DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	1	83
		I-540/HWY. 255 INTCHNG. IMPVTS. (ZERO ST.) (FORT SMITH) (S)				

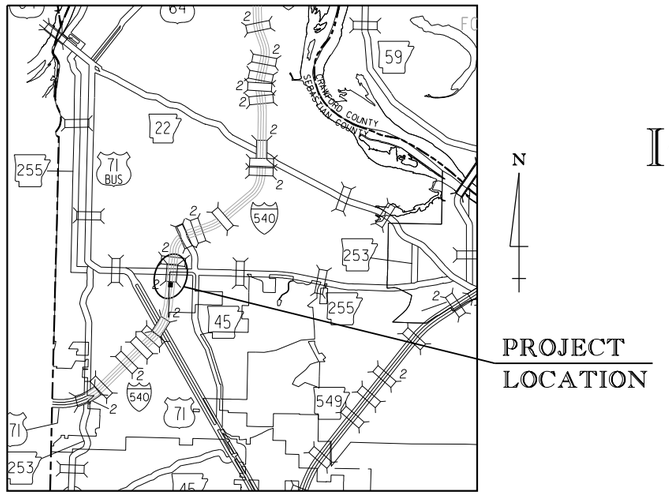
"A FULLY CONTROLLED ACCESS FACILITY"
ARKANSAS DEPARTMENT OF TRANSPORTATION
CONSTRUCTION PLANS FOR STATE HIGHWAY

I-540/HWY. 255 INTCHNG. IMPVTS.
(ZERO ST.) (FORT SMITH) (S)

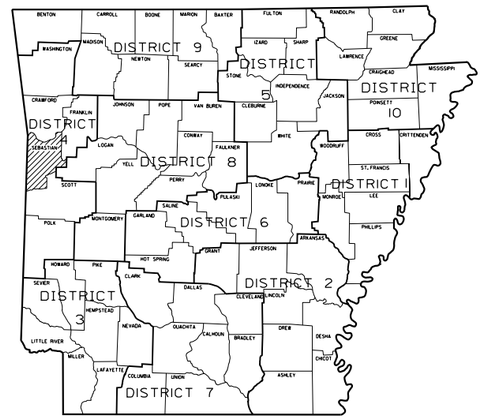
SEBASTIAN COUNTY
ROUTE 540 SECTION 1
ROUTE 255 SECTION 3
JOB 040889

FED. AID PROJ. NHFP-9150(39)

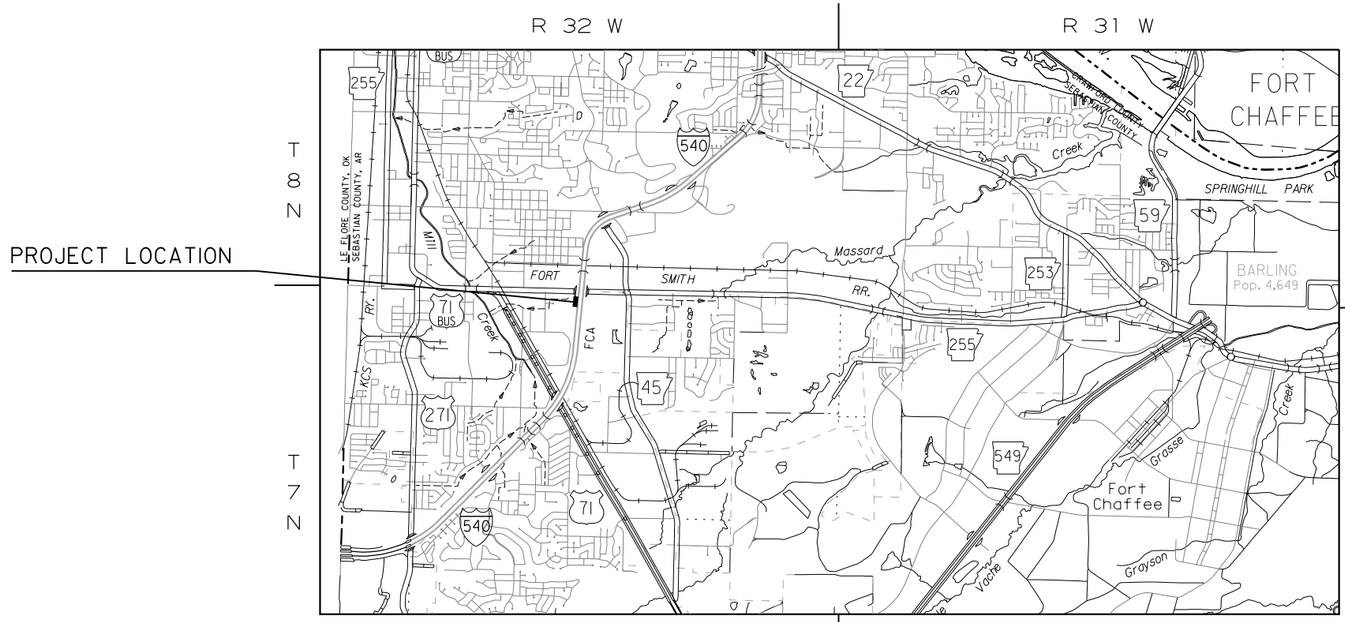
NOT TO SCALE



VICINITY MAP



ARKANSAS HIGHWAY DISTRICT 4



· DESIGN TRAFFIC DATA S. 36TH STREET ·

DESIGN YEAR	2044
2025 ADT	5500
2045 ADT	6100
2045 DHV	671
DIRECTIONAL DISTRIBUTION	80%
TRUCKS	5%
DESIGN SPEED	35 MPH

PROJECT COORDINATES

	BEGIN	MID-POINT	END
LATITUDE	N 35°19'33"	N 35°19'39"	N 35°19'43"
LONGITUDE	W 94°23'44"	W 94°23'44"	W 94°23'41"
STATION	1005+96.62	1011+39.95	1016+83.29

NO LENGTH INVOLVED

GROSS LENGTH OF	PROJECT	0000.00	FEET	OR	0.000	MILES
NET	" " ROADWAY	0000.00	"	"	0.000	MILES
NET	" " BRIDGES	0000.00	"	"	0.000	MILES
NET	" " PROJECT	0000.00	"	"	0.000	MILES

CERTIFICATE OF AUTHORIZATION
GARVER LLC
No. 766
ARKANSAS ENGINEER

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 14994
DUSTIN L. TACKETT

DIGITALLY SIGNED 6/26/2025

JATurner 6/23/2025 7:41:00 AM
WORKSPACE: AHTD
\\garverinc.local\gdata\Projects\2021\21010110 - ARDOT 040889 I-540-Hwy 255\Drawings\r040889_TL_0.DGN
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	2	83
		INDEX OF SHEETS AND STANDARD DRAWINGS				



DIGITALLY SIGNED 8/11/2025

INDEX OF SHEETS

SHEET NO.	TITLE
1	TITLE SHEET
2	INDEX OF SHEETS AND STANDARD DRAWINGS
3	GOVERNING SPECIFICATIONS AND GENERAL NOTES
4 - 7	TYPICAL SECTIONS OF IMPROVEMENT
8	SPECIAL DETAILS
9 - 15	TEMPORARY EROSION CONTROL DETAILS
16 - 21	MAINTENANCE OF TRAFFIC DETAILS
22	PERMANENT PAVEMENT MARKING DETAILS
23 - 26	QUANTITIES
27	SUMMARY OF QUANTITIES AND REVISIONS
28 - 30	SURVEY CONTROL DETAILS
31 - 34	PLAN AND PROFILE SHEETS
35 - 36	SIGN PLACEMENT SHEETS
37	SIGN QUANTITIES
38	SUMMARY OF TRAFFIC SIGNAL QUANTITIES
39	TRAFFIC SIGNAL NOTES
40	TRAFFIC SIGNAL STREET NAME SIGNS
41	GROUNDING ARRAY DETAIL
42	CABINET DETAIL
43 - 44	TRAFFIC SIGNAL QUANTITIES
45 - 58	SIGNALIZATION PLAN SHEETS
59	ELECTRICAL LEGEND & NOTES
60	ELECTRICAL GENERAL NOTES
61	LIGHTING REMOVAL PLAN
62	LIGHTING INSTALLATION PLAN
63	ELECTRICAL DETAILS 1
64	ELECTRICAL DETAILS 2
65	ELECTRICAL DETAILS 3
66	ELECTRICAL DETAILS 4
67 - 83	CROSS SECTIONS

NOTE: CROSS SECTIONS NOT NORMALLY INCLUDED IN PLANS SOLD TO PROSPECTIVE BIDDERS, BUT MAY BE HAD UPON REQUEST.

ROADWAY STANDARD DRAWINGS

DRWG.NO.	TITLE	DATE
CDP-1	CONCRETE DITCH PAVING	12-08-16
CG-1	CURBING DETAILS	11-29-07
DR-1	DETAILS OF DRIVEWAYS & ISLANDS	05-22-25
DR-2	DETAILS OF DRIVEWAYS & STREET TURNOUTS	05-19-22
FES-1	FLARED END SECTION	10-18-96
FES-2	FLARED END SECTION	10-18-96
FPC-9	DETAILS OF DROP INLETS & JUNCTION BOXES	11-16-01
FPC-9D	DETAILS OF DROP INLETS	08-22-02
FPC-9E	DETAILS OF DROP INLETS (TYPE C)	08-22-02
FPC-9M	DETAILS OF DROP INLET (TYPE MO)	08-22-02
FPC-9S	DETAILS OF DROP INLET & JUNCTION BOX (TYPE ST)	07-26-12
PCC-1	CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING	02-27-14
PCM-1	METAL PIPE CULVERT FILL HEIGHTS & BEDDING	02-27-14
PCP-1	PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)	02-27-14
PCP-2	PLASTIC PIPE CULVERT (PVC F949)	02-27-14
PCP-3	PLASTIC PIPE CULVERT (POLYPROPYLENE)	02-27-20
PM-1	PAVEMENT MARKING DETAILS	02-27-20
PM-2	PERMANENT PAVEMENT MARKING ON ACCESS CONTROLLED ROADWAYS	05-14-20
SD-5	CONTROLLER CABINET UTILITY DRAWER	09-12-13
SD-6	HEAVY DUTY PULL BOX	02-13-24
SD-7	SPAN WIRE ASSEMBLY WOOD POLE	02-13-24
SD-8	SIGNAL HEAD PLACEMENT	12-08-16
SD-9	SERVICE POINT	11-07-19
SD-11	STEEL POLE WITH MAST ARM	02-13-24
SD-12	SERVICE POINT INSTALLATION WITH SUPPLEMENTAL GROUNDING ARRAY	11-07-19
SE-1	TABLES AND METHOD OF SUPERELEVATION FOR ONE-WAY TRAFFIC	11-07-19
SHS-1	STANDARD HIGHWAY SIGNS AND SUPPORTS ASSEMBLIES	09-12-13
SHS-4	DETAIL OF BREAKAWAY SIGN SUPPORTS FOR STANDARD SIGNS	09-12-13
SHS-7	DETAIL OF OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS	09-12-13
SHS-8	TYPICAL DELINEATOR PLACEMENT ALONG THE INTERSTATE SYSTEM	11-16-17
TC-1	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	08-14-25
TC-2	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	08-14-25
TC-3	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	08-14-25
TC-4	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-TEMPORARY PRECAST BARRIER	11-07-19
TC-5	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-TEMPORARY PRECAST BARRIER	11-07-19
TC-6	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION BARRIER	08-14-25
TEC-1	TEMPORARY EROSION CONTROL DEVICES	11-16-17
TEC-3	TEMPORARY EROSION CONTROL DEVICES	11-03-94

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
8/28/2025		6	ARK.	040889	3	83
		GOVERNING SPECIFICATIONS AND GENERAL NOTES				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16886
NICHOLAS A. BRADDY

DIGITALLY SIGNED 8/28/2025

GOVERNING SPECIFICATIONS

ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014, AND THE FOLLOWING SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS:

NUMBER	TITLE
ERRATA_____	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273__	REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273__	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273__	SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273__	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273__	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273__	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273__	SUPPLEMENT - WAGE RATE DETERMINATION
100-3_____	CONTRACTOR'S LICENSE
100-4_____	DEPARTMENT NAME CHANGE
102-2_____	ISSUANCE OF PROPOSALS
102-3_____	PREQUALIFICATION OF BIDDERS
103-2_____	CONTACT INFORMATION FOR MOTORIST DAMAGE CLAIMS
105-4_____	MAINTENANCE DURING CONSTRUCTION
107-2_____	RESTRAINING CONDITIONS
108-1_____	LIQUIDATED DAMAGES
108-2_____	WORK ALLOWED PRIOR TO ISSUANCE OF WORK ORDER
110-1_____	PROTECTION OF WATER QUALITY AND WETLANDS
210-1_____	UNCLASSIFIED EXCAVATION
303-1_____	AGGREGATE BASE COURSE
306-1_____	QUALITY CONTROL AND ACCEPTANCE
307-2_____	CEMENT TREATED BASE COURSE
308-2_____	CEMENT STABILIZED CRUSHED STONE BASE COURSE
400-1_____	TACK COATS
400-4_____	DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES
400-5_____	PERCENT AIR VOIDS FOR ACHM MIX DESIGNS
400-6_____	LIQUID ANTI-STRIP ADDITIVE
400-7_____	TRACKLESS TACK
404-3_____	DESIGN OF ASPHALT MIXTURES
409-2_____	ASPHALT LABORATORY FACILITY
410-1_____	CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
410-2_____	DEVICES FOR MEASURING DENSITY FOR ROLLING PATTERNS
410-4_____	EVALUATION OF ACHM SUBLOT REPLACEMENT MATERIAL
416-1_____	RECYCLED ASPHALT PAVEMENT
501-3_____	PORTLAND CEMENT CONCRETE PAVEMENT
505-1_____	PORTLAND CEMENT CONCRETE DRIVEWAY
600-2_____	INCIDENTAL CONSTRUCTION
603-1_____	LANE CLOSURE NOTIFICATION
604-1_____	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
604-3_____	TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES (MASH)
605-1_____	CONCRETE DITCH PAVING
606-1_____	PIPE CULVERTS FOR SIDE DRAINS
620-1_____	MULCH COVER
621-1_____	FILTER SOCKS
632-1_____	CONCRETE ISLAND
633-1_____	CONCRETE WALKS, CONCRETE STEPS, AND HAND RAILING
634-1_____	CURBING
700-2_____	TRAFFIC CONTROL FACILITIES
723-1_____	GENERAL REQUIREMENTS FOR SIGNS
802-5_____	CONCRETE FOR STRUCTURES

GOVERNING SPECIFICATIONS

ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014, AND THE FOLLOWING SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS:

NUMBER	TITLE
JOB 040889__	ACTUATED CONTROLLER
JOB 040889__	ASPHALT MIXTURES WITH PG 76-22 BINDER
JOB 040889__	ASSESSMENT OF WORKING DAYS - MAINTENANCE OF TRAFFIC
JOB 040889__	BIDDING REQUIREMENTS AND CONDITIONS
JOB 040889__	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 040889__	BUY AMERICA - CONSTRUCTION MATERIALS
JOB 040889__	CABINET DRAWER ASSEMBLY
JOB 040889__	CARGO PREFERENCE ACT REQUIREMENTS
JOB 040889__	CEMENT STABILIZED CRUSHED STONE BASE COURSE
JOB 040889__	CLASS C FLY ASH IN PORTLAND CEMENT CONCRETE PAVEMENT AND CLASS S(AE) CONCRETE
JOB 040889__	COLD MILLING - COUNTY PROPERTY
JOB 040889__	CONCRETE PULL BOX
JOB 040889__	DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES
JOB 040889__	DESIGN OF ASPHALT MIXTURES - AGGREGATES
JOB 040889__	DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES
JOB 040889__	ELECTRICAL CONDUCTORS FOR LUMINAIRES
JOB 040889__	ELECTRICAL CONDUCTORS FOR LUMINAIRES (TRAFFIC SIGNAL)
JOB 040889__	ELECTRICAL CONDUCTORS-IN-CONDUIT
JOB 040889__	ELECTRICAL CONDUCTORS-IN-CONDUIT (TRAFFIC SIGNAL)
JOB 040889__	ELECTRICAL DEMOLITION AND RELOCATION WORK
JOB 040889__	EMERGENCY BATTERY BACKUP SYSTEM INSTALLATION
JOB 040889__	ENHANCED THERMOPLASTIC PAVEMENT MARKING
JOB 040889__	EXTENSION FOR PIPE CULVERTS
JOB 040889__	FLEXIBLE BEGINNING OF WORK – CALENDAR DAY CONTRACT
JOB 040889__	GEOTEXTILE FABRIC
JOB 040889__	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 040889__	LED LUMINAIRE ASSEMBLY (BUG U0 TYPE)
JOB 040889__	LED ROADWAY ILLUMINATION POLE
JOB 040889__	LED TRAFFIC SIGNAL HEAD
JOB 040889__	LIQUIDATED DAMAGES PROCEDURE FOR BID LETTINGS
JOB 040889__	LONGITUDINAL TINING
JOB 040889__	MAINTENANCE OF TRAFFIC
JOB 040889__	MANDATORY ELECTRONIC CONTRACT
JOB 040889__	MANDATORY ELECTRONIC DOCUMENT SUBMITTAL
JOB 040889__	NEMA ENCLOSURE
JOB 040889__	OFF-SITE RESTRAINING CONDITIONS FOR INDIANA AND NORTHERN LONG-EARED BATS
JOB 040889__	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORT
JOB 040889__	PARTNERING REQUIREMENTS
JOB 040889__	PEDESTAL TYPE SERVICE POINT ASSEMBLY
JOB 040889__	PLASTIC PIPE
JOB 040889__	PRICE ADJUSTMENT FOR ASPHALT BINDER
JOB 040889__	PRICE ADJUSTMENT FOR FUEL
JOB 040889__	PROHIBITION OF CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT
JOB 040889__	RADAR DETECTION SYSTEM
JOB 040889__	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT
JOB 040889__	RETROREFLECTIVE BACKPLATES
JOB 040889__	SERVICE POINT ASSEMBLY (TRAFFIC CONTROL DEVICES)
JOB 040889__	SHORING FOR CULVERTS
JOB 040889__	SOIL STABILIZATION
JOB 040889__	STORM WATER POLLUTION PREVENTION PLAN
JOB 040889__	STREET NAME SIGN (MAST ARM MOUNTED)
JOB 040889__	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 040889__	SYSTEM LOCAL CONTROLLER
JOB 040889__	THERMOPLASTIC PAVEMENT MARKING (YIELD LINE)
JOB 040889__	TRAFFIC SIGNAL CONTROLLER (MODIFICATION)
JOB 040889__	UTILITY ADJUSTMENTS
JOB 040889__	VALUE ENGINEERING
JOB 040889__	WARM MIX ASPHALT
JOB 040889__	WORK ZONE LAW ENFORCEMENT

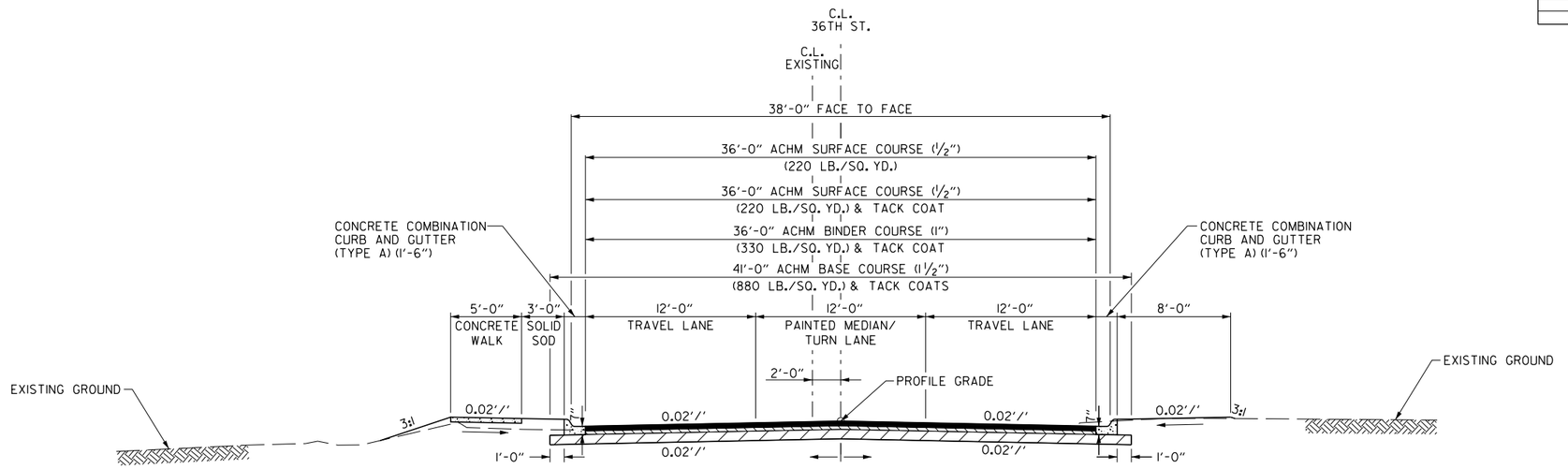
GENERAL NOTES

1. GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.
2. ALL PIPE LINES, POWER, TELEPHONE, AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
3. ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY OF UTILITY SERVICE ORGANIZATIONS SHALL BE MOVED BY THE OWNERS UNLESS OTHERWISE PROVIDED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING U. S. MAILBOXES WITHIN THE PROJECT LIMITS IN SUCH A MANNER THAT THE PUBLIC MAY RECEIVE CONTINUED MAIL SERVICE. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS BID ITEMS.
5. ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
6. ALL TREES THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE SPARED AS DIRECTED BY THE ENGINEER. CARE AND DISCRETION SHALL BE USED TO ENSURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HARMED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A FENCE TO CONTROL LIVESTOCK IN AREAS WHERE PASTURES ARE SEVERED. WIRE FENCE MAY BE CONSTRUCTED INITIALLY, OR IN LIEU THEREOF, THE CONTRACTOR AT HIS OWN EXPENSE, MAY ELECT TO PROVIDE TEMPORARY FENCING SUITABLE TO CONTAIN LIVESTOCK.
8. 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 RESIDENT ENGINEER.
9. ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 - UNCLASSIFIED EXCAVATION.
10. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	4	83
		TYPICAL SECTIONS OF IMPROVEMENT				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16886
NICHOLAS A. BRADDY
DIGITALLY SIGNED 6/26/2025



S. 36TH STREET TYPICAL CURB AND GUTTER SECTION

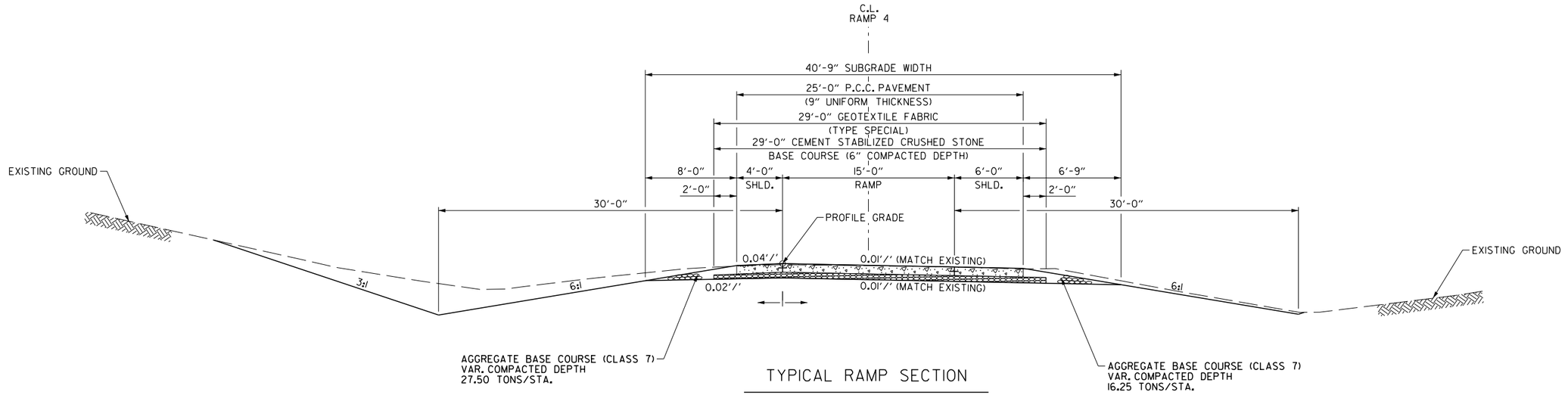
STA. 502+00.00 TO STA. 507+95.00

NOTES:

REFER TO CROSS SECTIONS FOR DEVIATIONS FROM NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.

THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT THE LANE LINES.

PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE CURB AND GUTTER, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHOD(S) USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.



TYPICAL RAMP SECTION

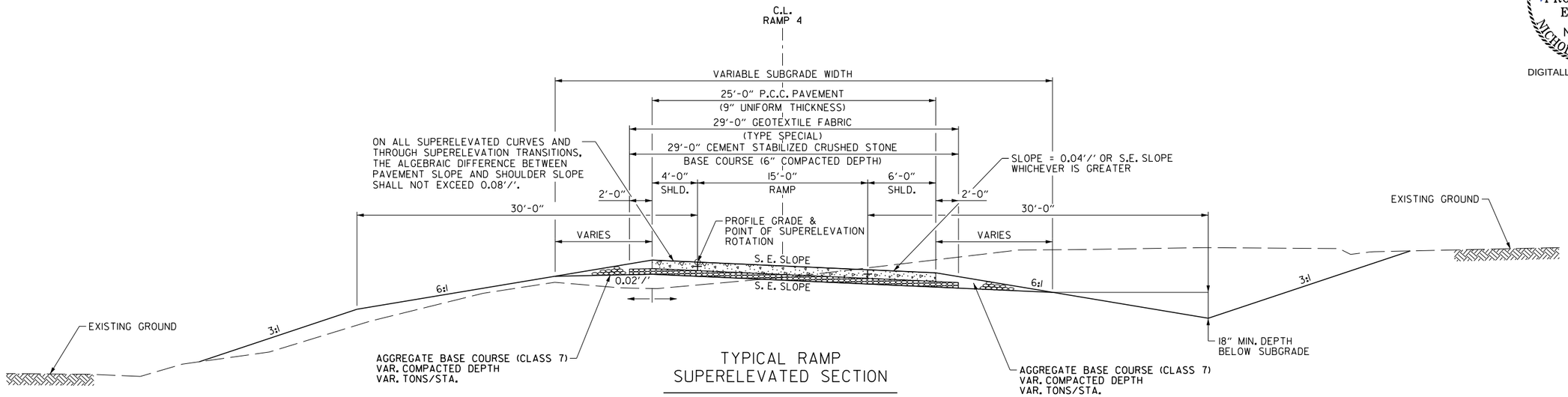
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RAMP 4 STA. 400+49.36 TO STA. 401+73.65

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DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
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		TYPICAL SECTIONS OF IMPROVEMENT				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16886
NICHOLAS A. BRADDY
DIGITALLY SIGNED 6/26/2025



TYPICAL RAMP SUPERELEVATED SECTION

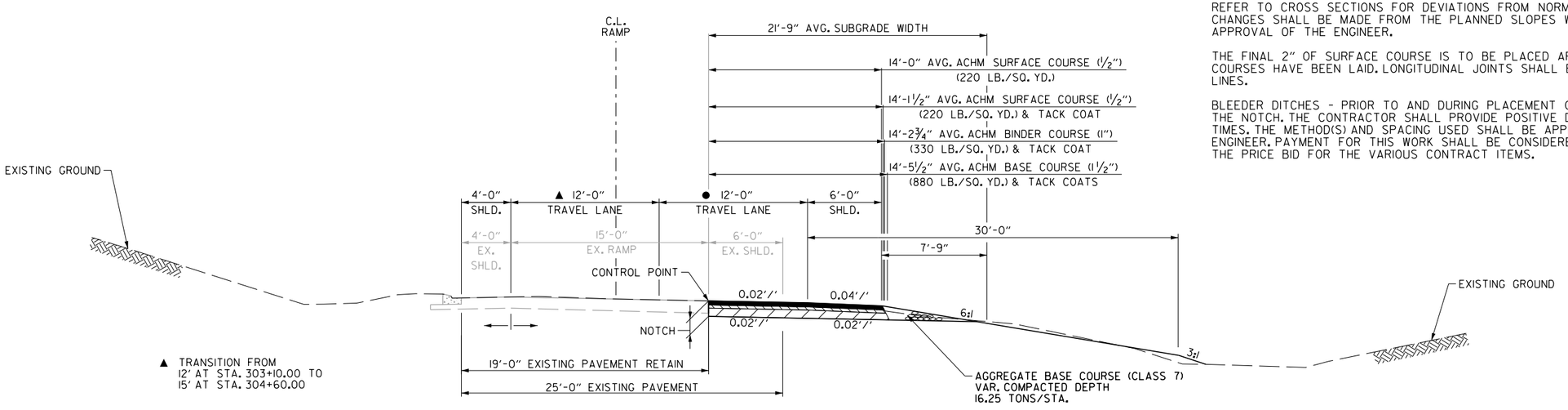
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NOTES:

REFER TO CROSS SECTIONS FOR DEVIATIONS FROM NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.

THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT THE LANE LINES.

BLEEDER DITCHES - PRIOR TO AND DURING PLACEMENT OF PAVEMENT AT THE NOTCH. THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHOD(S) AND SPACING USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.



▲ TRANSITION FROM 12' AT STA. 303+10.00 TO 15' AT STA. 304+60.00

● TRANSITION FROM 12' AT STA. 303+10.00 TO 0' AT STA. 304+60.00

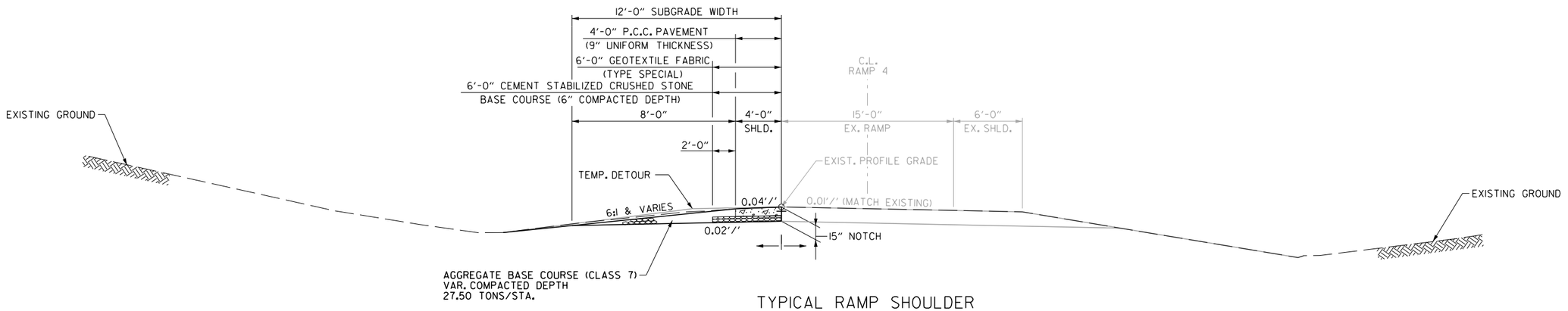
TYPICAL RAMP NOTCH & WIDEN SECTION

(SHOWN IN THE DIRECTION OF TRAFFIC)
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	6	83
		TYPICAL SECTIONS OF IMPROVEMENT				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16886
NICHOLAS A. BRADDY
DIGITALLY SIGNED 6/26/2025



TYPICAL RAMP SHOULDER RECONSTRUCTION

(SHOWN IN THE DIRECTION OF TRAFFIC)

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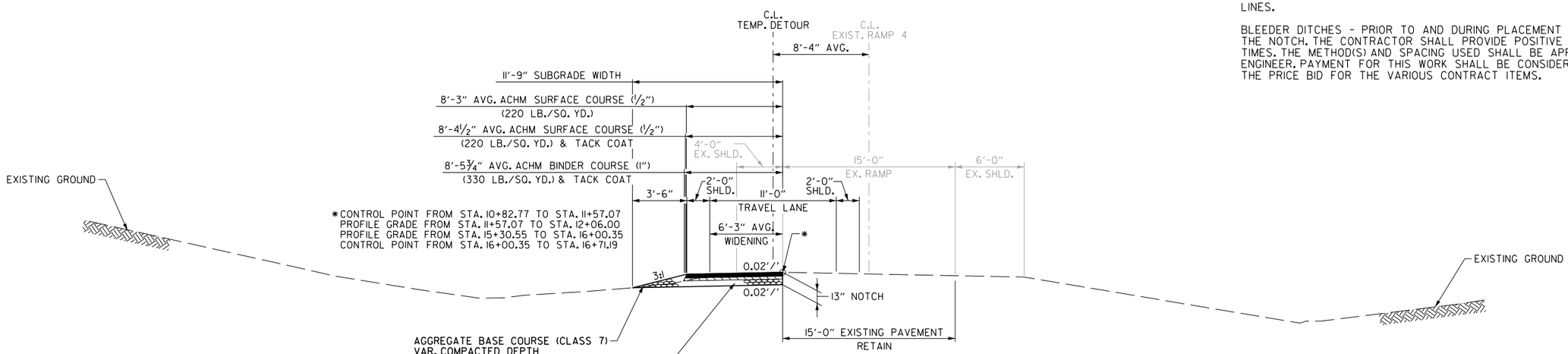
NOTES:

REFER TO CROSS SECTIONS FOR DEVIATIONS FROM NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.

THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET THE TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT THE LANE LINES.

BLEEDER DITCHES - PRIOR TO AND DURING PLACEMENT OF PAVEMENT AT THE NOTCH. THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHOD(S) AND SPACING USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.



TYPICAL TEMP. DETOUR

(SHOWN IN THE DIRECTION OF TRAFFIC)

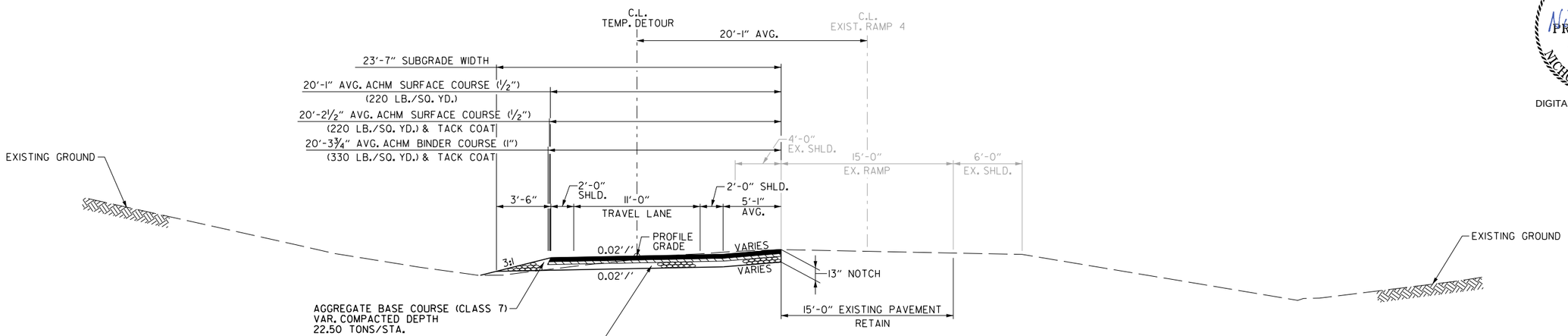
STA. 10+82.77 TO STA. 12+06.00

STA. 15+30.55 TO STA. 16+71.19

JATurner 12/6/2024 10:50:14 AM
WORKSPACE: AHTD
L:\2021\2110100 - ARDOT 040889 I-540-Hwy 255\Drawings\r040889_TYP.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	7	83
		TYPICAL SECTIONS OF IMPROVEMENT				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16886
NICHOLAS A. BRADDY
DIGITALLY SIGNED 6/26/2025



TYPICAL TEMP. DETOUR

(SHOWN IN THE DIRECTION OF TRAFFIC)

STA. 12+06.00 TO STA. 15+30.55

NOTES:

REFER TO CROSS SECTIONS FOR DEVIATIONS FROM NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.

THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET THE TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

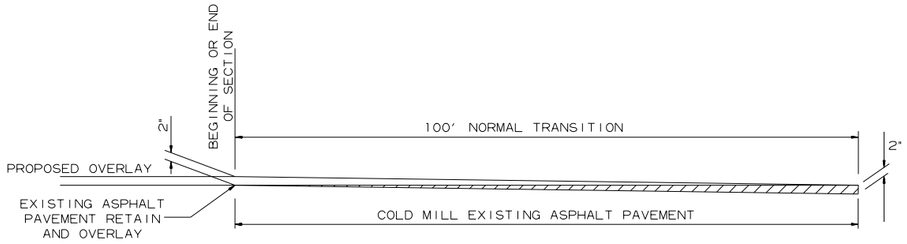
THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT THE LANE LINES.

BLEEDER DITCHES - PRIOR TO AND DURING PLACEMENT OF PAVEMENT AT THE NOTCH. THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHOD(S) AND SPACING USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

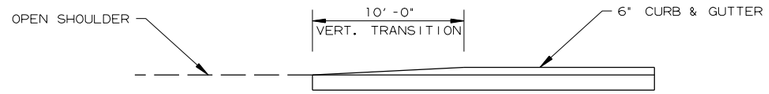
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	8	83
		SPECIAL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16886
NICHOLAS A. BRADDY
DIGITALLY SIGNED 6/26/2025

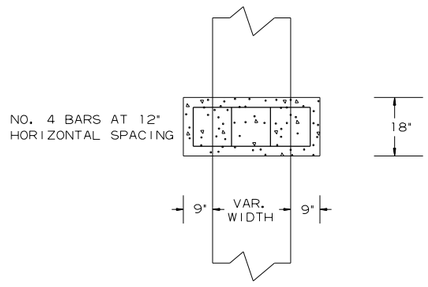


DETAIL FOR TRANSITIONS



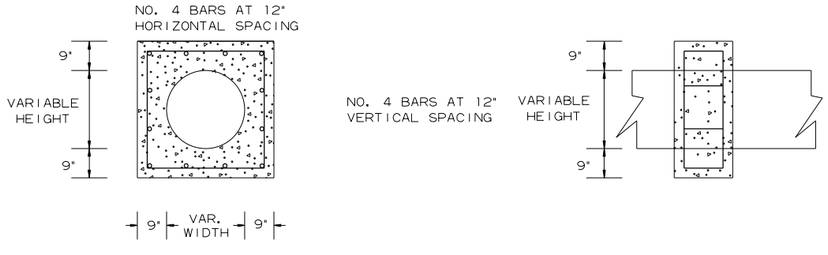
S. 36TH STREET:
STA. 504+10.00 RT.
STA. 508+07.00 RT.

TRANSITION FROM OPEN SHOULDER
TO CURB & GUTTER SECTION



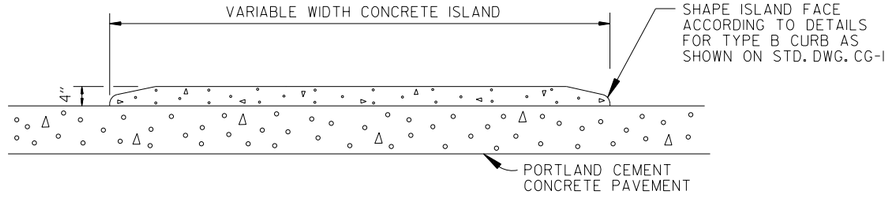
TOP VIEW

MIN 3" COVER



FRONT VIEW SIDE VIEW

PIPE EXTENSION
REINFORCED CONCRETE COLLAR DETAIL



DETAILS OF CONCRETE ISLAND ON P.C. CONCRETE PAVEMENT

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WORKSPACE: AHTD
\\garverinc.local\gdata\Projects\2021\21T0010 - ARDOT 040889 I-540-Hwy 255\Drawings\r040889_SD_AII.DGN
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	9	83

TEMPORARY EROSION CONTROL DETAILS

HWY. 255

SAND BAG DITCH CHECK	(E-5)	INSTALLATION
STA. 701+90	RT.	1

SILT FENCE	(E-11)	LIN. FT.
STA. 701+85 TO 702+90	RT.	107

RAMP 4

ROCK DITCH CHECK	(E-6)	INSTALLATION
STA. 398+20	LT.	1
STA. 399+25	RT.	1

SAND BAG DITCH CHECK	(E-5)	INSTALLATION
STA. 401+20	LT.	1
STA. 402+10	RT.	1

FILTER SOCK	E-13	INSTALLATION
STA. 402+65	RT.	1

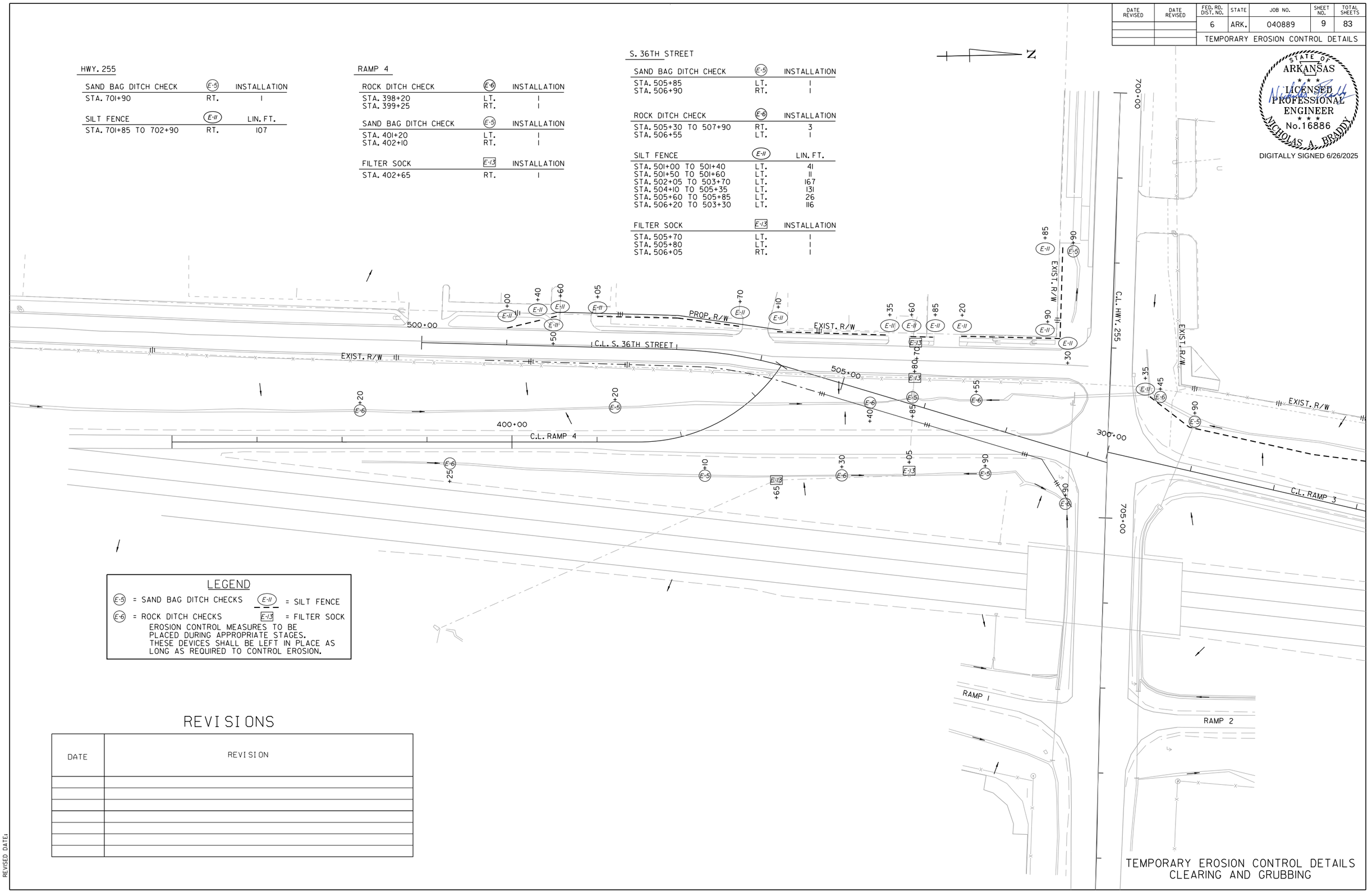
S. 36TH STREET

SAND BAG DITCH CHECK	(E-5)	INSTALLATION
STA. 505+85	LT.	1
STA. 506+90	RT.	1

ROCK DITCH CHECK	(E-6)	INSTALLATION
STA. 505+30 TO 507+90	RT.	3
STA. 506+55	LT.	1

SILT FENCE	(E-11)	LIN. FT.
STA. 501+00 TO 501+40	LT.	41
STA. 501+50 TO 501+60	LT.	11
STA. 502+05 TO 503+70	LT.	167
STA. 504+10 TO 505+35	LT.	131
STA. 505+60 TO 505+85	LT.	26
STA. 506+20 TO 503+30	LT.	116

FILTER SOCK	E-13	INSTALLATION
STA. 505+70	LT.	1
STA. 505+80	LT.	1
STA. 506+05	RT.	1



LEGEND

(E-5) = SAND BAG DITCH CHECKS
(E-6) = ROCK DITCH CHECKS
(E-11) = SILT FENCE
E-13 = FILTER SOCK

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

DATE	REVISION

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16886
NICHOLAS A. BRADDY
DIGITALLY SIGNED 6/26/2025

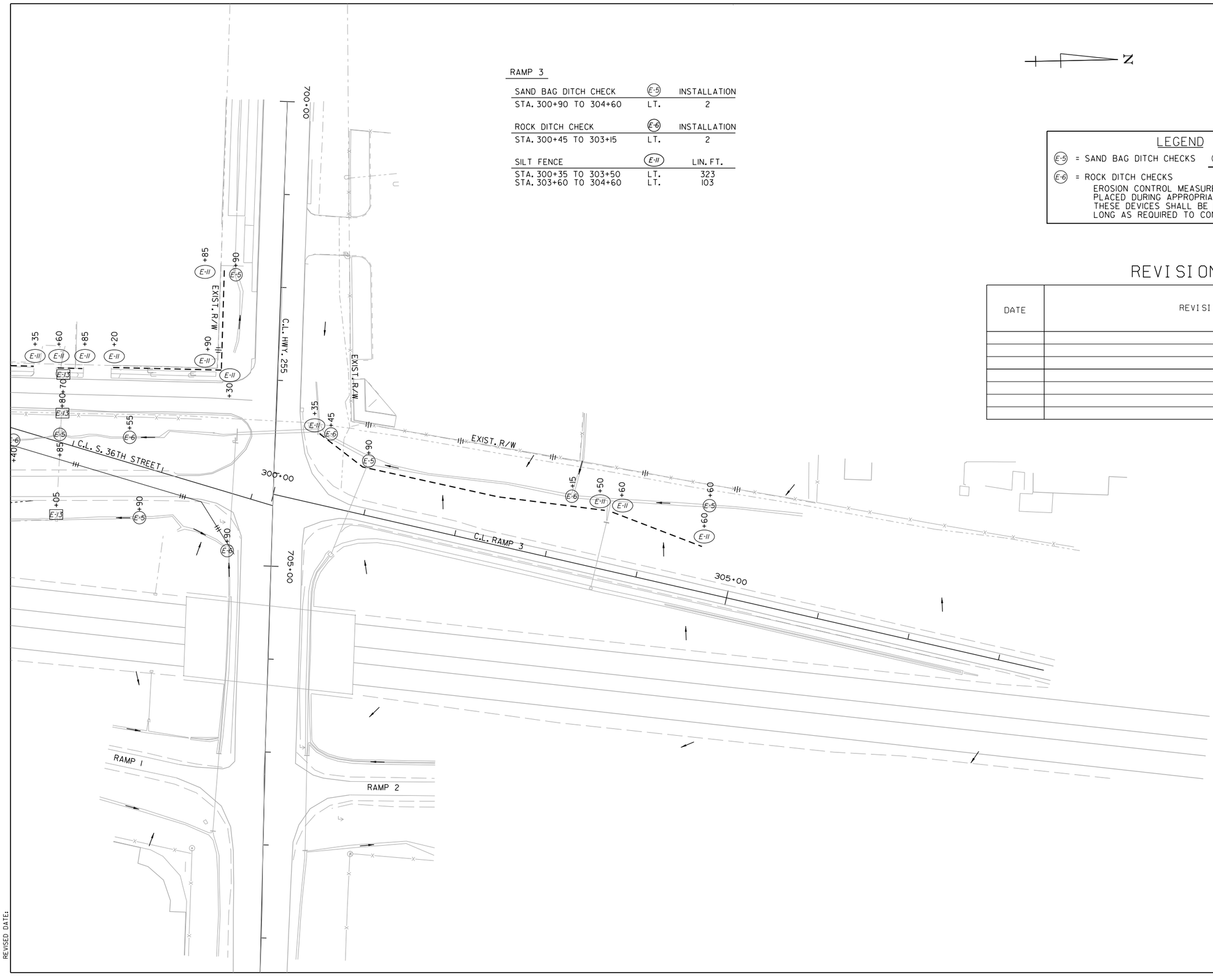
TEMPORARY EROSION CONTROL DETAILS
CLEARING AND GRUBBING

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	10	83
		TEMPORARY EROSION CONTROL DETAILS				

RAMP 3

SAND BAG DITCH CHECK (E-5)		INSTALLATION
STA. 300+90 TO 304+60	LT.	2
ROCK DITCH CHECK (E-6)		INSTALLATION
STA. 300+45 TO 303+15	LT.	2
SILT FENCE (E-11)		LIN. FT.
STA. 300+35 TO 303+50	LT.	323
STA. 303+60 TO 304+60	LT.	103



LEGEND

(E-5) = SAND BAG DITCH CHECKS (E-11) = SILT FENCE

(E-6) = ROCK DITCH CHECKS E-13 = FILTER SOCK

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
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NICHOLAS A. BRADDY
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REVISIONS

DATE	REVISION

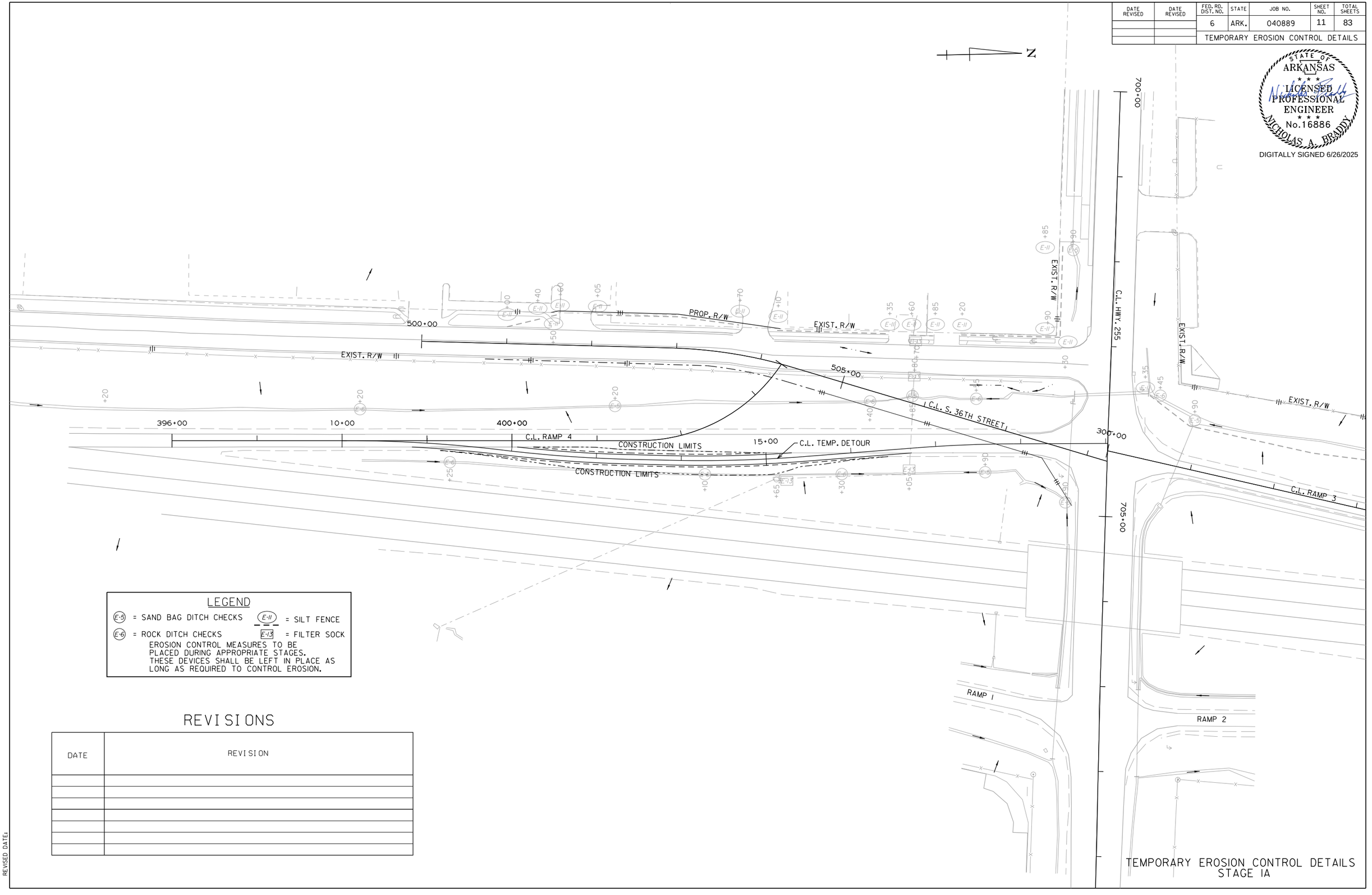
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REVISED DATE:

TEMPORARY EROSION CONTROL DETAILS
CLEARING AND GRUBBING

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	11	83

TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16886
NICHOLAS A. BRADDY
DIGITALLY SIGNED 6/26/2025



LEGEND

(E-5) = SAND BAG DITCH CHECKS
(E-6) = ROCK DITCH CHECKS
(E-11) = SILT FENCE
(E-13) = FILTER SOCK

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

DATE	REVISION

TEMPORARY EROSION CONTROL DETAILS
STAGE IA

JATurner
12/6/2024 10:50:43 AM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	12	83

TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
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NICHOLAS A. BRADDY
DIGITALLY SIGNED 6/26/2025

RAMP 4

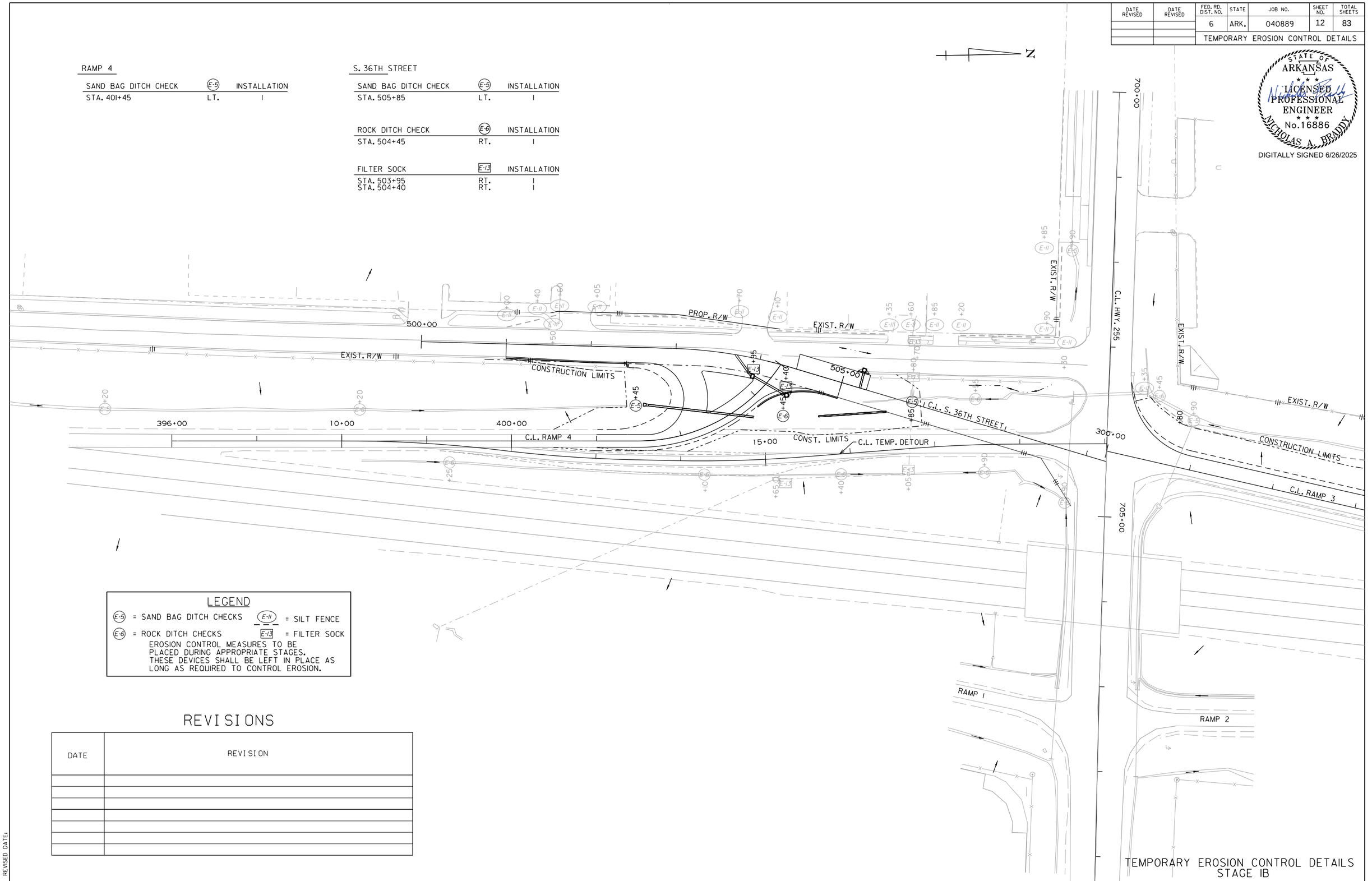
SAND BAG DITCH CHECK	E-5	INSTALLATION
STA. 401+45	LT.	I

S. 36TH STREET

SAND BAG DITCH CHECK	E-5	INSTALLATION
STA. 505+85	LT.	I

ROCK DITCH CHECK	E-6	INSTALLATION
STA. 504+45	RT.	I

FILTER SOCK	E-13	INSTALLATION
STA. 503+95	RT.	I
STA. 504+40	RT.	I



LEGEND

E-5 = SAND BAG DITCH CHECKS
E-6 = ROCK DITCH CHECKS
E-11 = SILT FENCE
E-13 = FILTER SOCK

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

DATE	REVISION

TEMPORARY EROSION CONTROL DETAILS
STAGE IB

JATurner 12/6/2024 10:50:43 AM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	13	83
		TEMPORARY EROSION CONTROL DETAILS				

N

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16886
NICHOLAS A. BRADDY
DIGITALLY SIGNED 6/26/2025

LEGEND

E-5 = SAND BAG DITCH CHECKS
E-6 = ROCK DITCH CHECKS
E-11 = SILT FENCE
E-13 = FILTER SOCK

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

DATE	REVISION

EXIST. R/W
C.L. HWY. 255
700+00
EXIST. R/W
EXIST. R/W
C.L. S. 36TH STREET
300+00
CONSTRUCTION LIMITS
C.L. RAMP 3
305+00
705+00
RAMP 1
RAMP 2

TEMPORARY EROSION CONTROL DETAILS
STAGE IB

JATurner 12/6/2024 10:50:45 AM
WORKSPACE: AHTD
\\garverinc.local\gdata\Projects\2021\21T0100 - ARDOT 040889 I-540-Hwy 255\Drawings\r040889_EC_STGIB_02.DGN
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	14	83

TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
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NICHOLAS A. BRADDY
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RAMP 4

SAND BAG DITCH CHECK	E-5	INSTALLATION
STA. 401+05 to 402+85	RT.	2

ROCK DITCH CHECK	E-6	INSTALLATION
STA. 402+45	RT.	1

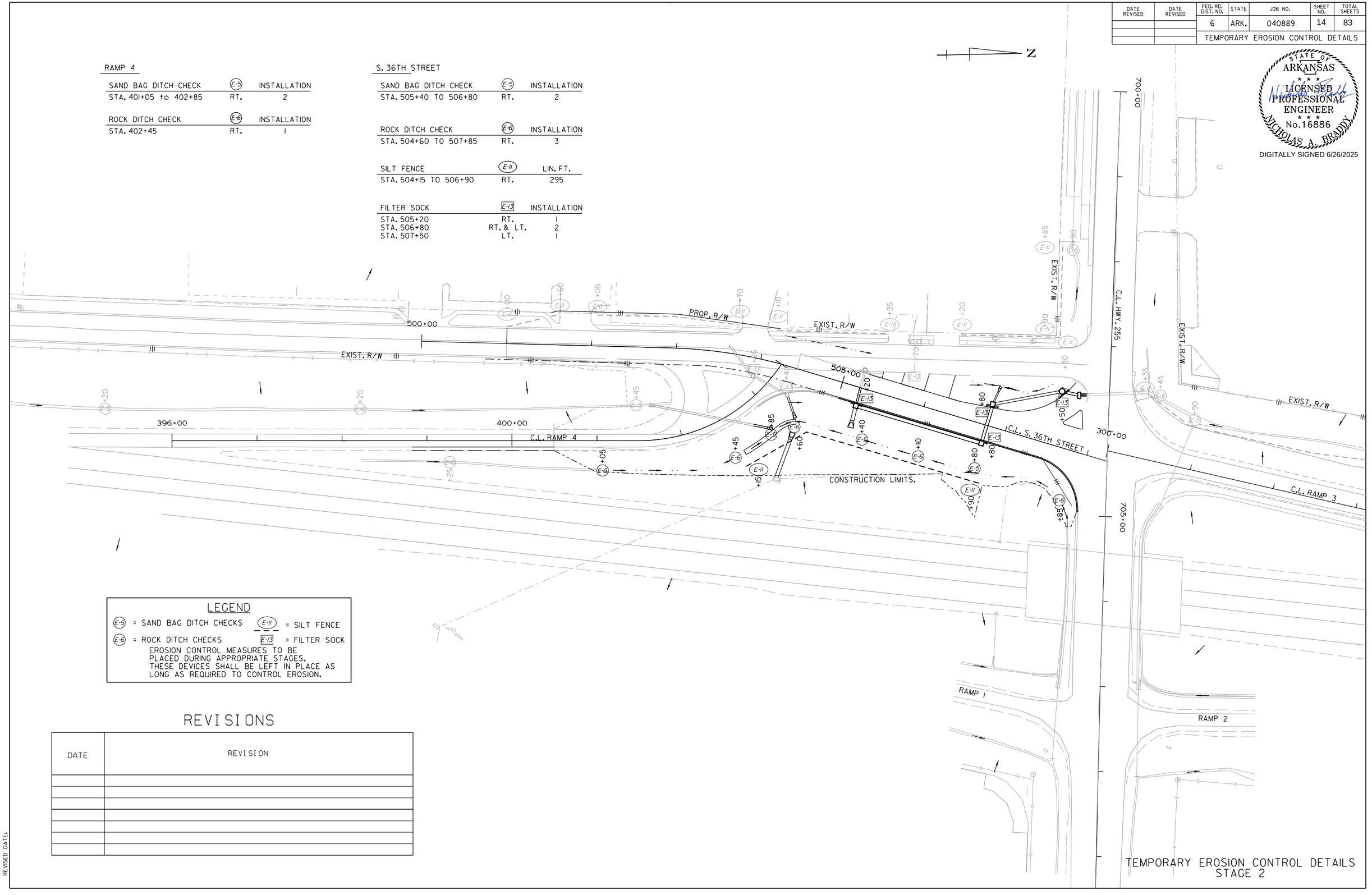
S. 36TH STREET

SAND BAG DITCH CHECK	E-5	INSTALLATION
STA. 505+40 TO 506+80	RT.	2

ROCK DITCH CHECK	E-6	INSTALLATION
STA. 504+60 TO 507+85	RT.	3

SILT FENCE	E-11	LIN. FT.
STA. 504+15 TO 506+90	RT.	295

FILTER SOCK	E-13	INSTALLATION
STA. 505+20	RT.	1
STA. 506+80	RT. & LT.	2
STA. 507+50	LT.	1



LEGEND

E-5 = SAND BAG DITCH CHECKS
E-6 = ROCK DITCH CHECKS
E-11 = SILT FENCE
E-13 = FILTER SOCK

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

DATE	REVISION

TEMPORARY EROSION CONTROL DETAILS
STAGE 2

JATurner
12/6/2024 10:50:45 AM
WORKSPACE: AHTD
\\garver-inc.local\gdata\Projects\2021\21T0010 - ARDOT 040889 I-540-Hwy 255\Drawings\r040889_EC_STG2.DLDGN
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
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TEMPORARY EROSION CONTROL DETAILS

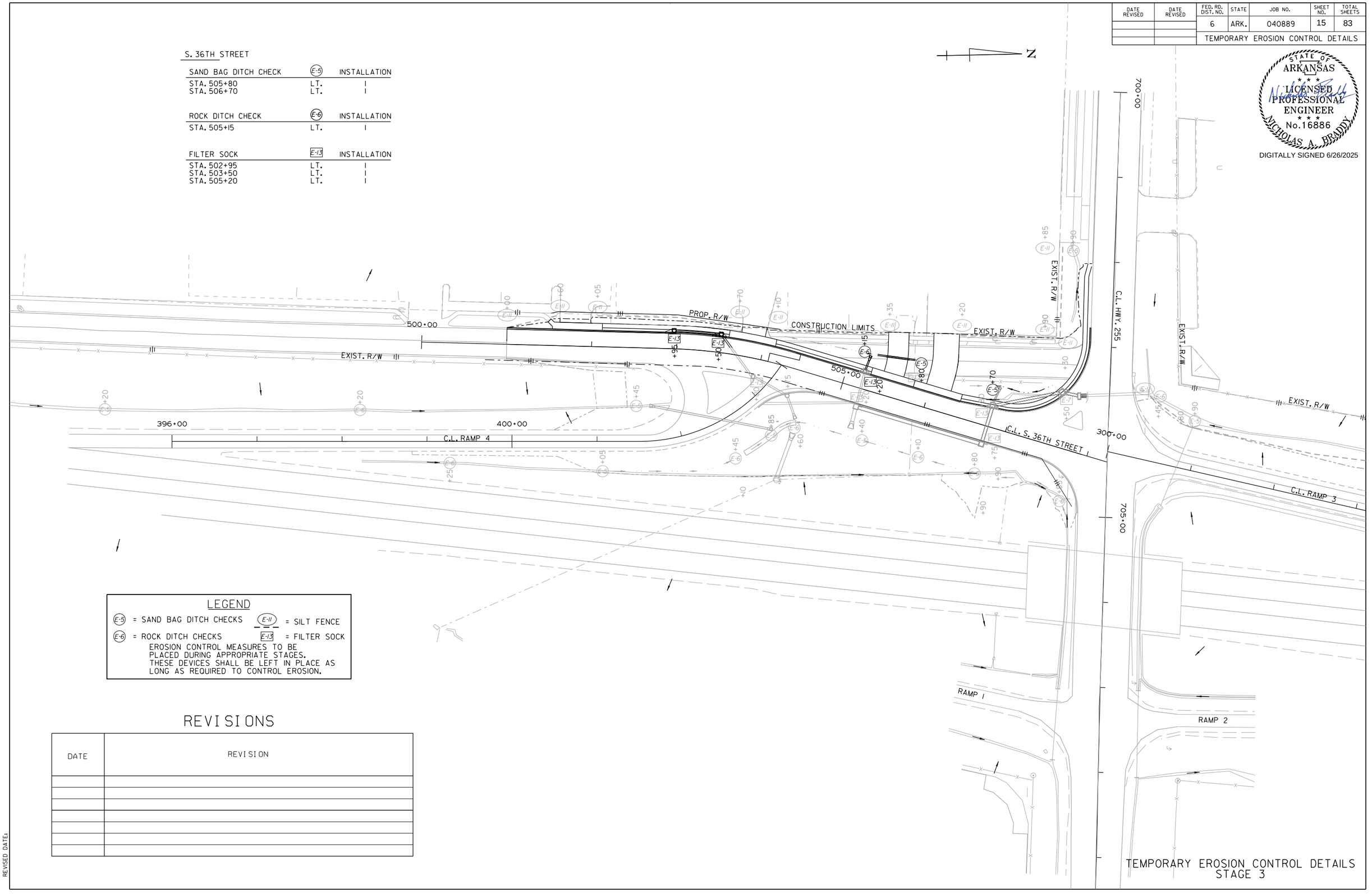
S. 36TH STREET

SAND BAG DITCH CHECK	(E-5)	INSTALLATION
STA. 505+80	LT.	I
STA. 506+70	LT.	I

ROCK DITCH CHECK	(E-6)	INSTALLATION
STA. 505+15	LT.	I

FILTER SOCK	E-13	INSTALLATION
STA. 502+95	LT.	I
STA. 503+50	LT.	I
STA. 505+20	LT.	I

STATE OF ARKANSAS
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NICHOLAS A. BRADDY
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LEGEND

(E-5) = SAND BAG DITCH CHECKS (E-11) = SILT FENCE

(E-6) = ROCK DITCH CHECKS E-13 = FILTER SOCK

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

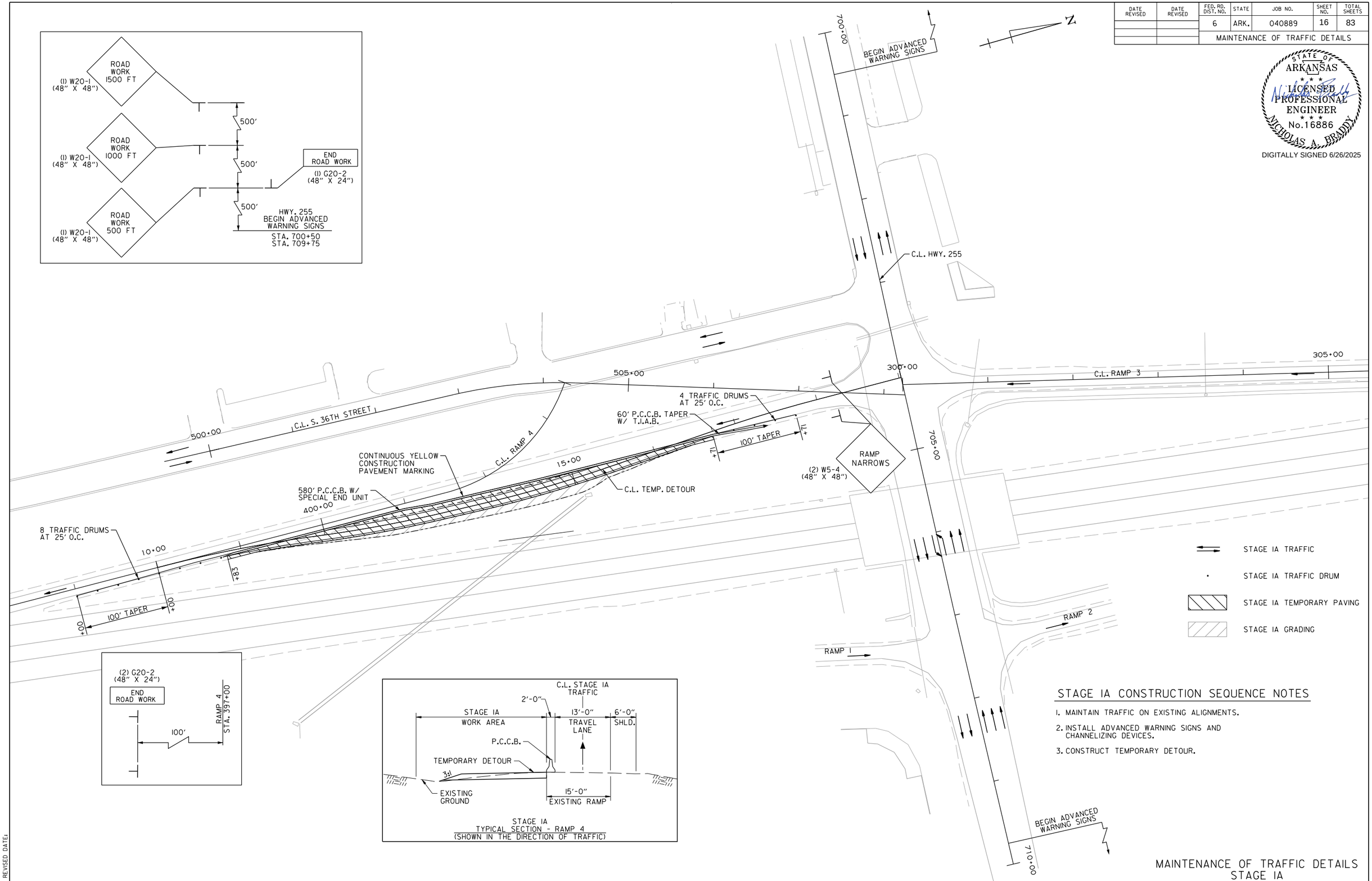
DATE	REVISION

TEMPORARY EROSION CONTROL DETAILS
STAGE 3

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	16	83
		MAINTENANCE OF TRAFFIC DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16886
NICHOLAS A. BRADDY
DIGITALLY SIGNED 6/26/2025



STAGE IA
TYPICAL SECTION - RAMP 4
(SHOWN IN THE DIRECTION OF TRAFFIC)

STAGE IA CONSTRUCTION SEQUENCE NOTES

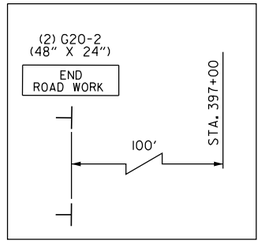
1. MAINTAIN TRAFFIC ON EXISTING ALIGNMENTS.
2. INSTALL ADVANCED WARNING SIGNS AND CHANNELIZING DEVICES.
3. CONSTRUCT TEMPORARY DETOUR.

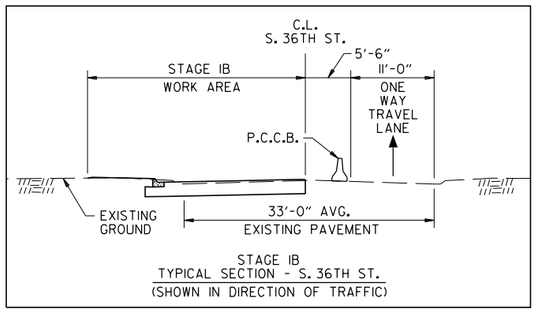
MAINTENANCE OF TRAFFIC DETAILS
STAGE IA

JATurner
WORKSPACE: AHTD
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REVISED DATE: 12/6/2024 10:51:09 AM

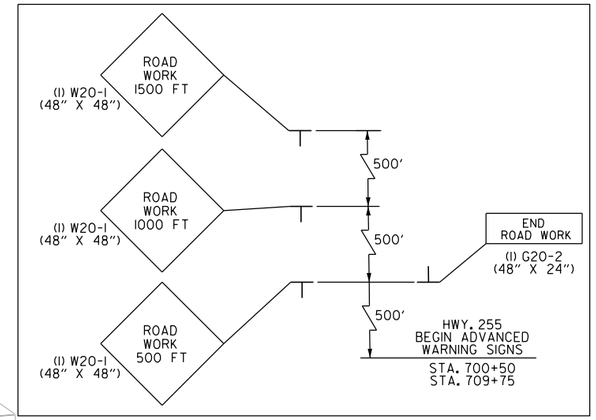
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	17	83
		MAINTENANCE OF TRAFFIC DETAILS				

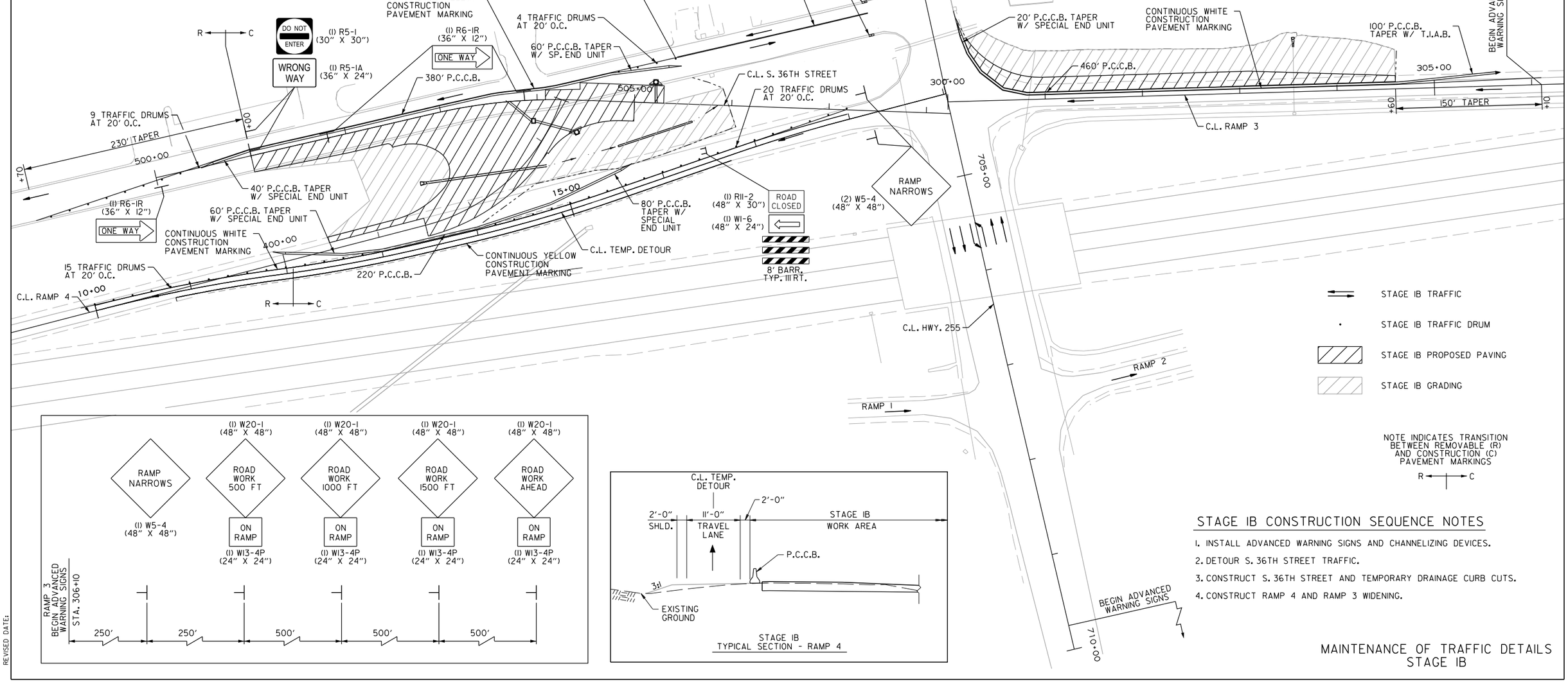
STATE OF ARKANSAS
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No.16886
NICHOLAS A. BRADDY
DIGITALLY SIGNED 6/26/2025





STAGE IB
TYPICAL SECTION - S. 36TH ST.
(SHOWN IN DIRECTION OF TRAFFIC)





STAGE IB
TYPICAL SECTION - RAMP 4

STAGE IB TRAFFIC

STAGE IB TRAFFIC DRUM

STAGE IB PROPOSED PAVING

STAGE IB GRADING

NOTE INDICATES TRANSITION
BETWEEN REMOVABLE (R)
AND CONSTRUCTION (C)
PAVEMENT MARKINGS

R ◄—► C

STAGE IB CONSTRUCTION SEQUENCE NOTES

1. INSTALL ADVANCED WARNING SIGNS AND CHANNELIZING DEVICES.
2. DETOUR S. 36TH STREET TRAFFIC.
3. CONSTRUCT S. 36TH STREET AND TEMPORARY DRAINAGE CURB CUTS.
4. CONSTRUCT RAMP 4 AND RAMP 3 WIDENING.

MAINTENANCE OF TRAFFIC DETAILS
STAGE IB

JATurner
WORKSPACE: AHTD
L:\2021\21T0100 - ARDOT 040889 I-540-Hwy 255\Drawings\r040889_MOT_STGIB_02.DGN
REVISED DATE: 12/6/2024 10:51:11 AM

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	18	83

MAINTENANCE OF TRAFFIC DETAILS

STAGE IB

1 — ROAD CLOSED
(1) R11-2 (48" X 30")
8' BARR. TYPE III RT.
8' BARR. TYPE III LT.

2 — DETOUR / ZERO ST. / 36TH ST. →
(1) M4-8 (30" X 15")
(2) W16-8P (30" X 8")
(1) M6-1R (21" X 15")

3 — DETOUR / ZERO ST. / 36TH ST. ←
(1) M4-8 (30" X 15")
(2) W16-8P (30" X 8")
(1) M6-1L (21" X 15")

4 — DETOUR / ZERO ST. / 36TH ST. ↑
(1) M4-8 (30" X 15")
(2) W16-8P (30" X 8")
(1) M6-3 (21" X 15")

5 — DETOUR / 36TH ST. →
(1) M4-8 (30" X 15")
(1) W16-8P (30" X 8")
(1) M6-1R (21" X 15")

6 — ROAD CLOSED S. 36TH ST. LOCAL TRAFFIC ONLY
(1) R11-3A (60" X 30")

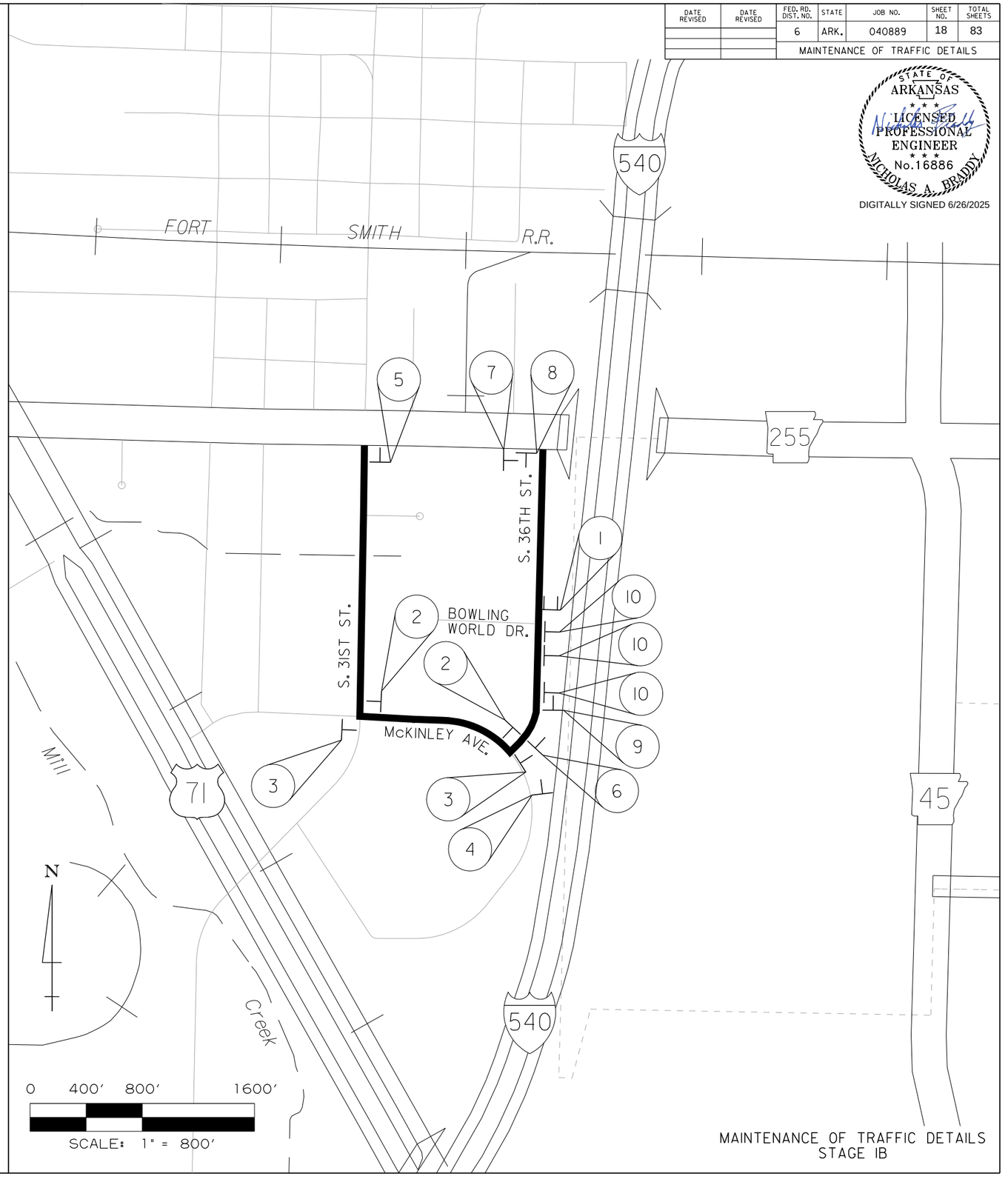
7 — END DETOUR
(1) M4-8A (48" X 24")

8 — ONE LANE ROAD AHEAD
(1) W20-4 (48" X 48")

9 — ROAD CLOSED AHEAD
(1) W20-3 (48" X 48")

10 — ONE WAY
(1) R6-1R (36" X 12")

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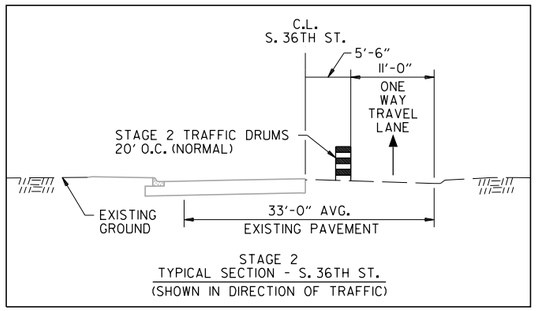
MAINTENANCE OF TRAFFIC DETAILS
STAGE IB

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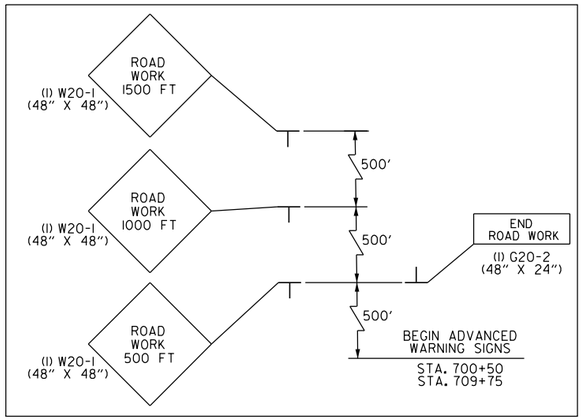
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		6	ARK.	040889	19	83
		MAINTENANCE OF TRAFFIC DETAILS				

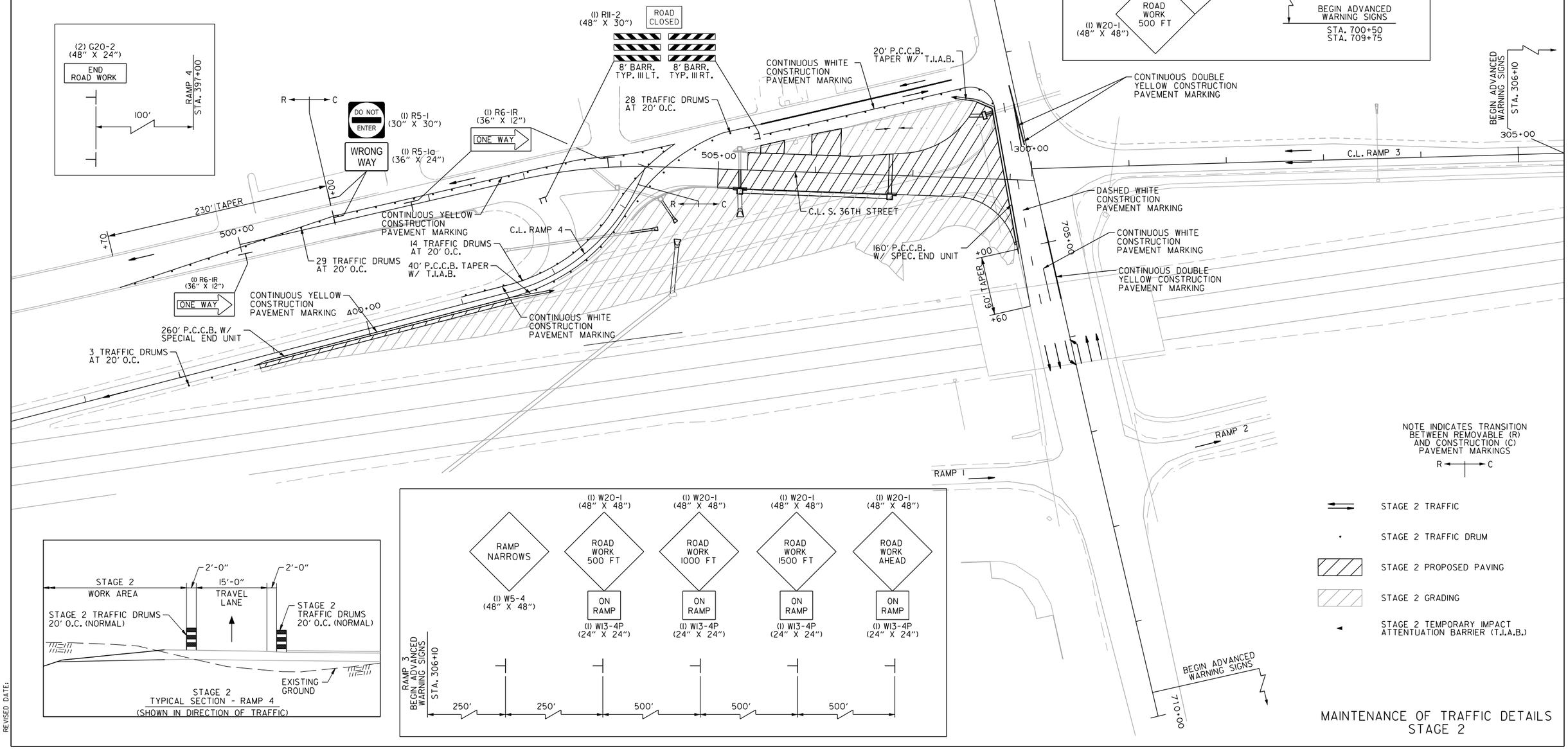
STAGE 2 CONSTRUCTION SEQUENCE NOTES

1. INSTALL ADVANCED WARNING SIGNS AND CHANNELIZING DEVICES.
2. MAINTAIN TRAFFIC ON S. 36TH STREET DETOUR.
3. CONSTRUCT TEMPORARY DRIVES AND PROPOSED S. 36TH STREET.
4. RECONSTRUCT RAMP 4 SHOULDER.



