DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		9	ARK.	090672	1	109
		HWY. 66 REALIGNMENT (LESLIE) (S)				

ARKANSAS DEPARTMENT OF TRANSPORTATION
CONSTRUCTION PLANS FOR STATE HIGHWAY

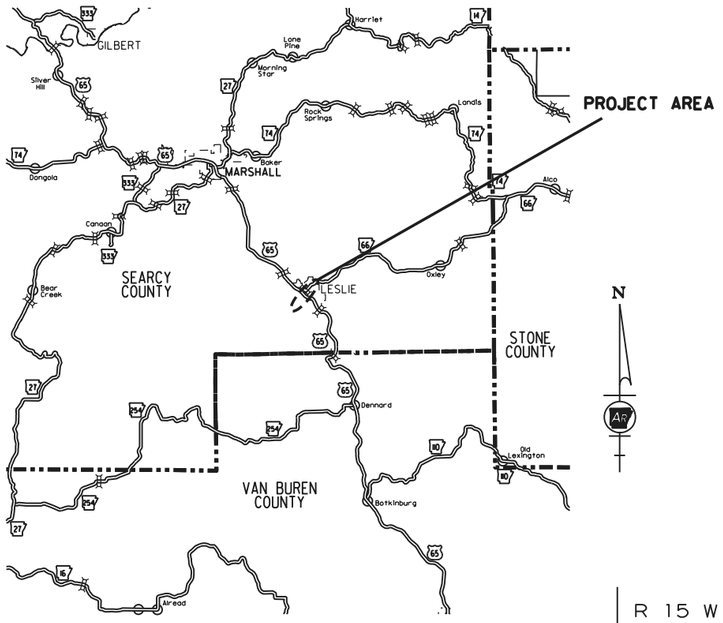
HWY. 66 REALIGNMENT (LESLIE) (S)

SEARCY COUNTY

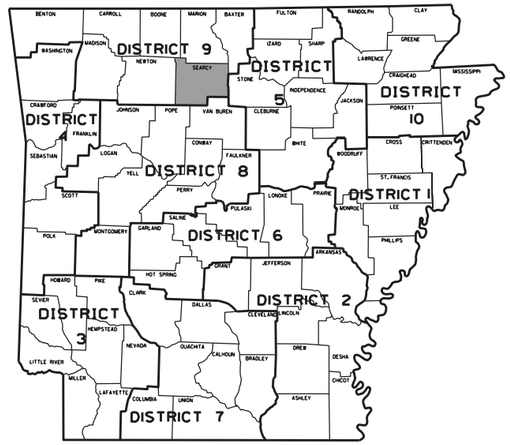
ROUTE 66 SECTION 1

JOB 090672

FED. AID PROJ. STPR-0064(20) & 9030

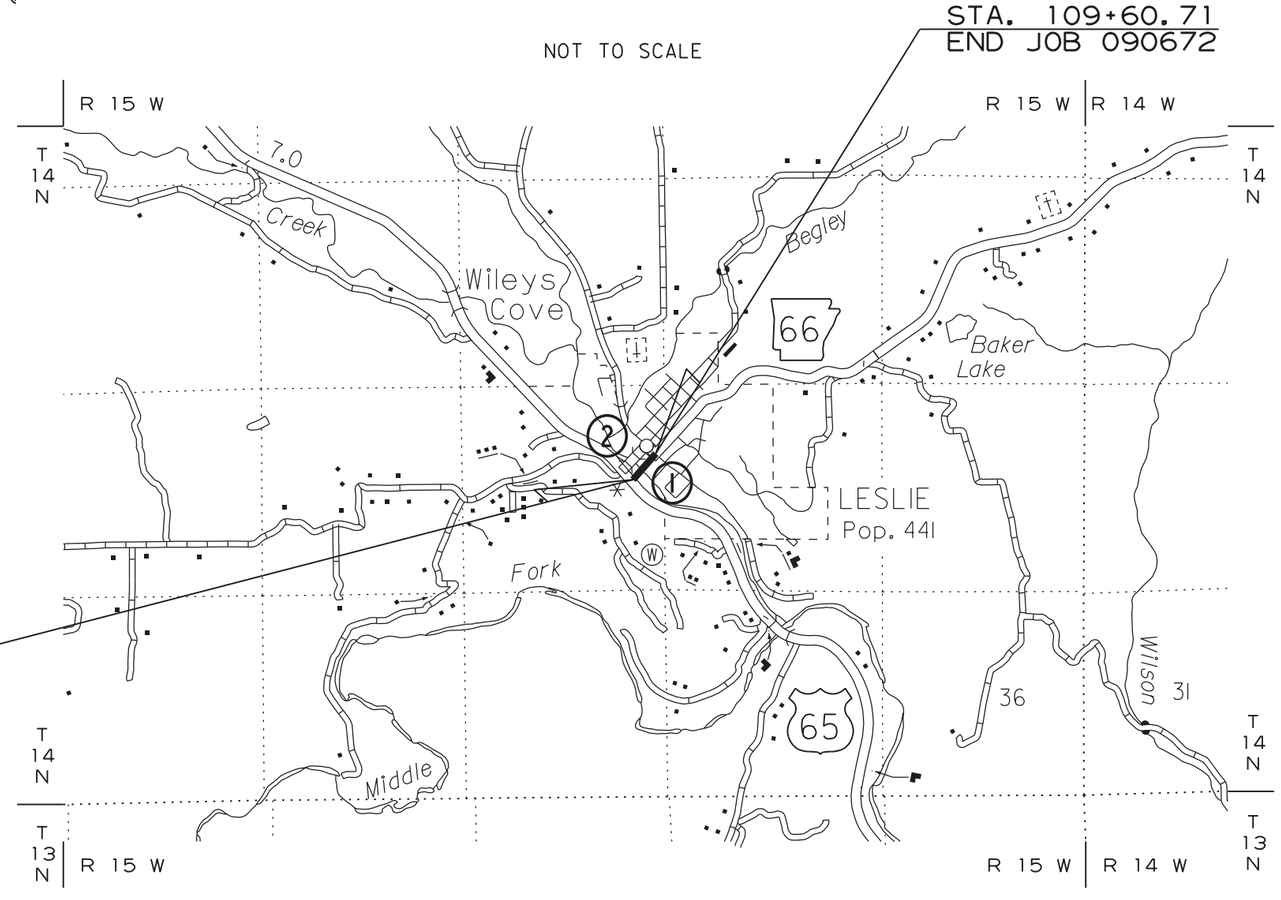


VICINITY MAP



ARK. HWY. DIST. NO. 9

NOT TO SCALE



BRIDGE INFORMATION

(1) STA. 102+10.00 BR. END
70'0" CONTINUOUS R.C. SLAB UNIT (35',35')
140'-0" CONTINUOUS W-BEAM UNIT (70',70')
70'0" CONTINUOUS R.C. SLAB UNIT (35',35')
280'-0" TOTAL LENGTH
30'-0" CLEAR ROADWAY
BR. NO. 07709
STA. 104+90.00 BR. END

(2) LOG MILE 0.028 BRIDGE END
BRIDGE NO.00680
167.1' CONCRETE TEE BEAM
20'-0" CLEAR ROADWAY
LOG MILE 0.060 BRIDGE END
167.1' TOTAL LENGTH
POLYMER OVERLAY

DESIGN TRAFFIC DATA

DESIGN YEAR	2045
2025 ADT	2,900
2045 ADT	3,200
2045 DHV	352
DIRECTIONAL DISTRIBUTION	0.60
TRUCKS	9%
DESIGN SPEED	30 MPH

N

APPROVED

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

Date: 2025.09.10 14:42:32-05'00'

CHIEF ENGINEER - PRECONSTRUCTION

	BEGIN PROJECT	MID-POINT OF PROJECT	END PROJECT
LATITUDE	N 35°49'36"	N 35°49'40"	N 35°49'44"
LONGITUDE	W 92°33'41"	W 92°33'38"	W 92°33'34"

LENGTH OF PROJECT CALCULATED ALONG C.L.

GROSS LENGTH OF PROJECT	942.71	FEET	OR	0.179	MILES
NET . . ROADWAY	662.71	.		0.126	MILES
NET . . BRIDGES	280.00	.		0.053	MILES
NET . . PROJECT	942.71	.		0.179	MILES

ER42959 9/10/2025
R090672.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	2	108
		INDEX OF SHEETS AND STANDARD DRAWINGS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, JR.

10/02/2025

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7 - 10	SPECIAL DETAILS		
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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
55006	STANDARD GENERAL NOTES FOR STEEL BRIDGE STRUCTURES	09-02-15
55007	STANDARD DETAILS FOR STEEL BRIDGE STRUCTURES	02-11-16
55008	STANDARD DETAILS FOR POURED SILICONE JOINTS	02-11-16
55010	STANDARD DETAILS FOR TYPE D BRIDGE NAME PLATE	01-28-25
55015	STANDARD DETAILS FOR TYPE H2 RAILING	06-25-20
55020	STANDARD DETAILS FOR STEEL H-PILES AND PILE ENCASEMENTS	03-24-16
55040F1	STANDARD DETAILS FOR TYPE F APPROACH SLAB	09-07-23

ROADWAY STANDARD DRAWINGS

DRWG.NO.	TITLE	DATE
CDP-1	CONCRETE DITCH PAVING	12-08-16
CG-1	CURBING DETAILS	11-29-07
DR-1	DETAILS OF DRIVEWAYS & ISLANDS	05-22-25
FES-1	FLARED END SECTION	10-18-96
FES-2	FLARED END SECTION	10-18-96
FPC-9	DETAILS OF DROP INLETS & JUNCTION BOXES	11-16-01
FPC-9E	DETAILS OF DROP INLETS (TYPE C)	08-22-02
FPC-9M	DETAILS OF DROP INLET (TYPE MO)	08-22-02
PCC-1	CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING	02-27-14
PCM-1	METAL PIPE CULVERT FILL HEIGHTS & BEDDING	02-27-14
PCP-1	PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)	02-27-14
PCP-2	PLASTIC PIPE CULVERT (PVC F949)	02-27-14
PCP-3	PLASTIC PIPE CULVERT (POLYPROPYLENE)	02-27-20
PM-1	PAVEMENT MARKING DETAILS	02-27-20
PU-1	DETAILS OF PIPE UNDERDRAIN	12-08-16
RCB-1	REINFORCED CONCRETE BOX CULVERT DETAILS	07-26-12
RCB-2	EXCAVATION PAY LIMITS, BACKFILL, & SOLID SODDING FOR BOX CULVERTS	11-20-03
RCB-3	METHOD OF EXTENDING EXISTING R.C. BOX CULVERTS	10-12-95
SE-2	TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC	11-07-19
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TC-1	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	08-14-25
TC-2	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	08-14-25
TC-3	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	08-14-25
TEC-1	TEMPORARY EROSION CONTROL DEVICES	11-16-17
TEC-2	TEMPORARY EROSION CONTROL DEVICES	06-02-94
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WR-1	WHEELCHAIR RAMPS NEW CONSTRUCTION AND ALTERATIONS	11-10-05
W-X002-1	DETAILS OF STANDARD WINGS FOR REINFORCED CONCRETE BOX CULVERTS	05-10-66
W-X003-1	DETAILS OF STANDARD WINGS FOR REINFORCED CONCRETE BOX CULVERTS	05-10-66
R-100X-0	DETAILS OF STANDARD BARREL SECTIONS FOR REINFORCED CONCRETE BOX CULVERTS	02-08-63

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INDEX OF SHEETS AND GENERAL NOTES

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	3	108
		GOVERNING SPECIFICATIONS AND 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 - TRAINING PROGRAM – JOB 090672
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 CONSTRUCTON
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
502-1_____ WELDED WIRE REINFORCEMENT
505-1_____ PORTLAND CEMENT CONCRETE DRIVEWAY
600-2_____ INCIDENTAL CONSTRUCTION
603-1_____ LANE CLOSURE NOTIFICATION
604-1_____ RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
604-3_____ TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES (MASH)
605-1_____ CONCRETE DITCH PAVING
606-1_____ PIPE CULVERTS FOR SIDE DRAINS
620-1_____ MULCH COVER
621-1_____ FILTER SOCKS
633-1_____ CONCRETE WALKS, CONCRETE STEPS, AND HAND RAILING
634-1_____ CURBING
800-1_____ STRUCTURES
802-3_____ CONCRETE FOR STRUCTURES
802-5_____ CONCRETE FOR STRUCTURES
804-2_____ REINFORCING STEEL FOR STRUCTURES
807-2_____ STEEL STRUCTURES
808-1_____ INSTALLATION OF ELASTOMERIC BEARINGS
808-2_____ ELASTOMERIC BEARINGS
JOB 090672__ ARCHITECTURAL FINISH
JOB 090672__ ARCHITECTURAL FINISH (CAST-IN PLACE RETAINING WALLS)
JOB 090672__ BIDDING REQUIREMENTS AND CONDITIONS
JOB 090672__ BRIDGE DECK REPAIR FOR POLYMER OVERLAYS
JOB 090672__ BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 090672__ BUY AMERICA - CONSTRUCTION MATERIALS
JOB 090672__ CARGO PREFERENCE ACT REQUIREMENTS
JOB 090672__ CAVE DISCOVERY
JOB 090672__ CLASS C FLY ASH IN PORTLAND CEMENT CONCRETE PAVEMENT AND CLASS S(AE) CONCRETE
JOB 090672__ COLD MILLING – COUNTY PROPERTY
JOB 090672__ CONCRETE BRIDGE DECK CURING AND SURFACE TREATMENT RESTRICTIONS
JOB 090672__ DESIGN AND QUALITY CONTROL ASPHALT MIXTURES
JOB 090672__ DESIGN OF ASPHALT MIXTURES - AGGREGATES
JOB 090672__ DIRECT TENSION INDICATORS FOR HIGH STRENGTH BOLT ASSEMBLIES
JOB 090672__ DOCUMENTATION OF PAYMENTS MADE TO DISADVANTAGED BUSINESS ENTERPRISES
JOB 090672__ EXPLORATORY HOLES
JOB 090672__ FLEXIBLE BEGINNING OF WORK – CALENDAR DAY CONTRACT

GOVERNING SPECIFICATIONS (CONTINUED)

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

JOB 090672__ LIQUIDATED DAMAGES PROCEDURE FOR BID LETTINGS
JOB 090672__ MANDATORY ELECTRONIC CONTRACT
JOB 090672__ MANDATORY ELECTRONIC DOCUMENT SUBMITTAL
JOB 090672__ NEMA 4X STAINLESS STEEL JUNCTION BOX
JOB 090672__ NESTING SITES OF MIGRATORY BIRDS
JOB 090672__ OFF-SITE RESTRAINING CONDITIONS FOR INDIANA AND NORTHERN LONG-EARED BATS
JOB 090672__ PARTNERING REQUIREMENTS
JOB 090672__ PLASTIC PIPE
JOB 090672__ POLYMER OVERLAY
JOB 090672__ PRICE ADJUSTMENT FOR ASPHALT BINDER
JOB 090672__ PRICE ADJUSTMENT FOR FUEL
JOB 090672__ PROHIBITION OF CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT
JOB 090672__ SHORING FOR CULVERTS
JOB 090672__ SOIL STABILIZATION
JOB 090672__ STAINING CONCRETE SURFACES
JOB 090672__ STORM WATER POLLUTION PREVENTION PLAN
JOB 090672__ SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 090672__ TEXTURED COATING FINISH (CAST-IN PLACE RETAINING WALLS)
JOB 090672__ UTILITY ADJUSTMENTS
JOB 090672__ UTILITY RELOCATION SPECIFICATIONS
JOB 090672__ VALUE ENGINEERING
JOB 090672__ WARM MIX ASPHALT
JOB 090672__ WATER POLLUTION CONTROL

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. ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.

5. 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.

6. 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.

7. ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 - UNCLASSIFIED EXCAVATION.

8. 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.

9. 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.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, JR.
10/02/2025

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DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	4	108
		TYPICAL SECTIONS OF IMPROVEMENT				

STATE OF ARKANSAS
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No. 15158
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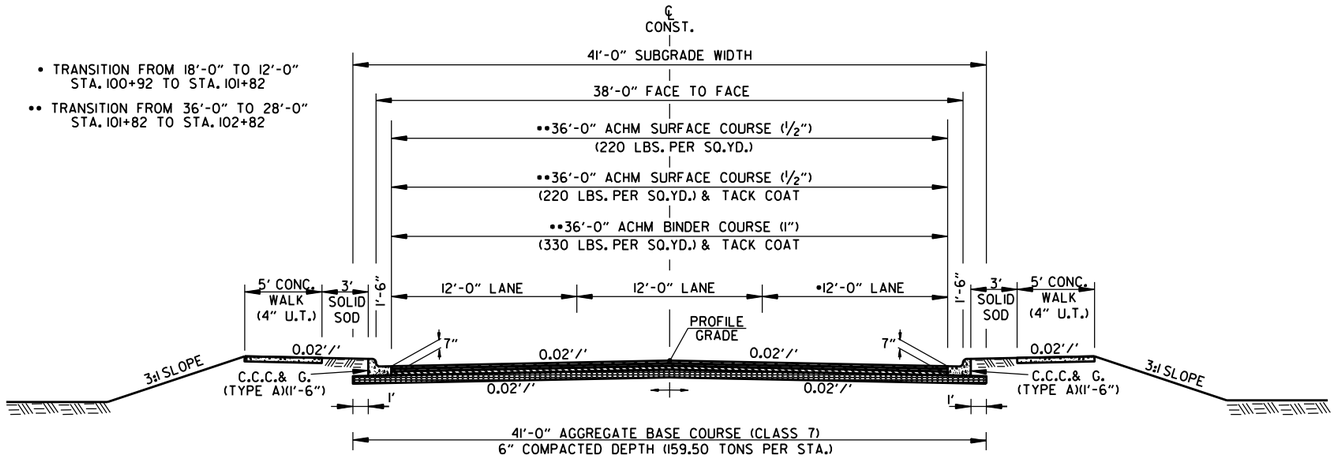
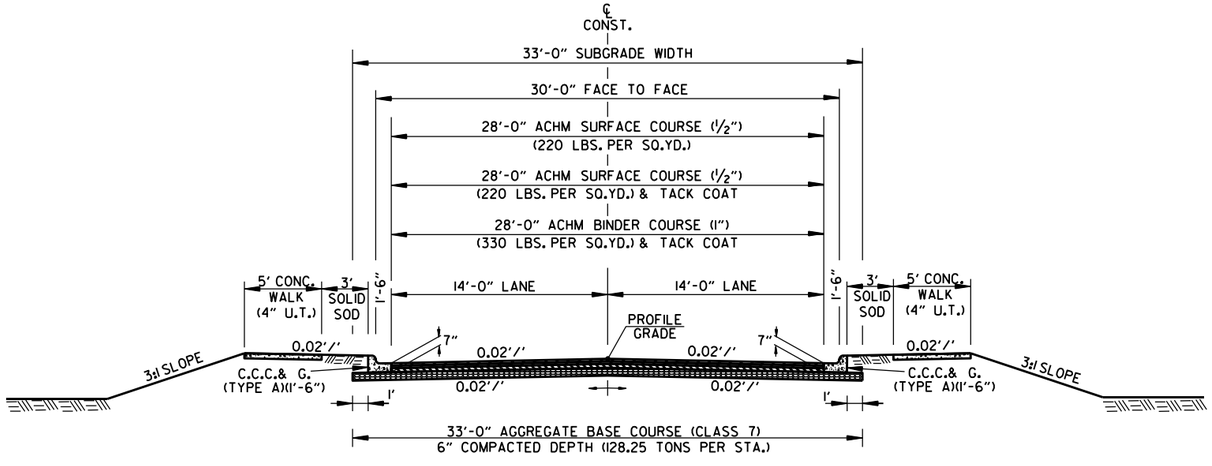
10/02/2025



HWY. 66
FULL DEPTH
STA. 100+18.00 TO STA. 102+82.00



HWY. 66
FULL DEPTH
STA. 102+82.00 TO STA. 109+61.00

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.

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

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

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

RD38049 6/12/2025
R090672.DGN MicroStation v8.11.9.578

TYPICAL SECTIONS OF IMPROVEMENT

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	5	108
		TYPICAL SECTIONS OF IMPROVEMENT				

STATE OF ARKANSAS
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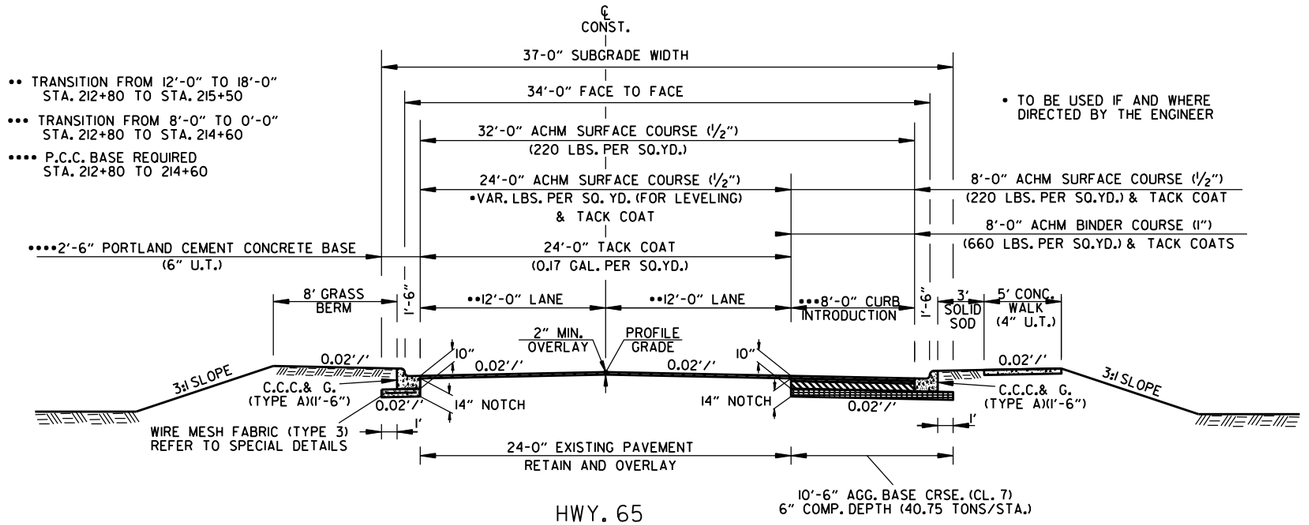
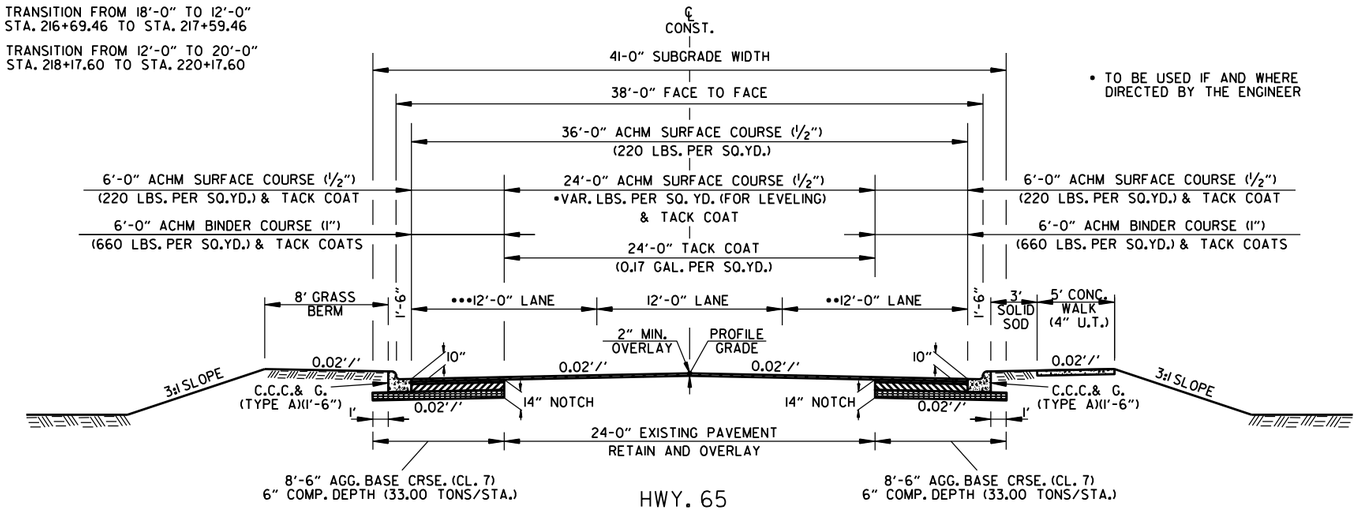
No. 15158
DAVID WILLIAM BAKER, JR.
10/02/2025



HWY. 65
NOTCH AND WIDEN
STA. 212+80.00 TO STA. 215+50.00



HWY. 65
NOTCH AND WIDEN
STA. 215+50.00 TO STA. 220+17.60

NOTES:

ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND 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.

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.

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

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

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

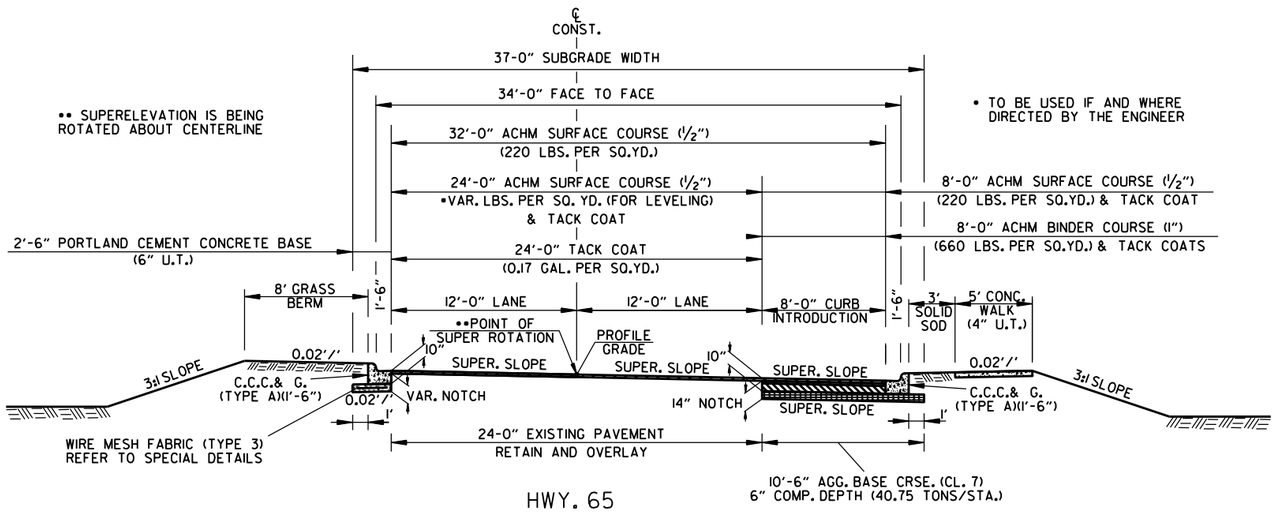
RD38049 6/12/2025
R090672.DGN MicroStation v8.11.9.578

TYPICAL SECTIONS OF IMPROVEMENT

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	6	108
		TYPICAL SECTIONS OF IMPROVEMENT				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, JR.

10/02/2025



HWY. 65
NOTCH AND WIDEN (SUPERELEVATED)

NOTES:

ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND 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.

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.

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

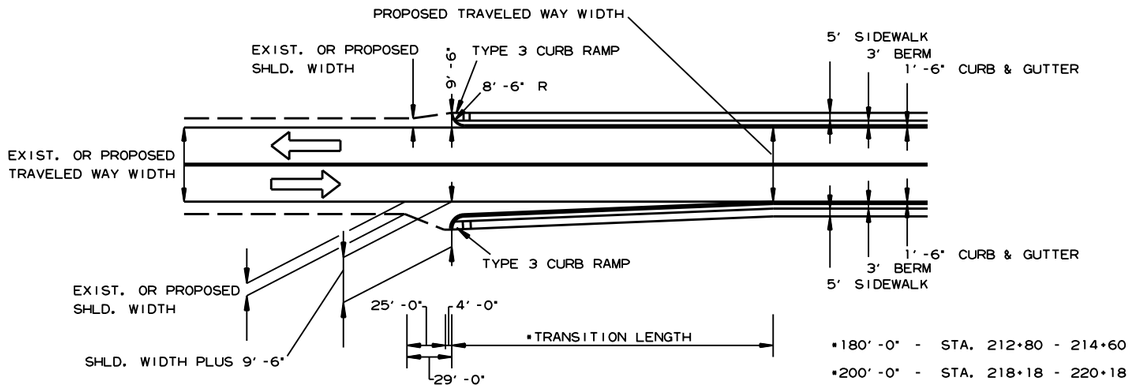
PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE CURB AND GUTTER, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIME. THE METHOD(S) USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

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

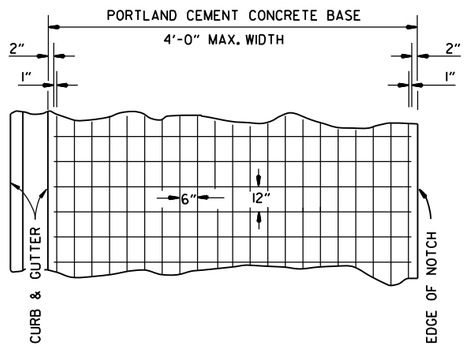
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	7	108
		SPECIAL DETAILS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER
10/02/2025



*180'-0" - STA. 212+80 - 214+60
*200'-0" - STA. 218+18 - 220+18

TRANSITION FROM OPEN SHOULDER TO CURB & GUTTER SECTION

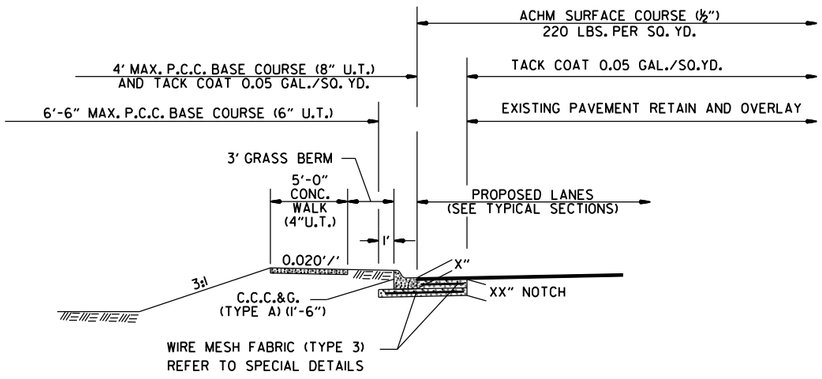


6" X 12" MESH FABRIC (TYPE 3) (W5.5 X W2.9) = 4.26 LBS./SQ.YD.

NOTES:

1. LAP MESH FABRIC MIN. 12" LONGITUDINALLY AND MIN. 6" TRANSVERSELY.
2. MESH FABRIC IS NOT REQUIRED WHEN WIDTH OF PORTLAND CEMENT CONCRETE BASE IS LESS THAN 12".
3. MESH FABRIC (TYPE 3) WILL NOT BE PAID FOR DIRECTLY, BUT FULL COMPENSATION THEREFORE WILL BE CONSIDERED INCLUDED IN THE CONTRACT PRICE BID PER SQ. YD. FOR PORTLAND CEMENT CONCRETE BASE (XX" U.T.)

DETAIL OF REINFORCING STEEL FOR PAVEMENT (MESH FABRIC TYPE 3)



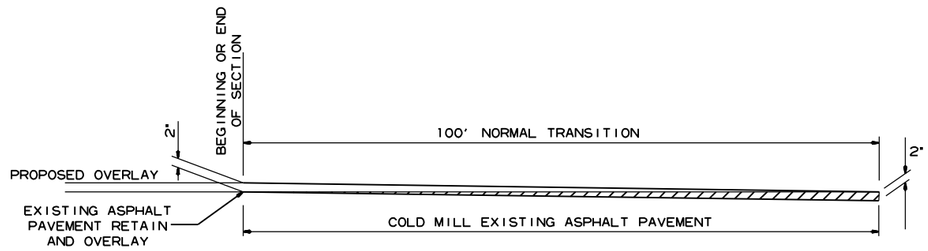
P.C.C. BASE WIDENING DETAIL

P.C.C. BASE WIDENING TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

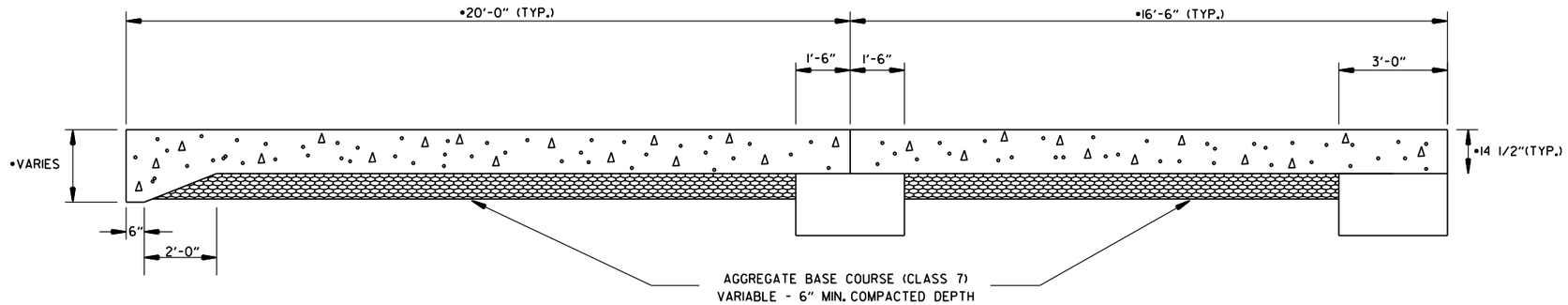
RD38049 6/13/2025
R090672.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	8	108
		SPECIAL DETAILS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, JR.
10/02/2025



DETAIL FOR TRANSITIONS



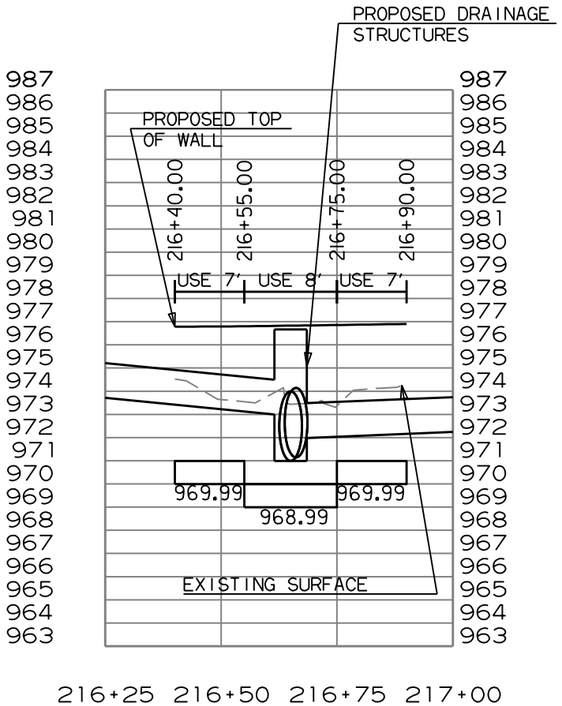
• SEE APPROACH SLAB DETAILS IN BRIDGE DRAWINGS

SECTION OF APPROACH SLAB
(FOR ASPHALT PAVEMENT)

RD38049 6/13/2025
R090672.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	9	108
		SPECIAL DETAILS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, JR.
10/02/2025



RETAINING WALL DETAILS - HWY. 65
STA. 216+40.00 - STA. 216+90.00 LT.

NOTES:

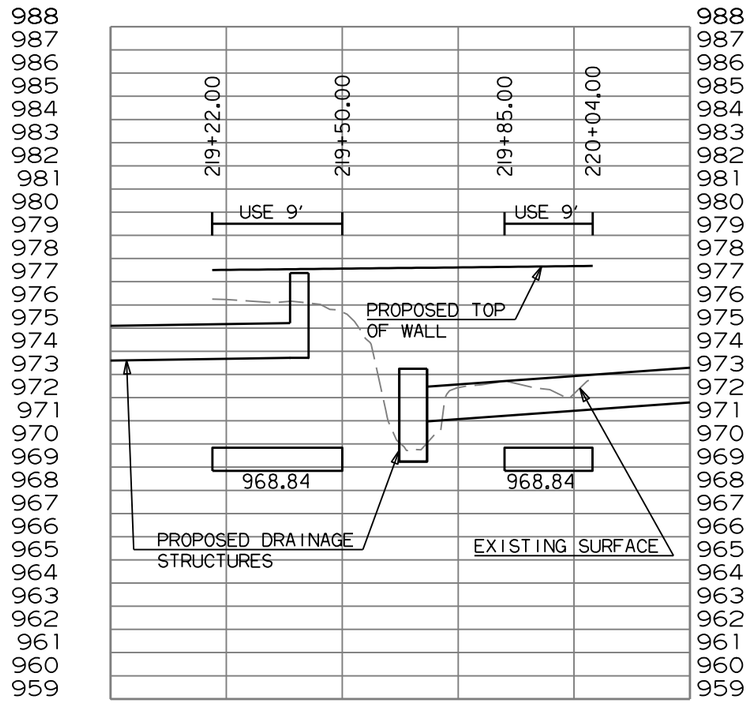
REFER TO STANDARD DRAWING. SI-2
FOR RETAINING WALL DIMENSIONS AND BAR LISTS.

REFER TO BRIDGE SPECIAL DETAILS FOR PIPE
REINFORCING DETAIL FROM STA. 216+55 TO STA. 216+75

NOTES:

REFER TO STANDARD DRAWING. SI-2
FOR RETAINING WALL DIMENSIONS AND BAR LISTS.

REFER TO BRIDGE SPECIAL DETAILS FOR
RETAINING WALL DETAILS FROM
STA. 219+50.00 TO STA. 219+85.00



RETAINING WALL DETAILS - HWY. 65
STA. 219+22.00 - STA. 220+04.00 LT.

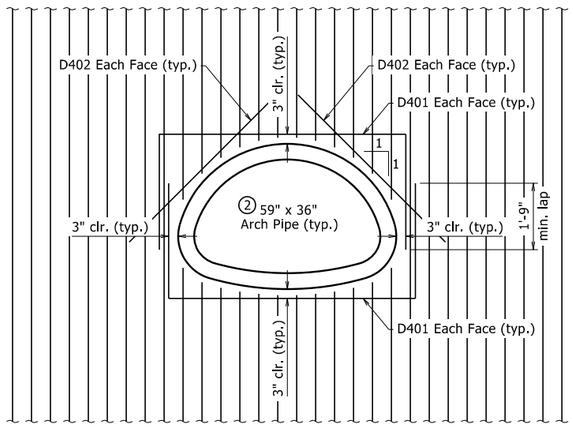
RD38049 6/13/2025
R090672.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.			
		JOB NO.		090672	10	108

1 SPECIAL DETAILS

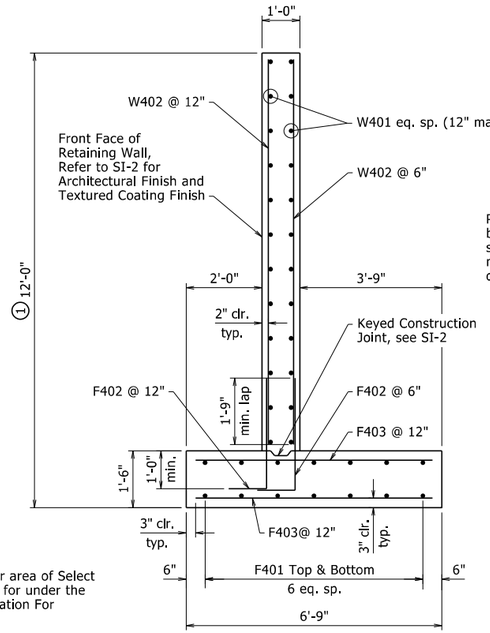
Ellis, Rick

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS



ARCH PIPE PROTRUSION DETAIL STA. 216+65 LT

No Scale

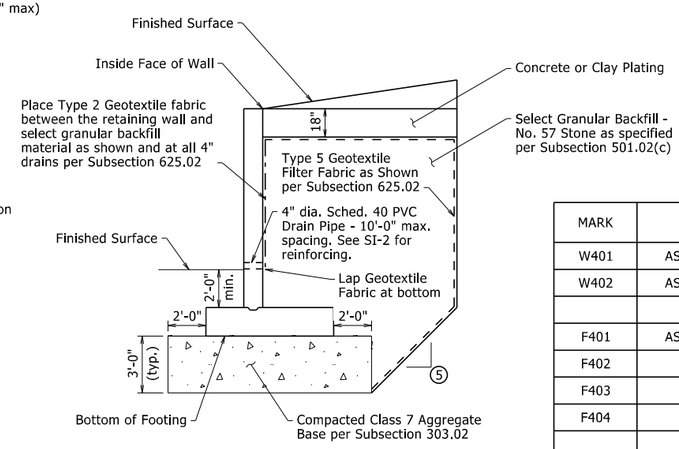


Note: Excavation required for area of Select Granular Backfill will be paid for under the pay item "Unclassified Excavation For Structures - Roadway".

4 TYPICAL SECTION STA. 219+50 - 219+85 LT

No Scale

This drawing to be used in conjunction with Standard Drawing SI-2.

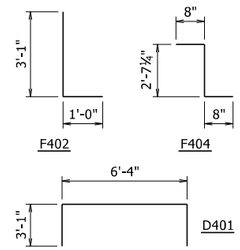


TYPICAL DRAINAGE AND BACKFILL DETAILS

No Scale

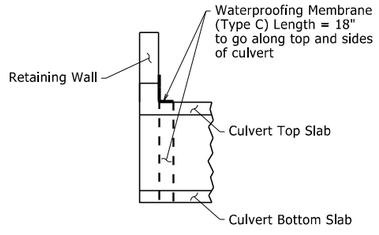
BAR LIST

MARK	LENGTH	P.D.	BENDING DIAGRAMS
W401	AS REQUIRED	Str.	
W402	AS REQUIRED	Str.	
F401	AS REQUIRED	Str.	
F402	4'-0"	3"	
F403	6'-3"	Str.	
F404	3'-9"	3"	
D401	12'-4"	3"	
D402	5'-6"	Str.	



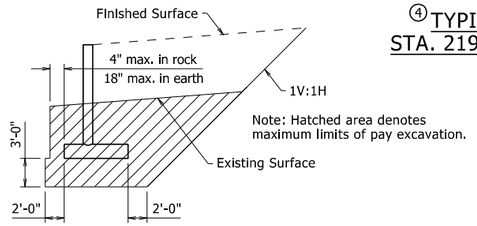
FOR INFORMATION ONLY QUANTITIES

PAY ITEM	QUANTITY
UNCLASSIFIED EXCAVATION FOR STRUCTURES - ROADWAY	284 CU. YD.
CLASS S CONCRETE - ROADWAY	22 CU. YD.
REINFORCING STEEL - ROADWAY (GRADE 60)	2,065 LB.
ARCHITECTURAL FINISH	309 SQ. FT.
TEXTURED COATING FINISH	30 SQ. YD.



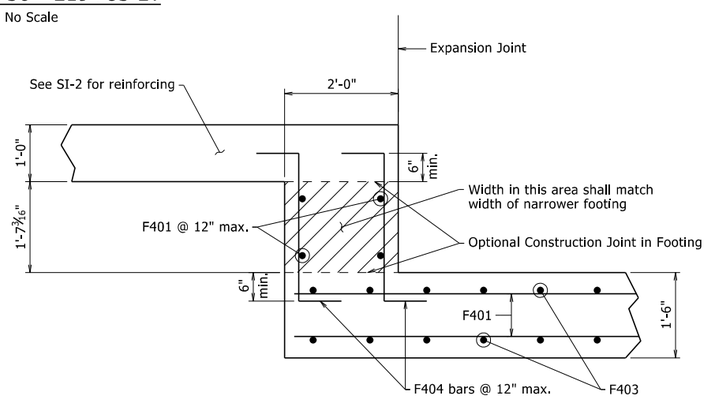
SECTION A-A

¼" = 1'



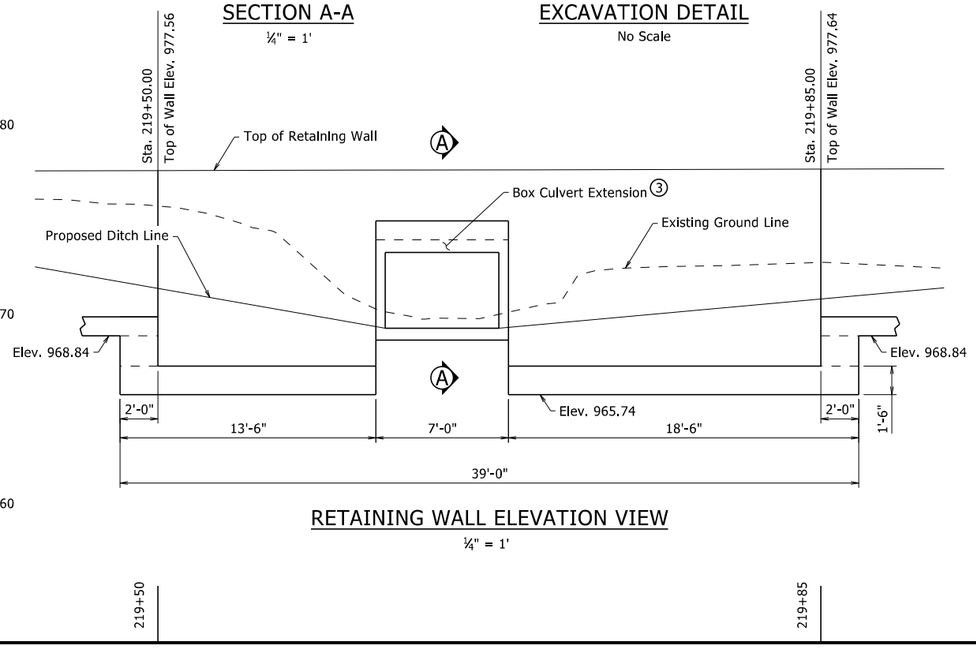
EXCAVATION DETAIL

No Scale



FOOTING STEP DETAIL STA. 219+50 SHOWN - STA. 219+85 LT SIMILAR

No Scale



RETAINING WALL ELEVATION VIEW

¼" = 1'

1 Design height of the Section. Actual heights may vary in the field.
2 See Standard Drawing FES-2.
3 Station 219+65 LT, See Roadway Plans for additional information.
4 Refer to Std. Dwg. SI-2 for wall details outside of these Station Limits.
5 0.8H:1.0V for fill slope
1.0H:1.0V for cut slope

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, 2014 Edition, with applicable supplemental specifications and special provisions.

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

SEISMIC ZONE: 1

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

SELECT GRANULAR BACKFILL: Select granular backfill for retaining wall shall be No. 57 Stone as specified per Subsection 501.02(c) and shall not be paid for directly, but shall be considered subsidiary to other items of the contract.

MISCELLANEOUS ITEMS: Drainage fill material, geotextile fabric, compacted class 7 aggregate base, waterstops, preformed joint material, waterproofing membrane, and the drain pipes shall not be paid for directly, but shall be considered subsidiary to other items of the contract.

The Engineer shall be notified if changes in footing elevations result in a total wall height greater than the design height, "H", of the design section.

DETAILS OF REINFORCED CONCRETE RETAINING WALL
SPECIAL DETAILS

v 1.17 b090672_rw.dgn

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	11	108
		TEMPORARY EROSION CONTROL DETAILS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV
10/02/2025

STA. 220+17.60
END HWY. 65 WIDENING

25' BUFFER ZONE

25' BUFFER ZONE

STA. 100+18.00
BEGIN JOB 090672

STA. 215+74.48 HWY. 65=
STA. 100+00.00 HWY. 66
Δ = 89° 59' 28"

STA. 212+80.00
BEGIN HWY. 65 WIDENING

STA. 109+60.71
END JOB 090672
LOG MILE 0.23

EXISTING ROW

PROP. R/W

N 51°05'53" E

N 38°54'39" W

N 44°30'39" E

N 17°29'52" E

.65 LIN.FT.

.300 LIN.FT.

.225 LIN.FT.

.270 LIN.FT.

.157 LIN.FT.

.80 LIN.FT.

E-6 = ROCK DITCH CHECK

E-11 = SILT FENCE

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

REVISIONS

DATE OF REVISION	REVISION

CLEARING AND GRUBBING
TEMPORARY EROSION CONTROL DETAILS

RD38049 6/13/2025
R090672.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	12	108
		TEMPORARY EROSION CONTROL DETAILS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, JR.
10/02/2025

STA. 220+17.60
END HWY. 65 WIDENING

STA. 100+18.00
BEGIN JOB 090672

STA. 215+74.48 HWY. 65=
STA. 100+00.00 HWY. 66
Δ = 89° 59' 28"

STA. 212+80.00
BEGIN HWY. 65 WIDENING

STA. 109+60.71
END JOB 090672
LOG MILE 0.23

25' BUFFER ZONE

25' BUFFER ZONE

EXISTING ROW

EXISTING ROW

EXISTING ROW

CONST. LIMITS

PROP. R/W

N 17°09'52" E

N 51°05'53" E

N 38°54'39" W

N 44°30'39" E

CONST. LIMITS

CONST. LIMITS

CONST. LIMITS

PROP. R/W

PROP. R/W

PROP. R/W

PROP. R/W

PC100+78.03

PT102+71.64

PC104+14.85

PI104+96.84

PT105+75.71

PI108+01.61

PT214+21.57

LEGEND

E-6	= ROCK DITCH CHECK
E-11	= SILT FENCE
E-13	= FILTER SOCK

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

REVISIONS

DATE OF REVISION	REVISION

STAGE I
TEMPORARY EROSION CONTROL DETAILS

RD38049 6/13/2025
R090672.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	13	108
		TEMPORARY EROSION CONTROL DETAILS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER
10/02/2025

STA. 220+17.60
END HWY. 65 WIDENING

STA. 109+60.71
END JOB 090672
LOG MILE 0.23

STA. 100+18.00
BEGIN JOB 090672

STA. 215+74.48 HWY. 65=
STA. 100+00.00 HWY. 66
Δ = 89° 59' 28"

STA. 212+80.00
BEGIN HWY. 65 WIDENING

25' BUFFER ZONE

25' BUFFER ZONE

EXISTING ROW

EXISTING ROW

CONST. LIMITS

CONST. LIMITS

PROP. R/W

PROP. R/W

N 17°09'52" E

N 51°05'53" E

N 38°54'39" W

N 44°30'39" E

PC100+78.03

PT102+71.64

PC104+96.84

PT105+75.71

PC104+14.85

PT214+21.57

PI01+01.61

PI01+80.06

105

220

215

100

110

LEGEND

E-6	= ROCK DITCH CHECK
E-11	= SILT FENCE
E-13	= FILTER SOCK

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

REVISIONS

DATE OF REVISION	REVISION

STAGE 2
TEMPORARY EROSION CONTROL DETAILS

RD38049 6/13/2025
R090672.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	14	108

TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER
10/02/2025

STA. 220+17.60
END HWY. 65 WIDENING

STA. 109+60.71
END JOB 090672
LOG MILE 0.23

STA. 100+18.00
BEGIN JOB 090672

STA. 215+74.48 HWY. 65=
STA. 100+00.00 HWY. 66
Δ = 89° 59' 28"

STA. 212+80.00
BEGIN HWY. 65 WIDENING

25' BUFFER ZONE

25' BUFFER ZONE

EXISTING ROW

EXISTING ROW

EXISTING ROW

CONST. LIMITS

PROP. R/W

N 17°09'52" E

N 51°05'53" E

N 38°54'39" W

N 44°30'39" E

PC100+78.03

PT102+71.64

PC104+96.84

PT105+75.71

PC104+14.85

PT104+80.86

PT214+21.57

POE220+83.41

POE111+01.61

LEGEND

E-6	= ROCK DITCH CHECK
E-11	= SILT FENCE
E-13	= FILTER SOCK

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

REVISIONS

DATE OF REVISION	REVISION

STAGE 3
TEMPORARY EROSION CONTROL DETAILS

RD38049 6/13/2025
R090672.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	15	108
		TEMPORARY EROSION CONTROL DETAILS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV
10/02/2025

STA. 220+17.60
END HWY. 65 WIDENING

STA. 109+60.71
END JOB 090672
LOG MILE 0.23

STA. 100+18.00
BEGIN JOB 090672

STA. 215+74.48 HWY. 65=
STA. 100+00.00 HWY. 66
Δ = 89° 59' 28"

STA. 212+80.00
BEGIN HWY. 65 WIDENING

25' BUFFER ZONE

25' BUFFER ZONE

EXISTING ROW

EXISTING ROW

EXISTING ROW

CONST. LIMITS

PROP. R/W

N 17°09'52" E

N 51°05'53" E

N 38°54'39" W

N 44°30'39" E

LEGEND

E-6	= ROCK DITCH CHECK
E-11	= SILT FENCE
E-13	= FILTER SOCK

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

REVISIONS

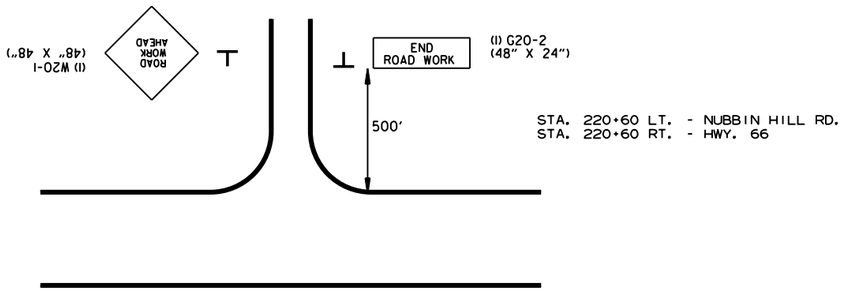
DATE OF REVISION	REVISION

STAGE 4
TEMPORARY EROSION CONTROL DETAILS

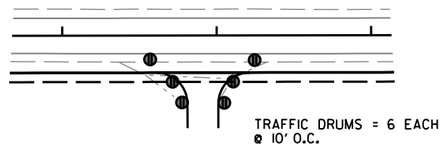
RD38049 6/13/2025
R090672.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	16	108
		MAINTENANCE OF TRAFFIC DETAILS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV
10/02/2025



ADVANCE WARNING - SIDE ROADS
(ALL STAGES)



DRIVEWAY/TRAFFIC DRUM DETAIL

STAGE 1 CONSTRUCTION SEQUENCE:

INSTALL STAGE 1 ADVANCE WARNING SIGNS AND END ROAD WORK SIGNS AT THE BEGINNING AND END OF JOB AS SHOWN ON THE ADVANCE WARNING DETAIL.

APPLY LEVELING COURSE TO EXISTING LANES IF AND WHERE DIRECTED BY THE ENGINEER.

NOTCH AND WIDEN HWY. 65 RIGHT, CONSTRUCT NEW LOCATION PORTION OF HWY. 66 FROM STA. 100+18 TO STA. 105+75 AND CONSTRUCT BRIDGE STRUCTURE AS SHOWN IN THE STAGE 1 MAINTENANCE OF TRAFFIC DETAILS.

USE TRAFFIC DRUMS SPACED 50' O.C.

STAGE 2 CONSTRUCTION SEQUENCE:

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

NOTCH AND WIDEN HWY. 65 LEFT AS SHOWN IN THE STAGE 2 MAINTENANCE OF TRAFFIC DETAILS.
USE TRAFFIC DRUMS SPACED 50' O.C.

STAGE 3 CONSTRUCTION SEQUENCE:

APPLY CONSTRUCTION PAVEMENT MARKINGS AS SHOWN IN THE STAGE 3 MAINTENANCE OF TRAFFIC DETAILS.

SHIFT TRAFFIC TO ROADWAY AS SHOWN IN STAGE 3 MAINTENANCE OF TRAFFIC DETAILS.

CONSTRUCT HWY. 66 RIGHT FROM STA. 105+75 TO 109+60.71.

USE TRAFFIC DRUMS SPACED 50' O.C.

STAGE 4 CONSTRUCTION SEQUENCE:

APPLY CONSTRUCTION PAVEMENT MARKINGS AS SHOWN IN THE STAGE 4 MAINTENANCE OF TRAFFIC DETAILS.

SHIFT TRAFFIC TO ROADWAY AS SHOWN IN STAGE 4 MAINTENANCE OF TRAFFIC DETAILS.

CONSTRUCT HWY. 66 LEFT FROM STA. 105+75 TO 109+60.71.

USE TRAFFIC DRUMS SPACED 50' O.C.

APPLY FINAL 2" LIFT ACHM SURFACE COURSE AND PLACE PERMANENT PAVEMENT MARKINGS FOR HWY. 65 AND HWY. 66AS SHOWN IN THE PERMANENT PAVEMENT MARKING DETAILS.

BUMP	(6) W8-1 (30" X 30")	ALL STAGES TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER
DO NOT PASS	(6) R4-1 (24" X 30")	ALL STAGES SPACED AT 1/4 MILE INTERVALS
RIGHT SHOULDER CLOSED	(6) W21-5a (36" X 36")	ALL STAGES TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

ADVANCE WARNING
MAINTENANCE OF TRAFFIC DETAILS

RD38049 6/18/2025
R090672.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	17	108
		MAINTENANCE OF TRAFFIC DETAILS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER
10/02/2025

STA. 220+17.60
END HWY. 65 WIDENING

STA. 109+60.71
END JOB 090672
LOG MILE 0.23

STA. 100+18.00
BEGIN JOB 090672

STA. 215+74.48 HWY. 65=
STA. 100+00.00 HWY. 66
Δ = 89° 59' 28"

STA. 212+80.00
BEGIN HWY. 65 WIDENING

ROAD CLOSED
0.07 MILES AHEAD
LOCAL TRAFFIC ONLY
(I) RII-3a
(60" X 30")
8' BARR. TYP.III RT.

ROAD CLOSED
(I) RII-2
(48" X 30")
16' BARR. TYP. III RT.
16' BARR. TYP. III LT.

ROAD CLOSED
(I) RII-2
(48" X 30")
16' BARR. TYP. III RT.
16' BARR. TYP. III LT.

WHITE SOLID CONSTRUCTION PAVEMENT MARKINGS

DOUBLE YELLOW SOLID CONSTRUCTION PAVEMENT MARKINGS R.P.M. (TYPE II) AT 80' O.C.

TRAFFIC DRUMS SPACED 50' O.C.

EXISTING ROW

CONST. LIMITS

PROP. R/W

N 44°20'39" E

N 17°09'52" E

N 51°05'53" E

N 38°54'39" W

RD38049 6/18/2025
R090672.DGN MicroStation v8.11.9.578

STAGE I
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	18	108
		MAINTENANCE OF TRAFFIC DETAILS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER
10/02/2025

STA. 220+17.60
END HWY. 65 WIDENING

STA. 109+60.71
END JOB 090672
LOG MILE 0.23

STA. 100+18.00
BEGIN JOB 090672

STA. 215+74.48 HWY. 65=
STA. 100+00.00 HWY. 66
Δ = 89° 59' 28"

STA. 212+80.00
BEGIN HWY. 65 WIDENING

WHITE SOLID CONSTRUCTION PAVEMENT MARKINGS

TRAFFIC DRUMS SPACED 50' O.C.

DOUBLE YELLOW SOLID CONSTRUCTION PAVEMENT MARKINGS R.P.M. (TYPE II) AT 80' O.C.

ROAD CLOSED
0.07 MILES AHEAD
LOCAL TRAFFIC ONLY
(I) RII-3a
(60" X 30")

8' BARR. TYP.III RT.

ROAD CLOSED
(I) RII-2
(48" X 30")
16' BARR. TYP. III RT.
16' BARR. TYP. III LT.

ROAD CLOSED
(I) RII-2
(48" X 30")
16' BARR. TYP. III RT.
16' BARR. TYP. III LT.

EXISTING ROW
CONST. LIMITS
PROP. R/W
N 17°09'52" E
N 51°05'53" E
N 38°54'39" W
N 44°20'39" E

RD38049 6/18/2025
R090672.DGN MicroStation v8.11.9.578

STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	19	108
		MAINTENANCE OF TRAFFIC DETAILS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, JR.
10/02/2025

STA. 220+17.60
END HWY. 65 WIDENING

ROAD CLOSED
0.07 MILES AHEAD
LOCAL TRAFFIC ONLY

(1) RII-3a
(60" X 30")

8' BARR.
TYP.III RT.

ROAD CLOSED

(1) RII-2
(48" X 30")

16' BARR.
TYP. III RT.
16' BARR.
TYP. III LT.

TRAFFIC DRUMS
SPACED 50' O.C.

WHITE SOLID CONSTRUCTION
PAVEMENT MARKINGS

WHITE SOLID CONSTRUCTION
PAVEMENT MARKINGS

DOUBLE YELLOW SOLID
CONSTRUCTION PAVEMENT MARKINGS
R.P.M. (TYPE II) AT 80' O.C.

DOUBLE YELLOW SOLID
CONSTRUCTION PAVEMENT MARKINGS
R.P.M. (TYPE II) AT 80' O.C.

STA. 109+60.71
END JOB 090672
LOG MILE 0.23

STA. 100+18.00
BEGIN JOB 090672

STA. 215+74.48 HWY. 65=
STA. 100+00.00 HWY. 66
Δ = 89° 59' 28"

STA. 212+80.00
BEGIN HWY. 65 WIDENING

STAGE 3
MAINTENANCE OF TRAFFIC DETAILS

RD38049 6/18/2025
R090672.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	20	108
		MAINTENANCE OF TRAFFIC DETAILS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER
10/02/2025

STA. 220+17.60
END HWY. 65 WIDENING

EXISTING ROW

WHITE SOLID CONSTRUCTION PAVEMENT MARKINGS

DOUBLE YELLOW SOLID CONSTRUCTION PAVEMENT MARKINGS R.P.M. (TYPE II) AT 80' O.C.

TRAFFIC DRUMS SPACED 50' O.C.

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

ROAD CLOSED 0.07 MILES AHEAD LOCAL TRAFFIC ONLY
(1) RII-3a (60" X 30")
8' BARR. TYP.III LT.

STA. 100+18.00
BEGIN JOB 090672

STA. 215+74.48 HWY. 65=
STA. 100+00.00 HWY. 66
Δ = 89° 59' 28"

STA. 212+80.00
BEGIN HWY. 65 WIDENING

STA. 109+60.71
END JOB 090672
LOG MILE 0.23

CONST. LIMITS

PROP. R/W

N 17°09'52" E

N 51°05'53" E

N 38°54'39" W

N 44°30'39" E

STAGE 4
MAINTENANCE OF TRAFFIC DETAILS

RD38049 6/18/2025
R090672.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	21	108
		PERMANENT PAVEMENT MARKING DETAILS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, JR.
10/02/2025

STA. 220+17.60
END HWY. 65 WIDENING

6" THERMOPLASTIC WHITE SOLID

THERMOPLASTIC PAVEMENT MARKING YELLOW (6") DOUBLE YELLOW WITH R.P.M.(TYPE II) AT 80' O.C.

6" THERMOPLASTIC WHITE SOLID

12" THERMOPLASTIC WHITE SOLID

THERMOPLASTIC PAVEMENT MARKING YELLOW (6") DOUBLE YELLOW WITH R.P.M.(TYPE II) AT 80' O.C.

STA. 100+18.00
BEGIN JOB 090672

STA. 215+74.48 HWY. 65=
STA. 100+00.00 HWY. 66
Δ = 89° 59' 28"

THERMOPLASTIC PAVEMENT MARKING YELLOW (6") DOUBLE YELLOW WITH R.P.M.(TYPE II) AT 80' O.C.

STA. 212+80.00
BEGIN HWY. 65 WIDENING
LOG MILE 7.60

THERMOPLASTIC PAVEMENT MARKING YELLOW (6") DOUBLE YELLOW WITH R.P.M.(TYPE II) AT 80' O.C.

STA. 109+60.71
END JOB 090672
LOG MILE 0.23

PERMANENT PAVEMENT MARKINGS

THERMOPLASTIC PAVEMENT MARKING WHITE (6") = 120 LN. FT.
THERMOPLASTIC PAVEMENT MARKING YELLOW (6") = 4,430 LN. FT.
THERMOPLASTIC PAVEMENT MARKING WHITE (12") = 75 LN. FT.
THERMOPLASTIC PAVEMENT MARKING (WORDS) = 3 EACH
THERMOPLASTIC PAVEMENT MARKING (ARROWS) = 6 EACH
RAISED PAVEMENT MARKERS TYPE II(YEL/YEL)(80' O.C.) = 30 EACH

PERMANENT PAVEMENT MARKING DETAILS

RD38049 6/11/2025
R090672.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	22	108
		QUANTITIES				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER
10/02/2025

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	STAGE 2	STAGE 3	STAGE 4	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		VERTICAL PANELS	TRAFFIC DRUMS	BARRICADES (TYPE III)	
												RIGHT	LEFT
			LIN. FT. - EACH					NO.	SQ. FT.	EACH		LIN. FT.	
W20-1	ROAD WORK 1500 FT.	48"x48"	2	2	2	2	2	2	32.0				
W20-1	ROAD WORK 1000 FT.	48"x48"	2	2	2	2	2	2	32.0				
W20-1	ROAD WORK 500 FT.	48"x48"	2	2	2	2	2	2	32.0				
W20-1	ROAD WORK AHEAD	48"x48"	2	2	2	2	2	2	32.0				
G20-2	END ROAD WORK	48"x24"	4	4	4	4	4	4	32.0				
R11-2	ROAD CLOSED	48"x30"	2	2	2	2	2	2	20.0				
R11-3a	ROAD CLOSED LOCAL TRAFFIC ONLY	60"x30"	1	1	1	1	1	1	12.5				
R4-1	DO NOT PASS	24"x30"	2	2			2	2	10.0				
W21-5a	RIGHT SHOULDER CLOSED	36"x36"	2	2			2	2	18.0				
W8-1	BUMP	30"x30"	2	2			2	2	12.5				
	VERTICAL PANELS		30	32	24	12	32			32			
	TRAFFIC DRUMS		30	32	24	12	32				32		
	TYPE III BARRICADE-RT. (8')		1	1	1		1					8	
	TYPE III BARRICADE-LT. (8')					1	1						8
	TYPE III BARRICADE-RT. (16')		2	2	2	2	2					32	
	TYPE III BARRICADE-LT. (16')		2	2	2	2	2						32
TOTALS:									**233.0**	**32**	**32**	**40**	**40**

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 1	STAGE 2	STAGE 3	STAGE 4	END OF JOB	REMOVAL OF PERMANENT PAVEMENT MARKINGS	REMOVAL OF PERMANENT PAVEMENT MARKINGS (WORDS)	REMOVAL OF PERMANENT PAVEMENT MARKINGS (ARROWS)	CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS	THERMOPLASTIC PAVEMENT MARKING				
										TYPE II	6"		12"	WORDS	ARROWS
										(YELLOW/YELLOW)	WHITE	YELLOW	WHITE		
	LIN. FT. - EACH					LIN. FT.				EACH	LIN. FT.			EACH	
REMOVAL OF PERMANENT PAVEMENT MARKINGS	1420					1420									
REMOVAL OF PERMANENT PAVEMENT MARKINGS (WORDS)	1						1								
REMOVAL OF PERMANENT PAVEMENT MARKINGS (ARROWS)	1							1							
CONSTRUCTION PAVEMENT MARKINGS	3620	3620	1095	1095					9430						
RAISED PAVEMENT MARKERS TYPE II (YELLOW/YELLOW)	11	11	5	5	27					59					
THERMOPLASTIC PAVEMENT MARKING WHITE (6")					1040						1040				
THERMOPLASTIC PAVEMENT MARKING YELLOW (6")					4370							4370			
THERMOPLASTIC PAVEMENT MARKING WHITE (12")					45								45		
THERMOPLASTIC PAVEMENT MARKING (WORDS)					3									3	
THERMOPLASTIC PAVEMENT MARKING (ARROWS)					6										6
TOTALS:						**1420**	**1**	**1**	**9430**	**59**	**1040**	**4370**	**45**	**3**	**6**

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.

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") DITCH CHECKS (E-1)	ROCK DITCH CHECKS (E-6)	SILT FENCE (E-11)	DROP INLET FILTER SOCK (12") (E-13)	SEDIMENT BASIN (E-14)	OBLITERATION OF SEDIMENT BASIN	*SEDIMENT REMOVAL & DISPOSAL
			ACRE	TON	ACRE	M.GAL.	ACRE	ACRE	ACRE	M.GAL.	LIN. FT.	CU.YD.	LIN. FT.	LIN. FT.	CU.YD.	CU.YD.	CU. YD.
ENTIRE	PROJECT	CLEARING AND GRUBBING						3.30	3.30	67.3		57	1212				64
ENTIRE	PROJECT	STAGE 1	0.58	1.16	0.58	59.2	0.58	1.69	1.69	34.5		3		359			14
ENTIRE	PROJECT	STAGE 2	0.11	0.22	0.11	11.2	0.11	0.54	0.54	11.0		18		168			12
ENTIRE	PROJECT	STAGE 3	0.02	0.04	0.02	2.0	0.02	0.10	0.10	2.0				115			4
ENTIRE	PROJECT	STAGE 4	0.03	0.06	0.03	3.1	0.03	0.09	0.09	1.8				99			4
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.			0.19	0.38	0.19	19.4	0.19	1.43	1.43	29.2	58.50	19.50	303.00	185.25	20.00	20.00	38
TOTALS:			**0.93**	**1.86**	**0.93**	**94.9**	**0.93**	**7.15**	**7.15**	**145.8**	**59**	**98**	**1515**	**926**	**20**	**20**	**136**

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
WATTLE DITCH CHECKS.....9 LIN. FT. / LOCATION
ROCK DITCH CHECKS.....3 CU.YD./LOCATION
FILTER SOCKS.....23 LIN. FT./ 4' DIA. INLET
27 LIN. FT. / 5' DIA. INLET
30 LIN. FT. / 6' DIA. INLET

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.

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

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	23	108
		QUANTITIES				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, JR.

10/02/2025

CLEARING AND GRUBBING

STATION	STATION	LOCATION	CLEARING	GRUBBING
			STATION	
212+80	218+00	HWY. 65	7	7
100+00	109+00	HWY. 66	9	9
TOTALS:			**16**	**16**

REMOVAL AND DISPOSAL OF CULVERTS AND DROP INLETS

STATION	DESCRIPTION	PIPE CULVERTS	BOX CULVERTS	DROP INLETS
		EACH	EACH	EACH
105+80	HWY. 66 - RT. SIDE DRAIN	1		
106+65	HWY. 66 - RT. SIDE DRAIN	1		
107+75	HWY. 66 - RT. SIDE DRAIN	1		
108+30	HWY. 66 - LT. SIDE DRAIN	1		
109+22	HWY. 66 - RT. SIDE DRAIN	1		
109+52	HWY. 66. - RT.			1
215+10	HWY. 65 - LT. SIDE DRAIN	1		
215+21	HWY. 65 - LT. SIDE DRAIN	1		
215+65	HWY. 65 - CROSS DRAIN		1	
220+65	HWY. 65 - LT SIDE DRAIN	1		
TOTALS:		**8**	**1**	**1**

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

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.

REMOVAL AND DISPOSAL OF ITEMS

STATION	STATION	LOCATION	CURB	CONCRETE WALL	CONCRETE DRIVEWAYS	WALKS	HEADWALLS	LUMINAIRE POLE AND FOUNDATION
			LIN. FT.	LIN. FT.	SQ. YD.	SQ. YD.	EACH	EACH
105+82	108+58	HWY. 66 - RT.				158		
106+10	106+10	HWY. 66 - RT.						1
106+50	106+50	HWY. 66 - RT.						1
107+50	108+00	HWY. 66 - LT.		50				
108+50	108+50	HWY. 66 - RT.						1
109+42	109+52	HWY. 66 - LT.				26		
109+42	109+52	HWY. 66 - RT.				75		
214+30	214+45	HWY. 65 - RT.					2	
217+80	217+90	HWY. 65 - RT.	14					
217+80	218+42	HWY. 65 - RT.			92			
218+29	218+79	HWY. 65 - RT.	58					
218+68	219+25	HWY. 65 - RT.			92			
219+17	219+30	HWY. 65 - RT.	22					
218+53	218+85	HWY. 65 - LT.	72					
219+55	219+75	HWY. 65 - LT.					1	
TOTALS:			**166**	**50**	**184**	**259**	**3**	**3**

4" PIPE UNDERDRAIN

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

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

UNDERDRAINS SHALL BE STUBBED INTO THE PROPOSED DROP INLET IF AND WHERE DIRECTED BY THE ENGINEER. PAYMENT FOR THIS TO BE INCLUDED IN THE UNIT PRICE BID FOR 4" PIPE UNDERDRAIN.

CONCRETE WALKS & HAND RAILING

STATION	STATION	LOCATION	LENGTH	CONCRETE WALKS	HAND RAILING
			LIN. FT.	SQ.YD.	LIN. FT.
100+18	101+08	HWY. 66 - LT.	112	62	90
100+18	100+89	HWY. 66 - RT.	103	57	
100+89	102+04	HWY. 66 - RT.	115	64	
101+08	102+19	HWY. 66 - LT.	111	62	111
104+81	105+63	HWY. 66 - RT.	82	46	
104+95	108+00	HWY. 66 - LT.	305	169	
106+07	106+88	HWY. 66 - RT.	81	45	
107+32	107+56	HWY. 66 - RT.	24	13	
108+00	108+49	HWY. 66 - RT.	49	27	
108+41	109+61	HWY. 66 - LT.	168	93	
109+17	109+39	HWY. 66 - RT.	22	12	
212+88	214+76	HWY. 65 - RT.	188	104	180
216+68	217+74	HWY. 65 - RT.	106	59	
218+42	218+64	HWY. 65 - RT.	22	12	
219+32	220+40	HWY. 65 - RT.	115	64	
TOTALS:				**889**	**381**

CONCRETE COMBINATION CURB AND GUTTER

STATION	STATION	LOCATION	TYPE A (1' 6")
			LIN. FT.
100+18	102+17	HWY. 66 - LT.	225
100+18	102+04	HWY. 66 - RT.	301
104+84	109+61	HWY. 66 - RT.	503
104+95	109+61	HWY. 66 - LT.	540
212+80	220+18	HWY. 65 - LT.	745
212+80	214+76	HWY. 65 - RT.	203
216+68	220+46	HWY. 65 - RT.	409
TOTAL:			**2926**

WHEELCHAIR RAMPS

STATION	LOCATION	TYPE 3	TYPE 6
		SQ.YD.	
212+80	HWY. 65 - RT.	39.0	
215+21	HWY. 65 - RT.	39.0	
216+21	HWY. 65 - RT.	41.0	
220+36	HWY. 65 - RT.	36.0	
109+45	HWY. 66 - RT.		35.6
109+51	HWY. 66 - LT.	40.0	
TOTALS:		**195.0**	**35.6**

BENCH MARKS

STATION	LOCATION	BENCH MARKS
		EACH
102+10	HWY. 66 - RT. BRIDGE	1
104+90	HWY. 66 - LT. BRIDGE	1
214+36	HWY. 65 - LT. HEADWALL	1
TOTAL:		**3**

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

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DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	24	108
		QUANTITIES				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER
10/02/2025

DRIVEWAYS & TURNOUTS

STATION	SIDE	LOCATION	WIDTH	**MODIFIED CURB		PORTLAND CEMENT CONCRETE DRIVEWAY	ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG 64-22)		AGGREGATE BASE COURSE (CLASS 7)	SIDE DRAINS 18"	STANDARD DRAWINGS
			FEET	STATION	STATION	SQ. YD.	SQ. YD.	TON	TON	LIN. FT.	
101+25	RT.	HWY. 66	16	101+03	101+47		222.72	24.50	90.94		DR-1
101+80	LT.	HWY. 66	40	101+46	102+14		380.17	41.82	155.24	96	DR-1, PCC-1. PCM-1, PCP-1, PCP-2, PCP-3
105+86	RT.	HWY.66	16	105+64	106+08		55.89	6.15	22.82		DR-1
107+10	RT.	HWY. 66	16	106+88	107+32		63.09	6.94	25.76		DR-1
107+79	RT.	HWY. 66	16	107+57	108+01		78.40	8.62	32.01		DR-1
108+20	LT.	HWY. 66	16	107+98	108+42		114.65	12.61	46.82		DR-1
108+83	RT.	HWY. 66	40	108+49	109+17		178.17	19.60	72.75		DR-1
215+06	LT.	HWY. 65	40	214+72	215+40		164.66	18.11	67.24		DR-1
215+93	LT.	HWY. 65	40	215+59	216+27		109.73	12.07	44.81		DR-1
218+08	RT.	HWY. 65	40	217+74	218+42	182.75					DR-1
218+98	RT.	HWY. 65	40	218+64	219+32	230.17					DR-1
219+02	LT.	HWY. 65	40	218+68	219+36		126.71	13.94	51.74		DR-1
* ENTIRE PROJECT TEMPORARY DRIVES									200.00		
TOTALS:						**412.92**	**1494.19**	**164.36**	**810.13**	**96**	

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.

** FOR INFORMATION ONLY

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.

COLD MILLING ASPHALT PAVEMENT

STATION	STATION	LOCATION	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT
			FEET	SQ. YD.
211+55.00	212+55.00	HWY. 65	24.00	266.67
220+17.60	221+17.60	HWY. 65	24.00	266.67
TOTAL:				**533.34**

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

ACHM PATCHING OF EXISTING ROADWAY

DESCRIPTION	TON
ENTIRE PROJECT - TO BE USED IF AND WHERE	25
DIRECTED BY THE ENGINEER	
TOTAL:	**25**

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

PAVEMENT REPAIR OVER CULVERTS (ASPHALT)

STATION	LOCATION	WIDTH	LENGTH	TON
		FEET		
216+65	HWY. 65 CROSS DRAIN	11.42	25	16
109+73	MAIN ST. CROSS DRAIN	8.50	29	14
TOTAL:				**30**

AVG. DEPTH = 9"

ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC

LOCATION	TON	TACK COAT
		GALLON
ENTIRE PROJECT - TO BE USED IF AND WHERE	25	50
DIRECTED BY THE ENGINEER		
TOTALS:	**25**	**50**

BASIS OF ESTIMATE:
ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC...25 TON/MILE
TACK COAT FOR MAINTENANCE OF TRAFFIC.....50 GAL./MILE
NOTE: QUANTITY ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.

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DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	25	108
		QUANTITIES				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER
10/02/2025

EARTHWORK

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT
			CU. YD.	
100+18.00	105+75.71	STAGE 1 - HYW. 66 - NEW CONST.	17	7849
212+80.00	220+17.60	STAGE 1 - HWY. 65 - RT.	188	1251
212+80.00	220+17.60	STAGE 2 - HWY. 65 - LT.	312	479
105+75.71	109+60.71	STAGE 3 - HWY 66. - RT.	264	102
105+75.71	109+60.71	STAGE 4 - HWY. 66 - LT.	161	181
ENTIRE	PROJECT	APPROACHES	30	1405
TOTALS:			**972**	**11267**

NOTE: EARTHWORK QUANTITIES SHALL BE PAID AS PLAN QUANTITY.

SELECTED PIPE BEDDING

LOCATION	SELECTED PIPE BEDDING
	CU.YD.
ENTIRE PROJECT TO BE USED IF	
AND WHERE DIRECTED BY THE	190
ENGINEER	
TOTAL:	**190**

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

STRUCTURES

STATION	DESCRIPTION	REINFORCED (CLASS III)	PIPE CULVERT STORM DRAIN ALTERNATES 1, 2, & 3		PIPE CULVERT STORM DRAIN ALTERNATES 1, 2, 3, 4, 5, & 6			FLARED END SECTIONS FOR R.C. PIPE CULVERTS	FLARED END SECTION ALTERNATES FOR PIPE CULVERT ALTERNATES	DROP INLETS TYPE		DROP INLETS EXT.		SPAN	HEIGHT	LENGTH	CLASS S CONCRETE-ROADWAY	REINF. STEEL-ROADWAY (GRADE 60)	UNCL.EXC. FOR STR.-ROADWAY	SOLID SODDING	WATER	STD. DWG. NOS.
		59"X36"	18"	59"X36"	18"	24"	30"	59"X36"	30"	C	MO	4'	8'										
		LIN. FT.						EACH		EACH				LIN. FT.			CU.YD.	POUND	CU.YD.	SQ.YD.	M.GAL.	
100+60	CONSTRUCT DROP INLET ON LT. W/ EXT. AND PIPE OUTLET	66									1		1									FPC-9E, PCC-1
100+60	CONSTRUCT DROP INLET ON RT. W/ EXT. AND PIPE OUTLET			30							1		1									FPC-9E, PCC-1, PCM-1
100+90	CONSTRUCT DROP INLET ON LT. W/ EXT. AND PIPE OUTLET				26							1	1									FPC-9E, FPC-9M, PCC-1, PCM-1
100+90	CONSTRUCT DROP INLET ON RT. W/ EXT. AND PIPE OUTLET				28							1	1									FPC-9E, FPC-9M, PCC-1, PCM-1
105+30	CONSTRUCT DROP INLET ON LT. AND PIPE OUTLET						6		1			1										FPC-9E, FPC-9M, PCC-1, PCM-1, FES-1, FES-2
105+30	CONSTRUCT DROP INLET ON RT. AND PIPE OUTLET						8		1			1										FPC-9E, FPC-9M, PCC-1, PCM-1, FES-1, FES-2
106+25	CONSTRUCT DROP INLET ON LT. W/ EXT. AND PIPE OUTLET						98					1	1									FPC-9E, FPC-9M, PCC-1, PCM-1
106+25	CONSTRUCT DROP INLET ON RT. W/ EXT. AND PIPE OUTLET					94						1	1									FPC-9E, FPC-9M, PCC-1, PCM-1
107+45	CONSTRUCT DROP INLET ON LT. AND PIPE OUTLET						120					1										FPC-9E, FPC-9M, PCC-1, PCM-1
107+45	CONSTRUCT DROP INLET ON RT. W/ EXT. AND PIPE OUTLET					120						1	1									FPC-9E, FPC-9M, PCC-1, PCM-1
108+43	CONSTRUCT DROP INLET ON RT. W/ EXT. AND PIPE OUTLET					96						1	1									FPC-9E, FPC-9M, PCC-1, PCM-1
108+50	CONSTRUCT DROP INLET ON LT. AND PIPE OUTLET						106			1												FPC-9E, PCC-1, PCM-1
109+00	CONSTRUCT DROP INLET ON LT. W/ EXT. AND PIPE OUTLET						50					1	1									FPC-9E, FPC-9M, PCC-1, PCM-1
109+45	CONSTRUCT DROP INLET ON RT. W/ EXT. AND PIPE OUTLET					98						1		1								FPC-9E, FPC-9M, PCC-1, PCM-1
109+54	CONSTRUCT DROP INLET ON RT. W/ EXT. AND PIPE OUTLET				24							1	1									FPC-9E, FPC-9M, PCC-1, PCM-1
109+96	CONSTRUCT DROP INLET ON RT. W/ EXT. AND PIPE OUTLET				54							1		1								FPC-9E, FPC-9M, PCC-1, PCM-1
213+25	CONSTRUCT DROP INLET ON RT. AND PIPE OUTLET		76									1										FPC-9E, FPC-9M, PCC-1, PCM-1
214+00	CONSTRUCT DROP INLET ON RT. AND PIPE OUTLET		36									1										FPC-9E, FPC-9M, PCC-1, PCM-1
214+36	IN PLACE R.C. BOX CULVERT RETAIN AND EXTEND 3' LT. AND 10' RT.														4	3	75	10.03	959	9	10	0.13	R-100X-0, RCB-1, RCB-2, RCB-3, W-X002-1
214+75	CONSTRUCT DROP INLET ON RT. AND PIPE OUTLET			14				1		1												FPC-9E, PCC-1, PCM-1
215+18	CONSTRUCT DROP INLET ON RT. AND PIPE OUTLET			38						1												FPC-9E, PCC-1, PCM-1
215+50	CONSTRUCT DROP INLET ON LT. AND PIPE OUTLET		112								1											FPC-9E, FPC-9M, PCC-1, PCM-1
216+34	CONSTRUCT DROP INLET ON LT. AND PIPE OUTLET		32								1											FPC-9E, FPC-9M, PCC-1, PCM-1
216+34	CONSTRUCT DROP INLET ON RT. AND PIPE OUTLET			32						1												FPC-9E, PCC-1, PCM-1
216+65	CONSTRUCT DROP INLET ON LT. W/ EXT. AND PIPE OUTLET	54								1		1										FPC-9E, PCC-1
216+65	CONSTRUCT DROP INLET ON RT. W/ EXT. AND PIPE OUTLET			28						1		1										FPC-9E, PCC-1, PCM-1
217+50	CONSTRUCT DROP INLET ON LT. AND PIPE OUTLET		86								1											FPC-9E, FPC-9M, PCC-1, PCM-1
218+53	CONSTRUCT DROP INLET ON LT. AND PIPE OUTLET		104								1											FPC-9E, FPC-9M, PCC-1, PCM-1
218+53	CONSTRUCT DROP INLET ON RT. AND PIPE OUTLET		186								1											FPC-9E, FPC-9M, PCC-1, PCM-1
219+41	CONSTRUCT DROP INLET ON LT. AND PIPE OUTLET		90								1											FPC-9E, FPC-9M, PCC-1, PCM-1
219+41	CONSTRUCT DROP INLET ON RT. W/ EXT. AND PIPE OUTLET		88								1	1										FPC-9E, FPC-9M, PCC-1, PCM-1
219+65	IN PLACE R.C. BOX CULVERT RETAIN AND EXTEND 7' LT.														6	4	227	13.22	1011	13	15	0.19	R-100X-0, RCB-1, RCB-2, RCB-3, W-X003-1
219+85	CONSTRUCT DROP INLET ON RT. W/ EXT. AND PIPE OUTLET		14								1	1										FPC-9E, FPC-9M, PCC-1, PCM-1
220+05	CONSTRUCT DROP INLET ON LT. W/ EXT. AND PIPE OUTLET		38								1	1										FPC-9E, FPC-9M, PCC-1, PCM-1
TOTALS:		**120**	**862**	**142**	**132**	**408**	**388**	**1**	**2**	**8**	**24**	**15**	**2**					**23.25**	**1970**	**22**	**25**	**0.32**	

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

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

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

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QUANTITIES

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	26	108
		QUANTITIES				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER
10/02/2025

DUMPED RIPRAP AND FILTER BLANKET

STATION	STATION	LOCATION	DUMPED RIPRAP	FILTER BLANKET
			CU. YD.	SQ. YD.
100+00	101+63	HWY. 66 LT.	167	333
101+96	102+08	HWY. 66 LT.	15	29
212+80	214+00	HWY. 65 RT.	180	360
TOTALS:			**362**	**722**

NOTE: FILTER BLANKET SHALL BE GEOTEXTILE FABRIC (TYPE 5).

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.
105+00.00	105+74.00	HWY. 66 LT.	74.00	6.33	52.05	32.89	0.41
104+90.00	105+62.00	HWY. 66 LT.	72.00	6.33	50.64	32.00	0.40
214+00.00	214+50.00	HWY. 65 LT.	50.00	6.33	35.17	22.22	0.28
219+25.00	220+05.00	HWY. 65 LT.	80.00	6.33	56.27	35.56	0.45
TOTALS:					**194.13**	**122.67**	**1.54**

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

APPROACH SLABS

STATION	STATION	LOCATION	APPROACH SLABS	REINFORCING STEEL-RDWY. (GR. 60)	AGGREGATE BASE CRS. (CLASS 7)
			CU.YD.	POUND	TON
101+75.00	102+10.00	HWY. 66	80.00	9230	37.57
104+90.00	105+25.00	HWY. 66	56.00	7219	29.94
TOTALS:			**136.00**	**16449**	**67.51**

RETAINING WALLS

STATION	STATION	LOCATION	CLASS S CONCRETE-ROADWAY	REINF. STEEL-ROADWAY (GRADE 60)	UNCL.EXC. FOR STR.-ROADWAY	ARCHITECTURAL FINISH	TEXTURED COATING FINISH
			CU.YDS.	POUNDS	CU.YDS.	SQ.FT.	SQ.YD.
216+40	216+90	HWY. 65 LT.	26.01	2304	142	350	39
219+22	219+50	HWY. 65 LT.	16.82	1651	110	230	230
219+85	220+04	HWY. 65 LT.	12.05	1199	57	164	18
TOTALS:			54.88	5154	309	744	287

CONCRETE BASE

STATION	STATION	LOCATION	LENGTH	TACK COAT 0.05 GAL. PER SQ. YD.			PORTLAND CEMENT CONCRETE BASE			
				AVG. WID.	SQ. YD.	GAL.	AVG. WID.	6" U.T.	AVG. WID.	8" U.T.
			FEET	FEET			FEET	SQ. YD.	FEET	SQ. YD.
212+80.00	214+60.00	HWY. 65 - NOTCH AND WIDEN - 26' FTF TO 34' FTF (LT. ONLY)	180.00	2.00	40.00	2.00	3.25	65.00	2.00	40.00
TOTALS:					**40.00**	**2.00**		**65.00**		**40.00**

BASIS OF ESTIMATE:
TACK COAT QUANTITIES WERE CALCULATED USING THE EMULISIFED ASPHALT RATES. REFER TO SS-400-1 FOR THE RESIDUAL ASPHALT APPLICATION RATES.

BASE AND SURFACING

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT (0.05 GAL. PER SQ. YD.)			TACK COAT (0.17 GAL. PER SQ. YD.)			TOTAL GALLONS	ACHM BINDER COURSE (1") AVG. WID.	ACHM BINDER COURSE (1") SQ.YD.	ACHM BINDER COURSE (1") POUND / SQ.YD.	ACHM BINDER COURSE (1") PG 70-22	ACHM SURFACE COURSE (1/2") AVG. WID.	ACHM SURFACE COURSE (1/2") SQ.YD.	ACHM SURFACE COURSE (1/2") POUND / SQ.YD.	ACHM SURFACE COURSE (1/2") PG 70-22	ACHM SURFACE COURSE (1") AVG. WID.	ACHM SURFACE COURSE (1") SQ.YD.	ACHM SURFACE COURSE (1") POUND / SQ.YD.	ACHM SURFACE COURSE (1") PG 70-22	TOTAL PG 70-22
				TON / STATION	TON	TOTAL WID.	SQ.YD.	GALLON	TOTAL WID.	SQ.YD.	GALLON														
			FEET			FEET			FEET				FEET			TON	FEET			TON	FEET			TON	TON
MAIN LANES																									
100+92.00	101+75.00	HWY. 66 - MAIN LANES - 38' FACE TO FACE	83.00	159.50	132.39	72.00	664.00	33.20				33.20	36.00	332.00	330.00	54.78	36.00	332.00	220.00	36.52	36.00	332.00	220.00	36.52	73.04
105+25.00	109+61.00	HWY. 66 - MAIN LANES - 30' FACE TO FACE	436.00	128.25	559.17	56.00	2712.89	135.64				135.64	28.00	1356.44	330.00	223.81	28.00	1356.44	220.00	149.21	28.00	1356.44	220.00	149.21	298.42
211+55.00	212+80.00	HWY. 65 - TRANSITION	125.00	21.50	5.38				40.00	555.56	94.45	94.45									40.00	555.56	VAR.	31.78	31.78
212+80.00	214+60.00	HWY. 65 - NOTCH AND WIDEN - 26' FTF TO 34' FTF (RT. ONLY)	180.00	17.50	31.50	6.00	120.00	6.00				6.00	2.00	40.00	660.00	13.20	2.00	40.00	220.00	4.40	2.00	40.00	220.00	4.40	8.80
214+60.00	215+50.00	HWY. 65 - NOTCH AND WIDEN - 34' FTF TO 38' FTF	90.00	58.25	52.43	30.00	300.00	15.00				15.00	10.00	100.00	660.00	33.00	10.00	100.00	220.00	11.00	10.00	100.00	220.00	11.00	22.00
215+50.00	220+17.60	HWY. 65 - NOTCH AND WIDEN - 38' FACE TO FACE	467.60	66.00	308.62	36.00	1870.40	93.52				93.52	12.00	623.47	660.00	205.75	12.00	623.47	220.00	68.58	12.00	623.47	220.00	68.58	137.16
220+17.60	221+17.60	HWY. 65 - TRANSITION	100.00						40.00	444.44	75.55	75.55									40.00	444.44	VAR.	24.44	24.44
ADDITIONAL FOR TAPERS AND TRANSITIONS																									
100+92.00	101+82.00	HWY. 66 - 6' TRUCK TRACKING TAPER RT.	90.00	11.63	10.47	6.00	60.00	3.00				3.00	3.00	30.00	330.00	4.95	3.00	30.00	220.00	3.30	3.00	30.00	220.00	3.30	6.60
212+80.00	214+60.00	HWY. 65 - 8' CURB INTRODUCTION TAPER	180.00	15.50	27.90	12.00	240.00	12.00				12.00	4.00	80.00	660.00	26.40	4.00	80.00	220.00	8.80	4.00	80.00	220.00	8.80	17.60
216+69.46	217+59.46	HWY. 65 - 6' TRUCK TRACKING TAPER RT.	90.00	11.63	10.47	9.00	90.00	4.50				4.50	3.00	30.00	660.00	9.90	3.00	30.00	220.00	3.30	3.00	30.00	220.00	3.30	6.60
218+17.60	220+17.60	HWY. 65 - 8' CURB INTRODUCTION TAPER	200.00	15.50	31.00	12.00	266.67	13.33				13.33	4.00	88.89	660.00	29.33	4.00	88.89	220.00	9.78	4.00	88.89	220.00	9.78	19.56
INTERSECTIONS																									
100+18.00	100+92.00	HWY. 66 - MAINLANES AND RADII	74.00	VAR.	259.64	VAR.	1349.84	67.49				67.49	VAR.	674.92	330.00	111.36	VAR.	674.92	220.00	74.24	VAR.	674.92	220.00	74.24	148.48
ADDITIONAL FOR LEVELING																									
212+80.00	214+60.00	HWY. 65 - LEVELING	180.00			24.00	480.00	24.00	24.00	480.00	81.60	105.60									24.00	480.00	VAR.	116.87	116.87
214+60.00	215+50.00	HWY. 65 - LEVELING	90.00			24.00	240.00	12.00	24.00	240.00	40.80	52.80									24.00	240.00	VAR.	63.19	63.19
215+50.00	220+17.60	HWY. 65 - LEVELING	467.60			24.00	1246.93	62.35	24.00	1246.93	211.98	274.33									24.00	1246.93	VAR.	316.96	316.96
TOTALS:					**1428.97**		**9640.73**	**482.03**		**2966.93**	**504.38**	**986.41**		**3355.72**		**712.48**		**3355.72**		**369.13**		**6322.65**		**922.37**	**1291.50**

BASIS OF ESTIMATE :
ACHM SURFACE COURSE (1/2").....94.1% MIN. AGGR.....5.9% ASPHALT BINDER
ACHM BINDER COURSE (1").....95.1% MIN. AGGR.....4.9% ASPHALT BINDER

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R090672.DGN MicroStation v8.11.9.578

QUANTITIES

DATE REVISED	DATE REVISED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.			
		JOB NO.		090672	27	108
		(1) 07709 - QUANTITIES - 69147				

SCHEDULE OF BRIDGE QUANTITIES - JOB NO. 090672

BRIDGE NO.	NAME PLATE TITLE	UNIT OF STRUCTURE	ITEM NO.	801	SP, SS & 802	SP, SS, & 802	SP & 803	SS & 804	SS & 804	SS & 805	SS & 805	SS & 806	SS & 806	SP, SS & 807	SS & 807	SS & 808	SS & 809	812	SS & 816	SS & 816
			ITEM	(1) UNCLASSIFIED EXCAVATION FOR STRUCTURES - BRIDGE	CLASS S CONCRETE-BRIDGE	CLASS S(AE) CONCRETE-BRIDGE	CLASS 2 PROTECTIVE SURFACE TREATMENT	REINFORCING STEEL-BRIDGE (GRADE 60)	EPOXY COATED REINFORCING STEEL (GRADE 60)	STEEL PILING (HP 12x53) (3)	PREBORING (2)	METAL BRIDGE RAILING (TYPE H2)	TRANSITIONAL APPROACH RAILING	STRUCTURAL STEEL IN BEAM SPANS (A709, GR. 50W)	PAINTING STRUCTURAL STEEL (4)	ELASTOMERIC BEARINGS	SILICONE JOINT SEALANT	BRIDGE NAME PLATE (TYPE D)	FILTER BLANKET	FOUNDATION PROTECTION RIPRAP
			UNIT	CU. YD.	CU. YD.	CU. YD.	SQ. YD.	LB.	LB.	LIN. FT.	LIN. FT.	LIN. FT.	EACH	POUND	TON	CU. IN.	LIN. FT.	EACH	SQ. YD.	TON
07709	HIGHWAY 66 OVER COVE CREEK	BENT 1			30.65		1.8	3,245		252			2					1	435	663
		BENT 2		330	101.55			13,371	701											
		BENT 3		343	112.89			17,120								2,106.0	51			
		BENT 4		236	82.53			14,432								2,867.0				
		BENT 5		206	113.29			17,181								2,106.0	50			
		BENT 6		250	99.59			13,249	664											
		BENT 7		10	28.60		1.8	3,030		136	120		2						497	756
		70'-0" R.C. SLAB UNIT 1				305.88	362.2		91,390			140								
		140'-0" CONTINUOUS W-BEAM UNIT				256.57	677.0		88,425			280		183,720	10.0					
		70'-0" R.C. SLAB UNIT 2				289.55	338.5		83,360			140								
		EXISTING BRIDGE NO. 00680						(2) 142									40			
TOTALS FOR JOB NO. 090672				1,375	569.10	852.00	1,381.3	81,770	264,540	388	120	560	4	183,720	10.0	7079.0	141	1	932	1,419

BRIDGE NO.	NAME PLATE TITLE	UNIT OF STRUCTURE	ITEM NO.	SP JOB 090672	SP JOB 090672	SP JOB 090672	SP JOB 090672	SP JOB 090672
			ITEM	ARCHITECTURAL FINISH	STAINING CONCRETE SURFACES	EXPLORATORY HOLES (2)	BRIDGE DECK REPAIR FOR POLYMER OVERLAYS (2)	POLYMER OVERLAY
			UNIT	SQ. FT.	SQ. FT.	LIN. FT.	SQ. FT.	SQ. YD.
07709	HIGHWAY 66 OVER COVE CREEK	BENT 1		47	162	234		
		BENT 2						
		BENT 3						
		BENT 4						
		BENT 5				20		
		BENT 6				21		
		BENT 7		47	162			
		70'-0" R.C. SLAB UNIT 1		1,221	1,621			
		140'-0" CONTINUOUS W-BEAM UNIT		2,407	3,495			
		70'-0" R.C. SLAB UNIT 2		1,209	1,603			
		EXISTING BRIDGE NO. 00680					167	372
TOTALS FOR JOB NO. 090672				4,931	7,043	275	167	372

TABLE OF APPROACH SLAB QUANTITIES

(FOR INFORMATION ONLY)

BRIDGE NO.	ITEM	REINFORCING STEEL	CONCRETE
	UNIT	LB.	CU. YDS.
07709	Begin Bridge	9,230	80
	End Bridge	7,219	56

REFERENCE TABLE

BRIDGE NO.	Existing Dwg. No.
00680	2569

Existing Bridge deck does not have asphalt overlay.

Existing Bridge has filled joints. See Std. Dwg. No 55064 for additional information.

(1) Includes approximately 414 cubic yards of rock excavation.

(2) The quantities shown are for estimating and bidding purposes only. Actual quantities will be determined in the field.

(3) All steel piling shall be Grade 50 and are required to have approved driving points which will not be paid for directly, but will be considered subsidiary to the item "Steel Piling (12x53)."

(4) The color of paint shall be Brown equal to or close to Federal Std. 595B Color Chip No. 30070 and as approved by the Engineer.

CHRIS WILLIAMS
DESIGN SECTION SUPERVISOR

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
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: 2025.10.02 15:27:23-05'00'

BRIDGE ENGINEER

SCHEDULE OF BRIDGE QUANTITIES
HWY. 66 REALIGNMENT (LESLIE) (S)
SEARCY COUNTY

ROUTE 66 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CDM DATE: 9/5/2025 FILENAME: b090672_q1.dgn
CHECKED BY: CMW DATE: 9/5/2025 SCALE: NO SCALE
DESIGNED BY: - DATE: -

BRIDGE NO. 07709 DRAWING NO. 69147

PRINT DATE: 10/2/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	28	108
		SUMMARY OF QUANTITIES AND REVISIONS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER

10/02/2025

SUMMARY OF QUANTITIES (BOX 1 OF 2)

	ITEM NUMBER	ITEM		QUANTITY (9030)	QUANTITY (STPR-0064(20))	QUANTITY TOTAL	UNIT
	201	CLEARING			16	16	STATION
	201	GRUBBING			16	16	STATION
	202	REMOVAL AND DISPOSAL OF CURB			166	166	LIN. FT.
	202	REMOVAL AND DISPOSAL OF CONCRETE WALLS			50	50	LIN. FT.
	202	REMOVAL AND DISPOSAL OF CONCRETE DRIVEWAYS			184	184	SQ. YD.
	202	REMOVAL AND DISPOSAL OF WALKS			259	259	SQ. YD.
	202	REMOVAL AND DISPOSAL OF DROP INLETS			1	1	EACH
	202	REMOVAL AND DISPOSAL OF PIPE CULVERTS			8	8	EACH
	202	REMOVAL AND DISPOSAL OF BOX CULVERTS			1	1	EACH
	202	REMOVAL AND DISPOSAL OF HEADWALLS			3	3	EACH
	202	REMOVAL AND DISPOSAL OF LUMINAIRE POLE AND FOUNDATION			3	3	EACH
	SP, SS, & 210	UNCLASSIFIED EXCAVATION		270	972	1242	CU. YD.
	SP & 210	COMPACTED EMBANKMENT			11267	11267	CU. YD.
	SP & 210	SOIL STABILIZATION			100	100	TON
	SP, SS, & 303	AGGREGATE BASE COURSE (CLASS 7)			2307	2307	TON
	SP, SS, & 309	PORTLAND CEMENT CONCRETE BASE (6" UNIFORM THICKNESS)			65	65	SQ. YD.
	SP, SS, & 309	PORTLAND CEMENT CONCRETE BASE (8" UNIFORM THICKNESS)			40	40	SQ. YD.
	SS & 401	TACK COAT			1038	1038	GAL.
	SP, SS, & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")			678	678	TON
	SP, SS, & 406	ASPHALT BINDER (PG 70-22) IN ACHM BINDER COURSE (1")			35	35	TON
	SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")			1370	1370	TON
	SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")			10	10	TON
	SP, SS, & 407	ASPHALT BINDER (PG 70-22) IN ACHM SURFACE COURSE (1/2")			76	76	TON
	SP & 412	COLD MILLING ASPHALT PAVEMENT			533	533	SQ. YD.
	SP, SS, & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC			25	25	TON
	SP, SS, & 415	ACHM PATCHING OF EXISTING ROADWAY			25	25	TON
	SP, SS, & 504	APPROACH SLABS			136.00	136.00	CU. YD.
	SP, SS, & 505	PORTLAND CEMENT CONCRETE DRIVEWAY			412.92	412.92	SQ. YD.
	601	MOBILIZATION			1.00	1.00	LUMP SUM
	SP & 602	FURNISHING FIELD OFFICE			1	1	EACH
	SS & 603	MAINTENANCE OF TRAFFIC			1.00	1.00	LUMP SUM
	SS & 604	SIGNS			233	233	SQ. FT.
	SS & 604	BARRICADES			80	80	LIN. FT.
	SS & 604	TRAFFIC DRUMS			32	32	EACH
	604	CONSTRUCTION PAVEMENT MARKINGS			9430	9430	LIN. FT.
	604	REMOVAL OF PERMANENT PAVEMENT MARKINGS			1420	1420	LIN. FT.
	604	REMOVAL OF PERMANENT PAVEMENT MARKINGS (WORDS)			1	1	EACH
	604	REMOVAL OF PERMANENT PAVEMENT MARKINGS (ARROWS)			1	1	EACH
	SS & 604	VERTICAL PANELS			32	32	EACH
	SP, SS, & 605	CONCRETE DITCH PAVING (TYPE B)			194	194	SQ. YD.
*	SS & 606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)		862	862	LIN. FT.
*	SS & 606	18" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 2)		862	862	LIN. FT.
*	SS & 606	18" SMOOTH SPIRAL RIB POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 3)		862	862	LIN. FT.
*	SS & 606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)		132	132	LIN. FT.
*	SS & 606	18" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 2)		132	132	LIN. FT.
*	SS & 606	18" SMOOTH SPIRAL RIB POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 3)		132	132	LIN. FT.
*	SP, SS, & 606	18" HIGH DENSITY POLYETHYLENE PIPE	(ALTERNATE NO. 4)		132	132	LIN. FT.
*	SP, SS, & 606	18" PVC PIPE	(ALTERNATE NO. 5)		132	132	LIN. FT.
*	SP, SS, & 606	18" POLYPROPYLENE PIPE	(ALTERNATE NO. 6)		132	132	LIN. FT.
*	SS & 606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)		408	408	LIN. FT.
*	SS & 606	24" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 2)		408	408	LIN. FT.
*	SS & 606	24" SMOOTH SPIRAL RIB POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 3)		408	408	LIN. FT.
*	SP, SS, & 606	24" HIGH DENSITY POLYETHYLENE PIPE	(ALTERNATE NO. 4)		408	408	LIN. FT.
*	SP, SS, & 606	24" PVC PIPE	(ALTERNATE NO. 5)		408	408	LIN. FT.
*	SP, SS, & 606	24" POLYPROPYLENE PIPE	(ALTERNATE NO. 6)		408	408	LIN. FT.
*	SS & 606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)		388	388	LIN. FT.
*	SS & 606	30" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 2)		388	388	LIN. FT.
*	SS & 606	30" SMOOTH SPIRAL RIB POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 3)		388	388	LIN. FT.
*	SP, SS, & 606	30" HIGH DENSITY POLYETHYLENE PIPE	(ALTERNATE NO. 4)		388	388	LIN. FT.
*	SP, SS, & 606	30" PVC PIPE	(ALTERNATE NO. 5)		388	388	LIN. FT.
*	SP, SS, & 606	30" POLYPROPYLENE PIPE	(ALTERNATE NO. 6)		388	388	LIN. FT.
	SS & 606	59" X 36" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS III)			120	120	LIN. FT.
*	SS & 606	59" X 36" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)		142	142	LIN. FT.
*	SS & 606	57" X 38" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL ARCH PIPE	(ALTERNATE NO. 2)		142	142	LIN. FT.
*	SS & 606	57" X 38" SMOOTH SPIRAL RIB POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 3)		142	142	LIN. FT.
*	SS & 606	30" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	(ALTERNATE NO. 1)		2	2	EACH
*	SS & 606	30" FLARED END SECTIONS FOR CORRUGATED STEEL PIPE CULVERTS	(ALTERNATE NO. 2)		2	2	EACH
*	SS & 606	59" X 36" FLARED END SECTIONS FOR REINFORCED CONCRETE ARCH PIPE CULVERTS	(ALTERNATE NO. 1)		1	1	EACH
*	SS & 606	57" X 38" FLARED END SECTIONS FOR CORRUGATED STEEL ARCH PIPE CULVERTS	(ALTERNATE NO. 2)		1	1	EACH
	SP, SS, & 606	18" SIDE DRAIN			96	96	LIN. FT.
	SS & 606	SELECTED PIPE BEDDING		365	190	555	CU. YD.
	SS & 609	DROP INLETS (TYPE C)			8	8	EACH
	SS & 609	DROP INLETS (TYPE MO)			24	24	EACH
	SS & 609	DROP INLET EXTENSIONS (4')			15	15	EACH
	SS & 609	DROP INLET EXTENSIONS (8')			2	2	EACH
	SS & 611	4" PIPE UNDERDRAINS			500	500	LIN. FT.
	SS & 611	UNDERDRAIN OUTLET PROTECTORS			4	4	EACH
	SS & 615	PAVEMENT REPAIR OVER CULVERTS (ASPHALT)			30	30	TON
	620	LIME			2	2	TON
	620	SEEDING			0.93	0.93	ACRE
	SS & 620	MULCH COVER			8.08	8.08	ACRE
	620	WATER			242.6	242.6	M. GAL.
	621	TEMPORARY SEEDING			7.15	7.15	ACRE

* DENOTES ALTERNATE BID ITEMS.

