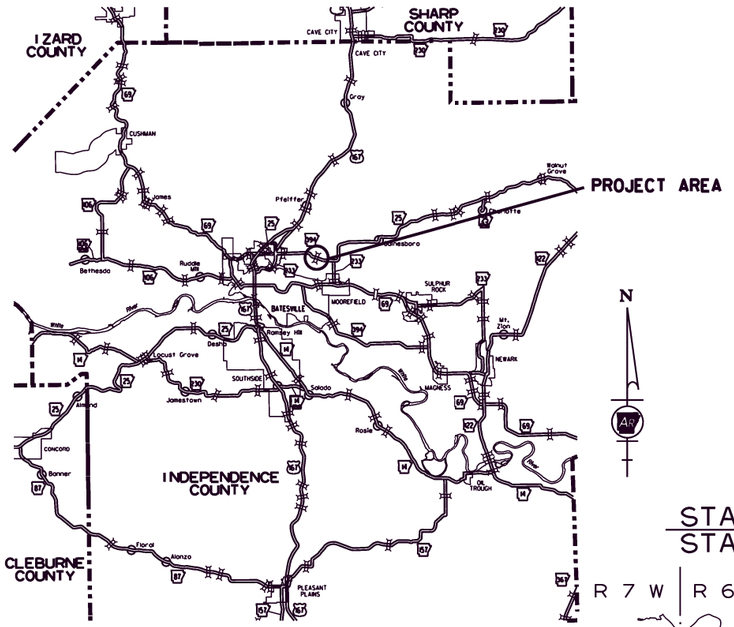
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	1	55
		HWY. 25 STR. & APPRS. (INDEPENDENCE CO.) (S)				

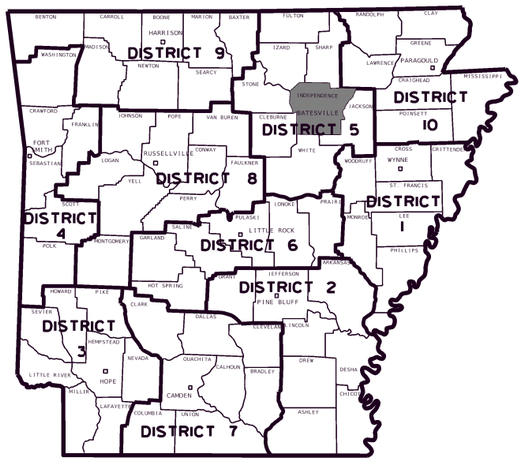
ARKANSAS DEPARTMENT OF TRANSPORTATION
CONSTRUCTION PLANS FOR STATE HIGHWAY

HWY. 25 STR. & APPRS.
(INDEPENDENCE CO.) (S)

INDEPENDENCE COUNTY
ROUTE 25 SECTION 5
JOB 050439
FED. AID PROJ. NHPP-0032(44)



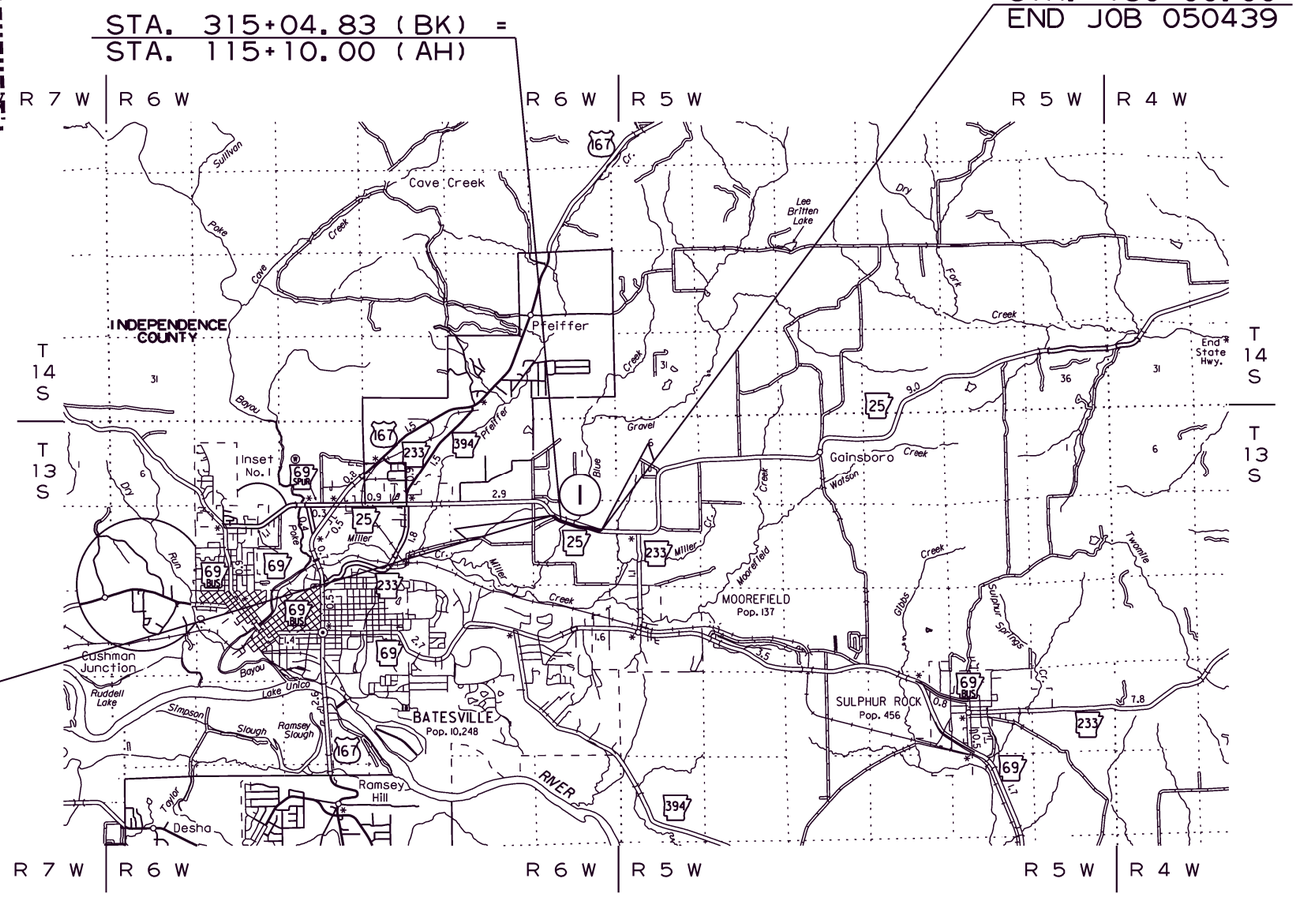
VICINITY MAP



ARK. HWY. DIST. NO. 5

STA. 315+04.83 (BK) =
STA. 115+10.00 (AH)

STA. 130+00.00
END JOB 050439



STA. 307+03.00
BEGIN JOB 050439
LOG MILE 2.76

BRIDGE INFORMATION

(1) STA. 116+13.50 BRIDGE END
BRIDGE NO. 07721
40' CLEAR ROADWAY
196'-0" TOTAL LENGTH
194'-6" INTEGRAL PRESTRESSED CONCRETE GIRDER UNIT TYPE III
(64'-9", 65', 64'-9")
STA. 118+09.50 BRIDGE END

DESIGN TRAFFIC DATA

DESIGN YEAR	2046
2026 ADT	5,400
2046 ADT	7,300
2026 DHV	378
DIRECTIONAL DISTRIBUTION	0.60
TRUCKS	7%
DESIGN SPEED	60 MPH

	BEGIN PROJECT	MID-POINT OF PROJECT	END PROJECT
LATITUDE	N 35°47'18"	N 35°47'15"	N 35°47'11"
LONGITUDE	W 91°35'22"	W 91°35'39"	W 91°34'56"

LENGTH OF PROJECT CALCULATED ALONG C.L.

GROSS LENGTH OF	PROJECT	2291.83	FEET	OR	0.434	MILES
NET	-	ROADWAY	2095.83	-		0.397	MILES
NET	-	BRIDGES	196.00	-		0.037	MILES
NET	-	PROJECT	2291.83	-		0.434	MILES

APPROVED

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 12547
JESSIE XU JONES

Digitally signed by Jones, Jessie
Date: 2026.09.11 09:58:09-05'00'

CHIEF ENGINEER

R050439 TITLE SHEET.DGN CREATED: 8/2/2023 SAVED: 9/11/2026 OpenRoads Designer v10.16.2.267

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	2	55
		INDEX OF SHEETS & STANDARD DRAWINGS				

INDEX OF SHEETS

SHEET NO.	TITLE	BRIDGE NO.	DRWG.NO.
1	TITLE SHEET		
2	INDEX OF SHEETS AND STANDARD DRAWINGS		
3	GOVERNING SPECIFICATIONS AND GENERAL NOTES		
4 - 5	TYPICAL SECTIONS OF IMPROVEMENT		
6 - 9	SPECIAL DETAILS		
10 - 12	TEMPORARY EROSION CONTROL DETAILS		
13 - 19	MAINTENANCE OF TRAFFIC DETAILS		
20	PERMANENT PAVEMENT MARKING DETAILS		
21 - 25	QUANTITIES		
26	SCHEDULE OF BRIDGE QUANTITIES	07721	69632
27	SUMMARY OF QUANTITIES AND REVISIONS		
28 - 30	SURVEY CONTROL DETAILS		
31 - 33	PLAN AND PROFILE SHEETS		
34	SHEET 1 OF 2 LAYOUT OF BRIDGE HWY. 25 OVER BLUE CREEK	07721	69633
35	SHEET 2 OF 2 LAYOUT OF BRIDGE HWY. 25 OVER BLUE CREEK	07721	69634
36	DETAILS OF END BENTS	07721	69635
37	SHEET 1 OF 2 DETAILS OF INTERMEDIATE BENTS	07721	69636
38	SHEET 2 OF 2 DETAILS OF INTERMEDIATE BENTS	07721	69637
39	DETAILS OF ELASTOMERIC BEARINGS	07721	69638
40	SHEET 1 OF 7 DETAILS OF 194'-6" INTEGRAL PRESTRESSED CONCRETE GIRDER UNIT	07721	69639
41	SHEET 2 OF 7 DETAILS OF 194'-6" INTEGRAL PRESTRESSED CONCRETE GIRDER UNIT	07721	69640
42	SHEET 3 OF 7 DETAILS OF 194'-6" INTEGRAL PRESTRESSED CONCRETE GIRDER UNIT	07721	69641
43	SHEET 4 OF 7 DETAILS OF 194'-6" INTEGRAL PRESTRESSED CONCRETE GIRDER UNIT	07721	69642
44	SHEET 5 OF 7 DETAILS OF 194'-6" INTEGRAL PRESTRESSED CONCRETE GIRDER UNIT	07721	69643
45	SHEET 6 OF 7 DETAILS OF 194'-6" INTEGRAL PRESTRESSED CONCRETE GIRDER UNIT	07721	69644
46	SHEET 7 OF 7 DETAILS OF 194'-6" INTEGRAL PRESTRESSED CONCRETE GIRDER UNIT	07721	69645
47 - 55	CROSS SECTIONS		

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV

Digitally Signed 09/18/2026

ROADWAY STANDARD DRAWINGS

DRWG.NO.	TITLE	DATE
CDP-1	CONCRETE DITCH PAVING	12-08-16
DR-2	DETAILS OF DRIVEWAYS & STREET TURNOUTS	05-19-22
GR-6	GUARDRAIL DETAILS	05-19-22
GR-8	GUARDRAIL DETAILS	11-07-19
GR-9	GUARDRAIL DETAILS	11-07-19
GR-10	GUARDRAIL DETAILS	11-07-19
GR-11	GUARDRAIL DETAILS	11-07-19
GR-12	GUARDRAIL DETAILS	05-14-20
MB-1	MAILBOX DETAILS	11-18-04
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	04-09-26
PU-1	DETAILS OF PIPE UNDERDRAIN	12-08-16
SE-2	TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC	11-07-19
TC-1	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	08-14-25
TC-1A	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	04-09-26
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	04-09-26
TEC-1	TEMPORARY EROSION CONTROL DEVICES	11-16-17
TEC-3	TEMPORARY EROSION CONTROL DEVICES	11-03-94
WF-4	WIRE FENCE TYPE C AND D	08-22-02

BRIDGE STANDARD DRAWINGS

DRWG.NO.	TITLE	DATE
55000	STANDARD DETAILS FOR EMBANKMENT CONSTRUCTION AND BACKFILL AT BRIDGE ENDS	02-27-14
55001	STANDARD DETAILS FOR DUMPED RIPRAP AND FILTER BLANKET AND COMPUTING EXCAVATION FOR STRUCTURES	02-27-14
55005	STANDARD DETAILS FOR PERMANENT STEEL BRIDGE DECK FORMS FOR STEEL & CONCRETE GIRDER SPANS	03-24-16
55010	STANDARD DETAILS FOR TYPE D BRIDGE NAME PLATE	01-28-25
55020	STANDARD DETAILS FOR STEEL H-PILES AND PILE ENCASEMENTS	03-24-16
55030F	STANDARD DETAILS FOR TYPE F APPROACH GUTTERS	04-08-21
55040F1	STANDARD DETAILS FOR TYPE F APPROACH SLAB	09-07-23
55040F2	ALTERNATE DETAILS FOR SKEWED TYPE F APPROACH SLAB	09-07-23
55070	STANDARD DETAILS FOR BRIDGE TRAFFIC RAIL TYPE SSTR36	09-27-22

R050439 TITLE SHEET.DGN CREATED: 8/2/2023 SAVED: 9/17/2026

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	3	55
		GOVERNING SPECIFICATIONS & GENERAL NOTES				

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
617-1_____ GUARDRAIL TERMINAL (TYPE 2)
617-2_____ GUARDRAIL DELINEATORS
619-1_____ FENCES
620-1_____ MULCH COVER
621-1_____ FILTER SOCKS
637-1_____ MAILBOXES
800-1_____ STRUCTURES
802-3_____ CONCRETE FOR STRUCTURES
802-5_____ CONCRETE FOR STRUCTURES
804-2_____ REINFORCING STEEL FOR STRUCTURES
808-1_____ INSTALLATION OF ELASTOMERIC BEARINGS
808-2_____ ELASTOMERIC BEARINGS
JOB 050439__ BIDDING REQUIREMENTS AND CONDITIONS
JOB 050439__ BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 050439__ BUY AMERICA - CONSTRUCTION MATERIALS
JOB 050439__ CARGO PREFERENCE ACT REQUIREMENTS
JOB 050439__ CLASS C FLY ASH IN PORTLAND CEMENT CONCRETE PAVEMENT AND CLASS S(AE) CONCRETE
JOB 050439__ COLD MILLING – COUNTY PROPERTY
JOB 050439__ CONCRETE BRIDGE DECK CURING AND SURFACE TREATMENT RESTRICTIONS
JOB 050439__ CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS
JOB 050439__ DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES
JOB 050439__ DOCUMENTATION OF PAYMENTS MADE - PROMPT PAYMENT (SIGNET)

GOVERNING SPECIFICATIONS - CONTINUED

JOB 050439__ LIQUIDATED DAMAGES PROCEDURE FOR BID LETTINGS
JOB 050439__ LONGITUDINAL JOINT DENSITIES FOR ACHM SURFACE COURSES
JOB 050439__ MANDATORY ELECTRONIC CONTRACT
JOB 050439__ MANDATORY ELECTRONIC DOCUMENT SUBMITTAL
JOB 050439__ NESTING SITES OF MIGRATORY BIRDS
JOB 050439__ OFF-SITE RESTRAINING CONDITIONS FOR INDIANA AND NORTHERN LONG-EARED BATS
JOB 050439__ PARTNERING REQUIREMENTS
JOB 050439__ PLASTIC PIPE
JOB 050439__ PRICE ADJUSTMENT FOR ASPHALT BINDER
JOB 050439__ PRICE ADJUSTMENT FOR FUEL
JOB 050439__ PRIME CONTRACTOR PERFORMANCE EVALUATION
JOB 050439__ PROHIBITION OF CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT
JOB 050439__ RUMBLE STRIPS
JOB 050439__ SECTION 404 NATIONWIDE 14 PERMIT REQUIREMENTS
JOB 050439__ SOIL STABILIZATION
JOB 050439__ STORM WATER POLLUTION PREVENTION PLAN
JOB 050439__ SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 050439__ UTILITY ADJUSTMENTS
JOB 050439__ VALUE ENGINEERING
JOB 050439__ VENDOR REGISTRATION REQUIREMENT
JOB 050439__ WARM MIX ASPHALT
JOB 050439__ WATER POLLUTION CONTROL

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER
Digitally Signed 09/11/2026

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.

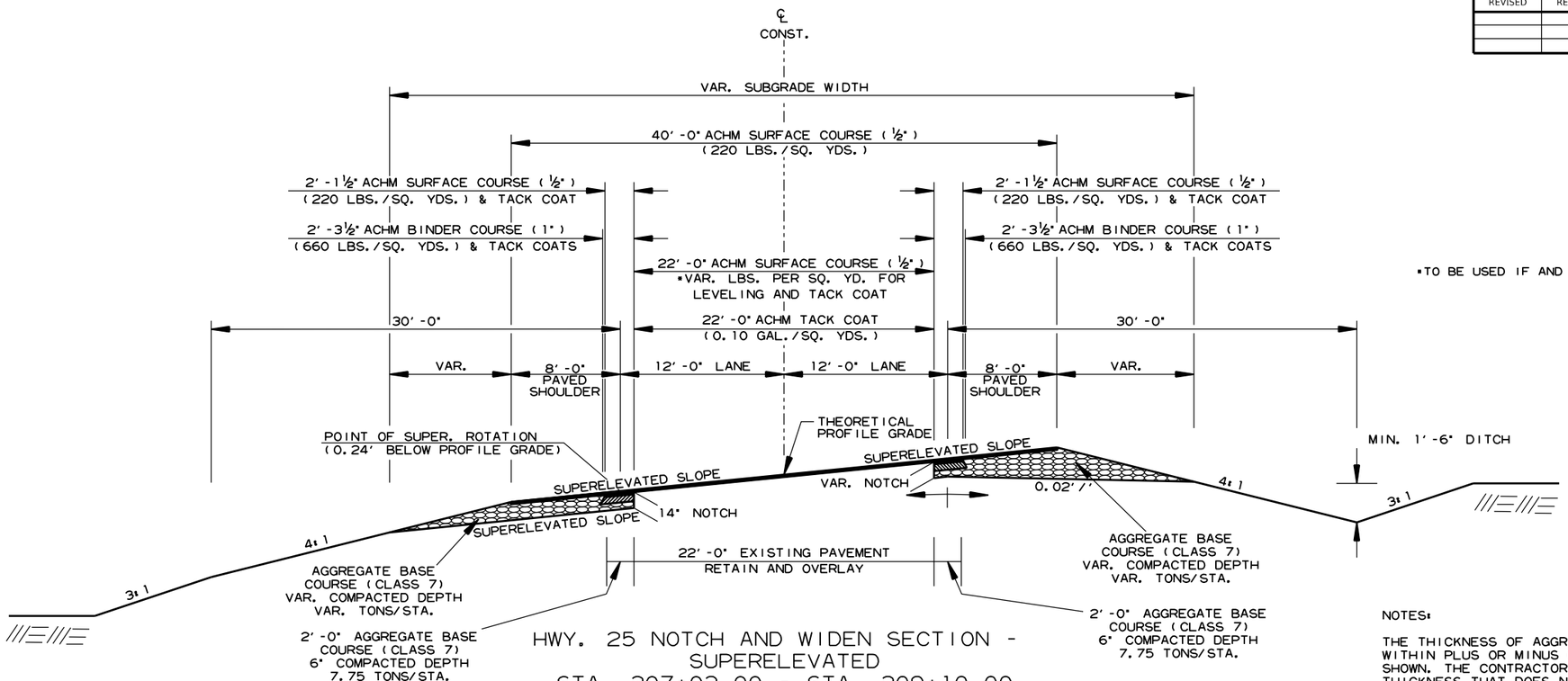
10. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

11. THIS PROJECT IS COVERED UNDER A SECTION 404 NATIONWIDE 14 PERMIT. REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS, EDITION OF 2014, FOR PERMIT REQUIREMENTS.

ORD 10.10
CREATED: 8/2/2023 SAVED: 9/9/2026
R050439 TITLE SHEET.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	4	55
		TYPICAL SECTIONS OF IMPROVEMENT				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV
Digitally Signed 09/11/2026



HWY. 25 NOTCH AND WIDEN SECTION - SUPERELEVATED
STA. 307+03.00 - STA. 309+10.00
STA. 124+42.00 - STA. 129+88.48

*TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

NOTES:

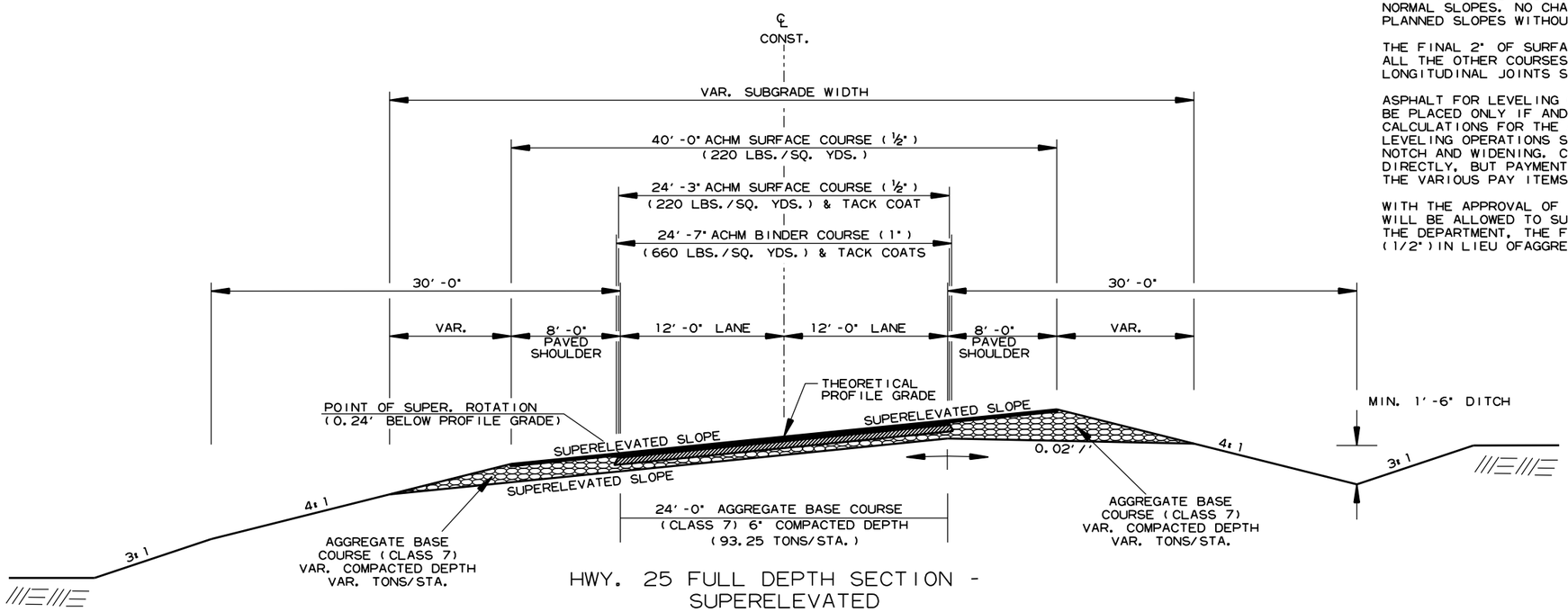
THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

REFER TO CROSS SECTIONS FOR DEVIATION FROM THE 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 THE OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.

ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WEHRE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING. CALCULATIONS WILL NOT BE PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED INCLUDED IN THE VARIOUS PAY ITEMS.

WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE, AT NO ADDITIONAL COST TO THE DEPARTMENT, THE FIRST LIFT OF ACHM SURFACE COURSE (1/2") IN LIEU OFAGGREGATE BASE COURSE ON THE SHOULDERS.



HWY. 25 FULL DEPTH SECTION - SUPERELEVATED
STA. 309+10.00 - STA. 315+04.68
STA. 118+44.50 - STA. 124+42.00

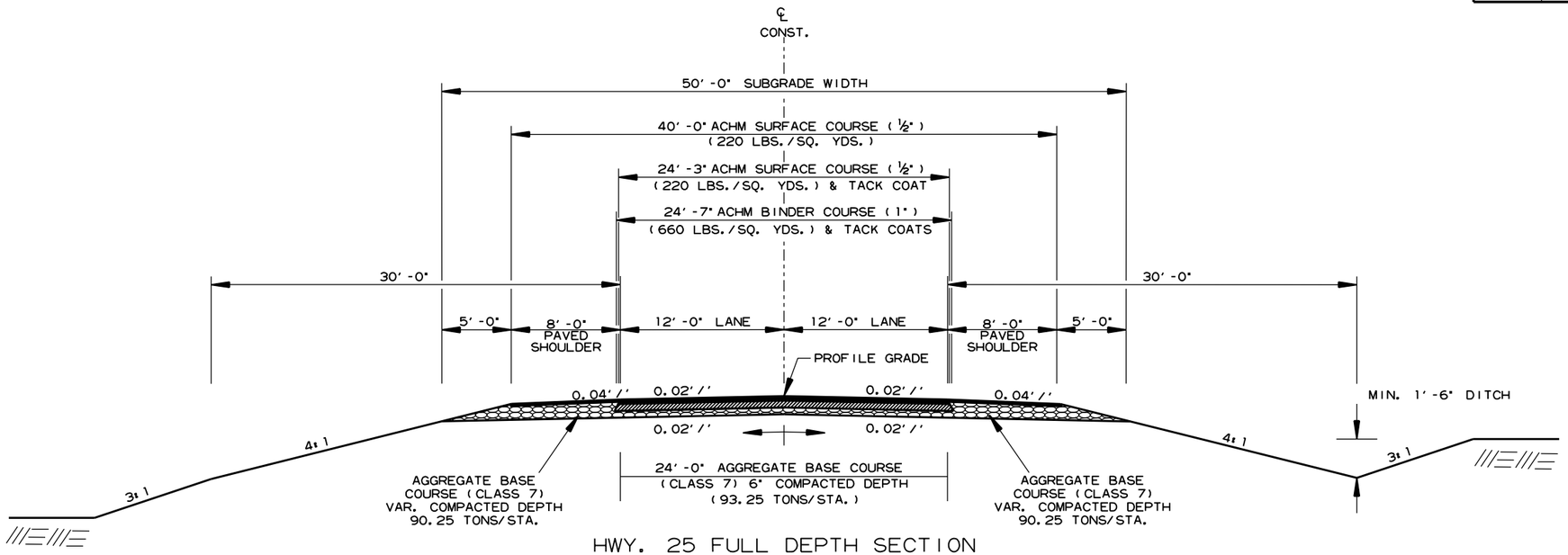
TYPICAL SECTIONS OF IMPROVEMENT

R050439_TYPICALS.DGN CREATED: 8/21/2023 SAVED: 8/31/2026 ORD 10.10

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	5	52
		TYPICAL SECTIONS OF IMPROVEMENT				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV

Digitally Signed 09/11/2026



HWY. 25 FULL DEPTH SECTION
STA. 315+04.68 (BK) - STA. 115+78.50 (AH)

NOTES:

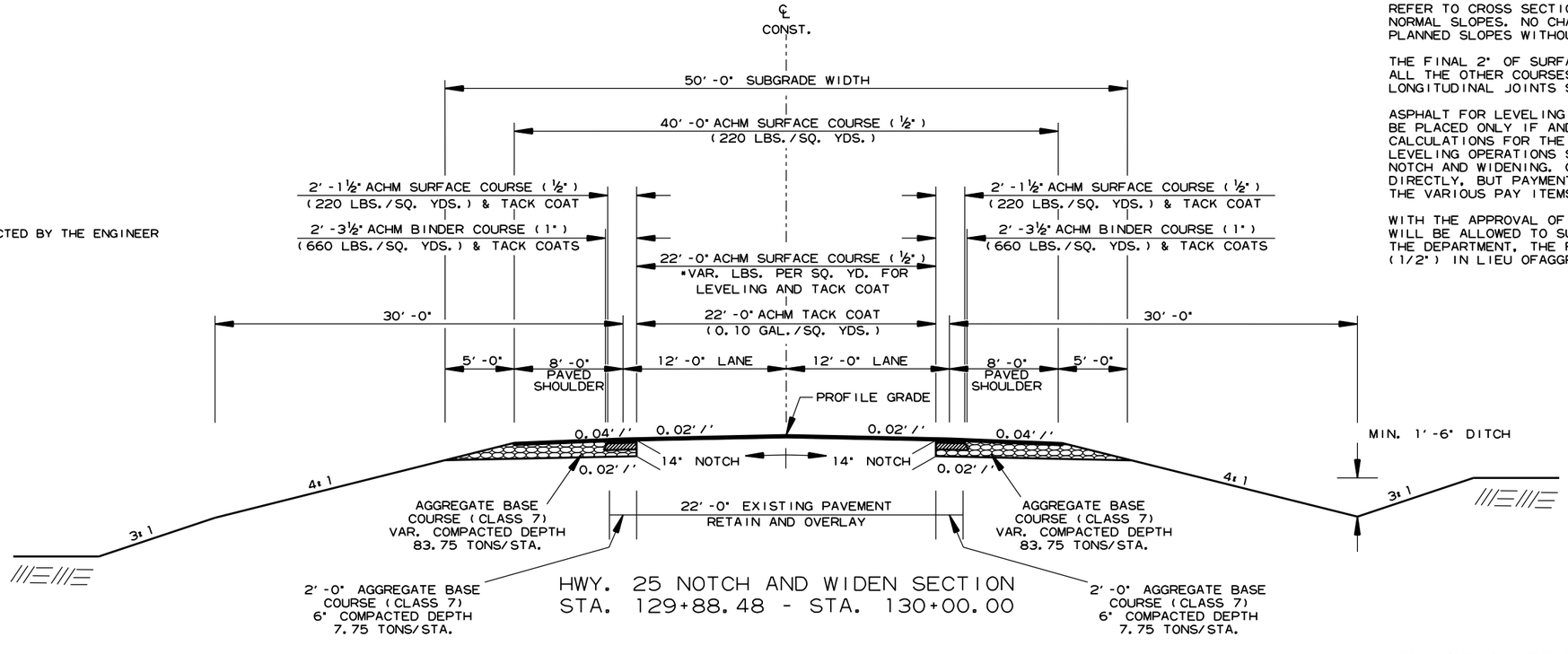
THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

REFER TO CROSS SECTIONS FOR DEVIATION FROM THE 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 THE OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.

ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WEHRE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING. CALCULATIONS WILL NOT BE PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED INCLUDED IN THE VARIOUS PAY ITEMS.

WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE, AT NO ADDITIONAL COST TO THE DEPARTMENT, THE FIRST LIFT OF ACHM SURFACE COURSE (1/2″) IN LIEU OFAGGREGATE BASE COURSE ON THE SHOULDERS.



*TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

HWY. 25 NOTCH AND WIDEN SECTION
STA. 129+88.48 - STA. 130+00.00

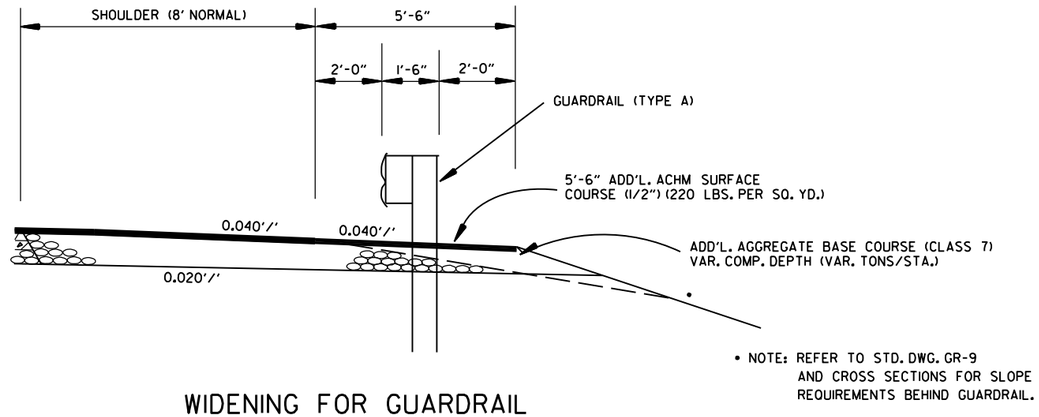
TYPICAL SECTIONS OF IMPROVEMENT

ORD 10.10

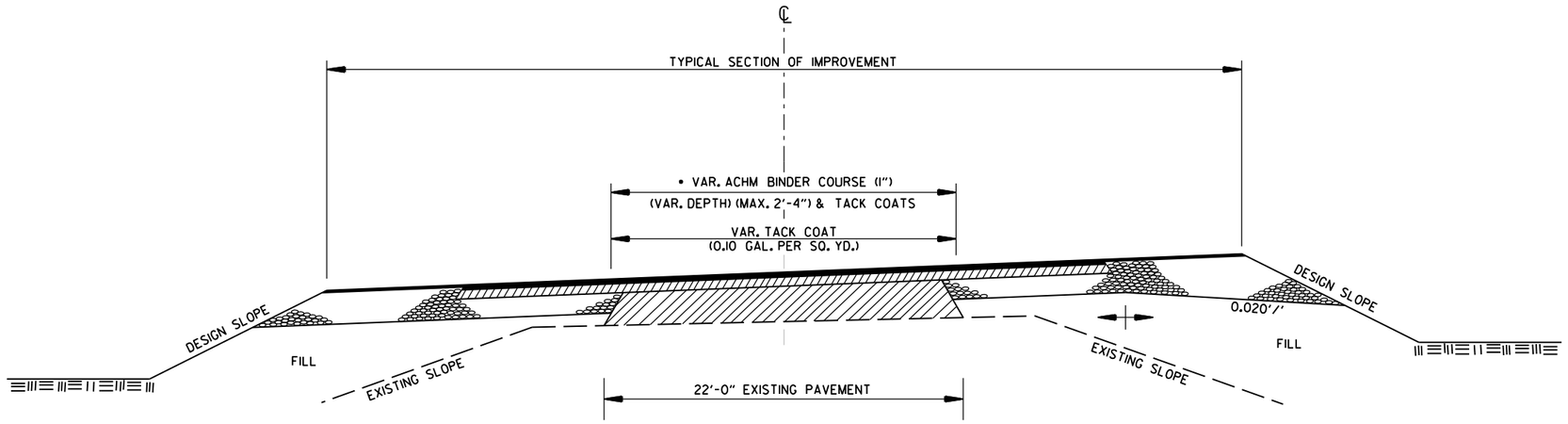
R050439_TYPICALS.DGN CREATED: 8/21/2023 SAVED: 8/31/2026

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	6	55
		SPECIAL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV
Digitally Signed 09/11/2026



WIDENING FOR GUARDRAIL



• 6" AGGREGATE BASE COURSE (CLASS 7)
TO BE REPLACED WITH ACHM BINDER COURSE (1")

METHOD OF RAISING GRADE

STATIONS: 308+70.00 - 309+10.00
STATIONS: 124+42.00 - 128+00.00

NOTES:

(1) THIS DETAIL TO BE USED ONLY WHERE DIRECTED BY THE ENGINEER.

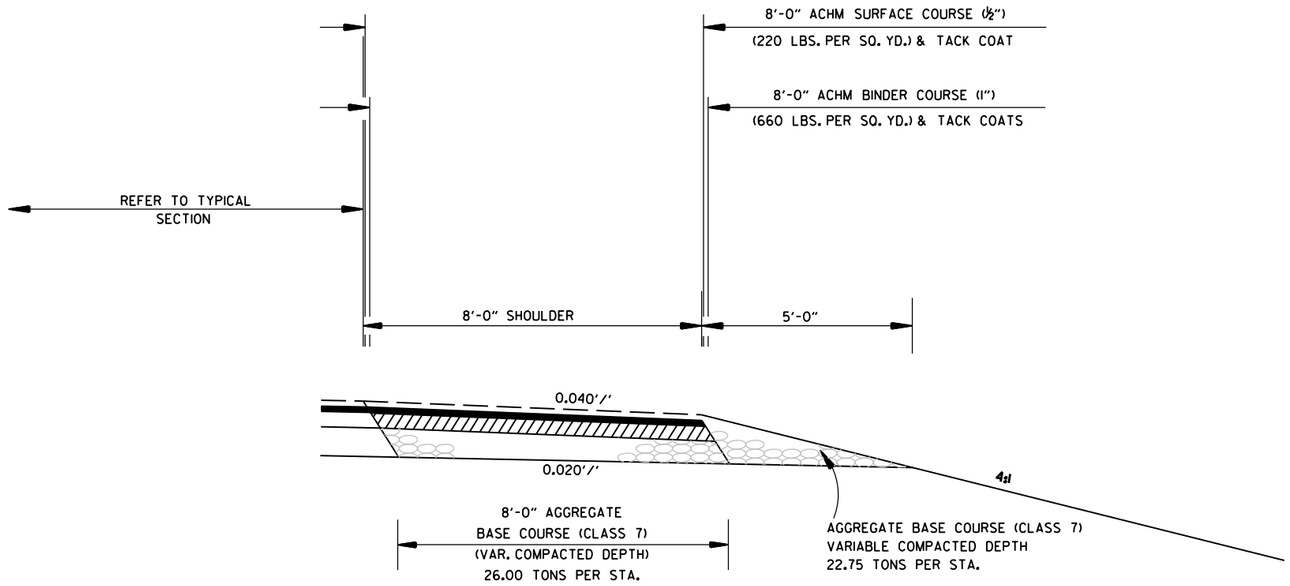
(2) QUANTITIES FOR METHOD OF GRADE RAISE USING ASPHALT WERE CALCULATED ON THIS PROJECT AT LOCATIONS WHERE THE DISTANCE BETWEEN THE EXISTING ASPHALT ROADWAY AND THE PROPOSED SUBGRADE WAS ONE FOOT OR LESS.

(3) IN LOCATIONS WHERE THE DISTANCE BETWEEN THE PROPOSED SUBGRADE AND THE EXISTING ASPHALT ROADWAY IS MORE THAN ONE FOOT, SCARIFICATION OF THE EXISTING ASPHALT ROADWAY WILL BE REQUIRED AS STATED IN SECTION 210, SUBSECTION 210.09, OF THE STANDARD SPECIFICATIONS.

ORD 10.10
R050439_SPECDET.DGN CREATED: 5/4/2026 SAVED: 9/1/2026

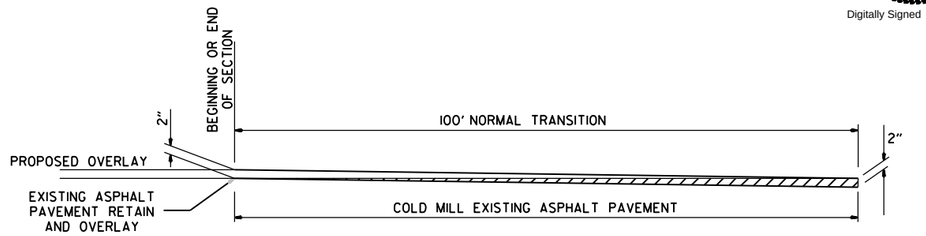
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	7	55
		SPECIAL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV
Digitally Signed 09/11/2026

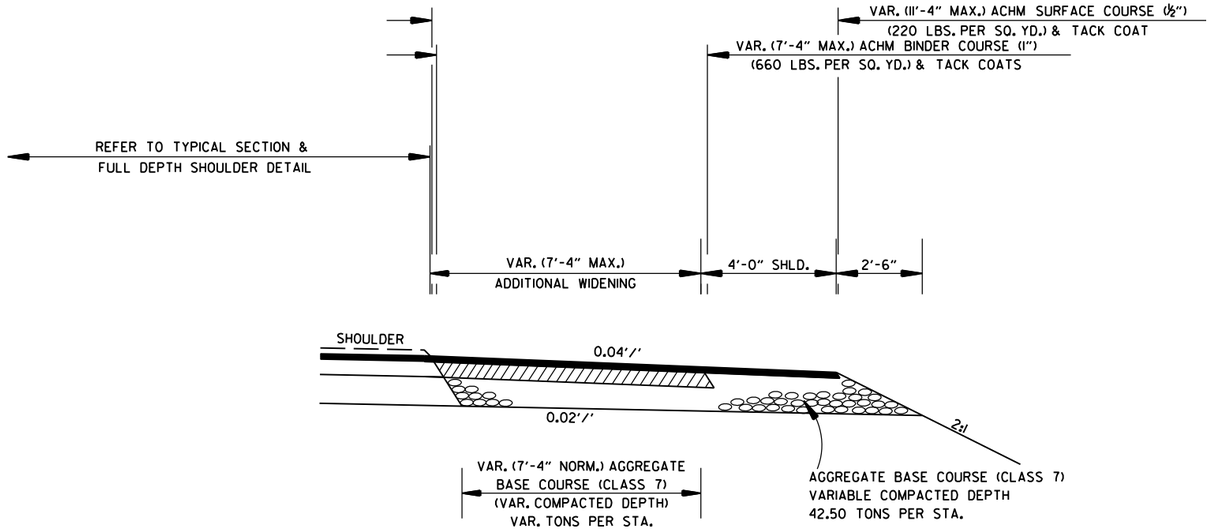


FULL DEPTH SHOULDER FOR MAINTENANCE OF TRAFFIC

STATIONS: 307+03.00 - 312+00.00
STATIONS: 121+63.00 - 126+52.00



DETAIL FOR TRANSITIONS



ADDITIONAL WIDENING FOR MAINTENANCE OF TRAFFIC

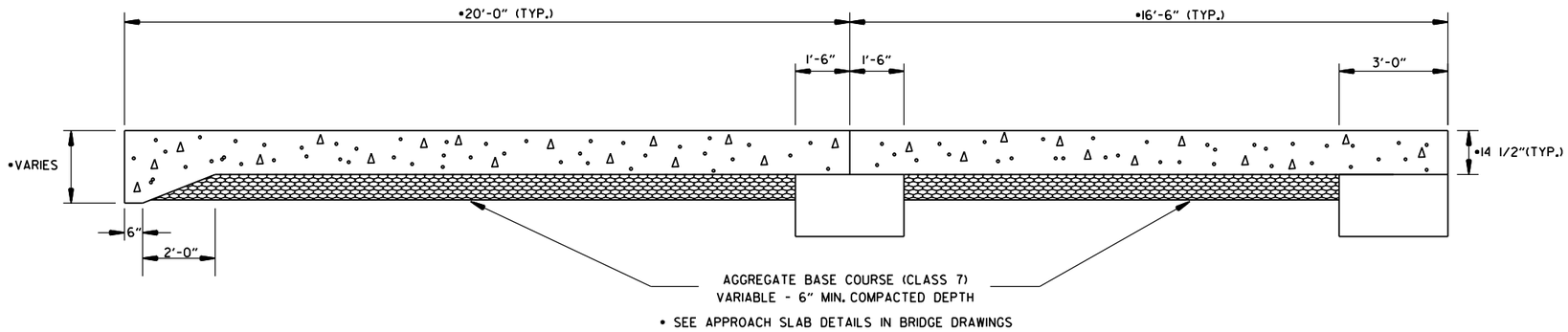
STATIONS: 307+41.50 - 313+13.80

ORD 10.10
R050439_SPECDET.DGN CREATED: 5/4/2026 SAVED: 9/10/2026

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	8	55
		SPECIAL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV

Digitally Signed 09/11/2026



• SEE APPROACH SLAB DETAILS IN BRIDGE DRAWINGS

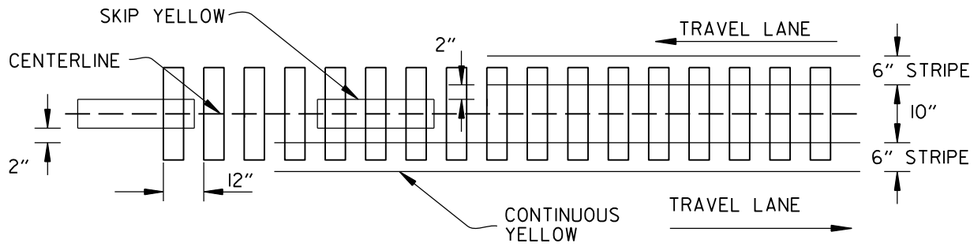
SECTION OF APPROACH SLAB (FOR ASPHALT PAVEMENT)

ORD 10.10
R050439_SPECDET.DGN CREATED: 5/4/2026 SAVED: 9/1/2026

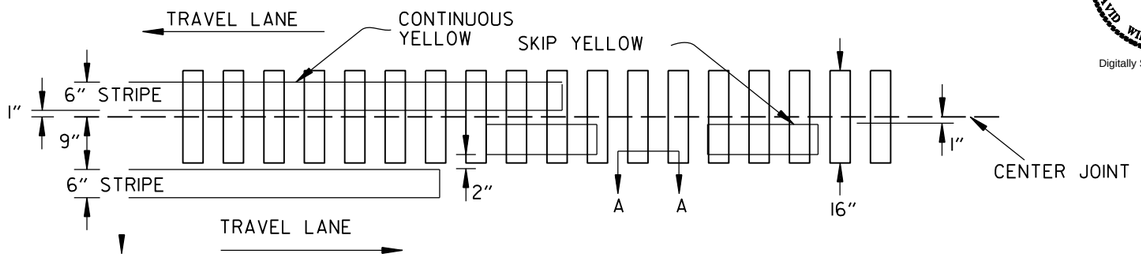
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	9	55
		SPECIAL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV

Digitally Signed 09/11/2026

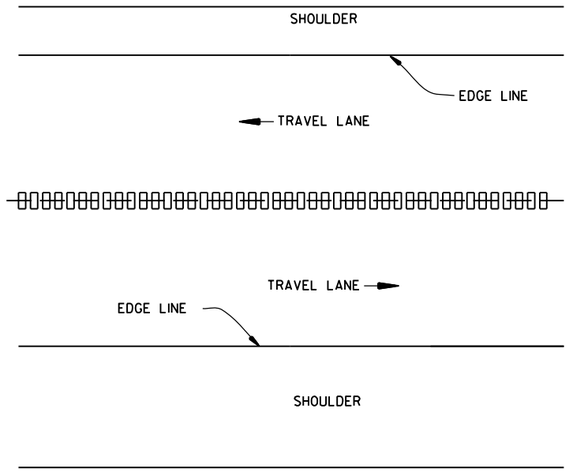


ASPHALT PAVEMENT

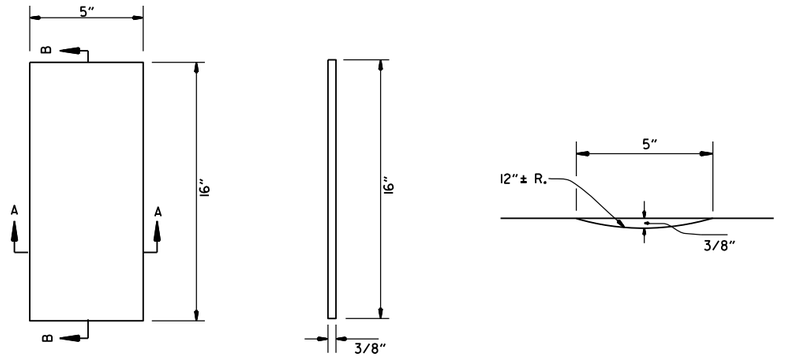


CONCRETE PAVEMENT

LOCATION PLAN OF CENTERLINE RUMBLE STRIPES



PLAN VIEW



PLAN SECTION B-B SECTION A-A

DETAILS OF CENTERLINE RUMBLE STRIPES

GENERAL NOTES:

1. RUMBLE STRIPES SHALL NOT BE INSTALLED ON BRIDGE DECKS, APPROACH SLABS, INTERSECTING STREETS OR ROADWAYS, OR ACROSS TRANSVERSE JOINTS OF CONCRETE SHOULDERS.
2. RUMBLE STRIPES SHALL BE MEASURED BY THE LINEAR FOOT LONGITUDINALLY ALONG THE CENTERLINE.
3. THE 3/8" DEPTH SHALL GENERALLY APPLY FOR THE ENTIRE 16" LENGTH. SOME VARIATION TO SUIT SLOPE BREAKS MAY BE NECESSARY.

ORD 10.10
R050439_SPECDET.DGN CREATED: 5/4/2026 SAVED: 9/10/2026

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	10	55
		TEMPORARY EROSION CONTROL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV
Digitally Signed 09/11/2026

CLEARING AND GRUBBING QUANTITIES:

WATTLES (20") (E-I) = 45 LIN. FT.
FILTER SOCKS (18") (E-3) = 281 LIN. FT.
ROCK DITCH CHECKS (E-6) = 15 CU. YD.
SILT FENCE (E-II) = 4701 LIN. FT.

STA. 307+03.00
BEGIN JOB 050439
LOG MILE 2.76

LEGEND

E-I	= WATTLE DITCH CHECKS
E-3	= FILTER SOCKS
E-6	= ROCK DITCH CHECKS
E-II	= SILT FENCE

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED.

REVISIONS

DATE OF REVISION	REVISION

STA. 130+00.00
END JOB 050439

CLEARING AND GRUBBING
TEMPORARY EROSION CONTROL DETAILS

ORD 10.10

R050439_TEC-C&G.DGN CREATED: 4/25/2024 SAVED: 9/2/2026

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	11	55
		TEMPORARY EROSION CONTROL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV
Digitally Signed 09/11/2026

STAGE I QUANTITIES:

WATTLES (20") (E-I) = 72 LIN. FT.
ROCK DITCH CHECKS (E-6) = 27 CU. YD.

STA. 307+03.00
BEGIN JOB 050439
LOG MILE 2.76

LEGEND

E-I	= WATTLE DITCH CHECKS
E-3	= FILTER SOCKS
E-6	= ROCK DITCH CHECKS
E-II	= SILT FENCE

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED.

REVISIONS

DATE OF REVISION	REVISION

STA. 130+00.00
END JOB 050439

STAGE I
TEMPORARY EROSION CONTROL DETAILS

ORD 10.10
R050439_TEC-STG 1.DGN CREATED: 4/25/2024 SAVED: 9/2/2026

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	12	55
		TEMPORARY EROSION CONTROL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV
Digitally Signed 09/11/2026

STAGE 2 QUANTITIES:

WATTLES (E-I) = 27 LIN. FT.
ROCK DITCH CHECKS (E-6) = 12 CU. YD.

STA. 307+03.00
BEGIN JOB 050439
LOG MILE 2.76

LEGEND

E-I	= WATTLE DITCH CHECKS
E-3	= FILTER SOCKS
E-6	= ROCK DITCH CHECKS
E-II	= SILT FENCE

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED.

REVISIONS

DATE OF REVISION	REVISION

STA. 130+00.00
END JOB 050439

STAGE 2A
TEMPORARY EROSION CONTROL DETAILS

ORD 10.10
CREATED: 4/25/2024 SAVED: 9/2/2026
R050439_TEC-STG 2.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	13	55
		MAINTENANCE OF TRAFFIC DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER
Digitally Signed 09/11/2026

STAGE I CONSTRUCTION SEQUENCE:

INSTALL ADVANCE WARNING SIGNS AND END ROAD WORK SIGNS AT THE BEGINNING AND END OF JOB AS SHOWN ON THE ADVANCE WARNING DETAILS. INSTALL ROAD WORK AHEAD (W20-1) SIGN ON SIDE ROADS AS SHOWN IN THE ADVANCE WARNING DETAILS.

MAINTAIN TRAFFIC IN EXISTING LANES.

INSTALL TRAFFIC DRUMS AS SHOWN IN THE STAGE I MAINTENANCE OF TRAFFIC DETAILS.

USE TRAFFIC DRUMS SPACED 45' O.C.
USE TRAFFIC DRUMS TO DELINEATE DRIVEWAYS.

FURNISH AND INSTALL P.C.C.B. AS SHOWN IN STAGE I.

NOTCH AND WIDEN RT. FROM STA. 307+03.00 TO STA. 309+10.00 AND FROM STA. 124+42.00 TO STA. 130+00.00.
CONSTRUCT RT. OF HWY. 25 ON TEMP. SLOPE FROM STA. 309+10.00 TO STA. 315+04.83, FROM STA. 115+10.00 TO STA. 116+13.50, AND FROM STA. 118+09.50 TO STA. 124+42.00 AS SHOWN IN STAGE I MAINTENANCE OF TRAFFIC DETAILS.

APPLY LEVELING FROM STA. 307+03.00 TO STA. 308+70.00 AND FROM STA. 126+00.00 TO STA. 130+00.00.
APPLY METHOD OF RAISING GRADE FROM STA. 308+70.00 TO STA. 309+10.00 AND FROM STA. 124+42.00 TO STA. 126+00.00.

CONSTRUCT TEMPORARY WIDENING ON RT. FROM STA. 307+41.50 TO STA. 312+00.00.

CONSTRUCT MINOR DRAINAGE STRUCTURES RT. OF CENTERLINE.
CONSTRUCT BRIDGE STRUCTURE FROM STA. 116+13.50 TO STA. 118+09.50.

MAINTENANCE OF TRAFFIC - STAGE I QUANTITIES

SIGNS = 404.0 SQ. FT.
VERTICAL PANELS = 11 EACH
TRAFFIC DRUMS = 57 EACH

STAGE 2A CONSTRUCTION SEQUENCE:

RETAIN ADVANCE WARNING SIGNS AND END ROAD WORK SIGNS AT THE BEGINNING AND END OF JOB AS SHOWN ON THE ADVANCE WARNING DETAILS.

APPLY CONSTRUCTION PAVEMENT MARKINGS AND TRAFFIC DRUMS AS SHOWN IN THE STAGE 2 MAINTENANCE OF TRAFFIC DETAILS.

SHIFT TRAFFIC RT. FROM STA. 306+03.00 TO STA. 315+00.00 AS SHOWN IN THE STAGE 2 MAINTENANCE OF TRAFFIC DETAILS

USE TRAFFIC DRUMS SPACED 45' O.C.
USE TRAFFIC DRUMS TO DELINEATE DRIVEWAYS.

RELOCATE EXISTING P.C.C.B. AND FURNISH AND INSTALL P.C.C.B. AS SHOWN IN STAGE 2.

WIDEN LT. SHOULDER FROM STA. 314+34.61 (BK) TO STA. 116+28.38 (AH) AND FROM STA. 118+23.18 TO STA. 120+82.53.
INSTALL GUARDRAIL ON LT. FROM STA. 314+79.50 (BK) TO STA. 116+28.38 (AH) AND FROM STA. 118+23.18 TO STA. 120+41.93.

NOTCH AND WIDEN LT. FROM STA. 307+03.00 TO STA. 309+10.00 AND FROM STA. 124+42.00 TO STA. 130+00.00.
CONSTRUCT LT. OF HWY. 25 ON TEMP. SLOPE FROM STA. 309+10.00 TO STA. 315+04.83, FROM STA. 115+10.00 TO STA. 116+13.50, AND FROM STA. 118+09.50 TO STA. 124+42.00 AS SHOWN IN STAGE 2 MAINTENANCE OF TRAFFIC DETAILS.

CONSTRUCT MINOR DRAINAGE STRUCTURES LT. OF CENTERLINE.

MAINTENANCE OF TRAFFIC - STAGE 2A QUANTITIES

SIGNS = 472.0 SQ. FT.
VERTICAL PANELS = 11 EACH
TRAFFIC DRUMS = 60 EACH

STAGE 2B CONSTRUCTION SEQUENCE:

RETAIN ADVANCE WARNING SIGNS AND END ROAD WORK SIGNS AT THE BEGINNING AND END OF JOB AS SHOWN ON THE ADVANCE WARNING DETAILS.

APPLY CONSTRUCTION PAVEMENT MARKINGS AND TRAFFIC DRUMS AS SHOWN IN THE STAGE 2B MAINTENANCE OF TRAFFIC DETAILS.

SHIFT TRAFFIC TO NEW LOCATION CONSTRUCTION AS SHOWN.
USE TRAFFIC DRUMS SPACED 45' O.C.
USE TRAFFIC DRUMS TO DELINEATE MASSEY LANE.

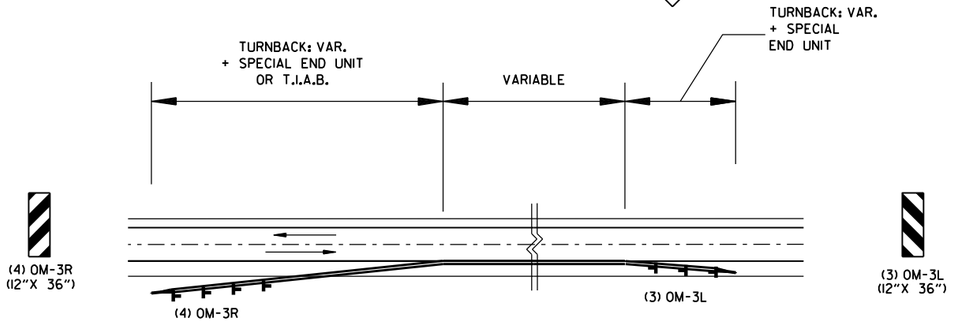
REMOVE TEMPORARY WIDENING RT. FROM STA. 307+41.50 TO STA. 312+00.00.

APPLY FINAL 2" OF ACHM AND PLACE PERMANENT PAVEMENT MARKINGS AS SHOWN IN THE PERMANENT PAVEMENT MARKING DETAILS.

MAINTENANCE OF TRAFFIC - STAGE 2B QUANTITIES

SIGNS = 344.0 SQ. FT.
TRAFFIC DRUMS = 22 EACH

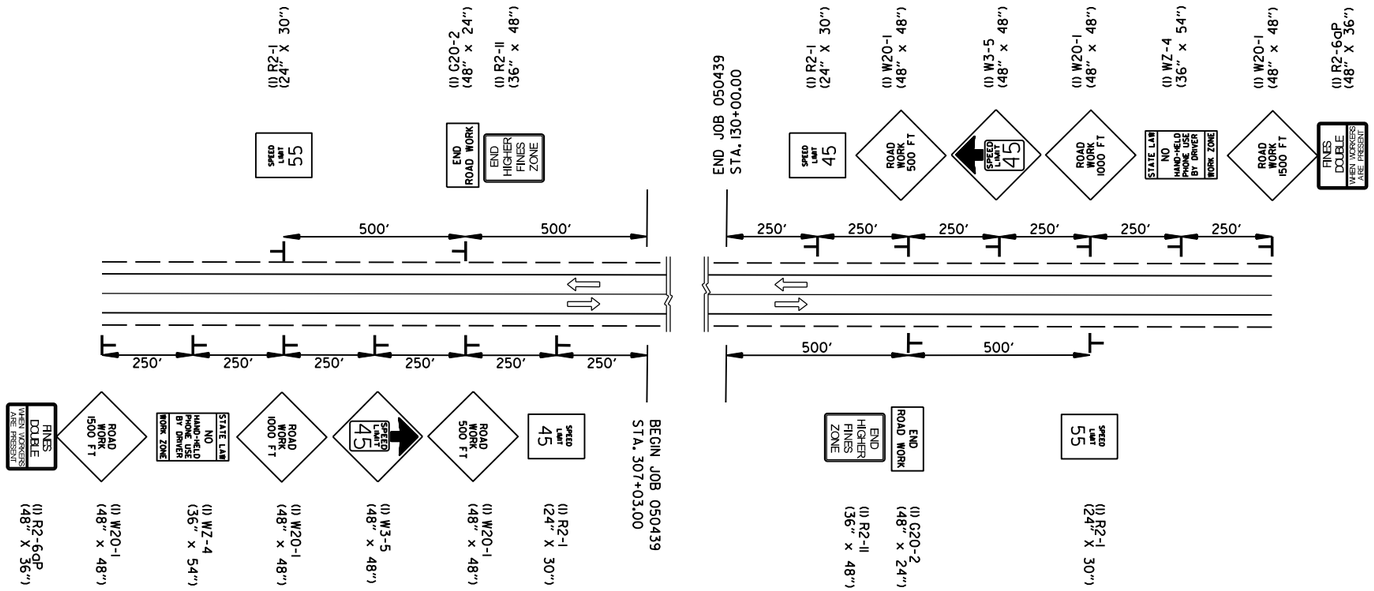
RIGHT SHOULDER CLOSED	(4) W21-5a (36" x 36")	ALL STAGES IF AND WHERE DIRECTED BY THE ENGINEER
DO NOT PASS	(4) R4-1 (24" X 30")	ALL STAGES SPACES AT ¼ MILE INTERVALS
BUMP	(4) W8-1 (30" X 30")	IF AND WHERE DIRECTED BY THE ENGINEER



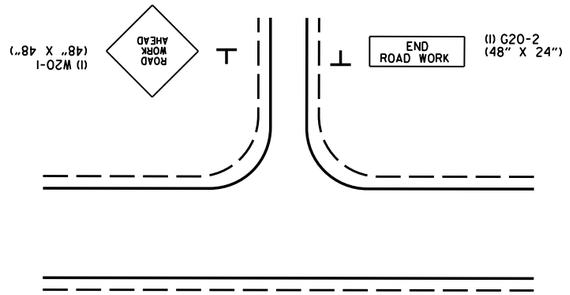
REFER ALSO TO STANDARD DRAWING TC-5 FOR DETAILS OF PLACEMENT OF PCCB TURNBACKS.

NOTE: OM-3L & OM-3R SIGNS SHALL BE EQUALLY SPACED ALONG P.C.C.B. TURNBACK.