STAGE 2
TYPICAL SECTION - S. 36TH ST.
(SHOWN IN DIRECTION OF TRAFFIC)





STAGE 2
TYPICAL SECTION - RAMP 4
(SHOWN IN DIRECTION OF TRAFFIC)

NOTE INDICATES TRANSITION BETWEEN REMOVABLE (R) AND CONSTRUCTION (C) PAVEMENT MARKINGS

R C

STAGE 2 TRAFFIC

STAGE 2 TRAFFIC DRUM

STAGE 2 PROPOSED PAVING

STAGE 2 GRADING

STAGE 2 TEMPORARY IMPACT ATTENUATION BARRIER (T.I.A.B.)

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MAINTENANCE OF TRAFFIC DETAILS
STAGE 2

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DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	20	83

MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
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STAGE 2 & STAGE 3

1 — ROAD CLOSED
8' BARR. TYPE III RT.
8' BARR. TYPE III LT.
(1) RII-2 (48" X 30")

2 — DETOUR / ZERO ST. / 36TH ST. →
(1) M4-8 (30" X 15")
(2) WI6-8P (30" X 8")
(1) M6-IR (21" X 15")

3 — DETOUR / ZERO ST. / 36TH ST. ←
(1) M4-8 (30" X 15")
(2) WI6-8P (30" X 8")
(1) M6-IL (21" X 15")

4 — DETOUR / ZERO ST. / 36TH ST. ↑
(1) M4-8 (30" X 15")
(2) WI6-8P (30" X 8")
(1) M6-3 (21" X 15")

5 — DETOUR / 36TH ST. →
(1) M4-8 (30" X 15")
(1) WI6-8P (30" X 8")
(1) M6-IR (21" X 15")

6 — ROAD CLOSED S. 36TH ST. LOCAL TRAFFIC ONLY
(1) RII-3A (60" X 30")

7 — END DETOUR
(1) M4-8A (48" X 24")

8 — ONE LANE ROAD AHEAD
(1) W20-4 (48" X 48")

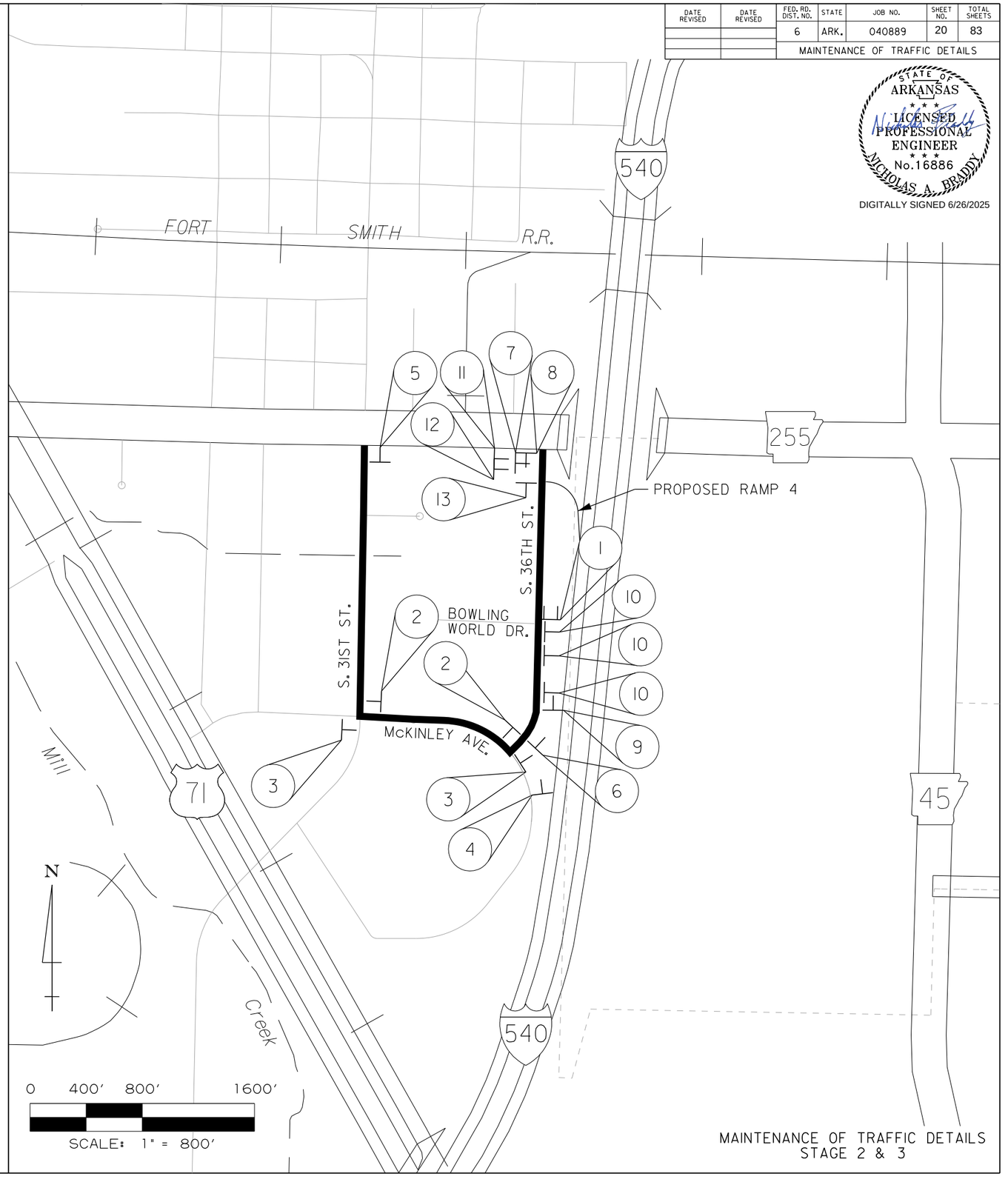
9 — ROAD CLOSED AHEAD
(1) W20-3 (48" X 48")

10 — ONE WAY
(1) R6-IR (36" X 12")

11 — TO INTERSTATE 40 ↑ / NORTH INTERSTATE 540 ↑
(1) M4-5 (24" X 12")
(1) MI-1 (MODIFIED) (24" X 24")
(1) M6-3 (21" X 15")
(1) M3-1 (24" X 12")
(1) MI-1 (MODIFIED) (30" X 24")
(1) M6-3 (21" X 15")

12 — SOUTH INTERSTATE 540 →
(1) M3-3 (24" X 12")
(1) MI-1 (MODIFIED) (30" X 24")
(1) M6-IR (21" X 15")

13 — SOUTH INTERSTATE 540 ←
(1) M3-3 (24" X 12")
(1) MI-1 (MODIFIED) (30" X 24")
(1) M6-IL (21" X 15")



MAINTENANCE OF TRAFFIC DETAILS
STAGE 2 & 3

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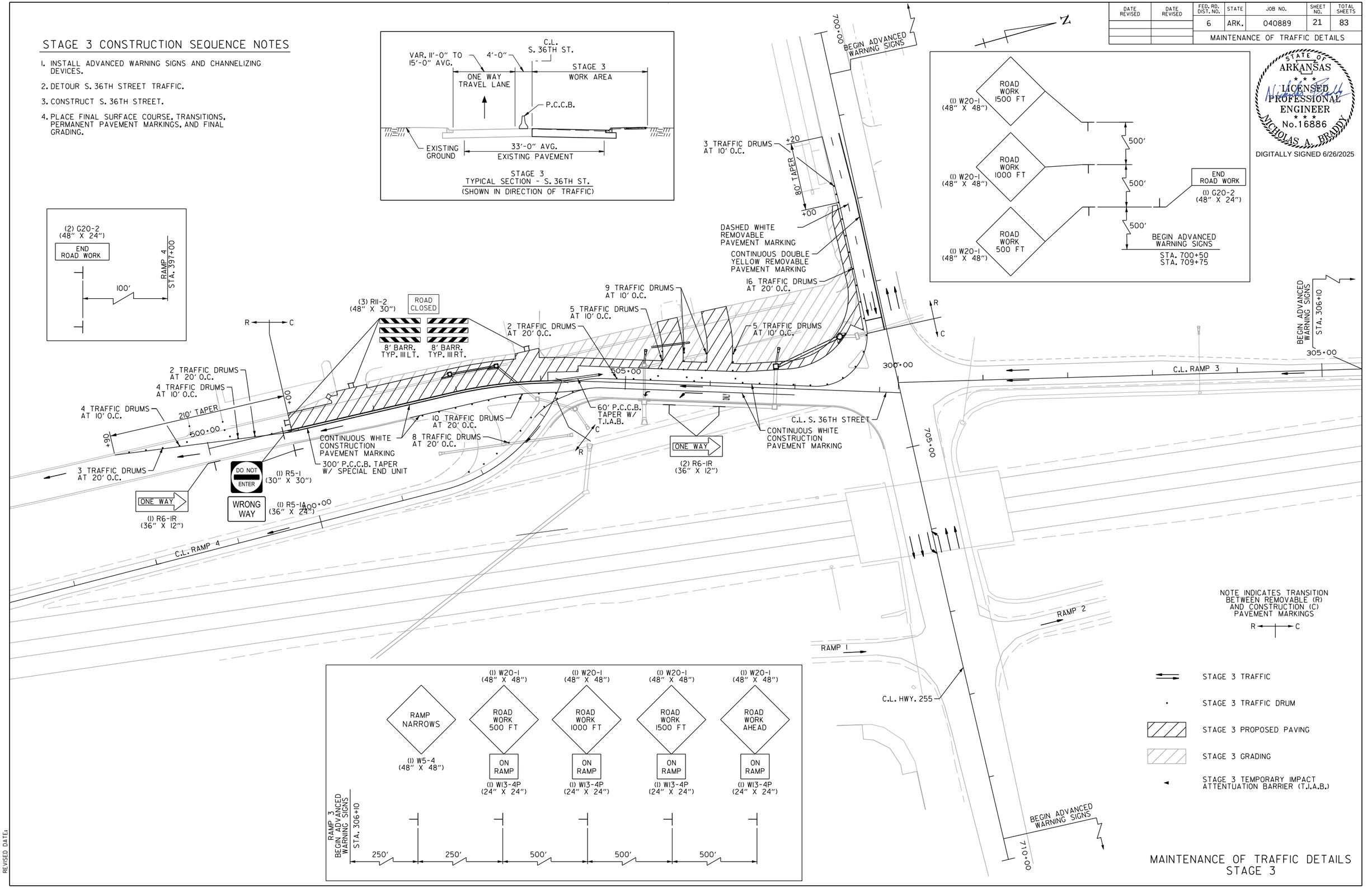
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		6	ARK.	040889	21	83
		MAINTENANCE OF TRAFFIC DETAILS				

STAGE 3 CONSTRUCTION SEQUENCE NOTES

1. INSTALL ADVANCED WARNING SIGNS AND CHANNELIZING DEVICES.
2. DETOUR S. 36TH STREET TRAFFIC.
3. CONSTRUCT S. 36TH STREET.
4. PLACE FINAL SURFACE COURSE, TRANSITIONS, PERMANENT PAVEMENT MARKINGS, AND FINAL GRADING.

STAGE 3
TYPICAL SECTION - S. 36TH ST.
(SHOWN IN DIRECTION OF TRAFFIC)

STATE OF ARKANSAS
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NOTE INDICATES TRANSITION BETWEEN REMOVABLE (R) AND CONSTRUCTION (C) PAVEMENT MARKINGS

R ◄——► C

- STAGE 3 TRAFFIC
- STAGE 3 TRAFFIC DRUM
- STAGE 3 PROPOSED PAVING
- STAGE 3 GRADING
- STAGE 3 TEMPORARY IMPACT ATTENTUATION BARRIER (T.I.A.B.)

MAINTENANCE OF TRAFFIC DETAILS
STAGE 3

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DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	22	83

PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
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6" WHITE ENHANCED THERMOPLASTIC PAVEMENT MARKING

STA.	STA.	LOCATION	LIN. FT.
707+11	707+29	HWY. 255 RT. (RAMP 1)	100
707+43	707+44	HWY. 255 LT. (RAMP 2)	100
300+08	304+60	RAMP 3 LT.	490
398+00	401+72	RAMP 4 LT.	522

6" YELLOW ENHANCED THERMOPLASTIC PAVEMENT MARKING

STA.	STA.	LOCATION	LIN. FT.
706+96	707+11	HWY. 255 RT. (RAMP 1)	167
707+12	707+28	HWY. 255 LT. (RAMP 2)	171
398+00	403+45	RAMP 4 RT.	575
402+25	402+54	RAMP 4 LT.	73

THERMOPLASTIC PAVEMENT MARKING (WORDS)

STA.	LOCATION	EACH
705+01	HWY. 255 RT.	1
705+72	HWY. 255 LT.	1
706+01	HWY. 255 RT.	1
706+72	HWY. 255 LT.	1
505+42	S. 36TH ST. C.L.	1
506+42	S. 36TH ST. C.L.	1
301+49	RAMP 3 LT.	1
302+49	RAMP 3 LT.	1

THERMOPLASTIC PAVEMENT MARKING (ARROWS)

STA.	LOCATION	EACH
705+22	HWY. 255 LT.	1
705+51	HWY. 255 RT.	1
706+22	HWY. 255 LT.	1
706+51	HWY. 255 RT.	1
708+25	HWY. 255 LT.	2
504+92	S. 36TH ST. C.L.	1
505+92	S. 36TH ST. C.L.	1
300+99	RAMP 3 LT. & RT.	2
301+99	RAMP 3 LT. & RT.	2
302+99	RAMP 3 LT. & RT.	2

THERMOPLASTIC PAVEMENT MARKING (YIELD LINE)

STA.	STA.	LOCATION	LIN. FT.
507+38	507+48	S. 36TH ST. LT.	17
503+94	503+94	S. 36TH ST. RT.	9
402+08	402+24	RAMP 4 LT.	21

6" WHITE THERMOPLASTIC PAVEMENT MARKING

STA.	STA.	LOCATION	LIN. FT.
700+75	703+65	HWY. 255 LT. & RT.	160
703+59	704+04	HWY. 255 RT.	144
703+75	704+65	HWY. 255 LT. & RT.	48
704+59	707+12	HWY. 255 LT.	542
704+72	707+11	HWY. 255 RT.	505
707+02	707+68	HWY. 255 LT. & RT.	36
707+29	707+81	HWY. 255 RT. (RAMP 1)	87
707+44	709+96	HWY. 255 LT. (RAMP 2)	96
707+75	709+75	HWY. 255 LT.	343
707+80	709+75	HWY. 255 RT.	244
503+21	504+09	S. 36TH ST. RT.	85
504+72	506+75	S. 36TH ST. LT.	203
300+50	303+10	RAMP 3 LT.	260
402+25	403+25	RAMP 4 LT.	96

8" YELLOW THERMOPLASTIC PAVEMENT MARKING

STA.	STA.	LOCATION	LIN. FT.
702+88	703+74	HWY. 255 C.L.	82
707+76	708+43	HWY. 255 RT.	20
502+13	503+92	S. 36TH ST. C.L.	164

10" WHITE REFLECTORIZED PAINT PAVEMENT MARKING

STA.	STA.	LOCATION	LIN. FT.
703+77	703+98	HWY. 255 RT.	72
402+39	403+12	RAMP 4 LT.	180

12" WHITE THERMOPLASTIC PAVEMENT MARKING

STA.	STA.	LOCATION	LIN. FT.
703+75		HWY. 255 RT.	20
704+72		HWY. 255 LT.	33
707+01		HWY. 255 RT.	33
707+19	707+54	HWY. 255 RT. (RAMP 1)	35
707+75		HWY. 255 LT. & RT.	42
501+62	507+66	S. 36TH ST. RT.	16
300+44	300+54	RAMP 3 LT. & RT.	54

RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)

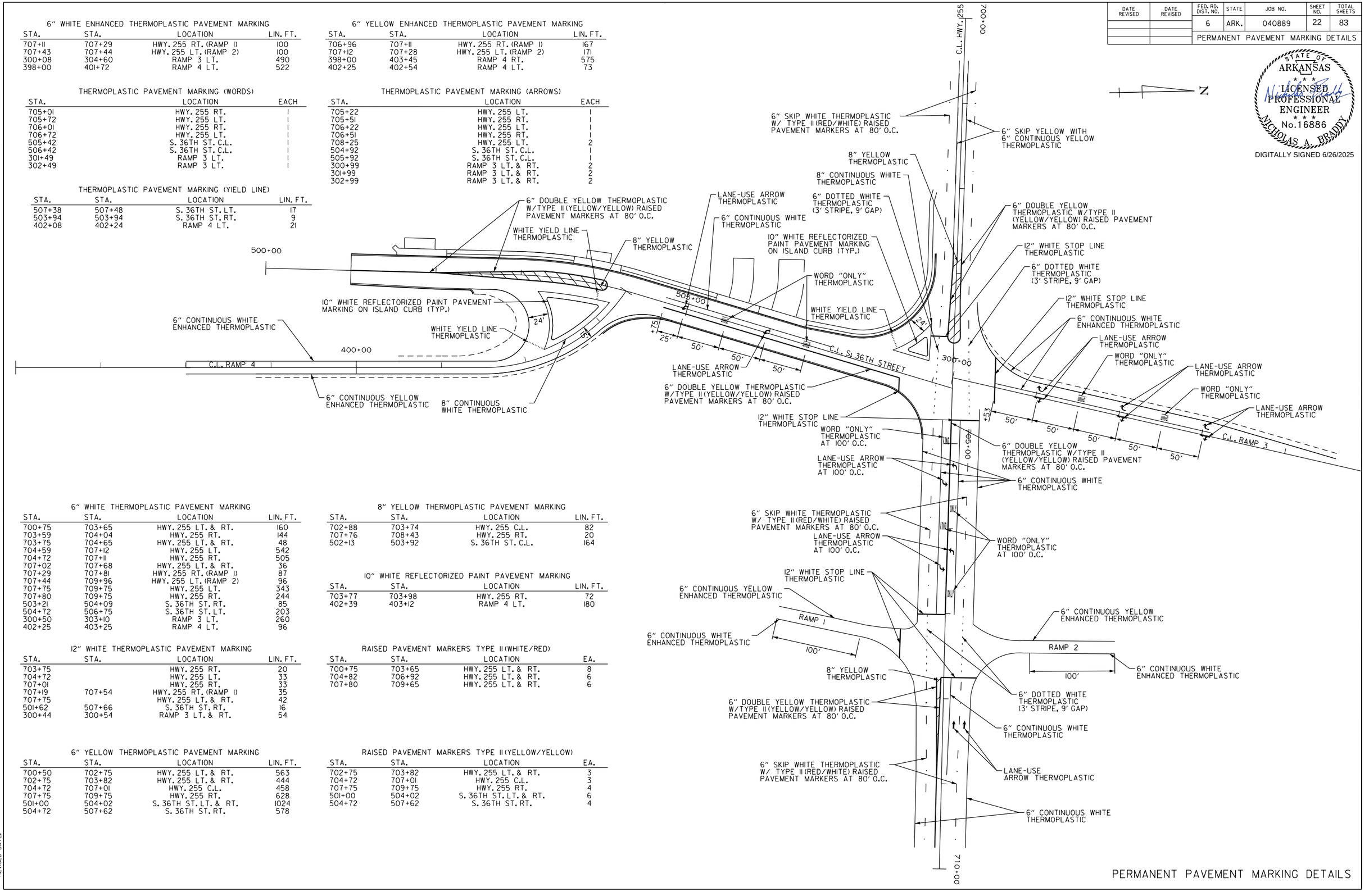
STA.	STA.	LOCATION	EA.
700+75	703+65	HWY. 255 LT. & RT.	8
704+82	706+92	HWY. 255 LT. & RT.	6
707+80	709+65	HWY. 255 LT. & RT.	6

6" YELLOW THERMOPLASTIC PAVEMENT MARKING

STA.	STA.	LOCATION	LIN. FT.
700+50	702+75	HWY. 255 LT. & RT.	563
702+75	703+82	HWY. 255 LT. & RT.	444
704+72	707+01	HWY. 255 C.L.	458
707+75	709+75	HWY. 255 RT.	628
501+00	504+02	S. 36TH ST. LT. & RT.	1024
504+72	507+62	S. 36TH ST. RT.	578

RAISED PAVEMENT MARKERS TYPE II (YELLOW/YELLOW)

STA.	STA.	LOCATION	EA.
702+75	703+82	HWY. 255 LT. & RT.	3
704+72	707+01	HWY. 255 C.L.	3
707+75	709+75	HWY. 255 RT.	4
501+00	504+02	S. 36TH ST. LT. & RT.	6
504+72	507+62	S. 36TH ST. RT.	4



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DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	23	83
		QUANTITIES				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16886
NICHOLAS A. BRADY

DIGITALLY SIGNED 6/26/2025

CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	STAGE 1A	STAGE 1B	STAGE 2	STAGE 3	END OF JOB	REMOVAL OF PERMANENT PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS		REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS		ENHANCED THERMOPLASTIC PAVEMENT MARKING		THERMOPLASTIC PAVEMENT MARKING						REFLECTORIZED PAINT PAVEMENT MARKING
								WORDS	ARROWS			TYPE II (WHITE/RED)	TYPE II (YELLOW/YELLOW)	6" WHITE	6" YELLOW	6" WHITE	6" YELLOW	8" YELLOW	12" WHITE	YIELD LINE	WORDS	ARROWS	10" WHITE
	LIN. FT. - EACH					LIN. FT.		EACH		LIN. FT.		EACH		LIN. FT.							EACH		LIN. FT.
REMOVAL OF PERMANENT PAVEMENT MARKINGS	682		249	612		1543																	
CONSTRUCTION PAVEMENT MARKINGS	188	1182					1370																
CONSTRUCTION PAVEMENT MARKINGS (WORDS)				1				1															
CONSTRUCTION PAVEMENT MARKINGS (ARROWS)				1					1														
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS		682	926	750	2314					4672													
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	682	1958	1484	2255							6379												
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)					20							20											
RAISED PAVEMENT MARKERS TYPE II (YELLOW/YELLOW)					20								20										
ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (6")					1212									1212									
ENHANCED THERMOPLASTIC PAVEMENT MARKING YELLOW (6")					986										986								
THERMOPLASTIC PAVEMENT MARKING WHITE (6")					2849											2849							
THERMOPLASTIC PAVEMENT MARKING YELLOW (6")					3695												3695						
THERMOPLASTIC PAVEMENT MARKING YELLOW (8")					266													266					
THERMOPLASTIC PAVEMENT MARKING WHITE (12")					233														233				
THERMOPLASTIC PAVEMENT MARKING (YIELD LINE)					47															47			
THERMOPLASTIC PAVEMENT MARKING (WORDS)					8																8		
THERMOPLASTIC PAVEMENT MARKING (ARROWS)					14																	14	
REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")					252																		252
TOTALS:						**1543**	**1370**	**1**	**1**	**4672**	**6379**	**20**	**20**	**1212**	**986**	**2849**	**3695**	**266**	**233**	**47**	**8**	**14**	**252**

NOTE: THIS IS A HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1A	STAGE 1B	STAGE 2	STAGE 3	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		TRAFFIC DRUMS	BARRICADES (TYPE III)		FURNISHING & INSTALLING PRECAST CONC. BARRIER	RELOCATING PRECAST CONCRETE BARRIER	TEMPORARY IMPACT ATTENUATION BARRIER	TEMP. IMPACT ATTEN.BARR. (REPAIR)
								NO.	SQ. FT.		RIGHT	LEFT				
			LIN. FT. - EACH							EACH			LIN. FT.		EACH	
W20-1	ROAD WORK 1500 FT.	48" x 48"	2	3	3	3	3	3	48.0							
W20-1	ROAD WORK 1000 FT.	48" x 48"	2	3	3	3	3	3	48.0							
W20-1	ROAD WORK 500 FT.	48" x 48"	2	3	3	3	3	3	48.0							
W20-1	ROAD WORK AHEAD	48" x 48"		1	1	1	1	1	16.0							
G20-2	END ROAD WORK	48" x 24"	4	4	4	4	4	4	32.0							
W5-4	RAMP NARROWS	48" x 48"	2	3	1	1	3	3	48.0							
W1-6	LEFT ARROW	48" x 24"		1			1	1	8.0							
W13-4P	ON RAMP	24" x 24"		4	4	4	4	4	16.0							
W16-8P	ZERO ST.	30" x 8"		5	5	5	5	5	8.3							
W16-8P	36TH ST.	30" x 8"		6	6	6	6	6	10.0							
W20-3	ROAD CLOSED AHEAD	48" x 48"		1	1	1	1	1	16.0							
W20-4	ONE LANE ROAD AHEAD	48" x 48"		1	1	1	1	1	16.0							
R11-2	ROAD CLOSED	48" x 30"		2	3	4	4	4	40.0							
R11-3A	ROAD CLOSED - LOCAL TRAFFIC ONLY	60" x 30"		1	1	1	1	1	12.5							
M1-1 (MODIFIED)	INTERSTATE ROUTE SIGN	24" x 24"			1	1	1	1	4.0							
M1-1 (MODIFIED)	INTERSTATE ROUTE SIGN	30" x 24"			3	3	3	3	15.0							
M3-1	CARDINAL DIRECTION NORTH	24" x 12"			1	1	1	1	2.0							
M3-3	CARDINAL DIRECTION SOUTH	24" x 12"			2	2	2	2	4.0							
M4-5	TO	24" x 12"			1	1	1	1	2.0							
M4-8	DETOUR	30" x 15"		6	6	6	6	6	18.8							
M4-8A	END DETOUR	48" x 24"		1	1	1	1	1	8.0							
M6-1R	DIRECTIONAL ARROW	21" x 15"		3	4	4	4	4	8.8							
M6-1L	DIRECTIONAL ARROW	21" x 15"		2	3	3	3	3	6.6							
M6-3	DIRECTIONAL ARROW	21" x 15"		1	3	3	3	3	6.6							
R4-7A	KEEP RIGHT	24" x 30"		1			1	1	5.0							
R5-1	DO NOT ENTER	30" x 30"		2	2	2	2	2	12.5							
R5-1A	WRONG WAY	36" x 24"		2	2	2	2	2	12.0							
R6-1R	ONE WAY	36" x 12"		6	6	6	6	6	18.0							
	TRAFFIC DRUMS		12	48	74	71	74			74						
	TYPE III BARRICADE-RT. (8')			2	3	4	4				32					
	TYPE III BARRICADE-LT. (8')			1	3	4	4					32				
	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER		640	780			1420						1420			
	RELOCATING PRECAST CONCRETE BARRIER			640	480	360	1480							1480		
	TEMPORARY IMPACT ATTENUATION BARRIER		1	1	2	1	5								5	
	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)		1	1	2	1	5									5
TOTALS:									**490.1**	**74**	**32**	**32**	**1420**	**1480**	**5**	**5**

NOTE: THIS IS A HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

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DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	24	83
		QUANTITIES				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16886
NICHOLAS A. BRADDY
DIGITALLY SIGNED 8/15/2025

CONCRETE WALKS

STATION	STATION	LOCATION	LENGTH	CONCRETE WALKS	SOLID SODDING	WATER
			LIN. FT.	SQ.YD.	SQ.YD.	M.GAL.
702+02	702+93	HWY. 255 - RT.	91	51	30	0.38
501+48	501+55	S. 36TH ST. - LT.	6	3	2	0.03
502+12	503+59	S. 36TH ST. - LT.	150	83	50	0.63
504+13	505+29	S. 36TH ST. - LT.	117	65	39	0.49
506+39	507+61	S. 36TH ST. - LT.	193	107	64	0.81
TOTAL:				**309**	**185**	**2.34**

BASIS OF ESTIMATE:
WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING

REMOVAL AND DISPOSAL OF ITEMS

STATION	STATION	LOCATION	CURB INLETS	CURB AND GUTTER	SIDEWALKS	HEADWALLS
			EACH	LIN. FT.	SQ. YD.	EACH
S. 36TH STREET						
501+00	507+61	LT.		702		
501+00	507+80	RT./LT.		693		
501+48	501+60	LT.			6	
502+03	503+71	LT.			85	
504+02	505+37	LT.			75	
505+60	505+89	LT.			16	
505+66	505+71	LT.	1			
505+75	505+81	LT.	1			
505+82	505+88	LT.				1
506+16	507+26	LT.			60	
507+17	507+80	LT.		104		
507+64	507+70	RT./LT.				2
TOTALS:			**2**	**1499**	**242**	**3**

REMOVAL AND DISPOSAL OF FENCE

STATION	STATION	LOCATION	FENCE
			LIN. FT.
501+59	507+25	S. 36TH STREET - LT./RT.	572
TOTAL:			**572**

REMOVAL AND DISPOSAL OF CULVERTS AND DROP INLETS

STATION	DESCRIPTION	PIPE CULVERTS	DROP INLETS
		EACH	
505+32	S. 36TH STREET - LT./RT.	1	
505+68	S. 36TH STREET - LT.		1
505+74	S. 36TH STREET - LT.	1	
505+78	S. 36TH STREET - LT.		1
505+86	S. 36TH STREET - LT./RT.	1	
TOTALS:		**3**	**2**

EARTHWORK

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION			*COMPACTED EMBANKMENT
			UNDERCUT	TYPICAL	TOTAL	
			CU. YD.			
STAGE 1A						
		TEMP. DETOUR		212	212	8
STAGE 1B						
		S. 36TH STREET	1141	1897	3038	1303
		RAMP 3		348	348	137
		RAMP 4	871	466	1337	1318
STAGE 2						
		S. 36TH STREET		2230	2230	544
		RAMP 4		1846	1846	1
STAGE 3						
		S. 36TH STREET		505	505	680
ENTIRE	PROJECT	APPROACHES		52	52	101
TOTALS:			**2012**	**7556**	**9568**	**4092**

NOTE: EARTHWORK QUANTITIES SHOWN ABOVE SHALL BE PAID AS PLAN QUANTITY.
* INCLUDES 2012 CU. YDS. OF COMPACTED EMBANKMENT USED FOR BACKFILL OF UNDERCUT.

SOIL STABILIZATION

STATION	STATION	LOCATION / DESCRIPTION	SOIL STABILIZATION
			TON
ENTIRE	PROJECT	TO BE USED IF AND WHERE	100
		DIRECTED BY THE ENGINEER.	
TOTAL:			**100**

QUANTITY ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.

CONCRETE DITCH PAVING

STATION	STATION	LOCATION	LENGTH	"W"	CONC. DITCH PAVING (TYPE B)	SOLID SODDING	WATER
			LIN. FT.	FEET	SQ. YD.	SQ. YD.	M. GAL.
402+55.00	403+12.00	RAMP 4. - RT.	71	6	47.33	31.56	0.40
TOTALS:					**47.33**	**31.56**	**0.40**

BASIS OF ESTIMATE:
WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING.

DRIVEWAYS & TURNOUTS

STATION	SIDE	LOCATION	WIDTH	**MODIFIED CURB		PORTLAND CEMENT CONCRETE DRIVEWAY	AGGREGATE BASE COURSE (CLASS 7)	SIDE DRAINS 18"	STANDARD DRAWINGS
			FEET	STATION		SQ. YD.	TON	LIN. FT.	
501+80	LT.	S. 36TH STREET	36	501+48	502+12	106.70			DR-2
503+86	LT.	S. 36TH STREET	28	503+58	504+14	82.33			DR-2
505+55	LT.	S. 36TH STREET	24	505+29	505+81	178.54		45	DR-2, PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
506+10	LT.	S. 36TH STREET	30	505+81	506+39	266.37			DR-2
* TEMPORARY DRIVES - STAGE 2							105.12		
TOTALS:						**633.94**	**105.12**	**45**	

* QUANTITY ESTIMATED
SEE SECTION 104.03 OF THE STD. SPECS.
TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

** FOR INFORMATION ONLY.

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	25	83
		QUANTITIES				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16886
NICHOLAS A. BRADDY
DIGITALLY SIGNED 8/15/2025

EROSION CONTROL

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL					TEMPORARY EROSION CONTROL							
			SEEDING	LIME	MULCH COVER	WATER	SECOND SEEDING APPLICATION	TEMPORARY SEEDING	MULCH COVER	WATER	SAND BAG DITCH CHECKS (E-5)	ROCK DITCH CHECKS (E-6)	SILT FENCE (E-11)	FILTER SOCK (E-13)	*SEDIMENT REMOVAL & DISPOSAL
			ACRE	TON	ACRE	M.GAL.	ACRE	ACRE	ACRE	M.GAL.	BAG	CU.YD.	LIN. FT.	LIN. FT.	CU. YD.
ENTIRE	PROJECT	CLEARING AND GRUBBING						1.80	1.80	36.7	154	24	1025	64	53
ENTIRE	PROJECT	STAGE 1A						0.06	0.06	1.3					
ENTIRE	PROJECT	STAGE 1B	0.45	0.90	0.45	45.9	0.45	0.22	0.22	4.5	44	3		24	3
ENTIRE	PROJECT	STAGE 2	0.82	1.64	0.82	83.6	0.82	0.12	0.12	2.4	88	12	295	48	19
ENTIRE	PROJECT	STAGE 3	0.40	0.80	0.40	40.8	0.40				44	3		36	3
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.			5.07	10.14	5.07	517.1	5.07	0.44	0.44	9.0	33	4	132	100	8
TOTALS:			**6.74**	**13.48**	**6.74**	**687.4**	**6.74**	**2.64**	**2.64**	**53.9**	**363**	**46**	**1452**	**272**	**86**

BASIS OF ESTIMATE:
LIME .....2 TONS / ACRE OF SEEDING
WATER.....102.0 M.G. / ACRE OF SEEDING
WATER.....20.4 M.G. / ACRE OF TEMPORARY SEEDING
SAND BAG DITCH CHECKS.....22 BAGS / LOCATION
ROCK DITCH CHECKS.....3 CU.YD./LOCATION

*QUANTITIES ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.

STRUCTURES

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE CULVERT (CLASS III)					PIPE CULVERT STORM DRAIN ALTERNATES 1 & 2			FLARED END SECTIONS FOR R.C. PIPE CULVERTS			TEMPORARY CULVERTS	DROP INLETS					JUNCT. BOXES	SOLID SODDING	WATER	STD. DWG. NOS.
														TYPE			EXT.					
		18"	24"	36"	42"	48"	18"	36"	48"	18"	24"	48"	18"	C	MO	ST	4'	8'	(TYPE E)			
		LIN. FT.								EACH			LIN. FT.	EACH						SQ.YD.	M.GAL.	
303+56	RAMP 3 - LT.	4								1										5	0.06	FES-1. FES-2, PCC-1
402+63	RAMP 4		147								2									16	0.20	FES-1. FES-2, PCC-1
502+96	S. 36TH ST. - LT.	52					52								1			1				FPC-9E, FPC-9M, PCC-1, PCP-3
503+50	S. 36TH ST. - LT.		60												1			1				FPC-9E, FPC-9M, PCC-1
503+95	S. 36TH ST. - RT.		43													1						FPC-9S, PCC-1
504+42	S. 36TH ST. - RT.		21								1				1		2			8	0.10	FES-1. FES-2, FPC-9E, FPC-9M, PCC-1
504+60	S. 36TH ST. - 82.0' RT.					48						1								29	0.37	FES-1. FES-2, FPC-9S, PCC-1
505+21	S. 36TH ST. - LT.	11	39							1					1		2			5	0.06	FES-1. FES-2, FPC-9E, FPC-9M, PCC-1
505+23	S. 36TH ST. - RT.					16						1		1			2			29	0.37	FES-1. FES-2, FPC-9E, PCC-1
505+23	S. 36TH ST. - 32.5' RT.												80									PCC-1, PCM-1, PCP-3
506+77	S. 36TH ST. - RT.					149			149					1			1					FPC-9E, PCC-1, PCP-3
506+77	S. 36TH ST. - LT.	14			43				1					1						5	0.06	FES-1. FES-2, FPC-9E, PCC-1
507+50	S. 36TH ST. - LT.			78				78							1		2					FPC-9E, FPC-9M, PCC-1, PCP-3
507+72	S. 36TH ST. - LT.	32		17															1			FPC-9, PCC-1
TOTALS:		**113**	**310**	**95**	**43**	**213**	**52**	**78**	**149**	**3**	**3**	**2**	**80**	**3**	**5**	**1**	**9**	**2**	**1**	**97**	**1.22**	

BASIS OF ESTIMATE:
WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING

NOTE: FOR R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
NOTE: FOR C.M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

BASE AND SURFACING - CONCRETE

STATION	STATION	LOCATION	LENGTH	CEMENT STABILIZED CRUSHED STONE BASE COURSE (6" COMP'D DEPTH)				GEOTEXTILE FABRIC (TYPE SPECIAL)		PORTLAND CEMENT CONCRETE PAVEMENT	
				AVG. WID.	PROCESSING	CEMENT	AGGREGATE	AVG. WID.	SQ. YD.	AVG. WID.	9" U.T.
			FEET	FEET	SQ. YD.	TON	TON	FEET		FEET	SQ. YD.
RAMP 4											
398+82.00	400+49.36	TYPICAL SHOULDER RECONSTRUCTION	167.36	6.00	111.57	2.34	36.71	6.00	111.57	4.00	74.38
400+49.36	401+73.65	TYPICAL SECTION	124.29	29.00	400.49	8.41	131.76	29.00	400.49	25.00	345.25
401+73.65	403+31.34	TYPICAL SUPERELEVATED SECTION	157.69	29.00	508.11	10.67	167.17	29.00	508.11	25.00	438.03
ADDITIONAL FOR RAMP 4 RADIUS RETURN											
401+18.80	403+31.34	RIGHT TURN ONLY AND ISLAND AREA	212.54	29.82	704.19		231.68	29.82	704.19	27.82	656.96
TOTALS:					**1724.36**	**21.42**	**567.32**		**1724.36**		**1514.62**

BASIS OF ESTIMATE:
CEMENT STABILIZED CRUSHED STONE BASE COURSE = 94.0% AGGR. 6.0% CEMENT

CLEARING AND GRUBBING

STATION	STATION	LOCATION	CLEARING	GRUBBING
			STATION	
501+00	508+09	S. 36TH ST.	8	8
300+11	304+60	RAMP 3	5	5
400+49	403+28	RAMP 4	3	3
10+83	16+71	TEMP. DETOUR	6	6
TOTALS:			**22**	**22**

SELECTED PIPE BEDDING

LOCATION	SELECTED PIPE BEDDING
	CU.YD.
ENTIRE PROJECT TO BE USED IF AND	100
WHERE DIRECTED BY THE ENGINEER.	
TOTAL:	**100**

NOTE: QUANTITY ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.

CONCRETE ISLAND

STATION	LOCATION	CURB FACE TYPE	CONCRETE ISLAND
			SQ.YD.
503+64	S. 36TH ST. - RT.	B	183
507+74	S. 36TH ST. - LT.	B	32
TOTAL:			**215**

CONCRETE COMBINATION CURB AND GUTTER

STATION	STATION	LOCATION	TYPE A (1'-6")
			LIN. FT.
501+00	502+45	S. 36TH ST. - RT.	147
501+00	507+68	S. 36TH ST. - LT.	760
504+10	508+09	S. 36TH ST. - RT.	429
TOTAL:			**1336**

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	26	83
		QUANTITIES				

BASE AND SURFACING (BOX 1 OF 2)

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT (0.05 GAL. PER SQ. YD.)			ACHM BASE COURSE (1 1/2")					ACHM BINDER COURSE (1")				
				TON / STATION	TON	TOTAL WID.	SQ.YD.	GALLON	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 64-22	PG 76-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 64-22	PG 76-22
			FEET			FEET			FEET			TON	TON	FEET			TON	TON
S. 36TH STREET																		
502+00.00	507+95.00	36TH STREET TYPICAL - C&G SECTION	595.00			113.00	7470.56	373.53	41.00	2710.56	880.00	1192.65		36.00	2380.00	330.00	392.70	
RAMP 3																		
300+30.82	304+60.00	TYPICAL RAMP - N&W SECTION	429.18	16.25	69.74	42.82	2041.90	102.10	14.46	689.69	880.00		303.46	14.23	678.63	330.00		111.97
RAMP 4																		
398+82.00	400+49.36	TYPICAL SHOULDER RECONSTRUCTION	167.36	27.50	46.02													
400+49.36	401+73.65	TYPICAL SECTION	124.29	43.75	54.38													
401+73.65	403+31.34	TYPICAL SUPERELEVATED SECTION	157.69	43.75	68.99													
TEMP. BYPASS DETOUR																		
10+82.77	12+06.00	TYPICAL TEMP. DETOUR	123.23	46.75	57.61	12.85	176.00	8.80						6.48	88.71	330.00	14.64	
12+06.00	15+30.55	TYPICAL TEMP. DETOUR	324.55	92.75	301.02	38.85	1401.12	70.06						19.48	702.44	330.00	115.90	
15+30.55	16+71.19	TYPICAL TEMP. DETOUR	140.64	46.75	65.75	12.85	200.87	10.04						6.48	101.25	330.00	16.71	
ADDITIONAL FOR SUPERELEVATION																		
401+73.65	403+31.34	TYPICAL SUPERELEVATED SECTION	157.69	14.25	22.47													
TOTALS:					**685.98**		**11290.45**	**564.53**		**3400.25**		**1192.65**	**303.46**		**3951.03**		**539.95**	**111.97**

BASIS OF ESTIMATE:

PG 64-22

ACHM SURFACE COURSE (1/2").....94.0% MIN. AGGR.....6.0% ASPHALT BINDER
ACHM BINDER COURSE (1").....95.6% MIN. AGGR.....4.4% ASPHALT BINDER
ACHM BASE COURSE (1 1/2").....96.4% MIN. AGGR.....3.6% ASPHALT BINDER

PG 76-22

ACHM SURFACE COURSE (1/2").....93.8% MIN. AGGR.....6.2% ASPHALT BINDER
ACHM BINDER COURSE (1").....95.6% MIN. AGGR.....4.4% ASPHALT BINDER
ACHM BASE COURSE (1 1/2").....96.4% MIN. AGGR.....3.6% ASPHALT BINDER

TACK COAT QUANTITIES WERE CALCULATED USING THE EMULSIFIED ASPHALT RATES. REFER TO SS-400-1 FOR THE RESIDUAL ASPHALT APPLICATION RATES.

BASE AND SURFACING (BOX 2 OF 2)

STATION	STATION	LOCATION	LENGTH	ACHM SURFACE COURSE (1/2")											
				AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 64-22	PG 76-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 64-22	PG 76-22	TOTAL PG 64-22	TOTAL PG 76-22
			FEET	FEET			TON	TON	FEET			TON	TON	TON	TON
S. 36TH STREET															
502+00.00	507+95.00	36TH STREET TYPICAL - C&G SECTION	595.00	36.00	2380.00	220.00	261.80		36.00	2380.00	220.00	261.80		523.60	
RAMP 3															
300+30.82	304+60.00	TYPICAL RAMP - N&W SECTION	429.18	14.13	673.57	220.00		74.09	14.00	667.61	220.00		73.44		147.53
RAMP 4															
398+82.00	400+49.36	TYPICAL SHOULDER RECONSTRUCTION	167.36												
400+49.36	401+73.65	TYPICAL SECTION	124.29												
401+73.65	403+31.34	TYPICAL SUPERELEVATED SECTION	157.69												
TEMP. BYPASS DETOUR															
10+82.77	12+06.00	TYPICAL TEMP. DETOUR	123.23	6.38	87.29	220.00	9.60		8.25	112.96	220.00	12.43		22.03	
12+06.00	15+30.55	TYPICAL TEMP. DETOUR	324.55	19.38	698.68	220.00	76.85		21.25	766.30	220.00	84.29		161.14	
15+30.55	16+71.19	TYPICAL TEMP. DETOUR	140.64	6.38	99.62	220.00	10.96		8.25	128.92	220.00	14.18		25.14	
ADDITIONAL FOR SUPERELEVATION															
401+73.65	403+31.34	TYPICAL SUPERELEVATED SECTION	157.69												
TOTALS:					**3939.16**		**359.21**	**74.09**		**4055.79**		**372.70**	**73.44**	**731.91**	**147.53**

BASIS OF ESTIMATE:

PG 64-22

ACHM SURFACE COURSE (1/2").....94.0% MIN. AGGR.....6.0% ASPHALT BINDER
ACHM BINDER COURSE (1").....95.6% MIN. AGGR.....4.4% ASPHALT BINDER
ACHM BASE COURSE (1 1/2").....96.4% MIN. AGGR.....3.6% ASPHALT BINDER

PG 76-22

ACHM SURFACE COURSE (1/2").....93.8% MIN. AGGR.....6.2% ASPHALT BINDER
ACHM BINDER COURSE (1").....95.6% MIN. AGGR.....4.4% ASPHALT BINDER
ACHM BASE COURSE (1 1/2").....96.4% MIN. AGGR.....3.6% ASPHALT BINDER

TACK COAT QUANTITIES WERE CALCULATED USING THE EMULSIFIED ASPHALT RATES. REFER TO SS-400-1 FOR THE RESIDUAL ASPHALT APPLICATION RATES.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16886
NICHOLAS A. BRADDY
DIGITALLY SIGNED 6/26/2025

FLOWABLE SELECT MATERIAL

STATION	LOCATION	CU. YD.
505+32	S. 36TH STREET	439
TOTAL:		**439**

ACHM PATCHING OF EXISTING ROADWAY

DESCRIPTION	TON
ENTIRE PROJECT - TO BE USED IF AND	50
WHERE DIRECTED BY THE ENGINEER.	
TOTAL:	**50**

NOTE: QUANTITY ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.

ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC

LOCATION	TON	TACK COAT GALLON
ENTIRE PROJECT - TO BE USED IF AND	8	17
WHERE DIRECTED BY THE ENGINEER.		
TOTALS:	**8**	**17**

BASIS OF ESTIMATE:
ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC....25 TON/MILE
TACK COAT FOR MAINTENANCE OF TRAFFIC.....50 GAL./MILE

COLD MILLING ASPHALT PAVEMENT

STATION	STATION	LOCATION	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT
			FEET	SQ. YD.
501+00.00	502+00.00	S. 36TH ST.	34.45	382.78
TOTAL:				**382.78**

NOTE: COORDINATE COLD MILLING STOCKPILE LOCATIONS WITH DISTRICT ENGINEER.
STOCKPILE LOCATIONS SHALL BE NO FURTHER THAN FIVE MILES FROM EACH SITE.

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WORKSPACE: AHTD
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REVISED DATE:

SUMMARY OF QUANTITIES (BOX 1 OF 2)

ITEM NUMBER	ITEM		QUANTITY	UNIT
201	CLEARING		22	STATION
201	GRUBBING		22	STATION
202	REMOVAL AND DISPOSAL OF CURB INLETS		2	EACH
202	REMOVAL AND DISPOSAL OF CURB AND GUTTER		1499	LIN. FT.
202	REMOVAL AND DISPOSAL OF FENCE		572	LIN. FT.
202	REMOVAL AND DISPOSAL OF SIDEWALKS		242	SQ. YD.
202	REMOVAL AND DISPOSAL OF DROP INLETS		2	EACH
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS		3	EACH
202	REMOVAL AND DISPOSAL OF HEADWALLS		3	EACH
SP & 202	REMOVAL AND DISPOSAL OF LUMINAIRE POLE AND FOUNDATION		8	EACH
SS & 206	FLOWABLE SELECT MATERIAL		439	CU. YD.
SP, SS, & 210	UNCLASSIFIED EXCAVATION		9568	CU. YD.
SP & 210	COMPACTED EMBANKMENT		4092	CU. YD.
SP & 210	SOIL STABILIZATION		100	TON
SP, SS, & 303	AGGREGATE BASE COURSE (CLASS 7)		791	TON
SP, SS, & 308	AGGREGATE IN CEMENT STABILIZED CRUSHED STONE BASE COURSE		567	TON
SS & 308	CEMENT IN CEMENT STABILIZED CRUSHED STONE BASE COURSE		21	TON
SS & 308	PROCESSING CEMENT STABILIZED CRUSHED STONE BASE COURSE		1724	SQ. YD.
SS & 401	TACK COAT		582	GAL.
SP, SS, & 405	MINERAL AGGREGATE IN ACHM BASE COURSE (1 1/2")		1442	TON
SP, SS, & 405	ASPHALT BINDER (PG 64-22) IN ACHM BASE COURSE (1 1/2")		43	TON
SP, SS, & 405	ASPHALT BINDER (PG 76-22) IN ACHM BASE COURSE (1 1/2")		11	TON
SP, SS, & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")		623	TON
SP, SS, & 406	ASPHALT BINDER (PG 64-22) IN ACHM BINDER COURSE (1")		24	TON
SP, SS, & 406	ASPHALT BINDER (PG 76-22) IN ACHM BINDER COURSE (1")		5	TON
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")		826	TON
SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")		44	TON
SP, SS, & 407	ASPHALT BINDER (PG 76-22) IN ACHM SURFACE COURSE (1/2")		9	TON
SP & 412	COLD MILLING ASPHALT PAVEMENT		383	SQ. YD.
SP, SS, & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC		8	TON
SP, SS, & 415	ACHM PATCHING OF EXISTING ROADWAY		50	TON
SP, SS, & 501	PORTLAND CEMENT CONCRETE PAVEMENT (9" UNIFORM THICKNESS)		1515	SQ. YD.
SP, SS, & 505	PORTLAND CEMENT CONCRETE DRIVEWAY		633.94	SQ. YD.
601	MOBILIZATION		1.00	LUMP SUM
SP & 602	FURNISHING FIELD OFFICE		1	EACH
SP, SS, & 603	MAINTENANCE OF TRAFFIC		1.00	LUMP SUM
603	18" TEMPORARY CULVERT		80	LIN. FT.
SS & 604	SIGNS		490	SQ. FT.
SS & 604	BARRICADES		64	LIN. FT.
SS & 604	TRAFFIC DRUMS		74	EACH
SS & 604	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER		1420	LIN. FT.
SS & 604	RELOCATING PRECAST CONCRETE BARRIER		1480	LIN. FT.
604	CONSTRUCTION PAVEMENT MARKINGS		1370	LIN. FT.
604	CONSTRUCTION PAVEMENT MARKINGS (WORDS)		1	EACH
604	CONSTRUCTION PAVEMENT MARKINGS (ARROWS)		1	EACH
604	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS		6379	LIN. FT.
604	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS		4672	LIN. FT.
604	REMOVAL OF PERMANENT PAVEMENT MARKINGS		1543	LIN. FT.
SP, SS, & 605	CONCRETE DITCH PAVING (TYPE B)		47	SQ. YD.
SS & 606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		113	LIN. FT.
* SS & 606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)	52	LIN. FT.
* SS & 606	18" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 2)	52	LIN. FT.
SS & 606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		310	LIN. FT.
SS & 606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		95	LIN. FT.
* SS & 606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)	78	LIN. FT.
* SS & 606	36" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 2)	78	LIN. FT.
SS & 606	42" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		43	LIN. FT.
SS & 606	48" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		213	LIN. FT.
* SS & 606	48" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)	149	LIN. FT.
* SS & 606	48" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 2)	149	LIN. FT.
SS & 606	18" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		3	EACH
SS & 606	24" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		3	EACH
SS & 606	48" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		2	EACH
SP, SS, & 606	18" SIDE DRAIN		45	LIN. FT.
SS & 606	SELECTED PIPE BEDDING		100	CU. YD.
SS & 609	DROP INLETS (TYPE C)		3	EACH
SS & 609	DROP INLETS (TYPE MO)		5	EACH
SS & 609	DROP INLETS (TYPE ST)		1	EACH
SS & 609	JUNCTION BOXES (TYPE E)		1	EACH
SS & 609	DROP INLET EXTENSIONS (4')		9	EACH
SS & 609	DROP INLET EXTENSIONS (8')		2	EACH
620	LIME		13	TON
620	SEEDING		6.74	ACRE
SS & 620	MULCH COVER		9.38	ACRE
620	WATER		745.3	M. GAL.
621	TEMPORARY SEEDING		2.64	ACRE
621	SILT FENCE		1452	LIN. FT.
621	SAND BAG DITCH CHECKS		363	BAG
621	SEDIMENT REMOVAL AND DISPOSAL		86	CU. YD.
621	ROCK DITCH CHECKS		46	CU. YD.
SS & 621	FILTER SOCK (12")		272	LIN. FT.
623	SECOND SEEDING APPLICATION		6.74	ACRE
624	SOLID SODDING		314	SQ. YD.
SP & 625	GEOTEXTILE FABRIC (TYPE SPECIAL)		1724	SQ. YD.
SP, SS, & 632	CONCRETE ISLAND		215	SQ. YD.
SP, SS, & 633	CONCRETE WALKS		309	SQ. YD.
SS & 634	CONCRETE COMBINATION CURB AND GUTTER (TYPE A) (1' 6")		1336	LIN. FT.
635	ROADWAY CONSTRUCTION CONTROL		1.00	LUMP SUM
SP & 701	SYSTEM LOCAL CONTROLLER TS2-TYPE 2, E-NET (8 PHASES)		1	EACH
SP	TRAFFIC SIGNAL CONTROLLER (MODIFICATION)		1	EACH
SP	ETHERNET SWITCH, T100 HARDENED (8-PORT)		1	EACH
SP	E-NET CABLE (EXTERIOR CAT 5E)		92	LIN. FT.
SP	LOCAL RADIO (E-NET 5.8) WITH ANTENNA		1	EACH
SP	BATTERY BACKUP SYSTEM		1	EACH

*DENOTES ALTERNATE BID ITEMS

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WORKSPACE: AHTD
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REVISED DATE:

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 16886
NICHOLAS A. BRADDY

DIGITALLY SIGNED 8/28/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
8/19/2025		6	ARK.	040889	27	83
8/28/2025		SUMMARY OF QUANTITIES AND REVISIONS				

SUMMARY OF QUANTITIES (BOX 2 OF 2)

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP	NEMA ENCLOSURE	1	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	22	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	5	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	1166	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	1992	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	2843	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	1519	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)	425	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	70	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, COPPER (2C/8 A.W.G., E.G.C.)	1535	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	3042	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")	20	LIN. FT.
709	GALVANIZED STEEL CONDUIT (3")	55	LIN. FT.
710	NON-METALLIC CONDUIT (2")	1856	LIN. FT.
710	NON-METALLIC CONDUIT (3")	1617	LIN. FT.
SS & 711	CONCRETE PULL BOX (TYPE 1 HD)	1	EACH
SP, SS, & 711	CONCRETE PULL BOX (TYPE 2 HD)	27	EACH
SS & 713	SPAN WIRE ASSEMBLY	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (18')	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (24')	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (34')	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (36')	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (44')	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (50')	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (54')	1	EACH
SP	LED LUMINAIRE ASSEMBLY	7	EACH
SP	LED ROADWAY ILLUMINATION POLE (29,715 LUMENS, LED, T-BASE, 40')	9	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH
SP	PEDESTAL TYPE SERVICE POINT ASSEMBLY (100 AMP)	1	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	1.00	LUMP SUM
716	TREATED WOOD POLE (CLASS 2, 45')	4	EACH
718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")	252	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (6")	2849	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (12")	233	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (6")	3695	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (8")	266	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING (WORDS)	8	EACH
719	THERMOPLASTIC PAVEMENT MARKING (ARROWS)	14	EACH
SP & 719	THERMOPLASTIC PAVEMENT MARKING (YIELD LINE)	47	LIN. FT.
SP	ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (6")	212	LIN. FT.
SP	ENHANCED THERMOPLASTIC PAVEMENT MARKING YELLOW (6")	986	LIN. FT.
721	RAISED PAVEMENT MARKERS (TYPE II)	40	EACH
SS & 726	STANDARD SIGN	308	SQ. FT.
SP	18" STREET NAME SIGN	5	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G-1)	12	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G-2)	5	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-3)	1	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-5)	1	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-6)	1	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-7)	1	EACH
SS & 731	TEMPORARY IMPACT ATTENUATION BARRIER	5	EACH
SS & 731	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)	5	EACH
SP & 733	STOP LINE RADAR DETECTOR	11	EACH
SP & 733	ADVANCED RADAR DETECTOR	2	EACH
SP & 733	RADAR CABINET INTERFACE	3	EACH
SP & 733	RADAR CABLE	5704	LIN. FT.
SP & 733	RADAR DETECTION SYSTEM RELOCATION	2	EACH

REVISIONS

DATE	REVISION	SHEET NUMBER
8/19/2025	REVISED OVERHEAD STREET NAME MARKER BACKGROUND COLOR FROM GREEN TO BLUE. NO QUANTITY REVISION.	27, 40
8/28/2025	REVISE RADAR CABINET INTERFACE QUANTITY. ADD "WORK ZONE LAW ENFORCEMENT" SPECIAL PROVISION.	3, 27, 38, 43

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	28	83
		SURVEY CONTROL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16886
NICHOLAS A. BRADDY
DIGITALLY SIGNED 6/26/2025

SURVEY CONTROL COORDINATES

Project Name: s040889
Date: 3/30/2022
Coordinate System: ARKANSAS STATE PLANE – NORTH ZONE BASED ON GPS CONTROL, 650026 – 650026A & 650038 – 650038A
PROJECTED TO GROUND.
Units: U.S. SURVEY FOOT

Point Name	Northing	Easting	Elev	Feature	Description
1	370428.2360	599636.0529	470.44	CTL	ARDOT STD. MON. STAMPED PN:1
2	370548.4340	598886.0358	490.30	CTL	ARDOT STD. MON. STAMPED PN:2
3	370584.3701	598295.8294	495.88	CTL	ARDOT STD. MON. STAMPED PN:3
4	370588.6712	597861.2520	490.57	CTL	ARDOT STD. MON. STAMPED PN:4
5	370572.8818	597014.3876	488.13	CTL	ARDOT STD. MON. STAMPED PN:5
6	370667.0851	596367.4204	487.57	CTL	ARDOT STD. MON. STAMPED PN:6
7	368844.3243	597905.7017	489.42	CTL	ARDOT STD. MON. STAMPED PN:7
8	369734.8529	598025.5008	491.91	CTL	ARDOT STD. MON. STAMPED PN:8
9	370442.2207	598118.8218	510.91	CTL	ARDOT STD. MON. STAMPED PN:9
10	370992.6458	598217.3909	512.15	CTL	ARDOT STD. MON. STAMPED PN:10
11	371438.3704	598249.0056	525.64	CTL	ARDOT STD. MON. STAMPED PN:11
12	371330.8409	598133.6011	524.75	CTL	ARDOT STD. MON. STAMPED PN:12
13	370859.0407	598072.0121	516.99	CTL	ARDOT STD. MON. STAMPED PN:13
14	370441.1901	598020.7952	510.44	CTL	ARDOT STD. MON. STAMPED PN:14
15	369741.3058	597907.6282	490.23	CTL	ARDOT STD. MON. STAMPED PN:15
16	369165.0571	597778.8494	491.21	CTL	ARDOT STD. MON. STAMPED PN:16
17	368531.0530	597726.8598	483.39	CTL	ARDOT STD. MON. STAMPED PN:17
19	370368.1910	600478.3282	463.24	CTL	ARDOT STD. MON. STAMPED PN:19
100	367870.3773	600280.9783	501.07	GPS	ARDOT GPS #650028
101	369491.9341	600449.4652	472.29	GPS	ARDOT GPS #650028A
102	370638.2871	595827.1566	486.34	GPS	ARDOT GPS #650036
103	370716.8715	594375.3464	475.42	GPS	ARDOT GPS #650036A
900	370527.7936	599031.2246	483.67	TBM	CHSLD SQ CENTER OF HW
901	370612.8087	597362.2984	488.61	TBM	CHSLD SQ NW CORNER CATCH BASIN
902	370631.4681	598142.0312	516.46	TBM	CHSLD SQ NE BRIDGE CORNER
903	368232.1330	597672.7744	482.17	TBM	CHSLD SQ NE COR OF CATCH BASIN
998	370416.6789	594054.0722	464.55	BM	NGS PUBLISHED 1ST ORDER BM F 29
999	370353.0818	600474.8995	463.79	BM	NGS PUBLISHED 1ST ORDER BM N 34

*Note – Rebar and Cap – Standard – 5/8" Rebar with 2" Aluminum Cap stamped
*(standard markings common to all caps), or as indicated
(other markings indicated in the point description of the individual point).
ALL DISTANCES ARE GROUND.
USE CAF = 1.0 FOR STAKEOUT FOR THIS PROJECT.
A PROJECT CAF OF 0.9999293814 HAS BEEN USED TO COMPUTE THE ABOVE GROUND COORDINATES.
THIS CAF IS INTENDED FOR USE WITHIN THE PROJECT LIMITS.
GRID DISTANCE = GROUND DISTANCE X CAF.
GRID COORDINATES ARE STORED UNDER FILE NAME s040889gi.CTL
HORIZONTAL DATUM: NAD 83 (2011)
VERTICAL DATUM: NAVD 88 POSITIONAL ACCURACY THIRD ORDER, UNLESS SPECIFIED OTHERWISE
AT A SPECIFIC POINT.

REFERENCE POINTS (1500 SERIES) ARE TO BE USED TO ESTABLISH CONTROL
IF THE PRIMARY CONTROL POINTS LISTED ABOVE HAVE BEEN DESTROYED.
REFERENCE POINTS ARE NOT TO BE USED FOR VERTICAL CONTROL

BASIS OF BEARING:
ARKANSAS STATE PLANE GRID BEARINGS – 0301–NORTH ZONE
DETERMINED FROM GPS CONTROL POINTS: 650026 – 650026A & 650038 – 650038A
CONVERGENCE ANGLE: 1°23'38.45" LEFT AT PN:4 LT:N 35°19'39.13" LG:W 94°23'44.27"
GRID AZIMUTH = ASTRONOMICAL AZIMUTH – CONVERGENCE ANGLE.

ALIGNMENT NAME : HWY. 255

POINT	STATION	TYPE	NORTHING	EASTING
8003	700+00.00	POB	370575.2335	597498.4655
8004	702+22.70	PI	370562.6189	597720.8064
8005	703+97.38	PI	370552.2086	597895.1741
8006	706+91.19	PI	370536.5758	598188.5667
8007	710+00.00	POE	370522.6344	598497.0664

ALIGNMENT NAME : S. 36TH STREET

POINT	STATION	TYPE	NORTHING	EASTING
8008	500+00.00	POB	369747.0425	597773.9731
8009	502+94.16	PC	370040.8589	597788.2404
8010	504+38.00	PT	370181.9586	597813.9631
8011	508+24.95	POE	370550.2046	597932.7850

ALIGNMENT NAME : RAMP 3

POINT	STATION	TYPE	NORTHING	EASTING
8012	300+00.00	POB	370550.8656	597920.3793
8013	308+50.00	POE	371375.1755	598127.7758

ALIGNMENT NAME : RAMP 4

POINT	STATION	TYPE	NORTHING	EASTING
8014	396+00.00	POB	369450.8027	597884.3627
8015	401+49.36	PC	370000.0361	597896.3763
8016	403+44.93	PT	370168.0636	597812.1814
8017	403+47.46	POE	370169.5366	597810.1177

ALIGNMENT NAME : TEMP. DETOUR

POINT	STATION	TYPE	NORTHING	EASTING
8018	10+00.00	POB	369650.7549	597888.7363
8019	10+05.56	PC	369656.3101	597888.8579
8020	11+90.55	PRC	369840.5626	597904.0763
8021	13+38.19	PT	369987.4884	597918.0218
8022	13+86.33	PC	370035.5719	597920.2503
8023	15+42.80	PT	370191.9729	597919.4855
8024	16+78.18	PC	370327.1454	597911.8950
8025	17+91.89	PT	370440.8060	597909.7483
8026	19+02.43	POE	370551.3241	597911.7739

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	29	83
		SURVEY CONTROL DETAILS				

100 50 0 100

Scale: 1" = 100'

ALL BEARINGS ARE GRID
BASED ON GPS
ALL DISTANCES ARE GROUND

N

STATE OF ARKANSAS
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C.L. RAMP 4
PI = 402+55.66
Δ = 55°44'06" LT.
D = 28°30'00"
T = 106.30'
L = 195.57'
PC = 401+49.36
PT = 403+44.93
e = 0.100'/'.
Ls = 300' (SEE PROFILE)

C.L. S. 36TH STREET
PI = 503+66.50
Δ = 15°06'12" RT.
D = 10°30'00"
T = 72.34'
L = 143.84'
PC = 502+94.16
PT = 504+38.00
e = NO SUPER

STA. 403+47.46 C.L. RAMP 4 =
STA. 504+25.00 C.L. S. 36TH STREET
Δ 71°00'00"

STA. 300+00.00 C.L. RAMP 3 =
STA. 704+22.62 C.L. HWY. 255
Δ 78°55'39"

STA. 398+00.00 C.L. RAMP 4 =
STA. 10+00.00 C.L. TEMP. DETOUR

STA. 19+02.43 C.L. TEMP. DETOUR =
STA 704+14.00 C.L. HWY. 255
Δ 88°00'00"

STA. 508+24.95 C.L. S. 36TH STREET =
STA 704+35.04 C.L. HWY. 255
Δ 75°10'00"

C.L. TEMP. DETOUR
PI = 10+98.17
Δ = 6°56'14" RT.
D = 3°45'00"
T = 92.61'
L = 184.99'
PC = 10+05.56
PRC = 11+90.55

C.L. TEMP. DETOUR
PI = 12+64.43
Δ = 5°32'12" LT.
D = 3°45'00"
T = 73.88'
L = 147.64'
PRC = 11+90.55
PT = 13+38.19

C.L. TEMP. DETOUR
PI = 14+64.63
Δ = 5°52'03" LT.
D = 3°45'00"
T = 78.30'
L = 156.47'
PC = 13+86.33
PT = 15+42.80

C.L. TEMP. DETOUR
PI = 17+35.06
Δ = 4°15'50" RT.
D = 3°45'00"
T = 56.88'
L = 113.71'
PC = 16+78.18
PT = 17+91.89

PN:16
PD:ARDOT STD. MON. STAMPED PN:16

PN: 8
PD: ARDOT STD. MON. STAMPED PN: 8

PN: 15
PD: ARDOT STD. MON. STAMPED PN: 15

PN: 14
PD: ARDOT STD. MON. STAMPED PN: 14

PN: 9
PD: ARDOT STD. MON. STAMPED PN: 9

PN: 4
PD: ARDOT STD. MON. STAMPED PN: 4

PN: 902
TBM PD: CHSLD SQ NE BRIDGE CORNER

PN: 3
PD: ARDOT STD. MON. STAMPED PN: 3

8003 POB 700+00.00
8004 PI 702+22.70 Δ = 0°10'10" RT.
8005 PI 703+97.38 Δ = 0°22'00" LT.
8006 PI 706+91.19 Δ = 0°27'45" LT.
8008 500+00
8009 PC 502+94.16
8010 505+00
8011 705+00
8012 PT 504+38.00
8013 POB 396+00.00
8014 POB 10+00.00
8015 PT 13+38.19
8016 PC 13+86.33
8017 PI 503+66.50
8018 PC 10+05.56
8019 10+00
8020 400+00
8021 PC 401+49.36
8022 PC 15+42.80
8023 15+00
8024 PT 15+42.80
8025 PT 17+91.89
8026 300+00

N 01°15'11" E 92.61'
N 08°11'25" E 92.61'
N 02°46'48" E 294.16'
N 02°39'13" E 48.14'
N 54°28'55" W 2.53'
N 02°46'48" E 72.34'
N 17°53'00" E 72.34'
N 17°53'00" E 386.95'
N 01°03'00" E 110.54'
N 03°12'50" W 56.88'
N 01°03'00" E 56.88'
N 03°12'50" W 135.38'
N 01°15'11" E 106.30'
N 54°28'55" W 106.30'
N 03°12'50" W 78.30'
N 02°39'13" E 78.30'
N 08°11'25" E 73.88'
N 02°39'13" E 73.88'
N 01°15'11" E 549.36'
N 01°15'11" E 5.56'
N 14°07'21" E 850.00'
S 86°45'10" E 222.70'
S 86°35'00" E 174.68'
S 86°57'00" E 293.81'
S 87°24'45" E 308.81'

SURVEY BASELINE S 88°55'55" W 847.01'
SURVEY BASELINE N 23°24'24" E 620.89'
SURVEY BASELINE N 16°46'05" E 732.04'
SURVEY BASELINE N 06°59'17" E 420.98'
SURVEY BASELINE N 89°25'59" W 434.60'
SURVEY BASELINE N 86°30'57" E 591.30'

PI 10+98.17
PRC 11+90.55
PI 12+64.43
PI 14+64.63
PI 17+35.06
PI 503+66.50
PC 502+94.16
PT 504+38.00
PC 401+49.36
PT 403+44.93
PC 13+86.33
PT 13+38.19
PC 15+42.80
PT 15+42.80
PC 16+78.18
PT 17+91.89
C.L. HWY. 255
C.L. S. 36TH STREET
C.L. RAMP 4
C.L. TEMP. DETOUR
C.L. RAMP 3

SURVEY CONTROL DETAILS

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	30	83
		SURVEY CONTROL DETAILS				

100 50 0 100

Scale: 1" = 100'

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8003 POB 700+00.00

700+00

SURVEY BASELINE S 88°55'55" W 847.01'

S 86°45'10" E 222.70'

8004 PI 702+22.70
Δ = 0°10'10" RT.

C.L. HWY. 255

STA. 300+00.00 C.L. RAMP 3 =
STA. 704+22.62 C.L. HWY. 255
∢ 78°55'39"

S 86°35'00" E 174.68'

PN: 4
PD: ARDOT STD. MON. STAMPED PN: 4

N 17°53'00" E 386.95'

PI 17+35.06

N 01°03'00" E 110.54'

C.L. S. 36TH STREET

N 03°12'50" W 56.88'

8005 300+00 8026 PI 703+97.38
Δ = 0°22'00" LT.

8024 8025 8012 8011

N 01°03'00" E 56.88'

PC 16+78.18

PT 17+91.89

SURVEY BASELINE N 89°25'59" W 434.60'

705+00

STA. 19+02.43 C.L. TEMP. DETOUR =
STA 704+14.00 C.L. HWY. 255
∢ 88°00'00"

C.L. RAMP 3 N 14°07'21" E 850.00'

305+00

STA. 508+24.95 C.L. S. 36TH STREET =
STA 704+35.04 C.L. HWY. 255
∢ 75°10'00"

POE 308+50.00

PN: 14
PD: ARDOT STD. MON. STAMPED PN: 14

SURVEY BASELINE N 06°59'17" E 420.98'

PN: 13
PD: ARDOT STD. MON. STAMPED PN: 13

SURVEY BASELINE N 16°46'05" E 732.04'

8013

PN: 12
PD: ARDOT STD. MON. STAMPED PN: 12

PN: 9
PD: ARDOT STD. MON. STAMPED PN: 9

PN: 902
TBM PD: CHSLD SQ NE BRIDGE CORNER

SURVEY BASELINE N 47°25'00" E 197.45'

SURVEY BASELINE N 13°54'55" W 348.42'

SURVEY BASELINE N 47°01'23" E 157.74'

S 86°57'00" E 293.81'

8006 PI 706+91.19
Δ = 0°27'45" LT.

PN: 10
PD: ARDOT STD. MON. STAMPED PN: 10

PN: 11
PD: ARDOT STD. MON. STAMPED PN: 11

S 87°24'45" E 308.81'

PN: 3
PD: ARDOT STD. MON. STAMPED PN: 3

SURVEY BASELINE N 86°30'57" W 591.30'

8007 POE 710+00.00

710+00

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REVISED DATE:

SURVEY CONTROL DETAILS

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	31	83
		PLAN AND PROFILE - S. 36TH STREET				

STA. 502+96 CONSTRUCT
DROP INLET ON LT. H=3'-7"
WITH 8' EXT.
WITH 18"x52' PIPE OUTLET
TO DROP INLET AT STA. 503+50 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'x3'
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 52 LIN. FT.
18" SLPPMCCS PIPE
(TYPE 2 BEDDING) = 52 LIN. FT.

STA. 503+50 CONSTRUCT
DROP INLET ON LT. H=5'-6"
WITH 8' EXT.
WITH 24"x60' PIPE OUTLET
TO DROP INLET AT STA. 503+95 RT.
TYPE MO DROP INLET = 4' DIA.
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 60 LIN. FT.

STA. 503+95 CONSTRUCT
DROP INLET ON RT. H=5'-8"
WITH 24"x43' PIPE OUTLET
TO DROP INLET AT STA 504+42
TYPE ST DROP INLET = 3'x4'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 43 LIN. FT.

STA. 504+42 CONSTRUCT
DROP INLET ON RT. H=10'-7"
WITH DBL 4' EXT.
WITH 24"x21' PIPE OUTLET
TO FES ON RT.
TYPE MO DROP INLET = 4' DIA.
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 21 LIN. FT.
24" FES = 1EACH

STA. 505+23 CONSTRUCT
DROP INLET ON RT. H=8'-11"
WITH DBL 4' EXT.
WITH 48"x16' PIPE OUTLET
TO FES ON RT.
TYPE C DROP INLET = 5'x5'
48" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 16 LIN. FT.
48" FES = 1EACH

STA. 505+21 CONSTRUCT
DROP INLET ON LT. H=6'-9"
WITH DBL. 4' EXT.
WITH 18"x11' PIPE INLET
FROM FES ON LT.
WITH 24"x39' PIPE OUTLET
TO DROP INLET AT STA. 505+23 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'x3'
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 11 LIN. FT.
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 39 LIN. FT.
18" FES = 1EACH

STA. 506+77 CONSTRUCT
DROP INLET ON RT. H=8'-4"
WITH 4' EXT.
WITH 48"x149' PIPE OUTLET
TO DROP INLET AT STA. 505+23 RT.
TYPE C DROP INLET = 5'x5'
48" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 149 LIN. FT.
48" SLPPMCCS PIPE
(TYPE 2 BEDDING) = 149 LIN. FT.

STA. 503+86 CONSTRUCT
APPROACH ON LT. = 10 CU. YDS.

STA. 501+80 CONSTRUCT
APPROACH ON LT. = 15 CU. YDS.

STA. 506+77 CONSTRUCT
DROP INLET ON LT. H=7'-7"
WITH 18"x14' PIPE INLET
FROM FES ON LT.
WITH 42"x43' OUTLET
TO DROP INLET AT STA. 506+77 RT.
TYPE C DROP INLET = 5'x5'
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 14 LIN. FT.
42" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 43 LIN. FT.
18" FES = 1EACH

STA. 507+50 CONSTRUCT
DROP INLET ON LT. H=6'-5"
WITH DBL. 4' EXT.
WITH 36"x78' PIPE OUTLET
TO DROP INLET 506+77 LT.
TYPE MO DROP INLET = 6' DIA.
36" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 78 LIN. FT.
36" SLPPMCCS PIPE
(TYPE 2 BEDDING) = 78 LIN. FT.

STA. 507+72 IN PLACE
DBL. 18"x88' R.C. PIPE CULVERT WITH HDWL LT. AND RT.
REMOVE HDWL LT. AND
15' DBL. PIPE CULVERT LT.
CONSTRUCT JUNCTION BOX 65' LT. H=5'-5"
ON EXIST. DBL. 18" PIPE CULVERT
WITH 36"X17' PIPE OUTLET
TO DROP INLET STA. 507+50 LT.
TYPE ST JUNCTION BOX = 3'x7'
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 16 LIN. FT.
36" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 17 LIN. FT.
Q50 = 65.45 CFS DA = 16.7 ACRES

STA. 505+55 INSTALL
18"x45' PIPE CULVERT
LT. SIDE DRAIN
CONSTRUCT APPROACH = 52 CU. YDS.

STA. 506+10 CONSTRUCT
APPROACH ON LT. = 76 CU. YDS.

C.L. S. 36TH STREET
PI = 503+66.50
Δ = 15°06'12" RT.
D = 10°30'00"
T = 72.34'
L = 143.84'
PC = 502+94.16
PT = 504+38.00
e = NO SUPER

STA. 504+25.00 C.L. S. 36TH STREET =
STA. 403+47.46 C.L. RAMP 4
∢ 71°00'00"

STA. 505+80.31, 51.3' LT.
END SP. DT. LT. -8.62%
ELEV. 486.54

STA. 505+77.95, 80.3' LT.
START SP. DT. RT. -8.62%
ELEV. 489.04

STA. 508+24.95 C.L. S. 36TH STREET =
STA 704+35.04 C.L. HWY. 255

STA. 505+32 IN PLACE
18" X 152' PIPE CULVERT
PLUG AND ABANDON

STA. 505+68 IN PLACE
DROP INLET 70' ON LT.
REMOVE

STA. 505+74 IN PLACE
24" X 37' PIPE CULVERT LT.
REMOVE

STA. 505+78 IN PLACE
DROP INLET 31' ON LT.
REMOVE

STA. 505+86 IN PLACE
18" X 89' PIPE CULVERT
REMOVE

STA. 504+60 CONSTRUCT
48"x48' R.C. PIPE CULVERT
W/ FES ON LT.
MODIFY TO EXISTING JB
48" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 48 LIN. FT.
48" FES = 1EACH

REMOVAL AND DISPOSAL OF FENCE

STA.	STA.	SIDE	UNIT
501+59	507+25	LT./RT.	572 LIN. FT.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16886
NICHOLAS A. BRADDY
DIGITALLY SIGNED 6/26/2025

S. 36TH STREET

REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS

502+96 LT.
TOP ELEV.=491.44
503+50 LT.
TOP ELEV.=491.25
PROFILE GRADE 503+95 RT.
TOP ELEV.=490.74
-0.35%
18" x 52' @ 3.00%
24" x 60' @ 1.00%
F.L. ELEV.=487.84(NE)
24" x 43' @ 1.00%
F.L. ELEV.=486.29(SW)
F.L. ELEV.=485.75(NE)
PVC 504+15.00
ELEV. 490.91
504+42 RT.
TOP ELEV.=490.75
-3.05% LT. DT.
24" x 21' @ 0.75%
2.90% RT. DT.
48" x 16' @ 0.50%
PVI 505+15.00
ELEV. 490.56
505+21 LT.
TOP ELEV.=490.84
505+23 RT.
TOP ELEV.=490.88
PVT 506+15.00
ELEV. 490.86
VC=200.00'
K=307.69
e=0.16'
506+77 LT.
TOP ELEV.=491.09
506+77 RT.
TOP ELEV.=491.16
0.30%
-5.60% LT. DT.
48" x 149' @ 0.50%
2.80% LT. DT.
5.00% LT. DT.
9.77% LT. DT.
36" x 78' @ 0.41%
36" x 17' @ 3.00%
507+50 LT.
TOP ELEV.=490.75
C.L. S. 36TH ST. STA. 507+95.00 =
C.L. HWY. 255 STA. 704+27.37
28.95' RT.
ELEV. 491.40
EJB 507+72 LT.
TOP ELEV.=490.35
EXISTING GROUND
1.00% RT. DT.
100' TRANSITION TO MATCH EXISTING
PVI 502+00.00
ELEV. 491.66
+00.00
+00.00
+20.00 LT. 489.20
+60.00 RT. 479.92
+25.00 LT. 486.00
+40.00 LT. 487.34
+80.00 LT. 485.10
+91.23 LT. 485.41
+25.00 LT. 487.10
+33.00 RT. 487.84
+54.68 LT. 490.00
+01.50 RT. 488.49

F.L. ELEV.=485.19(SW)
F.L. ELEV.=485.10(NE)
F.L. ELEV.=484.66(SW)
F.L. ELEV.=480.15(E)
F.L. ELEV.=485.11(W)
F.L. ELEV.=484.08(E)
F.L. ELEV.=482.91(W)
F.L. ELEV.=482.04(N)
F.L. ELEV.=481.94(E)
F.L. ELEV.=484.05(NW)
F.L. ELEV.=483.63(W)
F.L. ELEV.=483.53(E)
F.L. ELEV.=483.31(W)
F.L. ELEV.=482.79(S)
F.L. ELEV.=484.48(N)
F.L. ELEV.=484.37(S)
EX. F.L. ELEV.=485.40(N)
EX. F.L. ELEV.=485.40(N)
F.L. ELEV.=484.97(S)

530 520 510 500 490 480 470 460 450 440

500+00 501+00 502+00 503+00 504+00 505+00 506+00 507+00 508+00 509+00

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	32	83

PLAN AND PROFILE - RAMP 4

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16886
NICHOLAS A. BRADDY
DIGITALLY SIGNED 6/26/2025

STA. 402+63 CONSTRUCT
24"x147' R.C. PIPE CULVERT
50° RT. FWD. SKEW
WITH FES ON LT. & RT.
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 147 LIN. FT.
24" FES = 2 EACH
Q50 = 4.8 CFS DA = 2.94 ACRES

C.L. RAMP 4
PI = 402+55.66
Δ = 55°44'06" LT.
D = 28°30'00"
T = 106.30'
L = 195.57'
PC = 401+49.36
PT = 403+44.93
e = 0.100'/'
Ls = 300' (SEE PROFILE)

STA. 403+47.46 C.L. RAMP 4 =
STA. 504+25.00 C.L. S. 36TH STREET
Δ 71°00'00"

BEGIN PROP. C/A
END PROP. C/A
BEGIN PROP. C/A
PC 502+94.16
END PROP. C/A
PI 503+66.50
PT 504+38.00
BEGIN PROP. C/A
END PROP. C/A
EXIST. R/W
BEGIN EXIST. C/A
CONST. LIMITS
N 54°28'55" W
+60.00
40.00'
+51.00
37.95'
+00.00
40.00'
PROP. R/W
+13.69
40.15'
EXIST. R/W
500+00
+80
N 02°46'48" E
+86
EXIST. R/W
CONST. LIMITS
+75.00
18.74'
END EXIST. C/A
43' R
28'
505+00
+55
+10
86' R
C.L. S. 36TH STREET
75' R
PT 403+44.93
BEGIN PROP. C/A
396+00
400+00
EXIST. 6'
EXIST. 15'
EXIST. 4'
6'
15'
4'
N 01°15'11" E
C.L. RAMP 4
+49.36
+82
SHOULDER RECONSTRUCTION
100' SHLD. TRANS. TO MATCH EXISTING
PC 401+49.36
+49.36
PI 402+55.66
CONSTRUCTION LIMITS
N 17°53'00" E
65' R
END PROP. C/A
300+00
CONST. LIMITS
N 14°07'21" E
C.L. RAMP 3
705+00
S 86°57'00" E
S 86°45'10" E
PI 702+22.70
Δ = 0°10'10" RT.
C.L. HWY. 255
S 86°35'00" E
EXIST. R/W
90' R
PI 703+97.38
Δ = 0°22'00" LT.
EXIST. R/W & C/A

N

RAMP 4

CONCRETE DITCH PAVING (TYPE B)

STA.	STA.	SIDE	"W"	SQ. YDS.
402+55	403+12	RT. = 71 LIN. FT.	6' - 0"	47.33

REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS

STA. 401+73.65 BEGIN SUPERELEVATION (0.010'/')
STA. 402+47.15 MAX. SUPERELEVATION (0.021'/')
STA. 403+20.65 END SUPERELEVATION (0.0035'/')
STA. 403+31.34 MATCH PR. SUPERELEVATION (0.0035'/')

PVI 401+49.36
ELEV. 492.59
PVI 402+05.00
ELEV. 493.04
PROFILE GRADE
C.L. RAMP 4 STA. 403+31.34 =
C.L. S. 36TH ST. STA. 504+26.27
18.00' RT.
ELEV. 490.51
0.81%
-2.00%
EXISTING GROUND
-2.15% RT. DT.
+05.00 RT. 489.46
PVC 401+55.00
ELEV. 492.64
VC=100.00'
K=35.71
e=-0.35'
+55.00 RT. 486.24
PVT 402+55.00
ELEV. 492.04
-2.00% RT. DT.
+12.00 RT. 479.92
S. 36TH STREET
F.L. ELEV. =487.55 LT.
F.L. ELEV. =482.50 RT.

