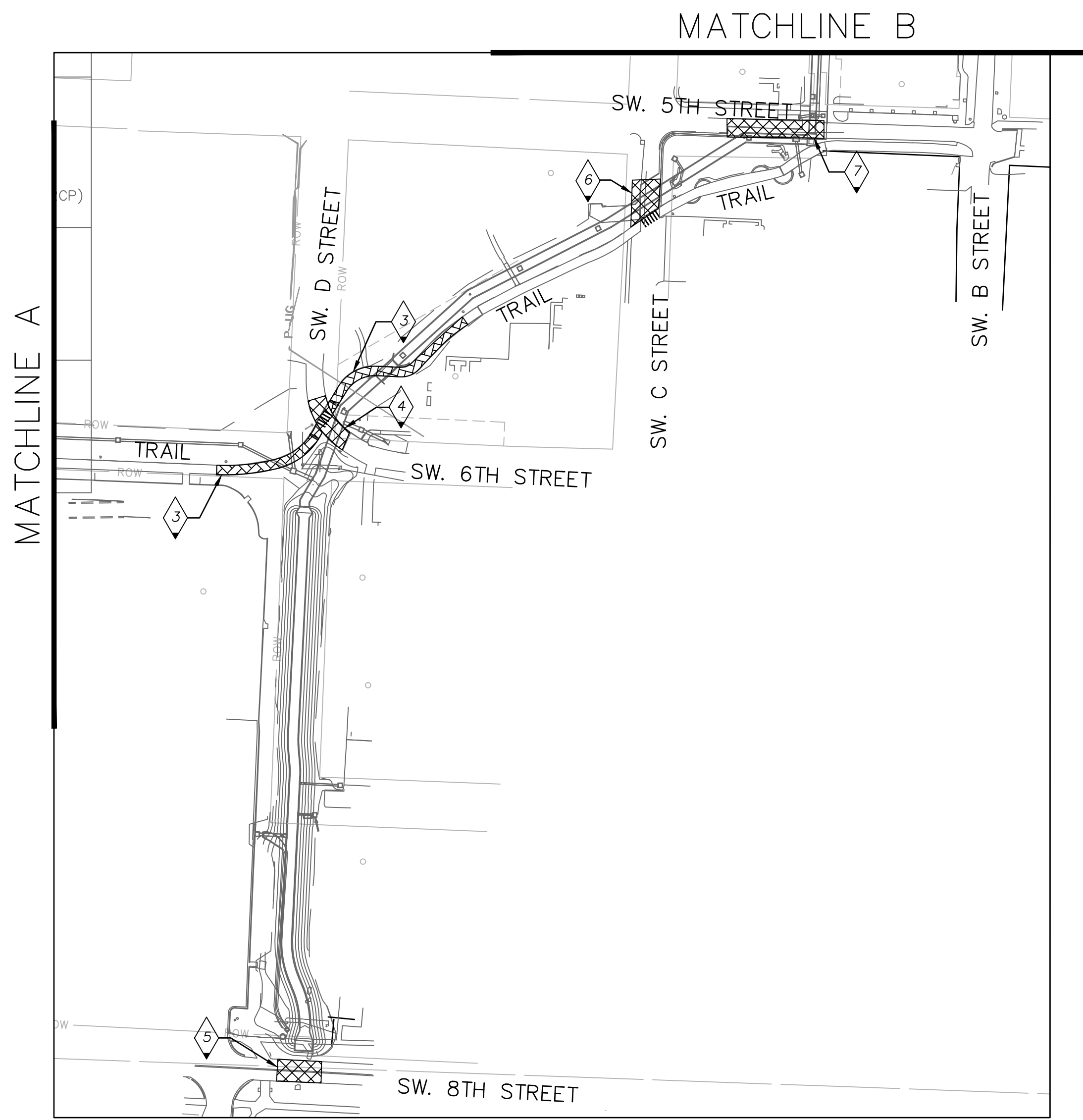
REV. NO.	DATE	REVISIONS DESCRIPTION	BY

drawn by: _____
 checked by: _____
 approved by: _____
 QA/QC by: _____
 project no.: 021-04210-G
 drawing no.: W_ELC01_G2104210
 date: 03.10.2023

DWG: F:\2021\04001-04500\021-04210-G\40-Design\AutoCAD\Final_Plans\Sheets\TRFC\F - TRFC_0214210.dwg
 DATE: Sep 13, 2023 10:53am XREFS: F_PTBK_G2104210 W_PBASE_G2104210 V_XBNDY_G2104210 V_XTOPO_G2104210 W_PSURE_G2104210 W_PPipe_G2104210 W_XTOPO_G2104210
 USER: nmccneel

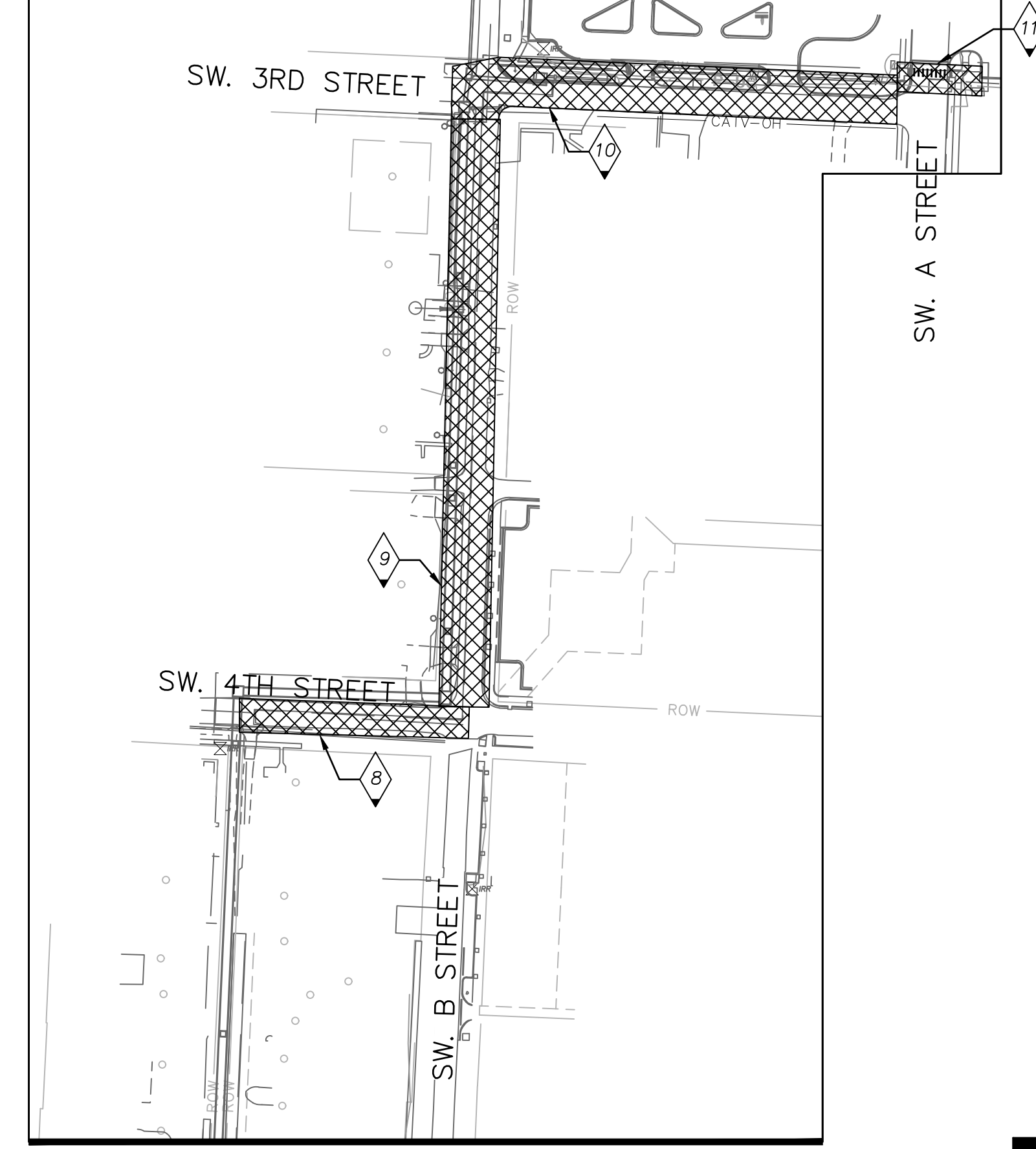


MATCHLINE A

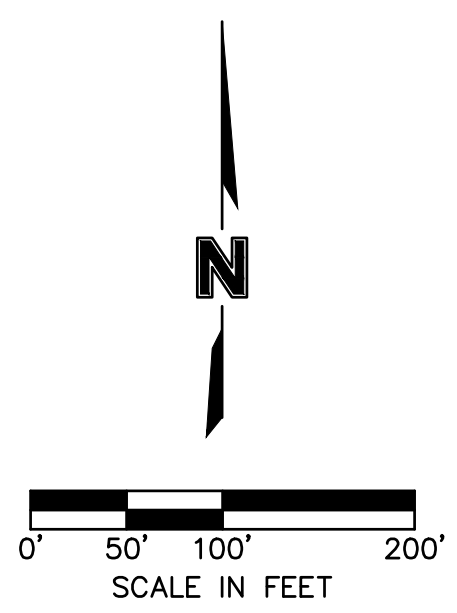


MATCHLINE A

MATCHLINE B



MATCHLINE B



CONSTRUCTION NOTES:

- 1 LANE CLOSURE OF SW. E ST WITH FLAGGER OPERATIONS. SEE DETAIL 1 ON SHEET 21.
- 2 FULL CLOSURE OF SW. E ST FOR STORM INSTALLATION. SEE DETAIL 4 ON SHEET 21. PLACE BARRICADES AT SW 5TH STREET AND SW 6TH SREET INTERSECTIONS WITH SW E STREET. NO DETOUR SIGNING REQUIRED.
- 3 PARTIAL OR FULL TRAIL CLOSURE AS NEEDED FOR STORM INSTALLATION. SEE DETAIL 5 ON SHEET 21.
- 4 FULL CLOSURE OF SW. 6TH ST FOR STORM INSTALLATION. SEE DETAIL 4 ON SHEET 21. PLACE BARRICADES AT SW 5TH STREET WITH SW D STREET AND SW 6TH STREET WITH SW C STREET INTERSECTIONS. NO DETOUR SIGNING REQUIRED.
- 5 FULL CLOSURE OF SW. 8TH ST FOR STORM INSTALLATION. WORK TO BE PHASED TO PROVIDE ONE LANE OF TRAFFIC. SEE DETAIL 1 ON SHEET 21.
- 6 FULL CLOSURE OF SW. C ST FOR STORM INSTALLATION. SEE DETAIL 4 ON SHEET 21. PLACE BARRICADES AT SW 5TH STREET AND SW 6TH STREET INTERSECTIONS WITH SW E STREET. NO DETOUR SIGNING REQUIRED.
- 7 FULL CLOSURE OF SW. 5TH ST FOR STORM INSTALLATION. SEE DETAIL 4 ON SHEET 21. PLACE BARRICADES AT SW 5TH STREET INTERSECTIONS WITH SW C STREET AND SW B STREET. NO DETOUR SIGNING REQUIRED.
- 8 FULL CLOSURE OF SW. 4TH ST FOR STORM INSTALLATION. SEE DETAIL 4 ON SHEET 21. PLACE BARRICADES AT SW 4TH STREET INTERSECTIONS WITH SW C STREET AND SW B STREET. NO DETOUR SIGNING REQUIRED.
- 9 FULL CLOSURE OF SW. B ST FOR STORM INSTALLATION. SEE DETAIL 4 ON SHEET 21. PLACE BARRICADES AT SW B STREET INTERSECTIONS WITH SW 3RD STREET AND SW 4TH STREET. NO DETOUR SIGNING REQUIRED.
- 10 FULL CLOSURE OF SW. 3RD ST FOR STORM INSTALLATION. SEE DETAIL 4 ON SHEET 21. PLACE BARRICADES AT SW 3RD STREET INTERSECTIONS WITH SW B STREET AND SW A STREET. NO DETOUR SIGNING REQUIRED.
- 11 FULL CLOSURE OF SW. A ST FOR PROPOSED WATERLINE INSTALLATION. SEE DETAIL 5 ON SHEET 21 SIDEWALK CLOSURE SIGNAGE. PLACE BARRICADES AT SW A STREET INTERSECTIONS WITH SW 4TH STREET AND SW HENRY STREET. DETOUR VEHICLES TO MAIN STREET DURING CONSTRUCTION OF PROPOSED WATER LINE.

GENERAL NOTES:

1. ROADWAY CLOSURES SHALL OCCUR IN STAGES AND/OR TEMPORARY ACCESS PROVIDED SO THAT PRIVATE ACCESS IS MAINTAINED AT ALL TIMES. CONTRACTOR TO DETERMINE CONSTRUCTION AND TEMPORARY TRAFFIC CONTROL SEQUENCING.
2. ALL TEMPORARY TRAFFIC CONTROL SHALL CONFORM TO THE STANDARDS OUTLINED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.) AND THE CITY OF BENTONVILLE "MINIMUM STANDARD SPECIFICATIONS FOR STREETS". WHERE THE CITY OF BENTONVILLE SPECIFICATIONS ARE NOT APPLICABLE, ARKANSAS DEPARTMENT OF TRANSPORTATION (ARDOT) STANDARDS SHALL ALSO APPLY.
3. ADDITIONAL REQUIREMENTS ON STANDARD TRAFFIC CONTROL DETAIL SHEETS PROVIDED HEREIN SHALL ALSO APPLY.
4. AS WITH ALL CONSTRUCTION ACTIVITIES, TRAFFIC SITUATIONS ARE SUBJECT TO CHANGE. ALTERNATE TRAFFIC CONTROL AND/OR DETOUR PLANS SHALL RECEIVE WRITTEN APPROVAL FROM THE CITY ENGINEER PRIOR TO COMMENCEMENT.
5. CONTRACTOR SHALL KEEP A SURFACED BIKE PATH OPEN FOR THE DOWNTOWN BIKE TRAIL. ALL ROADWAYS AND SIDEWALKS SHALL REMAIN OPEN TO THE PUBLIC EXCEPT FOR LIMITED CLOSURES OF NO MORE THAN 5 DAYS. TEMPORARY PAVEMENT MAY BE USED AT CONTRACTOR'S DISCRETION TO RESTORE ACCESS PRIOR TO PERMANENT PAVING. ONE ADDITIONAL CLOSURE OF NO MORE THAN 24 HOURS WILL BE ALLOWED FOR PERMANENT PAVEMENT REPLACEMENT.

LEGEND

- WORK AREA (FULL CLOSURE)
- WORK AREA (LANE CLOSURE)
- WORK AREA (PARTIAL OR FULL TRAIL CLOSURE)
- WORK AREA (PARTIAL PARKING LOT CLOSURE)

302 East Millisap Road
Fayetteville, AR 72703
TEL 479.443.3404
www.olsson.com

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

TRAFFIC CONTROL PLAN SHEET
TIGER BOULEVARD & G STREET

SW 3RD STREET & SW B STREET
IMPROVEMENTS

2023

BENTONVILLE, AR

drawn by: ERM
 checked by: JMP
 approved by: JSS
 QA/QC by: KJR
 project no.: 021-04210-G
 drawing no.: F_TRFC_0214210
 date: 03.10.2023

SHEET
15 of 71



11/28/2023 10:44 AM

ADVANCE DISTANCES (XXXX)

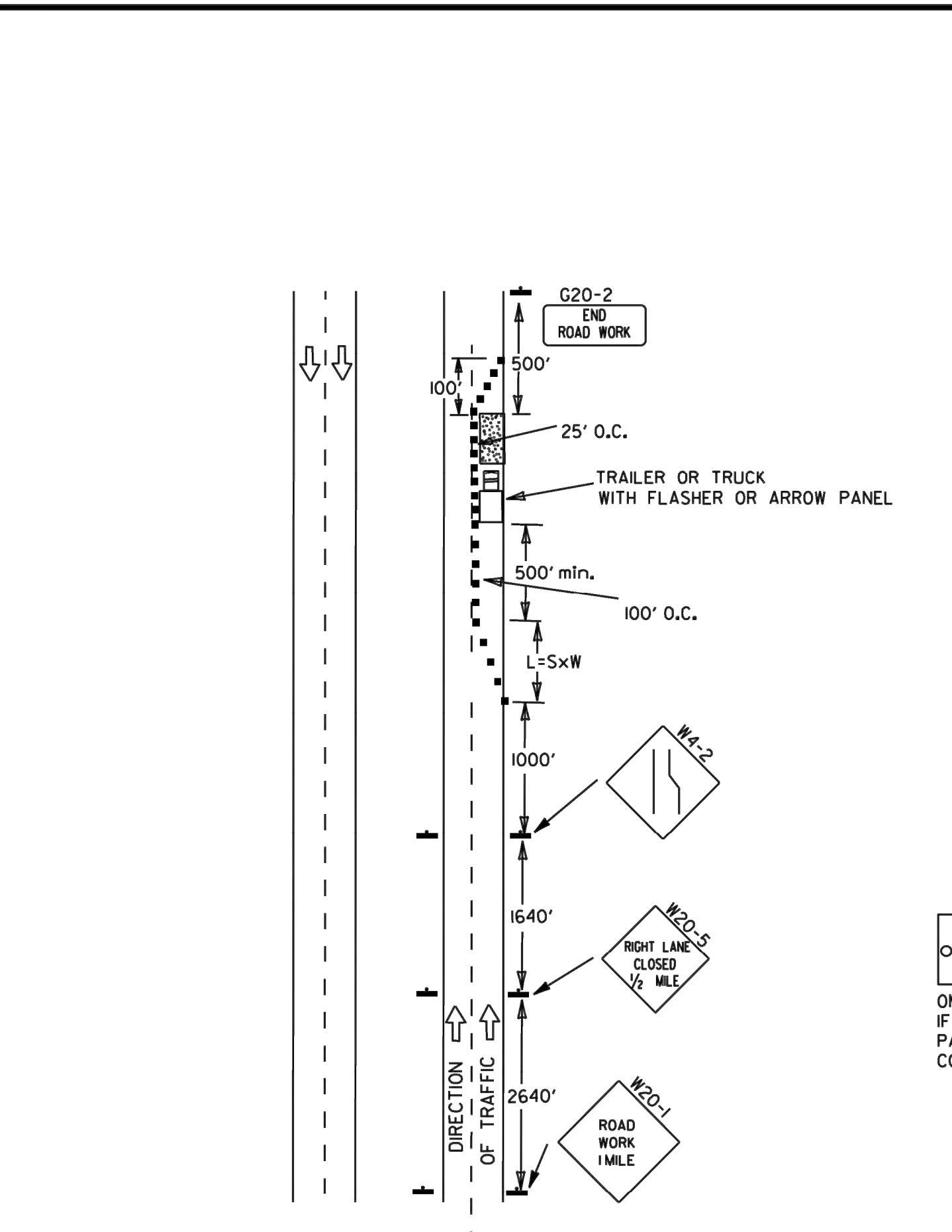
500 FT	1/2 MILE
1000 FT	3/4 MILE
1500 FT	1 MILE AHEAD

GENERAL NOTES:

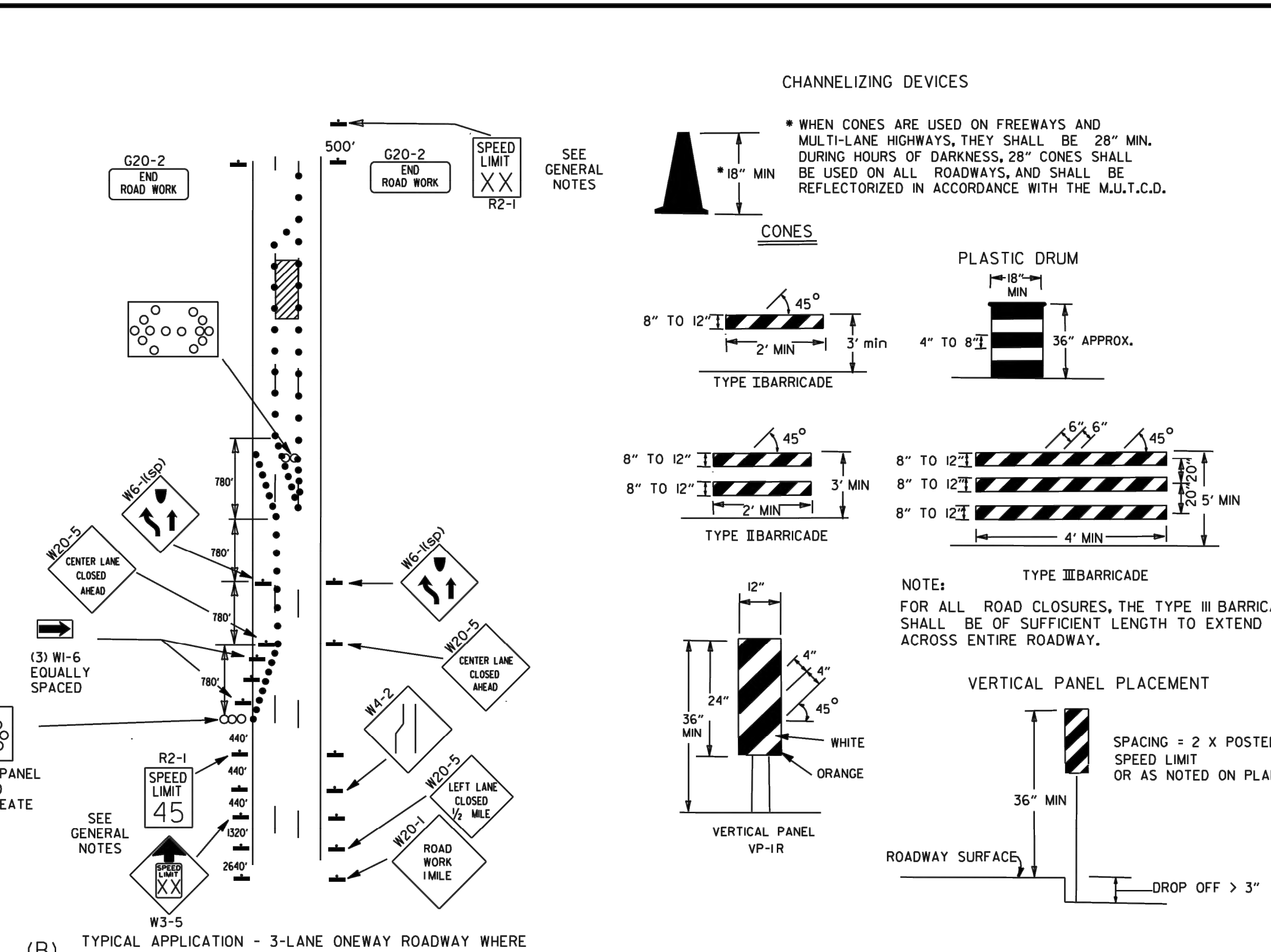
- ALL TRAFFIC CONTROL DEVICES USED ON ROAD CONSTRUCTION SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND TO THE STANDARD HIGHWAY SIGNS, LATEST EDITION, OR AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION.
 - TRAFFIC CONTROL DEVICES SHALL BE SET UP JUST BEFORE THE START OF CONSTRUCTION OPERATIONS AND SHALL BE PROPERLY MAINTAINED DURING THE TIME SUCH CONDITIONS EXIST. THEY SHALL REMAIN IN PLACE ONLY AS LONG AS NEEDED AND REMOVED THEREAFTER.
 - EXISTING SIGNS AND CONSTRUCTION SIGNS SHALL BE KEPT IN PROPER POSITION, AND BE CLEAN AND LEGIBLE AT ALL TIMES. SIGNS THAT DO NOT APPLY TO EXISTING CONDITIONS SHALL BE REMOVED. SIGNS THAT ARE DAMAGED, DEFACED, OR THAT ACCUMULATE DIRT DURING CONSTRUCTION SHALL BE CLEANED, REPAIRED, OR REPLACED.
 - SIGNS ARE USUALLY MOUNTED ON A SINGLE POST, ALTHOUGH THOSE WIDER THAN 36" OR LARGER THAN 10 SO. FT. SHALL BE MOUNTED ON TWO POSTS OR ABOVE A TYPE III BARRICADE.
 - SIGN POSTS DIRECT BURIED IN SOIL SHALL BE 2 LB. MINIMUM CHANNEL POST OR 4"x4" WOOD POSTS. CHANNEL POSTS SHALL BE PAINTED GREEN. WOOD POSTS SHALL BE PAINTED WHITE. ALL POSTS SHALL BE NEATLY CONSTRUCTED, AND SHALL BE REPLUMBED, CLEANED, OR REPAIRED AS NEEDED FOR THE DURATION OF THE JOB. THERE SHALL NOT BE MORE THAN 2 POSTS IN A 7' PATH FOR WOOD OR CHANNEL POSTS. ANY CHANNEL POST SPLICE SHALL BE IN ACCORDANCE WITH STANDARD DRAWING TC-3.
 - POST MOUNTED SIGNS IN RURAL AREAS SHALL BE CONSTRUCTED WITH THE NEAR EDGE OF THE SIGN FROM 6 TO 12 FEET FROM THE PAVEMENT EDGE. SIGNS IN URBAN AREAS AND BARRICADE MOUNTED SIGNS SHALL BE MOUNTED A MINIMUM OF 2 FEET FROM THE PAVEMENT EDGE.
 - ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN URBAN AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE. ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN RURAL AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE, EXCEPT A MINIMUM OF 6' SHALL BE USED WHEN MOUNTING AN ADVISORY SIGN BELOW A WARNING SIGN. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR INTERMEDIATE TERM STATIONARY WORK CONDITIONS. THE SIGNS MINIMUM MOUNTING HEIGHT SHALL BE 5'. RETROREFLECTIVE DEVICES SHALL BE USED. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR SHORT-TERM, SHORT DURATION, AND MOBILE CONDITIONS. THEY SHALL BE NO LESS THAN ONE (1) FOOT ABOVE THE TRAVELED WAY. LONG-TERM STATIONARY SIGNS SHALL BE DIRECT BURIED IN SOIL, UNLESS CONDITIONS NECESSITATE THE USE OF PORTABLE SIGNS, OR AS APPROVED BY THE ENGINEER. CONCRETE PADS, CONCRETE OR ROCK BALLAST, OR OTHER SOLID MATERIALS SHALL NOT BE UTILIZED WITH PORTABLE SIGN SUPPORTS.
 - FLAGGERS SHALL USE REFLECTORIZED STOP-SLOW PADDLES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.
 - MOST OF THE SIGNS SHOWN ARE ORIENTED TO THE RIGHT. HOWEVER, THIS DOES NOT PRECLUDE THE USE OF MIRROR IMAGES OF THESE SIGNS WHERE THE REVERSE ORIENTATION MIGHT BETTER CONVEY TO MOTORISTS THE PROPER DIRECTION OF MOVEMENT.
 - R55-1 SIGNS SHALL BE PLACED AT LEAST 1500' BUT NOT MORE THAN 1 MILE IN ADVANCE OF THE WORK ZONE. IF A SPEED LIMIT REDUCTION IS IN EFFECT, THE SIGN SHALL BE PLACED A MINIMUM OF 500' IN ADVANCE OF THE "REDUCED SPEED AHEAD" SIGN.
- NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) IS REQUIRED FOR ALL PROJECTS.

11-07-19	REVISED FOR MASH	
4-13-17	DELETED RSP-1 & ADDED W21-5a	
9-2-15	REVISED REDUCED SPEED LIMIT AHEAD SIGNS	
	REVISED ROAD WORK NEXT XX MILES	
12-15-11	REVISED W24-1	
11-17-10	DELETED W8-9g & ADDED W8-9	
10-15-09	ADDED REFERENCE TO MASH & ADDED SIGN W24-1	
4-17-08	REVISED SIGN DESIGNATIONS	
11-18-04	REVISED NOTES	
10-9-03	REVISED NOTE 1	
11-16-01	REVISED NOTE 7	
9-28-00	REVISED NOTE	
11-18-98	ADDED NOTE	
6-26-97	REVISED NOTE 5	
4-03-97	REVISED NOTE 5	
10-18-96	ADDED CONTROLLED ACCESS HWY. SIGN & TO NOTE 7	
10-12-95	ADDED R55-1	
6-8-95	REVISED TO CORRECT SIGN ILLUSTRATIONS	6-8-95
2-2-95	REVISED PER PART VI, MUTCD SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	
DATE	REVISION	FILMED

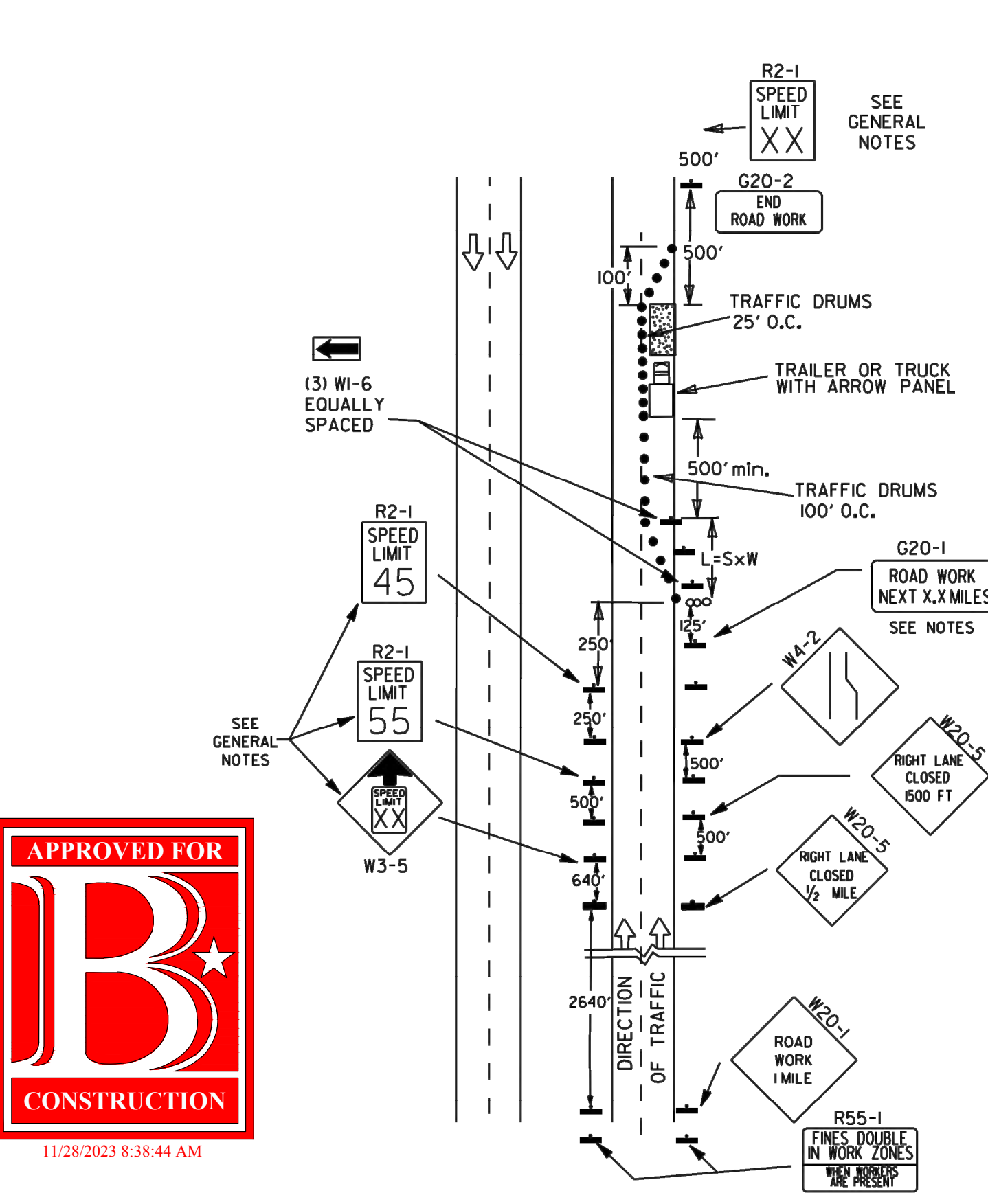
<p>RI-1</p> <p>STANDARD 30"x30" EXPRESSWAY 36"x36" SPECIAL 48"x48"</p>	<p>RI-2</p> <p>STD. 36"x36"x36" EXPWY. 48"x48"x48" FWY. 60"x60"x60"</p>	<p>R2-1</p> <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>W3-5</p> <p>STD. 36"x36" EXPWY. 48"x48" FWY. 48"x48"</p>	<p>W3-5a</p> <p>STD. 36"x36" EXPWY. 48"x48" FWY. 48"x48"</p>	<p>R4-1</p> <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>R4-2</p> <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	
<p>R5-1</p> <p>STD. 30"x30" EXPWY. 36"x36" SPECIAL 48"x48"</p>	<p>R11-2</p> <p>48"x30"</p>	<p>R11-3A</p> <p>60"x30"</p>	<p>R11-4</p> <p>60"x30"</p>	<p>W21-5a</p> <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W1-1</p> <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W1-2</p> <p>STD. 36"x36" FWY. 48"x48"</p>	
<p>W1-3</p> <p>STD. 48"x48"</p>	<p>W1-4</p> <p>STD. 48"x48"</p>	<p>W1-6</p> <p>STD. 48"x24" SPECIAL 60"x30"</p>	<p>W1-8</p> <p>STD. 18"x24" SPECIAL 24"x30" EXPWY. 30"x36" FWY. 36"x48"</p>	<p>W3-1</p> <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W3-2</p> <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W4-2</p> <p>STD. 36"x36" FWY. 48"x48"</p>	
<p>W5-1</p> <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W6-3</p> <p>EXPWY. 36"x36" SPECIAL 48"x48"</p>	<p>W8-7</p> <p>EXPWY. 36"x36" FWY. 48"x48"</p>	<p>W9-2</p> <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W13-1</p> <p>STD. 24"x24"</p>	<p>W20-1</p> <p>STD. 48"x48"</p>	<p>W20-2</p> <p>STD. 48"x48"</p>	<p>W20-3</p> <p>STD. 48"x48"</p>
<p>W20-4</p> <p>STD. 48"x48"</p>	<p>W20-5</p> <p>STD. 48"x48"</p>	<p>W20-7a</p> <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W21-2</p> <p>STD. 30"x30" SPECIAL 36"x36"</p>	<p>W21-5</p> <p>STD. 30"x30" SPECIAL 36"x36"</p>	<p>W24-1</p> <p>STD. 36"x36"</p>	<p>W1-4b</p> <p>STD. 48"x48"</p>	<p>R56-1</p> <p>STD. 18"x18"</p>
<p>W8-11</p> <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W8-9</p> <p>STD. 36"x36" FWY. 48"x48"</p>	<p>G20-1</p> <p>60"x24"</p>	<p>G20-2</p> <p>48"x24"</p>	<p>OM-3L OM-3R</p> <p>12"x36"</p>	<p>M4-9</p> <p>STD. 30"x24" SPECIAL 48"x36" SPECIAL 60"x48"</p>	<p>M4-10</p> <p>48"x18"</p>	<p>R55-1</p> <p>36"x60"</p> <p>• USE 6" C LETTERS •• USE 4" D LETTERS</p>



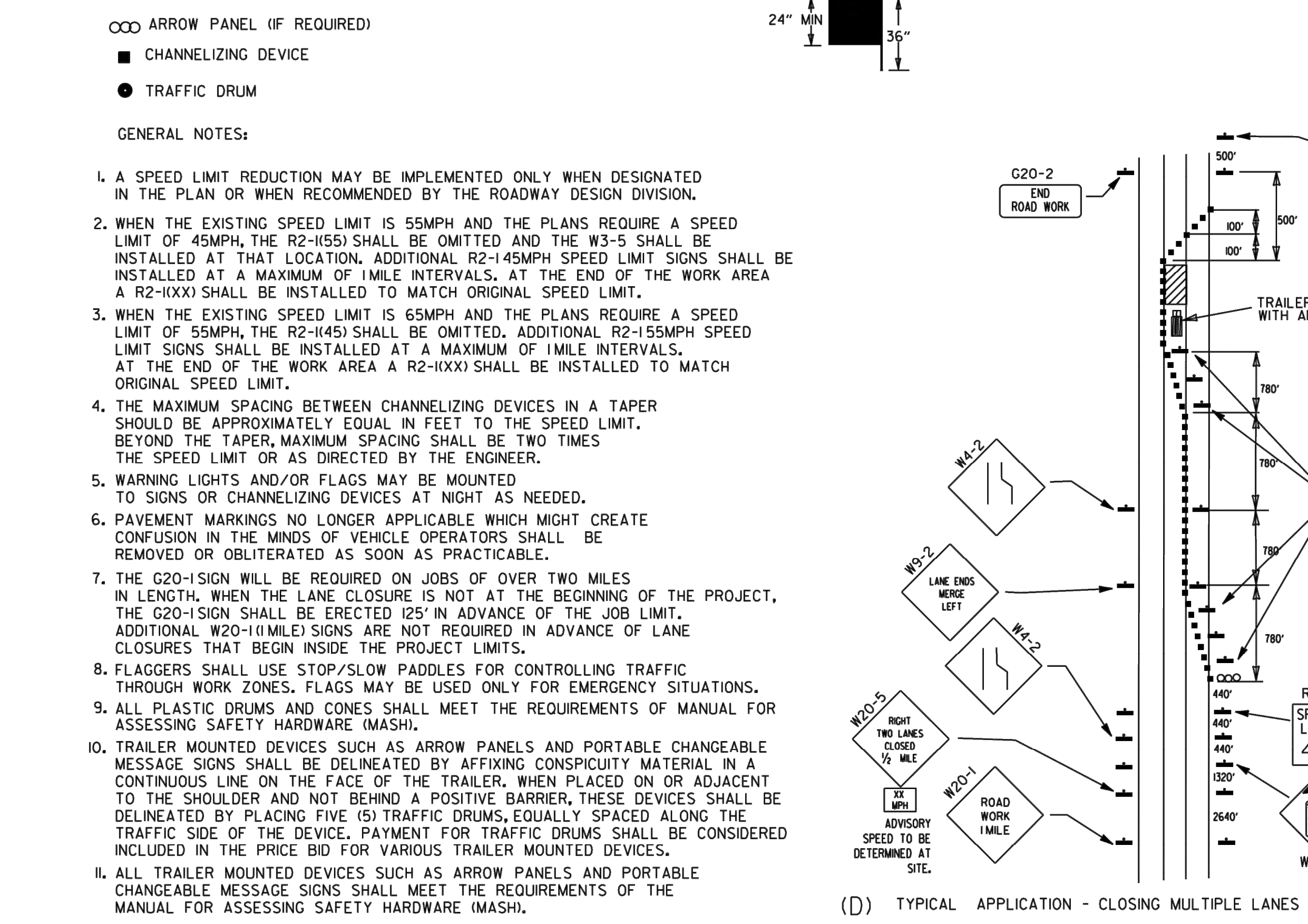
(A) TYPICAL APPLICATION - DAYTIME MAINTENANCE OPERATIONS OF SHORT DURATION ON A 4-LANE DIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



(B) TYPICAL APPLICATION - 3-LANE ONEWAY ROADWAY WHERE CENTER LANE IS CLOSED.



(C) TYPICAL APPLICATION - CONSTRUCTION OPERATIONS OF INTERMEDIATE TO LONG TERM DURATION ON A 4-LANE DIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



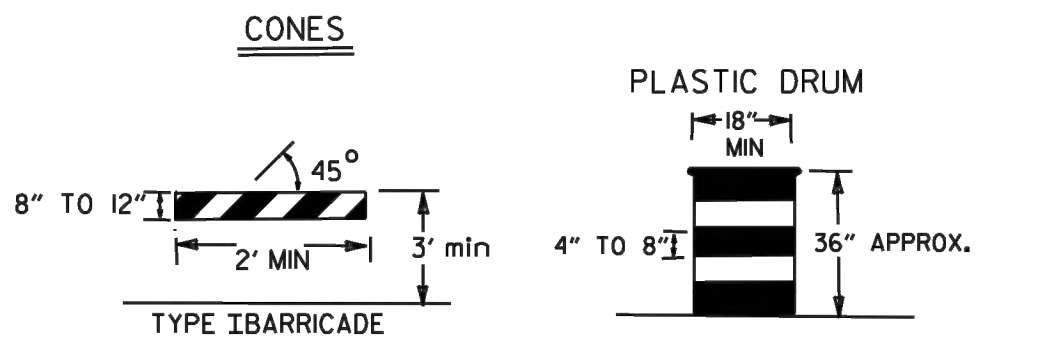
(D) TYPICAL APPLICATION - CLOSING MULTIPLE LANES OF A MULTILANE HIGHWAY.



11/28/2023 8:38:44 AM

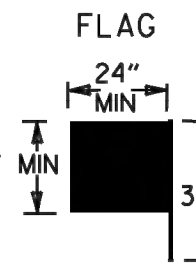
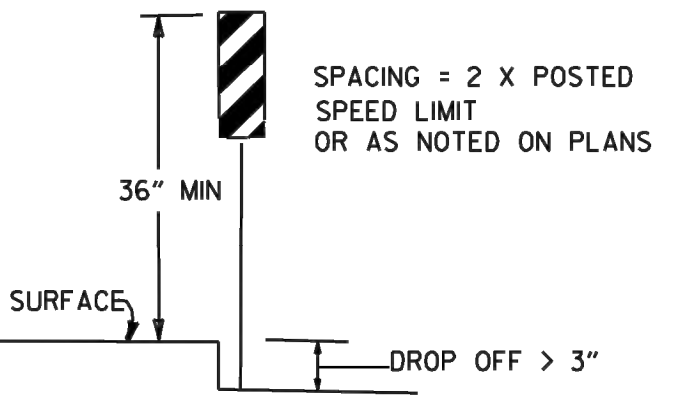
CHANNELIZING DEVICES

* WHEN CONES ARE USED ON FREEWAYS AND MULTI-LANE HIGHWAYS, THEY SHALL BE 28" MIN. DURING HOURS OF DARKNESS, 28" CONES SHALL BE USED ON ALL ROADWAYS, AND SHALL BE REFLECTORIZED IN ACCORDANCE WITH THE M.U.T.C.D.



NOTE: FOR ALL ROAD CLOSURES, THE TYPE III BARRICADES SHALL BE OF SUFFICIENT LENGTH TO EXTEND ACROSS ENTIRE ROADWAY.

VERTICAL PANEL PLACEMENT



FLAG SHALL BE OF GOOD GRADE RED MATERIAL

KEY:

- ○ ○ ○ ○ ARROW PANEL (IF REQUIRED)
- CHANNELIZING DEVICE
- TRAFFIC DRUM

GENERAL NOTES:

1. A SPEED LIMIT REDUCTION MAY BE IMPLEMENTED ONLY WHEN DESIGNATED IN THE PLAN OR WHEN RECOMMENDED BY THE ROADWAY DESIGN DIVISION.
2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-1(45) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-1(45)MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1/2 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
3. WHEN THE EXISTING SPEED LIMIT IS 65MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 55MPH, THE R2-1(55) SHALL BE OMITTED. ADDITIONAL R2-1(55)MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1/2 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
4. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT. BEYOND THE TAPER, MAXIMUM SPACING SHALL BE TWO TIMES THE SPEED LIMIT OR AS DIRECTED BY THE ENGINEER.
5. WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
6. PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICABLE.
7. THE G20-1 SIGN WILL BE REQUIRED ON JOBS OF OVER TWO MILES IN LENGTH. WHEN THE LANE CLOSURE IS NOT AT THE BEGINNING OF THE PROJECT, THE G20-1 SIGN SHALL BE ERECTED 125' IN ADVANCE OF THE JOB LIMIT. ADDITIONAL W20-1(1/2 MILE) SIGNS ARE NOT REQUIRED IN ADVANCE OF LANE CLOSURES THAT BEGIN INSIDE THE PROJECT LIMITS.
8. FLAGGERS SHALL USE STOP/SLOW PADDLES FOR CONTROLLING TRAFFIC THROUGH WORK ZONES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.
9. ALL PLASTIC DRUMS AND CONES SHALL MEET THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).
10. TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE DELINEATED BY AFFIXING CONSPICUITY MATERIAL IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER. WHEN PLACED ON OR ADJACENT TO THE SHOULDER AND NOT BEHIND A POSITIVE BARRIER, THESE DEVICES SHALL BE DELINEATED BY PLACING FIVE (5) TRAFFIC DRUMS, EQUALLY SPACED ALONG THE TRAFFIC SIDE OF THE DEVICE. PAYMENT FOR TRAFFIC DRUMS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR VARIOUS TRAILER MOUNTED DEVICES.
11. ALL TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).

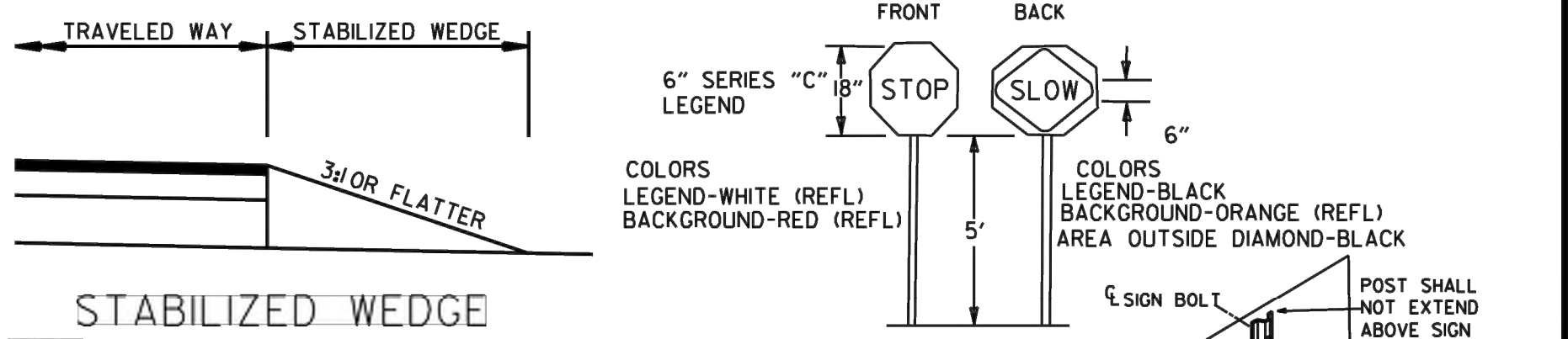
TRAFFIC CONTROL DEVICES

VERTICAL DIFFERENTIAL	LOCATION	TRAFFIC CONTROL	
		≤ 45 MPH	> 45 MPH
≤ 1"	CENTERLINE	W8-11	W8-11
> 1"	CENTERLINE	W8-11 AND CENTERLINE LANE STRIPING	W8-11 AND CENTERLINE LANE STRIPING
≤ 3"	CENTERLINE	STANDARD LANE CLOSURE ⁽¹⁾	STANDARD LANE CLOSURE ⁽¹⁾
> 3"	CENTERLINE	W8-9 AND TRAFFIC DRUMS ⁽¹⁾	W8-9 AND TRAFFIC DRUMS ⁽¹⁾
≤ 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽¹⁾	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽¹⁾
> 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽¹⁾	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽¹⁾
> 6"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽¹⁾	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽¹⁾
> 18"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽¹⁾	A STABILIZED WEDGE, W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽¹⁾
> 24"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	PRECAST CONCRETE BARRIER ⁽¹⁾ & EDGE LINES	PRECAST CONCRETE BARRIER ⁽¹⁾ & EDGE LINES

INTERSTATE		
VERTICAL DIFFERENTIAL	LOCATION	TRAFFIC CONTROL
≤ 3"	CENTERLINE	W8-11 AND LANE STRIPING
≤ 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-9, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽²⁾
> 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽²⁾
> 6"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	PRECAST CONCRETE BARRIER & EDGE LINES

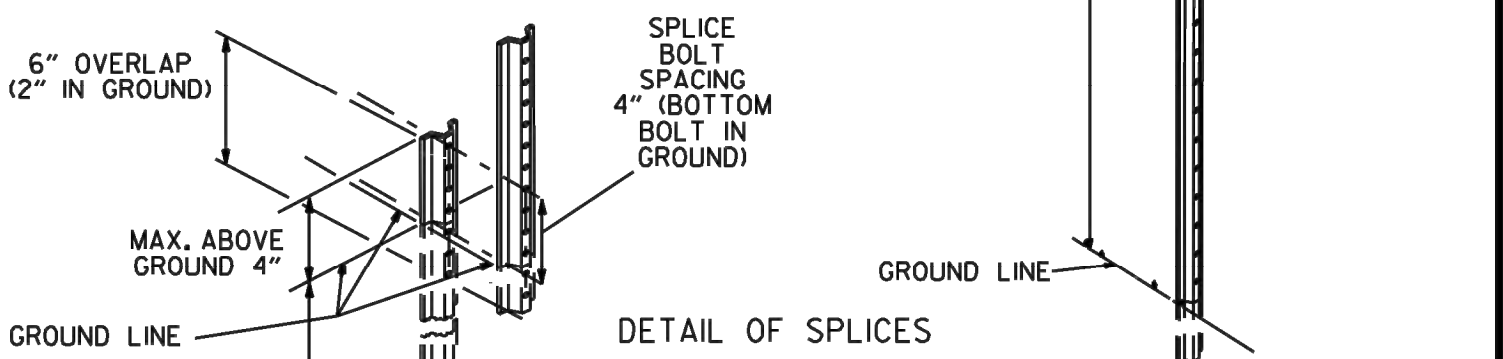
INTERSTATE AND NON-INTERSTATE		
FORESLOPE	HEIGHT	TRAFFIC CONTROL
1:1	> 2 FT	PRECAST CONCRETE BARRIER
2:1	≤ 5 FT	TRAFFIC DRUMS
2:1	> 5 FT	PRECAST CONCRETE BARRIER
Flatter than 2:1	N/A	TRAFFIC DRUMS

- GENERAL NOTES:
1. WHEN THE SHOULDER AREA IS USED AS PART OF THE TRAVELED LANE AND THERE IS INSUFFICIENT WIDTH TO PLACE TRAFFIC DRUMS ON THE REMAINING SHOULDER WIDTH, THEN VERTICAL PANELS SHALL BE USED.
 2. WHEN THERE IS INSUFFICIENT WIDTH TO PLACE TRAFFIC DRUMS ON THE REMAINING SHOULDER WIDTH, A STABILIZED WEDGE SHALL BE USED. PRECAST CONCRETE BARRIER WALL CAN BE USED IN LIEU OF A STABILIZED WEDGE, W8-17 SIGN, EDGE LINE STRIPING, AND TRAFFIC DRUMS, IF AND WHERE DIRECTED BY THE ENGINEER. A STABILIZED WEDGE, W8-17 SIGN, EDGE LINE STRIPING, AND TRAFFIC DRUMS CAN BE USED IN LIEU OF PRECAST CONCRETE BARRIER WALL, IF AND WHERE DIRECTED BY THE ENGINEER. W21-5, W21-5a, AND/OR W21-5b SIGNS SHALL BE USED WHERE THE ROADWAY IS UNOBSTRUCTED IF AND WHERE DIRECTED BY THE ENGINEER. TIME LIMITATIONS MUST CONFORM TO SECTION 603 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).



NOTE: MATERIALS FOR THE STABILIZED WEDGE SHALL MEET THE REQUIREMENTS PROVIDED IN SECTION 603.02 OF THE STANDARD SPECIFICATIONS.

- NOTES:
- USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-2)
 - NORMAL INSTALLATIONS WILL REQUIRE 1/4" DIA. BOLTS TO MOUNT SIGNS TO POST AND 5/16" DIA. BOLTS TO ASSEMBLE THE VARIOUS POST SUPPORTS. EACH OF THESE BOLTS SHALL BE CARRIAGE BOLTS.
 - SIGN POSTS SHALL BE PAINTED GREEN; SIGNS SHALL NOT BE PAINTED.
 - AND ALL SIGN POSTS SHALL BE PLUMB.

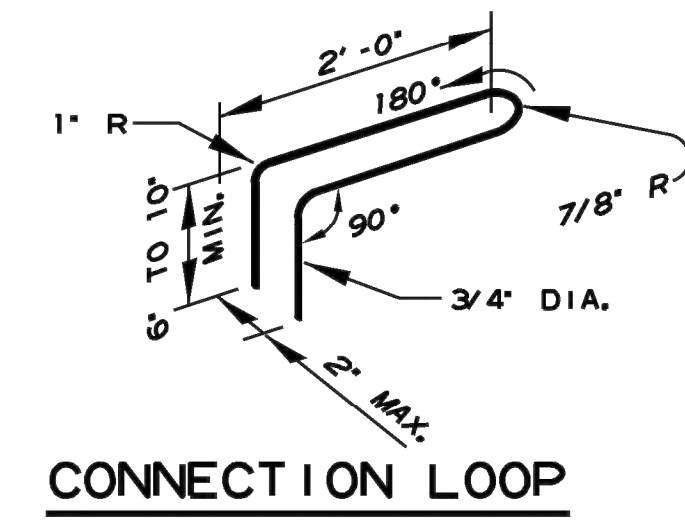
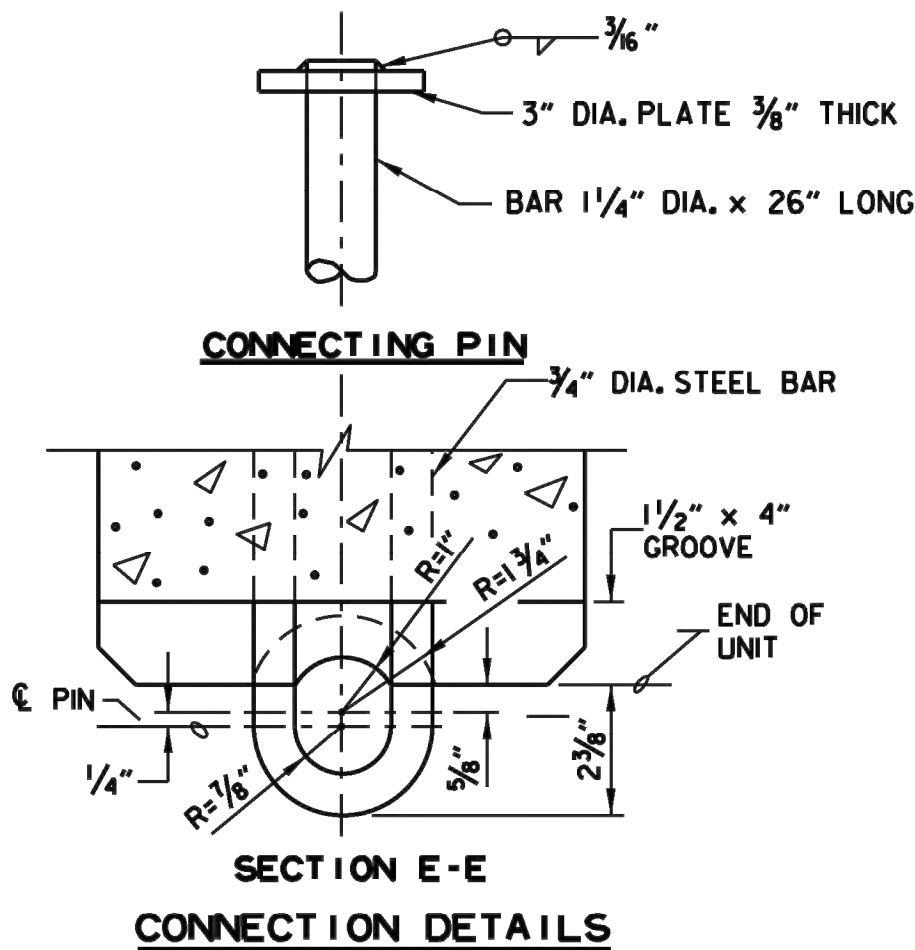


DATE	REVISION	FILED
08-12-21	REVISED TRAFFIC CONTROL DEVICES AND NOTES	
05-20-21	REVISED NOTE 10	
2-27-20	REVISED TRAFFIC CONTROL DEVICES DETAILS	
11-07-19	REVISED NOTE 9, ADDED NOTE II	
7-25-19	REVISED TRAFFIC CONTROL DEVICES DETAILS	
9-2-15	REVISED NOTE 2 & REPLACED R2-5A WITH W3-5	
10-15-09	ADDED REFERENCE TO MASH	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED NOTE	
10-1-98	ADDED NOTE	
4-03-97	ADDED (SP) TO W6-1 & REVISED TRAFFIC CONTROL DEVICES NOTE	
10-18-96	ADDED R55-1	
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL, TEXT	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	



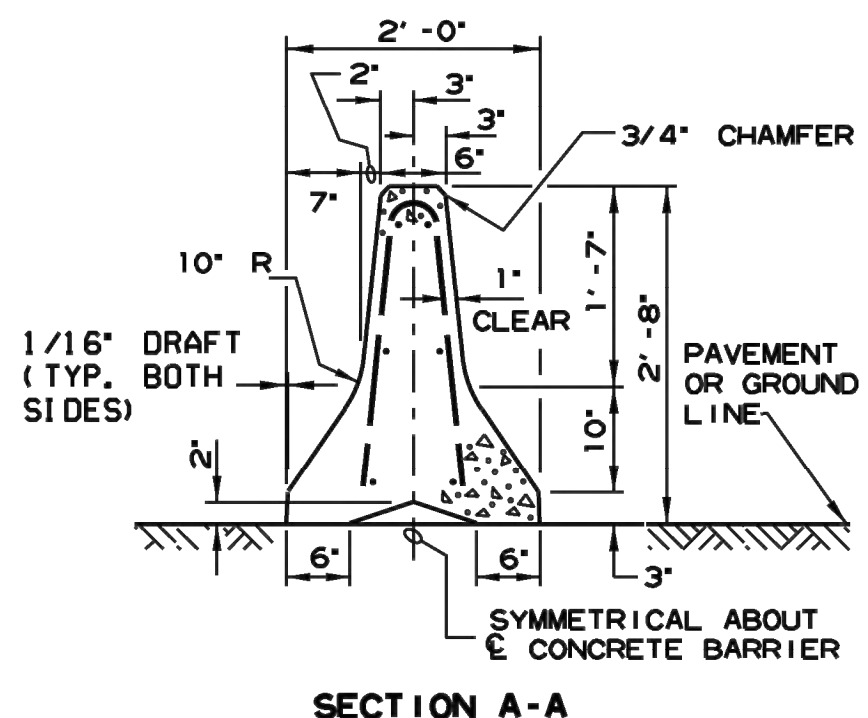
11/28/2023 8:38:44 AM

REINFORCING BAR TABLE PER BARRIER UNIT			
MARK	LOCATION	BAR SIZE	(NO. BARS)
H-1	HORIZONTAL IN BARRIER TIED INSIDE V-1 BARS	#5	(6)
H-2	CENTERED ABOVE DRAIN SLOTS LONG. & TRANSVERSELY	#5	(6)
H-3	TIED ABOVE H-1 BARS TO SUPPORT H-2, TIED TO V-1	#4	(2)
S-1	OVER LIFT HOLES	#4	(2)
S-2	HORIZ. AROUND SLOTS BETWEEN V-1'S @ DRAIN SLOTS	#4	(2)
V-1	VERTICAL IN BARRIER (3) EACH END & (2) AT EACH DRAIN SLOTS	#5	(16)

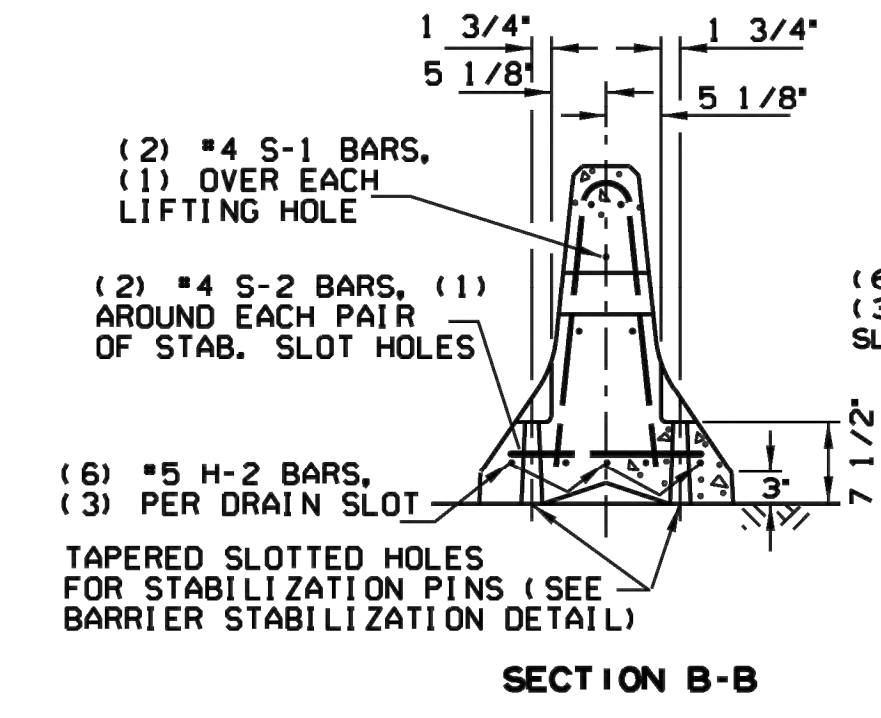


SECTION E-E
CONNECTION DETAILS

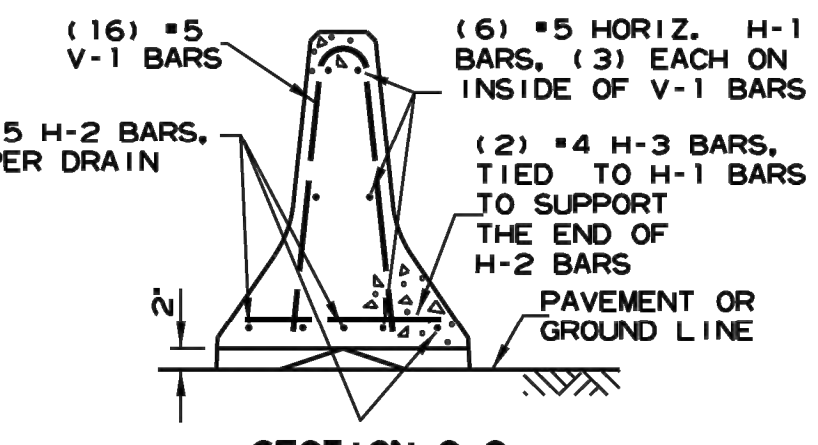
CONNECTION LOOP



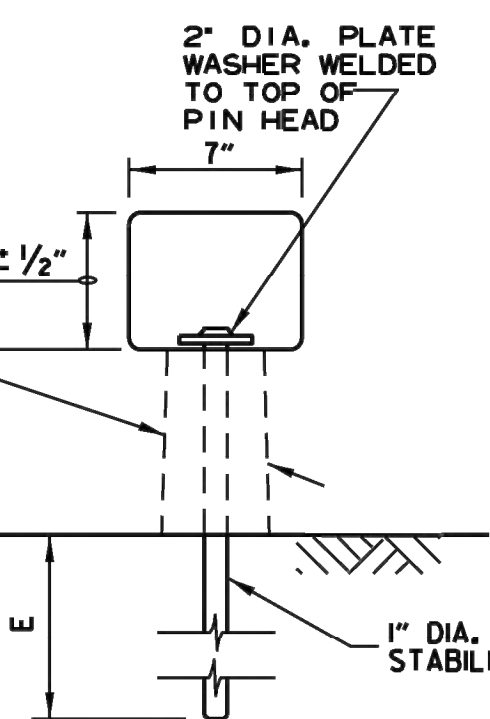
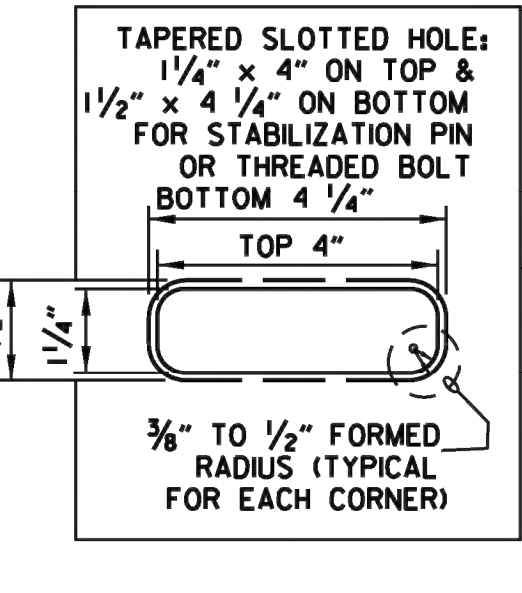
SECTION A-A



SECTION B-B



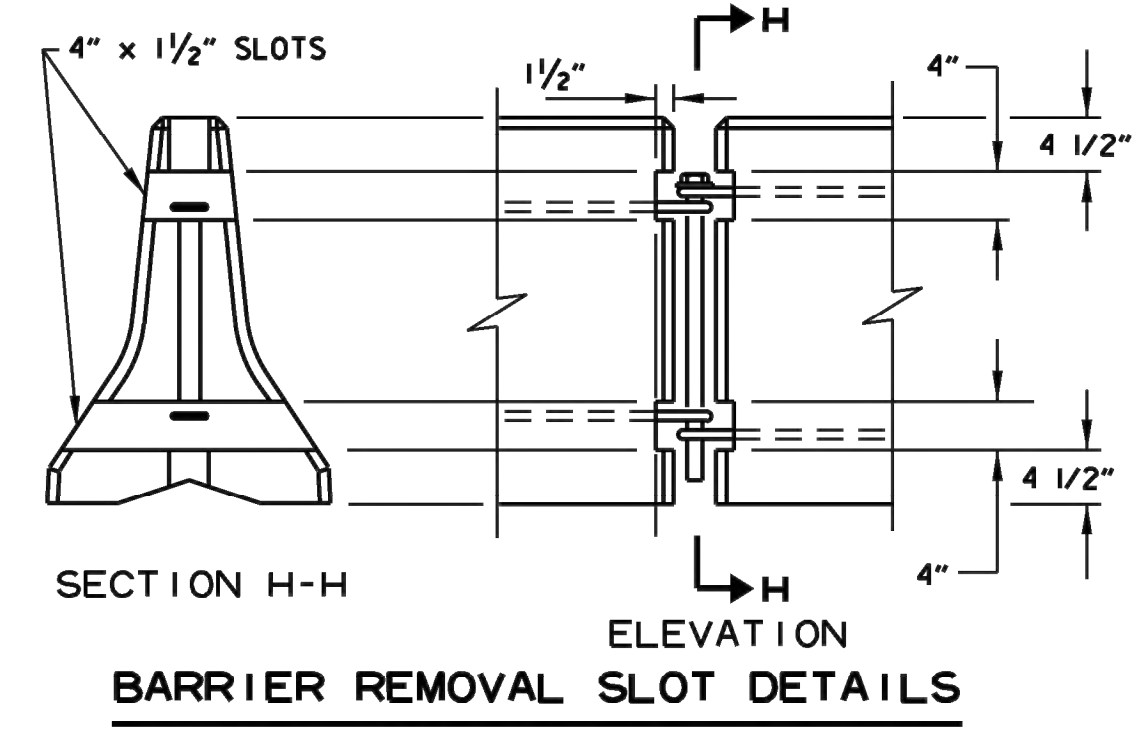
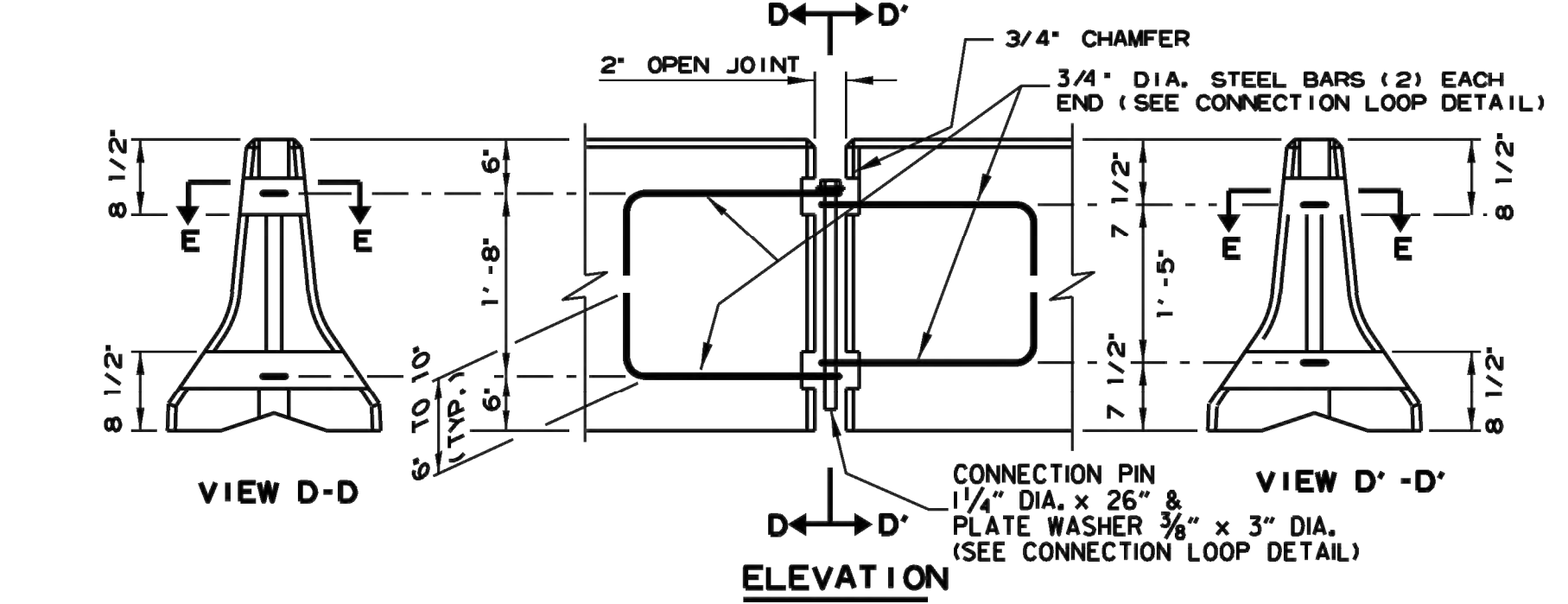
SECTION C-C



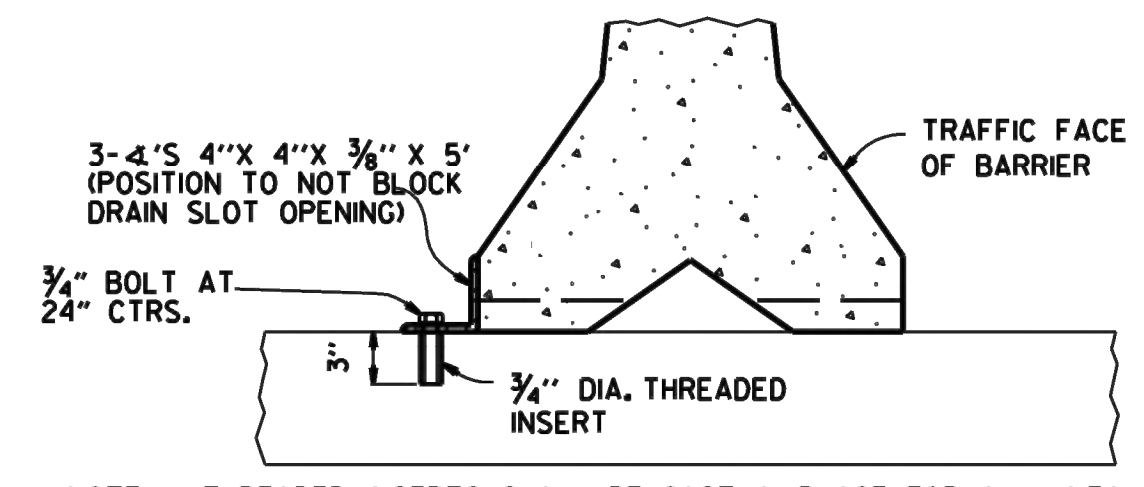
BARRIER STABILIZATION DETAIL
ROADWAY SECTION

- GENERAL NOTES**
- THE CONTRACTOR SHALL FURNISH THE PRECAST CONCRETE BARRIER UNITS AND SHALL BE RESPONSIBLE FOR THE MANUFACTURE, SHIPMENT, STORAGE, PLACEMENT AND REMOVAL. AT THE COMPLETION OF THE PROJECT, THE PRECAST UNITS WILL REMAIN THE PROPERTY OF THE CONTRACTOR.
 - MATERIALS SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS:
CONCRETE: 2500 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
REINFORCING STEEL: AASHTO M 31 OR M 53, GRADE 60
STRUCTURAL STEEL: AASHTO-M270 GRADE 36 SHALL BE USED FOR THE CONNECTION PIN, CONNECTION LOOPS, AND STABILIZATION PINS. A ONE PIECE PIN WITH A 3" ROUNDED TOP MAY BE USED IN PLACE OF THE DETAILED CONNECTION PIN.
DELINEATORS: DELINEATORS SHALL BE MOUNTED AT 10' SPACING ON TOP OF PRECAST BARRIER.