RD38049 6/19/2025
R090672.DGN MicroStation v8.11.9.578

SUMMARY OF QUANTITIES

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
10/20/2025		6	ARK.	090672	29	108
		SUMMARY OF QUANTITIES AND REVISIONS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER

Digitally signed by
Baker, David W
Date: 2025.10.23
08:28:28-05'00'

SUMMARY OF QUANTITIES (BOX 2 OF 2)

ITEM NUMBER	ITEM	QUANTITY (9030)	QUANTITY (STPR-0064(20))	QUANTITY TOTAL	UNIT
621	SILT FENCE		1515	1515	LIN. FT.
621	SEDIMENT BASIN		20	20	CU. YD.
621	OBLITERATION OF SEDIMENT BASIN		20	20	CU. YD.
621	SEDIMENT REMOVAL AND DISPOSAL		136	136	CU. YD.
621	ROCK DITCH CHECKS		98	98	CU. YD.
SS & 621	FILTER SOCK (12")		926	926	LIN. FT.
621	WATTLE (20")		59	59	LIN. FT.
623	SECOND SEEDING APPLICATION		0.93	0.93	ACRE
624	SOLID SODDING		148	148	SQ. YD.
SP, SS, & 633	CONCRETE WALKS		889	889	SQ. YD.
SS & 633	HAND RAILING		381	381	LIN. FT.
SS & 634	CONCRETE COMBINATION CURB AND GUTTER (TYPE A) (1' 6")		2926	2926	LIN. FT.
635	ROADWAY CONSTRUCTION CONTROL		1.00	1.00	LUMP SUM
SP, SS, & 641	WHEELCHAIR RAMPS (TYPE 3)		195	195	SQ. YD.
SP, SS, & 641	WHEELCHAIR RAMPS (TYPE 4)		36	36	SQ. YD.
709	GALVANIZED STEEL CONDUIT (1")		55	55	LIN. FT.
710	NON-METALLIC CONDUIT (2")		750	750	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (6")		1040	1040	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (12")		45	45	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (6")		4370	4370	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING (WORDS)		3	3	EACH
719	THERMOPLASTIC PAVEMENT MARKING (ARROWS)		6	6	EACH
721	RAISED PAVEMENT MARKERS (TYPE II)		59	59	EACH
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-ROADWAY		331	331	CU. YD.
SP, SS, & 802	CLASS S CONCRETE-ROADWAY		78.13	78.13	CU. YD.
SP	ARCHITECTURAL FINISH		744	744	SQ. FT.
SP	TEXTURED COATING FINISH		287	287	SQ. YD.
SS & 804	REINFORCING STEEL-ROADWAY (GRADE 60)		23573	23573	POUND
SP	DEWATER/BYPASS PUMPING	1		1	LUMP SUM
SS & 816	FILTER BLANKET		722	722	SQ. YD.
SS & 816	DUMPED RIPRAP		362	362	CU. YD.
SP	NEMA 4X STAINLESS STEEL JUNCTION BOX		8	8	EACH
SP	8" STEEL ENCASEMENT PIPE	150		150	LIN. FT.
SP	2" PVC SDR-17 WATER MAIN	280		280	LIN. FT.
SP	DUCTILE IRON PIPE WATER MAIN FITTINGS	66		66	POUND
SP	1" POLYETHYLENE SERVICE TUBING	290		290	LIN. FT.
SP	2" GATE VALVE WITH BOX	1		1	EACH
SP	SINGLE WATER METER SETTING (INC. METER BOX AND SHUT OFF VALVE)	5		5	EACH
SP	8" PVC SDR-26 SEWER MAIN	520		520	LIN. FT.
SP	MANHOLE, 0' TO 6' DEPTH (4' DIAMETER)	7		7	EACH
SP	MANHOLE, EXTRA DEPTH (4' DIAMETER)	19		19	LIN. FT.
SP	ABANDON EXISTING MANHOLE	4		4	EACH
SP	FILL ABANDONED SEWER MAINS WITH FLOWABLE FILL (ABANDON-IN-PLACE)	580		580	LIN. FT.
SP	FIRE HYDRANT ASSEMBLY	1		1	EACH
SP	1" SERVICE BORE	240		240	LIN. FT.
SP	4" PVC SEWER SERVICE LINE	340		340	LIN. FT.
SP	( )" BLOW OFF ASSEMBLY	1		1	EACH
	STRUCTURES OVER 20' SPAN				
636	BRIDGE CONSTRUCTION CONTROL		1.00	1.00	LUMP SUM
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-BRIDGE		1375.00	1375.00	CU. YD.
SP, SS, & 802	CLASS S CONCRETE-BRIDGE		568.90	568.90	CU. YD.
SP, SS, & 802	CLASS S(AE) CONCRETE-BRIDGE		852.00	852.00	CU. YD.
SP	ARCHITECTURAL FINISH		4931	4931	SQ. FT.
SP	STAINING CONCRETE SURFACES		7043	7043	SQ. FT.
SP & 803	CLASS 2 PROTECTIVE SURFACE TREATMENT		1381.30	1381.30	SQ. YD.
SS & 804	REINFORCING STEEL-BRIDGE (GRADE 60)		81770	31770	POUND
SS & 804	EPOXY COATED REINFORCING STEEL (GRADE 60)		264540	264540	POUND
SS & 805	STEEL PILING (HP 12X53)		388	388	LIN. FT.
SS & 805	PREBORING		120	120	LIN. FT.
SP	EXPLORATORY HOLES		275	275	LIN. FT.
SS & 806	METAL BRIDGE RAILING (TYPE H2)		560	560	LIN. FT.
SS & 806	TRANSITIONAL APPROACH RAILING		4	4	EACH
SP, SS, & 807	STRUCTURAL STEEL IN BEAM SPANS (A709, GR. 50W)		183720	183720	POUND
SS & 807	PAINTING STRUCTURAL STEEL		9.50	9.50	TON
SS & 808	ELASTOMERIC BEARINGS		7079.0	7079.0	CU. IN.
SS & 809	SILICONE JOINT SEALANT		141	141	LIN. FT.
812	BRIDGE NAME PLATE (TYPE D)		1	1	EACH
SS & 816	FILTER BLANKET		932	932	SQ. YD.
SS & 816	FOUNDATION PROTECTION RIPRAP		1419	1419	TON
SP	BRIDGE DECK REPAIR FOR POLYMER OVERLAYS		167	167	SQ. FT.
SP	POLYMER OVERLAY		372	372	SQ. YD.

REVISIONS

DATE	REVISION	SHEET NUMBER
10/20/2025	UPDATED SIGNATURE	47

RD38049 6/19/2025
R090672.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	30	108
		SURVEY CONTROL DETAILS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER
10/02/2025

SURVEY CONTROL COORDINATES

Project Name: s090672
Date: 12/22/2022
Coordinate System: ARKANSAS STATE PLANE - NORTH ZONE BASED ON GPS CONTROL, PROJECTED TO GROUND.
Units: U.S. SURVEY FOOT

Point Name	Northing	Easting	Elev	Feature	Description
1	543615.4812	1146514.1138	980.638	CTL	ARDOT STD MON STAMPED PN: 1
2	544216.8822	1146002.2092	974.006	CTL	ARDOT STD MON STAMPED PN: 2
3	544744.4614	1145562.0061	981.811	CTL	ARDOT STD MON STAMPED PN: 3
4	544547.5173	1146298.5622	974.570	CTL	ARDOT STD MON STAMPED PN: 4
5	544580.2791	1146890.0341	994.287	CTL	ARDOT STD MON STAMPED PN: 5
6	544886.7929	1146642.4762	994.581	CTL	ARDOT STD MON STAMPED PN: 6
7	545132.0041	1146328.5013	987.581	CTL	ARDOT STD MON STAMPED PN: 7
8	545391.6577	1147076.6287	1016.863	CTL	ARDOT STD MON STAMPED PN: 8
9	545835.3363	1147559.6422	1065.322	CTL	ARDOT STD MON STAMPED PN: 9
100	546000.2921	1143913.9475	977.328	GPS	ARDOT GPS MON 640018
101	547220.4521	1142818.0078	1011.370	GPS	ARDOT GPS MON 640011A
900	544407.2896	1145768.6287	974.943	TBM	SQUARE CUT CNTR W HW
901	544921.7347	1146597.9155	993.459	TBM	SQUARE CUT ON CONC
902	545413.5712	1147101.8043	1017.682	TBM	SQUARE CUT CNTR N HW
998	545680.4670	1145880.9835	971.974	BM	AHTD BM DISK STAMPED GRIGGS 201
999	544676.4510	1146203.2452	980.000	BM	US C&G DISK B 7 SET VERTICALY 65/66

*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).
USE CAF = 1.0 FOR STAKEOUT FOR THIS PROJECT
A PROJECT CAF OF 0.9998953011 HAS BEEN USED TO COMPUTE THE ABOVE GROUND COORDINATES.
THIS CAF IS INTENDED FOR USE WITHIN THE PROJECT LIMITS.
GRID DISTANCE = GROUND DISTANCE X CAF.

HWY. 66

POINT NO.	TYPE	STATION	NORTHING	EASTING
8000	POB	100+00.00	544119.9356	1146035.0172
8001	PC	100+78.03	544168.9367	1146095.7404
8003	PT	102+77.64	544331.7603	1146206.1094
8004	PC	104+14.85	544462.8621	1146246.6028
8006	PT	105+75.71	544599.6741	1146328.2806
8007	POE	111+01.61	544974.7022	1146696.9576

HWY. 65

POINT NO.	TYPE	STATION	NORTHING	EASTING
8010	PC	200+83.99	543325.5370	1147253.9991
8012	PT	214+21.57	544000.9461	1146131.0667
8013	POE	220+83.41	544515.9463	1145715.3533

RD38049 6/17/2025
R090672.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	31	108
		SURVEY CONTROL DETAILS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, JR.
10/02/2025

STA. 220+17.60
END HWY. 65 WIDENING

B013
POE220+83.41
220
PN900
PDOSQUARE CUT CNTR W HW
C.L. HWY. 65
N 38°54'39" W
661.85'
100
POB100+00.00
PN2
PDOARDOT STD MON STAMPED PN2
SURVEY BASELINE N41°52'13"E
444.01'
HWY. 66
PI = 101+80.86
Δ = 33°56'01"LT.
D = 17°00'00"
T = 102.83'
L = 199.61'
PC = 100+78.03
PT = 102+77.64
NO SUPER
PT102+77.64
N 17°09'52" E
137.21'
8003
PC100+78.03
8000
N 51°05'53" E
78.03'
8001
N 51°05'53" E
102.83'
N 17°09'52" E
102.83'
P101+80.86
215
B012
P1214+21.57
STA. 100+18.00
BEGIN JOB 090672
STA. 215+74.48 HWY. 65=
STA. 100+00.00 HWY. 66
Δ = 89° 59' 28"
N 38°54'39" W
697.53'
STA. 212+80.00
BEGIN HWY. 65 WIDENING
HWY. 65
PI = 207+81.53
Δ = 40°07'38"RT.
D = 3°00'00"
T = 697.54'
L = 1337.58'
PC = 200+83.99
PT = 214+21.57
MATCH EXIST. SUPER

PN999
PDAUS C&G DISK B 7 SET VERTICALY 65/66
P104+96.84
105
N 44°30'39" E
81.99'
N 17°09'52" E
81.99'
8004
PN4
PDOARDOT STD MON STAMPED PN4
PT105+75.71
C.L. HWY. 66
N 44°30'39" E
525.90'
8006
HWY. 66
PI = 104+96.84
Δ = 27°20'47"RT.
D = 17°00'00"
T = 81.99'
L = 160.86'
PC = 104+14.85
PT = 105+75.71
NO SUPER
PC104+14.85
SURVEY BASELINE N86°49'47"E
592.38'
110
PN901
PDOSQUARE CUT ON CONC
POE111+01.61
8007
SURVEY BASELINE N40°41'37"E
665.87'
PN6
PDOARDOT STD MON STAMPED PN6
SURVEY BASELINE N38°55'35"W
394.00'
STA. 109+60.71
END JOB 090672
LOG MILE 0.23
SURVEY BASELINE
PN5
PDOARDOT STD MON STAMPED PN5

RD38049 6/17/2025
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SURVEY CONTROL DETAILS

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	32	108
		PLAN AND PROFILE SHEETS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER
10/02/2025

STA. 100+60 CONSTRUCT
DROP INLET ON LT. W/ 4' EXTENSION
AND 59" X 36" X 65' ARCH PIPE OUTLET
CONNECT TO DROP INLET @ STA. 100+60 RT.
DROP INLET H = 6'-5"
TYPE C INLET = 8' X 8'
59" X 36" R.C. ARCH PIPE (CLASS III)(TYPE 3) = 66 LIN. FT.
57" X 38" SLPCCS ARCH PIPE (TYPE 2) = 66 LIN. FT.
57" X 38" SSRCCS ARCH PIPE = 66 LIN. FT.

STA. 100+90 CONSTRUCT
DROP INLET ON LT. W/ 4' EXTENSION
AND 18" X 26' PIPE OUTLET
CONNECT TO DROP INLET @ STA. 100+60 LT.
DROP INLET H = 5'-0"
TYPE MO INLET = 4' DIA.
TYPE C INLET = 4' X 3'
18" R.C. PIPE (CLASS III)(TYPE 3) = 26 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 26 LIN. FT.
18" SSRCCS PIPE = 26 LIN. FT.
18" HDPE PIPE = 26 LIN. FT.
18" PVC PIPE = 26 LIN. FT.
18" PPL PIPE = 26 LIN. FT.

STA. 101+80 INSTALL
18" X 96' PIPE CULVERT
LT. SIDE DRAIN
CONSTRUCT APPROACH = 560 CU. YD.

STA. 102+10.00 BR. END
70'0" CONTINUOUS R.C. SLAB UNIT (35',35')
139'-10" CONTINUOUS W-BEAM UNIT (70',70')
70'0" CONTINUOUS R.C. SLAB UNIT (35',35')
280'-00" TOTAL LENGTH
30'-00" CLEAR ROADWAY
BR. NO. 07709
STA. 104+90.00 BR. END

HWY. 66
PI = 101+80.86
Δ = 33°56'01"LT.
D = 17°00'00"
T = 102.83'
L = 199.61'
PC = 100+78.03
PT = 102+77.64
NO SUPER
+59.46

STA. 100+18.00
BEGIN JOB 090672

STA. 105+30 CONSTRUCT
DROP INLET ON LT.
AND 30" X 6' PIPE OUTLET W/F.E.S.
DROP INLET H = 3'-7"
TYPE MO INLET = 5' DIA.
TYPE C INLET = 4' X 3'
30" R.C. PIPE (CLASS III)(TYPE 3) = 6 LIN. FT.
30" SLPCCS PIPE (TYPE 2) = 6 LIN. FT.
30" SSRCCS PIPE = 6 LIN. FT.
30" HDPE PIPE = 6 LIN. FT.
30" PVC PIPE = 6 LIN. FT.
30" PPL PIPE = 6 LIN. FT.
30" F.E.S. = 1EACH

STA. 106+25 CONSTRUCT
DROP INLET ON LT. W/ 4' EXTENSION
AND 30" X 98' PIPE OUTLET
CONNECT TO DROP INLET @ STA. 105+30 LT.
DROP INLET H = 4'-10"
TYPE MO INLET = 5' DIA.
TYPE C INLET = 4' X 4'
30" R.C. PIPE (CLASS III)(TYPE 3) = 98 LIN. FT.
30" SLPCCS PIPE (TYPE 2) = 98 LIN. FT.
30" SSRCCS PIPE = 98 LIN. FT.
30" HDPE PIPE = 98 LIN. FT.
30" PVC PIPE = 98 LIN. FT.
30" PPL PIPE = 98 LIN. FT.

STA. 107+45 CONSTRUCT
DROP INLET ON LT.
AND 30" X 120' PIPE OUTLET
CONNECT TO DROP INLET @ STA. 106+25 LT.
DROP INLET H = 4'-8"
TYPE MO INLET = 5' DIA.
TYPE C INLET = 4' X 4'
30" R.C. PIPE (CLASS III)(TYPE 3) = 120 LIN. FT.
30" SLPCCS PIPE (TYPE 2) = 120 LIN. FT.
30" SSRCCS PIPE = 120 LIN. FT.
30" HDPE PIPE = 120 LIN. FT.
30" PVC PIPE = 120 LIN. FT.
30" PPL PIPE = 120 LIN. FT.

STA. 108+50 CONSTRUCT
DROP INLET ON LT.
AND 30" X 106' PIPE OUTLET
CONNECT TO DROP INLET @ STA. 107+45 LT.
DROP INLET H = 3'-11"
TYPE C INLET = 4' X 7'
30" R.C. PIPE (CLASS III)(TYPE 3) = 106 LIN. FT.
30" SLPCCS PIPE (TYPE 2) = 106 LIN. FT.
30" SSRCCS PIPE = 106 LIN. FT.
30" HDPE PIPE = 106 LIN. FT.
30" PVC PIPE = 106 LIN. FT.
30" PPL PIPE = 106 LIN. FT.

STA. 109+00 CONSTRUCT
DROP INLET ON LT. W/ 4' EXTENSION
AND 30" X 50' PIPE OUTLET
CONNECT TO DROP INLET @ STA. 108+50 LT.
DROP INLET H = 4'-9"
TYPE MO INLET = 5' DIA.
TYPE C INLET = 4' X 4'
30" R.C. PIPE (CLASS III)(TYPE 3) = 50 LIN. FT.
30" SLPCCS PIPE (TYPE 2) = 50 LIN. FT.
30" SSRCCS PIPE = 50 LIN. FT.
30" HDPE PIPE = 50 LIN. FT.
30" PVC PIPE = 50 LIN. FT.
30" PPL PIPE = 50 LIN. FT.

STA. 108+20
CONSTRUCT
APPROACH ON LT. = 35 CU. YD.

STA. 109+60.71
END JOB 090672
LOG MILE 0.23

HWY. 66
PI = 104+96.84
Δ = 27°20'47"RT.
D = 17°00'00"
T = 81.99'
L = 160.86'
PC = 104+14.85
PT = 105+75.71
NO SUPER

STA. 105+86
CONSTRUCT
APPROACH ON RT. = 5 CU. YD.

STA. 107+10
CONSTRUCT
APPROACH ON RT. = 5 CU. YD. UNCL. EX.

STA. 107+79
CONSTRUCT
APPROACH ON RT. = 10 CU. YD. UNCL. EX.

STA. 108+83
CONSTRUCT
APPROACH ON RT. = 15 CU. YD. UNCL. EX.

STA. 101+25
CONSTRUCT
APPROACH ON RT. = 715 CU. YD.

STA. 215+74.48 HWY. 65=
STA. 100+00.00 HWY. 66
Δ = 89° 59' 28"

STA. 100+90 CONSTRUCT
DROP INLET ON RT. W/ 4' EXTENSION
AND 18" X 27' PIPE OUTLET
CONNECT TO DROP INLET @ STA. 100+60 RT.
DROP INLET H = 4'-11"
TYPE MO INLET = 4' DIA.
TYPE C INLET = 4' X 3'
18" R.C. PIPE (CLASS III)(TYPE 3) = 28 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 28 LIN. FT.
18" SSRCCS PIPE = 28 LIN. FT.
18" HDPE PIPE = 28 LIN. FT.
18" PVC PIPE = 28 LIN. FT.
18" PPL PIPE = 28 LIN. FT.

STA. 105+30 CONSTRUCT
DROP INLET ON RT.
AND 30" X 7' PIPE OUTLET W/F.E.S.
DROP INLET H = 3'-11"
TYPE MO INLET = 5' DIA.
TYPE C INLET = 4' X 4'
30" R.C. PIPE (CLASS III)(TYPE 3) = 8 LIN. FT.
30" SLPCCS PIPE (TYPE 2) = 8 LIN. FT.
30" SSRCCS PIPE = 8 LIN. FT.
30" HDPE PIPE = 8 LIN. FT.
30" PVC PIPE = 8 LIN. FT.
30" PPL PIPE = 8 LIN. FT.
30" F.E.S. = 1EACH

STA. 106+25 CONSTRUCT
DROP INLET ON RT. W/ 4' EXTENSION
AND 24" X 93' PIPE OUTLET
CONNECT TO DROP INLET @ STA. 105+30 RT.
DROP INLET H = 5'-0"
TYPE MO INLET = 4' DIA.
TYPE C INLET = 4' X 3'
24" R.C. PIPE (CLASS III)(TYPE 3) = 94 LIN. FT.
24" SLPCCS PIPE (TYPE 2) = 94 LIN. FT.
24" SSRCCS PIPE = 94 LIN. FT.
24" HDPE PIPE = 94 LIN. FT.
24" PVC PIPE = 94 LIN. FT.
24" PPL PIPE = 94 LIN. FT.

STA. 107+45 CONSTRUCT
DROP INLET ON RT. W/ 4' EXTENSION
AND 24" X 120' PIPE OUTLET
CONNECT TO DROP INLET @ STA. 106+25 RT.
DROP INLET H = 5'-2"
TYPE MO INLET = 4' DIA.
TYPE C INLET = 4' X 3'
24" R.C. PIPE (CLASS III)(TYPE 3) = 120 LIN. FT.
24" SLPCCS PIPE (TYPE 2) = 120 LIN. FT.
24" SSRCCS PIPE = 120 LIN. FT.
24" HDPE PIPE = 120 LIN. FT.
24" PVC PIPE = 120 LIN. FT.
24" PPL PIPE = 120 LIN. FT.

STA. 108+43 CONSTRUCT
DROP INLET ON RT. W/ 4' EXTENSION
AND 24" X 96' PIPE OUTLET
CONNECT TO DROP INLET @ STA. 107+45 RT.
DROP INLET H = 6'-4"
TYPE MO INLET = 4' DIA.
TYPE C INLET = 4' X 3'
24" R.C. PIPE (CLASS III)(TYPE 3) = 96 LIN. FT.
24" SLPCCS PIPE (TYPE 2) = 96 LIN. FT.
24" SSRCCS PIPE = 96 LIN. FT.
24" HDPE PIPE = 96 LIN. FT.
24" PVC PIPE = 96 LIN. FT.
24" PPL PIPE = 96 LIN. FT.

STA. 109+45 CONSTRUCT
DROP INLET ON RT. W/ 8' EXTENSION
AND 24" X 98' PIPE OUTLET
CONNECT TO DROP INLET @ STA. 108+50 RT.
DROP INLET H = 5'-5"
TYPE MO INLET = 4' DIA.
TYPE C INLET = 4' X 3'
24" R.C. PIPE (CLASS III)(TYPE 3) = 98 LIN. FT.
24" SLPCCS PIPE (TYPE 2) = 98 LIN. FT.
24" SSRCCS PIPE = 98 LIN. FT.
24" HDPE PIPE = 98 LIN. FT.
24" PVC PIPE = 98 LIN. FT.
24" PPL PIPE = 98 LIN. FT.

STA. 109+54 CONSTRUCT
DROP INLET ON RT. W/ 4' EXTENSION
AND 18" X 24' PIPE OUTLET
CONNECT TO DROP INLET @ STA. 109+45 RT.
DROP INLET H = 4'-0"
TYPE MO INLET = 4' DIA.
TYPE C INLET = 4' X 3'
18" R.C. PIPE (CLASS III)(TYPE 3) = 24 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 24 LIN. FT.
18" SSRCCS PIPE = 24 LIN. FT.
18" HDPE PIPE = 24 LIN. FT.
18" PVC PIPE = 24 LIN. FT.
18" PPL PIPE = 24 LIN. FT.

STA. 109+96 CONSTRUCT
DROP INLET ON RT. W/8' EXTENSION
AND 24" X 53' PIPE OUTLET
CONNECT TO DROP INLET @ STA. 109+45 RT.
DROP INLET H = 4'-11"
TYPE MO INLET = 4' DIA.
TYPE C INLET = 4' X 3'
24" R.C. PIPE (CLASS III)(TYPE 3) = 54 LIN. FT.
24" SLPCCS PIPE (TYPE 2) = 54 LIN. FT.
24" SSRCCS PIPE = 54 LIN. FT.
24" HDPE PIPE = 54 LIN. FT.
24" PVC PIPE = 54 LIN. FT.
24" PPL PIPE = 54 LIN. FT.

STA. 100+60 CONSTRUCT
DROP INLET ON RT. W/ 4' EXTENSION
AND 59" X 36" X 30' ARCH PIPE OUTLET
CONNECT TO DROP INLET @ STA. 215+18 RT.
DROP INLET H = 6'-8"
TYPE C INLET = 8' X 8'
59" X 36" R.C. ARCH PIPE (CLASS III)(TYPE 3) = 30 LIN. FT.
57" X 38" SLPCCS ARCH PIPE (TYPE 2) = 30 LIN. FT.
57" X 38" SSRCCS ARCH PIPE = 30 LIN. FT.

HWY. 66

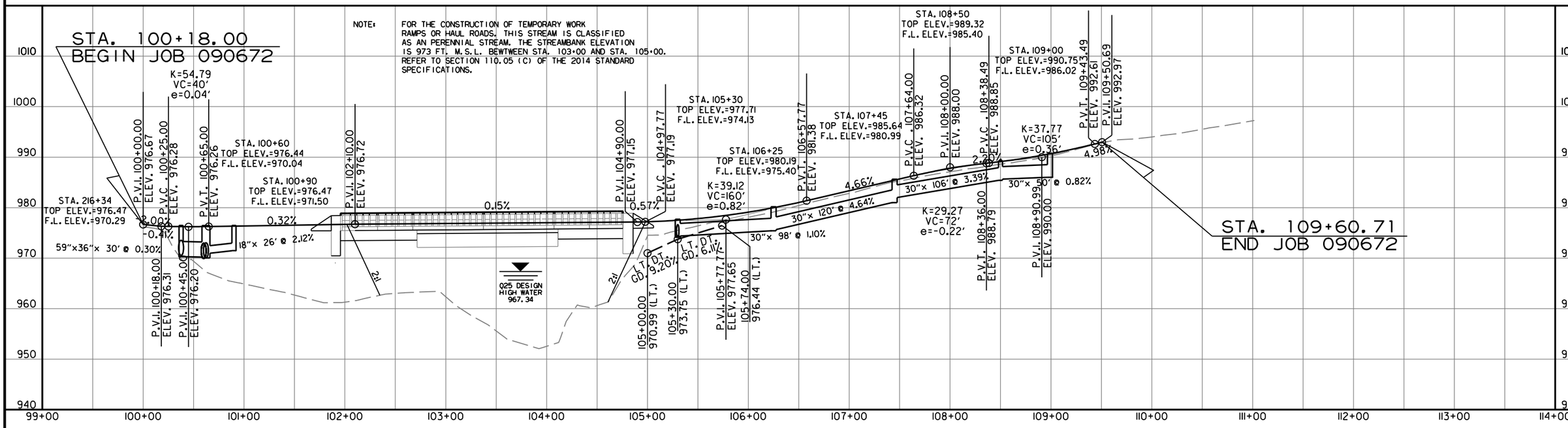
ER42959 9/18/2025
R090672.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	33	108
		PLAN AND PROFILE SHEETS				

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

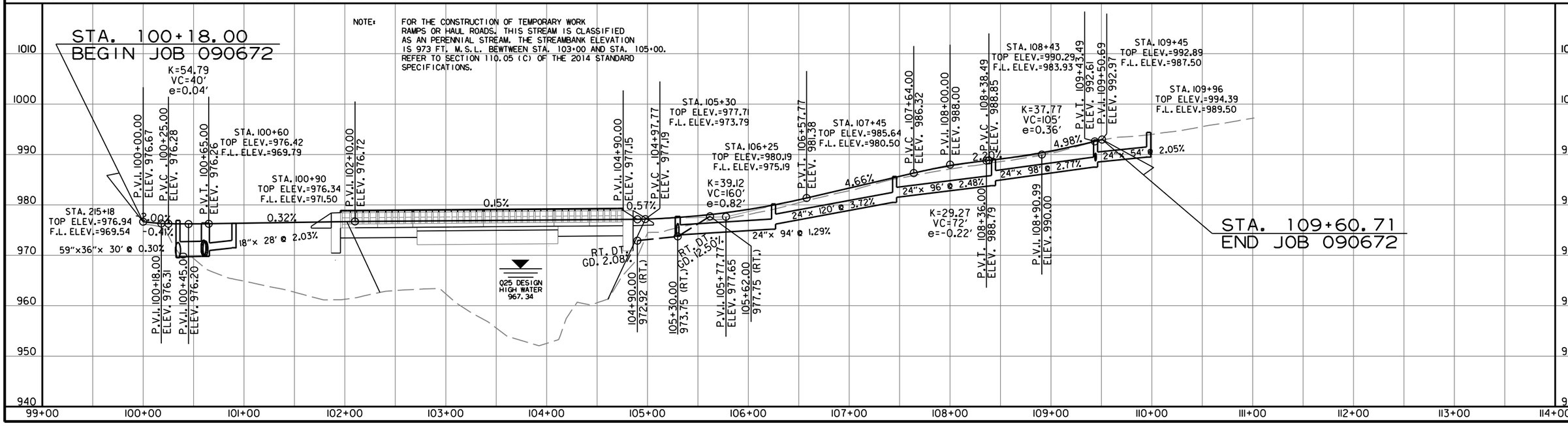
10/02/2025

LEFT SIDE OF HWY. 66



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

RIGHT SIDE OF HWY. 66



ER42959 9/18/2025
R090672.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	34	108
		PLAN AND PROFILE SHEETS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV
10/02/2025

STA. 215+50 CONSTRUCT
DROP INLET ON LT.
AND 18" X 112' PIPE OUTLET
CONNECT TO EXISTING STRUCTURE @ STA. 214+36 RT.
DROP INLET H = 3'-0"
TYPE MO INLET = 4' DIA.
TYPE C INLET = 4' X 3'
18" R.C. PIPE (CLASS III)(TYPE 3) = 112 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 112 LIN. FT.
18" SSRCCS PIPE = 112 LIN. FT.

STA. 216+34 CONSTRUCT
DROP INLET ON LT.
AND 18" X 31' PIPE OUTLET
CONNECT TO DROP INLET @ STA. 216+65 LT.
DROP INLET H = 3'-2"
TYPE MO INLET = 4' DIA.
TYPE C INLET = 4' X 3'
18" R.C. PIPE (CLASS III)(TYPE 3) = 32 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 32 LIN. FT.
18" SSRCCS PIPE = 32 LIN. FT.

STA. 216+65 CONSTRUCT
DROP INLET ON LT. W/ 4' EXTENSION
AND 59" X 36" X 5' ARCH PIPE INLET
AND 59" X 36" X 48' ARCH PIPE OUTLET
CONNECT TO DROP INLET @ STA. 216+65 RT.
DROP INLET H = 5'-9"
TYPE C INLET = 7' X 4'
59" X 36" R.C. ARCH PIPE (CLASS III)(TYPE 3) = 54 LIN. FT.
57" X 38" SLPCCS ARCH PIPE (TYPE 2) = 54LIN. FT.
57" X 38" SSRCCS ARCH PIPE = 54 LIN. FT.

STA. 217+50 CONSTRUCT
DROP INLET ON LT.
AND 18" X 85' PIPE OUTLET
CONNECT TO DROP INLET @ STA. 216+65 LT.
DROP INLET H = 3'-4"
TYPE MO INLET = 4' DIA.
TYPE C INLET = 4' X 3'
18" R.C. PIPE (CLASS III)(TYPE 3) = 86 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 86 LIN. FT.
18" SSRCCS PIPE = 86 LIN. FT.

STA. 218+53 CONSTRUCT
DROP INLET ON LT.
AND 18" X 104' PIPE OUTLET
CONNECT TO DROP INLET @ STA. 217+50 LT
DROP INLET H = 4'-1"
TYPE MO INLET = 4' DIA.
TYPE C INLET = 4' X 4'
18" R.C. PIPE (CLASS III)(TYPE 3) = 104 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 104 LIN. FT.
18" SSRCCS PIPE = 104 LIN. FT.

STA. 219+41 CONSTRUCT
DROP INLET ON LT.
AND 18" X 89' PIPE OUTLET
CONNECT TO DROP INLET @ STA. 219+41 LT.
DROP INLET H = 3'-9"
TYPE MO INLET = 4' DIA.
TYPE C INLET = 4' X 3'
18" R.C. PIPE (CLASS III)(TYPE 3) = 90 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 90 LIN. FT.
18" SSRCCS PIPE = 90 LIN. FT.

STA. 220+05 CONSTRUCT
DROP INLET ON LT. W/ 4' EXTENSION
AND 18" X 37' PIPE OUTLET
CONNECT TO EXISTING STRUCTURE @ STA. 219+65 LT.
DROP INLET H = 6'-1"
TYPE MO INLET = 4' DIA.
TYPE C INLET = 4' X 3'
18" R.C. PIPE (CLASS III)(TYPE 3) = 38 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 38 LIN. FT.
18" SSRCCS PIPE = 38 LIN. FT.

STA. 219+65 IN PLACE
6' X 4' X 220' R.C. BOX CULVERT
WITH 3:1 WINGS LT.
RETAIN & EXTEND 7' LT.
Q50 = 120 CFS D.A. = 28.00 ACRES

STA. 215+06
CONSTRUCT
APPROACH ON LT. = 15 CU. YD.

STA. 215+93
CONSTRUCT
APPROACH ON LT. = 5 CU. YD.

STA. 219+02
CONSTRUCT
APPROACH ON LT. = 5 CU. YD.

HWY. 65
PI = 207+81.53
Δ = 40°07'38"RT.
D = 3°00'00"
T = 697.54'
L = 1337.58'
PC = 200+83.99
PT = 214+21.57
MATCH EXIST. SUPER
SUPER. ROTATED ABOUT C.L.

STA. 215+74.48 HWY. 65=
STA. 100+00.00 HWY. 66
Δ = 89° 59' 28"

STA. 220+17.60
END HWY. 65 WIDENING

STA. 212+80.00
BEGIN HWY. 65 WIDENING
LOG MILE 7.60

STA. 213+25 CONSTRUCT
DROP INLET ON RT.
AND 18" X 75' PIPE OUTLET
CONNECT TO DROP INLET @ STA. 214+00 RT.
DROP INLET H = 4'-11"
TYPE MO INLET = 4' DIA.
TYPE C INLET = 4' X 3'
18" R.C. PIPE (CLASS III)(TYPE 3) = 76 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 76 LIN. FT.
18" SSRCCS PIPE = 76 LIN. FT.

STA. 214+00 CONSTRUCT
DROP INLET ON RT.
AND 18" X 35' PIPE OUTLE
CONNECT TO EXISTING STRUCTURE @ STA. 214+36 RT.
DROP INLET H = 7'-0"
TYPE MO INLET = 4' DIA.
TYPE C INLET = 4' X 3'
18" R.C. PIPE (CLASS III)(TYPE 3) = 36 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 36 LIN. FT.
18" SSRCCS PIPE = 76 LIN. FT.

STA. 214+75 CONSTRUCT
DROP INLET ON RT.
AND 59" X 36" X 13' ARCH PIPE OUTLET W/F.E.S.
DROP INLET H = 7'-11"
TYPE C INLET = 7' X 7'
59" X 36" R.C. ARCH PIPE (CLASS III)(TYPE 3) = 14 LIN. FT.
57" X 38" SLPCCS ARCH PIPE (TYPE 2) = 14 LIN. FT.
57" X 38" SSRCCS ARCH PIPE = 14 LIN. FT.
59"X36" F.E.S. = 1EACH

STA. 215+18 CONSTRUCT
DROP INLET ON RT.
AND 59" X 36" X 38' ARCH PIPE OUTLET
CONNECT TO DROP INLET @ STA. 214+75 RT.
DROP INLET H = 7'-5"
TYPE C INLET = 4' X 7'
59" X 36" R.C. ARCH PIPE (CLASS III)(TYPE 3) = 38 LIN. FT.
57" X 38" SLPCCS ARCH PIPE (TYPE 2) = 38 LIN. FT.
57" X 38" SSRCCS ARCH PIPE = 38 LIN. FT.

STA. 216+34 CONSTRUCT
DROP INLET ON RT.
AND 59" X 36" X 32' ARCH PIPE OUTLET
CONNECT TO DROP INLET @ STA. 100+60 LT.
DROP INLET H = 6'-3"
TYPE C INLET = 4' X 7'
59" X 36" R.C. ARCH PIPE (CLASS III)(TYPE 3) = 32 LIN. FT.
57" X 38" SLPCCS ARCH PIPE (TYPE 2) = 32 LIN. FT.
57" X 38" SSRCCS ARCH PIPE = 32 LIN. FT.

STA. 216+65 CONSTRUCT
DROP INLET ON RT. W/ 4' EXTENSION
AND 59" X 36" X 28' ARCH PIPE OUTLET
CONNECT TO DROP INLET @ STA. 216+34 RT.
DROP INLET H = 6'-2"
TYPE C INLET = 7' X 7'
59" X 36" R.C. ARCH PIPE (CLASS III)(TYPE 3) = 28 LIN. FT.
57" X 38" SLPCCS ARCH PIPE (TYPE 2) = 28 LIN. FT.
57" X 38" SSRCCS ARCH PIPE = 28 LIN. FT.

STA. 218+08
CONSTRUCT
APPROACH ON RT. = 30 CU. YD.

STA. 218+98
CONSTRUCT
APPROACH ON RT. = 35 CU. YD.

STA. 218+53 CONSTRUCT
DROP INLET ON RT.
AND 18" X 185' PIPE OUTLET
CONNECT TO DROP INLET @ STA. 216+65 RT.
DROP INLET H = 4'-0"
TYPE MO INLET = 4' DIA.
TYPE C INLET = 4' X 3'
18" R.C. PIPE (CLASS III)(TYPE 3) = 186 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 186 LIN. FT.
18" SSRCCS PIPE = 186 LIN. FT.

STA. 219+41 CONSTRUCT
DROP INLET ON RT. W/ 4' EXTENSION
AND 18" X 88' PIPE OUTLET
CONNECT TO DROP INLET @ STA. 218+53 RT.
DROP INLET H = 3'-8"
TYPE MO INLET = 4' DIA.
TYPE C INLET = 4' X 3'
18" R.C. PIPE (CLASS III)(TYPE 3) = 88 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 88 LIN. FT.
18" SSRCCS PIPE = 88 LIN. FT.

STA. 219+85 CONSTRUCT
DROP INLET ON RT. W/4' EXTENSION
AND 18" X 14' PIPE OUTLET
CONNECT TO EXISTING STRUCTURE @ STA. 219+65 RT.
DROP INLET H = 7'-8"
TYPE MO INLET = 4' DIA.
TYPE C INLET = 4' X 3'
18" R.C. PIPE (CLASS III)(TYPE 3) = 14 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 14 LIN. FT.
18" SSRCCS PIPE = 14 LIN. FT.

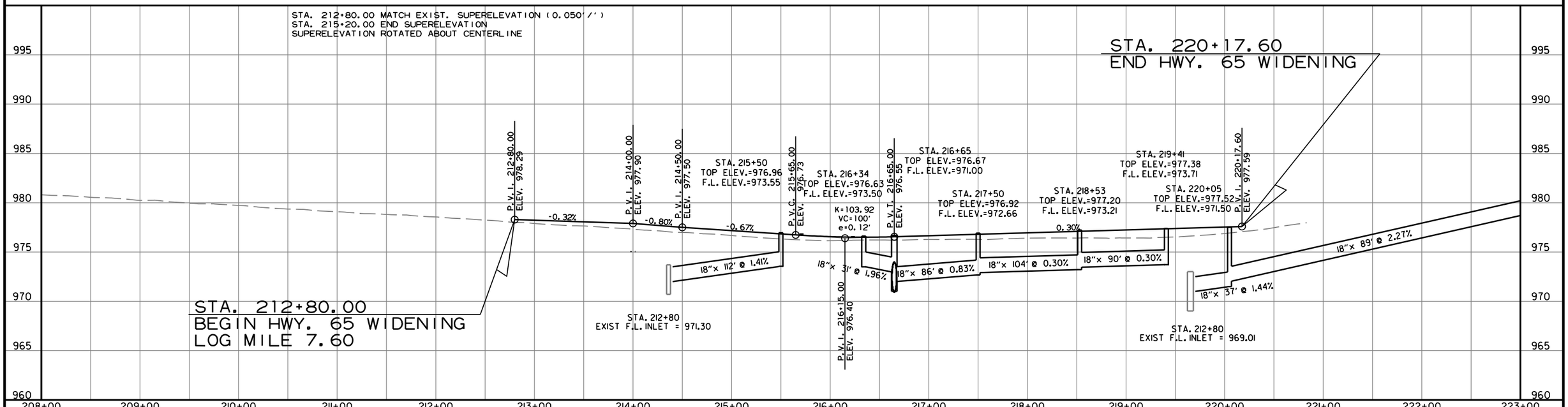
HWY. 65

ER42959 9/18/2025
R090672.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	35	108
		PLAN AND PROFILE SHEETS				

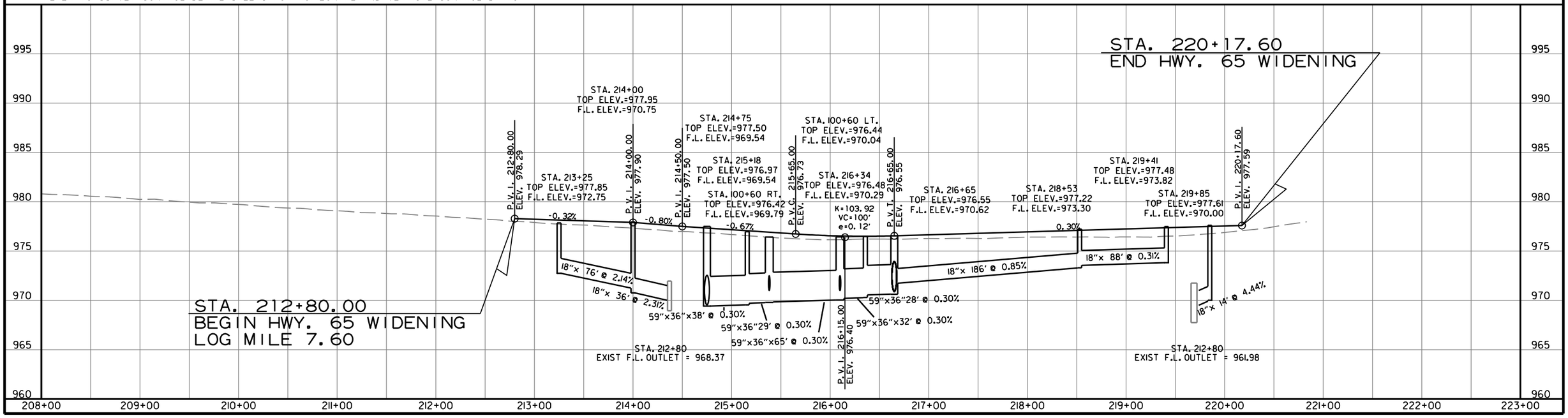
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV
10/02/2025

LEFT SIDE OF HWY. 65



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

RIGHT SIDE OF HWY. 65



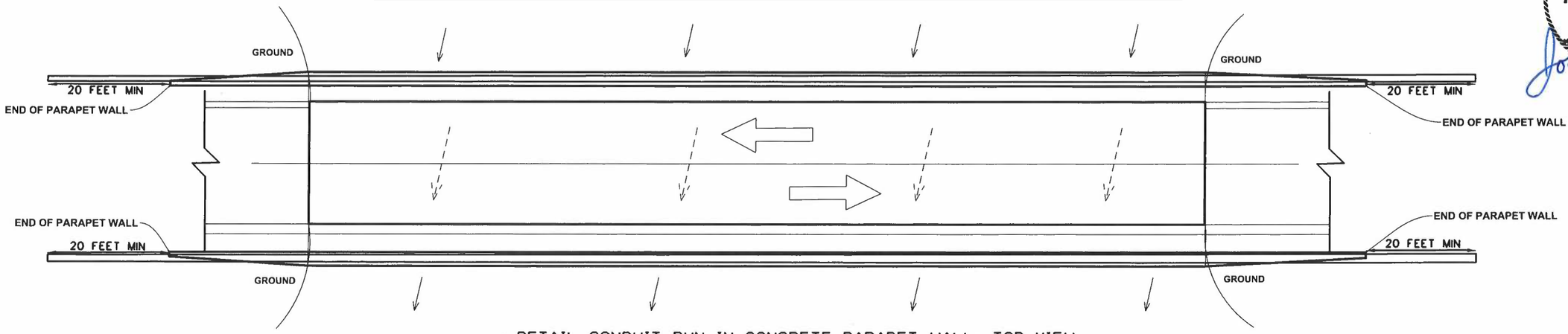
ER42959 9/18/2025
R090672.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		10	ARK.	090672	36	108

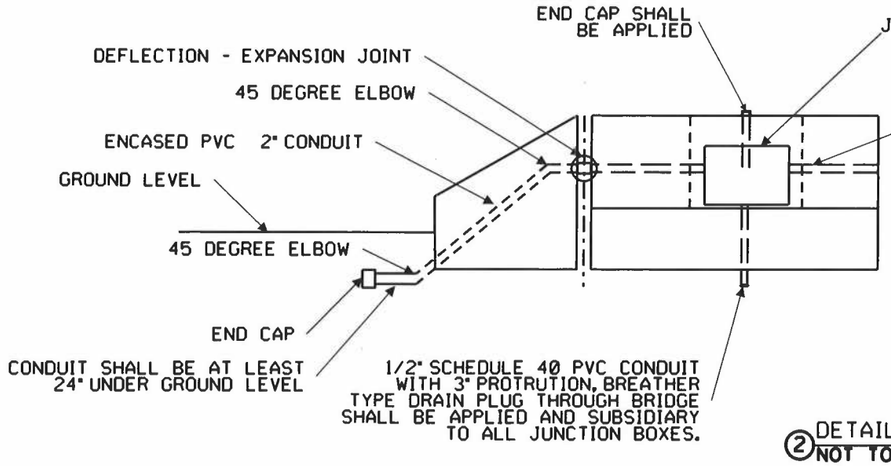
LIGHTING CONDUIT RUN DETAIL

ITEM NUMBER	ITEM DESCRIPTION	QUANTIY	UNIT
709	GALVANIZED STEEL CONDUIT (1")	55	LIN.FT
710	NON-METALLIC CONDUIT (2")	750	LIN.FT
SP	NEMA 4X STAINLESS STEEL JUNCTION BOX	8	EACH

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18408
ROBERT D. HAU
9-3-25

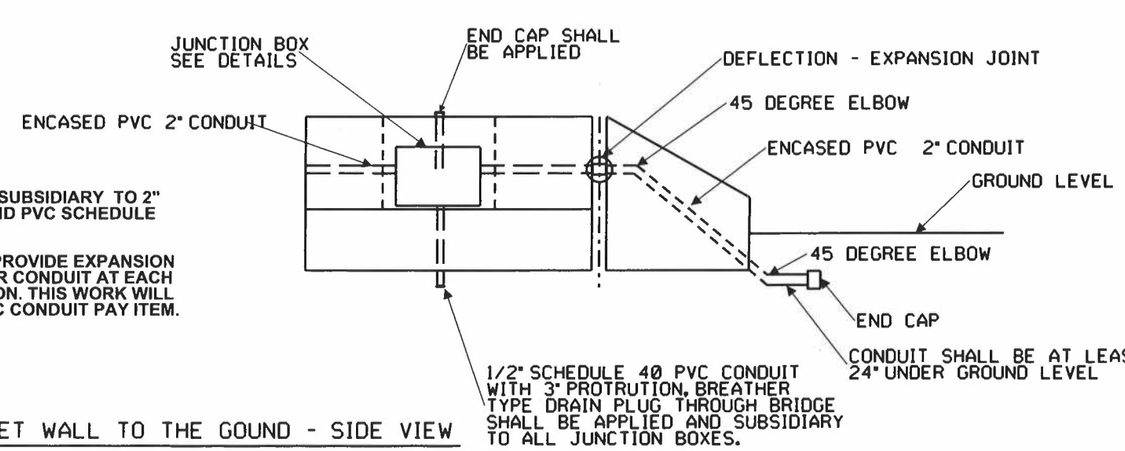


① DETAIL CONDUIT RUN IN CONCRETE PARAPET WALL- TOP VIEW
NOT TO SCALE

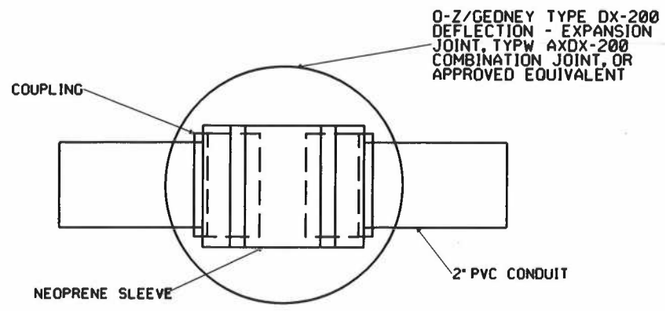


NOTES:

1. 2" END CAP SHALL BE SUBSIDIARY TO 2" GALVANIZED STEEL AND PVC SCHEDULE 40 CONDUIT.
2. CONTRACTOR SHALL PROVIDE EXPANSION DEFLECTION JOINT FOR CONDUIT AT EACH BRIDGE JOINT LOCATION. THIS WORK WILL BE SUBSIDIARY TO PVC CONDUIT PAY ITEM.



② DETAIL CONDUIT RUN IN PARAPET WALL TO THE GOUND - SIDE VIEW
NOT TO SCALE



③ CONDUIT DEFLECTION - EXPANSION JOINT
NOT TO SCALE

EXPANSION JOINT NOTES:

1. THE MOVEMENT RANGE OF THE EXPANSION JOINT SHALL MEET OR EXCEED THE MOVEMENT RANGE OF THE BRIDGE EXPANSION JOINTS.
2. PROVIDE STANDARD PVC ADAPTORS FOR CONNECTIONS AT EACH END OF EXPANSION JOINT.
3. DEFLECTION - EXPANSION JOINT PAY ITEM SHALL BE SUBSIDIARY TO THE 2" CONDUIT PAY ITEM.
4. QUANTITY OF DEFLECTION - EXPANSION JOINT SHALL BE EQUIVALENT TO THE NUMBER OF BRIDGE EXPANSIONS TIME THE CONDUIT RUNS.

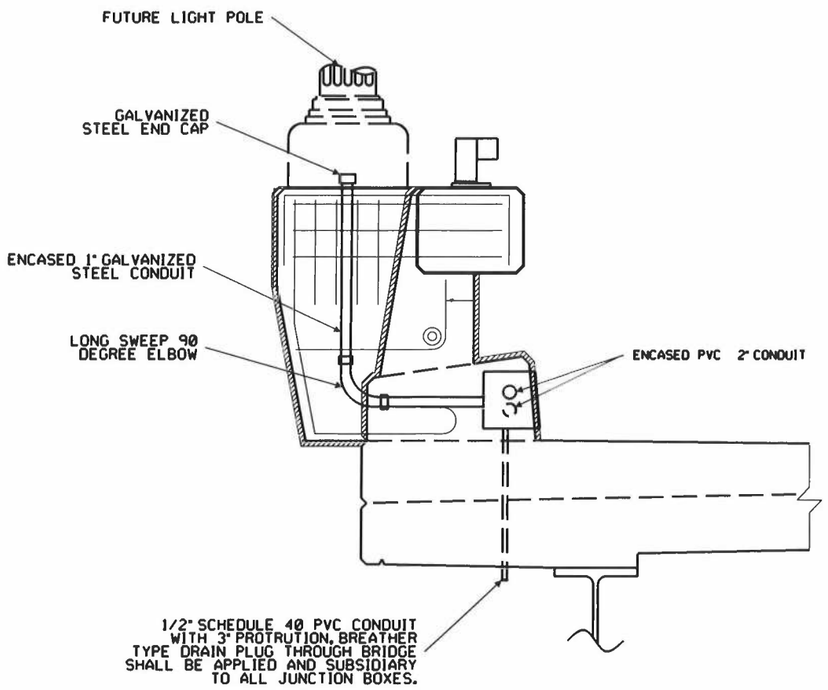
LOCATION: HWY. 66 - SECTION 1
CITY: LESLIE
COUNTY: SEARCY
DISTRICT: 9 SCALE: N/A DRAW BY: HVH

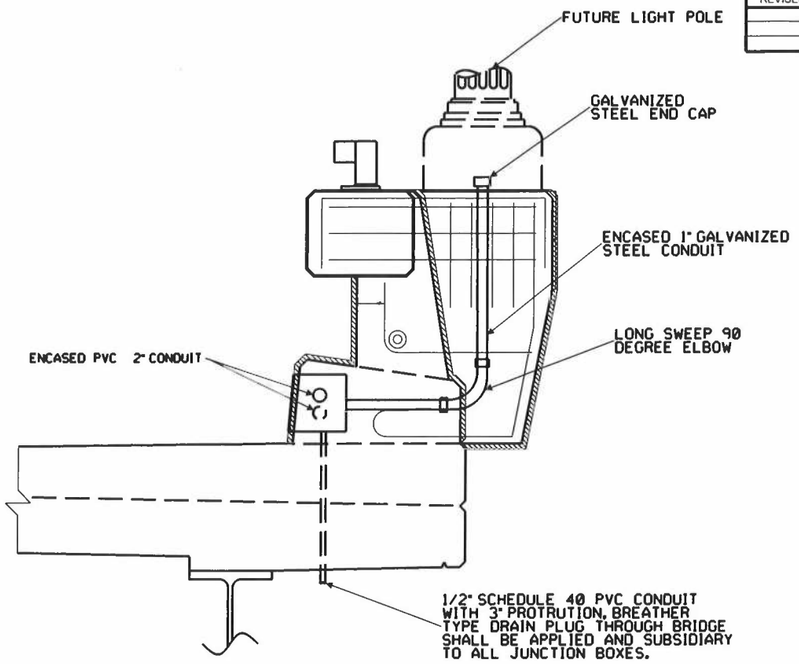
04/20/2025
TSMO DIVISION
TSMOSTOR-01\Ho.Hau\Future Lighting\090672 - D9, City of Leslie, Searcy County, R66, Sec 1

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		10	ARK.	090672	37	108

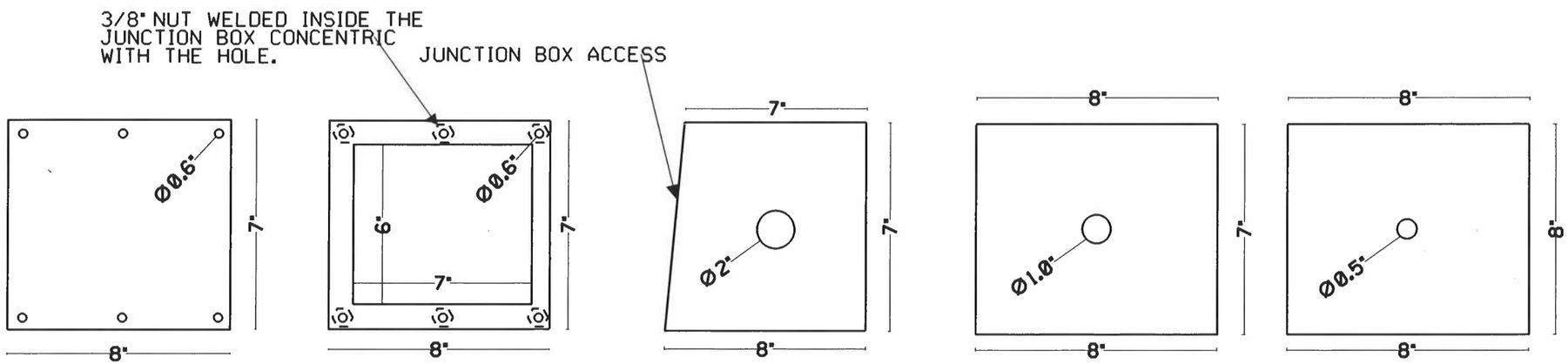
LIGHTING CONDUIT RUN DETAIL

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
NO. 15408
JOSEPH R. HAWKINS
9-3-25





① DETAIL CONDUIT RUN IN CONCRETE BUMPOUT AT CURB
NOT TO SCALE



② JUNCTION BOX DETAIL VIEWS
NOT TO SCALE

JUNCTION BOX NOTES

1. JUNCTION BOX AND LID MATERIAL SHALL BE NEMA 4X STAINLESS STEEL. FASTENERS SHALL BE 3/8". THE JUNCTION BOXES SHALL BE ADEQUATELY ANCHORED TO THE PARAPET BY MEANS OF AN APPROVED MECHANICAL DEVICE.
2. JUNCTION BOXES SHALL NOT INTERFERE WITH SLIDER PLATES OR EXPENSION JOINTS. PROVIDE AT LEAST 1/2" MIN. DIAMETER DRAINAGE HOLE NEAR THE BOTTOM OF THE JUNCTION BOX.
3. NEMA 4X STAINLESS STEEL CONSTRUCTION WITH GASKET, RECESSED IN PARAPET WALL.
4. INSTALL PULLWIRE IN EACH CONDUIT, SECURED TO PREVENT SLIPPING INTO CONDUIT END.
5. COLOR OF JUNCSTION BOX SHALL BE MATCH THE FINISH COLOR OF THE PARAPET WAL.

LOCATION: HWY.66 - SECTION 1
CITY: LESLIE
COUNTY: SEARCY
DISTRICT: 9 SCALE: N/A DRAW BY: HVH

04/20/2025
TSMO DIVISION
TSMOSTOR-01\Hq.Hau\Future Lighting\090672 - D9, City of Leslie, Searcy County, R66, Sec 1

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	38	108
			07709 -	LAYOUT	- 69148	

For R/W Data, see Roadway Plans.

Begin Bridge Approach: Use Type Special Approach Slab, see Dwg. No. 69186.
End Bridge Approach: Use Type F Approach Slab ("W" = 28'-0"), see Std. Dwg. No. 55040F1.

(1) Transition From 44'-0" to 38'-0" Sta. 100+92 to Sta. 101+82. Transition From 38'-0" to 30'-0" Sta. 101+82 to Station 102+82. See Roadway Plans for additional Information.

(2) Offsets to longitudinal lines within limits of clear roadway transition vary with respect to C.L. Bridge and C.L. Construction.

Toe of Fill Slope

15'-0" (typ.)

1V:3H

PT Sta. 102+77.64

(1) End Clear Roadway Width Transition
(2) Sta. 102+82.00

210 ft. to Jct. S.H. 65

102+00

1V:2H

Transitional Approach Railing (typ.), see Dwg. No. 69187.

Soil Boring (typ.)

Light Pole Support (typ.)

20° (Typ. U.N.O.)

Toe of Fill Slope

1V:3H

(2) C.L. Bridge is in a 17°00'00" curve left from Sta. 100+78.03 to Sta. 102+77.64 and a 17°00'00" curve right from Sta. 104+14.85 to Sta. 105+75.71. Unless otherwise noted, longitudinal lines within these curved sections shall be constructed on curves concentric to C.L. Bridge. The roughsawn timber portions of the bridge rail may be placed on chords between posts. Begin & End of Bridge, C.L. Bents 2, 5, & 6 shall be constructed along lines skewed as shown from radial lines to C.L. Bridge.

COVE CREEK

2'-1½" Rail
6'-6" Sidewalk
47'-3" Out to Out
30'-0" Clear Roadway
2'-1½" Rail
6'-6" Sidewalk

103+00
104+00
N 17°09'52" E
2.0% Slope

PC Sta. 104+14.85

C.L. Bridge and C.L. Construction

19°07'28.2"

1V:2H
1V:3H

105+00
14'-0" Lane
14'-0" Lane
28'-0" Pavement
3'-0" Grass Berm
3'-0" Grass Berm
1'-6" Curb and Gutter
5'-0" Sidewalk
1'-6" Curb and Gutter
5'-0" Sidewalk

Toe of Fill Slope

Existing Structure

Place 3'-0" thick Foundation Protection Riprap on top of Filter Blanket at both ends of bridge as shown. See "EMBANKMENT SECTION" on Dwg. No. 69149A. Top of Riprap Elev. 968.0 or as shown.

Toe of Fill Slope

PT Sta. 105+75.71

Existing Structures

Water Utilities

106+00

15" R.C. Pipe

12" R.C. Pipe

Utility Pole (typ.)

Sanitary Sewer Line

107+00

Existing Structure

PLAN

PVI 102+10.00 Elev. 976.72
+0.32% +0.15%

PVI 104+90.00 Elev. 977.15
+0.15% +0.57%

PVI 105+77.77 Elev. 977.65
+0.57% +4.66%

L= 160'

VERTICAL ALIGNMENT DATA

Theoretical Grade Along C.L. Construction

Begin Bridge
Sta. 102+10.00
Elev. 976.72

End Bridge
Sta. 104+90.00
Elev. 977.15

TABLE OF VARIABLES

Bent No.	C.L. Deck @ C.L. Bent to Low Seat of Cap
	"A"
2	2'-7¼"
3	5'-2¼"
4	5'-2⁵⁄₁₆"
5	5'-2⁵⁄₁₆"
6	2'-6⁹⁄₁₆"

C.L. Hwy. 66
PI = 101+80.86
Delta = 33°56'01" Left
D = 17°00'00"
L = 199.61'
T = 102.83'

C.L. Hwy. 66
PI = 104+96.84
Delta = 27°20'47" Right
D = 17°00'00"
L = 160.86'
T = 81.99'

HORIZONTAL CURVE DATA

Total Bridge Length = 280'-0"

70'-0" Continuous R.C. Slab Unit 1 (35'-35')

140'-0" Continuous W-Beam Unit (70'-70')

70'-0" Continuous R.C. Slab Unit 2 (35'-35')

C.L. 2" Poured Silicone Joint

C.L. 2" Poured Silicone Joint

Light Pole Supports (typ.)

Decorative Concrete Bridge Rail. See Dwg. Nos. 69178 thru 69185 for details.

Future Light Poles - by others (typ.)

Slope Intercept Sta. 102+02.00

Type H2 Railing

C.L. Bent Sta. 102+45.00 Elev. 976.77

C.L. Bent Sta. 102+80.00 Elev. 976.83

C.L. Bent Sta. 103+50.00 Elev. 976.94

(3) Low Steel to Design H.W. = 4.8'

C.L. Deck to Low Steel = 4'-4³⁄₁₆"

C.L. Deck to Low Seat of Cap = "A"

C.L. Bent Sta. 104+20.00 Elev. 977.04

C.L. Bent Sta. 104+55.00 Elev. 977.10

Slope Intercept Sta. 104+98.00

Transitional Approach Railing (typ.), see Dwg. No. 69187.

Proposed Grade Line along C.L. Bridge

Existing Ground Line along C.L. Bridge

Exp. Fix. Exp. Exp. Fix. Exp. Exp. Fix. Exp.

28' Piles

27'-6"

25'-0"

27'-0"

25'-6"

28'-0"

17' Piles

Elev. 946.67

Elev. 946.64

Elev. 944.74

Q25 Design H.W. Elev. = 967.4

Elev. 946.35

Elev. 946.52

Bent No. 1 2 3 4 5 6 7

1000 990 980 970 960 950 940 930

102+00 103+00 104+00 105+00

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 Std. Dwg. No. 55007 for additional information.

ELEVATION

See Dwg. Nos. 69149 and 69149A for Soil Borings, Hydraulic Table, and General Notes.

(3) Low Bridge Chord elevation of 972.42 occurs at Station 102+73.67, 20'-10" Right of C.L. Construction.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 1 OF 3
LAYOUT OF BRIDGE
HIGHWAY 66 OVER COVE CREEK
HWY. 66 REALIGNMENT (LESLIE) (S)
SEARCY COUNTY

ROUTE 66 SEC. I

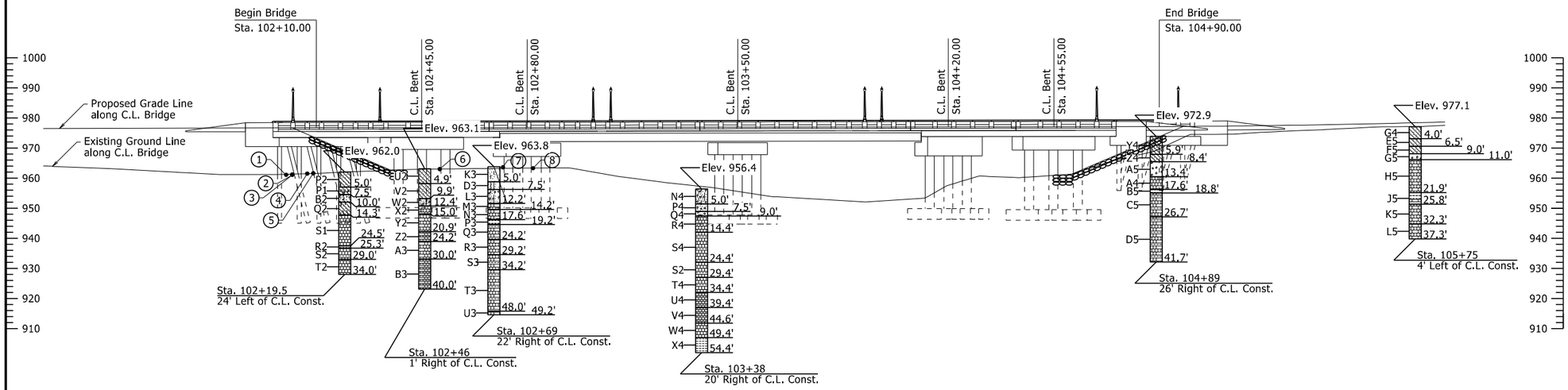
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: NAC DATE: 4/10/2023
CHECKED BY: DBS DATE: 2/6/2024
DESIGNED BY: NAC DATE: 4/10/2023
FILENAME: b090672_l1.dgn
SCALE: 1"=20'

BRIDGE NO. 07709 DRAWING NO. 69148

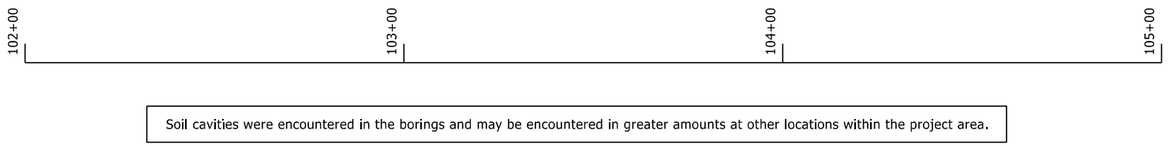
PRINT DATE: 9/30/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	39	108
			07709 -	LAYOUT - 69149		

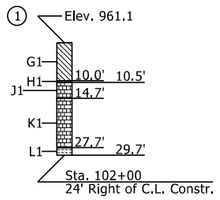


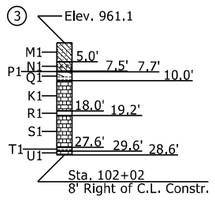
See Dwg. No. 69149A for "BORING LEGEND".

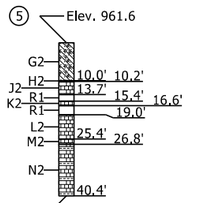
BORING ELEVATION

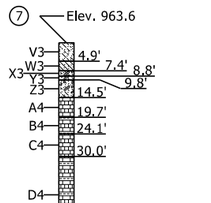


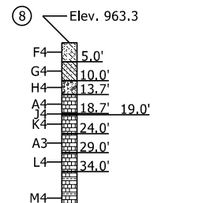
Soil cavities were encountered in the borings and may be encountered in greater amounts at other locations within the project area.

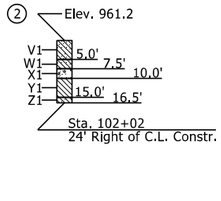


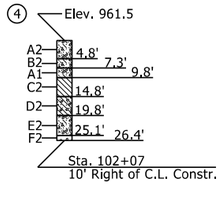


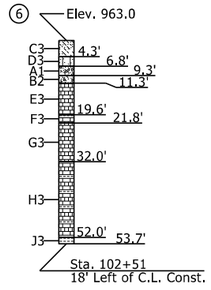












"N" VALUES

Sta. 102+00 - 24' RIght of C.L. Constr.
5.5- 6.5,N=15
10.5- 10.5,N=25(0")

Sta. 102+02 - 8' Right of C.L. Constr.
3.0- 4.0,N=11
5.5- 6.5,N=13
8.0- 9.0,N=25
10.0- 10.0,N=10(0")

Sta. 102+02 - 24' Right of C.L. Constr.
3.0- 4.0,N=11
5.5- 6.5,N=19
8.0- 9.0,N=22
10.5- 11.2,N=71(8")
15.5- 16.5,N=13

Sta. 102+07 - 10' Right of C.L. Constr.
2.8- 3.8,N=10
5.3- 6.3,N=10
7.8- 8.8,N=16
10.3- 11.3,N=0
15.3- 16.3,N=8
20.3- 21.3,N=1
25.6- 26.4,N=53(10")

Sta. 102+09 - 21' Right of C.L. Constr.
5.4- 6.4,N=13
10.0- 10.2,N=15(2")

Sta. 102+19.5 - 24' Left of C.L. Constr,
3.0- 4.0,N=13
5.5- 6.5,N=24
8.0- 9.0,N=10
10.5- 11.5,N=7

Sta. 102+46 - 1' Right of C.L. Constr.
2.9- 3.9,N=5
10.4- 11.3,N=27(11")
12.4- 12.4,N=14(6")

Sta. 102+51 - 18' RIght of C.L. Constr.
2.3- 3.3,N=6
4.8- 5.8,N=7
7.3- 8.3,N=12
9.8- 10.8,N=10

Sta. 102+69 - 22' Right of C.L. Constr.
3.0- 4.0,N=7
5.5- 6.5,N=7
8.0- 9.0,N=11
10.5- 11.5,N=0

Sta. 102+72 - 2' Right of C.L. Constr.
2.9- 3.9,N=6
5.4- 6.4,N=6
9.3- 10.3,N=8
14.5- 14.7,N=10(2")

Sta. 102+82 - 21' Left of C.L. Constr,
3.0- 4.0,N=6
5.5- 6.5,N=6
8.0- 9.0,N=8
10.5- 11.5,N=4

Sta. 103+38 - 20' Right of C.L. Constr.
3.0- 4.0,N=11
5.5- 6.5,N=27
7.5- 7.6,N=10(1")

Sta. 104+89 - 26' Right of C.L. Constr.
3.9- 4.9,N=6
6.4- 7.4,N=14
8.9- 9.9,N=81
13.4- 13.6,N=20(2")

Sta. 105+75 - 4' Left of C.L. Constr,
1.9- 2.9,N=6
4.5- 5.5,N=13
7.0- 8.0,N=16
9.0- 9.1,N=15(1")

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 2 OF 3
LAYOUT OF BRIDGE
HIGHWAY 66 OVER COVE CREEK
HWY. 66 REALIGNMENT (LESLIE) (S)
SEARCY COUNTY

ROUTE 66 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: NAC DATE: 4/10/2023
CHECKED BY: DBS DATE: 2/6/2024
DESIGNED BY: NAC DATE: 4/10/2023
FILENAME: b090672_l1.dgn
SCALE: 1"=20'

BRIDGE NO. 07709 DRAWING NO. 69149

PRINT DATE: 9/30/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	40	108
				07709 - LAYOUT - 69149A		

GENERAL NOTES

BENCH MARK: 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 SITE CLASS: C S_{D1}: 0.149

SEISMIC OPERATIONAL CLASSIFICATION: Other

MATERIALS AND STRENGTHS:

Class S(AE) Concrete (superstructure)	f'c = 4,000 psi
Class S Concrete (substructure)	f'c = 3,500 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) and shall be driven with an approved air, steam, or diesel hammer to a minimum safe bearing capacity of 96 tons per pile and into the material designated as Limestone on the boring legend. Minimum penetration shall be 10' below natural ground for all piles in Bents 1 and 7. 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. Actual pile lengths are to be determined in the field. The Contractor shall use QPL-approved steel H-Pile driving points on all piles.

PREBORING: Preboring is required for all piles in Bent 7. The depth of preboring shall be to a depth sufficient to provide the specified minimum penetration and to a minimum 3' depth into material designated as Limestone on the boring legend, whichever is lower. The actual size and depth of preboring shall be determined in the field by the Engineer. The Contractor shall be responsible for keeping prebored holes free of debris prior to driving piles and backfilling which may require the use of temporary casings or other approved methods. After driving is completed, the prebored hole shall be backfilled with Class S Concrete to the top of the rock and the remaining length backfilled in accordance with Subsection 805.08(a). Any related cost for backfilling and temporary casing will not be paid for directly, but shall be considered subsidiary to the Item "Preboring".

EXPLORATORY HOLES: The Contractor shall drill one exploratory hole at each pile location at Bent 1, and one exploratory hole at Bent 5 and Bent 6, in accordance with Special Provision Job No. 090672 "Exploratory Holes". Pending confirmation of rock elevations, the conditions encountered shall be provided to the Engineer for determination of preboring and pile penetration requirements at Bent 1, and for determination of footing elevations at Bent 5 and Bent 6. The quantities of exploratory holes listed are for estimating and bidding purposes only. The actual locations, number, and depths of exploratory holes are to be determined in the field by the Engineer.

SPREAD FOOTING: Footings shall be set a minimum of 2' into material designated as Limestone on the boring legend. The top of the footings at Bents 2 thru 6 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.

PAINTING: The following weathering steel surfaces shall be painted as specified in Section 807:

All steel surfaces within six feet of bridge deck expansion joints, including diaphragms, cross- frames, connection bolts and bearings.

All steel surfaces exposed to the outside face of the bridge, including outside faces & bottom of the exterior beams or girders, splice plates and bolts, stiffeners, drip plates and bearings. ASTM F3125, Grade A325 Type 3 bolts shall be used within these painted zones and shall be painted.

Galvanized members, the expansion device, and surfaces in contact with concrete shall not be painted. The color of paint shall be Brown equal or close to Fed. Std. 595 B, Color Chip No. 30070 and as approved by the Engineer. The finish system may be applied in the shop. Any damage to the paint system occurring during transport or installation shall be corrected according to the manufacturer's recommendations at no cost to the Department.

POWDER COATING: All metal bridge railing, including Type H2 Rail and Lower Tubular Railing, shall receive a powder coating finish. The color of paint shall be Black equal or close to Federal Std. 595B, Color Chip No. 27035 and as approved by the Engineer. See Std. Dwg. No. 55015 for additional information.

BRIDGE DECK: The concrete bridge deck, except sidewalks, shall be given a tine finish as specified for final finishing in Subsection 802.19 for Class 5 Tined Bridge Roadway Surface Finish. Sidewalks shall be given a Class 6 Broomed Finish.

STAINING CONCRETE SURFACES: A concrete penetrating stain shall be applied to bridge surfaces as specified in Special Provision Job No. 090672 "Staining Concrete Surfaces". The concrete penetrating stain shall not be applied on surfaces where Class 2 Protective Surface Treatment is applied. The color of the stain shall be specified in Special Provision Job No. 090672 "Staining Concrete Surfaces".

PROTECTIVE SURFACE TREATMENT: Class 2 Protective Surface Treatment shall be applied to the roadway surface and sidewalk surface, including curbing, in accordance with Section 803.

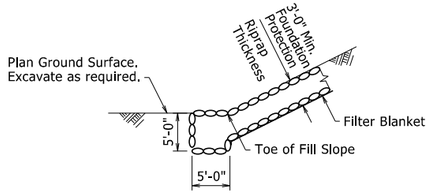
DETAIL DRAWINGS:	DRAWING NO(S).
End Bents	69150 - 69152
Intermediate Bents	69153 - 69159
Elastomeric Bearings	69160
70'-0" Continuous R.C. Slab Units	69161 - 69166 & 69172 - 69176
140'-0" Continuous W-Beam Unit	69167 - 69171
Deck Drains	69177
Decorative Concrete Bridge Rail	69178 - 69185
General Notes for Steel Bridge Structures	55006
Details For Steel Bridge Structures	55007
Poured Silicone Joints	55008
Type H2 Railing	55015
Steel H-Piles	55020

EXISTING BRIDGE: Existing Bridge No. 00680 (Log Mile 0.003) is 23.0' wide (20.0' clear roadway) and 167.1' long and consists of a R.C. Tee Beam supported by reinforced concrete abutments and reinforced concrete bents with spread footings. The existing bridge is located approximately 414' upstream from the proposed new bridge. The existing bridge is to be given a polymer overlay in accordance with Special Provision Job No. 090672 "Polymer Overlay". Plans of the existing structure, if available, may be obtained upon request to the Construction Contract Development Section of the Program Management Division.

MAINTENANCE OF TRAFFIC: See Roadway Plans.

BORING LEGEND

A1-Moist, Medium Dense, Brown Clayey Gravel with Sand
B1-Moist, Medium Dense, Brown Silty Gravel with Sand
C1-Moist, Medium Stiff, Brown Sandy Lean Clay with Some Gravel
D1-SHALE - Highly Weathered, Medium Hard, Calcareous, Gray
E1-SHALE - Slightly Weathered With Highly Weathered Layers, Medium Hard with Soft Layers, Calcareous, Gray
F1-LIMESTONE WITH FREQUENT SHALE LAYERS AND SEAMS - Unweathered with Weathered Layers, Moderately Hard with Soft Layers, Gray
G1-Moist, Stiff, Dark Brown Clay
H1-SHALE - Highly Weathered, Medium Hard, Gray
J1-LIMESTONE - Slightly Weathered, Moderately Hard, Frequent Vertical Fractures, Gray
K1-LIMESTONE - Unweathered, Moderately Hard, Gray
L1-SHALE - Weathered, Medium Hard, Calcareous, Gray
M1-Moist, Stiff, Brown Clay with Sand
N1-Moist, Stiff, Brown Sandy Clay with Gravel
P1-Moist, Very Stiff, Brown Sandy Clay with Gravel
Q1-SHALE - Highly Weathered, Soft, Gray
R1-Cavity
S1-LIMESTONE - Slightly Weathered, Moderately Hard, Frequent Vertical Fractures, Gray
T1-SHALE - Weathered, Soft, Calcareous, Gray
U1-LIMESTONE WITH FREQUENT SHALE PARTINGS AND SEAMS - Slightly Weathered, Moderately Hard with Soft Layers, Gray
V1-Moist, Stiff, Dark Brown Sandy Clay with Traces of Gravel
W1-Moist, Very Stiff, Dark Brown Clay with Sand and Traces of Gravel
X1-Moist, Medium Dense, Brown Gravel with Sand
Y1-Wet, Very Hard, Dark Gray Clay
Z1-Wet, Stiff, Gray Clay with Sand
A2-Moist, Loose, Brown Clayey Sand with Gravel
B2-Moist, Loose, Brown Clayey Gravel with Sand
C2-Wet, Very Soft, Gray Clay
D2-Wet, Medium Stiff, Gravelly Lean Clay with Sand
E2-Wet, Very Loose, Clayey Gravel with Sand (Limestone Rock Fragments)
F2-Limestone Rock Fragments.
G2-Moist, Stiff, Brown Gravelly Clay with Sand
H2-Dry, Very Dense, Brown Sand, Gravel, Cobbles, and Boulders
J2-LIMESTONE - Slightly Weathered, Moderately Hard with Soft Layers, Frequent Vertical Fractures, Light Gray
K2-LIMESTONE - Weathered, Moderately Hard with Soft Layers, Frequent Vertical Fractures, Light Gray
L2-LIMESTONE - Weathered, Moderately Hard with Soft Layers, Frequent Vertical Fractures, Light Gray
M2-LIMESTONE - Slightly Weathered, Moderately Hard with Soft Layers, Frequent Vertical Fractures, Light Gray
N2-LIMESTONE WITH FREQUENT TO OCCASIONAL SHALE PARTINGS, SEAMS, AND LAYERS - Unweathered with Weathered Layers, Moderately Hard with Sof
P2-Moist, Stiff, Brown Sandy Clay with Traces of Gravel
Q2-Wet, Medium Stiff, Light Gray Sandy Clay with Some Gravel (Rock Fragments)
R2-SHALE - Weathered, Medium Hard to Soft, Calcareous, Gray
S2-LIMESTONE WITH FREQUENT SHALE PARTINGS AND SEAMS - Unweathered, Moderately Hard with Soft Layers, Gray
T2-LIMESTONE WITH OCCASIONAL SHALE PARTINGS AND SEAMS - Unweathered, Hard, Gray
U2-Moist, Medium Stiff, Dark Brown Sandy Clay with Some Rock Fragments
V2-Moist, Dark Brown Sandy Lean Clay with Trace Gravel
W2-Moist, Very Dense, Dark Brown Poorly Graded Sand with Clay and Gravel (Limestone Rock Fragment)
X2-LIMESTONE - Unweathered, Moderately Hard, Frequent Healed Fractures, Light Gray
Y2-LIMESTONE - Unweathered, Moderately Hard, Light Gray
Z2-LIMESTONE WITH FREQUENT SHALE PARTINGS AND SEAMS - Unweathered, Moderately Hard with Occasional Soft Layers, Light and Dark Gray
A3-LIMESTONE - Unweathered, Moderately Hard, Frequent Vertical Fractures, Gray
B3-LIMESTONE WITH FREQUENT TO OCCASIONAL SHALE PARTINGS AND SEAMS - Unweathered, Moderately Hard with Occasional Soft Layers, Light and
C3-Moist, Loose, Dark Brown Clayey Sand with Some Gravel
D3-Moist, Loose, Brown Sandy Silt with Trace Gravel
E3-LIMESTONE - Slightly Weathered, Moderately Hard, Occasional Fractures, Light Gray
F3-LIMESTONE WITH FREQUENT SHALE PARTINGS, SEAMS, AND LAYERS - Unweathered, Moderately Hard with Soft Layers, Gray
G3-LIMESTONE WITH OCCASIONAL SHALE PARTINGS - Unweathered, Moderately Hard, Gray
H3-LIMESTONE WITH FREQUENT SHALE PARTINGS, SEAMS, AND LAYERS - Unweathered, Moderately Hard, Gray
J3-SHALE - Unweathered, Medium Hard, Calcareous, Gray
K3-Moist, Loose, Dark Brown Silty Sand with Gravel
L3-Moist, Medium Dense, Dark Brown Silty Gravel with Sand
M3-LIMESTONE - Unweathered, Moderately Hard, Frequent Fractures, Light Gray
N3-LIMESTONE - Unweatherd, Soft to Medium Hard, Occasional Fractures, Light Gray
P3-SHALE WITH FREQUENT LIMESTONE SEAMS AND LAYERS - Weathered, Soft, Dark Gray
Q3-LIMESTONE WITH FREQUENT SHALE PARTINGS AND SEAMS - Unweathered, Moderately Hard, Frequent Vertical Fractures, Gray
R3-LIMESTONE WITH OCCASIONAL SHALE PARTINGS - Unweathered, Moderately Hard, Frequent Vertical Fractures, Gray
S3-LIMESTONE WITH FREQUENT SHALE SEAMS - Unweathered, Moderately Hard, Gray
T3-LIMESTONE WITH FREQUENT SHALE SEAMS AND LAYERS - Unweathered, Moderately Hard, Gray
U3-LIMESTONE WITH FREQUENT SHALE PARTINGS, SEAMS, AND LAYERS - Unweathered, Moderately Hard, Gray
V3-Moist, Loose, Dark Brown Clayey Sand with Some Sandstone Rock Fragments
W3-Moist, Medium Stiff, Dark Brown Sandy Clay
X3-Brown Clayey Sand with Gravel
Y3-Moist, Loose, Bown Rock Fragments with Clay
Z3-Moist, Medium Stiff, Dark Brown Clayey Sand with Rock Fragments
A4-LIMESTONE - Unweathered, Moderately Hard, Light Gray
B4-LIMESTONE WITH FREQUENT SHALE PARTINGS AND SEAMS - Unweathered, Moderately Hard with Occasional Soft Layers, Gray
C4-LIMESTONE - Unweathered, Moderately Hard, Frequent Vertical Fractures, Light Gray
D4-LIMESTONE WITH FREQUENT SHALE PARTINGS AND SEAMS - Unweathered, Moderately Hard with Occasional Soft Layers, Occasional Vertical Fractures, Gray
E4-SHALE - Slightly Weathered to Weathered, Medium Hard, Calcareous, Gray
F4-Moist, Loose, Brown Clayey Sand with Trace Gravel
G4-Moist, Medium Stiff, Brown Sandy Lean Clay
H4-Moist, Very Loose, Brown Clayey Sand with Gravel (Rock Fragments)
J4-SHALE - Highly Weathered, Soft to Medium Hard, Gray
K4-LIMESTONE WITH OCCASIONAL SHALE PARTINGS AND SEAMS - Unweathered, Moderately Hard, Frequent Vertical Fractures, Gray
L4-LIMESTONE WITH OCCASIONAL SHALE PARTINGS AND SEAMS - Unweathered, Moderately Hard, Gray
M4-LIMESTONE WITH FREQUENT SHALE PARTINGS AND SEAMS - Unweathered, Moderately Hard, Gray
N4-Moist, Medium Dense, Brown Well Graded Sand with Silt and Gravel
P4-Moist, Medium Dense, Brown Sand with Gravel
Q4-Wet, Very Dense, Brown and Gray Gravel (Limestone Rock Fragments)
R4-LIMESTONE WITH OCCASIONAL SHALE SEAMS - Slightly Weathered, Hard with Moderately Hard Layers, Gray
S4-LIMESTONE WITH FREQUENT TO OCCASIONAL SHALE PARTINGS AND SEAMS - Unweathered, Hard with Moderately Hard Layers, Gray
T4-LIMESTONE WITH FREQUENT SHALE PARTINGS AND SEAMS - Unweathered, Hard Moderately with Hard Layers, Gray
U4-LIMESTONE WITH FREQUENT SHALE PARTINGS, SEAMS, AND LAYERS - Unweathered, Hard Moderately Soft Layers, Gray
V4-SHALE INTERBEDDED WITH LIMESTONE - Unweathered, Medium Hard with Hard Layers, Frequent Fractures, Gray
W4-LIMESTONE - Unweathered, Hard, Frequent Fractures and Calcite Veins, Gray
X4-SHALE - Unweathered, Medium Hard with Soft Layers, Fossiliferous, Gray
Y4-Moist, Medium Stiff, Brown Lean Clay with Sand
Z4-Moist, Stiff, Brown Lean Clay with Sand and Some Gravel
A5-Dry, Very Dense, Gravel (Limestone Rock Fragments)
B5-SHALE - Weathered, Soft to Medium Hard, Calcareous, Gray
C5-LIMESTONE WITH FREQUENT SHALE PARTINGS AND SEAMS - Unweathered, Moderately Hard with Hard Layers, Light Gray
D5-LIMESTONE WITH FREQUENT TO OCCASIONAL SHALE PARTINGS, LAYERS, AND SEAMS - Unweathered, Moderately Hard with Hard Layers, Light Gray
E5-Moist, Stiff, Brown Fat Clay with Sand
F5-Moist, Very Stiff, Brown Fat Clay with Sand
G5-LIMESTONE - Weathered, Moderately Hard, Gray
H5-LIMESTONE - Slightly Weathered, Moderately Hard, Gray
J5-SHALE WITH OCCASIONAL LIMESTONE LAYERS - Highly Weathered, Soft, Gray
K5-LIMESTONE WITH OCCASIONAL SHALE LAYERS AND SEAMS - Unweathered, Moderately Hard, Gray
L5-LIMESTONE WITH OCCASIONAL SHALE LAYERS AND SEAMS - Unweathered, Hard with Moderately Hard Layers, Gray



EMBANKMENT SECTION
No Scale

HYDRAULIC DATA

Flood Description	Frequency	Total Discharge	(1) Natural Water Surface Elevation	Water Surface Elevation With Backwater
	Years	CFS	FEET	FEET
Design	25	16,800	967.3	967.4
Base	100	28,400	969.4	970.7
Extreme	500	45,400	971.6	973.5
Overtopping	>500			

(1) Existing water surface elevation with structure and roadway approaches.

Q100 backwater elevation for existing structure = 969.4 ft.

Proposed Low Bridge Chord Elev. = 972.42 ft.

Drainage Area = 32.3 square miles

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 3 OF 3
LAYOUT OF BRIDGE
HIGHWAY 66 OVER COVE CREEK
HWY. 66 REALIGNMENT (LESLIE) (S)
SEARCY COUNTY

ROUTE 66 SEC. I

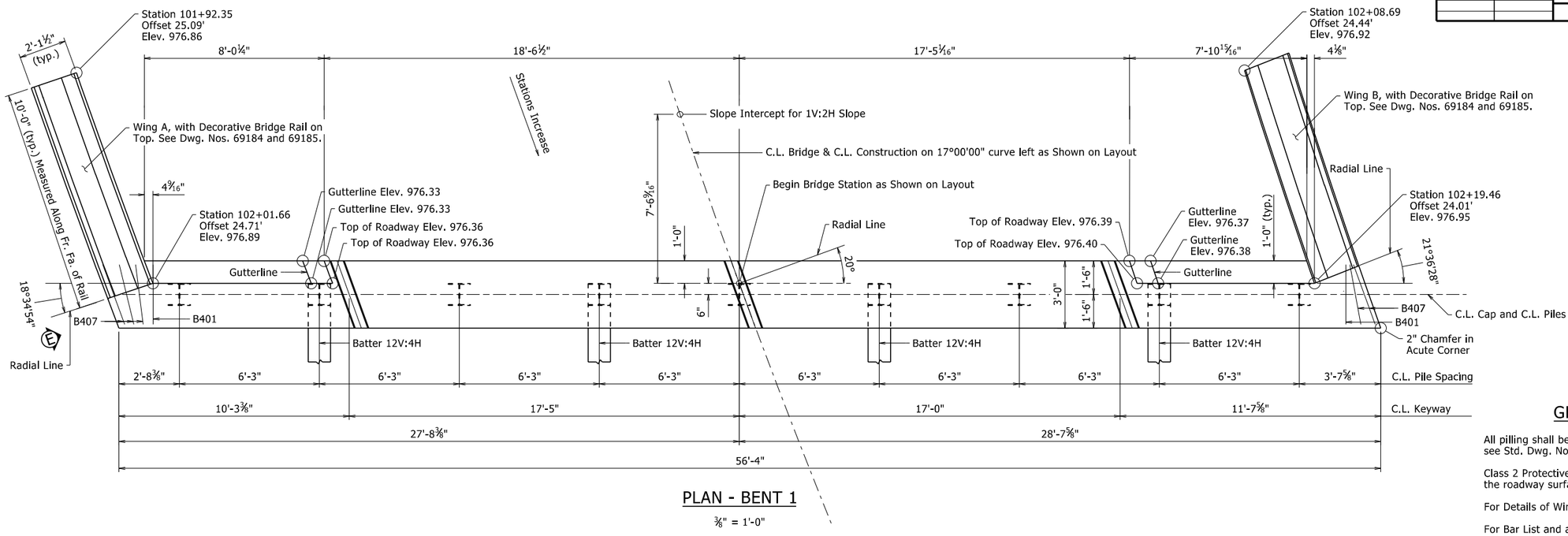
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: NAC DATE: 4/10/2023 FILENAME: b090672_l1.dgn
CHECKED BY: DBS DATE: 2/6/2024 SCALE: 1"=20'
DESIGNED BY: NAC DATE: 4/10/2023

BRIDGE NO. 07709 DRAWING NO. 69149A

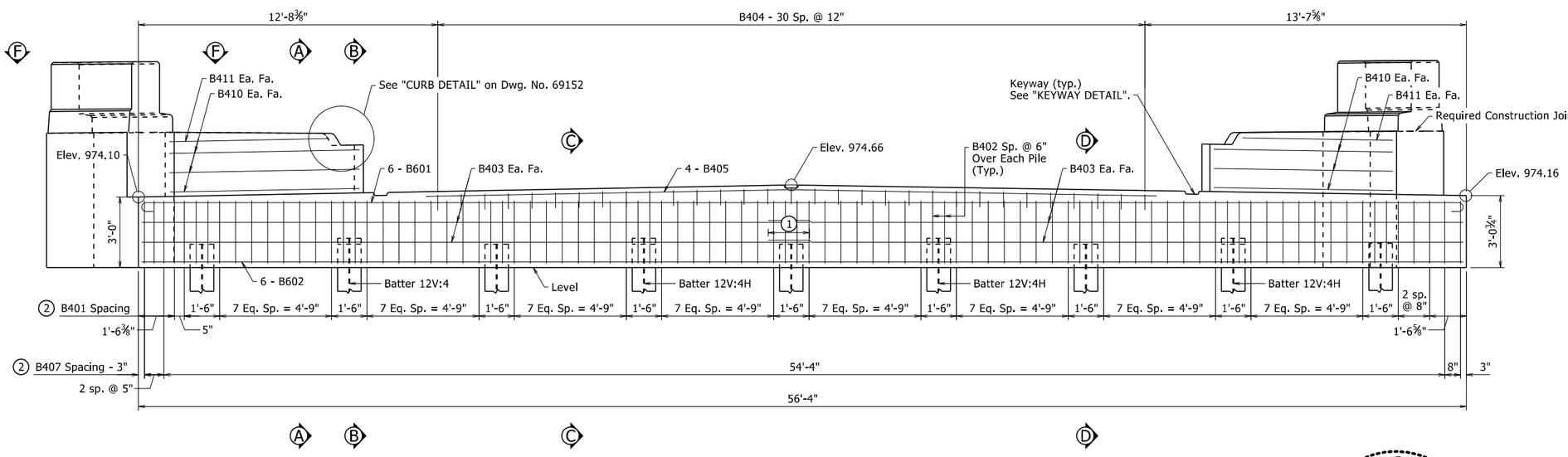
PRINT DATE: 9/30/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	41	108
		07709 - BENTS 1 AND 7 - 69150				



PLAN - BENT 1

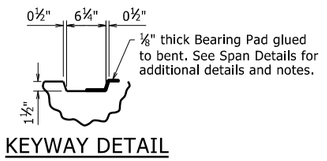
⅜" = 1'-0"



ELEVATION - BENT 1

Looking Back

⅜" = 1'-0"



KEYWAY DETAIL

GENERAL NOTES

All pilling shall be Grade 50. For details of steel piling, see Std. Dwg. No. 55020.

Class 2 Protective Surface Treatment shall be applied to the roadway surface and top of sidewalks, including curb.

For Details of Wings, see Dwg. No. 69152.

For Bar List and additional Sections, see Dwg. Nos. 69151 and 69152.

For additional information, see Layout and Std. Dwg. No. 55006.

For "SECTION A-A", "SECTION B-B", "SECTION C-C", and "SECTION D-D" see Dwg. No. 69152.

For "VIEW E-E" and "VIEW F-F", see Dwg. No. 69152.

(1) 1'-9" Min. Lap B403 Bars.

(2) Along Front Face of Cap.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 1 OF 3
DETAILS OF BENTS 1 AND 7

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

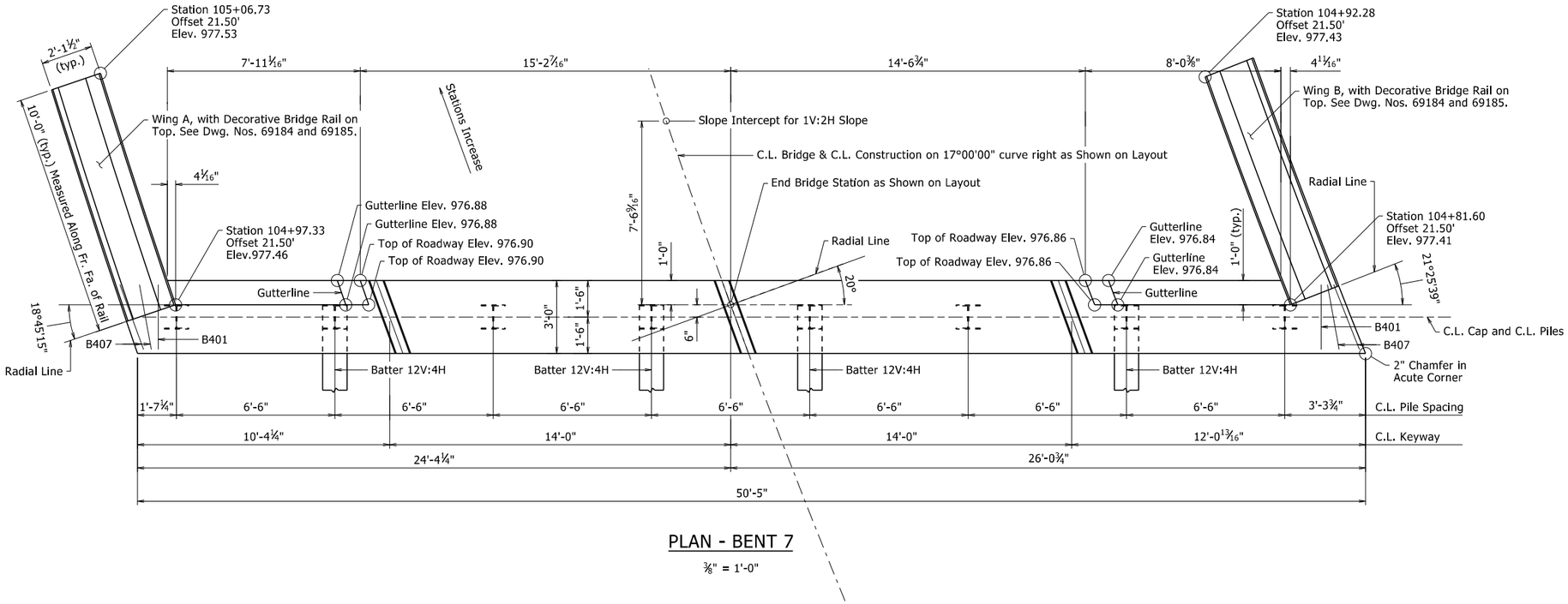
DRAWN BY: NAC DATE: 5/10/2025
CHECKED BY: WAC DATE: 6/30/2025
DESIGNED BY: NAC DATE: 4/2025

FILENAME: b090672_b1.dgn
SCALE: AS NOTED

BRIDGE NO. 07709 DRAWING NO. 69150

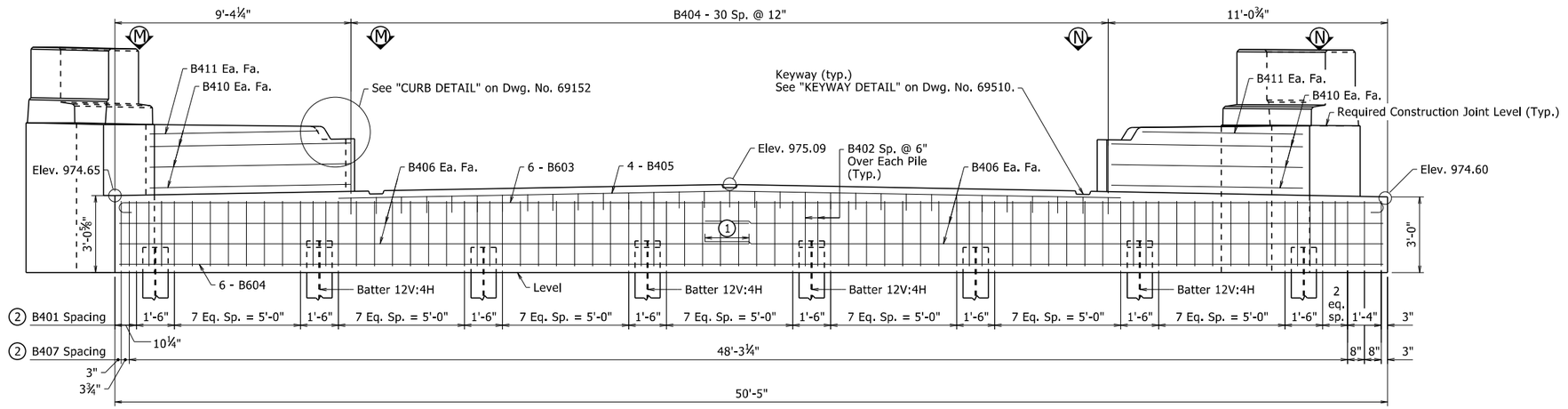
PRINT DATE: 10/2/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	42	108
		07709 - BENTS 1 AND 7 - 69151				



PLAN - BENT 7

⅜" = 1'-0"



ELEVATION - BENT 7

Looking Ahead

⅜" = 1'-0"

For details of wings, see Dwg. No. 69152.

For "VIEW M-M" and "VIEW N-N", see Dwg. No. 69152.

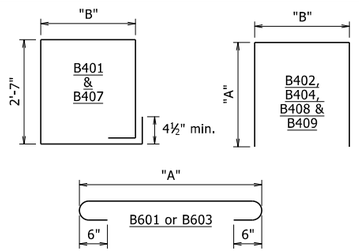
(1) 1'-9" Min. Lap B406 Bars.

(2) Along Front Face of Cap.

BAR LIST

	MARK	NO. REQ'D.	LENGTH	"A"	"B"	PIN DIA.
BENT 1	B401	69	10'-10"	-	2'-8"	2"
	B402	18	7'-10"	2'-8"	2'-8"	2"
	B403	8	28'-11"	-	-	Str.
	B404	31	5'-0"	1'-3"	2'-8"	2"
	B405	4	32'-0"	-	-	Str.
	B407	5	11'-0"	-	2'-9"	2"
	B408	26	8'-8"	4'-1"	8"	2"
	B409	4	7'-6"	3'-6"	8"	2"
	B410	12	7'-7"	-	-	Str.
	B411	4	6'-3"	-	-	Str.
	B601	6	57'-4"	56'-0"	-	4½"
	B602	6	56'-0"	-	-	Str.
	W401	48	5'-4"	-	-	Str.
	W801	32	9'-8"	-	-	Str.
BENT 7	B401	60	10'-10"	-	-	2"
	B402	16	7'-10"	2'-8"	2'-8"	2"
	B404	31	5'-0"	1'-3"	2'-8"	2"
	B405	4	32'-0"	-	-	Str.
	B406	8	25'-11"	-	-	Str.
	B407	4	11'-0"	-	2'-9"	2"
	B408	26	8'-8"	4'-1"	8"	2"
	B409	4	7'-6"	3'-6"	8"	2"
	B410	12	7'-7"	-	-	Str.
	B411	4	6'-3"	-	-	Str.
	B603	6	51'-5"	50'-1"	-	4½"
	B604	6	50'-1"	-	-	Str.
	W401	48	5'-4"	-	-	Str.
	W801	32	9'-8"	-	-	Str.

BENDING DIAGRAMS



Dimensions are out to out of bars.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 2 OF 3
DETAILS OF BENTS 1 AND 7

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

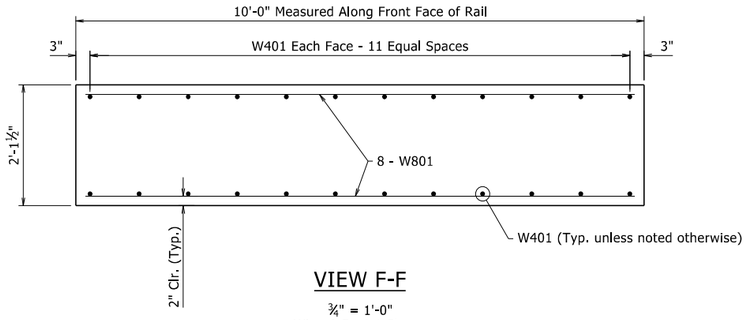
LITTLE ROCK, ARK.

DRAWN BY: NAC DATE: 5/10/2025 FILENAME: b090672_b1.dgn
CHECKED BY: WAC DATE: 6/30/2025 SCALE: AS NOTED
DESIGNED BY: NAC DATE: 4/2025

BRIDGE NO. 07709 DRAWING NO. 69151

PRINT DATE: 10/2/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	43	108
		07709 - BENTS 1 AND 7 - 69152				



VIEW F-F

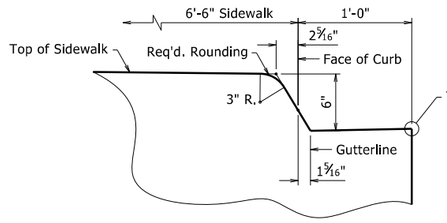
¾" = 1'-0"
Wing A Bent 1 Shown
Wing B Bent 1, Wing A Bent 7 and Wing B Bent 7 Similar

TABLE OF VARIABLES

Bent	Wing	"C"	"D"	"E"	"F"
1	A	976.86	976.89	5'-9⅛"	5'-9½"
1	B	976.92	976.95	5'-9 3/16"	5'-10 3/16"
7	A	977.53	977.46	5'-11 3/16"	5'-10 5/16"
7	B	977.43	977.41	5'-9 15/16"	5'-9¾"

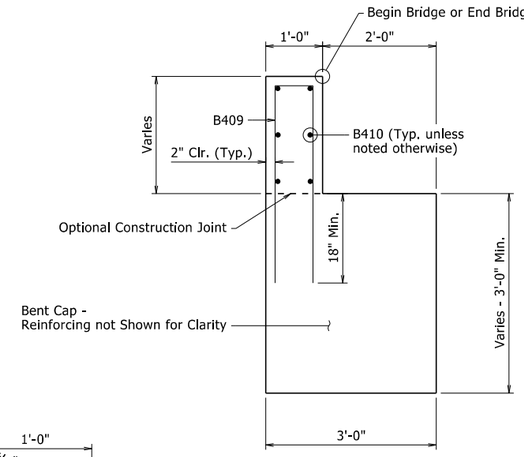
Bent 1: Longitudinal Lines in wings within limits of clear roadway transition vary with respect to C.L. Bridge and C.L. Construction.
Bent 7: Longitudinal Lines in wings are on curves concentric with C.L. Construction.

See Layout and Roadway Plans for more information.