DETAIL OF OBJECT MARKERS AT PRECAST CONCRETE BARRIER TURNBACKS

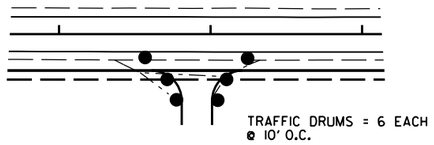


ADVANCE WARNING (ALL STAGES)



ADVANCE WARNING - SIDE ROADS (ALL ROADS)

STA. 308+01 RT. - MASSEY LANE



DRIVEWAY/TRAFFIC DRUM DETAIL

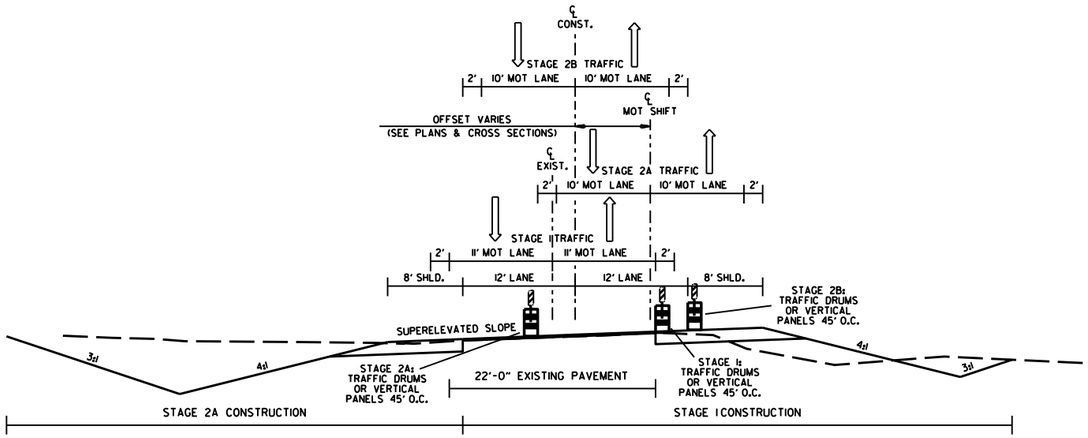
ADVANCE WARNING
MAINTENANCE OF TRAFFIC DETAILS

ORD 10.10

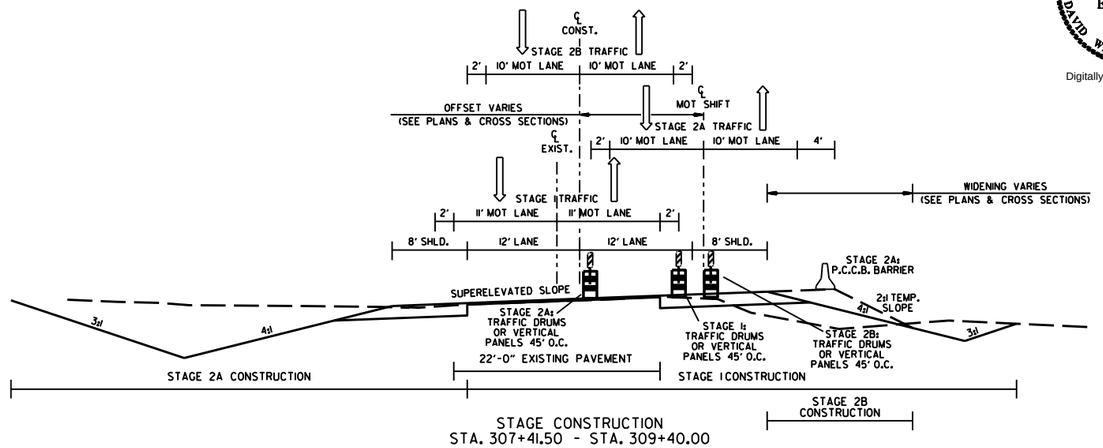
R050439_MOT ADV WARN.DGN CREATED: 1/3/2025 SAVED: 9/10/2026

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	14	55
		MAINTENANCE OF TRAFFIC DETAILS				

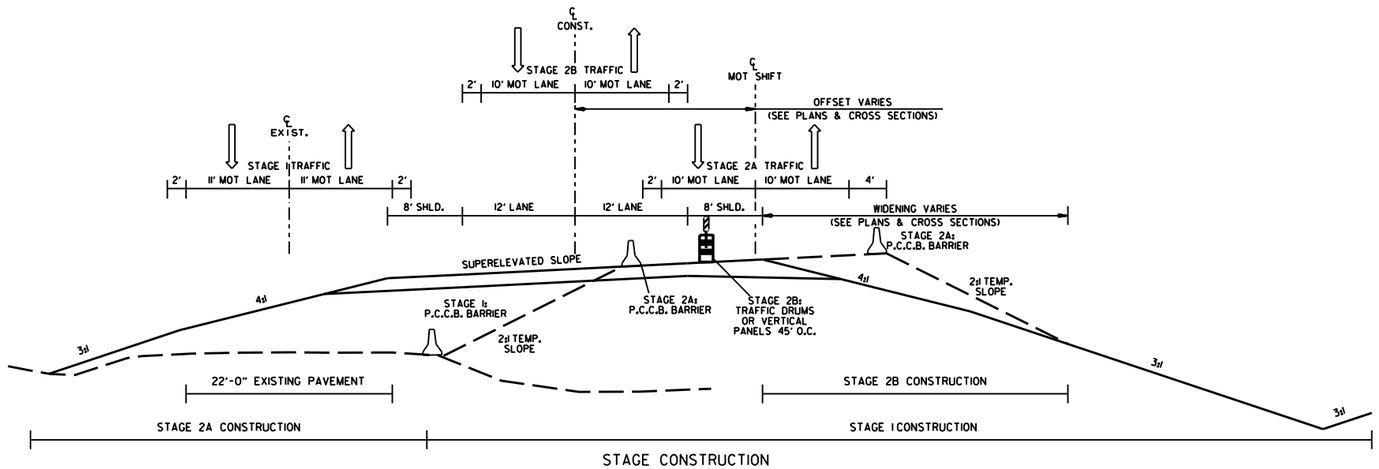
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV
Digitally Signed 09/11/2026



STAGE CONSTRUCTION
STA. 307+03.00 - STA. 307+41.50
STA. 124+50.00 - STA. 127+00.00



STAGE CONSTRUCTION
STA. 307+41.50 - STA. 309+40.00

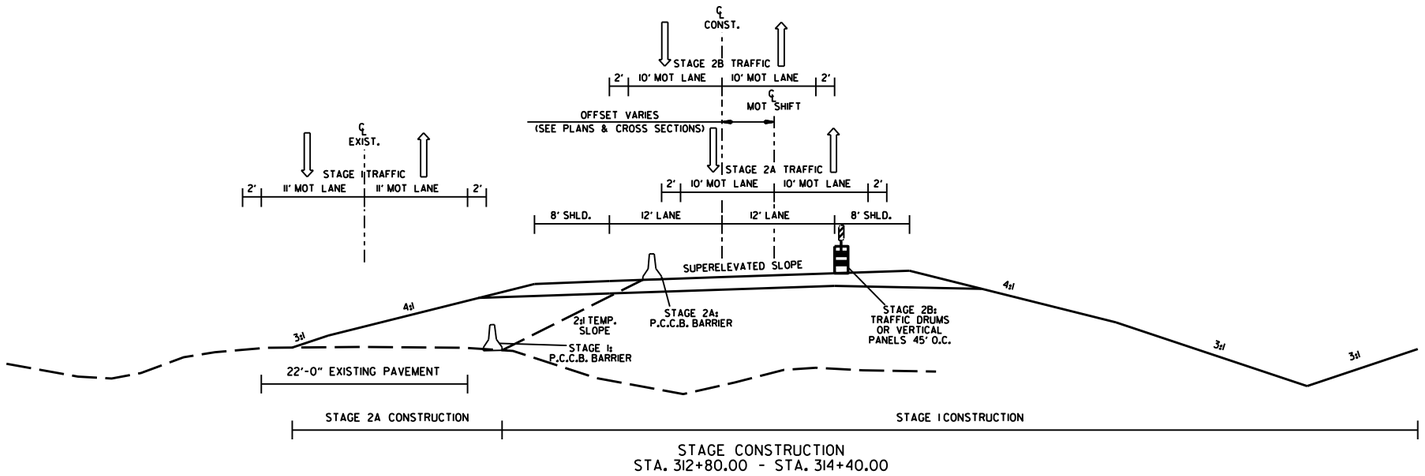


STAGE CONSTRUCTION
STA. 309+40.00 - STA. 312+80.00

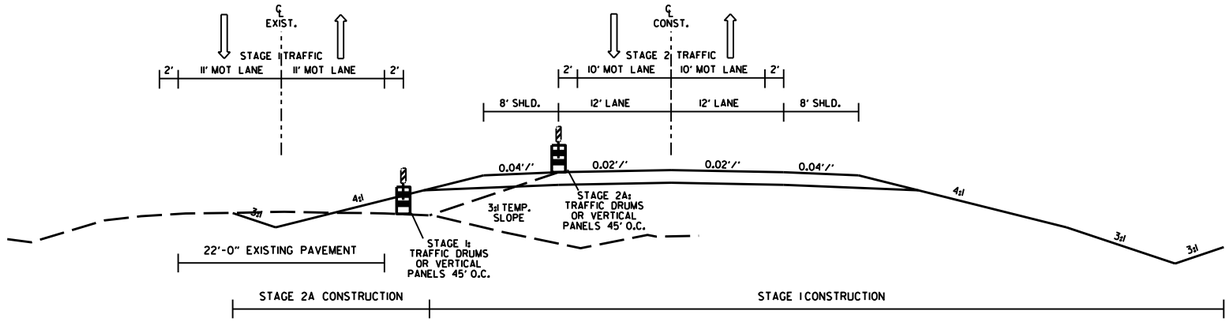
ORD 10.10
CREATED: 1/3/2025 SAVED: 9/1/2026
R050439_MOT ADV WARN.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	15	55
		MAINTENANCE OF TRAFFIC DETAILS				

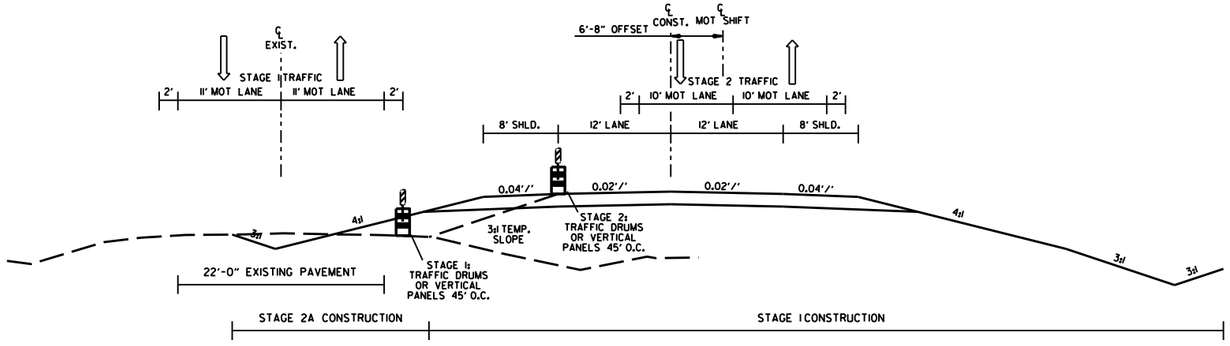
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV
Digitally Signed 09/11/2026



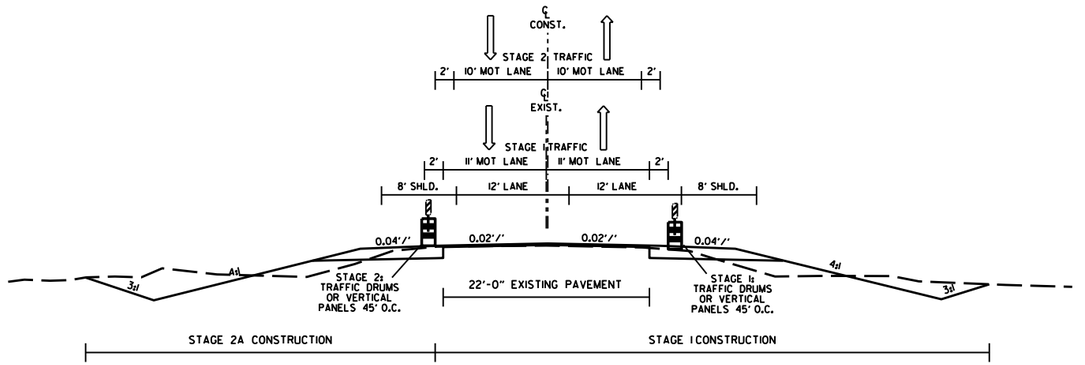
STAGE CONSTRUCTION
STA. 312+80.00 - STA. 314+40.00



STAGE CONSTRUCTION
STA. 314+40.00 - STA. 315+04.68
STA. 115+10.00 - STA. 116+13.50
STA. 117+96.99 - STA. 121+00.00



STAGE CONSTRUCTION
STA. 123+50.00 - STA. 124+50.00

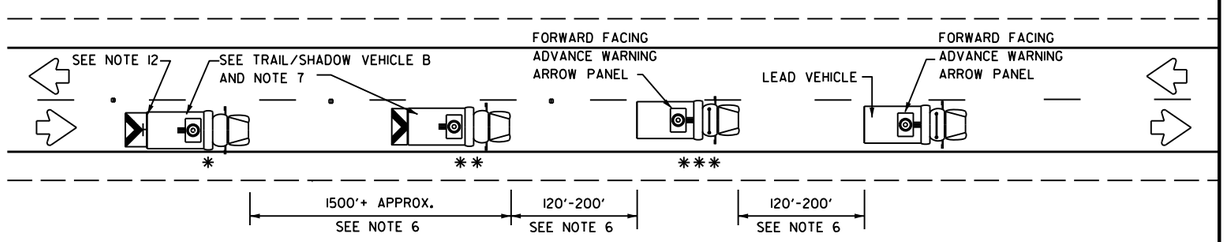


STAGE CONSTRUCTION
STA. 127+00.00 - STA. 130+00.00

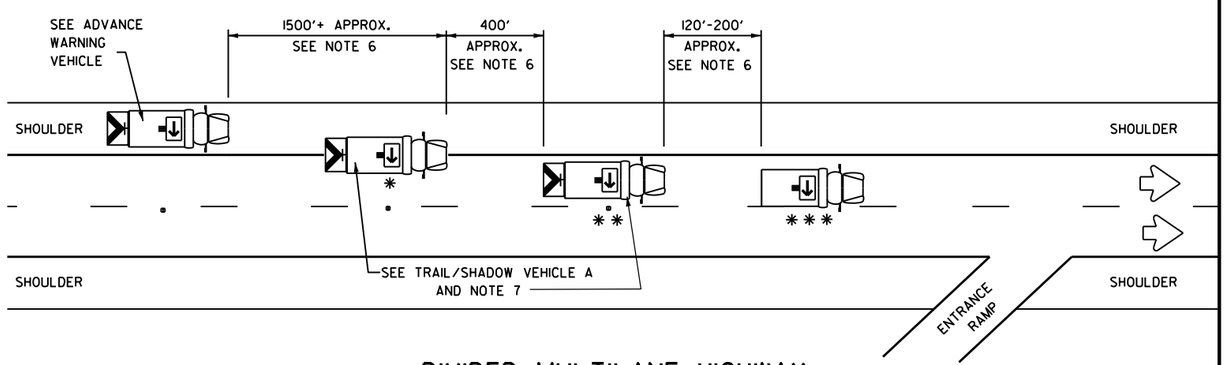
MAINTENANCE OF TRAFFIC DETAILS

ORD 10.10
R050439_MOT ADV WARN.DGN CREATED: 1/3/2025 SAVED: 9/1/2026

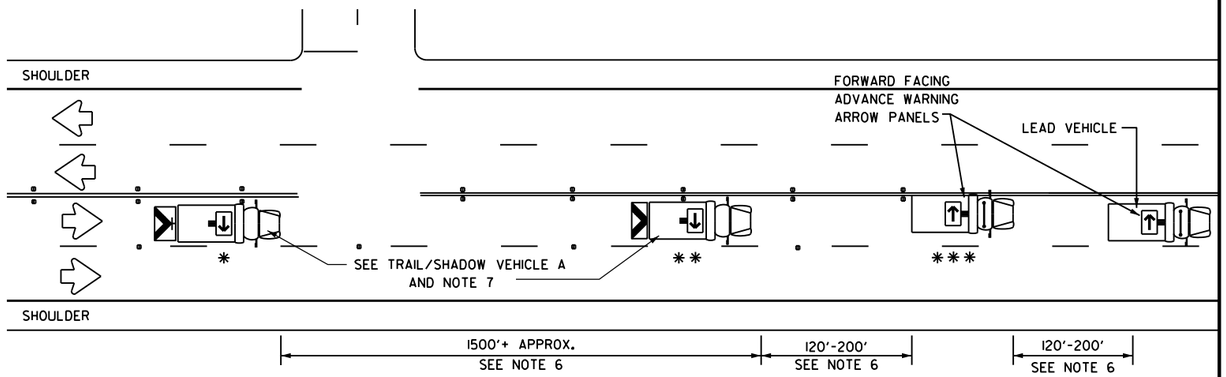
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	16	55
		MAINTENANCE OF TRAFFIC DETAILS				



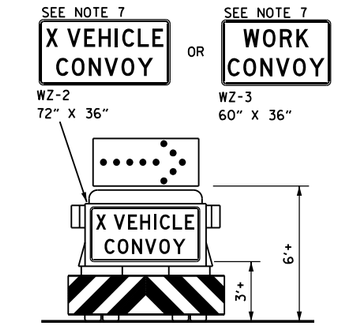
TWO LANE HIGHWAY (WORK ON TRAVEL LANE)



DIVIDED MULTILANE HIGHWAY

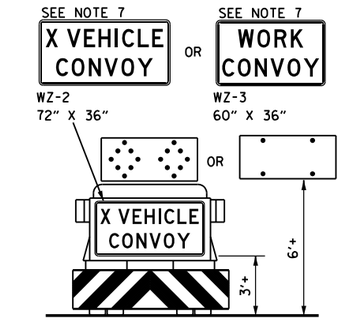


UNDIVIDED MULTILANE HIGHWAY



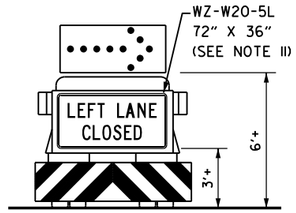
TRAIL/SHADOW VEHICLE A

WITH RIGHT DIRECTIONAL ADVANCE WARNING ARROW PANEL



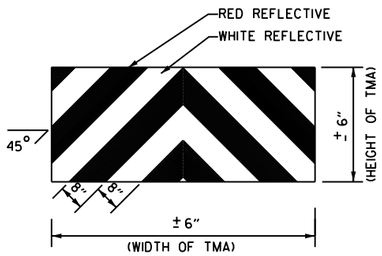
TRAIL/SHADOW VEHICLE B

WITH ADVANCE WARNING ARROW PANEL IN CAUTION MODE



ADVANCE WARNING VEHICLE

WITH RIGHT DIRECTIONAL ADVANCE WARNING ARROW PANEL



STRIPING FOR TMA

LEGEND			
*	TRAIL VEHICLE	ADVANCE WARNING ARROW PANEL DISPLAY	
**	SHADOW VEHICLE		
***	WORK VEHICLE		RIGHT DIRECTIONAL
	HEAVY WORK VEHICLE		LEFT DIRECTIONAL
	TRUCK MOUNTED ATTENUATOR (TMA)		DOUBLE ARROW
	TRAFFIC FLOW		CAUTION (ALTERNATING DIAMOND OR 4 CORNER FLASH)

TYPICAL APPLICATION - MOBILE WORK ZONE

GENERAL NOTES:

1. TRAIL, SHADOW, AND LEAD VEHICLES SHALL BE EQUIPPED WITH ADVANCE WARNING ARROW PANELS AS ILLUSTRATED.
2. THE USE OF AMBER OR GREEN HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS ON ALL VEHICLES ARE REQUIRED. VEHICLE HAZARD WARNING SIGNALS SHALL NOT BE USED INSTEAD OF THE VEHICLE'S HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS.
3. THE USE OF TRUCK MOUNTED ATTENUATORS (TMA) ON THE SHADOW VEHICLE, ADVANCE WARNING AND TRAIL VEHICLE ARE REQUIRED.
4. EACH VEHICLE SHALL HAVE TWO-WAY RADIO COMMUNICATION CAPABILITY.
5. WHEN WORK CONVOYS MUST CHANGE LANES, THE TRAIL VEHICLE SHOULD CHANGE LANES FIRST TO SHADOW THE OTHER CONVOY VEHICLES. WHEN WORK CONVOY EXITS THE ROADWAY, THE TRAIL VEHICLE SHOULD EXIT LAST.
6. VEHICLE SPACING BETWEEN THE TRAIL VEHICLE AND THE SHADOW VEHICLE WILL VARY DEPENDING ON SIGHT DISTANCE RESTRICTIONS AND QUEUE LENGTHS. MOTORISTS APPROACHING THE CONVOY SHOULD BE ABLE TO SEE THE TRAIL VEHICLE IN TIME TO SLOW DOWN AND/OR CHANGE LANES AS THEY APPROACH THE TRAIL VEHICLE. VEHICLE SPACING BETWEEN THE WORK VEHICLE AND SHADOW VEHICLE AND VEHICLE SPACING BETWEEN THE WORK VEHICLE AND LEAD VEHICLE MAY VARY ACCORDING TO TERRAIN, WORK ACTIVITY AND OTHER FACTORS.
7. X VEHICLE CONVOY (WZ-2) OR WORK CONVOY (WZ-3) SIGNS SHALL BE USED ON TRAIL VEHICLES AND SHADOW VEHICLES AS SHOWN. AS AN OPTION 48" X 48" DIAMOND SHAPED WORK CONVOY (WZ-2A) OR X VEHICLE CONVOY (WZ-3A) SIGNS MAY BE USED WHERE ADEQUATE MOUNTING SPACE EXISTS. WHEN USED, THE X VEHICLE CONVOY SIGN SHALL HAVE THE NUMBER OF THE CONVOY VEHICLES DISPLAYED ON THE SIGN IN THE NUMBER DESIGNATION "X" LOCATION. THE X VEHICLE CONVOY SIGN SHALL NOT BE USED ON THE SHADOW VEHICLE.
8. FOR DIVIDED HIGHWAYS WITH TWO OR THREE LANES IN ONE DIRECTION, THE APPROPRIATE LEFT LANE CLOSED (WZ-W20-5L), RIGHT LANE CLOSED (WZ-W20-5R), OR CENTER LANE CLOSED (WZ-W20-5C) SIGN SHOULD BE USED ON THE ADVANCE WARNING VEHICLE. AS AN OPTION, A PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) OR TRUCK MOUNTED CHANGEABLE MESSAGE SIGN (TMCMS) WITH A MINIMUM CHARACTER HEIGHT OF 12", AND DISPLAYING THE SAME LEGEND MAY BE SUBSTITUTED FOR THESE SIGNS. AN APPROPRIATE DIRECTIONAL ARROW DISPLAY, SIMULATING THE SIZE AND LEGIBILITY OF THE ADVANCE WARNING ARROW PANEL MAY BE USED IN THE SECOND PHASE OF THE PCMS/TMCMS MESSAGE. WHEN THIS IS DONE, THE ARROW BOARD WILL NOT BE REQUIRED ON THE ADVANCE WARNING VEHICLE.
9. A DOUBLE ARROW SHALL NOT BE DISPLAYED ON THE ADVANCE WARNING ARROW PANEL ON THE ADVANCE WARNING VEHICLE.
10. STANDARD DIAMOND SHAPE VERSIONS OF THE WZ SERIES SIGNS MAY BE USED AS AN OPTION IF THE RECTANGULAR SIGNS SHOWN ARE NOT AVAILABLE.
11. THE ADVANCE WARNING VEHICLE MAY STRADDLE THE EDGELINE WHEN SHOULDER WIDTH MAKES IT NECESSARY.
12. ON TWO-LANE TWO-WAY ROADWAYS, THE WORK AND PROTECTION VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW MOTOR VEHICLE TRAFFIC TO PASS. A DO NOT PASS (R4-1) SIGN SHALL BE PLACED ON THE BACK OF THE REARMOST PROTECTION VEHICLE.
13. MOBILE WORK ZONE METHODS AS DEPICTED IN THIS STANDARD DRAWING SHALL BE UTILIZED ON ALL PROJECTS THAT INCLUDE INSTALLATION OR REMOVAL OF RAISED PAVEMENT MARKERS OR PAVEMENT MARKINGS UNLESS APPROVED BY THE ENGINEER ON PROJECTS LESS THAN 0.5 MILE IN LENGTH.
14. NO DIRECT PAYMENT WILL BE MADE FOR COMPLIANCE WITH THE METHODS DEPICTED IN THIS STANDARD DRAWING (WHICH INCLUDES ALL SIGNS, DEVICES, MATERIALS, LABOR, TOOLS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLY) BUT SHALL BE CONSIDERED SUBSIDIARY TO THE MAINTENANCE OF TRAFFIC PAY ITEM.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER
Digitally Signed 09/11/2026

R050439_MOT ADV WARN.DGN CREATED: 1/3/2025 SAVED: 9/1/2026 ORD 10.10

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	17	55

MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV
Digitally Signed 09/11/2026

S32°59'30"E
PC 301+53.2
PO
PI 304+33.80
VERTICAL PANELS SPACED 45' O.C.
MOT SHIFT STA. 50+00.00 = HWY. 25 STA. 306+03.00
POB 50+00.00
306+03.00
100' TRANSITION
PT 307+02.48
307+03.00
TRAFFIC DRUMS SPACED 45' O.C.
PC 308+25.57
PC 52+06.64
C.L. MASSEY LANE STA. 200+00.00 = C.L. HWY. 25 STA. 308+01.00
Δ = 90°00'00"
EXIST. R/W
S56°39'10"E
S61°49'30"E
PQB 200+00.00
PROP. CONSTRUCTION LIMITS
PROP. R/W
PC 200+66.24
PT 201+41.98
PI 201+06.03
MASSEY LANE
PROP R/W
+55.00 47.08'
+70.00 50.43'
+45.00 115.00'
+45.00 59.65'
+20.00 60.00'
+35.00 135.00'
+25.00 216.00'
T.C.E.
PI 54+27.50
PI 310+52.99
+85.00 105.00'
PT 312+79.68
PT 56+44.91
+55.00 87.74-117.00'
+95.00 86.43-117.00'
T.C.E.
PI 58+79.10
POE
315
S69°46'28"E
HWY. 25
S74°11'00"E
MOT SHIFT
FURNISH AND INSTALL 480' P.C.C.B. AND (1) T.I.A.B. AND (1) SPECIAL END UNIT
MOT SHIFT STA. 59+01.45 = HWY. 25 STA. 315+00.00
PC 57+38.89
+61.34 92.00'
PT 58+99.22
+85.00 100.00'
STA 315+04.83 (BK)
STA 115+10.00 (AH)
AH +70.00 84.00'
AH +55.00 100.00'
25' BUFFER
BLUE CREEK
TRAFFIC DRUMS SPACED 45' O.C.

(1) RII-2 (48" X 30")
(1) WI-6 (48" X 24")
16' BARR. TYP. III RT.
ROAD CLOSED

LEGEND
= STAGE I CONSTRUCTION

STA. 307+03.00
BEGIN JOB 050439
LOG MILE 2.76

(1) RII-2 (48" X 30")
(1) WI-6 (48" X 24")
16' BARR. TYP. III LT.
ROAD CLOSED

STA. 130+00.00
END JOB 050439

BLUE CREEK
25' BUFFER
PC 120+15.36
EXIST. R/W
PT 122+50.38
AH +30.00 61.25'
AH +00.00 65.00'
AH +25.00 65.00'
PI 126+52.19
PROP. R/W
S69°46'28"E
HWY. 25
S75°39'00"E
S70°14'46"E
POE 131+24.87
AH +00.00 62.00'
AH +00.00 42.17'
AH +70.00 84.00'
AH +55.00 100.00'
AH +45.00 98.00'
AH +60.00 88.00'
AH +04.77 77.00'
PI 121+32.98
AH +49.00 72.57-128.00'
AH +05.00 68.24-128.00'
T.C.E.
16'
PROP. CONST. LIMITS
PROP. R/W
EXIST. R/W
AH +85.00 60.00'
PC 125+16.99
TRAFFIC DRUMS SPACED 45' O.C.
PT 127+87.18
AH +05.00 60.00'
PROP. CONST. LIMITS
PROP. R/W
AH +00.00 60.00'
AH +00.00 37.83'
100' TRANSITION
130+00.00
130+00.00

STAGE I
MAINTENANCE OF TRAFFIC DETAILS

ORD 10.10
CREATED: 4/25/2024 SAVED: 9/2/2026
R050439_MOT-STG 1.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	18	55
		MAINTENANCE OF TRAFFIC DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV
Digitally Signed 09/11/2026

TRAFFIC DRUMS 6 EACH LOCATION

TRAFFIC DRUMS SPACED 45' O.C.

DBL. YELLOW SOLID CONSTRUCTION PAVEMENT MARKINGS

RELOCATE AND INSTALL 220' P.C.C.B. AND (1) SPECIAL END UNIT
FURNISH AND INSTALL (1) T.I.A.B.

PO
PC 301+53.2
S32°59'30"E
PI 304+33.80
306+03.00
100' TRANSITION
PT 307+02.48
307+03.00
PC 308+25.57
C.L. MASSEY LANE STA. 200+00.00 =
C.L. HWY. 25 STA. 308+01.00
Δ = 90°00'00"
EXIST. R/W
PROP. CONST. LIMITS
T.C.E.
PT 312+79.68
POB 200+00.00
S61°49'39"E
PC 200+66.24
PI 201+41.28
PI 201+06.03
PI 310+52.99
PROP. R/W
MOT SHIFT STA. 59+01.45 =
HWY. 25 STA. 315+00.00
FURNISH AND INSTALL 560' P.C.C.B.
AND (1) SPECIAL END UNIT
AND (1) T.I.A.B.
RELOCATE AND INSTALL 180' P.C.C.B.
AND (1) SPECIAL END UNIT
FURNISH AND INSTALL (1) SPECIAL END UNIT
(1) RII-2 (48" X 30")
(1) WI-6 (48" X 24")
16' BARR. TYP. III LT.
ROAD CLOSED
MASSEY LANE
PROP. R/W
WHITE SOLID CONSTRUCTION PAVEMENT MARKINGS
BLUE CREEK
5' BUFFER
STA 315+04.83 (BK) =
STA 115+10.00 (AH)

LEGEND
= STAGE 2A CONSTRUCTION

DBL. YELLOW SOLID REMOVABLE CONSTRUCTION PAVEMENT MARKINGS ON BRIDGE
BLUE CREEK
25' BUFFER
TRAFFIC DRUMS SPACED 45' O.C.
PC 120+15.36
TRAFFIC DRUMS 6 EACH LOCATION
PT 122+50.38
DBL. YELLOW SOLID CONSTRUCTION PAVEMENT MARKINGS
ROAD CLOSED
(1) RII-2 (48" X 30")
(1) WI-6 (48" X 24")
16' BARR. TYP. III RT.
STA. 130+00.00
END JOB 050439
POE 131+24.87
EXIST. R/W
PROP. CONST. LIMITS
PROP. R/W
S69°46'28"E
HWY. 25
S75°39'50"E
S70°14'46"E
PI 121+32.98
PI 126+52.19
PC 125+16.99
PT 127+87.18
T.C.E.
WHITE SOLID REMOVABLE CONSTRUCTION PAVEMENT MARKINGS ON BRIDGE
WHITE SOLID CONSTRUCTION PAVEMENT MARKINGS
100' TRANSITION
130+00.00
210' SHIFTING TAPER
STA. 121+00
STA. 123+50
STA. 124+50
STA. 127+00

STAGE 2A
MAINTENANCE OF TRAFFIC DETAILS

ORD 10.10
CREATED: 4/25/2024 SAVED: 9/10/2026
R050439_MOT-STG 2.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	19	55
		MAINTENANCE OF TRAFFIC DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV

Digitally Signed 09/11/2026

POB 300
PC 301+53.22
S32°59'30"E
305
306+03.00
100' TRANSITION
PT 307+02.48
307+03.00
PC 308+25.57
C.L. MASSEY LANE STA. 200+00.00 =
C.L. HWY. 25 STA. 308+01.00
Δ = 90°00'00"
TRAFFIC DRUMS SPACED 45' O.C.
EXIST. R/W
PROP. CONST. LIMITS
16'
310
18'
+55.00 87.74+117.00'
+95.00 86.43+117.00'
T.C.E.
PT 312+79.68
B15
S69°46'28"E
HWY. 25
PQB 200+00.00
+40
+80
S61°49'39"E
200
EXIST. R/W
PROP. CONST. LIMITS
PROP. R/W
PC 200+66.24
PT 201+41.28
PI 201+06.03
MASSEY LANE
+55.00 47.08'
+70.00 50.43'
+45.00 59.65'
+45.00 115.00'
+35.00 135.00'
+35.00 216.00'
-00.00 44.00'
PI 304+33.80
PI 310+52.99
+20.00 60.00'
PROP. R/W
+85.00 105.00'
+61.34 92.00'
WHITE SOLID CONSTRUCTION PAVEMENT MARKINGS
DBL. YELLOW SOLID CONSTRUCTION PAVEMENT MARKINGS
+85.00 100.00' (BK)
+85.00 100.00' (AH)
AH +70.00 84.00'
AH +52.00 100.00'
STA 315+04.83
STA 115+10.00
25' BUFFER
BLUE CREEK

STA. 307+03.00
BEGIN JOB 050439
LOG MILE 2.76

LEGEND

= STAGE 2B CONSTRUCTION

= OBLITERATION OF PAVEMENT

STAGE 2B
MAINTENANCE OF TRAFFIC DETAILS

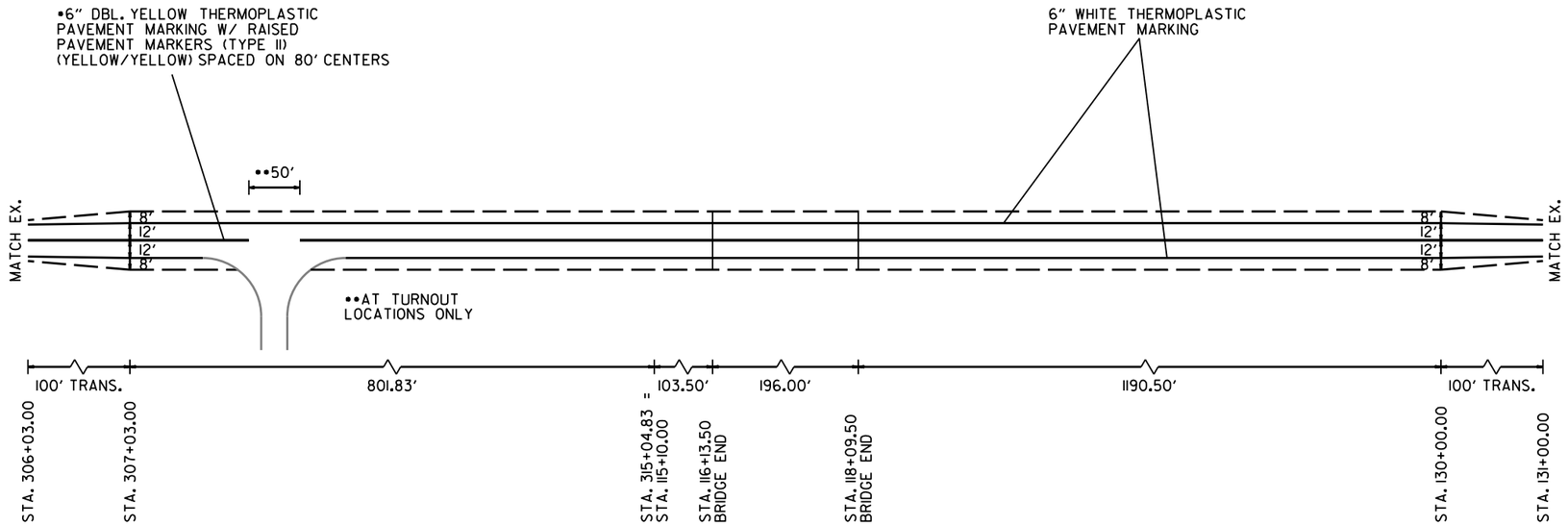
ORD 10.10
R050439_MOT-STG 3.DGN CREATED: 4/25/2024 SAVED: 9/10/2026

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	20	55
		PERMANENT PAVEMENT MARKING DETAILS				

PERMANENT PAVEMENT MARKINGS

THERMOPLASTIC PAVEMENT MARKING WHITE (6") = 4884 LIN. FT.
THERMOPLASTIC PAVEMENT MARKING YELLOW (6") = 4880 LIN. FT.
RAISED PAVEMENT MARKERS TYPE II(YELLOW/YELLOW) = 31 EACH

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV
Digitally Signed 09/11/2026



TYPICAL STRIPING DETAIL
HWY. 25

•NOTE:
THE 6" YELLOW STRIPING QUANTITY HAS BEEN ESTIMATED BASED ON A DOUBLE YELLOW CENTERLINE STRIPE FOR THE ENTIRE PROJECT. THE PROJECT MUST BE MARKED FOR PASSING/NO PASSING ZONES PRIOR TO THE PLACEMENT OF FINAL STRIPING. CONTACT THE MAINTENANCE DIVISION AFTER THE FINAL LIFT OF SURFACE COURSE HAS BEEN PLACED TO SCHEDULE THE ZONING OF THE PROJECT.

ORD 10.10

R050439_PPM.DGN CREATED: 1/9/2025 SAVED: 9/3/2026

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	21	55
		QUANTITIES				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER
Digitally Signed 09/11/2026

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	STAGE 2A	STAGE 2B	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		VERTICAL PANELS	TRAFFIC DRUMS	FURNISHING & INSTALLING PRECAST CONC. BARRIER	RELOCATING PRECAST CONCRETE BARRIER	TEMPORARY IMPACT ATTENUATION BARRIER	TEMP. IMPACT ATTEN.BARR. (REPAIR)
			LIN. FT. - EACH				NO.	SQ. FT.	EACH		LIN. FT.		EACH	
R2-6aP	FINES DOUBLE WHEN WORKERS ARE PRESENT	48"x36"	2	2	2	2	2	24.0						
W20-1	ROAD WORK 1500 FT.	48"x48"	2	2	2	2	2	32.0						
W20-1	ROAD WORK 1000 FT.	48"x48"	2	2	2	2	2	32.0						
W20-1	ROAD WORK 500 FT.	48"x48"	2	2	2	2	2	32.0						
W20-1	ROAD WORK AHEAD	48"x48"	1	1	1	1	1	16.0						
R2-11	END HIGHER FINES ZONE	36"x48"	2	2	2	2	2	24.0						
G20-2	END ROAD WORK	48"x24"	3	3	2	3	3	24.0						
R2-1	SPEED LIMIT 45	24"x30"	2	2	2	2	2	10.0						
R2-2	SPEED LIMIT 55	24"x30"	2	2	2	2	2	10.0						
W3-5	REDUCED SPEED LIMIT AHEAD	48"x48"	2	2	2	2	2	32.0						
R11-2	ROAD CLOSED	48"x30"	2	4		4	4	40.0						
OM-3L	OBJECT MARKER	12"x36"	4	12		12	12	36.0						
OM-3R	OBJECT MARKER	12"x36"	4	12		12	12	36.0						
W1-6	LARGE ARROW	48"x24"	2	2		2	2	16.0						
R4-1	DO NOT PASS	24"x30"	4	4	4	4	4	20.0						
W21-5a	RIGHT SHOULDER CLOSED	36"x36"	4	4	4	4	4	36.0						
W8-1	BUMP	30"x30"	4	4	4	4	4	25.0						
WZ-4	STATE LAW NO HAND-HELD PHONE USE BY DRIVER WORK ZONE	36"x54"	2	2	2	2	2	27.0						
	VERTICAL PANELS		11	11	22	22			22					
	TRAFFIC DRUMS		57	60	22	60				60				
	TYPE III BARRICADE-RT. (16')		1	1		1								
	TYPE III BARRICADE-LT. (16')		1	1		1								
	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER		493	599		1092					1092			
	RELOCATING PRECAST CONCRETE BARRIER			426		426						426		
	TEMPORARY IMPACT ATTENUATION BARRIER		1	2		3							3	
	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)		1	2		3								3
TOTALS:								**472.0**	**22**	**60**	**1092**	**426**	**3**	**3**

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

CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	STAGE 2A	STAGE 2B	END OF JOB	CONSTRUCTION PAVEMENT MARKINGS	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS	THERMOPLASTIC PAVEMENT MARKING	
						TYPE II	6"	
						(YELLOW/YELLOW)	WHITE	YELLOW
	LIN. FT. - EACH			LIN. FT.		EACH	LIN. FT.	
CONSTRUCTION PAVEMENT MARKINGS	6852	3188		10040				
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	784				784			
RAISED PAVEMENT MARKERS TYPE II (YELLOW/YELLOW)			31			31		
THERMOPLASTIC PAVEMENT MARKING WHITE (6")			4884				4884	
THERMOPLASTIC PAVEMENT MARKING YELLOW (6")			4880					4880
TOTALS:				**10040**	**784**	**31**	**4884**	**4880**

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

NOTE: THE 6" YELLOW STRIPING QUANTITY HAS BEEN ESTIMATED BASED ON A DOUBLE YELLOW CENTERLINE STRIPE FOR THE ENTIRE PROJECT.
THE PROJECT MUST BE MARKED FOR PASSING/NO PASSING ZONES PRIOR TO THE PLACEMENT OF ANY FINAL STRIPING.
CONTACT THE MAINTENANCE DIVISION AFTER THE FINAL LIFT OF SURFACE COURSE HAS BEEN PLACED TO SCHEDULE THE ZONING OF THE PROJECT.

ORD 10.10
R050439_QUANT.DGN CREATED: 8/4/2026 SAVED: 9/10/2026

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	22	55
		QUANTITIES				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER
Digitally Signed 09/11/2026

CLEARING AND GRUBBING

STATION	STATION	LOCATION	CLEARING	GRUBBING
			STATION	
307+03	315+05	HWY. 25 LT. & RT.	9	9
115+10	130+00	HWY. 25 LT. & RT.	15	15
TOTALS:			24	24

REMOVAL AND DISPOSAL OF ITEMS

STATION	STATION	LOCATION	CONCRETE DRIVEWAYS	GUARDRAIL
			SQ. YD.	LIN. FT.
309+31	309+50	HWY. 25 LT.	47	
115+35	116+77	HWY. 25 LT.		153
116+03	116+77	HWY. 25 LT.		75
117+89	118+64	HWY. 25 LT.		75
117+89	119+37	HWY. 25 LT.		147
TOTALS:			47	450

NOTE: THE QUANTITY SHOWN ABOVE FOR THE REMOVAL AND DISPOSAL OF GUARDRAIL SHALL INCLUDE THE REMOVAL AND DISPOSAL OF ALL GUARDRAIL TERMINALS AND TERMINAL ANCHOR POSTS.

REMOVAL AND DISPOSAL OF CULVERTS

STATION	DESCRIPTION	PIPE CULVERTS
		EACH
307+88	HWY. 25 LT. - 18" X 29' CMP	1
308+88	HWY. 25 RT. - 12" X 22' STEEL	1
309+40	HWY. 25 LT. - 18" X 25' CMP	1
311+75	HWY. 25 LT. - 15" X 19' CMP	1
121+77	HWY. 25 RT. - 15" X 23' CMP	1
TOTAL:		5

NOTE: QUANTITIES SHOWN ABOVE SHALL INCLUDE REMOVAL & DISPOSAL OF ALL HEADWALLS AND FLARED END SECTIONS IF APPLICABLE.

REMOVAL AND DISPOSAL OF FENCE

STATION	STATION	LOCATION	FENCE	GATES
			LIN. FT.	EACH
306+96	308+83	HWY. 25 RT.	268	
307+03	307+72	HWY. 25 LT.	74	
308+83	308+95	HWY. 25 RT.		1
308+95	315+05	HWY. 25 RT.	615	
311+59	311+71	HWY. 25 LT.	12	
311+71	311+89	HWY. 25 LT.		2
115+10	116+37	HWY. 25 RT.	128	
116+28	116+81	HWY. 25 LT.	53	
116+37	116+49	HWY. 25 RT.		1
116+49	116+76	HWY. 25 LT.	41	
116+81	116+85	HWY. 25 LT.		2
117+86	121+72	HWY. 25 RT.	428	
117+93	118+23	HWY. 25 LT.	33	
121+52	121+70	HWY. 25 LT.	17	
121+70	121+88	HWY. 25 LT.		1
121+72	121+89	HWY. 25 RT.		1
121+87	131+00	HWY. 25 RT.	932	
124+30	131+00	HWY. 25 LT.	675	
TOTALS:			3276	8

4" PIPE UNDERDRAIN

STATION	STATION	LOCATIONS	4" PIPE UNDERDRAINS	UNDERDRAIN OUTLET PROTECTORS
			LIN. FT.	EACH
* ENTIRE PROJECT TO BE USED IF AND			500	2
WHERE DIRECTED BY THE ENGINEER				
TOTALS:			500	2

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

EROSION CONTROL

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL					TEMPORARY EROSION CONTROL							
			SEEDING	LIME	MULCH COVER	WATER	SECOND SEEDING APPLICATION	TEMPORARY SEEDING	MULCH COVER	WATER	WATTLE (20") (E-1)	FILTER SOCK (18") (E-3)	ROCK DITCH CHECKS (E-6)	SILT FENCE (E-11)	*SEDIMENT REMOVAL & DISPOSAL
			ACRE	TON	ACRE	M.GAL.	ACRE	ACRE	ACRE	M.GAL.	LIN. FT.	LIN. FT.	CU.YD.	LIN. FT.	CU. YD.
ENTIRE	PROJECT	CLEARING AND GRUBBING						6.45	6.45	131.6	45	281	15	4701	184
ENTIRE	PROJECT	STAGE 1	2.24	4.48	2.24	228.5	2.24	3.30	3.30	67.3	72		27		17
ENTIRE	PROJECT	STAGE 2A	1.44	2.88	1.44	146.9	1.44	2.98	2.98	60.8	27		12		7
ENTIRE	PROJECT	STAGE 2B	0.10	0.20	0.10	10.2	0.10	1.10	1.10	22.4					
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.			0.95	1.90	0.95	96.9	0.95	3.46	3.46	70.6	36	70	12	1175	52
TOTALS:			4.73	9.46	4.73	482.5	4.73	17.29	17.29	352.7	180	351	66	5876	260

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
WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING
WATTLE DITCH CHECKS.....9 LIN. FT. / LOCATION
ROCK DITCH CHECKS.....3 CU.YD./LOCATION

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

NOTE: THE TEMPORARY EROSION CONTROL DEVICES SHOWN ABOVE AND ON THE PLANS SHALL BE INSTALLED IN SUCH A SEQUENCE AS TO DETER EROSION AND SEDIMENTATION ON U.S. WATERWAYS AS EXPLAINED BY THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT.

ORD 10.10
R050439_QUANT.DGN CREATED: 8/4/2026 SAVED: 9/1/2026

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	23	55
		QUANTITIES				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV

Digitally Signed 09/11/2026

EARTHWORK

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT
			CU. YD.	
ENTIRE	PROJECT	STAGE 1-MAIN LANES	2576	23822
ENTIRE	PROJECT	STAGE 2A-MAIN LANES	1927	4713
ENTIRE	PROJECT	STAGE 2B-MAIN LANES	900	
ENTIRE	PROJECT	APPROACHES		1470
200+12	202+72	MASSEY LANE	86	679
		BRIDGE CHANNEL EXCAVATION	1350	
TOTALS:			**6839**	**30684**

NOTE: EARTHWORK QUANTITIES SHALL BE PAID AS PLAN QUANTITY.

EROSION CONTROL MATTING

STATION	STATION	LOCATION	LENGTH	CLASS 3
			LIN. FT.	SQ. YD.
310+30.00	311+30.00	HWY. 25 LT.	100.00	88.89
117+95.00	122+25.00	HWY. 25 RT.	430.00	382.22
TOTAL:				**471.11**

NOTE: AVERAGE WIDTH = 8'-0"

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.
309+25.00	310+85.00	HWY. 25 RT.	160.00	9.00	160.00	71.11	0.90
TOTALS:					**160.00**	**71.11**	**0.90**

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

SOIL LOG

STATION	LATITUDE			LONGITUDE			LOCATION	DEPTH	LIQUID LIMIT	PLASTICITY INDEX	AASHTO CLASSIFICATION	COLOR
	DEG	MIN	SEC	DEG	MIN	SEC		FEET				
121+09	35	47	13.40	91	35	6.90	50RT	0-4.0	22	5	A-4(1)	BROWN
127+00	35	47	11. 80	91	34	59.20	25LT	0-5.0	36	23	A-6(13)	GR/BR
127+00	35	47	11. 90	91	34	59.20	06LT	0-5.0	23	11	A-6(4)	GR/BR
127+00	35	47	11.80	91	34	59.20	25LT	0-5.0	36	24	A-6(14)	GR/BR
202+00	35	47	17.20	91	35	21.10	25LT	0-4.0	28	13	A-6(6)	BROWN
202+00	35	47	17.00	91	35	21.20	06LT	0-5.0	26	13	A-6(5)	BROWN
307+00	35	47	17.90	91	35	20.60	10RT	0-3.5	ND	NP	A-2-4 (1)	BROWN
307+00	35	47	17.80	91	35	20.60	20RT	0-5.0	23	9	A-4(1)	BROWN
313+00	35	47	15.80	91	35	14.80	50RTZ	0-4.0	ND	NP	A-2-4 (1)	BROWN

SOIL CHARACTERISTICS TABULATED ABOVE ARE REPRESENTATIVE AT THE LOCATION OF THE SAMPLE, AND FROM SURFACE INDICATIONS ARE TYPICAL FOR THE LIMITS SHOWN. THESE DATA ARE SHOWN FOR INFORMATION ONLY. THE STATE WILL NOT BE RESPONSIBLE FOR VARIATIONS IN THE SOIL CHARACTERISTICS AND/OR EXTENT OF SAME DIFFERING FROM THE ABOVE TABULATIONS.
Z- AUGER REFUSAL
NP - NON-PLASTIC
ND - NOT DETERMINABLE

BENCH MARKS

STATION	LOCATION	BENCH MARKS
		EACH
116+14	HWY. 25 RT. BRIDGE END	1
TOTAL:		**1**

NOTE: SHOWN FOR INFORMATION ONLY. BENCH MARKS SHALL BE FURNISHED AND PLACED BY STATE FORCES.

ORD 10.10
R050439_QUANT.DGN CREATED: 8/4/2026 SAVED: 9/1/2026

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	24	55
		QUANTITIES				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER
Digitally Signed 09/11/2026

GUARDRAIL

STATION	STATION	LOCATION	GUARDRAIL (TYPE A)	THRIE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)
			LIN. FT.	EACH	
313+75.90	115+99.82	RT. SIDE	150	1	1
314+79.46	116+28.38	LT. SIDE	75	1	1
117+94.62	119+38.37	RT. SIDE	75	1	1
118+23.18	120+41.93	LT. SIDE	150	1	1
TOTALS:			**450**	**4**	**4**

MAILBOXES

LOCATION	MAILBOXES	MAILBOX SUPPORTS (SINGLE)
	EACH	
ENTIRE PROJECT	2	2
TOTALS:	**2**	**2**

APPROACH GUTTERS AND SLABS

STATION	STATION	LOCATION	APPROACH GUTTER (TYPE F)	APPROACH SLABS	REINFORCING STEEL-RDWY. (GR. 60)	AGGREGATE BASE CRS. (CLASS 7)
			CU.YD.	CU.YD.	POUND	TON
115+64.22	115+99.22	HWY. 25 RT.	4.20		210	
115+78.50	116+13.50	HWY. 25		75.20	9160	54.44
115+92.78	116+27.78	HWY. 25 LT.	4.20		210	
117+95.22	118+30.22	HWY. 25 RT.	4.20		210	
118+09.50	118+44.50	HWY. 25		75.20	9160	54.44
118+23.78	118+58.78	HWY. 25 LT.	4.20		210	
TOTALS:			**16.80**	**150.40**	**19160**	**108.88**

NOTE: USE T =16" FOR 8' SHOULDER.

SELECTED PIPE BEDDING

LOCATION	SELECTED PIPE BEDDING
	CU.YD.
ENTIRE PROJECT TO BE USED IF	
AND WHERE DIRECTED BY THE	20
ENGINEER	
TOTAL:	**20**

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

FENCING

STATION	STATION	LOCATION	WIRE FENCE (TYPE C)	16'-0" GATES
			LIN. FT.	EACH
306+96	315+05	HWY. 25 RT.	920	1
307+03	307+71	HWY. 25 LT.	68	
311+59	311+91	HWY. 25 LT.		2
115+10	116+00	HWY. 25 RT.	116	1
116+28	116+28	HWY. 25 LT.	56	1
117+96	131+00	HWY. 25 RT.	1374	1
118+24	118+24	HWY. 25 LT.	49	1
121+52	121+88	HWY. 25 LT.	19	1
121+30	131+00	HWY. 25 LT.	678	
TOTALS:			**3280**	**8**

DRIVEWAYS & TURNOUTS

STATION	SIDE	LOCATION	WIDTH	PORTLAND CEMENT CONCRETE DRIVEWAY	ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG 70-22)		AGGREGATE BASE COURSE (CLASS 7)	SIDE DRAINS 18"	STANDARD DRAWINGS
			FEET	SQ. YD.	SQ. YD.	TON	TON	LIN. FT.	
307+88	LT.	HWY. 25	16		63.84	7.02	26.07	30	DR-2, PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
308+01	RT.	HWY. 25 - MASSEY LANE	24		119.59	13.15	48.83	58	DR-2, PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
309+40	LT.	HWY. 25	16	88.73				36	DR-2, PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
311+75	LT.	HWY. 25	18		196.80	21.65	80.36	56	DR-2, PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
121+72	LT.	HWY. 25	16		115.57	12.71	47.19		DR-2
121+77	RT.	HWY. 25	16		195.04	21.45	79.64	70	DR-2, PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
* ENTIRE PROJECT TEMPORARY DRIVES							60.00		
TOTALS:				**88.73**	**690.84**	**75.98**	**342.09**	**250**	

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.1% MIN. AGGR.....5.9% ASPHALT BINDER

THE CONTRACTOR, WITH THE APPROVAL OF THE ENGINEER, WILL BE ALLOWED TO SUBSTITUTE A HIGHER PERFORMANCE GRADE ASPHALT SURFACE COURSE FOR DRIVEWAYS AND MINOR SIDE STREET CONSTRUCTION AT NO ADDITIONAL COST TO THE DEPARTMENT.

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

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.

CENTERLINE RUMBLE STRIPES IN ASPHALT ROADWAYS

STATION	STATION	LOCATION	* CENTERLINE RUMBLE STRIPES IN ASPHAL ROADWAYS
			LIN.FT.
307+03	315+05	HWY. 25	752
115+10	116+14	HWY. 25	104
118+10	130+00	HWY. 25	1190
TOTAL:			**2046**

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

ORD 10.10
R050439_QUANT.DGN CREATED: 8/4/2026 SAVED: 9/9/2026

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	25	55
		QUANTITIES				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER
Digitally Signed 09/11/2026

COLD MILLING ASPHALT PAVEMENT

STATION	STATION	LOCATION	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT
			FEET	SQ. YD.
306+03.00	307+03.00	MAIN LANES	22.00	244.44
130+00.00	131+00.00	MAIN LANES	22.00	244.44
TOTAL:				**488.88**

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

ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC

LOCATION	TON	TACK COAT
		GALLON
ENTIRE PROJECT - TO BE USED IF AND WHERE	10	20
DIRECTED BY THE ENGINEER		
TOTALS:	**10**	**20**

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

ACHM PATCHING OF EXISTING ROADWAY

DESCRIPTION	TON
ENTIRE PROJECT - TO BE USED IF AND WHERE	10
DIRECTED BY THE ENGINEER	
TOTAL:	**10**

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

BASE AND SURFACING

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT							ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")								
						(0.05 GAL. PER SQ. YD.)			(0.10 GAL. PER SQ. YD.)																
				TON / STATION	TON	TOTAL WID.	SQ.YD.	GALLON	TOTAL WID.	SQ.YD.	GALLON	TOTAL GALLONS	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 70-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 70-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 70-22	TOTAL PG 70-22
			FEET			FEET			FEET				FEET			TON	FEET			TON	FEET			TON	TON
MAIN LANES																									
306+03.00	307+03.00	HWY. 25 TRANSITION	100.00	167.75	167.75	6.71	74.56	3.73	22.00	244.44	24.44	28.17	2.29	25.44	660.00	8.40	2.13	23.67	220.00	2.60	37.00	411.11	220.00	45.22	47.82
307+03.00	309+10.00	HWY. 25 NOTCH AND WIDEN	207.00	VAR.	397.13	VAR.	442.34	22.12				22.12	VAR.	149.17	660.00	49.23	VAR.	144.00	220.00	15.84	40.00	920.00	220.00	101.20	117.04
309+10.00	315+04.68	HWY. 25 FULL DEPTH	594.68	273.75	1627.94	73.42	4851.27	242.56				242.56	24.58	1624.14	660.00	535.97	24.25	1602.33	220.00	176.26	40.00	2643.02	220.00	290.73	466.99
115+10.00	115+78.50	HWY. 25 FULL DEPTH	68.50	273.75	187.52	73.42	558.81	27.94				27.94	24.58	187.08	660.00	61.74	24.25	184.57	220.00	20.30	40.00	304.44	220.00	33.49	53.79
118+44.50	124+42.00	HWY. 25 FULL DEPTH	597.50	273.75	1635.66	73.42	4874.27	243.71				243.71	24.58	1631.84	660.00	538.51	24.25	1609.93	220.00	177.09	40.00	2655.56	220.00	292.11	469.20
124+42.00	130+00.00	HWY. 25 NOTCH AND WIDEN	558.00	VAR.	1080.47	13.42	1282.08	64.10				64.10	VAR.	432.72	660.00	142.80	VAR.	416.64	220.00	45.83	40.00	2480.00	220.00	272.80	318.63
130+00.00	131+00.00	HWY. 25 TRANSITION	100.00	160.00	160.00	6.71	74.56	3.73	22.00	244.44	24.44	28.17	2.29	25.44	660.00	8.40	2.13	23.67	220.00	2.60	36.00	400.00	220.00	44.00	46.60
ADDITIONAL FOR GUARDRAIL WIDENING																									
313+32.90	313+65.90	HWY. 25 RT.	33.00	18.13	5.98																2.75	10.08	220.00	1.11	1.11
313+65.90	315+04.83	HWY. 25 RT.	138.93	36.25	50.36																5.50	84.90	220.00	9.34	9.34
115+10.00	115+99.50	HWY. 25 RT.	89.50	36.25	32.44																5.50	54.69	220.00	6.02	6.02
314+36.46	314+69.46	HWY. 25 LT.	33.00	18.13	5.98																2.75	10.08	220.00	1.11	1.11
314+69.46	315+04.83	HWY. 25 LT.	35.37	36.25	12.82																5.50	21.62	220.00	2.38	2.38
115+10.00	116+27.50	HWY. 25 LT.	117.50	36.25	42.59																5.50	71.81	220.00	7.90	7.90
117+95.50	119+48.37	HWY. 25 RT.	152.87	36.25	55.42																5.50	93.42	220.00	10.28	10.28
118+23.50	120+51.93	HWY. 25 LT.	228.43	36.25	82.81																5.50	139.60	220.00	15.36	15.36
119+48.37	119+81.37	HWY. 25 RT.	33.00	18.13	5.98																2.75	10.08	220.00	1.11	1.11
120+51.93	120+84.93	HWY. 25 LT.	33.00	18.13	5.98																2.75	10.08	220.00	1.11	1.11
ADDITIONAL FOR MAINTENANCE OF TRAFFIC																									
307+03.00	312+00.00	HWY. 25 FULL DEPTH SHOULDER RT.	497.00			24.00	1325.33	66.27				66.27	8.00	441.78	660.00	145.79	8.00	441.78	220.00	48.60					48.60
307+41.50	312+00.00	HWY. 25 TEMPORARY WIDENING RT.	458.50	VAR.	375.11	VAR.	1801.17	90.06				90.06	VAR.	515.00	660.00	169.95	VAR.	771.17	220.00	84.83					84.83
121+63.00	126+52.00	HWY. 25 FULL DEPTH SHOULDER RT.	489.00			24.00	1304.00	65.20				65.20	8.00	434.67	660.00	143.44	8.00	434.67	220.00	47.81					47.81
ADDITIONAL FOR LEVELING																									
307+03.00	308+70.00	HWY. 25 NOTCH AND WIDEN	167.00			22.00	408.22	20.41	22.00	408.22	40.82	61.23					22.00	408.22	VAR.	11.88					11.88
128+00.00	130+00.00	HWY. 25 NOTCH AND WIDEN	200.00			22.00	488.89	24.44	22.00	488.89	48.89	73.33					22.00	488.89	VAR.	85.14					85.14
ADDITIONAL FOR METHOD OF RAISING GRADE																									
308+70.00	309+10.00	HWY. 25 NOTCH AND WIDEN	40.00			88.00	391.11	19.56	22.00	97.78	9.78	29.34	22.00	97.78	VAR.	115.96	22.00	97.78	220.00	10.76					10.76
309+10.00	310+51.60	HWY. 25 NOTCH AND WIDEN	141.60			44.00	692.27	34.61	22.00	346.13	34.61	69.22	22.00	346.13	VAR.	128.70	22.00	346.13	220.00	38.07					38.07
123+16.00	124+42.00	HWY. 25 NOTCH AND WIDEN	126.00			44.00	616.00	30.80	22.00	308.00	30.80	61.60	22.00	308.00	VAR.	31.68	22.00	308.00	220.00	33.88					33.88
124+42.00	128+00.00	HWY. 25 NOTCH AND WIDEN	358.00			66.00	2625.33	131.27	22.00	875.11	87.51	218.78	22.00	875.11	VAR.	345.28	22.00	875.11	220.00	96.26					96.26
ADDITIONAL FOR SUPERELEVATION																									
307+03.00	309+00.57	HWY. 25 - TRANSITION	197.57	38.63	76.32																				
309+00.57	312+04.68	HWY. 25 - MAX SUPERELEVATION	304.11	77.25	234.92																				
312+04.68	315+04.68	HWY. 25 - TRANSITION	300.00	38.63	115.89																				
118+27.25	120+78.06	HWY. 25 - TRANSITION	250.81	42.25	105.97																				
120+78.06	121+32.87	HWY. 25 - MAX SUPERELEVATION	54.81	84.50	46.31																				
121+32.87	123+83.68	HWY. 25 - TRANSITION	250.81	42.25	105.97																				
123+83.68	126+52.08	HWY. 25 - TRANSITION	268.40	32.00	85.89																				
126+52.08	127+20.08	HWY. 25 - MAX SUPERELEVATION	68.00	64.00	43.52																				
127+20.08	129+88.48	HWY. 25 - TRANSITION	268.40	32.00	85.89																				
TOTALS:					**6832.62**		**21810.21**	**1090.51**		**3013.01**	**301.29**	**1391.80**		**7094.30**		**2425.85**	**225.01**	**8176.56**		**897.75**		**10324.93**		**1135.27**	**2033.02**

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.1% MIN. AGGR.....5.9% ASPHALT BINDER
ACHM BINDER COURSE (1").....95.3% MIN. AGGR.....4.7% ASPHALT BINDER
TACK COAT QUANTITIES WERE CALCULATED USING THE EMULSIFIED ASPHALT RATES. REFER TO SS-400-1 FOR THE RESIDUAL ASPHALT APPLICATION RATES.

ORD 10.10
R050439_QUANT.DGN CREATED: 8/4/2026 SAVED: 9/3/2026

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	26	55
		07721 - QUANTITIES - 69632				

TABLE OF APPROACH SLAB QUANTITIES

(For Information Only)

BRIDGE NO.	ITEM	REINFORCING STEEL	CONCRETE
	UNIT	LB.	CU. YD.
07721	Begin Bridge	9,160	75.20
	End Bridge	9,160	75.20

SCHEDULE OF BRIDGE QUANTITIES - JOB NO. 050439

BRIDGE NO.	NAME PLATE TITLE	UNIT OF STRUCTURE	ITEM NO.	205	801	SP, SS, & 802	SP, SS, & 802	SS & 802	SP & 803	SS & 804	SS & 804	SS & 805	SS & 805	SS & 808	812	SS & 816	SS & 816
			ITEM	REMOVAL OF EXISTING BRIDGE STRUCTURE - BRIDGE (SITE NO.)	UNCLASSIFIED EXCAVATION FOR STRUCTURES - BRIDGE	CLASS S CONCRETE - BRIDGE	CLASS S (AE) CONCRETE - BRIDGE	PRESTRESSED CONCRETE GIRDERS (TYPE III)	CLASS 2 PROTECTIVE SURFACE TREATMENT	REINFORCING STEEL - BRIDGE (GRADE 60)	EPOXY COATED REINFORCING STEEL (GRADE 60)	② STEEL PILING (HP 12X53)	③ PREBORING	ELASTOMERIC BEARINGS	BRIDGE NAME PLATE (TYPE D)	FILTER BLANKET	DUMPED RIPRAP
			UNIT	LUMP SUM	CU. YD.	CU. YD.	CU. YD.	LIN. FT.	SQ. YD.	LB.	LB.	LIN. FT.	LIN. FT.	CU. IN.	EACH	SQ. YD.	Cu. Yd.
07721	HIGHWAY 25 OVER BLUE CREEK	BENT 1				26.10			10.6	4,489	573	175	124			486	299
		BENT 2			240	112.35				18,026				4,826.5			
		BENT 3			235	112.35				18,026				4,826.5			
		BENT 4				26.10			10.6	4,489	573	189	124			433	281
		194'-6" INTEGRAL PRESTRESSED CONCRETE GIRDER UNIT					359.70	967.5	1,031.4		81,774	106	70		1		
		SITE NO. 1 (EXISTING BR. NO. M0591)		1													
TOTALS FOR JOB NO. 050439					① 475	276.9	359.70	967.5	1,052.6	45,030	82,920	470	318	9,653.0	1	919	580

THOMAS GERARD
DESIGN SECTION SUPERVISOR

① Includes approximately 142 cubic yards of rock excavation.

② All steel piling shall be Grade 50 and are required to have QPL approved driving points which will not be paid for directly, but will be considered subsidiary to the item "STEEL PILING (HP12x53)". All piles shall conform to Standard Drawing No. 55020.

③ Quantity of Preboring shown is for estimating and bidding purposes only. Actual quantity will be determined in the field.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
9/17/26
CHARLES R. ELLIS

Ellis, Rick
Digitally signed by Ellis, Rick
DN: CN="Ellis, Rick", OU=Employees, OU=Users, OU=ARDOT, DC=AHTD, DC=com
Date: 2026.09.17 12:18:12-05'00'

BRIDGE ENGINEER

SCHEDULE OF BRIDGE QUANTITIES
HWY. 25 STR. & APPRS. (INDEPENDENCE CO.) (S)
INDEPENDENCE COUNTY

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: NLL DATE: 7/27/2026 FILENAME: b050439_q1.dgn
CHECKED BY: DPT DATE: 08/06/2026 SCALE: No Scale
DESIGNED BY: — DATE: —

BRIDGE NO. 07721 DRAWING NO. 69632

PRINT DATE: 09/17/2026

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
10/14/2026		6	ARK.	050439	27	55
		SUMMARY OF QUANTITIES & REVISIONS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13158
DAVID WILLIAM BAKER, IV

SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
201	CLEARING	24	STATION
201	GRUBBING	24	STATION
202	REMOVAL AND DISPOSAL OF FENCE	3276	LIN. FT.
202	REMOVAL AND DISPOSAL OF GATES	8	EACH
202	REMOVAL AND DISPOSAL OF CONCRETE DRIVEWAYS	47	SQ. YD.
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS	5	EACH
202	REMOVAL AND DISPOSAL OF GUARDRAIL	450	LIN. FT.
SP, SS, & 210	UNCLASSIFIED EXCAVATION	6839	CU. YD.
SP & 210	COMPACTED EMBANKMENT	30684	CU. YD.
SP & 210	SOIL STABILIZATION	100	TON
SP, SS, & 303	AGGREGATE BASE COURSE (CLASS 7)	7284	TON
SS & 401	TACK COAT	1412	GAL.
SP, SS, & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")	2312	TON
SP, SS, & 406	ASPHALT BINDER (PG 70-22) IN ACHM BINDER COURSE (1")	114	TON
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	1985	TON
SP, SS, & 407	ASPHALT BINDER (PG 70-22) IN ACHM SURFACE COURSE (1/2")	124	TON
SP & 412	COLD MILLING ASPHALT PAVEMENT	489	SQ. YD.
SP, SS, & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC	10	TON
SP, SS, & 415	ACHM PATCHING OF EXISTING ROADWAY	10	TON
SP, SS, & 504	APPROACH SLABS	150.40	CU. YD.
SP, SS, & 504	APPROACH GUTTERS	16.80	CU. YD.
SP, SS, & 505	PORTLAND CEMENT CONCRETE DRIVEWAY	88.73	SQ. YD.
601	MOBILIZATION	1.00	LUMP SUM
SP & 602	FURNISHING FIELD OFFICE	1	EACH
SS & 603	MAINTENANCE OF TRAFFIC	1.00	LUMP SUM
SS & 604	SIGNS	472	SQ. FT.
SS & 604	BARRICADES	32	LIN. FT.
SS & 604	TRAFFIC DRUMS	60	EACH
SS & 604	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER	1092	LIN. FT.
SS & 604	RELOCATING PRECAST CONCRETE BARRIER	426	LIN. FT.
604	CONSTRUCTION PAVEMENT MARKINGS	10040	LIN. FT.
604	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	784	LIN. FT.
SS & 604	VERTICAL PANELS	22	EACH
SP, SS, & 605	CONCRETE DITCH PAVING (TYPE B)	160	SQ. YD.
SP, SS, & 606	18" SIDE DRAIN	250	LIN. FT.
SS & 606	SELECTED PIPE BEDDING	20	CU. YD.
SS & 611	4" PIPE UNDERDRAINS	500	LIN. FT.
SS & 611	UNDERDRAIN OUTLET PROTECTORS	2	EACH
SS & 617	GUARDRAIL (TYPE A)	450	LIN. FT.
SS & 617	GUARDRAIL TERMINAL (TYPE 2)	4	EACH
SS & 617	THRIE BEAM GUARDRAIL TERMINAL	4	EACH
SS & 619	WIRE FENCE (TYPE C)	3280	LIN. FT.
SS & 619	16' STEEL GATES	8	EACH
620	LIME	9	TON
620	SEEDING	4.73	ACRE
SS & 620	MULCH COVER	22.02	ACRE
620	WATER	836.1	M. GAL.
621	TEMPORARY SEEDING	17.29	ACRE
621	SILT FENCE	5876	LIN. FT.
621	SEDIMENT REMOVAL AND DISPOSAL	260	CU. YD.
621	ROCK DITCH CHECKS	66	CU. YD.
SS & 621	FILTER SOCK (18")	351	LIN. FT.
621	WATTLE (20")	180	LIN. FT.
623	SECOND SEEDING APPLICATION	4.73	ACRE
624	SOLID SODDING	71	SQ. YD.
626	EROSION CONTROL MATTING (CLASS 3)	471	SQ. YD.
635	ROADWAY CONSTRUCTION CONTROL	1.00	LUMP SUM
637	MAILBOXES	2	EACH
SS & 637	MAILBOX SUPPORTS (SINGLE)	2	EACH
SP & 642	CENTERLINE RUMBLE STRIPES IN ASPHALT ROADWAYS	2046	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (6")	4884	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (6")	4880	LIN. FT.
721	RAISED PAVEMENT MARKERS (TYPE II)	31	EACH
SS & 731	TEMPORARY IMPACT ATTENUATION BARRIER	3	EACH
SS & 731	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)	3	EACH
SS & 804	REINFORCING STEEL-ROADWAY (GRADE 60)	19160	POUND
	STRUCTURES OVER 20' SPAN		
205	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. 1)	1.00	LUMP SUM
636	BRIDGE CONSTRUCTION CONTROL	1.00	LUMP SUM
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-BRIDGE	475	CU. YD.
SP, SS, & 802	CLASS S CONCRETE-BRIDGE	276.9	CU. YD.
SP, SS, & 802	CLASS S(AE) CONCRETE-BRIDGE	359.7	CU. YD.
SS & 802	PRESTRESSED CONCRETE BEAMS (TYPE III)	967.5	LIN. FT.
SP & 803	CLASS 2 PROTECTIVE SURFACE TREATMENT	1052.6	SQ. YD.
SS & 804	REINFORCING STEEL-BRIDGE (GRADE 60)	45030	POUND
SS & 804	EPOXY COATED REINFORCING STEEL (GRADE 60)	82920	POUND
SS & 805	STEEL PILING (HP 12X53)	470	LIN. FT.
SS & 805	PREBORING	318	LIN. FT.
SS & 808	ELASTOMERIC BEARINGS	9653.0	CU. IN.
812	BRIDGE NAME PLATE (TYPE D)	1	EACH
SS & 816	FILTER BLANKET	919	SQ. YD.
SS & 816	DUMPED RIPRAP	580	TON

REVISIONS

DATE	REVISION	SHEET NUMBER
10/14/2026	REVISED BRIDGE SHEETS TO CORRECT BEARING PLATE, STUD, AND THREADED ROD DIMENSIONS.	27, 39, & 41

R0050439_QUANT.DGN CREATED: 8/4/2026 SAVED: 10/29/2026

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	28	55
		SURVEY CONTROL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV

Digitally Signed 09/11/2026

SURVEY CONTROL COORDINATES

Project Name: s050439
Date: 6/14/2023
Coordinate System: ARKANSAS STATE PLANE – NORTH ZONE BASED ON GPS CONTROL, 320040 – 320040A
THIS IS A GRID PROJECT
Units: U.S. SURVEY FOOT

Point Name	Northing	Easting	Elev	Feature	Description
1	530303.9459	1433659.2484	316.01	CTL	ARDOT STD. MON. STAMPED PN:1
2	529962.0892	1434046.4671	327.48	CTL	ARDOT STD. MON. STAMPED PN:2
3	529625.7429	1434765.0123	302.36	CTL	ARDOT STD. MON. STAMPED PN:3
4	529422.7938	1435511.0651	304.05	CTL	ARDOT STD. MON. STAMPED PN:4
5	529103.3881	1436197.8381	309.66	CTL	ARDOT STD. MON. STAMPED PN:5
6	528864.3711	1436960.3900	340.07	CTL	ARDOT STD. MON. STAMPED PN:6
7	528781.7892	1437730.4217	325.97	CTL	ARDOT STD. MON. STAMPED PN:7
100	527340.4844	1439465.2815	310.86	GPS	ARDOT GPS #320040
101	528692.3675	1439284.6798	325.08	GPS	ARDOT GPS #320040A
900	529511.6351	1435110.7134	305.95	TBM	2X2 CHISELED SQUARE ON SE BR CRNR
901	528721.7594	1439111.4232	326.39	TBM	2X2 CHISELED SQUARE ON CNTR HW

*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).

GRID COORDINATES ARE STORED UNDER FILE NAME s050439gi.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: 320040 – 320040A
CONVERGENCE ANGLE: 0°14'30.02" RIGHT AT PN:4 LT:N 35°47'13.73" LG:W 91°35'04.86"
GRID AZIMUTH = ASTRONOMICAL AZIMUTH – CONVERGENCE ANGLE.

HWY. 25

POINT NO.	TYPE		STATION	NORTHING	EASTING
8000	POB		300+00.00	530397.62	1433625.57
8001	PC		301+53.22	530269.10	1433709.00
8003	PT		307+02.48	529901.30	1434109.11
8004	PC		308+25.57	529843.19	1434217.62
8006	PT		312+79.68	529657.19	1434631.50
8007	PC	A	120+15.36	529404.64	1435316.96
8009	PT	A	122+50.38	529334.83	1435541.27
8010	PC	A	125+16.99	529268.75	1435799.56
8012	PT	A	127+87.18	529189.55	1436057.78
8013	POE	A	131+24.87	529075.42	1436375.59

MASSEY LANE

POINT NO.	TYPE	STATION	NORTHING	EASTING
8014	POB	200+00.00	529854.79	1434195.96
8015	PC	200+66.24	529796.40	1434164.69
8017	PT	201+41.98	529748.74	1434108.15
8018	POE	203+83.35	529672.44	1433879.16

MOT SHIFT

POINT NO.	TYPE	STATION	NORTHING	EASTING
8019	POB	50+00.00	529952.20	1434023.68
8020	PC	52+06.64	529838.60	1434196.30
8022	PT	56+44.91	529657.00	1434593.29
8023	PC	57+38.89	529631.38	1434683.72
8025	PT	58+99.22	529581.79	1434836.14
8026	POE	59+01.45	529581.02	1434838.23

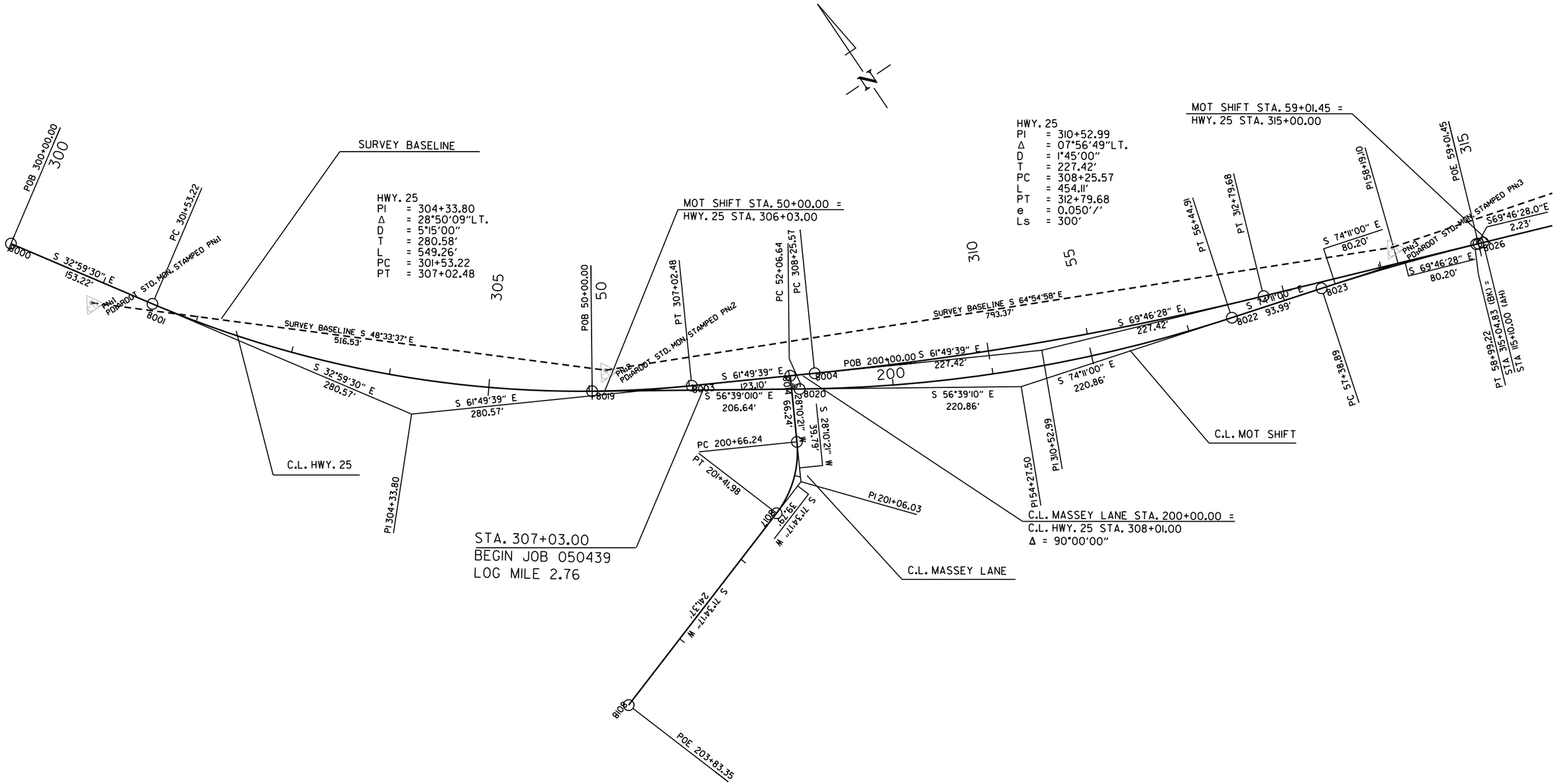
ORD 10.10

R050439_SURV CTRL.DGN CREATED: 5/1/2026 SAVED: 9/1/2026

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	29	55
		SURVEY CONTROL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV

Digitally Signed 09/11/2026



SURVEY CONTROL DETAILS

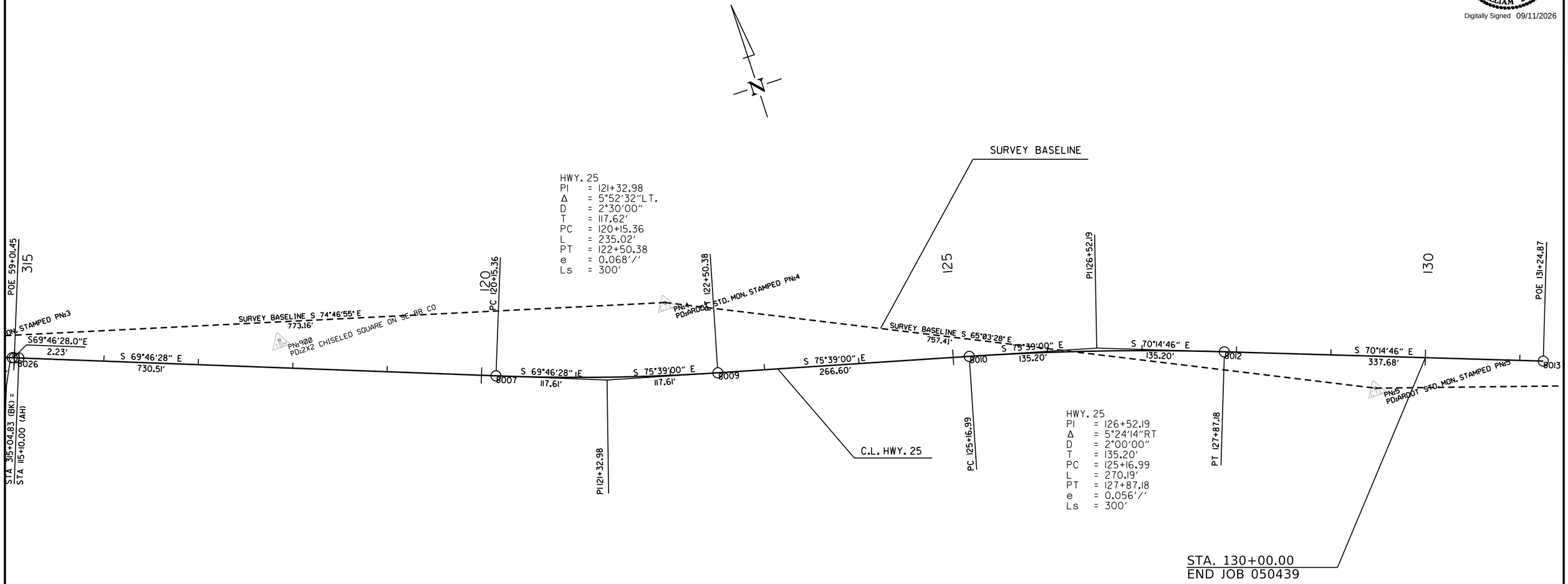
ORD 10.10

R050439_SURV CTRL.DGN CREATED: 5/1/2026 SAVED: 9/1/2026

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	30	55
		SURVEY CONTROL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV

Digitally Signed 09/11/2026



SURVEY CONTROL DETAILS

ORD 10.10

R050439_SURV CTRL.DGN CREATED: 5/1/2026 SAVED: 9/1/2026

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	31	55
		PLAN & PROFILE SHEETS - HWY. 25				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV
Digitally Signed 09/11/2026

CONCRETE DITCH PAVING (TYPE B)

STA.	STA.	SIDE	"W"	SQ. YDS.
309+25	310+85	RT.	9'-0"	160.00

FOR INFORMATION ONLY
HWY. 25
PI = 304+33.80
Δ = 28°50'09"LT.
D = 5°15'00"
T = 280.58'
L = 549.26'
PC = 301+53.22
PT = 307+02.48

HWY. 25
PI = 310+52.99
Δ = 07°56'49"LT.
D = 1°45'00"
T = 227.42'
L = 454.11'
PC = 308+25.57
PT = 312+79.68
e = 0.050'/'
Ls = 300'

STA. 307+88.00 IN PLACE
18" X 29' CMP CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
18" x 30' PIPE CULVERT
CONSTRUCT APPROACH = 40 CU. YDS.