IN APPLICATIONS WHERE BARRIER WALL IS WITHIN 6 FEET OF A TRAFFIC LANE, ADDITIONAL DELINEATORS SHALL BE PLACED ON THE BARRIER AT 10' SPACING APPROXIMATELY ONE (1) FOOT FROM THE TOP OF THE BARRIER. DELINEATORS SHALL BE ON THE AASHTO QUALIFIED PRODUCTS LIST FOR CONSTRUCTION CONCRETE BARRIER MARKERS. DELINEATOR COLOR SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
PAYMENT FOR DELINEATORS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID PER LIN. FT. FOR "FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER". THE CONTRACTOR SHALL CERTIFY TO THE ENGINEER THAT THE MATERIAL AND THE DESIGN USED IN THE PRECAST BARRIER UNITS MEETS THE REQUIREMENTS AS SHOWN ON THIS STANDARD DRAWING.
 - OTHER PRECAST CONCRETE BARRIERS THAT HAVE BEEN CRASH TESTED AND APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION TO MEET THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) WILL BE ACCEPTED IN LIEU OF THE BARRIER SHOWN. DRAIN SLOTS SHALL BE PROVIDED AS NEEDED OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH A CERTIFICATION OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) COMPLIANCE FOR ANY OTHER TYPES OF PRECAST BARRIER TO BE USED. THE CERTIFICATION SHALL STATE THAT THE PRECAST CONCRETE BARRIER MEETS THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH). MIXING OF SHAPES WILL NOT BE ALLOWED IN A CONTINUOUS LINE OF UNITS.
 - DOWEL HOLES IN PAVEMENT OR BRIDGE SLABS THAT ARE TO REMAIN IN PLACE SHALL BE FILLED. HOLES IN CONCRETE PAVEMENT AND BRIDGE SLABS SHALL BE FILLED WITH AN APPROVED NON-SHRINK EPOXY GROUT. HOLES IN ASPHALT PAVEMENT SHALL BE FILLED WITH AN APPROVED ASPHALT JOINT FILLER. PAYMENT FOR DRILLING AND FILLING HOLES TO BE INCLUDED IN THE PRICE FOR VARIOUS BARRIER ITEMS.
 - ATTACH UNITS TO ROADWAY SURFACE WITH STABILIZATION PINS AND TO DECK SLABS USING BOLTS WHEN REQUIRED.
 - A 4" WHITE PVC SLEEVE MAY BE USED TO FORM THE LIFTING HOLE AND IF USED THE SLEEVE IS TO BE LEFT IN PLACE.

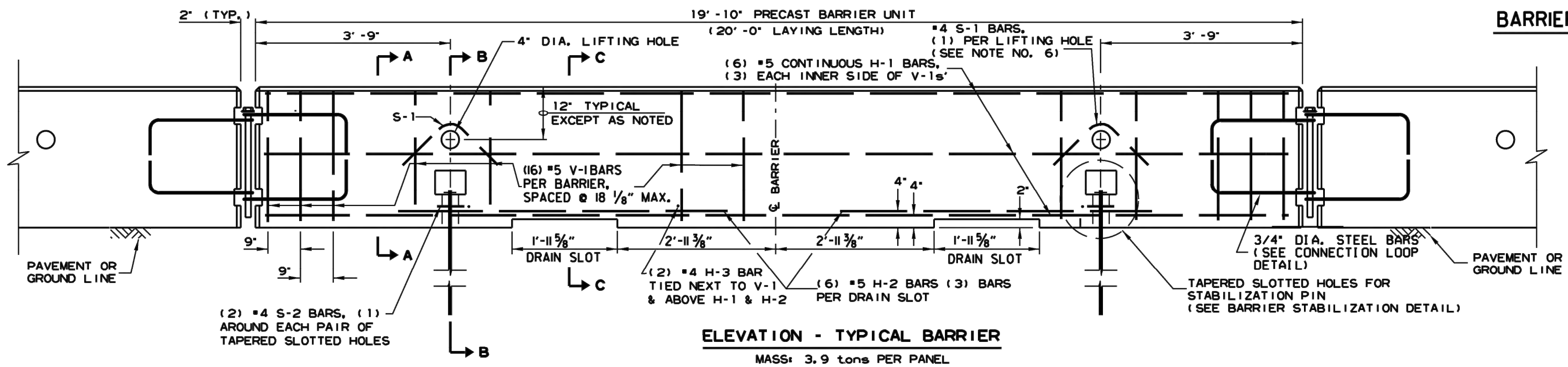


BARRIER REMOVAL SLOT DETAILS



NOTE: " THREADED INSERTS SHALL BE CAST IN PLACE FOR ALL NEW BRIDGE DECKS AND DRILLED AND GROUTED FOR EXISTING BRIDGE DECKS. INSERTS SHALL HAVE A MINIMUM ULTIMATE LOAD CAPACITY OF 8000 LBS. IN TENSION, AFTER REMOVAL OF BARRIER, BOLTS, AND ANGLES, THE INSERTS SHALL BE FILLED WITH APPROVED NON-SHRINK EPOXY.

BARRIER STABILIZATION DETAIL
BRIDGE DECKS



ELEVATION - TYPICAL BARRIER
MASS: 3.9 tons PER PANEL

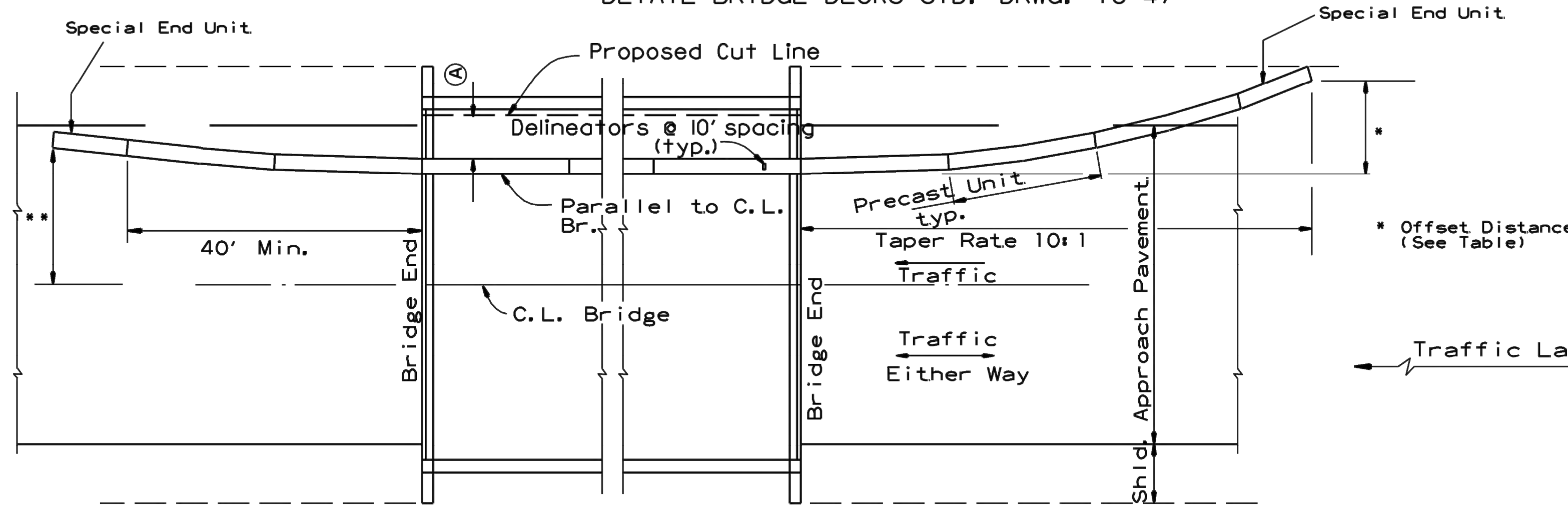
DATE	REVISION	FILMED
11-07-19	REVISED NOTE 3	
2-27-14	REVISED BARRIER STABILIZATION DETAIL	
10-15-09	ADDED REFERENCE TO MASH	
8-5-09	REV. NOTE 3 CONCERNING DRAIN SLOTS	
11-29-07	REVISED NOTE 3	
5-25-06	DELETED GENERAL NOTE 7	
11-18-04	REVISED BARRIER STABILIZATION DETAIL BRIDGE DECKS	
4-10-03	REVISED GENERAL NOTE 2	
8-22-02	ISSUED NEW DRAWING	

ARKANSAS STATE HIGHWAY COMMISSION
STANDARD TRAFFIC CONTROLS
FOR HIGHWAY CONSTRUCTION -
TEMPORARY PRECAST BARRIER



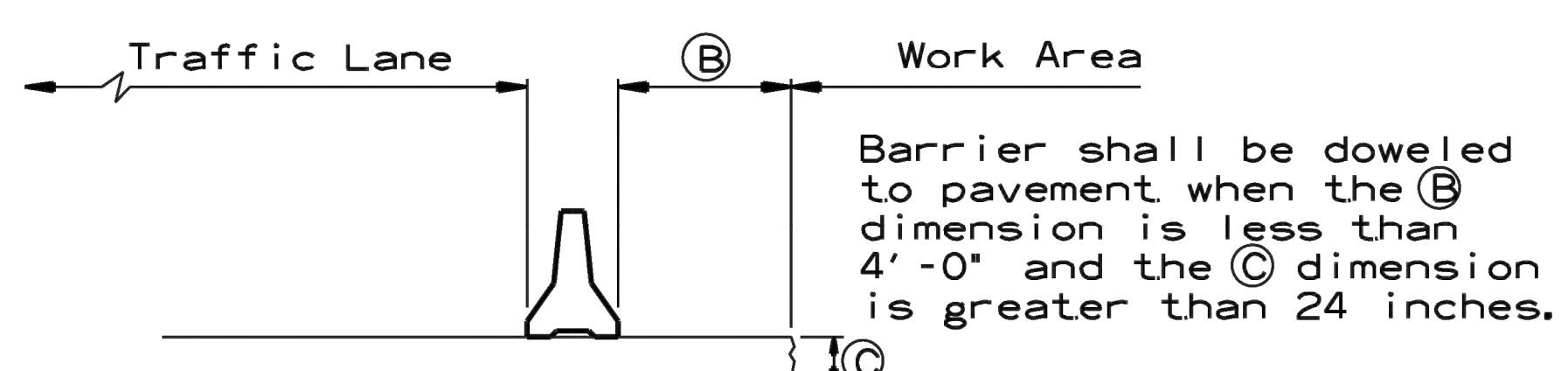
11/28/2023 8:38:44 AM

(A) 4 feet or greater preferred. If less than 4 feet, Precast Units shall be connected to slab (SEE BARRIER STABILIZATION DETAIL-BRIDGE DECKS STD. DRWG. TC-4)



BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET

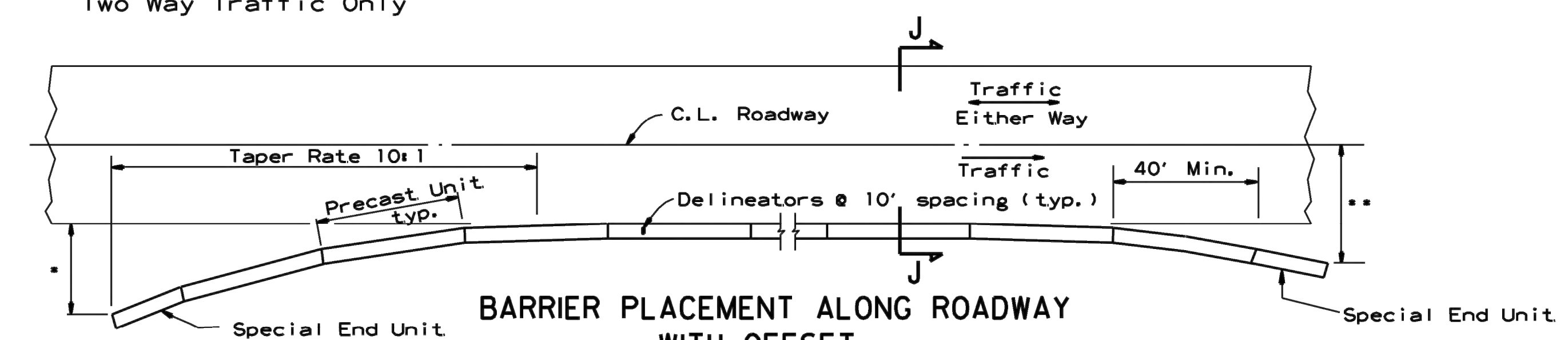
No Scale



SECTION J-J

No Scale

** Offset Distance for Two Way Traffic Only



BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET

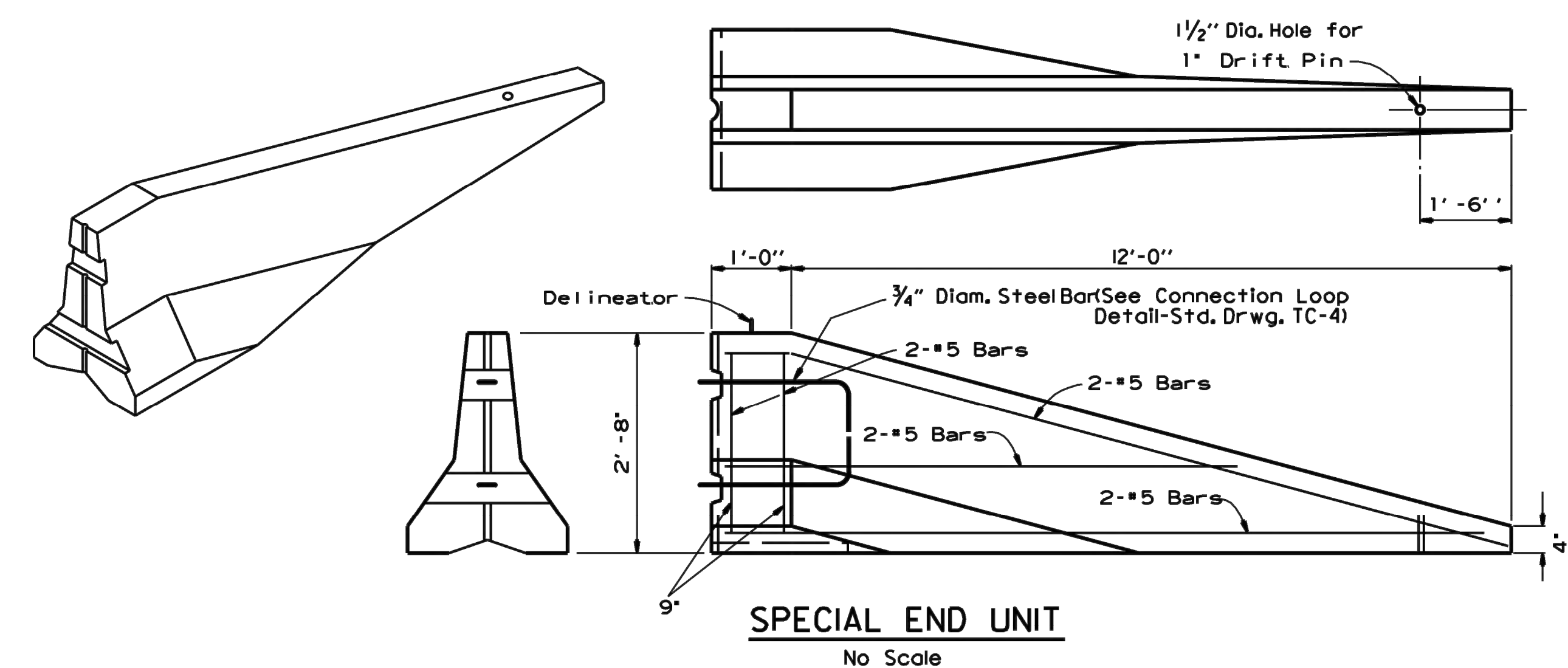
No Scale

** Offset Distance For Two Way Traffic Only

* Offset Distance (See Table)

Speed (MPH)	Offset Distance (FT.)
≤ 45	12
> 45	18

If offset distance is not attainable, then see "Barrier Placement With Attenuator" Detail shown below.

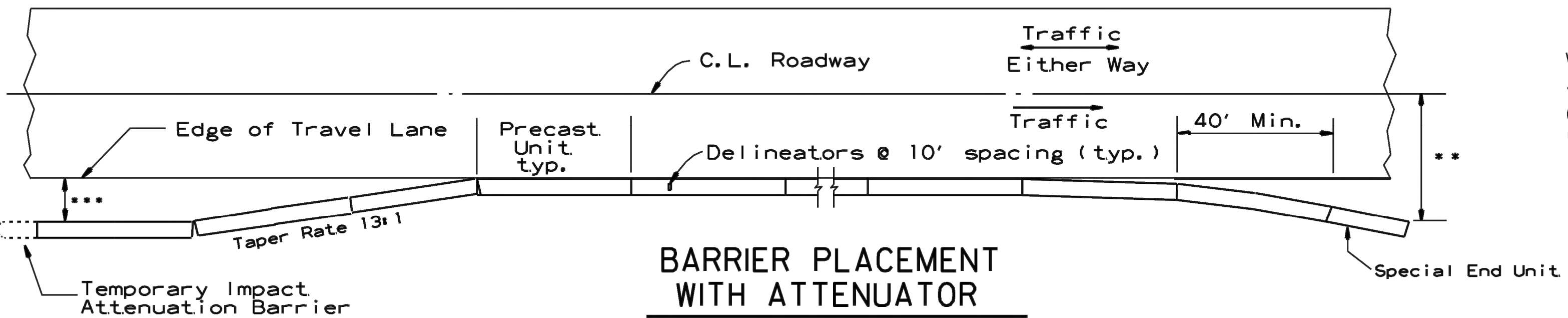


SPECIAL END UNIT

No Scale

General Notes

When shown on the Plans, the ends of the Temporary Precast Concrete Barrier shall be protected with a Manual For Assessing Safety Hardware (MASH) approved Crash Cushion. Payment for Crash Cushions shall be made under the item of "Temporary Impact Attenuation Barrier."



BARRIER PLACEMENT WITH ATTENUATOR

No Scale

** Offset Distance For Two Way Traffic Only

***Min. 3'-0" From Edge of Travel Lane to Nearest Edge of Attenuator

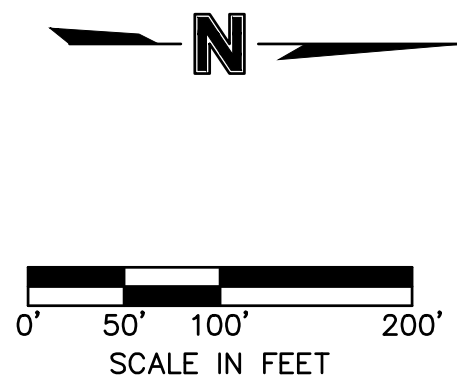
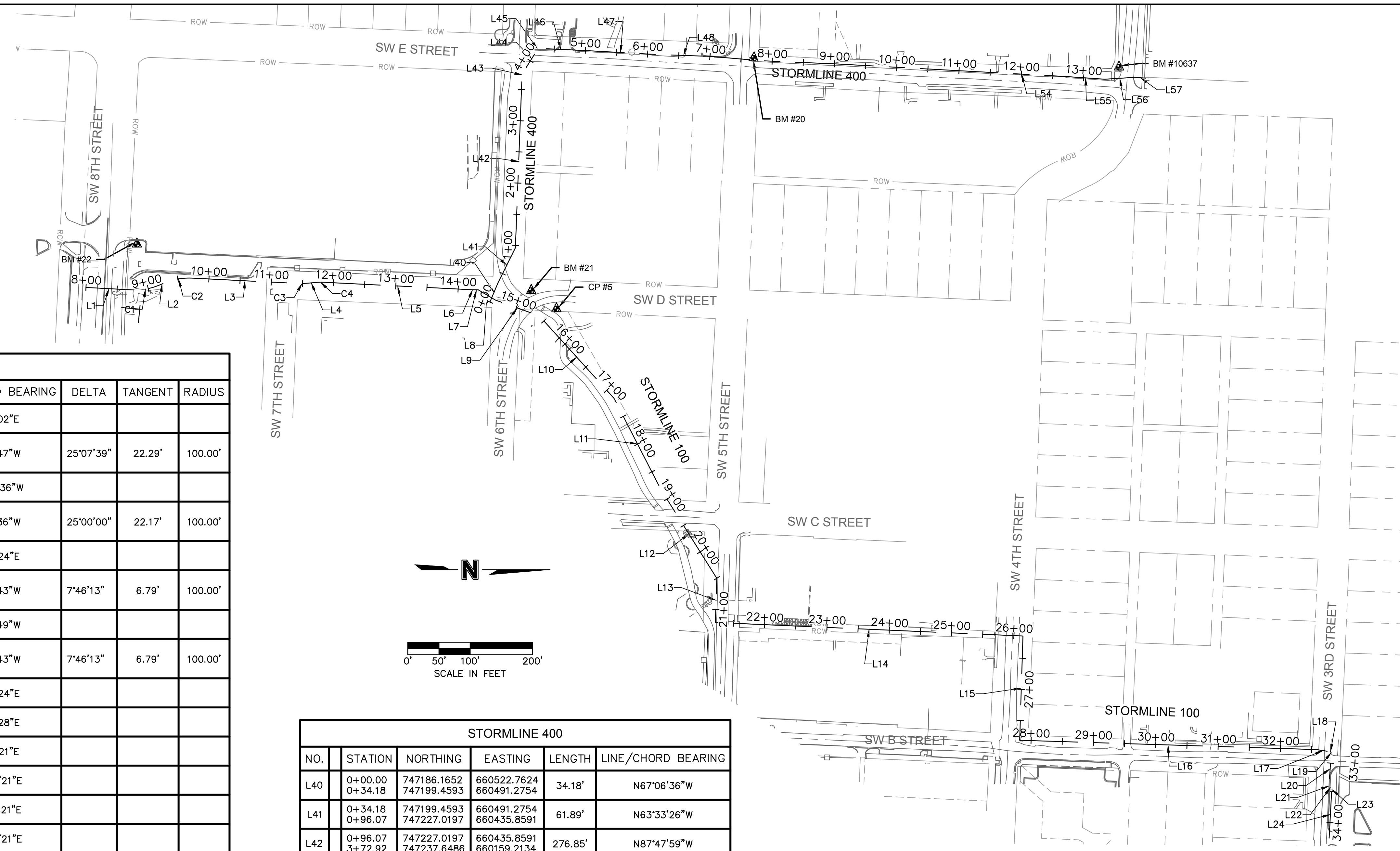
DATE	REVISION	FILMED
8-07-19	REVISED NOTE	
10-15-09	ADDED REFERENCE TO MASH	
5-25-06	REVISED BARRIER PLACEMENT	
8-22-02	ISSUED NEW DRAWING	

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER



11/28/2023 8:58:45 AM



STORMLINE 100									
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L1		8+00.00 8+73.71	746538.6863 746612.2913	660499.3768 660503.2566	73.71'	N3°01'02"E			
C1	PC= PI= PT=	8+73.71 8+95.99 9+17.56	746612.2913 746634.5465 746655.1938	660503.2566 660504.4296 660496.0414	43.86'	N9°32'47"W	25°07'39"	22.29'	100.00'
L2		9+17.56 9+29.34	746655.1938 746666.1013	660496.0414 660491.6101	11.77'	N22°06'36"W			
C2	PC= PI= PT=	9+29.34 9+51.51 9+72.97	746666.1013 746686.6405 746708.7818	660491.6101 660483.2658 660484.3835	43.63'	N9°36'36"W	25°00'00"	22.17'	100.00'
L3		9+72.97 11+42.63	746708.7818 746878.2315	660484.3835 660492.9376	169.67'	N2°53'24"E			
C3	PC= PI= PT=	11+42.63 11+49.43 11+56.20	746878.2315 746885.0141 746891.7807	660492.9376 660493.2800 660492.7022	13.56'	N0°59'43"W	7°46'13"	6.79'	100.00'
L4		11+56.20 11+72.20	746891.7807 746907.7257	660492.7022 660491.3408	16.00'	N4°52'49"W			
C4	PC= PI= PT=	11+72.20 11+78.99 11+85.76	746907.7257 746914.4924 746921.2750	660491.3408 660490.7630 660491.1054	13.56'	N0°59'43"W	7°46'13"	6.79'	100.00'
L5		11+85.76 14+19.98	746921.2750 747155.1955	660491.1054 660502.9140	234.22'	N2°53'24"E			
L6		14+19.98 14+26.40	747155.1955 747161.6099	660502.9140 660503.1912	6.42'	N2°28'28"E			
L7		14+26.40 14+32.50	747161.6099 747167.7068	660503.1912 660503.2770	6.10'	N0°48'21"E			
L8		14+32.50 14+64.34	747167.7068 747195.0540	660503.2770 660519.5830	31.84'	N30°48'21"E			
L9		14+64.34 15+38.97	747195.0540 747265.2693	660519.5830 660544.8703	74.63'	N19°48'21"E			
L10		15+38.97 17+17.42	747265.2693 747385.1282	660544.8703 660677.0837	178.46'	N47°48'21"E			
L11		17+17.42 18+81.88	747385.1282 747460.2871	660677.0837 660823.3642	164.46'	N62°48'21"E			
L12		18+81.88 20+50.00	747460.2871 747549.8596	660823.3642 660965.6355	168.12'	N57°48'21"E			
L13		20+50.00 21+20.97	747549.8596 747547.6230	660965.6355 661036.5729	70.97'	S88°11'39"E			
L14		21+20.97 26+14.46	747547.6230 748040.6286	661036.5729 661058.2658	493.48'	N2°31'10"E			
L15		26+14.46 27+81.70	748040.6286 748035.3906	661058.2658 661225.4292	167.25'	S88°12'19"E			
L16		27+81.70 32+57.60	748035.3906 748511.0574	661225.4292 661240.3028	475.90'	N1°47'28"E			
L17		32+57.60 32+79.14	748511.0574 748532.3504	661240.3028 661243.5612	21.54'	N8°42'01"E			
L18		32+79.14 32+81.86	748532.3504 748535.0479	661243.5612 661243.8669	2.71'	N6°27'57"E			
L19		32+81.86 32+83.86	748535.0479 748534.8569	661243.8669 661245.8621	2.00'	S84°31'49"E			
L20		32+83.86 33+34.34	748534.8569 748531.4574	661245.8621 661296.2254	50.48'	S86°08'18"E			
L21		33+34.34 33+39.34	748531.4574 748531.1153	661296.2254 661301.2139	5.00'	S86°04'37"E			
L22		33+39.34 33+44.06	748531.1153 748535.8276	661301.2139 661301.4981	4.72'	N3°27'05"E			
L23		33+44.06 33+49.06	748535.8276 748535.5622	661301.4981 661306.4912	5.00'	S86°57'26"E			
L24		33+49.06 34+25.00	748535.5622 748531.4940	661306.4912 661382.3207	75.94'	S86°55'45"E			

STORMLINE 400					
NO.	STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING
L40	0+00.00 0+34.18	747186.1652 747199.4593	660522.7624 660491.2754	34.18'	N67°06'36"W
L41	0+34.18 0+96.07	747199.4593 747227.0197	660491.2754 660435.8591	61.89'	N63°33'26"W
L42	0+96.07 3+72.92	747227.0197 747237.6486	660435.8591 660159.2134	276.85'	N87°47'59"W
L43	3+72.92 3+74.92	747237.6486 747237.7294	660159.2134 660157.2150	2.00'	N87°41'11"W
L44	3+74.92 4+21.21	747237.7294 747262.3443	660157.2150 660118.0171	46.29'	N57°52'21"W
L45	4+21.21 4+23.21	747262.3443 747262.4524	660118.0171 660116.0200	2.00'	N86°54'11"W
L46	4+23.21 4+97.89	747262.4524 747337.0635	660116.0200 660119.4191	74.69'	N2°36'31"E
L47	4+97.89 6+15.20	747337.0635 747454.1904	660119.4191 660125.8932	117.31'	N3°09'49"E
L48	6+15.20 6+99.99	747454.1904 747538.9337	660125.8932 660128.8159	84.79'	N1°58'31"E
L54	11+28.39 12+72.46	747966.5769 748110.4346	660153.4178 660161.2256	144.07'	N3°06'24"E
L55	12+72.46 13+33.98	748110.4346 748171.8121	660161.2256 660165.4723	61.52'	N3°57'29"E
L56	13+33.98 13+82.10	748171.8121 748219.8393	660165.4723 660162.4706	48.12'	N3°34'35"W
L57	13+82.10 14+00.00	748219.8393 748237.6906	660162.4706 660163.7353	17.90'	N4°03'09"E

BENCHMARK & CONTROL POINT INFORMATION

BM #20
TOP OPERATING NUT OF FIRE HYDRANT
N: 747609.06
E: 660131.6
ELEV. = 1303.29

BM #21
TOP OPERATING NUT OF FIRE HYDRANT
N: 747252.41
E: 660504.39
ELEV. = 1292.91

BM #22
TOP OPERATING NUT OF FIRE HYDRANT
N: 746620.39
E: 660429.99
ELEV. = 1290.36

BM #10637
TOP OPERATING NUT OF FIRE HYDRANT
N: 748194.76
E: 660146.18
ELEV. = 1309.50

CP #1
#5 REBAR WITH OLSSON CONTROL CAP
N: 745986.87
E: 660973.72
ELEV. = 1285.52

CP #2
#5 REBAR WITH OLSSON CONTROL CAP
N: 745996.36
E: 661311.13
ELEV. = 1287.37

CP #3
90D NAIL IN PARKING LOT ISLAND
N: 746096.48
E: 660410.74
ELEV. = 1284.07

CP #5
#5 REBAR WITH OLSSON CONTROL CAP
N: 747292.6
E: 660533.51
ELEV. = 1290.62

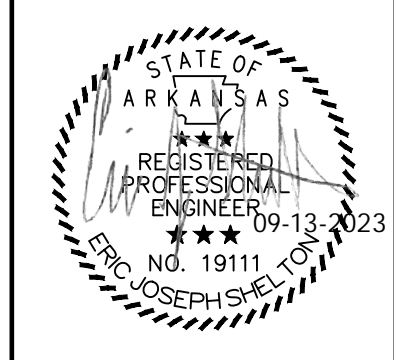
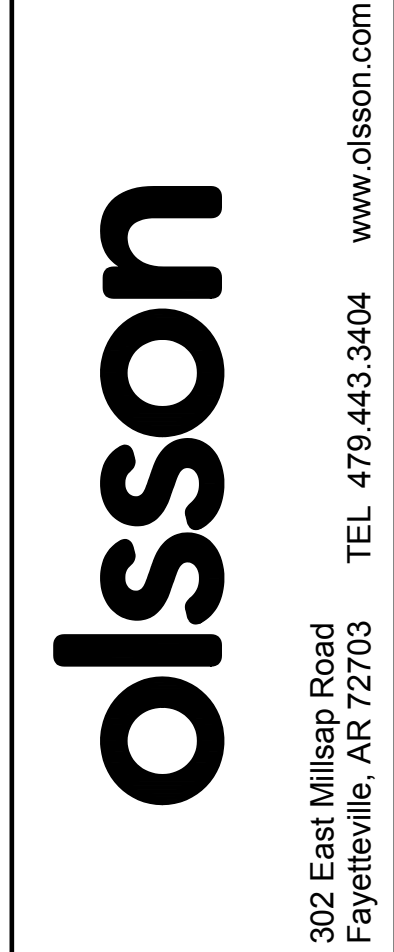
CP #9
BRONZE CAP MONUMENT CITY OF BENTONVILLE CONTROL
N: 743842.92
E: 661364.39
ELEV. = 1283.34 (NAVD88 PROJECT DATUM)
C.O.B. ELEV = 1283.63 (PUBLISHED)

CP #10
BRONZE CAP MONUMENT CITY OF BENTONVILLE CONTROL
N: 746496.56
E: 661509.95
ELEV. = 1288.71 (NAVD88 PROJECT DATUM)
C.O.B. ELEV = 1289.05 (PUBLISHED)

NOTE: ALL STREET AND ROAD CONSTRUCTION IN THE CITY OF BENTONVILLE SHALL BE TIED TO THE CITY OF BENTONVILLE SURVEY MONUMENTATION SYSTEM BASED UPON THE STATE PLANE COORDINATE SYSTEM ARKANSAS NORTH ZONE USING THE NORTH AMERICAN DATUM OF 1983 (NAD 83) IN ACCORDANCE WITH COB STREET SPECS

NORTH AMERICAN DATUM 1983 (NAD 83) AND NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88) USED FOR SURVEY

DWG: F:\2021\04001-04500\021-04210-G-40-Design\AutoCAD\Final_Plans\Sheets\WTRS\W_ALIGN_G2104210.dwg
 DATE: Sep 13, 2023 10:54am
 USER: nmcmeeal
 W_XTOPO_G2104210
 V_XBNDY_G2104210



REV. NO.	DATE	REVISIONS DESCRIPTION

SURVEY CONTROL & ALIGNMENT TABLES

SW 10TH STREET & SW F STREET
STORMWATER IMPROVEMENTS

BENTONVILLE, AR

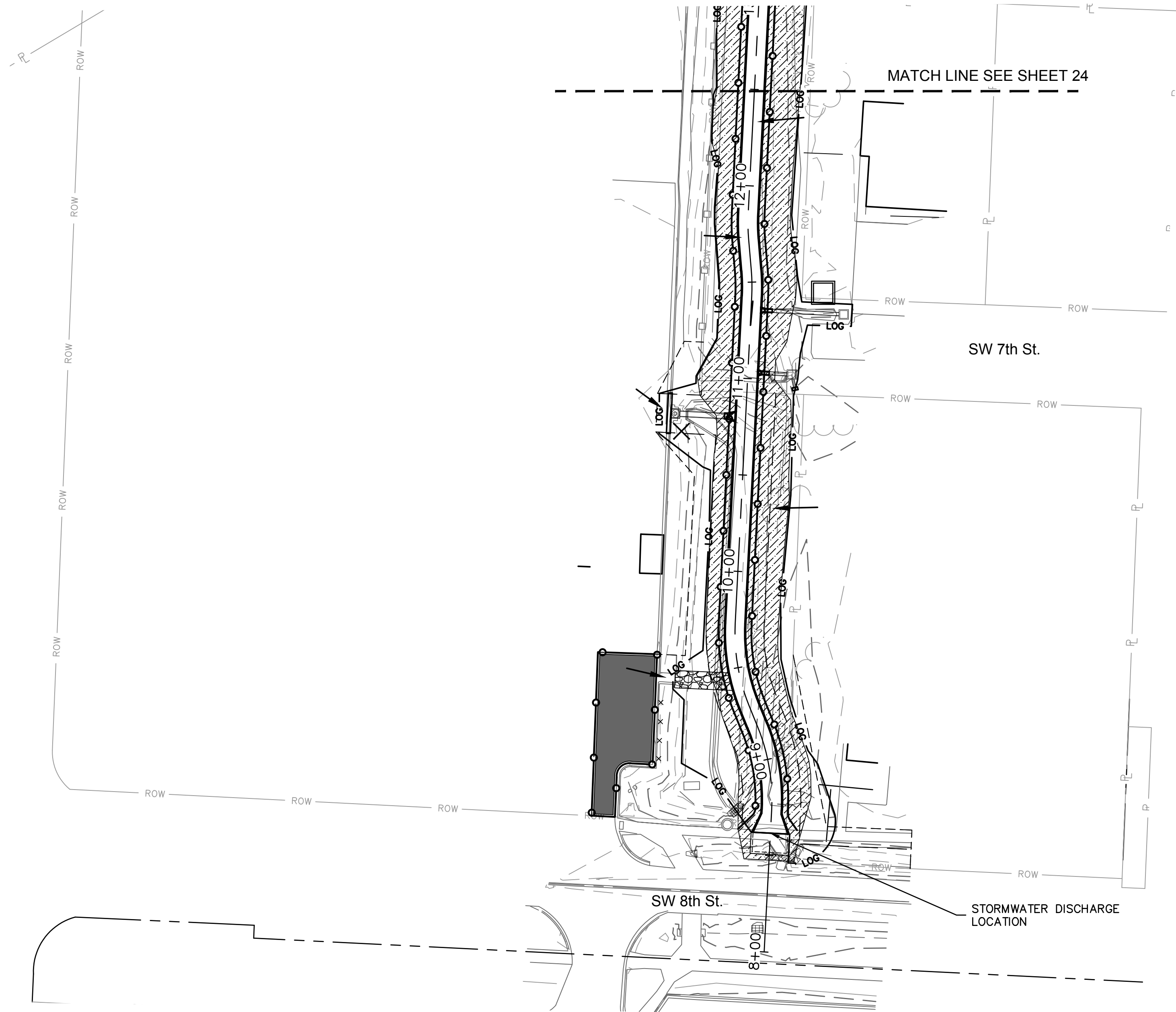
2023

drawn by: KTF
 checked by: JDA
 approved by: EJS
 QA/QC by: EJS
 project no.: 021-04210-G
 drawing no.: W_ALIGN_G2104210
 date: 09.13.2023

SHEET
22 of 71

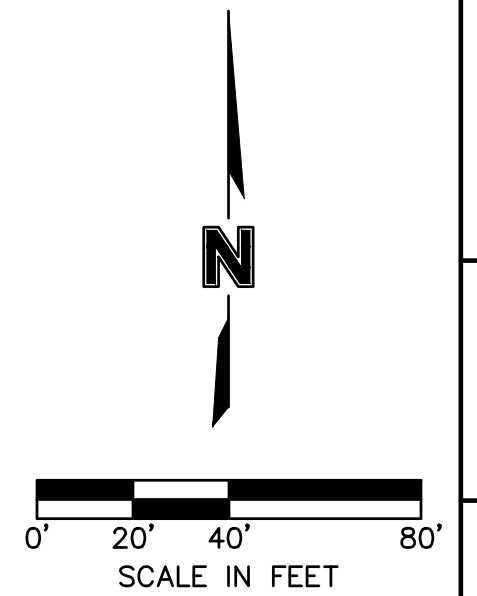
DWG: F:\2021\04001-04500\021-04210-G\40-Design\AutoCAD\Final_Plans\Sheets\WTRS\W_ERC01_G2104210.dwg
 DATE: Sep 13, 2023 10:55am XREFS: V_XBNDY_G2104210 W_PTBLK_G2104210 W_PBASE_G2104210 W_PESMT_G2104210 W_PSURE_G2104210 W_XTOPO_G2104210
 USER: nmccneal

NOTE:
 PRE-CONSTRUCTION TOPOGRAPHIC VIEW:
 REFER TO THE PLAN AND PROFILE SHEETS
 (38-52) FOR TOPOGRAPHIC INFORMATION



LEGEND

- LOG LIMITS OF GRADING
- SEDIMENT CONTROL BARRIER
- STABILIZED GRAVEL CONSTRUCTION ENTRANCE/EXIT
- INSTALL INLET PROTECTION
- TREE REMOVAL
- CONCRETE WASHOUT
- CONSTRUCTION STAGING AREA
- EROSION CONTROL MAT, NA-GREEN SC-150 OR EQUAL
- SEEDING
- SOD



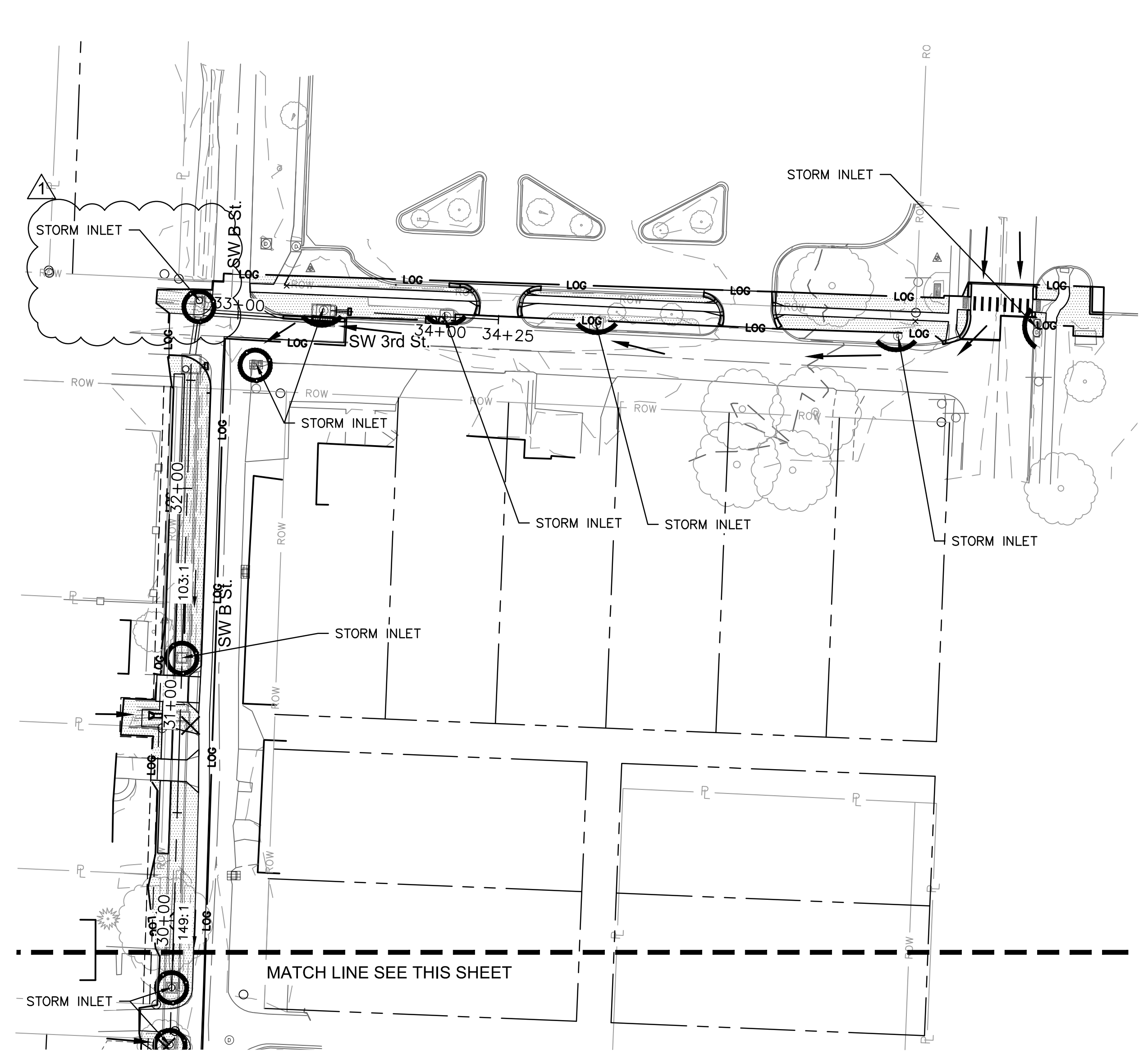
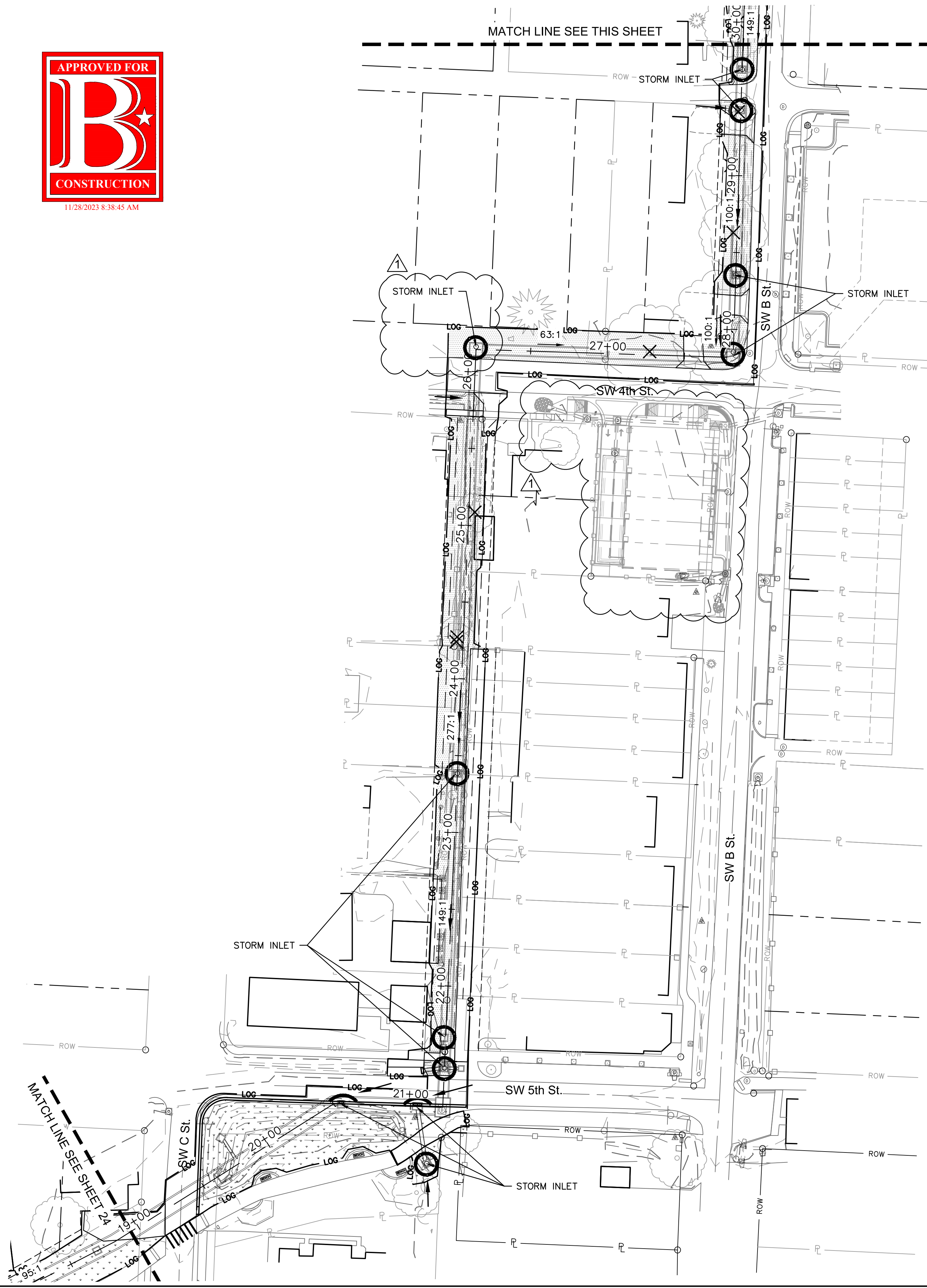
REV. NO.	DATE	REVISIONS DESCRIPTION	BY

EROSION CONTROL PLAN
 SW 10TH STREET & SW F STREET
 STORMWATER IMPROVEMENTS
 BENTONVILLE, AR
 2023

drawn by: KTF
 checked by: JDA
 approved by: EJS
 QA/QC by: EJS
 project no.: 021-04210-G
 drawing no.: W_ERC01_G2104210
 date: 09.13.2023

DWG: F:\2021\04001-04500\021-04210-G-40-Design\AutoCAD\Final_Plans\Sheets\WTRS\W_ERC01_G2104210.dwg
 DATE: Nov 01, 2023 11:15am XREFS: V_XBNDY_G2104210 W_PTBLK_G2104210 W_PBASE_G2104210 W_PESMT_G2104210 W_AERIAL_G2104210 W_PSURF_G2104210 W_XTOPO_G2104210 20-044 edg_base

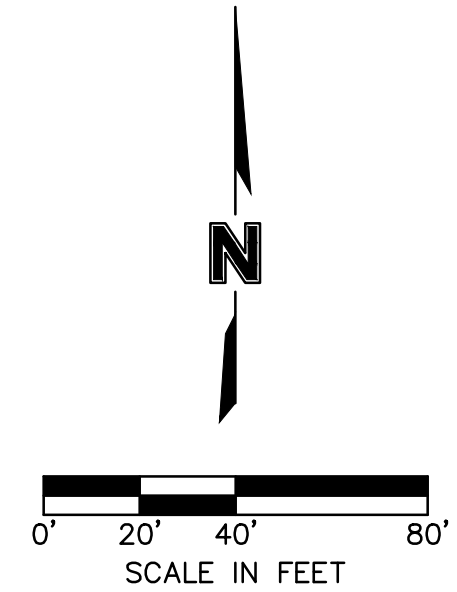
USER: eshelton



NOTE:
 PRE-CONSTRUCTION TOPOGRAPHIC VIEW:
 REFER TO THE PLAN AND PROFILE SHEETS
 (38-52) FOR TOPOGRAPHIC INFORMATION

LEGEND

- LOG LIMITS OF GRADING
- SEDIMENT CONTROL BARRIER
- STABILIZED GRAVEL CONSTRUCTION ENTRANCE/EXIT
- INSTALL INLET PROTECTION
- TREE REMOVAL
- CONCRETE WASHOUT
- CONSTRUCTION STAGING AREA
- EROSION CONTROL MAT, NA-GREEN SC-150 OR EQUAL
- SEEDING
- SOD



olsson

302 East Millisp Road
 Fayetteville, AR 72703
 TEL 479.443.3404
 www.ollsson.com

STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 NO. 19111
 ERIC JOSEPH SHELTON

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	10/31/2023	Miscellaneous updates	EMPS

EROSION CONTROL PLAN

SW 10TH STREET & SW F STREET
 STORMWATER IMPROVEMENTS

2023

BENTONVILLE, AR

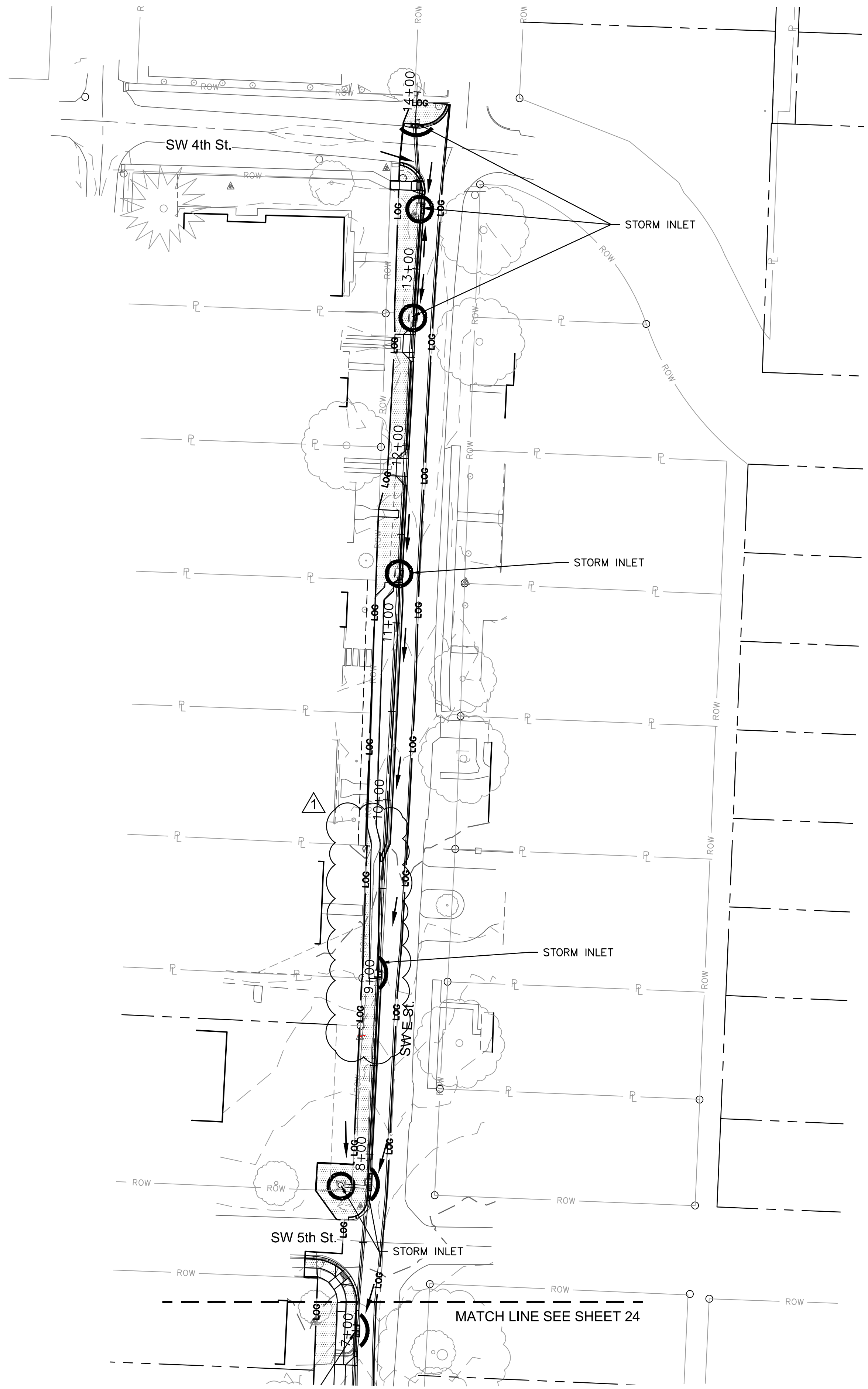
drawn by: KTF
 checked by: JDA
 approved by: EJS
 QA/QC by: EJS
 project no.: 021-04210-G
 drawing no.: W_ERC01_G2104210
 date: 09.13.2023

SHEET
 25 of 71

DWG: F:\2021\04001-04500\021-04210-G\40-Design\AutoCAD\Final_Plans\Sheets\WTRS\W_ERC01_G2104210.dwg
 DATE: Nov 01, 2023 11:15am XREFS: V_XBNDY_G2104210 W_PTBLK_G2104210 W_PBASE_G2104210 W_PESMT_G2104210 W_PESURF_G2104210 W_XTOPO_G2104210 20-044 edg_base

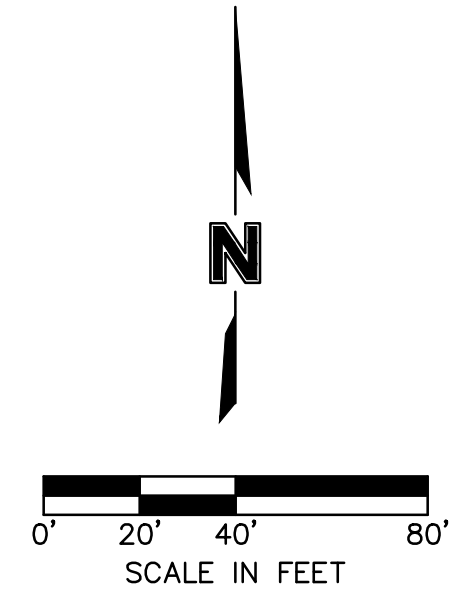
USER: eshalton
 W_AERIAL_G2104210

NOTE:
 PRE-CONSTRUCTION TOPOGRAPHIC VIEW:
 REFER TO THE PLAN AND PROFILE SHEETS
 (38-52) FOR TOPOGRAPHIC INFORMATION



LEGEND

- LOG LIMITS OF GRADING
- SEDIMENT CONTROL BARRIER
- STABILIZED GRAVEL CONSTRUCTION ENTRANCE/EXIT
- INSTALL INLET PROTECTION
- TREE REMOVAL
- CONCRETE WASHOUT
- CONSTRUCTION STAGING AREA
- EROSION CONTROL MAT, NA-GREEN SC-150 OR EQUAL
- SEEDING
- SOD



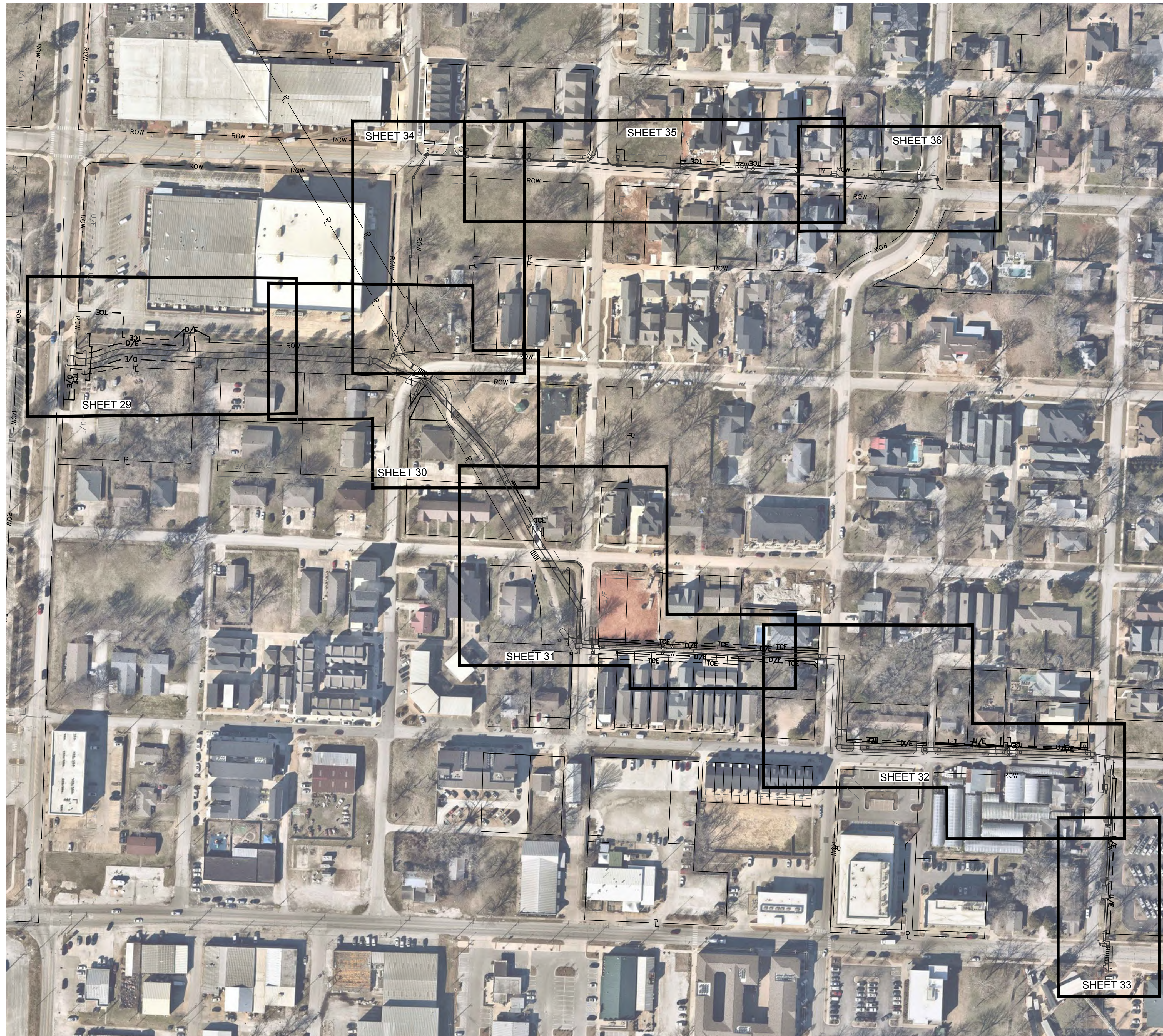
REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	10.31.2023	Miscellaneous updates	EMPS

EROSION CONTROL PLAN
 SW 10TH STREET & SW F STREET
 STORMWATER IMPROVEMENTS
 BENTONVILLE, AR
 2023

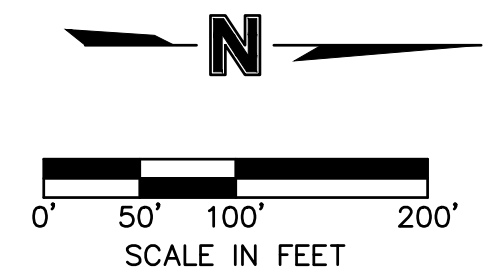
drawn by: KTF
 checked by: JDA
 approved by: EJS
 QA/QC by: EJS
 project no.: 021-04210-G
 drawing no.: W_ERC01_G2104210
 date: 09.13.2023

DWG: F:\2021\04001-04500\021-04210-G-40-Design\AutoCAD\Final_Plans\Sheets\WTRS\W_ROW-OVRALL_G2104210.dwg
 DATE: Sep 13, 2023 10:57am XREFS: V_XTOPO_G2104210 V_XBNDY_G2104210 W_PBLK_G2104210 W_PBASE_G2104210 W_PPIPE_G2104210 W_PESMT_G2104210 W_XTOPO_G2104210

USER: nmeneal



- LEGEND**
- TCE --- PROPOSED TEMPORARY CONSTRUCTION EASEMENT
 - D/E --- PROPOSED PERMANENT DRAINAGE EASEMENT
 - U/E --- PROPOSED UTILITY EASEMENT
 - ROW --- PROPOSED PERMANENT RIGHT-OF-WAY
 - U/E --- EXISTING UTILITY EASEMENT
 - ROW --- EXISTING RIGHT-OF-WAY



olsson

302 East Millcap Road
 Fayetteville, AR 72703
 TEL 479.443.3404
 www.olsson.com

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

OVERALL EASEMENT PLAN
 SW 10TH STREET & SW F STREET
 STORMWATER IMPROVEMENTS
 BENTONVILLE, AR

drawn by: KTF
 checked by: JDA
 approved by: EJS
 QA/QC by: EJS
 project no.: 021-04210-G
 drawing no. W_ROW-OVRALL_G2104210
 date: 09.13.2023

REVISIONS

2023

DWG: F:\2021\04001-04500\021-04210-G\40-Design\AutoCAD\Final_Plans\Sheets\WTRS\W_ROW-OVRALL_G2104210.dwg
 DATE: Nov 01, 2023 11:16am XREFS: V_XTPOPO_G2104210 V_XBNDY_G2104210 V_PBASE_G2104210 W_PBLK_G2104210 W_PBASE_G2104210 W_PPIPE_G2104210 W_PESMT_G2104210 W_PPIPE_G2104210 W_XTPOPO_G2104210
 USER: eshneton

EASEMENT INFORMATION					
PARCEL NUMBER	OWNER/ OWNER ADDRESS	PERMANENT DRAINAGE EASEMENT	TEMPORARY CONSTRUCTION EASEMENT	PERMANENT RIGHT-OF-WAY	UTILITY EASEMENT
1	WAL-MART STORES INC. WAL MART PROPERTY TAX DEPT PO BOX 8050 MS 0555 BENTONVILLE, AR 72712	7204 sf	10108 sf	-	419 sf
2	MAB EMPRESAS LLC 5543 EDMONDSON PIKE #1122 NASHVILLE, TN 37211	969 sf	1238 sf	-	215 sf
3	BRIAN L & PATRICIA K LARSON 802 NW D ST BENTONVILLE AR 72712	-	2167 sf	-	-
4	BRIAN L & PATRICIA K LARSON FAMILY TRUST 802 NW D ST BENTONVILLE AR 72712	617 sf	1934 sf	771 sf	-
5	NFD LLC PO BOX 808 BENTONVILLE AR 72712	36 sf	586 sf	-	-
6	MATTHEW W & DAPHNE GREEN 500 SW B ST BENTONVILLE AR 72712	-	19 sf	-	-
7	N & J FAMILY PROPERTIES LLC 1402 SW SUSANA ST UNIT 6 BENTONVILLE AR 72712	390	251 sf	-	-
8	BENTONVILLE B-SIDE HORIZONTAL PROPERTY REGIME HUBERT CHARLES AGEE, JR. & SLADER AGEE 4515 BAYWOOD AVE SPRINGDALE, AR 72762	7 sf	325 sf	-	-
9	DAVID & BRANDY HUBENER 468 SW B ST BENTONVILLE AR 72712	110 sf	370 sf	-	-
10	HUNTER & CELINA BANWARTH 644 W DICKSON ST STE 208 FAYETTEVILLE AR 72701	241 sf	315 sf	-	-
11	BENJAMIN W BUSE & KRISTIN COPHER 400 SW 5TH ST BENTONVILLE AR 72712	283 sf	354 sf	-	-
12	SATOKO KATO 403 SW C ST BENTONVILLE AR 72712	170 sf	199 sf	-	-
13	SATOKO KATO 403 SW C ST BENTONVILLE AR 72712	167 sf	199 sf	-	-
14	TODD D & AUDRA J PETERSON 319 SW 4TH ST BENTONVILLE AR 72712	632 sf	744 sf	-	-
15	ROBERT M & LESLIE R TUCKER 466 SW B ST BENTONVILLE AR 72712	110 sf	370 sf	-	-
16	NATALIE JULICH & SEAN THURMAN 464 SW B ST BENTONVILLE AR 72712	110 sf	370 sf	-	-

PARCEL NUMBER	OWNER/ OWNER ADDRESS	PERMANENT DRAINAGE EASEMENT	TEMPORARY CONSTRUCTION EASEMENT	PERMANENT RIGHT-OF-WAY	UTILITY EASEMENT
17	DANIEL M HINTZ & KASSIE M MISIEWICZ 452 SW B ST BENTONVILLE AR 72712	165 sf	554 sf	-	-
18	MARK & TARA KINSLEY 3702 SPRING HILL RD JOPLIN MO 64804	72 sf	242 sf	-	-
19	PETER MCGEE & YEE-LIN LAI 650 N LONGFELLOW LN FAYETTEVILLE AR 72704	71 sf	237 sf	-	-
20	BRIAN MOTTET 442 SW B ST BENTONVILLE AR 72712	71 sf	238 sf	-	-
21	CHRISTOPHER E CONWAY REVOCABLE TRUST 329 N B ST CENTERTON AR 72719	71 sf	239 sf	-	-
22	REEDA M RUSH 2014 REVOCABLE TRUST HABITAT FOR HUMANITY OF BENTON 1212 N WALTON BLVD BENTONVILLE AR 72712	183 sf	248 sf	-	-
23	TONY & LEAH A GAGLIARDO 303 SW 4TH ST BENTONVILLE AR 72712	420 sf	507 sf	-	-
24	PBR HOLDINGS LLC PO BOX 3450 BENTONVILLE AR 72712	450 sf	450 sf	-	113 sf
25	PBR HOLDINGS LLC PO BOX 3450 BENTONVILLE AR 72712	180 sf	180 sf	-	246 sf
26	JESSIE A WAGNER FAMILY TRUST 306 SW B ST BENTONVILLE AR 72712	204 sf	278 sf	-	238 sf
27	JUSTIN PURKEY & FRANCISCO SERPA 607 SW 2ND ST BENTONVILLE AR 72712	238 sf	306 sf	-	187 sf
28	PHILIP H & LESLEY E HERR 301 SW 3RD ST BENTONVILLE AR 72712	299 sf	299 sf	-	339 sf
29	CAPSTONE INVESTMENTS GROUP LLC PO BOX 1915 BENTONVILLE AR 72712	-	100 sf	-	-
30	PENSAGO LLC 604 SW 5TH ST BENTONVILLE AR 72712	300 sf	-	-	-
31	MARK STEVEN KELLEY 410 SW E ST BENTONVILLE, AR	-	-	-	-
32	ROBERT K & JULIE A CARLSON 408 SW E ST BENTONVILLE AR 72712	-	374 sf	-	-
33	ROBERT KELLY & CORTNEY M CARLSON 408 SW E ST BENTONVILLE AR 72712-5721	-	375 sf	-	-
34	FIRST BAPTIST CHURCH OF BENTONVILLE 200 SW A ST BENTONVILLE AR 72712-5963	-	-	-	2123 sf

1



www.olsson.com
TEL 479.443.3404

olsson

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	10/31/2023	Miscellaneous updates	EMPS

