WALTON BLVD. & CENTRAL AVE. INTERSECTION IMPROVEMENTS

CITY OF BENTONVILLE, BENTON COUNTY, ARKANSAS

MUNIS# 21ST0017 PIIP22-0021

LEGEND

FOUND MONUMENT (AS NOTED)	GUY WIRE
SET 1/2" REBAR W/PLASTIC CAP, "LC 366"	IRRIGATION VALVE
SET 5/8" REBAR W/ALUMINUM CAP, "LC 366"	LIGHT POLE
AIR CONDITIONER	MAIL BOX
BENCHMARK	MEASURED
BOLLARD	MONITORING WELL
BREAKER BOX	PLATTED
BUSH	POWER POLE
CABLE BOX	POWER POLE W/LIGHT
CABLE VAULT	ROOF DRAIN
CAMERA	SANITARY CLEANOUT
COLUMN	SANITARY MANHOLE
CONIFEROUS TREE	STORM MANHOLE
DECIDUOUS TREE	SIGN
DEEDED	SCHEDULE B-II EXCEPTION
ELECTRIC BOX	SPRINKLER HEAD
ELECTRIC BOX	STEEL POST
ELECTRIC MANHOLE	TELEPHONE CABINET
ELECTRIC METER	TELEPHONE PEDESTAL
ELECTRICAL OUTLET	TELEPHONE RISER
ELECTRIC VAULT	TELEPHONE MANHOLE
FIRE DEPT. CONNECTION	TRAFFIC CONTROL BOX
FIRE HYDRANT	TRAFFIC SIGNAL BOX
FIBER OPTIC BOX	TRAFFIC SIGNAL POLE
FIBER OPTIC PEDESTAL	TRANSFORMER
FLARED END SECTION	VENT PIPE
GAS MARKER	WATER MANHOLE
GAS METER	WATER METER
GAS VALVE	WATER VALVE
GAS VAULT	WOOD POST
GRATE INLET	SPRINKLER CONTROL VALVE
GREASE TRAP	

- PROPOSED CENTER LINE
- EXISTING CENTER LINE
- PROPERTY LINE
- **ROW** PROPOSED RIGHT-OF-WAY
- ROW EXISTING RIGHT-OF-WAY
- PROPOSED TEMPORARY EASEMENT
- PROPOSED PERMANENT EASEMENT
- EXISTING EASEMENT
- 1370 EXISTING CONTOUR
- 1371 EXISTING CONTOUR
- SS EXISTING SANITARY LINE
- SD EXISTING STORM LINE
- G EXISTING GAS LINE
- W EXISTING WATER LINE
- P-UG EXISTING UNDERGROUND POWER
- TEL EXISTING UNDERGROUND TELEPHONE
- CATV EXISTING UNDERGROUND CABLE/TV
- FO EXISTING UNDERGROUND FIBER OPTIC
- T EXISTING UNDERGROUND TRAFFIC
- P-OH EXISTING OVERHEAD ELECTRIC
- TEL-OH EXISTING OVERHEAD TELEPHONE
- CATV-OH EXISTING OVERHEAD CABLE/TV
- [P-OH] PROPOSED OVERHEAD POWER
- [AT&T] PROPOSED UNDERGROUND AT&T
- X EXISTING WOVEN WIRE FENCE
- EXISTING CHAIN LINK FENCE
- EXISTING WOOD FENCE
- EXISTING TREE LINE

ABBREVIATIONS

M.G.	MATCH GRADE
PVMT.	PAVEMENT
TC	TOP OF CURB
TP	TOP OF PAVEMENT
EP	EDGE OF PAVEMENT
G	GUTTER
EL.	ELEVATION
R/W	RIGHT-OF-WAY
ROW	RIGHT-OF-WAY
TCE	TEMPORARY CONSTRUCTION EASEMENT
ESMT.	EASEMENT
PROP.	PROPOSED
EXIST.	EXISTING
TYP.	TYPICAL
(R)	REMOVAL
CONST.	CONSTRUCT
TBM	TEMPORARY BENCHMARK
C.P.	CONTROL POINT
D.N.D.	DO NOT DISTURB
U.I.P.	USE IN PLACE
CONC.	CONCRETE
AGG.	AGGREGATE
N.T.S.	NOT TO SCALE
B-B	BACK OF CURB TO BACK OF CURB

Arkansas 811 Know what's below. Call before you dig.

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE BASED ON THE BEST INFORMATION AVAILABLE AND MAY NOT REFLECT ALL EXISTING UTILITIES IN THE PROJECT AREA. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE UTILITY COMPANIES FOR LOCATING EXISTING UTILITIES PRIOR TO CONSTRUCTION AND FOR PROTECTION OF SERVICES DURING CONSTRUCTION.

SECTION 25, T-20-N, R-31-W
SECTION 30, T-20-N, R-30-W
BENTON COUNTY, ARKANSAS

VICINITY MAP

0' 500' 1000' 2000'
SCALE IN FEET

DESIGN DESIGNATION

WALTON BOULEVARD: ROAD CLASS = ARTERIAL; DESIGN SPEED = 40 MPH
CENTRAL AVENUE (WEST OF WALTON BLVD): ROAD CLASS = ARTERIAL; DESIGN SPEED = 35 MPH
CENTRAL AVENUE (EAST OF WALTON BLVD): ROAD CLASS = DOWNTOWN COLLECTOR; DESIGN SPEED = 25 MPH

UTILITY CONTACTS

NATURAL GAS
Black Hills Energy
Contact: Josh Knight
1301 Federal Way
P.O. Box 2129
Lowell, AR 72745
Phone: (479)721-4543
Email: joshua.knight@blackhillscorp.com

CABLE TELEVISION
COX Communications
Contact: Kip Smith
4901 S. 48th Street
Springdale, AR
Phone: (479)717-3796
Email: kip.smith@cox.com

WATER & SEWER
City of Bentonville
Contact: Beau Thompson
3200 S.W. Municipal Drive
Bentonville, AR 72712
Phone: (479)271-3140

ELECTRIC
City of Bentonville
Contact: April Hayes
3200 S.W. Municipal Drive
Bentonville, AR 72712
Phone: (479)271-3135

TELEPHONE
AT&T
Contact: Scott Seaman
Phone: (479)442-1967
Contact: Layne Rhodes
Phone: (479)442-1977
627 White Road
Springdale, AR 72766

WASTE WATER
City of Bentonville
Contact: Chris Earl
1901 NE A Street
Bentonville, AR
Phone: (479)271-3160

FIRE DEPARTMENT
City of Bentonville
Contact: Brent Boydston
(Fire Chief)
800 SW A Street
Bentonville, AR 72712
Phone: (479)271-5927

DEPARTMENT OF HEALTH
Arkansas Department Of Health
Division of Engineer, Slot 37
4815 W. Markham
Little Rock, AR 72205
Phone: (501)661-2623

BENTONVILLE ENGINEERING

INDEX OF SHEETS

PREPARED & SUBMITTED BY

CERTIFICATE OF AUTHORIZATION
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STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No.13624
ANDREW S. BREWER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

TITLE SHEET AND INDEX OF SHEETS

WALTON BLVD. & CENTRAL AVE. INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

drawn by:	JRC/JKL
checked by:	JKL/JWP
approved by:	RCB
QA/QC by:	JKL/RCB
project no.:	J21-04210
drawing no.:	T_TTL_J2104210
date:	11.20.2023

SHEET 1 OF 89

DWG: F:\2021\04001-04500\021-04210-J\40-Design\AutoCAD\Final Plans\Sheets\T_TTL_J2104210.dwg
DATE: Nov 20, 2023 2:38pm
XREFS: T_PTBLK_J2104210 T_PBASE_J2104210
USER: jcoddington

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 MARKED DND (DO NOT DISTURB) OR ANY TREES 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 IS RESPONSIBLE FOR MAINTAINING THE SITE THROUGHOUT CONSTRUCTION INCLUDING MOWING AS DIRECTED. THE CONTRACTOR IS REQUIRED TO MOW THE SITE A MINIMUM OF TWO TIMES PRIOR TO TURNING OVER TO THE CITY. THIS WORK IS SUBSIDIARY TO OTHER BID ITEMS.
27. THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES TO MINIMIZE INTERRUPTIONS IN ACCESS TO ADJOINING PROPERTIES.
28. THE CONTRACTOR SHALL NOTIFY ALL PROPERTY OWNERS A MINIMUM 48 HOURS IN ADVANCE OF ALL WORK PERTAINING TO THEIR ENTRANCES.
29. 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.
30. THE CONTRACTOR SHALL MAINTAIN MAILBOXES FOR UNINTERRUPTED MAIL SERVICE.
31. SAWCUTS SHALL BE FULL DEPTH.
32. DRIVEWAYS AND SIDEWALKS SHALL BE REMOVED AND REPLACED TO EXISTING JOINTS, UNLESS OTHERWISE NOTED.
33. EXISTING TOPSOIL SHALL BE STRIPPED TO A POINT WHERE ALL VEGETATION IS REMOVED. THIS WORK IS SUBSIDIARY TO OTHER BID ITEMS.
34. ALL WASTE MATERIAL RESULTING FROM THE PROJECT SHALL BE DISPOSED OF OFF–SITE BY THE CONTRACTOR. THIS WORK IS SUBSIDIARY TO OTHER BID ITEMS.
35. THE CITY OF BENTONVILLE SHALL HAVE THE FIRST RIGHT OF REFUSAL ON DEMOLITION AND REMOVAL ITEMS.
36. 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.

GOVERNING SPECIFICATIONS

CITY OF BENTONVILLE, MINIMUM STANDARD SPECIFICATION FOR STREETS, 2006 EDITION

STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT, 2014 EDITION

SUMMARY OF QUANTITIES

Item	Description	Unit	Quantity
Percentage Bid Items			
1	Insurance and Bonding @ 2%	LS	1
2	Mobilization @ 5%	LS	1
3	Temporary Traffic Control @ 4%	LS	1
4	Erosion and Sediment Control @ 1%	LS	1
5	Trench and Excavation Safety Systems @ 0.25%	LS	1
6	Clearing & Grubbing @ 0.5%	LS	1
7	Construction Staking @ 1%	LS	1
8	Demolition @ 1%	LS	1
Earthwork Bid Items			
9	Undercut and Backfill	CY	50
10	Unclassified Excavation	CY	768
11	Compacted Embankment	CY	175
12	Solid Sodding	SY	1220
Pavement, Curb, and Driveway Bid Items			
13	Asphalt Milling	SY	5540
14	Asphalt Base Leveling Course	TONS	10
15	ACHM Surface Course - 1.5"	TONS	180
16	ACHM Surface Course - 2"	TONS	780
17	ACHM Binder Course - 4.5"	TONS	550
18	ACHM Base Course - 10"	TONS	1080
19	4-inch Class 7 Aggregate Base Course	SY	4150
20	Modified Curb	LF	300
21	Standard Curb & Gutter, Type A	LF	1900
22	6-inch Concrete Driveway	SY	470
23	Retaining Wall Extension	LF	12
24	Concrete Walk with Integral Curb	CY	180
25	Concrete Walk Curb	SY	210
26	Concrete Walk	SY	1020
27	Concrete Steps	LS	1
28	ADA Ramp with Detectable Warning	SY	70
29	Misc. Utility Adjustment	LS	1
30	Fire Hydrant Relocation	LS	1
31	Remove and Restore Existing Mailbox	EACH	1
Signal, Striping, and Signage Bid Items			
32	Siemens Eagle Size Super P Cabinet with Integrated BBS Compartment and Siemens Eagle M62 Controller	EACH	1
33	5 Position Video Detection Card Rack	EACH	1
34	EDI MMU2 16 LE/IP	EACH	1
35	Iteris Video Detection Vantage Next Vector System	EACH	1
36	SDLC Hub and Cables	EACH	1
37	EZ Communicator Navigator Touchless APS	EACH	8
38	Clay UPS	EACH	1
39	Traffic Cabinet Communication and Video Equipment Materials	EACH	1
40	Traffic Signal Mast Arm and Pole with Foundation (40')	EACH	1
41	Traffic Signal Mast Arm and Pole with Foundation (44')	EACH	1
42	Traffic Signal Mast Arm and Pole with Foundation (50')	EACH	1
43	Traffic Signal Mast Arm and Pole with Foundation (54')	EACH	1
44	LED Luminaire Assembly	EACH	3
45	Traffic Signal Pedestal Pole with Foundation	EACH	6
46	Traffic Signal Cable (20c/#14)	LF	640
47	Traffic Signal Cable (7c/#14)	LF	231
48	Traffic Signal Cable (5c/#14)	LF	3394
49	Electrical Conductors in Conduit (1c/#8)	LF	793
50	Electrical Conductors in Conduit (2c/#12)	LF	632
51	Electrical Conductors in Conduit (1c/#12)	LF	150
52	WIC Fiber Enclosure	EACH	1
53	Fiber Optic Pigtail, 12 MM	EACH	1
54	Non-metallic Conduit (2")	LF	20
55	Non-metallic Conduit (3")	LF	750
56	Concrete Pull Box(TYPE 3 HD)	EACH	6
57	Pull Box for Fiber, DS-1609, 24"X36"X24" HD	EACH	1
58	18" Street Name Sign (Install Only)	EACH	4
59	Standard Sign	SF	10
60	Removal of Traffic Signal Equipment	LUMP	1
61	Video Cable	LF	910
62	GPS Preemption Backup	EACH	1
63	Traffic Signal Head, LED (3 Section, 1-Way)	EACH	11
64	Traffic Signal Head, LED (4 Section, 1-Way)	EACH	2
65	Traffic Signal Head, LED (5 Section, 1-Way)	EACH	3

Item	Description	Unit	Quantity
66	Countdown Pedestrian Signal Head, LED	EACH	8
67	Electrical Meter Service Point	EACH	1
68	Thermoplastic Pavement Marking White (24")	LF	730
69	Thermoplastic Pavement Marking White (12")	LF	180
70	Thermoplastic Pavement Marking White (6")	LF	1756
71	Thermoplastic Pavement Marking Yellow (6")	LF	2361
72	Thermoplastic Pavement Marking Words	EACH	9
73	Thermoplastic Pavement Marking Arrow	EACH	18
74	Raised Pavement Marker (Type 2)	EACH	5
75	Remove and Reset Existing Salvaged Sign Assembly	EACH	7
Storm Sewer Bid Items			
76	18-inch Class III RCP	LF	545
77	24-inch Class III RCP	LF	48
78	24-inch Class V RCP	LF	75
79	30-inch Class III RCP	LF	339
80	30-inch Class V RCP	LF	75
81	36-inch Class III RCP	LF	101
82	38x24-inch HERCP Class V	LF	54
83	45x29-inch RCAP	LF	63
84	45x29-inch Tapered End Section	EACH	2
85	4-foot x 5-foot Type C Inlet	EACH	2
86	4-foot x 6-foot Type C Inlet	EACH	4
87	5.5-foot x 6-foot Type C Inlet	EACH	1
88	5.5-foot x 7-foot Type C Inlet	EACH	1
89	4-foot x 4-foot Area Inlet	EACH	1
90	3-foot x 3-foot Curb Inlet	EACH	1
91	3-foot x 4-foot Curb Inlet	EACH	2
92	4' Drop Inlet Extension	EACH	1
93	8' Drop Inlet Extension	EACH	9
94	4-foot x 4-foot Junction Box	EACH	3
95	4.5-foot x 4.5-foot Junction Box	EACH	1
96	7-foot x 3-foot Double Combo Inlet	EACH	2
97	7-foot x 4-foot Double Combo Inlet	EACH	1
98	10-foot x 3-foot Triple Combo Inlet	EACH	2
99	10-foot x 4-foot Triple Combo Inlet	EACH	4
100	11-foot x 8-foot Triple Combo Inlet	EACH	1
101	4-foot x 3-foot Single Combo Inlet	EACH	1
102	48-inch Manhole	EACH	2
103	Pipe Collar	EACH	2
Parcel 5 Off Right-of-Way Modifications			
104	6-inch Concrete Pavement	SY	43
105	6-inch Class 7 Aggregate Base Course	SY	46
106	Standard Curb & Gutter, Type A	LF	15
107	Relocate Sign	LS	1
Parcel 6 Off Right-of-Way Modifications			
108	ACHM Surface Course - 1.5"	TONS	3
109	ACHM Binder Course - 4.5"	TONS	8
110	6-inch Class 7 Aggregate Base Course	SY	30
111	Remove and Replace Bollards	EACH	2
Parcel 16 Off Right-of-Way Modifications			
112	6-inch Concrete Pavement	SY	170
113	6-inch Class 7 Aggregate Base Course	SY	180
114	Standard Curb & Gutter, Type A	LF	163
115	ADA Ramp with Detectable Warning	SY	11
116	Remove and Restore Existing Mailbox	EACH	1
117	Remove and Relocate Existing Light	LS	1
118	Solid Sodding	SY	241

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STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No.13624
ANDREW S. BREWER
12/31/2023

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

GENERAL NOTES & QUANTITIES

WALTON BLVD. & CENTRAL AVE. INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

drawn by: JRC/JKL
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SHEET 2 OF 89

DWG: F:\2021\04001-04500\021-04210-J\40-Design\AutoCAD\Final Plans\Sheets\T_GEN_J2104210.dwg USER: jpeitz
DATE: Nov 27, 2023 4:48pm XREFS: T_PTBLK_J2104210

BENCHMARKS

BM #102
CHISELED X
N: 749525.931
E: 658215.828
ELEV. = 1279.22

BM #103
FIRE HYDRANT TOP NUT
N: 749664.076
E: 658274.956
ELEV. = 1281.30

BM #104
CHISELED X
N: 749534.032
E: 658440.790
ELEV. = 1287.42

BM #105
CHISELED X
N: 749676.436
E: 658390.904
ELEV. = 1282.98

HORIZONTAL CONTROL

CPT #10570
SET 60D NAIL
N: 749243.920
E: 658357.673

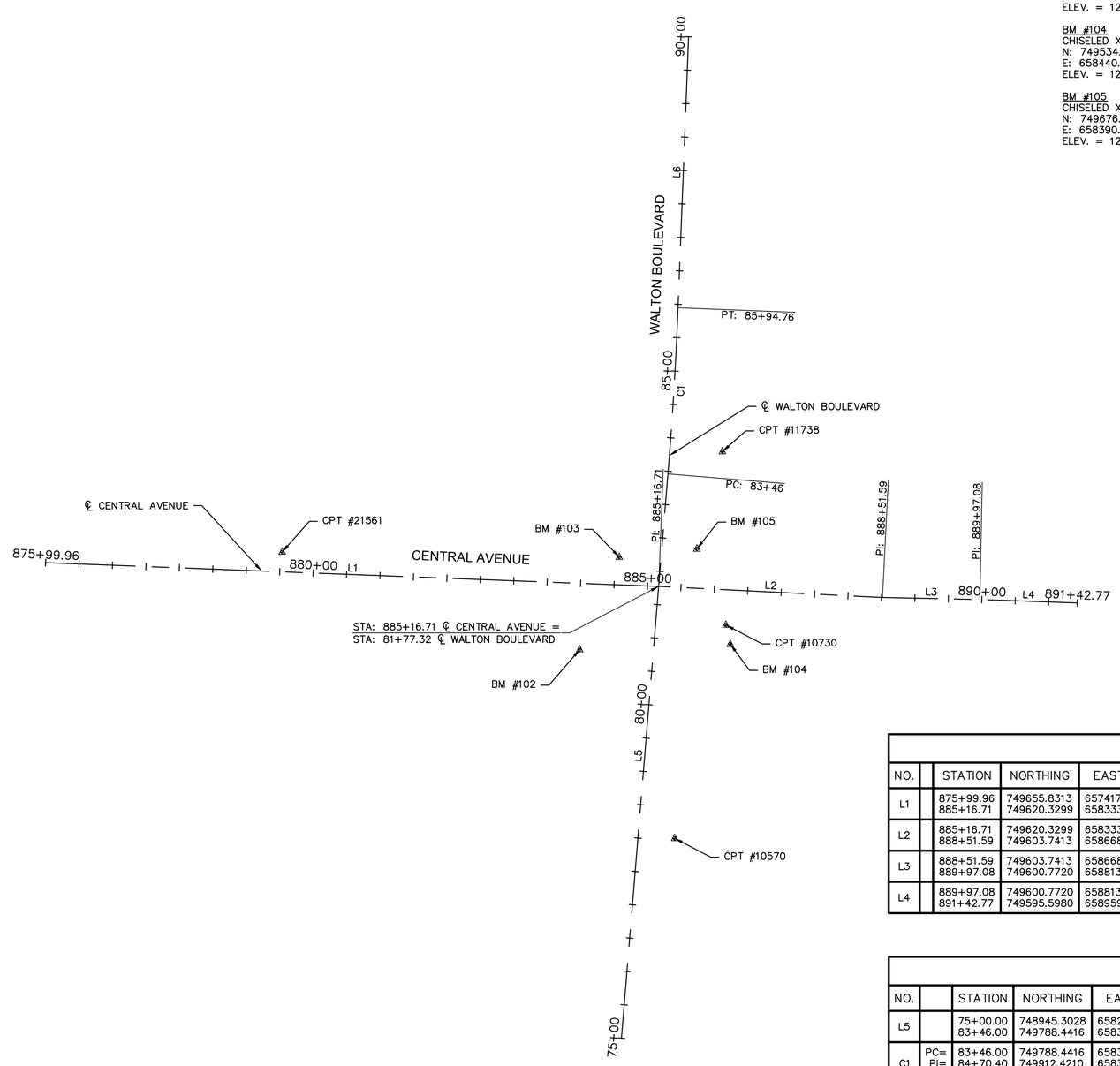
CPT #10730
SET 60D NAIL
N: 749562.658
E: 658434.280

CPT #11738
SET 60D NAIL
N: 749822.004
E: 658429.110

CPT #21561
SET 60D NAIL
N: 749671.875
E: 657771.287

N

0' 50' 100' 200'
SCALE IN FEET



CENTRAL AVENUE

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L1		875+99.96 885+16.71	749655.8313 749620.3299	657417.7061 658333.7676	916.75'	S87°46'50"E			
L2		885+16.71 888+51.59	749620.3299 749603.7413	658333.7676 658668.2374	334.88'	S87°09'38"E			
L3		888+51.59 889+97.08	749603.7413 749600.7720	658668.2374 658813.7000	145.49'	S88°49'50"E			
L4		889+97.08 891+42.77	749600.7720 749595.5980	658813.7000 658959.2940	145.69'	S87°57'53"E			

WALTON BOULEVARD

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L5		75+00.00 83+46.00	748945.3028 749788.4416	658278.1107 658347.6286	846.00'	N4°42'48"E			
C1	PC= PI= PT=	83+46.00 84+70.40 85+94.76	749788.4416 749912.4210 750036.7269	658347.6286 658357.8509 658362.6917	248.76'	N3°28'18"E	2°29'00"	124.40'	5739.45'
L6		85+94.76 90+00.00	750036.7269 750441.6588	658362.6917 658378.4608	405.24'	N2°13'48"E			

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STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No.13624
ANDREW S. BREWER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

ALIGNMENT DATA AND SURVEY CONTROL

WALTON BLVD. & CENTRAL AVE.
INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

drawn by: JRC/JKL
checked by: JKL/JWP
approved by: RCB
QA/QC by: JKL/RCB
project no.: J21-04210
drawing no.: T_ALI_J2104210
date: 11.20.2023

SHEET
3 OF 89

DWG: F:\2021\04001-04500\021-04210-J\40-Design\AutoCAD\Final Plans\Sheets\T_ALI_J2104210.dwg USER: jcoddington
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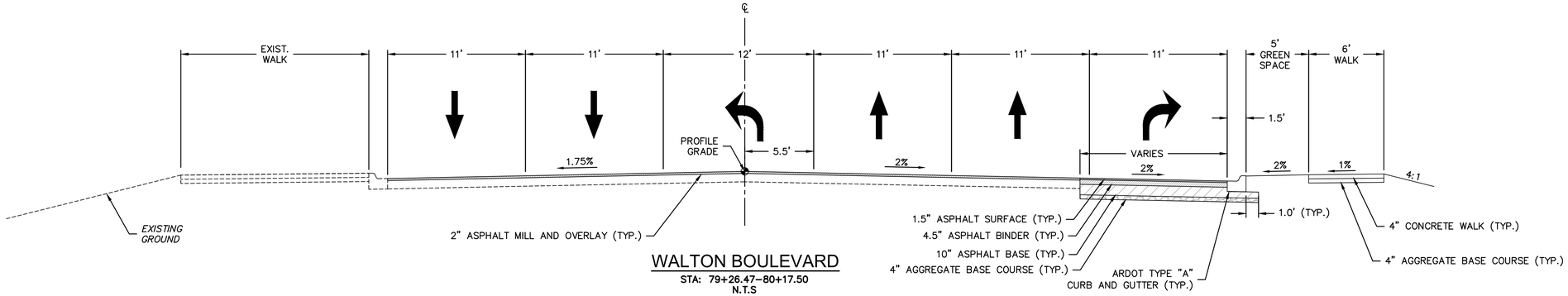
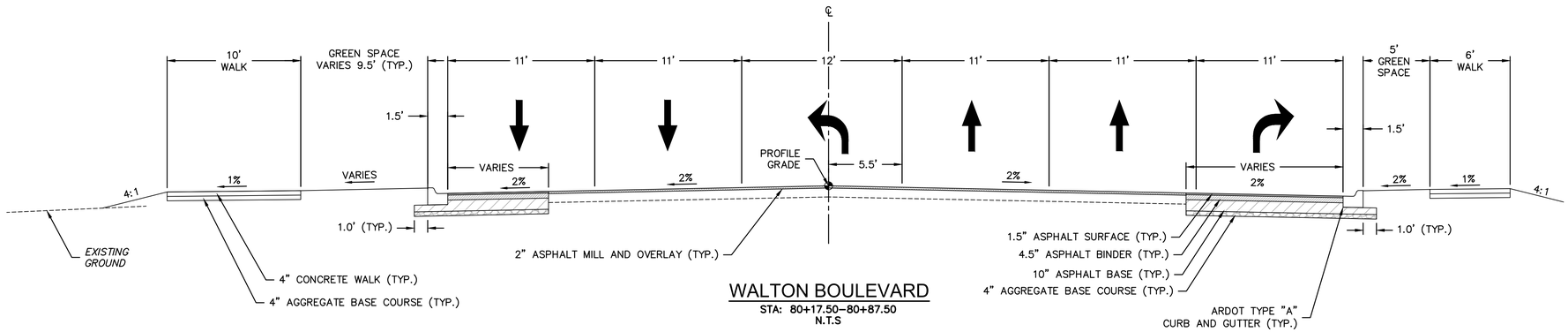
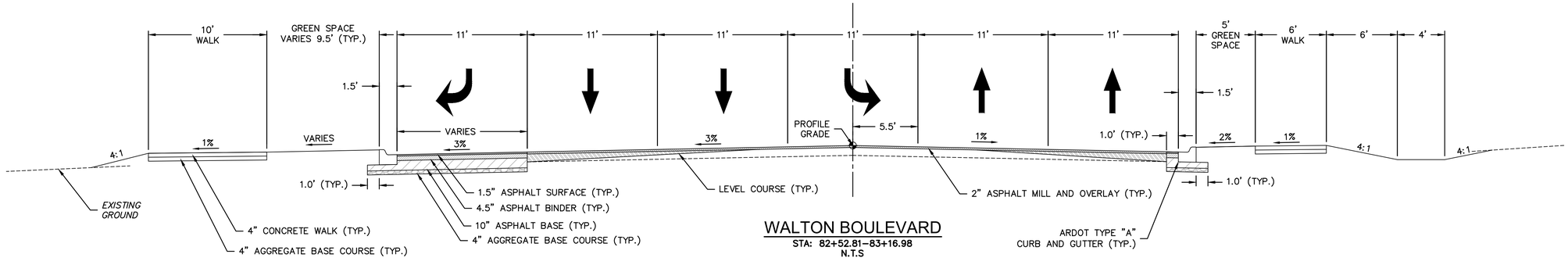


WALTON BOULEVARD
STA: 79+26.47–80+17.50
N.T.S



WALTON BOULEVARD
STA: 80+17.50–80+87.50
N.T.S



WALTON BOULEVARD
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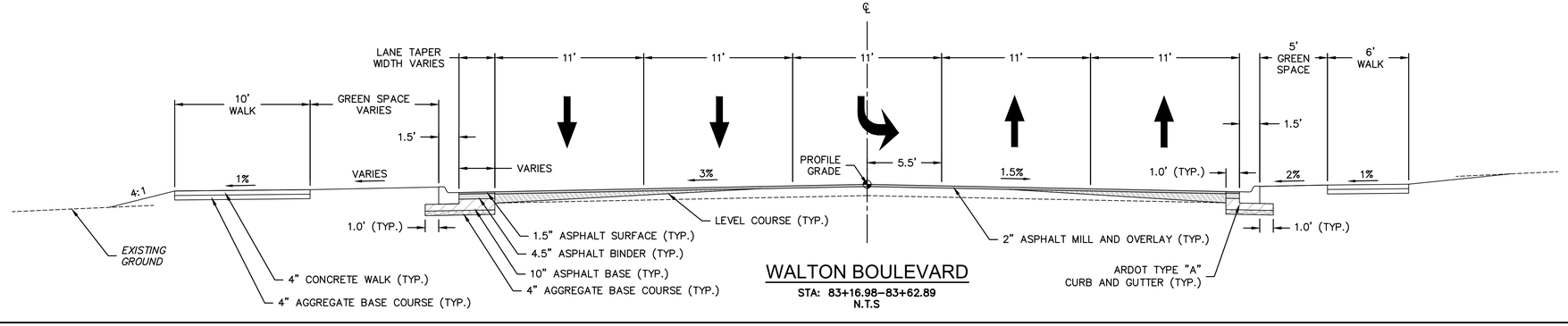
N.T.S



WALTON BOULEVARD
STA: 83+16.98–83+62.89
N.T.S

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REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

TYPICAL SECTIONS

WALTON BLVD. & CENTRAL AVE. INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

drawn by:	JRC/JKL
checked by:	JKL/JWP
approved by:	RCB
QA/QC by:	JKL/RCB
project no.:	J21-04210
drawing no.:	T_TYP_J2104210
date:	11.20.2023

SHEET 4 OF 89

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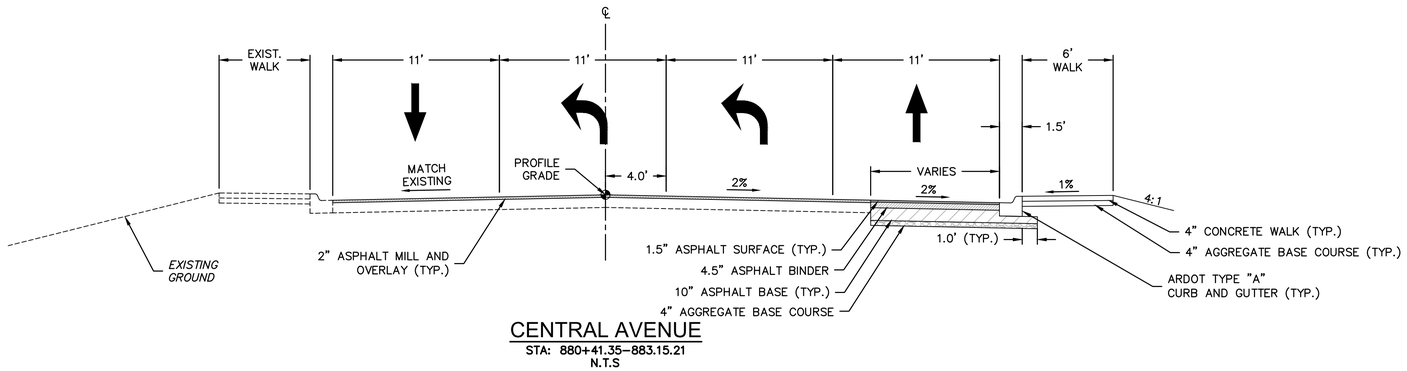

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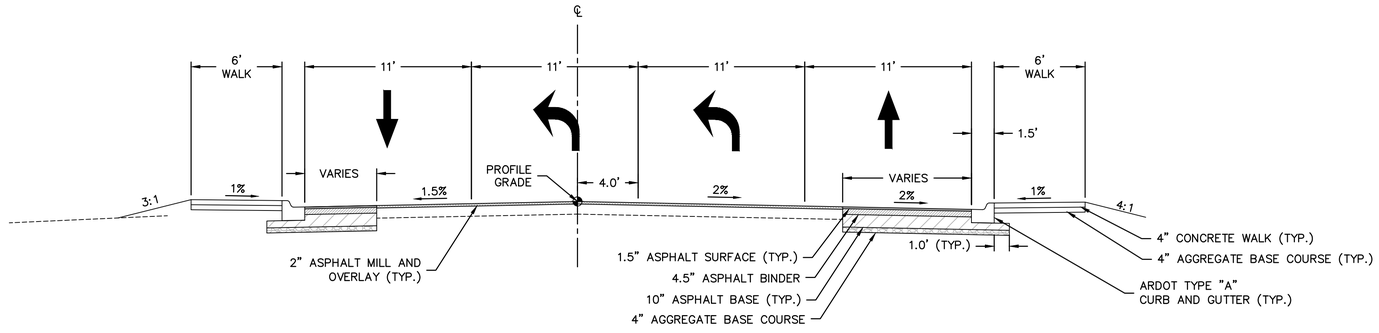
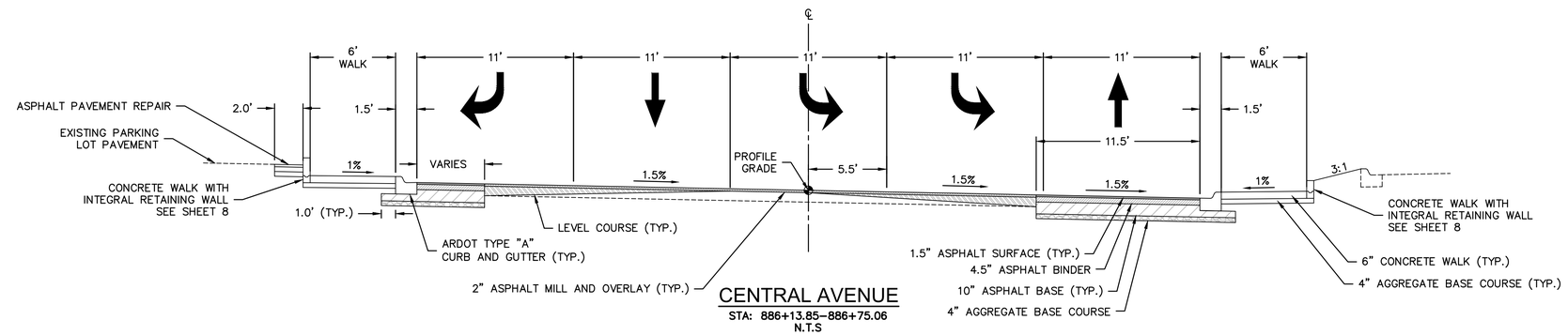
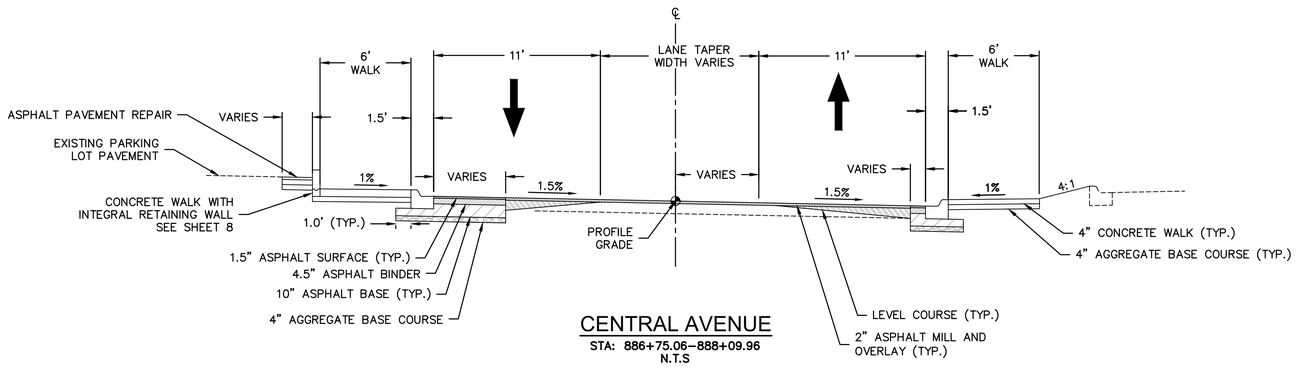
N.T.S



CENTRAL AVENUE
STA: 883.15.21–884+20.08
N.T.S



CENTRAL AVENUE
STA: 886+13.85–886+75.06
N.T.S



CENTRAL AVENUE
STA: 886+75.06–888+09.96
N.T.S

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TYPICAL SECTIONS

WALTON BLVD. & CENTRAL AVE.
INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

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SHEET
5 OF 89

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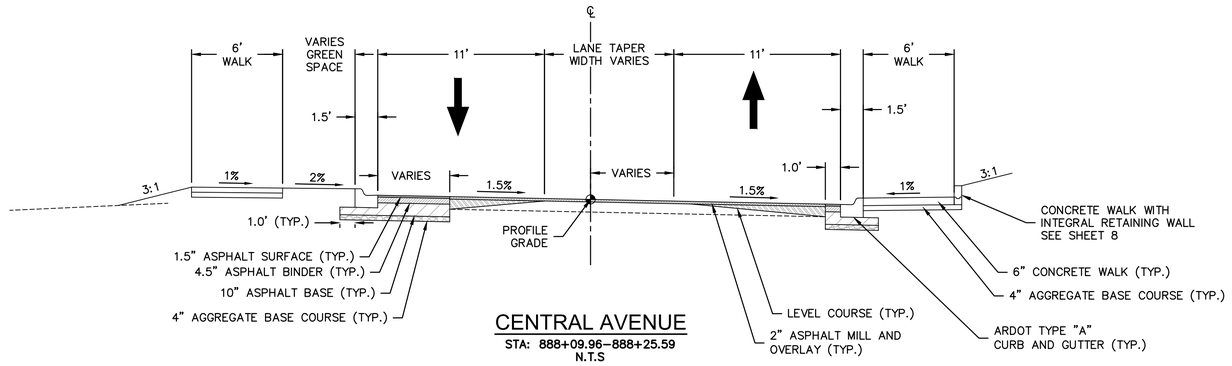
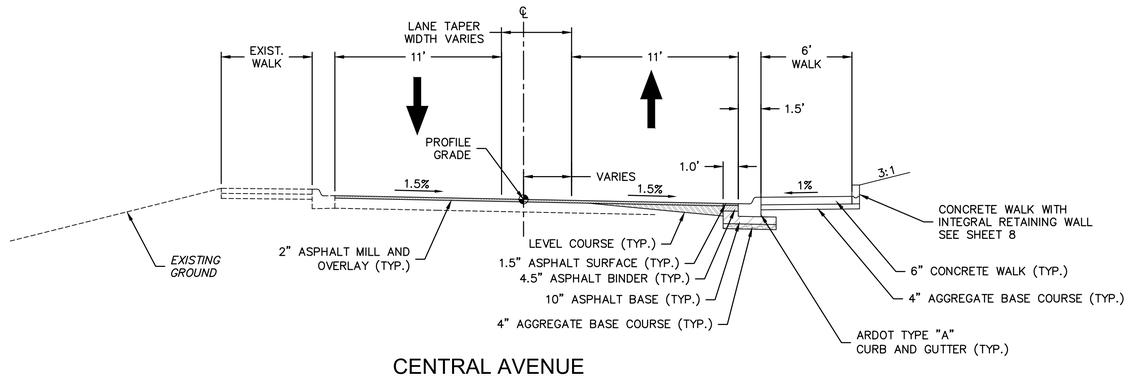


CENTRAL AVENUE

STA: 888+09.96–888+25.59
N.T.S



CENTRAL AVENUE

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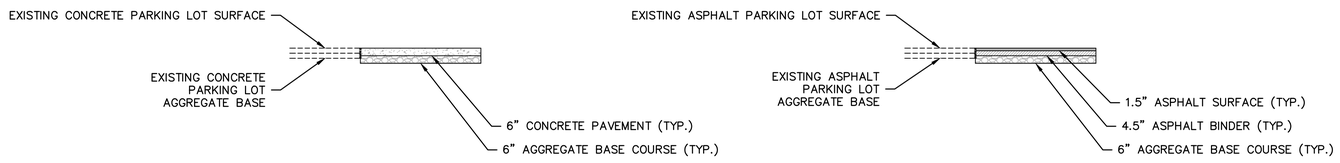
N.T.S



ASPHALT AND CONCRETE PARKING LOT PAVEMENT SECTIONS

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project no.: J21-04210
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date: 11.20.2023

SHEET
6 OF 89

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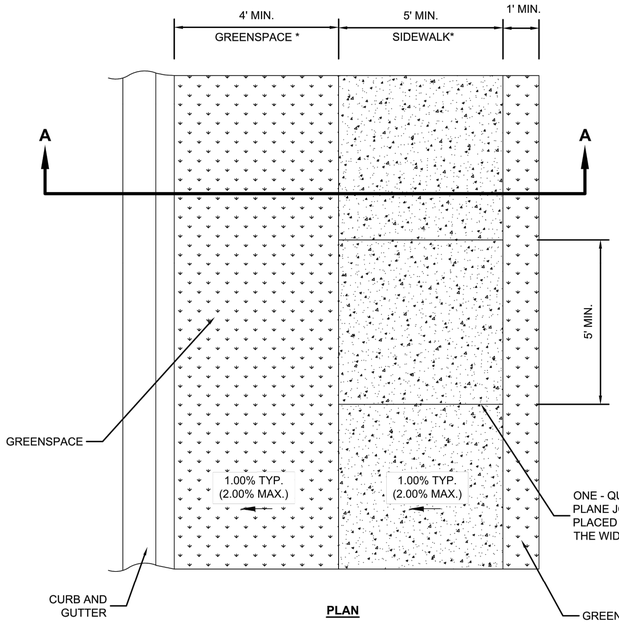
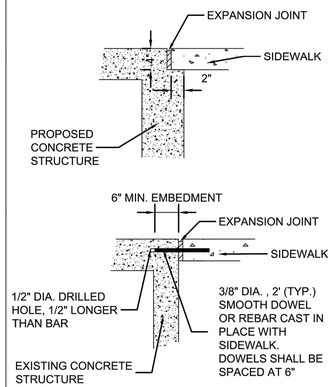
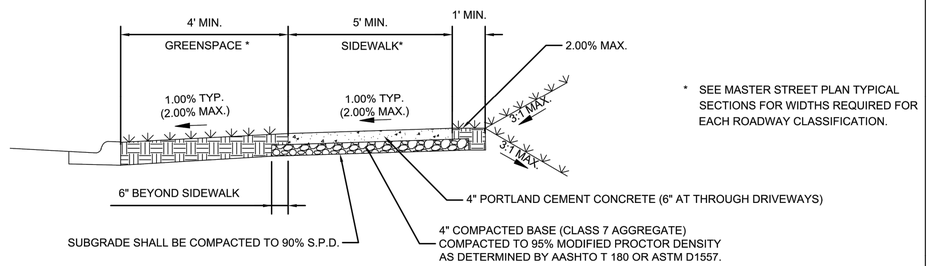


PLAN

CONNECTION TO CONCRETE STRUCTURES





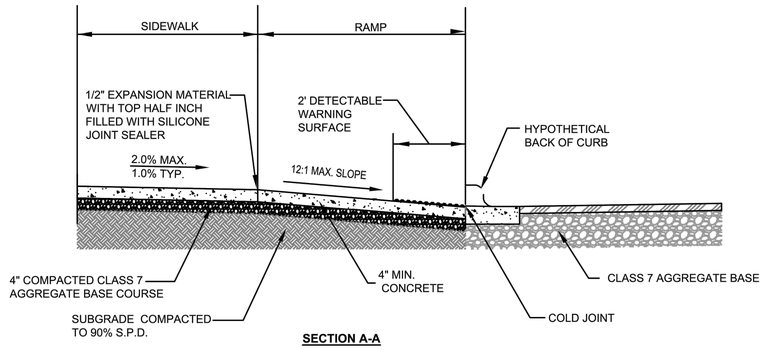
SECTION A-A

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

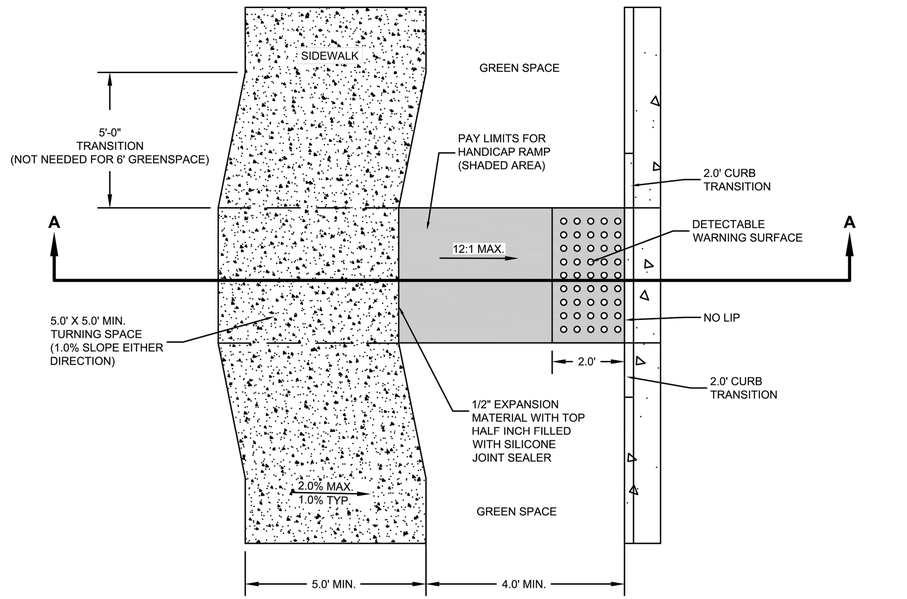
SIDEWALK CONSTRUCTION NOTES:

1. 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" TO 3/8" WIDE. EXPANSION JOINTS SHALL BE INSTALLED PERPENDICULAR TO THE SIDEWALK AT INTERVALS EQUAL TO FIVE (5) TIMES THE SIDEWALK WIDTH. EXPANSION JOINTS SHALL BE A MINIMUM OF 1/2" WIDTH AND EXTEND THE FULL DEPTH OF THE CONCRETE.
2. 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" LOWER THAN GRADE OR TRIMMED 1/2" LOWER, AND FILLED WITH SELF-LEVELING SEALANT TO FINISHED GRADE.
3. ALL SIDEWALKS SHALL RECEIVE A BROOM FINISH AND ALL EDGES SHALL HAVE A 1/2" RADIUS EDGE. CONCRETE CURING COMPOUND SHALL BE SEALTIGHT 1600-WHITE MANUFACTURED BY W.R. MEADOWS, OR AN APPROVED EQUAL.
4. CONCRETE FOR SIDEWALK SHALL CONFORM TO ARDOT CLASS "S", 3500 PSI, 6.5 BAG MIX WITH 4-7% AIR ENTRAINMENT.
5. 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.
6. CLOSED CELL BACKER ROD SHALL BE USED IN DEEP JOINTS, AS NEEDED, ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.
7. 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.

CITY OF BENTONVILLE ARKANSAS	TRANSPORTATION DIVISION 3200 SW MUNICIPAL DRIVE PHONE: (479) 271-6840	DESCRIPTION: **SIDEWALK WITH GREENSPACE** TITLE: ***SIDEWALK DETAILS***	DATE: FEBRUARY, 2021 SHEET: **SW-1**



SECTION A-A



PLAN

NOTES:

1. 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" RADIUS EDGE. CONCRETE CURING COMPOUND SHALL BE SEALTIGHT 1600-WHITE MANUFACTURED BY W.R. MEADOWS, OR AN APPROVED EQUAL.
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 RADII 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.
3. ALL SIDEWALK RAMPS REQUIRE A CITY INSPECTION PRIOR TO CONCRETE PLACEMENT.

CITY OF BENTONVILLE ARKANSAS	TRANSPORTATION DIVISION 3200 SW MUNICIPAL DRIVE PHONE: (479) 271-6840	DESCRIPTION: **SIDEWALK RAMP WITH 2' CURB TRANSITION** TITLE: ***SIDEWALK RAMP DETAIL***	DATE: FEBRUARY, 2021 SHEET: **SR-1**

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CIVIL DETAILS

WALTON BLVD. & CENTRAL AVE. INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

drawn by: JRC/JKL
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project no.: J21-04210
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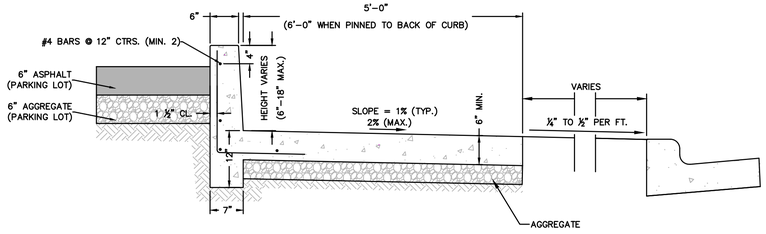
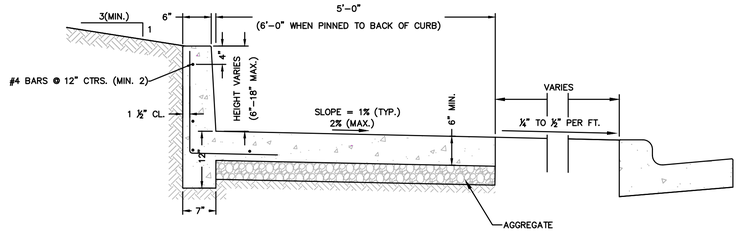
SHEET 7 OF 89

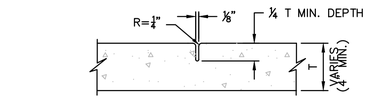
DWG: F:\2021\04001-04500\021-04210-J\40-Design\AutoCAD\Final Plans\Sheets\T_DET_J2104210.dwg USER: jcoddington
DATE: Nov 20, 2023 12:11pm XREFS: T_PTBLK_J2104210



CONCRETE WALK WITH INTEGRAL CURB
SCALE: N.T.S.



CONCRETE WALK WITH INTEGRAL CURB
SCALE: N.T.S.



TYPE A* (HORIZONTAL)
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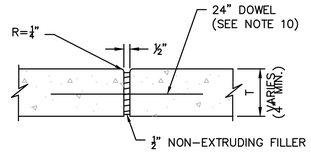

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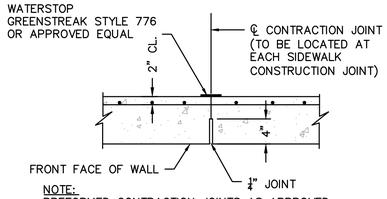
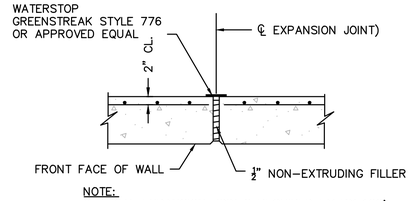


NOTE:
PREFORMED CONTRACTION JOINTS AS APPROVED BY THE CITY ENGINEER SHALL BE USED

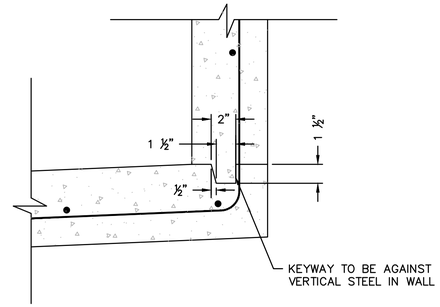
VERTICAL CONTRACTION JOINT DETAIL
SCALE: N.T.S.



NOTE:
VERTICAL EXPANSION JOINTS REQUIRED EVERY 100'

VERTICAL EXPANSION JOINT DETAIL
SCALE: N.T.S.

JOINT DETAILS
SCALE: N.T.S.



CONSTRUCTION JOINT DETAIL
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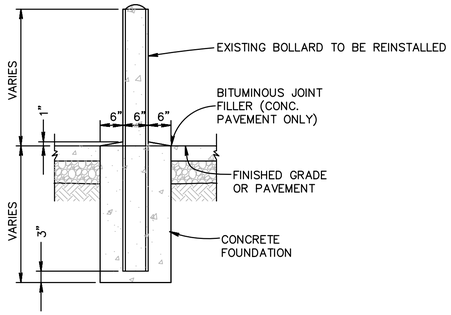
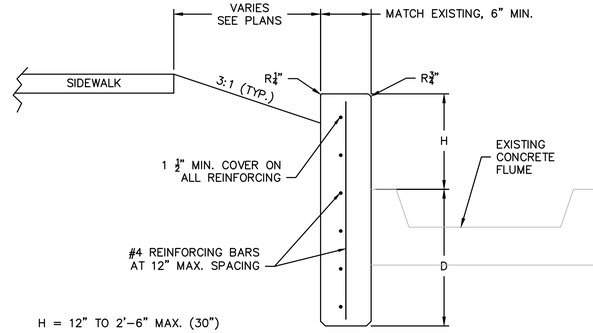


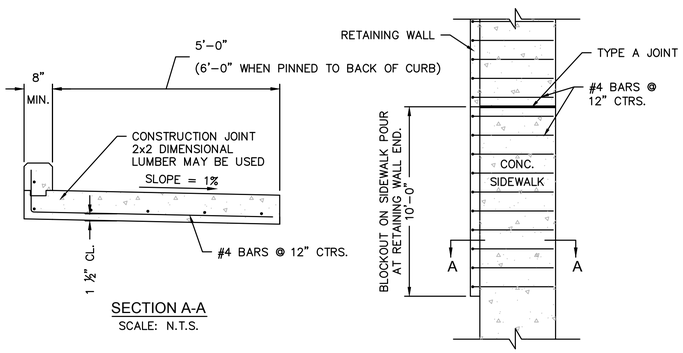
STATIONARY BOLLARD
SCALE: N.T.S.



H = 12" TO 2'-6" MAX. (30")

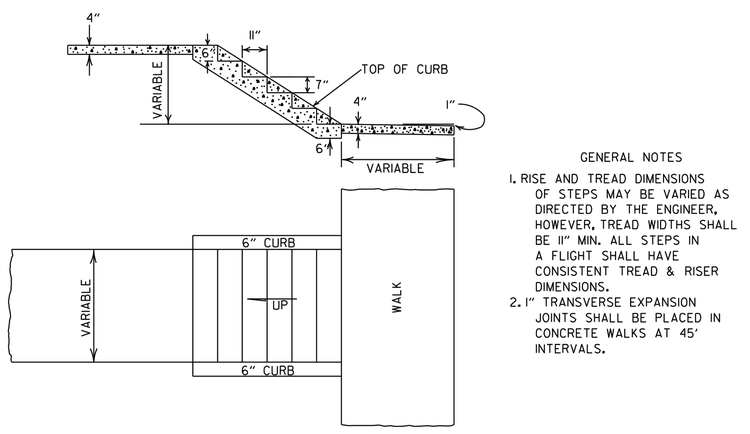
D = BURY DEPTH (FORMING NOT REQUIRED) THIS SHALL BE 18 INCHES OR "H" WHICHEVER IS GREATER. VERTICAL REINFORCING LENGTHS VARY AS NEEDED. DEPTH MAY BE REDUCED IF KEYED 6" IN ROCK.

RETAINING WALL EXTENSION
SCALE: N.T.S.



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

END OF SIDEWALK RETAINING WALL BLOCKOUT DETAIL
SCALE: N.T.S.



CONCRETE STEPS AND WALK
SCALE: N.T.S.

GENERAL NOTES

1. RISE AND TREAD DIMENSIONS OF STEPS MAY BE VARIED AS DIRECTED BY THE ENGINEER, HOWEVER, TREAD WIDTHS SHALL BE 11" MIN. ALL STEPS IN A FLIGHT SHALL HAVE CONSISTENT TREAD & RISER DIMENSIONS.
2. 1" TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE WALKS AT 45' INTERVALS.

INTEGRAL SIDEWALK AND RETAINING WALL NOTES:

GENERAL:

1. ROCK BACKFILL AND TOPSOIL PLACEMENT SHALL BE CONSIDERED SUBSIDIARY TO INTEGRAL SIDEWALK AND RETAINING WALL CONSTRUCTION.
2. DO NOT SCALE THESE DRAWINGS FOR DIMENSIONS OR CLEARANCES. ANY QUESTIONS REGARDING DIMENSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE CITY ENGINEER PRIOR TO CONSTRUCTION.
3. INSTALL WEEPHOLES EVERY 25'. CONNECT UNDERDRAIN OUTLET TO NEAREST DRAIN BASIN/STORM INLET.

CONCRETE:

4. CONCRETE USED IN THIS WORK SHALL CONFORM WITH THE LATEST EDITION OF THE CITY OF SPRINGFIELD GENERAL CONDITIONS & TECHNICAL SPECIFICATIONS FOR PUBLIC IMPROVEMENTS.
5. ALL EXPOSED WALL FACES SHALL BE HAND FINISHED WITH AN APPROVED GROUT WHILE THE WALL IS GREEN. FORM MARKS SHALL BE REMOVED PRIOR TO FINISHING WALL.
6. ALL FORM TIES SHALL BE RECESSED TYPE.

JOINTS:

7.* TYPE A JOINT SPACING SHALL BE 8'.

8.** WHERE WALK ABUTS JUNCTION OF EXISTING WALK, CONCRETE CURBS, DRIVEWAYS, AND SIMILAR STRUCTURES, AND 100' CENTERS MAXIMUM.

9. TYPE B HORIZONTAL EXPANSION JOINTS SHALL HAVE ⅝" SMOOTH DOWEL ASSEMBLIES WITH GREASED CAPS @ 12" CTRS. MAX.
10. KEY ALL CONSTRUCTION JOINTS.

REINFORCING STEEL:

11. REINFORCING STEEL SHALL BE NEW BILLET, MINIMUM GRADE 40 AS PER ASTM A615, AND SHALL BE BENT COLD.
12. ALL DIMENSIONS RELATIVE TO REINFORCING STEEL ARE TO CENTERLINE OF BARS. 2" CLEARANCE SHALL BE PROVIDED THROUGHOUT UNLESS NOTED OTHERWISE. TOLERANCE OF +/- ⅜" SHALL BE PERMITTED.
13. ALL LAP SPLICES NOT SHOWN SHALL BE A MINIMUM OF 40 BAR DIAMETERS IN LENGTH.
14. ALL DOWELS SHALL BE ACCURATELY PLACED AND SECURELY TIED IN PLACE PRIOR TO PLACEMENT OF BOTTOM SLAB CONCRETE. STICKING OF DOWELS INTO FRESH OR PARTIALLY HARDENED CONCRETE WILL NOT BE ACCEPTABLE.
15. ALL REINFORCING STEEL SHALL BE SUPPORTED ON FABRICATED STEEL BAR SUPPORTS @ 3'-0" MAXIMUM SPACING.

UNDERDRAIN CONSTRUCTION:

16. STOP UNDERDRAIN AT ENDS OF SIDEWALK / RETAINING WALL.
17. PROPOSED UNDERDRAIN PIPE LAYOUT, FLOWLINE ELEVATIONS, INLET CONNECTION POINTS, AND DETAILS SHALL BE APPROVED PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND MATERIAL TESTS AS REQUIRED FOR APPROVAL BY THE CITY ENGINEER.
18. ALL UNDERDRAIN OUTLET PIPES SHALL CONFORM TO THE CITY OF SPRINGFIELD STANDARD SPECIFICATIONS FOR PVC PIPE. ALL JOINTS SHALL BE WATERTIGHT. ALL OUTLET PIPES SHALL BE TIED INTO THE NEAREST STORM SEWER INLET AS APPROVED.
19. ALL UNDERDRAIN PIPES, SHALL BE INSTALLED AT A MINIMUM SLOPE OF 1%.
20. ALL FILTER FABRIC USED FOR PIPE UNDERDRAIN CONSTRUCTION SHALL MEET THE REQUIREMENTS OF AASHTO M288 CLASS 1 OR APPROVED EQUAL.

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REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

CIVIL DETAILS

WALTON BLVD. & CENTRAL AVE. INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

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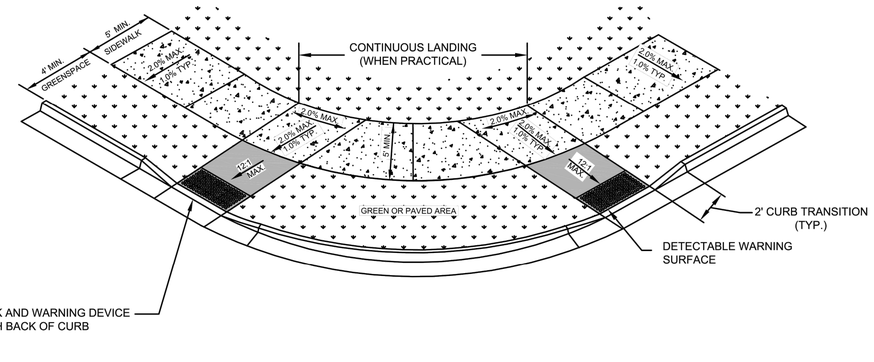
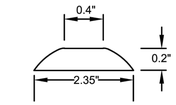


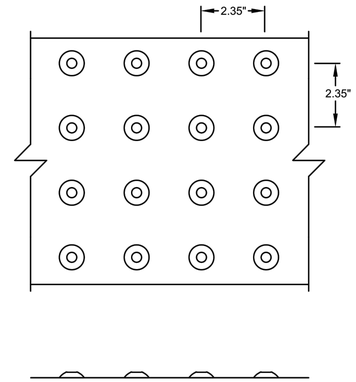
NOTES:
1. CONCRETE FOR SIDEWALK RAMPS SHALL CONFORM TO ARDOT CLASS "S", 3500 PSI, 6.5 BAG MIX WITH 4-7% AIR ENTRAINMENT. ALL SIDEWALK RAMPS SHALL RECEIVE A BROOM FINISH AND ALL EDGES SHALL HAVE A 1/2" RADIUS EDGE. CONCRETE CURING COMPOUND SHALL BE SEALTIGHT 1600-WHITE MANUFACTURED BY W.R. MEADOWS, OR AN APPROVED EQUAL.
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 RADII 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.
3. ALL SIDEWALK RAMPS REQUIRE A CITY INSPECTION PRIOR TO CONCRETE PLACEMENT.

CITY OF BENTONVILLE ARKANSAS	TRANSPORTATION DIVISION 3200 SW MUNICIPAL DRIVE PHONE: (479) 271-6840	DESCRIPTION: **SIDEWALK RAMP LOCATIONS AT RADIUS** TITLE: ***SIDEWALK RAMP DETAIL***	DATE: MARCH, 2021 SHEET: **SR-4**

NOTES:
1. THE DETECTABLE WARNING DEVICE SHALL BE LOCATED SO THAT THE NEAREST EDGE OF THE DEVICE IS LOCATED AT THE BACK OF CURB.
2. TRUNCATED DOMES SHALL HAVE A DIAMETER OF 0.9 INCH AT THE BOTTOM, A DIAMETER OF 0.4 INCH AT THE TOP, A HEIGHT OF 0.2 INCH, AND A CENTER-TO-CENTER SPACING OF 2.35 INCHES MEASURED ALONG ONE SIDE OF A SQUARE ARRANGEMENT.
3. DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.
4. DETECTABLE WARNING DEVICE SHALL BE 24 INCHES IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE. (MIN 4')
5. TYPE OF DETECTABLE WARNING DEVICE SHALL BE APPROVED BY THE CITY OF BENTONVILLE PRIOR TO INSTALLATION. STAMPED CONCRETE SHALL NOT BE USED AS A DETECTABLE WARNING DEVICE.



TRUNCATED DOME SECTION



TRUNCATED DOME SPACING

DETECTABLE WARNING DEVICE DETAIL

CITY OF BENTONVILLE ARKANSAS	TRANSPORTATION DIVISION 3200 SW MUNICIPAL DRIVE PHONE: (479) 271-6840	DESCRIPTION: ***DETECTABLE WARNING DEVICE*** TITLE: **SIDEWALK RAMP DETAIL**	DATE: MARCH, 2021 SHEET: **SR-5**

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BENTONVILLE, ARKANSAS 2023

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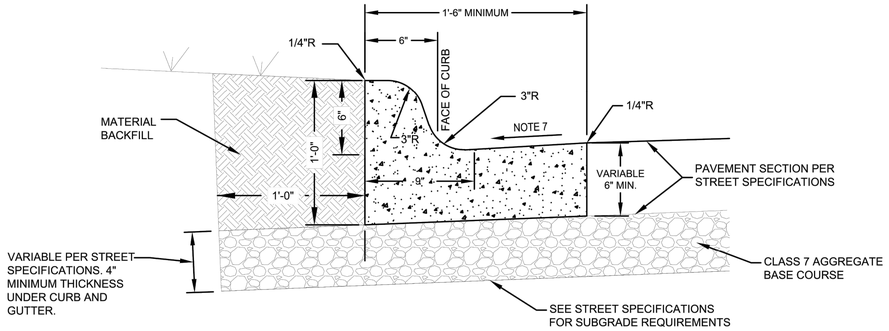
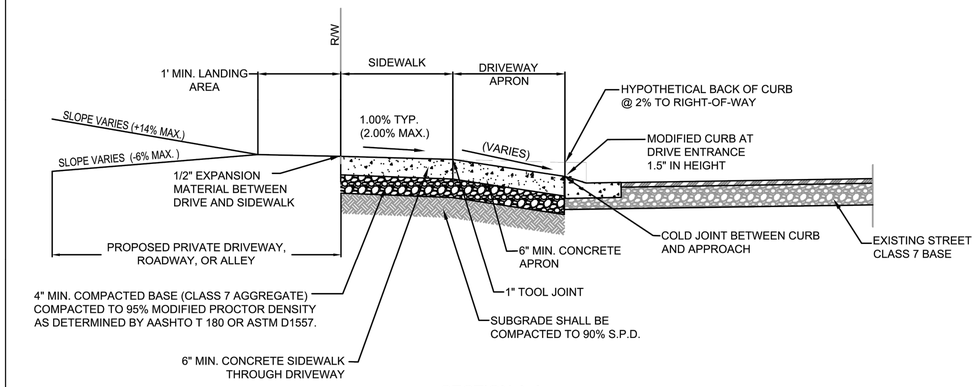


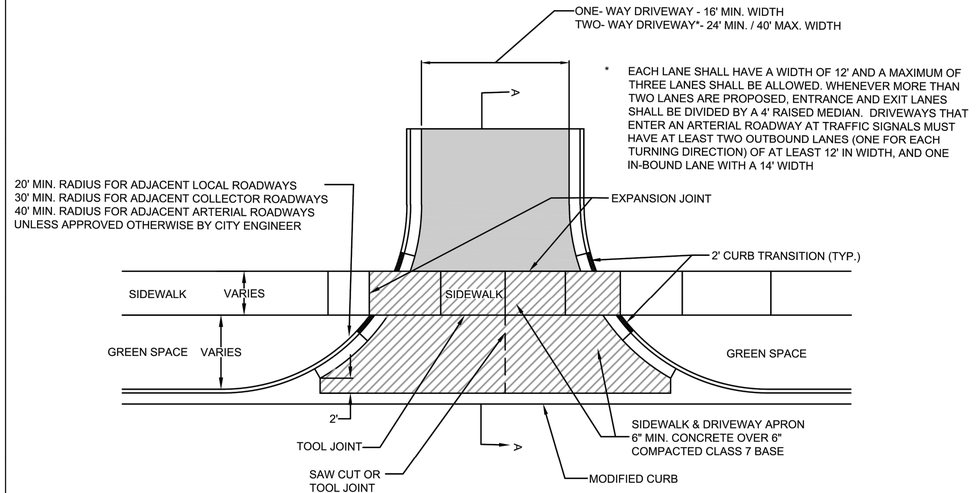
CURB & GUTTER NOTES:

1. CONCRETE SHALL BE CLASS "S" PORTLAND CEMENT CONCRETE IN ACCORDANCE WITH SECTION 802 OR 501, ARDOT STANDARD SPECIFICATIONS WITH A 28-DAY COMPRESSIVE STRENGTH OF 3,500 p.s.i. ADMIXTURES SHALL NOT BE USED UNLESS SPECIFICALLY APPROVED BY THE CITY ENGINEER. MAXIMUM SLUMP SHALL NOT EXCEED 4". CONCRETE MAY NOT BE POURED IF A FALLING AIR TEMPERATURE FALLS BELOW 40°F NOR RESUMED UNTIL AN ASCENDING AIR TEMPERATURE RISES ABOVE 35°F WITHOUT SPECIFIC AUTHORITY FROM THE CITY REPRESENTATIVE.
2. ½" WIDE EXPANSION JOINTS SHALL BE REQUIRED AT 75 FT. INTERVALS AND AT ALL STATIONARY STRUCTURES AND ENDS OF CURB RETURNS. EXPANSION JOINTS SHALL BE MADE WITH 1/2 " ASPHALT IMPREGNATED FIBERBOARD CONFORMING TO AASHTO M-213 . ACCEPTABLE MATERIAL MAY BE FOUND ON THE CURRENT ARDOT "QUALIFIED PRODUCTS LIST". EXPANSION JOINT MATERIAL SHALL BE LEFT 1/2" LOWER THAN GRADE OR TRIMMED 1/2" LOWER THAN GRADE.
3. EXPANSION JOINT MATERIAL SHALL BE FULL DEPTH OF THE CURB AND PERPENDICULAR TO THE CURB LINE.
4. FINISH SHALL BE MEDIUM BROOM FINISH.
5. CURING COMPOUND SHALL BE A WHITE PIGMENTED MEMBRANE-FORMING LIQUID CONFORMING TO THE REQUIREMENTS OF ASTM DESIGNATION C309, TYPE 2.
6. CONTRACTION JOINTS SHALL BE 1/8" TO 3/8" X 1 1/2" AT 15 FT. INTERVALS. ALL CONTRACTION JOINTS AND COLD JOINTS SHALL BE FILLED WITH JOINT SEALANT TO FINISHED GRADE. JOINT SEALING COMPOUND FOR CONTRACTION JOINTS SHALL BE SONNEBORN "SONOLASTIC SLI" OR APPROVED EQUAL. CLOSED CELL BACKER ROD SHALL BE USED IN DEEP JOINTS, AS NEEDED, ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.
7. GUTTER SHALL MATCH THE CROSS SLOPE OF THE ROAD WITHIN ± 0.5%. GUTTER DRAINING THE OPPOSITE DIRECTION AS THE ROAD WILL NOT BE ACCEPTED.
8. CONTRACTOR SHALL GIVE THE CITY AT LEAST TWENTY-FOUR (24) HOURS ADVANCE NOTICE BEFORE PLACING CONCRETE, AND THE SUBGRADE SHALL BE CHECKED AND APPROVED BY THE CITY REPRESENTATIVE BEFORE ANY CONCRETE IS PLACED.
9. AFTER CURBS HAVE SET SUFFICIENTLY, THEY SHALL BE BACKFILLED WITH APPROVED MATERIAL AND GRADED SO THAT NO PONDING WILL OCCUR. AREAS ON WHICH SIDEWALK OR DRIVEWAYS ARE TO BE CONSTRUCTED SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AS MEASURED BY AASHTO T99 OR ASTM D698 (STANDARD PROCTOR).
10. FOR CONCRETE STREETS, IF THE CURB AND GUTTER IS CAST SEPARATELY, 1/2 " DIAMETER DOWEL RODS 30" LONG SHALL BE PROVIDED A MINIMUM OF EVERY 30" ON-CENTER.

CITY OF BENTONVILLE ARKANSAS	TRANSPORTATION DIVISION 3200 SW MUNICIPAL DRIVE PHONE: (479) 271-6840	DESCRIPTION: **TYPE "A" CURB & GUTTER**	DATE: FEBRUARY, 2021
		TITLE: ***CURB & GUTTER DETAILS***	SHEET: **CG-1**



SECTION A-A



* EACH LANE SHALL HAVE A WIDTH OF 12' AND A MAXIMUM OF THREE LANES SHALL BE ALLOWED. WHENEVER MORE THAN TWO LANES ARE PROPOSED, ENTRANCE AND EXIT LANES SHALL BE DIVIDED BY A 4' RAISED MEDIAN. DRIVEWAYS THAT ENTER AN ARTERIAL ROADWAY AT TRAFFIC SIGNALS MUST HAVE AT LEAST TWO OUTBOUND LANES (ONE FOR EACH TURNING DIRECTION) OF AT LEAST 12' IN WIDTH, AND ONE IN-BOUND LANE WITH A 14' WIDTH

PLAN VIEW

NOTES:
1. FULL DEPTH EXPANSION JOINTS (SIX INCHES) SHALL BE PROVIDED AT THE BACK OF THE SIDEWALK THROUGH THE DRIVEWAY AND AT THE EDGE OF DRIVEWAY AS SHOWN ABOVE. EXPANSION MATERIAL SHALL BE ASPHALT IMPREGNATED FIBERBOARD OR APPROVED EQUAL. (NO WOOD)
2. CONCRETE TO BE SAW CUT OR PLACE A TOOL JOINT AT THE CENTER OF DRIVE AND SEALED. IF POSSIBLE CONTRACTOR SHALL TRY TO ALIGN THE JOINT AT THE CENTER OF THE DRIVE WITH THE A JOINT IN THE ADJACENT SIDEWALK. JOINTS SHALL BE PLACED SO THAT NO SLAB DIMENSION IS GREATER THAN 15'.
3. CONCRETE FOR DRIVEWAYS SHALL BE CLASS "S" PORTLAND CEMENT CONCRETE IN ACCORDANCE WITH SECTION 802 OR 501, ARDOT STANDARD SPECIFICATIONS WITH A 28-DAY COMPRESSIVE STRENGTH OF 3,500 PSI AND 4% TO 7% AIR ENTRAINED.
4. ALL SIDEWALKS REQUIRE A CONCRETE CURING COMPOUND, SUCH AS SEALTIGHT 1600-WHITE MANUFACTURED BY W.R. MEADOWS, OR AN APPROVED EQUAL
5. ALL DRIVEWAY APRONS SHALL BE CONSTRUCTED WITH A BROOM FINISH. TEXTURED, STAMPED, OR EXPOSED AGGREGATE CONCRETE IS NOT ALLOWED WITHIN STREET RIGHT OF WAY.
6. ALL CURB CUTS FOR DRIVEWAY APPROACHES REQUIRE AN INSPECTION PRIOR TO AND AFTER CONCRETE PLACEMENT.
7. CONCRETE DRIVEWAYS SHALL BE A MINIMUM OF 6 INCHES OF CONCRETE OVER 4 INCHES OF COMPACTED CLASS 7 AGGREGATE BASE COURSE OVER PREPARED SUBGRADE. COMMERCIAL ASPHALT DRIVEWAYS BEYOND THE CONCRETE APRON SHALL BE A MINIMUM OF 3 INCHES OF ASPHALT SURFACE COURSE OVER 6 INCHES OF COMPACTED CLASS 7 AGGREGATE BASE COURSE OVER PREPARED SUBGRADE.
8. DRIVEWAY APRON AND MODIFIED CURB SHALL BE PLACED MONOLITHICALLY.