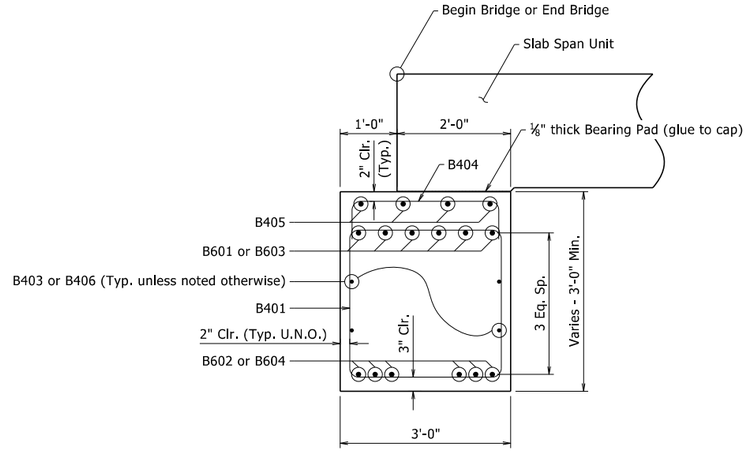
CURB DETAIL

1½" = 1'-0"



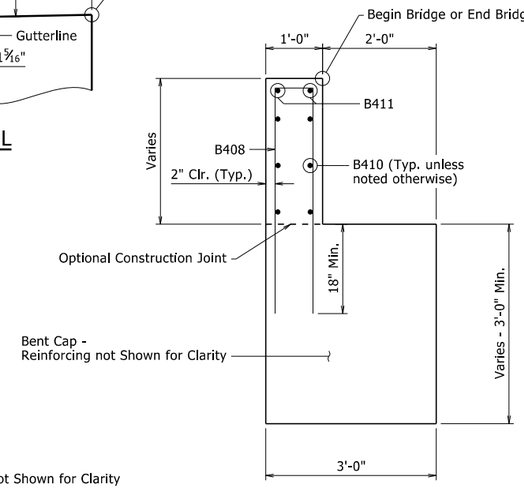
SECTION B-B

¾" = 1'-0"



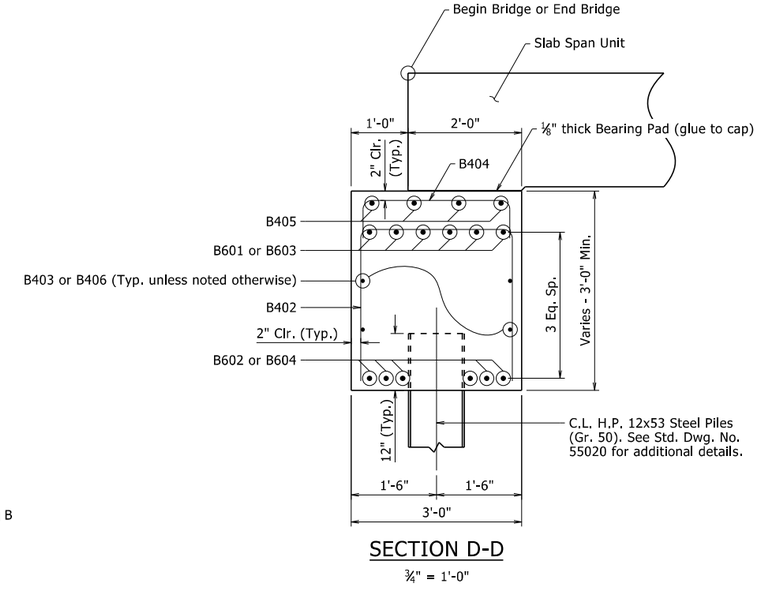
SECTION C-C

¾" = 1'-0"



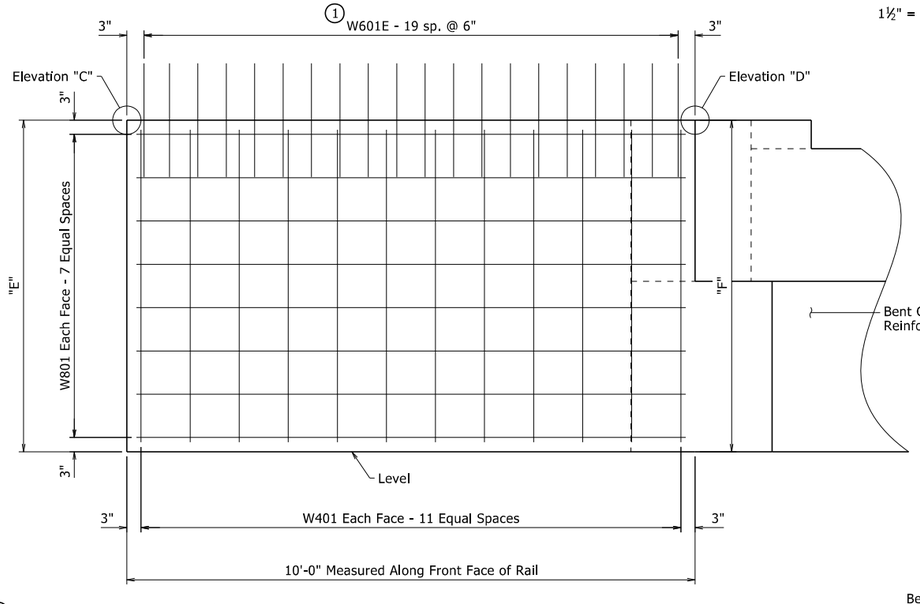
SECTION A-A

¾" = 1'-0"



SECTION D-D

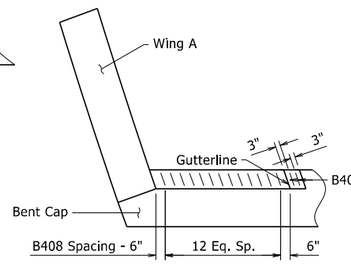
¾" = 1'-0"



① See Dwg. No. 69184 and 69185 for Bar List and Rail Details over Wing.

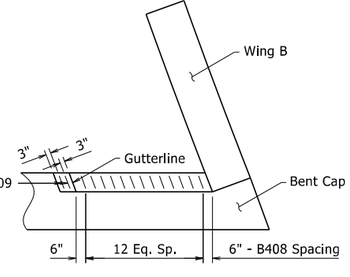
VIEW E-E

¾" = 1'-0"
Wing A Bent 1 Shown
Wing B Bent 1, Wing A Bent 7 and Wing B Bent 7 Similar



VIEW M-M

¼" = 1'-0"
Wing A Bent 7 Shown,
Wing A Bent 1 Similar



VIEW N-N

¼" = 1'-0"
Wing B Bent 7 Shown,
Wing B Bent 1 Similar

B408 and B409 shall be placed parallel to C.L. Bridge

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS

BRIDGE ENGINEER

PRINT DATE: 10/2/2025

SHEET 3 OF 3
DETAILS OF BENTS 1 AND 7

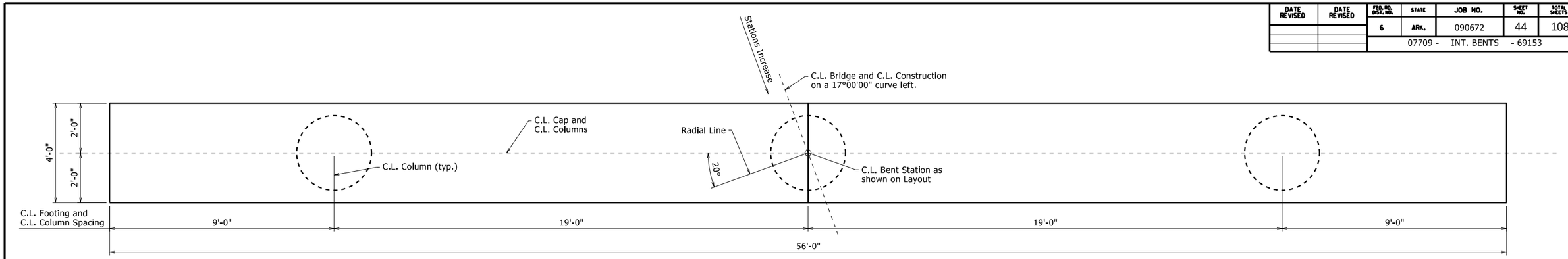
ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: NAC DATE: 5/10/2025
CHECKED BY: WAC DATE: 6/30/2025
DESIGNED BY: NAC DATE: 4/2025
FILENAME: b090672_b1.dgn
SCALE: AS NOTED

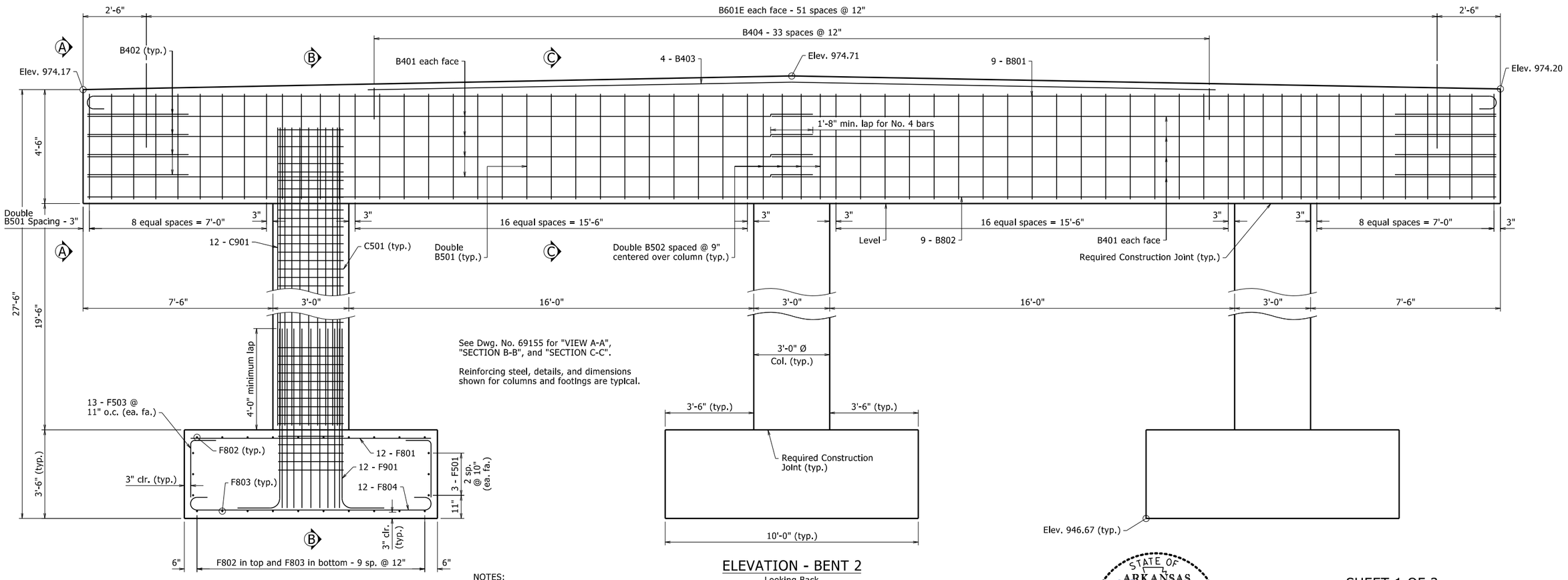
BRIDGE NO. 07709
DRAWING NO. 69152

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	44	108
		07709 - INT. BENTS - 69153				



PLAN - BENT 2

½" = 1'-0"



See Dwg. No. 69155 for "VIEW A-A", "SECTION B-B", and "SECTION C-C".

Reinforcing steel, details, and dimensions shown for columns and footings are typical.

ELEVATION - BENT 2

Looking Back
½" = 1'-0"

NOTES:

See Std. Dwg. No. 55006 for additional General Notes.

See Layout for additional information.

See Dwg. No. 69155 for Bar List.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 1 OF 3
DETAILS OF BENTS 2 AND 6

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: WAC DATE: 4/2025
CHECKED BY: DBS DATE: 6/23/2025
DESIGNED BY: DBS DATE: 4/2025

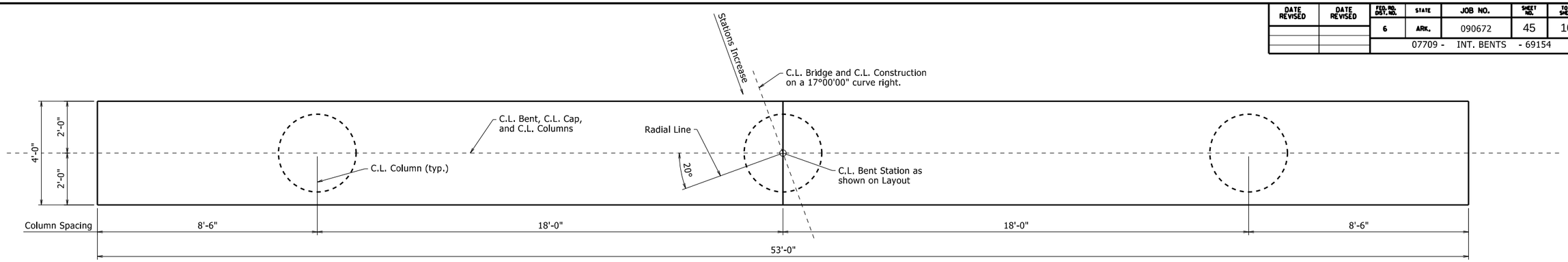
FILENAME: b090672_b2.dgn
SCALE: As Shown

BRIDGE NO. 07709

DRAWING NO. 69153

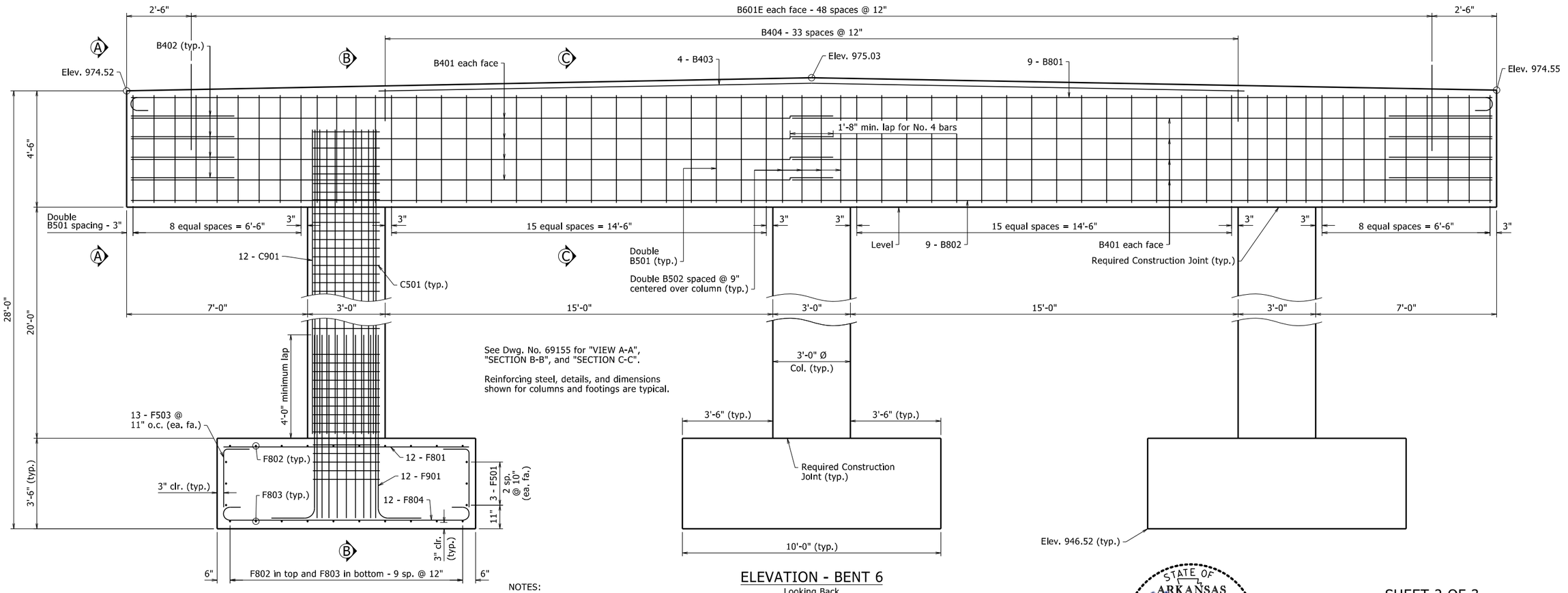
PRINT DATE: 9/30/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	45	108
		07709 - INT. BENTS - 69154				



PLAN - BENT 6

½" = 1'-0"



ELEVATION - BENT 6

Looking Back

½" = 1'-0"

NOTES:

See Std. Dwg. No. 55006 for additional General Notes.

See Layout for additional information.

See Dwg. No. 69155 for Bar List.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 2 OF 3

DETAILS OF BENTS 2 AND 6

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: WAC DATE: 4/2025 FILENAME: b090672_b2.dgn

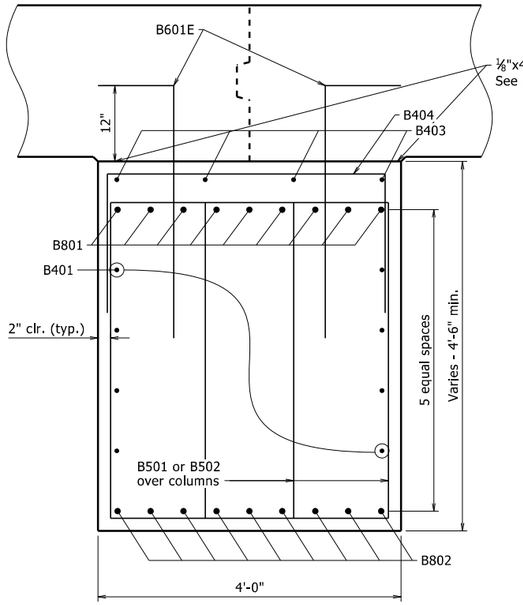
CHECKED BY: DBS DATE: 6/23/2025 SCALE: As Shown

DESIGNED BY: DBS DATE: 4/2025

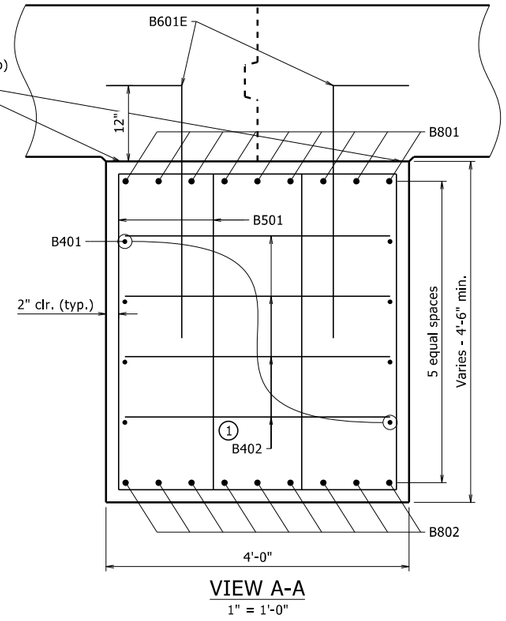
BRIDGE NO. 07709 DRAWING NO. 69154

PRINT DATE: 9/30/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	46	108
		07709 - INT. BENTS - 69155				

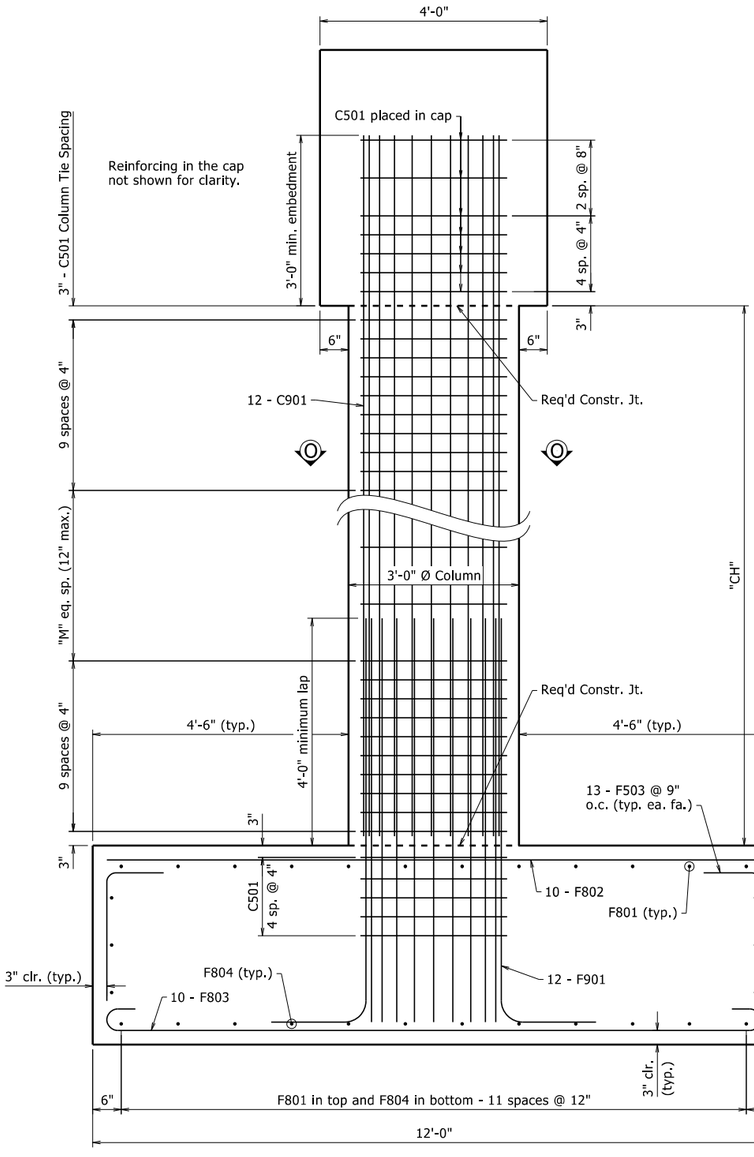


SECTION C-C
1" = 1'-0"



VIEW A-A
1" = 1'-0"

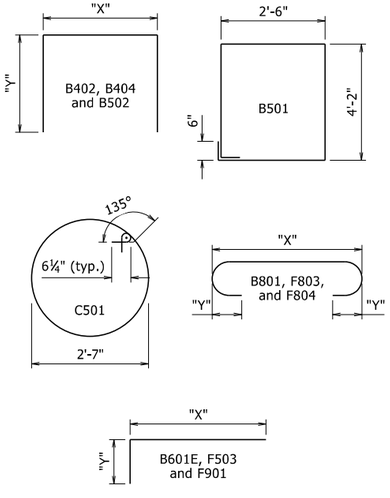
1 B402 shall be placed to maintain a 2" clear cover to the end of the cap.



SECTION B-B
¾" = 1'-0"

BAR LIST - PER BENT

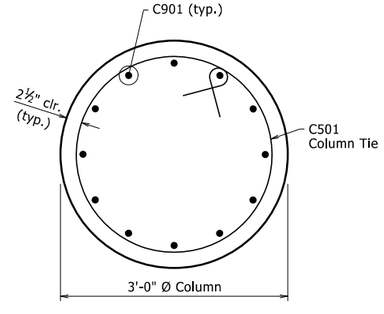
Mark	No. Req'd.	Length	Pin Dia.	"X"	"Y"	Bending Diagram
B401	16	"F"	Str.	-	-	
B402	8	11'-4"	2"	3'-6"	4'-0"	
B403	4	33'-6"	Str.	-	-	
B404	34	6'-0"	2"	3'-8"	1'-10"	
B501	"G"	13'-10"	2½"	-	-	
B502	24	10'-8"	2½"	2'-6"	4'-2"	
B601E	"H"	4'-2"	4½"	3'-4"	1'-0"	
B801	9	"I"	6"	"J"	8"	
B802	9	"J"	Str.	-	-	
C501	"K"	9'-6"	3¾"	-	-	
C901	36	"L"	Str.	-	-	
F501	18	11'-6"	Str.	-	-	
F502	18	9'-6"	Str.	-	-	
F503	156	3'-2"	3¾"	2'-3"	1'-0"	
F801	36	9'-6"	Str.	-	-	
F802	30	11'-6"	Str.	-	-	
F803	30	13'-4"	6"	11'-6"	8"	
F804	36	11'-4"	6"	9'-6"	8"	
F901	36	10'-7"	9"	9'-2"	1'-8"	



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

TABLE OF VARIABLES

	"F"	"G"	"H"	"I"	"J"	"K"	"L"	"M"	"CH"
BENT 2	28'-8"	104	104	57'-6"	55'-8"	132	22'-4"	13	19'-6"
BENT 6	27'-2"	100	98	54'-6"	52'-8"	135	22'-10"	14	20'-0"



SECTION O-O
1" = 1'-0"

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 3 OF 3
DETAILS OF BENTS 2 AND 6

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

DRAWN BY: WAC DATE: 4/2025
CHECKED BY: DBS DATE: 6/23/2025
DESIGNED BY: NAC DATE: 4/2025
FILENAME: b090672_b2.dgn
SCALE: As Shown

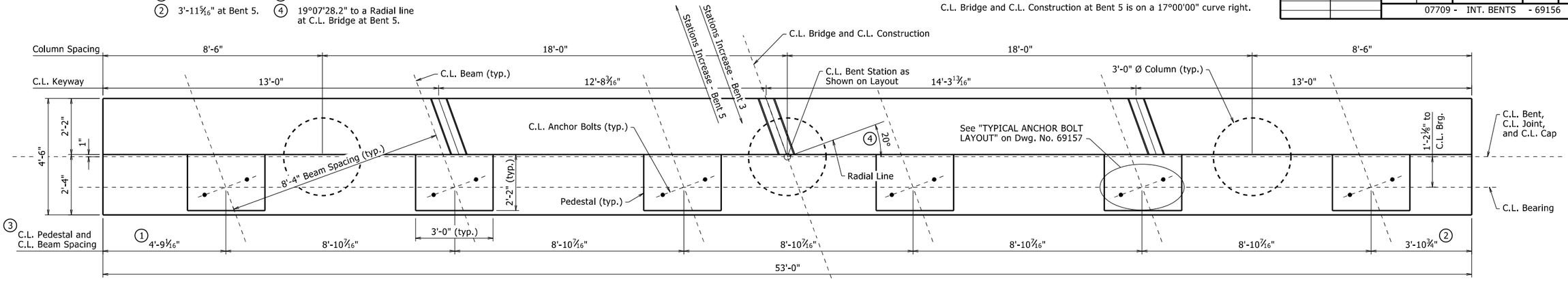
BRIDGE NO. 07709 DRAWING NO. 69155

PRINT DATE: 9/30/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
10-20-2025		6	ARK.	090672	47	108
				07709 - INT. BENTS - 69156		

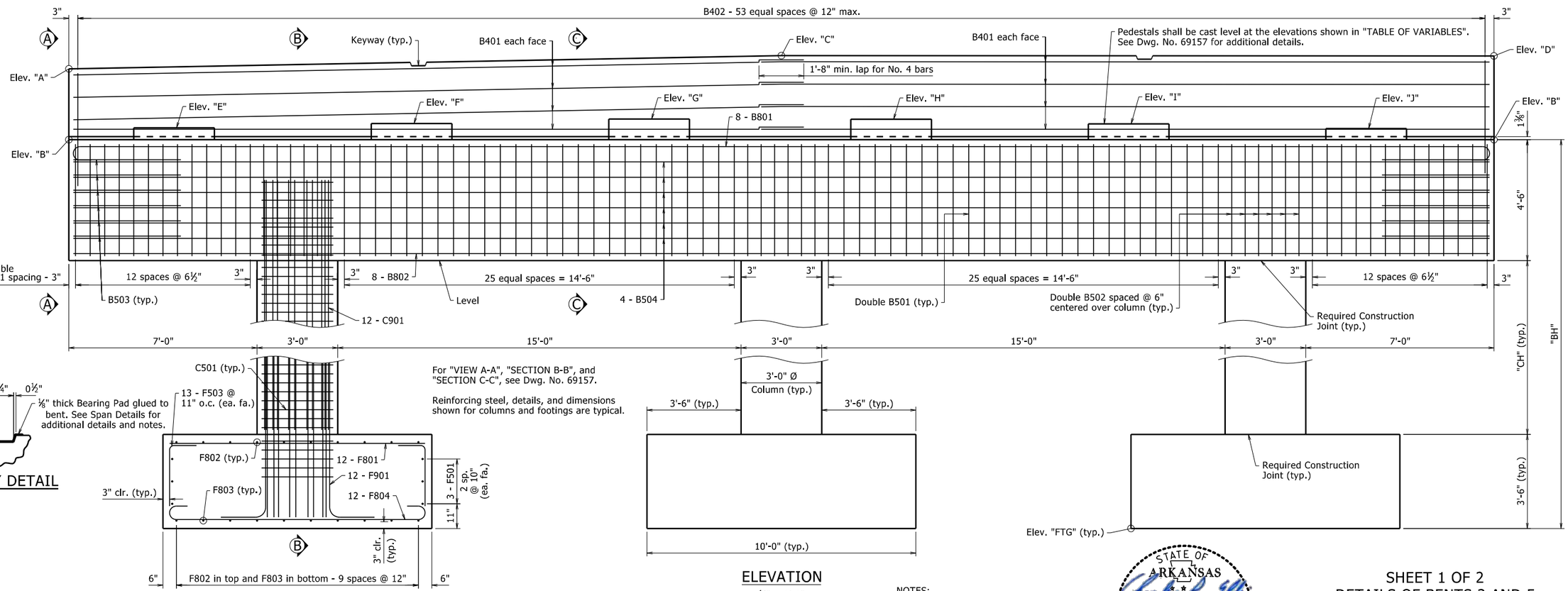
(1) 4'-8 9/16" at Bent 5.
(2) 3'-11 5/16" at Bent 5.
(3) Measured along front face of Cap.
(4) 19°07'28.2" to a Radial line at C.L. Bridge at Bent 5.

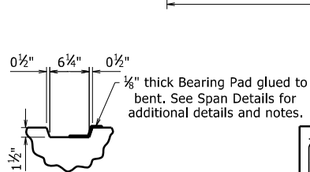
C.L. Bridge and C.L. Construction at Bent 5 is on a 17°00'00" curve right.



PLAN

½" = 1'-0"
Bent 3 Shown (Bent 5 Similar)





KEYWAY DETAIL

For "VIEW A-A", "SECTION B-B", and "SECTION C-C", see Dwg. No. 69157.

Reinforcing steel, details, and dimensions shown for columns and footings are typical.

ELEVATION

½" = 1'-0"
Looking Back - Bent 3 Shown
Looking Ahead - Bent 5 Similar

TABLE OF VARIABLES

	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"I"	"J"	"FTG"	"CH"	"BH"	"Z"
Bent 3	974.26	971.64	974.76	974.27	972.05	972.22	972.39	972.40	972.24	972.08	946.64	17'-0"	25'-0"	19'-10"
Bent 5	974.50	971.85	974.98	974.46	972.28	972.45	972.61	972.61	972.43	972.26	946.35	17'-6"	25'-6"	20'-4"

NOTES:

See Std. Dwg. No. 55006 for additional General Notes.

See Layout for additional information.

See Dwg. No. 69157 for Bar List.

1 Corrected location of Engineer of Record's digital signature. By: WAC 10/20/2025

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/20/25
CHARLES R. ELLIS

Ellis, Rick BRIDGE ENGINEER

SHEET 1 OF 2
DETAILS OF BENTS 3 AND 5

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

DRAWN BY: WAC DATE: 5/2025
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FILENAME: b090672_b3.dgn
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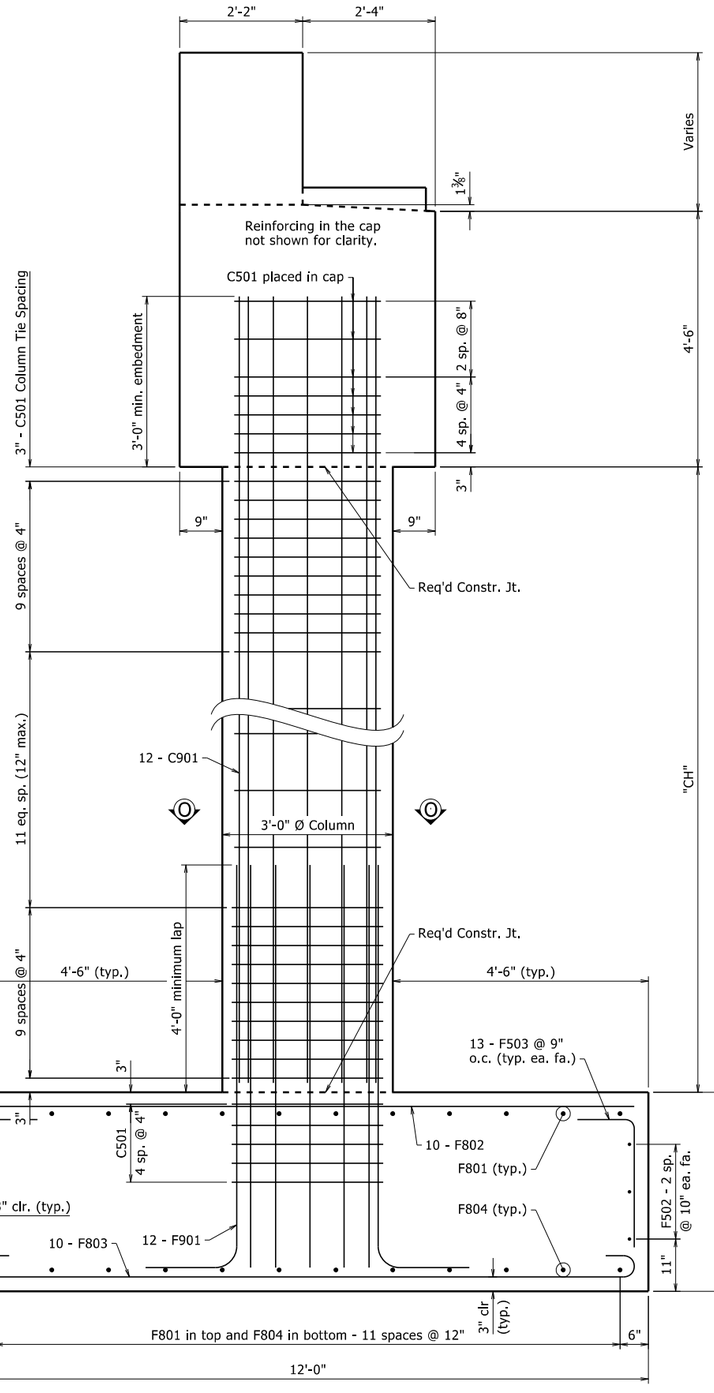
BRIDGE NO. 07709 DRAWING NO. 69156

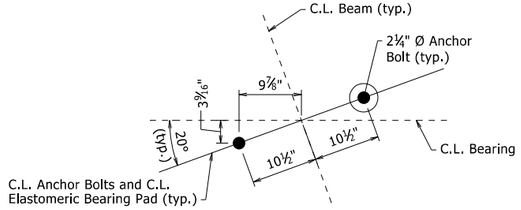
PRINT DATE: 10/20/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	48	108
		07709 - INT. BENTS - 69157				



SECTION B-B

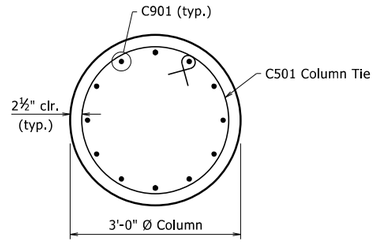
¾" = 1'-0"



For details of Elastomeric Bearings, see Dwg. No. 69160.

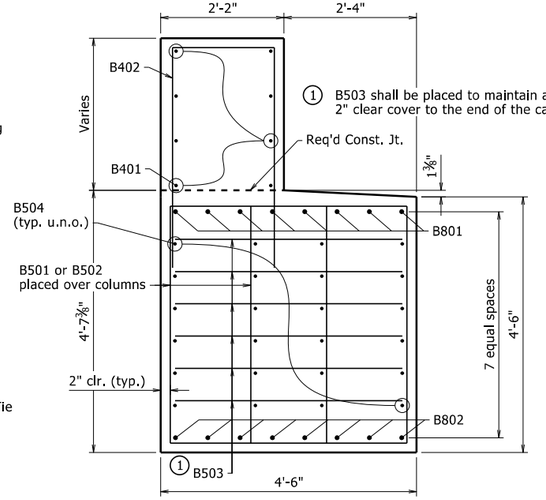
TYPICAL ANCHOR BOLT LAYOUT

1" = 1'-0"



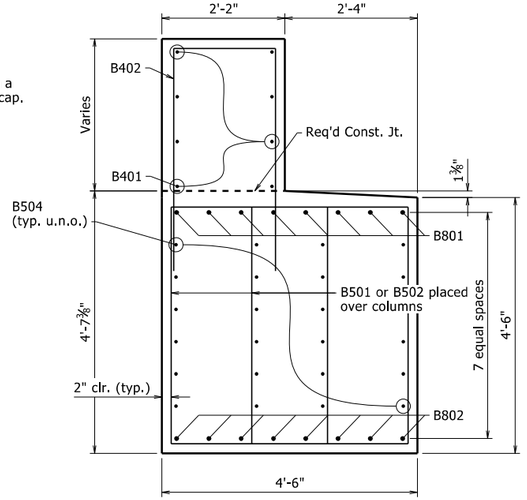
SECTION O-O

¾" = 1'-0"



VIEW A-A

¾" = 1'-0"

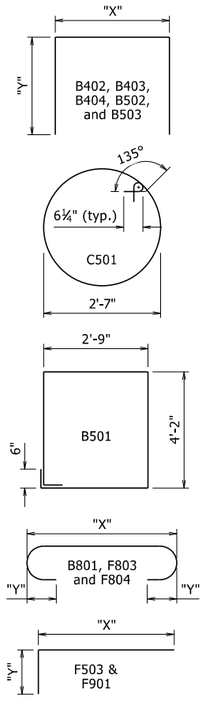


SECTION C-C

¾" = 1'-0"

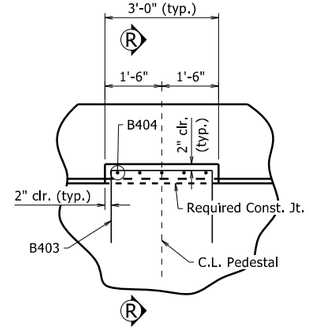
BAR LIST - PER BENT

Mark	No. Req'd.	Length	Pin Dia.	"X"	"Y"	Bending Diagram
B401	16	27'-2"	Str.	-	-	
B402	54	10'-2"	2"	1'-10"	4'-3"	
B403	24	6'-4"	2"	2'-8"	1'-11"	
B404	30	5'-6"	2"	1'-10"	1'-11"	
B501	156	14'-4"	2½"	-	-	
B502	36	10'-11"	2½"	2'-9"	4'-2"	
B503	12	11'-10"	2½"	4'-0"	4'-0"	
B504	24	52'-8"	Str.	-	-	
B801	8	54'-6"	6"	52'-8"	8"	
B802	8	52'-8"	Str.	-	-	
C501	126	9'-6"	3¾"	-	-	
C901	36	"Z"	Str.	-	-	
F501	18	11'-6"	Str.	-	-	
F502	18	9'-6"	Str.	-	-	
F503	156	3'-2"	3¾"	2'-3"	1'-0"	
F801	36	9'-6"	Str.	-	-	
F802	30	11'-6"	Str.	-	-	
F803	30	13'-4"	6"	11'-6"	8"	
F804	36	11'-4"	6"	9'-6"	8"	
F901	36	10'-7"	9"	9'-2"	1'-8"	



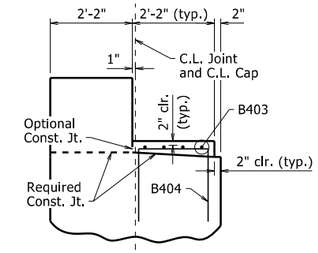
Dimensions are out to out of bars.

See "TABLE OF VARIABLES" on Dwg. No. 69156 for variable "Z".



TYPICAL PEDESTAL

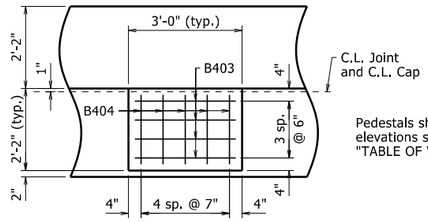
½" = 1'-0"



SECTION R-R

½" = 1'-0"

Bars B403 and B404 in pedestals shall be embedded 1'-3" minimum into the cap.



PEDESTAL PLAN

½" = 1'-0"

Pedestals shall be cast level at the elevations shown in "ELEVATION" and "TABLE OF VARIABLES" on Dwg. No. 69156.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 2 OF 2
DETAILS OF BENTS 3 AND 5

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

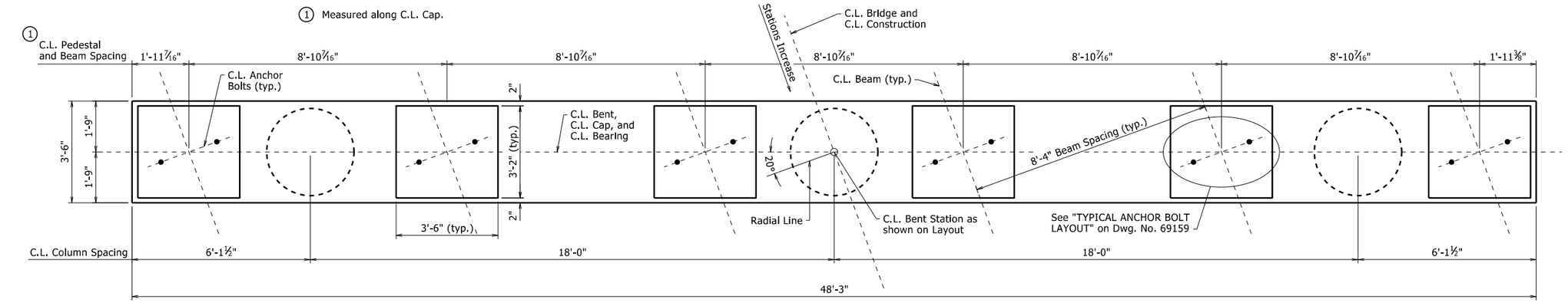
DRAWN BY: WAC DATE: 5/2025
CHECKED BY: DBS DATE: 6/23/2025
DESIGNED BY: DBS DATE: 4/2025

FILENAME: b090672_b3.dgn
SCALE: As Shown

BRIDGE NO. 07709 DRAWING NO. 69157

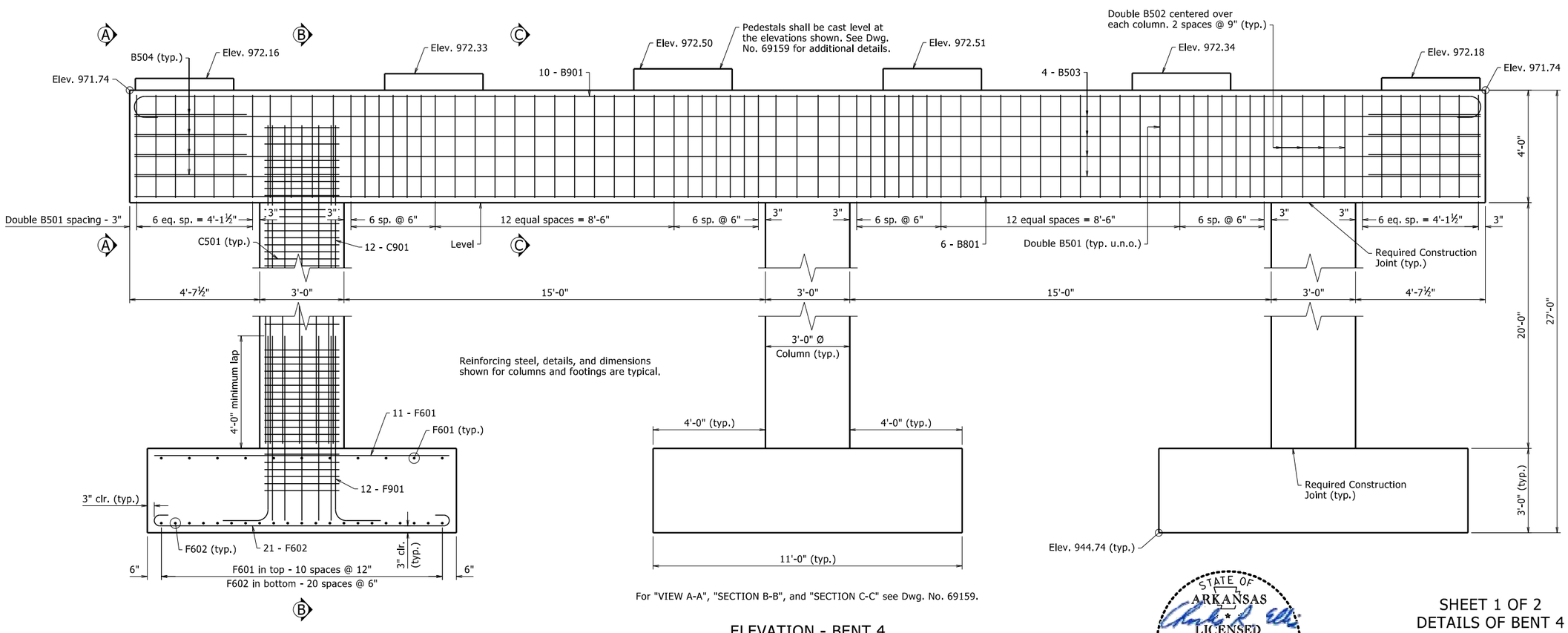
PRINT DATE: 10/2/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	49	108
		07709 - INT. BENTS - 69158				



PLAN - BENT 4

½" = 1'-0"



For "VIEW A-A", "SECTION B-B", and "SECTION C-C" see Dwg. No. 69159.

ELEVATION - BENT 4

½" = 1'-0"
Looking Back

NOTES:

See Std. Dwg. No. 55006 for additional General Notes.

See Layout for additional Information.

See Dwg. No. 69159 for Bar List.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 1 OF 2
DETAILS OF BENT 4

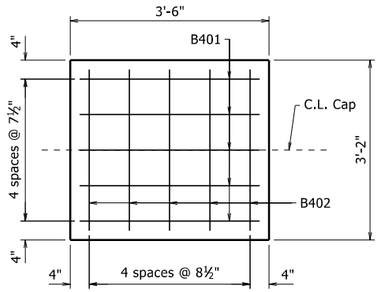
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: WAC DATE: 4/2025 FILENAME: b090672_b4.dgn
CHECKED BY: NAC DATE: 6/30/2025 SCALE: As Shown
DESIGNED BY: NAC DATE: 4/2025

BRIDGE NO. 07709 DRAWING NO. 69158

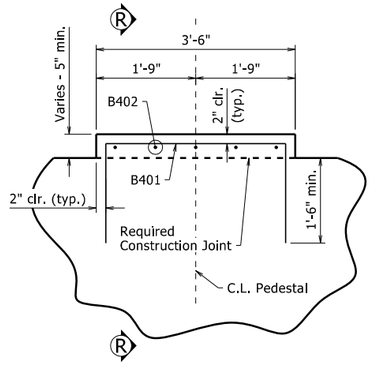
PRINT DATE: 9/30/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	50	108
		07709 -	BENT 4	- 69159		



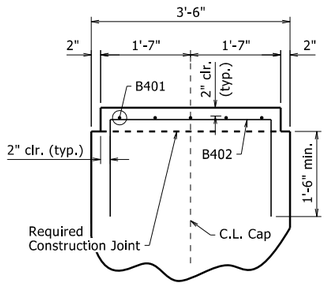
PEDESTAL PLAN

¾" = 1'-0"



TYPICAL PEDESTAL

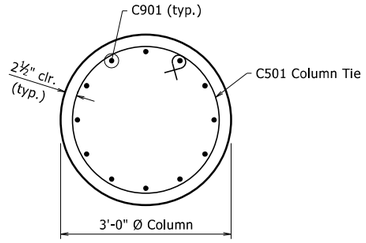
¾" = 1'-0"



SECTION R-R

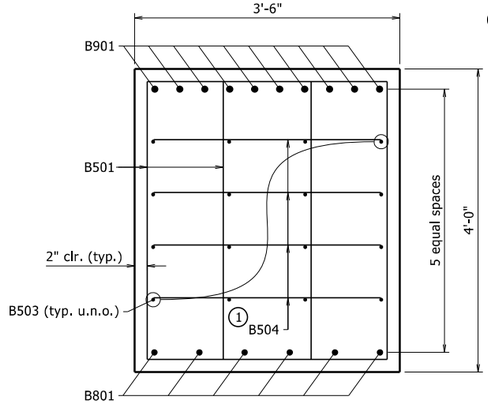
¾" = 1'-0"

Pedestals shall be cast level at the elevations shown in "ELEVATION" on Dwg. No. 69158.



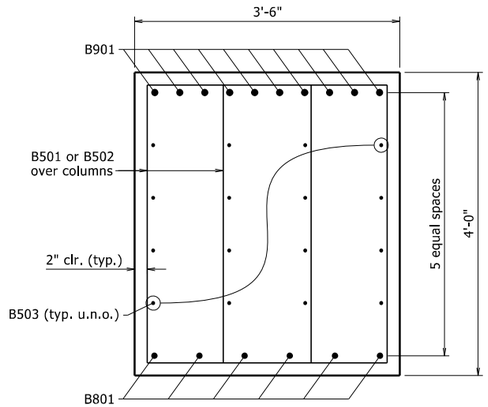
SECTION O-O

¾" = 1'-0"



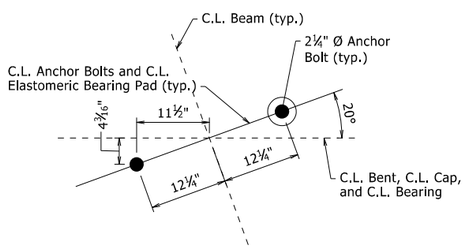
VIEW A-A

1" = 1'-0"



SECTION C-C

1" = 1'-0"

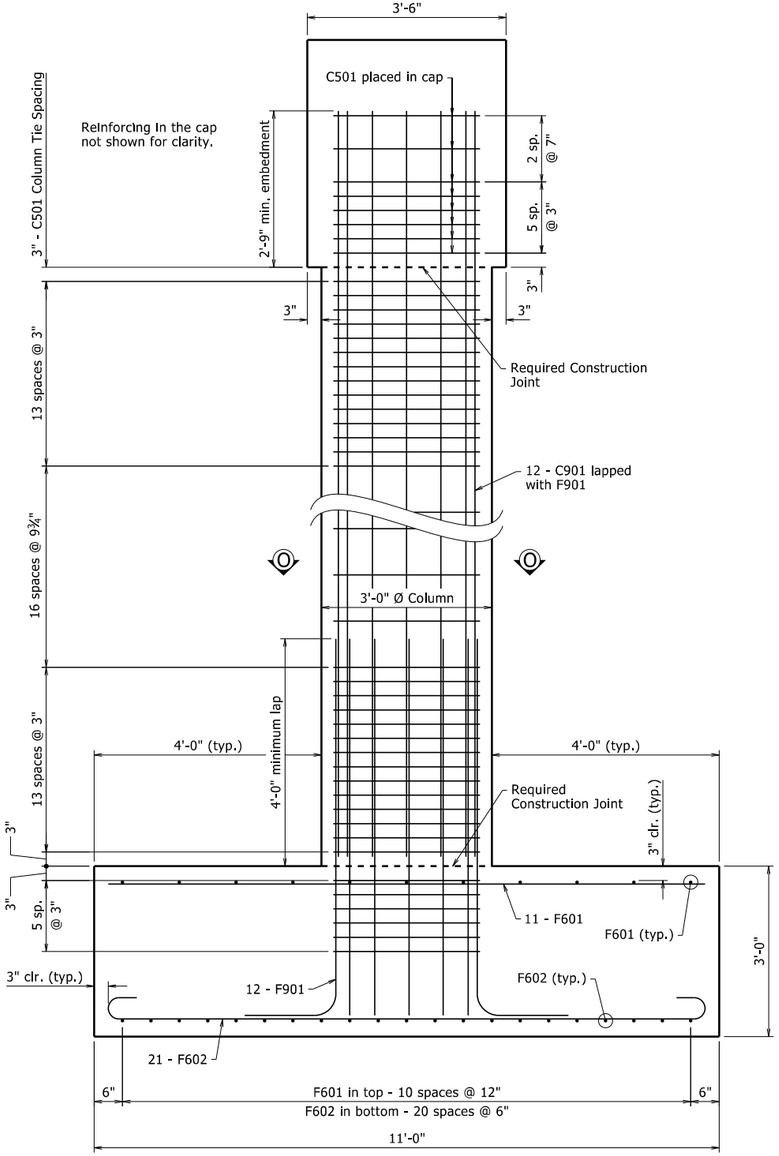


TYPICAL ANCHOR BOLT LAYOUT

1" = 1'-0"

For details of Elastomeric Bearings see Dwg. No. 69160.

1 B504 shall be placed to maintain a 2" clear cover to the end of the cap.

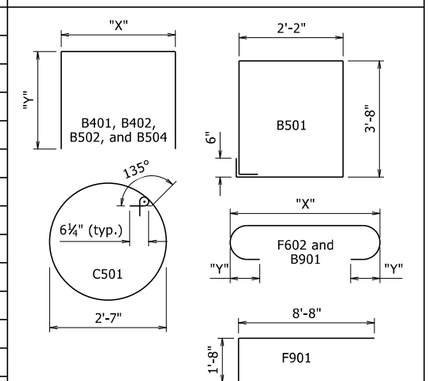


SECTION B-B

¾" = 1'-0"

BAR LIST

Mark	No. Req'd.	Length	Pin Dia.	"X"	"Y"	Bending Diagram (dimensions are out to out of bars)
B401	30	7'-4"	2"	3'-2"	2'-2"	
B402	30	7'-0"	2"	2'-10"	2'-2"	
B501	128	12'-2"	2½"	-	-	
B502	24	9'-4"	2½"	2'-2"	3'-8"	
B503	16	47'-11"	Str.	-	-	
B504	8	10'-2"	2½"	3'-0"	3'-8"	
B801	6	47'-11"	Str.	-	-	
B901	10	50'-5"	9"	47'-11"	10"	
C501	171	9'-6"	3¾"	-	-	
C901	36	22'-7"	Str.	-	-	
F601	66	10'-6"	Str.	-	-	
F602	126	11'-10"	4½"	10'-6"	6"	
F901	36	12'-0"	9"	-	-	



STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 2 OF 2
DETAILS OF BENT 4

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

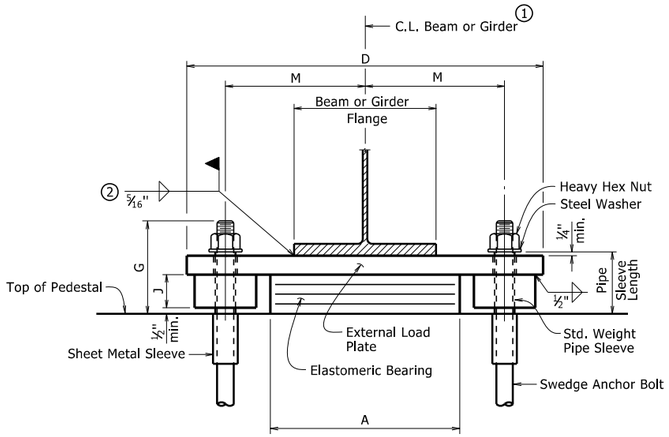
DRAWN BY: WAC DATE: 4/2025
CHECKED BY: NAC DATE: 6/30/2025
DESIGNED BY: NAC DATE: 4/2025

FILENAME: b090672_b4.dgn
SCALE: As Shown

BRIDGE NO. 07709 DRAWING NO. 69159

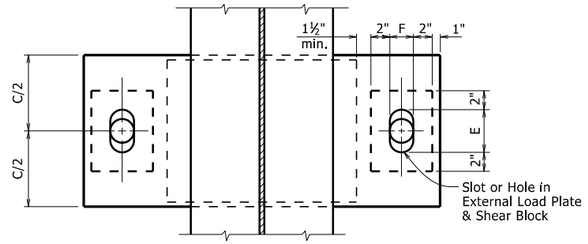
PRINT DATE: 9/30/2025

DATE REVISED	DATE REVISED	FED. ROAD DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	51	108
		07709 - ELASTO. BEARINGS - 69160				



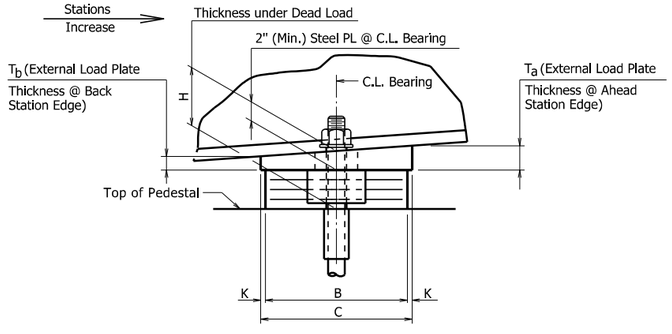
FRONT VIEW - BENTS WITH SHEAR BLOCKS

Bent 4



PLAN VIEW - BENTS WITH SHEAR BLOCKS

Bent 4



SIDE VIEW - BENTS WITH SHEAR BLOCKS

Bent 4

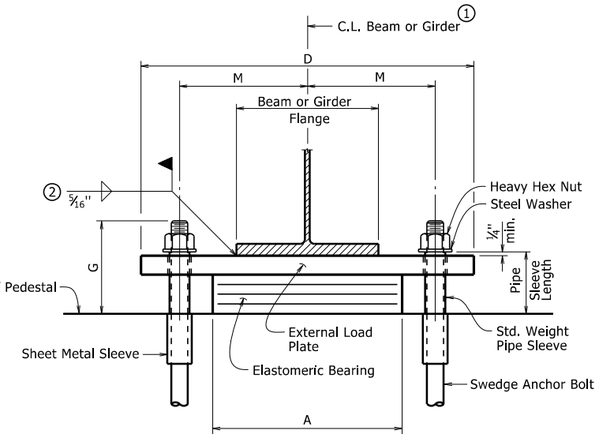
1. C.L. Elastomeric Pad shall be aligned with C.L. Beam or Girder.

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.

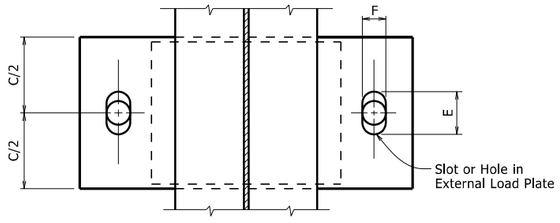
   The direction of bevel of the external load plate may not be accurately depicted with respect to Ta and Tb values shown in the "Table of Fabricator Variables".

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



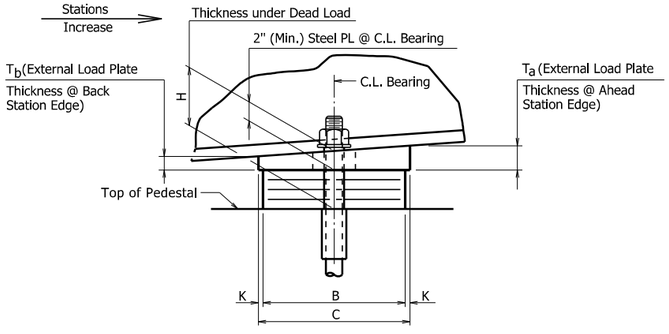
FRONT VIEW

Bents 3 & 5



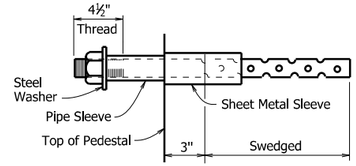
PLAN VIEW

Bents 3 & 5



SIDE VIEW

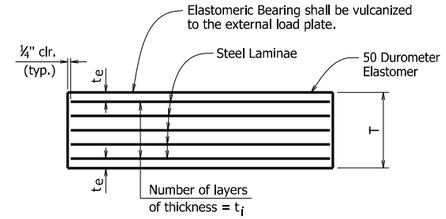
Bents 3 & 5



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 "Structural Steel in Beam Spans (A709, Gr. 50W)".



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(b) for painted steel and 807.84(e) for unpainted Grade 50W 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 "Structural Steel in Beam Spans (A709, Gr. 50W)", 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

③ Maximum Design Load = Service 1 Limit State

BRIDGE NO.	LOCATION		BEARING TYPE	NO. of BEARINGS EACH BENT	③MAXIMUM DESIGN LOAD (KIPS)	G	H	ELASTOMERIC PAD						EXTERNAL LOAD PLATE								ANCHOR BOLT				
	BENT NO(S).	BEAM OR GIRDER NO.						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.)
07709	3 & 5	All	Exp.	6	139	8"	4⅜"	12"	12"	3	½"	¼"	4 @ 12 ga.	2 7/16"	13"	27½"	5⅞"	3⅛"	NA	½"	10½"	2.01"	1.99"	2¼"ø x 35"	55	2½"ø x 4⅜"	4"ø x 16"	4"
	4	All	Fix	6	288	8"	4⅜"	14"	14"	3	½"	¼"	4 @ 12 ga.	2 7/16"	15"	33¾"	3⅛"	3⅛"	1⅞"	½"	12¼"	2.01"	1.99"	2¼"ø x 35"	55	2½"ø x 4⅜"	4"ø x 16"	4"

PRINT DATE: 10/2/2025

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS

BRIDGE ENGINEER

DETAILS OF ELASTOMERIC BEARINGS

ROUTE SEC.

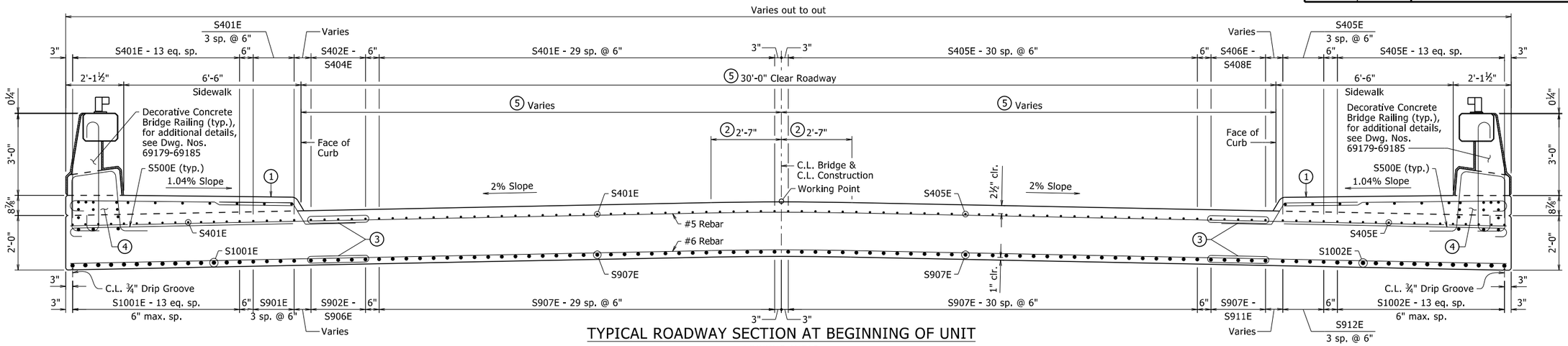
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 05/02/25
CHECKED BY: DBS DATE: 05/20/25
DESIGNED BY: JWP DATE: 02/25
FILENAME: b090672_e1.dgn
SCALE: NO SCALE

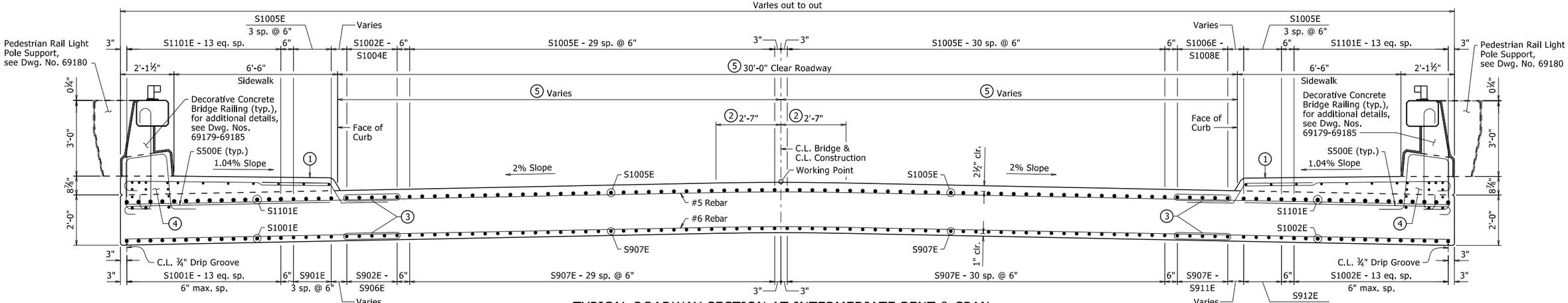
BRIDGE NO. 07709 DRAWING NO. 69160

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	52	108
		07709 - SPAN DETAILS - 69161				



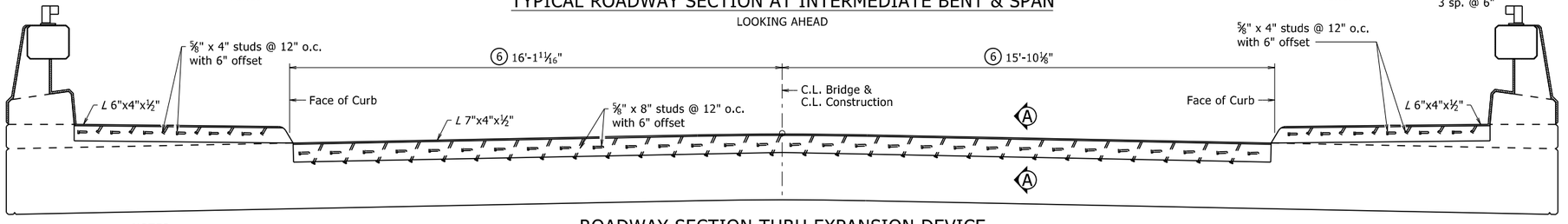
TYPICAL ROADWAY SECTION AT BEGINNING OF UNIT

LOOKING AHEAD



TYPICAL ROADWAY SECTION AT INTERMEDIATE BENT & SPAN

LOOKING AHEAD



ROADWAY SECTION THRU EXPANSION DEVICE

LOOKING BACK AT BENT 3

All structural steel shall be ASTM A709, Gr. 50W and will not be paid for directly, but will be considered subsidiary to the item "Class S(AE) Concrete-Bridge". All exposed surfaces shall be cleaned in accordance with Subsection 807.84(e) unless otherwise noted.

Class 2 Protective Surface Treatment shall be applied to the roadway surface and sidewalk including sidewalk curbing. It shall not be applied to the wings, railings or railing curbs.

Bar positions and clearances from the forms shall be maintained by means of stays, ties, hangers, or other approved devices sufficient in size and number to prevent displacement during construction, per Subsection 804.06. Placement of slab bolsters or hi-chairs with full-length lower runners directly on removable deck forms will not be allowed.

NOTES:

For reinforcing bar spacing and placement, see Dwg. Nos. 69164-69166.

See "SECTION A-A" on Dwg. No. 69171.

See "GENERAL NOTES" on Std. Dwg. No. 55006.

(1) For additional information see "SIDEWALK DETAILS AT R.C. SLAB UNIT 1" on Dwg. No. 69166.

(2) For "ROUNDING DETAIL", see Std. Dwg. No. 55007.

(3) For additional rebars in this area, see "R.C. SLAB UNIT 1 BOTTOM LONGITUDINAL REINFORCING PLAN" & R.C. SLAB UNIT 1 TOP LONGITUDINAL REINFORCING PLAN" on Dwg. Nos. 69164 & 69166, respectively. Additional rebars not required at end of unit.

(4) See Dwg. No. 69179 for location of additional rebar under the post.

(5) For limits of Clear Roadway Transition, see Dwg. Nos. 69148, 69163 and Roadway Plans for additional information.

(6) Dimension measured along C.L. Joint.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 1 OF 6
DETAILS OF 70'-0" R.C. SLAB UNIT 1

ROUTE SEC.

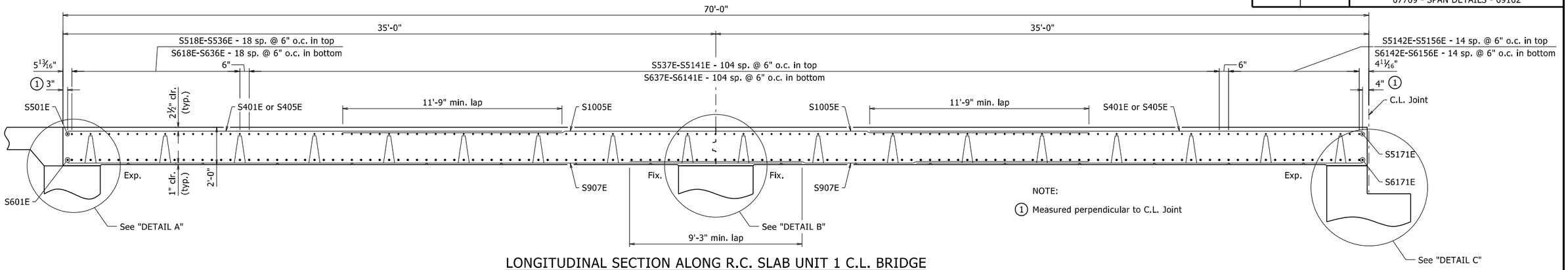
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY:	CGP	DATE:	05/02/25	FILENAME:	b090672_s1.dgn
CHECKED BY:	DBS	DATE:	05/20/25	SCALE:	1/2" = 1'-0"
DESIGNED BY:	LHC	DATE:	04/24		

BRIDGE NO. 07709 DRAWING NO. 69161

PRINT DATE: 10/2/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	53	108
		07709 - SPAN DETAILS - 69162				

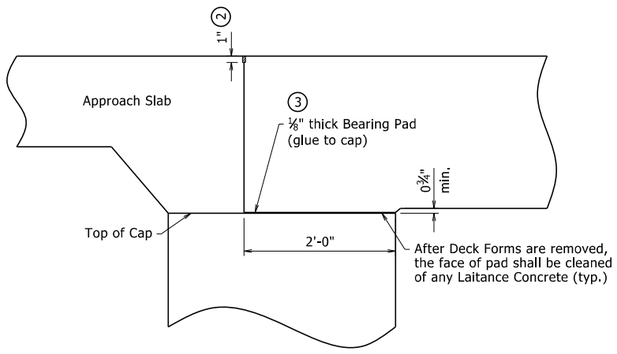


NOTE:

(1) Measured perpendicular to C.L. Joint

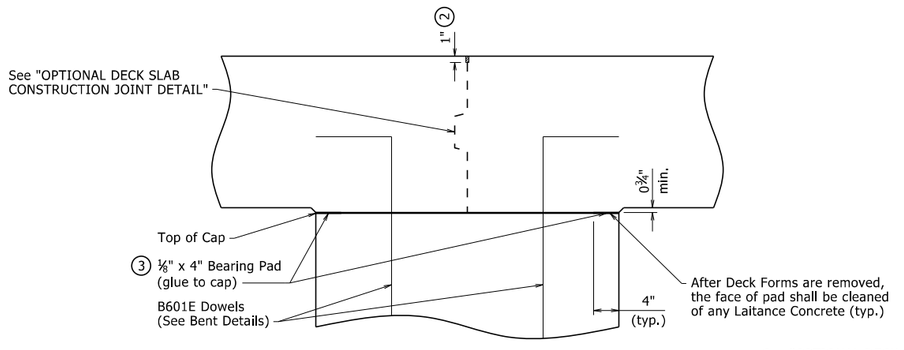
LONGITUDINAL SECTION ALONG R.C. SLAB UNIT 1 C.L. BRIDGE

⅜" = 1'-0"



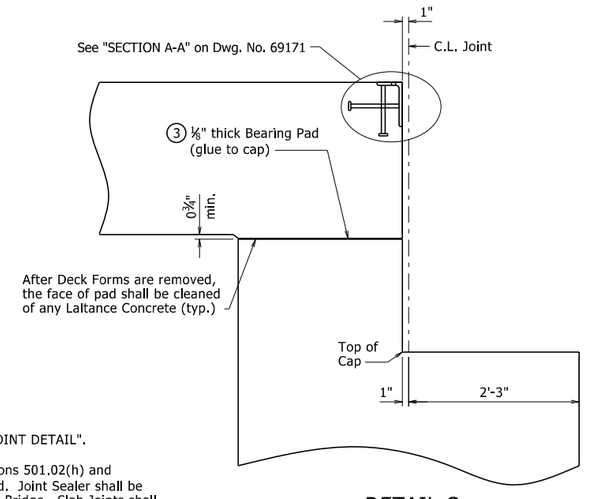
DETAIL A

1" = 1'-0"



DETAIL B

1" = 1'-0"



DETAIL C

1" = 1'-0"

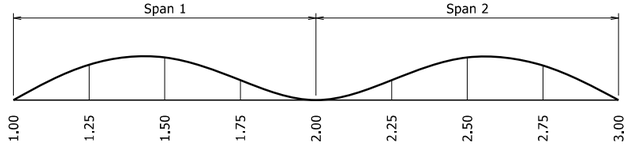
See "OPTIONAL DECK SLAB CONSTRUCTION JOINT DETAIL".

(2) ½" x 1" Type 3 or 4 Joint Sealer. See Subsections 501.02(h) and 501.05(j). Backer Rod filler 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 the concrete bridge rail. Slab joints shall be installed before the concrete bridge 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 the deck from gutterline to gutterline. Seal color shall be gray or other similar to concrete.

(3) The ⅛" bearing pad shall be an unreinforced pad meeting the requirements of Section 808, or shall be nylon reinforced neoprene meeting the requirements of Subsection 807.20. The pad shall be furnished in one piece for the required width and full length of the bearing and glued to the bent cap with an adhesive approved by the Engineer. Pads and adhesive will not be paid for directly, but will be considered subsidiary to the item "Class S(AE) Concrete-Bridge".

DEAD LOAD DEFLECTIONS (INCHES)

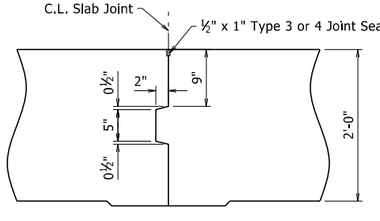
POINT	TOTAL DEFLECTION
1.00	0.00"
1.25	0.39"
1.50	0.47"
1.75	0.22"
2.00	0.00"
2.25	0.22"
2.50	0.46"
2.75	0.38"
3.00	0.00"



DEAD LOAD CAMBER DIAGRAM

NOTE:

Deflections shown are from a chord from C.L. Bent to C.L. Bent. Vertical alignment corrections are not included. Tolerance ¼" for camber and vertical alignment.



OPTIONAL DECK SLAB CONSTRUCTION JOINT DETAIL

1" = 1'-0"

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 2 OF 6
DETAILS OF 70'-0" R.C. SLAB UNIT 1

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

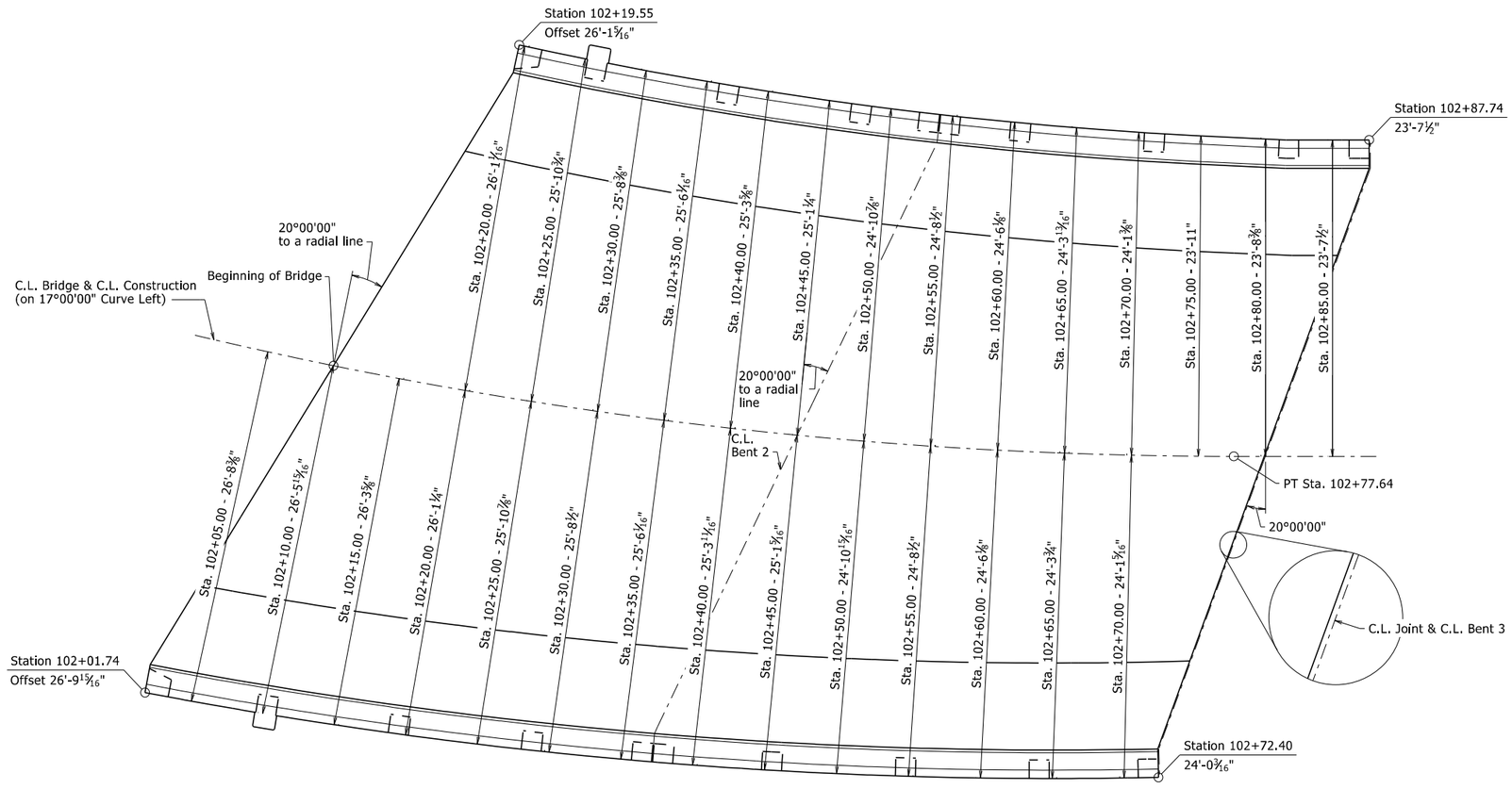
LITTLE ROCK, ARK.

DRAWN BY:	CGP	DATE:	05/02/25	FILENAME:	b090672_s1.dgn
CHECKED BY:	DBS	DATE:	05/20/25	SCALE:	AS NOTED
DESIGNED BY:	LHC	DATE:	04/24		

BRIDGE NO. 07709 DRAWING NO. 69162

PRINT DATE: 10/2/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	54	108
		07709 - SPAN DETAILS - 69163				



R.C. SLAB UNIT 1 LAYOUT

NOTES:

C.L. Bridge is in a 17°00'00" horizontal curve to the left. All bridge stations shown are measured along C.L. Bridge.

All Bridge offsets shown are measured on radial lines from C.L Bridge to outside face of slab.

See Dwg. No. 69148 and Roadway Plans for additional information.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 3 OF 6
DETAILS OF 70'-0" R.C. SLAB UNIT 1

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

DRAWN BY: CGP DATE: 05/02/25
CHECKED BY: DBS DATE: 05/20/25
DESIGNED BY: LHC DATE: 04/24
FILENAME: b090672_s1.dgn
SCALE: 3/16" = 1'-0"

BRIDGE NO. 07709 DRAWING NO. 69163

PRINT DATE: 10/2/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	55	108
		07709 - SPAN DETAILS - 69164				

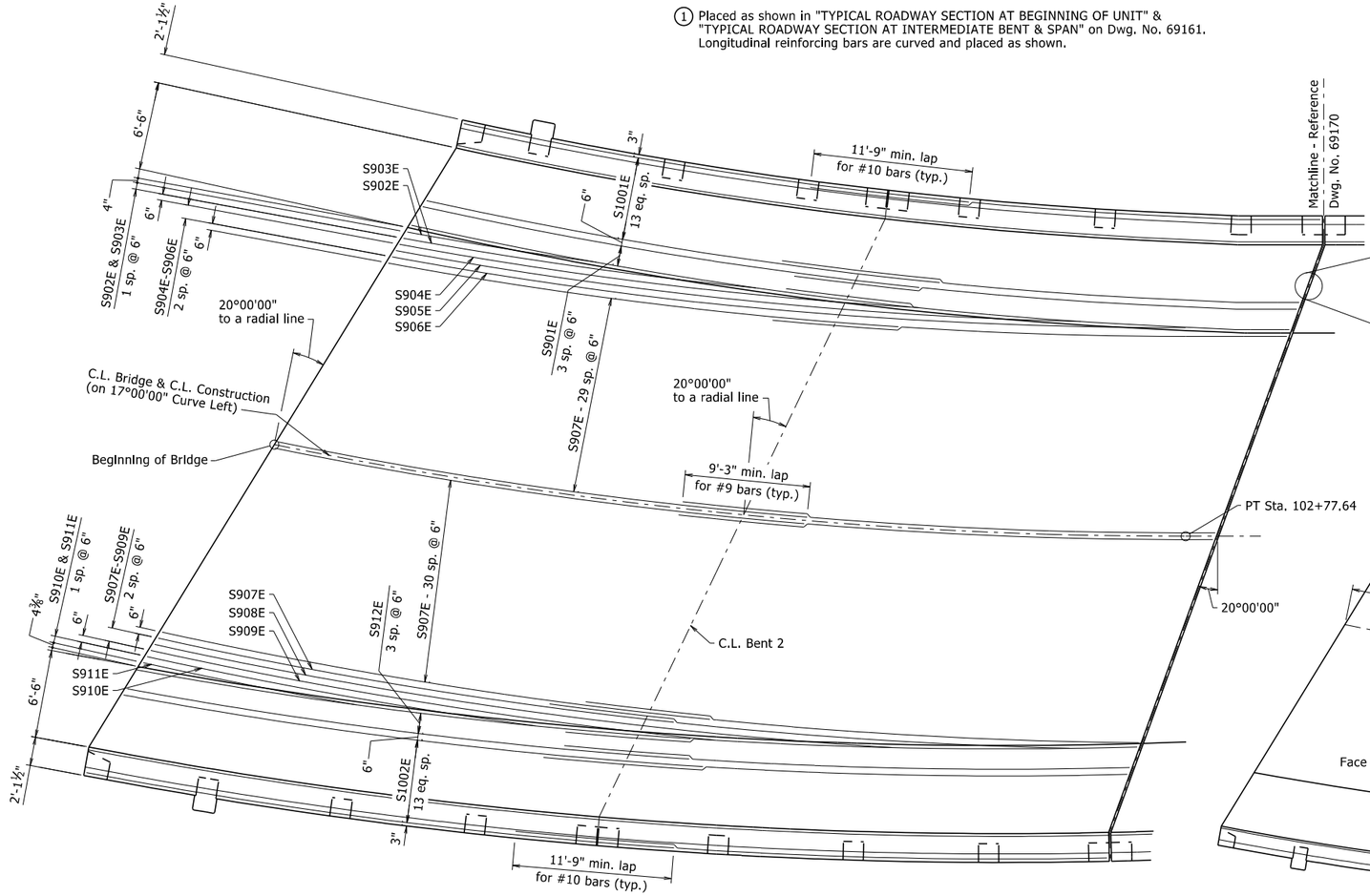
R.C. SLAB UNIT 1 BOTTOM LONGITUDINAL BAR LIST

MARK	NO. REQ'D	LENGTH	P.D.
S901E	8	37'-4"	Str.
S902E	1	14'-2"	Str.
S903E	1	26'-3"	Str.
S904E	1	38'-8"	Str.
S905E	1	50'-10"	Str.
S906E	1	58'-10"	Str.
S907E	124	40'-11"	Str.
S908E	1	55'-0"	Str.
S909E	1	42'-1"	Str.
S910E	1	29'-1"	Str.
S911E	1	16'-1"	Str.
S912E	8	42'-3"	Str.
S1001E	28	38'-4"	Str.
S1002E	28	43'-9"	Str.

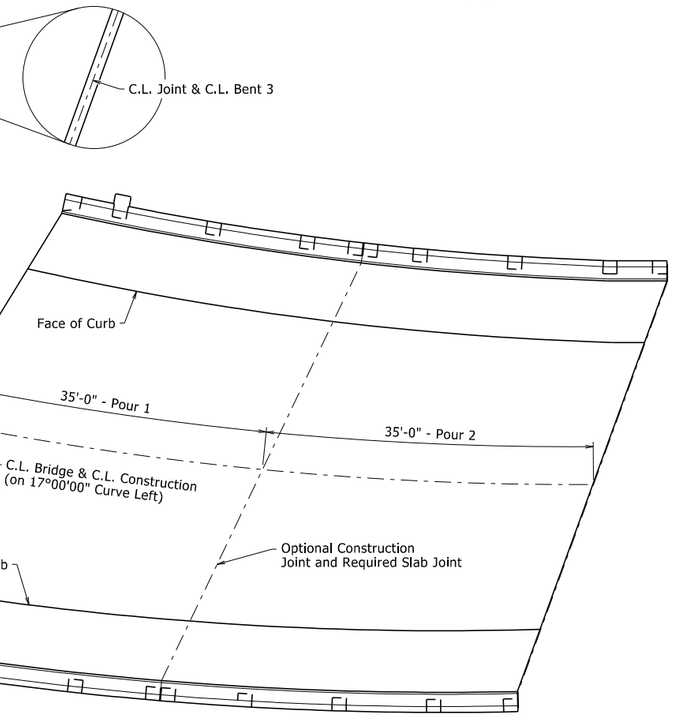
Bars with an "E" suffix are to be epoxy coated.

NOTES:

(1) Placed as shown in "TYPICAL ROADWAY SECTION AT BEGINNING OF UNIT" & "TYPICAL ROADWAY SECTION AT INTERMEDIATE BENT & SPAN" on Dwg. No. 69161. Longitudinal reinforcing bars are curved and placed as shown.



(1) R.C. SLAB UNIT 1
BOTTOM LONGITUDINAL REINFORCING PLAN



POURING SEQUENCE FOR CONTINUOUS
R.C. SLAB UNIT 1
NO SCALE

NOTES:

The Contractor may pour the entire bridge slab unit at once or may elect to form and pour the slab unit in two separate pours according to the pouring sequence shown. The Contractor must obtain approval from the Engineer for any deviation from the pouring sequence. No part of the falsework for the entire unit shall be removed until all of the concrete in the slab has been placed and cured. Before removal of falsework begins, both the time and strength requirements of Subsection 802.15 must be met. All pours shall begin at one end of the unit and proceed in sequence to the other end of the unit. A minimum of 72 hours shall elapse between the end of a pour and the start of an adjacent pour. A minimum of 72 hours shall elapse between the completion of the bridge deck pour and start of the sidewalk pour. A minimum of 72 shall elapse between the end of the sidewalk pour and the start of the railing pour. Any railing pours made before the entire sidewalk has been placed must be approved by the Engineer.

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

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 4 OF 6
DETAILS OF 70'-0" R.C. SLAB UNIT 1

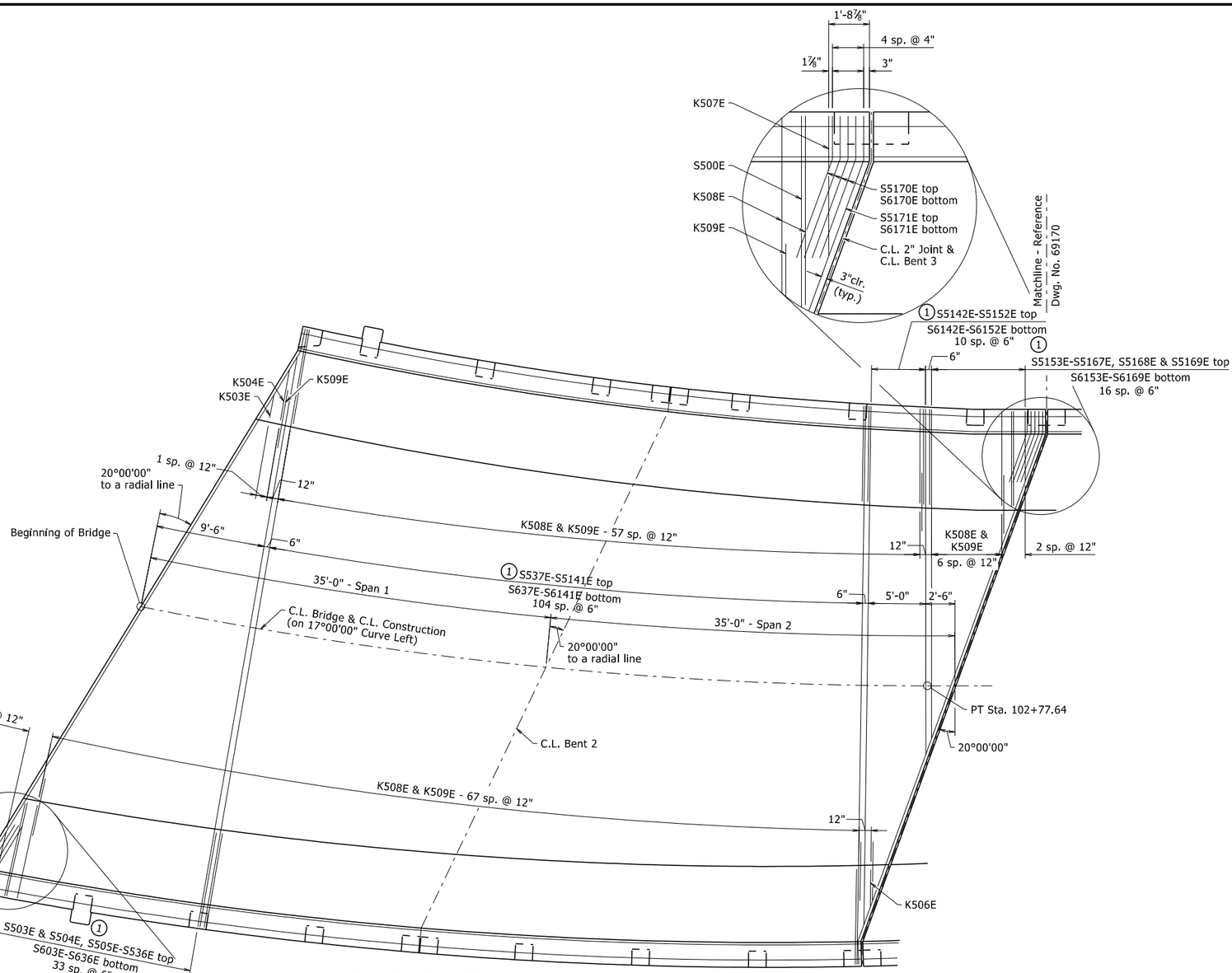
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 05/02/25
CHECKED BY: DBS DATE: 05/20/25
DESIGNED BY: LHC DATE: 04/24
FILENAME: b090672_s1.dgn
SCALE: 3/16" = 1'-0"

BRIDGE NO. 07709 DRAWING NO. 69164

PRINT DATE: 10/2/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	56	108
		07709 - SPAN DETAILS - 69165				



R.C. SLAB UNIT 1
TRANSVERSE REINFORCING PLAN

NOTES:

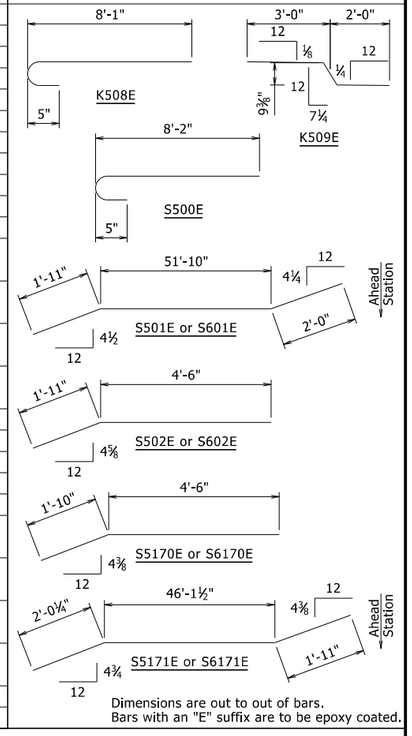
Transverse reinforcing bars within limits of curve are placed on radial lines. Spacing shown for transverse reinforcing is measured along C.L. of Bridge.

(1) S500E bundled with these bars.

R.C. SLAB UNIT 1 TRANSVERSE BAR LIST

MARK	NO. REQ'D	LENGTH	P.D.
K503E	1	1'-11"	Str.
K504E	1	4'-4"	Str.
K505E	1	5'-4"	Str.
K506E	1	3'-2"	Str.
K507E	1	6'-0"	Str.
K508E	135	8'-8"	3¾"
K509E	136	5'-5"	3¾"
S500E	268	8'-9"	3¾"
S501E	1	55'-9"	3¾"
S502E	3	6'-5"	3¾"
S503E-S536E	1 ea.	5'-4"-49'-4"	Str.
S537E-S599E	1 ea.	51'-10"-49'-5"	Str.
S5100E-S5141E	1 ea.	49'-4"-47'-9"	Str.
S5142E-S5169E	1 ea.	44'-3"-6'-0"	Str.
S5170E	4	6'-4"	3¾"
S5171E	1	50'-1"	3¾"
S600E	268	8'-9"	4½"
S601E	1	55'-9"	4½"
S602E	3	6'-5"	4½"
S603E-S636E	1 ea.	5'-4"-49'-4"	Str.
S637E-S699E	1 ea.	51'-10"-49'-5"	Str.
S6100E-S6141E	1 ea.	49'-4"-47'-9"	Str.
S6142E-S6169E	1 ea.	44'-3"-6'-0"	Str.
S6170E	4	6'-4"	4½"
S6171E	1	50'-1"	4½"

BENDING DIAGRAMS



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

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 5 OF 6
DETAILS OF 70'-0" R.C. SLAB UNIT 1

ROUTE SEC.

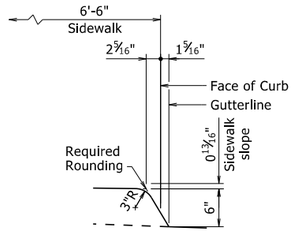
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 05/02/25 FILENAME: b090672_s1.dgn
CHECKED BY: DBS DATE: 05/20/25 SCALE: 3/16" = 1'-0"
DESIGNED BY: LHC DATE: 04/24

BRIDGE NO. 07709 DRAWING NO. 69165

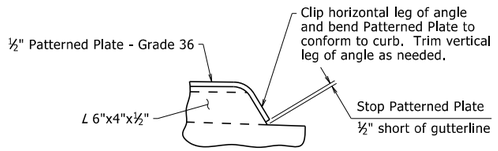
PRINT DATE: 10/2/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	57	108
		07709 - SPAN DETAILS - 69166				

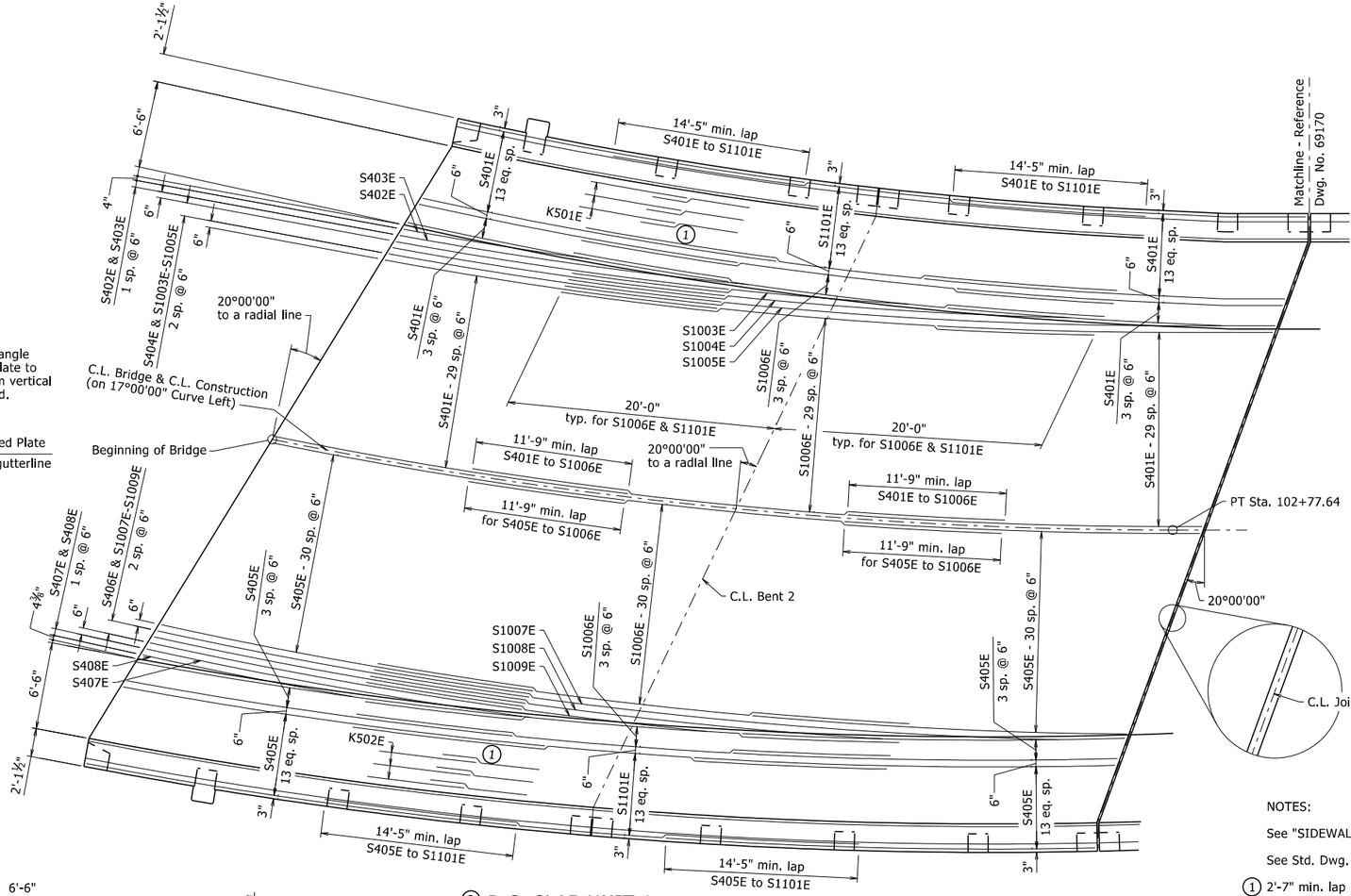


SIDEWALK CURB DETAIL

NO SCALE



SIDEWALK JOINT ARMOR DETAIL



② R.C. SLAB UNIT 1
TOP LONGITUDINAL REINFORCING PLAN

R.C. SLAB UNIT 1 TOP LONGITUDINAL BAR LIST

MARK	NO. REQ'D	LENGTH	P.D.
K501E	28	34'-4"	Str.
K502E	28	39'-4"	Str.
S401E	96	27'-0"	Str.
S402E	1	14'-2"	Str.
S403E	1	26'-3"	Str.
S404E	3	25'-1"	Str.
S405E	98	32'-6"	Str.
S406E	3	28'-3"	Str.
S407E	1	29'-1"	Str.
S408E	1	16'-1"	Str.
S5172E	4	34'-4"	Str.
S5173E	4	39'-4"	Str.
S6172E	6	34'-8"	Str.
S6173E	6	39'-8"	Str.
S1003E	1	25'-4"	Str.
S1004E	1	37'-6"	Str.
S1005E	1	49'-3"	Str.
S1006E	69	40'-0"	Str.
S1007E	1	51'-5"	Str.
S1008E	1	38'-7"	Str.
S1009E	1	25'-8"	Str.
S1101E	28	40'-0"	Str.

Bars with an "E" suffix are to be epoxy coated.

NOTES:

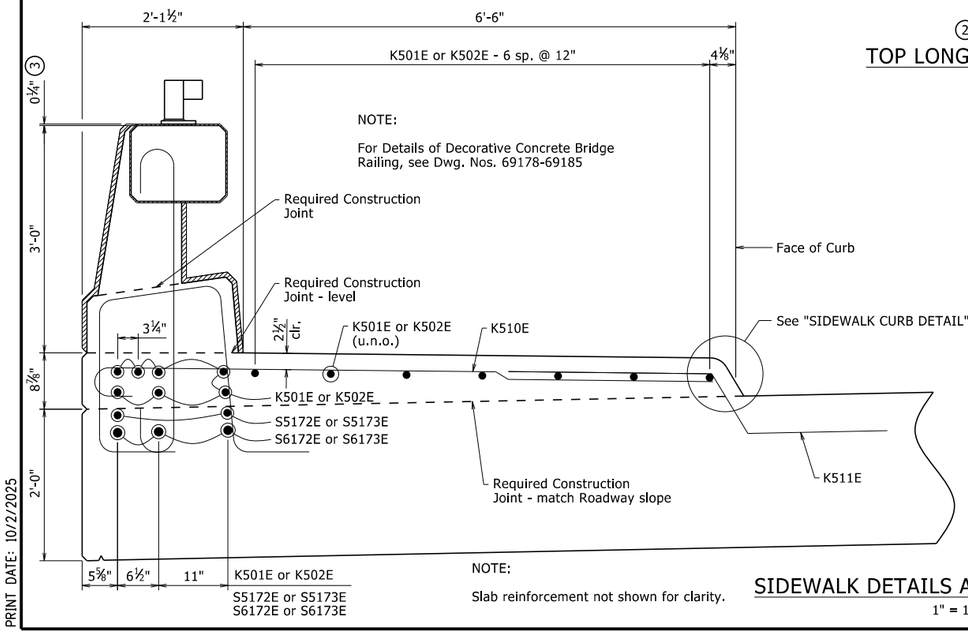
See "SIDEWALK SECTION THRU JOINT" on Dwg. No. 69171.

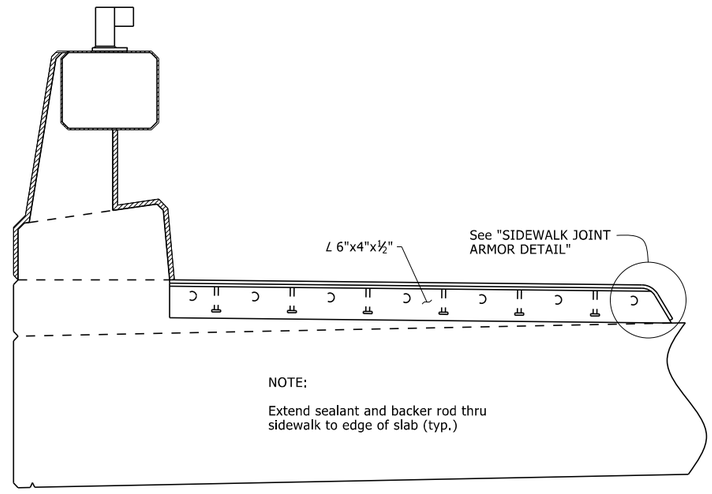
See Std. Dwg. No. 55008 for additional joint details.

(1) 2'-7" min. lap

(2) Placed as shown in "TYPICAL ROADWAY SECTION AT BEGINNING OF UNIT" & "TYPICAL ROADWAY SECTION AT INTERMEDIATE BENT & SPAN" on Dwg. No. 69161. Longitudinal reinforcing bars are curved and placed as shown.

(3) ¼" allowance for Roughsawn Wood Finish, typical for Rail.





SIDEWALK DETAILS AT R.C. SLAB UNIT 1

1" = 1'-0"

STATE OF ARKANSAS
CHARLES R. ELLIS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25

BRIDGE ENGINEER

SHEET 6 OF 6
DETAILS OF 70'-0" R.C. SLAB UNIT 1

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 05/02/25
CHECKED BY: DBS DATE: 05/20/25
DESIGNED BY: LHC DATE: 04/24

FILENAME: b090672_s1.dgn
SCALE: 3/16" = 1'-0"

BRIDGE NO. 07709

DRAWING NO. 69166

PRINT DATE: 10/2/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	58	108
		07709 - SPAN DETAILS - 69167				

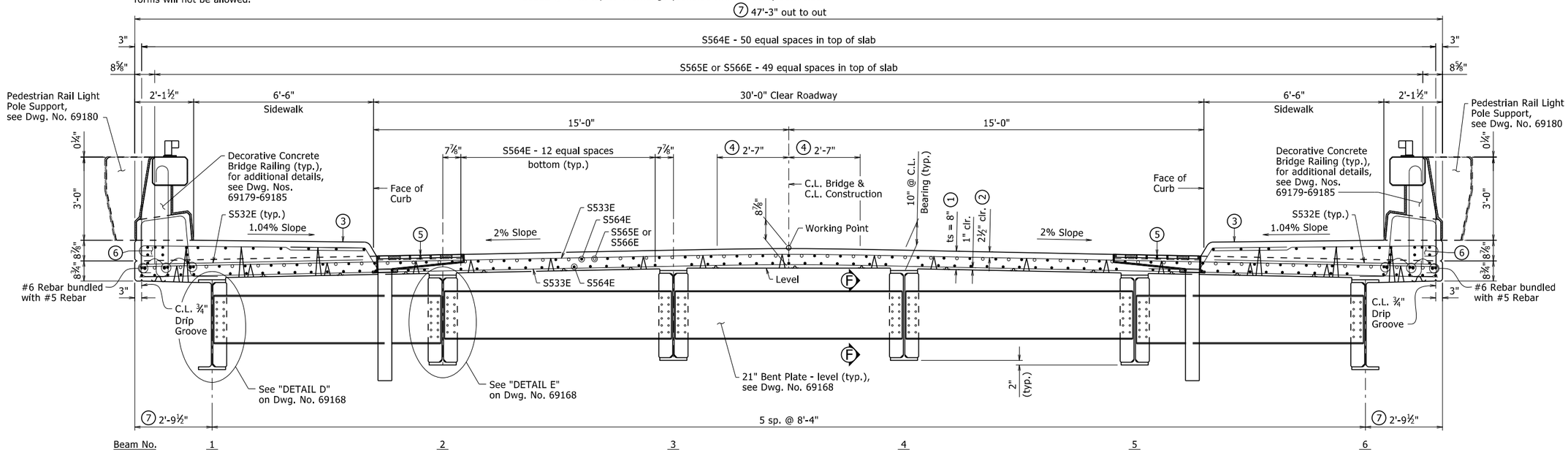
Class 2 Protective Surface Treatment shall be applied to the roadway surface and sidewalk including sidewalk curbing. It shall not be applied to the wings, railings or railing curbs.

Bar positions and clearances from the forms shall be maintained by means of stays, ties, hangers, or other approved devices sufficient in size and number to prevent displacement during construction, per Subsection 804.06. Placement of slab bolsters or hi-chairs with full-length lower runners directly on removable deck forms will not be allowed.

Slab Reinforcing

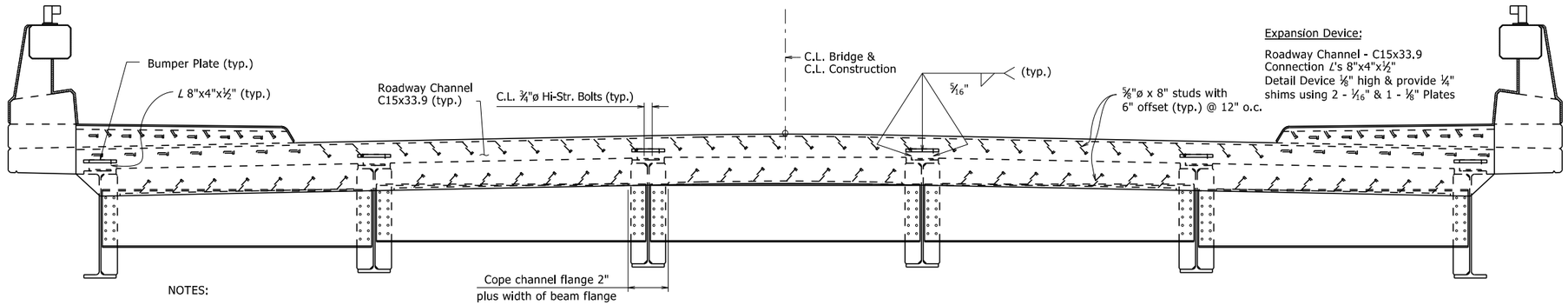
Longitudinal: S564E in top & bottom (place as shown), S565E or S566E in top (place as shown), see "BEAM REINFORCING PLAN & DECK POURING SEQUENCE", Dwg. No. 69170.

Transverse: S533E @ 6" o.c. in top & 6" o.c. in bottom
S532E @ 6" in top of overhangs (bundled with #5 bars) both sides



TYPICAL ROADWAY SECTION THRU W-BEAM UNIT

LOOKING AHEAD



TYPICAL ROADWAY SECTION NEAR BENT 3 AND BENT 5

LOOKING AHEAD BENT 3
½" = 1'-0"

NOTES:

See "GENERAL NOTES" on Std. Dwg. No. 55006.

For additional joint details, see Std. Dwg. No. 55008.

(1) See "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE" on Std. Dwg. No. 55007.

(2) Tolerance Minus = ¼":
Plus = to the amount of slab thickness used to meet slab thickness tolerance
See "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE" on Std. Dwg. No. 55007.

(3) For additional information, see "SIDEWALK DETAILS AT BEAM UNIT", on Dwg. No. 69168.

(4) For "ROUNDING DETAIL", see Std. Dwg. No. 55007.

(5) For details of Deck Drains, see Dwg. No. 69177.

(6) See "SECTION A-A" on Dwg. No. 69179 for location of additional rebar under the post.