EASEMENT TABLE

SW 10TH STREET & SW F STREET
STORMWATER IMPROVEMENTS

2023

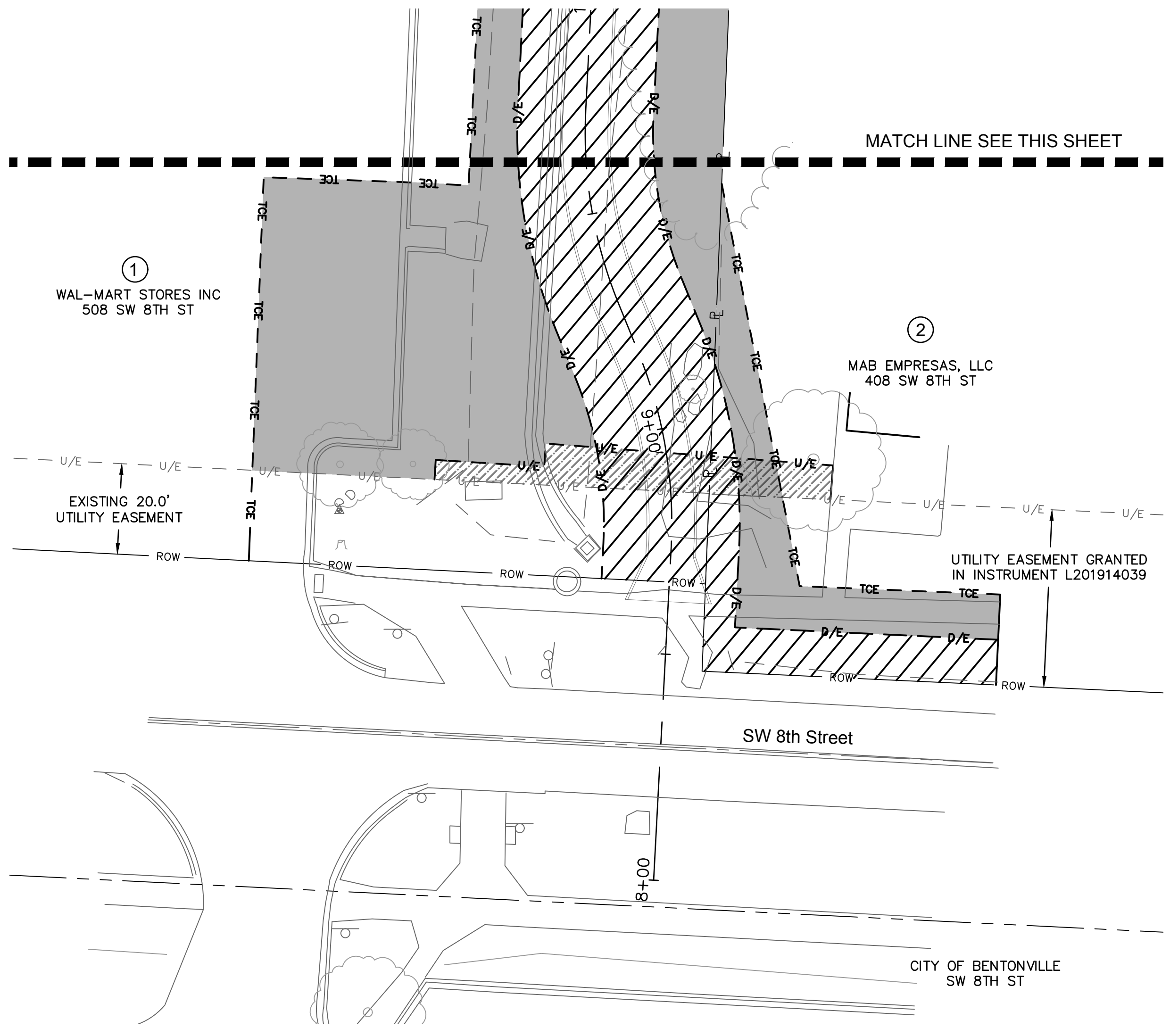
BENTONVILLE, AR

REVISIONS

drawn by: KTF
 checked by: JDA
 approved by: EJS
 QA/QC by: EJS
 project no.: 021-04210-G
 drawing no. W_ROW-OVRALL_G2104210
 date: 09.13.2023

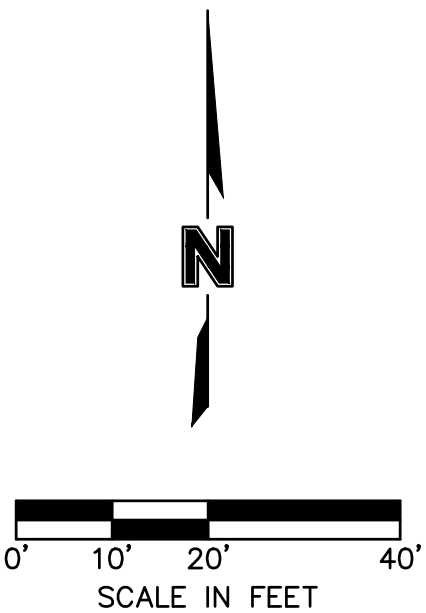
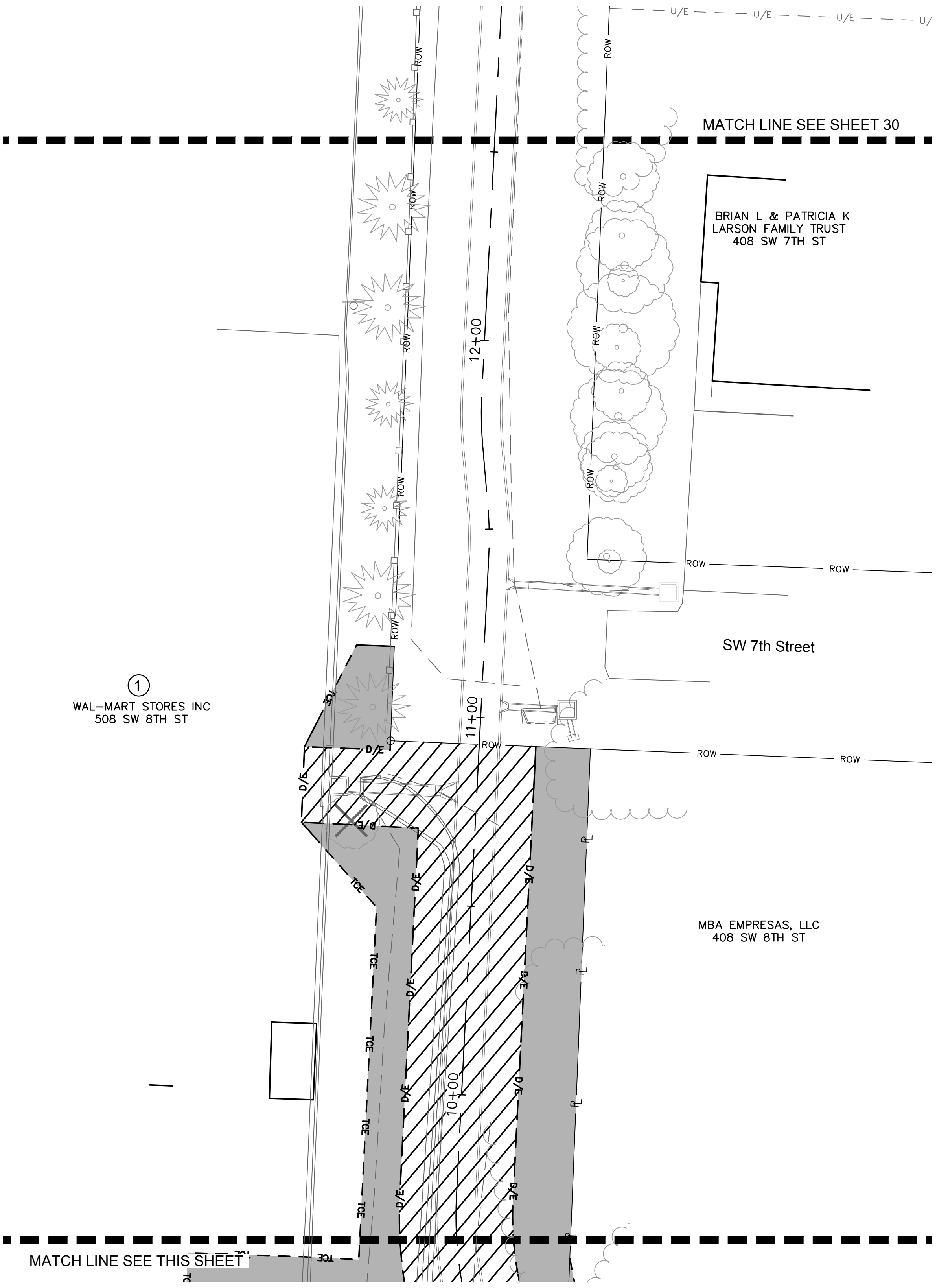
SHEET
28 of 71

DWG: F:\2021\04001-04500\021-04210-G\40-Design\AutoCAD\Final_Plans\Sheets\WTRS\W_ROW01_G2104210.dwg
 DATE: Sep 13, 2023 10:57am XREFS: V_XBNDY_G2104210 W_PTBLK_G2104210 W_PBASE_G2104210 W_PESMT_G2104210 W_XTOPO_G2104210
 USER: nmenead 20-044_edg_base



LEGEND	
	PERMANENT DRAINAGE EASEMENT
	PERMANENT RIGHT-OF-WAY (PROPOSED)
	PERMANENT UTILITY EASEMENT
	TEMPORARY CONSTRUCTION EASEMENT
	PROPERTY LINE
	LOT LINE
	EXISTING RIGHT OF WAY
	EXISTING UTILITY EASEMENT

ABBREVIATIONS	
D/E	EXISTING DRAINAGE EASEMENT
TRAIL/E	EXISTING TRAIL EASEMENT
ACCESS/E	EXISTING ACCESS EASEMENT
SWB/E	EXISTING SOUTH WESTERN BELL EASEMENT



302 East Millisap Road
Fayetteville, AR 72703
TEL 479.443.3404
www.olsson.com

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

RIGHT OF WAY EASEMENT PLAN

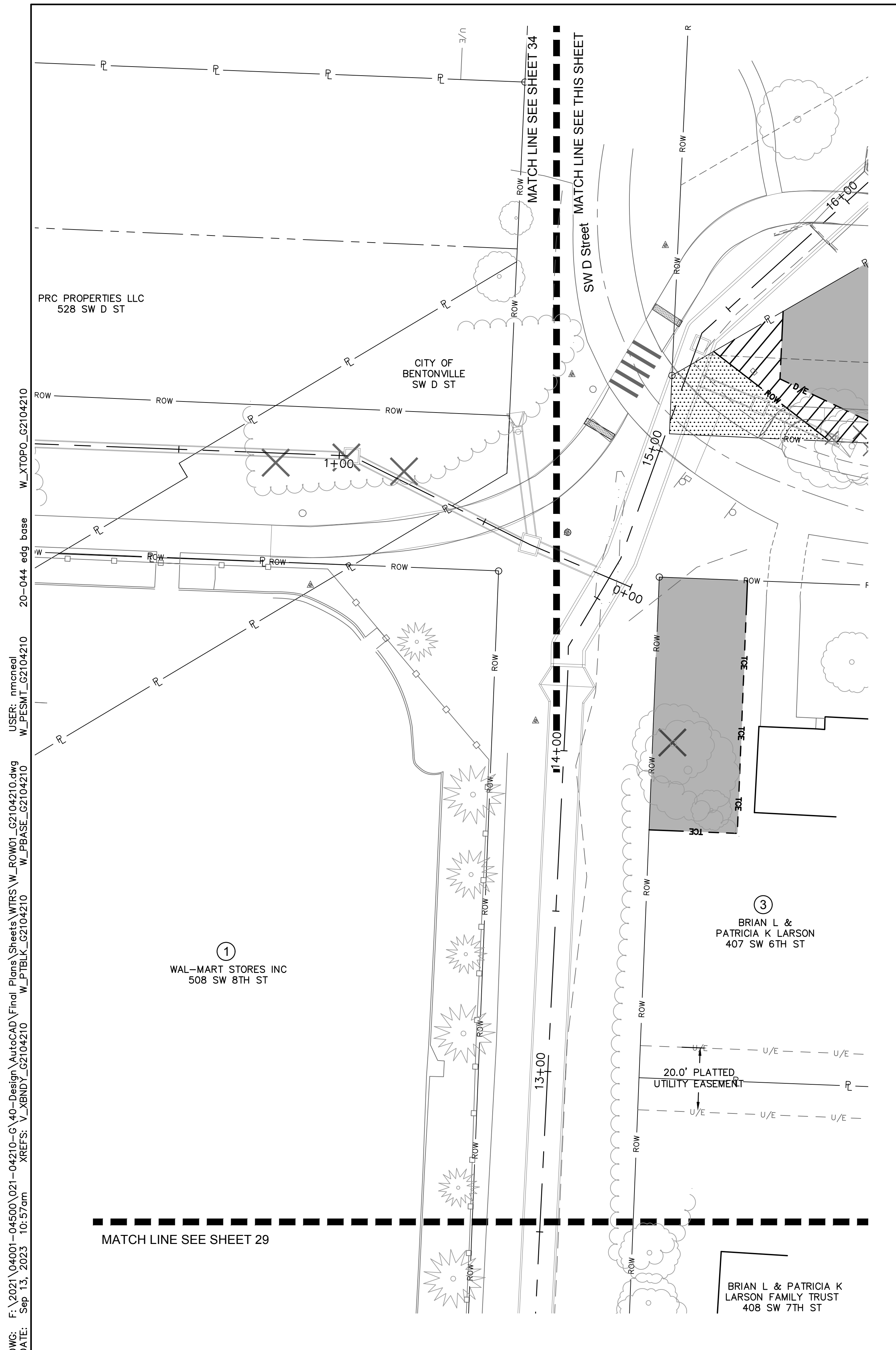
SW 10TH STREET & SW F STREET
STORMWATER IMPROVEMENTS

BENTONVILLE, AR

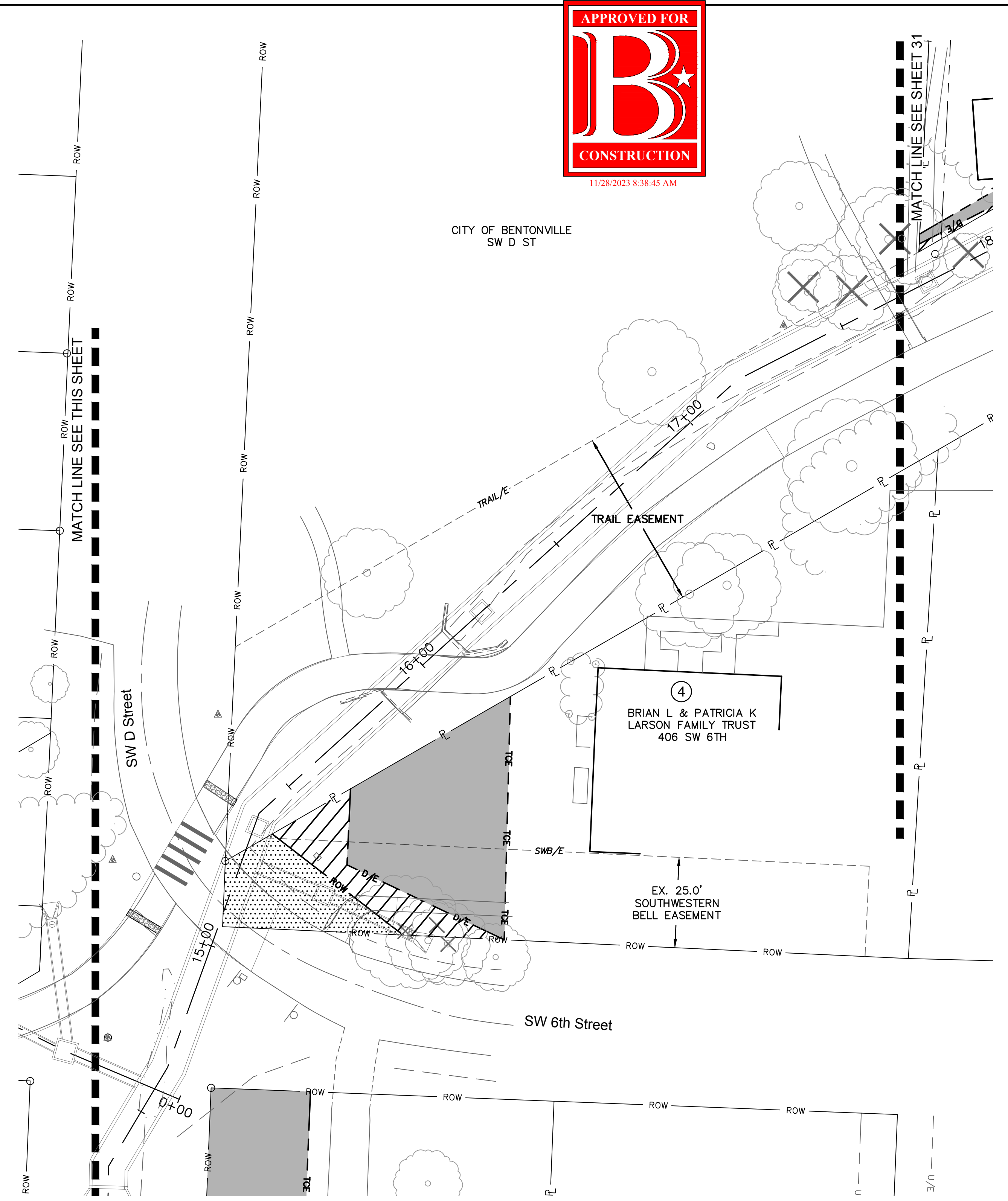
REVISIONS

drawn by: KTF
 checked by: JDA
 approved by: EJS
 QA/QC by: EJS
 project no.: 021-04210-G
 drawing no. W_ROW01_G2104210
 date: 09.13.2023

SHEET
29 of 71



DWG: F:\2021\04001-04500\021-04210-G\40-Design\AutoCAD\Final_Plans\Sheets\WTRS\W_ROW01_G2104210.dwg
 DATE: Sep 13, 2023 10:57am XREFS: V_XBNDY_G2104210 W_PTBLK_G2104210 W_PBASE_G2104210 W_PESMT_G2104210 W_XTOPO_G2104210
 USER: nmeneal
 20-044.edg_base



LEGEND

	PERMANENT DRAINAGE EASEMENT
	PERMANENT RIGHT-OF-WAY (PROPOSED)
	PERMANENT UTILITY EASEMENT
	TEMPORARY CONSTRUCTION EASEMENT
	PROPERTY LINE
	LOT LINE
	EXISTING RIGHT OF WAY
	EXISTING UTILITY EASEMENT

ABBREVIATIONS

D/E	EXISTING DRAINAGE EASEMENT
TRAIL/E	EXISTING TRAIL EASEMENT
ACCESS/E	EXISTING ACCESS EASEMENT
SWB/E	EXISTING SOUTH WESTERN BELL EASEMENT

ABOVE THE LINE

	PERMANENT RIGHT-OF-WAY (PROPOSED)
	PERMANENT UTILITY EASEMENT
	TEMPORARY CONSTRUCTION EASEMENT

PROPERTY LINE

	PROPERTY LINE
	LOT LINE
	EXISTING RIGHT OF WAY
	EXISTING UTILITY EASEMENT

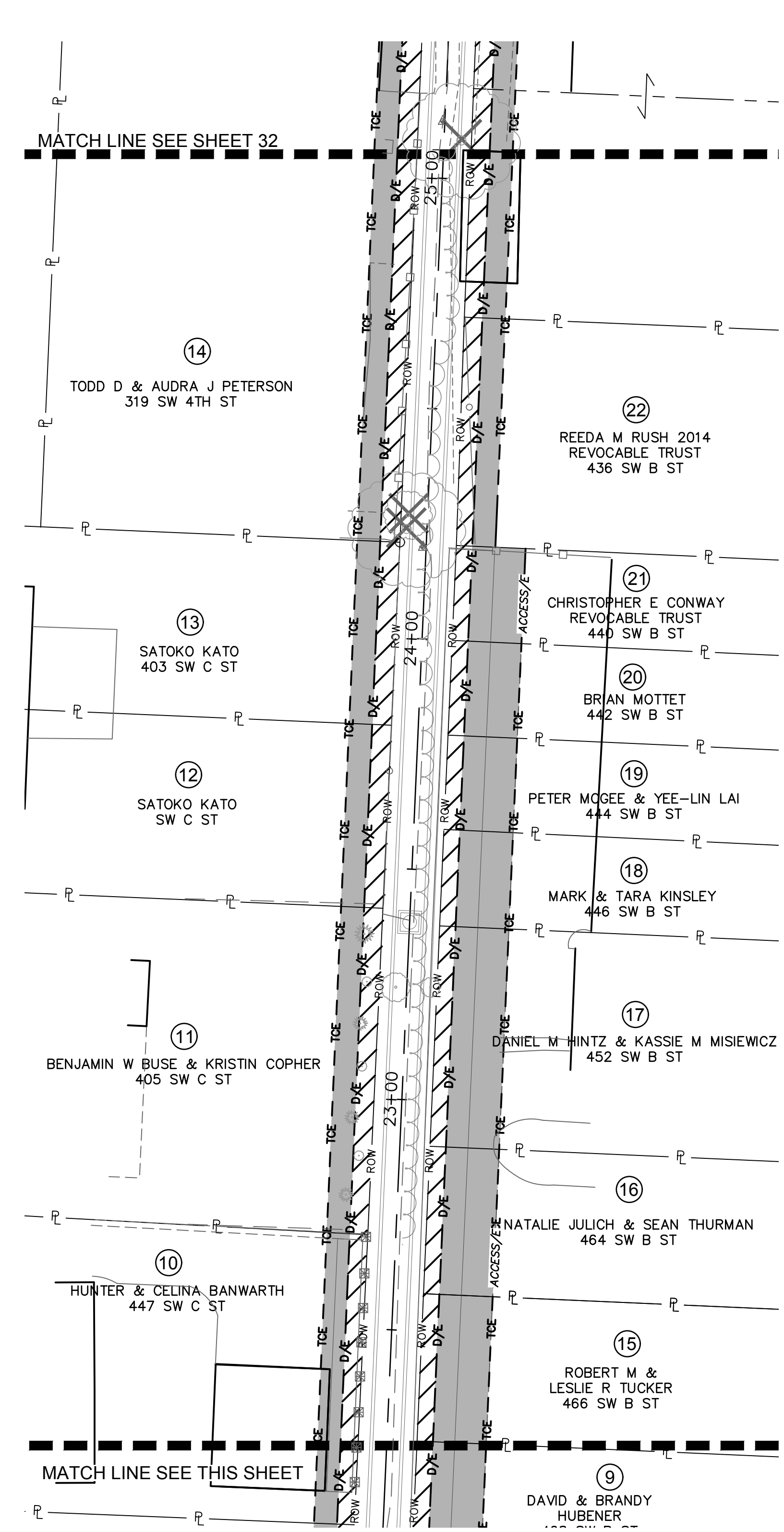
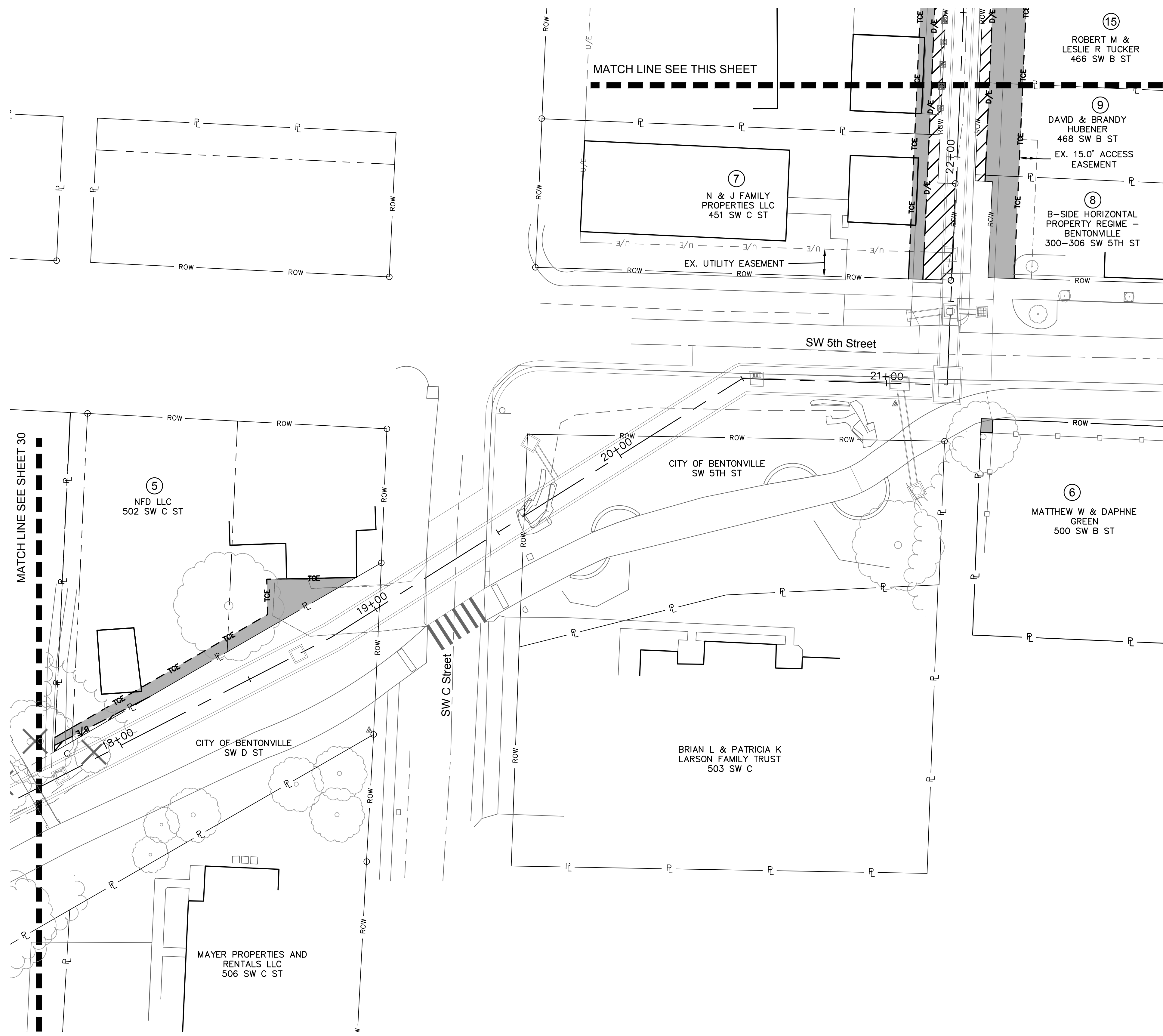
SCALE IN FEET

0' 10' 20' 40'

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

DWG: F:\2021\04001-04500\021-04210-G\40-Design\AutoCAD\Final_Plans\Sheets\WTRS\W_ROW01_G2104210.dwg
 DATE: Sep 13, 2023 10:57am XREFS: V_XBNDY_G2104210 W_PBASE_G2104210 W_PESMT_G2104210 20-044_edg_base W_XTOPO_G2104210
 USER: nmcedal

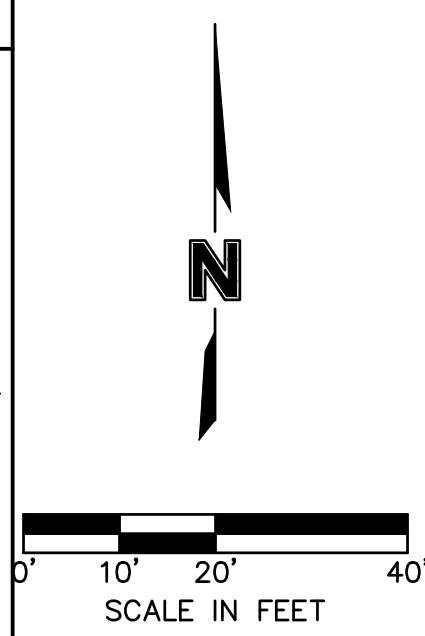


ABBREVIATIONS

D/E	EXISTING DRAINAGE EASEMENT
TRAIL/E	EXISTING TRAIL EASEMENT
ACCESS/E	EXISTING ACCESS EASEMENT
SWB/E	EXISTING SOUTH WESTERN BELL EASEMENT

LEGEND

	PERMANENT DRAINAGE EASEMENT
	PERMANENT RIGHT-OF-WAY (PROPOSED)
	PERMANENT UTILITY EASEMENT
	TEMPORARY CONSTRUCTION EASEMENT
	PROPERTY LINE
	LOT LINE
	EXISTING RIGHT OF WAY
	EXISTING UTILITY EASEMENT



olsson
 302 East Millisap Road
 Fayetteville, AR 72703
 TEL 479.443.3404
 www.olsson.com

STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 NO. 19111
 EXPIRES 09-13-2023
 ERIC JOSEPH SHELTON

REV. NO.	DATE	REVISIONS DESCRIPTION

BY: _____

RIGHT OF WAY EASEMENT PLAN
SW 10TH STREET & SW F STREET
STORMWATER IMPROVEMENTS

2023

BENTONVILLE, AR

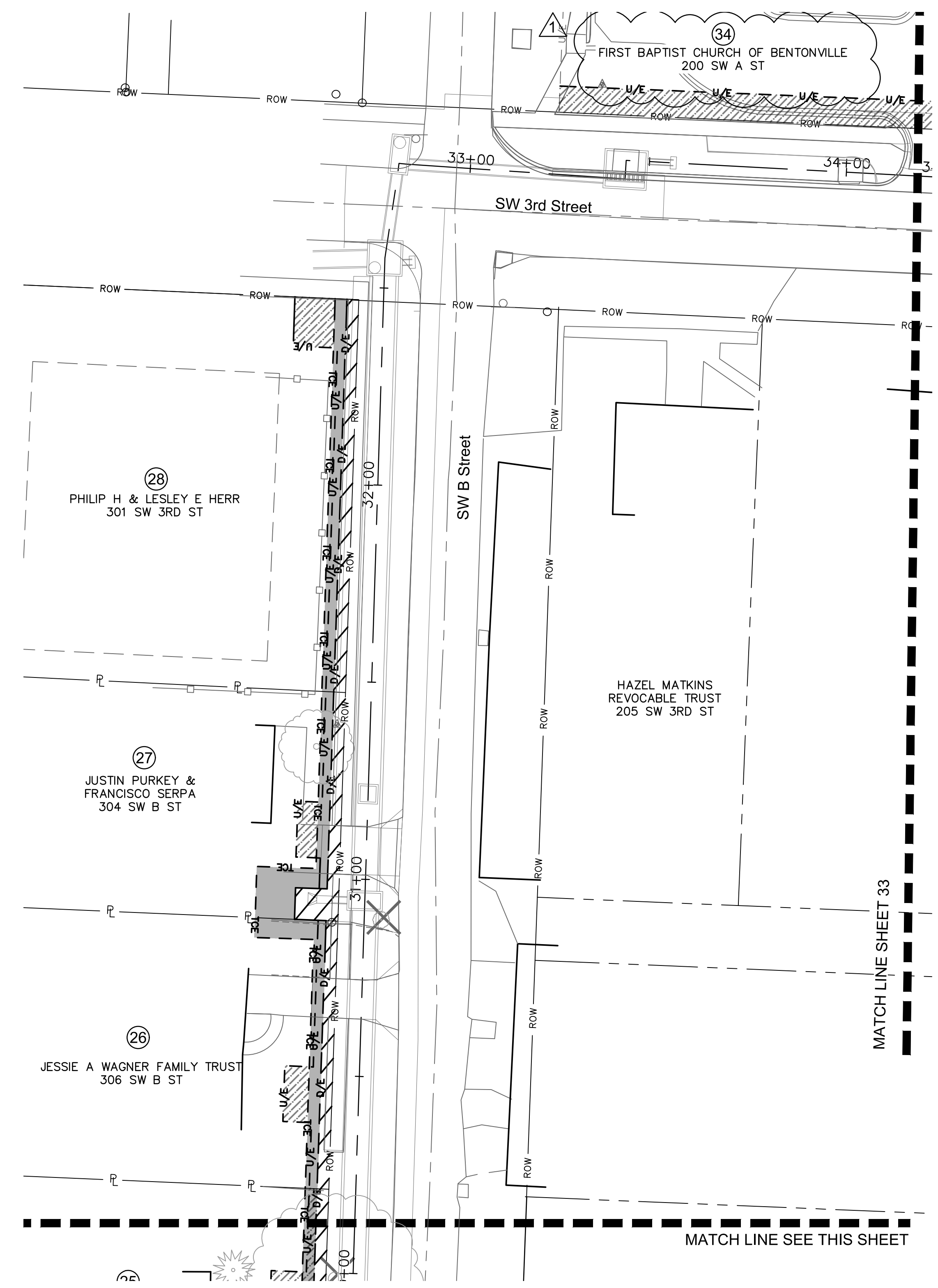
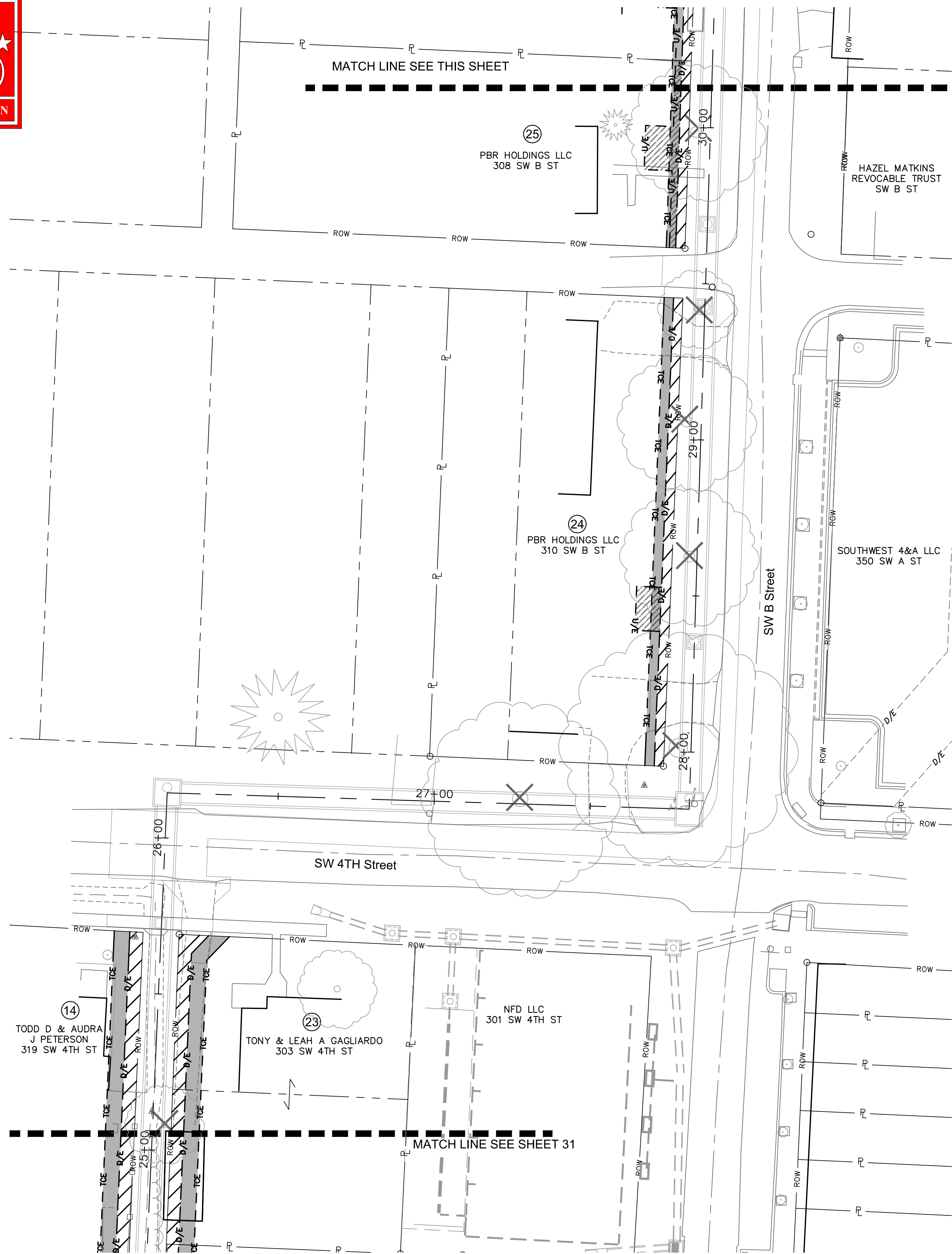
drawn by: KTF
 checked by: JDA
 approved by: EJS
 QA/QC by: EJS
 project no.: 021-04210-G
 drawing no. W_ROW01_G2104210
 date: 09.13.2023

SHEET
 31 of 71



11/28/2023 8:38:46 AM

DWG: F:\2021\04001-04500\021-04210-G\40-Design\AutoCAD\Final_Plans\Sheets\WTRS\W_ROW01_G2104210.dwg
 DATE: Nov 01, 2023 11:16am XREFS: V_XBNDY_G2104210 W_PTBLK_G2104210 W_PBASE_G2104210 W_PESMT_G2104210 W_XTOPO_G2104210
 USER: eshelton
 20-044 edg base

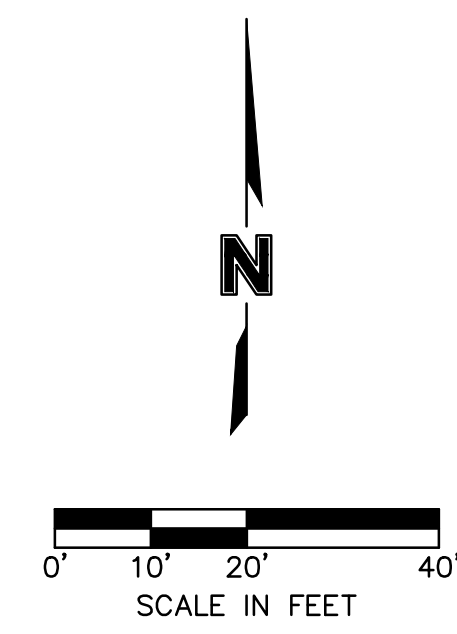


ABBREVIATIONS

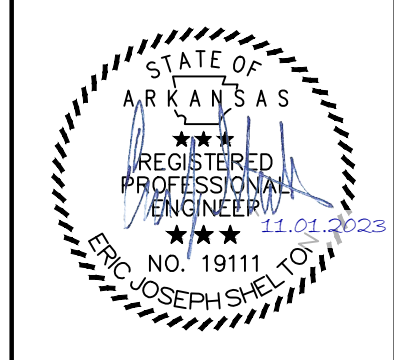
D/E	EXISTING DRAINAGE EASEMENT
TRAIL/E	EXISTING TRAIL EASEMENT
ACCESS/E	EXISTING ACCESS EASEMENT
SWB/E	EXISTING SOUTH WESTERN BELL EASEMENT

LEGEND

	PERMANENT DRAINAGE EASEMENT
	PERMANENT RIGHT-OF-WAY (PROPOSED)
	PERMANENT UTILITY EASEMENT
	TEMPORARY CONSTRUCTION EASEMENT
	PROPERTY LINE
	LOT LINE
	EXISTING RIGHT OF WAY
	EXISTING UTILITY EASEMENT



olsson
 302 East Millcap Road
 Fayetteville, AR 72703
 TEL 479.443.3404
 www.olsson.com

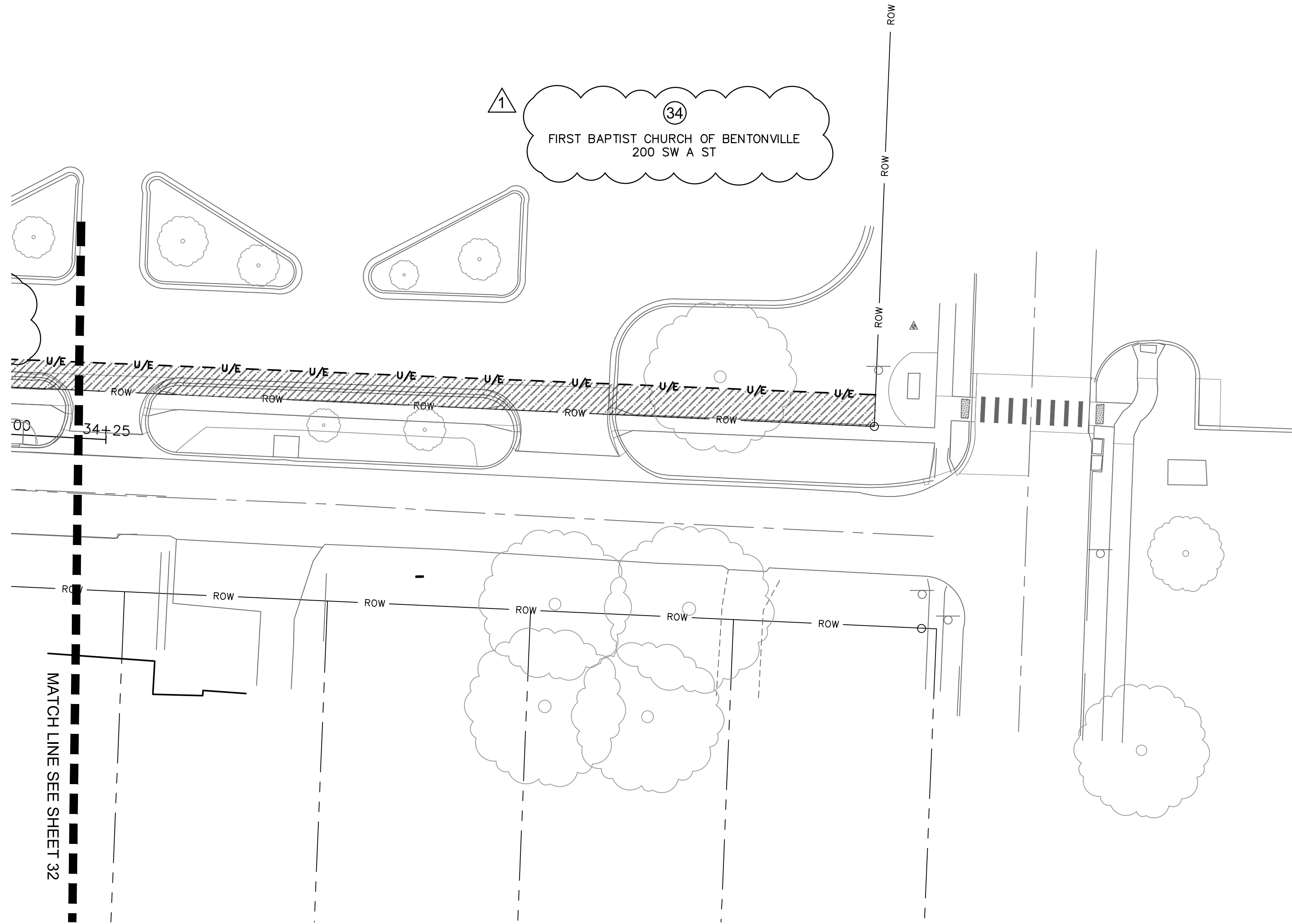


REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	10.31.2023	Miscellaneous updates	EMPS

RIGHT OF WAY EASEMENT PLAN
SW 10TH STREET & SW F STREET
STORMWATER IMPROVEMENTS
 2023
 BENTONVILLE, AR
 drawn by: KTF
 checked by: JDA
 approved by: EJS
 QA/QC by: EJS
 project no.: 021-04210-G
 drawing no. W_ROW01_G2104210
 date: 09.13.2023
SHEET 32 of 71

REVISIONS

DWG: F:\2021\04001-04500\021-04210-G\40-Design\AutoCAD\Final_Plans\Sheets\WTRS\W_ROW01_G2104210.dwg
 DATE: Nov 01, 2023 11:16am XREFS: V_XBNDY_G2104210 W_PTBLK_G2104210 W_PBASE_G2104210 W_PESMT_G2104210
 USER: eshelton
 20-044.edg base W_XTOPO_G2104210

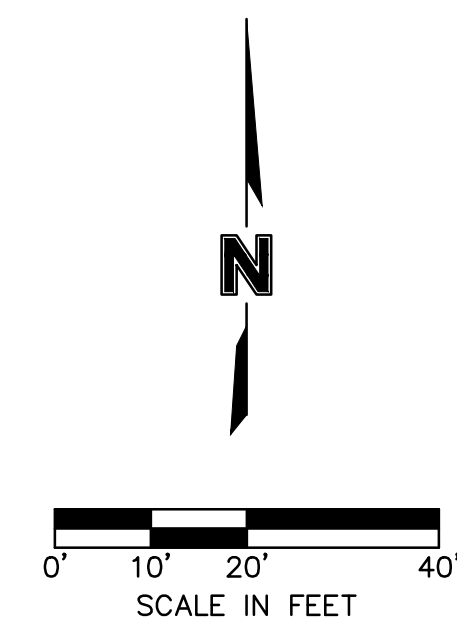


ABBREVIATIONS

D/E	EXISTING DRAINAGE EASEMENT
TRAIL/E	EXISTING TRAIL EASEMENT
ACCESS/E	EXISTING ACCESS EASEMENT
SWB/E	EXISTING SOUTH WESTERN BELL EASEMENT

LEGEND

	PERMANENT DRAINAGE EASEMENT
	PERMANENT RIGHT-OF-WAY (PROPOSED)
	PERMANENT UTILITY EASEMENT
	TEMPORARY CONSTRUCTION EASEMENT
	PROPERTY LINE
	LOT LINE
	EXISTING RIGHT OF WAY
	EXISTING UTILITY EASEMENT



olsson
 302 East Millcap Road
 Fayetteville, AR 72703
 TEL 479.443.3404
 www.olsson.com



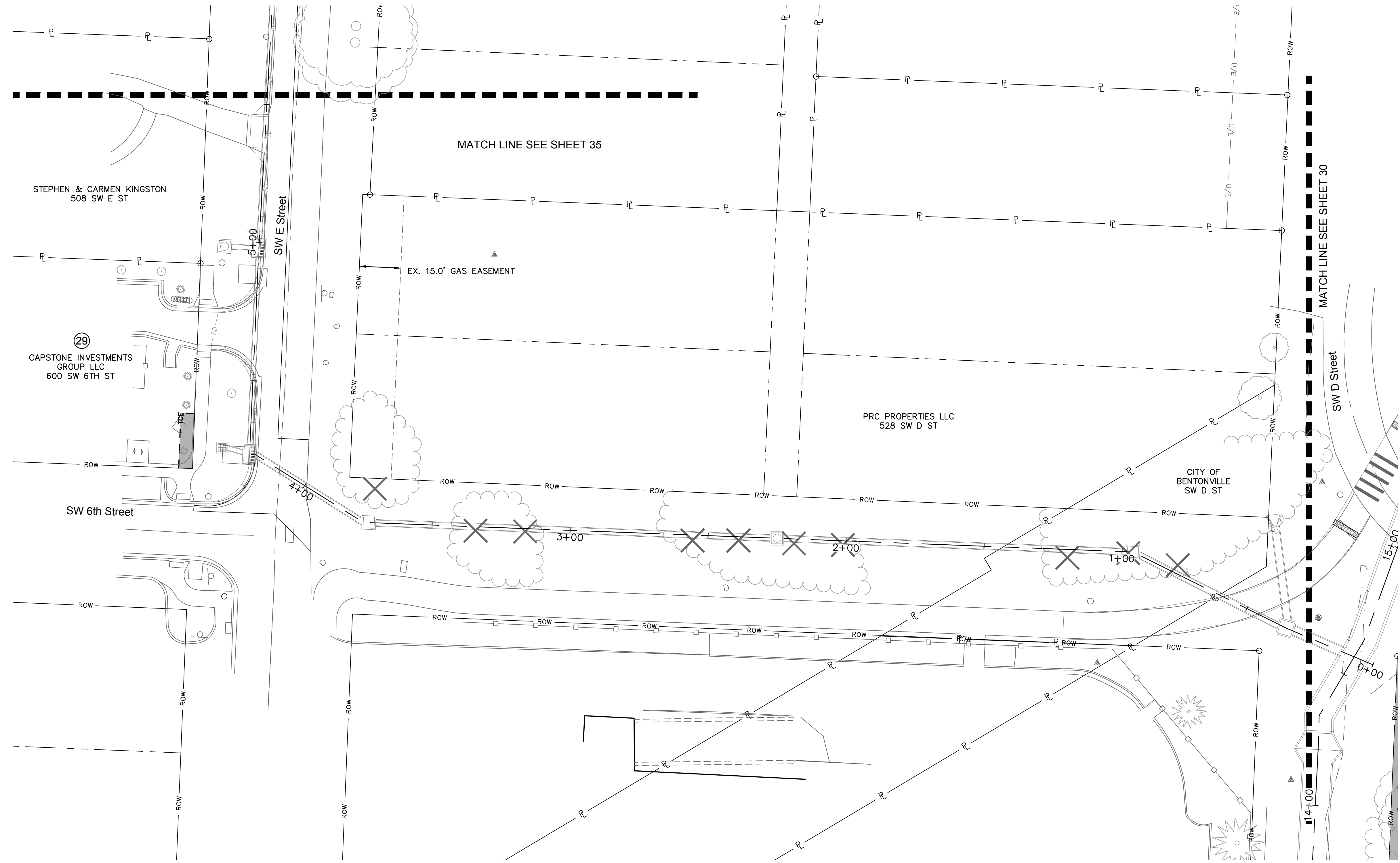
REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	10.31.2023	Miscellaneous updates	EMPS

RIGHT OF WAY EASEMENT PLAN
SW 10TH STREET & SW F STREET
STORMWATER IMPROVEMENTS
 BENTONVILLE, AR
 2023

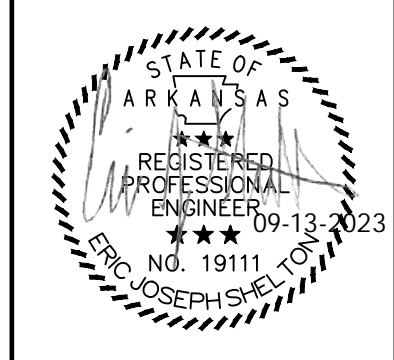
drawn by: KTF
 checked by: JDA
 approved by: EJS
 QA/QC by: EJS
 project no.: 021-04210-G
 drawing no. W_ROW01_G2104210
 date: 09.13.2023

SHEET 33 of 71

DWG: F:\2021\04001-04500\021-04210-G\40-Design\AutoCAD\Final_Plans\Sheets\WTRS\W_ROW01_G2104210.dwg
 DATE: Sep 13, 2023 10:58am XREFS: V_XBNDY_G2104210 W_PTBK_G2104210 W_PBASE_G2104210 W_PESMT_G2104210 W_XTOPO_G2104210
 USER: nmccnd W_PESMT_G2104210 20-044_edg_base W_ROW01_G2104210.dwg



olsson
 302 East Millisp Road
 Fayetteville, AR 72703
 TEL 479.443.3404
 www.olsson.com



REV. NO.	DATE	REVISIONS DESCRIPTION	BY

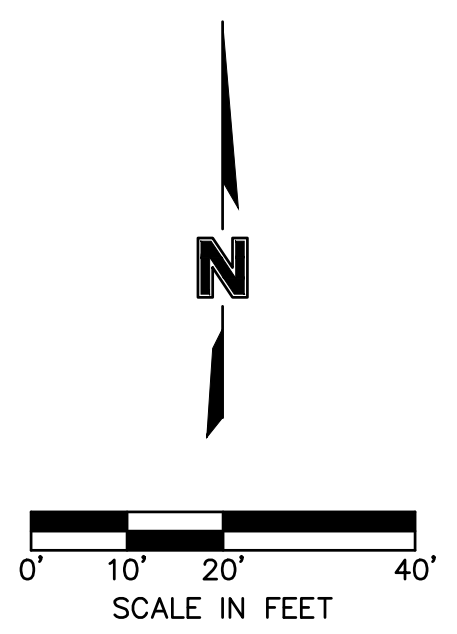
RIGHT OF WAY EASEMENT PLAN
SW 10TH STREET & SW F STREET
STORMWATER IMPROVEMENTS
 2023
 BENTONVILLE, AR

drawn by: KTF
 checked by: JDA
 approved by: EJS
 QA/QC by: EJS
 project no.: 021-04210-G
 drawing no. W_ROW01_G2104210
 date: 09.13.2023

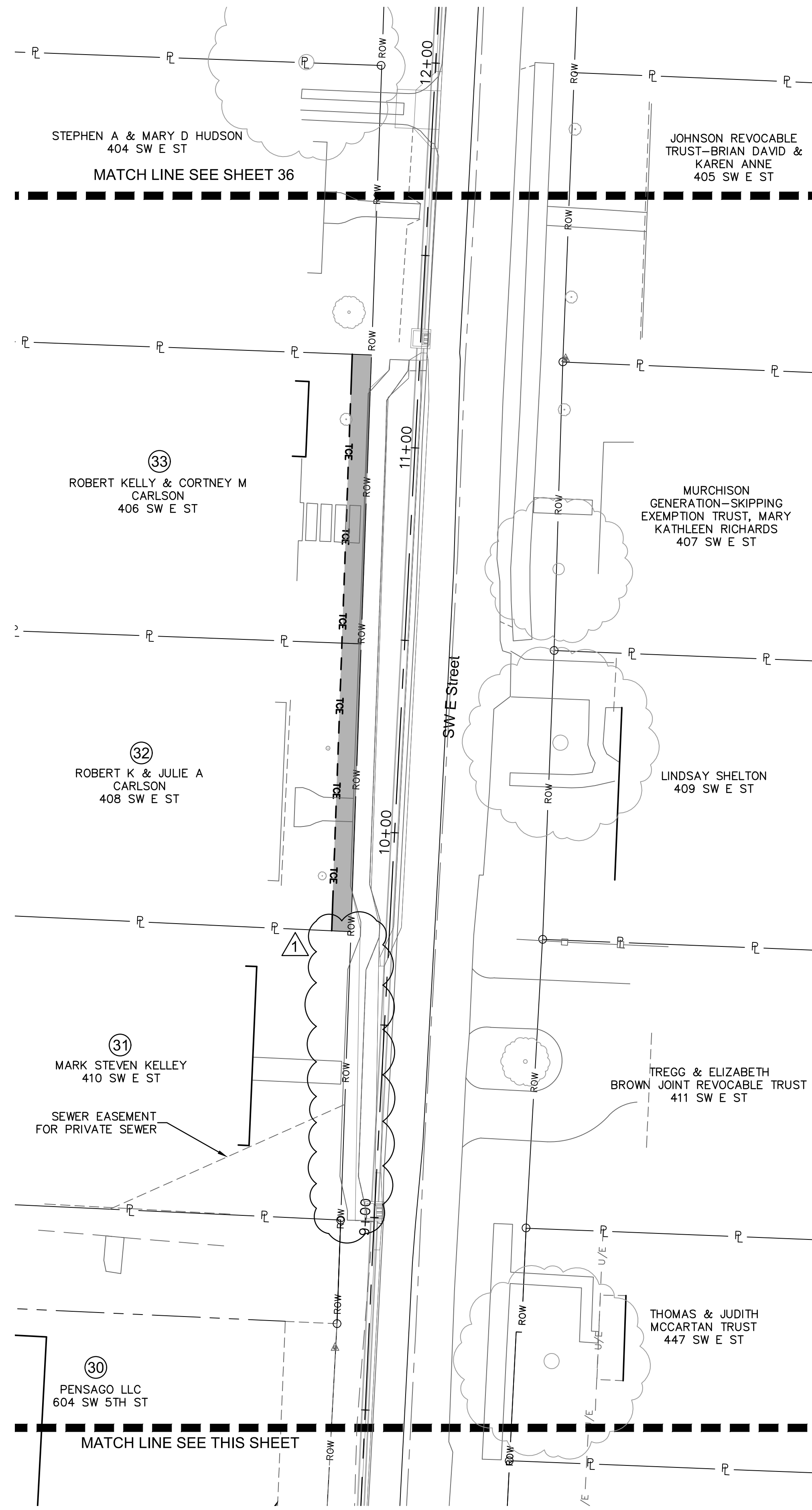
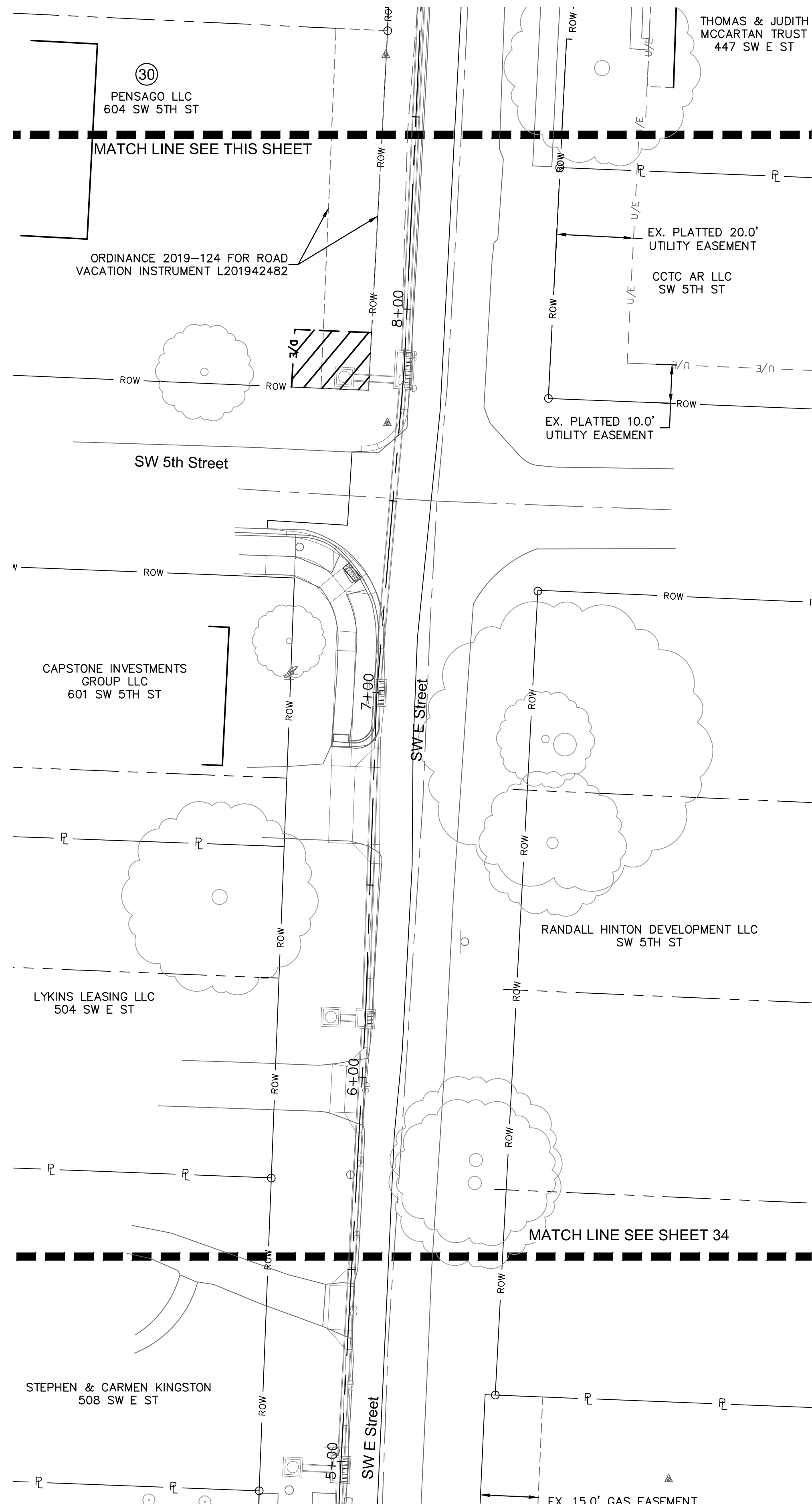
- ABBREVIATIONS**
- D/E EXISTING DRAINAGE EASEMENT
 - TRAIL/E EXISTING TRAIL EASEMENT
 - ACCESS/E EXISTING ACCESS EASEMENT
 - SWE/E EXISTING SOUTH WESTERN BELL EASEMENT

LEGEND

	PERMANENT DRAINAGE EASEMENT
	PERMANENT RIGHT-OF-WAY (PROPOSED)
	PERMANENT UTILITY EASEMENT
	TEMPORARY CONSTRUCTION EASEMENT
	PROPERTY LINE
	LOT LINE
	EXISTING RIGHT OF WAY
	EXISTING UTILITY EASEMENT

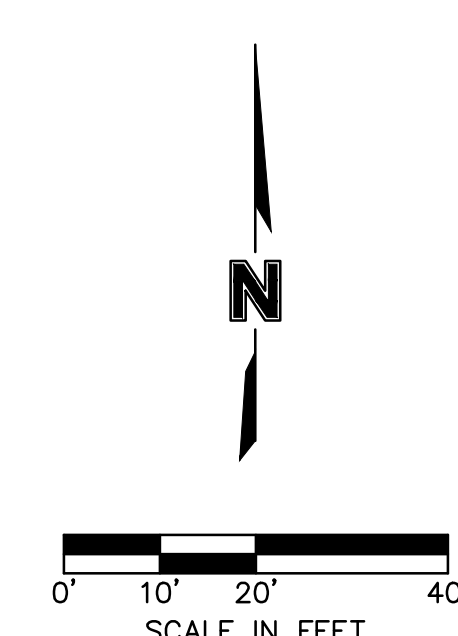


DWG: F:\2021\04001-04500\021-04210-G\40-Design\AutoCAD\Final_Plans\Sheets\WTRS\W_ROW01_G2104210.dwg
 DATE: Nov 01, 2023 11:17am XREFS: V_XBNDY_G2104210 W_PTBLK_G2104210 W_PBASE_G2104210 W_PESMT_G2104210 W_XTOPO_G2104210
 USER: eshelton 20-044 edg base



LEGEND	
	PERMANENT DRAINAGE EASEMENT
	PERMANENT RIGHT-OF-WAY (PROPOSED)
	PERMANENT UTILITY EASEMENT
	TEMPORARY CONSTRUCTION EASEMENT
	PROPERTY LINE
	LOT LINE
	EXISTING RIGHT OF WAY
	EXISTING UTILITY EASEMENT

ABBREVIATIONS	
D/E	EXISTING DRAINAGE EASEMENT
TRAIL/E	EXISTING TRAIL EASEMENT
ACCESS/E	EXISTING ACCESS EASEMENT
SWB/E	EXISTING SOUTH WESTERN BELL EASEMENT



302 East Millcap Road
Fayetteville, AR 72703
TEL 479.443.3404
www.olsson.com

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	10/31/2023	Miscellaneous updates	EMPS

RIGHT OF WAY EASEMENT PLAN

SW 10TH STREET & SW F STREET

STORMWATER IMPROVEMENTS

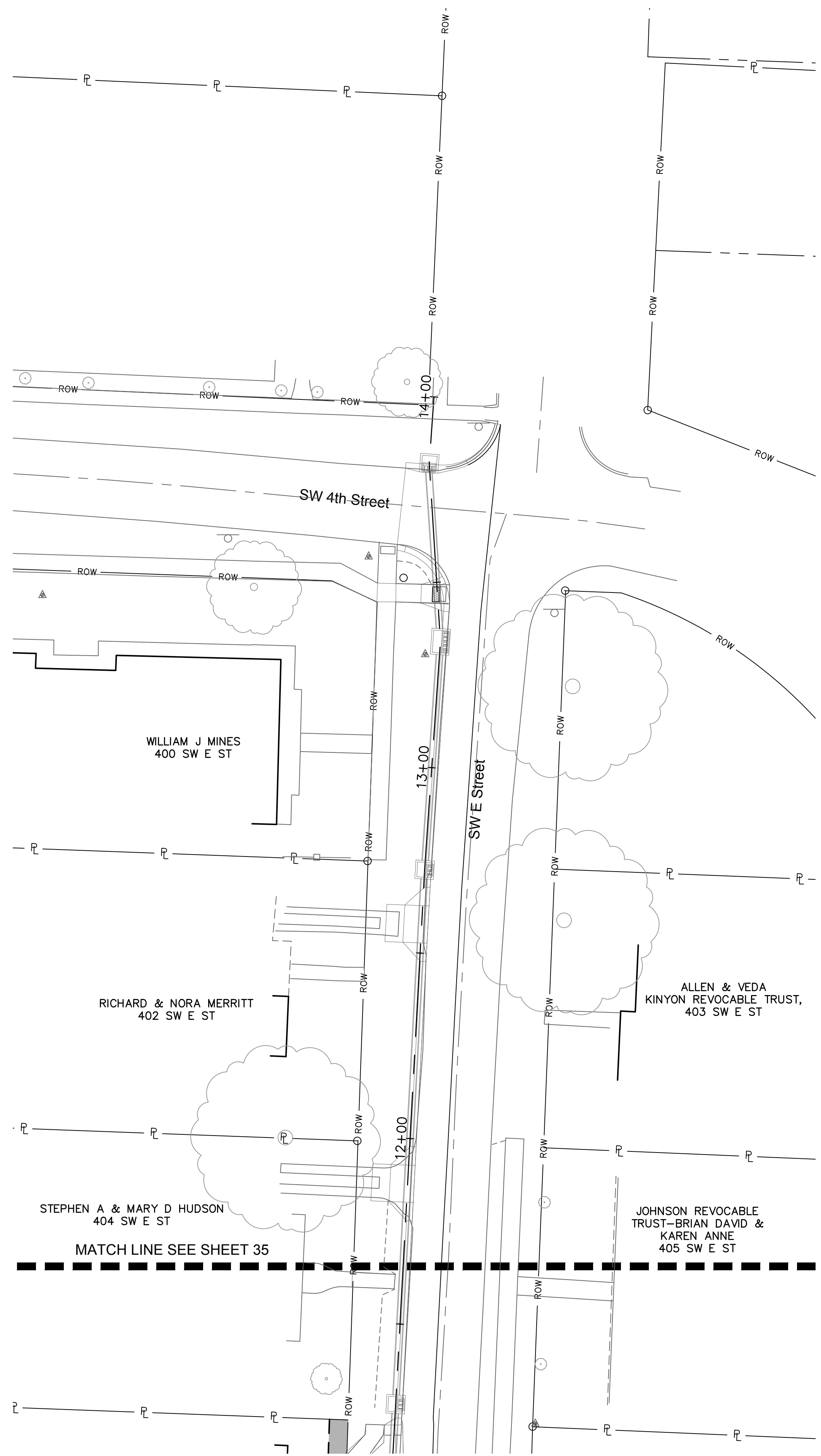
BENTONVILLE, AR 2023

drawn by: KTF	checked by: JDA
approved by: EJS	QA/QC by: EJS
project no.: 021-04210-G	drawing no. W_ROW01_G2104210
date: 09.13.2023	

SHEET

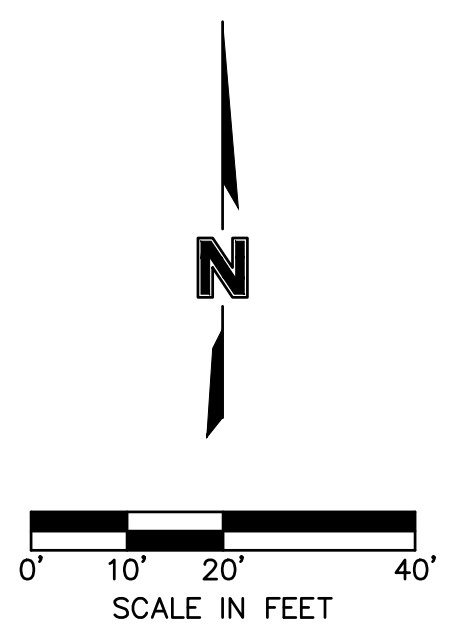
35 of 71

DWG: F:\2021\04001-04500\021-04210-G-40-Design\AutoCAD\Final_Plans\Sheets\WTRS\W_ROW01_G2104210.dwg
 DATE: Sep 13, 2023 10:58am XREFS: V_XBNDY_G2104210 W_PTBLK_G2104210 W_PBASE_G2104210 W_PESMT_G2104210 W_XTOPO_G2104210
 USER: nmcnad
 20-044_edg_base

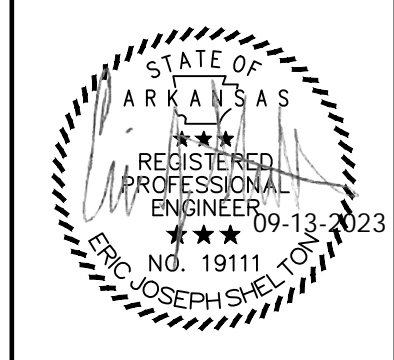


LEGEND	
	PERMANENT DRAINAGE EASEMENT
	PERMANENT RIGHT-OF-WAY (PROPOSED)
	PERMANENT UTILITY EASEMENT
	TEMPORARY CONSTRUCTION EASEMENT
	PROPERTY LINE
	LOT LINE
	EXISTING RIGHT OF WAY
	EXISTING UTILITY EASEMENT

ABBREVIATIONS	
D/E	EXISTING DRAINAGE EASEMENT
TRAIL/E	EXISTING TRAIL EASEMENT
ACCESS/E	EXISTING ACCESS EASEMENT
SMB/E	EXISTING SOUTH WESTERN BELL EASEMENT



olsson
 302 East Millisp Road
 Fayetteville, AR 72703
 TEL 479.443.3404
 www.olsson.com



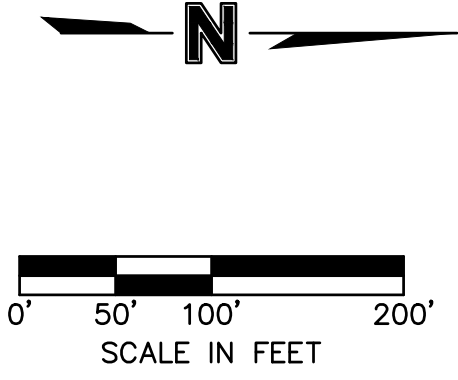
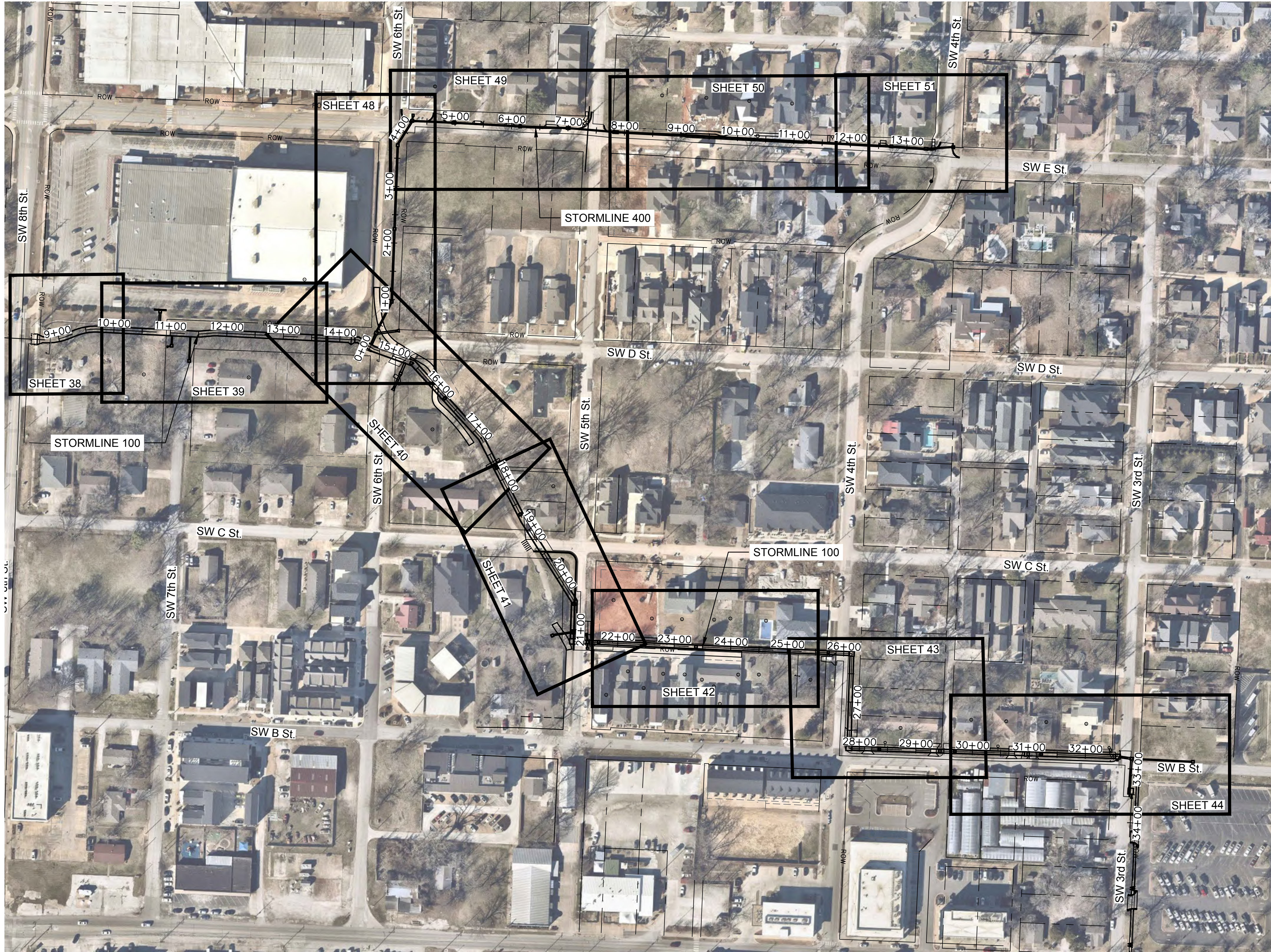
REV. NO.	DATE	REVISIONS DESCRIPTION	BY

RIGHT OF WAY EASEMENT PLAN
SW 10TH STREET & SW F STREET
STORMWATER IMPROVEMENTS
 BENTONVILLE, AR
 2023

drawn by: KTF
 checked by: JDA
 approved by: EJS
 QA/QC by: EJS
 project no.: 021-04210-G
 drawing no. W_ROW01_G2104210
 date: 09.13.2023

DWG: F:\2021\04001-04500\021-04210-G-40-Design\AutoCAD\Final_Plans\Sheets\WTRS\W_GEN01_G2104210.dwg
 DATE: Sep 13, 2023 10:59am XREFS: W_PTBK_G2104210 V_XBNDY_G2104210 W_PBASE_G2104210 W_PPipe_G2104210 W_XTOPO_G2104210

USER: nmcneal



olsson

302 East Millcap Road
Fayetteville, AR 72703
TEL 479.443.3404 www.olsson.com

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

STORM SEWER GENERAL LAYOUT

SW 10TH STREET & SW F STREET
STORMWATER IMPROVEMENTS

2023

REVISIONS

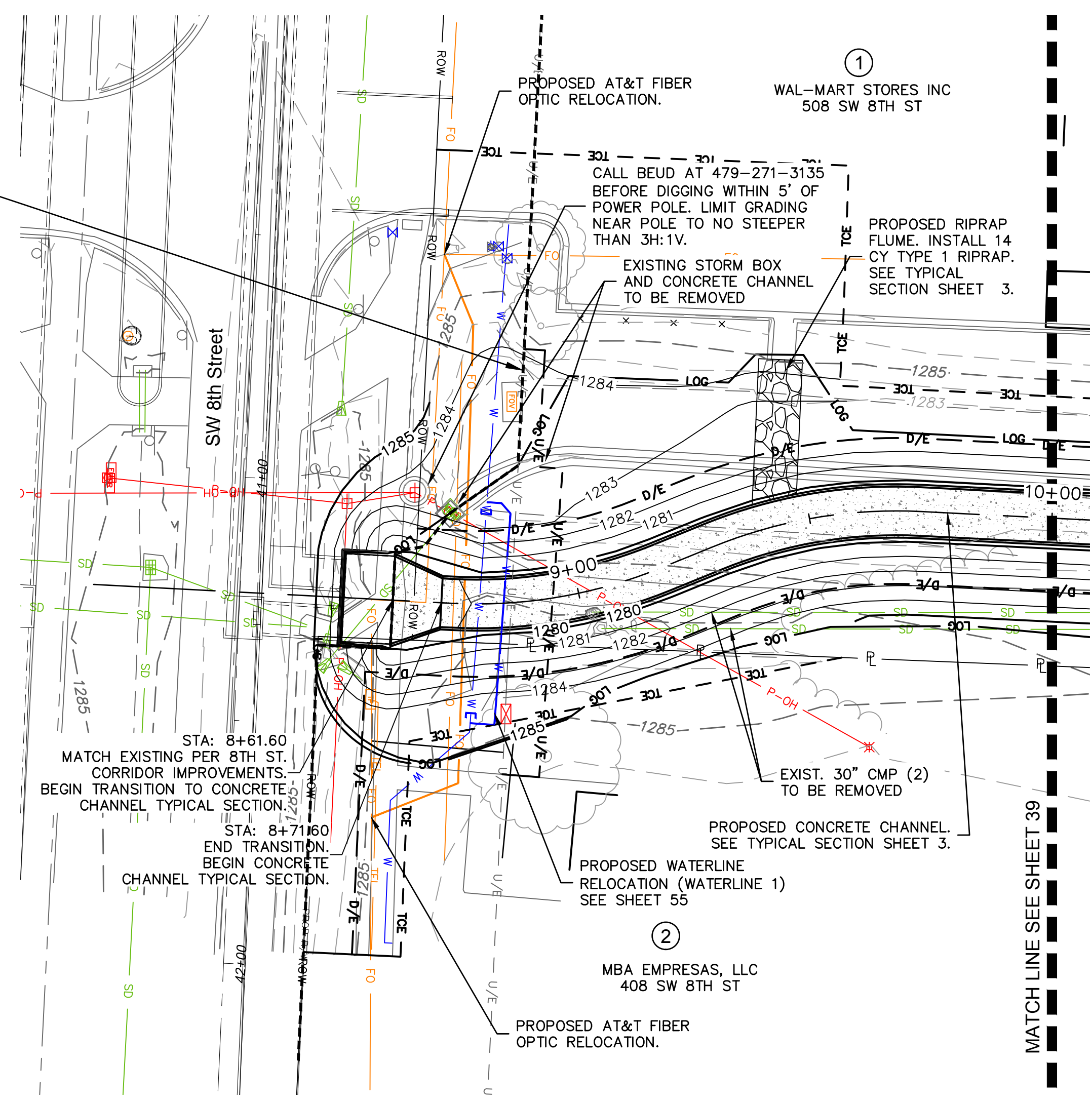
drawn by: KTF
 checked by: JDA
 approved by: EJS
 QA/QC by: EJS
 project no.: 021-04210-G
 drawing no.: W_GEN01_G2104210
 date: 09.13.2023

SHEET

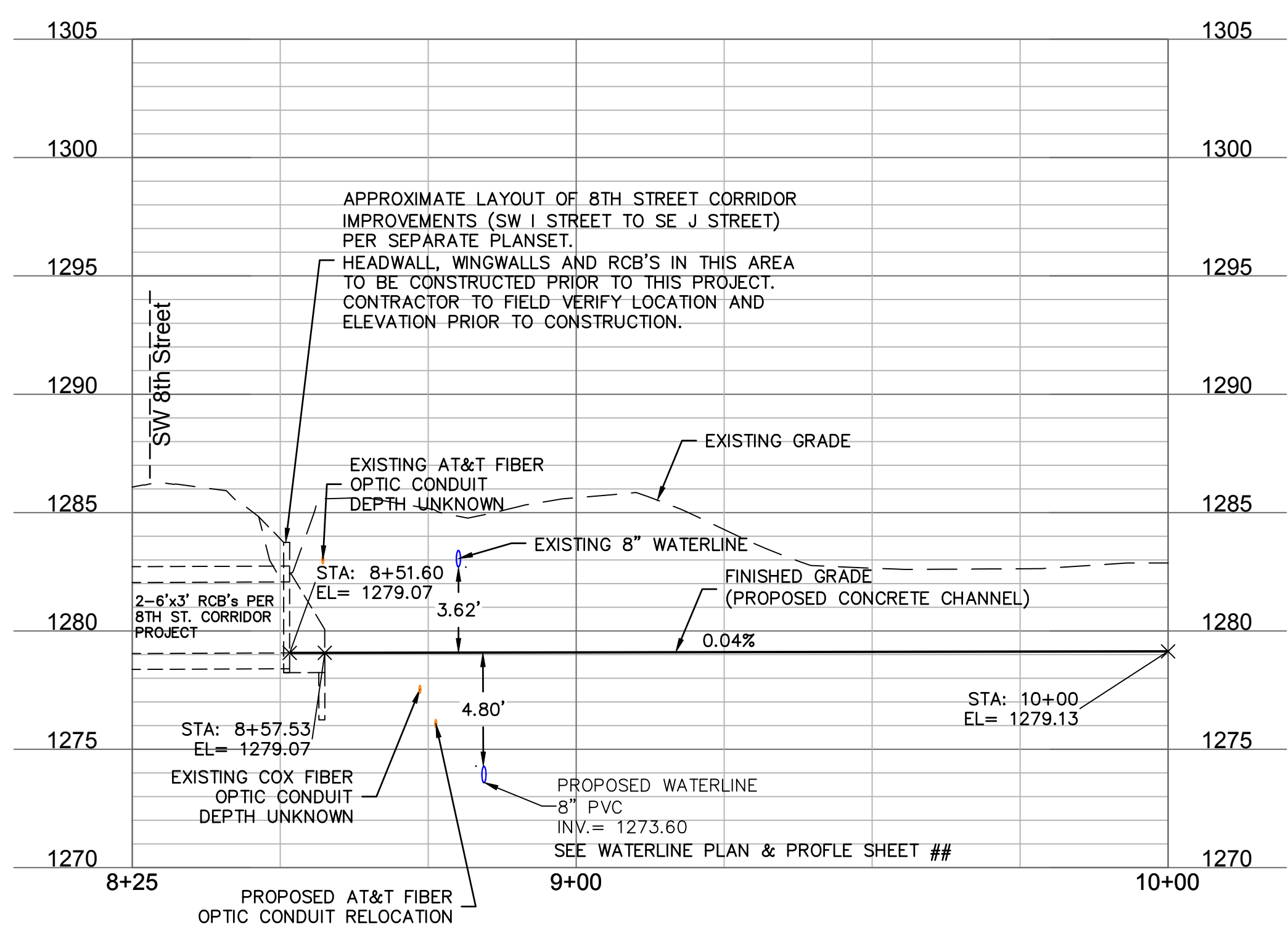
37 of 71

END 8TH STREET CORRIDOR PROJECT: START OF SW 10TH AND F STORMWATER IMPROVEMENTS

NOTE:
 APPROXIMATE LIMITS OF 8TH STREET CORRIDOR IMPROVEMENTS (SW I STREET TO SE J STREET) PER COB PROJECT #PIIP20-0007 ARE SHOWN. THE 8TH STREET CORRIDOR IMPROVEMENTS SHALL CONSTRUCT THE HEADWALL AND CULVERT DOWNSTREAM OF STA 8+61.60 AND PERFORM MINIMAL GRADING TO TRANSITION EXISTING CONCRETE CHANNEL TO APRON ELEVATION OF BOX CULVERT. THIS PROJECT ASSUMES 8TH STREET CORRIDOR WORK IS COMPLETED PRIOR TO PROJECT.