CITY OF BENTONVILLE ARKANSAS	TRANSPORTATION DIVISION 3200 SW MUNICIPAL DRIVE PHONE: (479) 271-6840	DESCRIPTION: **STANDARD COMMERCIAL DRIVEWAY WITH GREEN SPACE**	DATE: MARCH, 2021
		TITLE: ***COMMERCIAL DRIVEWAY DETAIL***	SHEET: **DW-2**

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SHEET 10 OF 89

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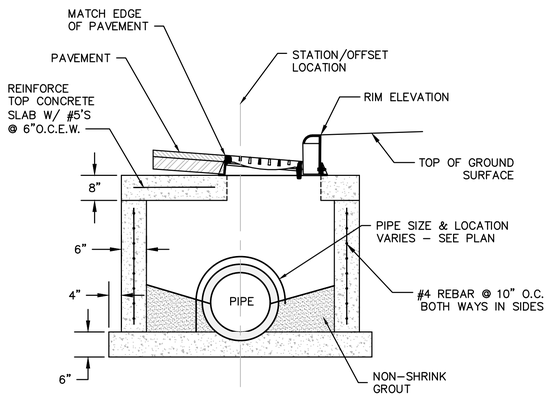

COMBINATION INLET DETAIL

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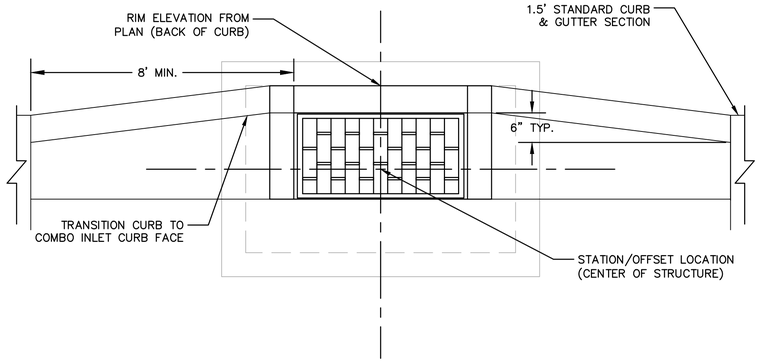
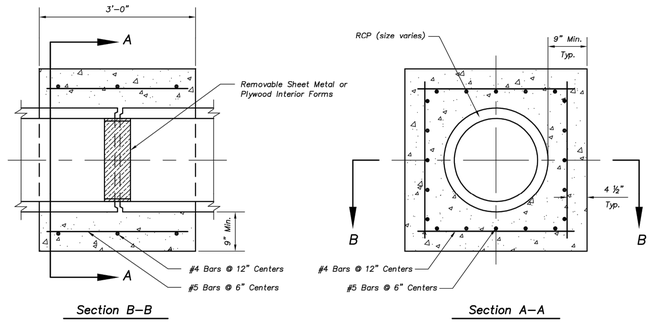


COMBINATION INLET GUTTER TRANSITION DETAIL

PLAN VIEW

N.T.S.

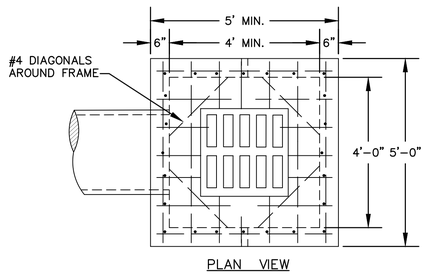


CONCRETE COLLAR DETAIL

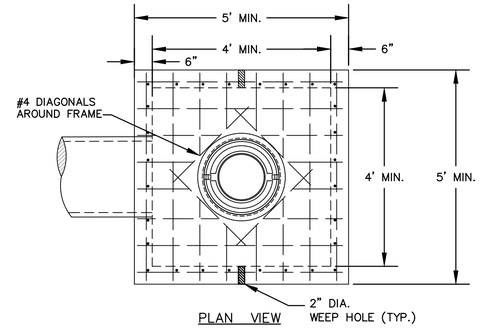
N.T.S.

CONCRETE COLLAR NOTES

1. USE KCMMB4K CONCRETE THROUGHOUT.
2. REINFORCING STEEL SHALL BE NEW BILLET, MINIMUM GRADE 40 AS PER ASTM A615, AND SHALL BE BENT COLD.
3. ALL DIMENSIONS RELATIVE TO REINFORCING STEEL ARE TO CENTERLINE OF BARS. 2" CLEARANCE SHALL BE PROVIDED THROUGHOUT UNLESS NOTED OTHERWISE. TOLERANCE OF +/– 1/8" SHALL BE PERMITTED.
4. ALL LAP SPLICES NOT SHOWN SHALL BE A MINIMUM OF 40 BAR DIAMETERS IN LENGTH.
5. ALL DOWELS SHALL BE ACCURATELY PLACED AND SECURELY TIED IN PLACE PRIOR TO PLACEMENT OF BOTTOM SLAB CONCRETE. STICKING OF DOWELS INTO FRESH OR PARTIALLY HARDENED CONCRETE WILL NOT BE ACCEPTABLE.
6. ALL REINFORCING STEEL SHALL BE SUPPORTED ON FABRICATED STEEL BAR SUPPORTS @ 3'–0" MAXIMUM SPACING.
7. DO NOT SCALE THESE DRAWINGS FOR DIMENSIONS OR CLEARANCES. ANY QUESTIONS REGARDING DIMENSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE CITY ENGINEER PRIOR TO CONSTRUCTION.



PLAN VIEW



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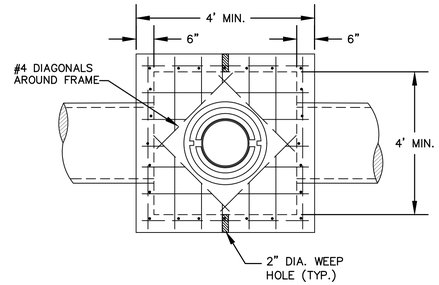
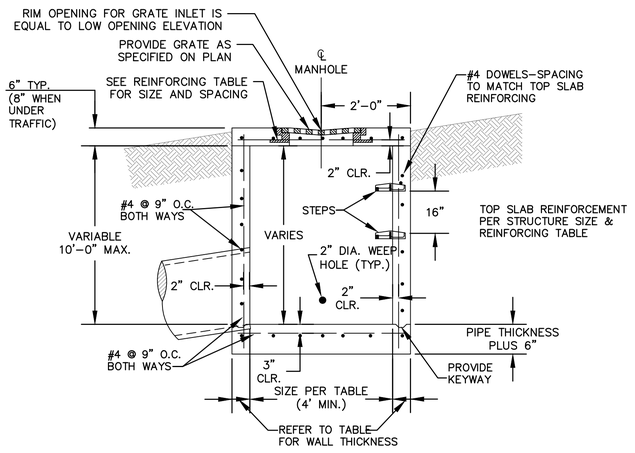


PLAN VIEW



ELEVATION

GRATE INLET

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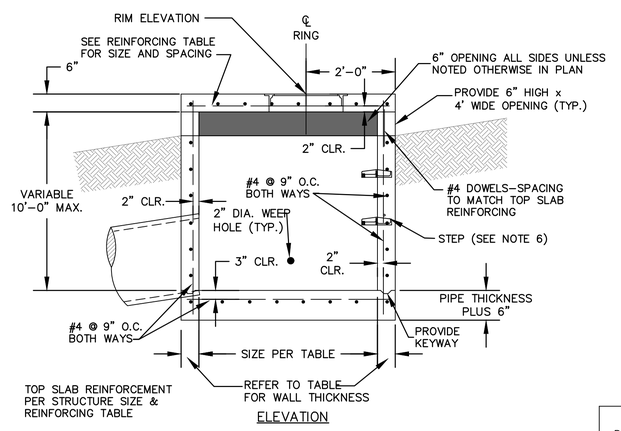

ELEVATION

AREA INLET

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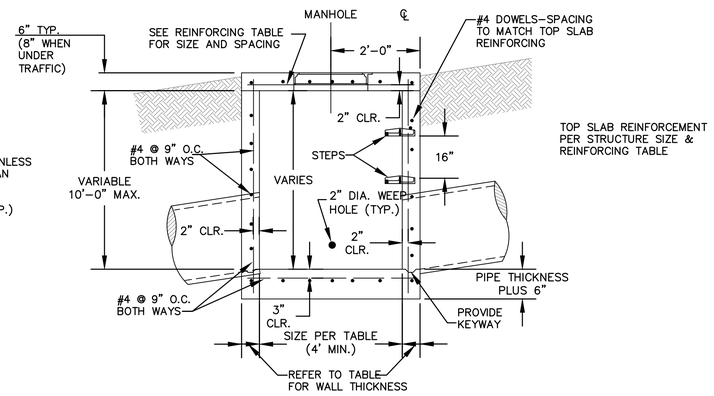

ELEVATION

JUNCTION BOX

N.T.S.

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.

JUNCTION BOX 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. INVERTS SHALL BE POURED MONOLITHICALLY WITH FOOTING.
5. PIPES MAY ENTER BOX FROM ANY ANGLE OF ELEVATION AS DIRECTED BY THE ENGINEER. REINFORCING BARS SHALL BE CUT TO CLEAR PIPE BY 2".
6. 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.
7. LIMIT DEFLECTION TO 60 DEGREES. IF GREATER, USE NEXT LARGER MANHOLE DIAMETER/SIZE.

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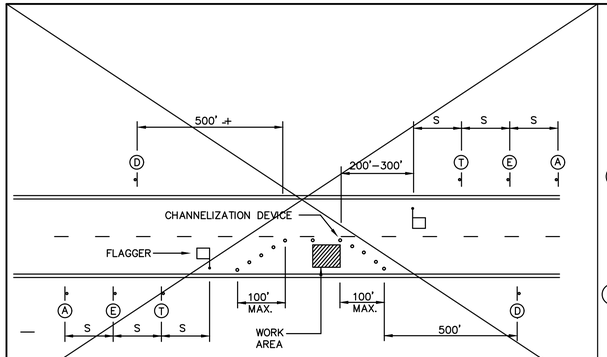
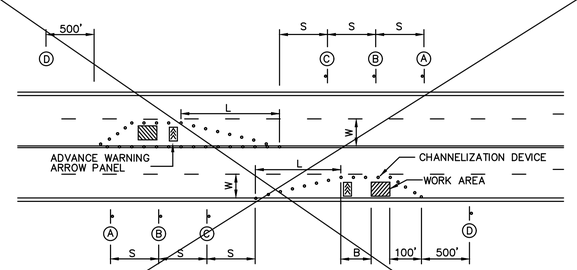
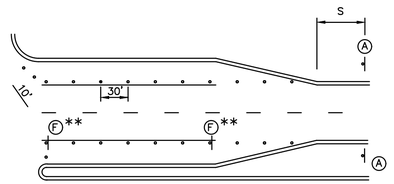


DETAIL 1: TYPICAL CLOSURE – TWO–LANE STREET

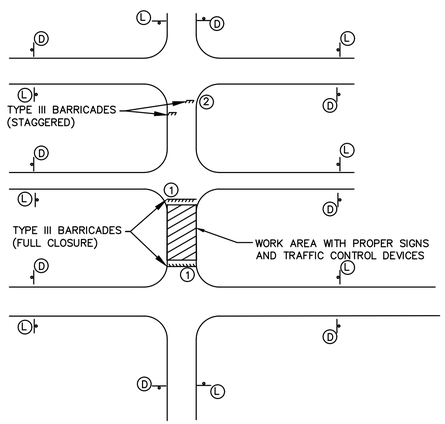


DETAIL 2: TYPICAL LANE CLOSURE – FOUR–LANE STREET



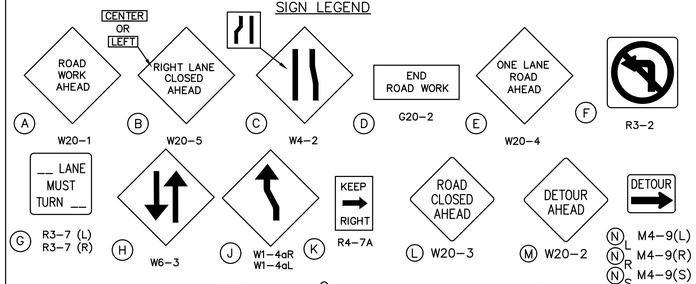
** USE ONLY AS APPROVED BY CITY TRAFFIC ENGINEER

DETAIL 3: TYPICAL RIGHT–TURN LANE AND LEFT–TURN LANE CLOSURES

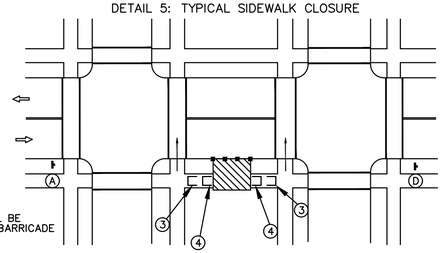


DETAIL 4: TYPICAL SIDE ROAD SIGNING FOR ROAD CLOSURE

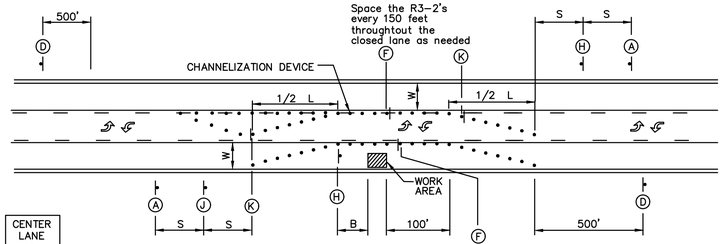
SIGN LEGEND



DETAIL 5: TYPICAL SIDEWALK CLOSURE



NOTE: SIGNS SHALL BE MOUNTED TO ADA BARRICADE



CENTER LANE ONLY R3–9B

Note: ALL Center Turn Lane signs (R3–9B) SHALL be bagged during lane closer.

DETAIL 6: TYPICAL LANE CLOSURE – THREE–LANE STREET

Guidelines for length of longitudinal buffer space (B)	
Speed* (mph)	Length (Feet)
20	35
25	55
30	85
35	120
40	170
45	220
50	300

*Posted speed

SIGN SPACING(S)	
Speed Limit M.P.H.	Spacing (Feet)
≤ 30	100
35 – 45	350
≥ 55	500

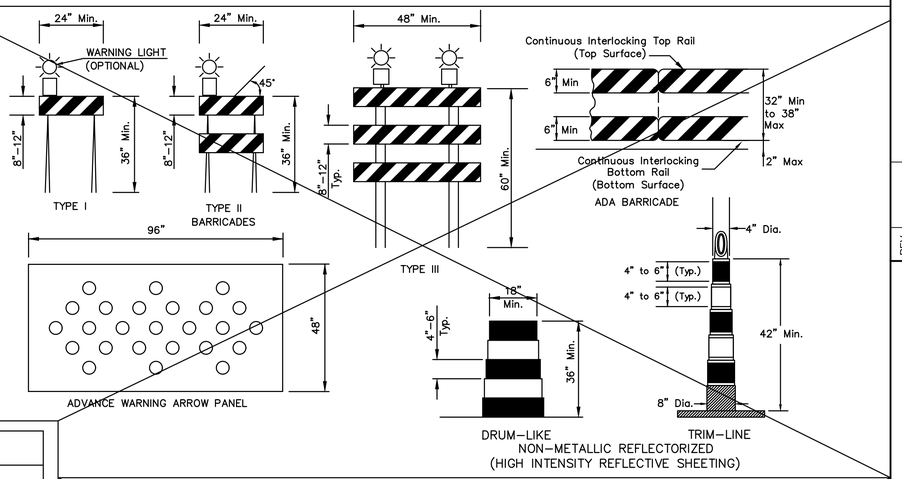
MAXIMUM CHANNELIZATION SPACING IN FEET *		
Speed Limit M.P.H.	Along Taper	After Taper
20	20	40
25	25	50
30	30	60
35	35	70
40	40	80
45	45	90
50	50	100
55	55	100

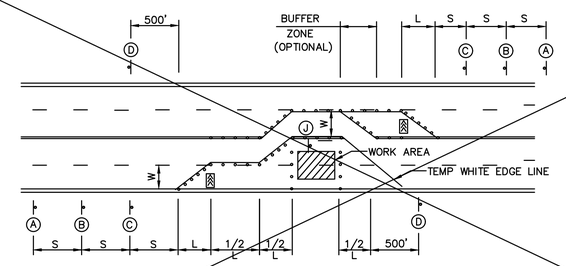
* The maximum distance in feet between devices in a taper should not exceed 1.0 times the speed limit in MPH.

TAPER DETAIL				
Speed Limit M.P.H.	Minimum Taper Length (L) Lane Width (W) 10	11	12	Minimum Number of Channelizing Devices for Taper
20	70	75	80	5
25	105	115	125	6
30	150	165	180	7
35	205	225	245	8
40	270	295	320	9
45	450	495	540	13
50	500	550	600	13
55	550	605	660	13

GENERAL NOTES:

1. All signs, barricades, drums, markings and other traffic control devices shall conform to the Manual on Uniform Traffic Control Devices (M.U.T.C.D.), most current edition.
2. All traffic control devices shall be standard in size, shape, color and message, in good condition, and reflectorized. All signs and barricades in place at night shall be reflectorized with high intensity sheeting. All signs shall be securely mounted with height and lateral location as described in the M.U.T.C.D.
3. Warning lights should be used on all channelization devices and warning signs per M.U.T.C.D. Type A Low–Intensity Flashing Warning lights should be mounted on warning signs as well as barricades where used singley to warn users of potentially hazardous areas during nighttime hours. Type B High–Intensity Flashing warning lights should be used during day and nighttime operations to increase awareness of potentially hazardous areas. Type C Steady–Burn lights should be mounted on barricades where used in series to delineate the edge of the travel way.
4. Advance Warning Arrow Panels shall be used for all lane closures on multi–lane streets but should not be used in lieu of proper traffic control signs, barricades and channelization devices.
5. Flaggers shall be used where indicated on the plans, where construction vehicles interact with normal traffic or where construction activities impose a restriction on traffic, as directed by the Engineer in charge of construction. Where flaggers are used, advance signing shall be erected as shown above or as specified in the M.U.T.C.D. Flaggers shall meet the requirements in the M.U.T.C.D. in regard to character, training, attire and behavior.
6. Channelization devices used in the street shall be either drums, cones or Trimline channelizers.
7. Traffic control devices not in use or not applicable shall be either covered or removed from the work area.
8. The Contractor shall place as many barricades as needed to effectively shield pedestrians and traffic from exposed objects, excavations and construction activities. ADA Pedestrian Barricades shall be installed around all excavations left open during non–construction times or as directed by the Engineer in charge of construction.
9. Access shall be maintained to all driveways and side streets unless noted otherwise on the plans.
10. Construction materials shall be kept off of sidewalks, consolidated in one location within City Right–Of–Way, and removed daily unless otherwise approved by the Engineer in charge of construction.
11. Dirt, mud and other construction debris on streets and sidewalks shall be removed immediately.
12. The Contractor shall not perform any work that will restrict traffic in any way between the hours of 7:00 a.m. and 8:30 a.m. or 4:30 p.m. and 6:00 p.m. unless prior approval has been given.
13. The Contractor shall be responsible for maintaining all traffic control devices on an around–the–clock basis, whether or not work is actively being pursued and any deficiencies noted shall be corrected immediately.
14. 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 assure the safety of motorist, pedestrians, and workers at all times. Any additional quantities of traffic control devices necessary to complete the contract or as ordered by the Engineer shall be considered subsidiary to the contract bid price.
15. Construction vehicles parked along streets and construction signs shall not restrict sight distance for vehicles exiting at streets or any drives.
16. Should the contractor fail to enforce the traffic control plan or fail to clean, replace or otherwise maintain the traffic control devices when directed to do so by the Engineer or representative, the City/Controlling Jurisdiction may take one or more of the following actions:
    A) Employ another agency to correct deficiencies in signing or warning devices and deduct the cost from the contractor's pay estimate
    B) Suspend all pay Estimates until deficiencies are corrected.
    C) Stop the work until deficiencies are corrected.
    D) Place the contractor in default.
17. The Contractor shall keep roadway closures due to construction activities to a minimum and provide advanced notice to affected users.
18. The Contractor shall notify enforcement and emergency agencies before the start of construction to request their cooperation and to provide coordination of services when emergencies arise during the construction at the project site. When the contractor completes this notification with enforcement and emergency agencies, a report shall be furnished to the engineer on the status of incident management.
19. The Contractor may, if need arises or at the request of the Engineer, place reduced speed limit signing and work zone speed limit signing in advance of all active work zone areas. Work zone speed limit reduction shall not be greater than 10 mph throughout construction areas without advanced signing in place. Contractor shall cover or replace all speed limit signs in conflict with the work zone speed limit throughout the construction area.





DETAIL 7: TYPICAL LANE CLOSURE – FOUR–LANE STREET

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TEL 479.443.3404
www.olsson.com

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18072
K. ROTERING
11-20-2023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

TRAFFIC CONTROL DETAILS

WALTON BLVD. & CENTRAL AVE. INTERSECTION IMPROVEMENTS

2023

BENTONVILLE, ARKANSAS

drawn by:	MES
checked by:	JAB
approved by:	TBD
QA/QC by:	KR
project no.:	J21-04210
drawing no.:	F_TRFDTLS_J210210
date:	11.20.2023

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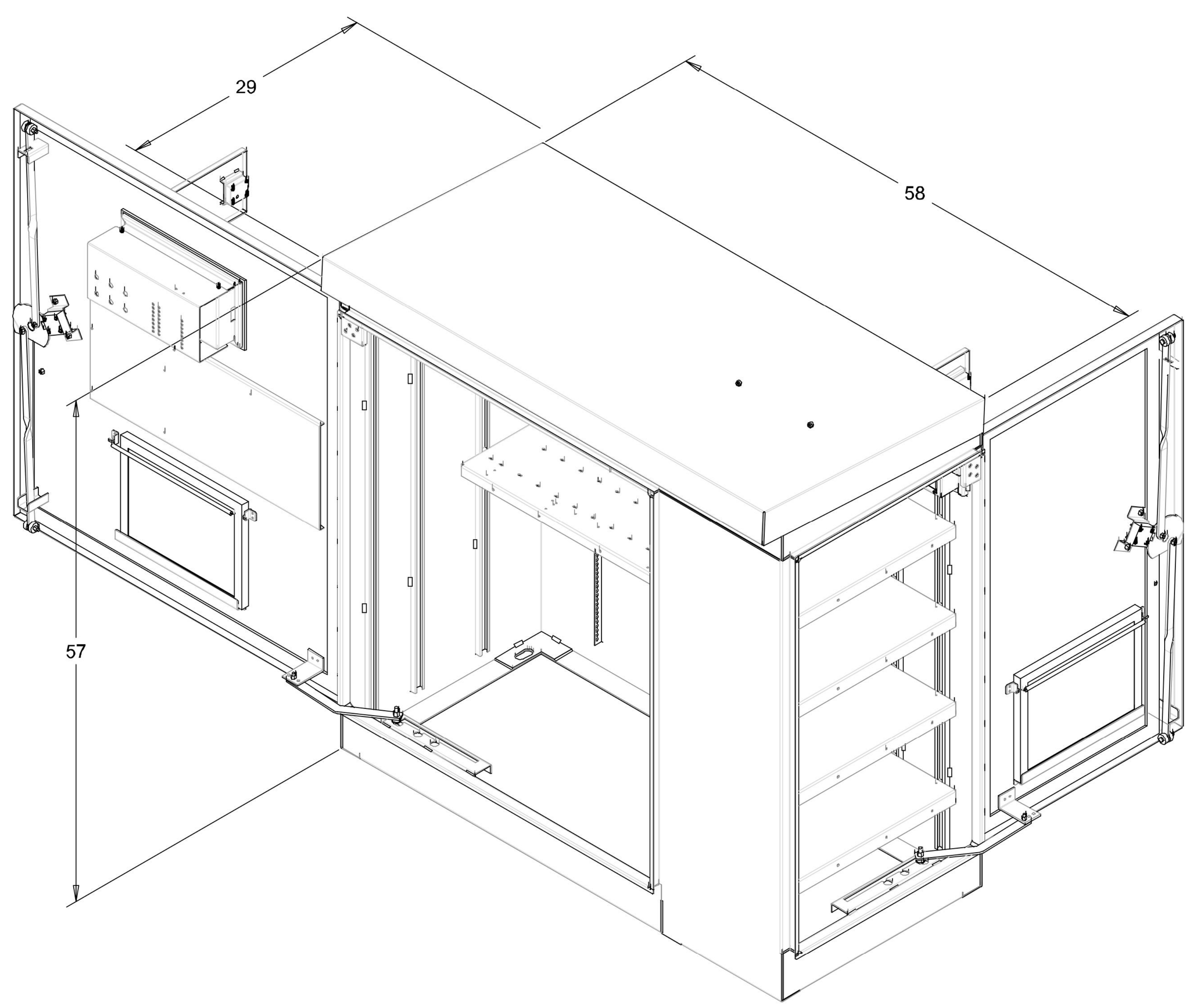
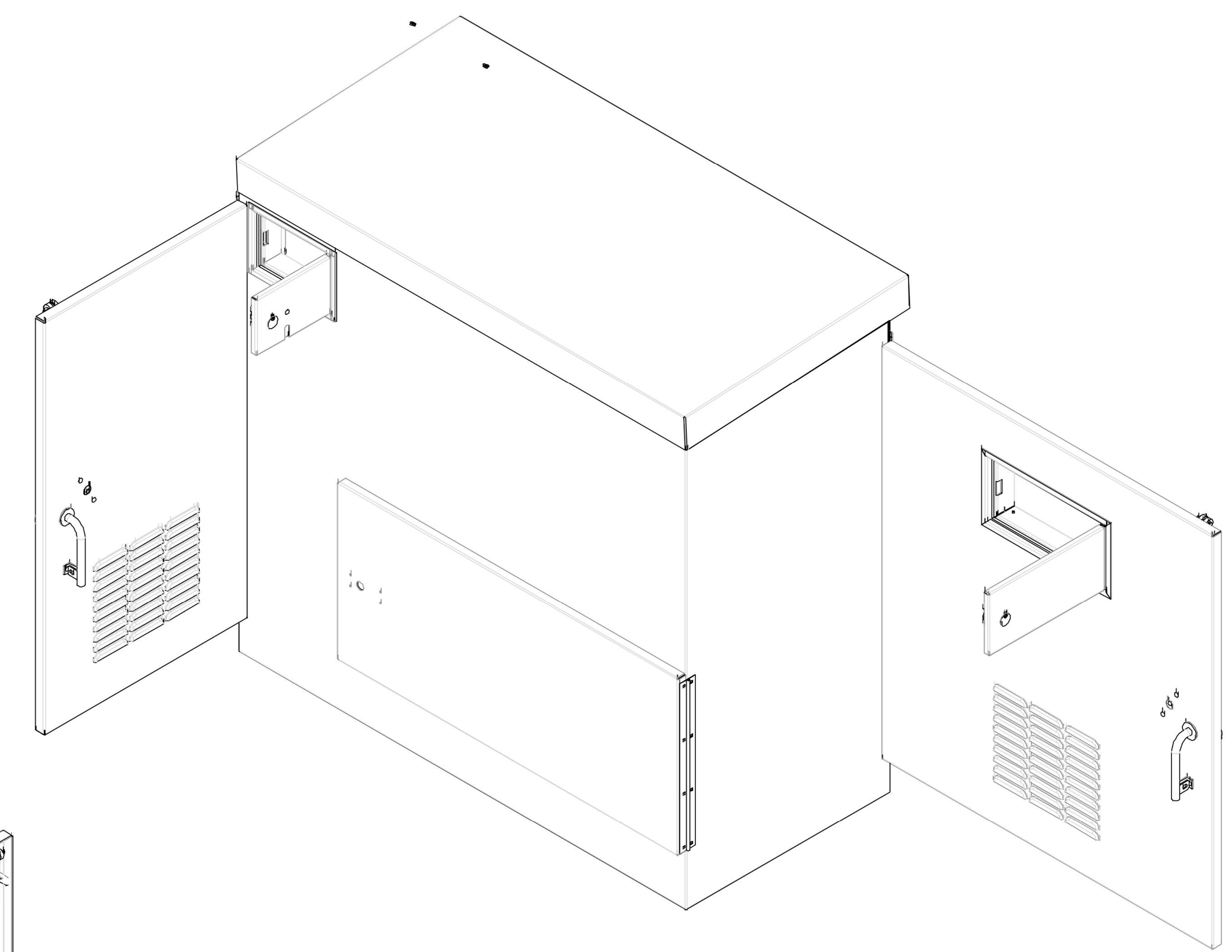
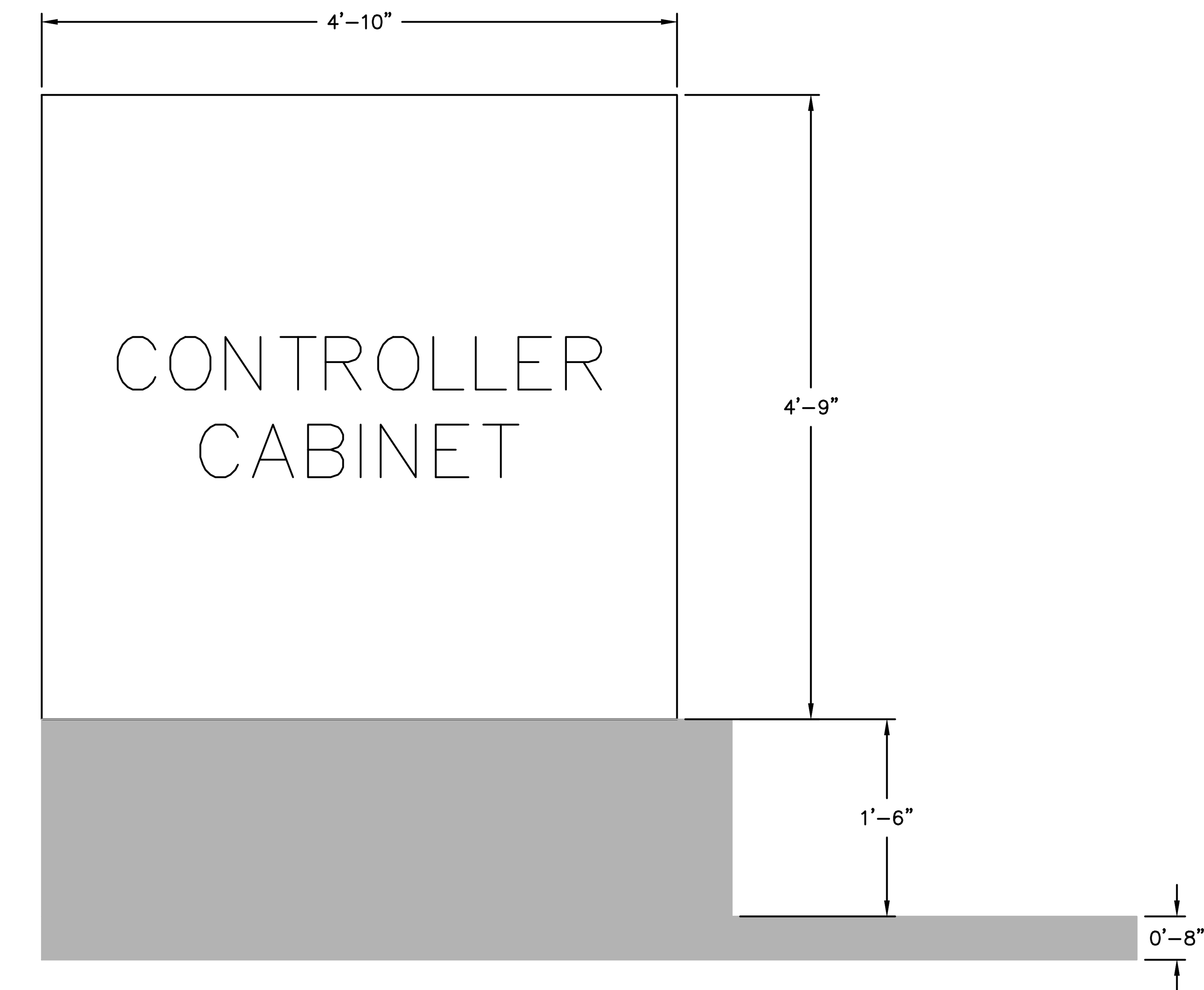
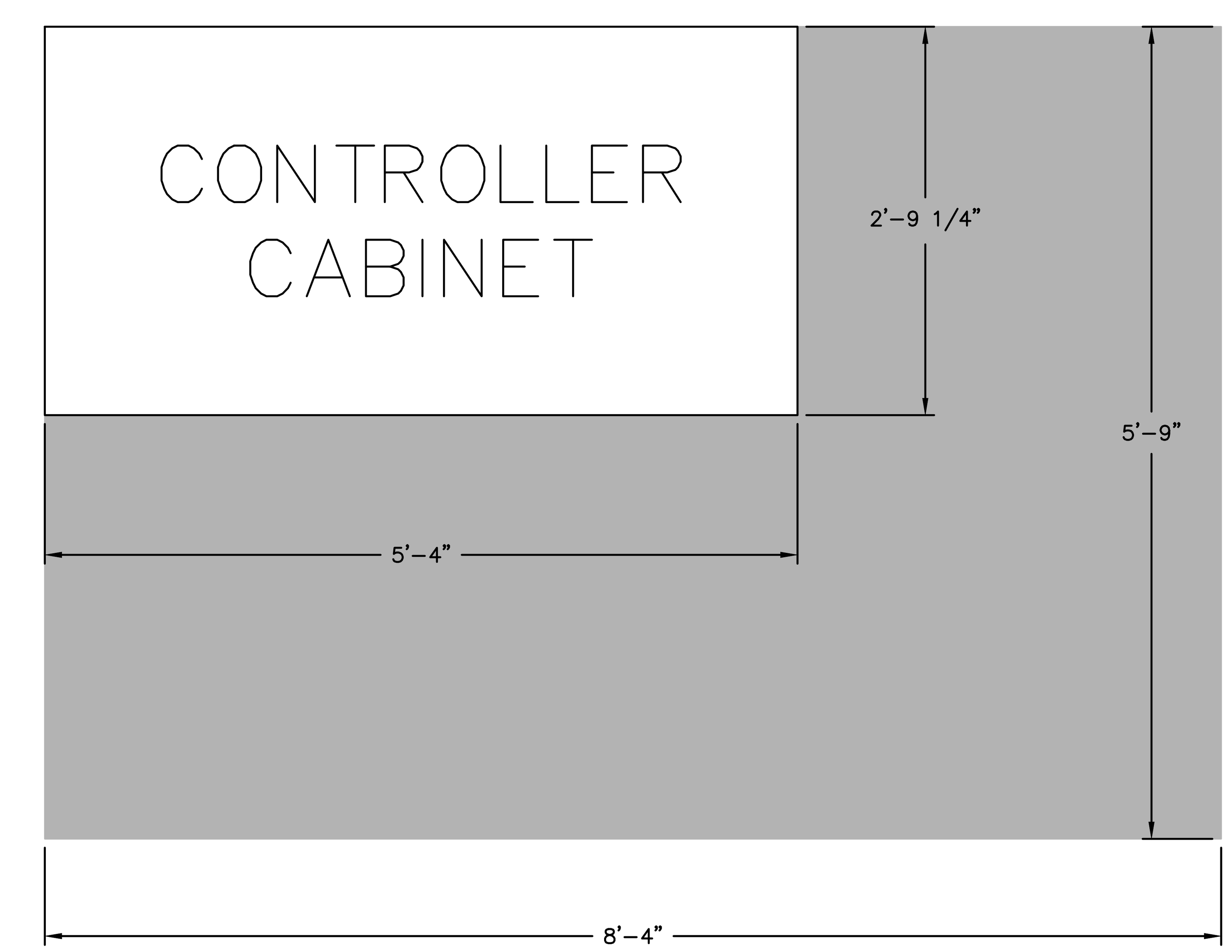
XREFS: F_PTBLK_J2104210









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TRAFFIC CONTROL DETAILS

WALTON BLVD. & CENTRAL AVE.
INTERSECTION IMPROVEMENTS
BENTONVILLE, ARKANSAS
2023

drawn by:	MES
checked by:	JAB
approved by:	TBD
QA/QC by:	KR
project no.:	J21-04210
drawing no.:	F_TRFDTLS_J2104210
date:	11.20.2023

SHEET
13 OF 89

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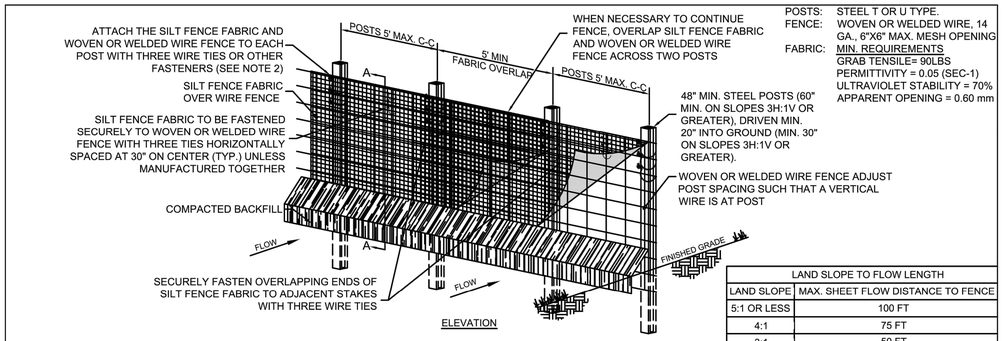
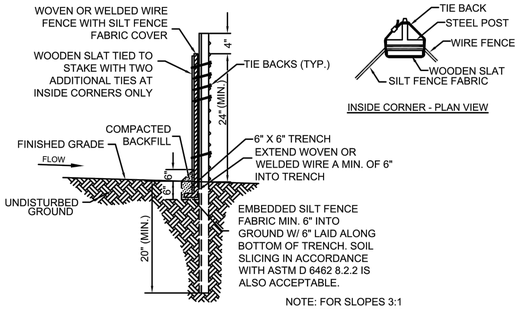


ELEVATION

POSTS: STEEL T OR U TYPE.
FENCE: WOVEN OR WELDED WIRE, 14 GA., 6"X6" MAX. MESH OPENING
FABRIC: MIN. REQUIREMENTS
GRAB TENSILE= 90LBS
PERMITTIVITY = 0.05 (SEC-1)
ULTRAVIOLET STABILITY = 70%
APPARENT OPENING = 0.60 mm

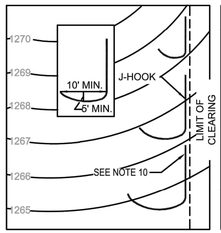
LAND SLOPE TO FLOW LENGTH	
LAND SLOPE	MAX. SHEET FLOW DISTANCE TO FENCE
5:1 OR LESS	100 FT
4:1	75 FT
3:1	50 FT
2:1	25 FT



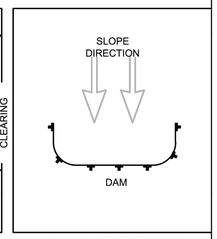
A-A-SECTION
(FOR SLOPES LESS THAN 3:1)

NOTE: FOR SLOPES 3:1 AND GREATER USE 60" T-POST AND EMBED POST 30" MIN.

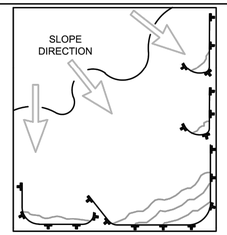
INSIDE CORNER - PLAN VIEW



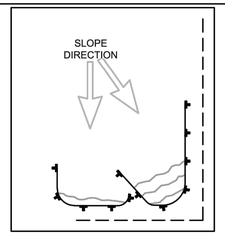
PLAN: J-HOOK INSTALLATION



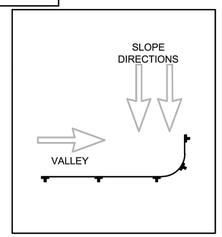
PLAN: PLACEMENT ON ONE SLOPE



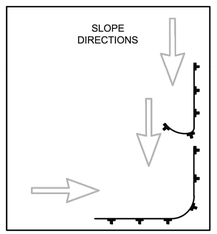
PLAN: PLACEMENT FOR PERIMETER CONTROL



PLAN: PLACEMENT FOR PERIMETER CONTROL



PLAN: PLACEMENT ON TWO SLOPES



PLAN: PLACEMENT ON TWO SLOPES

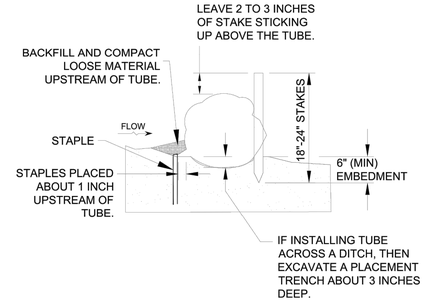
INSTALLATION NOTES:
1. MATERIALS AND INSTALLATION SHALL COMPLY WITH ASTM D 6462 LATEST EDITION.
2. INSTALL SILT FENCE AT A FAIRLY LEVEL GRADE ALONG THE CONTOUR WITH THE ENDS CURVED UPHILL TO PROVIDE SUFFICIENT UPSTREAM STORAGE VOLUME FOR THE ANTICIPATED RUNOFF.
3. ATTACH THE GEOTEXTILE OR FABRIC TO THE WOVEN OR WELDED WIRE FENCE WITH THREE WIRE TIES OR OTHER FASTENERS (HORIZONTALLY SPACED EVERY 30"), ALL SPACED WITHIN THE TOP 8" OF THE FABRIC. ATTACH EACH TIE DIAGONALLY 45 DEGREES THROUGH THE FABRIC, WITH EACH PUNCTURE AT LEAST 1" VERTICALLY APART. AT EACH POST, ATTACH THE GEOTEXTILE OR FABRIC AND THE WOVEN OR WELDED WIRE FENCE TO THE POST AS PREVIOUSLY STATED. IN ADDITION, EACH TIE PLACED ON A POST SHOULD BE POSITIONED TO HANG ON A POST NIPPLE WHEN TIGHTENED TO PREVENT SAGGING.
4. WHEN TWO SECTIONS OF SILT FENCE FABRIC ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED A MINIMUM OF 60" ACROSS TWO POSTS, AS SHOWN.
5. ALL SILT FENCE SHALL INCLUDE WIRE SUPPORT.
6. WRAP APPROXIMATELY 6" OF FABRIC AROUND THE END POSTS AND SECURE WITH 3 TIES.
7. COMPACT THE SOIL IMMEDIATELY NEXT TO THE SILT FENCE FABRIC WITH THE FRONT WHEEL OF THE TRACTOR, SKID STEER, OR ROLLER EXERTING AT LEAST 60 POUNDS PER SQ. INCH. COMPACT THE UPSTREAM SIDE FIRST. COMPACT EACH SIDE TWICE FOR A TOTAL OF FOUR TRIPS.
8. ADD POST CAPS AS NEEDED BASED ON SITE CONDITIONS AND APPLICABLE AGENCY REQUIREMENTS.

J-HOOK NOTES:
9. J-HOOKS SHALL BE USED WHENEVER THE SILT FENCE LINE IS INSTALLED AT AN ANGLE OF 30 DEGREES OR GREATER FROM PARALLEL TO CONTOURS.
10. START DOWN-GRADIENT SILT FENCE LINE AS CLOSE AS POSSIBLE TO UP-GRADIENT J-HOOK.

MAINTENANCE NOTES:
11. SILT FENCES SHALL BE INSPECTED ALONG ITS ENTIRETY AND MUST BE CLEANED WHEN SEDIMENT HAS ACCUMULATED TO ONE-THIRD THE HEIGHT OF THE SILT FENCE. MAINTENANCE CLEANOUT MUST BE CONDUCTED REGULARLY TO PREVENT ACCUMULATED SEDIMENTS FROM REACHING ONE-THIRD THE HEIGHT OF THE SILT FENCE.
12. SPECIAL ATTENTION SHOULD BE PAID TO ENSURE THAT NO UNDERMINING OF SILT FENCE HAS OCCURRED AND THAT NO BYPASS IS OCCURRING AT JOINING SECTIONS.
13. IF EXCESS SEDIMENT IS ACCUMULATING IN ANY SECTION OF SILT FENCE, THE CONTRACTOR SHOULD IMPLEMENT ADDITIONAL UPSTREAM STABILIZATION MEASURES OR ADDITIONAL BMPS (PENDING CITY APPROVAL) TO PREVENT EXCESSIVE BUILDUP ON SILT FENCE.
14. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED.

THE CITY OF BENTONVILLE	CITY OF BENTONVILLE ARKANSAS	TRANSPORTATION DIVISION 3200 SW MUNICIPAL DRIVE PHONE: (479) 271-6840	DESCRIPTION: **SILT FENCE WITH WIRE BACKING NOTES & REQUIREMENTS**
			TITLE: ***EROSION CONTROL DETAILS***

DATE: MARCH, 2021
SHEET: **EC-4**



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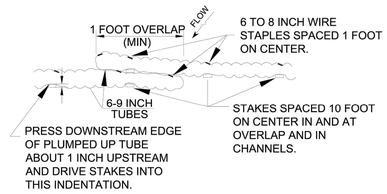

PLAN

GENERAL GUIDELINES FOR SPACING OF TUBE TRENCHES FOR SLOPE INSTALLATIONS	
SLOPE GRADIENT	TUBE INTERVAL
1H:1V	15 FEET
2H:1V	25 FEET
3H:1V	35 FEET
4H:1V	50 FEET

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

EXAMPLES OF ACCEPTABLE COMMERCIALLY AVAILABLE SEDIMENT LOGS ARE:

1. SILT SOCK
2. BIG 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.

THE CITY OF BENTONVILLE	CITY OF BENTONVILLE ARKANSAS	TRANSPORTATION DIVISION 3200 SW MUNICIPAL DRIVE PHONE: (479) 271-6840	DESCRIPTION: **SEDIMENT LOG DETAIL**
			TITLE: ***EROSION CONTROL DETAILS***

DATE: MARCH, 2021
SHEET: **EC-5**

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STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No.13624
ANDREW S. BREWER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
		REVISIONS	

EROSION CONTROL DETAILS

WALTON BLVD. & CENTRAL AVE. INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

drawn by: JRC/JKL
checked by: JKL/JWP
approved by: RCB
QA/QC by: JKL/RCB
project no.: J21-04210
drawing no.: T_ERC2_J2104210
date: 11.20.2023

SHEET 14 OF 89

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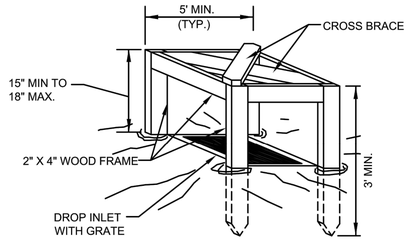
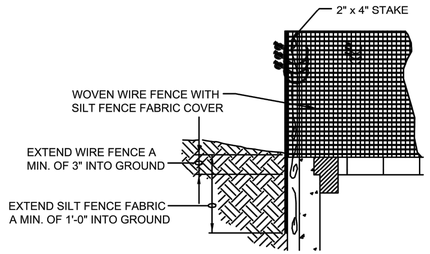
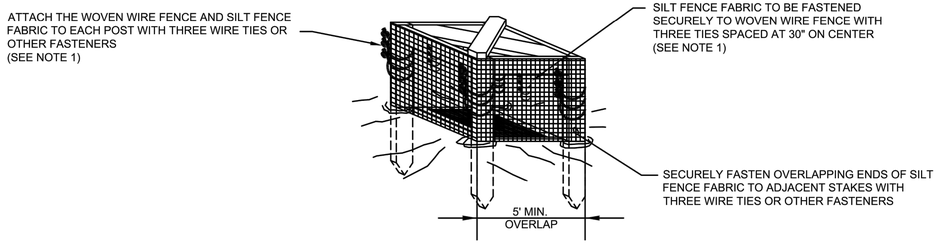






POSTS: 2" X 4" WOODEN STAKE
FENCE: WOVEN WIRE, 14-1/2 GA., 6" MAX. MESH OPENING
FABRIC: IN ACCORDANCE WITH ASTM D 6461 LATEST EDITION

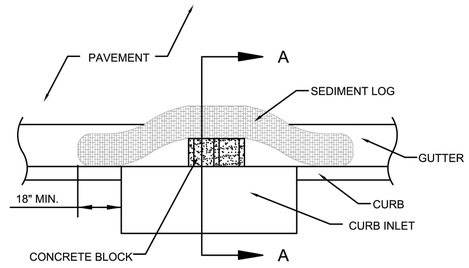
NOTES:

1. ATTACH THE WOVEN WIRE FENCE AND THE GEOTEXTILE TO EACH POST (SPACED EVERY 30") WITH THREE WIRE TIES OR OTHER FASTENERS, ALL SPACED WITHIN THE TOP 8" OF THE FABRIC. ATTACH EACH TIE DIAGONALLY 45 DEGREES THROUGH THE FABRIC, WITH EACH PUNCTURE AT LEAST 1" VERTICALLY APART.
2. WHEN TWO SECTIONS OF SILT FENCE FABRIC ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED ACROSS TWO POSTS.
3. MAINTENANCE SHALL BE PERFORMED AS NOTED IN THE SWPPP. DEPTH OF ACCUMULATED SEDIMENTS MAY NOT EXCEED ONE-THIRD THE HEIGHT OF THE FABRIC.
4. ALL SILT FENCE INLET PROTECTIONS SHALL INCLUDE WIRE SUPPORT.

MAINTENANCE NOTES:

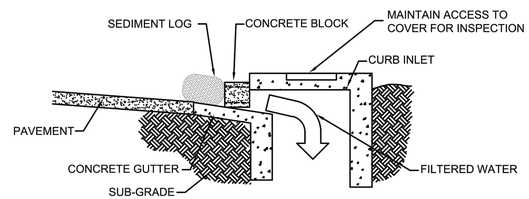
5. INLET PROTECTION DEVICES MUST BE INSPECTED FOR SEDIMENT ACCUMULATION WITHIN THE CATCH BASIN (IF USING INSERT-TYPE DEVICE) OR UPGRADIENT OF THE INLET.
7. ANY SEDIMENT ACCUMULATED IN OR ADJACENT TO A STORM DRAIN INLET MUST BE REMOVED AS SOON AS PRACTICABLE BUT NOT LATER THAN 3 DAYS AFTER DISCOVERY.
8. INLET PROTECTION DEVICES SHALL BE INSPECTED FOR UNINTENDED BYPASS OR IMPROPER FLOW-RATES THAT MAY CAUSE DOWNSTREAM FLOODING.
9. 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.
10. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING OR DETERIORATION.

THE CITY OF BENTONVILLE	CITY OF BENTONVILLE ARKANSAS	TRANSPORTATION DIVISION 3200 SW MUNICIPAL DRIVE PHONE: (479) 271-6840	DESCRIPTION: **DROP INLET SILT FENCE** TITLE: ***EROSION CONTROL DETAILS*** DATE: MARCH, 2021 SHEET: **EC-6**



SEDIMENT LOGS SHALL HAVE A MIN. WEIGHT PER LINEAR FOOT OF 4.5 LBS AND SHALL EXCLUDE **STRAW** OR **SAND** MEDIA.

PLAN



EXAMPLES OF ACCEPTABLE COMMERCIALLY AVAILABLE SEDIMENT LOGS ARE:

1. SILT SOCK
2. BIG RED
3. EROSION EEL

SECTION A-A

NOTES:

1. PLACE DEVICES AROUND PERIMETER OF GRATE/AREA INLET, WITH ENDS OF ADJACENT SEDIMENT LOGS OVERLAPPING 12" MIN.
2. PLACEMENT OF DEVICES SHALL EXTEND 12" MIN BEYOND THE LIMITS OF THE CURB INLET STRUCTURE ON BOTH SIDES.
3. IF ROAD OR PARKING AREA IS OPEN TO PUBLIC, VERIFY SUITABILITY OF BMP WITH CITY INSPECTOR.

MAINTENANCE NOTES:

4. INLET PROTECTION DEVICES MUST BE INSPECTED FOR SEDIMENT ACCUMULATION WITHIN THE CATCH BASIN OR UPGRADIENT OF THE INLET.
7. 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.
8. INLET PROTECTION DEVICES SHALL BE INSPECTED FOR UNINTENDED BYPASS OR IMPROPER FLOW-RATES THAT MAY CAUSE DOWNSTREAM FLOODING.
9. 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.
10. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING OR DETERIORATION.

THE CITY OF BENTONVILLE	CITY OF BENTONVILLE ARKANSAS	TRANSPORTATION DIVISION 3200 SW MUNICIPAL DRIVE PHONE: (479) 271-6840	DESCRIPTION: **SEDIMENT LOG CURB INLET PROTECTION (ON GRADE)** TITLE: ***EROSION CONTROL DETAILS*** DATE: MARCH, 2021 SHEET: **EC-7**

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REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

EROSION CONTROL DETAILS

WALTON BLVD. & CENTRAL AVE. INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

drawn by: JRC/JKL
checked by: JKL/JWP
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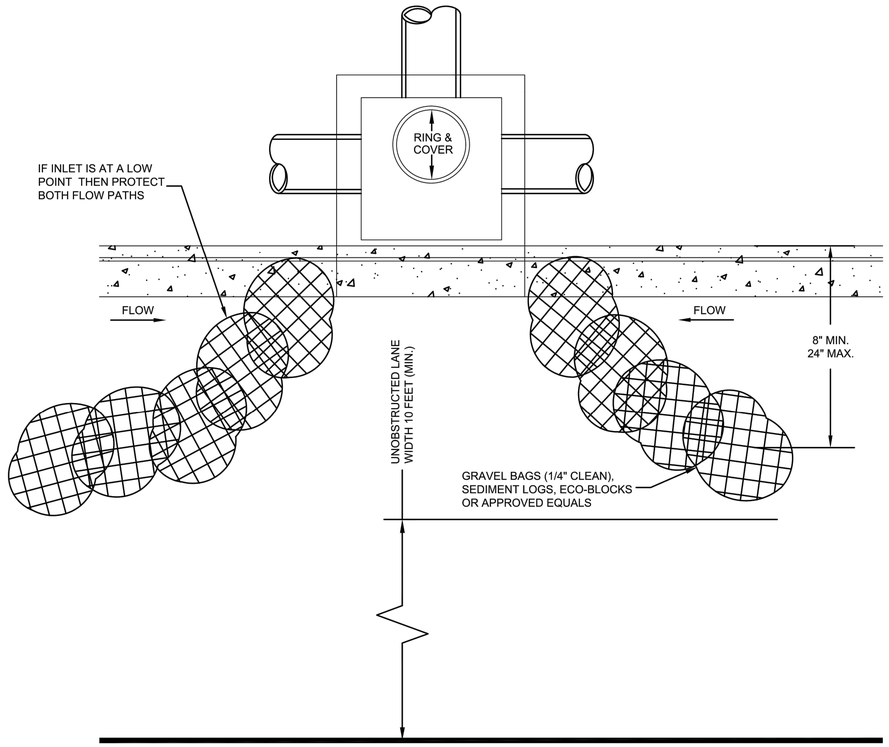
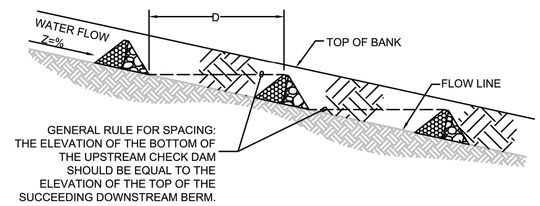


J-HOOK CURB TRAP

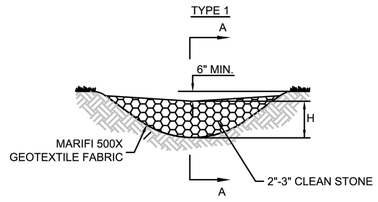
MAINTENANCE NOTES:

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.

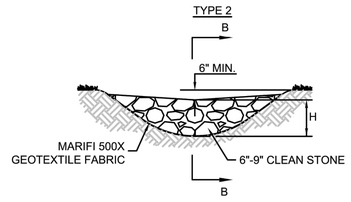
THE CITY OF BENTONVILLE	CITY OF BENTONVILLE ARKANSAS	TRANSPORTATION DIVISION 3200 SW MUNICIPAL DRIVE PHONE: (479) 271-6840	DESCRIPTION: **J-HOOK CURB INLET PROTECTION DEVICE**
			TITLE: ***EROSION CONTROL DETAILS***
			DATE: MARCH, 2021
			SHEET: **EC-8**



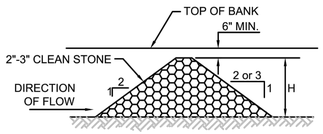
CHECK DAMS IN SWALE



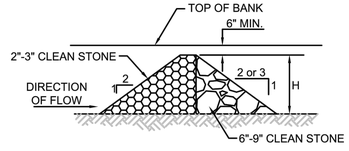
2 ACRES OR LESS OF DRAINAGE AREA
(DOWNSTREAM VIEW)



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.

THE CITY OF BENTONVILLE	CITY OF BENTONVILLE ARKANSAS	TRANSPORTATION DIVISION 3200 SW MUNICIPAL DRIVE PHONE: (479) 271-6840	DESCRIPTION: **ROCK CHECK DAM**
			TITLE: ***EROSION CONTROL DETAILS***
			DATE: MARCH, 2021
			SHEET: **EC-9**

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EROSION CONTROL DETAILS

WALTON BLVD. & CENTRAL AVE.
INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

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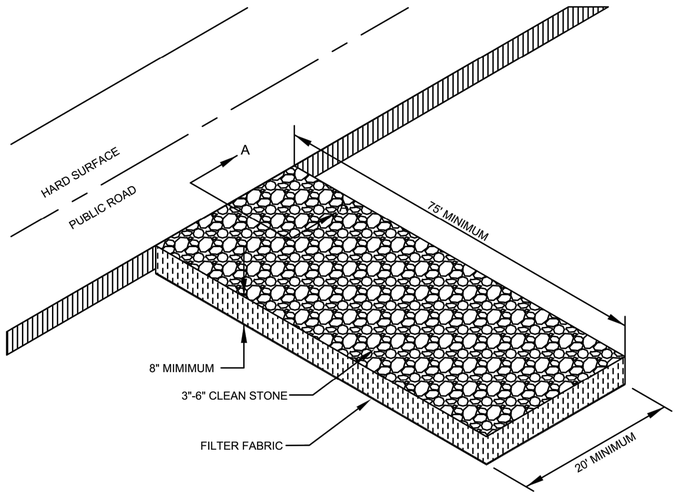


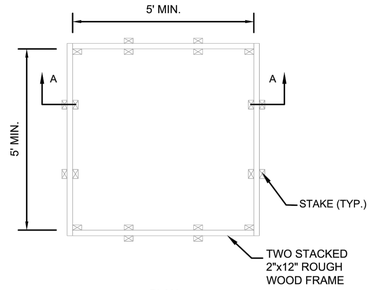
DIVERSION RIDGE REQUIRED WHERE GRADE EXCEEDS 2%

SECTION A-A

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.

CITY OF BENTONVILLE ARKANSAS	TRANSPORTATION DIVISION 3200 SW MUNICIPAL DRIVE PHONE: (479) 271-6840	DESCRIPTION: **STABILIZED CONSTRUCTION EXIT**	DATE: MARCH, 2021
		TITLE: ***EROSION CONTROL DETAILS***	SHEET: **EC-1**



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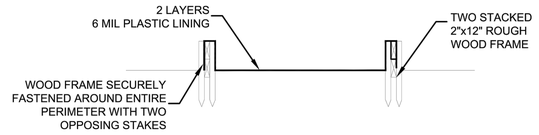
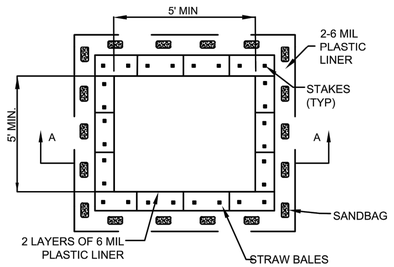


SECTION A-A

TIMBER CONCRETE WASHOUT



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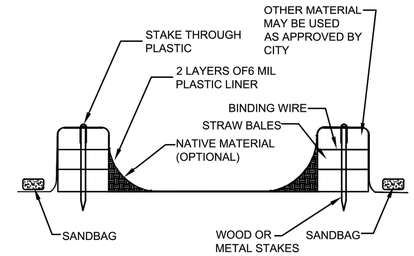
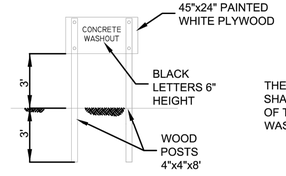


SECTION A-A

STRAW CONCRETE WASHOUT



THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

CONCRETE WASHOUT SIGN DETAIL

NOTES:

1. NO WASHING OUT OF CONCRETE TRUCKS OR WASHING OF SWEEPINGS FROM EXPOSED AGGREGATE CONCRETE INTO STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS IS ALLOWED.
2. EXCESS CONCRETE IS NOT ALLOWED TO BE DUMPED ON-SITE, EXCEPT IN DESIGNATED TEMPORARY CONCRETE WASHOUT PIT AREAS.
3. ON-SITE TEMPORARY CONCRETE WASHOUT AREAS SHALL BE LOCATED AT LEAST 50 FEET FROM STORM DRAINS, OPEN DITCHES, OR WATER BODIES.
4. TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE CONSTRUCTED AND MAINTAINED IN SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
5. WASHOUT FACILITIES SHALL BE CLEANED OUT OR REPLACED ONCE THE WASHOUT IS 75% FULL.
6. PLASTIC LINING MATERIAL SHALL BE MINIMUM OF 10 MIL POLYETHYLENE SHEETING AND SHALL BE FREE OF HOLES, TEARS, OR OTHER DEFECTS.
7. WHEN WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR WORK, THE HARDENED CONCRETE SHALL BE REMOVED AND DISPOSED OF OFFSITE. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES WILL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY (*i.e.* PERMITTED FACILITY OR RECYCLED).

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BENTONVILLE, ARKANSAS

2023

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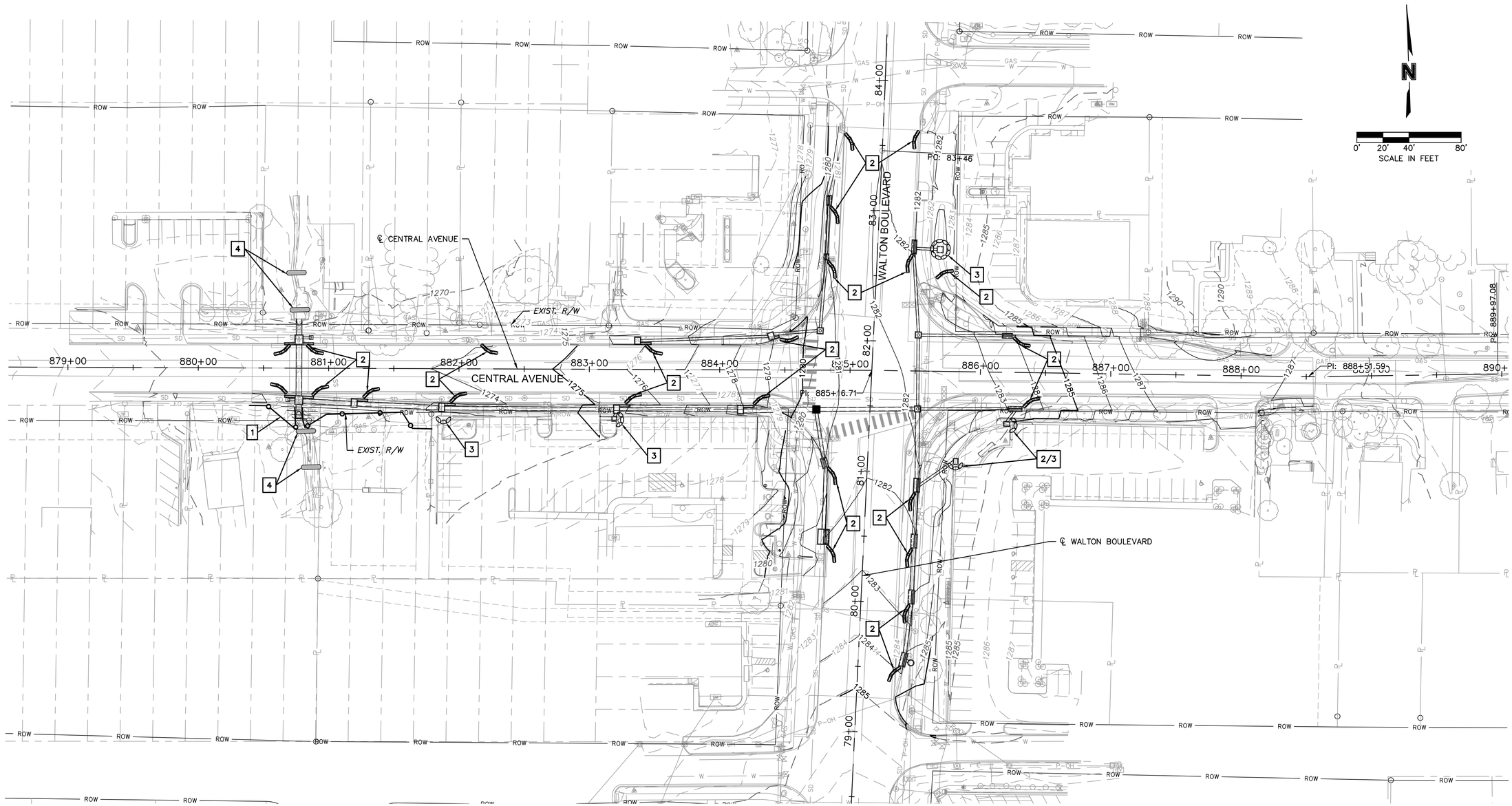

EROSION AND SEDIMENT CONTROL STAGING CHART

PROJECT STAGE	EROSION CONTROL PLAN BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES
A – PRIOR TO CLEARING AND GRUBBING		STAGING AREA	C	
		STABILIZED CONSTRUCTION EXIT	C	
	1	SILT FENCE	C	INSTALL AS SHOWN ON PLANS
	2	INLET PROTECTION	C	PROTECT EXISTING STORM STRUCTURES
B – STORM SEWER INSTALLATION		CONCRETE WASHOUT	C	INSTALL PRIOR TO POURING CONCRETE
	2	J-HOOK CURB INLET PROTECTION	C	PROTECT ON-GRADE AND AREA INLET OPENINGS WITH SEDIMENT LOGS
	3	SEDIMENT LOG CURB INLET PROTECTION (ON GRADE)	C	PROTECT INLET OPENINGS WITH GRAVEL BAGS
	4	ROCK DITCH CHECK	C	INSTALL AS SHOWN ON PLANS
C – SURFACE RESTORATION		ESTABLISH VEGETATION	N/A	REDISTRIBUTE TOPSOIL AND SEED ALL DISTURBED AREAS
		PAVEMENT INSTALLATION	N/A	COMPLETE PAVEMENT RESTORATION

LEGEND

- PROPOSED STORM SEWER
- PROPERTY LINE
- RIGHT OF WAY LINE
- CONSTRUCTION LIMITS
- SILT FENCE
- GRAVEL BAGS
- ROCK DITCH CHECK
- SEDIMENT LOGS
- (#) EROSION CONTROL BMP REFERENCE NUMBER

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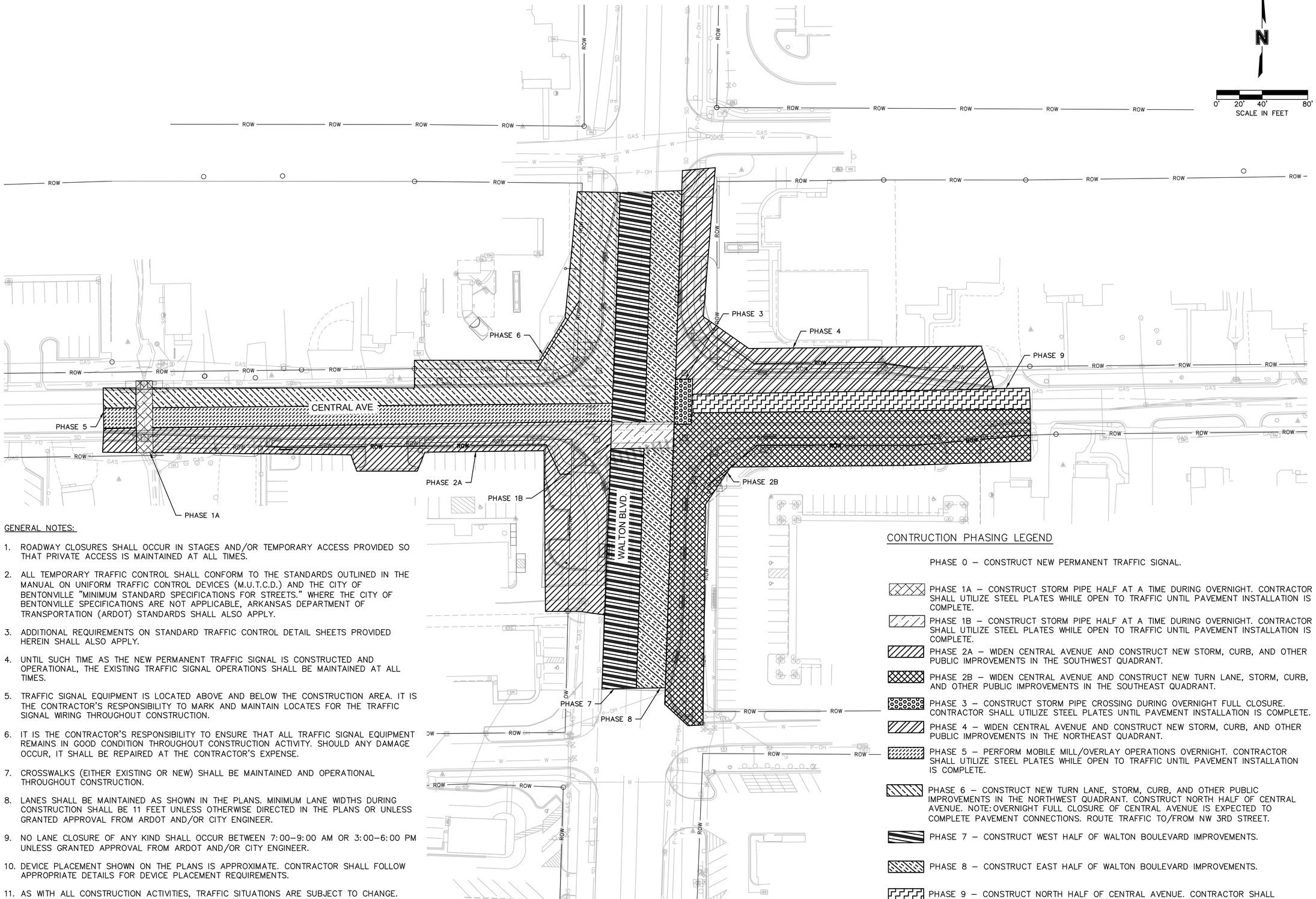

GENERAL NOTES:

1. ROADWAY CLOSURES SHALL OCCUR IN STAGES AND/OR TEMPORARY ACCESS PROVIDED SO THAT PRIVATE ACCESS IS MAINTAINED AT ALL TIMES.
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. UNTIL SUCH TIME AS THE NEW PERMANENT TRAFFIC SIGNAL IS CONSTRUCTED AND OPERATIONAL, THE EXISTING TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED AT ALL TIMES.
5. TRAFFIC SIGNAL EQUIPMENT IS LOCATED ABOVE AND BELOW THE CONSTRUCTION AREA. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MARK AND MAINTAIN LOCATES FOR THE TRAFFIC SIGNAL WIRING THROUGHOUT CONSTRUCTION.
6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL TRAFFIC SIGNAL EQUIPMENT REMAINS IN GOOD CONDITION THROUGHOUT CONSTRUCTION ACTIVITY. SHOULD ANY DAMAGE OCCUR, IT SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
7. CROSSWALKS (EITHER EXISTING OR NEW) SHALL BE MAINTAINED AND OPERATIONAL THROUGHOUT CONSTRUCTION.
8. LANES SHALL BE MAINTAINED AS SHOWN IN THE PLANS. MINIMUM LANE WIDTHS DURING CONSTRUCTION SHALL BE 11 FEET UNLESS OTHERWISE DIRECTED IN THE PLANS OR UNLESS GRANTED APPROVAL FROM ARDOT AND/OR CITY ENGINEER.
9. NO LANE CLOSURE OF ANY KIND SHALL OCCUR BETWEEN 7:00–9:00 AM OR 3:00–6:00 PM UNLESS GRANTED APPROVAL FROM ARDOT AND/OR CITY ENGINEER.
10. DEVICE PLACEMENT SHOWN ON THE PLANS IS APPROXIMATE. CONTRACTOR SHALL FOLLOW APPROPRIATE DETAILS FOR DEVICE PLACEMENT REQUIREMENTS.
11. AS WITH ALL CONSTRUCTION ACTIVITIES, TRAFFIC SITUATIONS ARE SUBJECT TO CHANGE. ANY ALTERNATIVE TRAFFIC CONTROL AND/OR DETOUR PLANS SHALL RECEIVE WRITTEN APPROVAL FROM ARDOT AND/OR CITY ENGINEER PRIOR TO COMMENCEMENT.