(7) Edge of slab within the limits of PT Sta. 102+77.64 and PC Sta. 104+14.85 is as shown and parallel to C.L. Construction. Edge of slab before PT Sta. 102+77.64 varies due to Clear Roadway Transition. Edge of slab after PC Sta. 104+14.85 is on a curve concentric to C.L. Construction. For additional information, see Layout.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 1 OF 5
DETAILS OF 140'-0"
CONTINUOUS W-BEAM UNIT

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

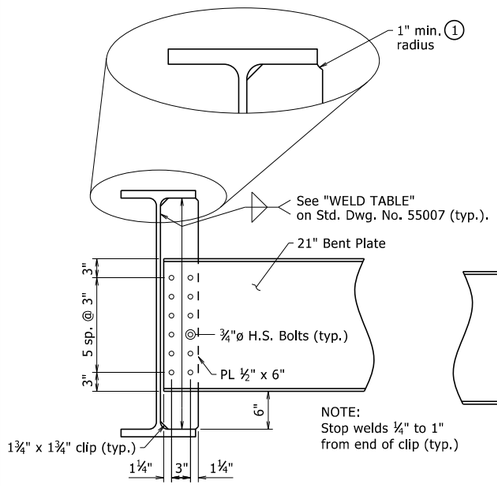
DRAWN BY: CGP DATE: 05/02/25
CHECKED BY: DBS DATE: 05/20/25
DESIGNED BY: JWP DATE: 02/25
FILENAME: b090672_s1.dgn
SCALE: ½" = 1'-0"

BRIDGE NO. 07709 DRAWING NO. 69167

PRINT DATE: 10/2/2025

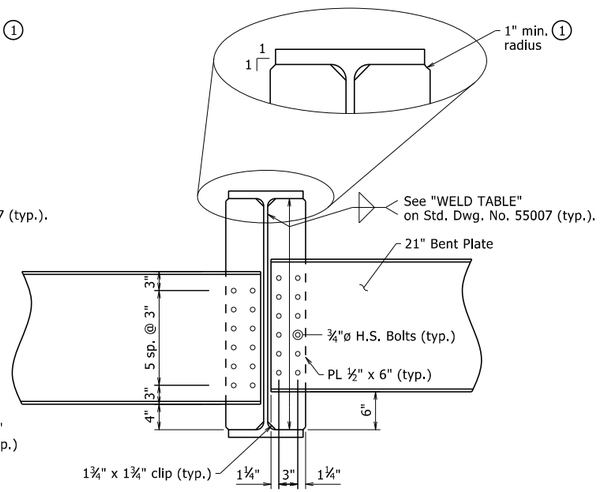
DATE REVISED	DATE REVISED	FED. ROAD DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	59	108
		07709 - SPAN DETAILS - 69168				

① If permanent steel bridge deck forms are used, the Fabricator shall clip plates as necessary to accommodate the deck form supports.

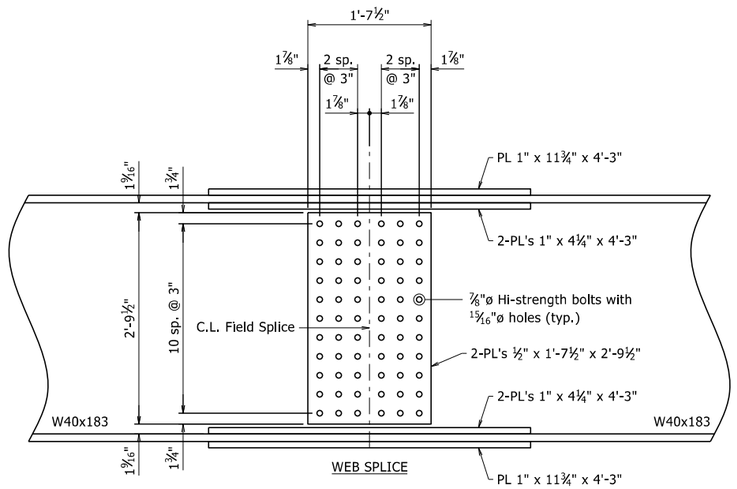


DETAIL D
1" = 1'-0"

NOTE:
Stop welds ¼" to 1" from end of clip (typ.)

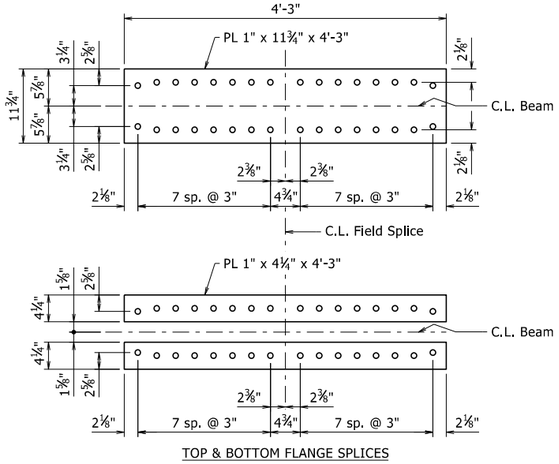


DETAIL E
1" = 1'-0"

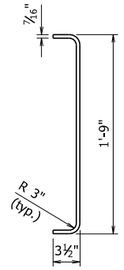


WEB SPLICE

DETAILS OF FIELD SPLICE
1" = 1'-0"

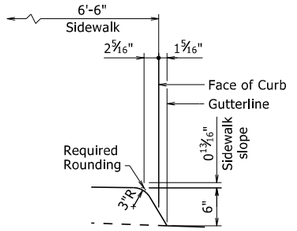


TOP & BOTTOM FLANGE SPLICES

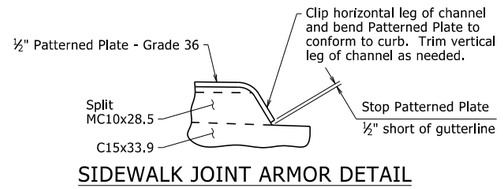


Typical cross-section for all 21" bent plate diaphragms.

SECTION F-F
⅜" = 1'-0"

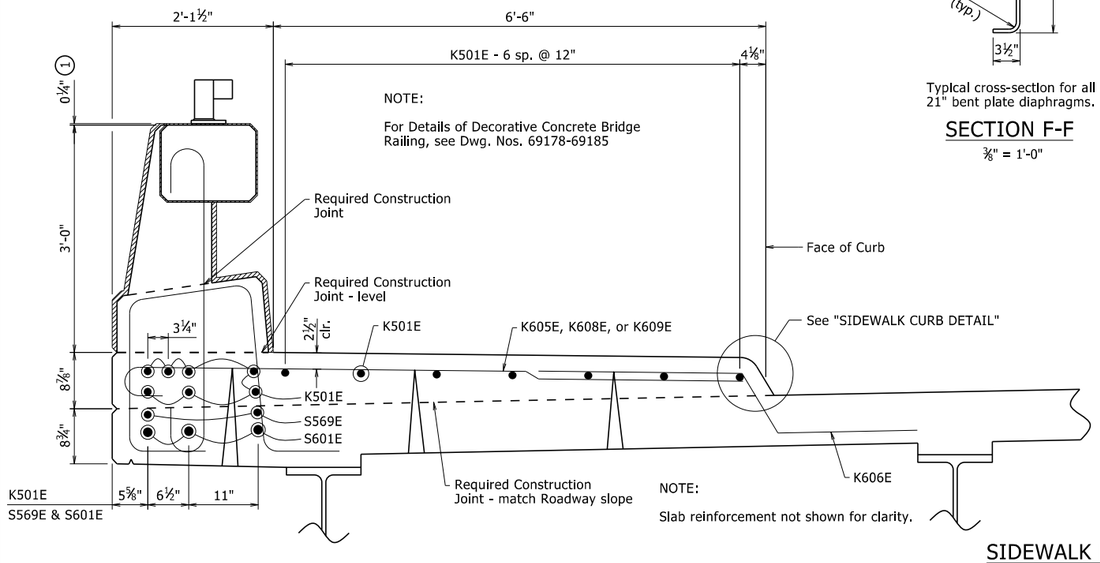


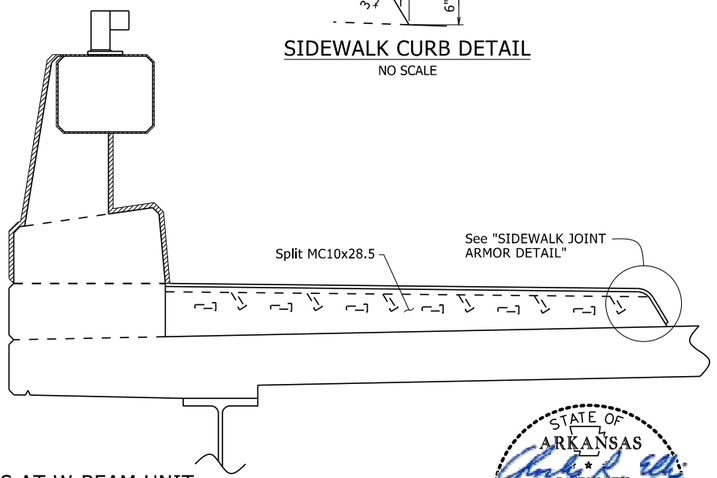
SIDEWALK CURB DETAIL
NO SCALE



SIDEWALK JOINT ARMOR DETAIL

① ¼" allowance for Roughsawn Wood Finish, typical for Rail.





SIDEWALK DETAILS AT W-BEAM UNIT
1" = 1'-0"

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 2 OF 5
DETAILS OF 140'-0"
CONTINUOUS W-BEAM UNIT

ROUTE SEC.

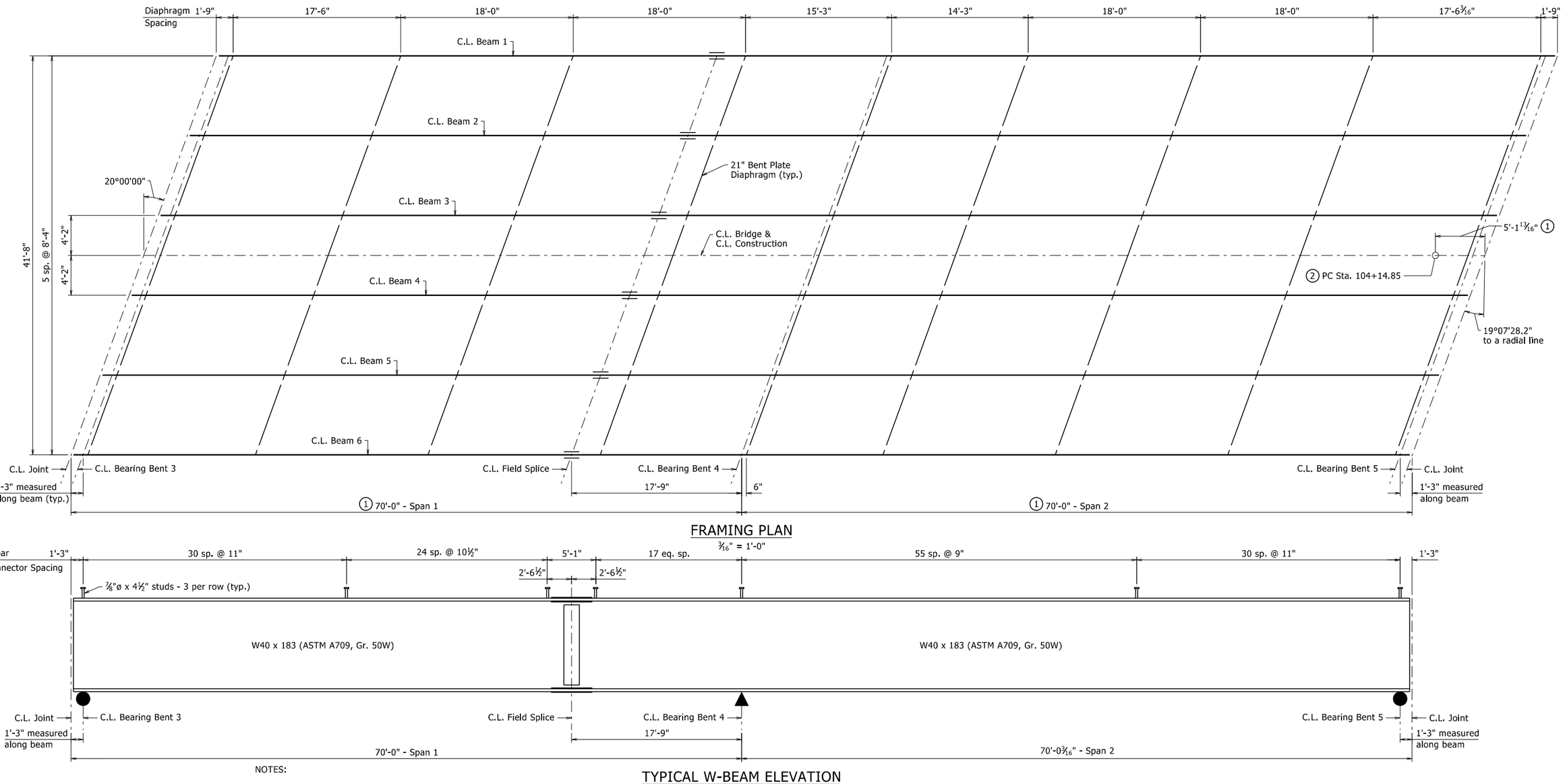
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY:	CGP	DATE:	05/02/25	FILENAME:	b090672_s1.dgn
CHECKED BY:	DBS	DATE:	05/20/25	SCALE:	AS NOTED
DESIGNED BY:	JWP	DATE:	02/25		

BRIDGE NO. 07709 DRAWING NO. 69168

PRINT DATE: 10/2/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	60	108
		07709 - SPAN DETAILS - 69169				



FRAMING PLAN

3/16" = 1'-0"

TYPICAL W-BEAM ELEVATION

(ALL MEASUREMENTS ALONG C.L. BEAM)
NO SCALE

NOTES:

Portions of beams within the limits of PT Sta. 102+77.64 and PC Sta. 104+14.85 are tangent and parallel to C.L. Construction. Portions of beams outside of this stationing remain tangent with varying offset to C.L. Construction.

All structural steel shall be ASTM A709, Gr. 50W unless otherwise noted and shall be paid for as "Structural Steel in Beam Spans (ASTM A709, Gr. 50W)".

Bolted field splices may be eliminated or shop welded splices may be substituted with the approval of the Engineer. Payment will be made on the basis of plan quantities.

For additional information, see Layout.

For additional General Notes, see Std. Dwg. No. 55006.

See Std. Dwg. No. 55007 for additional details.

See "DETAILS OF FIELD SPLICE" on Dwg. No. 69168.

(1) Measured along C.L. Bridge

(2) C.L. Bridge & C.L. Construction is on a 17° Curve Right after Sta. 104+14.85. C.L. Beams will remain tangent after this station.

STATE OF ARKANSAS
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SHEET 3 OF 5
DETAILS OF 140'-0"
CONTINUOUS W-BEAM UNIT

ROUTE SEC.

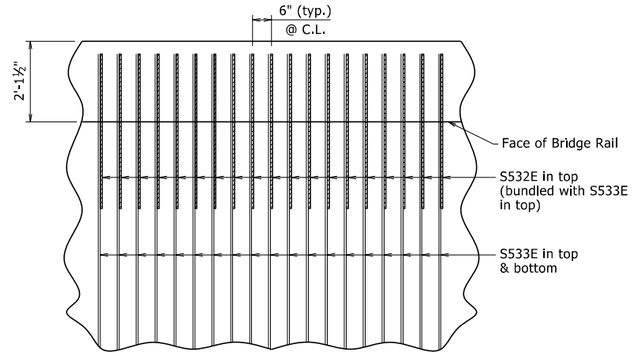
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CGP	DATE: 05/02/25	FILENAME: b090672_s1.dgn	
CHECKED BY: DBS	DATE: 05/20/25	SCALE: AS NOTED	
DESIGNED BY: JWP	DATE: 02/25		

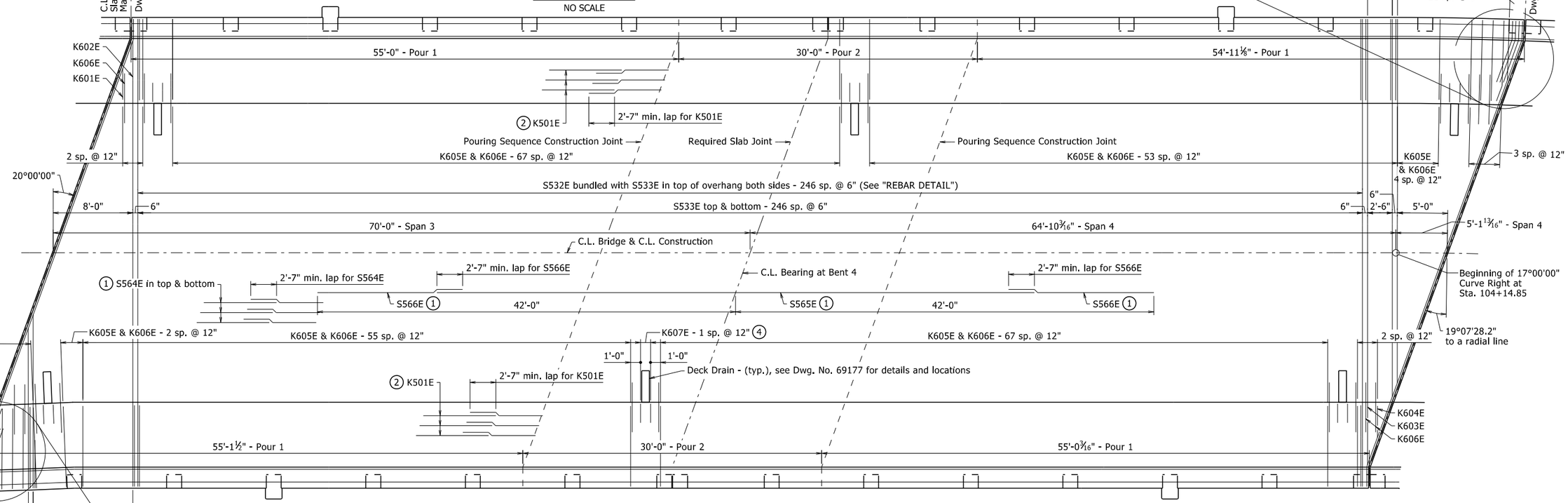
BRIDGE NO. 07709 DRAWING NO. 69169

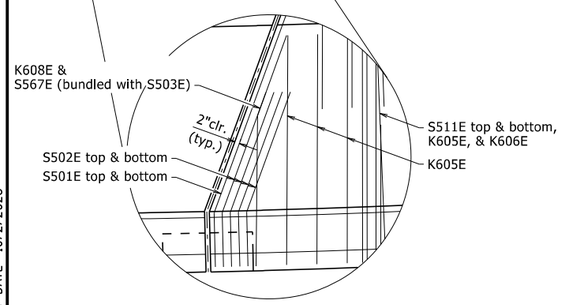
PRINT DATE: 10/2/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	61	108
		07709 - SPAN DETAILS - 69170				



REBAR DETAIL
NO SCALE





W-BEAM REINFORCING PLAN & DECK POURING SEQUENCE

NOTES:

Pours with same number may be placed simultaneously or separately. No deviations will be allowed. All Pour(s) 1 shall be placed before Pour(s) 2 can be placed. A minimum of 48 hours shall elapse between the end of a pour and the start of the next pour. A minimum of 72 hours shall elapse between the end of a pour and the start of an adjacent pour. A minimum of 72 hours shall elapse between the completion of the bridge deck pour and start of the sidewalk pour. A minimum of 72 hours shall elapse between the end of the sidewalk pour and the start of the railing pour. Any railing pours made before the entire sidewalk has been placed must be approved by the Engineer.

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 the use of a retarding agent.

Required slab joints and pouring sequence construction joints shall align with rail joints at base of rail.

See "W-BEAM UNIT BAR LIST" on Dwg. No. 69171 for rebar quantities.

See "DECORATIVE RAIL POST LAYOUT" on Dwg. No. 69178 for locations of posts.

(1) Placed as shown in "TYPICAL ROADWAY SECTION THRU W-BEAM UNIT", Dwg. No. 69167.

(2) Placed as shown in "SIDEWALK DETAILS AT W-BEAM UNIT", Dwg. No. 69168.

(3) S532E bundled with these bars

(4) K607E will be substituted for K606E bars at the deck drains (typ.), see "DETAILS OF DECK DRAINS" on Dwg. No. 69177.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 4 OF 5
DETAILS OF 140'-0"
CONTINUOUS W-BEAM UNIT

ROUTE SEC.

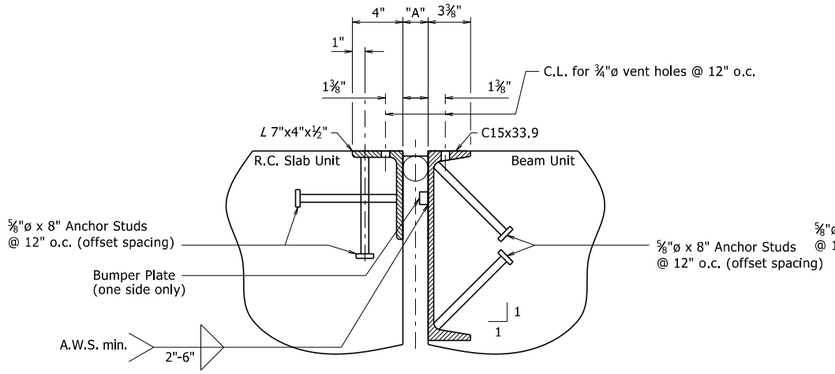
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 05/02/25
CHECKED BY: DBS DATE: 05/20/25
DESIGNED BY: JWP DATE: 02/25
FILENAME: b090672_s1.dgn
SCALE: 3/16" = 1'-0"

BRIDGE NO. 07709 DRAWING NO. 69170

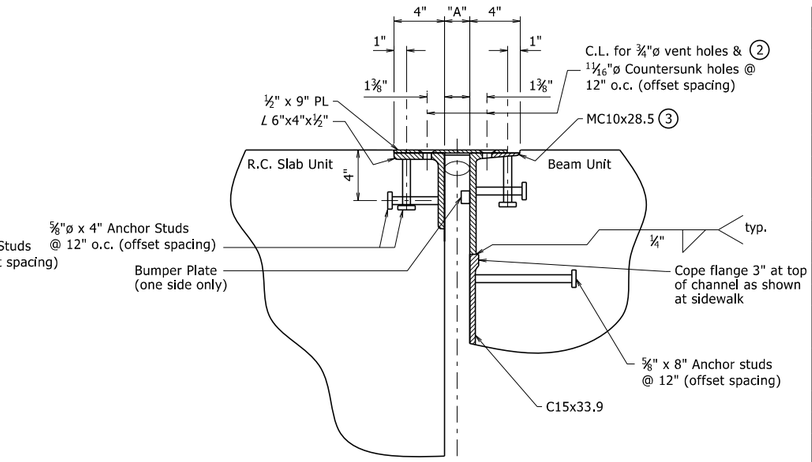
PRINT DATE: 10/2/2025

DATE REVISED	DATE REVISED	FED. ROAD DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	62	108
		07709 - SPAN DETAILS - 69171				



SECTION A-A

NO SCALE



SIDEWALK SECTION THRU JOINT

NO SCALE

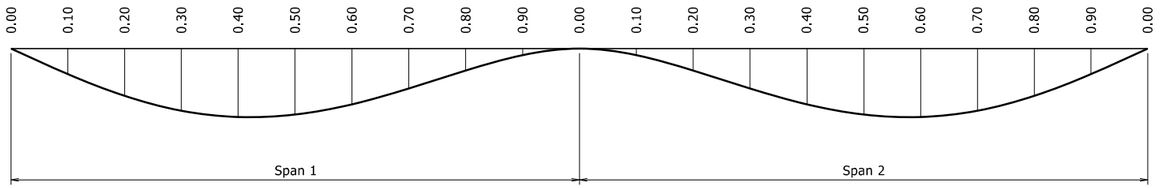
NOTES:

Concrete shall be hand packed under the joint armor in the sidewalk.

(2) Countersunk 1 1/16"ø holes in ½" Patterned Plate. Tap 4" leg of channel & angle for ASTM A449 ⅝"ø screws @ 12" o.c. Install screws in the shop and ship as a unit. Screws on the Beam Unit to be removed. Screws on the R.C. Slab Unit to remain in place after erection. See "Expansion Device Installation" on Std. Dwg. No. 55008.

(3) Trim vertical leg of MC10x28.5 as needed.

Patterned Plate shall be ASTM A709, Gr. 36. Surfaces of the structural steel in the roadway and sidewalk joint armor not completely embedded in concrete and the patterned plate shall be cleaned in accordance with Subsection 807.84(b) and shop painted Brown, Color Chip No. 30070. The Contractor shall repair any damage to the paint at their expense and to the satisfaction of the Engineer prior to installation of the joint seal. Painting will not be paid for directly, but shall be considered subsidiary to the item "Structural Steel in Beam Spans (A709, Gr. 50W)."



DEAD LOAD DEFLECTION DIAGRAM (INCHES)

Span	Point of Deflection	Structural Steel		Structural Steel + Slab		Structural Steel + Slab + Rail + Sidewalk	
		Int.	Ext.	Int.	Ext.	Int.	Ext.
1	0.0	0	0	0	0	0	0
	0.1	0.048	0.042	0.244	0.206	0.28	0.282
	0.2	0.088	0.078	0.45	0.381	0.516	0.521
	0.3	0.115	0.103	0.59	0.501	0.677	0.685
	0.4	0.127	0.113	0.651	0.551	0.747	0.753
	0.5	0.122	0.109	0.627	0.532	0.719	0.727
	0.6	0.103	0.092	0.53	0.449	0.608	0.614
	0.7	0.074	0.066	0.379	0.322	0.435	0.44
	0.8	0.041	0.036	0.209	0.177	0.24	0.242
	0.9	0.012	0.011	0.063	0.054	0.072	0.074
2	0.0	0	0	0	0	0	0
	0.1	0.012	0.011	0.063	0.054	0.072	0.074
	0.2	0.041	0.036	0.209	0.177	0.24	0.242
	0.3	0.074	0.066	0.379	0.322	0.435	0.44
	0.4	0.103	0.092	0.53	0.449	0.608	0.614
	0.5	0.122	0.109	0.627	0.532	0.719	0.727
	0.6	0.127	0.113	0.651	0.551	0.747	0.753
	0.7	0.115	0.103	0.59	0.501	0.677	0.685
	0.8	0.088	0.078	0.45	0.381	0.516	0.521
	0.9	0.048	0.042	0.244	0.206	0.28	0.282
	0.0	0	0	0	0	0	0

Note:
Camber for Dead Load Deflection +/- ½" tolerance. Deflections shown are along centerline of beam from a chord from C.L. Bearing to C.L. Bearing. Vertical curve corrections not included.

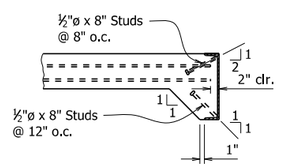
Dead load deflections shown include an assumed loading of 18 psf to account for stay-in-place metal deck forms. Revisions to the deflection table may be necessary upon review of the Contractor's submitted forming details.

TABLE OF SILICONE JOINT DATA

For details of poured silicone joint, see Std. Dwg. No. 55008.

"A" Width Perpendicular to Joint at 24 Hour Average Temperature (1) of:			"B" Perpendicular to Joint at 60°F	Bumper Plate Size
40°F	60°F	80°F		
2⅛"	2"	1⅞"	2½"	1" x 1"

(1) The temperature used to set the joint opening shall be the approximate average air temperature during the 24 hour period immediately before the bolts are tightened. The Engineer shall establish the temperature. Interpolation of the table may be necessary.



As an alternate to ⅝"ø studs, ½"ø x 8" studs spaced as shown may be used. Use weight of ⅝"ø stud as basis of measurement of structural steel in anchors.

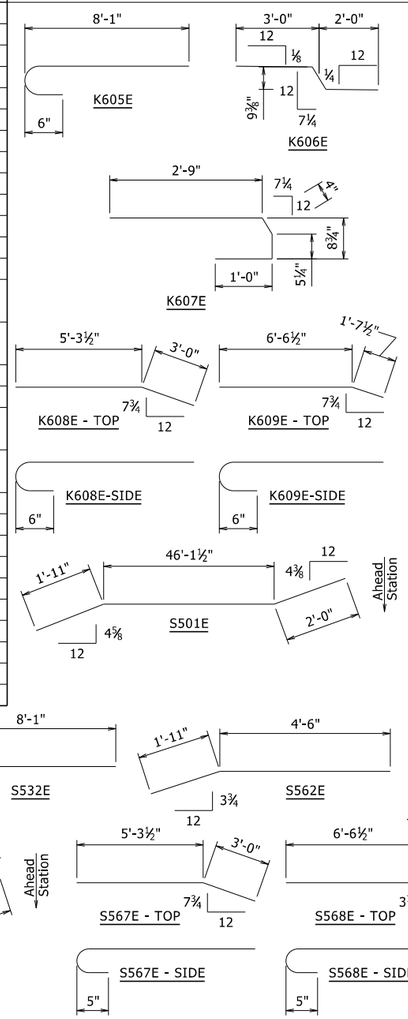
DETAILS OF ALTERNATE ANCHORS AND PLACEMENT OF LONGITUDINAL REINFORCEMENT

⅜" = 1'-0"

W-BEAM UNIT BAR LIST

MARK	NO. REQ'D	LENGTH	P.D.
K501E	84	49'-0"	Str.
K601E	1	3'-1"	Str.
K602E	1	5'-10"	Str.
K603E	1	5'-11"	Str.
K604E	1	3'-2"	Str.
K605E	261	8'-9"	4½"
K606E	264	5'-5"	4½"
K607E	12	4'-5"	4½"
K608E	1	9'-0"	4½"
K609E	1	8'-10"	4½"
S501E	2	50'-1"	3¾"
S502E	8	6'-5"	3¾"
S503E-S510E	2 ea.	6'-1"-16'-1"	Str.
S511E-S531E	2 ea.	17'-5"-44'-8"	Str.
S532E	549	8'-8"	3¾"
S533E	494	46'-11"	Str.
S534E-S539E	2 ea.	44'-9"-37'-10"	Str.
S540E-S561E	2 ea.	36'-6"-5'-11"	Str.
S562E	6	6'-5"	3¾"
S563E	2	49'-5"	3¾"
S564E	378	49'-0"	Str.
S565E	50	60'-0"	Str.
S566E	100	14'-7"	Str.
S567E	1	8'-11"	Str.
S568E	1	8'-9"	Str.
S569E	12	49'-0"	Str.
S601E	18	49'-4"	Str.

BENDING DIAGRAMS



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

STATE OF ARKANSAS
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10/2/25
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SHEET 5 OF 5
DETAILS OF 140'-0"
CONTINUOUS W-BEAM UNIT

ROUTE SEC.

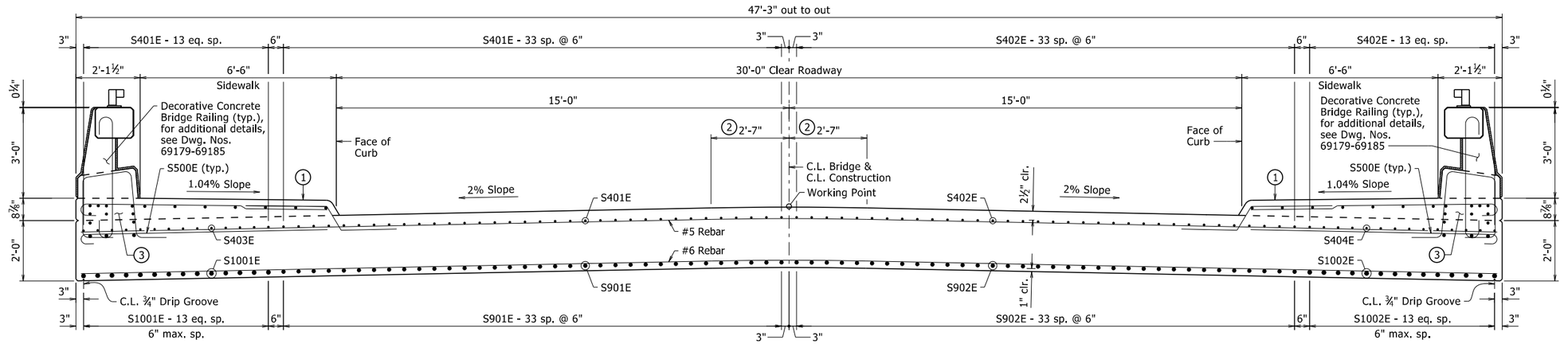
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CGP	DATE: 05/02/25	FILENAME: b090672_s1.dgn	
CHECKED BY: DBS	DATE: 05/20/25	SCALE: AS NOTED	
DESIGNED BY: JWP	DATE: 02/25		

BRIDGE NO. 07709 DRAWING NO. 69171

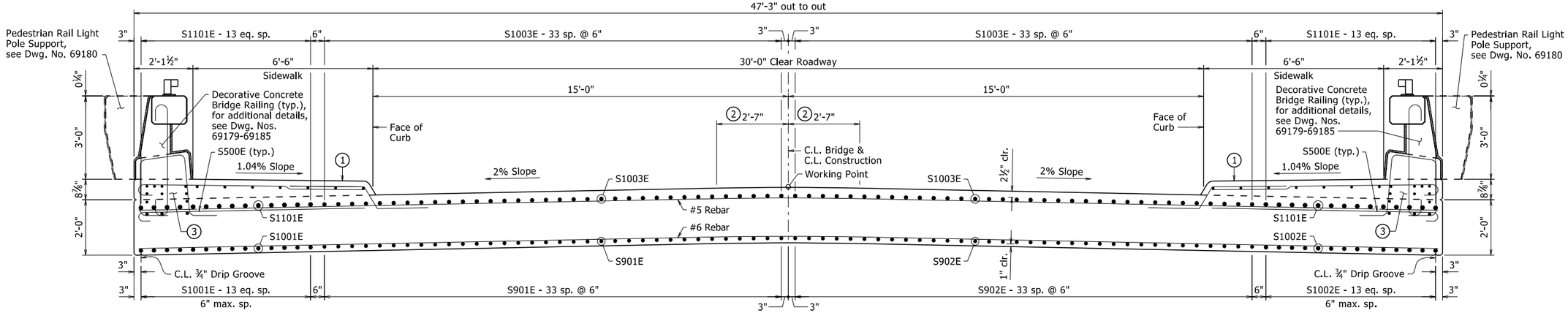
PRINT DATE: 10/2/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	63	108
		07709 - SPAN DETAILS - 69172				



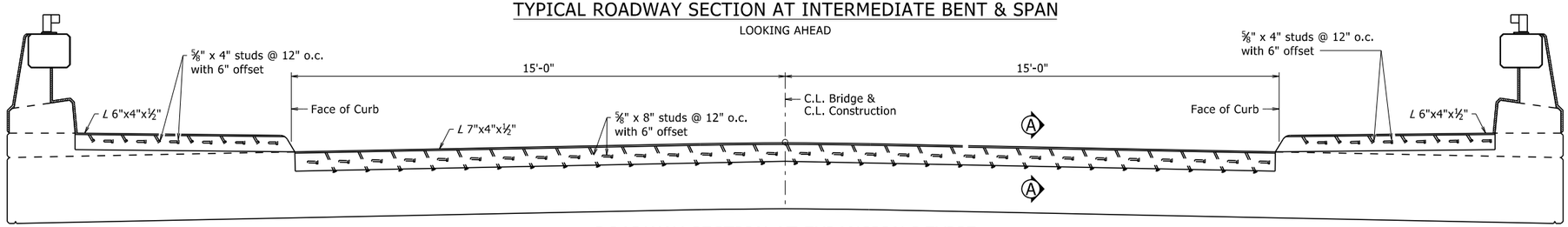
TYPICAL ROADWAY SECTION AT ENDS OF UNIT

LOOKING AHEAD



TYPICAL ROADWAY SECTION AT INTERMEDIATE BENT & SPAN

LOOKING AHEAD



ROADWAY SECTION AT EXPANSION DEVICE

LOOKING AHEAD AT BENT 5

All structural steel shall be ASTM A709, Gr. 50W and will not be paid for directly, but will be considered subsidiary to the item "Class S(AE) Concrete-Bridge". All exposed surfaces shall be cleaned in accordance with Subsection 807.84(e) unless otherwise noted.

Class 2 Protective Surface Treatment shall be applied to the roadway surface and sidewalk including sidewalk curbing. It shall not be applied to the wings, railings or railing curbs.

Bar positions and clearances from the forms shall be maintained by means of stays, ties, hangers, or other approved devices sufficient in size and number to prevent displacement during construction, per Subsection 804.06. Placement of slab bolsters or hi-chairs with full-length lower runners directly on removable deck forms will not be allowed.

NOTES:

For reinforcing bar spacing and placement, see Dwg. Nos. 69174-69176.

See "SECTION A-A" on Dwg. No. 69173.

See "GENERAL NOTES" on Std. Dwg. No. 55006.

(1) For additional information see "SIDEWALK DETAILS AT R.C. SLAB UNIT 2" on Dwg. No. 69176.

(2) For "ROUNDING DETAIL", see Std. Dwg. No. 55007.

(3) See Dwg. No. 69179 for location of additional rebar under the post.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 1 OF 5

DETAILS OF 70'-0" R.C. SLAB UNIT 2

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 05/02/25
CHECKED BY: DBS DATE: 05/20/25
DESIGNED BY: LHC DATE: 04/24

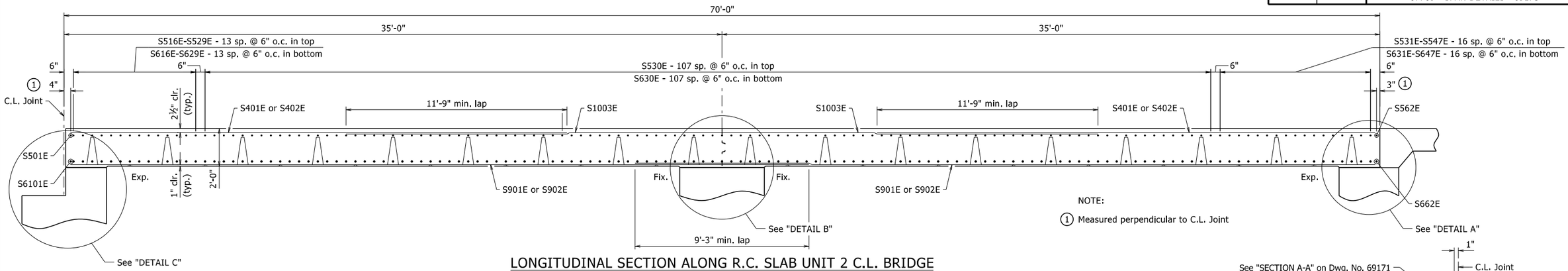
FILENAME: b090672_s1.dgn
SCALE: 1/2" = 1'-0"

BRIDGE NO. 07709

DRAWING NO. 69172

PRINT DATE: 10/2/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	64	108
		07709 - SPAN DETAILS - 69173				

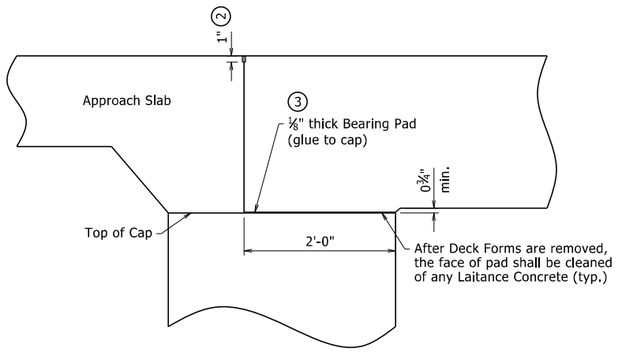


LONGITUDINAL SECTION ALONG R.C. SLAB UNIT 2 C.L. BRIDGE

⅜" = 1'-0"

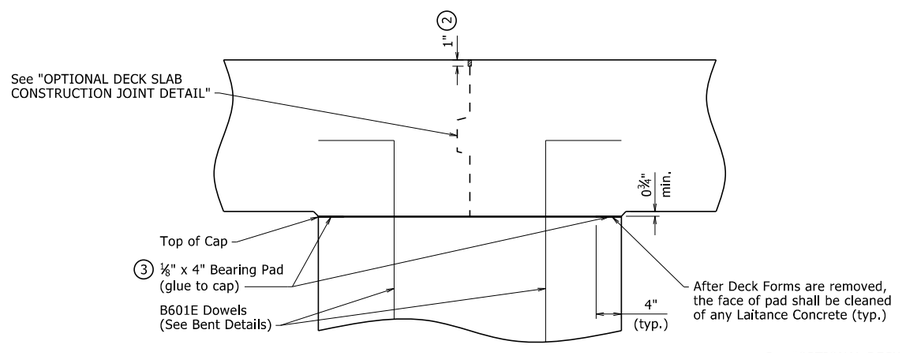
NOTE:

(1) Measured perpendicular to C.L. Joint



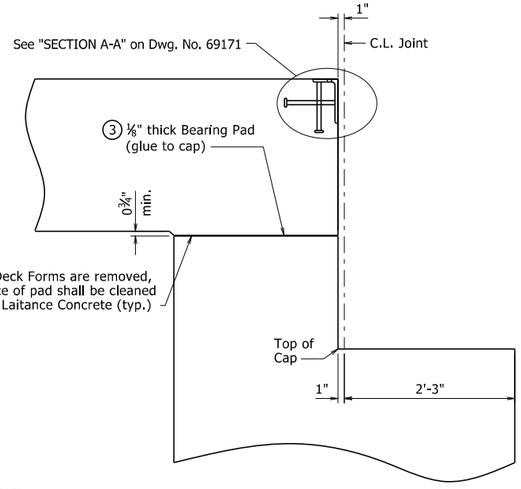
DETAIL A

1" = 1'-0"



DETAIL B

1" = 1'-0"



DETAIL C

1" = 1'-0"

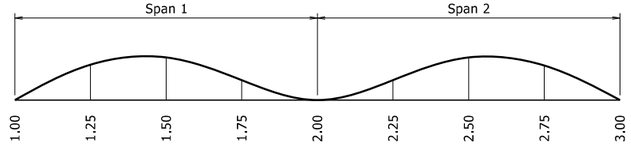
See "OPTIONAL DECK SLAB CONSTRUCTION JOINT DETAIL".

(2) ½" x 1" Type 3 or 4 Joint Sealer. See Subsections 501.02(h) and 501.05(j). Backer Rod filler 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 the concrete bridge rail. Slab joints shall be installed before the concrete bridge 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 the deck from gutterline to gutterline. Seal color shall be gray or other similar to concrete.

(3) The ⅛" bearing pad shall be an unreinforced pad meeting the requirements of Section 808, or shall be nylon reinforced neoprene meeting the requirements of Subsection 807.20. The pad shall be furnished in one piece for the required width and full length of the bearing and glued to the bent cap with an adhesive approved by the Engineer. Pads and adhesive will not be paid for directly, but will be considered subsidiary to the item "Class S(AE) Concrete-Bridge".

DEAD LOAD DEFLECTIONS (INCHES)

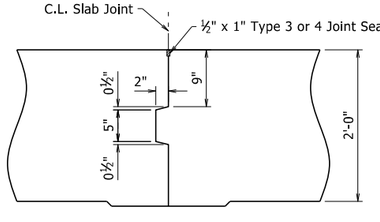
POINT	TOTAL DEFLECTION
1.00	0.00"
1.25	0.39"
1.50	0.47"
1.75	0.22"
2.00	0.00"
2.25	0.22"
2.50	0.46"
2.75	0.38"
3.00	0.00"



DEAD LOAD CAMBER DIAGRAM

NOTE:

Deflections shown are from a chord from C.L. Bent to C.L. Bent. Vertical alignment corrections are not included. Tolerance ¼" for camber and vertical alignment.



OPTIONAL DECK SLAB CONSTRUCTION JOINT DETAIL

1" = 1'-0"

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
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BRIDGE ENGINEER

SHEET 2 OF 5
DETAILS OF 70'-0" R.C. SLAB UNIT 2

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY:	CGP	DATE:	05/02/25	FILENAME:	b090672_s1.dgn
CHECKED BY:	DBS	DATE:	05/20/25	SCALE:	AS NOTED
DESIGNED BY:	LHC	DATE:	04/24		

BRIDGE NO. 07709 DRAWING NO. 69173

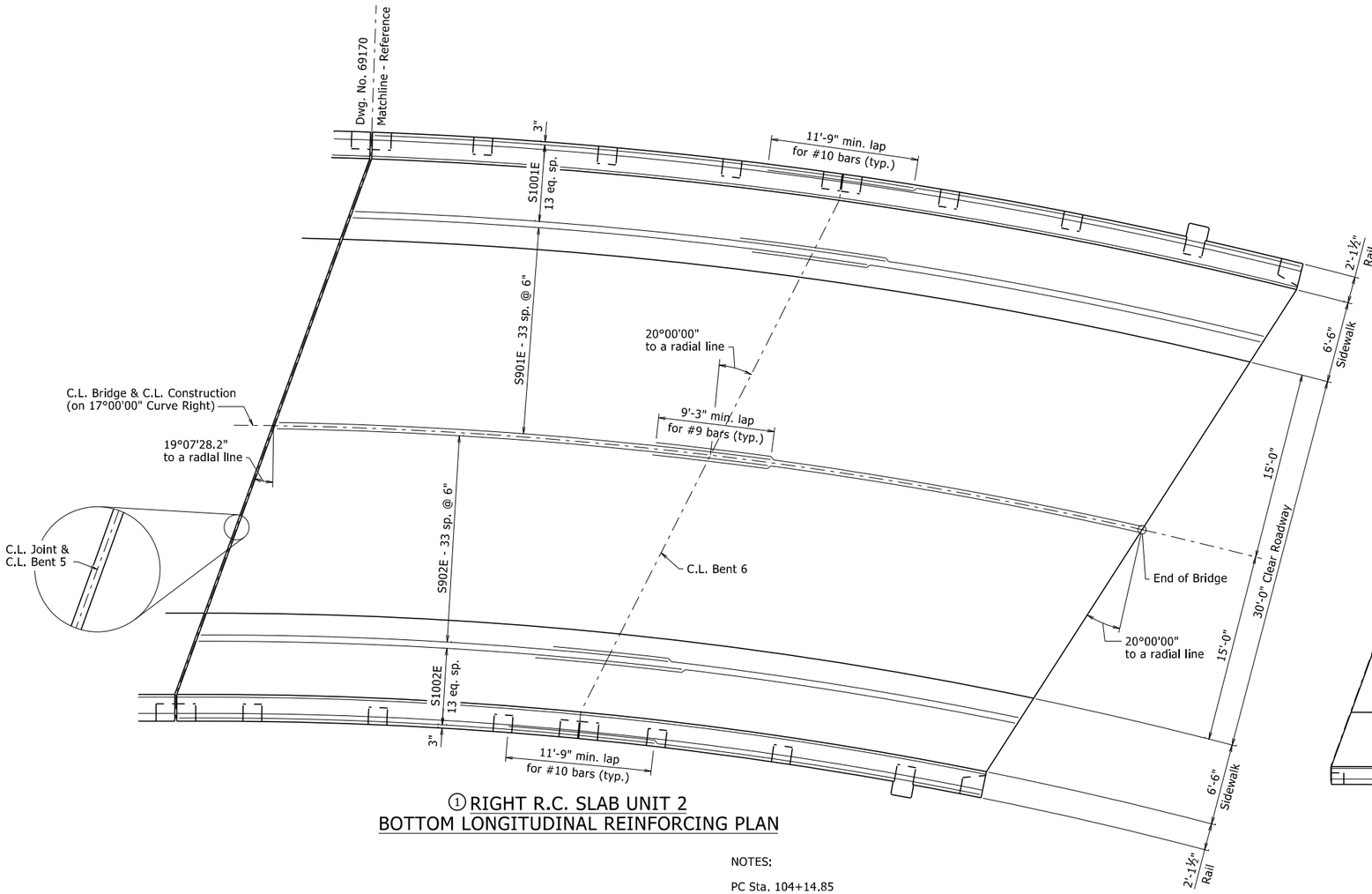
PRINT DATE: 10/2/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	65	108
		07709 - SPAN DETAILS - 69174				

R.C. SLAB UNIT 2 BOTTOM LONGITUDINAL BAR LIST

MARK	NO. REQ'D	LENGTH	P.D.
S901E	68	41'-4"	Str.
S902E	68	39'-4"	Str.
S1001E	28	43'-4"	Str.
S1002E	28	38'-9"	Str.

Bars with an "E" suffix are to be epoxy coated.



① RIGHT R.C. SLAB UNIT 2
BOTTOM LONGITUDINAL REINFORCING PLAN

NOTES:

PC Sta. 104+14.85

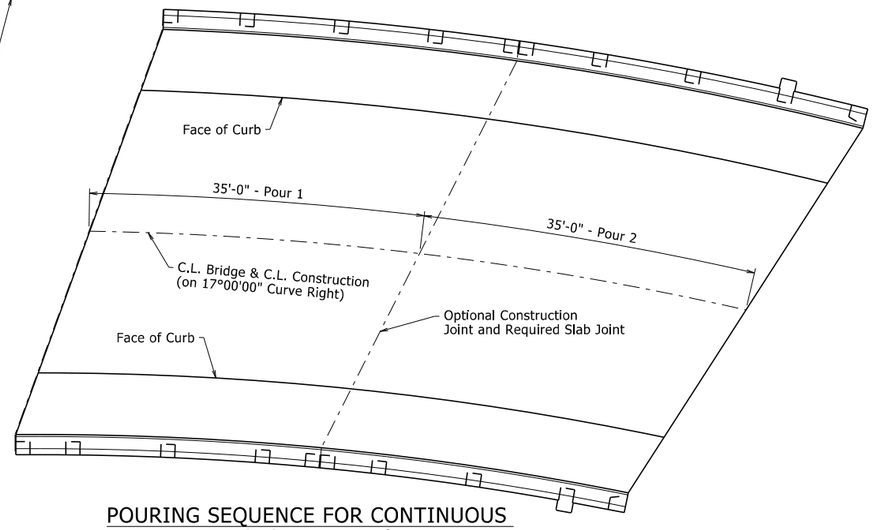
See Std. Dwg. No. 55008 for additional joint details.

① Placed as shown in "TYPICAL ROADWAY SECTION AT END OF UNIT" & "TYPICAL ROADWAY SECTION AT INTERMEDIATE BENT & SPAN" on Dwg. No. 69172. Longitudinal lines of concrete bridge deck and longitudinal reinforcing bars are curved and concentric to a 17°00'00" Curve Right which is located along C.L. Bridge.

NOTES:

The Contractor may pour the entire bridge slab unit at once or may elect to form and pour the slab unit in two separate pours according to the pouring sequence shown. The Contractor must obtain approval from the Engineer for any deviation from the pouring sequence. No part of the falsework for the entire unit shall be removed until all of the concrete in the slab has been placed and cured. Before removal of falsework begins, both the time and strength requirements of Subsection 802.15 must be met. All pours shall begin at one end of the unit and proceed in sequence to the other end of the unit. A minimum of 72 hours shall elapse between the end of a pour and the start of an adjacent pour. A minimum of 72 hours shall elapse between the completion of the bridge deck pour and start of the sidewalk pour. A minimum of 72 shall elapse between the end of the sidewalk pour and the start of the railing pour. Any railing pours made before the entire sidewalk has been placed must be approved by the Engineer.

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



POURING SEQUENCE FOR CONTINUOUS
R.C. SLAB UNIT 2
NO SCALE

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 3 OF 5
DETAILS OF 70'-0" R.C. SLAB UNIT 2

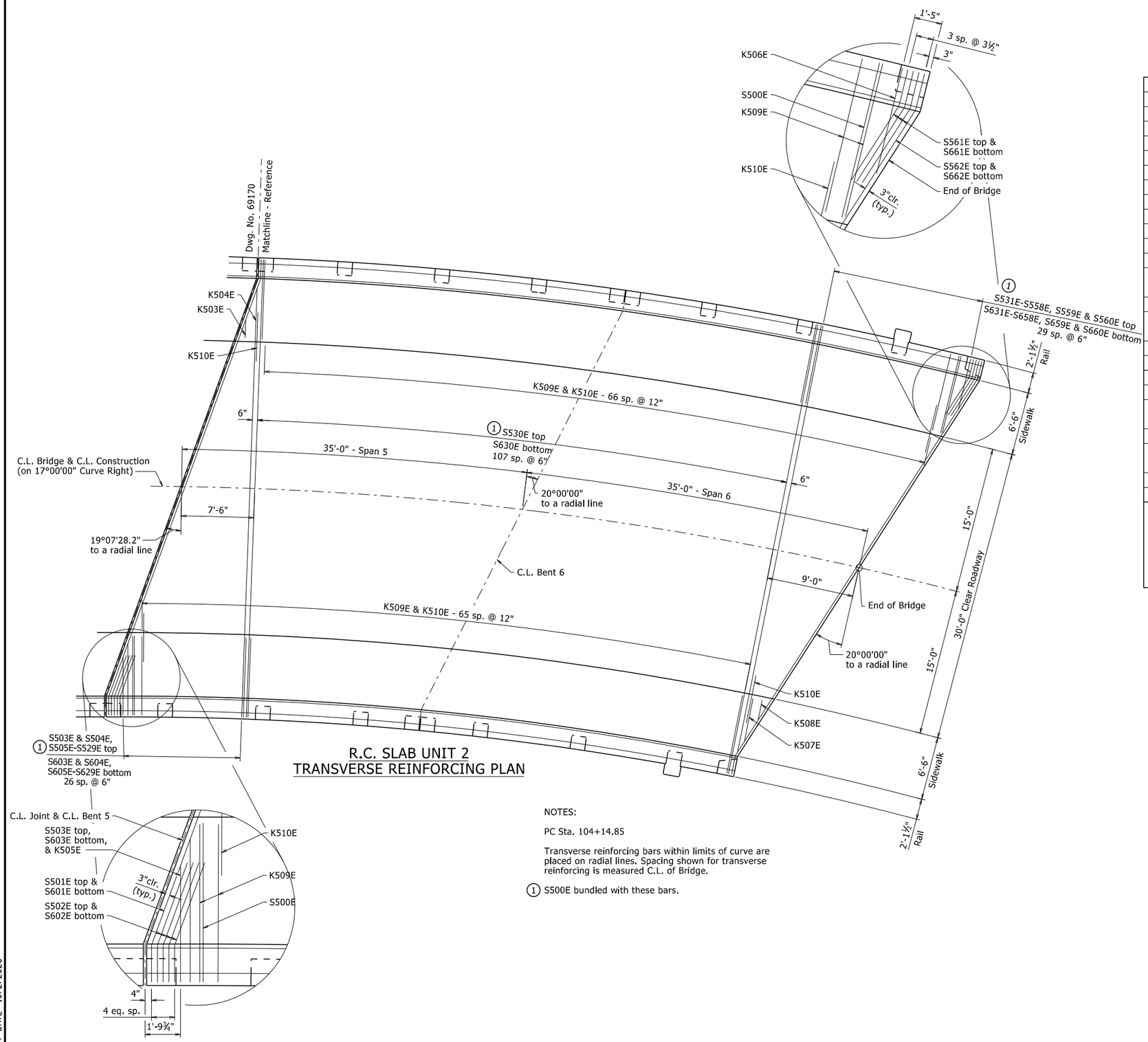
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY:	CGP	DATE:	05/02/25	FILENAME:	b090672_s1.dgn
CHECKED BY:	DBS	DATE:	05/20/25	SCALE:	3/16" = 1'-0"
DESIGNED BY:	LHC	DATE:	04/24		

BRIDGE NO. 07709 DRAWING NO. 69174

PRINT DATE: 10/2/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	66	108
		07709 - SPAN DETAILS - 69175				



R.C. SLAB UNIT 2
TRANSVERSE REINFORCING PLAN

NOTES:

PC Sta. 104+14.85

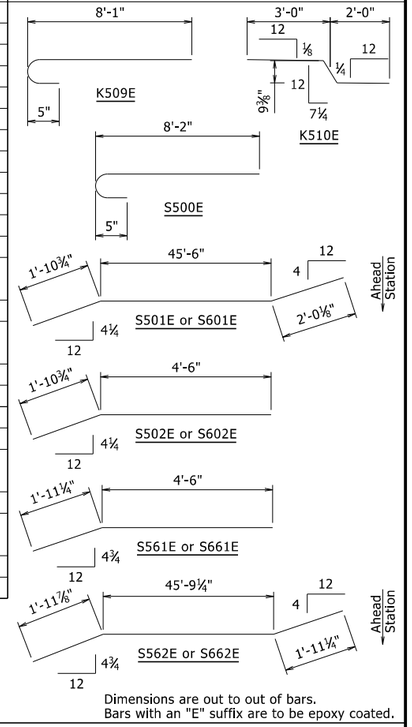
Transverse reinforcing bars within limits of curve are placed on radial lines. Spacing shown for transverse reinforcing is measured C.L. of Bridge.

1 S500E bundled with these bars.

R.C. SLAB UNIT 2 TRANSVERSE BAR LIST

MARK	NO. REQ'D	LENGTH	P.D.
K503E	1	1'-10"	Str.
K504E	1	5'-1"	Str.
K505E	1	5'-11"	Str.
K506E	1	5'-6"	Str.
K507E	1	4'-8"	Str.
K508E	1	2'-3"	Str.
K509E	135	8'-8"	3¾"
K510E	135	5'-5"	3¾"
S500E	269	8'-9"	3¾"
S501E	1	49'-5"	3¾"
S502E	4	6'-5"	3¾"
S503E-S529E	1 ea.	5'-11"-43'-11"	Str.
S530E	108	46'-11"	Str.
S531E-S560E	1 ea.	44'-6"-5'-3"	Str.
S561E	3	6'-5"	3¾"
S562E	1	49'-8"	3¾"
S601E	1	49'-5"	4½"
S602E	4	6'-5"	4½"
S603E-S629E	1 ea.	5'-11"-43'-11"	Str.
S630E	108	46'-11"	Str.
S631E-S660E	1 ea.	44'-6"-5'-3"	Str.
S661E	3	6'-5"	4½"
S662E	1	49'-8"	4½"

BENDING DIAGRAMS



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

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 4 OF 5
DETAILS OF 70'-0" R.C. SLAB UNIT 2

ROUTE SEC.

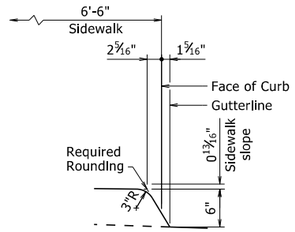
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 05/02/25
CHECKED BY: DBS DATE: 05/20/25
DESIGNED BY: LHC DATE: 04/24
FILENAME: b090672_s1.dgn
SCALE: 3/16" = 1'-0"

BRIDGE NO. 07709 DRAWING NO. 69175

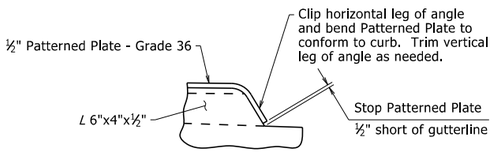
PRINT DATE: 10/2/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	67	108
		07709 - SPAN DETAILS - 69176				

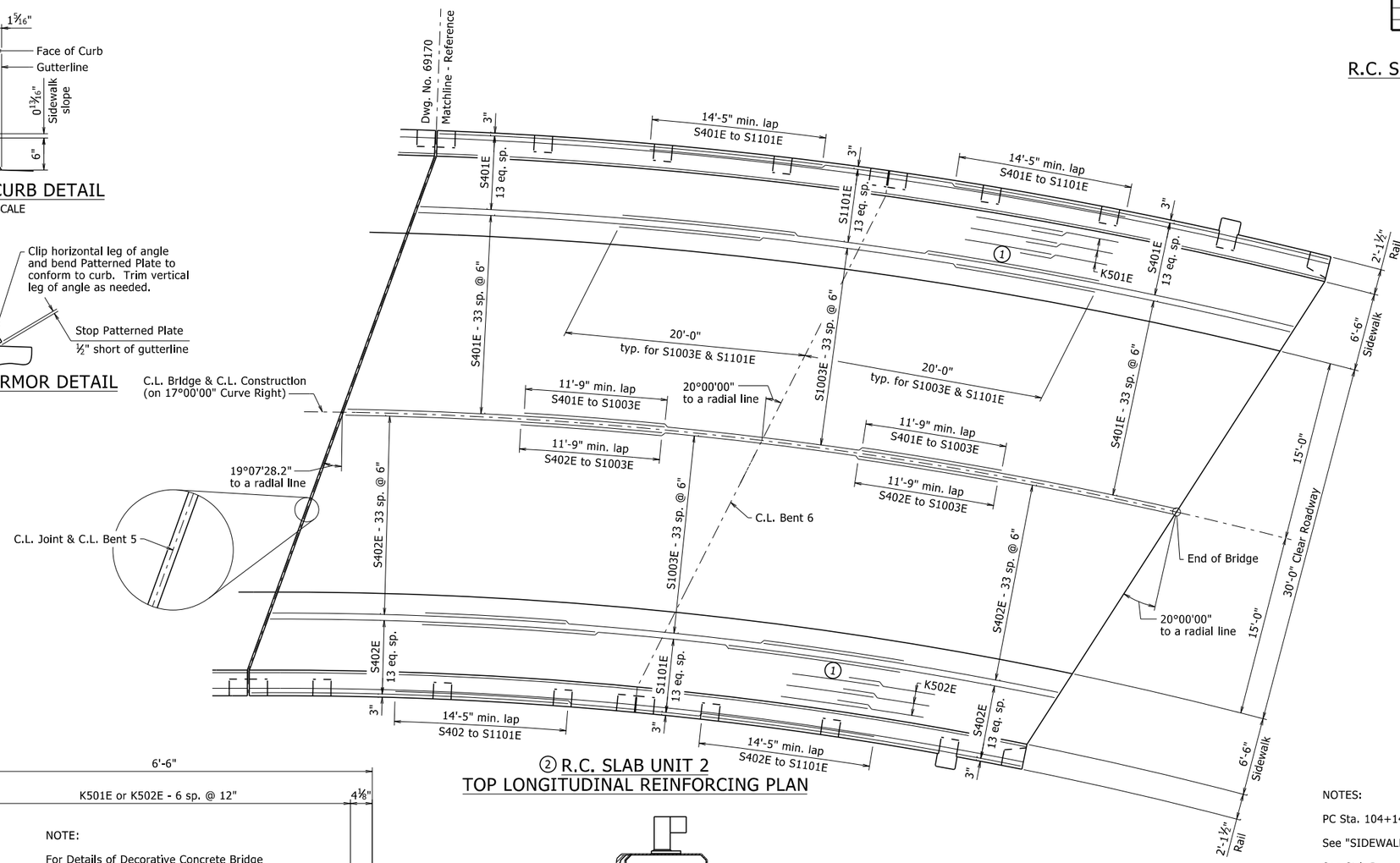


SIDEWALK CURB DETAIL

NO SCALE



SIDEWALK JOINT ARMOR DETAIL

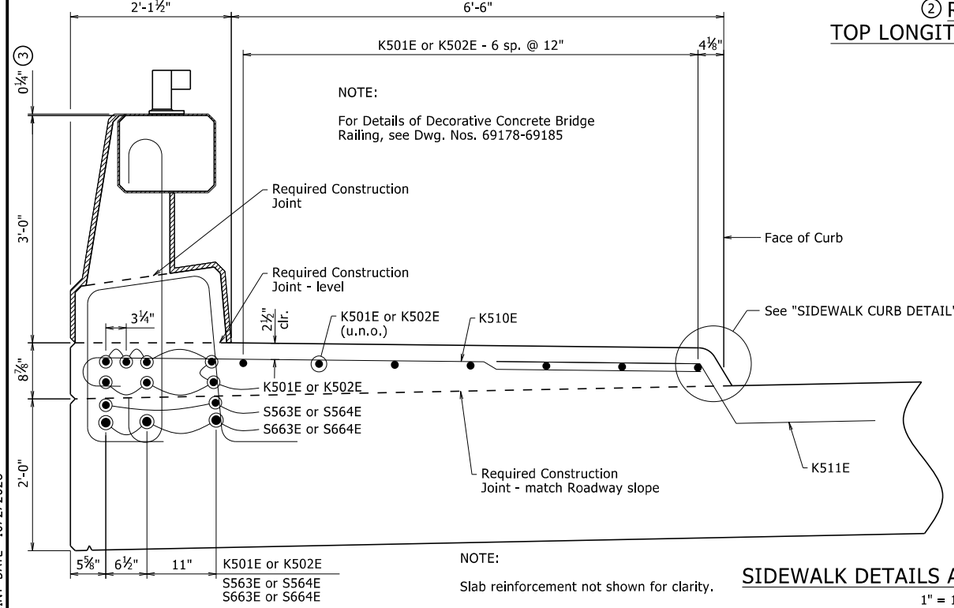


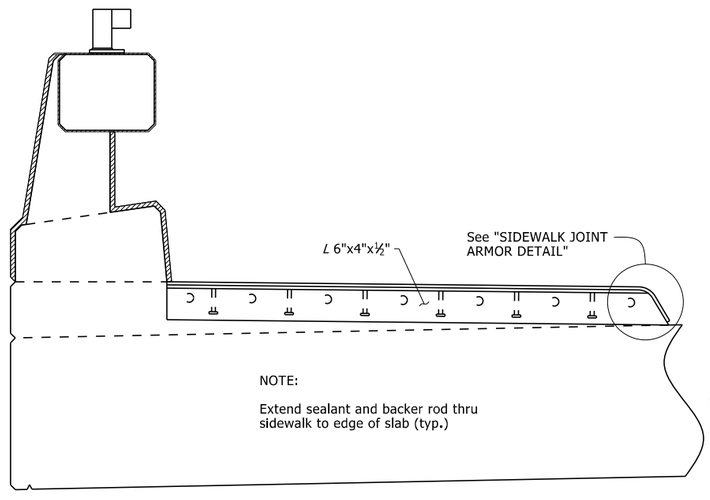
② R.C. SLAB UNIT 2 TOP LONGITUDINAL REINFORCING PLAN

R.C. SLAB UNIT 2 TOP LONGITUDINAL BAR LIST

MARK	NO. REQ'D	LENGTH	P.D.
K501E	28	38'-9"	Str.
K502E	28	34'-4"	Str.
S401E	96	32'-0"	Str.
S402E	96	27'-6"	Str.
S563E	4	38'-9"	Str.
S564E	4	34'-4"	Str.
S663E	6	39'-1"	Str.
S664E	6	34'-8"	Str.
S1003E	68	40'-0"	Str.
S1101E	28	40'-0"	Str.

Bars with an "E" suffix are to be epoxy coated.





SIDEWALK DETAILS AT R.C. SLAB UNIT 2

1" = 1'-0"

NOTES:

PC Sta. 104+14.85

See "SIDEWALK SECTION THRU JOINT" on Dwg. No. 69171.

See Std. Dwg. No. 55008 for additional joint details.

① 2'-7" min. lap

② Placed as shown in "TYPICAL ROADWAY SECTION AT END OF UNIT" & "TYPICAL ROADWAY SECTION AT INTERMEDIATE BENT & SPAN" on Dwg. No. 69172. Longitudinal lines of concrete bridge deck and longitudinal reinforcing bars are curved and concentric to a 17°00'00" Curve Right which is located along C.L. Bridge.

③ ¼" allowance for Roughsawn Wood Finish, typical for Rail.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 5 OF 5
DETAILS OF 70'-0" R.C. SLAB UNIT 2

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

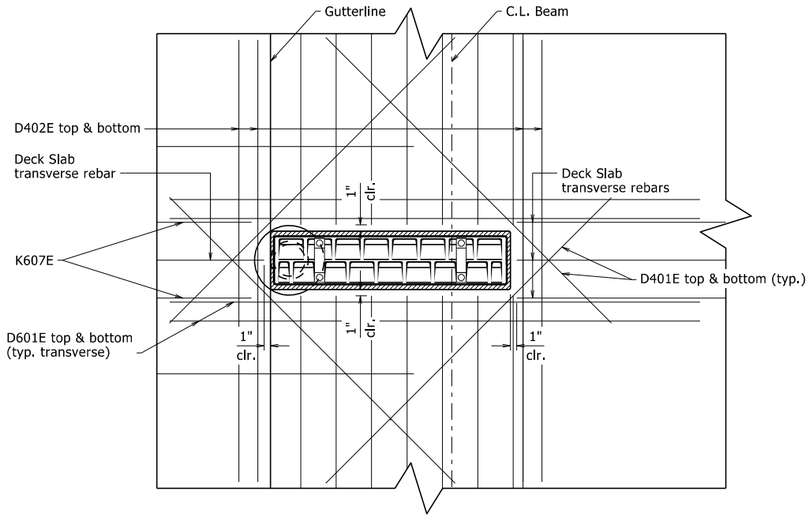
LITTLE ROCK, ARK.

DRAWN BY:	CGP	DATE:	05/02/25	FILENAME:	b090672_s1.dgn
CHECKED BY:	DBS	DATE:	05/20/25	SCALE:	3/16" = 1'-0"
DESIGNED BY:	LHC	DATE:	04/24		

BRIDGE NO. 07709 DRAWING NO. 69176

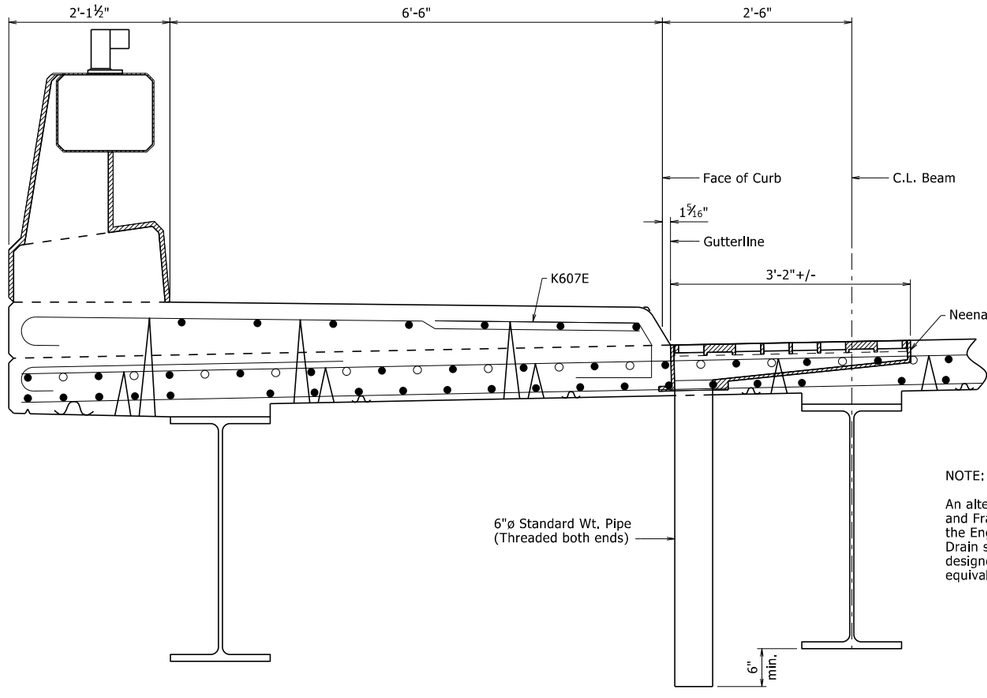
PRINT DATE: 10/2/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	68	108
		07709 - DECK DRAINS - 69177				



PLAN OF REINFORCING AT DECK DRAINS

1" = 1'-0"



SECTION AT DECK DRAIN

1" = 1'-0"

NOTE:

An alternate Pre-Manufactured Grate or Grate and Frame may be submitted for approval by the Engineer in place of the Neenah R-4014-TL Drain shown in the plans. Grate shall be designed for a 16,000 lb. wheel load, with equivalent hydraulic capacity.

① DECK DRAIN LOCATIONS

DRAIN NO.	STATION
1 - LEFT	102+90.50
2 - RIGHT	102+79.50
3 - LEFT	103+60.50
4 - RIGHT	103+39.50
5 - LEFT	104+20.50
6 - RIGHT	104+09.50

① Locations of deck drains may be adjusted up-station or down-station to avoid interference with shear connectors.

BAR LIST - PER DECK DRAIN

MARK	NO. REQ'D	LENGTH	P.D.
D401E	8	5'-4"	Str.
D402E	8	5'-10"	Str.
D601E	8	7'-0"	Str.

GENERAL NOTES

Deck Drains shall be Neenah R-4014-TL or approved equal.

For locations of Deck Drains, see Dwg. No. 69170 and "DECK DRAIN LOCATIONS".

Structural steel in deck drains shall not be paid for directly, but shall be considered subsidiary to the item "Structural Steel in Beam Spans (A709, Gr. 50W)".

Standard weight pipe for deck drains shall conform to ASTM A501. All other structural steel shall be ASTM A709, Grade 36. After fabrication, all structural steel in drains shall be galvanized in accordance with AASHTO M 111. Steel fasteners shall be galvanized in accordance with AASHTO M 232, Class C or ASTM B695, Class 50.

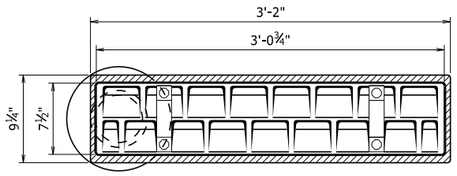
Top longitudinal reinforcing steel in the slab shall be cut as required to install the deck drains. Two additional 5'-10" No. 4 straight bars shall be placed longitudinally on each side of the drain.

Top and bottom transverse reinforcing steel in the slab shall be cut as required (up to a maximum of three bars per mat) to install the deck drain. Two additional 7'-0" No. 6 straight bars shall be placed transversely per mat on each side of the drain.

One additional 5'-4" No. 4 straight bar shall be placed at a 45° angle to each corner in both top and bottom mats.

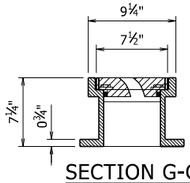
Repair all cut or damaged epoxy bars in accordance with the Standard Specifications.

All additional reinforcing steel placed around deck drains shall be epoxy-coated and shall be paid for at the unit price bid for "Epoxy Coated Reinforcing Steel (Grade 60)."



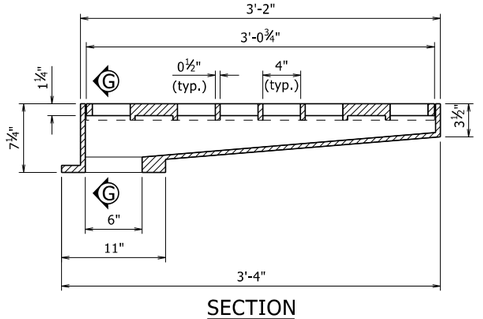
PLAN

1½" = 1'-0"



SECTION G-G

1½" = 1'-0"



SECTION

1½" = 1'-0"

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
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BRIDGE ENGINEER

DETAILS OF DECK DRAINS

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

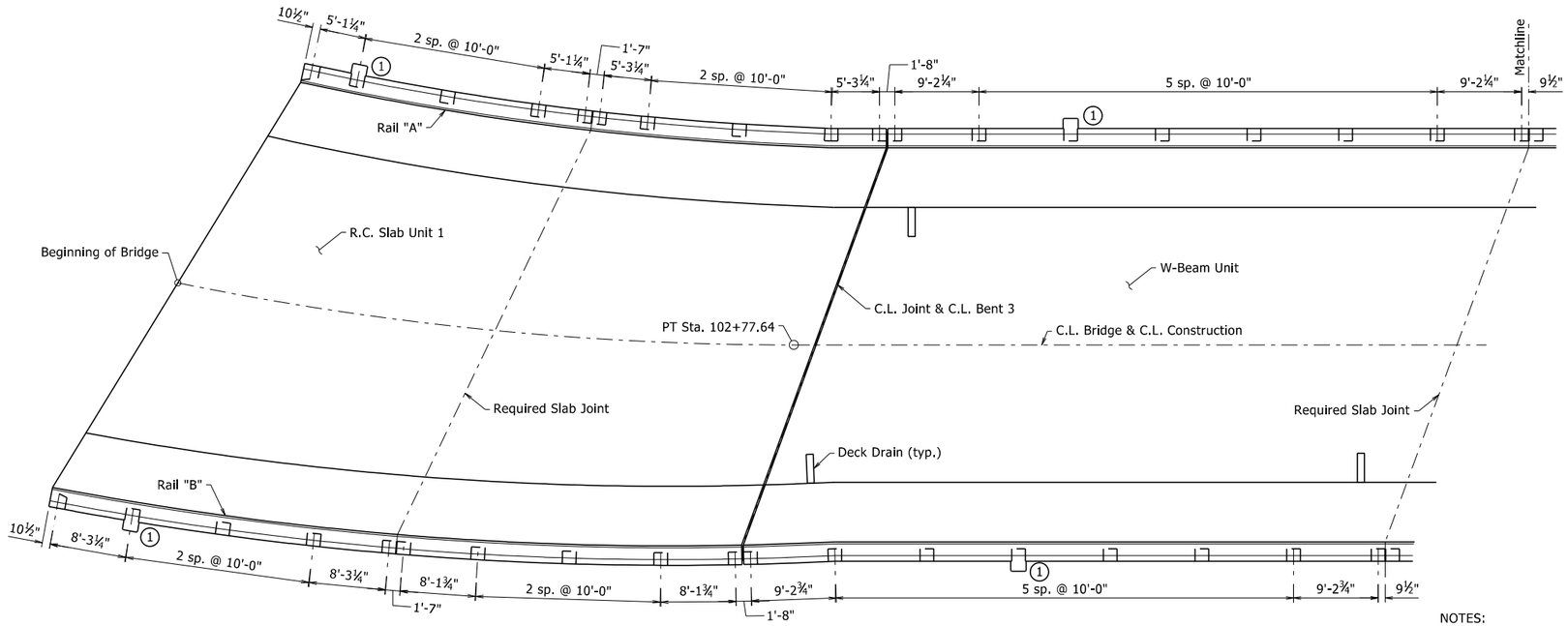
LITTLE ROCK, ARK.

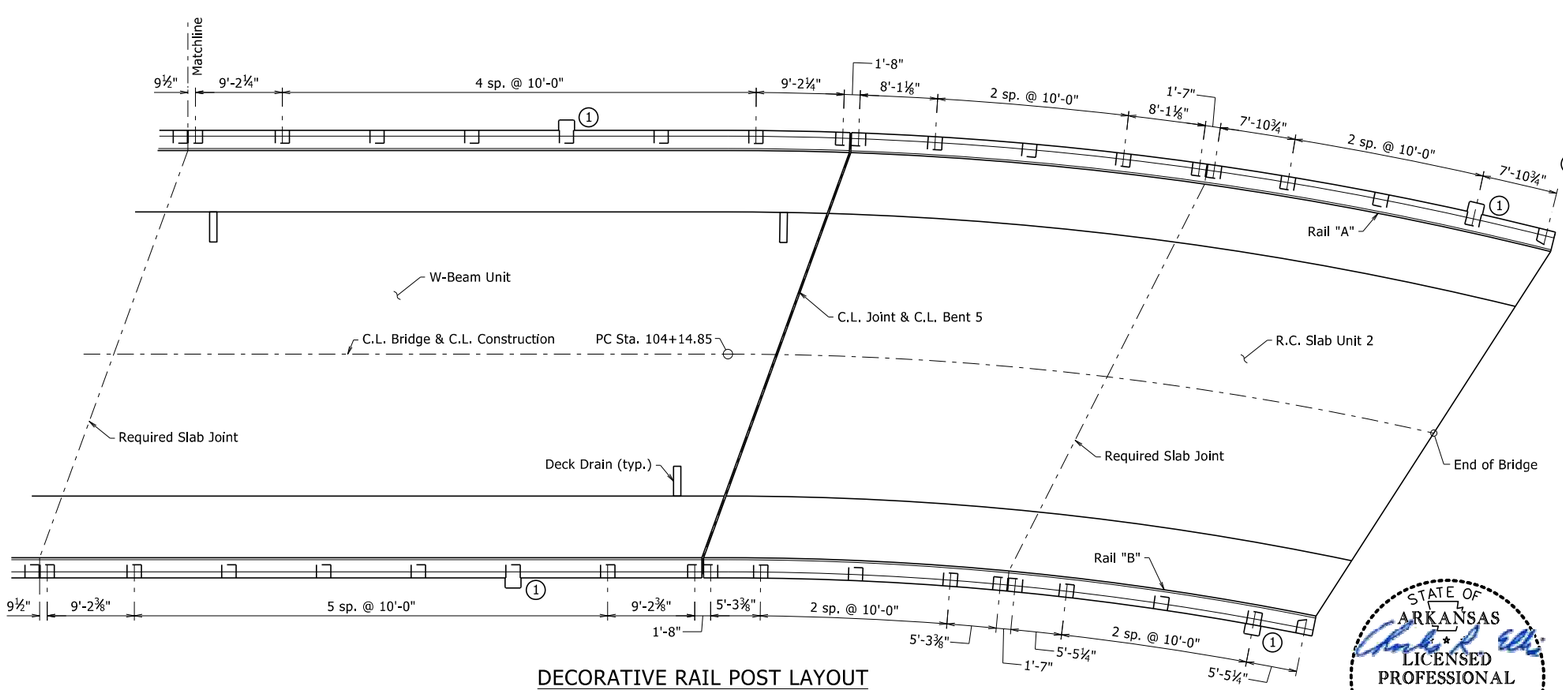
DRAWN BY:	CGP	DATE:	05/02/25	FILENAME:	b090672_s1.dgn
CHECKED BY:	DBS	DATE:	05/20/25	SCALE:	AS NOTED
DESIGNED BY:	JWP	DATE:	02/25		

BRIDGE NO. 07709 DRAWING NO. 69177

PRINT DATE: 10/2/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	69	108
		07709 - DECORATIVE RAILING - 69178				





DECORATIVE RAIL POST LAYOUT

NOTES:

For Light Pole Support locations, see Dwg. No. 69180.

For Deck Drain locations, see Dwg. No. 69177.

Dimensions measured along edge of slab.

The roughsawn timber portions of the bridge rail may be placed on chords between posts when located in horizontal curves.

① Light Pole Support

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
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SHEET 1 OF 8
DETAILS OF DECORATIVE CONCRETE RAILING

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

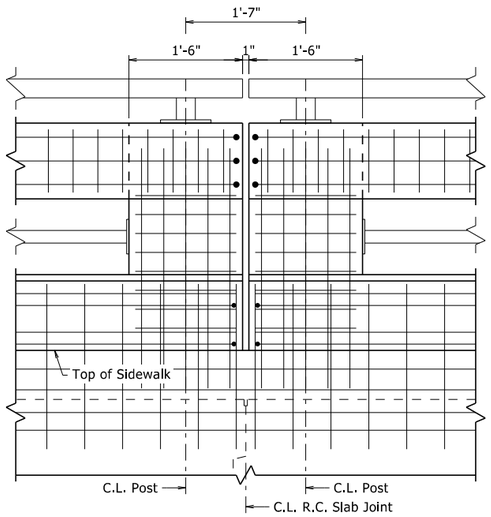
LITTLE ROCK, ARK.

DRAWN BY:	CGP	DATE:	05/02/25	FILENAME:	b090672_r1.dgn
CHECKED BY:	DBS	DATE:	05/20/25	SCALE:	1/8" = 1'-0"
DESIGNED BY:	JWP	DATE:	02/25		

BRIDGE NO. 07709 DRAWING NO. 69178

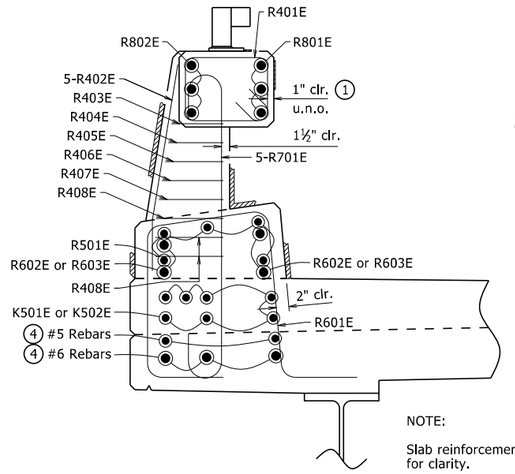
PRINT DATE: 10/2/2025

DATE REVISED	DATE REVISED	FED. ROAD DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	70	108
		07709 - DECORATIVE RAILING - 69179				



LONGITUDINAL SECTION OF DECORATIVE BRIDGE RAILING @ REQUIRED SLAB JOINT

1" = 1'-0"

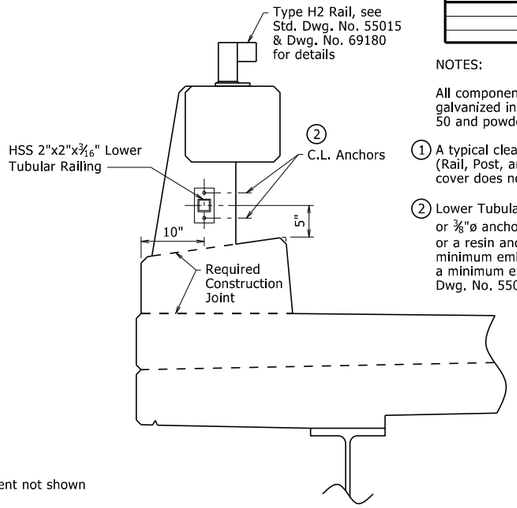


NOTE:

Slab reinforcement not shown for clarity.

SECTION A-A

1" = 1'-0"



SECTION B-B

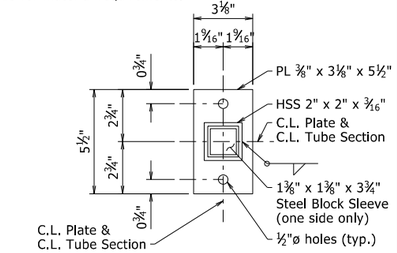
1" = 1'-0"

NOTES:

All components of the Lower Tubular Railing and its connection shall be galvanized in accordance with AASHTO M 232, Class C or ASTM B695, Class 50 and powder coated according to Std. Dwg. No. 55015.

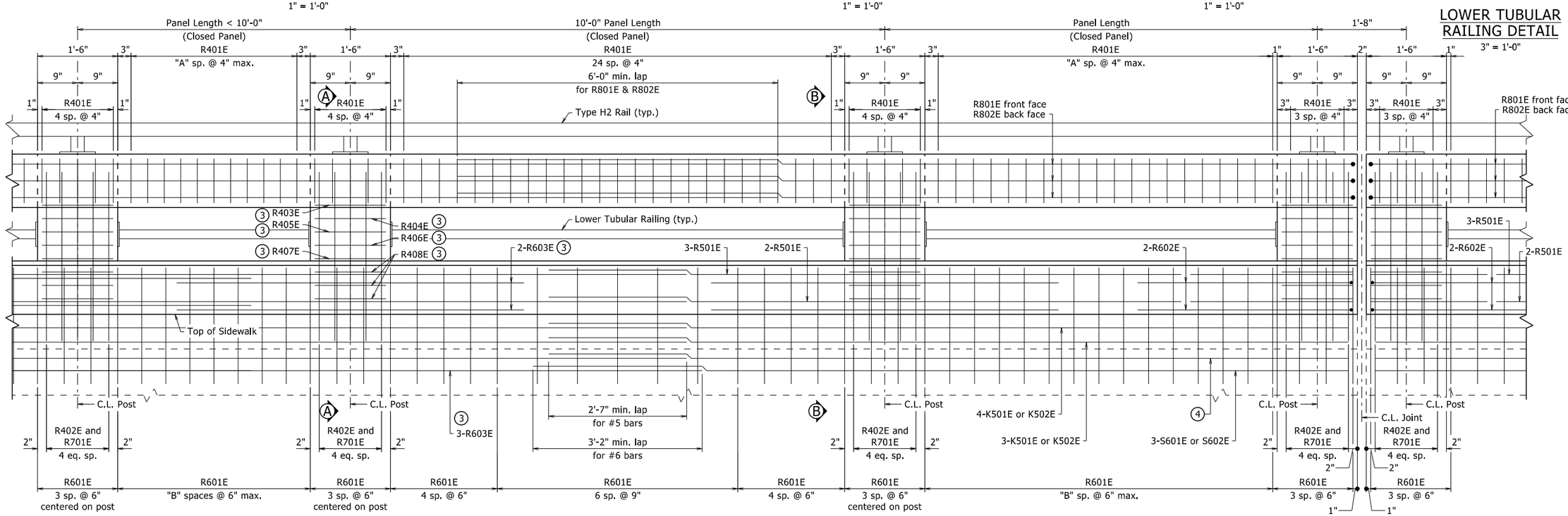
(1) A typical clear cover of 1" shall be provided for the Railing components (Rail, Post, and Curb) reinforcement, unless otherwise noted. This clear cover does not include any allowance for architectural finish.

(2) Lower Tubular Railing to be installed using cast-in-place ⅜"ø anchor bolts or ⅜"ø anchors drilled and grouted using a QPL approved non-shrink grout or a resin anchoring system. Cast-in-place anchor bolts shall have a minimum embedment of 2", and drilled and grouted anchor bolts shall have a minimum embedment per the manufacturer's recommendations. See Std. Dwg. No. 55015 for material requirements.



LOWER TUBULAR RAILING DETAIL

3" = 1'-0"



LONGITUDINAL SECTION OF DECORATIVE BRIDGE RAILING

1" = 1'-0"

R.C. SLAB UNIT 1					BEAM UNIT			R.C. SLAB UNIT 2				
Panel Length	"A"	"B"	"C"	"D"	Panel Length	"A"	"B"	Panel Length	"A"	"B"	"C"	"D"
5'-1¼"	10	8	10	7	9'-2¼"	23	16	5'-3⅜"	11	8		
5'-3¼"	11	8			9'-2⅜"	23	16	5'-5¼"	11	8	11	8
8'-1¾"	19	14			9'-2¾"	23	16	7'-10¾"	19	13	18	13
8'-3¼"	20	14	19	14				8'-1⅛"	19	14		

NOTE:

See "LONGITUDINAL SECTION OF DECORATIVE BRIDGE RAILING" for rebar locations on 10'-0" panel lengths.

(3) Bar designations are typical per 1'-6" post.

(4) See Sidewalk Details on Dwg. Nos. 69166, 69168, & 69176 for #5 & #6 bar designations.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
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SHEET 2 OF 8

DETAILS OF DECORATIVE CONCRETE RAILING

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY:	CGP	DATE:	05/02/25	FILENAME:	b090672_r1.dgn
CHECKED BY:	DBS	DATE:	05/20/25	SCALE:	AS NOTED
DESIGNED BY:	JWP	DATE:	02/25		

BRIDGE NO. 07709 DRAWING NO. 69179

PRINT DATE: 10/2/2025

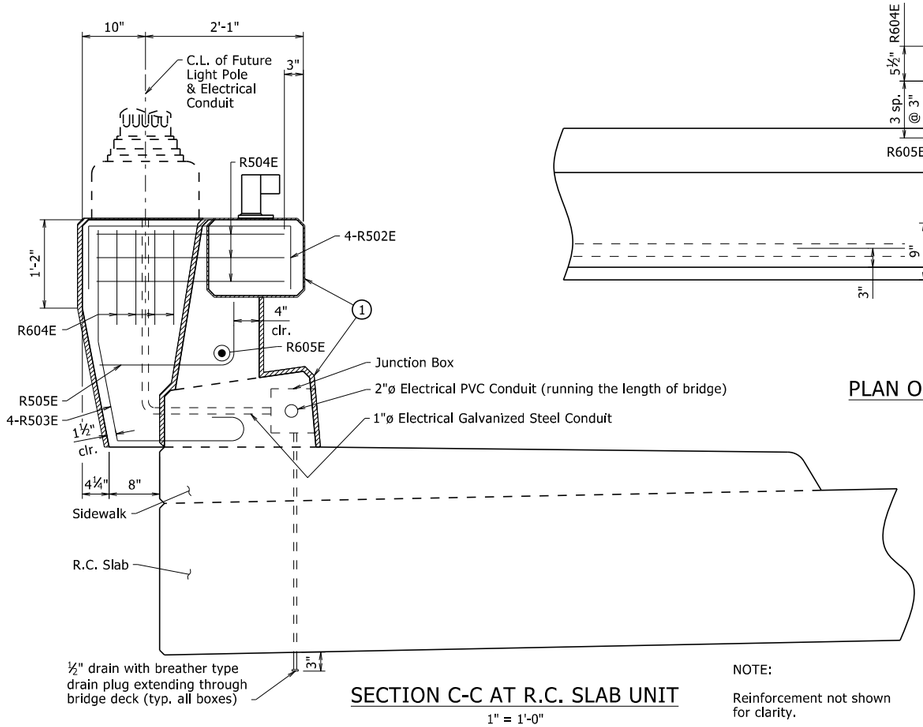
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	71	108
		07709 - DECORATIVE RAILING - 69180				

LIGHT POLE SUPPORT LOCATIONS

LOCATION	STATION
RIGHT	102+09.23
LEFT	102+25.05
RIGHT	103+02.16
LEFT	103+07.85
RIGHT	103+92.17
LEFT	103+97.82
RIGHT	104+74.85
LEFT	104+88.96

NOTE:

Stations shown are at C.L. Light Pole Support and locations are in the ahead direction.

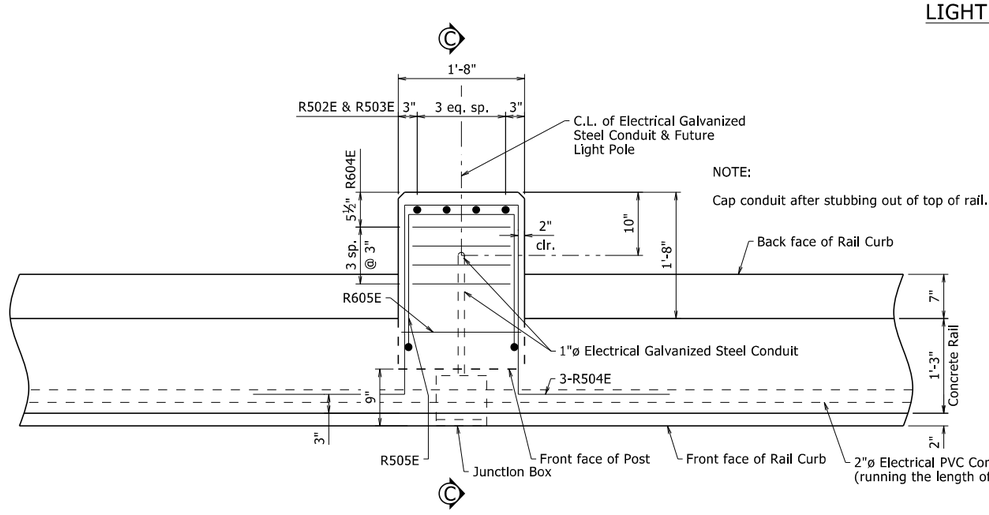


SECTION C-C AT R.C. SLAB UNIT

1" = 1'-0"

NOTE:

Reinforcement not shown for clarity.

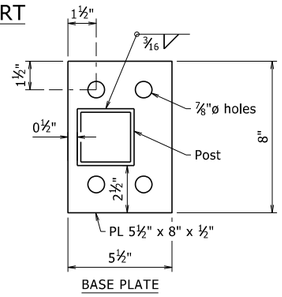


PLAN OF LIGHT POLE SUPPORT

1" = 1'-0"

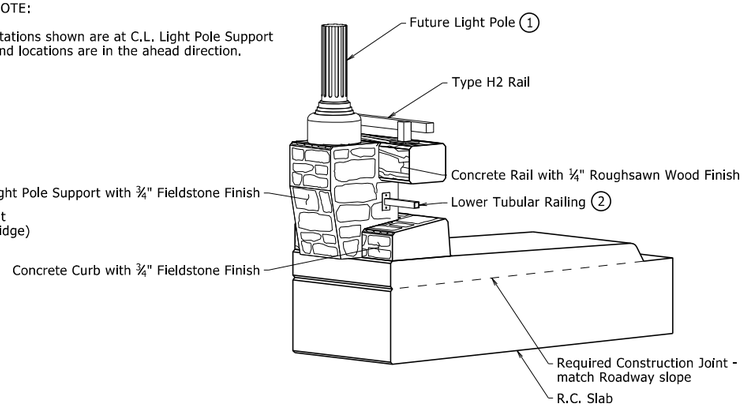
NOTE:

Cap conduit after stubbing out of top of rail.



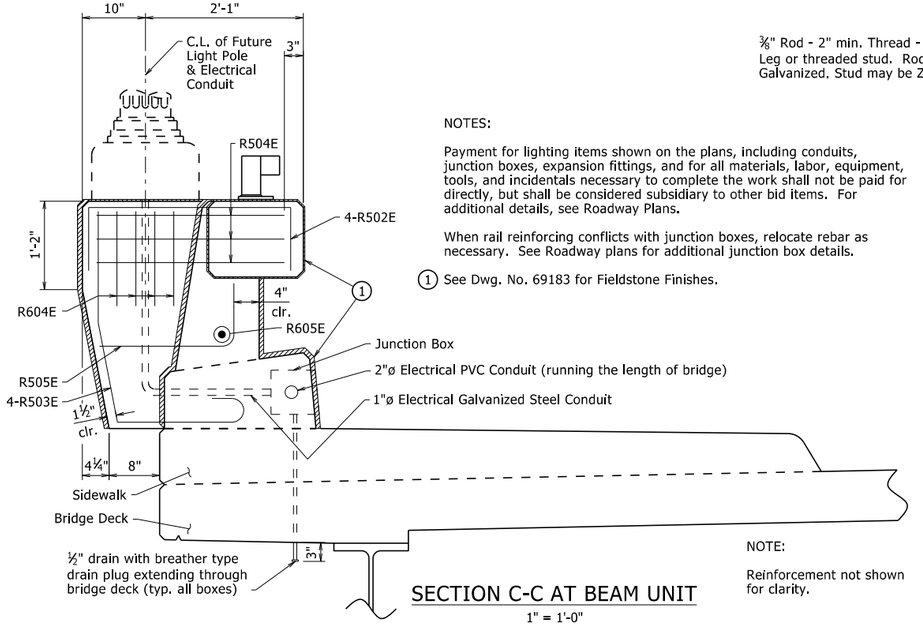
(1) The light pole and connection provided by others shall be verified to be compatible with the structural capacity and mounting configuration of the specified support. All loads, including wind and dead loads, must be reviewed and confirmed prior to installation of light pole and connection.

(2) Lower Tubular Railing, including connections, anchorage, joints, coating, and installation shall be included in the unit bid price for Metal Bridge Railing (Type H2).



DECORATIVE CONCRETE LIGHT POLE SUPPORT AT R.C. SLAB UNIT THREE DIMENSIONAL VIEW

NO SCALE



SECTION C-C AT BEAM UNIT

1" = 1'-0"

NOTES:

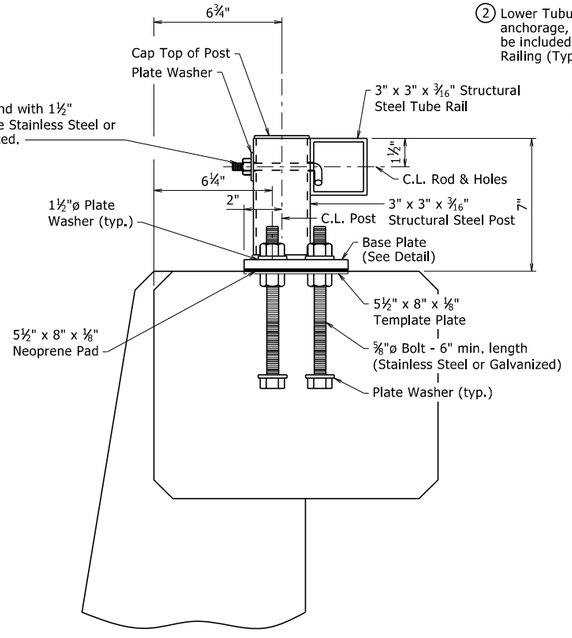
Payment for lighting items shown on the plans, including conduits, junction boxes, expansion fittings, and for all materials, labor, equipment, tools, and incidentals necessary to complete the work shall not be paid for directly, but shall be considered subsidiary to other bid items. For additional details, see Roadway Plans.

When rail reinforcing conflicts with junction boxes, relocate rebar as necessary. See Roadway plans for additional junction box details.

(1) See Dwg. No. 69183 for Fieldstone Finishes.

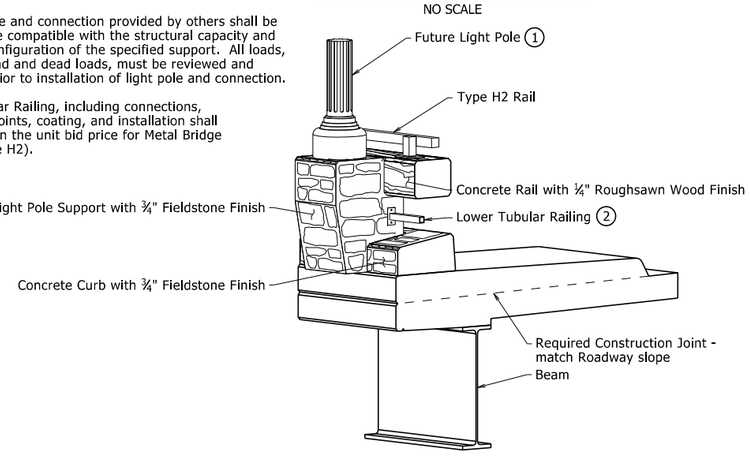
NOTE:

Reinforcement not shown for clarity.



DETAILS OF POST ANCHOR SYSTEM

(Cast-in-Place Bolts)



DECORATIVE CONCRETE LIGHT POLE SUPPORT AT W-BEAM UNIT THREE DIMENSIONAL VIEW

NO SCALE

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 3 OF 8
DETAILS OF DECORATIVE CONCRETE RAILING

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: CGP	DATE: 05/02/25	FILENAME: b090672_r1.dgn	
CHECKED BY: DBS	DATE: 05/20/25	SCALE: AS NOTED	
DESIGNED BY: JWP	DATE: 02/25		

BRIDGE NO. 07709 DRAWING NO. 69180

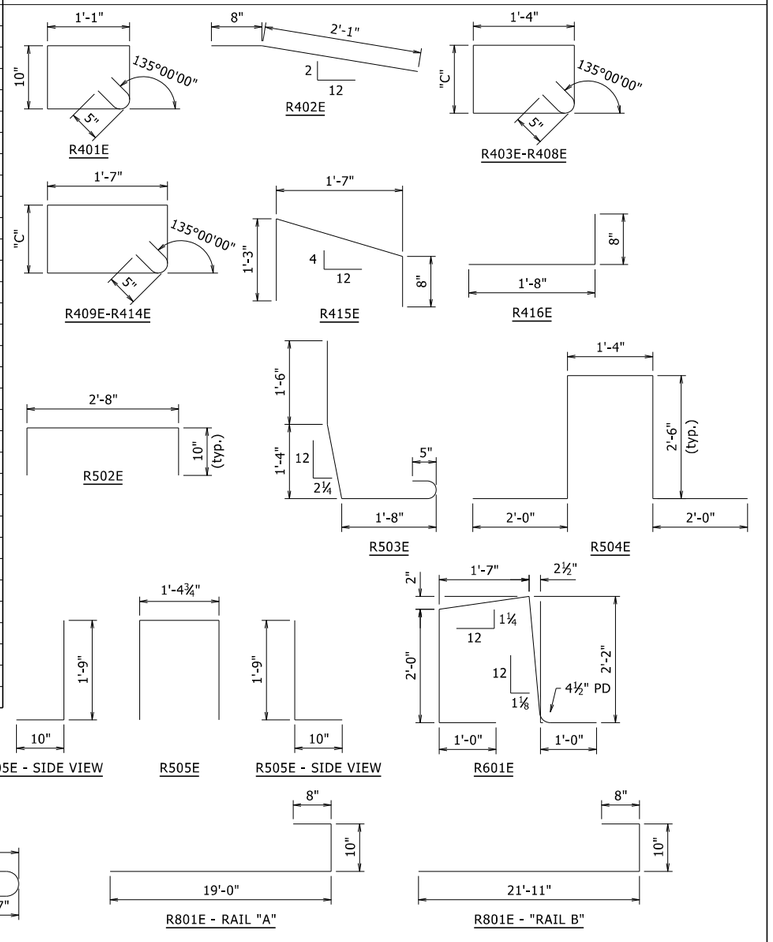
PRINT DATE: 10/2/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	72	108
		07709 - DECORATIVE RAILING - 69181				

R.C. SLAB UNIT 1 RAIL BAR LIST

MARK	RAIL "A" NO. REQ'D	RAIL "A" LENGTH	RAIL "B" NO. REQ'D	RAIL "B" LENGTH	"C"	P.D.
R401E	193	4'-4"	228	4'-4"		2"
R402E	51	2'-9"	51	2'-9"		3"
R403E	10	4'-7"	10	4'-7"	8¼"	2"
R404E	10	4'-8"	10	4'-8"	8¾"	2"
R405E	10	4'-9"	10	4'-9"	9¼"	2"
R406E	10	4'-10"	10	4'-10"	9¾"	2"
R407E	10	4'-11"	10	4'-11"	10¼"	2"
R408E	30	5'-0"	30	5'-0"	10¾"	2"
R409E	1	5'-1"	1	5'-1"		2"
R410E	1	5'-2"	1	5'-2"		2"
R411E	1	5'-3"	1	5'-3"		2"
R412E	1	5'-4"	1	5'-4"		2"
R413E	1	5'-5"	1	5'-5"		2"
R414E	3	5'-6"	3	5'-6"		2"
R415E	3	3'-7"	3	3'-7"		3"
R416E	2	2'-3"	2	2'-3"		3"
R501E	20	17'-4"	20	20'-3"		Str.
R502E	4	4'-2"	4	4'-2"		2½"
R503E	4	5'-1"	4	5'-1"		3¾"
R504E	3	9'-11"	3	9'-11"		2½"
R505E	1	6'-2"	1	6'-2"		2½"
R601E	120	7'-6"	144	7'-6"		4½"
R602E	16	4'-9"	16	4'-9"		4½"
R603E	24	6'-6"	24	6'-6"		Str.
R604E	4	3'-6"	4	3'-6"		4½"
R605E	1	1'-7"	1	1'-7"		Str.
R701E	51	5'-8"	51	5'-8"		5¼"
R801E	6	20'-1"	6	23'-0"		6"
R802E	6	19'-0"	6	21'-11"		Str.

BENDING DIAGRAMS

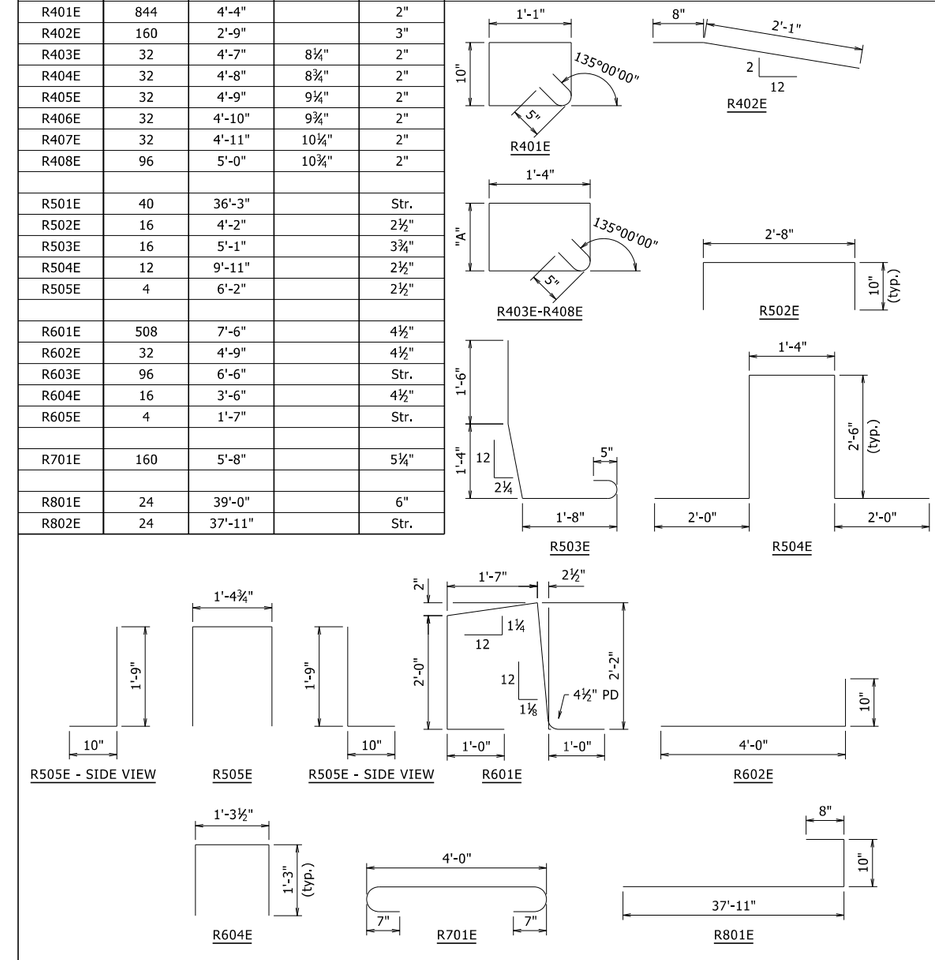


Dimensions are out to out of bars.
Bars with an "E" suffix are to be epoxy coated.