STORMLINE 100 (8+25 - 10+00)



LEGEND

- LIMITS OF GRADING
- ASPHALT STREET
- ASPHALT PAVEMENT REPAIR
- BRICK
- COMMERCIAL DRIVEWAY
- CONCRETE CHANNEL
- CONCRETE STREET
- CONCRETE TRAIL
- GRAVEL (CLASS 8 AGGREGATE BASE COURSE)
- RESIDENTIAL DRIVEWAY
- SIDEWALK
- - - TCE - PROPOSED TEMPORARY CONSTRUCTION EASEMENT
- - - D/E - PROPOSED PERMANENT DRAINAGE EASEMENT
- - - U/E - PROPOSED UTILITY EASEMENT
- - - U/E - EXISTING UTILITY EASEMENT

NOTE:
 SEE GRADING ENLARGEMENT PLANS FOR PROPOSED CURB TYPES AND LOCATIONS.

SUMMARY OF HARDSCAPE

ITEM	UNIT	QUANTITY
1 10 FOOT CONCRETE CHANNEL WITH CURB	SY	176

N

0' 10' 20' 40'
SCALE IN FEET

APPROVED FOR

CONSTRUCTION

11/28/2023 8:38:46 AM

0' 5' 10'
SCALE IN FEET

302 East Millisap Road
Fayetteville, AR 72703
TEL 479.443.3404
www.olsson.com

STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 NO. 19111
 ERIC JOSEPH SHELTON

REV. NO.	DATE	REVISIONS DESCRIPTION

PLAN & PROFILE - STORMLINE 100

SW 10TH STREET & SW F STREET
STORMWATER IMPROVEMENTS

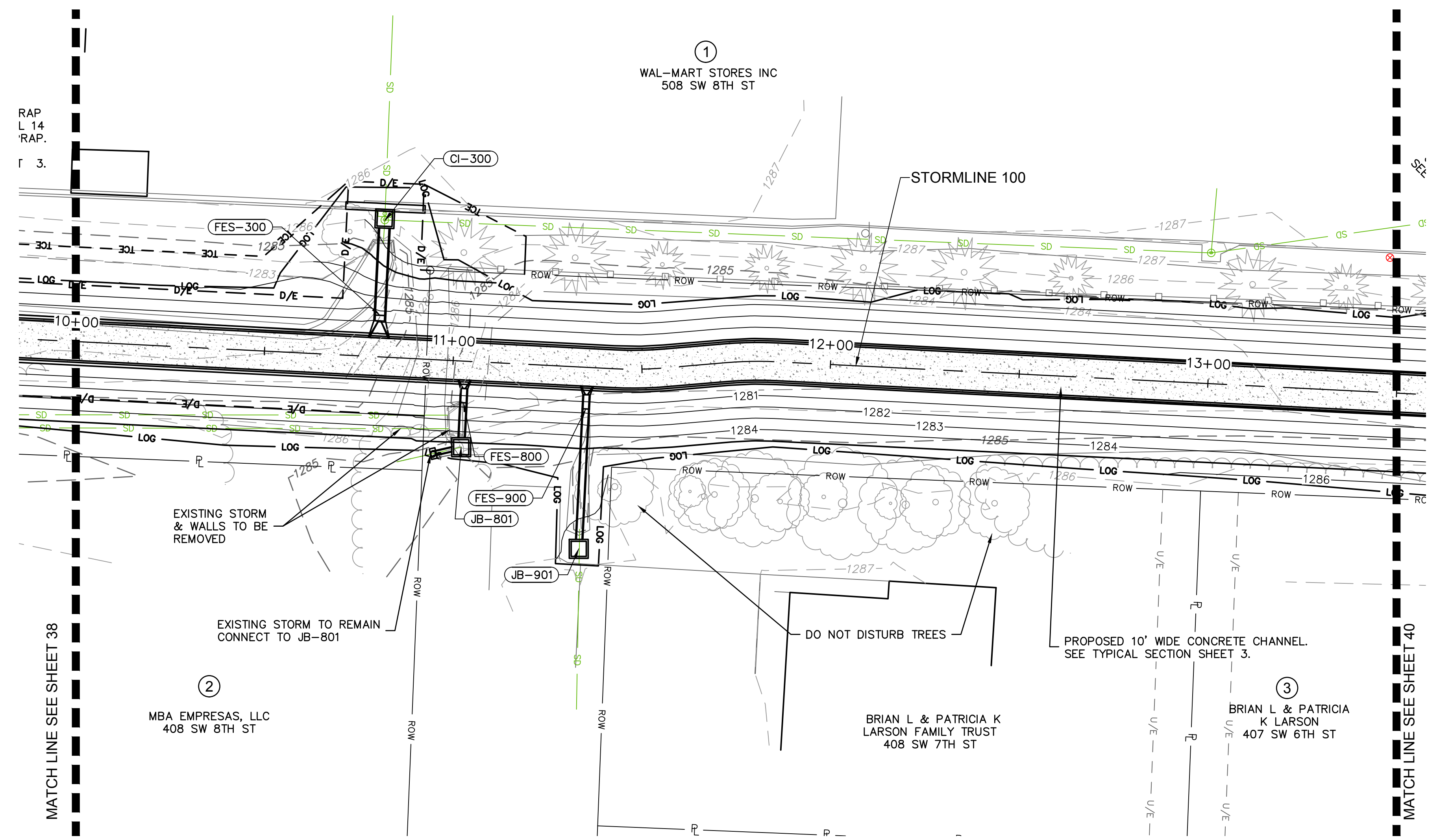
BENTONVILLE, AR

2023

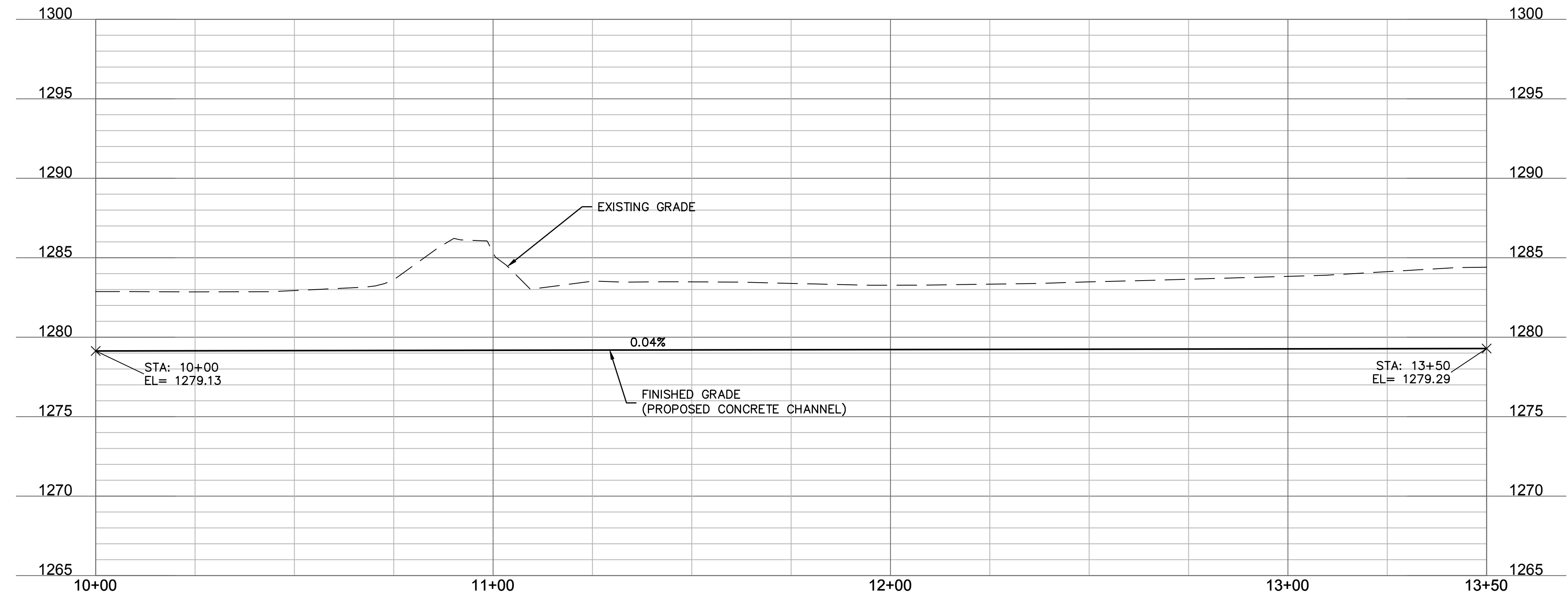
drawn by: KTF
 checked by: JDA
 approved by: EJS
 QA/QC by: EJS
 project no.: 021-04210-G
 drawing no.: W_STM01_G2104210
 date: 09.13.2023

SHEET
38 of 71

DWG: F:\2021\04001-04500\021-04210-G-40-Design\AutoCAD\Final_Plans\Sheets\WTRS\W_STM01_G2104210.dwg
 DATE: Sep 13, 2023 11:01am XREFS: W_PTBK_G2104210 V_XBNDY_G2104210 W_PSURE_G2104210 W_PATTI_G2104210 W_PESMT_G2104210 W_PATL_G2104210 W_PBA
 USER: nmeneal 20-044 edg base 117348_STORM_Olsson_ADJUSTED 22-08-23_32244-BASE



STORMLINE 100 (10+00 - 13+50)



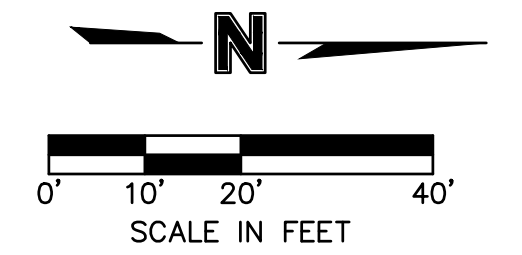
LEGEND

- LIMITS OF GRADING
- ASPHALT STREET
- ASPHALT PAVEMENT REPAIR
- BRICK
- COMMERCIAL DRIVEWAY
- CONCRETE CHANNEL
- CONCRETE STREET
- CONCRETE TRAIL
- GRAVEL (CLASS 8 AGGREGATE BASE COURSE)
- RESIDENTIAL DRIVEWAY
- SIDEWALK
- PROPOSED TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED PERMANENT DRAINAGE EASEMENT
- PROPOSED UTILITY EASEMENT
- EXISTING UTILITY EASEMENT

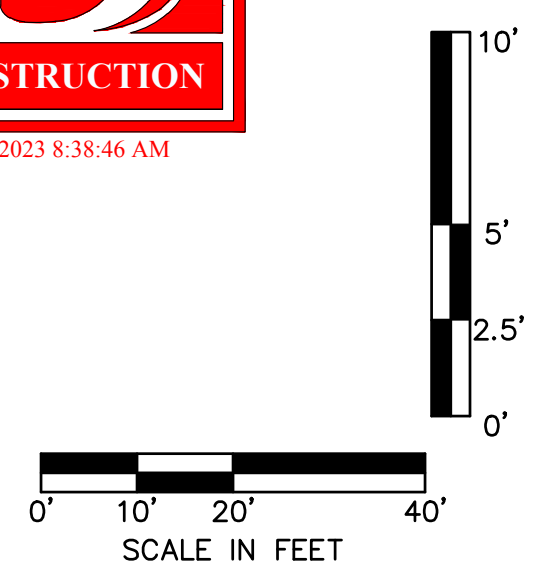
NOTE:
SEE GRADING ENLARGEMENT PLANS FOR
PROPOSED CURB TYPES AND LOCATIONS.

SUMMARY OF HARDSCAPE

ITEM	UNIT	QUANTITY
1 10 FOOT CONCRETE CHANNEL WITH CURB	SY	428



11/28/2023 8:38:46 AM



olsson
 302 East Millisp Road
 Fayetteville, AR 72703
 TEL 479.443.3404
 www.olsson.com

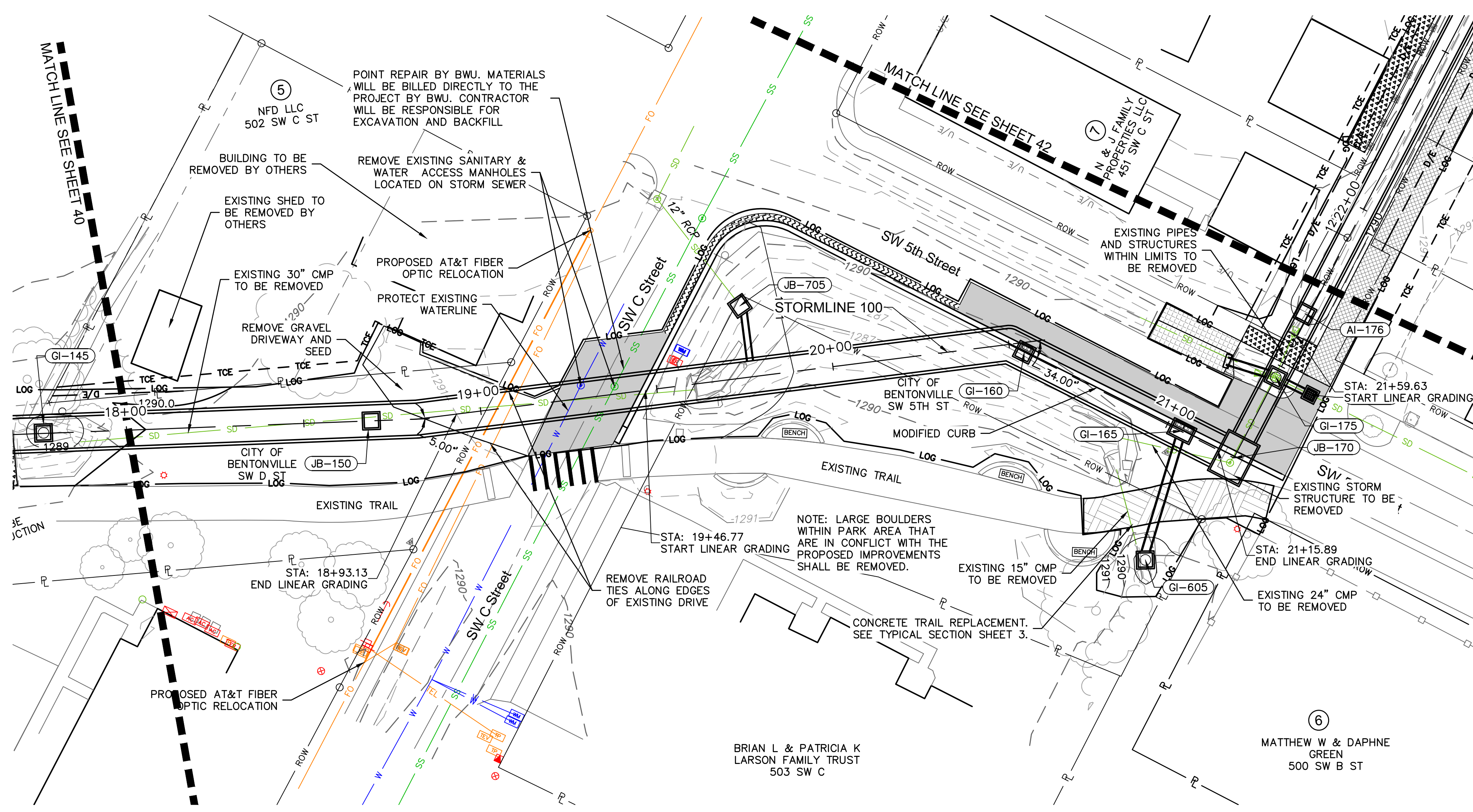


REV. NO.	DATE	REVISIONS DESCRIPTION

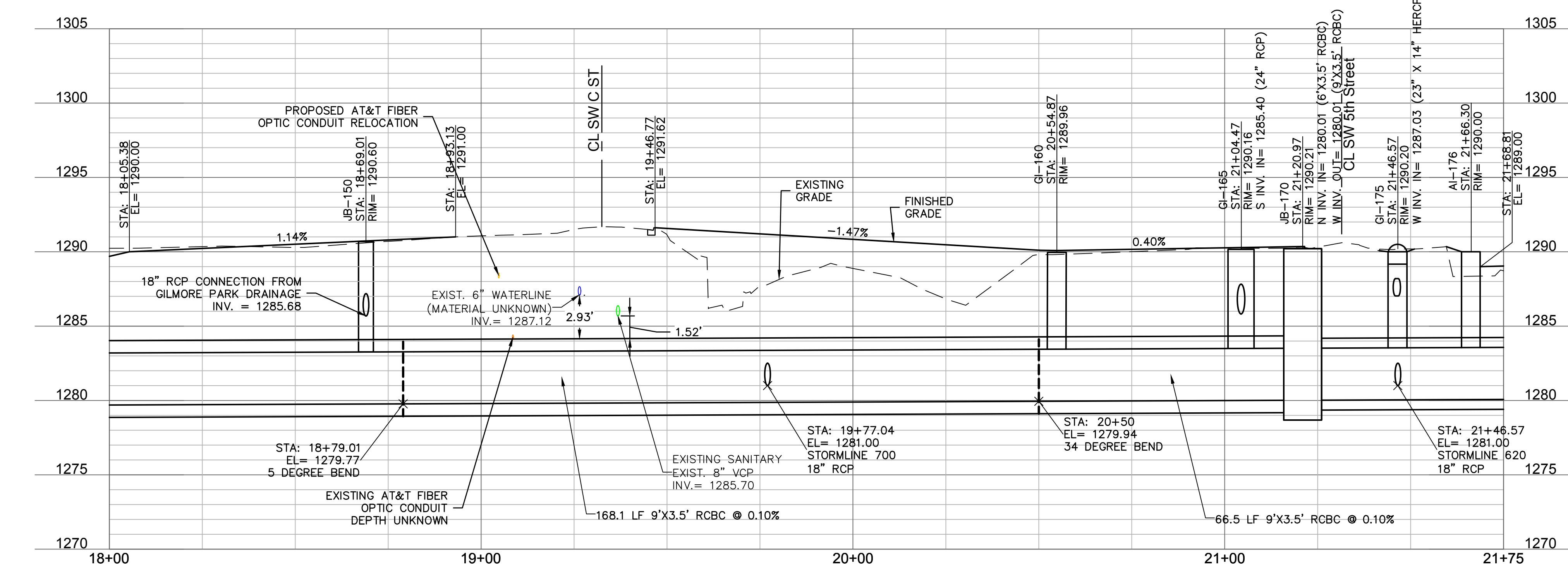
PLAN & PROFILE - STORMLINE 100
 SW 10TH STREET & SW F STREET
 STORMWATER IMPROVEMENTS
 BENTONVILLE, AR
 2023

drawn by: KTF
 checked by: JDA
 approved by: EJS
 QA/QC by: EJS
 project no.: 021-04210-G
 drawing no.: W_STM01_G2104210
 date: 09.13.2023

DWG: F:\2021\04001-04500\021-04210-G-40-Design\AutoCAD\Final_Plans\Sheets\WTR\S\W_STM01_G2104210.dwg
 DATE: Sep 13, 2023 11:02am XREFS: W_PTBK_G2104210_V_XBNDY_G2104210_W_PSURE_G2104210_W_PATTI_G2104210_W_PESMT_G2104210_W_PATTO_G2104210_W_PATTO_G2104210
 USER: nmcneal 20-044.edg base
 117348_STORM_Olsson_ADJUSTED 22-08-23_32244-BASE W_PBAAS



STORMLINE 100 (18+00 - 21+75)



STRUCTURES	
ID	DESCRIPTION
AI-176	4'X4' AREA INLET OPEN N, E, W 21+66.30, -1.00' LT STORMLINE 100
GI-160	4'X4' GRATE INLET (NEENAH R-3408-L GRATE) 20+54.87, 0.03' RT STORMLINE 100
GI-165	6'X4' GRATE INLET (NEENAH R-3408-BL GRATE) 21+04.47, -0.14' LT STORMLINE 100
GI-175	4'X4' GRATE INLET (NEENAH R-2560-E1 GRATE) 21+46.57, 0.00' STORMLINE 100
JB-150	4'X4' JUNCTION BOX, OPEN ON BOTTOM WITH 8" FLANGE ALL AROUND 18+69.01, -0.01' LT STORMLINE 100
JB-170	12X9' JUNCTION BOX 21+20.97, 0.00' STORMLINE 100

SUMMARY OF HARDSCAPE		
ITEM	UNIT	QUANTITY
1 ASPHALT STREET	SY	220
2 ASPHALT PAVEMENT REPAIR	SY	24
3 COMMERCIAL DRIVEWAY	SY	29
4 CONCRETE STREET	SY	23
5 CONCRETE TRAIL	SY	60
6 SIDEWALK	SY	15

NOTE: CONTRACTOR TO COORDINATE SCHEDULE WITH CITY PRIOR TO DEMOLITION OF ANY EXISTING FENCES, PAVEMENT, OR OTHER PERSONAL PROPERTY LOCATED BETWEEN STATION 21+60 AND 26+00. 30 DAYS WRITTEN NOTICE WILL BE REQUIRED PRIOR TO DISTURBANCE OF THIS AREA. ONCE WORK COMMENCES IN THIS AREA, CONTRACTOR IS REQUIRED TO MEET THE SCHEDULE/TIMELINE REQUIREMENTS OF JSP 1001-09. WORK SHOULD START PROMPTLY, 30 DAYS AFTER NOTICE IS GIVEN AND PROGRESS CONTINUOUSLY UNTIL WORK IS COMPLETED IN THE STATION RANGE.



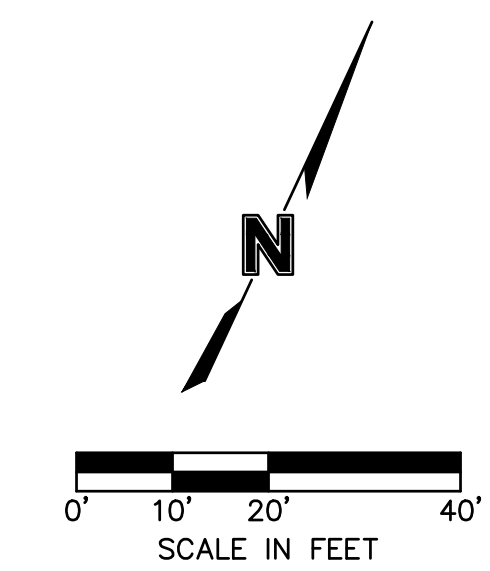
11/28/2023 8:38:47 AM

LEGEND

- LIMITS OF GRADING
- ASPHALT STREET
- ASPHALT PAVEMENT REPAIR
- BRICK
- COMMERCIAL DRIVEWAY
- CONCRETE CHANNEL
- CONCRETE STREET
- CONCRETE TRAIL
- GRAVEL (CLASS 8 AGGREGATE BASE COURSE)
- RESIDENTIAL DRIVEWAY
- SIDEWALK
- PROPOSED TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED PERMANENT DRAINAGE EASEMENT
- PROPOSED UTILITY EASEMENT
- EXISTING UTILITY EASEMENT

NOTE: SEE GRADING ENLARGEMENT PLANS FOR PROPOSED CURB TYPES AND LOCATIONS.

NOTE: CONTRACTOR SHALL MAINTAIN PRIVATE ACCESS TO PARKING LOT AND GARAGES NORTH OF SW 5TH STREET. CONTRACTOR MAY LIMIT THE DURATION OF CLOSURE TO A FEW HOURS IF CLOSURE IS ABSOLUTELY NECESSARY. REFER TO JSP 1001-10.



302 East Millisap Road
Fayetteville, AR 72703
TEL 479.443.3404
www.olsson.com

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION

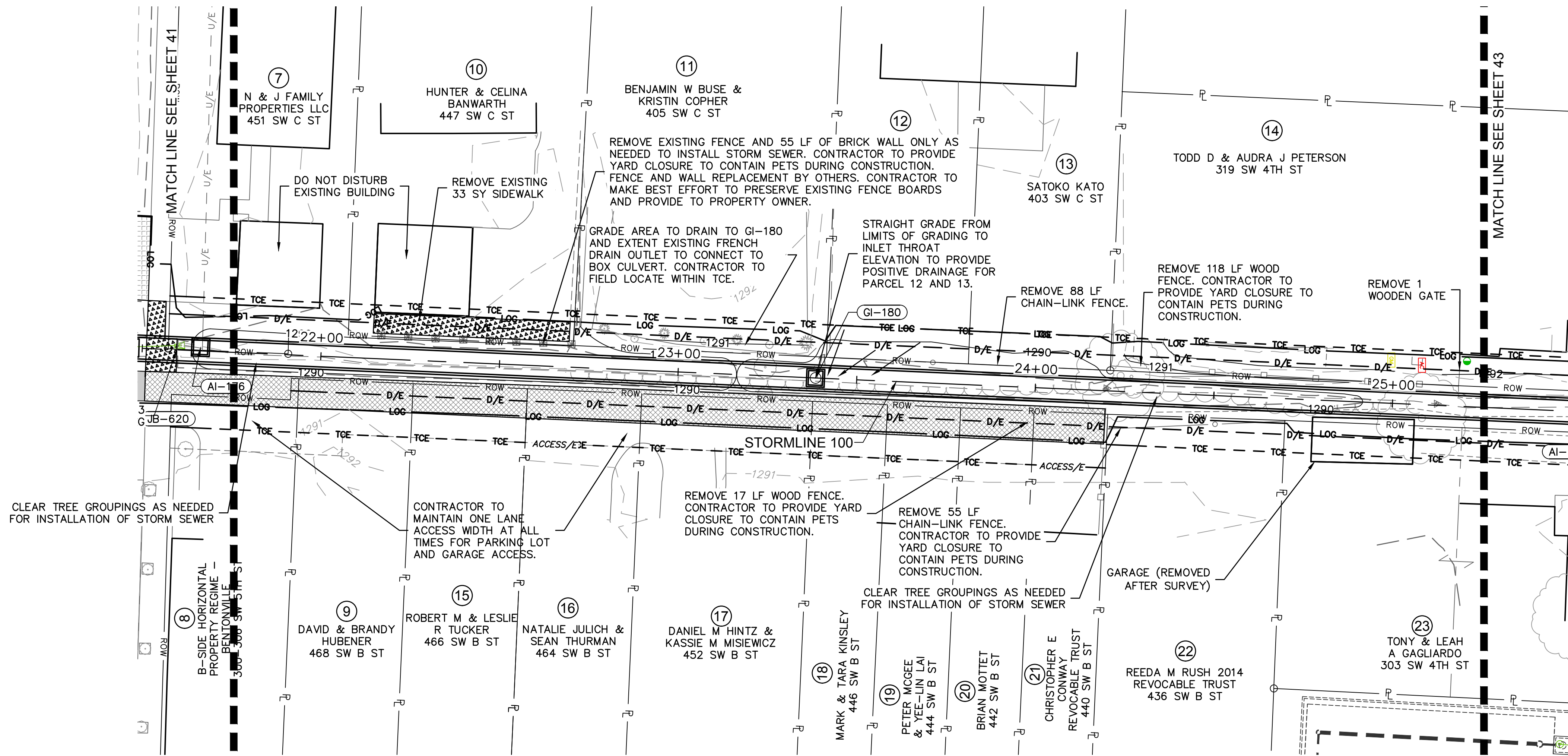
PLAN & PROFILE - STORMLINE 100

SW 10TH STREET & SW F STREET
STORMWATER IMPROVEMENTS

BENTONVILLE, AR

drawn by: KTF
checked by: JDA
approved by: EJS
QA/QC by: EJS
project no.: 021-04210-G
drawing no.: W_STM01_G2104210
date: 09.13.2023

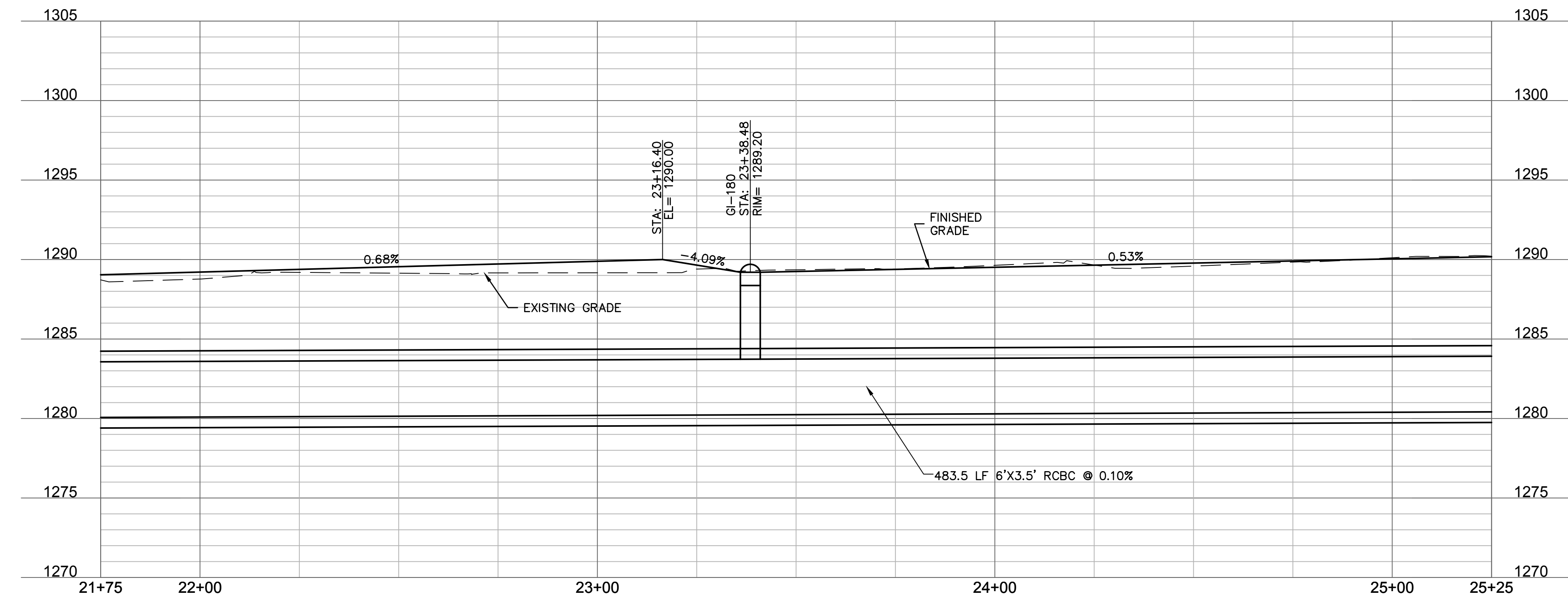
SHEET
41 of 71



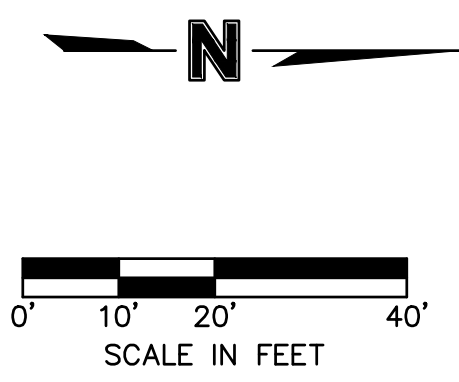
LEGEND	
	LIMITS OF GRADING
	ASPHALT STREET
	ASPHALT PAVEMENT REPAIR
	BRICK
	COMMERCIAL DRIVEWAY
	CONCRETE CHANNEL
	CONCRETE STREET
	CONCRETE TRAIL
	GRAVEL (CLASS 8 AGGREGATE BASE COURSE)
	RESIDENTIAL DRIVEWAY
	SIDEWALK
	PROPOSED TEMPORARY CONSTRUCTION EASEMENT
	PROPOSED PERMANENT DRAINAGE EASEMENT
	PROPOSED UTILITY EASEMENT
	EXISTING UTILITY EASEMENT

NOTE: SEE GRADING ENLARGEMENT PLANS FOR PROPOSED CURB TYPES AND LOCATIONS.

STORMLINE 100 (21+75 - 25+25)



STRUCTURES	
ID	DESCRIPTION
GI-180	4'X4' GRATE INLET (NEENAH R-2560-E2 GRATE) 23+38.48, 0.00' STORMLINE 100



SUMMARY OF HARDSCAPE		
ITEM	UNIT	QUANTITY
1 CONCRETE DRIVEWAY REPLACEMENT	SY	253
2 SIDEWALK	SY	33

NOTE: CONTRACTOR TO COORDINATE SCHEDULE WITH CITY PRIOR TO DEMOLITION OF ANY EXISTING FENCES, PAVEMENT, OR OTHER PERSONAL PROPERTY LOCATED BETWEEN STATION 21+60 AND 26+00. 30 DAYS WRITTEN NOTICE WILL BE REQUIRED PRIOR TO DISTURBANCE OF THIS AREA. ONCE WORK COMMENCES IN THIS AREA, CONTRACTOR IS REQUIRED TO MEET THE SCHEDULE/TIMELINE REQUIREMENTS OF JSP 1001-09. WORK SHOULD START PROMPTLY, 30 DAYS AFTER NOTICE IS GIVEN AND PROGRESS CONTINUOUSLY UNTIL WORK IS COMPLETED IN THE STATION RANGE.



www.olsson.com
 TEL 479.443.3404
 302 East Millisap Road
 Fayetteville, AR 72703

REV. NO.	DATE	REVISIONS DESCRIPTION

PLAN & PROFILE - STORMLINE 100

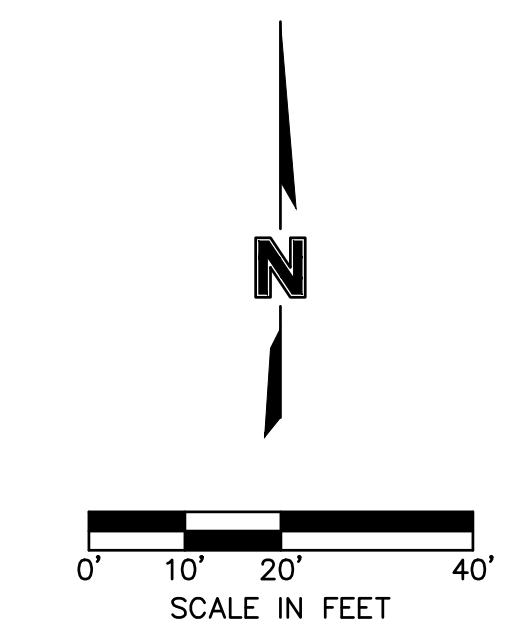
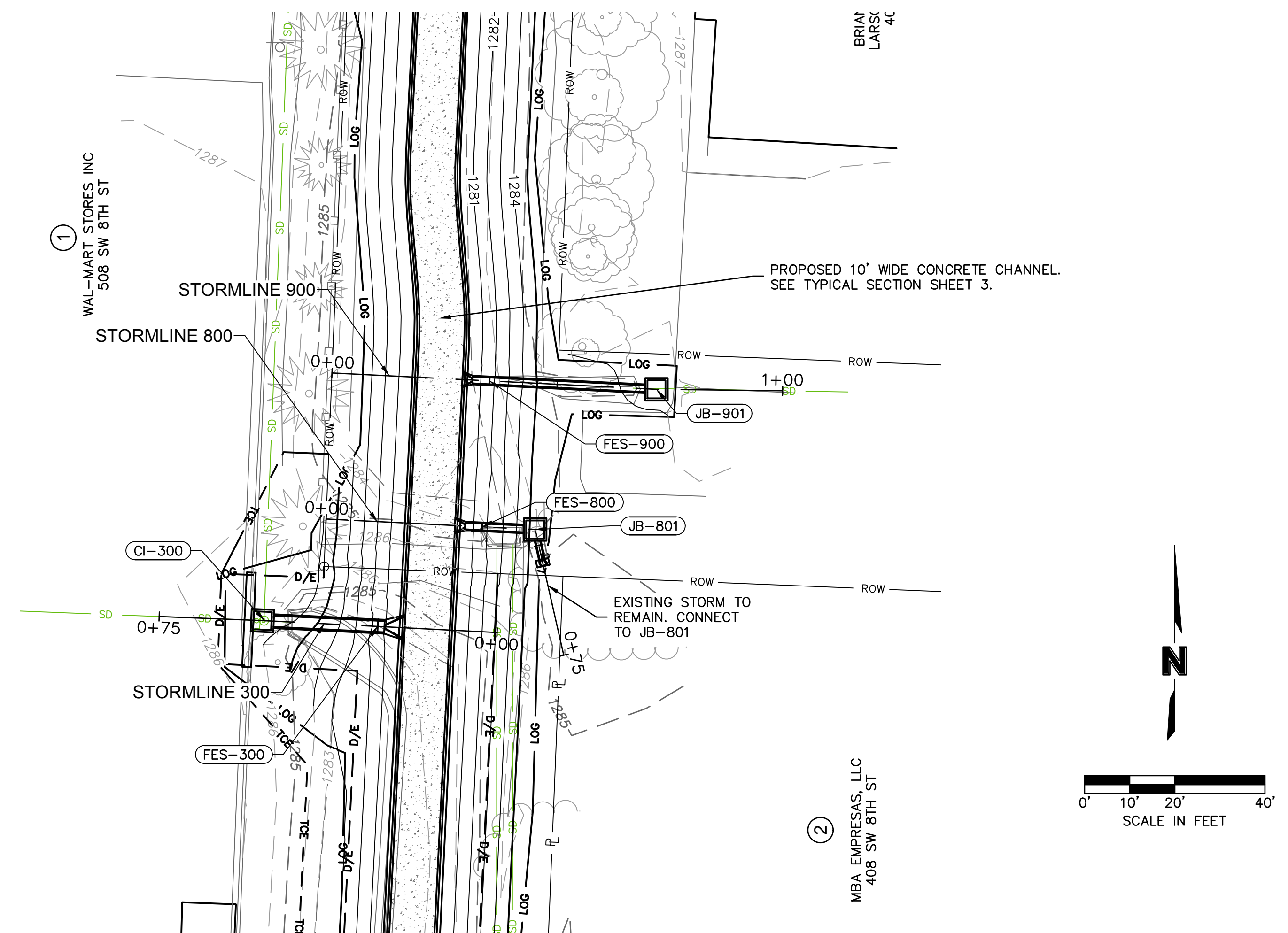
SW 10TH STREET & SW F STREET
STORMWATER IMPROVEMENTS

BENTONVILLE, AR

2023

drawn by: KTF
 checked by: JDA
 approved by: EJS
 QA/QC by: EJS
 project no.: 021-04210-G
 drawing no.: W_STM01_G2104210
 date: 09.13.2023

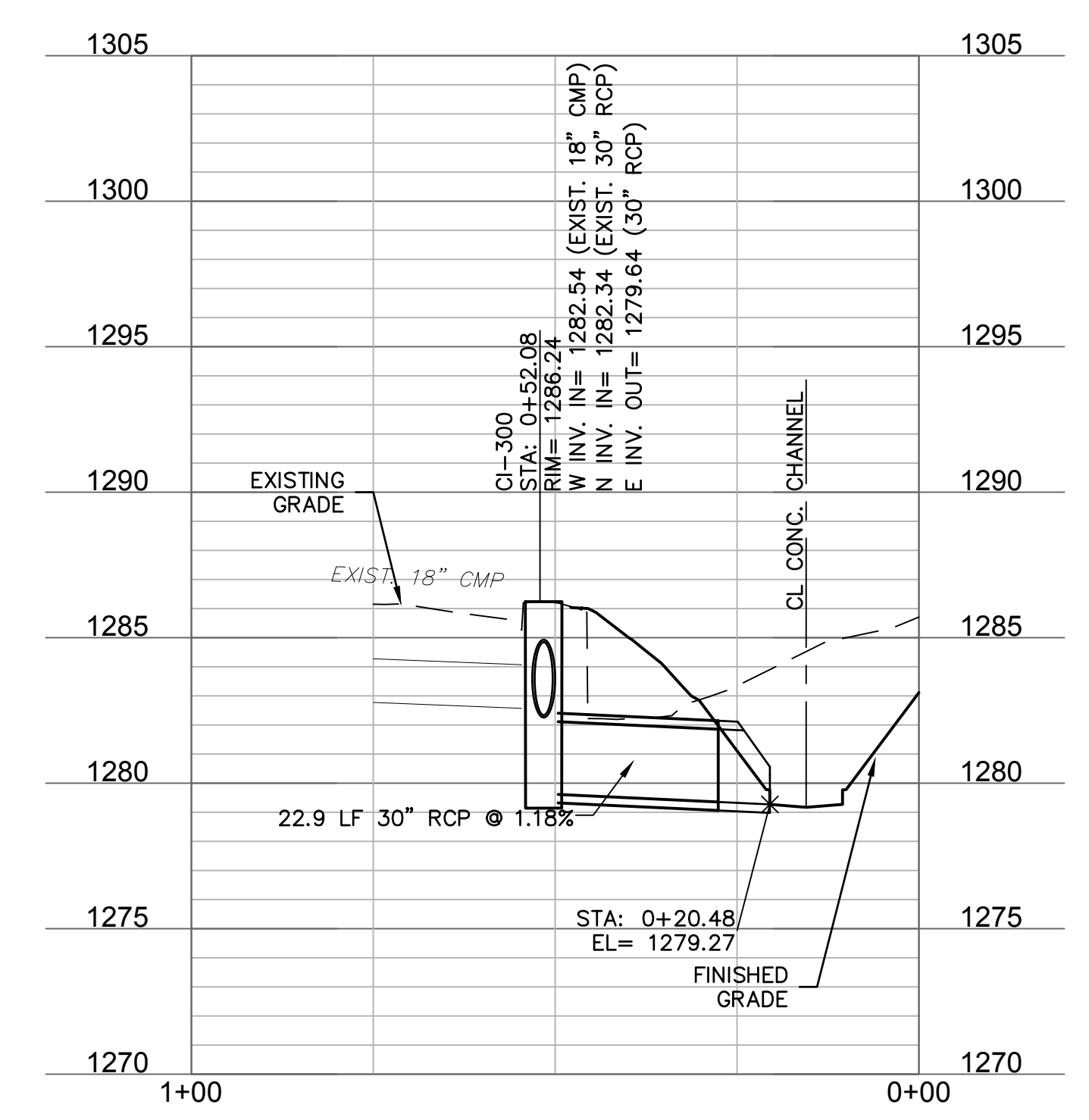
SHEET
42 of 71



LEGEND	
	LIMITS OF GRADING
	ASPHALT STREET
	ASPHALT PAVEMENT REPAIR
	BRICK
	COMMERCIAL DRIVEWAY
	CONCRETE CHANNEL
	CONCRETE STREET
	CONCRETE TRAIL
	GRAVEL (CLASS 8 AGGREGATE BASE COURSE)
	RESIDENTIAL DRIVEWAY
	SIDEWALK
	PROPOSED TEMPORARY CONSTRUCTION EASEMENT
	PROPOSED PERMANENT DRAINAGE EASEMENT
	PROPOSED UTILITY EASEMENT
	EXISTING UTILITY EASEMENT

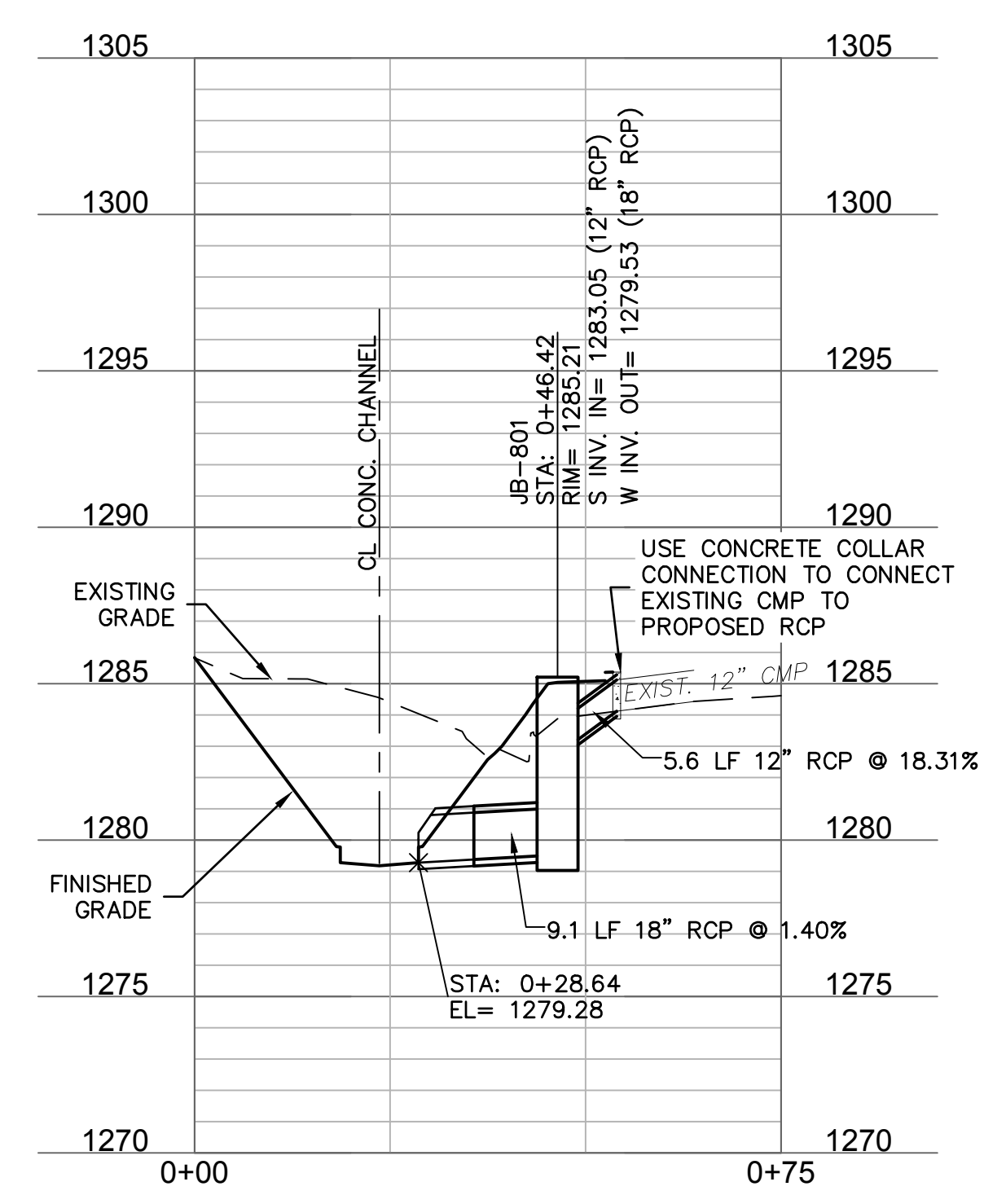
NOTE: SEE GRADING ENLARGEMENT PLANS FOR PROPOSED CURB TYPES AND LOCATIONS.

STORMLINE 300 (0+00 - 1+00)

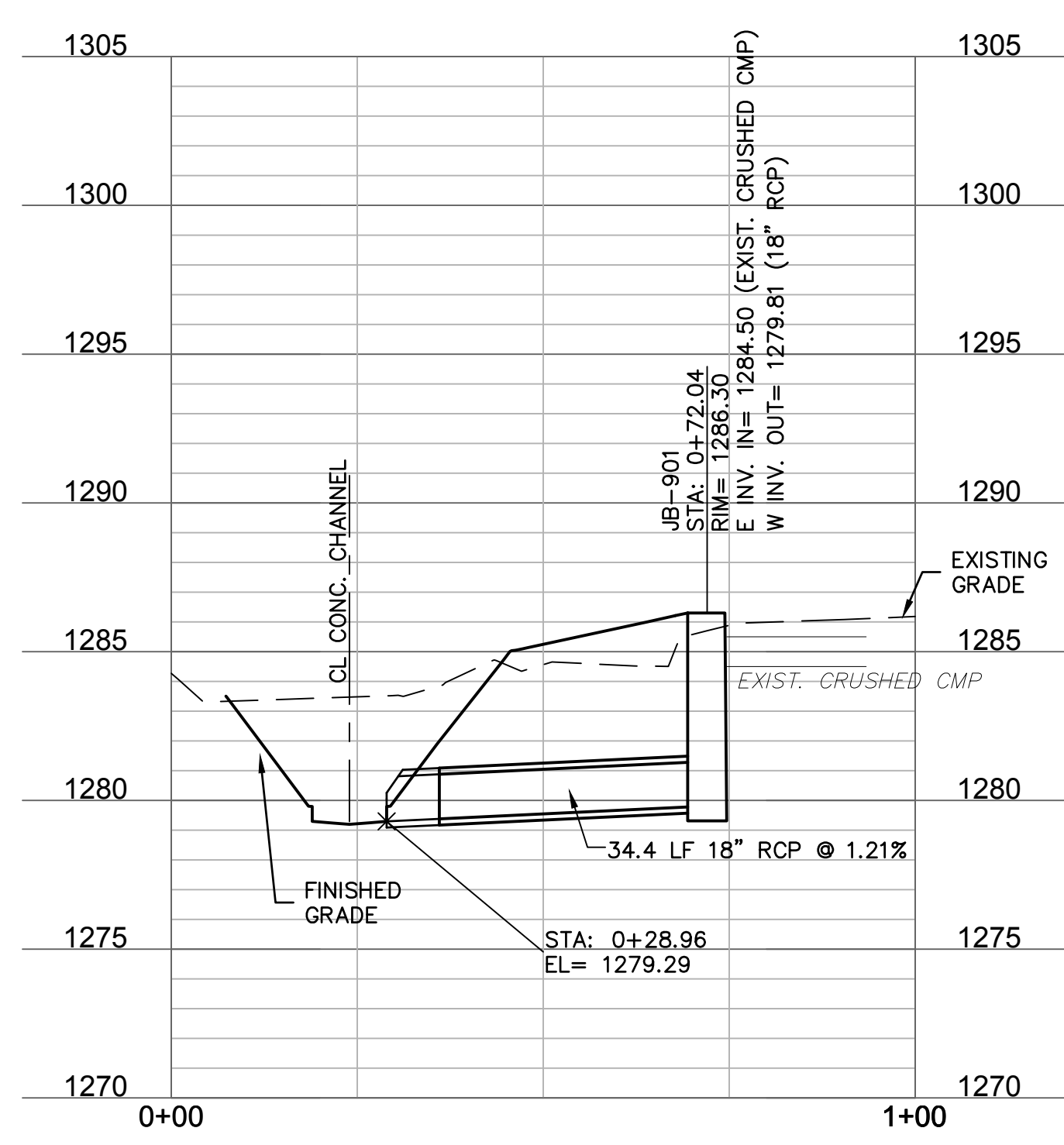


NOTE: CONTRACTOR TO ADD FILL TO COVER CROWN OF FLARED END SECTIONS

STORMLINE 800 (0+00 - 0+75)



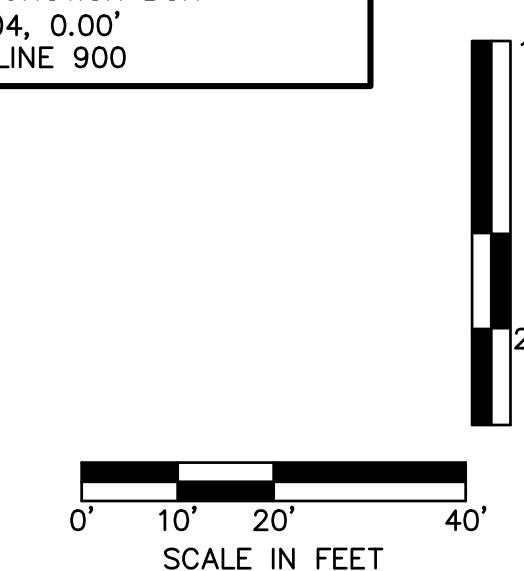
STORMLINE 900 (0+00 - 1+00)



STRUCTURES	
ID	DESCRIPTION
CI-300	4'X4' CURB INLET (NON-SETBACK) 0+52.08, -0.02' LT STORMLINE 300
FES-300	30" RCP FLARED END SECTION 0+26.50, 0.01' RT STORMLINE 300

STRUCTURES	
ID	DESCRIPTION
FES-800	18" RCP FLARED END SECTION 0+34.64, 0.00' STORMLINE 800
JB-801	4'X4' JUNCTION BOX 0+46.42, 0.00' STORMLINE 800

STRUCTURES	
ID	DESCRIPTION
FES-900	18" RCP FLARED END SECTION 0+34.96, 0.00' STORMLINE 900
JB-901	4'X4' JUNCTION BOX 0+72.04, 0.00' STORMLINE 900



STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 19111
ERIC JOSEPH SHELTON

BY _____

DATE _____

REV. NO. _____

PLAN & PROFILE - STORMLINES 300, 800 & 900

SW 10TH STREET & SW F STREET

STORMWATER IMPROVEMENTS

BENTONVILLE, AR

2023

REVISIONS

drawn by: KTF

checked by: JDA

approved by: EJS

QA/QC by: EJS

project no.: 021-04210-G

drawing no.: W_STM01_G2104210

date: 09.13.2023

SHEET

45 of 71

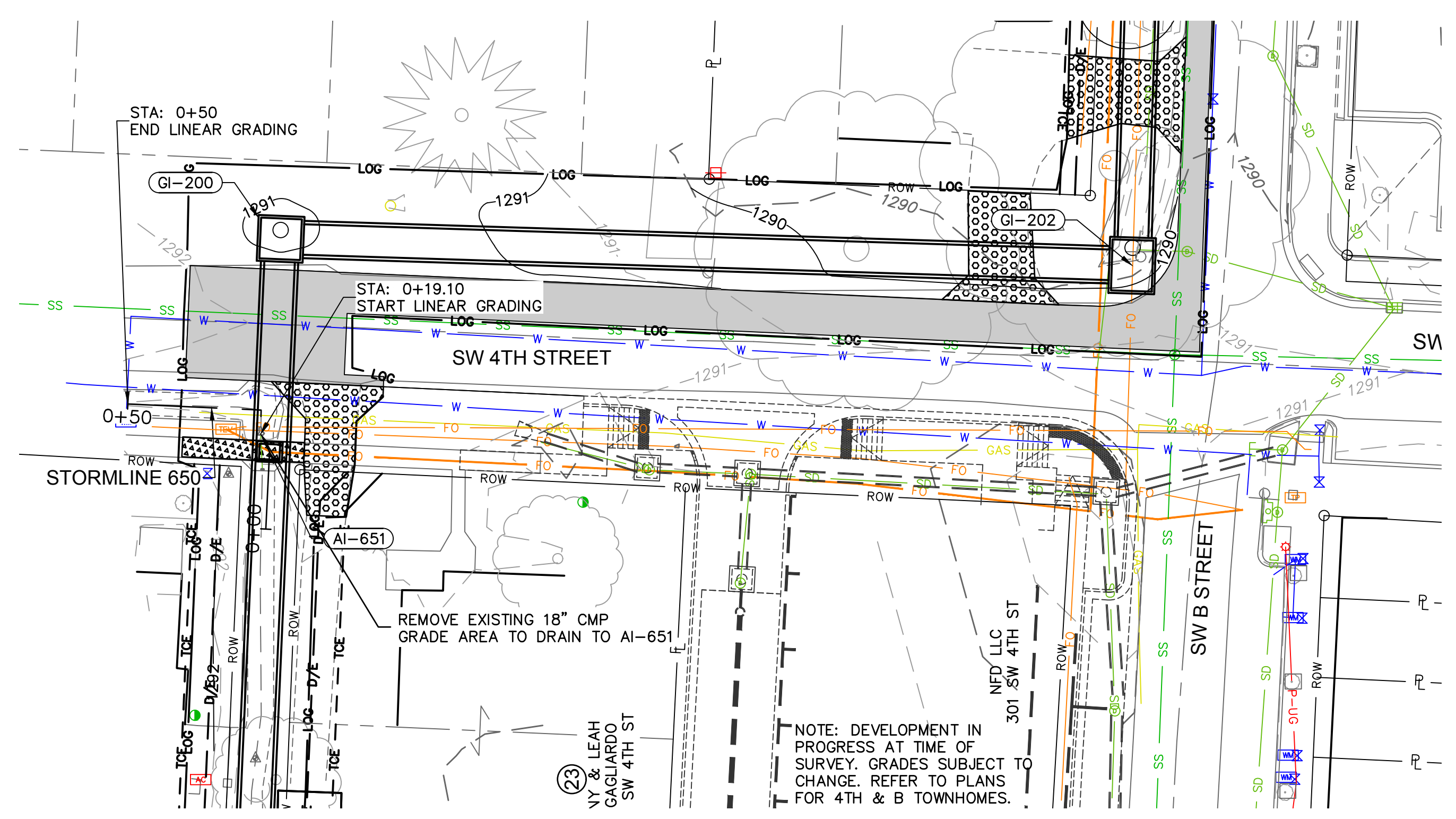
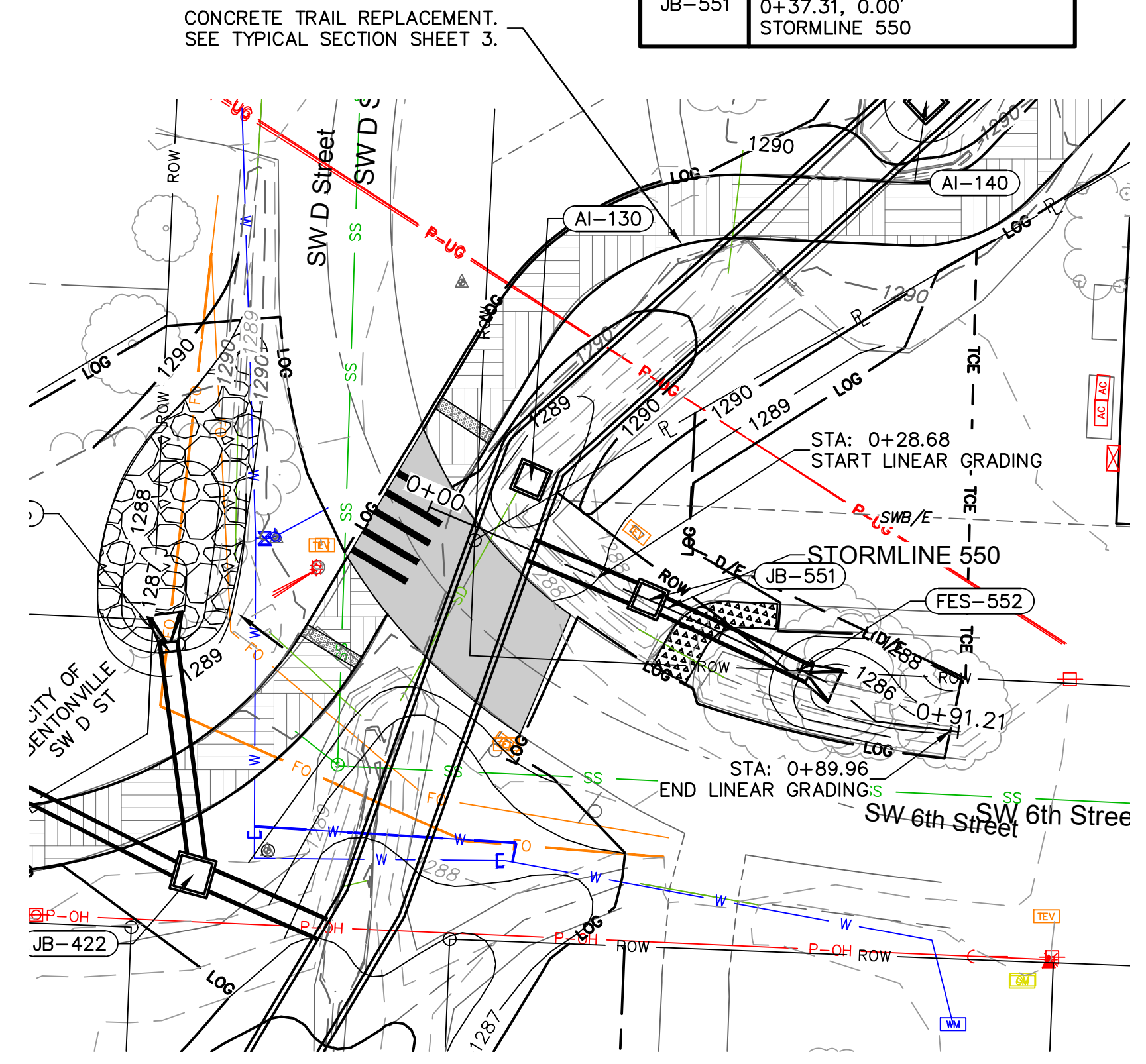
DWG: F:\2021\04001-04500\021-04210-G-40-Design\AutoCAD\Final_Plans\Sheets\WTR\W_STM01_G2104210.dwg
 DATE: Sep 13, 2023 11:05am
 USER: nmcneal
 W_PAT1_G2104210 W_PESMT_G2104210 W_PPSURF_G2104210
 20-044.edg base
 117348_STORM_Olsson_ADJUSTED 22-08-23_32244-BASE W_PBA5

STRUCTURES	
ID	DESCRIPTION
FES-552	30" RCP FLARED END SECTION (WITH TOEWALL) 0+63.69, 0.00' STORMLINE 550
JB-551	4'X4' JUNCTION BOX 0+37.31, 0.00' STORMLINE 550

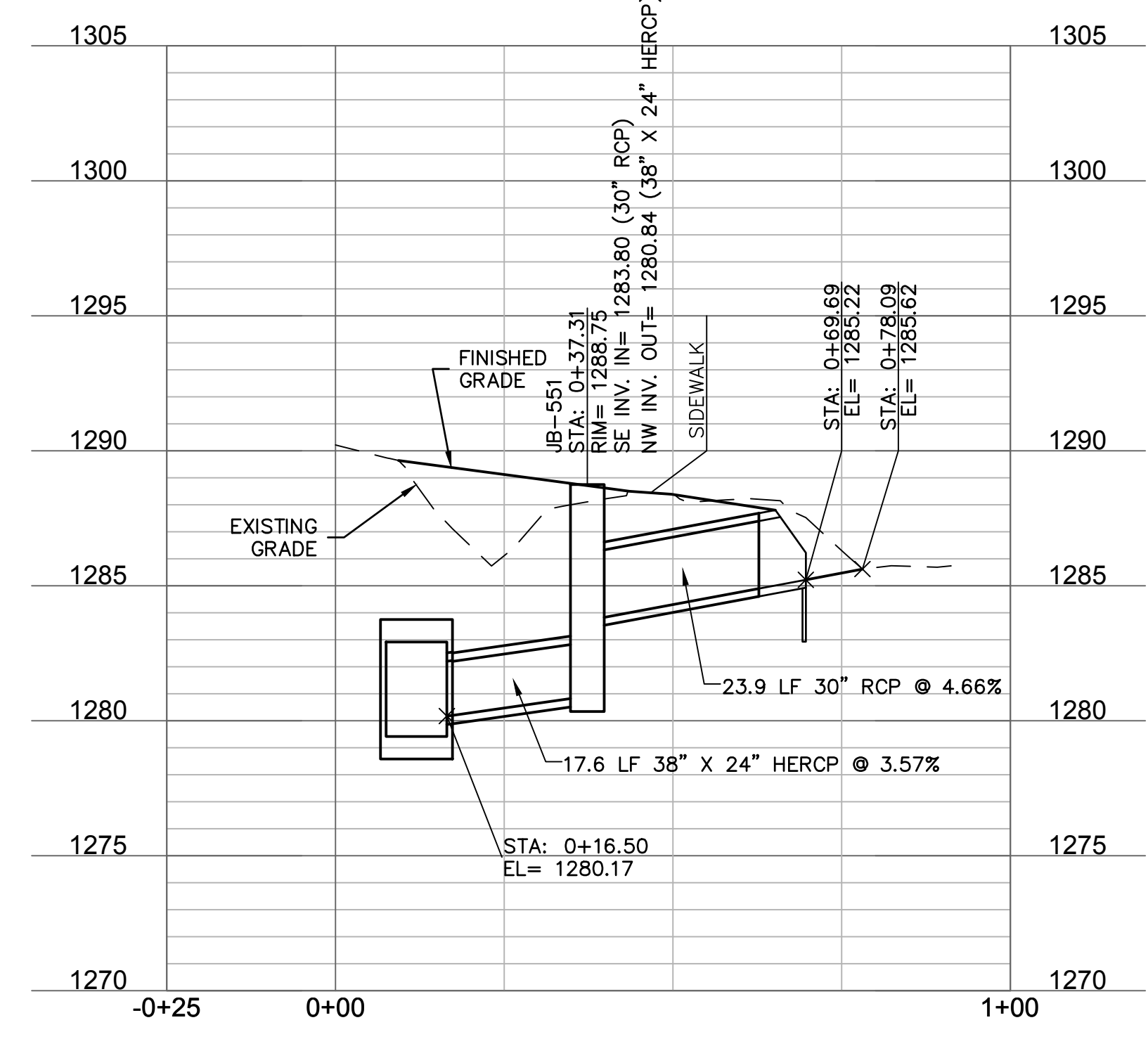
STRUCTURES	
ID	DESCRIPTION
AI-651	4' X 3' AREA INLET 25+72.61, -0.33' LT STORMLINE 100

LEGEND	
	LIMITS OF GRADING
	ASPHALT STREET
	ASPHALT PAVEMENT REPAIR
	BRICK
	COMMERCIAL DRIVEWAY
	CONCRETE CHANNEL
	CONCRETE STREET
	CONCRETE TRAIL
	GRAVEL (CLASS 8 AGGREGATE BASE COURSE)
	RESIDENTIAL DRIVEWAY
	SIDEWALK
	PROPOSED TEMPORARY CONSTRUCTION EASEMENT
	PROPOSED PERMANENT DRAINAGE EASEMENT
	PROPOSED UTILITY EASEMENT
	EXISTING UTILITY EASEMENT

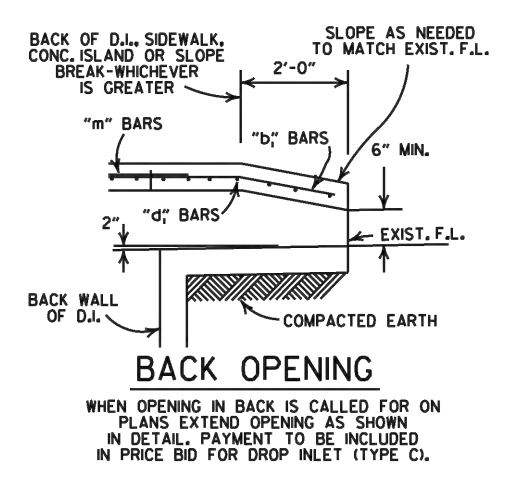
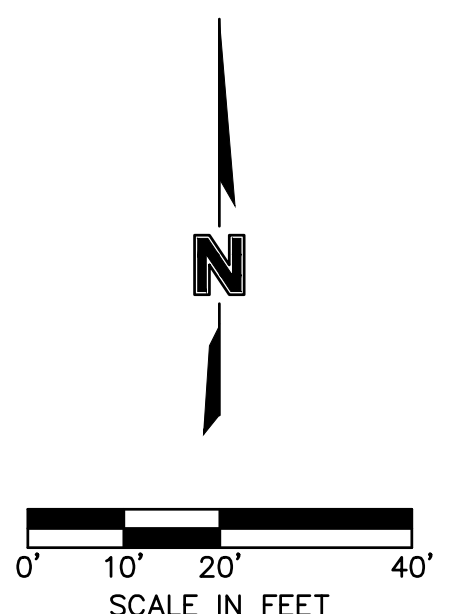
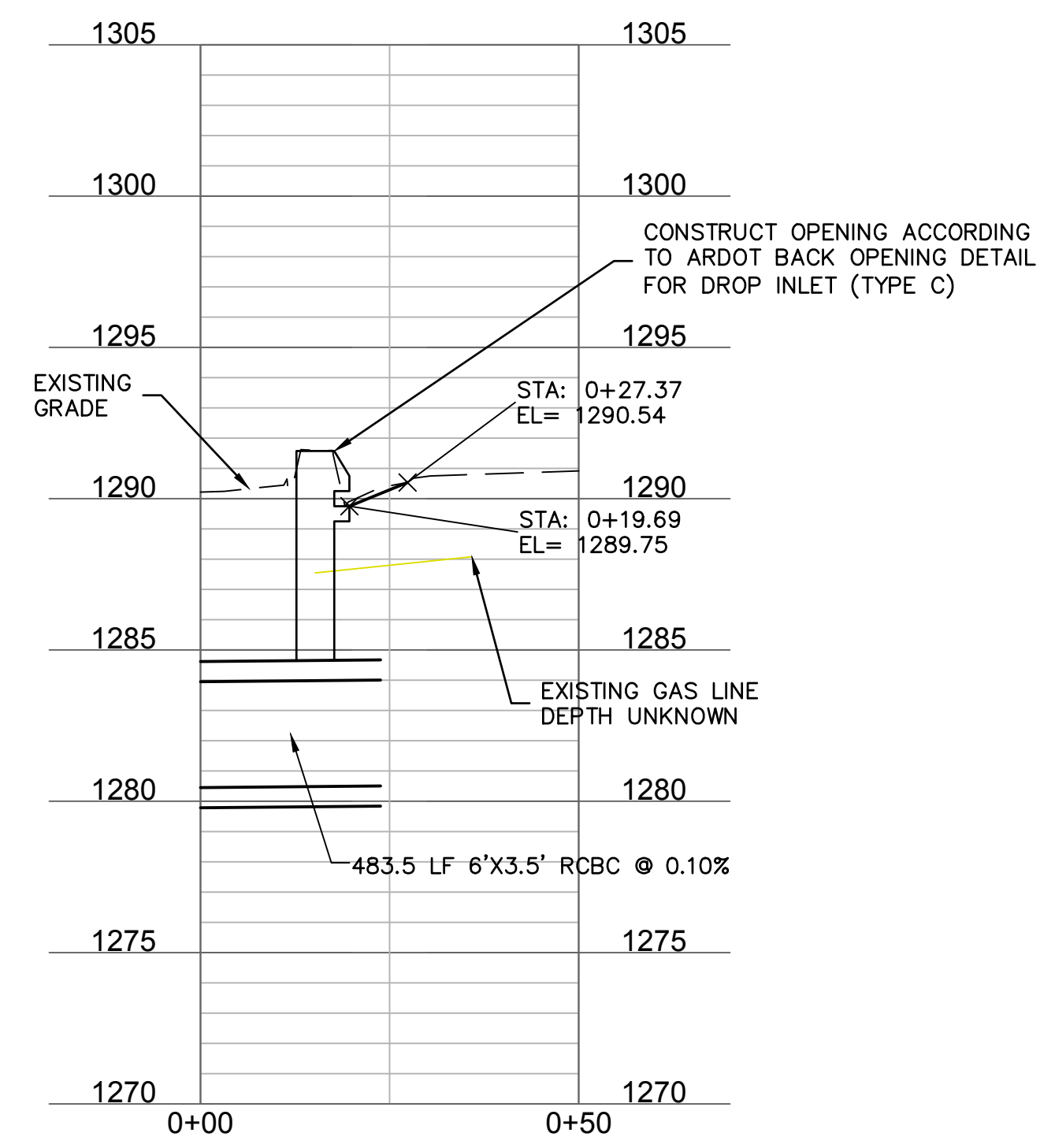
NOTE:
SEE GRADING ENLARGEMENT PLANS FOR PROPOSED CURB TYPES AND LOCATIONS.