CONTRUCTION PHASING LEGEND

PHASE 0 – CONSTRUCT NEW PERMANENT TRAFFIC SIGNAL.

PHASE 1A – CONSTRUCT STORM PIPE HALF AT A TIME DURING OVERNIGHT. CONTRACTOR SHALL UTILIZE STEEL PLATES WHILE OPEN TO TRAFFIC UNTIL PAVEMENT INSTALLATION IS COMPLETE.

PHASE 1B – CONSTRUCT STORM PIPE HALF AT A TIME DURING OVERNIGHT. CONTRACTOR SHALL UTILIZE STEEL PLATES WHILE OPEN TO TRAFFIC UNTIL PAVEMENT INSTALLATION IS COMPLETE.

PHASE 2A – WIDEN CENTRAL AVENUE AND CONSTRUCT NEW STORM, CURB, AND OTHER PUBLIC IMPROVEMENTS IN THE SOUTHWEST QUADRANT.

PHASE 2B – WIDEN CENTRAL AVENUE AND CONSTRUCT NEW TURN LANE, STORM, CURB, AND OTHER PUBLIC IMPROVEMENTS IN THE SOUTHEAST QUADRANT.

PHASE 3 – CONSTRUCT STORM PIPE CROSSING DURING OVERNIGHT FULL CLOSURE. CONTRACTOR SHALL UTILIZE STEEL PLATES UNTIL PAVEMENT INSTALLATION IS COMPLETE.

PHASE 4 – WIDEN CENTRAL AVENUE AND CONSTRUCT NEW STORM, CURB, AND OTHER PUBLIC IMPROVEMENTS IN THE NORTHEAST QUADRANT.

PHASE 5 – PERFORM MOBILE MILL/OVERLAY OPERATIONS OVERNIGHT. CONTRACTOR SHALL UTILIZE STEEL PLATES WHILE OPEN TO TRAFFIC UNTIL PAVEMENT INSTALLATION IS COMPLETE.

PHASE 6 – CONSTRUCT NEW TURN LANE, STORM, CURB, AND OTHER PUBLIC IMPROVEMENTS IN THE NORTHWEST QUADRANT. CONSTRUCT NORTH HALF OF CENTRAL AVENUE. NOTE: OVERNIGHT FULL CLOSURE OF CENTRAL AVENUE IS EXPECTED TO COMPLETE PAVEMENT CONNECTIONS. ROUTE TRAFFIC TO/FROM NW 3RD STREET.

PHASE 7 – CONSTRUCT WEST HALF OF WALTON BOULEVARD IMPROVEMENTS.

PHASE 8 – CONSTRUCT EAST HALF OF WALTON BOULEVARD IMPROVEMENTS.

PHASE 9 – CONSTRUCT NORTH HALF OF CENTRAL AVENUE. CONTRACTOR SHALL UTILIZE STEEL PLATES UNTIL PAVEMENT INSTALLATION IS COMPLETE.

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11-20-2023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

TRAFFIC CONTROL PLAN

WALTON BLVD. & CENTRAL AVE. INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

drawn by:	MES
checked by:	JAB
approved by:	TBD
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drawing no.:	F_TRF_J21042I0
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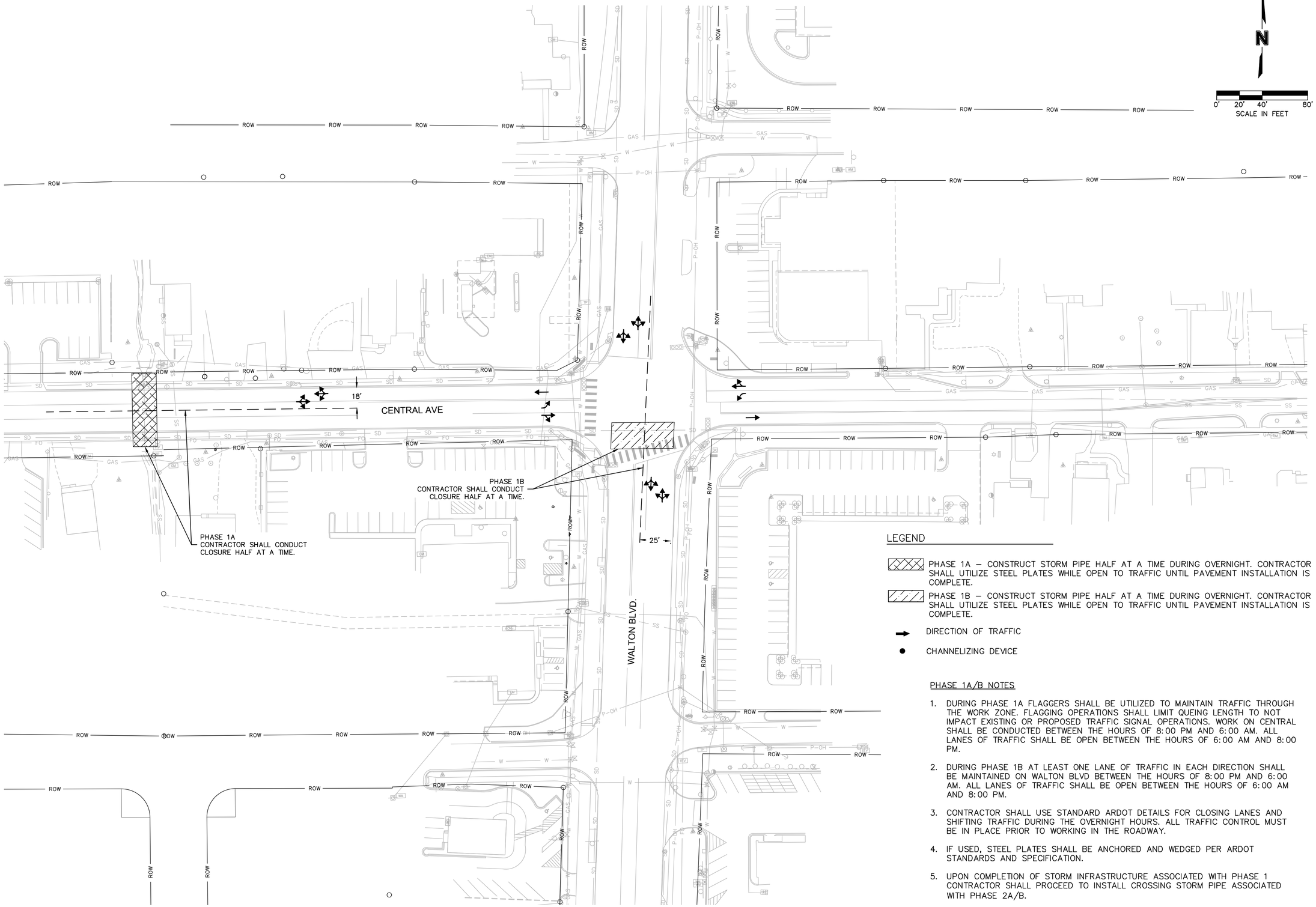

LEGEND

- PHASE 1A – CONSTRUCT STORM PIPE HALF AT A TIME DURING OVERNIGHT. CONTRACTOR SHALL UTILIZE STEEL PLATES WHILE OPEN TO TRAFFIC UNTIL PAVEMENT INSTALLATION IS COMPLETE.
- PHASE 1B – CONSTRUCT STORM PIPE HALF AT A TIME DURING OVERNIGHT. CONTRACTOR SHALL UTILIZE STEEL PLATES WHILE OPEN TO TRAFFIC UNTIL PAVEMENT INSTALLATION IS COMPLETE.
- DIRECTION OF TRAFFIC
- CHANNELIZING DEVICE

PHASE 1A/B NOTES

1. DURING PHASE 1A FLAGGERS SHALL BE UTILIZED TO MAINTAIN TRAFFIC THROUGH THE WORK ZONE. FLAGGING OPERATIONS SHALL LIMIT QUEING LENGTH TO NOT IMPACT EXISTING OR PROPOSED TRAFFIC SIGNAL OPERATIONS. WORK ON CENTRAL SHALL BE CONDUCTED BETWEEN THE HOURS OF 8:00 PM AND 6:00 AM. ALL LANES OF TRAFFIC SHALL BE OPEN BETWEEN THE HOURS OF 6:00 AM AND 8:00 PM.
2. DURING PHASE 1B AT LEAST ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED ON WALTON BLVD BETWEEN THE HOURS OF 8:00 PM AND 6:00 AM. ALL LANES OF TRAFFIC SHALL BE OPEN BETWEEN THE HOURS OF 6:00 AM AND 8:00 PM.
3. CONTRACTOR SHALL USE STANDARD ARDOT DETAILS FOR CLOSING LANES AND SHIFTING TRAFFIC DURING THE OVERNIGHT HOURS. ALL TRAFFIC CONTROL MUST BE IN PLACE PRIOR TO WORKING IN THE ROADWAY.
4. IF USED, STEEL PLATES SHALL BE ANCHORED AND WEDGED PER ARDOT STANDARDS AND SPECIFICATION.
5. UPON COMPLETION OF STORM INFRASTRUCTURE ASSOCIATED WITH PHASE 1 CONTRACTOR SHALL PROCEED TO INSTALL CROSSING STORM PIPE ASSOCIATED WITH PHASE 2A/B.

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11-20-2023

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REVISIONS

TRAFFIC CONTROL PLAN

WALTON BLVD. & CENTRAL AVE.
INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

drawn by:	MES
checked by:	JAB
approved by:	TBD
QA/QC by:	KR
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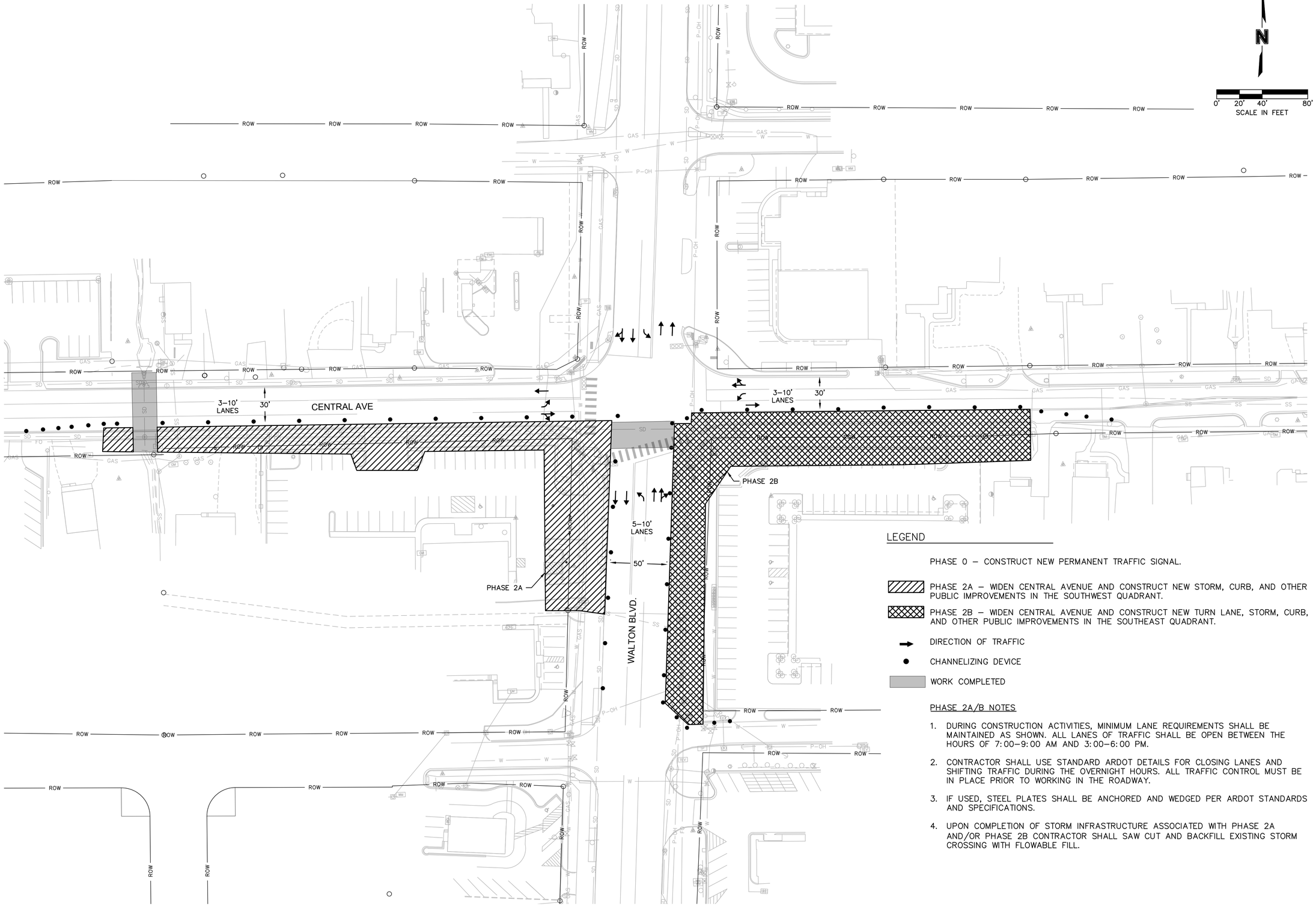

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BENTONVILLE, ARKANSAS

2023

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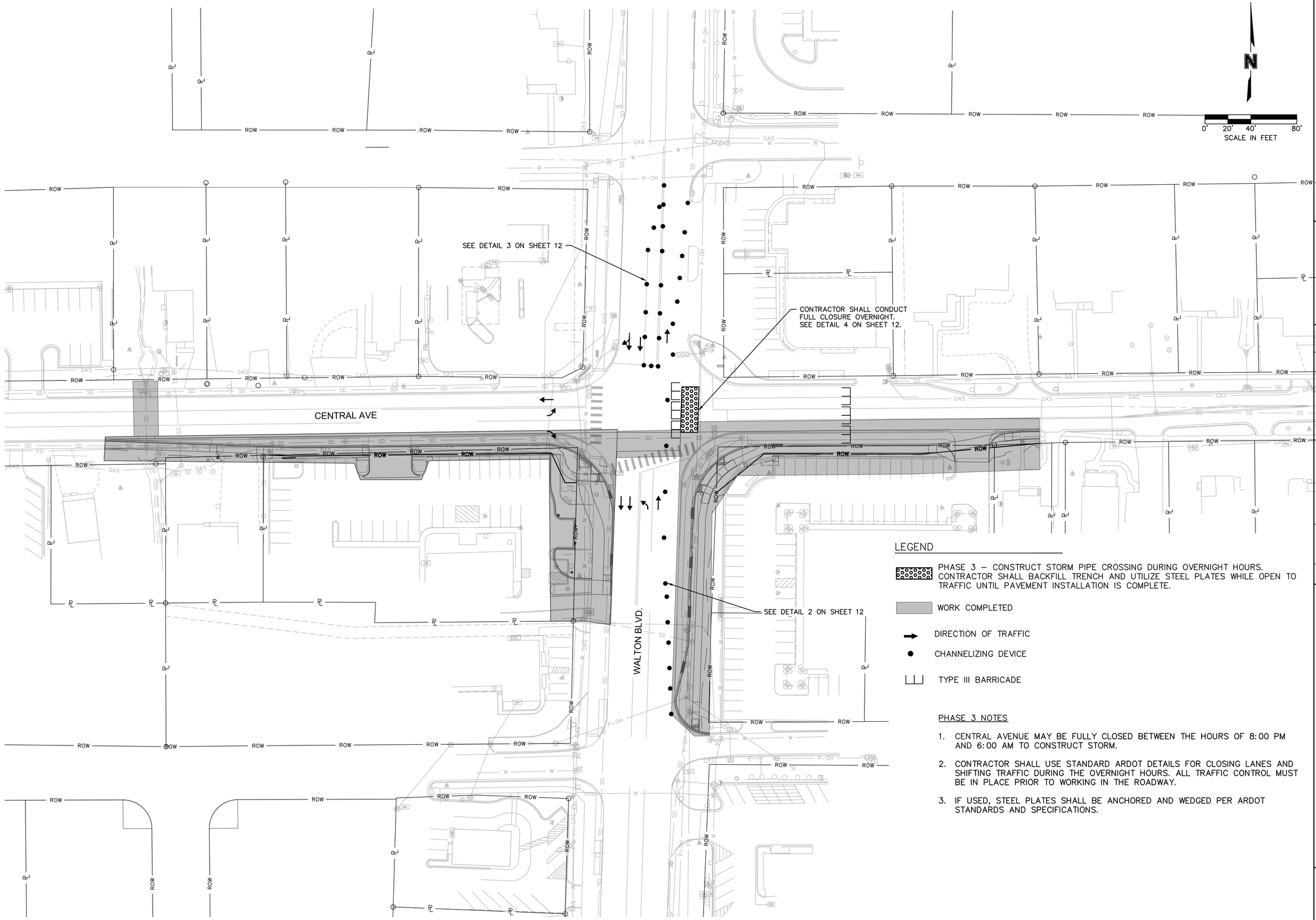

LEGEND

- PHASE 3 – CONSTRUCT STORM PIPE CROSSING DURING OVERNIGHT HOURS. CONTRACTOR SHALL BACKFILL TRENCH AND UTILIZE STEEL PLATES WHILE OPEN TO TRAFFIC UNTIL PAVEMENT INSTALLATION IS COMPLETE.
- WORK COMPLETED
- DIRECTION OF TRAFFIC
- CHANNELIZING DEVICE
- TYPE III BARRICADE

PHASE 3 NOTES

1. CENTRAL AVENUE MAY BE FULLY CLOSED BETWEEN THE HOURS OF 8:00 PM AND 6:00 AM TO CONSTRUCT STORM.
2. CONTRACTOR SHALL USE STANDARD ARDOT DETAILS FOR CLOSING LANES AND SHIFTING TRAFFIC DURING THE OVERNIGHT HOURS. ALL TRAFFIC CONTROL MUST BE IN PLACE PRIOR TO WORKING IN THE ROADWAY.
3. IF USED, STEEL PLATES SHALL BE ANCHORED AND WEDGED PER ARDOT STANDARDS AND SPECIFICATIONS.

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WALTON BLVD. & CENTRAL AVE.
INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

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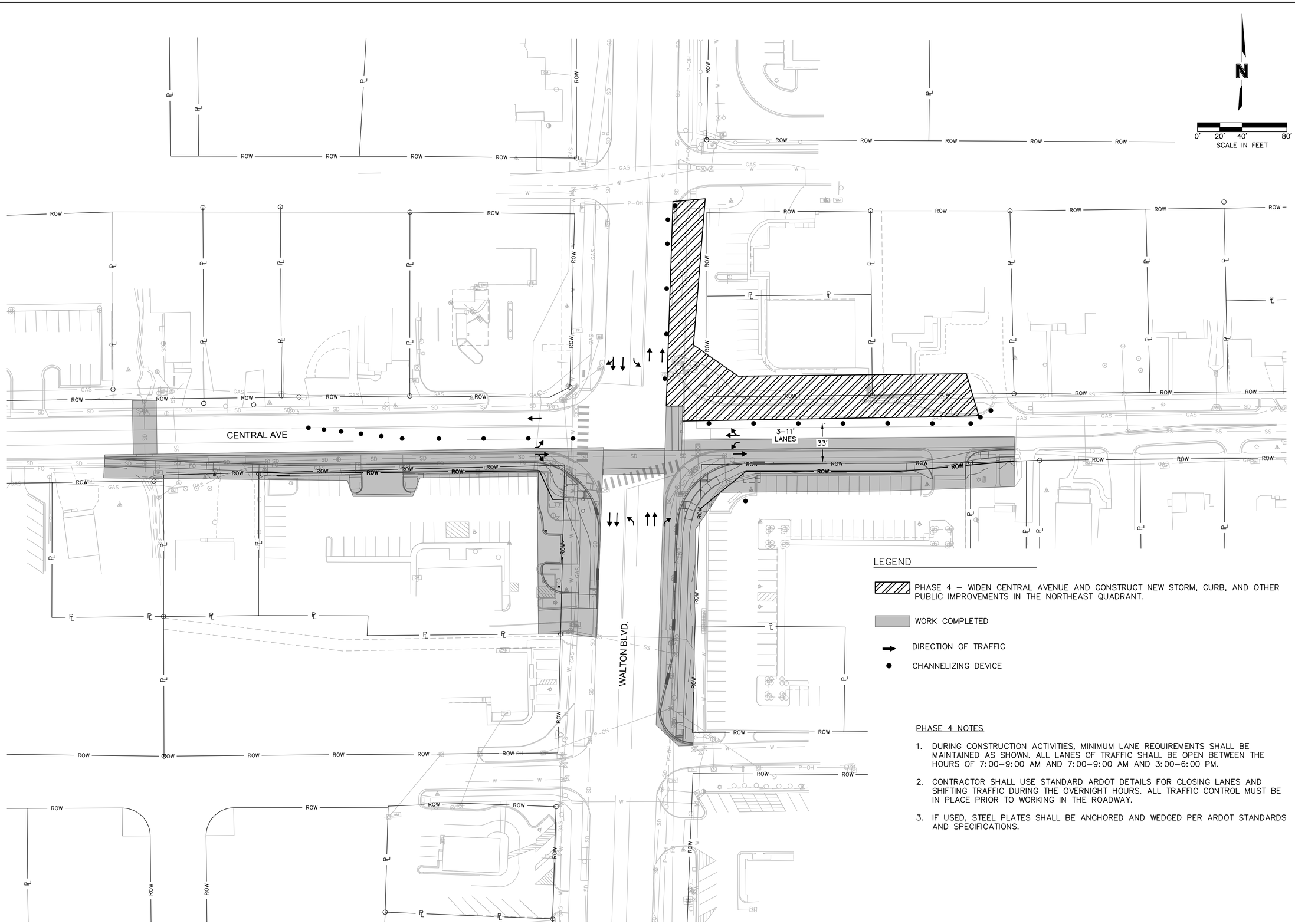

LEGEND

- PHASE 4 – WIDEN CENTRAL AVENUE AND CONSTRUCT NEW STORM, CURB, AND OTHER PUBLIC IMPROVEMENTS IN THE NORTHEAST QUADRANT.
- WORK COMPLETED
- DIRECTION OF TRAFFIC
- CHANNELIZING DEVICE

PHASE 4 NOTES

1. DURING CONSTRUCTION ACTIVITIES, MINIMUM LANE REQUIREMENTS SHALL BE MAINTAINED AS SHOWN. ALL LANES OF TRAFFIC SHALL BE OPEN BETWEEN THE HOURS OF 7:00–9:00 AM AND 7:00–9:00 AM AND 3:00–6:00 PM.
2. CONTRACTOR SHALL USE STANDARD ARDOT DETAILS FOR CLOSING LANES AND SHIFTING TRAFFIC DURING THE OVERNIGHT HOURS. ALL TRAFFIC CONTROL MUST BE IN PLACE PRIOR TO WORKING IN THE ROADWAY.
3. IF USED, STEEL PLATES SHALL BE ANCHORED AND WEDGED PER ARDOT STANDARDS AND SPECIFICATIONS.

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BENTONVILLE, ARKANSAS

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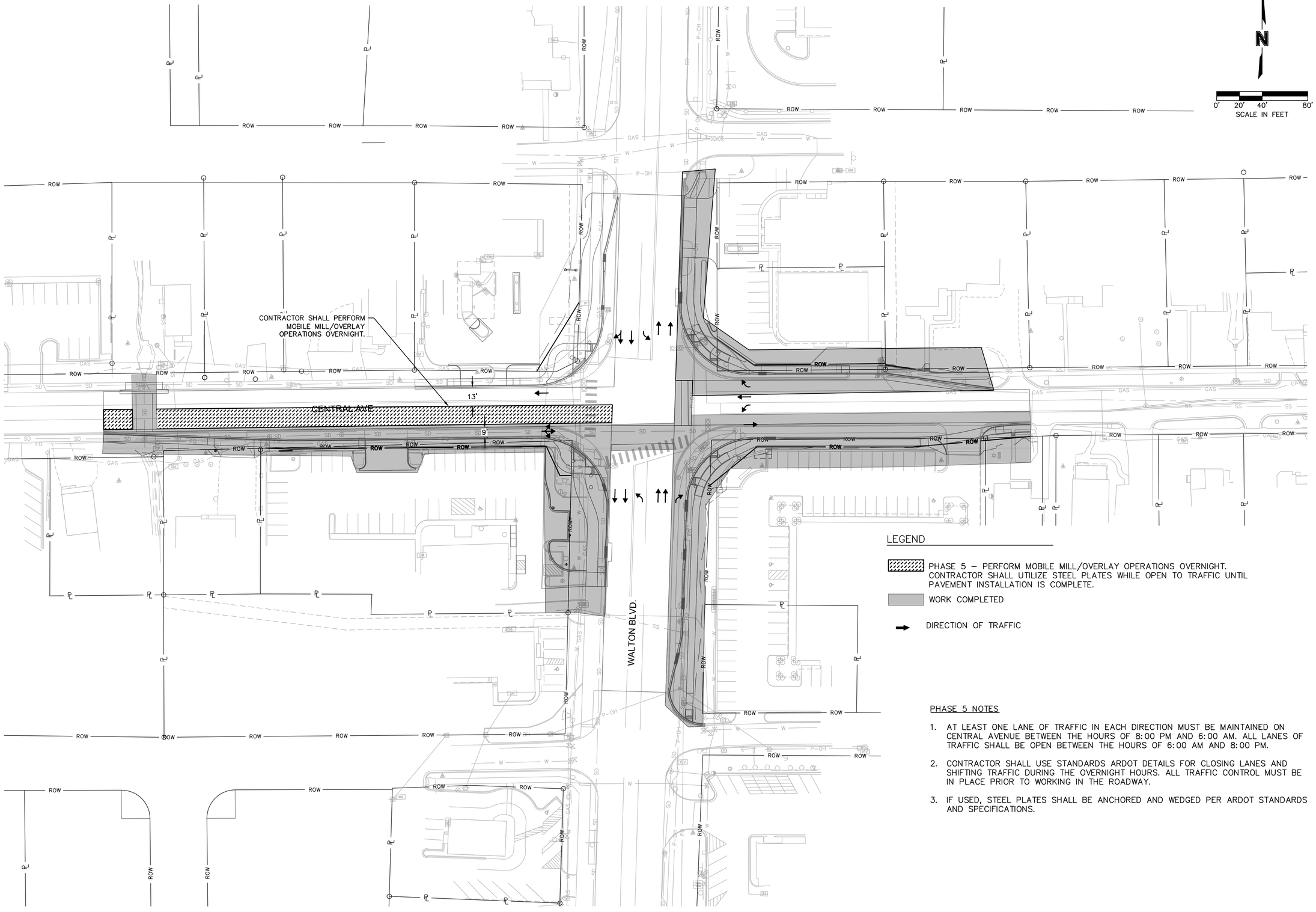

LEGEND

- PHASE 5 – PERFORM MOBILE MILL/OVERLAY OPERATIONS OVERNIGHT. CONTRACTOR SHALL UTILIZE STEEL PLATES WHILE OPEN TO TRAFFIC UNTIL PAVEMENT INSTALLATION IS COMPLETE.
- WORK COMPLETED
- DIRECTION OF TRAFFIC

PHASE 5 NOTES

1. AT LEAST ONE LANE OF TRAFFIC IN EACH DIRECTION MUST BE MAINTAINED ON CENTRAL AVENUE BETWEEN THE HOURS OF 8:00 PM AND 6:00 AM. ALL LANES OF TRAFFIC SHALL BE OPEN BETWEEN THE HOURS OF 6:00 AM AND 8:00 PM.
2. CONTRACTOR SHALL USE STANDARDS ARDOT DETAILS FOR CLOSING LANES AND SHIFTING TRAFFIC DURING THE OVERNIGHT HOURS. ALL TRAFFIC CONTROL MUST BE IN PLACE PRIOR TO WORKING IN THE ROADWAY.
3. IF USED, STEEL PLATES SHALL BE ANCHORED AND WEDGED PER ARDOT STANDARDS AND SPECIFICATIONS.

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WALTON BLVD. & CENTRAL AVE.
INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

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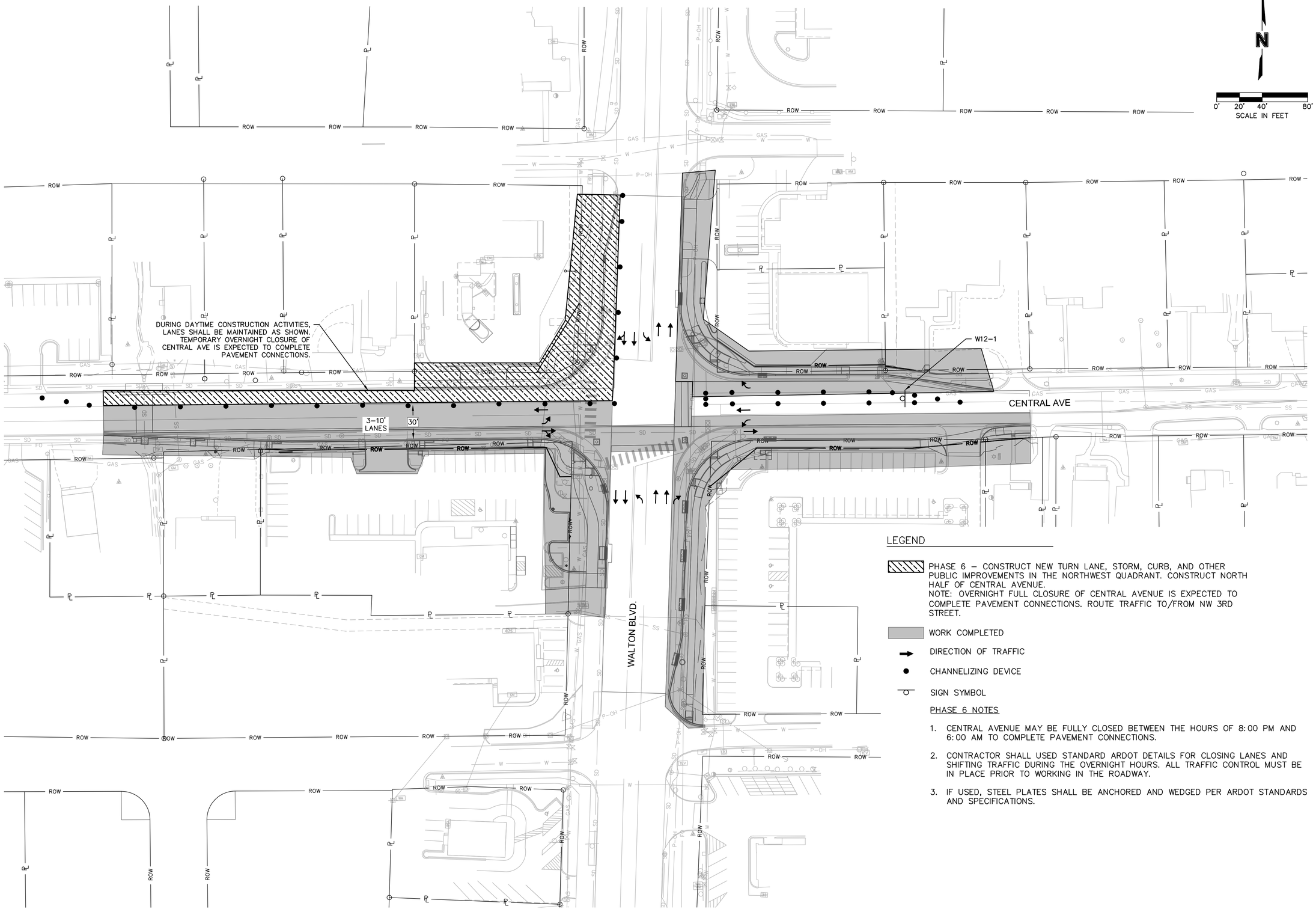

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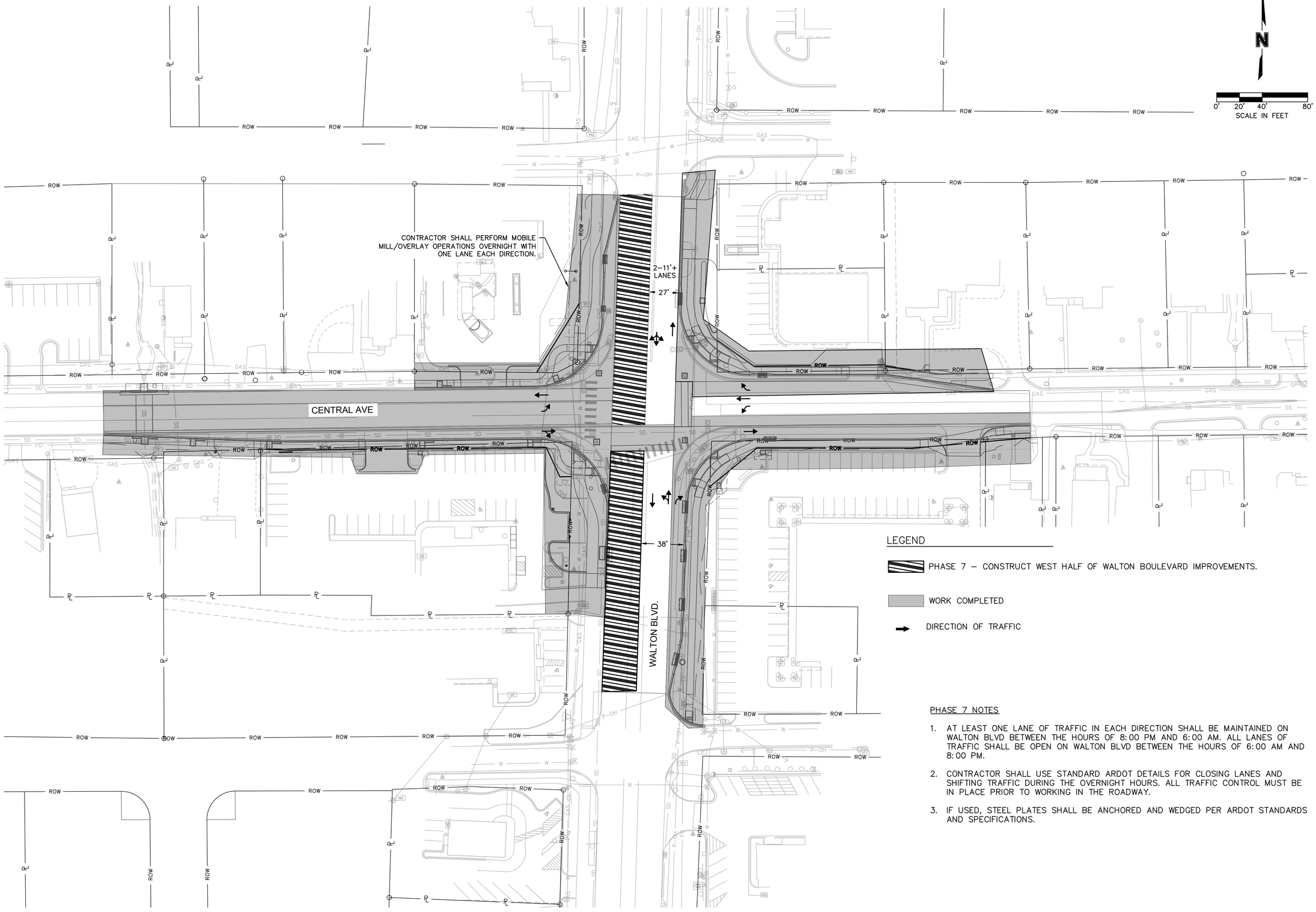

LEGEND

PHASE 7 – CONSTRUCT WEST HALF OF WALTON BOULEVARD IMPROVEMENTS.

WORK COMPLETED

DIRECTION OF TRAFFIC

PHASE 7 NOTES

1. AT LEAST ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED ON WALTON BLVD BETWEEN THE HOURS OF 8:00 PM AND 6:00 AM. ALL LANES OF TRAFFIC SHALL BE OPEN ON WALTON BLVD BETWEEN THE HOURS OF 6:00 AM AND 8:00 PM.
2. CONTRACTOR SHALL USE STANDARD ARDOT DETAILS FOR CLOSING LANES AND SHIFTING TRAFFIC DURING THE OVERNIGHT HOURS. ALL TRAFFIC CONTROL MUST BE IN PLACE PRIOR TO WORKING IN THE ROADWAY.
3. IF USED, STEEL PLATES SHALL BE ANCHORED AND WEDGED PER ARDOT STANDARDS AND SPECIFICATIONS.

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WALTON BLVD. & CENTRAL AVE. INTERSECTION IMPROVEMENTS

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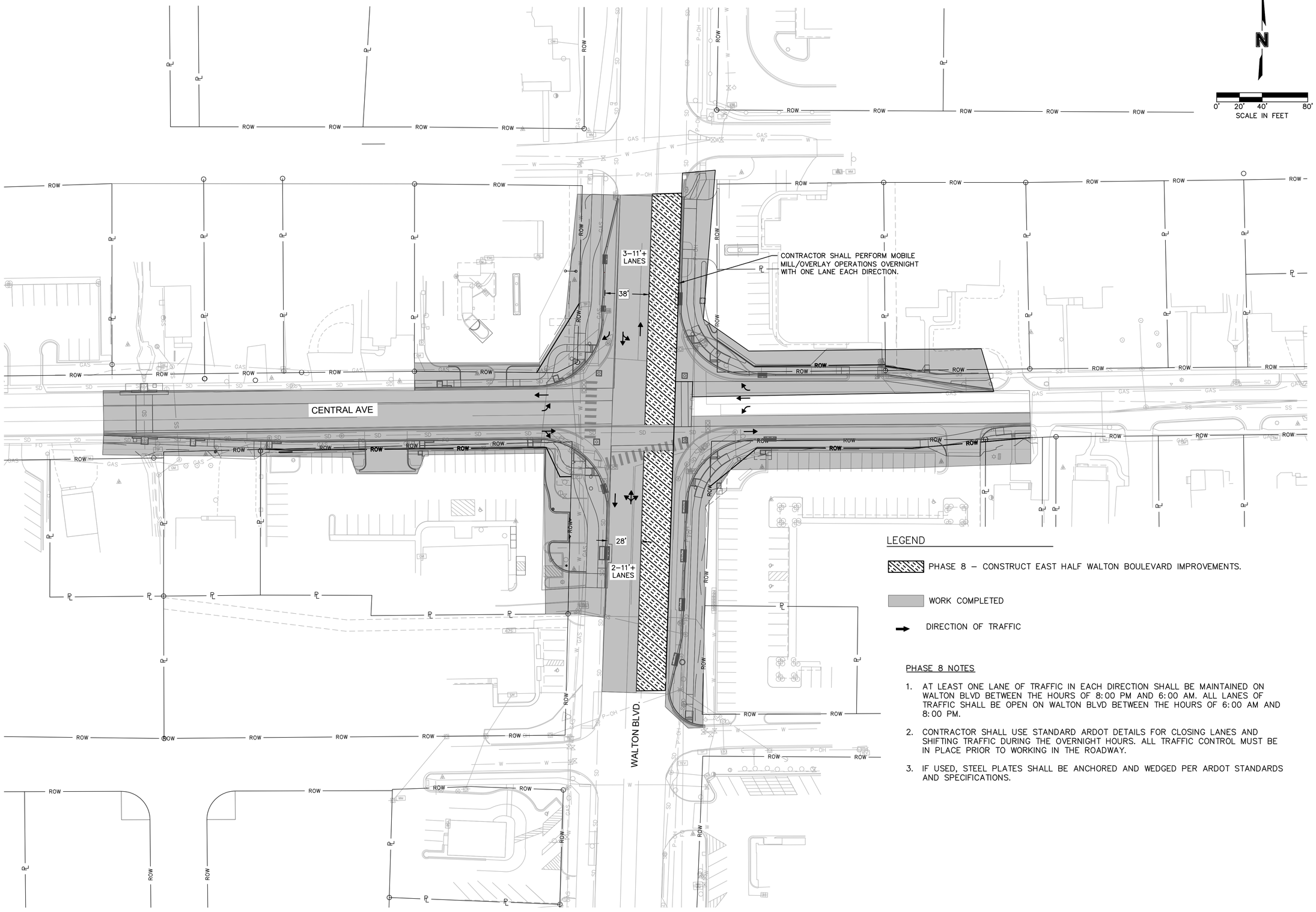

LEGEND

- PHASE 8 – CONSTRUCT EAST HALF WALTON BOULEVARD IMPROVEMENTS.
- WORK COMPLETED
- DIRECTION OF TRAFFIC

PHASE 8 NOTES

1. AT LEAST ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED ON WALTON BLVD BETWEEN THE HOURS OF 8:00 PM AND 6:00 AM. ALL LANES OF TRAFFIC SHALL BE OPEN ON WALTON BLVD BETWEEN THE HOURS OF 6:00 AM AND 8:00 PM.
2. CONTRACTOR SHALL USE STANDARD ARDOT DETAILS FOR CLOSING LANES AND SHIFTING TRAFFIC DURING THE OVERNIGHT HOURS. ALL TRAFFIC CONTROL MUST BE IN PLACE PRIOR TO WORKING IN THE ROADWAY.
3. IF USED, STEEL PLATES SHALL BE ANCHORED AND WEDGED PER ARDOT STANDARDS AND SPECIFICATIONS.

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WALTON BLVD. & CENTRAL AVE. INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

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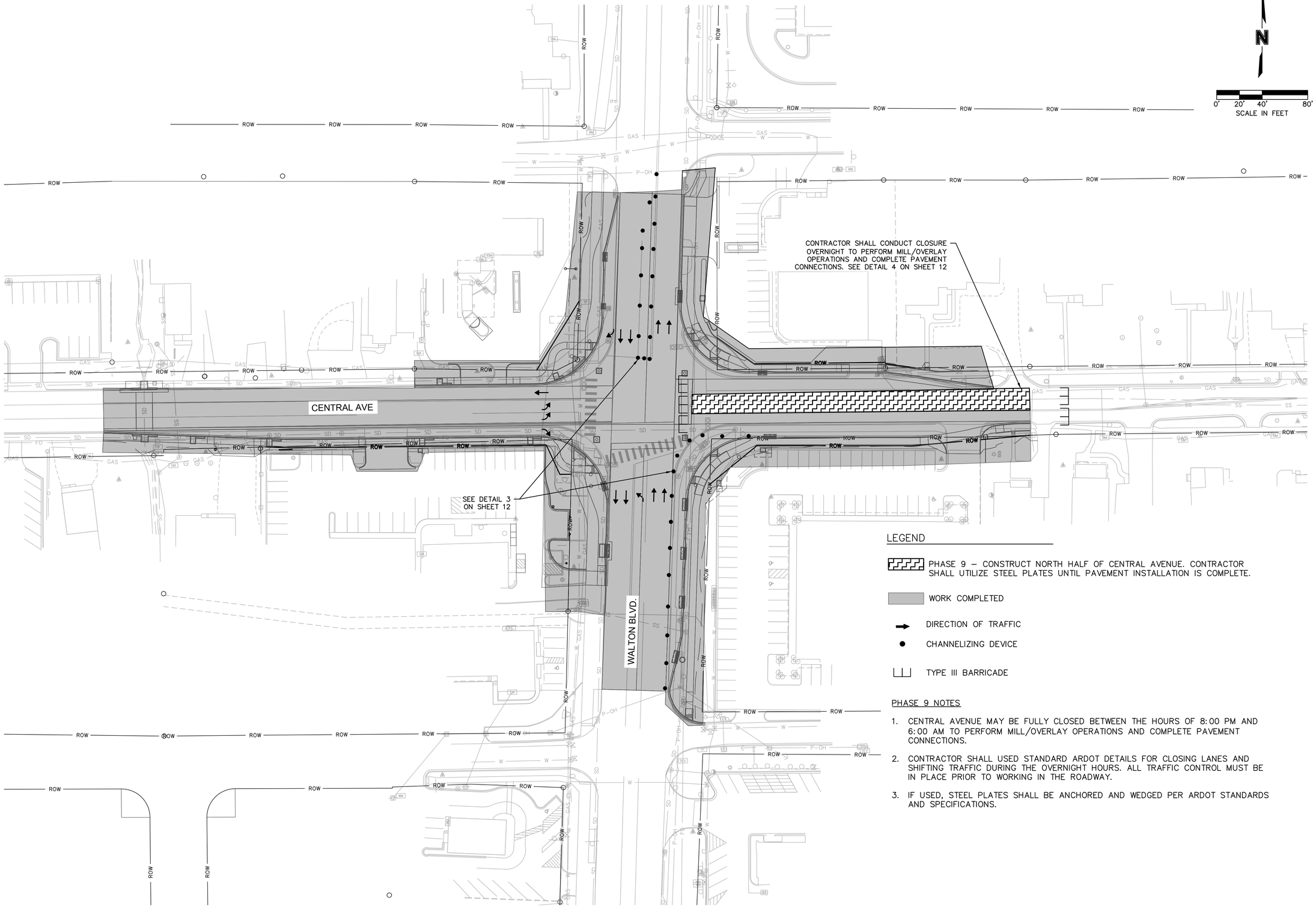

LEGEND

- PHASE 9 – CONSTRUCT NORTH HALF OF CENTRAL AVENUE. CONTRACTOR SHALL UTILIZE STEEL PLATES UNTIL PAVEMENT INSTALLATION IS COMPLETE.
- WORK COMPLETED
- DIRECTION OF TRAFFIC
- CHANNELIZING DEVICE
- TYPE III BARRICADE

PHASE 9 NOTES

1. CENTRAL AVENUE MAY BE FULLY CLOSED BETWEEN THE HOURS OF 8:00 PM AND 6:00 AM TO PERFORM MILL/OVERLAY OPERATIONS AND COMPLETE PAVEMENT CONNECTIONS.
2. CONTRACTOR SHALL USED STANDARD ARDOT DETAILS FOR CLOSING LANES AND SHIFTING TRAFFIC DURING THE OVERNIGHT HOURS. ALL TRAFFIC CONTROL MUST BE IN PLACE PRIOR TO WORKING IN THE ROADWAY.
3. IF USED, STEEL PLATES SHALL BE ANCHORED AND WEDGED PER ARDOT STANDARDS AND SPECIFICATIONS.

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BENTONVILLE, ARKANSAS

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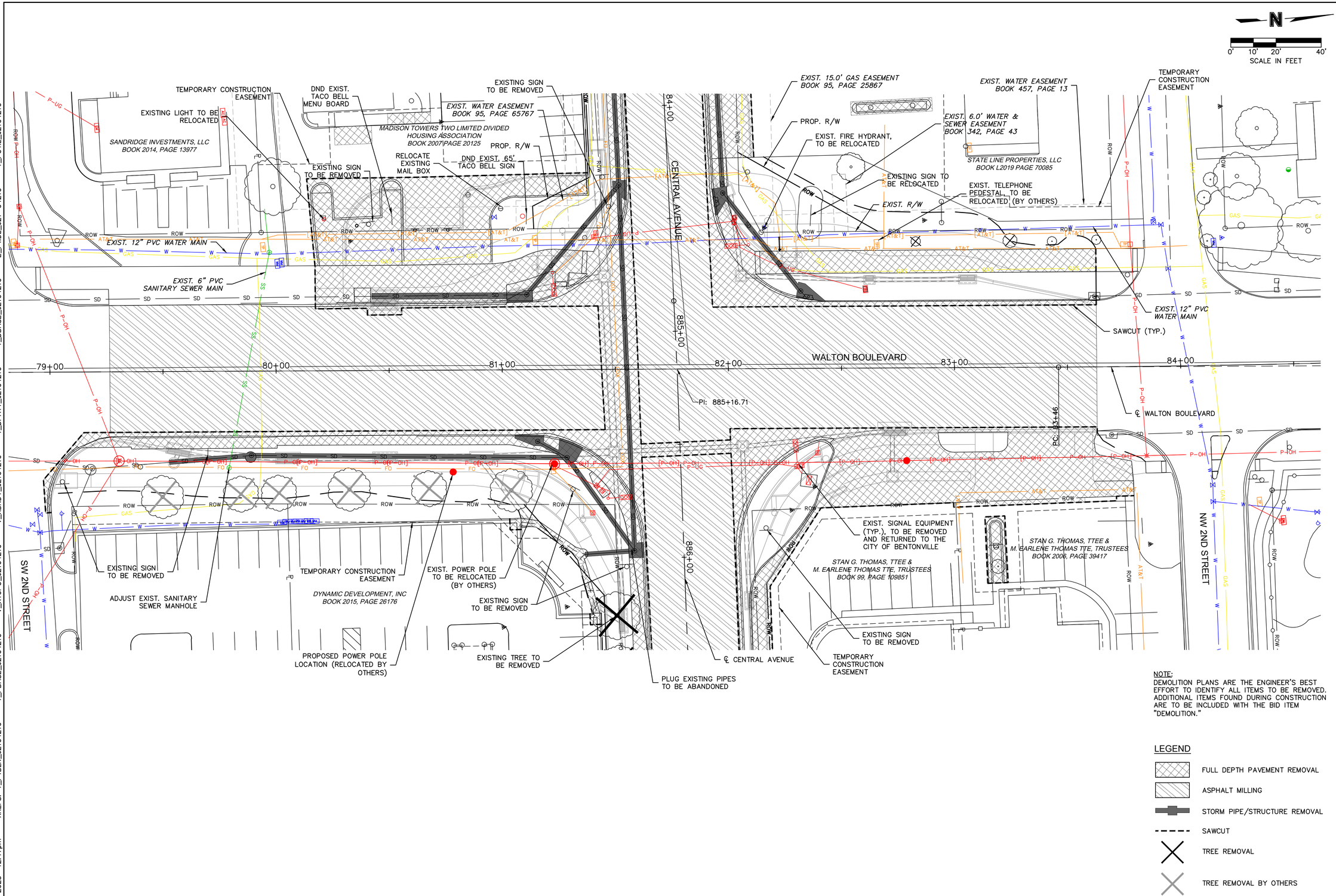

NOTE:
DEMOLITION PLANS ARE THE ENGINEER'S BEST EFFORT TO IDENTIFY ALL ITEMS TO BE REMOVED. ADDITIONAL ITEMS FOUND DURING CONSTRUCTION ARE TO BE INCLUDED WITH THE BID ITEM "DEMOLITION."

LEGEND

- FULL DEPTH PAVEMENT REMOVAL
- ASPHALT MILLING
- STORM PIPE/STRUCTURE REMOVAL
- SAWCUT
- TREE REMOVAL
- TREE REMOVAL BY OTHERS

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DEMOLITION PLAN

WALTON BLVD. & CENTRAL AVE. INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

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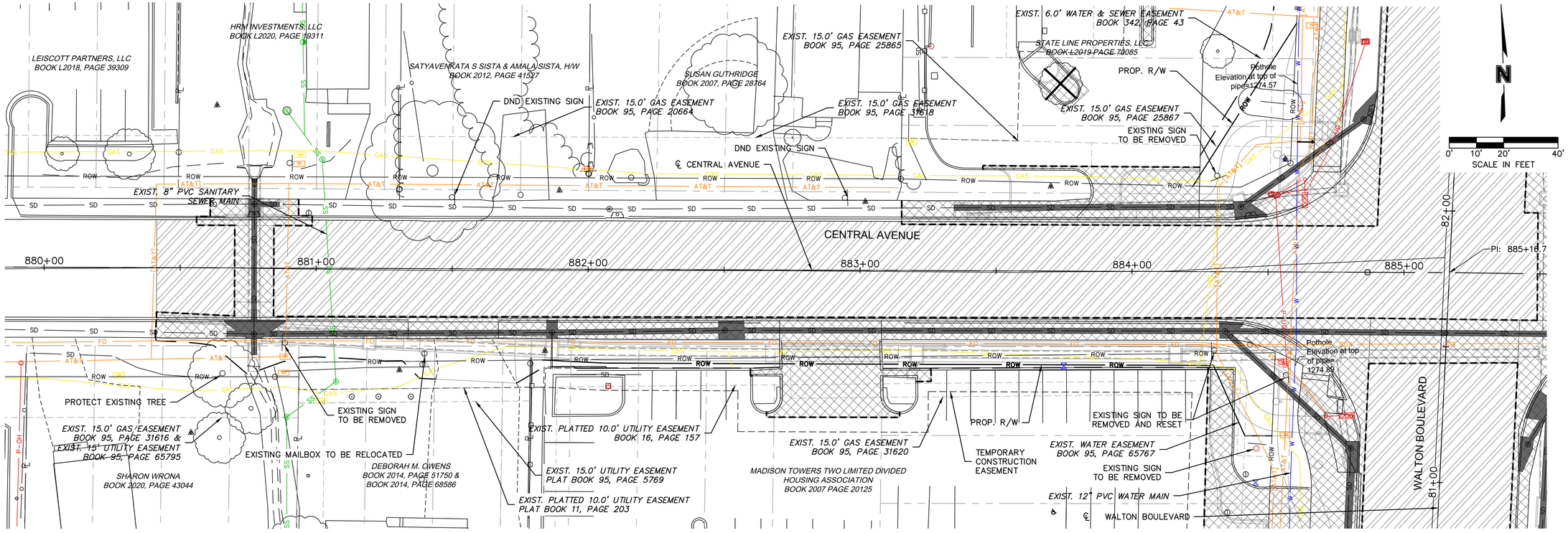

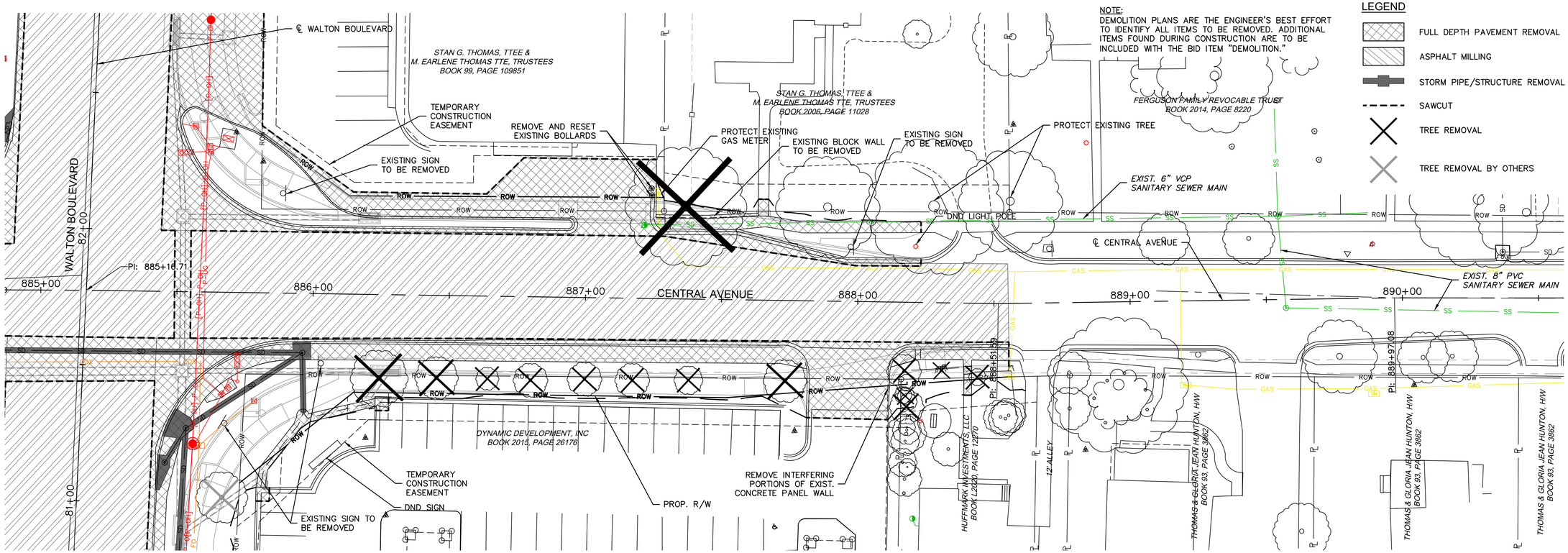

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DEMOLITION PLAN

WALTON BLVD. & CENTRAL AVE.
INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

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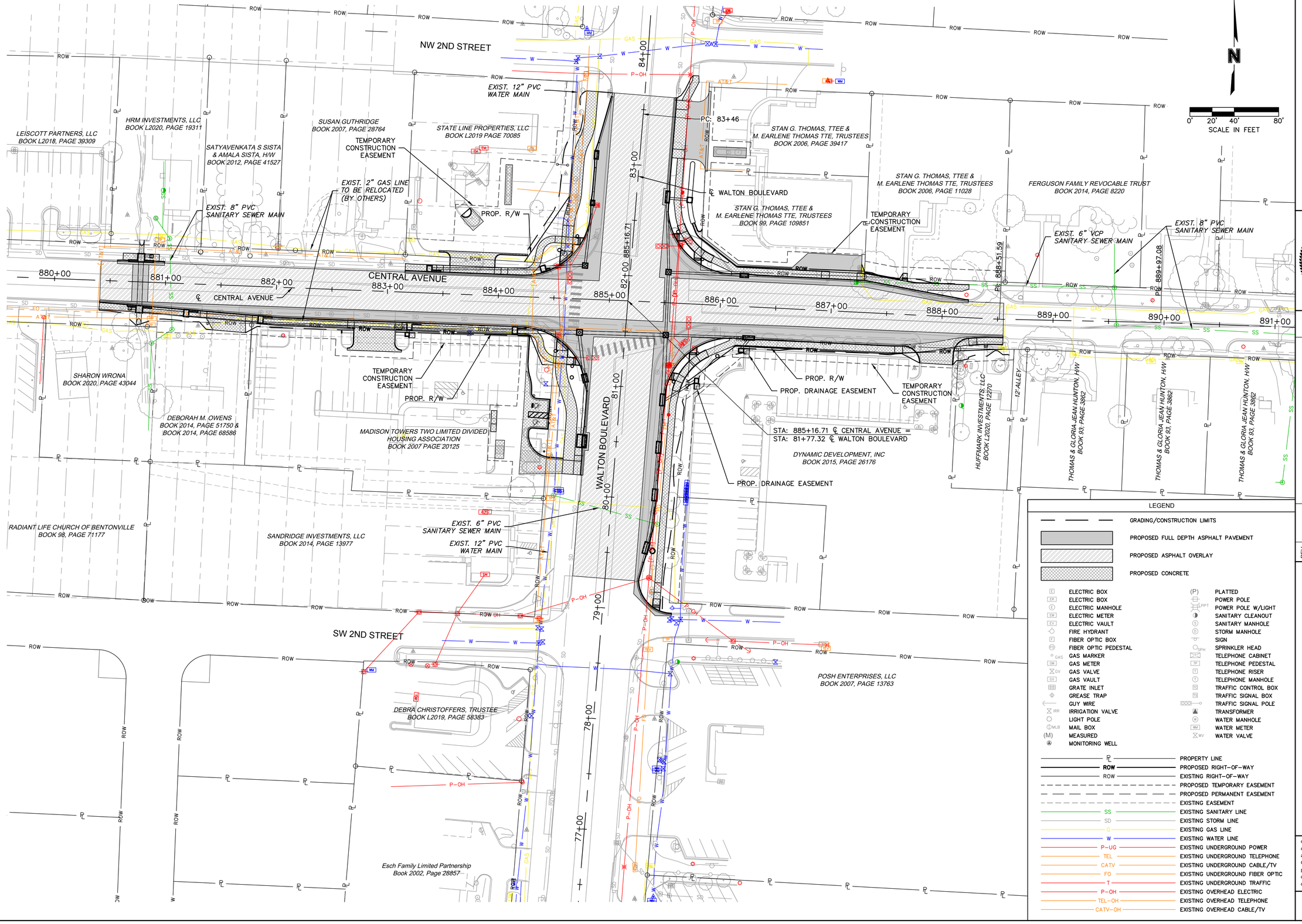

LEGEND

- GRADING/CONSTRUCTION LIMITS
- PROPOSED FULL DEPTH ASPHALT PAVEMENT
- PROPOSED ASPHALT OVERLAY
- PROPOSED CONCRETE

E	ELECTRIC BOX	(P)	PLATTED
ER	ELECTRIC BOX	PPT	POWER POLE
E	ELECTRIC MANHOLE	PPT	POWER POLE W/LIGHT
EM	ELECTRIC METER		SANITARY CLEANOUT
EV	ELECTRIC VAULT	S	SANITARY MANHOLE
	FIRE HYDRANT	D	STORM MANHOLE
F	FIBER OPTIC BOX		SIGN
FP	FIBER OPTIC PEDESTAL	SPH	SPRINKLER HEAD
GAS	GAS MARKER		TELEPHONE CABINET
GM	GAS METER	TP	TELEPHONE PEDESTAL
GV	GAS VALVE		TELEPHONE RISER
GV	GAS VAULT	T	TELEPHONE MANHOLE
	GRATE INLET		TRAFFIC CONTROL BOX
	GREASE TRAP		TRAFFIC SIGNAL BOX
	GUY WIRE		TRAFFIC SIGNAL POLE
IRR	IRRIGATION VALVE		TRANSFORMER
	LIGHT POLE	W	WATER MANHOLE
MLB	MAIL BOX	WM	WATER METER
(M)	MEASURED	WV	WATER VALVE
	MONITORING WELL		

- PROPERTY LINE
- **ROW** PROPOSED RIGHT-OF-WAY
- ROW EXISTING RIGHT-OF-WAY
- PROPOSED TEMPORARY EASEMENT
- PROPOSED PERMANENT EASEMENT
- EXISTING EASEMENT
- SS EXISTING SANITARY LINE
- SD EXISTING STORM LINE
- G EXISTING GAS LINE
- W EXISTING WATER LINE
- P-UG EXISTING UNDERGROUND POWER
- TEL EXISTING UNDERGROUND TELEPHONE
- CATV EXISTING UNDERGROUND CABLE/TV
- FO EXISTING UNDERGROUND FIBER OPTIC
- T EXISTING UNDERGROUND TRAFFIC
- P-OH EXISTING OVERHEAD ELECTRIC
- TEL-OH EXISTING OVERHEAD TELEPHONE
- CATV-OH EXISTING OVERHEAD CABLE/TV

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OVERALL SITE PLAN

WALTON BLVD. & CENTRAL AVE. INTERSECTION IMPROVEMENTS

2023

BENTONVILLE, ARKANSAS

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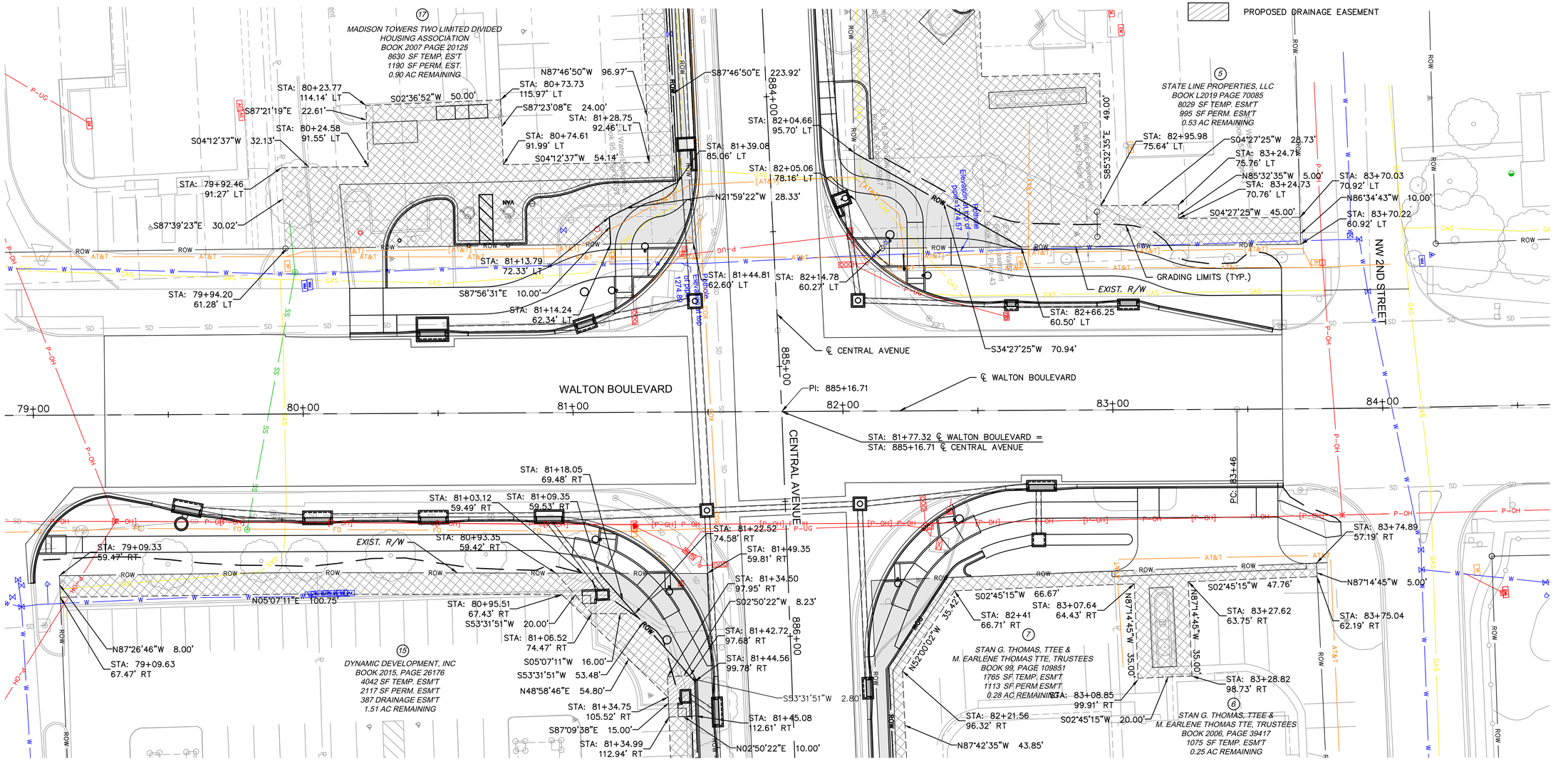

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USER: jcoddington

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STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No.13624
ANDREW S. BREWER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

RIGHT-OF-WAY PLANS

WALTON BLVD. & CENTRAL AVE. INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

drawn by:	JRC/JKL
checked by:	JKL/JWP
approved by:	RCB
QA/QC by:	JKL/RCB
project no.:	J21-04210
drawing no.:	T_ROW_J2104210
date:	11.20.2023

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1 LEISCOTT PARTNERS, LLC
BOOK L2018, PAGE 39309

2 HRM INVESTMENTS, LLC
BOOK L2020, PAGE 19311

3 SATYAVENKATA S SISTA & AMALA SISTA, H/W
BOOK 2012, PAGE 41527

4 SUSAN GUTHRIDGE
BOOK 2007, PAGE 28764

5 STATE LINE PROPERTIES, LLC
BOOK L2019 PAGE 70085
8029 SF TEMP. ESM'T
995 SF PERM. ESM'T
0.53 AC REMAINING

16 MADISON TOWERS TWO LIMITED DIVIDED HOUSING ASSOCIATION
BOOK 2007 PAGE 20125
8630 SF TEMP. ES'T
1190 SF PERM. EST.
0.90 AC REMAINING

18 DEBORAH M. OWENS
BOOK 2014, PAGE 51750 &
BOOK 2014, PAGE 68586
850 SF TEMP. ES'T.
0.26 AC REMAINING

19 SHARON WRONA
BOOK 2020, PAGE 43044

7 STAN G. THOMAS, TTEE &
M. EARLENE THOMAS TTE, TRUSTEES
BOOK 99, PAGE 109851
1765 SF TEMP. ESM'T
1113 SF PERM ESM'T
0.28 AC REMAINING

8 STAN G. THOMAS, TTEE &
M. EARLENE THOMAS TTE, TRUSTEES
BOOK 2006, PAGE 11028
1271 SF TEMP. ESM'T
51 SF PERM. ESM'T
0.48 AC REMAINING

9 FERGUSON FAMILY REVOCABLE TRUST
BOOK 2014, PAGE 8220

15 DYNAMIC DEVELOPMENT, INC
BOOK 2015, PAGE 26176
4042 SF TEMP. ESM'T
2117 SF PERM. ESM'T
387 DRAINAGE ESM'T
1.51 AC REMAINING

14 HUFFMARK INVESTMENTS, LLC
BOOK L2020, PAGE 12270
499 SF TEMP. ESM'T
80 SF PERM. ESMT
0.15 AC REMAINING

12' ALLEY

13 THOMAS & GLORIA JEAN HUNTON, H/W
BOOK 93, PAGE 3862

12 THOMAS & GLORIA JEAN HUNTON, H/W
BOOK 93, PAGE 3862

LEGEND
- PROPOSED RIGHT-OF-WAY
- TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED DRAINAGE EASEMENT

SCALE IN FEET 0 10' 20' 40'

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WALTON BLVD. & CENTRAL AVE.
INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

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drawing no.:	T_ROW_J2104210
date:	11.20.2023

SHEET
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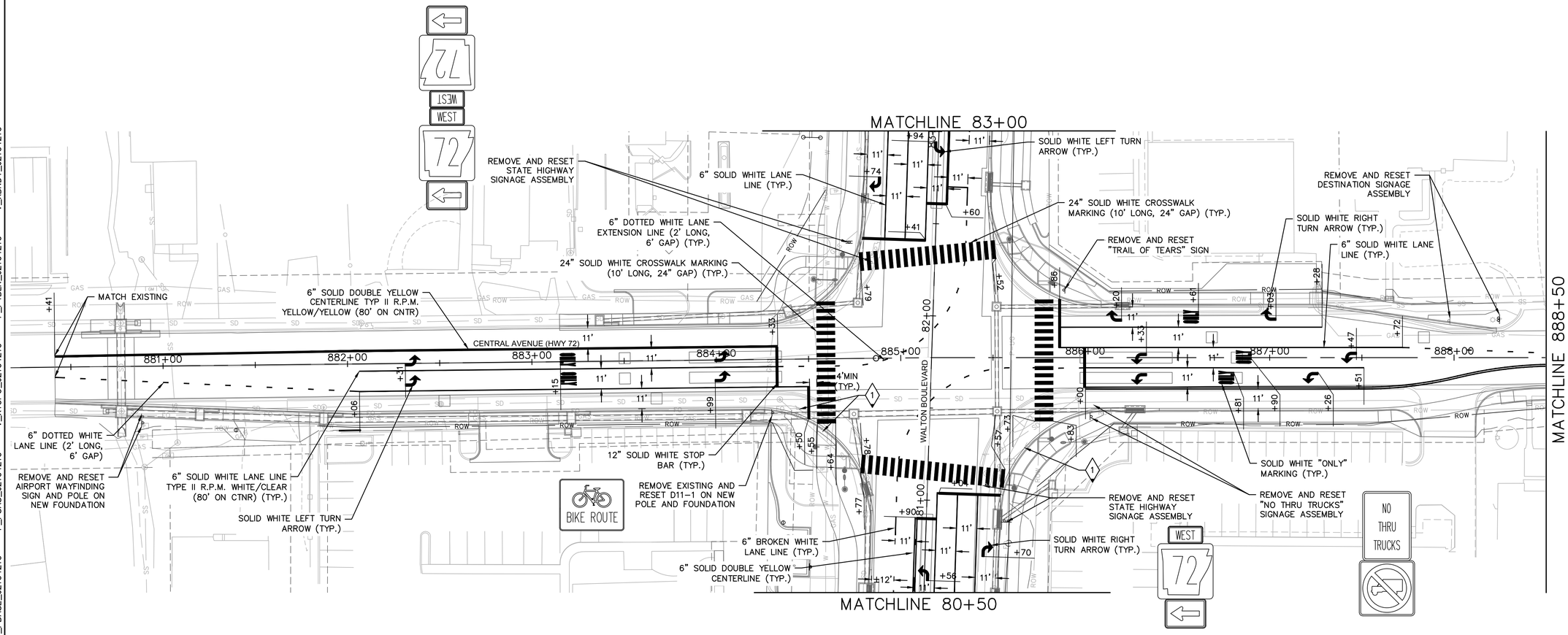
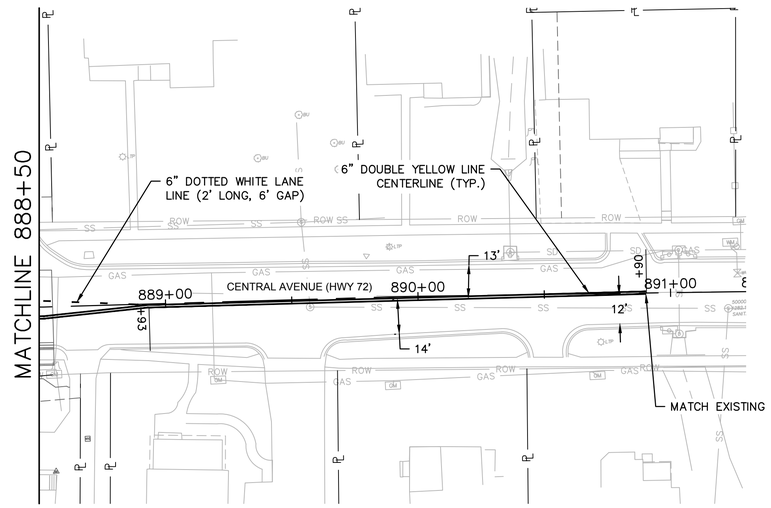
CONSTRUCTION NOTES:

1 DENOTES EXISTING UTILITY MARKER. FOR UTILITIES TO REMAIN IN THE ROADWAY, MARKER SHALL BE REMOVED. FOR RELOCATED UTILITIES, MARKER SHALL BE RELOCATED ACCORDINGLY.