STA. 309+40.00 IN PLACE
18" X 25' CMP CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
18" x 36' PIPE CULVERT
CONSTRUCT APPROACH = 80 CU. YDS.

STA. 311+75.00 IN PLACE
15" X 19' CMP CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
18" x 56' PIPE CULVERT
CONSTRUCT APPROACH = 390 CU. YDS.

WIRE FENCE STA.	STA.	SIDE	(TYPE C) (LIN. FT.)	GATES (EACH)
306+96	315+05	RT.	920	1
307+03	307+71	LT.	68	
311+59	311+91	LT.		2
115+10	116+00	RT.	116	

STA. 308+01 INSTALL
18" x 58' PIPE CULVERT
RT. SIDE DRAIN

STA. 308+88 IN PLACE
12" x 22' PIPE CULVERT
RT. SIDE DRAIN
REMOVE

GUARDRAIL STA.	STA.	SIDE	(TYPE A) LIN. FT.	THRIE BEAM GUARDRAIL TERMINAL EACH	GUARDRAIL TERMINAL (TYPE 2) EACH
313+75.90	115+99.82	RT.	150		
314+79.50	116+28.38	LT.	75		
117+94.62	119+38.37	RT.	75		
118+23.18	120+41.93	LT.	150		

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

HWY. 25

STA. 307+03.00
BEGIN JOB 050439
LOG MILE 2.76

STA. 307+03.00 MATCH EXIST. SUPERELEVATION (0.026 FT./FT.)
STA. 309+00.57 MAX SUPERELEVATION (0.050 FT./FT.)
STA. 312+04.68 MAX SUPERELEVATION (0.050 FT./FT.)
STA. 315+04.68 END SUPERELEVATION

PVI 307+03.00 ELEV 327.44
PVC 311+65.00 ELEV 315.84
K = 159.36
VC = 400'
E = 1.26'
PVT 115+70.17 ELEV 310.82
-2.51%
SDG RT. -0.33%
SDG RT. -9.87%
SDG LT. -3.76%
SDG RT. -0.63%
+0.00%
308+36.62 318.65 (RT.)
308+95.00 318.45 (RT.)
309+25.00 315.80 (RT.)
310+85.00 300.01 (RT.)
311+50.00 304.65 (LT.)
311+99.00 302.81 (LT.)
PVI 313+65.00 ELEV 310.82
115+70.00 297.00 (RT.)

327.44 325.00 322.49 319.98 317.47 315.00 313.02 311.67 310.95 310.82

301+00 302+00 303+00 304+00 305+00 306+00 307+00 308+00 309+00 310+00 311+00 312+00 313+00 314+00 315+00 116+00

ORD 10.10
CREATED: 2/7/2025 SAVED: 9/9/2026
R050439 PLAN AND PROFILE.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	32	55
		PLAN & PROFILE SHEETS - HWY. 25				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV
Digitally Signed 09/11/2026

STA. 116+79 - STA. 117+87
106' X 26' CONC. CHANNEL BEAM
BR. NO. M0591
REMOVE AS EXISTING BRIDGE STRUCTURE
(SITE NO. 1) = 1.00 LUMP SUM

STA. 116+13.50 BRIDGE END
BRIDGE NO. 07721
40' CLEAR ROADWAY
196'-0" TOTAL LENGTH
194'-6" INTEGRAL PRESTRESSED CONCRETE
GIRDER UNIT TYPE III
(64'-9", 65', 64'-9")
STA. 118+09.50 BRIDGE END

STA.	STA.	SIDE	GUARDRAIL (TYPE A) LIN. FT.	THRIE BEAM GUARDRAIL TERMINAL EACH	GUARDRAIL TERMINAL (TYPE 2) EACH
313+75.90	115+99.82	RT.	150	1	1
317+79.50	116+28.38	LT.	75	1	1
117+94.62	119+38.37	RT.	75	1	1
118+23.18	120+41.93	LT.	150	1	1

HWY. 25
PI = 121+32.98
Δ = 5°52'32"LT.
D = 2°30'00"
T = 117.62'
L = 235.02'
PC = 120+15.36
PT = 122+50.38
e = 0.068'/'
Ls = 300'

WIRE FENCE STA.	STA.	SIDE	(TYPE C) (LIN. FT.)	GATES (EACH)
116+28	116+28	LT.	56	1
117+96	131+00	RT.	1374	1
118+24	118+24	LT.	49	1
121+52	121+88	LT.	19	1
121+30	131+00	LT.	678	1

SPECIAL FLOODPLAIN BOUNDARY

BRIDGE END
STA. 116+13.50
ELEV. 310.82

GATE

BLUE CREEK

25' BUFFER

PC 120+15.36

EXIST. R/W

PROP. CONST. LIMITS

GATE

PT 122+50.38

STA. 121+72.00 IN PLACE
24" X 50' CMP CULVERT
RT. SIDE DRAIN
RETAIN
CONSTRUCT APPROACH = 80 CU. YDS.

AH +30.00
61.25

AH +00.00
65.00

AH +25.00
65.00

PI 126+52.19

PROP. R/W

PROP. CONST. LIMITS

AH +00.00
62.00

AH +00.00
42.17

PO

S69°46'28"E

HWY. 25

S75°39'00"E

S70°14'46"E

BRIDGE END
STA. 118+09.50
ELEV. 310.82

GATE

EXIST. R/W

PROP. CONST. LIMITS

PROP. R/W

PROP. CONST. LIMITS

PROP. R/W

AH +70.00
84.00

AH +55.00
100.00

AH +45.00
98.00

AH +60.00
88.00

AH +04.77
77.00

PI 121+32.98

T.C.E.

AH +49.00
72.57-128.00'

AH +05.00
68.24-128.00'

STA. 121+77.00 IN PLACE
15" X 23' CMP CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
18" x 70' PIPE CULVERT
CONSTRUCT APPROACH = 825 CU. YDS.

AH +85.00
60.00

PC 125+16.99

HWY. 25
PI = 126+52.19
Δ = 5°24'14"RT.
D = 2°00'00"
T = 135.20'
L = 270.19'
PC = 125+16.99
PT = 127+87.18
e = 0.056'/'
Ls = 300'

PT 127+87.18

AH +05.00
60.00

AH +00.00
60.00

100' TRANSITION

STA. 130+00.00
END JOB 050439

130+00.00

131+00.00

AH +00.00
37.83'

HWY. 25

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

STA. 118+27.25 BEGIN SUPERELEVATION
STA. 120+78.06 MAX SUPERELEVATION (0.057 FT./FT.)
STA. 121+32.87 MAX SUPERELEVATION (0.057 FT./FT.)
STA. 123+83.68 END SUPERELEVATION

STA. 123+83.68 BEGIN SUPERELEVATION
STA. 126+52.08 MAX SUPERELEVATION (0.050 FT./FT.)
STA. 127+20.08 MAX SUPERELEVATION (0.050 FT./FT.)
STA. 129+88.48 END SUPERELEVATION

BRIDGE END
STA. 116+13.50
ELEV. 310.82

BRIDGE END
STA. 118+09.50
ELEV. 310.82

PVI 120+20.00
ELEV 310.82

PVC 124+35.00
ELEV 308.54

K = 167.69
VC = 550'
E = 2.25'

PVT 129+85.00
ELEV 314.53

PVI 130+00.00
ELEV 314.94

+0.00%

-0.55%

+2.73%

Q50 DESIGN
H.W. ELEV. = 303.5

SDG RT +1.13%

SDG LT.+0.03%

SDG RT.+0.60%

117+95.50
296.94 (RT.)

PVC 119+20.00
ELEV 310.82

K = 363.38
VC = 200'
E = -0.14'

PVT 121+20.00
ELEV 310.27

122+25.00
301.80 (RT.)
122+50.00
302.70 (LT.)

123+75.00
302.74 (LT.)
123+80.00
302.72 (RT.)

PVI 127+10.00
ELEV 307.03

NOTE:
FOR CONSTRUCTION OF TEMPORARY WORK RAMPS OR HAUL ROADS, THIS STREAM IS CLASSIFIED AS A PERENNIAL STREAM. THE STREAM BANK ELEVATION IS 301 FT. MSL. BETWEEN STATIONS 116+25 AND 117+75. REFER TO SECTION 110.05(C) OF THE STANDARD SPECIFICATIONS.

350 340 330 320 310 300 290 280 270 260

310.82 310.82 310.82 310.73 310.38 309.83 309.28 308.73 308.31 308.44 309.18 310.50 312.43 314.94

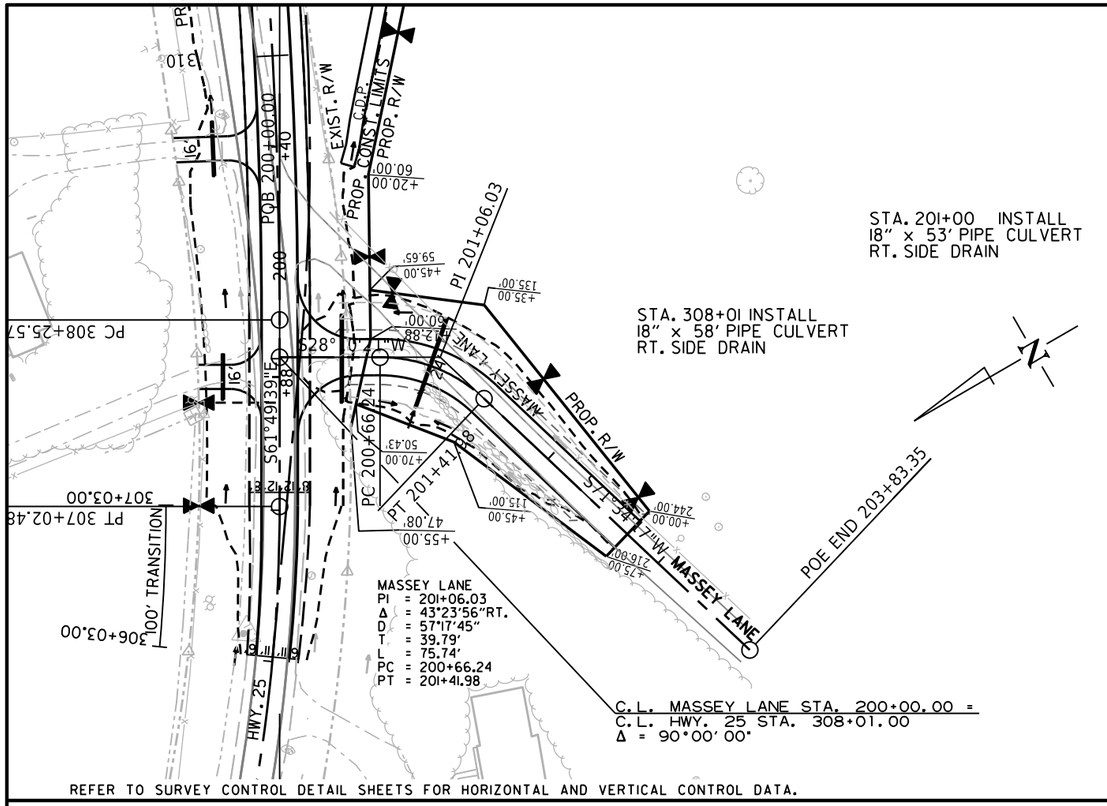
117+00 118+00 119+00 120+00 121+00 122+00 123+00 124+00 125+00 126+00 127+00 128+00 129+00 130+00 131+00

ORD 10.10

R050439 PLAN AND PROFILE.DGN CREATED: 2/7/2025 SAVED: 9/9/2026

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	33	55
		PLAN & PROFILE SHEETS - MASSEY LN				

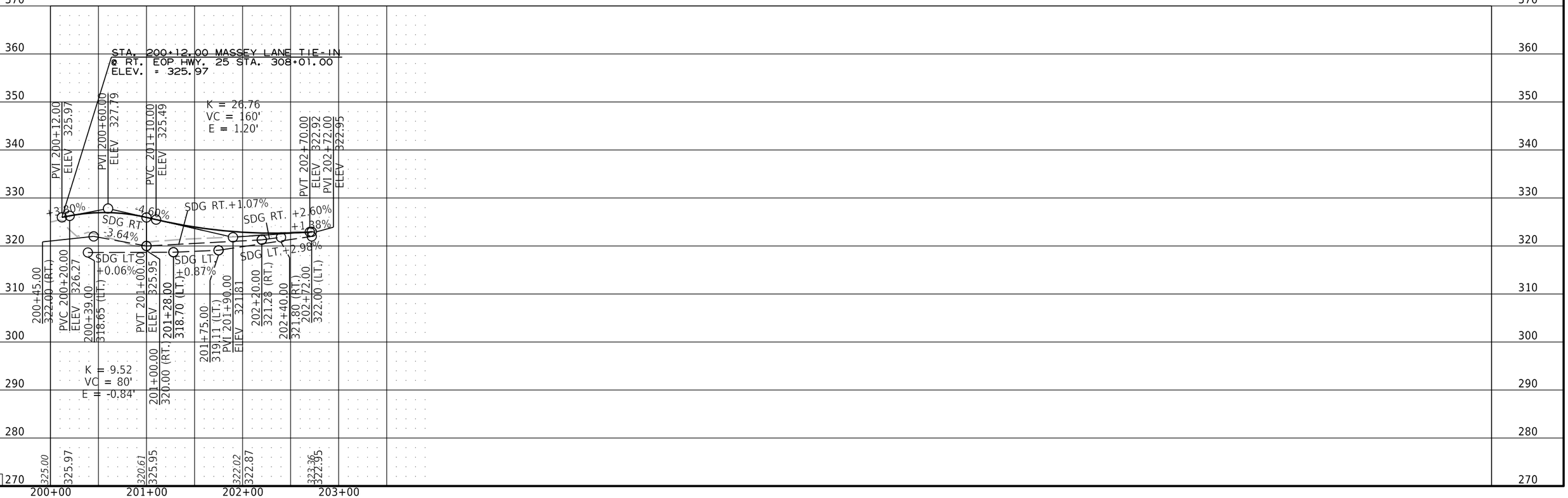
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER
Digitally Signed 09/11/2026



SPECIAL FLOODPLAIN BOUNDARY

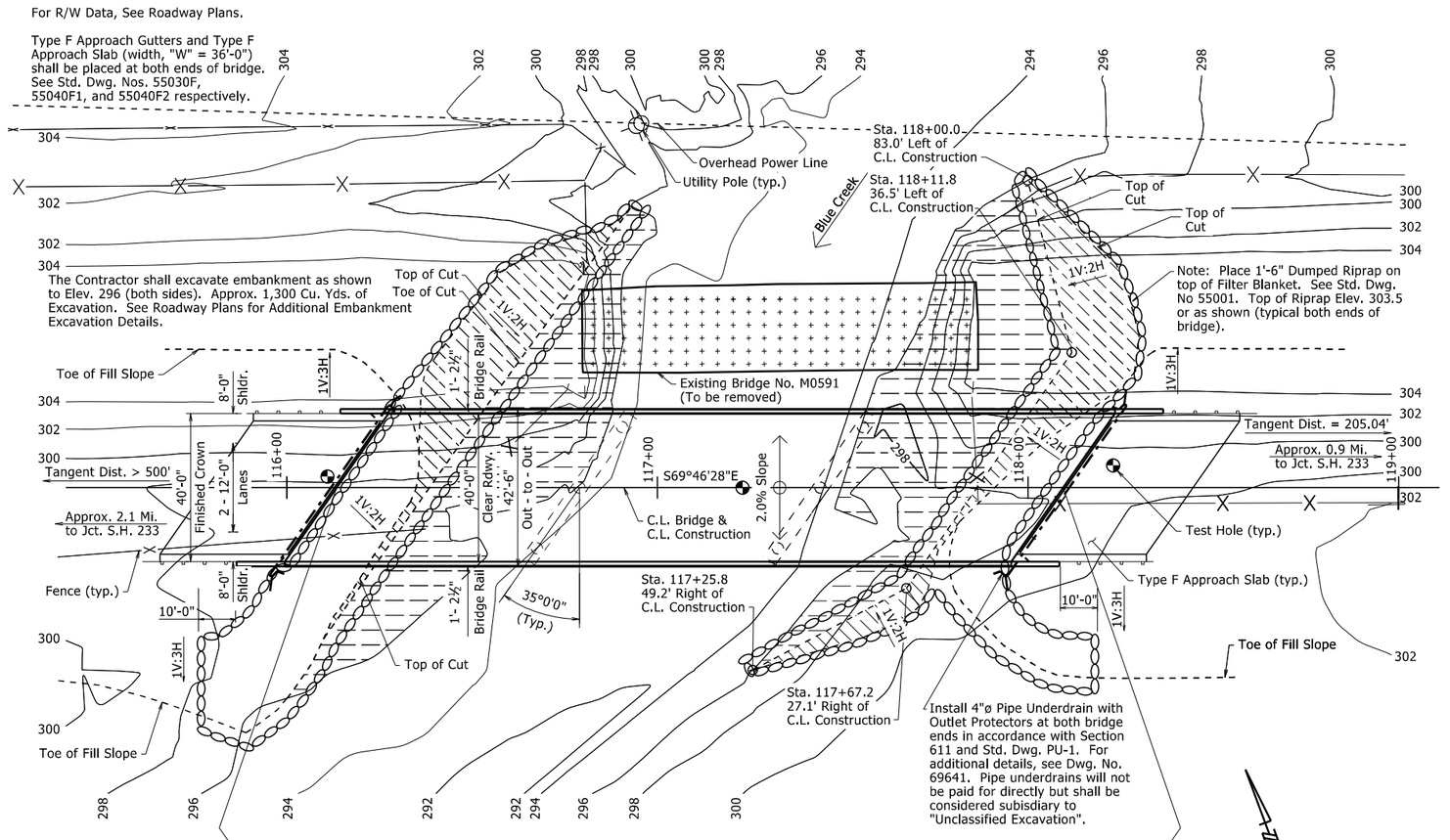
REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

MASSEY LANE



ORD 10.10
CREATED: 2/7/2025 SAVED: 9/2/2026
R050439 PLAN AND PROFILE.DGN

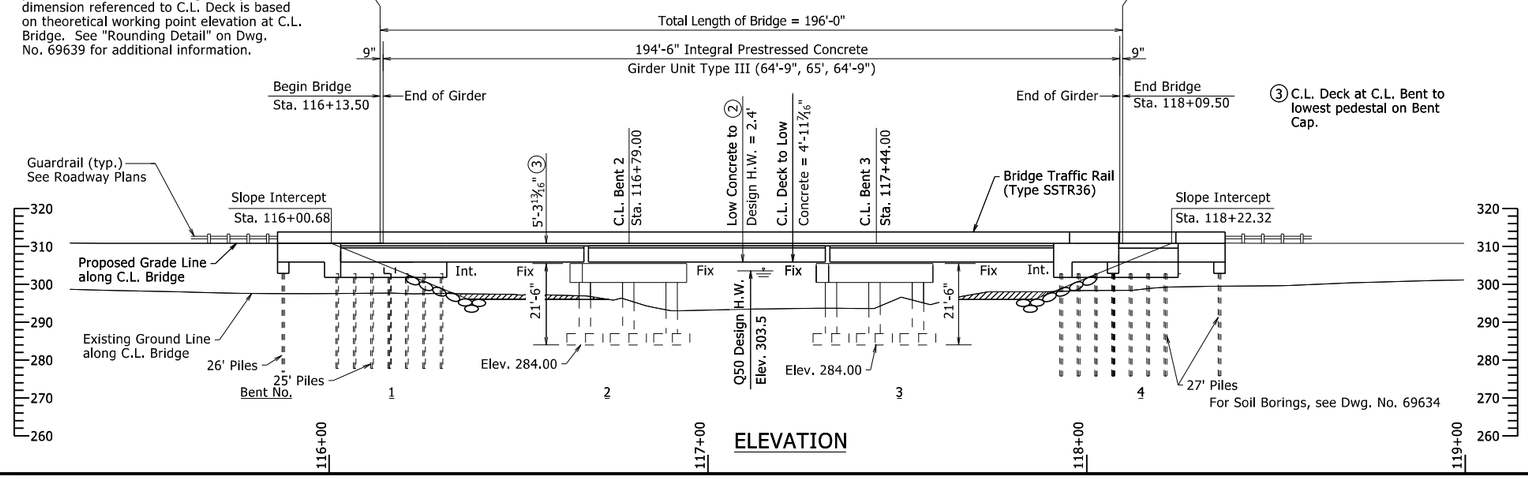
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	34	55
		07721 - LAYOUT - 69633				



PLAN

Bridge on Level Grade: Theoretical C.L. Deck Elev. 310.82

Stations shown are along C.L. Construction. Elevations shown are theoretical working point elevations at C.L. Bridge. Any vertical dimension referenced to C.L. Deck is based on theoretical working point elevation at C.L. Bridge. See "Rounding Detail" on Dwg. No. 69639 for additional information.



ELEVATION

HYDRAULIC DATA

FLOOD DESCRIPTION	FREQUENCY	DISCHARGE	① NATURAL WATER SURFACE ELEVATION	WATER SURFACE ELEVATION WITH BACKWATER
	YEARS	CFS	FEET	FEET
DESIGN	50	6,210	301.7	303.5
BASE	100	7,470	303.1	304.3
EXTREME	500	10,720	304.0	307.0
OVERTOPPING	>500	-	-	-

① Unconstricted water surface elevation without structure or roadway approaches.

② Q100 backwater elevation for existing structure = 305.6 feet
Proposed Low Bridge Chord Elev. = 305.9 feet

Drainage Area = 11.9 square miles
Historical H.W. Elev. = 305.9 feet

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
9/17/26
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 1 OF 2
LAYOUT OF BRIDGE
HWY. 25 OVER BLUE CREEK
HWY. 25 STR. & APPRS. (INDEPENDENCE CO.) (S)
INDEPENDENCE COUNTY

ROUTE 25 SEC. 5
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: NLL DATE: 11/2024 FILENAME: b050439_l1.dgn
CHECKED BY: DPT DATE: 08/06/2026 SCALE: 1" = 20'
DESIGNED BY: DPT DATE: 02/2024
BRIDGE NO. 07721 DRAWING NO. 69633

PRINT DATE: 09/17/2026

DATE REVISED	DATE REVISED	FED. ROAD DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	35	55
		07721 - LAYOUT - 69634				

GENERAL NOTES

BENCHMARK: Vertical Control Data are shown on the Survey Control Data Sheets.

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2014 edition) with applicable Supplemental Specifications and Special Provisions. Section and Subsection refer to the Standard Construction Specifications unless otherwise noted in the Plans.

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications, Ninth Edition (2020)

LIVE LOADING: HL-93

SEISMIC ZONE: 1 S_{01}: 0.128 SITE CLASS: B

SEISMIC OPERATIONAL CLASSIFICATION: Other

MATERIALS AND STRENGTHS:

Class S(AE) Concrete (superstructure)	f'c = 4,000 psi
Class S Concrete (prestressed concrete girders)	f'c = 8,000 psi
Class S Concrete (substructure)	f'c = 3,500 psi
Prestressing Strands (AASHTO M 203, Gr. 270)	fpu = 270,000 psi
Reinforcing Steel (AASHTO M 31 or M 322, Type A)	fy = 60,000 psi
Structural Steel (ASTM A709, Gr. 50 or 50W)	fy = 50,000 psi
Structural Steel (ASTM A709, Gr. 36)	fy = 36,000 psi

BORING LOGS: Boring logs may be obtained from the Construction Contract Development Section of the Program Management Division.

STEEL PILING: All piling shall be HP12x53 (Grade 50) steel piling and shall be driven with an approved single-acting diesel hammer to a minimum nominal driving resistance of 282 tons per pile. All piling shall be driven into the material designated as slightly weathered to unweathered shale on the boring legend. The nominal driving resistance shall be determined by the FHWA Modified Gates Formula. See Special Provision "Driving Piling by Method A" for additional information. Minimum penetration shall be 10' below natural ground for all piles. Piling in end bents shall be driven after embankment to bottom of cap is in place. Lengths of piling shown are for estimating quantities and for use in determining payment for cut- off and build- up in accordance with Section 805. The Contractor shall use approved steel H-Pile driving points on all piles.

PREBORING: Preboring is required for all piles. Preboring shall be to a minimum depth of 5' into material designated as medium hard weathered shale on the boring legend or to a depth of 15' below the bottom of the cap, whichever is lower. Prebored holes shall have a diameter 9" greater than the diagonal of the pile for a depth of 10' below the bottom of the cap. The size and depth of the remaining preboring shall be determined in the field by the Engineer. After driving is completed, the prebored holes shall be backfilled with Class S Concrete to within 10' of the bottom of the cap, and the remaining 10' shall be backfilled with sand or pea gravel. The Contractor shall be responsible for keeping prebored holes free of debris prior to driving piles and backfiling which may require the use of temporary casings or other approved methods. Any related cost for backfiling and temporary casing will not be paid for directly, but shall be considered subsidiary to the item "Preboring".

SPREAD FOOTINGS: Footings shall be set a minimum of 2' into material designated as weathered medium hard shale. The top of the footings at Bents 2 and 3 shall be set a minimum 2' below the channel bottom as determined by the lowest channel elevation within the footprint of the footing. Foundations for footings shall be prepared in accordance with Subsection 801.04. Rock excavations shall be made to neat lines of the concrete footings. Care shall be exercised to avoid shattering of rock faces by excessive blasting. Concrete in footings shall be poured directly against excavated surfaces of rock. Excavations shall be backfilled and compacted to the level of the existing ground in accordance with Subsection 801.08.

BRIDGE DECK: The concrete bridge deck shall be given a tine finish as specified for final finishing in Subsection 802.19 for Class 5 Tined Bridge Roadway Surface Finish.

PROTECTIVE SURFACE TREATMENT: Class 2 Protective Surface Treatment shall be applied to the roadway surface and to the roadway face and top of the concrete bridge rails in accordance with Section 803.

DETAIL DRAWINGS:	DRAWING NO(S).
End Bents	69635
Intermediate Bents	69636-69637
Elastomeric Bearings	69638
194'-6" Integral Prestressed Concrete Girder Unit	69639-69645
Steel H-Piling	55020
Type F Approach Gutters	55030F
Type F Approach Slab	55040F1-55040F2
Bridge Traffic Rail	55070

EXISTING BRIDGE: Existing Bridge No. M0591 (Log Mile 2.96) is 25.7' wide (24' clear roadway) and 106.0' long and consists of 15' and 19' precast channel beam spans (6 spans total) supported by reinforced concrete columns and footings. The existing bridge is located approximately 43.0' upstream from the proposed new bridge. Plans of the existing structure, if available, may be obtained upon request to the Construction Contract Development Section of the Program Management Division.

REMOVAL AND SALVAGE: After the new bridge is open to traffic, the Contractor shall remove existing Bridge No. M0591 in accordance with Section 205. All material from the existing bridge shall become the property of the Contractor with the following exceptions:

The following shall remain the property of the State:

Concrete L-Posts from Bridge Railing
2 Precast Channel Units at the direction of the Engineer

The Contractor shall load the materials onto ARDOT trucks on site. The Contractor should coordinate the State's salvage operations with Brandon Love, District Maintenance Engineer, at 870-251-2374. ARDOT will unload all material at its final destination.

The following shall become the property of Independence County:

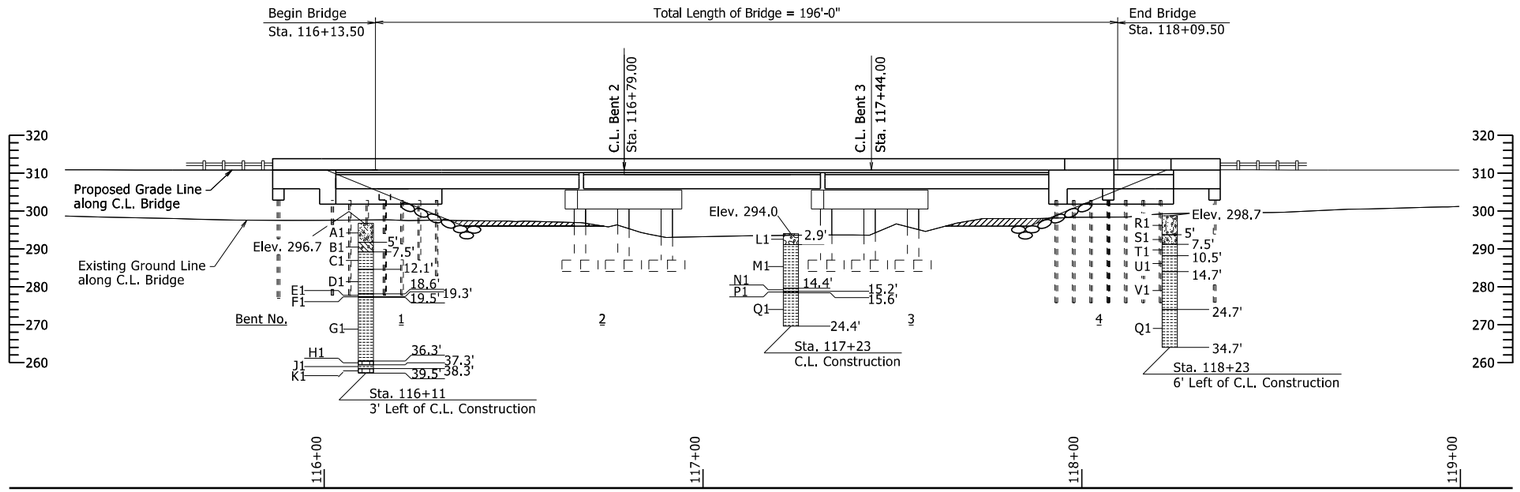
Remaining Precast Channel Units

The Contractor shall load the materials onto County trucks on site. The Contractor should coordinate the County's salvage operations with Ron Byars, at 870-834-7327. The County will unload all material at its final destination.

The Contractor shall notify the Department prior to removal to determine the specfic precast channel units to be delivered to the State. This work shall be considered incidental to the item "Removal of Existing Bridge Structure (Site No.)"

MAINTENANCE OF TRAFFIC: See Roadway Plans.

PRINT DATE: 09/17/2026



BORING ELEVATION

BORING LEGEND

A1-Moist, Medium Dense, Brown Poorly Graded Gravel with Clay and Sand
B1-Moist, Loose, Brown Poorly Graded Gravel with Clay
C1-SHALE - Weathered, Medium Hard, Dark Gray (Moorefield Formation)
D1-SHALE - Weathered with Slightly Weathered Layers, Medium Hard, Dark Gray
E1-SHALE - Slightly Weathered, Hard, Dark Gray
F1-SILICEOUS SHALE - Slightly Weathered, Hard, Dark Gray
G1-SHALE - Unweathered, Medium Hard to Hard, Dark Gray
H1-ARGILLACEOUS LIMESTONE - Unweathered, Moderately Hard, Dark Gray (Calcareous Shale)
J1-SHALE - Unweathered, Medium Hard, Dark Gray
K1-LIMESTONE - Unweathered, Hard, Sandy, Gray
L1-Gravel and Cobbles
M1-SHALE - Weathered, Medium Hard, Dark Gray (Moorefield Formation)
N1-SHALE - Slightly Weathered, Medium Hard, Dark Gray
P1-SHALE - Unweathered, Hard, Siliceous, Dark Gray
Q1-SHALE - Unweathered, Medium Hard to Hard, Dark Gray
R1-Moist, Medium Dense, Brown Silty Sand with Gravel
S1-Wet, Medium Dense, Brown Clayey Gravel with Sand
T1-SHALE - Highly Weathered, Medium Hard, Dark Gray (Moorefied Formation)
U1-SHALE - Highly Weathered with Weathered Layers, Medium Hard, Dark Gray
V1-SHALE - Weathered, Medium Hard, Dark Gray

"N" VALUES

Sta. 116+11 - 3' Left of C.L. Construction
3.0- 4.0,N=13
5.5- 6.5,N=6
8.0- 8.9,N=95(11")
10.5- 10.6,N=60(1")

Sta. 117+23 - C.L. Construction
5.0- 5.4,N=60(5")

Sta. 118+23 - 6' Left of C.L. Construction
3.0- 4.0,N=13
5.5- 6.5,N=13
8.0- 9.0,N=66
10.5- 10.5,N=60(6")

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
9/17/26
CHARLES R. ELLIS

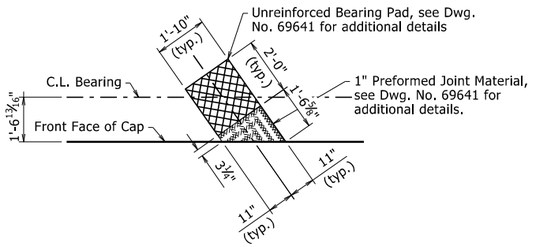
BRIDGE ENGINEER

SHEET 2 OF 2
LAYOUT OF BRIDGE
HWY. 25 OVER BLUE CREEK
HWY. 25 STR. & APPRS. (INDEPENDENCE CO.) (S)
INDEPENDENCE COUNTY

ROUTE 25 SEC. 5
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: NLL DATE: 11/2024 FILENAME: b050439_l1.dgn
CHECKED BY: DPT DATE: 08/06/2026 SCALE: 1" = 20'
DESIGNED BY: DPT DATE: 02/2024
BRIDGE NO. 07721 DRAWING NO. 69634

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	36	55
		07721 - END BENTS - 69635				



BEARING PAD LAYOUT

3/8" = 1'-0"

1. Measured along C.L. Cap
2. Measured along C.L. Bearing
3. Measured to working point. See "CHAMFER DETAIL".
4. Stirrups to be placed parallel to skew.

GENERAL NOTES

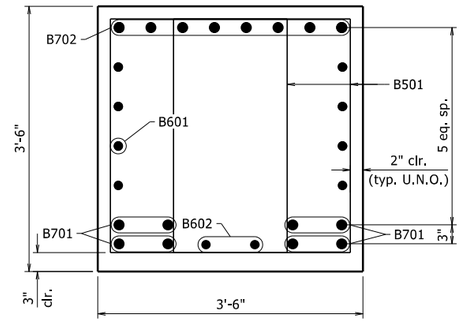
All concrete in end bent shall be Class S with a minimum 28 day compressive strength f'c = 3,500 psi and shall be poured in the dry. All exposed corners shall be chamfered ¾" unless noted otherwise.

All reinforcing steel shall be Grade 60 (yield strength = 60,000 psi) confoming to AASHTO M 31 or M 322, Type A, with mill test resports.

Granular Backfill and Pipe Underdrain required behind cap. See Dwg. No. 69641 for details.

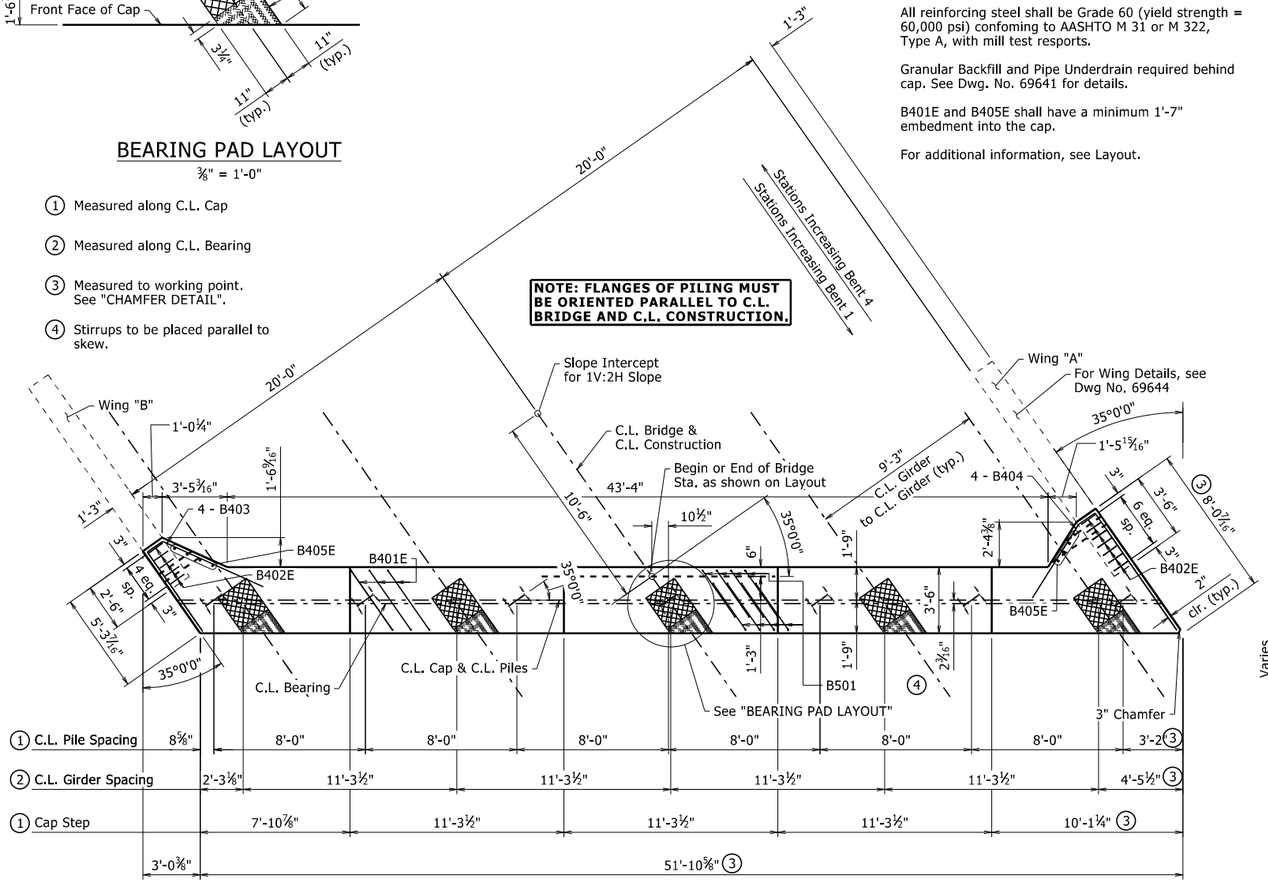
B401E and B405E shall have a minimum 1'-7" embedment into the cap.

For additional information, see Layout.



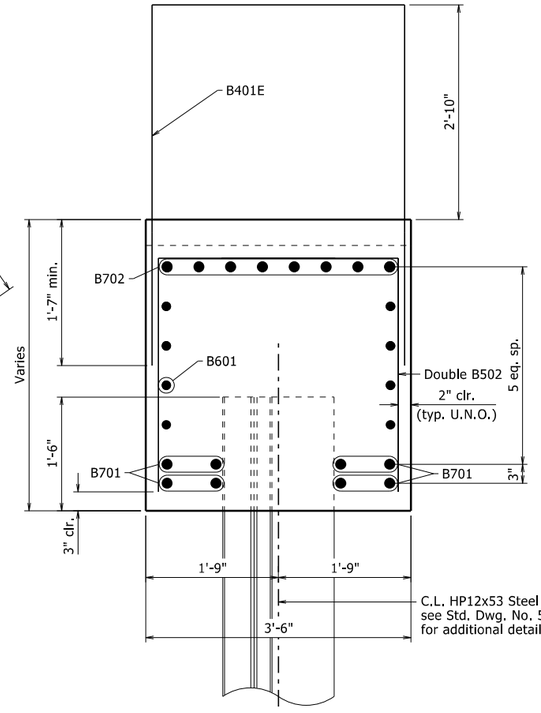
SECTION A-A

1" = 1'-0"



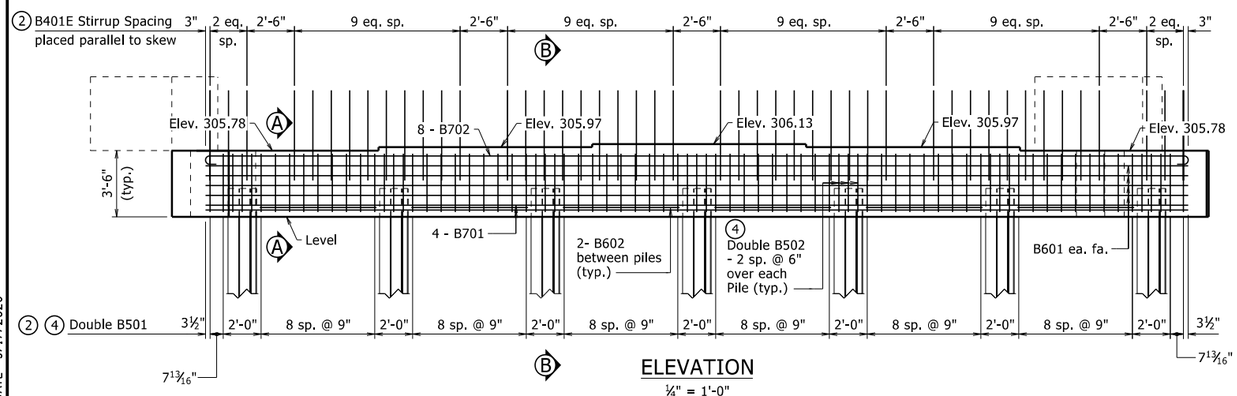
PLAN

¼" = 1'-0"



SECTION B-B

1" = 1'-0"

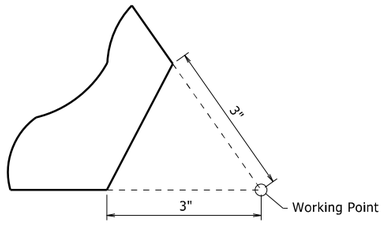


ELEVATION

¼" = 1'-0"

Looking Back - Bent 1

Looking Ahead - Bent 4

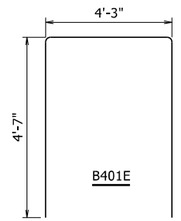


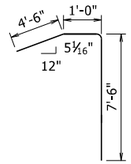
CHAMFER DETAIL

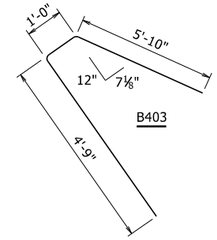
No Scale

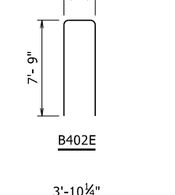
BAR LIST - PER BENT

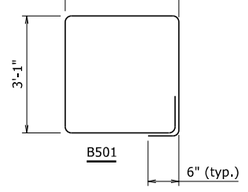
Mark	No. Req'd.	Length	Pin Dia.
B401E	46	13'-3"	2"
B402E	12	16'-3"	2"
B403	4	11'-6"	2"
B404	4	12'-11"	2"
B405E	8	6'-6"	str.
B501	116	12'-8"	2½"
B502	42	9'-10"	2½"
B601	8	51'-11"	str.
B602	12	6'-6"	str.
B701	8	51'-11"	str.
B702	8	53'-2"	5¼"

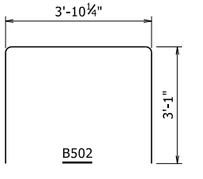


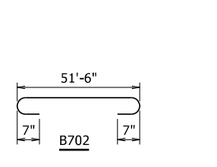












Dimensions are out-to-out of bars. All bars with an "E" suffix are to be epoxy coated.

STATE OF ARKANSAS
CHARLES R. ELLIS
LICENSED PROFESSIONAL ENGINEER
No. 9235
9/17/26

BRIDGE ENGINEER

DETAILS OF END BENTS

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: CPK DATE: 05/08/2026 FILENAME: b050439_b1.dgn

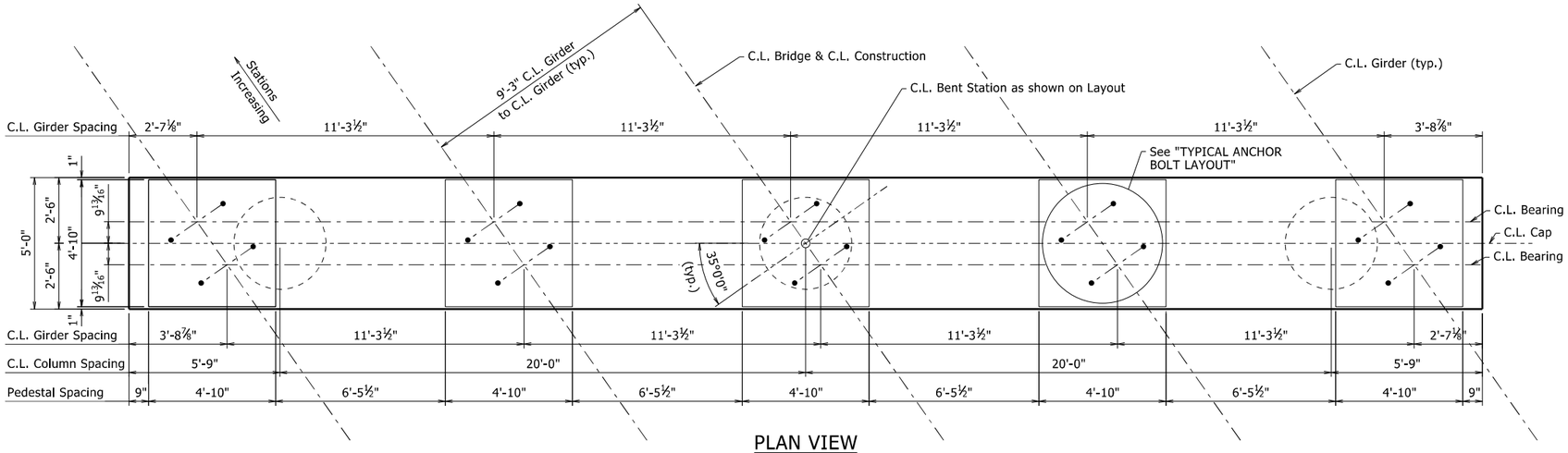
CHECKED BY: DPT DATE: 07/30/2026 SCALE: As Noted

DESIGNED BY: DPT DATE: 03/2026

BRIDGE NO. 07721 DRAWING NO. 69635

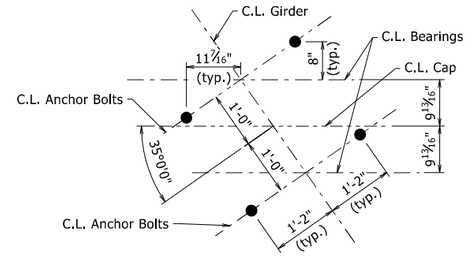
PRINT DATE: 9/17/2026

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	37	55
		07721 - INT BENTS - 69636				



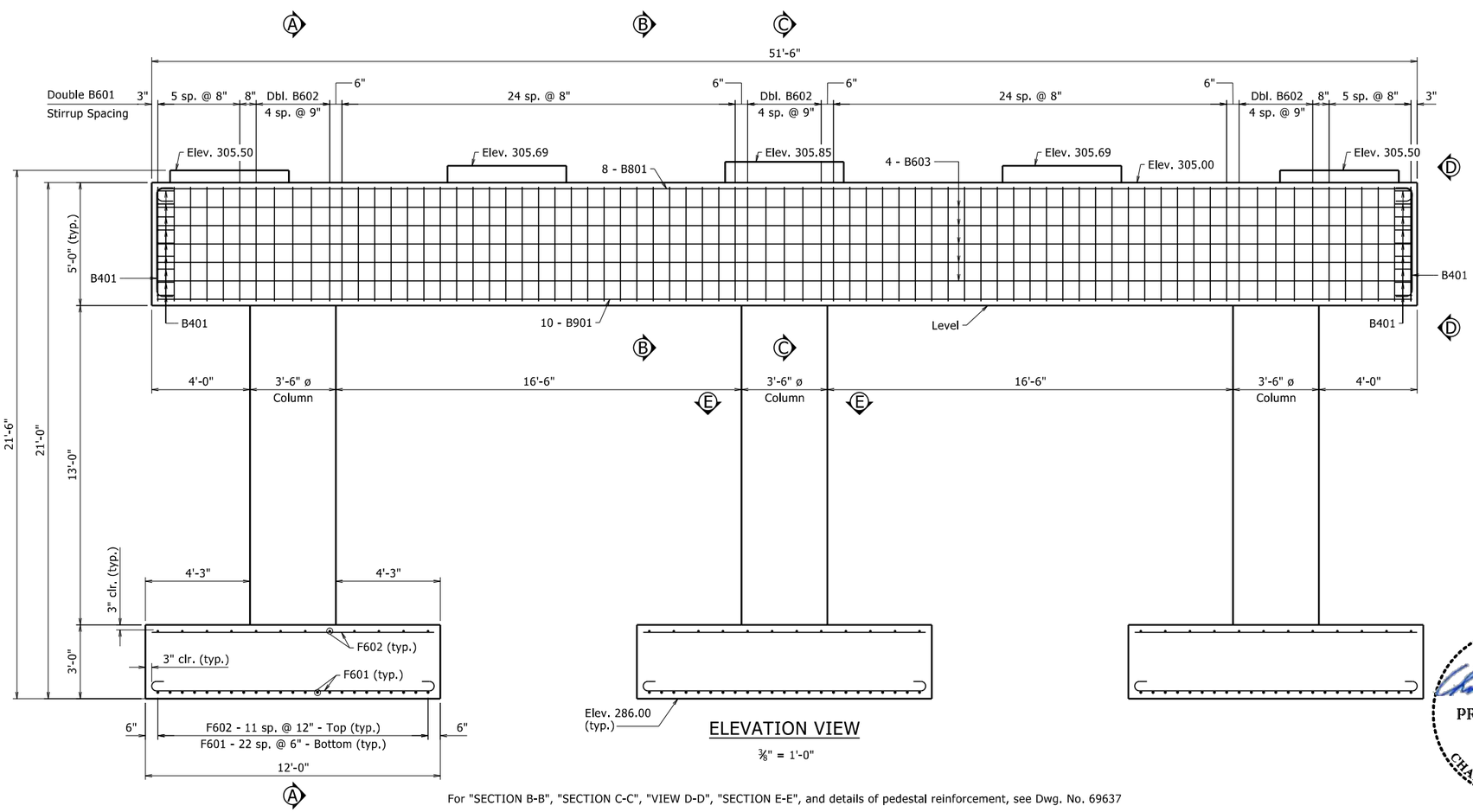
PLAN VIEW

⅜" = 1'-0"



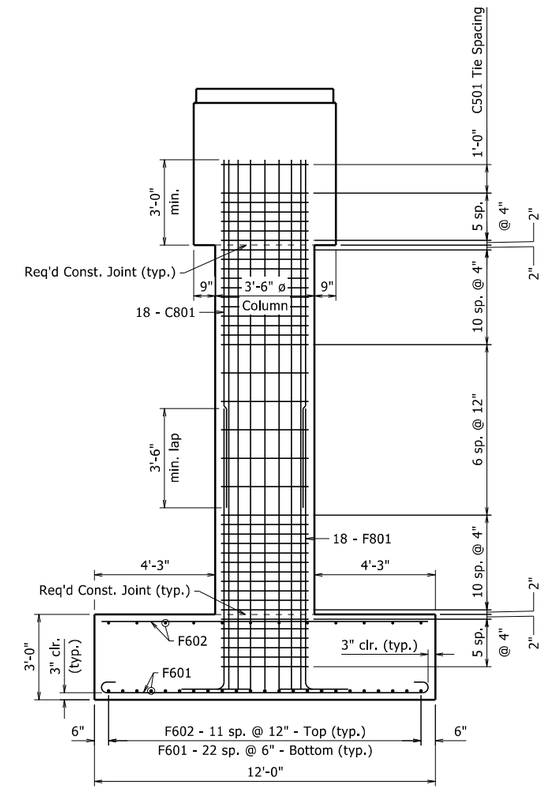
TYPICAL ANCHOR BOLT LAYOUT

¾" = 1'-0"



ELEVATION VIEW

⅜" = 1'-0"



SECTION A-A

⅜" = 1'-0"

For "SECTION B-B", "SECTION C-C", "VIEW D-D", "SECTION E-E", and details of pedestal reinforcement, see Dwg. No. 69637

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
9/17/26
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 1 OF 2

DETAILS OF INTERMEDIATE BENTS

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

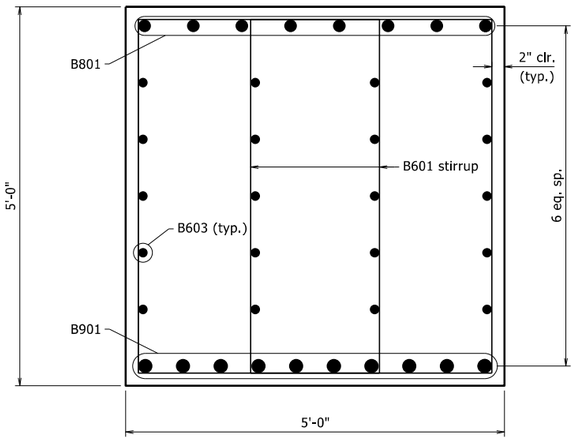
LITTLE ROCK, ARK.

DRAWN BY: CPK	DATE: 04/29/2026	FILENAME: b050439_b2.dgn	
CHECKED BY: DPT	DATE: 07/30/2026	SCALE: As Shown	
DESIGNED BY: DPT	DATE: 03/2026		

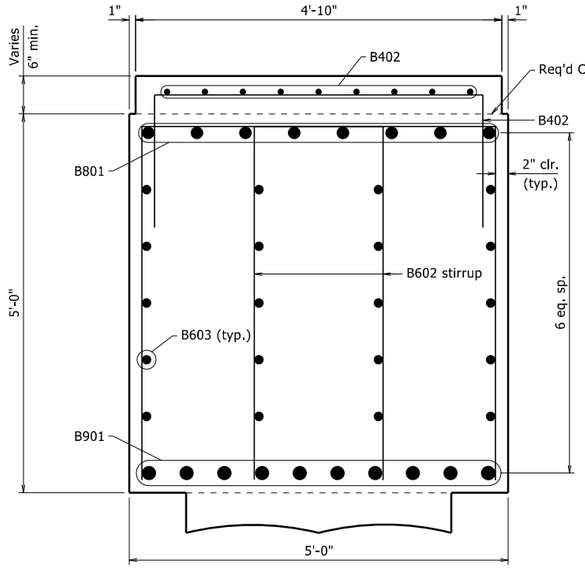
BRIDGE NO. 07721 DRAWING NO. 69636

PRINT DATE: 9/17/2026

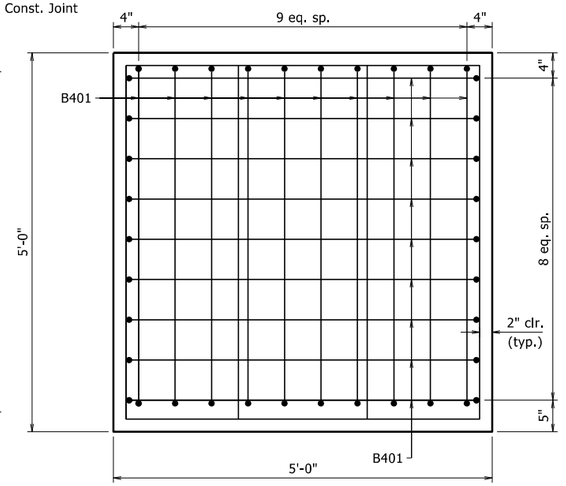
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	38	55
		07721 - INT BENTS - 69637				



SECTION B-B

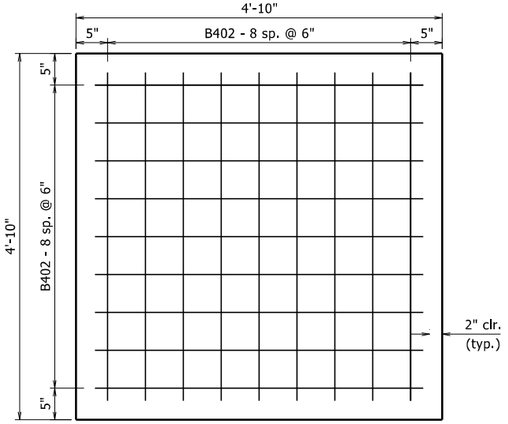


SECTION C-C



VIEW D-D

NOTE: Longitudinal cap bars not shown for clarity.



TYPICAL PEDESTAL PLAN

SECTION E-E

TYPICAL PEDESTAL ELEVATION

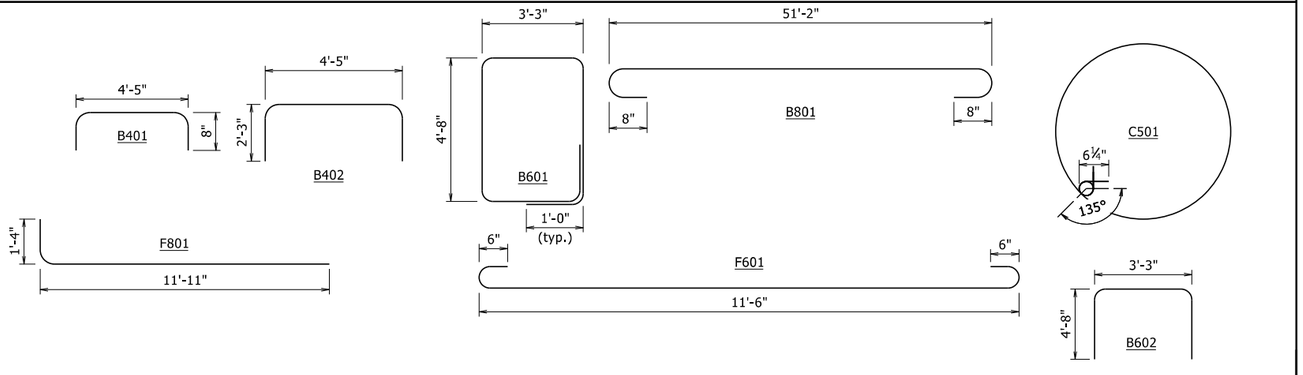
Looking Ahead

SECTION F-F

BAR LIST - PER BENT

Mark	No. Req'd.	Length	Pin Dia.
B401	38	5'-7"	2"
B402	90	8'-9"	2"
B601	124	17'-0"	4½"
B602	30	12'-3"	4½"
B603	20	51'-1"	str.
B801	8	53'-0"	6"
B901	10	51'-2"	str.
C501	120	11'-1"	3¾"
C801	54	14'-3"	str.
F601	138	12'-10"	4½"
F602	72	11'-6"	str.
F801	54	13'-1"	6"

Bending Diagrams



Dimensions are out-to-out of bars.

PRINT DATE: 9/17/2026

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
9/17/26
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 2 OF 2
DETAILS OF INTERMEDIATE BENTS

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

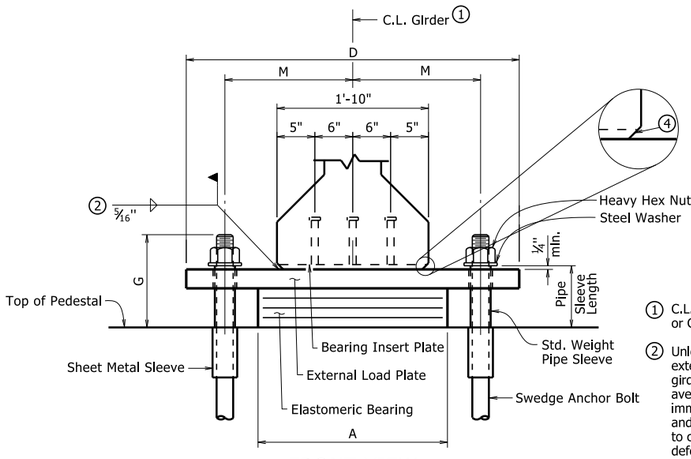
DRAWN BY: CPK DATE: 04/29/2026 FILENAME: b050439_b2.dgn
CHECKED BY: DPT DATE: 07/30/2026 SCALE: 1" = 1'-0"
DESIGNED BY: DPT DATE: 03/2026

BRIDGE NO. 07721 DRAWING NO. 69637

DATE REVISED	DATE REVISED	FED. ROAD DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
10-14-26		6	ARK.	050439	39	55
		07721 - ELASTO. BEARINGS - 69638				

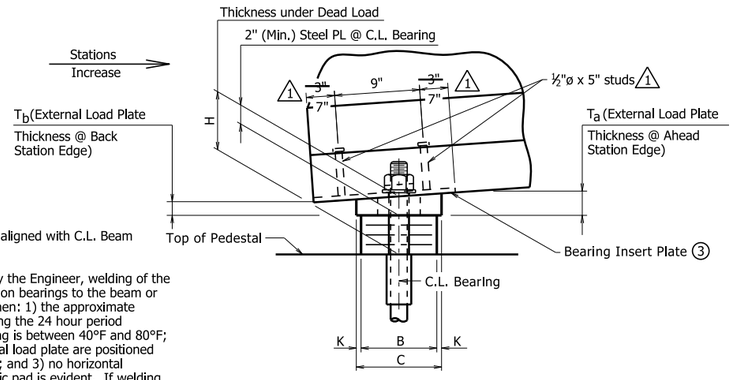
1 Revised Bearing Insert Plate Dimension and added Stud Dimensions

10-14-26 Revised by: CPK Checked by: DPT



FRONT VIEW

Typical Unless Noted Otherwise



SIDE VIEW

Typical Unless Noted Otherwise

1 C.L. Elastomeric Pad shall be aligned with C.L. Beam or Girder.

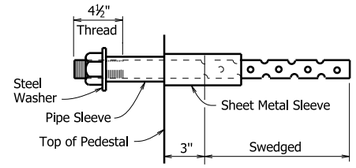
2 Unless otherwise approved by the Engineer, welding of the external load plate at expansion bearings to the beam or girder will be allowed only when: 1) the approximate average air temperature during the 24 hour period immediately preceding welding is between 40°F and 80°F; and 2) the slots in the external load plate are positioned to center on the anchor bolts; and 3) no horizontal deformation of the elastomeric pad is evident. If welding at other temperatures is required, the Engineer will provide adjustment data.

Care shall be taken to ensure that the external load plate is in full and complete contact with the beam or girder flange before welding begins.

The direction of bevel of the external load plate may not be accurately depicted with respect to Ta and Tb values shown in the "Table of Fabricator Variables".

3 Bearing Insert Plate (A709, Gr. 50W) & Studs shall be considered subsidiary to the item "Prestressed Concrete Girders (Type III)".

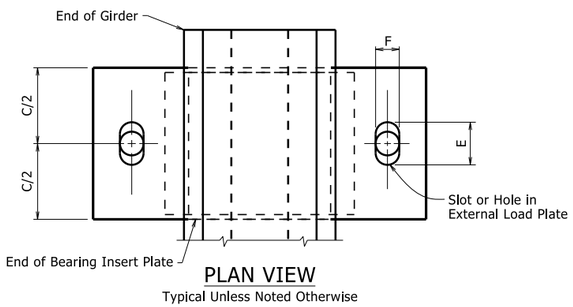
4 Bevel Bearing Insert Plate to conform to Girder Chamfer.



ANCHOR BOLT DETAIL

Anchor Bolts may be cast in place or drilled and grouted into place. If Anchor Bolts are to be cast in place, the Galvanized Sheet Metal Sleeves will not be required.

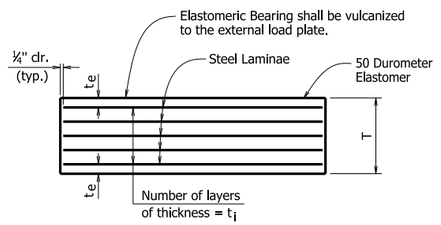
If Anchor Bolts are to be drilled and grouted in place, the Galvanized Sheet Metal Sleeves shall be cast in place as shown. Sleeves shall be dry packed with styrofoam, urethane foam or approved equal prior to pouring of concrete. After pouring of the cap and prior to erection of Structural Steel, the dry pack shall be removed and holes for the anchor bolts shall be accurately drilled into the concrete. Bolts placed in drilled holes shall be accurately set and fixed using a QPL approved epoxy or non-shrink grout that completely fills the holes. Galvanized Sheet Metal Sleeves shall meet the requirements of ASTM 653, CS Type B or approved equivalent, be of minimum 16 gage thickness, and be galvanized according to ASTM B695, Class 50. Sheet Metal Sleeves will not be paid for directly, but will be considered subsidiary to the item "Prestressed Concrete Girders (Type III)."



PLAN VIEW

Typical Unless Noted Otherwise

Prior to erection of the beams or girders, the Contractor shall verify the orientation of the bearing with respect to Ta and Tb.



t_e = Thickness of elastomer cover on top and bottom of pad

t_i = Thickness of elastomer between steel laminae

N = Number of elastomer layers of thickness t_i

ELASTOMERIC BEARING

GENERAL NOTES

Elastomeric Bearings shall conform to Section 808 and shall be paid for at the unit price bid for "Elastomeric Bearings".

External load plates and shear blocks shall conform to ASTM A709, Grade 50W. Pipe sleeves shall be ASTM A500, Grade B, and shall be galvanized to conform to AASHTO M 232, Class C or ASTM B695, Class 50.

External load plates and shear blocks shall be completely fabricated (including bevel, bolt holes and all shop welding) and shall be cleaned before vulcanizing to the elastomeric bearing. The surface in contact with the elastomeric bearing shall be cleaned in accordance with Subsection 808.03. Other surfaces shall be blast cleaned in accordance with Subsection 807.84(e) for unpainted weathering steel.

Anchor Bolts, Washers and Nuts shall conform to Subsection 807.07. The anchor bolt grade of steel shall be as specified in the "Table of Fabricator Variables". Indentations shall be circular with rounded bottoms and staggered as shown in the details.

Pipe Sleeves, Anchor Bolts, Washers and Nuts shall be paid for at the unit price bid for "Prestressed Concrete Girders (Type III)." External load plates and shear blocks will not be measured or paid for separately, but will be considered incidental to the unit price bid for "Elastomeric Bearings".

Bearings shall be seated in accordance with Subsection 808.08. This work and materials are considered subsidiary to the item "Elastomeric Bearings" and will not be paid for directly.

TABLE OF FABRICATOR VARIABLES

5 Maximum Design Load = Service 1 Limit State

LOCATION		BEARING TYPE	NO. of BEARINGS EACH BENT	5 MAXIMUM DESIGN LOAD (KIPS)	ELASTOMERIC PAD								EXTERNAL LOAD PLATE									ANCHOR BOLT				
BENT NO(S).	BEAM OR GIRDER NO.				G	H	A	B	N	t_i	t_e	NO. & THICKESS OF STEEL LAMINAE	T	C	D	E	F	J	K	M	T_a	T_b	ANCHOR BOLT (Ø x L)	GRADE	PIPE SLEEVE SIZE (Ø x L)	SHEET METAL SLEEVE SIZE (Ø x L)	STEEL WASHER SIZE (O.D.)
2	All	Fix	10	153	8¼"	4⅜"	22"	9"	3	½"	¼"	4 @ 12 ga.	2 7/16"	10"	35"	3¾"	3¾"	NA	½"	14"	2.0"	2.0"	2½"ø x 38"	55	3"ø x 4⅝"	4"ø x 17"	4½"
3	All	Fix	10	153	8¼"	4⅜"	22"	9"	3	½"	¼"	4 @ 12 ga.	2 7/16"	10"	35"	3¾"	3¾"	NA	½"	14"	2.0"	2.0"	2½"ø x 38"	55	3"ø x 4⅝"	4"ø x 17"	4½"

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/28/26
CHARLES R. ELLIS

BRIDGE ENGINEER

DETAILS OF ELASTOMERIC BEARINGS

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: CPK DATE: 06/17/2026 FILENAME: b050439_e1.dgn

CHECKED BY: DPT DATE: 07/30/2026 SCALE: NO SCALE

DESIGNED BY: NL DATE: 12/2024

BRIDGE NO. 07721 DRAWING NO. 69638

PRINT DATE: 10/26/2026

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	40	55
		07721 - SPAN DETAILS - 69639				

(1) Working Point to Gutterline

(2) Tolerance: Minus = ¼";
Plus equal to the amount of slab thickening used to meet slab thickness tolerance, See "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE".

(3) See "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE".

(4) Bridge Traffic Rail (Type SSTR36). For additional details, see Std. Dwg. No. 55070.

(5) See "ROUNDING DETAIL"

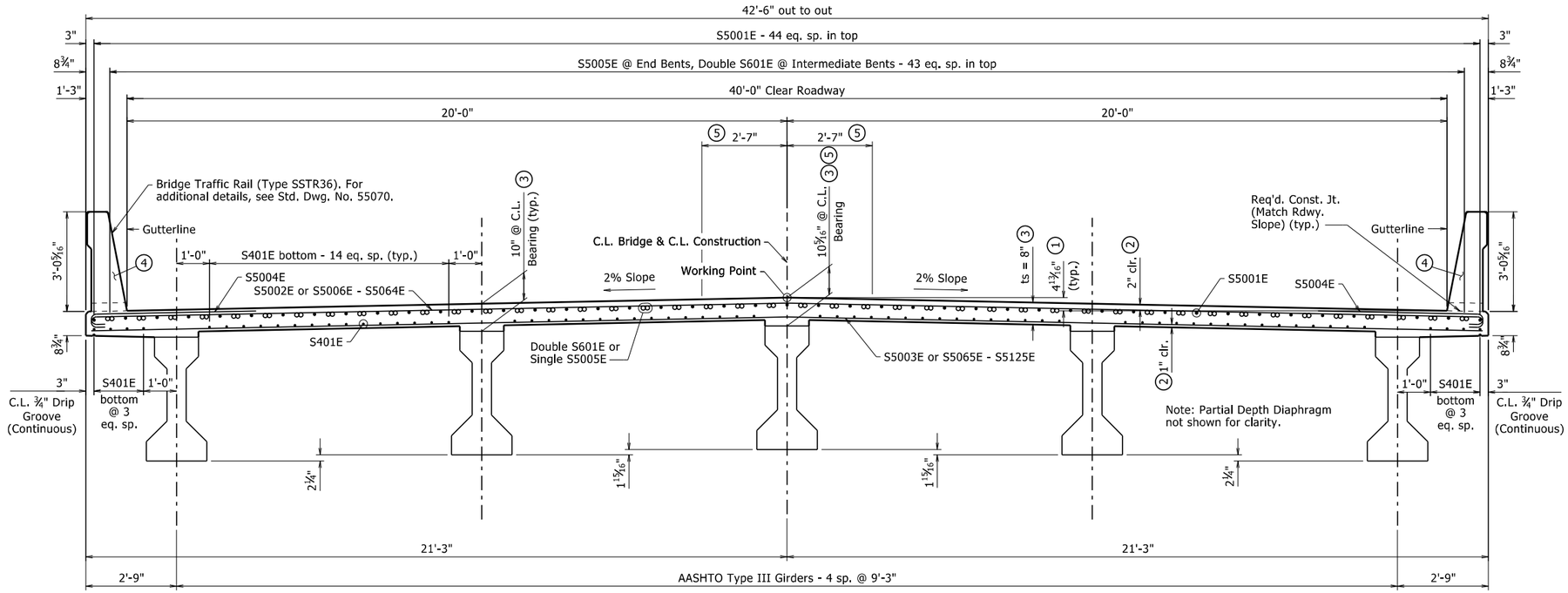
Slab Reinforcing

Longitudinal: S5001E in top & S401E in bottom placed as shown
S5005E & Double S601E in top placed as shown, see "HALF REINFORCING PLAN AND SLAB POURING SEQUENCE" on Dwg. No. 69643.