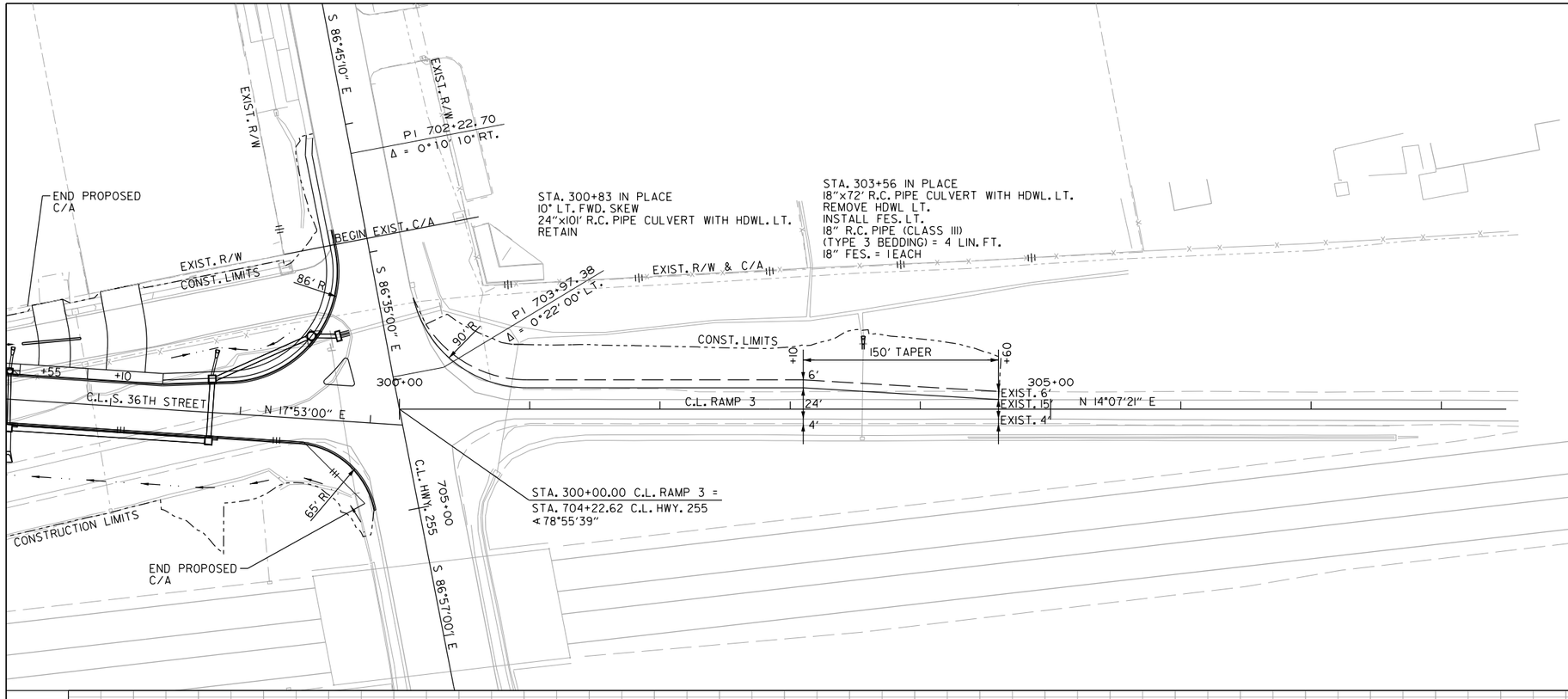
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396+00 397+00 398+00 399+00 400+00 401+00 402+00 403+00 404+00

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REVISED DATE:

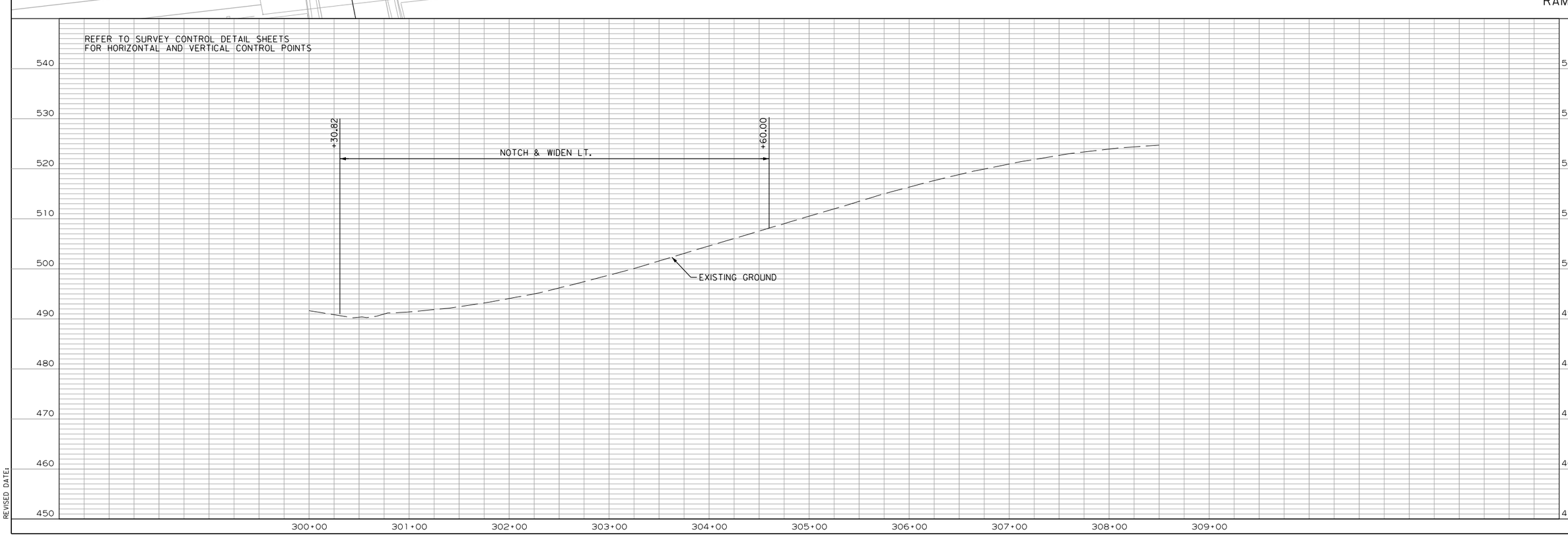
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	33	83
		PLAN AND PROFILE - RAMP 3				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16886
NICHOLAS A. BRADDY
DIGITALLY SIGNED 6/26/2025



RAMP 3

REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS



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DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	34	83

PLAN AND PROFILE - TEMP. DETOUR

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16886
NICHOLAS A. BRADDY
DIGITALLY SIGNED 6/26/2025

C.L. TEMP. DETOUR
PI = 10+98.17
Δ = 6°56'14" RT.
D = 3°45'00"
T = 92.61'
L = 184.99'
PC = 10+05.56
PRC = 11+90.55

C.L. TEMP. DETOUR
PI = 12+64.43
Δ = 5°32'12" LT.
D = 3°45'00"
T = 73.88'
L = 147.64'
PRC = 11+90.55
PT = 13+38.19

C.L. TEMP. DETOUR
PI = 14+64.63
Δ = 5°52'03" LT.
D = 3°45'00"
T = 78.30'
L = 156.47'
PC = 13+86.33
PT = 15+42.80

C.L. TEMP. DETOUR
PI = 17+35.06
Δ = 4°15'50" RT.
D = 3°45'00"
T = 56.88'
L = 113.71'
PC = 16+78.18
PT = 17+91.89

BEGIN PROP. C/A
END PROP. C/A
BEGIN PROP. C/A
END PROP. C/A
BEGIN PROP. C/A
END PROP. C/A
BEGIN EXIST. C/A
EXIST. R/W
EXIST. R/W
EXIST. R/W
PROP. R/W
C.L. S. 36TH STREET
C.L. HWY. 255
EXIST. R/W & C/A
+60.00
40.00'
+51
37.95'
+00.00
40.00'
+13.69
40.15'
+75.00
18.74'
POB 10+00.00
PC 10+05.56
PI 10+98.17
PRC 11+90.55
END EXIST. C/A
PT 13+38.19
PC 13+86.33
PT 15+42.80
PI 17+35.06
POE 19+02.43
BEGIN PROP. C/A
C.L. RAMP 4
C.L. RAMP 3
396+00
400+00
500+00
505+00
300+00
705+00
10+00
6' EX. SHLD.
15' EX. LANES
4' EX. SHLD.
N 01°15'11" E
N 03°12'50" W
N 01°03'00" E
CONST. LIMITS
15+00
2%
2%
N 08°11'25" E
N 02°39'13" E
22' EX. LANES
4' EX. SHLD.
6' EX. SHLD.
C.L. TEMP. DETOUR
END PROP. C/A
PI 12+64.43
PI 14+64.63
PC 16+78.18
PT 17+91.89
STA. 10+00.00 C.L. TEMP. DETOUR =
STA. 398+00.00 C.L. RAMP 4
STA. 19+02.43 C.L. TEMP. DETOUR =
STA. 704+14.00 C.L. HWY. 255
<88°00'00"
N

TEMP. DETOUR

REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS

PVI 11+57.07
ELEV. 491.39
PVC 12+50.00
ELEV. 491.63
VC=100.00'
K=161.29
e=0.08'
PVI 13+00.00
ELEV. 491.75
PVT 13+50.00
ELEV. 492.19
PROFILE GRADE
0.25%
0.87%
-0.10%
PVC 14+50.00
ELEV. 493.06
VC=100.00'
K=103.09
e=-0.12'
PVI 15+00.00
ELEV. 493.49
PVT 15+50.00
ELEV. 493.44
PVI 16+00.35
ELEV. 493.39
EXISTING GROUND
EXISTING GROUND

540 530 520 510 500 490 480 470 460 450

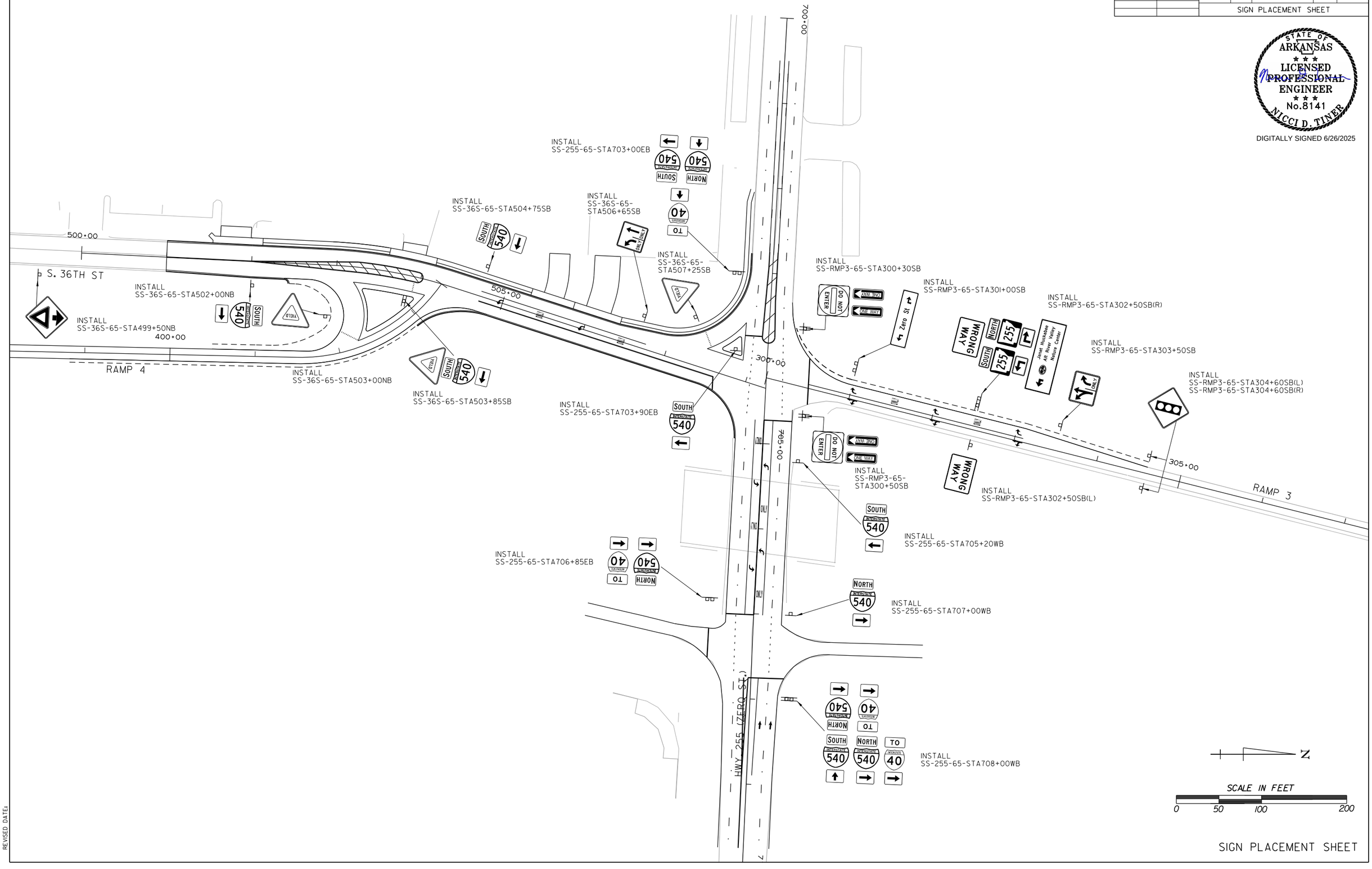
10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	35	83
		SIGN PLACEMENT SHEET				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.8141
NICCI D. TINER

DIGITALLY SIGNED 6/26/2025

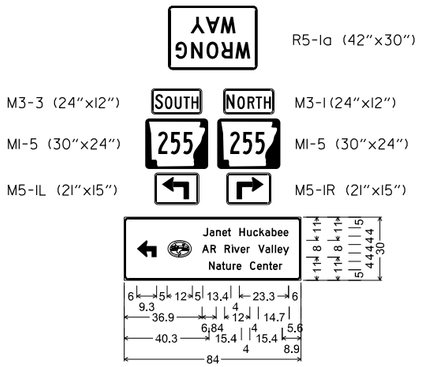


SIGN PLACEMENT SHEET

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	36	83
		SIGN PLACEMENT SHEET				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.8141
NICCI D. TINER
DIGITALLY SIGNED 6/26/2025



2.0" Radius, 1.0" Border, White on Brown;
arrow;
"Janet Huckabee", D 2K;
"AR River Valley", D 2K;
"Nature Center", D 2K;

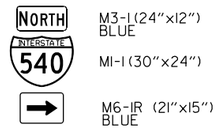
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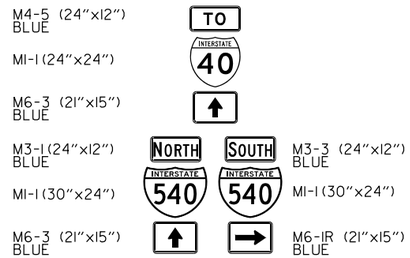
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SS-36S-65-STA504+75SB
SS-255-65-STA703+90EB
SS-255-65-STA705+20WB



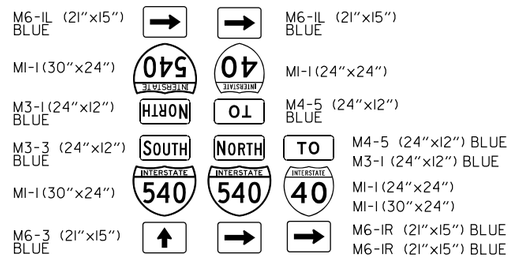
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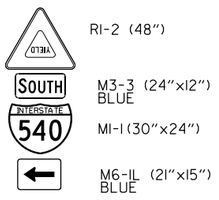
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SS-255-65-STA706+85EB



SS-255-65-STA708+00WB



SS-36S-65-STA503+85SB



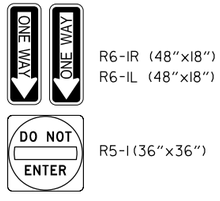
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SS-36S-65-STA507+25SB



SS-36S-65-STA506+65SB



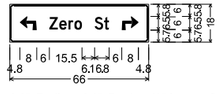
SS-RMP3-65-STA303+50SB



SS-RMP3-65-STA300+30SB
SS-RMP3-65-STA300+50SB



SS-RMP3-65-STA302+50SB(L)



2.0" Radius, 0.8" Border, White on Green;
90 Deg Advance Turn Arrow 8.0" X 6.5";
"Zero St", D 2K;
90 Deg Advance Turn Arrow 8.0" X 6.5";

SS-RMP3-65-STA301+00SB



SS-36S-65-STA499+50NB



SS-RMP3-65-STA304+60SB(L)
SS-RMP3-65-STA304+60SB(R)

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	37	83
		SIGN QUANTITIES				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.8141
NICCI D. TINER

DIGITALLY SIGNED 6/26/2025

STANDARD ROADSIDE SIGN
SHEET ALUMINUM 0.100" THICKNESS (5 SF OR LESS)

SIGN NO.	SIZE OF SIGN	UNIT AREA (SQ. FT.)	QUANTITY REQUIRED	TOTAL SIGN AREA (SQ. FT.)	LEGEND/BACKGROUND
M1-1	30" x 24"	5.00	12	60.00	WHITE/BLUE
M1-1	24" x 24"	4.00	4	16.00	WHITE/BLUE
M1-5	30" x 24"	5.00	2	10.00	WHITE/BLACK
M3-1	24" x 12"	2.00	1	2.00	WHITE/BLACK
M3-1	24" x 12"	2.00	5	10.00	WHITE/BLUE
M3-3	24" x 12"	2.00	1	2.00	BLACK/WHITE
M3-3	24" x 12"	2.00	7	14.00	WHITE/BLUE
M4-5	24" x 12"	2.00	4	8.00	WHITE/BLUE
M5-1L	21" x 15"	2.19	1	2.19	BLACK/WHITE
M5-1R	21" x 15"	2.19	1	2.19	BLACK/WHITE
M6-1L	21" x 15"	2.19	8	17.50	WHITE/BLUE
M6-1R	21" x 15"	2.19	5	10.94	WHITE/BLUE
M6-3	21" x 15"	2.19	3	6.56	WHITE/BLUE
TOTAL 0.100" THICKNESS				161.38	

STANDARD ROADSIDE SIGNS
SHEET ALUMINUM 0.125" THICKNESS (GREATER THAN 5 SF)

SIGN NO.	SIZE OF SIGN	UNIT AREA (SQ. FT.)	QUANTITY REQUIRED	TOTAL SIGN AREA (SQ. FT.)	LEGEND/BACKGROUND
D1-1	66" x 18"	8.25	1	8.25	WHITE/GREEN
D1-1	84" x 30"	17.5	1	17.50	WHITE/BROWN
R1-2	48" x 48" x 48"	6.93	3	20.79	RED/WHITE
R3-8	36" x 30"	7.5	1	7.50	BLACK/WHITE
R3-8	30" x 30"	6.25	1	6.25	BLACK/WHITE
R5-1	36" x 36"	9	2	18.00	RED/WHITE
R5-1a	42" x 30"	8.75	2	17.50	WHITE/RED
R6-1L	48" x 18"	6.00	2	12.00	BLACK/BLACK
R6-1R	48" x 18"	6.00	2	12.00	BLACK/BLACK
W3-2	36" x 36"	9	1	9.00	BLACK/YELLOW
W3-3	36" x 36"	9	2	18.00	BLACK/YELLOW
TOTAL 0.125" THICKNESS				146.79	

SIGN NO./LOCATION	STANDARD ROADSIDE SIGNS TO BE MOUNTED	OMNI-DIRECTIONAL SIGN ASSEMBLIES					
		G-1	G-2	G2-3	G2-5	G2-6	G2-7
		EACH	EACH	EACH	EACH	EACH	EACH
SS-RMP3-65-STA300+30SB	R5-1, R6-1L, R6-1R	1					
SS-RMP3-65-STA300+50SB	R5-1, R6-1L, R6-1R	1					
SS-RMP3-65-STA301+00SB	D1-1 (ZERO ST)		1				
SS-RMP3-65-STA302+50SB(R)	M3-3, M1-5, M5-1L; M3-1, M1-5, M5-1R D1-1, R5-1a				1		
SS-RMP3-65-STA302+50SB(L)	R5-1a		1				
SS-RMP3-65-STA303+50SB	R3-8	1					
SS-RMP3-65-STA304+60SB(L)	W3-3	1					
SS-RMP3-65-STA304+60SB(R)	W3-3	1					
SS-36S-65-STA499+50NB	W3-2	1					
SS-36S-65-STA502+00NB	M3-3, M1-1, M6-1R	1					
SS-36S-65-STA503+00NB	R1-2		1				
SS-36S-65-STA503+85SB	R1-2:M3-3, M1-1, M6-1L			1			
SS-36S-65-STA504+75SB	M3-3, M1-1, M6-1L	1					
SS-36S-65-STA506+65SB	R3-8	1					
SS-36S-65-STA507+25SB	R1-2		1				
SS-255-65-STA703+00EB	M4-5, M1-1, M6-3 M3-1, M1-1, M6-3, M3-3, M1-1, M6-1R						1
SS-255-65-STA703+90EB	M3-3, M1-1, M6-1L	1					
SS-255-65-STA705+20WB	M3-3, M1-1, M6-1L	1					
SS-255-65-STA706+85EB	M3-1, M1-1, M6-1L; M4-5, M1-1, M6-1L		1				
SS-255-65-STA707+00WB	M3-1, M1-1, M6-1R	1					
SS-255-65-STA708+00WB	M3-3, M1-1, M6-3: M3-1, M1-1, M6-1R; M4-5, M1-1, M6-1R M3-1, M1-1, M6-1L; M4-5, M1-1, M6-1L					1	
TOTALS		12	5	1	1	1	1

ITEM NUMBER	ITEM	UNIT	ESTIMATED QUANTITY
SS & 726	STANDARD SIGN	SQ. FT.	308
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORT (TYPE G-1)	EACH	12
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORT (TYPE G-2)	EACH	5
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORT (TYPE G2-3)	EACH	1
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORT (TYPE G2-5)	EACH	1
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORT (TYPE G2-6)	EACH	1
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORT (TYPE G2-7)	EACH	1

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
8/28/2025		6	ARK.	040889	38	83
		SUMMARY OF TRAFFIC SIGNAL QUANTITIES				



DIGITALLY SIGNED 8/28/2025

SUMMARY OF TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	I-540 NB RAMP AND HWY. 255/ ZERO ST.	I-540 SB RAMP AND HWY. 255/ ZERO ST.	QUANTITY	UNIT
SP & 701	SYSTEM LOCAL CONTROLLER TS2-TYPE 2, E-NET (8 PHASES)	1		1	EACH
SP	TRAFFIC SIGNAL CONTROLLER (MODIFICATION)	1		1	EACH
SP	ETHERNET SWITCH, T100 HARDENED (8-PORT)	1		1	EACH
SP	E-NET CABLE (EXTERIOR CAT 5E)	92		92	LIN. FT.
SP	LOCAL RADIO (E-NET 5.8) WITH ANTENNA	1		1	EACH
SP	BATTERY BACKUP SYSTEM	1		1	EACH
SP	NEMA ENCLOSURE		1	1	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	7	15	22	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	1	4	5	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	457	709	1166	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	88	1904	1992	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	492	2351	2843	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	447	1072	1519	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)	195	230	425	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	70		70	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	687	1815	2502	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")	20		20	LIN. FT.
709	GALVANIZED STEEL CONDUIT (3")		55	55	LIN. FT.
710	NON-METALLIC CONDUIT (2")	56		56	LIN. FT.
710	NON-METALLIC CONDUIT (3")	338	1279	1617	LIN. FT.
SS & 711	CONCRETE PULL BOX (TYPE 1 HD)	1		1	EACH
SS & 711	CONCRETE PULL BOX (TYPE 2 HD)	4	10	14	EACH
SS & 713	SPAN WIRE ASSEMBLY		1	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (18')		1	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (24')		1	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (34')	1		1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (36')	1		1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (44')		1	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (50')		1	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (54')	1		1	EACH
SP	LED LUMINAIRE ASSEMBLY	3	4	7	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1		1	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.34	0.66	1.00	LUMP SUM
716	TREATED WOOD POLE (CLASS 2, 45')		4	4	EACH
SP	18" STREET NAME SIGN	1	4	5	EACH
SP & 733	STOP LINE RADAR DETECTOR	3	8	11	EACH
SP & 733	ADVANCED RADAR DETECTOR	1	1	2	EACH
SP & 733	RADAR CABINET INTERFACE	3		3	EACH
SP & 733	RADAR CABLE	1391	4313	5704	LIN. FT.
SP & 733	RADAR DETECTION SYSTEM RELOCATION	1	1	2	EACH

NOTES:
1. QUANTITIES FOR THE NB RAMP INTERSECTION INCLUDE ALL WIRING, CONDUIT, AND PULL BOXES FROM POLES A, B, AND C TO THE CONTROLLER AT THE NB RAMP

2. QUANTITIES FOR THE SB RAMP INTERSECTION INCLUDE ALL WIRING, CONDUIT, AND PULL BOXES FROM POLES D, E, F, AND G TO THE CONTROLLER AT THE NB RAMP

DATE: 12/2/2024 FILE NAME: t040889_SUMQ.dgn

LOCATION: I-540/HWY. 255 INTCHNG. IMPVTS. (ZERO ST.)
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 04 SCALE: N/A DRAWN BY: AS

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	39	83
		TRAFFIC SIGNAL NOTES				

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 REQUIRED BY TSMO 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 FLAGMEN 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'S/ 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 PROGRAMMNG 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.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.8141
NICCI D. TINER

DIGITALLY SIGNED 6/26/2025

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.

35. ALL SIGNAL HEADS AND SIGNS ON THE TEMPORARY SPAN WIRE SHALL HAVE AN ADDITIONAL TETHER WIRE (NOT SHOWN ON SD-7) AT THE BOTTOM CHORD TO MINIMIZE MOVEMENT DUE TO WIND EFFECTS. THE BOTTOM TETHER, HARDWARE, BRACKETS, AND MATERIALS FOR THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE TEMPORARY SIGNAL. THE BOTTOM TETHER SHALL BE INSTALLED BETWEEN THE MINIMUM AND MAXIMUM HEIGHT CLEARANCE ABOVE THE ROADWAY.

DATE: 12/2/2024 FILE NAME: t040889_GN.dgn

LOCATION: I-540/HWY. 255 INTCHNG. IMPVTS. (ZERO ST.)
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 04 SCALE: N/A DRAWN BY: ALM

JATurner
WORKSPACE: AHTD
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REVISED DATE: 12/6/2024 10:54:14 AM

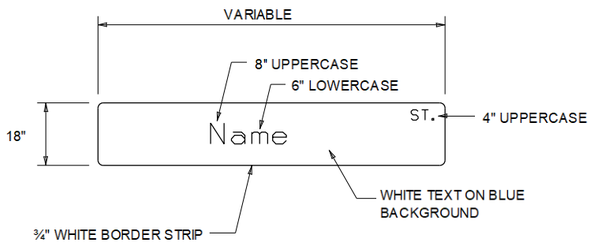
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8/19/2025		6	ARK.	040889	40	83
		TRAFFIC SIGNAL STREET NAME SIGNS				

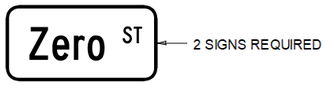
OVERHEAD STREET NAME MARKER STANDARD MAST ARM MOUNTED

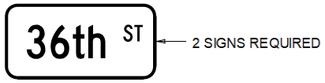
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.8141
NICCI D. TINER

DIGITALLY SIGNED 8/19/2025

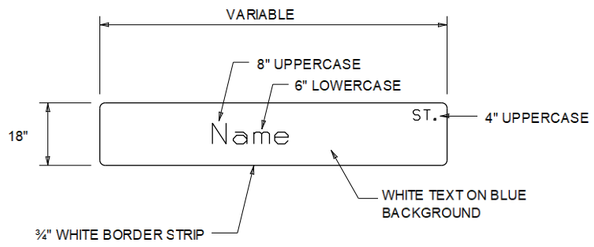
I-540 SB RAMP AND HWY. 255/ZERO ST. INTERSECTION

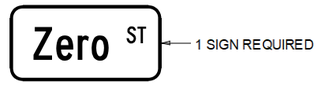






I-540 NB RAMP AND HWY. 255/ZERO ST. INTERSECTION





NOTES:

1. REFLECTIVE SHEETING SHALL COMPLY WITH ASTM 4956 TYPE 8 OR 9 REFLECTIVE SHEETING. SHEETING AND LEGEND SHALL BE APPLIED IN SUCH A MANNER TO PROVIDE WRINKLE AND BUBBLE FREE SURFACES. APPLICATION OF SHEETING IS CAUSE FOR REJECTION OF MATERIALS DUE TO WORKMANSHIP.
2. ALUMINUM SIGN BLANK SHALL BE ALLOY 6061-T6 OR 5052-H38. THE ALUMINUM SIGN SHALL BE ALSO ALODIZED. THE ALUMINUM SHEETING SHALL BE 0.100 INCH NOMINAL 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/ COUNTY.
3. WHEN CROSSROAD HAS TWO NAMES, THE SIGN FOR THE CROSSROAD TO THE LEFT MAY BE INSTALLED ON THE BACKSIDE OF THE MAST ARM ON THE NEARSIDE LEFT POLE. SEE STANDARD DRAWING SHEET FOR MORE INFORMATION FOR MOUNTING ON MAST ARM ASSEMBLY.
4. THE SERIES C 2000 STANDARD ALPHABET SHALL BE USED FOR ALL LETTERS.

DATE: 8/19/2025 FILE NAME: t040889_SNS.dgn

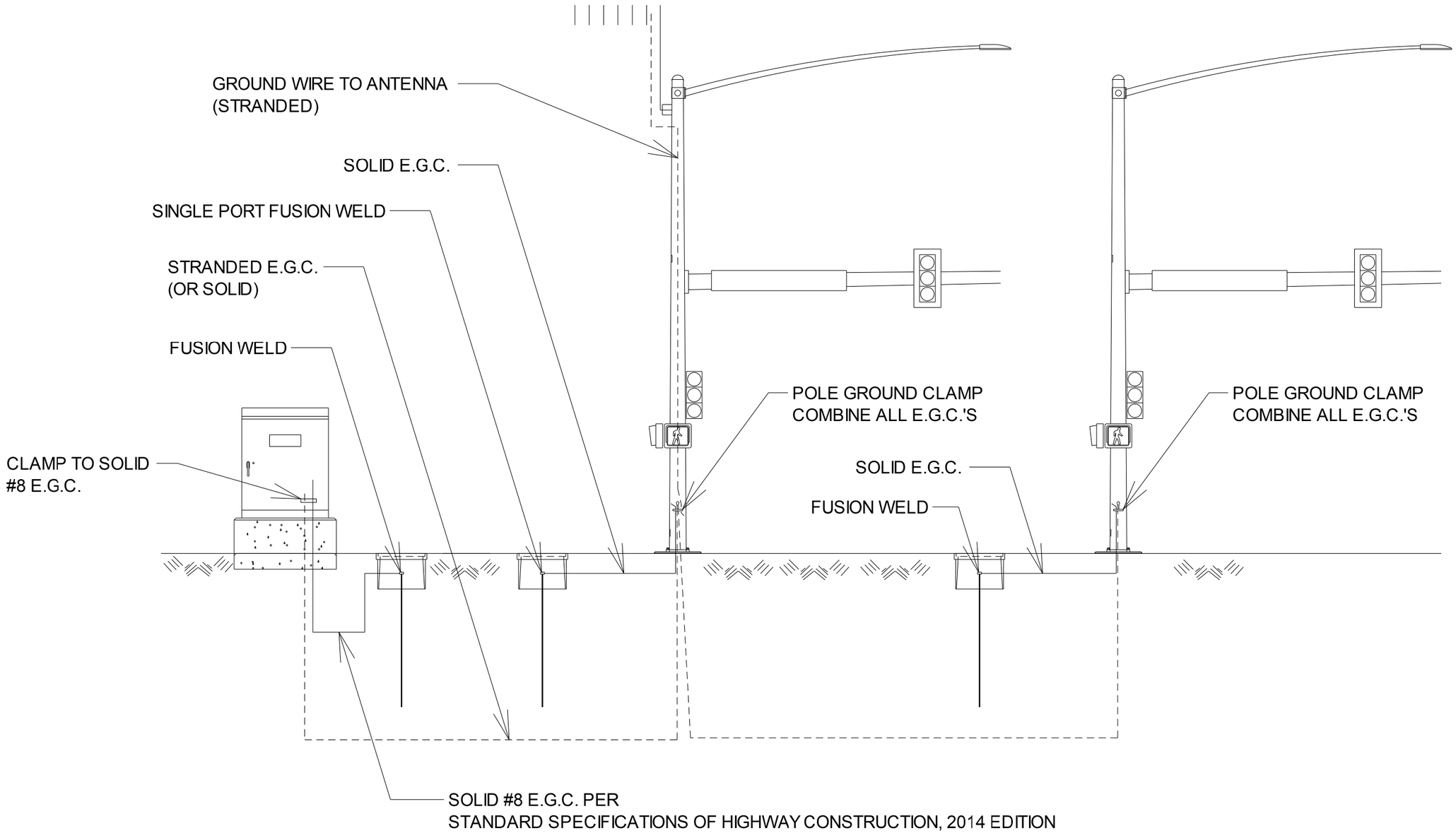
LOCATION: I-540/HWY. 255 INTCHNG. IMPVTS. (ZERO ST.)
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 04 SCALE: N/A DRAWN BY: ALM

ALMoore 8/9/2025 2:23:39 PM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	41	83
		GROUNDING ARRAY DETAIL				

GROUNDING ARRAY
SINGLE-PORT FUSION WELDS

STATE OF ARKANSAS
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LOCATION:	I-540/HWY. 255 INTCHNG. IMPVTS. (ZERO ST.)
CITY:	FORT SMITH
COUNTY:	SEBASTIAN
DISTRICT: 04	SCALE: N/A DRAWN BY: ALM

DATE: 12/2/2024 FILE NAME: t040889_DTL1.dgn

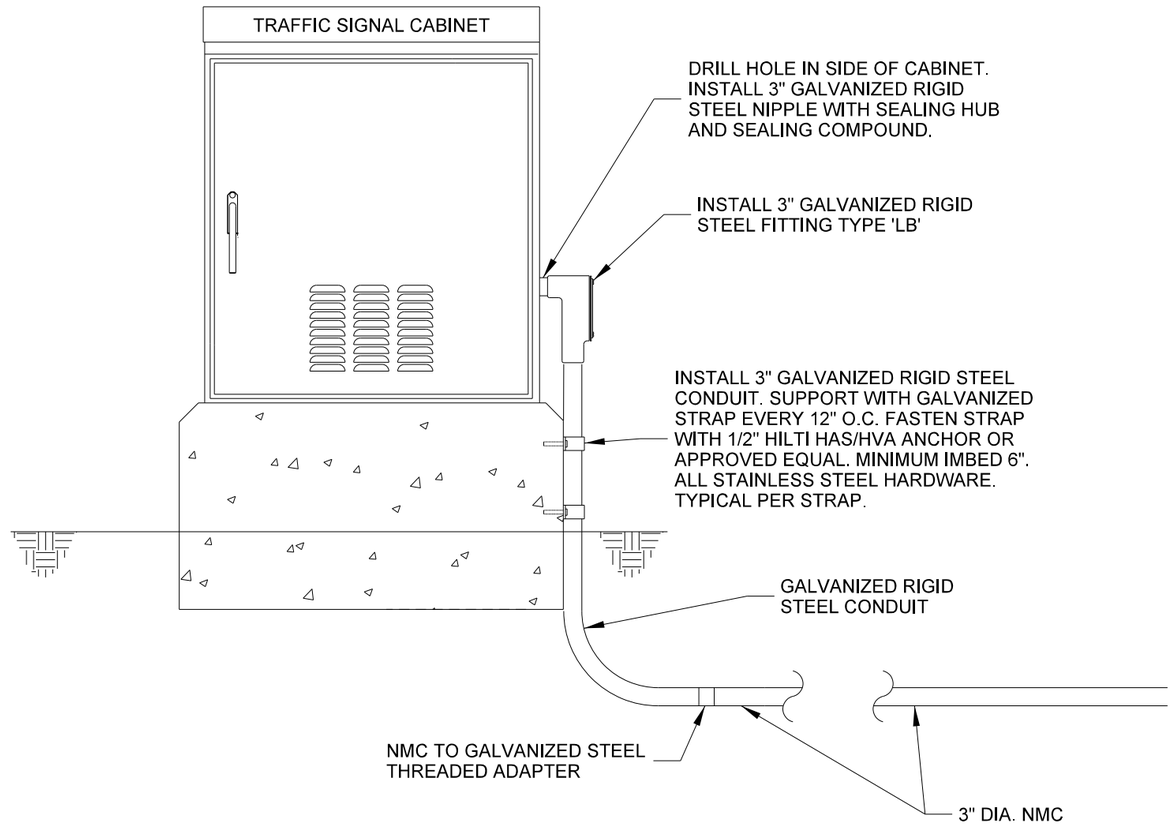
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	42	83
		CABINET DETAIL				

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NOTE:
COST OF GALVANIZED RIGID STEEL CONDUIT AND ITEMS NEEDED TO INSTALL IT INTO THE SIDE OF THE CABINET SUBSIDIARY TO PAY ITEM SP, TRAFFIC SIGNAL CONTROLLER (MODIFICATION)



LOCATION: I-540/HWY. 255 INTCHNG. IMPVTS. (ZERO ST.)
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 04 SCALE: N/A DRAWN BY: ALM

DATE: 12/2/2024 FILE NAME: t040889_Cabinet Detail.dgn

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
8/28/2025		6	ARK.	040889	43	83
		TRAFFIC SIGNAL QUANTITIES - NB RAMP				

NOTES:
1. QUANTITIES FOR THE NB RAMP INTERSECTION INCLUDE ALL WIRING, CONDUIT, AND PULL BOXES FROM POLES A, B, AND C TO THE CONTROLLER AT THE NB RAMP

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TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP & 701	SYSTEM LOCAL CONTROLLER TS2-TYPE 2, E-NET (8 PHASES)	1	EACH
SP	ETHERNET SWITCH, T100 HARDENED (8-PORT)	1	EACH
SP	E-NET CABLE (EXTERIOR CAT 5E)	92	LIN. FT.
SP	LOCAL RADIO (E-NET 5.8) WITH ANTENNA	1	EACH
SP	BATTERY BACKUP SYSTEM	1	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	7	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	1	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	457	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	88	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	492	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	447	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)	195	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	70	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	687	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")	20	LIN. FT.
710	NON-METALLIC CONDUIT (2")	56	LIN. FT.
710	NON-METALLIC CONDUIT (3")	338	LIN. FT.
SS & 711	CONCRETE PULL BOX (TYPE 1 HD)	1	EACH
SS & 711	CONCRETE PULL BOX (TYPE 2 HD)	4	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (34')	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (36')	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (54')	1	EACH
SP	LED LUMINAIRE ASSEMBLY	3	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH
SP	18" STREET NAME SIGN	1	EACH
SP & 733	STOP LINE RADAR DETECTOR	3	EACH
SP & 733	ADVANCED RADAR DETECTOR	1	EACH
SP & 733	RADAR CABINET INTERFACE	3	EACH
SP & 733	RADAR CABLE	758	LIN. FT.

NOTES:
FINAL SIGNAL SHALL BE OPERATIONAL UPON COMPLETION OF STAGE 3 CONSTRUCTION.

STAGE 1B TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP	TRAFFIC SIGNAL CONTROLLER (MODIFICATION)	1	EACH
SP & 733	RADAR CABLE	633	LIN. FT.

STAGE 1B NOTES:
EXISTING TRAFFIC SIGNAL POLES, PULL BOXES, CONTROLLER, AND CONDUIT SHALL BE USED DURING STAGES 1B-2 AT THE NORTHBOUND RAMP INTERSECTION.
STOP LINE RADAR DETECTION SHALL BE INSTALLED IN STAGE 1B.

STAGE 3 TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.34	LUMP SUM
SP & 733	RADAR DETECTION SYSTEM RELOCATION	1	EACH

STAGE 3 NOTES:
EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED.
EXISTING SIGNAL CONDUIT SHALL BE ABANDONED IN PLACE.
STAGE 3 SIGNAL SHALL BE OPERATIONAL PRIOR TO STAGE 3 BEGINNING.
RELOCATE RADAR DETECTORS R1B, R3B, AND R5B

DATE: 12/2/2024 FILE NAME: t040889_QTY_NB.dgn

LOCATION: I-540 RAMPS/36TH ST. AND HWY. 255/ZERO ST.
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 04 SCALE: N/A DRAWN BY: ALM

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	44	83
		TRAFFIC SIGNAL QUANTITIES - SB RAMP				

NOTES:
1. QUANTITIES FOR THE SB RAMP INTERSECTION INCLUDE ALL WIRING, CONDUIT, AND PULL BOXES FROM POLES D, E, F, AND G TO THE CONTROLLER AT THE NB RAMP

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TRAFFIC SIGNAL QUANTITIES

	ITEM NUMBER	ITEM	QUANTITY	UNIT
	SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	6	EACH
	SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	3	EACH
	708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	352	LIN. FT.
	708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	205	LIN. FT.
	708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	1585	LIN. FT.
	SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	689	LIN. FT.
	SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)	230	LIN. FT.
	SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	1815	LIN. FT.
	710	NON-METALLIC CONDUIT (3")	911	LIN. FT.
	SS & 711	CONCRETE PULL BOX (TYPE 2 HD)	6	EACH
	SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (18')	1	EACH
	SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (24')	1	EACH
	SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (44')	1	EACH
	SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (50')	1	EACH
	SP	LED LUMINAIRE ASSEMBLY	4	EACH
	SP	18" STREET NAME SIGN	4	EACH
	SP & 733	STOP LINE RADAR DETECTOR	4	EACH
	SP & 733	ADVANCED RADAR DETECTOR	1	EACH
*	SP & 733	RADAR CABLE	2056	LIN. FT.

NOTES:
FINAL SIGNAL SHALL BE OPERATIONAL UPON COMPLETION OF STAGE 3 CONSTRUCTION.
*THE 2c/#18 POWER CABLE SHOWN ON THE FINAL WIRING DIAGRAM IS SUBSIDIARY TO THE RADAR CABLE PAY ITEM.

STAGE 1B TRAFFIC SIGNAL QUANTITIES

	ITEM NUMBER	ITEM	QUANTITY	UNIT
	SP	NEMA ENCLOSURE	1	EACH
	SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	9	EACH
	SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	1	EACH
	708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	357	LIN. FT.
	708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	1699	LIN. FT.
	708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	766	LIN. FT.
	SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	383	LIN. FT.
	709	GALVANIZED STEEL CONDUIT (3")	55	LIN. FT.
	710	NON-METALLIC CONDUIT (3")	368	LIN. FT.
	SS & 711	CONCRETE PULL BOX (TYPE 2 HD)	4	EACH
	SS & 713	SPAN WIRE ASSEMBLY	1	EACH
	SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.33	LUMP SUM
	716	TREATED WOOD POLE (CLASS 2, 45')	4	EACH
	SP & 733	STOP LINE RADAR DETECTOR	4	EACH
*	SP & 733	RADAR CABLE	2257	LIN. FT.
	SP & 733	RADAR DETECTION SYSTEM RELOCATION	1	EACH

STAGE 1B NOTES:
EXISTING TRAFFIC SIGNAL POLES SHALL BE REMOVED AT THE SOUTHBOUND RAMP INTERSECTION.
THE EXISTING CONTROLLER SHALL BE USED FOR STAGES 1B-2 SIGNAL OPERATION.
THE TEMPORARY SIGNAL SHALL BE OPERATIONAL PRIOR TO STAGE 1B BEGINNING.
STOP LINE RADAR DETECTION SHALL BE INSTALLED IN STAGE 1B.
UPON COMPLETION OF STAGE 2 CONSTRUCTION, THE TEMPORARY SIGNAL SHALL BE REMOVED.
*THE 2c/#18 POWER CABLE SHOWN ON THE STAGE 1B WIRING DIAGRAM IS SUBSIDIARY TO THE RADAR CABLE PAY ITEM.
RELOCATE RADAR DETECTORS R1A, R3A, R5A, AND R7.

STAGE 3 TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.33	LUMP SUM

STAGE 3 NOTES:
REMOVE TEMPORARY SIGNAL EQUIPMENT AND ABANDON CONDUIT IN PLACE.
STAGE 3 SIGNAL SHALL BE OPERATIONAL PRIOR TO STAGE 3 BEGINNING.

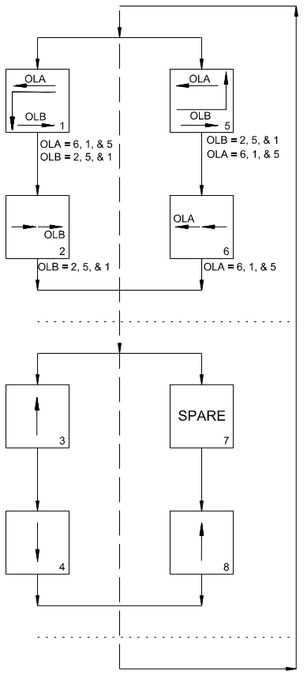
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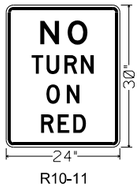
LOCATION: I-540 RAMPS/36TH ST. AND HWY. 255/ZERO ST.
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 04 SCALE: N/A DRAWN BY: ALM

JATurner 12/6/2024 10:54:44 AM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	45	83
		SIGNALIZATION PLAN SHEET				

STAGES 1B & 2 PHASING DIAGRAM





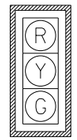
R10-11

STAGE 1B & 2 - SIGNAL FACES

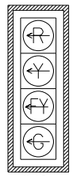
12" LENSES

NOTES:
1. OVERLAPS A AND B TO HAVE A MINIMUM TRAILING GREEN OF 6 SECONDS.
2. PHASE 1 FYA SHALL BE TERMINATED WITH THE TRAILING OVERLAP A TO AVOID YELLOW TRAP.
3. PHASE 5 FYA SHALL BE TERMINATED WITH THE TRAILING OVERLAP B TO AVOID YELLOW TRAP.

NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISION "RETROREFLECTIVE BACKPLATES" FOR DETAILS ON REQUIREMENTS FOR BACKPLATES.



41 & 42, 44 & 45, 46 & 47, 48, 49, & 50 (TEMP) 31 & 32, 33 & 34, 35 & 36 (EXISTING)



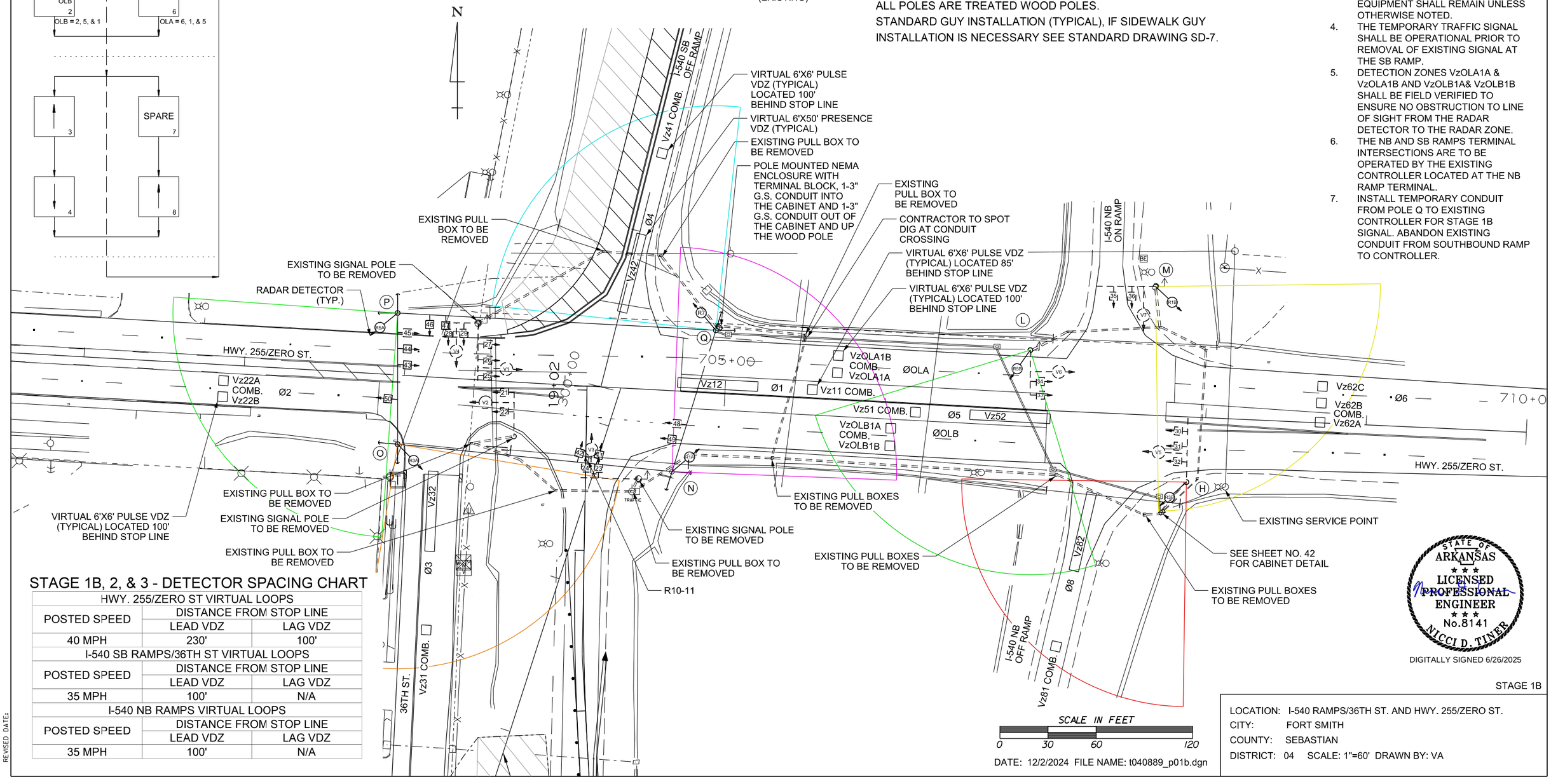
#43 (TEMP) 30 (EXISTING)

I-540 SB RAMP/36TH ST. AND HWY. 255/ZERO ST. STAGE 1B & 2- POLE DIMENSIONS

POLE	CLASS	HEIGHT	LUM. ARM	LUM. ANGLE
N	2	45'	N/A	N/A
O	2	45'	N/A	N/A
P	2	45'	N/A	N/A
Q	2	45'	N/A	N/A

ALL POLES ARE TREATED WOOD POLES.
STANDARD GUY INSTALLATION (TYPICAL), IF SIDEWALK GUY INSTALLATION IS NECESSARY SEE STANDARD DRAWING SD-7.

NOTES:
1. R1A, R3A, R5A, R7, R1B, R3B, AND R5B ARE STOP LINE RADAR DETECTORS.
2. TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT ALL CONSTRUCTION PHASES.
3. THE EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL REMAIN UNLESS OTHERWISE NOTED.
4. THE TEMPORARY TRAFFIC SIGNAL SHALL BE OPERATIONAL PRIOR TO REMOVAL OF EXISTING SIGNAL AT THE SB RAMP.
5. DETECTION ZONES VzOLA1A & VzOLA1B AND VzOLB1A& VzOLB1B SHALL BE FIELD VERIFIED TO ENSURE NO OBSTRUCTION TO LINE OF SIGHT FROM THE RADAR DETECTOR TO THE RADAR ZONE.
6. THE NB AND SB RAMPS TERMINAL INTERSECTIONS ARE TO BE OPERATED BY THE EXISTING CONTROLLER LOCATED AT THE NB RAMP TERMINAL.
7. INSTALL TEMPORARY CONDUIT FROM POLE Q TO EXISTING CONTROLLER FOR STAGE 1B SIGNAL. ABANDON EXISTING CONDUIT FROM SOUTHBOUND RAMP TO CONTROLLER.



STAGE 1B, 2, & 3 - DETECTOR SPACING CHART

HWY. 255/ZERO ST VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
40 MPH	230'	100'
I-540 SB RAMPS/36TH ST VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
35 MPH	100'	N/A
I-540 NB RAMPS VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
35 MPH	100'	N/A

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.8141
NICCI D. TINER
DIGITALLY SIGNED 6/26/2025

STAGE 1B

SCALE IN FEET
0 30 60 120

DATE: 12/2/2024 FILE NAME: t040889_p01b.dgn

LOCATION: I-540 RAMPS/36TH ST. AND HWY. 255/ZERO ST.
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 04 SCALE: 1"=60' DRAWN BY: VA

JATurner 12/6/2024 10:54:59 AM
WORKSPACE: AHTD
L:\202\2170100 - ARDOT 040889 I-540-Hwy 255\Drawings\t040889_p01b.dgn
REVISED DATE:

DESIGN PARAMETERS

POSTED SPEED LIMIT:
40 MPH EAST AND WEST APPROACH
35 MPH NORTH AND SOUTH APPROACH

NO BUS STOPS
NO RAILROAD TRACKS
EXISTING INTERCONNECTIONS
NO FIRE STATION
NO PARKING
NO SIGHT DISTANCE RESTRICTIONS

LOCATION OF STOP LINES SHOWN ON MAINTENANCE OF TRAFFIC DETAILS (SEE SEPARATE SHEET).

MINIMUM CLEAR ZONE DISTANCE
4 FEET BEHIND CURB
14 FEET (HWY. 255)

I-540 SB RAMP/36TH ST. AND HWY 255/ZERO ST.
STAGE 1B & 2 - POLE LOCATIONS

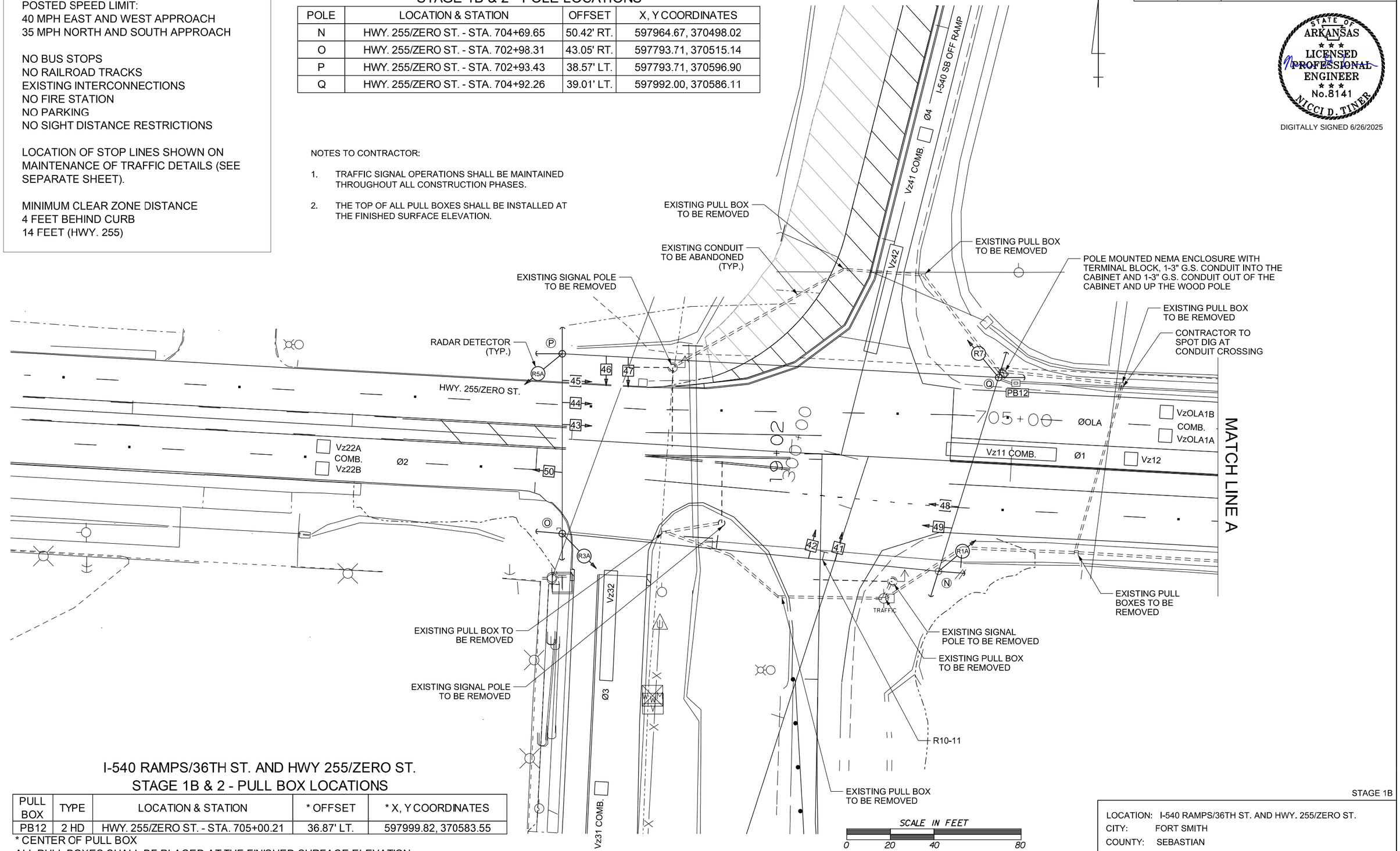
POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
N	HWY. 255/ZERO ST. - STA. 704+69.65	50.42' RT.	597964.67, 370498.02
O	HWY. 255/ZERO ST. - STA. 702+98.31	43.05' RT.	597793.71, 370515.14
P	HWY. 255/ZERO ST. - STA. 702+93.43	38.57' LT.	597793.71, 370596.90
Q	HWY. 255/ZERO ST. - STA. 704+92.26	39.01' LT.	597992.00, 370586.11

NOTES 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.

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	46	83
		SIGNALIZATION PLAN SHEET				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.8141
NICCI D. TINER
DIGITALLY SIGNED 6/26/2025



I-540 RAMPS/36TH ST. AND HWY 255/ZERO ST.
STAGE 1B & 2 - PULL BOX LOCATIONS

PULL BOX	TYPE	LOCATION & STATION	* OFFSET	* X, Y COORDINATES
PB12	2 HD	HWY. 255/ZERO ST. - STA. 705+00.21	36.87' LT.	597999.82, 370583.55

* CENTER OF PULL BOX
ALL PULL BOXES SHALL BE PLACED AT THE FINISHED SURFACE ELEVATION.

STAGE 1B

LOCATION: I-540 RAMPS/36TH ST. AND HWY. 255/ZERO ST.
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 04 SCALE: 1"=40' DRAWN BY: VA

DATE: 12/2/2024 FILE NAME: t040889_p02b_SB.dgn

JATurner 12/6/2024 10:55:10 AM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	47	83
		SIGNALIZATION PLAN SHEET				

DESIGN PARAMETERS

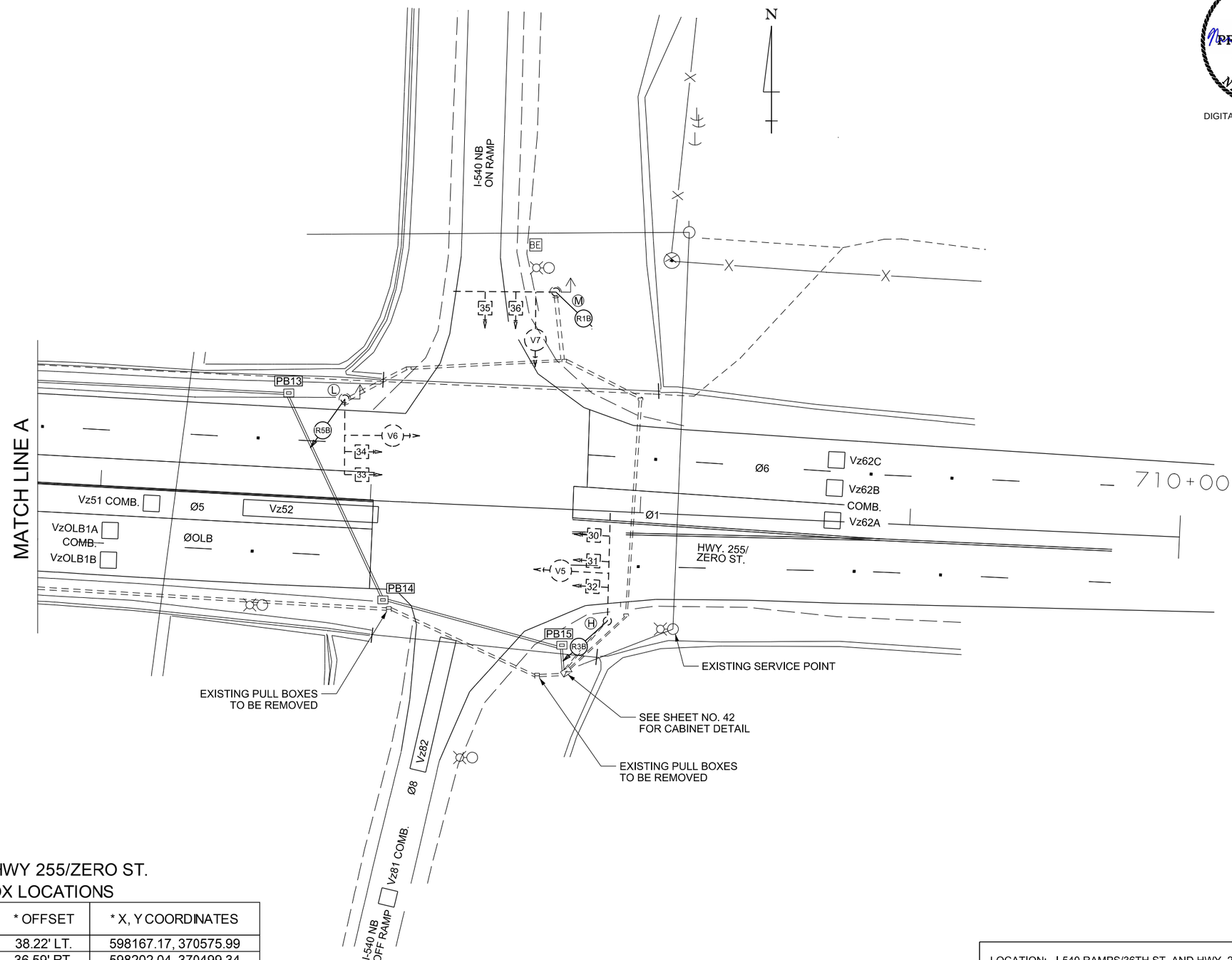
POSTED SPEED LIMIT:
40 MPH EAST AND WEST APPROACH
35 MPH NORTH AND SOUTH APPROACH

NO BUS STOPS
NO RAILROAD TRACKS
EXISTING INTERCONNECTIONS
NO FIRE STATION
NO PARKING
NO SIGHT DISTANCE RESTRICTIONS

LOCATION OF STOP LINES SHOWN ON MAINTENANCE OF TRAFFIC DETAILS (SEE SEPARATE SHEET).

MINIMUM CLEAR ZONE DISTANCE
4 FEET BEHIND CURB
14 FEET (HWY. 255)

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.8141
NICCI D. TINER
DIGITALLY SIGNED 6/26/2025



NOTES 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.

I-540 RAMPS/36TH ST. AND HWY 255/ZERO ST.
STAGE 1B & 2 - PULL BOX LOCATIONS

PULL BOX	TYPE	LOCATION & STATION	* OFFSET	* X, Y COORDINATES
PB13	2 HD	HWY. 255/ZERO ST. - STA. 706+67.72	38.22' LT.	598167.17, 370575.99
PB14	2 HD	HWY. 255/ZERO ST. - STA. 707+06.33	36.59' RT.	598202.04, 370499.34
PB15	2 HD	HWY. 255/ZERO ST. - STA. 707+73.30	50.35' RT.	598268.32, 370482.57

* CENTER OF PULL BOX
ALL PULL BOXES SHALL BE PLACED AT THE FINISHED SURFACE ELEVATION.

SCALE IN FEET
0 20 40 80

DATE: 12/2/2024 FILE NAME: t040889_p02b_NB.dgn

STAGE 1B

LOCATION: I-540 RAMPS/36TH ST. AND HWY. 255/ZERO ST.
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 04 SCALE: 1"=40' DRAWN BY: VA

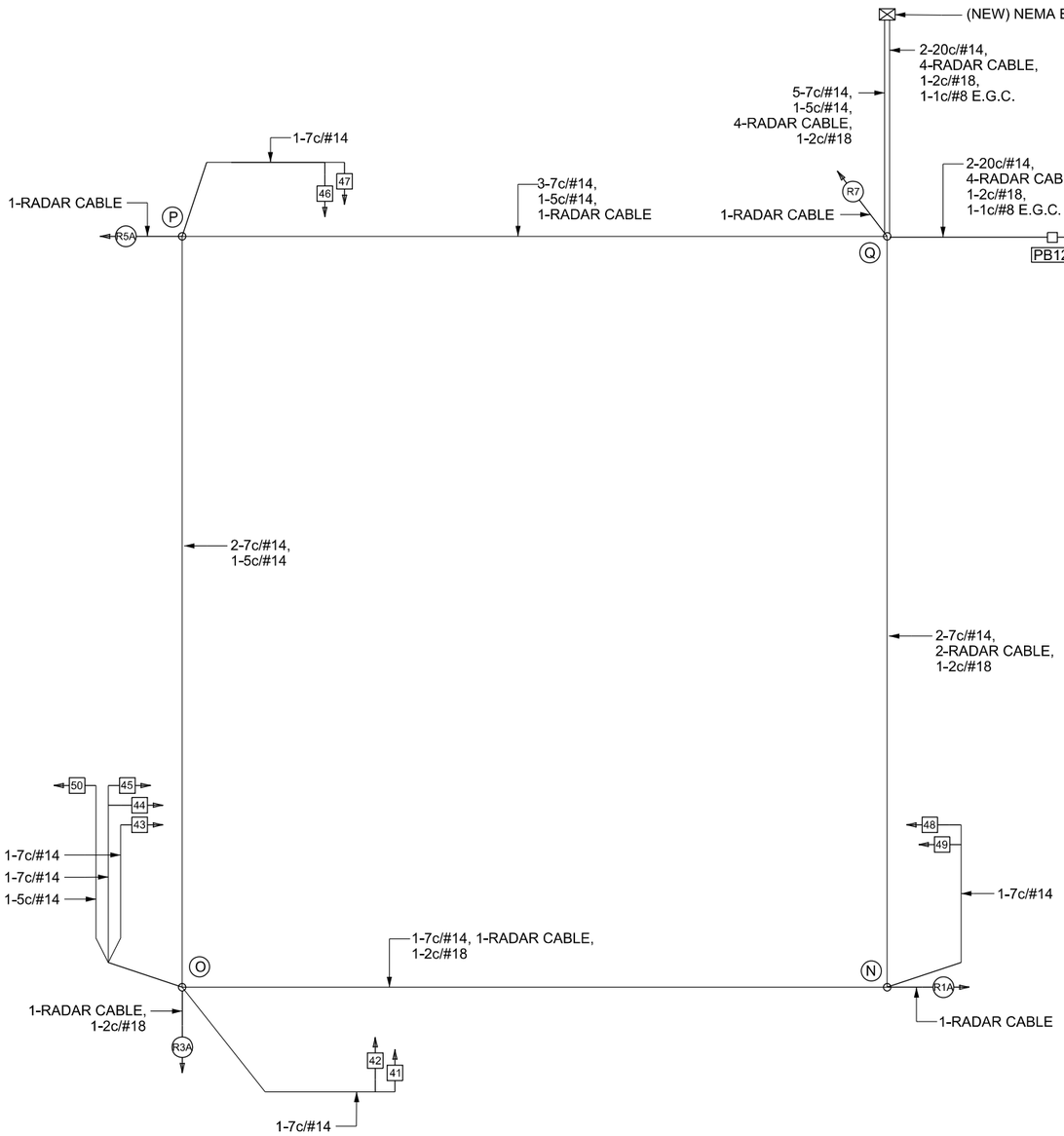
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REVISED DATE:

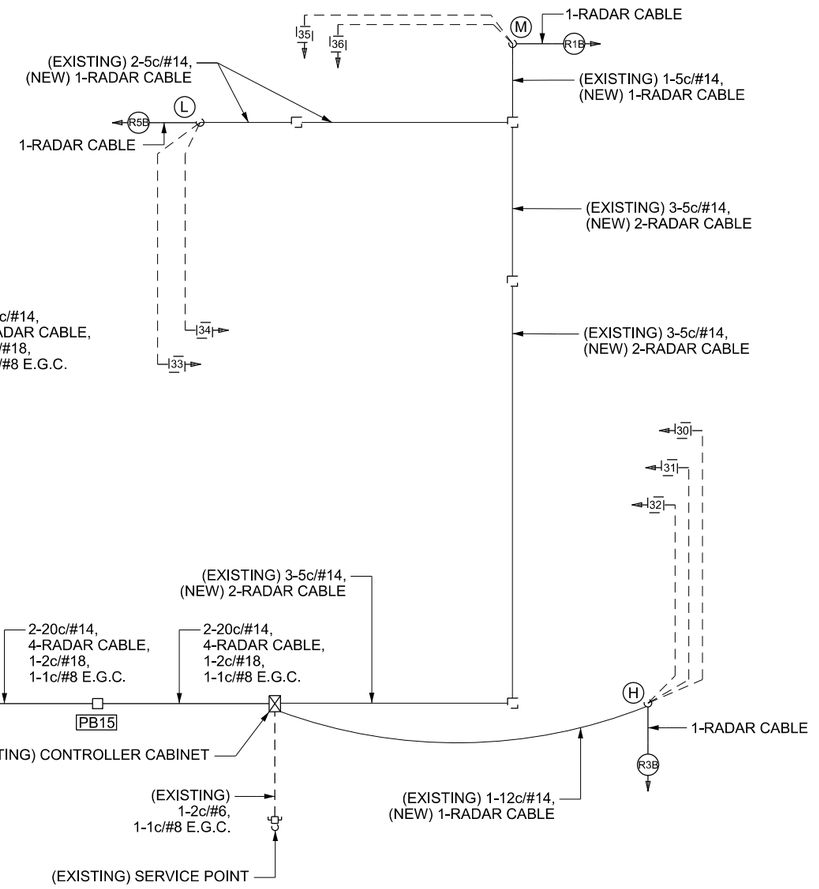
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	48	83
		SIGNALIZATION PLAN SHEET				

STAGE 1B & 2 WIRING DIAGRAM

NOTES TO CONTRACTOR:
1. ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA OF CABINET.
2. THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.
3. SEE SHEET NUMBER 41 FOR GROUNDING ARRAY DETAIL.
4. THE 2c/#18 POWER CABLE SHOWN IS SUBSIDIARY TO THE RADAR CABLE PAY ITEM.

STATE OF ARKANSAS
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DIGITALLY SIGNED 6/26/2025





STAGE 1B

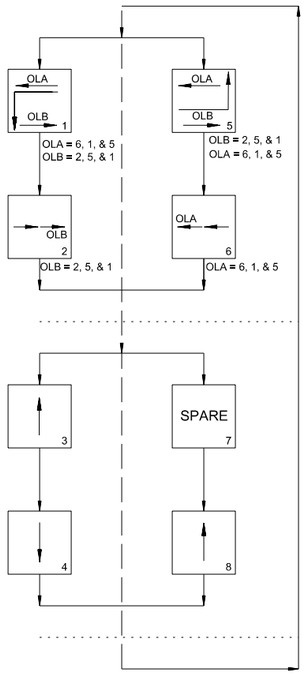
LOCATION: I-540 RAMPS/36TH ST. AND HWY. 255/ZERO ST.
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 04 SCALE: N/A DRAWN BY: VA

DATE: 12/2/2024 FILE NAME: t040889_p03b.dgn

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REVISED DATE:

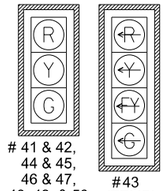
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	49	83
		SIGNALIZATION PLAN SHEET				

STAGES 1B & 2 PHASING DIAGRAM



STAGE 1B & 2 - SIGNAL FACES

12" LENSES



41 & 42, 44 & 45, 46 & 47, 48, 49, & 50 (TEMP) 31 & 32, 33 & 34, 35 & 36 (EXISTING)

#43 (TEMP) 30 (EXISTING)



R10-11

NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISION "RETROREFLECTIVE BACKPLATES" FOR DETAILS ON REQUIREMENTS FOR BACKPLATES.

NOTES:
1. OVERLAPS A AND B TO HAVE A MINIMUM TRAILING GREEN OF 6 SECONDS.
2. PHASE 1 FYA SHALL BE TERMINATED WITH THE TRAILING OVERLAP A TO AVOID YELLOW TRAP.
3. PHASE 5 FYA SHALL BE TERMINATED WITH THE TRAILING OVERLAP B TO AVOID YELLOW TRAP.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.8141
NICCI D. TINER

DIGITALLY SIGNED 6/26/2025

STAGES 1B & 2 - DETECTOR CHART

DETECTOR SYSTEM DESCRIPTION: JOB 040889								
I-540 RAMPS/36TH ST. AND HWY. 255/ZERO ST. DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER	PROGRAM ASSIGNMENTS LOCAL		DETECTION	COMMENTS
DET. ZONE ID #	LOCATION DIRECTION	TYPE	RADAR DET. ID #	CON. INPUT #	PHASE	SYSTEM DET. #	OUTPUT CHANNEL	
Vz11	WB LEFT TURN FAR	COMB.	R1A	V9	1	1	1	
Vz12	WB LEFT TURN	LOCAL	R1A	V1	1		2	
Vz22 A&B	EB NEAR	COMB.	R5A	V10	2	2	4	
Vz31	NB ADVANCE (36TH ST)	COMB.	R3A	V11	3	3	5	
Vz32	NB NEAR (36TH ST)	LOCAL	R3A	V3	3		6	
Vz41	SB ADVANCE (SB RAMP)	COMB.	R7	V12	4	4	7	
Vz42	SB NEAR (SB RAMP)	LOCAL	R7	V4	4		8	
Vz51	EB LEFT TURN FAR	COMB.	R5B	V13	5	5	9	
Vz52	EB LEFT TURN	LOCAL	R5B	V5	5		10	
Vz62 A&B&C	WB NEAR	COMB.	R1B	V14	6	6	12	
Vz81	NB ADVANCE (NB RAMP)	COMB.	R3B	V16	8	8	13	
Vz82	NB NEAR (NB RAMP)	LOCAL	R3B	V8	8		14	
VzOLA1 A&B	WB ADVANCE	COMB.	R1A	P1	OLA		15	
VzOLB1 A&B	EB ADVANCE	COMB.	R5B	P3	OLB		16	
				SPARE OUTPUT CHANNELS:				

CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
P = PEDESTRIAN INPUT

NOTES: STOP BAR DETECTION SHALL BE SET FROM 2 FEET IN FRONT OF THE STOP BAR TO THE SENSORS LIMIT. IN THE CASE OF A LEFT TURN LANE, THE BACK OF THE DETECTION AREA SHALL BE TO THE SENSORS LIMIT.

ON THE ADVANCE SENSOR - CREATE AN ADDITIONAL ZONE STARTING WHERE THE STOP BAR DETECTION ENDS AND TO THE FURTHEST DISTANCE THE SENSOR READS. THE "ZONE" SHALL READ UNDER THE "ETA (SECONDS)": 2.5-7.5. THE OUTPUT SHALL BE THE SAME AS THE ADVANCED DETECTION ZONE BEING OVERLAYED

ALL INPUT/OUTPUT LOGIC SHALL BE PROGRAMMED IN THE ARC

STAGE 1B & 2 - INTERVAL CHART

SIGNAL FACES	I-540 RAMPS/36TH ST. AND HWY. 255/ZERO ST. 1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	3+8	CLR.	4+8	CLR.	FLASH SEQUENCE
30	~~G~~	*	~~FY~~	***	~~G~~	*	~~FY~~	***	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
31 & 32	G	**	G	**	G	**	G	**	R	R	R	R	R
33 & 34	R	R	G	**	R	R	G	**	R	R	R	R	R
35 & 36	R	R	R	R	R	R	R	R	G	**	G	**	R
41 & 42	R	R	R	R	R	R	R	R	R	R	G	Y	R
43	~~G~~	*	~~G~~	*	~~FY~~	***	~~FY~~	***	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
44 & 45	G	**	G	**	G	**	G	**	R	R	R	R	R
46 & 47	R	R	R	R	R	R	R	R	G	Y	R	R	R
48 & 49 & 50	R	R	R	R	G	**	G	**	R	R	R	R	R

* 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

STAGE 1B

LOCATION: I-540 RAMPS/36TH ST. AND HWY. 255/ZERO ST.
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 04 SCALE: N/A DRAWN BY: VA

DATE: 12/2/2024 FILE NAME: t040889_p04b.dgn

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	50	83
		SIGNALIZATION PLAN SHEET				

STAGES 1B & 2 PHASING DIAGRAM

NOTES:
1. OVERLAPS A AND B TO HAVE A MINIMUM TRAILING GREEN OF 6 SECONDS.
2. PHASE 1 FYA SHALL BE TERMINATED WITH THE TRAILING OVERLAP A TO AVOID YELLOW TRAP.
3. PHASE 5 FYA SHALL BE TERMINATED WITH THE TRAILING OVERLAP B TO AVOID YELLOW TRAP.

R10-11

STAGE 1B & 2 - SIGNAL FACES

12" LENSES

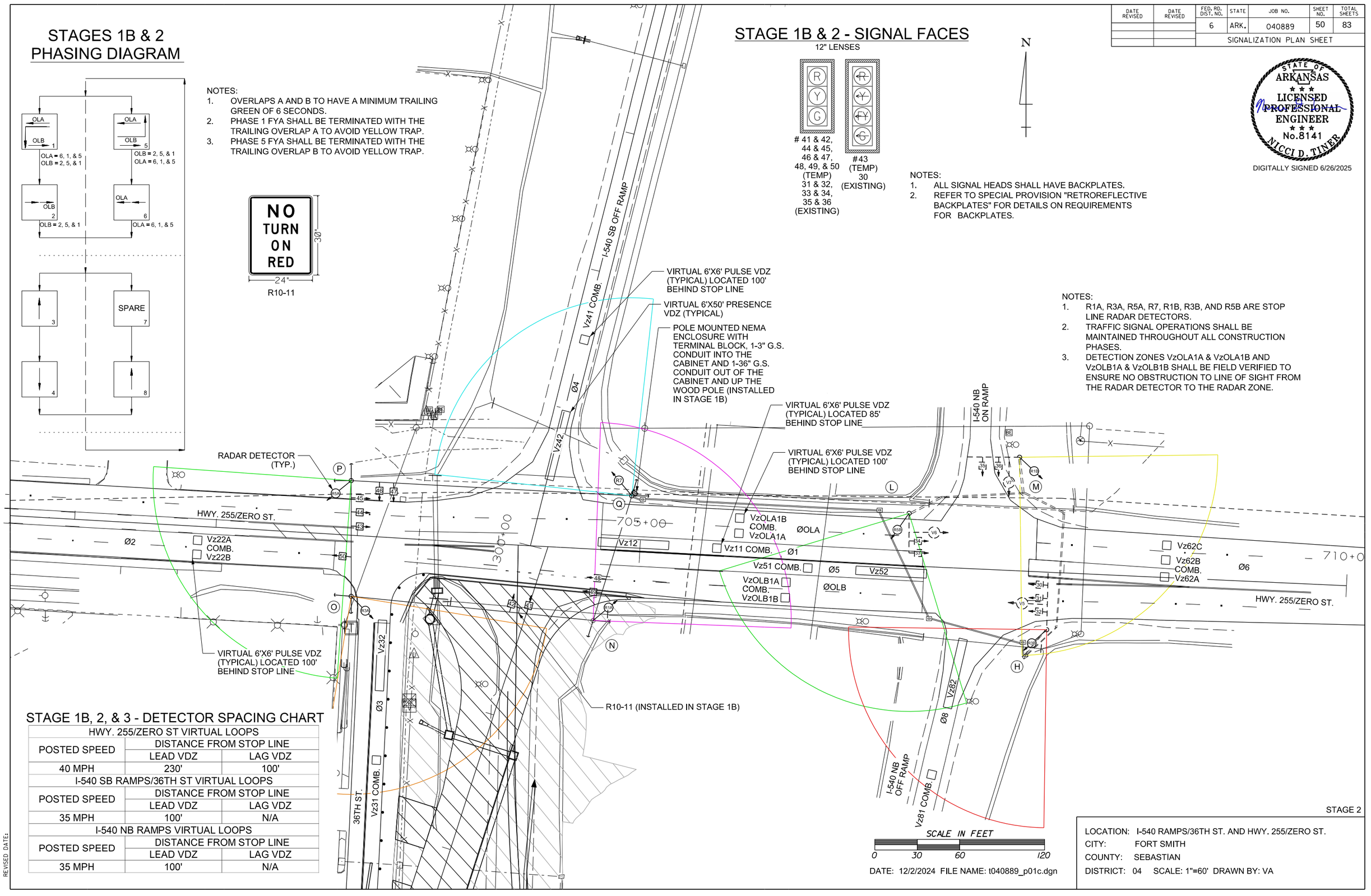
41 & 42, 44 & 45, 46 & 47, 48, 49, & 50 (TEMP) 31 & 32, 33 & 34, 35 & 36 (EXISTING)

#43 (TEMP) 30 (EXISTING)

NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISION "RETROREFLECTIVE BACKPLATES" FOR DETAILS ON REQUIREMENTS FOR BACKPLATES.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.8141
NICCI D. TINER
DIGITALLY SIGNED 6/26/2025

NOTES:
1. R1A, R3A, R5A, R7, R1B, R3B, AND R5B ARE STOP LINE RADAR DETECTORS.
2. TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT ALL CONSTRUCTION PHASES.
3. DETECTION ZONES VzOLA1A & VzOLA1B AND VzOLB1A & VzOLB1B SHALL BE FIELD VERIFIED TO ENSURE NO OBSTRUCTION TO LINE OF SIGHT FROM THE RADAR DETECTOR TO THE RADAR ZONE.



STAGE 2

STAGE 1B, 2, & 3 - DETECTOR SPACING CHART

HWY. 255/ZERO ST VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
40 MPH	230'	100'
I-540 SB RAMPS/36TH ST VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
35 MPH	100'	N/A
I-540 NB RAMPS VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
35 MPH	100'	N/A

LOCATION: I-540 RAMPS/36TH ST. AND HWY. 255/ZERO ST.
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 04 SCALE: 1"=60' DRAWN BY: VA

DATE: 12/2/2024 FILE NAME: t040889_p01c.dgn

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WORKSPACE: AHTD
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REVISED DATE:

DESIGN PARAMETERS

POSTED SPEED LIMIT:
40 MPH EAST AND WEST APPROACH
35 MPH NORTH AND SOUTH APPROACH

NO BUS STOPS
NO RAILROAD TRACKS
EXISTING INTERCONNECTIONS
NO FIRE STATION
NO PARKING
NO SIGHT DISTANCE RESTRICTIONS

LOCATION OF STOP LINES SHOWN ON MAINTENANCE OF TRAFFIC DETAILS (SEE SEPARATE SHEET).

MINIMUM CLEAR ZONE DISTANCE
4 FEET BEHIND CURB
14 FEET (HWY. 255)

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	51	83
		SIGNALIZATION PLAN SHEET				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.8141
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DIGITALLY SIGNED 6/26/2025

N

I-540 SB OFF RAMP
Vz41 COMB.
Ø4
Vz42
RADAR DETECTOR (TYP.)
POLE MOUNTED NEMA ENCLOSURE WITH TERMINAL BLOCK, 1-3" G.S. CONDUIT INTO THE CABINET AND 1-3" G.S. OUT OF THE CABINET AND UP THE WOOD POLE (INSTALLED IN STAGE 1B)
I-540 NBION RAMP
HWY. 255/ ZERO ST.
Vz22A COMB.
Vz22B
Ø2
Vz12
Ø1
ØOLA
VzOLA1B COMB. VzOLA1A
Vz11 COMB.
Vz51 COMB.
Ø5
Vz52
VzOLB1A COMB. VzOLB1B
ØOLB
Ø6
Vz62C
Vz62B COMB.
Vz62A
HWY. 255/ ZERO ST.
Vz32
Ø3
Vz31 COMB.
36TH ST.
R10-11
Vz282
Ø8
Vz281 COMB.
I-540 NB OFF RAMP
STAGE 2

SCALE IN FEET
0 20 40 80

LOCATION: I-540 RAMPS/36TH ST. AND HWY. 255/ZERO ST.
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 04 SCALE: 1"=40' DRAWN BY: VA

DATE: 12/2/2024 FILE NAME: t040889_p02c.dgn

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	52	83
		SIGNALIZATION PLAN SHEET				

STAGE 3 PHASING DIAGRAM

STAGE 3 SIGNAL FACES

12" LENSES

NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISION "RETROREFLECTIVE BACKPLATES" FOR DETAILS ON REQUIREMENTS FOR BACKPLATES.

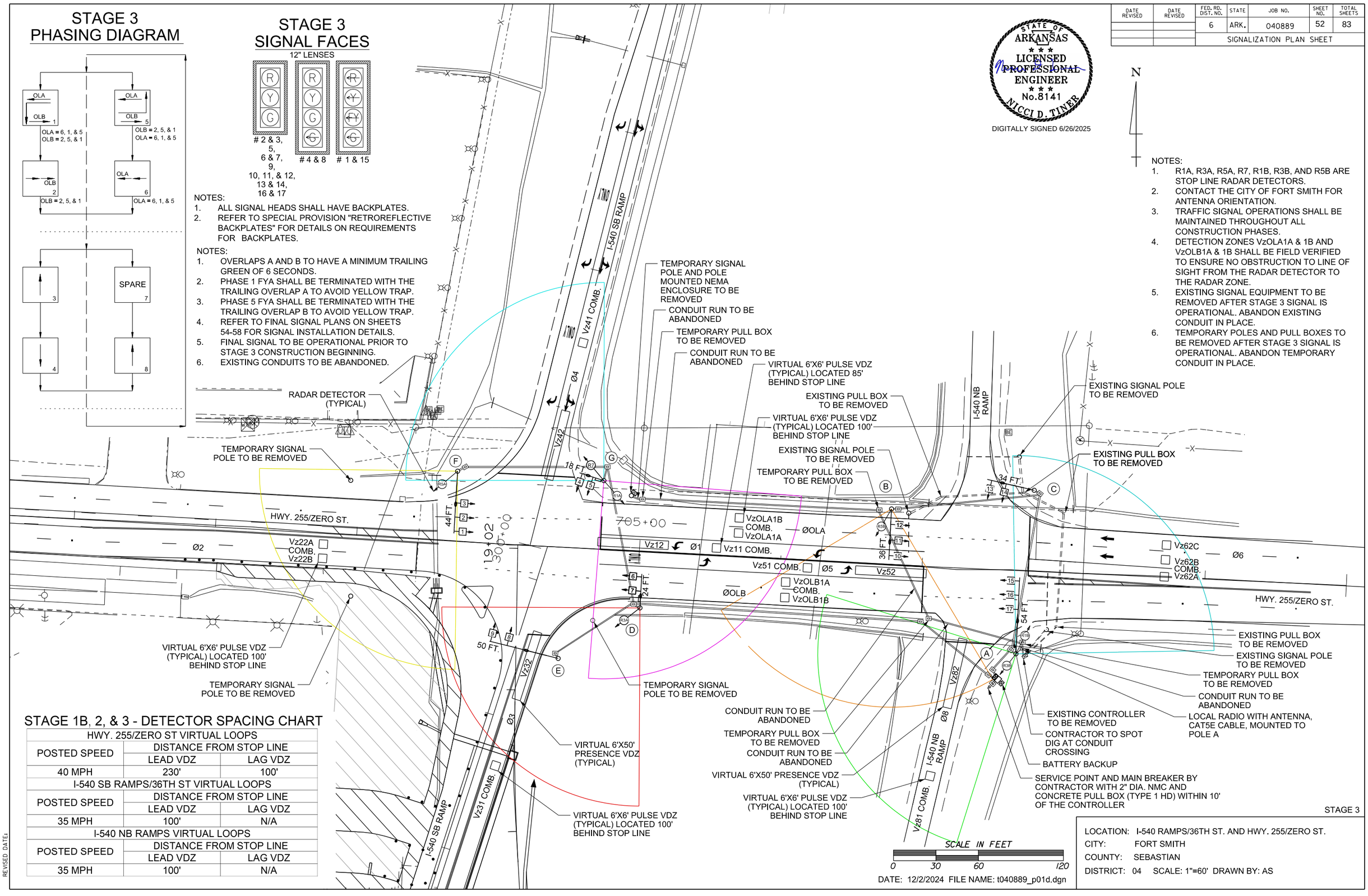
NOTES:
1. OVERLAPS A AND B TO HAVE A MINIMUM TRAILING GREEN OF 6 SECONDS.
2. PHASE 1 FYA SHALL BE TERMINATED WITH THE TRAILING OVERLAP A TO AVOID YELLOW TRAP.
3. PHASE 5 FYA SHALL BE TERMINATED WITH THE TRAILING OVERLAP B TO AVOID YELLOW TRAP.
4. REFER TO FINAL SIGNAL PLANS ON SHEETS 54-58 FOR SIGNAL INSTALLATION DETAILS.
5. FINAL SIGNAL TO BE OPERATIONAL PRIOR TO STAGE 3 CONSTRUCTION BEGINNING.
6. EXISTING CONDUITS TO BE ABANDONED.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.8141
NICCI D. TINER

DIGITALLY SIGNED 6/26/2025

N

NOTES:
1. R1A, R3A, R5A, R7, R1B, R3B, AND R5B ARE STOP LINE RADAR DETECTORS.
2. CONTACT THE CITY OF FORT SMITH FOR ANTENNA ORIENTATION.
3. TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT ALL CONSTRUCTION PHASES.
4. DETECTION ZONES VzOLA1A & 1B AND VzOLB1A & 1B SHALL BE FIELD VERIFIED TO ENSURE NO OBSTRUCTION TO LINE OF SIGHT FROM THE RADAR DETECTOR TO THE RADAR ZONE.
5. EXISTING SIGNAL EQUIPMENT TO BE REMOVED AFTER STAGE 3 SIGNAL IS OPERATIONAL. ABANDON EXISTING CONDUIT IN PLACE.
6. TEMPORARY POLES AND PULL BOXES TO BE REMOVED AFTER STAGE 3 SIGNAL IS OPERATIONAL. ABANDON TEMPORARY CONDUIT IN PLACE.



STAGE 1B, 2, & 3 - DETECTOR SPACING CHART

HWY. 255/ZERO ST VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
40 MPH	230'	100'
I-540 SB RAMPS/36TH ST VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
35 MPH	100'	N/A
I-540 NB RAMPS VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
35 MPH	100'	N/A

STAGE 3

LOCATION: I-540 RAMPS/36TH ST. AND HWY. 255/ZERO ST.
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 04 SCALE: 1"=60' DRAWN BY: AS

DATE: 12/2/2024 FILE NAME: t040889_p01d.dgn

JATurner 12/6/2024 10:55:53 AM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	53	83
		SIGNALIZATION PLAN SHEET				

DESIGN PARAMETERS

POSTED SPEED LIMIT:
40 MPH EAST AND WEST APPROACH
35 MPH NORTH AND SOUTH APPROACH

NO BUS STOPS
NO RAILROAD TRACKS
EXISTING INTERCONNECTIONS
NO FIRE STATION
NO PARKING
NO SIGHT DISTANCE RESTRICTIONS

LOCATION OF STOP LINES SHOWN ON MAINTENANCE OF TRAFFIC DETAILS (SEE SEPARATE SHEET).

MINIMUM CLEAR ZONE DISTANCE
4 FEET BEHIND CURB
14 FEET (HWY. 255)

N

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.8141
NICCI D. TINER
DIGITALLY SIGNED 6/26/2025

NOTES 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.

TEMPORARY SIGNAL POLE TO BE REMOVED
RADAR DETECTOR (TYPICAL)
I-540 SB RAMP
Vz41 COMB.
Ø4
Vz42
TEMPORARY SIGNAL POLE AND POLE MOUNTED NEMA ENCLOSURE TO BE REMOVED
TEMPORARY CONDUIT TO BE ABANDONED
TEMPORARY PULL BOX TO BE REMOVED
EXISTING CONDUIT TO BE ABANDONED (TYP.)
EXISTING PULL BOX TO BE REMOVED
EXISTING SIGNAL POLE TO BE REMOVED
I-540 NB RAMP
EXISTING PULL BOX TO BE REMOVED
EXISTING PULL BOX TO BE REMOVED
HWY. 255/ZERO ST.
44 FT.
18 FT.
34 FT.
36 FT.
54 FT.
24 FT.
50 FT.
705+00
1902 30+00
VzOLA1B COMB. VzOLA1A
ØOLA
Ø2
Vz22A COMB. Vz22B
Vz12
Vz11 COMB.
Ø1
Vz51 COMB.
Ø5
Vz52
ØOLB
VzOLB1A COMB. VzOLB1B
TEMPORARY CONDUIT TO BE ABANDONED
TEMPORARY SIGNAL POLE TO BE REMOVED
TEMPORARY SIGNAL POLE TO BE REMOVED
TEMPORARY PULL BOX TO BE REMOVED
TEMPORARY CONDUIT TO BE ABANDONED
NOTE TO CONTRACTOR:
CONTACT THE CITY OF FORT SMITH FOR ANTENNA ORIENTATION.
HWY. 255/ZERO ST.
EXISTING PULL BOX TO BE REMOVED
EXISTING SIGNAL POLE TO BE REMOVED
TEMPORARY PULL BOX TO BE REMOVED
TEMPORARY CONDUIT TO BE ABANDONED
EXISTING CONTROLLER TO BE REMOVED
CONTRACTOR TO SPOT DIG AT CONDUIT CROSSING
BATTERY BACKUP
SERVICE POINT AND MAIN BREAKER BY CONTRACTOR WITH 2" DIA. NMC AND CONCRETE PULL BOX (TYPE 1 HD) WITHIN 10' OF THE CONTROLLER
I-540 SB RAMP
Ø3
Vz32
Vz231 COMB.
Vz82
Ø8
Vz81 COMB.
I-540 NB RAMP

STAGE 3

SCALE IN FEET
0 20 40 80

DATE: 12/2/2024 FILE NAME: t040889_p02d.dgn

LOCATION: I-540 RAMPS/36TH. AND HWY. 255/ZERO ST.
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 04 SCALE: 1"=40' DRAWN BY: VA

JATurner 12/6/2024 10:55:55 AM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	54	83
		SIGNALIZATION PLAN SHEET				

PHASING DIAGRAM

SIGNAL FACES

12" LENSES

2&3, 5, 6 & 7, 9, 10,11,&12, 13&14, 16&17 — #4&8 — # 1 & 15

NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISION "RETROREFLECTIVE BACKPLATES" FOR DETAILS ON REQUIREMENTS FOR BACKPLATES.

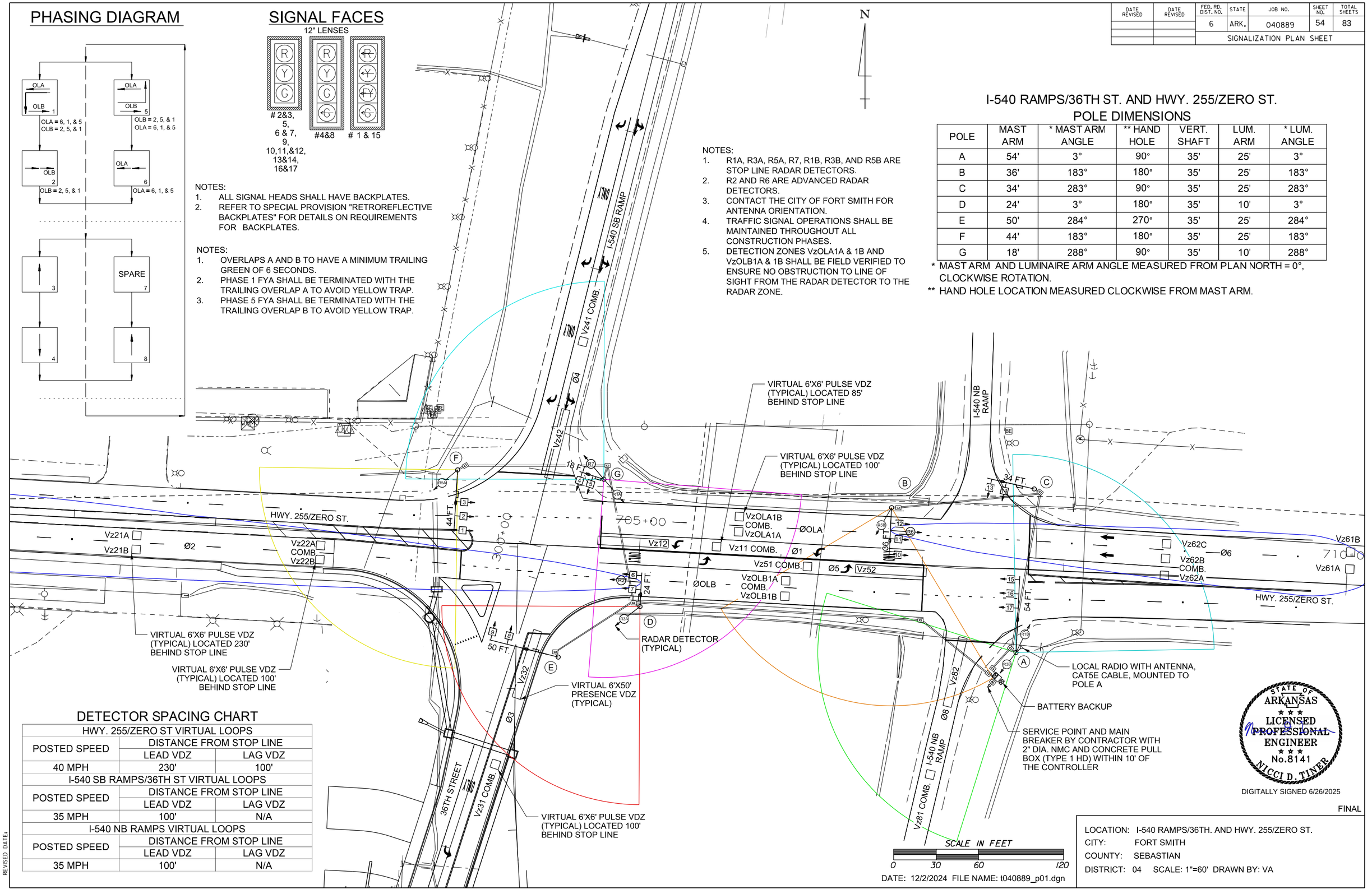
NOTES:
1. OVERLAPS A AND B TO HAVE A MINIMUM TRAILING GREEN OF 6 SECONDS.
2. PHASE 1 FYA SHALL BE TERMINATED WITH THE TRAILING OVERLAP A TO AVOID YELLOW TRAP.
3. PHASE 5 FYA SHALL BE TERMINATED WITH THE TRAILING OVERLAP B TO AVOID YELLOW TRAP.