PAVEMENT MARKINGS AND SIGNAGE QUANTITIES			
ITEM NUMBER	ITEM	TOTAL QUANTITY	UNIT
719	THERMOPLASTIC PAVEMENT MARKING WHITE (24")	730	LF
719	THERMOPLASTIC PAVEMENT MARKING WHITE (12")	180	LF
719	THERMOPLASTIC PAVEMENT MARKING WHITE (6")	1793	LF
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (6")	2361	LF
719	THERMOPLASTIC PAVEMENT MARKING WORDS	9	EA
719	THERMOPLASTIC PAVEMENT MARKING ARROWS	18	EA
721	RAISED PAVEMENT MARKER (TYPE 2)	5	EA
NOTE 3	REMOVE AND RESET EXISTING SALVAGED SIGN ASSEMBLY	7	EA

GENERAL NOTES:

1. CONTRACTOR SHALL FOLLOW APPLICABLE ARDOT STANDARD DETAILS (SEE PM-1 AND SHS-1 - SHS-8).
2. IF STANDARD ARDOT LATERAL OFFSET CANNOT BE PROVIDED, A MINIMUM OF 2' OFFSET (MEASURED FROM EDGE OF PAVEMENT TO EDGE OF SIGN) SHALL BE PROVIDED.
3. SALVAGED SIGNS SHALL BE INSTALLED ON NEW POSTS/FOUNDATION. SEE DEMOLITION PLAN SHEETS FOR EXISTING LOCATIONS OF SALVAGED SIGNS.
4. EXISTING SIGNS NOT SPECIFICALLY MARKED FOR REMOVAL SHALL REMAIN IN PLACE.
5. ALL EXISTING PAVEMENT MARKINGS IN CONFLICT WITH NEW SHALL BE REMOVED.
6. ALL MARKINGS SHALL BE STANDARD THERMOPLASTIC MATERIAL UNLESS OTHERWISE NOTED.
7. STRIPING LAYOUT AND DIMENSIONS TO BE INSTALLED PER MUTCD REQUIREMENTS.
8. PAVEMENT MARKING REMOVAL SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO PAYMENT FOR MAINTENANCE OF TRAFFIC.

N

0' 15' 30' 60'
SCALE IN FEET

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STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18072
K. ROTERING
11-20-2023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

PAVEMENT MARKING AND SIGNING PLAN

WALTON BLVD. & CENTRAL AVE. INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

drawn by: MES
checked by: JAB
approved by: TBD
QA/QC by: KR
project no.: J21-04210
drawing no.: F_SAS_2104210J
date: 06.23.2023

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DWG: F:\2021\04001-04500\021-04210-J\40-Design\AutoCAD\Final Plans\Sheets\TFTC\PAVEMENT MARKING & SIGNING\F_SAS_2104210J.dwg USER: jcoddington
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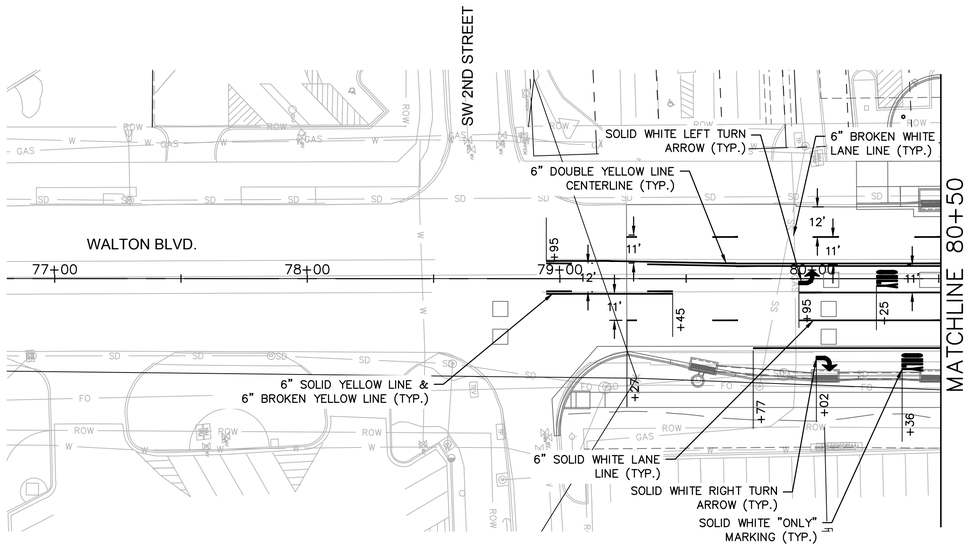

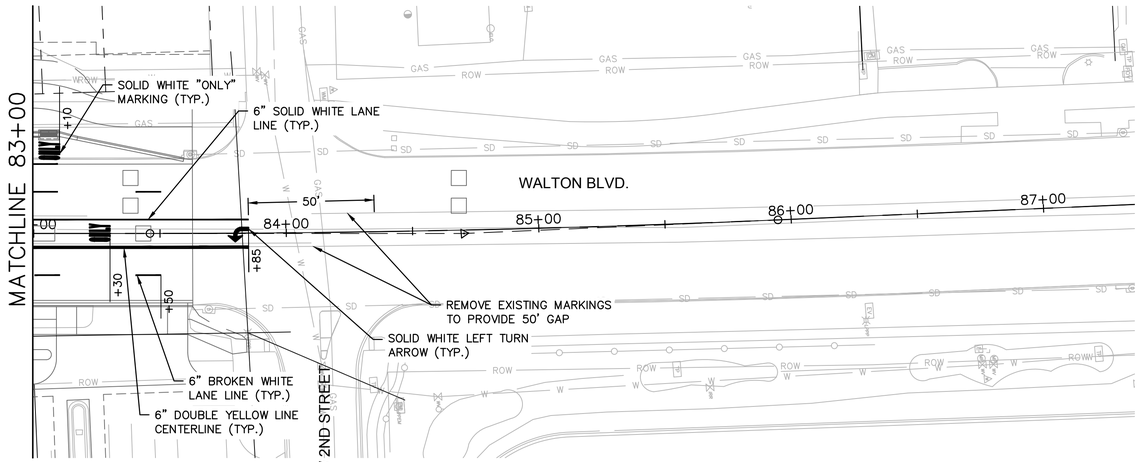

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No. 18072
K. L. ROTERING
11-20-2023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
		REVISIONS	

PAVEMENT MARKING AND SIGNING PLAN

WALTON BLVD. & CENTRAL AVE.
INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

drawn by:	MES
checked by:	JAB
approved by:	TBD
QA/QC by:	KR
project no.:	J21-04210
drawing no.:	F_SAS_2104210J
date:	06.23.2023

SHEET
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N
0' 15' 30' 60'
SCALE IN FEET

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F_PTBLK_J2104210 V_XBNDY_J2104210

MADISON TOWERS TWO LIMITED DIVIDED HOUSING ASSOCIATION BOOK 2007 PAGE 20125

PROPOSED MAILBOX RELOCATION

RELOCATE EXIST. PARKING SIGN AND INSTALL ADDITIONAL SIGN

PROPOSED LIGHT RELOCATION

ADJUST WATER VALVE TO GRADE

TEMPORARY CONSTRUCTION EASEMENT

PROP. R/W

EXIST. 12" PVC WATER MAIN

EXIST. 6" PVC SANITARY SEWER MAIN

STA: 80+17.51
27.40' LT

BEGIN CONSTRUCTION
STA: 79+26.47

STA: 79+28.55
29.11' RT

DND EXISTING POWER POLE

STA: 79+76.57
38.50' RT

ADJUST EXISTING SANITARY SEWER MANHOLE TO MATCH FINISHED GRADE
EXIST. ELEV. = 1284.54
PROP. ELEV. = 1283.64

ADJUST EXISTING STORM MANHOLE TO MATCH FINISHED GRADE
EXIST. RIM ELEV. = 1285.96

TEMPORARY CONSTRUCTION EASEMENT

DYNAMIC DEVELOPMENT, INC
BOOK 2015, PAGE 26176

EXIST. R/W

PROPOSED POWER POLE RELOCATION

PROPOSED DRAINAGE EASEMENT

PROP. R/W

WALTON BOULEVARD

79+00 80+00 81+00

℄ CENTRAL AVENUE

885+00

87°30'21"
92°29'39"
91°52'27"
87°7'33"

PI: 885+16.71

℄ WALTON BOULEVARD

STA: 81+77.32 ℄ WALTON BOULEVARD =
STA: 885+16.71 ℄ CENTRAL AVENUE

REMOVE AND RELOCATE EXISTING POWER POLE

26.73'
13.27'
6'
5'

CENTRAL AVENUE

886+00

STATE LINE PROPERTIES, LLC
BOOK L2019 PAGE 70085

GRADING LIMITS (TYP.)

EXIST. R/W

PROPOSED SIGN RELOCATION

EXIST. 12" PVC WATER MAIN

NW 2ND STREET

STA: 83+09.45
38.50' LT

STA: 83+59.24
28.49' LT

12.5'
27.5'

END CONSTRUCTION
STA: 83+62.89

83+00 84+00

PC: 83+46

STA: 83+62.89
27.50' RT

STA: 83+79.75
41.80' RT

DND EXISTING POWER POLE

STA: 83+83.95
42.12' RT

PROPOSED POWER POLE RELOCATION

STA: 83+84.17
47.15' RT

STA: 83+78.51
47.81' RT

STA: 83+60.88
40.02' RT

TEMPORARY CONSTRUCTION EASEMENT

STAN G. THOMAS, TTEE & M. EARLENE THOMAS TTE, TRUSTEES
BOOK 99, PAGE 109851

STAN G. THOMAS, TTEE & M. EARLENE THOMAS TTE, TRUSTEES
BOOK 2005, PAGE 39417

PROP. R/W

JB-135 JB-210 JB-235 JB-240 JB-340 JB-510
CI-140 CI-145 CI-215 CI-220 CI-225 CI-230 CI-330 CI-350 CI-360 CI-520 CI-710 CI-910 CI-1210
AI-610

N
0' 10' 20' 40'
SCALE IN FEET

LEGEND

- GRADING/CONSTRUCTION LIMITS
- PROPOSED FULL DEPTH ASPHALT PAVEMENT
- PROPOSED ASPHALT OVERLAY
- PROPOSED CONCRETE

VPI STA: 79+75
VPI EL= 1283.87
K= 80.69
LVC= 80.00

LOW POINT STA: 81+54.42
LOW POINT EL= 1281.73
VPI STA: 81+12.50
VPI EL= 1281.44
K= 66.16
LVC= 150.00

HIGH POINT STA: 82+81.14
HIGH POINT EL= 1282.13
VPI STA: 82+87.50
VPI EL= 1282.31
K= 124.78
LVC= 137.50

STA: 79+26.47
EL= 1285.21

VPC STA: 79+35
VPC EL= 1284.97

EX. GAS LINE
STA: 79+93.09

VPT STA: 80+15
VPT EL= 1283.16

VPC STA: 80+37.50
VPC EL= 1282.76

EX. FIBER OPTIC LINE
STA: 81+51.06

VPT STA: 81+87.50
VPT EL= 1281.81

VPC STA: 82+18.75
VPC EL= 1281.97

VPT STA: 83+56.25
VPT EL= 1281.90

STA: 83+62.89
EL= 1281.86

END CONSTRUCTION
STA. 83+62.89

-2.76%
-1.77%
0.50%
-1.50%
0.00%
2.35%
-0.60%

BEGIN CONSTRUCTION
STA. 79+26.47

EXISTING GRADE

EXISTING 6" PVC SANITARY SEWER, FIELD VERIFY FLOWLINE ELEVATION AT CROSSING PRIOR TO CONSTRUCTION

PROPOSED FINISHED GRADE

30" CLASS V RCP
INV.= 1276.82

24" RCP
INV.= 1275.94

STA: 82+50
EL= 1281.64

STA: 82+69.85
EL= 1281.34

STA: 82+74.85
EL= 1281.34

STA: 83+08.98
EL= 1282.14

PROPOSED SPECIAL DITCH RIGHT

8' 4' 2' 0'

0' 10' 20' 40'
SCALE IN FEET

EXISTING GRADE ELEVATION

PROPOSED FINISHED GRADE ELEVATION

1300 1295 1290 1285 1280 1275 1270 1265

1286.0 1285.3 1284.5 1284.57 1284.0 1283.97 1283.4 1283.44 1283.0 1282.98 1282.6 1282.55 1282.2 1282.21 1282.0 1281.95 1281.8 1281.80 1281.8 1281.73 1281.8 1281.76 1281.8 1281.88 1281.9 1282.00 1281.9 1282.09 1281.9 1282.12 1281.9 1282.11 1281.9 1282.05 1281.9 1281.94 1281.8 1281.8

79+00 80+00 81+00 82+00 83+00 84+00

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STATE OF ARKANSAS
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ANDREW S. BREWER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

ROADWAY PLAN AND PROFILE

WALTON BLVD. & CENTRAL AVE. INTERSECTION IMPROVEMENTS

2023

BENTONVILLE, ARKANSAS

drawn by:	JRC/JKL
checked by:	JKL/JWP
approved by:	RCB
QA/QC by:	JKL/RCB
project no.:	J21-04210
drawing no.:	T_RPP_J2104210
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SHEET
36 OF 89

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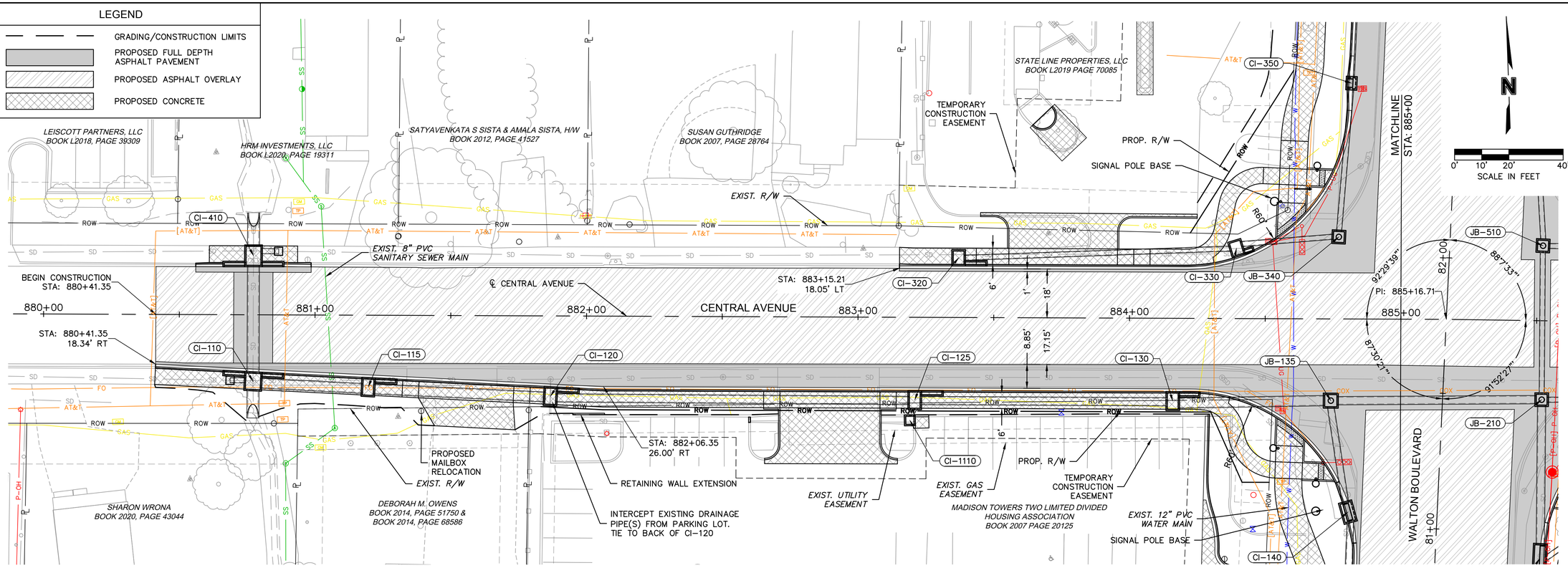
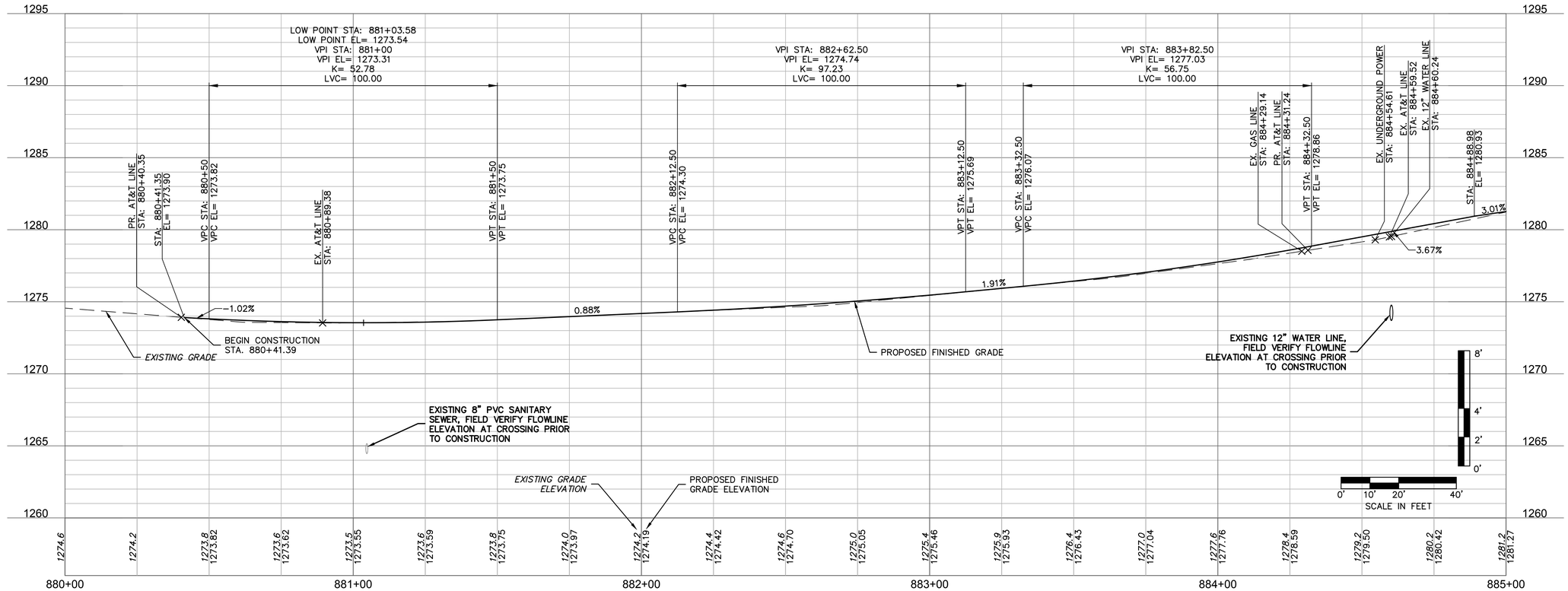
LEGEND

- GRADING/CONSTRUCTION LIMITS
- PROPOSED FULL DEPTH ASPHALT PAVEMENT
- PROPOSED ASPHALT OVERLAY
- PROPOSED CONCRETE





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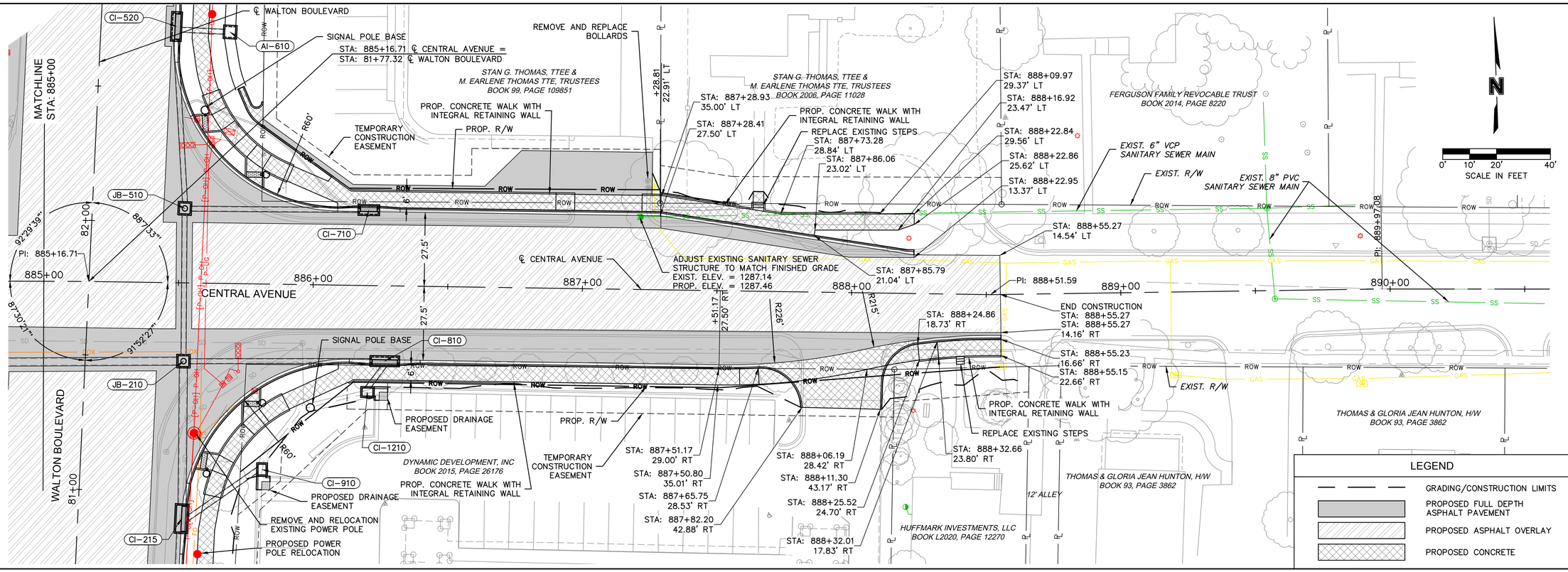

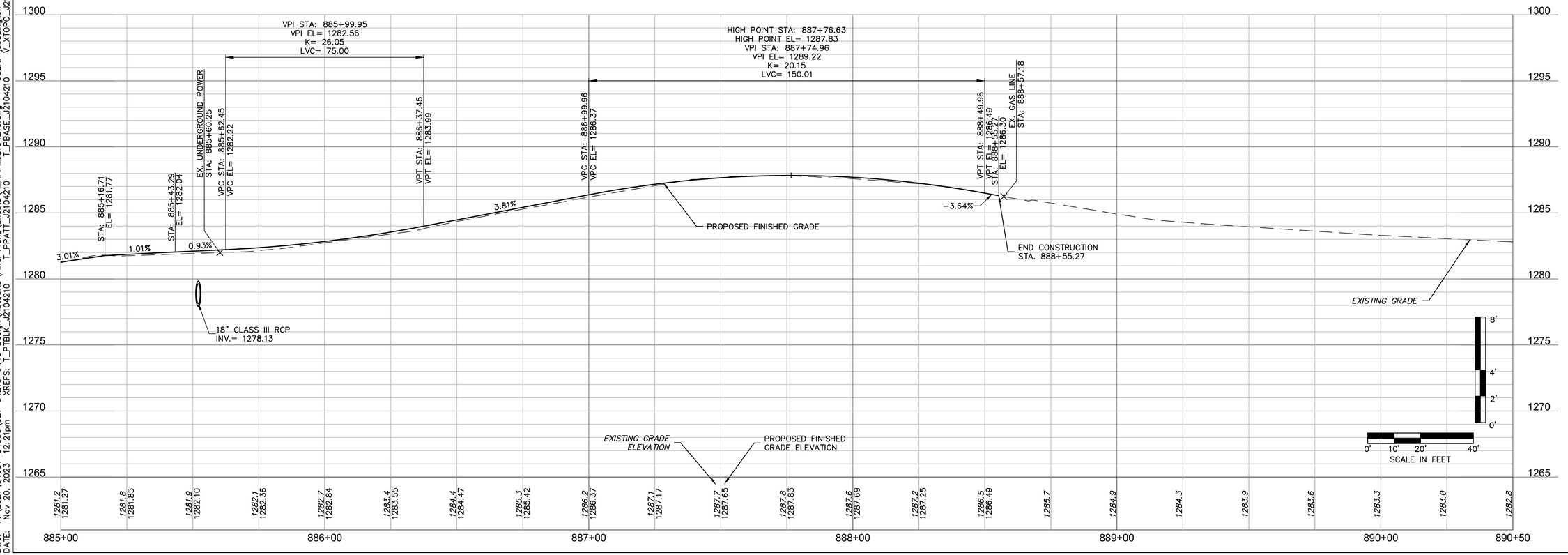

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WALTON BOULEVARD

CENTRAL AVENUE

NW 2ND STREET

886+00

887+00

STA: 885+74.76
64.97' LT

STA: 885+71.44
72.43' LT

STA: 885+72.81
73.04' LT

STA: 885+75.68
66.61' LT

EXIST. R/W

R2.5'

R12'

STA: 885+80.46
67.63' LT

STA: 885+80.47
61.32' LT

STA: 885+78.82
60.04' LT

STA: 885+87.19
133.58' LT

STA: 885+87.08
142.37' LT

TEMPORARY CONSTRUCTION EASEMENT

SAWCUT AND REMOVE EXISTING PARKING LOT PAVEMENT. REPLACE WITH FULL DEPTH ASPHALT PAVEMENT

REMOVE EXISTING CURB ISLAND, POLE SIGN, AND TREE. REPLACE WITH FULL DEPTH ASPHALT PAVEMENT

INTEGRAL WALK RETAINING WALL, MAINTAIN 6" (TYP.) FROM TOP OF PARKING LOT PAVEMENT TO TOP OF WALL.

STA: 886+16.59
142.75' LT

STA: 886+16.60
133.72' LT

STA: 886+14.28
37.50' LT

⑦ STAN G. THOMAS, TTEE & M. EARLENE THOMAS TTE, TRUSTEES BOOK 99, PAGE 109851

⑥ STAN G. THOMAS, TTEE & M. EARLENE THOMAS TTE, TRUSTEES BOOK 2006, PAGE 39417

PROP. R/W

STA: 886+63.21
37.50' LT

STA: 886+76.70
50.99' LT

STA: 887+25.33
50.99' LT

N

0' 5' 10' 20'
SCALE IN FEET

LEGEND

- GRADING/CONSTRUCTION LIMITS
- PROPOSED FULL DEPTH ASPHALT PAVEMENT
- PROPOSED ASPHALT OVERLAY
- PROPOSED CONCRETE

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OFF RIGHT OF WAY MODIFICATIONS

WALTON BLVD. & CENTRAL AVE. INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

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DWG: F:\2021\04001-04500\021-04210-J\40-Design\AutoCAD\Final Plans\Sheets\T_SIT02_J2104210.dwg USER: jcoddington
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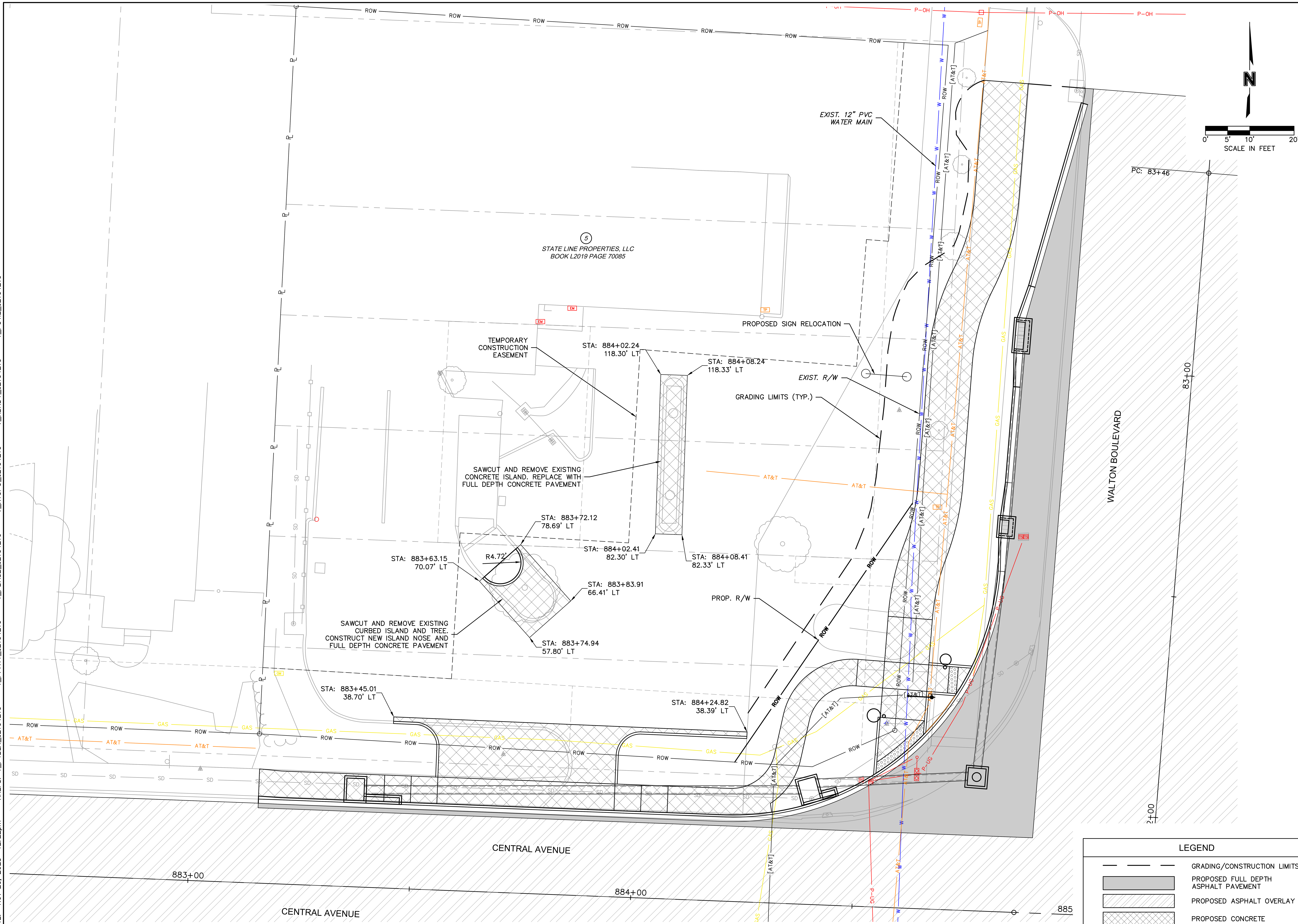

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REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

OFF RIGHT OF WAY MODIFICATIONS

WALTON BLVD. & CENTRAL AVE.
INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

drawn by:	JRC/JKL
checked by:	JKL/JWP
approved by:	RCB
QA/QC by:	JKL/RCB
project no.:	J21-04210
drawing no.:	T_SIT02_J2104210
date:	11.20.2023

883+00

884+00

CENTRAL AVENUE

WALTON BOULEVARD

STA: 882+65.32
33.50' RT

STA: 882+71.36
34.27' RT

STA: 882+65.78
52.64' RT

STA: 882+65.78
54.14' RT

STA: 882+71.36
47.05' RT

STA: 883+08.20
46.04' RT

STA: 883+08.20
33.50' RT

STA: 883+14.72
54.05' RT

STA: 883+14.72
52.55' RT

STA: 883+21.19
35.88' RT

STA: 883+20.60
40.90' RT

STA: 883+14.20
34.00' RT

STA: 883+26.18
35.85' RT

STA: 883+26.31
40.75' RT

GRADING LIMITS (TYP.)

TEMPORARY CONSTRUCTION EASEMENT

SAWCUT AND REMOVE EXISTING CONCRETE PAVEMENT AND CURB. CONSTRUCT NEW CURB AND GUTTER AND FULL DEPTH CONCRETE PAVEMENT

STA: 884+29.60
35.24' RT

PROP. R/W

DND EXIST. 65' TACO BELL SIGN

STA: 884+29.10
57.87' RT

STA: 884+28.41
66.92' RT

R40'

STA: 884+27.41
66.89' RT

STA: 884+31.19
71.53' RT

R40'

EXIST. R/W

STA: 884+33.27
85.71' RT

STA: 884+38.09
90.88' RT

R5'

STA: 884+50.13
91.30' RT

Pothole
Elevation at top of pipe=
1274.89

STA: 883+97.76
103.45' RT

STA: 884+02.76
103.48' RT

SAWCUT AND REMOVE EXISTING SIDEWALK, CONSTRUCT NEW PARALLEL ADA RAMP

PROPOSED ADA RAMP

19'

5'

STA: 883+97.63
122.45' RT

STA: 884+02.63
122.48' RT

16
MADISON TOWERS TWO LIMITED DIVIDED HOUSING ASSOCIATION
BOOK 2007 PAGE 20125

STA: 884+35.76
117.81' RT

STA: 884+32.20
120.66' RT

R3.5'

STA: 884+49.19
118.28' RT

R20'

STA: 884+51.25
143.36' RT

STA: 884+63.93
143.85' RT

STA: 884+02.58
130.10' RT

STA: 884+10.58
129.85' RT

SAWCUT AND REMOVE EXISTING CONCRETE RAMP. REPLACE WITH FULL DEPTH CONCRETE PAVEMENT

DND EXIST. TACO BELL MENU BOARD

STA: 884+02.46
146.29' RT

STA: 884+10.46
146.35' RT

STA: 884+24.74
159.55' RT

STA: 884+63.39
157.73' RT

PROPOSED LIGHT RELOCATION

VAN

11'

5'

8'

N

0' 5' 10' 20'
SCALE IN FEET

LEGEND

- GRADING/CONSTRUCTION LIMITS
- PROPOSED FULL DEPTH ASPHALT PAVEMENT
- PROPOSED ASPHALT OVERLAY
- PROPOSED CONCRETE

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BENTONVILLE, ARKANSAS

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SHEET
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NW 2ND STREET

SW 2ND STREET

CENTRAL AVENUE

WALTON BOULEVARD

N

0' 15' 30' 60'
SCALE IN FEET

EXIST. 12" PVC WATER MAIN

EXIST. 8" PVC SANITARY SEWER MAIN

EXIST. 6" PVC SANITARY SEWER MAIN

EXIST. R/W

PROP. R/W

PC: 83+46

PI: 885+16.71

℄ CENTRAL AVENUE

℄ WALTON BOULEVARD

880+00 881+00 882+00 883+00 884+00 885+00 886+00 887+00 888+00

84+00 83+00 82+00 81+00 80+00 79+00

CI-110 CI-115 CI-120 CI-125 CI-130 CI-140 CI-145 CI-320 CI-330 CI-350 CI-360 CI-410 CI-520 CI-710 CI-810 CI-910 CI-1110 CI-1210 CI-215 CI-220 CI-225 CI-230

AI-610

JB-135 JB-210 JB-340 JB-510 JB-235

SIGNAL POLE BASE

STORM LINE 100, SEE SHEET 44

STORM LINE 200, SEE SHEET 45

STORM LINE 300, SEE SHEET 46

STORM LINE 400, SEE SHEET 46

STORM LINE 500, SEE SHEET 47

STORM LINE 600, SEE SHEET 47

STORM LINE 700, SEE SHEET 48

STORM LINE 800, SEE SHEET 48

STORM LINE 900, SEE SHEET 49

STORM LINE 1100, SEE SHEET 49

LEISCOTT PARTNERS, LLC
BOOK L2018, PAGE 39309

HRM INVESTMENTS, LLC
BOOK L2020, PAGE 19311

SATYAVENKATA S SISTA & AMALA SISTA H/W
BOOK 2012, PAGE 41527

SUSAN GUTHRIDGE
BOOK 2007, PAGE 28764

STATE LINE PROPERTIES, LLC
BOOK L2019 PAGE 70085

STAN G. THOMAS, TTEE &
M. EARLENE THOMAS TTE, TRUSTEES
BOOK 2006, PAGE 39417

STAN G. THOMAS, TTEE &
M. EARLENE THOMAS TTE, TRUSTEES
BOOK 99, PAGE 109851

STAN G. THOMAS, TTEE &
M. EARLENE THOMAS TTE, TRUSTEES
BOOK 2006, PAGE 11028

SHARON WRONA
BOOK 2020, PAGE 43044

DEBORAH M. OWENS
BOOK 2014, PAGE 51750 &
BOOK 2014, PAGE 68586

MADISON TOWERS TWO LIMITED DIVIDED HOUSING ASSOCIATION
BOOK 2007 PAGE 20125

DYNAMIC DEVELOPMENT, INC
BOOK 2015, PAGE 26176

RADIANT LIFE CHURCH OF BENTONVILLE
BOOK 98, PAGE 71177

SANDRIDGE INVESTMENTS, LLC
BOOK 2014, PAGE 13977

POSH ENTERPRISES, LLC
BOOK 2007, PAGE 13763

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STORM DRAINAGE LAYOUT PLAN

WALTON BLVD. & CENTRAL AVE.
INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

drawn by:	JRC/JKL
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Inlet Hydrology			
Name	Area (Acres)	TC (MIN)	Runoff Coefficient
CI-110	0.14	5.00	0.90
CI-115	0.04	5.00	0.90
CI-120	0.13	5.00	0.90
CI-125	0.16	5.00	0.90
CI-130	0.22	5.00	0.90
CI-140	0.04	5.00	0.90
CI-145	0.28	5.00	0.90
CI-150	0.21	5.00	0.90
CI-155	0.12	5.00	0.90
CI-160	0.07	5.00	0.90
CI-215	0.13	5.00	0.80
CI-220	0.06	5.00	0.80
CI-225	0.09	5.00	0.80
CI-230	0.11	5.00	0.80
CI-245	0.16	5.00	0.80
CI-250	0.51	7.65	0.80
CI-255	0.89	5.80	0.90
CI-260	0.54	5.50	0.90
CI-265	0.56	5.00	0.90
CI-270	0.36	7.50	0.90
CI-310	0.06	5.00	0.90
CI-320	0.11	5.00	0.90
CI-330	0.12	5.00	0.90
CI-350	0.12	5.00	0.90
CI-360	0.07	5.00	0.90
CI-410	0.16	5.00	0.90
CI-520	0.19	5.00	0.90
AI-610	0.17	5.00	0.80
CI-710	0.06	5.00	0.90
CI-810	0.13	5.00	0.90
CI-910	0.13	5.00	0.90
CI-1110	0.32	5.00	0.90
CI-1210	0.39	5.00	0.90

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DRAINAGE AREA MAP

WALTON BLVD. & CENTRAL AVE.
INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

drawn by:	JRC/JKL
checked by:	JKL/JWP
approved by:	RCB
QA/QC by:	JKL/RCB
project no.:	J21-04210
drawing no.:	T_DRN_J2104210
date:	11.20.2023

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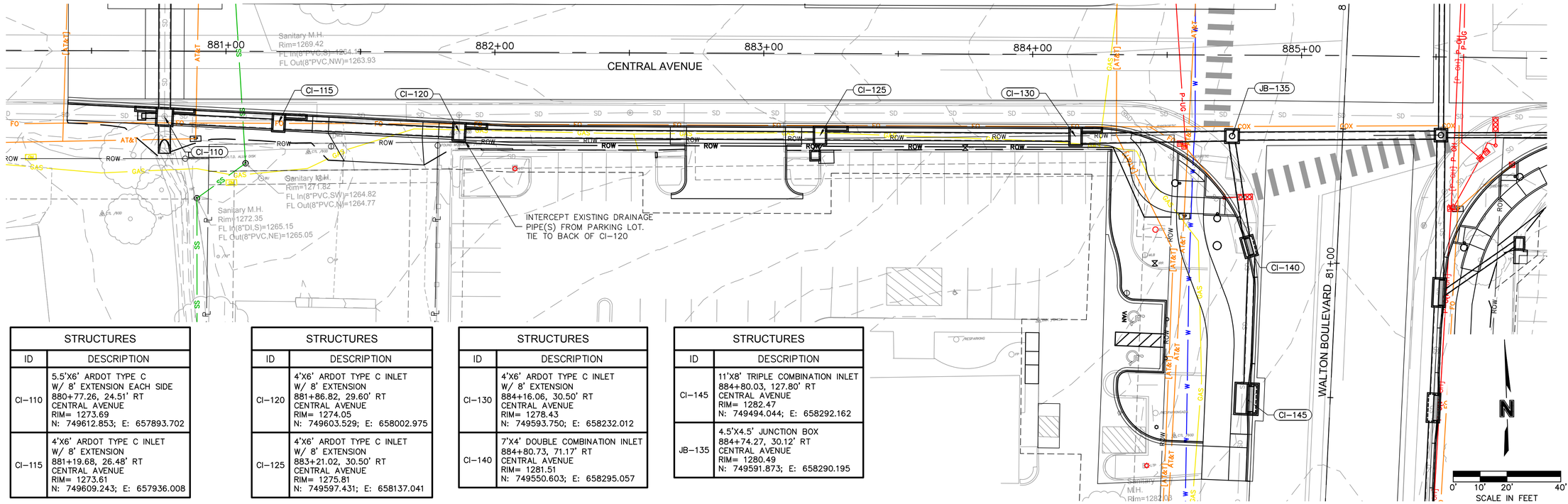


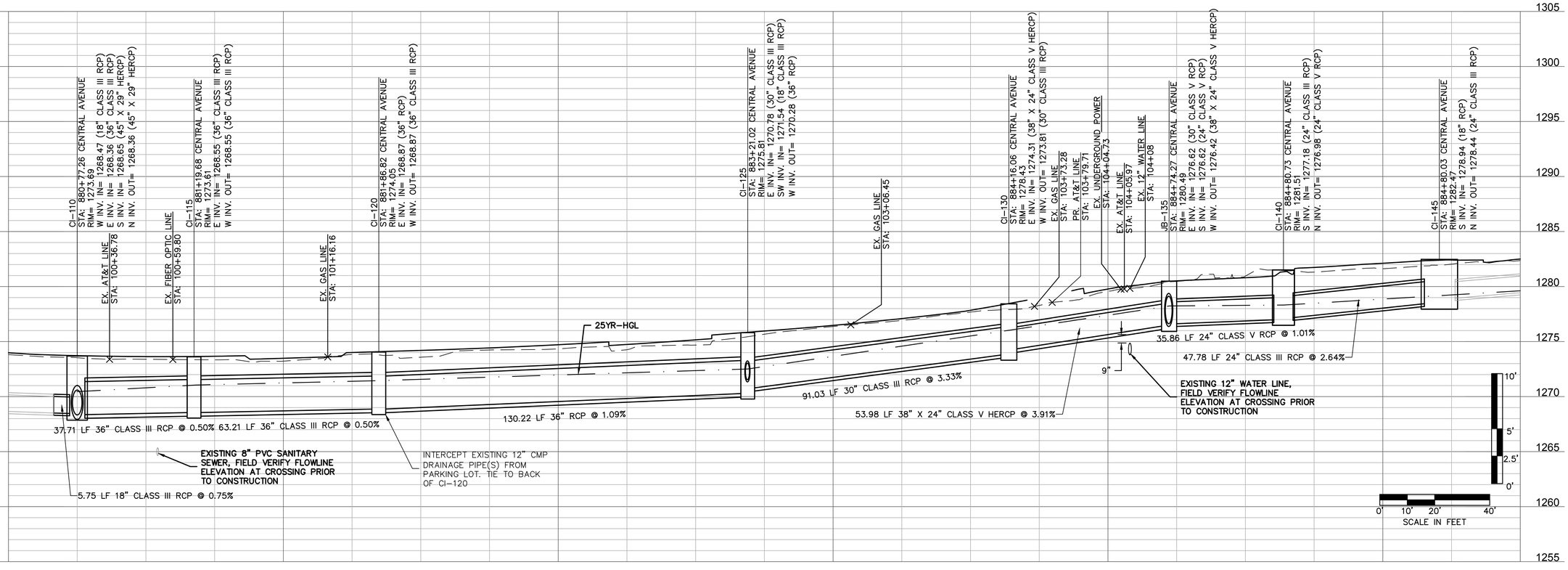
STRUCTURES	
ID	DESCRIPTION
CI–110	5.5'X6' ARDOT TYPE C W/ 8' EXTENSION EACH SIDE 880+77.26, 24.51' RT CENTRAL AVENUE RIM= 1273.69 N: 749612.853; E: 657893.702
CI–115	4'X6' ARDOT TYPE C INLET W/ 8' EXTENSION 881+19.68, 26.48' RT CENTRAL AVENUE RIM= 1273.61 N: 749609.243; E: 657936.008

STRUCTURES	
ID	DESCRIPTION
CI–120	4'X6' ARDOT TYPE C INLET W/ 8' EXTENSION 881+86.82, 29.60' RT CENTRAL AVENUE RIM= 1274.05 N: 749603.529; E: 658002.975
CI–125	4'X6' ARDOT TYPE C INLET W/ 8' EXTENSION 883+21.02, 30.50' RT CENTRAL AVENUE RIM= 1275.81 N: 749597.431; E: 658137.041

STRUCTURES	
ID	DESCRIPTION
CI–130	4'X6' ARDOT TYPE C INLET W/ 8' EXTENSION 884+16.06, 30.50' RT CENTRAL AVENUE RIM= 1278.43 N: 749593.750; E: 658232.012
CI–140	7'X4' DOUBLE COMBINATION INLET 884+80.73, 71.17' RT CENTRAL AVENUE RIM= 1281.51 N: 749550.603; E: 658295.057

STRUCTURES	
ID	DESCRIPTION
CI–145	11'X8' TRIPLE COMBINATION INLET 884+80.03, 127.80' RT CENTRAL AVENUE RIM= 1282.47 N: 749494.044; E: 658292.162
JB–135	4.5'X4.5' JUNCTION BOX 884+74.27, 30.12' RT CENTRAL AVENUE RIM= 1280.49 N: 749591.873; E: 658290.195

STORM LINE 100 (100+00 - 105+50)



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STORM PLAN AND PROFILE

WALTON BLVD. & CENTRAL AVE.
INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

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approved by: RCB
QA/QC by: JKL/RCB
project no.: J21-04210
drawing no.T_STM-PROF_J2104210
date: 11.20.2023

SHEET
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DWG: F:\2021\04001-04500\021-04210-J\40-Design\AutoCAD\Final Plans\Sheets\T_STM-PROF_J2104210.dwg USER: jceddington
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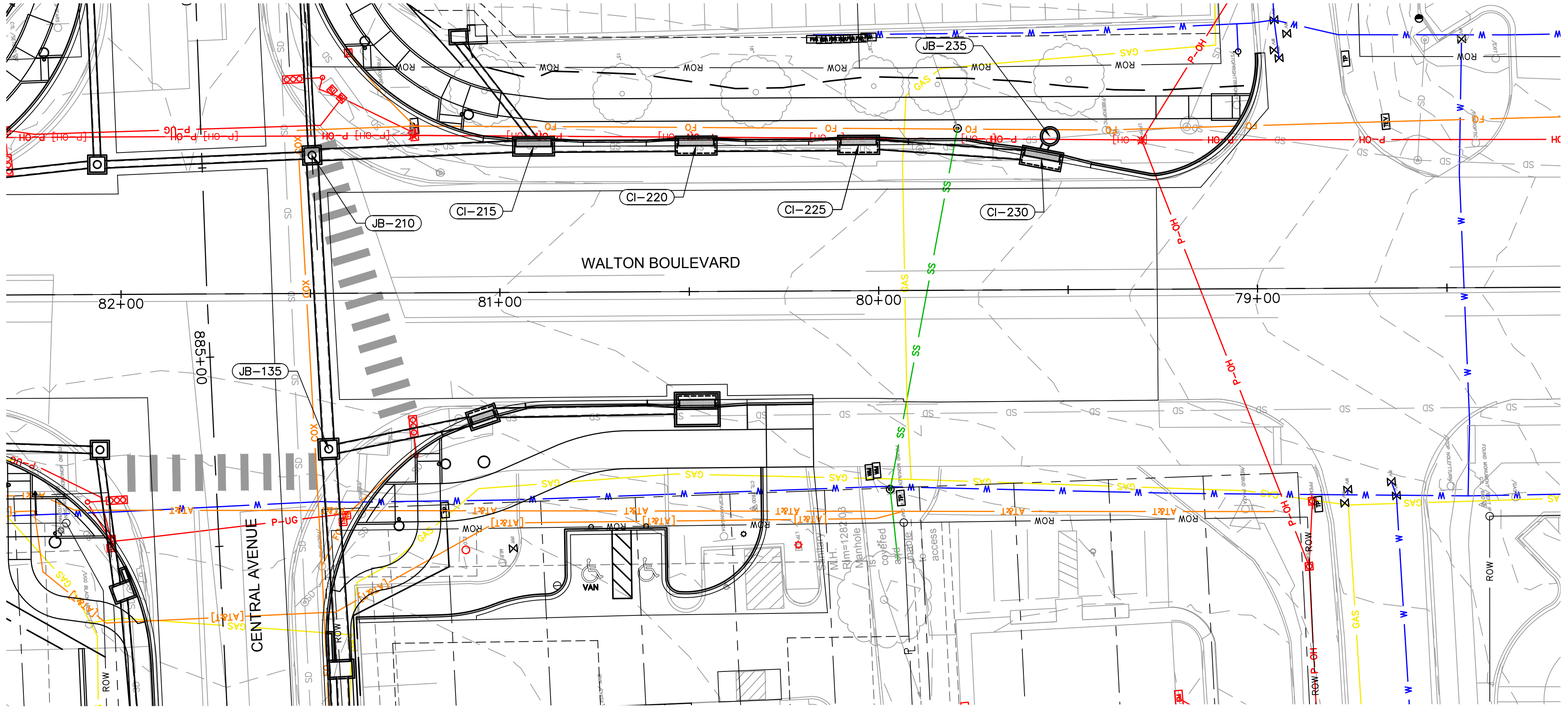
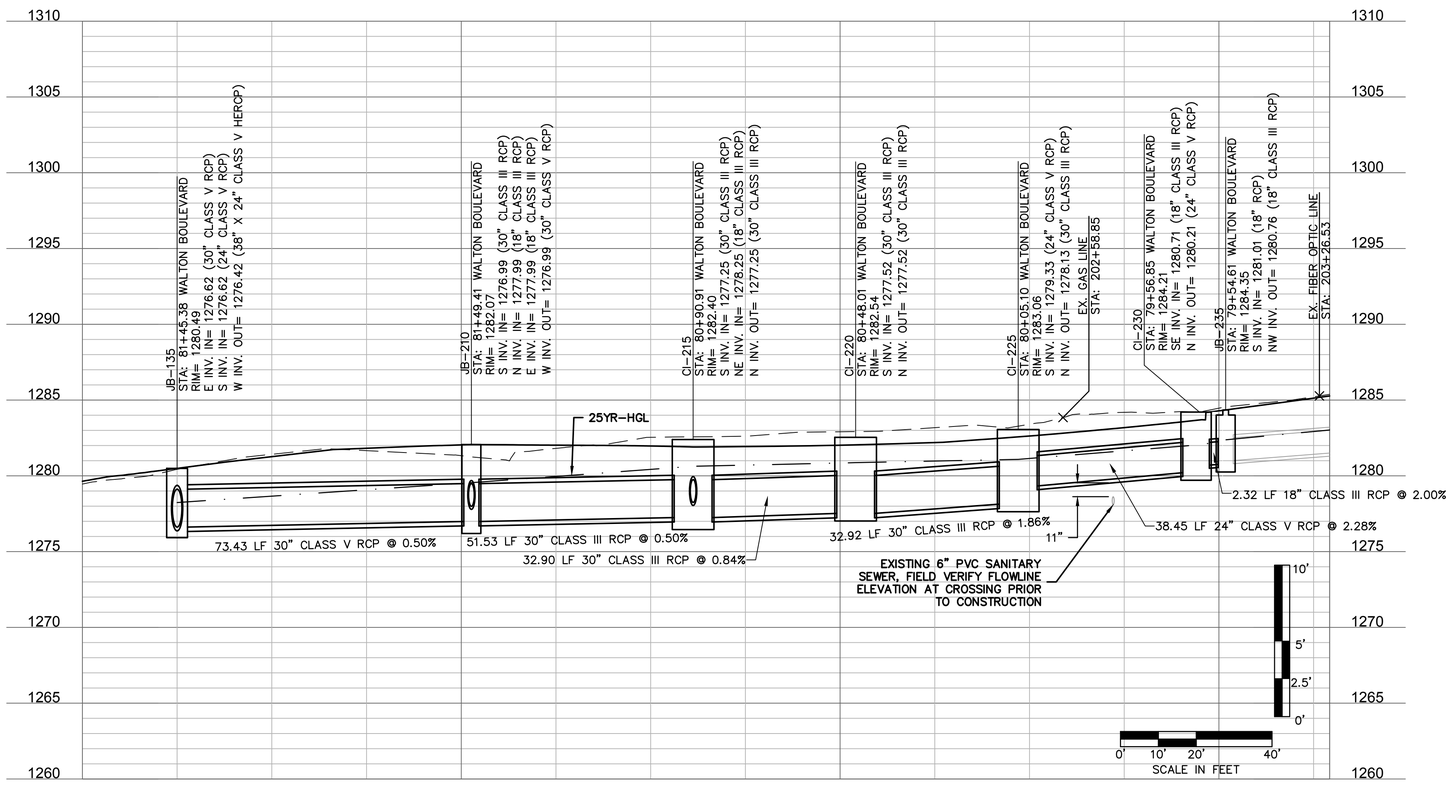


STORM LINE 200 (200+00 - 203+29.23)



STRUCTURES	
ID	DESCRIPTION
Cl-215	10'X4' TRIPLE COMBINATION INLET 80+90.91, 38.50' RT WALTON BOULEVARD RIM= 1282.40 N: 749531.052; E: 658365.037
Cl-220	10'X4' TRIPLE COMBINATION INLET 80+48.01, 38.50' RT WALTON BOULEVARD RIM= 1282.54 N: 749488.299; E: 658361.512
Cl-225	10'X4' TRIPLE COMBINATION INLET 80+05.10, 38.50' RT WALTON BOULEVARD RIM= 1283.06 N: 749445.533; E: 658357.986
Cl-230	10'X4' TRIPLE COMBINATION INLET 79+56.85, 34.65' RT WALTON BOULEVARD RIM= 1284.21 N: 749397.765; E: 658350.181
JB-135	4.5'X4.5' JUNCTION BOX 884+74.27, 30.12' RT CENTRAL AVENUE RIM= 1280.49 N: 749591.873; E: 658290.195
JB-210	4'X4' JUNCTION BOX 881+49.41, 36.48' RT WALTON BOULEVARD RIM= 1282.07 N: 749589.514; E: 658367.833
JB-235	48" MH 79+54.61, 40.51' RT WALTON BOULEVARD RIM= 1284.35 N: 749395.043; E: 658355.838

N

0' 10' 20' 40'
SCALE IN FEET

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STORM PLAN AND PROFILE

WALTON BLVD. & CENTRAL AVE. INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

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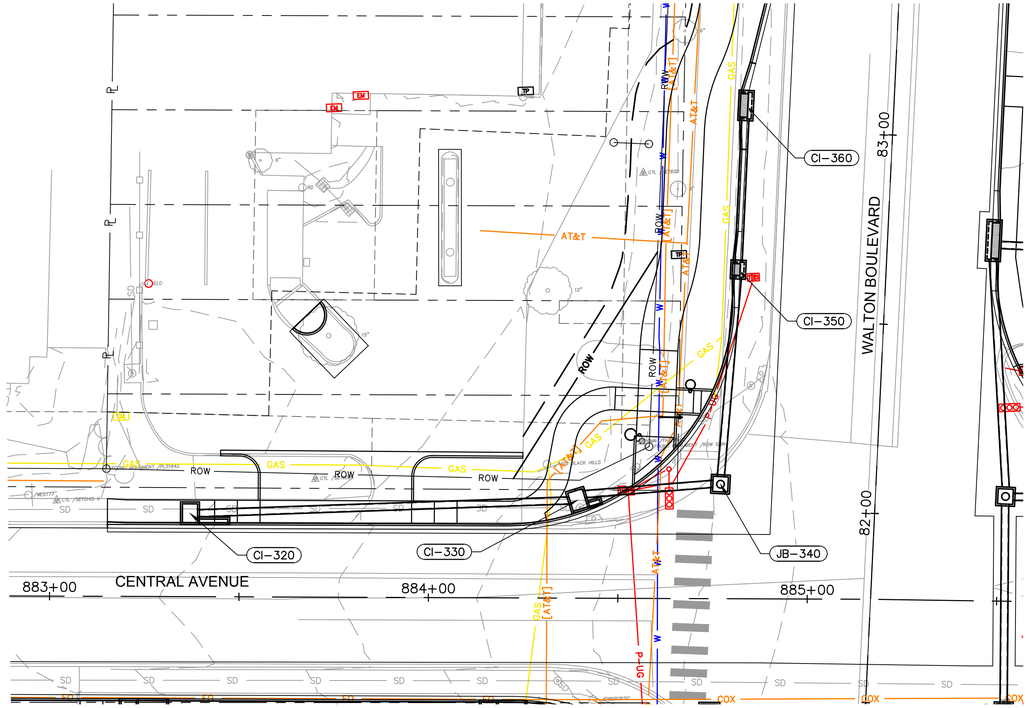
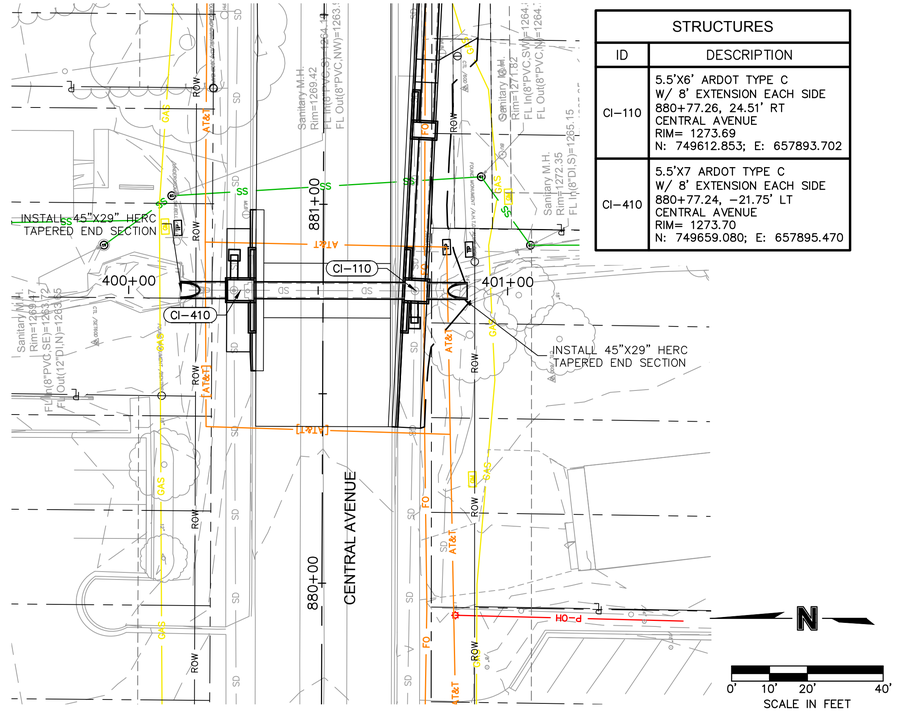


STRUCTURES	
ID	DESCRIPTION
CI-320	4'X5' ARDOT TYPE C INLET W/ 8' EXTENSION 883+36.99, -22.00' LT CENTRAL AVENUE RIM= 1276.37 N: 749649.273; E: 658155.032
CI-330	4'X5' ARDOT TYPE C INLET W/ 8' EXTENSION 884+39.33, -25.90' LT CENTRAL AVENUE RIM= 1279.46 N: 749649.206; E: 658257.451
CI-350	4'X3' SINGLE COMBINATION INLET 884+81.46, -86.89' LT CENTRAL AVENUE RIM= 1281.38 N: 749708.518; E: 658301.906
CI-360	7'X3' DOUBLE COMBINATION INLET 884+83.34, -130.20' LT CENTRAL AVENUE RIM= 1281.35 N: 749751.728; E: 658305.469
JB-340	4'X4' JUNCTION BOX 884+76.99, -30.22' LT CENTRAL AVENUE RIM= 1280.48 N: 749652.062; E: 658295.245

N

0' 10' 20' 40'
SCALE IN FEET

STORM LINE 300 (300+00 - 302+99.93)

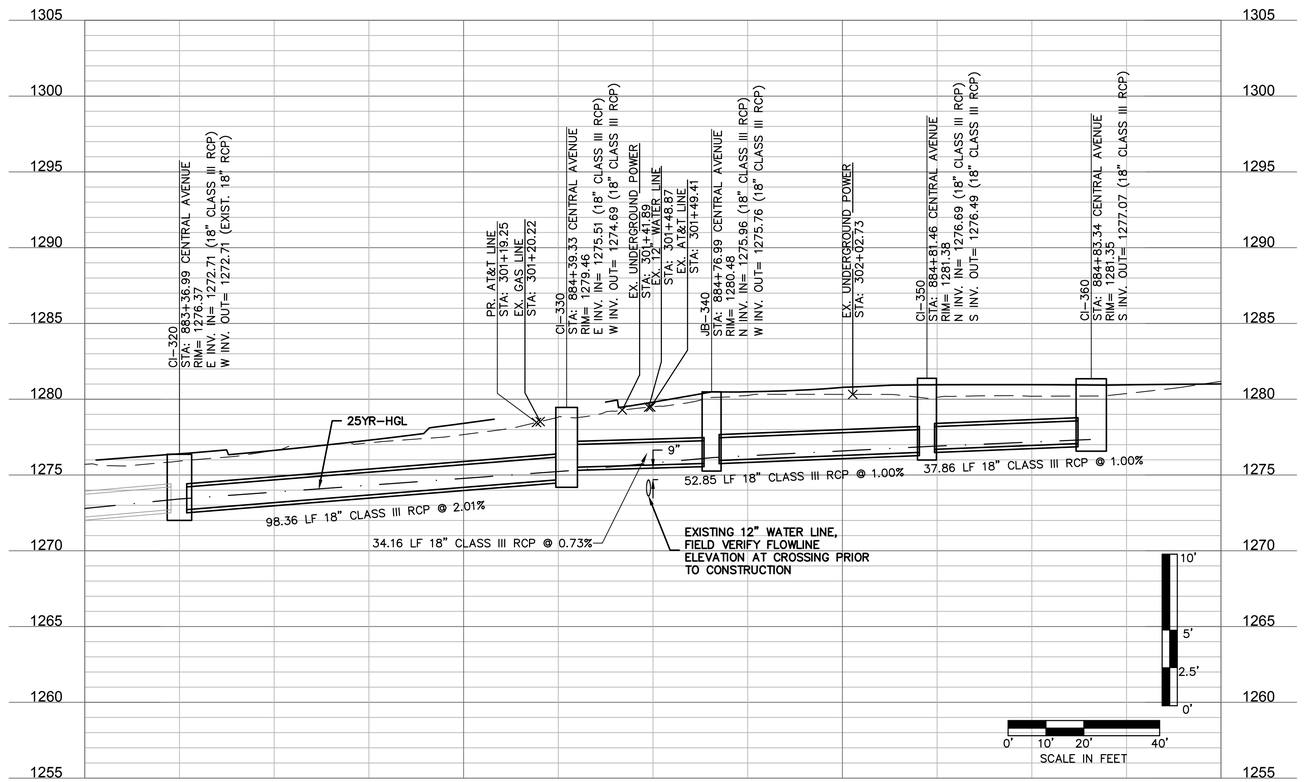


STRUCTURES	
ID	DESCRIPTION
CI-110	5.5'X6' ARDOT TYPE C W/ 8' EXTENSION EACH SIDE 880+77.26, 24.51' RT CENTRAL AVENUE RIM= 1273.69 N: 749612.853; E: 657893.702
CI-410	5.5'X7 ARDOT TYPE C W/ 8' EXTENSION EACH SIDE 880+77.24, -21.75' LT CENTRAL AVENUE RIM= 1273.70 N: 749659.080; E: 657895.470

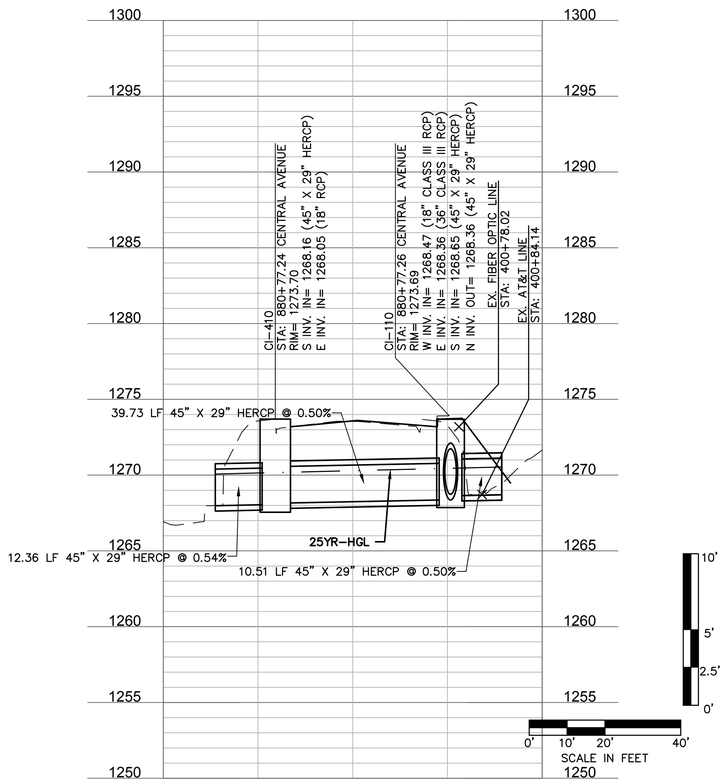
N

0' 10' 20' 40'
SCALE IN FEET

STORM LINE 400 (400+00 - 401+00)



0' 10' 20' 40'
SCALE IN FEET



0' 10' 20' 40'
SCALE IN FEET

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STORM PLAN AND PROFILE

WALTON BLVD. & CENTRAL AVE. INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

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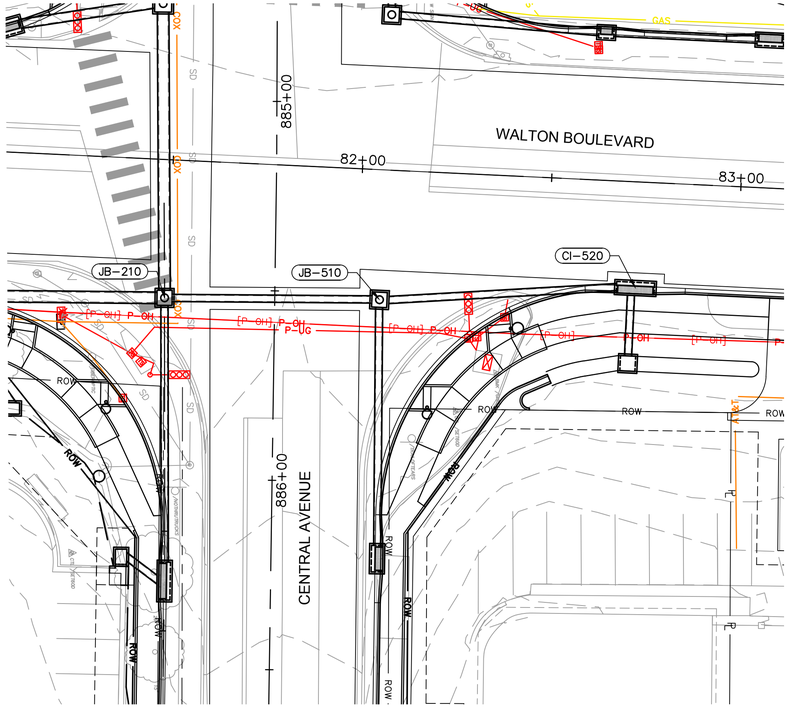
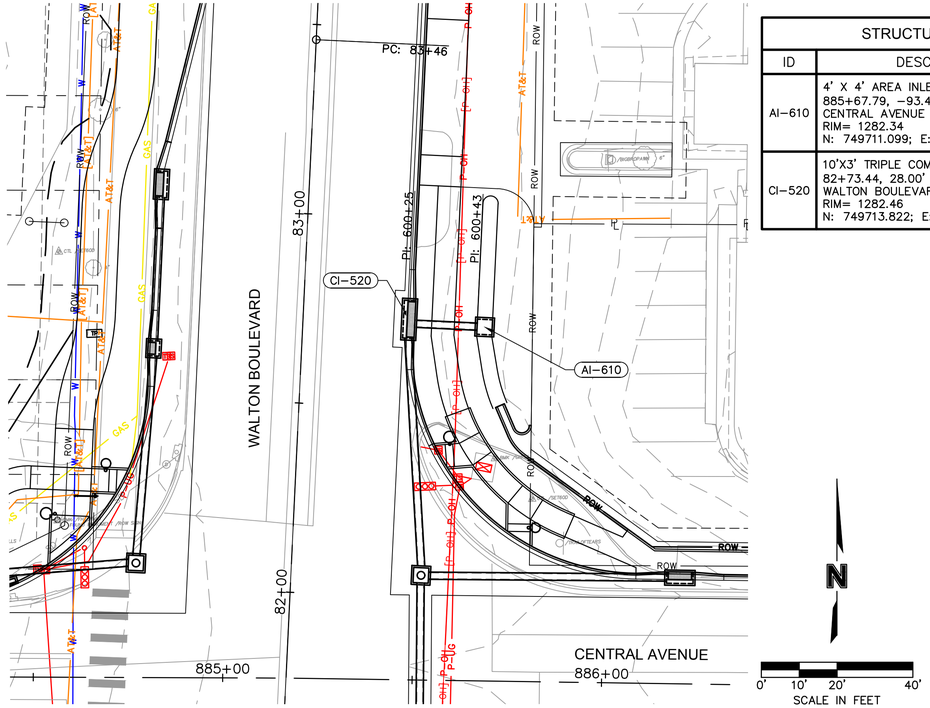


STRUCTURES	
ID	DESCRIPTION
CI-520	10'X3' TRIPLE COMBINATION INLET 82+73.44, 28.00' RT WALTON BOULEVARD RIM= 1282.46 N: 749713.822; E: 658369.571
JB-210	4'X4' JUNCTION BOX 81+49.41, 36.48' RT WALTON BOULEVARD RIM= 1282.07 N: 749589.514; E: 658367.833
JB-510	4'X4' JUNCTION BOX 82+06.10, 34.30' RT WALTON BOULEVARD RIM= 1282.24 N: 749646.194; E: 658370.318

N

0' 10' 20' 40'
SCALE IN FEET

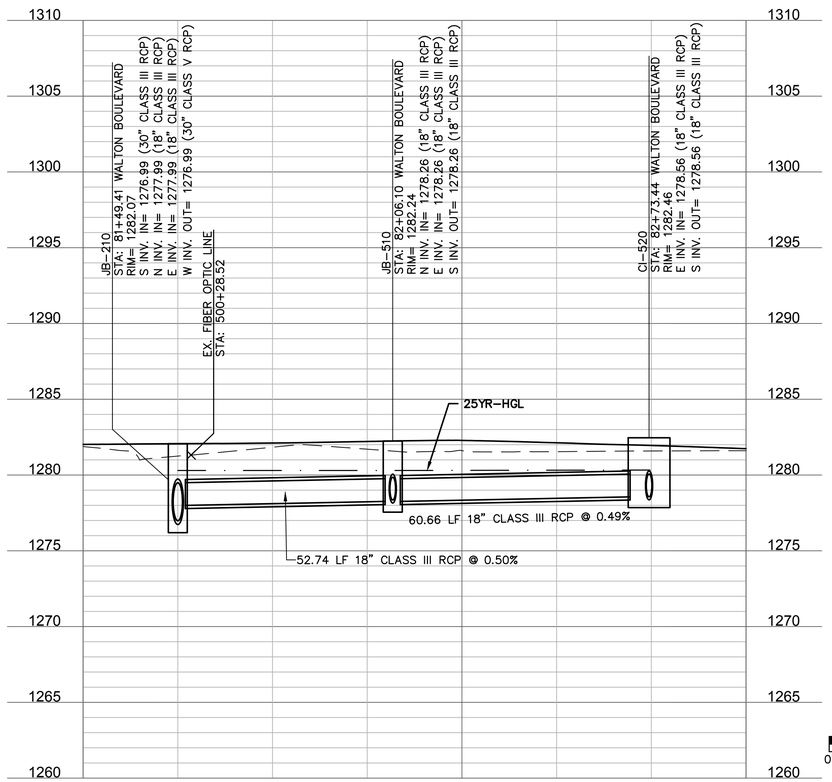


STRUCTURES	
ID	DESCRIPTION
AI-610	4' X 4' AREA INLET (N&S SIDES OPEN) 885+67.79, -93.41' LT CENTRAL AVENUE RIM= 1282.34 N: 749711.099; E: 658389.414
CI-520	10'X3' TRIPLE COMBINATION INLET 82+73.44, 28.00' RT WALTON BOULEVARD RIM= 1282.46 N: 749713.822; E: 658369.571

N

0' 10' 20' 40'
SCALE IN FEET

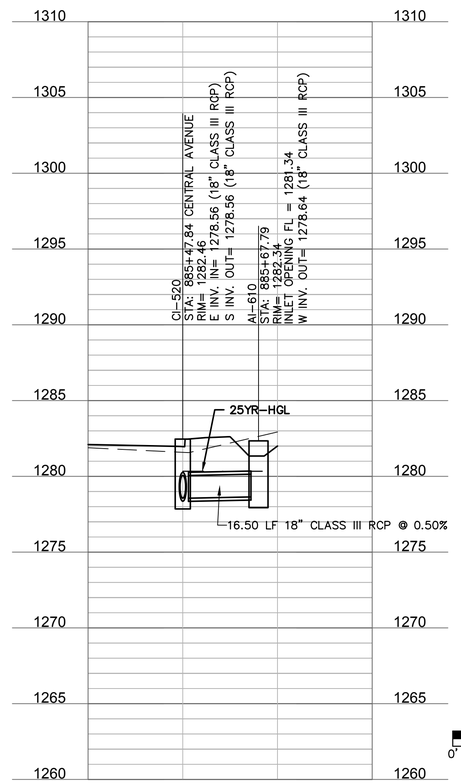
STORM LINE 500 (500+00 - 501+75)