Transverse: S5002E @ 6" o.c. in top
S5003E @ 6" o.c. in bottom
S5004E @ 6" in top of overhangs (bundled with S5002E bars)
S5006E - S5064E @ 6" in top near endbents
S5065E - S5125E @ 6" in bottom near endbents

Bar positions or clearances from the forms shall be maintained by means of stays, ties, hangers, or other approved devices per Subsection 804.06. Placement of slab bolsters or high-chairs with full-length lower runners directly on removable deck forms will not be allowed.

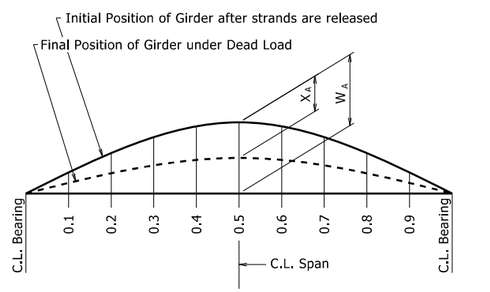
Class 2 Protective Surface Treatment shall be applied to the Roadway Surface and the Roadway Face and Top of Bridge Traffic Rail.



TYPICAL ROADWAY SECTION

½" = 1'-0"

Section shown at Intermediate Bent



"W_A" is camber of Girder (Prestress + Dead Load of girder @ 60 days after release)

"X_A" is Dead Load Deflection of Slab + Diaphragms + Compositie Dead Load

CAMBER AND DEFLECTION (INCHES)

No Scale

Span Pt.	Inches	
	W_A	X_A
0.0	0	0
0.1	0.573	0.212
0.2	0.992	0.426
0.3	1.274	0.594
0.4	1.437	0.702
0.5	1.490	0.738
0.6	1.437	0.702
0.7	1.274	0.594
0.8	0.992	0.426
	0.573	0.212
	0	0

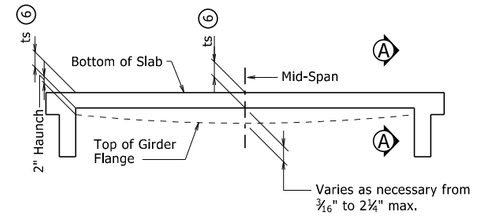
CAMBER NOTES

The camber and dead load deflection values shown in the plans are estimated based on the required minimum concrete strength for the prestressed concrete girders. The contractor shall provide the Engineer with the following information:

A. Actual 28-day concrete strength of prestressed concrete girders
B. Actual concrete strength of prestressed concrete girders at time of release
C. Estimated age of prestressed concrete girders at time of erection
D. Profile of each girder under self weight in final position

Following receipt of the above data, the Engineer will provide an updated deflection diagram to the Contractor, if required.

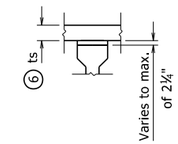
"W_A" and "X_A" are based on the required minimum concrete strength and may vary from the dimension shown. "W_A" and "X_A" shall be measured along bottom of girders unless otherwise approved by the Engineer. See "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE" on Dwg. No. 69639 for limitations of the girder final position under dead load. The Contractor is responsible for any adjustment necessary to meet slab thickness tolerance and to achieve an acceptable finished grade. No payment shall be made for any additional concrete in the hauches when camber is less than shown.



GIRDER ELEVATION

NO SCALE

"GIRDER ELEVATION" sketch show the range of acceptability of the top of the Girder relative to bottom of slab after the placement of the slab. When the top of the Girder projects more than 1#2" into the slab, a raise in grade will be necessary. Girders shall be set in a sufficient number of spans over suitable increments so the revised grade line will produce a smooth riding surface. Variation of haunch height will be at the Contractor's expense.



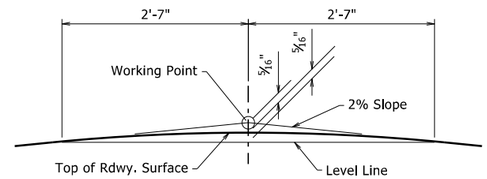
SECTION A-A

NO SCALE

ADJUSTMENT FOR SLAB THICKNESS TOLERANCE

ts = slab thickness as shown on superstructure details - See "TYPICAL ROADWAY SECTION".

(6) Tolerance when removable deck forming is used is + ½", - ¼", Haunch forming is required and shall be adjusted to maintain slab thickness tolerance. See Std. Dwg. No. 55005 for tolerances when permanent steel deck forms are used.



NOTE: Working Point matches Theoretical Roadway Grade.

ROUNDING DETAIL

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
9/17/26
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 1 OF 7
DETAILS OF 194'-6" INTEGRAL PRESTRESSED CONCRETE GIRDER UNIT

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: CPK DATE: 05/15/2026 FILENAME: b050439_s1.dgn
CHECKED BY: DPT DATE: 07/30/2026 SCALE: AS NOTED
DESIGNED BY: NLL DATE: 12/2024

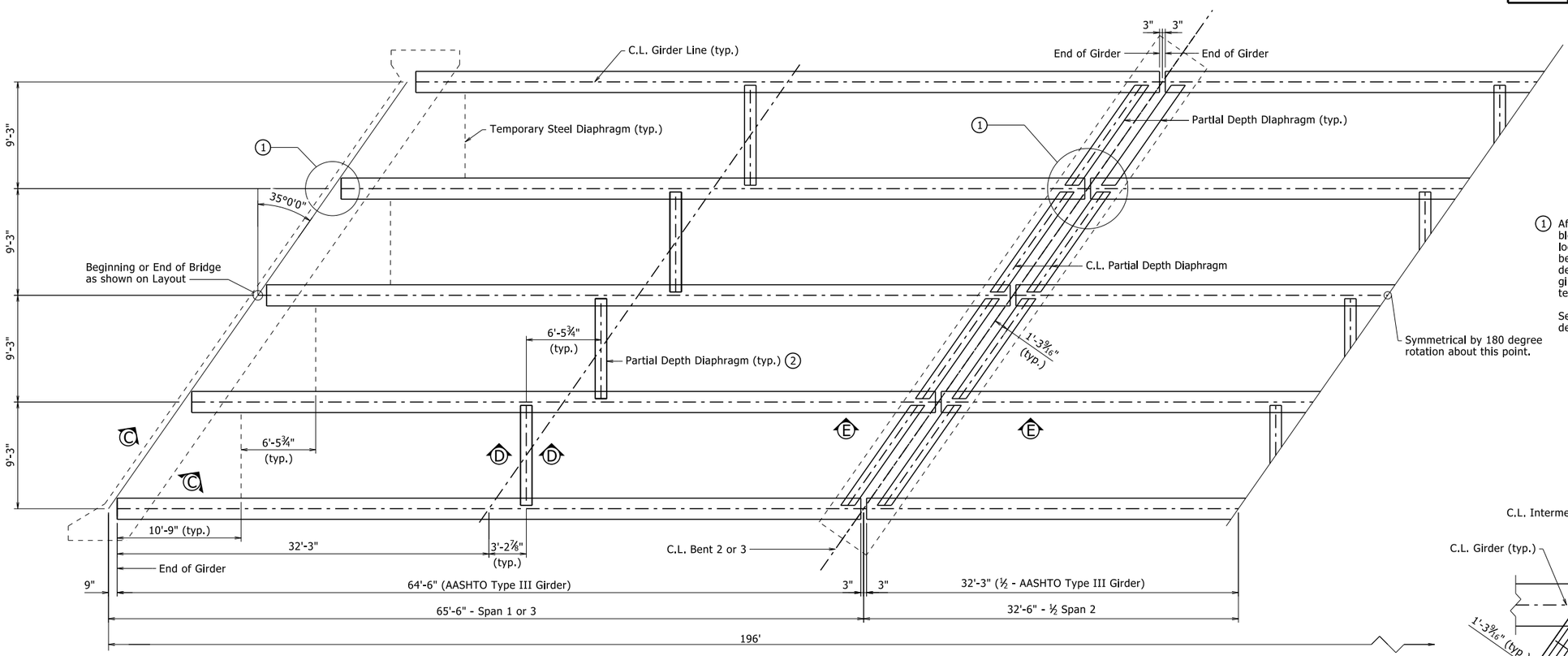
BRIDGE NO. 07721 DRAWING NO. 69639

PRINT DATE: 9/17/2026

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
10-14-26		6	ARK.	050439	41	55
		07721 - SPAN DETAILS - 69640				

1 Revised length of threaded rod inserts

10-14-26 Revised By: CPK Checked By: DPT



1 After erection, the ends of girders at all bents shall be blocked using temporary blocking to maintain proper location on bent caps. The ends of girders at Intermediate bents shall remain blocked until 72 hours after all partial depth concrete diaphragms are poured. The ends of girders at end bents shall remain blocked until after the temporary steel diaphragms are in place.

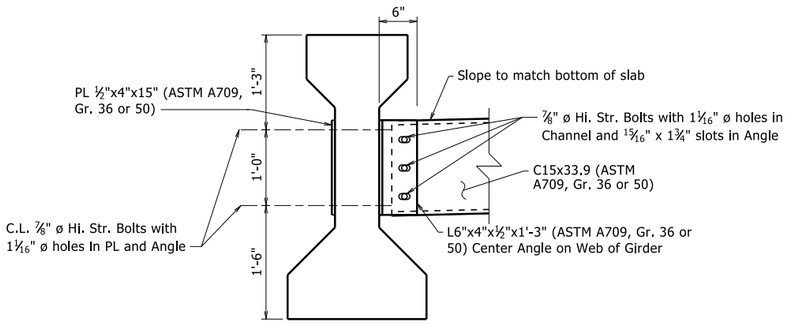
See "SECTION E-E" on Dwg. No. 69641 for additional details.

HALF FRAMING PLAN

3/16" = 1'-0"

NOTE:

For "SECTION C-C", "SECTION D-D", and "SECTION E-E" see Dwg. No. 69641.



TEMPORARY STEEL DIAPHRAGMS

1" = 1'-0"

Steel diaphragms shall be used at locations noted as "Temporary Steel Diaphragm" and installed prior to placement of the concrete end diaphragm.

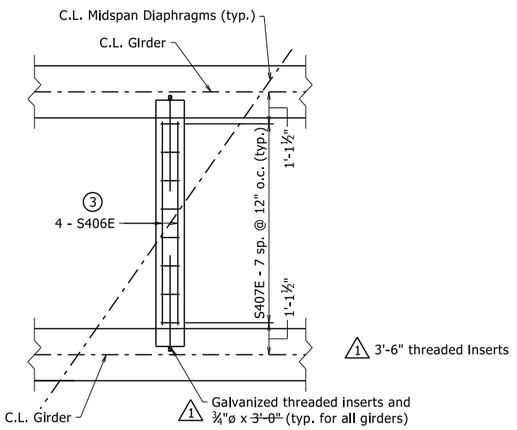
After the concrete deck construction and curing are complete, the temporary steel diaphragm and connecting elements may remain in place or be removed and become the property of the Contractor. If removed, the holes in the girder webs shall be filled with QPL approved non-shrink epoxy grout.

The Temporary Steel Diaphragms and components will not be paid for directly, but shall be considered subsidiary to the item "Prestressed Concrete Girders (Type III)."

2 Permanent Steel Diaphragms may be used in lieu of the Partial Depth Diaphragm. Payment for permanent steel diaphragm and components will be based on concrete diaphragms, under the item "Class S(AE) Concrete-Bridge." Details of Permanent Steel Diaphragms shall match those of the Temporary Steel Diaphragms.

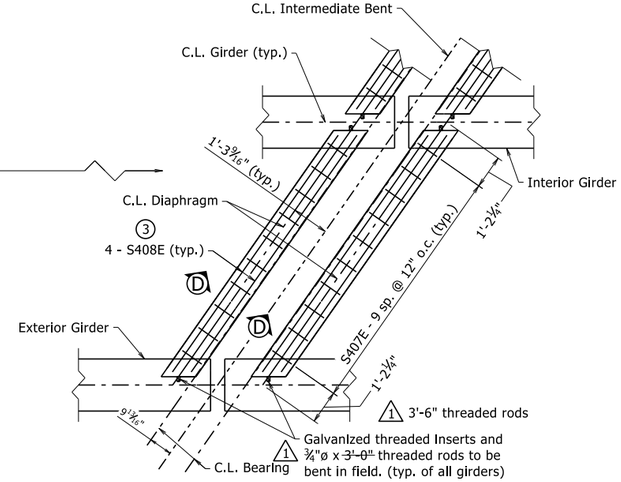
All components of Steel Diaphragms (permanent and temporary) shall be galvanized in accordance with Section 807.19.

A standard washer shall be supplied under both the nut and the head of the ⅞" ø H.S. bolts. An additional plate washer shall cover the angle slots.



PLAN VIEW OF DIAPHRAGMS AT MIDSPAN

⅜" = 1'-0"



PLAN VIEW OF DIAPHRAGMS AT INTERMEDIATE BENTS

⅜" = 1'-0"

3 Trim bars as necessary to maintain clearance.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/28/26
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 2 OF 7
DETAILS OF 194'-6" INTEGRAL PRESTRESSED CONCRETE GIRDER UNIT

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

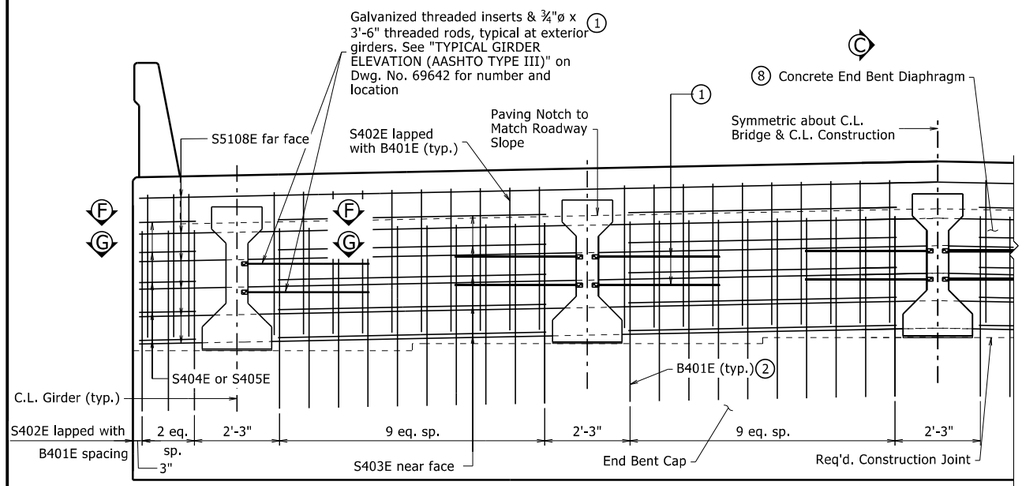
LITTLE ROCK, ARK.

DRAWN BY: CPK DATE: 05/29/2026
CHECKED BY: DPT DATE: 07/30/2026
DESIGNED BY: NLL DATE: 12/2024
FILENAME: b050439_s1.dgn
SCALE: AS NOTED

BRIDGE NO. 07721 DRAWING NO. 69640

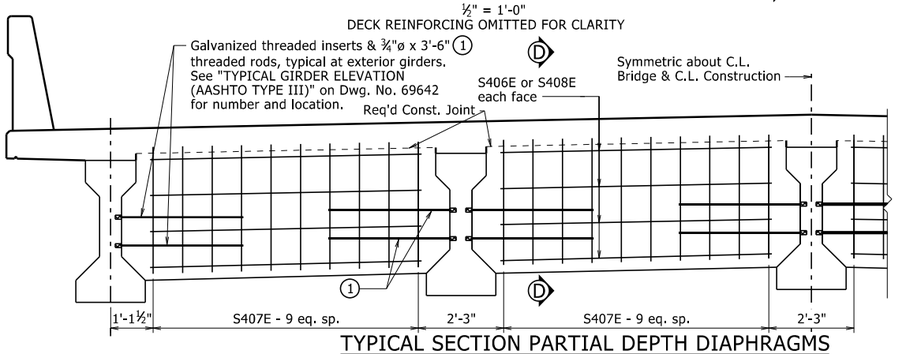
PRINT DATE: 10/26/2026

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	42	55
		07721 - SPAN DETAILS - 69641				



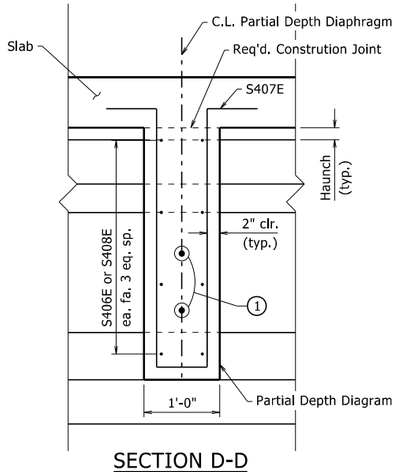
TYPICAL SECTION AT END BENT DIAPHRAGMS

½" = 1'-0"
DECK REINFORCING OMITTED FOR CLARITY



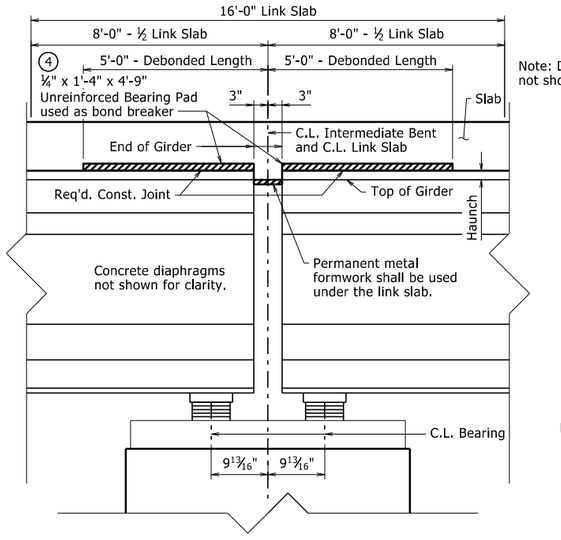
TYPICAL SECTION PARTIAL DEPTH DIAPHRAGMS

½" = 1'-0"
DECK REINFORCING OMITTED FOR CLARITY



SECTION D-D

Partial Depth Diaphragm, Along C.L. Bridge
1" = 1'-0"



Note: Deck reinforcement not shown for clarity.

SECTION E-E

¾" = 1'-0"

1 Galvanized Threaded Inserts shall be Dayton-Richmond F-42 Loop Ferule Inserts or approved equal. ¾"ø x 3'-6" Galvanized Threaded Rods shall be ASTM A709, Grade 36 or AASHTO M 31 or M322 Type A, Grade 60. Galvanizing shall be in accordance with AASHTO M 232, Class C or ASTM B695, Class 50. These items will not be paid for directly, but shall be considered subsidiary to the item "Prestressed Concrete Girders (Type III)".

2 See End Bent details on Dwg. No. 69635 for reinforcing and additional details

3 Unreinforced bearing pads shall meet requirements of Section 808 with the exception that hardness shall be 50 durometer. Unreinforced bearing pads shall not be paid for directly but shall be considered subsidiary to the item "Class S(AE) Concrete-Bridge".

4 Unreinforced bearing pads shall be glued to the top of Girder and shall meet the requirement of Section 808 with the exception that hardness shall be 50 durometer. Unreinforced bearing pads shall not be paid for directly but shall be considered subsidiary to the item "Class S(AE) Concrete - Bridge".

5 Prestressed Strands, see Dwg. No. 69642.

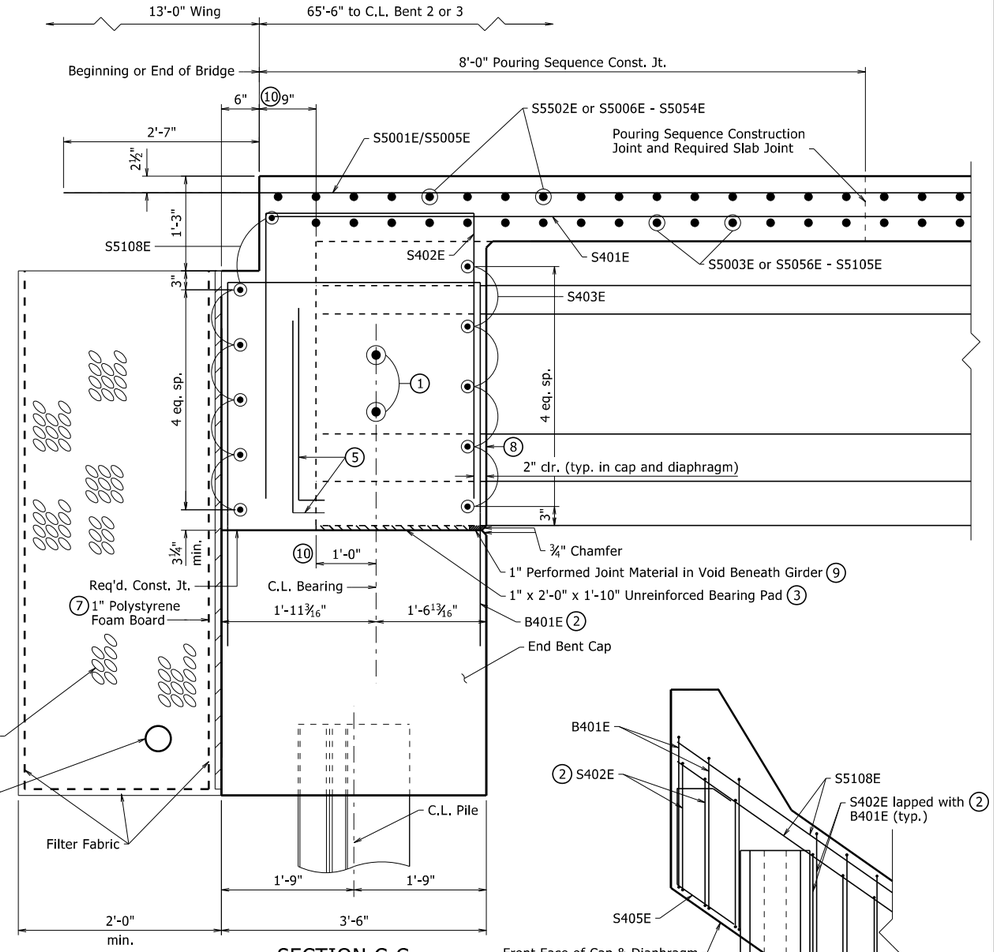
6 For additional details of pipe underdrain see Std. Dwg. PU-1 and Section 611. Pipe underdrains will not be measured or paid for separately, but will be considered subsidiary to "Unclassified Excavation".

7 Polystyrene Foam Board, Filter Fabric and Granular Material shall not be paid for directly, but shall be considered subsidiary to the various bid items.

8 Limits of the concrete End Bent Diaphragm shall match plan dimension of End Bent Cap.

9 1" Preformed Joint Material shall be AASHTO M 153, Type I per Subsection 501.02(h)(1)(b). Preformed Joint Material shall not be paid for directly but shall be considered subsidiary to the item "Class S(AE) Concrete-Bridge".

10 Measured along the C.L of the girder

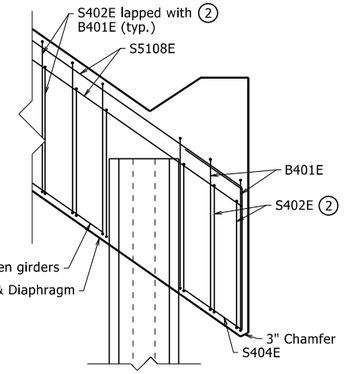


SECTION C-C

Skew not represented for clarity.
1" = 1'-0"

SECTION F-F

½" = 1'-0"



SECTION G-G

½" = 1'-0"

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
9/17/26
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 3 OF 7
DETAILS OF 194'-6" INTEGRAL PRESTRESSED CONCRETE GIRDER UNIT

ROUTE SEC.

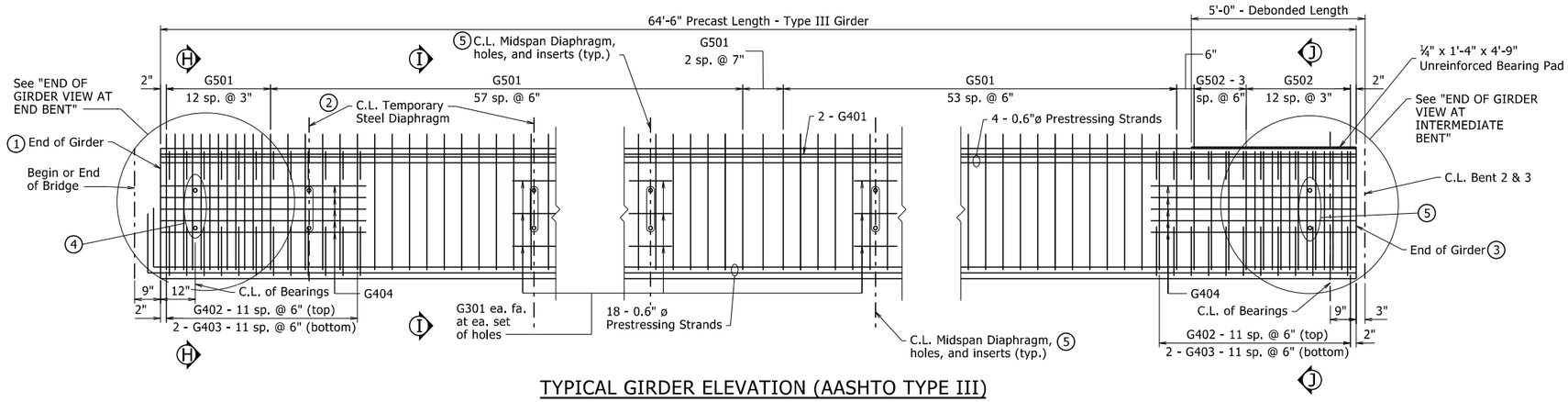
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CPK DATE: 05/15/2026
CHECKED BY: DPT DATE: 07/30/2026
DESIGNED BY: NLL DATE: 12/2024
FILENAME: b050439_s1.dgn
SCALE: AS NOTED

BRIDGE NO. 07721 DRAWING NO. 69641

PRINT DATE: 9/17/2026

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	43	55
		07721 - SPAN DETAILS - 69642				



TYPICAL GIRDER ELEVATION (AASHTO TYPE III)

Spans 1 & 3 Shown
Span 2 Similar
½"=1'-0"

1 At End Bents 1 & 4, shop bend all bottom prestressing strands from end of the girder into diaphragms as shown. Cut any remaining strands flush with the end of the girder.

2 Connection for Temporary Steel Diaphragm: 1 1/16" ø holes in web. See Dwg. No. 69640 for additional details.

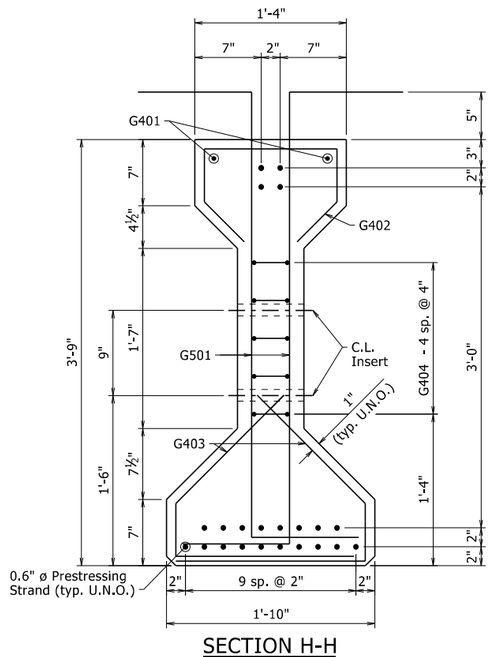
3 At Intermediate bents only, saw cut or grind all strands flush with end of the girder. The ends of the girders and the cut-off strands shall be coated with a min. 1/16" thick coating of a QPL approved epoxy resin.

4 Connection for End Bent Diaphragm: ¾"ø Threaded Inserts at interior face of girders. See Dwg. No. 69640 for additional details.

5 Connection for Partial Depth Diaphragm: ¾" ø Threaded Inserts at interior faces of girders. See Dwg. No. 69640 for additional details.

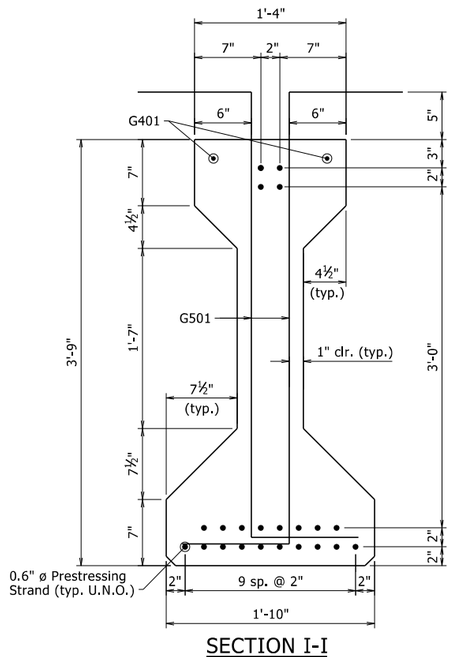
GIRDER BAR LIST VARIABLES

	"X"	"Y"
End Spans	125	16
Int. Span	109	32



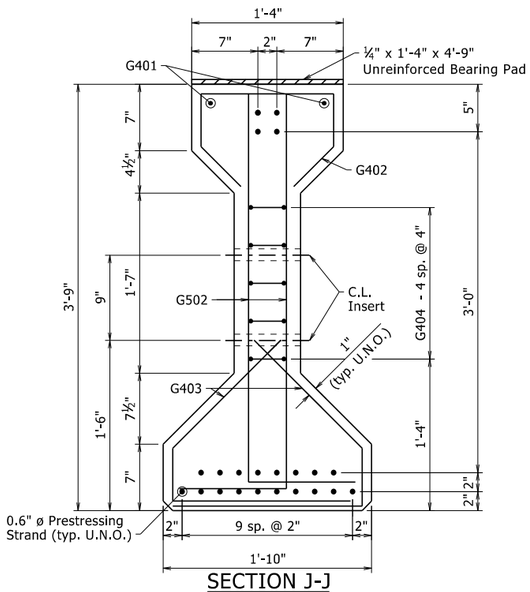
SECTION H-H

1½"=1'-0"



SECTION I-I

1½"=1'-0"



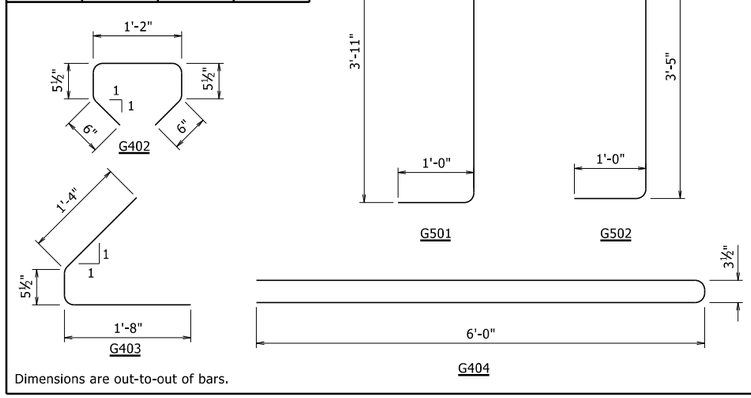
SECTION J-J

1½"=1'-0"

BAR LIST - PER GIRDER

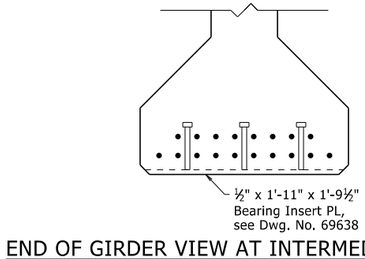
MARK	NO. REQ'D.	LENGTH	P.D.
G301	90	1'-3"	str.
G401	2	64'-2"	str.
G402	24	2'-10"	3"
G403	48	5'-1"	3"
G404	10	11'-11"	3"
G501	"X"	5'-6"	3¾"
G502	"Y"	4'-4"	3¾"

BENDING DIAGRAMS



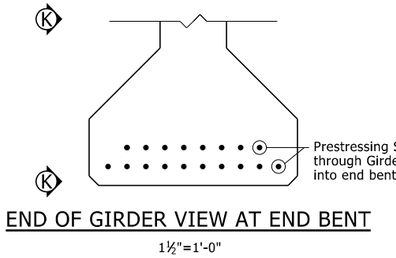
Dimensions are out-to-out of bars.

All bars in "BAR LIST - PER GIRDER" shall be subsidiary to the Item "Prestressed Concrete Girders (Type III)". See span drawings for bar list of span reinforcing.



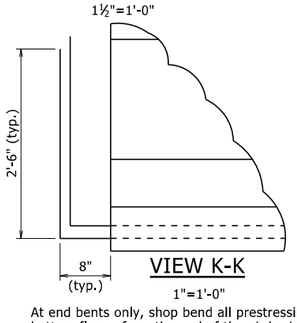
END OF GIRDER VIEW AT INTERMEDIATE BENT

1½"=1'-0"



END OF GIRDER VIEW AT END BENT

1½"=1'-0"



VIEW K-K

1"=1'-0"

At end bents only, shop bend all prestressing strands in bottom flange from the end of the girder into end bent diaphragms as shown.

At the Contractor's option, the location for bent up strands may be varied. Saw cut or grind remaining strands to within 1" of the end of the girder.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
9/17/26
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 4 OF 7
DETAILS OF 194'-6" INTEGRAL PRESTRESSED CONCRETE GIRDER UNIT

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CPK DATE: 05/15/2026 FILENAME: b050439_s1.dgn
CHECKED BY: DPT DATE: 07/30/2026 SCALE: As Shown
DESIGNED BY: NLL DATE: 12/2024

BRIDGE NO. 07721 DRAWING NO. 69642

PRINT DATE: 9/17/2026

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	44	55
		07721 - SPAN DETAILS - 69643				

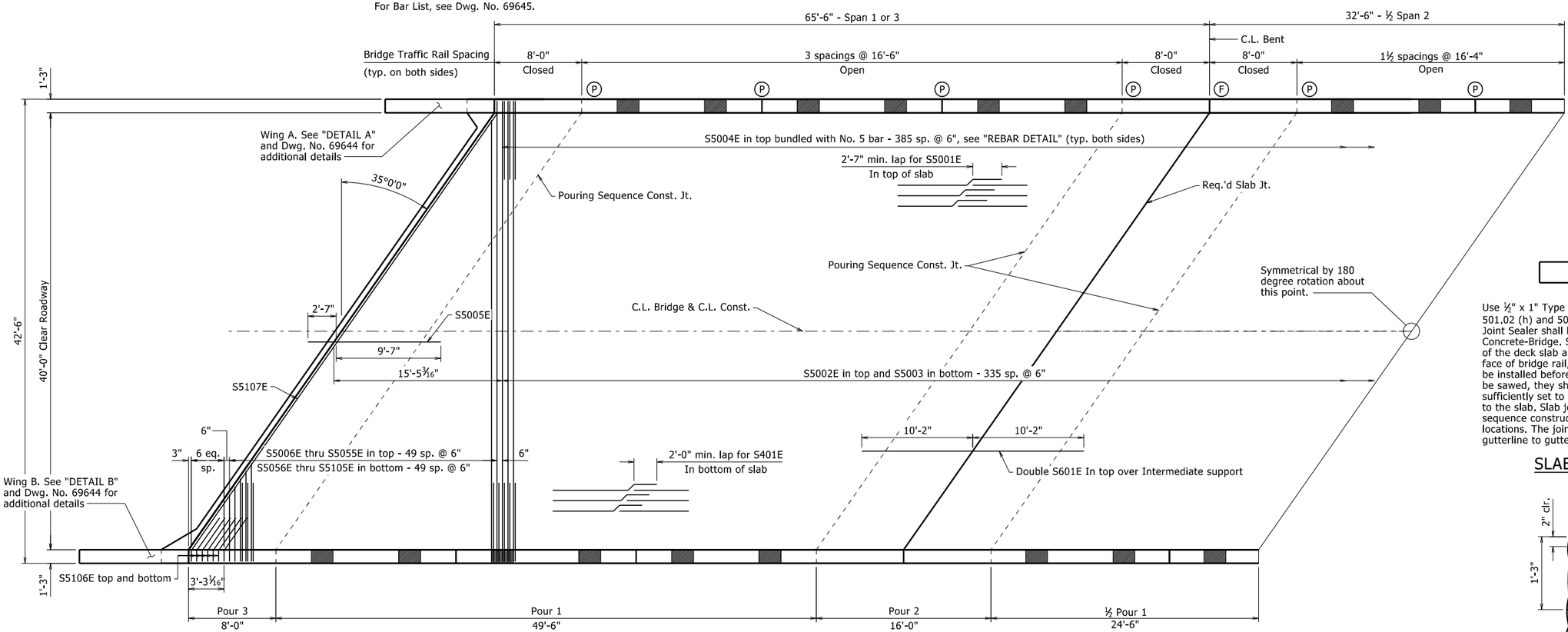
(1) Placed as shown in "TYPICAL ROADWAY SECTION", Dwg. No. 69639.

(2) Stay-In-Place forms, If used, shall be installed in a manner that facilitates the direction of the Pour.

Rails and wings are included in the 194'-6" Integral Prestressed Concrete Girder Unit quantities.

Required slab joints and pouring sequence joints shall align with bridge rail open joints at the gutterline, unless noted otherwise.

For Bar List, see Dwg. No. 69645.



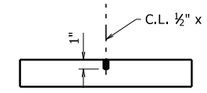
HALF REINFORCING PLAN AND SLAB POURING SEQUENCE

3/16" = 1'-0"

TABLE OF VARIABLES

Closed Rail Panel			Open Rail Panel					
Panel Length	A	R40XE	Panel Length	B	C	D	E	R40XE
8'-0"	15	R404E	16'-4"	8	3'-2"	11	6'-0"	R405E
			16'-6"	9	3'-3"	11	6'-0"	R406E

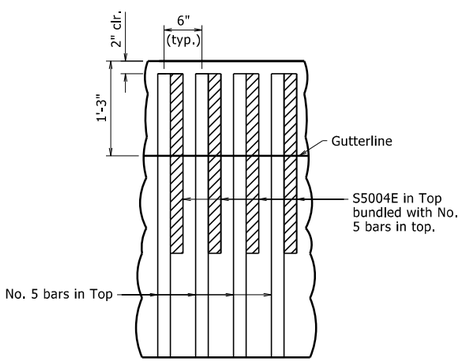
Reference Std. Dwg. No. 55070 for additional details of Bridge Traffic Rail and Wing.



Use ½" x 1" Type 3 or 4 Joint Sealer. See Subsections 501.02 (h) and 501.05 (j). Backer rod will not be required. Joint Sealer shall be measured and paid for as Class S(AE) Concrete-Bridge. Slab Joints shall extend to the outside edge of the deck slab and shall align with open joints at the front face of bridge rail, unless shown otherwise. Slab joints shall be installed before the railing is poured. If slab joints are to be sawed, they shall be sawed as soon as the concrete has sufficiently set to allow sawing of the joint without damage to the slab. Slab joints shall be placed at all pouring sequence construction joints and required slab joint locations. The joint sealer shall extend across deck from gutterline to gutterline.

SLAB JOINT DETAIL

NO SCALE



REBAR DETAIL

NO SCALE

Slab Pouring Sequence Notes:

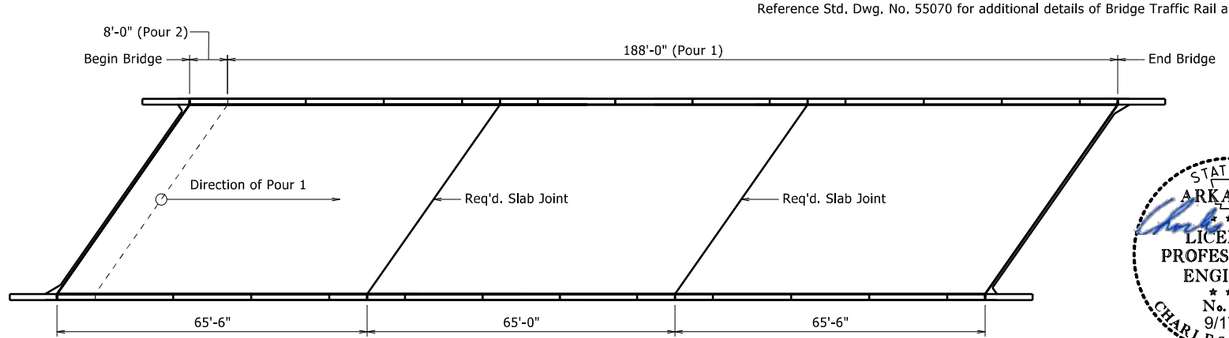
Pours with the same number may be placed simultaneously or separately. All Pours (1) must be placed before Pours (2) can be placed. 48 hours shall elapse between the end of a pour and the start of the next pour. 72 hours shall elapse between adjacent pours.

Concrete in bridge superstructure shall be placed, consolidated and screeded off for the entire pour before any concrete has taken its initial set. This may require use of a retarding agent.

The partial depth concrete diaphragms shall not be poured prior to 90 days after release of strands for the girders.

Concrete diaphragms at Bents 1 & 4 shall be poured monolithically with the deck. All other concrete diaphragms shall be placed no less than 48 hours prior to deck slab pour.

A minimum of 72 hours shall elapse between completion of the slab and the pouring of the bridge railing. Any railing pours made before the entire slab unit has been placed must be approved by the Engineer. The Contractor must obtain approval from the Engineer for any deviations from the pouring sequence(s) shown.



ALTERNATE POURING SEQUENCE

1/16" = 1'-0"

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
9/17/26
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 5 OF 7
DETAILS OF 194'-6" INTEGRAL PRESTRESSED CONCRETE GIRDER UNIT

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

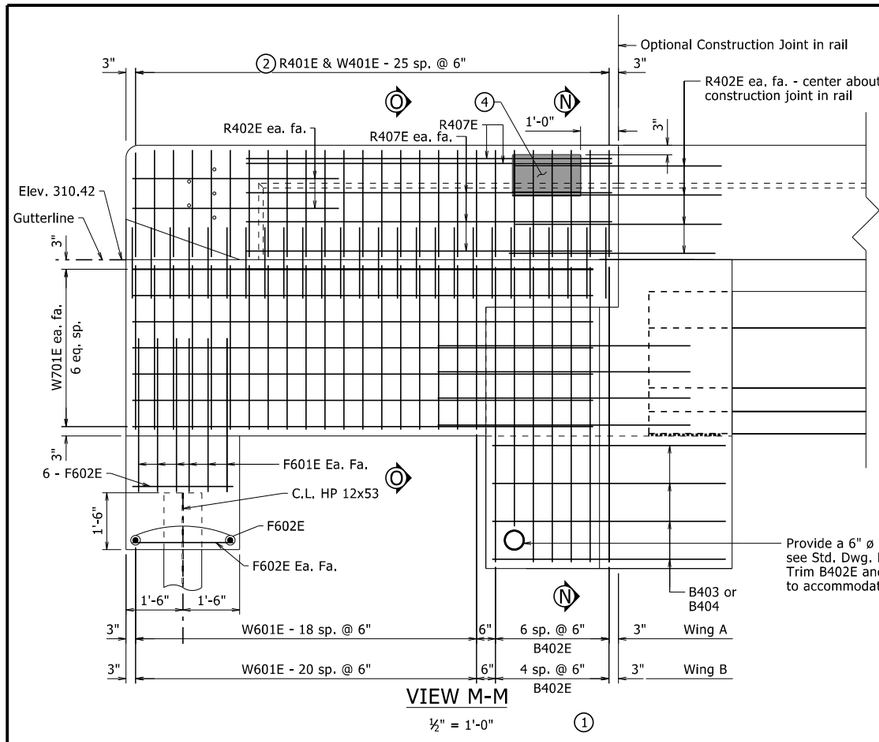
LITTLE ROCK, ARK.

DRAWN BY: CPK DATE: 05/29/2026 FILENAME: b050439_s1.dgn
CHECKED BY: DPT DATE: 07/30/2026 SCALE: AS NOTED
DESIGNED BY: NLL DATE: 12/2024

BRIDGE NO. 07721 DRAWING NO. 69643

PRINT DATE: 9/17/2026

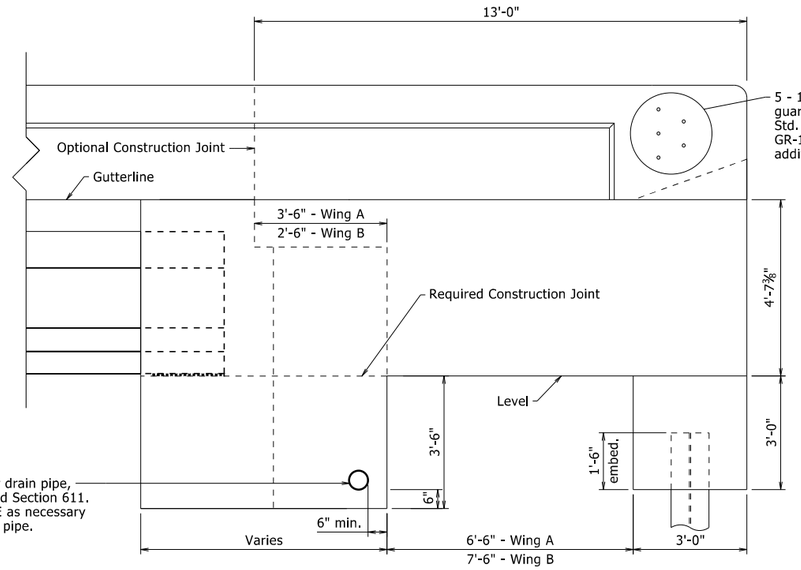
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	45	55
		07721 - SPAN DETAILS - 69644				



VIEW M-M

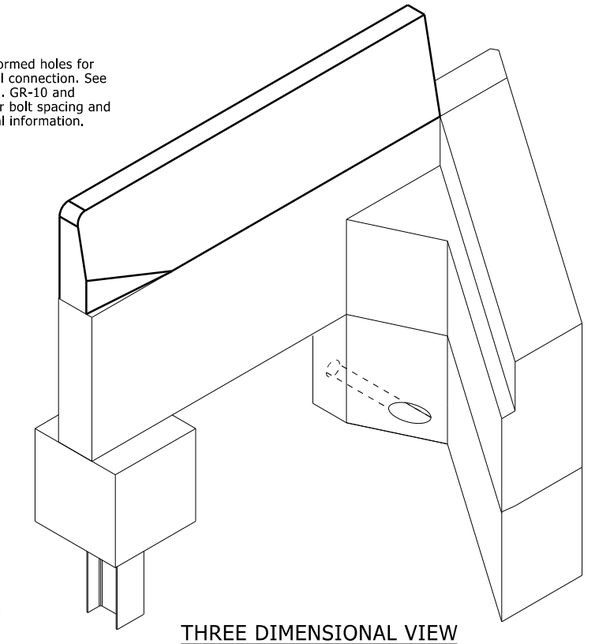
½" = 1'-0"

(1)

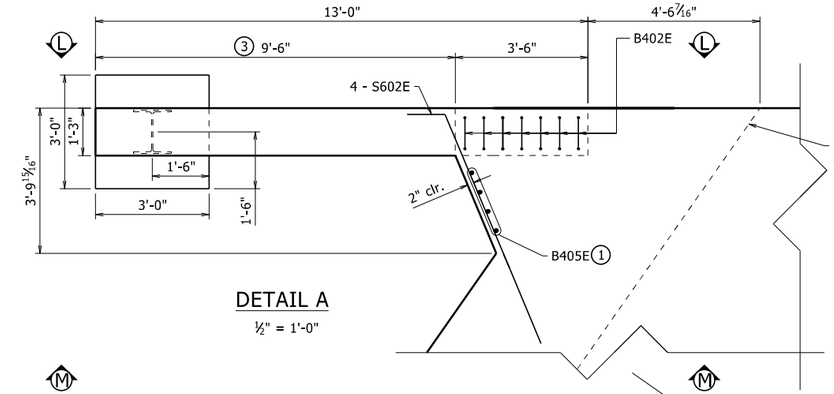


VIEW L-L

½" = 1'-0"

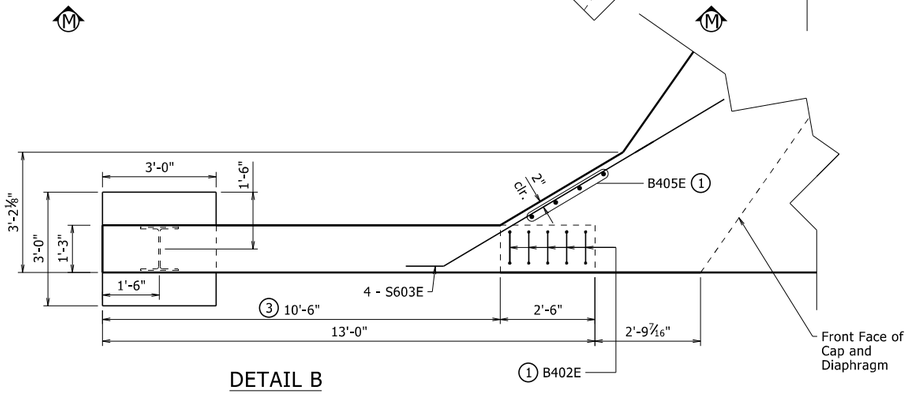


THREE DIMENSIONAL VIEW OF WING AND RAIL AT INTEGRAL END BENT



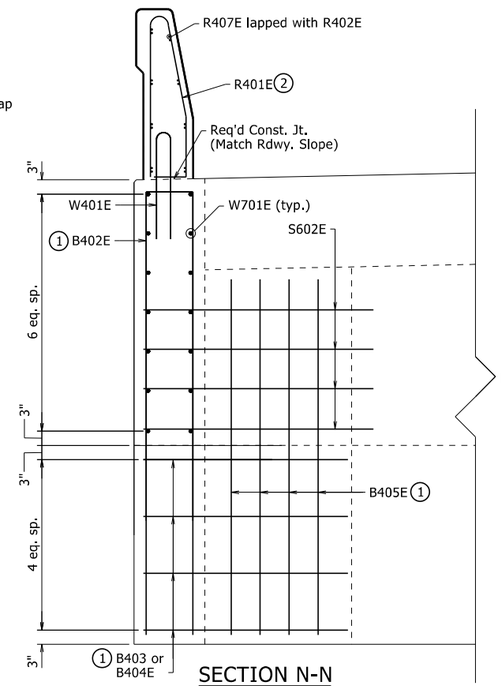
DETAIL A

½" = 1'-0"



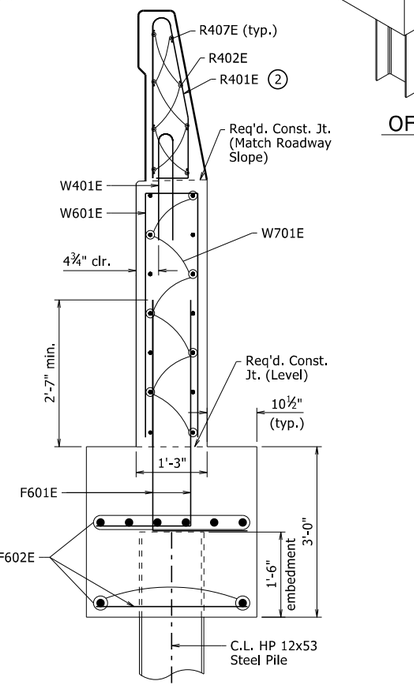
DETAIL B

½" = 1'-0"



SECTION N-N

¾" = 1'-0"



SECTION O-O

¾" = 1'-0"

1. See End Bent Details on Dwg. No. 69635 for reinforcing and additional details.
2. Field bend as necessary to maintain 1" cover at rail taper
3. Measured along gutterline.
4. Place Type D Bridge Name Plate on right bridge rail approximately 1'-0" from optional construction joint. (beginning of bridge only)

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
9/17/26
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 6 OF 7
DETAILS OF 194'-6" INTEGRAL PRESTRESSED CONCRETE GIRDER UNIT

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY:	CPK	DATE:	05/29/2026	FILENAME:	b050439_s1.dgn
CHECKED BY:	DPT	DATE:	07/30/2026	SCALE:	AS NOTED
DESIGNED BY:	NLL	DATE:	12/2024		

BRIDGE NO. 07721 DRAWING NO. 69644

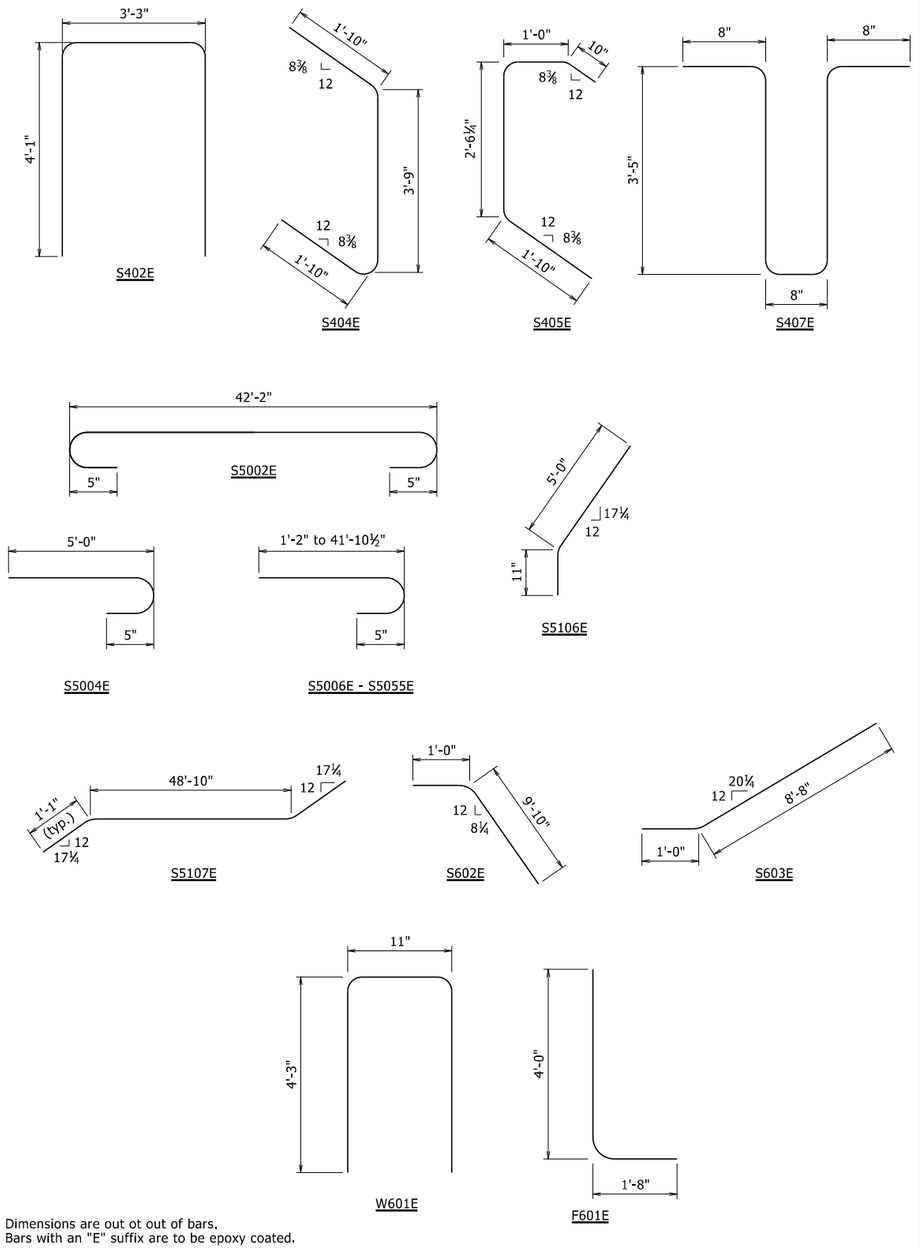
PRINT DATE: 9/17/2026

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	46	55
		07721 - SPAN DETAILS - 69645				

BAR LIST

MARK	NO. REQ'D	LENGTH	P.D.
(1) R400E	144	5'-3"	2½"
(1) R401E	860	6'-4"	2½"
(1) R402E	144	5'-6"	Str.
(1) R403E	756	3'-6"	3¾"
(1) R404E	96	7'-8"	Str.
(1) R405E	48	16'-0"	Str.
(1) R406E	96	16'-2"	Str.
(1) R407E	32	12'-8"	Str.
S401E	340	40'-9"	Str.
S402E	92	11'-3"	2"
S403E	40	8'-9"	Str.
S404E	10	7'-3"	2"
S405E	10	6'-1"	2"
S406E	96	7'-1"	Str.
S407E	280	8'-6"	2"
S408E	128	10'-2"	Str.
S5001E	180	50'-11"	Str.
S5002E	336	43'-4"	3¾"
S5003E	336	42'-2"	Str.
S5004E	772	5'-7"	3¾"
S5005E	88	12'-2"	Str.
S5006E - S5055E	2 ea.	6'-1" to 41'-1"	3¾"
S5056E - S5105E	2 ea.	5'-6" to 40'-6"	Str.
S5106E	24	5'-11"	3¾"
S5107E	2	51'-0"	3¾"
S5108E	12	51'-7"	Str.
S601E	176	20'-4"	Str.
S602E	8	10'-10"	4½"
S603E	8	9'-8"	4½"
(1) W401E	104	3'-11"	3¾"
W601E	80	9'-1"	4½"
W701E	56	12'-8"	Str.
F601E	48	5'-0"	4½"
F602E	40	2'-6"	Str.

BENDING DIAGRAMS



Dimensions are out ot out of bars.
Bars with an "E" suffix are to be epoxy coated.

(1) For additional details and bending diagram of reinforcing bars in Bridge Trafic Rail and Wings, see Std. Dwg. No. 55070.

GENERAL NOTES

CONCRETE: All concrete, except for prestressed girders, shall be Class S(AE) with a minimum 28 day compressive strength f'c = 4,000 psi. Concrete shall be poured in the dry and all exposed corners shall be chamfered ¾" unless otherwise noted.

The superstructure details shown are for use when removable deck forming is used and are the basis for measurement of Class S(AE) Concrete. See Standard Drawing No. 55005 for allowable modifications and for tolerances when Permanent Steel Bridge Deck Forms are used.

The concrete deck (roadway surface) shall be given a tine finish in accordance with Subsection 802.19 for Class 5 Tined Bridge Roadway Surface Finish. Movement of the finishing machine across new concrete shall be on planks placed on the surface and shall be prohibited for 72 hours after finishing the pour. Sufficient concrete must be placed ahead of the strike-off to fully load the girder.

REINFORCING STEEL: All reinforcing steel shall be Grade 60 conforming to AASHTO M 32 or M 322, Type A, with mill test reports and shall be epoxy coated. The reinforcing steel is to be accurately located in the forms and firmly held in place by steel wire supports, sufficient in number and size to prevent displacement during the course of construction. The wire supports will not be paid for directly, but will be considered subsidiary to the item "Epoxy Coated Reinforcing Steel (Grade 60)".

STRUCTURAL STEEL: Structural steel shall be ASTM A709 as specified in the plans. Unless otherwise noted, Grade 50W steel shall not be painted and all exposed surfaces shall be cleaned in accordance with Subsection 807.84(e). Grade 36 and Grade 50 steel shall be painted unless otherwise noted and all exposed surfaces shall be cleaned in accordance with Subsection 807.74. Structural steel completely embedded in concrete may be ASTM A709, Gr. 36, Gr. 50, or Gr. 50W unless otherwise noted.

Drawings show general features of design only. Shop drawings shall be made in accordance with the specifications, submitted, and approval secured before fabrication is begun.

Requests for substitution of structural steel shapes shown with shapes of greater size must be submitted by the Contractor to the Engineer for approval. Steels of equal or greater strengths will be accepted only when shown on the approved shop drawings. Payment, where applicable, will be based on the basis of shapes and materials shown in the plans, and no additional compensation will be made for any adjustments due to substitutions.

All welding that is to be done during fabrication of structural steel, including temporary welds, shall be detailed on the shop drawings and submitted for approval. If additional welds are required, whether permanent or temporary, a formal request with detailed drawings shall be submitted to the Engineer for approval. All welding shall conform to Subsection 807.26.

PRESTRESSED GIRDER: Prestressing steel shall be 0.6"ø Low Relaxation strands with a minimum ultimate strength of 270 ksi, and shall conform to AASHTO M 203.

All girders shall be Type III as noted on the details and shall be the standard prestressed sections adopted by the Joint Committee of AASHTO and the Prestressed Concrete Institute. All girders shall be cast in concrete floored pallets and in metal forms.

Concrete shall be Class S and shall have a minimum 28 day compressive strength, f'c = 8,000 psi. The initial force applied to each 0.6" ø strand shall be 43,950 lbs. Transfer of this tensioning load to the girder shall not be done until the compressive strength of the concrete is 6,000 psi.

Dimensions shown are to the center of the strands.

Holes and Inserts shall be cast into the girder. Field drilling of holes shall not be permitted.

At the unbonded portions near the intermediate bents, the tops of girders shall be smooth along the debonded length shown in "SECTION E-E", on Dwg. No. 69641. The tops of the girders in the bonded regions shall be roughened to an amplitude of ¼" and shall be scrubbed transversely with a coarse wire brush to remove all laitance to produce an adequate surface for bonding to the slab.

After detensioning, saw cut, grind, or bend up strands as designated by the plans. Heat-cutting or bending methods shall not be used within 6" of the girder.

The points of support and directions of the reactions with respect to member shall be approximately the same during transportation and storage as when the member is in its final position.

Reinforcing steel shall be Grade 60 (fy = 60,000 psi.) conforming to AASHTO M 31 or M322, Type A with mill test reports.

The Contractor may submit alternate strand patterns with design calculations for review and approval.

Drawings show general feature of design only. Shop drawings shall be made in accordance with the specifications, submitted, and approval secured before fabrication is begun.

Extreme care shall be exercised in handling and moving precast prestressed concrete girders. Girders must be maintained in an upright position at all times and must be picked up from points near the girder ends. Disregard of this requirement may lead to collapse of the girder. The Contractor's proposed lifting details shall be submitted on shop drawings to the Engineer for approval. The use of holes for lifting purposes will not be permitted.

The Contractor shall submit the method and sequence for release of strands to the Engineer for approval prior to casting of the girders.

Distances from the forms and spacing of the Prestressing steel shall be maintained by stays, ties, hangers, spacers, or other approved supports which shall be shown on the Shop Drawings.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
9/17/26
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 7 OF 7
DETAILS OF 194'-6" INTEGRAL PRESTRESSED CONCRETE GIRDER UNIT

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: CPK DATE: 06/01/2026 FILENAME: b050439_s1.dgn
CHECKED BY: DPT DATE: 07/30/2026 SCALE: NO SCALE
DESIGNED BY: NLL DATE: 12/2024

BRIDGE NO. 07721 DRAWING NO. 69645

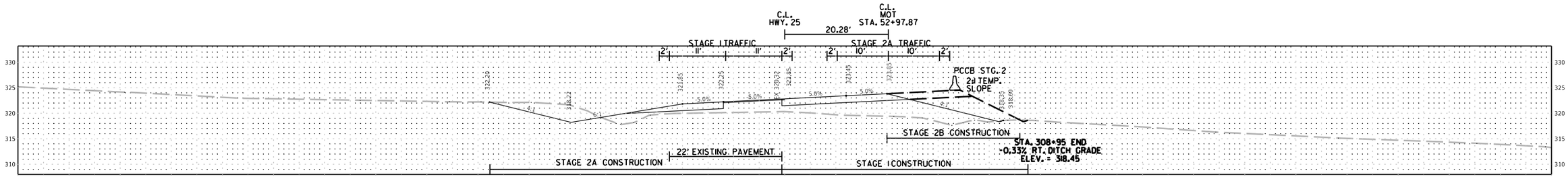
PRINT DATE: 9/17/2026

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	47	55
		CROSS SECTIONS - HWY. 25				

STAGE 1 STAGE 2A STAGE 2B

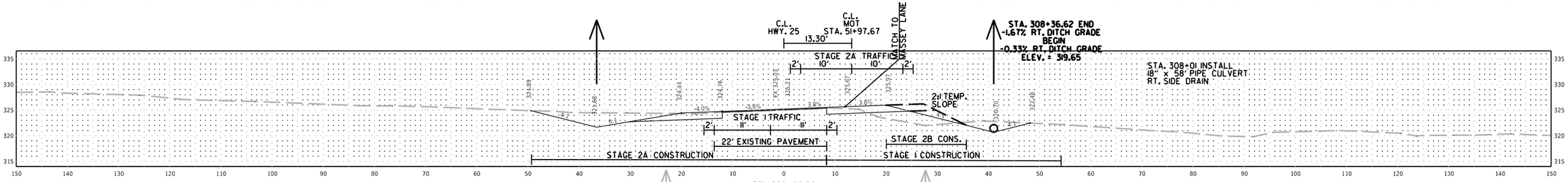
STA. 309+00.57 MAX. SUPERELEVATION (0.050 FT./FT.)

STAGE 1 STAGE 2A STAGE 2B



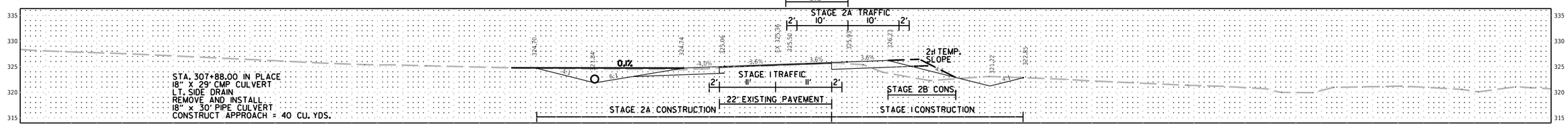
CUT AREA 0.26 SQ. FT. CUT AREA 39.33 SQ. FT. CUT AREA 61 SQ. FT. CUT VOLUME 42 CU. YD. CUT VOLUME 176 CU. YD. CUT VOLUME 142 CU. YD.
FILL AREA 139 SQ. FT. FILL AREA 21.22 SQ. FT. FILL AREA 0 SQ. FT. FILL VOLUME 316 CU. YD. FILL VOLUME 39 CU. YD. FILL VOLUME 0 CU. YD.

STA 309+00.00



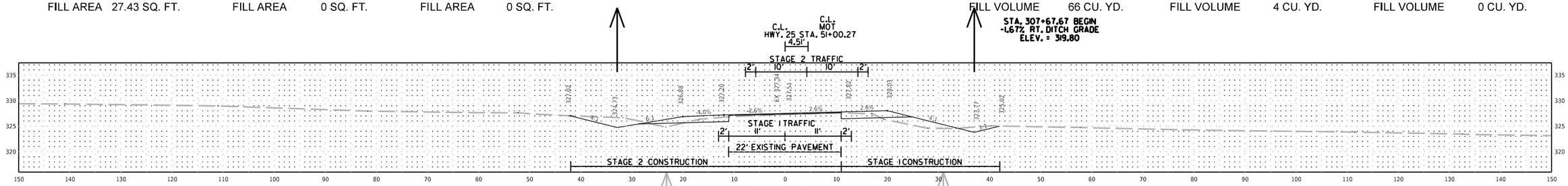
CUT AREA 22.6 SQ. FT. CUT AREA 55.82 SQ. FT. CUT AREA 16 SQ. FT. CUT VOLUME 9 CU. YD. CUT VOLUME 24 CU. YD. CUT VOLUME 6 CU. YD.
FILL AREA 31.76 SQ. FT. FILL AREA 0 SQ. FT. FILL AREA 0 SQ. FT. FILL VOLUME 13 CU. YD. FILL VOLUME 0 CU. YD. FILL VOLUME 0 CU. YD.

STA 308+00.00



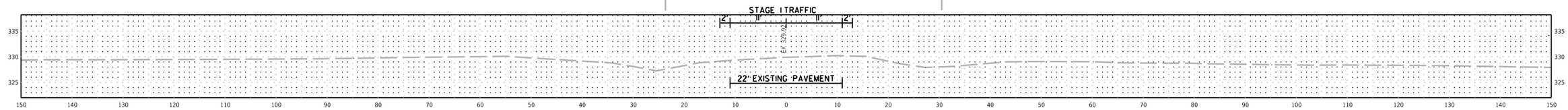
CUT AREA 18.75 SQ. FT. CUT AREA 50.44 SQ. FT. CUT AREA 12 SQ. FT. CUT VOLUME 47 CU. YD. CUT VOLUME 112 CU. YD. CUT VOLUME 19 CU. YD.
FILL AREA 27.43 SQ. FT. FILL AREA 0 SQ. FT. FILL AREA 0 SQ. FT. FILL VOLUME 66 CU. YD. FILL VOLUME 4 CU. YD. FILL VOLUME 0 CU. YD.

STA 307+88.00



CUT AREA 11.09 SQ. FT. CUT AREA 20.92 SQ. FT. CUT AREA 0 SQ. FT. CUT VOLUME 21 CU. YD. CUT VOLUME 39 CU. YD. CUT VOLUME 0 CU. YD.
FILL AREA 14.46 SQ. FT. FILL AREA 2.45 SQ. FT. FILL AREA 0 SQ. FT. FILL VOLUME 27 CU. YD. FILL VOLUME 5 CU. YD. FILL VOLUME 0 CU. YD.

STA 307+03.00
END 100' TRANSITION
BEGIN JOB 050439
MATCH EXISTING SUPERELEVATION (0.026 FT./FT.)



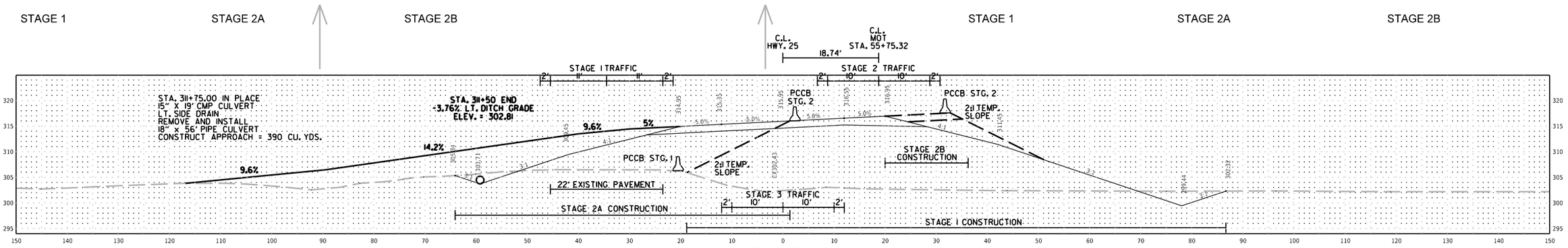
CUT AREA 0 SQ. FT. CUT AREA 0 SQ. FT. CUT AREA 0 SQ. FT. CUT VOLUME 0 CU. YD. CUT VOLUME 0 CU. YD. CUT VOLUME 0 CU. YD.
FILL AREA 0 SQ. FT. FILL AREA 0 SQ. FT. FILL AREA 0 SQ. FT. FILL VOLUME 0 CU. YD. FILL VOLUME 0 CU. YD. FILL VOLUME 0 CU. YD.