NOTES:
1. R1A, R3A, R5A, R7, R1B, R3B, AND R5B ARE STOP LINE RADAR DETECTORS.
2. R2 AND R6 ARE ADVANCED RADAR DETECTORS.
3. CONTACT THE CITY OF FORT SMITH FOR ANTENNA ORIENTATION.
4. TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT ALL CONSTRUCTION PHASES.
5. DETECTION ZONES VzOLA1A & 1B AND VzOLB1A & 1B SHALL BE FIELD VERIFIED TO ENSURE NO OBSTRUCTION TO LINE OF SIGHT FROM THE RADAR DETECTOR TO THE RADAR ZONE.

I-540 RAMPS/36TH ST. AND HWY. 255/ZERO ST.
POLE DIMENSIONS

POLE	MAST ARM	* MAST ARM ANGLE	** HAND HOLE	VERT. SHAFT	LUM. ARM	* LUM. ANGLE
A	54'	3°	90°	35'	25'	3°
B	36'	183°	180°	35'	25'	183°
C	34'	283°	90°	35'	25'	283°
D	24'	3°	180°	35'	10'	3°
E	50'	284°	270°	35'	25'	284°
F	44'	183°	180°	35'	25'	183°
G	18'	288°	90°	35'	10'	288°

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



DETECTOR SPACING CHART

HWY. 255/ZERO ST VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
40 MPH	230'	100'
I-540 SB RAMPS/36TH ST VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
35 MPH	100'	N/A
I-540 NB RAMPS VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
35 MPH	100'	N/A

SCALE IN FEET
0 30 60 120

DATE: 12/2/2024 FILE NAME: t040889_p01.dgn

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.8141
NICCI D. TINER
DIGITALLY SIGNED 6/26/2025

FINAL

LOCATION: I-540 RAMPS/36TH. AND HWY. 255/ZERO ST.
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 04 SCALE: 1"=60' DRAWN BY: VA

JATurner 12/6/2024 10:55:57 AM
WORKSPACE: AHTD
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REVISED DATE:

I-540 RAMPS/36TH ST. AND HWY 255/ZERO ST.
POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 255/ZERO ST. - STA. 707+69.01	58.76 RT.	598263.66, 370474.37
B	HWY. 255/ZERO ST. - STA. 706+76.26	39.36' LT.	598175.76, 370576.67
C	HWY. 255/ZERO ST. - STA. 707+76.68	57.22' LT.	598276.56, 370589.88
D	HWY. 255/ZERO ST. - STA. 705+02.52	39.85' RT.	597998.05, 370506.82
E	HWY. 255/ZERO ST. - STA.704+46.71	78.59' RT.	597940.26, 370471.11
F	HWY. 255/ZERO ST. - STA. 703+68.43	49.51' LT.	597869.23, 370603.36
G	HWY. 255/ZERO ST. - STA.704+72.27	48.56' LT.	597972.55, 370596.72

TOP OF POLE FOUNDATION ELEVATION SHALL BE THREE (3) INCHES ABOVE THE FINISHED SURFACE ELEVATION AT THE LOCATIONS SHOWN ABOVE.
TOP OF POLE FOUNDATION ELEVATION MAY BE INCREASED IN ACCORDANCE WITH STANDARD DRAWING SD-11.

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	55	83
		SIGNALIZATION PLAN SHEET				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.8141
NICCI D. TINER
DIGITALLY SIGNED 6/26/2025

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

DESIGN PARAMETERS

POSTED SPEED LIMIT:
40 MPH EAST AND WEST APPROACH
35 MPH NORTH AND SOUTH APPROACH

NO BUS STOPS
NO RAILROAD TRACKS
EXISTING INTERCONNECTIONS
NO FIRE STATION
NO PARKING
NO SIGHT DISTANCE RESTRICTIONS

LOCATION OF STOP LINES SHOWN ON PERMANENT PAVEMENT MARKING DETAILS (SEE SEPARATE SHEET).

MINIMUM CLEAR ZONE DISTANCE
4 FEET BEHIND CURB
14 FEET (HWY. 255)

LOCAL RADIO WITH ANTENNA, CAT 5E CABLE, MOUNTED TO POLE A

BATTERY BACKUP

SERVICE POINT AND MAIN BREAKER BY CONTRACTOR WITH 2" DIA. NMC AND CONCRETE BOX (TYPE 1 HD) WITHIN 10' OF THE CONTROLLER

SCALE IN FEET
0 20 40 80

FINAL

LOCATION: I-540 RAMPS/36TH ST. AND HWY. 255/ZERO ST.
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 04 SCALE: 1"=40' DRAWN BY: VA

DATE: 12/2/2024 FILE NAME: t040889_p02.dgn

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	56	83
		SIGNALIZATION PLAN SHEET				

I-540 RAMPS/36TH ST. AND HWY 255/ZERO ST.
PULL BOX LOCATIONS

PULL BOX	TYPE	LOCATION & STATION	* OFFSET	* X, Y COORDINATES
PB1	2 HD	HWY. 255/ZERO ST. - STA. 707+64.95	56.01' RT.	598259.73, 370477.29
PB2	2 HD	HWY. 255/ZERO ST. - STA. 706+81.08	39.59' LT.	598180.58, 370576.65
PB3	2 HD	HWY. 255/ZERO ST. - STA. 707+80.90	55.17' LT.	598280.68, 370587.63
PB4	2 HD	HWY. 255/ZERO ST. - STA. 704+97.92	37.49' RT.	597993.58, 370509.43
PB5	2 HD	HWY. 255/ZERO ST. - STA. 704+44.44	75.03' RT.	597938.18, 370474.78
PB6	2 HD	HWY. 255/ZERO ST. - STA. 703+73.66	52.87' LT.	597874.65, 370606.40
PB7	2 HD	HWY. 255/ZERO ST. - STA. 704+74.37	58.41' LT.	597975.17, 370606.44
PB8	2 HD	HWY. 255/ZERO ST. - STA. 707+00.59	39.10' RT.	598196.19, 370497.09
PB9	2 HD	HWY. 255/ZERO ST. - STA. 707+53.14	70.77' RT.	598247.26, 370463.08
PB10	2 HD	HWY. 255/ZERO ST. - STA. 707+50.10	74.52' RT.	598244.05, 370459.48
PB11	1 HD	HWY. 255/ZERO ST. - STA. 707+53.46	80.47' RT.	598247.14, 370453.38

* CENTER OF PULL BOX
ALL PULL BOXES SHALL BE PLACED AT THE FINISHED SURFACE ELEVATION.

N

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DIGITALLY SIGNED 6/26/2025

CONTROLLER CABINET LOCATION

LOCATION & STATION	* OFFSET	* X, Y COORDINATES
HWY. 255/ZERO ST. - STA. 707+55.07	75.79' RT.	598248.97, 370457.98

* CENTER OF CABINET

BATTERY BACKUP SYSTEM LOCATION

LOCATION & STATION	* OFFSET	* X, Y COORDINATES
HWY. 255/ZERO ST. - STA. 707+59.78	80.09' RT.	598253.48, 370453.47

* CENTER OF CABINET

SCALE IN FEET
0 15 30 60

DATE: 12/2/2024 FILE NAME: t040889_p02_1.dgn

LOCATION: I-540 RAMPS/36TH ST. AND HWY. 255/ZERO ST.
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 04 SCALE: 1"=30' DRAWN BY: VA

FINAL

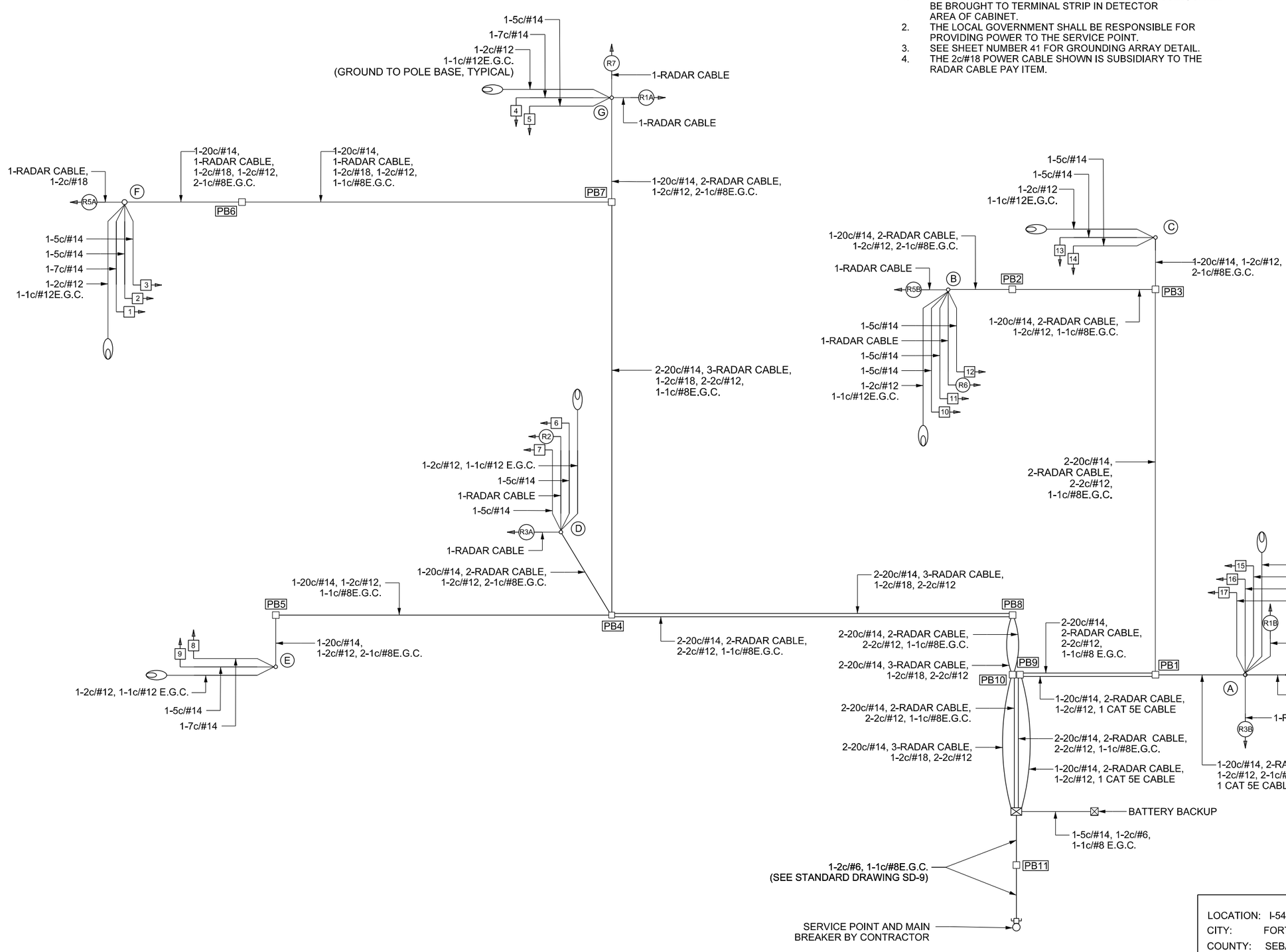
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WORKSPACE: AHTD
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REVISED DATE:

WIRING DIAGRAM

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	57	83
		SIGNALIZATION PLAN SHEET				

NOTES TO CONTRACTOR:
1. ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA OF CABINET.
2. THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.
3. SEE SHEET NUMBER 41 FOR GROUNDING ARRAY DETAIL.
4. THE 2c/#18 POWER CABLE SHOWN IS SUBSIDIARY TO THE RADAR CABLE PAY ITEM.

STATE OF ARKANSAS
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FINAL

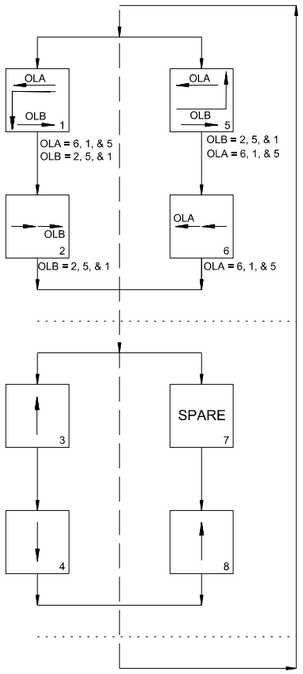
LOCATION: I-540 RAMPS/36TH ST. AND HWY. 255/ZERO ST.
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 04 SCALE: N/A DRAWN BY: VA

DATE: 12/2/2024 FILE NAME: t040889_p03.dgn

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REVISED DATE:

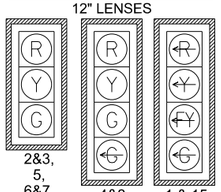
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	58	83
		SIGNALIZATION PLAN SHEET				

PHASING DIAGRAM



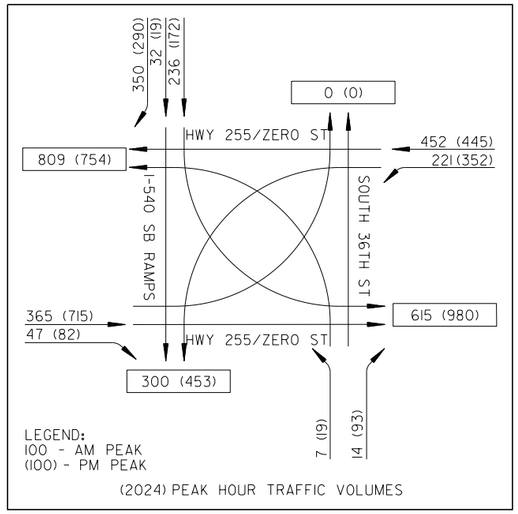
SIGNAL FACES

12" LENSES

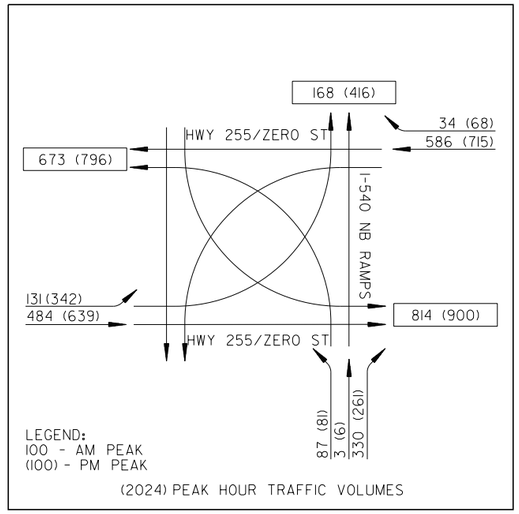


NOTES:
1. OVERLAPS A AND B TO HAVE A MINIMUM TRAILING GREEN OF 6 SECONDS.
2. PHASE 1 FYA SHALL BE TERMINATED WITH THE TRAILING OVERLAP A TO AVOID YELLOW TRAP.
3. PHASE 5 FYA SHALL BE TERMINATED WITH THE TRAILING OVERLAP B TO AVOID YELLOW TRAP.

TRAFFIC FLOW DIAGRAM



TRAFFIC FLOW DIAGRAM



STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.8141
NICCI D. TINER
DIGITALLY SIGNED 6/26/2025

DETECTOR CHART

DETECTOR SYSTEM DESCRIPTION: JOB 040889								
I-540 RAMPS/36TH ST. AND HWY. 255/ZERO ST. DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER	PROGRAM ASSIGNMENTS LOCAL		DETECTION	COMMENTS
DET. ZONE ID #	LOCATION DIRECTION	TYPE	RADAR DET. ID #	CON. INPUT #	PHASE	SYSTEM DET. #	OUTPUT CHANNEL	
Vz11	WB LEFT TURN FAR	COMB.	R1A	V9	1	1	1	
Vz12	WB LEFT TURN	LOCAL	R1A	V1	1		2	
Vz21 A&B	EB ADVANCE	LOCAL	R2	V2	2		3	
Vz22 A&B	EB NEAR	COMB.	R5A	V10	2	2	4	
Vz31	NB ADVANCE (36TH ST)	COMB.	R3A	V11	3	3	5	
Vz32	NB NEAR (36TH ST)	LOCAL	R3A	V3	3		6	
Vz41	SB ADVANCE (SB RAMP)	COMB.	R7	V12	4	4	7	
Vz42	SB NEAR (SB RAMP)	LOCAL	R7	V4	4		8	
Vz51	EB LEFT TURN FAR	COMB.	R5B	V13	5	5	9	
Vz52	EB LEFT TURN	LOCAL	R5B	V5	5		10	
Vz61 A&B	WB ADVANCE	LOCAL	R6	V6	6		11	
Vz62 A&B&C	WB NEAR	COMB.	R1B	V14	6	6	12	
Vz81	NB ADVANCE (NB RAMP)	COMB.	R3B	V16	8	8	13	
Vz82	NB NEAR (NB RAMP)	LOCAL	R3B	V8	8		14	
VzOLA1 A&B	WB ADVANCE	COMB.	R1A	P1	OLA		15	
VzOLB1 A&B	EB ADVANCE	COMB.	R5B	P3	OLB		16	
				SPARE OUTPUT CHANNELS:				

CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
P = PEDESTRIAN INPUT

NOTES: STOP BAR DETECTION SHALL BE SET FROM 2 FEET IN FRONT OF THE STOP BAR TO THE SENSORS LIMIT. IN THE CASE OF A LEFT TURN LANE, THE BACK OF THE DETECTION AREA SHALL BE TO THE SENSORS LIMIT.

ON THE ADVANCE SENSOR - CREATE AN ADDITIONAL ZONE STARTING WHERE THE STOP BAR DETECTION ENDS AND TO THE FURTHEST DISTANCE THE SENSOR READS. THE "ZONE" SHALL READ UNDER THE "ETA (SECONDS)": 2.5-7.5. THE OUTPUT SHALL BE THE SAME AS THE ADVANCED DETECTION ZONE BEING OVERLAYED

ALL INPUT/OUTPUT LOGIC SHALL BE PROGRAMMED IN THE ARC

INTERVAL CHART

SIGNAL FACES	I-540 AND HWY. 255/ZERO ST. 1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	3+8	CLR.	4+8	CLR.	FLASH SEQUENCE
1	~~G~~	*	~~G~~	*	~~FY~~	***	~~FY~~	***	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
2 & 3	G	**	G	**	G	**	G	**	R	R	R	R	R
4	R	R	R	R	R	R	R	R	G / ~~G~~	Y	R	R	R
5	R	R	R	R	R	R	R	R	G	Y	R	R	R
6 & 7	R	R	R	R	G	**	G	**	R	R	R	R	R
8	R	R	R	R	R	R	R	R	R	R	G / ~~G~~	Y	R
9	R	R	R	R	R	R	R	R	R	R	G	Y	R
10, 11, & 12	R	R	G	**	R	R	G	**	R	R	R	R	R
13 & 14	R	R	R	R	R	R	R	R	G	**	G	**	R
15	~~G~~	*	~~FY~~	***	~~G~~	*	~~FY~~	***	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
16 & 17	G	**	G	**	G	**	G	**	R	R	R	R	R

* 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

FINAL

LOCATION: I-540 RAMPS/36TH ST. AND HWY. 255/ZERO ST.
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 04 SCALE: N/A DRAWN BY: VA

DATE: 12/2/2024 FILE NAME: t040889_p04.dgn

JATurner 12/6/2024 10:56:11 AM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	59	83
		ELECTRICAL LEGEND & NOTES				

ELECTRICAL SYMBOLS LEGEND

- REMOVE EXISTING ELECTRICAL CIRCUIT FROM EXISTING ELECTRICAL CONDUIT AND ABANDON CONDUIT IN PLACE
- EXISTING ELECTRICAL CIRCUIT FROM EXISTING ELECTRICAL CONDUIT TO REMAIN
- INSTALL NEW ELECTRICAL CONDUIT AND ROADWAY LIGHTING CIRCUIT, TRENCHED (1-WAY 2"C UNLESS OTHERWISE NOTED)
- REMOVE EXISTING LIGHT FIXTURE AND LIGHT POLE AND DEMOLISH FOUNDATION
- EXISTING LIGHT FIXTURE AND LIGHT POLE TO REMAIN
- INSTALL NEW LUMINAIRE, SINGLE 6' MAST ARM, LIGHT POLE, AND FOUNDATION
- PB — INSTALL NEW TYPE 2 HD PULLBOX
- CONDUIT STUBOUT
- OR — 3/4" x 10' COPPER CLAD GROUND ROD.
- INSTALL NEW ELECTRICAL EQUIPMENT PEDESTAL, INCLUDING UTILITY METER AND ELECTRICAL PANEL

ABBREVIATIONS

A	AMP
ABC	ABOVE COUNTER
ACS	ACCESS CONTROL SYSTEM
ACU	AIR CONDITIONING UNIT
AHU	AIR HANDLING UNIT
AIC	AMPS INTERRUPTING CAPACITY
AM	AMP-METER
ANN	ANNUNCIATOR
AP	AERIAL PRIMARY
AS	AERIAL SECONDARY
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILIARY
BFI	BLOWN FUSE INDICATOR
BI	BYPASS ISOLATION
BKR	BREAKER
C	CONDUIT
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CGRS	PVC COATED GALVANIZED RIGID STEEL
CKT	CIRCUIT
COM	COMMON
CONT	CONTINUOUS
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
CRI	COLOR RENDERING INDEX
CS	CORD SET
CU	COEFFICIENT OF UTILIZATION
DEB	DIRECT EARTH BURIED
EC	EMPTY OR EMBEDDED CONDUIT
EF	EXHAUST FAN
EG	EQUIPMENT GROUND
EL	ELEVATION
EMT	ELECTRICAL METALLIC TUBING
ETM	ELASPED TIME METER
FC	FAN COIL
FDS	FUSED DISCONNECT SWITCH
FOC	FIBER OPTIC CABLE
FVNR	FULL VOLTAGE NON-REVERSING STARTER
FVR	FULL VOLTAGE REVERSING STARTER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
GRS	GALVANIZED RIGID STEEL
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTO
HP	HORSEPOWER OR HEAT PUMP
IDS	INTRUSION DETECTION SYSTEM
HR	HOUR
IG	ISOLATED GROUND
ISP	INDIVIDUALLY SHIELDED PAIR
JB	JUNCTION BOX
kVA	KILOVOLT-AMPERE
kVAR	KILOVOLT-AMPERE, REACTIVE
kW	KILOWATT
LA	LIGHTNING ARRESTER
LC	LIGHTING CONTACTOR
LLF	LIGHT LOSS FACTOR
LO	LUGS ONLY
LOR	LOCAL-OFF-REMOTE
LSI	LONG, SHORT, INSTANTANEOUS
LSIG	LONG, SHORT, INSTANTANEOUS, GROUND
LV	LOW VOLTAGE
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MFR	MANUFACTURER
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MN	MASS NOTIFICATION
MON	MONACO
MS	MOTOR STARTER
MTS	MANUAL TRANSFER SWITCH
N	NEUTRAL
NFDS	NON-FUSED DISCONNECT SWITCH
NL	NIGHT LIGHT
OH	OVERHEAD
OHP	OVERHEAD PRIMARY
OHS	OVERHEAD SECONDARY
OL	OVERLOAD
PB	PUSH BUTTON
PEC	PHOTO ELECTRIC CELL
PF	POWER FACTOR
PFCC	POWER FACTOR CORRECTION CAPACITOR
PL	PILOT LIGHT
PMR	PHASE MONITOR RELAY
PNL	PANEL
PTT	PUSH-TO-TEST
PTZ	PAN-TILT-ZOOM
PVC	SCHEDULE 40 POLYVINYL CONDUIT
RECPT	RECEPTACLE
RVAT	REDUCED VOLTAGE AUTO-TRANSFORMER STARTER
SA	SURGE ARRESTER
SDBC	SOFT DRAWN BARE COPPER
SE	SERVICE ENTRANCE
SN	SOLID NEUTRAL
SPD	SURGE PROTECTIVE DEVICE
SS	STAINLESS STEEL
STA	STATION
SW	SWITCH
TC	TIME CLOCK
TD	TIME DELAY
TDD	TIME DELAY ON DE-ENERGIZATION
TDE	TIME DELAY ON ENERGIZATION
TEL	TELEPHONE
THD	TOTAL HARMONIC DISTORTION
TMGB	TELECOMMUNICATIONS MAIN GROUND BAR
TGB	TELECOMMUNICATIONS GROUND BAR
TR	TAMPER RESISTANT
UG	UNDERGROUND
UGE	UNDERGROUND ELECTRIC
UGP	UNDERGROUND PRIMARY
UGS	UNDERGROUND SECONDARY
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
UTP	UNSHIELDED TWISTED PAIR
V	VOLT
VA	VOLT-AMP
VFD	VARIABLE FREQUENCY DRIVE
VM	VOLT-METER
W	WATT OR WIRE
WAP	WIRELESS ACCESS POINT
WH	WEATHER HEAD
WM	WATT METER
WP	WEATHERPROOF
XFMR	TRANSFORMER

LIGHTING REMOVAL PLAN KEYED NOTES:

1. DEMOLISH ABANDONED FOUNDATION 2' BELOW GRADE, RECOVER AND GRADE AREA. DEMOLITION SHALL BE PAID FOR UNDER THE LIGHT POLE AND FOUNDATION REMOVAL PAY ITEM.
2. REMOVE EXISTING ELECTRICAL LIGHTING CONDUCTORS BACK TO SOURCE FROM WITHIN EXISTING CONDUIT. ABANDON CONDUIT IN PLACE.
3. EXISTING ROADWAY LIGHT FIXTURE TO REMAIN. TRACE LIGHTING CONDUCTORS FOR RECONNECTION TO NEW CIRCUIT.
4. REMOVE EXISTING ROADWAY LIGHT ASSEMBLY AND DEMOLISH FOUNDATION 2' BELOW GRADE, RECOVER AND GRADE AREA.
5. EXISTING ROADWAY LIGHTING CIRCUIT TO REMAIN.

LIGHTING INSTALLATION PLAN KEYED NOTES:

1. INSTALL NEW ELECTRICAL CIRCUIT IN NEW CONDUIT.
2. CONTRACTOR SHALL TRACE AND IDENTIFY EXISTING CONDUIT AND DETERMINE CONDUIT SPLICE POINT IN FIELD. SPLICE NEW CONDUCTORS TO EXISTING CONDUCTORS IN POLE BASE.
3. CONSTRUCT NEW 2-WAY 2" DIRECTIONAL BORE.
4. CONNECT NEW CONDUIT TO THE EXISTING UTILITY POLE MOUNTED TRANSFORMER.
5. INSTALL NEW ROADWAY LIGHTING ASSEMBLY, LIGHT POLE, AND FOUNDATION.
6. INSTALL NEW ELECTRICAL PEDESTAL WITH NEW UTILITY METER, PEC, AND POWER PANEL.
7. CONSTRUCT NEW 2-WAY 2"C ELECTRICAL DUCT BANK.

LEGEND NOTES:

1. SOME SYMBOLS OR ABBREVIATIONS MAY APPEAR ON THIS SHEET BUT NOT BE UTILIZED ON THE PROJECT.
2. LIGHTING LEGEND SHOWS EXAMPLE IDENTIFIERS. REFER TO LIGHT FIXTURE SCHEDULE FOR SPECIFIC REQUIREMENTS.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 21640
JAMES K. SCHMITT

DIGITALLY SIGNED 6/26/2025

2 SETS ((3*8 + 1*8N + 1*10EG) 2" GRS)

- CONDUIT TYPE (SEE ABBREVIATIONS) REFER TO SPECIFICATIONS IF NOT SHOWN
- CONDUIT SIZE
- GROUNDING (GROUND) CONDUCTOR, NUMBER AND SIZE
- GROUNDED (NEUTRAL) CONDUCTOR, NUMBER AND SIZE
- PHASE (HOT) CONDUCTOR, NUMBER AND SIZE
- NUMBER OF SETS

SUMMARY OF LIGHTING QUANTITIES

ITEM NO.	ITEM	QUANTITIES TOTAL	UNIT
SP & 202	REMOVAL AND DISPOSAL OF LUMINAIRE POLE AND FOUNDATION	8	EACH
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, COPPER (2C/8 A.W.G., E.G.C.)	1535	LIN. FT.
710	NON-METALLIC CONDUIT (2")	1800	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	540	LIN. FT.
SP & 711	CONCRETE PULL BOX (TYPE 2 HD)	13	EACH
SP	LED ROADWAY ILLUMINATION POLE (29,715 LUMENS, LED, T-BASE, 40')	9	EACH
SP	PEDESTAL TYPE SERVICE POINT ASSEMBLY (100 AMP)	1	EACH

FINAL

LOCATION: I-540 RAMPS/36TH ST. AND HWY. 255/ZERO ST.
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 04 SCALE: N/A DRAWN BY: BW

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	60	83
		ELECTRICAL GENERAL NOTES				

CONSTRUCTION NOTES:

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE (NFPA70, CURRENT EDITION), LIFE SAFETY CODE (NFPA 101, CURRENT EDITION), UNDERGROUND FACILITIES DAMAGE PREVENTION ACT (14-271-101 ET SEQ.), AND LOCAL ELECTRICAL CODE. IN ADDITION, ALL PARTS OF THIS INSTALLATION SHALL BE IN ACCORDANCE WITH THE ARKANSAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, CURRENT EDITION.

2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE DOCUMENTATION TO PROJECT ENGINEER, TO ENSURE ARKANSAS STATE CODES (14-28-101 ET SEQ. AND 20-31-101 ET SEQ.) ARE MET. THE DOCUMENTATION SHALL INCLUDE:
   (1) ELECTRICIANS' LICENSE INFORMATION AND EXPIRATION DATE.
   (2) THE RATIO OF LICENSED-ELECTRICIAN TO APPRENTICE-ELECTRICIANS.
   (3) PRINTED SEARCH RESULT OF LICENSED ELECTRICIANS FROM ARKANSAS DEPARTMENT OF LABOR
   ELECTRICIAN LICENSEE DIRECTORY
   (https://www.ark.org/labor/electrician/search.php)
   ALL LICENSES SHALL BE VALID AND CURRENT

3. THE CONTRACTOR SHALL NOT ENGAGE IN EXCAVATION OR DEMOLITION ACTIVITIES WITHOUT HAVING FIRST NOTIFIED THE ARKANSAS ONE CALL CENTER IN ACCORDANCE WITH UNDERGROUND FACILITIES DAMAGE PREVENTION ACT. NOT ALL UTILITY COMPANIES ARE MEMBERS OF THE ARKANSAS ONE CALL SYSTEM. THE CONTRACTOR IS ADVISED TO CONTACT ALL NON-MEMBER UTILITIES AS WELL AS THE ONE CALL CENTER.

4. UNDERGROUND UTILITIES EXIST WITHIN AND ADJACENT TO THE LIMITS OF CONSTRUCTION. SOME UTILITIES MAY HAVE BEEN RELOCATED SINCE THE TIME OF DESIGN AND THE CONTRACTOR'S NOTICE TO PROCEED. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANIES INVOLVED AND VERIFY THE LOCATIONS OF UNDERGROUND UTILITIES. THE CONTRACTOR SHALL MAINTAIN THE UTILITY LOCATION MARKINGS UNTIL IT IS NO LONGER NECESSARY.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS OF REPAIR OR REPLACEMENT OF EXISTING UTILITIES DAMAGED DURING THE CONSTRUCTION.

6. ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY OF UTILITY SERVICE ORGANIZATIONS SHALL BE MOVED BY THE OWNERS UNLESS OTHERWISE NOTED.

7. CONDUIT INSTALLED UNDER ROADWAY SURFACES SHALL BE INSTALLED BY A PUSHING OR BORING METHOD OR AS DIRECTED BY ENGINEER. PVC OR HDPE CONDUIT SHALL BE USED. PVC CONDUIT SHALL BE MARKED "DIR. BORING" OR "DIRECTIONAL BORING" AS PER NEC.

8. NON-DESTRUCTIVE MEG TEST AND CURRENT LEAKAGE TEST SHALL BE PERFORMED ON NEW CONDUCTORS, IN THE PRESENCE OF FIELD INSPECTOR. THE TEST VOLTAGE SHALL BE LIMITED TO 600 VOLTS. ANY CONDUCTORS NOT MEETING THE MINIMUM ACCEPTABLE VALUE SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE USING NEW CONDUCTOR. THE RESULTS SHALL BE DOCUMENTED AND PROVIDED TO THE JOB ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES CAUSED BY MEG TEST WHILE DEVICES OR ACCESSORIES ARE STILL CONNECTED AND SHALL BE REPLACED AT CONTRACTOR'S EXPENSE. SEE ELECTRICAL SPECIAL PROVISIONS.

9. 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 CONTRACTOR'S EXPENSE.

10. EACH ROADWAY ILLUMINATION POLE SHALL BE BONDED TO EQUIPMENT GROUNDING CONDUCTOR PER NEC. SEE ARTICLES 250 AND 410.

11. ALL ELECTRICAL COMPONENTS SHALL BE UL LISTED.

12. ALL LUMINAIRE ASSEMBLIES SHALL HAVE BUG RATING OF U-0.

13. BEFORE FINAL ACCEPTANCE, CONTRACTOR SHALL PROVIDE TWO (2) SETS OF LEDGER SIZE (11" X 17") AS-BUILT PLANS TO THE MAINTENANCE AUTHORITY AND ARDOT.

14. PULL CABLE SHALL BE MINIMUM 1/4" PULL NYLON OR POLYESTER ROPE, OR 1200 LBS PULL TAPE WHEN PULLING CONDUCTORS. STEEL CABLE OR FISH TAPE SHALL NOT BE USED. CONNECT PULLING DEVICES TO COPPER WIRE AND NOT TO JACKET. USE PULLING COMPOUND PER MANUFACTURER'S REQUIREMENTS. ALL BENDS SHALL NOT BE LESS THAN RECOMMENDED BY NEC FOR CONDUCTORS USED.

15. ALL CONCRETE PULL BOXES SHALL BE TYPE 2 HD UNLESS OTHERWISE INDICATED ON THE PLANS.

16. SLACK CABLES IN PULL BOXES SHALL BE 3 FEET.

17. CONDUCT A MINIMUM 14-DAY BURN TEST FOR THE COMPLETE LIGHTING SYSTEM. REPLACE BURNED OUT AND NOTICEABLY DIM LUMINAIRES; MALFUNCTIONING EQUIPMENT SHALL BE CORRECTED, AND RETEST THE SYSTEM. OTHERWISE REMOVE AND REPLACE WITH NEW EQUIPMENT.

18. SEE STANDARD DRAWING SD-6 FOR PULL BOX CONSTRUCTION.

19. ALL METAL POLES SHALL BE BONDED TO E.G.C. PER NEC 410 PART IV AND PART V.

20. THE CONTRACTOR SHALL LABEL ALL CONDUCTORS IN PULL BOXES AND AT SPLICE POINTS.

21. CONDUCTORS SHALL CONTINUOUSLY RUN DIRECTLY FROM SERVICE POINTS TO ELECTRICAL DEVICES AND/OR PULL BOXES WITHOUT SPLICES BEING MADE IN THE CONDUIT. ANY CONDUCTORS THAT HAVE BEEN DAMAGED BY PINCHING SHALL BE COMPLETELY REPLACED AT THE CONTRACTOR'S EXPENSE.

22. ALL SPLICES SHALL BE WATERTIGHT AND UL-LISTED FOR CONTINUOUS USE IN SUBMERSIBLE INSTALLATION.

23. E.G.C. SHALL BE EXOTHERMICALLY BONDED TO GROUND ROD.

24. 2C/_A.W.G._"- E.G.C. INDICATES TWO CURRENT CARRYING CONDUCTORS AND ONE E.G.C.

25. POLE FOUNDATION/NON-BREAKAWAY FOUNDATIONS SHALL NOT PROTRUDE MORE THAN 4 INCHES ABOVE FINISH GRADE LEVEL.

26. ELECTRICAL SERVICE SHALL BE PROVIDED BY THE CITY/COUNTY (MAINTENANCE AUTHORITY) 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. THE CONTRACTOR SHALL PROVIDE THE SERVICE POINT ASSEMBLY PER PLANS SET AND CONTRACT PRIOR TO THE DATE ELECTRICAL COMPANIES PROVIDE SERVICE.

27. CONTRACTOR SHALL ATTACH A PERMANENT TAG OF RIGID PLASTIC OR NON-FERROUS METAL TO EACH CONDUIT AT PULLBOXES, POLE BASES, JUNCTION BOXES. 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: SERVICE POINT TO PULL BOX 1(SP TO PB-1)
   PULL BOX 1TO SERVICE POINT (PB-1TO SP)
   PULL BOX 1TO PULL BOX 2 (PB-1TO PB-2)

28. CONDUIT BELL END FITTINGS SHALL BE INSTALLED ON ALL TERMINATING ENDS OF NON-METALLIC CONDUIT RUNS. THIS INCLUDES PULL BOXES, AND POLE BASES. THE COST OF THE FITTINGS SHALL BE CONSIDERED SUBSIDIARY TO THE PAY ITEM. ALL NON-METALLIC CONDUIT SHALL USE LONG SWEEP 90 DEGREE ELBOWS ON ALL CONDUIT BENDS.

29. CONDUIT SHALL BE BURIED NOT LESS THAN 18" DEPTH BELOW THE FINAL GRADE, AND MINIMUM 24" DEPTH UNDER THE ROADWAY AND SIDEWALK, UNLESS OTHERWISE INDICATED ON THE PLANS.

30. PRIOR TO THE ORDERING OF ALL LIGHTING EQUIPMENT, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A COPY OF THE APPLICABLE BROCHURES CONTAINING THE DESIGN CRITERIA FOR THE EQUIPMENT WHICH THE CONTRACTOR PROPOSES TO INSTALL FOR APPROVAL. THE SPECIFIC ITEMS THAT ARE PROPOSED FOR USE SHALL BE CLEARLY MARKED IN THE APPLICABLE BROCHURES. A LIST SHALL BE ATTACHED TO IDENTIFY THE PAY ITEM AND CONTAIN THE MANUFACTURER, QUANTITY, MODEL, AND IDENTIFYING DESCRIPTIONS OF EACH ITEM. ADEQUATE ENGINEERING DATA, ESSENTIAL SHOP DRAWINGS, AND SCHEMATIC DIAGRAMS SHALL BE PROVIDED FOR REVIEW. PARTIAL SUBMITTALS WILL NOT BE ACCEPTED FOR CONSIDERATION AND SHALL BE RETURNED FOR CORRECTION WITHOUT REVIEW.

31. IF ENGINEER DETERMINED THAT THE EQUIPMENT SUBMITTAL MEETS THE DESIGN CRITERIA, AN APPROVAL WILL BE PROVIDED. IF THE EQUIPMENT SUBMITTAL FOR USE IS REJECTED, THE CONTRACTOR SHALL RE-SUBMIT THE EQUIPMENT SUBMITTAL WITHIN FIFTEEN (15) DAYS OF NOTIFICATION OF EQUIPMENT REJECTION. THE EQUIPMENT RESUBMITTAL WILL BE CONSIDERED THE STARTING POINT OF A NEW APPROVAL CYCLE AS DESCRIBED.

32. ALL CONDUIT INSTALLED UNDER PAVED AREAS SHALL BE SCHEDULE 80 PVC CONDUIT.

33. ALL CONDUIT INSTALLED IN UNPAVED AREAS SHALL BE SCHEDULE 40 PVC CONDUIT.

34. INSTALL PULL BOX (TYPE 2 HD) WITHIN 5' OF POLE FOUNDATION, AND THE SERVICE POINT ASSEMBLY UNLESS SHOWN OTHERWISE ON THE PLANS.

35. THE DEGREE OF TILT ON LUMINAIRES SHALL BE ZERO.

36. ALL SPLICES SHALL BE WATERTIGHT AND UL-LISTED FOR CONTINUOUS USE IN SUBMERSIBLE INSTALLATIONS.

37. CONDUCTORS SHALL CONTINUOUSLY RUN DIRECTLY FROM SERVICE POINTS TO ELECTRICAL DEVICES AND/OR PULLBOXES WITHOUT SPLICES BEING MADE IN CONDUIT.

38. SEE STANDARD DRAWING SD-6 FOR PULLBOX CONSTRUCTION.

39. CONDUIT BURIED UNDER ROADWAY AND SIDEWALK SHALL HAVE MINIMUM 24" DEPTH, AND MINIMUM 18" DEPTH UNDER FINISH GRADE. CONDUIT DEPTH MAY NEED TO INCREASE NEAR DROP INLETS.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 21040
JAMES K. SCHMITT

DIGITALLY SIGNED 6/26/2025

FINAL

LOCATION: I-540 RAMPS/36TH ST. AND HWY. 255/ZERO ST.
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 04 SCALE: N/A DRAWN BY: BW

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WORKSPACE: AHTD
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REVISED DATE:

REMOVAL NOTES

1. CONDUCTOR REMOVAL SHALL NOT BE MEASURED FOR SEPARATE PAYMENT BUT SHALL BE SUBSIDIARY TO THE LIGHT REMOVAL PAY ITEM.
2. ALL EXISTING ELECTRICAL EQUIPMENT AND INFRASTRUCTURE TO BE REMOVED SHALL BE COMPLETELY DEMOLISHED AND REMOVED, AND THE AREA SHALL BE RESTORED TO MATCH EXISTING CONDITIONS.
3. ALL EXISTING ELECTRICAL EQUIPMENT AND INFRASTRUCTURE TO REMAIN SHALL BE PROTECTED DURING CONSTRUCTION.
4. ALL ELECTRICAL WORK SHALL MATCH DESCRIPTION IN THE LEGEND, UNLESS OTHERWISE NOTED.

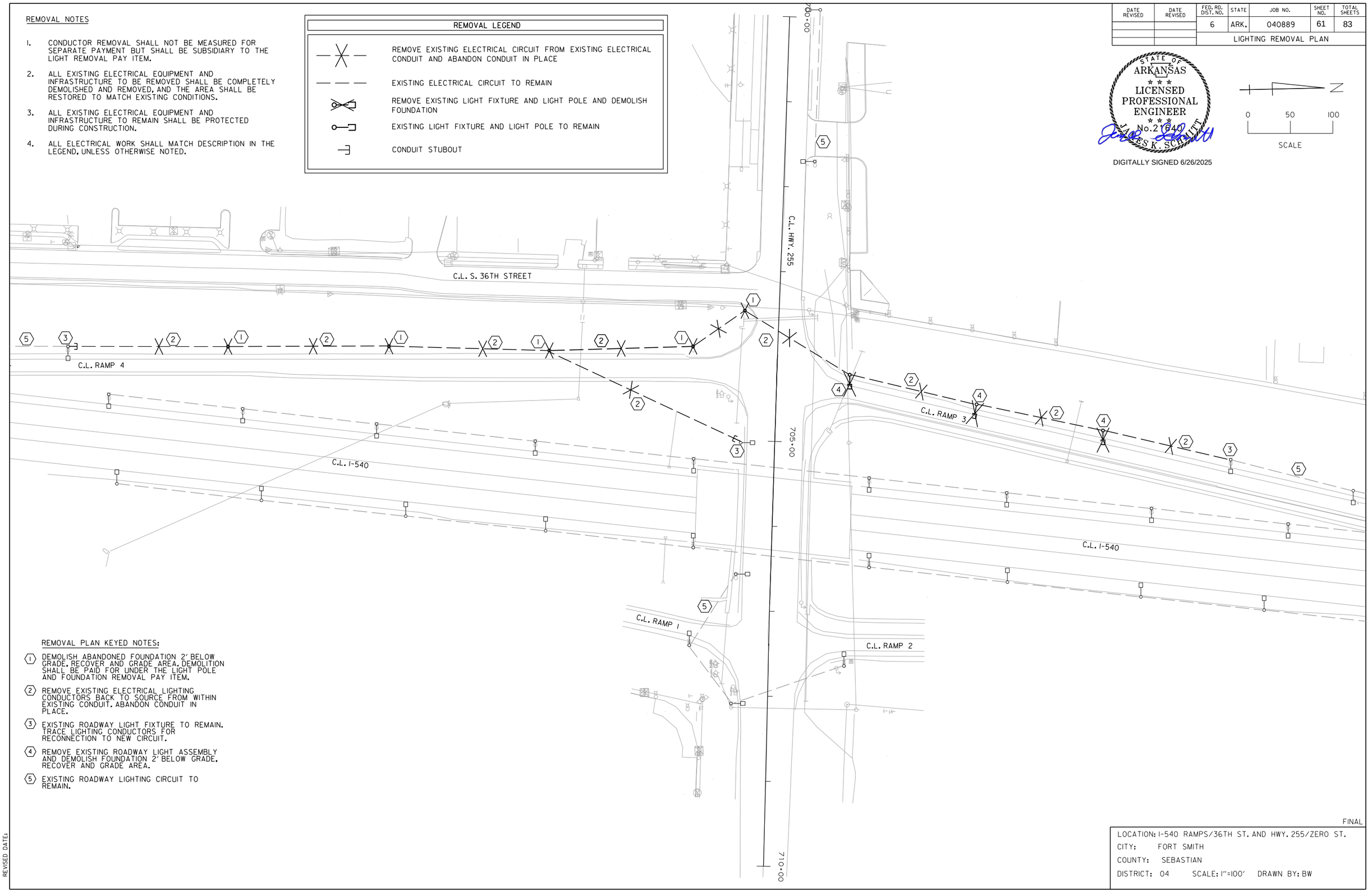
REMOVAL LEGEND

- REMOVE EXISTING ELECTRICAL CIRCUIT FROM EXISTING ELECTRICAL CONDUIT AND ABANDON CONDUIT IN PLACE
- EXISTING ELECTRICAL CIRCUIT TO REMAIN
- REMOVE EXISTING LIGHT FIXTURE AND LIGHT POLE AND DEMOLISH FOUNDATION
- EXISTING LIGHT FIXTURE AND LIGHT POLE TO REMAIN
- CONDUIT STUBOUT

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	61	83
		LIGHTING REMOVAL PLAN				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.21640
JAMES K. SCHMITT
DIGITALLY SIGNED 6/26/2025

0 50 100
SCALE



REMOVAL PLAN KEYED NOTES:

1. DEMOLISH ABANDONED FOUNDATION 2' BELOW GRADE. RECOVER AND GRADE AREA. DEMOLITION SHALL BE PAID FOR UNDER THE LIGHT POLE AND FOUNDATION REMOVAL PAY ITEM.
2. REMOVE EXISTING ELECTRICAL LIGHTING CONDUCTORS BACK TO SOURCE FROM WITHIN EXISTING CONDUIT. ABANDON CONDUIT IN PLACE.
3. EXISTING ROADWAY LIGHT FIXTURE TO REMAIN. TRACE LIGHTING CONDUCTORS FOR RECONNECTION TO NEW CIRCUIT.
4. REMOVE EXISTING ROADWAY LIGHT ASSEMBLY AND DEMOLISH FOUNDATION 2' BELOW GRADE. RECOVER AND GRADE AREA.
5. EXISTING ROADWAY LIGHTING CIRCUIT TO REMAIN.

FINAL

LOCATION: I-540 RAMPS/36TH ST. AND HWY. 255/ZERO ST.
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 04 SCALE: 1"=100' DRAWN BY: BW

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WORKSPACE: AHTD
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REVISED DATE:

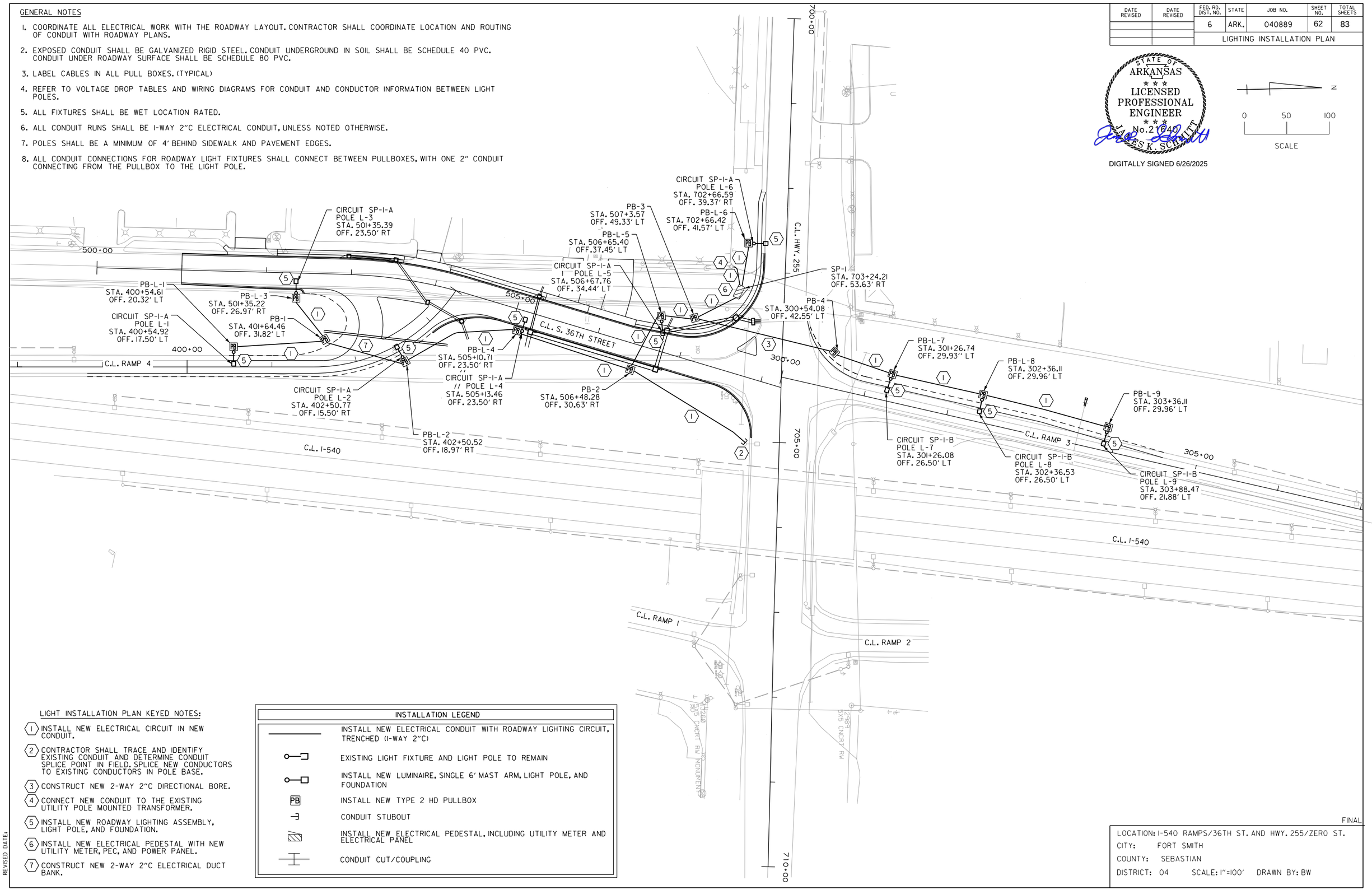
GENERAL NOTES

1. COORDINATE ALL ELECTRICAL WORK WITH THE ROADWAY LAYOUT. CONTRACTOR SHALL COORDINATE LOCATION AND ROUTING OF CONDUIT WITH ROADWAY PLANS.
2. EXPOSED CONDUIT SHALL BE GALVANIZED RIGID STEEL. CONDUIT UNDERGROUND IN SOIL SHALL BE SCHEDULE 40 PVC. CONDUIT UNDER ROADWAY SURFACE SHALL BE SCHEDULE 80 PVC.
3. LABEL CABLES IN ALL PULL BOXES. (TYPICAL)
4. REFER TO VOLTAGE DROP TABLES AND WIRING DIAGRAMS FOR CONDUIT AND CONDUCTOR INFORMATION BETWEEN LIGHT POLES.
5. ALL FIXTURES SHALL BE WET LOCATION RATED.
6. ALL CONDUIT RUNS SHALL BE 1-WAY 2"C ELECTRICAL CONDUIT, UNLESS NOTED OTHERWISE.
7. POLES SHALL BE A MINIMUM OF 4' BEHIND SIDEWALK AND PAVEMENT EDGES.
8. ALL CONDUIT CONNECTIONS FOR ROADWAY LIGHT FIXTURES SHALL CONNECT BETWEEN PULLBOXES, WITH ONE 2" CONDUIT CONNECTING FROM THE PULLBOX TO THE LIGHT POLE.

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	62	83
		LIGHTING INSTALLATION PLAN				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 21640
JAMES K. SCHMITT
DIGITALLY SIGNED 6/26/2025

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0 50 100
SCALE



LIGHT INSTALLATION PLAN KEYED NOTES:

1. INSTALL NEW ELECTRICAL CIRCUIT IN NEW CONDUIT.
2. CONTRACTOR SHALL TRACE AND IDENTIFY EXISTING CONDUIT AND DETERMINE CONDUIT SPLICE POINT IN FIELD. SPLICE NEW CONDUCTORS TO EXISTING CONDUCTORS IN POLE BASE.
3. CONSTRUCT NEW 2-WAY 2"C DIRECTIONAL BORE.
4. CONNECT NEW CONDUIT TO THE EXISTING UTILITY POLE MOUNTED TRANSFORMER.
5. INSTALL NEW ROADWAY LIGHTING ASSEMBLY, LIGHT POLE, AND FOUNDATION.
6. INSTALL NEW ELECTRICAL PEDESTAL WITH NEW UTILITY METER, PEC, AND POWER PANEL.
7. CONSTRUCT NEW 2-WAY 2"C ELECTRICAL DUCT BANK.

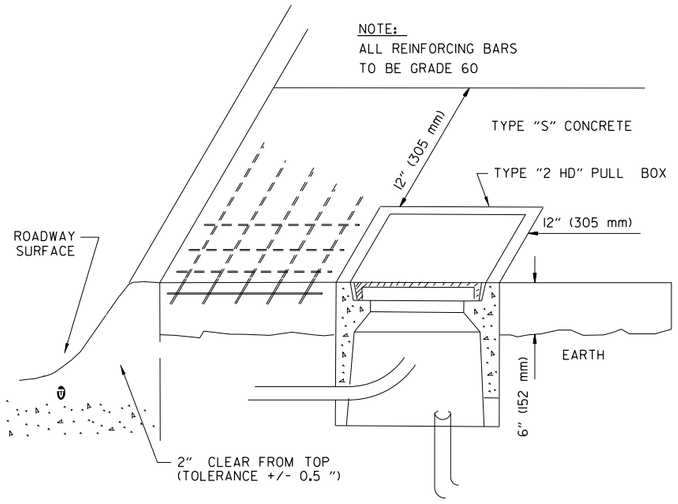
INSTALLATION LEGEND	
———	INSTALL NEW ELECTRICAL CONDUIT WITH ROADWAY LIGHTING CIRCUIT, TRENCHED (1-WAY 2"C)
	EXISTING LIGHT FIXTURE AND LIGHT POLE TO REMAIN
	INSTALL NEW LUMINAIRE, SINGLE 6' MAST ARM, LIGHT POLE, AND FOUNDATION
PB	INSTALL NEW TYPE 2 HD PULLBOX
	CONDUIT STUBOUT
	INSTALL NEW ELECTRICAL PEDESTAL, INCLUDING UTILITY METER AND ELECTRICAL PANEL
	CONDUIT CUT/COUPLING

FINAL

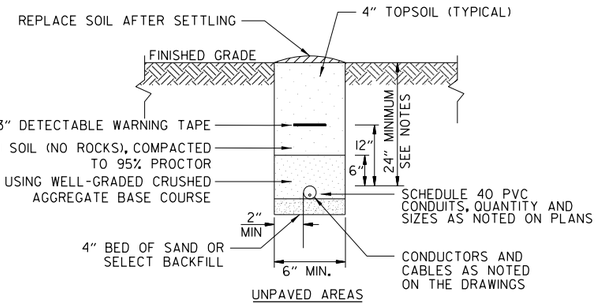
LOCATION: I-540 RAMPS/36TH ST. AND HWY. 255/ZERO ST.
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 04 SCALE: 1"=100' DRAWN BY: BW

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WORKSPACE: AHTD
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REVISED DATE:

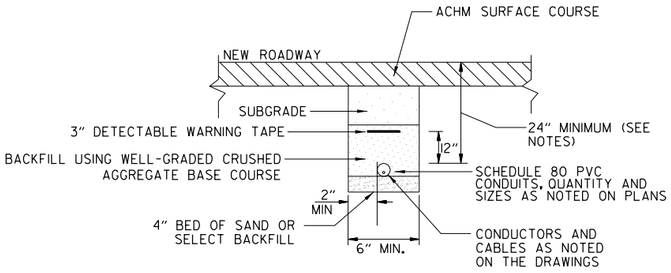
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	63	83
		ELECTRICAL DETAILS I				



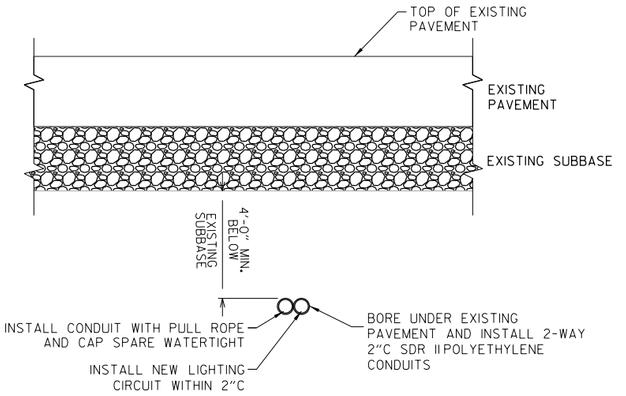
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UNPAVED AREAS



PAVED AREAS



E DIRECTIONAL BORING CONDUITS

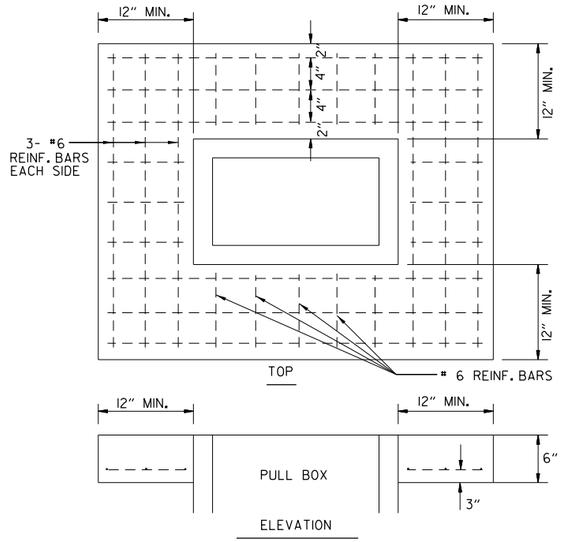
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BORING NOTES:

1. POLYETHYLENE CONDUITS SHALL EXTEND 15'-0" BEYOND EACH PAVEMENT EDGE.
2. INSTALL PE TO PVC FITTING AND EXTEND PVC RACEWAY SYSTEM TO HAND HOLES AS INDICATED ON THE PLANS.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 21040
JAMES K. SCHMITT

DIGITALLY SIGNED 6/26/2025



NOTES:

1. ALL TYPE HD PULL BOXES ARE INSTALLED WITH AN APRON OF CONCRETE 12" (305 MM) WIDE AND 6" (152 MM) IN DEPTH. ALL PAYMENT SHALL BE INCLUDED IN THE PRICE OF THE TYPE HD PULL BOX. 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 PULL BOX ARE REQUIRED IN CONCRETE.
2. UL LISTED PULL BOX AND EXTRA HEAVY-DUTY COVER SHALL BE DESIGNED FOR A TEST LOAD OF 33,750 LBS AND A DESIGN LOAD OF 22,500 LBS.
3. PULL BOX INTERIOR DIMENSIONS SHALL BE 24"L x 18"W x 18"D (OPEN BOTTOM).
4. PROVIDE MINIMUM 3' SLACK CABLE LOOP FOR EACH CABLE.
5. COLOR CODE, TAG AND IDENTIFY ALL CABLES IN UL LISTED PULL BOX.
6. EXACT LOCATION OF EACH UL LISTED PULL BOX SHALL BE APPROVED BY THE OWNER AND ENGINEER.

A CONCRETE PULL BOX (TYPE 2 HD) DETAIL

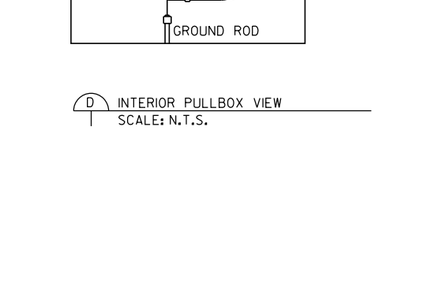
SCALE: N.T.S.

ELECTRICAL DUCT NOTES:

1. CONTRACTOR SHALL STAKE THE DUCT INSTALLATION IN PLAN AND ELEVATION FOR NEW ELECTRICAL DUCTS TO AVOID EXISTING UTILITIES. STAKING PLAN SHALL BE APPROVED BY OWNER AND ENGINEER PRIOR TO WORK.
2. CONTRACTOR SHALL ADJUST THE DEPTH OF THE ELECTRICAL DUCTS AS REQUIRED TO MAINTAIN THE MINIMUM COVER REQUIREMENT INDICATED AND AVOID EXISTING AND NEW UTILITIES.
3. SIMILAR CONSTRUCTION FOR OTHER DUCT SIZES.
4. INSTALL DUCT CONDUIT SUPPORTS AT 5"-0" O.C. MAXIMUM SPACING. UTILIZE LOCKING COLLARS OR HOLD DOWN BARS WITH ANCHORS TO PREVENT DUCT FLOTATION. (TYPICAL ALL DUCTS).
5. NO PVC SHALL EMERGE FROM THE GROUND OR CONCRETE SLAB OR ENCASEMENT.
6. INSTALL CONDUCTORS AND CABLES AS NOTED ON DRAWING. INSTALL PULLWIRE IN ALL SPARE DUCTS/CONDUITS.
7. MINIMUM COVER REQUIREMENT FOR DUCT BANKS UNDER ROADS, DRIVEWAYS AND PARKING LOTS SHALL BE 24".
8. VERTICAL AND HORIZONTAL DISTANCES BETWEEN CONDUITS SHALL BE 3" MINIMUM FOR DUCTS CONTAINING CIRCUITS OVER 600 VOLTS.
9. END BELLS OR COUPLINGS WITH REMOVABLE FACTORY PLUGS SHALL BE INSTALLED FLUSH WITH THE CONCRETE ENCASEMENT AT ACCESS POINTS.
10. ROCK REMOVAL SHALL BE CONSIDERED SUBSIDIARY TO DUCT INSTALLATION.

B NON-ENCASED ELECTRICAL DUCT BANK DETAILS

SCALE: N.T.S.

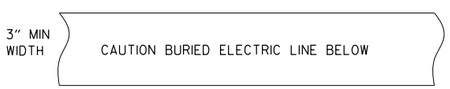


D INTERIOR PULLBOX VIEW

SCALE: N.T.S.

KEYED NOTES:

1. INSTALL TYPE "HD" PULL BOX AS PER ARDOT STANDARD SPECIFICATION 711 AND SP.
2. LOOP THE NEW LIGHTING CIRCUITS WITHIN EACH JUNCTION BOX, SLACK WIRE EQUAL TO ONE COMPLETE LOOP FOR FUTURE USE. NEATLY TRAIN AND LACE BRANCH CIRCUIT BUNDLES TOGETHER WITHIN THE BOX WITH A SEPARATE BUNDLE FOR EACH BRANCH CIRCUIT.
3. ALL CABLES, SPLICES, TERMINATIONS, ETC. SHALL BE RATED 600 VOLTS, WATERPROOF METHOD.
4. ALL CONDUCTORS SHALL BE CONTINUOUS FROM ORIGIN TO EQUIPMENT TERMINATION WITHOUT SPLICES. WHERE LIGHT FIXTURE TAPS ARE REQUIRED, TAPS SHALL BE MADE USING A SEALED, INSULATED PRESSURE CONNECTOR PROVIDING BOTH INSULATION AND JACKET EQUAL TO THE CABLE. CONNECTORS SHALL BE 600V RATED, 150 DEGREE C TEMPERATURE RATED, AND UL LISTED.



WARNING TAPE GENERAL NOTES:

1. POWER MARKING TAPES SHALL BE DETECTABLE TYPE CONSTRUCTION WITH RED BACKGROUND AND BLACK LETTERING.
2. TAPE SHALL BE DETECTABLE, DURABLE, HIGHLY VISIBLE, RESISTANT TO ELEMENTS, MEETING AND/OR EXCEEDING ALL INDUSTRY STANDARDS.

C UNDERGROUND DETECTABLE WARNING TAPE

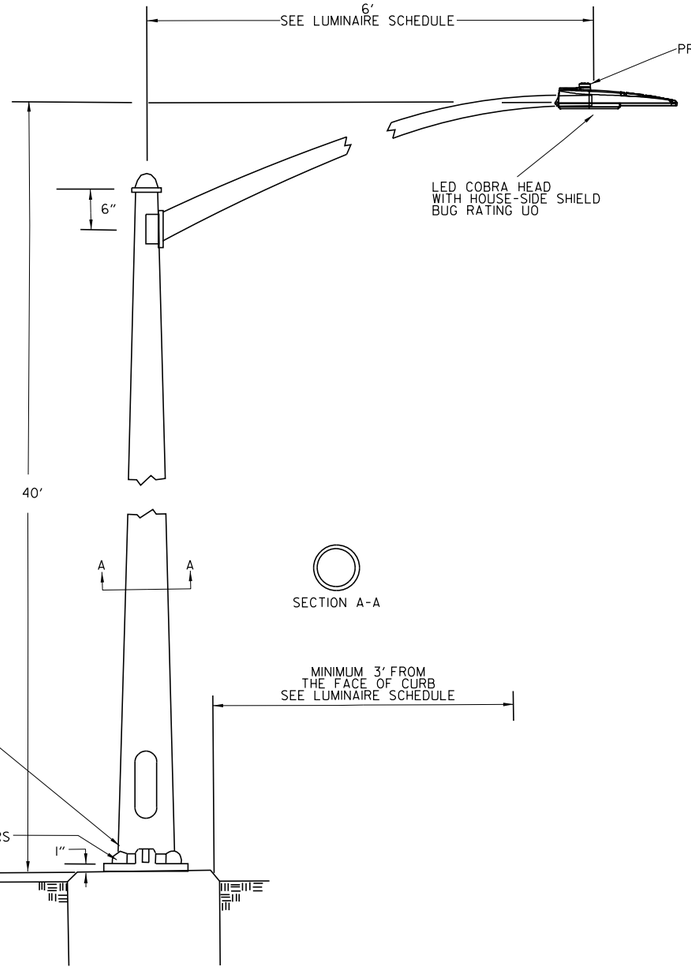
SCALE: N.T.S.

FINAL

LOCATION: I-540 RAMPS/36TH ST. AND HWY. 255/ZERO ST.
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 04 SCALE: 1"=100' DRAWN BY: BW

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WORKSPACE: AHTD
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REVISED DATE:

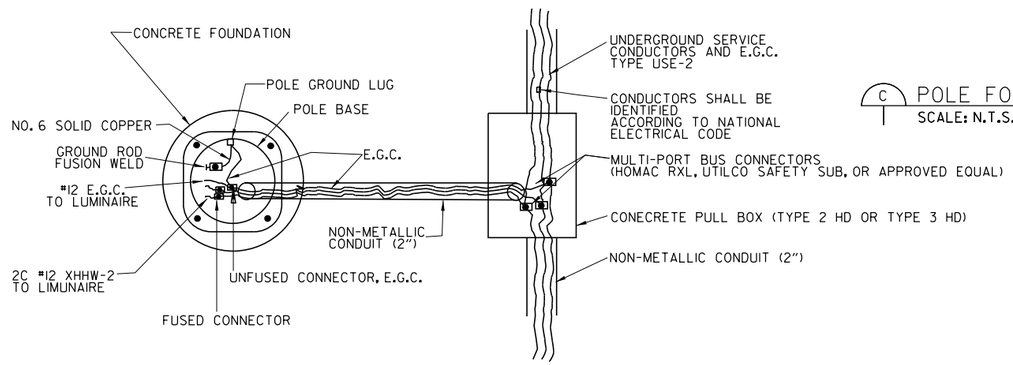
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	64	83
		ELECTRICAL DETAILS 2				



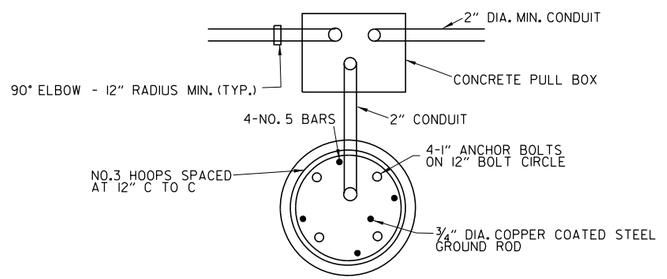
A COBRA HEAD LUMINAIRE WITH SHOE BASE
SCALE: N.T.S.

NOTES:

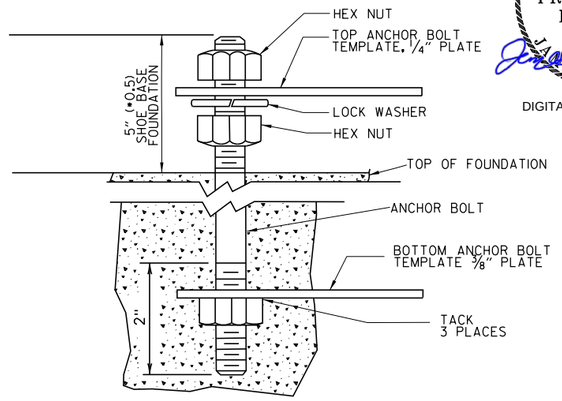
1. LUMINAIRE POLE SHALL MEET THE REQUIREMENTS OF 90 MPH WIND ZONE WITH 1.3 GUST FACTOR ON THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGN LUMINAIRES AND TRAFFIC SIGNALS, 2001 EDITION WITH 2003 AND 2006 INTERIMS.
2. STEEL LUMINAIRE POLES SHALL BE A MINIMUM OF 11 GAUGE.
   STEEL LUMINAIRE POLES SHALL BE HOT-DIPPED GALVANIZED.
   OTHER DIMENSIONS PER MANUFACTURER'S RECOMMENDATION AS NECESSARY TO MEET REQUIREMENTS OF THE SP - LED ROADWAY ILLUMINATION POLE.
3. POLE CAP OR TNEON CAP SHALL BE PROVIDED.
4. ANCHOR BOLTS SHALL MEET THE REQUIREMENTS OF SECTION 714 OF THE STANDARD SPECIFICAIONS. THE TOP 9" OF ALL ANCHOR BOLTS SHALL BE GALAVANIZED PER ASTM M232. ANCHOR BOLTS IN FOUNDATIONS SHALL BE 1.25" X 30" FOR MOUNTING HEIGHT OF 40' OR GREATER, 1" X 30" FOR MOUNTING HEIGHT LESS THAN 40'. ANCHOR BOLTS SHALL HAVE TOP END THREADED NOT LESS THAN 5" AND FURNISHED WITH GALVANIZED HEX NUTS, LOCK WASHERS, AND TEMPLATE. THE LOWER END OF THE BOLT SHALL BE THREADED AND FURNISHED WIHT HEX NUT AND TEMPLATE.
5. ALL METAL POLES SHALL BE BONDED TO E.G.C. PER NATIONAL ELECTRICAL CODE.



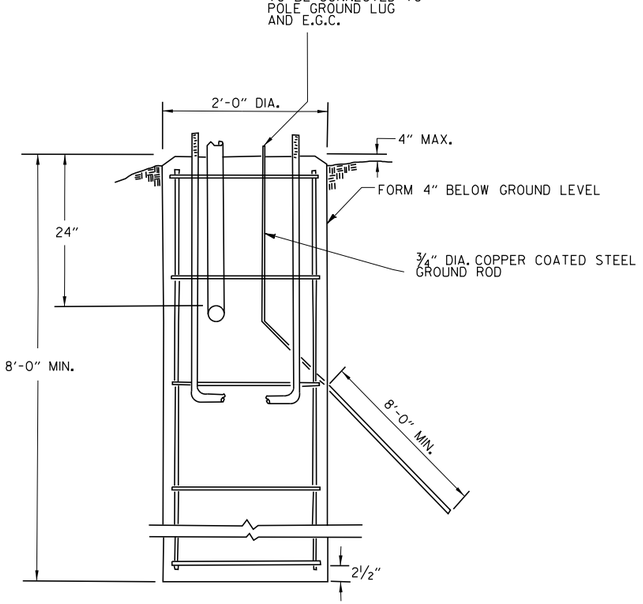
B POLE FOUNDATION/PULL BOX WIRING DETAIL
SCALE: N.T.S.



C POLE FOUNDATION/PULL BOX WIRING DETAILS - PLAN
SCALE: N.T.S.



D ANCHOR BOLT DETAIL
SCALE: N.T.S.



E ROADWAY LUMINAIRE POLE FOUNDATION
SCALE: N.T.S.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 21640
JAMES K. SCRUTCHFIELD
DIGITALLY SIGNED 6/26/2025

FINAL

LOCATION: I-540 RAMPS/36TH ST. AND HWY. 255/ZERO ST.
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 04 SCALE: 1"=100' DRAWN BY: BW

JATurner
WORKSPACE: AHTD
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REVISED DATE: 6/18/2025 3:03:27 PM

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	65	83
		ELECTRICAL DETAILS 3				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 21640
JARED K. SCHMITT
DIGITALLY SIGNED 6/26/2025

LUMINAIRE SCHEDULE AND POLE ASSEMBLY

POLE NO.	NORTHING	EASTING	STA.	OFFSET (FT.)	CENTERLINE	MOUNTING HT. (FT.)	POLE ARM (FT.)	BASE TYPE	WATTS	FIXTURE CURRENT	VOLTAGE	DELIVERED LUMENS	ORIENTATION ANGLE TRUE NORTH = 0, CW ROTATION	IES CLASSIFICATION	FIXTURE NAME	DAY		NIGHT	
																SWITCHED	POWER	SWITCHED	POWER
1	369906	597876.75	400+54.92	17.50' LT	RAMP 4	40	6	BREAKAWAY BASE	196W	0.82	240V	29715	91	TYPE III	ATBO P457 R3 4K	OFF	N/A	ON	100%
2	370104.95	597887.24	402+50.77	15.50' RT	RAMP 4	40	6	BREAKAWAY BASE	196W	0.82	240V	29715	242	TYPE III	ATBO P457 R3 4K	OFF	N/A	ON	100%
3	369981	597808.81	501+35.39	23.50' RT	36TH STREET	40	6	BREAKAWAY BASE	196W	0.82	240V	29715	272	TYPE III	ATBO P457 R3 4K	OFF	N/A	ON	100%
4	370246.51	597859.49	505+13.46	23.50' RT	36TH STREET	40	6	BREAKAWAY BASE	196W	0.82	240V	29715	287	TYPE III	ATBO P457 R3 4K	OFF	N/A	ON	100%
5	370411.22	597851.73	506+67.76	34.44' LT	36TH STREET	40	6	BREAKAWAY BASE	196W	0.82	240V	29715	85	TYPE III	ATBO P457 R3 4K	OFF	N/A	ON	100%
6	370522.01	597762.47	702+66.59	39.37' RT	HWY. 255	40	6	BREAKAWAY BASE	196W	0.82	240V	29715	1	TYPE III	ATBO P457 R3 4K	OFF	N/A	ON	100%
7	370679.55	597925.39	301+26.08	26.50' LT	RAMP 3	40	6	BREAKAWAY BASE	196W	0.82	240V	29715	109	TYPE III	ATBO P457 R3 4K	OFF	N/A	ON	100%
8	370786.77	597952.45	302+36.53	26.50' LT	RAMP 3	40	6	BREAKAWAY BASE	196W	0.82	240V	29715	103	TYPE III	ATBO P457 R3 4K	OFF	N/A	ON	100%
9	370932.94	597993.9	303+88.47	21.88' LT	RAMP 3	40	6	BREAKAWAY BASE	196W	0.82	240V	29715	107	TYPE III	ATBO P457 R3 4K	OFF	N/A	ON	100%

Electrical Service Data

CIRCUIT ID	LOCATION	SERVICE VOLTAGE	SERVICE CONDUIT SIZE	SERVICE CONDUCTORS	MAIN CIRCUIT BREAKER	BRANCH CIRCUIT BREAKER	BRANCH CIRCUIT (AMPS)	KVA LOAD
SP-1								
SP-1-A	N/A	240V, SINGLE PHASE	2" NMC	2C/4 AWG, EGC	SP/100A	2P/20A	5.78	1.4
SP-1-B	N/A	240V, SINGLE PHASE	2" NMC	2C/4 AWG, EGC	SP/100A	2P/20A	2.45	2.1

ILLUMINATION DESIGN CRITERIA

DESCRIPTION	AVERAGE (FC)	AVG/MIN
HWY.255/ZERO ST & 36TH ST INT.	1.2	3.0
HWY. 255/ZERO ST & I-540 RAMPS INT.	1.2	3.0

NOTES:
1. LIGHTING CALCULATIONS WERE PERFORMED USING VISUAL LIGHTING VERSION 2.11.0094 SOFTWARE
2. DESIGN BASIS WAS AASHTO ROADWAY LIGHTING DESIGN GUIDE, 7TH ED. AND IES RP-8-22
3. ATBO P457 R3 4K.IES OR APPROVED EQUAL SHALL BE USED.

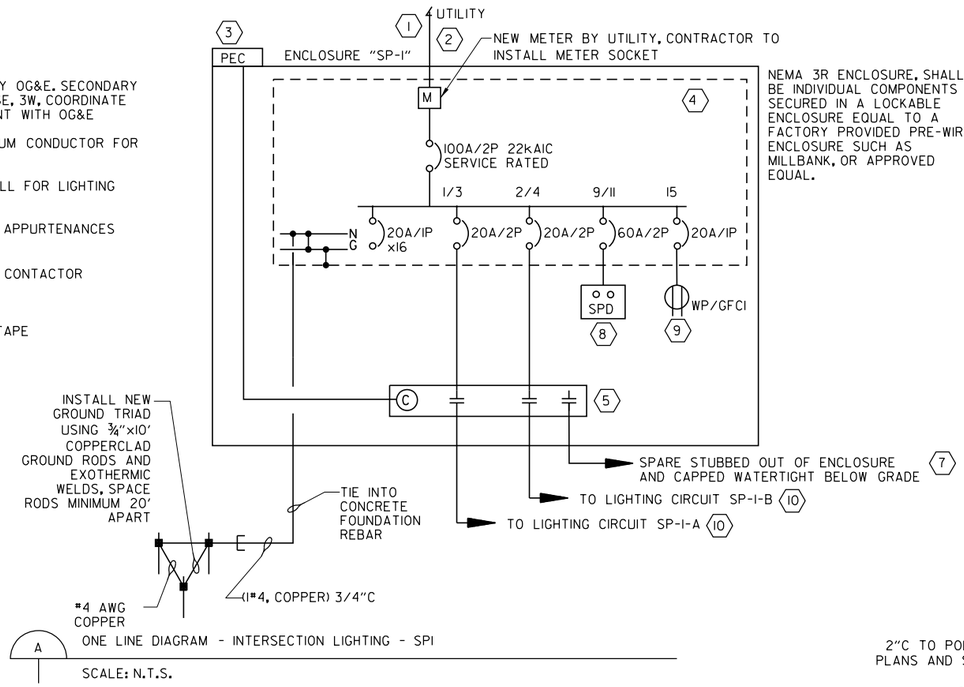
ILLUMINATION STATISTICS

DESCRIPTION	AVERAGE (FC)	AVG/MIN
HWY.255/ZERO ST & 36TH ST INT.	1.8	3.0
HWY. 255/ZERO ST & I-540 RAMPS INT.	2.7	3.0

Note:
1. CALCULATIONS WERE BASED ON .85 LIGHT LOSS FACTOR

KEYED NOTES:

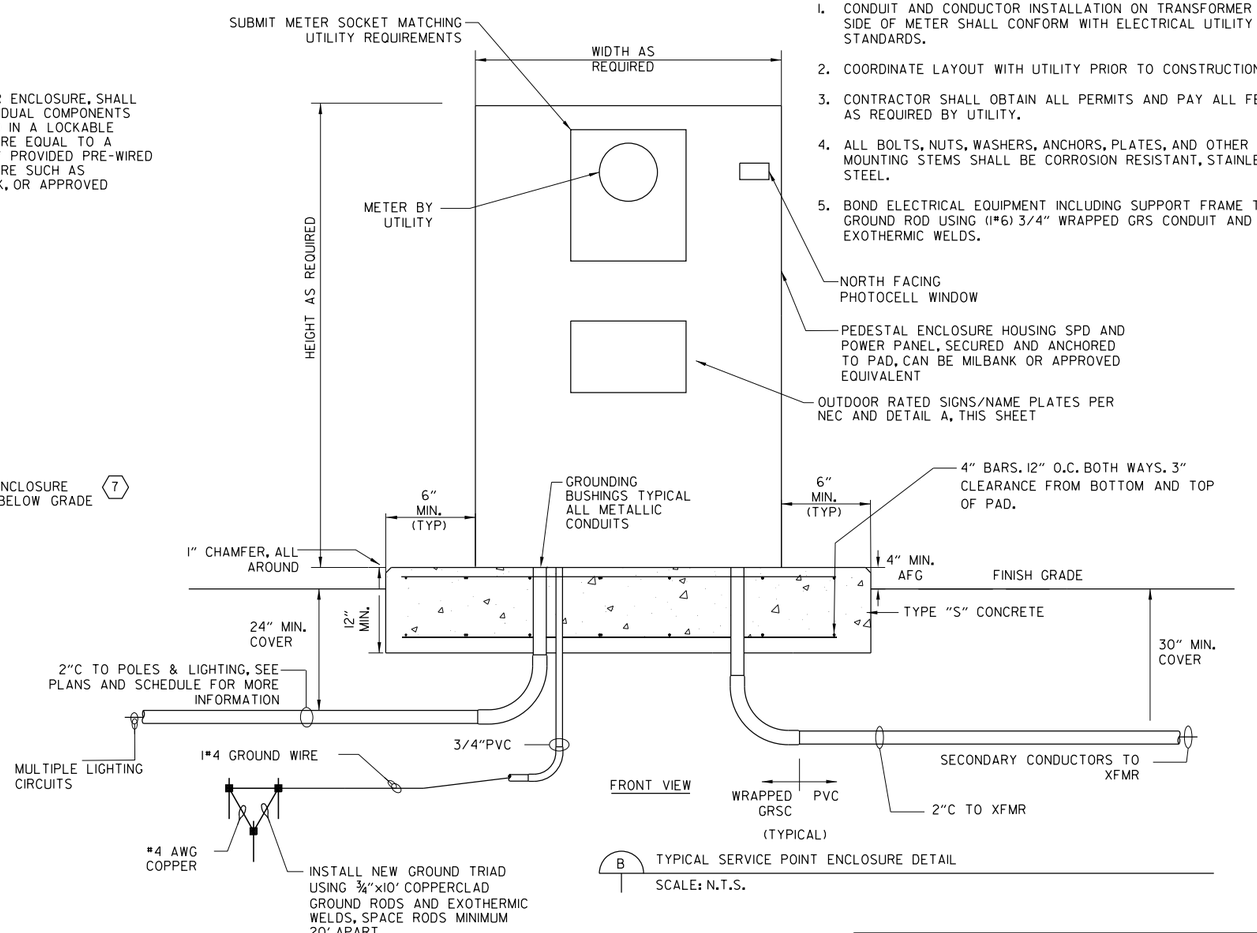
1. UTILITY TRANSFORMER BY OG&E. SECONDARY SERVICE 240/120V, 1PHASE, 3W. COORDINATE ALL WORK AND EQUIPMENT WITH OG&E
2. 3#2, 2"C, UTILIZE ALUMINUM CONDUCTOR FOR SERVICE
3. WEATHERPROOF PHOTOCELL FOR LIGHTING CONTROL
4. 100A PANEL BOARD AND APPURTENANCES WITH ENCLOSURE
5. TEN POLE 30A LIGHTING CONTACTOR
6. 2#8, 1#10 EGC, 2"C
7. 2" CONDUIT WITH PULL TAPE
8. 3#6, 3/4"C
9. 2#12, 1#12 EGC, 3/4"C
10. 2#8, 1#8 EGC, 2"C



A ONE LINE DIAGRAM - INTERSECTION LIGHTING - SP1
SCALE: N.T.S.

SERVICE POINT ENCLOSURE GENERAL NOTES:

1. CONDUIT AND CONDUCTOR INSTALLATION ON TRANSFORMER SIDE OF METER SHALL CONFORM WITH ELECTRICAL UTILITY STANDARDS.
2. COORDINATE LAYOUT WITH UTILITY PRIOR TO CONSTRUCTION.
3. CONTRACTOR SHALL OBTAIN ALL PERMITS AND PAY ALL FEES AS REQUIRED BY UTILITY.
4. ALL BOLTS, NUTS, WASHERS, ANCHORS, PLATES, AND OTHER MOUNTING STEMS SHALL BE CORROSION RESISTANT, STAINLESS STEEL.
5. BOND ELECTRICAL EQUIPMENT INCLUDING SUPPORT FRAME TO GROUND ROD USING (1#6) 3/4" WRAPPED GRS CONDUIT AND EXOTHERMIC WELDS.



B TYPICAL SERVICE POINT ENCLOSURE DETAIL
SCALE: N.T.S.

GENERAL NOTES

1. ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE NFPA 70 (2023) NATIONAL ELECTRICAL CODE, NFPA 101 (2021) LIFE SAFETY CODE, STATE ELECTRICAL CODE, AND LOCAL ELECTRICAL CODE.
2. COORDINATE ELECTRICAL POWER SUPPLY WITH EQUIPMENT SUPPLIED.
3. COORDINATE ALL ELECTRICAL WORK AND POWER OUTAGES WITH CITY AND POWER UTILITY.
4. SERVICE WIRING SHALL BE MINIMUM TYPE THHN/THWN-2.
5. FEEDER AND BRANCH WIRING SHALL BE MINIMUM TYPE THHN/THWN-2.
6. EQUIPMENT SHORT CIRCUIT CURRENT RATINGS AND AVAILABLE INTERRUPTING CURRENT RATINGS SHALL BE FULLY RATED TO INTERRUPT SYMMETRICAL SHORT CIRCUIT CURRENT AVAILABLE AT TERMINALS. SERIES RATED SYSTEMS SHALL NOT BE USED.
7. NEUTRAL BUSES SHALL BE COPPER 100% RATED UNLESS OTHERWISE NOTED.
8. GROUND BUSES SHALL BE COPPER UNLESS OTHERWISE NOTED.
9. INSTALL AN EQUIPMENT GROUNDING CONDUCTOR IN ALL FEEDER AND BRANCH CIRCUITS.
10. INSTALL ALL CONDUCTORS AND CABLES IN CONDUIT UNLESS OTHERWISE NOTED.
11. INSTALL LUGS AND JUNCTION BOXES AS REQUIRED TO FIT WIRING.
12. INSTALL NEW TYPED PANEL SCHEDULES IN ALL ELECTRICAL PANELS INDICATING WORK PERFORMED.
13. CONDUIT FILL IS PER NEC 2023 CHAPTER 9 CALCULATIONS AND TABLES.