10'
5'
2.5'
0'

0' 10' 20' 40'
SCALE IN FEET

STORM LINE 600 (600+00 - 600+75)



10'
5'
2.5'
0'

0' 10' 20' 40'
SCALE IN FEET

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REV. NO.	DATE	REVISIONS DESCRIPTION	BY
		REVISIONS	

STORM PLAN AND PROFILE

WALTON BLVD. & CENTRAL AVE.
INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

drawn by: JRC/JKL
checked by: JKL/JWP
approved by: RCB
QA/QC by: JKL/RCB
project no.: J21-04210
drawing no.T_STM-PROF_J2104210
date: 11.20.2023

SHEET
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DWG: F:\2021\04001-04500\021-04210-J\40-Design\AutoCAD\Final Plans\Sheets\T_STM-PROF_J2104210.dwg USER: jcoddington
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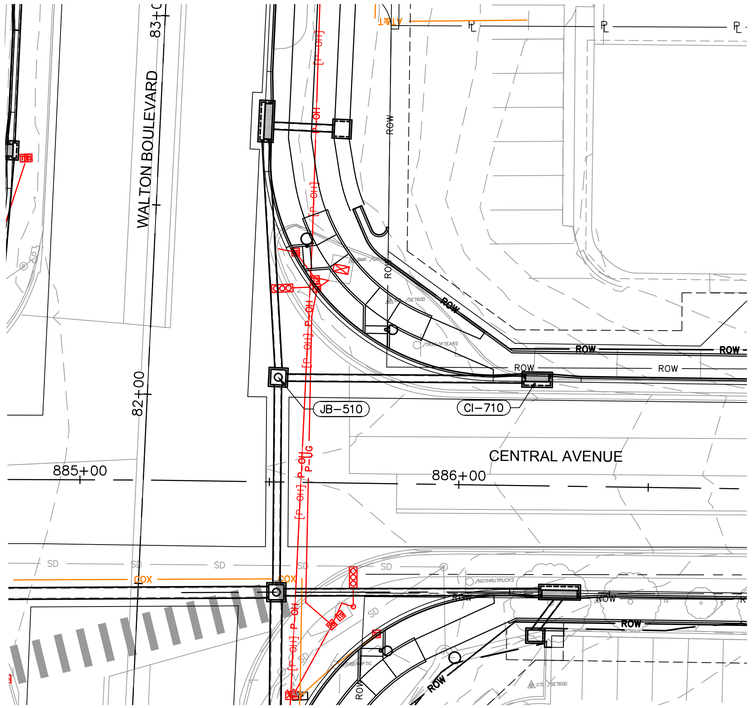
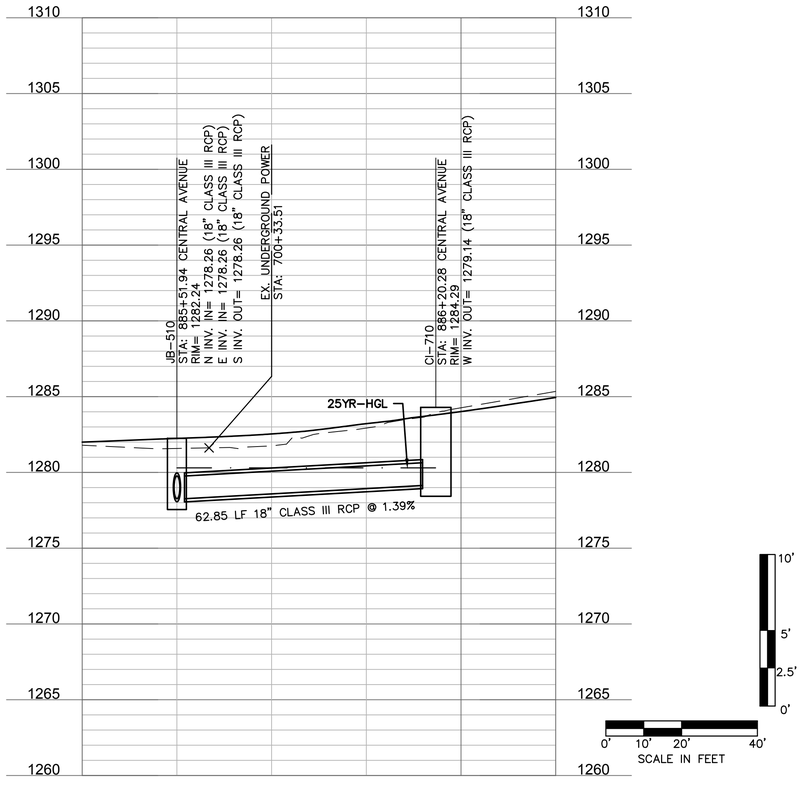
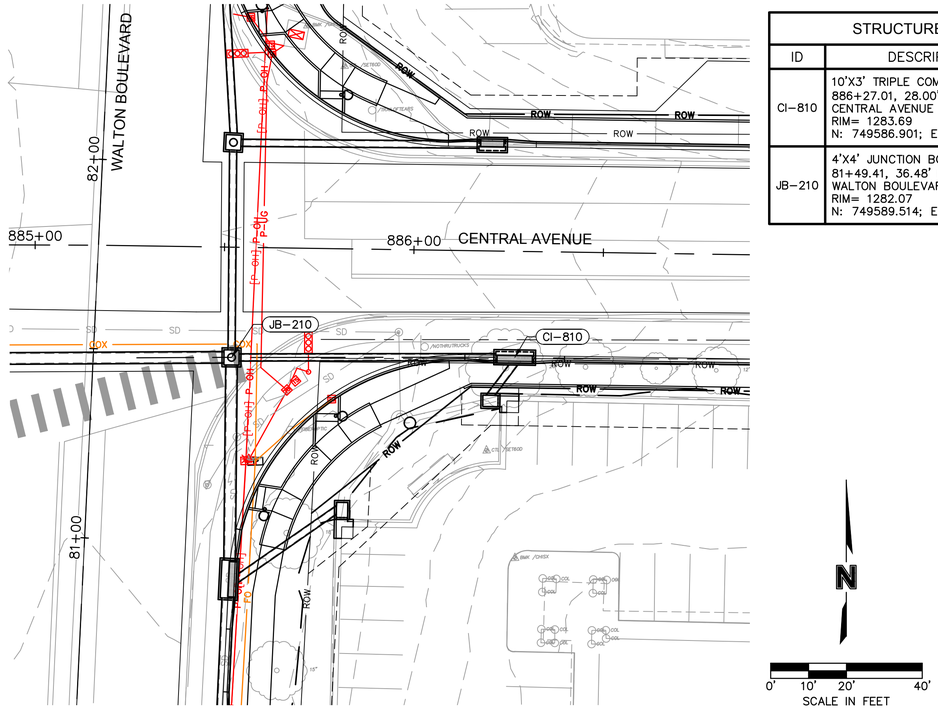


STRUCTURES	
ID	DESCRIPTION
CI–710	7'X3' DOUBLE COMBINATION INLET 886+20.28, –28.00' LT CENTRAL AVENUE RIM= 1284.29 N: 749643.165; E: 658438.595
JB–510	4'X4' JUNCTION BOX 82+06.10, 34.30' RT WALTON BOULEVARD RIM= 1282.24 N: 749646.194; E: 658370.318

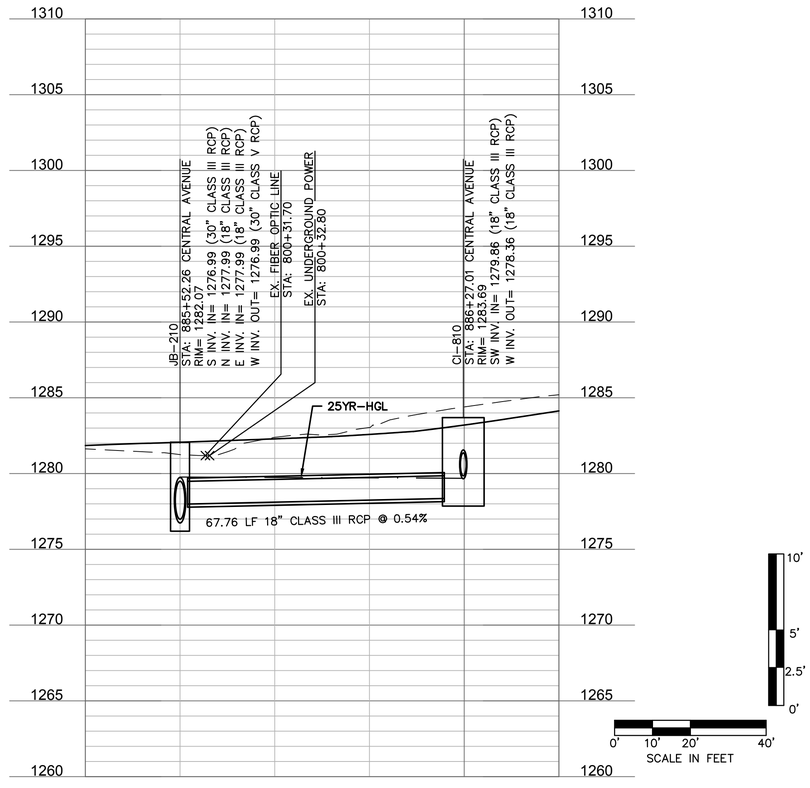
STORM LINE 700 (700+00 - 701+25)





STRUCTURES	
ID	DESCRIPTION
CI–810	10'X3' TRIPLE COMBINATION INLET 886+27.01, 28.00' RT CENTRAL AVENUE RIM= 1283.69 N: 749586.901; E: 658442.543
JB–210	4'X4' JUNCTION BOX 81+49.41, 36.48' RT WALTON BOULEVARD RIM= 1282.07 N: 749589.514; E: 658367.833

STORM LINE 800 (800+00 - 801+25)



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STORM PLAN AND PROFILE

WALTON BLVD. & CENTRAL AVE.
INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

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project no.: J21-04210
drawing no.T_STM-PROF_J2104210
date: 11.20.2023

SHEET
48 OF 89

DWG: F:\2021\04001-04500\021-04210-J\40-Design\AutoCAD\Final Plans\Sheets\T_STM-PROF_J2104210.dwg USER: jcoddington
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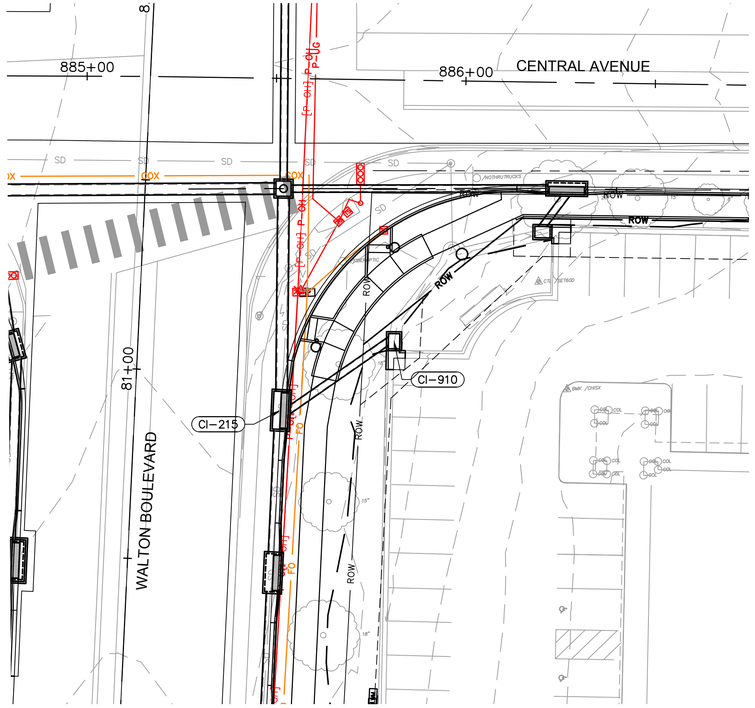
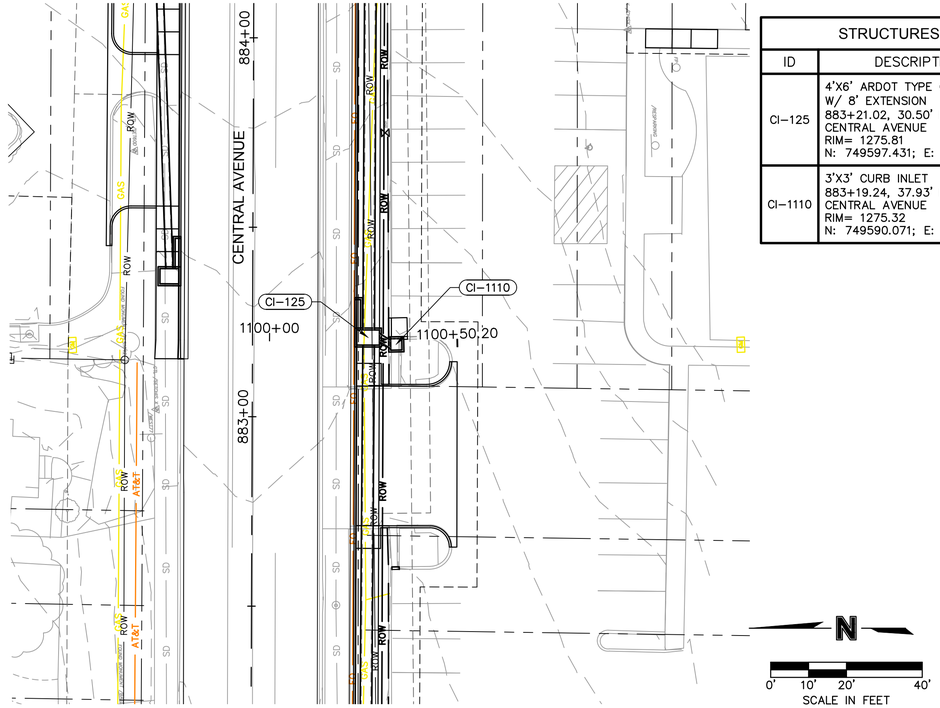
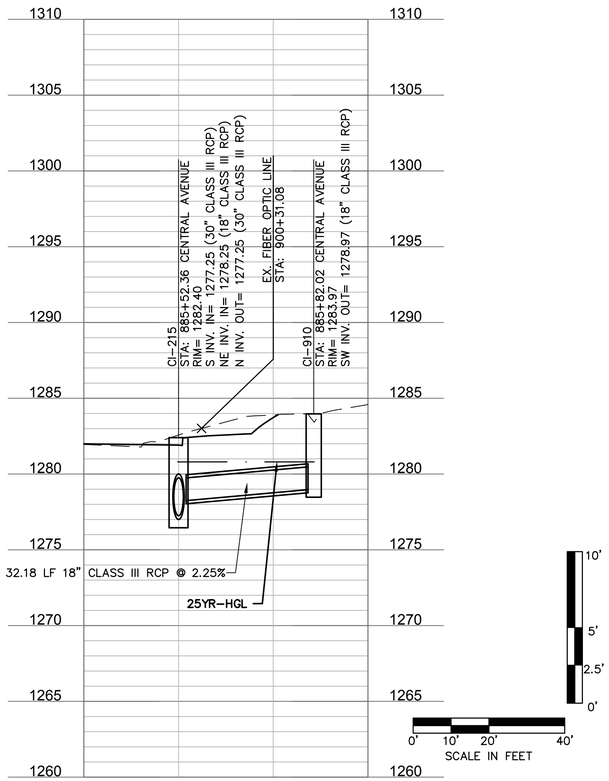


STRUCTURES	
ID	DESCRIPTION
CI–215	10'X4' TRIPLE COMBINATION INLET 80+90.91, 38.50' RT WALTON BOULEVARD RIM= 1282.40 N: 749531.052; E: 658365.037
CI–910	3'X4' CURB INLET 885+82.02, 68.92' RT CENTRAL AVENUE RIM= 1283.97 N: 749548.255; E: 658395.582

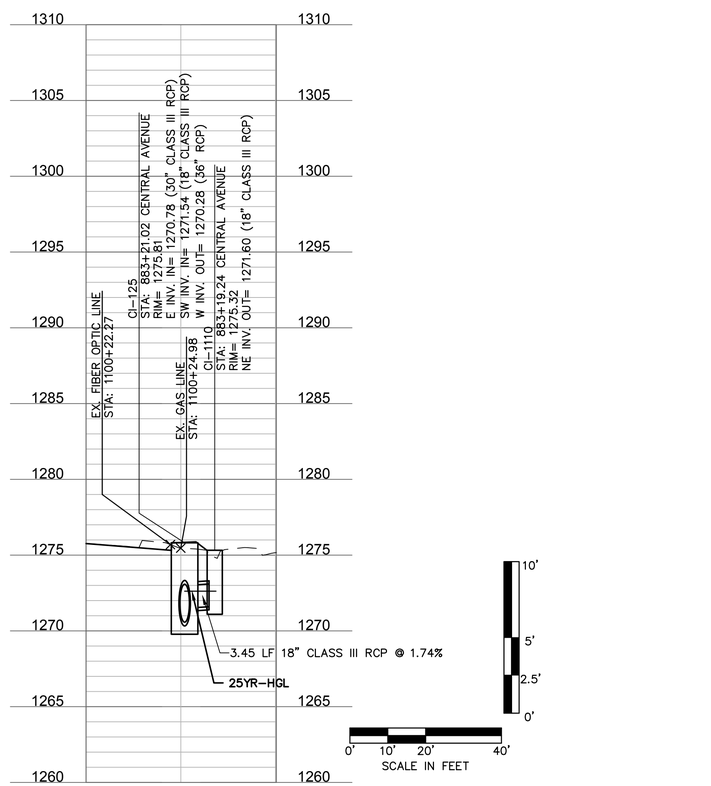


STRUCTURES	
ID	DESCRIPTION
CI–125	4'X6' ARDOT TYPE C INLET W/ 8' EXTENSION 883+21.02, 30.50' RT CENTRAL AVENUE RIM= 1275.81 N: 749597.431; E: 658137.041
CI–1110	3'X3' CURB INLET 883+19.24, 37.93' RT CENTRAL AVENUE RIM= 1275.32 N: 749590.071; E: 658134.974

STORM LINE 900 (900+00 - 900+75)



STORM LINE 1100 (1100+00 - 1100+50.20)



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STORM PLAN AND PROFILE

WALTON BLVD. & CENTRAL AVE.
INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

drawn by:	JRC/JKL
checked by:	JKL/JWP
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QA/QC by:	JKL/RCB
project no.:	J21-04210
drawing no.	T_STM-PROF_J2104210
date:	11.20.2023

SHEET
49 OF 89

DWG: F:\2021\04001-04500\021-04210-J\40-Design\AutoCAD\Final Plans\Sheets\T_STM-PROF_J2104210.dwg USER: jcoddington
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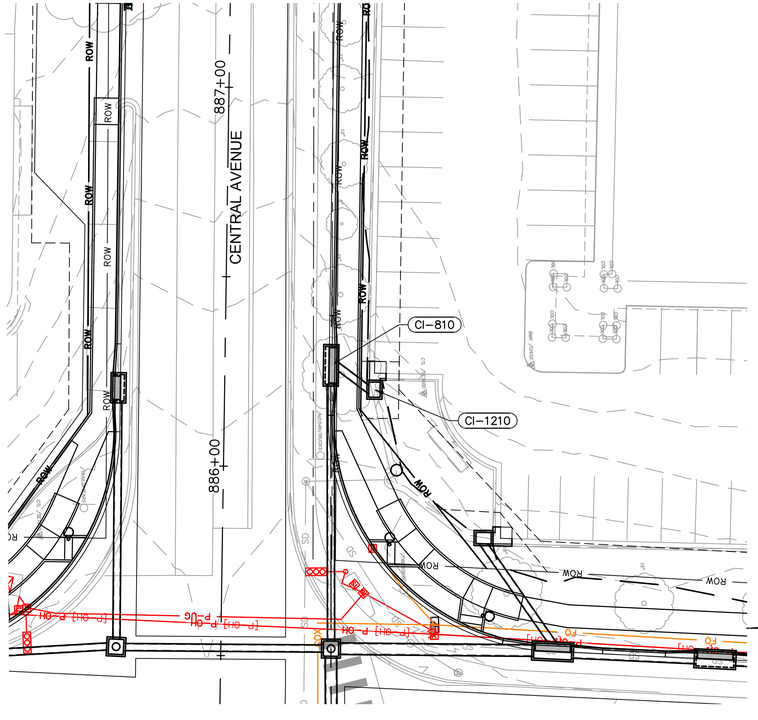
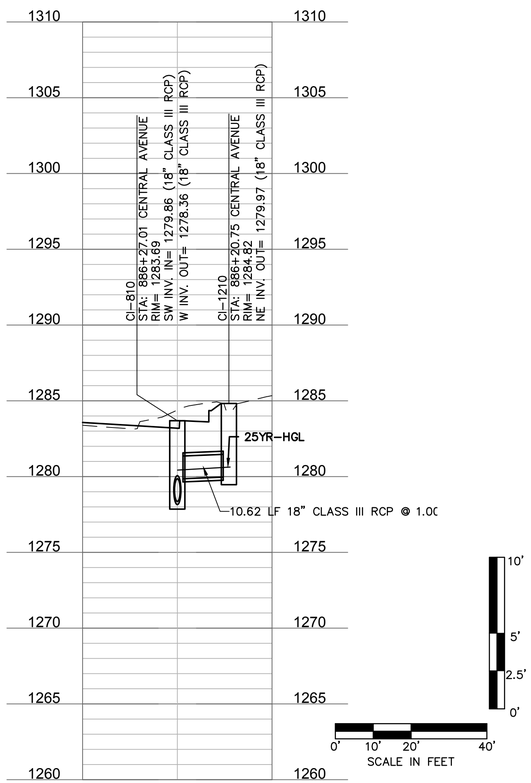


STRUCTURES	
ID	DESCRIPTION
CI-810	10'X3' TRIPLE COMBINATION INLET 886+27.01, 28.00' RT CENTRAL AVENUE RIM= 1283.69 N: 749586.901; E: 658442.543
CI-1210	3'X4' CURB INLET 886+20.75, 39.57' RT CENTRAL AVENUE RIM= 1284.82 N: 749575.654; E: 658435.722

STORM LINE 1200 (1200+00 - 1200+50)



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STORM PLAN AND PROFILE

WALTON BLVD. & CENTRAL AVE.
INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

drawn by: JRC/JKL
checked by: JKL/JWP
approved by: RCB
QA/QC by: JKL/RCB
project no.: J21-04210
drawing no.T_STM-PROF_J2104210
date: 11.20.2023

SHEET
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DWG: F:\2021\04001-04500\021-04210-J\40-Design\AutoCAD\Final Plans\Sheets\T_STM-PROF_J2104210.dwg USER: jcoddington
DATE: Nov 20, 2023 12:28pm XREFS: T_PTBLK_J2104210 V_XTOPO_J2104210 V_XBNDY_J2104210 T_PBASE_J2104210 T_PUTIL_J2104210

STA: 884+20.08, 79.50' LT ℄ CENTRAL AVENUE
STA: 82+52.54, 100.00' LT ℄ WALTON BOULEVARD
R=61.50'
Δ=87d30'21.24"
L=93.93'

STA: 884+81.52, 76.82' LT
EL. 1280.93 TP

EL. 1280.47 TP

EL. 1279.91 TP

EL. 1279.07 TP

EL. 1278.14 TP
STA: 884+20.08, 18.00' LT

ROW

STA: 886+08.67, 89.00' LT ℄ CENTRAL AVENUE
STA: 82+69.28, 89.00' RT ℄ WALTON BOULEVARD
R=61.50
Δ=91d52'26.81"
L=98.62'

EL. 1282.00 TP
STA: 885+47.20, 91.01' LT

EL. 1282.16 TP

EL. 1282.42 TP

EL. 1282.75 TP

EL. 1283.42 TP
STA: 886+08.67, 27.50' LT

N

0' 5' 10' 20'
SCALE IN FEET

3.00% 0.62%
3.00% 0.12%
3.00% 0.85%
3.00% 1.00%

82+00

92°29'39" 88°7'33"
PI: 885+16.71
87°30'21" 91°52'27"

1.50% 1.42% 0.57% 0.27% 0.46% 0.46% 1.00% 1.50% 1.50%
884+00 CENTRAL AVENUE 885+00 3.00% 1.00% ℄ CENTRAL AVE. 886+00
2.00% 0.92% 0.06% 0.06% 0.24% 0.24% 0.90% 1.50% 1.50%

1.98%

STA: 885+16.71 ℄ CENTRAL AVENUE =
STA: 81+77.26 ℄ WALTON BOULEVARD

3.00% 1.00%

ROW

STA: 884+22.56, 26.00' RT
EL. 1278.25 TC

EL. 1279.53 TP

EL. 1280.35 TC

EL. 1280.94 TC

2.50% 0.43%
2.50% 0.13%

WALTON BOULEVARD
℄ WALTON BLVD.
81+00

EL. 1282.39 TP

EL. 1282.21 TP

EL. 1282.06 TC

STA: 886+13.85, 27.50' RT
EL. 1282.79 TC

STA: 884+22.56, 87.50' RT ℄ CENTRAL AVENUE
STA: 80+85.80, 90.26' LT ℄ WALTON BOULEVARD
R=61.50'
Δ=92d11'57.59"
L=98.96'

STA: 884+84.01, 89.86' RT
EL. 1281.44 TC

VAN

EL. 1281.91 TC
STA: 885+52.38, 86.99' RT

STA: 886+13.85, 89.00' RT ℄ CENTRAL AVENUE
STA: 80+91.54, 100.00' RT ℄ WALTON BOULEVARD
R=61.50'
Δ=88d7'32.69"
L=94.59'

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		REVISIONS	

ENLARGED INTERSECTION PLAN

WALTON BLVD. & CENTRAL AVE.
INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

drawn by:	JRC/JKL
checked by:	JKL/JWP
approved by:	RCB
QA/QC by:	JKL/RCB
project no.:	J21-04210
drawing no.:	T_INT_J2104210
date:	11.20.2023

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ENLARGED INTERSECTION PLAN

WALTON BLVD. & CENTRAL AVE.
INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

drawn by: JRC/JKL
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approved by: RCB
QA/QC by: JKL/RCB
project no.: J21-04210
drawing no.: T_INT_J2104210
date: 11.20.2023

SHEET
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DWG: F:\2021\04001-04500\021-04210-J\40-Design\AutoCAD\Final Plans\Sheets\T_INT_J2104210.dwg USER: jcoddington
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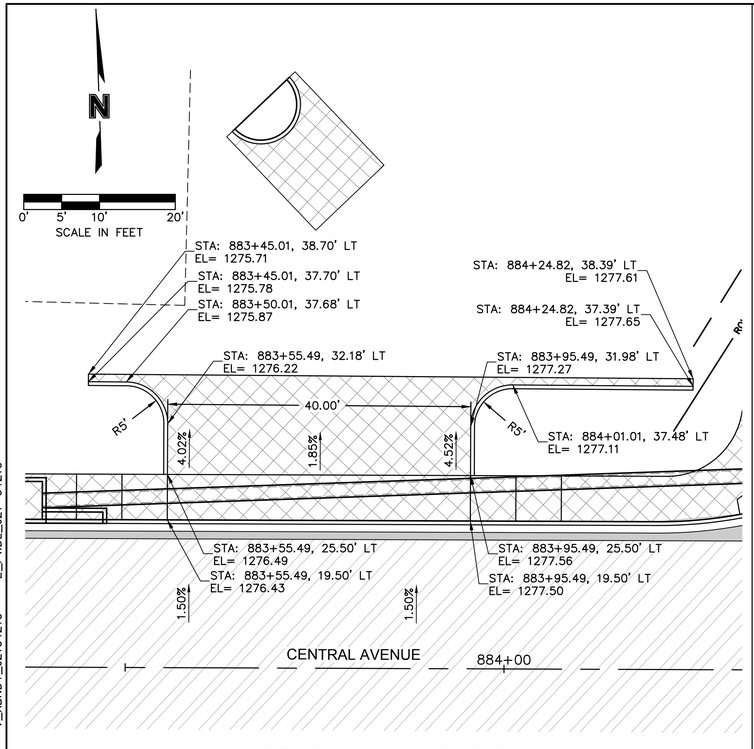
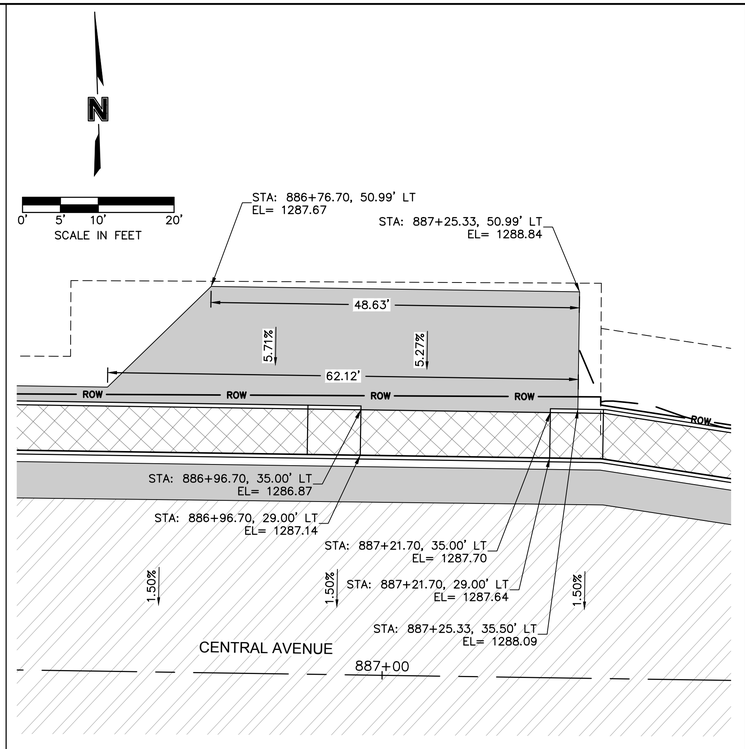
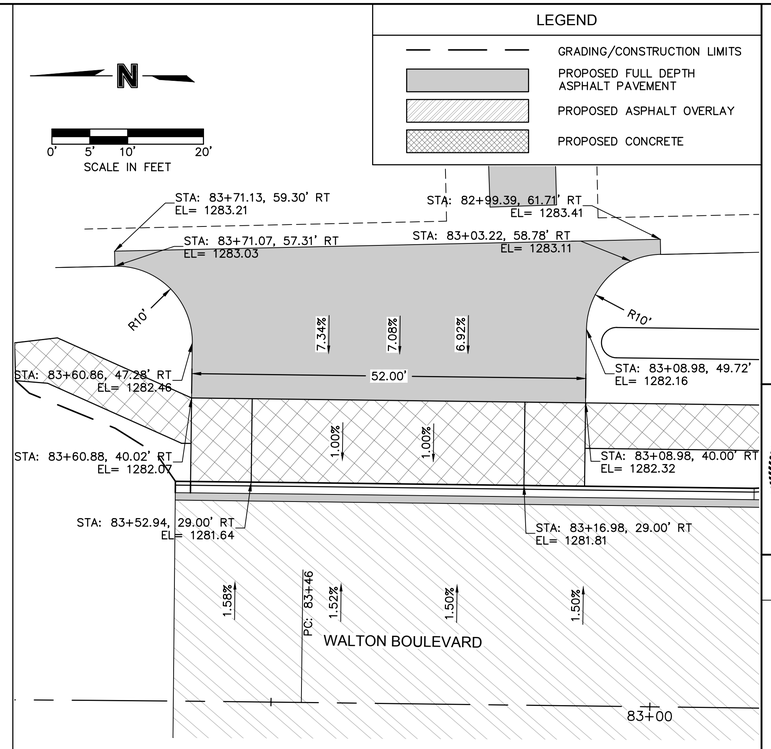
V_XBNDY_J2104210 E_PWDL_J21-04210



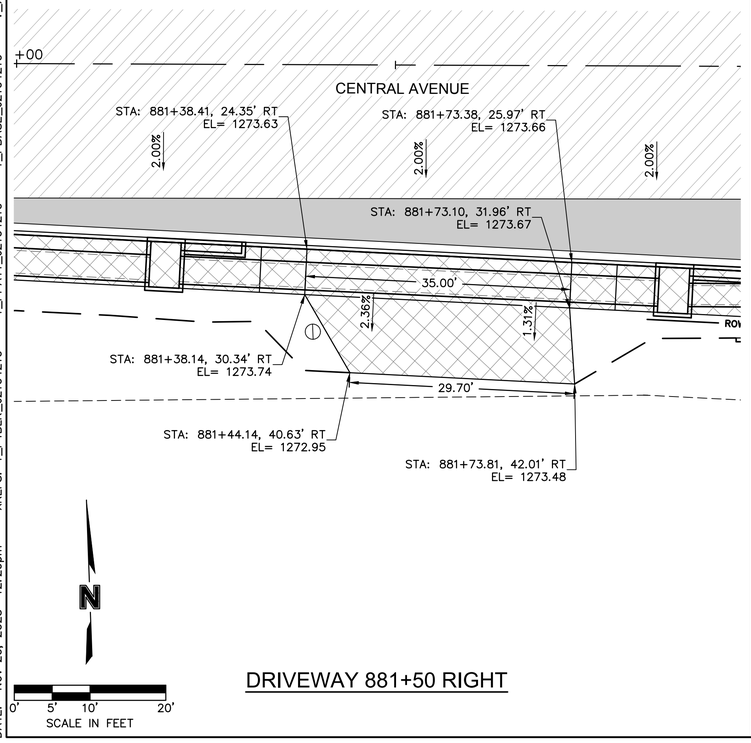
DRIVEWAY 883+75 LEFT



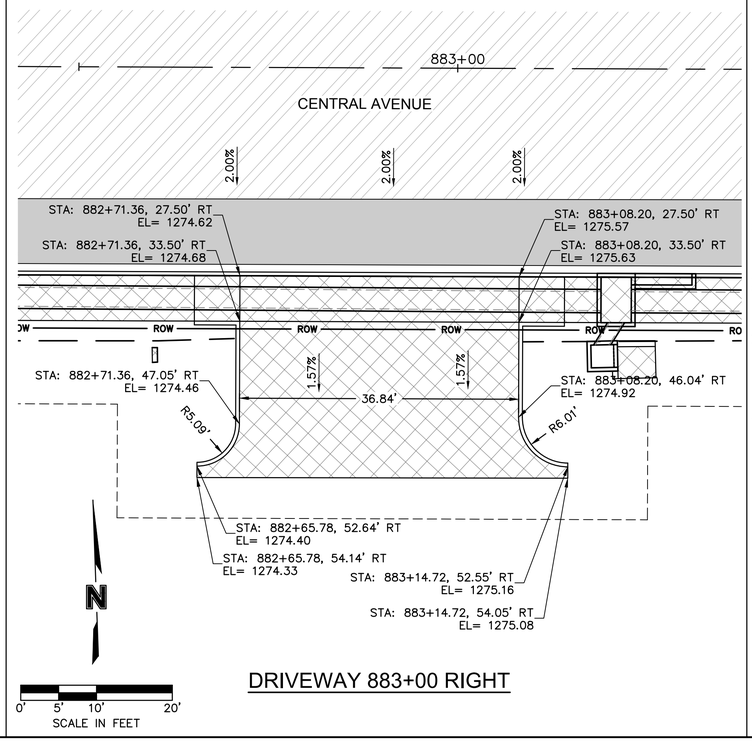
DRIVEWAY 887+00 LEFT



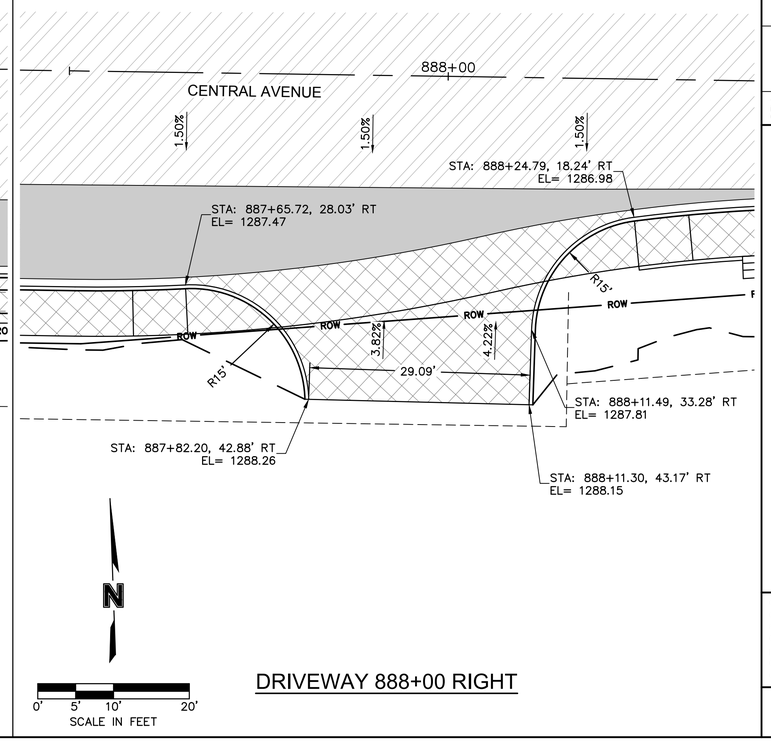
DRIVEWAY 83+25 RIGHT



DRIVEWAY 881+50 RIGHT



DRIVEWAY 883+00 RIGHT



DRIVEWAY 888+00 RIGHT

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DRIVEWAY LAYOUT PLAN

WALTON BLVD. & CENTRAL AVE.
INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

drawn by:	JRC/JKL
checked by:	JKL/JWP
approved by:	RCB
QA/QC by:	JKL/RCB
project no.:	J21-04210
drawing no.:	T_DRV_J2104210
date:	11.20.2023

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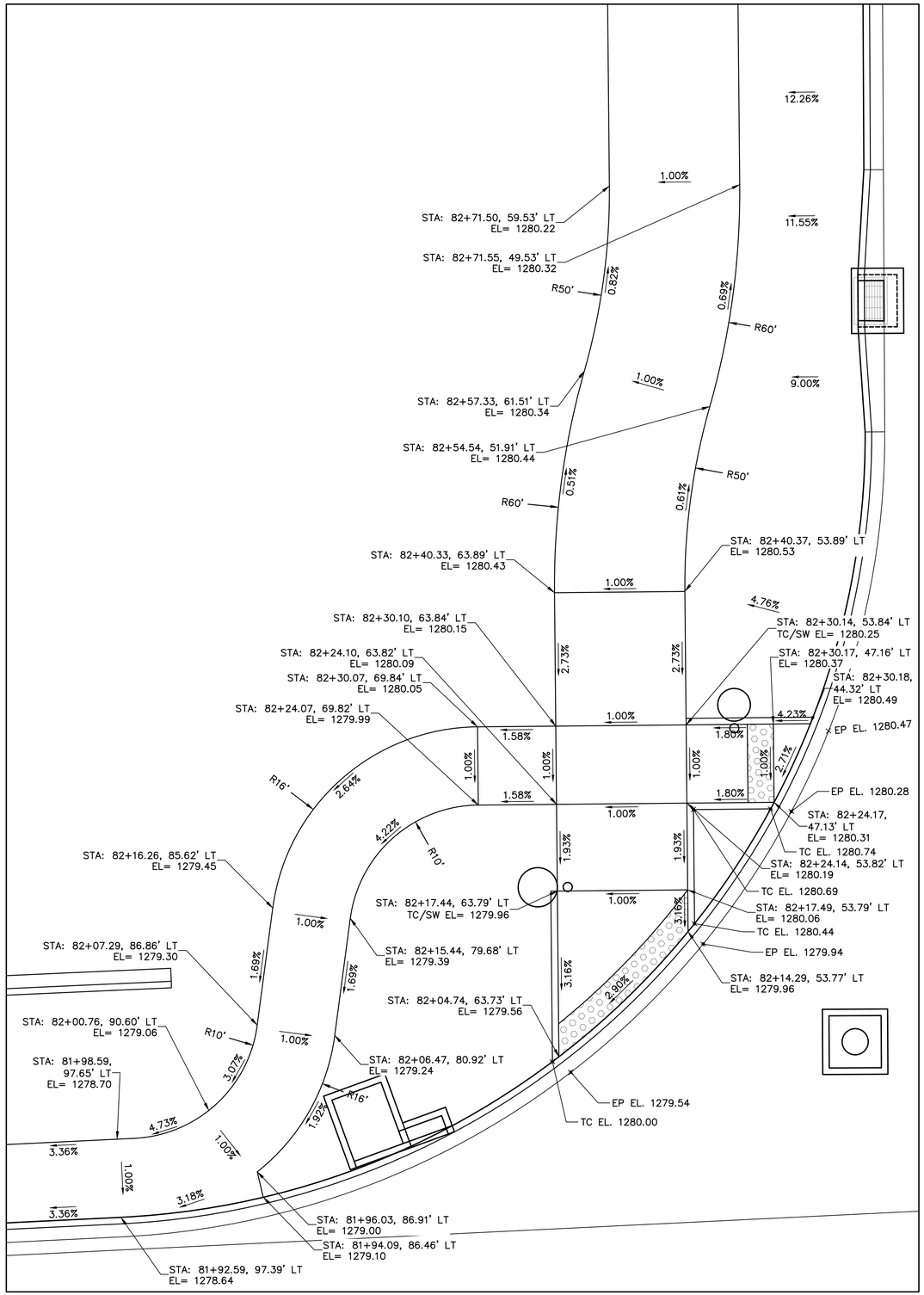
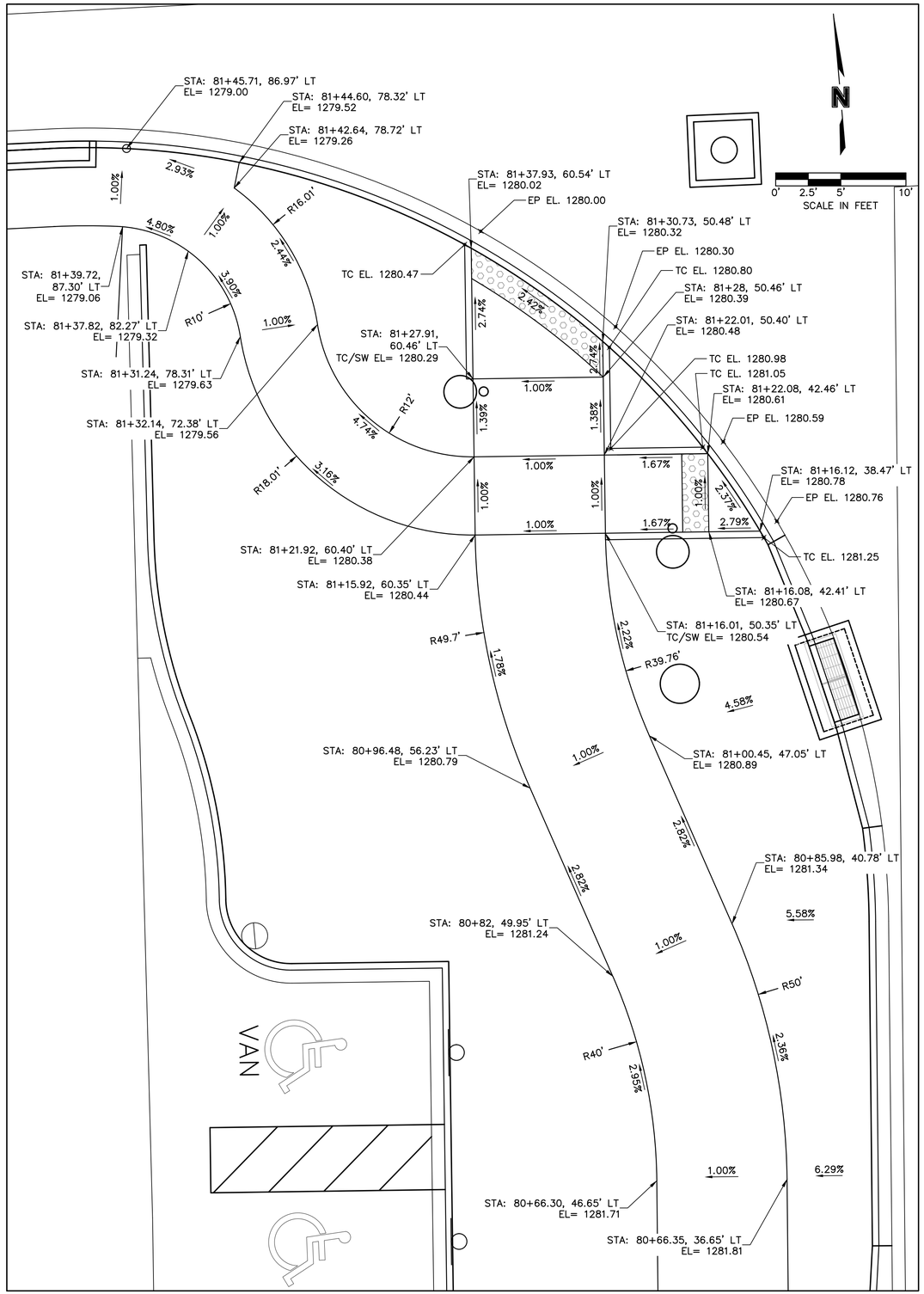


WALTON BLVD. & CENTRAL AVE. - NORTHWEST
1" = 5'



WALTON BLVD. & CENTRAL AVE. - SOUTHWEST
1" = 5'

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SIDEWALK RAMP LAYOUTS

WALTON BLVD. & CENTRAL AVE.
INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

drawn by:	JRC/JKL
checked by:	JKL/JWP
approved by:	RCB
QA/QC by:	JKL/RCB
project no.:	J21-04210
drawing no.:	T_SWK_J2104210
date:	11.20.2023

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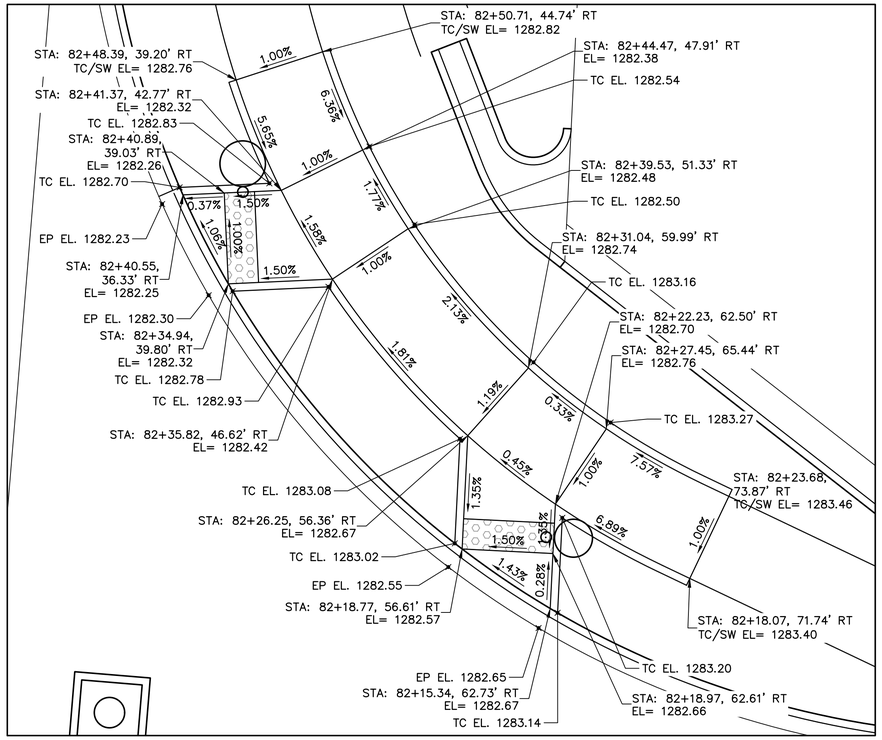
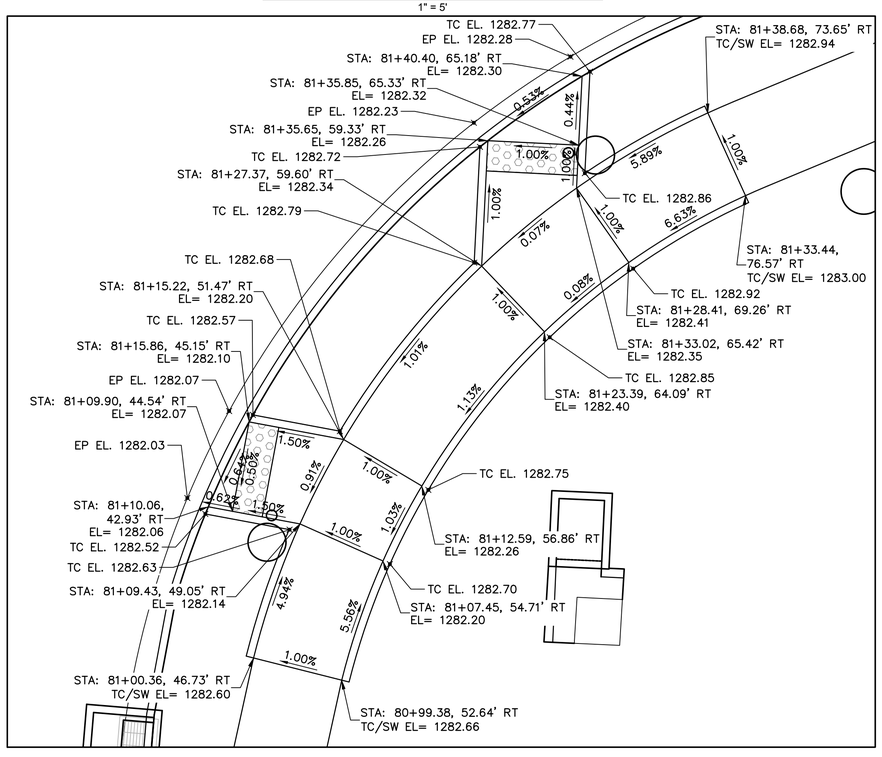
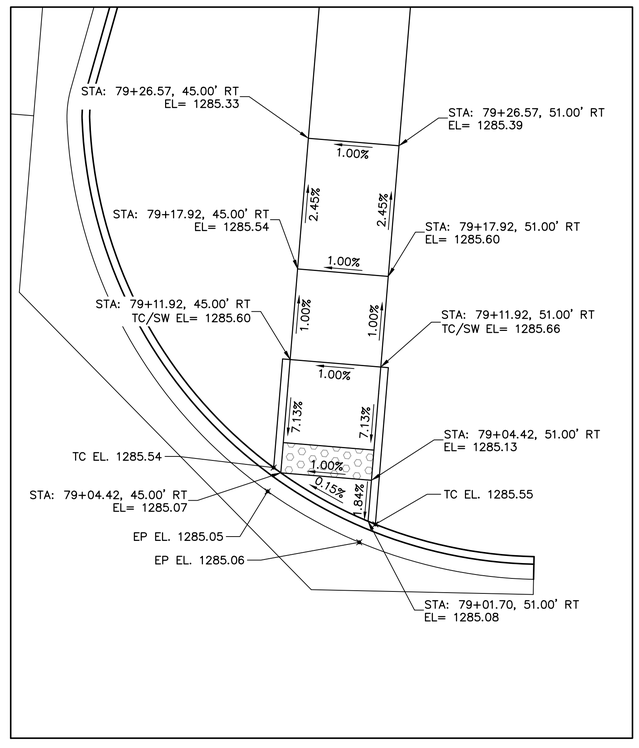
DWG: F:\2021\04001-04500\021-04210-J\40-Design\AutoCAD\Final Plans\Sheets\T_SWK_J2104210.dwg USER: jcoddington
DATE: Nov 20, 2023 12:30pm XREFS: T_PTBLK_J2104210 T_PPATT_J2104210 T_PBASE_J2104210 V_XTOPO_J2104210 V_XBNDY_J2104210



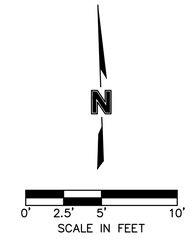
WALTON BLVD. & CENTRAL AVE. - NORTHEAST
1" = 5'



WALTON BLVD. & CENTRAL AVE. - SOUTHEAST
1" = 5'



WALTON BLVD. & NW 2ND STREET - NORTHEAST
1" = 5'



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STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No.13624
ANDREW S. BREWER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
		REVISIONS	

SIDEWALK RAMP LAYOUTS

WALTON BLVD. & CENTRAL AVE.
INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

drawn by:	JRC/JKL
checked by:	JKL/JWP
approved by:	RCB
QA/QC by:	JKL/RCB
project no.:	J21-04210
drawing no.:	T_SWK_J2104210
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SHEET
55 OF 89

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ARDOT TRAFFIC SIGNAL NOTES:

1. THE TRAFFIC SIGNAL SHALL NOT BE PUT INTO OPERATION OR SWITCHED TO THE NEXT CONSTRUCTION STAGE PRIOR TO THE FOLLOWING:

   A. ALL TRAFFIC SIGNAL EQUIPMENT HAS BEEN INSTALLED ACCORDING TO THE PLANS, SPECIAL PROVISIONS, AND PROPERLY FUNCTIONAL. THIS INCLUDES BUT NOT LIMITED TO: CABINETS, PULL BOXES, JUNCTION BOXES, POLES, MAST ARMS, FOUNDATIONS, LUMINAIRES, SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS, PUSH BUTTONS, DETECTION SYSTEM, CONDUITS, CONDUCTORS, CABLES, TRAFFIC CONTROLLER, CONFLICT MONITOR, COMMUNICATION SYSTEM, SERVICE POINT, AND RAILROAD INTERCONNECT SYSTEM.

   B. THE DETECTION SYSTEM SHALL BE INSTALLED, SETUP, AND CONFIGURED BY THE CONTRACTOR OR THEIR SUPPLIER PER PLANS. A TRAFFIC OPERATIONS INSPECTOR SHALL INSPECT AND PROVIDE APPROVAL IN ORDER TO PUT THE TRAFFIC SIGNAL INTO OPERATION.

   C. THE TRAFFIC CONTROLLER AND CONFLICT MONITOR SHALL BE PROGRAMMED TO OPERATE AS REQUIRED PER THE PLANS (PHASING DIAGRAM, INTERVAL CHART, AND ANY ADDITIONAL NOTES), SPECIAL PROVISIONS AND ARDOT SPECIFICATIONS.

   D. TIMING SETTINGS HAVE BEEN PROGRAMMED AND APPROVED AS REQUIRE BY ITS MANAGEMENT SECTION–MAINTENANCE DIVISION.

   E. THE TRAFFIC SIGNAL HAS BEEN INSPECTED AND APPROVED BY A TRAFFIC OPERATIONS INSPECTOR.

   F. ALL REQUIRED DOCUMENTS RELATED TO THE TRAFFIC SIGNAL EQUIPMENT, THIS INCLUDES BUT NOT LIMITED TO: TEST RESULTS, CONFIGURATION/DATA REPORTS, WARRANTIES, AND ANY OTHER DOCUMENTATION REQUIRED PER PLANS AND SPECIAL PROVISIONS.

2. CONTRACTOR SHALL NOTIFY ALL EXISTING UTILITY OWNERS BEFORE BEGINNING WORK ON THIS PROJECT.
3. TRAFFIC SIGNAL CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER OR ASSIGNED DEPARTMENT PROJECT INSPECTOR EACH DAY PRIOR TO SIGNAL RELATED WORK. NO WORK ON TRAFFIC SIGNALS WILL BE ALLOWED OR APPROVED WITHOUT THIS PRIOR NOTIFICATION.
4. THE CONTRACTOR SHALL PERFORM ALL WORK POSSIBLE THAT WILL MINIMIZE THE TIME THAT THE TRAFFIC SIGNAL IS OUT OF OPERATION. IF, IN THE OPINION OF THE ENGINEER, TRAFFIC CONDITIONS WARRANT, THE CONTRACTOR SHALL PROVIDE FLAGGERS TO DIRECT TRAFFIC WHILE THE TRAFFIC SIGNAL IS OUT OF OPERATION.
5. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE NFPA 70 (CURRENT EDITION) NATIONAL ELECTRICAL CODE, NFPA 101 (CURRENT EDITION) LIFE SAFETY CODE, STATE ELECTRICAL CODE AND LOCAL ELECTRICAL CODE.
6. EXTEND GREEN EQUIPMENT GROUNDING CONDUCTOR (E.G.C.) FROM GROUND BAR AT MAIN BREAKER TO CONTROL PANEL AND TO FIRST POLE. SOLIDLY BOND E.G.C. TO GROUND LUG OF CONTROL CABINET AND TO POLE GROUND. ENSURE THAT ONLY ONE NEUTRAL–TO–GROUND BOND EXISTS IN THE SYSTEM AND THAT IT IS AT THE MAIN BREAKER.
7. ELECTRICAL SERVICE SHALL BE PROVIDED BY THE CITY/COUNTY TO A SERVICE POLE WITH EXTERNAL RAINTIGHT BREAKER (MAIN BREAKER), GALVANIZED STEEL SERVICE RISER, METER LOOP (IF REQUIRED), AND WEATHERHEAD AT A MUTUALLY ACCEPTABLE POINT WITHIN THE RIGHT–OF–WAY. IF THE SERVICE POINT IS OVER 10 FEET FROM THE CONTROLLER, THE CONTRACTOR SHALL PROVIDE AND INSTALL A SEPARATE TWO CIRCUIT EXTERNAL BREAKER (SECONDARY BREAKER) ON OR NEAR THE TRAFFIC SIGNAL CONTROLLER CABINET AND SHALL INSTALL CONDUIT, ELECTRICAL SERVICE WIRE (2c/#6 A.W.G. USE RATED, WITH GROUND TYPICAL), AND PERFORM WIRING TO TAP INTO THE CITY/COUNTY'S MAIN BREAKER AS PART OF THIS CONTRACT. CONDUIT IS PAID FOR AS A SEPARATE ITEM OF THIS CONTRACT. TWO CIRCUIT BREAKERS, CONSIDERED SUBSIDIARY TO THE CONTROL EQUIPMENT, ARE NEEDED WHERE STREET LIGHTING IS INCLUDED. AS PART OF THE SIGNAL INSTALLATION, STREET LIGHTING CIRCUIT (2c/#12 A.W.G. UF RATED, TYPICAL) SHALL BE KEPT FROM THE CIRCUIT SERVING THE TRAFFIC SIGNAL CONTROL EQUIPMENT FROM THE POINT OF TIE–IN AT THE SECONDARY BREAKER PROVIDED BY THE CONTRACTOR.
8. CONTRACTOR SHALL CONNECT A SEPARATE NEUTRAL FOR EACH LOAD SWITCH REPRESENTED ON EACH SIGNAL POLE.
9. TRAFFIC CONTROLLER CABINET AND LAYOUT SHALL BE SUCH THAT IT IS NOT NECESSARY TO SHUT DOWN POWER OR REMOVE LOAD SWITCHES IN ORDER TO EASILY TEST OR MODIFY DETECTOR INPUTS TO THE CONTROLLER.
10. CONTROLLER CABINET SHALL BE WIRED SUCH THAT DURING FLASH OPERATIONS POWER TO THE LOAD SWITCHES CANNOT BACKFEED TO LOAD SWITCH POWER BUSS.
11. ALL PARTS OF THIS INSTALLATION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, STANDARD DRAWINGS, AND WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION.
12. CONTROLLER CABINET LAYOUT AND ORIENTATION SHALL CONFORM TO IMSA STANDARDS.
13. DOOR PANEL TEST PUSH BUTTONS SHALL ACTUATE INDICATED PHASES. DETECTOR ASSIGNMENTS AND/OR SIDE PANEL JUMPERS MAY REQUIRE MODIFICATION.
14. ALL SYSTEM DETECTOR RACKS AND ASSOCIATED EQUIPMENT SHALL BE PROTECTED BY THE MAIN CONTROLLER CABINET POWER SURGE PROTECTION.
15. ONE VIDEO PROGRAMMING MODULE SHALL BE PROVIDED FOR AIMING AND SETUP OF DETECTORS IF THE VIDEO SYSTEM CANNOT BE ADJUSTED THROUGH HARDWARE AND SOFTWARE PROVIDED BY ITEMS WITHIN THE JOB.
16. HARDWARE INPUTS MAY BE DETERMINED BY SUPPLIER. EACH DETECTOR OUTPUT SHALL INPUT THE CONTROLLER THROUGH A SEPARATE INPUT UNLESS OTHERWISE NOTED AND BE PROGRAMMED TO ACTUATE THE ASSOCIATED PHASE. COMBINATION (COMB.) DETECTORS SHALL ALSO BE PROGRAMMED TO PROVIDE VEHICLE COUNT/OCCUPANCY DATA.
17. THE LOCAL RADIO WITH ANTENNA AND TRAFFIC SIGNAL CONTROLLER SHALL BE COMPATIBLE WITH THE EXISTING COORDINATION SYSTEM IN THE CITY/COUNTY.
18. CONDUIT INSTALLED UNDER ROADWAY SURFACES SHALL BE INSTALLED BY PUSHING OR BORING METHOD OR AS DIRECTED BY THE ENGINEER. PVC OR HDPE CONDUIT SHALL BE USED AND SHALL BE UL LISTED. PVC CONDUIT SHALL BE MARKED "DIR. BORING" OR "DIRECTIONAL BORING" PER NEC. IF THE ENGINEER DETERMINES THIS IS NOT FEASIBLE, THEN A TRENCHING METHOD AS SHOWN IN THE STANDARD DRAWINGS MAY BE USED. THE ENGINEER SHALL GRANT A WRITTEN APPROVAL PRIOR TO USING THE TRENCHING METHOD.
19. ALL CONDUIT SHALL BE THREE (3") INCH DIAMETER UNLESS SPECIFIED ON PLANS. ALL CONDUIT UNDER THE ROADWAY, SIDEWALKS, AND DRIVEWAYS SHALL HAVE A MINIMUM DEPTH OF 24" FROM THE TOP OF THE CONDUIT TO THE FINISHED GRADE. CONDUIT DEPTH MAY NEED TO INCREASE NEAR DRAINAGE STRUCTURES.
20. CONDUIT BELL END FITTINGS SHALL BE INSTALLED ON ALL TERMINATING ENDS OF NON–METALLIC CONDUIT RUNS. THIS INCLUDES PULL BOXES, POLE BASES, AND TRAFFIC SIGNAL CABINETS. THE COST OF THE FITTINGS SHALL BE CONSIDERED SUBSIDARY TO THE PAY ITEM. ALL NON–METALLIC CONDUIT SHALL USE LONG SWEEP 90 DEGREE ELBOWS ON ALL CONDUIT BENDS.
21. ALL CONCRETE PULL BOXES SHALL BE (TYPE 2 HD) UNLESS OTHERWISE INDICATED. PULL BOX LIDS SHALL CLOSE FLUSH WITHOUT PINCHING ANY CONDUCTORS. CONDUIT LENGTHS IN PULL BOXES SHALL BE SET ACCORDINGLY. ANY CONDUCTORS THAT HAVE BEEN DAMAGED BY PINCHING SHALL BE COMPLETELY REPLACED AT THE CONTRACTOR'S EXPENSE.
22. ALL CONCRETE PULL BOXES SHALL BE SET ON A GRAVEL OR CRUSHED STONE BEDDING AS SPECIFIED IN SECTION 711, CONCRETE PULL BOX, OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014.
23. CONTRACTOR SHALL ATTACH A PERMANENT TAG OF RIGID PLASTIC OR NON–FERROUS METAL TO EACH CONDUIT AT PULLBOXES, POLE BASES, JUNCTION BOXES AND CONTROLLER CABINETS. TAGS SHALL BE EMBOSSED, STAMPED OR ENGRAVED WITH LETTERS 1/4" OR GREATER IN HEIGHT AND SECURED TO THE CONDUIT WITH NYLON OR PLASTIC TIES. EACH TAG SHALL INDICATE THE END LOCATION OF CONDUIT RUN. THE COST OF THE TAGS SHALL BE SUBSIDIARY TO THE CONDUIT PAY ITEM.

   EXAMPLES FOR CONDUIT IN SIDE CABINET: "TO POLE A AND B" OR "TO POLE C"
   EXAMPLES FOR CONDUIT IN PULL BOX: "TO POLE A" OR "TO TRAFFIC CABINET"

24. ALL STEEL POLES SHALL BE DESIGNED TO MEET THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 4th EDITION (2001) WITH 2003 AND 2006 INTERIMS.
25. ALL TRAFFIC SIGNAL POLES SHALL BE GALVANIZED.
26. CONNECTION OF TRAFFIC SIGNAL DISPLAY TO FIELD WIRING SHALL UTILIZE AN APPROVED TERMINAL STRIP BEHIND HAND–HOLE COVER AT BASE OF POLE. TERMINAL STRIP SHALL PROVIDE PROTECTION TO PREVENT EXPOSURE TO THE PUBLIC IN THE EVENT THAT POLE COVER IS MISSING. PAYMENT FOR TERMINAL STRIPS SHALL BE INCLUDED IN ITEM 714 TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, CURRENT EDITION.
27. FOUNDATION FOR ALL POLES SHALL BE EXTENDED IF NECESSARY TO ACCOMMODATE THE REQUIREMENTS FOR SIGNAL HEAD CLEARANCE ABOVE ROADWAY ONLY AT LOCATIONS WHERE THE GROUND ELEVATION AT THE POLE IS BELOW THE ELEVATION OF THE ROADWAY (SEE NOTES ON STANDARD DRAWING). PAYMENT WILL BE INCLUDED IN SECTION 714 TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, CURRENT EDITION.
28. TO DETERMINE UTILITY CLEARANCES ABOVE THE TRAFFIC SIGNAL POLE, REFER TO THE POLE SCHEDULE FOR VERTICAL SHAFT HEIGHT. WHERE THE POLE SCHEDULE INDICATES THAT A LUMINAIRE ARM WILL BE USED, THIRTY–EIGHT (38') FEET SHOULD BE USED TO DETERMINE UTILITY CLEARANCE ABOVE THE LUMINAIRE ARM. WHERE THE POLE SCHEDULE INDICATES A TRAFFIC SIGNAL POLE WITHOUT A LUMINAIRE ARM, A HEIGHT OF TWENTY–ONE (21') FEET SHOULD BE USED TO DETERMINE UTILITY CLEARANCE ABOVE THE TRAFFIC SIGNAL MAST ARM. AN ADDITIONAL SIX (6') FEET SHOULD BE USED DIRECTLY ABOVE "VIDEO DETECTOR" AT LOCATIONS SHOWN ON THE SIGNAL PLANS.
29. THE DESIRABLE MINIMUM DISTANCE FROM THE FACE OF ROADWAY CURB OR SHOULDER EDGE TO THE FACE OF NON–BREAKAWAY POLE OR OBSTRUCTION IS SIX (6') FEET. REFER TO TRAFFIC SIGNAL PLANS FOR SPECIFIC LOCATION OF POLES, CONTROLLER AND ANY OTHER NON–BREAKAWAY OBSTRUCTIONS. REFER TO "DESIGN PARAMETERS, MINIMUM CLEAR ZONE DISTANCE" FOR MINIMUM DISTANCE FROM THE EDGE OF TRAVELED WAY TO THE FACE OF A NON–BREAKAWAY POLE OR OBSTRUCTION. TRAFFIC SIGNAL POLES OR ANY OTHER NON–BREAKAWAY OBSTRUCTION SHALL NOT BE INSTALLED WITHIN THE CLEAR ZONE.
30. AS DETERMINED BY THE ENGINEER, FOUNDATION EMBEDMENT MAY BE DECREASED BY A MAXIMUM OF TWO FEET IF COMPETENT ROCK IS ENCOUNTERED PRIOR TO ACHIEVING PLAN EMBEDMENT AND AT LEAST HALF OF THE REMAINING PLAN EMBEDMENT LENGTH IS KEYED INTO COMPETENT ROCK.
31. LED LUMINAIRE ASSEMBLIES SHALL HAVE A BUG RATING OF U0.
32. BACKPLATES SHALL BE SUPPLIED FOR ALL TRAFFIC SIGNAL HEADS, REFER TO THE RETROREFLECTIVE BACKPLATES SPECIAL PROVISION FOR REQUIREMENTS.
33. PAVEMENT MARKINGS SHOWN FOR REFERENCE ONLY. SEE PERMANENT PAVEMENT MARKING DETAILS.
34. BEFORE FINAL ACCEPTANCE OF THE TRAFFIC SIGNAL, THE CONTRACTOR SHALL PROVIDE TWO (2) SETS OF LEDGER SIZE (11" X 17") AS–BUILT TRAFFIC SIGNAL PLANS TO THE MAINTENANCE AUTHORITY AND ARDOT.

ADDITIONAL TRAFFIC SIGNAL NOTES:

1. ALL PARTS OF THIS INSTALLATION SHALL BE IN ACCORDANCE WITH THE AHTD STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, STANDARD DRAWINGS, AND WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), CURRENT EDITIONS.
2. ALL PARTS OF THIS INSTALLATION SHALL BE IN ACCORDANCE WITH CITY OF BENTONVILLE STANDARDS FOR EQUIPMENT, MATERIALS METHODS, FEATURES, AND COLORS CURRENTLY IN EFFECT AT THE TIME OF INSTALLATION.
3. TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED (VIA EXISTING, TEMPORARY OR PROPOSED POLES) THROUGHOUT ALL CONSTRUCTION PHASES.

CITY OF BENTONVILLE TRAFFIC SIGNAL NOTES:

1. SEE JOB SPECIAL PROVISIONS FOR ADDITIONAL SIGNALIZED INTERSECTION EQUIPMENT STANDARDS.
2. ONE ADDITIONAL VANTAGE NEXT VECTOR AND ONE IDS APS PUSHBUTTON STATION SHALL BE PROVIDED TO CITY OF BENTONVILLE. NO DIRECT PAYMENT SHALL BE MADE.
3. ALL ACCESSORIES, BRACKETS, TUBES, STRAPS, AND OTHER MOUNTING HARDWARE SHALL BE BLACK IN COLOR.
4. CONTRACTOR SHALL REPAIR ALL SCUFFS, SCRATCHES, AND OTHER BLEMISHES WITH CITY APPROVED MATERIALS AT NO DIRECT PAYMENT.
5. CONTRACTOR SHALL PROVIDE EQUIPMENT SUBMITTALS TO THE CITY OF BENTONVILLE FOR APPROVAL PRIOR TO PURCHASING.
9. CONTRACTOR SHALL PROVIDE FINAL AS–BUILT DRAWINGS TO THE CITY BENTONVILLE AT NO DIRECT PAYMENT.
10. CITY OF BENTONVILLE WILL PROVIDE STREET NAME SIGNS AND CONTRACTORS SHALL INSTALL. CONTRACTORS SHALL PROVIDE AND INSTALL ALL OTHER SIGNS.
11. THE CITY OF BENTONVILLE RESERVES THE RIGHT TO REJECT ANY MATERIALS OR EQUIPMENT THAT HAS BEEN DAMAGED IN SHIPPING, HANDLING OR UNLOADING AND MAY REQUIRE REPLACEMENT AT NO COST TO THE CITY.
12. CONTRACTOR SHALL UPDATE COORDINATION FOR NEW PHASING DATA PRIOR TO TURN ON AT NO DIRECT PAYMENT.
13. THE CONTRACTOR SHALL CONNECT TO POWER AT FREE–STANDING METER RACK PER BEUD SPEC DS–1003. METER LOCATION AS SHOWN ON SIGNAL LAYOUT DRAWING. MUST BE MINIMUM 10' AWAY FROM BEUD POLES. THE CONTRACTOR IS RESPONSIBLE FOR THE PURCHASE AND INSTALL OF THE ELECTRICAL METER.
14. BEUD DESIGN LAYOUT DRAWING TAKES PRECEDENCE OVER ANY ELECTRIC INFORMATION SHOWN ON THIS PLAN. CONTRACTOR SHALL FOLLOW BEUD DESIGN WHEN INSTALLING FACILITIES.
15. PEDESTRIAN PUSH BUTTONS SHALL BE LOCATED TO FACE APPROPRIATE RAMPS.
16. EXISTING CITY FIBER OPTIC CABLE SHALL BE RECONNECTED TO NEW SIGNAL CONTROLLER CABINET PRIOR TO SIGNAL TURN–ON.
17. TRENCHING SHALL ADHERE TO THE BEUD TRENCH DETAIL AND INSPECTIONS. DETAILS CAN BE FOUND AT http://www.bentonvillear.com/194/electric.
18. CONTRACTOR/BEUD HANDOFF POINT: CONTRACTOR TO PROVIDE METER PEDESTAL, CONDUIT AND CABLING. BEUD TO PROVIDE AND PULL WIRE INTO CONTRACTOR–SUPPLIED CONDUIT/CABLE AND MAKE FINAL CONNECTIONS.
19. THE TOP OF ALL PULL BOXES SHALL BE INSTALLED AT THE FINISHED SURFACE ELEVATION.
20. CONTROLLER SHALL IMPLEMENT PEDESTRIAN RECALL FOR THE COORDINATED NORTH/SOUTH MOVEMENTS. CONTROLLER SHALL ALSO ALLOW FOR LEADING PEDESTRIAN INTERVAL (LPI) FUNCTIONALITY (LPI TURN ON SHALL BE DETERMINED BY THE CITY).
21. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL EQUIPMENT AND MATERIALS NECESSARY FOR COMPLETE OPERATION OF EACH TRAFFIC SIGNAL SYSTEM WHETHER SPECIFICALLY MENTIONS OR NOT.