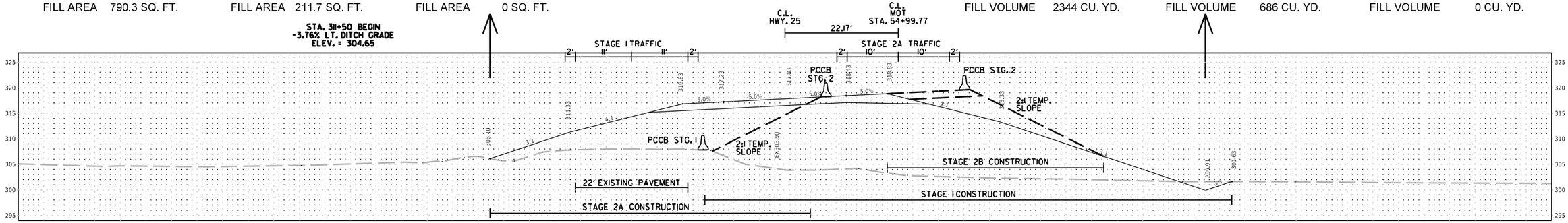
STA 306+03.00
BEGIN 100' TRANSITION

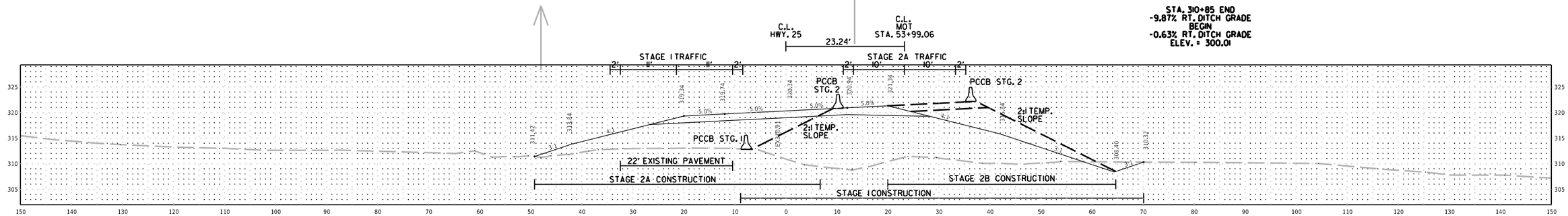
STA. 306+03 TO STA. 309+00

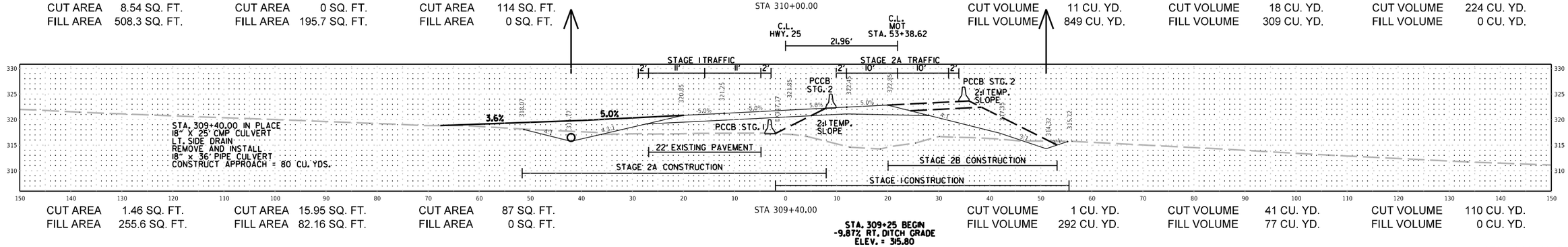
R050439_XS.DGN CREATED: 3/19/2025 SAVED: 9/2/2026

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	48	55
		CROSS SECTIONS - HWY. 25				









STA. 309+40 TO STA. 311+75

R050439_XS.DGN CREATED: 3/19/2025 SAVED: 8/10/2026

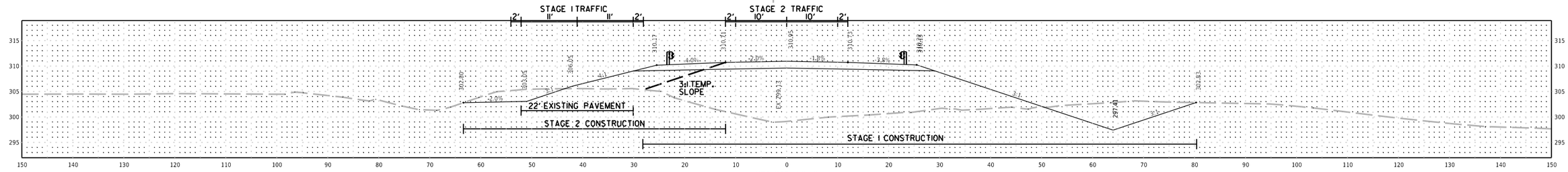
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	49	55
		CROSS SECTIONS - HWY. 25				

STAGE 1 STAGE 2A STAGE 2B

STA. 315+04.83 (BK) = STA. 115+10.00 (AH)
STA. 315+04.68 END SUPERELEVATION

STAGE 1 STAGE 2A STAGE 2B

STA. 315+70 END
-0.63% RT. DITCH GRADE
ELEV. = 297.00

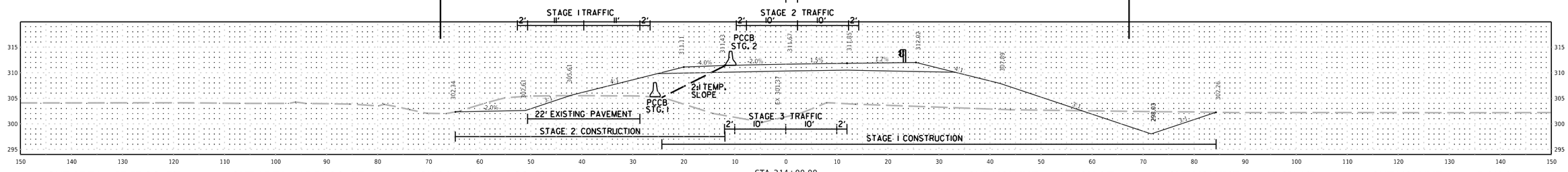


CUT AREA 83.79 SQ. FT. CUT AREA 28.82 SQ. FT. CUT AREA 0 SQ. FT.
FILL AREA 534.3 SQ. FT. FILL AREA 53.26 SQ. FT. FILL AREA 0 SQ. FT.

STA 315+00.00

CUT VOLUME 262 CU. YD. CUT VOLUME 119 CU. YD. CUT VOLUME 0 CU. YD.
FILL VOLUME 1907 CU. YD. FILL VOLUME 219 CU. YD. FILL VOLUME 0 CU. YD.

C.L. MOT
HWY. 25 STA. 58+01.41
2.30'

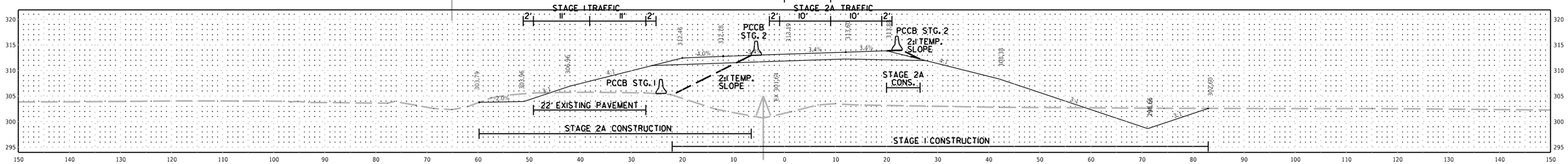


CUT AREA 57.57 SQ. FT. CUT AREA 35.59 SQ. FT. CUT AREA 0 SQ. FT.
FILL AREA 495.8 SQ. FT. FILL AREA 65.01 SQ. FT. FILL AREA 0 SQ. FT.

STA 314+00.00

CUT VOLUME 195 CU. YD. CUT VOLUME 90 CU. YD. CUT VOLUME 5 CU. YD.
FILL VOLUME 1963 CU. YD. FILL VOLUME 332 CU. YD. FILL VOLUME 0 CU. YD.

C.L. MOT
HWY. 25 STA. 57+01.18
9.07'



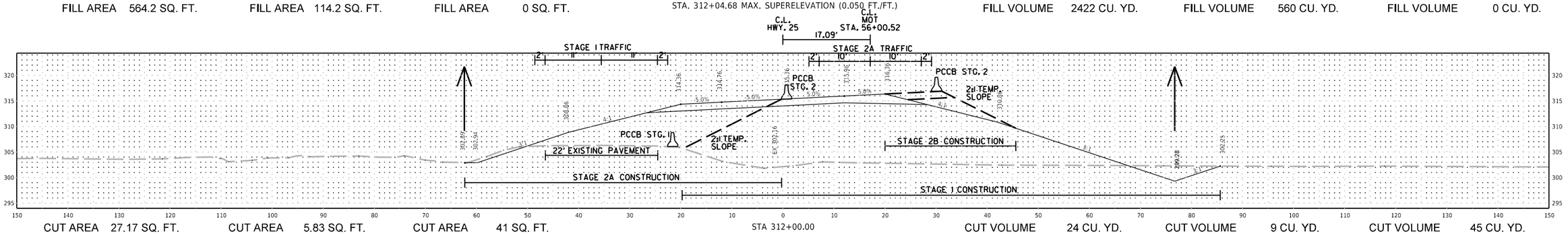
CUT AREA 47.57 SQ. FT. CUT AREA 12.8 SQ. FT. CUT AREA 3 SQ. FT.
FILL AREA 564.2 SQ. FT. FILL AREA 114.2 SQ. FT. FILL AREA 0 SQ. FT.

STA 313+00.00

STA. 312+04.68 MAX. SUPERELEVATION (0.050 FT./FT.)

CUT VOLUME 138 CU. YD. CUT VOLUME 34 CU. YD. CUT VOLUME 81 CU. YD.
FILL VOLUME 2422 CU. YD. FILL VOLUME 560 CU. YD. FILL VOLUME 0 CU. YD.

C.L. HWY. 25
C.L. MOT
STA. 56+00.52
17.09'



CUT AREA 27.17 SQ. FT. CUT AREA 5.83 SQ. FT. CUT AREA 41 SQ. FT.
FILL AREA 743.9 SQ. FT. FILL AREA 188.2 SQ. FT. FILL AREA 0 SQ. FT.

STA 312+00.00

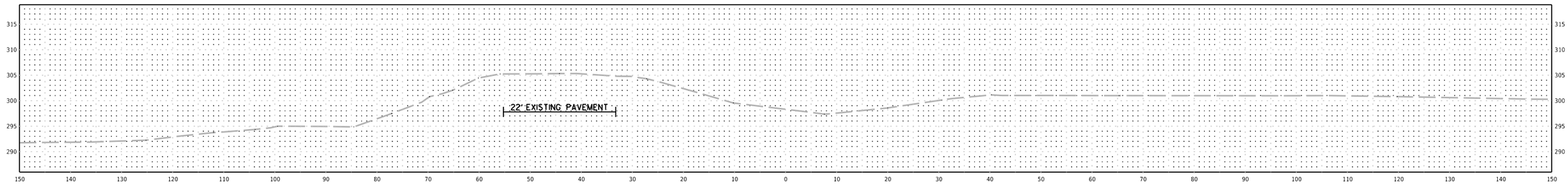
CUT VOLUME 24 CU. YD. CUT VOLUME 9 CU. YD. CUT VOLUME 45 CU. YD.
FILL VOLUME 710 CU. YD. FILL VOLUME 185 CU. YD. FILL VOLUME 0 CU. YD.

STA. 312+00 TO STA. 315+00

R050439_XS.DGN CREATED: 3/19/2025 SAVED: 9/2/2026

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	50	55
		CROSS SECTIONS - HWY. 25				

STAGE 1 STAGE 2A STAGE 2B

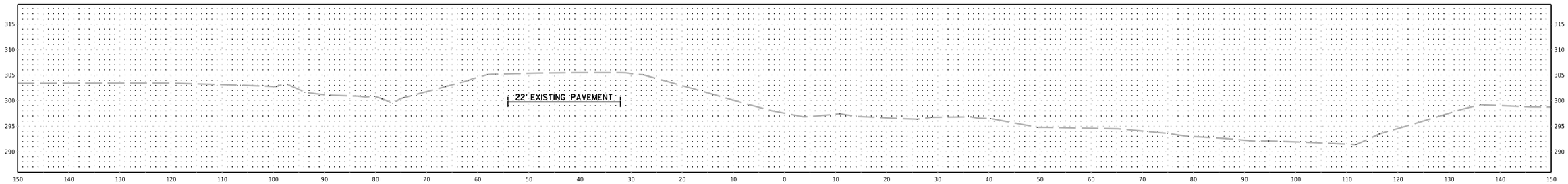


CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.
FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.

STA 117+96.99
TOE OF SLOPE

CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.

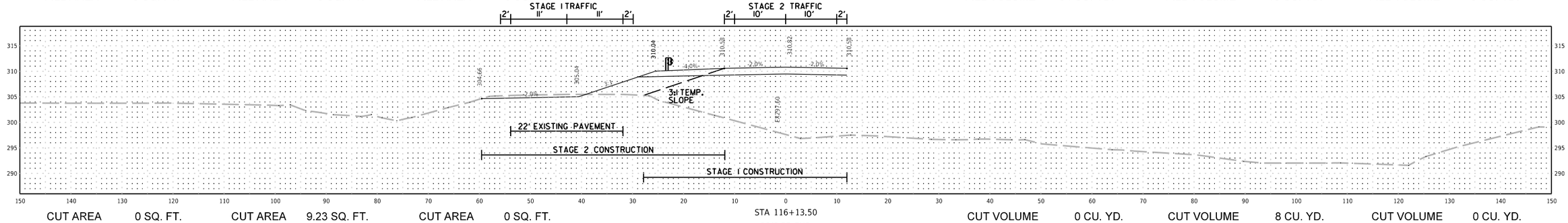
STA. 117+95.50 BEGIN
4.3% RT. DITCH GRADE
ELEV. = 296.94



CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.
FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.

STA 116+26.76
TOE OF SLOPE

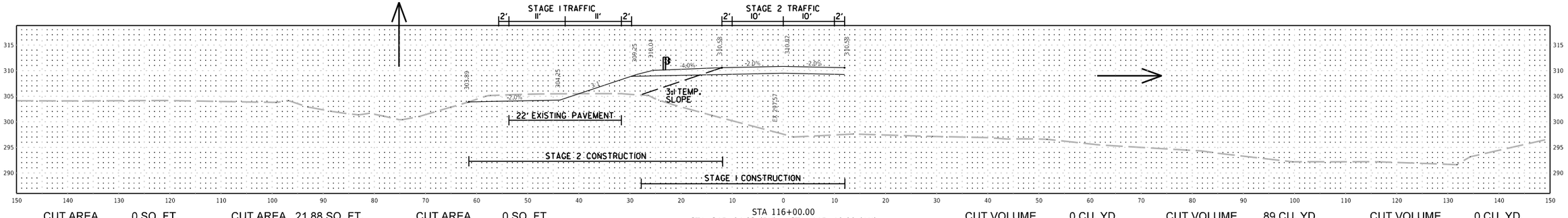
CUT VOLUME	0 CU. YD.	CUT VOLUME	2 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	84 CU. YD.	FILL VOLUME	10 CU. YD.	FILL VOLUME	0 CU. YD.



CUT AREA	0 SQ. FT.	CUT AREA	9.23 SQ. FT.	CUT AREA	0 SQ. FT.
FILL AREA	342.9 SQ. FT.	FILL AREA	42.6 SQ. FT.	FILL AREA	0 SQ. FT.

STA 116+13.50
BRIDGE END

CUT VOLUME	0 CU. YD.	CUT VOLUME	8 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	268 CU. YD.	FILL VOLUME	22 CU. YD.	FILL VOLUME	0 CU. YD.



CUT AREA	0 SQ. FT.	CUT AREA	21.88 SQ. FT.	CUT AREA	0 SQ. FT.
FILL AREA	728.1 SQ. FT.	FILL AREA	45.24 SQ. FT.	FILL AREA	0 SQ. FT.

STA 116+00.00
STA. 315+04.83 (BK) = STA. 115+10.00 (AH)
STA. 315+04.68 END SUPERELEVATION

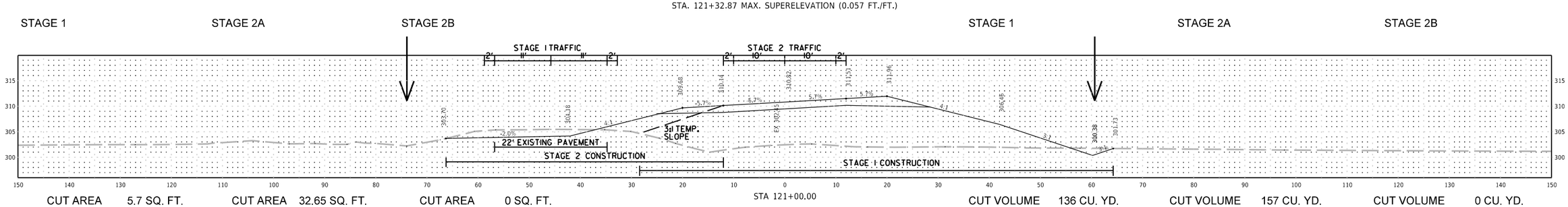
CUT VOLUME	0 CU. YD.	CUT VOLUME	89 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	1213 CU. YD.	FILL VOLUME	173 CU. YD.	FILL VOLUME	0 CU. YD.

STA. 116+00 TO STA. 117+96.99

R050439_XS.DGN CREATED: 3/19/2025 SAVED: 9/2/2026

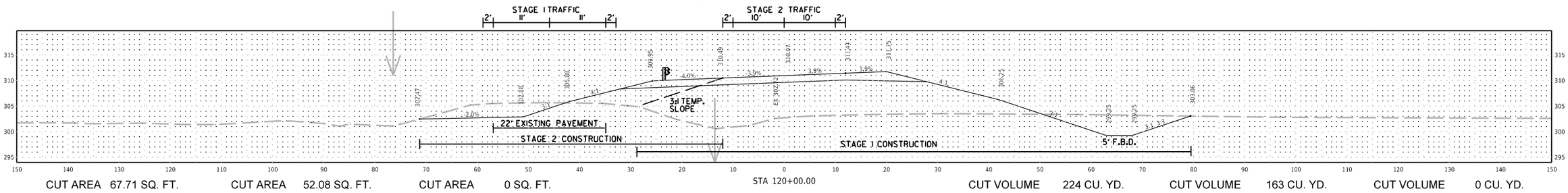
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	51	55
		CROSS SECTIONS - HWY. 25				

STA. 121+32.87 MAX. SUPERELEVATION (0.057 FT./FT.)

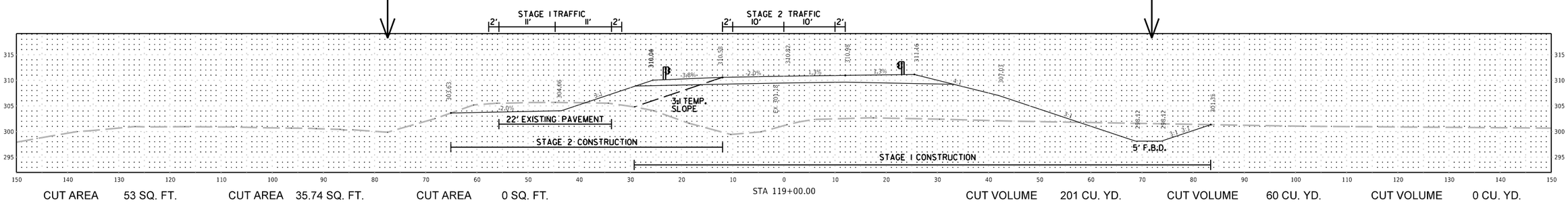


CUT AREA	5.7 SQ. FT.	CUT AREA	32.65 SQ. FT.	CUT AREA	0 SQ. FT.	CUT VOLUME	136 CU. YD.	CUT VOLUME	157 CU. YD.	CUT VOLUME	0 CU. YD.
FILL AREA	495.5 SQ. FT.	FILL AREA	29.48 SQ. FT.	FILL AREA	0 SQ. FT.	FILL VOLUME	1732 CU. YD.	FILL VOLUME	146 CU. YD.	FILL VOLUME	0 CU. YD.

STA. 120+78.06 MAX. SUPERELEVATION (0.057 FT./FT.)

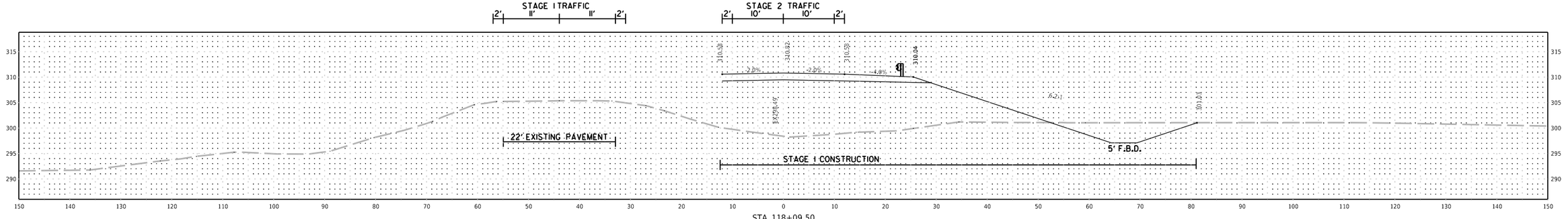


CUT AREA	67.71 SQ. FT.	CUT AREA	52.08 SQ. FT.	CUT AREA	0 SQ. FT.	CUT VOLUME	224 CU. YD.	CUT VOLUME	163 CU. YD.	CUT VOLUME	0 CU. YD.
FILL AREA	440 SQ. FT.	FILL AREA	49.15 SQ. FT.	FILL AREA	0 SQ. FT.	FILL VOLUME	1789 CU. YD.	FILL VOLUME	173 CU. YD.	FILL VOLUME	0 CU. YD.



CUT AREA	53 SQ. FT.	CUT AREA	35.74 SQ. FT.	CUT AREA	0 SQ. FT.	CUT VOLUME	201 CU. YD.	CUT VOLUME	60 CU. YD.	CUT VOLUME	0 CU. YD.
FILL AREA	526.2 SQ. FT.	FILL AREA	44.1 SQ. FT.	FILL AREA	0 SQ. FT.	FILL VOLUME	1525 CU. YD.	FILL VOLUME	74 CU. YD.	FILL VOLUME	0 CU. YD.

STA. 118+27.25 BEGIN SUPERELEVATION



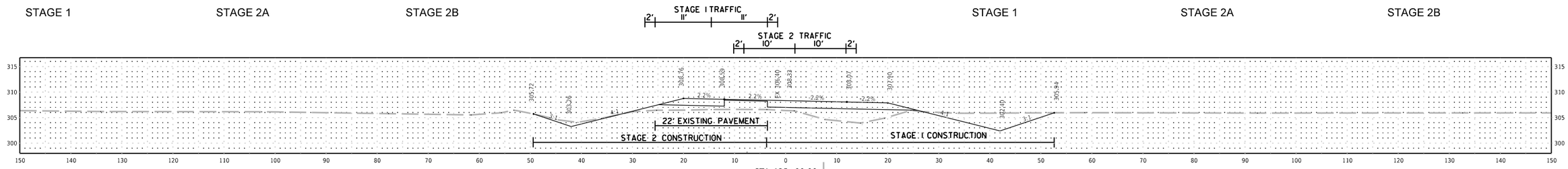
CUT AREA	66.94 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.	CUT VOLUME	16 CU. YD.	CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.
FILL AREA	383.9 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.	FILL VOLUME	89 CU. YD.	FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.

STA. 118+09.5 TO STA. 121+00

R050439_XS.DGN CREATED: 3/19/2025 SAVED: 9/2/2026

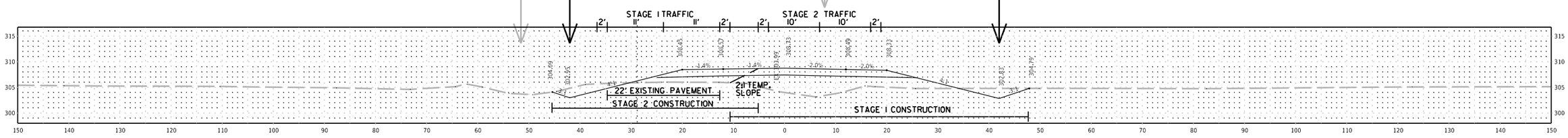
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	52	55
		CROSS SECTIONS - HWY. 25				

STAGE 1 STAGE 2A STAGE 2B



STA 125+00.00

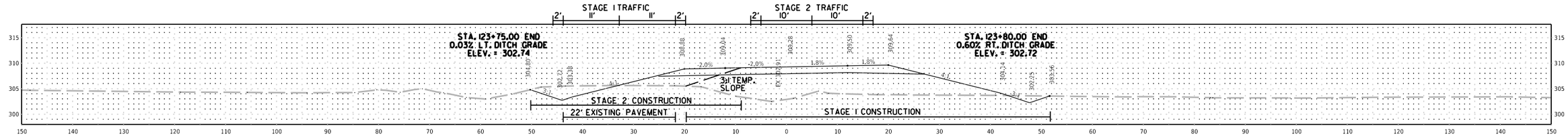
CUT AREA	43.56 SQ. FT.	CUT AREA	5.5 SQ. FT.	CUT AREA	0 SQ. FT.		
FILL AREA	44.06 SQ. FT.	FILL AREA	14.5 SQ. FT.	FILL AREA	0 SQ. FT.		
CUT VOLUME	105 CU. YD.	CUT VOLUME	42 CU. YD.	CUT VOLUME	0 CU. YD.		
FILL VOLUME	273 CU. YD.	FILL VOLUME	67 CU. YD.	FILL VOLUME	0 CU. YD.		



STA 124+00.00

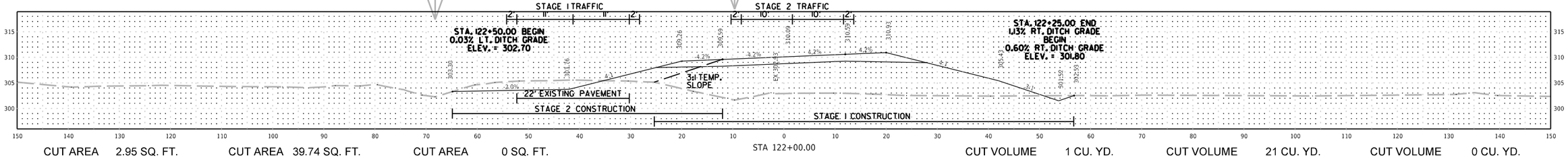
STA. 123+83.68 NORMAL CROWN

CUT AREA	13.3 SQ. FT.	CUT AREA	17.08 SQ. FT.	CUT AREA	0 SQ. FT.		
FILL AREA	103.6 SQ. FT.	FILL AREA	21.72 SQ. FT.	FILL AREA	0 SQ. FT.		
CUT VOLUME	35 CU. YD.	CUT VOLUME	76 CU. YD.	CUT VOLUME	0 CU. YD.		
FILL VOLUME	596 CU. YD.	FILL VOLUME	87 CU. YD.	FILL VOLUME	0 CU. YD.		



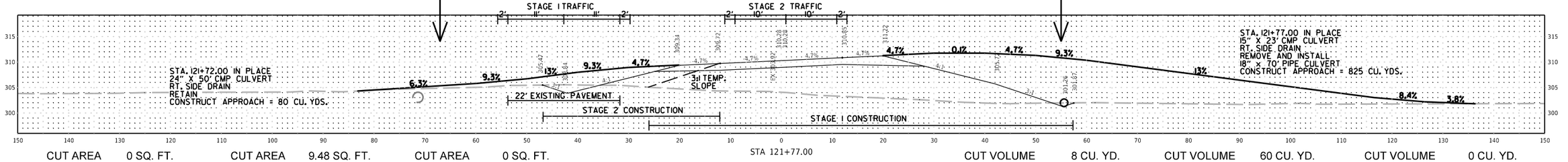
STA 123+00.00

CUT AREA	5.59 SQ. FT.	CUT AREA	24.15 SQ. FT.	CUT AREA	0 SQ. FT.		
FILL AREA	218.5 SQ. FT.	FILL AREA	25.01 SQ. FT.	FILL AREA	0 SQ. FT.		
CUT VOLUME	16 CU. YD.	CUT VOLUME	118 CU. YD.	CUT VOLUME	0 CU. YD.		
FILL VOLUME	1098 CU. YD.	FILL VOLUME	92 CU. YD.	FILL VOLUME	0 CU. YD.		



STA 122+00.00

CUT AREA	2.95 SQ. FT.	CUT AREA	39.74 SQ. FT.	CUT AREA	0 SQ. FT.		
FILL AREA	374.7 SQ. FT.	FILL AREA	24.47 SQ. FT.	FILL AREA	0 SQ. FT.		
CUT VOLUME	1 CU. YD.	CUT VOLUME	21 CU. YD.	CUT VOLUME	0 CU. YD.		
FILL VOLUME	311 CU. YD.	FILL VOLUME	21 CU. YD.	FILL VOLUME	0 CU. YD.		



STA 121+77.00

STA. 121+32.87 MAX. SUPERELEVATION (0.057 FT./FT.)

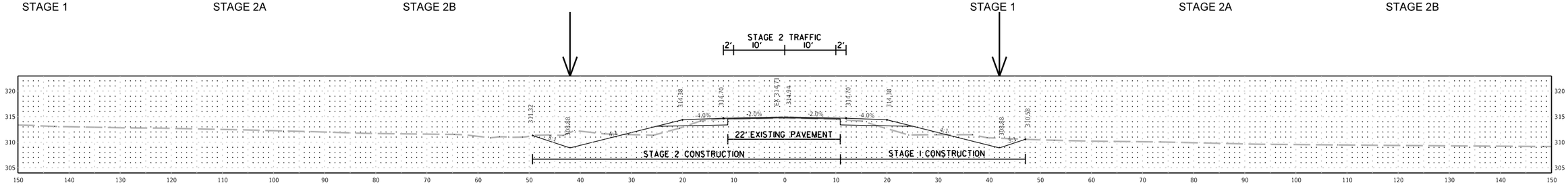
CUT AREA	0 SQ. FT.	CUT AREA	9.48 SQ. FT.	CUT AREA	0 SQ. FT.		
FILL AREA	355.2 SQ. FT.	FILL AREA	24.64 SQ. FT.	FILL AREA	0 SQ. FT.		
CUT VOLUME	8 CU. YD.	CUT VOLUME	60 CU. YD.	CUT VOLUME	0 CU. YD.		
FILL VOLUME	1213 CU. YD.	FILL VOLUME	77 CU. YD.	FILL VOLUME	0 CU. YD.		

STA. 121+77 TO STA. 125+00

R050439_XS.DGN CREATED: 3/19/2025 SAVED: 9/2/2026

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	53	55
		CROSS SECTIONS - HWY. 25				

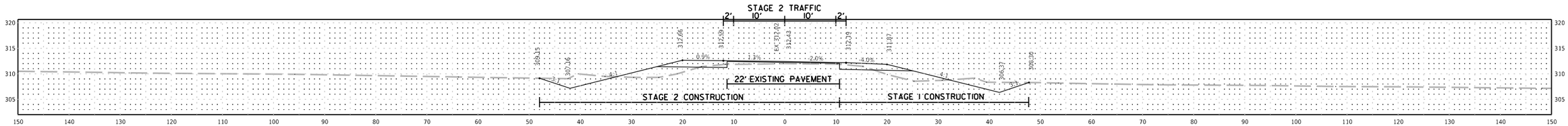
STAGE 1 STAGE 2A STAGE 2B STAGE 1 STAGE 2A STAGE 2B



CUT AREA 21.19 SQ. FT. CUT AREA 33.77 SQ. FT. CUT AREA 0 SQ. FT.
FILL AREA 12.24 SQ. FT. FILL AREA 10.4 SQ. FT. FILL AREA 0 SQ. FT.

STA 130+00.00
END JOB 050439
BEGIN 100' TRANSITION
STA. 129+88.48 END SUPERELEVATION

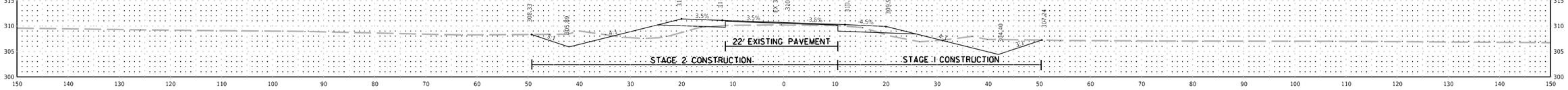
CUT VOLUME 80 CU. YD. CUT VOLUME 100 CU. YD. CUT VOLUME 0 CU. YD.
FILL VOLUME 51 CU. YD. FILL VOLUME 54 CU. YD. FILL VOLUME 0 CU. YD.



CUT AREA 21.82 SQ. FT. CUT AREA 19.99 SQ. FT. CUT AREA 0 SQ. FT.
FILL AREA 15.45 SQ. FT. FILL AREA 18.66 SQ. FT. FILL AREA 0 SQ. FT.

STA 129+00.00

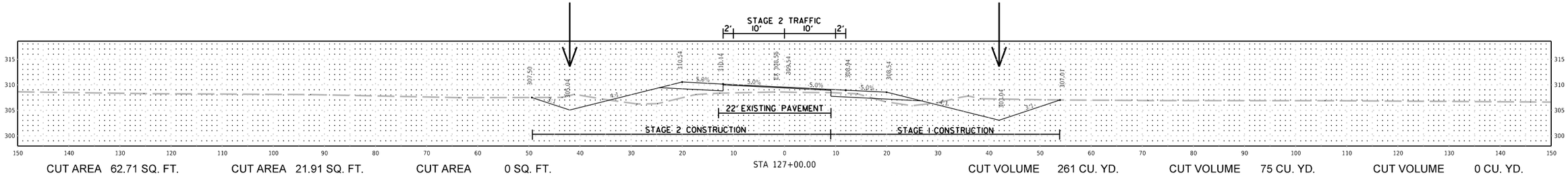
CUT VOLUME 111 CU. YD. CUT VOLUME 81 CU. YD. CUT VOLUME 0 CU. YD.
FILL VOLUME 46 CU. YD. FILL VOLUME 80 CU. YD. FILL VOLUME 0 CU. YD.



CUT AREA 38.1 SQ. FT. CUT AREA 23.73 SQ. FT. CUT AREA 0 SQ. FT.
FILL AREA 9.44 SQ. FT. FILL AREA 24.77 SQ. FT. FILL AREA 0 SQ. FT.

STA 128+00.00
STA. 127+20.08 MAX. SUPERELEVATION (0.050 FT./FT.)

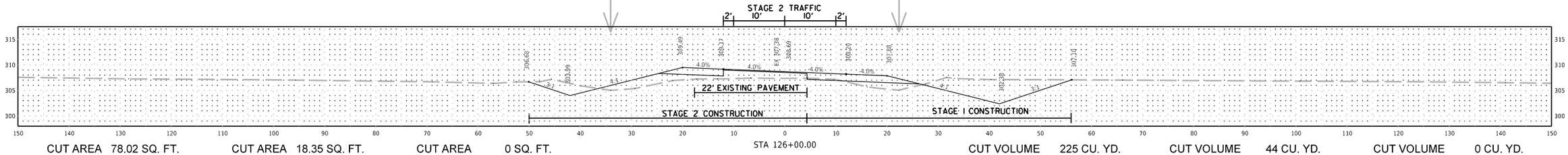
CUT VOLUME 187 CU. YD. CUT VOLUME 85 CU. YD. CUT VOLUME 0 CU. YD.
FILL VOLUME 31 CU. YD. FILL VOLUME 111 CU. YD. FILL VOLUME 0 CU. YD.



CUT AREA 62.71 SQ. FT. CUT AREA 21.91 SQ. FT. CUT AREA 0 SQ. FT.
FILL AREA 7.11 SQ. FT. FILL AREA 35.43 SQ. FT. FILL AREA 0 SQ. FT.

STA 127+00.00
STA. 126+52.08 MAX. SUPERELEVATION (0.050 FT./FT.)

CUT VOLUME 261 CU. YD. CUT VOLUME 75 CU. YD. CUT VOLUME 0 CU. YD.
FILL VOLUME 38 CU. YD. FILL VOLUME 120 CU. YD. FILL VOLUME 0 CU. YD.



CUT AREA 78.02 SQ. FT. CUT AREA 18.35 SQ. FT. CUT AREA 0 SQ. FT.
FILL AREA 13.38 SQ. FT. FILL AREA 29.24 SQ. FT. FILL AREA 0 SQ. FT.

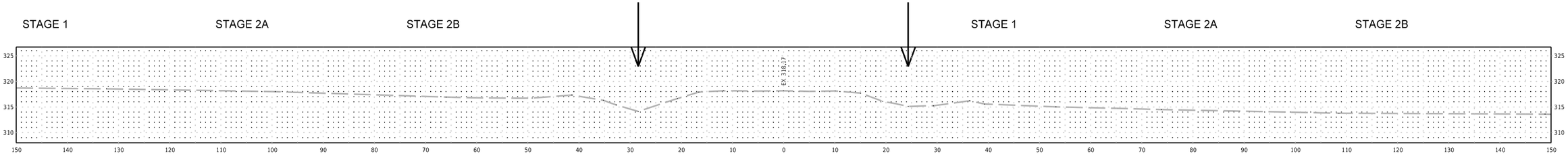
STA 126+00.00

CUT VOLUME 225 CU. YD. CUT VOLUME 44 CU. YD. CUT VOLUME 0 CU. YD.
FILL VOLUME 106 CU. YD. FILL VOLUME 81 CU. YD. FILL VOLUME 0 CU. YD.

STA. 126+00 TO STA. 130+00

R050439_XS.DGN CREATED: 3/19/2025 SAVED: 9/2/2026

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	54	55
		CROSS SECTIONS - HWY. 25				



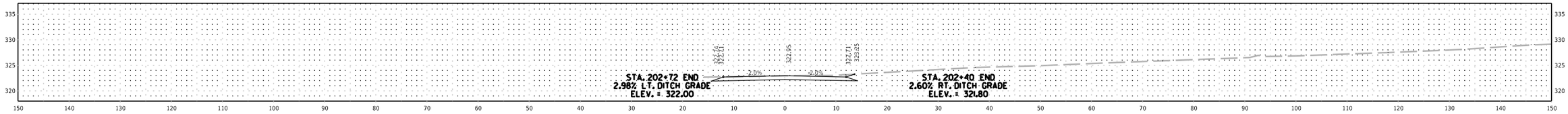
CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.		CUT VOLUME	39 CU. YD.	CUT VOLUME	63 CU. YD.	CUT VOLUME	0 CU. YD.
FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.		FILL VOLUME	23 CU. YD.	FILL VOLUME	19 CU. YD.	FILL VOLUME	0 CU. YD.

STA 131+00.00
END 100' TRANSITION

STA. 131+00 TO STA. 131+00

R050439_XS.DGN CREATED: 3/19/2025 SAVED: 9/2/2026

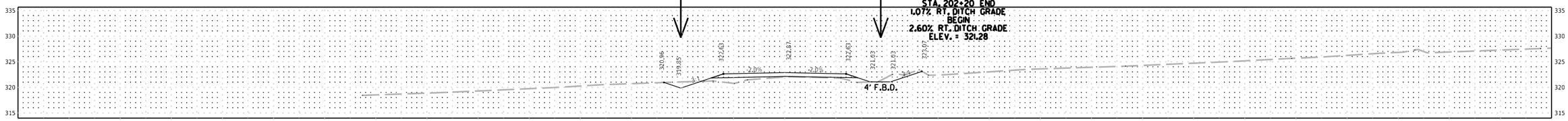
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	050439	55	55
		CROSS SECTIONS - MASSEY LANE				



STA 202+72.00

CUT AREA 2.43 SQ. FT.
FILL AREA 0 SQ. FT.

CUT VOLUME 11 CU. YD.
FILL VOLUME 17 CU. YD.

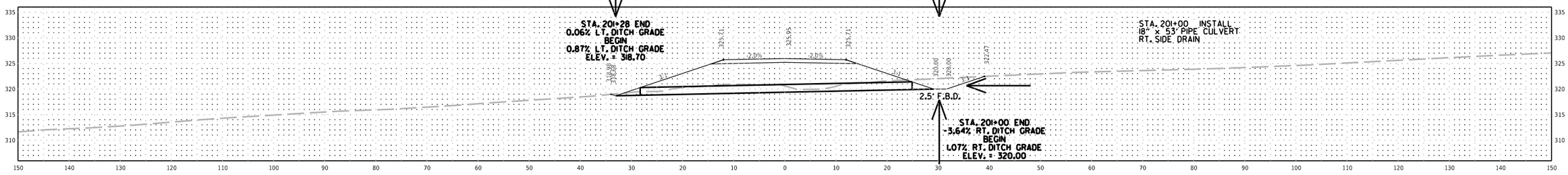


STA 202+00.00

CUT AREA 5.84 SQ. FT.
FILL AREA 12.49 SQ. FT.

CUT VOLUME 45 CU. YD.
FILL VOLUME 363 CU. YD.

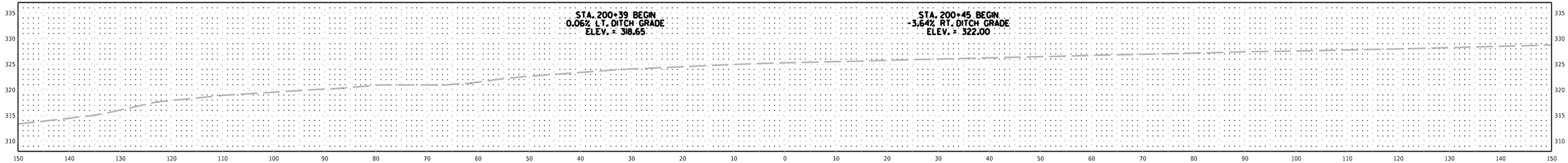
STA. 201+75 END
0.87% LT. DITCH GRADE
BEGIN
2.98% LT. DITCH GRADE
ELEV. = 319.11



STA 201+00.00

CUT AREA 18.41 SQ. FT.
FILL AREA 183.4 SQ. FT.

CUT VOLUME 30 CU. YD.
FILL VOLUME 299 CU. YD.



STA 200+12.00

CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

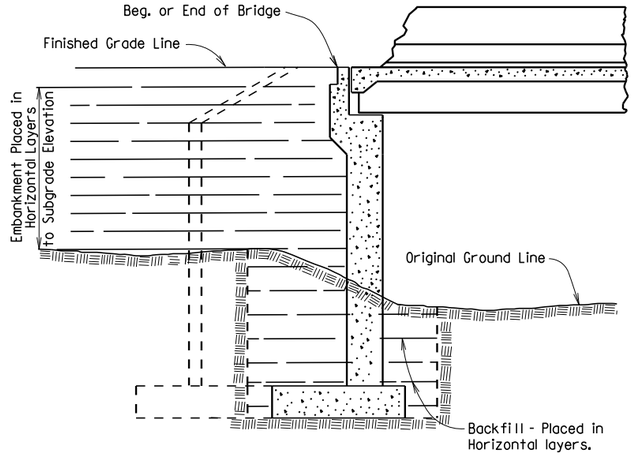
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.

STA. 200+12 TO STA. 202+72

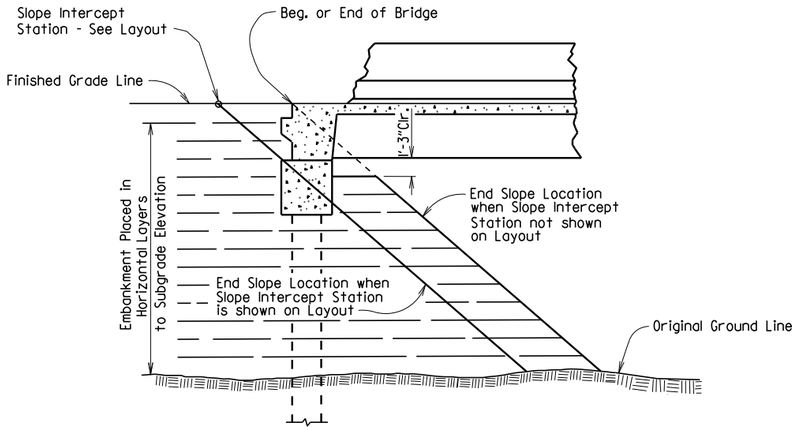
R050439_XS.DGN CREATED: 3/19/2025 SAVED: 9/2/2026

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.				

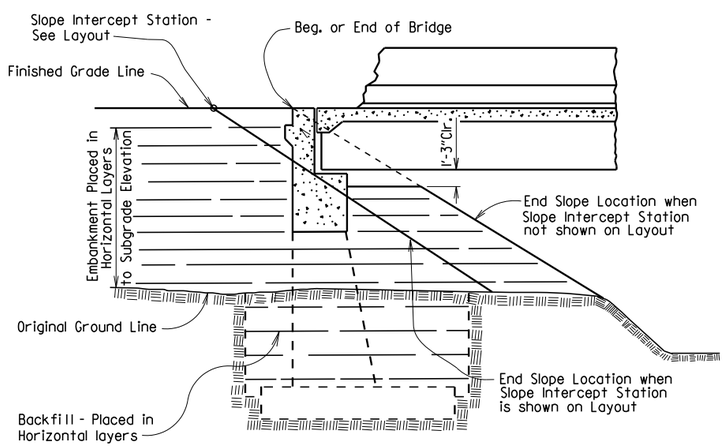
1 EMBANKMENT & BACKFILL 55000



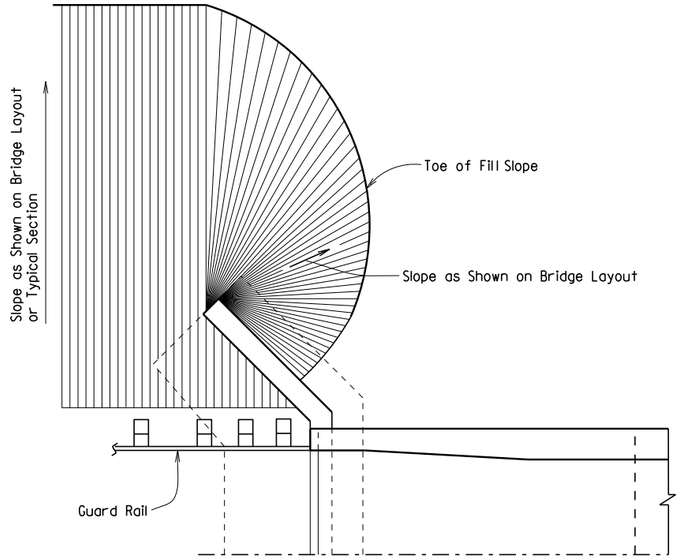
EMBANKMENT CONSTRUCTION AND FOOTING BACKFILL AT VERTICAL WALL ABUTMENTS



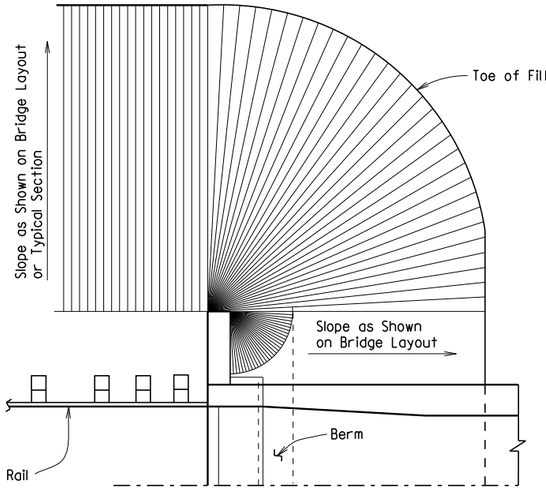
EMBANKMENT CONSTRUCTION AT SPILL-THROUGH PILE END BENTS



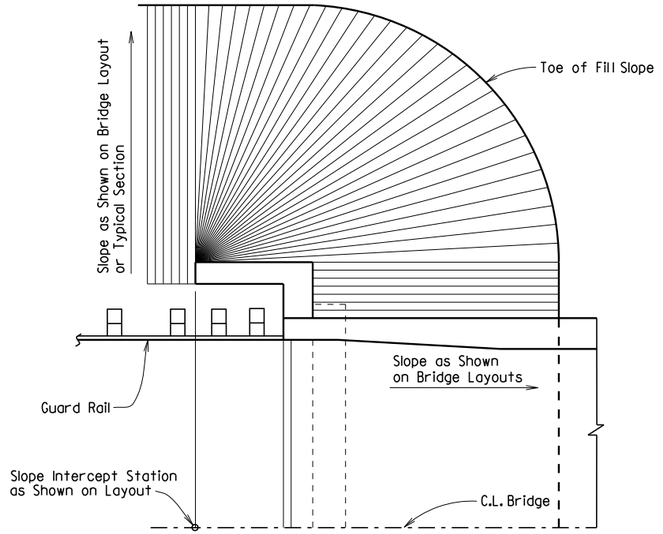
EMBANKMENT CONSTRUCTION AND FOOTING BACKFILL AT SPILL-THROUGH END BENTS



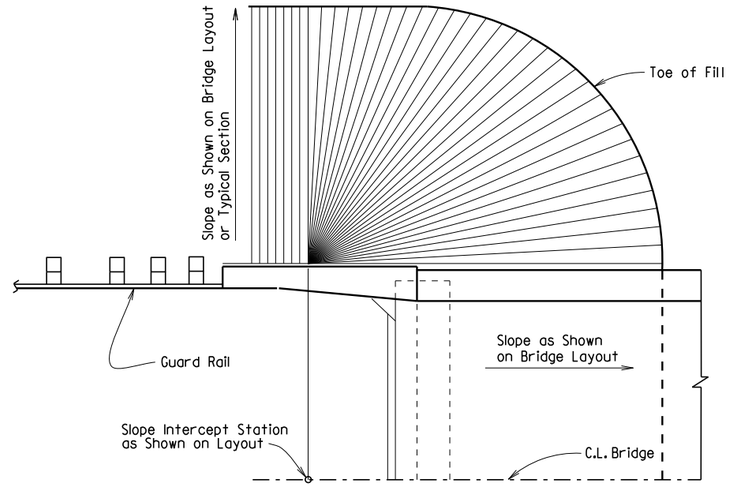
VERTICAL WALL ABUTMENTS



SPILL-THROUGH END BENTS WITH STUB WING



SPILL-THROUGH END BENTS WITH TURNBACK WING



SPILL-THROUGH END BENTS WITH TRANSITION WING

METHOD OF DETERMINING FILL SLOPE LOCATION AT BRIDGE ENDS

GENERAL NOTES

The Bridge End Embankment shall be defined as a section of embankment, not less than 20 feet long adjacent to the bridge end, together with the side slopes and slopes under the bridge end including around the end of wingwalls. Embankment adjacent to structures shall be constructed in 6 inch horizontal layers (loose measure) and compacted by the use of mechanical equipment to the satisfaction of the Engineer. Refer to Subsections 210.09, 210.10 and 801.08 for construction requirements.

STANDARD DETAILS FOR EMBANKMENT CONSTRUCTION AND BACKFILL AT BRIDGE ENDS

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 2-27-2014 FILENAME: b55000.dgn

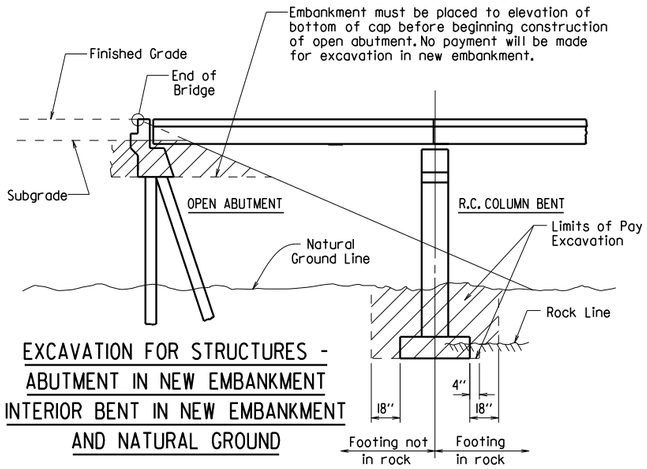
CHECKED BY: BEF DATE: 2-27-2014 SCALE: NO SCALE

DESIGNED BY: STD. DATE: -

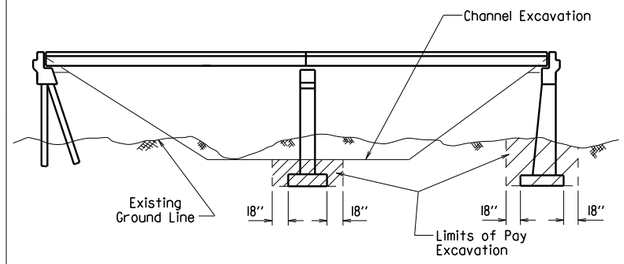
DRAWING NO. 55000

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.				

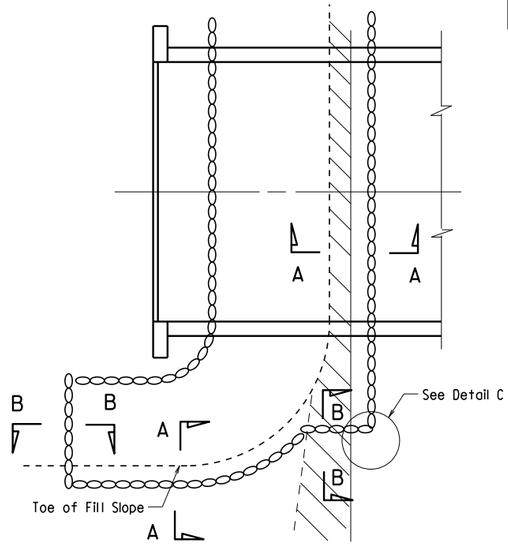
1 RIPRAP & EXCAV. 55001



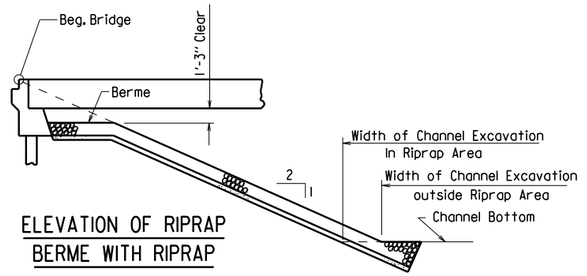
EXCAVATION FOR STRUCTURES - ABUTMENT IN NEW EMBANKMENT INTERIOR BENT IN NEW EMBANKMENT AND NATURAL GROUND



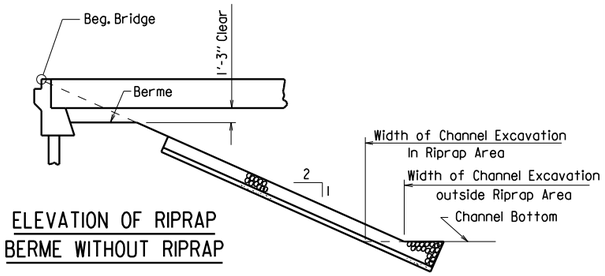
EXCAVATION FOR STRUCTURES - BRIDGE LOCATION WITH DESIGNATED CHANNEL CHANGE



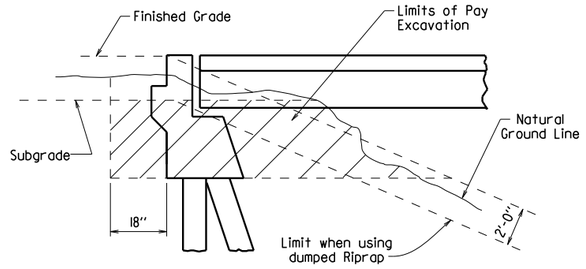
PLAN OF DUMPED RIPRAP



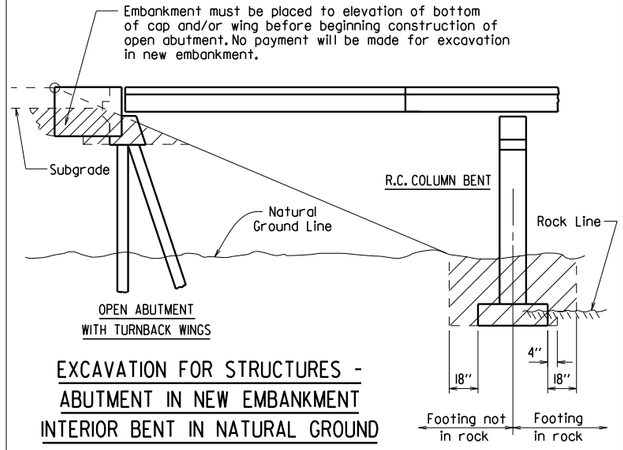
ELEVATION OF RIPRAP BERME WITH RIPRAP



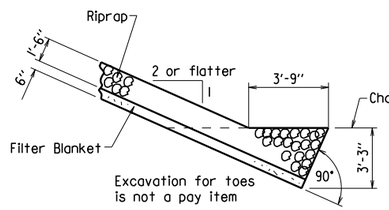
ELEVATION OF RIPRAP BERME WITHOUT RIPRAP



EXCAVATION FOR STRUCTURES - ABUTMENT IN NATURAL GROUND



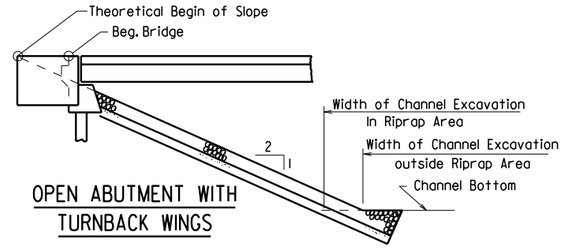
EXCAVATION FOR STRUCTURES - ABUTMENT IN NEW EMBANKMENT INTERIOR BENT IN NATURAL GROUND



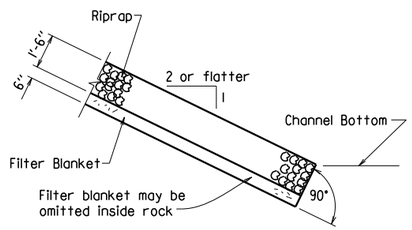
SECTION A-A

(Toe Excavation in Soil)

SECTION B-B



OPEN ABUTMENT WITH TURNBACK WINGS



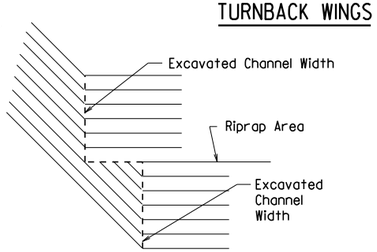
SECTION A-A

(Toe Excavation in Rock)

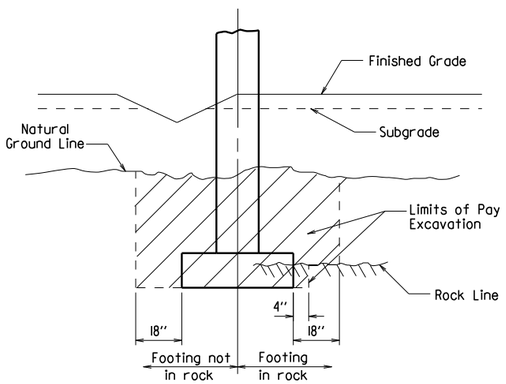
Note : Use this type of toe when rock is encountered which is in a stable condition.

Note : In lieu of an aggregate filter blanket, a synthetic fiber geotextile fabric complying with the requirements of Subsection 816.02(e) may be used.

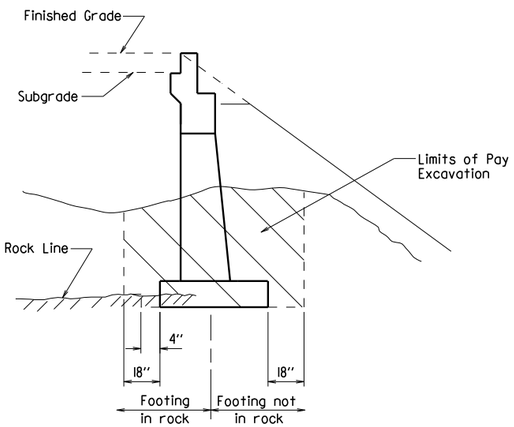
Note : Details for computing excavation for structures are included for information as to how plan quantities were calculated and for use when adjusting quantities when changing footing elevation.



DETAIL C



EXCAVATION FOR STRUCTURES - BENT IN ROADWAY FILL SECTION AND NATURAL GROUND



EXCAVATION FOR STRUCTURES - ABUTMENT IN NATURAL GROUND AND NEW EMBANKMENT

STANDARD DETAILS FOR DUMPED RIPRAP AND FILTER BLANKET AND COMPUTING EXCAVATION FOR STRUCTURES

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

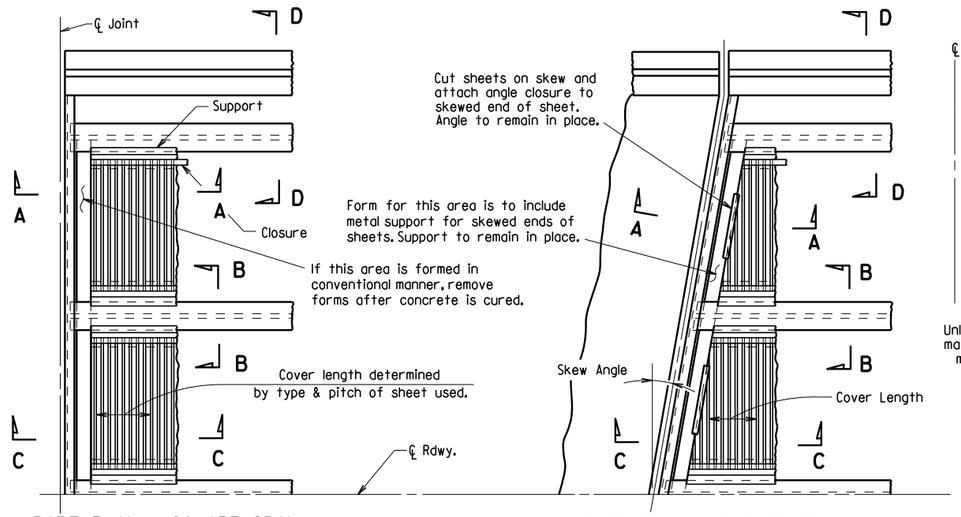
DRAWN BY: KDH DATE: 2-27-2014 FILENAME: b5500l.dgn

CHECKED BY: BEF DATE: 2-27-2014 SCALE: NO SCALE

DESIGNED BY: STD. DATE:

DRAWING NO. 55001

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3/24/16				6	ARK.			
				JOB NO.				
				①	BRIDGE DECK FORMS		55005	

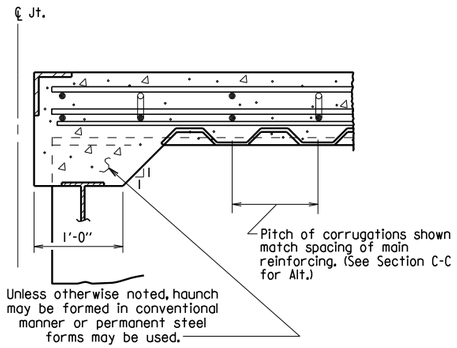


PART PLAN - SQUARE SPAN

3/8" = 1'-0"

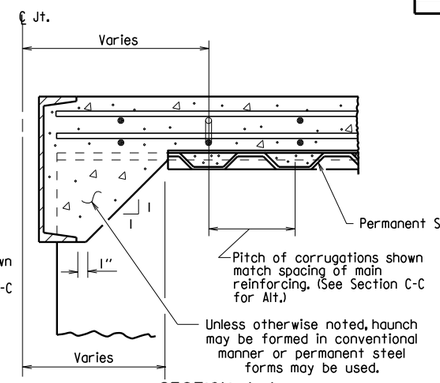
PART PLAN - SKEWED SPAN

3/8" = 1'-0"



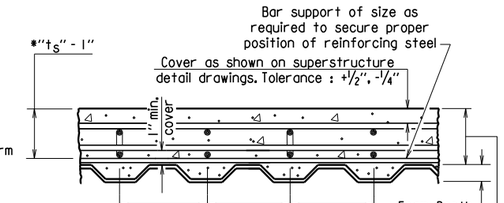
SECTION A-A

N.T.S.
(Angle at end of span)



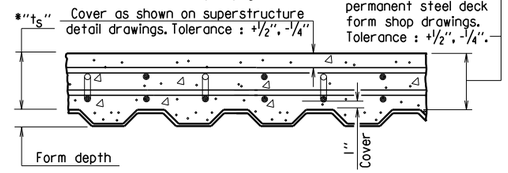
SECTION A-A

N.T.S.
(Channel at end of span)



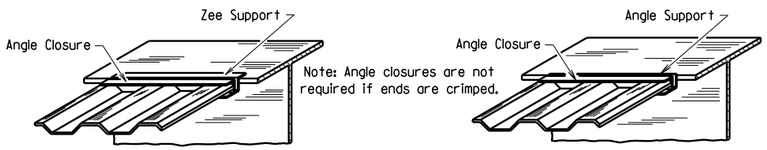
SECTION C-C

1" = 1'-0"



SECTION C-C - ALTERNATE

1" = 1'-0"
(Applicable when corrugations do not match spacing of main reinforcement)



SKETCH OF PERMISSIBLE SUPPORTS

N.T.S.

*t_s = slab thickness as shown on superstructure detail drawings.

GENERAL NOTES

Permanent steel deck forms may be used at the Contractor's option and shall be at no additional cost to the Department. Such use may result in changes to the dead load deflection of the girder. Any cost for adjustments due to a change in the dead load deflection will be borne by the Contractor. Payment for deck concrete and structural steel will not be increased due to use of permanent steel deck forms.

Permanent steel deck forms shall conform to Subsection 802.14(b). Detailed plans, including detailed calculations and manufacturer's technical brochure, shall be submitted to and approved by the Engineer before work of forming the bridge deck is started.

Welding of form supports to the tension flange of steel girders will be permitted only in areas where shear connectors are used. When welding is not allowed, the method of fastening Z or ∠ supports to the flange must be approved by the Engineer.

Form sheets shall be fastened to supporting members and to each other with galvanized metal screws sufficient in size and number to provide a secure attachment. Alternate methods of attachment must be approved by the Engineer.

When the pitch of form corrugations match the reinforcing spacing, transversely align form sheets across the bridge to maintain the correct orientation of continuous reinforcing bars in the corrugations.

Bar support rods, when used, shall be sized and spaced to adequately support the bottom reinforcing mat at the required position.

High chairs shall be sized to support the top mat of reinforcing at the proper position. High chairs shall be placed at locations shown on the detail drawings.

Specifications: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2014 Edition), with applicable Supplemental Specifications and Special Provisions.

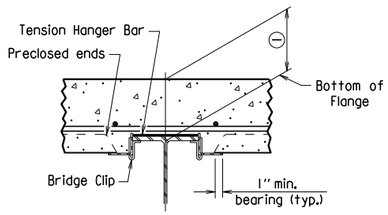
SECTION B-B

1" = 1'-0"
(Showing permissible support for tension flange where shear connectors are used, and for all compression flanges)

③ ⚠ Minimum weld: 1/8" x 1" @ 18". More weld may be required; maximum length per weld = 1 1/2" (typ.)

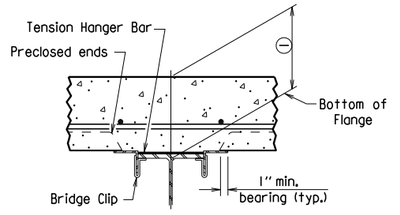
SECTION B-B

1" = 1'-0"
(Showing permissible support for tension flange where shear connectors are used and for all compression flanges)



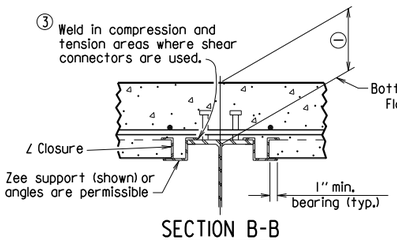
SECTION B-B

1" = 1'-0"
(Showing permissible support for tension flange where shear connectors are not used)



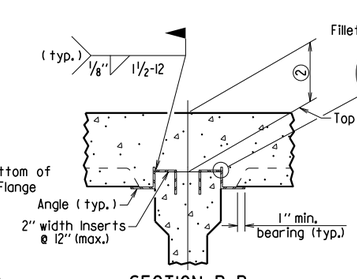
SECTION B-B

1" = 1'-0"
(Showing permissible support for tension flange where shear connectors are not used)



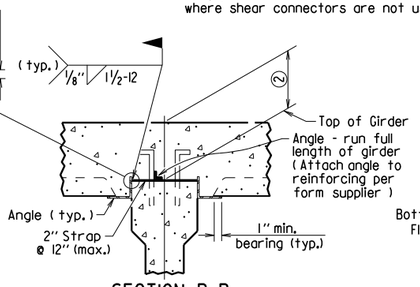
SECTION B-B

1" = 1'-0"
(Showing ∠ Closure)



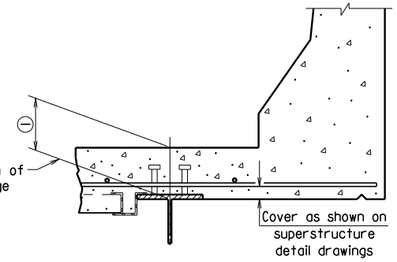
SECTION B-B (FOR CONCRETE GIRDERS)

1" = 1'-0"
(Showing support by Insert cast in girder)



SECTION B-B (FOR CONCRETE GIRDERS)

1" = 1'-0"
(Showing support by Strap)



SECTION D-D

1" = 1'-0"
Note: Only Bottom Reinforcing is shown.

① Distance from top of slab to bottom of top flange as measured at centerline girder and as shown on superstructure detail drawings. This dimension may vary within the following limits to maintain the grade and slab thickness tolerances : Minimum - occurs when either the top flange or the support angle leg contacts the bottom reinforcing steel; Maximum = t_S + 1 3/4" + flange thickness. See Section C-C for slab thickness tolerance between adjacent girder flanges.

② Distance from top of slab to top of girder as measured at centerline girder and as shown on superstructure detail drawings. This dimension may vary within the following limits to maintain the grade and slab thickness tolerances : Minimum - occurs when either the top of girder or the support angle leg contacts the bottom reinforcing steel; Maximum - value shown on the superstructure detail drawings when removable forms are used. See Section C-C for slab thickness tolerance between adjacent girder flanges.

⚠ Revised weld dimension by KWY, Ck'd. by BEF, 3/24/16.