W-BEAM RAIL BAR LIST

MARK	NO. REQ'D	LENGTH	"A"	P.D.
R401E	844	4'-4"		2"
R402E	160	2'-9"		3"
R403E	32	4'-7"	8¼"	2"
R404E	32	4'-8"	8¾"	2"
R405E	32	4'-9"	9¼"	2"
R406E	32	4'-10"	9¾"	2"
R407E	32	4'-11"	10¼"	2"
R408E	96	5'-0"	10¾"	2"
R501E	40	36'-3"		Str.
R502E	16	4'-2"		2½"
R503E	16	5'-1"		3¾"
R504E	12	9'-11"		2½"
R505E	4	6'-2"		2½"
R601E	508	7'-6"		4½"
R602E	32	4'-9"		4½"
R603E	96	6'-6"		Str.
R604E	16	3'-6"		4½"
R605E	4	1'-7"		Str.
R701E	160	5'-8"		5¼"
R801E	24	39'-0"		6"
R802E	24	37'-11"		Str.

BENDING DIAGRAMS



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

PRINT DATE: 10/2/2025

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 4 OF 8
DETAILS OF DECORATIVE CONCRETE RAILING

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

DRAWN BY: CGP DATE: 05/02/25
CHECKED BY: DBS DATE: 05/20/25
DESIGNED BY: JWP DATE: 02/25
FILENAME: b090672_r1.dgn
SCALE: NO SCALE

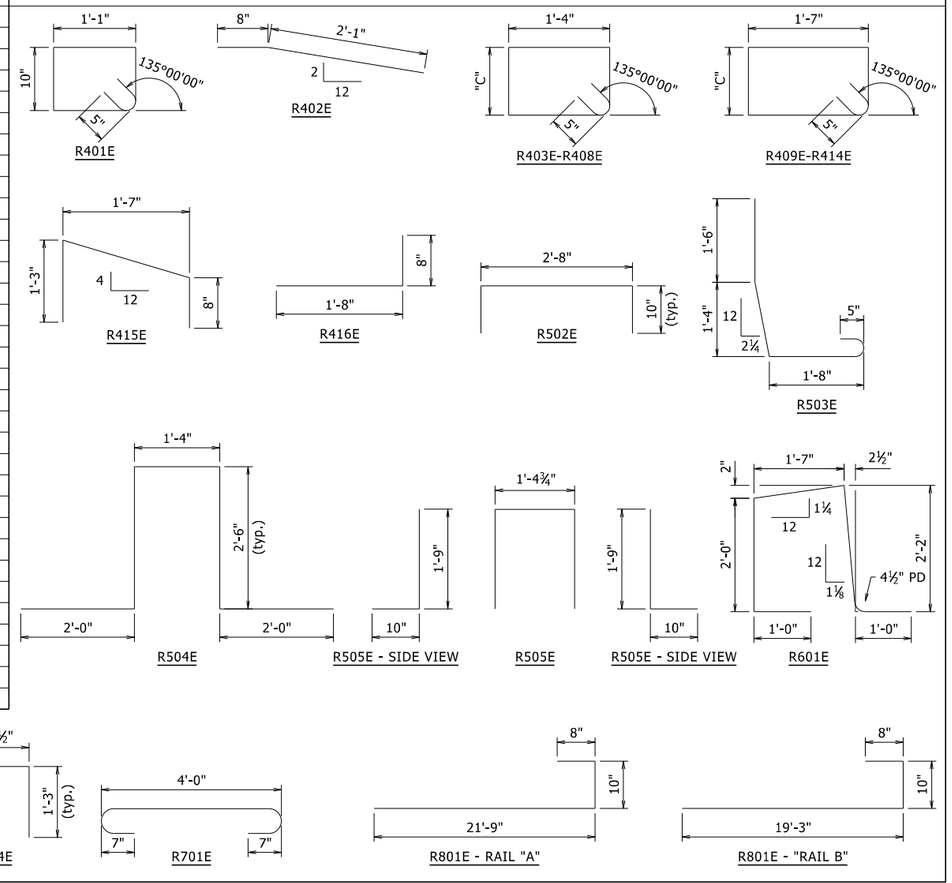
BRIDGE NO. 07709
DRAWING NO. 69181

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	73	108
		07709 - DECORATIVE RAILING - 69182				

R.C. SLAB UNIT 2 RAIL BAR LIST

MARK	RAIL "A" NO. REQ'D	RAIL "A" LENGTH	RAIL "B" NO. REQ'D	RAIL "B" LENGTH	"C"	P.D.
R401E	227	4'-4"	195	4'-4"		2"
R402E	51	2'-9"	51	2'-9"		3"
R403E	10	4'-7"	10	4'-7"	8¼"	2"
R404E	10	4'-8"	10	4'-8"	8¾"	2"
R405E	10	4'-9"	10	4'-9"	9¼"	2"
R406E	10	4'-10"	10	4'-10"	9¾"	2"
R407E	10	4'-11"	10	4'-11"	10¼"	2"
R408E	30	5'-0"	30	5'-0"	10¾"	2"
R409E	1	5'-1"	1	5'-1"		2"
R410E	1	5'-2"	1	5'-2"		2"
R411E	1	5'-3"	1	5'-3"		2"
R412E	1	5'-4"	1	5'-4"		2"
R413E	1	5'-5"	1	5'-5"		2"
R414E	3	5'-6"	3	5'-6"		2"
R415E	3	3'-7"	3	3'-7"		3"
R416E	2	2'-3"	2	2'-3"		3"
R501E	20	20'-1"	20	17'-7"		Str.
R502E	4	4'-2"	4	4'-2"		2½"
R503E	4	5'-1"	4	5'-1"		3¾"
R504E	3	9'-11"	3	9'-11"		2½"
R505E	1	6'-2"	1	6'-2"		2½"
R601E	142	7'-6"	120	7'-6"		4½"
R602E	16	4'-9"	16	4'-9"		4½"
R603E	24	6'-6"	24	6'-6"		Str.
R604E	4	3'-6"	4	3'-6"		4½"
R605E	1	1'-7"	1	1'-7"		Str.
R701E	51	5'-8"	51	5'-8"		5¼"
R801E	6	22'-10"	6	20'-4"		6"
R802E	6	21'-9"	6	19'-3"		Str.

BENDING DIAGRAMS



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

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 5 OF 8
DETAILS OF DECORATIVE CONCRETE RAILING

ROUTE SEC.

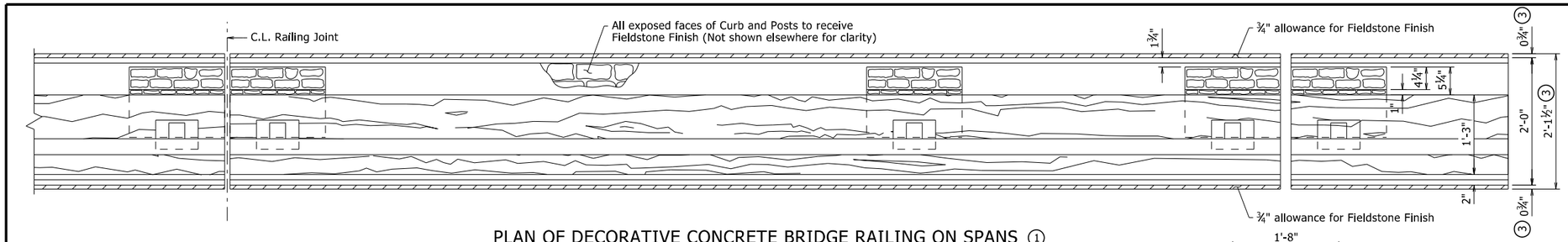
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 05/02/25 FILENAME: b090672_r1.dgn
CHECKED BY: DBS DATE: 05/20/25 SCALE: NO SCALE
DESIGNED BY: JWP DATE: 02/25

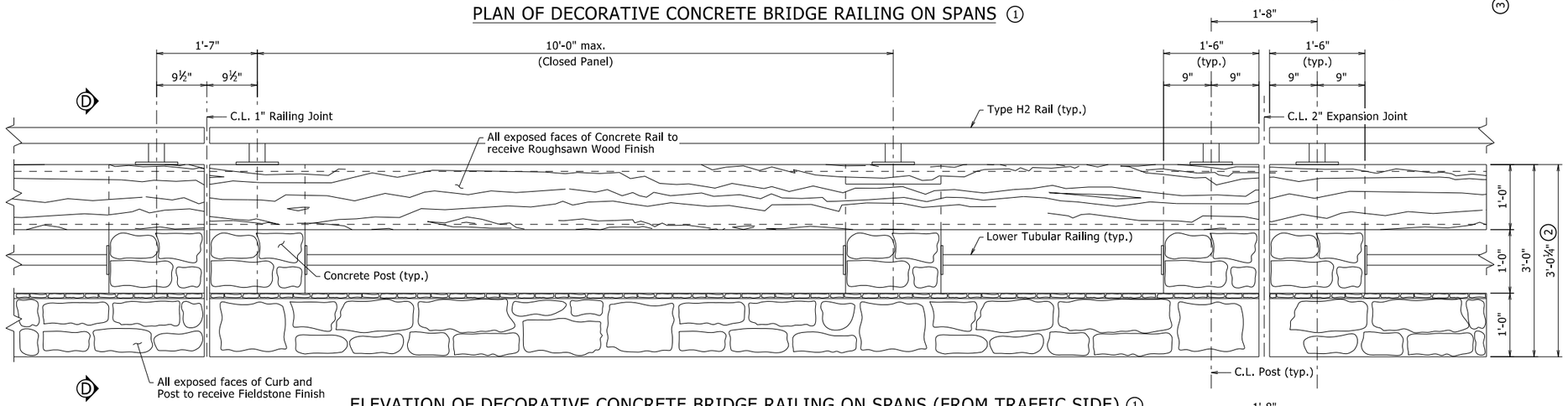
BRIDGE NO. 07709 DRAWING NO. 69182

PRINT DATE: 10/2/2025

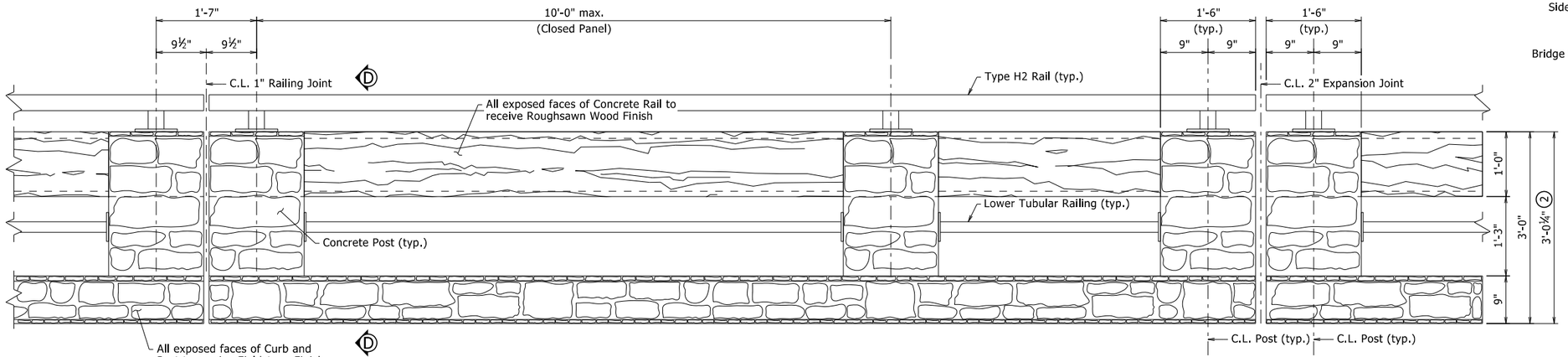
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	74	108
		07709 - DECORATIVE RAILING - 69183				



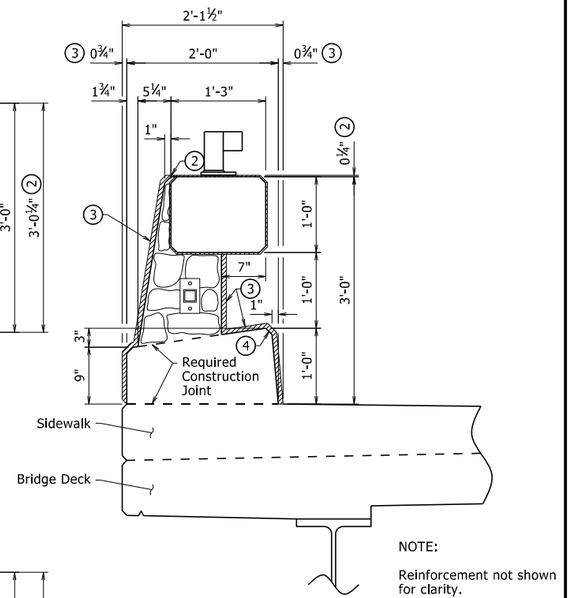
PLAN OF DECORATIVE CONCRETE BRIDGE RAILING ON SPANS ①



ELEVATION OF DECORATIVE CONCRETE BRIDGE RAILING ON SPANS (FROM TRAFFIC SIDE) ①



ELEVATION OF DECORATIVE CONCRETE BRIDGE RAILING ON SPANS (FROM BACK SIDE) ①



NOTE:

Reinforcement not shown for clarity.

① SECTION D-D

NOTE:

ALL EXPOSED FACES OF THE CURB, INCLUDING THE TOP OF CURB, SHALL RECEIVE THE FIELDSTONE FINISH. THE GROUT LINES MAY BE TOOLED BY HAND, IF NECESSARY TO ALIGN WITH THE GROUT LINES ON THE FRONT AND BACK FACES OF THE CURB.

NOTES:

Concrete Rail with Roughsawn Wood Finish, see SP Job No. 090672 "Architectural Finish" and SP Job No. 090672 "Staining Concrete Surfaces"

Concrete Post with Fieldstone Finish, see SP Job No. 090672 "Architectural Finish" and SP Job No. 090672 "Staining Concrete Surfaces"

Concrete Curb with Fieldstone Finish, see SP Job No. 090672 "Architectural Finish" and SP Job No. 090672 "Staining Concrete Surfaces"

① Unless noted otherwise, Railing components (Rail, Post, and Curb) dimensions do not include additional allowance for architectural finish.

② ¼" allowance for Roughsawn Wood Finish, typical for Rail.

③ ¾" allowance for Fieldstone Finish, typical for Post and Curb.

④ All exposed corners for the Railing components (Rail, Post, and Curb) shall be chamfered 1" unless otherwise noted.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 6 OF 8

DETAILS OF DECORATIVE CONCRETE RAILING

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

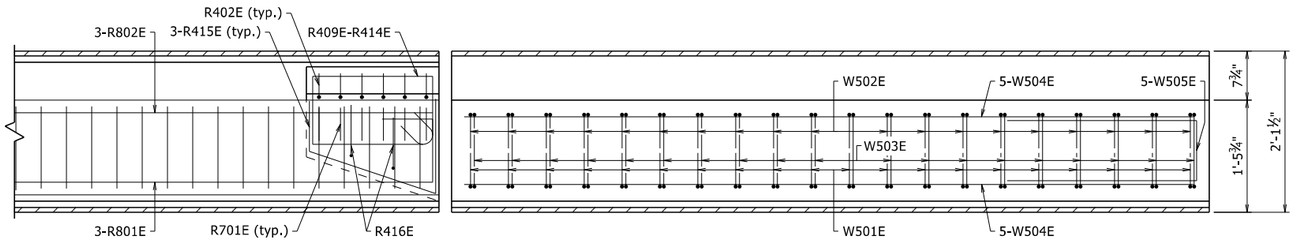
DRAWN BY: CGP DATE: 05/02/25
CHECKED BY: DBS DATE: 05/20/25
DESIGNED BY: JWP DATE: 02/25

FILENAME: b090672_r1.dgn
SCALE: 1" = 1'-0"

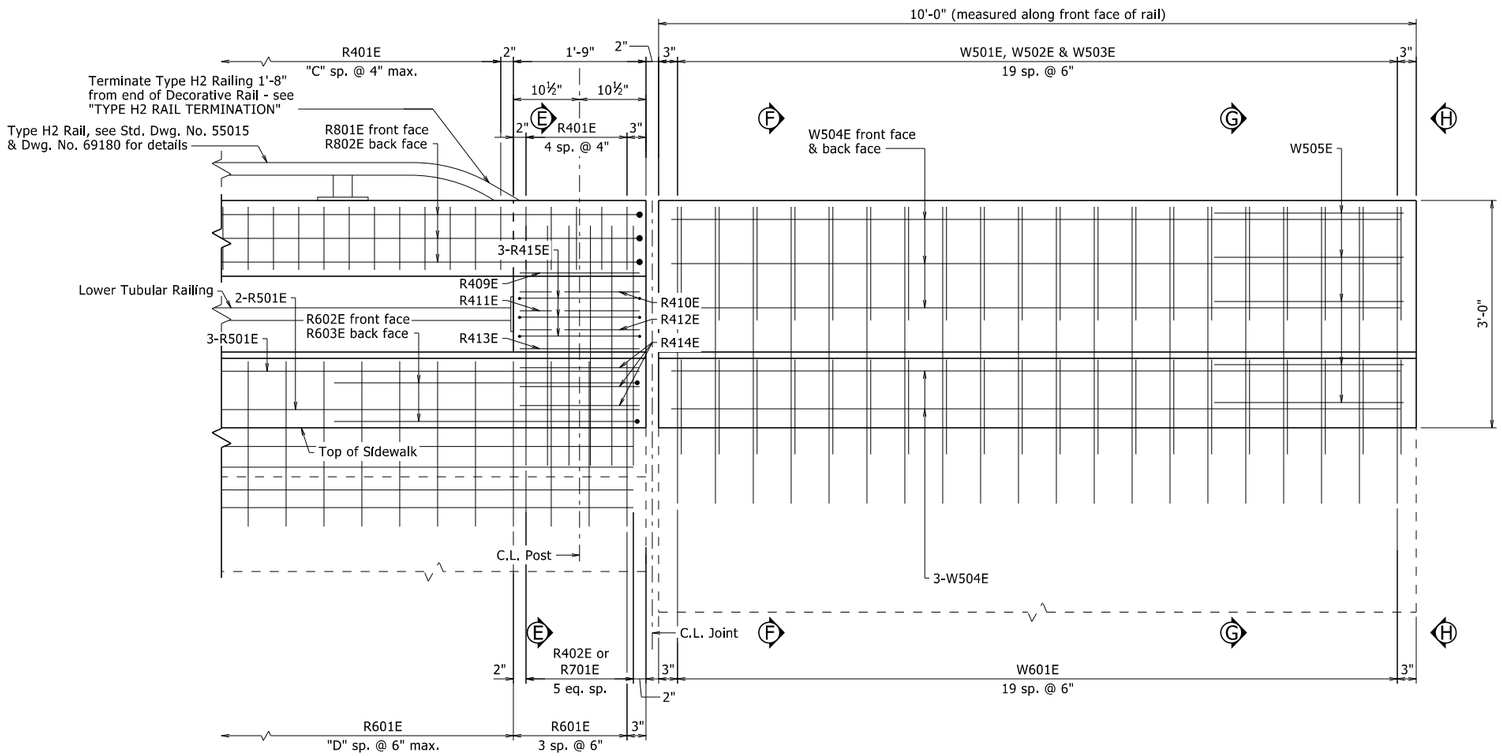
BRIDGE NO. 07709 DRAWING NO. 69183

PRINT DATE: 10/2/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	75	108
		07709 - DECORATIVE RAILING - 69184				



DECORATIVE CONCRETE BRIDGE WING REINFORCING PLAN



DECORATIVE CONCRETE BRIDGE WING REINFORCING ELEVATION

NOTES:

Concrete Rail with Roughsawn Wood Finish, see SP Job No. 090672 "Architectural Finish" and SP Job No. 090672 "Staining Concrete Surfaces"

Concrete Post with Fieldstone Finish, see SP Job No. 090672 "Architectural Finish" and SP Job No. 090672 "Staining Concrete Surfaces"

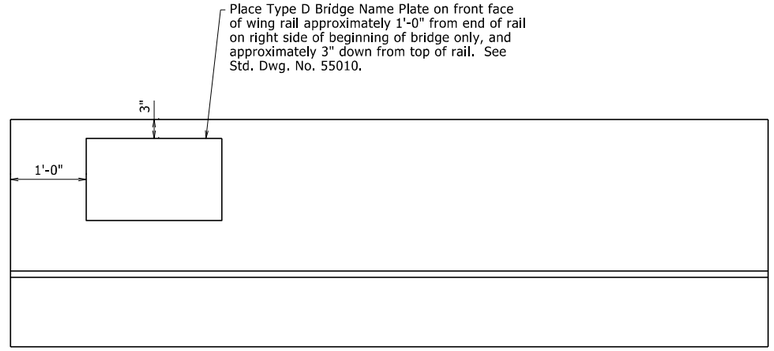
Concrete Curb with Fieldstone Finish, see SP Job No. 090672 "Architectural Finish" and SP Job No. 090672 "Staining Concrete Surfaces"

(1) Unless noted otherwise, Railing components (Rail, Post, and Curb) dimensions do not include additional allowance for architectural finish.

(2) ¼" allowance for Roughsawn Wood Finish, typical for Rail.

(3) ¾" allowance for Fieldstone Finish, typical for Post and Curb.

(4) All exposed corner for the Railing components (Rail, Post, and Curb) shall be chamfered 1" unless otherwise noted.

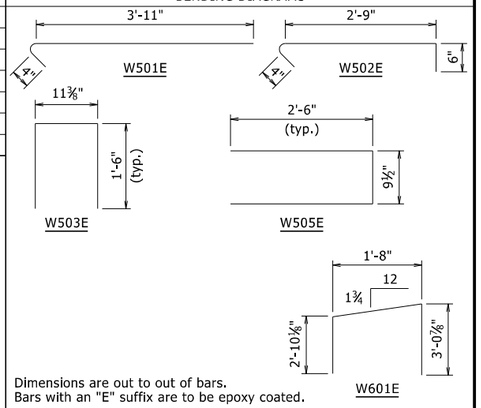


DECORATIVE CONCRETE BRIDGE WING ELEVATION

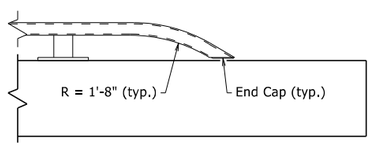
BAR LIST PER WING

MARK	NO. REQ'D	LENGTH	P.D.
W501E	20	4'-5"	2½"
W502E	20	3'-8"	2½"
W503E	20	3'-9"	2½"
W504E	12	9'-8"	Str.
W505E	5	5'-7"	2½"
W601E	20	7'-6"	4½"

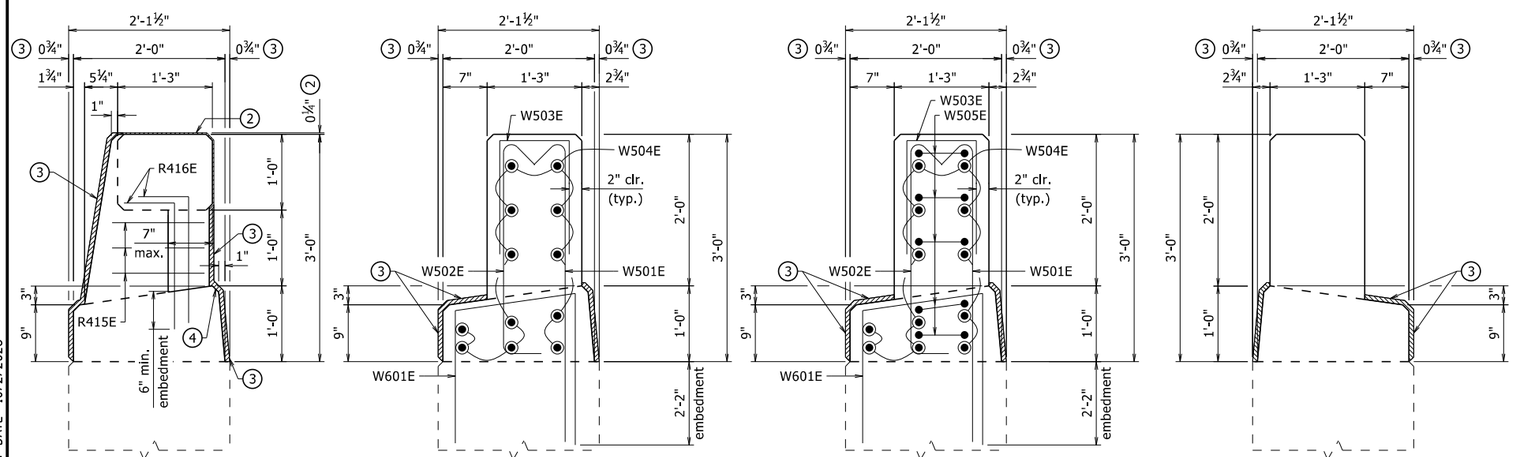
BENDING DIAGRAMS



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



TYPE H2 RAIL TERMINATION



STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 7 OF 8
DETAILS OF DECORATIVE CONCRETE RAILING

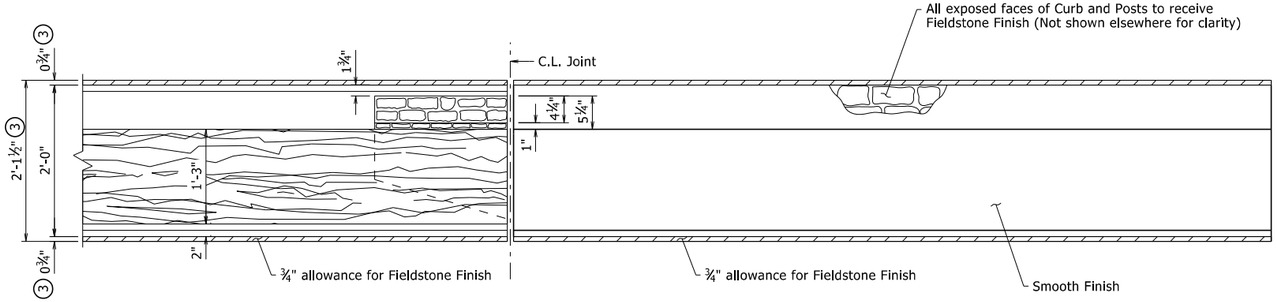
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 05/02/25
CHECKED BY: DBS DATE: 05/20/25
DESIGNED BY: JWP DATE: 02/25
FILENAME: b090672_r1.dgn
SCALE: 1" = 1'-0"

BRIDGE NO. 07709 DRAWING NO. 69184

PRINT DATE: 10/2/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	76	108
		07709 - DECORATIVE RAILING - 69185				



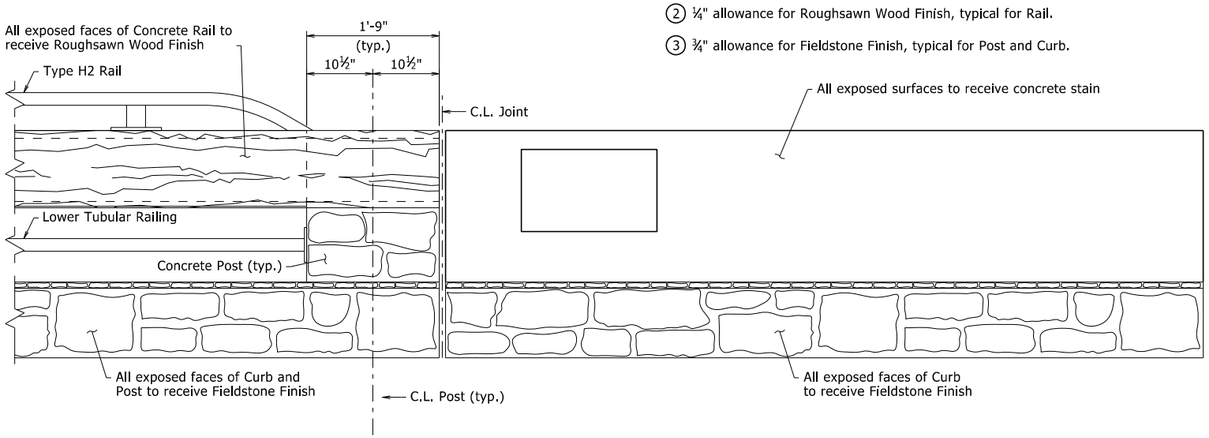
PLAN OF DECORATIVE CONCRETE BRIDGE WING ①

1" = 1'-0"

① Unless noted otherwise, Railing components (Rail, Post, and Curb) dimensions do not include additional allowance for architectural finish.

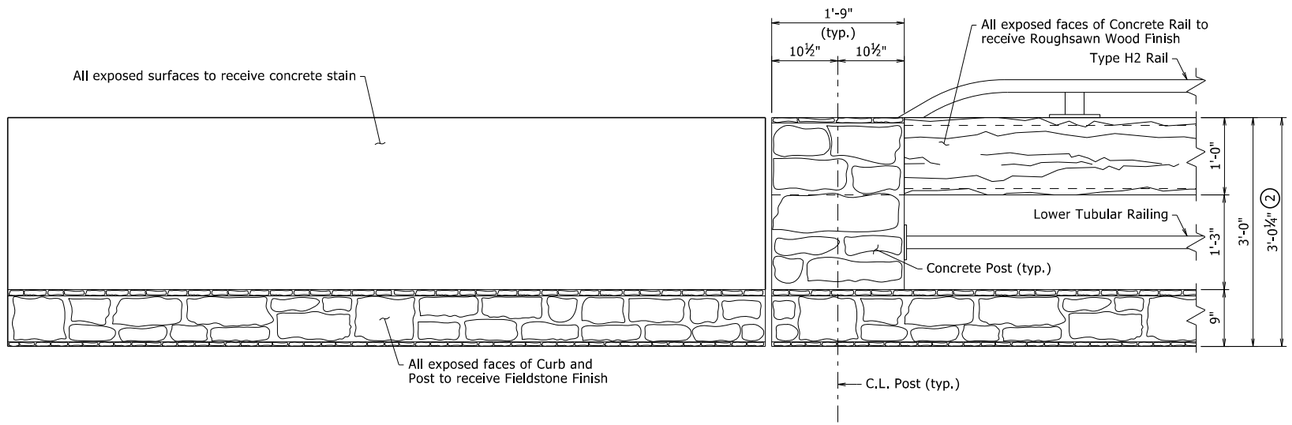
② ¼" allowance for Roughsawn Wood Finish, typical for Rail.

③ ¾" allowance for Fieldstone Finish, typical for Post and Curb.



ELEVATION OF DECORATIVE CONCRETE BRIDGE WING (FROM TRAFFIC SIDE) ①

1" = 1'-0"

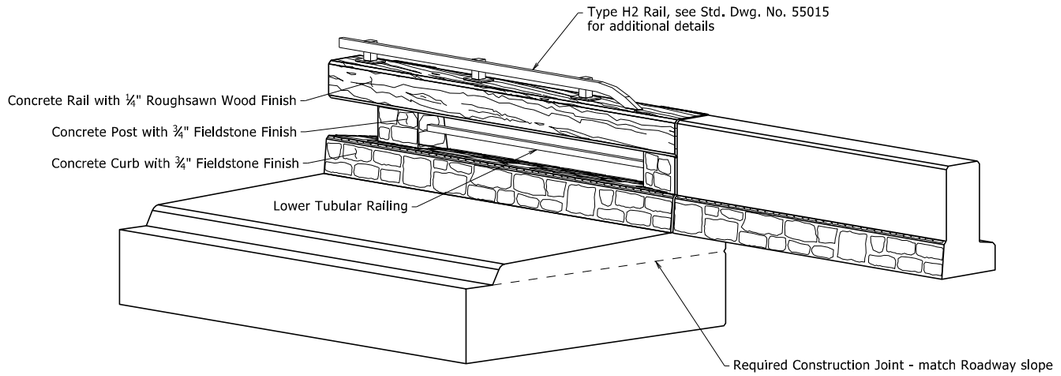


ELEVATION OF DECORATIVE CONCRETE BRIDGE WING (FROM BACK SIDE) ①

1" = 1'-0"

NOTE:

ALL EXPOSED FACES OF THE CURB, INCLUDING THE TOP OF CURB, SHALL RECEIVE THE FIELDSTONE FINISH. THE GROUT LINES MAY BE TOOLED BY HAND, IF NECESSARY TO ALIGN WITH THE GROUT LINES ON THE FRONT AND BACK FACES OF THE CURB.



DECORATIVE CONCRETE BRIDGE RAILING AT R.C. SLAB UNIT THREE DIMENSIONAL VIEW

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 8 OF 8
DETAILS OF DECORATIVE CONCRETE RAILING

ROUTE SEC.

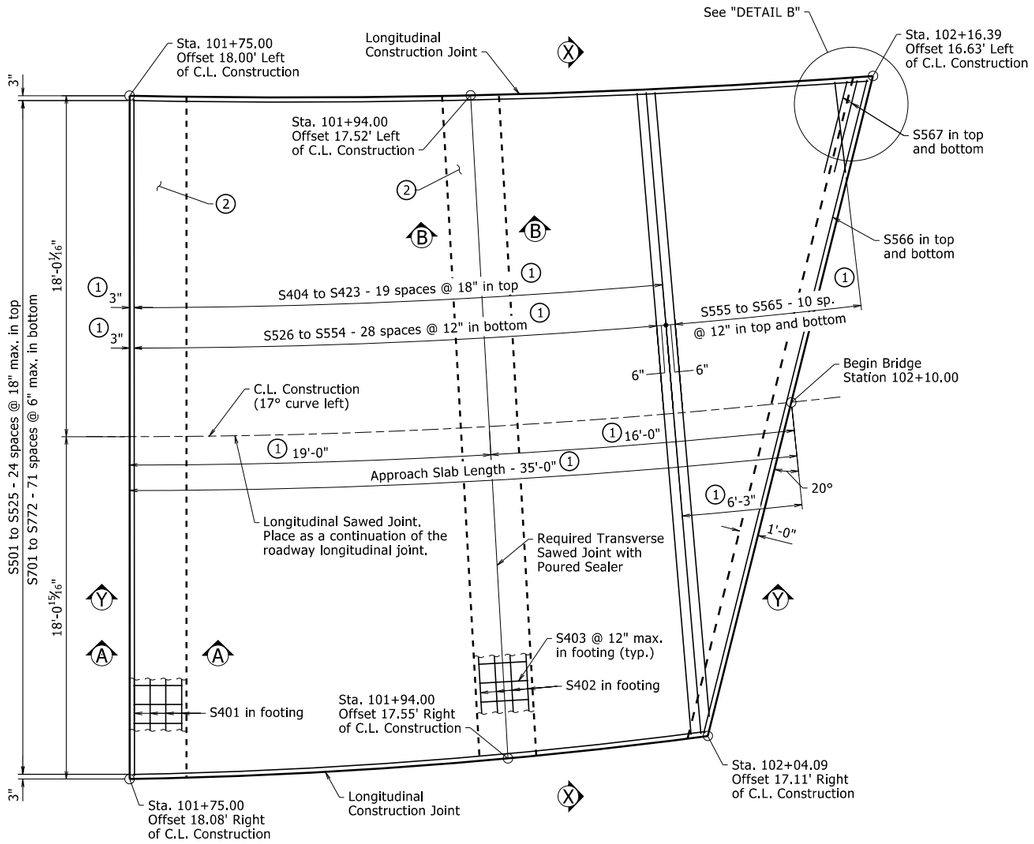
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 05/02/25
CHECKED BY: DBS DATE: 05/20/25
DESIGNED BY: JWP DATE: 02/25
FILENAME: b090672_r1.dgn
SCALE: AS NOTED

BRIDGE NO. 07709 DRAWING NO. 69185

PRINT DATE: 10/2/2025

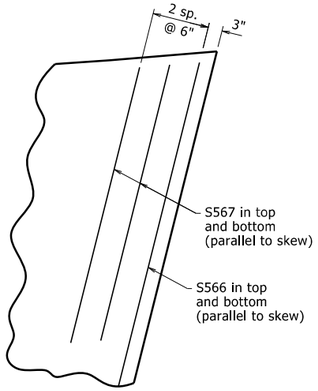
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	77	108
		07709 - TYPE SPECIAL APPROACH SLAB - 69186				



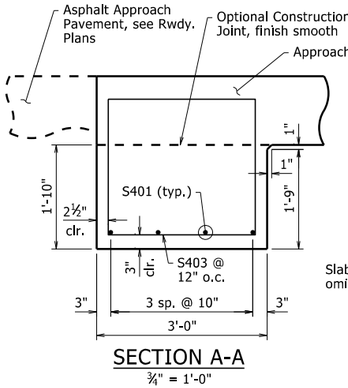
PLAN
¼" = 1'-0"

(1) Measured along C.L. Construction.

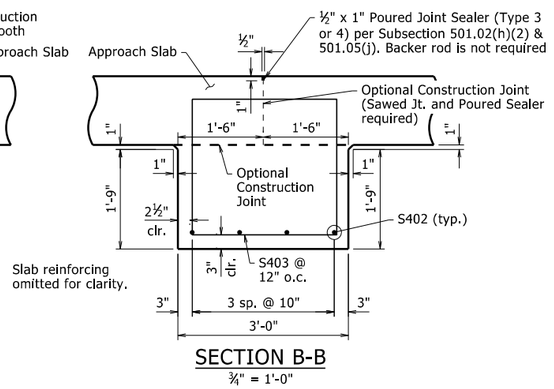
(2) Footings shall be placed radial to C.L. Construction.



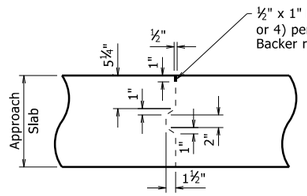
DETAIL B
¾" = 1'-0"



SECTION A-A
¾" = 1'-0"



SECTION B-B
¾" = 1'-0"



LONGITUDINAL CONSTRUCTION JOINT
1" = 1'-0"

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.

C.L. Construction is in a 17°00'00" curve left. Offsets to longitudinal lines within limits of clear roadway transition vary with respect to C.L. Construction. Adjustments to longitudinal bar lengths may be required. Transverse reinforcing shall be placed on radial lines to C.L. Construction. See layout for additional information.

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

Fabricate bar lengths to provide a 2" minimum cover at each end.

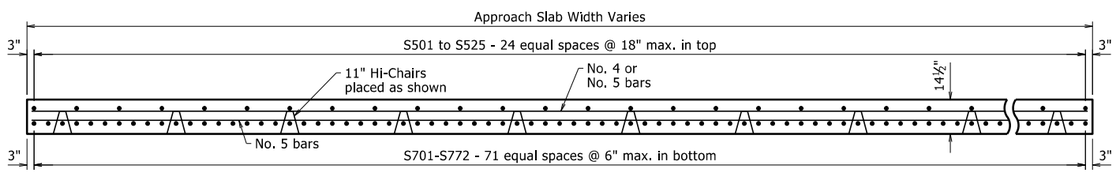
TABLE OF QUANTITIES

Reinforcing Steel (lb.)	Concrete (Cu. Yds.)
8,595	75

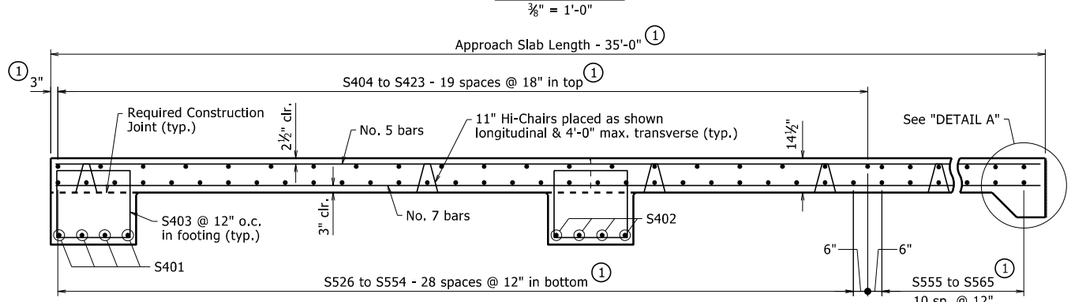
BENDING DIAGRAM
No Scale
Dimensions are out to out of bar

BAR LIST

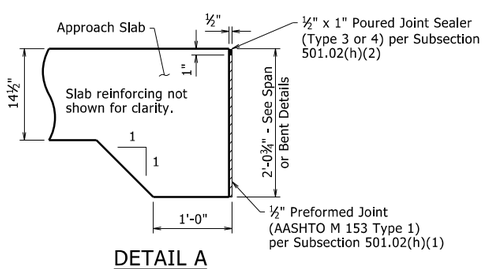
MARK	NO. REQ'D	LENGTH
S401	4	35'-8"
S402	4	34'-9"
S403	73	10'-4"
S404 - S423	1 each	35'-9" to 34'-0"
S501 - S525	1 each	30'-4" to 38'-11½"
S526 to S554	1 each	35'-9" to 34'-0"
S555 - S565	2 each	33'-1" to 4'-10"
S566	2	35'-7"
S567	4	5'-0"
S701 - S777	1 each	30'-4" to 38'-11½"



SECTION X-X
⅜" = 1'-0"



SECTION Y-Y
⅜" = 1'-0"



DETAIL A
1" = 1'-0"

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS

BRIDGE ENGINEER

DETAILS OF TYPE SPECIAL APPROACH SLAB

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

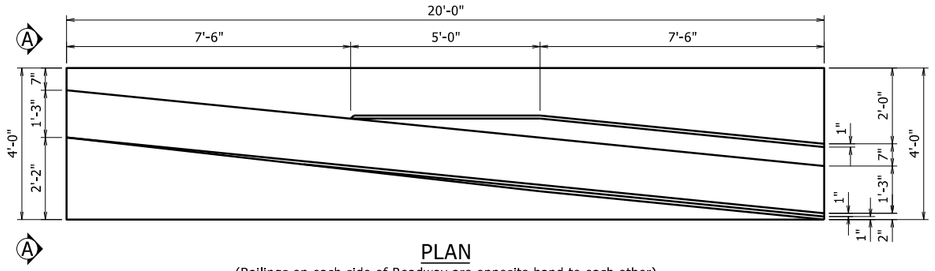
LITTLE ROCK, ARK.

DRAWN BY: LHC DATE: 5/2025
CHECKED BY: WAC DATE: 6/2025
DESIGNED BY: LHC DATE: 5/2025
FILENAME: b090672_as1.dgn
SCALE: AS SHOWN

BRIDGE NO. 07709 DRAWING NO. 69186

PRINT DATE: 10/01/2025

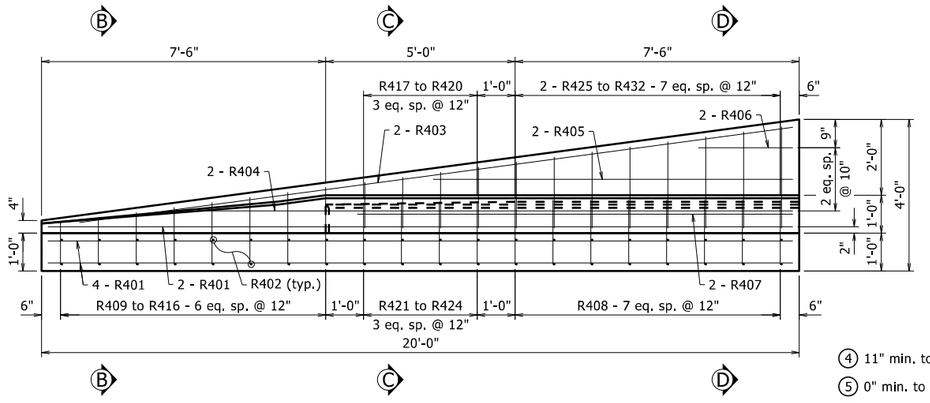
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	78	108
		07709 - TRANS. APPROACH RAILING - 69187				



PLAN

(Railings on each side of Roadway are opposite hand to each other)

½" = 1'-0"



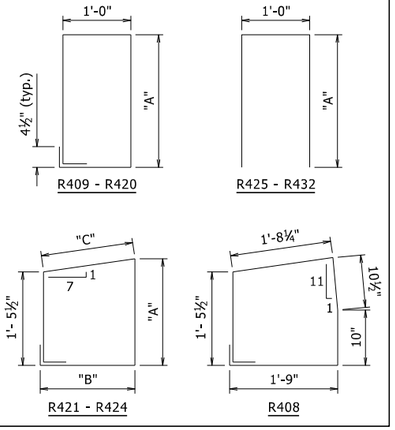
ELEVATION

½" = 1'-0"

BAR LIST - PER TRANSITIONAL APPROACH RAILING

MARK	NO. REQ'D	LENGTH	A	B	C	P.D.
R401	10	19'-8"	-	-	-	Str.
R402	40	3'-8"	-	-	-	Str.
R403	2	19'-0"	-	-	-	Str.
R404	2	15'-6"	-	-	-	Str.
R405	2	9'-6"	-	-	-	Str.
R406	2	2'-6"	-	-	-	Str.
R407	2	11'-6"	-	-	-	Str.
R408	8	6'-11¼"	-	-	-	2"
R409 - R416	1 each	4'-6½" - 6'-5"	1'-1¼" - 2'-½"	-	-	2"
R417 - R420	1 each	4'-9½" - 5'-7"	1'-2¾" - 1'-7½"	-	-	2"
R421 - R424	1 each	5'-6¾" - 6'-5½"	1'-7" - 1'-8¼"	1'-1" - 1'-5¾"	1'-1¼" - 1'-6"	2"
R425 - R432	2 each	4'-4" - 6'-2½"	1'-9" - 2'-8¼"	-	-	2"

BENDING DIAGRAMS



Dimensions are out to out of bars.

(1) Varies from 1'-4" to 4"

(2) 1'-4" max. to 7" min.

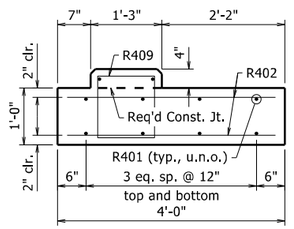
(3) 1½" Clearance is typical everywhere unless specified.

(4) 11" min. to 1'-5" max.

(5) 0" min. to 2" max.

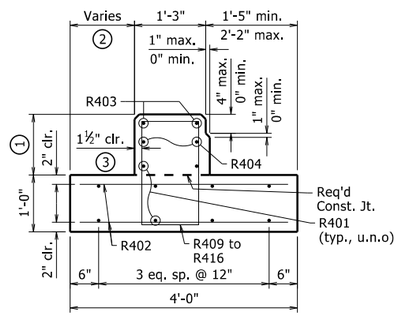
(6) ¾" allowance for Fieldstone Finish, typical for Curb as shown.

(7) Adjustments to longitudinal lines of transitional approach railing may be required at beginning of bridge, see layout for additional information.



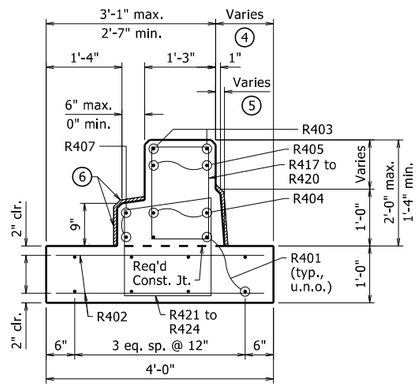
VIEW A-A

¾" = 1'-0"



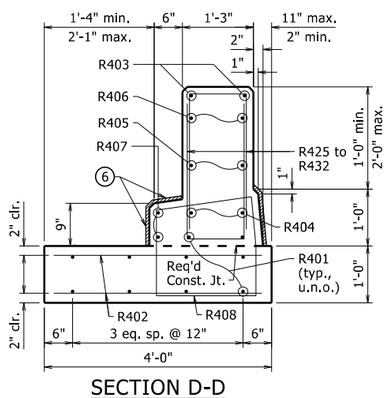
SECTION B-B

¾" = 1'-0"



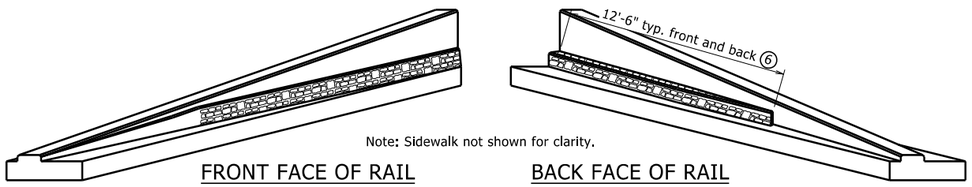
SECTION C-C

¾" = 1'-0"



SECTION D-D

¾" = 1'-0"



Note: Sidewalk not shown for clarity.

FRONT FACE OF RAIL

BACK FACE OF RAIL

PICTORIALS OF TRANSITIONAL APPROACH RAILING

(No Scale)

FOR INFORMATION ONLY
SCHEDULE OF QUANTITIES PER RAIL UNIT

CLASS "S" CONCRETE	REINFORCING STEEL (GRADE 60)	CLASS 2 PROTECTIVE SURFACE TREATMENT	STAINING CONCRETE SURFACES	ARCHITECTURAL FINISH
4.74 Cu. Yds.	363 Lbs.	2.4 Sq. Yds.	33.6 Sq. Ft.	26.9 Sq. Ft.

GENERAL NOTES

Transitional Approach Railing shall be placed at locations shown in the plans.

Concrete Curb with Fieldstone Finish, see SP Job No. 090672 "Architectural Finish" and SP Job No. 090672 "Staining Concrete Surfaces"

All concrete 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 to be chamfered 1" unless noted otherwise.

All reinforcing steel shall be Grade 60 conforming to AASHTO M 31 or M 322, Type A, with mill test reports.

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

Unless noted otherwise in the plans, curing and finishing shall be in accordance with Subsection 806.05(c) and the surface finish type and areas of application shall match that used on the adjacent bridge railing or concrete barrier wall. See Subsection 803.03(b) for Class 2 Protective Surface Treatment. Payment for surface finishes shall not be paid for directly, but shall be considered incidental to the unit price bid for "Transitional Approach Railing".

Transitional Approach Railing shall be paid for at the contract unit price bid for "Transitional Approach Railing". See Section 806 for additional information.

Architectural Finish shall meet the requirements specified in Special Provision "Architectural Finish".

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
10/2/25
CHARLES R. ELLIS

BRIDGE ENGINEER

DETAILS OF TRANSITIONAL APPROACH RAILING

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: LHC DATE: 04/2025 FILENAME: b090672_r1.dgn

CHECKED BY: NAC DATE: 06/30/2025 SCALE: AS SHOWN

DESIGNED BY: LHC DATE: 04/2025

BRIDGE NO. 07709 DRAWING NO. 69187

PRINT DATE: 10/01/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	79	108
		UTILITY RELOCATION				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 20688
JEREMY D. RAWN
9.30.25

CERTIFICATE OF AUTHORIZATION
ENGINEERING SERVICES, INC.
131
ARKANSAS • ENGINEER

SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP, SS, & 210	UNCLASSIFIED EXCAVATION	270	CU. YD.
SS & 606	SELECTED PIPE BEDDING	365	CU. YD.
SP	DEWATER/BYPASS PUMPING	1	LUMP SUM
SP	2" PVC SDR-17 WATER MAIN	280	LIN. FT.
SP	DUCTILE IRON PIPE WATER MAIN FITTINGS	66	POUND
SP	1" POLYETHYLENE SERVICE TUBING	290	LIN. FT.
SP	2" GATE VALVE WITH BOX	1	EACH
SP	SINGLE WATER METER SETTING (INC. METER BOX AND SHUT OFF VALVE)	5	EACH
SP	8" PVC SDR-26 SEWER MAIN	520	LIN. FT.
SP	MANHOLE, 0' TO 6' DEPTH (4' DIAMETER)	7	EACH
SP	MANHOLE, EXTRA DEPTH (4' DIAMETER)	19	LIN. FT.
SP	ABANDON EXISTING MANHOLE	4	EACH
SP	FILL ABANDONED SEWER MAINS WITH FLOWABLE FILL (ABANDON-IN-PLACE)	580	LIN. FT.
SP	FIRE HYDRANT ASSEMBLY	1	EACH
SP	1" SERVICE BORE	240	LIN. FT.
SP	4" PVC SEWER SERVICE LINE	340	LIN. FT.
SP	( )" BLOWOFF ASSEMBLY	1	EACH
SP	8" STEEL ENCASEMENT PIPE	150	LIN. FT.

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	80	108
		UTILITY RELOCATION				

STATE OF ARKANSAS
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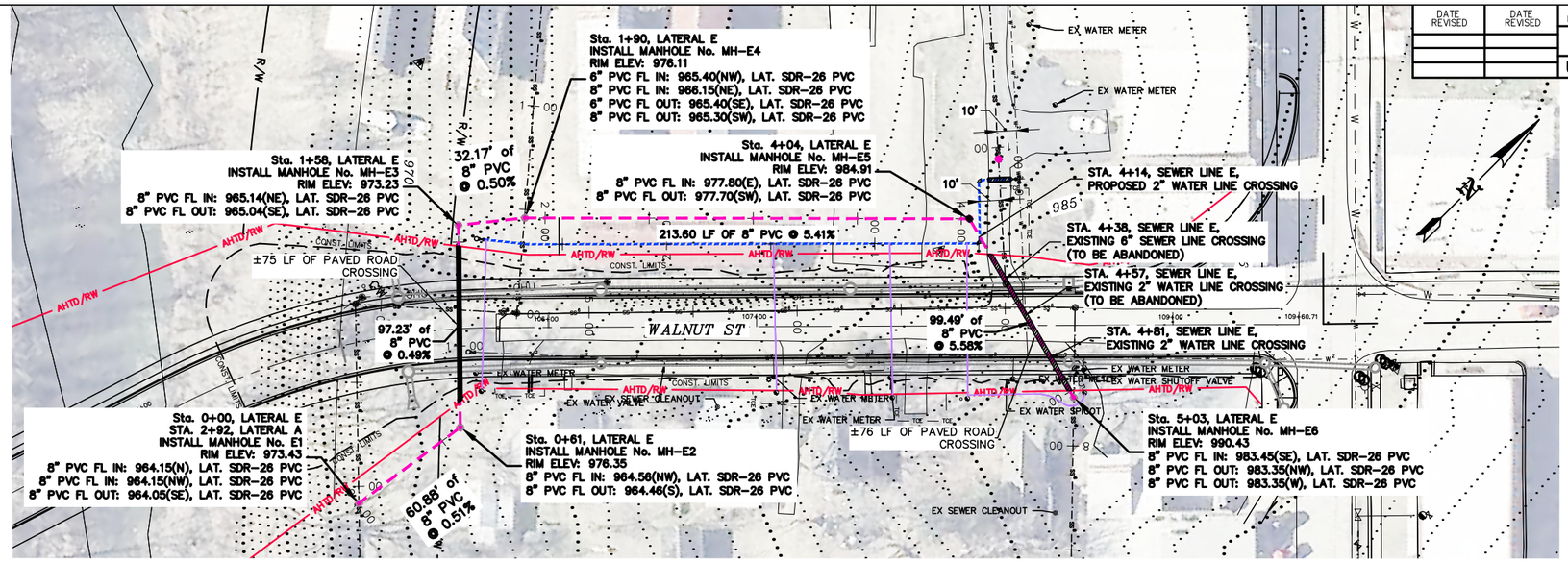
EXISTING SEWER LATERAL 'C'
EX WATER METER
EX WATER METER
EXISTING 2" WATER LINE
MH-C2
MH-E5
PROPOSED 2" WATER LINE RELOCATION (SHEET 04)
PROPOSED SEWER LATERAL 'E' (SHEET 03)
EXISTING SEWER LATERAL 'B'
PROPOSED 2" WATER LINE RELOCATION (SHEET 04)
MH-E4
PROPOSED SEWER LATERAL 'E' (SHEET 03)
MH-E3
PROPOSED BLOW-OFF ASSEMBLY
MH-E2
PROPOSED SEWER LATERAL 'E'
MH-E1
EXISTING SEWER LATERAL 'A'
PROPOSED SEWER LATERAL 'E'
EX SEWER CLEANOUT
EX GREASE TRAP
EX GREASE TRAP
EX WATER METER
EX WATER SHUTOFF VALVE
MH-E6
EX WATER METER
EX WATER SPIGOT
EX SEWER CLEANOUT
EXISTING SEWER LATERAL 'A'
EX SEWER CLEANOUT
EX WATER METER
EX WATER METER
EX WATER VALVE
EX SEWER CLEANOUT
EX WATER METER
EX SEWER MANHOLE
EX WATER METER
EX WATER SHUTOFF VALVE
EX SEWER CLEANOUT
WALNUT ST
MAIN ST
COVE
CREEK
R/W
AHTD/RW
CONST. LIMITS
10' (TYP)
5' (TYP)
14'
14'
N

GENERAL LAYOUT

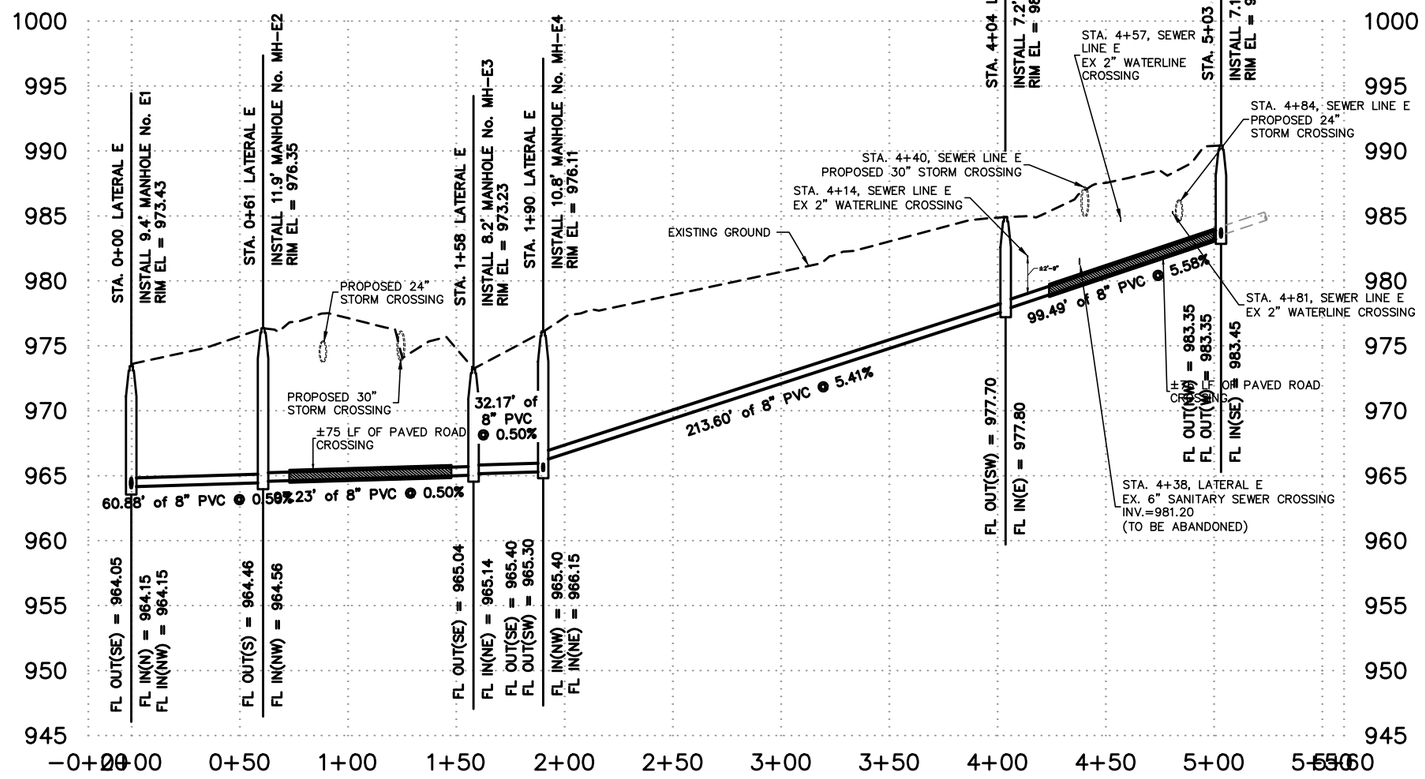
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	81	108
		UTILITY RELOCATION				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 20688
JEREMY D. RAWN
9/30/25

CERTIFICATE OF AUTHORIZATION
ENGINEERING SERVICES, INC.
131
ARKANSAS • ENGINEER



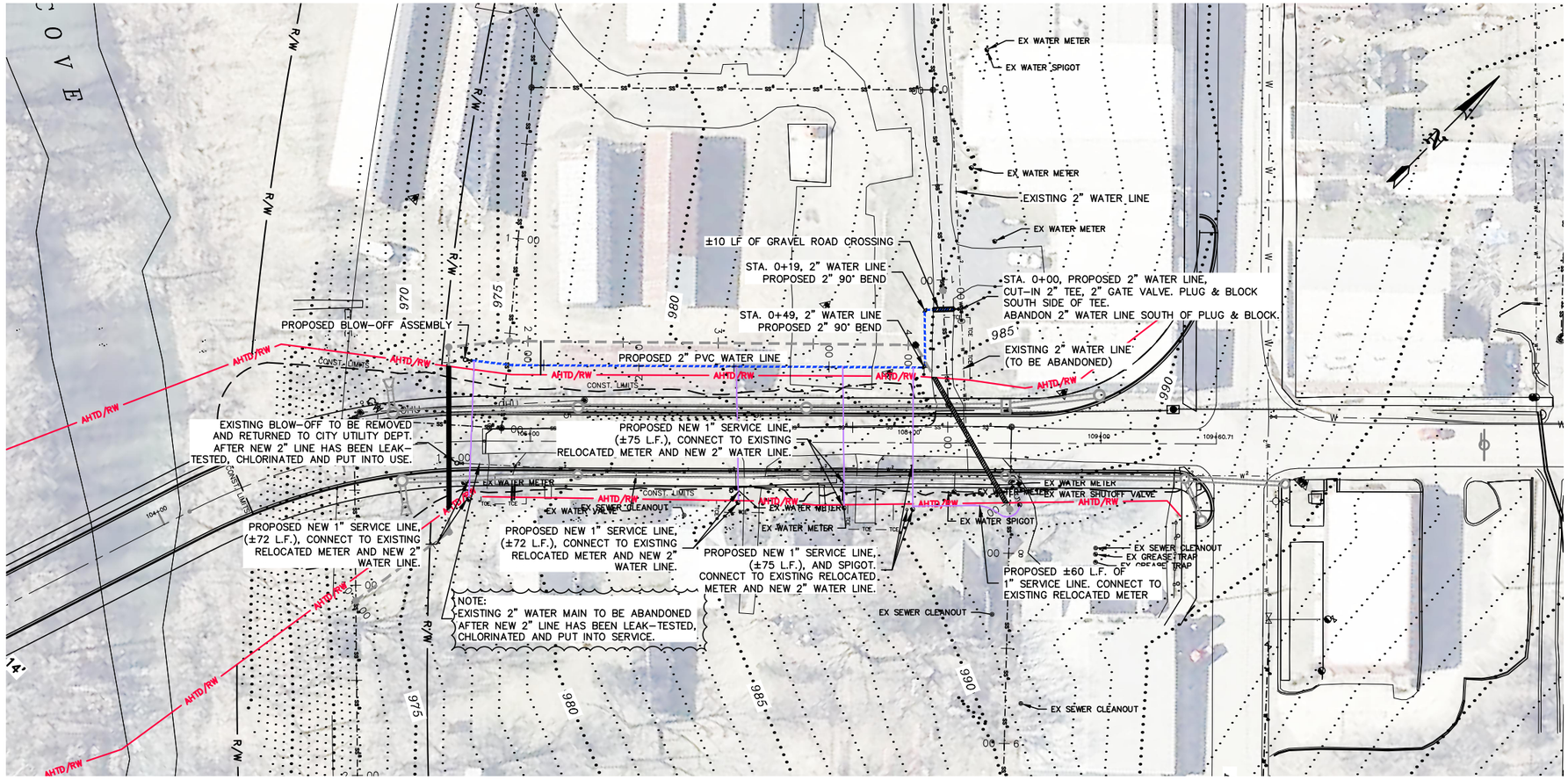
PLAN & PROFILE - PROPOSED SANITARY SEWER



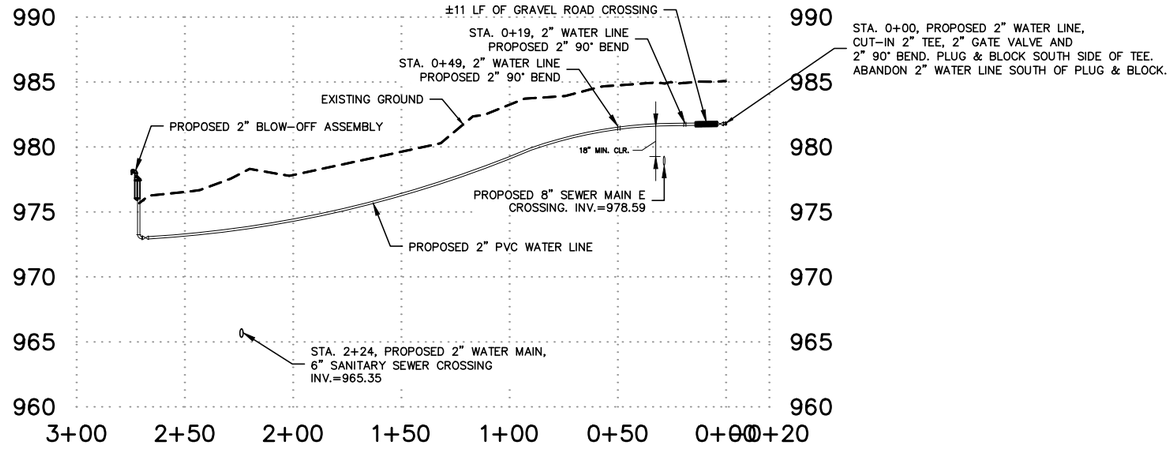
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	82	108
		UTILITY RELOCATION				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 20688
JEREMY D. RAWN
9.30.25

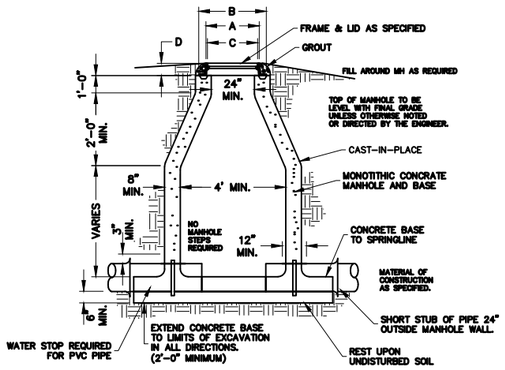
CERTIFICATE OF AUTHORIZATION
ENGINEERING SERVICES, INC.
131
ARKANSAS • ENGINEER



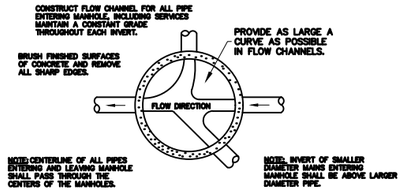
PLAN & PROFILE - PROPOSED WATER



DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	83	108
		UTILITY RELOCATION				



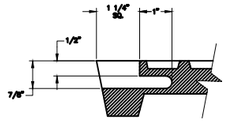
CAST IN PLACE MANHOLE DETAIL



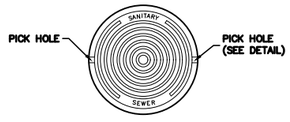
MANHOLE BOTTOM DETAIL

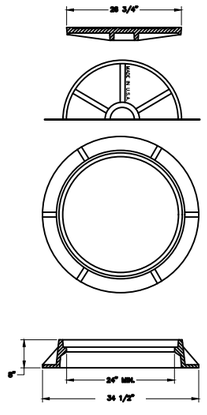
MANHOLES FOR 8" THROUGH 24" SEWERS

(MANHOLES FOR SEWERS LARGER THAN 24" REQUIRE INDIVIDUAL DESIGN)



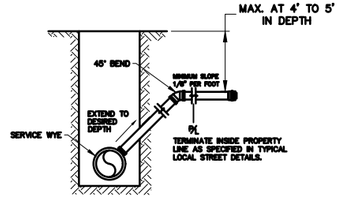
PICKHOLE DETAIL



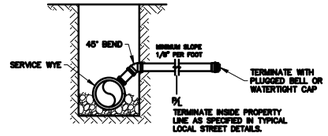


MANHOLE FRAME & COVER

NOTE: MINIMUM WEIGHTS:
COVER: 110 LBS.
FRAME: 148 LBS.
MINIMUM COMBINED WEIGHT: 270 LBS.
(SEE SPECS FOR ADDITIONAL REQUIREMENTS)

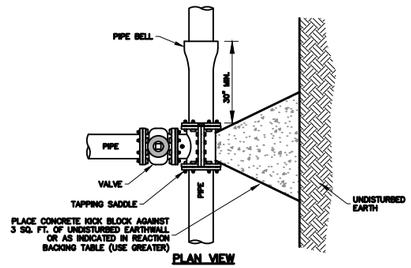


RISER FROM DEEP MAIN

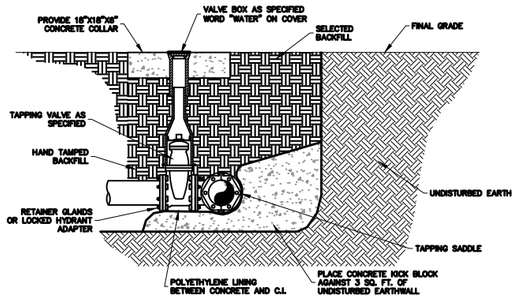


NORMAL DEPTH

SEWER SERVICE CONNECTIONS

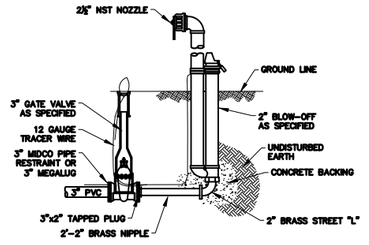


PLAN VIEW

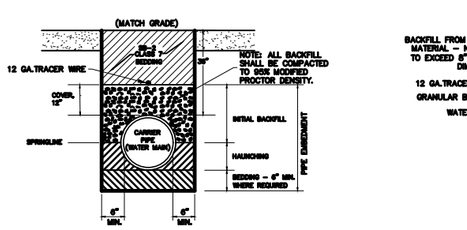


PROFILE VIEW

TAPPING SADDLE AND VALVE

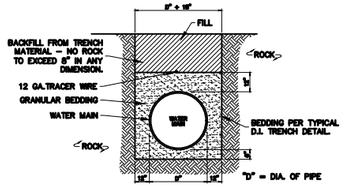


BLOW-OFF ASSEMBLY

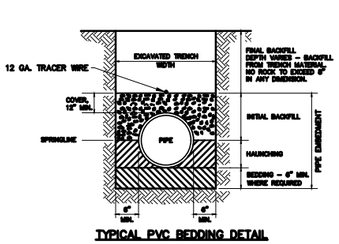


GRAVEL DRIVEWAY CROSSING

(FOR PRIVATE DRIVES)

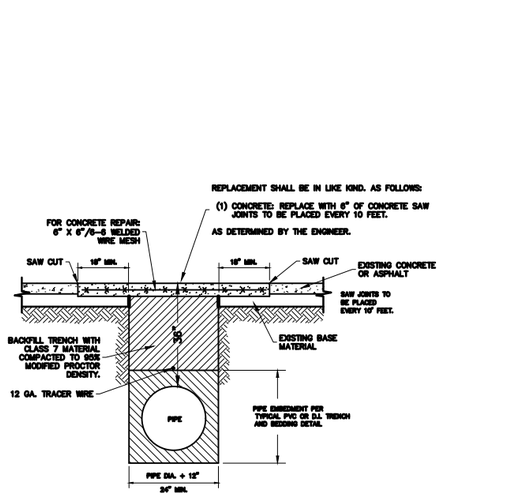


TYPICAL ROCK EXCAVATION AND BEDDING FOR WATER MAIN



TYPICAL PVC BEDDING DETAIL

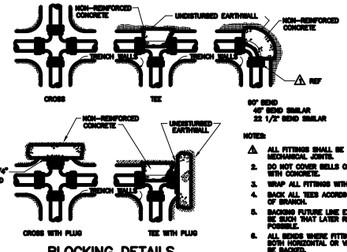
NOTES:
1) PIPE EMBEDMENT SHALL BE IN ACCORDANCE WITH AWWA C605.
2) PIPE EMBEDMENT SHALL HAVE NO PARTICLE SIZE IN EXCESS OF 3/4" ANGULAR ROCK OR 1" ROUNDED STONES.
3) FINAL BACKFILL SHALL HAVE NO PARTICLE SIZE IN EXCESS OF 6" IN ANY DIMENSION.
4) BEDDING WILL BE REQUIRED WHERE NATIVE MATERIAL DOES NOT MEET THE REQUIREMENT FOR EMBEDMENT AS DESCRIBED ABOVE. THE CONTRACTOR SHALL FURNISH AND INSTALL SUITABLE MATERIAL.
5) MINIMUM TRENCH WIDTH SHALL BE PIPE DIAMETER PLUS 12" MEASURED AT THE SPRINGLINE TO ENABLE BACKFILL MATERIAL TO BE INSTALLED IN THE HAUNCHING AREA. IN NO CASE SHALL THE TRENCH WIDTH BE LESS THAN 18" WIDE.
6) PIPING SHALL HAVE A MINIMUM COVER OF 36" OVER THE TOP OF THE PIPE.



CONCRETE AND ASPHALT DRIVE REPAIR

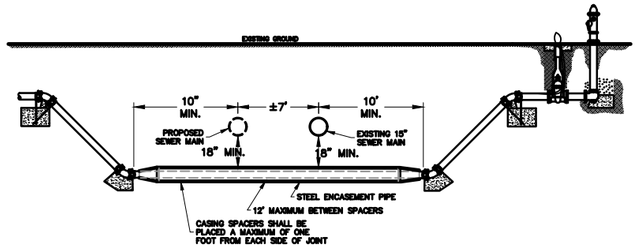
(FOR PRIVATE DRIVES)

REACTION BACKING TABLE				
SIZE	REQUIRED SQ. FT. OF UNDISTURBED EARTHWALL FOR REACTION BACKING			
	TYPE OF FITTINGS			
	TEE	90°	45°	22 1/2°
4"	1	1	1	1
6"	2	2	1	1
8"	3	3	2	1
10"	4	4	2	2
12"	6	5	3	2
14"	8	7	4	2
16"	10	9	5	3
18"	12	11	6	3
20"	15	13	7	4
24"	18	17	9	5
30"	27	24	13	7
36"	38	33	17	9

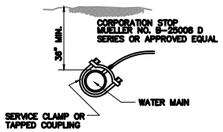


BLOCKING DETAILS

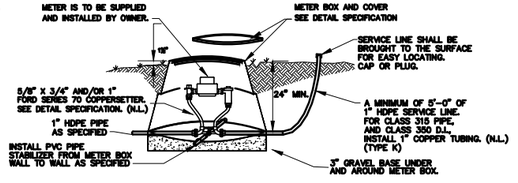
NOTES:
1. ALL FITTINGS SHALL BE MECHANICAL JOINTS.
2. DO NOT COVER BELLS OR FLANGES WITH CONCRETE.
3. WRAP ALL FITTINGS WITH VISQUEEN.
4. BACK ALL TEES ACORDING TO SIZE OF BRANCH.
5. BACKING FUTURE LINE EXTENSIONS SHALL BE SUCH THAT LATER REMOVAL IS POSSIBLE.
6. ALL BENDS WHERE FITTINGS ARE USED, BOTH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



TYPICAL ENCASED HIGHWAY CROSSING



NOTE: SERVICE CLAMPS REQUIRED ON PVC MAINS MUELLER NO. S-13000 OR APPROVED EQUAL.



TYPICAL METER SERVICE 5/8" x 3/4" AND 1"

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 20688
JEREMY D. RAWN
9.30.25

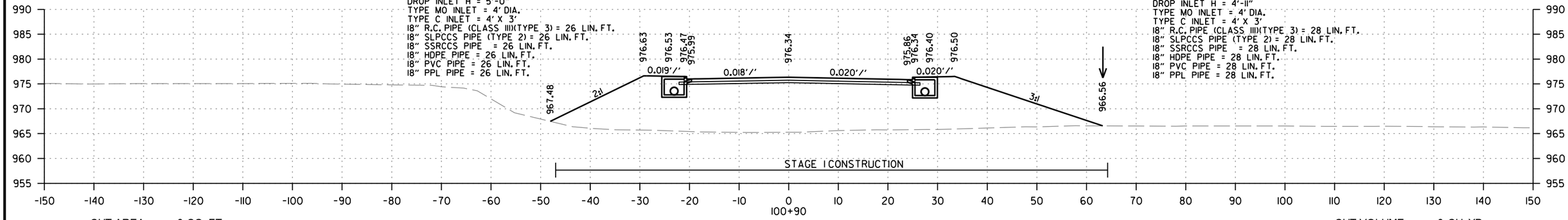
CERTIFICATE OF AUTHORIZATION
ENGINEERING SERVICES, INC.
131
ARKANSAS • ENGINEER

TYPICAL DETAILS

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	84	108
		CROSS SECTIONS				

STAGE 1

STA. 100+90 CONSTRUCT
DROP INLET ON LT. W/ 4' EXTENSION
AND 18" X 26' PIPE OUTLET
CONNECT TO DROP INLET @ STA. 100+60 LT.
DROP INLET H = 5'-0"
TYPE MO INLET = 4' DIA.
TYPE C INLET = 4' X 3'
18" R.C. PIPE (CLASS III)(TYPE 3) = 26 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 26 LIN. FT.
18" SSRCCS PIPE = 26 LIN. FT.
18" HDPE PIPE = 26 LIN. FT.
18" PVC PIPE = 26 LIN. FT.
18" PPL PIPE = 26 LIN. FT.



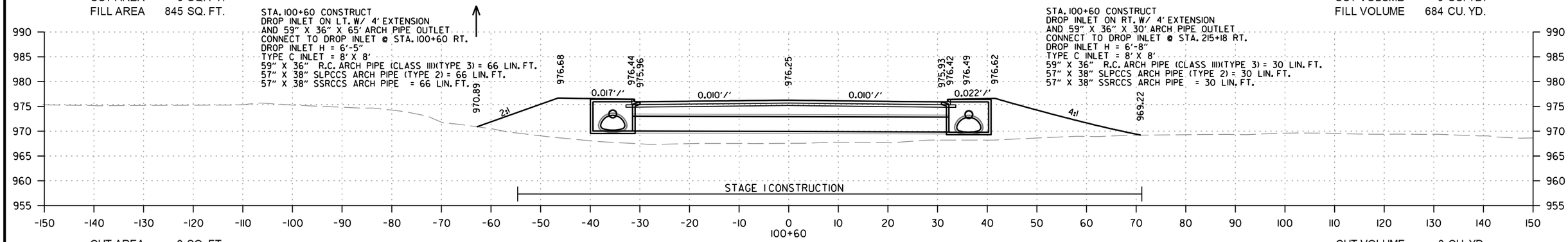
CUT AREA 0 SQ. FT.
FILL AREA 845 SQ. FT.

CUT VOLUME 0 CU. YD.
FILL VOLUME 684 CU. YD.

STAGE 1

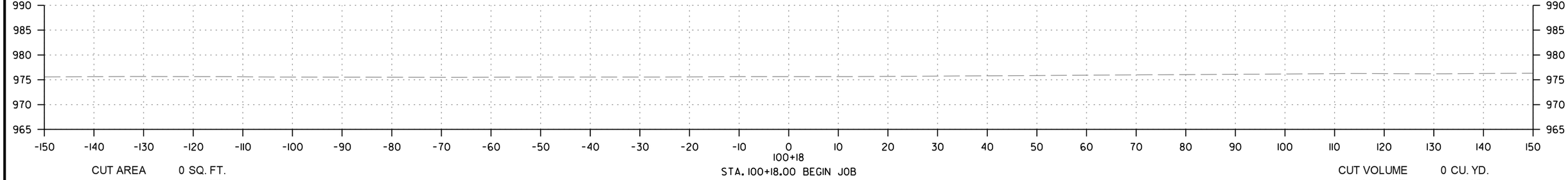
STA. 100+60 CONSTRUCT
DROP INLET ON LT. W/ 4' EXTENSION
AND 59" X 36" X 65' ARCH PIPE OUTLET
CONNECT TO DROP INLET @ STA. 100+60 RT.
DROP INLET H = 6'-5"
TYPE C INLET = 8' X 8'
59" X 36" R.C. ARCH PIPE (CLASS III)(TYPE 3) = 66 LIN. FT.
57" X 38" SLPCCS ARCH PIPE (TYPE 2) = 66 LIN. FT.
57" X 38" SSRCCS ARCH PIPE = 66 LIN. FT.

STA. 100+60 CONSTRUCT
DROP INLET ON RT. W/ 4' EXTENSION
AND 59" X 36" X 30' ARCH PIPE OUTLET
CONNECT TO DROP INLET @ STA. 215+18 RT.
DROP INLET H = 6'-8"
TYPE C INLET = 8' X 8'
59" X 36" R.C. ARCH PIPE (CLASS III)(TYPE 3) = 30 LIN. FT.
57" X 38" SLPCCS ARCH PIPE (TYPE 2) = 30 LIN. FT.
57" X 38" SSRCCS ARCH PIPE = 30 LIN. FT.



CUT AREA 0 SQ. FT.
FILL AREA 387 SQ. FT.

CUT VOLUME 0 CU. YD.
FILL VOLUME 301 CU. YD.



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

STA. 100+18.00 BEGIN JOB

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

HWY. 66
STA. 100+18 TO STA. 100+90

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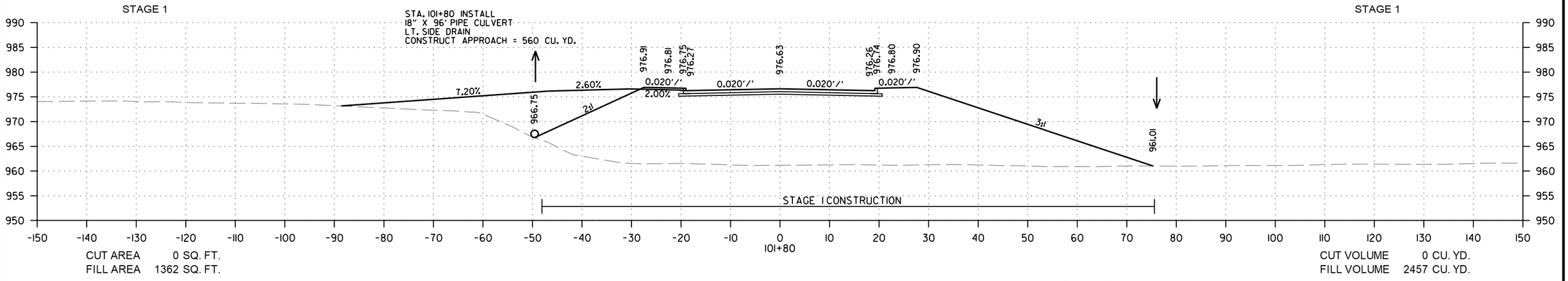
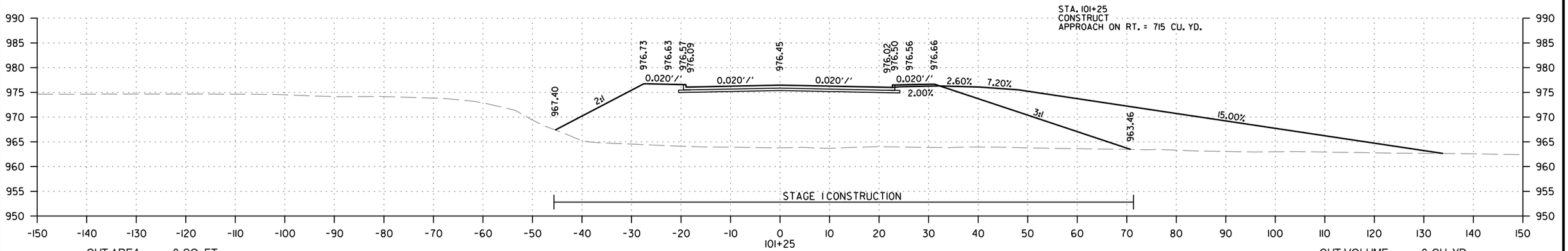
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	85	108
		CROSS SECTIONS				



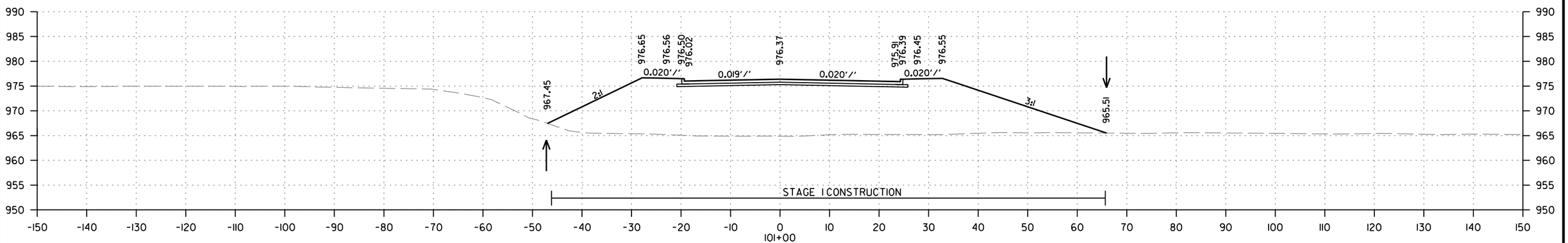
CUT AREA 0 SQ. FT.
FILL AREA 1362 SQ. FT.

CUT VOLUME 0 CU. YD.
FILL VOLUME 2457 CU. YD.



CUT AREA 0 SQ. FT.
FILL AREA 1050 SQ. FT.

CUT VOLUME 0 CU. YD.
FILL VOLUME 917 CU. YD.



CUT AREA 0 SQ. FT.
FILL AREA 931 SQ. FT.

CUT VOLUME 0 CU. YD.
FILL VOLUME 329 CU. YD.

HWY. 66
STA. 101+00 TO STA. 101+80

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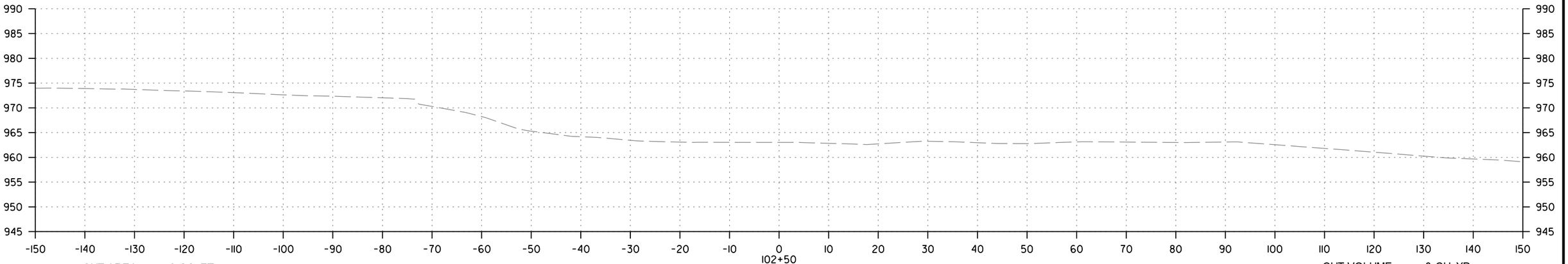
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	86	108
		CROSS SECTIONS				

STAGE 1

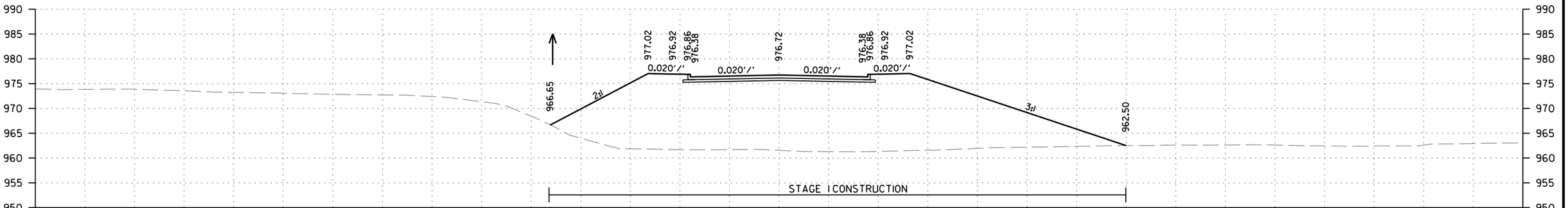


CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

STAGE 1

CUT VOLUME 0 CU. YD.
FILL VOLUME 935 CU. YD.

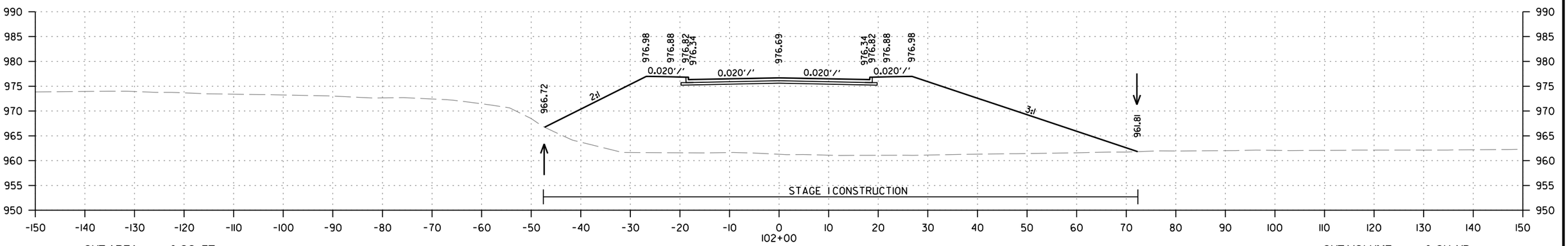
TOE OF SLOPE



CUT AREA 0 SQ. FT.
FILL AREA 1262 SQ. FT.

BRIDGE END

CUT VOLUME 0 CU. YD.
FILL VOLUME 477 CU. YD.



CUT AREA 0 SQ. FT.
FILL AREA 1316 SQ. FT.

CUT VOLUME 0 CU. YD.
FILL VOLUME 992 CU. YD.

HWY. 66
STA. 102+00 TO STA. 102+50

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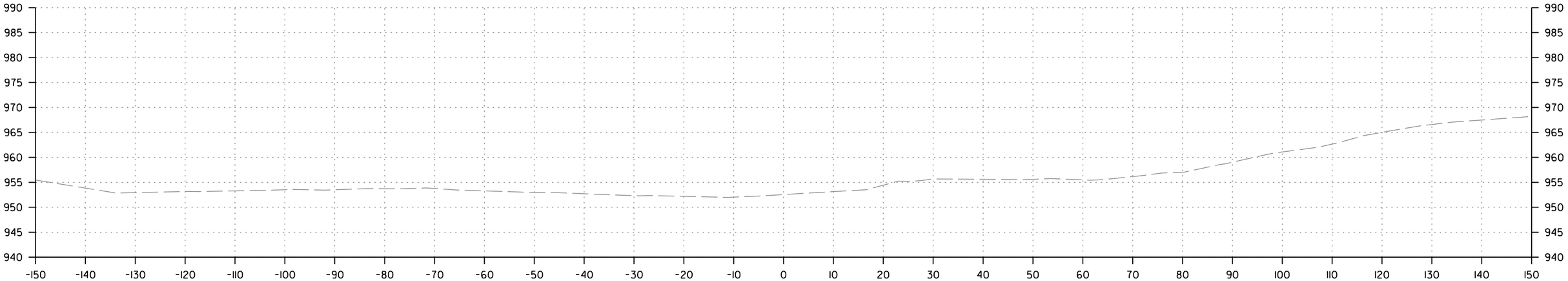
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	87	108
		CROSS SECTIONS				

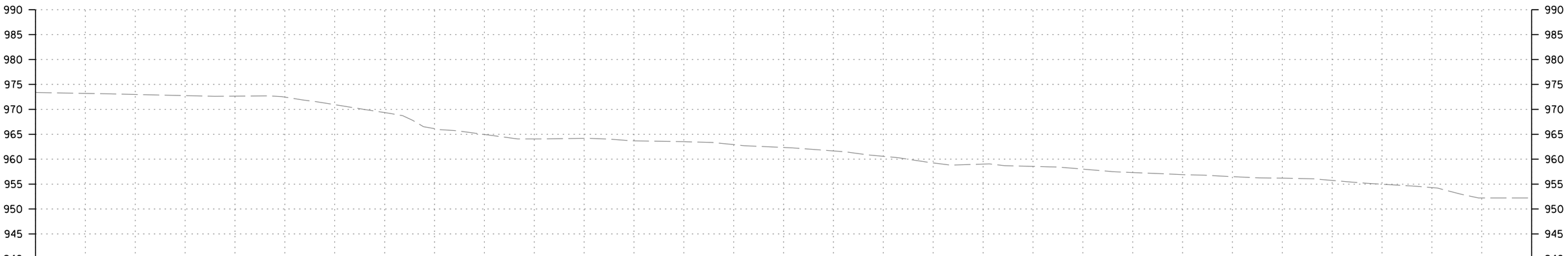
STAGE 1



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

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

STAGE 1



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

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

HWY. 66
STA. 103+00 TO STA. 104+00

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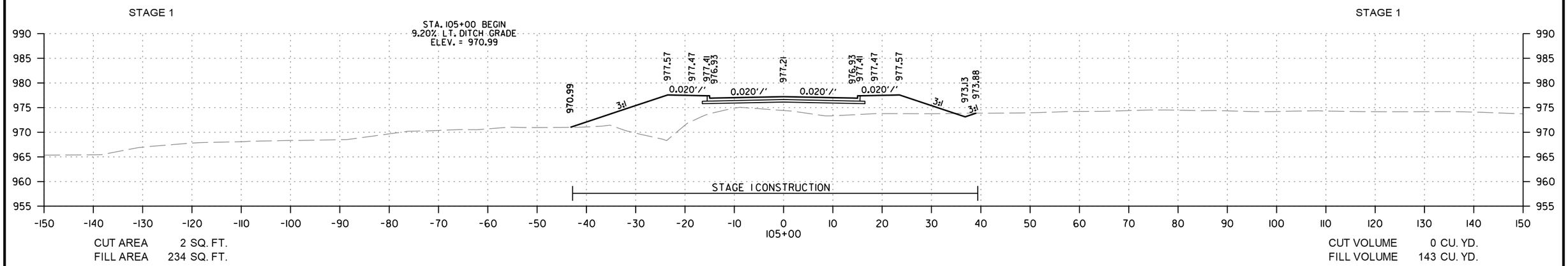
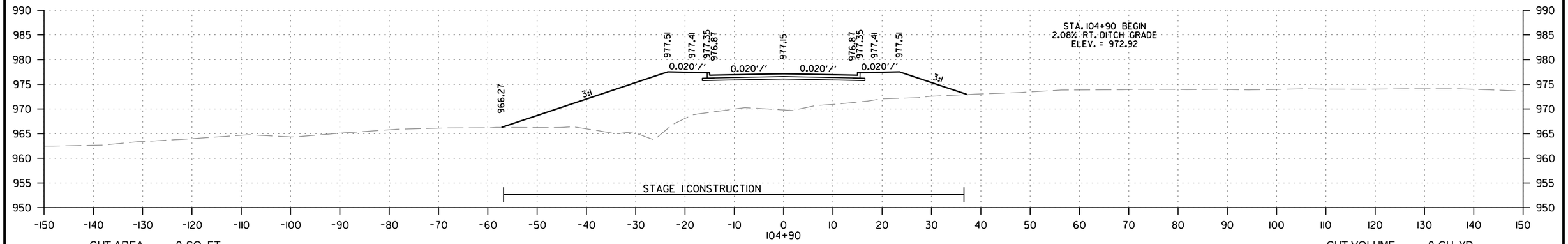
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	88	108
		CROSS SECTIONS				



CUT AREA 2 SQ. FT.
FILL AREA 234 SQ. FT.

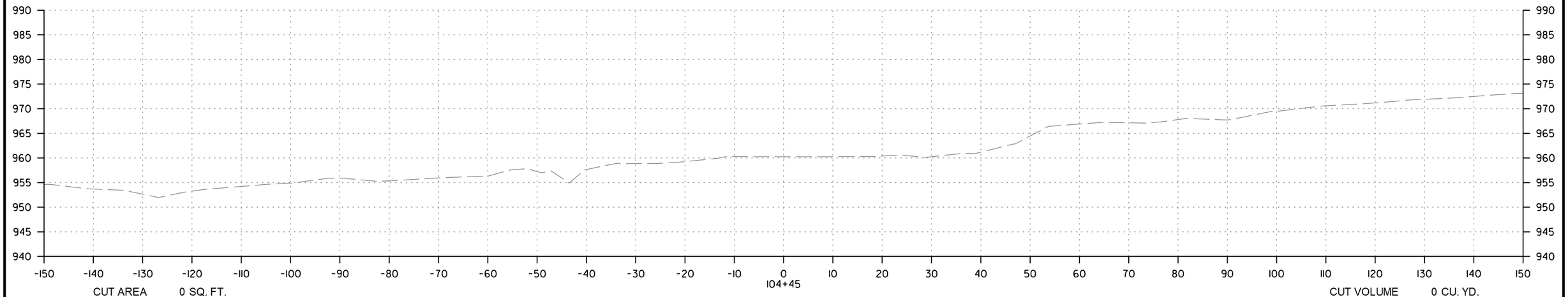
CUT VOLUME 0 CU. YD.
FILL VOLUME 143 CU. YD.



CUT AREA 0 SQ. FT.
FILL AREA 540 SQ. FT.

END BRIDGE

CUT VOLUME 0 CU. YD.
FILL VOLUME 450 CU. YD.



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

TOE OF SLOPE

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

HWY. 66
STA. 104+45 TO STA. 105+00

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DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	89	108
		CROSS SECTIONS				

HWY. 66
STA. 105+30 TO STA. 106+25

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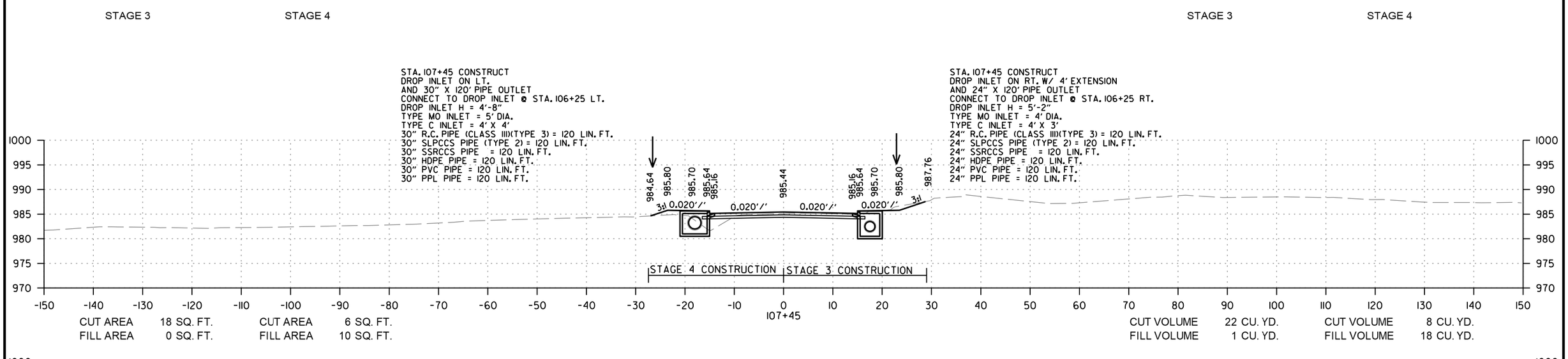
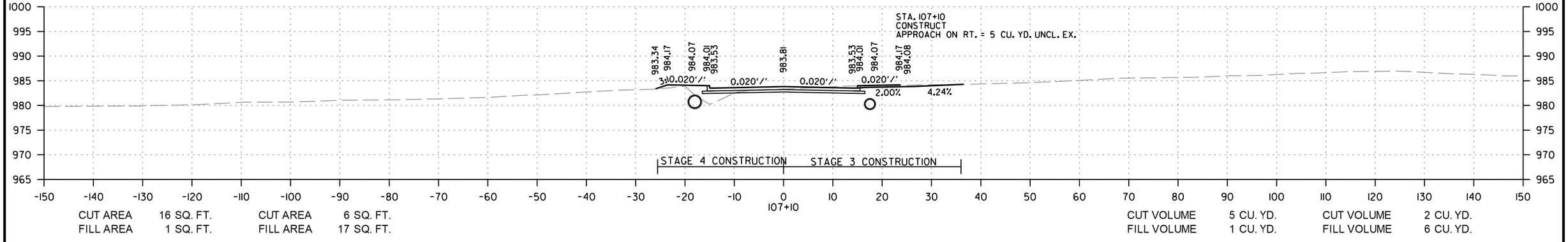
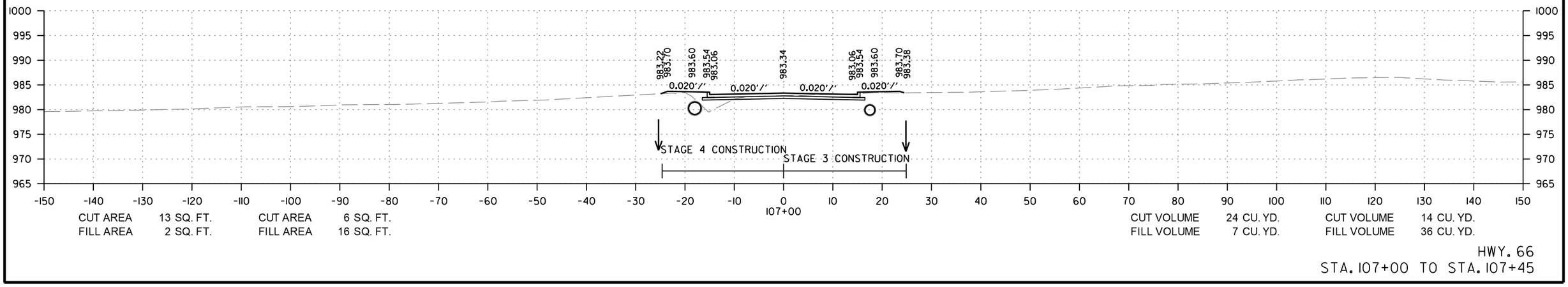
R090672.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	90	108
		CROSS SECTIONS				







HWY. 66
STA. 107+00 TO STA. 107+45

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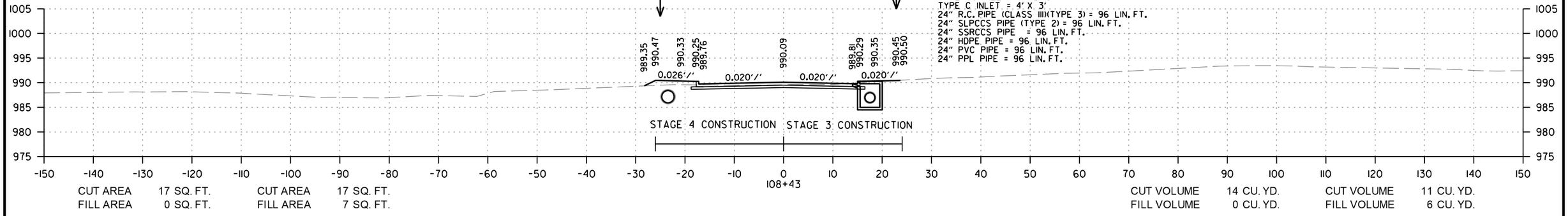
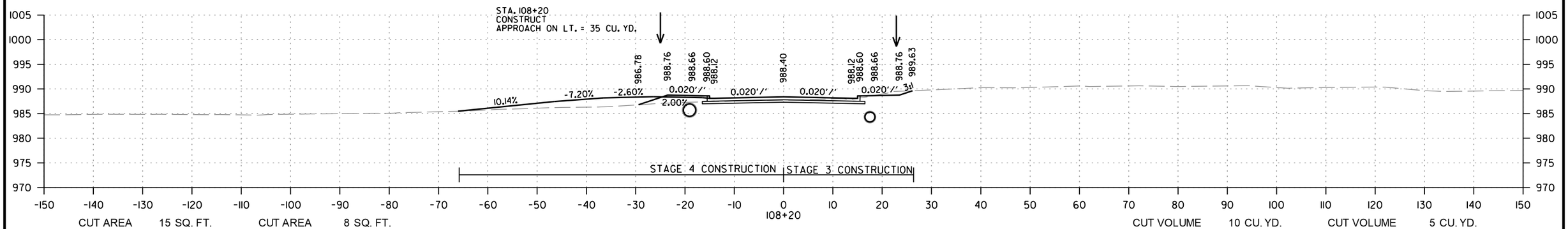
R090672.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	91	108
		CROSS SECTIONS				



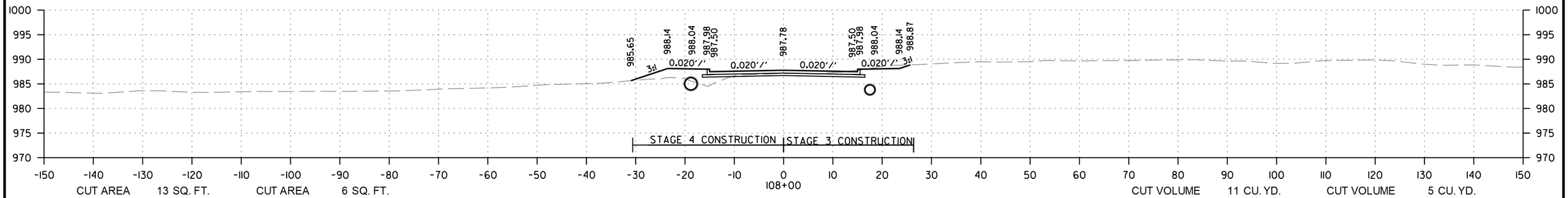
CUT AREA 17 SQ. FT. CUT AREA 17 SQ. FT.
FILL AREA 0 SQ. FT. FILL AREA 7 SQ. FT.

CUT VOLUME 14 CU. YD. CUT VOLUME 11 CU. YD.
FILL VOLUME 0 CU. YD. FILL VOLUME 6 CU. YD.



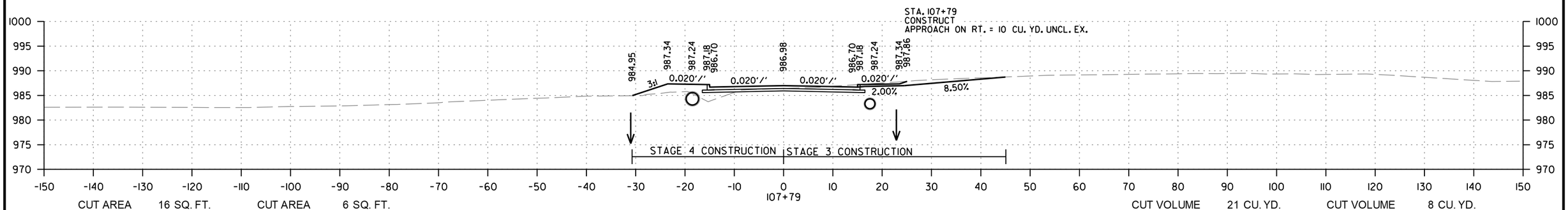
CUT AREA 15 SQ. FT. CUT AREA 8 SQ. FT.
FILL AREA 0 SQ. FT. FILL AREA 8 SQ. FT.

CUT VOLUME 10 CU. YD. CUT VOLUME 5 CU. YD.
FILL VOLUME 0 CU. YD. FILL VOLUME 13 CU. YD.



CUT AREA 13 SQ. FT. CUT AREA 6 SQ. FT.
FILL AREA 0 SQ. FT. FILL AREA 28 SQ. FT.