CITY OF BENTONVILLE FIBER CONNECTION NOTES:

1. THIS PROJECT INVOLVES THE MODIFICATION & INSTALLATION OF FIBER OPTIC CABLE TO INTERCONNECT THE PROPOSED TRAFFIC SIGNAL AT WALTON BOULEVARD AND CENTRAL AVENUE TO THE EXISTING SYSTEM. ALL FIBER OPTIC WORK MUST BE COORDINATED WITH THE CITY'S TRAFFIC ENGINEERING AND IT DEPARTMENTS BEFORE MODIFYING THE CURRENT FIBER INSTALLATION.
2. WIC ENCLOSURE SHALL BE PROVIDED FOR TERMINATION POINT WITH SPACE FOR 12 SC CONNECTORS.
3. ALL FIBER SHALL BE 12 COUNT MULTI–MODE (MM) PRE–TERMINATED PIGTAIL AND BE APPROVED BY THE CITY PRIOR TO PROCUREMENT.
4. ALL FIBER OPTIC PULL BOXES SHALL BE 24"X36"X24" HD WITH "CITY FIBER" LABEL ON LID.
5. ALL FIBER OPTIC CONDUITS SHALL BE LABELED "CITY FIBER" AND SHALL INCLUDE TRACER WIRE. TRACER WIRE SHALL BE #10 SOLID COPPER. TRACER WIRE SHALL BE TAPED TO THE TOP OF CONDUITS OR INSIDE CONDUITS WITH FIBER AND SHALL BE JOINED FROM ONE END OF PROJECT TO THE OTHER END OF PROJECT AS A CONTINUOUS CONNECTION.
6. PIGTAIL SHALL BE SPLICED INTO NEAREST "CITY FIBER" PULL BOX. CONTRACTOR SHALL INSTALL, TERMINATE, AND TEST FIBER FROM NEAREST SERVICE POINT INTO CABINET AT NO DIRECT PAYMENT.
7. FIBER SHALL BE CONNECTED PRIOR TO SIGNAL TURN–ON.
8. CONTRACTOR TO PROVIDE TO THE CITY PROPOSED SPLICE CONNECTIONS DISPLAYING WHICH CABLES ARE TO BE CONNECTED AND THEIR COLOR DESIGNATION BEFORE INSTALLATION.
9. TRENCHING SHALL ADHERE TO THE BEUD TRENCH DETAIL AND INSPECTIONS. DETAILS CAN BE FOUND AT http://www.bentonvillear.com/194/electric.

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STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18072
K. V. ROTERING
11-20-2023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

TRAFFIC SIGNAL PLAN

WALTON BLVD. & CENTRAL AVE.
INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

drawn by: MES
checked by: JAB
approved by: TBD
QA/QC by: KR
project no.: J21-04210
drawing no.: T_TS_J2401
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SHEET
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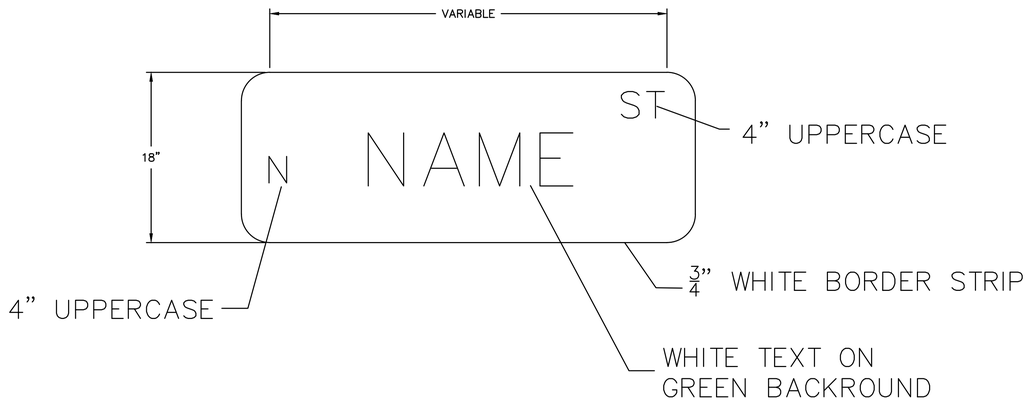
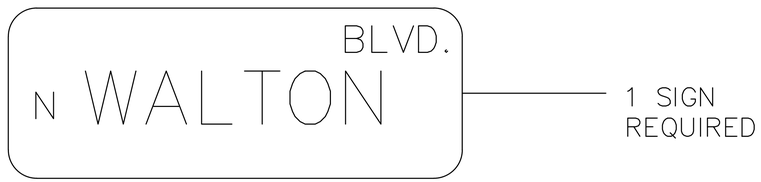
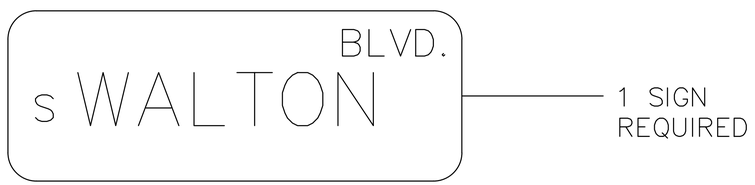
OVERHEAD STREET NAME MARKER STANDARD MAST ARM MOUNTED







SIGNING NOTES:

1. REFLECTIVE SHEETING SHALL COMPLY WITH ASTM 4956 TYPE 8 OR 9 REFLECTIVE SHEETING. SHEETING AND LEGEND SHALL BE APPLIED IN A SUCH MANNER TO PROVIDE WRINKLE AND BUBBLE FREE SURFACES. APPLICATION OF SHEETING IS CAUSE FRO REJECTION OF MATERIALS DUE TO WORKMANSHIP.
2. ALUMINUM SIGN BLANK SHALL BE ALLOY 6061–T6 OR 5052–H38 THE ALUMINUM SIGN SHALL ALSO BE ANODIZED. THE ALUMINUM SHEET SHALL BE 0.100 INCH NORMAL THICKNESS AND OF THE SIZE SHOWN WITH 1.5" CORNER RADII. PRIOR TO FABRICATION OF THE SIGNS, THE LAYOUT SHALL FIRST BE APPROVED BY AN AGENT OF THE CITY.
3. WHEN THE CROSSROAD HAS TWO NAMES, THE SIGN FOR THE CROSSROAD TO THE LEFT MAY BE INSTALLED ON THE BACKSIDE OF THE MAST ARM OF THE NEAREST LEFT POLE. SEE STD. DETAIL SHEET FOR MORE INFORMATION FOR MOUNTING ON MAST ARM ASSEMBLY.
4. THE C 2000 STANDARD ALPHABET SHALL BE USED FOR ALL LETTERS.

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2023

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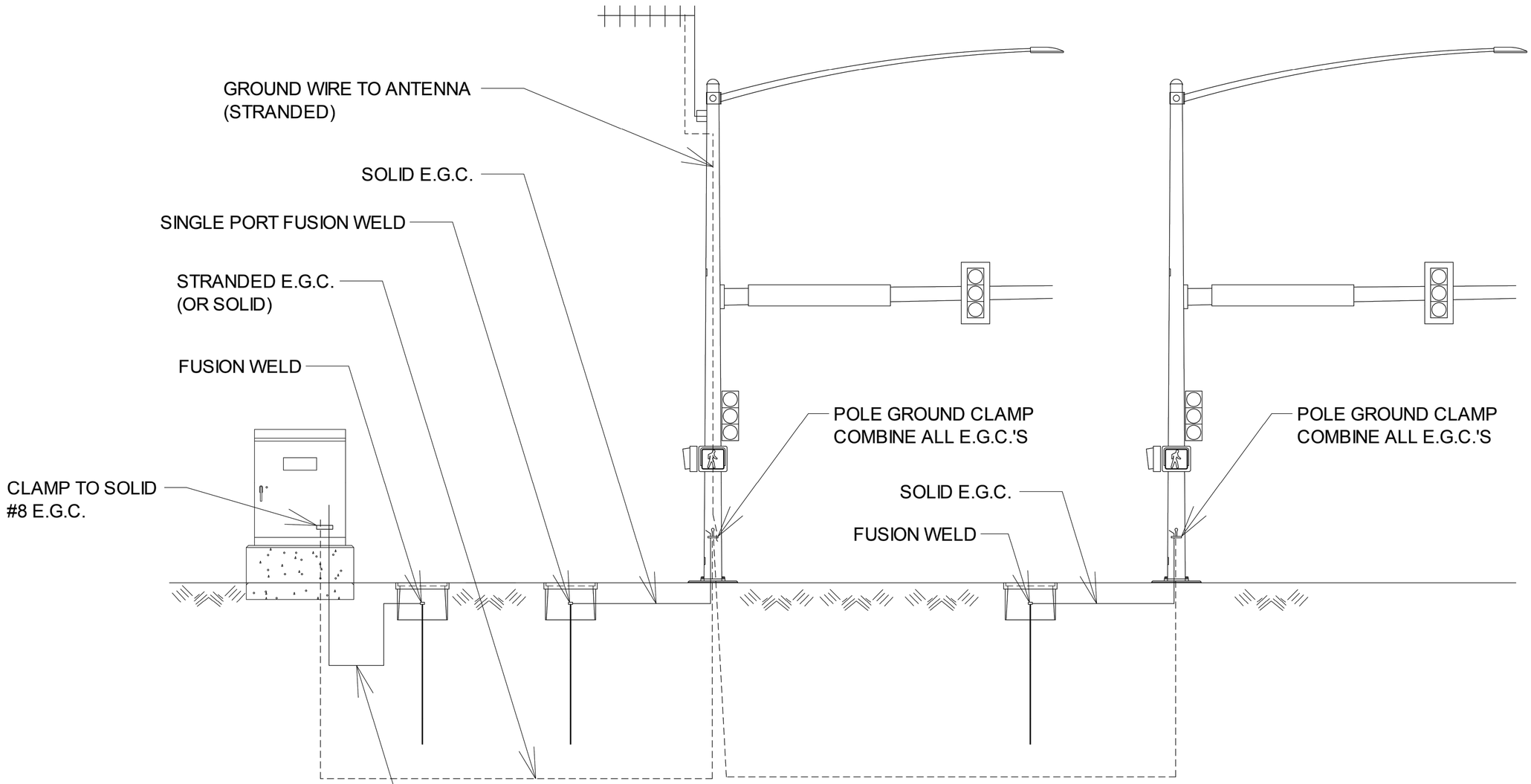
GROUNDING ARRAY
SINGLE-PORT FUSION WELDS



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F_PBASE_J2104210 F_PSAS_J2104210 F_PTBLK_J2104210 T_PUTIL_J2104210

SUMMARY OF TRAFFIC SIGNAL QUANTITIES			
ITEM NUMBER	ITEM	TOTAL QUANTITY	UNIT
SP & 701	SIEMENS EAGLE SIZE SUPER P CABINET WITH INTEGRATED BBS COMPARTMENT AND EAGLE M62 CONTROLLER	1	EA
SP	5 POSITION VIDEO DETECTION CARD RACK	1	EA
SP	EDI MMU2 16 LE/IP	1	EA
SP	ITERIS VIDEO DETECTION VANTAGE NEXT VECTOR SYSTEM	1	EA
SP	SDLC HUB AND CABLES	1	EA
SP	EZ COMMUNICATOR NAVIGATOR TOUCHLESS APS	8	EA
SP	CLARY UPS	1	EA
SP	TRAFFIC CABINET COMMUNICATION AND VIDEO EQUIPMENT MATERIALS	1	EA
SP & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (40')	1	EA
SP & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (44')	1	EA
SP & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (50')	1	EA
SP & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (54')	1	EA
SP	LED LUMINAIRE ASSEMBLY	3	EA
SP & 715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	6	EA
708	TRAFFIC SIGNAL CABLE (20c/#14)	640	LF
708	TRAFFIC SIGNAL CABLE (7c/#14)	231	LF
708	TRAFFIC SIGNAL CABLE (5c/#14)	3394	LF
708	ELECTRICAL CONDUCTORS IN CONDUIT (1c/#8)	793	LF
708	ELECTRICAL CONDUCTORS IN CONDUIT (2c/#12)	632	LF
708	ELECTRICAL CONDUCTORS IN CONDUIT (1c/#12)	150	LF
*	WIC FIBER ENCLOSURE	1	EA
*	FIBER OPTIC PIGTAIL, 12 MM	1	EA
710 *	NON-METALLIC CONDUIT (2")	20	LF
710	NON-METALLIC CONDUIT (3")	750	LF
711	CONCRETE PULL BOX (TYPE 3 HD)	6	EA
711 *	PULL BOX FOR FIBER, DS-1609, 24"X36"X24" HD	1	EA
726**	18" STREET NAME SIGN (INSTALL ONLY)	4	EA
726	STANDARD SIGN	10	SF
	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	1	LUMP
733	VIDEO CABLE	910	LF
SP	GPS PREEMPTION BACKUP	1	EA
SP & 706	TRAFFIC SIGNAL HEAD, LED (3 SECTION, 1-WAY)	11	EA
SP & 706	TRAFFIC SIGNAL HEAD, LED (4 SECTION, 1-WAY)	2	EA
SP & 706	TRAFFIC SIGNAL HEAD, LED (5 SECTION, 1-WAY)	3	EA
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	8	EA
**	ELECTRICAL METER SERVICE POINT	1	EA

SEE CITY OF BENTONVILLE FIBER CONNECTION NOTES ON SHEET 56
SEE CITY OF BENTONVILLE TRAFFIC SIGNAL NOTES ON SHEET 56

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STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18072
K. V. ROTERING
11-20-2023

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

TRAFFIC SIGNAL PLAN

WALTON BLVD. & CENTRAL AVE.
INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

drawn by: MES
checked by: JAB
approved by: TBD
QA/QC by: KR
project no.: J21-04210
drawing no.: F_TRS_J21021
date: 11.20.2023

SHEET
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DWG: F:\2021\04001-04500\021-04210-J\40-Design\AutoCAD\Final Plans\Sheets\F_TRS_J2104210.dwg USER: jcoddington
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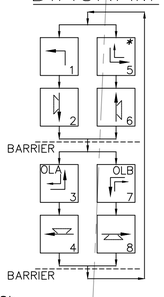
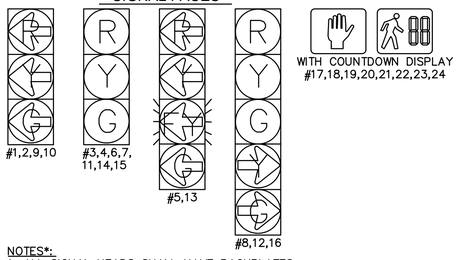
PHASING DIAGRAM



NOTES*:
HEAD #12 YELLOW RIGHT AND GREEN RIGHT SHALL BE HARDWIRED TO HEAD #5 YELLOW LEFT AND GREEN LEFT, RESPECTIVELY, TO MIMIC A RIGHT-TURN OVERLAP WITHOUT USE OF A LOAD BAY.

SIGNAL FACES



NOTES*:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.

2. REFER TO SPECIAL PROVISION "RETROREFLECTIVE BACKPLATES" FOR DETAILS ON REQUIREMENTS FOR BACKPLATES.

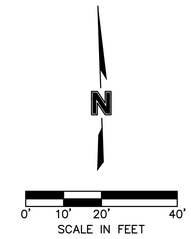
3. REFER TO SPECIAL PROVISIONS FOR DETAILS ON REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.

4. ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEETS A.D.A. STANDARDS.

SIGN 1

R10-27A
(24"x30")

WALTON AND CENTRAL DETECTOR SPACING CHART		
HIGHWAY 72/CENTRAL AVE. VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP BAR	
	LEAD ZONE	LAG ZONE
35 MPH	200'	85'
WALTON BLVD VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP BAR	
	LEAD ZONE	LAG ZONE
40 MPH	230'	100'



POLE DIMENSIONS						
POLE #	MAST ARM	* MAST ARM ANGLE	** HAND HOLE	VERT. SHAFT	LUM. ARM	* LUM. ANGLE
A	50 feet	2 deg	180 deg	35 feet	10 feet	271 deg
B		N/A		12 feet	N/A	
C		N/A		12 feet	N/A	
D	44 feet	94 deg	180 deg	35 feet	10 feet	1 deg
E		N/A		12 feet	N/A	
F		N/A		12 feet	N/A	
G	54 feet	182 deg	180 deg	35 feet	10 feet	94 deg
H		N/A		12 feet	N/A	
I	40 feet	274 deg	180 deg	21 feet	N/A	
J		N/A		12 feet	N/A	

Notes:
*MAST ARM AND LUMINAIRE ARM ANGLE MEASURED FROM PLAN NORTH = 0°, CLOCKWISE ROTATION.
**HAND HOLE LOCATION MEASURED CLOCKWISE FROM MAST ARM.

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No. 18072
K. V. ROTERING
11-20-2023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
		REVISIONS	

TRAFFIC SIGNAL PLAN

WALTON BLVD. & CENTRAL AVE. INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

drawn by:	MES
checked by:	JAB
approved by:	TBD
QA/QC by:	KR
project no.:	J21-04210
drawing no.:	F_TRS_J210210
date:	11.20.2023

SHEET
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F_PBASE_J2104210 F_PSAS_J2104210 F_PTBLK_J2104210 T_PUTIL_J2104210

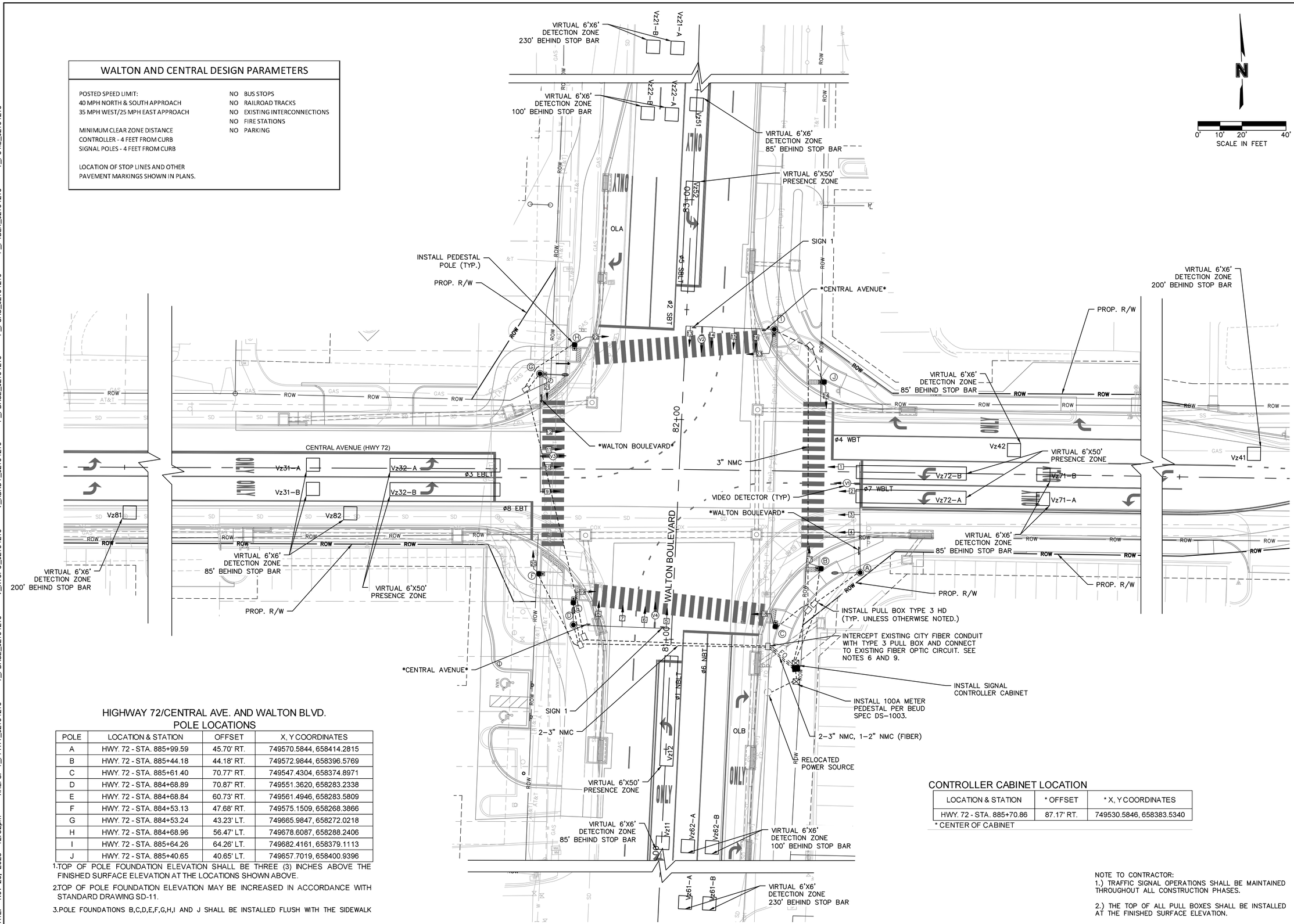
WALTON AND CENTRAL DESIGN PARAMETERS

POSTED SPEED LIMIT:
40 MPH NORTH & SOUTH APPROACH
35 MPH WEST/25 MPH EAST APPROACH

MINIMUM CLEAR ZONE DISTANCE
CONTROLLER - 4 FEET FROM CURB
SIGNAL POLES - 4 FEET FROM CURB

LOCATION OF STOP LINES AND OTHER
PAVEMENT MARKINGS SHOWN IN PLANS.

NO BUS STOPS
NO RAILROAD TRACKS
NO EXISTING INTERCONNECTIONS
NO FIRE STATIONS
NO PARKING



HIGHWAY 72/CENTRAL AVE. AND WALTON BLVD. POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 72 - STA. 885+99.59	45.70' RT.	749570.5844, 658414.2815
B	HWY. 72 - STA. 885+44.18	44.18' RT.	749572.9844, 658396.5769
C	HWY. 72 - STA. 885+61.40	70.77' RT.	749547.4304, 658374.8971
D	HWY. 72 - STA. 884+68.89	70.87' RT.	749551.3620, 658283.2338
E	HWY. 72 - STA. 884+68.84	60.73' RT.	749561.4946, 658283.5809
F	HWY. 72 - STA. 884+53.13	47.68' RT.	749575.1509, 658268.3866
G	HWY. 72 - STA. 884+53.24	43.23' LT.	749665.9847, 658272.0218
H	HWY. 72 - STA. 884+68.96	56.47' LT.	749678.6087, 658288.2406
I	HWY. 72 - STA. 885+64.26	64.26' LT.	749682.4161, 658379.1113
J	HWY. 72 - STA. 885+40.65	40.65' LT.	749657.7019, 658400.9396

1. TOP OF POLE FOUNDATION ELEVATION SHALL BE THREE (3) INCHES ABOVE THE FINISHED SURFACE ELEVATION AT THE LOCATIONS SHOWN ABOVE.
2. TOP OF POLE FOUNDATION ELEVATION MAY BE INCREASED IN ACCORDANCE WITH STANDARD DRAWING SD-11.
3. POLE FOUNDATIONS B,C,D,E,F,G,H,I AND J SHALL BE INSTALLED FLUSH WITH THE SIDEWALK

CONTROLLER CABINET LOCATION

LOCATION & STATION	* OFFSET	* X, Y COORDINATES
HWY. 72 - STA. 885+70.86	87.17' RT.	749530.5846, 658383.5340

* CENTER OF CABINET

NOTE TO CONTRACTOR:
1.) TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT ALL CONSTRUCTION PHASES.

2.) THE TOP OF ALL PULL BOXES SHALL BE INSTALLED AT THE FINISHED SURFACE ELEVATION.

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11-20-2023

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REVISIONS

TRAFFIC SIGNAL PLAN

WALTON BLVD. & CENTRAL AVE. INTERSECTION IMPROVEMENTS

2023

BENTONVILLE, ARKANSAS

drawn by: MES
checked by: JAB
approved by: TBD
QA/QC by: KR
project no.: J21-04210
drawing no.: F_TRS_J21021
date: 11.20.2023

SHEET
61 OF 89

DWG: F:\2021\04001-04500\021-04210-J\40-Design\AutoCAD\Final Plans\Sheets\F_TRS_J21042l0.dwg USER: jcoddington
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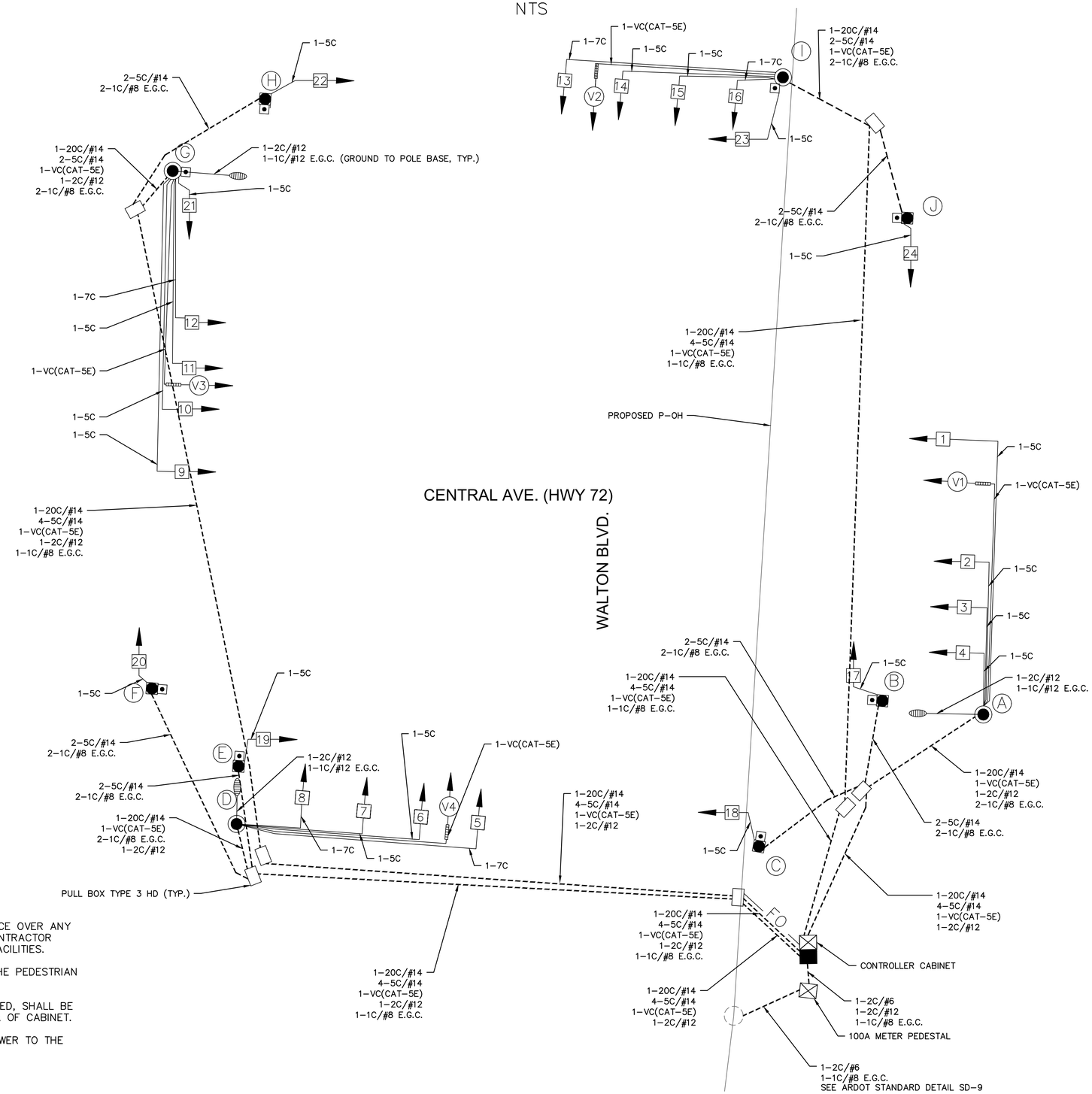
WIRING DIAGRAM
NTS



WIRING NOTES:

1. BEUD DESIGN LAYOUT DRAWING TAKES PRECEDENCE OVER ANY ELECTRIC INFORMATION SHOWN ON THE PLAN. CONTRACTOR SHALL FOLLOW BEUD DESIGN WHEN INSTALLING FACILITIES.
2. ONE SEPARATE 1-5C RUN TO EACH POLE FOR THE PEDESTRIAN PUSH BUTTON.
3. ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTION AREA OF CABINET.
4. BEUD SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.
5. SEE GROUNDING ARRAY DETAIL ON SHEET 58.

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WALTON BLVD. & CENTRAL AVE. INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

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date:	11.20.2023

SHEET
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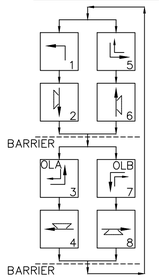
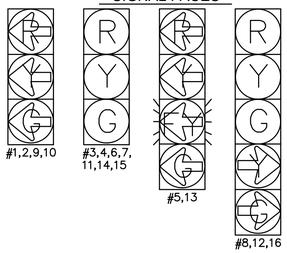
PHASING DIAGRAM



NOTES*:
HEAD #12 YELLOW RIGHT AND GREEN RIGHT SHALL BE HARDWIRED TO HEAD #5 YELLOW LEFT AND GREEN LEFT, RESPECTIVELY, TO MIMIC A RIGHT-TURN OVERLAP WITHOUT USE OF A LOAD BAY.

SIGNAL FACES



#1,2,9,10 | #3,4,6,7, 11,14,15 | #5,13 | #8,12,16

WITH COUNTDOWN DISPLAY
#17,18,19,20,21,22,23,24

SIGN 1

R10-27A
(24"x30")

NOTES*:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.

2. REFER TO SPECIAL PROVISION "RETROREFLECTIVE BACKPLATES" FOR DETAILS ON REQUIREMENTS FOR BACKPLATES.

3. REFER TO SPECIAL PROVISIONS FOR DETAILS ON REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.

4. ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEETS A.D.A. STANDARDS.

DETECTOR CHART

DETECTOR SYSTEM DESCRIPTION: SEE "VIDEO DETECTION SYSTEM" IN THE PROJECT SPECIFICATIONS FOR MORE DETAILS.											
HIGHWAY 72/CENTRAL AVE AND WALTON BLVD DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS			COMMENTS	TUBE LENGTHS
							LOCAL		MASTER SYSTEM DETECTOR NUMBERS		
DET. ID #	LOCATION DIRECTION	TYPE	DET. #	CAB. TRM. #	AMP CHN. #	CON. IMP. #	PHS	SYSTEM DET. #			
Vz11	NB LT FAR	COMB.			1	V9	1	1		CAMERA V2	74"
Vz12	NB LT PRESENCE	LOCAL			2	V1	1			CAMERA V2	74"
Vz21-A&B	SB ADVANCE	LOCAL			5	V2	2			CAMERA V4	74"
Vz22-A&B	SB NEAR	COMB.			6	V10	2	2		CAMERA V4	74"
Vz31-A&B	EB LT FAR	COMB.			9	V11	3	3		CAMERA V1	74"
Vz32-A&B	EB LT PRESENCE	LOCAL			10	V3	3			CAMERA V1	74"
Vz41	WB ADVANCE	LOCAL			13	V4	4			CAMERA V3	74"
Vz42	WB NEAR	COMB.			14	V12	4	4		CAMERA V3	74"
Vz51	SB LT FAR	COMB.			7	V13	5	5		CAMERA V4	74"
Vz52	SB LT PRESENCE	LOCAL			8	V5	5			CAMERA V4	74"
Vz61-A&B	NB ADVANCE	LOCAL			3	V6	6			CAMERA V2	74"
Vz62-A&B	NB NEAR	COMB.			4	V14	6	6		CAMERA V2	74"
Vz71-A&B	WB LT FAR	COMB.			15	V15	7	7		CAMERA V3	74"
Vz72-A&B	WB LT PRESENCE	LOCAL			16	V7	7			CAMERA V3	74"
Vz81	EB ADVANCE	LOCAL			11	V8	8			CAMERA V1	74"
Vz82	EB NEAR	COMB.			12	V16	8	8		CAMERA V1	74"
PB2 A&B	(SB PED) W. LEG	PED.				P2	2				
PB4 A&B	(WB PED) N. LEG	PED.				P4	4				
PB6 A&B	(NB PED) E. LEG	PED.				P6	6				
PB8 A&B	(EB PED) S. LEG	PED.				P8	8				
					SPARE:						

CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT

NOTE: "AMP CHN =" REFERS TO THE RACK OUTPUT POSITION.
THIS IS WIRED TO CONTROLLER INPUT DETECTOR NUMBER WHICH IS PROGRAMMED TO ACTUATE THE DESIGNATED PHASE.
EXAMPLE: V9 = SYSTEM DETECTOR 1, V10 = SYSTEM DETECTOR 2

WALTON AND CENTRAL INDICATION CHART

SIGNAL NUMBER	INTERVAL																FLASH SEQ.
	Φ 1&5	CLR	Φ 1&6	CLR	Φ 2&5	CLR	Φ 2&6	CLR	Φ 3&7	CLR	Φ 3&8	CLR	Φ 4&7	CLR	Φ 4&8	CLR	
1&2	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~G~~	*	~~G~~	*	~~R~~	~~R~~	~~R~~	~~R~~	R←
3&4	R	R	R	R	R	R	R	R	R	R	G	**	R	R	G	**	R
5	~~G~~	*	~~FY~~	***	~~G~~	*	~~FY~~	***	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	R←
6&7	R	R	R	R	G	**	G	**	R	R	R	R	R	R	R	R	R
8	R	R	R	R	G	**	G	**	R G→	R *	R G→	R *	R	R	R	R	R
9&10	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~G~~	*	~~R~~	~~R~~	~~G~~	*	~~R~~	~~R~~	R←
11	R	R	R	R	R	R	R	R	R	R	R	R	G	**	G	**	R
12	R G→	R *	R	R	R G→	R *	R	R	R	R	R	R	G	**	G	**	R
13	~~G~~	*	~~G~~	*	~~FY~~	***	~~FY~~	***	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	R←
14&15	R	R	G	**	R	R	G	**	R	R	R	R	R	R	R	R	R
16	R	R	G	**	R	R	G	**	R G→	R *	R	R	R G→	R *	R	R	R
17&24	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLK
18&19	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	W	FDW	BLK
20&21	DW	DW	DW	DW	W	FDW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLK
22&23	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	W	FDW	BLK

* DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE
** DENOTES GREEN OR YELLOW BALL DEPENDING ON NEXT PHASE
*** DENOTES FLASHING YELLOW ARROW OR YELLOW ARROW DEPENDING ON NEXT PHASE

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No. 18072
K. ROTERING
11-20-2023

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

TRAFFIC SIGNAL PLAN

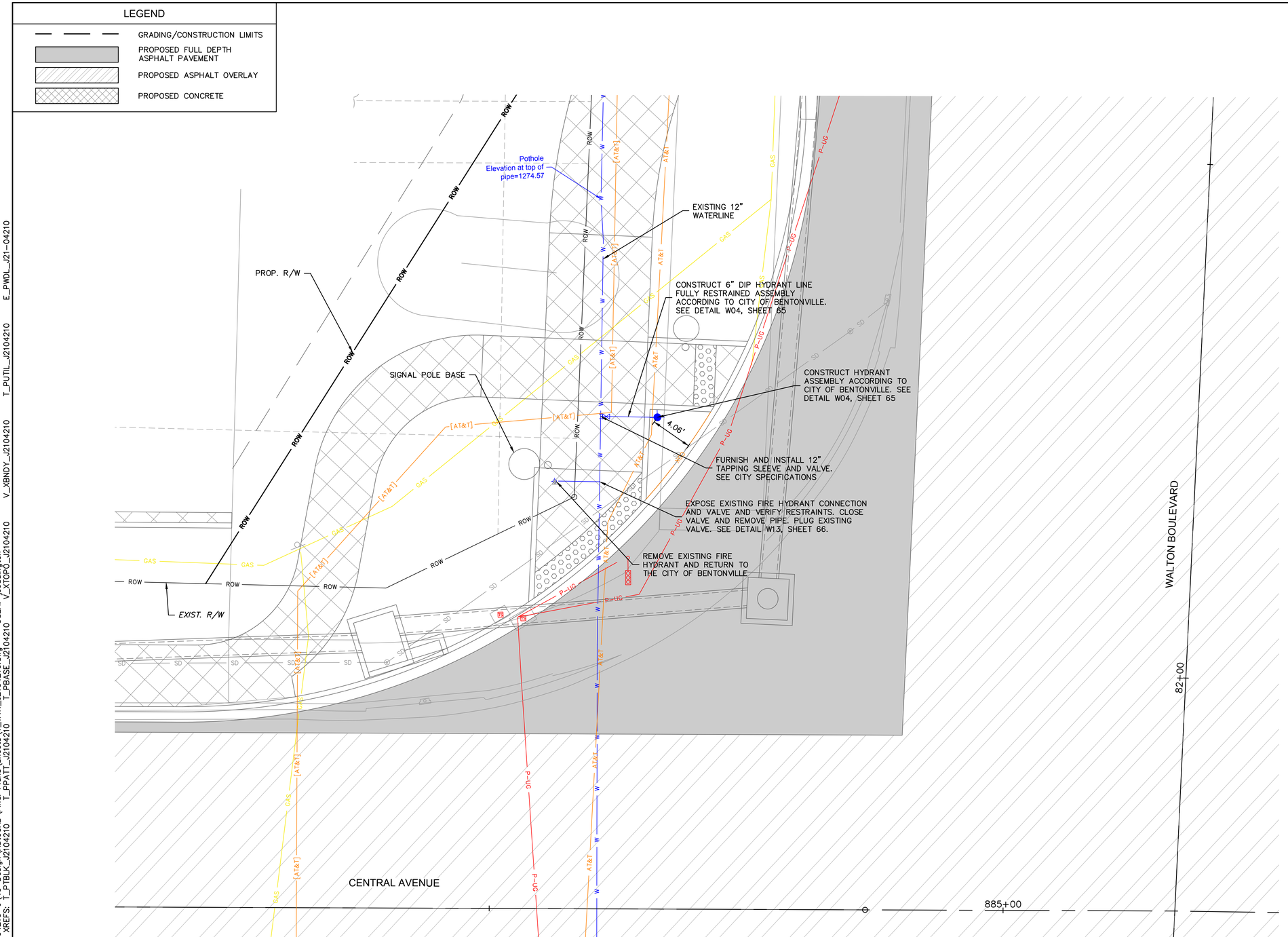
WALTON BLVD. & CENTRAL AVE.
INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

drawn by: MES
checked by: JAB
approved by: TBD
QA/QC by: KR
project no.: J21-04210
drawing no.: 1 TRS J2421
date: 11.20.2023

SHEET
63 OF 89



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STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No.13624
ANDREW S. BREWER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
		REVISIONS	

WATERLINE PLAN

WALTON BLVD. & CENTRAL AVE. INTERSECTION IMPROVEMENTS

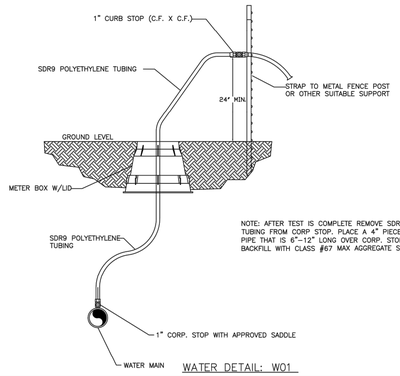
BENTONVILLE, ARKANSAS

2023

drawn by:	JRC/JKL
checked by:	JKL/JWP
approved by:	RCB
QA/QC by:	JKL/RCB
project no.:	J21-04210
drawing no.:	T_WTR_J2104210
date:	11.20.2023

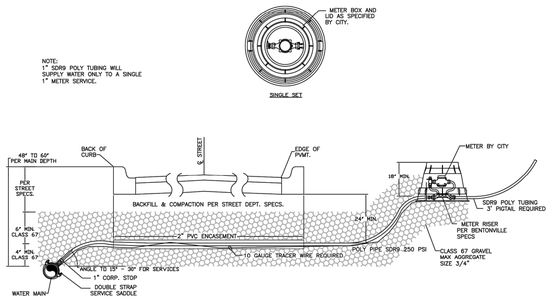
SHEET
64 OF 89

TEMPORARY 1" BLOW OFF ASSEMBLY SAMPLE POINTS



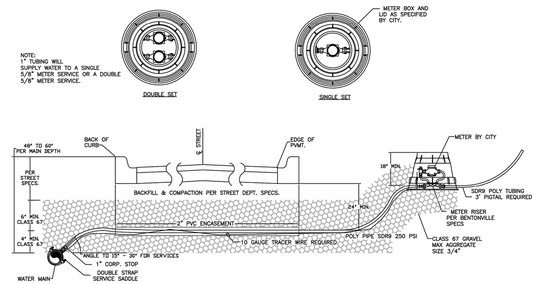
WATER DETAIL: W01

WATER SERVICE DETAIL 1"



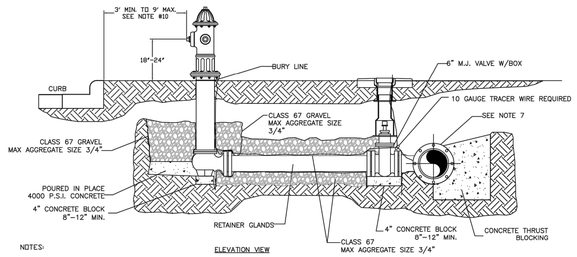
WATER DETAIL: W02

WATER SERVICE DETAIL 5/8"



WATER DETAIL: W03

FIRE HYDRANT DETAIL W/ RETAINER GLANDS

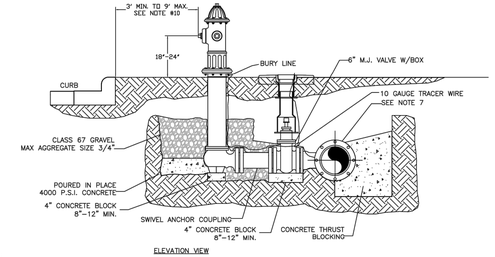


ELEVATION VIEW

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.

WATER DETAIL: W04

FIRE HYDRANT DETAIL W/SWIVEL ANCHOR COUPLING



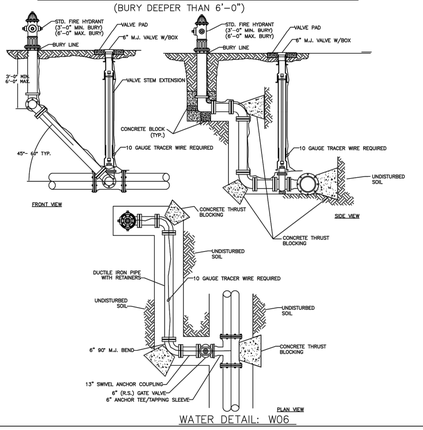
ELEVATION VIEW

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.

WATER DETAIL: W05

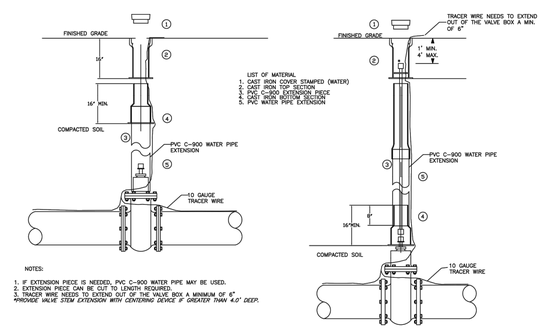
DEEP BURY FIRE HYDRANTS

(BURY DEEPER THAN 6'-0")



WATER DETAIL: W06

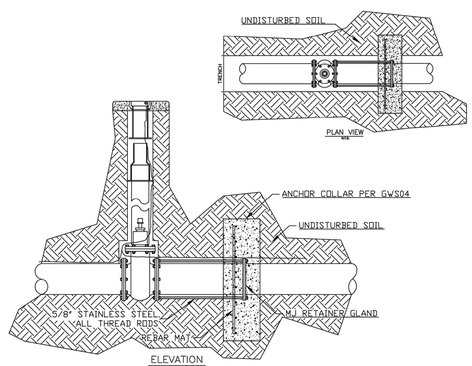
VALVE BOX VALVE STEM & TRACER WIRE INSTALLATION



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".
KRISTEE VALVE STEM EXTENSION WITH CENTERING DEVICE IF GREATER THAN 4.0' DEEP.

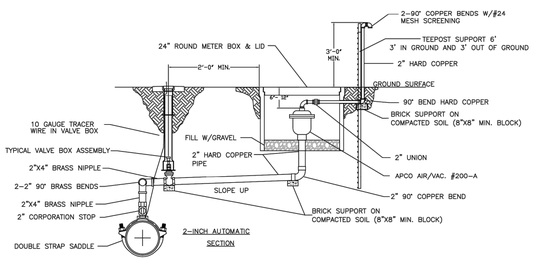
WATER DETAIL: W07

RESTRAINED GATE VALVE



WATER DETAIL: W08

2" 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.

WATER DETAIL: W09

THE CITY OF WASTEWATER WATER BENTONVILLE
3200 SW MUNICIPAL DR.
Bentonville, AR 72712
Ph: (479) 271-3140
www.bentonvillear.com

WATER DETAILS

Know what's **below.** **Call** before you dig.

REVISIONS:
Adopted by City Council 06/22/2021
Ordinance Number: 2021-135

Approved by Dept. of Health
04/01/2021

NOTES:

DRAWN BY:	JI	DATE:	03/16/2021
APPROVED BY:	PN	DATE:	03/16/2021
SHEET NUMBER:	1	OF	2

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STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No.13624
ANDREW S. BREWER
12/31/2023

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

WATERLINE DETAILS

WALTON BLVD. & CENTRAL AVE. INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

drawn by:	JRC/JKL
checked by:	JKL/JWP
approved by:	RCB
QA/QC by:	JKL/RCB
project no.:	J21-04210
drawing no.:	T_WTR_J2104210
date:	11.20.2023

SHEET 65 OF 89

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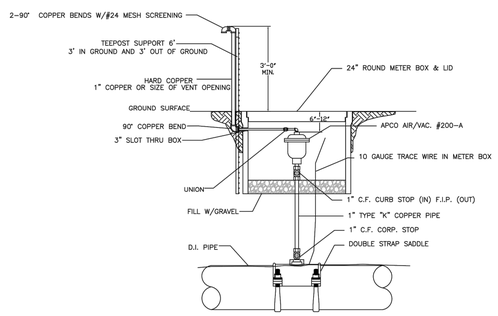
V_XBNDY_J2104210 T_PUTIL_J2104210 E_PWDL_J21-04210

1" COMBINATION AIR/VACUUM VALVE DETAIL



NOTES:
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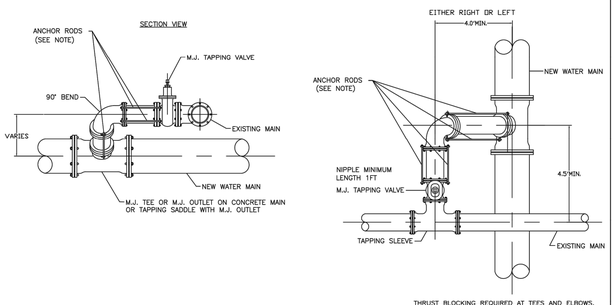
2. DRILL HOLE IN SIDE OF METER BOX FOR OUTLET PIPING.
3. VALVES WILL BE PIPED TO POINT BEYOND PAVEMENT AND SHOULDER.

WATER DETAIL: W10

SWING CONNECTION – NEW MAIN TO EXISTING MAIN



THRUST BLOCKING REQUIRED AT TEES AND ELBOWS.

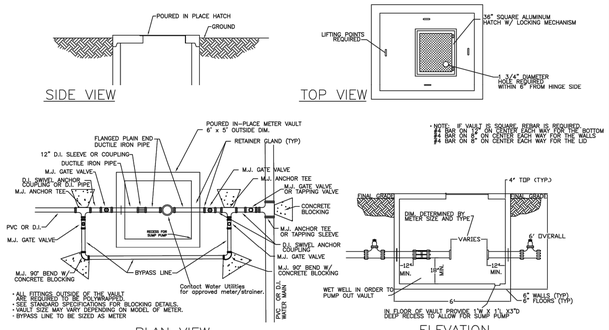
PIPE SIZE	6"	8"	12"
RODS PER NIPPLE	2	2	4

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 RECOMENDED 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.

WATER DETAIL: W11

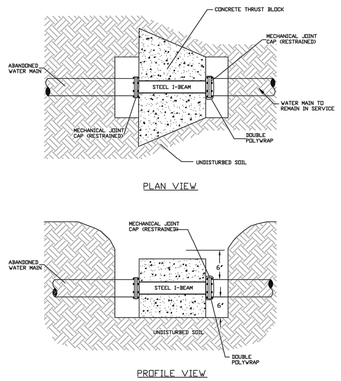
METER VAULT DETAIL FOR 4" – 8" METERS (TYPICAL)

(DIMENSIONS MAY VARY FOR METER SIZES)



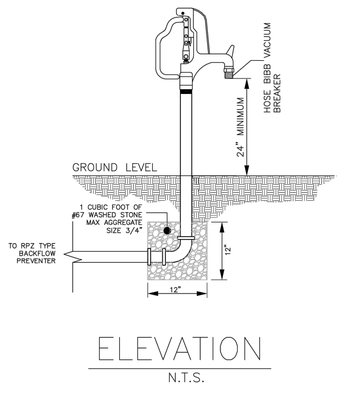
WATER DETAIL: W12

CUT/CAP DETAIL



WATER DETAIL: W13

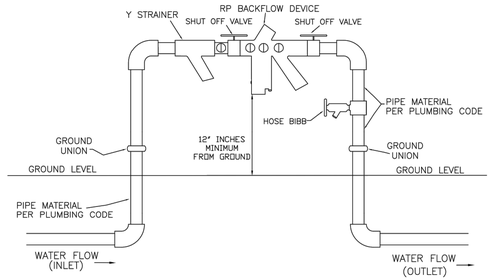
FROST FREE HOSE BIBB WITH VACUUM BREAKER



ELEVATION
N.T.S.

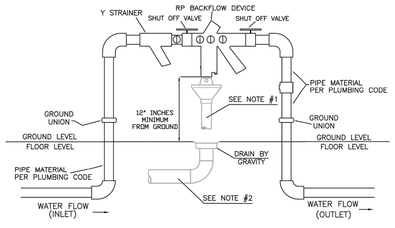
WATER DETAIL: W14

REDUCED PRESSURE (RP) IRRIGATION ONLY



WATER DETAIL: W15

REDUCED PRESSURE (RP) IRRIGATION ONLY



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.

WATER DETAIL: W16

THE CITY OF WASTEWATER WATER BENTONVILLE
3200 SW MUNICIPAL DR.
Bentonville, AR 72712
Ph: (479) 271-3140
www.bentonvillear.com

WATER DETAILS

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REVISIONS:
Adopted by City Council 06/22/2021
Ordinance Number: 2021-135

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SHEET NUMBER: 2 OF 2

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STATE OF ARKANSAS
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ANDREW S. BREWER
12/31/2023

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WALTON BLVD. & CENTRAL AVE. INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

drawn by: JRC/JKL
checked by: JKL/JWP
approved by: RCB
QA/QC by: JKL/RCB
project no.: J21-04210
drawing no.: T_WTR_J2104210
date: 11.20.2023

SHEET 66 OF 89

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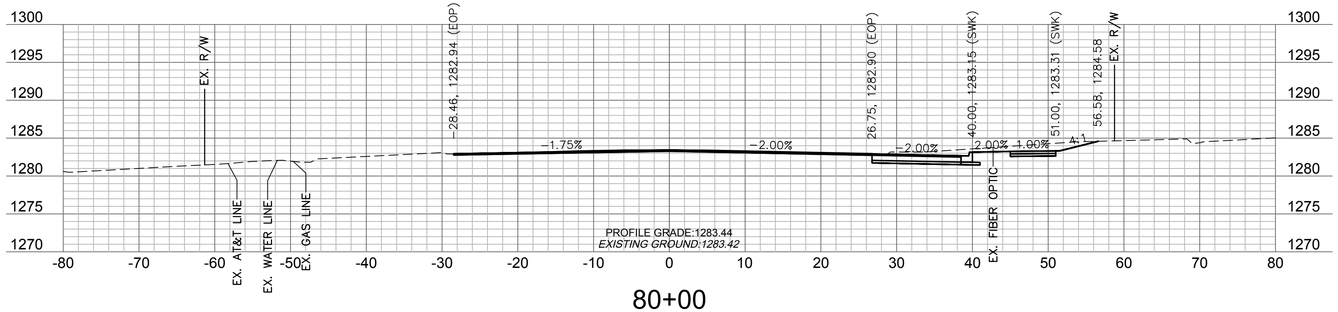
V_XBNDY_J2104210 T_PUTIL_J2104210 E_PWDL_J21-04210



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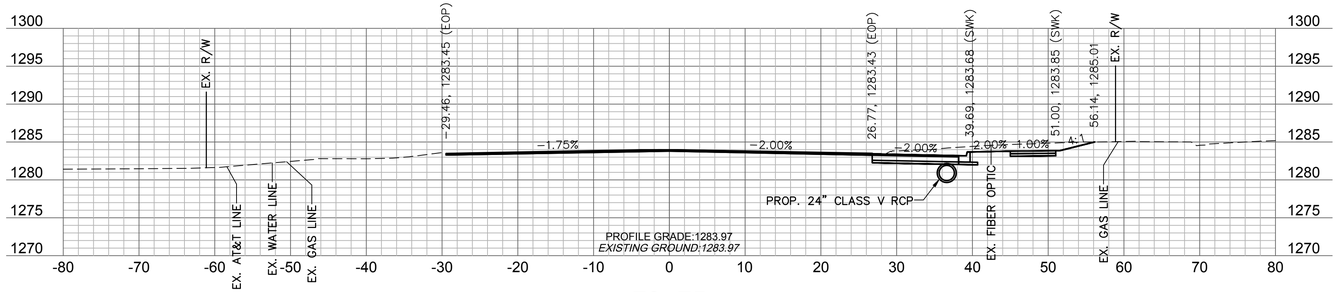

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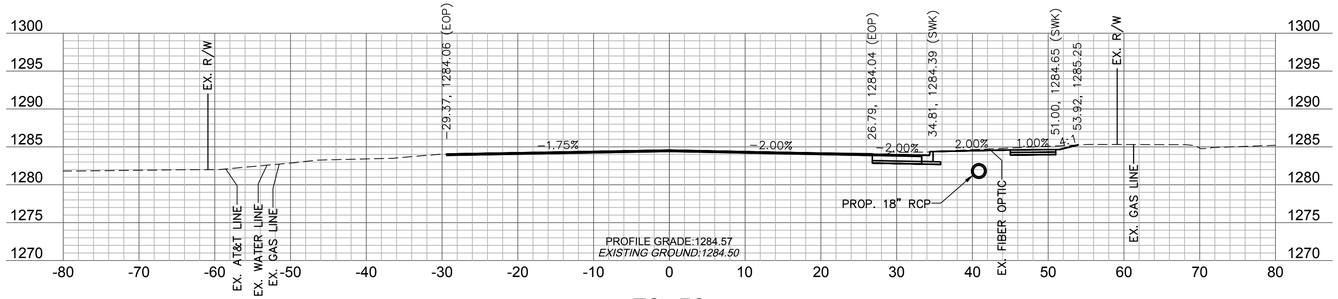

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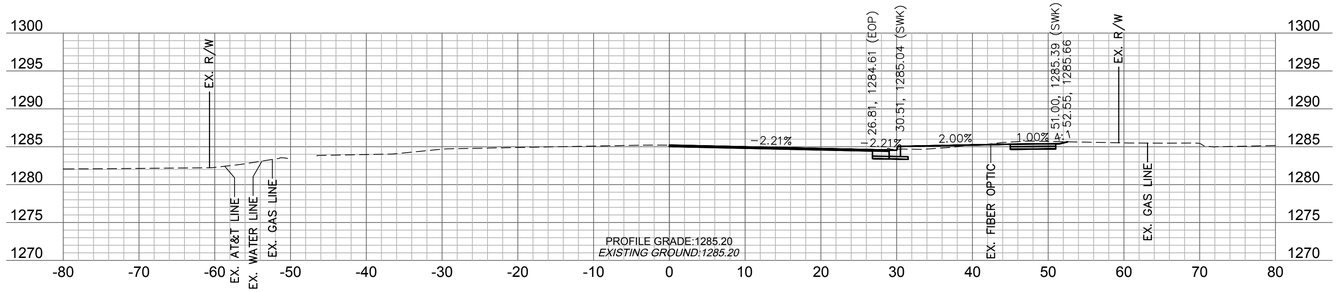

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CROSS SECTIONS - WALTON BOULEVARD

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INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

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approved by: RCB
QA/QC by: JKL/RCB
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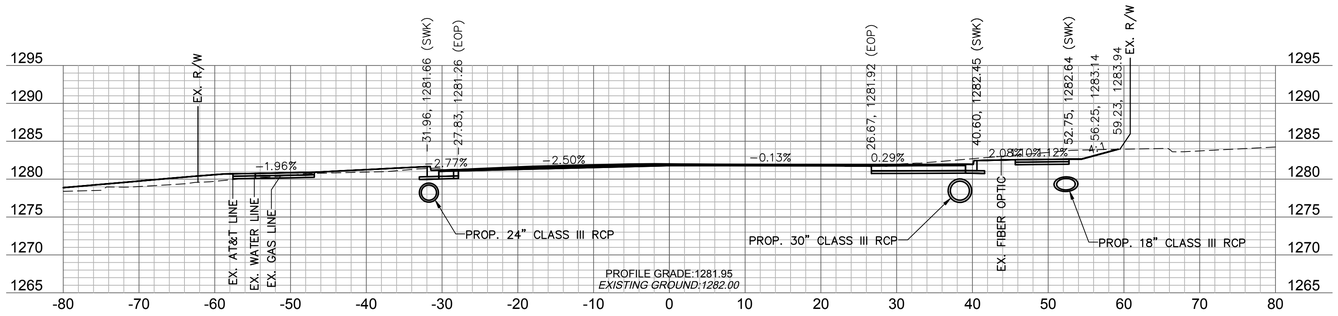

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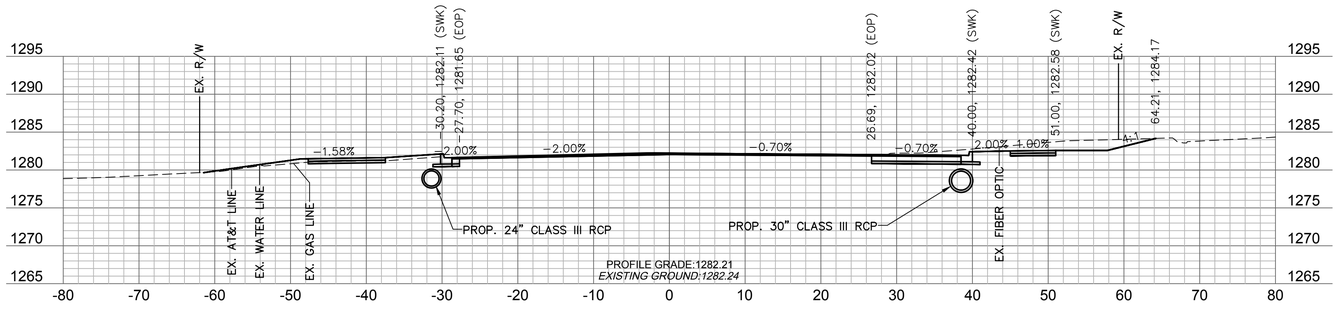

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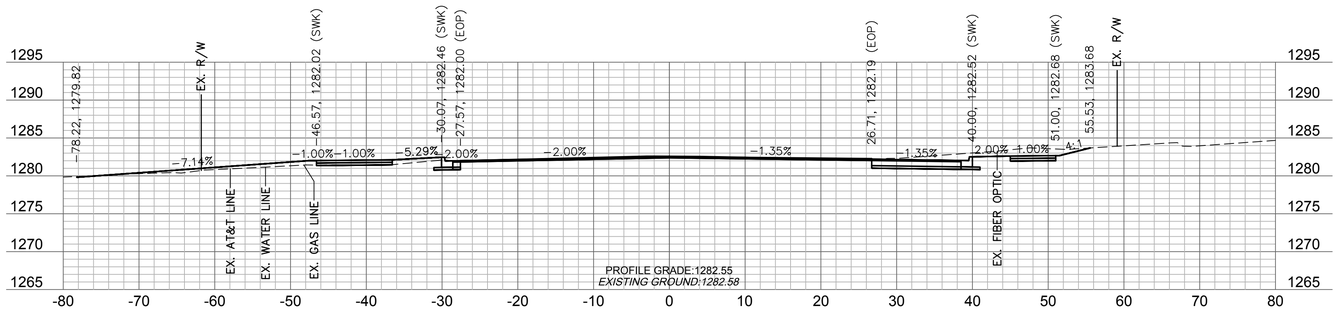

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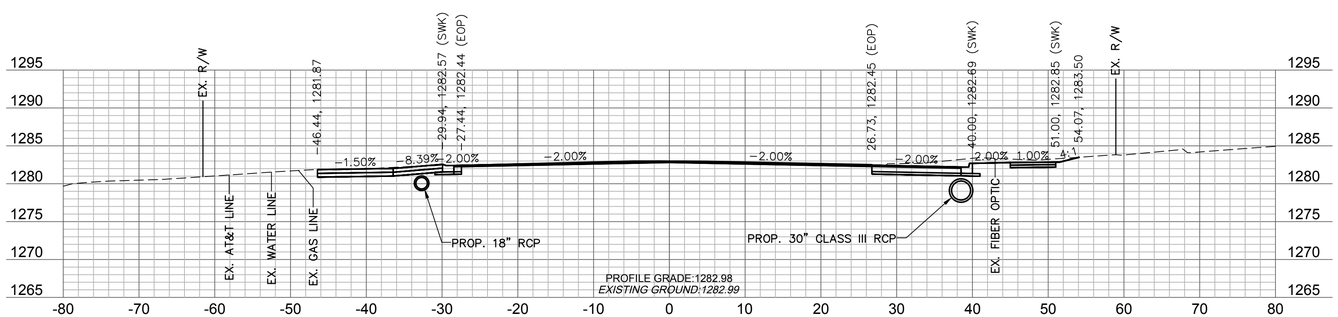

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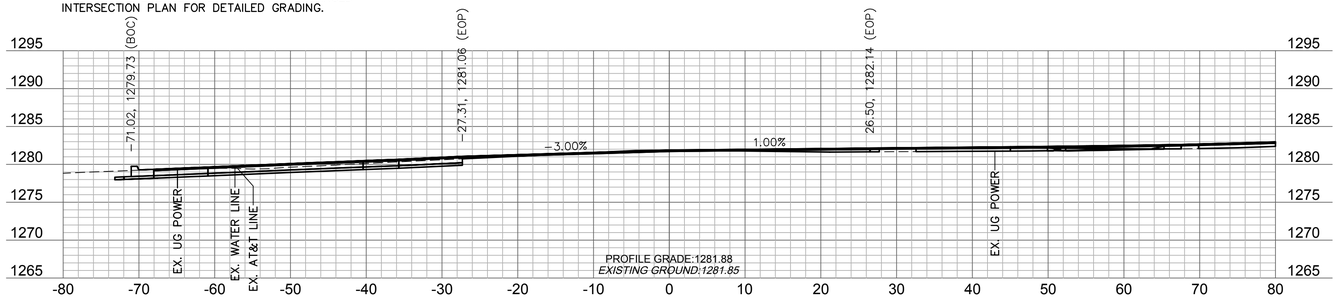

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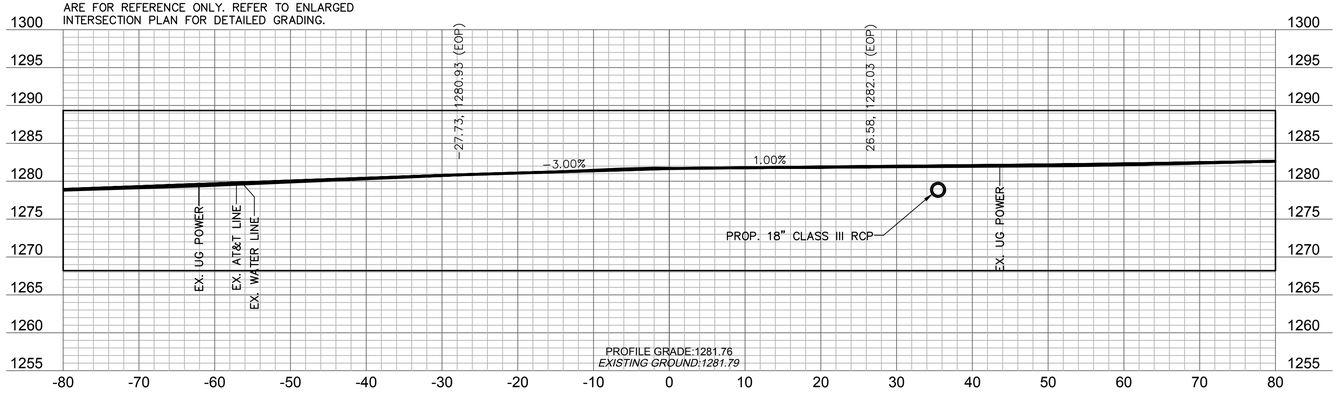

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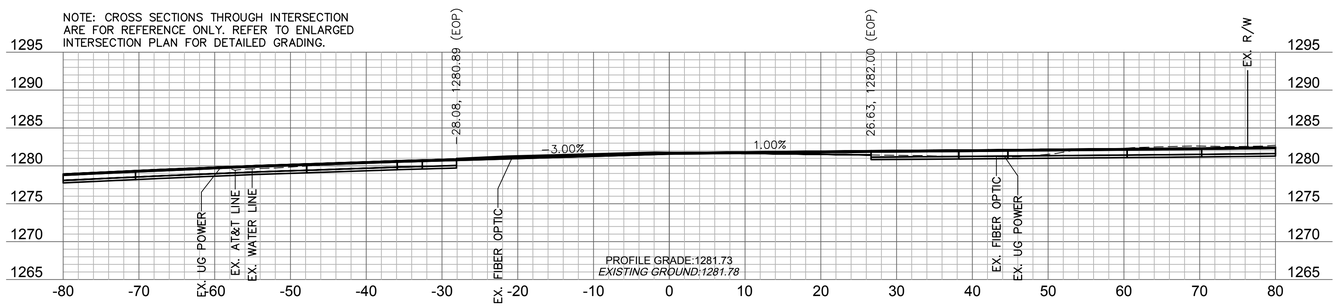

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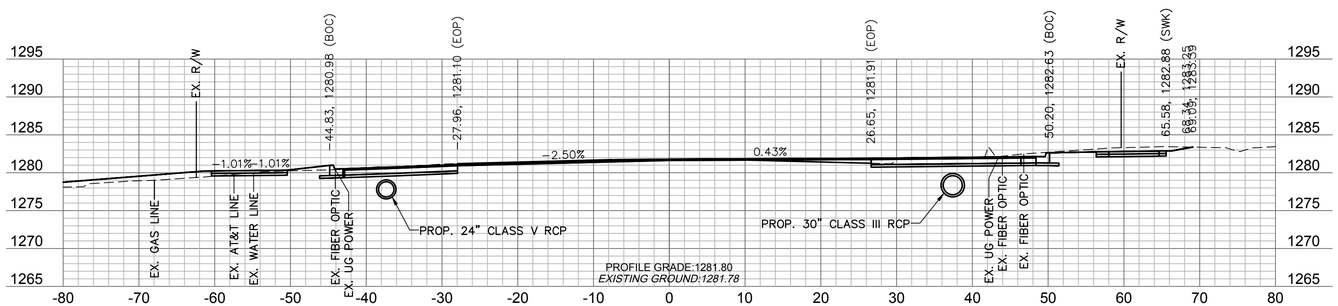

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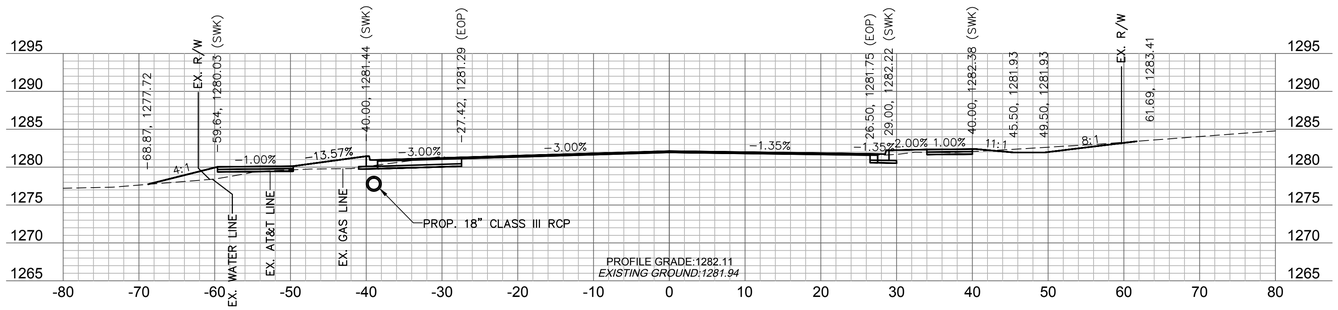

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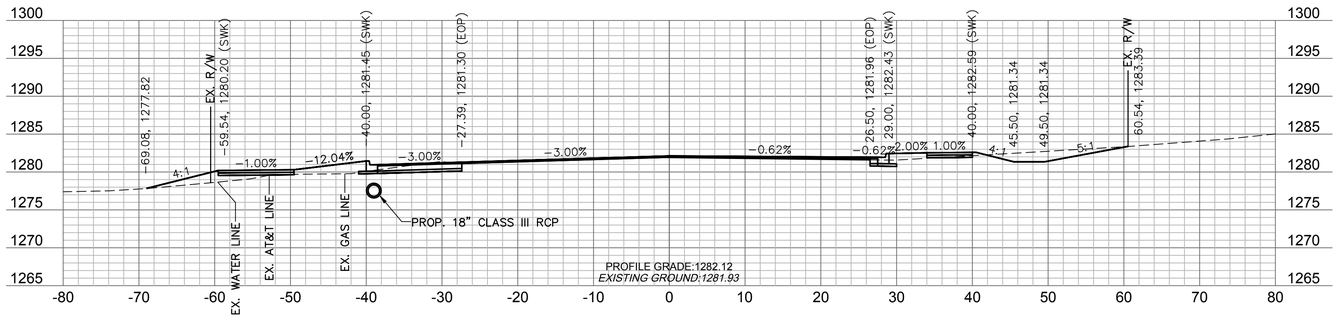

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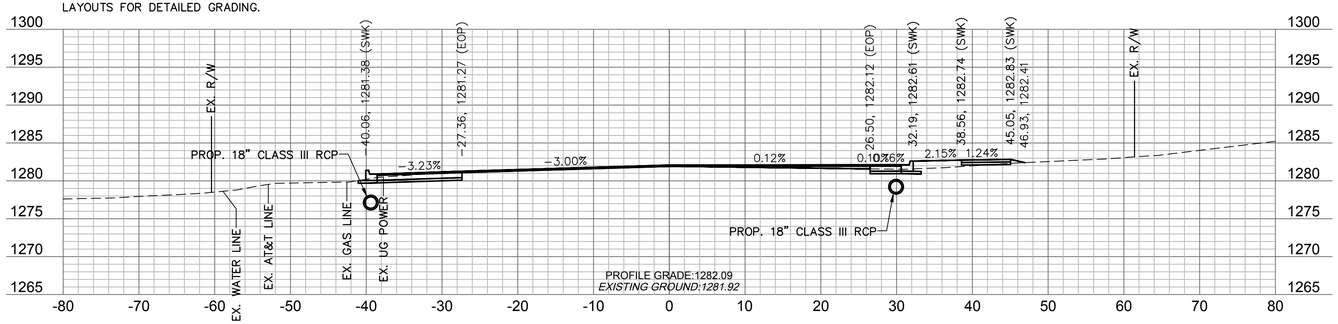

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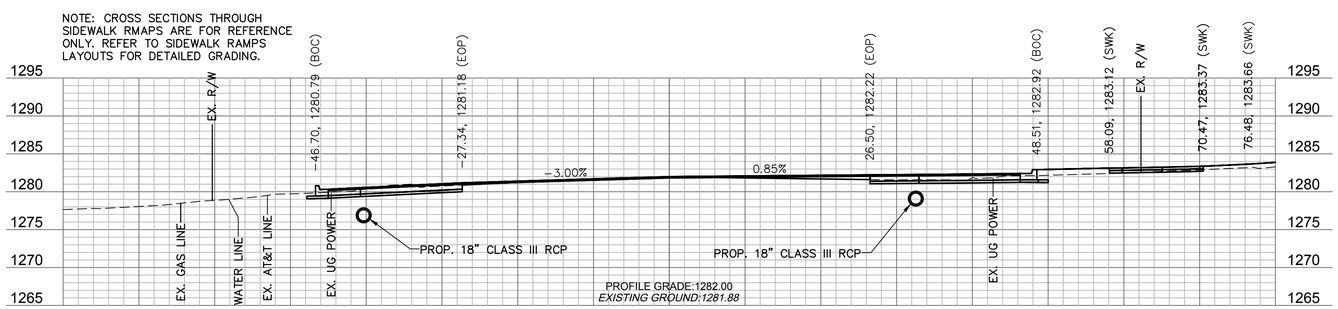

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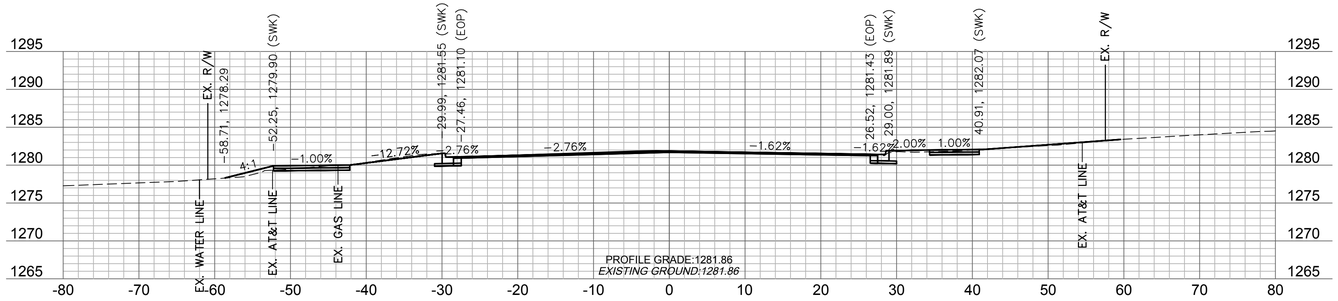