STANDARD DETAILS FOR PERMANENT STEEL BRIDGE DECK FORMS FOR STEEL & CONCRETE GIRDER SPANS

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

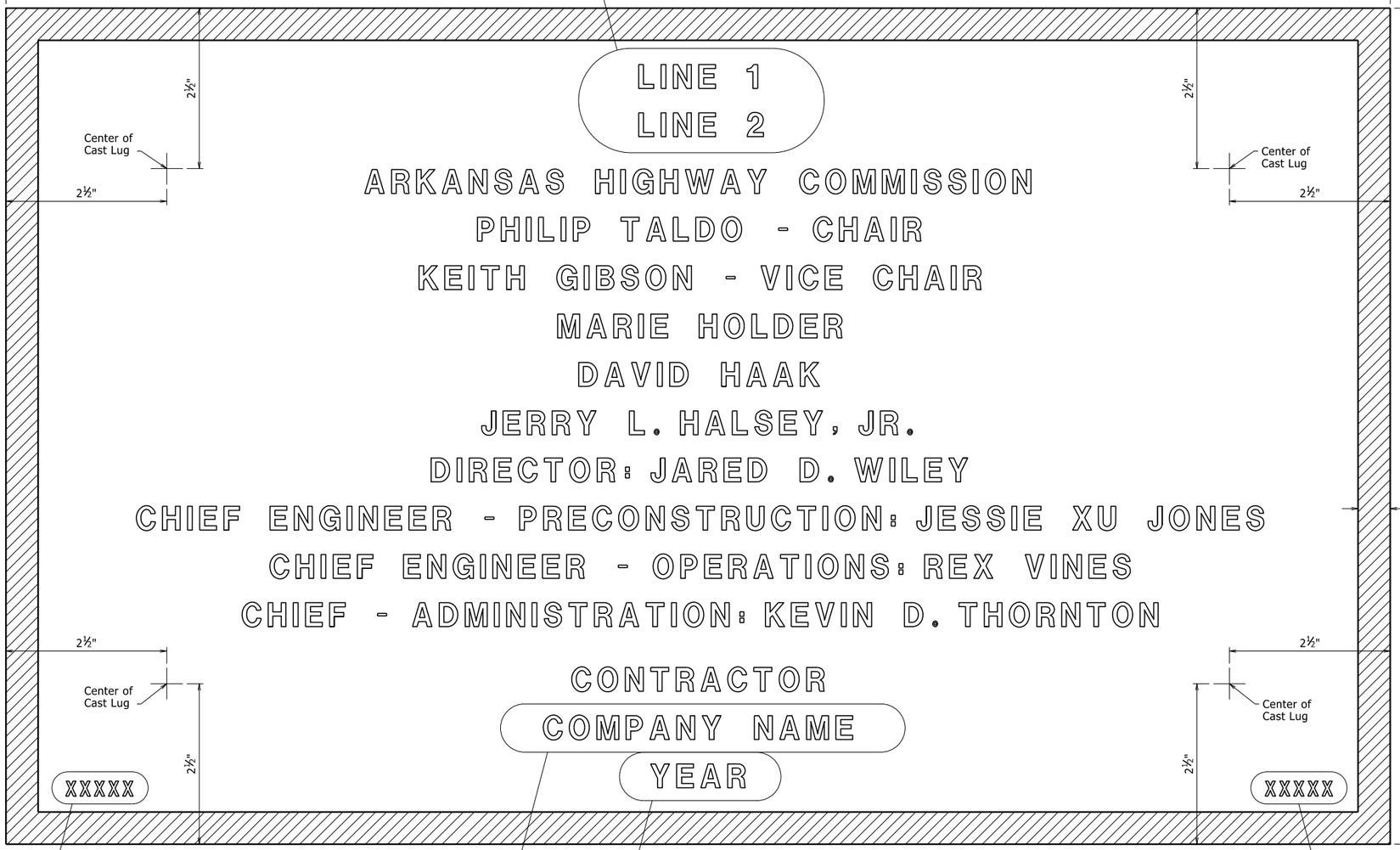
DRAWN BY:	KDH	DATE:	2-27-2014	FILENAME:	b55005.dgn
CHECKED BY:	BEF	DATE:	2-27-2014	SCALE:	NONE
DESIGNED BY:	STD.	DATE:	—		

DRAWING NO. 55005

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
4-14-23		6	ARK.			
1-28-25		TYPE D NAME PLATE - 55010				

The name of the bridge as shown on the plans shall be placed on Lines 1 & 2 using ⅛" raised letters and numerals ⅜" high.

	Example 1	Example 2	Example 3	Example 4
Line 1	RED RIVER	SOUTHERN RAILROAD	SALINE RIVER	HIGHWAY 5
Line 2	RELIEF	OVERPASS		



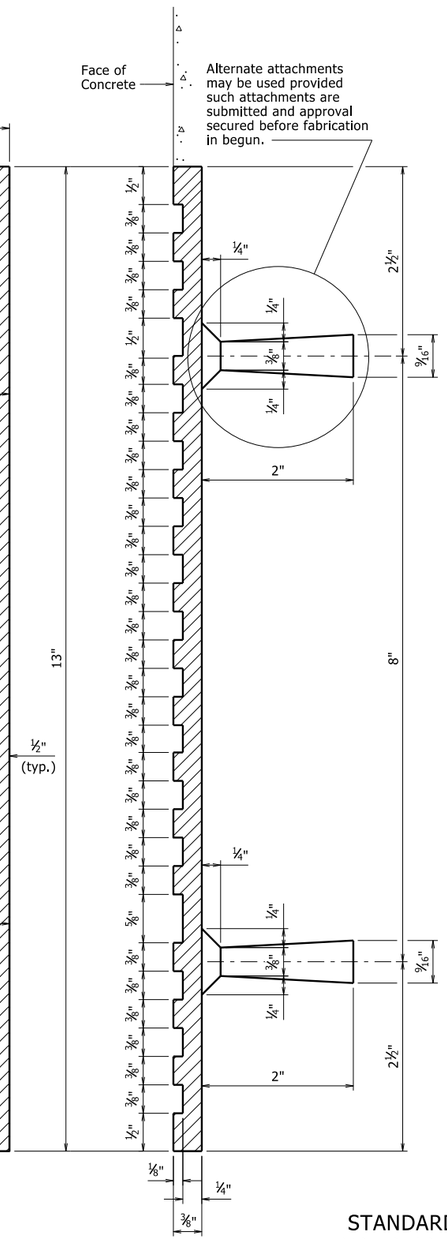
Place the design live loading here using ⅛" raised letters and numerals ¼" high. Examples: HS20 HL-93

Place the Year in which Contract was awarded here using ⅛" raised numerals ⅜" high. Example: 2001

Place the name of the company awarded the construction contract here using ⅛" raised letters and numerals ⅜" high. Example: ABCD CONSTRUCTION, INC.

Place the Bridge number here using ⅛" raised letters and numerals ¼" high. Examples: A1234 05432

TYPICAL BRIDGE NAME PLATE



GENERAL NOTES

Specifications: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, (2014 Edition) with applicable Supplemental Specifications and Special Provisions.

Name plates shall be cast bronze and shall meet the material requirements as specified in Section 812.

Body of plate shall be ¼" thick and shall include four tapering cone lugs ⅜" to 9/16" x 2" long. The border and all lettering shall be raised ⅛" above the face of plate and shall be polished.

All lettering shall be plain gothic, square cut and not tapered.

The number of plates required and the location and name on the plate for each bridge shall be as designated on the plans.

2 Updated names
1-28-25 CGP Checked By: CRE

1 Revised and Redrawn
4-14-23 CGP Checked By: CRE

STANDARD DETAILS FOR
TYPE D BRIDGE NAME PLATE

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 2-27-2014 FILENAME: b55010.dgn
CHECKED BY: BEF DATE: 2-27-2014 SCALE: NO SCALE
DESIGNED BY: STD. DATE:

DRAWING NO. 55010

PRINT DATE: 1/28/2025

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3/24/16				6	ARK.			
				JOB NO.				
				①		STEEL H-PILES		55020

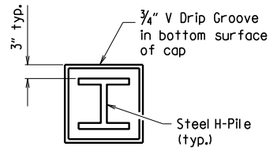
GENERAL NOTES FOR STEEL H-PILES:

Steel H-Piles shall conform to AASHTO M 270, Grade 36 or greater.

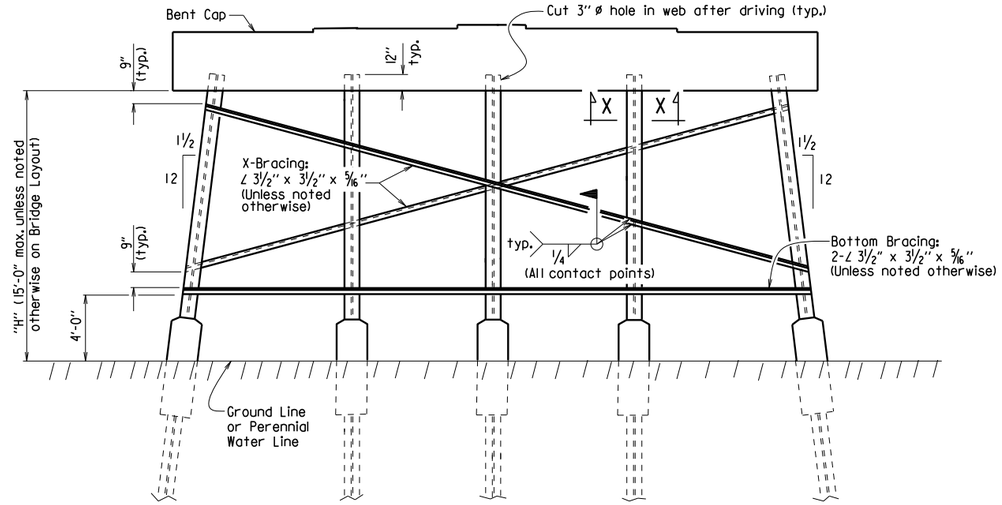
See Bridge Layout and Bent Details for pile size, estimated length, spacing, pile anchorage (if required) and for driving information.

Steel H-Piles that extend above the ground and are not protected by pile encasement shall be painted in accordance with Subsection 805.02.

Brackets, lugs, cap plates, pile tips, driving points, pile painting, splicing and welding shall not be paid for directly, but shall be considered subsidiary to the item "Steel Piling".



VIEW X-X



Notes:
All bracing shall be cut and welded in the field. Each brace shall be furnished in one piece. Payment shall be made under Item 807.

Unless noted otherwise, omit X-Bracing when "H" is less than 8 feet.

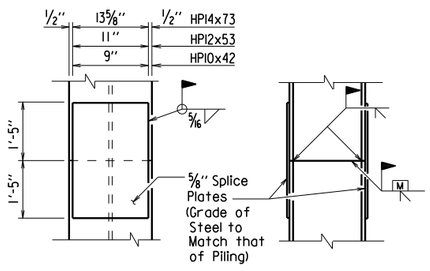
Omit X-Bracing and Bottom Bracing when "H" is 5 feet or less.

When required on the Bridge Layout sheet, pile encasements shall be constructed. See Notes and Details for H-Pile Encasements.

Omit all bracing (and V-groove in cap) when pile encasement is extended to bottom of bent cap.

TYPICAL DETAILS OF H-PILE TRESTLE INTERMEDIATE BENT

(Shown with Partial Height Encasement)



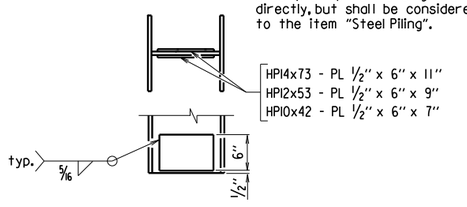
The Contractor may for his own convenience and at his own expense provide as many as three splices per pile. Minimum spacing between splices shall be 5 feet.

TYPICAL SPLICE DETAILS

⚠ H-pile splicers manufactured by Associated Pile and Fitting Corporation, LB Foster Piling, Skyline Steel or equivalent may be used in lieu of the "Typical Splice Details" shown. H-pile splicers shall match the same grade of steel specified for the piling and shall be welded to the pile with a 5/16" fillet weld around the entire perimeter of the splice. Flanges shall be welded with a complete penetration groove weld complying with AASHTO/AWS Joint Designation B-U4a or B-U4b. All welding shall conform to Subsection 807.26 of the AHTD Standard Specifcations for Highway Construction (2014 Edition).

Notes:
Steel pile tip reinforcing not required when approved H-Pile driving points are used.

Steel pile tip reinforcing shall not be paid for directly, but shall be considered subsidiary to the item "Steel Piling".



REINFORCING DETAIL FOR STEEL H-PILE TIP

GENERAL NOTES FOR H-PILE ENCASEMENTS:

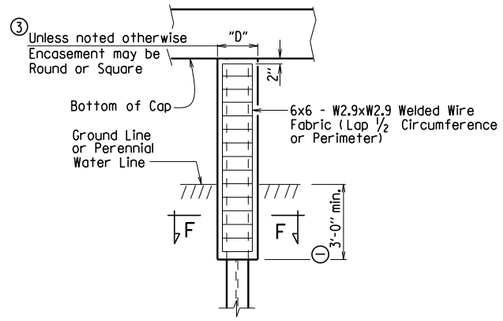
⚠ See Bridge Layout for additional notes, any pile encasement restrictions and required location of pile encasements.

All concrete shall be Class S with a minimum 28-day compressive strength, f'c = 3,500 psi. If concrete cannot be placed in the dry, Seal Concrete may be used from top to bottom of encasement.

Reinforcing steel shall be Grade 60 conforming to AASHTO M 31 or M 322, Type A.

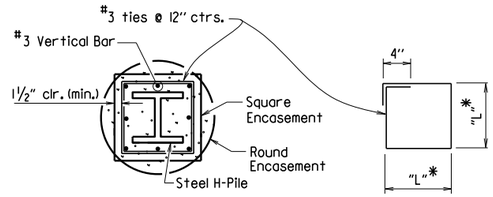
Welded Wire Fabric shall conform to AASHTO M 55 or M 221. Galvanized Corrugated Steel Pipe shall conform to AASHTO M 36 and M 218.

Concrete, welded wire fabric or reinforcing steel and galvanized pipe shall not be paid for directly, but shall be considered subsidiary to the item "Pile Encasement".



PILE ENCASEMENT DETAIL FOR STEEL H-PILES

④ (Shown with Encasement to Bottom of Cap)

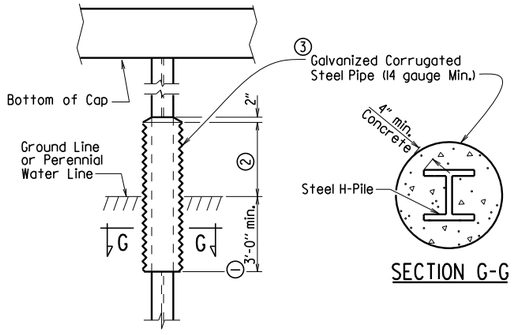


SECTION F-F

*Measured out-to-out of bar.

TABLE OF VARIABLES FOR PILE ENCASEMENT

Pile Size	"D" Square Encsmt.	"D" Round Encsmt.	"L"*
HPI0x42	1'-7"	2'-0"	1'-4"
HPI2x53	1'-8"	2'-2"	1'-5"
HPI4x73	1'-11"	2'-6"	1'-8"



SECTION G-G

① Unless otherwise noted on Bridge Layout.

② 3'-0" minimum or as shown on Bridge Layout.

③ Encasement dimensions shall be sized to maintain a minimum concrete cover of 4" from the H-Pile. Reinforcement shall be sized to provide a minimum concrete cover of 1½" and a minimum clearance of 1¼" from the pile.

④ Alternate pile encasement, when not extended to bottom of cap, shall have 2" concrete taper for water runoff as shown in the Partial Height Encasement detail.

ALTERNATE PILE ENCASEMENT DETAIL FOR STEEL H-PILES

(Shown with Partial Height Encasement)

⚠ Added alternate method of splicing H-piles and revised pile encasement note.
3/24/2016 AMS

This document was originally issued and sealed by Charles R. Ellis, PE No. 9235, on March 24, 2016. This copy is not a signed and sealed document.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS

BRIDGE ENGINEER

STANDARD DETAILS FOR STEEL H-PILES AND PILE ENCASEMENTS

ARKANSAS STATE HIGHWAY COMMISSION

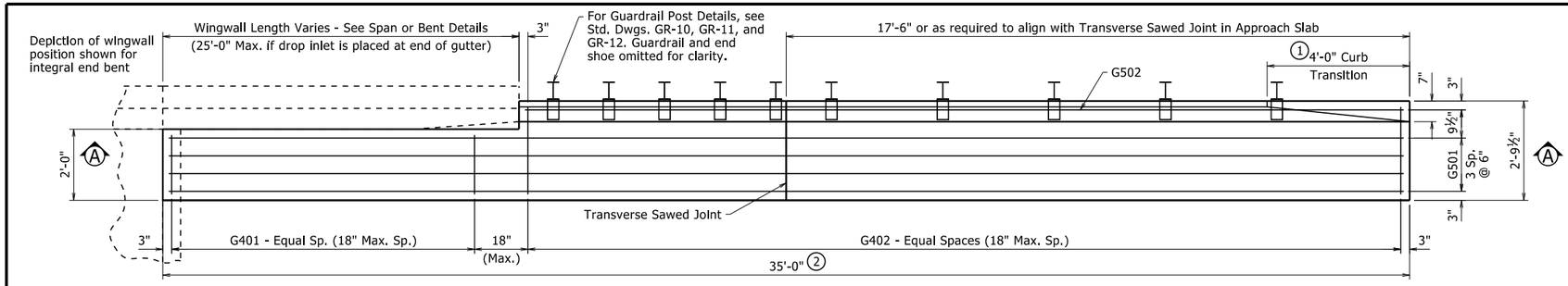
LITTLE ROCK, ARK.

DRAWN BY: A.M.S. DATE: 2/27/2014 FILENAME: b55020.dgn
CHECKED BY: B.E.F. DATE: 2/27/2014 SCALE: NO SCALE
DESIGNED BY: STD. DATE: —

DRAWING NO. 55020

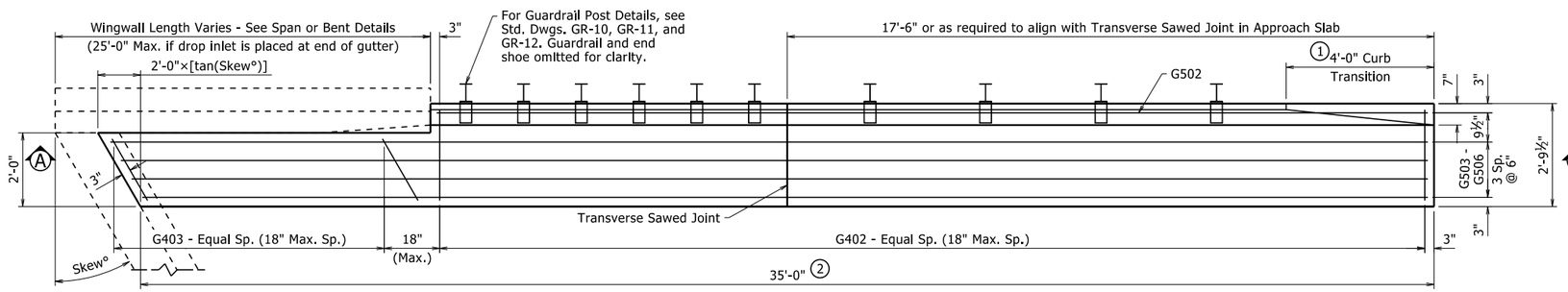
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.				

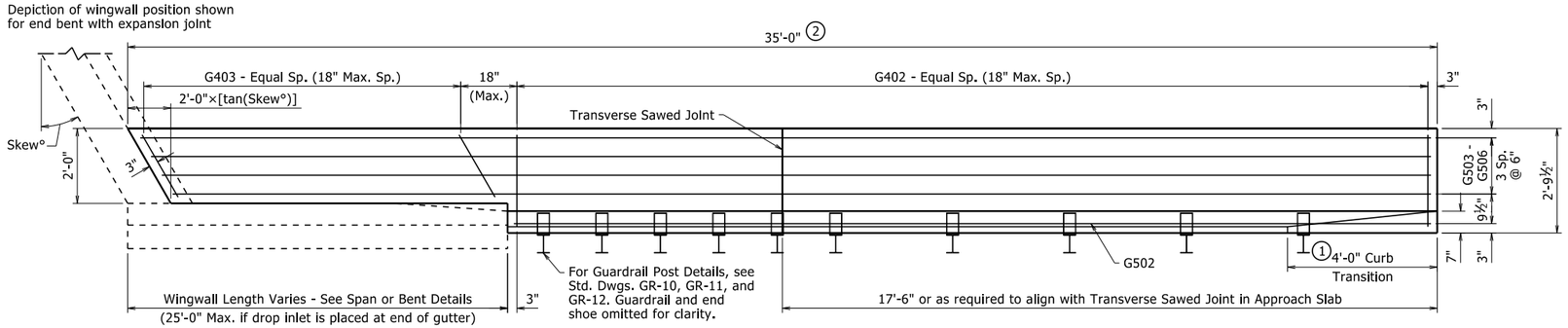
(1) Type F Approach Gutters - 55030F



HALF PLAN OF APPROACH GUTTERS FOR SQUARE END BENT

½" = 1'-0"





PLAN OF SKEWED APPROACH GUTTERS FOR SKEWED END BENT

½" = 1'-0"

QUANTITIES FOR ONE APPROACH GUTTER

(For Information Only)

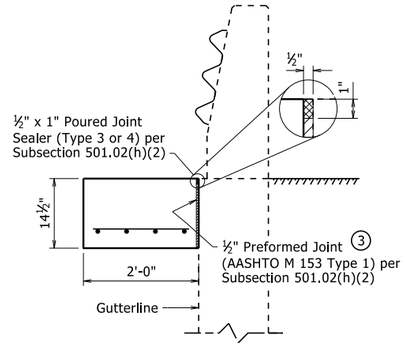
Reinforcing Steel (Lbs.)	Concrete (Cu. Yds.)
210	4.20

Quantities are based on one gutter for a square, integral end bent and a wingwall length of 10'-0"

BAR LIST FOR ONE APPROACH GUTTER

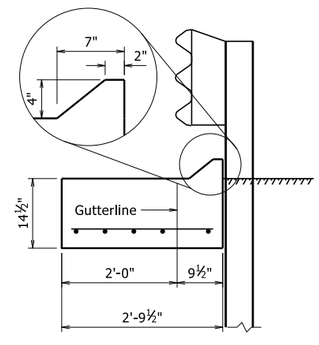
	Mark	No. Req'd.	Length
Square End Bent	G401	(4)	1'-8"
	G402	(4)	2'-5½"
	G501	4	34'-8"
	G502	1	(4)
Skewed End Bent	G402	(4)	2'-5½"
	G403	(4)	(4)
	G502	1	(4)
	G503 - G506	1 ea.	(4)

(4) Varies with Skew and/or Wingwall Length



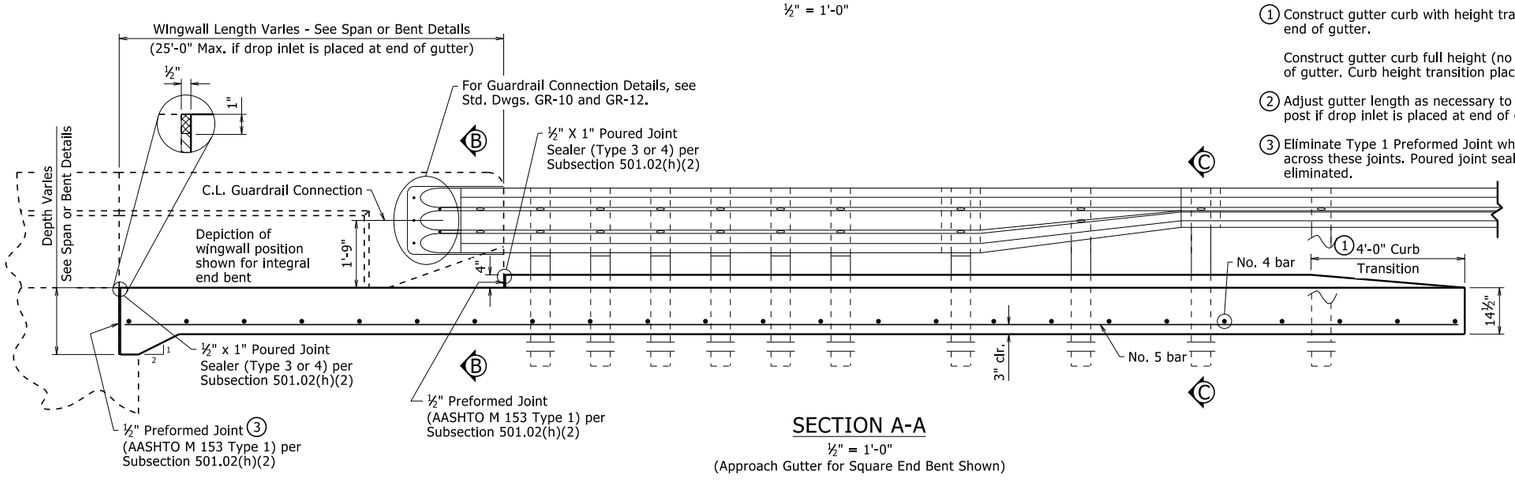
SECTION B-B

¾" = 1'-0"



SECTION C-C

¾" = 1'-0"



SECTION A-A

½" = 1'-0"

(Approach Gutter for Square End Bent Shown)

(1) Construct gutter curb with height transition as shown if drop inlet is not placed at end of gutter.

Construct gutter curb full height (no height transition) if drop inlet is placed at end of gutter. Curb height transition placed on drop inlet.

(2) Adjust gutter length as necessary to avoid outlet pipe interference with guardrail post if drop inlet is placed at end of gutter.

(3) Eliminate Type 1 Preformed Joint when bridge details show reinforcing dowels across these joints. Poured joint sealer is required, however, backer rod shall be eliminated.

GENERAL NOTES

All concrete shall be Class S(AE) with a minimum 28 day compressive strength f'c = 4,000 psi and shall be poured in the dry.

All reinforcing steel shall be Grade 60 (yield strength = 60,000 psi) conforming to AASHTO M 31 or M 322, Type A, with mill test reports.

Approach Gutters will be measured and paid for in accordance with Section 504.

All longitudinal lines within the limits of horizontal curves shall be on curves concentric to C.L. Bridge. Adjustment to longitudinal bar lengths may be required. Transverse reinforcing shall be placed on radial lines to C.L. Bridge.

Scales shown are for 22"x34" drawings. When using 11"x17" drawings, reduce scale by one half.

STANDARD DETAILS FOR TYPE F APPROACH GUTTERS

ARKANSAS STATE HIGHWAY COMMISSION

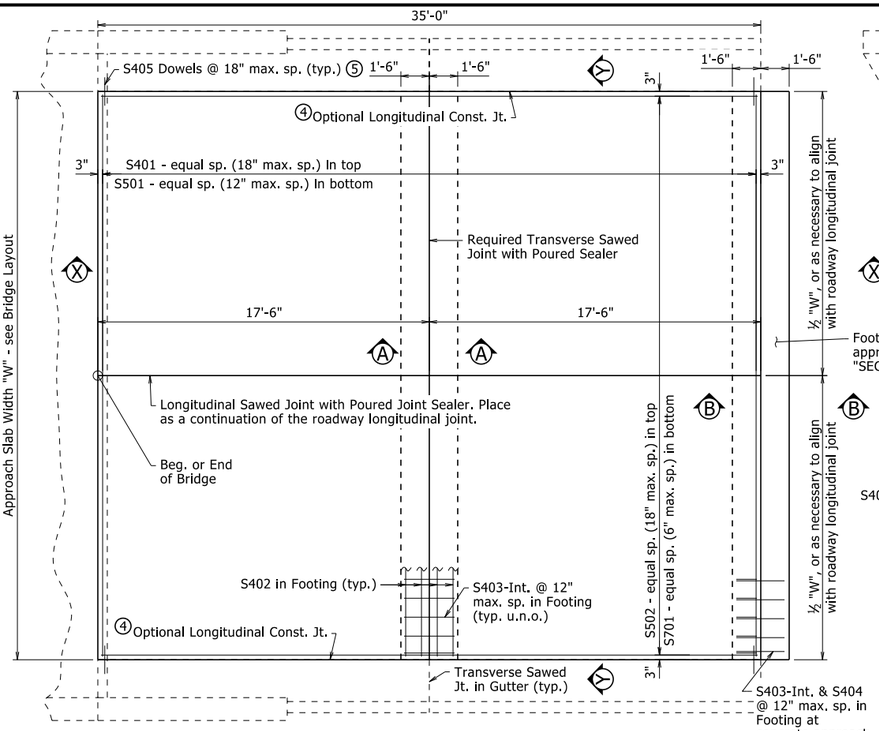
LITTLE ROCK, ARK.

DRAWN BY:	NAC	DATE:	4-8-2021	FILENAME:	b55030f.dgn
CHECKED BY:	LJB	DATE:	4-8-2021	SCALE:	AS NOTED
DESIGNED BY:	STD	DATE:	-		

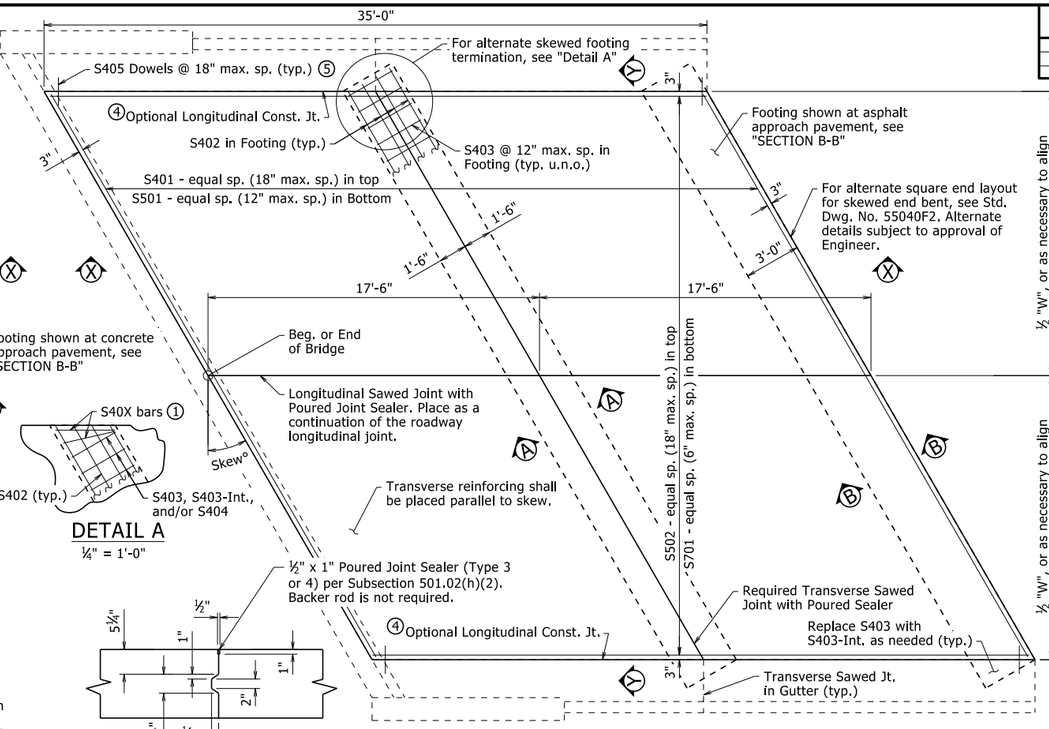
DRAWING NO. 55030F

PRINT DATE: 4/9/2021

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.			
		Type F Approach Slab - 55040F1				

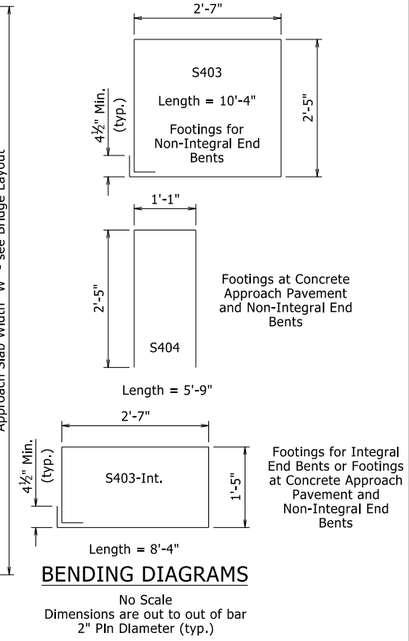


PLAN - APPROACH SLAB AT SQUARE END BENT



LONGITUDINAL CONSTRUCTION JOINT

½" = 1'-0"

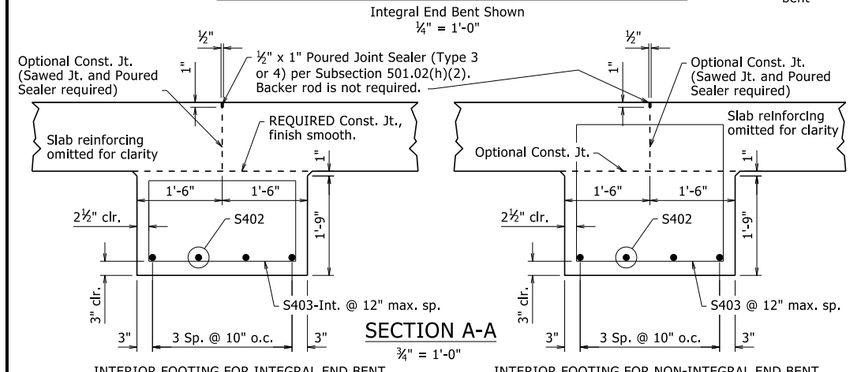


BENDING DIAGRAMS

No Scale
Dimensions are out to out of bar
2" PIn Diameter (typ.)

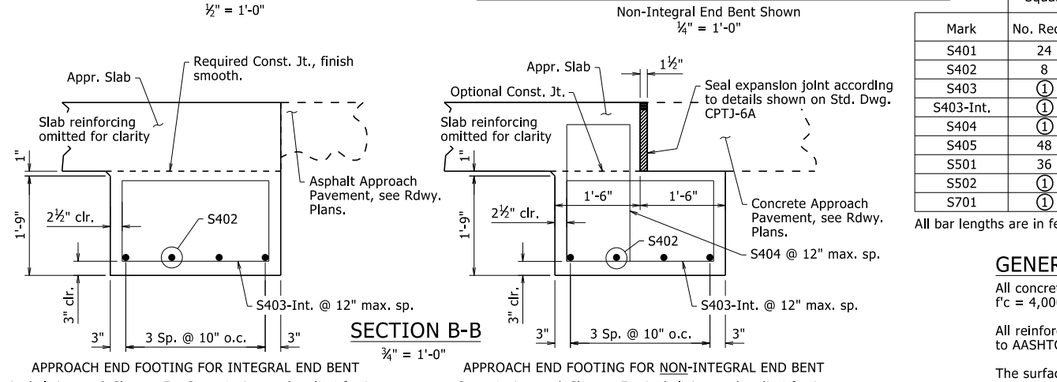
PLAN - APPROACH SLAB AT SKEWED END BENT

Non-Integral End Bent Shown
¼" = 1'-0"



INTERIOR FOOTING FOR INTEGRAL END BENT

INTERIOR FOOTING FOR NON-INTEGRAL END BENT



APPROACH END FOOTING FOR INTEGRAL END BENT

Asphalt Approach Shown. For Concrete Approach, adjust footing location by 1'-6" to add paving notch and include expansion joint.

APPROACH END FOOTING FOR NON-INTEGRAL END BENT

Concrete Approach Shown. For Asphalt Approach, adjust footing location by 1'-6", omit expansion joint, and replace bars S403-Int. & S404 with S403.

BAR LIST - PER APPROACH SLAB

	Square End Bent		Skewed End Bent	
Mark	No. Req'd.	Length	No. Req'd.	Length
S401	24	"W" - 0.33'	24	("W" - 0.33') / cos (Skew°)
S402	8	"W" - 0.33'	8	"W"/cos(Skew°) + 3.0'×tan(Skew°) - 0.33'
S403	①	②	①	②
S403-Int.	①	②	①	②
S404	①	②	①	②
S405	48	1'-6"	48	1'-6"
S501	36	"W" - 0.33'	36	("W" - 0.33') / cos (Skew°)
S502	①	34'-8"	①	34'-8"
S701	①	34'-8"	①	34'-8"

All bar lengths are in feet.

① Varies with Approach Slab Type, Width and/or Skew.
② See "BENDING DIAGRAMS"

GENERAL NOTES

All concrete shall be Class S(AE) with a minimum 28 day compressive strength f'c = 4,000 psi and shall be poured in the dry.

All reinforcing steel shall be Grade 60 (yield strength = 60,000 psi) conforming to AASHTO M 31 or M 322, Type A, with mill test reports.

The surface finish for Approach Slabs shall match that used on the bridge deck.

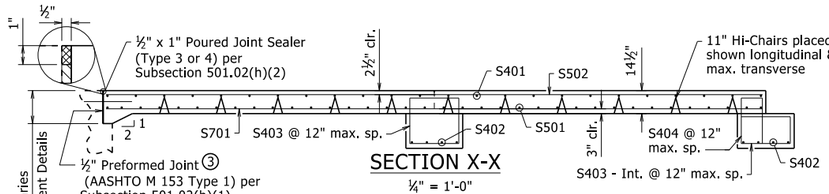
All longitudinal lines within the limits of horizontal curves shall be on curves concentric to C.L. Bridge. Adjustment to longitudinal bar lengths may be required. Transverse reinforcing shall be placed on radial lines to C.L. Bridge.

See Plans for actual Approach Slab Width, "W", end bent or span details, and approach pavement. Units of "W" are in Feet.

Approach Slabs will be measured and paid for in accordance with Section 504.

Scales shown are for full size 22"x34" drawings. When using 11"x17" drawings, reduce scale by one half.

For Table of Quantities, see "SCHEDULE OF BRIDGE QUANTITIES".



Approach Slab for Square Non-Integral End Bent at Concrete Approach Shown

MINIMUM BAR LAP LENGTH

#4	1'-8"
#5	2'-0"
#7	2'-10"

③ Eliminate Type 1 Preformed Joint when bridge details show reinforcing dowels across these joints. Poured joint sealer is required, however, backer rod shall be eliminated.

④ When construction joint is eliminated, place 1" Sawed Joint with ½" x 1" Poured Joint Sealer (Type 3 or 4) per Subsection 501.02(h)(2). Backer rod is not required.

⑤ Eliminate dowels when approach slab is adjacent to curb and gutter, or as directed by the Engineer.

The document was originally issued and sealed by Charles R. Ellis, PE No. 9235, on September 7, 2023. This copy is not a signed and sealed document.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS

BRIDGE ENGINEER

STANDARD DETAILS FOR TYPE F APPROACH SLAB

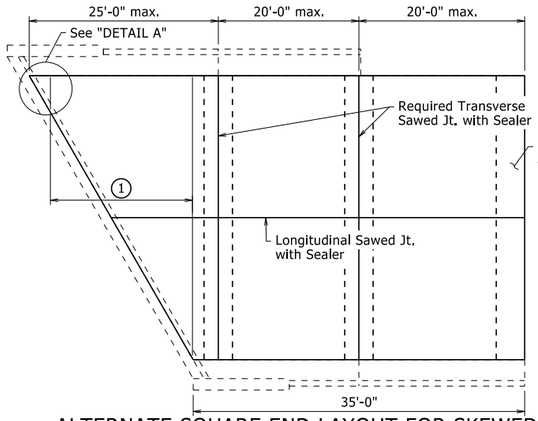
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY:	CGP	DATE:	05/12/2023	FILENAME:	b55040f.dgn
CHECKED BY:	JYP	DATE:	05/15/2023	SCALE:	AS NOTED
DESIGNED BY:	STD.	DATE:	-		

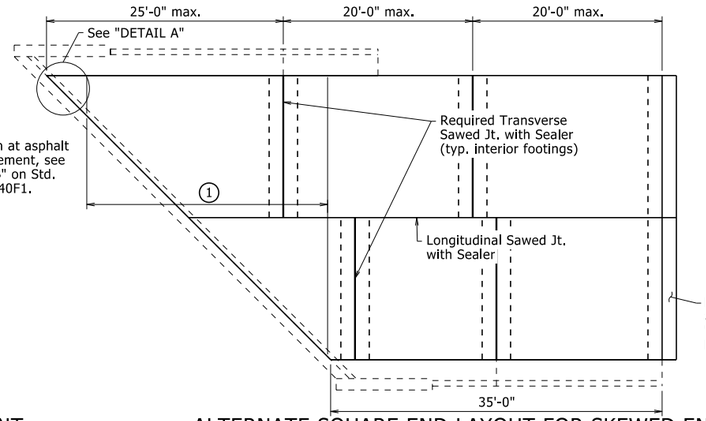
DRAWING NO. 55040F1

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.			
		Type F Approach Slab - 55040F2				



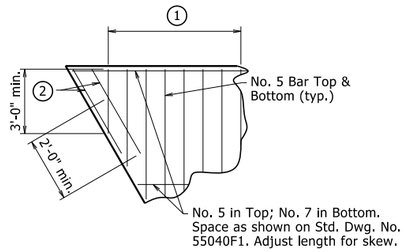
ALTERNATE SQUARE END LAYOUT FOR SKEWED END BENT - CONTINUOUS FOOTINGS

⅛" = 1'-0"



ALTERNATE SQUARE END LAYOUT FOR SKEWED END BENT - STAGGERED FOOTINGS

⅛" = 1'-0"



DETAIL A

¼"= 1'-0"

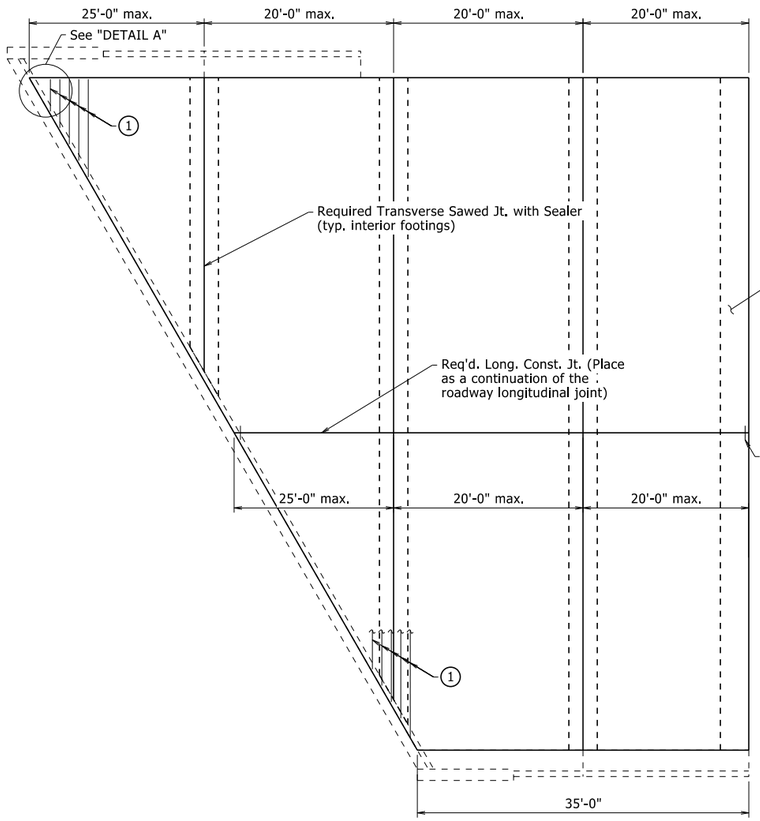
NOTES

See Std. Dwg. No. 55040F1 for additional details of Type F Approach Slabs. Unless noted otherwise, minimum dimensions and reinforcing shall be as shown on Std. Dwg. No. 55040F1. Use of Alternate Square End Details shall be approved by the Engineer. Payment for alternate square end approach slabs shall be based on plan quantities.

Reinforcing shall be lapped as needed. All reinforcing shall be lapped between stages except for the reinforcing in the staggered footings or where the reinforcing cannot obtain the minimum lap length as shown in "MINIMUM BAR LAP LENGTH" on Std. Dwg. No. 55040F1.

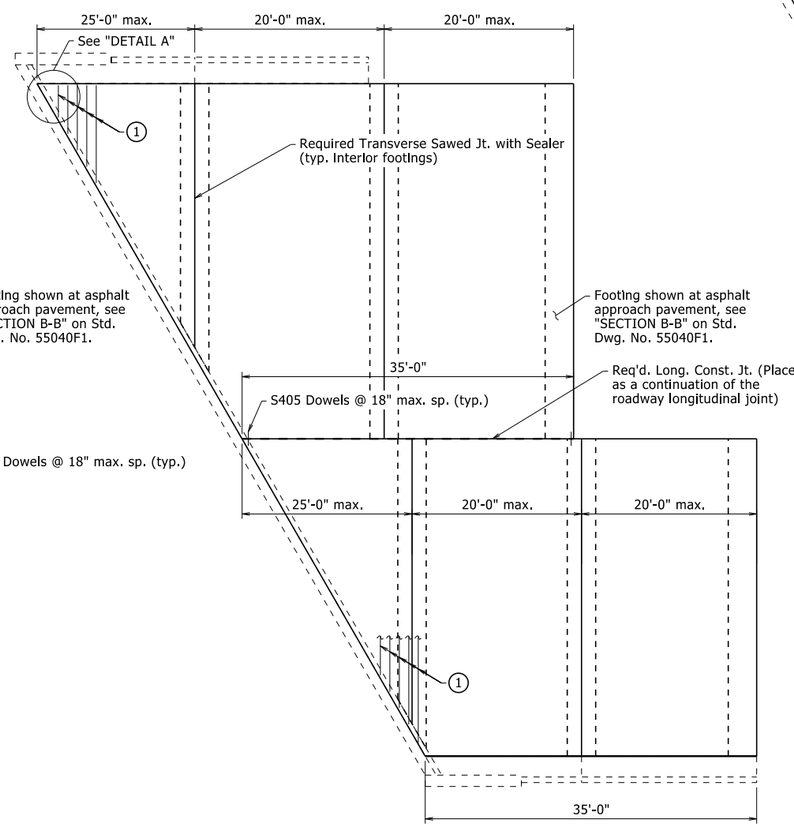
(1) Variable Length No. 5 Bars Top and Bottom spaced at 12" max. where slab is less than full width.

(2) Place additional No. 5 Bars Top and Bottom parallel to skew and spaced at 12" max. in acute corners for all stages as shown. Terminate once a 2'-0" lap with variable length No. 5 bars is achieved.



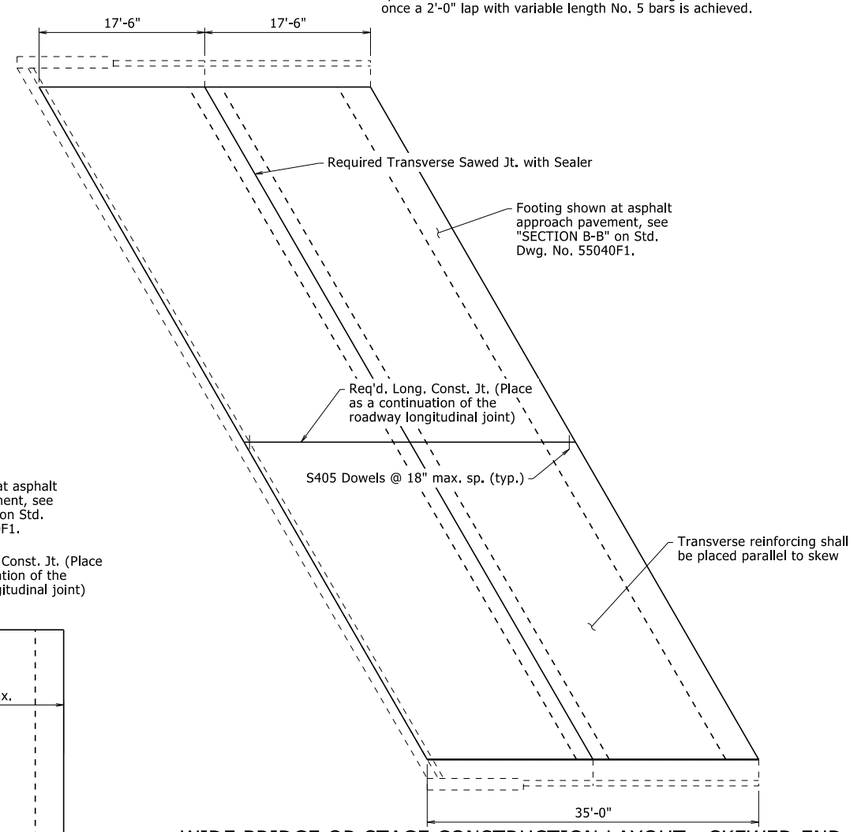
WIDE BRIDGE OR STAGE CONSTRUCTION LAYOUT - SQUARE END, CONTINUOUS FOOTINGS

⅛" = 1'-0"



WIDE BRIDGE OR STAGE CONSTRUCTION LAYOUT - SQUARE END, STAGGERED FOOTINGS

⅛" = 1'-0"



WIDE BRIDGE OR STAGE CONSTRUCTION LAYOUT - SKEWED END

Square End Bent Similar

⅛"= 1'-0"

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS

BRIDGE ENGINEER

The document was originally issued and sealed by Charles R. Ellis, PE No. 9235, on September 7, 2023. This copy is not a signed and sealed document.

ALTERNATE DETAILS FOR SKEWED TYPE F APPROACH SLAB

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 05/12/2023 FILENAME: b55040f.dgn

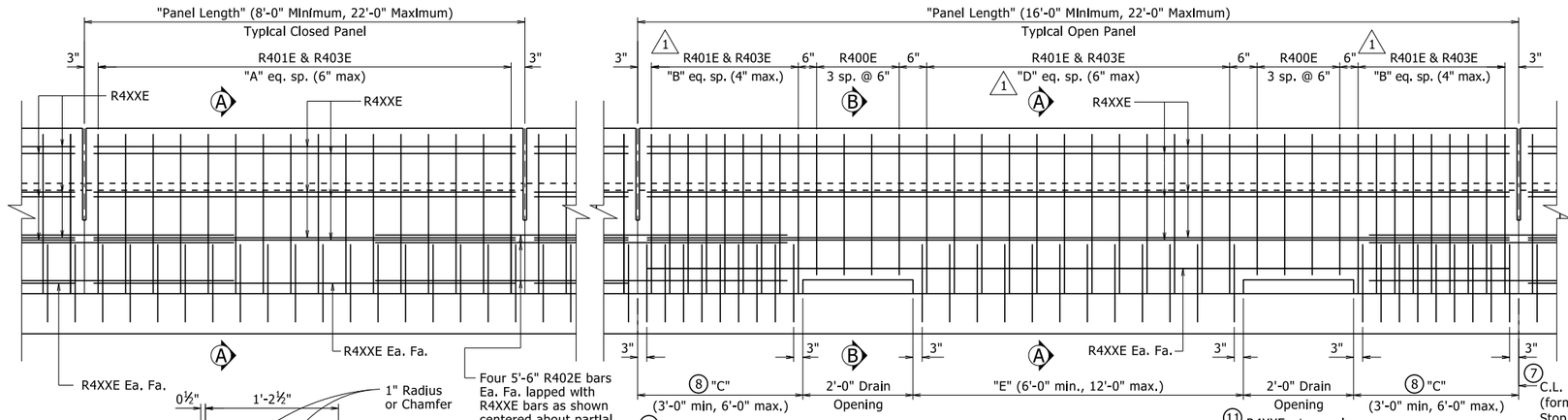
CHECKED BY: JYP DATE: 05/15/2023 SCALE: AS NOTED

DESIGNED BY: STD. DATE: -

DRAWING NO. 55040F2

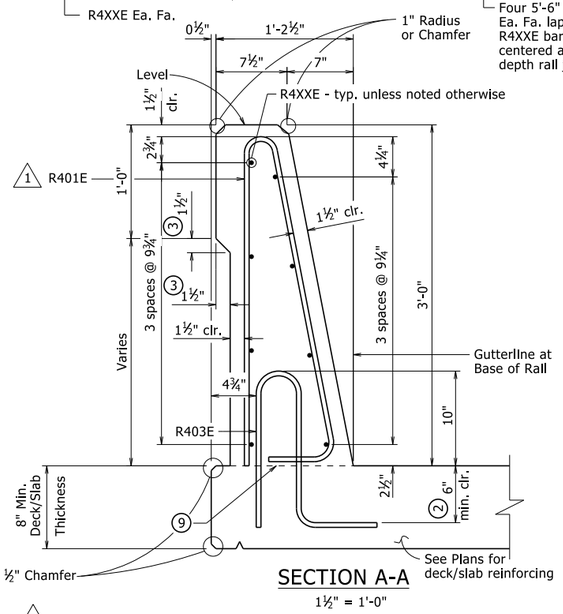
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
09/27/2022				6	ARK.			
				JOB NO.				

TYPE SSTR36 - 55070



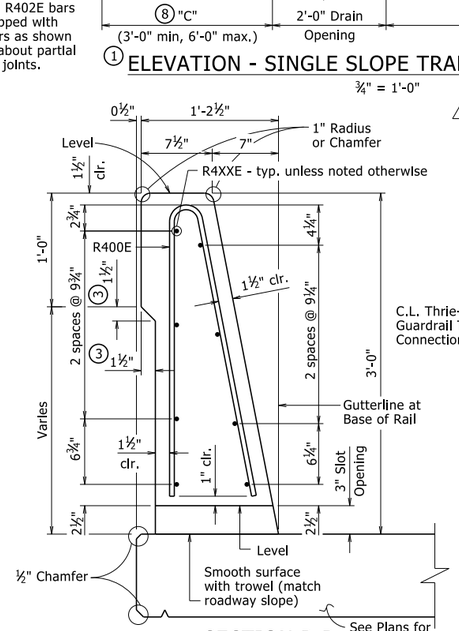
① ELEVATION - SINGLE SLOPE TRAFFIC RAIL

¾" = 1'-0"



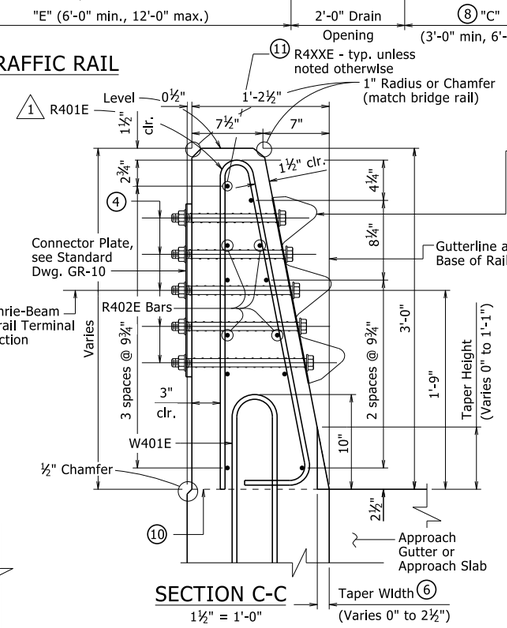
SECTION A-A

1½" = 1'-0"



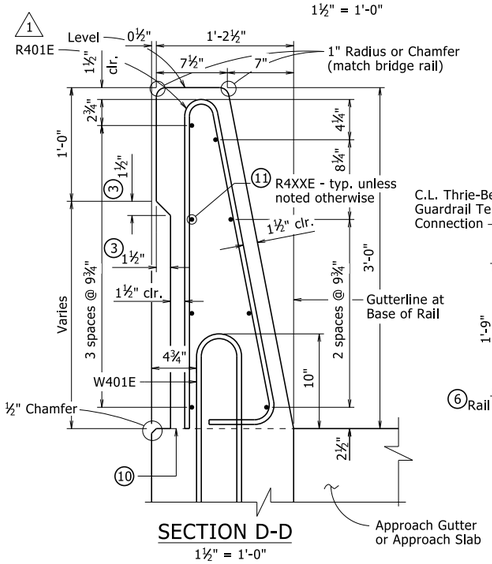
SECTION B-B

1½" = 1'-0"



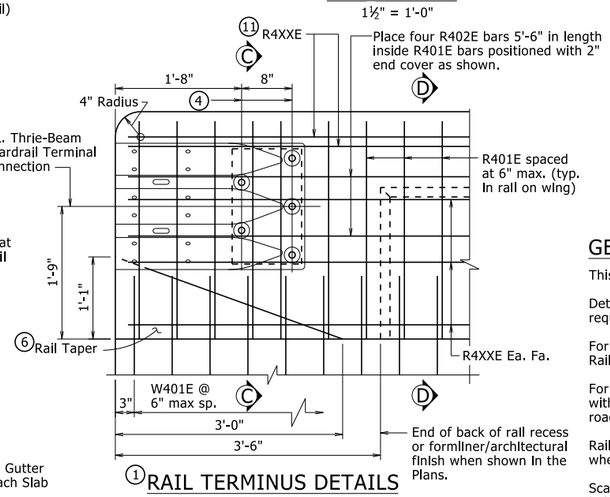
SECTION C-C

1½" = 1'-0"



SECTION D-D

1½" = 1'-0"



① RAIL TERMINUS DETAILS

1" = 1'-0"

⑦ C.L. Full-Depth Rail Joint (formed width ¼" to 1" max). Stop 6" from top of deck/slab or sidewalk. Place at all intermediate bents locations where rail is continuous.

⑦ C.L. Partial-Depth Rail Joint (formed width ¼" to 1" max). Stop 16" from top of deck/slab or sidewalk. Place at all remaining locations other than at intermediate bents.

① All measurements shown are along gutterline at base of rail.

② Minimum embedment into deck/slab.

③ Eliminate recess when formliner with architectural finish is used. See Plans for additional information.

④ C.L. 1" ø formed holes for ⅞" ø bolts. See Standard Drawings GR-10 and GR-12 for additional information.

⑤ Only applicable for bridges with rail cast directly on bridge deck/slab surface. Increase height as necessary for sidewalks, see Plans for additional information.

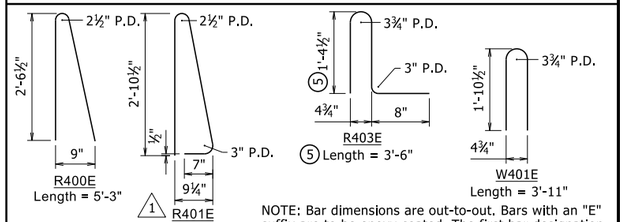
⑥ Field bend front leg of R401E bar as required to maintain minimum 1½" front face clearance within limits of taper.

⑦ When optional slip forming is used: to control cracking, all rail joints must be V-grooved around the perimeter of the rail prior to concrete set and sawing. Depth of V-groove shall be ½". Sawing of the joints shall be done as soon as practical to a width of ¼", and must be controlled so it will follow the V-Groove.

⑧ End posts shall be the same length within a panel.

Bolt Special End Shoe to face of rail as shown. Tapered washers are not required between the head of the bolts and the sloped face of the rail. Tighten the five terminal connection bolts in a well distributed pattern to prevent damage or distortion of the thrie-beam connection. Cut bolts off after installation so as to extend no more than ¾" beyond nut. Paint ends of cut-off bolts with zinc-rich paint. This work and material will not be paid for directly but shall be considered subsidiary to associated contract items.

BENDING DIAGRAM



NOTE: Bar dimensions are out-to-out. Bars with an "E" suffix are to be epoxy coated. The first bar designation number indicates the reinforcing bar size.

⑨ Required Construction Joint. Level where water flows away from rail, match roadway slope where water flows toward rail.

⑩ Top of Abutment Wing & Required Construction Joint (match bridge deck/slab construction joint slope). See Plans for Wing reinforcing.

⑪ These bars will not be included in the "Table of Variables". See Plans for details.

TABLE OF VARIABLES

Closed Rail Panels			Open Rail Panels					
Panel Length	A	R4XXE	Panel Length	B	C	D	E	R4XXE

See Plans for table with values.

GENERAL NOTES

This rail has been successfully evaluated by full-scale crash test to meet MASH TL-4 criteria.

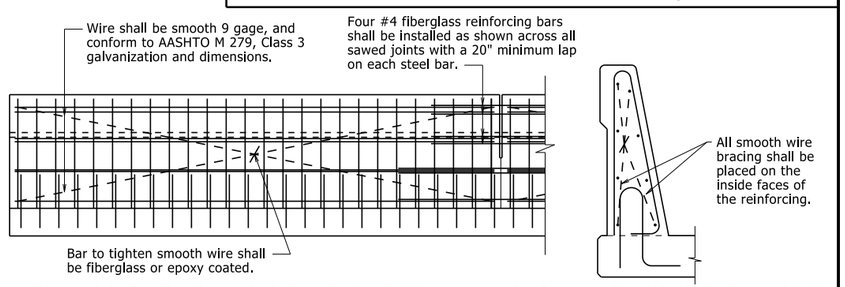
Details shown are general for bridges without sidewalks. See Plans for additional details and requirements specific to bridges with sidewalks.

For Table of Variables, Rail Bar List, locations of Full and Partial Depth Rail Joints, and Wing & Rail Bar Lists, see Plans.

For location of drain openings, see Plans. Drain openings shown are not applicable for bridges with sidewalks. Drain openings will not be allowed over Railroad Right of Way, travelled roadways, and protected waterways.

Rail Terminus details, including Rail Taper, are not applicable for bridges with sidewalks or when bridge railing is continuous with roadway railing.

Scales shown are for 22"x34" drawings. When using 11"x17" drawings, reduce scale by one half.



The extruded rail shall conform to the horizontal and vertical lines shown on the plans or as directed by the Engineer and shall present a smooth, uniform appearance and texture. Unless otherwise noted, exposed surfaces may be given a light brush finish or a Class 3, Textured Coating Finish in place of Class 2, Rubbed Finish.

All panels shall be braced as required to prevent racking.

Slip forming will not be allowed on bridges where formliner with architectural treatment is used unless approval from the Engineer is obtained.

DETAILS OF OPTIONAL SLIP FORMING OF BRIDGE TRAFFIC RAIL

No Scale

△1 Modified bending diagram and spacing for R401E bar.

By: CGP, Checked by: CMW 09/27/2022

This document was originally issued and sealed by Charles R. Ellis, PE No. 9235, on November 5, 2020. This copy is not a signed and sealed document.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS

BRIDGE ENGINEER

THESE DETAILS ARE APPLICABLE UNLESS OTHERWISE SHOWN IN THE PLAN DETAILS, SPECIAL PROVISIONS, OR SUPPLEMENTAL SPECIFICATIONS.

STANDARD DETAILS FOR BRIDGE TRAFFIC RAIL TYPE SSTR36

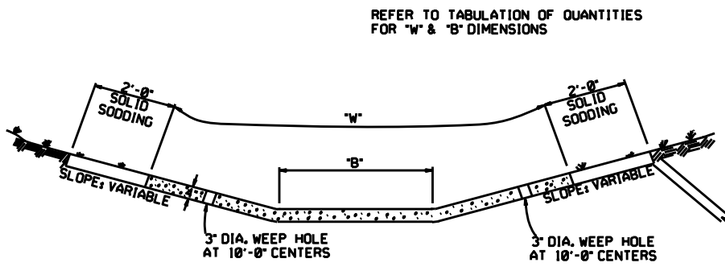
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: KWY DATE: 11/5/2020
CHECKED BY: LJB DATE: 11/5/2020
DESIGNED BY: STD. DATE: -----
FILENAME: b55070.dgn
SCALE: As Noted

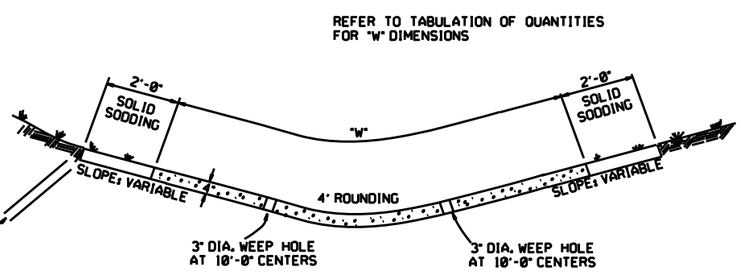
DRAWING NO. 55070

PRINT DATE: 10/6/2022



TYPE A

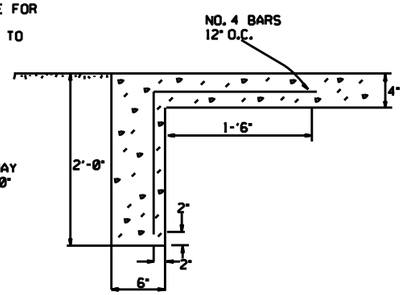
EXCAVATE TO NEAT LINES TO CONSTRUCT DITCH PAVING AND SOLID SODDING.



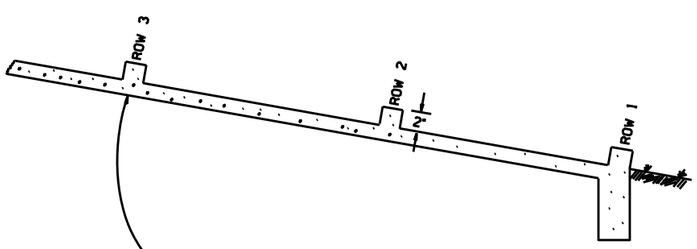
TYPE B

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

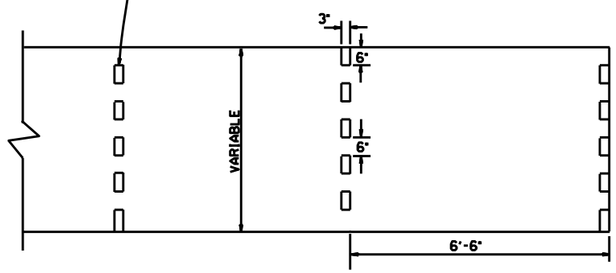


TOE WALL DETAIL FOR CONCRETE DITCH PAVING



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.

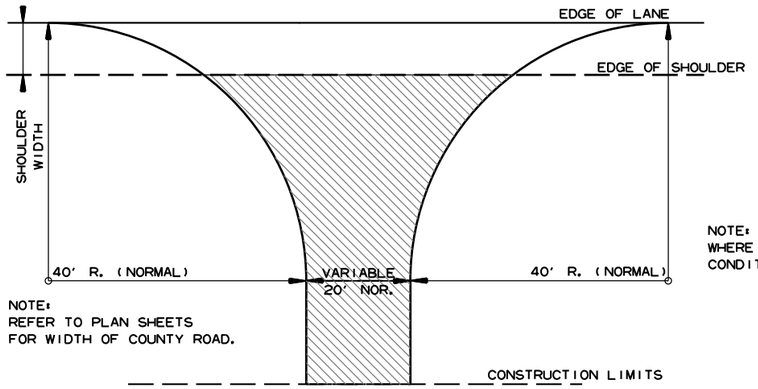
1" WIDE TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE DITCH PAVING AT 45° INTERVALS. THE SPACE SHALL BE FILLED WITH APPROVED JOINT FILLER COMPLYING WITH AASHTO M213.

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

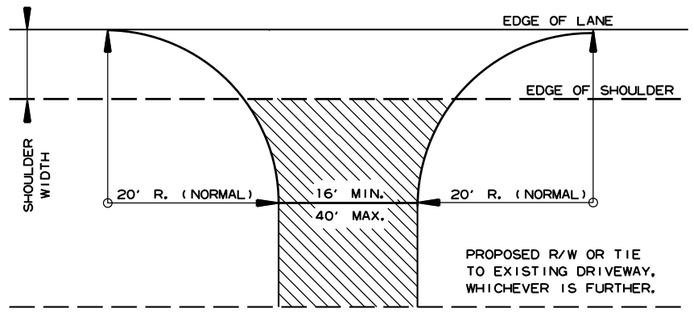


NOTE:
REFER TO PLAN SHEETS
FOR WIDTH OF COUNTY ROAD.

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.

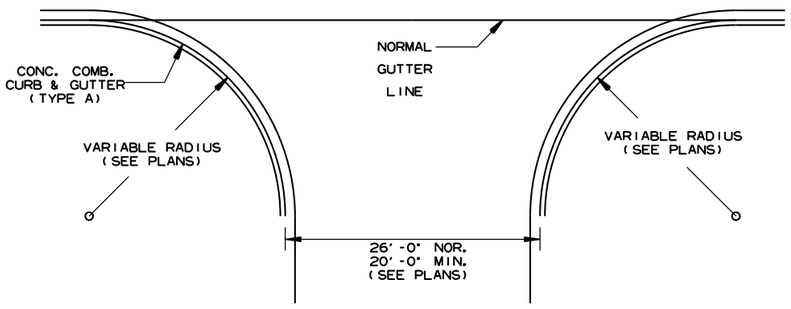
DETAIL FOR COUNTY ROAD TURNOUTS OPEN SHOULDER SECTION



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

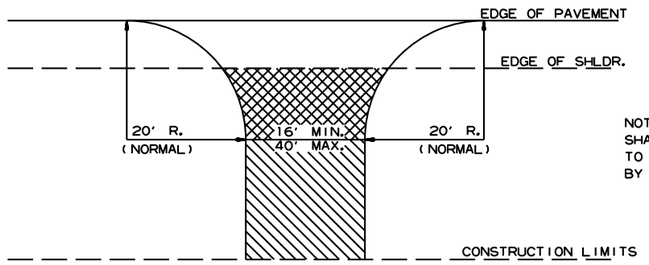
ACHM SURFACE COURSE (1/2")
(220 LBS. PER SQ. YD.) AND
AGGREGATE BASE COURSE (CLASS 7)
7" COMP. DEPTH IF ASPHALT OR
GRAVEL DRIVE EXISTING; OR 6"
CONCRETE IF CONCRETE DRIVE
EXISTING.

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

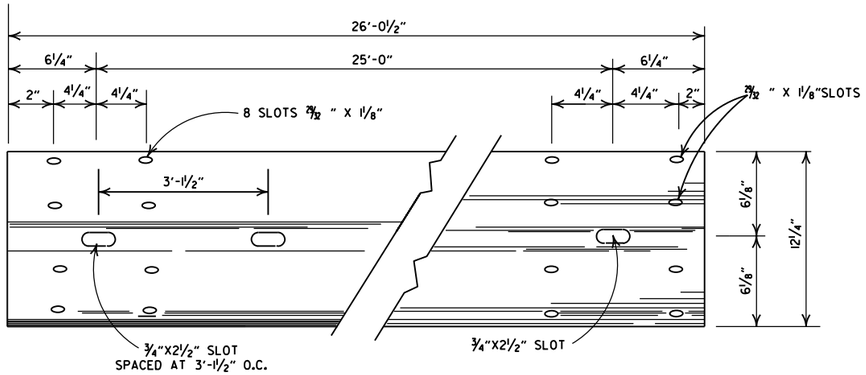
DETAIL FOR DRIVEWAY TURNOUTS (COLLECTORS)

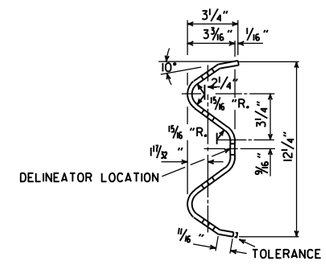
DATE REV	DATE FILMED	DESCRIPTION
5-19-22		ISSUED

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DRIVEWAYS & STREET TURNOUTS

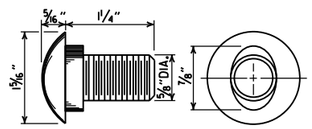
STANDARD DRAWING DR-2



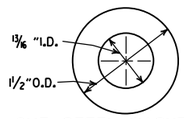


DETAILS OF W-BEAM GUARDRAIL

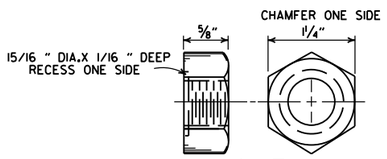
RAIL SECTION OF CLOSELY SIMILAR DIMENSIONS AND COMPARABLE STRENGTH MAY BE SUBSTITUTED IF APPROVED BY THE ENGINEER.



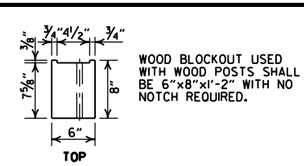
SPLICE BOLT
POST BOLT - SAME EXCEPT LENGTH



CUT STEEL WASHER

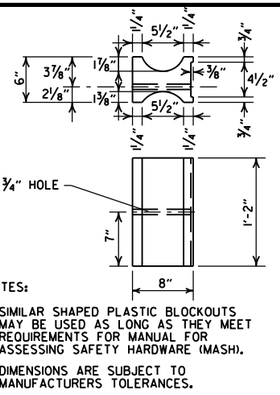


NUT



WOOD BLOCKOUT USED WITH WOOD POSTS SHALL BE 6"x8"x1'-2" WITH NO NOTCH REQUIRED.

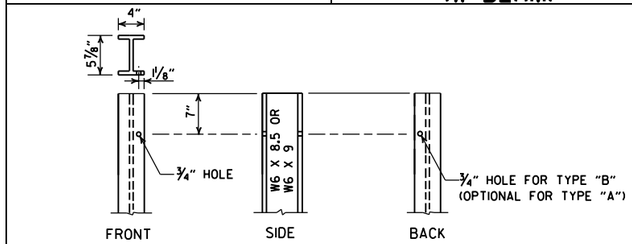
WOOD BLOCKOUT (W-BEAM)



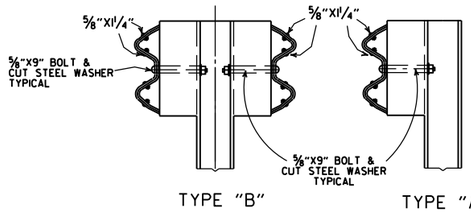
NOTES:

1. SIMILAR SHAPED PLASTIC BLOCKOUTS MAY BE USED AS LONG AS THEY MEET REQUIREMENTS FOR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).
2. DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCES.