CUT VOLUME 11 CU. YD. CUT VOLUME 5 CU. YD.
FILL VOLUME 0 CU. YD. FILL VOLUME 21 CU. YD.



CUT AREA 16 SQ. FT. CUT AREA 6 SQ. FT.
FILL AREA 0 SQ. FT. FILL AREA 27 SQ. FT.

CUT VOLUME 21 CU. YD. CUT VOLUME 8 CU. YD.
FILL VOLUME 0 CU. YD. FILL VOLUME 23 CU. YD.

HWY. 66
STA. 107+79 TO STA. 108+20

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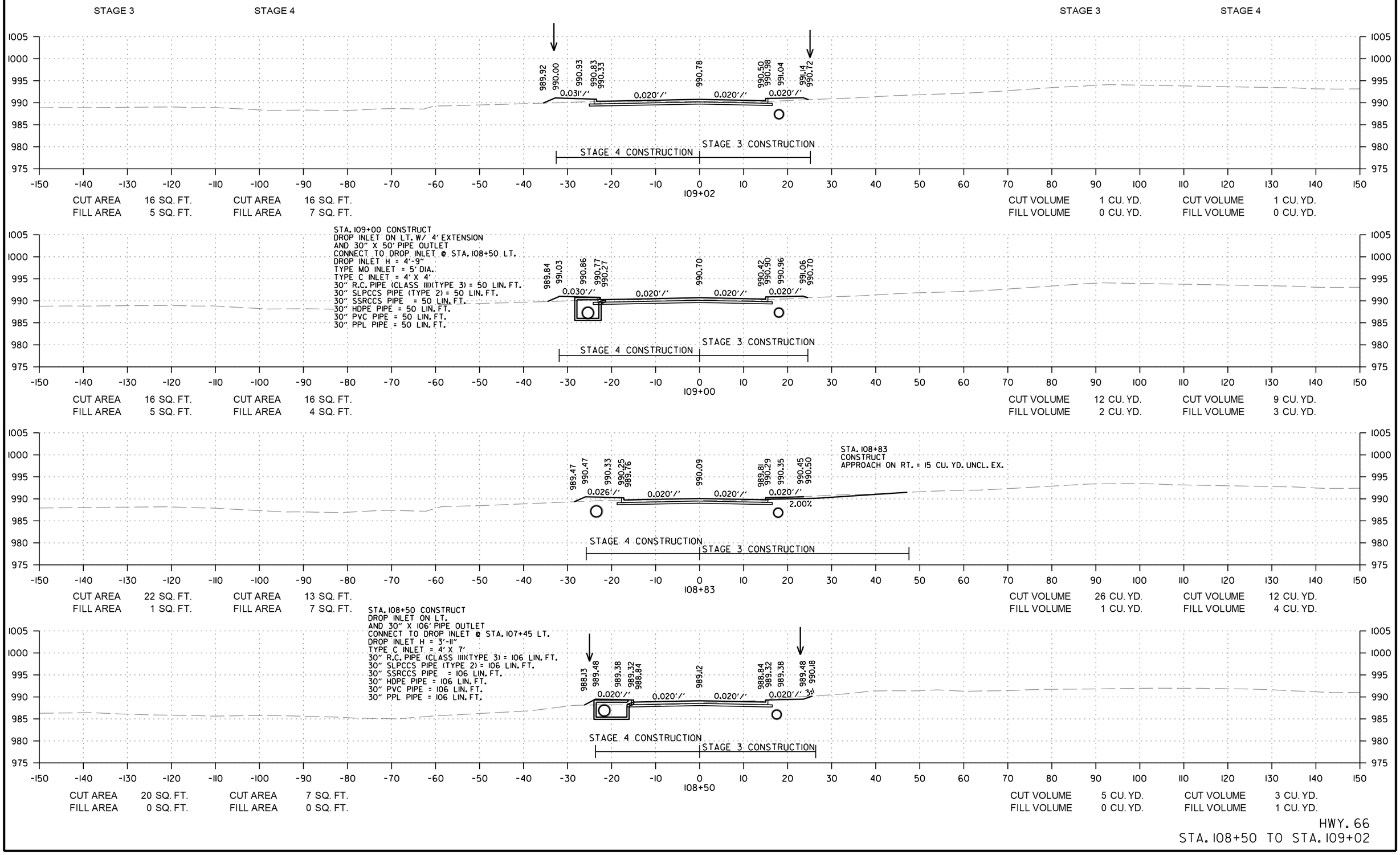
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	92	108
		CROSS SECTIONS				



HWY. 66
STA. 108+50 TO STA. 109+02

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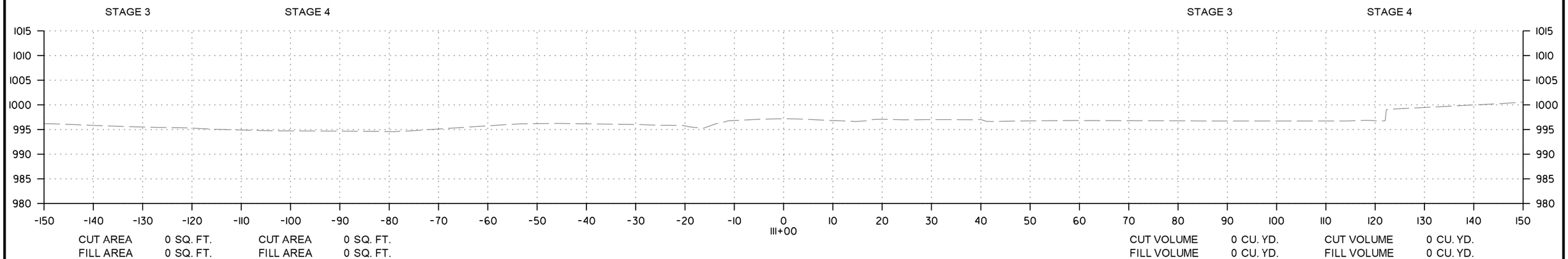
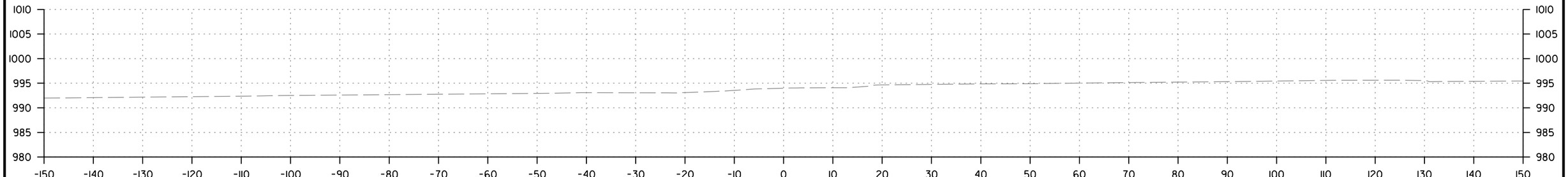
R090672.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	93	108
		CROSS SECTIONS				



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

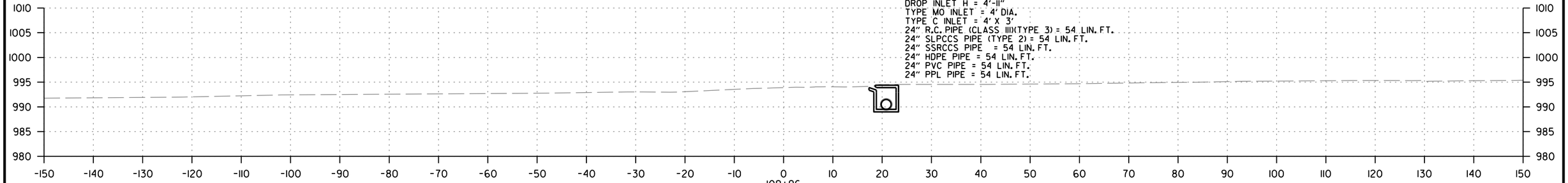
CUT VOLUME 0 CU. YD. CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD. FILL VOLUME 0 CU. YD.



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

STA. 109+96 CONSTRUCT
DROP INLET ON RT. W/8' EXTENSION
AND 24" X 53' PIPE OUTLET
CONNECT TO DROP INLET @ STA. 109+45 RT.
DROP INLET H = 4'-11"
TYPE MO INLET = 4' DIA.
TYPE C INLET = 4' X 3'
24" R.C. PIPE (CLASS III)(TYPE 3) = 54 LIN. FT.
24" SLPCCS PIPE (TYPE 2) = 54 LIN. FT.
24" SSRCCS PIPE = 54 LIN. FT.
24" HDPE PIPE = 54 LIN. FT.
24" PVC PIPE = 54 LIN. FT.
24" PPL PIPE = 54 LIN. FT.

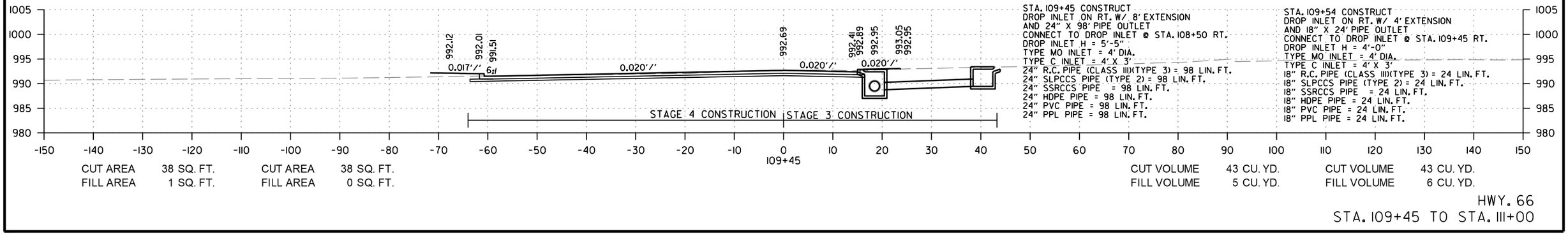
CUT VOLUME 0 CU. YD. CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD. FILL VOLUME 0 CU. YD.



STA. 109+60.71 END JOB

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

CUT VOLUME 36 CU. YD. CUT VOLUME 36 CU. YD.
FILL VOLUME 1 CU. YD. FILL VOLUME 0 CU. YD.



STA. 109+45 CONSTRUCT
DROP INLET ON RT. W/ 8' EXTENSION
AND 24" X 98' PIPE OUTLET
CONNECT TO DROP INLET @ STA. 108+50 RT.
DROP INLET H = 5'-5"
TYPE MO INLET = 4' DIA.
TYPE C INLET = 4' X 3'
24" R.C. PIPE (CLASS III)(TYPE 3) = 98 LIN. FT.
24" SLPCCS PIPE (TYPE 2) = 98 LIN. FT.
24" SSRCCS PIPE = 98 LIN. FT.
24" HDPE PIPE = 98 LIN. FT.
24" PVC PIPE = 98 LIN. FT.
24" PPL PIPE = 98 LIN. FT.

STA. 109+54 CONSTRUCT
DROP INLET ON RT. W/ 4' EXTENSION
AND 18" X 24' PIPE OUTLET
CONNECT TO DROP INLET @ STA. 109+45 RT.
DROP INLET H = 4'-0"
TYPE MO INLET = 4' DIA.
TYPE C INLET = 4' X 3'
18" R.C. PIPE (CLASS III)(TYPE 3) = 24 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 24 LIN. FT.
18" SSRCCS PIPE = 24 LIN. FT.
18" HDPE PIPE = 24 LIN. FT.
18" PVC PIPE = 24 LIN. FT.
18" PPL PIPE = 24 LIN. FT.

CUT AREA 38 SQ. FT. CUT AREA 38 SQ. FT.
FILL AREA 1 SQ. FT. FILL AREA 0 SQ. FT.

CUT VOLUME 43 CU. YD. CUT VOLUME 43 CU. YD.
FILL VOLUME 5 CU. YD. FILL VOLUME 6 CU. YD.

HWY. 66
STA. 109+45 TO STA. 111+00

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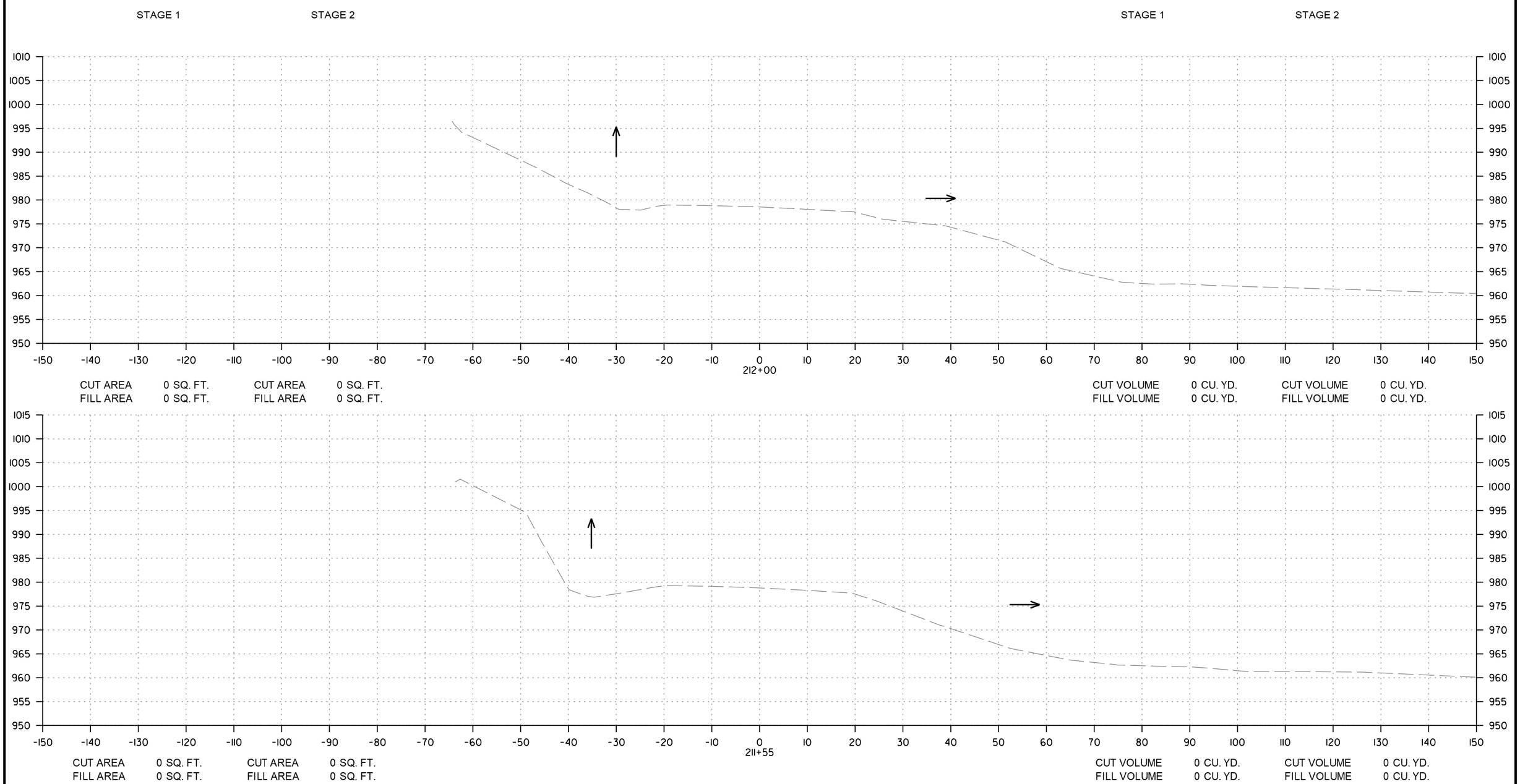
R090672.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	94	108
		CROSS SECTIONS				



HWY. 65
CROSS SECTION STA. 211+55 TO STA. 212+00

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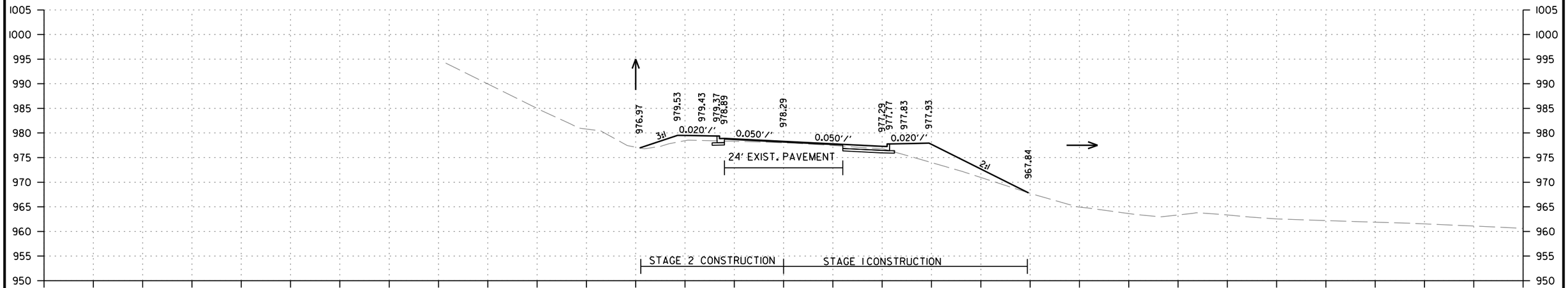
R090672.DGN MicroStation v8.11.9.578

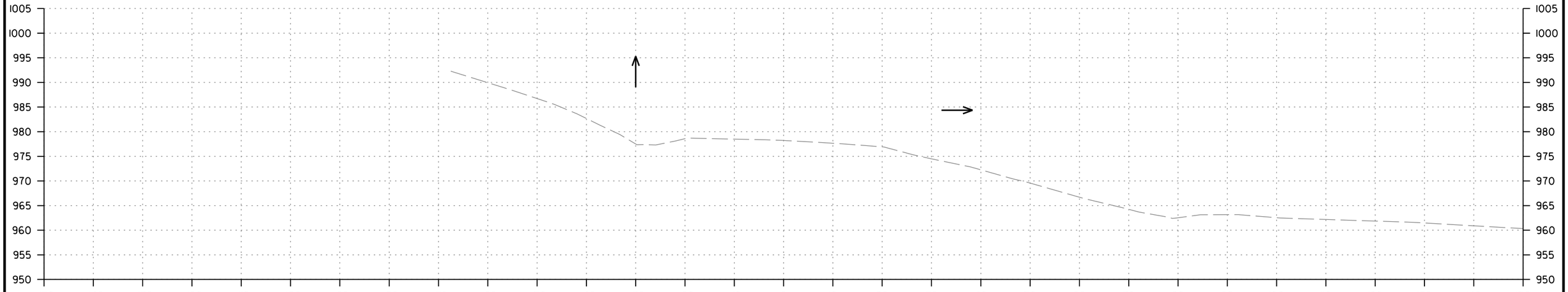
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	95	108
		CROSS SECTIONS				

STAGE 1 STAGE 2 STAGE 1 STAGE 2



CUT AREA 8 SQ. FT. CUT AREA 2 SQ. FT.
FILL AREA 57 SQ. FT. FILL AREA 15 SQ. FT.

CUT VOLUME 4 CU. YD. CUT VOLUME 1 CU. YD.
FILL VOLUME 26 CU. YD. FILL VOLUME 7 CU. YD.



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

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

HWY. 65
CROSS SECTION STA. 212+55 TO STA. 212+80

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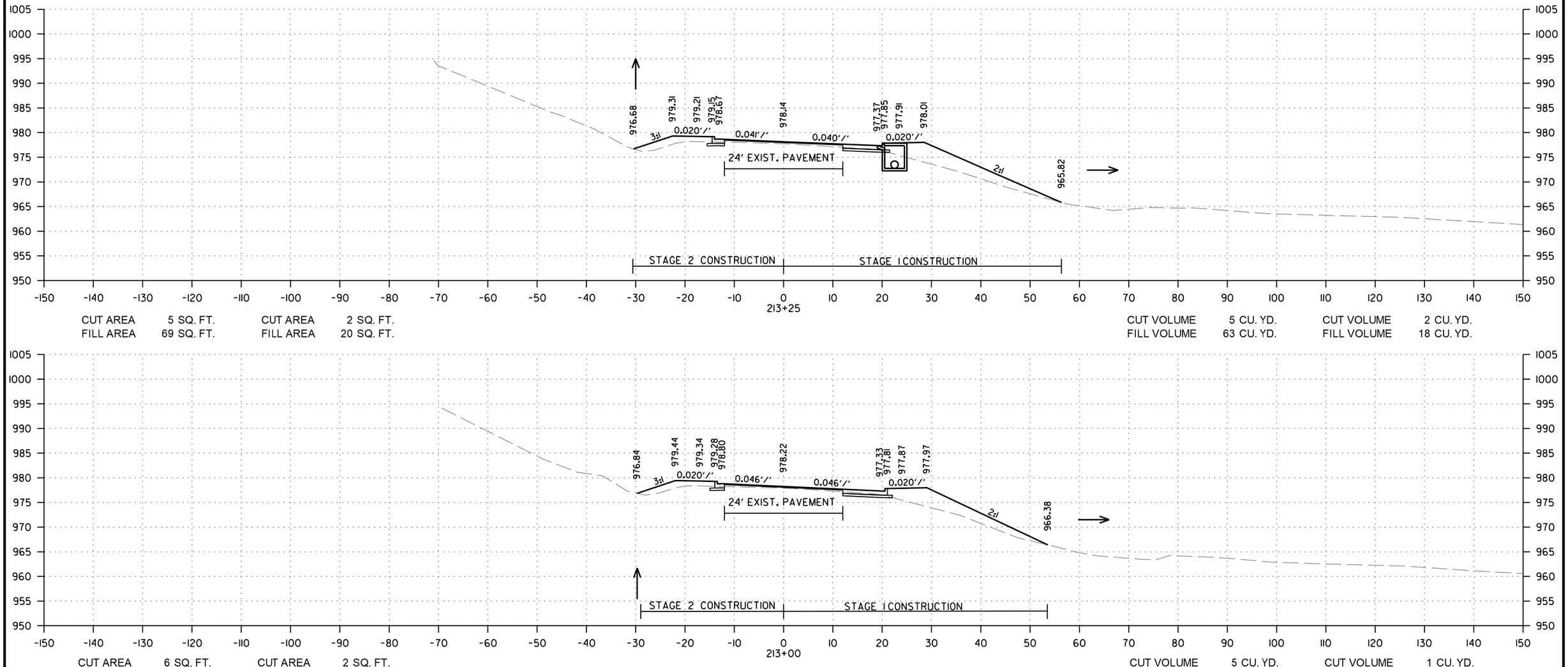
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	96	108
		CROSS SECTIONS				

STAGE 1 STAGE 2

STAGE 1 STAGE 2

STA. 213+25 CONSTRUCT
DROP INLET ON RT.
AND 18" X 75' PIPE OUTLET
CONNECT TO DROP INLET @ STA. 214+00 RT.
DROP INLET H = 4'-11"
TYPE MO INLET = 4' DIA.
TYPE C INLET = 4' X 3'
18" R.C. PIPE (CLASS III)(TYPE 3) = 76 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 76 LIN. FT.
18" SSRCCS PIPE = 76 LIN. FT.



CUT AREA 5 SQ. FT. CUT AREA 2 SQ. FT.
FILL AREA 69 SQ. FT. FILL AREA 20 SQ. FT.

CUT VOLUME 5 CU. YD. CUT VOLUME 2 CU. YD.
FILL VOLUME 63 CU. YD. FILL VOLUME 18 CU. YD.

CUT AREA 6 SQ. FT. CUT AREA 2 SQ. FT.
FILL AREA 68 SQ. FT. FILL AREA 18 SQ. FT.

CUT VOLUME 5 CU. YD. CUT VOLUME 1 CU. YD.
FILL VOLUME 46 CU. YD. FILL VOLUME 12 CU. YD.

HWY. 65
CROSS SECTION STA. 213+00 TO STA. 213+25

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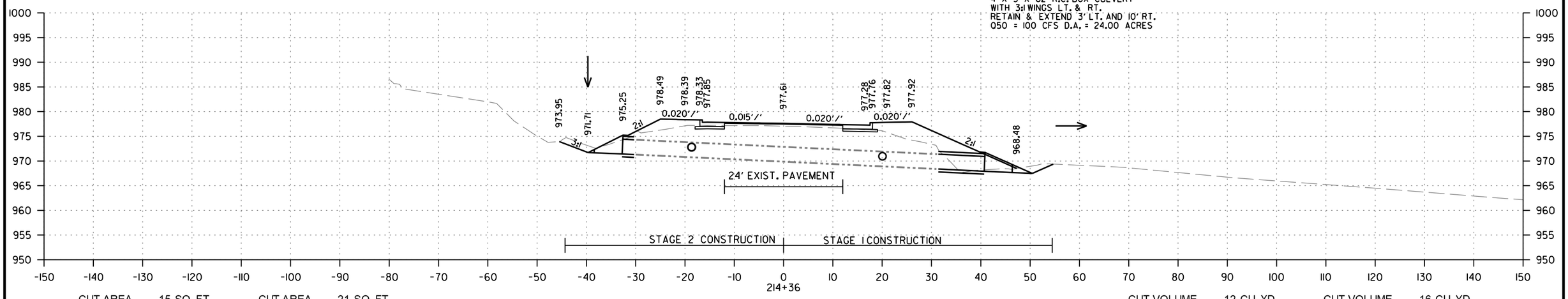
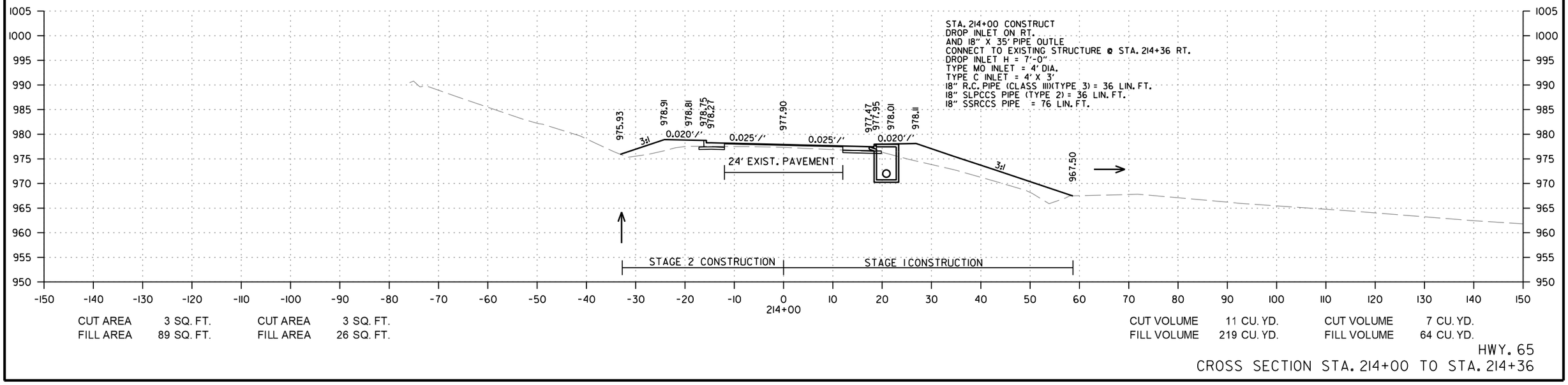
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	97	108
		CROSS SECTIONS				

STAGE 1 STAGE 2 STAGE 1 STAGE 2



CUT AREA 15 SQ. FT. CUT AREA 21 SQ. FT.
FILL AREA 84 SQ. FT. FILL AREA 20 SQ. FT.

CUT VOLUME 12 CU. YD. CUT VOLUME 16 CU. YD.
FILL VOLUME 115 CU. YD. FILL VOLUME 31 CU. YD.



CUT AREA 3 SQ. FT. CUT AREA 3 SQ. FT.
FILL AREA 89 SQ. FT. FILL AREA 26 SQ. FT.

CUT VOLUME 11 CU. YD. CUT VOLUME 7 CU. YD.
FILL VOLUME 219 CU. YD. FILL VOLUME 64 CU. YD.

HWY. 65
CROSS SECTION STA. 214+00 TO STA. 214+36

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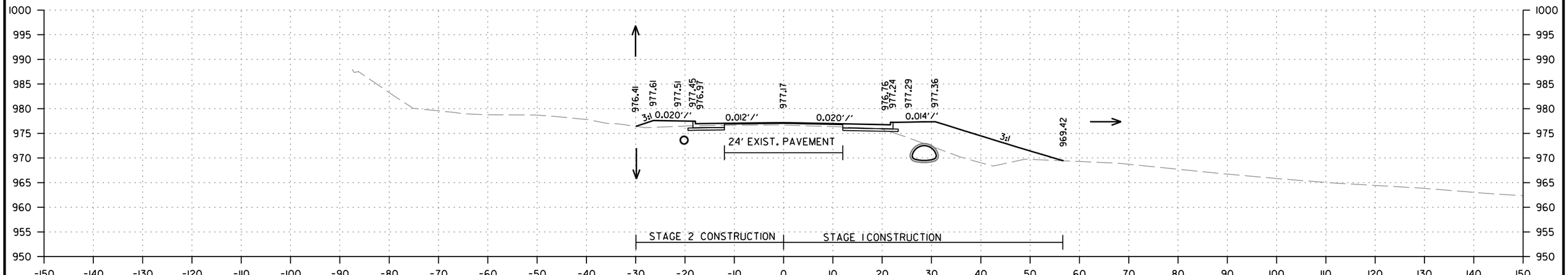
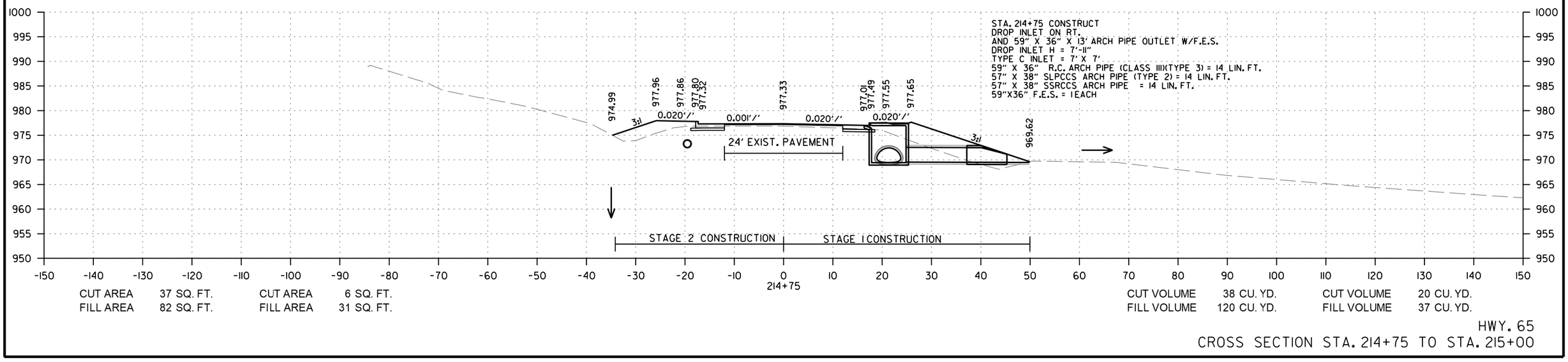
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	98	108
		CROSS SECTIONS				

STAGE 1 STAGE 2 STAGE 1 STAGE 2





HWY. 65
CROSS SECTION STA. 214+75 TO STA. 215+00

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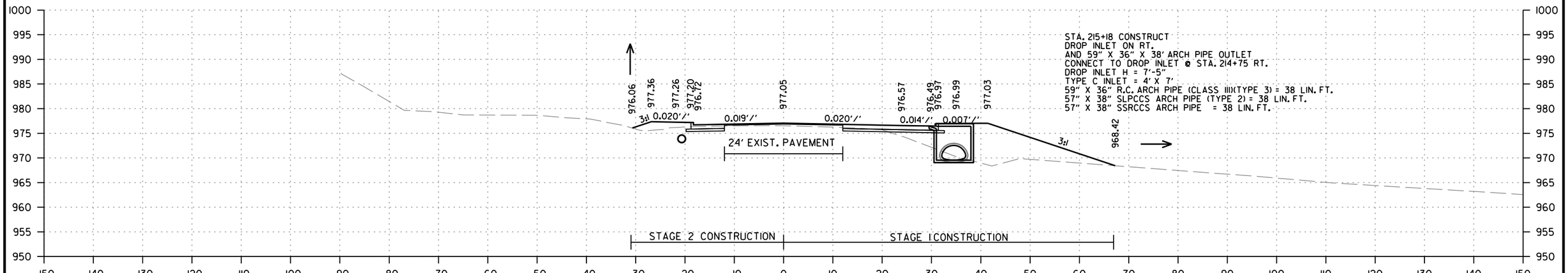
R090672.DGN MicroStation v8.11.9.578

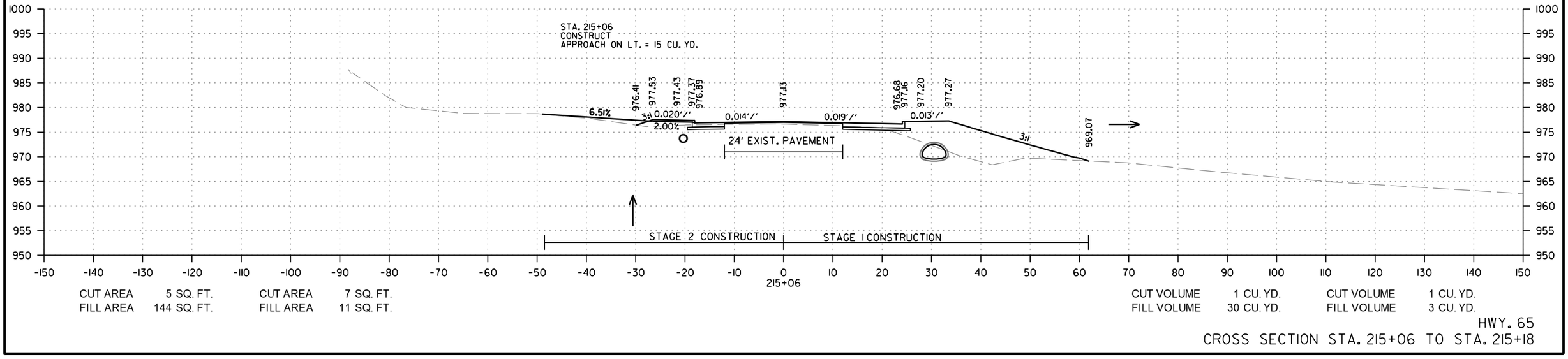
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	99	108
		CROSS SECTIONS				

STAGE 1 STAGE 2 STAGE 1 STAGE 2



CUT AREA 5 SQ. FT. CUT AREA 7 SQ. FT.
FILL AREA 117 SQ. FT. FILL AREA 14 SQ. FT.

CUT VOLUME 2 CU. YD. CUT VOLUME 3 CU. YD.
FILL VOLUME 58 CU. YD. FILL VOLUME 6 CU. YD.



CUT AREA 5 SQ. FT. CUT AREA 7 SQ. FT.
FILL AREA 144 SQ. FT. FILL AREA 11 SQ. FT.

CUT VOLUME 1 CU. YD. CUT VOLUME 1 CU. YD.
FILL VOLUME 30 CU. YD. FILL VOLUME 3 CU. YD.

HWY. 65
CROSS SECTION STA. 215+06 TO STA. 215+18

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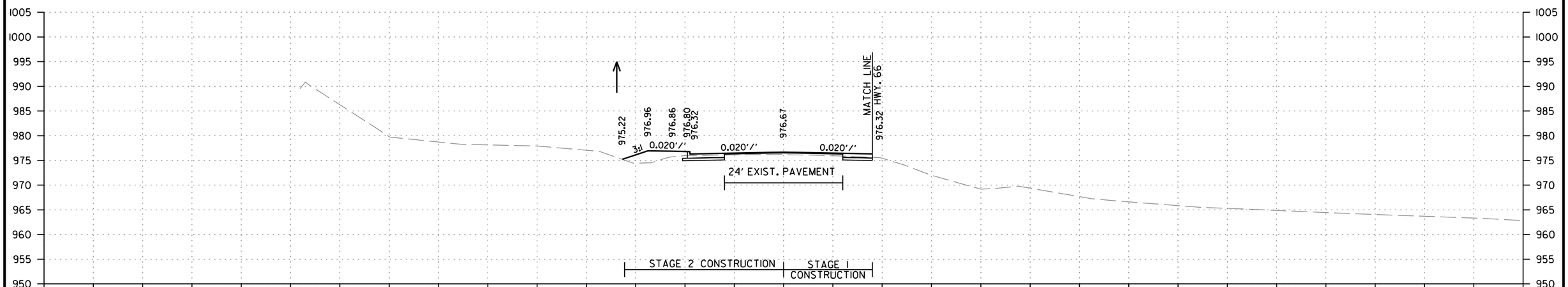
R090672.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	100	108
		CROSS SECTIONS				

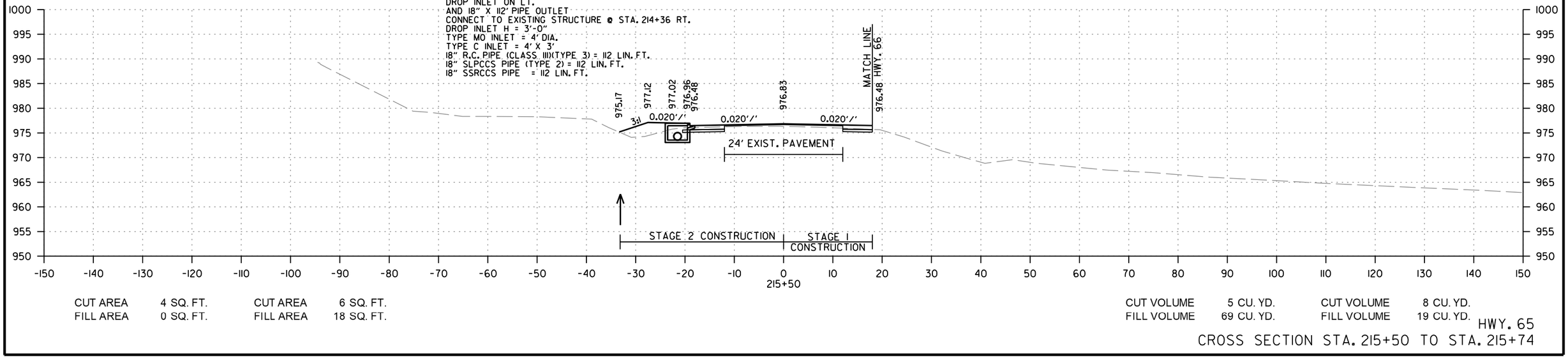
STAGE 1 STAGE 2 STAGE 1 STAGE 2



CUT AREA 4 SQ. FT. CUT AREA 8 SQ. FT.
FILL AREA 0 SQ. FT. FILL AREA 20 SQ. FT.

CUT VOLUME 4 CU. YD. CUT VOLUME 6 CU. YD.
FILL VOLUME 0 CU. YD. FILL VOLUME 17 CU. YD.

STA. 215+50 CONSTRUCT
DROP INLET ON LT.
AND 18" X 112' PIPE OUTLET
CONNECT TO EXISTING STRUCTURE @ STA. 214+36 RT.
DROP INLET H = 3'-0"
TYPE MO INLET = 4' DIA.
TYPE C INLET = 4' X 3'
18" R.C. PIPE (CLASS III)(TYPE 3) = 112 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 112 LIN. FT.
18" SSRCCS PIPE = 112 LIN. FT.



CUT AREA 4 SQ. FT. CUT AREA 6 SQ. FT.
FILL AREA 0 SQ. FT. FILL AREA 18 SQ. FT.

CUT VOLUME 5 CU. YD. CUT VOLUME 8 CU. YD.
FILL VOLUME 69 CU. YD. FILL VOLUME 19 CU. YD.

HWY. 65
CROSS SECTION STA. 215+50 TO STA. 215+74

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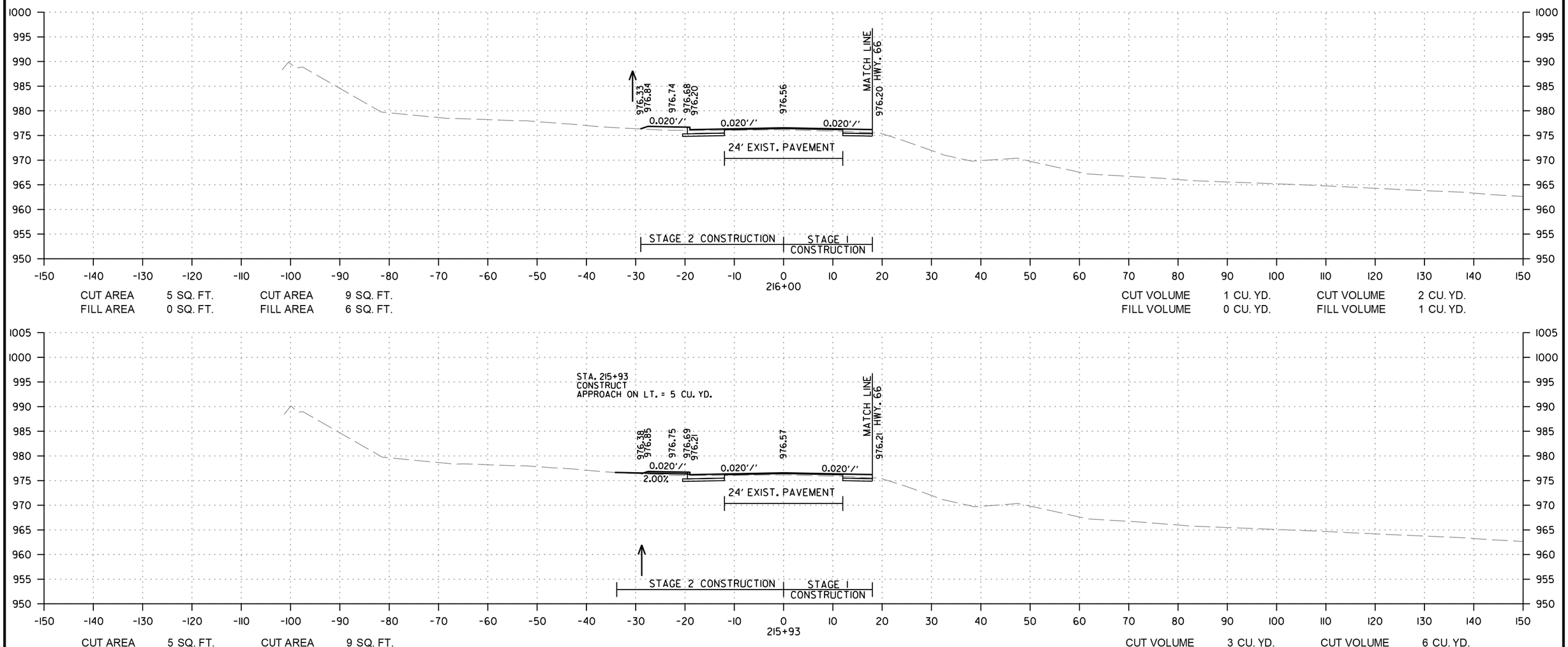
R090672.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	101	108
		CROSS SECTIONS				

STAGE 1 STAGE 2 STAGE 1 STAGE 2



HWY. 65
CROSS SECTION STA. 215+97 TO STA. 216+00

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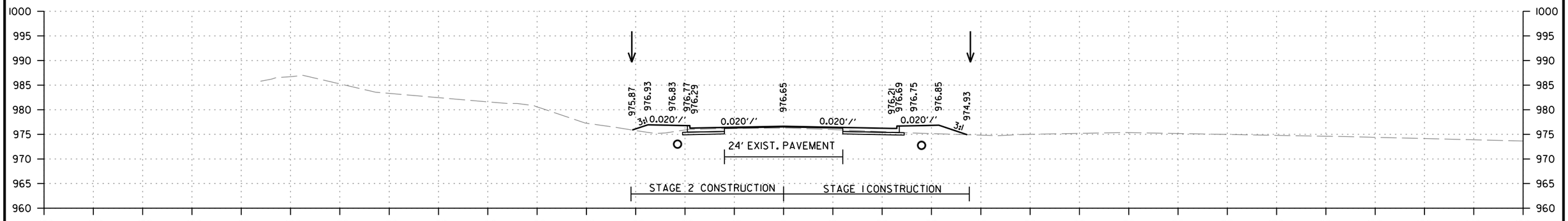
R090672.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	102	108
		CROSS SECTIONS				

STAGE 1 STAGE 2 STAGE 1 STAGE 2

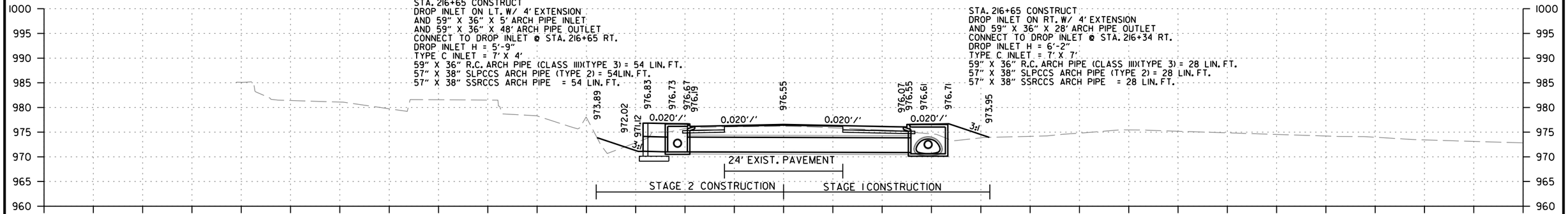


CUT AREA 8 SQ. FT. CUT AREA 9 SQ. FT.
FILL AREA 17 SQ. FT. FILL AREA 14 SQ. FT.

CUT VOLUME 11 CU. YD. CUT VOLUME 24 CU. YD.
FILL VOLUME 21 CU. YD. FILL VOLUME 14 CU. YD.

STA. 216+65 CONSTRUCT
DROP INLET ON LT. W/ 4' EXTENSION
AND 59" X 36" X 5' ARCH PIPE INLET
AND 59" X 36" X 48' ARCH PIPE OUTLET
CONNECT TO DROP INLET @ STA. 216+65 RT.
DROP INLET H = 5'-9"
TYPE C INLET = 7' X 4'
59" X 36" R.C. ARCH PIPE (CLASS III)(TYPE 3) = 54 LIN. FT.
57" X 38" SLPCCS ARCH PIPE (TYPE 2) = 54LIN. FT.
57" X 38" SSRCCS ARCH PIPE = 54 LIN. FT.

STA. 216+65 CONSTRUCT
DROP INLET ON RT. W/ 4' EXTENSION
AND 59" X 36" X 28' ARCH PIPE OUTLET
CONNECT TO DROP INLET @ STA. 216+34 RT.
DROP INLET H = 6'-2"
TYPE C INLET = 7' X 7'
59" X 36" R.C. ARCH PIPE (CLASS III)(TYPE 3) = 28 LIN. FT.
57" X 38" SLPCCS ARCH PIPE (TYPE 2) = 28 LIN. FT.
57" X 38" SSRCCS ARCH PIPE = 28 LIN. FT.

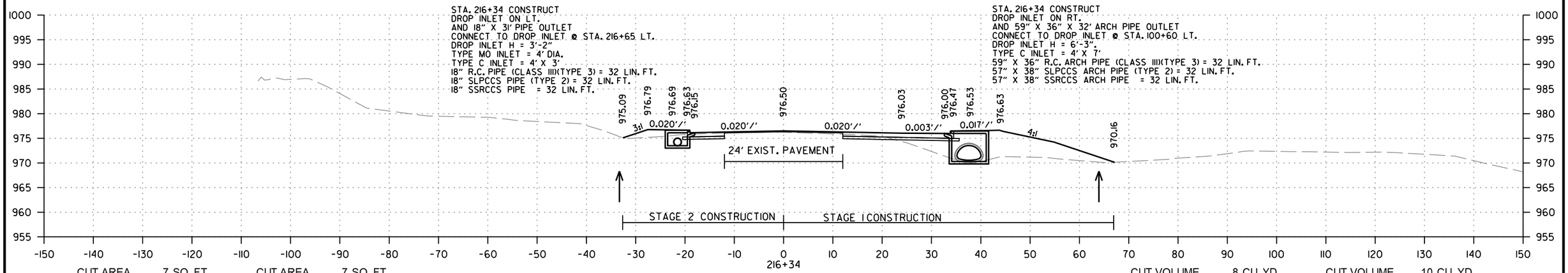


CUT AREA 9 SQ. FT. CUT AREA 28 SQ. FT.
FILL AREA 15 SQ. FT. FILL AREA 7 SQ. FT.

CUT VOLUME 9 CU. YD. CUT VOLUME 20 CU. YD.
FILL VOLUME 66 CU. YD. FILL VOLUME 10 CU. YD.

STA. 216+34 CONSTRUCT
DROP INLET ON LT.
AND 18" X 31' PIPE OUTLET
CONNECT TO DROP INLET @ STA. 216+65 LT.
DROP INLET H = 3'-2"
TYPE MO INLET = 4' DIA.
TYPE C INLET = 4' X 3'
18" R.C. PIPE (CLASS III)(TYPE 3) = 32 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 32 LIN. FT.
18" SSRCCS PIPE = 32 LIN. FT.

STA. 216+34 CONSTRUCT
DROP INLET ON RT.
AND 59" X 36" X 32' ARCH PIPE OUTLET
CONNECT TO DROP INLET @ STA. 100+60 LT.
DROP INLET H = 6'-3".
TYPE C INLET = 4' X 7'
59" X 36" R.C. ARCH PIPE (CLASS III)(TYPE 3) = 32 LIN. FT.
57" X 38" SLPCCS ARCH PIPE (TYPE 2) = 32 LIN. FT.
57" X 38" SSRCCS ARCH PIPE = 32 LIN. FT.



CUT AREA 7 SQ. FT. CUT AREA 7 SQ. FT.
FILL AREA 100 SQ. FT. FILL AREA 10 SQ. FT.

CUT VOLUME 8 CU. YD. CUT VOLUME 10 CU. YD.
FILL VOLUME 63 CU. YD. FILL VOLUME 10 CU. YD.

HWY. 65
CROSS SECTION STA. 216+34 TO STA. 217+00

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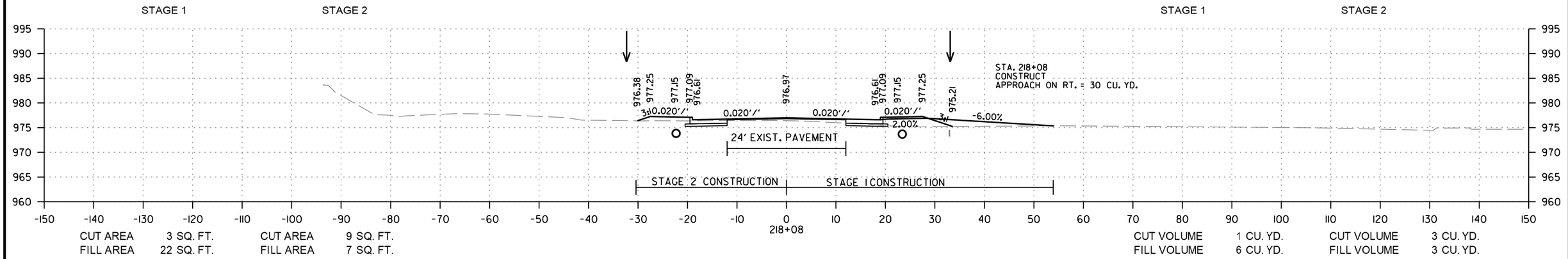
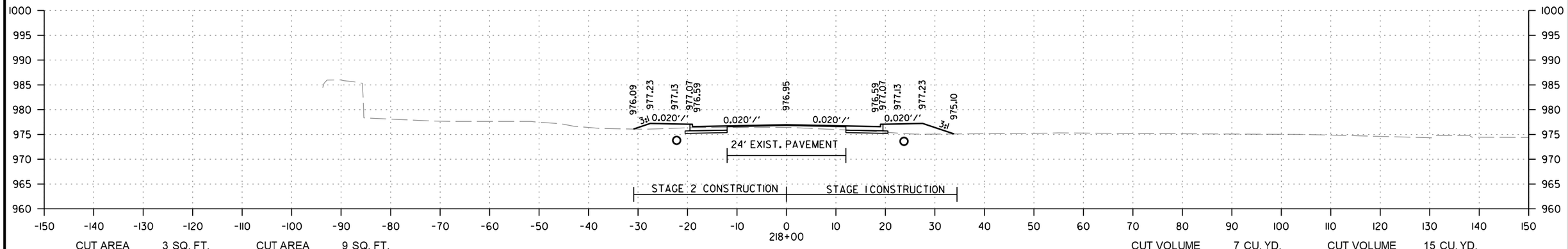
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	103	108
		CROSS SECTIONS				



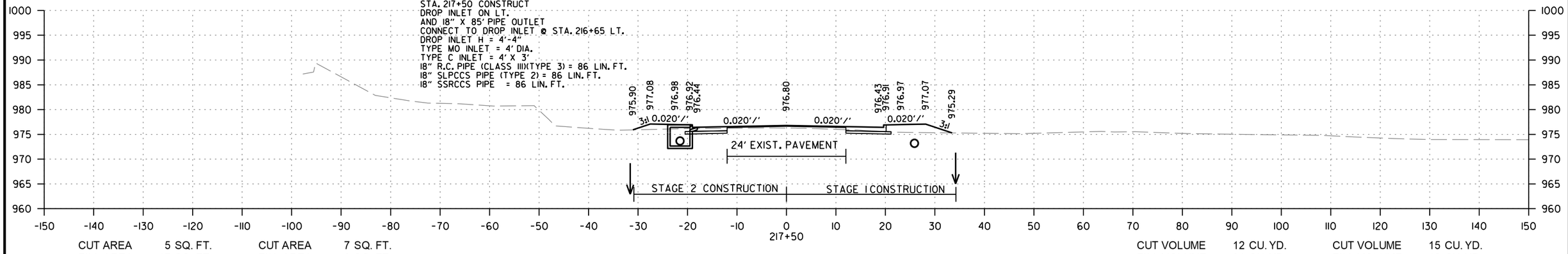
CUT AREA 3 SQ. FT. CUT AREA 9 SQ. FT.
FILL AREA 22 SQ. FT. FILL AREA 7 SQ. FT.

CUT VOLUME 1 CU. YD. CUT VOLUME 3 CU. YD.
FILL VOLUME 6 CU. YD. FILL VOLUME 3 CU. YD.



CUT AREA 3 SQ. FT. CUT AREA 9 SQ. FT.
FILL AREA 20 SQ. FT. FILL AREA 10 SQ. FT.

CUT VOLUME 7 CU. YD. CUT VOLUME 15 CU. YD.
FILL VOLUME 34 CU. YD. FILL VOLUME 15 CU. YD.



CUT AREA 5 SQ. FT. CUT AREA 7 SQ. FT.
FILL AREA 17 SQ. FT. FILL AREA 6 SQ. FT.

CUT VOLUME 12 CU. YD. CUT VOLUME 15 CU. YD.
FILL VOLUME 31 CU. YD. FILL VOLUME 19 CU. YD.

HWY. 65
CROSS SECTION STA. 217+50 TO STA. 218+08

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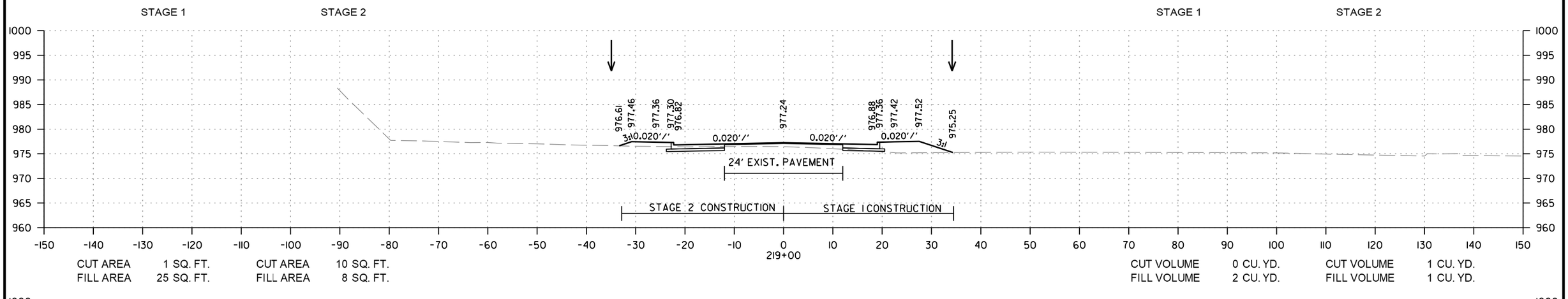
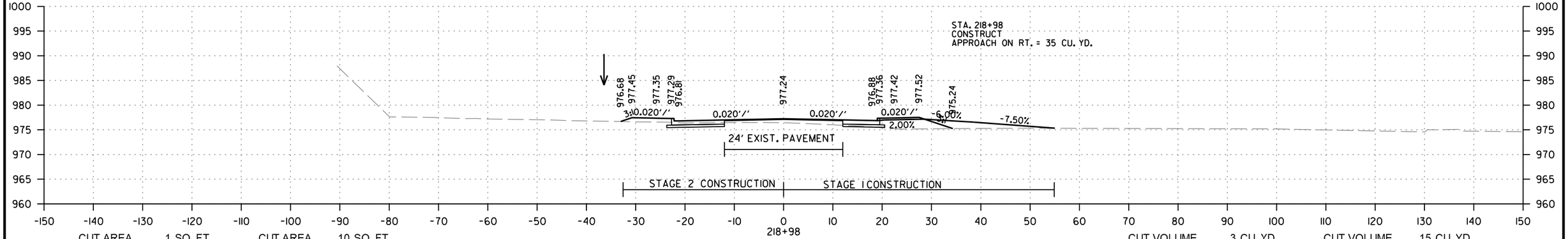
R090672.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	104	108
		CROSS SECTIONS				



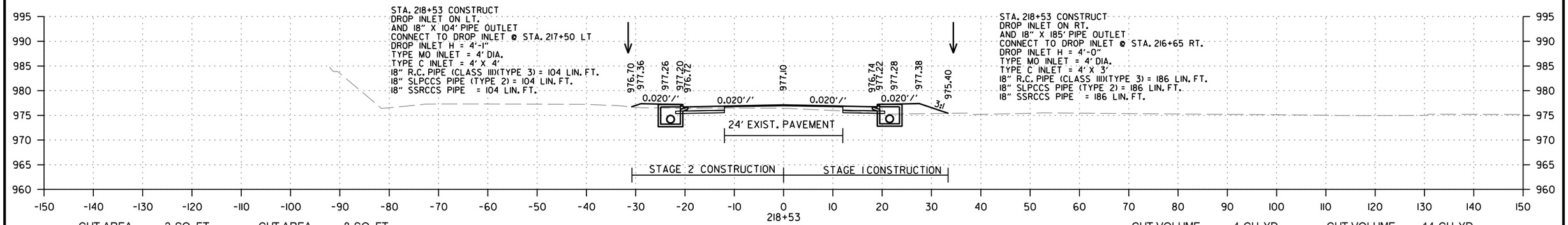
CUT AREA 1 SQ. FT. CUT AREA 10 SQ. FT.
FILL AREA 25 SQ. FT. FILL AREA 8 SQ. FT.

CUT VOLUME 0 CU. YD. CUT VOLUME 1 CU. YD.
FILL VOLUME 2 CU. YD. FILL VOLUME 1 CU. YD.



CUT AREA 1 SQ. FT. CUT AREA 10 SQ. FT.
FILL AREA 25 SQ. FT. FILL AREA 7 SQ. FT.

CUT VOLUME 3 CU. YD. CUT VOLUME 15 CU. YD.
FILL VOLUME 33 CU. YD. FILL VOLUME 9 CU. YD.



CUT AREA 2 SQ. FT. CUT AREA 8 SQ. FT.
FILL AREA 14 SQ. FT. FILL AREA 4 SQ. FT.

CUT VOLUME 4 CU. YD. CUT VOLUME 14 CU. YD.
FILL VOLUME 30 CU. YD. FILL VOLUME 9 CU. YD.

HWY. 65
CROSS SECTION STA. 218+53 TO STA. 219+00

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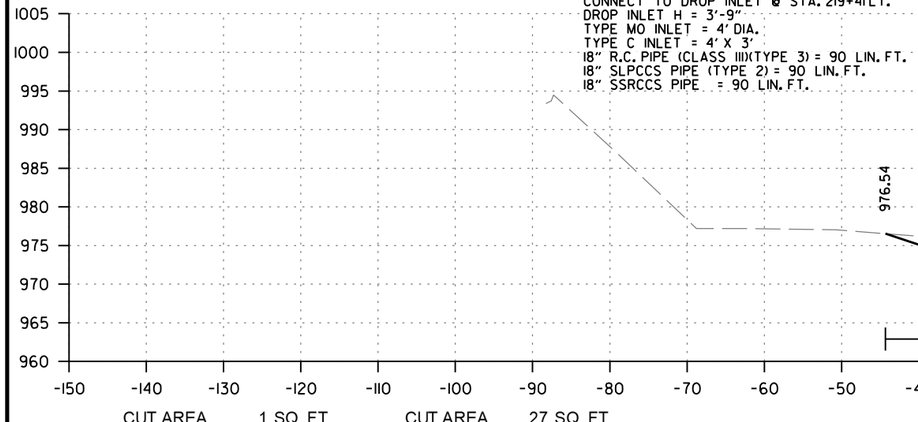
R090672.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	105	108
		CROSS SECTIONS				

STAGE 1 STAGE 2

STA. 219+41 CONSTRUCT
DROP INLET ON LT.
AND 18" X 89' PIPE OUTLET
CONNECT TO DROP INLET @ STA. 219+41 LT.
DROP INLET H = 3'-9"
TYPE MO INLET = 4' DIA.
TYPE C INLET = 4' X 3'
18" R.C. PIPE (CLASS III(TYPE 3) = 90 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 90 LIN. FT.
18" SSRCCS PIPE = 90 LIN. FT.

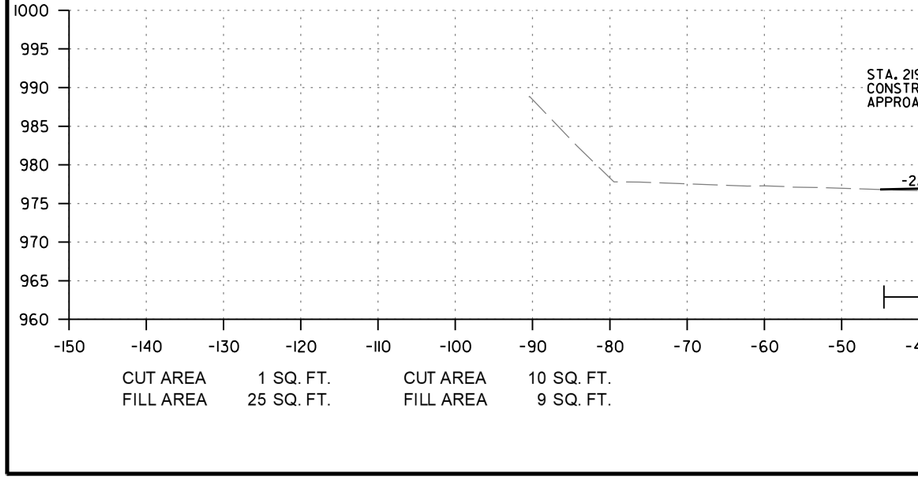


CUT AREA 1 SQ. FT. CUT AREA 27 SQ. FT.
FILL AREA 19 SQ. FT. FILL AREA 5 SQ. FT.

STA. 219+41 CONSTRUCT
DROP INLET ON RT. W/ 4' EXTENSION
AND 18" X 88' PIPE OUTLET
CONNECT TO DROP INLET @ STA. 218+53 RT.
DROP INLET H = 3'-8"
TYPE MO INLET = 4' DIA.
TYPE C INLET = 4' X 3'
18" R.C. PIPE (CLASS III(TYPE 3) = 88 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 88 LIN. FT.
18" SSRCCS PIPE = 88 LIN. FT.

CUT VOLUME 1 CU. YD. CUT VOLUME 27 CU. YD.
FILL VOLUME 32 CU. YD. FILL VOLUME 10 CU. YD.

STA. 219+02
CONSTRUCT
APPROACH ON LT. = 5 CU. YD.



CUT AREA 1 SQ. FT. CUT AREA 10 SQ. FT.
FILL AREA 25 SQ. FT. FILL AREA 9 SQ. FT.

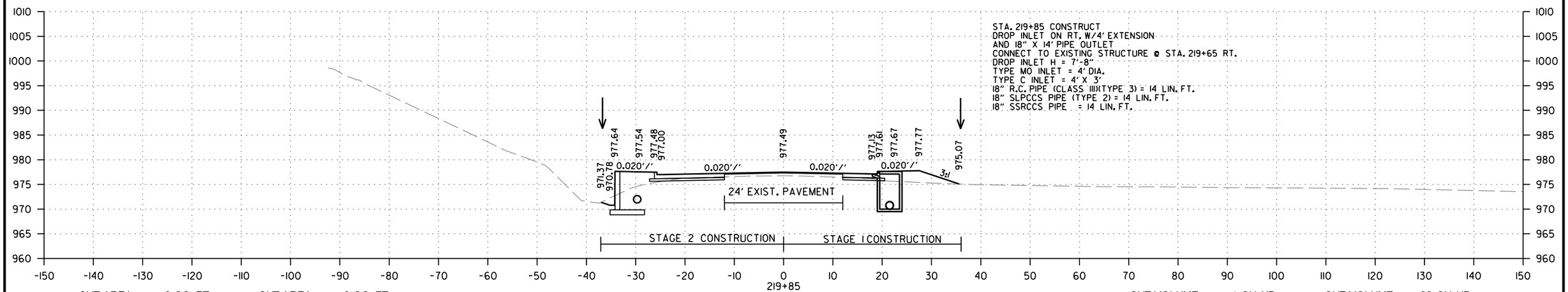
CUT VOLUME 0 CU. YD. CUT VOLUME 1 CU. YD.
FILL VOLUME 2 CU. YD. FILL VOLUME 1 CU. YD.

HWY. 65
CROSS SECTION STA. 219+02 TO STA. 219+41

vn39816 4/1/2025
R090672.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	106	108
		CROSS SECTIONS				

STAGE 1 STAGE 2 STAGE 1 STAGE 2



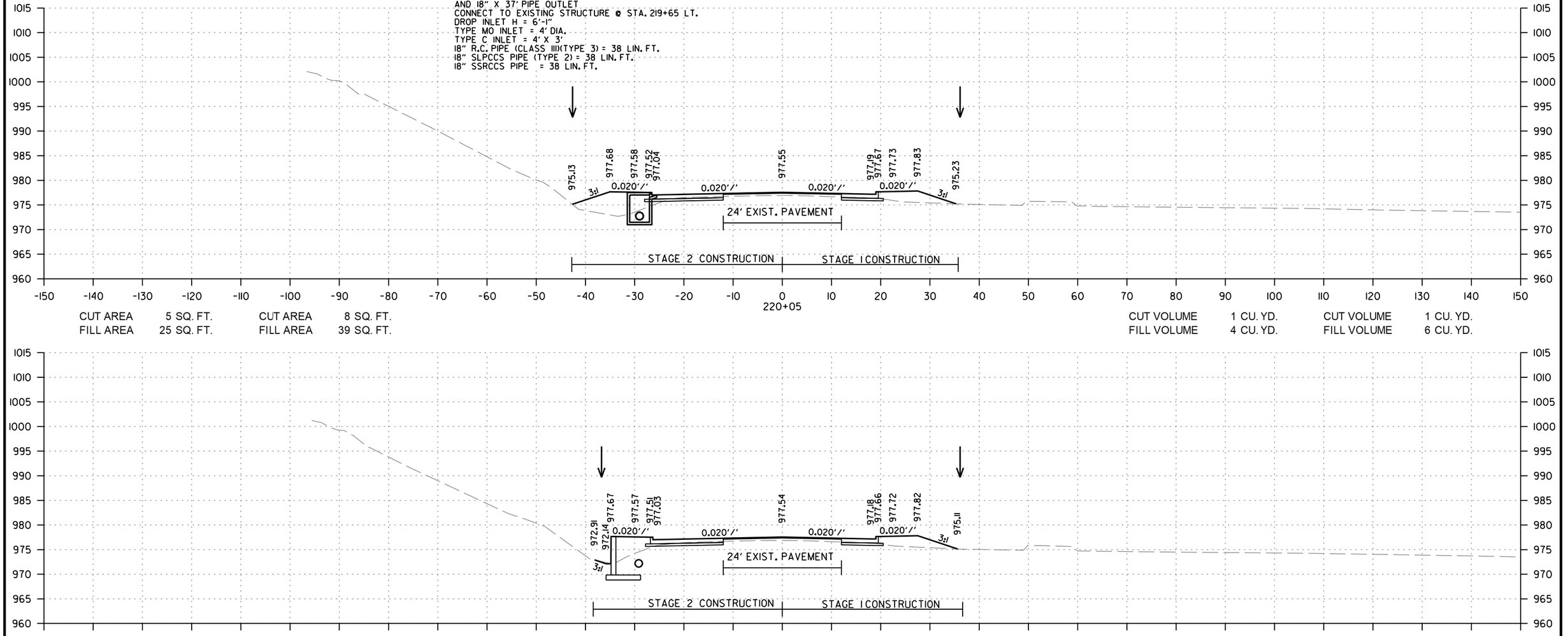
HWY. 65
CROSS SECTION STA. 219+65 TO STA. 219+85

vn39816 4/1/2025
R090672.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	107	108
		CROSS SECTIONS				

STAGE 1 STAGE 2

STA. 220+05 CONSTRUCT
DROP INLET ON LT. W/ 4' EXTENSION
AND 18" X 37' PIPE OUTLET
CONNECT TO EXISTING STRUCTURE @ STA. 219+65 LT.
DROP INLET H = 6'-1"
TYPE MO INLET = 4' DIA.
TYPE C INLET = 4' X 3'
18" R.C. PIPE (CLASS III)(TYPE 3) = 38 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 38 LIN. FT.
18" SSRCCS PIPE = 38 LIN. FT.



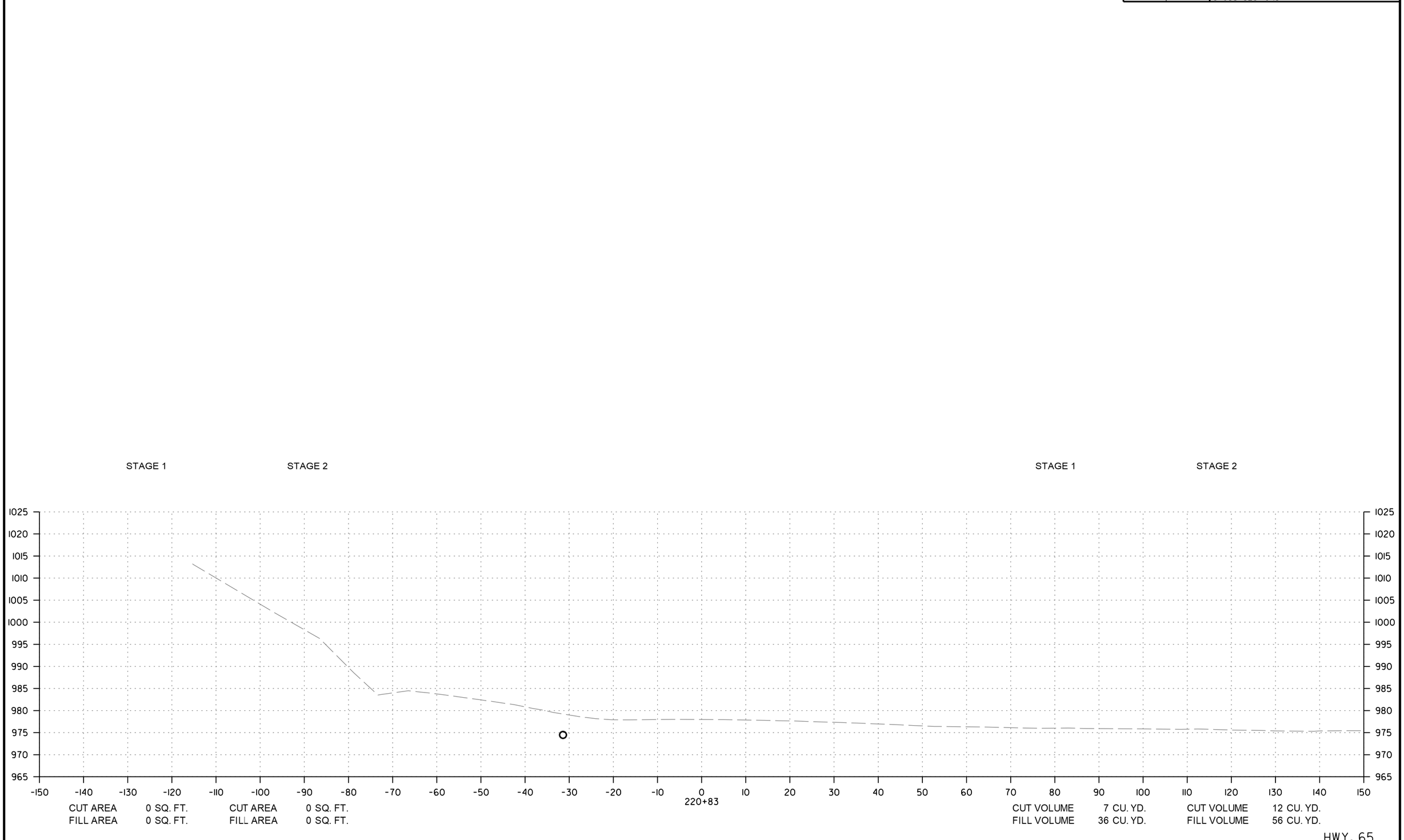
CUT AREA	5 SQ. FT.	CUT AREA	8 SQ. FT.
FILL AREA	25 SQ. FT.	FILL AREA	39 SQ. FT.
CUT VOLUME	1 CU. YD.	CUT VOLUME	1 CU. YD.
FILL VOLUME	4 CU. YD.	FILL VOLUME	6 CU. YD.

CUT AREA	4 SQ. FT.	CUT AREA	8 SQ. FT.
FILL AREA	20 SQ. FT.	FILL AREA	30 SQ. FT.
CUT VOLUME	2 CU. YD.	CUT VOLUME	5 CU. YD.
FILL VOLUME	11 CU. YD.	FILL VOLUME	16 CU. YD.

HWY. 65
CROSS SECTION STA. 220+00 TO STA. 220+05

vn39816 4/1/2025
R090672.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	090672	108	108
		CROSS SECTIONS				

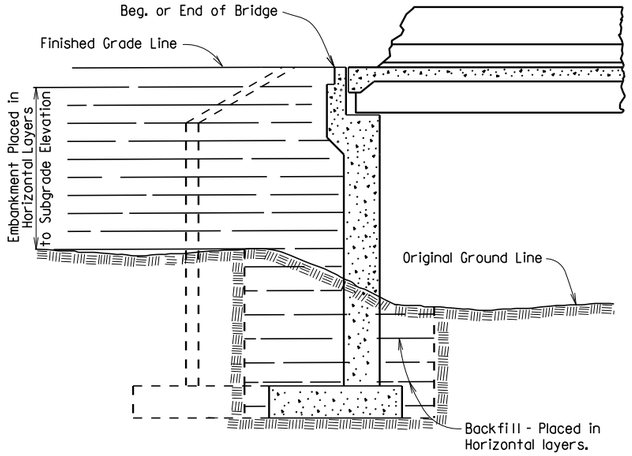


HWY. 65
CROSS SECTION STA. 220+83 TO STA. 220+83

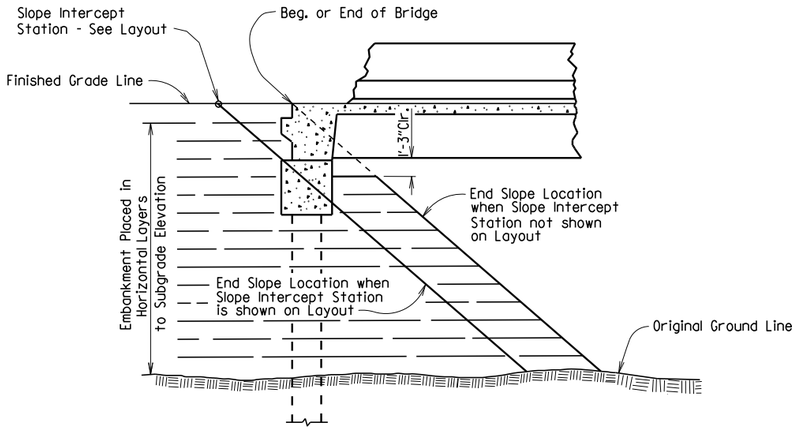
vn39816 4/1/2025
R090672.DGN MicroStation v8.11.9.578

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.				

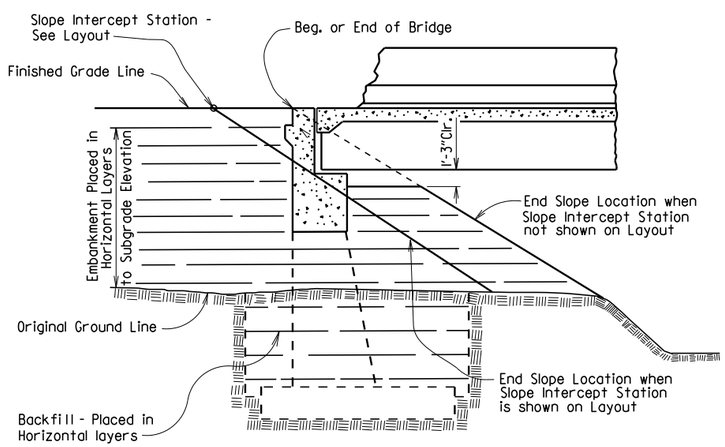
1 EMBANKMENT & BACKFILL 55000



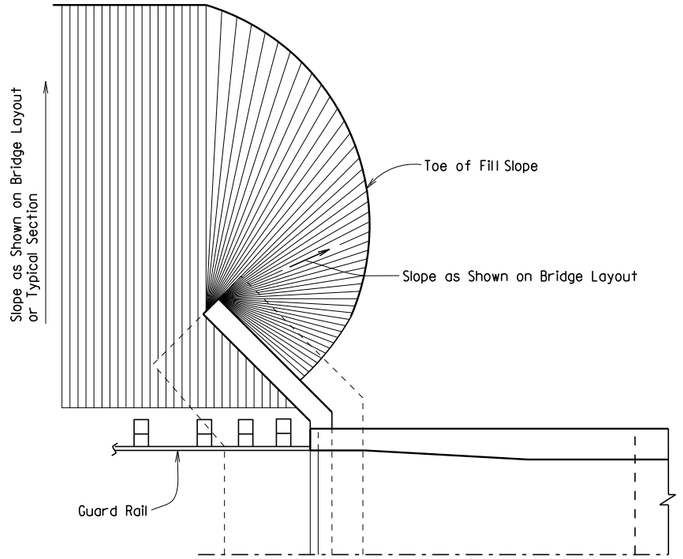
EMBANKMENT CONSTRUCTION AND FOOTING BACKFILL AT VERTICAL WALL ABUTMENTS



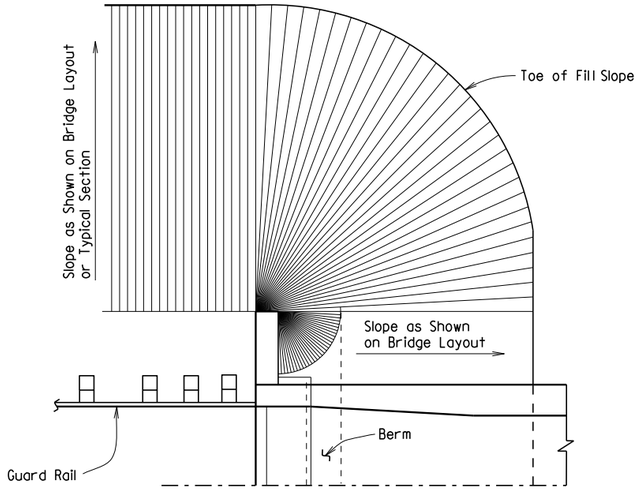
EMBANKMENT CONSTRUCTION AT SPILL-THROUGH PILE END BENTS



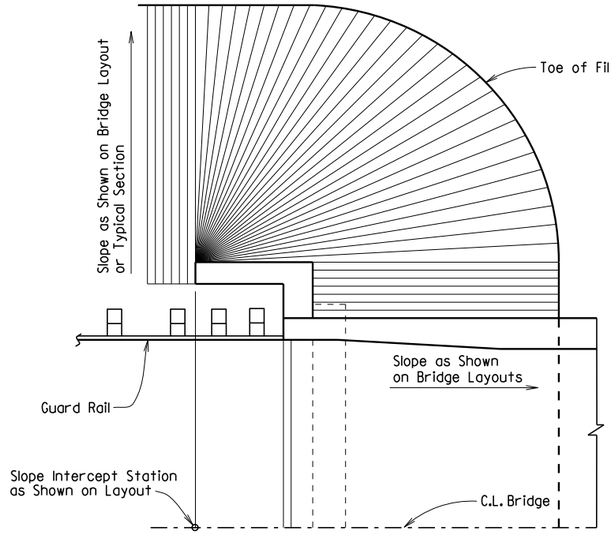
EMBANKMENT CONSTRUCTION AND FOOTING BACKFILL AT SPILL-THROUGH END BENTS



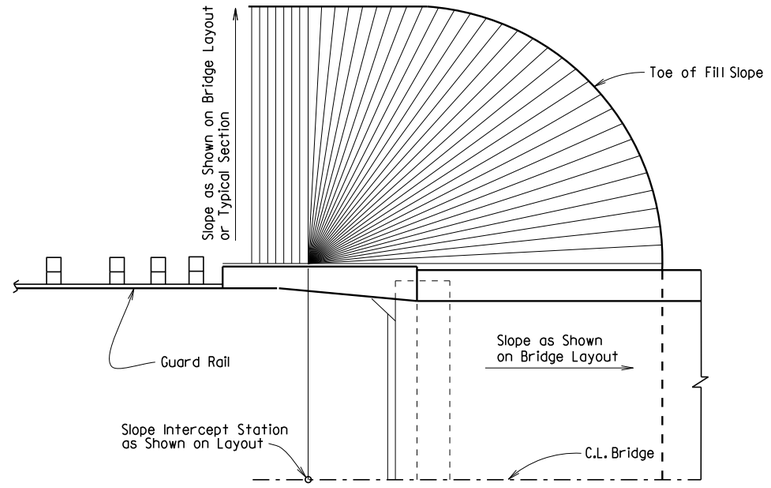
VERTICAL WALL ABUTMENTS



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

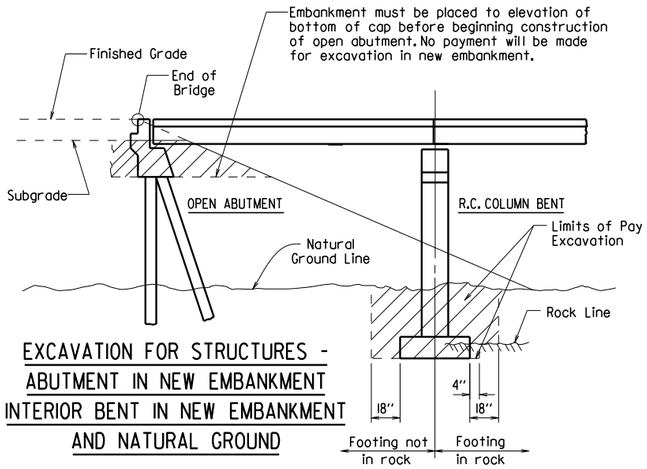
CHECKED BY: BEF DATE: 2-27-2014 SCALE: NO SCALE

DESIGNED BY: STD. DATE: -

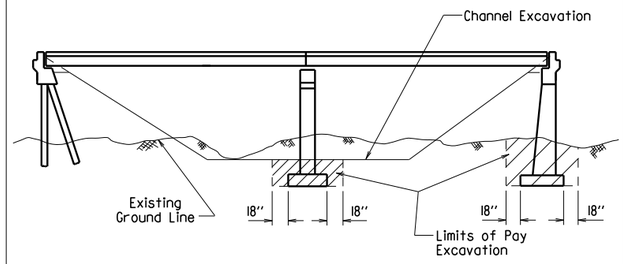
DRAWING NO. 55000

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.				

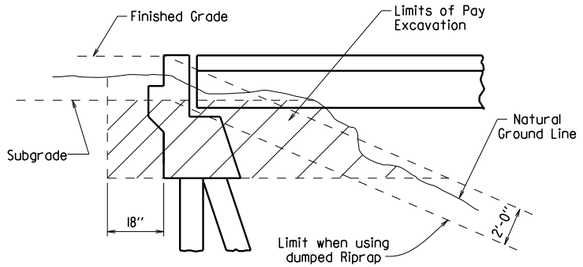
1 RIPRAP & EXCAV. 55001



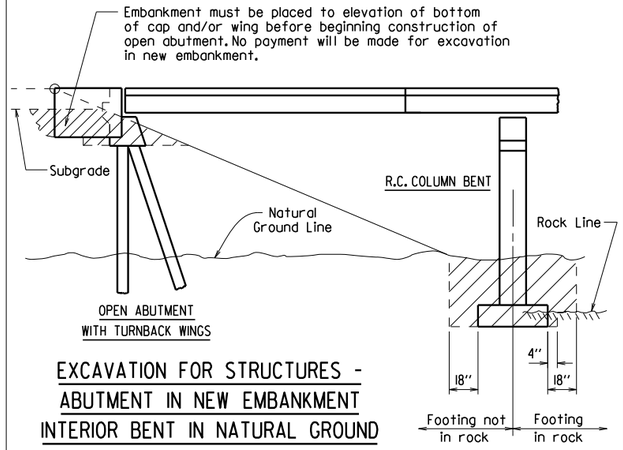
EXCAVATION FOR STRUCTURES - ABUTMENT IN NEW EMBANKMENT INTERIOR BENT IN NEW EMBANKMENT AND NATURAL GROUND



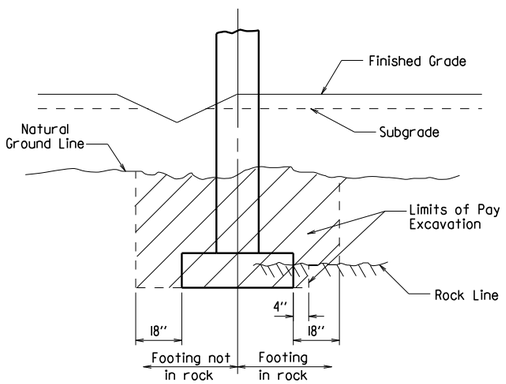
EXCAVATION FOR STRUCTURES - BRIDGE LOCATION WITH DESIGNATED CHANNEL CHANGE



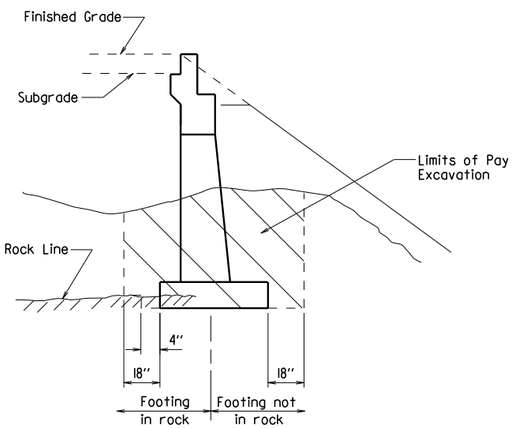
EXCAVATION FOR STRUCTURES - ABUTMENT IN NATURAL GROUND



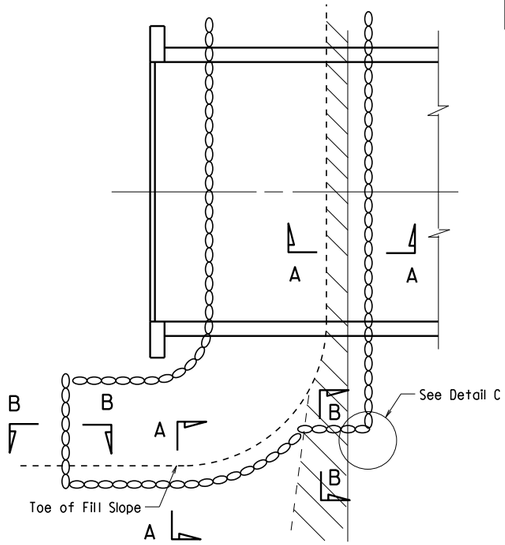
EXCAVATION FOR STRUCTURES - ABUTMENT IN NEW EMBANKMENT INTERIOR BENT IN NATURAL GROUND



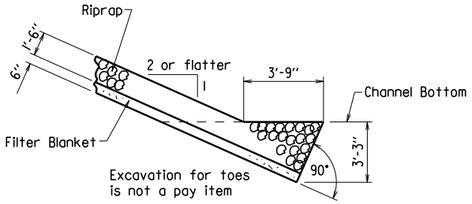
EXCAVATION FOR STRUCTURES - BENT IN ROADWAY FILL SECTION AND NATURAL GROUND



EXCAVATION FOR STRUCTURES - ABUTMENT IN NATURAL GROUND AND NEW EMBANKMENT

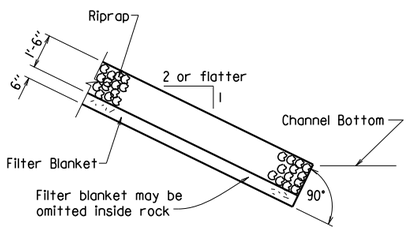


PLAN OF DUMPED RIPRAP



SECTION A-A

(Toe Excavation in Soil)



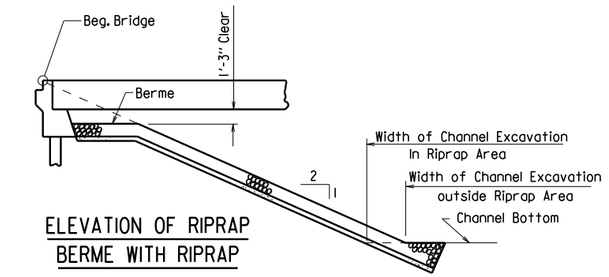
SECTION A-A

(Toe Excavation in Rock)

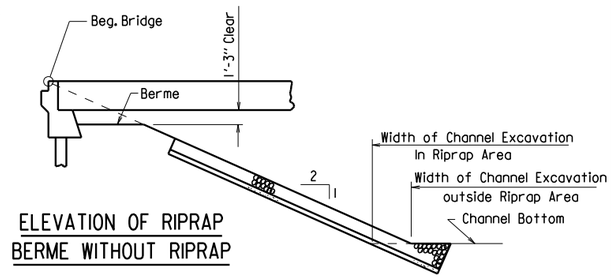
Note : Use this type of toe when rock is encountered which is in a stable condition.

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.

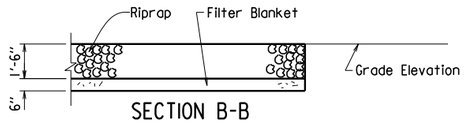
Note : Details for computing excavation for structures are included for information as to how plan quantities were calculated and for use when adjusting quantities when changing footing elevation.



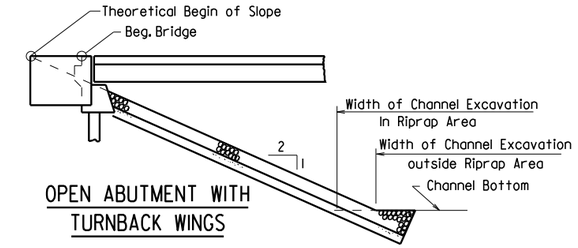
ELEVATION OF RIPRAP BERME WITH RIPRAP



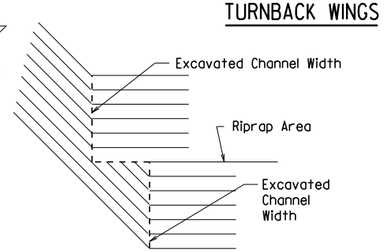
ELEVATION OF RIPRAP BERME WITHOUT RIPRAP



SECTION B-B



OPEN ABUTMENT WITH TURNBACK WINGS



DETAIL C

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: b55001.dgn

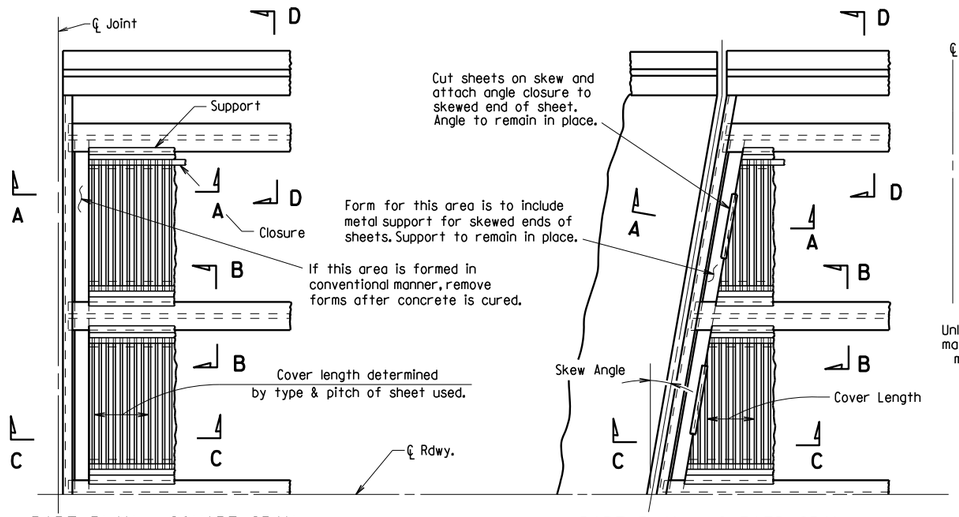
CHECKED BY: BEF DATE: 2-27-2014 SCALE: NO SCALE

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

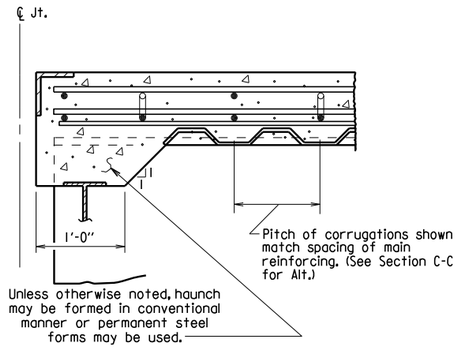


PART PLAN - SQUARE SPAN

3/8" = 1'-0"

PART PLAN - SKEWED SPAN

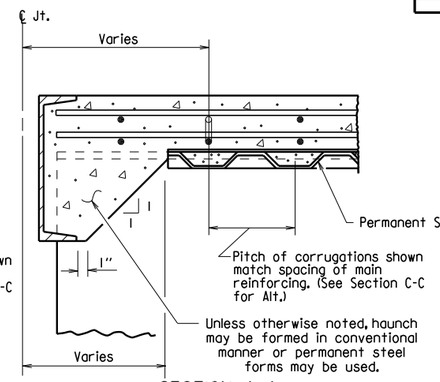
3/8" = 1'-0"



SECTION A-A

N.T.S.

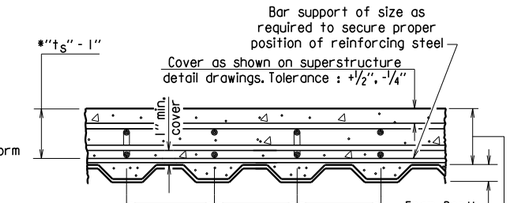
(Angle at end of span)



SECTION A-A

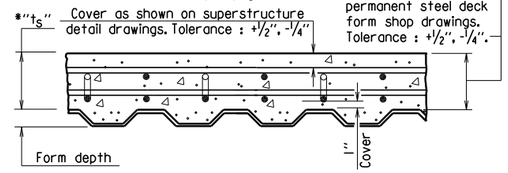
N.T.S.

(Channel at end of span)



SECTION C-C

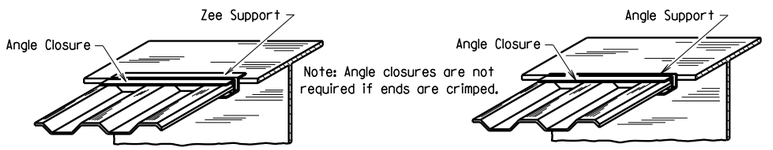
1" = 1'-0"



SECTION C-C - ALTERNATE

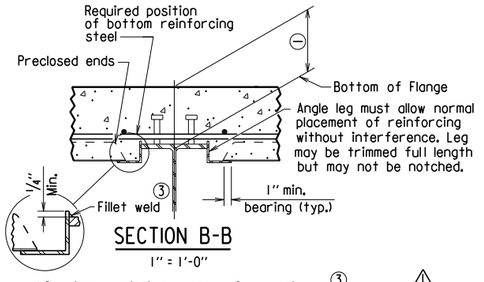
1" = 1'-0"

(Applicable when corrugations do not match spacing of main reinforcement)



SKETCH OF PERMISSIBLE SUPPORTS

N.T.S.

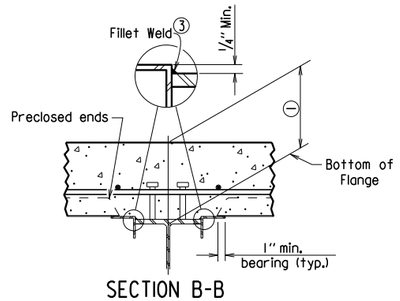


SECTION B-B

1" = 1'-0"

(Showing permissible support for tension flange where shear connectors are used, and for all compression flanges)

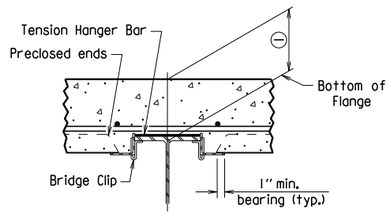
③ ⚠ Minimum weld: 1/8" x 1" @ 18". More weld may be required; maximum length per weld = 1 1/2" (typ.)



SECTION B-B

1" = 1'-0"

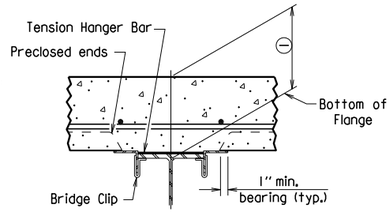
(Showing permissible support for tension flange where shear connectors are used and for all compression flanges)



SECTION B-B

1" = 1'-0"

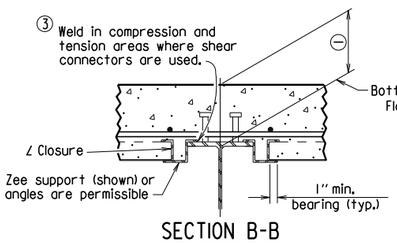
(Showing permissible support for tension flange where shear connectors are not used)



SECTION B-B

1" = 1'-0"

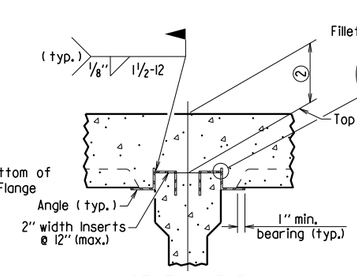
(Showing permissible support for tension flange where shear connectors are not used)



SECTION B-B

1" = 1'-0"

(Showing ∠ Closure)

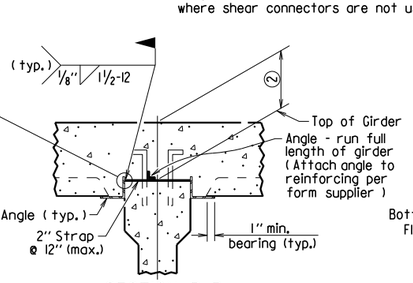


SECTION B-B

(FOR CONCRETE GIRDERS)

1" = 1'-0"

(Showing support by Insert cast in girder)

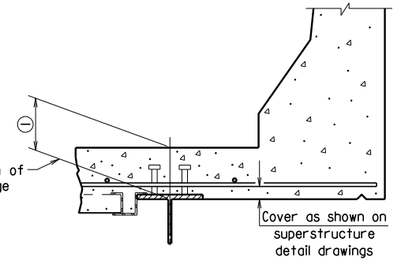


SECTION B-B

(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.

*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.

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 FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.				
						GENERAL NOTES		55006

GENERAL NOTES

These GENERAL NOTES are applicable unless otherwise shown in the Plan Details, Special Provisions, or Supplemental Specifications.

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 Specifications.

DESIGN SPECIFICATIONS: See Bridge Layout(s).

SUPERSTRUCTURE NOTES:

MATERIALS AND STRENGTHS:

Class S(AE) Concrete	f'c =	4,000 psi
Reinforcing Steel (Gr. 60, AASHTO M 31 or M 322, Type A)	fy =	60,000 psi
Structural Steel (AASHTO M 270, Gr. 36)	Fy =	36,000 psi
Structural Steel (AASHTO M 270, Gr. 50)	Fy =	50,000 psi
Structural Steel (AASHTO M 270, Gr. 50W)	Fy =	50,000 psi
Structural Steel (AASHTO M 270, Gr. HPS70W)	Fy =	70,000 psi

See Plan Details for Grade(s) of Structural Steel required.

CONCRETE:

All concrete 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.

Use of a longitudinal screed is not permitted on any span of a bridge deck with horizontal curvature.

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. Sidewalks shall receive a broomed finish as specified for final finishing in Subsection 802.19 for Class 6 Broomed 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 beam or girder. When permitted, the use of a longitudinal strike-off will require that a vertical camber adjustment be made in the strike-off to account for the future dead load deflection due to any railings, median barrier, and sidewalks.

REINFORCING STEEL:

All reinforcing steel shall be Grade 60 conforming to AASHTO M 31 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 (COMMON TO W-BEAMS AND PLATE GIRDERS):

Structural steel shall be AASHTO M 270 with grade and payment as specified in the plans. 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 807.84. Structural steel completely embedded in concrete may be AASHTO M 270, 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 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; however, additional welds used for attaching falsework support devices or screed rail supports to the structural steel that do not exceed the limitations of Subsection 802.13 will not require approval prior to construction. All welding shall conform to Subsection 807.26.

Unless otherwise noted, field connections shall be bolted with ¾" ø high-strength bolts using 13/16 " ø open holes. Holes for ¾" ø high-strength bolts may be 15/16 " ø if a washer is supplied for use under both the nut and head of the bolt. The use of oversized holes will not be allowed on main members unless otherwise noted. Bolts shall be placed with heads on the outside face of the exterior beam or girder webs and on the bottom of the beam or girder flanges.

All stud shear connectors shall be granular flux filled, solid fluxed, or equal and shall be automatically end welded in accordance with recommendations of the Manufacturer.

When painting is required, all structural steel except galvanized steel and steel completely encased in concrete shall be painted in accordance with Subsection 807.75. The color of paint shall be as specified in the plans.

STRUCTURAL STEEL (W-BEAMS):

All beams and field splice plates, and all diaphragms and connection plates attached to horizontally curved beams are considered main load carrying members and shall meet the Longitudinal Charpy V-Notch Test specified in Subsection 807.05. This work and material will not be paid for directly, but shall be considered subsidiary to the item "Structural Steel in Beam Spans (M 270, Gr. ___)".

All beams in continuous units and simple spans with field splices shall be blocked in their true position in the shop in groups as specified in Subsection 807.54(b)(2) with the webs horizontal. The camber, length of sections, distance between bearings, and openings of joints shall be measured and this information shall become part of the permanent records. The component parts shall be match marked in this assembly and these marks shall be shown on the erection diagram.

All beams in simple spans without field splices shall be blocked in their true position with webs horizontal. The camber, distance between bearings, and openings of joints shall be measured and this information shall become part of the permanent records.

Flange field splice plates shall be cut and fabricated so that the primary direction of rolling is parallel to the direction of the main tensile and/or compressive stresses.

All beam dimensions are based on a temperature of 60 degrees F. A tolerance of ¼" +/- is allowed for camber.

Bent plate diaphragms for horizontally curved beams shall be cut and fabricated so that the primary direction of rolling is parallel to the direction of the main tensile and/or compressive stresses. Bent plate diaphragms for straight beams may be cut and fabricated in accordance with Subsection 807.35 or as required for horizontally curved beams.

Unless otherwise noted, diaphragms shall be installed as beams are erected. All bolts in diaphragms and field splices shall be installed and tightened in accordance with Subsection 807.71 prior to pouring the concrete deck.

STRUCTURAL STEEL (PLATE GIRDERS):

All references to cross-frames shall include "X" or "K" types.

All girder web and flange plates, all field splice plates, and all diaphragms, cross-frames and connection plates attached to horizontally curved girders are considered main load carrying members and shall meet the Longitudinal Charpy V-Notch Test specified in Subsection 807.05. This work and material will not be paid for directly, but shall be considered subsidiary to the item "Structural Steel in Plate Girder Spans (M 270, Gr. ___)".

All girders in continuous units and simple spans with field splices shall be assembled in the shop as specified in Subsection 807.54(b)(2) and blocked in their true position with webs horizontal. The camber, length of sections, distance between bearings, and openings of joints shall be measured and this information shall become part of the permanent records. The component parts shall be match marked in this assembly and these marks shall be shown on the erection diagram.

All girders in simple spans without field splices shall be blocked in their true position with webs horizontal. The camber, distance between bearings, and openings of joints shall be measured and this information shall become part of the permanent records.

Web and flange plates for main members and flange splice plates for main members shall be cut and fabricated so that the primary direction of rolling is parallel to the direction of the main tensile and/or compressive stresses.

Girder webs may be made by shop splicing with minimum lengths of 25 feet for sections. Flange plates longer than 50 feet may be made by shop splicing with minimum lengths of 25 feet for sections. No additional payment will be made for shop welded splices.

All girder dimensions are based on a temperature of 60 degrees F. A tolerance of ¼" +/- is allowed for camber.

Groove welds in web and flange plates shall be Quality Control (Q.C.) tested by nondestructive testing, as required in Subsection 807.23(b). Fillet welds at flange to web plate connections shall be Q.C. tested by the magnetic particle method. All Q.C. testing shall be considered subsidiary to the item "Structural Steel in Plate Girder Spans (M 270, Gr. ___)".

Bent plate diaphragms for horizontally curved girders shall be cut and fabricated so that the primary direction of rolling is parallel to the direction of the main tensile and/or compressive stresses. Bent plate diaphragms for straight girders may be cut and fabricated in accordance with Subsection 807.35 or as required for horizontally curved girders.

Unless otherwise noted, cross-frames and diaphragms shall be installed as girders are erected. All bolts in cross-frames, diaphragms, and field splices shall be installed and tightened in accordance with Subsection 807.71 prior to pouring the concrete deck.

SUBSTRUCTURE NOTES:

CONCRETE:

Unless otherwise noted, concrete in caps, columns and footings (except seal footings) shall be Class "S" with a minimum 28 day compressive strength f'c = 3,500 psi and shall be poured in the dry. Seal Concrete for footings shall have a minimum 28 day compressive strength f'c = 2,100 psi.

Concrete in drilled shafts shall be Class "S" as modified by Job SP "Drilled Shaft Foundations".

All exposed corners shall be chamfered ¾" unless otherwise noted.

REINFORCING STEEL:

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.

Top reinforcing bars in cap shall be properly placed to avoid interference with anchor bolts or sheet metal sleeves.

STRUCTURAL STEEL:

Structural steel in end bents shall be AASHTO M 270 with grade and payment as specified in the plans.

FOR ADDITIONAL INFORMATION AND NOTES, SEE LAYOUT(S) AND PLAN DETAILS.

STANDARD GENERAL NOTES
FOR STEEL BRIDGE STRUCTURES

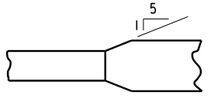
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: A.M.S. DATE: 9-2-2015 FILENAME: b55006.dgn
CHECKED BY: B.E.F. DATE: 9-2-2015 SCALE: NO SCALE
DESIGNED BY: STD. DATE:

DRAWING NO. 55006

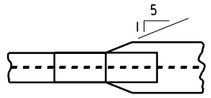
PRINT DATE: 11/7/2019

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	STEEL BRIDGE STRUCTURES 55007			

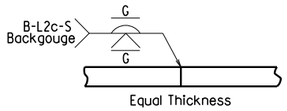


Plan-Unequal Width (Flg.)