STORMLINE 550 (-0+25 - 1+00)



STORMLINE 650 (0+00 - 0+50)



302 East Millisp Road
Fayetteville, AR 72703
TEL 479.443.3404
www.olsson.com

STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 NO. 19111
 ERIC JOSEPH SHELTON

REV. NO.	DATE	REVISIONS DESCRIPTION

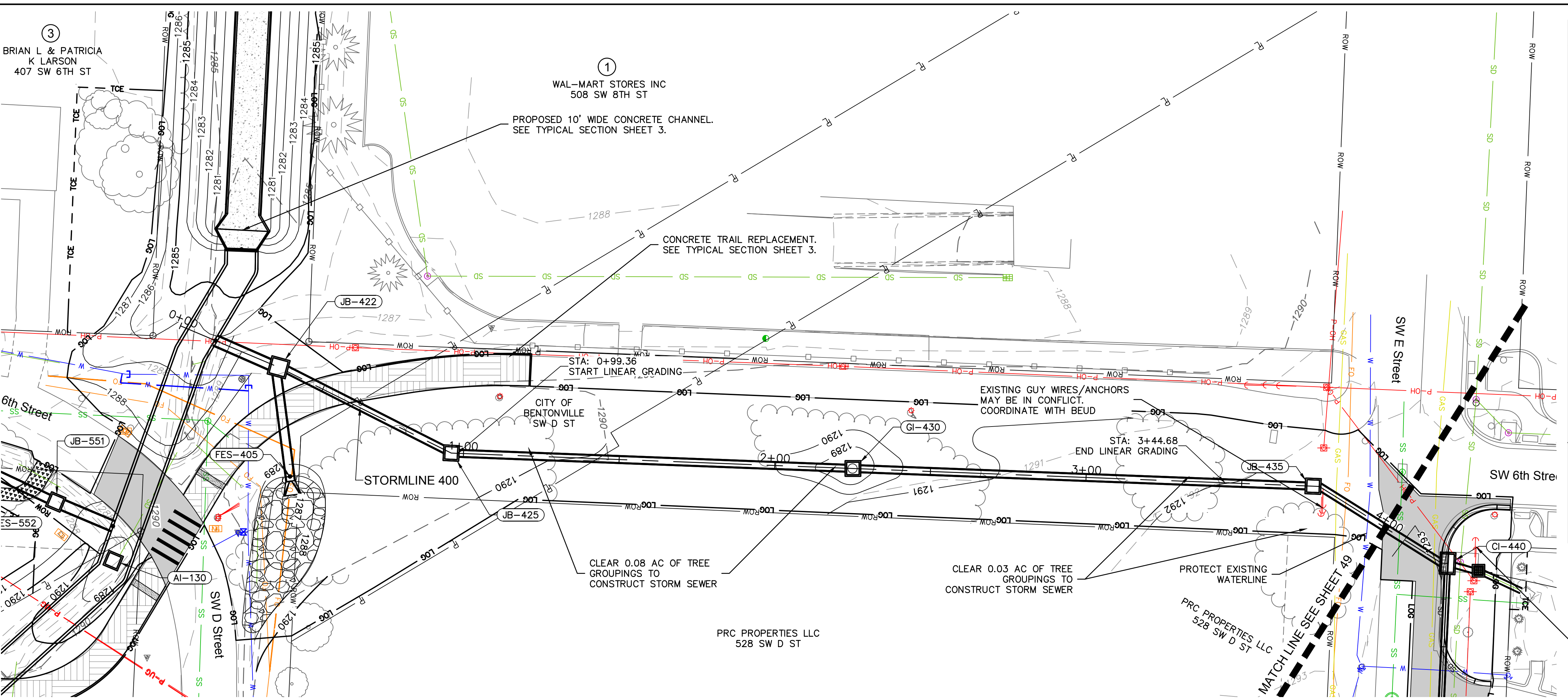
PLAN & PROFILE - STORMLINES 500, 550 & 650
 SW 10TH STREET & SW F STREET
 STORMWATER IMPROVEMENTS
 BENTONVILLE, AR

REVISIONS
 2023

drawn by: KTF
 checked by: JDA
 approved by: EJS
 QA/QC by: EJS
 project no.: 021-04210-G
 drawing no.: W_STM01_G2104210
 date: 09.13.2023

SHEET
 47 of 71

DWG: F:\2021\04001-04500\021-04210-G-40-Design\AutoCAD\Final_Plans\Sheets\WTRS\W_STM02_G2104210.dwg
 DATE: Sep 13, 2023 11:07am XREFS: W_PTBK_G2104210 V_XBNDY_G2104210 W_PBASE_G2104210 W_PESMT_G2104210 W_PPATT_G2104210 W_XTOPO_G2104210
 USER: nmcneel W_PSIURF_G2104210



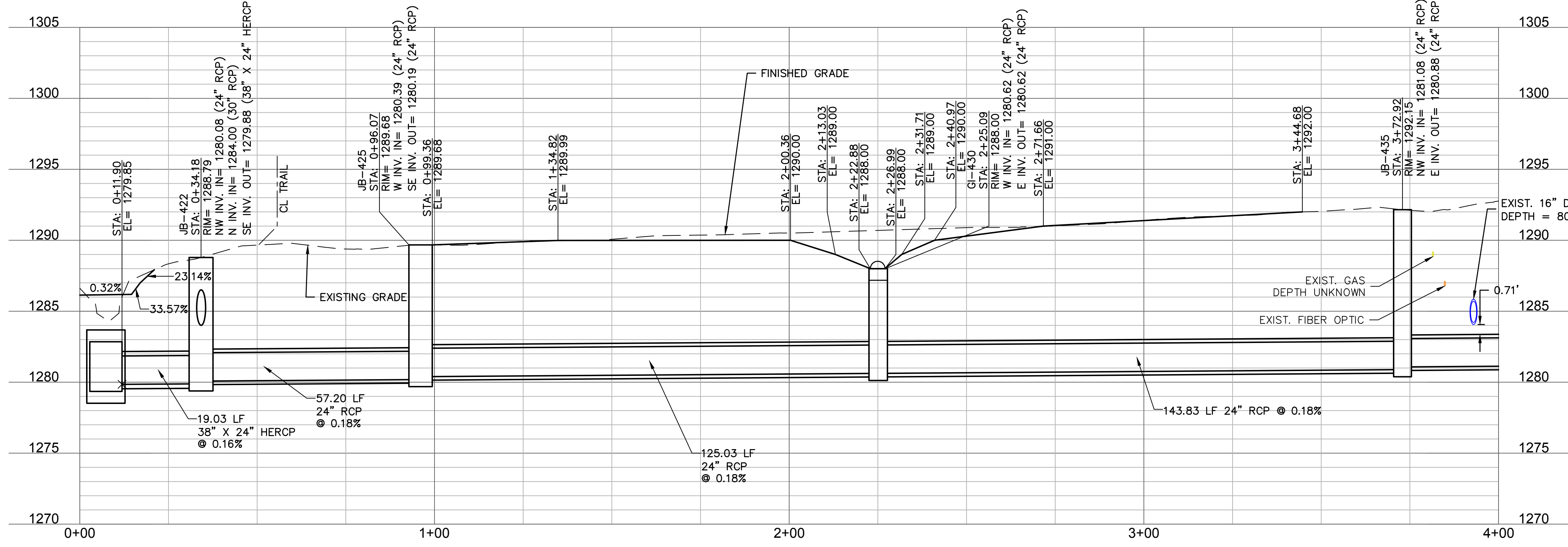
LEGEND

- LIMITS OF GRADING
- ASPHALT STREET
- ASPHALT PAVEMENT REPAIR
- BRICK
- COMMERCIAL DRIVEWAY
- CONCRETE CHANNEL
- CONCRETE STREET
- CONCRETE TRAIL
- GRAVEL (CLASS 8 AGGREGATE BASE COURSE)
- RESIDENTIAL DRIVEWAY
- SIDEWALK
- - - TCE - PROPOSED TEMPORARY CONSTRUCTION EASEMENT
- - - D/E - PROPOSED PERMANENT DRAINAGE EASEMENT
- - - U/E - PROPOSED UTILITY EASEMENT
- - - U/E - EXISTING UTILITY EASEMENT

NOTE:
SEE GRADING ENLARGEMENT PLANS FOR PROPOSED CURB TYPES AND LOCATIONS.

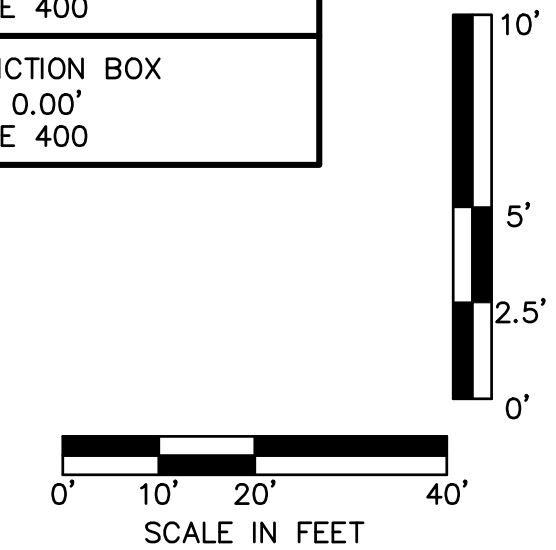
POLE WILL NEED TO BE HELD DURING EXCAVATION. CONTACT BEUD AT 479-271-3135 TO SCHEDULE.

STORMLINE 400 (0+00 - 4+00)



SUMMARY OF HARDSCAPE		
ITEM	UNIT	QUANTITY
1 ASPHALT STREET	SY	14

STRUCTURES	
ID	DESCRIPTION
GI-430	4' X 4' GRATE INLET (NEENAH R-2560-E2 GRATE) 2+25.09, 0.00' LT STORMLINE 400
JB-422	5'X5' JUNCTION BOX 0+34.18, 0.00' STORMLINE 400
JB-425	4'X4' JUNCTION BOX 0+96.07, 0.00' STORMLINE 400
JB-435	4'X4' JUNCTION BOX 3+72.92, 0.00' STORMLINE 400



302 East Millisp Road
Fayetteville, AR 72703
TEL 479.443.3404
www.olsson.com

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION

PLAN & PROFILE - STORMLINE 400

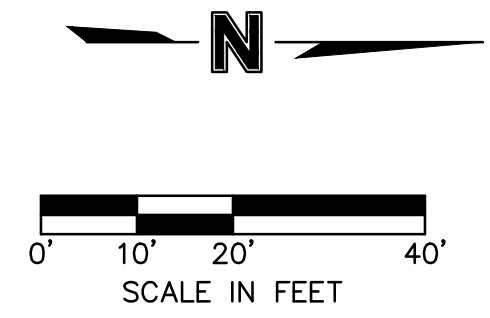
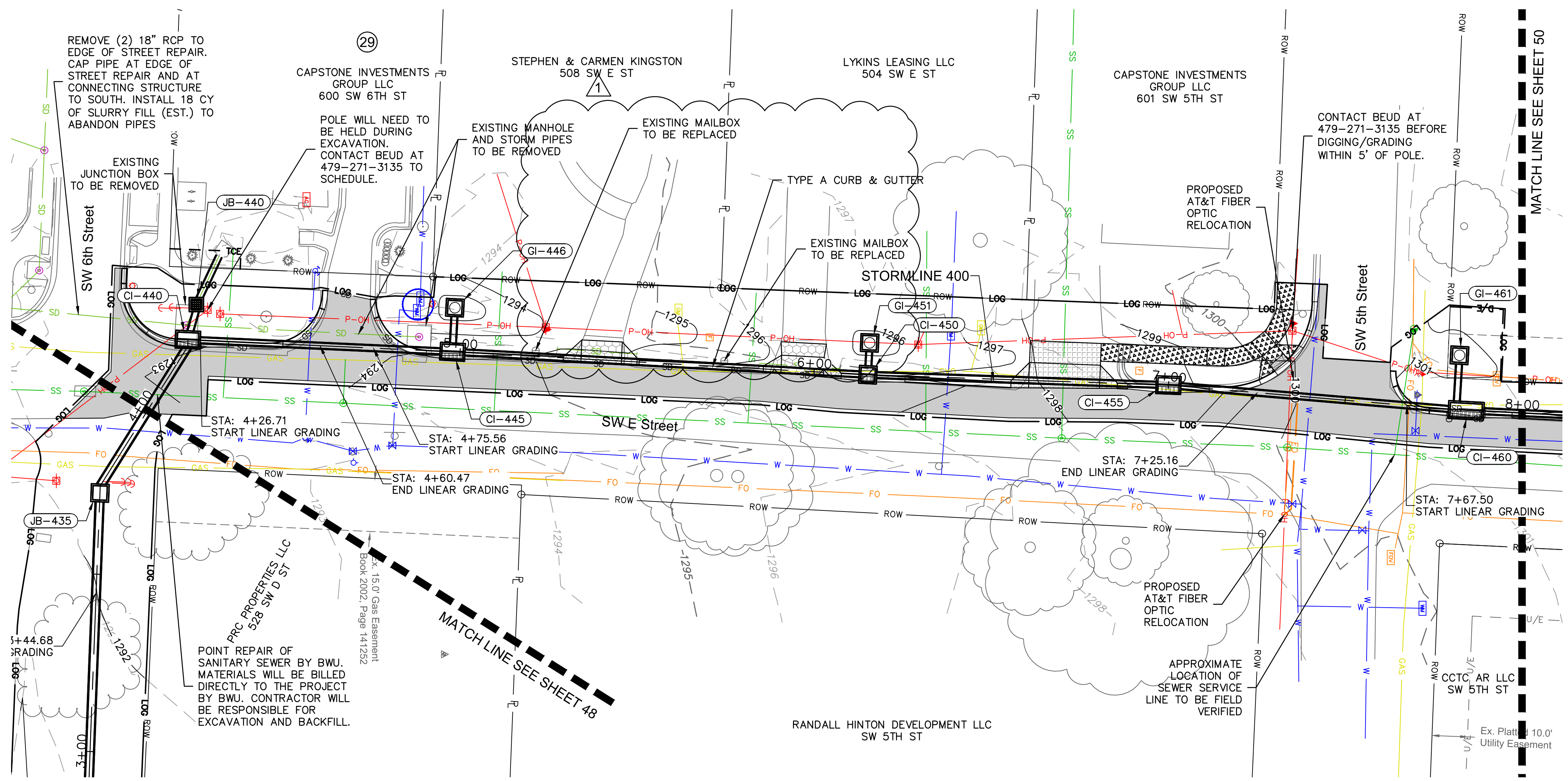
SW 10TH STREET & SW F STREET
STORMWATER IMPROVEMENTS

BENTONVILLE, AR

2023

drawn by: KTF
 checked by: JDA
 approved by: EJS
 QA/QC by: EJS
 project no.: 021-04210-G
 drawing no.: W_STM02_G2104210
 date: 09.13.2023

SHEET
48 of 71



LEGEND

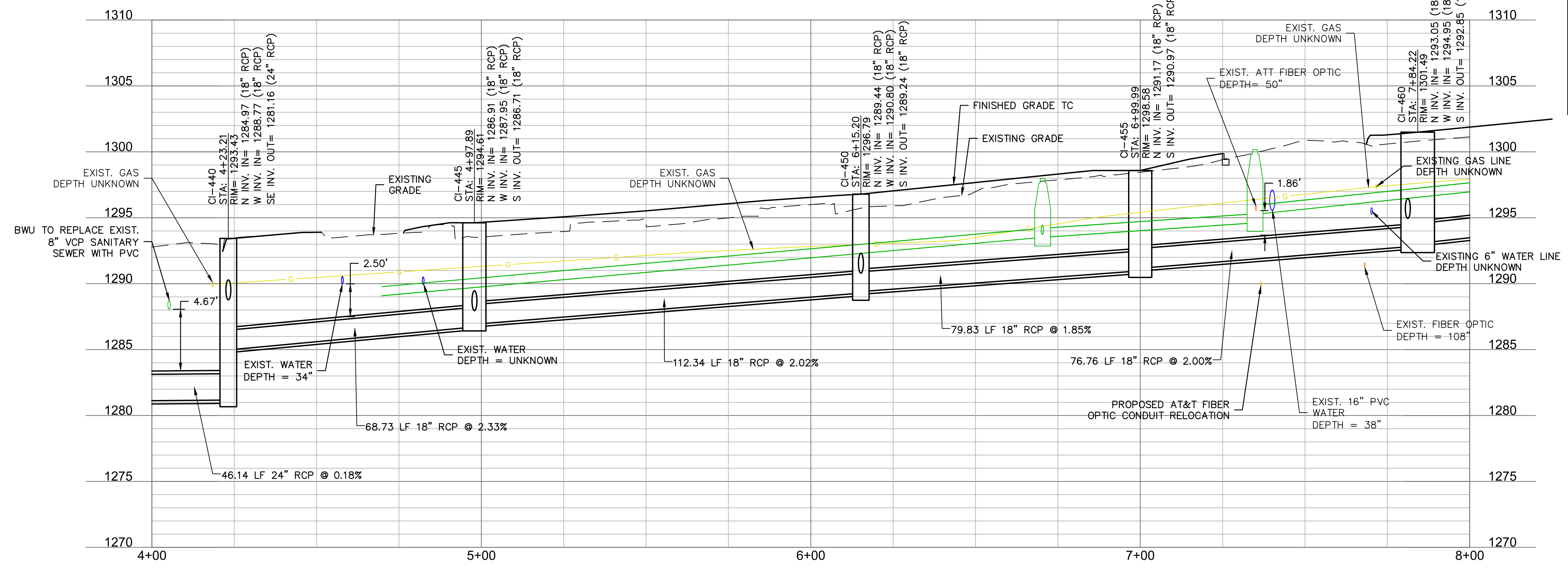
- LIMITS OF GRADING
- ▬ ASPHALT STREET
- ▨ ASPHALT PAVEMENT REPAIR
- ▩ BRICK
- ▧ COMMERCIAL DRIVEWAY
- ▦ CONCRETE CHANNEL
- ▤ CONCRETE STREET
- ▥ CONCRETE TRAIL
- ▣ GRAVEL (CLASS 8 AGGREGATE BASE COURSE)
- ▢ RESIDENTIAL DRIVEWAY
- ▧ SIDEWALK
- - - TCE — PROPOSED TEMPORARY CONSTRUCTION EASEMENT
- - - D/E — PROPOSED PERMANENT DRAINAGE EASEMENT
- - - U/E — PROPOSED UTILITY EASEMENT
- - - U/E — EXISTING UTILITY EASEMENT

NOTE: SEE GRADING ENLARGEMENT PLANS FOR PROPOSED CURB TYPES AND LOCATIONS.

STORMLINE 400 (4+00 - 8+00)

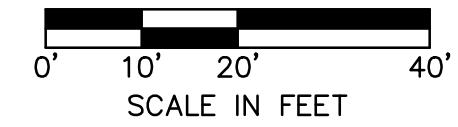
SUMMARY OF HARDSCAPE

ITEM	UNIT	QUANTITY
1 ASPHALT STREET	SY	533
2 COMMERCIAL DRIVEWAY REPLACEMENT	SY	34
3 RESIDENTIAL DRIVEWAY REPLACEMENT	SY	29
4 SIDEWALK	SY	17
5 WHEELCHAIR RAMPS	SF	233



STRUCTURES

ID	DESCRIPTION
CI-440	6'x4' COMBINATION INLET (NEENAH R-3295-2L GRATE) 4+23.21, 0.00' STORMLINE 400
CI-445	6'x4' COMBINATION INLET (NEENAH R-3295-2L GRATE) 4+97.89, 0.00' STORMLINE 400
CI-450	4'x4' COMBINATION INLET (NEENAH R-3067-L GRATE) 6+15.20, 0.00' STORMLINE 400
CI-455	6'x4' COMBINATION INLET (NEENAH R-3295-2L GRATE) 6+99.99, 0.00' STORMLINE 400
CI-460	9'x4' COMBINATION INLET (NEENAH R-3295-3L GRATE) 7+84.22, 0.00' STORMLINE 400



DWG: F:\2021\04001-04500\021-04210-G-40-Design\AutoCAD\Final Plans\Sheets\WTRS\W_STM02_G2104210.dwg
 DATE: Nov 01, 2023 11:24am
 XREFS: W_P_TBLK_G2104210 V_XBNDY_G2104210 W_PBASE_G2104210 W_PESMT_G2104210 W_PPATT_G2104210 W_XTOPO_G2104210
 USER: eshelton
 W_PSURF_G2104210

olsson
 302 East Milligan Road
 Fayetteville, AR 72703
 TEL 479.443.3404
 www.olsson.com

STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 NO. 19111
 EXPIRES 11.01.2028
 ERIC JOSEPH SHELTON

BY: EMPS

REVISIONS DESCRIPTION
 DATE: 10.31.2023
 REVISIONS: Miscellaneous updates

REV. NO. 1

PLAN & PROFILE - STORMLINE 400
 SW 10TH STREET & SW F STREET
 STORMWATER IMPROVEMENTS
 BENTONVILLE, AR

2023

drawn by: KTF
 checked by: JDA
 approved by: EJS
 QA/QC by: EJS
 project no.: 021-04210-G
 drawing no.: W_STM02_G2104210
 date: 09.13.2023

SHEET 49 of 71



11/28/2023 8:38:48 AM

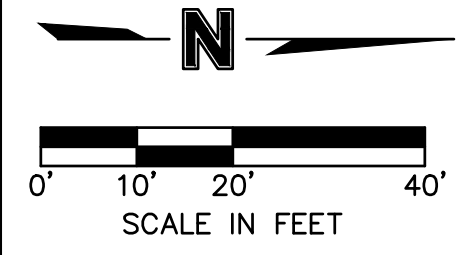
DWG: F:\2021\04001-04500\021-04210-G-40-Design\AutoCAD\Final Plans\Sheets\WTR\W_STM02_G2104210.dwg
DATE: Sep 13, 2023 11:07am
USER: nmcneel
W_PESMT_G2104210 W_PPATT_G2104210 W_XTOPO_G2104210
V_XBNDY_G2104210 V_PBASE_G2104210
XREFS: W_PTBK_G2104210

SUMMARY OF HARDSCAPE		
ITEM	UNIT	QUANTITY
1 ASPHALT STREET	SY	218
2 RESIDENTIAL DRIVEWAY REPLACEMENT	SY	17

NOTE:
SEE GRADING ENLARGEMENT PLANS FOR PROPOSED CURB TYPES AND LOCATIONS.

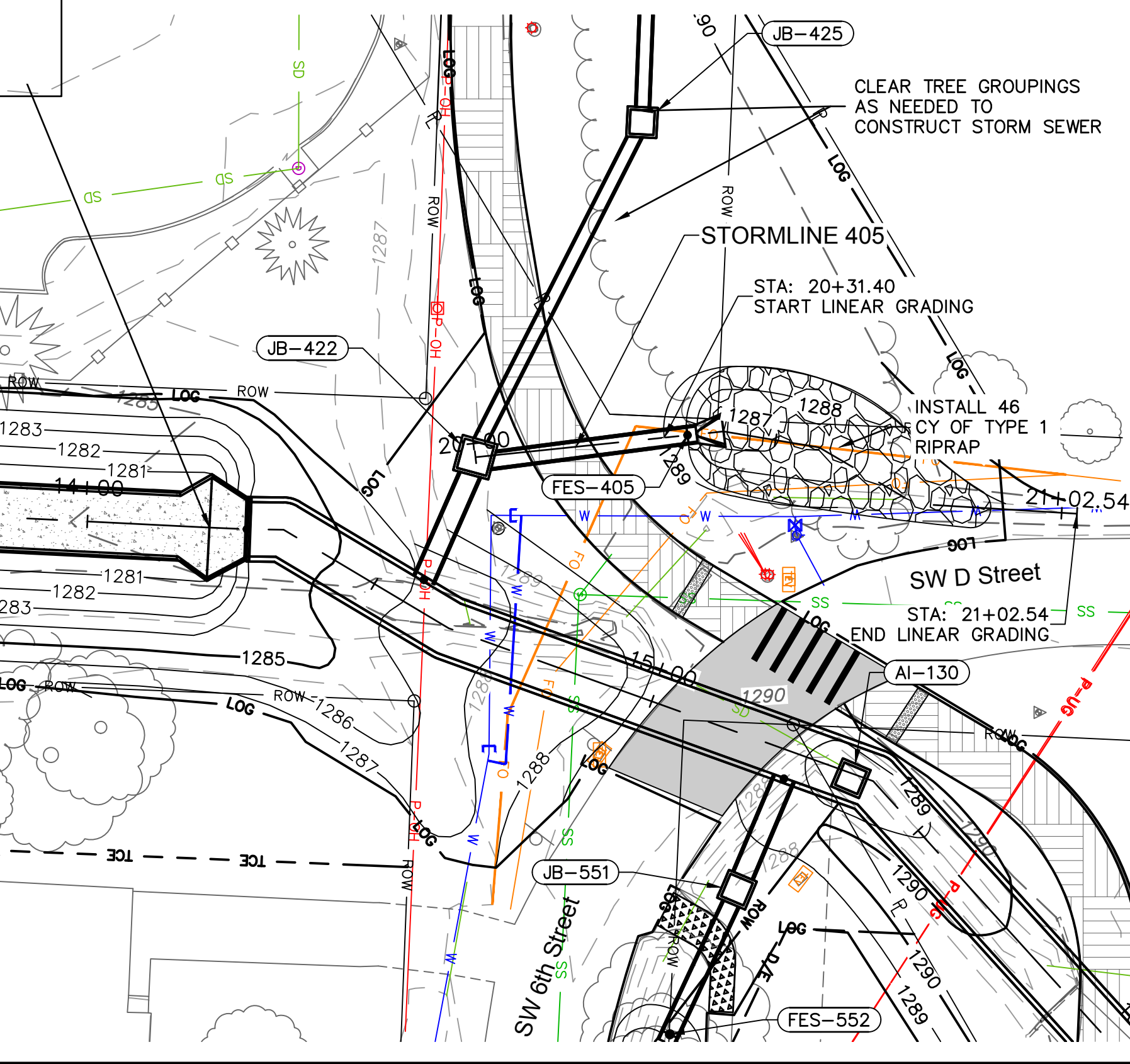
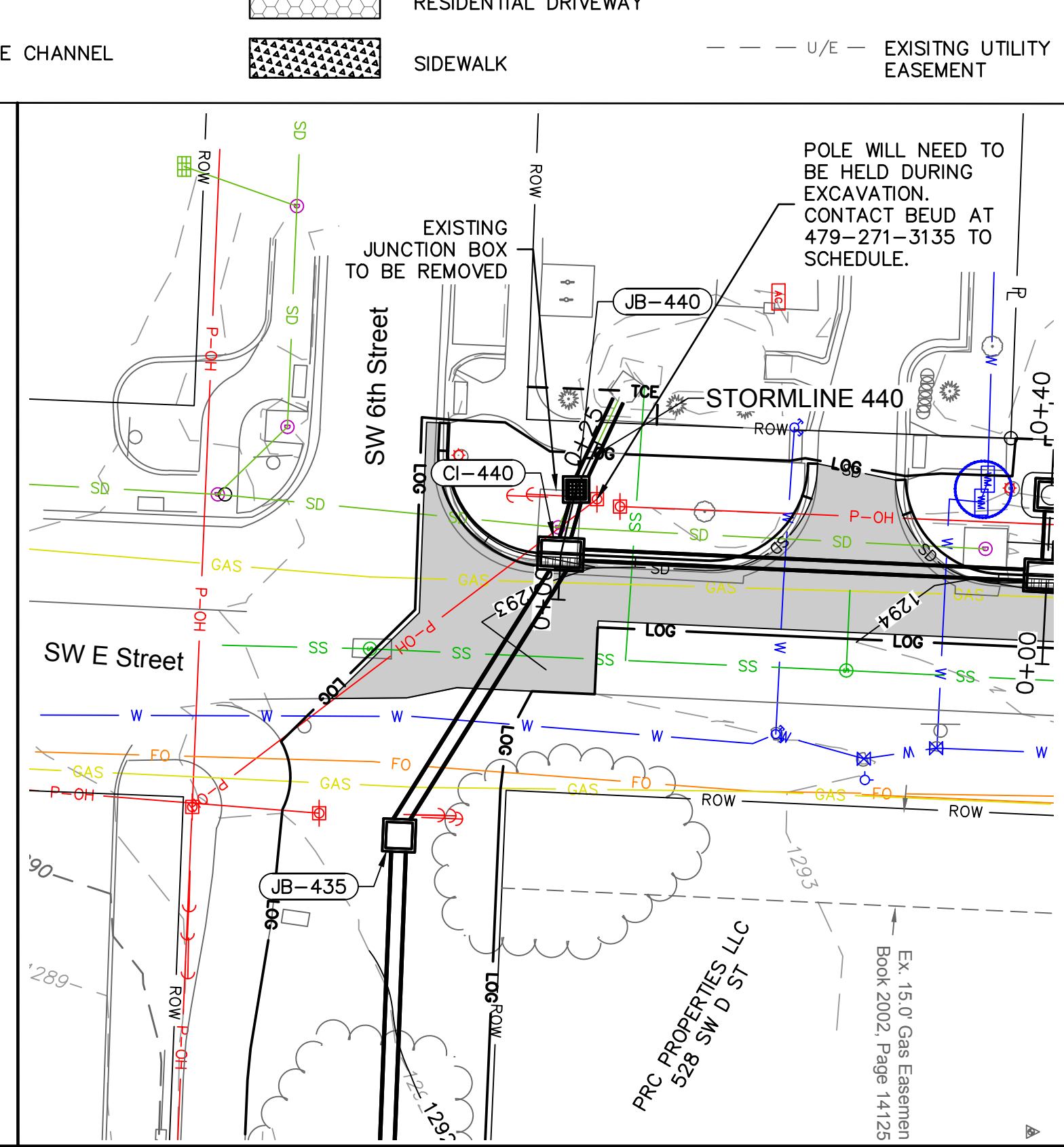
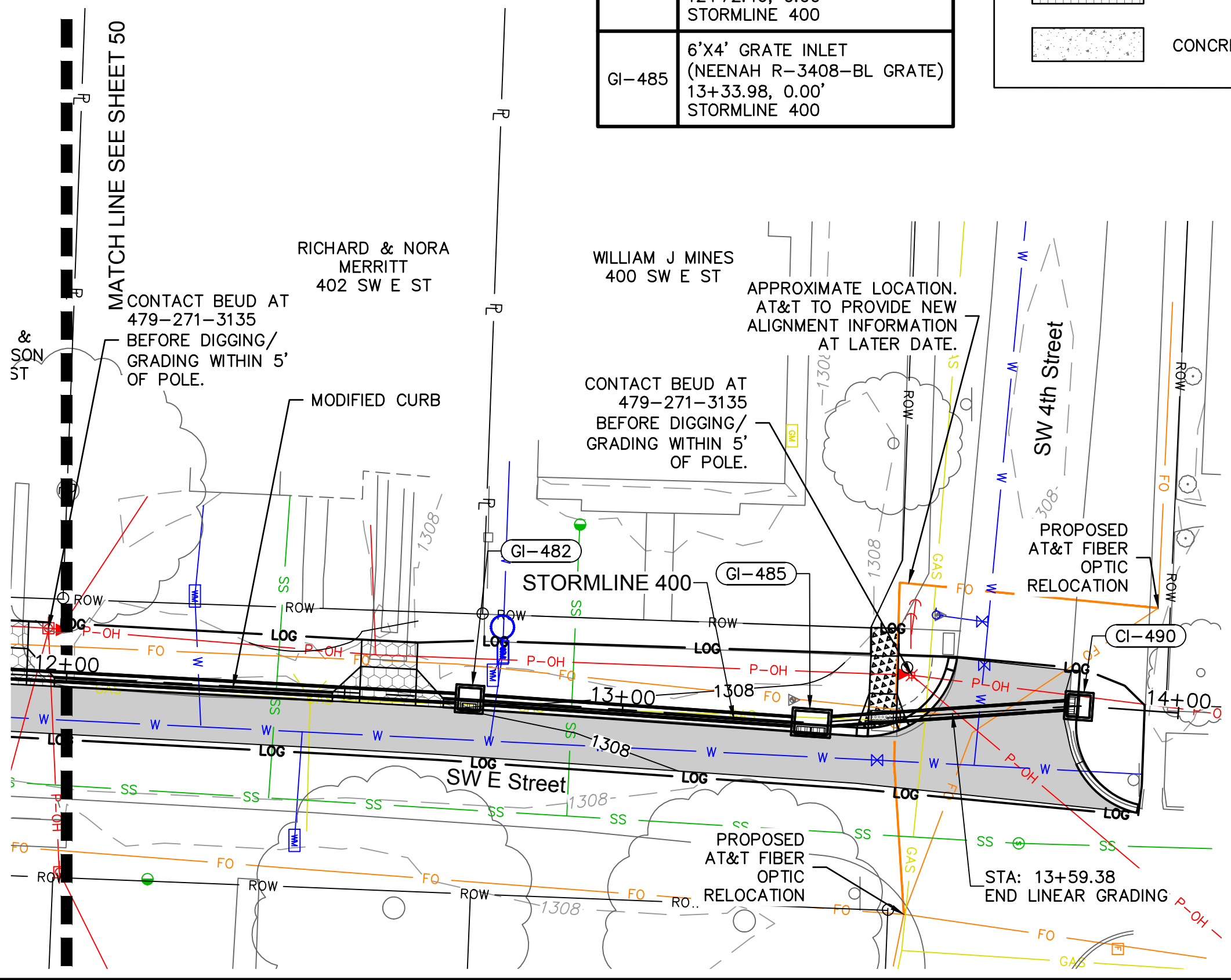
STRUCTURES	
ID	DESCRIPTION
CI-490	4'X4' COMBINATION INLET (NEENAH R-3067-L GRATE) 13+82.10, 0.00' STORMLINE 400
GI-482	4'X4' GRATE INLET (NEENAH R-3408-L GRATE) 12+72.46, 0.00' STORMLINE 400
GI-485	6'X4' GRATE INLET (NEENAH R-3408-BL GRATE) 13+33.98, 0.00' STORMLINE 400

LEGEND			
	ASPHALT STREET		CONCRETE STREET
	ASPHALT PAVEMENT REPAIR		CONCRETE TRAIL
	BRICK		GRAVEL (CLASS 8 AGGREGATE BASE COURSE)
	COMMERCIAL DRIVEWAY		RESIDENTIAL DRIVEWAY
	CONCRETE CHANNEL		SIDEWALK
	PROPOSED TEMPORARY CONSTRUCTION EASEMENT		PROPOSED PERMANENT DRAINAGE EASEMENT
	PROPOSED UTILITY EASEMENT		EXISTING UTILITY EASEMENT

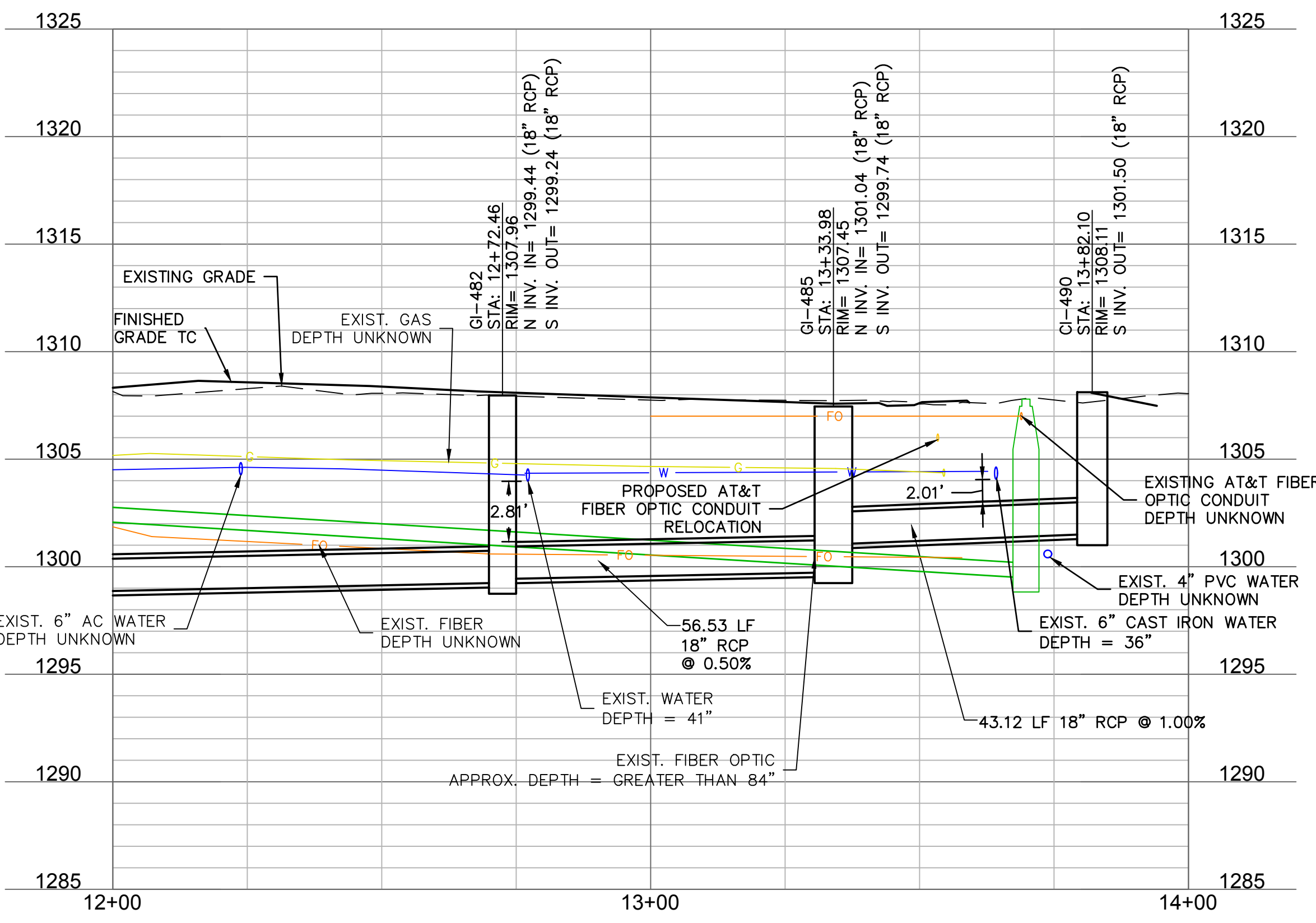


STRUCTURES	
ID	DESCRIPTION
JB-440	3' X 3' JUNCTION BOX 4+25.11, -10.00' LT STORMLINE 400

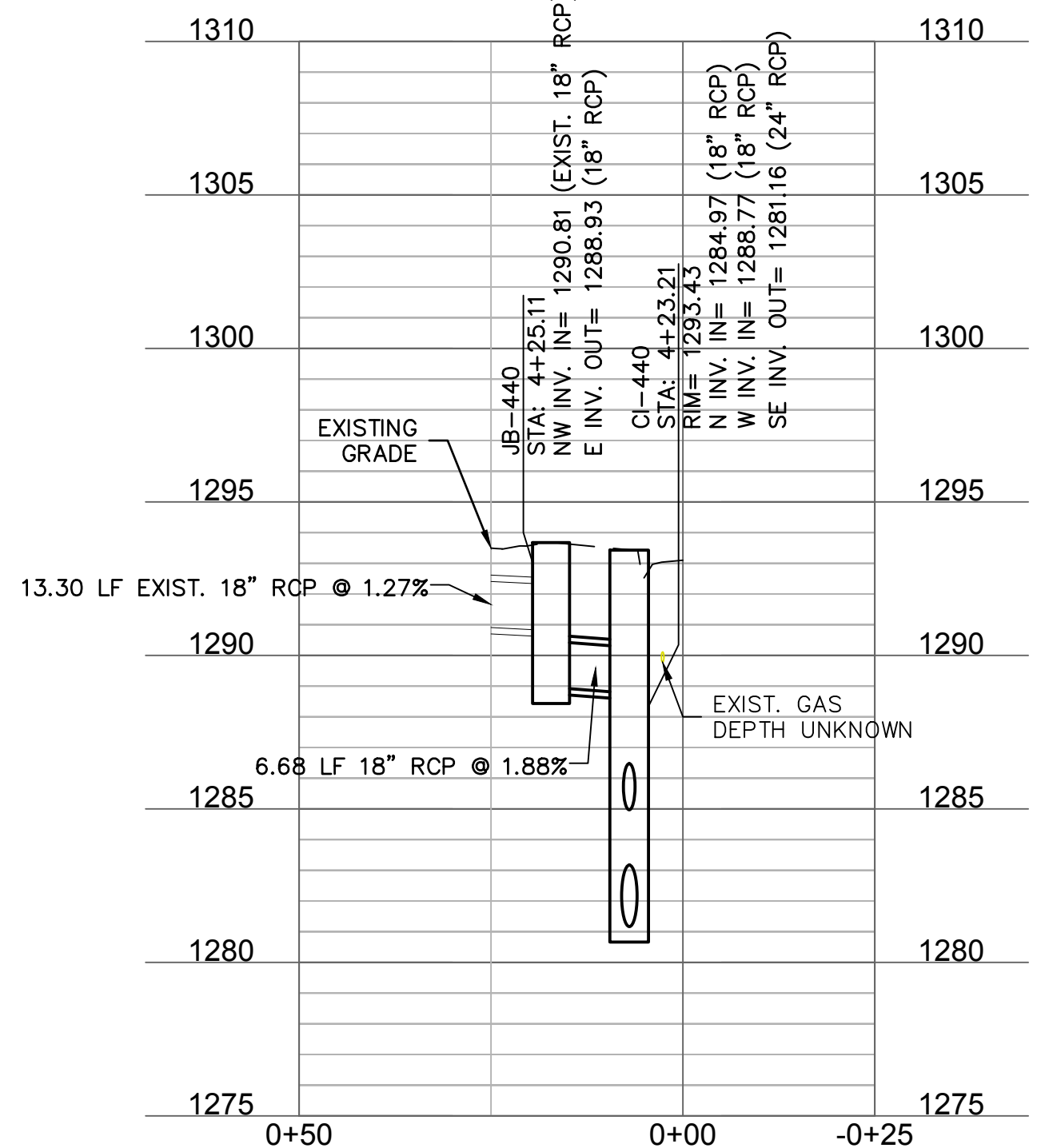
STRUCTURES	
ID	DESCRIPTION
FES-405	30" RCP FLARED END SECTION (WITH TOEWALL) 20+35.26, 0.00' STORMLINE 405



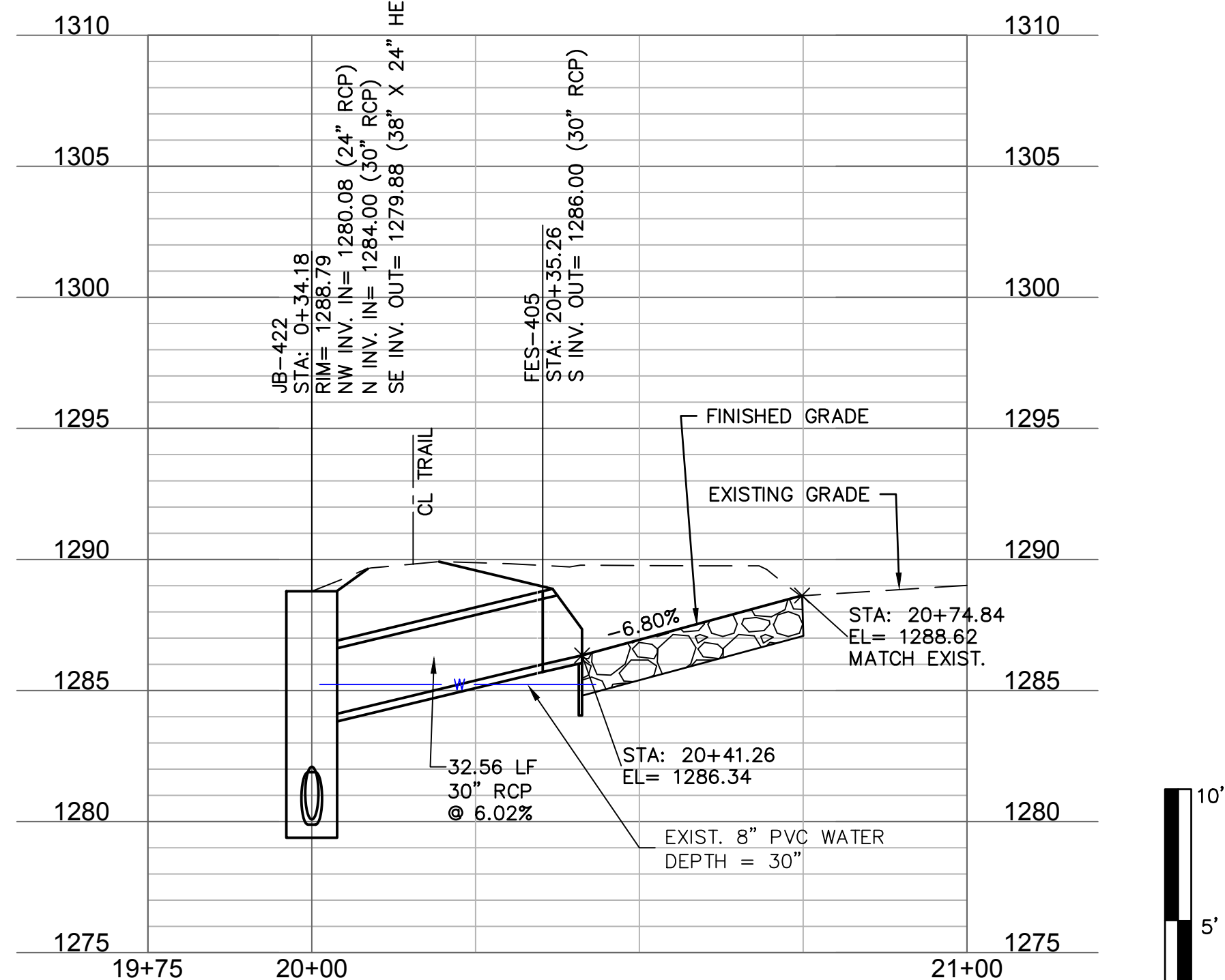
STORMLINE 400 (12+00 - 14+00)



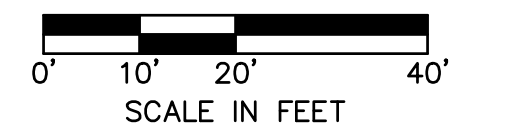
STORMLINE 440 (-0+25 - 0+50)



STORMLINE 405 (19+75 - 21+00)



NOTE: CONTRACTOR TO ADD FILL TO COVER CROWN OF FLARED END SECTION



olsson
302 East Millisp Road
Fayetteville, AR 72703
TEL 479.443.3404
www.olsson.com

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 19111
ERIC JOSEPH SHELTON

REV. NO.	DATE	REVISIONS DESCRIPTION

PLAN & PROFILE - STORMLINES 400, 405 & 440
SW 10TH STREET & SW F STREET
STORMWATER IMPROVEMENTS
BENTONVILLE, AR

drawn by: KTF
checked by: JDA
approved by: EJS
QA/QC by: EJS
project no.: 021-04210-G
drawing no.: W_STM02_G2104210
date: 09.13.2023

SHEET 51 of 71

DWG: F:\2021\04001-04500\021-04210-G-40-Design\AutoCAD\Final_Plans\Sheets\WTRS\W_STM02_G2104210.dwg
 DATE: Sep 13, 2023 11:07am
 XREFS: W_PTBK_G2104210 V_XBNDY_G2104210 W_PBASE_G2104210 W_PESMT_G2104210 W_PPSURF_G2104210 W_PPATT_G2104210 W_XTOPO_G2104210
 USER: nmeneal
 W_PPSURF_G2104210 W_PESMT_G2104210 W_PPATT_G2104210 W_XTOPO_G2104210

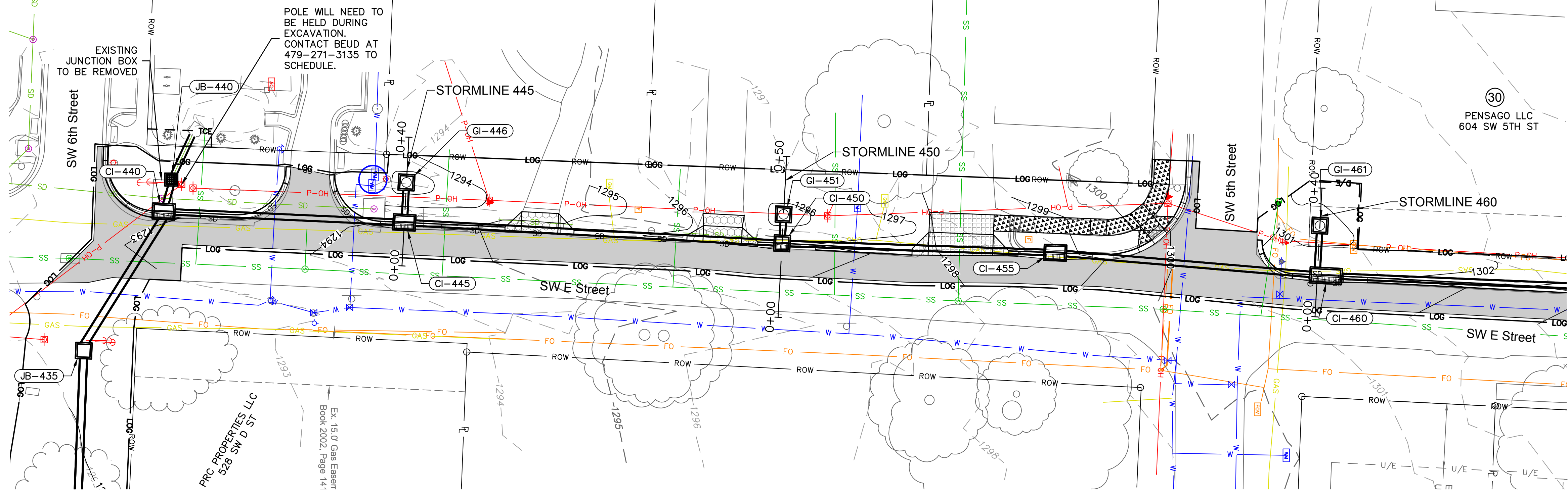
STRUCTURES	
ID	DESCRIPTION
GI-446	4'X4' GRATE INLET (NEENAH R-2560-E2 GRATE) 4+97.89, -12.44' LT STORMLINE 400

STRUCTURES	
ID	DESCRIPTION
GI-451	4'X4' GRATE INLET (NEENAH R-2560-E2 GRATE) 6+15.37, -9.00' LT STORMLINE 400

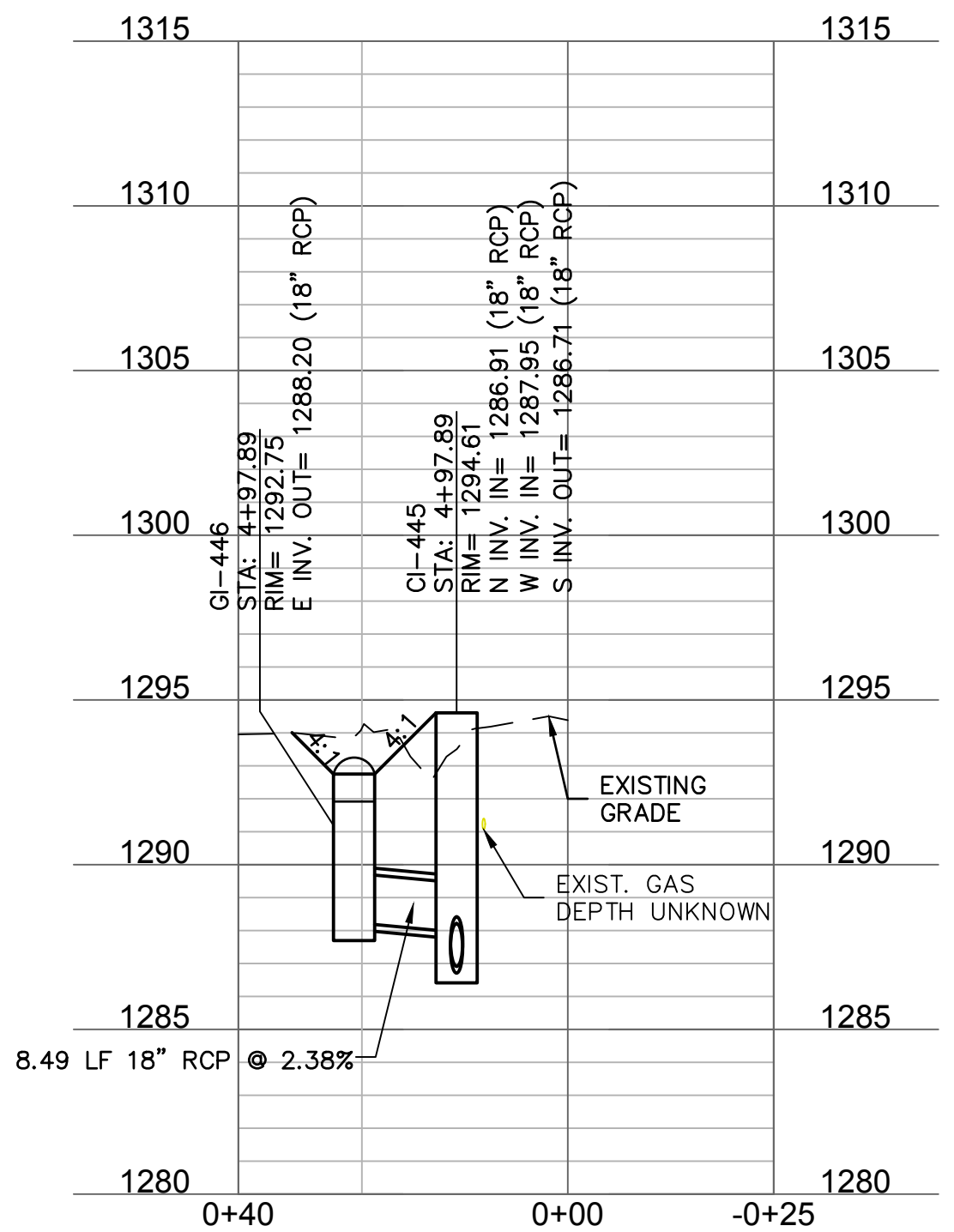
STRUCTURES	
ID	DESCRIPTION
GI-461	4'X4' GRATE INLET (NEENAH R-2560-E2 GRATE) 7+81.05, -15.34' LT STORMLINE 400

LEGEND	
	LIMITS OF GRADING
	ASPHALT STREET
	ASPHALT PAVEMENT REPAIR
	BRICK
	COMMERCIAL DRIVEWAY
	CONCRETE CHANNEL
	CONCRETE STREET
	CONCRETE TRAIL
	GRAVEL (CLASS 8 AGGREGATE BASE COURSE)
	RESIDENTIAL DRIVEWAY
	SIDEWALK
	PROPOSED TEMPORARY CONSTRUCTION EASEMENT
	PROPOSED PERMANENT DRAINAGE EASEMENT
	PROPOSED UTILITY EASEMENT
	EXISTING UTILITY EASEMENT

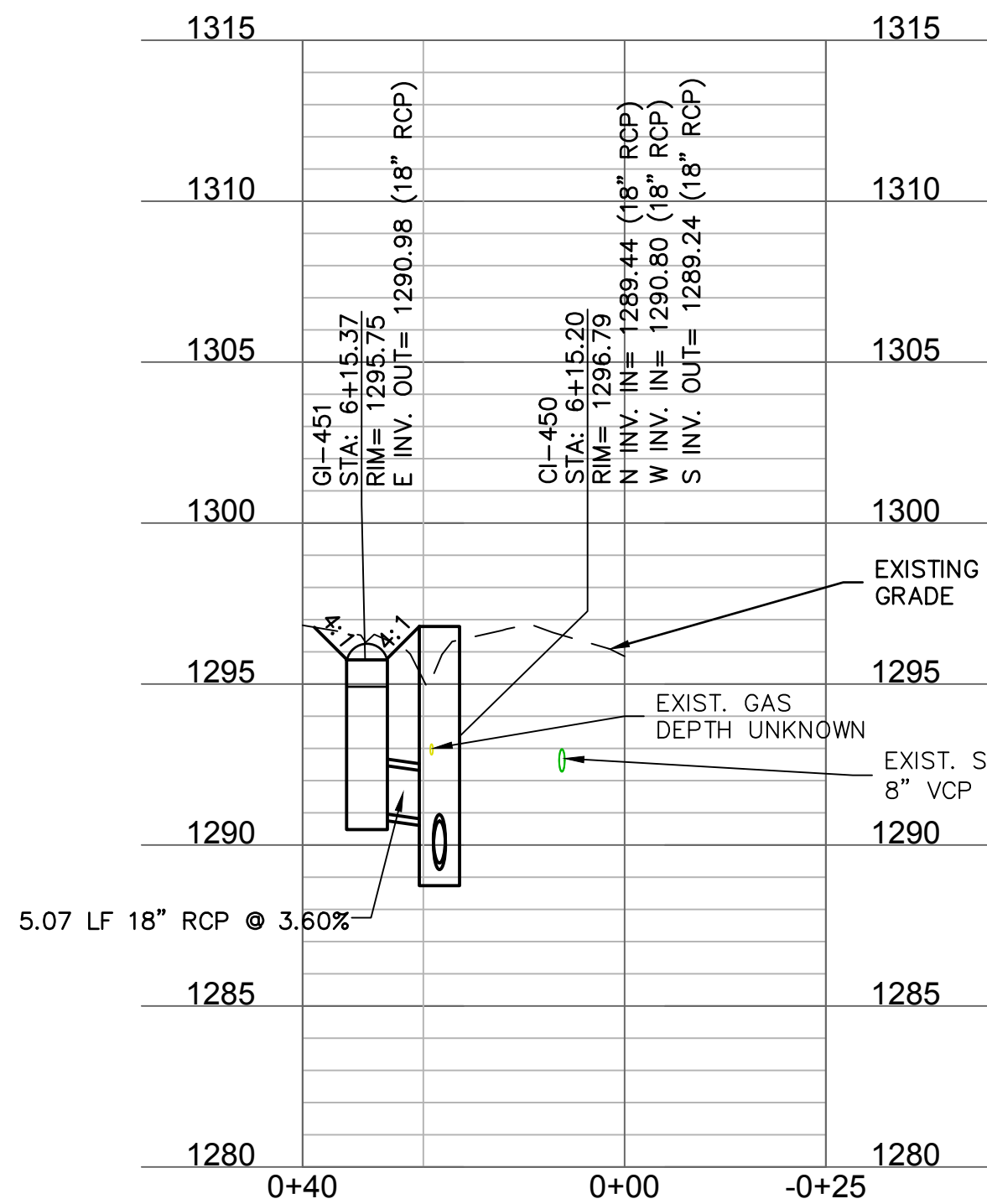
NOTE:
SEE GRADING ENLARGEMENT PLANS FOR PROPOSED CURB TYPES AND LOCATIONS.