PLASTIC BLOCKOUT (W-BEAM)



STEEL POST



DETAILS OF STEEL LINE POST CONNECTIONS (W-BEAM)

-GENERAL NOTES-

ALL BOLTS SHALL BE SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN ¾" BEYOND IT.

WHERE W-BEAM GUARDRAIL CONTINUES, THE INTERMEDIATE SECTIONS SHALL HAVE A POST SPACING OF 6'-3" UNLESS OTHERWISE NOTED.

W-BEAM GUARDRAIL REPRESENTING INTERMEDIATE SECTIONS WILL BE MEASURED ALONG THE ROADWAY FACE FROM CENTERLINE OF POST TO CENTERLINE OF POST.

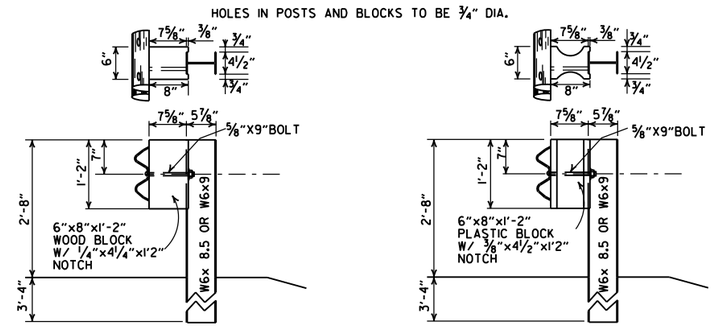
USE W-BEAM GUARDRAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB. FOR EXTENSIONS OR MODIFICATION OF EXISTING GUARDRAIL, W-BEAM GUARDRAIL COMPONENTS OF THE SAME TYPE AS THOSE EXISTING SHALL BE USED.

ANY BACKFILLING UNDER OR AROUND POST SHALL BE DAMP SAND THOROUGHLY TAMPED IN PLACE.

WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7 f (1400 f) OR NO. 1 1350 f SOUTHERN PINE.

CONTRACTOR SHALL HAVE THE OPTION OF USING WOOD BLOCKOUTS FOR W-BEAM GUARDRAIL OR PLASTIC BLOCKOUTS, AS LONG AS BLOCKOUT USED MEETS REQUIREMENTS FOR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) FOR W-BEAM GUARDRAIL.

DELINEATORS SHALL BE MOUNTED AT 37.5' SPACING ON THE FRONT FACE OF THE GUARDRAIL. SPACING MAY BE REDUCED IN CURVES, AS DIRECTED BY THE ENGINEER. 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 GUARDRAIL.



WOOD BLOCKOUT CONNECTIONS

PLASTIC BLOCKOUT CONNECTIONS

DETAILS OF STEEL LINE POST CONNECTIONS (W-BEAM)

POSTS AND BLOCKS TO BE ROUGH SAWN 6"X8" WITH A TOLERANCE OF + OR - ¼".

WOOD BLOCKOUT CONNECTIONS

PLASTIC BLOCKOUT CONNECTIONS

DETAILS OF WOOD LINE POST CONNECTIONS (W-BEAM)

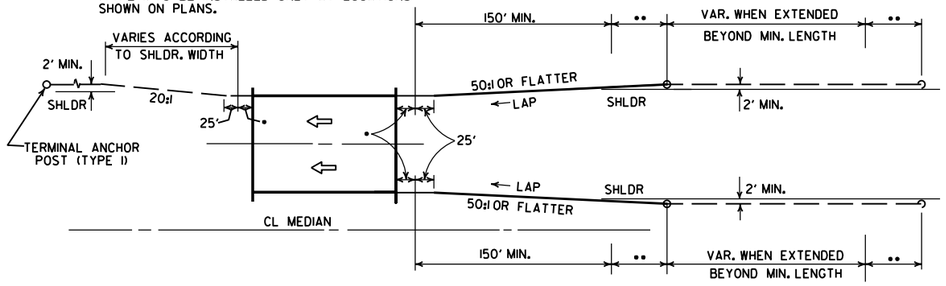
DATE	REVISION	FILMED
05-19-22	REVISED GENERAL NOTES, ADDED DELINEATOR LOCATION.	
11-07-19	RENUMBERED AND RENAMED	
11-16-17	REVISED GENERAL NOTES AND RAISED GUARDRAIL HEIGHT 3"	
07-14-10	RAISED HEIGHT OF GUARDRAIL 1"	
10-15-09	ADDED REFERENCE TO MASH	
04-10-03	REVISED GENERAL NOTES	
08-22-02	REVISED DIMENSION ON WOOD & PLASTIC BLOCKOUT CONNECTIONS & STEEL POST	
11-16-01	REVISED WOOD BLOCKOUT & DETAILS OF WOOD LINE POST CONNECTIONS	
03-30-00	REMOVED GUARDRAIL AT BRIDGE ENDS	
01-12-00	ADDED PLASTIC BLOCKOUT	
08-12-98	REV. BLOCKOUTS TO WOOD, DELETED CONC. POST & REV. GENERAL NOTE, DELETED DET. OF GUARDRAIL REPLACE. BEHIND CURB & DET. OF POST PLACE. IN SOLID ROCK, & ADDED DETAILS OF STEEL LINE POST CONN. REMOVED BACK-UP PLATE, REVISED HOLES IN STEEL POLES	
04-03-97	REMOVED "LAP IN DIRECTION OF TRAFFIC" NOTE & PLACED ARROWS ON WASHERS	
10-18-96	REVISED WOOD POST NOTE	
06-02-94	ADDED ALT. STEEL POST SIZE	
08-05-93	REVISED STEEL POST SIZE	8-5-93
10-01-92	REDRAWN & REVISED	10-1-92
08-15-91	REVISED WASHER NOTE	8-15-91
08-02-90	REV. GEN. NOTE & DEPTH OF ANC. POST IN ROCK	8-2-90
07-15-88	REVISED SECTION 3 & GENERAL NOTES	
03-04-88	REV. ANCHOR POST, ELEV. NOTES & POST IN ROCK	780-3-4-88
10-30-87	REVISED WOOD LINE POST DETAIL	546-10-30-87
10-09-87	REDRAWN & REVISED	802-10-9-87

ARKANSAS STATE HIGHWAY COMMISSION

GUARDRAIL DETAILS

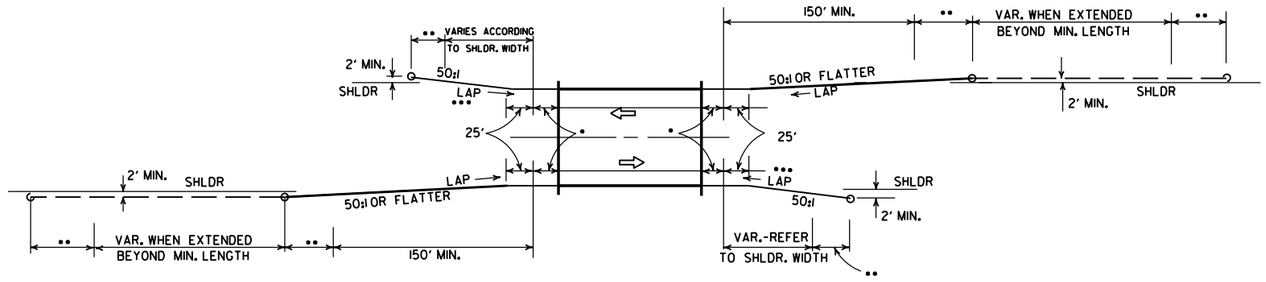
STANDARD DRAWING GR-6

NOTE: GUARDRAIL WITH GUARDRAIL TERMINAL (TYPE 1) TO BE INSTALLED ONLY AT LOCATIONS SHOWN ON PLANS.



ONE-WAY TRAFFIC

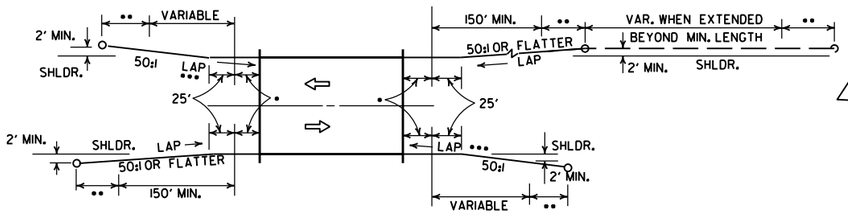
••• LAP OF GUARDRAIL SHALL BE AS SHOWN FOR A DISTANCE OF UP TO 200'. CHANGE TO LAP IN DIRECTION OF TRAVEL.



TWO-WAY TRAFFIC

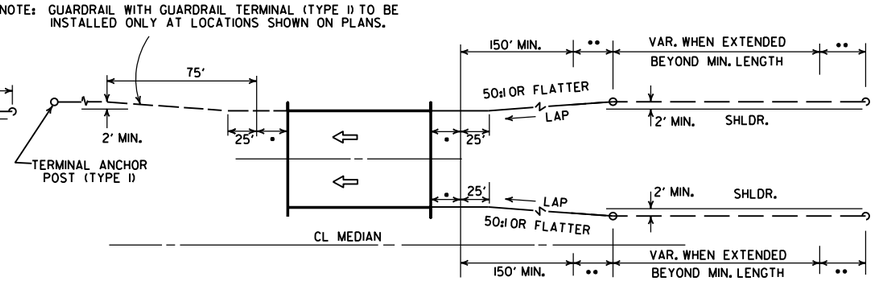
METHODS OF INSTALLATION OF GUARDRAIL AT LESS THAN FULL SHOULDER WIDTH BRIDGES USING GUARDRAIL TERMINAL (TYPE 2)

••• LAP OF GUARDRAIL SHALL BE AS SHOWN FOR A DISTANCE OF UP TO 200'. CHANGE TO LAP IN DIRECTION OF TRAVEL.



TWO-WAY TRAFFIC

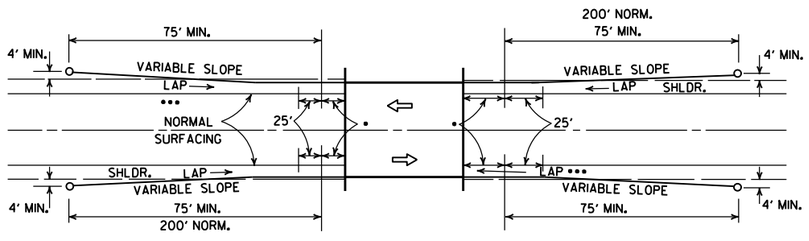
NOTE: GUARDRAIL WITH GUARDRAIL TERMINAL (TYPE 1) TO BE INSTALLED ONLY AT LOCATIONS SHOWN ON PLANS.



ONE-WAY TRAFFIC

METHOD OF INSTALLATION OF GUARDRAIL AT FULL SHOULDER WIDTH BRIDGES USING GUARDRAIL TERMINAL (TYPE 2)

••• LAP OF GUARDRAIL SHALL BE AS SHOWN FOR A DISTANCE OF UP TO 200'. CHANGE TO LAP IN DIRECTION OF TRAVEL.



METHOD OF INSTALLATION OF GUARDRAIL USING GUARDRAIL TERMINAL (TYPE 1) (FULL SHOULDER WIDTH OR LESS BRIDGES)

LEGEND

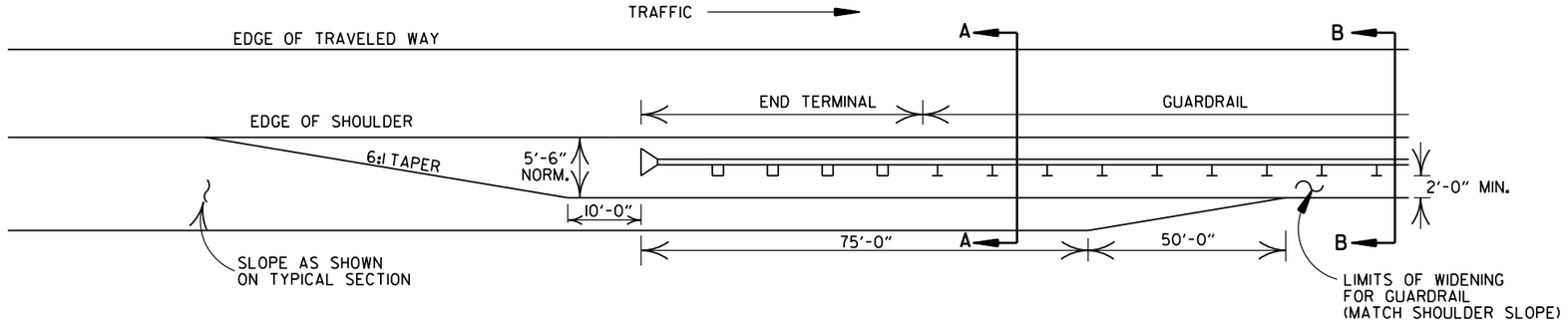
- • THRIE BEAM GUARDRAIL TERMINAL
- •• GUARDRAIL TERMINAL (TYPE 2)

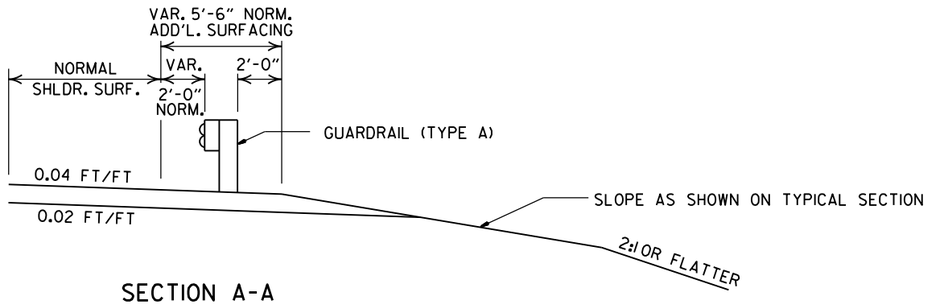
DATE	REVISION	DATE FILM
11-07-19	RENUMBERED AND RENAMED	
4-17-08	REVISED LAYOUTS	
11-10-05	REMOVED GUARDRAIL NOTES AND DETAILS	
11-16-01	DELETED NOTE-METHOD OF INSTALLATION OF GUARDRAIL USING GUARDRAIL TERM. (TY. 1)	
1-12-00	ADDED CONSTRUCTION NOTE	1-12-00
6-26-97	REVISED LAYOUT	
10-1-92	REDRAWN & REVISED	10-1-92
	ADDED NOTE	
10-9-87	REDRAWN & REVISED	

ARKANSAS STATE HIGHWAY COMMISSION

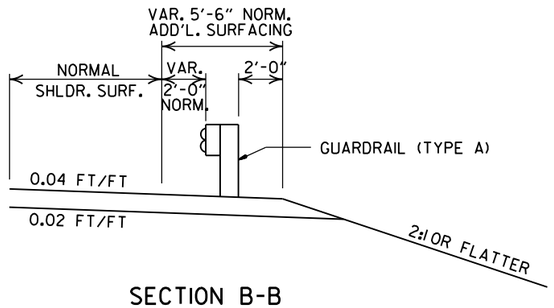
GUARDRAIL DETAILS

STANDARD DRAWING GR-8



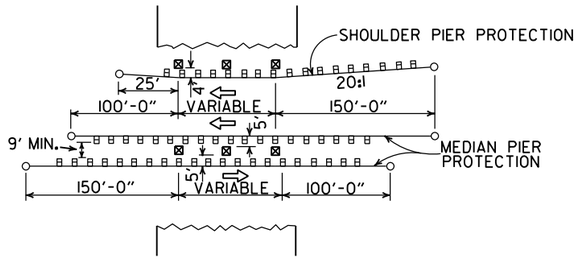


SECTION A-A



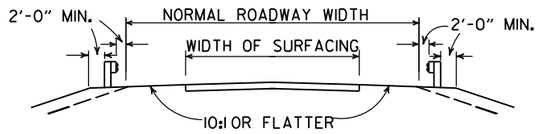
SECTION B-B

DETAILS OF WIDENING FOR GUARDRAIL

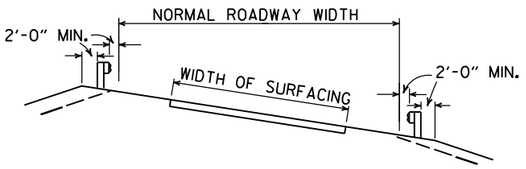


METHOD OF INSTALLATION OF GUARDRAIL AT FIXED OBSTACLE

NOTE: NORMAL SECTION TO BE WIDENED APPROX. 5'-6" EACH SIDE TO SUPPORT GUARDRAIL.



SECTION ON TANGENT



SECTION ON CURVE

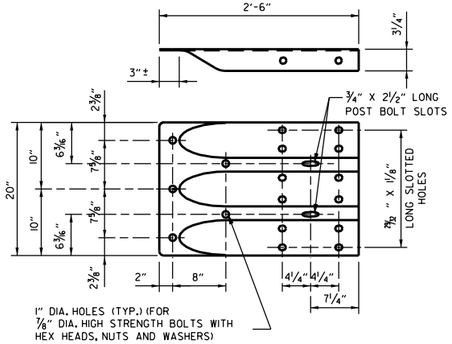
DETAILS SHOWING POSITION OF GUARDRAIL ON HIGHWAY

DATE	REVISION	DATE FILM
11-07-19	RENUMBERED AND RENAMED	
4-17-08	MINOR REVISION	
11-10-05	DRAWN	

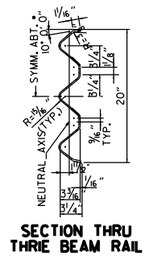
ARKANSAS STATE HIGHWAY COMMISSION

GUARDRAIL DETAILS

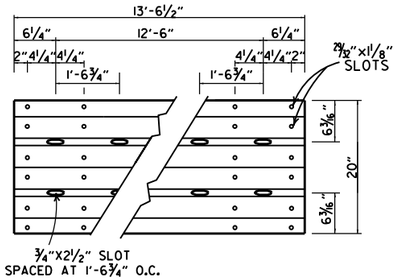
STANDARD DRAWING GR-9



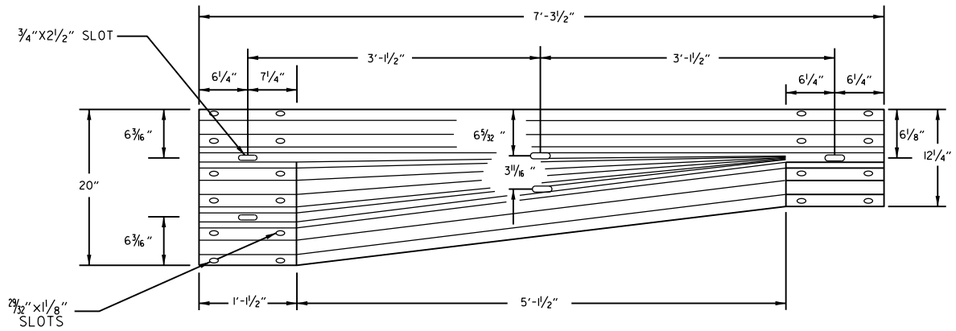
SPECIAL END SHOE



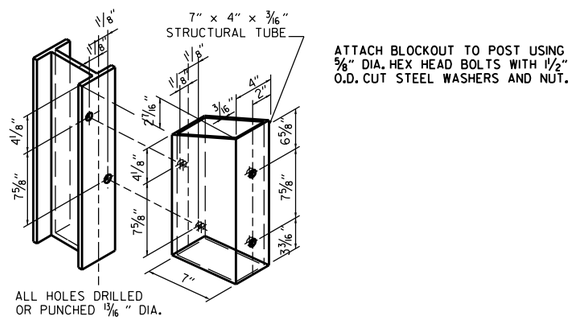
SECTION THRU THRIE BEAM RAIL



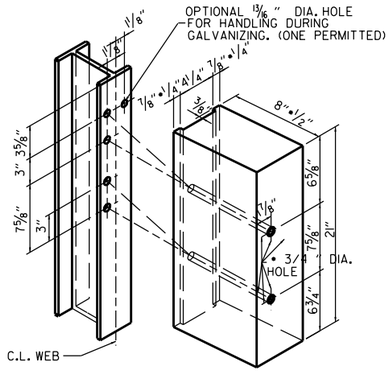
THRIE BEAM RAIL



TRANSITION SECTION



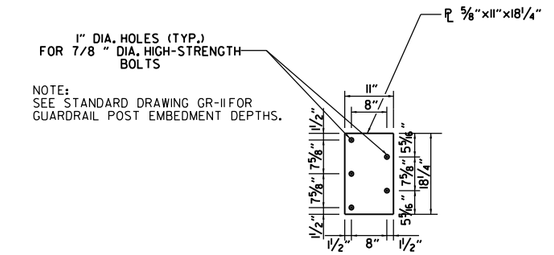
STRUCTURAL STEEL TUBING BLOCKOUT DETAIL



ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED

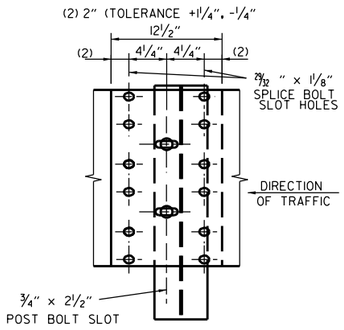
HOLE PUNCHING DETAIL FOR STEEL POST & WOOD OR PLASTIC BLOCKOUTS

NOTE: BLOCKS SHALL BE THE SAME TYPE THROUGHOUT THE PROJECT LIMITS.



CONNECTOR PLATE

CONNECTOR PLATE SHALL BE AASHTO M270, GR. 36 AND SHALL BE GALVANIZED AFTER FABRICATION. GALVANIZING SHALL CONFORM TO SUBSECTION 807.19 OF THE STANDARD SPECIFICATIONS. CONNECTOR PLATE TO BE BOLTED TO SPECIAL END SHOE USING ⅞" DIA. HIGH STRENGTH BOLTS, WITH THE HEADS PLACED ON THE TRAFFIC FACE. WASHERS SHALL BE USED UNDER THE HEAD AND NUT. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AND SHALL CONFORM TO SUBSECTION 807.06.



THRIE BEAM RAIL SPLICE AT POST

GENERAL NOTES:

THE THRIE BEAM RAIL, SPECIAL END SHOE, AND THE TRANSITION SECTION SHALL BE MADE OF STEEL AND SHALL BE 12 GAGE. ZINC COATING SHALL BE TYPE 1.

RAIL POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION.

ALL BOLTS SHALL BE SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN 3"4" BEYOND IT.

ALL LAP SPLICES, INCLUDING SPECIAL END SHOES, SHALL BE MADE IN THE DIRECTION SHOWN ON STANDARD DRAWINGS GR-8 & GR-13.

REFER TO STD. DRWG. GR-11 FOR POST DETAILS.

USE THRIE BEAM GUARDRAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB.

THRIE BEAM POSTS SHALL BE SAME MATERIAL AS W-BEAM POSTS FOR ENTIRE JOB.

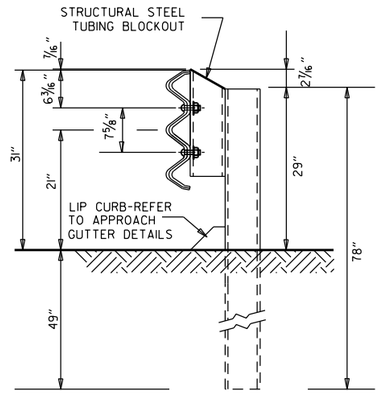
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7 f (1400 f) OR NO. 1 1350 f SOUTHERN PINE.

DATE	REVISION	FILMED
11-07-19	RENAMED AND REVISED REFERENCES	
11-16-17	REVISED TRANSITION SECTION, GUARD RAIL HEIGHT, AND GENERAL NOTES; MOVED THRIE BEAM GUARD RAIL CONNECTIONS AT BRIDGES ENDS TO STD. DRWG. GR-12	
07-14-10	RAISED HEIGHT OF W-BEAM 1"	
11-29-07	ADDED PLASTIC BLOCKOUTS	
11-10-05	ADDED NOTE FOR ATTACHING STEEL BLOCKOUT	
11-18-04	REVISED GENERAL NOTES	
10-9-03	REVISED GENERAL NOTES	
04-10-03	REVISED GENERAL NOTES	
08-22-02	REVISED NOTE (2)	
06-29-00	MOVED DIMENSION LINES	
05-18-00	ADDED NOTE	
03-30-00	DRAWN & ISSUED	

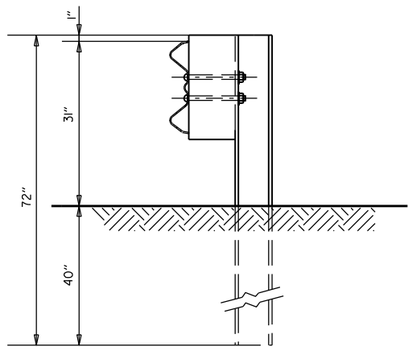
ARKANSAS STATE HIGHWAY COMMISSION

GUARDRAIL DETAILS

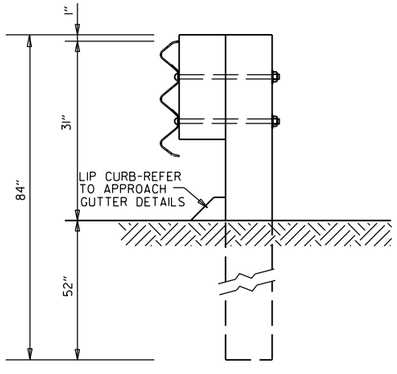
STANDARD DRAWING GR-10



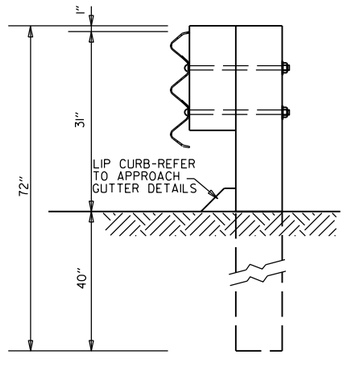
THRIE BEAM RAIL WITH STEEL TUBING BLOCKOUT
AND STEEL POST
POSTS 1-7



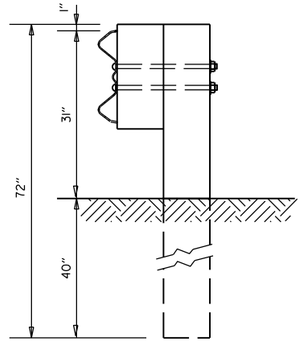
W-BEAM TO THRIE BEAM TRANSITION RAIL
WITH WOOD OR PLASTIC BLOCKOUT AND STEEL POST
POST 8



THRIE BEAM RAIL
WITH WOOD OR PLASTIC
BLOCKOUTS & WOOD POSTS
POSTS 1-6



THRIE BEAM RAIL
WITH WOOD OR PLASTIC
BLOCKOUT & WOOD POST
POST 7



W-BEAM TO THRIE BEAM
TRANSITION RAIL WITH WOOD OR
PLASTIC BLOCKOUT & WOOD POST
POST 8

GENERAL NOTES:

RAIL POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION.

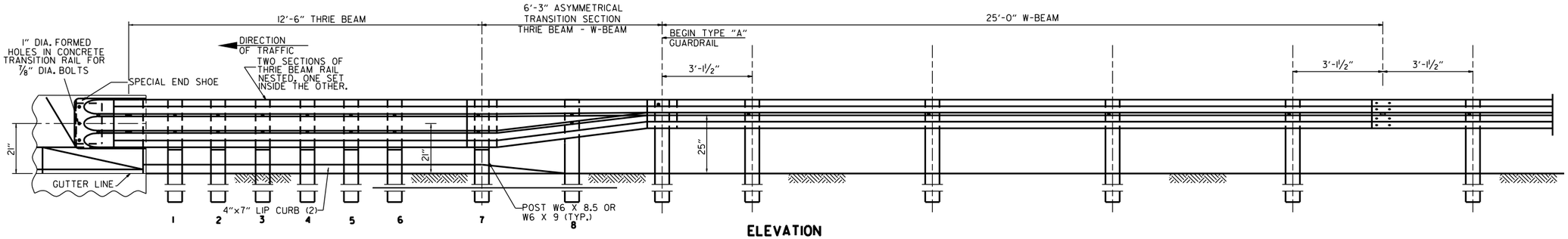
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1STRUCTURAL OR BETTER 9.7f (1400 f) OR NO.1 1350 f SOUTHERN PINE.

DATE	REVISION	FILMED
11-07-19	RENAMED	
11-16-17	REVISED GUARDRAIL HEIGHT, CHANGED STD. DWG. NUMBER FROM GR-10A TO GR-11	
07-14-10	REVISED POST 8 DIMENSIONS	
11-29-07	ADDED PLASTIC BLOCKOUTS	
08-22-02	REVISED LIP CURB NOTE	
03-30-00	DRAWN & ISSUED	

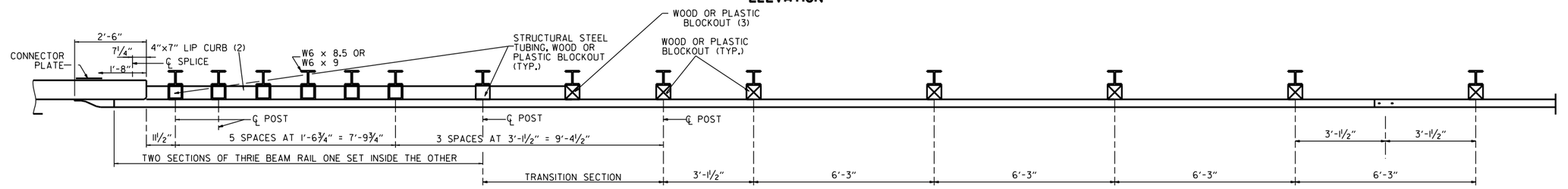
ARKANSAS STATE HIGHWAY COMMISSION

GUARDRAIL DETAILS

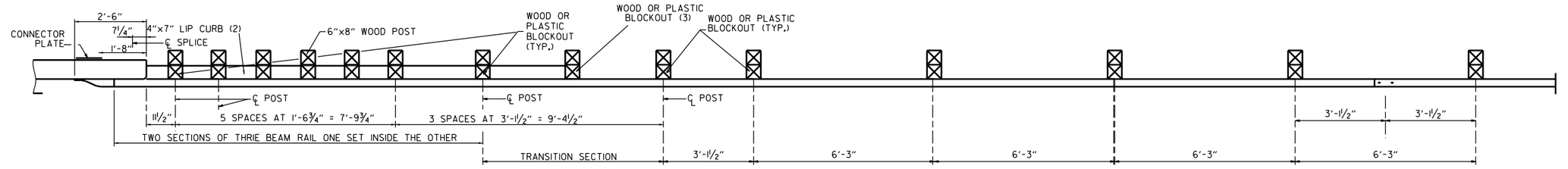
STANDARD DRAWING GR-11



ELEVATION



PLAN



PLAN

(1) VERIFY BOLT SPACING FROM RAIL TRANSITION PRODUCER.
(2) REFER TO APPROACH GUTTER DETAILS.
(3) LENGTH OF BLOCKOUT ON POST 8 TO BE MODIFIED TO FIT RAIL WIDTH.

THRIE BEAM GUARDRAIL CONNECTION AT BRIDGE ENDS

GENERAL NOTES:

THE THRIE BEAM RAIL, SPECIAL END SHOE, AND THE TRANSITION SECTION SHALL BE MADE OF STEEL AND SHALL BE 12 GAGE. ZINC COATING SHALL BE TYPE I.

RAIL POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION.

ALL BOLTS SHALL BE SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN 3/4" BEYOND IT.

ALL LAP SPLICES, INCLUDING SPECIAL END SHOES, SHALL BE MADE IN THE DIRECTION SHOWN ON STANDARD DRAWINGS GR-8 & GR-13.

REFER TO STD. DRWG. GR-11 FOR POST DETAILS.

USE THRIE BEAM GUARDRAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB.

THRIE BEAM POSTS SHALL BE SAME MATERIAL AS W-BEAM POSTS FOR ENTIRE JOB.

POSTS SHALL NOT BE PLACED AT SPLICE LOCATIONS ALONG W-BEAM RAILS.

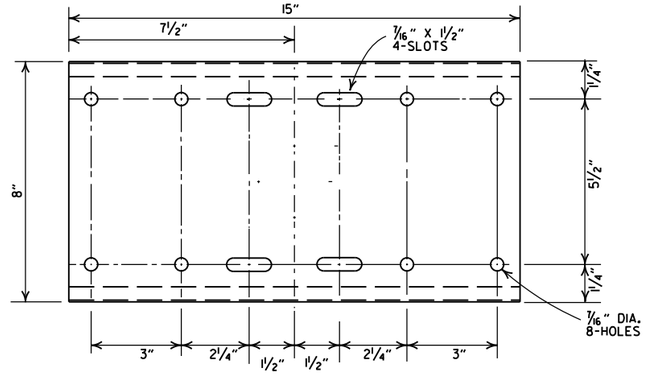
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7f (1400 f) OR NO. 1 1350 f SOUTHERN PINE.

DATE	REVISION	FILMED
05-14-20	REVISED NOTES	
11-07-19	RENAMED & REVISED REFERENCES	
11-16-17	RE-DRAWN FROM STD. DWG. GR-10 & ISSUED	

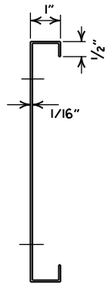
ARKANSAS STATE HIGHWAY COMMISSION

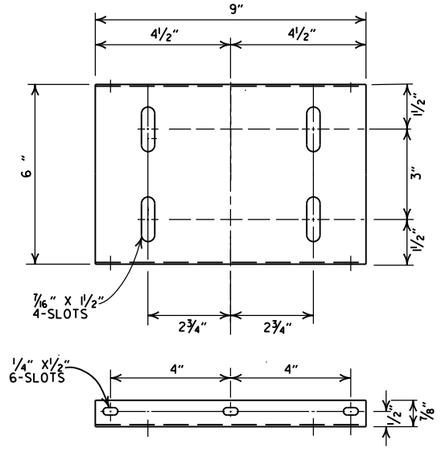
GUARDRAIL DETAILS

STANDARD DRAWING GR-12

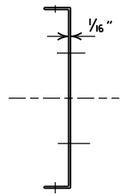


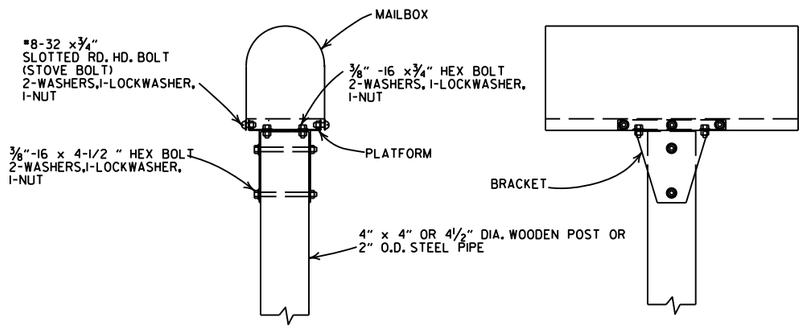
SHELF



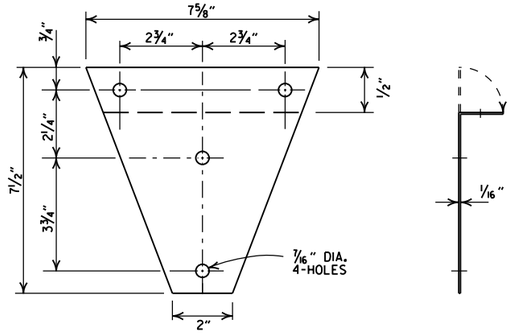


PLATFORM





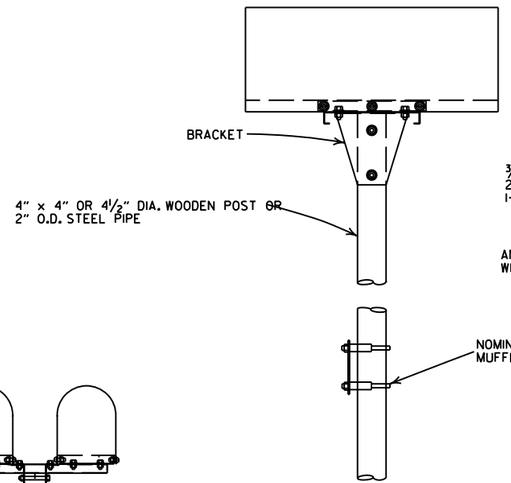
SINGLE INSTALLATION



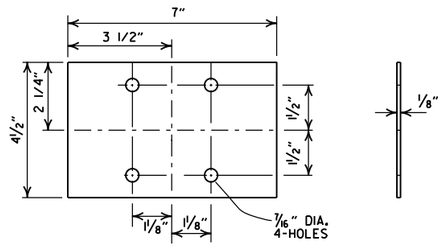
BRACKET

GENERAL NOTES

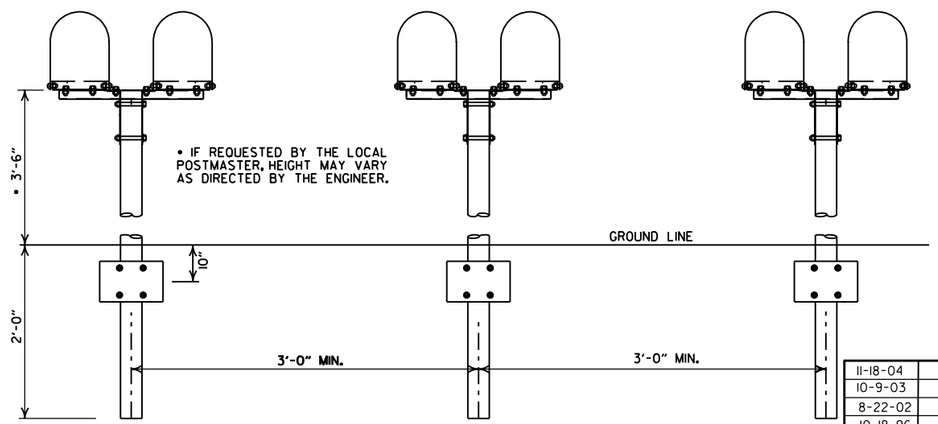
1. MAILBOX POSTS MAY BE WOOD OR METAL. WOOD POSTS SHALL BE PRESSURE TREATED FOR GROUND CONTACT IN ACCORDANCE WITH SECTION 637.02 OF THE STANDARD SPECIFICATIONS.
2. ANTI-TWIST PLATES SHALL BE USED ONLY ON METAL POSTS.
3. MAILBOX SHELF, BRACKET & PLATFORM SHALL BE GALVANIZED OR PAINTED STEEL, HOWEVER TREATED WOOD MAY BE USED WITH WOODEN POSTS. THE WOODEN SHELF, BRACKET & PLATFORM SHALL BE A MINIMUM OF ¾" THICK AND SHALL BE ASSEMBLED WITH BOLTS OF THE APPROPRIATE LENGTH WITH SIX 8 X¾" FLATHEAD WOOD SCREWS USED TO ATTACH THE MAILBOX TO THE PLATFORM.
4. THE MAILBOX SHELF AND PLATFORM THAT IS SHOWN IS FOR STANDARD SIZE MAILBOXES. THE SHELF AND PLATFORM SIZE SHALL BE MODIFIED TO FIT MAILBOXES OF A DIFFERENT SIZE.
5. METAL PIPE FOR MAILBOX SUPPORT SHALL BE 2" OUTSIDE DIAMETER STEEL WITH A WALL THICKNESS OF 0.145" AND A WEIGHT OF 2.72 LBS PER FT. OUTSIDE DIAMETER AND WEIGHT SHALL HAVE A TOLERANCE OF +/- 5% ACCORDING TO AASHTO M 181.
6. MAILBOX SUPPORT SYSTEM DIFFERING FROM THOSE SHOWN MAY BE USED, PROVIDED THEY ARE ON THE ARDOT QUALIFIED PRODUCTS LIST FOR MAILBOX SUPPORTS.



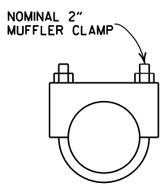
DOUBLE INSTALLATION



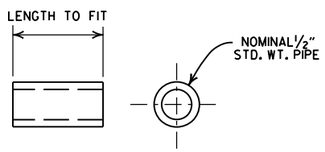
ANTI-TWIST PLATE



SPACING FOR MULTIPLE POST INSTALLATION



CLAMP



SPACER

DATE	FILMED	REVISION
11-18-04		REVISED NOTES
10-9-03		REVISED NOTE 6
8-22-02		REVISED NOTE 6
10-18-96		CORRECTED AASHTO
10-1-92		CORRECTED SPELLING
9-26-91		NEW PHONE NUMBER
8-15-91		ADDED NOTE
11-30-89		ADJUSTED HEIGHT & ADDED NOTE
2-16-89		DELETED SLOTS FROM SHELF & PLTF
11-17-88	10-1-92	ADJUSTED DIMENSIONS OF STEEL POSTS
7-15-88	20-7-15-88	ISSUED

ARKANSAS STATE HIGHWAY COMMISSION

MAILBOX DETAILS

STANDARD DRAWING MB-1

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.

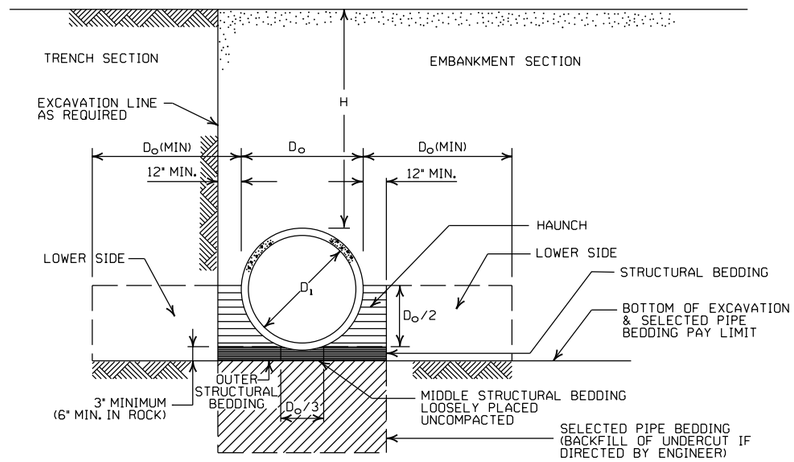
- LEGEND -

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

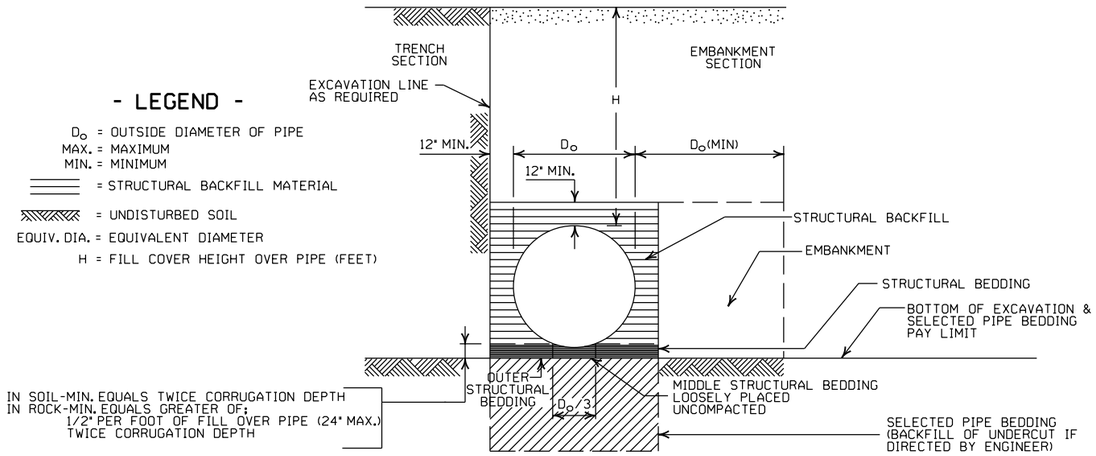
EQUIV. DIA. (INCHES)	PIPE DIMENSION SPAN X RISE (INCHES)	MINUMUM CORNER RADIUS (INCHES)	STEEL				ALUMINUM			
			MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)	MAX. HEIGHT OF FILL, "H" (FT.)		MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)	MAX. HEIGHT OF FILL, "H" (FT.)	
				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"

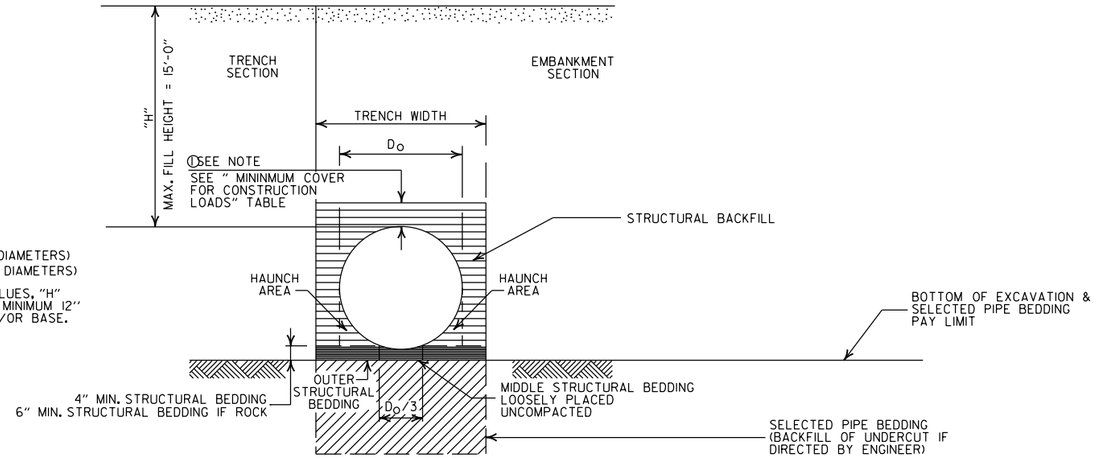
①NOTE:
18" MIN. (18" - 30" DIAMETERS)
24" MIN. (36" - 48" DIAMETERS)

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

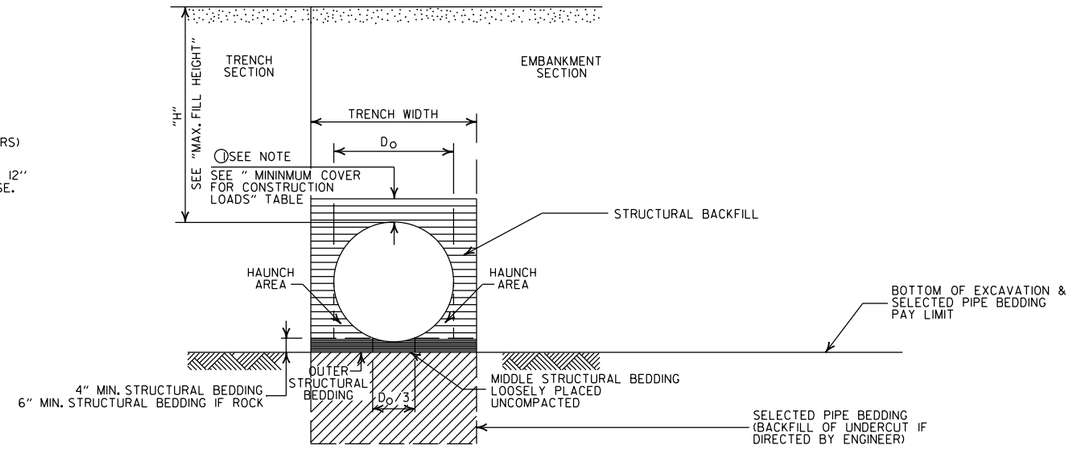
PIPE DIAMETER	"H"
18"	45'-0"
24"	45'-0"
30"	40'-0"
36"	40'-0"

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"

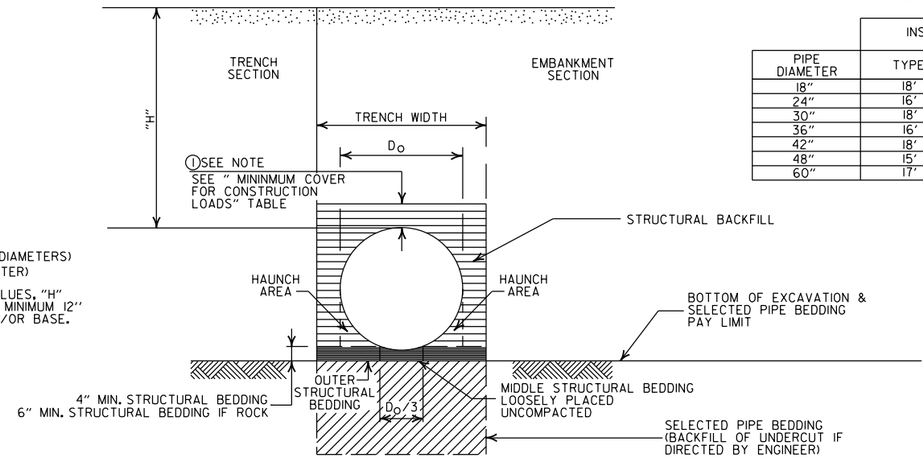
PIPE DIAMETER	TRENCH WIDTH (FEET)	
	"H" < 10'-0"	"H" >OR= 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"
42"	7'-0"	10'-6"
48"	8'-0"	12'-0"
60"	10'-0"	15'-0"

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

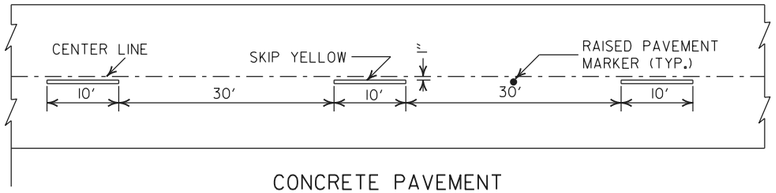
= UNDISTURBED SOIL

DATE	REVISION	DATE FILMED
02-27-20	REVISED	
11-07-19	ISSUED	

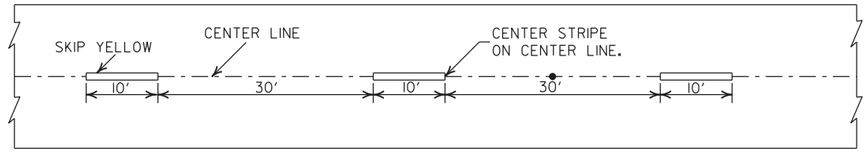
ARKANSAS STATE HIGHWAY COMMISSION

PLASTIC PIPE CULVERT (POLYPROPYLENE)

STANDARD DRAWING PCP-3



CONCRETE PAVEMENT

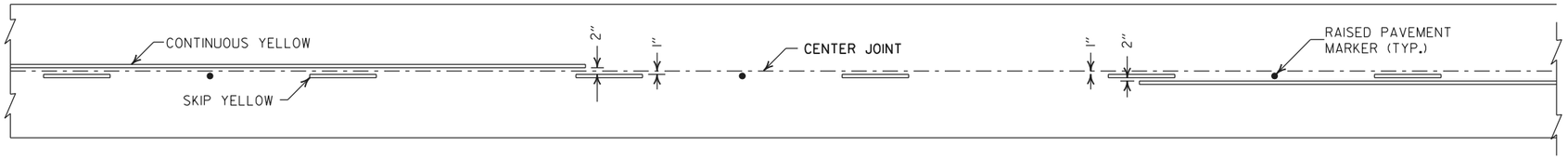


ASPHALT PAVEMENT

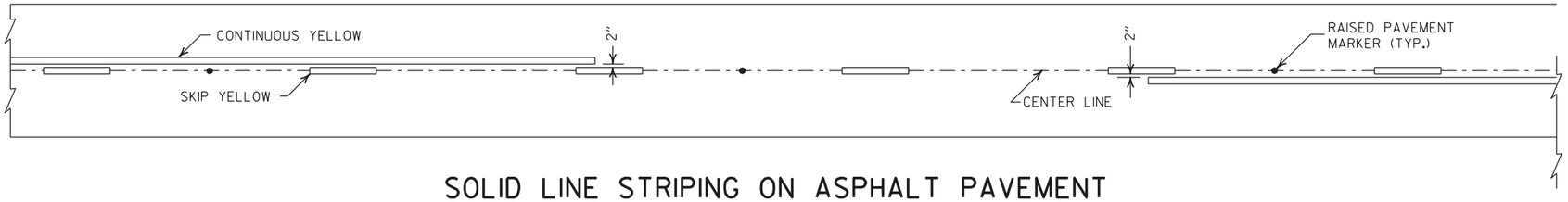
BROKEN LINE STRIPING

NOTES:

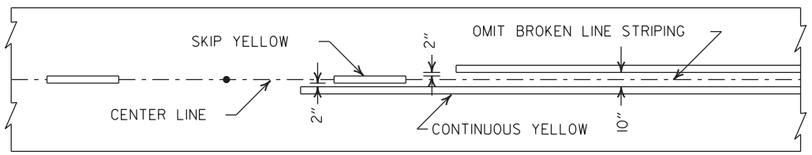
1. REFER TO THE STRIPING DETAILS FOR PAVEMENT MARKING LINE WIDTHS.
2. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
3. RAISED PAVEMENT MARKERS SHALL BE PLACED ON AN 80 FEET SPACING UNLESS OTHERWISE SHOWN IN THE PLANS.



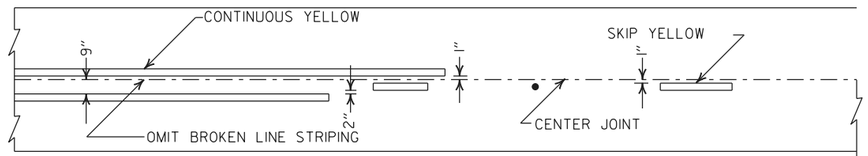
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

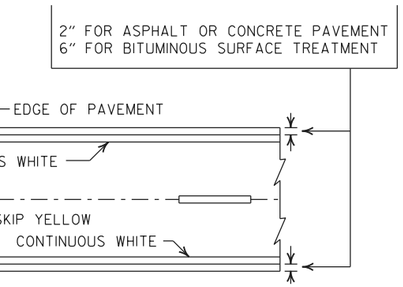


ASPHALT PAVEMENT

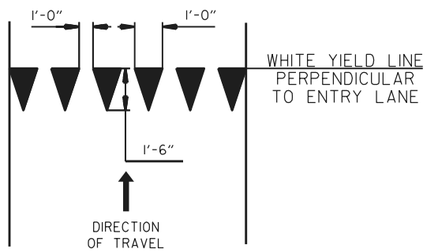


CONCRETE PAVEMENT

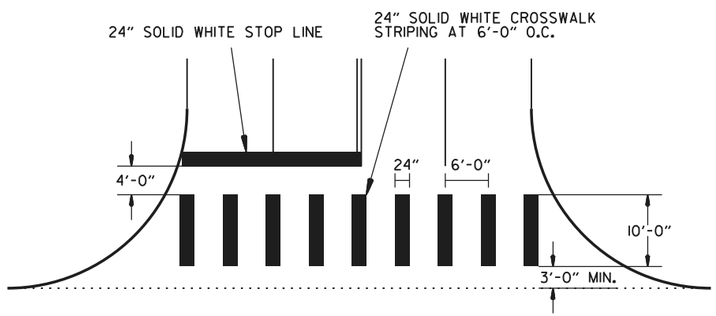
STRIPING AT ADJACENT NO PASSING LANES



PAVEMENT EDGE LINE MARKING



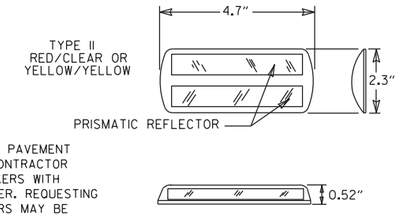
YIELD LINE DETAIL



CROSSWALK AND STOP LINE DETAILS

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

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	REV	DESCRIPTION
04-09-26		REV. CROSSWALK & STOP LINE DETAILS
02-27-20		REV. STOP LINE DETAILS
06-01-17		ADDED YIELD LINE DETAIL
05-12-16		REVISED LINE WIDTHS, SPACING, & NOTES
09-12-13		REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS

ARKANSAS STATE HIGHWAY COMMISSION

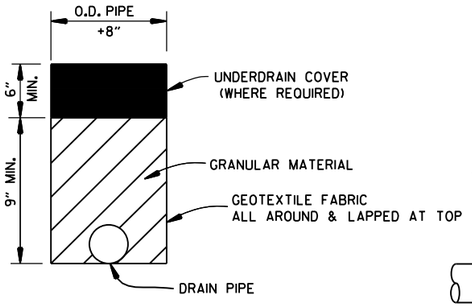
PAVEMENT MARKING DETAILS

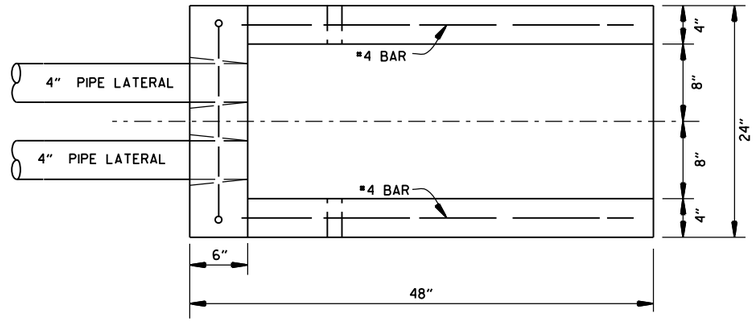
DATE EFFECTIVE 04-09-2026 | STANDARD DRAWING | PM-1

NOTE:

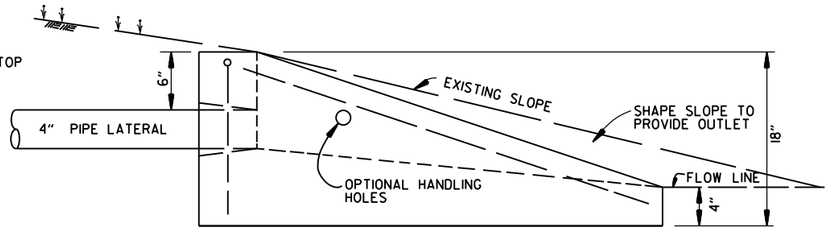
1. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THOROUGHLY COMPACTED EARTH AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.

2. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC. LAP FABRIC 12" OR THE WIDTH OF THE TRENCH AT THE TOP.

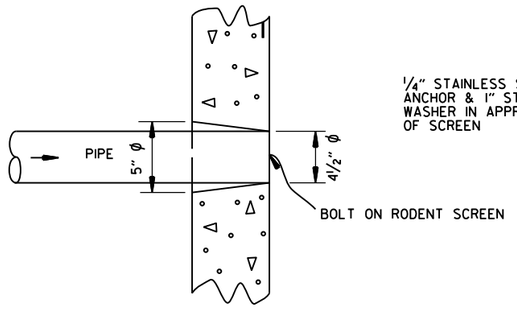




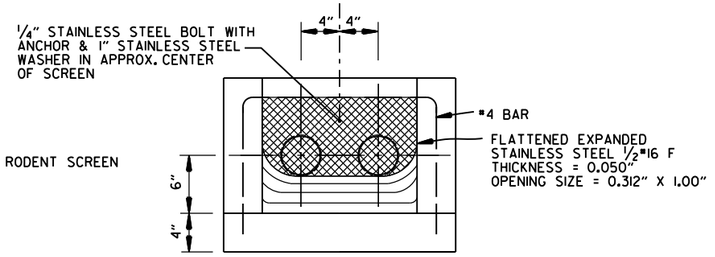
PLAN VIEW



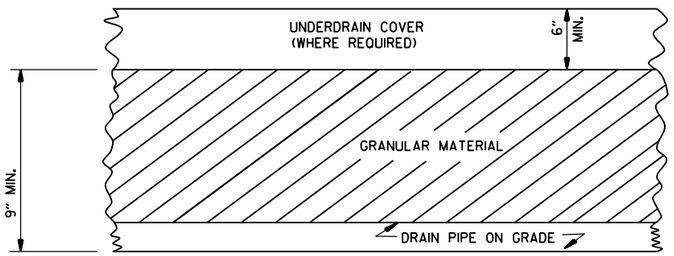
SIDE VIEW



DETAIL OF HOLE
FOR 4" PIPE



FRONT VIEW
(DETAIL OF RODENT SCREEN)



DETAILS OF PIPE UNDERDRAIN

NOTES FOR PIPE UNDERDRAINS

1. GEOTEXTILE FABRIC SHALL MEET THE REQUIREMENTS OF SECTION 625 FOR TYPE 1. PAYMENT FOR GEOTEXTILE FABRIC AND GRANULAR FILTER MATERIAL SHALL BE INCLUDED IN THE PRICE BID PER LIN. FT. FOR "4" PIPE UNDERDRAINS" IN ACCORDANCE WITH SECTION 611 OF THE STANDARD SPECIFICATIONS.

2. 4" NON-PERFORATED SCHEDULE 40 PVC PIPE LATERALS WITH OUTLET PROTECTORS SHALL BE INSTALLED AS SHOWN HEREON. LATERALS WILL BE MEASURED AND PAID FOR AS "4" PIPE UNDERDRAINS." UNDERDRAIN OUTLET PROTECTORS WILL BE MEASURED AND PAID FOR BY THE UNIT IN ACCORDANCE WITH SECTION 611 OF THE STANDARD SPECIFICATIONS.

3. EXISTING 4" PIPE UNDERDRAINS MAY BE CONNECTED TO PROPOSED DROP INLETS OR EXTENDED WHERE DIRECTED BY THE ENGINEER. PAYMENT FOR CONNECTING TO DROP INLETS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR "4" PIPE UNDERDRAINS."

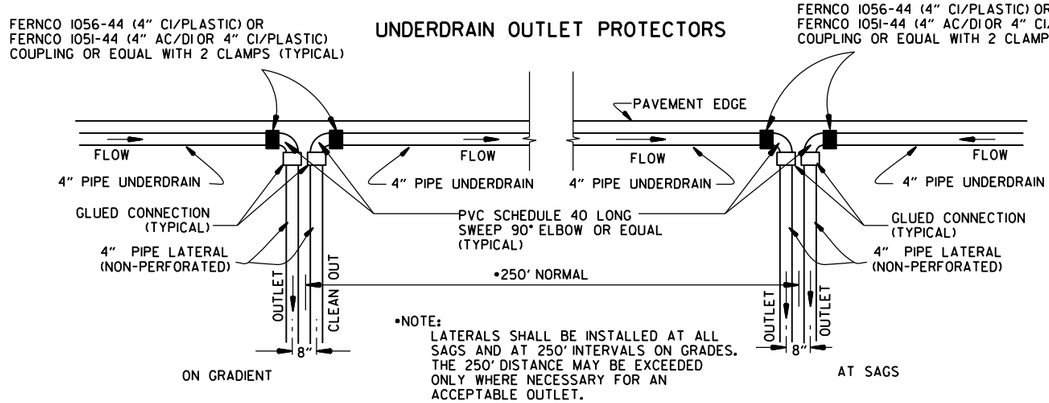
4. THE LOCATION OF ALL LATERALS SHALL BE MARKED WITH 4" X 12" PERMANENT PAVEMENT MARKING TAPE (TYPE III WHITE) AT THE OUTSIDE EDGE OF THE SHOULDER, PLACED TRANSVERSE TO TRAFFIC. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

5. PAYMENT FOR THE RODENT SCREEN SHALL BE INCLUDED IN THE PRICE BID PER EACH FOR "UNDERDRAIN OUTLET PROTECTORS."

6. ANY EXISTING UNDERDRAINS THAT INTERFERE WITH INSTALLATION OF THE NEW UNDERDRAIN SYSTEM SHALL BE REMOVED AND DISPOSED OF AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS. EXISTING UNDERDRAIN OUTLET PROTECTORS SHALL BE REMOVED UNDER THE ITEM "REMOVAL AND DISPOSAL OF UNDERDRAIN OUTLET PROTECTORS."

7. AT LOCATIONS WHERE A SINGLE LATERAL IS USED THE CONTRACTOR SHALL HAVE THE FOLLOWING OPTIONS: 1. INSTALL OUTLET PROTECTOR AS SHOWN ON STANDARD DRAWING PU-1 AND GROUT THE UNUSED HOLE OR 2. INSTALL AN OUTLET PROTECTOR WITH A SINGLE HOLE.

UNDERDRAIN OUTLET PROTECTORS



DETAIL OF PIPE UNDERDRAIN LATERALS
WHEN PLACED ALONG PAVEMENT EDGE

NOTE: PVC PIPE FOR LATERALS SHALL MEET THE REQUIREMENTS OF ASTM D 1785 (LATEST REVISION) FOR SCHEDULE 40 PIPE.

DATE	REVISION	DATE FILMED
12-8-16	ADDED NOTES FOR PIPE UNDERDRAINS, REVISED RODENT SCREEN DETAIL AND NOTES, REMOVED NOTE 1 FOR GRANULAR MATERIAL, ADDED NOTE FOR GEOTEXTILE FABRIC	
4-10-03	REVISED NOTE 3	
1-12-00	REVISED DETAIL OF UNDERDRAIN LATERALS	
11-18-98	REVISED NOTE	
10-18-96	REVISED MIN. DEPTH & GEOTEXTILE FABRIC	
4-26-96	ADDED LATERAL NOTE; 5½" TO 5"	
11-22-95	REVISED LATERALS	
7-20-95	REVISED LATERALS & ADDED NOTE	
11- 3-94	REVISED FOR DUAL LATERALS	11- 3-94
10- 1-92	SUBSTITUTED GEOTEXTILE	10- 1-92
8-15-91	ADDED POLYEDTHYLENE PIPE	8-15-91
11- 8-90	DELETED ALTERNATE NOTE	11- 8-90
1-25-90	ADDED 4" SNAP ADAPTER	1-25-90
11-30-89	DEL. (SUBGRADE); ADDED (WHERE REQUIRED)	11-30-89
7-15-88	ISSUED P.L.M.	647-7-15-88

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF PIPE UNDERDRAIN

STANDARD DRAWING PU-1

SUPERELEVATION TABLE FOR TWO - 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	96		RC	96		RC	96		0.022	101	
0° 45'	NC			NC			NC			NC			RC	96		RC	96		0.024	106		0.026	110		0.030	120		0.032	125	
1° 00'	NC			NC			NC			RC	90		0.022	101		0.026	110		0.030	120		0.034	130		0.038	139	300	0.042	149	300
1° 15'	NC			NC			RC	84		0.022	95		0.028	115		0.032	125		0.038	139		0.042	149		0.046	158		0.052	173	
1° 30'	NC			RC	78		0.022	88		0.028	108		0.032	125		0.038	139		0.044	154		0.050	168	300	0.056	182		0.062	197	
1° 45'	RC	72		RC	78		0.026	97		0.030	113		0.036	134		0.044	154		0.050	168	300	0.056	182		0.064	202		0.070	216	
2° 00'	RC	72		0.024	86		0.028	101		0.034	122		0.042	149		0.048	163		0.056	182		0.064	202		0.070	216		0.080	240	
2° 15'	RC	72		0.026	90		0.032	109		0.038	131		0.046	158		0.054	178	300	0.062	197		0.070	216		0.078	235	350	0.088	259	350
2° 30'	0.022	75		0.028	94		0.034	113		0.042	140		0.050	168		0.058	187		0.068	211		0.076	230		0.086	254		0.096	278	
2° 45'	0.024	79		0.030	98		0.038	122		0.046	149	200	0.054	178		0.064	202		0.072	221		0.082	245		0.092	269		0.100	288	400
3° 00'	0.026	83		0.034	105		0.040	126		0.050	158		0.058	187	250	0.068	211		0.078	235		0.088	259		0.098	283	400	D MAX = 2° 45'		
3° 15'	0.028	86		0.036	109		0.044	134		0.052	162		0.062	197		0.072	221		0.082	245		0.092	269		0.100	288				
3° 30'	0.030	90		0.038	113		0.046	139	200	0.056	171		0.066	206		0.076	230		0.086	254		0.096	278	350	D MAX = 3° 30'					
3° 45'	0.032	93		0.040	117		0.050	147		0.058	176		0.070	216		0.080	240		0.090	264		0.098	283							
4° 00'	0.034	97		0.042	121	200	0.052	151		0.062	185		0.072	221		0.084	250		0.094	274	350	0.100	288							
4° 15'	0.036	100		0.044	125		0.054	155		0.064	189		0.076	230		0.086	254	350	0.096	278		D MAX = 4° 15'								
4° 30'	0.036	100		0.046	129		0.056	160		0.068	198		0.078	235		0.090	264		0.098	283										
4° 45'	0.038	104	200	0.048	133		0.060	168		0.070	203		0.082	245		0.092	269		0.100	288										
5° 00'	0.040	108		0.050	137		0.062	172		0.072	207		0.084	250		0.094	274		D MAX = 5° 15'										
5° 30'	0.044	115		0.054	144		0.066	181		0.078	221	250	0.088	259		0.098	283												
6° 00'	0.046	119		0.058	152		0.070	189		0.082	230		0.092	269		0.100	288												
6° 30'	0.050	126		0.062	160		0.074	198		0.086	239		0.096	278	300	D MAX = 6° 30'													
7° 00'	0.052	130		0.064	164		0.078	206		0.090	248		0.098	283															
7° 30'	0.054	133		0.068	172		0.080	210		0.092	252		0.100	288															
8° 00'	0.058	140		0.070	176		0.084	219		0.094	257	300	D MAX = 8° 25'																
8° 30'	0.060	144		0.072	179		0.086	223	250	0.096	261																		
9° 00'	0.062	148		0.076	187		0.088	227		0.098	266																		
9° 30'	0.064	151		0.078	191		0.092	235		0.100	270																		
10° 00'	0.066	155		0.080	195		0.094	240		D MAX = 10° 30'																			
11° 00'	0.070	162		0.084	203		0.096	244																					
12° 00'	0.074	169		0.088	211	250	0.098	248																					
13° 00'	0.076	173		0.090	215		0.100	252	300	D MAX = 13° 45'																			
14° 00'	0.080	180		0.094	222																								
15° 00'	0.082	184		0.096	226																								
16° 00'	0.086	191		0.098	230																								
17° 00'	0.088	194		0.100	234																								
18° 00'	0.090	198	250	D MAX = 19° 30'																									
19° 00'	0.092	202																											
20° 00'	0.094	205																											
21° 00'	0.096	209																											
22° 00'	0.096	209																											
23° 00'	0.098	212																											
24° 00'	0.098	212																											
25° 00'	0.100	216																											
D MAX = 28° 30'																													

ABBREVIATIONS

NC - NORMAL CROWN
RC - REVERSE CROWN, SUPERELEVATION AT NORMAL CROWN SLOPE
e - RATE OF SUPERELEVATION (FT. PER FT.)
Ls - LENGTH OF SUPERELEVATION TRANSITION (FT.)
L - DISTANCE FROM BEGINNING OF SUPERELEVATION TRANSITION TO ANY POINT (FT.)
d - WIDTH OF PAVEMENT (FT.) OR WIDTH OF SUBGRADE (FT.)
C - NORMAL CROWN (FT.)