FLANGE SPLICE

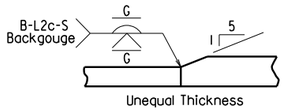


FLANGE SPLICE AT UNEQUAL BOTTOM FLANGE WIDTHS



Equal Thickness

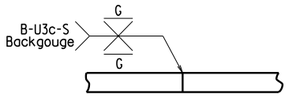
WEB & FLANGE SPLICE



Unequal Thickness

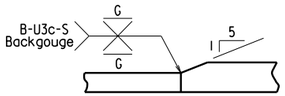
FLANGE SPLICE

(Use when Base Metal Thickness is Equal to or Less than 2")



Equal Thickness

WEB & FLANGE SPLICE

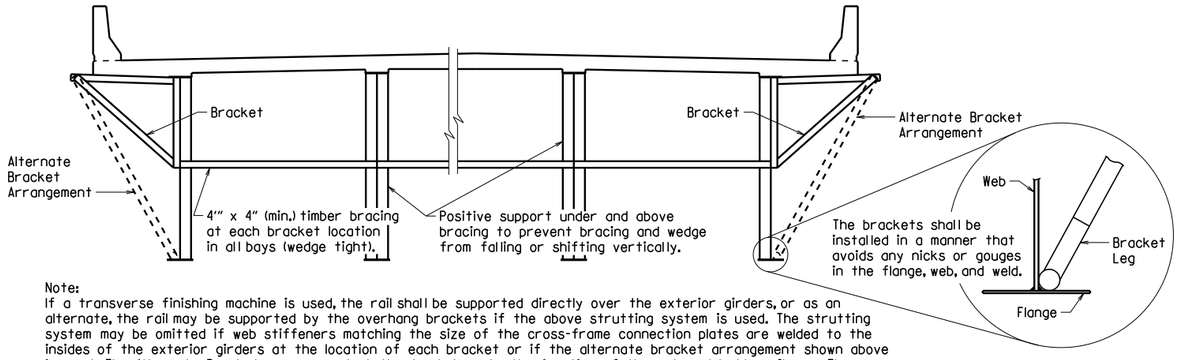


Unequal Thickness

FLANGE SPLICE

(Use when Base Metal Thickness is Greater than 2")

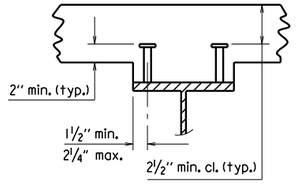
DETAILS OF WELDED SPLICES FOR PLATE GIRDERS



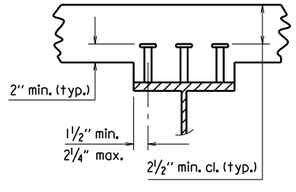
Note:
If a transverse finishing machine is used, the rail shall be supported directly over the exterior girders, or as an alternate, the rail may be supported by the overhang brackets if the above strutting system is used. The strutting system may be omitted if web stiffeners matching the size of the cross-frame connection plates are welded to the insides of the exterior girders at the location of each bracket or if the alternate bracket arrangement shown above is used. The Alternate Bracket arrangement shall extend down to the junction of the web and bottom flange. The stiffener shall conform to the details for cross frame connection plates shown on the plans. No direct payment will be made for brackets, timber bracing, supports, or welded stiffeners. Payment shall be subsidiary to "Structural Steel in Plate Girder Spans (___)".

SCREED RAIL SUPPORT FOR PLATE GIRDERS

(USE WHEN WEB DEPTHS ARE 48" OR GREATER)



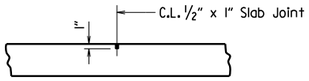
2 STUDS PER ROW



3 STUDS PER ROW

Stud Shear Connectors shall be automatically end welded to the beam or girder flange in accordance with the recommendations of the Manufacturer. See plan details for number and size.

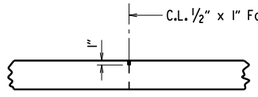
SHEAR CONNECTOR DETAIL



Use Type 3 or 4 Joint Sealer. See Subsections 501.02(h) and 501.05(j). Backer Rod filler 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 the parapet. Slab joints shall be installed before the parapet 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 the deck from gutterline to gutterline.

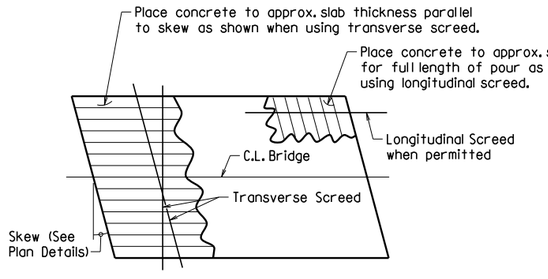
ADDITIONAL NOTES IF SIDEWALKS OR RAISED MEDIANS ARE REQUIRED:
Slab Joints shall be installed before the sidewalk or raised median is poured. After installation of the joint in the sidewalk or raised median and prior to pouring the parapet rail, the joint sealer shall be placed extending across the deck slab from gutterline to gutterline and acrosss the top of the sidwalk or raised median to the edge of the slab. No joint sealer shall be placed on the deck slab under the sidewalk or raised median.

TRANSVERSE SLAB JOINT DETAIL



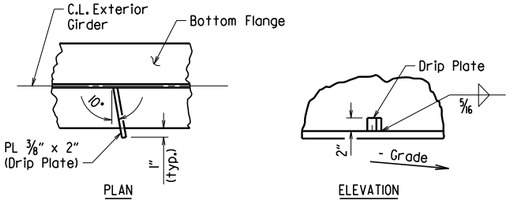
Use ½" x 1" Type 3 or 4 Joint Sealer. See Subsections 501.02(h) and 501.05(j). Backer Rod filler will not be required. Joint sealer shall be measured and paid for as Class S(AE) Concrete-Bridge. This joint shall be formed. Seal color shall be gray or other color similar to concrete.

LONGITUDINAL CONSTRUCTION JOINT



Note: At the Contractor's option, the transverse screed may be placed parallel to the skew or perpendicular to C. L. Bridge.

CONCRETE PLACEMENT PROCEDURE FOR BRIDGES WITH SKEW



PLAN

ELEVATION

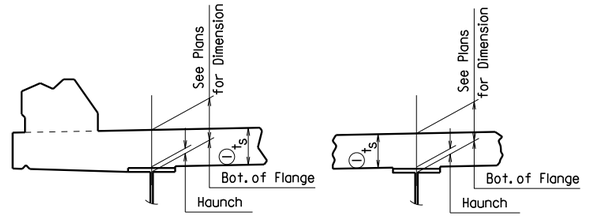
Drip Plate to be welded to the outer side of the bottom flange of the exterior girders.

Locate drip plate 5'-0" from C.L. Bearing on high side of each Bent, unless otherwise noted in the plans.

BOTTOM FLANGE DRIP PLATE

(USE WHEN WEB DEPTHS ARE 54" OR GREATER AND UNIT OR SPAN IS NOT IN LEVEL GRADE)

t_s = slab thickness. See "Typical Roadway Section" in the plans.



EXTERIOR BEAM OR GIRDER

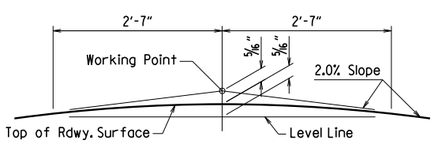
INTERIOR BEAM OR GIRDER

① Tolerance when removable deck forming is used is + ½", - ¼". Haunch forming is required and shall be adjusted to maintain slab thickness tolerance.

NOTES:
Haunch dimension may vary within the following limits to maintain the grade and slab thickness tolerance: Minimum occurs when top flange contacts bottom reinforcing steel; Maximum = top flange thickness plus 1¾" unless otherwise noted in the plans. No increase in concrete and structural steel quantities will be made to maintain tolerances.

Tolerances shown are applicable only when removable deck forming is used. See Std. Dwg. No. 55005 for tolerances when permanent steel deck forms are used. Payment for concrete shall be based on removable deck forming.

ADJUSTMENT FOR SLAB THICKNESS TOLERANCE



NOTE: Working Point matches Theoretical Roadway Grade.

ROUNDING DETAIL

BRIDGES IN NORMAL CROWN

WELD TABLE

Material Thickness of Thicker Part Joined (Inches)	Minimum Size of Fillet Weld (Inches)	Single Pass Weld Must Be Used
To ¾" Inclusive	¼"	
Over ¾"	⅝"	

NOTE: When a fillet weld size, as shown on the plans, is larger than the minimum, the first pass shall be that specified for minimum size of fillet weld.

SECTION AND SUBSECTION REFER TO THE ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2014 EDITION).

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

STANDARD DETAILS FOR STEEL BRIDGE STRUCTURES

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

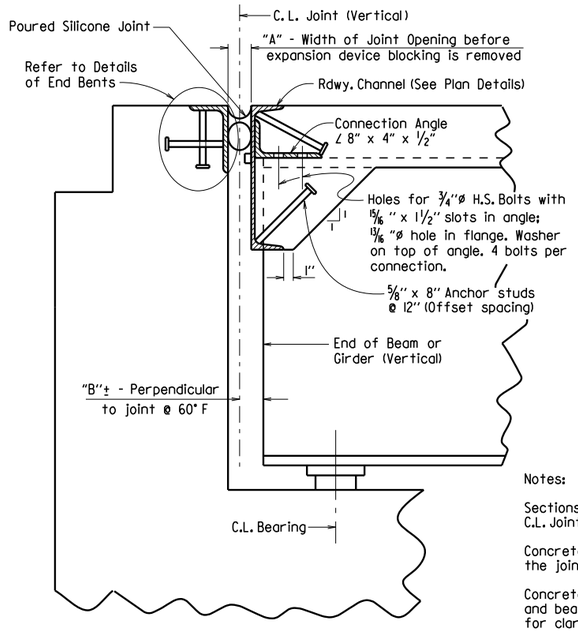
DRAWN BY: JYP DATE: 2/11/2016 FILENAME: b55007.dgn

CHECKED BY: AMS DATE: 2/11/2016 SCALE: No Scale

DESIGNED BY: STD. DATE: —

DRAWING NO. 55007

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		POURED SILICONE JOINT		55008



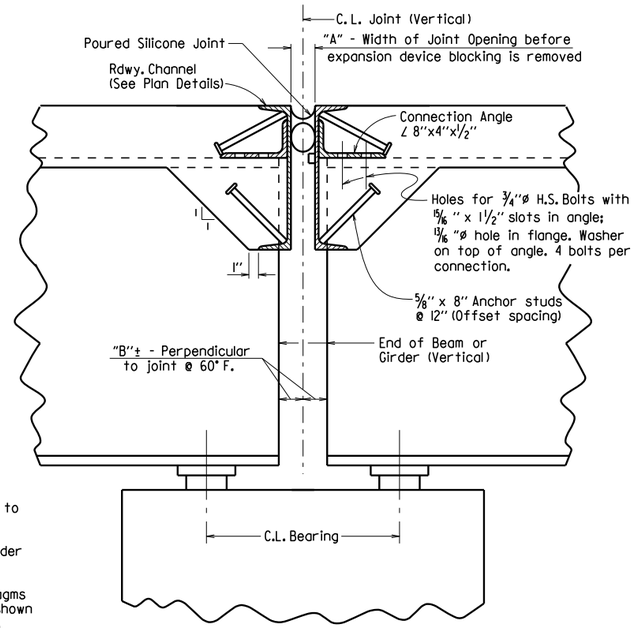
SECTION THRU JOINT AT END BENT

Notes:

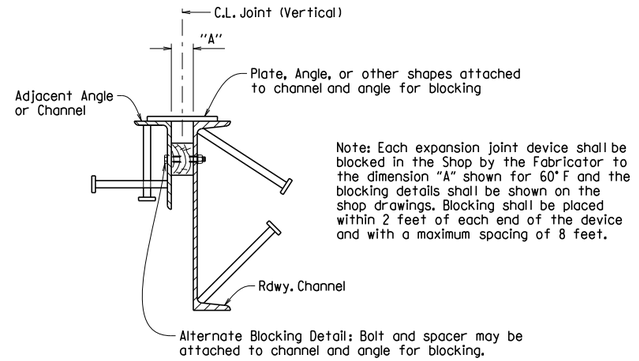
Sections are taken perpendicular to C.L. Joint.

Concrete shall be hand packed under the joint armor.

Concrete diaphragms, steel diaphragms and bearing stiffeners are not shown for clarity. See plans for details.



SECTION THRU JOINT AT INTERMEDIATE BENT



Note: Each expansion joint device shall be blocked in the Shop by the Fabricator to the dimension "A" shown for 60° F and the blocking details shall be shown on the shop drawings. Blocking shall be placed within 2 feet of each end of the device and with a maximum spacing of 8 feet.

DETAILS FOR BLOCKING EXPANSION JOINT DEVICE

EXPANSION DEVICE INSTALLATION AT END BENTS:

The Contractor may elect to install the expansion device using one of the following two alternatives:

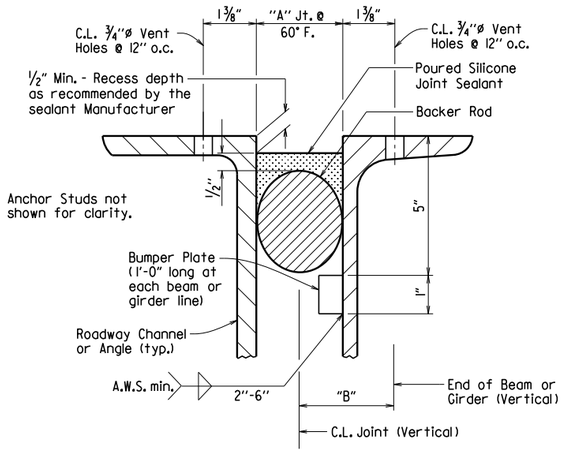
1) The concrete span pour adjacent to joint shall be placed before the end bent backwall is placed. After the end bent backwall forms are in place and the beams or girders erected, the blocked expansion device shall be installed and adjusted for grade. All connection bolts shall be fully tightened prior to placing the deck concrete adjacent to the bent. Immediately prior to pouring the backwall concrete, the blocking shall be removed, and the opening adjusted for temperature and grade.

2) The backwall shall be poured to the optional construction joint after beams or girders are erected. The blocked expansion device shall be installed and adjusted for grade. All connection bolts shall be fully tightened prior to placing the deck concrete adjacent to the bent. Immediately prior to pouring the remainder of the backwall concrete, the blocking shall be removed and the opening adjusted for temperature and grade.

EXPANSION DEVICE INSTALLATION AT INTERMEDIATE BENTS:

After all beams or girders on each side of the joint are erected the blocked expansion device shall be installed and adjusted for grade. Deck concrete shall be placed for the entire unit or span on one side of the joint before deck concrete on the other side is placed. Connection bolts for the first side to have deck concrete placed shall be completely bolted. Bolts on the other side shall be loosely installed so that thermal and rotational movements will not be restricted during concrete placement on the first side.

Connection bolts on the second side shall remain loose until the concrete pour adjacent to the joint is to be placed. Immediately prior to pouring the span concrete on the second side, the blocking shall be removed, the joint adjusted for temperature and grade, and the connection bolts tightened.



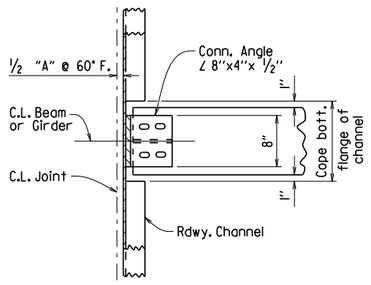
DETAIL OF POURED SILICONE JOINT

Silicone joint material and installation shall conform to Section 809. The temperature limitations recommended by the sealant Manufacturer shall be observed. The sealant shall be installed only when the average 24 hour air temperature is between 40° and 80° F.

Use an appropriately sized backer rod at the depth shown in the Manufacturer's literature based on the joint width at the time of sealing. Unless otherwise noted, do not install more backer rod than can be sealed in the same day.

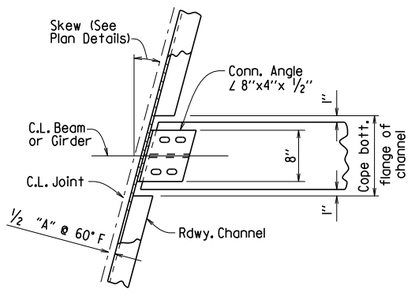
The Contractor shall verify separation of the backer rod from the joint material after the joint material has set.

When bridge deck is constructed in stages, backer rods shall be extended beyond length of poured joint in initial construction stage so that the two pieces can be properly spliced together prior to installing sealant in subsequent stages. Manufacturer's recommendations shall be followed to prevent sealant from "running out of joint" during stage construction.



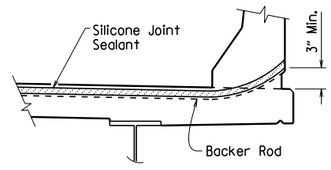
CHANNEL CONNECTION DETAIL

BENTS WITHOUT SKEW

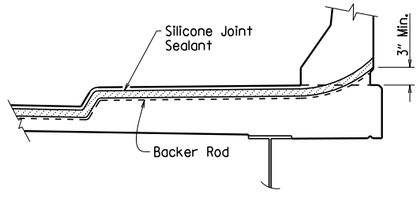


CHANNEL CONNECTION DETAIL

BENTS WITH SKEW



JOINT SEAL PLACEMENT AT RAIL



JOINT SEAL PLACEMENT AT SIDEWALK

SECTION AND SUBSECTION REFER TO THE ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2014 EDITION).

THESE DETAILS ARE APPLICABLE UNLESS OTHERWISE SHOWN IN THE PLAN DETAILS, SPECIAL PROVISIONS, OR SUPPLEMENTAL SPECIFICATIONS. SEE "TABLE OF SILICONE JOINT DATA" IN PLAN DETAILS FOR VARIABLES "A" AND "B", AND BUMPER PLATE SIZE.

STANDARD DETAILS FOR POURED SILICONE JOINTS

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: A.C.P. DATE: 2/11/2016 FILENAME: b55008.dgn

CHECKED BY: A.M.S. DATE: 2/11/2016 SCALE: No Scale

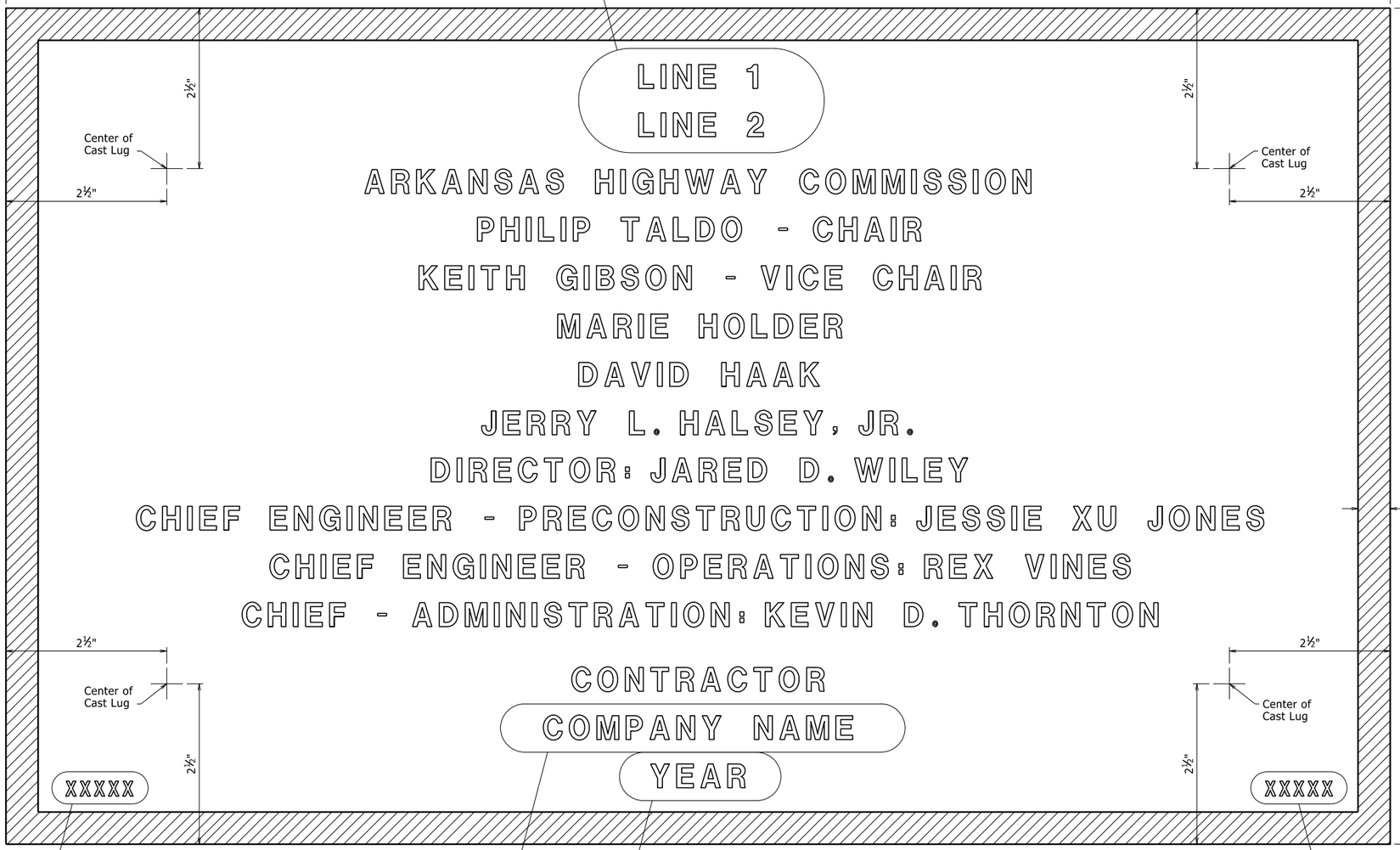
DESIGNED BY: STD. DATE: —

DRAWING NO. 55008

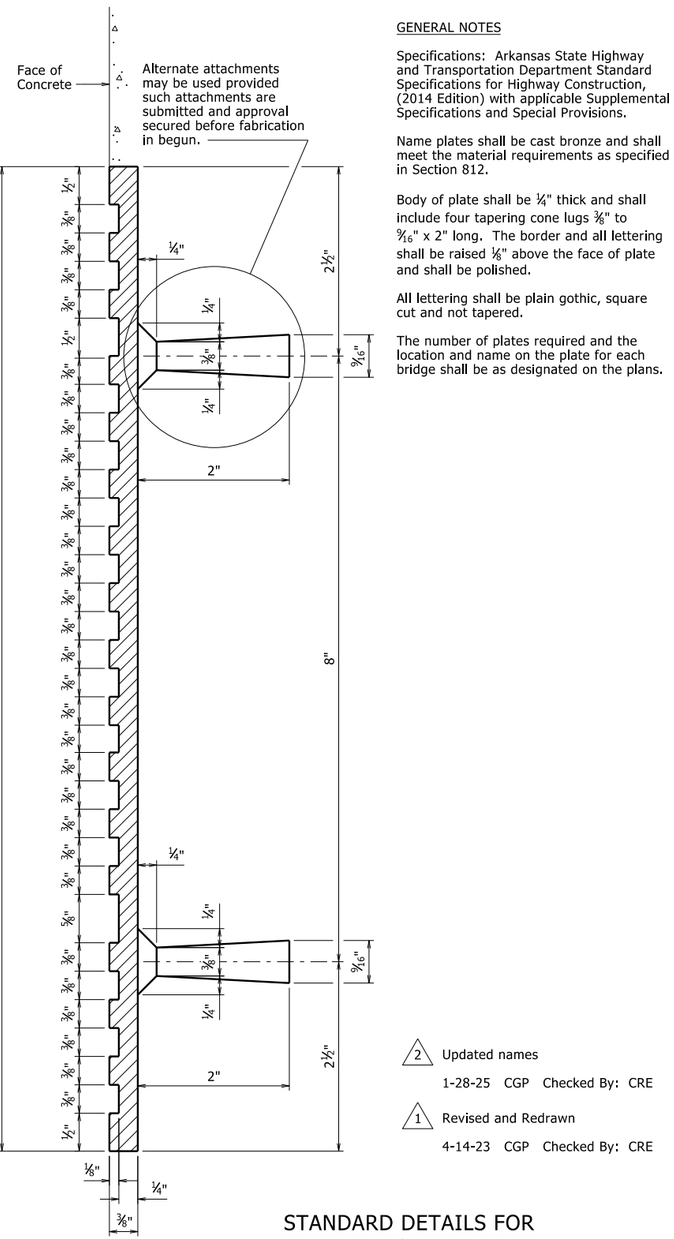
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
4-14-23		6	ARK.			
1-28-25		TYPE D NAME PLATE - 55010				

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		



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.

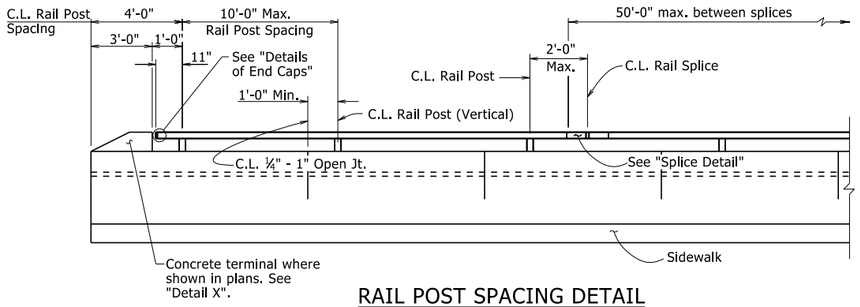
DRAWN BY: KDH DATE: 2-27-2014 FILENAME: b55010.dgn
CHECKED BY: BEF DATE: 2-27-2014 SCALE: NO SCALE
DESIGNED BY: STD. DATE:

DRAWING NO. 55010

PRINT DATE: 1/28/2025

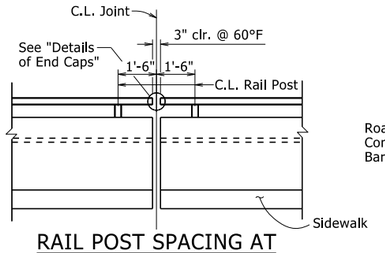
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.				

(1) TYPE H2 RAILING - 55015

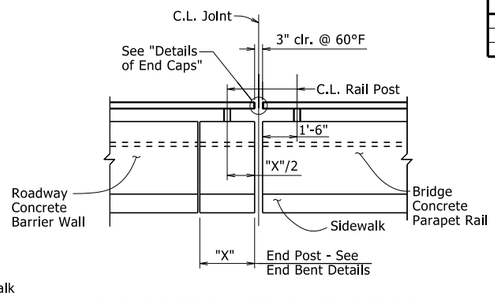


RAIL POST SPACING DETAIL

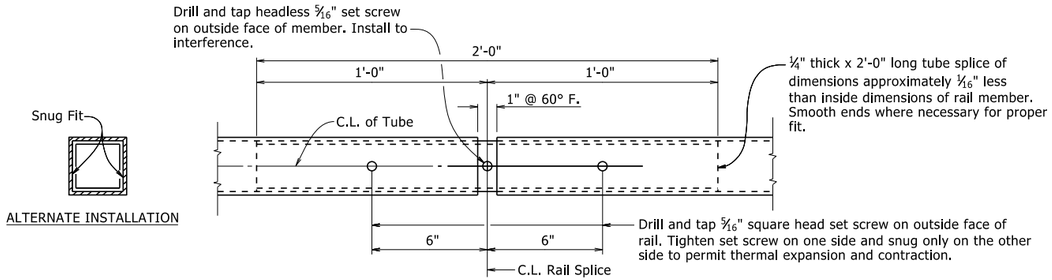
(Horizontal dimensions are along face of rail)



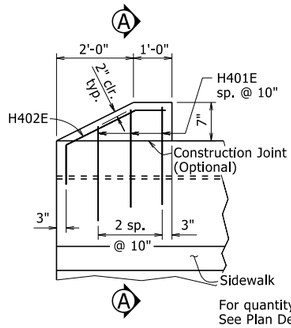
RAIL POST SPACING AT EXPANSION JOINTS



RAIL POST SPACING AT BRIDGE ENDS WITH CONCRETE BARRIER WALL

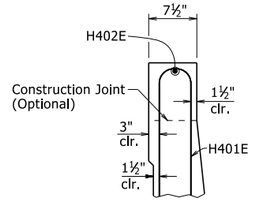


SPLICE DETAIL

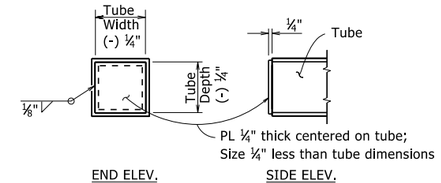


DETAIL X

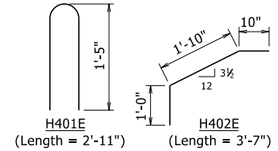
For quantity of reinforcing steel, See Plan Details.



SECTION A-A



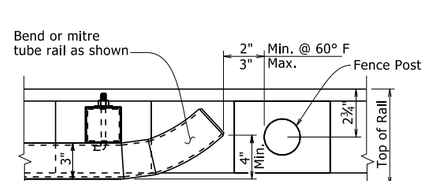
DETAILS OF END CAPS



Pin diameter for bending is 2". Bars shall be epoxy coated.

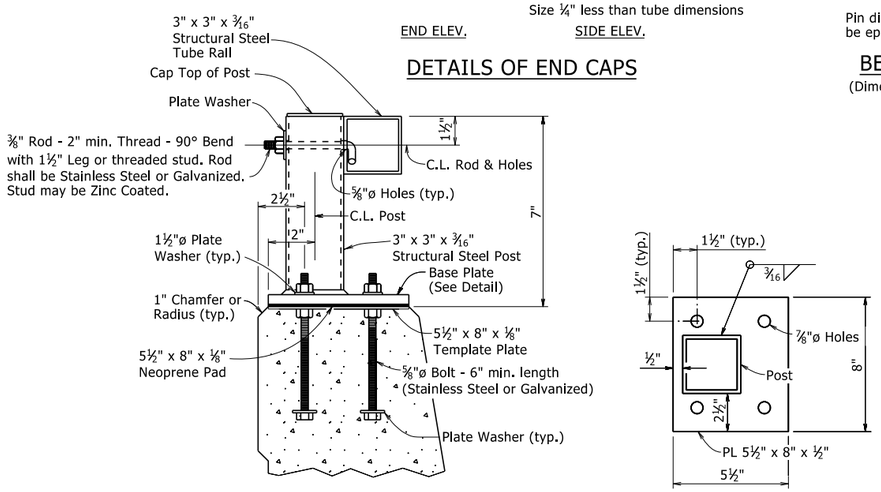
BENDING DIAGRAMS

(Dimensions are Out-to-Out of Bars)



DETAILS OF RAIL TERMINUS AT FENCE POST

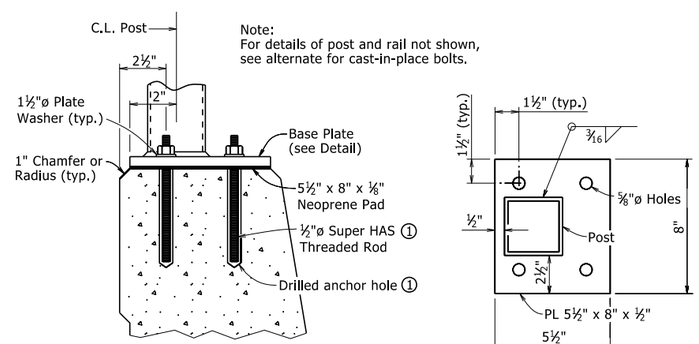
(When Chain Link Fence is Required)



BASE PLATE

DETAILS OF POST ANCHOR SYSTEM

(Cast-in-Place Bolts)



BASE PLATE

① HILTI HIT RE 500 Epoxy Adhesive Anchor System with 4½" embedment or approved equal.

The Hilti Epoxy Adhesive Anchor System (or approved equal) shall be installed in accordance with Manufacturer's recommendations.

DETAILS OF ALTERNATE POST ANCHOR SYSTEM

(Epoxy Adhesive Anchors)

MATERIALS:

Rail tubing, posts, end caps, and base plates shall conform to ASTM A709, Grade 36 or ASTM A500-Grade B, and shall be galvanized after fabrication in accordance with Subsection 806.02(c). When required elsewhere in the plans, steel rail members shall receive a powder coating process after galvanizing. Galvanized surfaces shall be prepared in accordance with Subsection 807.87 and the manufacturer's recommendations prior to application of the powder coating process.

The powder coating process shall be a two coat system applied using electrostatic spray. The base coat shall be a thermosetting epoxy powder with a minimum thickness of 2 to 4 mils. The top coat shall be tough polyester powder with a minimum thickness of 2 to 4 mils. The color shall be as shown in the plans. Coated galvanized framework shall have a salt spray resistance of 3,000 hours using ASTM B117 without loss of adhesion. The powder coating process shall be in accordance with manufacturer's recommendations. Any damage to the powder coated finish shall be repaired with a compatible touch-up system in accordance with the manufacturer's recommendations and to the satisfaction of the Engineer at the Contractor's expense.

Cast-in-place anchor bolts, nuts, washers, and set screws shall be galvanized high-strength steel or stainless steel. Mixing of galvanized and stainless steel fasteners will not be permitted.

High-Strength Steel:
Cast-in-place anchor bolts shall conform to ASTM F3125, Grade A325, Type 1.
Nuts shall conform to ASTM A563, Grade DH or AASHTO M 292, Grade 2H.
Washers shall conform to ASTM F436.
Plate Washers shall conform to ASTM A709, Grade 36.
Template Plates shall conform to ASTM A709, Grade 36.
Splice Set Screws shall conform to ASTM A307, Grade A.
Anchor bolts, nuts, washers, plate washers, and set screws shall be galvanized in accordance with AASHTO M 232, Class C or ASTM B695, Class 50.

Stainless Steel:
Cast-in-place anchor bolts shall conform to ASTM A193, Grade B8, Class 2 or A320, Grade B8, Class 2 with a minimum yield strength of 80,000 psi.
Nuts shall conform to ASTM A194, Grade 8.
Washers shall conform to ASTM A240, Type 302.
Plate Washers shall conform to ASTM A240, Type 302.
Template Plates shall conform to ASTM A240, Type 302.
Splice Set Screws shall conform to ASTM A193, Grade B8, Class 1 or A320, Grade B8, Class 1.

Threads on bolts, screws, and nuts shall conform to American Standard Coarse Series, Class 2 FIT, ASA Specification B1.1. Plate washers shall have dimensions meeting the requirements of ANSI/ASME B18.22.1, Type A plain washer (Wide Series) unless otherwise noted. Neoprene pads shall conform to the requirements of Subsection 807.15(b).

GENERAL NOTES FOR BRIDGE RAILING:

Rail layout shall conform to vertical and horizontal alignment of bridge. All posts shall be vertical. Rail sections shall be fabricated to attach to at least three posts.

Base plates shall not be placed upon areas that are improperly finished, deformed or irregular.

Bridge railing, including posts, templates, and base plates, fasteners, and neoprene pads shall be paid for at the contract unit price bid per linear foot for "Metal Bridge Railing (Type H2)". When required elsewhere in the plans, powdered coating finish and repair of powdered coating finish shall be considered subsidiary to the item "Metal Bridge Railing (Type H2)".

Shop drawings showing details of railing shall be submitted and approval secured prior to fabrication.

SECTION AND SUBSECTION REFER TO THE ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2014 EDITION).

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

STANDARD DETAILS FOR TYPE H2 RAILING

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY:	KJT	DATE:	6/25/2020	FILENAME:	b55015.dgn
CHECKED BY:	KWY	DATE:	6/25/2020	SCALE:	No Scale
DESIGNED BY:	STD.	DATE:	-		

DRAWING NO. 55015

PRINT DATE: 4/6/2021

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

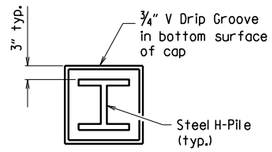
GENERAL NOTES FOR STEEL H-PILES:

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

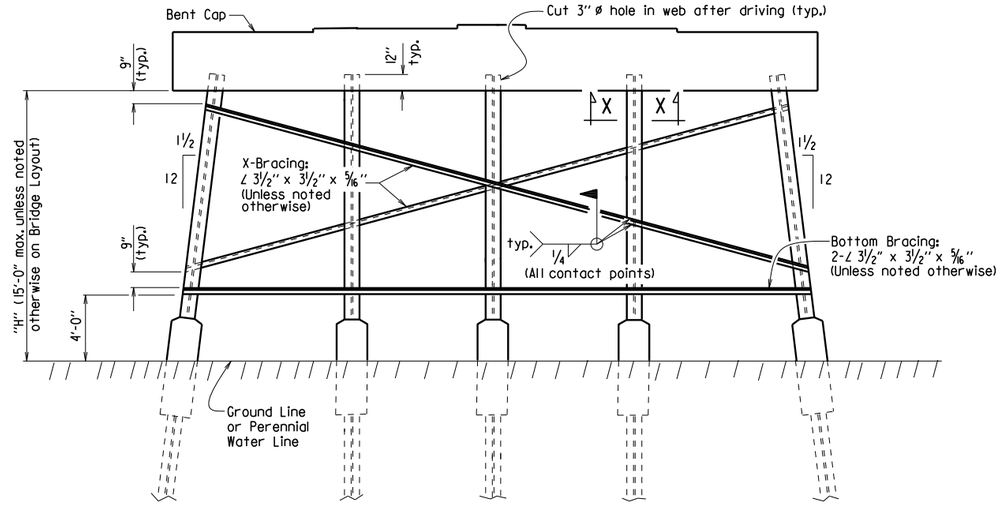
See Bridge Layout and Bent Details for pile size, estimated length, spacing, pile anchorage (if required) and for driving information.

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.

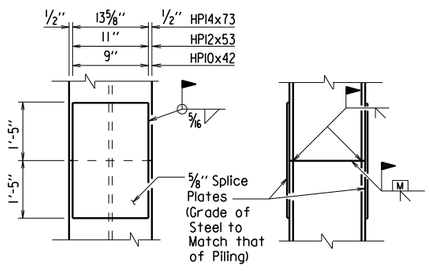
Omit X-Bracing and Bottom Bracing when "H" is 5 feet or less.

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)



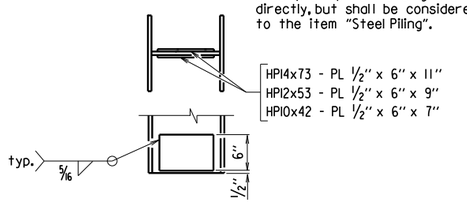
The Contractor may for his own convenience and at his own expense provide as many as three splices per pile. Minimum spacing between splices shall be 5 feet.

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:

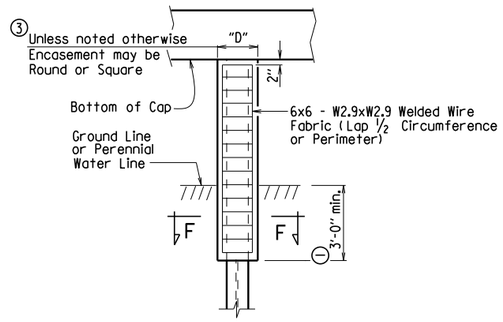
⚠ See Bridge Layout for additional notes, any pile encasement restrictions and required location of pile encasements.

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.

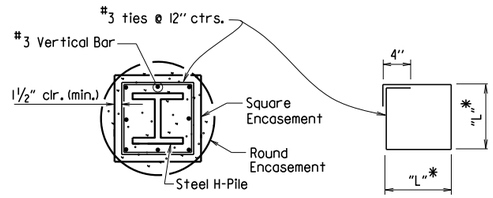
Welded Wire Fabric shall conform to AASHTO M 55 or M 221. Galvanized Corrugated Steel Pipe shall conform to AASHTO M 36 and M 218.

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)

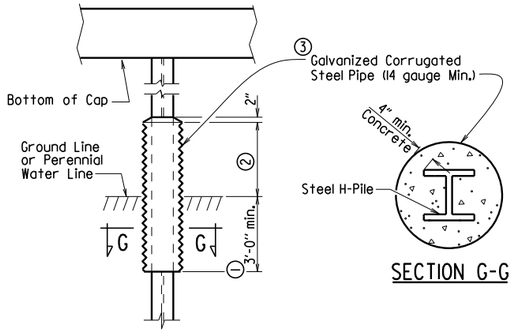


SECTION F-F

*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

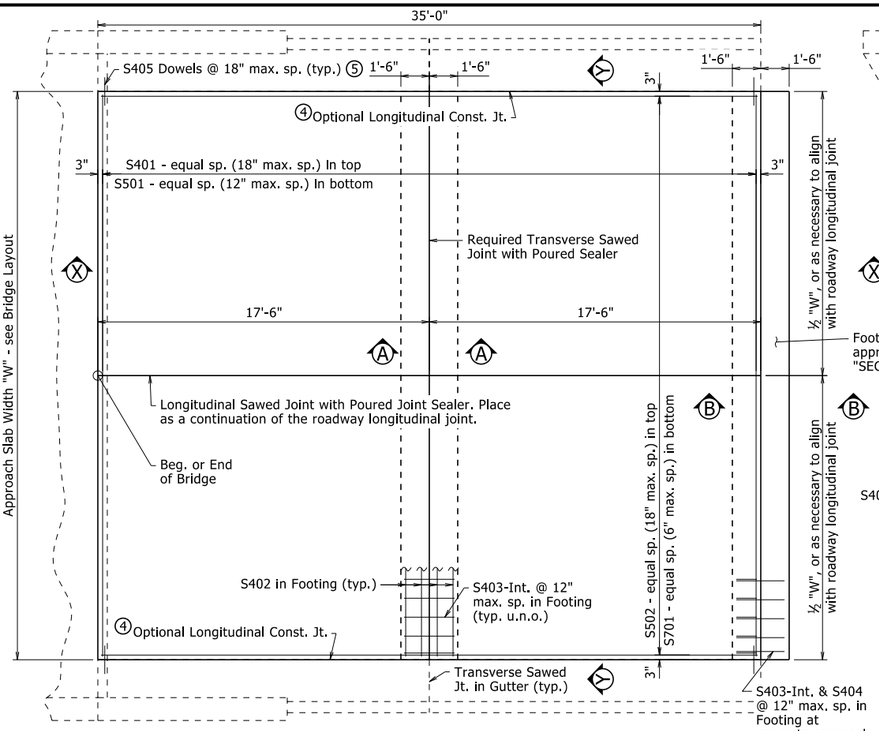
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

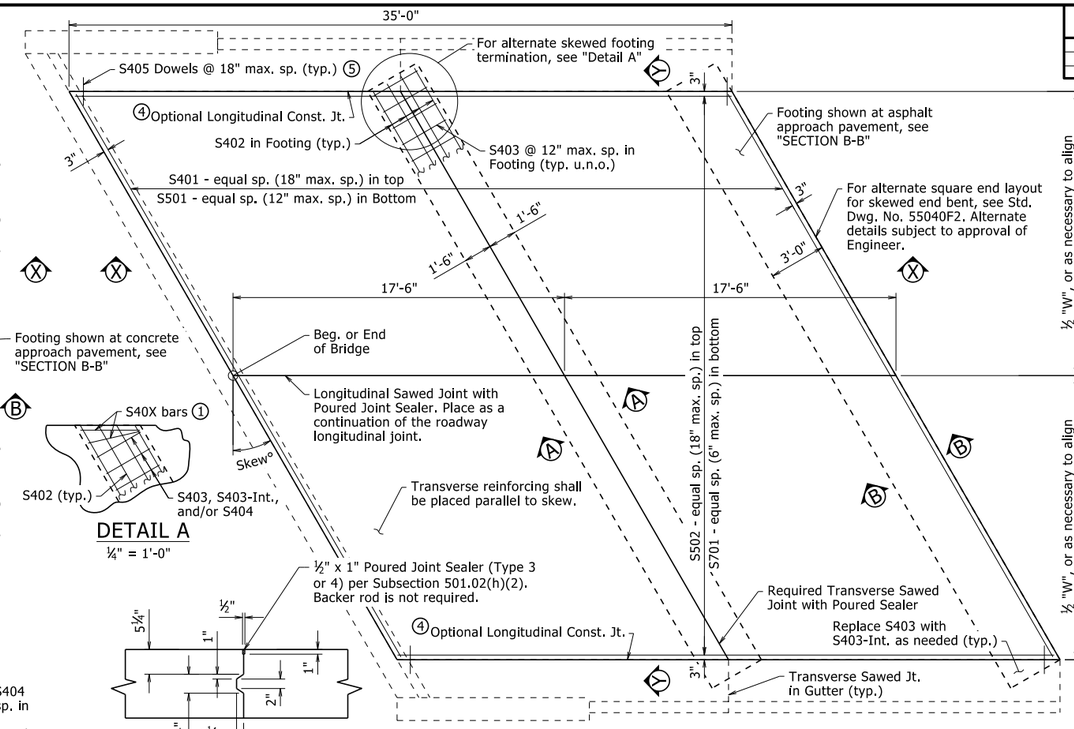
DRAWN BY: A.M.S. DATE: 2/27/2014 FILENAME: b55020.dgn
CHECKED BY: B.E.F. DATE: 2/27/2014 SCALE: NO SCALE
DESIGNED BY: STD. DATE: —

DRAWING NO. 55020

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

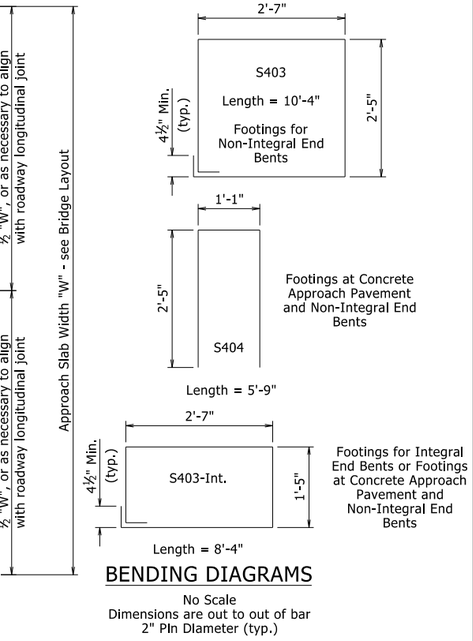


PLAN - APPROACH SLAB AT SQUARE END BENT



LONGITUDINAL CONSTRUCTION JOINT

½" = 1'-0"

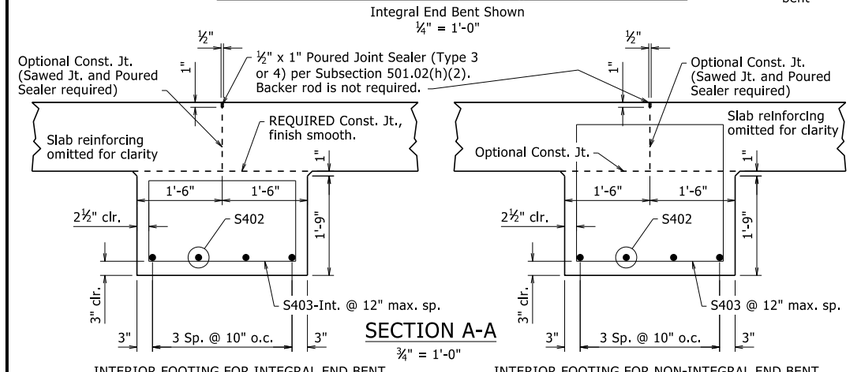


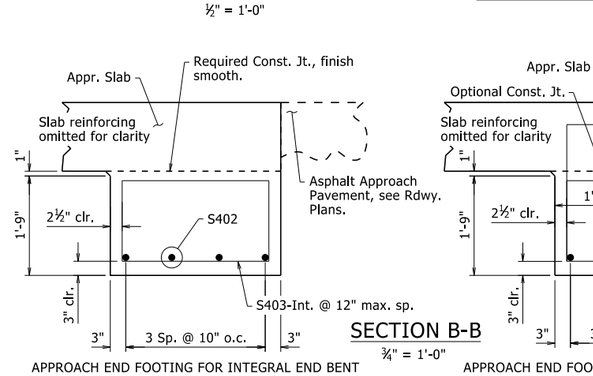
BENDING DIAGRAMS

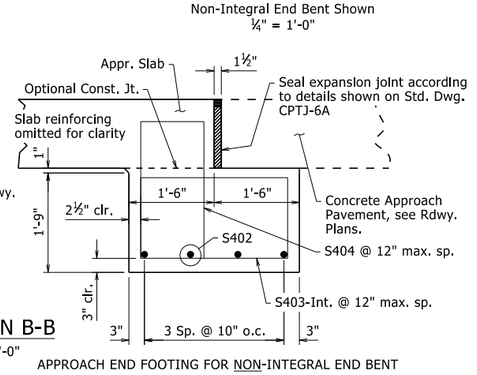
No Scale
Dimensions are out to out of bar
2" PIn Diameter (typ.)

PLAN - APPROACH SLAB AT SKEWED END BENT

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







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.

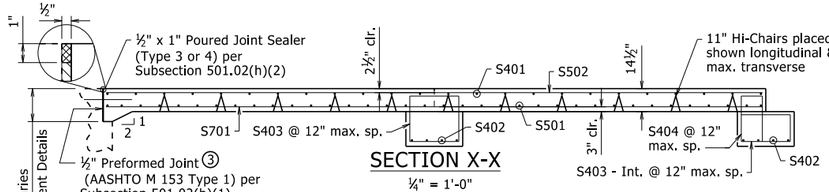
All longitudinal lines within the limits of horizontal curves shall be on curves concentric to C.L. Bridge. Adjustment to longitudinal bar lengths may be required. Transverse reinforcing shall be placed on radial lines to C.L. Bridge.

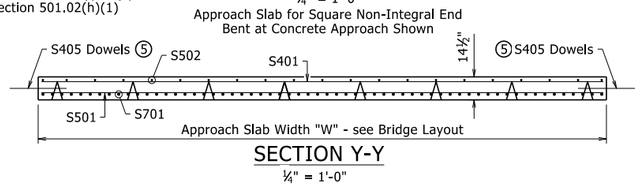
See Plans for actual Approach Slab Width, "W", end bent or span details, and approach pavement. Units of "W" are in Feet.

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".





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.

MINIMUM BAR LAP LENGTH

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

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

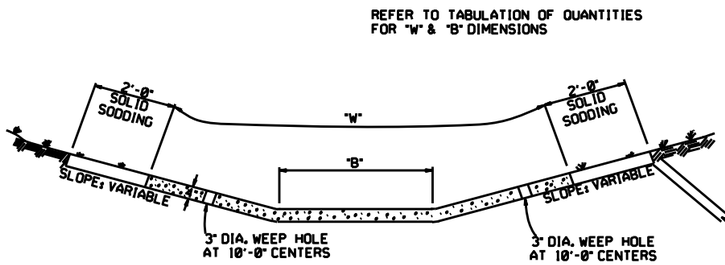
STANDARD DETAILS FOR TYPE F APPROACH SLAB

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

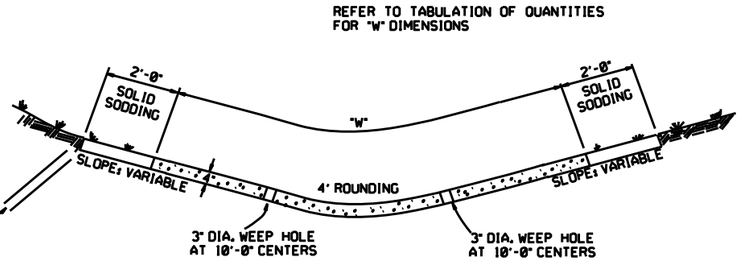
DRAWN BY: CGP DATE: 05/12/2023 FILENAME: b55040f.dgn
CHECKED BY: JYP DATE: 05/15/2023 SCALE: AS NOTED
DESIGNED BY: STD. DATE: -

DRAWING NO. 55040F1



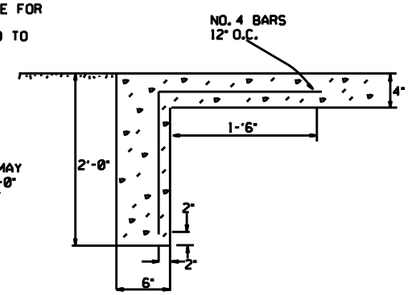
TYPE A

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



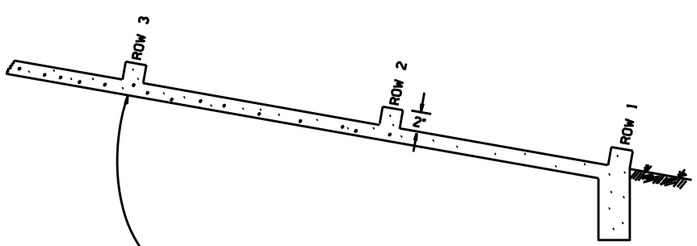
TYPE B

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



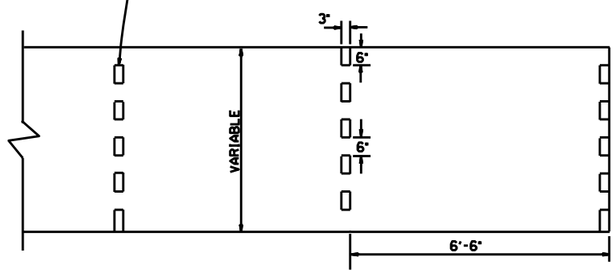
TOE WALL DEPTH MAY BE ALTERED TO 1'-0" WHEN DIRECTED BY THE ENGINEER IN ROCK EXCAVATION

TOE WALL DETAIL FOR CONCRETE DITCH PAVING



NUMBER OF ELEMENTS PER ROW VARIES WITH WIDTH OF PAVING SPECIFIED

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



ENERGY DISSIPATORS
(NO SCALE)

GENERAL NOTES:

THE FULL WIDTH OF EACH SECTION SHALL BE POURED MONOLITHICALLY.

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

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

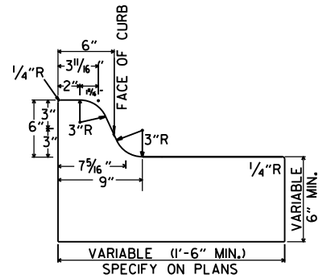
1" WIDE TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE DITCH PAVING AT 45° INTERVALS. THE SPACE SHALL BE FILLED WITH APPROVED JOINT FILLER COMPLYING WITH AASHTO M213.

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

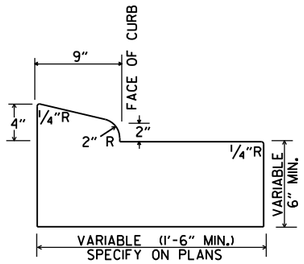
ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE DITCH PAVING

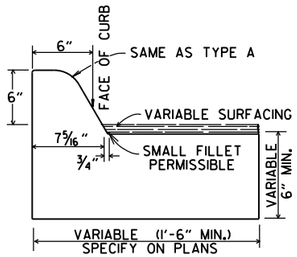
STANDARD DRAWING CDP-1



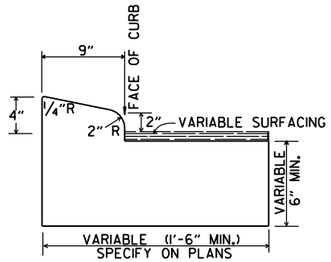
TYPE A



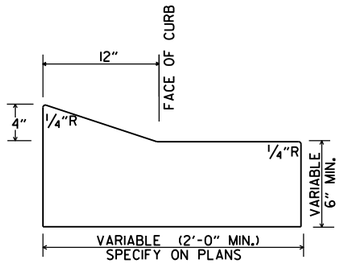
TYPE B-1



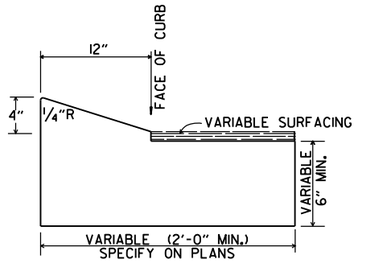
TYPE C



TYPE B-2

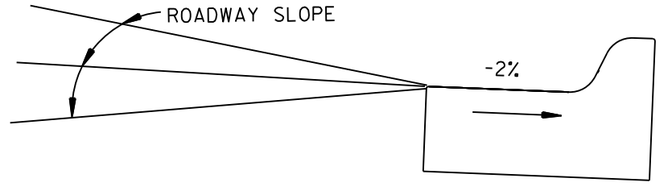


TYPE E-1



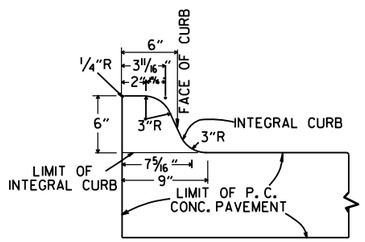
TYPE E-2

CONCRETE COMBINATION CURB AND GUTTER

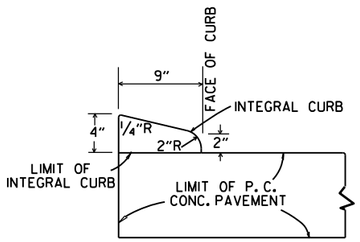


DETAIL OF GUTTER SLOPE

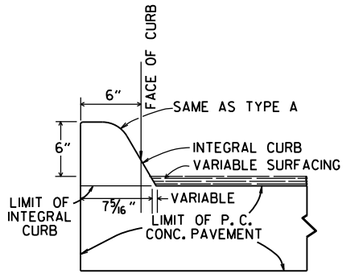
GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.



TYPE A

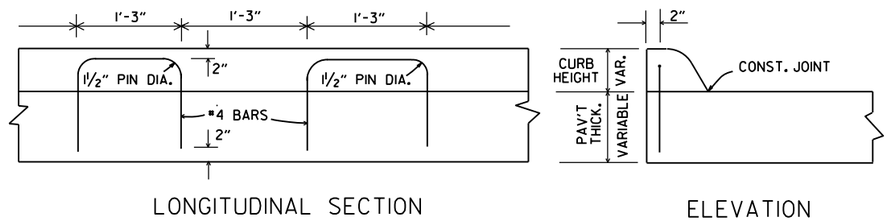


TYPE B



TYPE C

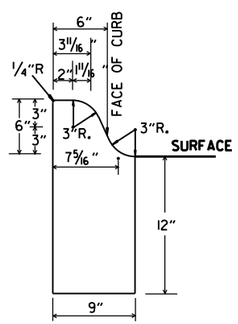
INTEGRAL CURB



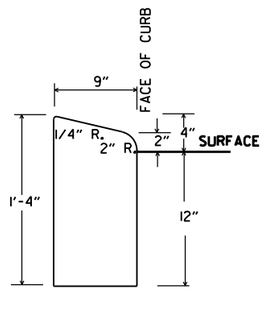
LONGITUDINAL SECTION

ELEVATION

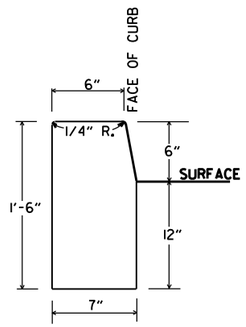
ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



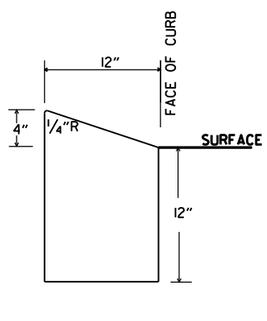
TYPE A



TYPE B

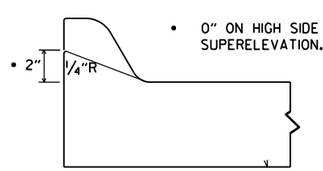


TYPE D



TYPE E

CONCRETE CURB



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

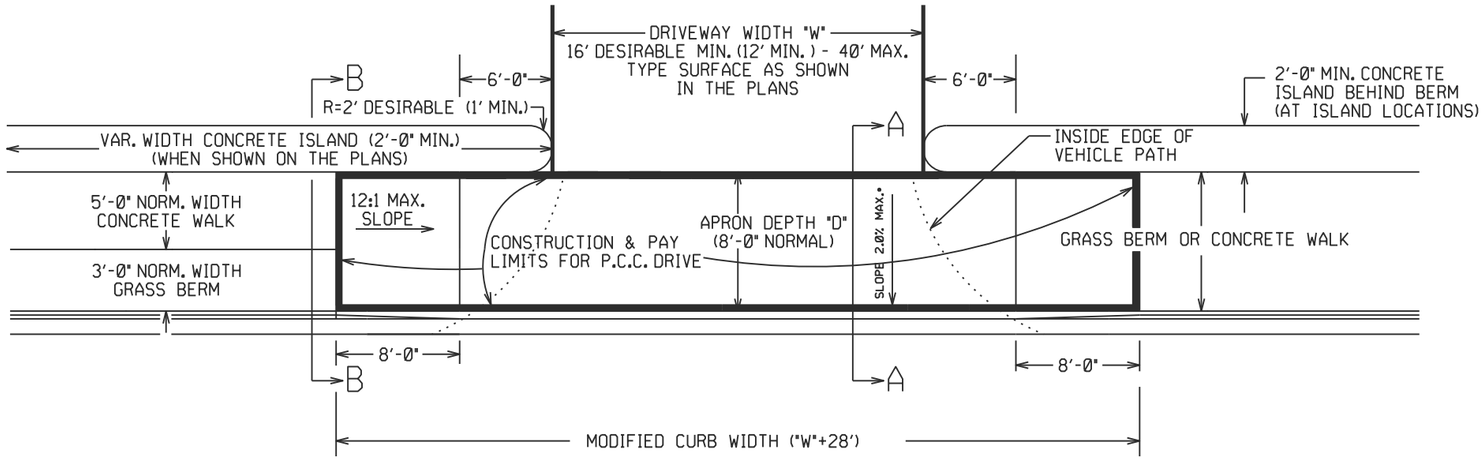
DETAILS OF MODIFIED CURB

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

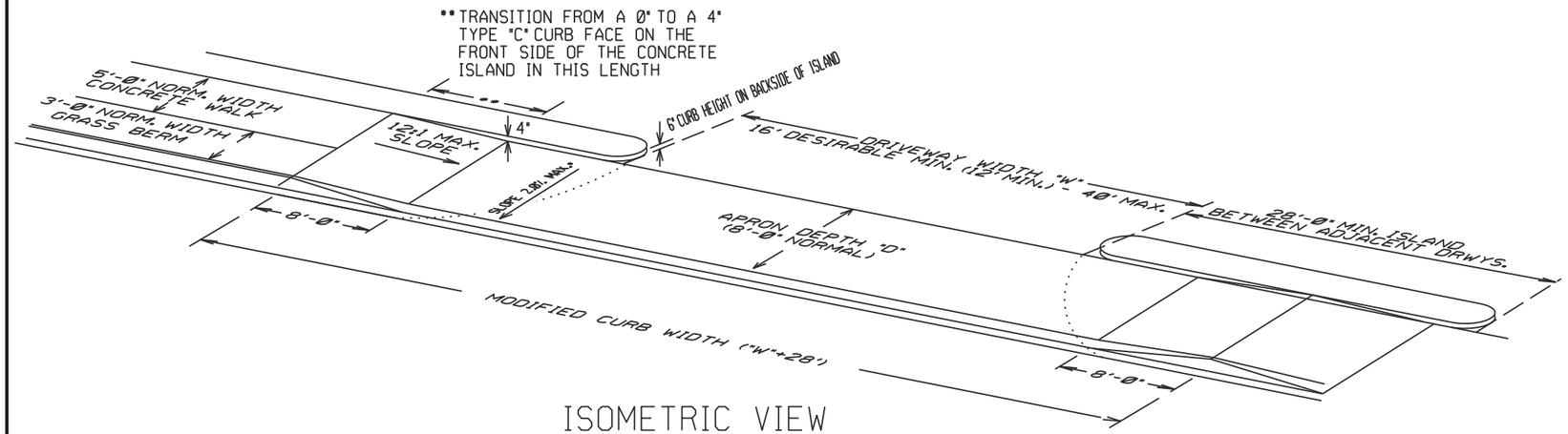
ARKANSAS STATE HIGHWAY COMMISSION

CURBING DETAILS

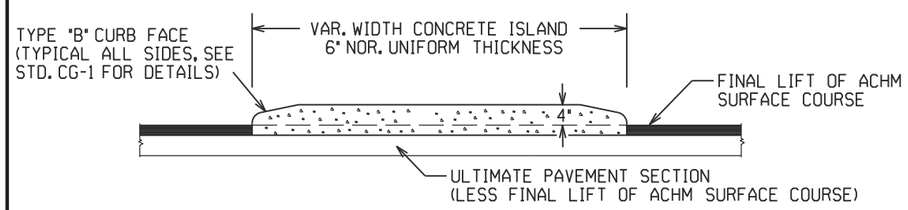
STANDARD DRAWING CG-1



PLAN VIEW



ISOMETRIC VIEW

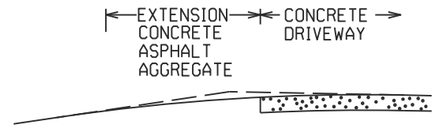


CURBED ISLANDS FOR CHANNELIZATION

CONCRETE ISLAND NOTES:

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

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



EXTENSION TYPICAL SECTIONS

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

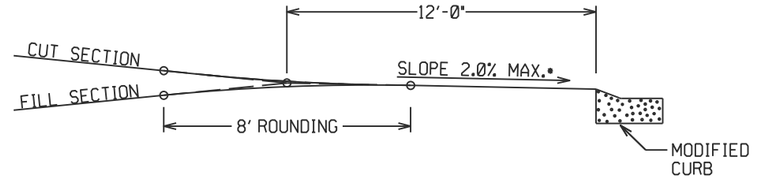
2: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
4" ACHM BINDER COURSE (1") OR
4" ACHM BASE COURSE (1-1/2")

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

4: AGGREGATE - 6" AGGREGATE BASE COURSE

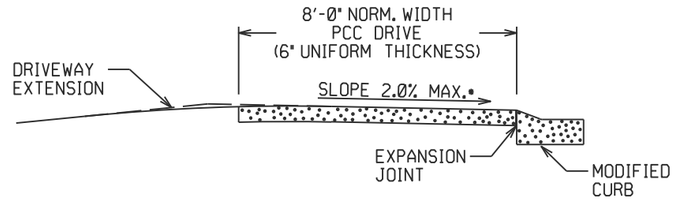
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

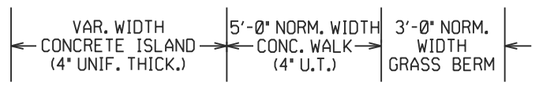


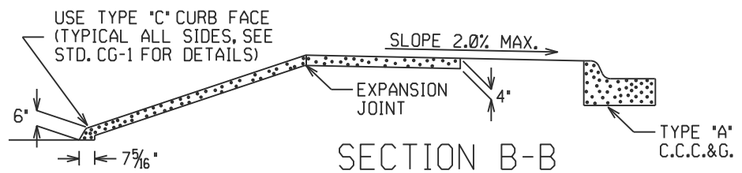
DRIVEWAY VERTICAL ALIGNMENT DETAILS

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



SECTION A-A





SECTION B-B

CURBED ISLAND BEHIND WALK

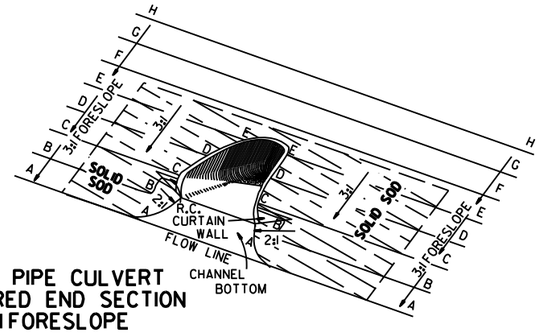
DATE REV	DESCRIPTION
05-22-25	REVISED ISLAND DETAILS & ADDED DESIRABLE MIN. DRIVEWAY WIDTH
05-19-22	REVISED ISLAND NOTES
11-07-19	REVISED WALK DETAILS
02-27-14	REVISED PLAN & ISOMETRIC VIEW
11-29-07	ADDED CHANNELIZATION ISLAND & REVISED DRIVEWAY SLOPE NOTE & VERTICAL ALIGNMENT DETAIL

ARDOT ARKANSAS DEPARTMENT OF TRANSPORTATION

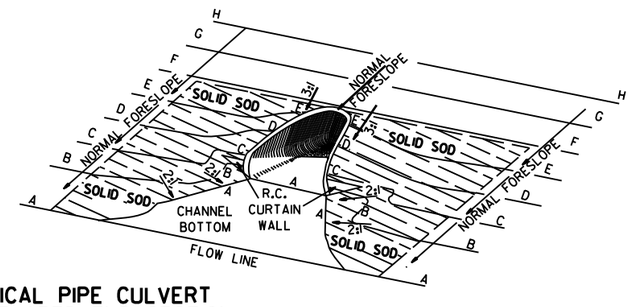
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DRIVEWAYS & ISLANDS

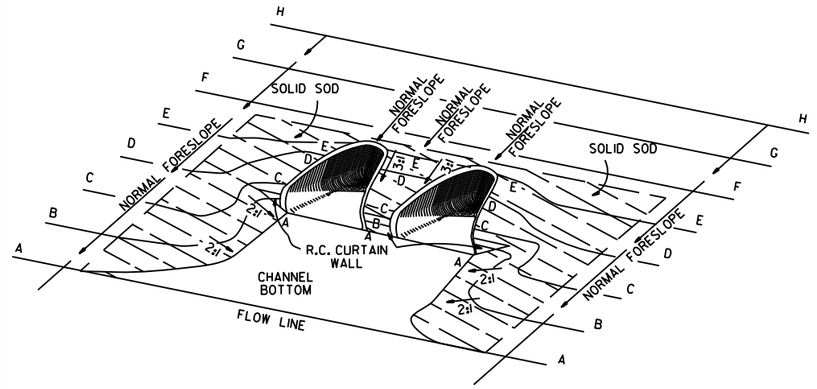
DATE EFFECTIVE	STANDARD DRAWING	DR-1
05-22-2025		



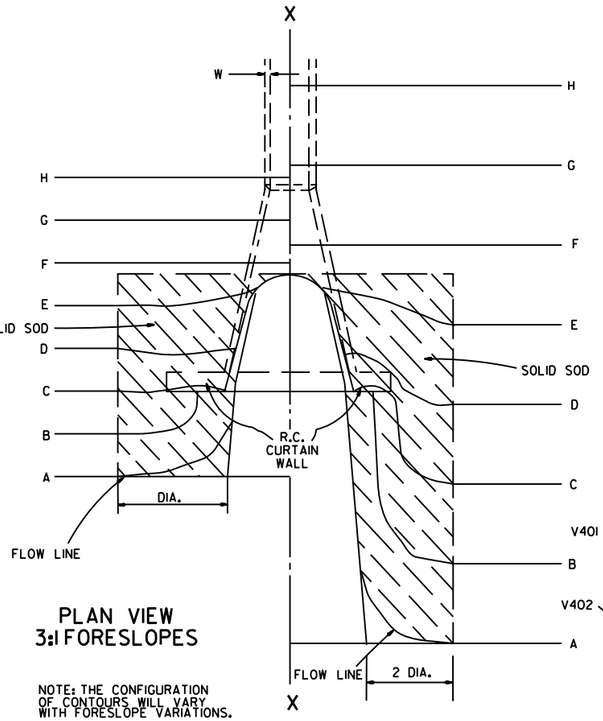
TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& 3:1 FORESLOPE



TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& FLATTENED ADJACENT SLOPES



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



PLAN VIEW
3:1 FORESLOPES

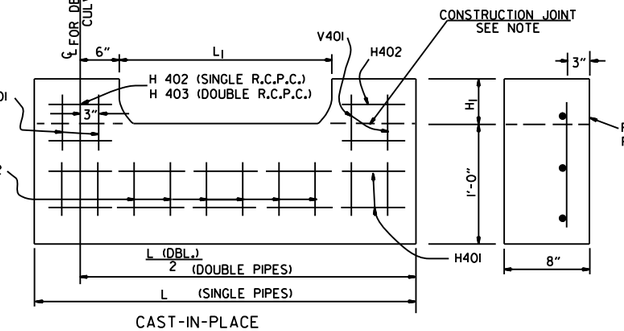
NOTE: THE CONFIGURATION OF CONTOURS WILL VARY WITH FORESLOPE VARIATIONS.

PLAN VIEW
FLATTENED FORESLOPES

R.C. CURTAIN WALL
DIMENSIONS & QUANTITIES

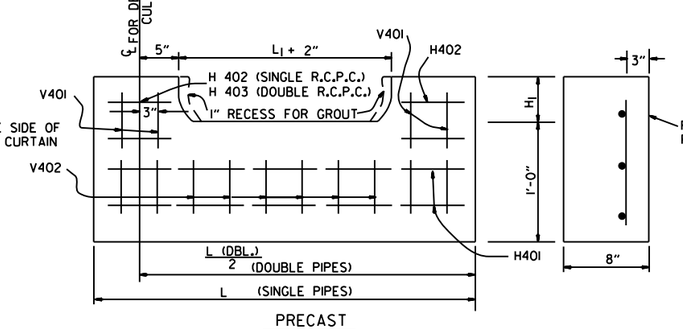
PIPE DIA.	H_1	L_1	L	L (DBL.)/2	SINGLE R.C.P.C. CONC.	SINGLE R.C.P.C. REINF. STEEL	DOUBLE R.C.P.C. CONC.	DOUBLE R.C.P.C. REINF. STEEL
					CU. YDS.	LBS.	CU. YDS.	LBS.
18"	1'-11½"	3'-5"	8'-0"	6'-3"	0.31	27.7	0.45	39.5
24"	1'-0½"	4'-6"	9'-6"	7'-6"	0.37	33.4	0.53	48.0
30"	1'-3½"	5'-7"	11'-0"	9'-0"	0.45	39.0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

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



CAST-IN-PLACE

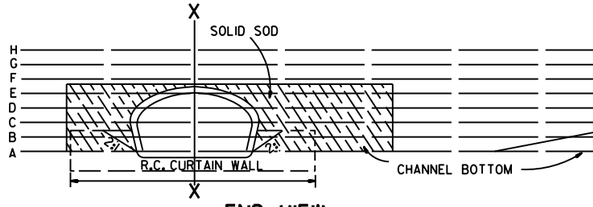
NOTE: THE PORTION OF THE R.C. CURTAIN WALL BENEATH THE FLARED END SECTION (LOWER 1'-0") SHALL BE PLACED MONOLITHICALLY. THE FLARED END SECTION SHALL THEN BE SET IN PLACE & THE REMAINING PORTIONS OF THE R.C. CURTAIN WALL PLACED.



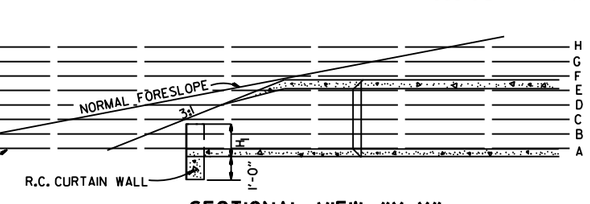
PRECAST

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

R.C. CURTAIN WALL DETAILS



END VIEW



SECTIONAL VIEW "X-X"

REINFORCING STEEL SCHEDULE

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

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

SOLID SODDING

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

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

GENERAL NOTES

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

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

ARKANSAS STATE HIGHWAY COMMISSION

FLARED END SECTION

STANDARD DRAWING FES-1

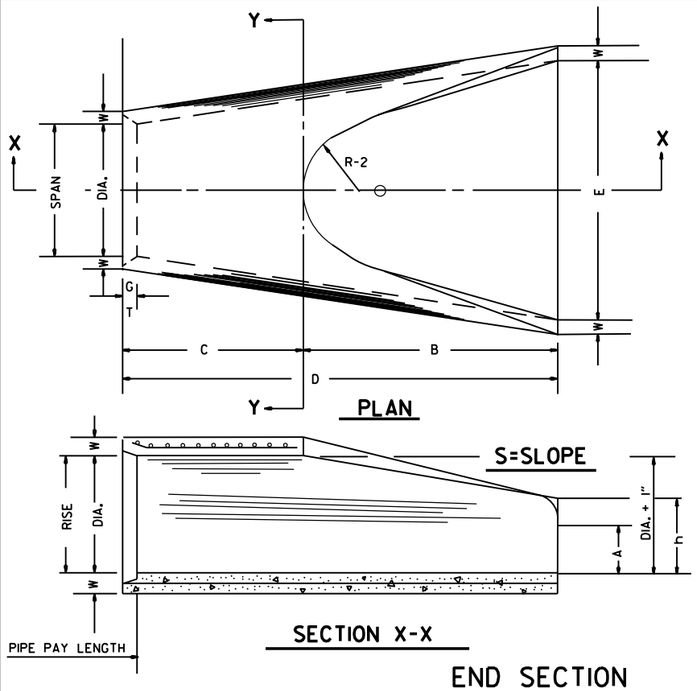
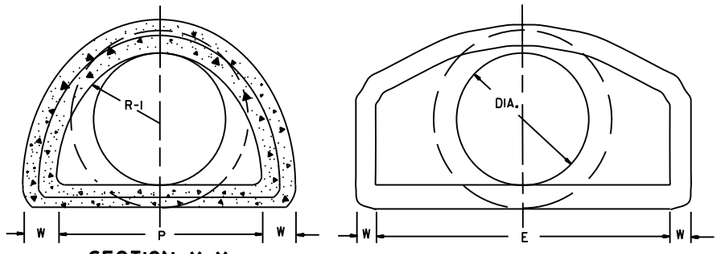


TABLE OF DIMENSIONS

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

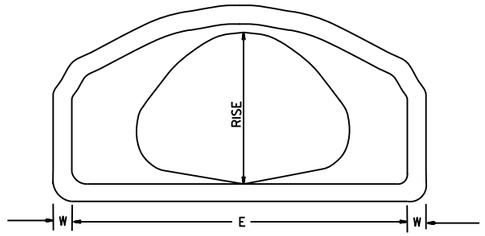


NOTE: TONGUE END ON UPSTREAM SECTION
GROOVE END ON DOWNSTREAM SECTION

ARCH PIPE

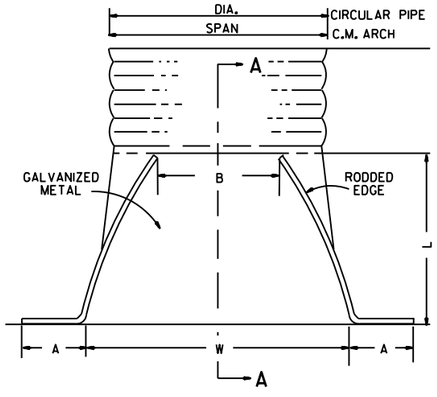
EQUIV. DIA.	• SPAN AASHTO M 206	• SPAN AHD NOMINAL	• RISE AASHTO M 206	• RISE AHD NOMINAL	W	A	B	C	D	E	P	R2	G-T	S
	INCHES													
15	18	18	11	11	2"	4"	2'-0"	4'-0"	6'-0"	3'-0"	29"	12"	1½"	2½:1
18	22	22	13½	14	2½"	5"	2'-0"	4'-1"	6'-1"	3'-6"	32⅛"	13"	2½"	2½:1
21	26	26	15½	16	2¾"	7"	2'-3"	3'-10"	6'-1"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

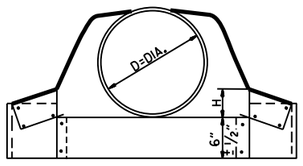
• THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PER CENT FROM THE VALUES SPECIFIED BY AASHTO M 206.

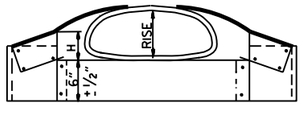


END VIEW
CONCRETE ARCH PIPE

END SECTION FOR REINFORCED CONCRETE PIPE CULVERTS







CIRCULAR PIPE

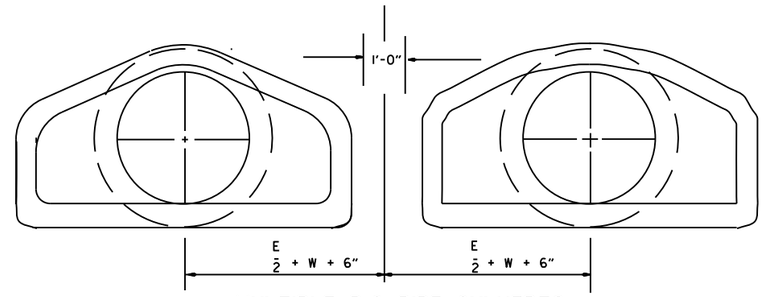
D. DIA.	GAUGE	A 1" ±	B. MAX.	H 1" ±	L 1½" ±	W 2" ±	S
		INCHES					
12	16	6	6	6	21	24	2½:1
15	16	7	8	6	26	30	2½:1
18	16	8	10	6	31	36	2½:1
21	16	9	12	6	36	42	2½:1
24	16	10	13	6	41	48	2½:1
30	14	12	16	8	51	60	2½:1
36	14	14	19	9	60	72	2½:1
42	12	16	22	11	69	84	2½:1
48	12	18	27	12	78	90	2½:1
54	12	18	30	12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

C.M. ARCH PIPE

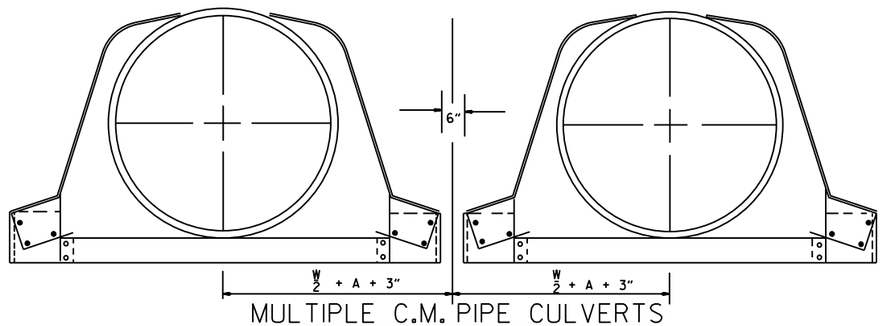
EQUIV. DIA.	SPAN	RISE	A 1" ±	B. MAX.	H 1" ±	L 1½" ±	W 2" ±	S	GAUGE
	INCHES								
15"	17	13	7	9	6	19	30	2½:1	16
18"	21	15	7	10	6	23	36	2½:1	16
21"	24	18	8	12	6	28	42	2½:1	16
24"	28	20	9	14	6	32	48	2½:1	16
30"	35	24	10	16	6	39	60	2½:1	14
36"	42	29	12	18	8	46	75	2½:1	14
42"	49	33	13	21	9	53	85	2½:1	12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

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

END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS



MULTIPLE R.C. PIPE CULVERTS



MULTIPLE C.M. PIPE CULVERTS

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

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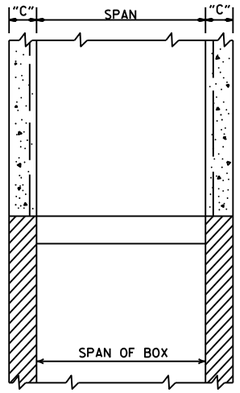
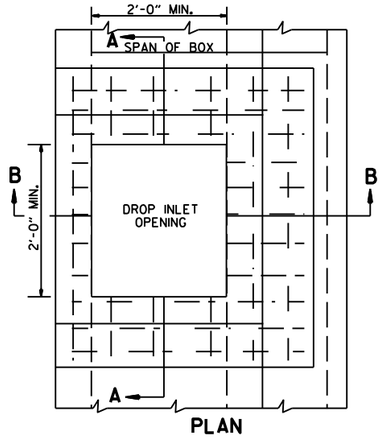
FLARED END SECTION

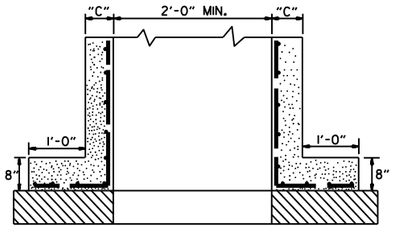
STANDARD DRAWING FES-2



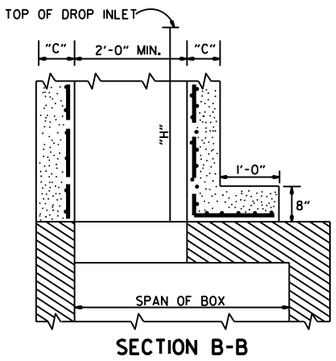
SECTION B-B



PLAN

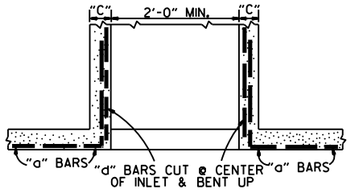


SECTION A-A

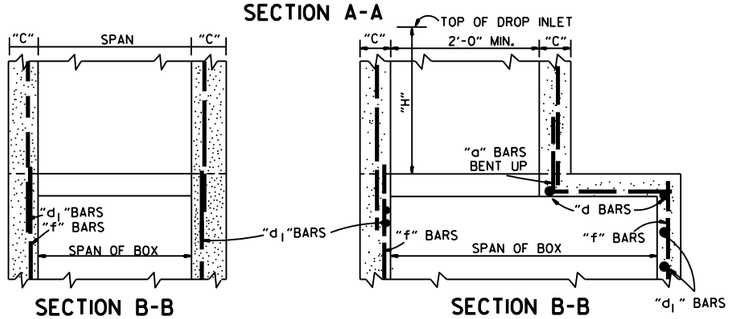


SECTION B-B

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



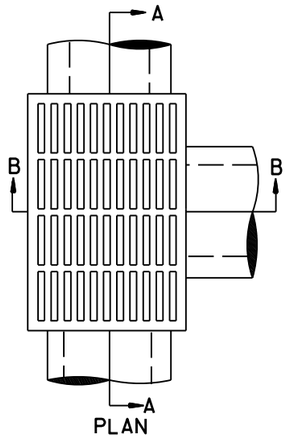
SECTION A-A



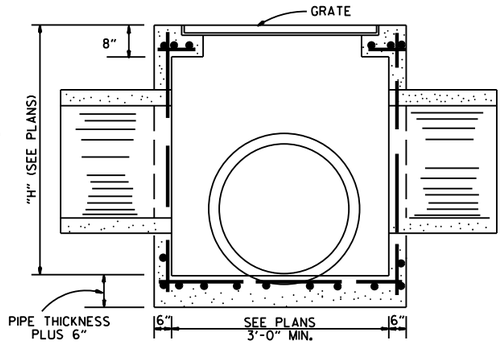
SECTION B-B SECTION B-B

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

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

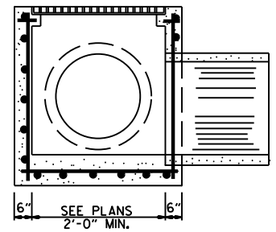


PLAN



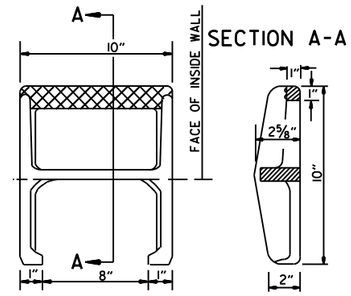
SECTION A-A

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



SECTION B-B

DROP INLET (TYPE E)

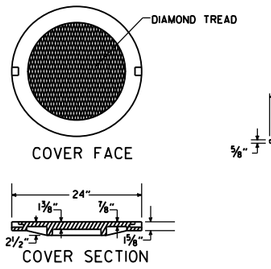


APPROX. WEIGHT = 11 LBS. (CAST IRON)

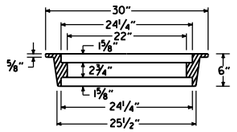
PLAN

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

DETAIL OF STEP FOR DROP INLET



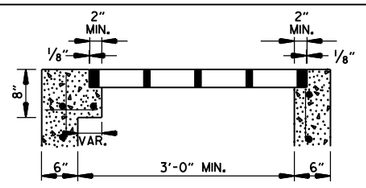
COVER SECTION



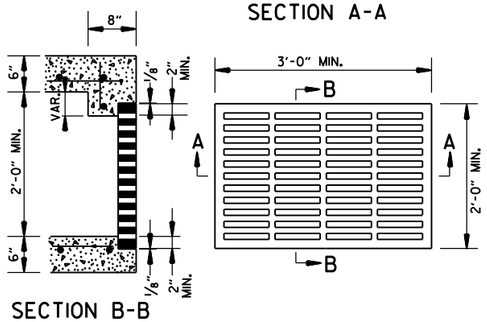
RING SECTION

APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER



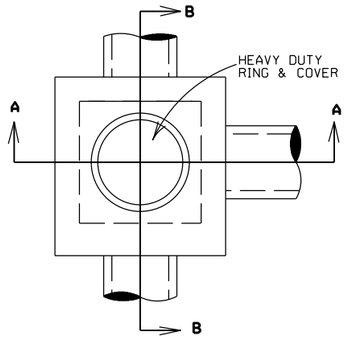
SECTION A-A



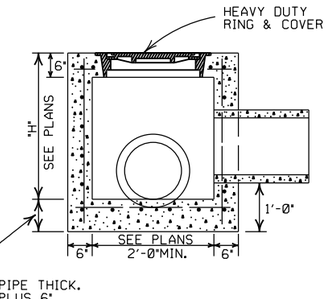
SECTION B-B

APPROXIMATE MINIMUM WATERWAY OPENING = 260 SQ. IN.

GRATE FOR TYPE E DROP INLET

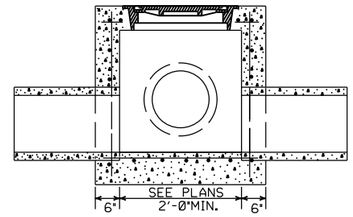


PLAN



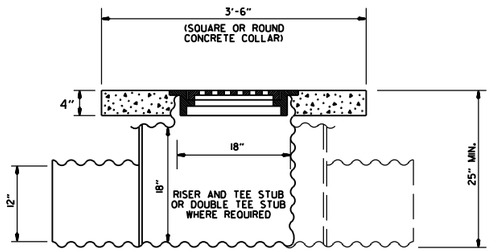
SECTION A-A

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

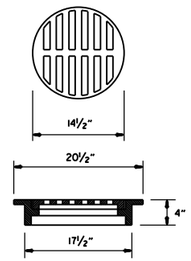


SECTION B-B

JUNCTION BOX (TYPE E)



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



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

DETAIL OF YARD DRAIN

GENERAL NOTES:

1. ALL EXPOSED CORNERS SHALL BE ¾" CHAMFERED.
2. STEPS SHALL BE INSTALLED ON 16" CENTERS ON ALL INLETS 4'-0" HIGH OR OVER, OR AS APPROVED BY THE ENGINEER.
3. EXPANSION JOINT MATERIAL SHALL BE ¾" PREFORMED FIBER.
4. GRATE OR GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105 CLASS 35B. GRATE MAY BE USED WITHOUT FRAME.
5. GRATE AND FRAME SHALL NOT BE PAINTED.
6. GRATE SHALL BE BICYCLE SAFE.
7. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
8. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
9. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
10. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

DATE REV.	REVISION	DATE FILMED
11-16-01	ADDED NOTE 10	
1-12-00	REVISED HEAVY DUTY RING & COVER	
7-02-98	CHANGED GRATE DETAIL, DELETED DI(TYPE D), REPLACED RING & COVER W/HEAVY DUTY RING & COVER, ADDED JUNCTION BOX (TYPE E)	
6-26-97	ADDED DIMENSION TO TYPE IV-A	
10-18-96	ADDED DETAIL OF YARD DRAIN	
8-15-91	DELETE TYPE IV GRATE	
7-15-88	REVISED STEP DETAIL	
5-20-83	REVISED DETAILS OF GRATES (TYPE IV & IV-A)	
2-4-83	ADDED GENERAL NOTE NO. 4	
3-2-81	ADDED TYPE IV-A GRATE	
5-22-74	DELETED INLET (TYPE F) & GRATE (TYPE III)	
10-2-72	REVISED AND REDRAWN	

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS & JUNCTION BOXES

STANDARD DRAWING FPC-9

4'-0" LENGTH DROP INLET

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

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

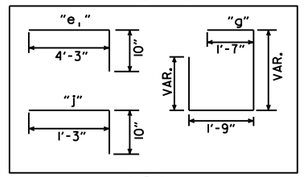
DROP INLET EXTENSION

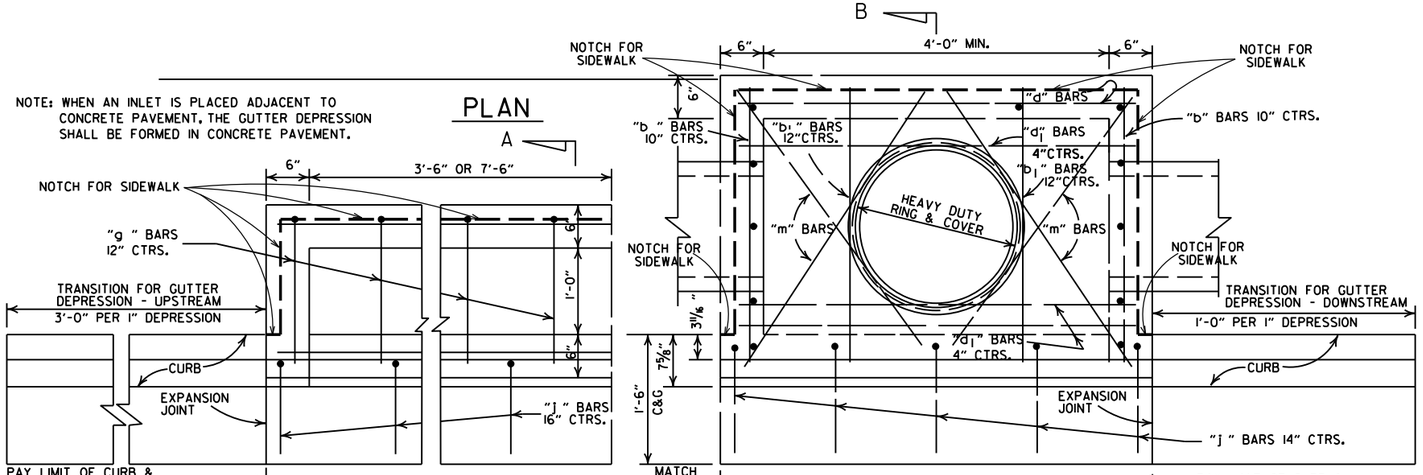
4'-0" CLASS A CONC.	4'-0" REINF. STEEL	8'-0" CLASS A CONC.	8'-0" REINF. STEEL
CU. YDS.	POUNDS	CU. YDS.	POUNDS
0.58	38	0.87	72
DEDUCT FROM QUANTITY COMPUTED FOR EACH EXTENSION ADDED.			
0.04	3		

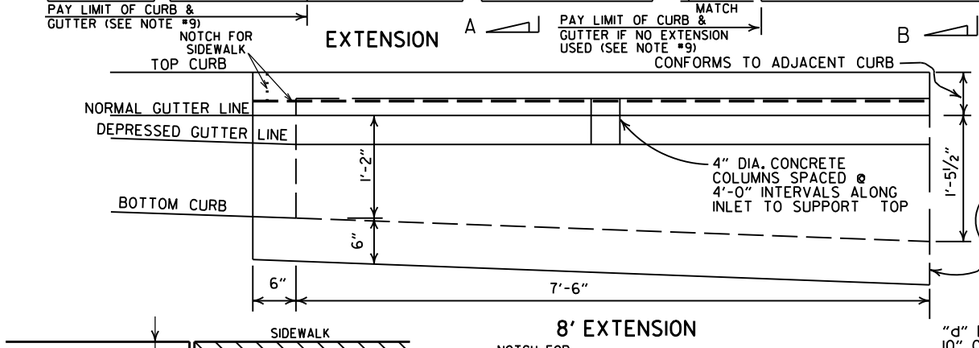
DEDUCT FROM QUANTITY COMPUTED FOR EACH PIPE ENTERING INLET

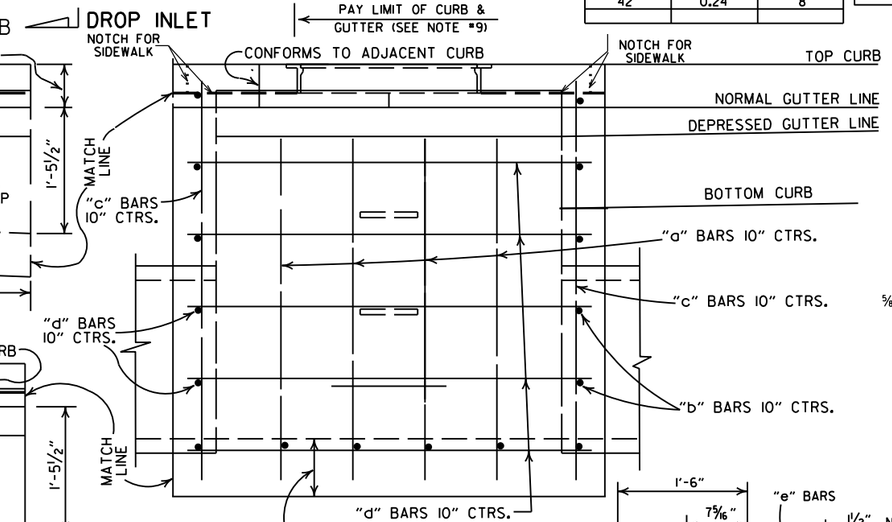
INSIDE DIA. PIPE	CLASS A CONC.	REINF. STEEL
INCHES	CU. YDS.	POUNDS
18	0.05	2
24	0.09	3
30	0.13	4
42	0.24	8

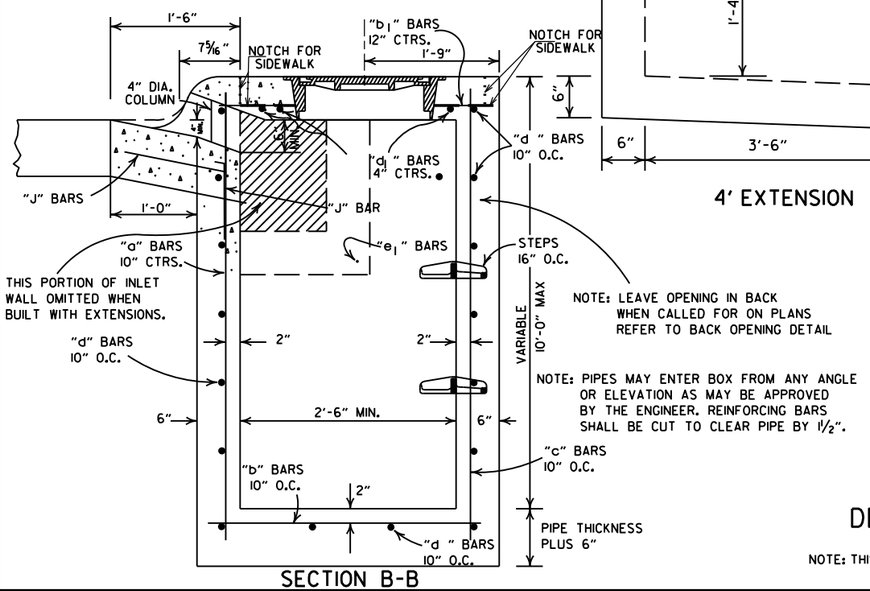
BAR DIAMETER

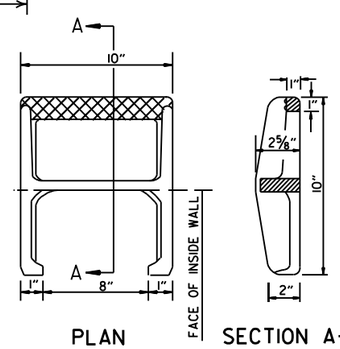


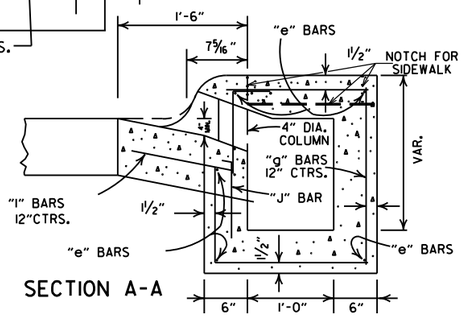


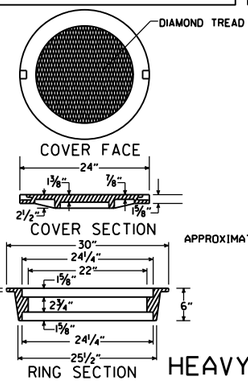






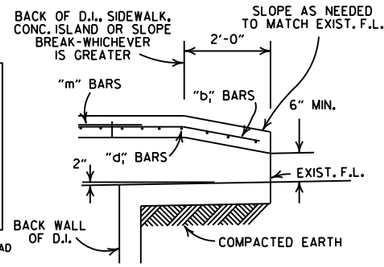






APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER



BACK OPENING

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

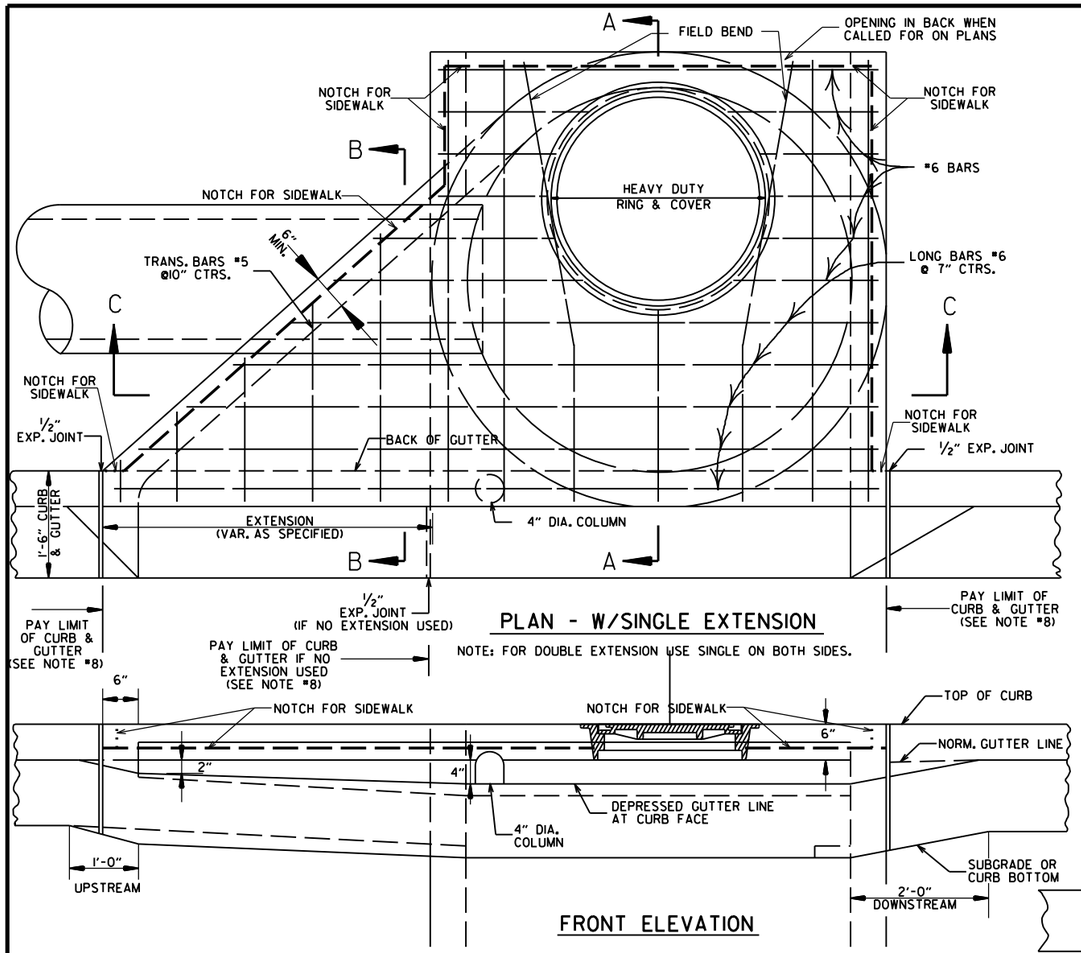
GENERAL NOTES:
1. ALL EXPOSED CORNERS TO HAVE ¾" CHAMFER.
2. STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER OF AS APPROVED BY THE ENGINEER.
3. ALL REINF. BARS SHALL BE #4 AND HAVE 1½" COVER.
4. DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
5. THIS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

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

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS (TYPE C)

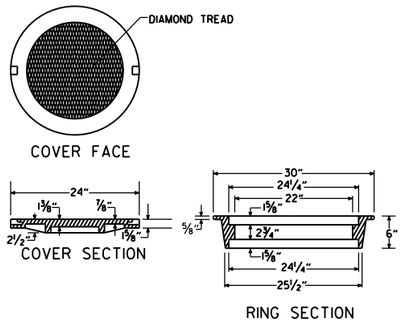
STANDARD DRAWING FPC-9E



PLAN - W/SINGLE EXTENSION

FRONT ELEVATION

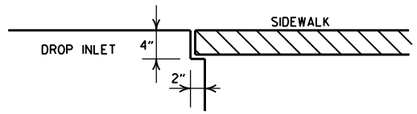
SECTION C-C



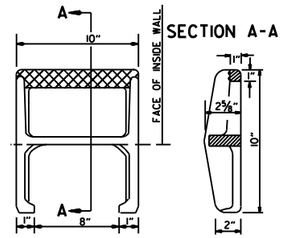
APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER

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



DETAIL OF NOTCH FOR SIDEWALKS



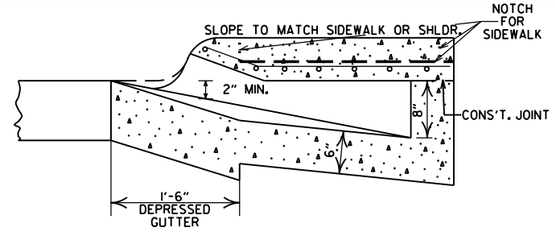
SECTION A-A

APPROX. WEIGHT = 11LBS. (CAST IRON)

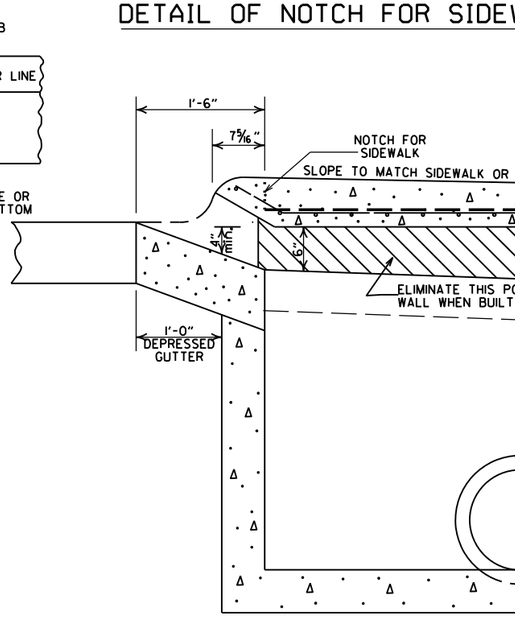
PLAN

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

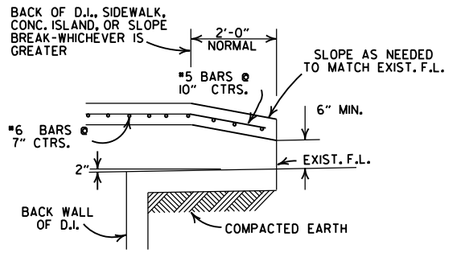
DETAIL OF STEP FOR DROP INLET



SECTION B-B



SECTION A-A



BACK OPENING

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

GENERAL NOTES:

1. ALL EXPOSED CORNERS TO HAVE ¾" CHAMFER.
2. STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER OR AS DIRECTED BY THE ENGINEER.
3. ALL REINFORCING BARS SHALL BE GRADE 60 AND HAVE MIN. 1½" COVER.
4. DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
5. 4" DIA. COLUMNS SPACED AT MAX. 4'-0" INTERVALS SHALL BE INSTALLED ALONG INLET AND EXTENSION TO SUPPORT TOP.
6. BASE AND INLET WALLS SHALL BE CAST MONOLITHICALLY.
7. THE THROAT SHALL BE CAST INTEGRALLY WITH THE GUTTER.
8. PAYMENT FOR CURB AND/OR CURB AND GUTTER WITHIN THE LIMITS OF DROP INLETS AND DROP INLET EXTENSIONS SHALL BE CONSIDERED INCLUDED IN PAYMENT MADE FOR DROP INLETS AND/OR DROP INLET EXTENSIONS.
9. PIPES MAY ENTER DROP INLET FROM ANY ANGLE OR ELEVATION AS MAY BE APPROVED BY THE ENGINEER.
10. APPROPRIATE SIZE TYPE C DROP INLETS MAY BE SUBSTITUTED FOR TYPE MO DROP INLETS AS APPROVED BY THE ENGINEER. PAYMENT TO BE AS DROP INLET (TYPE MO).
11. DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
12. 4"x2" NOTCH SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
13. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

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

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

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLET (TYPE MO)

STANDARD DRAWING FPC-9M

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.