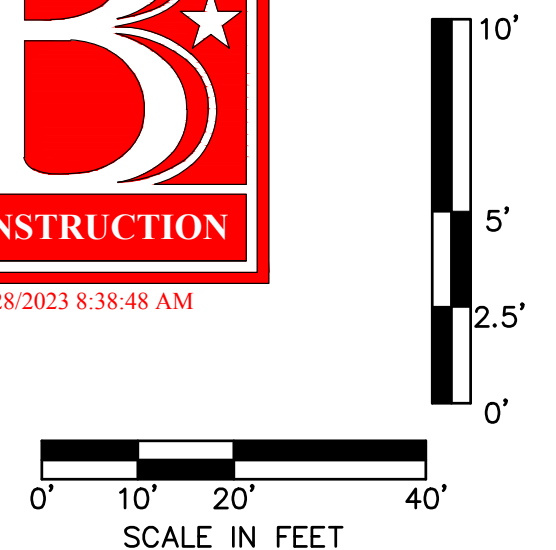
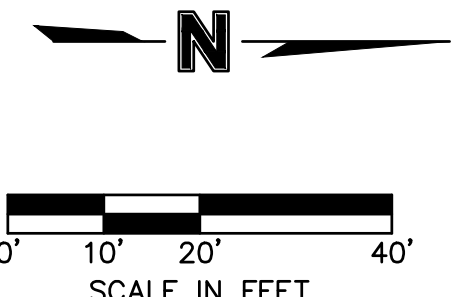
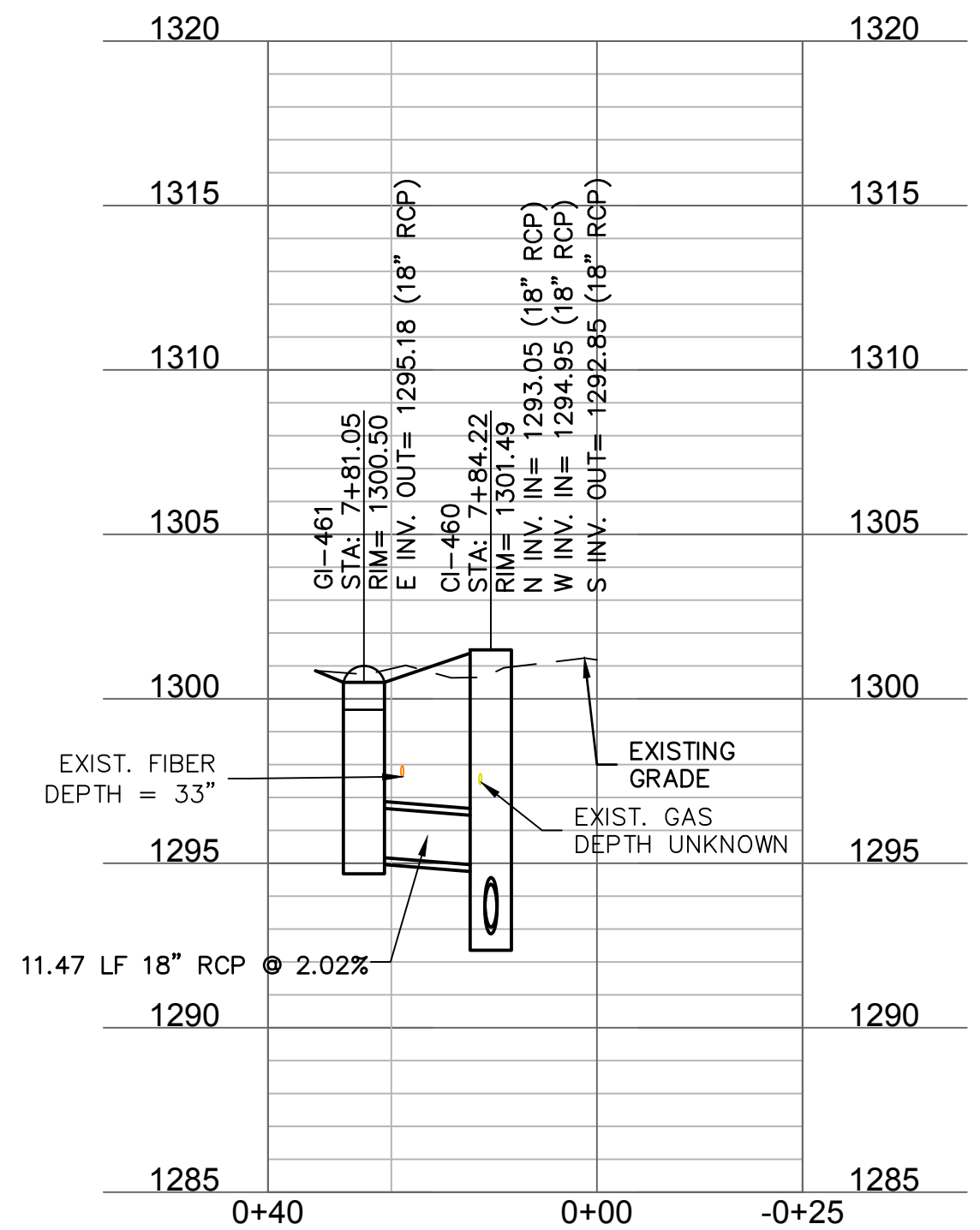
STORMLINE 445 (-0+25 - 0+40)



STORMLINE 450 (-0+25 - 0+40)



STORMLINE 460 (-0+25 - 0+40)



olsson
 302 East Millisp Road
 Fayetteville, AR 72703
 TEL 479.443.3404
 www.olsson.com

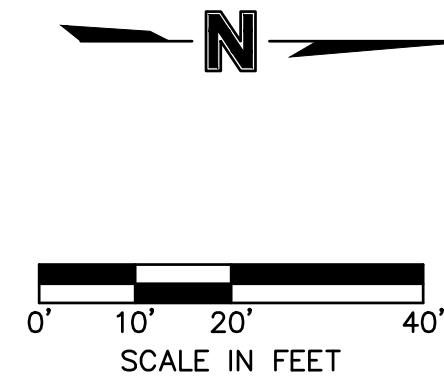


REV. NO.	DATE	REVISIONS DESCRIPTION	BY

PLAN & PROFILE - STORMLINES 445, 450 & 460
 SW 10TH STREET & SW F STREET
 STORMWATER IMPROVEMENTS
 BENTONVILLE, AR
 2023

drawn by: KTF
 checked by: JDA
 approved by: EJS
 QA/QC by: EJS
 project no.: 021-04210-G
 drawing no.: W_STM02_G2104210
 date: 09.13.2023

DWG: F:\2021\04001-04500\021-04210-G-40-Design\AutoCAD\Final_Plans\Sheets\WTRS\W_WAT_G2104210.dwg
 DATE: Sep 12, 2023 10:35am
 XREFS: W_PWATR_G2104210 W_PPATT_G2104210 V_YBNDY_G2104210 W_PBASE_G2104210 W_PPipe_G2104210 W_PESMT_G2104210 P_PTBLK_G2104210 W_XTOPO_G2104210
 USER: nmccend

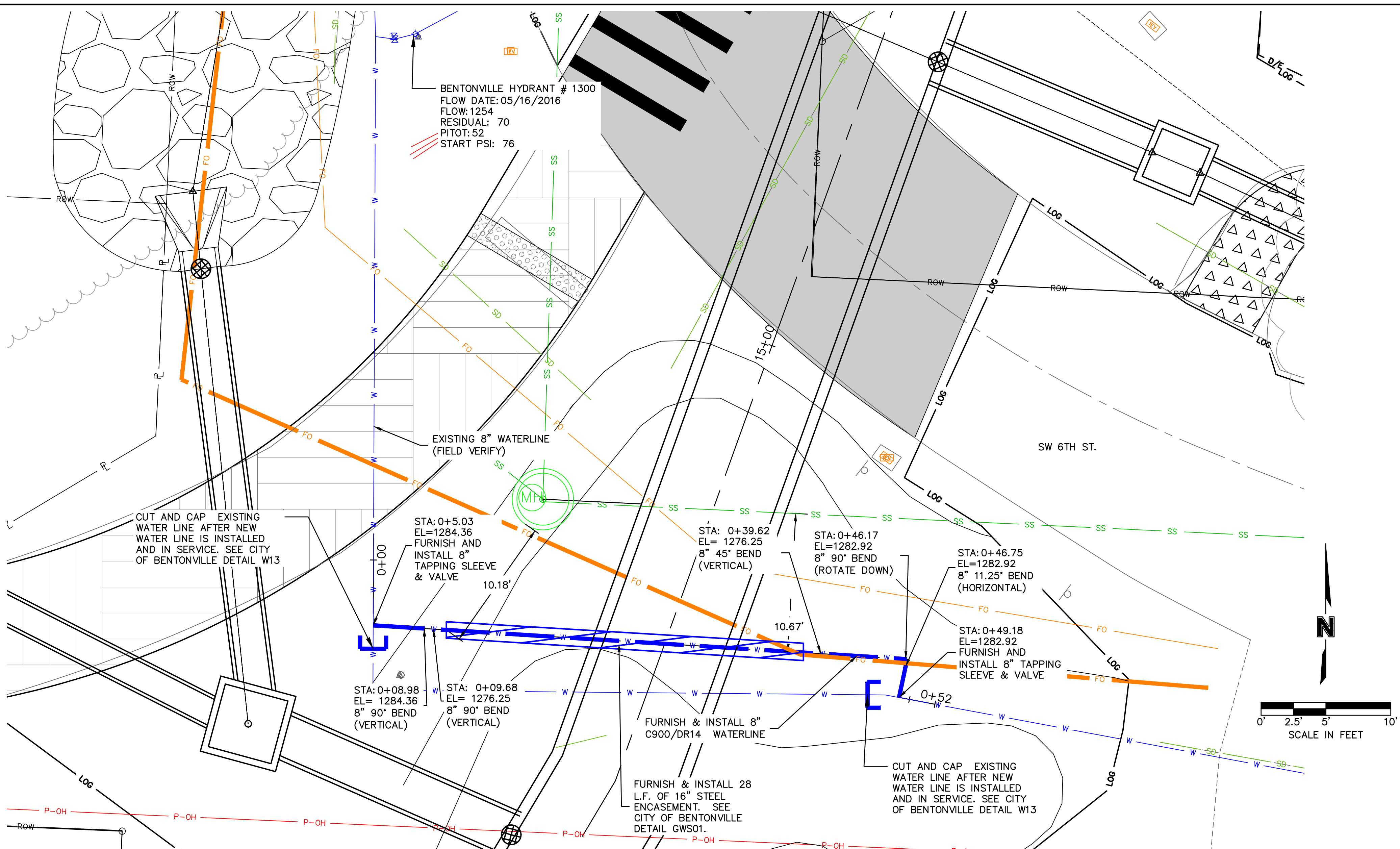


REV. NO.	DATE	REVISIONS DESCRIPTION	BY

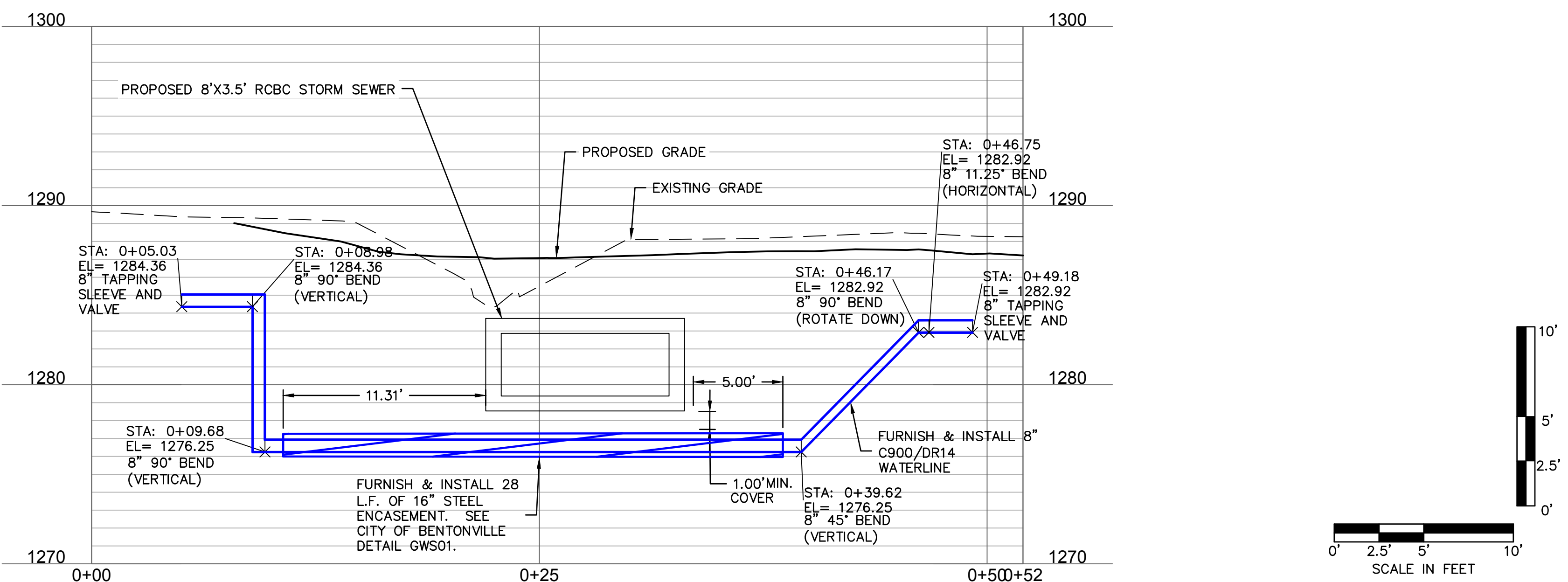
WATERLINE RELOCATION GENERAL LAYOUT
 SW 10TH STREET & SW F STREET
 STORMWATER IMPROVEMENTS
 BENTONVILLE, AR
 2023
 REVISIONS

drawn by: NDHM
 checked by: EJS
 approved by: CBD
 QA/QC by: CBD
 project no.: 021-04210-G
 drawing no.: W_WAT_G2104210
 date: 09.01.2023

DWG: F:\2021\04001-04500\021-04210-G-40-Design\AutoCAD\Final_Plans\Sheets\WTRS\W_WAT01_G2104210.dwg
 DATE: Sep 12, 2023 10:36am
 USER: nmccord
 W_PBASE_G2104210
 W_PPAITL_G2104210
 W_PWATR_G2104210
 W_XBNDY_G2104210
 W_PESMT_G2104210
 W_PPipe_G2104210
 P_PTBLK_G2104210
 W_XTOPO_G2104210



WATERLINE 2 (0+00 - 0+52)



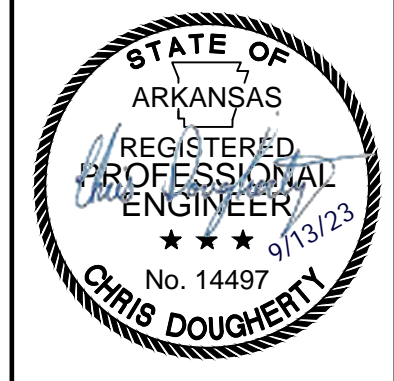
LEGEND

- LIMITS OF GRADING
- ASPHALT STREET
- ASPHALT PAVEMENT REPAIR
- BRICK
- COMMERCIAL DRIVEWAY
- CONCRETE CHANNEL
- CONCRETE STREET
- CONCRETE TRAIL
- GRAVEL (CLASS 8) AGGREGATE BASE COURSE
- RESIDENTIAL DRIVEWAY
- SIDEWALK
- TCE --- PROPOSED TEMPORARY CONSTRUCTION EASEMENT
- D/E --- PROPOSED PERMANENT DRAINAGE EASEMENT
- U/E --- PROPOSED UTILITY EASEMENT
- U/E --- EXISTING UTILITY EASEMENT

NOTE: SEE GRADING ENLARGEMENT PLANS FOR PROPOSED CURB TYPES AND LOCATIONS.



olsson
 302 East Millisp Road
 Fayetteville, AR 72703
 TEL 479.443.3404
 www.olsson.com



REV. NO.	DATE	REVISIONS DESCRIPTION	BY

PLAN & PROFILE - WATERLINE 2

SW 10TH STREET & SW F STREET STORMWATER IMPROVEMENTS

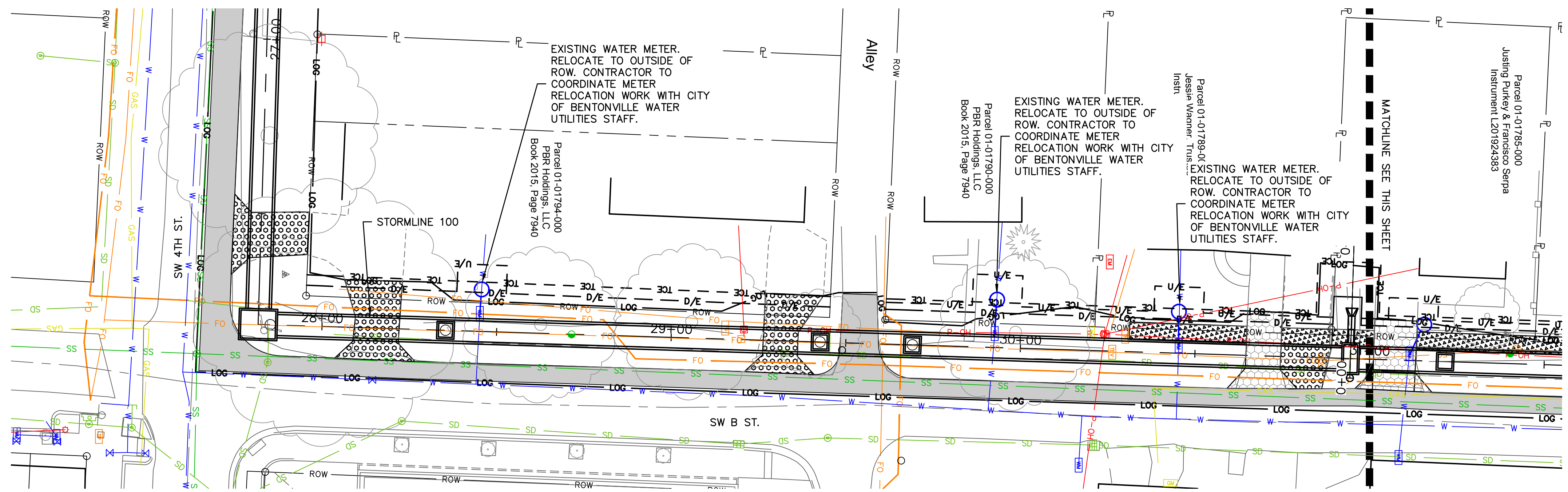
BENTONVILLE, AR

2023

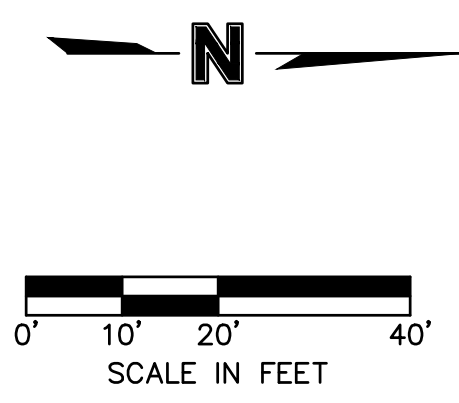
drawn by: NDHM
 checked by: EJS
 approved by: CBD
 QA/QC by: CBD
 project no.: 021-04210-G
 drawing no. W_WAT01_G2104210
 date: 09.01.2023

NOTE: CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE WATER UTILITIES DEPARTMENT SPECIFICATIONS FOR THE CITY OF BENTONVILLE DATED 2021.

DWG: F:\2021\04001-04500\021-04210-G-40-Design\AutoCAD\Final_Plans\Sheets\WTRS\W_WAT01_G2104210.dwg
 DATE: Sep 12, 2023 10:39am XREFS: W_PWATR_G2104210 W_PPATT_G2104210 W_PBASE_G2104210 W_PPIPE_G2104210 W_PESMT_G2104210 W_PTBLK_G2104210 W_XTOPO_G2104210
 USER: nmcnead



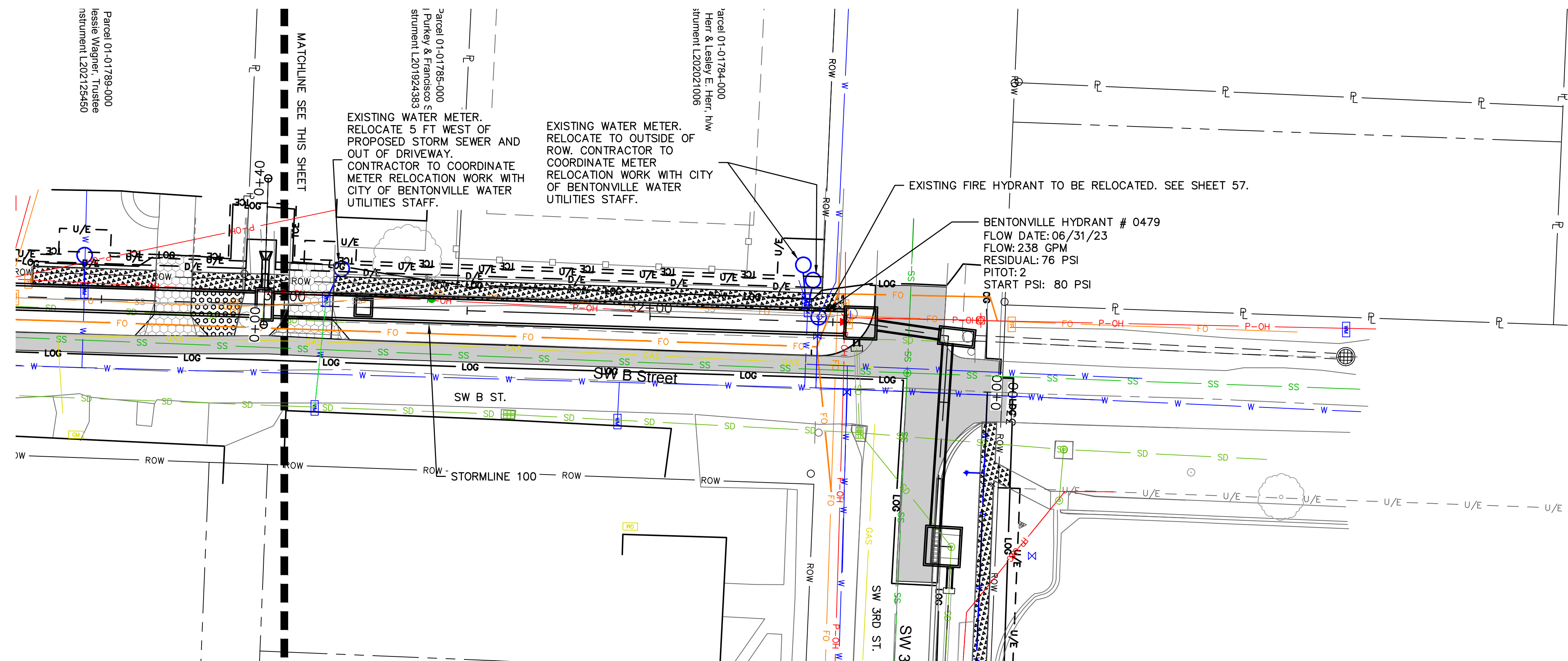
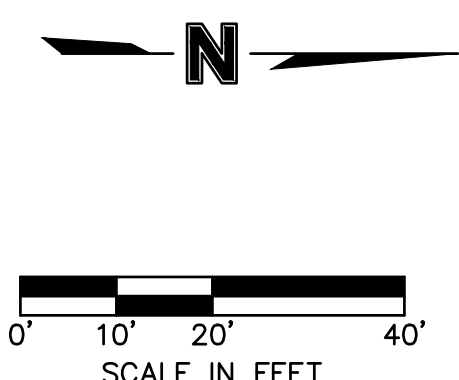
NOTE:
 COORDINATE WITH BWJ INSPECTOR FOR WATER METER RELOCATIONS BY BWJ CREWS. NO COST BILLED TO CONTRACTOR. CONTRACTOR RESPONSIBLE FOR PROVIDING LICENSED PLUMBER TO THE PRIVATE SERVICE TO NEW METER LOCATION.



LEGEND

	LIMITS OF GRADING
	ASPHALT STREET
	ASPHALT PAVEMENT REPAIR
	BRICK
	COMMERCIAL DRIVEWAY
	CONCRETE CHANNEL
	CONCRETE STREET
	CONCRETE TRAIL
	GRAVEL (CLASS 8 AGGREGATE BASE COURSE)
	RESIDENTIAL DRIVEWAY
	SIDEWALK
	PROPOSED TEMPORARY CONSTRUCTION EASEMENT
	PROPOSED PERMANENT DRAINAGE EASEMENT
	PROPOSED UTILITY EASEMENT
	EXISTING UTILITY EASEMENT

NOTE:
 SEE GRADING ENLARGEMENT PLANS FOR PROPOSED CURB TYPES AND LOCATIONS.



olsson
 302 East Millisap Road
 Fayetteville, AR 72703
 TEL 479.443.3404
 www.olsson.com



REV. NO.	DATE	REVISIONS DESCRIPTION	BY

WATERLINE ADJUSTMENTS - STORMLINE 100
 SW 10TH STREET & SW F STREET
 STORMWATER IMPROVEMENTS
 BENTONVILLE, AR

2023

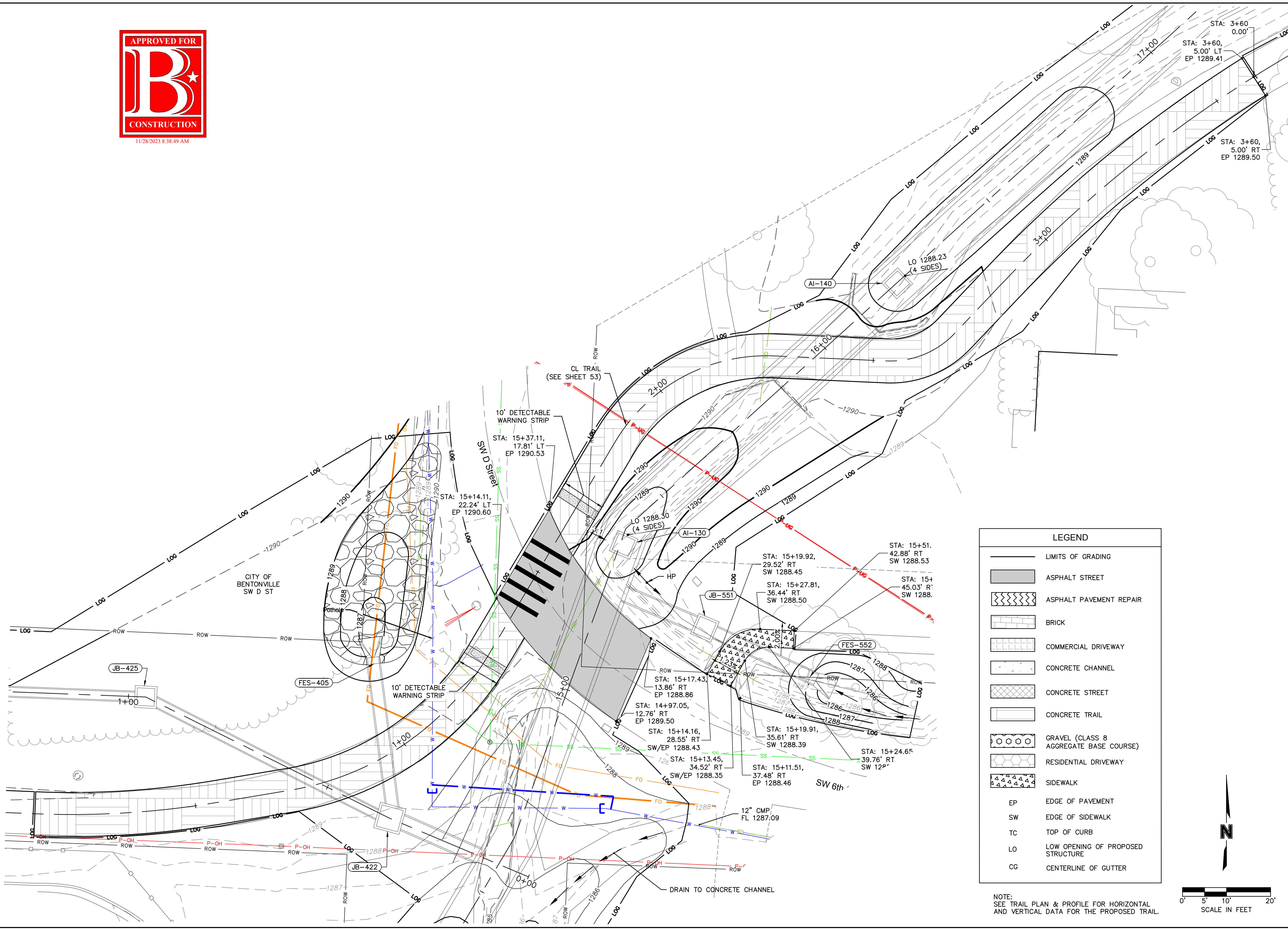
drawn by: NDHM
 checked by: EJS
 approved by: CBD
 QA/QC by: CBD
 project no.: 021-04210-G
 drawing no. W_WAT01_G2104210
 date: 09.01.2023

NOTE: CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE WATER UTILITIES DEPARTMENT SPECIFICATIONS FOR THE CITY OF BENTONVILLE DATED 2021.



11/28/2023 8:38:49 AM

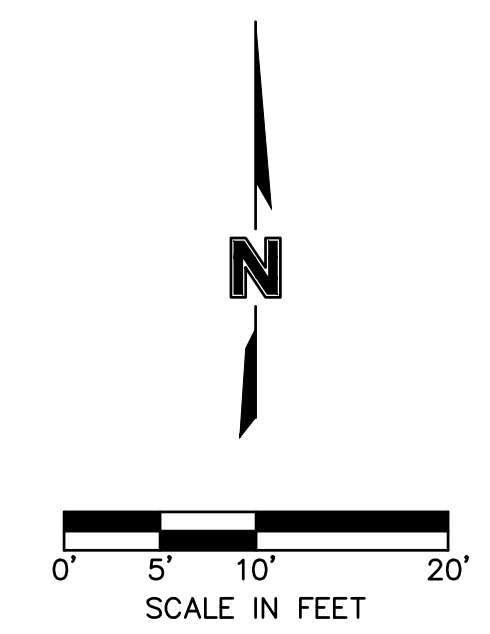
DWG: F:\2021\04001-04500\021-04210-G-40-Design\AutoCAD\Final_Plans\Sheets\WTRS\W_PAV01_G2104210.dwg
DATE: Sep 13, 2023 11:17 am XREFS: V_XBNDY_G2104210 W_PTBLK_G2104210 W_PBASE_G2104210 W_PPATT_G2104210 W_PSURE_G2104210 W_XTOPO_G2104210
USER: nmcneal 20-044 edg base



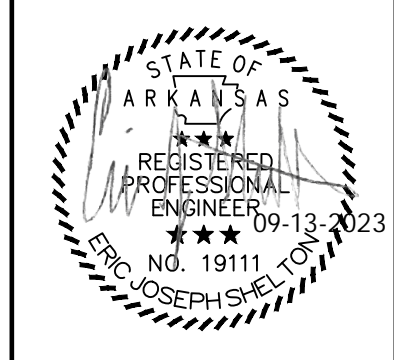
LEGEND

- LIMITS OF GRADING
- ASPHALT STREET
- ASPHALT PAVEMENT REPAIR
- BRICK
- COMMERCIAL DRIVEWAY
- CONCRETE CHANNEL
- CONCRETE STREET
- CONCRETE TRAIL
- GRAVEL (CLASS 8 AGGREGATE BASE COURSE)
- RESIDENTIAL DRIVEWAY
- SIDEWALK
- EP EDGE OF PAVEMENT
- SW EDGE OF SIDEWALK
- TC TOP OF CURB
- LO LOW OPENING OF PROPOSED STRUCTURE
- CG CENTERLINE OF GUTTER

NOTE:
SEE TRAIL PLAN & PROFILE FOR HORIZONTAL AND VERTICAL DATA FOR THE PROPOSED TRAIL.



olsson
302 East Milligan Road
Fayetteville, AR 72703
TEL 479.443.3404
www.olsson.com

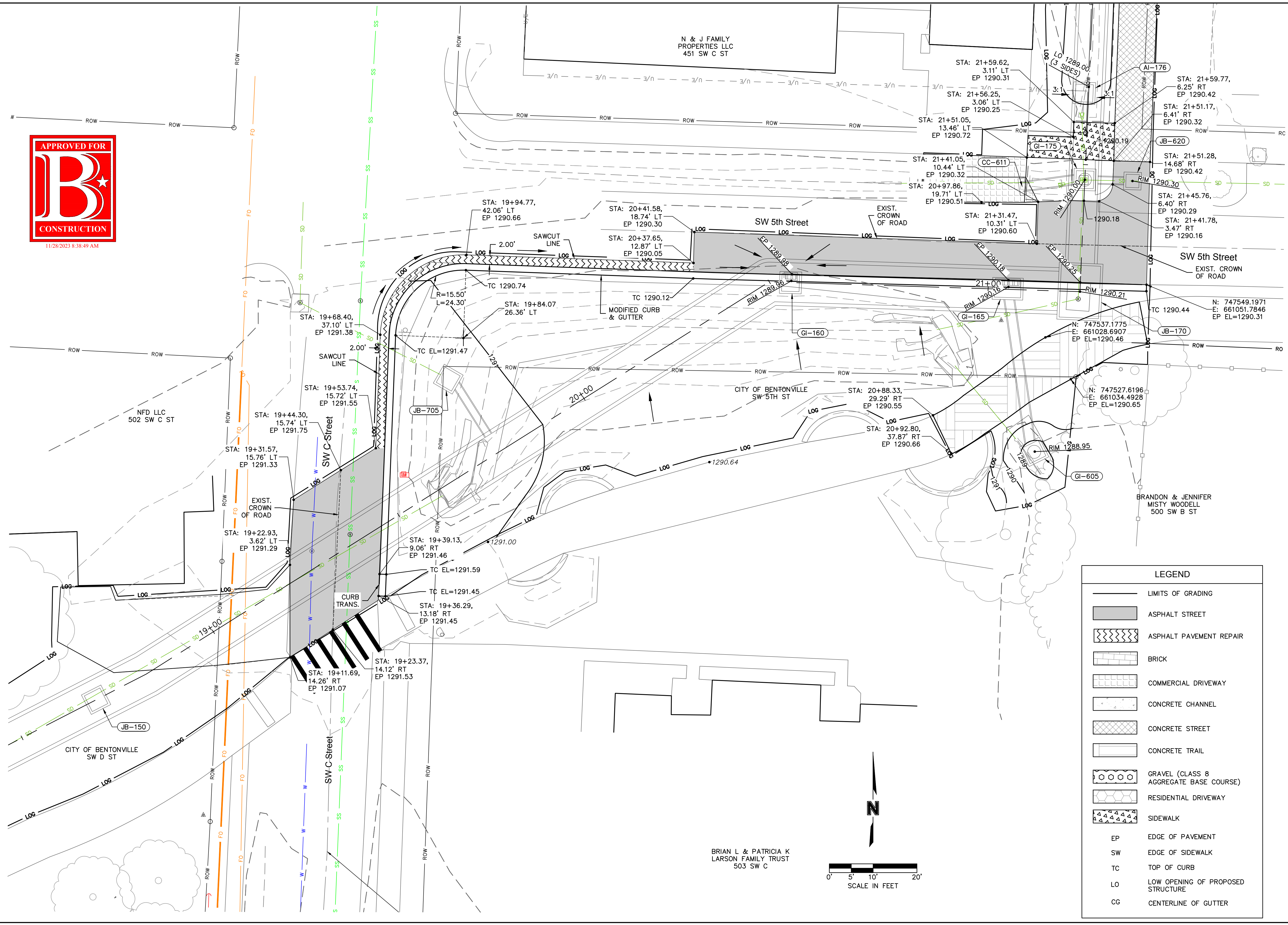


REV. NO.	DATE	REVISIONS DESCRIPTION	BY

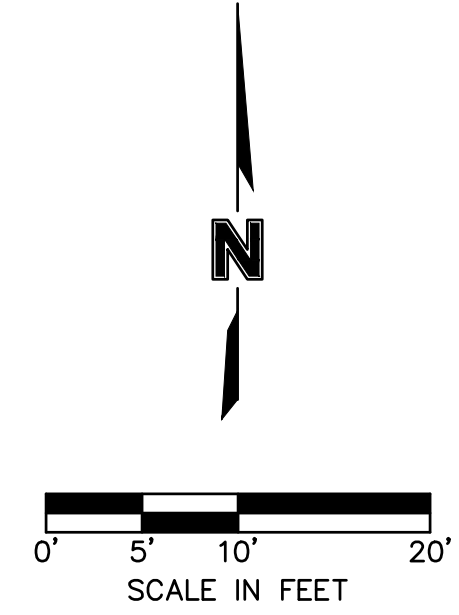
GRADING ENLARGEMENT PLAN - 6TH & D STREET
SW 10TH STREET & SW F STREET
STORMWATER IMPROVEMENTS
BENTONVILLE, AR
2023

drawn by: KTF
checked by: JDA
approved by: EJS
QA/QC by: EJS
project no.: 021-04210-G
drawing no.: W_PAV01_G2104210
date: 09.13.2023

DWG: F:\2021\04001-04500\021-04210-G\40-Design\AutoCAD\Final_Plans\Sheets\WTRS\W_PAV01_G2104210.dwg
 DATE: Sep 13, 2023 11:17am XREFS: V_XBNDY_G2104210 W_PTBLK_G2104210 W_PBASE_G2104210 W_PPATT_G2104210 W_PSURF_G2104210 W_P044_edg_base W_XTOPO_G2104210
 USER: nmcneal



BRIAN L & PATRICIA K
 LARSON FAMILY TRUST
 503 SW C



LEGEND	
	LIMITS OF GRADING
	ASPHALT STREET
	ASPHALT PAVEMENT REPAIR
	BRICK
	COMMERCIAL DRIVEWAY
	CONCRETE CHANNEL
	CONCRETE STREET
	CONCRETE TRAIL
	GRAVEL (CLASS 8 AGGREGATE BASE COURSE)
	RESIDENTIAL DRIVEWAY
	SIDEWALK
EP	EDGE OF PAVEMENT
SW	EDGE OF SIDEWALK
TC	TOP OF CURB
LO	LOW OPENING OF PROPOSED STRUCTURE
CG	CENTERLINE OF GUTTER

302 East Millisp Road
Fayetteville, AR 72703
TEL 479.443.3404
www.olsson.com

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 19111
EXPIRES 12/31/2023
ERIC JOSEPH SHELTON

REV. NO.	DATE	REVISIONS DESCRIPTION

GRADING ENLARGEMENT PLAN - 5TH & C STREET

SW 10TH STREET & SW F STREET
 STORMWATER IMPROVEMENTS

BENTONVILLE, AR

drawn by: KTF
 checked by: JDA
 approved by: EJS
 QA/QC by: EJS
 project no.: 021-04210-G
 drawing no.: W_PAV01_G2104210
 date: 09.13.2023

SHEET
 63 of 71

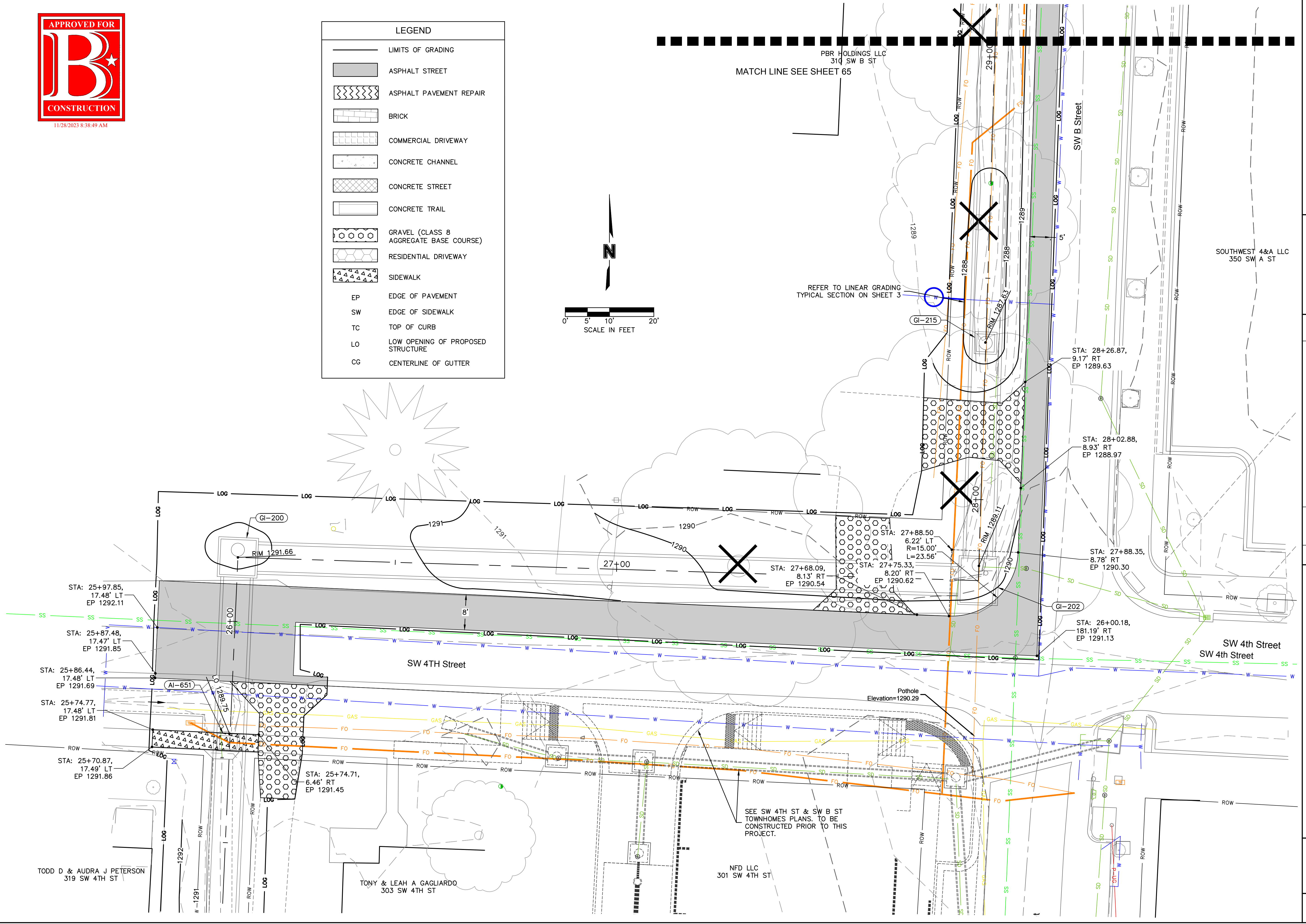
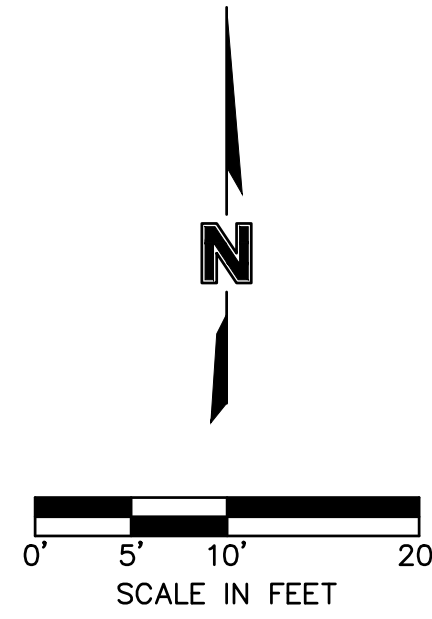
REVISIONS



11/28/2023 8:38:49 AM

DWG: F:\2021\04001-04500\021-04210-G-40-Design\AutoCAD\Final_Plans\Sheets\WTRS\W_PAV01_G2104210.dwg
 DATE: Sep 13, 2023 11:17am XREFS: V_XBNDY_G2104210 W_PTBK_G2104210 W_PBASE_G2104210 W_PPATT_G2104210 W_PSURF_G2104210 W_XTOPO_G2104210
 USER: nmcneal 20-044 edg base

LEGEND	
	LIMITS OF GRADING
	ASPHALT STREET
	ASPHALT PAVEMENT REPAIR
	BRICK
	COMMERCIAL DRIVEWAY
	CONCRETE CHANNEL
	CONCRETE STREET
	CONCRETE TRAIL
	GRAVEL (CLASS 8 AGGREGATE BASE COURSE)
	RESIDENTIAL DRIVEWAY
	SIDEWALK
EP	EDGE OF PAVEMENT
SW	EDGE OF SIDEWALK
TC	TOP OF CURB
LO	LOW OPENING OF PROPOSED STRUCTURE
CG	CENTERLINE OF GUTTER



olsson

302 East Millisap Road
Fayetteville, AR 72703
TEL 479.443.3404
www.olsson.com



REV. NO.	DATE	REVISIONS DESCRIPTION

GRADING ENLARGEMENT PLAN - 4TH & B STREET

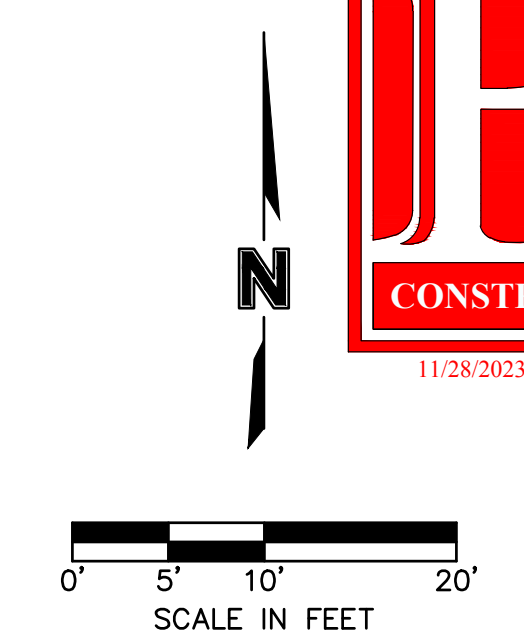
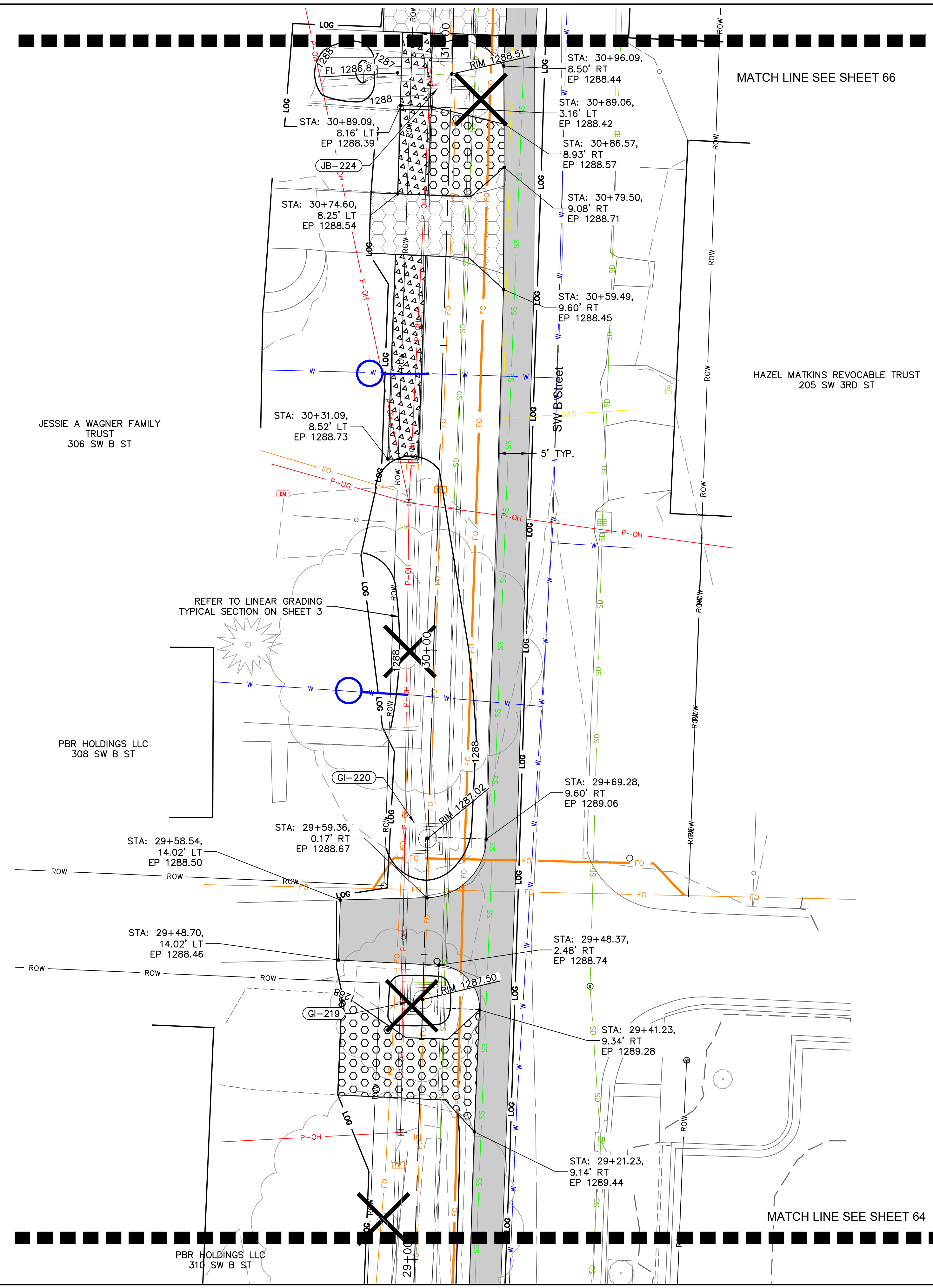
SW 10TH STREET & SW F STREET
STORMWATER IMPROVEMENTS

BENTONVILLE, AR

2023

drawn by: KTF
 checked by: JDA
 approved by: EJS
 QA/QC by: EJS
 project no.: 021-04210-G
 drawing no.: W_PAV01_G2104210
 date: 09.13.2023

DWG: F:\2021\04001-04500\021-04210-G\40-Design\AutoCAD\Final_Plans\Sheets\WTRS\W_PAV01_G2104210.dwg
 DATE: Sep 13, 2023 11:17am XREFS: V_XBNDY_G2104210 W_PTBLK_G2104210 W_PBASE_G2104210 W_PPATT_G2104210 W_PSURE_G2104210 W_XTOPO_G2104210
 USER: nmcneal
 20-044 edg base



LEGEND	
	LIMITS OF GRADING
	ASPHALT STREET
	ASPHALT PAVEMENT REPAIR
	BRICK
	COMMERCIAL DRIVEWAY
	CONCRETE CHANNEL
	CONCRETE STREET
	CONCRETE TRAIL
	GRAVEL (CLASS 8 AGGREGATE BASE COURSE)
	RESIDENTIAL DRIVEWAY
	SIDEWALK
EP	EDGE OF PAVEMENT
SW	EDGE OF SIDEWALK
TC	TOP OF CURB
LO	LOW OPENING OF PROPOSED STRUCTURE
CG	CENTERLINE OF GUTTER

www.olsson.com
 TEL 479.443.3404
 Fayetteville, AR 72703

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

GRADING ENLARGEMENT PLAN - B ST

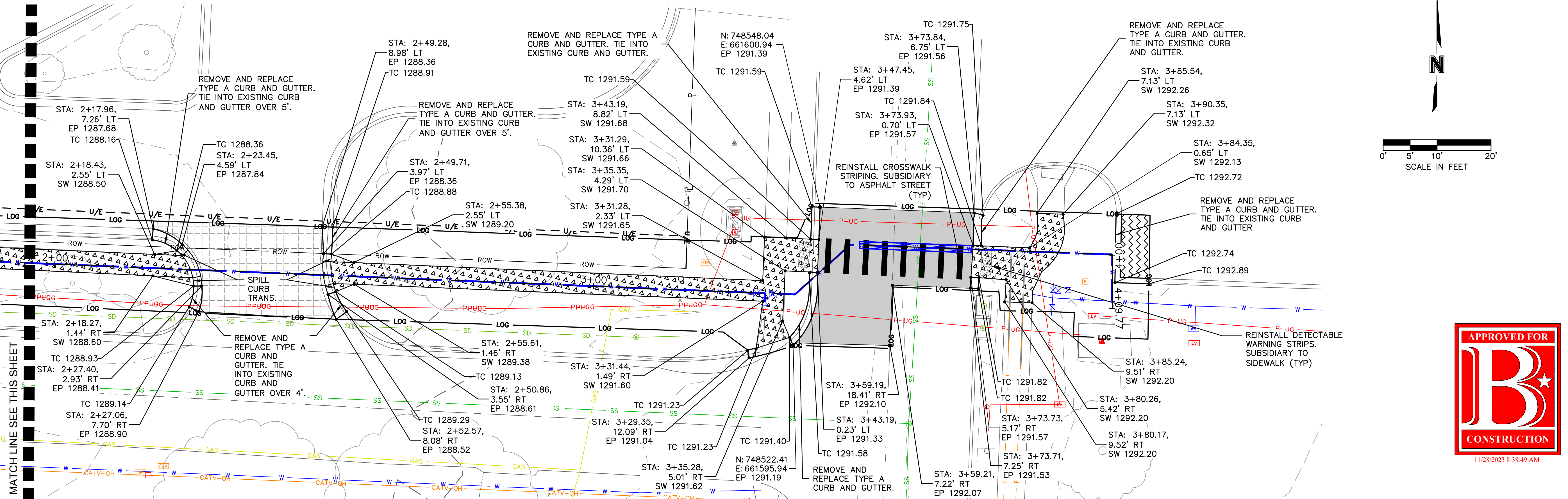
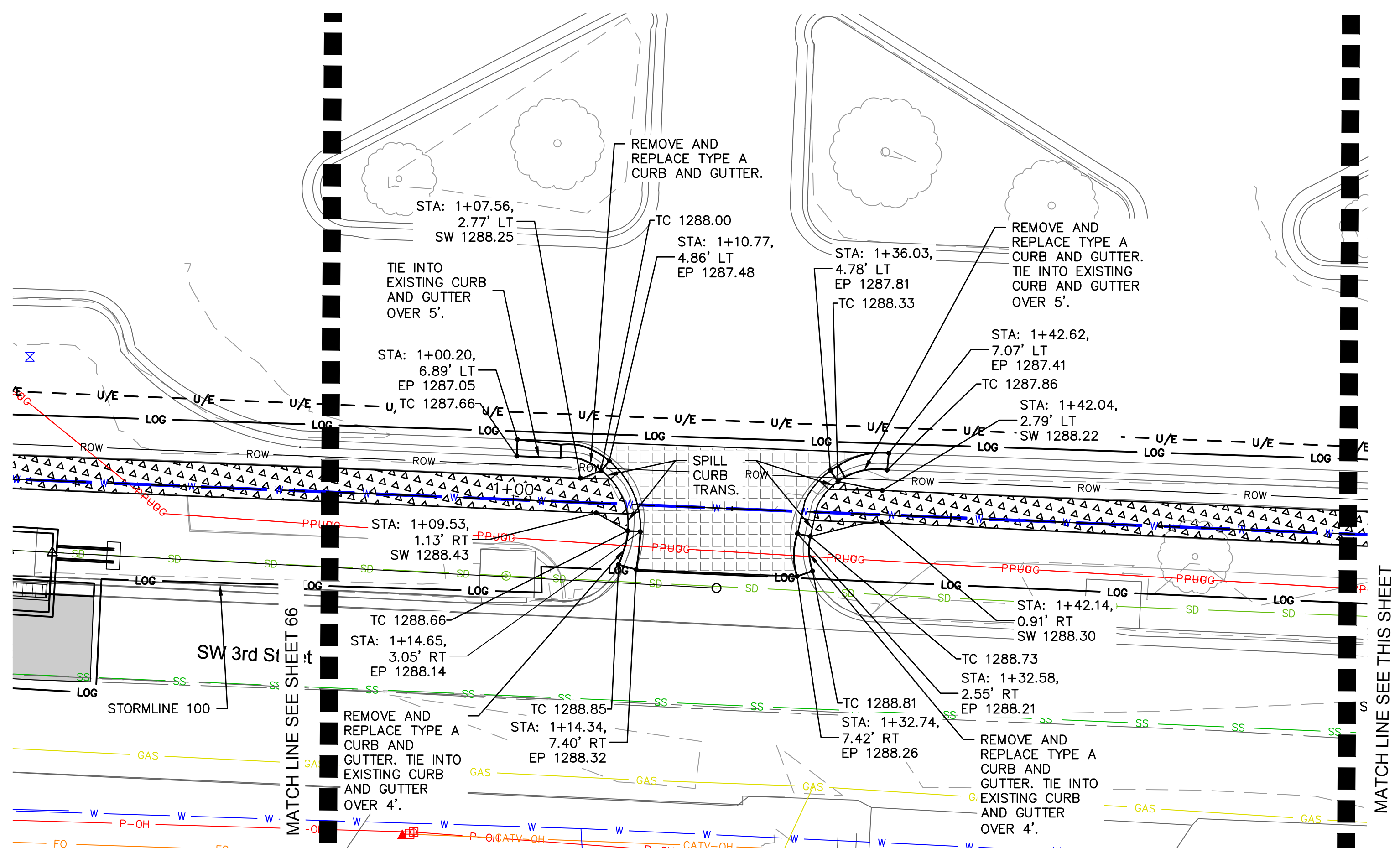
SW 10TH STREET & SW F STREET
STORMWATER IMPROVEMENTS

2023

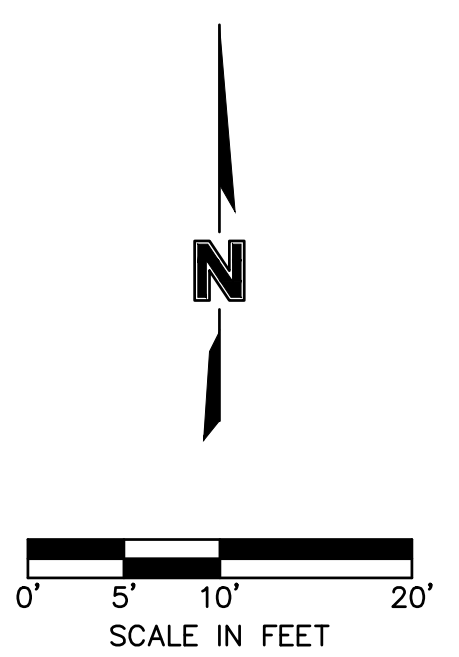
drawn by: KTF
 checked by: JDA
 approved by: EJS
 QA/QC by: EJS
 project no.: 021-04210-G
 drawing no.: W_PAV01_G2104210
 date: 09.13.2023

SHEET
65 of 71

DWG: F:\2021\04001-04500\021-04210-G-40-Design\AutoCAD\Final_Plans\Sheets\WTRS\W_PAV02_G2104210.dwg
 DATE: Sep 13, 2023 11:18am
 USER: nmeneal
 W_Pipe_G2104210 W_PBASE_G2104210 W_PESMT_G2104210 W_PTBLK_G2104210 W_XTOPO_G2104210



LEGEND	
	LIMITS OF GRADING
	ASPHALT STREET
	ASPHALT PAVEMENT REPAIR
	BRICK
	COMMERCIAL DRIVEWAY
	CONCRETE CHANNEL
	CONCRETE STREET
	CONCRETE TRAIL
	GRAVEL (CLASS 8) AGGREGATE BASE COURSE
	RESIDENTIAL DRIVEWAY
	SIDEWALK
	TCE - PROPOSED TEMPORARY CONSTRUCTION EASEMENT
	D/E - PROPOSED PERMANENT DRAINAGE EASEMENT
	U/E - PROPOSED UTILITY EASEMENT
	U/E - EXISTING UTILITY EASEMENT



302 East Millisp Road
Fayetteville, AR 72703
TEL 479.443.3404
www.olsson.com

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 19111
09-13-2023
ERIC JOSEPH SHELTON

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

GRADING ENLARGEMENT PLAN - 3RD ST

SW 10TH STREET & SW F STREET
STORMWATER IMPROVEMENTS

BENTONVILLE, AR

2023

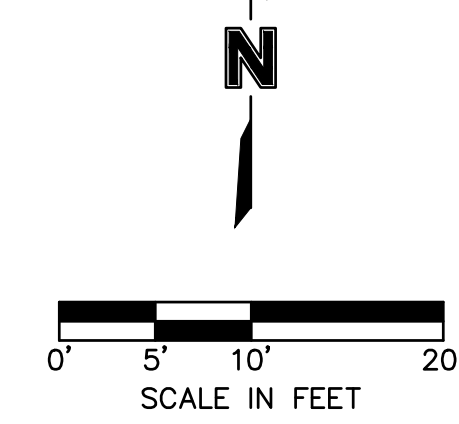
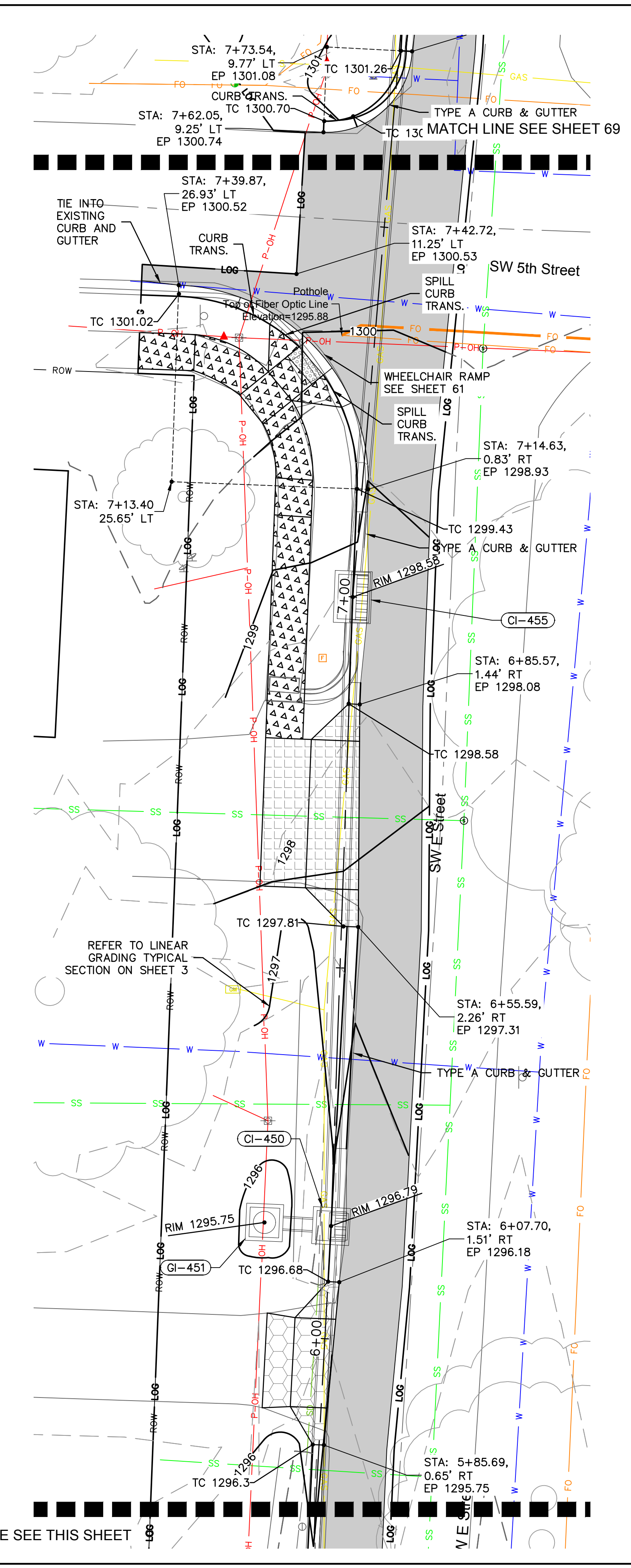
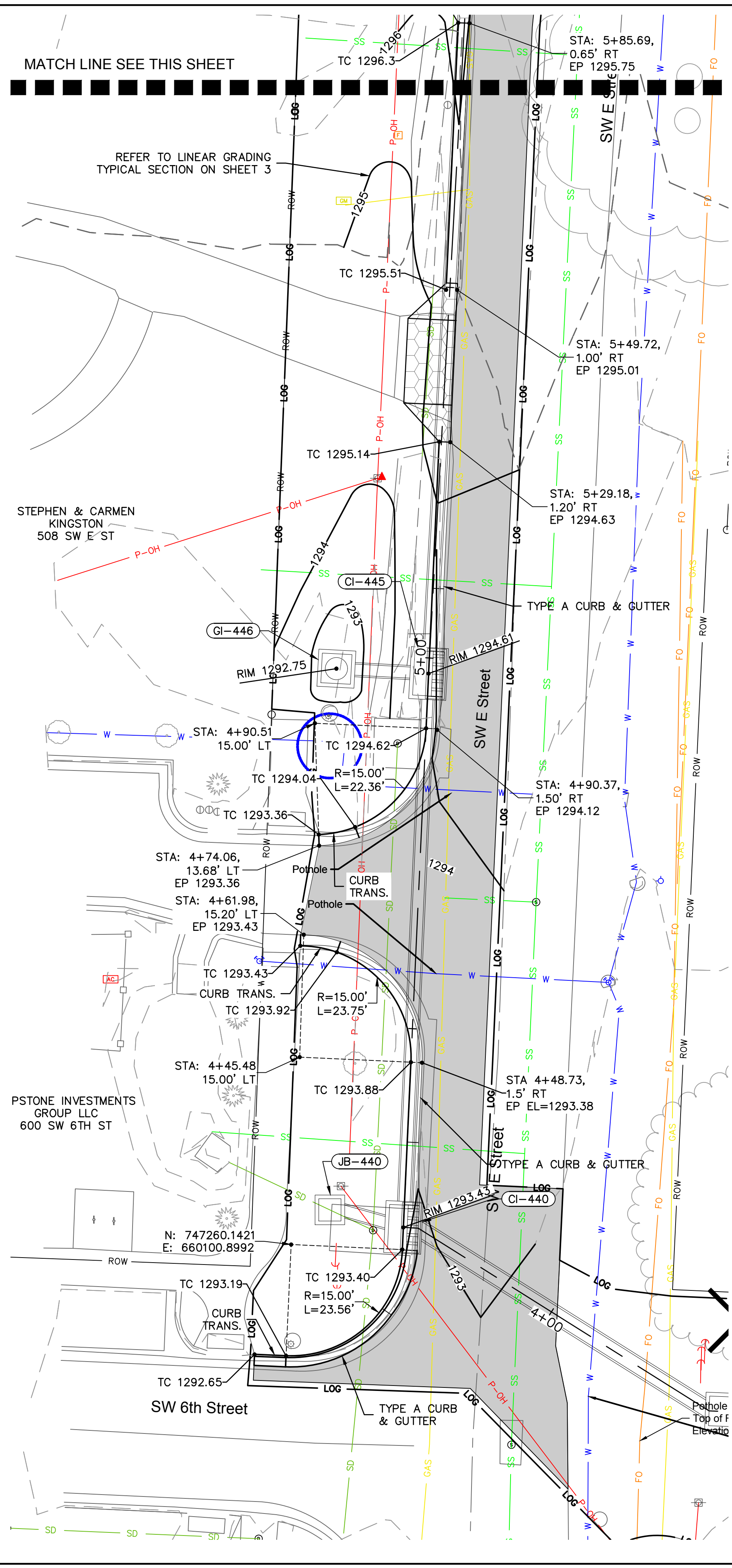
REVISIONS

drawn by: NDHM
 checked by: EJS
 approved by: CBD
 QA/QC by: CBD
 project no.: 021-04210-G
 drawing no.: W_PAV02_G2104210
 date: 09.01.2023

11/28/2023 8:38:49 AM

SHEET
67 of 71

DWG: F:\2021\04001-04500\021-04210-G-40-Design\AutoCAD\Final_Plans\Sheets\WTRS\W_PAV01_G2104210.dwg
 DATE: Sep 13, 2023 11:20am XREFS: V_XBNDY_G2104210 W_PTBLK_G2104210 W_PBASE_G2104210 W_PPATT_G2104210 W_PPSURF_G2104210 W_PPAIT_G2104210 W_XTOPO_G2104210
 USER: nmcneal
 20-044.edg base



LEGEND	
	LIMITS OF GRADING
	ASPHALT STREET
	ASPHALT PAVEMENT REPAIR
	BRICK
	COMMERCIAL DRIVEWAY
	CONCRETE CHANNEL
	CONCRETE STREET
	CONCRETE TRAIL
	GRAVEL (CLASS 8 AGGREGATE BASE COURSE)
	RESIDENTIAL DRIVEWAY
	SIDEWALK
EP	EDGE OF PAVEMENT
SW	EDGE OF SIDEWALK
TC	TOP OF CURB
LO	LOW OPENING OF PROPOSED STRUCTURE
CG	CENTERLINE OF GUTTER

olsson

302 East Millispaw Road
Fayetteville, AR 72703
TEL 479.443.3404
www.olsson.com

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 19111
EXPIRES 09-13-2023
ERIC JOSEPH SHELTON