GENERAL NOTES

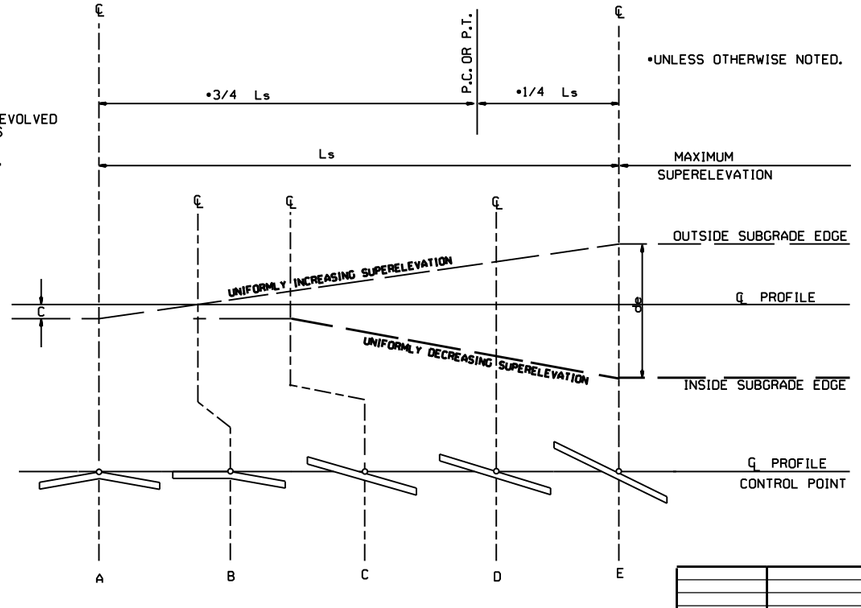
1. ON PAVEMENT WITH TWO-WAY TRAFFIC, THE SUPERELEVATION SHALL BE REVOLVED ON THE INSIDE PAVEMENT EDGE UNLESS OTHERWISE NOTED ON THE PLANS
2. SUPERELEVATION VALUES SHOWN ON THE CROSS SECTIONS ARE VALUES (+) OR (-) TO BE ADDED TO OR SUBTRACTED FROM THE POINT OF CONTROL.
3. LENGTHS FOR L MAY BE ROUNDED IN MULTIPLES OF 25 FT. OR 50 FT. TO PERMIT SIMPLER CALCULATIONS.
4. PAVEMENTS WIDER THAN 2 LANES SHALL HAVE ADDITIONAL TRANSITION LENGTHS AS FOLLOWS:

3 LANE UNDIVIDED - - - - - +20%
4 LANE UNDIVIDED - - - - - +50%
5 LANE UNDIVIDED - - - - - +80%
6 LANE UNDIVIDED - - - - - +100%

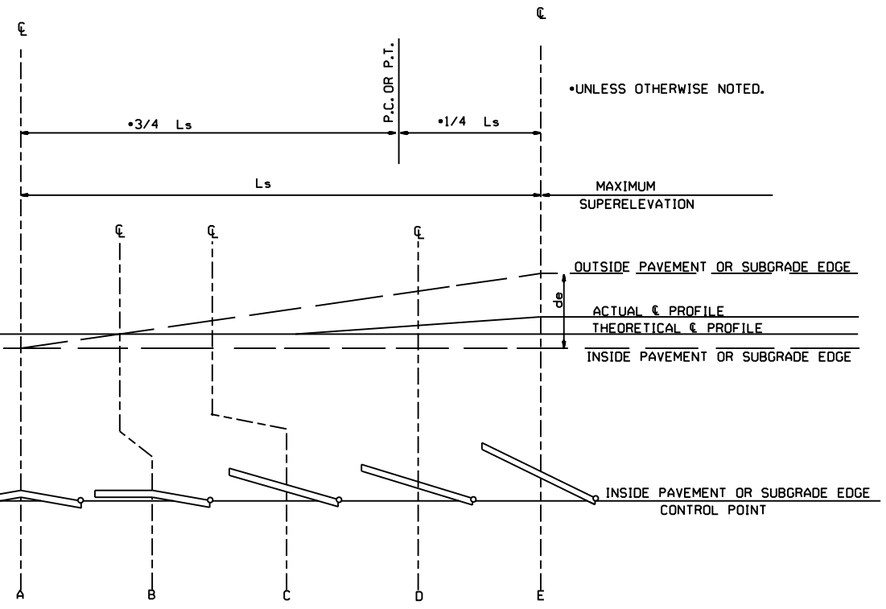
NOTE: MAINTAIN NORMAL CROWN ON INSIDE UNTIL SUPERELEVATION EXCEEDS 2C.

RATE OF SUPERELEVATION SHALL BE COMPUTED ON STRAIGHT LINE METHOD USING APPLICABLE Ls.

SUPERELEVATION FORMULA = $\frac{Lde}{Ls}$



STANDARD METHOD WHEN SUPERELEVATION REVOLVES AROUND CENTER LINE



STANDARD METHOD WHEN SUPERELEVATION REVOLVES AROUND INNER SUBGRADE POINT OR INNER PAVEMENT EDGE

NOTE: MAINTAIN NORMAL CROWN ON INSIDE UNTIL SUPERELEVATION EXCEEDS 2C.

DATE	REVISION	DATE FILLMED
11-07-19	REVISED SUPERELEVATION TABLE	
10-18-96	ADDED FORMULA	
01-09-87	ISSUED	534-1-9-87

ARKANSAS STATE HIGHWAY COMMISSION

TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC

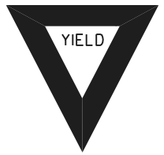
STANDARD DRAWING SE-2

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



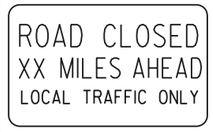
STD. 30"X30"
EXPWY. 36"X36"
SPECIAL 48"X48"

RII-2



48"X30"

RII-3A



60"X30"

RII-4



60"X30"

W21-5a



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

W1-1



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

W1-2



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

R2-11



36"X48"

W1-3



STD. 48"X48"

W1-4



STD. 48"X48"

W1-6



STD. 48"X24"
SPECIAL 60"X30"

W1-8



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

W3-1



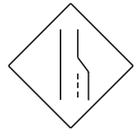
STD. 36"X36"
SPECIAL 48"X48"

W3-2



STD. 36"X36"
SPECIAL 48"X48"

W4-2



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

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"

W13-1



STD. 24"X24"

W20-1



STD. 48"X48"

W20-2



STD. 48"X48"

W20-3



STD. 48"X48"

W20-4



STD. 48"X48"

W20-5



STD. 48"X48"

W20-7a



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

W21-2



STD. 30"X30"
SPECIAL 36"X36"

W21-5



STD. 30"X30"
SPECIAL 36"X36"

W24-1



STD. 36"X36"

W1-4b



STD. 48"X48"

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.

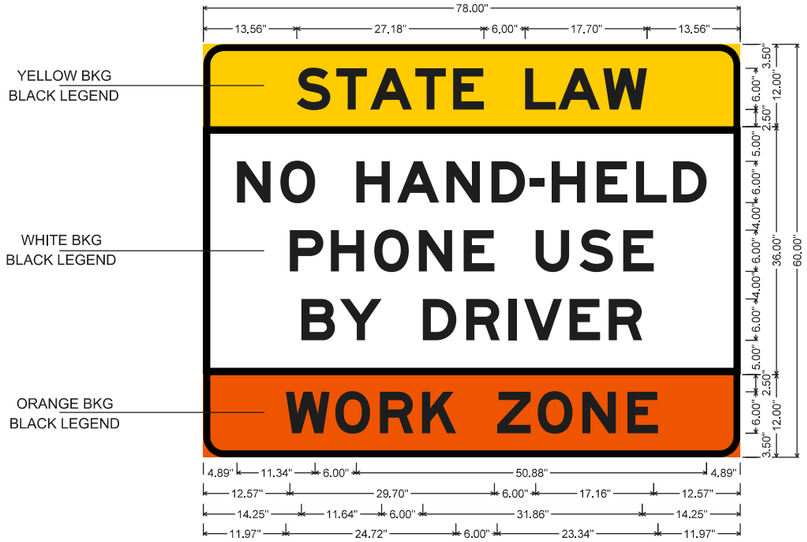
DATE REV	DESCRIPTION
08-14-25	REPLACED R55-1 WITH R2-6aP, ADDED R2-11 & REVISED NOTE 10
11-07-19	REVISED FOR MASH
04-13-17	DELETED RSP-1 & ADDED W21-5a
09-02-15	REVISED REDUCED SPEED LIMIT AHEAD SIGNS, REVISED ROAD WORK NEXT XX MILES
12-15-11	REVISED W24-1

ARDOT ARKANSAS DEPARTMENT OF TRANSPORTATION

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

DATE EFFECTIVE	STANDARD DRAWING	TC-1
08-14-2025		

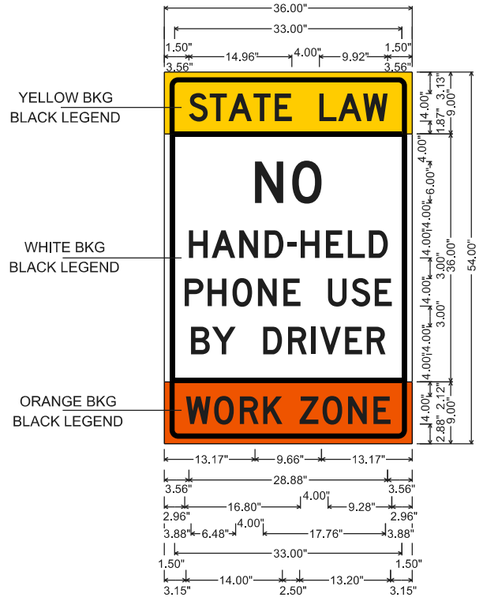


3.0" Radius, 1.0" Border, Black on Yellow;
"STATE LAW", E Mod 2K;

3.0" Radius, 1.0" Border, Black on White;
"NO HAND-HELD", E Mod 2K; "PHONE USE", E Mod 2K; "BY DRIVER", E Mod 2K;

3.0" Radius, 1.0" Border, Black on Orange;
"WORK ZONE", E Mod 2K;

WZ-4 (INTERSTATE) SIGN

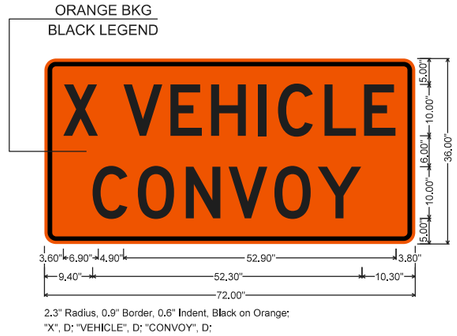


2.00" Radius, 0.75" Border, 0.75" Indent, Black on Yellow;
"STATE LAW", D 2K;

3.00" Radius, 0.75" Border, 0.75" Indent, Black on White;
"NO", D 2K; "HAND-HELD", D 2K;
"PHONE USE", D 2K;
"BY DRIVER", D 2K;

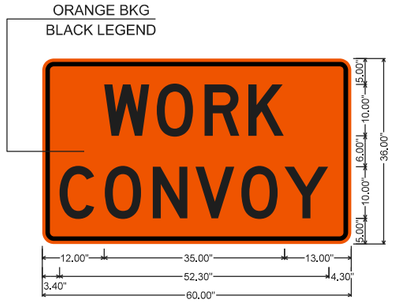
2.00" Radius, 0.75" Border, 0.75" Indent, Black on Orange;
"WORK", D 2K; "ZONE", D 2K;

WZ-4 (NON-INTERSTATE) SIGN



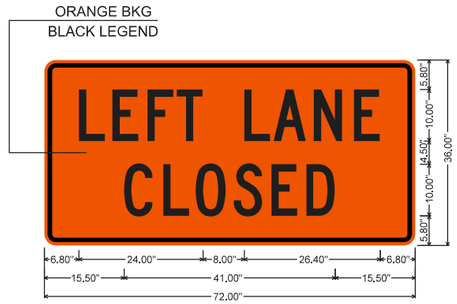
2.3" Radius, 0.9" Border, 0.6" Indent, Black on Orange;
"X", D; "VEHICLE", D; "CONVOY", D;

WZ-2 SIGN



2.3" Radius, 0.9" Border, 0.6" Indent, Black on Orange;
"WORK", D; "CONVOY", D;

WZ-3 SIGN



2.3" Radius, 0.9" Border, 0.6" Indent, Black on Orange;
"LEFT LANE", C; "CLOSED", C;

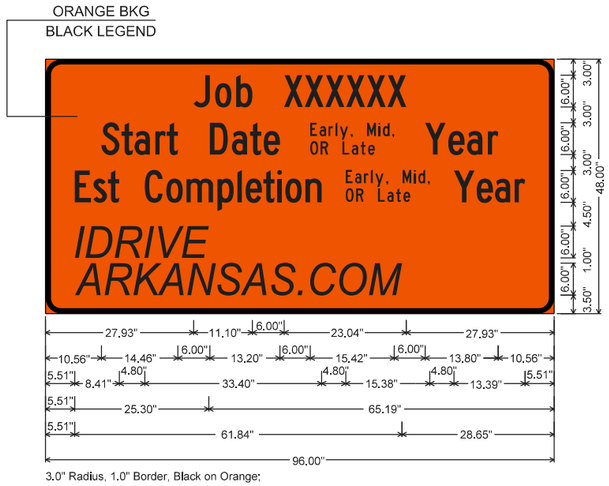
WZ-W20-5L SIGN



2.3" Radius, 0.9" Border, 0.6" Indent, Black on Orange;
"RIGHT", C specified length; "LANE", C specified length;
"CLOSED", C specified length;

WZ-W20-5R SIGN

NOTE: REFER TO STANDARD DRAWING TC-1 FOR GENERAL NOTES.



3.0" Radius, 1.0" Border, Black on Orange;
"Job XXXXXX" C 2K; "Start Date Xxxx Year" C 2K;
"Est Completion Xxxx Year" C 2K 80% spacing;
"IDRIVE" Arial, Italic; "ARKANSAS.COM" Arial, Italic;

CONSTRUCTION PROJECT INFORMATION SIGN



WZ-1 (INTERSTATE) SIGN



2.3" Radius, 0.9" Border, 0.6" Indent, Black on Orange;
"CENTER LANE", B 2K; "CLOSED", C;

WZ-W20-5C SIGN

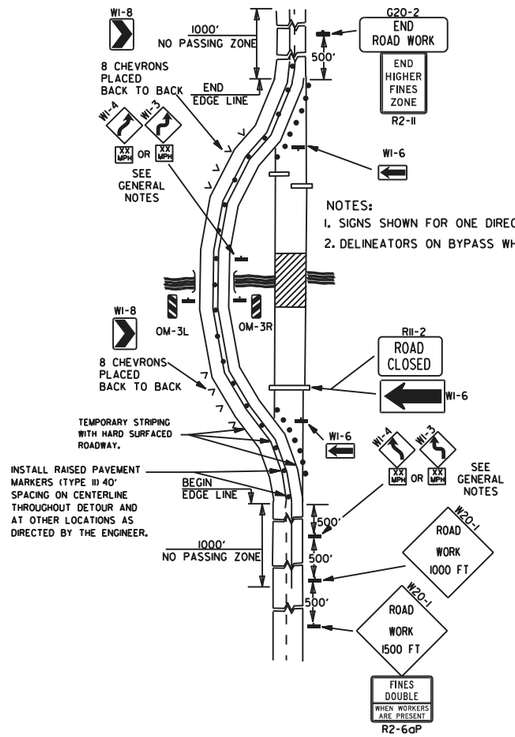
MOBILE WORK ZONE SIGNS

DATE REV	DESCRIPTION
04-09-26	ISSUED

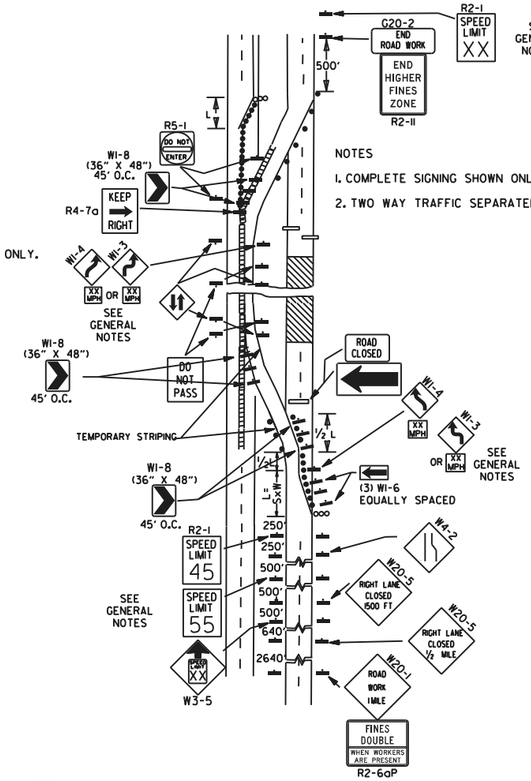
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

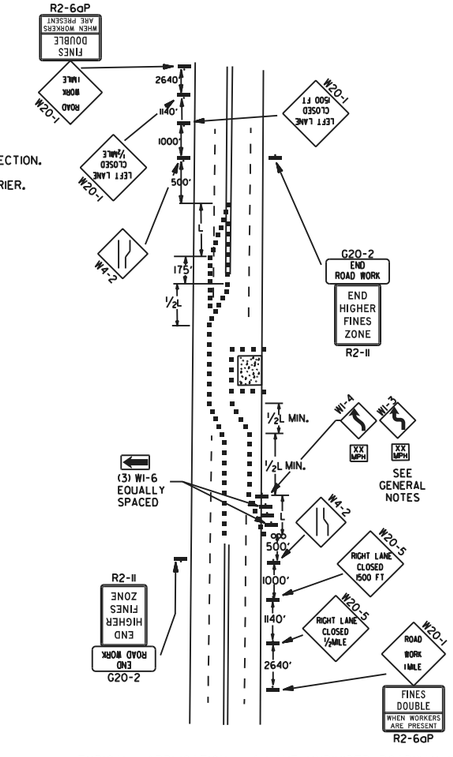
DATE EFFECTIVE	STANDARD DRAWING	TC-1A
04-09-2026		



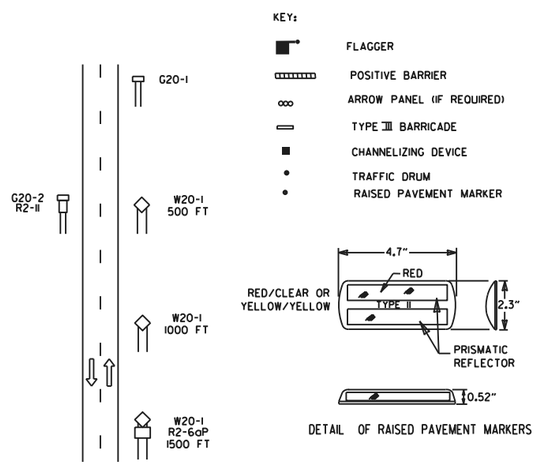
(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.



(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:

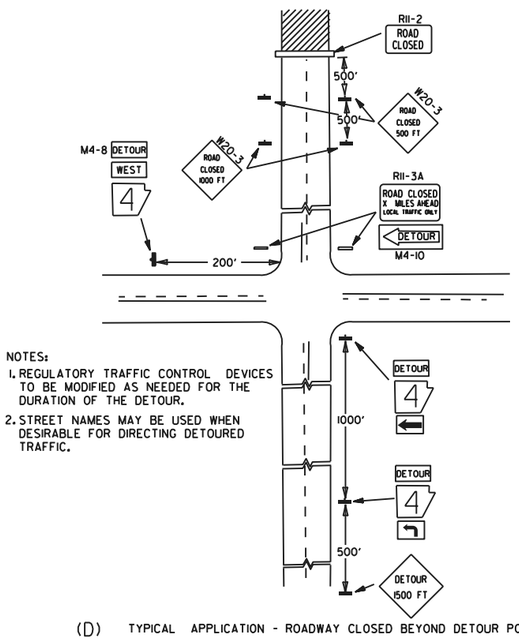
L= MINIMUM LENGTH OF TAPER.

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

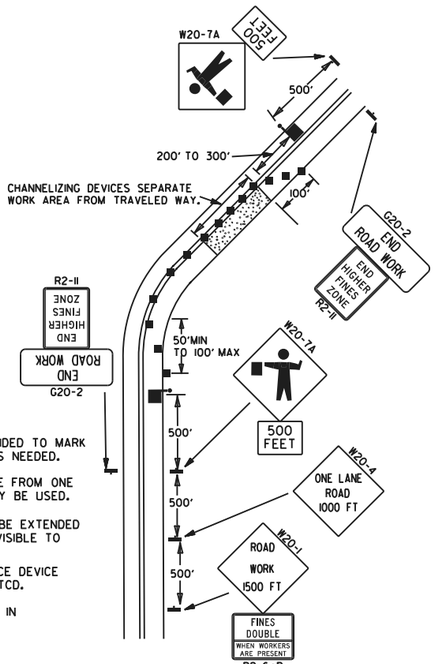
W= WIDTH OF OFFSET.

GENERAL NOTES:

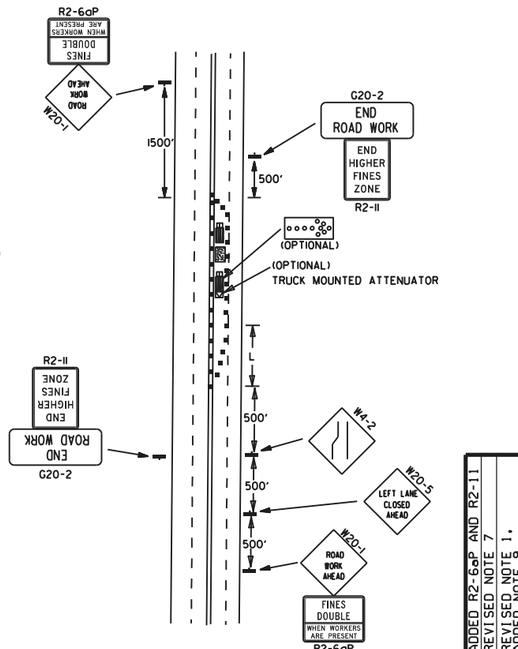
1. THE MAINTENANCE DIVISION SHALL CONDUCT A BALL BANK STUDY TO DETERMINE THE ADVISORY SPEED LIMIT PRIOR TO OPENING TO TRAFFIC. THE ADVISORY SPEED WILL BE POSTED ON W1-3 OR W1-4 CURVE WARNING SIGNS. USE W1-4 WHEN SPEED IS GREATER THAN 30MPH AND W1-3 WHEN 30MPH OR LESS
2. WHEN THE EXISTING SPEED LIMIT 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.



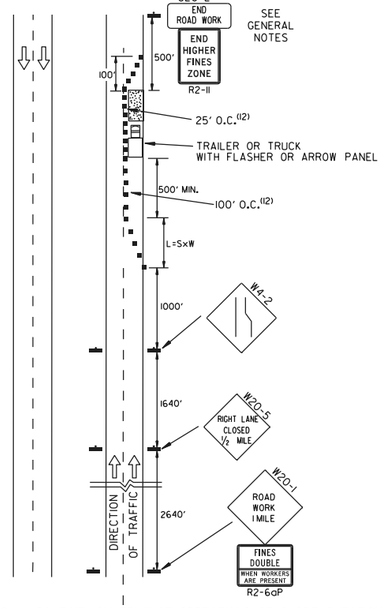
(F) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WITH INSIDE LANE CLOSED.

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

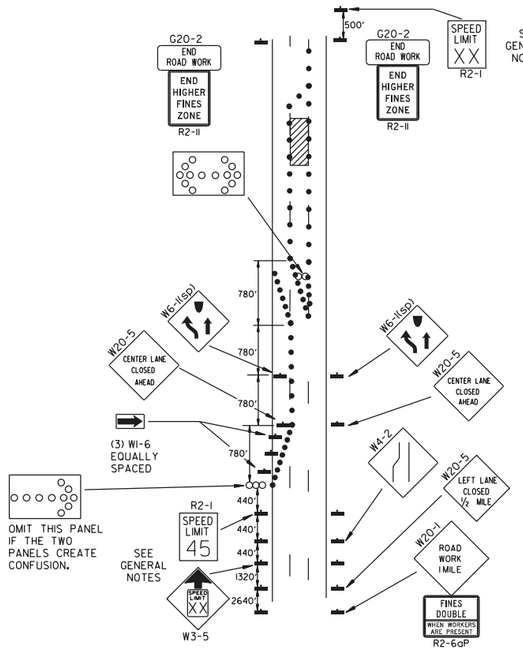
ARKANSAS STATE HIGHWAY COMMISSION

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.

KEY:

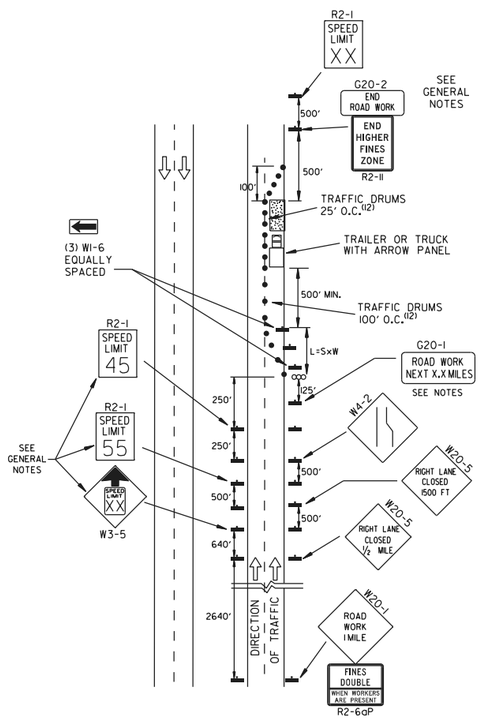
○○○ ARROW PANEL (IF REQUIRED)

■ CHANNELIZING DEVICE

● TRAFFIC DRUM

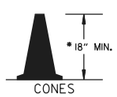
GENERAL NOTES:

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.

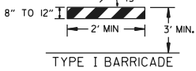


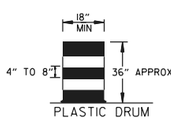
(C) TYPICAL APPLICATION - CONSTRUCTION OPERATIONS OF INTERMEDIATE TO LONG TERM DURATION ON A 4-LANE DIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.

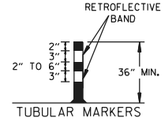
CHANNELIZING DEVICES

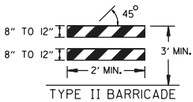


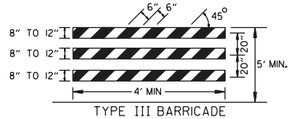
* WHEN CONES ARE USED ON FREEWAYS AND MULTI-LANE HIGHWAYS, THEY SHALL BE 28" MIN. DURING HOURS OF DARKNESS, 28" CONES SHALL BE USED ON ALL ROADWAYS, AND SHALL BE REFLECTORIZED IN ACCORDANCE WITH THE M.U.T.C.D.



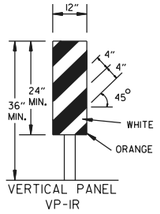


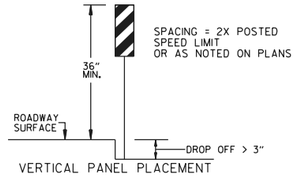


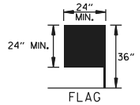




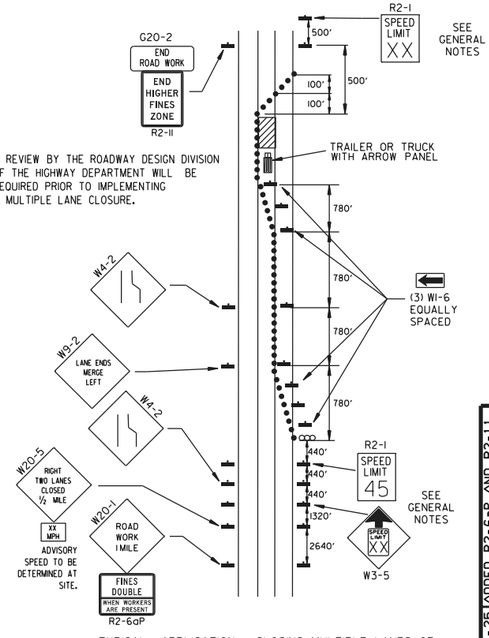
NOTE:
FOR ALL ROAD CLOSURES, THE TYPE III BARRICADES SHALL BE OF SUFFICIENT LENGTH TO EXTEND ACROSS ENTIRE ROADWAY.







FLAG SHALL BE OF GOOD GRADE RED MATERIAL



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

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

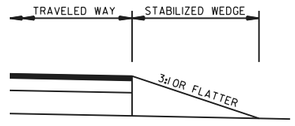
VERTICAL DIFFERENTIAL	LOCATION	TRAFFIC CONTROL
≤ 3"	CENTERLINE	W8-11 AND LANE STRIPING
≤ 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-9, EDGE LINE STRIPING, AND TRAFFIC DRUMS(2)
> 3" ≤ 6"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS(2)
> 6"	EDGE OF TRAVELED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

INTERSTATE AND NON-INTERSTATE

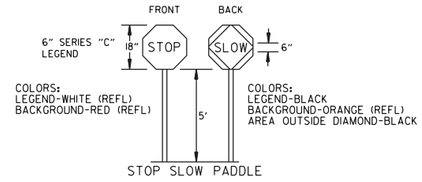
FORESLOPE	HEIGHT	TRAFFIC CONTROL
1:1	> 2 FT	PRECAST CONCRETE BARRIER
2:1	≤ 5 FT	TRAFFIC DRUMS
2:1	> 5 FT	PRECAST CONCRETE BARRIER
Flatter than 2:1	N/A	TRAFFIC DRUMS

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).



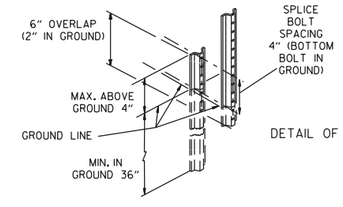
NOTE:
MATERIALS FOR THE STABILIZED WEDGE SHALL MEET THE REQUIREMENTS PROVIDED IN SECTION 603.02 OF THE STANDARD SPECIFICATIONS.

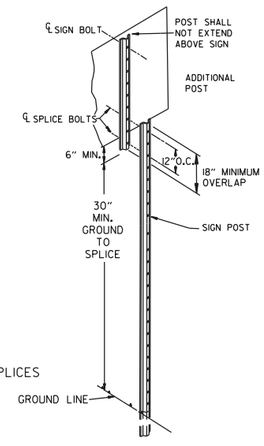


NOTES:
USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-2)

NORMAL INSTALLATIONS WILL REQUIRE 1/4" DIA. BOLTS TO MOUNT SIGNS TO POST AND 5/16" DIA. BOLTS TO ASSEMBLE THE VARIOUS POST SUPPORTS. EACH OF THESE BOLTS SHALL BE CARRIAGE BOLTS.

SIGN POSTS SHALL BE PAINTED GREEN; SIGNS SHALL NOT BE PAINTED, AND ALL SIGN POSTS SHALL BE PLUMB.





DATE 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

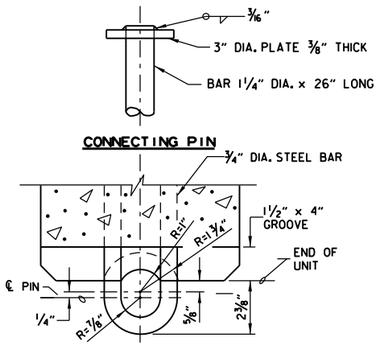
DATE EFFECTIVE 08-14-2025

STANDARD DRAWING

TC-3

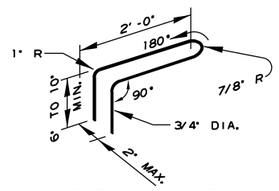
REINFORCING BAR TABLE PER BARRIER UNIT

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"

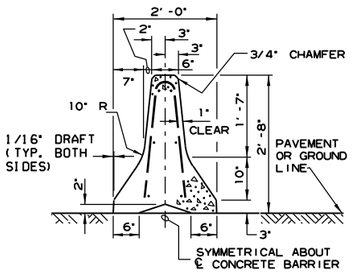


SECTION E-E

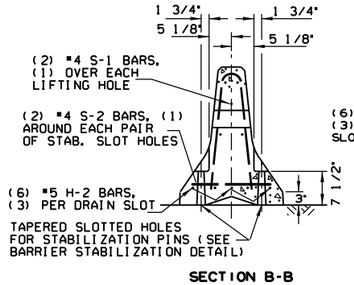
CONNECTION DETAILS



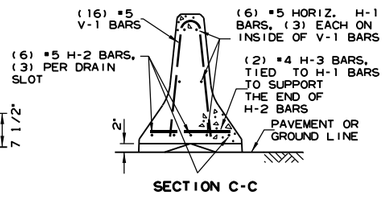
CONNECTION LOOP



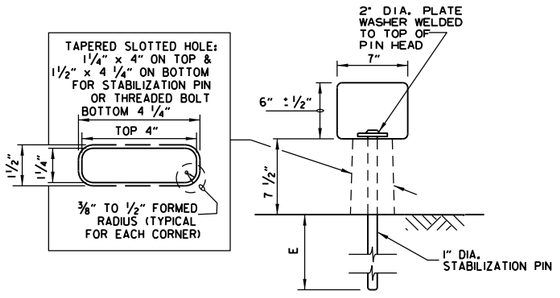
SECTION A-A



SECTION B-B



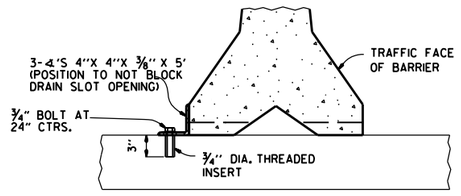
SECTION C-C



BARRIER STABILIZATION DETAIL

ROADWAY SECTION

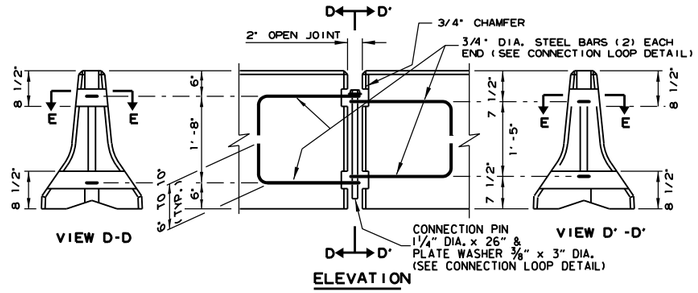
(E) 4" - CONCRETE PAVEMENT
8" - ASPHALT PAVEMENT
12" - SHOULDER AREAS



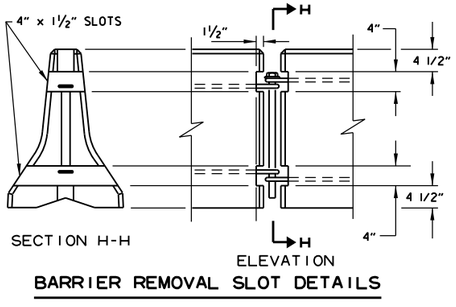
NOTE: " THREADED INSERTS SHALL BE CAST IN PLACE FOR ALL NEW BRIDGE DECKS AND DRILLED AND GROUTED FOR EXISTING BRIDGE DECKS. INSERTS SHALL HAVE A MINIMUM ULTIMATE LOAD CAPACITY OF 8000 LBS. IN TENSION. AFTER REMOVAL OF BARRIER, BOLTS, AND ANGLES, THE INSERTS SHALL BE FILLED WITH APPROVED NON-SHRINK EPOXY.

BARRIER STABILIZATION DETAIL

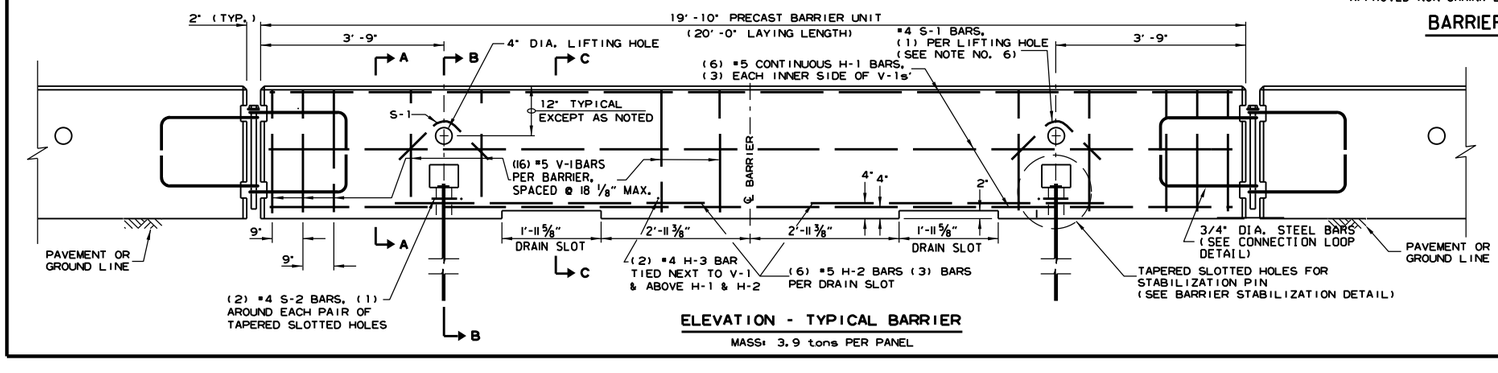
BRIDGE DECKS



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.

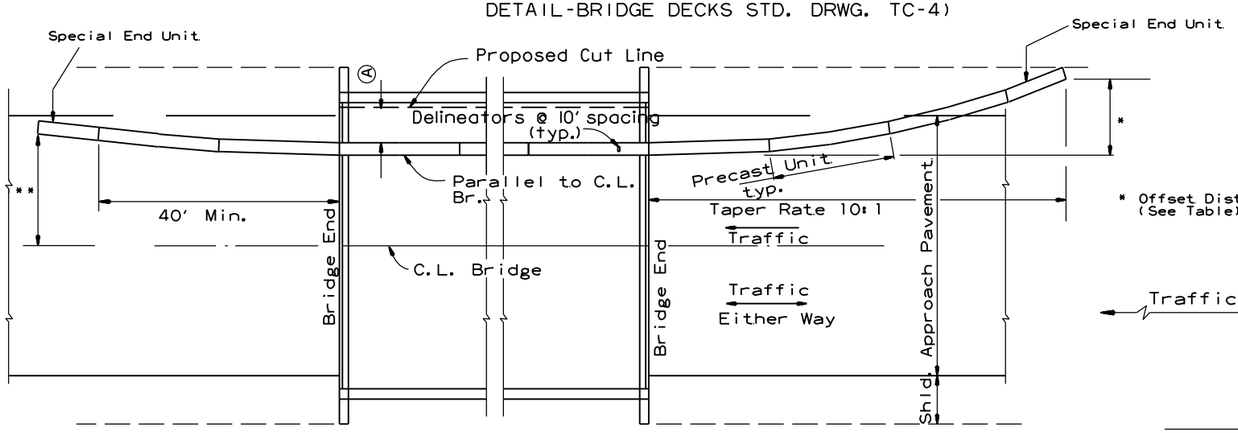
DATE	REVISION	FILMED
11-07-19	REVISED NOTE 3	
2-27-14	REVISED BARRIER STABILIZATION DETAIL	
10-15-09	ADDED REFERENCE TO WASH	
8-5-09	REV. NOTE 3 CONCERNING DRAIN SLOTS	
11-29-07	REVISED NOTE 3	
5-25-06	DELETED GENERAL NOTE 7	
11-18-04	REVISED BARRIER STABILIZATION DETAIL BRIDGE DECKS	
4-10-03	REVISED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

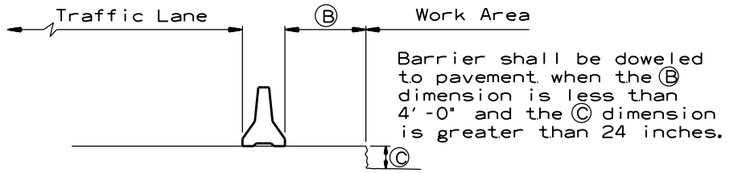
Ⓐ 4 feet or greater preferred. If less than 4 feet, Precast Units shall be connected to slab (SEE BARRIER STABILIZATION DETAIL-BRIDGE DECKS STD. DRWG. TC-4)



* Offset Distance (See Table)

BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET

No Scale

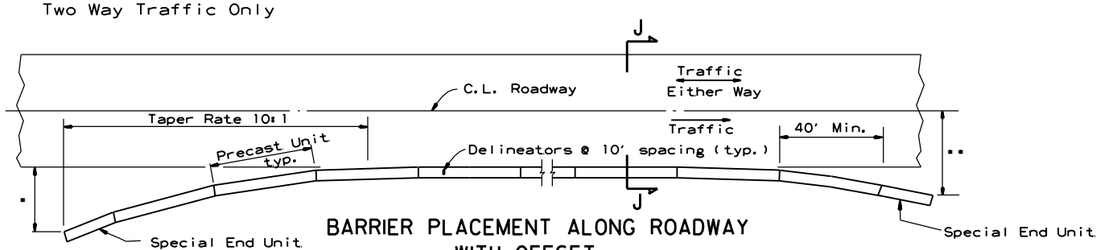


Barrier shall be doweled to pavement when the Ⓑ dimension is less than 4'-0" and the Ⓒ dimension is greater than 24 inches.

SECTION J-J

No Scale

** Offset Distance for Two Way Traffic Only



BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET

No Scale

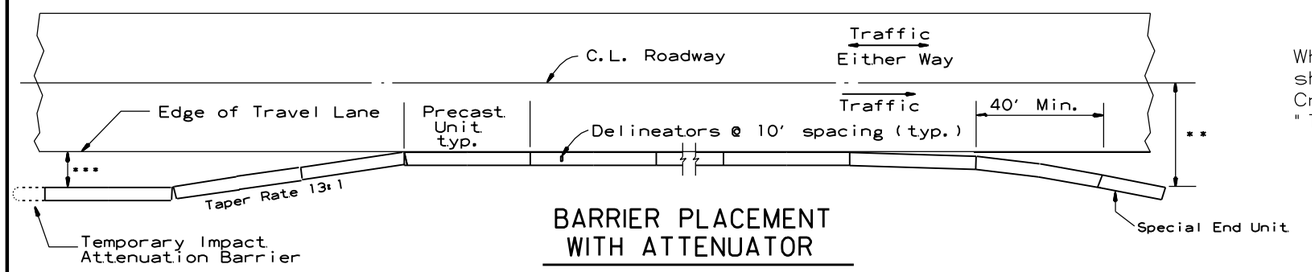
* Offset Distance (See Table)

** 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.

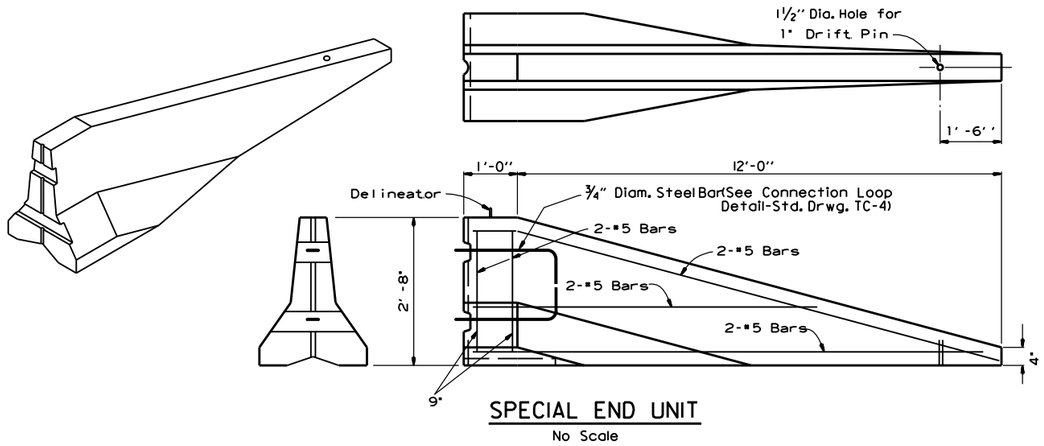


BARRIER PLACEMENT WITH ATTENUATOR

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."

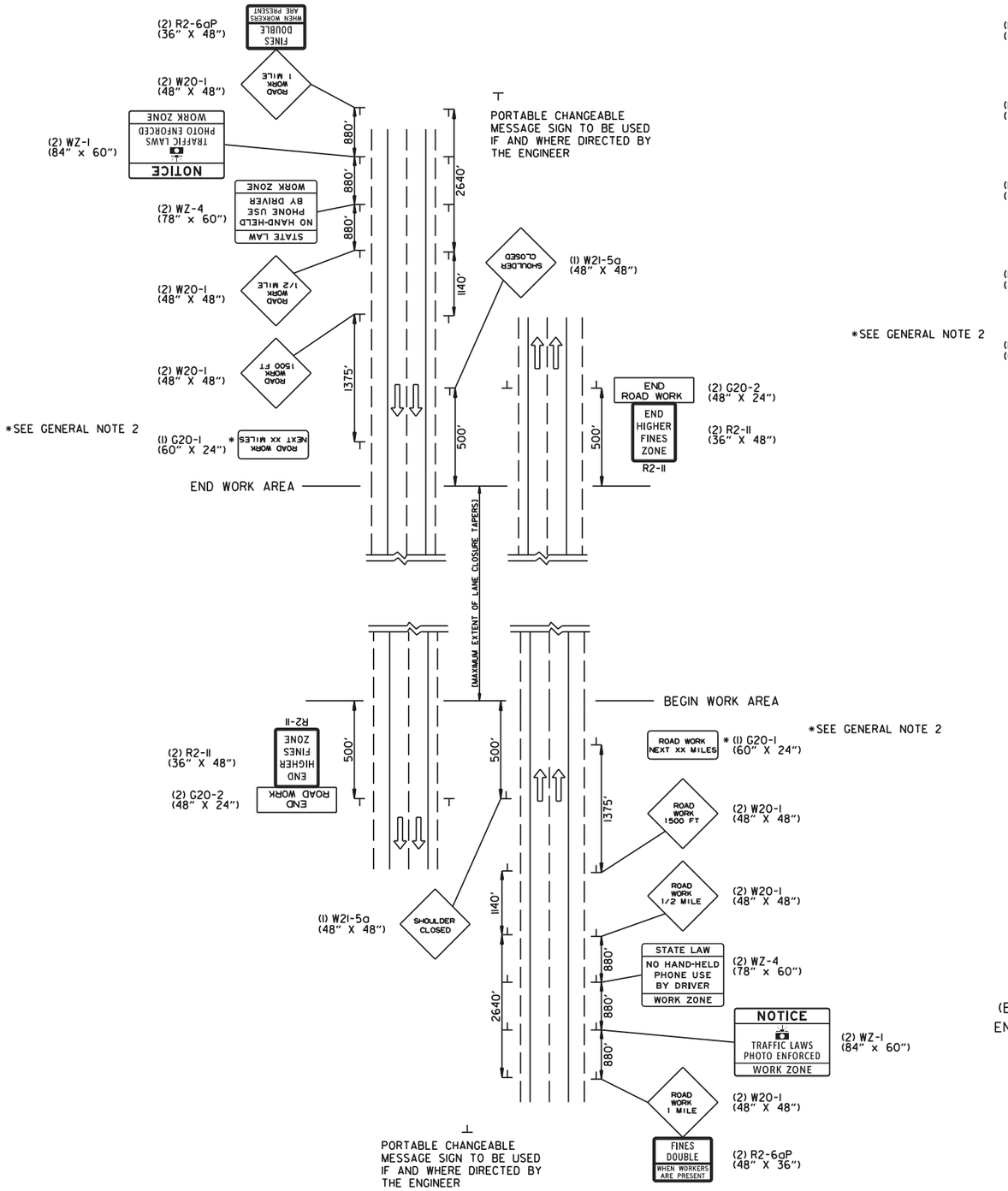
DATE	REVISION	FILMED
11-07-19	REVISED NOTE	
10-15-09	ADDED REFERENCE TO MASH	
5-25-06	REVISED BARRIER PLACEMENT	
8-22-02	ISSUED NEW DRAWING	

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

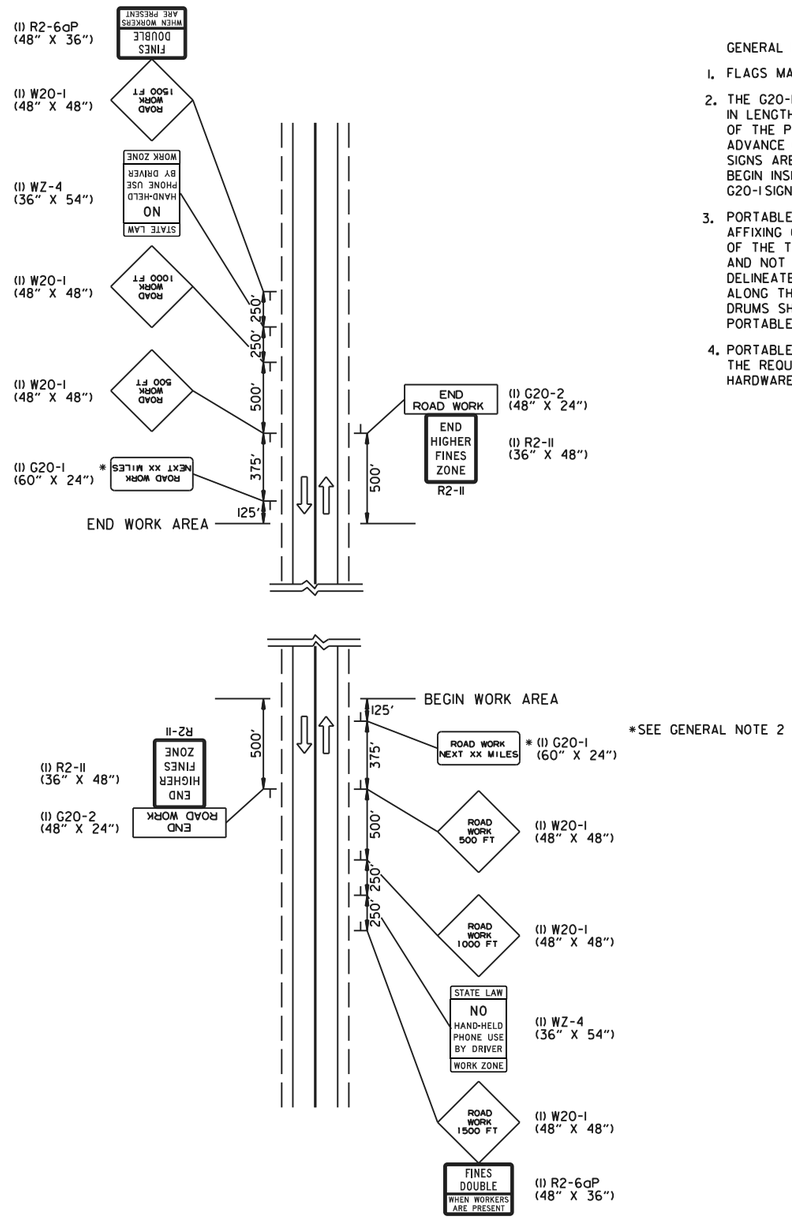
STANDARD DRAWING TC-5

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. FLAGS MAY BE MOUNTED TO SIGNS 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	DESCRIPTION
08-14-25	ISSUED
11-06-25	REPLACED "SPEED" WITH "TRAFFIC LAWS" ON WZ-1
01-22-26	ADDED WZ-4 AND REVISED GENERAL NOTE 1
04-09-26	CORRECTED WZ-4 SIGN DIMENSIONS

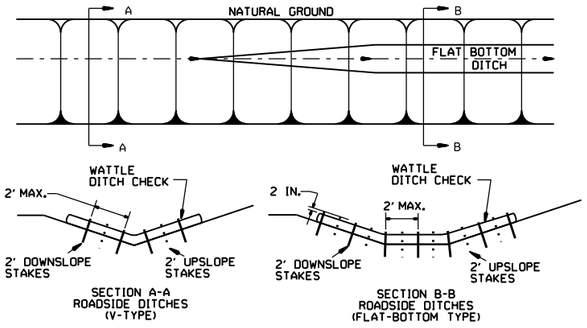
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

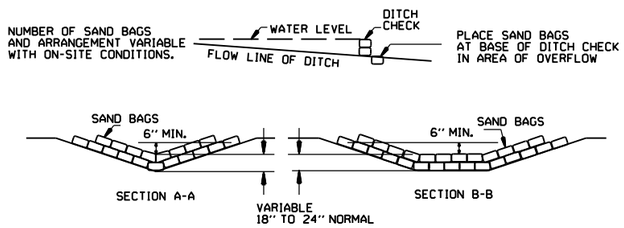
DATE EFFECTIVE	STANDARD DRAWING	TC-6
04-09-2026		

GENERAL NOTES

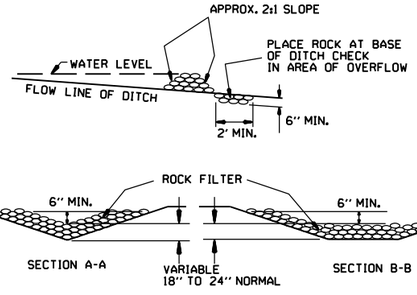
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



SAND BAG DITCH CHECK (E-5)

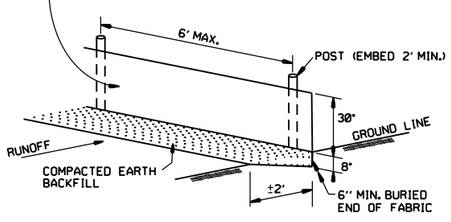


ROCK DITCH CHECK (E-6)

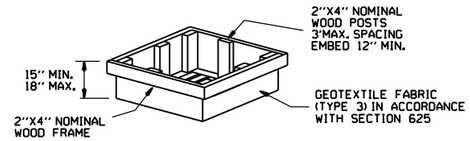
GENERAL NOTES

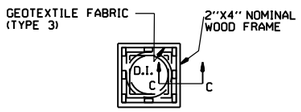
GEOTEXTILE FABRIC (TYPE 4) IN ACCORDANCE WITH SECTION 625

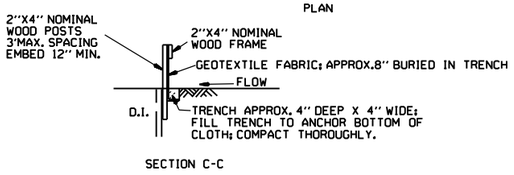
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.



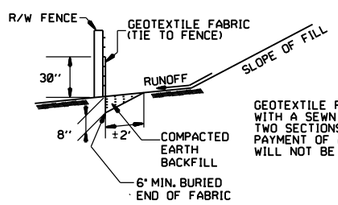
SILT FENCE (E-11)





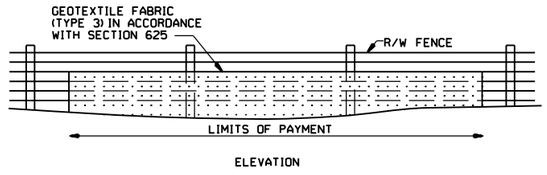


DROP INLET SILT FENCE (E-7)



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.



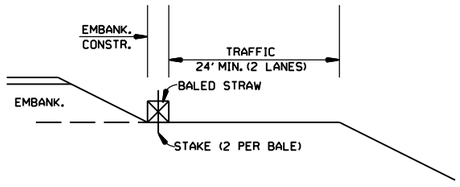
SILT FENCE ON R/W FENCE (E-4)

GENERAL NOTES

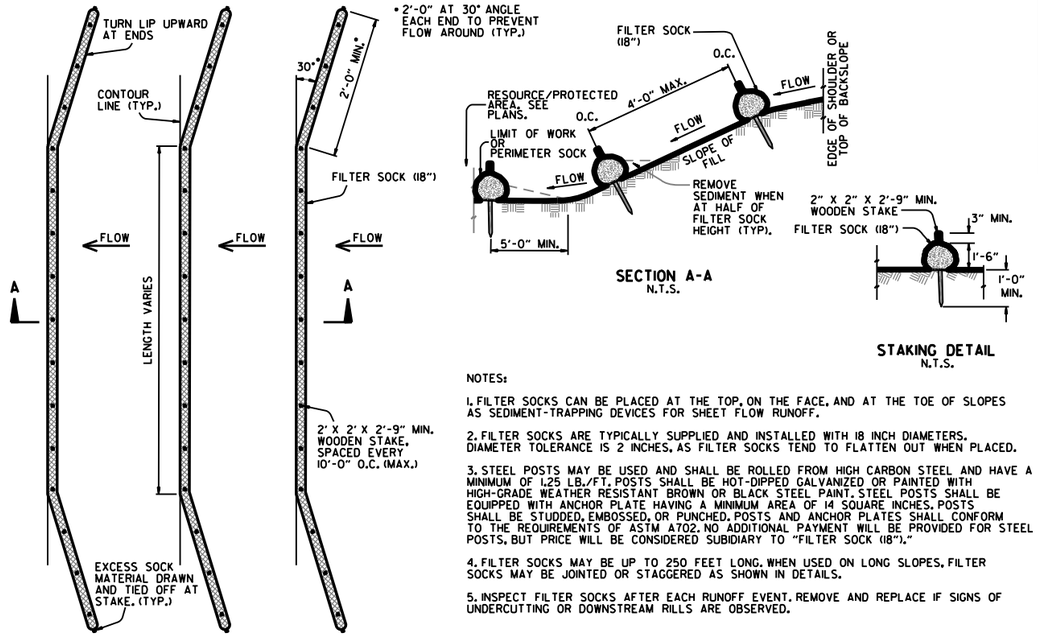
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.

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.

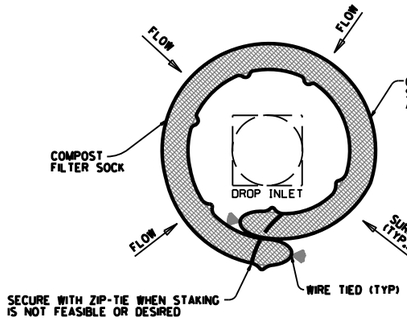
2. FILTER SOCKS ARE TYPICALLY SUPPLIED AND INSTALLED WITH 18 INCH DIAMETERS. DIAMETER TOLERANCE IS 2 INCHES, AS FILTER SOCKS TEND TO FLATTEN OUT WHEN PLACED.

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")."

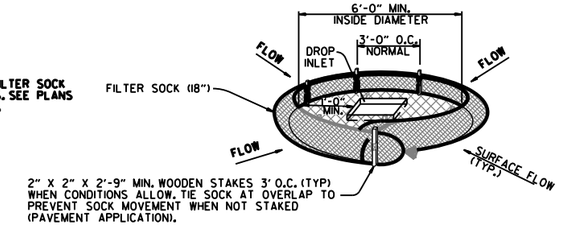
4. FILTER SOCKS MAY BE UP TO 250 FEET LONG. WHEN USED ON LONG SLOPES, FILTER SOCKS MAY BE JOINTED OR STAGGERED AS SHOWN IN DETAILS.

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

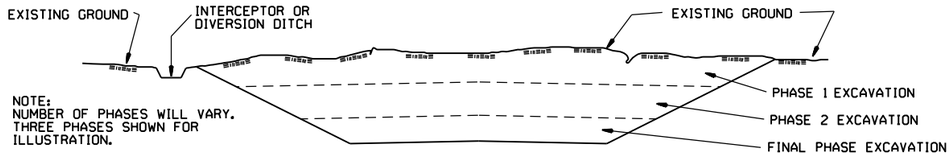
STANDARD DRAWING TEC-1

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



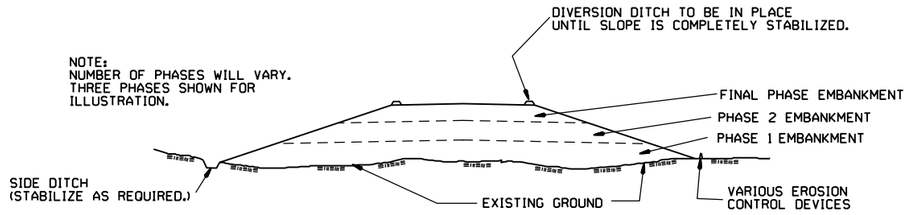
GENERAL NOTE

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

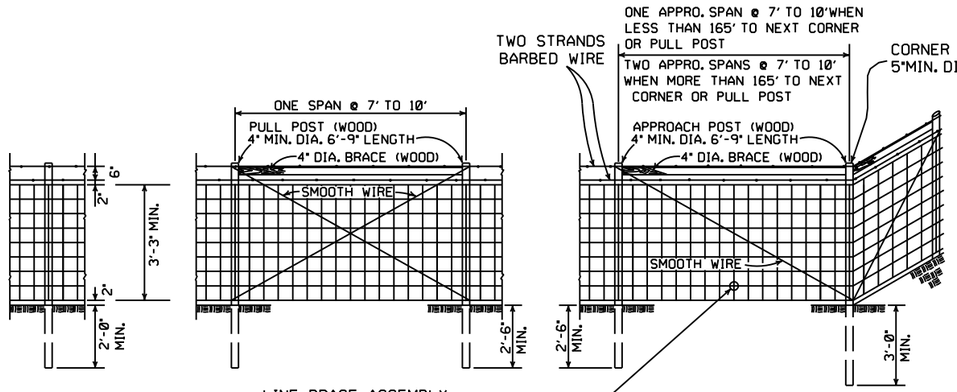
1. CONSTRUCT DIVERSION DITCHES, DITCH CHECKS, SEDIMENT BASINS, SILT FENCES, OR OTHER EROSION CONTROL DEVICES AS SPECIFIED.
2. PLACE PHASE 1 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD 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

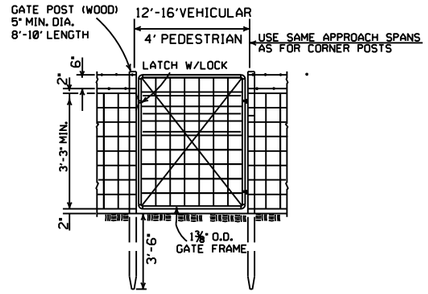
ARKANSAS STATE HIGHWAY COMMISSION

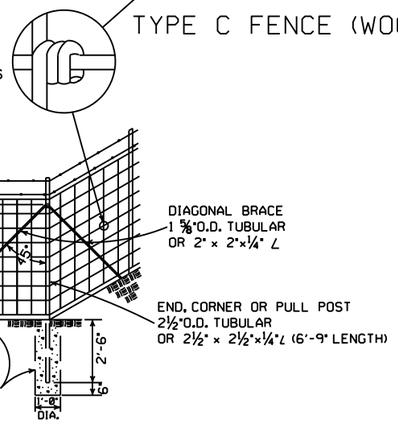
TEMPORARY EROSION CONTROL DEVICES

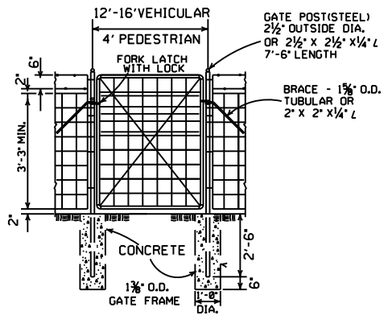
STANDARD DRAWING TEC-3



TYPE C FENCE (WOOD POSTS)

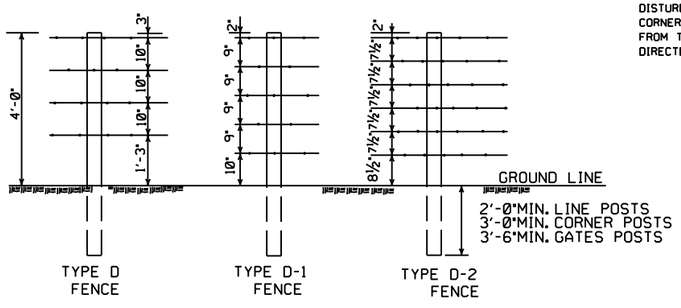




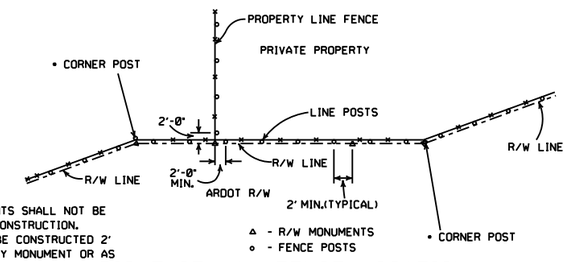


NOTE: STEEL LINE POSTS SHALL BE 6'-6" MINIMUM LENGTH.

TYPE C FENCE (STEEL POSTS)

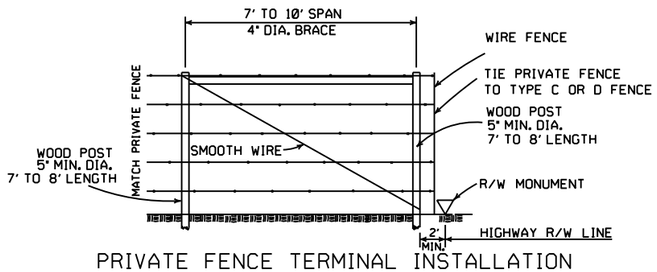


NOTE: SPACING AND SIZE (EXCEPT LENGTH) OF POSTS, APPROACH SPANS, PULL POST ASSEMBLIES, AND CORNER BRACING FOR TYPE D FENCE SHALL CONFORM TO TYPE C FENCE. USE GALVANIZED STAPLES ON WOOD POSTS AND APPROVED FASTENERS ON STEEL POSTS.



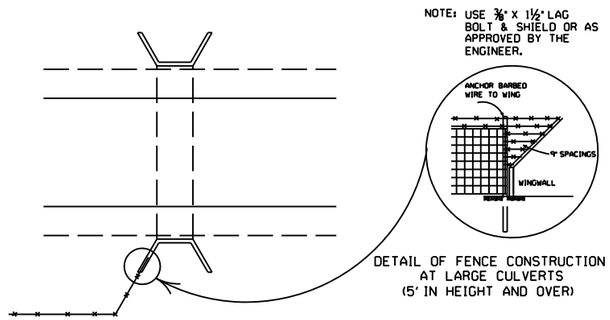
• NOTE: RIGHT-OF-WAY MONUMENTS SHALL NOT BE DISTURBED BY FENCE CONSTRUCTION. CORNER POSTS SHALL BE CONSTRUCTED 2' FROM THE RIGHT-OF-WAY MONUMENT OR AS DIRECTED BY THE ENGINEER.

RIGHT-OF-WAY FENCE LOCATION

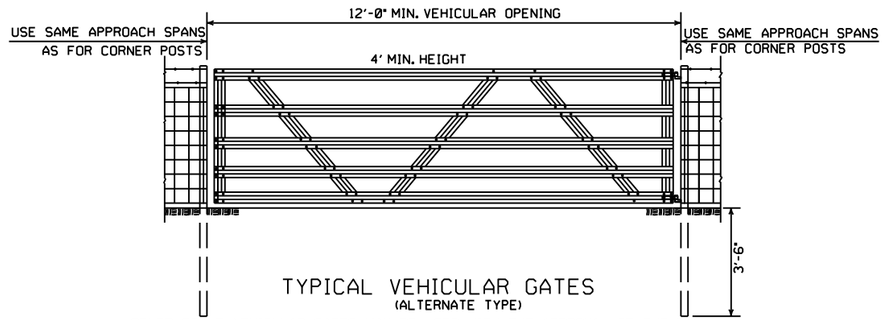


PRIVATE FENCE TERMINAL INSTALLATION

WHERE EXISTING FENCE CONSISTS OF STEEL POSTS, USE END POST ASSEMBLY AS SHOWN IN TYPE C FENCE OR OTHER END POST ASSEMBLY AS APPROVED BY THE ENGINEER.



DETAIL OF FENCE CONSTRUCTION AT LARGE CULVERTS (5' IN HEIGHT AND OVER)



TYPICAL VEHICULAR GATES

(ALTERNATE TYPE)

OTHER STYLE VEHICULAR GATES MAY BE USED WITH THE APPROVAL OF THE ENGINEER. THE METHOD OF SECURING GATE (LATCH AND/OR LOCK)SHALL MEET THE APPROVAL OF THE ENGINEER.

GENERAL NOTES:

STEEL LINE POSTS SHALL BE PAINTED OR GALVANIZED. TUBULAR END, CORNER, PULL, OR DIAGONAL BRACES MUST CONFORM TO THE DIMENSIONS AND WEIGHTS SPECIFIED ON STANDARD DRAWING WF-3 (CHAIN LINK). APPROVED ALTERNATES ARE ACCEPTABLE.
AN ACCEPTABLE TOLERANCE IN LENGTH OF TUBULAR OR WOODEN POSTS SHALL BE - 1" TO +2".
TUBULAR POSTS MUST BE PAINTED OR GALVANIZED.

THE CONTRACTOR SHALL FURNISH AT LEAST 25% OF TIMBER LINE POSTS OF 7 FOOT LENGTHS IN ORDER TO PROVIDE SUFFICIENT SET IN SOFT GROUND OR SMALL DEPRESSIONS.

DRIVEWAY GATES, EITHER SINGLE 12' TO 16' OR DOUBLE 6' TO 8' OPENING OF THE SAME TYPE AS THE PEDESTRIAN GATE, SHALL BE INSTALLED ON THE RIGHT SIDE OF EACH THROUGH LANE ROAD AT LARGE CULVERTS OR BRIDGE CROSS FENCE, FOR USE OF MAINTENANCE EQUIPMENT. LOCATION OF GATES TO BE SHOWN ON PLANS OR AS DESIGNATED BY THE ENGINEER.

AT STREAM CROSSINGS, THE FENCE SHALL NOT BE CONSTRUCTED ACROSS LARGE STREAMS. WHERE CLEARANCE IS SUFFICIENT FROM THE TOP OF THE BANK TO THE BRIDGE STRUCTURE A CROSS CONNECTION SHALL BE CONSTRUCTED BETWEEN THE FENCE ON EACH SIDE OF THE ROAD. WHERE THE CLEARANCE IS NOT SUFFICIENT, THE FENCE SHALL BE TERMINATED WITH CROSS CONNECTIONS AND END POSTS ADJACENT TO BRIDGE ABUTMENTS OR CULVERT WINGWALLS.

SPLICE FOR BARBED WIRE BETWEEN PULL POST ASSEMBLY SHALL BE BY THE "EYE METHOD" AS DESCRIBED AS FOLLOWS: THE ENDS OF THE BARBED WIRE SHALL BE BENT TO FORM A LOOP. THE LOOPS SHALL BE CONNECTED. AFTER THE LOOPS ARE CONNECTED THE ENDS OF THE WIRE SHALL BE WRAPPED AROUND THE PROJECTING WIRES A MINIMUM OF 4 TIMES FOR EACH WIRE LOOP.

SPLICE FOR WOVEN WIRE BETWEEN PULL POST SHALL BE BY THE "WESTERN UNION METHOD" AS DESCRIBED AS FOLLOWS: THE VERTICAL WIRES FOR EACH END OF THE FENCE FABRIC SHALL BE PLACED SIDE BY SIDE AND THE PROJECTING HORIZONTAL WIRES SHALL BE WRAPPED A MINIMUM OF 4 TIMES AROUND THE HORIZONTAL WIRES OF THE FIRST WEB.

STAPLE AT LEAST TOP, BOTTOM AND ALTERNATE WIRES OF WOVEN FABRIC FOR WOOD LINE POSTS.

DATE	REVISION	FILMED
8-22-02	REVISED GENERAL NOTES	
10-18-96	REVISED AASHTO	
11-22-95	REVISED R-O-W LOCATION DETAIL	
6-2-94	REVISED BARB WIRE AND ADDED CORNER POST NOTES	6-2-94
8-5-93	REVISED R/W INSTALLATION FENCE	8-5-93
10-1-92	ADDED STAPLE NOTE	10-1-92
8-15-91	ADDED TYPE D-2 FENCE	8-15-91
11-30-89	DELETED CLASS CONCRETE	11-30-89
7-15-88	ADDED SPLICE NOTE	700-7-15-88
10-30-87	GENERAL REVISIONS	549-10-30-87
11-1-84	MAX. POST SPACING MIN. WIRE GAUGE	507-11-1-84
1-4-83	MIN. DIA. LINE POST	648-1-4-83
3-2-81	TOLERANCE FOR POST LENGTH	722-3-2-81
12-1-72	ADDED D-1 & FENCE INSTALLATION	564-12-1-72
10-2-72	REVISED AND REDRAWN	540-10-2-72

ARKANSAS STATE HIGHWAY COMMISSION

WIRE FENCE TYPE C AND D

STANDARD DRAWING WF-4