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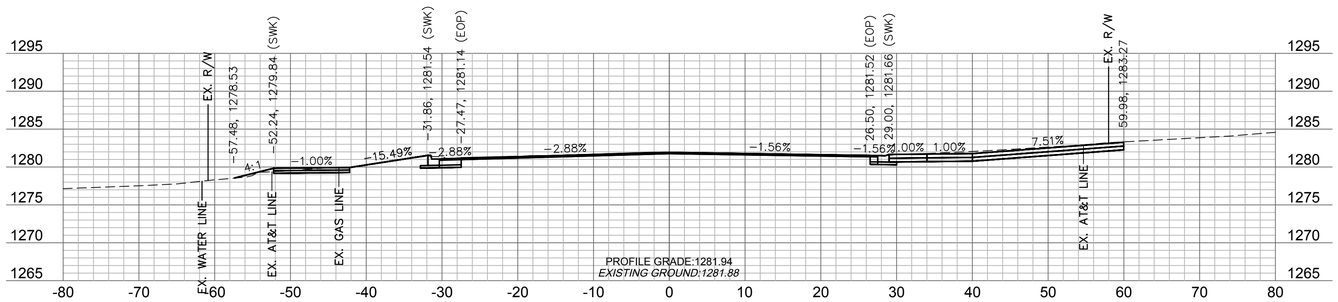

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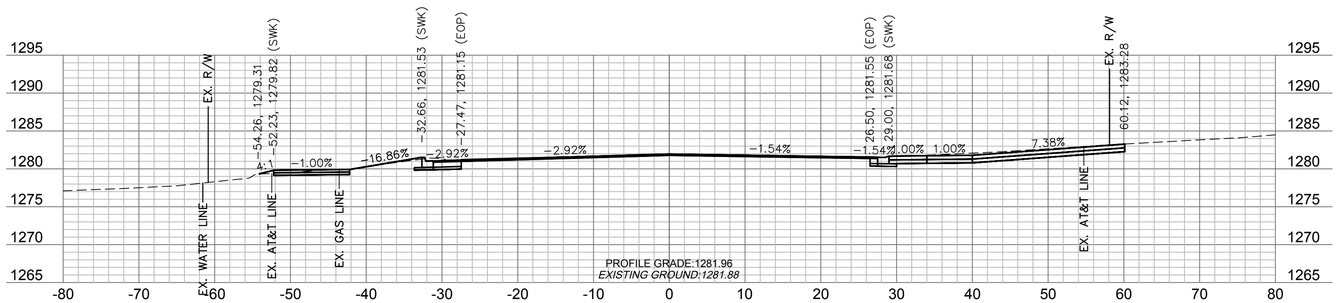

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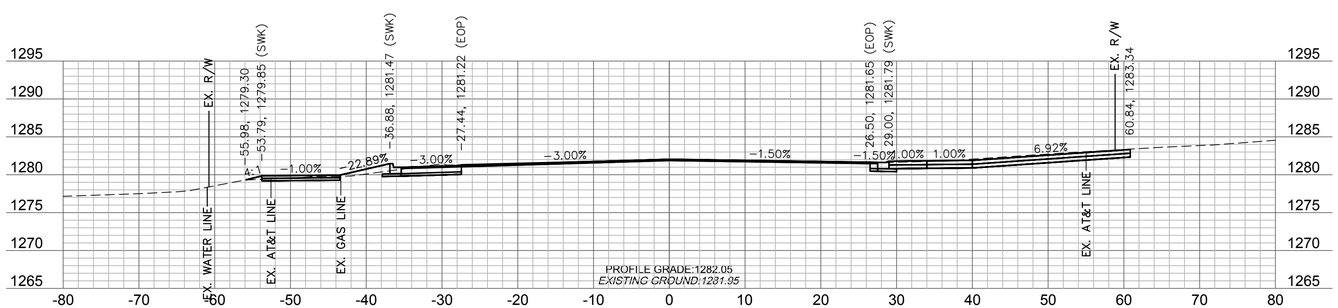

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REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

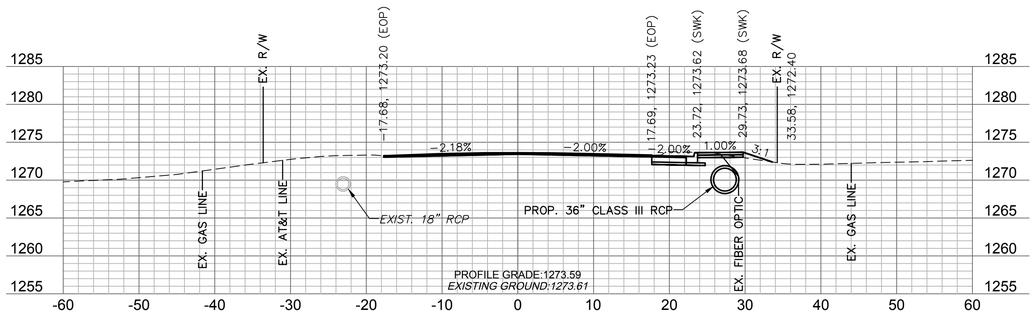
CROSS SECTIONS - WALTON BOULEVARD

WALTON BLVD. & CENTRAL AVE.
INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

drawn by: JRC/JKL
checked by: JKL/JWP
approved by: RCB
QA/QC by: JKL/RCB
project no.: J21-04210
drawing no.: T_XSC_J2104210
date: 11.20.2023



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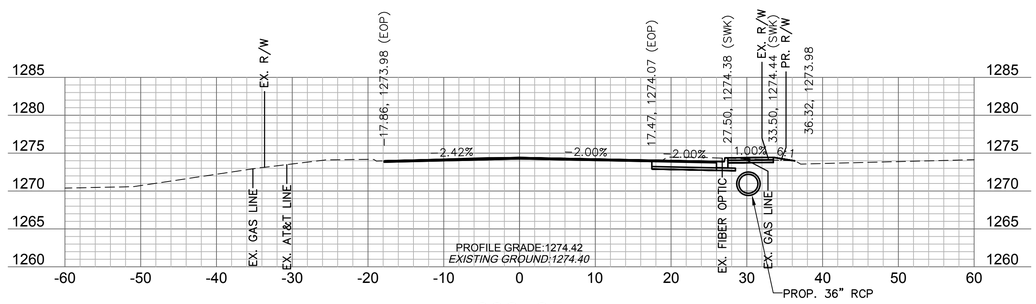

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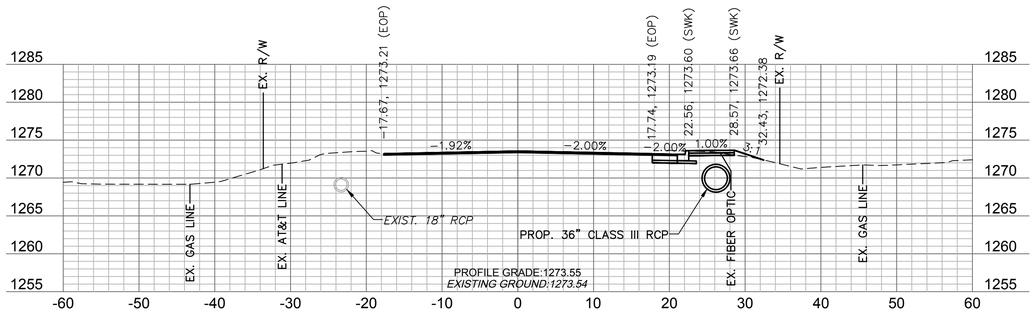

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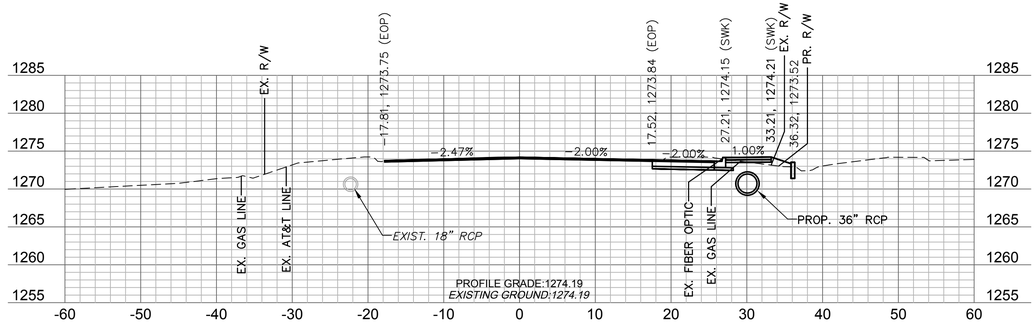

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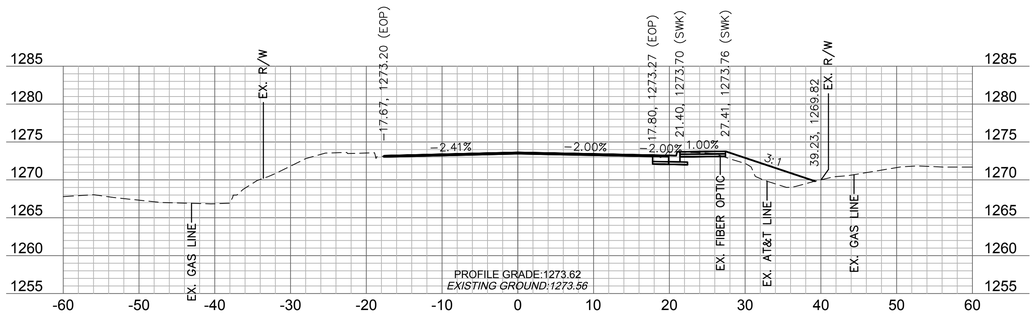

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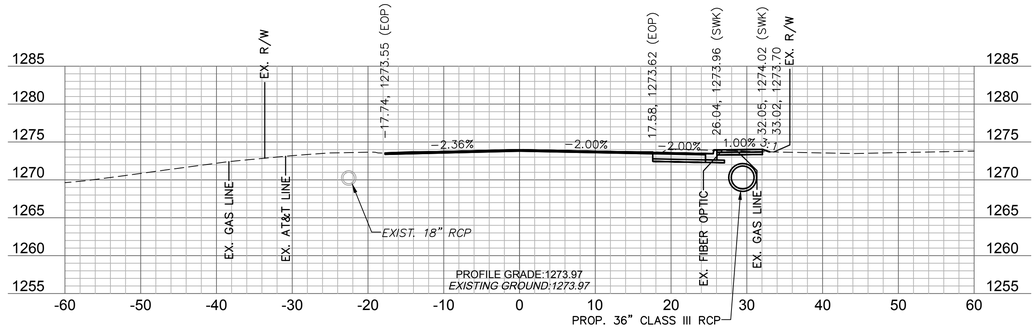

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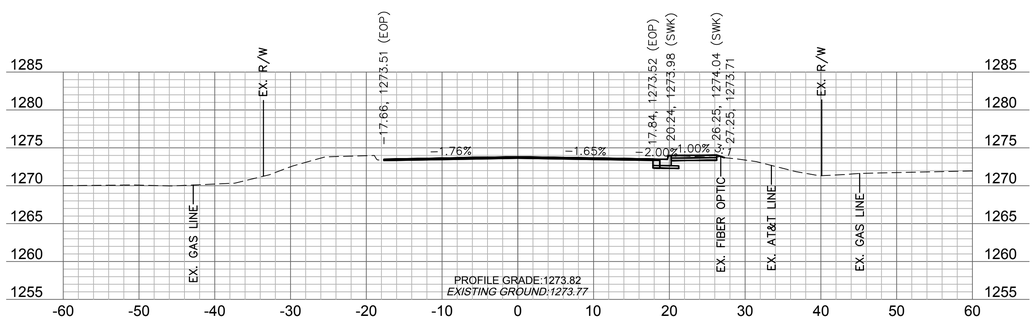

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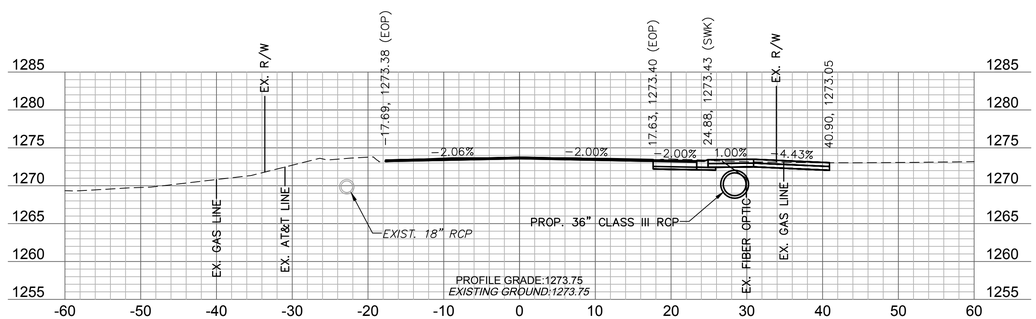

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CROSS SECTIONS - CENTRAL AVENUE

WALTON BLVD. & CENTRAL AVE.
INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

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drawing no.:	T_XSC_J2104210
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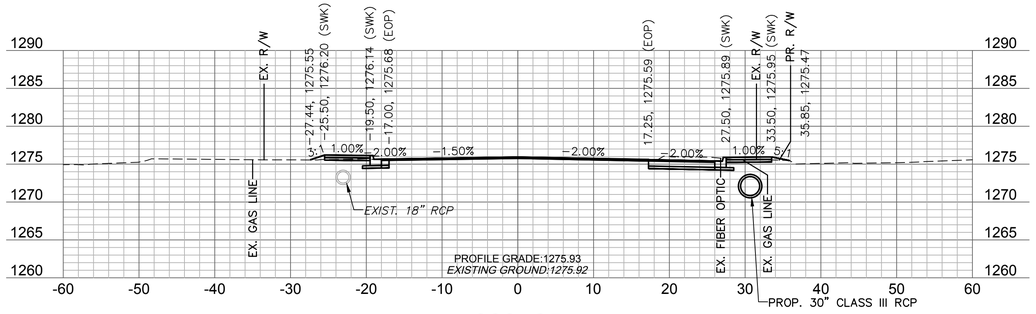

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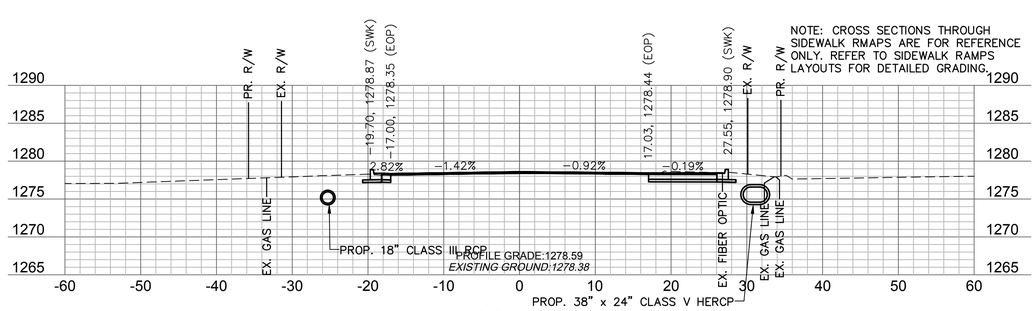

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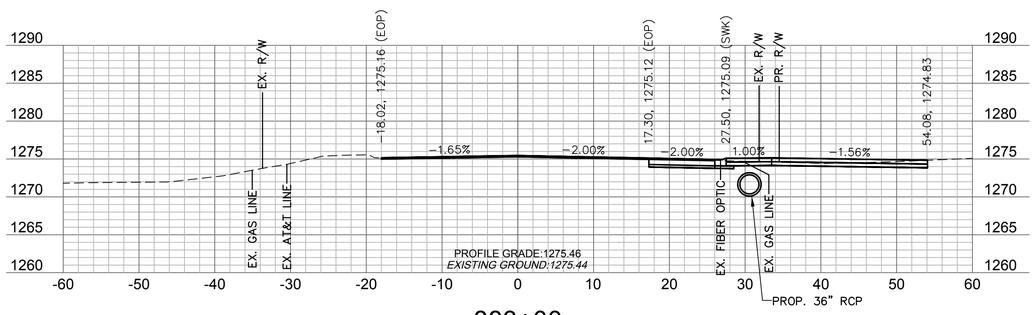

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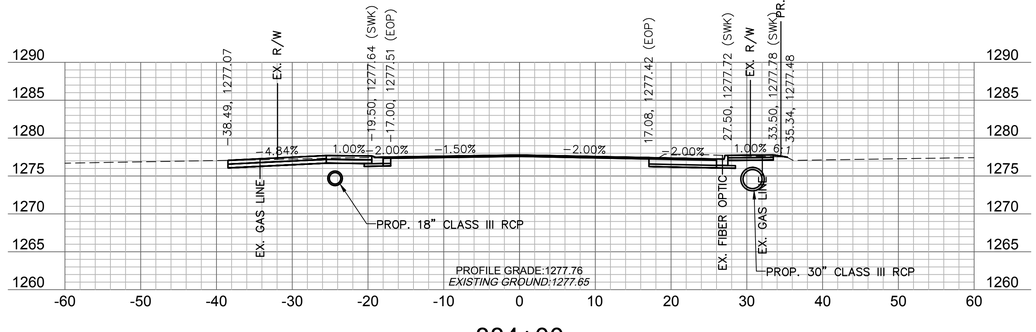

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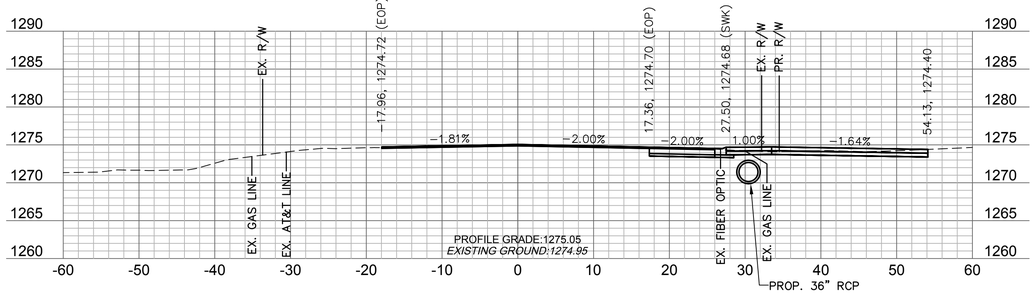

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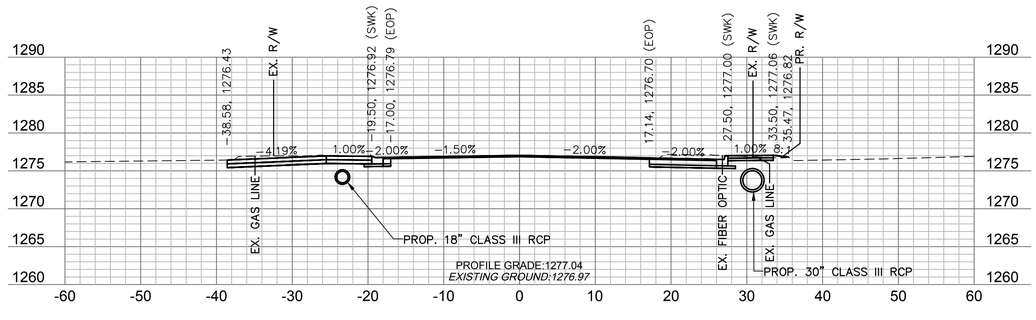

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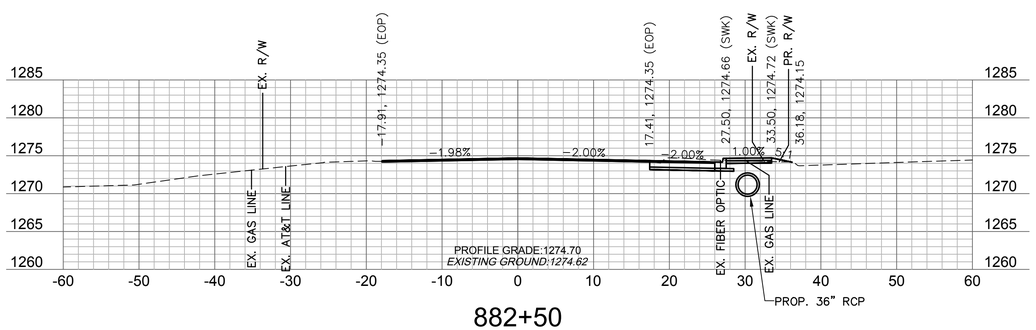

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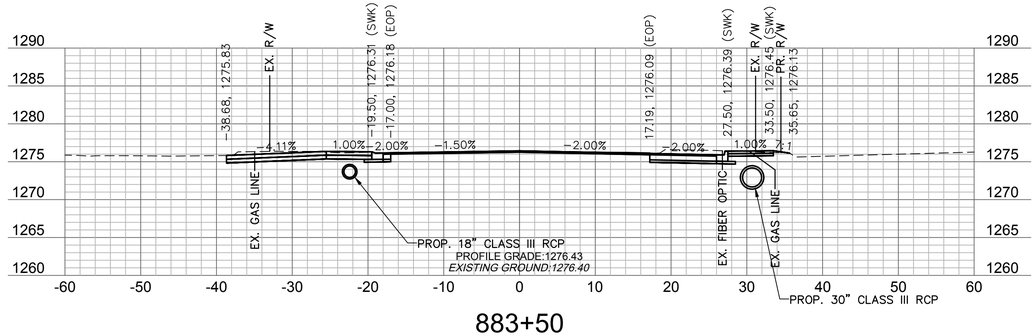

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REVISIONS

CROSS SECTIONS - CENTRAL AVENUE

WALTON BLVD. & CENTRAL AVE.
INTERSECTION IMPROVEMENTS

2023

BENTONVILLE, ARKANSAS

drawn by:	JRC/JKL
checked by:	JKL/JWP
approved by:	RCB
QA/QC by:	JKL/RCB
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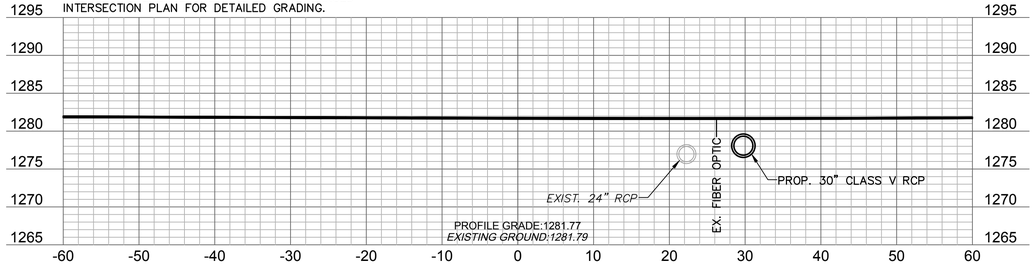

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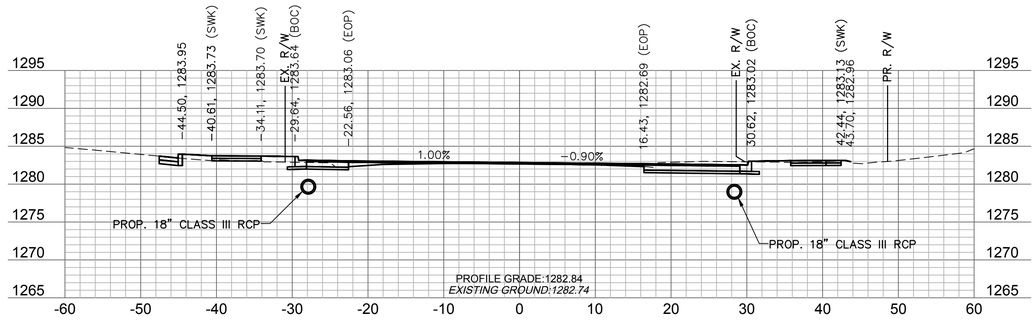

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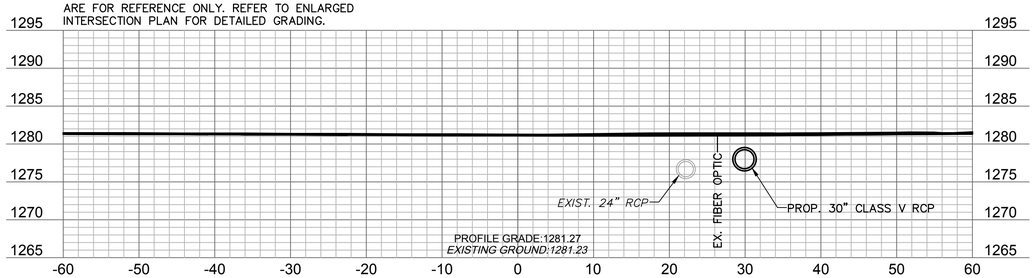

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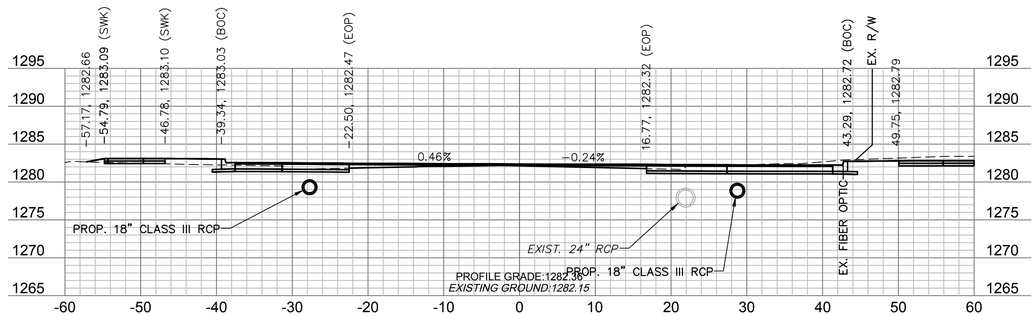

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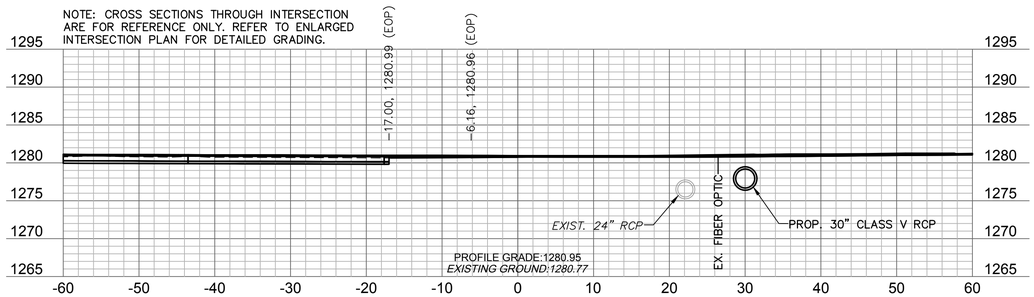

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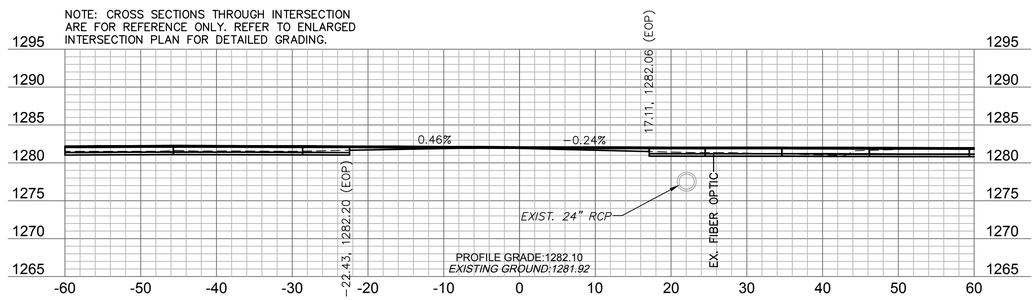

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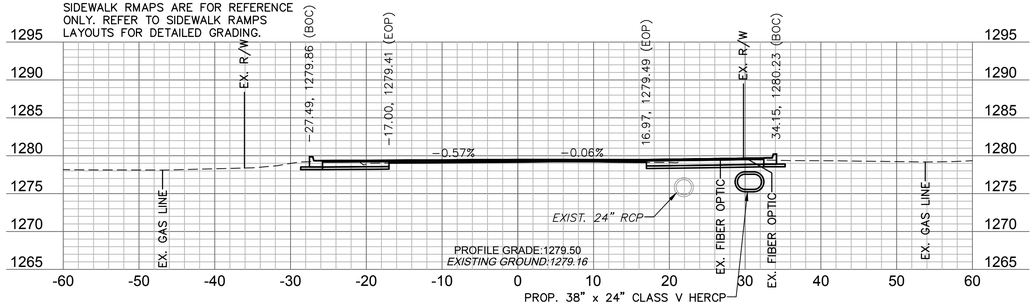

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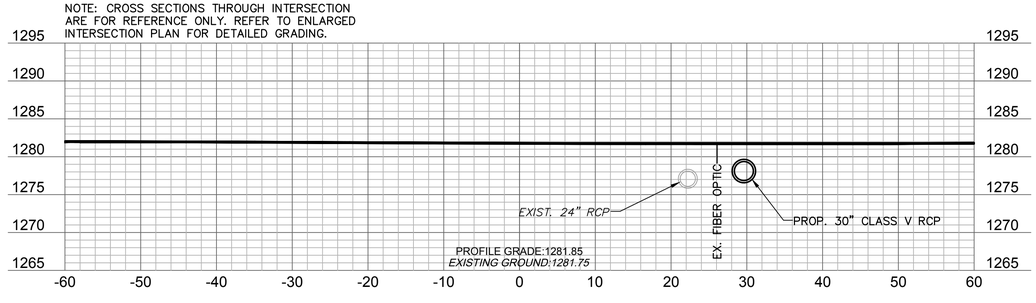

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CROSS SECTIONS - CENTRAL AVENUE

WALTON BLVD. & CENTRAL AVE.
INTERSECTION IMPROVEMENTS

2023

BENTONVILLE, ARKANSAS

drawn by:	JRC/JKL
checked by:	JKL/JWP
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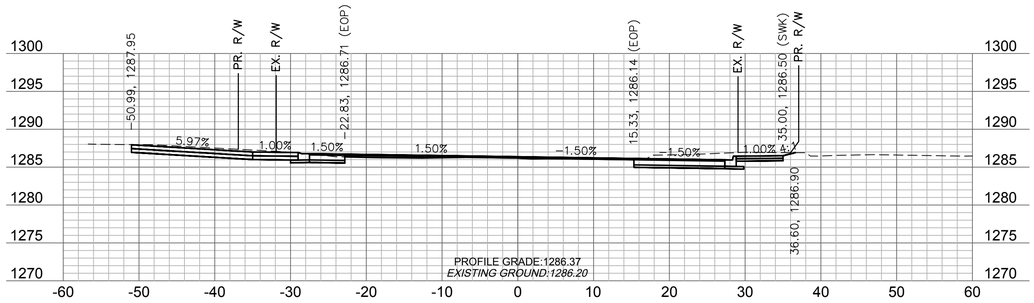

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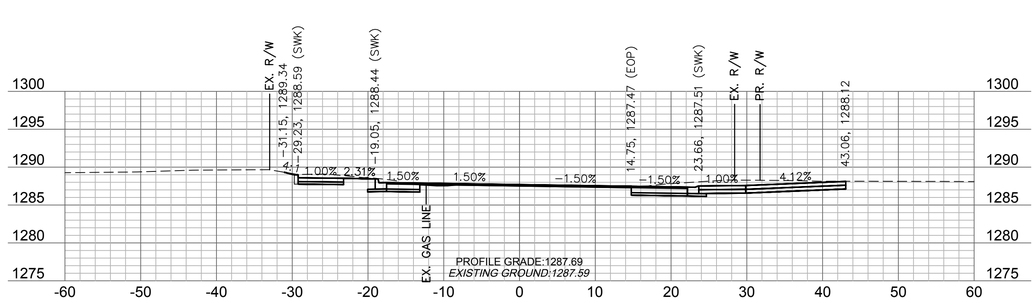

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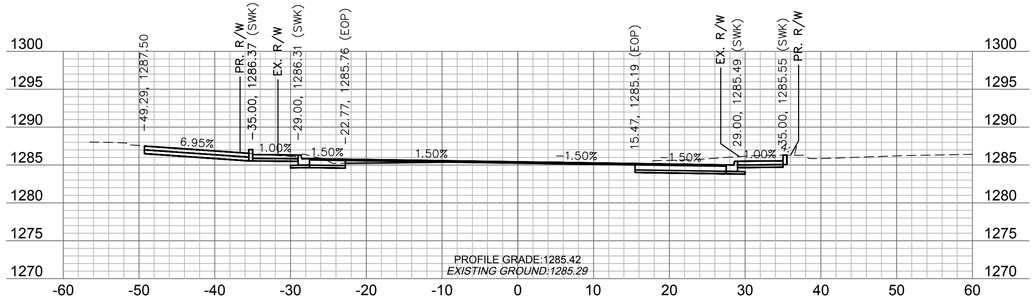

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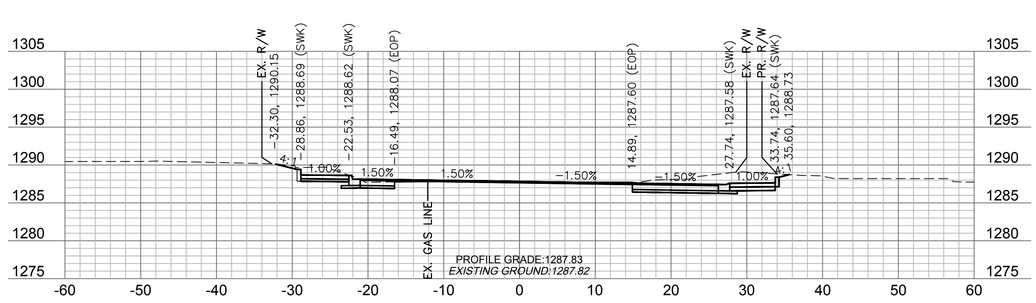

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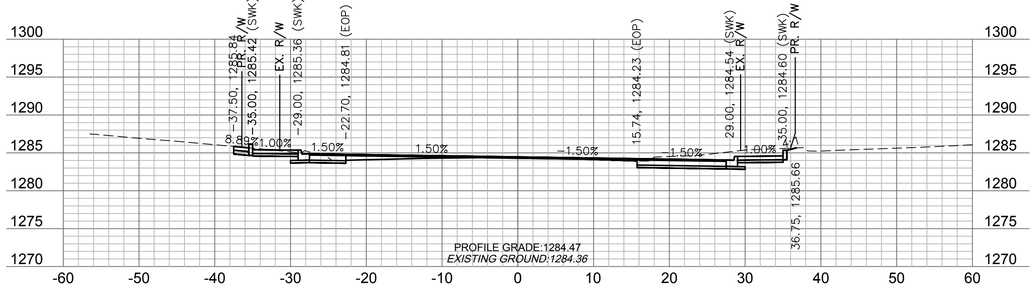

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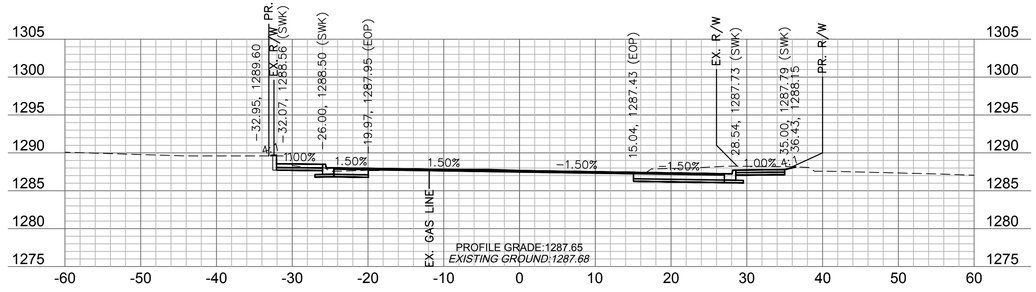

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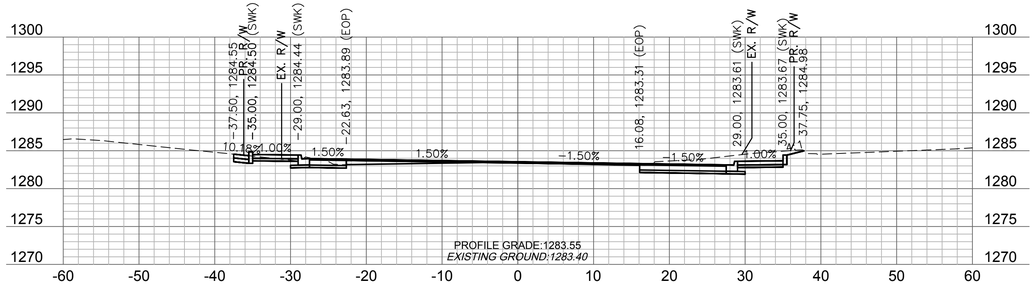

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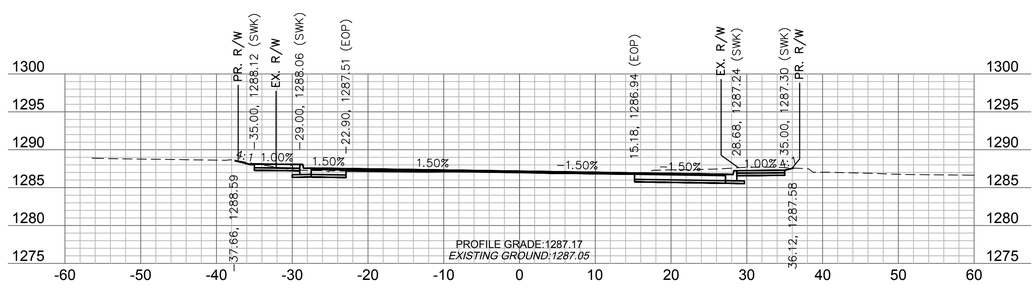

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INTERSECTION IMPROVEMENTS

BENTONVILLE, ARKANSAS

2023

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SHEET
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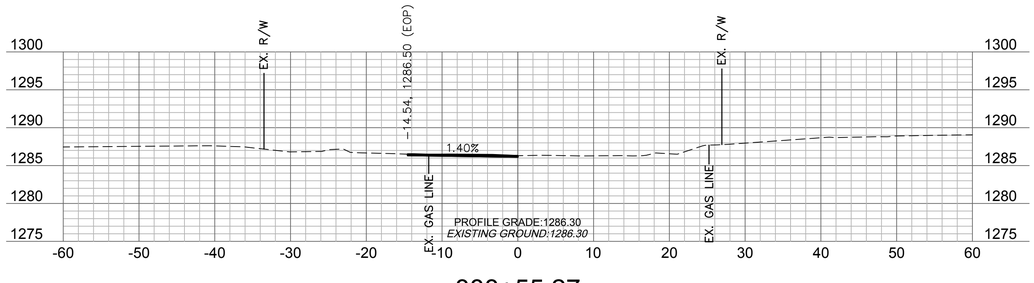

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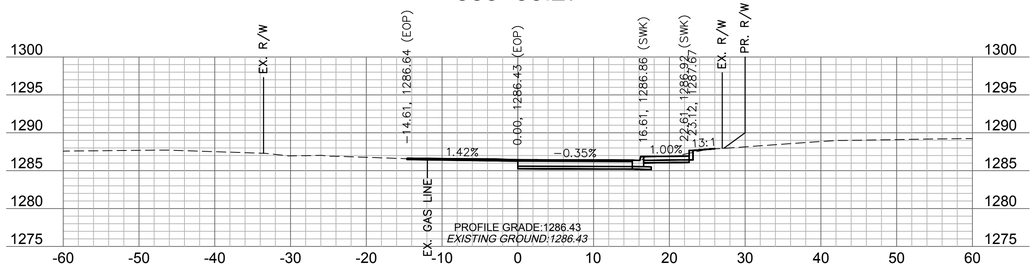

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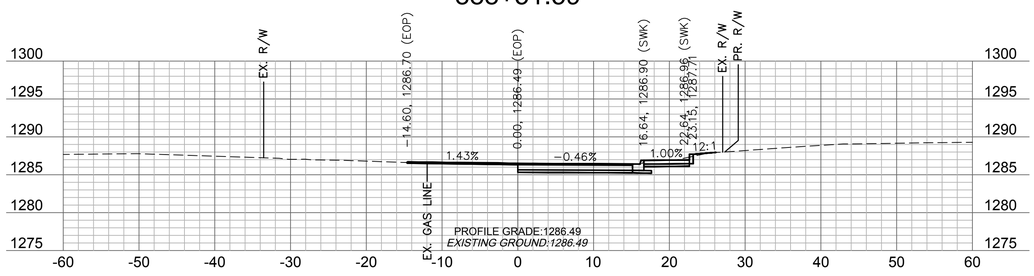

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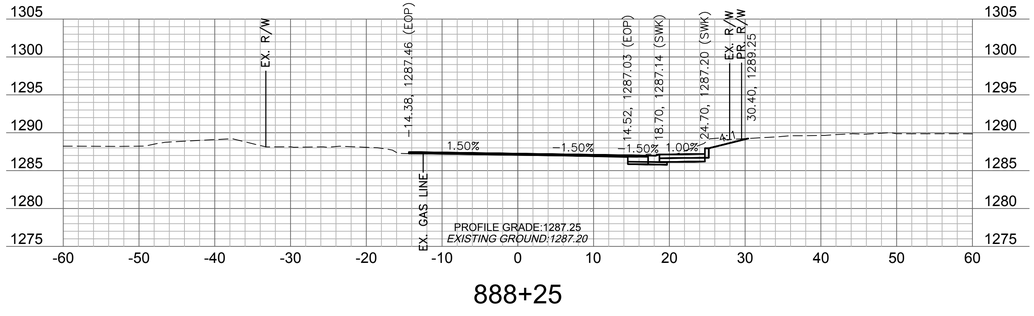

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76 OF 89

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4'-0" LENGTH DROP INLET

PIPE SIZE	MIN. WIDTH	HEIGHT 5'-0" CLASS A CONC. CU. YDS.	HEIGHT 5'-0" REINF. STEEL POUNDS	PLUS OR MINUS PER LIN. FT. OF HEIGHT CLASS A CONC. CU. YDS.	PLUS OR MINUS PER LIN. FT. OF HEIGHT REINF. STEEL POUNDS
18"	2'-6"	1.77	156	0.28	22
24"	2'-6"	1.79	156	0.28	22
30"	3'-2"	2.39	205	0.30	26
36"	3'-8"	2.63	236	0.32	28
42"	4'-4"	2.95	250	0.34	30
48"	4'-10"	3.21	265	0.36	32

DROP INLET EXTENSION

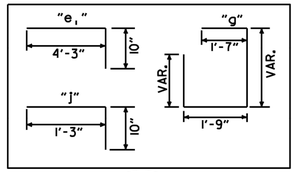
4'-0" CLASS A CONC. CU. YDS.	4'-0" REINF. STEEL POUNDS	8'-0" CLASS A CONC. CU. YDS.	8'-0" REINF. STEEL POUNDS
0.58	38	0.87	72
DEDUCT FROM QUANTITY COMPUTED FOR EACH EXTENSION ADDED.			
0.04	3		

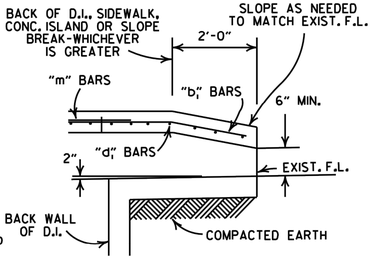
NOTE: QUANTITIES ARE APPROXIMATE AND ARE SHOWN FOR BIDDER INFORMATION ONLY.

DEDUCT FROM QUANTITY COMPUTED FOR EACH PIPE ENTERING INLET

INSIDE DIA. PIPE	CLASS A CONC.	REINF. STEEL
INCHES	CU. YDS.	POUNDS
18	0.05	2
24	0.09	3
30	0.13	4
42	0.24	8

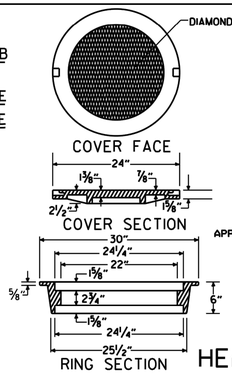
BAR DIAGRAM





BACK OPENING

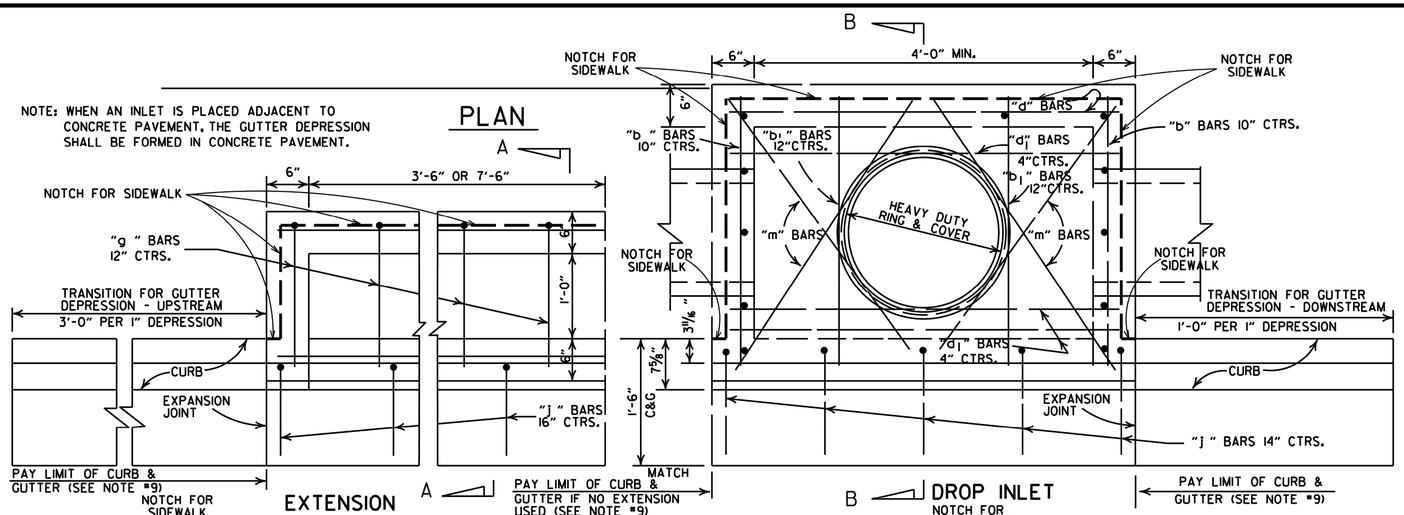
WHEN OPENING IN BACK IS CALLED FOR ON PLANS EXTEND OPENING AS SHOWN IN DETAIL. PAYMENT TO BE INCLUDED IN PRICE BID FOR DROP INLET (TYPE C).

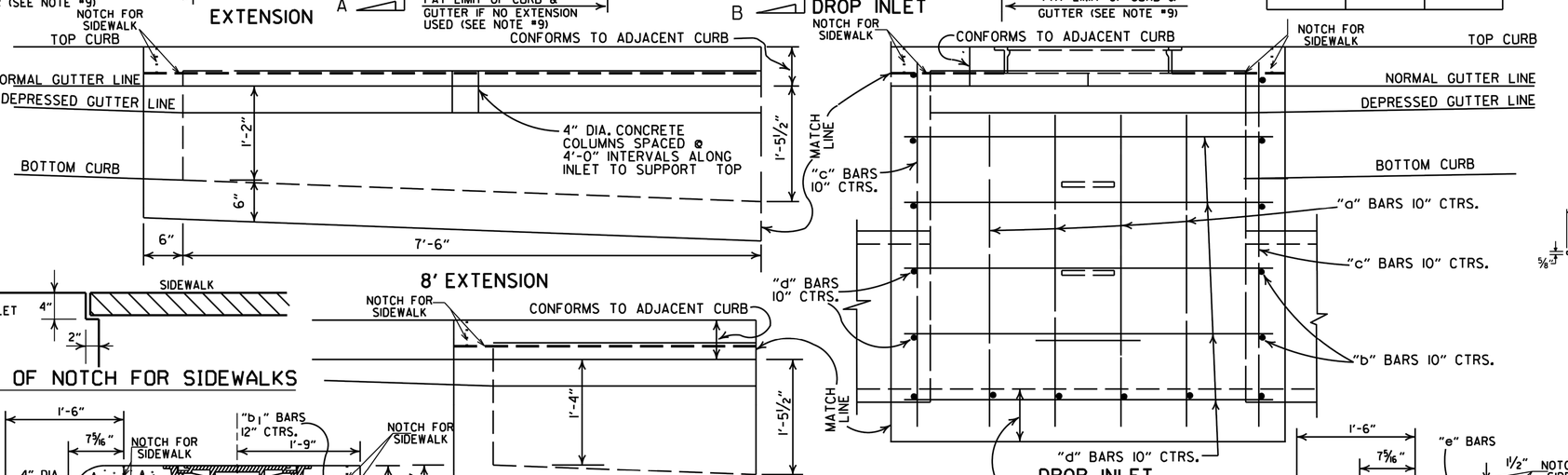


APPROXIMATE TOTAL WEIGHT = 333 LBS.

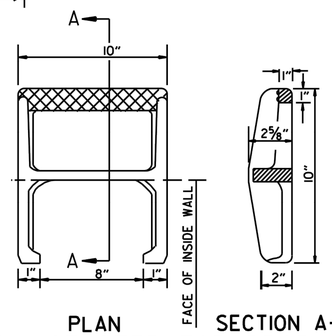
HEAVY DUTY RING & COVER

GENERAL NOTES:
1. ALL EXPOSED CORNERS TO HAVE ¾" CHAMFER.
2. STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER OF AS APPROVED BY THE ENGINEER.
3. ALL REINF. BARS SHALL BE #4 AND HAVE 1½" COVER.
4. DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
5. THIS DROP INLET MAY BE CONSTRUCTED ON NEW OR EXISTING R.C. BOX CULVERT AS SHOWN ON F.P.C.-9.
6. WHEN PLANS CALL FOR DROP INLET OVER 10'-0" HIGH, FLOOR AND WALLS SHALL BE CONSTRUCTED AS SHOWN FOR TYPE "RM" DROP INLET (FPC-9D).
7. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
8. DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
9. PAYMENT FOR CURB AND/OR CURB AND GUTTER WITHIN THE LIMITS OF DROP INLETS AND DROP INLET EXTENSIONS SHALL BE CONSIDERED INCLUDED IN PAYMENT MADE FOR DROP INLETS AND/OR DROP INLET EXTENSIONS.
10. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
11. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
12. 4"x2" NOTCH SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
13. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.





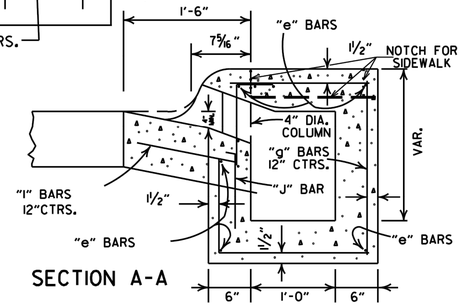
DETAIL OF NOTCH FOR SIDEWALKS



DETAIL OF STEP FOR DROP INLET

APPROX. WEIGHT = 11LBS. (CAST IRON)

NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.



DATE REV.	REVISION	DATE FILMED
8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01	ADDED NOTE 13; REVISED SECTION B-B	
1-12-00	CORRECTED DIMENSION ON SECTION B-B & REVISED RING & COVER	
5-13-99	ADDED DETAIL OF NOTCH FOR SIDEWALKS	
7-02-98	REPLACED RING & COVER W/HEAVY DUTY RING & COVER ADDED NOTES 9,10,&11	
10-18-96	CORRECTED SPELLING	
4-26-96	ADDED NOTE 8 & REVISED (4')(8') EXTENSION TITLES	10-18-96
4-1-93	REVISED BACK OPENING & NOTE	
8-15-91	DELETE TYPE IV GRATE	
7-15-88	REVISED STEP DETAIL	
5-20-83	REVISED DETAILS OF GRATES (TYPE IV & IV-A)	
2-4-83	ADDED GENERAL NOTE NO. 4	
3-2-81	ADDED TYPE IV-A GRATE	
5-22-74	DELETED INLET (TYPE F) & GRATE (TYPE III)	
10-2-72	REVISED AND REDRAWN	

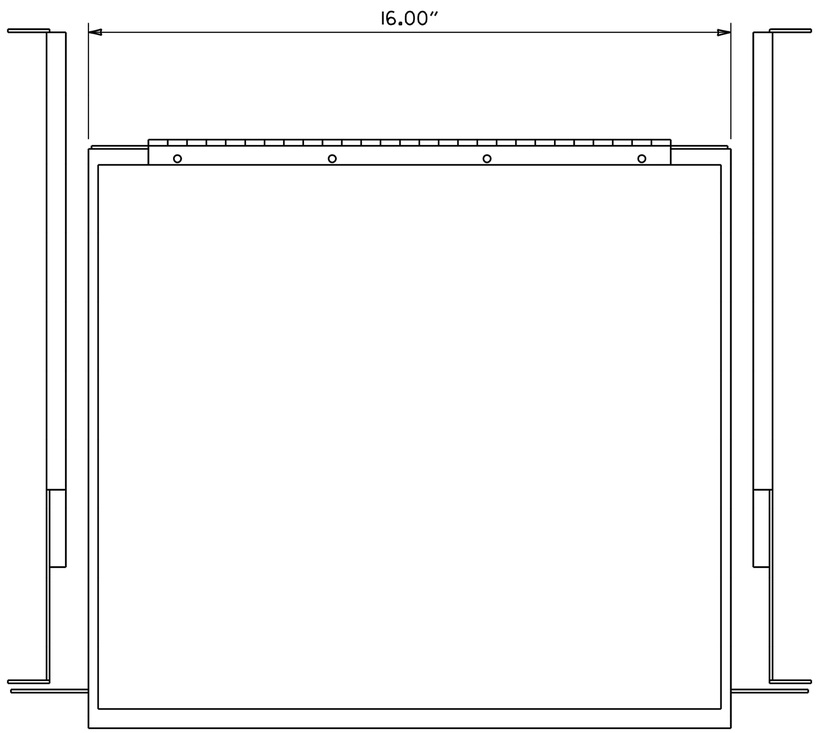
ARKANSAS STATE HIGHWAY COMMISSION

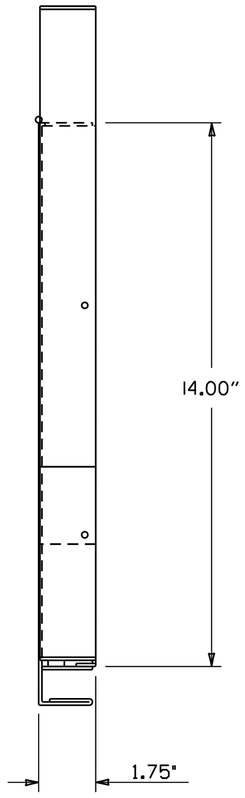
DETAILS OF DROP INLETS

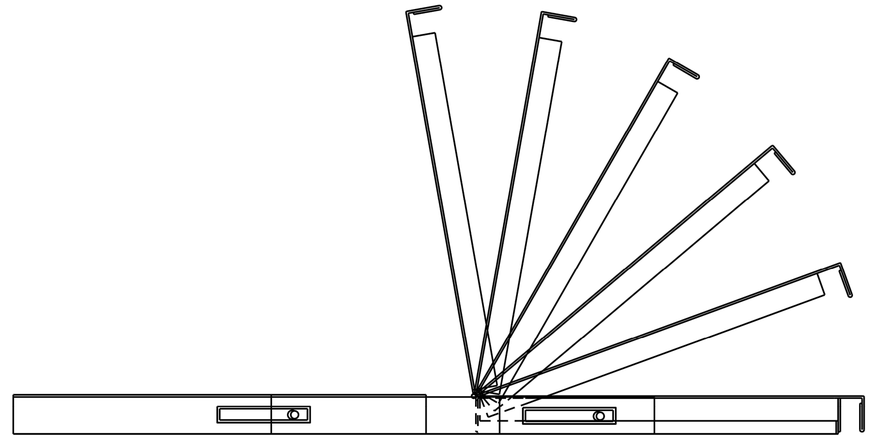
(TYPE C)

STANDARD DRAWING FPC-9E

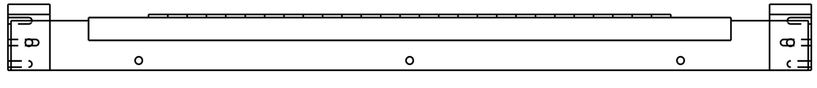
DRAWER PLAN VIEW



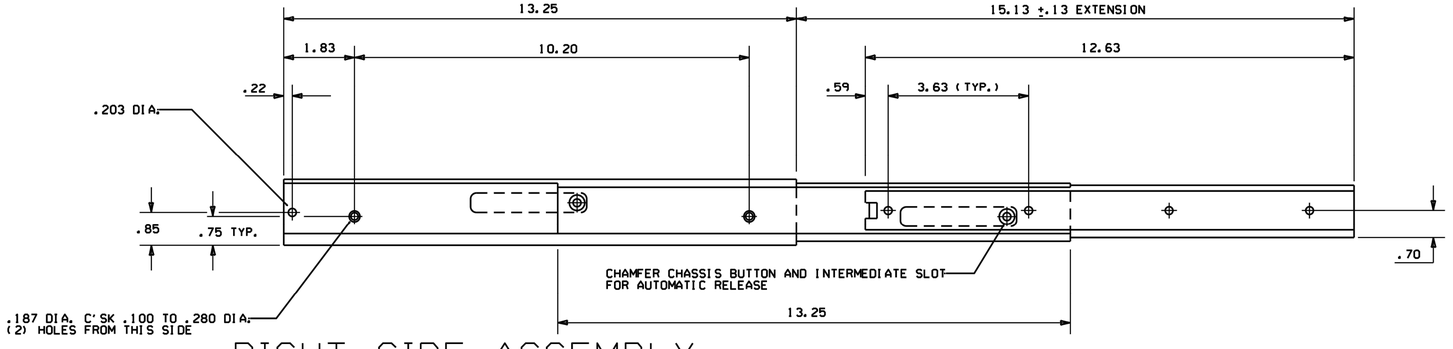




NOTES:
1. RIGHT HAND SLIDE SHOWN, LEFT SLIDE OPPOSITE.
2. GENERAL DEVICES (CC3002-99-0102) OR EQUAL AND CONTAINS (1) RIGHT HAND SLIDE ASSEMBLY, (1) LEFT HAND SLIDE ASSEMBLY.
3. ALL HARDWARE NECESSARY TO FASTEN SLIDE ASSEMBLY TO UNDERSIDE OF CONTROLLER SHELF SHALL BE INCLUDED.



FRONT VIEW



RIGHT SIDE ASSEMBLY

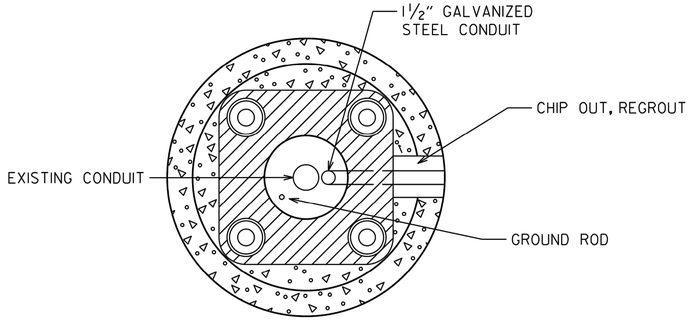
9-12-13	ISSUED AS STANDARD DRAWING	
6-15-05	ISSUED	
DATE	REVISION	DATE FILM

ARKANSAS STATE HIGHWAY COMMISSION

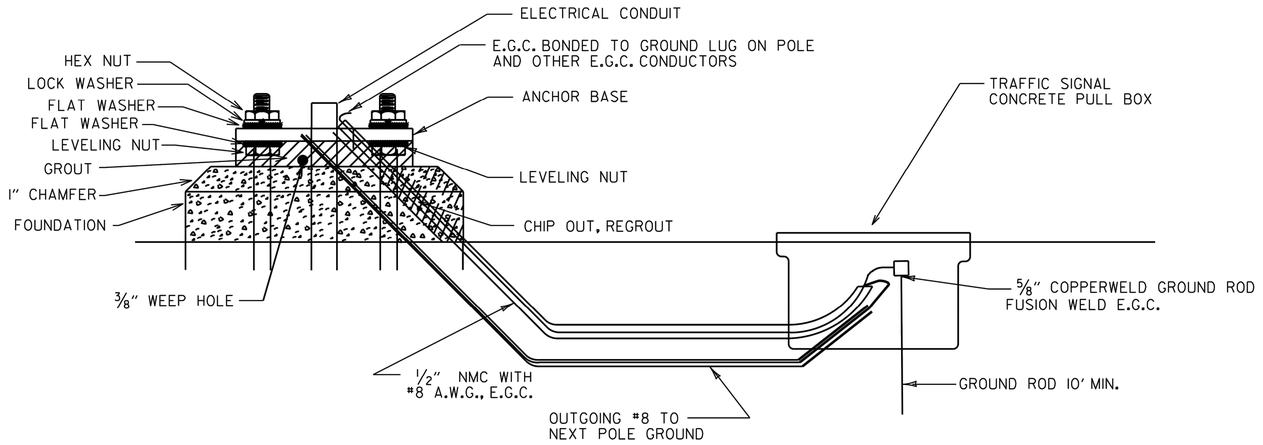
CONTROLLER CABINET UTILITY DRAWER

STANDARD DRAWING SD-5

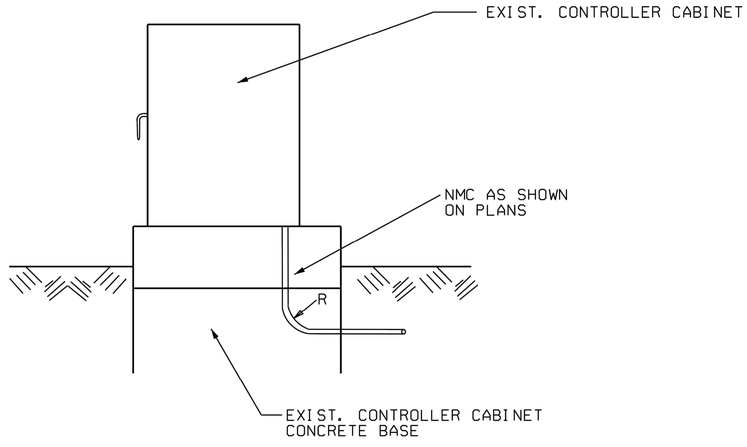
CONDUIT ENTRY TO EXISTING POLE BASE



ANCHOR BASE

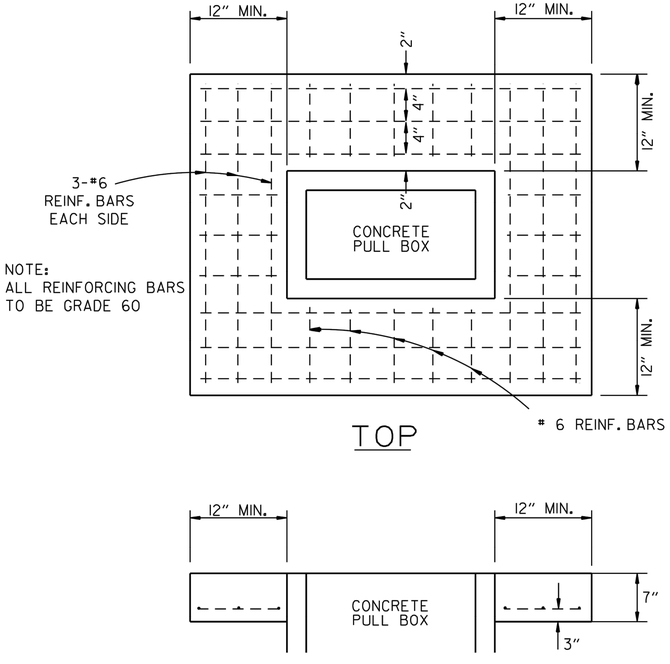


CONDUIT ENTRY TO EXISTING CONTROLLER CABINET



NOTE: ENTRY TO CABINET SHALL BE THROUGH A CUT IN THE BASE SUFFICIENT TO PROVIDE ADEQUATE CONDUIT RADIUS FOR ITEM.

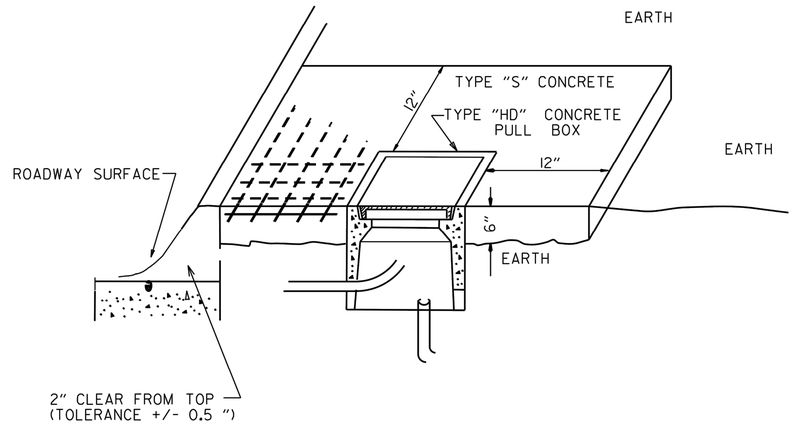
TYPE "HD" CONCRETE PULL BOX DETAIL



NOTE:
ALL REINFORCING BARS TO BE GRADE 60

TOP

ELEVATION



NOTE:
ALL TYPE 1 AND TYPE 2 HD CONCRETE PULL BOXES ARE INSTALLED WITH AN APRON OF CONCRETE 12" WIDE AND 7" IN DEPTH. ALL PAYMENT SHALL BE INCLUDED IN THE PRICE OF THE TYPE HD CONCRETE PULL BOX. THE CONCRETE PULL BOX SHALL BE INSTALLED FLUSH TO SURROUNDING GRADE UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER. THE CONCRETE SHALL BE CLASS "S". THREE #6 REINFORCING BARS IN THE APRON ON ALL SIDES OF THE CONCRETE PULL BOX IS REQUIRED IN CONCRETE.

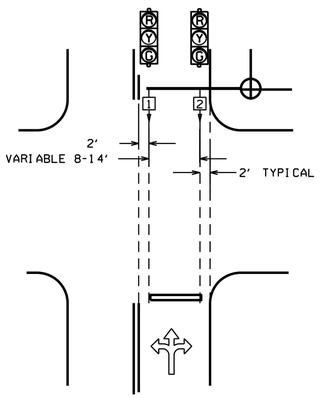
DATE	REVISION	FILMED
11-16-17	REVISED NOTES	
09-02-15	REVISED PULL BOX DEPTH	
09-12-13	ISSUED AS STANDARD DRAWING	
05-21-09	REVISED GROUNDING	
07-31-08	ADDED & REVISED CONDUIT ENTRY	
06-23-04	REVISED CLEARANCE AT CURB ENTRY	
01-04-02	ADDED REINFORCING TO BOX APRON	
07-02-01	REVISED	
12-27-99	REVISED NOTES	
11-18-98	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

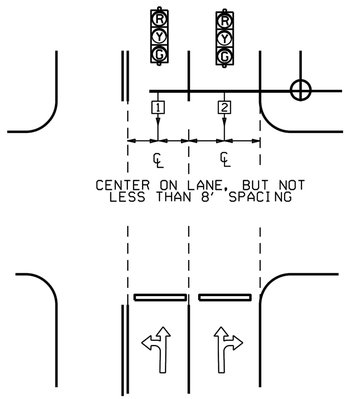
HEAVY DUTY PULL BOX

STANDARD DRAWING SD-6

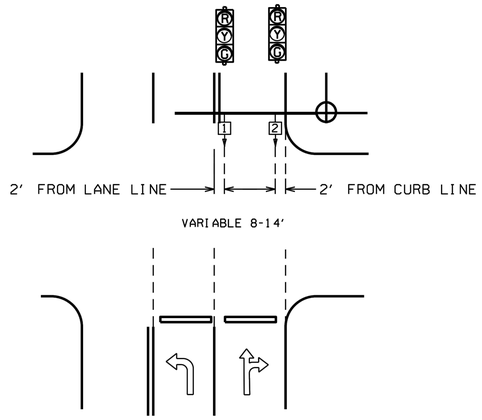
(A)



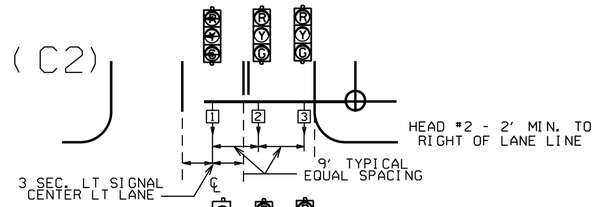
(B)



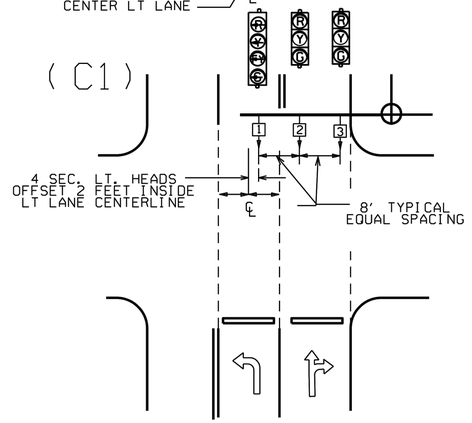
(C)



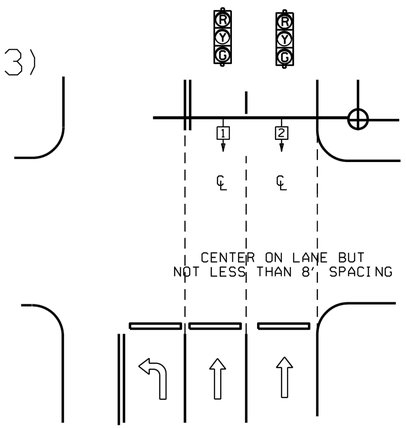
(C2)



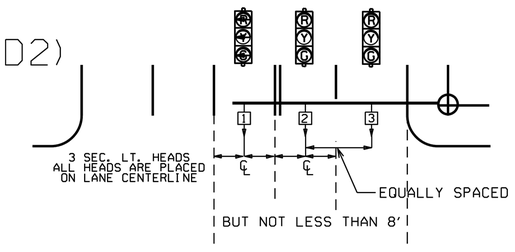
(C1)



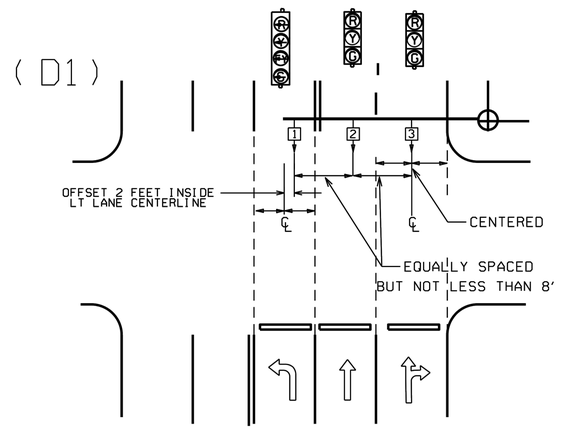
(C3)



(D2)

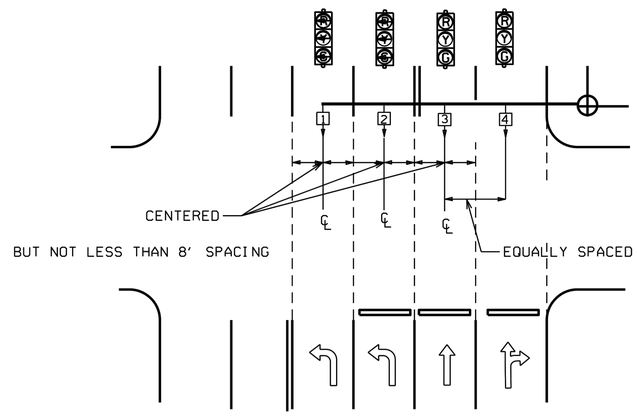


(D1)



NOTE: WHERE LEFT TURN HEAD (HEAD 1 ON D1 AND D2) IS NOT CALLED FOR ON PLANS, MAST ARM LENGTH MAY STILL BE ALLOWED FOR FUTURE INSTALLATION. HEADS FOR THROUGH MOVEMENTS SHALL STILL BE ALIGNED WITH THROUGH LANES AS SHOWN ON DETAILS.

(E)



℄ = CENTER OF LANE FROM APPROACH SIDE

GENERAL NOTES:

1. FOUR SECTION "PROTECTED/PERMISSIVE" LEFT TURN HEADS SHOULD BE PLACED A MINIMUM OF TWO (2') FEET TO THE RIGHT OF THE CENTERLINE OF THE APPROACHING LEFT TURN LANE.

2. THREE SECTION "PROTECTED" LEFT TURN HEADS SHOULD BE PLACED ON THE CENTERLINE OF THE APPROACHING LEFT TURN LANE.

3. WHEN IT IS NECESSARY TO PLACE POLES OTHER THAN AS SHOWN ON PLAN SHEET(S) RESULTING IN MAST ARM EXTENDING MORE THAN TWO FEET PAST (TO THE LEFT OF) THE CENTERLINE OF THE APPROACHING LEFT TURN LANE, MAST ARM SHALL BE CUT TO APPROPRIATE LENGTH AS DETERMINED BY THE ENGINEER, AND A NEW END CAP PROVIDED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THIS PRIOR TO INSTALLING THE MAST ARM IF ADDITIONAL COMPENSATION IS REQUIRED.