FINAL

LOCATION: I-540 RAMPS/36TH ST. AND HWY. 255/ZERO ST.
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 04 SCALE: 1"=100' DRAWN BY: BW

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WORKSPACE: AHTD
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REVISED DATE:

I-540 - VOLTAGE DROP, CIRCUIT A, 2C/8AWG, EGC

SEGMENT	VOLTAGE	PHASE	# OF SETS	WIRE SIZE	LINE CURRENT	IMPEDENCE (W/1000 FT)	LENGTH	POWER FACTOR	WIRE TYPE	CONDUIT TYPE	VOLTAGE DROP (VOLTS)	%VD
SP-1 TO PB-L-6	240	1	1	8	0.82	0.78	60	100%	COPPER	PVC	0.076	0.03%
PB-L-6 TO L-6	240	1	1	12	0.82	2.0	60	100%	COPPER	PVC	0.196	0.08%
SP-1 TO PB-3	240	1	1	8	4.96	0.78	65	100%	COPPER	PVC	0.503	0.21%
PB-3 TO PB-L-5	239	1	1	8	4.96	0.78	40	100%	COPPER	PVC	0.310	0.13%
PB-L-5 TO L-5	239	1	1	12	0.82	2.0	60	100%	COPPER	PVC	0.196	0.08%
PB-L-5 TO PB-2	239	1	1	8	4.14	0.78	75	100%	COPPER	PVC	0.484	0.20%
PB-2 TO EXISTING	238	1	1	8	0.82	0.78	215	100%	COPPER	PVC	0.274	0.11%
PB-2 TO PB-L-4	238	1	1	8	3.32	0.78	145	100%	COPPER	PVC	0.751	0.32%
PB-L-4 TO L-4	237	1	1	12	0.82	2.0	60	100%	COPPER	PVC	0.196	0.08%
PB-L-4 TO PB-L-2	237	1	1	8	2.49	0.78	140	100%	COPPER	PVC	0.544	0.23%
PB-L-2 TO L-2	236	1	1	12	0.82	2.0	60	100%	COPPER	PVC	0.196	0.08%
PB-L-2 TO PB-1	236	1	1	8	1.63	0.78	100	100%	COPPER	PVC	0.255	0.11%
PB-1 TO PB-L-3	236	1	1	8	0.82	0.78	60	100%	COPPER	PVC	0.076	0.03%
PB-L-3 TO L-3	236	1	1	12	0.82	2.0	60	100%	COPPER	PVC	0.196	0.08%
PB-1 TO PB-L-1	236	1	1	8	0.82	0.78	110	100%	COPPER	PVC	0.140	0.06%
PB-L-1 TO L-1	236	1	1	12	0.82	2.0	60	100%	COPPER	PVC	0.196	0.08%
											TOTAL %VD	1.93%

Project: 21T01010 - I-540 & HWY 255

I-540 - VOLTAGE DROP, CIRCUIT B, 2C/8AWG, EGC

SEGMENT	VOLTAGE	PHASE	# OF SETS	WIRE SIZE	LINE CURRENT	IMPEDENCE (W/1000 FT)	LENGTH	POWER FACTOR	WIRE TYPE	CONDUIT TYPE	VOLTAGE DROP (VOLTS)	%VD
SP-1 TO PB-3	240	1	1	8	2.45	0.78	65	100%	COPPER	PVC	0.248	0.10%
PB-3 TO PB-4	240	1	1	8	2.45	0.78	170	100%	COPPER	PVC	0.650	0.27%
PB-4 TO PB-L-7	239	1	1	8	2.45	0.78	75	100%	COPPER	PVC	0.287	0.12%
PB-L-7 TO L-7	239	1	1	12	0.82	2.0	60	100%	COPPER	PVC	0.196	0.08%
PB-L-7 TO PB-L-8	239	1	1	8	1.63	0.78	110	100%	COPPER	PVC	0.280	0.12%
PB-L-8 TO L-8	238	1	1	12	0.82	2.0	60	100%	COPPER	PVC	0.196	0.08%
PB-L-8 TO PB-L-9	238	1	1	8	0.82	0.78	155	100%	COPPER	PVC	0.197	0.08%
PB-L-9 TO L-9	238	1	1	12	0.82	2.0	60	100%	COPPER	PVC	0.196	0.08%
											TOTAL %VD	0.94%

Project: 21T01010 - I-540 & HWY 255

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	66	83
		ELECTRICAL DETAILS 4				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 21640
JAMES K. SCHMITT

DIGITALLY SIGNED 6/26/2025

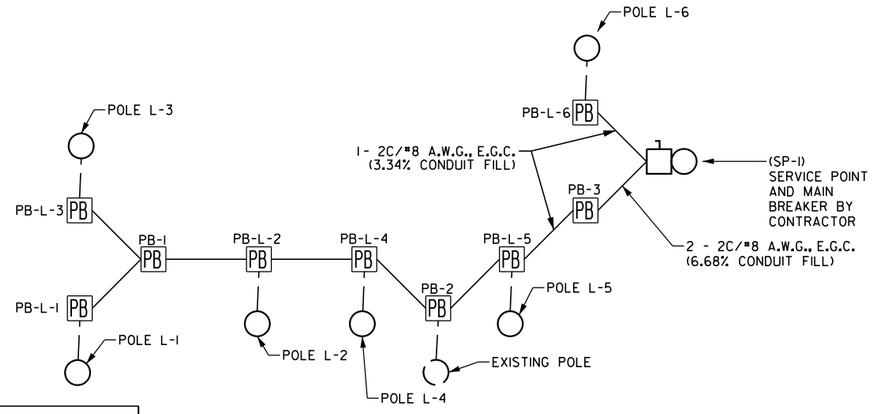
PB — INSTALL NEW TYPE 2 HD PULLBOX

— — — — 2C/#12 A.W.G., E.G.C. SHALL BE USED PULL BOX TO LUMINAIRE

——— ELECTRICAL CIRCUIT, SEE CALL-OUTS FOR CONDUCTOR NUMBER AND SIZES

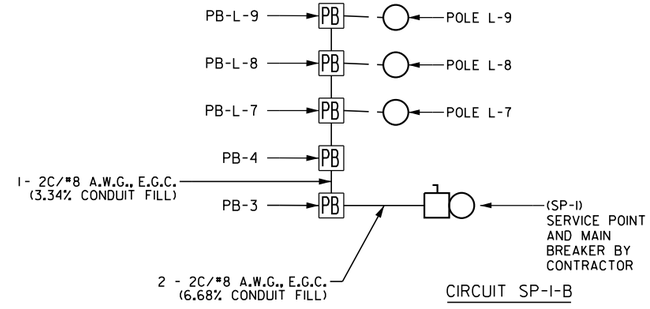
WIRING NOTES:

1. REFER TO ELECTRICAL CONDUCTOR FOR LUMINAIRE SPECIAL PROVISION FOR ELECTRICAL CONDUCTOR SIZE FROM PULL BOX TO LIGHT FIXTURE.



CIRCUIT SP-1-A

B WIRING DIAGRAM
SCALE: N.T.S.



CIRCUIT SP-1-B

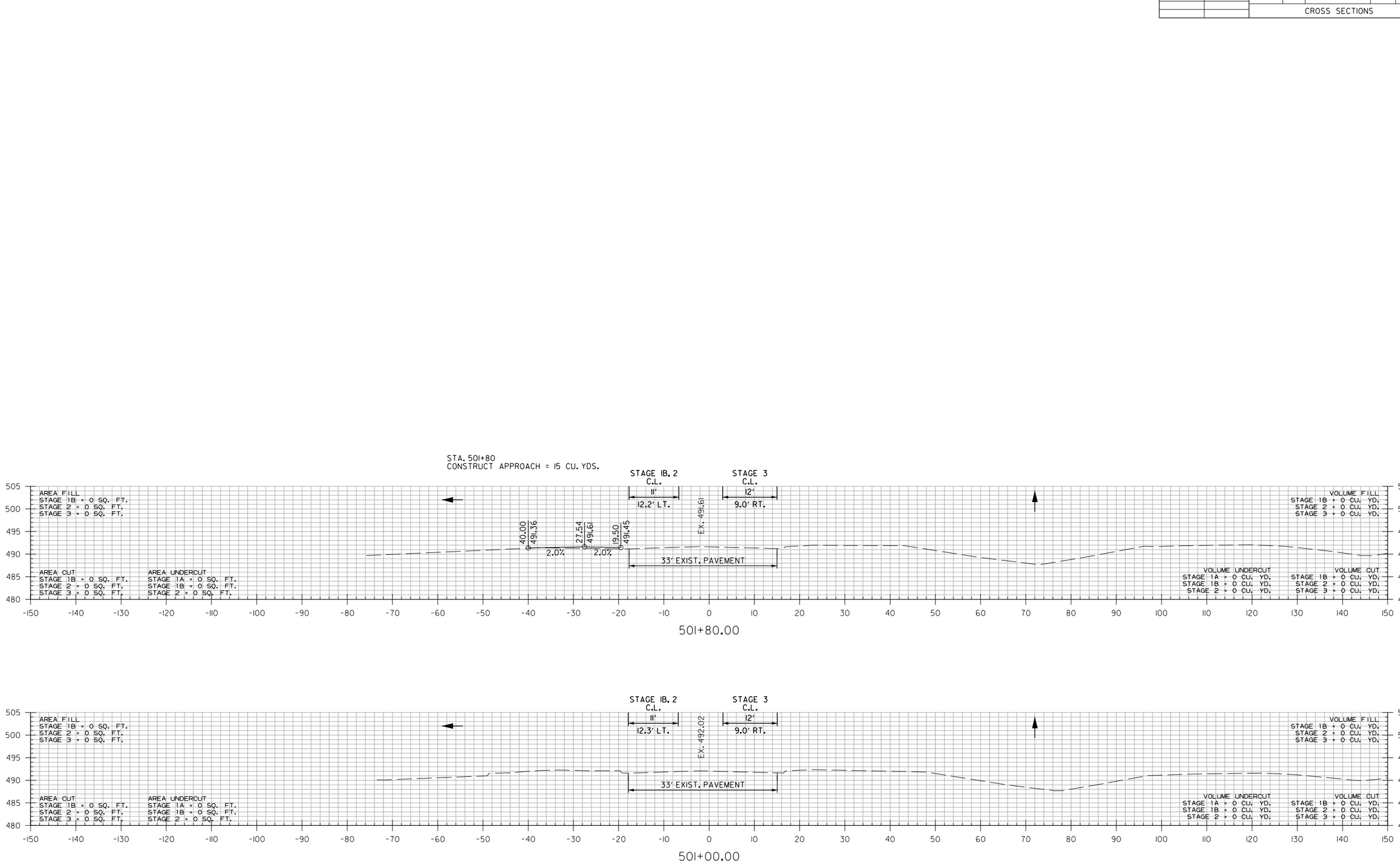
CONDUIT FILL			
CONDUIT SIZE	CONDUCTORS	CONDUIT FILL	MAX FILL
2"	1 - 2C/#8 A.W.G., E.G.C.	3.34%	40%
2"	2 - 2C/#8 A.W.G., E.G.C.	6.68%	40%

FINAL

LOCATION: I-540 RAMPS/36TH ST. AND HWY. 255/ZERO ST.
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 04 SCALE: 1"=100' DRAWN BY: BW

JATurner 6/18/2025 3:03:31 PM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	67	83
		CROSS SECTIONS				



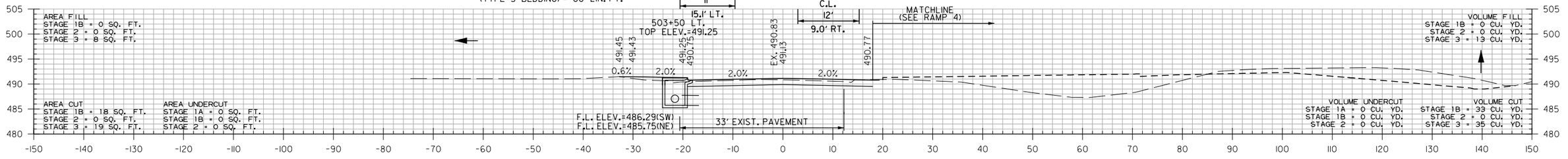
STA. 501+00.00 BEGIN 100' TRANSITION

S. 36TH STREET
STA. 501+00 TO STA. 501+80

JATurner 12/6/2024 10:56:55 AM
WORKSPACE: AHTD
\\garverinc.local\gdata\Projects\2021\21010 - ARDOT 040889 I-540-Hwy 255\Drawings\r040889_CX_S36THSTREET.DGN
REVISED DATE:

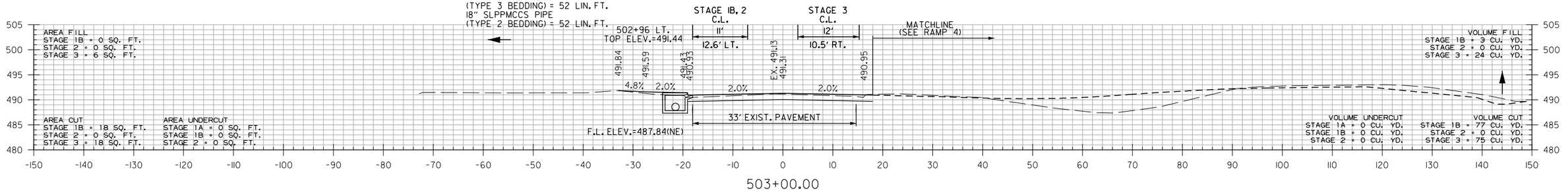
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	68	83
		CROSS SECTIONS				

STA. 503+50 CONSTRUCT
DROP INLET ON LT. H=5'-6"
WITH 8' EXT.
WITH 24"x60' PIPE OUTLET
TO DROP INLET AT STA. 503+95 RT.
TYPE MO DROP INLET = 4' DIA.
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 60 LIN. FT.

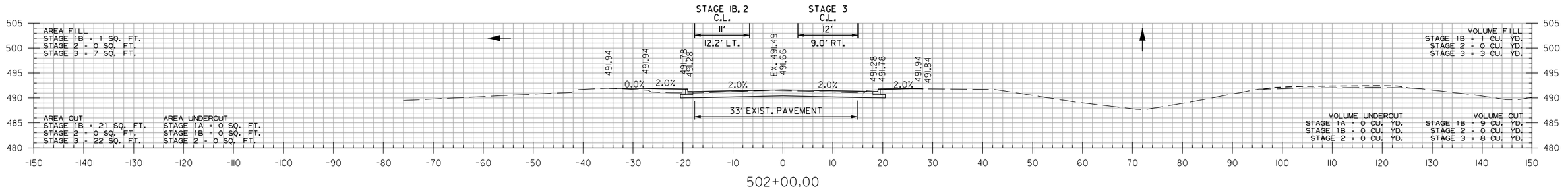


503+50.00

STA. 502+96 CONSTRUCT
DROP INLET ON LT. H=3'-7"
WITH 8' EXT.
WITH 18"x52' PIPE OUTLET
TO DROP INLET AT STA. 503+50 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'x3'
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 52 LIN. FT.
18" SLPPMCCS PIPE
(TYPE 2 BEDDING) = 52 LIN. FT.



503+00.00



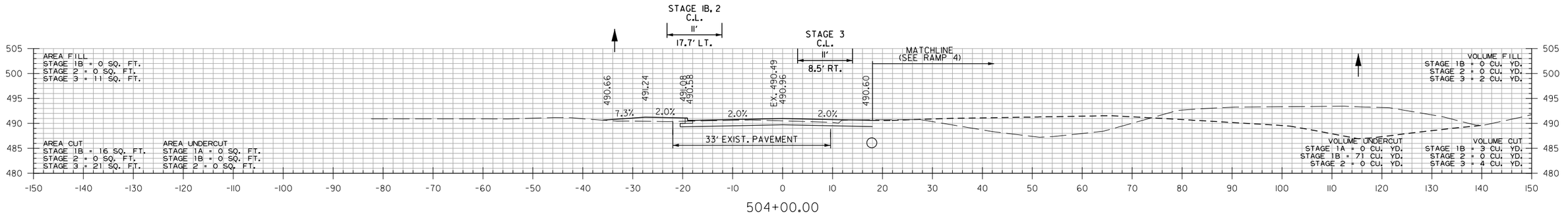
502+00.00

STA. 502+00.00
END 100' TRANSITION

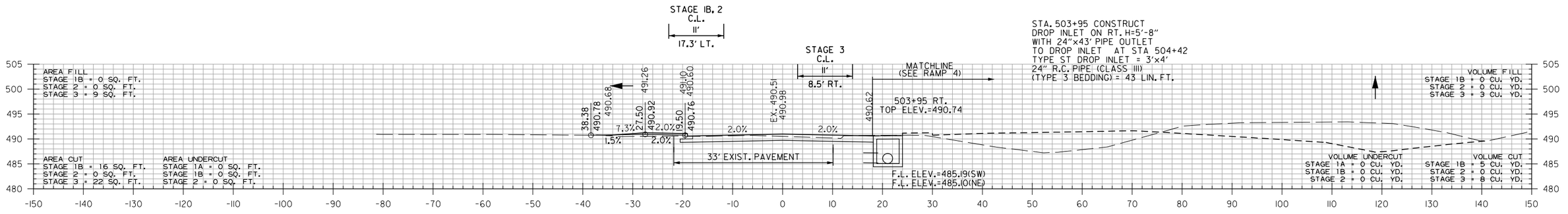
S. 36TH STREET
STA. 502+00 TO STA. 503+50

JATurner
12/6/2024 10:56:55 AM
WORKSPACE: AHTD
\\garverinc.local\gdata\Projects\2021\210100 - ARDOT 040889 I-540-Hwy 255\Drawings\r040889_CX_S36THSTREET.DGN
REVISED DATE:

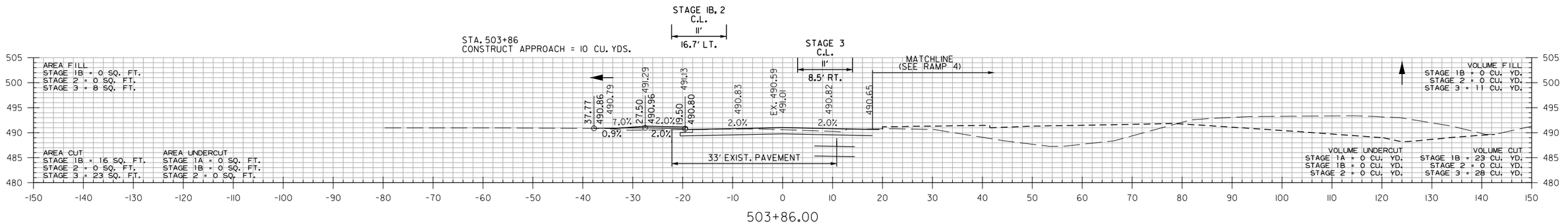
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	69	83
		CROSS SECTIONS				



504+00.00



503+95.00

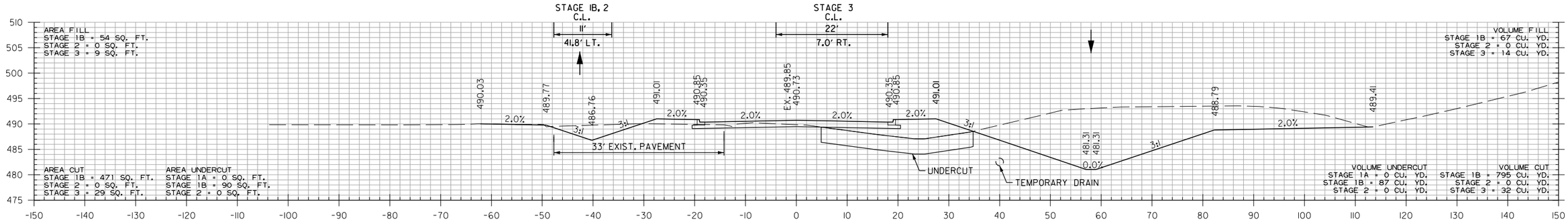


503+86.00

S. 36TH STREET
STA. 503+86 TO STA. 504+00

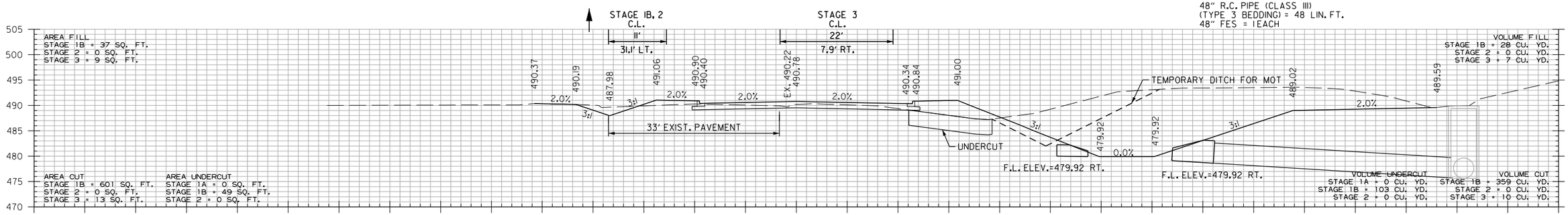
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	70	83
		CROSS SECTIONS				



STA. 504+85.00
END TEMP. DT. RT. -0.60%
ELEV. 481.86

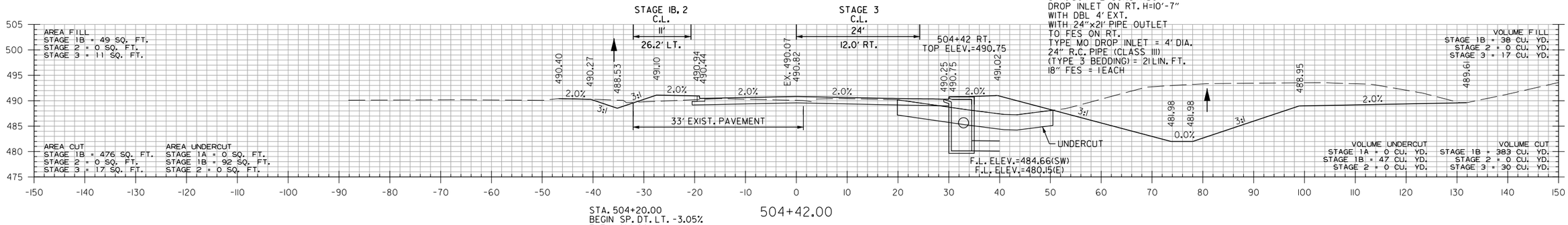
STA. 504+60 CONSTRUCT
48"×48' R.C. PIPE CULVERT
W/ FES ON LT.
MODIFY TO EXISTING JB
48" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 48 LIN. FT.
48" FES = 1EACH



STA. 504+62.00
BEGIN TEMP. DT. RT. -0.60%
ELEV. 482.00

STA. 504+60.00
BEGIN SP. DT. RT. 2.90%
ELEV. 479.92

STA. 504+42 CONSTRUCT
DROP INLET ON RT. H=10'-7"
WITH DBL 4' EXT.
WITH 24"x21' PIPE OUTLET
TO FES ON RT.
TYPE MO DROP INLET = 4' DIA.
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 21LIN. FT.
18" FES = 1EACH

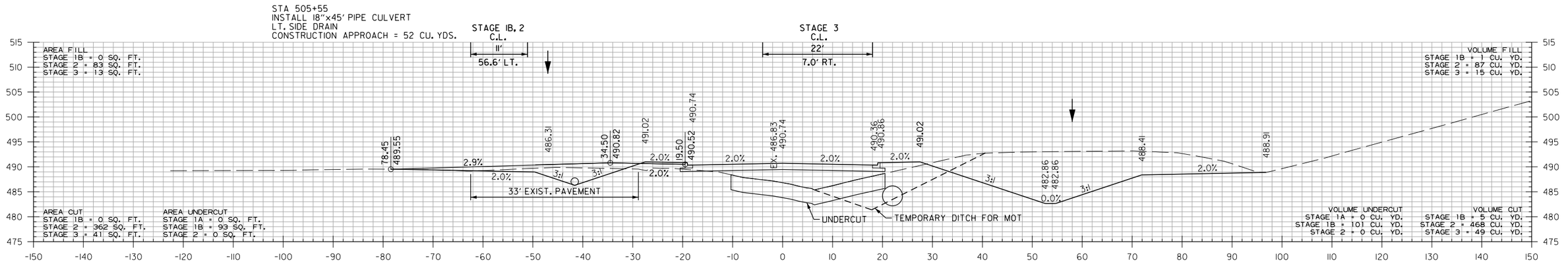


STA. 504+20.00
BEGIN SP. DT. LT. -3.05%
ELEV. 489.20

S. 36TH STREET
STA. 504+42 TO STA. 505+00

JATurner 12/6/2024 10:56:55 AM
WORKSPACE: AHTD
\\garverinc.local\gdata\Projects\2021\21T0100 - ARDOT 040889 I-540-Hwy 255\Drawings\r040889_CX_S36THSTREET.DGN
REVISED DATE:

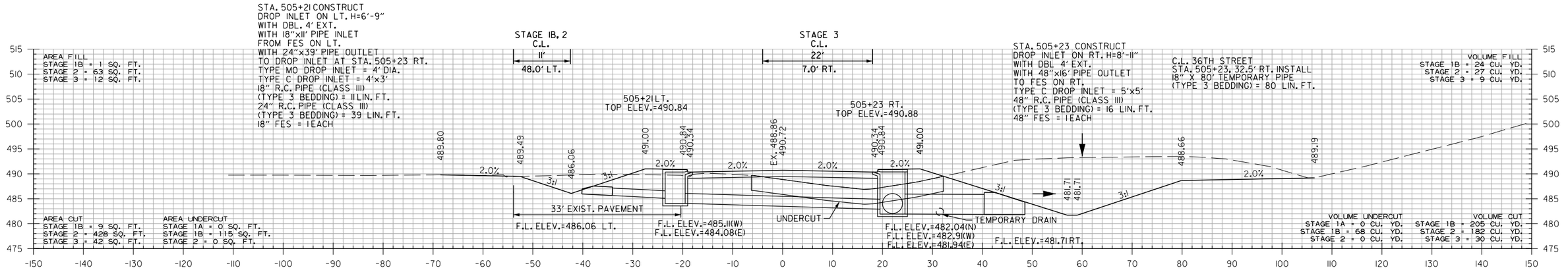
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	71	83
		CROSS SECTIONS				



STA. 505+25.00
END SP. DT. LT. -3.05%
ELEV. 486.00

505+55.00

STA. 505+60.00
BEGIN TEMP. DT. RT. -0.60%
ELEV. 481.40

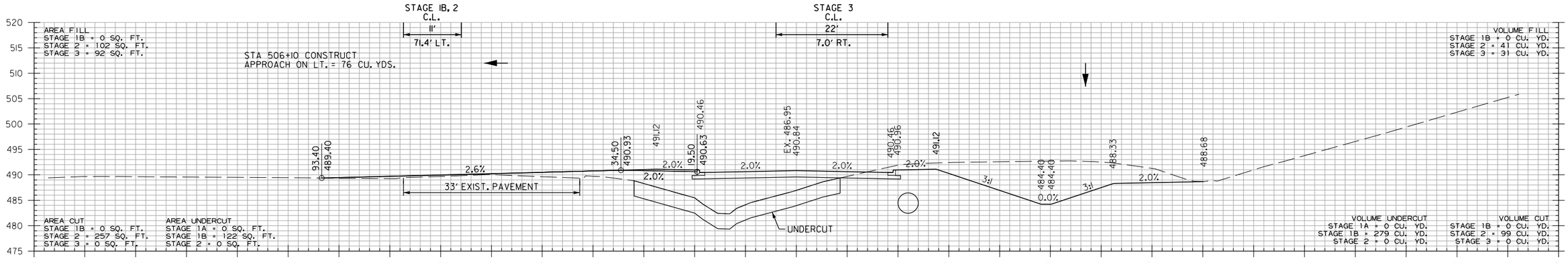


505+23.00

S. 36TH STREET
STA. 505+23 TO STA. 505+55

JATurner
12/6/2024 10:56:55 AM
WORKSPACE: AHTD
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REVISED DATE:

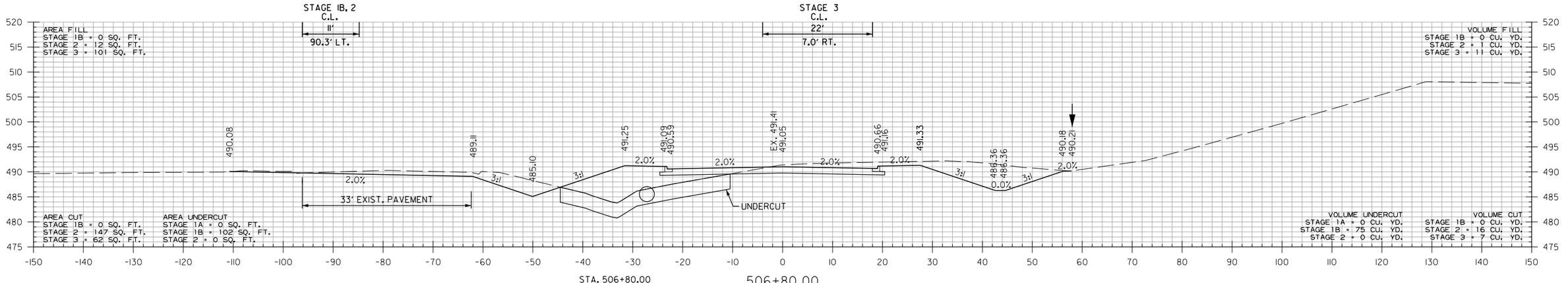
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	72	83
		CROSS SECTIONS				



S. 36TH STREET
STA. 506+00 TO STA. 506+10

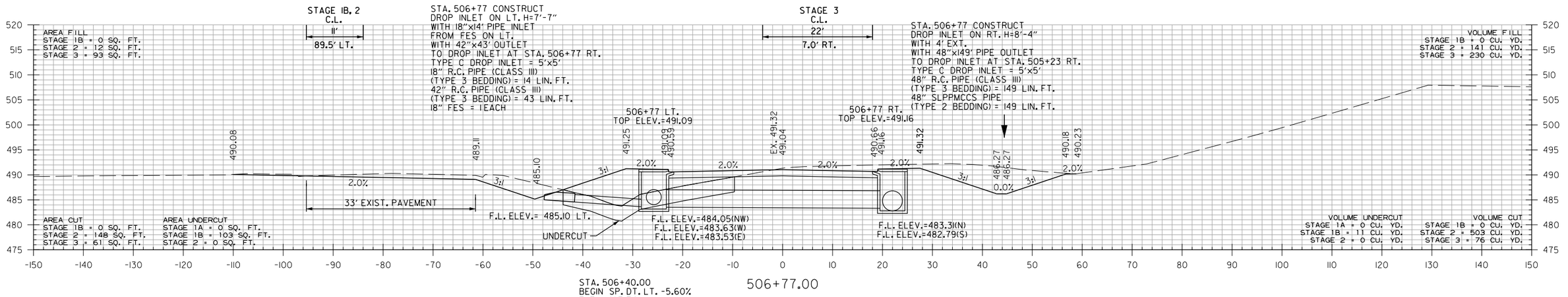
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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	73	83
		CROSS SECTIONS				



STA. 506+80.00
END SP. DT. LT. -5.60%
BEGIN SP. DT. LT. 2.80%
ELEV. 485.10

506+80.00



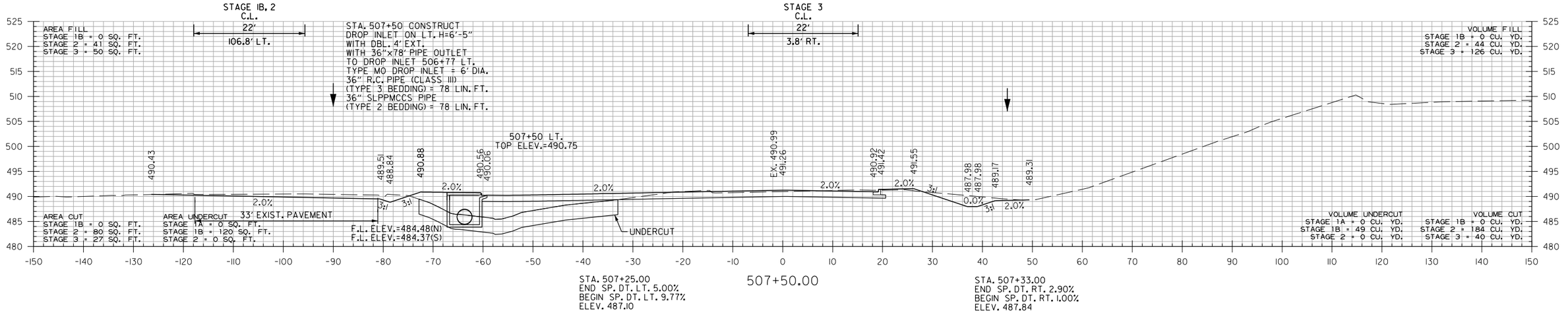
STA. 506+40.00
BEGIN SP. DT. LT. -5.60%
ELEV. 487.34

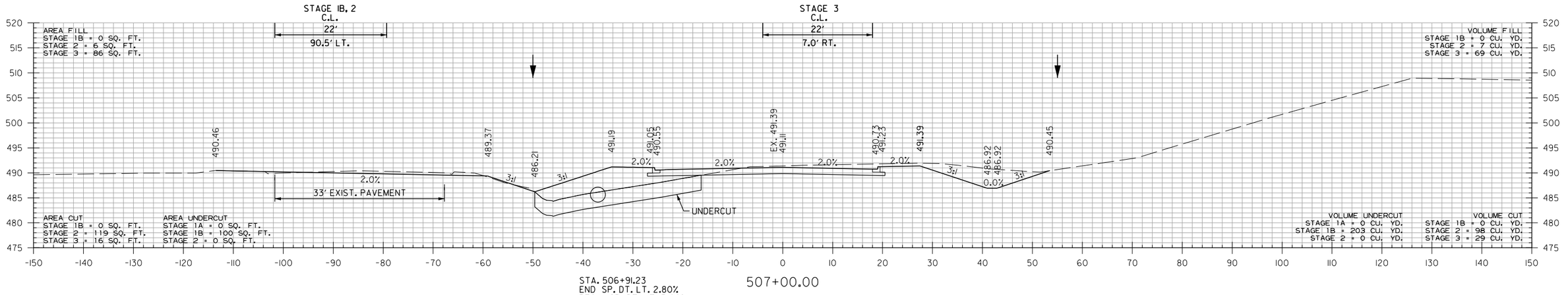
506+77.00

S. 36TH STREET
STA. 506+77 TO STA. 506+80

JATurner 12/6/2024 10:56:56 AM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	74	83
		CROSS SECTIONS				



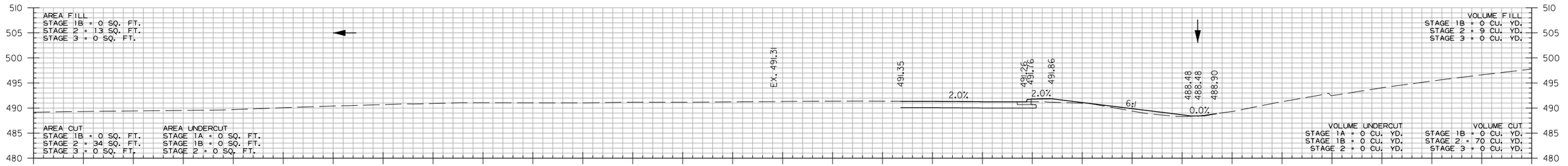


S. 36TH STREET
STA. 507+00 TO STA. 507+50

JATurner
WORKSPACE: AHTD
\\garverinc.local\gdata\Projects\2021\21T0010 - ARDOT 040889 I-540-Hwy 255\Drawings\r040889_CX_S36THSTREET.DGN
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REVISED DATE:

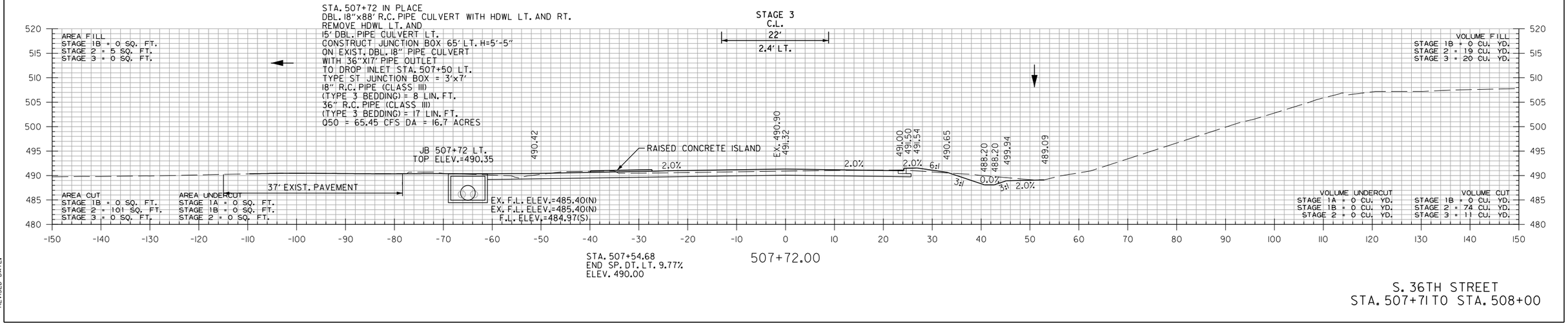
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	75	83
		CROSS SECTIONS				

STA. 508+01.50
END SP. DT. RT. 1.00%
ELEV. 488.49



508+00.00

STA. 507+72 IN PLACE
DBL. 18"x88' R.C. PIPE CULVERT WITH HDWL LT. AND RT.
REMOVE HDWL LT. AND
15' DBL. PIPE CULVERT LT.
CONSTRUCT JUNCTION BOX 65' LT. H=5'-5"
ON EXIST. DBL. 18" PIPE CULVERT
WITH 36"X17' PIPE OUTLET
TO DROP INLET STA. 507+50 LT.
TYPE ST JUNCTION BOX = 3'x7'
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 8 LIN. FT.
36" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 17 LIN. FT.
Q50 = 65.45 CFS DA = 16.7 ACRES



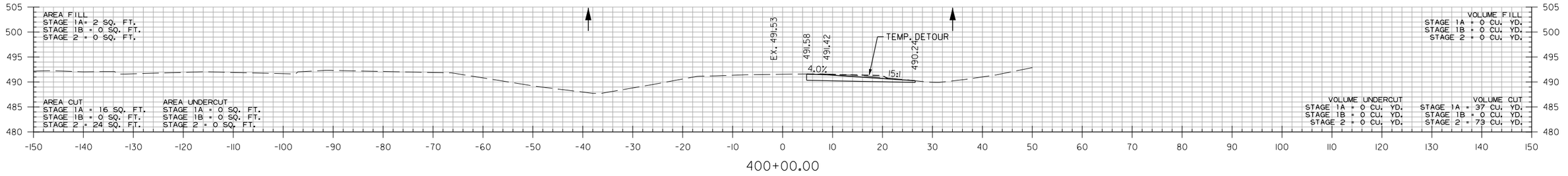
STA. 507+54.68
END SP. DT. LT. 9.77%
ELEV. 490.00

507+72.00

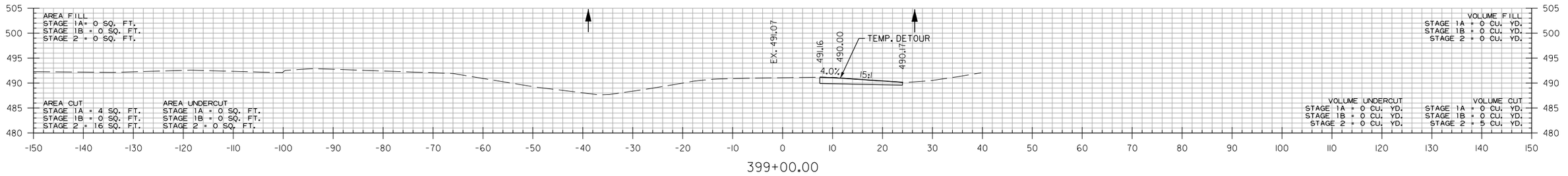
S. 36TH STREET
STA. 507+71 TO STA. 508+00

JATurner
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WORKSPACE: AHTD
\\garverinc.local\gdata\Projects\2021\21T0100 - ARDOT 040889 I-540-Hwy 255\Drawings\r040889_CX_S36THSTREET.DGN
REVISED DATE:

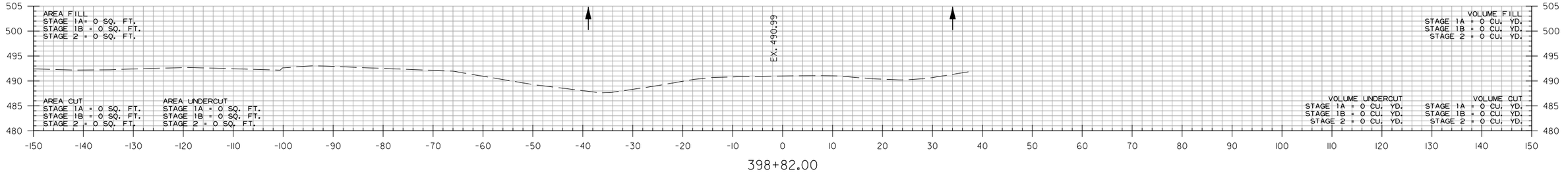
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	76	83
		CROSS SECTIONS				



400+00.00



399+00.00



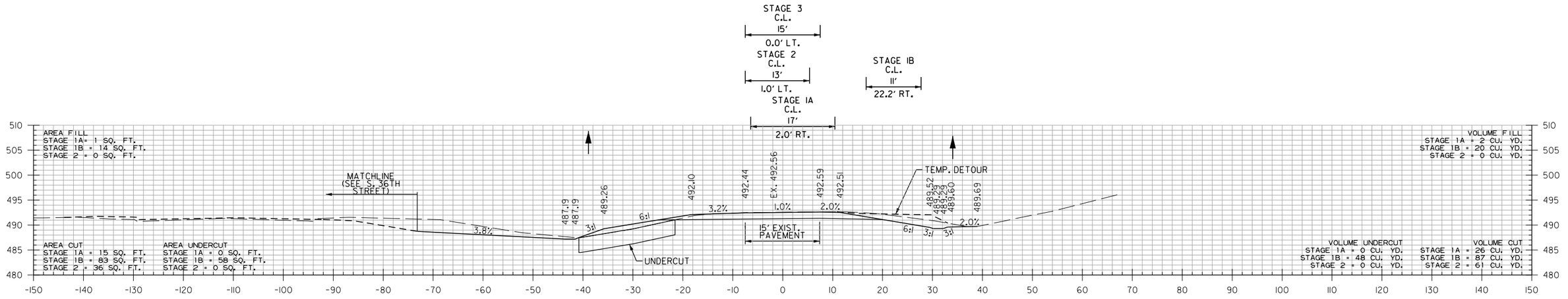
398+82.00

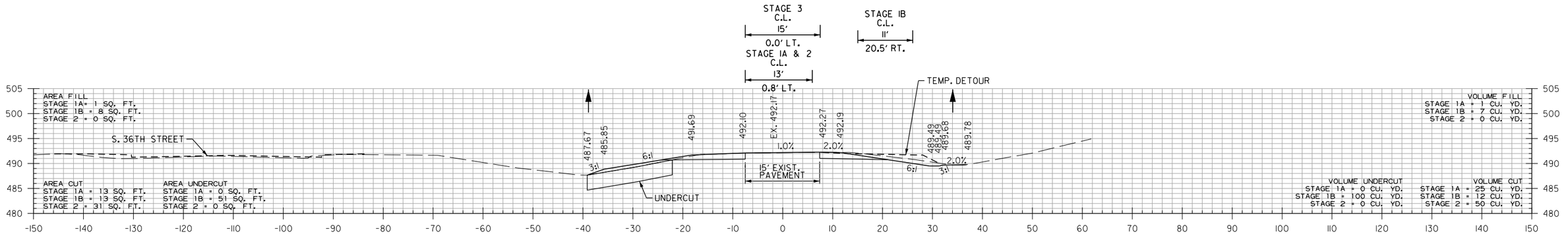
STA. 398+82.00 BEGIN SHOULDER RECONSTRUCTION

RAMP 4
STA. 398+82 TO STA. 400+00

JATurner 12/6/2024 10:56:59 AM
WORKSPACE: AHTD
\\garverinc.local\gdata\Projects\2021\21010 - ARDOT 040889 I-540-Hwy 255\Drawings\r040889-CX_RAMP4.DGN
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	77	83
		CROSS SECTIONS				

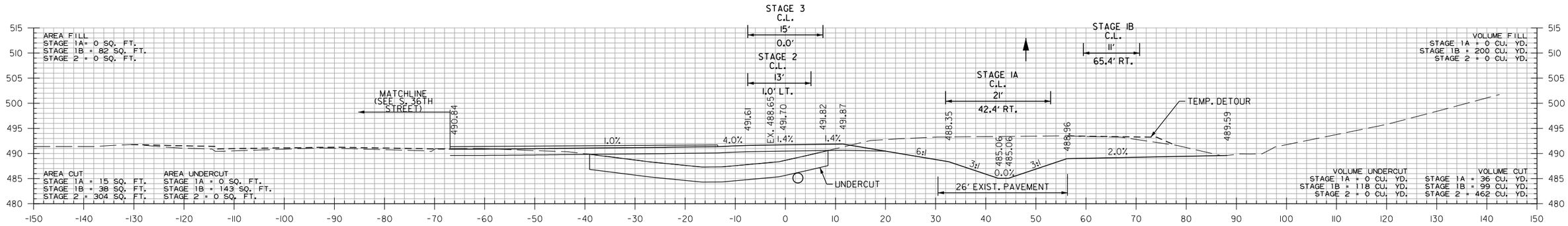




RAMP 4
STA. 400+49 TO STA. 401+49

JATurner
12/6/2024 10:57:00 AM
WORKSPACE: AHTD
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REVISED DATE:

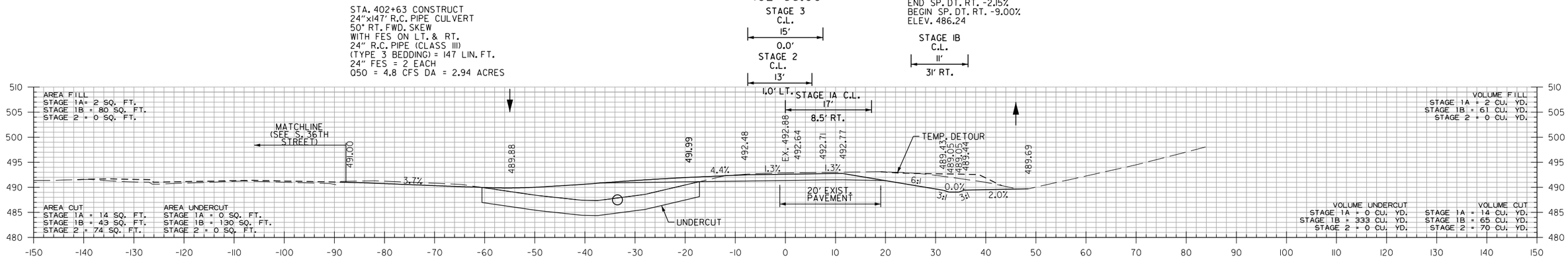
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	78	83
		CROSS SECTIONS				



STA. 402+63 CONSTRUCT
24"x147' R.C. PIPE CULVERT
50° RT. FWD. SKEW
WITH FES ON LT. & RT.
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 147 LIN. FT.
24" FES = 2 EACH
Q50 = 4.8 CFS DA = 2.94 ACRES

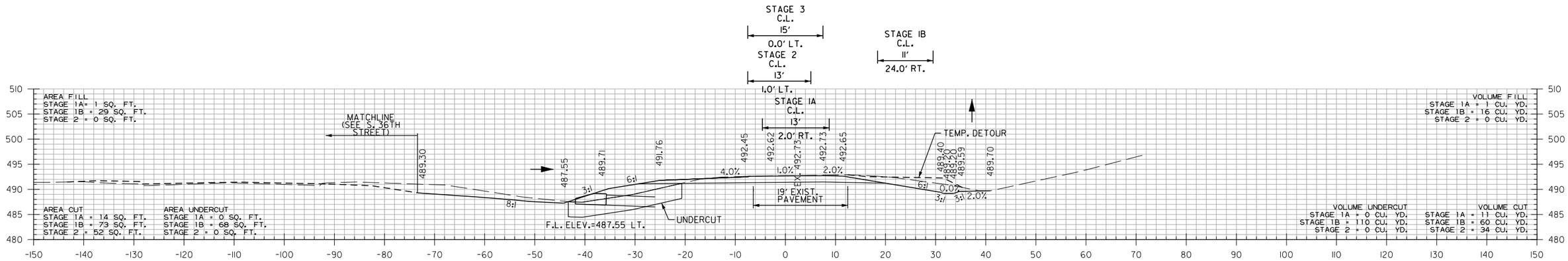
402+66.00

STA. 402+55.00
END SP. DT. RT. -2.15%
BEGIN SP. DT. RT. -9.00%
ELEV. 486.24



402+00.00

STA. 401+73.65 BEGIN SUPERELEVATION (0.010'/')



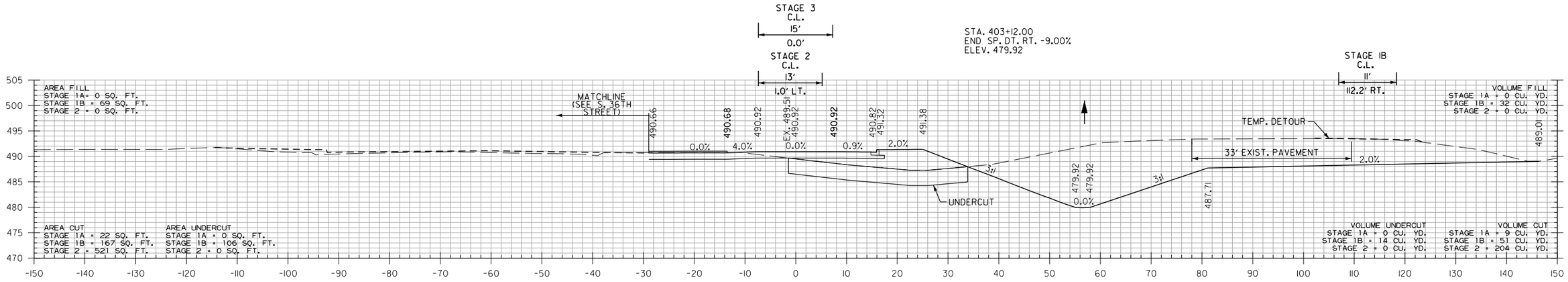
401+70.00

RAMP 4
STA. 401+70 TO STA. 402+66

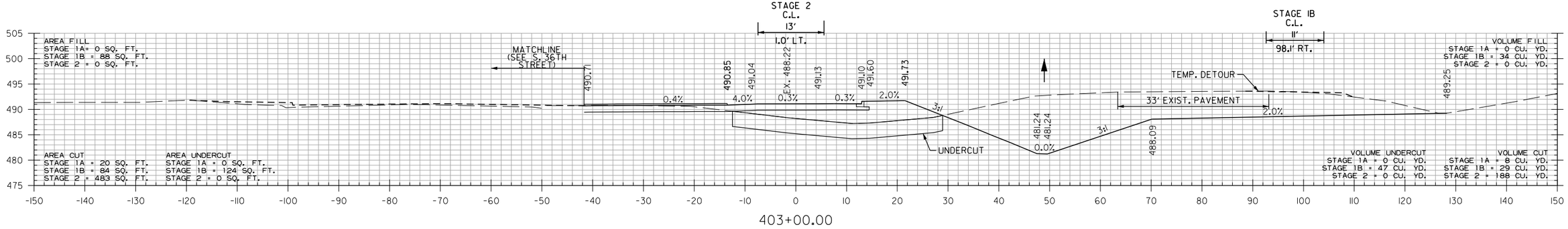
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	79	83
		CROSS SECTIONS				

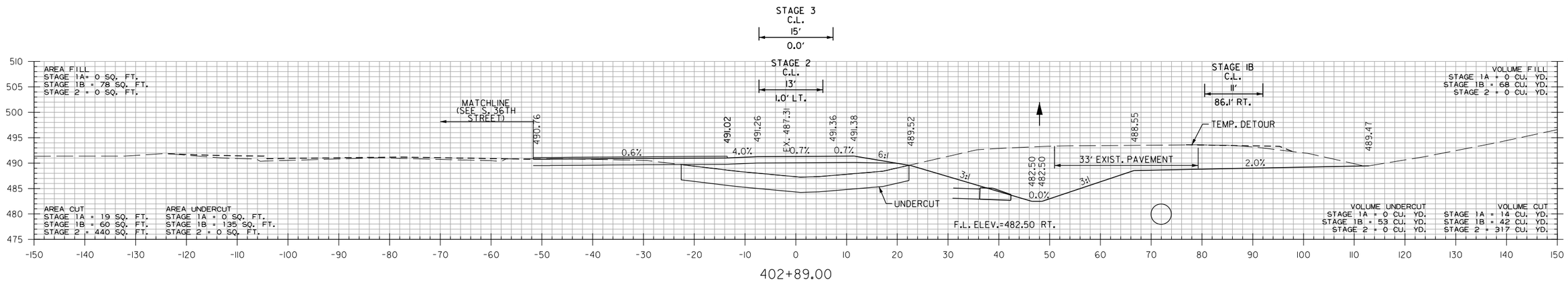
STA. 403+20.65 END SUPERELEVATION (0.0035'/')
STA. 403+31.34 MATCH PR. SUPERELEVATION (0.0035'/')



403+11.00



403+00.00



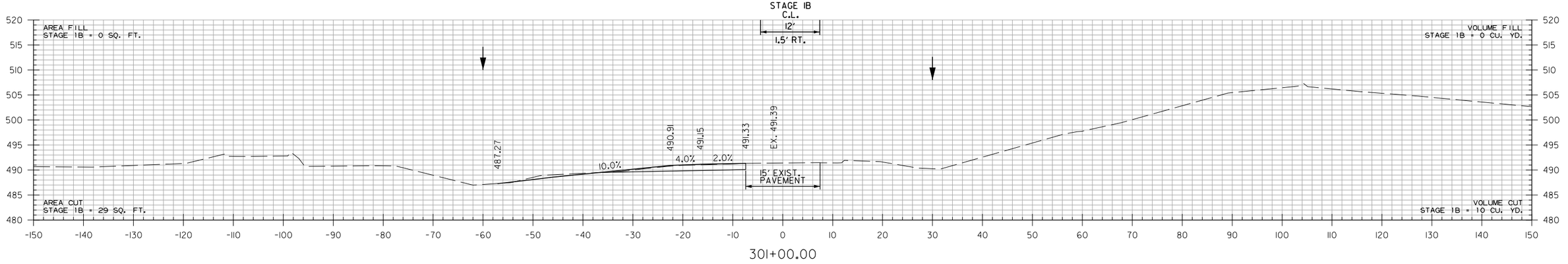
402+89.00

STA. 402+47.15 MAX. SUPERELEVATION (0.021'/')

RAMP 4
STA. 402+89 TO STA. 403+11

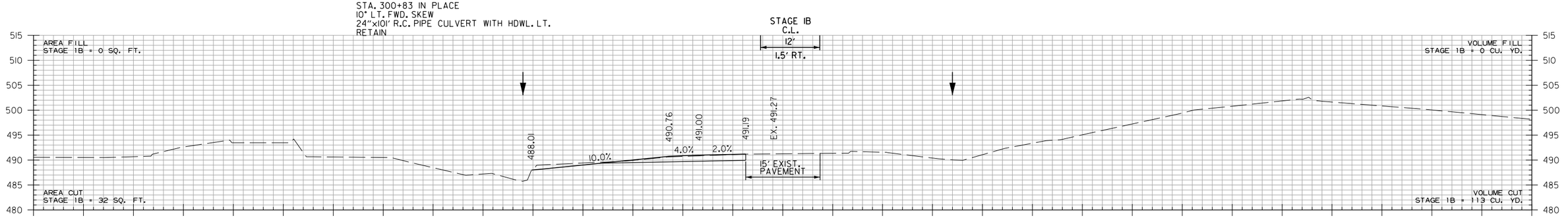
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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	80	83
		CROSS SECTIONS				

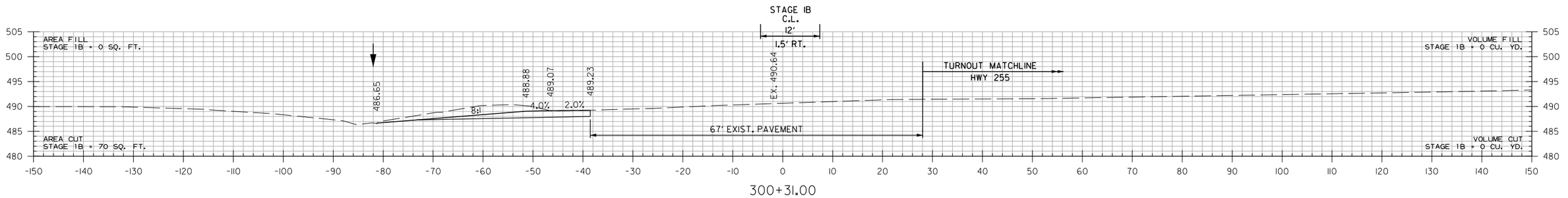


301+00.00

STA. 300+83 IN PLACE
10° LT. FWD. SKEW
24"x101' R.C. PIPE CULVERT WITH HDWL. LT.
RETAIN



300+91.00

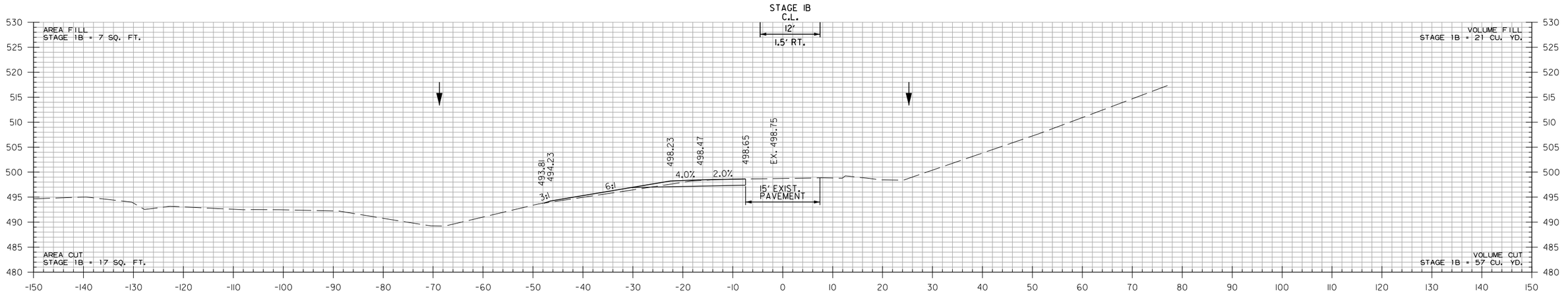


300+31.00

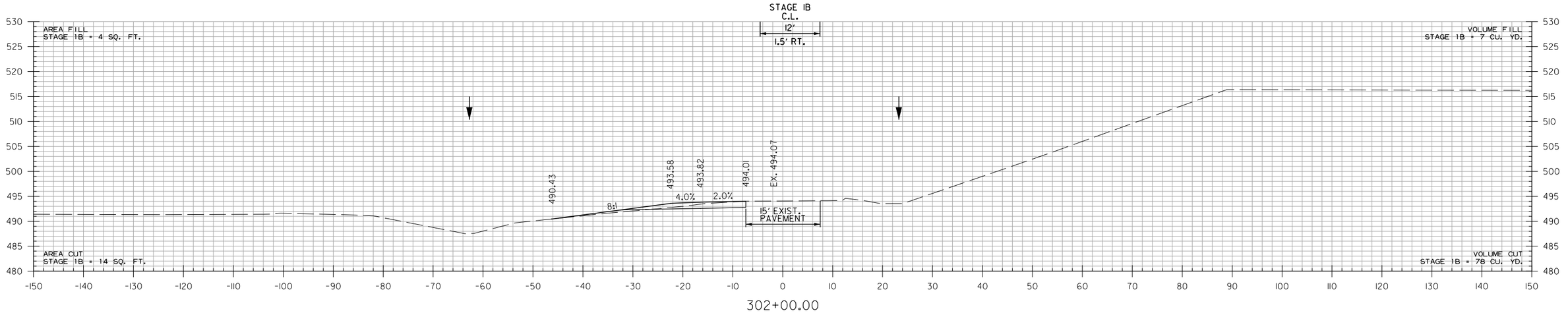
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STA. 300+31 TO STA. 301+00

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\\garverinc.local\gdata\Projects\2021\21T0100 - ARDOT 040889 I-540-Hwy 255\Drawings\r040889_CX_RAMP3.DGN
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	81	83
		CROSS SECTIONS				



303+00.00

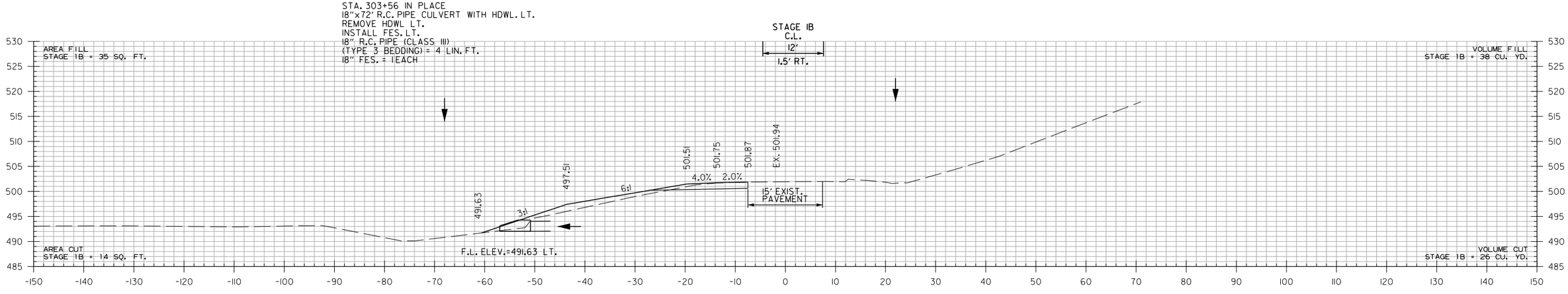


302+00.00

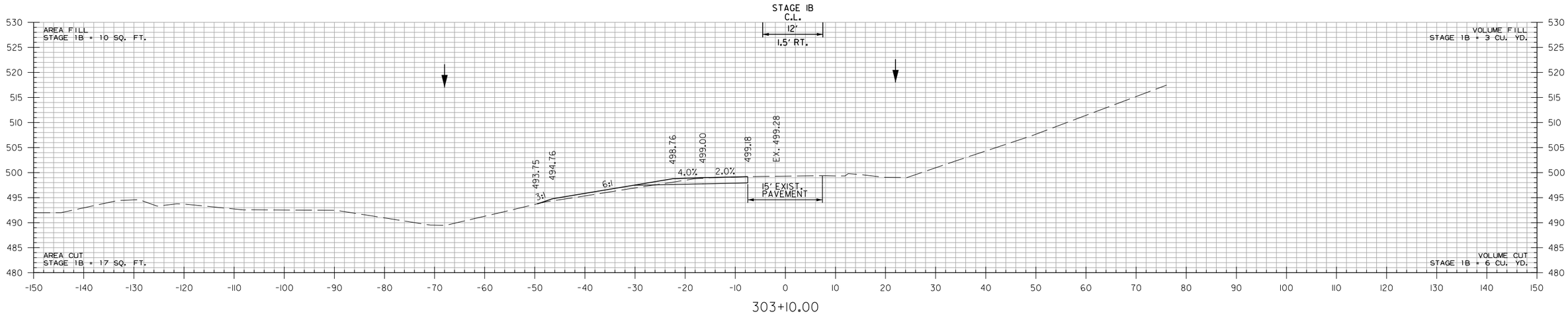
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STA. 302+00 TO STA. 303+00

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	82	83
		CROSS SECTIONS				



303+56.00

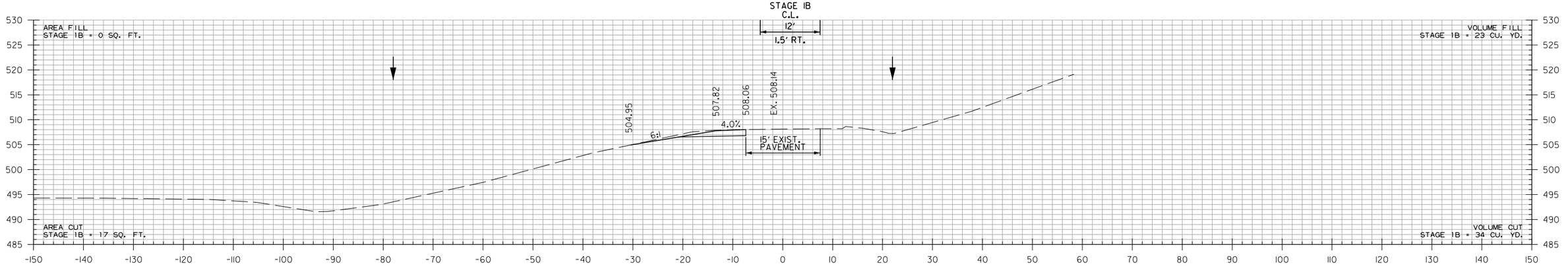


303+10.00

RAMP 3
STA. 303+10 TO STA. 303+56

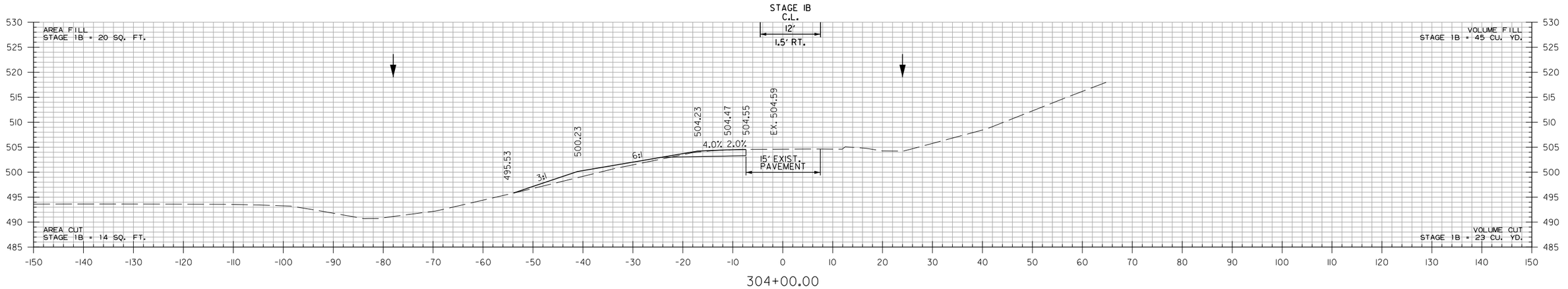
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	040889	83	83
		CROSS SECTIONS				



304+60.00

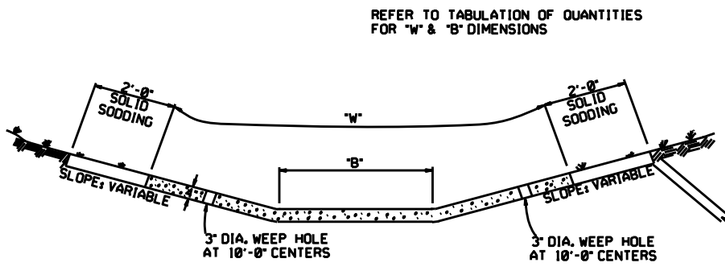
STA. 304+60.00



304+00.00

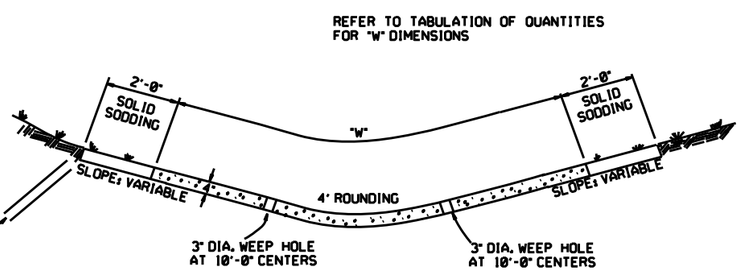
RAMP 3
STA. 304+00 TO STA. 304+60

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REVISED DATE:



TYPE A

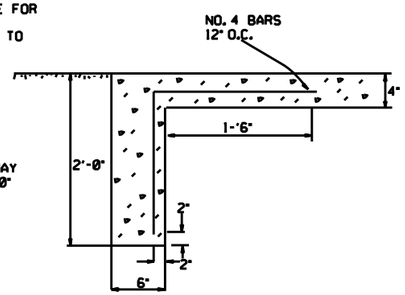
EXCAVATE TO NEAT LINES TO CONSTRUCT DITCH PAVING AND SOLID SODDING.



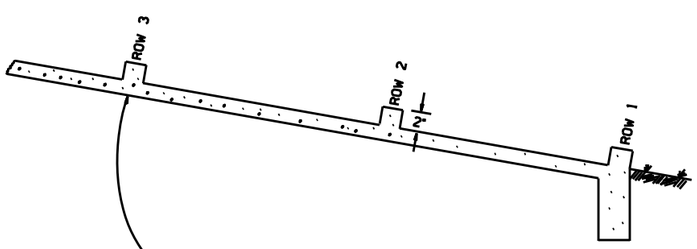
TYPE B

THE STEEL AND ADDITIONAL CONCRETE FOR THE WALLS SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID FOR "CONCRETE DITCH PAVING."

TOE WALL DEPTH MAY BE ALTERED TO 1'-0" WHEN DIRECTED BY THE ENGINEER IN ROCK EXCAVATION

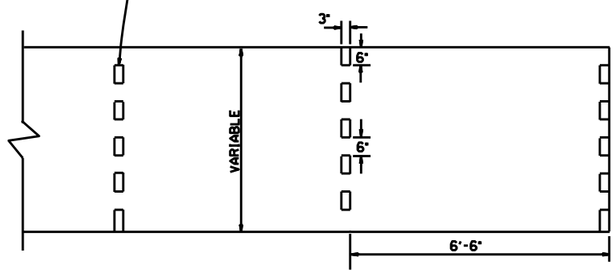


TOE WALL DETAIL FOR CONCRETE DITCH PAVING



NUMBER OF ELEMENTS PER ROW VARIES WITH WIDTH OF PAVING SPECIFIED

ENERGY DISSIPATORS TO BE USED FOR THE ENTIRE LENGTH OF DITCH WHEN SLOPE OF DITCH PAVING EXCEEDS 7%. THE DISSIPATORS WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID FOR CONCRETE DITCH PAVING.



ENERGY DISSIPATORS
(NO SCALE)

GENERAL NOTES:

THE FULL WIDTH OF EACH SECTION SHALL BE POURED MONOLITHICALLY.

TOE WALLS TO BE CONSTRUCTED FULL WIDTH AT EACH END OF DITCH PAVING, AND POURED MONOLITHICALLY.

SOLID SOD ALONG DITCH PAVING TO BE PLACED WITHIN 14 DAYS OF DITCH PAVING CONSTRUCTION.

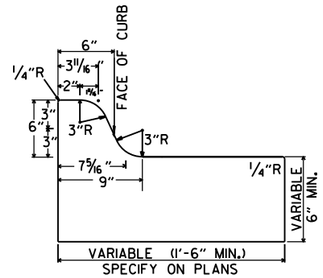
1" WIDE TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE DITCH PAVING AT 45° INTERVALS. THE SPACE SHALL BE FILLED WITH APPROVED JOINT FILLER COMPLYING WITH AASHTO M213.

DATE	REVISION	DATE FILM'D
12-8-16	CORRECTED ENERGY DISSIPATOR DRAWING AND NOTE	
11-17-10	ADDED GENERAL NOTE	
6-2-94	ADDED GENERAL NOTE ABOUT SOLID SODDING	
11-30-8	ELIMINATED MIN. ROWS OF ELEMENTS	111-30-89
7-15-88	REVISED DISSIPATOR NOTE	653-7-15-88
4-3-87	REVISED ENERGY DISSIPATOR	671-4-3-87
1-9-87	MODIFIED NOTE ON ENERGY DISS.	532-1-9-87
11-3-86	ADDED NOTE TO ENERGY DISS.	599-12-1-86
11-1-84	ENERGY DISSIPATOR DETAILS ADDED	508-11-1-84
11-1-84	EXCAVATION DETAILS ADDED TYPED A & B	
10-2-72	REVISED AND REDRAWN	508-10-2-72

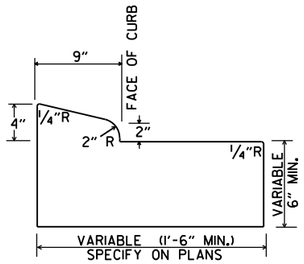
ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE DITCH PAVING

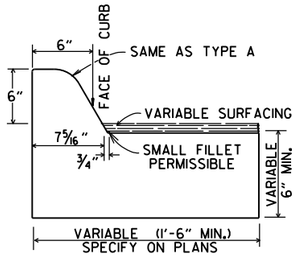
STANDARD DRAWING CDP-1



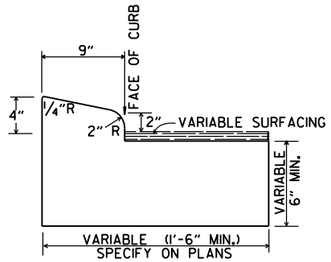
TYPE A



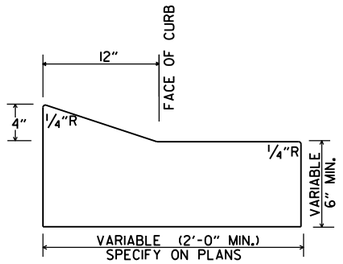
TYPE B-1



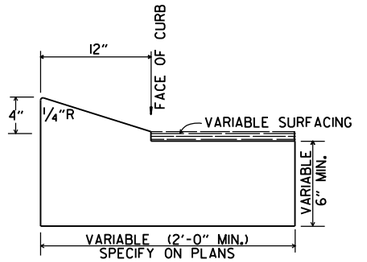
TYPE C



TYPE B-2

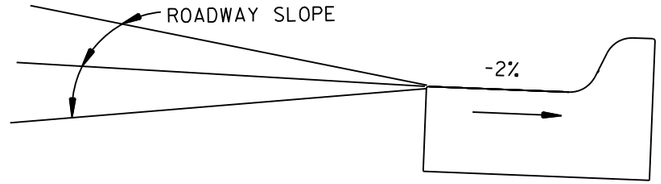


TYPE E-1



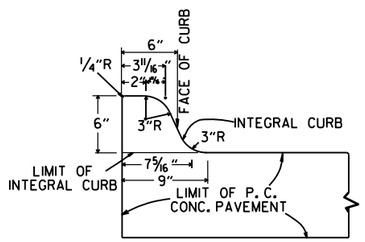
TYPE E-2

CONCRETE COMBINATION CURB AND GUTTER

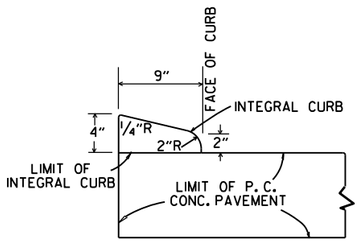


DETAIL OF GUTTER SLOPE

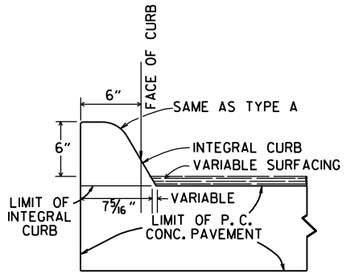
GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.



TYPE A

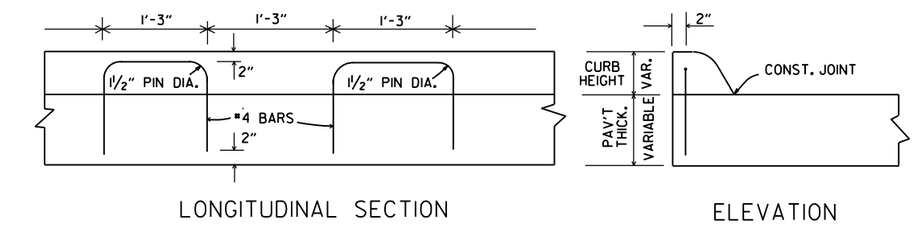


TYPE B



TYPE C

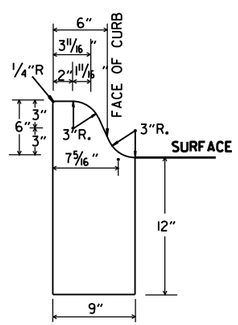
INTEGRAL CURB



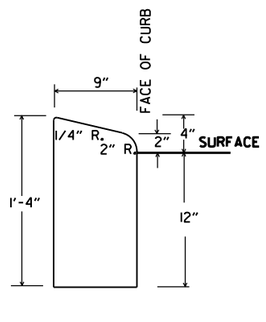
LONGITUDINAL SECTION

ELEVATION

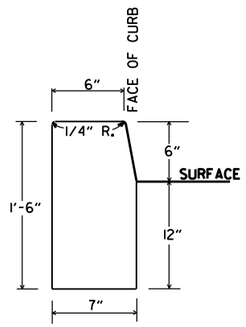
ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



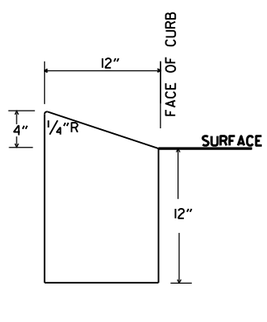
TYPE A



TYPE B

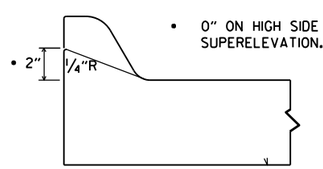


TYPE D



TYPE E

CONCRETE CURB



NOTE: USE MODIFIED CURB AS SPECIFIED ON STD. DR-1. COMPENSATION FOR MODIFIED CURB WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE TYPE OF CURB OR CURB AND GUTTER SPECIFIED.

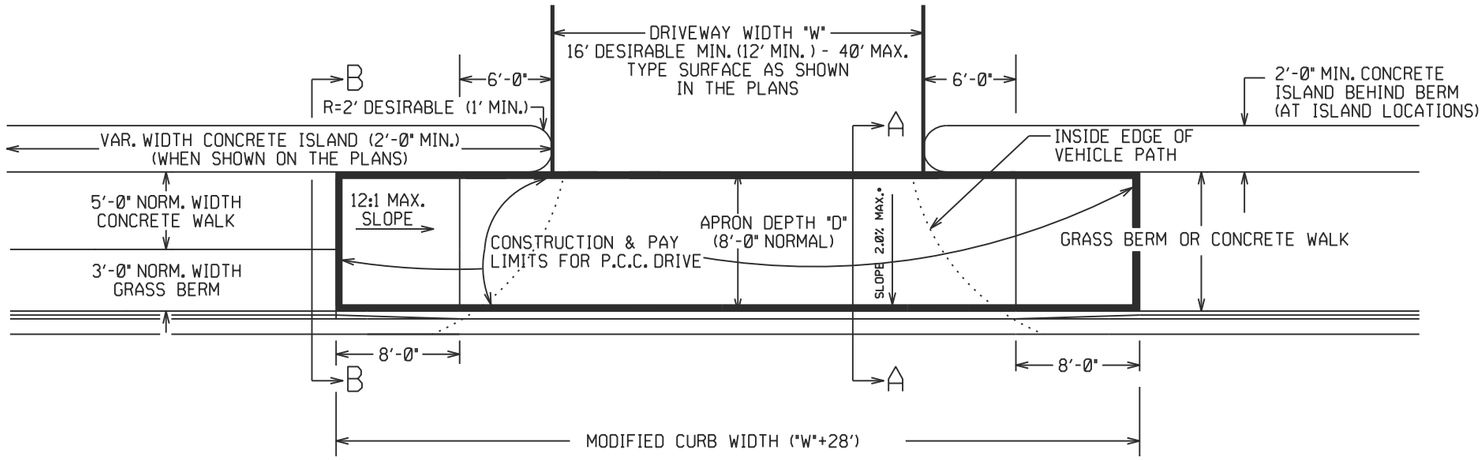
DETAILS OF MODIFIED CURB

DATE	REVISION	DATE FILMED
11-29-07	REVISED GUTTER SLOPE & MODIFIED CURB DETAILS	
11-10-05	ADDED DETAILS OF TYPE E CURBS	
11-16-01	REVISED CONCRETE CURB TYPE B	
11-18-98	REVISED MODIFIED CURB	
6-2-94	ADDED NOTE TO SPECIAL MODIFIED CURB	
8-5-93	CORRECTED GUTTER SLOPE	8-5-93
10-1-92	ADDED DETAILS OF GUTTER SLOPE	10-1-92
5-24-90	ADDED DETAILS OF MODIFIED CURB	5-24-90
11-30-89	VARIBLE DEPTH TYPE A & B I	11-30-89
7-15-88	REVISED MODIFIED CURB	630-7-15-88
11-1-73	REVISED MODIFIED CURB	500-11-1-73
10-2-72	REVISED AND REDRAWN	512-10-2-72

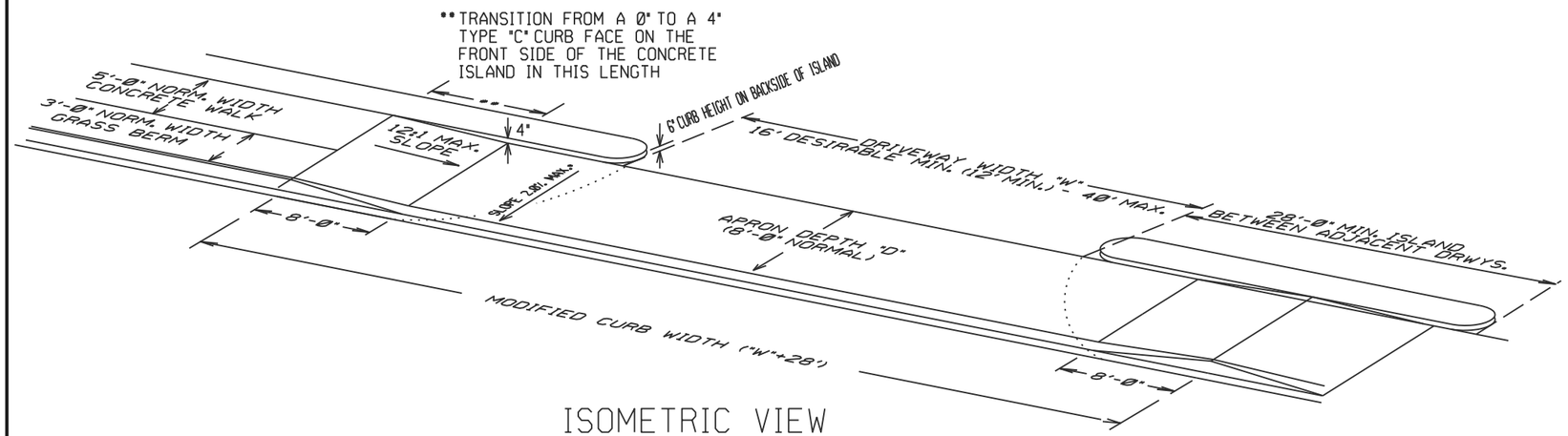
ARKANSAS STATE HIGHWAY COMMISSION

CURBING DETAILS

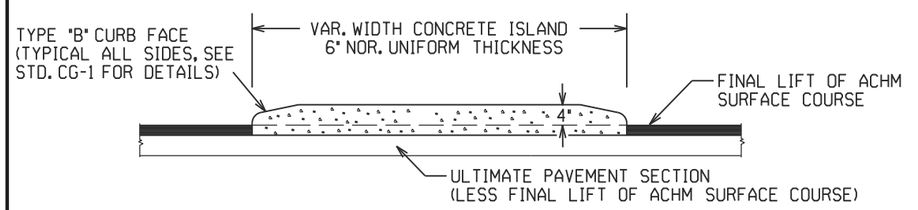
STANDARD DRAWING CG-1



PLAN VIEW



ISOMETRIC VIEW

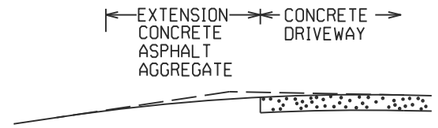


CURBED ISLANDS FOR CHANNELIZATION

CONCRETE ISLAND NOTES:

1. REFER TO PLANS FOR TYPE OF CURB FACE TO BE USED. NO DIRECT PAYMENT WILL BE MADE FOR THE CURB FACES SHOWN ON THE ISLAND DETAILS. PAYMENT FOR THE CURB FACE WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEM "CONCRETE ISLAND".

2. TRANSVERSE EXPANSION JOINTS, NOT LESS THAN 1/2" WIDE, SHALL BE PLACED AT MINIMUM INTERVAL OF 45'. TRANSVERSE JOINT SHALL BE CONSTRUCTED USING A JOINT FILLER COMPLYING WITH AASHTO M213.



EXTENSION TYPICAL SECTIONS

1: CONCRETE - 6" P.C. CONCRETE DRIVEWAY

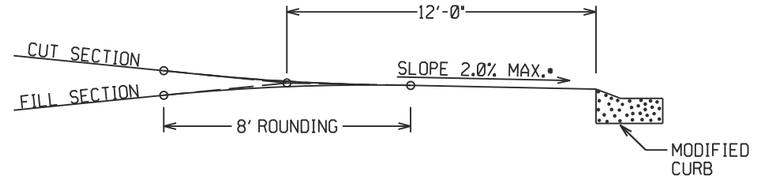
2: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
4" ACHM BINDER COURSE (1") OR
4" ACHM BASE COURSE (1-1/2")

3: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
7" AGGREGATE BASE COURSE

4: AGGREGATE - 6" AGGREGATE BASE COURSE

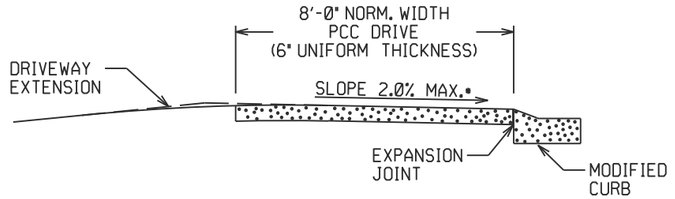
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

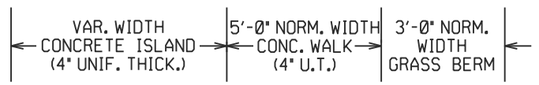


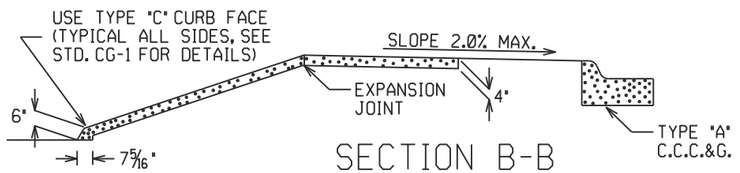
DRIVEWAY VERTICAL ALIGNMENT DETAILS

• NOTE: DRIVEWAYS MAY NOT BE SLOPED AWAY FROM THE ROADWAY UNLESS APPROVED BY THE ENGINEER.



SECTION A-A





SECTION B-B

CURBED ISLAND BEHIND WALK

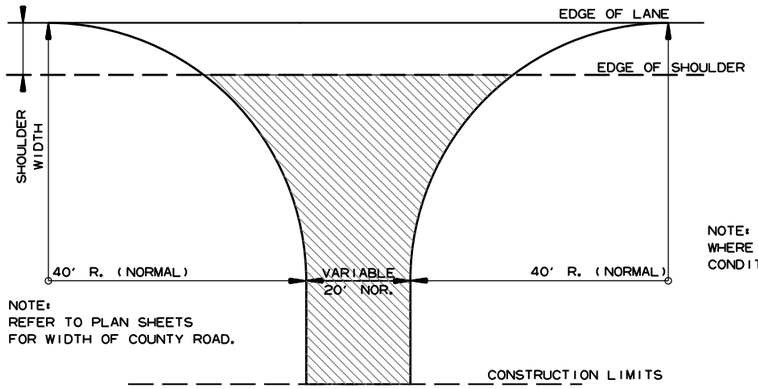
DATE REV	DESCRIPTION
05-22-25	REVISED ISLAND DETAILS & ADDED DESIRABLE MIN. DRIVEWAY WIDTH
05-19-22	REVISED ISLAND NOTES
11-07-19	REVISED WALK DETAILS
02-27-14	REVISED PLAN & ISOMETRIC VIEW
11-29-07	ADDED CHANNELIZATION ISLAND & REVISED DRIVEWAY SLOPE NOTE & VERTICAL ALIGNMENT DETAIL

ARDOT ARKANSAS DEPARTMENT OF TRANSPORTATION

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DRIVEWAYS & ISLANDS

DATE EFFECTIVE	STANDARD DRAWING	DR-1
05-22-2025		

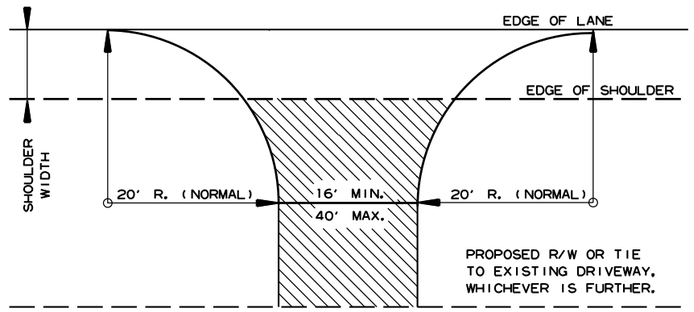


NOTE:
REFER TO PLAN SHEETS
FOR WIDTH OF COUNTY ROAD.

NOTE: TURNOUTS SHALL BE MODIFIED WHERE NECESSARY TO MEET LOCAL CONDITIONS AS DIRECTED BY THE ENGINEER.

ACHM SURFACE COURSE (1/2")
(220 LBS. PER SQ. YD.) AND
AGGREGATE BASE COURSE (CLASS 7)
7" COMP. DEPTH, UNLESS OTHERWISE
SPECIFIED IN PLANS.

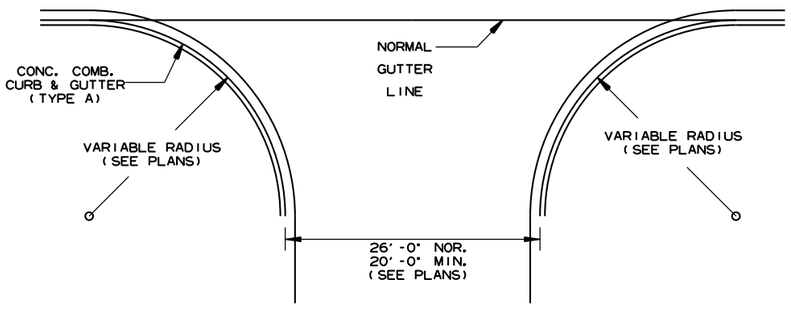
DETAIL FOR COUNTY ROAD TURNOUTS OPEN SHOULDER SECTION



NOTE: TURNOUTS AND PRIVATE DRIVES SHALL BE MODIFIED WHERE NECESSARY TO MEET LOCAL CONDITIONS AS DIRECTED BY THE ENGINEER.

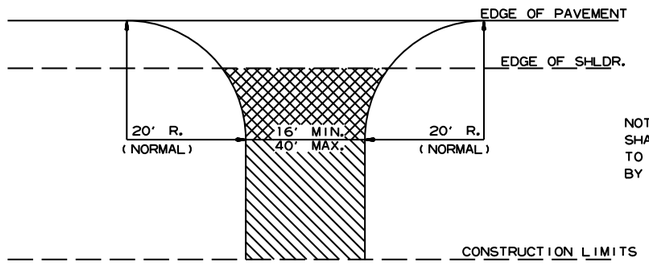
ACHM SURFACE COURSE (1/2")
(220 LBS. PER SQ. YD.) AND
AGGREGATE BASE COURSE (CLASS 7)
7" COMP. DEPTH IF ASPHALT OR
GRAVEL DRIVE EXISTING; OR 6"
CONCRETE IF CONCRETE DRIVE
EXISTING.

DETAIL FOR DRIVEWAY TURNOUTS OPEN SHOULDER SECTION (ARTERIALS)



NOTE:
PAVEMENT STRUCTURE FOR STATE HIGHWAYS, CITY STREETS,
& COUNTY ROADS TO BE SAME AS MAIN LANES.