REV. NO.	DATE	REVISIONS DESCRIPTION

GRADING ENLARGEMENT PLAN - E ST

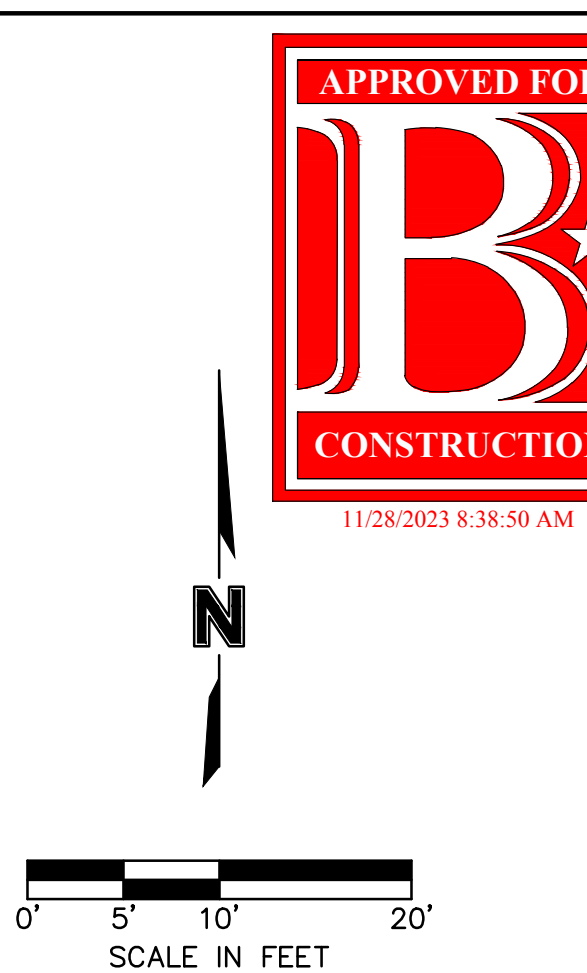
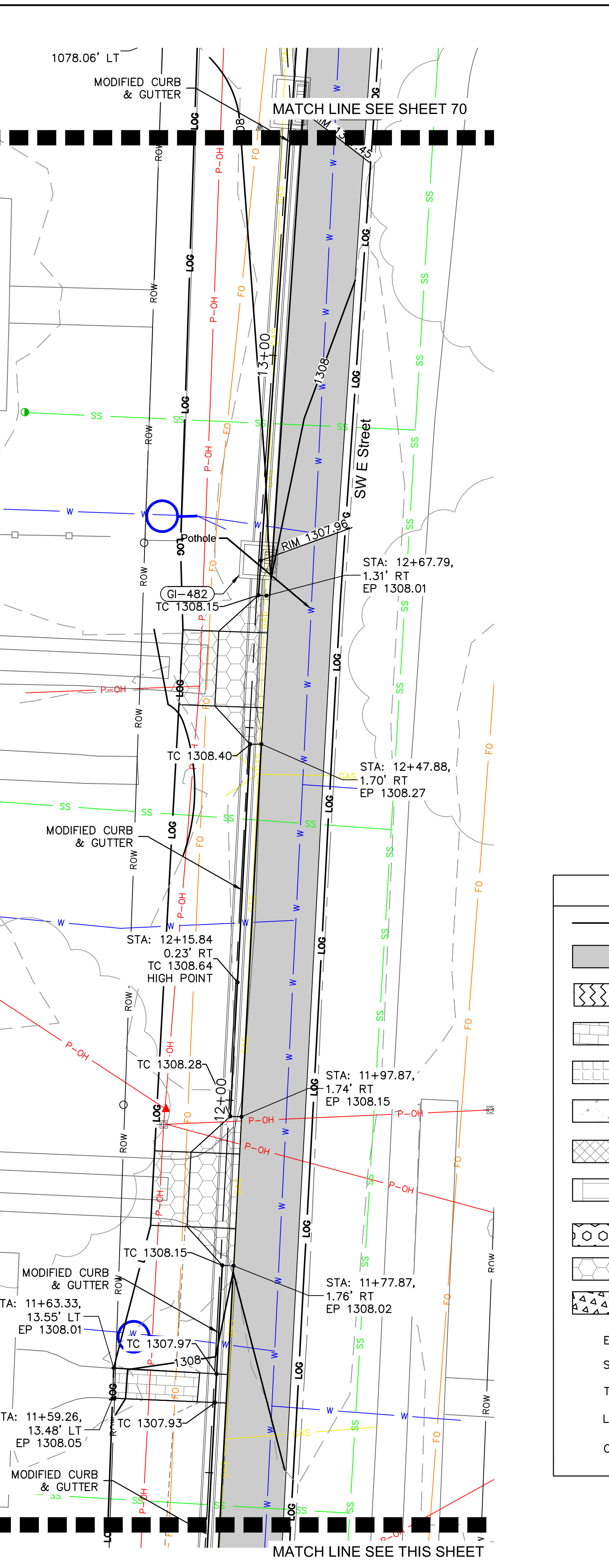
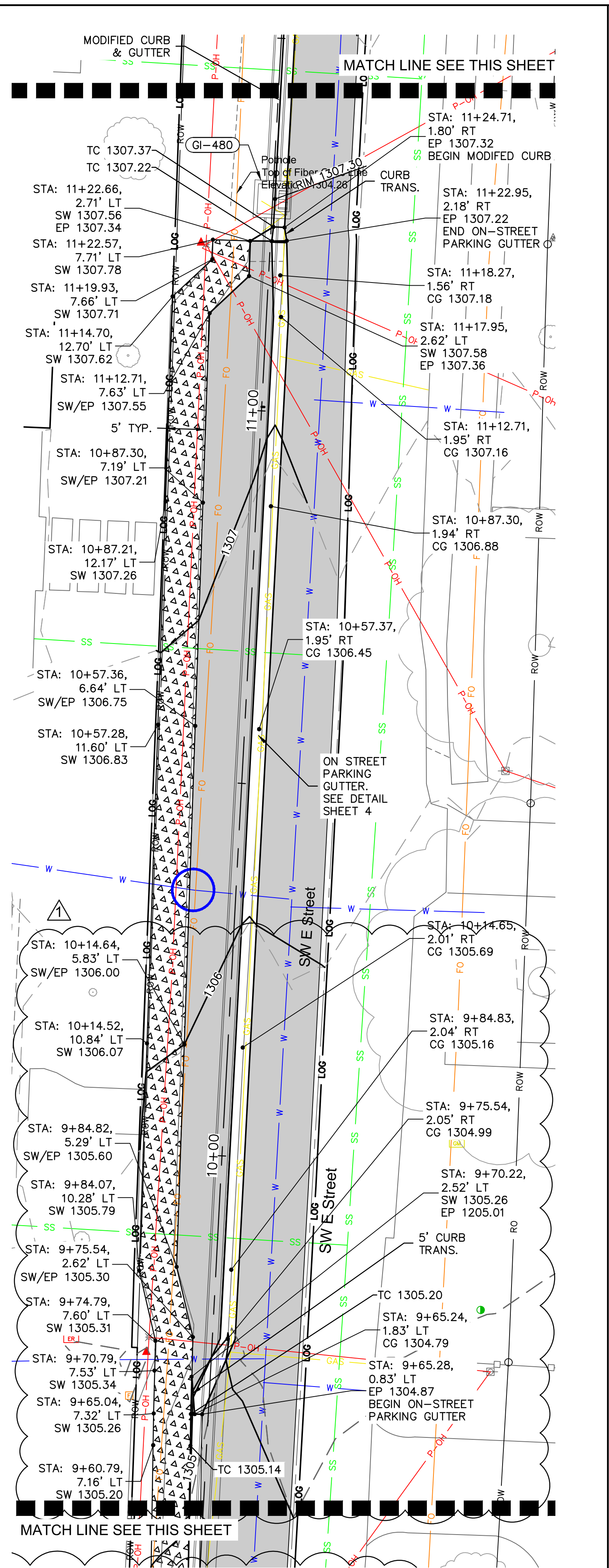
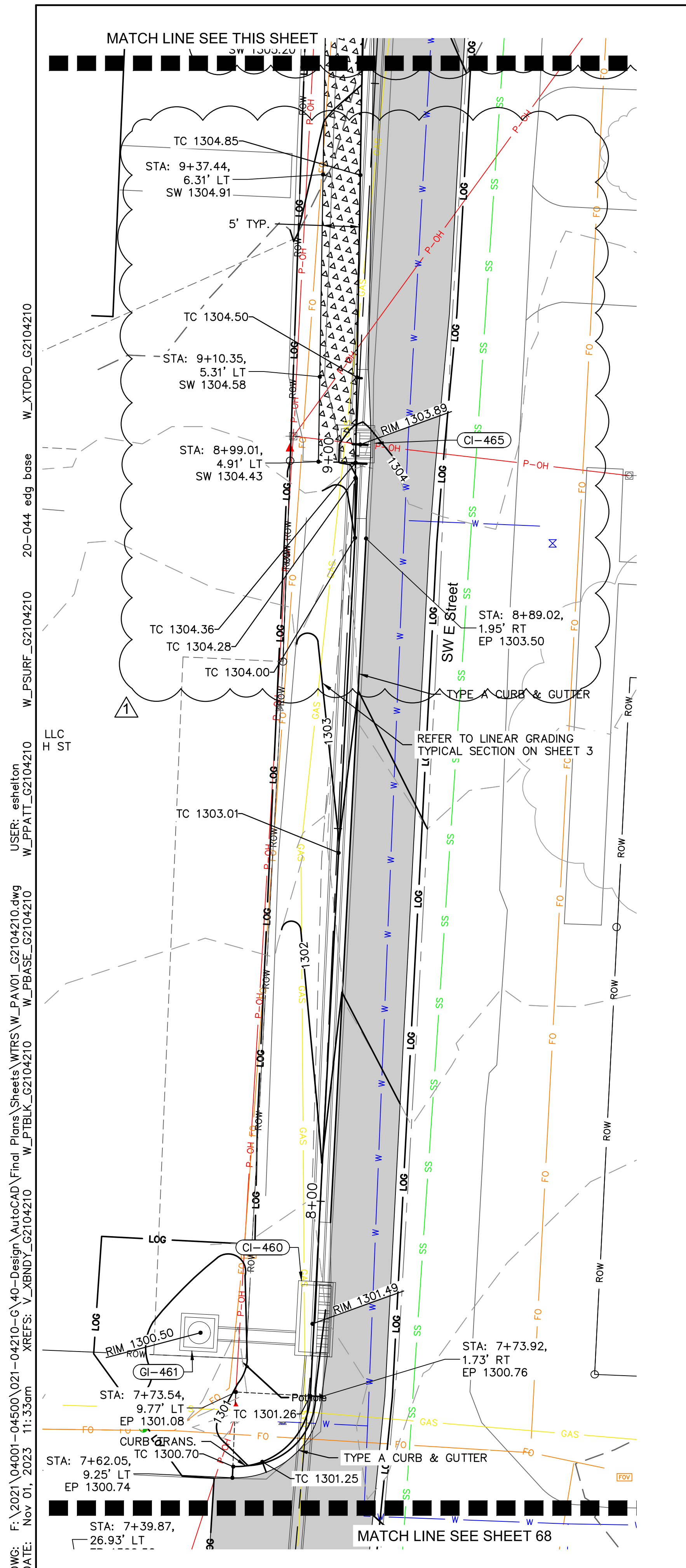
SW 10TH STREET & SW F STREET
STORMWATER IMPROVEMENTS

2023

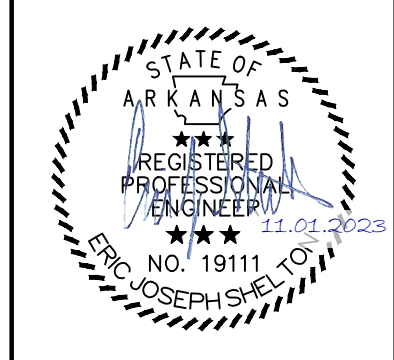
BENTONVILLE, AR

drawn by: KTF
 checked by: JDA
 approved by: EJS
 QA/QC by: EJS
 project no.: 021-04210-G
 drawing no.: W_PAV01_G2104210
 date: 09.13.2023

SHEET
68 of 71



olsson
 302 East Millisap Road
 Fayetteville, AR 72703
 TEL 479.443.3404
 www.olsson.com



REV. NO.	DATE	REVISIONS DESCRIPTION
1	10/31/2023	Miscellaneous updates

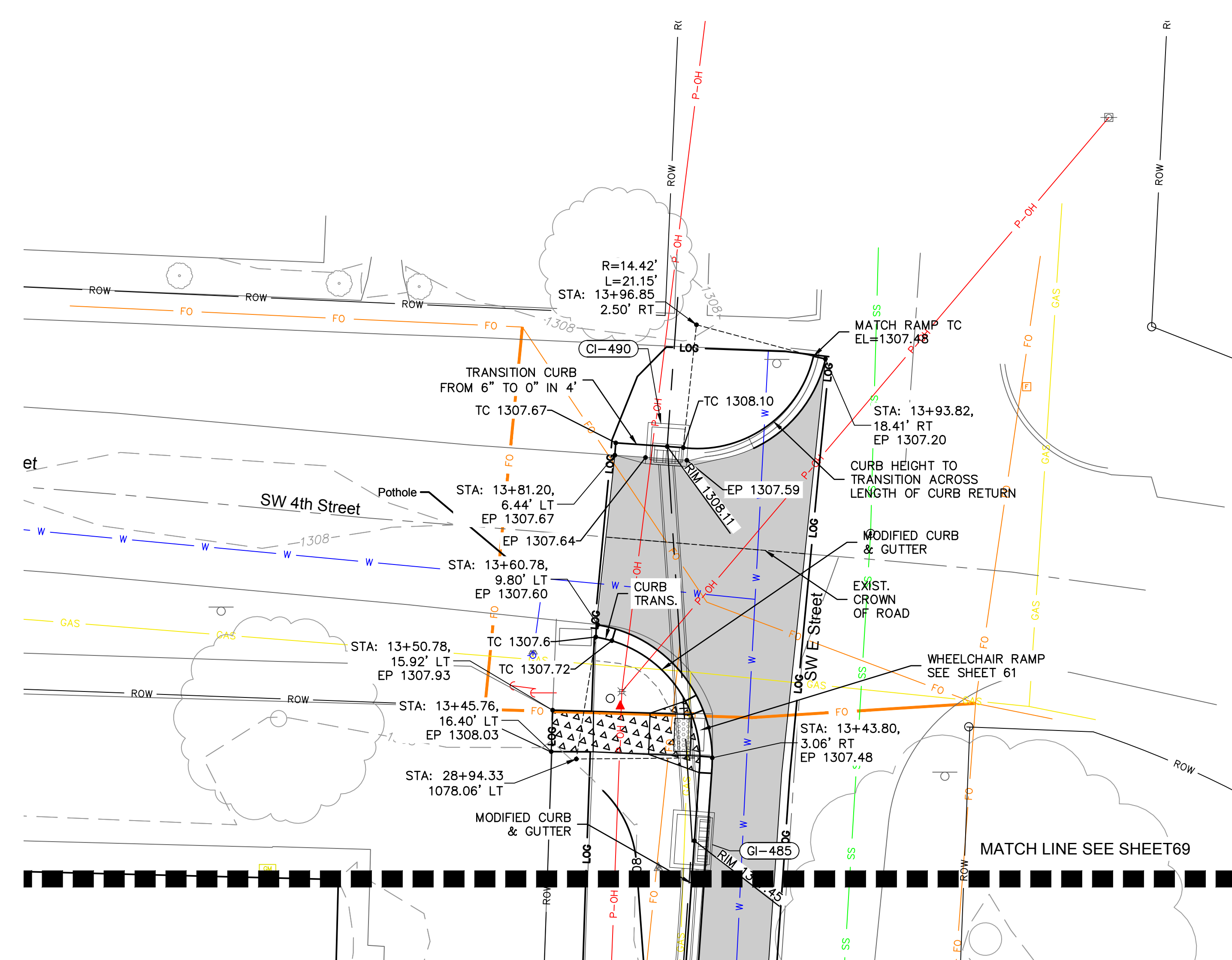
GRADING ENLARGEMENT PLAN - E ST
 SW 10TH STREET & SW F STREET
 STORMWATER IMPROVEMENTS
 BENTONVILLE, AR
 2023

drawn by: KTF
 checked by: JDA
 approved by: EJS
 QA/QC by: EJS
 project no.: 021-04210-G
 drawing no.: W_PAV01_G2104210
 date: 09.13.2023

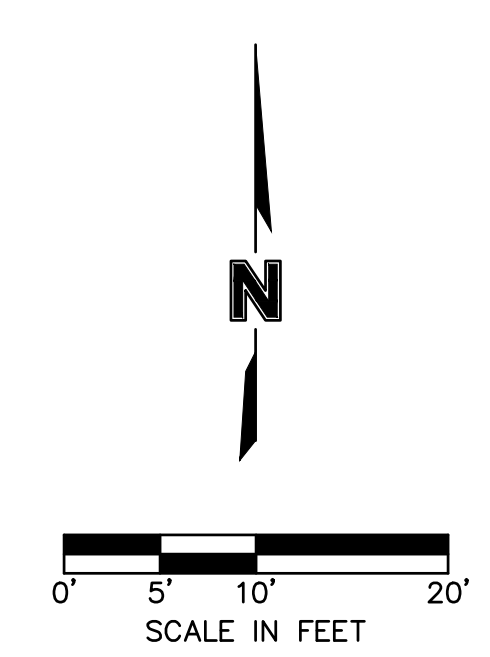
LEGEND	
—	LIMITS OF GRADING
	ASPHALT STREET
	ASPHALT PAVEMENT REPAIR
	BRICK
	COMMERCIAL DRIVEWAY
	CONCRETE CHANNEL
	CONCRETE STREET
	CONCRETE TRAIL
	GRAVEL (CLASS 8 AGGREGATE BASE COURSE)
	RESIDENTIAL DRIVEWAY
	SIDEWALK
EP	EDGE OF PAVEMENT
SW	EDGE OF SIDEWALK
TC	TOP OF CURB
LO	LOW OPENING OF PROPOSED STRUCTURE
CG	CENTERLINE OF GUTTER

DWG: F:\2021\04001-04500\021-04210-G-40-Design\AutoCAD\Final_Plans\Sheets\WTRS\W_PAV01_G2104210.dwg
 DATE: Nov 01, 2023 11:33am
 XREFS: V_XBNDY_G2104210 W_PTBLK_G2104210 W_PBASE_G2104210 W_PPATT_G2104210 W_PSURF_G2104210 W_XTOPO_G2104210
 USER: eshatlon
 LLC
 H ST

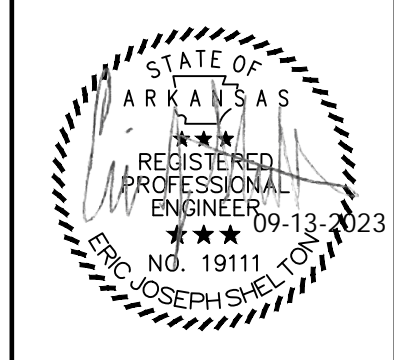
DWG: F:\2021\04001-04500\021-04210-G\40-Design\AutoCAD\Final_Plans\Sheets\WTRS\W_PAV01_G2104210.dwg
 DATE: Sep 13, 2023 11:21am XREFS: V_XBNDY_G2104210 W_PTBLK_G2104210 W_PBASE_G2104210 W_PPATT_G2104210 W_PSURE_G2104210 W_XTOPO_G2104210
 USER: nmcneal
 20-044 edg base



LEGEND	
	LIMITS OF GRADING
	ASPHALT STREET
	ASPHALT PAVEMENT REPAIR
	BRICK
	COMMERCIAL DRIVEWAY
	CONCRETE CHANNEL
	CONCRETE STREET
	CONCRETE TRAIL
	GRAVEL (CLASS 8 AGGREGATE BASE COURSE)
	RESIDENTIAL DRIVEWAY
	SIDEWALK
EP	EDGE OF PAVEMENT
SW	EDGE OF SIDEWALK
TC	TOP OF CURB
LO	LOW OPENING OF PROPOSED STRUCTURE
CG	CENTERLINE OF GUTTER



olsson
 302 East Millisp Road
 Fayetteville, AR 72703
 TEL 479.443.3404
 www.olsson.com

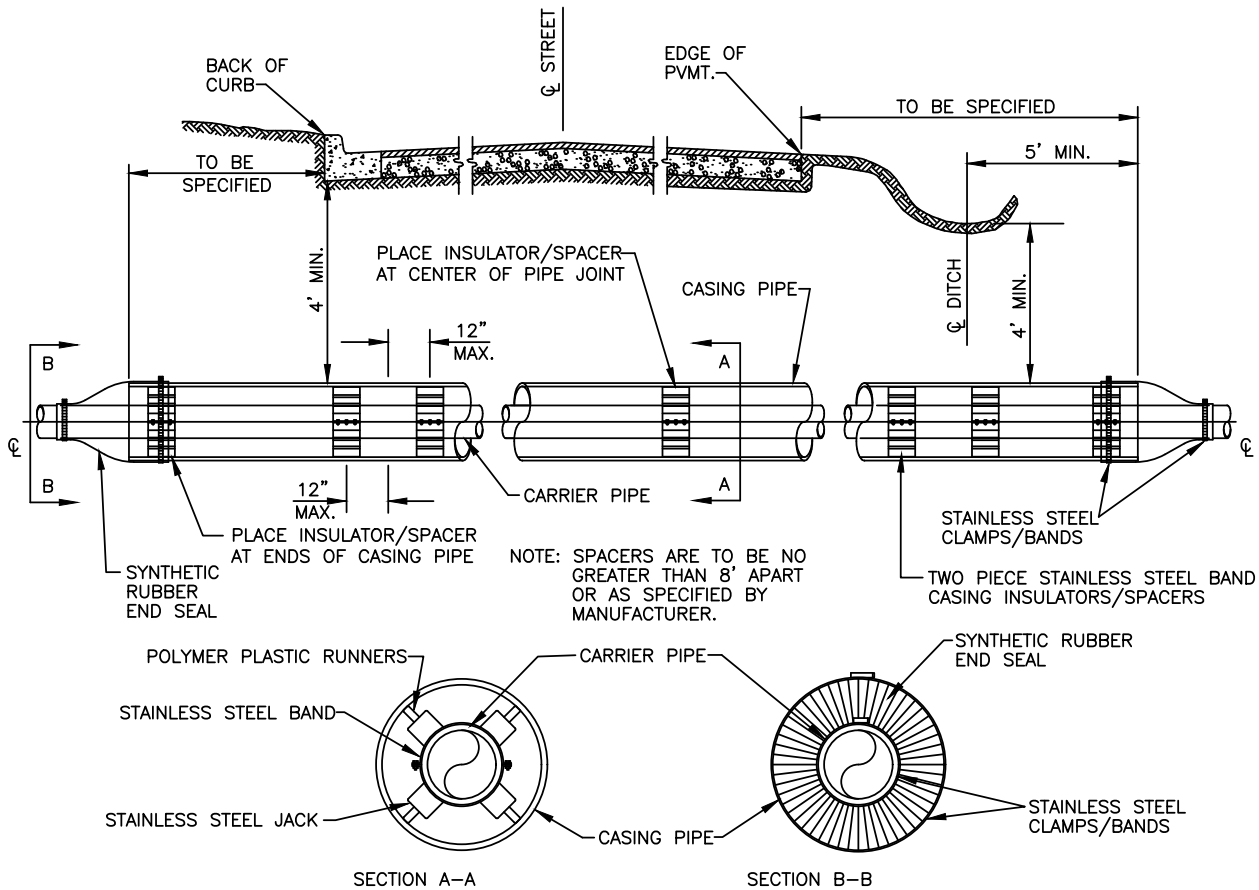


REV. NO.	DATE	REVISIONS DESCRIPTION	BY

GRADING ENLARGEMENT PLAN - 4TH & E STREET
 SW 10TH STREET & SW F STREET
 STORMWATER IMPROVEMENTS
 BENTONVILLE, AR
 2023

drawn by: KTF
 checked by: JDA
 approved by: EJS
 QA/QC by: EJS
 project no.: 021-04210-G
 drawing no.: W_PAV01_G2104210
 date: 09.13.2023

ENCASEMENT DETAIL



CARRIER & CASING SIZES								
CARRIER	4"	6"	8"	10"	12"	14"	16"	20"
CASING	16"	16"	16"	18"	20"	24"	30"	36"
CASING/WALL THICKNESS	.219	.219	.219	.250	.281	.344	.406	.500

NOTE: DUCTILE IRON, OR PVC PIPE REQUIRED FOR WATER, OR SEWER.

*ALL BELLS SHALL BE RESTRAINED INSIDE ENCASEMENT BY APPROVED METHOD.

Bentonville Water Utilities

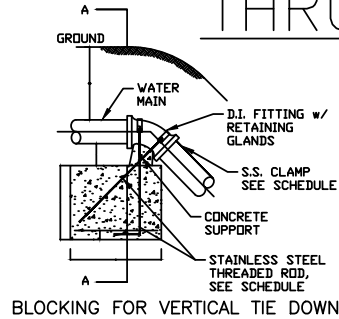
Approved for ADH review

[Signature]

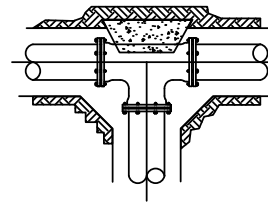
(4/04/2023 2:59:40 PM)

	DRAWN BY: JI	CHECKED BY: PN
	GEN WATER/SEWER DETAIL: GWS01	
	LAST REVISION DATE: 01/27/2020	
	APPROVED:	06/22/2021

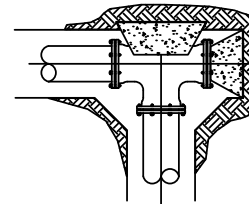
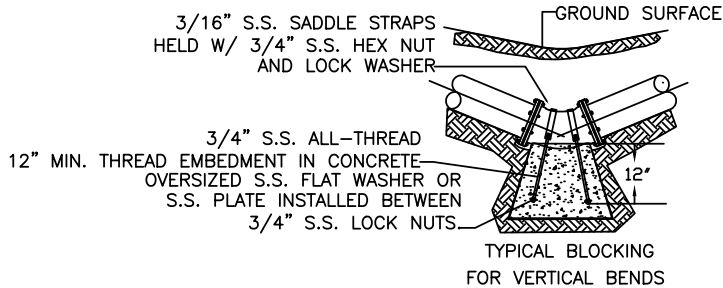
THRUST BLOCKING



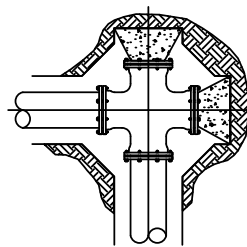
BLOCKING FOR VERTICAL TIE DOWN



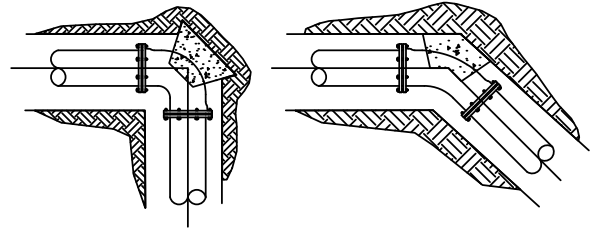
BLOCKING FOR TEE



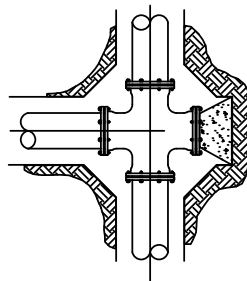
SPECIAL BLOCKING OF TEE & PLUG
(WHEN DIRECTED BY WATER DEPT.)



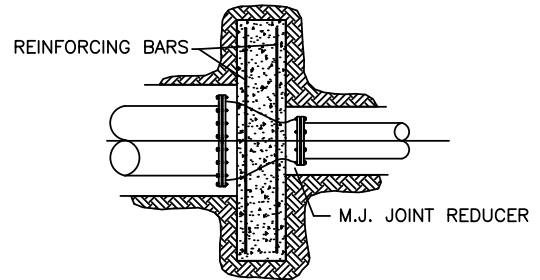
TYPICAL SECTION OF CROSS & 2 PLUG BLOCKING
(WHEN DIRECTED BY WATER DEPT.)



TYPICAL BLOCKING
FOR HORIZONTAL BENDS



TYPICAL SECTION OF CROSS & PLUG BLOCKING
(WHEN DIRECTED BY WATER DEPT.)



THRUST SUPPORT FOR REDUCER
(SIZE TO BE DETERMINED BY WATER DEPT.)

Bentonville Water Utilities
Approved for ADH review
Jim Jones
04/04/2023 2:59:25 PM

NOTES

1. ALL BLOCKING SHALL BE AGAINST UNDISTURBED SOIL USING 4,000 PSI CONCRETE.
2. WHERE SOIL CONDITIONS MAKE IT NECESSARY TO POUR CONCRETE OVER JOINTS, THE ENDS OF THE ADJACENT PIPES MUST HAVE A THRUST BLOCK TO RESIST MOVEMENT OF THESE JOINTS.
3. WEIGHT CALCULATIONS TO BE BASED ON REACTION BACKING TABLE (SEE GWS03).
4. WHEN BLOCKING AGAINST FITTINGS, FITTINGS SHALL BE COVERED WITH POLYETHYLENE WRAP TO PREVENT BONDING OF CONCRETE
5. WHERE SHEAR BECOMES A PROBLEM PROPER REINFORCING MUST BE INSTALLED INTO THE BLOCKING.
6. CLEARANCE SHALL BE A MINIMUM OF 6" BETWEEN PIPE AND OBSTRUCTIONS.
7. CLEARANCE ON PIPES BELONGING TO OIL/GAS COMPANIES SHALL BE 18" UNLESS SPECIAL PERMISSION IS GIVEN BY THESE COMPANIES AND THE DEPARTMENT.
8. 12" OF ALL THREAD EMBEDDED IN CONCRETE
9. MIN. 5/8" ALL THREAD FOR SECTIONS 10FT OR UNDER



DRAWN BY: JI	CHECKED BY: PN
GEN WATER/SEWER DETAIL: GWS02	
LAST REVISION DATE: 01/27/2020	
APPROVED:	06/22/2021

REACTION BACKING TABLE

BLOCKING SCHEDULE					
PIPE SIZE	BENDS				
		45°	22 1/2°	11 1/4°	ROD DIA.
	VOLUME REQ'D (CU. FT.)	98.5	50.2	25.2	3/4 IN.
8"	A (FT.)	5.00'	4.00'	3.00'	
	B (FT.)	4.00'	3.20'	2.80'	
	C (FT.)	5.00'	4.00'	3.00'	
	MIN. CLAMP (2 EA.)	3/8 IN. x 2 IN.			
	VOLUME REQ'D (CU. FT.)	209.5	106.8	53.7	3/4 IN.
12"	A (FT.)	6.00'	5.00'	4.00'	
	B (FT.)	6.00'	4.25'	3.50'	
	C (FT.)	6.00'	5.00'	4.00'	
	MIN. CLAMP (2 EA.)	1/2 IN. x 2 IN.			
	VOLUME REQ'D (CU. FT.)	457.2	233.1	117.1	1 IN.
18"	A (FT.)	8.00'	6.50'	5.00'	
	B (FT.)	7.25'	5.50'	4.75'	
	C (FT.)	8.00'	6.50'	5.00'	
	MIN. CLAMP (2 EA.)	5/8 IN. x 3 IN.			
	VOLUME REQ'D (CU. FT.)	800.3	408.0	205.0	1 1/4 IN.
24"	A (FT.)	9.50'	7.50'	6.00'	
	B (FT.)	9.00'	7.25'	5.75'	
	C (FT.)	9.50'	7.50'	6.00'	
	MIN. CLAMP (2 EA.)	5/8 IN. x 3 IN.			

VOLUME CALCULATED ON THE BASIS OF CONCRETE REACTING THRUST ON THE RESPECTIVE BENDS UNDER AN INTERNAL PRESSURE OF 250 PSI, 50 PSI SURGE AND THE WEIGHT OF CONCRETE IS 150 POUNDS PER CU. FT.

NOTES:

1. ALL FITTINGS SHALL BE MECHANICAL JOINTS.
2. DO NOT COVER BELLS OR FLANGES WITH CONCRETE.
3. WRAP ALL FITTINGS WITH POLY WRAP.
4. BACK ALL TEES ACCORDING TO SIZE OF BRANCH.
5. BACKING FUTURE LINE EXTENSIONS SHALL BE SUCH THAT LATER REMOVAL IS POSSIBLE.
6. ALL BENDS WHERE FITTINGS ARE USED, BOTH HORIZONTAL OR VERTICAL, SHALL BE BACKED WITH CONCRETE.
7. REACTION BACKING TABLE IS BASED ON 150 PSI AND SOIL BEARING PRESSURE OF 2,000 LB/SQ. FT. ADDITIONAL BACKING MAY BE REQUIRED IN SOME AREAS AS REQUIRED BY CITY WATER DEPARTMENT.

Bentonville Water Utilities

Approved for ADH review

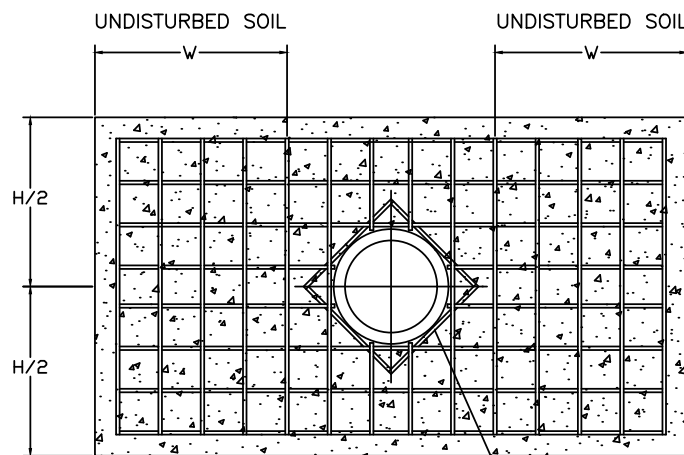
04/04/2023 2:59:17 PM



DRAWN BY: JI	CHECKED BY: PN
GEN WATER/SEWER DETAIL: GWS03	
LAST REVISION DATE: 01/27/2020	
APPROVED:	06/22/2021

ANCHOR COLLAR SPECIFICATIONS

ANCHOR COLLAR SCHEDULE						
PIPE SIZE	DIMENSIONS				REINFORCING BARS	
	W	H	T	M	"A" BARS	"B" BARS
6"	1.5'	2.0'	1.0'	M.J. RETAINER GLAND	#6@6"	#6@6"
8"	1.5'	2.5'	1.0'	M.J. RETAINER GLAND	#6@6"	#6@6"
12"	2.0'	4.0'	1.5'	M.J. RETAINER GLAND	#6@6"	#6@6"
16"	3.0'	4.5'	1.5'	M.J. RETAINER GLAND	#6@6"	#6@6"
20"	3.0'	5.0'	2.0'	M.J. RETAINER GLAND	#6@6"	#6@6"
24"	3.5'	5.5'	2.0'	M.J. RETAINER GLAND	#7@6"	#6@10"
30"	6.5'	6.0'	2.5'	4"	#8@6"	#7@10"
36"	7.0'	7.0'	2.5'	4"	#8@6"	#7@10"



Bentonville Water Utilities
 Approved for ADH review
Jim Jones
 (4/04/2023 2:59:11 PM)

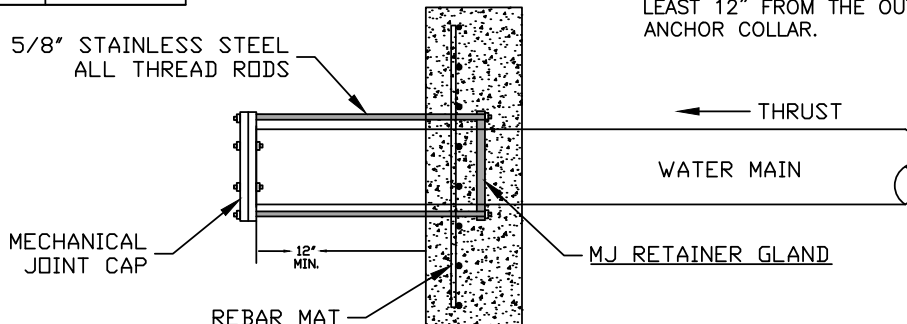
ANCHOR COLLAR (ELEVATION) 4EA. #6 BARS

ROD REQUIREMENTS	
MAIN SIZE	NO. OF RODS
6"	2
8"	4
12"	4
16"	6
24"	6
30"	8
36"	8

NOTE:
USE M.J. RETAINER GLANDS FOR PIPE 24" AND SMALLER.

NOTE:
PIPE SURFACES SHALL BE CLEANED OF ALL FOREIGN MATERIAL BEFORE 4000 PSI CONCRETE COLLAR IS POURED.

NOTE:
ON DEAD END LINE, PIPE MUST EXTEND AT LEAST 12" FROM THE OUTSIDE EDGE OF ANCHOR COLLAR.



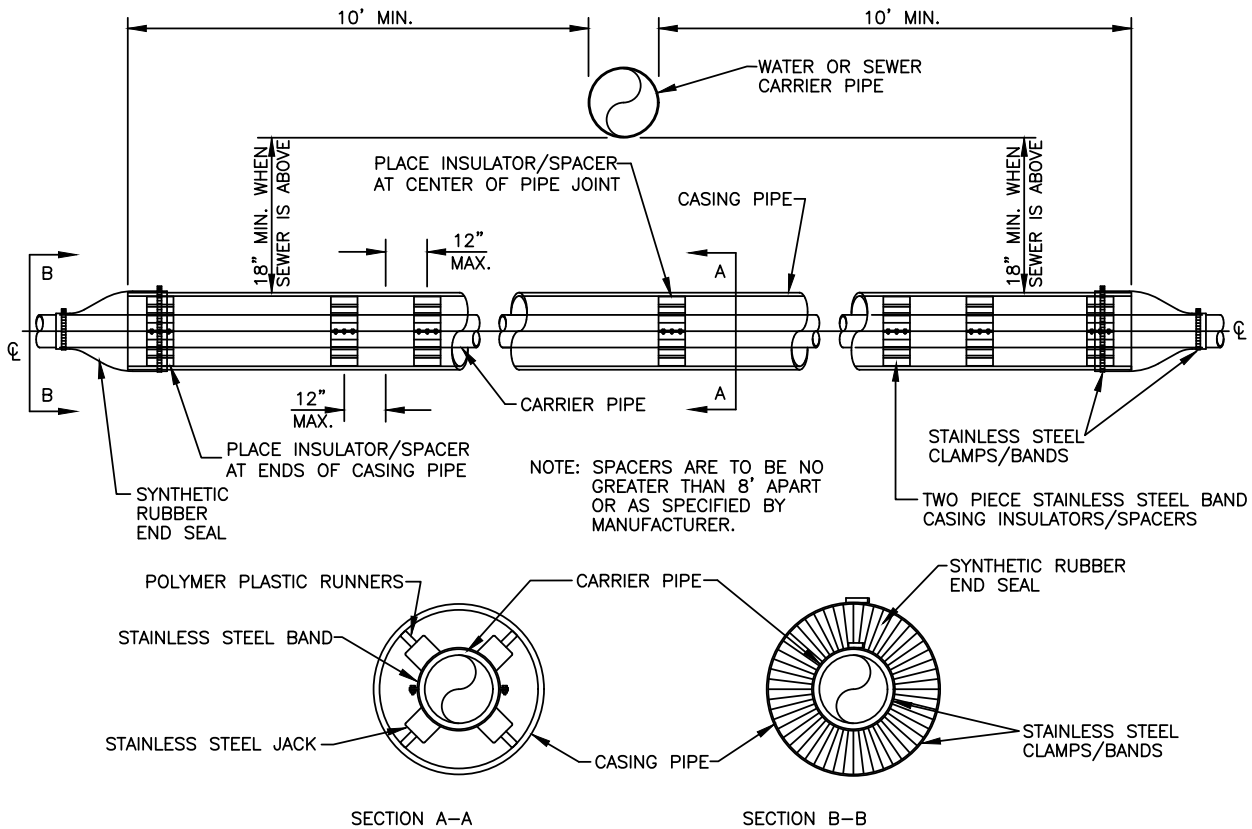
ANCHOR COLLAR (SIDE)

NOTE:
ALL-THREAD STEEL RODS SHALL BE 5/8" STAINLESS STEEL WITH STAINLESS STEEL HARDWARE.



DRAWN BY: JI	CHECKED BY: PN
GEN WATER/SEWER DETAIL: GWS04	
LAST REVISION DATE: 01/27/2020	
APPROVED:	06/22/2021

ENCASEMENT CROSSING DETAIL



CARRIER & CASING SIZES								
CARRIER	4"	6"	8"	10"	12"	14"	16"	20"
CASING	16"	16"	16"	18"	20"	24"	30"	36"
CASING/WALL THICKNESS	.219	.219	.219	.250	.281	.344	.406	.500

NOTE: DUCTILE IRON, OR PVC PIPE REQUIRED FOR WATER, OR SEWER.

*ALL BELLS SHALL BE RESTRAINED BY APPROVED METHOD.

Bentonville Water Utilities

Approved for ADH review

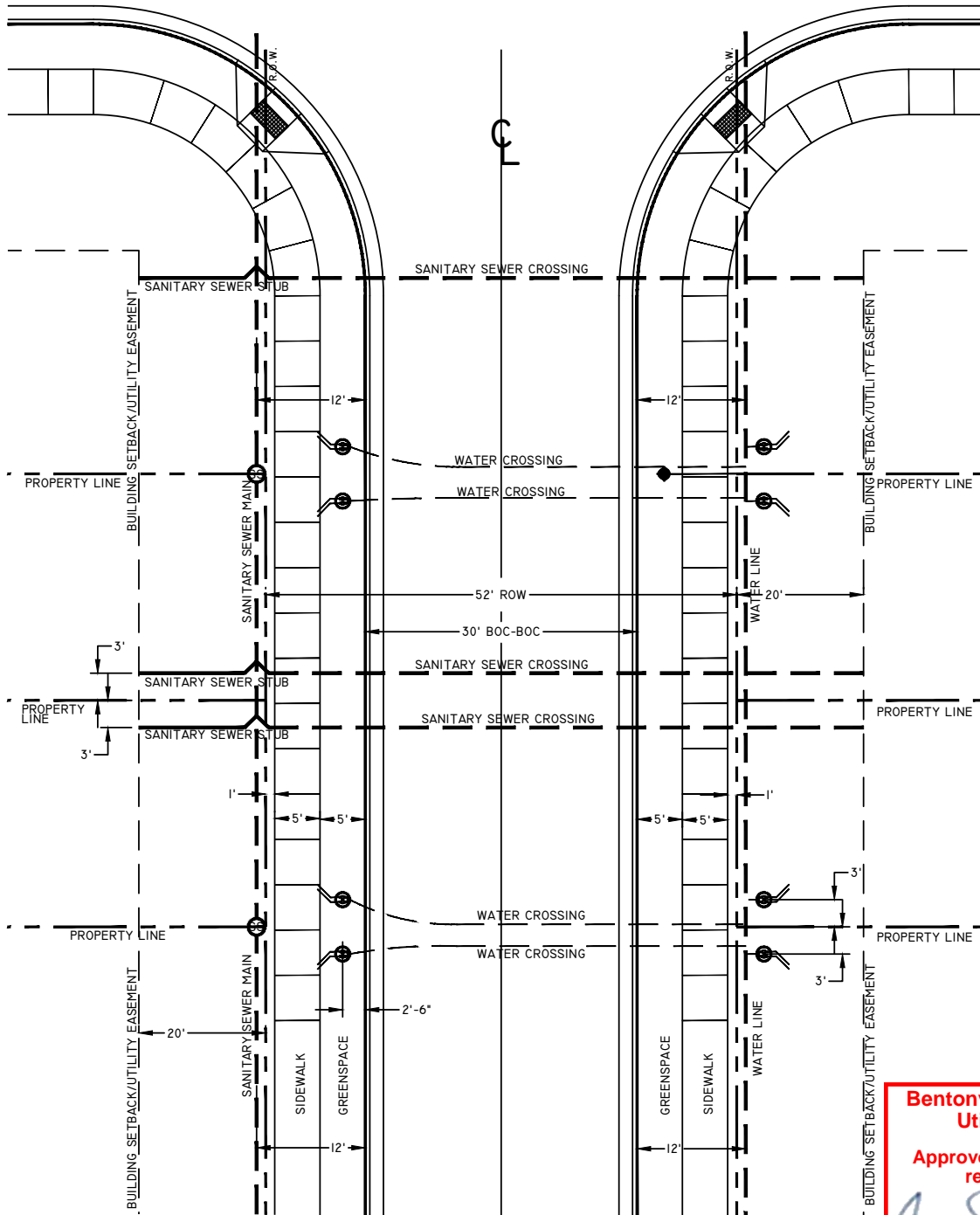
[Signature]

(4/04/2023 2:59:01 PM)



DRAWN BY: JI	CHECKED BY: PN
GEN WATER/SEWER DETAIL: GWS05	
LAST REVISION DATE: 01/27/2020	
APPROVED:	06/22/2021

SUBDIVISION UTILITY PLACEMENT



UTILITY SEPARATIONS:

- 10' HORZ. BETWEEN WATER & SEWER
- 18" VERT. BETWEEN WATER & SEWER
- 5' HORZ. BETWEEN ELECTRIC & WATER OR SEWER(MAINS)
- 18" MIN. VERT. BETWEEN ELEC. & WATER OR SEWER
- 12" MIN. HORZ. BETWEEN ELEC. & FRANCHISE UTIL.
- 12" MIN. VERT. BETWEEN SECONDARY CONDUIT AND WATER & SEWER

**Bentonville Water
Utilities**

**Approved for ADH
review**

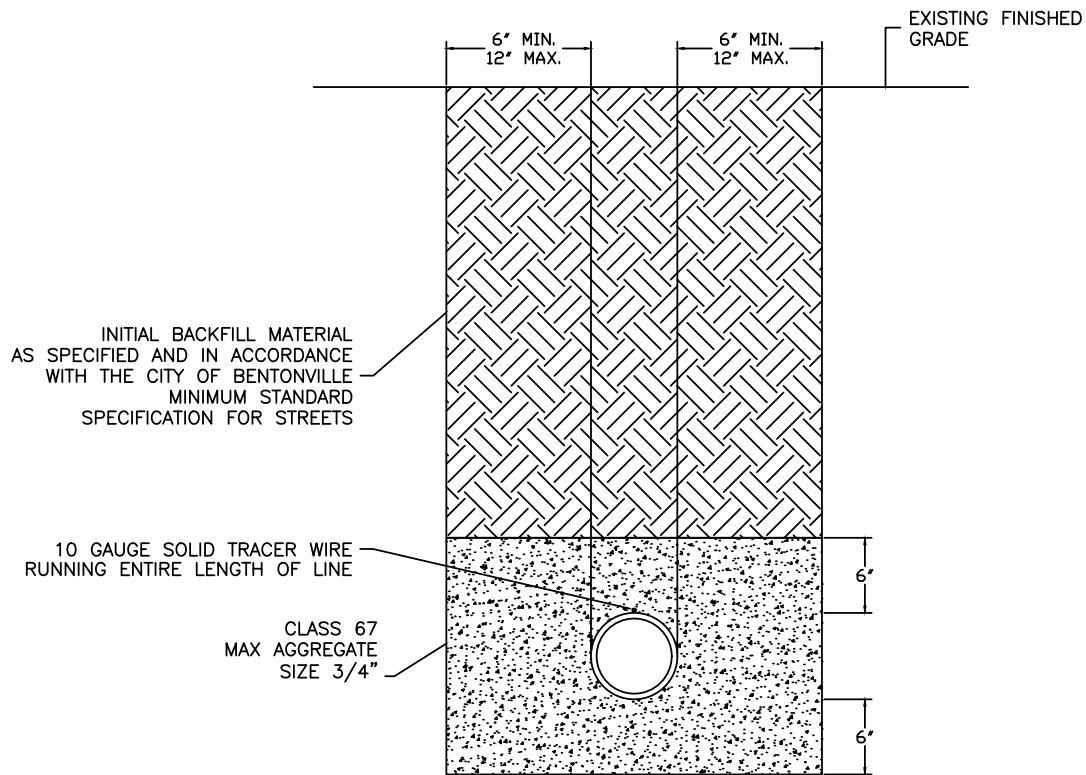
John Jones

04/04/2023 2:58:51 PM



DRAWN BY: JI	CHECKED BY: PN
GEN WATER/SEWER DETAIL: GWS06	
LAST REVISION DATE: 01/27/2020	
APPROVED:	06/22/2021

TYPICAL BEDDING DETAIL



* REFER TO STREET SPECIFICATIONS FOR STREET REPAIR INFORMATION

Bentonville Water Utilities

Approved for ADH review

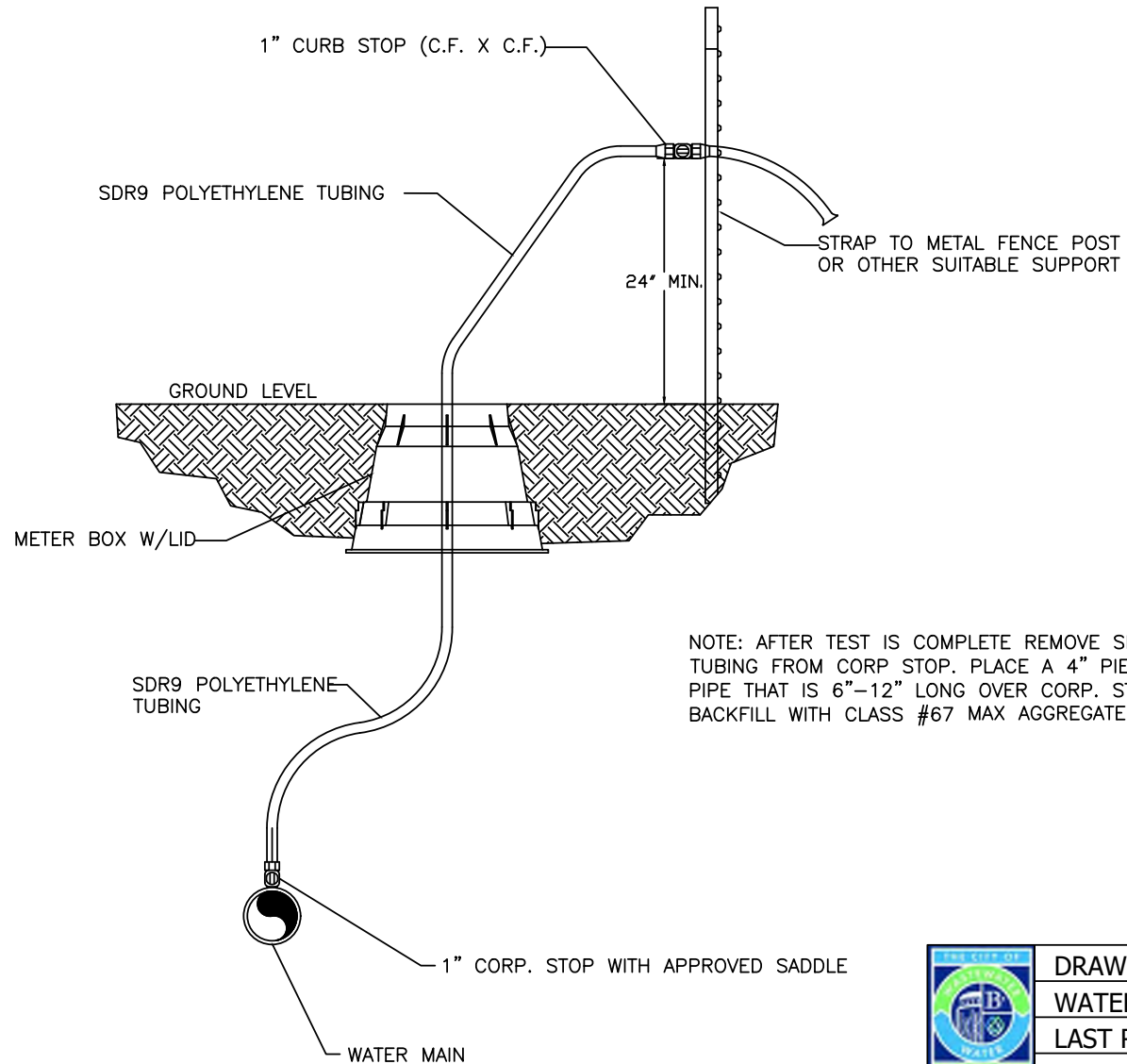


04/04/2023 2:58:39 PM



DRAWN BY: JI	CHECKED BY: PN
GEN WATER/SEWER DETAIL: GWS07	
LAST REVISION DATE: 01/27/2020	
APPROVED:	06/22/2021

TEMPORARY 1" BLOW OFF ASSEMBLY SAMPLE POINTS



**Bentonville Water
Utilities**

**Approved for ADH
review**

John Jones

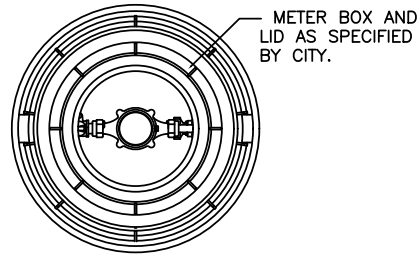
04/04/2023 2:58:30 PM



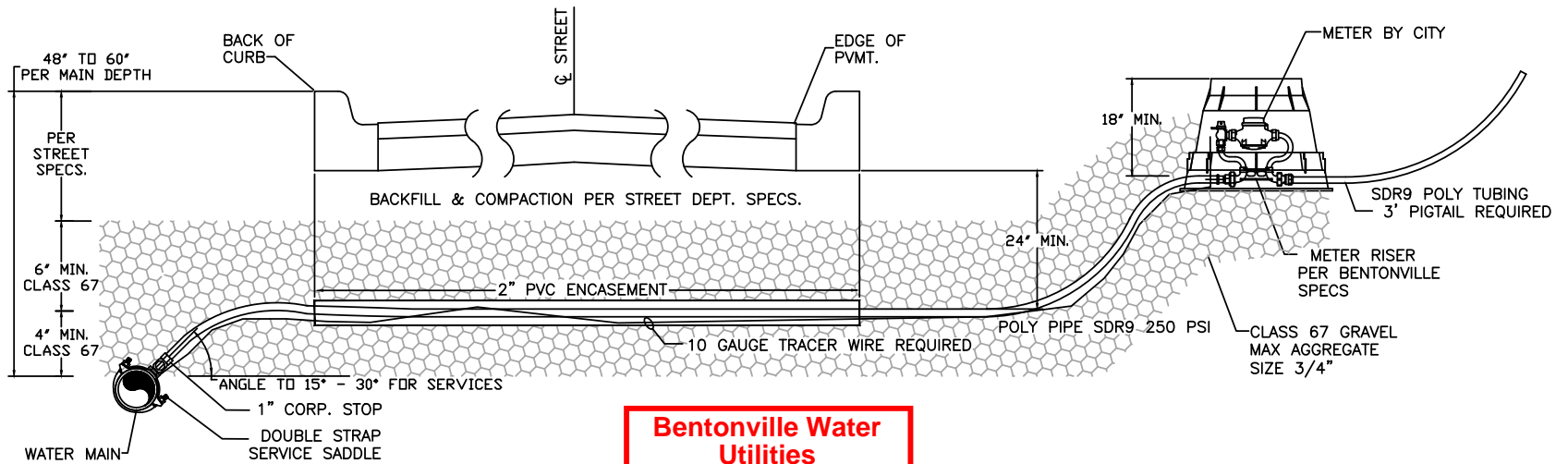
DRAWN BY: JI	CHECKED BY: PN
WATER DETAIL: W01	
LAST REVISION DATE: 01/27/2020	
APPROVED:	06/22/2021

WATER SERVICE DETAIL 1''

NOTE:
1" SDR9 POLY TUBING WILL
SUPPLY WATER ONLY TO A SINGLE
1" METER SERVICE.



SINGLE SET



**Bentonville Water
Utilities**

**Approved for ADH
review**

Jim Jones

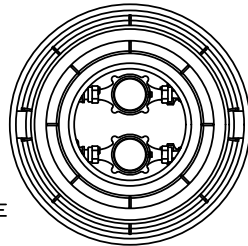
04/04/2023 2:58:20 PM



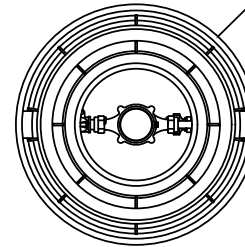
DRAWN BY: JI	CHECKED BY: PN
WATER DETAIL: W02	
LAST REVISION DATE: 01/27/2020	
APPROVED:	06/22/2021

WATER SERVICE DETAIL 5/8"

NOTE:
1" TUBING WILL
SUPPLY WATER TO A SINGLE
5/8" METER SERVICE OR A DOUBLE
5/8" METER SERVICE.

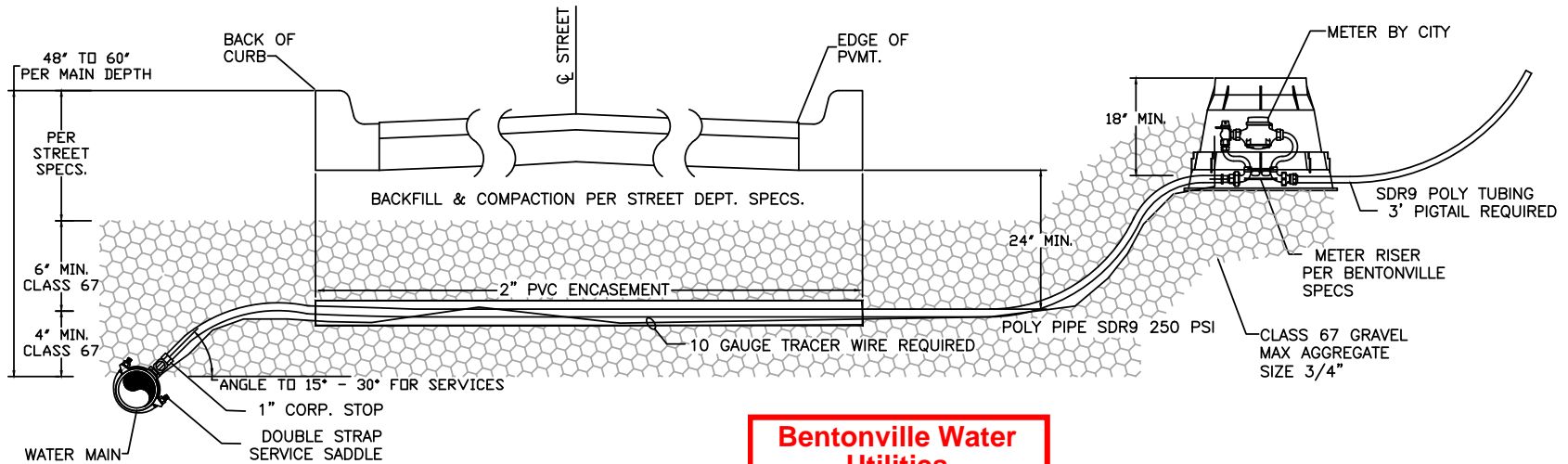


DOUBLE SET



SINGLE SET

METER BOX AND
LID AS SPECIFIED
BY CITY.



**Bentonville Water
Utilities**

**Approved for ADH
review**

John Jones
04/04/2023 2:58:10 PM



DRAWN BY: JI	CHECKED BY: PN
WATER DETAIL: W03	
LAST REVISION DATE: 01/27/2020	
APPROVED:	06/22/2021

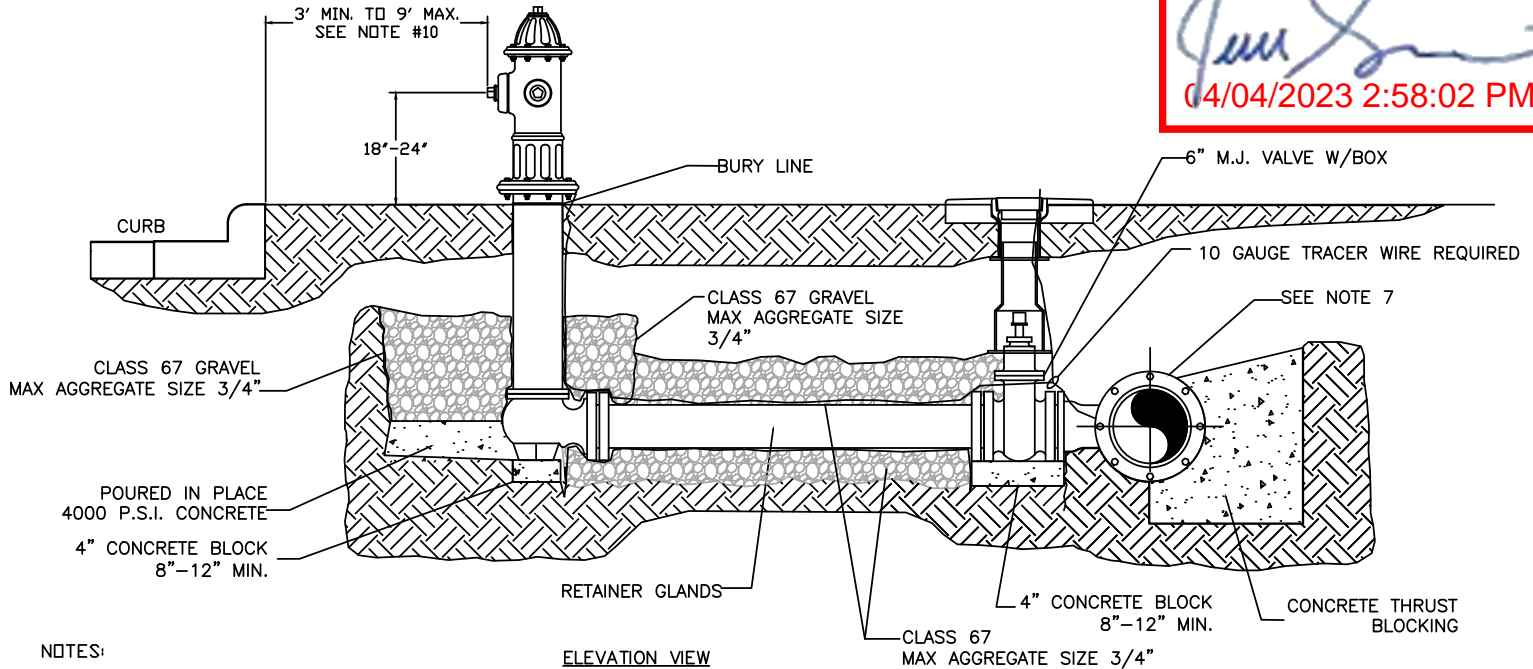
FIRE HYDRANT DETAIL W/ RETAINER GLANDS

**Bentonville Water
Utilities**

**Approved for ADH
review**

Jim Jones

4/04/2023 2:58:02 PM



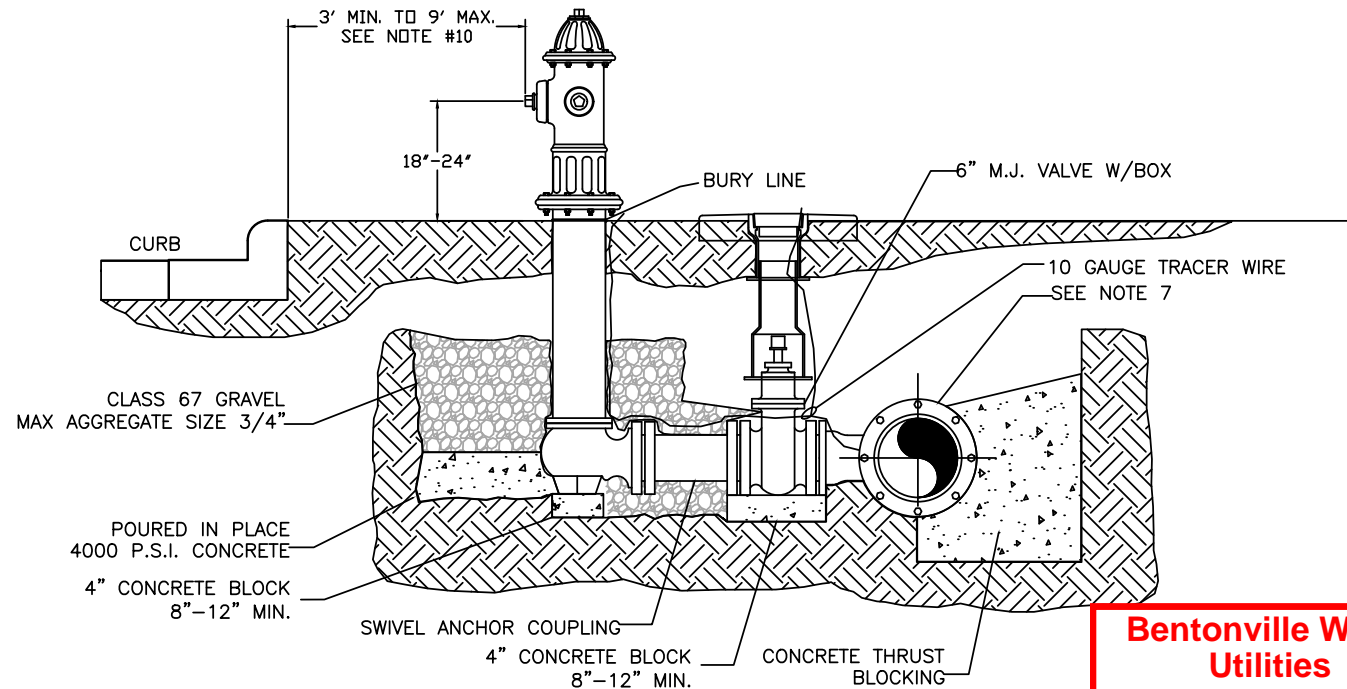
NOTES:

1. DRAINAGE BED SHALL CONSIST OF CLASS 67 GRAVEL WITH A MAX AGGREGATE SIZE OF 3/4".
2. USE 6" NIPPLE WITH M.J. RETAINER GLANDS IF DISTANCE BETWEEN VALVE AND HYDRANT MUST BE GREATER THAN 13" SWIVEL ADAPTER.
3. FIRE HYDRANT TO BE BLOCKED AGAINST FIRM SOIL AS SHOWN.
4. ALL HYDRANTS SHALL BE INSTALLED PLUMB.
5. LARGE NOZZLE SHALL FACE CURB UNLESS OTHERWISE NOTED. ROTATE BARREL AS REQUIRED.
6. HYDRANT SHOULD NOT BE SET CLOSER THAN 4.0' TO OBSTRUCTIONS THAT ARE IN LINE WITH NOZZLE.
7. M.J. ANCHOR TEE, TAPPING SLEEVE OR TAPPING SADDLE MAY BE USED (SEE MATERIAL SPECIFICATIONS)
8. HYDRANTS TO BE SET AT DEPTHS GREATER THAN 6.0' SHALL BE SET WITH A MODIFIED FIRE HYDRANT SETTING.
9. POLYWRAP ENTIRE HYDRANT ASSEMBLY. DO NOT COVER WEEP HOLE DRAIN.
10. HYDRANTS WILL BE SET AT A MINIMUM OF 3' TO A MAXIMUM OF 9' BACK OF CURB OR EDGE OF DRAINING SURFACE, NOT IN SIDEWALK, FIRE LANE, OR RADIUS OR AS DIRECTED BY BENTONVILLE WATER DEPARTMENT.



DRAWN BY: JI	CHECKED BY: PN
WATER DETAIL: W04	
LAST REVISION DATE: 03/16/2021	
APPROVED:	06/22/2021

FIRE HYDRANT DETAIL W/SWIVEL ANCHOR COUPLING



ELEVATION VIEW

NOTES:

1. DRAINAGE BED SHALL CONSIST OF CLASS 67 GRAVEL WITH A MAX AGGREGATE SIZE OF 3/4".
2. M.J. RETAINER GLANDS IF DISTANCE BETWEEN VALVE AND HYDRANT MUST BE GREATER THAN 13" SWIVEL ADAPTER.
3. FIRE HYDRANT TO BE BLOCKED AGAINST FIRM SOIL AS SHOWN.
4. ALL HYDRANTS SHALL BE INSTALLED PLUMB.
5. LARGE NOZZLE SHALL FACE CURB UNLESS OTHERWISE NOTED. ROTATE BARREL AS REQUIRED.
6. HYDRANT SHOULD NOT BE SET CLOSER THAN 4.0' TO OBSTRUCTIONS THAT ARE IN LINE WITH NOZZLE.
7. M.J. ANCHOR TEE, TAPPING SLEEVE OR TAPPING SADDLE MAY BE USED (SEE MATERIAL SPECIFICATIONS)
8. HYDRANTS TO BE SET AT DEPTHS GREATER THAN 6.0' SHALL BE SET WITH A MODIFIED FIRE HYDRANT SETTING.
9. POLYWRAP ENTIRE HYDRANT ASSEMBLY. DO NOT COVER WEEP HOLE DRAIN.
10. HYDRANTS WILL BE SET AT A MINIMUM OF 3' TO A MAXIMUM OF 9' BACK OF CURB, NOT IN SIDEWALK, FIRE LANE, OR RADIUS OR AS DIRECTED BY BENTONVILLE WATER DEPARTMENT.

Bentonville Water Utilities

Approved for ADH review

John Jones

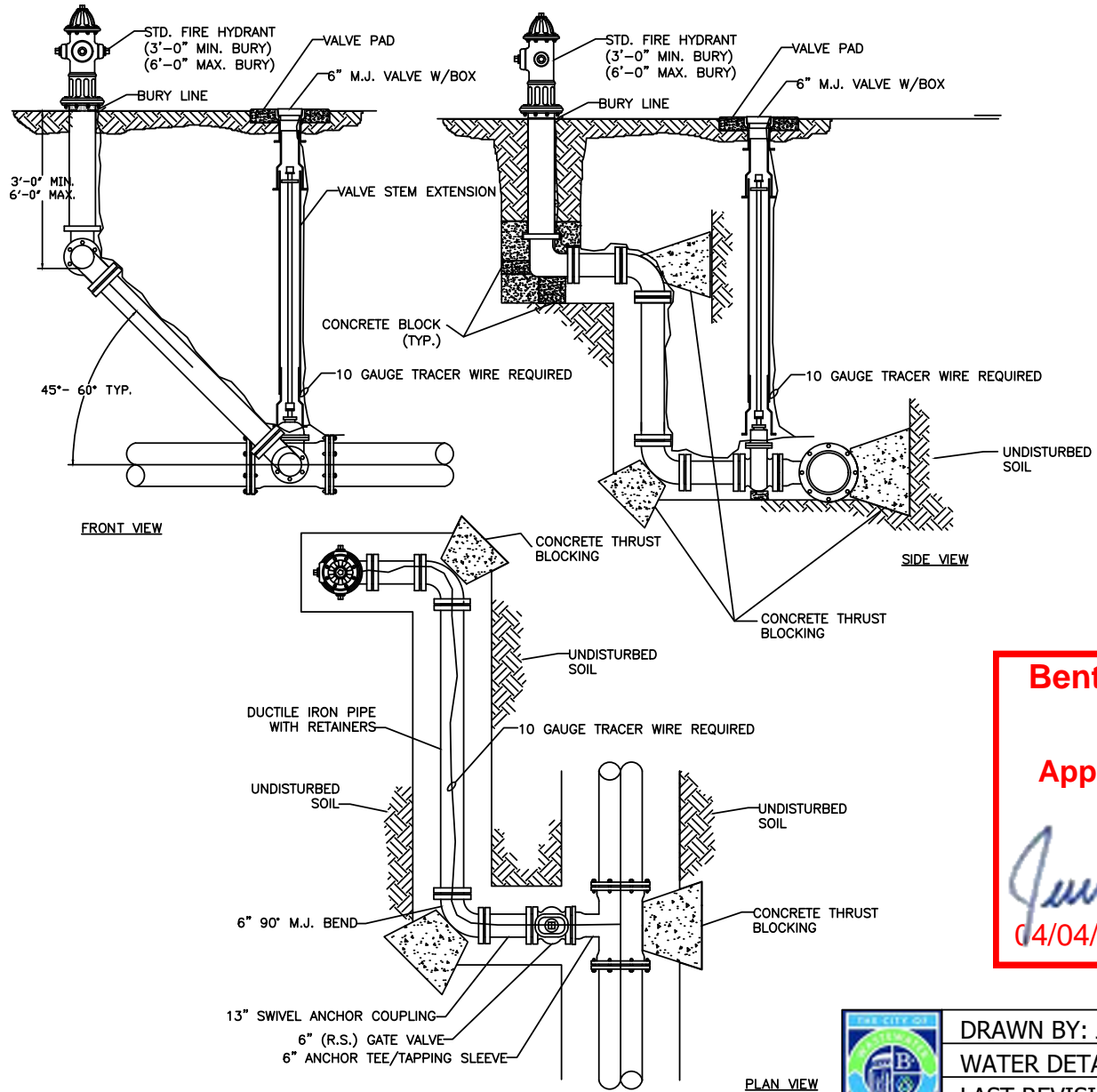
04/04/2023 2:57:43 PM



DRAWN BY: JI	CHECKED BY: PN
WATER DETAIL: W05	
LAST REVISION DATE: 03/16/2021	
APPROVED:	06/22/2021

DEEP BURY FIRE HYDRANTS

(BURY DEEPER THAN 6'-0")



**Bentonville Water
Utilities**

**Approved for ADH
review**

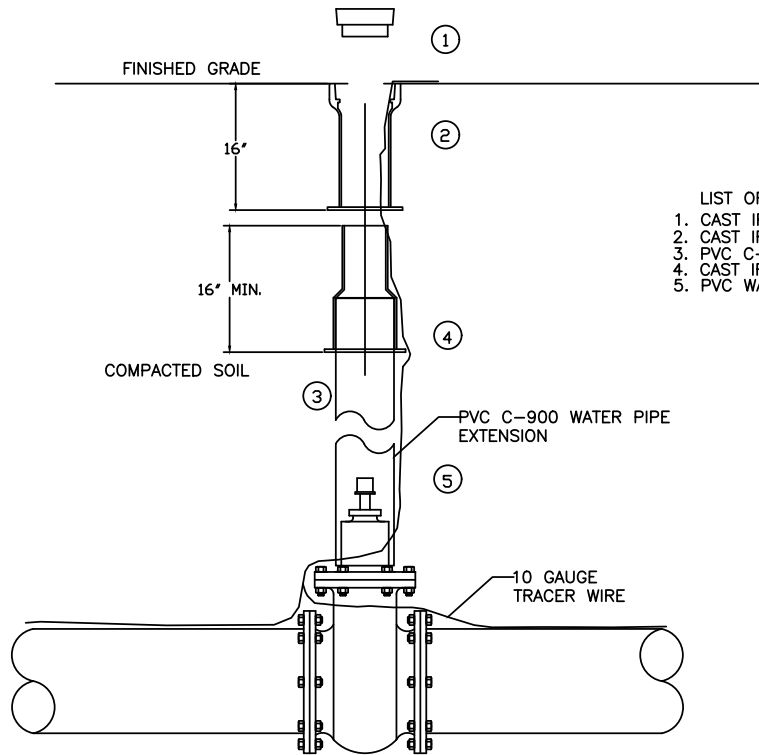
John Jones

04/04/2023 2:57:41 PM

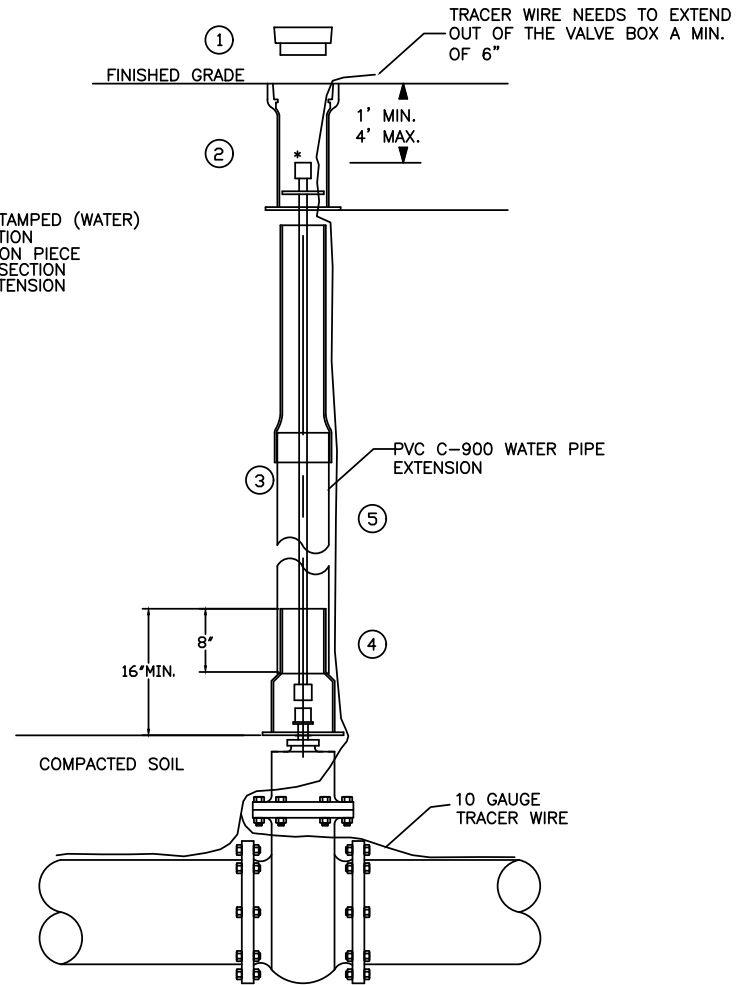


DRAWN BY: JI	CHECKED BY: PN
WATER DETAIL: W06	
LAST REVISION DATE: 03/16/2021	
APPROVED:	06/22/2021

VALVE BOX VALVE STEM & TRACER WIRE INSTALLATION



- LIST OF MATERIAL
1. CAST IRON COVER STAMPED (WATER)
 2. CAST IRON TOP SECTION
 3. PVC C-900 EXTENSION PIECE
 4. CAST IRON BOTTOM SECTION
 5. PVC WATER PIPE EXTENSION



NOTES:

1. IF EXTENSION PIECE IS NEEDED, PVC C-900 WATER PIPE MAY BE USED.
2. EXTENSION PIECE CAN BE CUT TO LENGTH REQUIRED.
3. TRACER WIRE NEEDS TO EXTEND OUT OF THE VALVE BOX A MINIMUM OF 6"
- *PROVIDE VALVE STEM EXTENSION WITH CENTERING DEVICE IF GREATER THAN 4.0' DEEP.