4. SIGNAL HEAD SPACING SHALL, IN NO CASE, BE LESS THAN EIGHT (8') FEET BETWEEN HEADS ON CENTER, MEASURED HORIZONTALLY PERPENDICULAR TO THE APPROACH.

5. ALL SIGNAL HEADS SHOWN ON THIS DETAIL SHEET SHALL BE LOCATED ACCORDING TO THE DIMENSIONS SHOWN IN RELATION TO THE APPROACH SIDE OF THE INTERSECTION.

6. MAXIMUM MOUNTING HEIGHT OF SIGNAL FACES LOCATED BETWEEN 40 FEET AND 53 FEET FROM STOP BAR SHALL BE IN ACCORDANCE WITH FIGURE 4D-5 OF 2009 MUTCD.

DATE	REVISION	DATE FILM
12-8-16	REVISED NOTE 6	
9-12-13	ISSUED AS STANDARD DRAWING	
3-11-10	2009 MUTCD	
12-9-99	ISSUED	

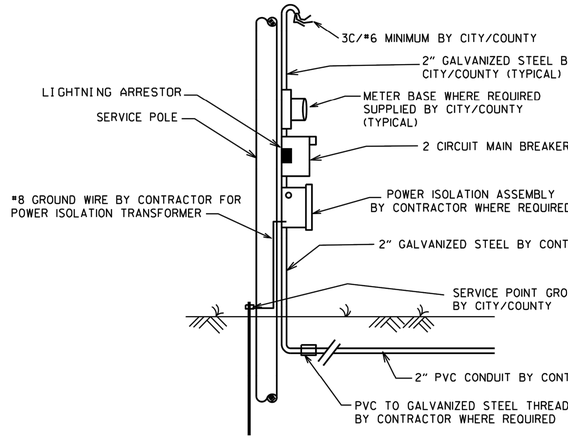
ARKANSAS STATE HIGHWAY COMMISSION

SIGNAL HEAD PLACEMENT

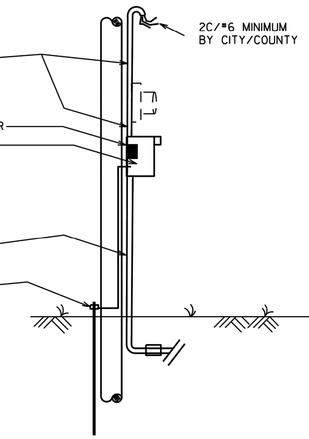
STANDARD DRAWING SD-8

MAIN BREAKER NOT NEAR CONTROLLER CABINET SECONDARY REQUIRED

WITH POWER ISOLATION ASSEMBLY



WITHOUT POWER ISOLATION ASSEMBLY



NOTES TO CONTRACTOR AND AGENCY RESPONSIBLE FOR MAINTENANCE OF THE INTERSECTION (CITY/COUNTY):

ELECTRICAL SERVICE TYPICALLY FALLS INTO TWO CATEGORIES:
MAIN BREAKER NEAR CONTROLLER CABINET; AND MAIN BREAKER NOT NEAR CONTROLLER CABINET. THE CONTRACTOR'S AND THE CITY'S/COUNTY'S RESPONSIBILITY VARIES ACCORDINGLY AS INDICATED ON THESE DETAILS.

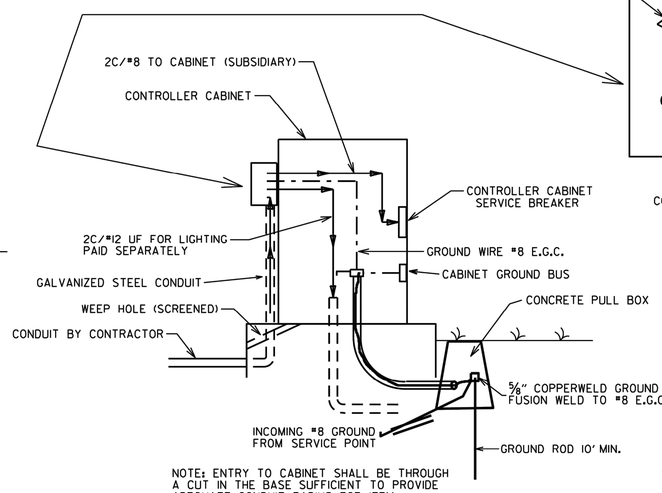
ALL SITUATIONS:
ELECTRICAL SERVICE SHALL BE PROVIDED BY THE CITY/COUNTY TO A SERVICE POLE WITH EXTERNAL RAINTIGHT BREAKER (MAIN BREAKER) AT A MUTUALLY ACCEPTABLE POINT WITHIN THE RIGHT-OF-WAY. SERVICE POINT INCLUDES GALVANIZED STEEL CONDUIT TO A POINT 18" BELOW GROUND LINE, TWO CIRCUIT MAIN BREAKER, LIGHTNING ARRESTOR, POWER ISOLATION ASSEMBLY WHERE REQUIRED, METER LOOP IF REQUIRED BY LOCAL UTILITY COMPANY, ELECTRICAL CONDUCTORS AND WEATHERHEAD. WHERE STREET LIGHTING IS INCLUDED AS PART OF SIGNAL INSTALLATION STREET LIGHTING CIRCUIT (2C/#12 A.W.G. UF RATED, TYPICAL) SHALL BE KEPT SEPARATE FROM THE CIRCUIT SERVING TRAFFIC SIGNAL. SERVICE WIRE AND WIRING FROM THE CONTROLLER TO MAIN BREAKER IS PROVIDED BY THE CONTRACTOR AS A PART OF THIS CONTRACT. WIRE AND WIRING FROM MAIN BREAKER, AND CONNECTION TO THE UTILITY IS THE RESPONSIBILITY OF THE CITY/COUNTY.

MAIN BREAKER NOT NEAR CONTROLLER CABINET:
THE MAIN BREAKER ASSEMBLY, GALVANIZED STEEL CONDUIT, WEATHERHEAD AND WIRE ABOVE MAIN BREAKER AND CONNECTION TO THE UTILITY SHALL BE PROVIDED BY CITY/COUNTY. CONTRACTOR SHALL PROVIDE AS PART OF CONTRACT SECONDARY BREAKER, CONDUIT, WIRE AND WIRING TO THE MAIN BREAKER.

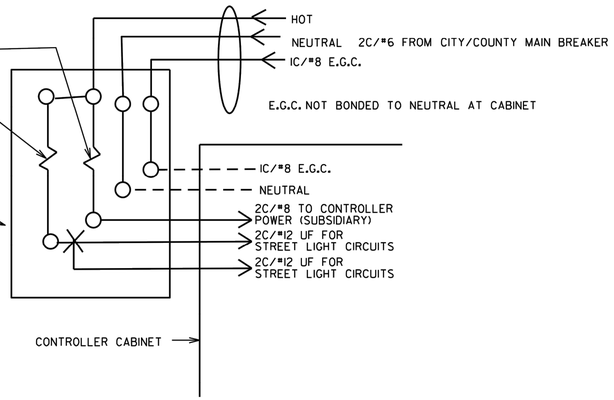
MAIN BREAKER NEAR CONTROLLER CABINET:
ALL COMPONENTS OF THE SERVICE POINT WITH THE EXCEPTION OF THE WIRE AND WIRING ABOVE THE MAIN BREAKER IS FURNISHED AND INSTALLED BY THE CONTRACTOR. WIRING FROM MAIN BREAKER INCLUDING CONNECTION TO THE UTILITY, IS THE RESPONSIBILITY OF THE CITY/COUNTY. IF METER LOOP IS REQUIRED, METER BASE AND HARDWARE IS PROVIDED BY THE CITY/COUNTY AND INSTALLED BY THE CONTRACTOR.

GROUND ROD - A 10' X 5/8" GROUND ROD SHALL BE INSTALLED IN THE CONCRETE PULL BOX FOR EACH POLE AND THE CONTROLLER. PAYMENT FOR THE GROUND ROD AND 1/2" NMC SHALL BE INCLUDED IN ITEM 701. THE CONCRETE PULL BOX AND CONDUCTOR BOX SHALL BE PAID FOR SEPARATELY.

SECONDARY BREAKER BY CONTRACTOR (SUBSIDIARY)



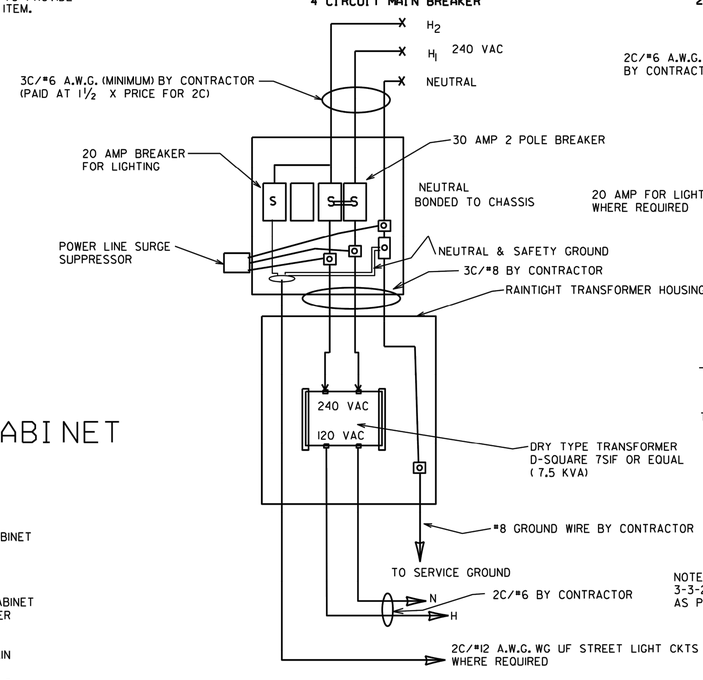
NOTE: ENTRY TO CABINET SHALL BE THROUGH A CUT IN THE BASE SUFFICIENT TO PROVIDE ADEQUATE CONDUIT RADIUS FOR ITEM.



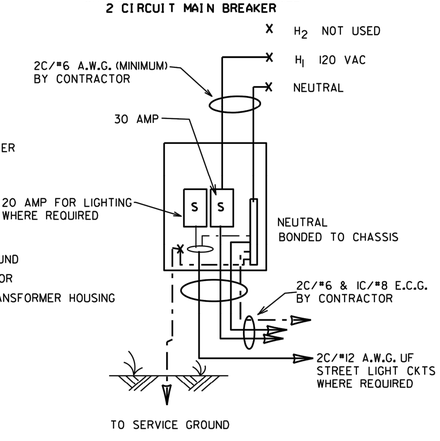
MAIN BREAKER WIRING (TYPICAL)

SERVICE GROUND IS TYPICALLY TIED TO NEUTRAL AT THE MAIN BREAKER. AS SUCH, CONTROLLER GROUND IS NOT TIED TO NEUTRAL AT SECONDARY BREAKER OR IN CONTROLLER CABINET.

WITH POWER ISOLATION ASSEMBLY
4 CIRCUIT MAIN BREAKER

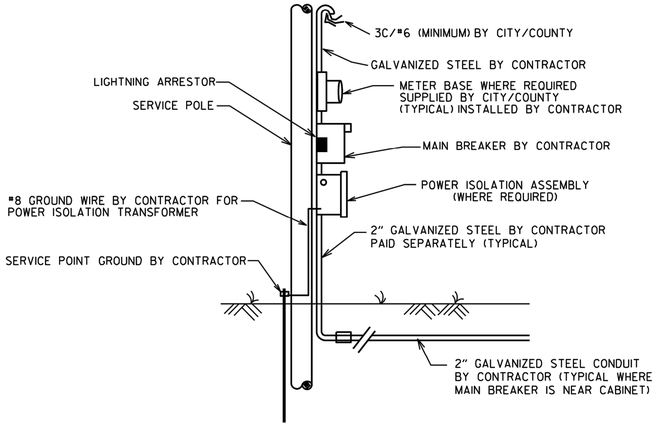


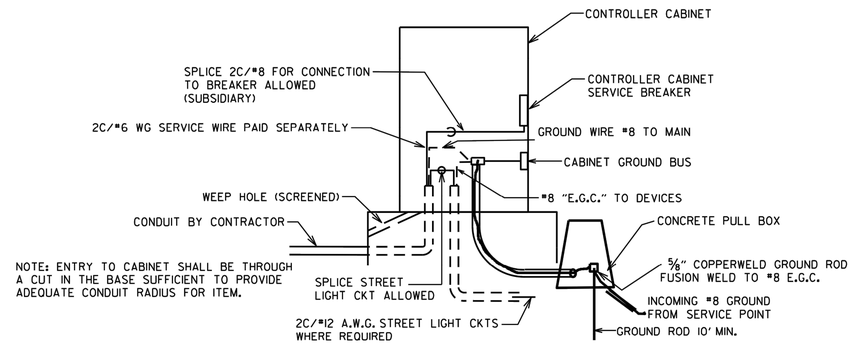
WITHOUT POWER ISOLATION ASSEMBLY
2 CIRCUIT MAIN BREAKER



NOTE: ELECTRICAL GROUND CONDUCTOR (E.C.G.) ADDED 3-3-2003, CONSISTING OF A IC/#8 A.W.G. CU GREEN WIRE AS PER NATIONAL ELECT. CODES.

MAIN BREAKER NEAR CONTROLLER CABINET SECONDARY NOT REQUIRED





NOTE: ENTRY TO CABINET SHALL BE THROUGH A CUT IN THE BASE SUFFICIENT TO PROVIDE ADEQUATE CONDUIT RADIUS FOR ITEM.

DATE	REVISION	FILMED
11-07-19	REVISED	
11-16-17	REVISED NOTES	
09-12-13	ISSUED AS STANDARD DRAWING	
04-18-13	ADDED LIGHTNING ARRESTOR	
05-21-09	REVISED GROUNDING	
07-31-08	REVISED GROUNDING	
03-03-03	ADDED EGC NOTE	
09-26-01	REVISED	
12-27-99	REVISED	
07-28-99	REVISED	
02-05-99	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

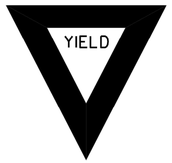
SERVICE POINT

STANDARD DRAWING SD-9

R1-1

STANDARD 30"X30"
EXPRESSWAY 36"X36"
SPECIAL 48"X48"

R1-2



STD. 36"X36"X36"
EXPWY. 48"X48"X48"
FWY. 60"X60"X60"

R2-1

STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

W3-5

STD. 36"X36"
EXPWY. 48"X48"
FWY. 48"X48"

W3-5a

STD. 36"X36"
EXPWY. 48"X48"
FWY. 48"X48"

R4-1

STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

R4-2

STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

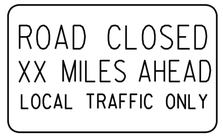
R5-1

STD. 30"X30"
EXPWY. 36"X36"
SPECIAL 48"X48"

R11-2

48"X30"

R11-3A



60"X30"

R11-4

60"X30"

W21-5a

STD. 36"X36"
FWY. 48"X48"

W1-1

STD. 36"X36"
FWY. 48"X48"

W1-2

STD. 36"X36"
FWY. 48"X48"

W1-3

STD. 48"X48"

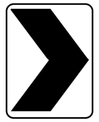
W1-4

STD. 48"X48"

W1-6

STD. 48"X24"
SPECIAL 60"X30"

W1-8



STD. 18"X24"
SPECIAL 24"X30"
EXPWY. 30"X36"
FWY. 36"X48"

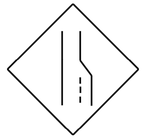
W3-1

STD. 36"X36"
SPECIAL 48"X48"

W3-2

STD. 36"X36"
SPECIAL 48"X48"

W4-2



STD. 36"X36"
FWY. 48"X48"

W5-1

STD. 36"X36"
SPECIAL 48"X48"

W6-3

EXPWY. 36"X36"
SPECIAL 48"X48"

W8-7

EXPWY. 36"X36"
FWY. 48"X48"

W9-2

STD. 36"X36"
FWY. 48"X48"

W13-1

STD. 24"X24"

W20-1

STD. 48"X48"

W20-2

STD. 48"X48"

W20-3

STD. 48"X48"

W20-4

STD. 48"X48"

W20-5

STD. 48"X48"

W20-7a

STD. 36"X36"
FWY. 48"X48"

W21-2

STD. 30"X30"
SPECIAL 36"X36"

W21-5

STD. 30"X30"
SPECIAL 36"X36"

W24-1

STD. 36"X36"

W1-4b

STD. 48"X48"

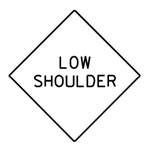
R56-1

STD. 18"X18"

W8-11

STD. 36"X36"
FWY. 48"X48"

W8-9



STD. 36"X36"
FWY. 48"X48"

G20-1

60"X24"

G20-2

48"X24"

OM-3L OM-3R

12"X36"

M4-9

STD. 30"X24"
SPECIAL 48"X36"
SPECIAL 60"X48"

M4-10

48"X18"

R55-1

36"X60"

• USE 6" C LETTERS
•• USE 4" D LETTERS

ADVANCE DISTANCES
(XXXX)

500 FT	½ MILE
1000 FT	¾ MILE
1500 FT	1 MILE AHEAD

GENERAL NOTES:

1. 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.
2. 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.
3. 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.
- 4. SIGNS ARE USUALLY MOUNTED ON A SINGLE POST, ALTHOUGH THOSE WIDER THAN 36" OR LARGER THAN 10 SQ. FT. SHALL BE MOUNTED ON TWO POSTS OR ABOVE A TYPE III BARRICADE.
- 5. 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.
6. 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.
7. 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.
8. FLAGGERS SHALL USE REFLECTORIZED STOP-SLOW PADDLES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.
9. 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.
10. 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.

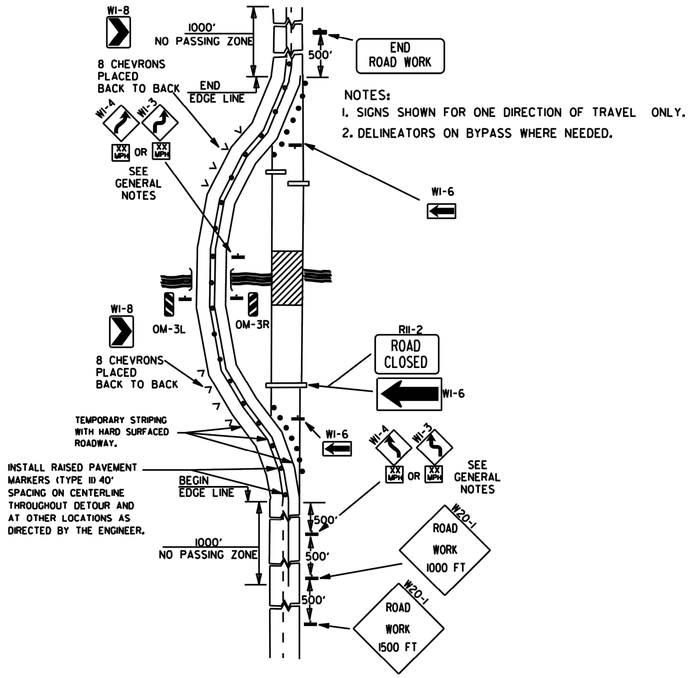
• NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) IS REQUIRED FOR ALL PROJECTS.

DATE	REVISION	FILMED
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 W8-9a & 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	

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

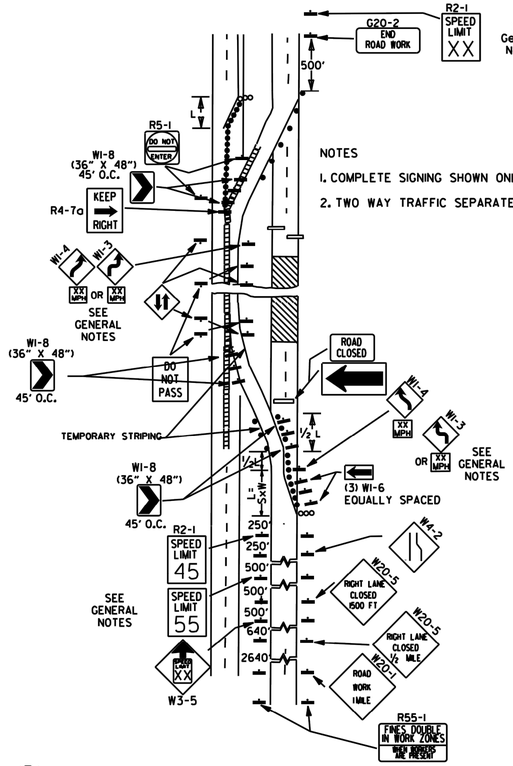
STANDARD DRAWING TC-1



NOTES:

1. SIGNS SHOWN FOR ONE DIRECTION OF TRAVEL ONLY.
2. DELINEATORS ON BYPASS WHERE NEEDED.

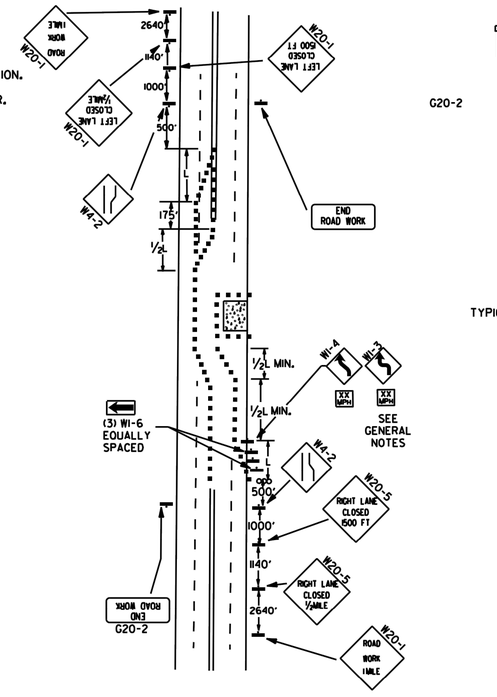
(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.



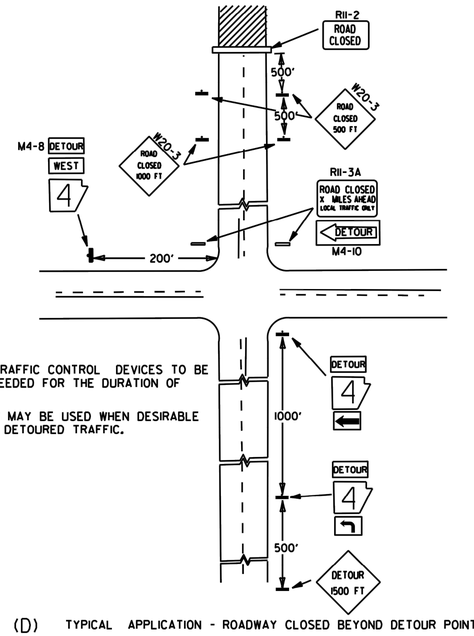
NOTES

1. COMPLETE SIGNING SHOWN ONLY IN CROSSOVER DIRECTION.
2. TWO WAY TRAFFIC SEPARATED WITH POSITIVE BARRIER.

(B) TYPICAL APPLICATION - 4-LANE DIVIDED ROADWAY WHERE ONE ROADWAY IS CLOSED.



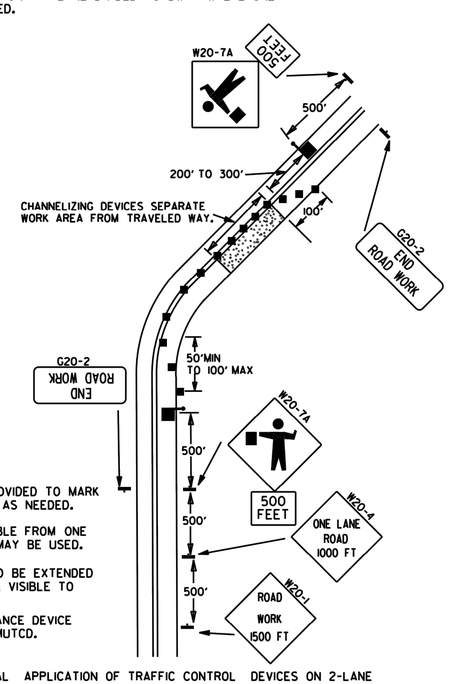
(C) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



NOTES:

1. REGULATORY TRAFFIC CONTROL DEVICES TO BE MODIFIED AS NEEDED FOR THE DURATION OF THE DETOUR.
2. STREET NAMES MAY BE USED WHEN DESIRABLE FOR DIRECTING DETOURED TRAFFIC.

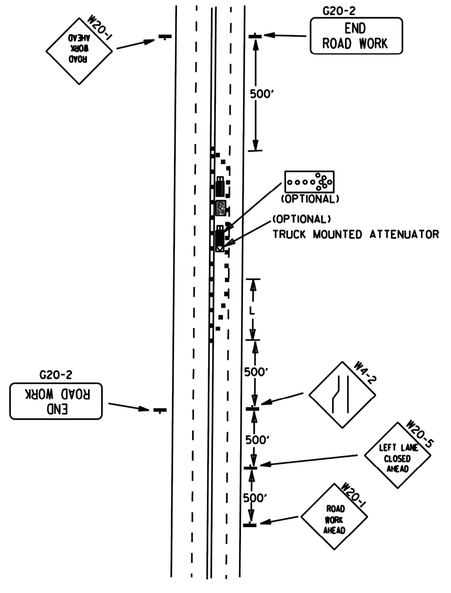
(D) TYPICAL APPLICATION - ROADWAY CLOSED BEYOND DETOUR POINT.



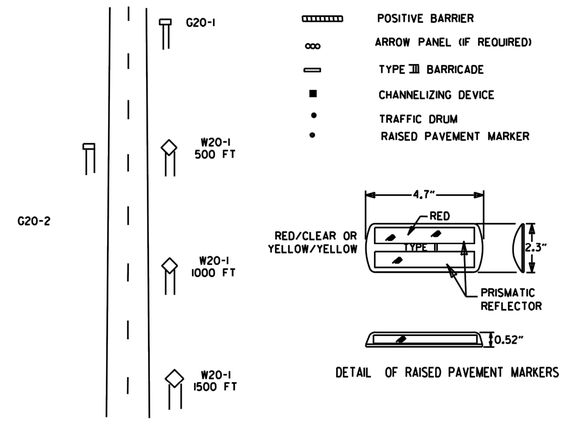
NOTES:

1. FLOOD LIGHTS SHOULD BE PROVIDED TO MARK FLAGGER STATIONS AT NIGHT AS NEEDED.
2. IF ENTIRE WORK AREA IS VISIBLE FROM ONE STATION, A SINGLE FLAGGER MAY BE USED.
3. CHANNELIZING DEVICES ARE TO BE EXTENDED TO A POINT WHERE THEY ARE VISIBLE TO APPROACHING TRAFFIC.
4. AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD) OPTIONAL. REFER TO MUTCD.

(E) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON 2-LANE HIGHWAY WHERE ONE LANE IS CLOSED AND FLAGGING IS PROVIDED.



(F) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WITH INSIDE LANE CLOSED.



DETAIL OF RAISED PAVEMENT MARKERS

TYPICAL ADVANCE WARNING SIGN PLACEMENT

TAPER FORMULAE:

L=SXW FOR SPEEDS OF 45MPH OR MORE.

$L=\frac{WS^2}{60}$ FOR SPEEDS OF 40MPH OR LESS.

WHERE:

L= MINIMUM LENGTH OF TAPER.

S= NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85TH PERCENTILE SPEED.

W= WIDTH OF OFFSET.

GENERAL NOTES:

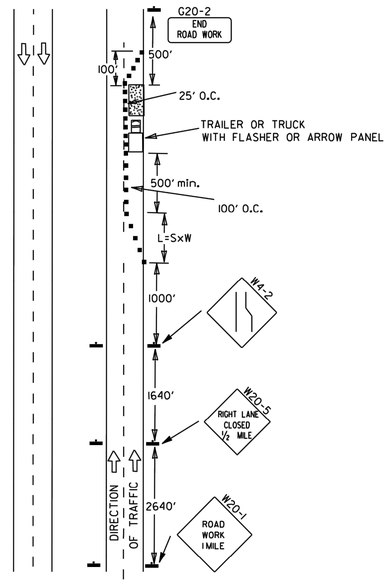
1. THE MAINTENANCE DIVISION SHALL CONDUCT A BALL BANK STUDY TO DETERMINE THE ADVISORY SPEED LIMIT PRIOR TO OPENING TO TRAFFIC. THE ADVISORY SPEED WILL BE POSTED ON WI-3 OR WI-4 CURVE WARNING SIGNS. USE WI-4 WHEN SPEED IS GREATER THAN 30MPH AND WI-3 WHEN 30MPH OR LESS
2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-1(55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-1 45MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE 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(45) SHALL BE OMITTED. ADDITIONAL R2-1 55MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE 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. 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.
8. DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING TO THE ARDOT QUALIFIED PRODUCTS LIST.
9. 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).

DATE	REVISION	FILMED
05-20-21	REVISED NOTE 7	
11-07-19	REVISED NOTE 1, ADDED NOTE 9	
9-2-15	REVISED NOTE 2, ADDED NOTE 8, REVISED DRAWING (A) & REPLACED R2-5A WITH W3-5	
9-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKERS	
3-11-10	ADDED (AFAD)	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED GENERAL NOTE	
10-18-96	ADDED R55-1	
4-26-96	CORRECTED (a) BEHIND G20-2	
6-8-95	CORRECTED SIGN IDENT. ON WI-4A	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

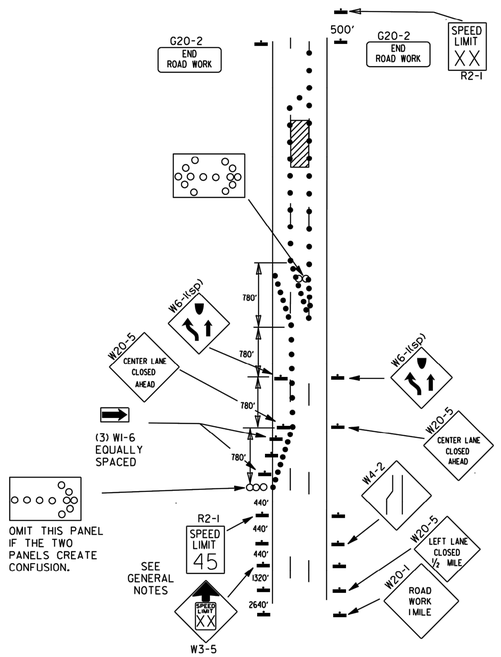
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

STANDARD DRAWING TC-2



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



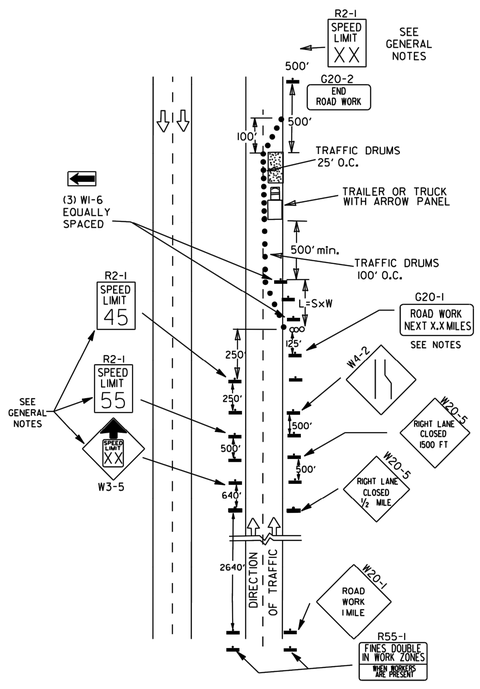
(B) TYPICAL APPLICATION - 3-LANE ONEWAY ROADWAY WHERE CENTER LANE IS CLOSED.

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(55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-1 45MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE 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(45) SHALL BE OMITTED. ADDITIONAL R2-1 55MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE 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 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).

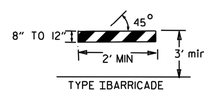


(C) TYPICAL APPLICATION - CONSTRUCTION OPERATIONS OF INTERMEDIATE TO LONG TERM DURATION ON A 4-LANE DIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.

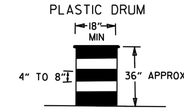
CHANNELIZING DEVICES

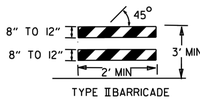
* WHEN CONES ARE USED ON FREEWAYS AND MULTI-LANE HIGHWAYS, THEY SHALL BE 28" MIN. DURING HOURS OF DARKNESS, 28" CONES SHALL BE USED ON ALL ROADWAYS, AND SHALL BE REFLECTORIZED IN ACCORDANCE WITH THE M.U.T.C.D.

CONES

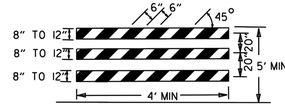


TYPE I BARRICADE



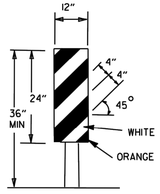


TYPE II BARRICADE



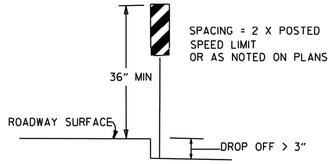
TYPE III BARRICADE

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



VERTICAL PANEL
VP-1R

VERTICAL PANEL PLACEMENT



TRAFFIC CONTROL DEVICES

NON-INTERSTATE

VERTICAL DIFFERENTIAL	LOCATION	TRAFFIC CONTROL	
		≤ 45 MPH	> 45 MPH
≤ 1"	CENTERLINE	W8-11	W8-11
> 1" ≤ 3"	CENTERLINE	W8-11 AND CENTERLINE LANE STRIPING	W8-11 AND CENTERLINE LANE STRIPING
> 3"	CENTERLINE	STANDARD LANE CLOSURE[6]	STANDARD LANE CLOSURE[6]
≤ 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-9 AND TRAFFIC DRUMS[1]	W8-9 AND TRAFFIC DRUMS[1]
> 3" ≤ 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]
> 6" ≤ 18"	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[2]
> 18" ≤ 24"	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[3]
> 24"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	PRECAST CONCRETE BARRIER[4] & EDGE LINES	PRECAST CONCRETE BARRIER[4] & 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" ≤ 6"	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

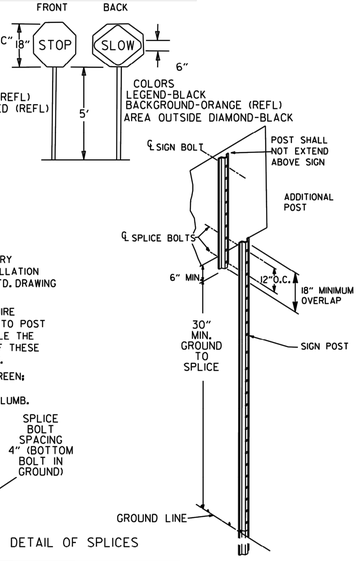
INTERSTATE AND NON-INTERSTATE

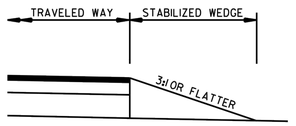
FORESLOPE	HEIGHT	TRAFFIC CONTROL
1:1	> 2 FT	PRECAST CONCRETE BARRIER
2:1	≤ 5 FT	TRAFFIC DRUMS
2:1	> 5 FT	PRECAST CONCRETE BARRIER
Flatter than 2:1	N/A	TRAFFIC DRUMS

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.
3. 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.
4. 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.
5. W21-5, W21-5a, AND/OR W21-5b SIGNS SHALL BE USED WHERE THE ROADWAY IS UNOBSTRUCTED IF AND WHERE DIRECTED BY THE ENGINEER.
6. TIME LIMITATIONS MUST CONFORM TO SECTION 603 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).

STOP SLOW PADDLE





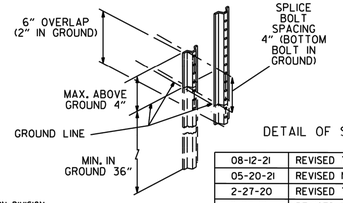
STABILIZED WEDGE

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

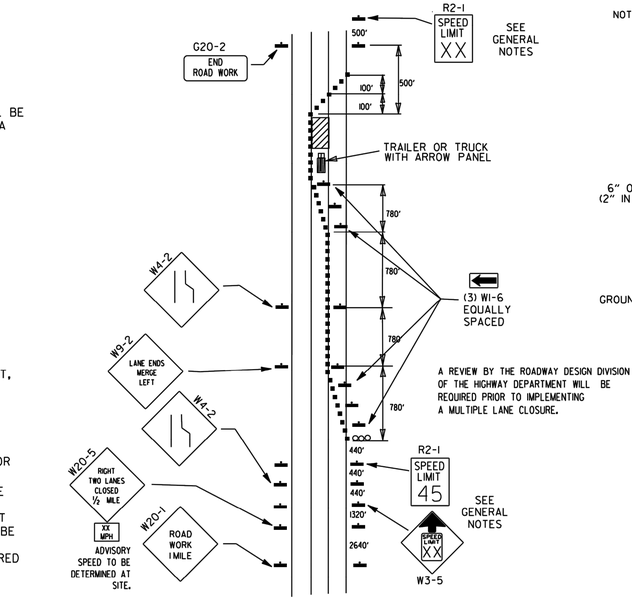
NOTES: USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-2)

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.



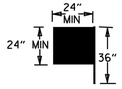
DETAIL OF SPLICES



A REVIEW BY THE ROADWAY DESIGN DIVISION OF THE HIGHWAY DEPARTMENT WILL BE REQUIRED PRIOR TO IMPLEMENTING A MULTIPLE LANE CLOSURE.

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

FLAG



FLAG SHALL BE OF GOOD GRADE RED MATERIAL

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

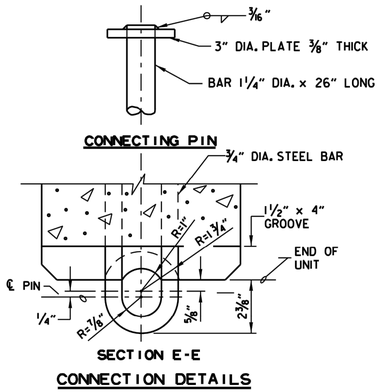
ARKANSAS STATE HIGHWAY COMMISSION

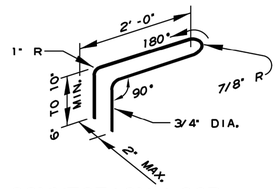
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

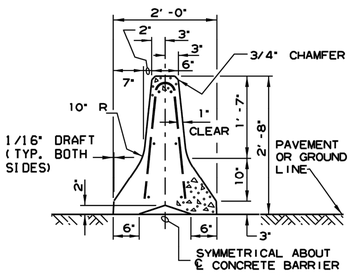
STANDARD DRAWING TC-3

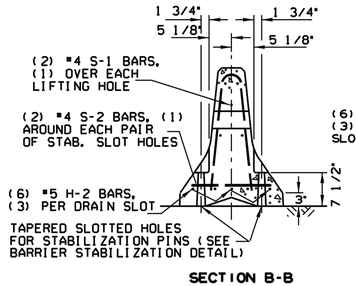
REINFORCING BAR TABLE PER BARRIER UNIT

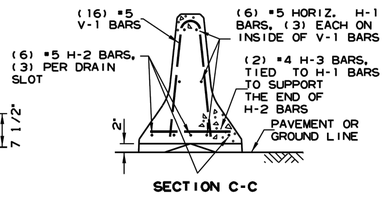
MARK	LOCATION	BAR SIZE	(NO. BARS)	SKETCH
H-1	HORIZONTAL IN BARRIER TIED INSIDE V-1 BARS	#5	(6)	19'-3"
H-2	CENTERED ABOVE DRAIN SLOTS LONG. & TRANSVERSELY	#5	(6)	6'-6"
H-3	TIED ABOVE H-1 BARS TO SUPPORT H-2, TIED TO V-1	#4	(2)	1'-6"
S-1	OVER LIFT HOLES	#4	(2)	2'-5", 90°, 3 3/8" R, LIFTING HOLE
S-2	HORIZ. AROUND SLOTS BETWEEN V-1'S @ DRAIN SLOTS	#4	(2)	1 1/2" R, SLOTS, 7", 1" MIN. CLEAR TO BAR, 1'-6", 5'-1" BAR W/(4) 1 1/2" R BENDS & MIN. 1'-0" OVERLAP
V-1	VERTICAL IN BARRIER(3) EACH END & (2) AT EACH DRAIN SLOTS	#5	(16)	TOTAL LENGTH 4'-9", 2 3/16" R, 12°, 9 1/2", 2'-1 3/8", 4 3/8"

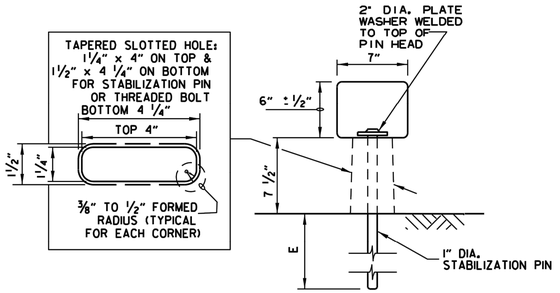


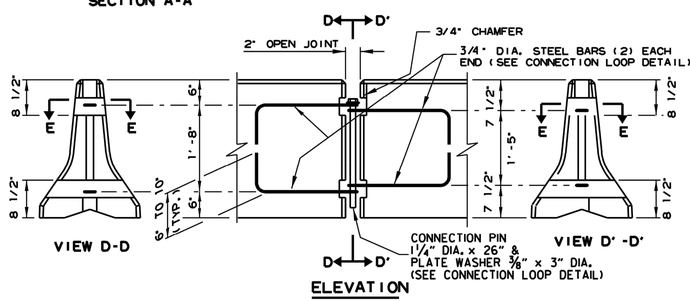


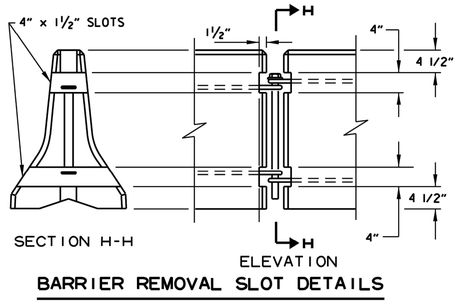


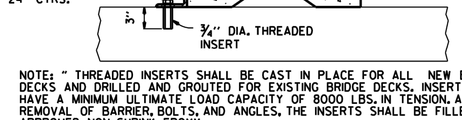


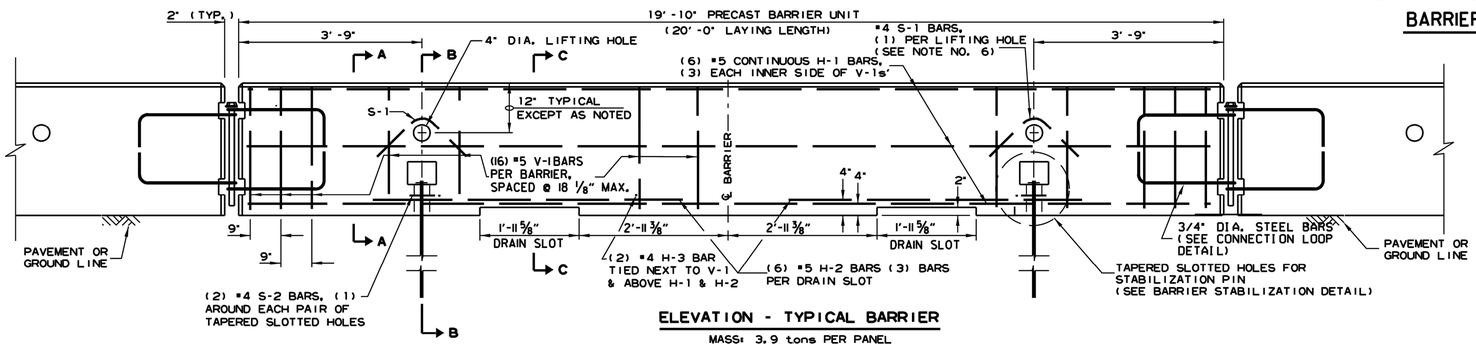












GENERAL NOTES

1. 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.

2. 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 ARDOT 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.

3. 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.

4. 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.

5. ATTACH UNITS TO ROADWAY SURFACE WITH STABILIZATION PINS AND TO DECK SLABS USING BOLTS WHEN REQUIRED.

6. A 4" WHITE PVC SLEEVE MAY BE USED TO FORM THE LIFTING HOLE AND IF USED THE SLEEVE IS TO BE LEFT IN PLACE.

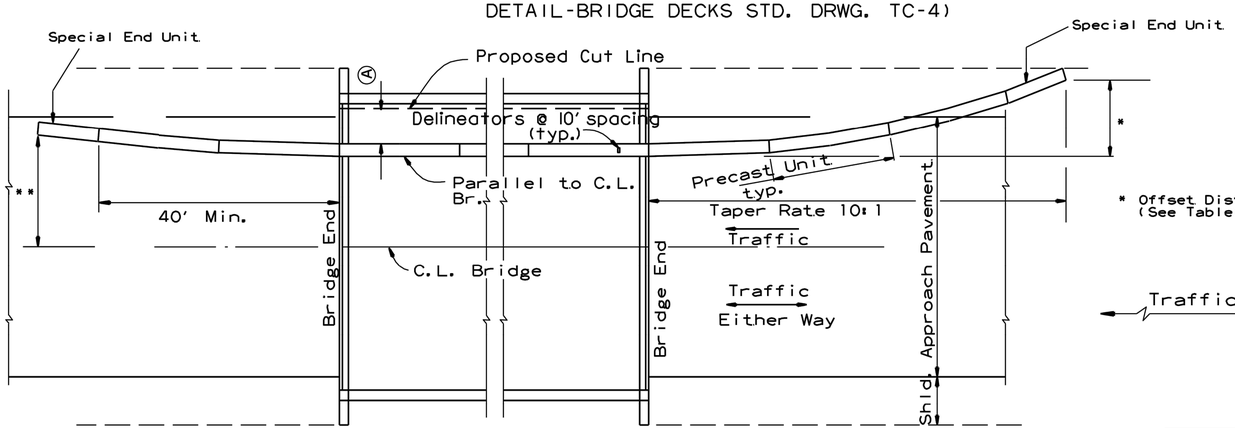
DATE	REVISION	FILMED
11-07-19	REVISED NOTE 3	
2-27-14	REVISED BARRIER STABILIZATION DETAIL	
10-15-09	ADDED REFERENCE TO WASH	
8-5-09	REV. NOTE 3 CONCERNING DRAIN SLOTS	
11-29-07	REVISED NOTE 3	
5-25-06	DELETED GENERAL NOTE 7	
11-18-04	REVISED BARRIER STABILIZATION DETAIL BRIDGE DECKS	
4-10-03	REVISED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

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

STANDARD DRAWING TC-4 85 of 89

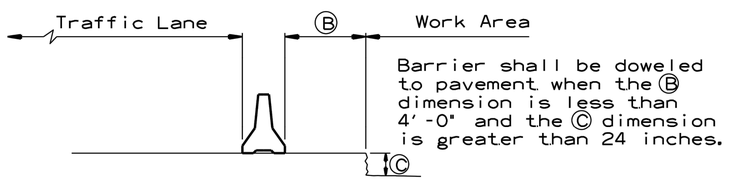
Ⓐ 4 feet or greater preferred. If less than 4 feet, Precast Units shall be connected to slab (SEE BARRIER STABILIZATION DETAIL-BRIDGE DECKS STD. DRWG. TC-4)



BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET

No Scale

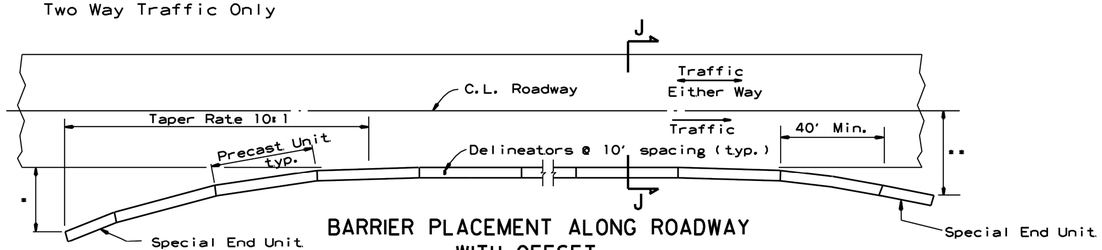
** Offset Distance for Two Way Traffic Only



Barrier shall be doweled to pavement when the Ⓑ dimension is less than 4'-0" and the Ⓒ dimension is greater than 24 inches.

SECTION J-J

No Scale



BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET

No Scale

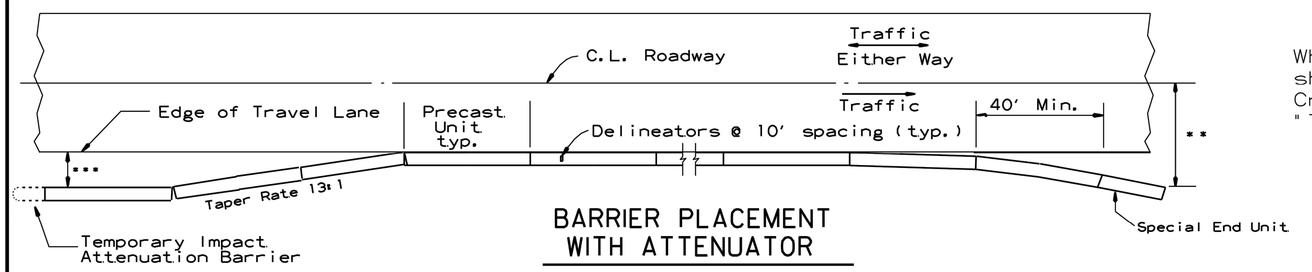
* Offset Distance (See Table)

** Offset Distance For Two Way Traffic Only

Offset Distance 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.

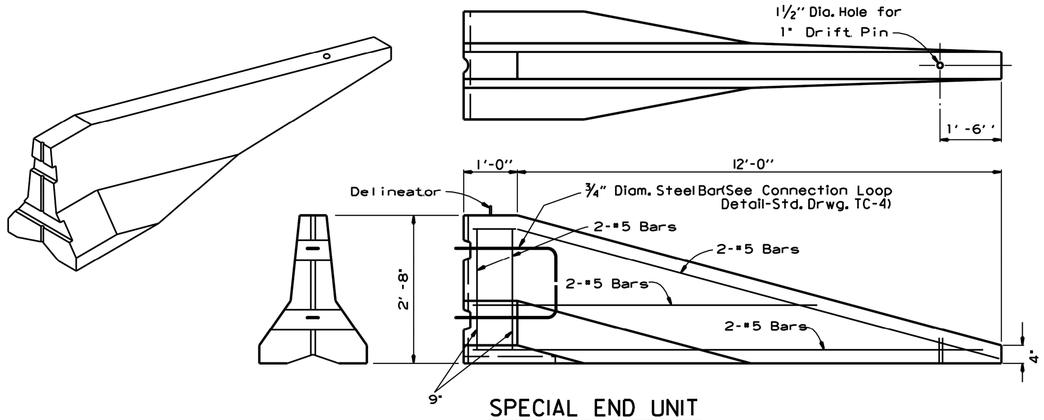


BARRIER PLACEMENT WITH ATTENUATOR

No Scale

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

** Offset Distance For Two Way Traffic Only



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."

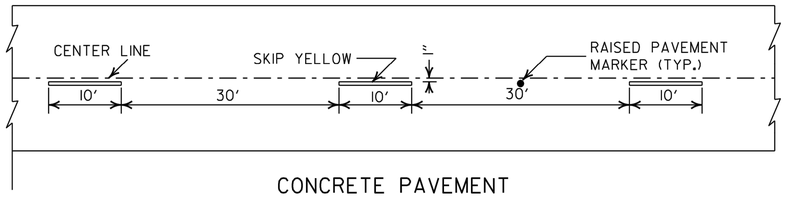
DATE	REVISION	FILMED
11-07-19	REVISED NOTE	
10-15-09	ADDED REFERENCE TO MASH	
5-25-06	REVISED BARRIER PLACEMENT	
8-22-02	ISSUED NEW DRAWING	

ARKANSAS STATE HIGHWAY COMMISSION

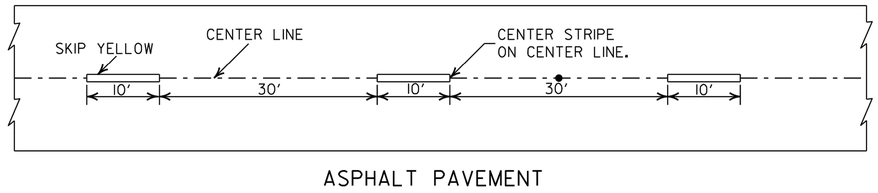
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

STANDARD DRAWING TC-5

NOTES:
1. REFER TO THE STRIPING DETAILS FOR PAVEMENT MARKING LINE WIDTHS.
2. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
3. RAISED PAVEMENT MARKERS SHALL BE PLACED ON AN 80 FEET SPACING UNLESS OTHERWISE SHOWN IN THE PLANS.

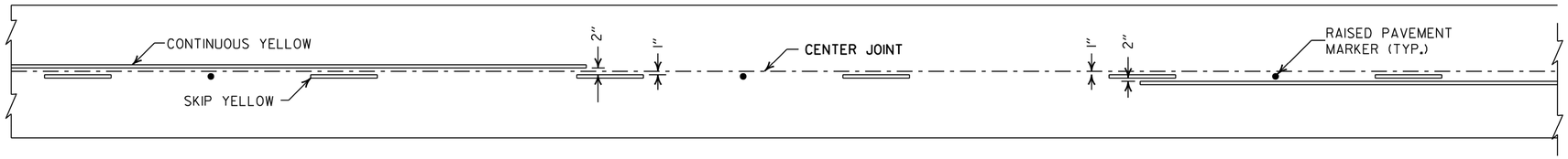


CONCRETE PAVEMENT

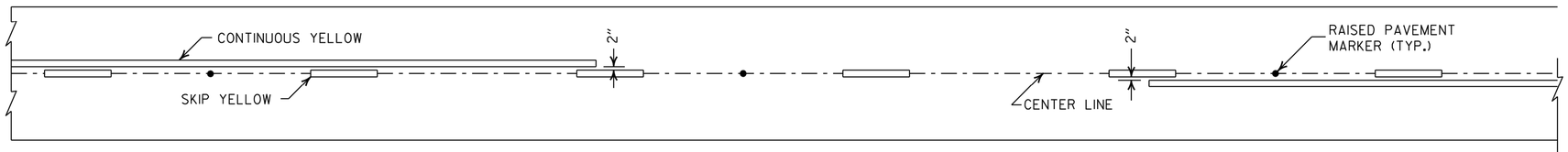


ASPHALT PAVEMENT

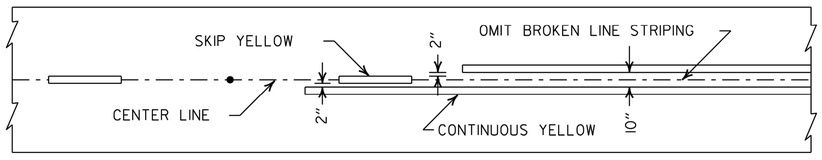
BROKEN LINE STRIPING



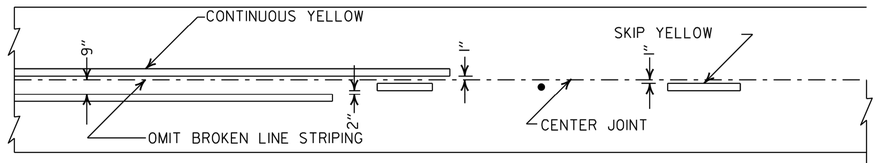
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

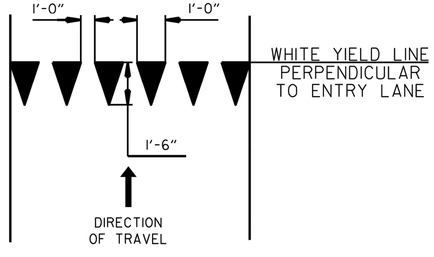


ASPHALT PAVEMENT

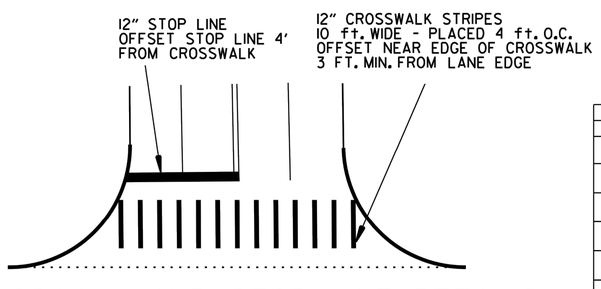


CONCRETE PAVEMENT

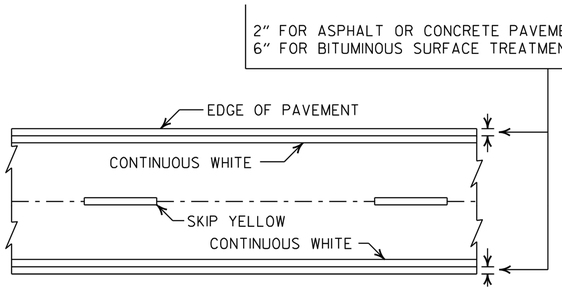
STRIPING AT ADJACENT NO PASSING LANES



YIELD LINE DETAIL



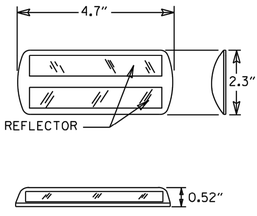
CROSSWALK AND STOP LINE DETAILS



PAVEMENT EDGE LINE MARKING

NOTE:
THE RED LENS OF THE TYPE II R.P.M. SHALL FACE THE INCORRECT TRAFFIC MOVEMENT.

TYPE II
RED/CLEAR OR
YELLOW/YELLOW



NOTE:
DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING TO THE ARDOT QUALIFIED PRODUCTS LIST.

DETAIL OF STANDARD RAISED PAVEMENT MARKERS

DATE	REVISION	FILMED
2-27-20	REVISED STOP LINE DETAILS	
6-1-17	ADDED YIELD LINE DETAIL	
5-12-16	REVISED LINE WIDTHS, SPACING, & NOTES	
9-12-13	REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS	
11-17-10	REVISED GENERAL NOTES & REMOVED PLOWABLE PVMT MRKRS	
11-18-04	REVISED NOTE 2 & GENERAL NOTES	
8-22-02	ADDED CROSSWALK & STOPBAR DTLS.	
7-02-98	ADDED DETAILS OF STD. RAISED PAV'T. MARKERS	
4-26-96	REV. NOTES 3&4; ADDED R.P.M.	
9-30-80	DRAWN	1-9-30-80

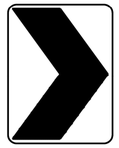
ARKANSAS STATE HIGHWAY COMMISSION

PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1

R1-1
30"X30"

W1-3
30"X30"
(LT. OR RT.)



W1-8
18"X24"

W2-5
30"X30"

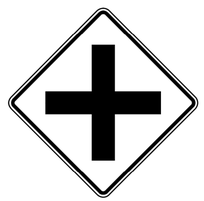
W3-1
36"X36"

W5-1
36"X36"

M6-3
21"X15"

R1-2
36"X36"X36"

W1-4
30"X30"
(LT. or RT.)



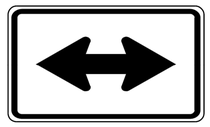
W2-1
30"X30"

S1-1
36"X36"

W3-2
36"X36"

County
Route Marker
M1-6
24"X24"

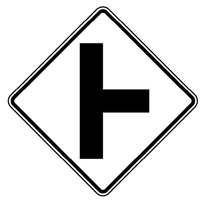
NOTE: REFLECTORIZED YELLOW LEGEND (COUNTY NAME, ROUTE LETTER & NUMBER) & BORDER ON A BLUE BACKGROUND.



M6-4
21"X15"

R2-1
24"X30"

W1-5
30"X30"
(LT. or RT.)

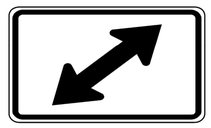


W2-2
30"X30"

W5-2
36"X36"

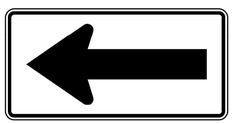
W8-3
36"X36"

R1-3P
18"X6"

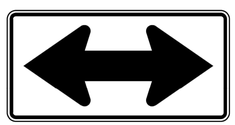


M6-5
21"X15"

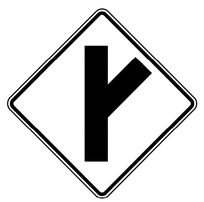
W1-1
30"X30"
(LT. or RT.)



W1-6
48"X24"



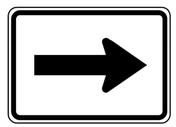
W1-7
48"X24"



W2-3
30"X30"
(LT. or RT.)

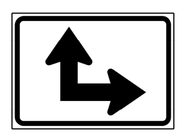
W5-3
36"X36"

W13-1P
18"X18"

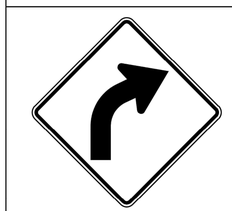


M6-1
21"X15"

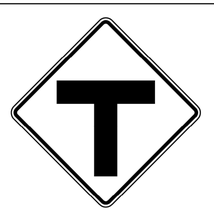
NOTE: ALL M6 SIGNS TO BE MADE WITH REFLECTORIZED YELLOW ARROW & BORDER WITH BLUE BACKGROUND.



M6-6
21"X15"

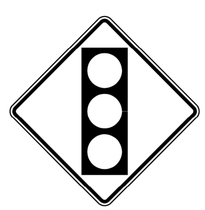


W1-2
30"X30"
(LT. or RT.)

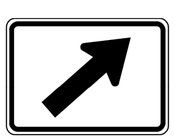


W2-4
30"X30"

W10-1
36" DIAMETER

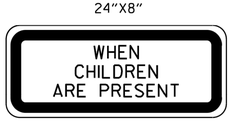


W3-3
36"X36"

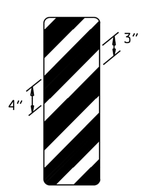


M6-2
21"X15"

S4-3P
24"X8"



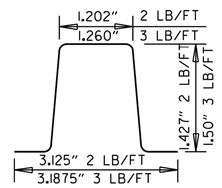
S4-2P
24"X10"



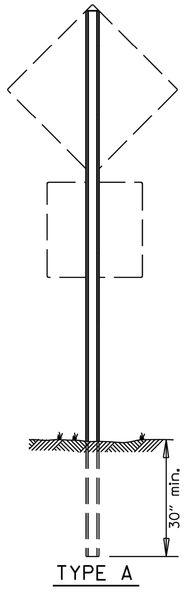
OM-3
12"X36"
(LT. or RT.)

MINIMUM DIMENSIONS SHOWN

SUPPORT SECTION

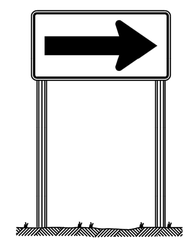


(U-CHANNEL)
STANDARD SUPPORT
ASSEMBLIES



TYPE A

NOTE: LENGTH OF SIGN POSTS SHALL BE DETERMINED SO AS TO PROVIDE FOR MINIMUM VERTICAL CLEARANCES AS CALLED FOR IN THE SPECIFICATIONS PLUS A MINIMUM VERTICAL PENETRATION OF 30" IN THE SOIL.



TYPE B

TYPE C

MINIMUM WEIGHT

TYPE A & B = 3 LBS./FT.
TYPE C = 2 LBS./FT.

STANDARD HIGHWAY SIGNS

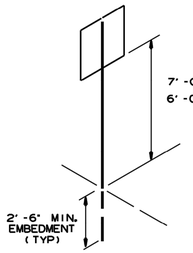
DATE	REVISION	DATE FILMED
9-12-13	DELETED JOB NO. BLOCK; REVISED RI-3 TO RI-3P	
4-17-08	REVISED SIGN DESIGNATION - W3-1& W3-2	
4-10-03	REVISED W5-2, W8-3, OM-3; ADDED WI-8	
1-5-81	REDRAWN	960-1-15-81
9-15-78	ADDED W14-3	877-9-15-78
9-2-76	POST WT.	623-9-3-76
5-3-76	STEEL POST WT. FROM 2#-3#; ADDED S4-2 & S4-3	504-5-3-76
8-12-74	REV. HT. TYPE "C" ASSEMBLY	500-8-21-74
12-21-72	ADDED M6-2,3,4,5,6	500-12-21-72
12-1-72	ISSUED	562-12-1-72

SUPPORT ASSEMBLIES

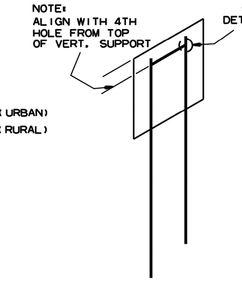
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD HIGHWAY SIGNS
AND SUPPORT ASSEMBLIES

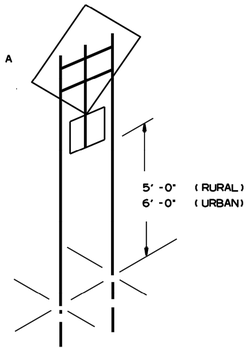
STANDARD DRAWING SHS-1 88 of 89



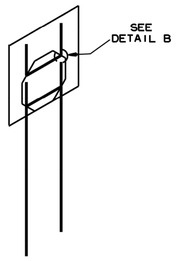
U-1



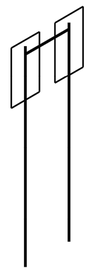
U-2



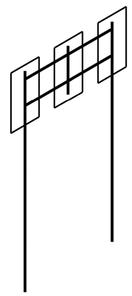
U-2 (A)



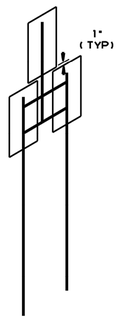
U-2 (B)



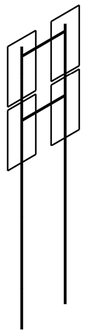
U-2 (1)



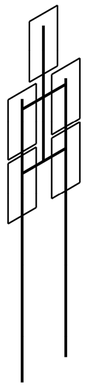
U-2 (2)



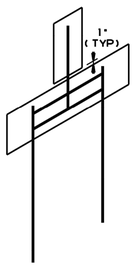
U-2 (3)



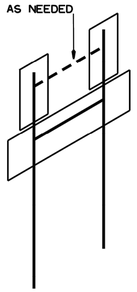
U-2 (4)



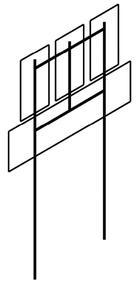
U-2 (5)



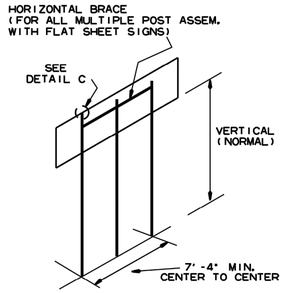
U-2 (6)



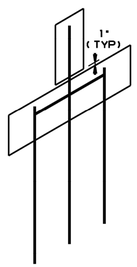
U-2 (7)



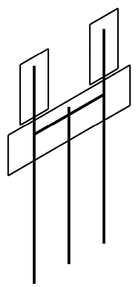
U-2 (8)



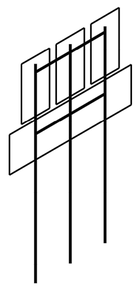
U-3



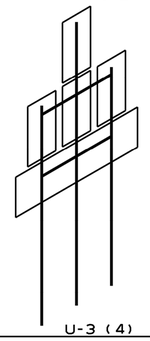
U-3 (1)



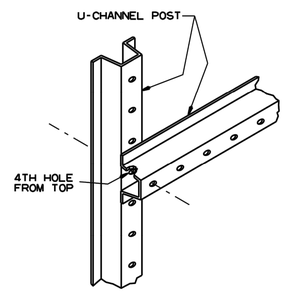
U-3 (2)



U-3 (3)

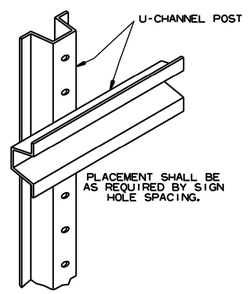


U-3 (4)



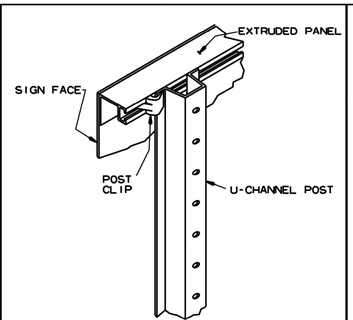
DETAIL A

SHOWING HORIZONTAL BRACE



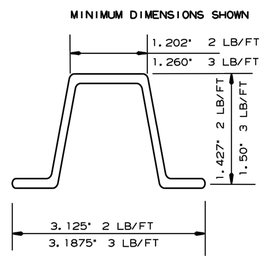
DETAIL B

SHOWING BACK-TO-BACK INSTALLATION



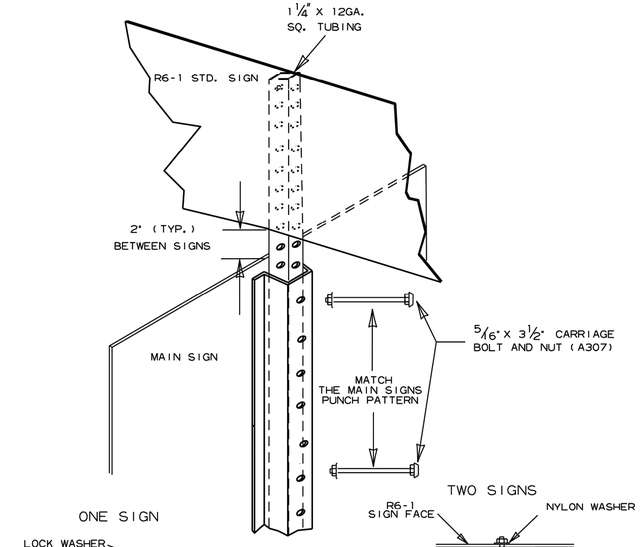
DETAIL C

SHOWING GUIDE SIGN MOUNTING WITH EXTRUDED PANELS



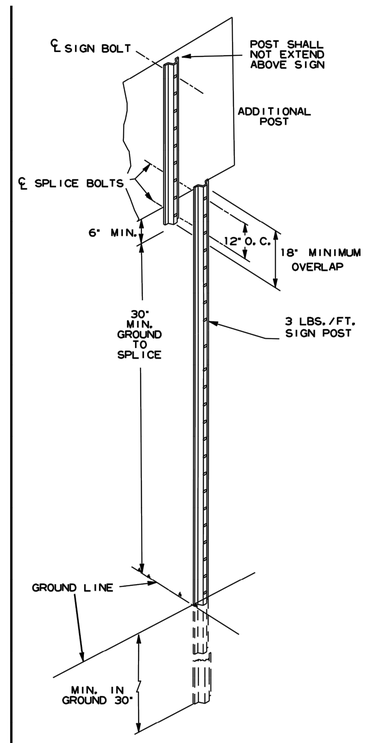
DETAIL C

U-CHANNEL POST



DETAIL E

R6-1 EXTENSION FOR U-CHANNEL POST



DETAIL F

DETAIL OF SPLICES

NOTES:

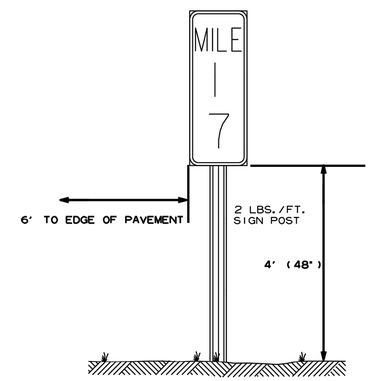
SIGNS AT LEAST 8' IN LENGTH MAY BE INSTALLED ON THREE 3 LB. POST. IN NO CASE SHALL THERE BE MORE THAN TWO 3 LB. POSTS WITHIN A 7' PATH.

SPLICES NECESSARY TO ATTAIN PROPER MOUNTING HEIGHT SHALL BE AS SHOWN IN DETAIL (F).

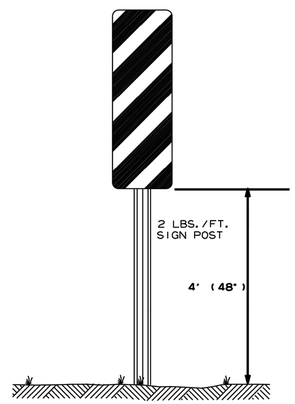
NORMAL INSTALLATIONS WILL REQUIRE 5/16" DIA. CARRIAGE BOLTS TO MOUNT SIGNS TO POST AND TO ASSEMBLE THE VARIOUS POST SUPPORTS.

ALL SIGN POSTS SHALL BE PLUMB.

THE POST FOR "TYPE U" SUPPORTS SHALL BE HOT DIP GALVANIZED.



TYPICAL MILE MARKER INSTALLATION



TYPICAL OM-3 INSTALLATION AT EDGE OF OBSTRUCTION

DATE	REVISION	FILMED
7-25-19	REVISED CARRIAGE BOLT WITH MATERIAL REQUIREMENT	
2-27-14	REVISED NOTES.	
9-12-13	REVISED U-2(3), U-2(6), U-3(1), DETAIL D; ADDED DETAILS E & F; ADDED TYPICAL MARKERS	
10-9-03	REMOVED ROUND POST & REVISED SPACING	
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL	6-8-95
2-2-95	REDRAWN	2-2-95

ARKANSAS STATE HIGHWAY COMMISSION

U-CHANNEL POST ASSEMBLIES

STANDARD DRAWING SHS-2