DETAIL OF TURNOUTS, ASPHALT STREETS, COUNTY ROADS & STATE HIGHWAYS CURB & GUTTER SECTION



NOTE: TURNOUTS AND PRIVATE DRIVES SHALL BE MODIFIED WHERE NECESSARY TO MEET LOCAL CONDITIONS AS DIRECTED BY THE ENGINEER.

ASPHALT CONCRETE HOT MIX SURFACE
COURSE (220 LBS. PER SQ. YD.)
AGGREGATE BASE COURSE (CLASS 7)
7" COMP. DEPTH IF ASPHALT DRIVE EXIST OR
6" CONCRETE IF CONCRETE DRIVE EXIST.

AGGREGATE BASE COURSE (CLASS 7)
9" COMP. DEPTH OR CONFORM
TO EXISTING DRIVEWAY

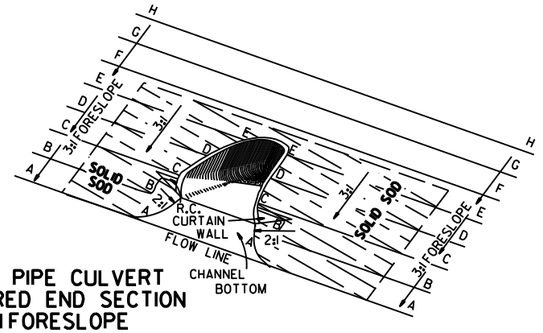
DETAIL FOR DRIVEWAY TURNOUTS (COLLECTORS)

DATE REV	DATE FILMED	DESCRIPTION
5-19-22		ISSUED

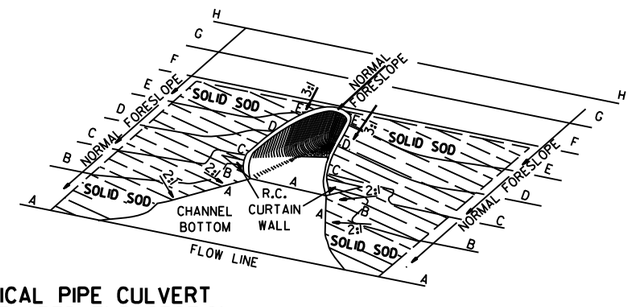
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DRIVEWAYS & STREET TURNOUTS

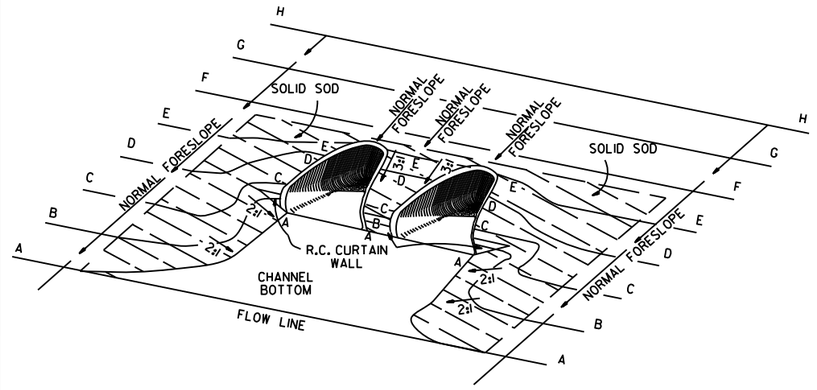
STANDARD DRAWING DR-2



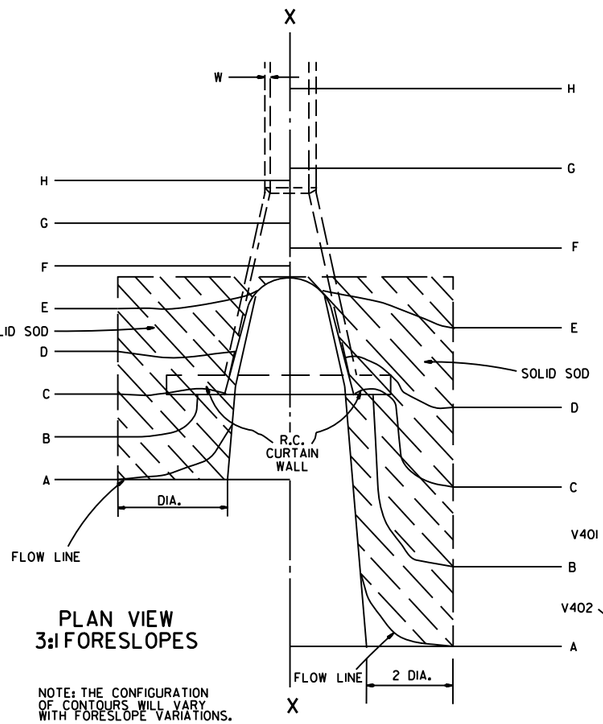
TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& 3:1 FORESLOPE



TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& FLATTENED ADJACENT SLOPES



TYPICAL MULTIPLE PIPE CULVERT
WITH FLARED END SECTIONS
& FLATTENED ADJACENT SLOPES



PLAN VIEW
3:1 FORESLOPES

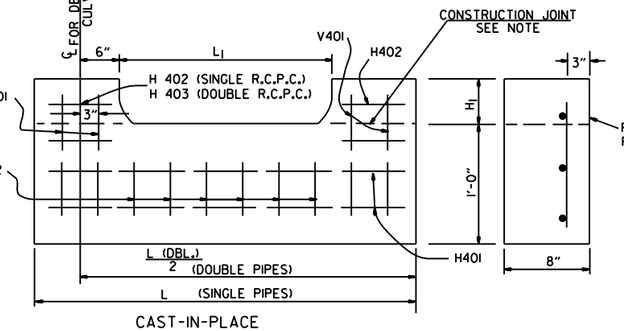
NOTE: THE CONFIGURATION OF CONTOURS WILL VARY WITH FORESLOPE VARIATIONS.

PLAN VIEW
FLATTENED FORESLOPES

R.C. CURTAIN WALL
DIMENSIONS & QUANTITIES

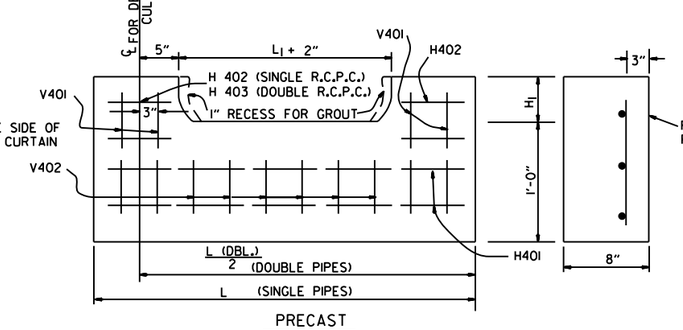
PIPE DIA.	H_1	L_1	L	L (DBL.) / 2	SINGLE R.C.P.C. CONC.	SINGLE R.C.P.C. REINF. STEEL	DOUBLE R.C.P.C. CONC.	DOUBLE R.C.P.C. REINF. STEEL
					CU. YDS.	LBS.	CU. YDS.	LBS.
18"	1'-11½"	3'-5"	8'-0"	6'-3"	0.31	27.7	0.45	39.5
24"	1'-0½"	4'-6"	9'-6"	7'-6"	0.37	33.4	0.53	48.0
30"	1'-3½"	5'-7"	11'-0"	9'-0"	0.45	39.0	0.67	59.0
36"	1'-7"	6'-8"	13'-0"	10'-6"	0.58	52.6	0.83	73.9
42"	2'-1½"	7'-3"	15'-6"	12'-0"	0.82	77.1	1.10	100.7
48"	2'-5"	7'-10"	17'-0"	13'-0"	0.98	94.9	1.27	120.4
54"	2'-9½"	8'-5"	18'-6"	14'-0"	1.16	115.8	1.47	143.7
60"	3'-4"	9'-0"	20'-6"	15'-6"	1.47	149.7	1.84	180.3
72"	4'-5"	10'-2"	25'-6"	18'-6"	2.31	232.6	2.73	271.0

NOTE: QUANTITIES SHOWN ARE FOR ONE (1) CURTAIN WALL.



CAST-IN-PLACE

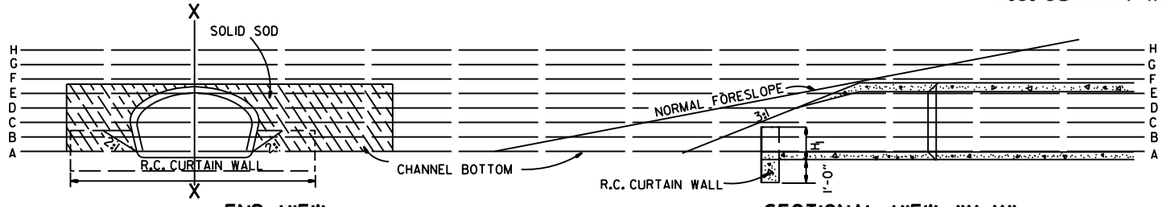
NOTE: THE PORTION OF THE R.C. CURTAIN WALL BENEATH THE FLARED END SECTION (LOWER 1'-0") SHALL BE PLACED MONOLITHICALLY. THE FLARED END SECTION SHALL THEN BE SET IN PLACE & THE REMAINING PORTIONS OF THE R.C. CURTAIN WALL PLACED.



PRECAST

NOTE: THE PRECAST CURTAIN WALL WILL BE SET AND BACKFILLED WITH COMPACTED MATERIAL. THE FLARED END SECTION SHALL THEN BE SET IN PLACE AND THE 1" RECESS FILLED WITH GROUT. WHERE "L" EXCEEDS 11' THE CURTAIN WALL MAY BE CAST IN TWO (2) OR MORE SECTIONS. THE METHOD OF JOINING THE SECTIONS FOR INSTALLATION SHALL BE APPROVED BY THE ENGINEER.

R.C. CURTAIN WALL DETAILS



END VIEW

SECTIONAL VIEW "X-X"

REINFORCING STEEL SCHEDULE

PIPE DIA.	SINGLE R.C. PIPE CULVERT H401 L	H401 NO.	H402 L	H402 NO.	V401 L	V401 NO.	V402 L	V402 NO.	DOUBLE R.C. PIPE CULVERT H401 L	H401 NO.	H402 L	H402 NO.	H403 L	H403 NO.	V401 L	V401 NO.	V402 L	V402 NO.
18"	7'-8"	2	1'-11½"	4	1'-7½"	8	8"	8	12'-2"	2	1'-11½"	4	8"	2	1'-7½"	10	8"	14
24"	9'-2"	2	2'-2"	4	1'-8½"	10	8"	9	14'-8"	2	2'-2"	4	8"	2	1'-8½"	12	8"	18
30"	10'-8"	2	2'-4½"	4	1'-11½"	10	8"	12	17'-8"	2	2'-4½"	4	8"	2	1'-11½"	14	8"	22
36"	12'-8"	2	2'-10"	6	2'-3"	12	8"	14	20'-8"	2	2'-10"	6	8"	3	2'-3"	14	8"	28
42"	15'-2"	2	3'-9½"	8	2'-9½"	16	8"	15	23'-8"	2	3'-9½"	8	8"	4	2'-9½"	18	8"	30
48"	16'-8"	2	4'-3"	10	3'-1"	18	8"	16	25'-8"	2	4'-3"	10	8"	5	3'-1"	20	8"	32
54"	18'-2"	2	4'-8½"	12	3'-5½"	20	8"	17	27'-8"	2	4'-9"	12	8"	6	3'-5½"	22	8"	34
60"	20'-2"	2	5'-5"	14	4'-0"	24	8"	18	30'-8"	2	5'-5"	14	8"	7	4'-0"	26	8"	36
72"	25'-2"	2	7'-4"	18	5'-1"	30	8"	20	36'-8"	2	7'-4"	18	8"	9	5'-1"	33	8"	40

ALL REINFORCING STEEL #4 BARS @ 6" O.C.

SOLID SODDING

PIPE DIA.	SINGLE R.C.P.C. 3:1	4:1	6:1	DOUBLE R.C.P.C. 3:1	4:1	6:1
	SQ. YDS.			SQ. YDS.		
18"	5	7	12	6	8	13
24"	8	12	19	9	13	20
30"	13	18	29	14	19	30
36"	17	26	41	18	28	43
42"	23	35	55	25	37	57
48"	29	46	68	31	48	70
54"	35	57	85	37	59	87
60"	45	62	104	48	65	107
72"	64	92	156	67	95	159

NOTE: QUANTITIES SHOWN ABOVE ARE FOR ONE (1) END OF F.E.S.

GENERAL NOTES

1. A CAST-IN-PLACE OR PRECAST CURTAIN WALL MAY BE USED. PAYMENT FOR THE CURTAIN WALL SHALL BE CONSIDERED TO BE INCLUDED IN THE UNIT PRICE BID EACH FOR FLARED END SECTIONS OF THE SEVERAL SIZES, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS INCLUDING REINFORCING STEEL AND CONCRETE: FOR FORMS, MIXING AND PLACING; FOR EXCAVATION AND BACKFILL, AND FOR ALL LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.
2. ALL EXPOSED EDGES SHALL BE CHAMFERED ¾".
3. CONCRETE FOR CURTAIN WALL SHALL MEET THE REQUIREMENTS FOR CLASS A OR S CONCRETE AS PROVIDED IN SECTION 802 OF THE STANDARD SPECIFICATIONS OR FOR PAVING CONCRETE AS PROVIDED IN SECTION 501 OF THE STANDARD SPECIFICATIONS.
4. WELDED WIRE MESH 3 x 3 W10 x W10 MAY BE USED IN LIEU OF REINFORCING BARS.

DATE	REVISION	FILMED
10-18-96	ADDED NOTE TO SOLID SODDING	
10-12-95	CORRECTED SPELLING	
11- 3-94	ADDED GENERAL NOTE NO. 4	
8-15-91	REV. CURTAIN WALL QUANT. STEEL SCH. & SOLID SOD QUANT.	
3-2-81	ALLOW PRECAST IN 2 OR MORE PIECES CHAMFER EDGES	
5-15-80	ADDED PRECAST WALL & GENERAL NOTES	
10-2-72	REVISED AND REDRAWN	

ARKANSAS STATE HIGHWAY COMMISSION

FLARED END SECTION

STANDARD DRAWING FES-1

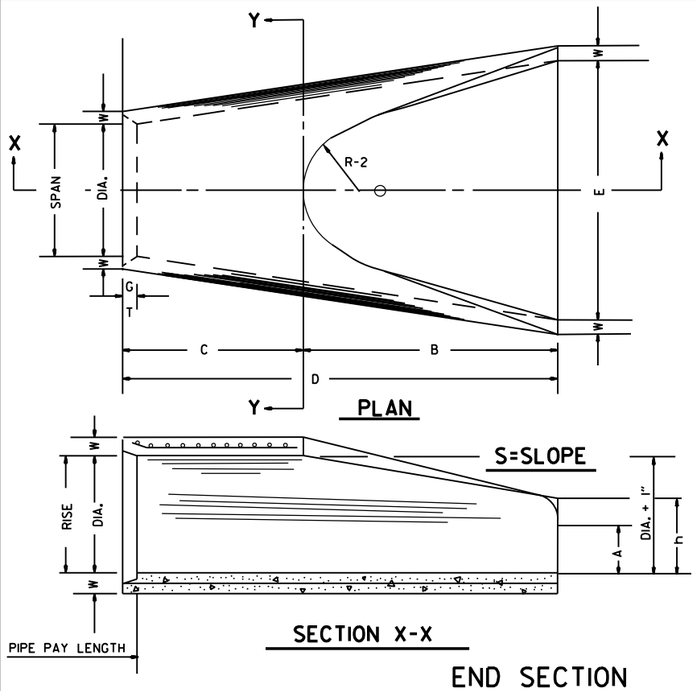
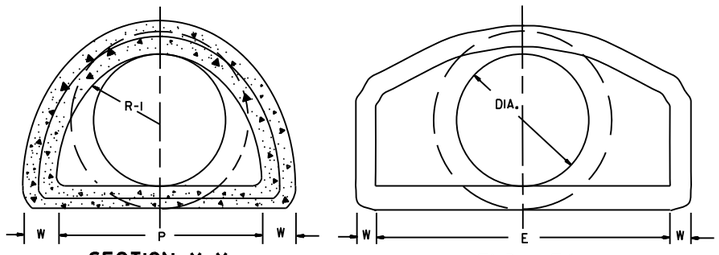


TABLE OF DIMENSIONS

DIA.	WALL	A	B	C	D	E	S	DIA. + 1"	P	R-1	R-2	G-T	WT.	h
18"	2½"	9"	2'-3"	3'-10"	6'-1"	3'-0"	3:1	19"	29"	15½"	12"	2"	1000	1'-0½"
24"	3"	9½"	3'-7½"	2'-6"	6'-1½"	4'-0"	3:1	25"	33 3/16"	16 15/16"	14"	2½"	1600	1'-1½"
30"	3½"	1'-0"	4'-6"	1'-7 3/4"	6'-1 3/4"	5'-0"	3:1	31"	37"	18½"	15"	3¼"	1940	1'-4 5/8"
36"	4"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	6'-0"	3:1	37"	47 13/16"	24 5/16"	20"	3½"	4100	1'-8"
42"	4½"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	3:1	43"	53⅞"	27½"	22"	3½"	5380	2'-2½"
48"	5"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	3:1	49"	56½"	28½"	22"	3½"	6550	2'-6"
54"	5½"	2'-4"	6'-6"	1'-10"	8'-4"	7'-6"	3:1	55"	65½"	33⅛"	24"	4"	8750	2'-10½"
60"	6"	2'-10"	6'-6"	1'-10"	8'-4"	8'-0"	3:1	61"	72½"	36 11/16"	24"	4"	9270	3'-5"
72"	7"	3'-10"	6'-6"	1'-10"	8'-4"	9'-0"	3:1	73"	77 13/16"	38 15/16"	24"	5"	13250	4'-6"

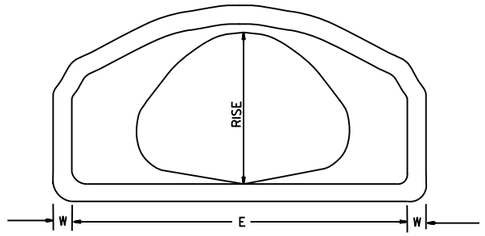


NOTE: TONGUE END ON UPSTREAM SECTION
GROOVE END ON DOWNSTREAM SECTION

ARCH PIPE

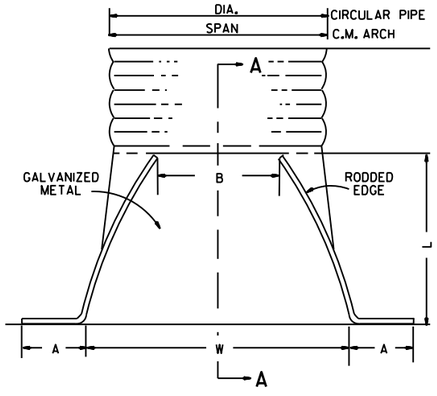
EQUIV. DIA.	• SPAN AASHTO M 206	• SPAN AHD NOMINAL	• RISE AASHTO M 206	• RISE AHD NOMINAL	W	A	B	C	D	E	P	R2	G-T	S
	INCHES													
15	18	18	11	11	2"	4"	2'-0"	4'-0"	6'-0"	3'-0"	29"	12"	1½"	2½:1
18	22	22	13½	14	2½"	5"	2'-0"	4'-1"	6'-1"	3'-6"	32⅛"	13"	2½"	2½:1
21	26	26	15½	16	2¾"	7"	2'-3"	3'-10"	6'-1"	4'-0"	34⅛"	14"	2½"	2½:1
24	28½	29	18	18	3"	9"	2'-3"	3'-10"	6'-1"	5'-0"	36 11/16"	15"	2½"	2½:1
30	36¼	36	22½	23	3½"	10"	3'-1"	3'-0½"	6'-1½"	6'-0"	47 11/16"	20"	3"	2½:1
36	43¾	44	26⅜	27	4"	10½"	4'-0"	2'-11½"	6'-1½"	6'-6"	54 5/16"	22"	3½"	2½:1
42	51⅛	51	31 5/16	31	4½"	11½"	4'-7"	1-10¼"	6'-5¼"	7'-2"	59½"	23"	3¾"	2½:1
48	58½	59	36	36	5"	1'-3"	5'-3"	2'-10¾"	8'-1¾"	7'-10"	70 5/16"	24"	4¼"	2½:1
54	65	65	40	40	5½"	1'-7"	5'-3"	2'-11"	8'-2"	8'-6"	72 1/16"	24"	4¾"	2¼:1
60	73	73	45	45	6"	1'-10"	5'-6"	2'-8"	8'-2"	9'-0"	77 1/16"	24"	5"	2¼:1

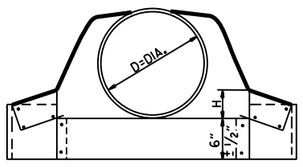
• THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PER CENT FROM THE VALUES SPECIFIED BY AASHTO M 206.



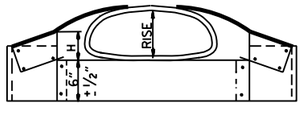
END VIEW
CONCRETE ARCH PIPE

END SECTION FOR REINFORCED CONCRETE PIPE CULVERTS





CIRCULAR PIPE



C.M. ARCH PIPE

CIRCULAR PIPE

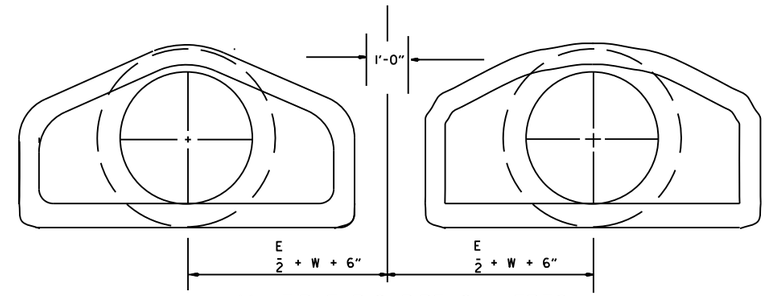
D. DIA.	GAUGE	A 1" ±	B. MAX.	H 1" ±	L 1½" ±	W 2" ±	S
		INCHES					
12	16	6	6	6	21	24	2½:1
15	16	7	8	6	26	30	2½:1
18	16	8	10	6	31	36	2½:1
21	16	9	12	6	36	42	2½:1
24	16	10	13	6	41	48	2½:1
30	14	12	16	8	51	60	2½:1
36	14	14	19	9	60	72	2½:1
42	12	16	22	11	69	84	2½:1
48	12	18	27	12	78	90	2½:1
54	12	18	30	12	84	102	2:1
60	12	18	33	12	87	114	1¾:1
66	12	18	36	12	87	120	1½:1
72	12	18	39	12	87	126	1 1/3:1

C.M. ARCH PIPE

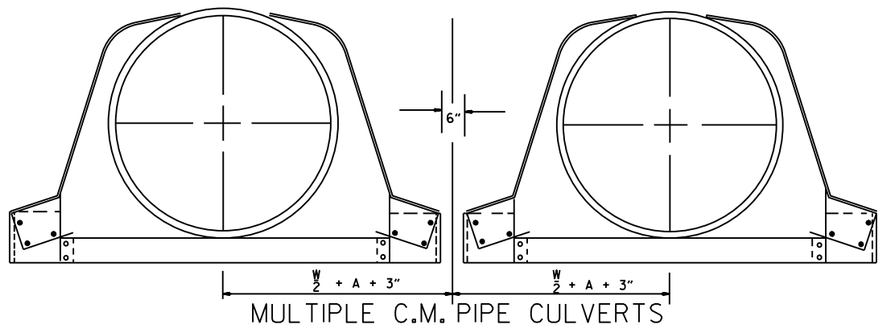
EQUIV. DIA.	SPAN	RISE	A 1" ±	B MAX.	H 1" ±	L 1½" ±	W 2" ±	S	GAUGE
	INCHES								
15"	17	13	7	9	6	19	30	2½:1	16
18"	21	15	7	10	6	23	36	2½:1	16
21"	24	18	8	12	6	28	42	2½:1	16
24"	28	20	9	14	6	32	48	2½:1	16
30"	35	24	10	16	6	39	60	2½:1	14
36"	42	29	12	18	8	46	75	2½:1	14
42"	49	33	13	21	9	53	85	2½:1	12
48"	57	38	18	26	12	63	90	2½:1	12
54"	64	43	18	30	12	70	102	2¼:1	12
60"	71	47	18	33	12	77	114	2¼:1	12

NOTE: ALTERNATE CONNECTIONS TO THE PIPE CULVERTS, IN ACCORDANCE WITH MANUFACTURER'S STANDARD PRACTICES, MAY BE MADE SUBJECT TO THE APPROVAL OF THE ENGINEER.

END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS



MULTIPLE R.C. PIPE CULVERTS



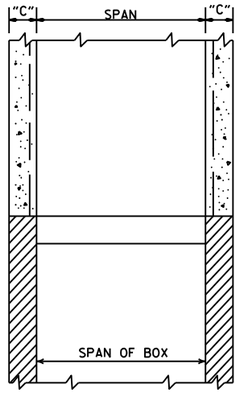
MULTIPLE C.M. PIPE CULVERTS

DATE	REVISION	FILMED
10-18-96	REVISED ASTM REF. TO AASHTO	
5-15-80	REVISED DISTANCE BETWEEN MULTIPLE R.C.P. F.E.S.	664-5-15-80
7-14-78	C.M. ARCH SIZES TO CONFORM WITH AASHTO SIZES	752-7-14-78
8-22-75	ADDED MULTIPLE PIPE CULVERTS	517-8-22-75
12-5-74	REMOVED NOTE RE REINF. FOR R.C. F.E.S.	500-12-5-74
5-24-73	CMP END SECTION, SHOW PIPE PAY LENGTH	627-5-24-73
10-2-72	REVISED AND REDRAWN	760-10-2-72

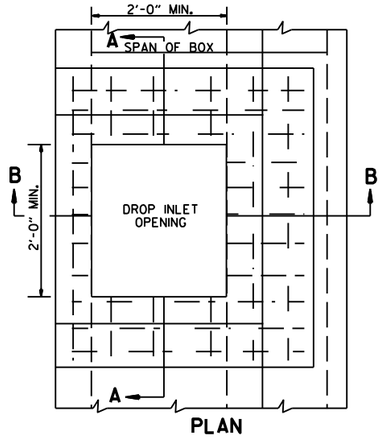
ARKANSAS STATE HIGHWAY COMMISSION

FLARED END SECTION

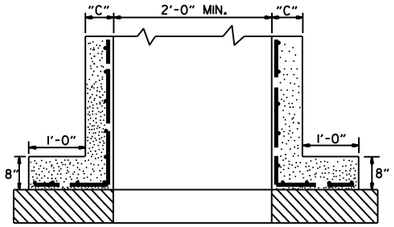
STANDARD DRAWING FES-2



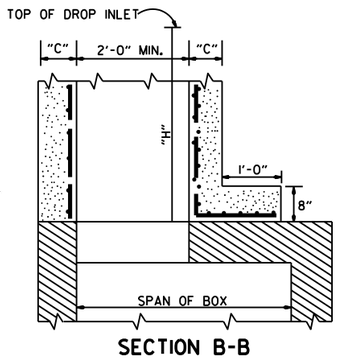
SECTION B-B



PLAN

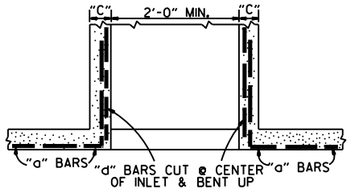


SECTION A-A

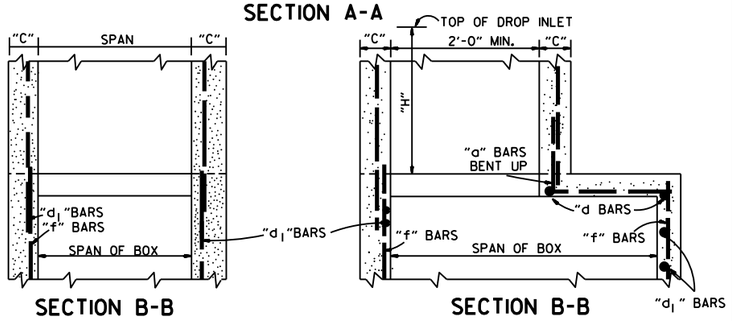


SECTION B-B

METHOD OF CONSTRUCTING DROP INLET ON EXISTING R.C. BOX CULVERT



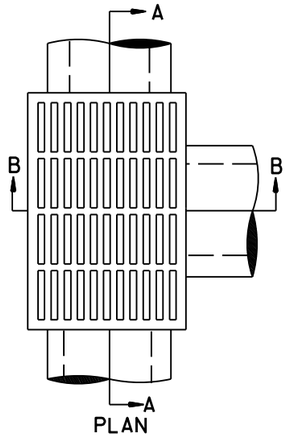
SECTION A-A



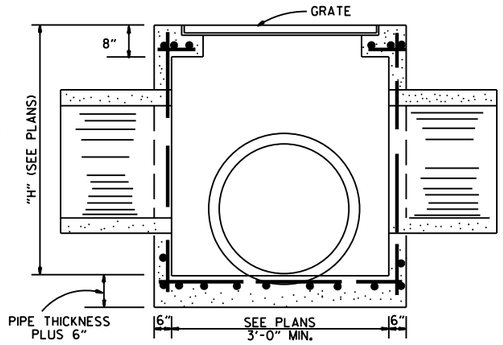
SECTION B-B SECTION B-B

METHOD OF CONSTRUCTING DROP INLET ON NEW R.C. BOX CULVERT

NOTE: "C" DIMENSIONS AND REINFORCING BAR SIZES, SHALL CONFORM TO THOSE SHOWN ON STANDARD DRAWING FOR DROP INLET.

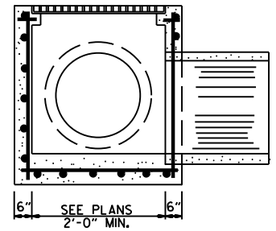


PLAN



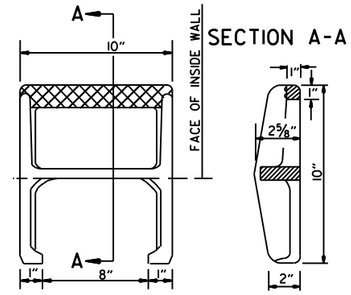
SECTION A-A

NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1½" MIN. COVER. THIS TYPE DROP INLET TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.



SECTION B-B

DROP INLET (TYPE E)

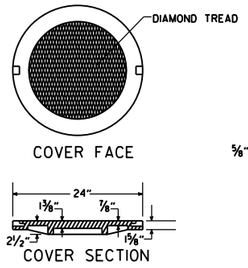


APPROX. WEIGHT = 11 LBS. (CAST IRON)

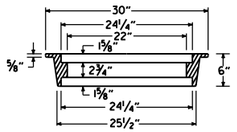
PLAN

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

DETAIL OF STEP FOR DROP INLET



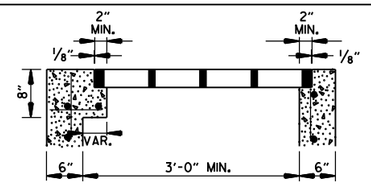
COVER SECTION



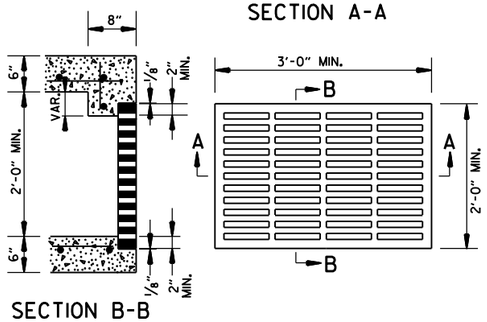
RING SECTION

APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER



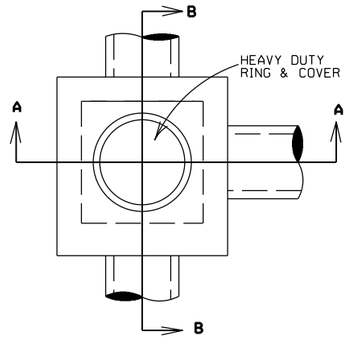
SECTION A-A



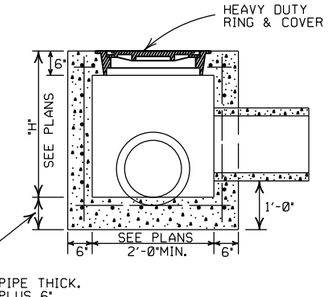
SECTION B-B

APPROXIMATE MINIMUM WATERWAY OPENING = 260 SQ. IN.

GRATE FOR TYPE E DROP INLET

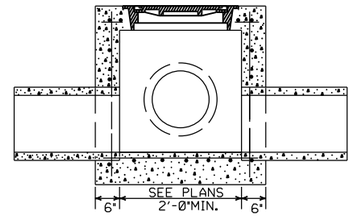


PLAN



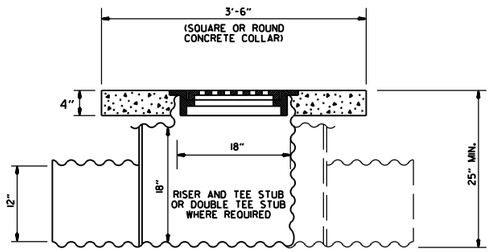
SECTION A-A

NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1½" MIN. COVER. THIS TYPE JUNCTION BOX TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.

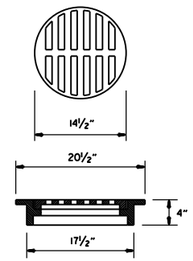


SECTION B-B

JUNCTION BOX (TYPE E)



NOTE: CONCRETE COLLAR TO BE CAST IN PLACE. 12" PIPE CULVERTS TO BE MEASURED AND PAID FOR AS " 12" SIDE DRAIN ".



USE NEENAH R-5901-C OR EQUIVALENT BICYCLE SAFE FRAME AND GRATE

DETAIL OF YARD DRAIN

GENERAL NOTES:

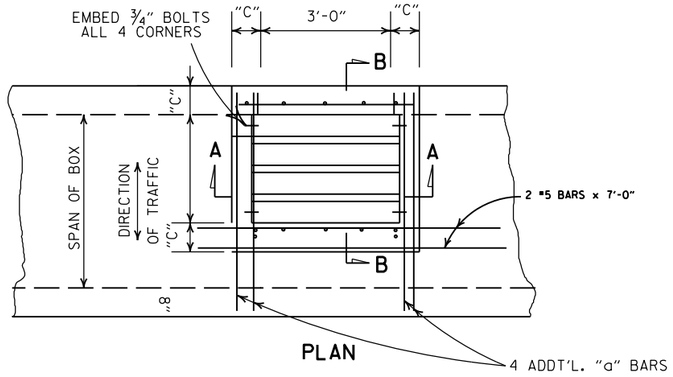
1. ALL EXPOSED CORNERS SHALL BE ¾" CHAMFERED.
2. STEPS SHALL BE INSTALLED ON 16" CENTERS ON ALL INLETS 4'-0" HIGH OR OVER, OR AS APPROVED BY THE ENGINEER.
3. EXPANSION JOINT MATERIAL SHALL BE ¾" PREFORMED FIBER.
4. GRATE OR GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105 CLASS 35B. GRATE MAY BE USED WITHOUT FRAME.
5. GRATE AND FRAME SHALL NOT BE PAINTED.
6. GRATE SHALL BE BICYCLE SAFE.
7. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
8. 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.
9. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
10. 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.

DATE REV.	REVISION	DATE FILMED
11-16-01	ADDED NOTE 10	
1-12-00	REVISED HEAVY DUTY RING & COVER	
7-02-98	CHANGED GRATE DETAIL, DELETED DI(TYPE D), REPLACED RING & COVER W/HEAVY DUTY RING & COVER, ADDED JUNCTION BOX (TYPE E)	
6-26-97	ADDED DIMENSION TO TYPE IV-A	
10-18-96	ADDED DETAIL OF YARD DRAIN	
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	

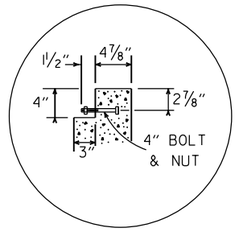
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS & JUNCTION BOXES

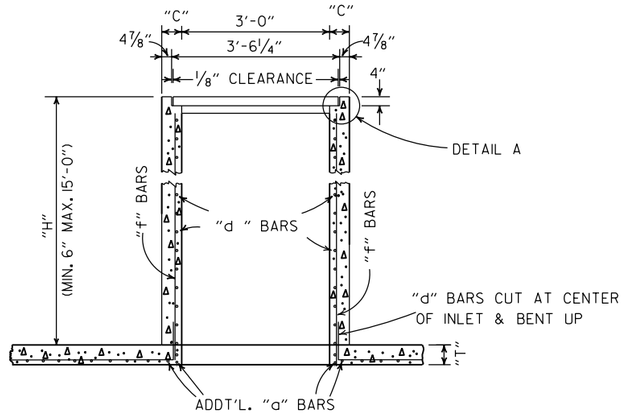
STANDARD DRAWING FPC-9



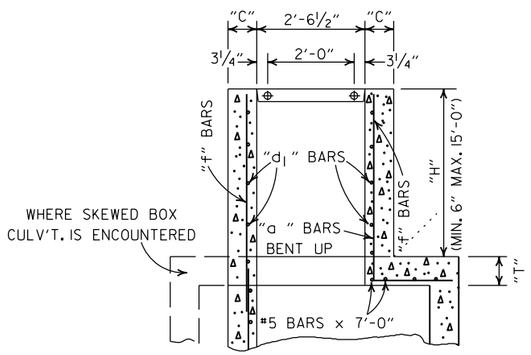
PLAN



DETAIL A



SECTION A-A

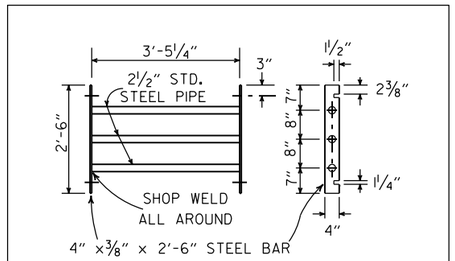


SECTION B-B

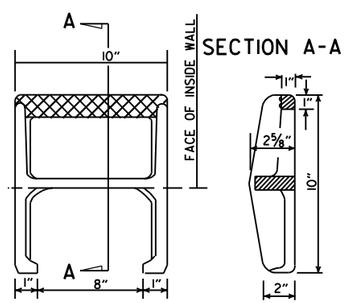
NOTE: ADDT'L.REINF. STEEL TO BE INCLUDED IN UNIT PRICE BID PER TYPE "TM" D.I.

DIMENSIONS & REINF. BARS FOR D.I. TO BE THE SAME AS THOSE SHOWN ON APPLICABLE STD. BARREL DRAWING FOR R.C. BOX CULVERTS.

DROP INLET TYPE "TM"
FOR REINFORCED CONC. BOX CULVERTS



GRATE DETAIL



APPROX. WEIGHT = 11 LBS. (CAST IRON)

PLAN

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

DETAIL OF STEP FOR DROP INLET

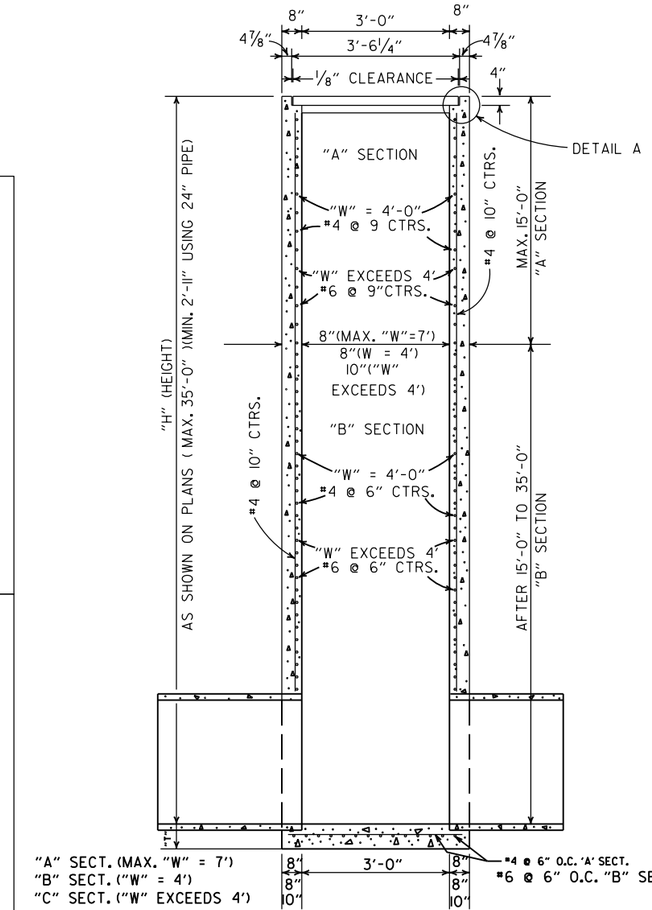
GENERAL NOTES:

1. STEEL PIPE FOR GRATES AND BOLTS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 807. BOLTS SHALL CONFORM TO ONE OF THE FOLLOWING: ASTM A193, GRADE B8 CLASS 1 OR 2, ASTM A307 OR AASHTO M 164.
2. STEEL PIPE FOR GRATES SHALL BE "STANDARD WEIGHT" PIPE CONFORMING TO ASTM A53 NATIONAL STANDARD PIPE.
3. BOLTS, NUTS, WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M 232 OR AASHTO M 298, CLASS 40 OR 50.
4. ALL EXPOSED CORNERS TO HAVE ¾" CHAMFER.
5. ALL #4 AND #5 REINFORCING BARS TO HAVE 1½" COVER. LARGER SIZES TO HAVE 2" COVER.
6. THE COMPLETE PIPE GRATE SHALL BE PAINTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

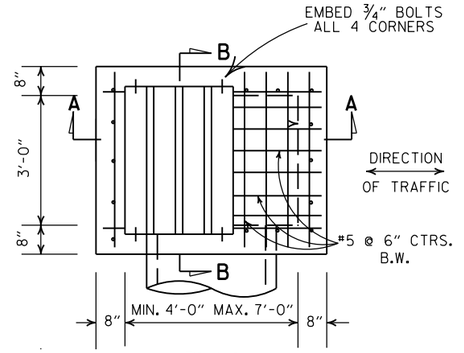
TABLE OF "W" DIMENSIONS

I.D. PIPE	SKEW OF CROSS DRAIN		
	STRAIGHT	30°	45°
	"W"	"W"	"W"
24"	4'-0"	4'-0"	4'-0"
30"	4'-0"	4'-0"	4'-5"
36"	4'-0"	4'-3"	5'-3"
42"	4'-3"	4'-11"	6'-1"
48"	4'-10"	5'-7"	6'-11"

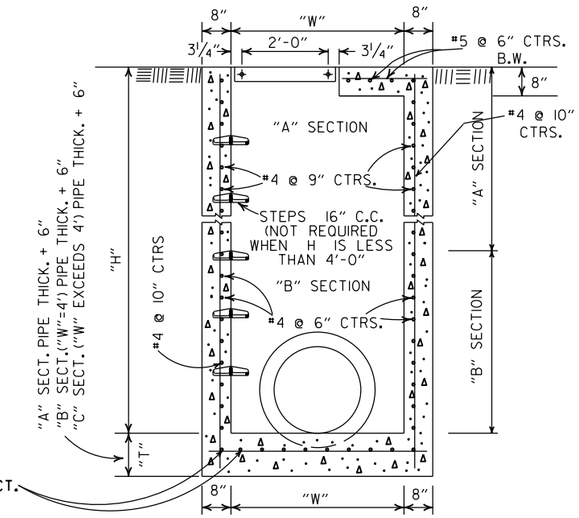
NOTE: DIMENSIONS SHOWN ABOVE ARE FOR PIPES INTERSECTING DROP INLET ON ONE SIDE ONLY. FOR SKEWED PIPES INTERSECTING BOTH SIDES OF DROP INLET, "W" WILL NEED TO BE INCREASED OR AXIS OF INTERSECTING PIPES WILL NEED TO BE SHIFTED.



SECTION B-B



PLAN



SECTION A-A

DROP INLET(TYPE RM)

REVISED		DATE FILMED
8-22-02	ADDED & REVISED DIMENSION TO SECTION A-A	
1-12-00	CORRECTED DIMENSION ON SECTION B-B	
11-06-97	ADDED DIMENSION TO SECTION A-A	
10-18-96	REVISED ASTM REF. TO AASHTO AND ADDED NOTE TO TABLE OF "W" DIMENSIONS	
10-1-92	ADDED DIRECTION OF TRAFFIC	10-1-92
8-15-91	ADDED NOTE ABOUT PAINTING OF GRATE	8-15-91
11-30-89	ALTERED DETAIL A	11-30-89
7-15-88	REVISED STEP DETAIL,TM & RM D.I. & GRATE DETAIL	719-7-15-88
10-2-72	REVISED AND REDRAWN	542-10-2-72

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS

STANDARD DRAWING FPC-9D

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

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

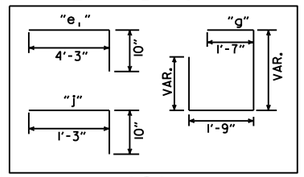
DROP INLET EXTENSION

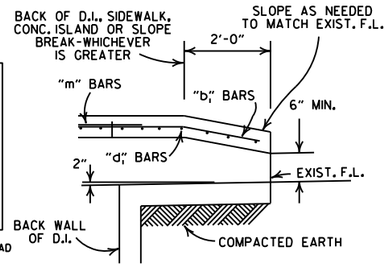
4'-0" CLASS A CONC. CU. YDS.	4'-0" REINF. STEEL POUNDS	8'-0" CLASS A CONC. CU. YDS.	8'-0" REINF. STEEL POUNDS
0.58	38	0.87	72
DEDUCT FROM QUANTITY COMPUTED FOR EACH EXTENSION ADDED.			
0.04	3		

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

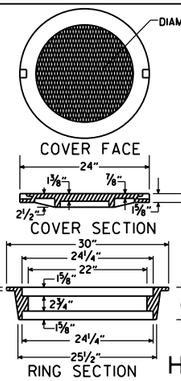
BAR DIAMETER





BACK OPENING

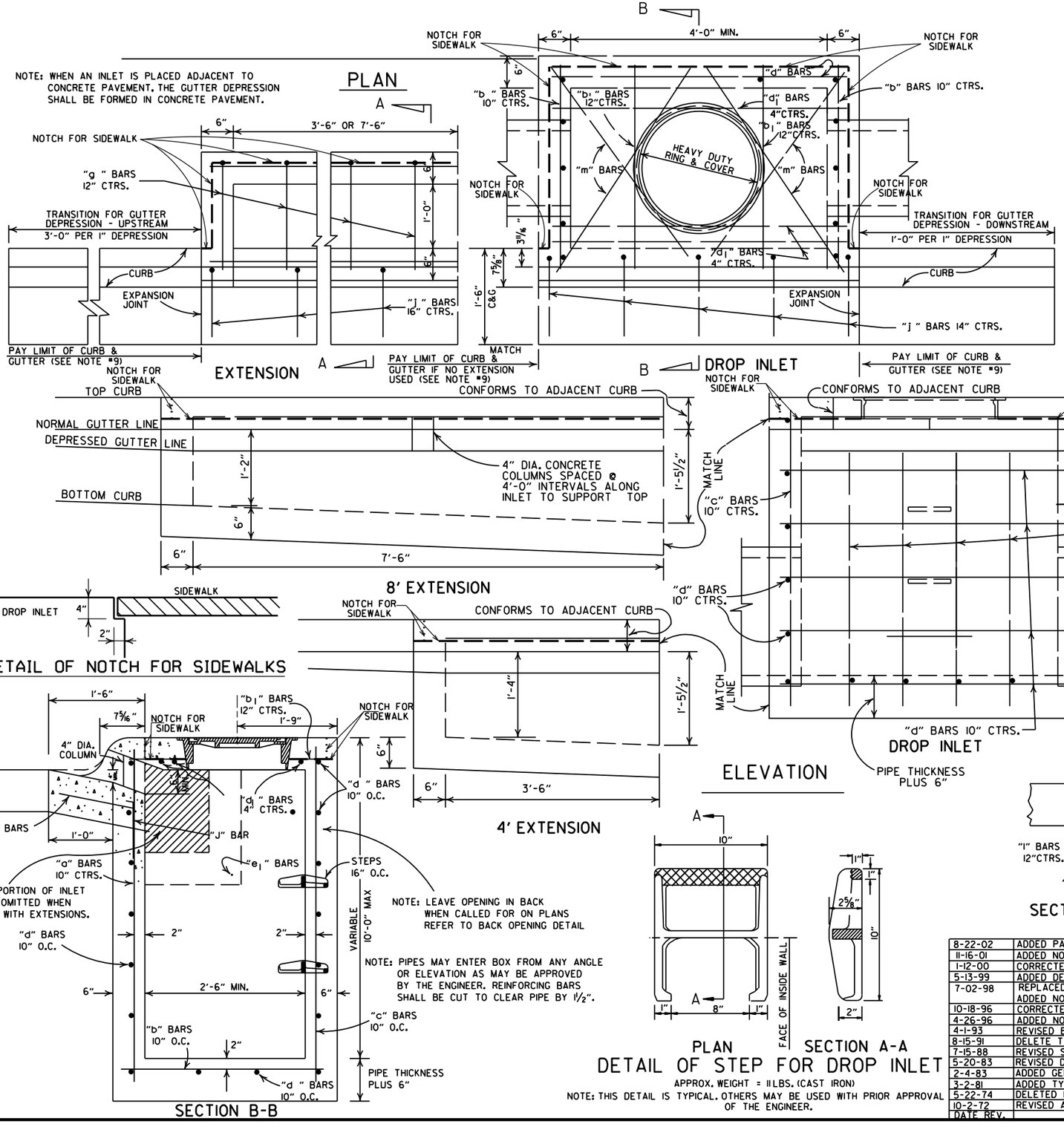
WHEN OPENING IN BACK IS CALLED FOR ON PLANS EXTEND OPENING AS SHOWN IN DETAIL. PAYMENT TO BE INCLUDED IN PRICE BID FOR DROP INLET (TYPE C).



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"×2" 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.



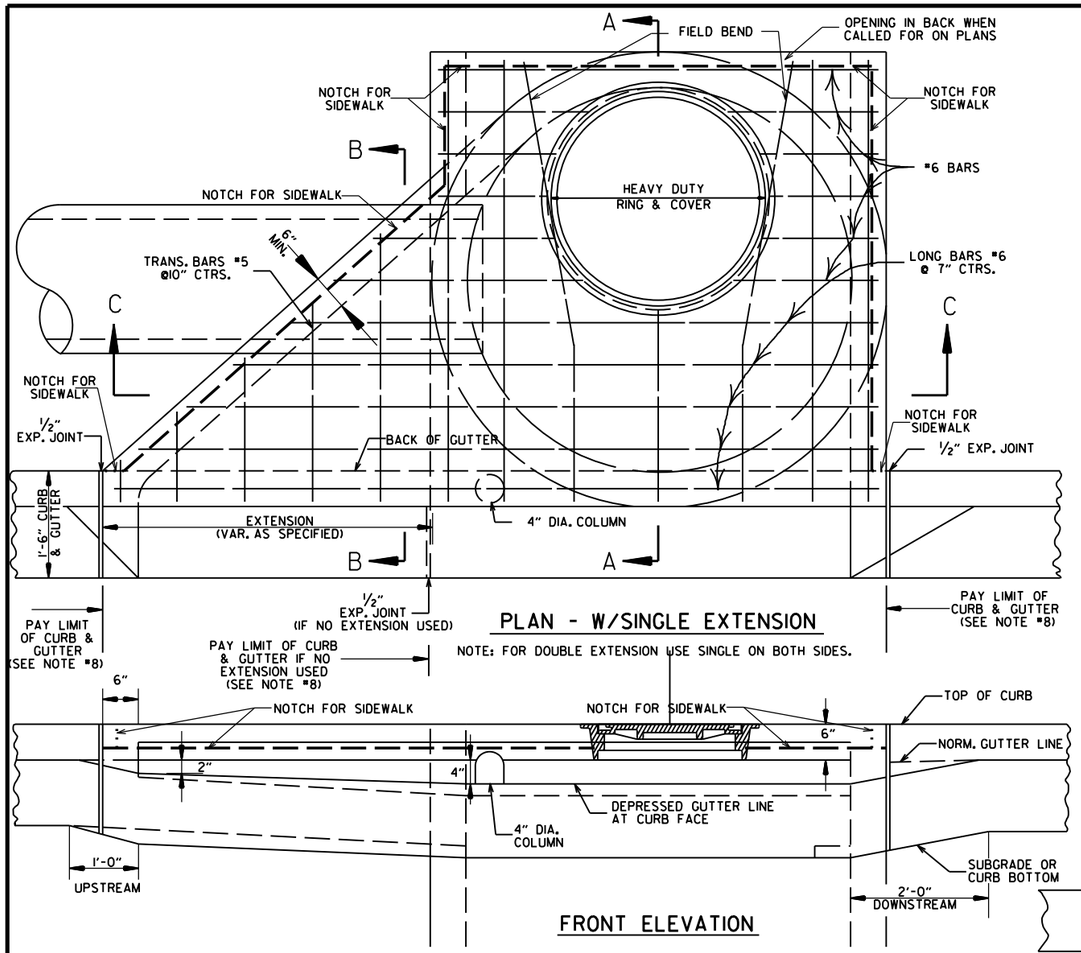
DATE REV.	REVISION	DATE FILMED
8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01	ADDED NOTE 13; REVISED SECTION B-B	
1-12-00	CORRECTED DIMENSION ON SECTION B-B & REVISED RING & COVER	
5-13-99	ADDED DETAIL OF NOTCH FOR SIDEWALKS	
7-02-98	REPLACED RING & COVER W/HEAVY DUTY RING & COVER 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	

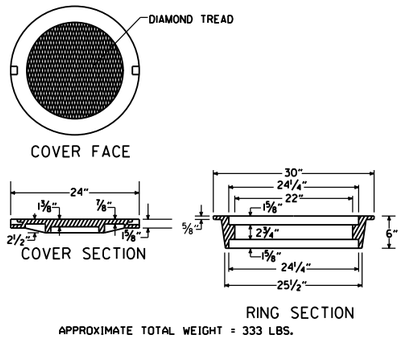
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS

(TYPE C)

STANDARD DRAWING FPC-9E

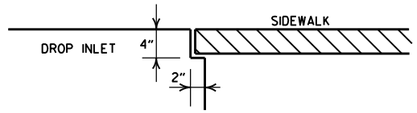




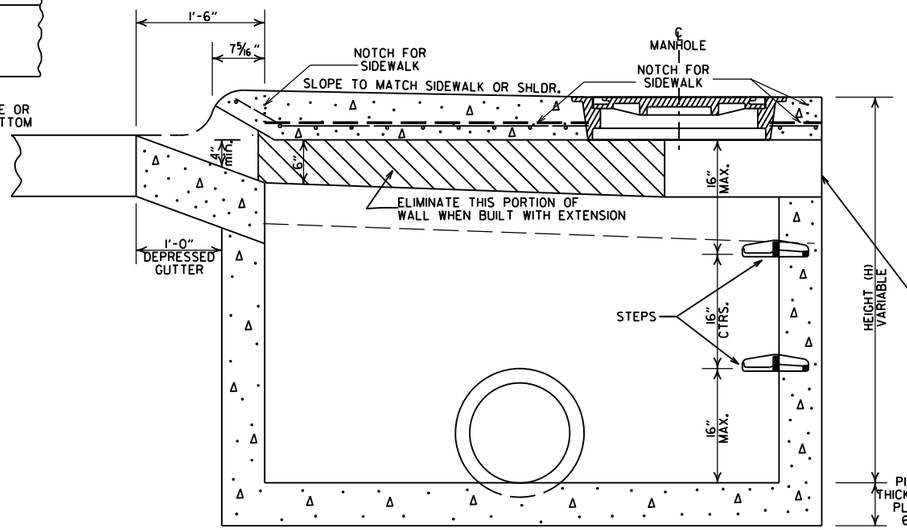
APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER

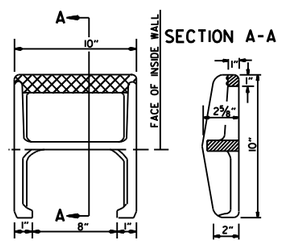
1. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
2. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
3. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.



DETAIL OF NOTCH FOR SIDEWALKS



SECTION A-A



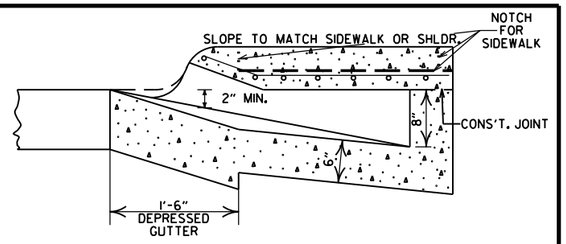
SECTION A-A

APPROX. WEIGHT = 11LBS. (CAST IRON)

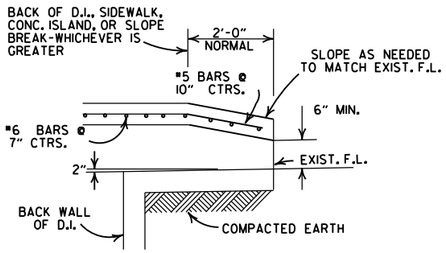
PLAN

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

DETAIL OF STEP FOR DROP INLET



SECTION B-B



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 MO).

GENERAL NOTES:

1. ALL EXPOSED CORNERS TO HAVE ¾" CHAMFER.
2. STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER OR AS DIRECTED BY THE ENGINEER.
3. ALL REINFORCING BARS SHALL BE GRADE 60 AND HAVE MIN. 1½" COVER.
4. DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
5. 4" DIA. COLUMNS SPACED AT MAX. 4'-0" INTERVALS SHALL BE INSTALLED ALONG INLET AND EXTENSION TO SUPPORT TOP.
6. BASE AND INLET WALLS SHALL BE CAST MONOLITHICALLY.
7. THE THROAT SHALL BE CAST INTEGRALLY WITH THE GUTTER.
8. 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.
9. PIPES MAY ENTER DROP INLET FROM ANY ANGLE OR ELEVATION AS MAY BE APPROVED BY THE ENGINEER.
10. APPROPRIATE SIZE TYPE C DROP INLETS MAY BE SUBSTITUTED FOR TYPE MO DROP INLETS AS APPROVED BY THE ENGINEER. PAYMENT TO BE AS DROP INLET (TYPE MO).
11. DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
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.

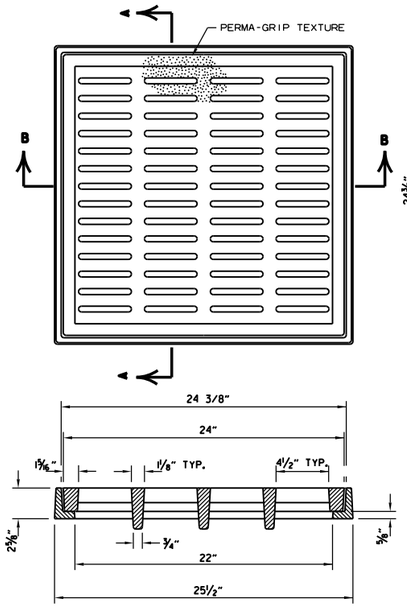
DIA. OF D.I.	DIA. OF OUTLET PIPE	MINIMUM WALL THICKNESS	
		CAST IN PLACE	PRECAST
4' I.D.	12" THRU 27"	6"	5"
5' I.D.	30" THRU 42"	8"	6"
6' I.D.	48" THRU 54"	8"	7"

DATE	REVISIONS	DATE FILMED
8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01	ADDED NOTE 13	
1-12-00	REVISED HEAVY DUTY RING & COVER	
5-13-99	ADDED NOTCH DETAIL FOR SIDEWALKS	
7-02-98	REP. NOTE 8, REM. PLAN DET., REV. PICTURE FOR NEW RING & COVER, ADDED HEAVY DUTY RING & COVER AND DETAIL OF STEP FOR DROP INLET	
4-26-96	ADDED NOTE 11, ADJ. OPENING DIMENSION	
10-12-95	CORRECTED #6 BAR SPACING	
7-20-95	CORRECTED DIAMETER OF D.I. IN BOX	
2-2-95	TYPE C TO MO (OPEN, BACK DETAIL)	
11-3-94	REVISED GENERAL NOTES	11-3-94
4-1-93	REV. BACK OPEN. DETAIL & NOTE	4-1-93
8-16-91	REVISED NOTES 11,12 & ADDED BK.OPEN DETAIL	8-15-91
11-30-89	ADDED NOTE NO. 12	11-30-89
5-23-89	ADDED NOTE & MINIMUM WALL THICKNESS	513-5-23-89
7-15-88	ADDED EXTEND NOTE TO SECTION A-A	629-7-15-88
1-14-87	MODIFIED WALL THICKNESS	783-1-14-87
6-12-87	ISSUED	4-6-12-87

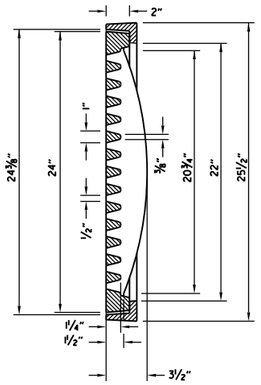
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLET (TYPE MO)

STANDARD DRAWING FPC-9M



SECTION B-B

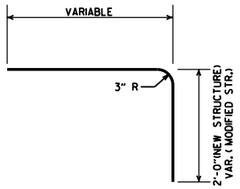


SECTION A-A

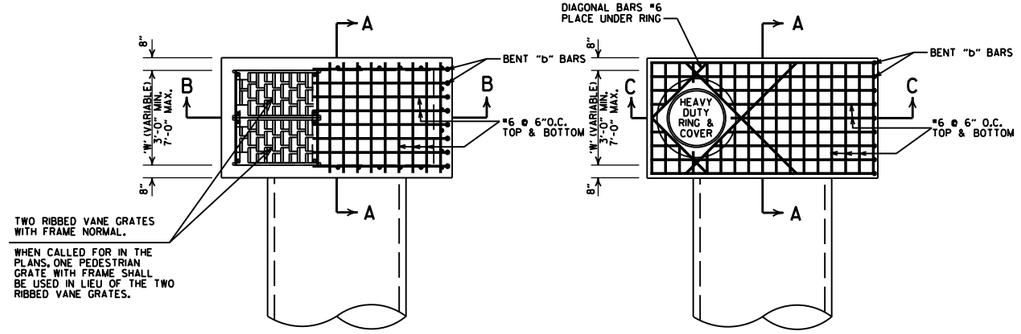
GENERAL NOTES (PEDESTRIAN GRATE & FRAME)

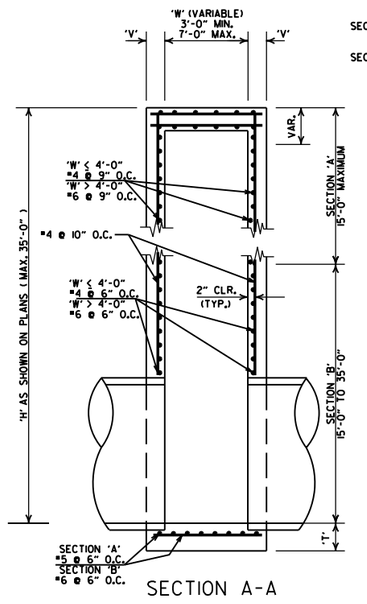
1. THE PEDESTRIAN GRATE SHALL BE ORIENTED IN THE TOP OF THE DROP INLET SO THAT THE ½" OPENINGS ARE PERPENDICULAR TO THE PATH OF PEDESTRIAN TRAVEL.
2. THE PEDESTRIAN GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105, CLASS 35B, & AASHTO M 306.
3. THE GRATE AND FRAME SHALL NOT BE PAINTED.
4. THE GRATE AND FRAME SHALL BE INSTALLED IN THE DROP INLET IN THE ASSEMBLED POSITION.
5. THE APPROXIMATE WEIGHT OF THE GRATE AND FRAME SHALL BE 218 LBS.
6. THE MINIMUM WATERWAY OPENING SHALL BE 122 SQ. IN.

DETAILS OF PEDESTRIAN GRATE AND FRAME



DETAIL OF BENT "b" BAR





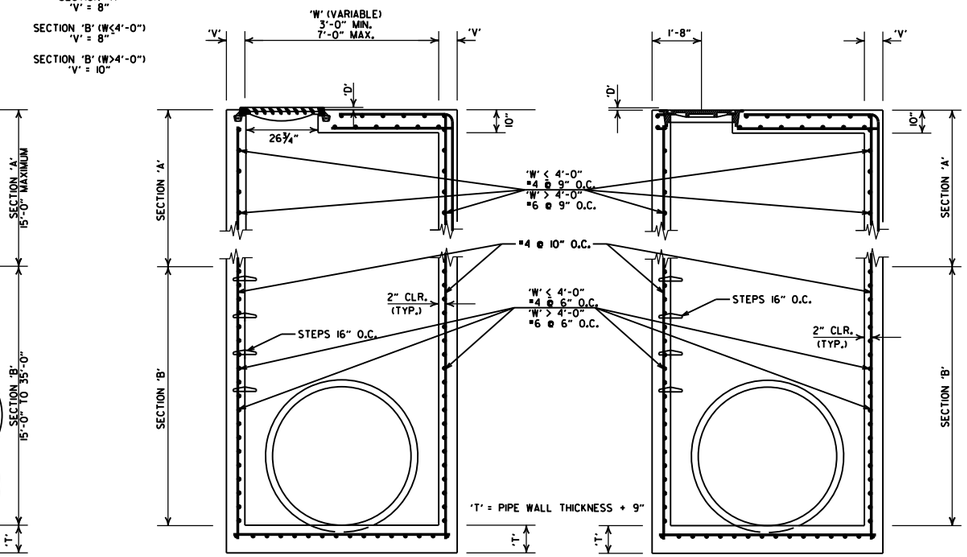
SECTION 'A'
'V' = 8"

SECTION 'B' (W≤4'-0")
'V' = 8"

SECTION 'B' (W>4'-0")
'V' = 10"

SECTION A-A

DETAILS OF DROP INLET (TYPE ST)



SECTION B-B

SECTION C-C

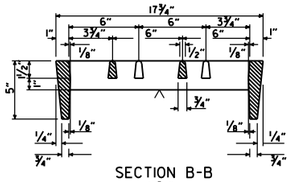
DETAILS OF JUNCTION BOX (TYPE ST)

GENERAL NOTES (TYPE ST DROP INLET & JUNCTION BOX)

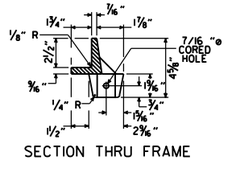
1. THE 'D' DIMENSION SHALL MATCH THE FINAL LIFT OF ACHM SURFACE COURSE SHOWN IN THE PLANS WHEN ASPHALT PAVING SURROUNDS THE GRATE OR RING COVER, AND SHALL BE 0" AT OTHER INSTALLATIONS.
2. THE STEPS SHALL BE OMITTED WHERE 'H' IS LESS THAN 4'-0".
3. ALL EXPOSED CORNERS ARE TO HAVE A ¾" CHAMFER.

GENERAL NOTES (HEAVY DUTY RING & COVER):

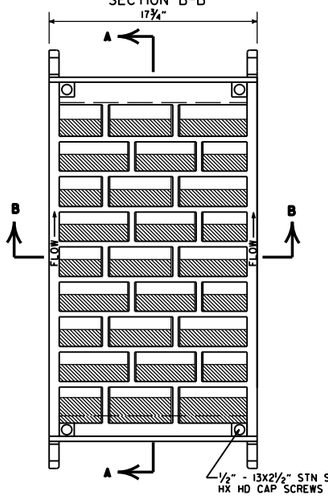
1. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105, CLASS 35B, & AASHTO M 306.
2. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
3. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
4. 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.

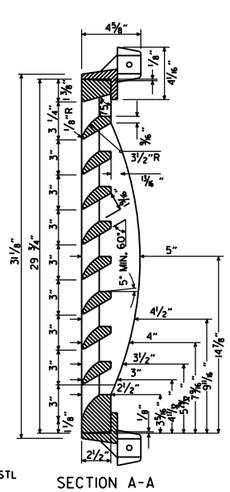


SECTION B-B



SECTION THRU FRAME



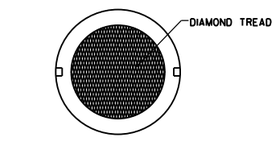


SECTION A-A

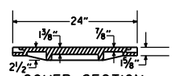
DETAILS OF RIBBED VANE GRATE AND FRAME

GENERAL NOTES (RIBBED VANE GRATE & FRAME)

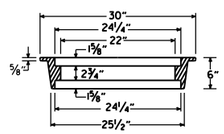
1. RIBBED VANE GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105, CLASS 35B, & AASHTO M 306.
2. GRATE AND FRAME SHALL NOT BE PAINTED.
3. GRATE AND FRAME SHALL BE INSTALLED IN DROP INLET IN ASSEMBLED POSITION.
4. APPROXIMATE WEIGHT OF GRATE SHALL BE 170 LBS.



COVER FACE



COVER SECTION



RING SECTION

HEAVY DUTY RING & COVER

APPROXIMATE TOTAL WEIGHT = 333 LBS.

DATE REVISED	DATE FILMED	DESCRIPTION
7-26-12		REMOVED NOTE 4, REVISED 'T', REVISED BOTTOM SLAB REBAR FOR SECTION 'A', SHOWED REBAR CLEARANCE IN SECTIONS
11-16-01		ADDED NOTE 4
1-12-00		REVISED HEAVY DUTY RING & COVER
5-13-99		ADDED PEDESTRIAN FRAME & GRATE
7-02-98		REMOVED NOTE 5, REV. DIMENSIONS, ADDED HEAVY DUTY RING & COVER ADDED AASHTO REF. REVISED GRATE
10-18-96		REVISED ASTM REF. TO AASHTO
10-1-92		REVISED & REISSUED
8-15-91	8-15-91	REVISED & REISSUED

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLET & JUNCTION BOX (TYPE ST)

STANDARD DRAWING FPC-9S

REINFORCED CONCRETE ARCH PIPE DIMENSIONS

EQUIV. DIA.	SPAN		RISE	
	AASHTO M 206	ARDOT NOMINAL	AASHTO M 206	ARDOT NOMINAL
INCHES	INCHES			
15	18	18	11	11
18	22	22	13½	14
21	26	26	15½	16
24	28½	29	18	18
30	36¼	36	22½	23
36	43⅜	44	26⅝	27
42	51⅛	51	31⅜	31
48	58½	59	36	36
54	65	65	40	40
60	73	73	45	45
72	88	88	54	54
84	102	102	62	62
90	115	115	72	72
96	122	122	77½	77
108	138	138	87⅛	87
120	154	154	96⅞	97
132	168¾	169	106½	107

THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PERCENT FROM THE VALUES SPECIFIED BY AASHTO M206.

REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE DIMENSIONS

EQUIV. DIA.	AASHTO M 207	
	SPAN	RISE
INCHES	INCHES	
18	23	14
24	30	19
27	34	22
30	38	24
33	42	27
36	45	29
39	49	32
42	53	34
48	60	38
54	68	43
60	76	48
66	83	53
72	91	58
78	98	63
84	106	68

THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PERCENT FROM THE VALUES SPECIFIED BY AASHTO M207.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. PLACE AND COMPACT THE HAUNCH AREA UP TO THE MIDDLE OF THE PIPE.
5. COMPLETE BACKFILL ACCORDING TO SUBSECTION 606.03.(f)(1).

NOTE: HAUNCH AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF CONCRETE PIPE.

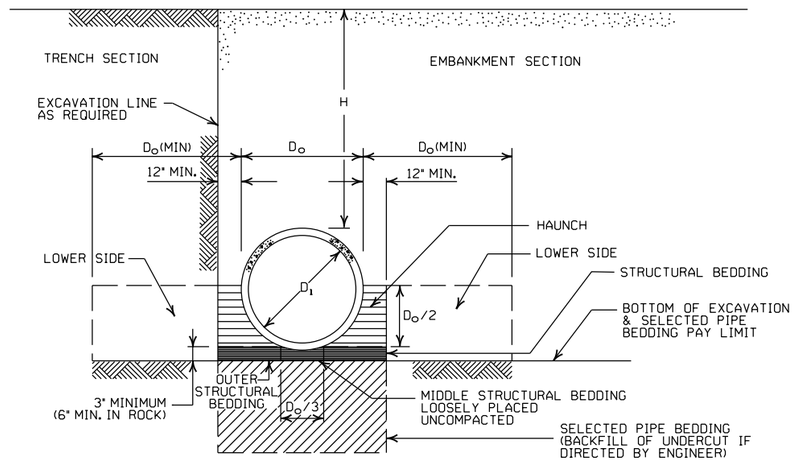
- LEGEND -

D_1 = NORMAL INSIDE DIAMETER OF PIPE
D_O = OUTSIDE DIAMETER OF PIPE
H = FILL COVER HEIGHT OVER PIPE (FEET)
MIN. = MINIMUM
= UNDISTURBED SOIL

INSTALLATION TYPE	MATERIAL REQUIREMENTS FOR HAUNCH AND STRUCTURAL BEDDING
TYPE 1	AGGREGATE BASE COURSE (CLASS 5 OR CLASS 7)
TYPE 2	SELECTED MATERIALS (CLASS SM-1, SM-2, OR SM-4) OR TYPE 1 INSTALLATION MATERIAL*
TYPE 3**	AASHTO CLASSIFICATION A-1 THRU A-6 SOIL OR TYPE 1 OR 2 INSTALLATION MATERIAL

* SM-3 WILL NOT BE ALLOWED.

** MATERIALS SHALL NOT INCLUDE ORGANIC MATERIALS OR STONES LARGER THAN 3 INCHES.



EMBANKMENT AND TRENCH INSTALLATIONS

1. MATERIAL IN THE HAUNCH AND OUTER STRUCTURAL BEDDING SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.
2. FOR TRENCHES WITH WALLS OF NATURAL SOIL, THE DENSITY OF THE SOIL IN THE LOWER SIDE ZONE SHALL BE AS FIRM AS THE 95% DENSITY REQUIRED FOR THE HAUNCH. IF THE EXISTING SOIL DOES NOT MEET THIS CRITERIA, IT SHALL BE REMOVED AND RECOMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OF MATERIAL USED.
3. FOR EMBANKMENTS, THE MATERIAL IN THE LOWER SIDE ZONE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

GENERAL NOTES

1. CONCRETE PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS. UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER TO THE STANDARD CONSTRUCTION SPECIFICATIONS.
2. CONCRETE PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. ALL PIPE SHALL CONFORM TO SECTION 606. CIRCULAR R.C. PIPE CULVERTS SHALL CONFORM TO AASHTO M170, R.C. ARCH PIPE CULVERTS SHALL CONFORM TO AASHTO M206 AND HORIZONTAL ELLIPTICAL PIPE CULVERTS SHALL CONFORM TO AASHTO M207.
4. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
5. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PRACTICABLE FOR WORKING CONDITIONS.
6. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE. REFER TO STD. DWG. FES-2 FOR MINIMUM CLEARANCE WHERE FLARED END SECTIONS ARE USED.
7. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
8. NOT MORE THAN ONE LIFTING HOLE MAY BE PROVIDED IN CONCRETE PIPE TO FACILITATE HANDLING. HOLE MAY BE CAST IN PLACE, CUT INTO THE FRESH CONCRETE AFTER FORMS ARE REMOVED, OR DRILLED. THE HOLE SHALL NOT BE MORE THAN TWO INCHES IN DIAMETER OR TWO INCHES SQUARE. CUTTING OR DISPLACEMENT OF REINFORCEMENT WILL NOT BE PERMITTED. SPALLED AREAS AROUND THE HOLE SHALL BE REPAIRED IN A WORKMANLIKE MANNER. LIFTING HOLE SHALL BE FILLED WITH MORTAR, CONCRETE, OR OTHER METHOD AS APPROVED BY THE ENGINEER.
9. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
10. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS THE HAUNCH), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."

MINIMUM HEIGHT OF FILL "H" OVER CIRCULAR R.C. PIPE CULVERTS

	CLASS OF PIPE			
	CLASS III		CLASS IV	CLASS V
INSTALLATION TYPE	TYPE 1 OR 2	TYPE 3	ALL	ALL
PIPE ID (IN.)	FEET			
12-15	2	2.5	2	1
18-24	2.5	3	2	1
27-33	3	4	2	1
36-42	3.5	5	2	1
48	4.5	5.5	2	1
54-60	5	7	2	1
66-78	6	8	2	1
84-108	7.5	8	2	1

NOTE: FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM OF 12" OF PAVEMENT AND/OR BASE.

MAXIMUM HEIGHT OF FILL "H" OVER CIRCULAR R.C. PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE		
	CLASS III	CLASS IV	CLASS V
	FEET		
TYPE 1	21	32	50
TYPE 2	16	25	39
TYPE 3	12	20	30

NOTE: IF FILL HEIGHT EXCEEDS 50 FEET, A SPECIAL DESIGN CONCRETE PIPE WILL BE REQUIRED USING TYPE 1 INSTALLATION.

MINIMUM HEIGHT OF FILL "H" OVER R.C. ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE	
	CLASS III	CLASS IV
	FEET	
TYPE 2 OR TYPE 3	2.5	1.5

NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

NOTE: FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM OF 12" OF PAVEMENT AND/OR BASE.

MAXIMUM HEIGHT OF FILL "H" OVER R.C. ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE	
	CLASS III	CLASS IV
	FEET	
TYPE 2	13	21
TYPE 3	10	16

NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REVISED FOR LRFD DESIGN SPECIFICATIONS	
5-18-00	REVISED TYPE 3 BEDDING & ADDED NOTE	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCC-1

CORRUGATED STEEL PIPE (ROUND)

PIPE DIAMETER (INCHES)	① MINUMUM COVER TOP OF PIPE TO TOP OF GROUND "H" (FEET)	MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET)				
		METAL THICKNESS (INCHES)				
		0.064	0.079	0.109	0.138	0.168
2⅔ INCH BY ½ INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM						
12	1	84	91			
15	1	67	73			
18	1	56	61			
24	1	42	46	59		
30	2	34	36	47		
36	2		30	39	41	
42	2		43	67	70	73
48	2		37	58	61	64
② 3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION RIVETED, WELDED, BOLTED, OR HELICAL LOCK-SEAM						
36	1	48	60	88	111	118
42	1	41	51	72	90	102
48	1	36	45	64	77	85
54	2	32	40	59	71	79
60	2	29	36	53	64	71
66	2	26	33	47	58	64
72	2	24	30	44	53	59
78	2		28	41	49	54
84	2		26	38	45	51
90	2		24	35	43	45
96	2		22	33	40	44
102	2			31	38	42
108	2			30	35	39
114	2			28	34	37
120	2			27	32	35

CORRUGATED ALUMINUM PIPE (ROUND)

PIPE DIAMETER (INCHES)	① MINUMUM COVER TOP OF PIPE TO TOP OF GROUND "H" (FEET)	MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET)				
		METAL THICKNESS IN INCHES				
		0.060	0.075	0.105	0.135	0.164
		2 ⅔ INCH BY ½ INCH CORRUGATION RIVETED OR HELICAL LOCK-SEAM				
12	1	45	45			
18	2	30	30	52		
24	2	22	22	39	41	
30	2		18	31	32	34
36	2.5		15	26	27	28
42	2			43	43	44
48	2			40	41	43
54	2			35	37	38
60	2				33	34
66	2					31
72	2					29

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. COMPLETE STRUCTURAL BACKFILL OPERATION BY WORKING FROM SIDE TO SIDE OF THE PIPE. THE SIDE TO SIDE STRUCTURAL BACKFILL DIFFERENTIAL SHALL NOT EXCEED 24 INCHES OR 1/3 THE SIZE OF THE PIPE, WHICHEVER IS LESS.

NOTE: STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF METAL PIPE.

INSTALLATION TYPE	MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 1	AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7)
TYPE 2	SELECTED MATERIALS (CLASS SM-1, SM-2, OR SM-4) OR TYPE 1 INSTALLATION MATERIAL ③

③ SM-3 WILL NOT BE ALLOWED.

EQUIVALENT METAL THICKNESSES AND GAUGES

METAL THICKNESS IN INCHES			GAUGE NUMBER
STEEL			
ZINC COATED	UNCOATED	ALUMINUM	
0.064	0.0598	0.060	16
0.079	0.0747	0.075	14
0.109	0.1046	0.105	12
0.138	0.1345	0.135	10
0.168	0.1644	0.164	8

CORRUGATED METAL PIPE ARCHES

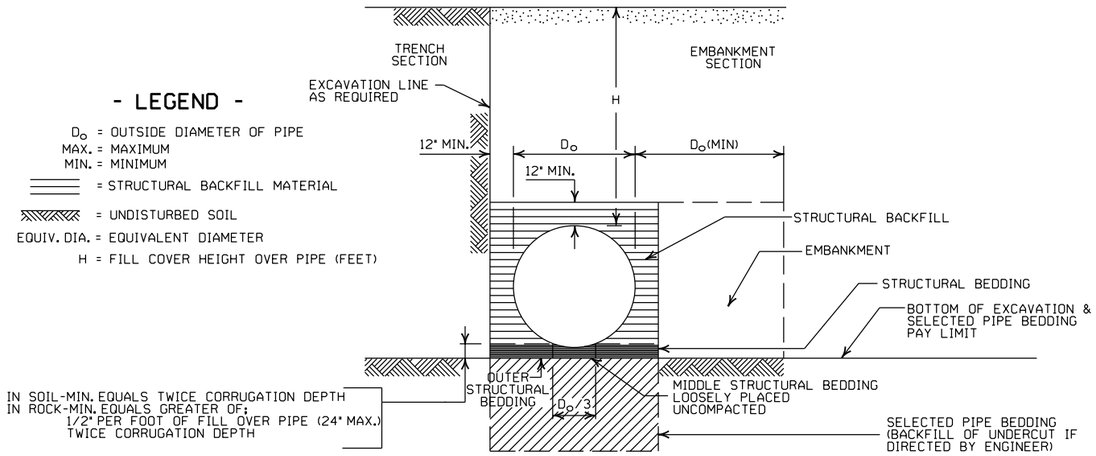
EQUIV. DIA. (INCHES)	PIPE DIMENSION SPAN X RISE (INCHES)	MINUMUM CORNER RADIUS (INCHES)	STEEL				ALUMINUM			
			MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)	MAX. HEIGHT OF FILL, "H" (FT.)		MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)	MAX. HEIGHT OF FILL, "H" (FT.)	
				INSTALLATION	INSTALLATION			INSTALLATION	INSTALLATION	
				TYPE 1	TYPE 1			TYPE 1	TYPE 1	
			2 ⅔ INCH BY ½ INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM				2 ⅔ INCH BY ½ INCH CORRUGATION RIVETED OR HELICAL LOCK-SEAM			
15	17x13	3	0.064	2	15		0.060	2	15	
18	21x15	3	0.064	2	15		0.060	2	15	
21	24x18	3	0.064	2.25	15		0.060	2.25	15	
24	28x20	3	0.064	2.5	15		0.075	2.5	15	
30	35x24	3	0.079	3	12		0.075	3	12	
36	42x29	3½	0.079	3	12		0.105	3	12	
42	49x33	4	0.079	3	12		0.105	3	12	
48	57x38	5	0.109	3	13		0.135	3	13	
54	64x43	6	0.109	3	14		0.135	3	14	
60	71x47	7	0.138	3	15		0.164	3	15	
66	77x52	8	0.168	3	15					
72	83x57	9	0.168	3	15					
			② 3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM							
				INSTALLATION		INSTALLATION				
				TYPE 2	TYPE 1	TYPE 2	TYPE 1			
36	40x31	5	0.079	3	2	12	15			
42	46x36	6	0.079	3	2	13	15			
48	53x41	7	0.079	3	2	13	15			
54	60x46	8	0.079	3	2	13	15			
60	66x51	9	0.079	3	2	13	15			
66	73x55	12	0.079	3	2	15	15			
72	81x59	14	0.079	3	2	15	15			
78	87x63	14	0.079	3	2	15	15			
84	95x67	16	0.109	3	2	15	15			
90	103x71	16	0.109	3	2	15	15			
96	112x75	18	0.109	3	2	15	15			
102	117x79	18	0.109	3	2	15	15			
108	128x83	18	0.138	3	2	15	15			

① FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.

② WHERE THE STANDARD 2 2/3"x ½" CORRUGATION AND GAUGE IS SPECIFIED FOR A GIVEN DIAMETER, A PIPE OF THE SAME DIAMETER WITH A 3" x 1" OR 5" x 1" CORRUGATION MAY BE SUBSTITUTED, PROVIDING IT IS GAUGED FOR A FILL HEIGHT CONDITION EQUAL TO OR GREATER THAN THE MAXIMUM FILL HEIGHT CONDITION FOR THE SPECIFIED GAUGE AND CORRUGATION.

- LEGEND -

D_o = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM
= STRUCTURAL BACKFILL MATERIAL
= UNDISTURBED SOIL
EQUIV. DIA. = EQUIVALENT DIAMETER
H = FILL COVER HEIGHT OVER PIPE (FEET)



EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.
2. INSTALLATION TYPE 1 OR 2 MAY BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE (ROUND).
3. INSTALALTION TYPE 1 SHALL BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE ARCHES WITH 2⅔" X ½" CORRUGATION.
4. INSTALLATION TYPE 1 OR 2 MAY BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE ARCHES WITH 3" X 1" OR 5" X 1" CORRUGATION.

GENERAL NOTES

1. METAL PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS. UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER TO THE STANDARD CONSTRUCTION SPECIFICATIONS.
2. METAL PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. METAL PIPE CULVERT MATERIALS AND INSTALLATIONS SHALL CONFORM TO SECTION 606 AND JOB SPECIAL PROVISION "METAL PIPE".
4. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
5. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PRACTICABLE FOR WORKING CONDITIONS.
6. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE. REFER TO STD. DWG. FES-2 FOR MINIMUM CLEARANCE WHERE FLARED END SECTIONS ARE USED.
7. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
8. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
9. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REVISED FOR LRFD DESIGN SPECS	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

METAL PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCM-1

INSTALLATION TYPE	•• MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 2	•SELECTED MATERIALS (CLASS SM-1, SM-2 OR SM-4)

• AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7) MAY BE USED IN LIEU OF SELECTED MATERIAL.

SM3 WILL NOT BE ALLOWED.

•• STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1INCH. STRUCTURAL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, STONES LARGER THAN 1.50 INCH IN GREATEST DIMENSION, OR FROZEN LUMPS.

STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF HDPE PIPE.

MULTIPLE INSTALLATION OF HIGH DENSITY POLYETHYLENE PIPES

PIPE DIAMETER	CLEAR DISTANCE BETWEEN PIPES
18"	1'-6"
24"	2'-0"
30"	2'-6"
36"	3'-0"
42"	3'-6"
48"	4'-0"

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

PIPE DIAMETER	TRENCH WIDTH (FEET)	
	"H" < 10'-0"	"H" >OR= 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"
42"	7'-0"	10'-6"
48"	8'-0"	12'-0"

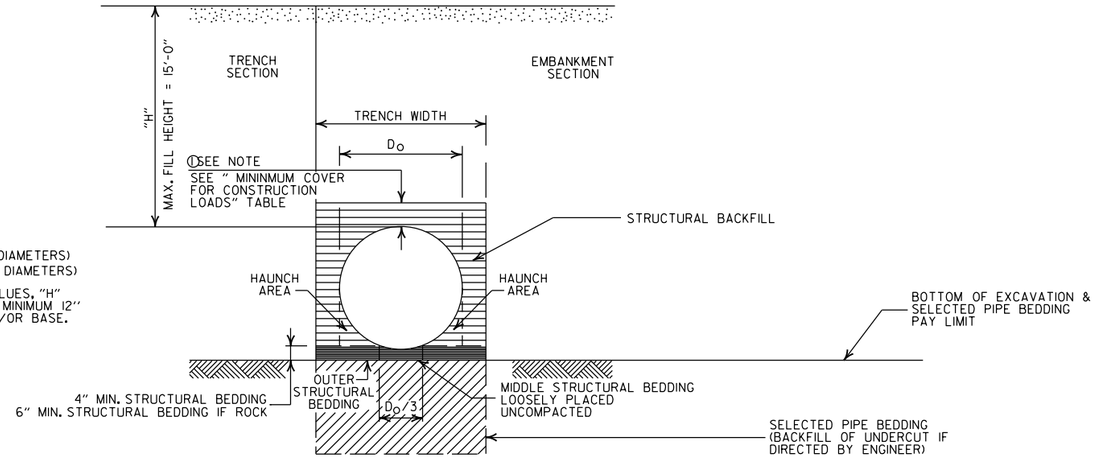
①NOTE:
18" MIN. (18" - 30" DIAMETERS)
24" MIN. (36" - 48" DIAMETERS)

MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.

MINIMUM COVER FOR CONSTRUCTION LOADS

PIPE DIAMETER	② MIN. COVER (FEET) FOR INDICATED CONSTRUCTION LOADS			
	18.0-50.0 (KIPS)	50.0-75.0 (KIPS)	75.0-110.0 (KIPS)	110.0-175.0 (KIPS)
36" OR LESS	2'-0"	2'-6"	3'-0"	3'-0"
42" OR GREATER	3'-0"	3'-0"	3'-6"	4'-0"

②MINIMUM COVER SHALL BE MEASURED FROM TOP OF PIPE TO TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE. THE SURFACE SHALL BE MAINTAINED.



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. THE STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8". THE LAYERS SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.
5. PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING OR OTHER APPROVED METHODS IN ORDER TO HELP MAINTAIN GRADE AND ALIGNMENT.

GENERAL NOTES

1. PIPE SHALL CONFORM TO AASHTO M294, TYPE S. INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICIATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
2. PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
4. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
5. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
6. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
7. FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
8. HIGH DENSITY POLYETHYLENE PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
9. JOINTS FOR HDPE PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN AASHTO SECTION 26.4.2.4 AND 30.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

- LEGEND -

H = FILL HEIGHT (FT.)
D = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM

= STRUCTURAL BACKFILL MATERIAL

= UNDISTURBED SOIL

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REVISED GENERAL NOTES & MINIMUM COVER NOTE	
11-17-10	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)

STANDARD DRAWING PCP-1

INSTALLATION TYPE	•• MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 2	•SELECTED MATERIALS (CLASS SM-1, SM-2, OR SM-4)

• AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7) MAY BE USED IN LIEU OF SELECTED MATERIAL.

SM3 WILL NOT BE ALLOWED.

•• STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1INCH. STRUCTURAL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, STONES LARGER THAN 1.50 INCH IN GREATEST DIMENSION, OR FROZEN LUMPS.

STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF PVC PIPE.

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

PIPE DIAMETER	TRENCH WIDTH (FEET)	
	"H" < 10'-0"	"H" >OR= 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"

MULTIPLE INSTALLATION OF PVC PIPES

PIPE DIAMETER	CLEAR DISTANCE BETWEEN PIPES
18"	1'-6"
24"	2'-0"
30"	2'-6"
36"	3'-0"

MAXIMUM FILL HEIGHT BASED ON STRUCTURAL BACKFILL

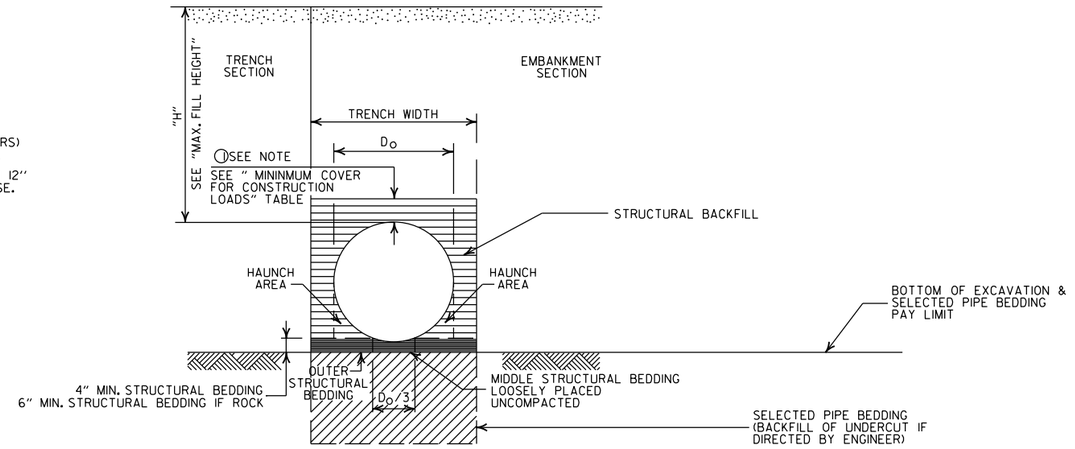
PIPE DIAMETER	"H"
18"	45'-0"
24"	45'-0"
30"	40'-0"
36"	40'-0"

① NOTE:
12" MIN. (18" - 36" DIAMETERS)
MINIMUM COVER VALUE, "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.

MINIMUM COVER FOR CONSTRUCTION LOADS

PIPE DIAMETER	② MIN. COVER (FEET) FOR INDICATED CONSTRUCTION LOADS			
	18.0-50.0 (KIPS)	50.0-75.0 (KIPS)	75.0-110.0 (KIPS)	110.0-175.0 (KIPS)
18" THRU 36"	2'-0"	2'-6"	3'-0"	3'-0"

②MINIMUM COVER SHALL BE MEASURED FROM TOP OF PIPE TO TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE. THE SURFACE SHALL BE MAINTAINED.



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. THE STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8". THE LAYERS SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.
5. PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING OR OTHER APPROVED METHODS IN ORDER TO HELP MAINTAIN GRADE AND ALIGNMENT.

GENERAL NOTES

1. PIPE SHALL CONFORM TO ASTM F949, CELL CLASS 12454. INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
2. PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
4. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
5. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
6. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
7. FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
8. PVC PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
9. JOINTS FOR PVC PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN AASHTO SECTION 26.4.2.4 AND 30.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

- LEGEND -

H = FILL HEIGHT (FT.)
D_O = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM

= STRUCTURAL BACKFILL MATERIAL
= UNDISTURBED SOIL

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REV GENERAL NOTES & MINIMUM COVER NOTE; DELETED SM3 MATERIAL	
11-17-10	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

PLASTIC PIPE CULVERT (PVC F949)

STANDARD DRAWING PCP-2

INSTALLATION TYPE	**MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 1	AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7)
TYPE 2	*SELECTED MATERIALS (CLASS SM-1, SM-2 OR SM-4) OR TYPE 1 INSTALLATION MATERIAL

*SM3 WILL NOT BE ALLOWED.

** STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1INCH. STRUCTURAL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, STONES LARGER THAN 1.50 INCH IN GREATEST DIMENSION, OR FROZEN LUMPS.

STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF POLYPROPYLENE PIPE.

MULTIPLE INSTALLATION OF POLYPROPYLENE PIPES

PIPE DIAMETER	CLEAR DISTANCE BETWEEN PIPES
18"	1'-6"
24"	2'-0"
30"	2'-6"
36"	3'-0"
42"	3'-6"
48"	4'-0"
60"	5'-0"

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

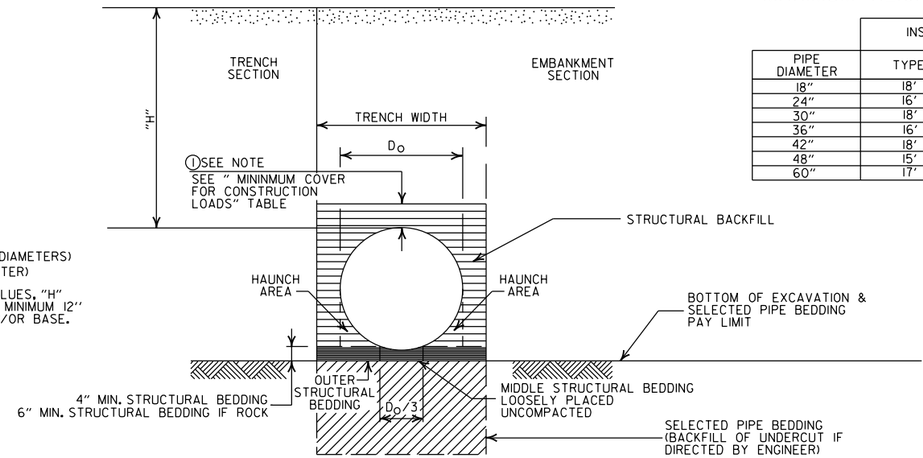
PIPE DIAMETER	TRENCH WIDTH (FEET)	
	"H" < 10'-0"	"H" >OR= 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"
42"	7'-0"	10'-6"
48"	8'-0"	12'-0"
60"	10'-0"	15'-0"

①NOTE:
12" MIN. (18" - 42" DIAMETERS)
24" MIN. (60" DIAMETER)

MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.

MAXIMUM HEIGHT OF FILL "H"

PIPE DIAMETER	INSTALLATION TYPE	
	TYPE 1	TYPE 2
18"	18'	14'
24"	16'	12'
30"	18'	14'
36"	16'	12'
42"	18'	13'
48"	15'	11'
60"	17'	12'



MINIMUM COVER FOR CONSTRUCTION LOADS

PIPE DIAMETER	② MIN. COVER (FEET) FOR INDICATED CONSTRUCTION LOADS			
	18.0-50.0 (KIPS)	50.0-75.0 (KIPS)	75.0-110.0 (KIPS)	110.0-150.0 (KIPS)
36" OR LESS	2'-0"	2'-6"	3'-0"	3'-0"
42" OR GREATER	3'-0"	3'-0"	3'-6"	4'-0"

②MINIMUM COVER SHALL BE MEASURED FROM TOP OF PIPE TO TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE. THE SURFACE SHALL BE MAINTAINED.

EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. THE STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8". THE LAYERS SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.
5. PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING OR OTHER APPROVED METHODS IN ORDER TO HELP MAINTAIN GRADE AND ALIGNMENT.

GENERAL NOTES

1. PIPE SHALL CONFORM TO AASHTO M330, TYPE S, INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICIATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
2. PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SIXTH EDITION (2012) WITH 2013 INTERIMS.
3. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
4. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
5. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
6. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
7. FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
8. POLYPROPYLENE PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
9. JOINTS FOR POLYPROPYLENE PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN SECTION 26.4.2.4 AND 30.4.2 OF THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS 3RD EDITION (2010) WITH 2012 INTERIMS. JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

- LEGEND -

H = FILL HEIGHT (FT.)
D_O = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM

= STRUCTURAL BACKFILL MATERIAL

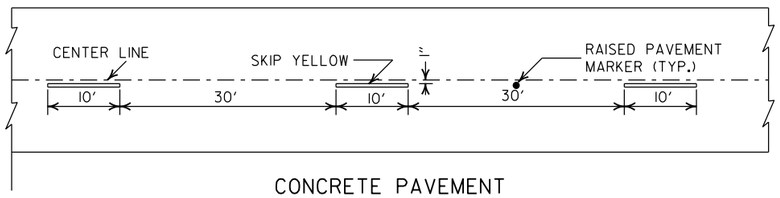
= UNDISTURBED SOIL

DATE	REVISION	DATE FILMED
02-27-20	REVISED	
11-07-19	ISSUED	

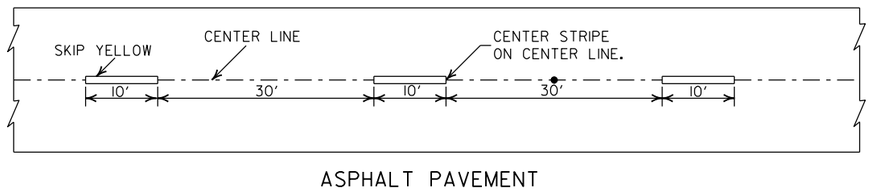
ARKANSAS STATE HIGHWAY COMMISSION

PLASTIC PIPE CULVERT (POLYPROPYLENE)

STANDARD DRAWING PCP-3

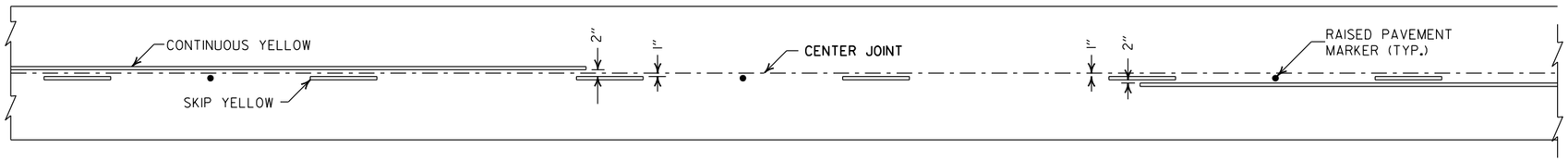


CONCRETE PAVEMENT

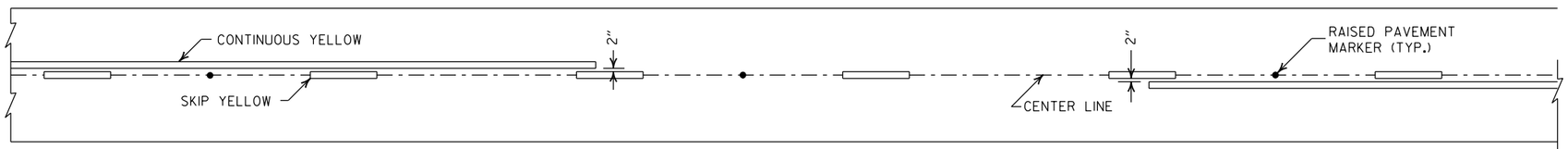


ASPHALT PAVEMENT

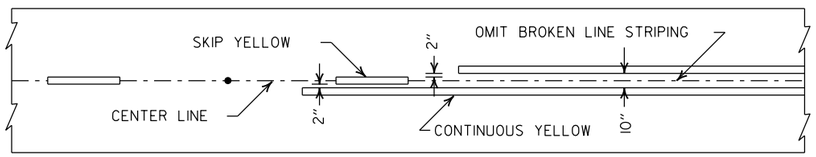
BROKEN LINE STRIPING



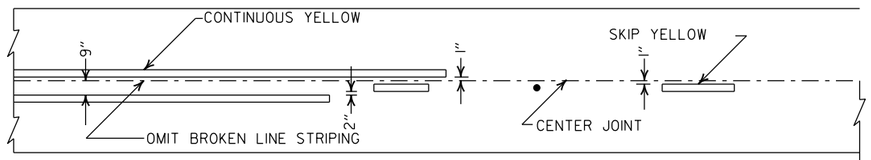
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

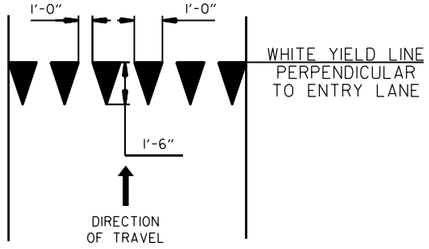


ASPHALT PAVEMENT

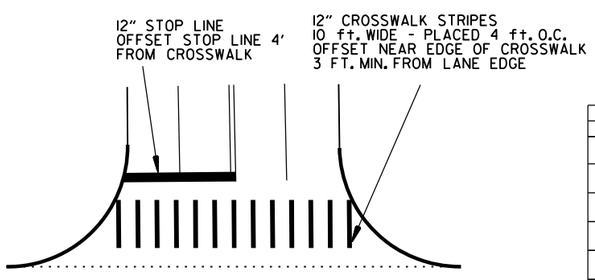


CONCRETE PAVEMENT

STRIPING AT ADJACENT NO PASSING LANES

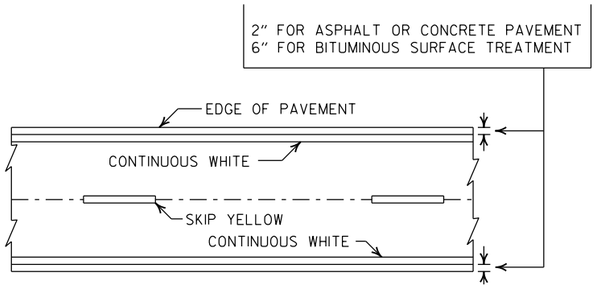


YIELD LINE DETAIL



CROSSWALK AND STOP LINE DETAILS

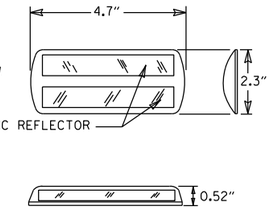
NOTES:
1. REFER TO THE STRIPING DETAILS FOR PAVEMENT MARKING LINE WIDTHS.
2. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
3. RAISED PAVEMENT MARKERS SHALL BE PLACED ON AN 80 FEET SPACING UNLESS OTHERWISE SHOWN IN THE PLANS.



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

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PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1

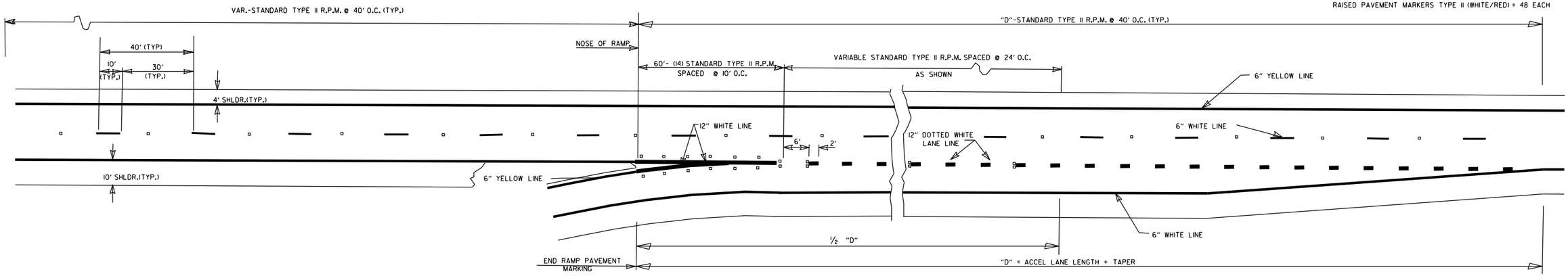
PAVEMENT MARKING QUANTITIES
(BASED ON 700' ACCEL. LANE + 300' TAPER)

ENTRANCE RAMP

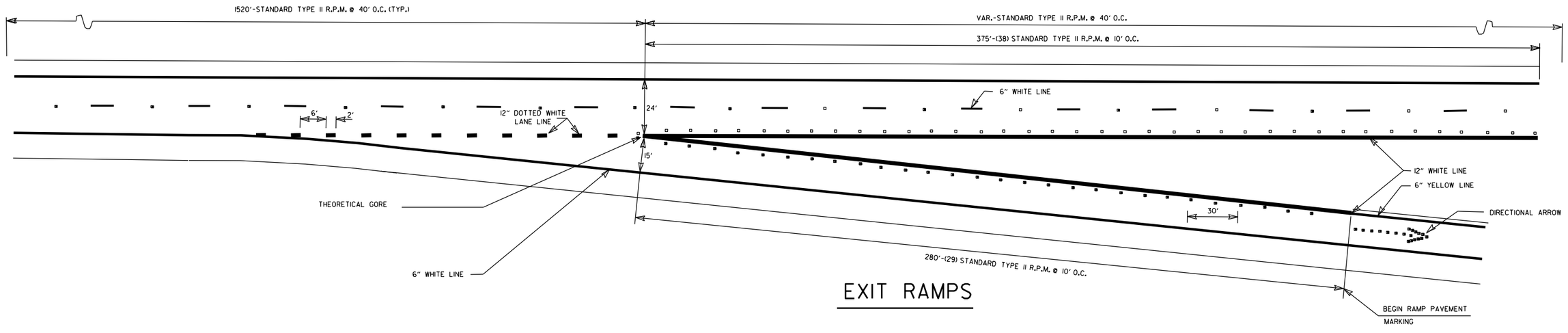
12" WHITE = 370 LIN. FT.
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH

EXIT RAMP

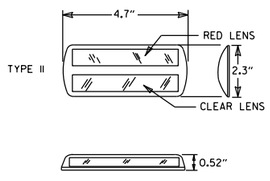
6" WHITE = 280 LIN. FT.
12" WHITE = 815 LIN. FT.
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 48 EACH



ENTRANCE RAMPS

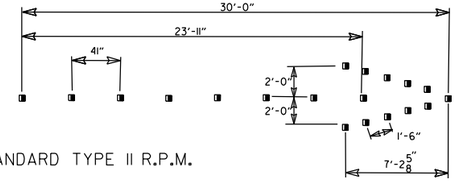


EXIT RAMPS



DETAIL OF
STANDARD
RAISED PAVEMENT MARKERS

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



(19) STANDARD TYPE II R.P.M.

DIRECTIONAL ARROWS

GENERAL NOTES:

THIS DRAWING SHOULD BE CONSIDERED AS TYPICAL ONLY AND THE FINAL LOCATION OF THE STRIPING AND PAVEMENT MARKERS SHALL BE DETERMINED BY THE ENGINEER.

THIS DRAWING SHOULD BE USED IN CONJUNCTION WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST REVISION.

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.

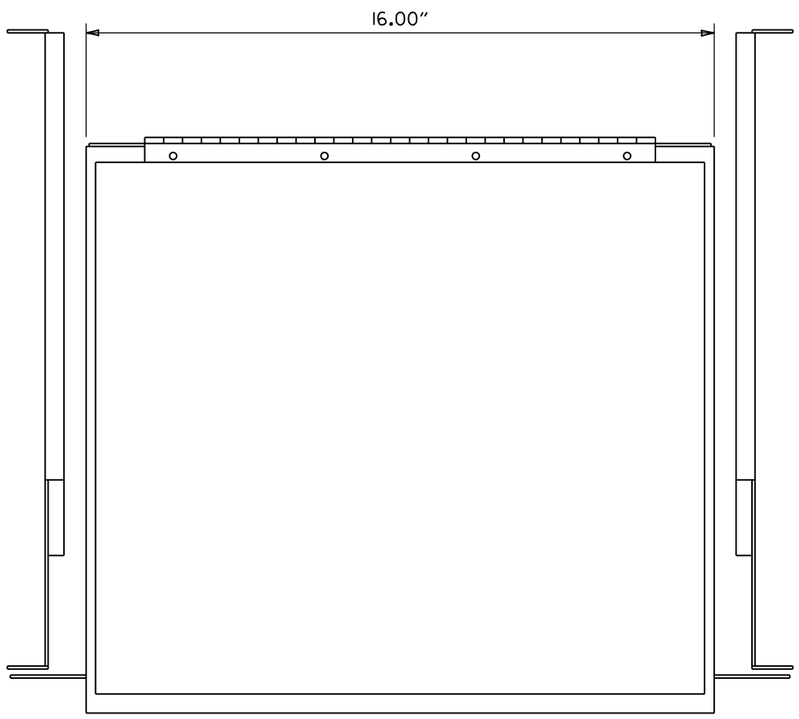
DATE	REVISION	FILMED
05-14-20	REMOVED CROSSHATCH MARKINGS ON EXIT RAMPS	
11-07-19	REVISED DOTTED PAV'T MARKINGS; ADDED CROSSHATCH MARKINGS ON EXIT RAMPS	
12-8-16	REVISED RAISED PAV'T MARKERS FOR 80' SPACING; REVISED WIDTH OF STRIPING	
9-12-13	REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS	
7-26-12	REVISED RPM NOTATION	
12-15-11	REVISED RPMs ACCORDING TO LATEST POLICY	
11-17-10	REMOVED PLOWABLE PAVEMENT MARKERS	
6-3-10	REVISED PER 2009 MUTCD	
11-18-04	REVISED NOTES	
8-22-02	ADDED & REVISED NOTES; REV. ENTRANCE & EXIT RAMPS	
5-18-00	REMOVED HASHMARKS	
7-02-98	CHANGED TYPES TO ROMAN NUMERALS	
4-26-96	ADDED DIMENSIONS & QUANTITIES; REVISED LANE WIDTH ON EXIT RAMP	
2-2-95	PLACED IN USE	2-2-95

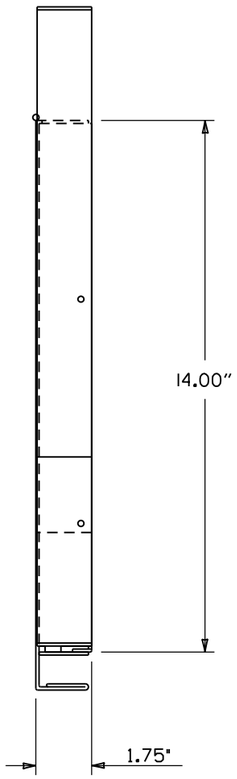
ARKANSAS STATE HIGHWAY COMMISSION

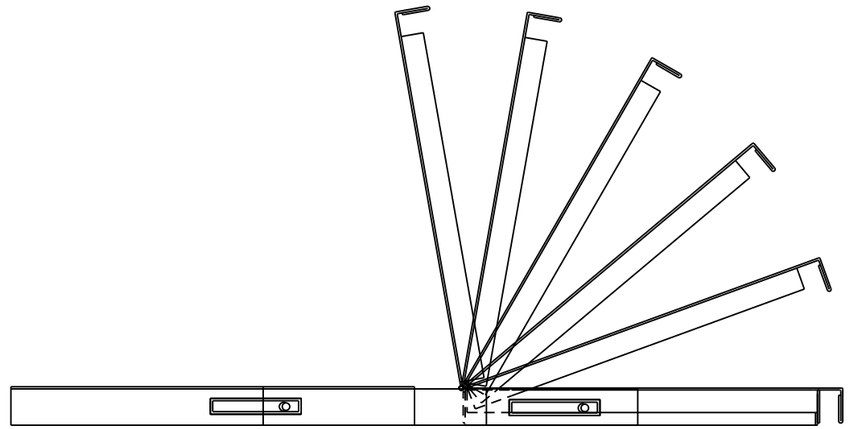
PAVEMENT MARKING DETAILS ON ACCESS CONTROLLED ROADWAYS

STANDARD DRAWING PM-2

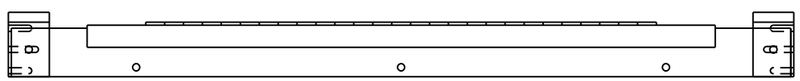
DRAWER PLAN VIEW



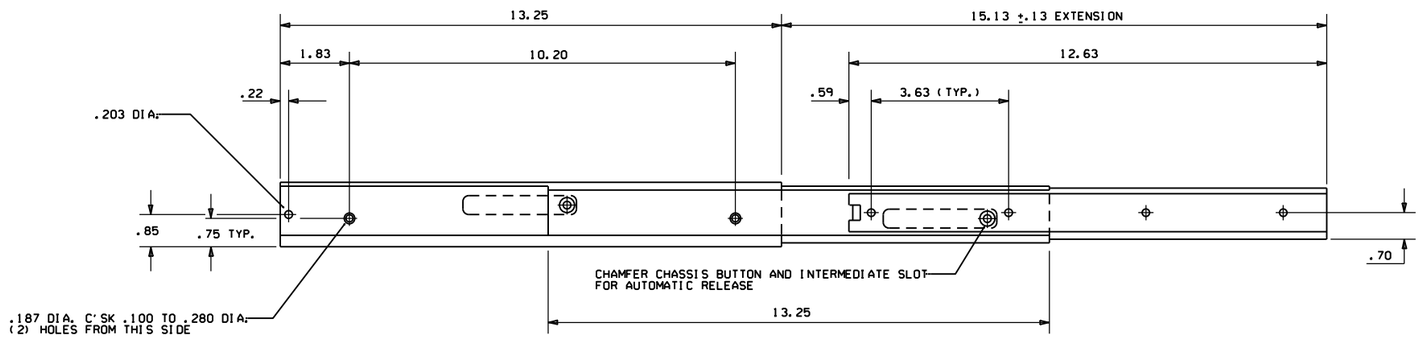




NOTES:
1. RIGHT HAND SLIDE SHOWN, LEFT SLIDE OPPOSITE.
2. GENERAL DEVICES (CC3002-99-0102) OR EQUAL AND CONTAINS (1) RIGHT HAND SLIDE ASSEMBLY, (1) LEFT HAND SLIDE ASSEMBLY.
3. ALL HARDWARE NECESSARY TO FASTEN SLIDE ASSEMBLY TO UNDERSIDE OF CONTROLLER SHELF SHALL BE INCLUDED.



FRONT VIEW



RIGHT SIDE ASSEMBLY

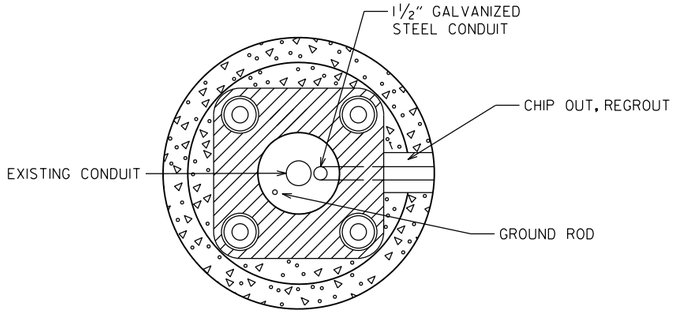
DATE	REVISION	DATE FILM
9-12-13	ISSUED AS STANDARD DRAWING	
6-15-05	ISSUED	

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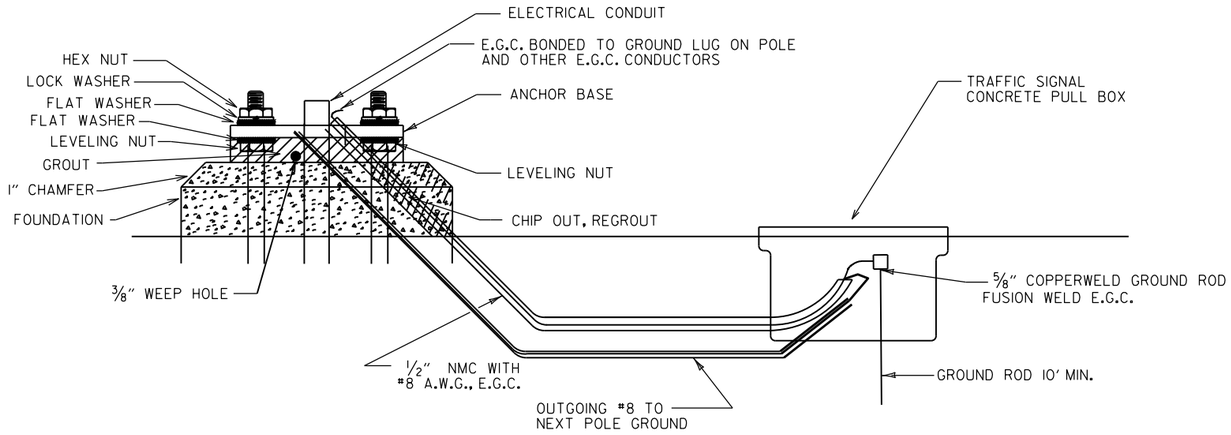
CONTROLLER CABINET UTILITY DRAWER

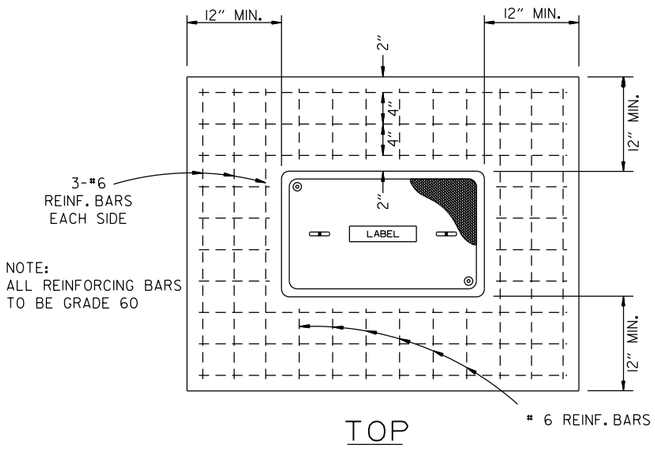
STANDARD DRAWING SD-5

CONDUIT ENTRY TO EXISTING POLE BASE

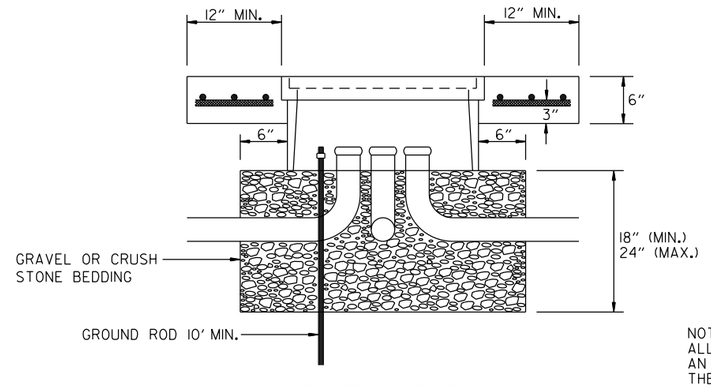


ANCHOR BASE



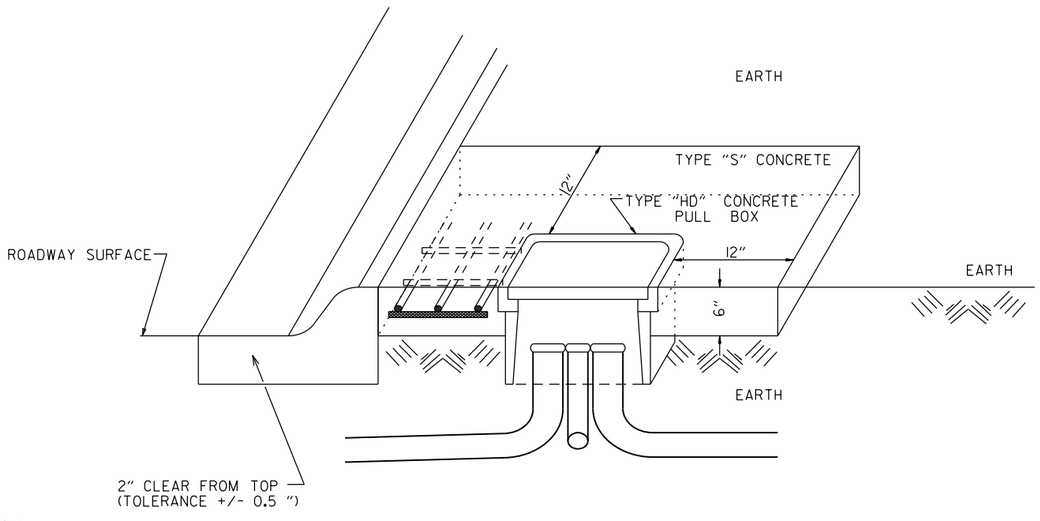


TOP



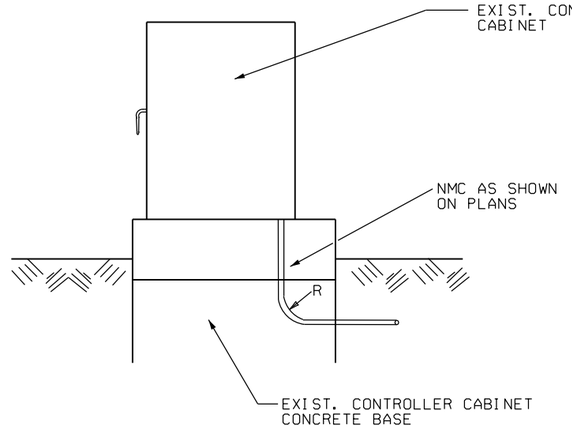
ELEVATION

TYPE "HD" CONCRETE PULL BOX DETAIL



NOTE:
ALL TYPE 1 HD, TYPE 2 HD, AND TYPE 3 HD CONCRETE PULL BOXES ARE INSTALLED WITH AN APRON OF CONCRETE 12" WIDE AND 6" 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.

CONDUIT ENTRY TO EXISTING CONTROLLER CABINET



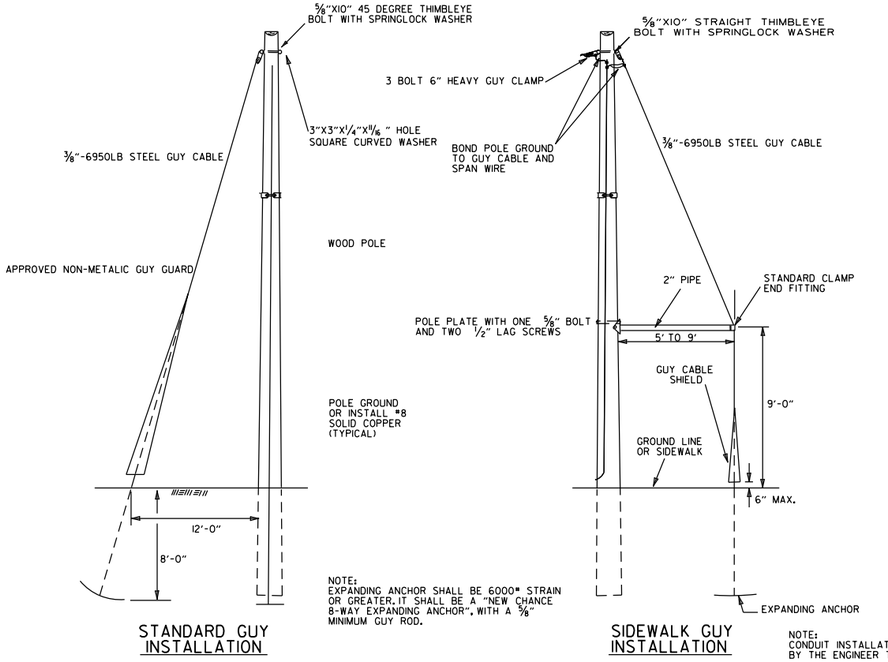
NOTE: ENTRY TO CABINET SHALL BE THROUGH A CUT IN THE BASE SUFFICIENT TO PROVIDE ADEQUATE CONDUIT RADIUS FOR ITEM.

DATE	REVISION	FILMED
02-13-24	REVISED NOTES AND TYPE "HD" CONCRETE PULL BOX DETAILS	
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	

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HEAVY DUTY PULL BOX

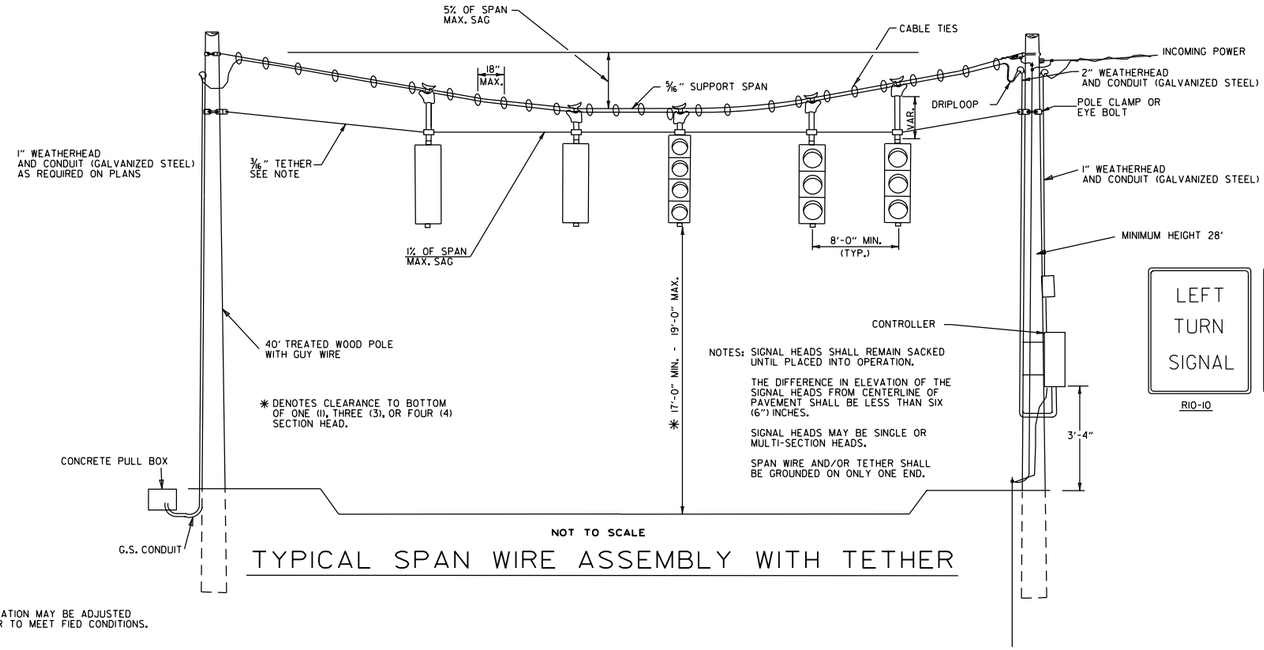
STANDARD DRAWING SD-6



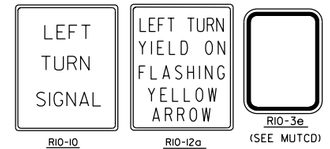
STANDARD GUY INSTALLATION

SIDEWALK GUY INSTALLATION

NOTE: CONDUIT INSTALLATION MAY BE ADJUSTED BY THE ENGINEER TO MEET FIED CONDITIONS.



TYPICAL SPAN WIRE ASSEMBLY WITH TETHER

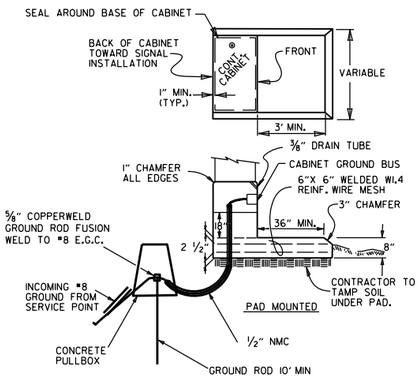


NOTES:
SPAN WIRE POLES SHALL BE MOUNTED A MINIMUM OF FOUR (4') FEET BEHIND CURB OR SHOULDER.

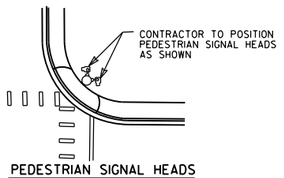
SPAN WIRE ASSEMBLIES WILL REQUIRE TETHER UNLESS OTHERWISE NOTED ON PLAN SHEETS.

CABLE TIES SHALL BE SUITABLE FOR OUTSIDE USE (BLACK).

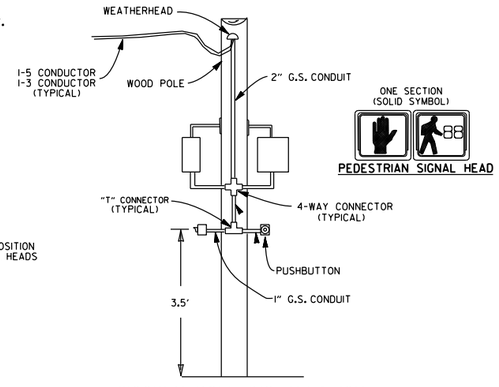
THE CONTROLLER POWER SUPPLY GROUND BUSS SHALL BE BONDED TO THE FOUNDATION GROUND ROD WITH A #8 A.W.G. SOLID COPPER WIRE. ON EXISTING FOUNDATIONS WITH NO GROUND ROD, CONTRACTOR SHALL INSTALL A 10' X 5/8" COPPERWELD GROUND ROD.



CONCRETE BASE MOUNTED CABINET DETAILS

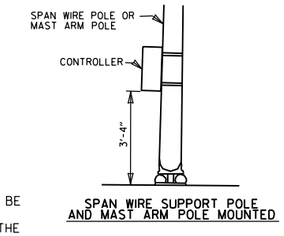


PEDESTRIAN SIGNAL HEADS

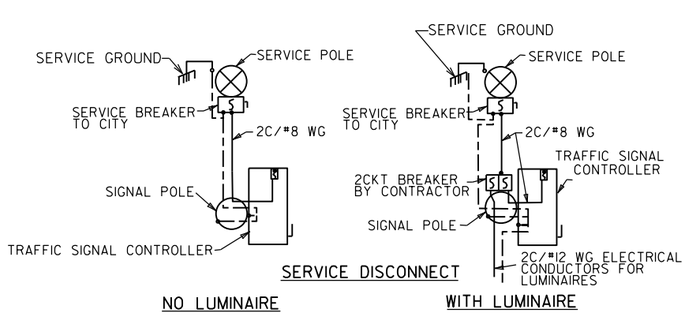


WOODEN POLE INSTALLATION OF PED HEADS

PEDESTRIAN SIGNAL HEAD



SPAN WIRE SUPPORT POLE AND MAST ARM POLE MOUNTED



SERVICE DISCONNECT

NO LUMINAIRE WITH LUMINAIRE

NOTE: ELECTRICAL GROUND CONDUCTOR IS BONDED TO ALL METAL ENCLOSURES

NOTES:

EACH ITEM "TRAFFIC SIGNAL HEAD (4 SEC., 1-WAY)" SHALL INCLUDE A SIGN (R10-12a) AS SHOWN, ATTACHED TO THE MAST ARM OR SPAN ASSEMBLY 12" TO THE RIGHT OF THE SIGNAL HEAD UNLESS REMOVED WITHIN SIGNAL PLAN NOTES.

EACH ITEM "TRAFFIC SIGNAL HEAD (3 SEC., 1-WAY)", TO BE USED AS A LEFT TURN INDICATION ONLY, SHALL INCLUDE A SIGN (R10-10) AS SHOWN, ATTACHED TO THE MAST ARM OR SPAN ASSEMBLY 12" TO THE RIGHT OF THE SIGNAL HEAD.

ALL SIGN BLANKS SHALL BE CONSTRUCTED OF ALUMINUM ALLOY (ASTM DESIGNATION B-209, ALLOY 5052-H38) WITH A THICKNESS OF 0.100 INCH.

ALL SIGN FACES SHALL BE CONSTRUCTED OF HIGH INTENSITY SHEETING (TYPE III) WITH SILKSCREEN LEGEND AND BORDER.

SIGNAL OPERATION NOTES:

FLASHING OPERATION - PRIOR TO NORMAL OPERATION, SIGNAL SHALL BE FLASHED FOR A PERIOD OF 3 TO 5 WORK DAYS. SIGNAL SHALL BE PLACED IN OPERATION ONLY ON A REGULAR WORK DAY, EXCEPT FRIDAY.

THE CONTRACTOR MAY BE REQUIRED TO ALTER THE FLASHING DISPLAY DURING THE TEMPORARY FLASH PERIOD. AT THE TIME THE INTERSECTION IS PLACED IN PERMANENT OPERATION, THE FLASH SEQUENCE SHALL THEN BE RETURNED TO THAT INDICATED ON THE PLAN SHEETS. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR THESE ALTERATIONS IN FLASH SEQUENCE.

CABINET NOTE:

UNLESS OTHERWISE DIRECTED BY THE ENGINEER, CABINET ORIENTATION SHALL BE SUCH THAT THE BACK OF THE CABINET IS PARALLEL TO THE STREET AND POSITIONED TO ALLOW VISIBILITY OF THE SIGNAL DISPLAY WHILE OBSERVING THE CONTROLLER FRONT PANEL.

MINIMUM STRUCTURAL REQUIREMENTS:

DESIGN SPECIFICATIONS: AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 4TH EDITION (2001) WITH 2003 AND 2006 INTERIMS.

CONSTRUCTION SPECIFICATIONS: STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION) WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

BASE WIND SPEED: 90 MPH

STEEL MEMBERS CONSIDERED MAIN LOAD CARRYING MEMBERS WITH THICKNESS GREATER THAN 1/2" SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TEST SPECIFIED IN SUBSECTION 807.05 OF THE STANDARD SPECIFICATIONS.

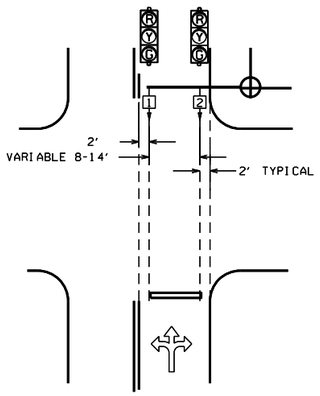
DATE	REVISION	FILMED
02-13-24	REVISED SPECIAL SIGN TO R10-12a SIGN	
11-16-17	REVISED NOTES, ADDED SPAN WIRE SUPPORT POLE DETAIL, ADDED PEDESTRIAN SIGNAL HEAD DETAIL	
02-27-14	REVISED NOTES.	
09-12-13	ISSUED AS STANDARD DRAWING	
07-21-11	REVISED PEDESTRIAN SIGN & GROUNDING	
04-17-08	REVISED TO 2001 AASHTO STANDARDS	
10-12-04	REV. CABINET ORIENTATION & SIGNAL OPERATION	
05-22-02	REV. TYP. SPAN WIRE ASSEMBLY	
12-27-99	REVISED	
11-18-98	REVISION TO NOTES	
11-21-95	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

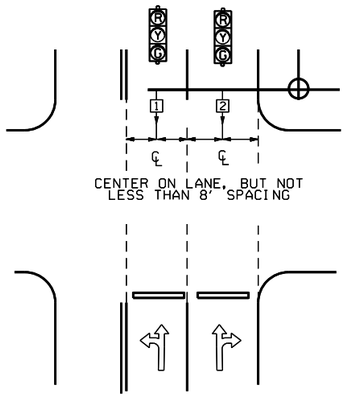
SPAN WIRE ASSEMBLY WOOD POLE

STANDARD DRAWING SD-7

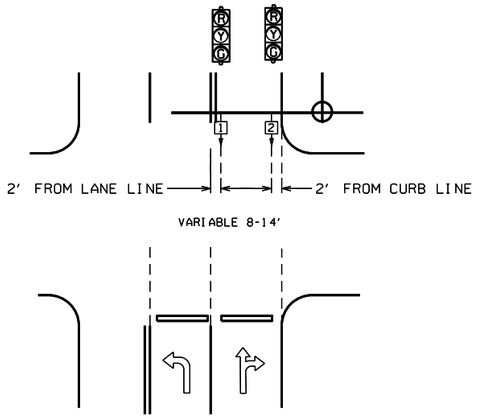
(A)



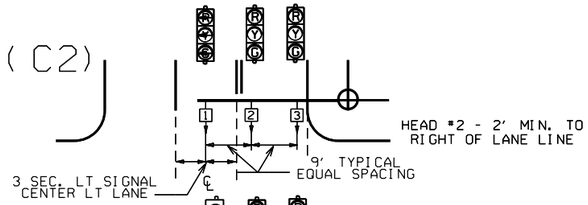
(B)



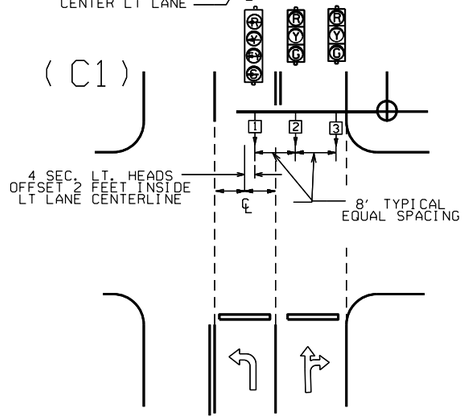
(C)



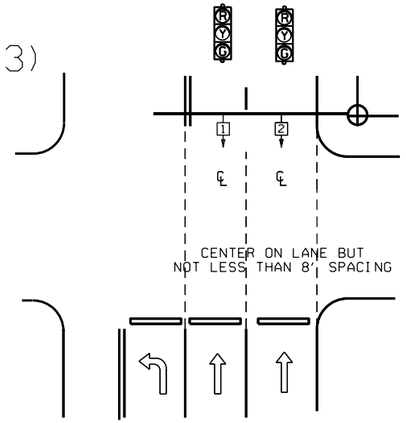
(C2)



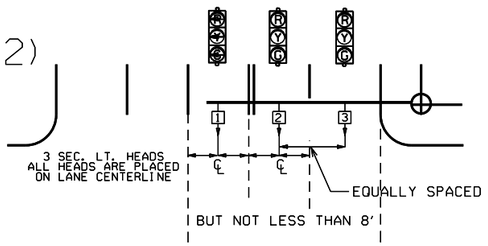
(C1)



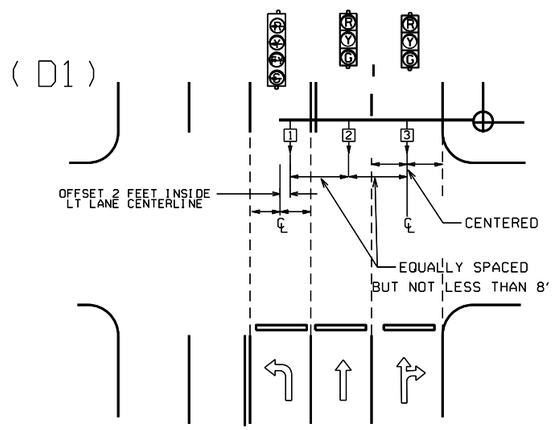
(C3)



(D2)

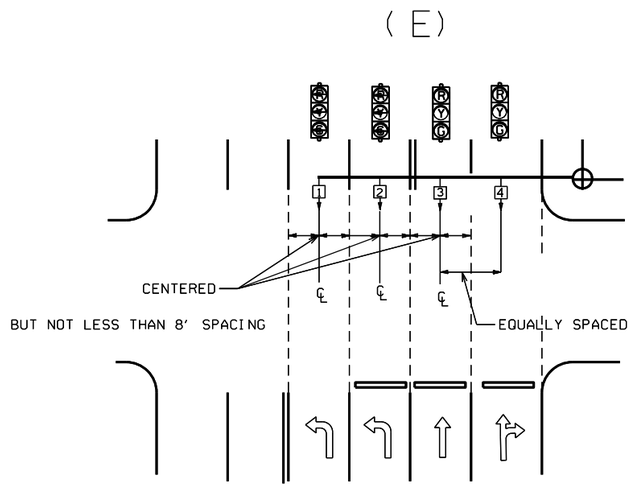


(D1)



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.

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

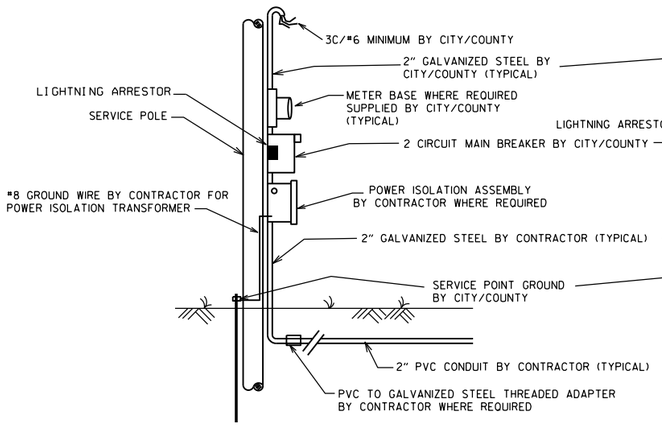
ARKANSAS STATE HIGHWAY COMMISSION

SIGNAL HEAD PLACEMENT

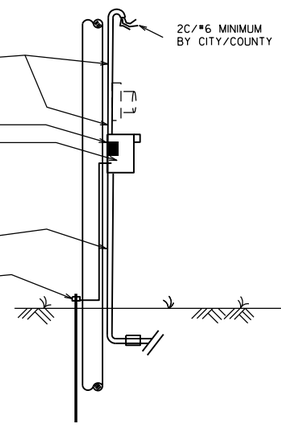
STANDARD DRAWING SD-8

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.

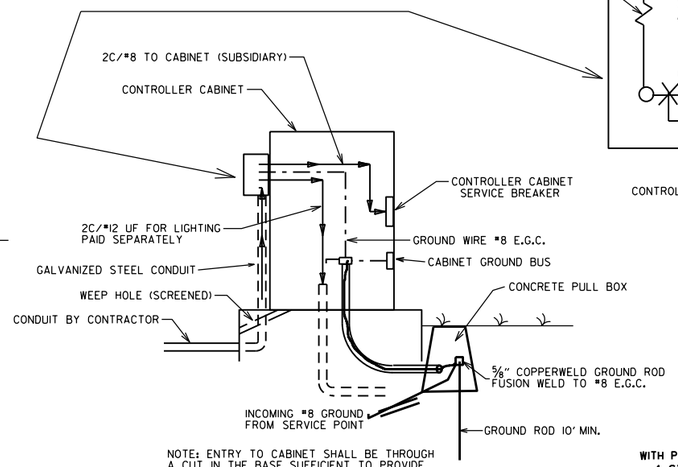
ALL SITUATIONS:
ELECTRICAL SERVICE SHALL BE PROVIDED BY THE CITY/COUNTY TO A SERVICE POLE WITH EXTERNAL RAINTIGHT BREAKER (MAIN BREAKER) AT A MUTUALLY ACCEPTABLE POINT WITHIN THE RIGHT-OF-WAY. SERVICE POINT INCLUDES GALVANIZED STEEL CONDUIT TO A POINT 18" BELOW GROUND LINE, TWO CIRCUIT MAIN BREAKER, 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.

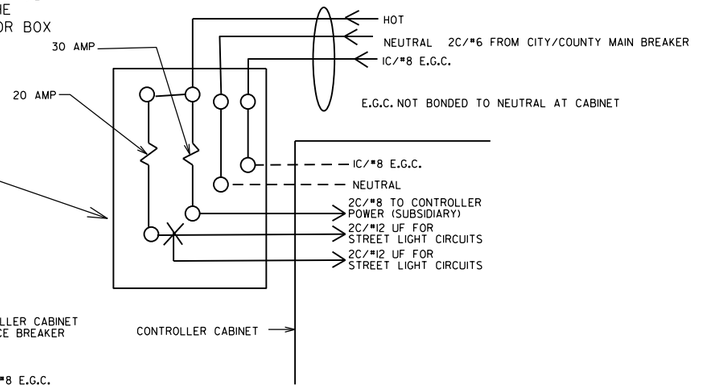
MAIN BREAKER NEAR CONTROLLER CABINET:
ALL COMPONENTS OF THE SERVICE POINT WITH THE EXCEPTION OF THE WIRE AND WIRING ABOVE THE MAIN BREAKER IS FURNISHED AND INSTALLED BY THE CONTRACTOR. WIRING FROM MAIN BREAKER INCLUDING CONNECTION TO THE UTILITY, IS THE RESPONSIBILITY OF THE CITY/COUNTY. IF METER LOOP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



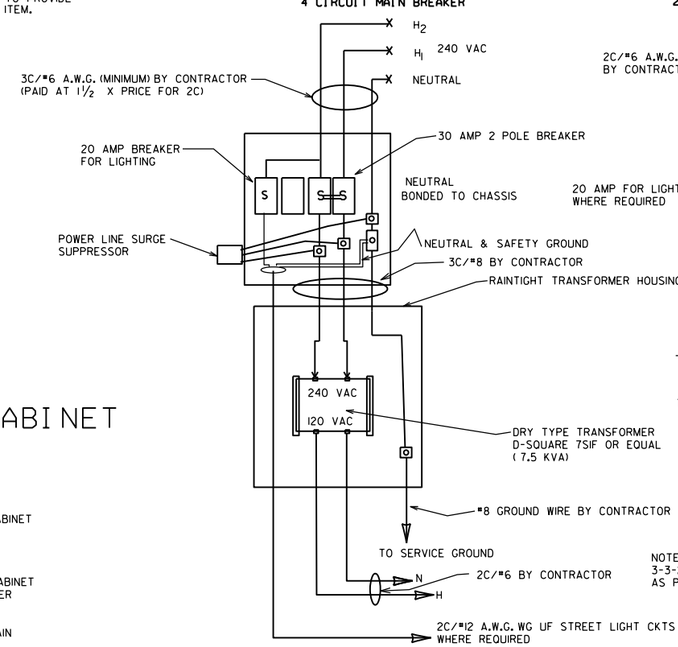
NOTE: ENTRY TO CABINET SHALL BE THROUGH A CUT IN THE BASE SUFFICIENT TO PROVIDE ADEQUATE CONDUIT RADIUS FOR ITEM.



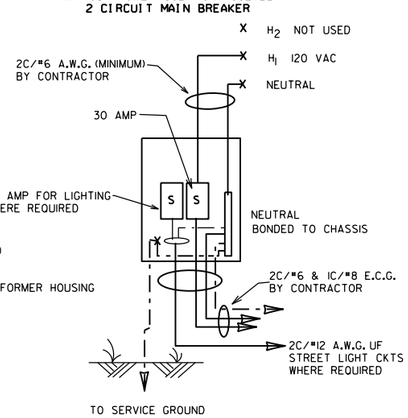
MAIN BREAKER WIRING (TYPICAL)

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

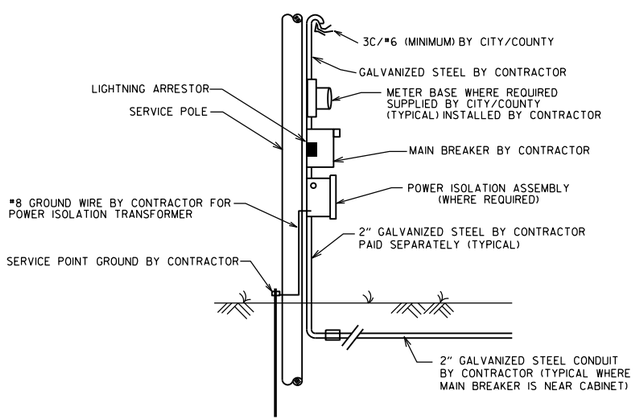


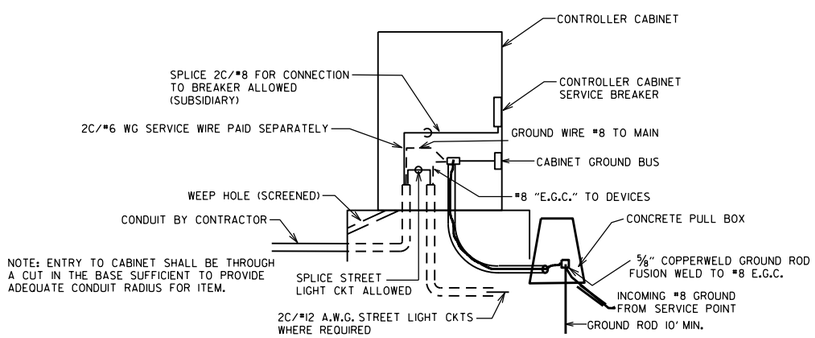
WITHOUT POWER ISOLATION ASSEMBLY
2 CIRCUIT MAIN BREAKER



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

NOTES:
PEDESTRIAN AND TRAFFIC SIGNAL HEAD SIGNS:
EACH ITEM "TRAFFIC SIGNAL HEAD (4 SEC., 1-WAY)" SHALL INCLUDE A SIGN (RIO-12a) AS SHOWN, ATTACHED TO THE MAST ARM OR SPAN ASSEMBLY 12" TO THE RIGHT OF THE SIGNAL HEAD UNLESS REMOVED WITHIN THE SIGNAL PLAN NOTES.

EACH ITEM "TRAFFIC SIGNAL HEAD (3 SEC., 1-WAY)" TO BE USED AS A LEFT TURN INDICATION ONLY SHALL INCLUDE A SIGN (RIO-10) AS SHOWN, ATTACHED TO THE MAST ARM OR SPAN ASSEMBLY 12" TO THE RIGHT OF THE SIGNAL HEAD.

EACH PEDESTRIAN PUSHBUTTON SHALL HAVE ONE RIO-3E SIGN ATTACHED TO THE POLE ABOVE THE BUTTON. ALL SIGNS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 723 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

ALL SIGN BLANKS SHALL BE CONSTRUCTED OF ALUMINUM ALLOY (ASTM DESIGNATION B-209, ALLOY 5052-H38) WITH THICKNESS OF 0.100 INCH.

GENERAL NOTES:
1. MAST ARM POLES SHALL BE MOUNTED A MINIMUM OF FOUR (4') FEET BEHIND CURB OR SHOULDER.

2. OCTAGONAL POLES AND ARMS MEETING THE REQUIREMENTS OF THE PLANS SPECIFICATIONS CAN BE INSTALLED IN LIEU OF ROUND. ALL POLES AND ARMS IN A JOB MUST BE THE SAME SHAPE.

3. MINIMUM STRUCTURAL REQUIREMENTS:
DESIGN SPECIFICATIONS: AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 4TH EDITION (2001) WITH 2003 AND 2006 INTERIMS.

USE FATIGUE CATEGORY I FOR ALL STRUCTURES ON ROUTES WHERE THE SPEED LIMIT IS 65 MPH AND GREATER AT THE STRUCTURE LOCATION AND ON ROUTES WHERE THE SPEED LIMIT IS GREATER THAN 45 MPH WITH AN MAST ARM OF 60' OR LONGER.

USE FATIGUE CATEGORY II FOR ALL STRUCTURES ON ROUTES WHERE THE SPEED LIMIT IS LESS THAN 65 MPH AND GREATER THAN 45 MPH WITH MAST ARMS LESS THAN 60' AND ON ROUTES WHERE THE SPEED LIMITS OF 45 MPH AND LESS WITH AN MAST ARM OF 60' OR LONGER.

USE FATIGUE CATEGORY III FOR ALL STRUCTURES WHERE THE SPEED LIMIT IS 45 MPH AND LESS AND MAST ARMS LESS THAN 60'.

CONSTRUCTION SPECIFICATIONS:
STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION) WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

BASE WIND SPEED: 90 MPH.

STEEL MEMBERS CONSIDERED MAIN LOAD CARRYING MEMBERS WITH A THICKNESS GREATER THAN ½" SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TEST SPECIFIED IN SUBSECTION 807.05 OF THE STANDARD SPECIFICATIONS.

DEAD LOAD: AS A MINIMUM, DESIGN SHALL BE BASED ON THE FIXED ATTACHMENTS SHOWN BELOW OR AS MODIFIED IN THE PLANS.

ALL SIGNAL HEADS TO BE ONE WAY, TWELVE (12") INCH AND HAVE FIVE (5") INCH BACK PLATES:

SIGNAL HEADS AT THE END OF MAST ARM - ONE 4 SEC., 85 LB., 14.5 SQ. FT., ONE SIGN MOUNTED 3 FEET FROM SIGNAL HEAD (2'-0" X 2'-6"; 20 LB.) REMAINING SIGNAL HEADS SPACED AT 8 FT. (3 SEC., 56 LB., 8.3 SQ. FT.):
DESIGN TO ACCOMMODATE:
2 SIGNAL HEADS FOR MAST ARMS 10 FT. TO 16 FT.
3 SIGNAL HEADS FOR MAST ARMS 18 FT. TO 24 FT.
4 SIGNAL HEADS FOR MAST ARMS OVER 26 FT.

STREET NAME SIGN - 72" X 18", 36 LB., MOUNTED SUCH THAT OUTSIDE EDGE IS NOT GREATER THAT 12 FT. FROM POLE. DEPENDING UPON POSITION OF SIGNAL HEAD ADJACENT TO POLE, SIGN MAY OVERLAP POLE SHAFT.
ROADWAY LUMINAIRES (WHERE REQUIRED ON PLAN SHEET) - VARIABLE ARM LENGTH (MAX. WT. 75 LB., 3.3 SQ. FT.)
PEDESTRIAN SIGNALS - TWO 1 SEC., 12 INCH MOUNTED 8 FT. FROM BASE OF POLE. POST MOUNTED 3 SEC. SIGNAL HEAD AT 10 FT. ON SIDE OF POLE.

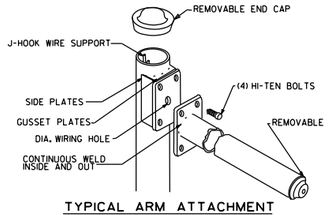
4. POLE/MAST ARM CAP - POLE AND MAST ARM CAPS SHALL BE PROVIDED, FABRICATED OF EITHER STEEL OR CAST ALUMINUM.

5. HAND HOLE - HAND HOLES SHALL BE 4 IN. X 6 IN. FOR STANDARD, AND 3 IN. X 5 IN. FOR PED POLES. MINIMUM PLACED APPROXIMATELY 12 INCHES FROM BASE, AND SHALL BE FIXED WITH A BOLT DOWN COVER. A VACCUM FORMED ABS COVER IS AN ACCEPTABLE ALTERNATE TO STEEL. POLES GREATER THAN 21FT. IN HEIGHT (FOR ROADWAY LUMINAIRE ATTACHMENT) SHALL INCLUDED A HAND HOLE WITHIN 12 INCHES OF MAST ARM(S) ATTACHMENT(S).

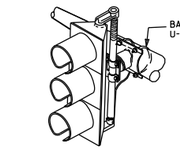
6. POLE/MAST ARM TAPER SLOPE - AVERAGE TAPER OF SIGNAL MAST ARMS AND POLE SHAFT SHALL BE 0.125 TO 0.15 INCHES PER FOOT.

MAST ARM CENTERLINE ANGLE AT ATTACHMENT POINT WITH POLE SHALL MAINTAIN NOT LESS THAN 0.5 DEGREES OR MORE THAN 4 DEGREES POSITIVE SLOPE WITH A LINE PERPENDICULAR TO THE POLE CENTERLINE. THE MAST ARM SHALL MAINTAIN A POSITIVE SLOPE AFTER IT IS PLACED UNDER LOAD.

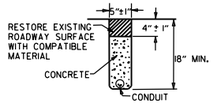
7. NUT COVERS - EACH POLE SHALL INCLUDE A BOLT DOWN NUT COVER FOR EACH ANCHOR BOLT.



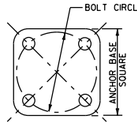
TYPICAL ARM ATTACHMENT



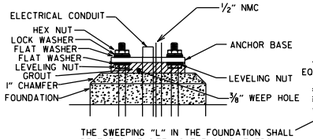
NOTE: THE SIGNAL SHALL BE CONNECTED TO THE MAST ARM BY BRACKETING AS DIRECTED BY THE ENGINEER.

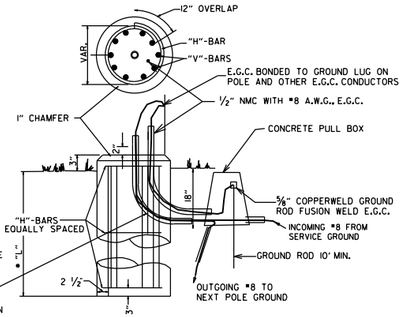


TRENCHING DETAIL
(FOR SAW CUT TRENCH IN ROADWAY)



ANCHOR BASE





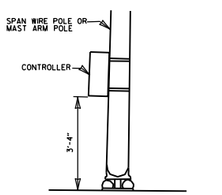
THE SWEEPING "L" IN THE FOUNDATION SHALL BE THE SAME SIZE AS THE CONDUIT FROM THE FOUNDATION TO THE PULL BOX AS SHOWN ON THE PLANS.

THE GROUND ROD SHALL BE FUSION WELDED TO A 1C/#8 A.W.G. SOLID COPPER GROUND WIRE. ATTACHMENT TO THE PRIMARY GROUND MAY BE BY AN APPROVED CLAMP. THE GROUND ROD IS TO BE LOCATED IN THE CONCRETE PULL BOX.

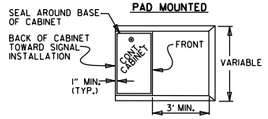
TYPICAL FOUNDATION DETAILS

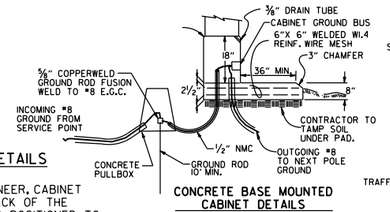
POLE FOUNDATION MINIMUM DIMENSIONS AND STEEL REINFORCING. ALL REINFORCING STEEL SHALL BE GRADE 40 MIN.

ARM LENGTH	FOUNDATION DIAMETER	DEPTH "L"*	STEEL		
			VERTICAL	HORIZONTAL	O.C.
PED	30"	7'-0"	12-#7 (6'-6")	10-#4	8.44"
2' TO 12'	30"	10'-6"	12-#7 (10'-0")	15-#4	8.42"
OVER 12' TO 20'	30"	11'-6"	12-#7 (11'-0")	16-#4	8.66"
OVER 20' TO 35'	36"	12'-6"	13-#8 (12'-0")	17-#4	8.88"
OVER 35' TO 50'	36"	13'-6"	13-#8 (13'-0")	19-#4	8.56"
OVER 50' TO 72'	42"	14'-6"	18-#8 (14'-0")	20-#4	8.74"
TWINS TO 20'	30"	16'-0"	12-#6 (15'-6")	22-#4	8.76"
TWINS OVER 20' TO 44'	36"	16'-0"	13-#8 (15'-6")	22-#4	8.76"
TWINS OVER 44' TO 50'	42"	16'-0"	18-#8 (15'-6")	22-#4	8.76"
TWINS OVER 50' TO 72'	42"	16'-6"	18-#8 (16'-0")	23-#4	8.64"



SPAN WIRE SUPPORT POLE AND MAST ARM POLE MOUNTED





CONCRETE BASE MOUNTED CABINET DETAILS

CONTROLLER CABINET MOUNTING DETAILS

NOTE:
UNLESS OTHERWISE DIRECTED BY THE ENGINEER, CABINET ORIENTATION SHALL BE SUCH THAT THE BACK OF THE CABINET IS PARALLEL TO THE STREET AND POSITIONED TO ALLOW VISIBILITY OF THE SIGNAL DISPLAY WHILE OBSERVING THE CONTROLLER FRONT PANEL.

8. GROUND ROD - A 10' X ⅝" GROUND ROD SHALL BE INSTALLED IN THE CONCRETE PULL BOX FOR EACH POLE AND THE CONTROLLER. PAYMENT FOR THE GROUND ROD AND ½" NMC SHALL BE INCLUDED IN ITEM 714 FOR SIGNAL POLES AND ITEM 701FOR THE CONTROLLER. THE CONCRETE PULL BOX AND CONDUCTOR BOX SHALL BE PAID SEPERATELY.

9. POLE BASE/FOUNDATION - ANCHOR BOLTS SHALL INCLUDE AS A MINIMUM, ONE LEVELING NUT, TWO FLAT WASHERS, ONE LOCK WASHER, AND ONE HEX NUT. PERIMETER OF ANCHOR BASE SHALL BE GROUTED WITH A ¼" WEEP HOLE. ALL CONCRETE SHALL BE CLASS "S" OR GREATER.

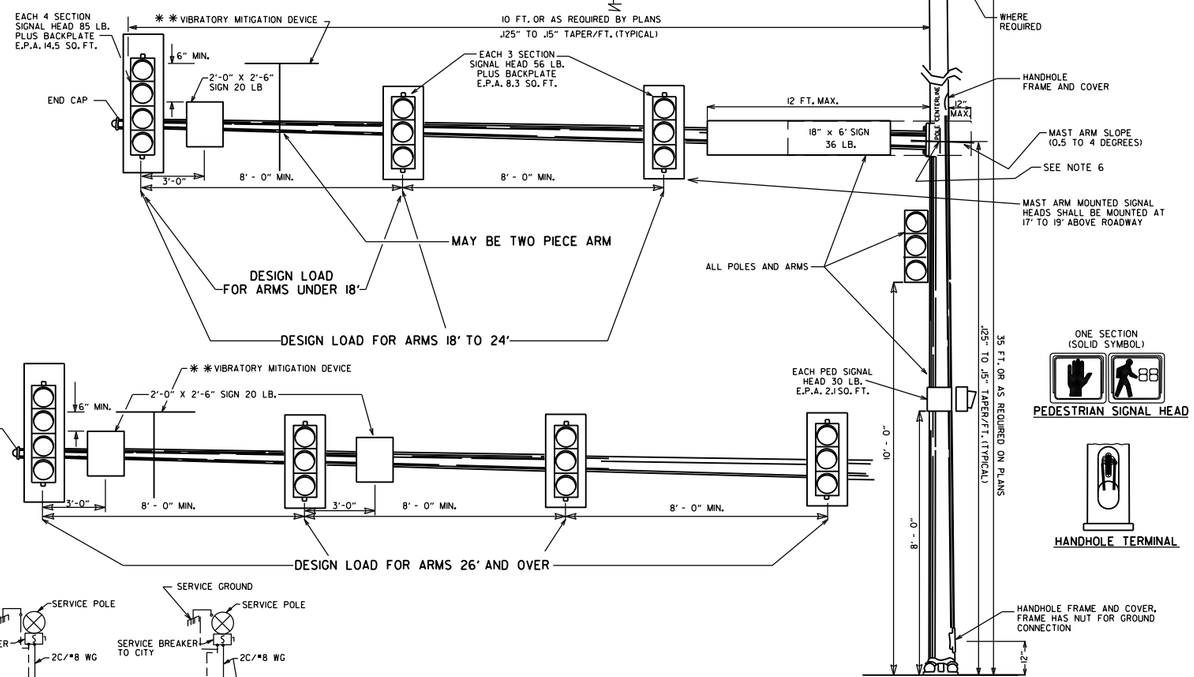
10. CONCRETE - ALL CONCRETE FOR CONTROLLER CABINET AND POLE FOUNDATIONS SHALL BE CLASS "S" OR GREATER.

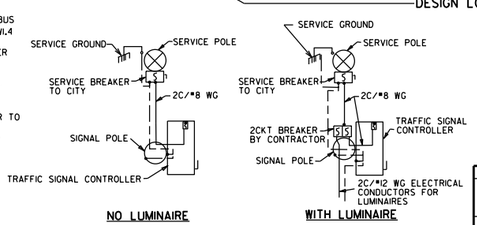
11. PEDESTRIAN PHASES - PEDESTRIAN MOVEMENTS SHALL BE PUSH BUTTON ACTUATED AND CONCURRENTLY TIMED, UNLESS OTHERWISE INDICATED ON THE PLAN SHEET(S). FURNISHING AND INSTALLING PEDESTRIAN PUSH SWITCH SHALL BE CONSIDERED SUBSIDIARY TO THE ITEM 707 PEDESTRIAN SIGNAL HEAD.

* WHEN THE GROUND ELEVATION AT THE POLE IS LOWER THAN THE ROADWAY ELEVATION, THE LENGTH OF FOUNDATION ABOVE THE GROUND MAY BE INCREASED TO PROVIDE THE REQUIRED SIGNAL HEAD CLEARANCE ABOVE THE ROADWAY. WHEN THE REQUIRED LENGTH OF FOUNDATION ABOVE THE GROUND IS 18" OR LESS, NO INCREASE IN DEPTH "L" WILL BE REQUIRED. WHEN THE REQUIRED LENGTH OF FOUNDATION ABOVE THE GROUND IS 5'-6" OR LESS, INCREASE DEPTH "L" BY 1'-0". FOR LENGTHS GREATER THAN 5'-6", DEPTH "L" SHALL BE ADJUSTED AS DIRECTED BY THE ENGINEER. LONGITUDINAL REINFORCING, AS SHOWN IN THE TABLE, SHALL BE PROVIDED FOR THE LENGTH OF THE EXTENDED SHAFT AND #4 TIES SHALL BE PROVIDED AT A SPACING NOT TO EXCEED 9" ON CENTERS. PAYMENT WILL BE IN ACCORDANCE WITH SECTION 714 TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION OF THE STANDARD SPECIFICATIONS.

** IN LIEU OF DESIGNING THE STRUCTURE TO RESIST PERIODIC GALLOPING, A VIBRATORY MITIGATION DEVICE MAY BE PROVIDED BY THE POLE MANIFACTURER. THE VIBRATORY MITIGATION DEVICE SHALL BE AN ANTI-GALLOPING PANEL CONSISTING OF A 60" X 16" X 0.125" SIGN BLANK MOUNTED NEAR THE END OF THE MAST ARM NOT TO EXCEED ONE QUARTER OF THE LENGTH OF THE MAST ARM FROM THE END OF THE MAST ARM WITH THE LONG AXIS OF THE PANEL COLLINEAR WITH THE LONG AXIS OF THE MAST ARM. THE PANEL SHOULD BE MOUNTED AT SUCH THE HEIGHT AS TO PROVIDE AT LEAST 6" CLEAR FROM THE TOP OF ANY SIGNAL ASSEMBLY OF SIGN PANEL LOCATED ON THE MAST ARM WITHIN THE LENGTH OF THE ANTI-GALLOPING PANEL.

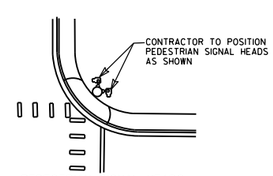
TRUCK-INDUCED GUST LOADS SHALL BE EXCLUDED FOR FATIGUE DESIGN FOR ALL STRUCTURES EXCEPT MAST ARMS MOUNTED OVER FACILITIES WITH POSTED SPEEDS OF 65 MPH OR GREATER AT THE LOCATION OF THE STRUCTURE.





SERVICE DISCONNECT

NOTE: ELECTRICAL GROUND CONDUCTOR IS BONDED TO ALL METAL ENCLOSURES



PEDESTRIAN SIGNAL HEADS

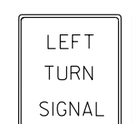
SIGNAL OPERATION NOTES:

FLASHING OPERATION - PRIOR TO NORMAL OPERATION, SIGNAL SHALL BE FLASHED FOR A PERIOD OF 3 TO 5 WORK DAYS OR AS DIRECTED BY THE ENGINEER. SIGNAL SHALL BE PLACED IN OPERATION ONLY ON A REGULAR WORK DAY, EXCEPT FRIDAY.

THE CONTRACTOR MAY BE REQUIRED TO ALTER THE FLASHING DISPLAY DURING THE TEMPORARY FLASH PERIOD. AT THE TIME THE INTERSECTION IS PLACED IN PERMANENT OPERATION, THE FLASH SEQUENCE SHALL THEN BE RETURNED TO THAT INDICATED ON THE PLAN SHEETS. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR THESE ALTERATIONS IN FLASH SEQUENCE.

SPECIAL NOTE: 90 MPH WIND ZONE DESIGN, SEE NOTE 3. MINIMUM STRUCTURAL REQUIREMENTS.

DATE	REVISION	FILMED
02-13-24	REVISED SPECIAL SIGN TO RIO-12a SIGN	
11-16-17	REVISED NOTES, ADDED PEDESTRIAN SIGNAL HEAD DETAIL, ADDED HANDHOLE TERMINAL DETAIL, ADDED TRENCHING DETAIL	
02-27-14	REVISED NOTES.	
09-12-13	ISSUED AS STANDARD DRAWING	
12-08-16	REVISED NOTES	
02-27-14	REVISED NOTES	
09-12-13	ISSUED AS STANDARD DRAWING	
07-21-11	REVISED VMD, SIGNAL HEADS	
05-21-09	REVISED GROUNDING	
07-31-08	REVISED GROUNDING	
04-25-08	ADDED VIBRATORY MITIGATION DEVICE & NOTES	
04-18-08	REVISED AASHTO NOTES	
04-17-08	REVISED TO 2001 AASHTO STANDARDS	
10-12-04	REVISED CABINET ORIENTATION	
06-23-04	REVISED	
05-11-04	REV. NOTE 3/AASHTO REQUIREMENTS	
06-11-01	REV. NOTES & POLE MAST ARM SLOPE	
04-11-01	REVISED POLE TAPERS	
04-25-00	REV. NOTES & SIGNAL HEAD PLACEMENT	
11-22-99	REVISED FOUNDATION DETAILS	
11-17-98	REVISED DETAILS AND NOTES	
11-21-95	ISSUED	



RIO-10



RIO-12a

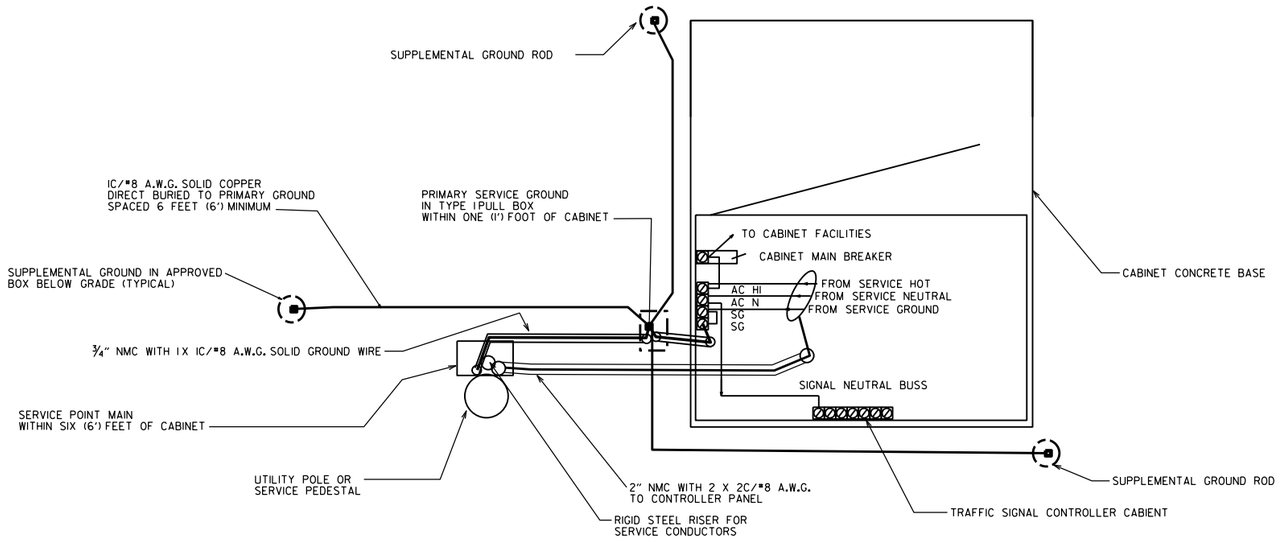


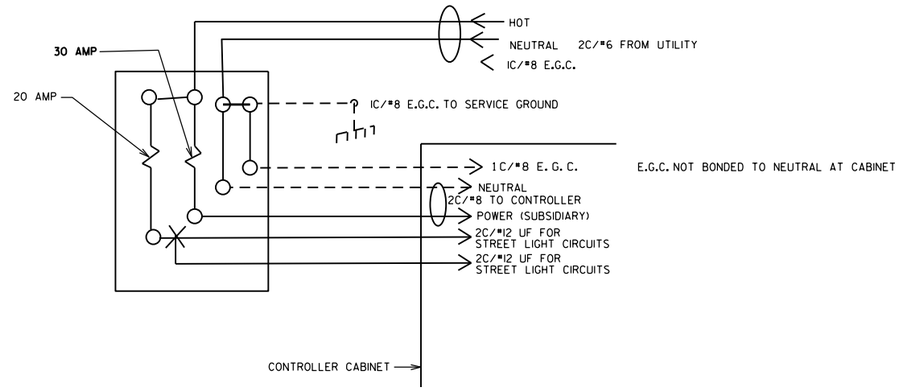
RIO-3e
(SEE MUTCD)

ARKANSAS STATE HIGHWAY COMMISSION

STEEL POLE WITH MAST ARM

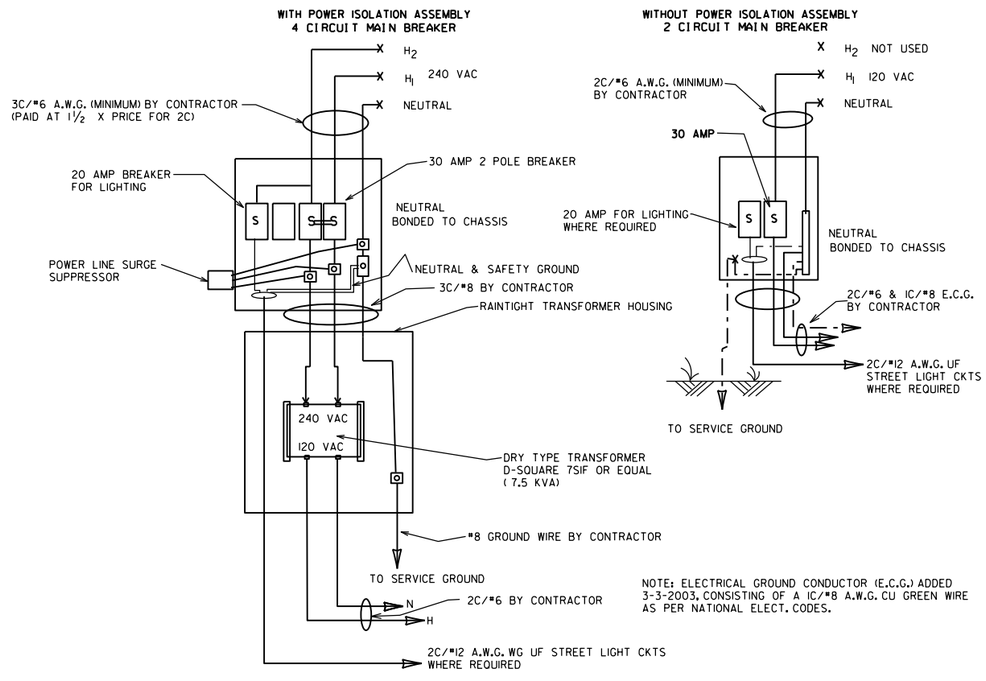
STANDARD DRAWING SD-11





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.



NOTES:

LOCATION OF SERVICE:
TO MEET THE REQUIREMENTS FOR SAFETY AND MAXIMIZE LIGHTNING PROTECTION. THE "SERVICE POINT MAIN" FROM THE UTILITY PRIMARY SERVICE POINT MUST BE WITHIN SIX (6') FEET OF THE TRAFFIC SIGNAL CONTROLLER CABINET. ELECTRICAL SERVICE SHALL BE PROVIDED BY THE CITY/COUNTY TO A SERVICE POLE OR PEDESTAL WITH EXTERNAL RAINTIGHT BREAKER (MAIN BREAKER) AT A MUTUALLY ACCEPTABLE POINT WITHIN THE RIGHT-OF-WAY. SERVICE POINT INCLUDES GALVANIZED STEEL CONDUIT TO A POLE 18" BELOW GROUND LINE, TWO CIRCUIT MAIN BREAKER, 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 RESPONSIBILITY OF THE CITY/COUNTY.

METER LOOP:
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 ISTALLED BY THE CONTRACTOR.

SUPPLEMENT GROUND RODS:
SUPPLEMENT GROUND RODS ARE FUSION WELDED TO IC/#8 A.W.G. SOLID COPPER GROUND WIRE. ATTACHMENT TO PRIMARY GROUND MAY BE AN APPROVED CLAMP. GROUND RODS ARE LOCATED IN A BOX APPROVED BY THE ENGINEER MEETING THE SAME LOADING REQUIREMENTS AS SECTION 711 CONCRETE PULL BOX OF THE STANDARD SPECIFICATIONS, WITH THE EXCEPTION TO DIMENSIONS. THE CONCRETE PULL BOX MAY BE EITHER ROUND OR SQUARE APPROXIMATELY SIX (6") INCHES MINIMUM INSIDE DIMENSIONS AND SIX (6") INCHES DEPTH. (STRONGWELL PC0608BA06 WITH PC0608CA00 LID OR EQUAL).