Bentonville Water Utilities

Approved for ADH review

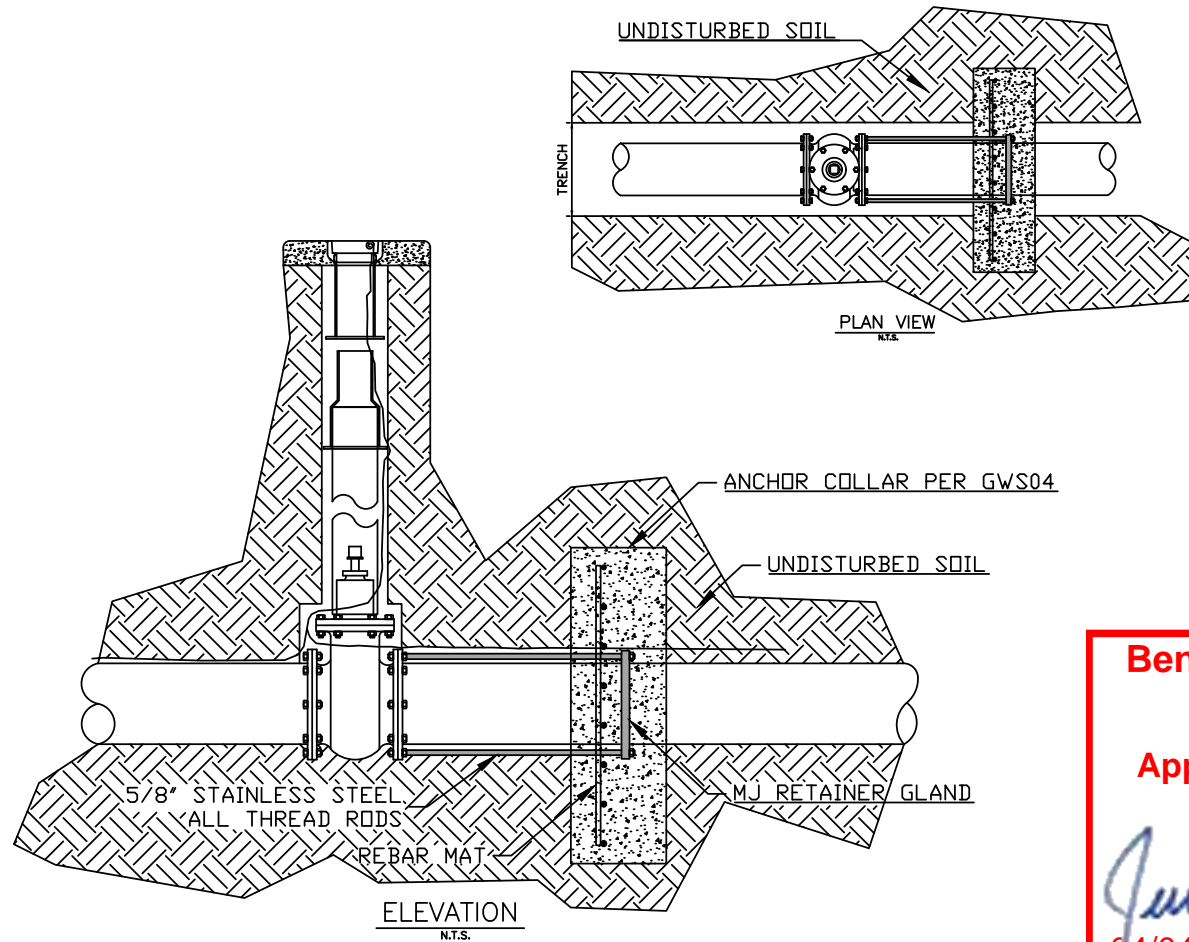
John Jones

(4/04/2023 2:57:31 PM)



DRAWN BY: JI	CHECKED BY: PN
WATER DETAIL: W07	
LAST REVISION DATE: 01/27/2020	
APPROVED:	06/22/2021

RESTRAINED GATE VALVE



Bentonville Water Utilities

Approved for ADH review

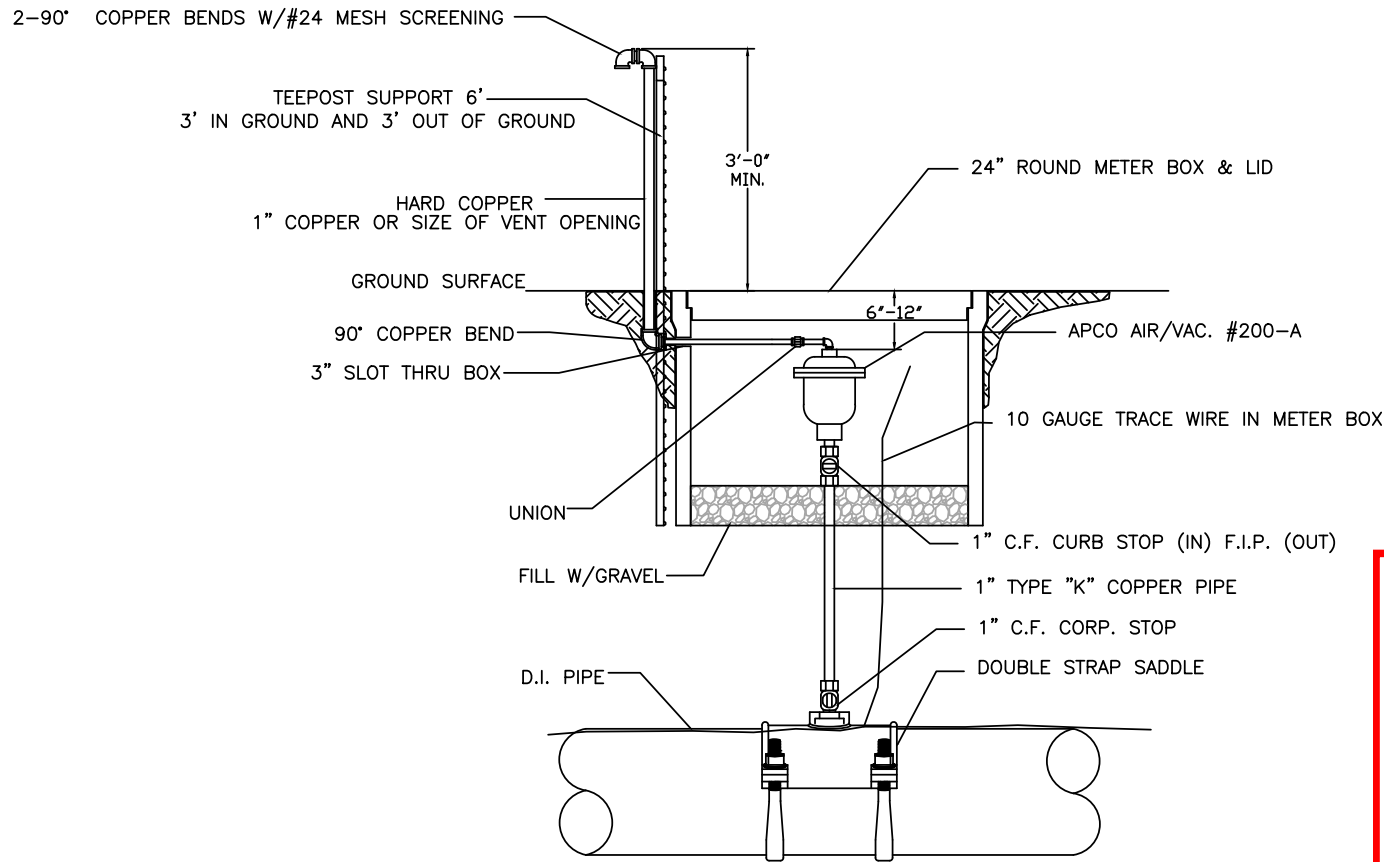
John Jones

04/04/2023 2:57:27 PM



DRAWN BY: JI	CHECKED BY: PN
WATER DETAIL: W08	
LAST REVISION DATE: 01/27/2020	
APPROVED:	06/22/2021

1" COMBINATION AIR/VACUUM VALVE DETAIL



NOTES:

1. ALL THREADED CONNECTIONS SHALL HAVE A DOUBLE WRAP OF TEFLON TAPE ON THREADS.
2. DRILL HOLE IN SIDE OF METER BOX FOR OUTLET PIPING.
3. VALVES WILL BE PIPED TO POINT BEYOND PAVEMENT AND SHOULDER.

Bentonville Water Utilities

Approved for ADH review

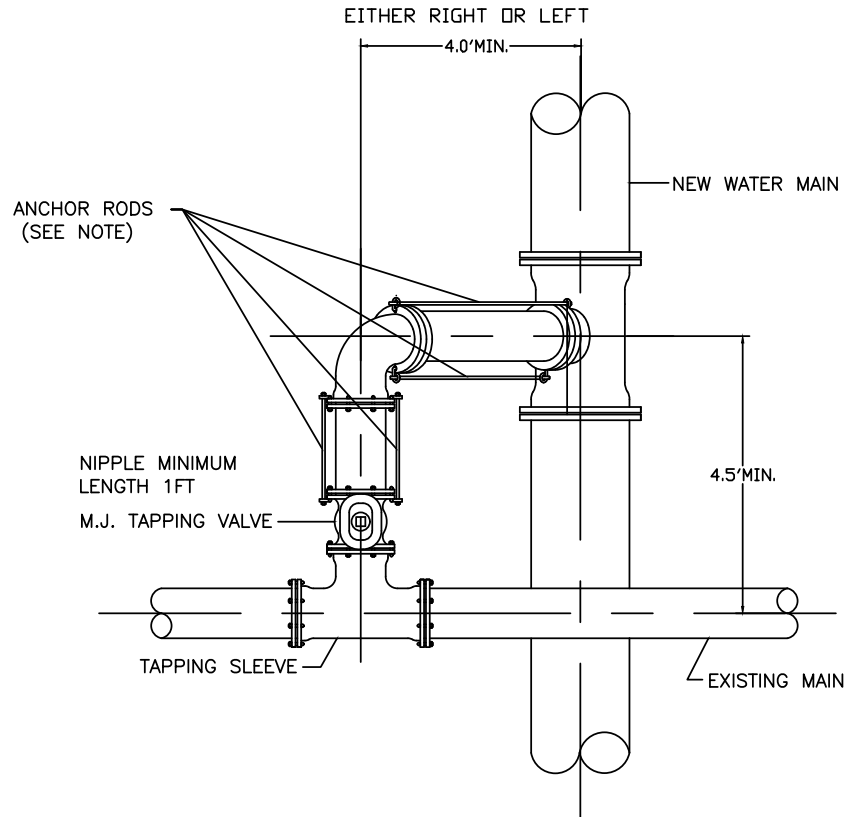
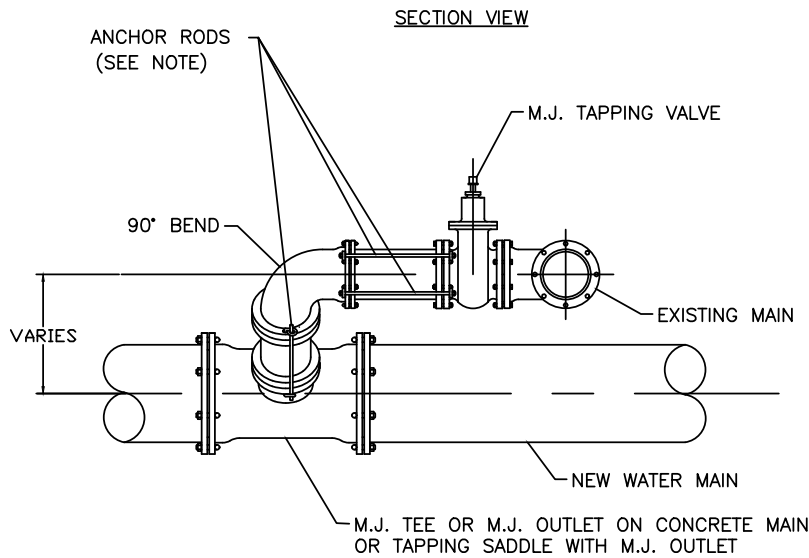
John Jones

04/04/2023 2:57:18 PM



DRAWN BY: JI	CHECKED BY: PN
WATER DETAIL: W10	
LAST REVISION DATE: 01/27/2020	
APPROVED:	06/22/2021

SWING CONNECTION – NEW MAIN TO EXISTING MAIN



THRUST BLOCKING REQUIRED AT TEES AND ELBOWS.

Bentonville Water Utilities

Approved for ADH review

John Jones

04/04/2023 2:57:10 PM

PIPE SIZE	6"	8"	12"
RODS PER NIPPLE	2	2	4

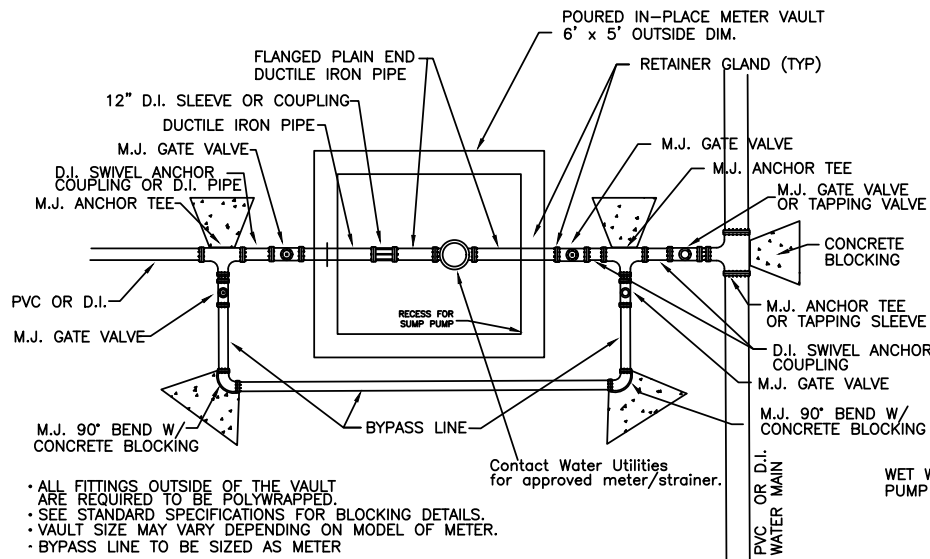
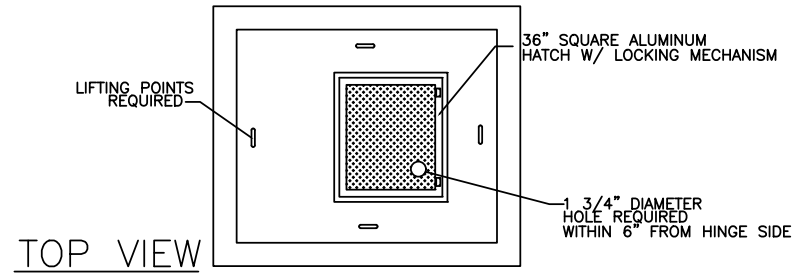
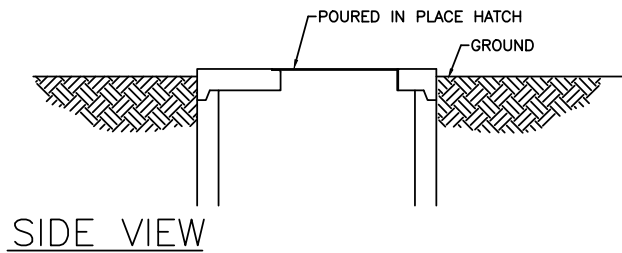
- NOTES:
1. CONTRACTOR SHALL LOCATE EXISTING MAIN IN ADVANCE OF LAYING NEW LINE IN ORDER TO ASSURE ADEQUATE LENGTH TO ADJUST DEPTH OF NEW MAIN.
 2. DIMENSIONS SHOWN ARE RECOMMENDED MINIMUMS TO PROVIDE ADEQUATE ROOM FOR TIGHTENING BOLTS ON JOINTS. (OTHER DIMENSIONS MAY BE USED)
 3. PROVIDE STAINLESS STEEL "ALL THREAD(MIN 5/8)" TIE RODS WITH EYE BOLTS FOR ANCHORING ALL JOINTS.
 4. RODS SHALL BE FIELD CUT TO FIT & SHALL BE PROTECTED WITH POLYWRAP.
 5. ROTATE TEE UP & ELBOW DOWN AS REQUIRED TO MATCH.
 6. USE TYPICAL CONCRETE BLOCKING REQUIRED.



DRAWN BY: JI	CHECKED BY: PN
WATER DETAIL: W11	
LAST REVISION DATE: 01/27/2020	
APPROVED:	06/22/2021

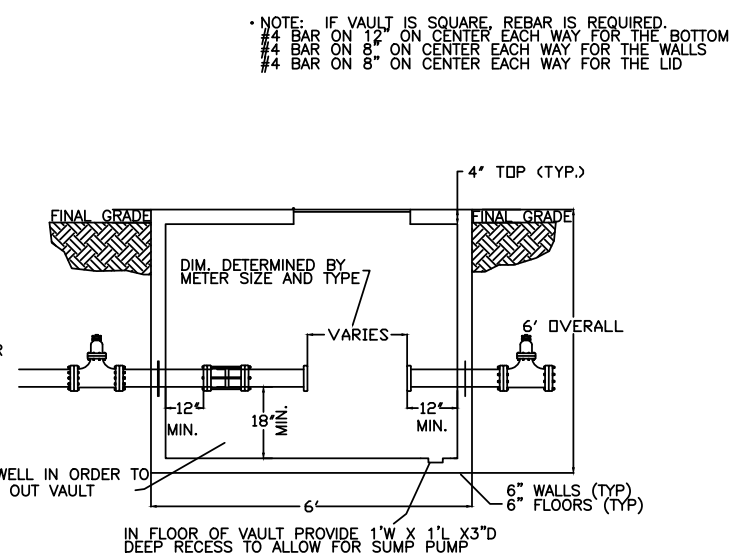
METER VAULT DETAIL FOR 4" – 8" METERS (TYPICAL)

(DIMENSIONS MAY VARY FOR METER SIZES)



- ALL FITTINGS OUTSIDE OF THE VAULT ARE REQUIRED TO BE POLYWRAPPED.
- SEE STANDARD SPECIFICATIONS FOR BLOCKING DETAILS.
- VAULT SIZE MAY VARY DEPENDING ON MODEL OF METER.
- BYPASS LINE TO BE SIZED AS METER

PLAN VIEW
N.T.S.



- NOTE: IF VAULT IS SQUARE REBAR IS REQUIRED.
- #4 BAR ON 12" ON CENTER EACH WAY FOR THE BOTTOM
- #4 BAR ON 12" ON CENTER EACH WAY FOR THE WALLS
- #4 BAR ON 8" ON CENTER EACH WAY FOR THE LID

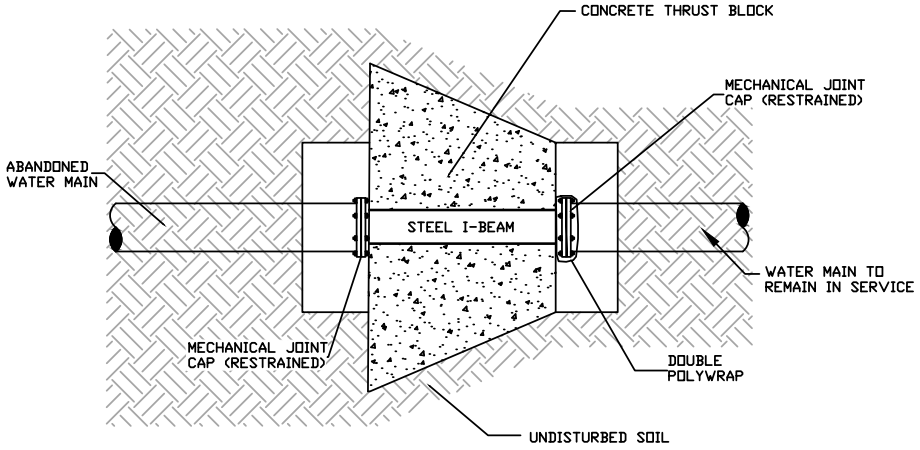
ELEVATION
N.T.S.

Bentonville Water Utilities
Approved for ADH review
Janice
04/04/2023 2:57:02 PM

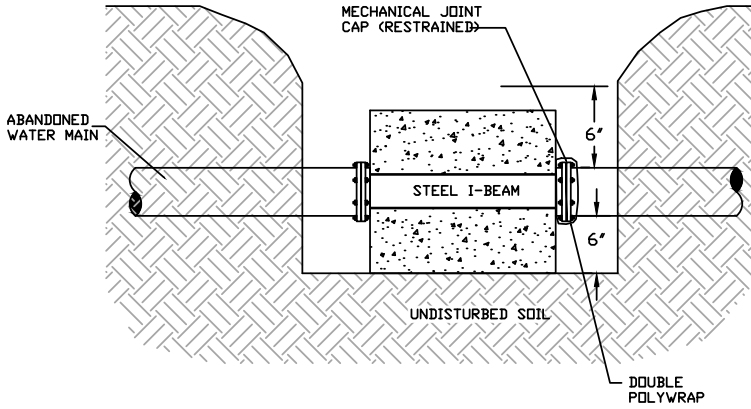


DRAWN BY: JI	CHECKED BY: PN
WATER DETAIL: W12	
LAST REVISION DATE: 01/27/2020	
APPROVED:	06/22/2021

TYPICAL CUT/CAP DETAIL



PLAN VIEW



PROFILE VIEW

Bentonville Water Utilities

Approved for ADH review

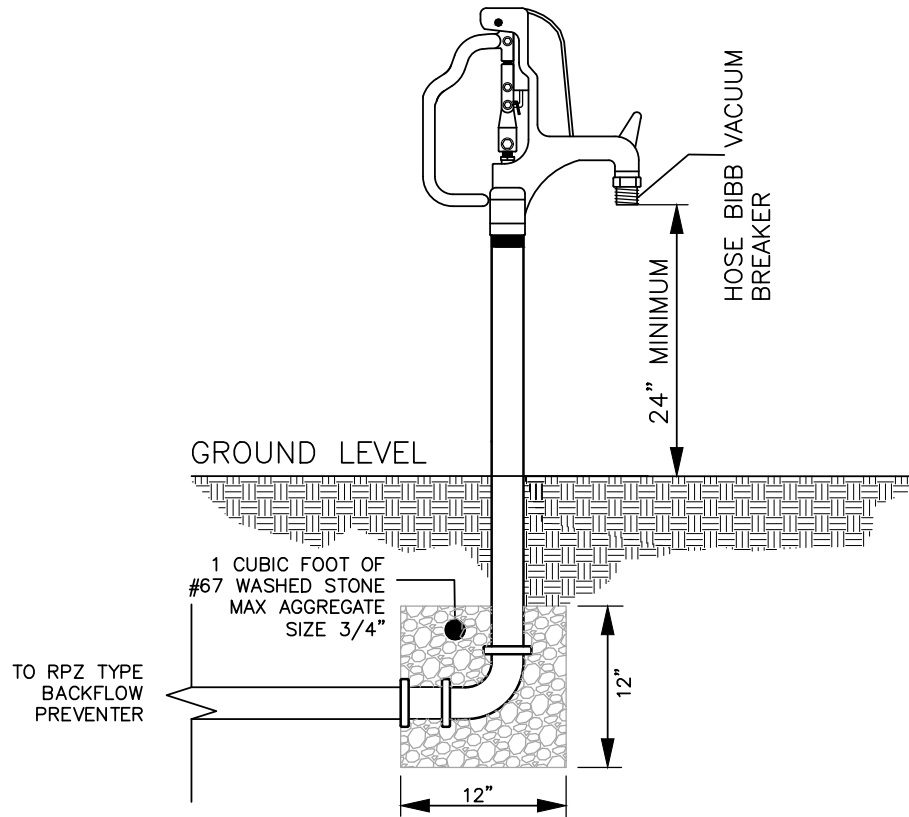
John Jones

04/04/2023 2:56:52 PM



DRAWN BY: JI	CHECKED BY: PN
WATER DETAIL: W13	
LAST REVISION DATE: 01/27/2020	
APPROVED:	06/22/2021

FROST FREE HOSE BIBB WITH VACUUM BREAKER



**Bentonville Water
Utilities**

**Approved for ADH
review**

John Jones

04/04/2023 2:56:48 PM

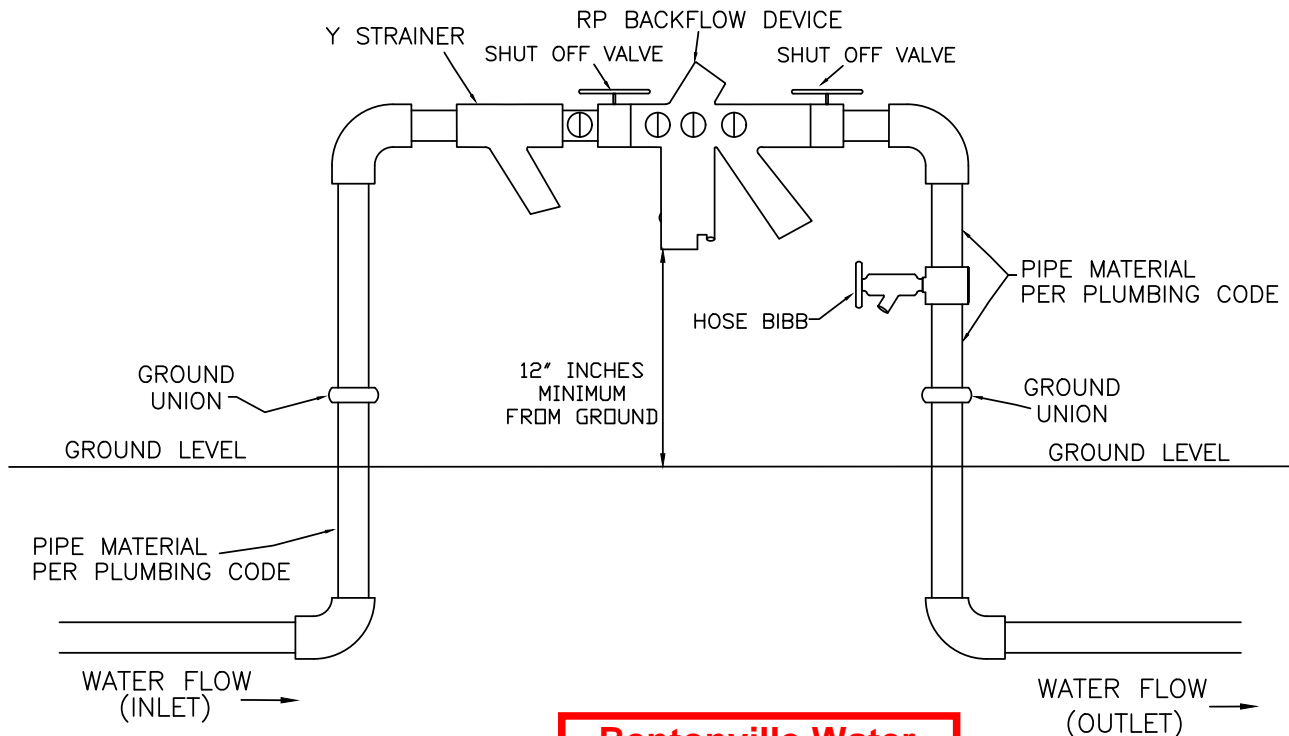
ELEVATION

N.T.S.



DRAWN BY: JI	CHECKED BY: PN
WATER DETAIL: W14	
LAST REVISION DATE: 03/16/2021	
APPROVED:	06/22/2021

REDUCED PRESSURE (RP) BACKFLOW IRRIGATION ONLY



Bentonville Water Utilities

Approved for ADH review

John Jones

04/04/2023 2:56:43 PM



DRAWN BY: JI	CHECKED BY: PN
WATER DETAIL: W15	
LAST REVISION DATE: 01/27/2020	
APPROVED:	06/22/2021

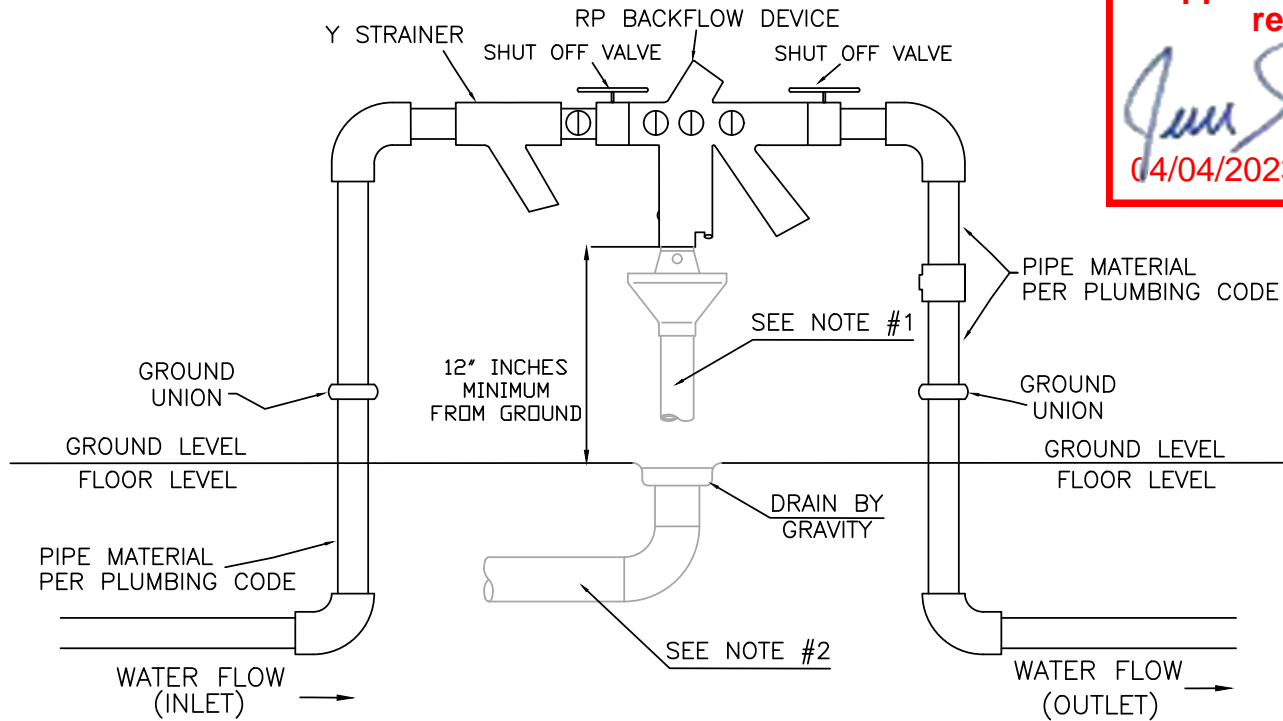
REDUCED PRESSURE (RP) BACKFLOW DOMESTIC ONLY

Bentonville Water Utilities

Approved for ADH review

Jim Jones

(4/04/2023 2:56:37 PM)



INDOOR APPLICATION ONLY NOTES:

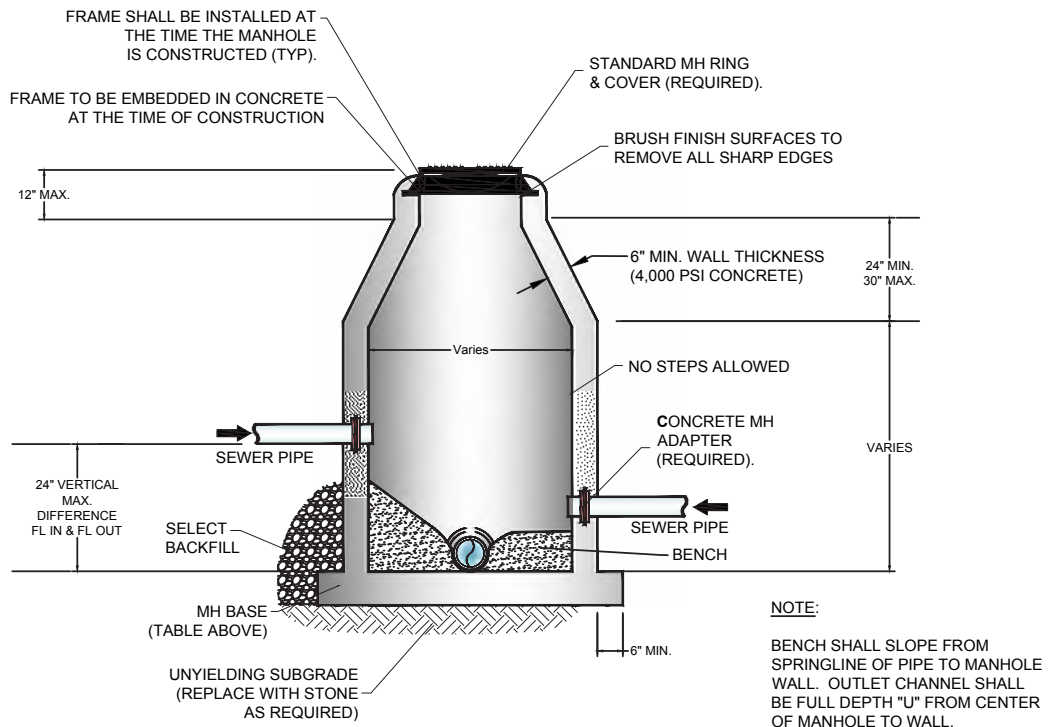
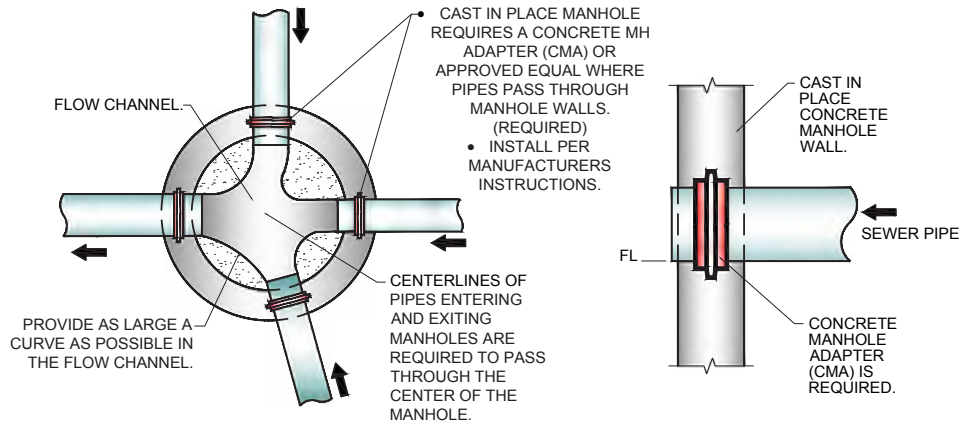
1. AN AIR GAP DRAIN IS REQUIRED TO REDUCE SPLASHING OF MINOR DISCHARGES FROM THE RELIEF VALVE DRAIN PORT.
2. INDOOR INSTALLATION OF RP'S SHOULD PROVIDE FOR DRAINAGE CAPABLE OF HANDLING IN EXCESS OF THE MAXIMUM DISCHARGE RATE EXPECTED BY THE BACKFLOW ASSEMBLY MANUFACTURER.



DRAWN BY: JI	CHECKED BY: PN
WATER DETAIL: W16	
LAST REVISION DATE: 01/27/2020	
APPROVED:	06/22/2021

SANITARY SEWER CAST IN PLACE MANHOLE

4,000 PSI CONCRETE



Inside Diameter of Manhole	Minimum Wall Thickness	Base Thickness	Minimum Ring & Cover Size
4' DIA	6"	8"	24" (< or Equal to 24" Pipes)
5' DIA	8"	10"	
6' DIA	8"	12"	36" (> 24" Pipes)

MANHOLE INFORMATION TABLE

Bentonville Water Utilities

Approved for ADH review

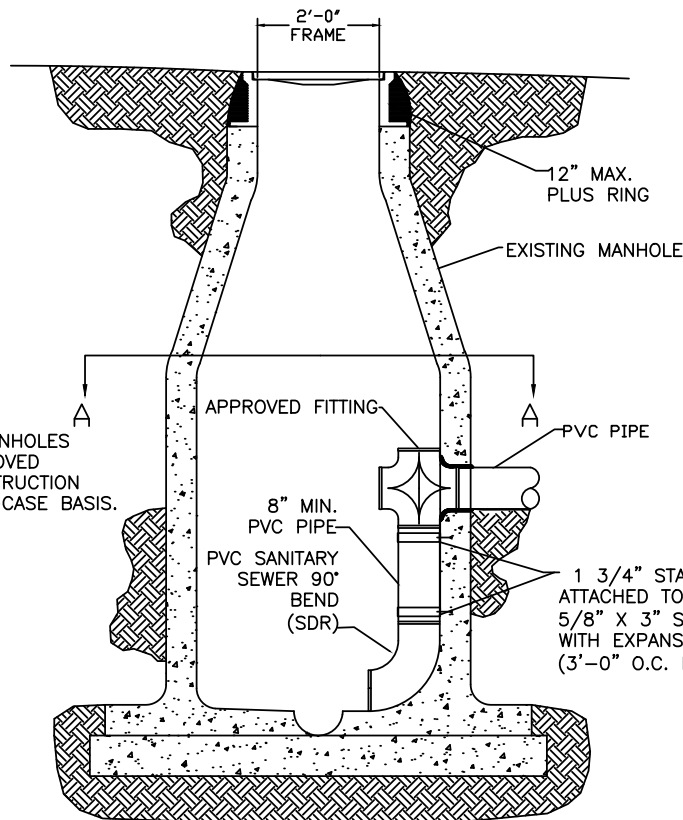
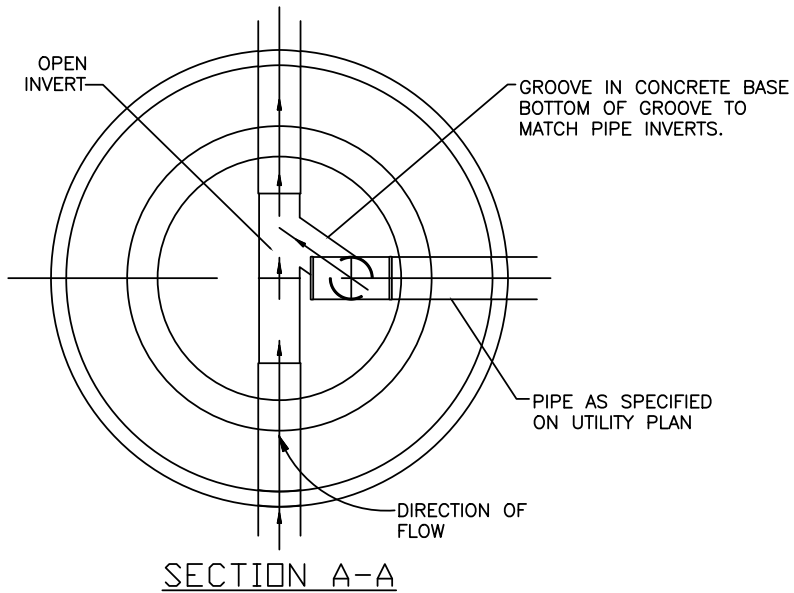
John Jones

(4/04/2023 2:56:19 PM)



DRAWN BY: JI	CHECKED BY: PN
SANITARY SEWER DETAIL: SS01	
LAST REVISION DATE: 01/27/2020	
APPROVED:	06/22/2021

SANITARY SEWER INTERIOR DROP MANHOLE



NOTE:
INSIDE DROP MANHOLES
SHALL BE APPROVED
PRIOR TO CONSTRUCTION
ON A CASE-BY-CASE BASIS.

**Bentonville Water
Utilities**

**Approved for ADH
review**

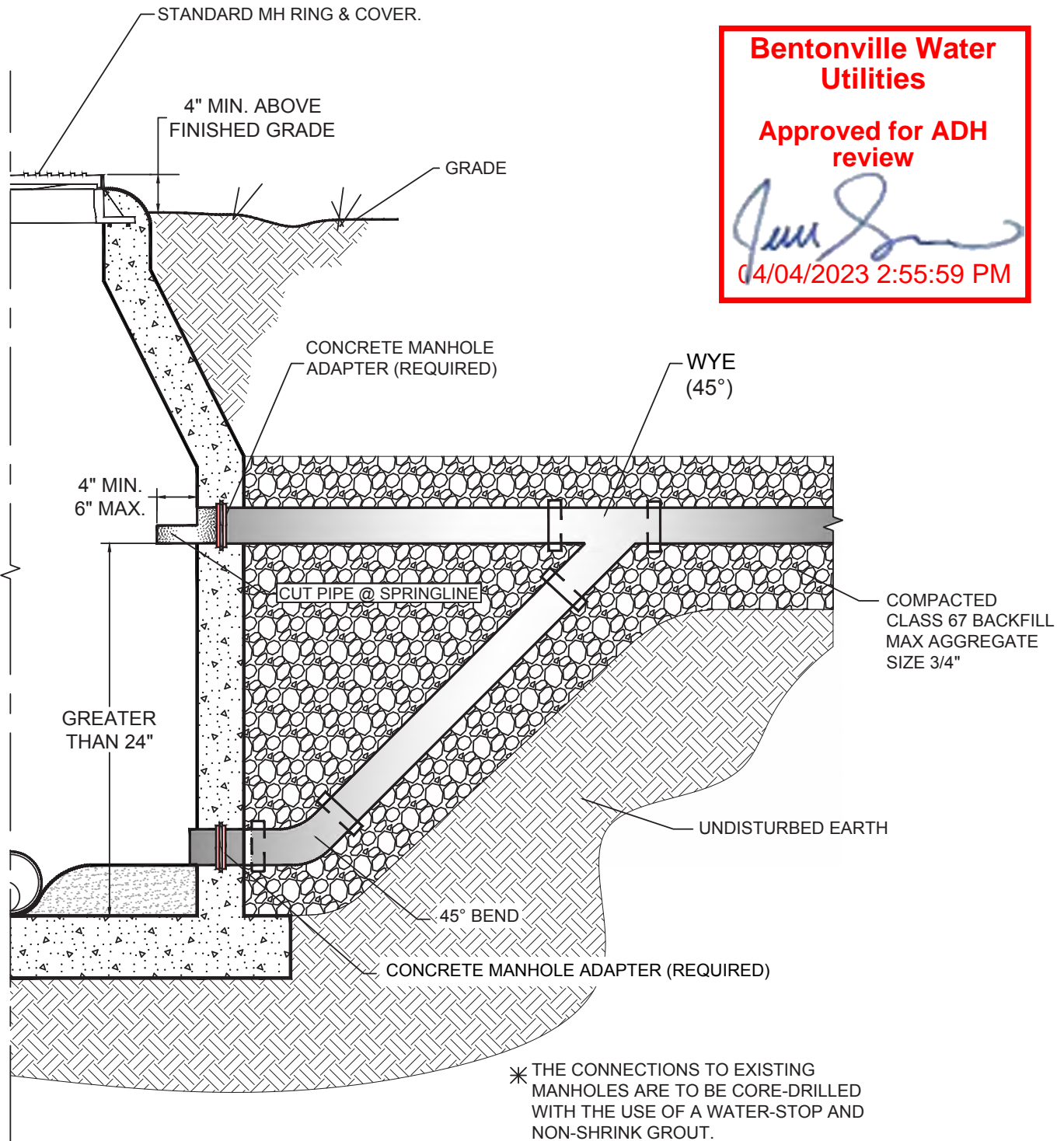
John Jones

4/04/2023 2:56:07 PM



DRAWN BY: JI	CHECKED BY: PN
SANITARY SEWER DETAIL: SS02	
LAST REVISION DATE: 01/27/2020	
APPROVED:	06/22/2021

SANITARY SEWER EXTERIOR DROP MANHOLE



**Bentonville Water
Utilities**

**Approved for ADH
review**

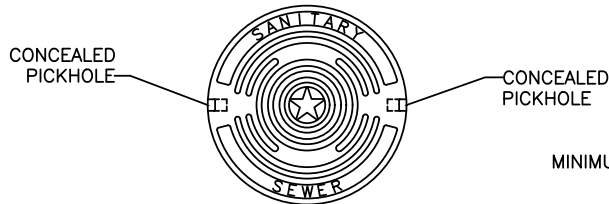
John Jones

04/04/2023 2:55:59 PM

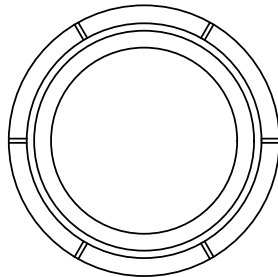
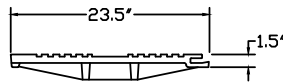


DRAWN BY: JI	CHECKED BY: PN
SANITARY SEWER DETAIL: SS03	
LAST REVISION DATE: 01/27/2020	
APPROVED:	06/22/2021

HEAVY DUTY MANHOLE LID & FRAME



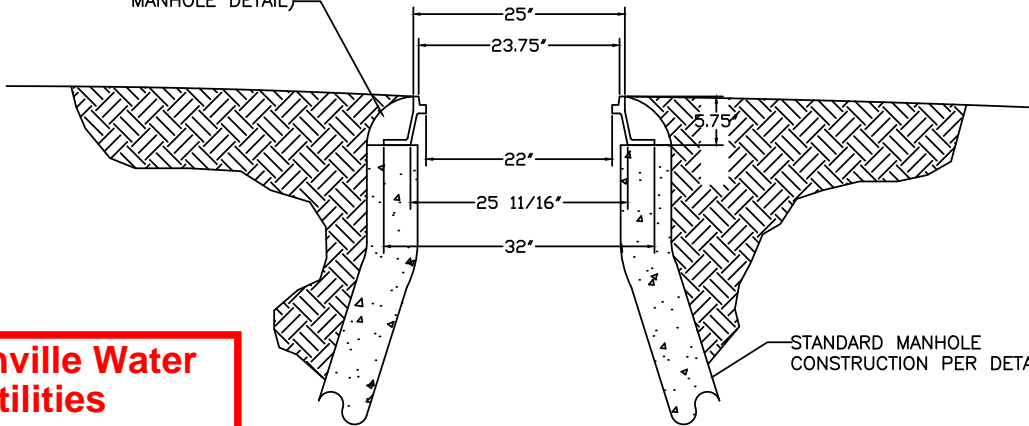
MINIMUM 260LB IN STREETS



USA MANUFACTURED
RING AND LID
ASSEMBLY REQUIRED

* SEE PLANS FOR
PROPER MANHOLE ELEVATION

CONCRETE MANHOLE FRAME
TO MANHOLE AT SAME
TIME MANHOLE IS CAST.
(SEE CAST-IN-PLACE
SANITARY SEWER
MANHOLE DETAIL)



**Bentonville Water
Utilities**

**Approved for ADH
review**

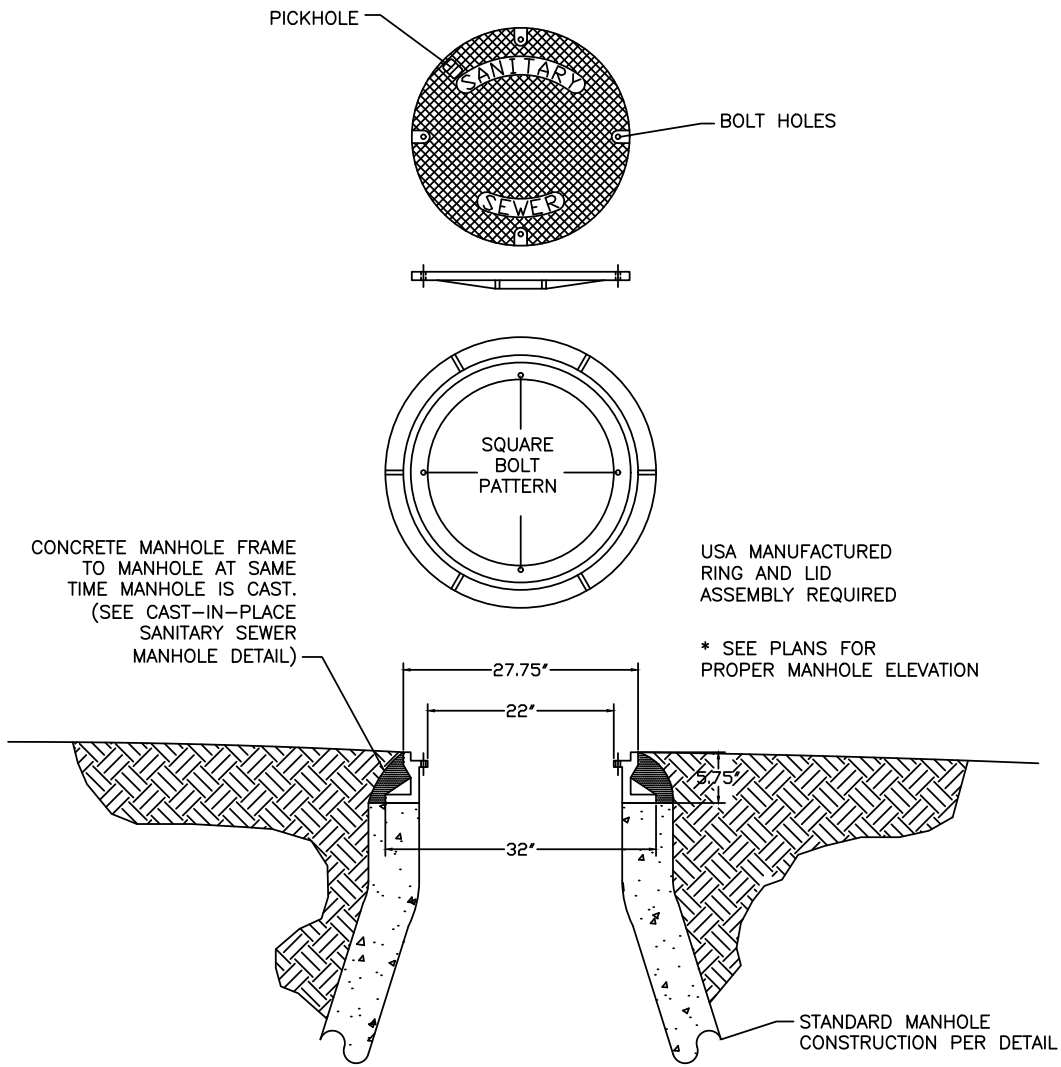


04/04/2023 2:55:50 PM



DRAWN BY: JI	CHECKED BY: PN
SANITARY SEWER DETAIL: SS04	
LAST REVISION DATE: 01/27/2020	
APPROVED:	06/22/2021

WATER TIGHT BOLTED MANHOLE LID & FRAME



Bentonville Water Utilities

Approved for ADH review

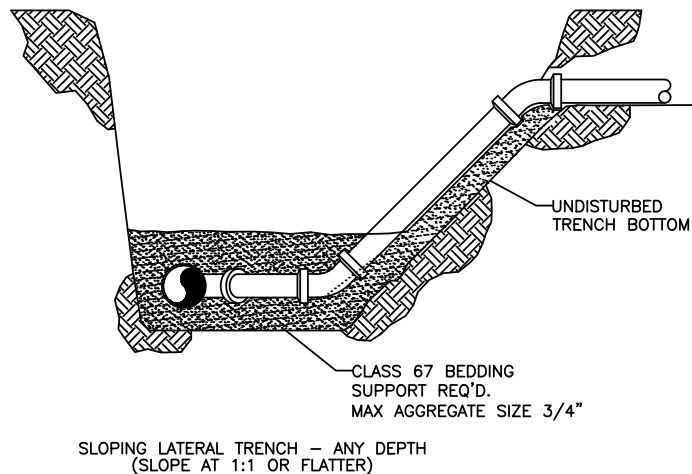
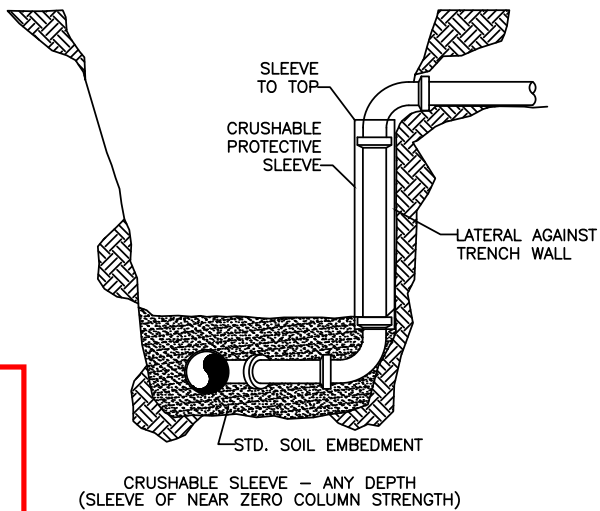
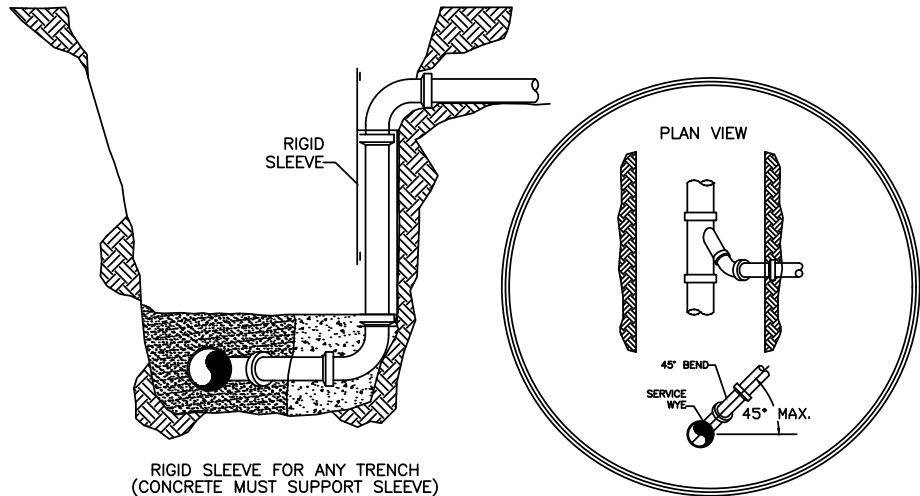
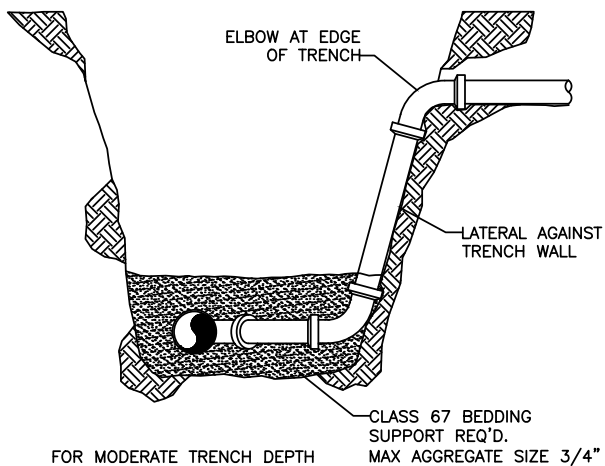
John Jones

04/04/2023 2:55:47 PM



DRAWN BY: JI	CHECKED BY: PN
SANITARY SEWER DETAIL: SS05	
LAST REVISION DATE: 01/27/2020	
APPROVED:	06/22/2021

SANITARY SEWER SERVICE WYE



Bentonville Water Utilities

Approved for ADH review

Jim Jones

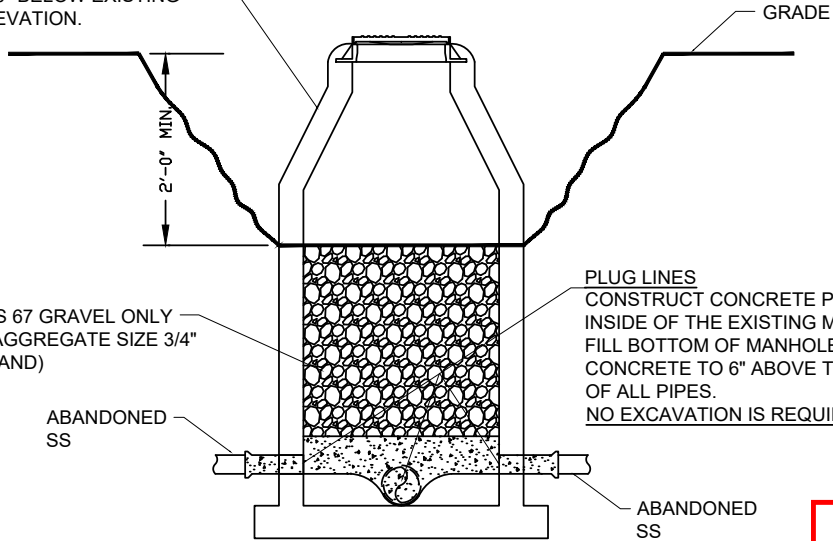
4/04/2023 2:55:38 PM



DRAWN BY: JI	CHECKED BY: PN
SANITARY SEWER DETAIL: SS06	
LAST REVISION DATE: 01/27/2020	
APPROVED:	06/22/2021

EXISTING MANHOLE ABANDONMENT DETAIL 5 FT OR DEEPER

REMOVE MH RING & COVER, CONE AND/OR BARREL TO A MIN. OF 2'-0" BELOW EXISTING GRADE ELEVATION.



CLASS 67 GRAVEL ONLY
MAX AGGREGATE SIZE 3/4"
(NO SAND)

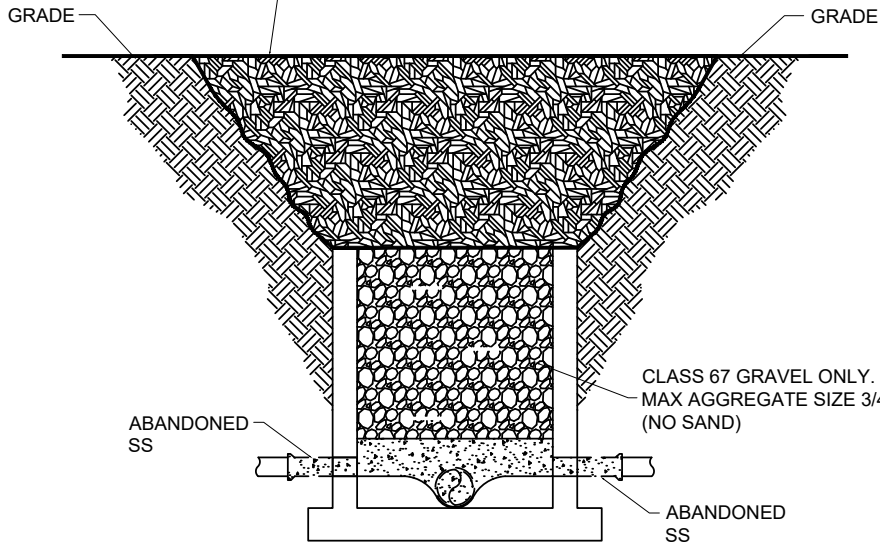
PLUG LINES
CONSTRUCT CONCRETE PLUG FROM INSIDE OF THE EXISTING MANHOLE. FILL BOTTOM OF MANHOLE WITH 4,000 PSI CONCRETE TO 6" ABOVE THE CROWN OF ALL PIPES.
NO EXCAVATION IS REQUIRED.

ABANDONED SS

ABANDONED SS

Bentonville Water Utilities
Approved for ADH review
Jim Jones
04/04/2023 2:55:24 PM

BACKFILL, REPAVE or RESURFACE
BACKFILL ABANDONMENT IN PAVED AREAS, AND PERFORM PAVEMENT REPAIR AS PER STANDARD STREET DEPARTMENT SPECIFICATIONS.
BACKFILL ABANDONMENT IN NONPAVED AREAS WITH SELECT NATIVE MATERIAL, AND RESURFACE WITH APPROPRIATE MATERIALS.



ABANDONED SS

CLASS 67 GRAVEL ONLY.
MAX AGGREGATE SIZE 3/4"
(NO SAND)

ABANDONED SS



DRAWN BY: JI	CHECKED BY: PN
SANITARY SEWER DETAIL: SS07	
LAST REVISION DATE: 01/27/2020	
APPROVED:	06/22/2021

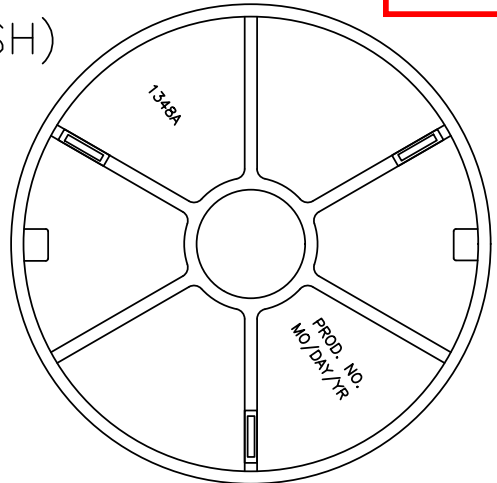
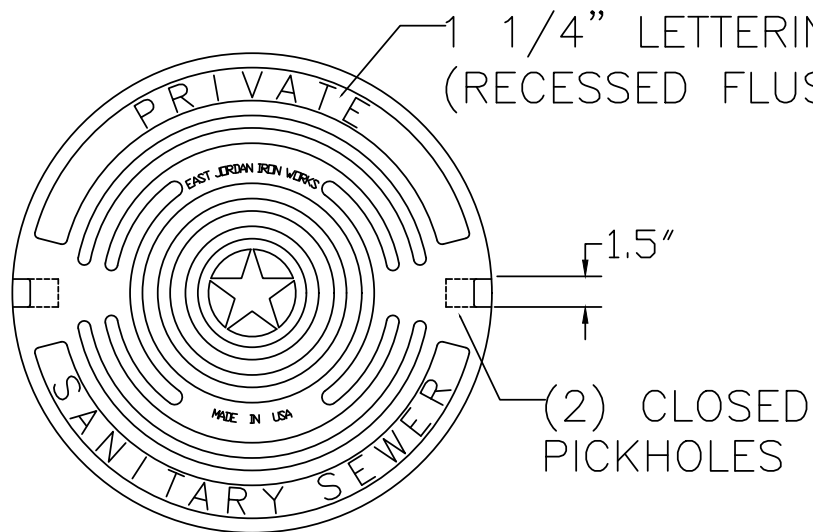
PRIVATE MANHOLE RING AND LID

**Bentonville Water
Utilities**

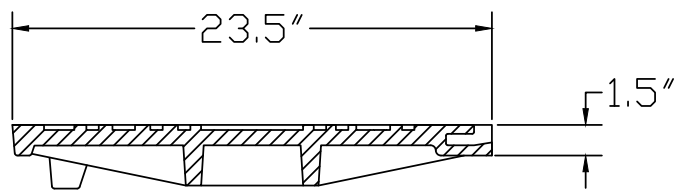
**Approved for ADH
review**

John Jones

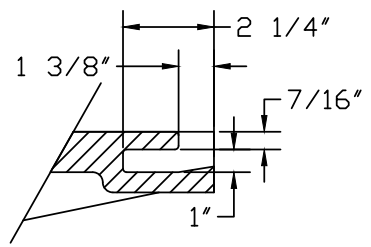
(4/04/2023 2:55:14 PM)



BOTTOM VIEW



COVER SECTION

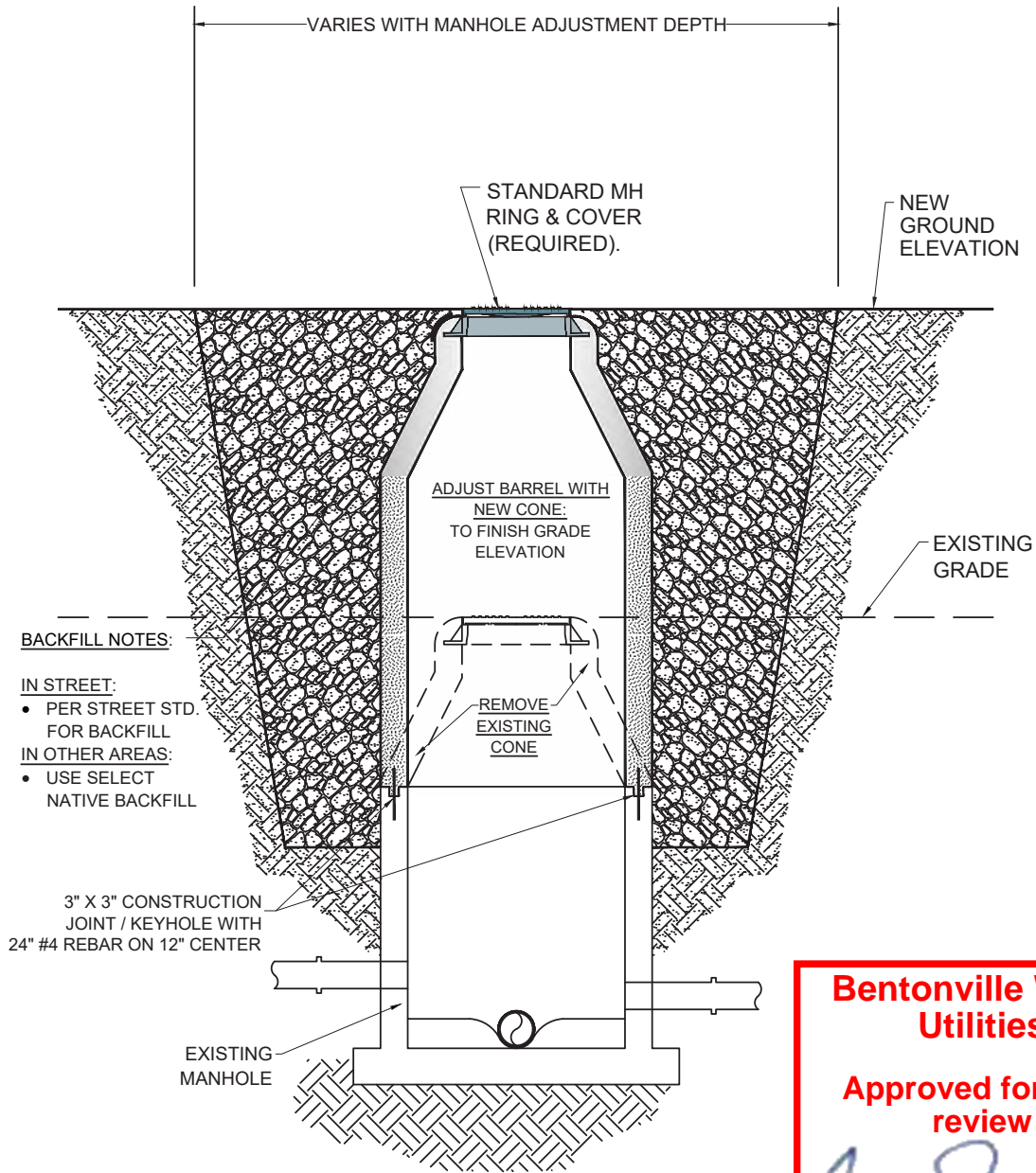


PICKHOLE DETAIL



DRAWN BY: JI	CHECKED BY: PN
SANITARY SEWER DETAIL: SS08	
LAST REVISION DATE: 01/27/2020	
APPROVED:	06/22/2021

TYPICAL MANHOLE ADJUST TO GRADE DETAIL



Bentonville Water Utilities

Approved for ADH review

John Jones

04/04/2023 2:54:39 PM



DRAWN BY: JI	CHECKED BY: PN
SANITARY SEWER DETAIL: SS09	
LAST REVISION DATE: 01/27/2020	
APPROVED:	06/22/2021