DATE	REVISION	FILMED
11-07-19	REVISED NOTES	
11-16-17	REVISED NOTES	
09-12-13	ISSUED AS STANDARD DRAWING	
01-17-08	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

SERVICE POINT INSTALLATION WITH SUPPLEMENT GROUNDING ARRAY

STANDARD DRAWING SD-12

SUPERELEVATION TABLE FOR ONE - WAY TRAFFIC

DEGREE OF CURVE	30 MPH			35 MPH			40 MPH			45 MPH			50 MPH			55 MPH			60 MPH			65 MPH			70 MPH			75 MPH		
	e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)	
		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE
0° 15'	NC			NC			NC			NC			NC			NC			NC			NC			NC			NC		
0° 30'	NC			NC			NC			NC			NC			NC			RC	115		RC	115		RC	115		0.022	121	
0° 45'	NC			NC			NC			NC			RC	115		RC	115		0.024	127		0.026	132		0.030	144		0.032	150	
1° 00'	NC			NC			NC			RC	108		0.022	121		0.026	132		0.030	144		0.034	156		0.038	167		0.042	179	350
1° 15'	NC			NC			RC	101		0.022	114		0.028	138		0.032	150		0.038	167		0.042	179		0.046	190	350	0.052	208	
1° 30'	NC			RC	94		0.022	106		0.028	130		0.032	150		0.038	167		0.044	185		0.050	202	350	0.056	218		0.062	236	
1° 45'	RC	86		RC	94		0.026	116		0.030	136		0.036	161		0.044	185		0.050	202	350	0.056	218		0.064	242		0.070	259	
2° 00'	RC	86		0.024	103		0.028	121		0.034	146		0.042	179		0.048	196		0.056	218		0.064	242		0.070	259		0.080	288	400
2° 15'	RC	86		0.026	108		0.032	131		0.038	157		0.046	190		0.054	214		0.062	236		0.070	259		0.078	282	400	0.088	311	
2° 30'	0.022	90		0.028	113		0.034	136		0.042	168		0.050	202		0.058	224	350	0.068	253		0.076	276		0.086	305		0.096	334	450
2° 45'	0.024	95		0.030	118		0.038	146		0.046	179		0.054	214		0.064	242		0.072	265		0.082	294		0.092	323		0.100	346	
3° 00'	0.026	100		0.034	126		0.040	151		0.050	190	300	0.058	224		0.068	253		0.078	282		0.088	311		0.098	340	450	D MAX = 2° 45'		
3° 15'	0.028	103		0.036	131		0.044	161		0.052	194		0.062	236		0.072	265		0.082	294		0.092	323		0.100	346				
3° 30'	0.030	108		0.038	136		0.046	167	250	0.056	205		0.066	247		0.076	276		0.086	305		0.096	334		D MAX = 3° 30'					
3° 45'	0.032	112		0.040	140		0.050	176		0.058	211		0.070	259		0.080	288		0.090	317		0.098	340							
4° 00'	0.034	116		0.042	145	250	0.052	181		0.062	222		0.072	265		0.084	300		0.094	329	400	0.100	346							
4° 15'	0.036	120		0.044	150		0.054	186		0.064	227		0.076	276		0.086	305		0.096	334		D MAX = 4° 15'								
4° 30'	0.036	120		0.046	155		0.056	192		0.068	238		0.078	282		0.090	317	400	0.098	340										
4° 45'	0.038	125		0.048	160		0.060	202		0.070	244		0.082	294		0.092	323		0.100	346										
5° 00'	0.040	130		0.050	164		0.062	206		0.072	248		0.084	300		0.094	329		D MAX = 5° 15'										
5° 30'	0.044	138		0.054	173		0.066	217		0.078	265		0.088	311		0.098	340												
6° 00'	0.046	143	250	0.058	182		0.070	227		0.082	276		0.092	323		0.100	346												
6° 30'	0.050	151		0.062	192		0.074	238		0.086	287		0.096	334	350	D MAX = 6° 30'													
7° 00'	0.052	156		0.064	197		0.078	247		0.090	298		0.098	340															
7° 30'	0.054	160		0.068	206		0.080	252		0.092	302	350	0.100	346															
8° 00'	0.058	168		0.070	211		0.084	263		0.094	308		D MAX = 8° 25'																
8° 30'	0.060	173		0.072	215		0.086	268	300	0.096	313																		
9° 00'	0.062	178		0.076	224		0.088	272		0.098	319																		
9° 30'	0.064	181		0.078	229		0.092	282		0.100	324																		
10° 00'	0.066	186		0.080	234		0.094	288		D MAX = 10° 30'																			
11° 00'	0.070	194		0.084	244		0.096	293																					
12° 00'	0.074	203		0.088	253	300	0.098	298																					
13° 00'	0.076	208		0.090	258		0.100	302	350																				
14° 00'	0.080	216		0.094	266		D MAX = 13° 45'																						
15° 00'	0.082	221		0.096	271																								
16° 00'	0.086	229		0.098	276																								
17° 00'	0.088	233		0.100	281																								
18° 00'	0.090	238		D MAX = 19° 30'																									
19° 00'	0.092	242																											
20° 00'	0.094	246																											
21° 00'	0.096	251	300																										
22° 00'	0.096	251																											
23° 00'	0.098	254																											
24° 00'	0.098	254																											
25° 00'	0.100	259																											
D MAX = 28° 30'																													

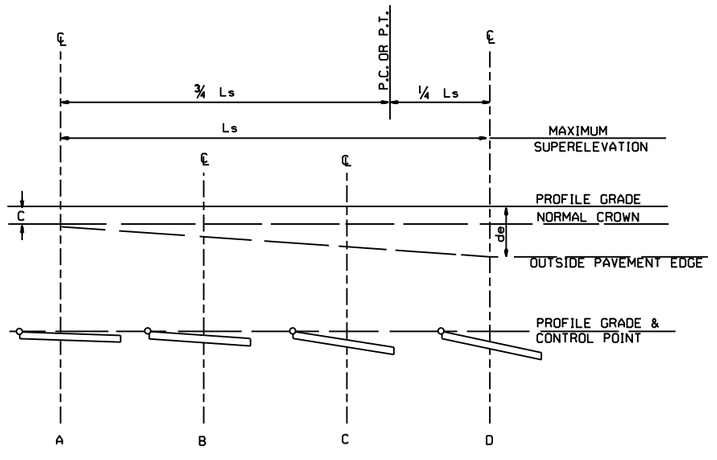
GENERAL NOTES

1. ON PAVEMENT WITH ONE-WAY TRAFFIC, THE SUPERELEVATION SHALL BE REVOLVED ON THE PROFILE GRADE POINT.
2. SUPERELEVATION VALUES SHOWN ON THE CROSS SECTIONS ARE VALUES (+) OR (-) TO BE ADDED OR SUBTRACTED FROM THE POINT OF CONTROL.
3. LENGTHS FOR Ls MAY BE ROUNDED IN MULTIPLES OF 25 FT. OR 50 FT. TO PERMIT SIMPLER CALCULATIONS.
4. MINIMUM Ls VALUES MAY BE USED FOR RAMPS; DESIRABLE VALUES SHALL APPLY TO MAIN LANES.
5. DIVIDED PAVEMENTS WIDER THAN 4 LANES SHALL HAVE ADDITIONAL TRANSITION LENGTHS AS FOLOWS:

6 LANE DIVIDED---------+20%
8 LANE DIVIDED---------+50%

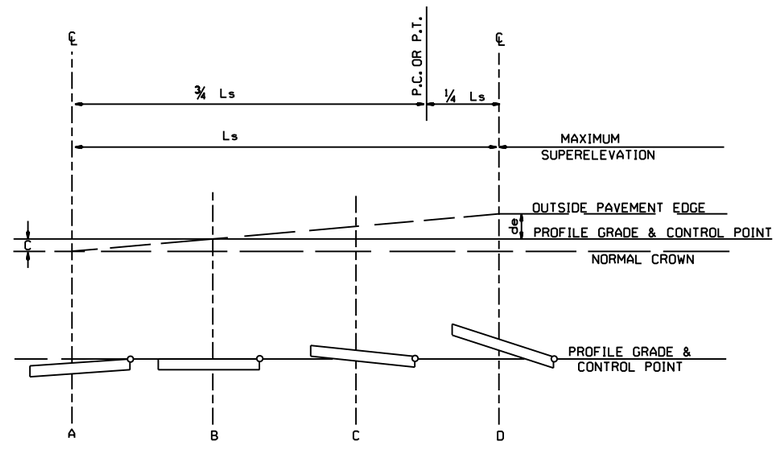
ABBREVIATIONS

NC - NORMAL CROWN
RC - REVERSE CROWN, SUPERELEVATION AT NORMAL CROWN SLOPE
S - SUPERELEVATION
L - DISTANCE FROM BEGINNING OF SUPERELEVATION TRANSITION TO ANY POINT (FT.)
d - WIDTH OF PAVEMENT
e - MAXIMUM RATE OF SUPERELEVATION (FT. PER FT.)
Ls - LENGTH OF SUPERELEVATION TRANSITION (FT.)
C - NORMAL CROWN (FT.)



ONE-WAY TRAFFIC
INSIDE LANE

SUPERELEVATION FORMULA = $S = -\frac{L(de-C)}{Ls} - C$



ONE-WAY TRAFFIC
OUTSIDE LANE

SUPERELEVATION FORMULA = $S = +\frac{L(de+C)}{Ls} - C$

DATE	REVISION	DATE FILLMED
11-07-19	REVISED SUPERELEVATION TABLE	
01-09-87	ISSUED	578-1-15-87

ARKANSAS STATE HIGHWAY COMMISSION

TABLES AND METHOD OF SUPERELEVATION FOR ONE-WAY TRAFFIC

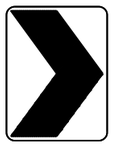
STANDARD DRAWING SE-1



R1-1
30"X30"



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



W1-8
18"X24"



W2-5
30"X30"



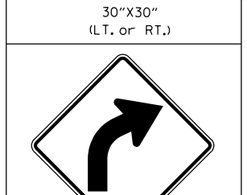
W3-1
36"X36"



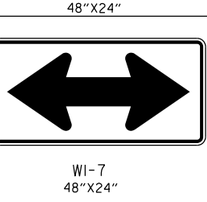
W5-1
36"X36"



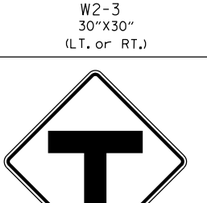
M6-3
21"X15"



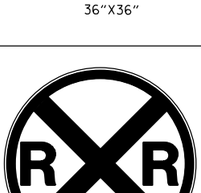
R1-2
36"X36"X36"



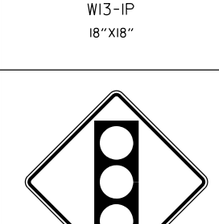
W1-4
30"X30"
(LT. or RT.)



W2-1
30"X30"



S1-1
36"X36"



W3-2
36"X36"

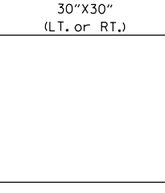


County
Route Marker
M1-6
24"X24"

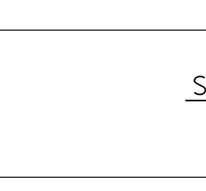
NOTE: REFLECTORIZED YELLOW LEGEND (COUNTY NAME, ROUTE LETTER & NUMBER) & BORDER ON A BLUE BACKGROUND.



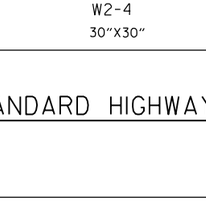
M6-4
21"X15"



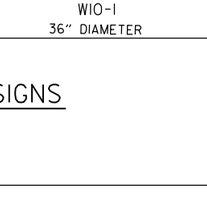
R2-1
24"X30"



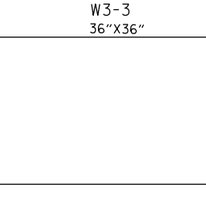
W1-5
30"X30"
(LT. or RT.)



W2-2
30"X30"

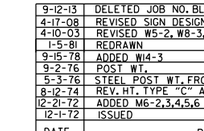


W5-2
36"X36"



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"

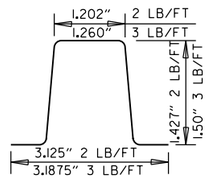
S4-3P
24"X8"

S4-2P
24"X10"

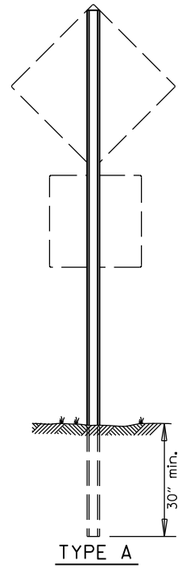
OM-3
12"X36"
(LT. or RT.)

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

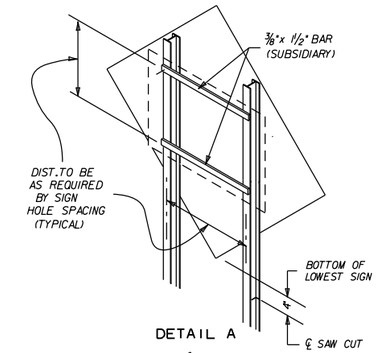
DATE	REVISION	DATE FILMED
9-12-13	DELETED JOB NO. BLOCK; REVISED RI-3 TO RI-3P	
4-17-08	REVISED SIGN DESIGNATION - W3-1 & W3-2	
4-10-03	REVISED W5-2, W8-3, OM-3; ADDED WI-8	
1-5-81	REDRAWN	960-1-15-81
9-15-78	ADDED WI4-3	877-9-15-78
9-2-76	POST WT.	623-9-3-76
5-3-76	STEEL POST WT. FROM 2"-3"; ADDED S4-2 & 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

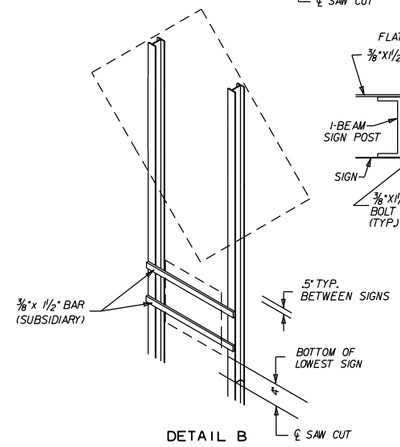
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD HIGHWAY SIGNS AND SUPPORT ASSEMBLIES

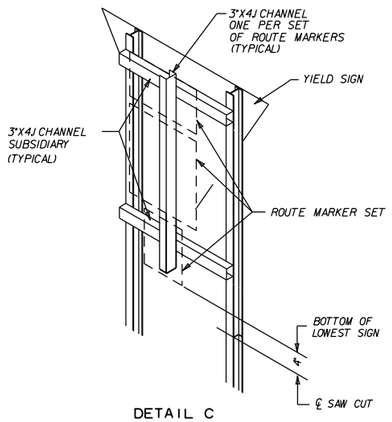
STANDARD DRAWING SHS-1



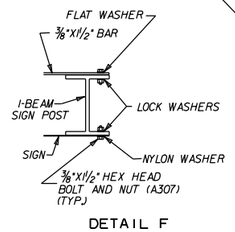
DETAIL A



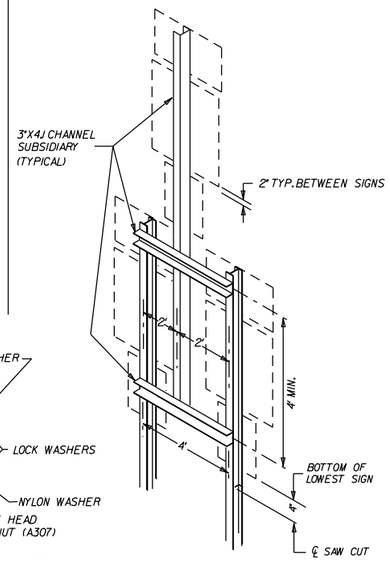
DETAIL B



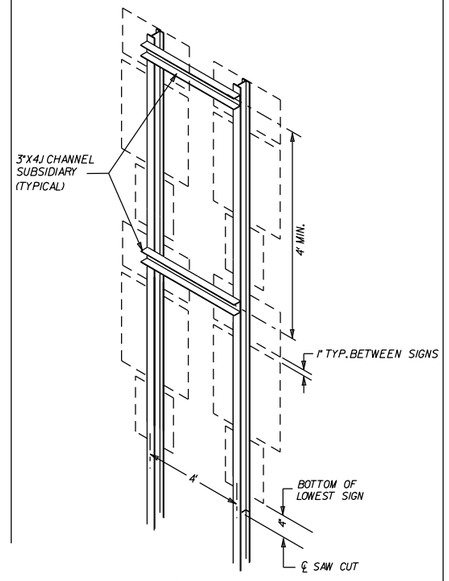
DETAIL C



DETAIL F



DETAIL D



DETAIL E

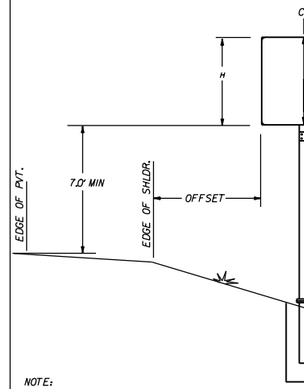
NOTE

ALL ADDITIONAL MOUNTING HARDWARE, BOLTS, NUTS, CHANNELS AND BAR STRAPS REQUIRED TO MOUNT SECONDARY SIGNS WILL BE CONSIDERED TO BE SUPPLEMENTAL TO THE MAIN SIGN SUPPORT SPECIFIED. PAYMENT WILL BE CONSIDERED SUBSIDIARY TO THE MAIN SUPPORT.

THE GALVANIZED STEEL CHANNEL AND BAR SUPPORTS MAY BE ASTM A-36.

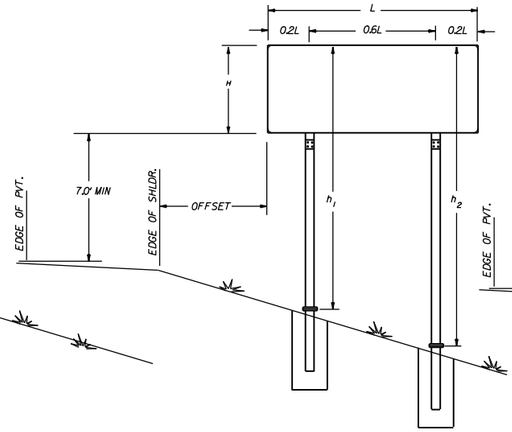
REFER TO THE P.C. RUTLEDGE FORMULA ON PAGE 58 OF THE AASHTO PUBLICATION "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS.

ALL BOLT HOLES SHALL BE 1/8" DIA. UNLESS OTHERWISE SHOWN.

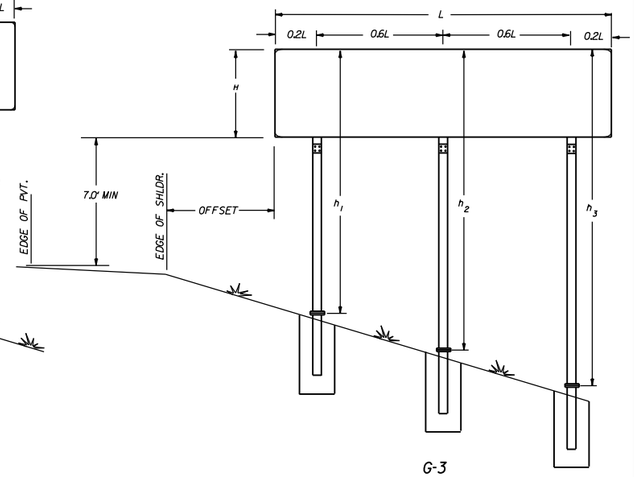


G-1

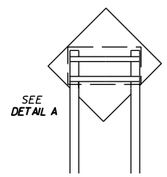
NOTE:
THE OFFSET WILL BE A MINUTE OF 10' FROM THE EDGE OF PAVED SURFACE OR AS DIRECTED BY THE ENGINEER.



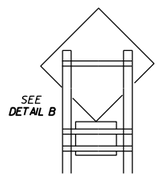
G-2



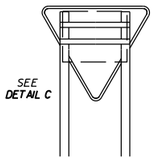
G-3



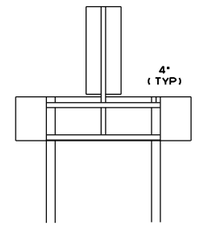
G2-1



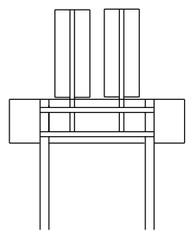
G2-2



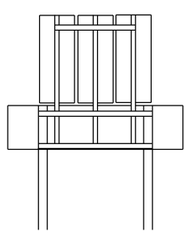
G2-3



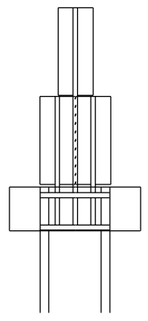
G2-4



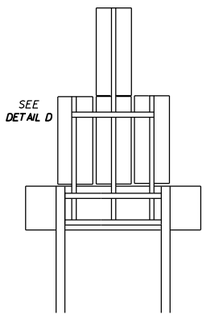
G2-5



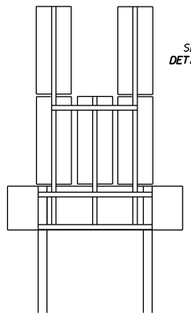
G2-6



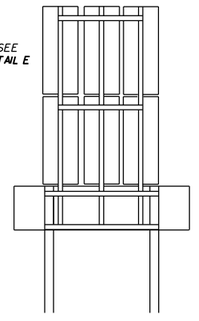
G2-7



G2-8

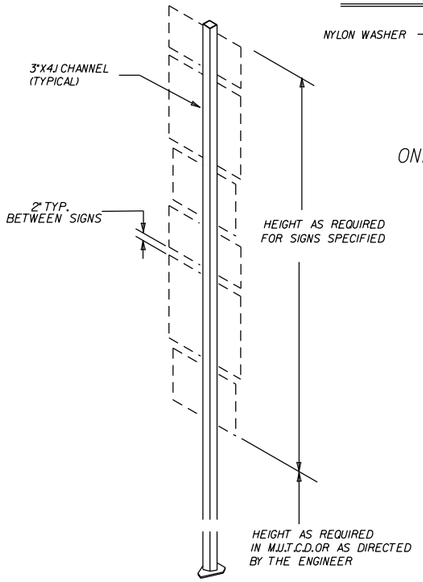


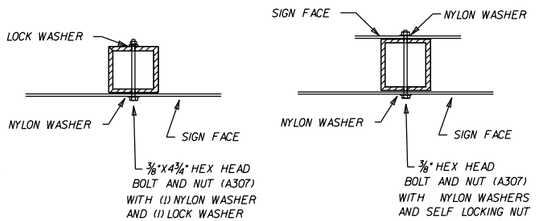
G2-9



G2-10

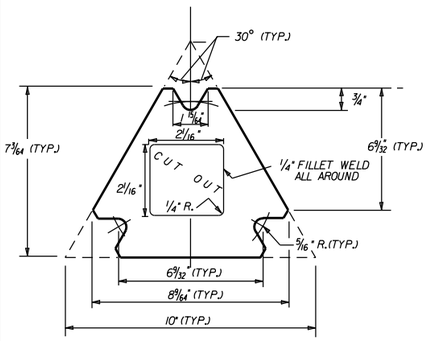
			ARKANSAS STATE HIGHWAY COMMISSION
			DETAIL OF BREAKAWAY SIGN SUPPORTS FOR STANDARD SIGNS
9-12-13	ISSUED		STANDARD DRAWING SHS-4
DATE	REVISION	FILMED	



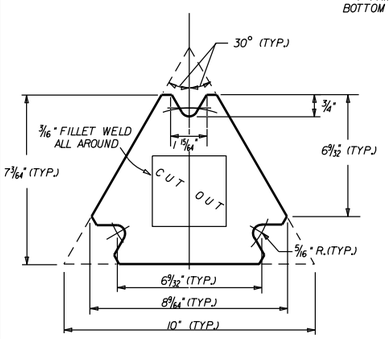


CHANNEL SHALL BE FULL LENGTH OF RECTANGULAR AND SQUARE SIGNS AND SHALL EXTEND 1½" BEYOND BOLT HOLES ON DIAMOND OR IRREGULAR SHAPED SIGNS.

MOUNTING HARDWARE



TOP PLATE



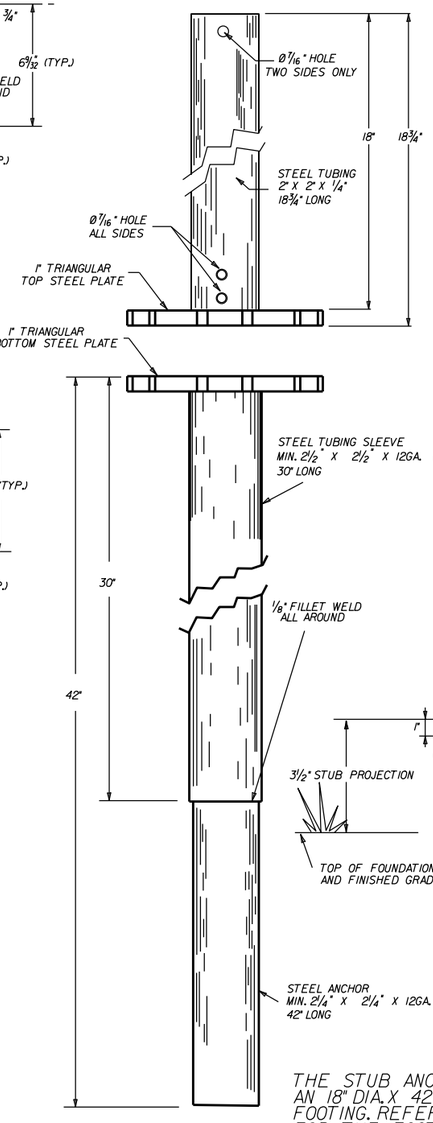
BOTTOM PLATE

GENERAL NOTES:

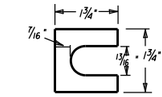
THE TOP PLATE OF TRIANGULAR SLIP BASES SHALL HAVE THE SAME EXTERIOR DIMENSIONS AS THE BOTTOM PLATE.

INSIDE DIAMETER OF THE SIGN POST SHALL BE CUT THROUGH THE CENTER OF THE TOP PLATE WITH THE HOLE EDGE BEVELED AS SHOWN. THE BEVEL END SHALL BE TANGENT TO THE BOLT HOLE . ANY MISALIGNMENT SHALL BE REMOVED BY GRINDING . FACE OF BEVEL SHALL BE FINISHED TO A MINIMUM SMOOTHNESS OF 1•500 .

OTHER MASH COMPLIANT BREAKAWAY SIGN SUPPORTS THAT HAVE THE SAME TOP PLATE DIMENSIONS AND SUPPORT 2¼" X 2¼" SQUARE TUBE SIGN POSTS MAY BE SUBSTITUTED AS APPROVED BY THE ENGINEER.

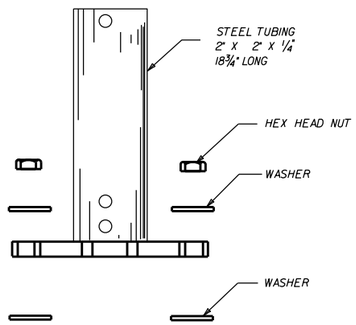


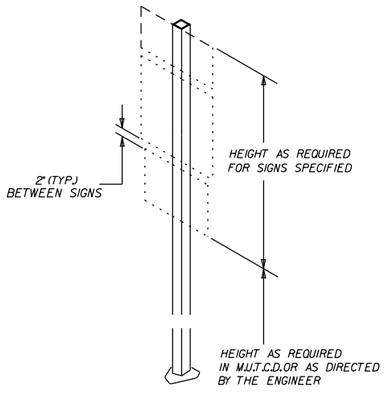
THE STUB ANCHOR SHALL BE SET IN AN 18" DIA. X 42" DEEP CONCRETE FOOTING. REFER TO STD.DRWG.SHS-3 FOR THE FOOTING DETAILS.



FURNISH (2) .012" THICK AND (2) .032" THICK SHIMS PER POST

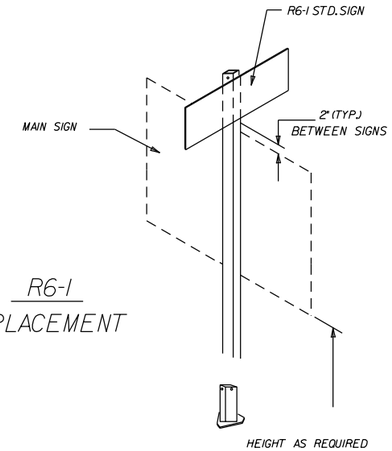
SHIM DETAIL





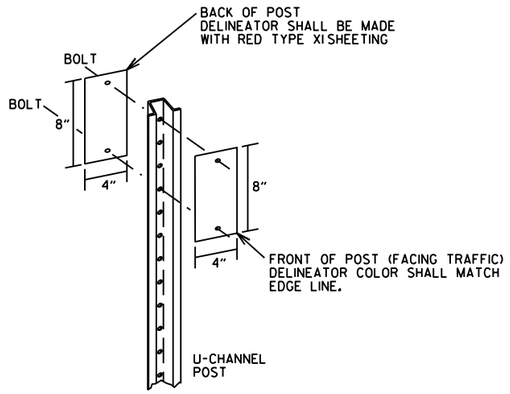
TYPE-I

BASIS OF ESTIMATE
APPROX. 100 lbs STEEL

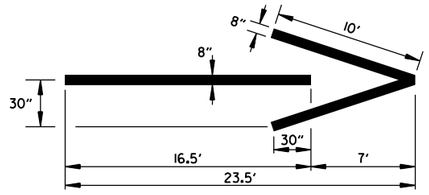


R6-1 PLACEMENT

			ARKANSAS STATE HIGHWAY COMMISSION
			DETAIL OF OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS
9-12-13	ISSUED		STANDARD DRAWING SHS-7
DATE	REVISION	FILMED	



TYPE 2 DELINEATOR DETAILS



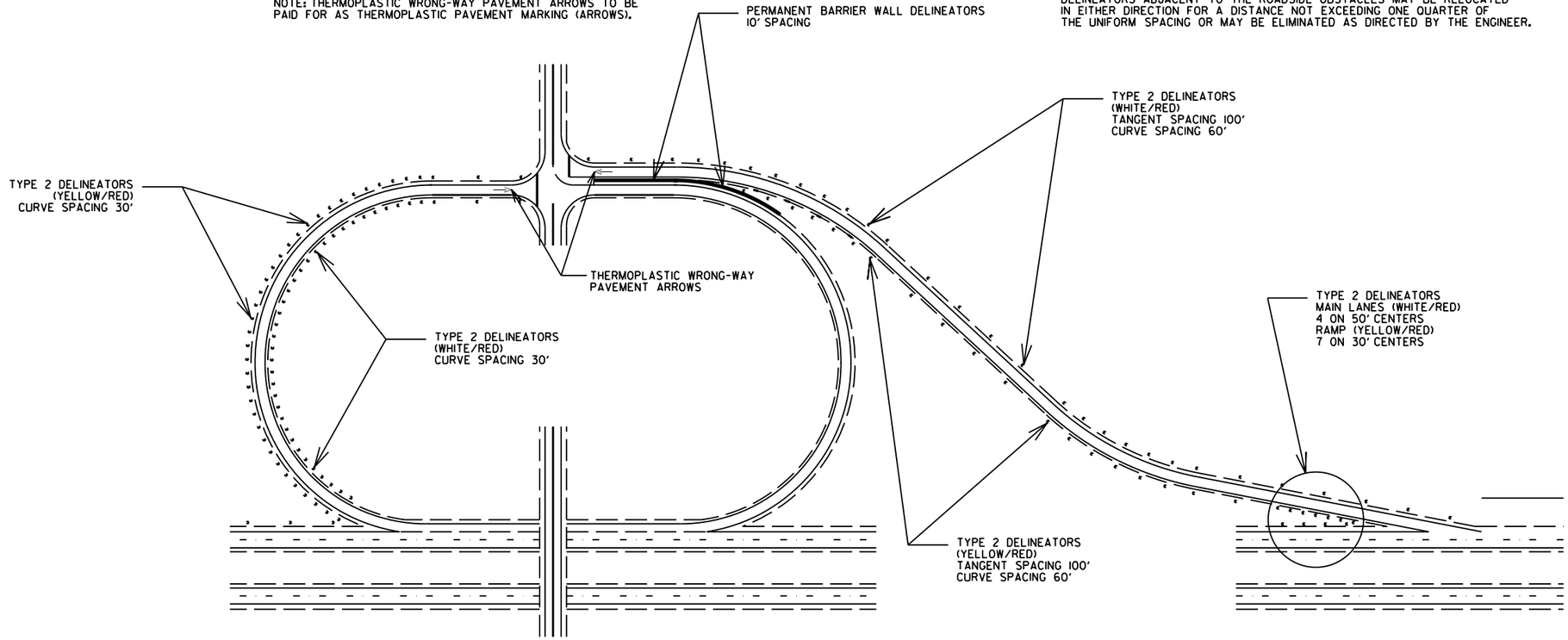
THERMOPLASTIC WRONG-WAY
PAVEMENT ARROWS

NOTE: THERMOPLASTIC WRONG-WAY PAVEMENT ARROWS TO BE PAID FOR AS THERMOPLASTIC PAVEMENT MARKING (ARROWS).

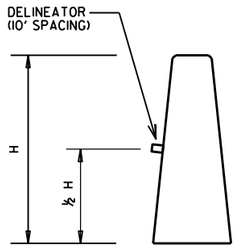
LEGEND

DELINEATOR

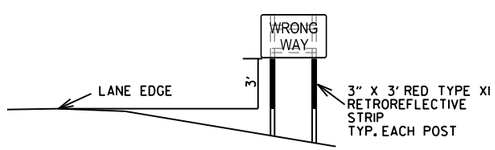
NOTE: WHEN UNIFORM SPACING IS INTERRUPTED BY ROADSIDE OBSTACLES, DELINEATORS ADJACENT TO THE ROADSIDE OBSTACLES MAY BE RELOCATED IN EITHER DIRECTION FOR A DISTANCE NOT EXCEEDING ONE QUARTER OF THE UNIFORM SPACING OR MAY BE ELIMINATED AS DIRECTED BY THE ENGINEER.



TYPICAL EXIT RAMP DELINEATOR PLACEMENT

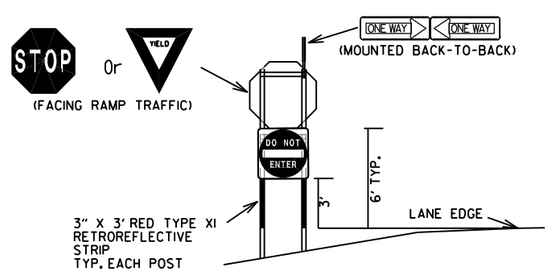


PERMANENT BARRIER WALL
DELINEATOR DETAIL



WRONG-WAY SIGN ASSEMBLY DETAILS

NOTES
1. WRONG-WAY SIGNS MAY BE MOUNTED ON THE BACK SIDE OF EXISTING SIGN SUPPORTS WHERE POSSIBLE.
2. WRONG-WAY SIGNS ARE NORMALLY GATED, BUT MAY BE OFFSET WHEN BARRIER WALLS ARE PRESENT ON THE INSIDE SHOULDER. IN SUCH CASES, THE SIGN ON THE INSIDE SHOULDER SIDE MAY BE LOCATED PAST THE END OF THE BARRIER WALL. IN RARE CASES WHERE THE BARRIER WALL EXTENDS TO OR NEAR THE MAIN LANES, BOTH SIGNS MAY BE LOCATED ON THE OUTSIDE SHOULDER SIDE OF THE RAMP, WITH APPROXIMATELY 300' SPACING BETWEEN THE SIGNS.



RAMP INTERSECTION SIGN ASSEMBLY DETAILS

THE DELINEATORS SHALL BE PLACED AT A 4' HEIGHT MEASURED FROM THE PAVEMENT EDGE TO THE BOTTOM OF THE DELINEATOR. DELINEATOR POSTS SHALL BE PLACED 2 TO 8 FT. OUTSIDE THE OUTER EDGE OF THE SHOULDER, OR IF APPROPRIATE, IN LINE WITH THE ROADSIDE BARRIER THAT IS 8 FT. OR LESS OUTSIDE THE OUTER EDGE OF THE SHOULDER.

DELINEATOR SPACING IN CURVES SHALL BE REDUCED TO 30' WHEN THE RAMP ADVISORY SPEED IS 30 MPH OR LESS.

IF MULTIPLE LANES EXIST AT THE RAMP TERMINAL, THE THERMOPLASTIC WRONG-WAY ARROW SHALL BE PLACED AS CLOSE TO THE RAMP TERMINAL TURNOUT AS POSSIBLE.

DATE	REVISION	FILMED
11-16-17	ADDED NOTES	
06-01-17	RE-DRAWN	
09-12-13	ISSUED AS STANDARD DRAWING	

ARKANSAS STATE HIGHWAY COMMISSION

TYPICAL EXIT RAMP SIGN AND DELINEATOR DETAILS

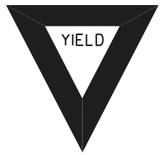
STANDARD DRAWING SHS-8

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"

R2-6aP



48"X36"

*USE 6" C LETTERS
**USE 4" D LETTERS

R5-1



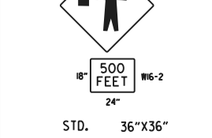
STD. 30"X30"
EXPWY. 36"X36"
SPECIAL 48"X48"

RII-2



48"X30"

RII-3A



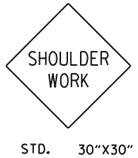
60"X30"

RII-4



60"X30"

W21-5a



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

WI-1



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

WI-2



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

R2-11

36"X48"

WI-3



STD. 48"X48"

WI-4



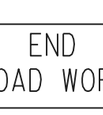
STD. 48"X48"

WI-6



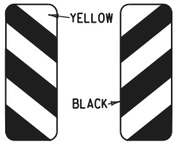
STD. 48"X24"
SPECIAL 60"X30"

WI-8



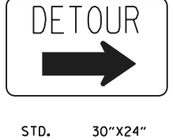
STD. 18"X24"
SPECIAL 24"X30"
EXPWY. 30"X36"
FWY. 36"X48"

W3-1



STD. 36"X36"
SPECIAL 48"X48"

W3-2



STD. 36"X36"
SPECIAL 48"X48"

W4-2



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

R56-1

STD. 18"X18"

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"

WI3-1

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"

WI-4b

STD. 48"X48"

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"

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. R2-6aP PLAQUES SHALL BE MOUNTED BELOW AN APPLICABLE ADVANCE WARNING SIGN THAT IS LOCATED AT LEAST 1500' BUT NOT MORE THAN 1 MILE IN ADVANCE OF THE WORK ZONE. IF A SPEED LIMIT REDUCTION IS IN EFFECT, THE PLAQUE SHALL BE PLACED A MINIMUM OF 500' IN ADVANCE OF THE W3-5 "REDUCED SPEED AHEAD" SIGN. R2-11 SIGNS SHALL BE INSTALLED AT OR NEAR THE DOWNSTREAM END OF THE WORK ZONE. SEE STANDARD DRAWINGS TC-2, TC-3, AND TC-6 FOR TYPICAL PLACEMENT LOCATIONS.

• 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.

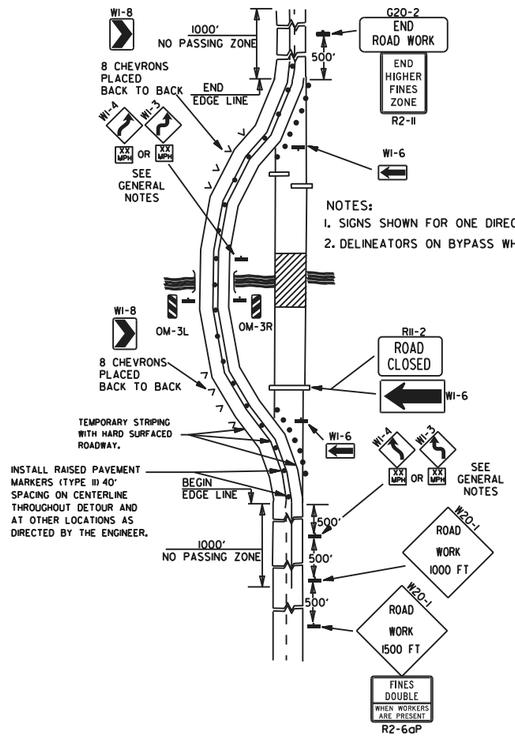
DATE REV	DESCRIPTION
08-14-25	REPLACED R55-1 WITH R2-6aP, ADDED R2-11 & REVISED NOTE 10
11-07-19	REVISED FOR MASH
04-13-17	DELETED RSP-1 & ADDED W21-5a
09-02-15	REVISED REDUCED SPEED LIMIT AHEAD SIGNS REVISED ROAD WORK NEXT XX MILES
12-15-11	REVISED W24-1

ARDOT ARKANSAS DEPARTMENT OF TRANSPORTATION

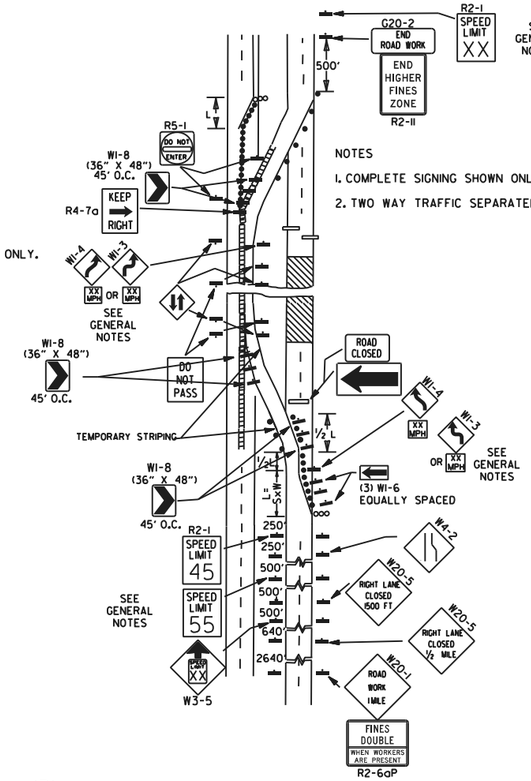
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

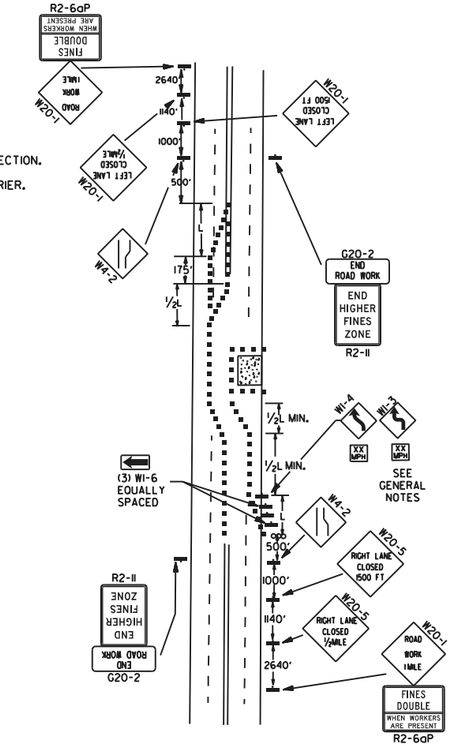
DATE EFFECTIVE	STANDARD DRAWING	TC-1
08-14-2025		



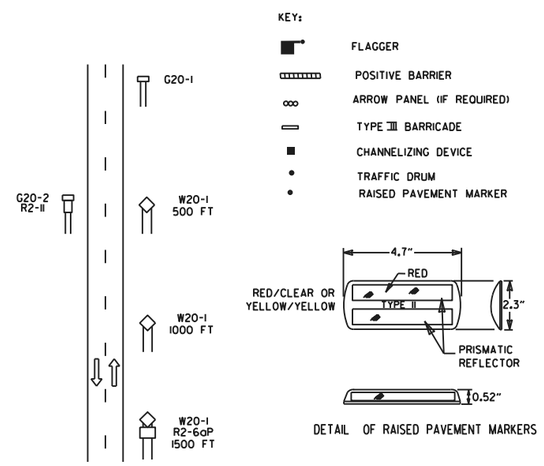
(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.



(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.



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:

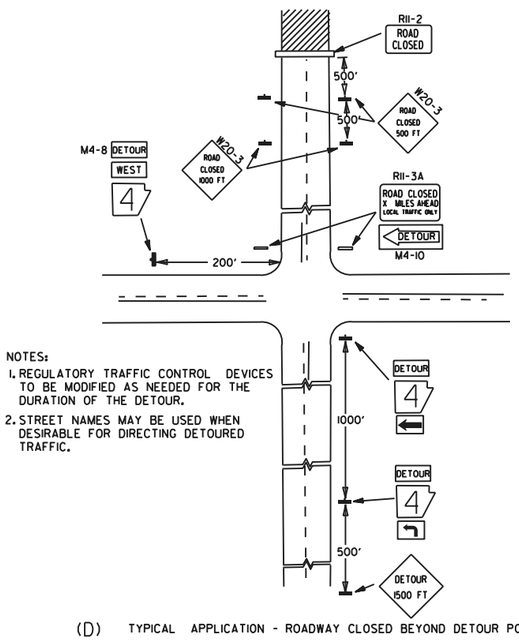
L= MINIMUM LENGTH OF TAPER.

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

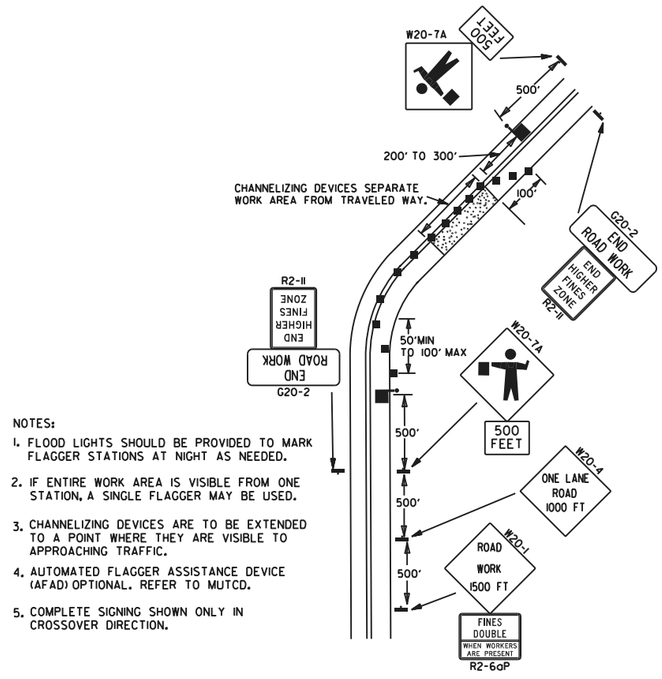
W= WIDTH OF OFFSET.

GENERAL NOTES:

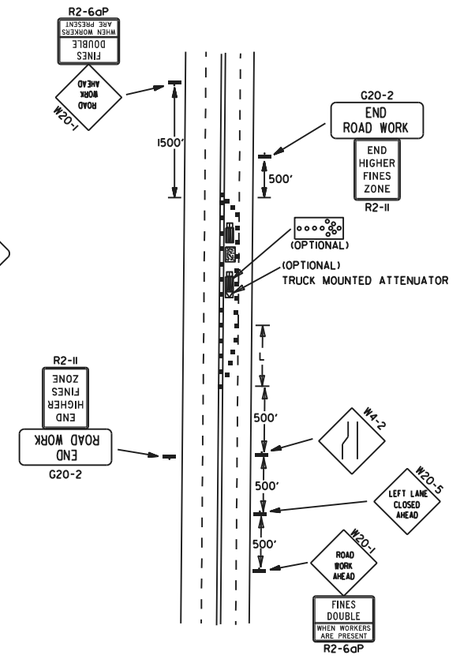
1. THE MAINTENANCE DIVISION SHALL CONDUCT A BALL BANK STUDY TO DETERMINE THE ADVISORY SPEED LIMIT PRIOR TO OPENING TO TRAFFIC. THE ADVISORY SPEED WILL BE POSTED ON W1-3 OR W1-4 CURVE WARNING SIGNS. USE W1-4 WHEN SPEED IS GREATER THAN 30MPH AND W1-3 WHEN 30MPH OR LESS
2. WHEN THE EXISTING SPEED LIMIT 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).



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



(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.

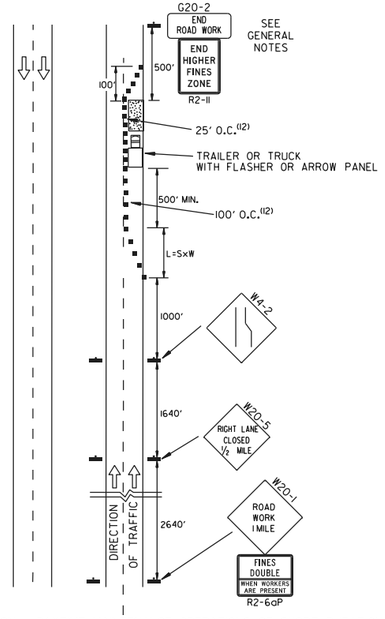
DATE REV	DESCRIPTION
08-14-25	ADDED R2-6aP AND R2-11
05-20-21	REVISED NOTE 7
11-07-19	REVISED NOTE 1. ADDED NOTE 9
09-02-15	REVISED NOTE 2, ADDED NOTE 8, REVISED DRAWING (AT & REPLACED R2-5A WITH W3-5
09-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKINGS

ARDOT ARKANSAS DEPARTMENT OF TRANSPORTATION

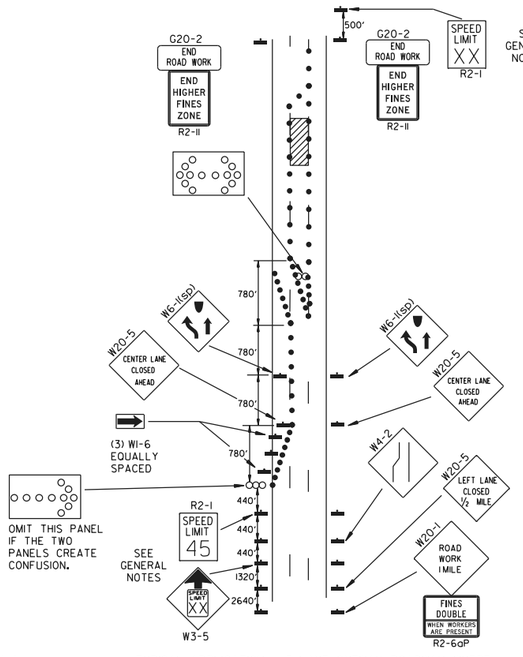
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

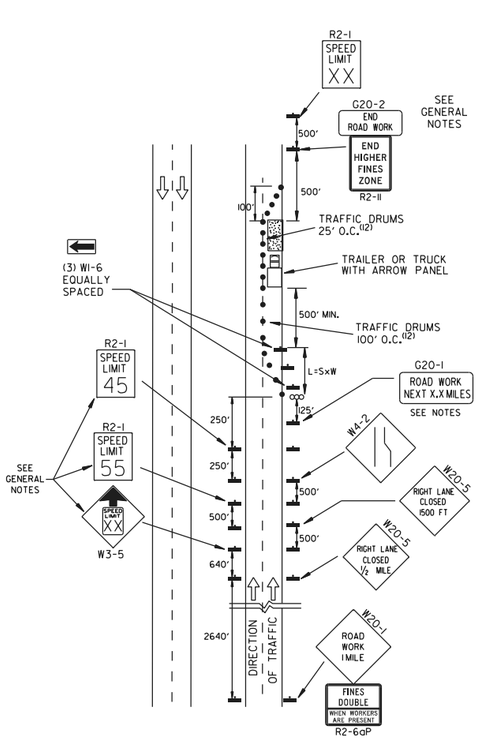
DATE EFFECTIVE	STANDARD DRAWING	TC-2
08-14-2025		



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



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



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

KEY:

○○○ ARROW PANEL (IF REQUIRED)

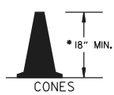
■ CHANNELIZING DEVICE

● TRAFFIC DRUM

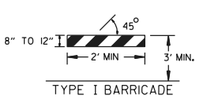
GENERAL NOTES:

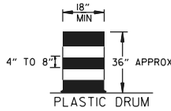
1. A SPEED LIMIT REDUCTION MAY BE IMPLEMENTED ONLY WHEN DESIGNATED IN THE PLAN OR WHEN RECOMMENDED BY THE ROADWAY DESIGN DIVISION.
2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-I(55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-I 45MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-I(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-I(45) SHALL BE OMITTED. ADDITIONAL R2-I 55MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-I(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 SHOULD BE INSTALLED 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. THE DISTANCE DISPLAYED ON THE G20-1 SIGN SHALL BE STATED TO THE NEAREST WHOLE MILE.
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).
12. ONLY WHERE SPACE RESTRICTIONS DO NOT ALLOW FOR TRAFFIC DRUMS, TUBULAR MARKERS MAY BE USED AT 50' O.C. IN STABILIZATION ZONES AND AT 10' O.C. DIRECTLY ADJACENT TO CONSTRUCTION OPERATIONS AND AT EXIT TAPERS. TUBULAR MARKERS SHALL BE STABILIZED WITH WEIGHTED BASES IN ACCORDANCE WITH THE M.U.T.C.D.

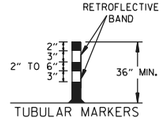
CHANNELIZING DEVICES

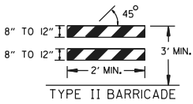


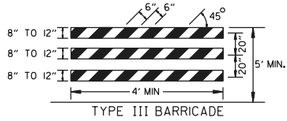
* WHEN CONES ARE USED ON FREEWAYS AND MULTI-LANE HIGHWAYS, THEY SHALL BE 28" MIN. DURING HOURS OF DARKNESS, 28" CONES SHALL BE USED ON ALL ROADWAYS, AND SHALL BE REFLECTORIZED IN ACCORDANCE WITH THE M.U.T.C.D.



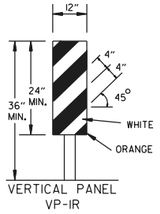


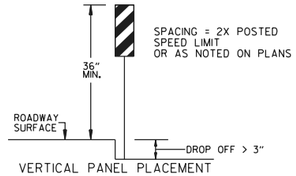




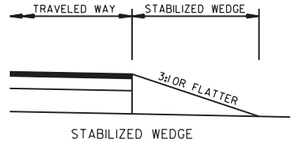


NOTE:
FOR ALL ROAD CLOSURES, THE TYPE III BARRICADES SHALL BE OF SUFFICIENT LENGTH TO EXTEND ACROSS ENTIRE ROADWAY.

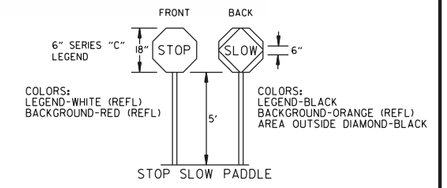


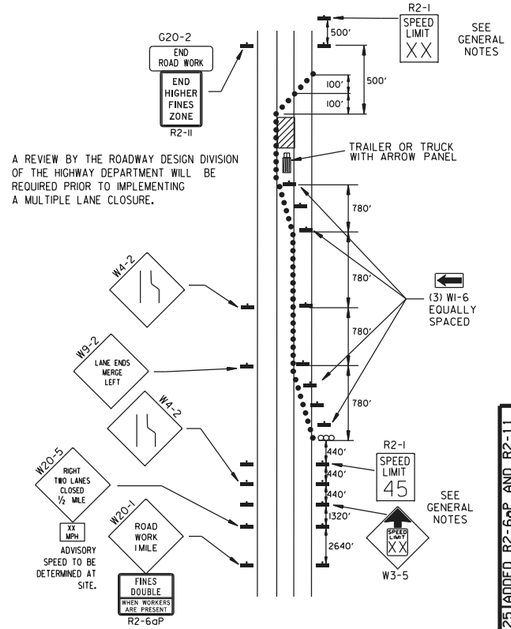


FLAG SHALL BE OF GOOD GRADE RED MATERIAL



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





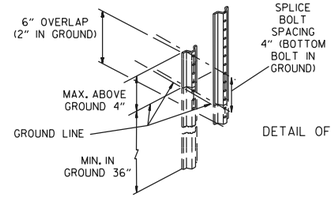
A REVIEW BY THE ROADWAY DESIGN DIVISION OF THE HIGHWAY DEPARTMENT WILL BE REQUIRED PRIOR TO IMPLEMENTING A MULTIPLE LANE CLOSURE.

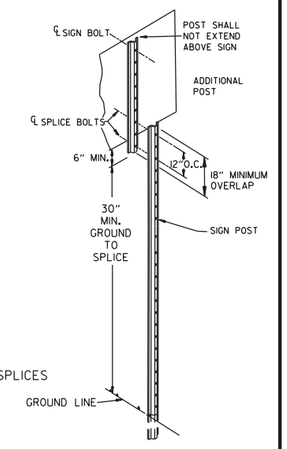
(D) TYPICAL APPLICATION - CLOSING MULTIPLE LANES OF A MULTILANE HIGHWAY.

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.





TRAFFIC CONTROL DEVICES

NON-INTERSTATE

VERTICAL DIFFERENTIAL	LOCATION	TRAFFIC CONTROL ≤ 45 MPH	TRAFFIC CONTROL > 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).

DATE REV	DESCRIPTION
08-14-25	ADDED R2-6aP AND R2-11
05-22-25	REVISED TRAFFIC CONTROL DEVICES AND NOTES. ADDED NOTE 12.
08-12-21	REVISED TRAFFIC CONTROL DEVICES AND NOTES
05-20-21	REVISED NOTE 10
02-27-20	REVISED TRAFFIC CONTROL DEVICES DETAILS

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

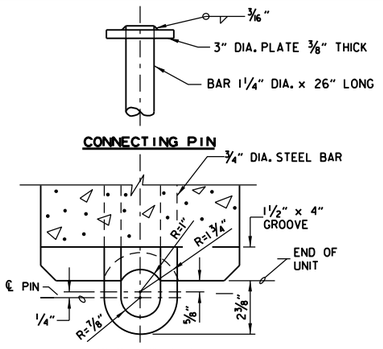
DATE EFFECTIVE 08-14-2025

STANDARD DRAWING

TC-3

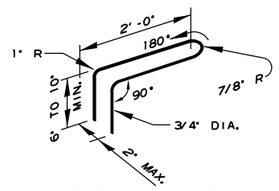
REINFORCING BAR TABLE PER BARRIER UNIT

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", LIFTING HOLE, 90°, 3 3/8" R
S-2	HORIZ. AROUND SLOTS BETWEEN V-1'S @ DRAIN SLOTS	#4	(2)	1 1/2" R, SLOTS, 7", 1'-6", 1" MIN. CLEAR TO BAR; 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°; 1 1/2"; 9"; 2'-1 3/8"; 4 3/8"

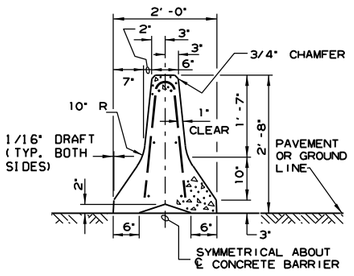


SECTION E-E

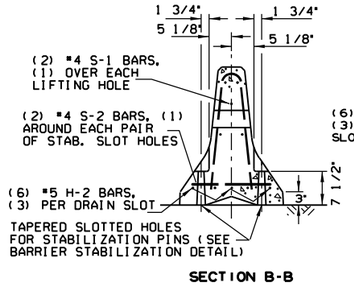
CONNECTION DETAILS



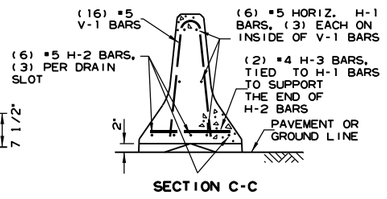
CONNECTION LOOP



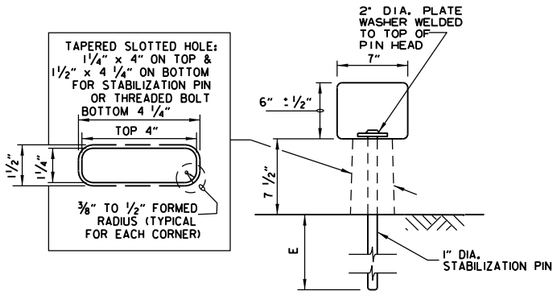
SECTION A-A



SECTION B-B



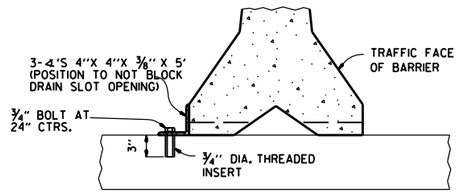
SECTION C-C



BARRIER STABILIZATION DETAIL

ROADWAY SECTION

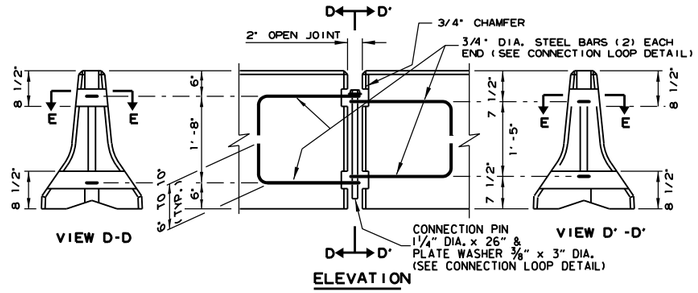
(E) 4" - CONCRETE PAVEMENT
8" - ASPHALT PAVEMENT
12" - SHOULDER AREAS



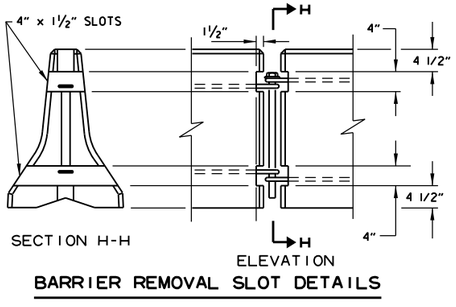
NOTE: " THREADED INSERTS SHALL BE CAST IN PLACE FOR ALL NEW BRIDGE DECKS AND DRILLED AND GROUTED FOR EXISTING BRIDGE DECKS. INSERTS SHALL HAVE A MINIMUM ULTIMATE LOAD CAPACITY OF 8000 LBS. IN TENSION. AFTER REMOVAL OF BARRIER, BOLTS, AND ANGLES, THE INSERTS SHALL BE FILLED WITH APPROVED NON-SHRINK EPOXY.

BARRIER STABILIZATION DETAIL

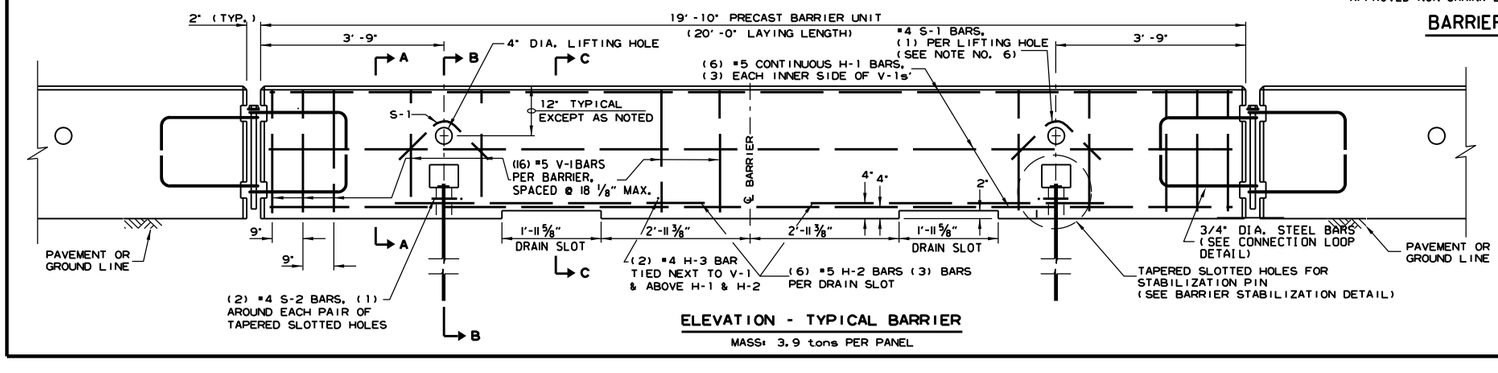
BRIDGE DECKS



ELEVATION



BARRIER REMOVAL SLOT DETAILS



ELEVATION - TYPICAL BARRIER

MASS: 3.9 tons PER PANEL

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.

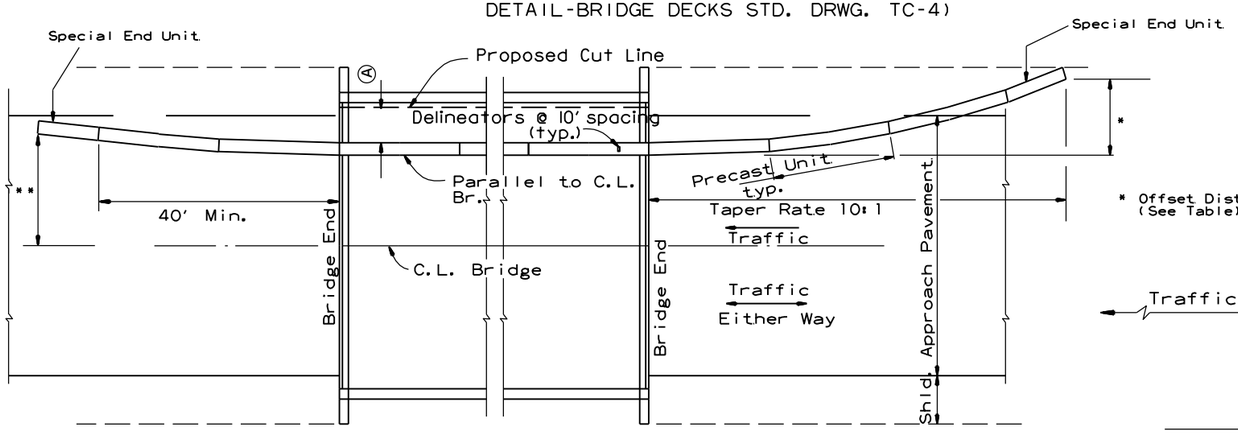
DATE	REVISION	FILMED
11-07-19	REVISED NOTE 3	
2-27-14	REVISED BARRIER STABILIZATION DETAIL	
10-15-09	ADDED REFERENCE TO WASH	
8-5-09	REV. NOTE 3 CONCERNING DRAIN SLOTS	
11-29-07	REVISED NOTE 3	
5-25-06	DELETED GENERAL NOTE 7	
11-18-04	REVISED BARRIER STABILIZATION DETAIL BRIDGE DECKS	
4-10-03	REVISED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

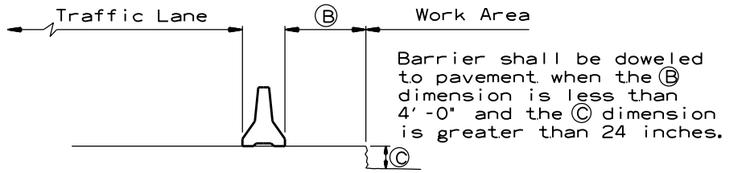
Ⓐ 4 feet or greater preferred. If less than 4 feet, Precast Units shall be connected to slab (SEE BARRIER STABILIZATION DETAIL-BRIDGE DECKS STD. DRWG. TC-4)



* Offset Distance (See Table)

BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET

No Scale

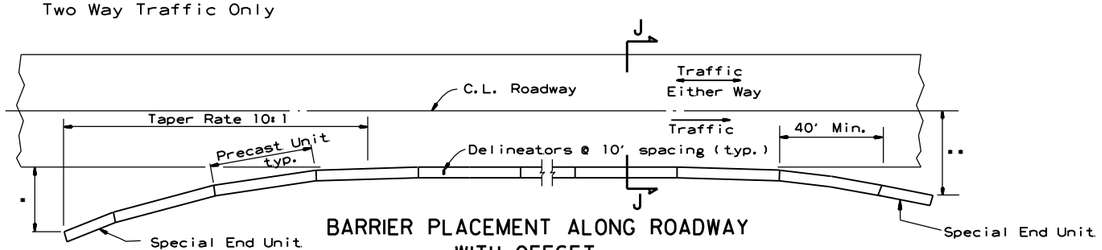


Barrier shall be doweled to pavement when the Ⓑ dimension is less than 4'-0" and the Ⓒ dimension is greater than 24 inches.

SECTION J-J

No Scale

** Offset Distance for Two Way Traffic Only



BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET

No Scale

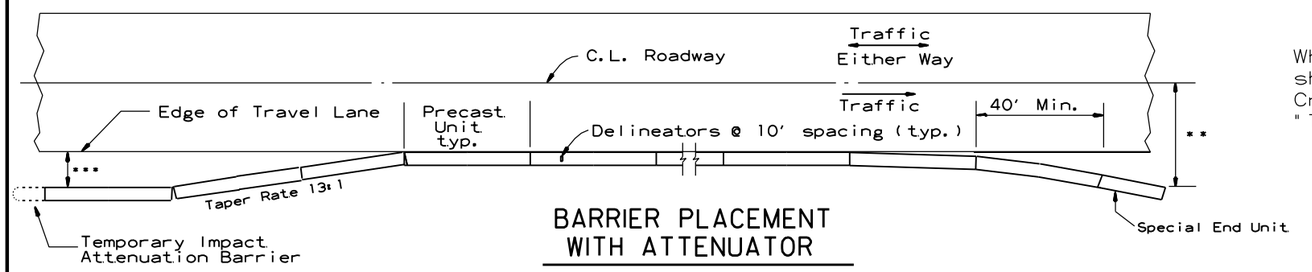
* Offset Distance (See Table)

** 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.

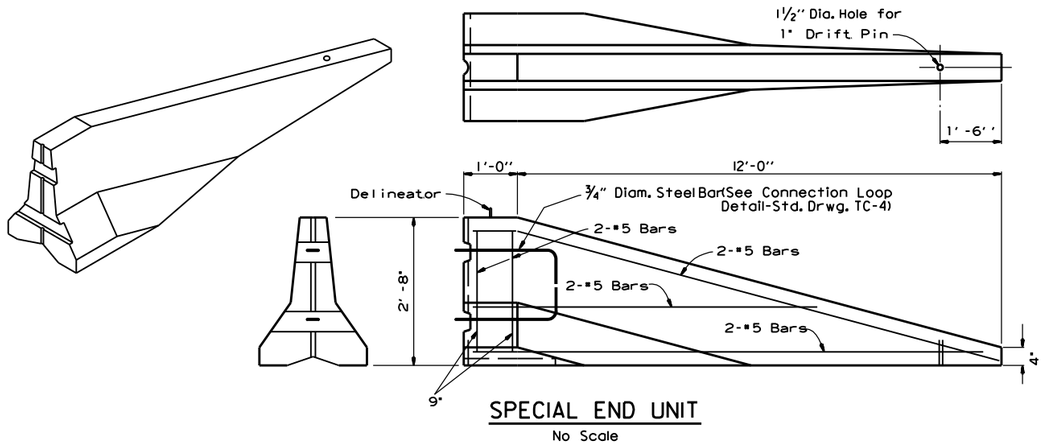


BARRIER PLACEMENT WITH ATTENUATOR

No Scale

** Offset Distance For Two Way Traffic Only

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



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."

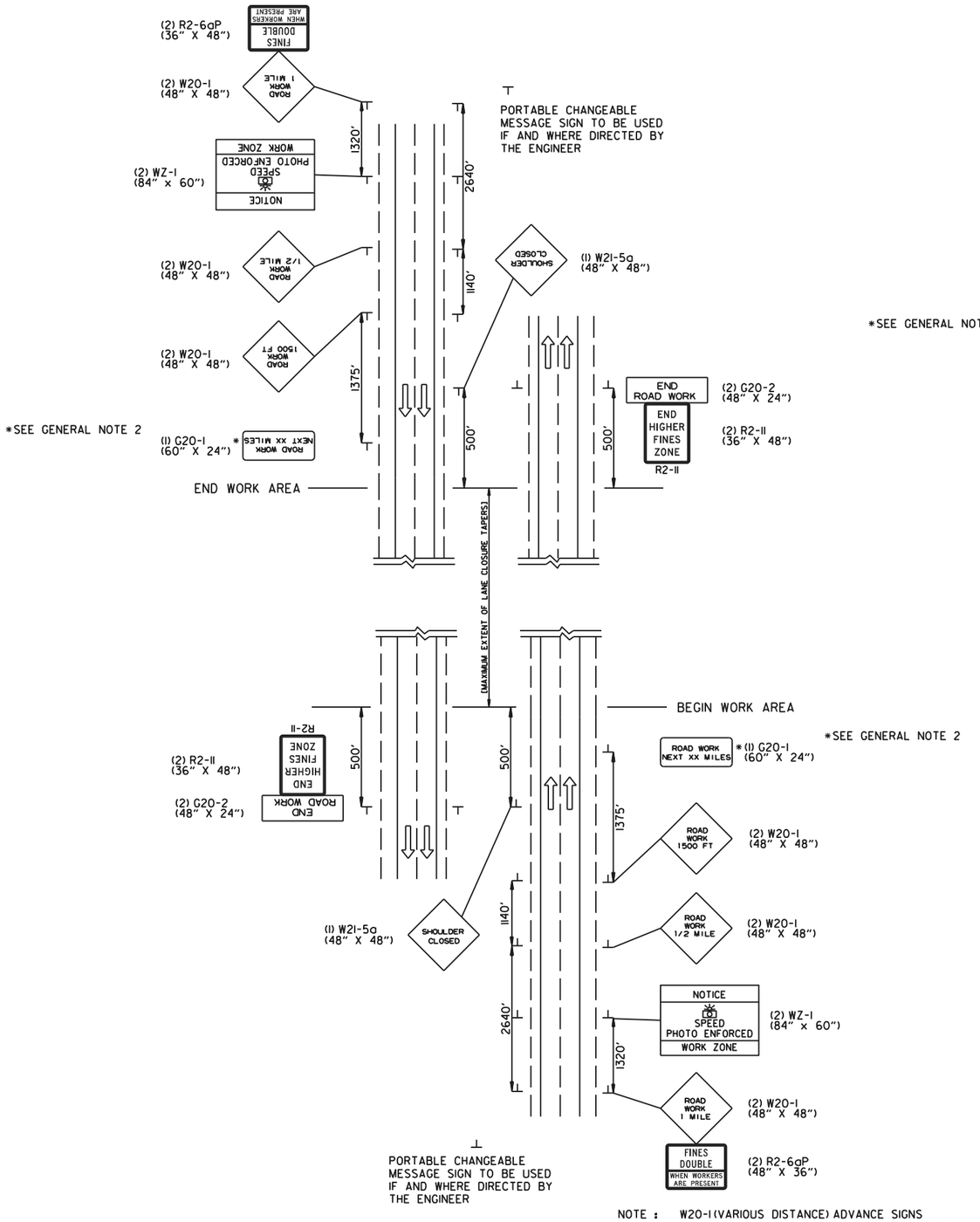
DATE	REVISION	FILMED
11-07-19	REVISED NOTE	
10-15-09	ADDED REFERENCE TO MASH	
5-25-06	REVISED BARRIER PLACEMENT	
8-22-02	ISSUED NEW DRAWING	

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

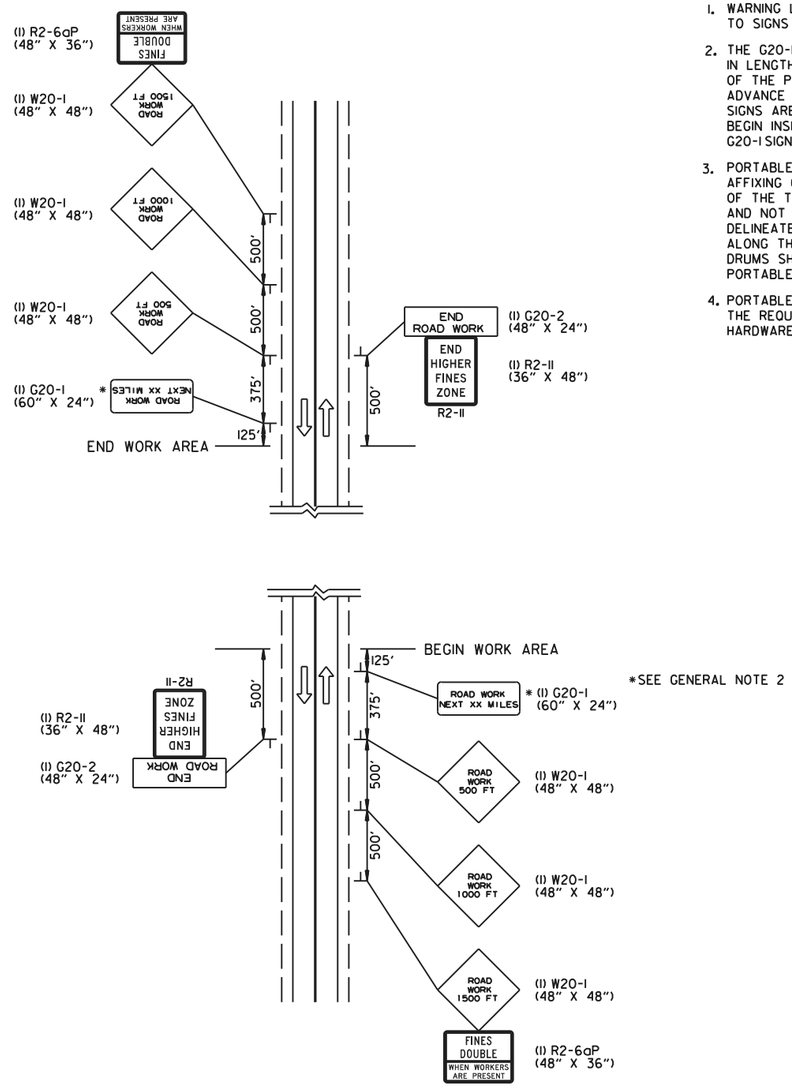
STANDARD DRAWING TC-5

NOTE : W20-1 (VARIOUS DISTANCE) ADVANCE SIGNS TO BE REPLACED AS NEEDED BY EQUIVALENT W20-5 SIGNS AS WORKING AREA SHIFTS.



NOTE : W20-1 (VARIOUS DISTANCE) ADVANCE SIGNS TO BE REPLACED AS NEEDED BY EQUIVALENT W20-5 SIGNS AS WORKING AREA SHIFTS.

(A) TYPICAL APPLICATION - ADVANCE WARNING SIGNS AT BEGINNING AND END OF JOB (FULLY CONTROLLED ACCESS FACILITIES) (ALL STAGES)



(B) TYPICAL APPLICATION - ADVANCE WARNING SIGNS AT BEGINNING AND END OF JOB (NON-FULLY CONTROLLED ACCESS FACILITIES) (ALL STAGES)

GENERAL NOTES:

1. WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
2. THE G20-1 SIGN SHOULD BE INSTALLED 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 OR 1500 FT) SIGNS ARE NOT REQUIRED IN ADVANCE OF LANE CLOSURES THAT BEGIN INSIDE THE PROJECT LIMITS. THE DISTANCE DISPLAYED ON THE G20-1 SIGN SHALL BE STATED TO THE NEAREST WHOLE MILE.
3. 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, THIS DEVICE 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 PORTABLE CHANGEABLE MESSAGE SIGNS.
4. PORTABLE CHANGEABLE MESSAGE SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).

DATE REV	ISSUED	DESCRIPTION
08-14-25		

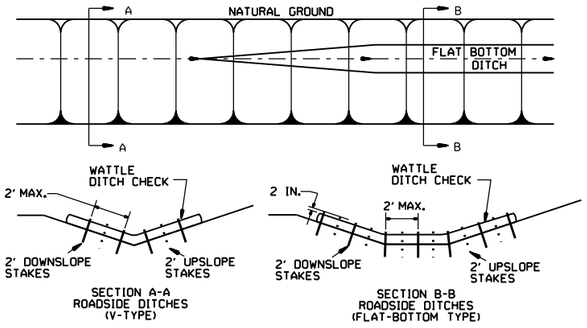
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

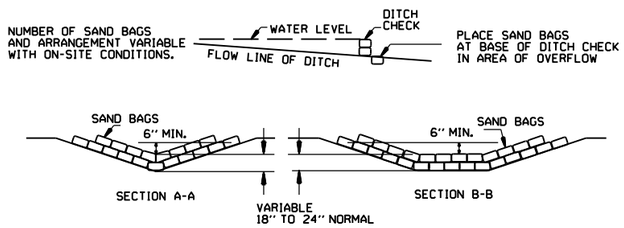
DATE EFFECTIVE	STANDARD DRAWING	TC-6
08-14-2025		

GENERAL NOTES

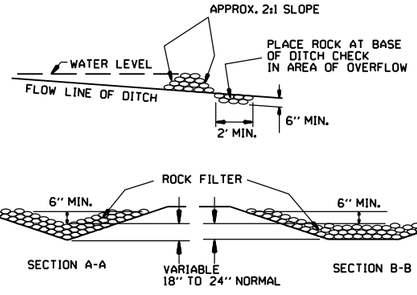
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



SAND BAG DITCH CHECK (E-5)

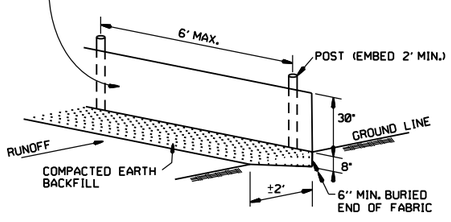


ROCK DITCH CHECK (E-6)

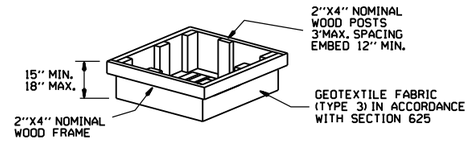
GENERAL NOTES

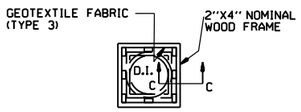
GEOTEXTILE FABRIC (TYPE 4) IN ACCORDANCE WITH SECTION 625

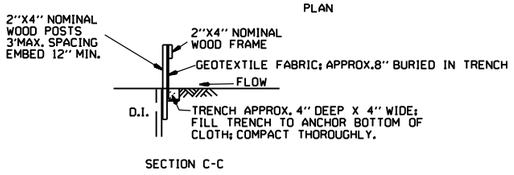
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.



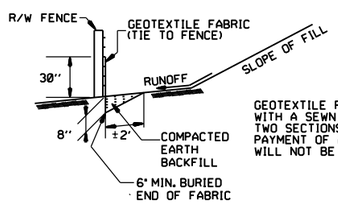
SILT FENCE (E-11)





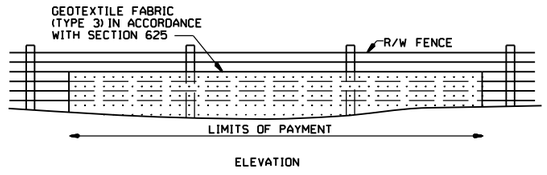


DROP INLET SILT FENCE (E-7)



GENERAL NOTES

GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST, OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.



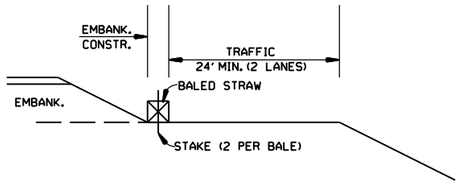
SILT FENCE ON R/W FENCE (E-4)

GENERAL NOTES

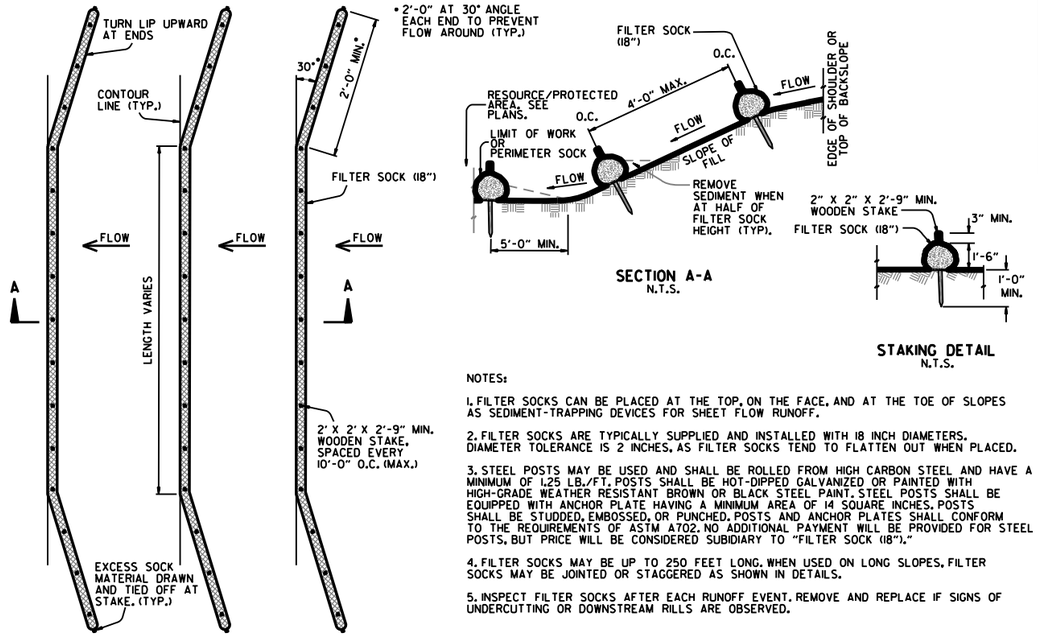
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.

2. NO GAPS SHALL BE LEFT BETWEEN BALES.

3. BALED STRAW FILTER BARRIERS COMPLETED AND ACCEPTED WILL BE MEASURED BY THE BALE IN PLACE AS AUTHORIZED BY THE ENGINEER AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER BALE FOR BALED STRAW DITCH CHECKS.



BALED STRAW FILTER BARRIER (E-2)



NOTES:

1. FILTER SOCKS CAN BE PLACED AT THE TOP, ON THE FACE, AND AT THE TOE OF SLOPES AS SEDIMENT-TRAPPING DEVICES FOR SHEET FLOW RUNOFF.

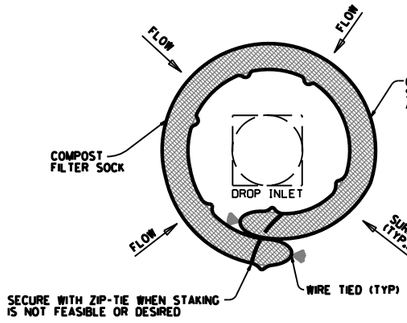
2. FILTER SOCKS ARE TYPICALLY SUPPLIED AND INSTALLED WITH 18 INCH DIAMETERS. DIAMETER TOLERANCE IS 2 INCHES, AS FILTER SOCKS TEND TO FLATTEN OUT WHEN PLACED.

3. STEEL POSTS MAY BE USED AND SHALL BE ROLLED FROM HIGH CARBON STEEL AND HAVE A MINIMUM OF 1.25 LB./FT. POSTS SHALL BE HOT-DIPPED GALVANIZED OR PAINTED WITH HIGH-GRADE WEATHER RESISTANT BROWN OR BLACK STEEL PAINT. STEEL POSTS SHALL BE EQUIPPED WITH ANCHOR PLATE HAVING A MINIMUM AREA OF 14 SQUARE INCHES. POSTS SHALL BE STUDDED, EMBOSSED, OR PUNCHED. POSTS AND ANCHOR PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A702. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR STEEL POSTS, BUT PRICE WILL BE CONSIDERED SUBIDIARY TO "FILTER SOCK (18")."

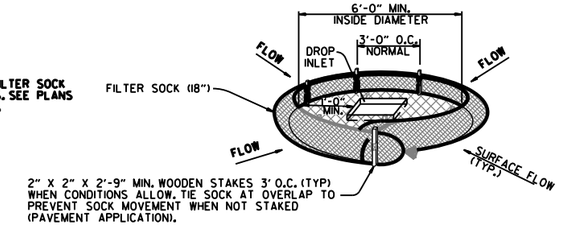
4. FILTER SOCKS MAY BE UP TO 250 FEET LONG. WHEN USED ON LONG SLOPES, FILTER SOCKS MAY BE JOINTED OR STAGGERED AS SHOWN IN DETAILS.

5. INSPECT FILTER SOCKS AFTER EACH RUNOFF EVENT. REMOVE AND REPLACE IF SIGNS OF UNDERCUTTING OR DOWNSTREAM RILLS ARE OBSERVED.

FILTER SOCK ALONG SLOPE (E-3)



DROP INLET PLAN VIEW
N.T.S.



DROP INLET PERSPECTIVE VIEW
N.T.S.

NOTES:

1. OVERLAP ENDS OF SOCK (1' MIN. 3' MAX.).

2. USE 18" DIA. SOCK IN NON-TRAFFIC AREAS OR AREAS WHERE SAFETY IS NOT A CONCERN.

COMPOST FILTER SOCK DROP INLET PROTECTION (E-13)

DATE	REVISION	FILMED
11-16-17	ADDED FILTER SOCK E-3 AND E-13	
12-15-11	DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK	
11-18-98	ADDED NOTES	
07-02-98	ADDED BALED STRAW FILTER BARRIER (E-2)	
07-20-95	REVISED SILT FENCE E-4 AND E-11	7-20-95
07-15-94	REV. E-4 & E-11 MIN. 13" BURIED END OF FABRIC	
06-02-94	REVISED E-1,4,7 & 11; DELETED E-2 & 3	6-2-94
04-01-93	REDRAWN	
10-01-92	REDRAWN	
08-02-76	ISSUED R.D.M.	298-7-28-76

ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

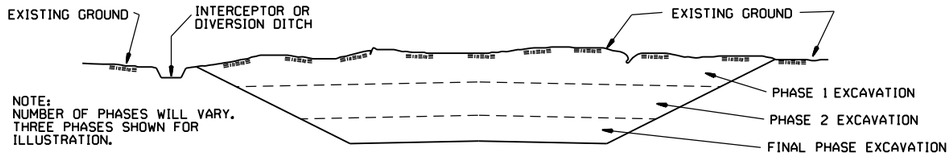
STANDARD DRAWING TEC-1

CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE

1. PLACE PERIMETER CONTROLS (I.E. SILT FENCES , DIVERSION DITCHES, SEDIMENT BASINS, ETC.)
2. PERFORM CLEARING AND GRUBBING OPERATION.

EXCAVATION



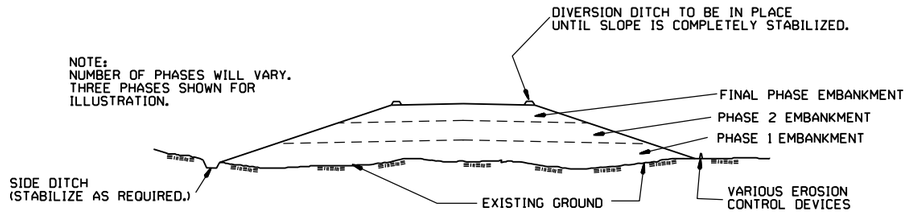
GENERAL NOTE

ALL CUT SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE EXCAVATED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 25 FEET, MEASURED VERTICALLY.

CONSTRUCTION SEQUENCE

1. EXCAVATE AND STABILIZE INTERCEPTOR AND/OR DIVERSION DITCHES.
2. PERFORM PHASE 1 EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING.
3. PERFORM PHASE 2 EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING.
4. PERFORM FINAL PHASE OF EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING. STABILIZE DITCHES. CONSTRUCT DITCH CHECKS, DIVERSION DITCHES, SEDIMENT BASINS, OR OTHER EROSION CONTROL DEVICES AS REQUIRED.

EMBANKMENT



GENERAL NOTE

ALL EMBANKMENT SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE CONSTRUCTED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 25 FEET, MEASURED VERTICALLY.

CONSTRUCTION SEQUENCE

1. CONSTRUCT DIVERSION DITCHES, DITCH CHECKS, SEDIMENT BASINS, SILT FENCES, OR OTHER EROSION CONTROL DEVICES AS SPECIFIED.
2. PLACE PHASE 1 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD OF GREATER THAN 21 DAYS.
3. PLACE PHASE 2 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD OF GREATER THAN 21 DAYS.
4. PLACE FINAL PHASE OF EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PLACE DIVERSION DITCHES AND SLOPE DRAINS AND MAINTAIN UNTIL ENTIRE SLOPE IS STABILIZED.

11-03-94	CORRECTED SPELLING	
6-2-94	Drawn & Issued	6-2-94
DATE	REVISION	FILMED

ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-3