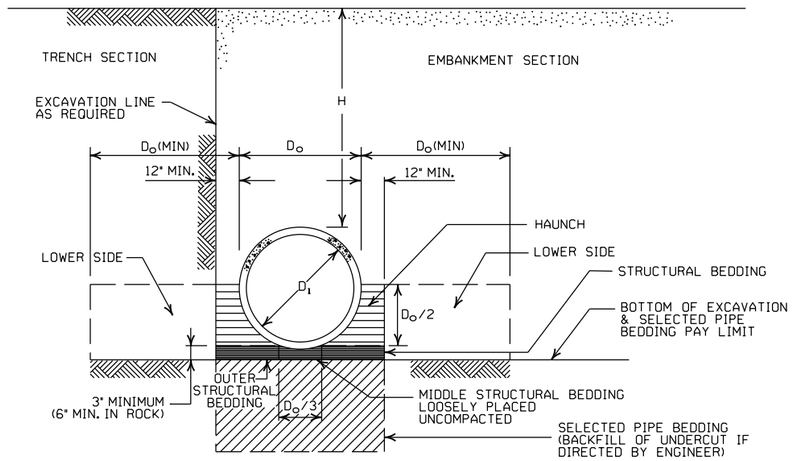
- LEGEND -

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

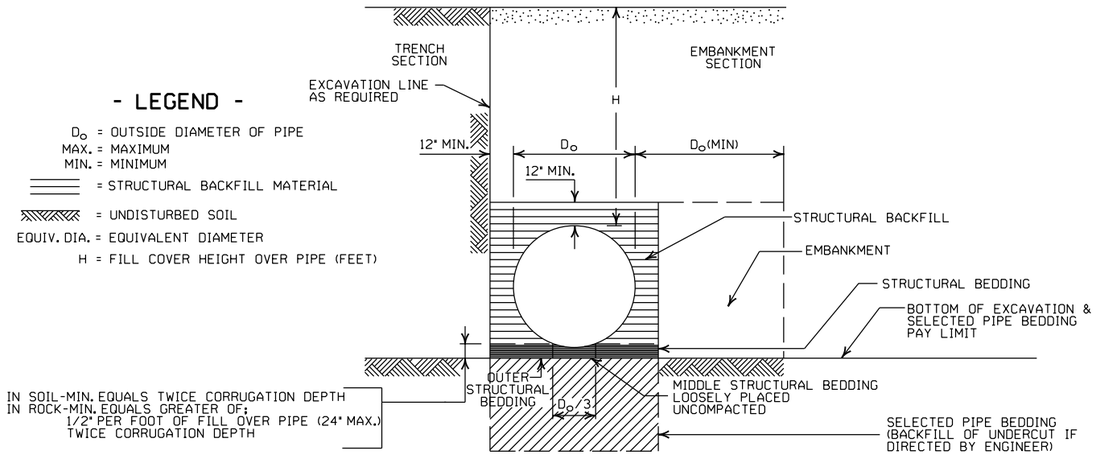
EQUIV. DIA. (INCHES)	PIPE DIMENSION SPAN X RISE (INCHES)	MINUMUM CORNER RADIUS (INCHES)	STEEL			ALUMINUM		
			MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)	MAX. HEIGHT OF FILL, "H" (FT.)	MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)	MAX. HEIGHT OF FILL, "H" (FT.)
				INSTALLATION TYPE 1	INSTALLATION TYPE 1		INSTALLATION TYPE 1	INSTALLATION 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 TYPE 2	INSTALLATION TYPE 1		INSTALLATION TYPE 2	INSTALLATION 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"

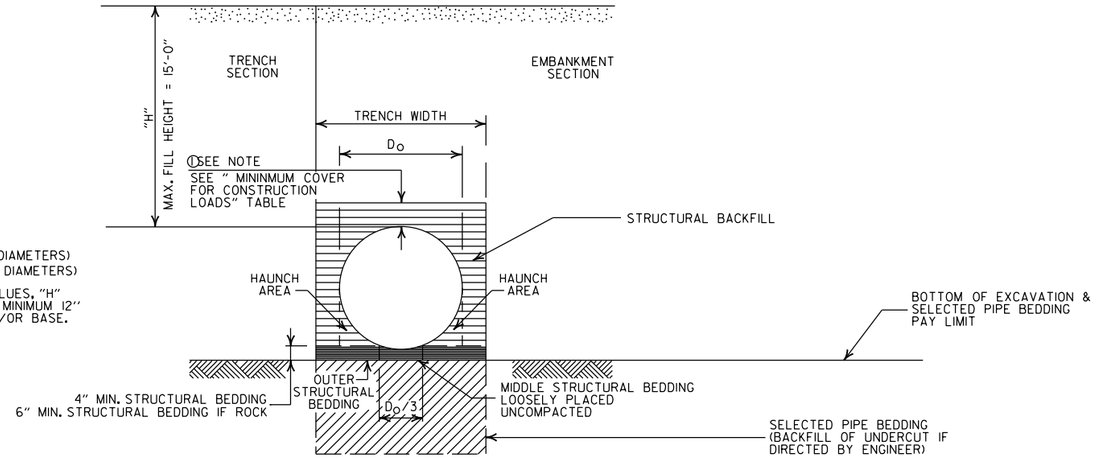
PIPE DIAMETER	TRENCH WIDTH (FEET)	
	"H" < 10'-0"	"H" >OR= 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"
42"	7'-0"	10'-6"
48"	8'-0"	12'-0"

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_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	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

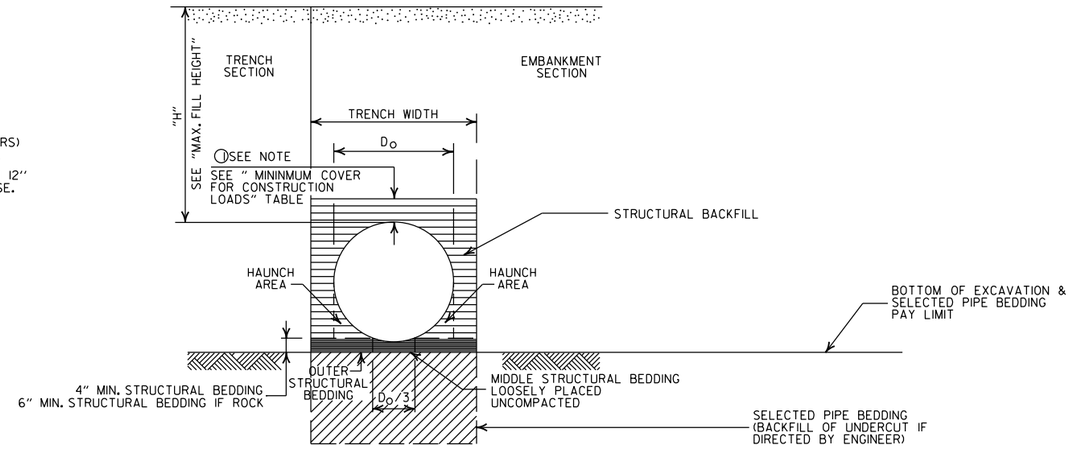
PIPE DIAMETER	"H"
18"	45'-0"
24"	45'-0"
30"	40'-0"
36"	40'-0"

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"

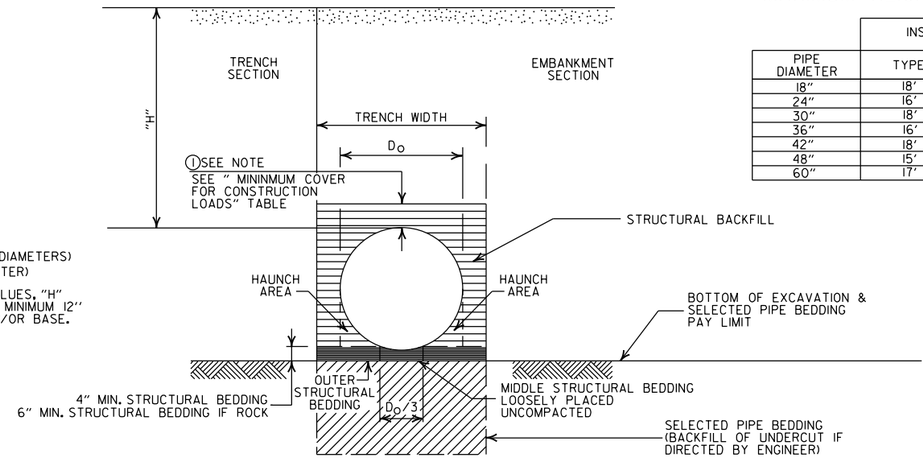
MINIMUM COVER FOR CONSTRUCTION LOADS

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.

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'

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

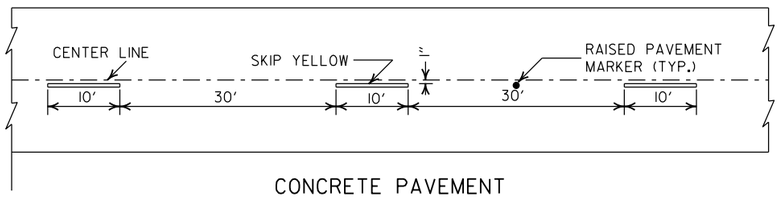
DATE	REVISION	DATE FILMED
02-27-20	REVISED	
11-07-19	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

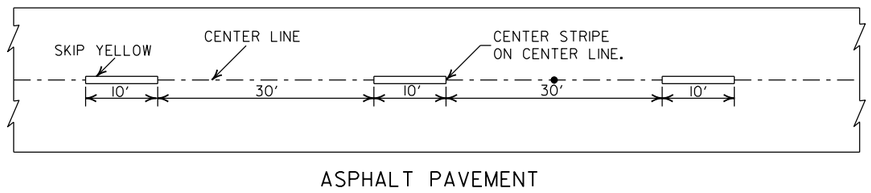
PLASTIC PIPE CULVERT (POLYPROPYLENE)

STANDARD DRAWING PCP-3

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

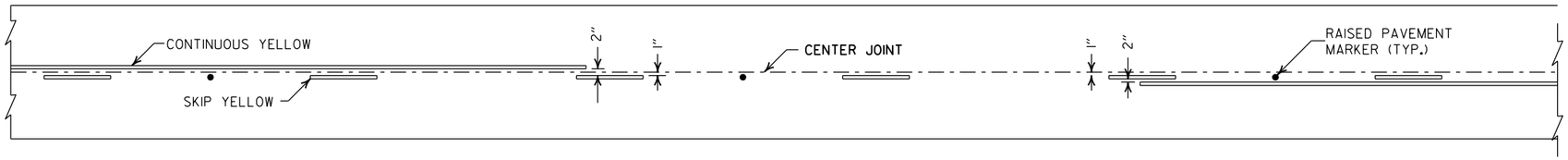


CONCRETE PAVEMENT

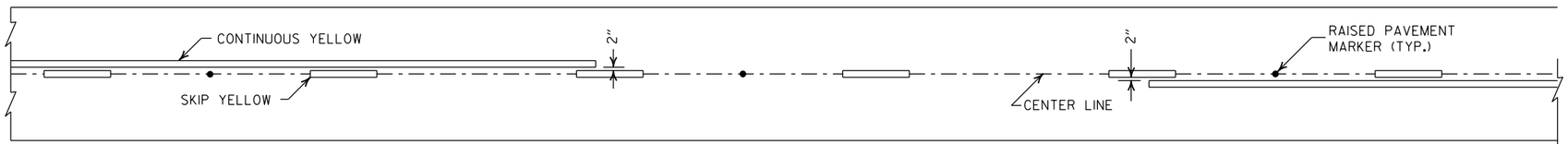


ASPHALT PAVEMENT

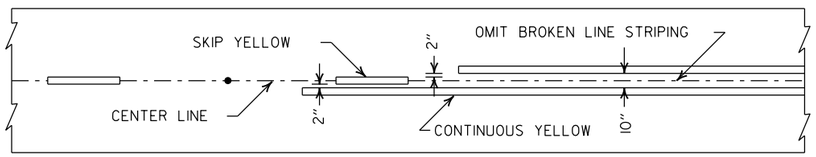
BROKEN LINE STRIPING



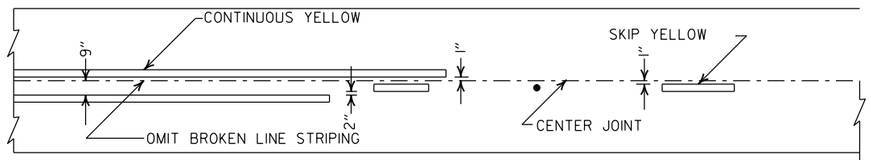
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

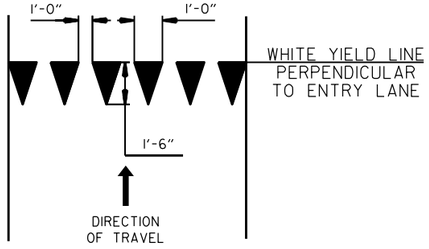


ASPHALT PAVEMENT

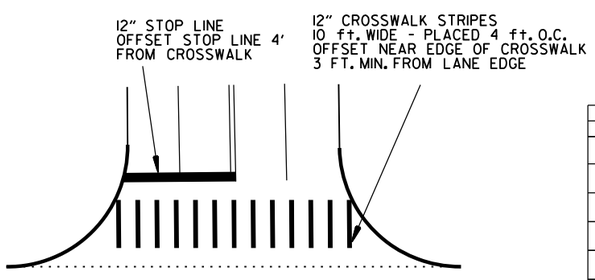


CONCRETE PAVEMENT

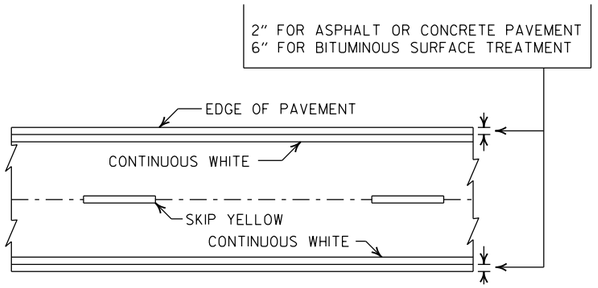
STRIPING AT ADJACENT NO PASSING LANES



YIELD LINE DETAIL



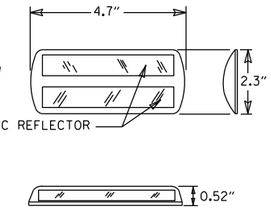
CROSSWALK AND STOP LINE DETAILS



PAVEMENT EDGE LINE MARKING

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

TYPE II
RED/CLEAR OR YELLOW/YELLOW



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

DETAIL OF STANDARD RAISED PAVEMENT MARKERS

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

ARKANSAS STATE HIGHWAY COMMISSION

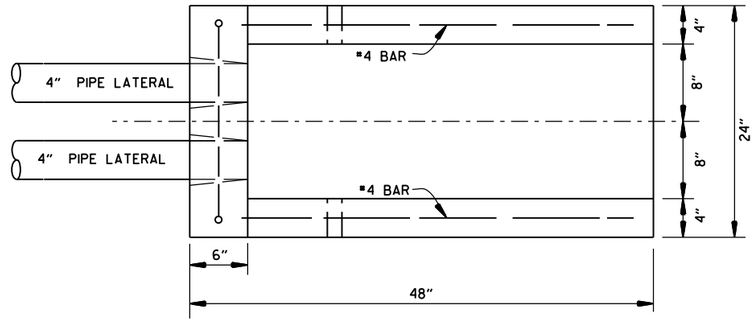
PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1

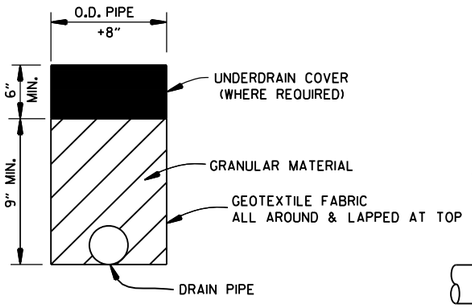
NOTE:

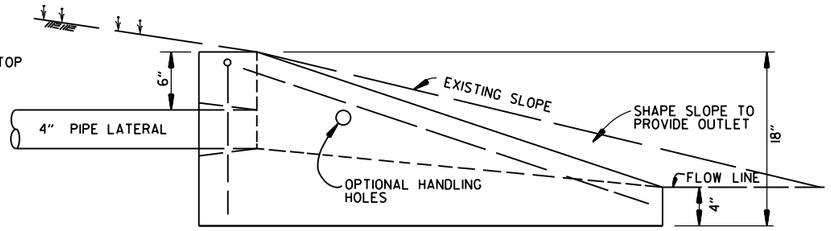
1. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THOROUGHLY COMPACTED EARTH AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.

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

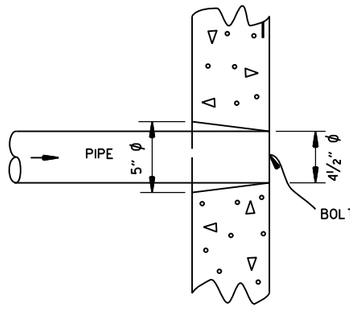


PLAN VIEW

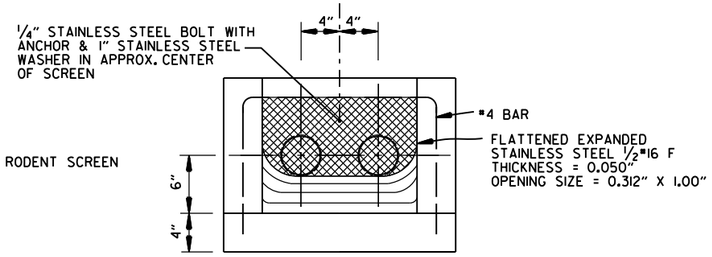




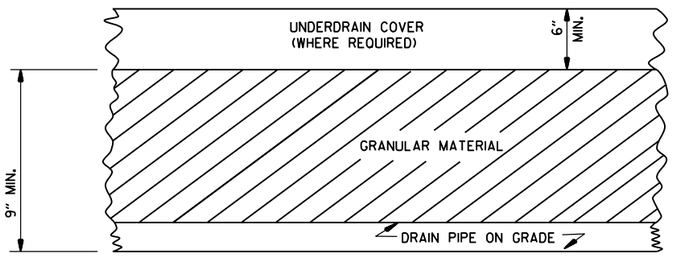
SIDE VIEW



DETAIL OF HOLE FOR 4" PIPE

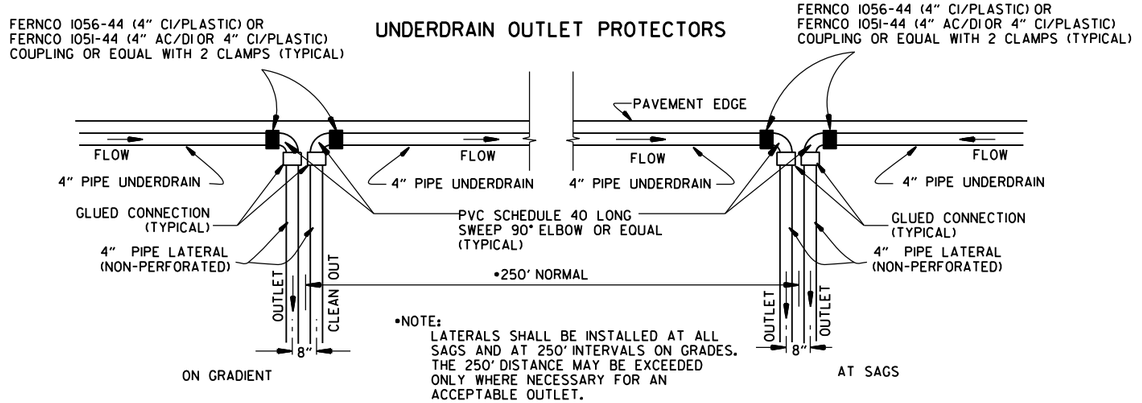


FRONT VIEW
(DETAIL OF RODENT SCREEN)



DETAILS OF PIPE UNDERDRAIN

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.

NOTES FOR PIPE UNDERDRAINS

1. GEOTEXTILE FABRIC SHALL MEET THE REQUIREMENTS OF SECTION 625 FOR TYPE I. 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.

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

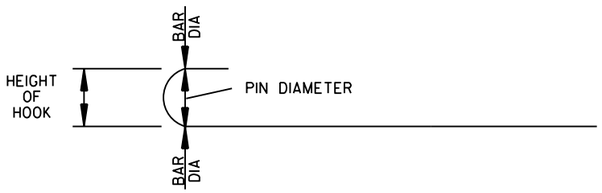
DETAILS OF PIPE UNDERDRAIN

STANDARD DRAWING PU-1

STEEL FABRICATION: REINFORCING STEEL FABRICATION SHALL CONFORM TO THE DIMENSIONS LISTED IN THE TABLE BELOW:

BAR SIZE	PIN DIAMETER	HOOK EXTENSION "K"
3	2¼"	4"
4	3 "	4½"
5	3¾"	5"
6	4½"	6"
7	5¼"	7"
8	6"	8"

IF THE OVERALL HEIGHT OF THE HOOK (SEE DIAGRAM BELOW) FOR A "b", "b1", "b2" or "b3" BENT BAR IS GREATER THAN THE CORRESPONDING TOP OR BOTTOM SLAB THICKNESS, LESS 2¾ INCHES, EACH BENT BAR SHALL BE REPLACED WITH ONE HOOKED BAR AND ONE STRAIGHT BAR, USING LENGTHS AS SHOWN IN THE TABLE BELOW. THE TWO BARS SHALL BE THE SAME DIAMETER AS, AND PLACED AT THE SAME SPACING AS, THE "b", "b1", "b2" OR "b3" BENT BARS THEY REPLACE.



NOTE: DIMENSIONS OF BARS ARE MEASURED OUT TO OUT OF BARS.

OVERALL HEIGHT OF HOOKED BAR DIAGRAM

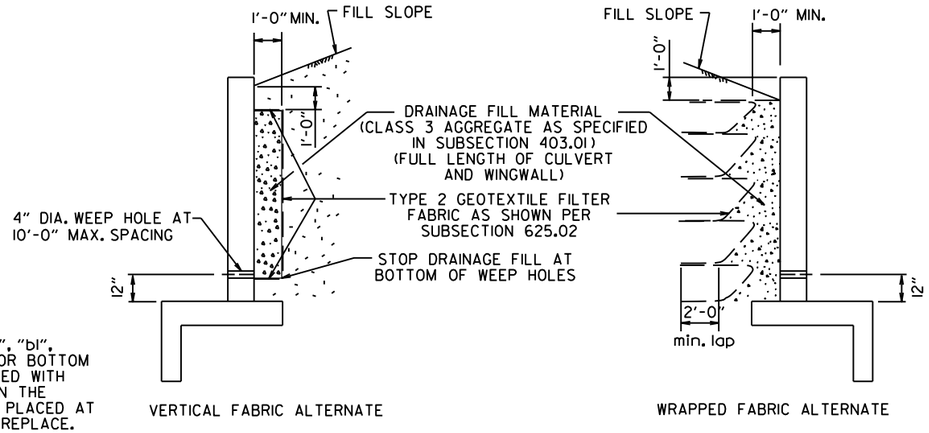
THE HOOKED BARS SHALL BE PLACED IN THE BOTTOM OF THE TOP SLAB AND THE TOP OF THE BOTTOM SLAB. THE STRAIGHT BARS SHALL BE PLACED IN THE TOP OF THE TOP SLAB AND THE BOTTOM OF THE BOTTOM SLAB. SEE TABLE BELOW FOR LENGTHS OF REPLACEMENT HOOKED AND STRAIGHT BARS.

FOR SKEWED CULVERTS, THE REPLACEMENT STRAIGHT BAR MAY HAVE TO BE CUT IN FIELD TO FIT.

REPLACEMENT BAR LENGTHS TABLE

BAR SIZE: "b", "b1", "b2" OR "b3"	LENGTH OF HOOKED BAR	LENGTH OF STRAIGHT BAR
#4	L + 1' - 0"	SEE "c" BAR LENGTH
#5	L + 1' - 2"	SEE "c" BAR LENGTH
#6	L + 1' - 4"	SEE "c" BAR LENGTH
#7	L + 1' - 8"	SEE "c" BAR LENGTH
#8	L + 1' - 10"	SEE "c" BAR LENGTH
#9	L + 2' - 6"	SEE "c" BAR LENGTH

L = "OW" - 3 INCHES



WINGWALL & CULVERT DRAINAGE DETAIL

REINFORCED CONCRETE BOX CULVERT GENERAL NOTES

CONCRETE SHALL BE CLASS S WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3500 PSI.

REINFORCING STEEL SHALL BE AASHTO M 31 OR M 53, GRADE 60.

CONSTRUCTION AND MATERIALS FOR WINGWALL & CULVERT DRAINAGE, INCLUDING WEEP HOLES AND GRANULAR MATERIAL, SHALL BE SUBSIDIARY TO THE BID ITEM, "CLASS S CONCRETE".

MEMBRANE WATERPROOFING SHALL CONFORM TO THE REQUIREMENTS OF SECTION 815 OF THE STANDARD SPECIFICATIONS.

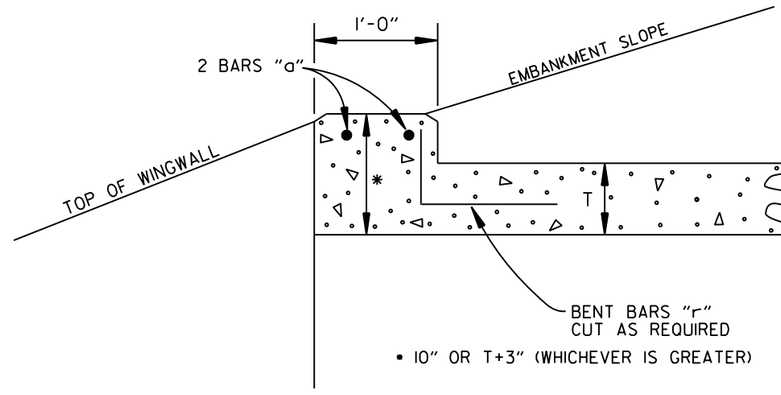
MEMBRANE WATERPROOFING SHALL BE APPLIED TO ALL CONSTRUCTION JOINTS IN THE TOP SLAB AND THE SIDEWALLS OF R.C. BOX CULVERTS AS DIRECTED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FOR THIS ITEM, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS BID FOR THE R.C. BOX CULVERT.

REINFORCING STEEL TOLERANCES: THE TOLERANCES FOR REINFORCING STEEL SHALL MEET THOSE LISTED IN "MANUAL OF STANDARD PRACTICE" PUBLISHED BY CONCRETE REINFORCING STEEL INSTITUTE (CRSI) EXCEPT THAT THE TOLERANCE FOR TRUSS BARS SUCH AS FIGURE 3 ON PAGE 7-4 OF THE CRSI MANUAL SHALL BE MINUS ZERO TO PLUS ½ INCH.

WEEP HOLES IN BOX CULVERT WALLS SHALL HAVE A MAXIMUM HORIZONTAL SPACING OF 10'-0" AND SHALL BE SPACED TO CLEAR ALL REINFORCING STEEL. THE DRAIN OPENING SHALL BE 4" DIAMETER AND SHALL BE PLACED 12" ABOVE THE TOP OF THE BOTTOM SLAB.

WEEP HOLES IN WINGWALLS SHALL HAVE A MAXIMUM HORIZONTAL SPACING OF 10'-0" AND SHALL BE SPACED TO CLEAR ALL REINFORCING STEEL. THERE SHALL BE A MINIMUM OF TWO (2) WEEP HOLES IN EACH WINGWALL. THE DRAIN OPENING SHALL BE 4" DIAMETER AND SHALL BE PLACED 12" ABOVE THE TOP OF THE WINGWALL FOOTING.

THE REQUIREMENTS SHOWN ON THIS DRAWING SHALL SUPERCEDE THE CORRESPONDING REQUIREMENTS ON ALL REINFORCED CONCRETE BOX CULVERT STANDARD DRAWINGS.



NOTE: FOR ALL SKEWED R.C. BOX CULVERTS THE LENGTH "K" OF THE MODIFIED HEADWALL SHALL BE EQUAL TO THE ROADWAY LENGTH "RL". THE ENDS OF THE HEADWALL SHALL BE CONSTRUCTED PARALLEL TO THE SKEW ANGLE OF THE BOX CULVERT.

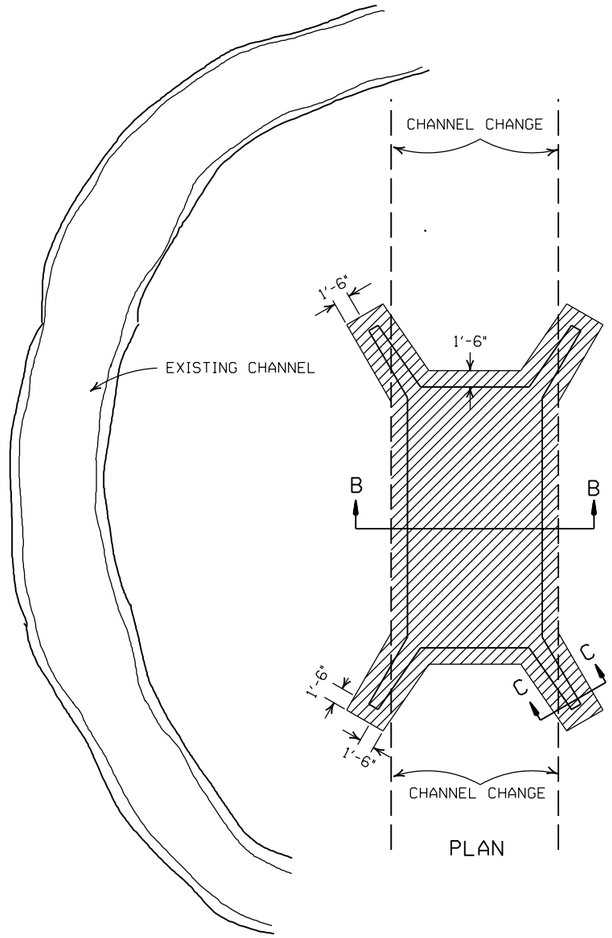
R.C. BOX CULVERT HEADWALL MODIFICATIONS

DATE	REVISION	DATE FILMED
7/26/12	REV. DRAINAGE FILL MATERIAL & DETAIL	
12/15/11	REQUIRE WEEP HOLES IN BOX CULVERT WALLS	
5-25-06	REV. GEN. NOTES AND DETAILS FOR WEEP HOLES; BAR DIAGRAM	
11-16-01	ADDED WINGWALL DRAINAGE DETAIL/EDITED GEN. NOTES	
10-18-96	REV. ASTM REF. TO AASHTO & ADDED BAR DIAGRAM	
10-12-95	MOVED SOLID SODDING DETAIL TO RCB-2	
6-2-94	ADDED SOLID SODDING PLAN DETAIL	
8-5-93	REVISED PIN DIAMETER TO SPECS.	
8-15-91	DRAWN AND ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

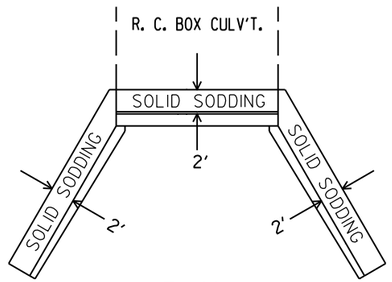
REINFORCED CONCRETE BOX CULVERT DETAILS

STANDARD DRAWING RCB-1



PLAN

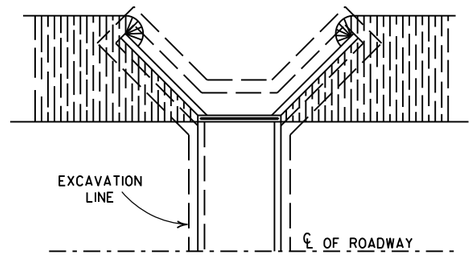
SOLID SODDING



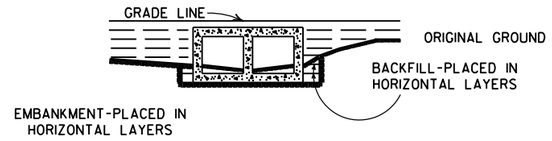
PLAN

PARTIAL SECTION SHOWING SOLID SODDING AT HEADWALLS AND WING WALLS

NOTE: LENGTH MEASURED ALONG THE CENTER OF 2' STRIP OF SOLID SODDING.

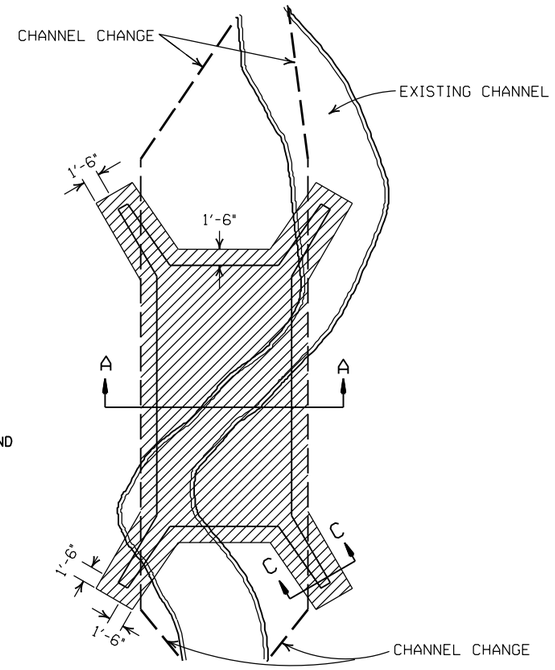


PLAN

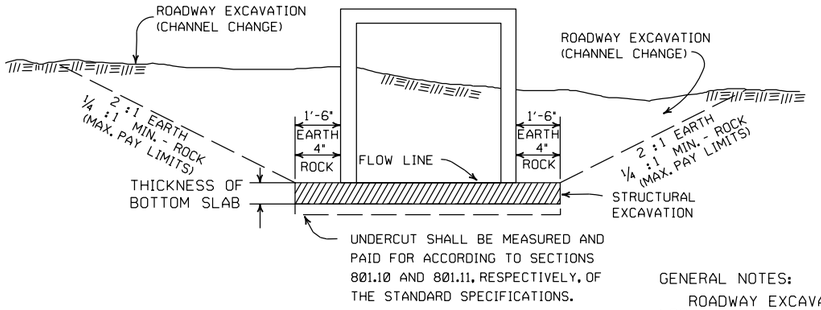


LONGITUDINAL SECTION

BACKFILL DETAILS FOR BOX CULVERT

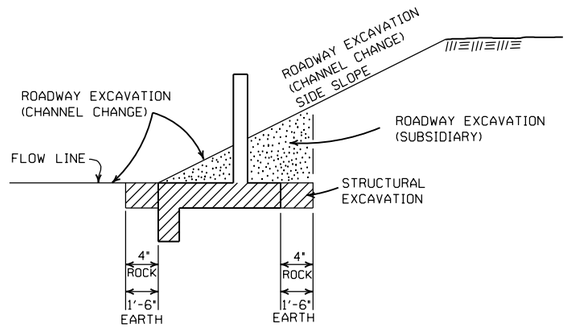


PLAN

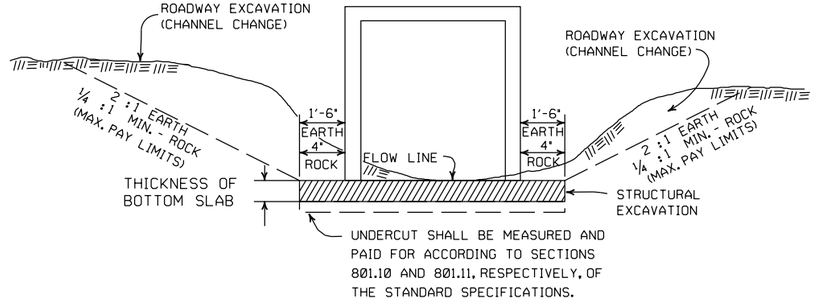


SECTION B-B

DETAILS FOR NEW CHANNELS



SECTION C-C



SECTION A-A

DETAILS THROUGH EXISTING CHANNELS

GENERAL NOTES:

ROADWAY EXCAVATION (CHANNEL CHANGE) WILL BE PAID FOR AT R.C. BOX CULVERT LOCATIONS. IT WILL BE PAID TO THE LIMITS ACTUALLY CUT AND WILL BE CONFINED TO THAT PORTION OF THE INDICATED AREA THAT IS ABOVE THE FLOW LINE. ROADWAY EXCAVATION (CHANNEL CHANGE) SHALL BE MEASURED BY CROSS SECTIONS AND VOLUMES COMPUTED BY AVERAGE END AREA METHOD. ALL CHANNEL CHANGES SHALL BE BROUGHT TO GRADE PRIOR TO MAKING ANY EXCAVATION FOR STRUCTURES.

EXCAVATION FOR STRUCTURES WILL BE PAID FOR AT ALL R.C. BOX CULVERT LOCATIONS. IT WILL BE PAID TO THE LIMITS SHOWN AND SHALL BE CONFINED TO THAT PORTION OF THE INDICATED AREA THAT IS BELOW THE CHANNEL FLOW LINE.

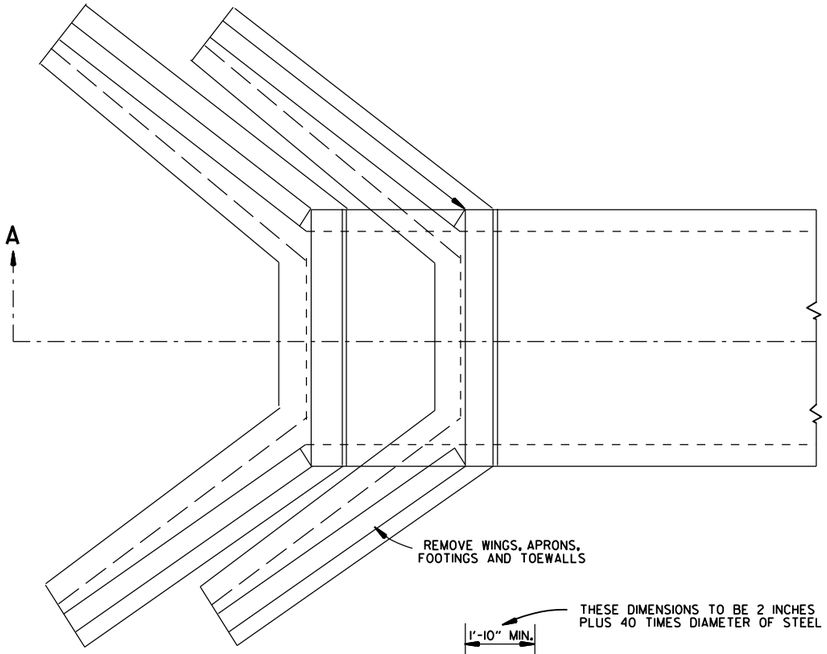
ROADWAY EXCAVATION SHOWN IN SECTION C-C ABOVE AS SUBSIDIARY WILL NOT BE MEASURED OR PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION.

DATE	REVISION	FILMED
11-20-03	REVISED SECTION A-A NOTE	
8-22-02	REVISED SECTION B-B NOTE	
10-12-95	COMBINED 1891B AND 1888A	
1-4-83	REVISED GENERAL NOTES	674-1-4-83
	AND ADDED MAXIMUM PAY	
	LIMIT NOTES.	
2-2-76	EXCAV. PAY LIMITS	917-2-2-76
10-2-72	REVISED AND REDRAWN	564-10-16-72

ARKANSAS STATE HIGHWAY COMMISSION

EXCAVATION PAY LIMITS, BACKFILL, & SOLID SODDING FOR BOX CULVERTS

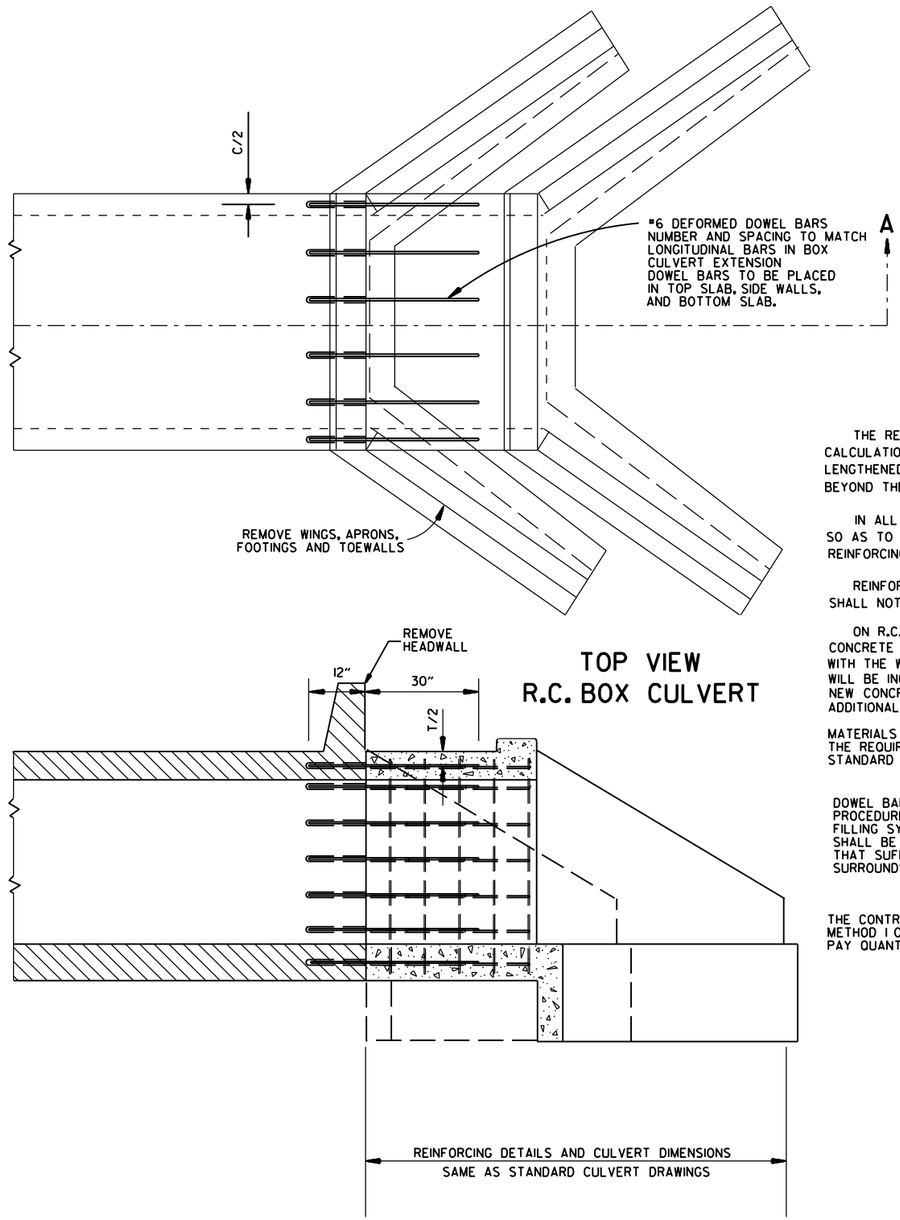
STANDARD DRAWING RCB-2



TOP VIEW
R.C. BOX CULVERT

SECTION A-A

METHOD 1



TOP VIEW
R.C. BOX CULVERT

SECTION A-A

METHOD 2

GENERAL NOTES

	USE FOR METHOD
THE RESIDENT ENGINEER WILL MAKE INDIVIDUAL CALCULATIONS OF QUANTITIES FOR EACH STRUCTURE LENGTHENED, MAKING NO ALLOWANCE FOR OVERBREAKAGE BEYOND THE LINES INDICATED.	1
IN ALL INSTANCES CONCRETE SHALL BE REMOVED SO AS TO PERMIT FULL 40 DIAMETER SPLICE OF REINFORCING STEEL.	1
REINFORCING STEEL REMOVED FROM EXISTING STRUCTURE SHALL NOT BE REUSED IN CONSTRUCTING EXTENSION.	1&2
ON R.C. BOX CULVERTS THAT HAVE AN EXISTING CONCRETE APRON; THE CONCRETE APRON SHALL BE REMOVED WITH THE WINGS. THE COST OF REMOVING ALL OLD CONCRETE WILL BE INCLUDED IN THE PRICE BID PER CUBIC YARD FOR NEW CONCRETE OF THE CLASS SPECIFIED AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.	1&2
MATERIALS FOR SECURING DOWEL BARS SHALL MEET THE REQUIREMENTS OF SECTION 507.02 OF THE STANDARD SPECIFICATIONS.	2
DOWEL BARS SHALL BE INSTALLED AS FOLLOWS: THE DRILLING PROCEDURE SHALL BE APPROVED BY THE ENGINEER. THE FILLING SYSTEM SHALL BE APPROVED BY THE ENGINEER. AND SHALL BE AN INJECTION-TYPE SYSTEM WHICH WILL INSURE THAT SUFFICIENT MATERIAL IS INJECTED SO IT COMPLETELY SURROUNDS THE BARS AND FILLS THE HOLES.	2
THE CONTRACTOR SHALL HAVE THE OPTION OF USING EITHER METHOD 1 OR METHOD 2. REGARDLESS OF WHICH METHOD IS USED, PAY QUANTITIES WILL BE CALCULATED BASED ON METHOD 1.	1&2

NOTE:
NO PART OF THIS STANDARD IS TO BE USED FOR ANY DETAILS RELATIVE TO NEW CONSTRUCTION.

SEE STANDARD DRAWING LISTED IN TABULATION OF STRUCTURES FOR ALL NEW CONSTRUCTION DETAILS.

DATE	REVISION	DATE FILM
10-12-95	CHANGED DRAWING # FROM 144-A	
4-1-93	ADDED GENERAL NOTE	
10-1-92	ADDED ALT. METHOD OF EXTENSION	
11-30-89	REDRAWN	
1-4-83	ELIMINATED CONCRETE CLASS	
12-20-56	RETRACED	

ARKANSAS STATE HIGHWAY COMMISSION

METHOD OF EXTENDING EXISTING R.C. BOX CULVERTS

STANDARD DRAWING RCB-3

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	200	0.046	129		0.056	160		0.068	198		0.078	235		0.090	264		0.098	283										
4° 45'	0.038	104		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	300	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	250	0.086	239		0.096	278		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	300	0.100	288																
8° 00'	0.058	140		0.070	176		0.084	219		0.094	257		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																					
14° 00'	0.080	180		0.094	222		D MAX = 13° 45'																							
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'

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%

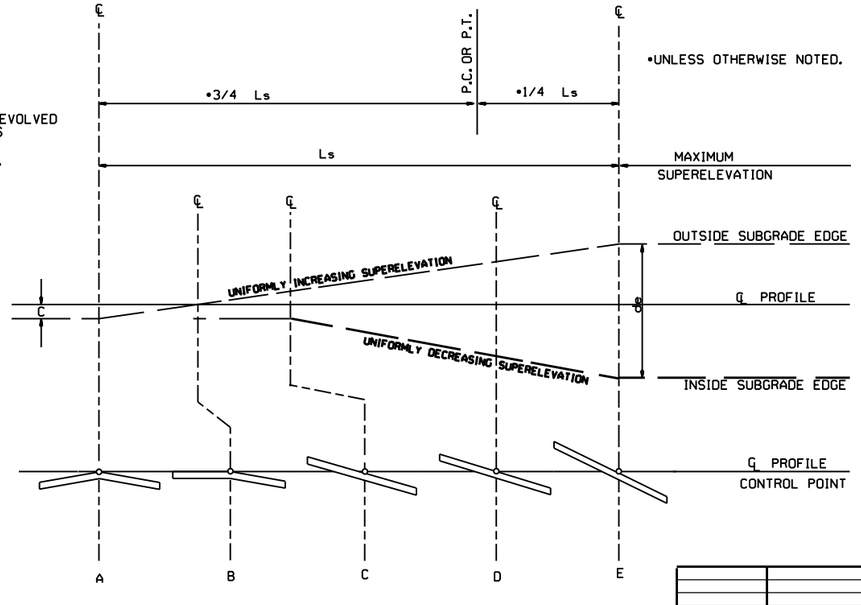
NOTE: MAINTAIN NORMAL CROWN ON INSIDE UNTIL SUPERELEVATION EXCEEDS 2C.

RATE OF SUPERELEVATION SHALL BE COMPUTED ON STRAIGHT LINE METHOD USING APPLICABLE Ls.

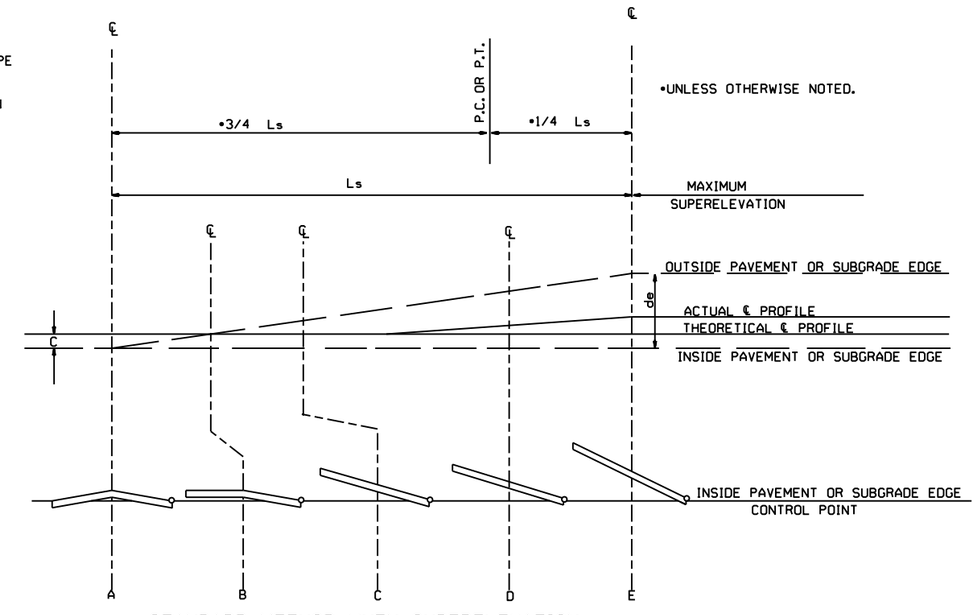
SUPERELEVATION FORMULA = $\frac{Lde}{Ls}$

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.)



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 FILMED
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

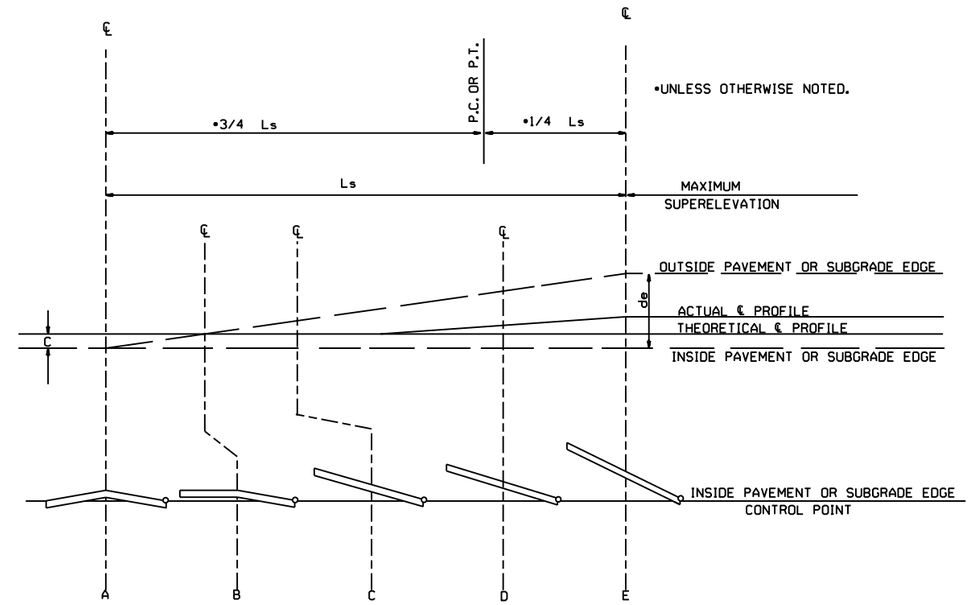
SUPERELEVATION TABLE FOR TWO - WAY TRAFFIC (4% MAXIMUM)

DEGREE OF CURVE	30 MPH e	30 MPH Ls (FT) MINIMUM	30 MPH Ls (FT) DESIRABLE	DEGREE OF CURVE	35 MPH e	35 MPH Ls (FT) MINIMUM	35 MPH Ls (FT) DESIRABLE	DEGREE OF CURVE	40 MPH e	40 MPH Ls (FT) MINIMUM	40 MPH Ls (FT) DESIRABLE	DEGREE OF CURVE	45 MPH e	45 MPH Ls (FT) MINIMUM	45 MPH Ls (FT) DESIRABLE
0° 15'	NC			0° 15'	NC			0° 15'	NC			0° 15'	NC		
0° 30'				0° 30'				0° 30'				0° 30'			
0° 45'				0° 45'				0° 45'				0° 45'			
1° 00'				1° 00'				1° 00'				1° 00'	RC	90	125
1° 15'				1° 15'				1° 15'				1° 15'			
1° 30'				1° 30'				1° 30'	RC	84	100	1° 30'	0.022	95	
1° 45'				1° 45'				1° 45'				1° 45'	0.024	99	
2° 00'				2° 00'	RC	78	100	2° 00'	0.022	88		2° 00'	0.026	104	
2° 15'				2° 15'				2° 15'	0.024	92		2° 15'			
2° 30'	RC	72		2° 30'	0.022	82		2° 30'	0.026	97		2° 30'	0.028	108	
2° 45'				2° 45'				2° 45'				2° 45'	0.030	113	
3° 00'				3° 00'	0.024	86		3° 00'				3° 00'			
3° 15'	0.022	75		3° 15'				3° 15'	0.028	101	125	3° 15'	0.032	117	
3° 30'				3° 30'				3° 30'				3° 30'			
3° 45'				3° 45'	0.026	90		3° 45'				3° 45'			
4° 00'	0.024	79	100	4° 00'				4° 00'	0.030	105		4° 00'	0.034	122	150
4° 15'				4° 15'				4° 15'				4° 15'			
4° 30'				4° 30'	0.028	94	125	4° 30'	0.032	109		4° 30'	0.036	126	
4° 45'				4° 45'				4° 45'				4° 45'			
5° 00'	0.026	83		5° 00'	0.030	98		5° 00'	0.034	113		5° 00'	0.038	131	
5° 30'				5° 30'				5° 30'				5° 30'			
6° 00'				6° 00'	0.032	101		6° 00'	0.036	118		6° 00'	0.040	135	
6° 30'	0.028	86		6° 30'				6° 30'			150				
7° 00'				7° 00'				7° 00'	0.038	122					
7° 30'	0.030	90		7° 30'	0.034	105		7° 30'							
8° 00'				8° 00'				8° 00'	0.040	126					
8° 30'	0.032	93		8° 30'	0.036	109									
9° 00'				9° 00'			150								
9° 30'				9° 30'											
10° 00'	0.034	97		10° 00'	0.038	113									
10° 30'				10° 30'											
11° 00'			125	11° 00'											
11° 30'				11° 30'	0.040	117									
12° 00'															
12° 30'	0.036	100													
13° 00'															
13° 30'															
14° 00'															
14° 30'	0.038	104													
15° 00'															
15° 30'															
16° 00'															
16° 30'	0.040	108	150												

D MAX = 22° 45' | D MAX = 15° 15' | D MAX = 10° 30' | D MAX = 8° 00'

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.)



STANDARD METHOD WHEN SUPERELEVATION REVOLVES AROUND INNER SUBGRADE POINT OR INNER PAVEMENT EDGE

NOTE: MAINTAIN NORMAL CROWN ON INSIDE UNTIL SUPERELEVATION EXCEEDS 2C.

SUPERELEVATION FORMULA = $\frac{Lde}{Ls}$

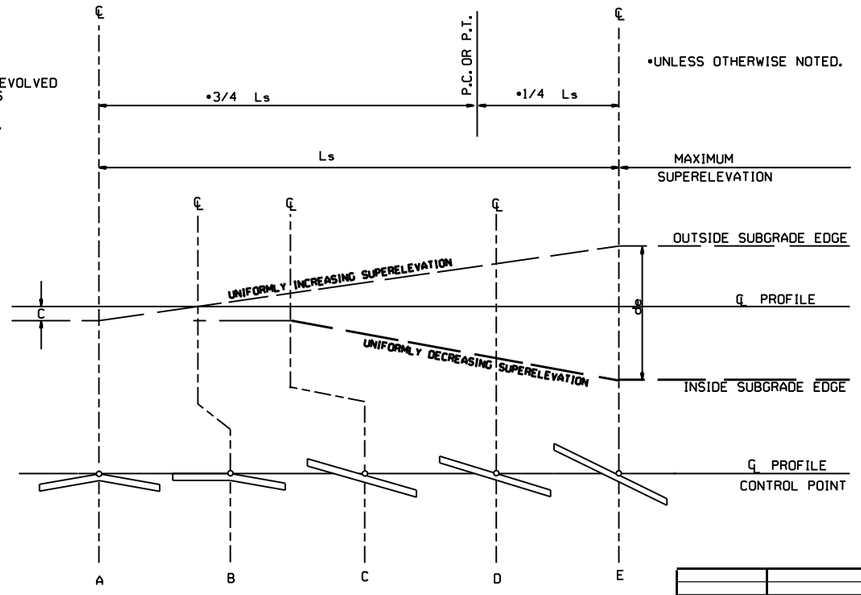
GENERAL NOTES

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.



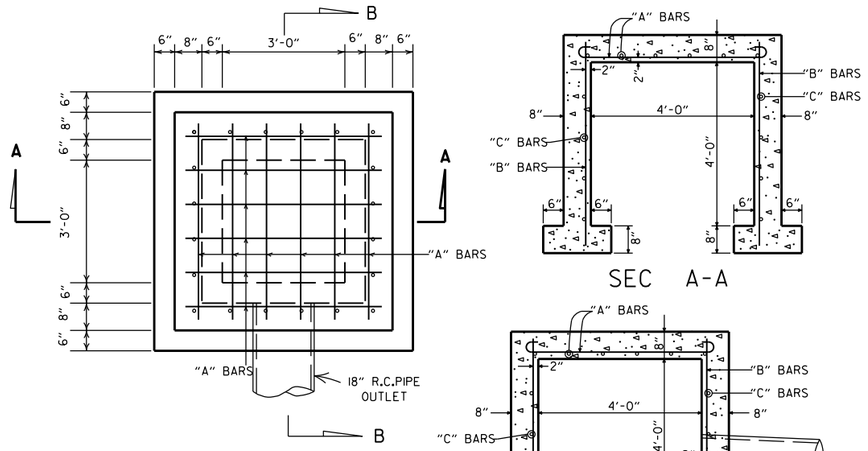
STANDARD METHOD WHEN SUPERELEVATION REVOLVES AROUND CENTER LINE

11-07-19	ISSUED	
DATE	REVISION	DATE FILMED

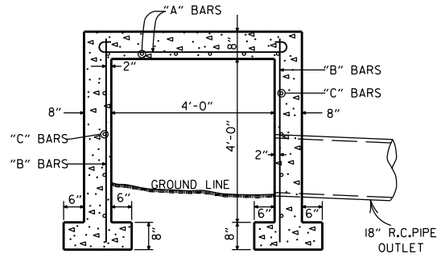
ARKANSAS STATE HIGHWAY COMMISSION

TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC (4% MAXIMUM)

STANDARD DRAWING SE-3



SEC A-A



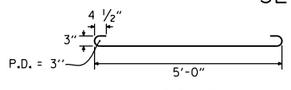
SEC B-B

NOTE: MAX FILL HEIGHT ABOVE TOP OF BOX = 13'-0".

STEEL SCHEDULE

BARS	NUMBER	LENGTH	SPACING
"A"	12	6'-0"	10"
"B"	20	5'-0"	10 ½"
"C"	16	5'-0"	12"

ALL STEEL TO BE #4 BARS



"A" BARS

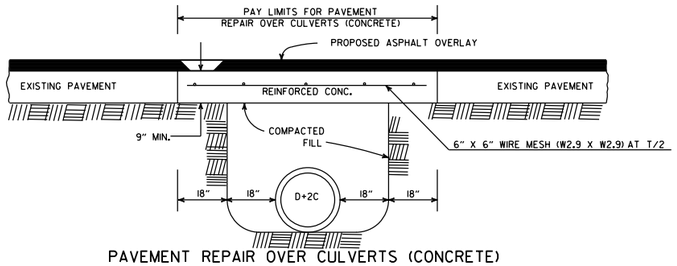
QUANTITIES

CONCRETE 3.31 CU. YDS.
REINFORCING STEEL 168 LB.

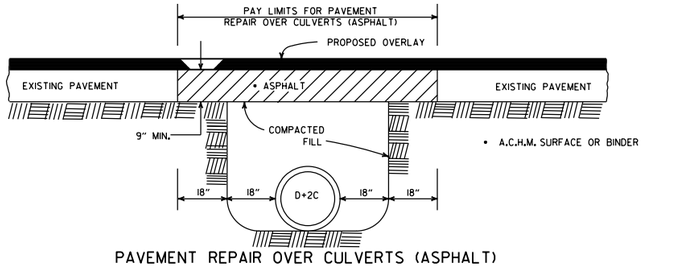
GENERAL NOTE:

THE PAY ITEMS FOR REINFORCED CONCRETE SPRING BOXES SHALL BE FOR THE QUANTITIES OF CONCRETE OF THE CLASS SPECIFIED, REINFORCING STEEL, EXCAVATION FOR STRUCTURES AND 18" R.C. PIPE CULVERT.

REINFORCED CONCRETE SPRING BOX



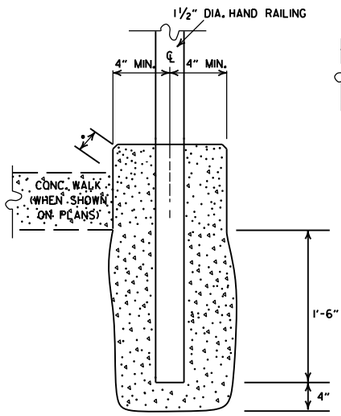
PAVEMENT REPAIR OVER CULVERTS (CONCRETE)



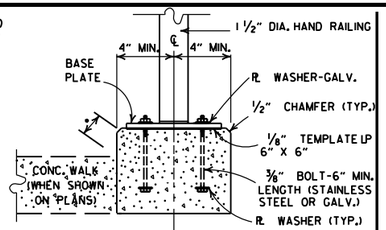
PAVEMENT REPAIR OVER CULVERTS (ASPHALT)

DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS

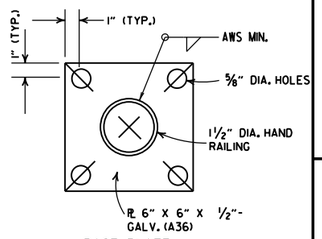
• A 2" MIN. HIGH CURB IS REQUIRED WHEN CONCRETE WALK IS ADJACENT TO THE HAND RAILING. PAYMENT FOR CURB SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR CONCRETE WALKS.



DETAIL OF HAND RAILING SET IN CONCRETE

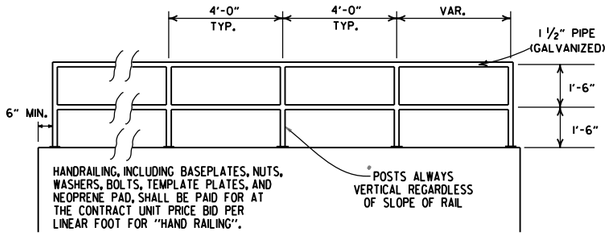


POST CONNECTION TO WALL

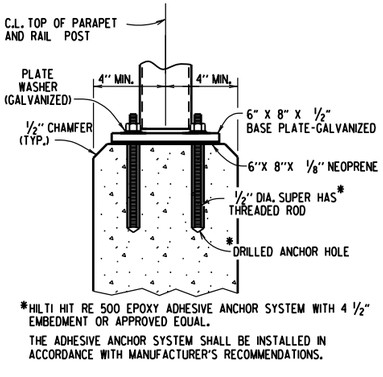


BASE PLATE

POST CONNECTION DETAILS



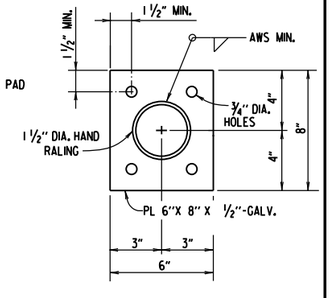
HAND RAILING SHALL CONFORM TO SECTION 633.



*HILTI HIT RE 500 EPOXY ADHESIVE ANCHOR SYSTEM WITH 4 ½" EMBEDMENT OR APPROVED EQUAL.

THE ADHESIVE ANCHOR SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

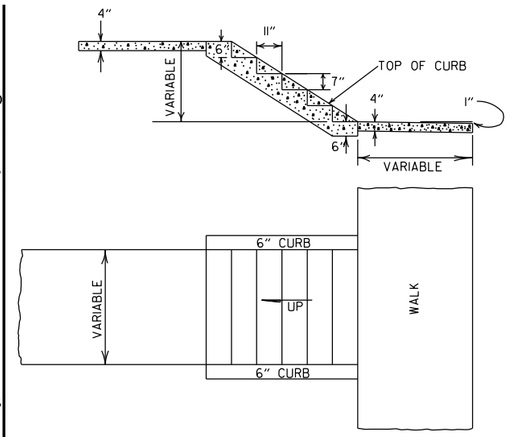
POST CONNECTION TO WALL



BASE PLATE

DETAILS OF ALTERNATE POST ANCHOR SYSTEM (EPOXY ADHESIVE ANCHORS)

HAND RAILING DETAILS



GENERAL NOTES

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

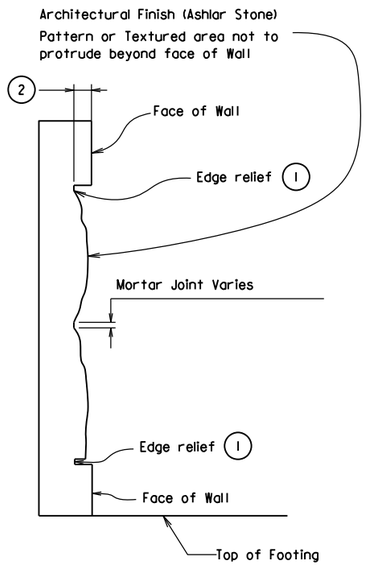
DETAILS OF CONCRETE STEPS & WALKS

DATE	REVISION	DATE FILMED
10-25-18	REVISED DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS	
9-12-13	REVISED REINFORCED CONCRETE SPRING BOX	
7-26-12	REMOVED RETAINING WALL DETAILS & REVISED HAND RAILING DETAILS	
4-17-08	REV. JOINT & FOOTING STEP DETAILS	
11-29-07	REVISED RETAINING WALL DRAINAGE	
5-25-06	REVISED PVMT REPAIR OVER CULVERTS (CONC); REVISED REINFORCED CONC SPRING BOX	
10-9-03	REVISED PIPE RAILING DETAILS TO HAND RAILING DETAILS	
4-10-03	REVISED RETAINING WALL DRAWING	
8-22-02	ADDED HAND RAILING DETAIL	
11-16-01	REVISED PVMT REPAIR OVER CULVERTS (CONC); CORRECTED SPELLING IN GENERAL NOTES	
11-18-98	ADDED GENERAL NOTES TO CONCRETE STEPS & WALKS	
7-02-98	ENLARGED PIPE	
4-03-97	ADDED NOTE TO STEEL BAR SCHED.	
10-18-96	CORRECTED SPELLING	
4-26-94	ADD WEEP HOLE;REV. JOINT SPACING IN RET. WALL	
6-2-94	CHANGED CONST. TO CONTRACTION JOINT	
10-1-92	CHANGED MESH FABRIC TO WIRE MESH	10-1-92
8-15-91	DELETED HDWL MODIFICATION DETAIL	8-15-91
11-8-90	DELETED COLD MIX FROM CULV'T. REPAIR	11-8-90
11-30-89	REV. RETAINING WALL STEEL SCHEDULE	11-30-89
11-17-88	V. BARS BEHIND ARROW	665-11-17-88
7-15-88	REV. PAVEMENT REPAIR ADDED HDWL. MODS, DEL. PIPE UNDERDRAINS	649-7-15-88
11-1-84	REV. TRENCH FOR PIPE UNDERDRAIN	510-11-1-84
1-4-83	ELIMINATED CONC. CLASS & ADDED CHAMFER NOTE	682-1-4-83
3-2-81	SPELLING OF "UNDERDRAIN"	721-3-2-81
4-20-79	REV. UNDERDRAIN DET& PAVEMENT REPAIR	674-4-20-79
2-2-76	12"MIN. GRAN. MAT'L. OVER PIPE	919-2-2-76
4-10-75	REM. SPECS. FOR GRAN. MAT'L.	568-4-10-75-853
5-22-74	GRANULAR MAT'L. TO BE SB-3	567-5-22-74-740
10-2-72	REVISED AND REDRAWN	564-10-16-72

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF SPECIAL ITEMS

STANDARD DRAWING SI - 1

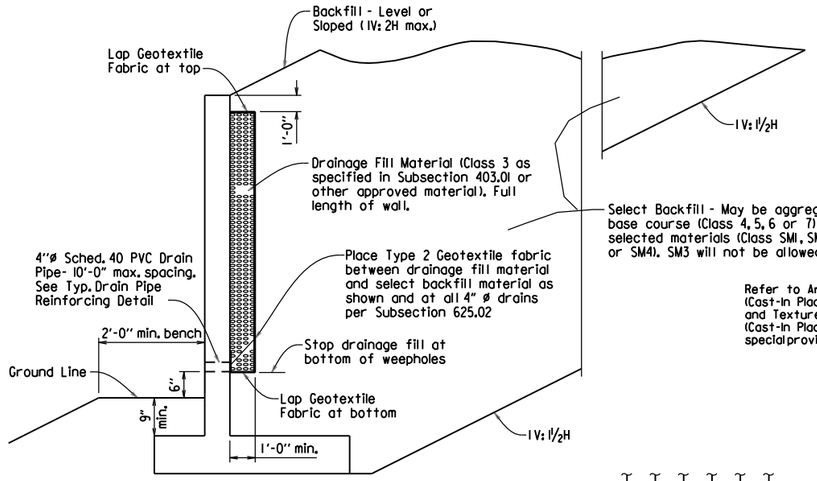


ARCHITECTURAL FINISH DETAILS

N.T.S.

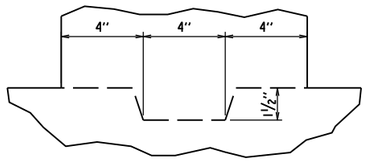
(1) Provide edge relief around perimeter of Texture. Edge relief dimensions shall match manufacturers edge distance.

(2) Depth of Ashlar Stone pattern approx. 1⅝". See SP "Architectural Finish".



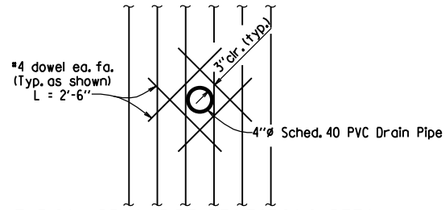
TYPICAL DRAINAGE & BACKFILL DETAILS

N.T.S



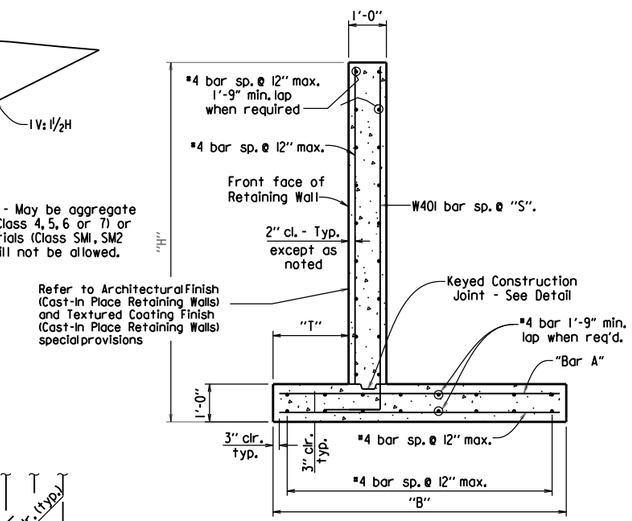
KEYED CONSTRUCTION JOINT DETAIL

N.T.S



TYPICAL DRAIN PIPE REINFORCING DETAIL

N.T.S



TYPICAL SECTION

N.T.S

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS: 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.

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications, Sixth Edition (2012).

LIVE LOAD: Live Load Surcharge is not included in the design of these walls. Vehicular Live Load shall not be allowed within a distance equal to one-half the height of the wall.

CONCRETE: Concrete shall be poured in the dry and all exposed corners to be chamfered ½". All concrete shall be Class S with a minimum 28 day compressive strength f'c = 3,500 psi. A Class 2 Surface finish shall be used on all surfaces of the concrete unless otherwise noted. Refer to Architectural Finish (Cast-in Place Retaining Walls) and Textured Coating Finish (Cast-in Place Retaining Walls) special provisions.

REINFORCING STEEL: All reinforcing steel shall conform to AASHTO M31 or M53, Grade 60.

Foundations for footings shall be prepared in accordance with subsection 801.04. Backfill for retaining walls shall be in accordance with subsection 801.08.

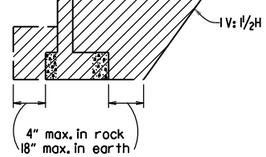
Waterproof Membrane (Type C), waterstops, preformed joints, weep holes & geotextile fabric shall not be paid for directly, but shall be considered subsidiary to Class S Concrete.

Drainage fill material (Class 3) and select backfill shall be measured and paid for as Compacted Embankment.

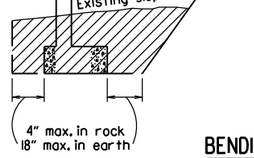
These details are not intended for use along streams or ditches without consideration for scour.

TABLE OF RETAINING WALL VARIABLES (SLOPED BACKFILL) (1V: 2H MAX.)

"H"	"T"	"B"	"S"	"Bar A" Size @ Spacing
3'-0"	9"	2'-6"	12"	#4 @ 12"
4'-0"	9"	3'-6"	12"	#4 @ 12"
5'-0"	9"	4'-6"	12"	#4 @ 12"
6'-0"	9"	5'-6"	12"	#4 @ 6"
7'-0"	9"	6'-6"	12"	#5 @ 6½"
8'-0"	1'-6"	8'-0"	7½"	#6 @ 6"
9'-0"	1'-11"	9'-6"	5"	#8 @ 6"



In Excavation



In Embankment

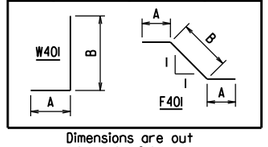
NOTE: Hatched area denotes maximum limits of pay excavation.

DETAILS OF EXCAVATION

N.T.S

BENDING DIAGRAMS

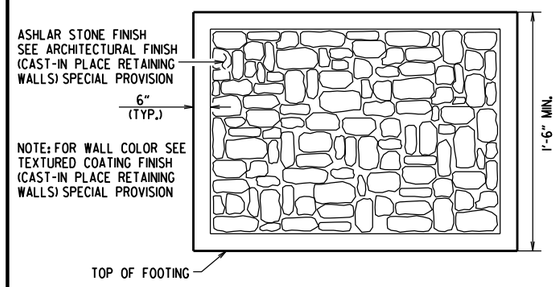
MARK	A	B	P.D.
W401	8"	"H" - 6"	3"
F401	1'-6"	1'-10"	2½"



Dimensions are out to out of bars.

TABLE OF RETAINING WALL VARIABLES (LEVEL BACKFILL)

"H"	"T"	"B"	"S"	"Bar A" Size @ Spacing
3'-0"	9"	2'-6"	12"	#4 @ 12"
4'-0"	9"	3'-6"	12"	#4 @ 12"
5'-0"	9"	4'-0"	12"	#4 @ 12"
6'-0"	9"	4'-6"	12"	#4 @ 12"
7'-0"	9"	5'-6"	12"	#4 @ 10"
8'-0"	9"	6'-0"	12"	#5 @ 10"
9'-0"	1'-0"	7'-0"	12"	#5 @ 6½"



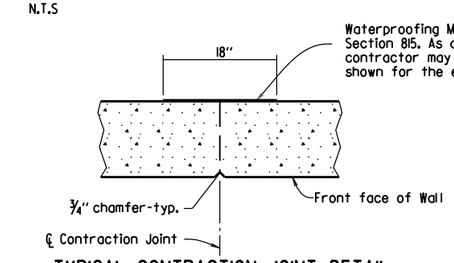
ASHLAR STONE FINISH DETAIL

NOTES:

Wall pattern shall be applied to the exposed surfaces of wall in accordance with SP "Architectural Finish (Cast-in Place Retaining Walls)" and as shown in the plans. Care shall be taken with form liner handling and installation to ensure aesthetic quality of the wall texturing is maintained. Where form liner panels require modification to conform to the location, dimensions and lines shown in the plans, the Contractor shall provide edge relief matching that of the unaltered form liner. Payment for wall texturing shall be in accordance with SP "Architectural Finish (Cast-in Place Retaining Walls)".

No adjustments will be made in concrete volume due to the use of "Architectural Finish". Class "S" Concrete shall be measured in accordance with Subsection 802.24(a). Care shall be taken in placing concrete to avoid segregation and to eliminate flow lines.

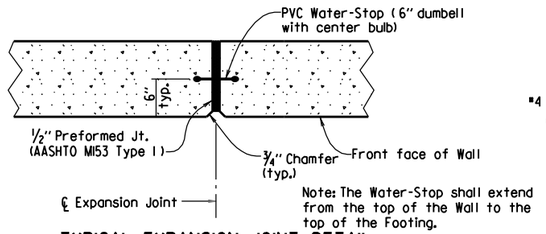
Class 3 Textured Coating Finish shall be applied to wall surfaces as specified in SP "Textured Coating Finish (Cast-in Place Retaining Walls)" and in accordance with Subsection 802.19(b)(3).



TYPICAL CONTRACTION JOINT DETAIL

N.T.S.

Note: 20'-0" Max. Spacing between Contraction Joints. Horizontal reinforcement shall be continuous through Contraction joints.

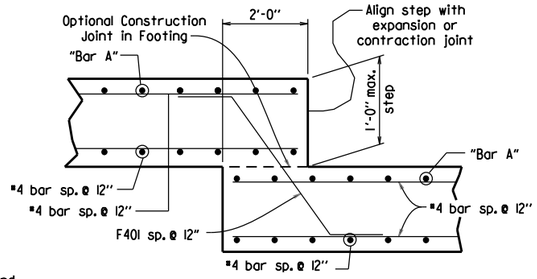


Note: The Water-Stop shall extend from the top of the Wall to the top of the Footing.

TYPICAL EXPANSION JOINT DETAIL

N.T.S.

Note: 60'-0" Max. Spacing between Expansion Joints. Horizontal reinforcing shall stop 2" from ℄ Expansion Joint.



FOOTING STEP DETAIL

N.T.S.

SEISMIC ZONE: These walls have been designed for the following site adjusted peak ground accelerations (A_S):
Level Backfill - $A_S \leq .40g$
Sloped Backfill (1V: 2H max.) - $A_S \leq .30g$

5-14-20	ADDED ASHLAR STONE FINISH DETIAL AND NOTES. REVISED TYP. SECTION AND GEN. NOTES.	
5-12-16	REVISED SLOPES FOR SELECT BACKFILL	
2-27-14	REVISED GENERAL NOTES	
7-26-12	DRAWING ISSUED	
DATE	REVISION	DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION

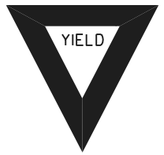
REINFORCED CONCRETE RETAINING WALL (WITHOUT LIVE LOAD SURCHARGE)

STANDARD DRAWING SI - 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

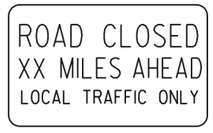
R5-1

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"

WI-1

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

WI-2

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

R2-11

36"X48"

WI-3

STD. 48"X48"

WI-4

STD. 48"X48"

WI-6

STD. 48"X24"
SPECIAL 60"X30"

WI-8

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

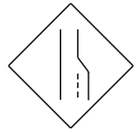
W3-1

STD. 36"X36"
SPECIAL 48"X48"

W3-2

STD. 36"X36"
SPECIAL 48"X48"

W4-2



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

R56-1

STD. 18"X18"

W5-1

STD. 36"X36"
SPECIAL 48"X48"

W6-3

EXPWY. 36"X36"
SPECIAL 48"X48"

W8-7

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

W9-2

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

WI3-1

STD. 24"X24"

W20-1

STD. 48"X48"

W20-2

STD. 48"X48"

W20-3

STD. 48"X48"

W20-4

STD. 48"X48"

W20-5

STD. 48"X48"

W20-7a

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

W21-2

STD. 30"X30"
SPECIAL 36"X36"

W21-5

STD. 30"X30"
SPECIAL 36"X36"

W24-1

STD. 36"X36"

WI-4b

STD. 48"X48"

W8-11

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

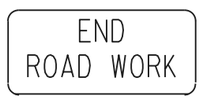
W8-9

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

G20-1

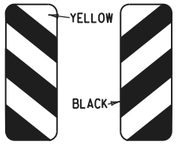
60"X24"

G20-2



48"X24"

OM-3L OM-3R



12"X36"

M4-9

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

M4-10

48"X18"

GENERAL NOTES:

1. ALL TRAFFIC CONTROL DEVICES USED ON ROAD CONSTRUCTION SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND TO THE STANDARD HIGHWAY SIGNS, LATEST EDITION, OR AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION.

2. TRAFFIC CONTROL DEVICES SHALL BE SET UP JUST BEFORE THE START OF CONSTRUCTION OPERATIONS AND SHALL BE PROPERLY MAINTAINED DURING THE TIME SUCH CONDITIONS EXIST. THEY SHALL REMAIN IN PLACE ONLY AS LONG AS NEEDED AND REMOVED THEREAFTER.

3. EXISTING SIGNS AND CONSTRUCTION SIGNS SHALL BE KEPT IN PROPER POSITION, AND BE CLEAN AND LEGIBLE AT ALL TIMES. SIGNS THAT DO NOT APPLY TO EXISTING CONDITIONS SHALL BE REMOVED. SIGNS THAT ARE DAMAGED, DEFACED, OR THAT ACCUMULATE DIRT DURING CONSTRUCTION SHALL BE CLEANED, REPAIRED, OR REPLACED.

4. SIGNS ARE USUALLY MOUNTED ON A SINGLE POST, ALTHOUGH THOSE WIDER THAN 36" OR LARGER THAN 10 SQ. FT. SHALL BE MOUNTED ON TWO POSTS OR ABOVE A TYPE III BARRICADE.

5. SIGN POSTS DIRECT BURIED IN SOIL SHALL BE 2 LB. MINIMUM CHANNEL POST OR 4"x4" WOOD POSTS. CHANNEL POSTS SHALL BE PAINTED GREEN. WOOD POSTS SHALL BE PAINTED WHITE. ALL POSTS SHALL BE NEATLY CONSTRUCTED, AND SHALL BE REPLUMBED, CLEANED, OR REPAIRED AS NEEDED FOR THE DURATION OF THE JOB. THERE SHALL NOT BE MORE THAN 2 POSTS IN A 7' PATH FOR WOOD OR CHANNEL POSTS. ANY CHANNEL POST SPLICE SHALL BE IN ACCORDANCE WITH STANDARD DRAWING TC-3.

6. POST MOUNTED SIGNS IN RURAL AREAS SHALL BE CONSTRUCTED WITH THE NEAR EDGE OF THE SIGN FROM 6 TO 12 FEET FROM THE PAVEMENT EDGE. SIGNS IN URBAN AREAS AND BARRICADE MOUNTED SIGNS SHALL BE MOUNTED A MINIMUM OF 2 FEET FROM THE PAVEMENT EDGE.

7. ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN URBAN AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE. ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN RURAL AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE, EXCEPT A MINIMUM OF 6' SHALL BE USED WHEN MOUNTING AN ADVISORY SIGN BELOW A WARNING SIGN. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR INTERMEDIATE TERM STATIONARY WORK CONDITIONS. THE SIGNS MINIMUM MOUNTING HEIGHT SHALL BE 5'. RETROREFLECTIVE DEVICES SHALL BE USED. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR SHORT-TERM, SHORT DURATION, AND MOBILE CONDITIONS. THEY SHALL BE NO LESS THAN ONE (1) FOOT ABOVE THE TRAVELED WAY. LONG-TERM STATIONARY SIGNS SHALL BE DIRECT BURIED IN SOIL, UNLESS CONDITIONS NECESSITATE THE USE OF PORTABLE SIGNS, OR AS APPROVED BY THE ENGINEER. CONCRETE PADS, CONCRETE OR ROCK BALLAST, OR OTHER SOLID MATERIALS SHALL NOT BE UTILIZED WITH PORTABLE SIGN SUPPORTS.

8. FLAGGERS SHALL USE REFLECTORIZED STOP-SLOW PADDLES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.

9. MOST OF THE SIGNS SHOWN ARE ORIENTED TO THE RIGHT. HOWEVER, THIS DOES NOT PRECLUDE THE USE OF MIRROR IMAGES OF THESE SIGNS WHERE THE REVERSE ORIENTATION MIGHT BETTER CONVEY TO MOTORISTS THE PROPER DIRECTION OF MOVEMENT.

10. R2-6aP PLAQUES SHALL BE MOUNTED BELOW AN APPLICABLE ADVANCE WARNING SIGN THAT IS LOCATED AT LEAST 1500' BUT NOT MORE THAN 1 MILE IN ADVANCE OF THE WORK ZONE. IF A SPEED LIMIT REDUCTION IS IN EFFECT, THE PLAQUE SHALL BE PLACED A MINIMUM OF 500' IN ADVANCE OF THE W3-5 "REDUCED SPEED AHEAD" SIGN. R2-11 SIGNS SHALL BE INSTALLED AT OR NEAR THE DOWNSTREAM END OF THE WORK ZONE. SEE STANDARD DRAWINGS TC-2, TC-3, AND TC-6 FOR TYPICAL PLACEMENT LOCATIONS.

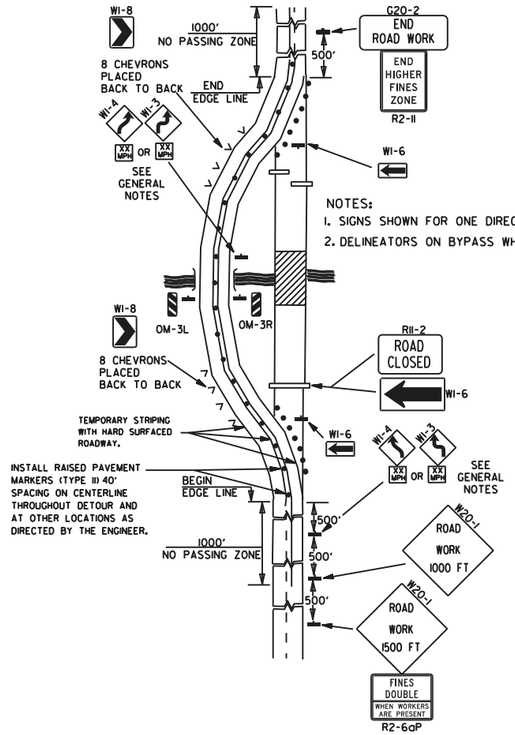
• NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) IS REQUIRED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

DATE REV	DESCRIPTION
08-14-25	REPLACED R55-1 WITH R2-6aP, ADDED R2-11 & REVISED NOTE 10
11-07-19	REVISED FOR MASH
04-13-17	DELETED RSP-1 & ADDED W21-5a
09-02-15	REVISED REDUCED SPEED LIMIT AHEAD SIGNS REVISED ROAD WORK NEXT XX MILES
12-15-11	REVISED W24-1

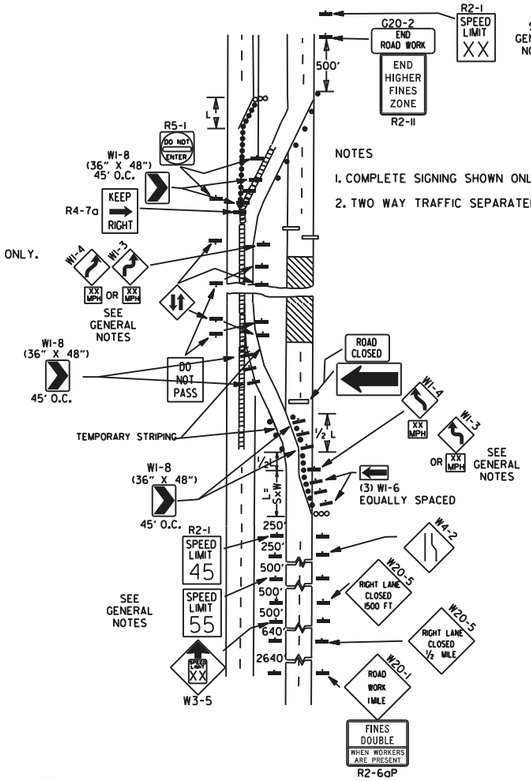
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

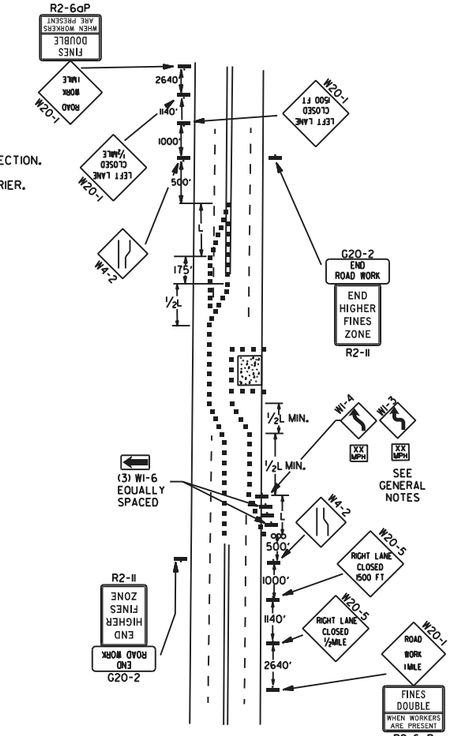
DATE EFFECTIVE 08-14-2025 | STANDARD DRAWING | TC-1



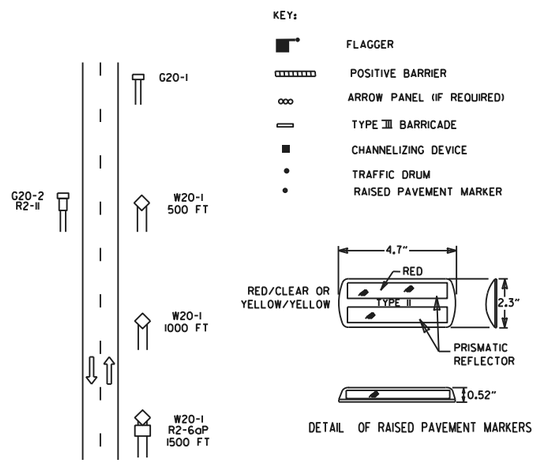
(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.



(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.



DETAIL OF RAISED PAVEMENT MARKERS

TYPICAL ADVANCE WARNING SIGN PLACEMENT

TAPER FORMULAE:

L=SXW FOR SPEEDS OF 45MPH OR MORE.

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

WHERE:

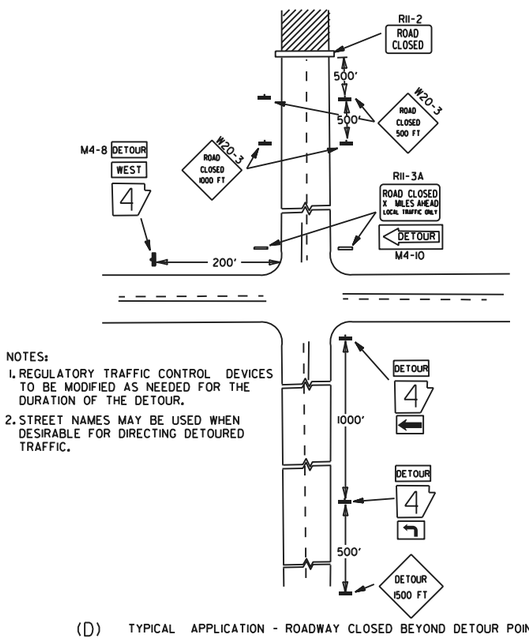
L= MINIMUM LENGTH OF TAPER.

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

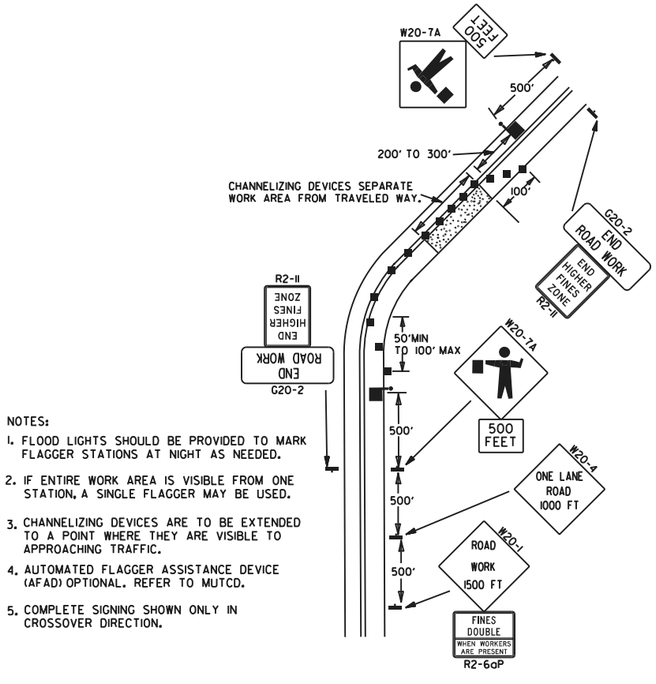
W= WIDTH OF OFFSET.

GENERAL NOTES:

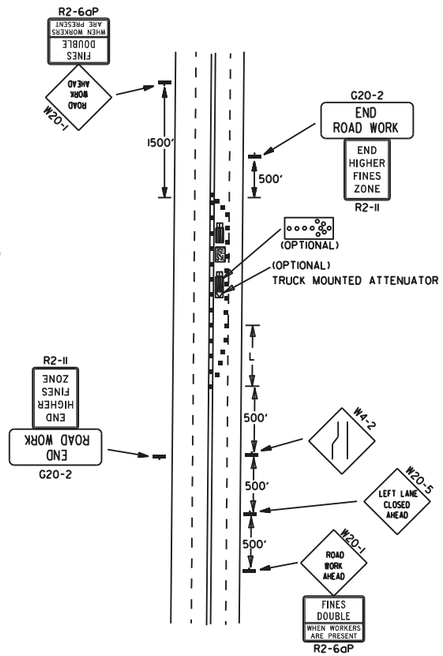
1. THE MAINTENANCE DIVISION SHALL CONDUCT A BALL BANK STUDY TO DETERMINE THE ADVISORY SPEED LIMIT PRIOR TO OPENING TO TRAFFIC. THE ADVISORY SPEED WILL BE POSTED ON W1-3 OR W1-4 CURVE WARNING SIGNS. USE W1-4 WHEN SPEED IS GREATER THAN 30MPH AND W1-3 WHEN 30MPH OR LESS
2. WHEN THE EXISTING SPEED LIMIT 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.



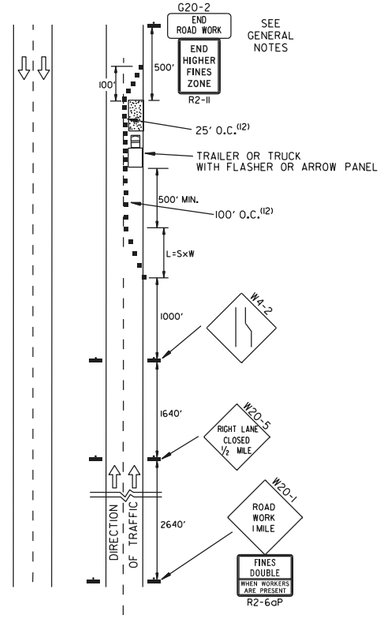
(F) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WITH INSIDE LANE CLOSED.

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

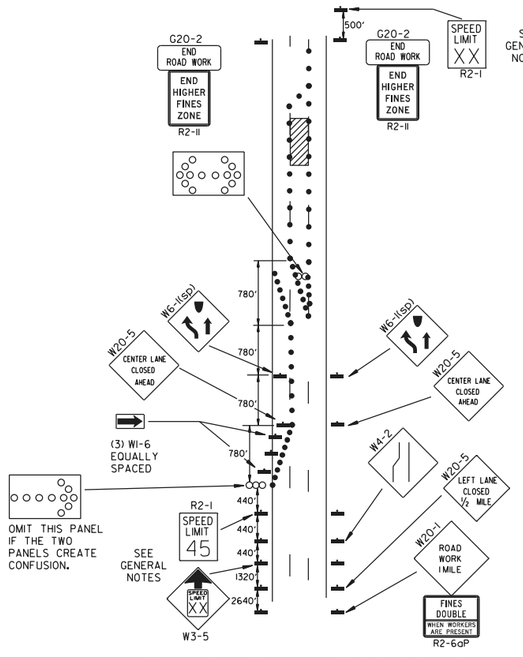
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

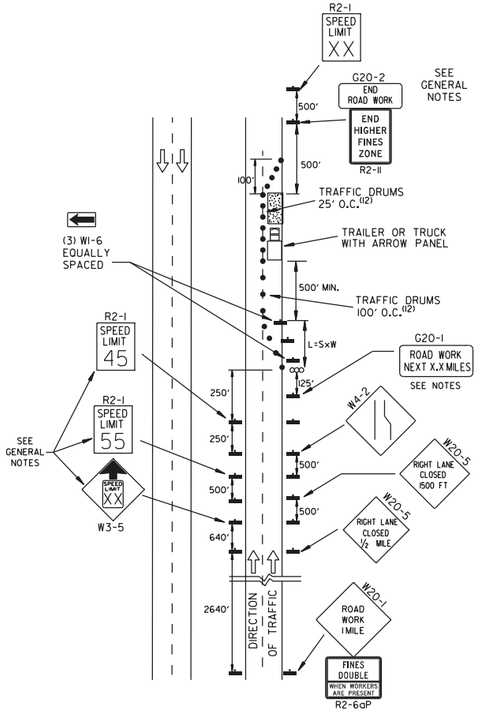
DATE EFFECTIVE	STANDARD DRAWING	TC-2
08-14-2025		



(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.



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

KEY:

○○○ ARROW PANEL (IF REQUIRED)

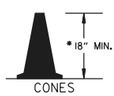
■ CHANNELIZING DEVICE

● TRAFFIC DRUM

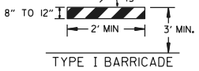
GENERAL NOTES:

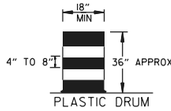
1. A SPEED LIMIT REDUCTION MAY BE IMPLEMENTED ONLY WHEN DESIGNATED IN THE PLAN OR WHEN RECOMMENDED BY THE ROADWAY DESIGN DIVISION.
2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-I(55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-I 45MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-I(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
3. WHEN THE EXISTING SPEED LIMIT IS 65MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 55MPH, THE R2-I(45) SHALL BE OMITTED. ADDITIONAL R2-I 55MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-I(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
4. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT. BEYOND THE TAPER, MAXIMUM SPACING SHALL BE TWO TIMES THE SPEED LIMIT OR AS DIRECTED BY THE ENGINEER.
5. WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
6. PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICABLE.
7. THE G20-1 SIGN SHOULD BE INSTALLED ON JOBS OF OVER TWO MILES IN LENGTH. WHEN THE LANE CLOSURE IS NOT AT THE BEGINNING OF THE PROJECT, THE G20-1 SIGN SHALL BE ERECTED 125' IN ADVANCE OF THE JOB LIMIT. ADDITIONAL W20-1 (1 MILE) SIGNS ARE NOT REQUIRED IN ADVANCE OF LANE CLOSURES THAT BEGIN INSIDE THE PROJECT LIMITS. THE DISTANCE DISPLAYED ON THE G20-1 SIGN SHALL BE STATED TO THE NEAREST WHOLE MILE.
8. FLAGGERS SHALL USE STOP/SLOW PADDLES FOR CONTROLLING TRAFFIC THROUGH WORK ZONES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.
9. ALL PLASTIC DRUMS AND CONES SHALL MEET THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).
10. TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE DELINEATED BY AFFIXING CONSPICUITY MATERIAL IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER. WHEN PLACED ON OR ADJACENT TO THE SHOULDER AND NOT BEHIND A POSITIVE BARRIER, THESE DEVICES SHALL BE DELINEATED BY PLACING FIVE (5) TRAFFIC DRUMS, EQUALLY SPACED ALONG THE TRAFFIC SIDE OF THE DEVICE. PAYMENT FOR TRAFFIC DRUMS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR VARIOUS TRAILER MOUNTED DEVICES.
11. ALL TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).
12. ONLY WHERE SPACE RESTRICTIONS DO NOT ALLOW FOR TRAFFIC DRUMS, TUBULAR MARKERS MAY BE USED AT 50' O.C. IN STABILIZATION ZONES AND AT 10' O.C. DIRECTLY ADJACENT TO CONSTRUCTION OPERATIONS AND AT EXIT TAPERS. TUBULAR MARKERS SHALL BE STABILIZED WITH WEIGHTED BASES IN ACCORDANCE WITH THE M.U.T.C.D.

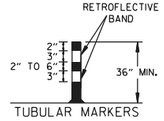
CHANNELIZING DEVICES

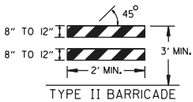


* WHEN CONES ARE USED ON FREEWAYS AND MULTI-LANE HIGHWAYS, THEY SHALL BE 28" MIN. DURING HOURS OF DARKNESS, 28" CONES SHALL BE USED ON ALL ROADWAYS, AND SHALL BE REFLECTORIZED IN ACCORDANCE WITH THE M.U.T.C.D.

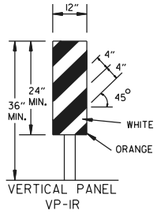


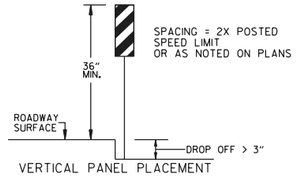


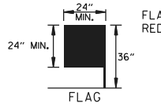




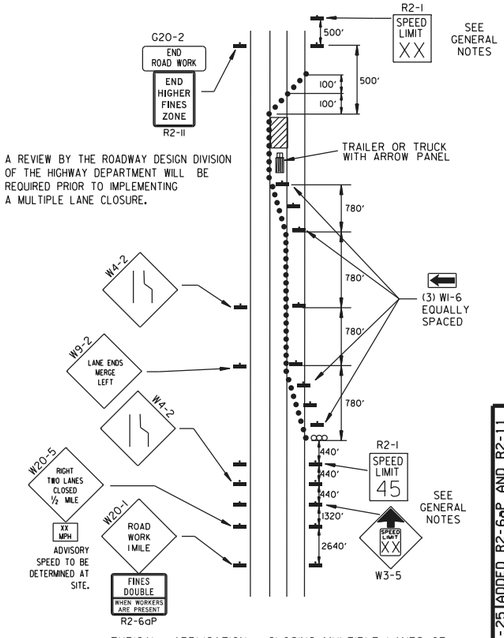
NOTE:
FOR ALL ROAD CLOSURES, THE TYPE III BARRICADES SHALL BE OF SUFFICIENT LENGTH TO EXTEND ACROSS ENTIRE ROADWAY.







FLAG SHALL BE OF GOOD GRADE RED MATERIAL



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

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

TRAFFIC CONTROL DEVICES

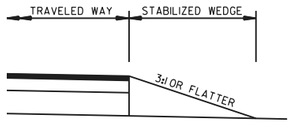
NON-INTERSTATE			
VERTICAL DIFFERENTIAL	LOCATION	TRAFFIC CONTROL	
		≤ 45 MPH	> 45 MPH
≤ 1"	CENTERLINE	W8-11	W8-11
> 1" ≤ 3"	CENTERLINE	W8-11 AND CENTERLINE LANE STRIPING	W8-11 AND CENTERLINE LANE STRIPING
> 3"	CENTERLINE	STANDARD LANE CLOSURE[6]	STANDARD LANE CLOSURE[6]
≤ 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-9 AND TRAFFIC DRUMS[1]	W8-9 AND TRAFFIC DRUMS[1]
> 3" ≤ 6"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS[1]	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS[1]
> 6" ≤ 18"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS[1]	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS[2]
> 18" ≤ 24"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS[1]	A STABILIZED WEDGE, W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS[3]
> 24"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	PRECAST CONCRETE BARRIER[4] & EDGE LINES	PRECAST CONCRETE BARRIER[4] & EDGE LINES

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

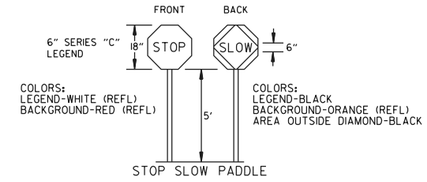
INTERSTATE AND NON-INTERSTATE		
FORESLOPE	HEIGHT	TRAFFIC CONTROL
1:1	> 2 FT	PRECAST CONCRETE BARRIER
2:1	≤ 5 FT	TRAFFIC DRUMS
2:1	> 5 FT	PRECAST CONCRETE BARRIER
Flatter than 2:1	N/A	TRAFFIC DRUMS

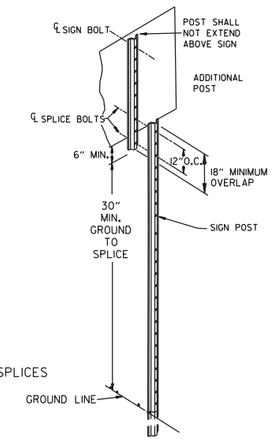
GENERAL NOTES:

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



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

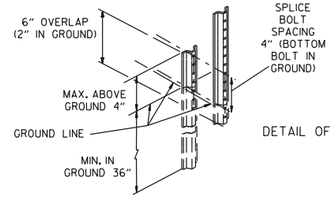




NOTES:
USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-2)

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

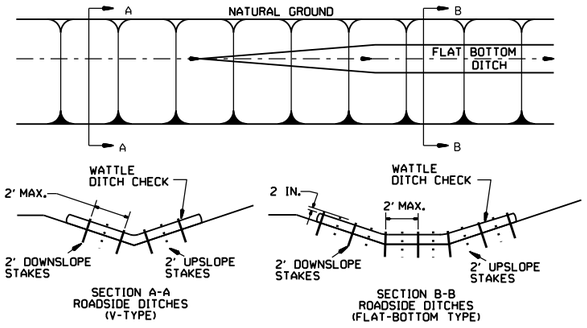
DATE EFFECTIVE 08-14-2025

STANDARD DRAWING

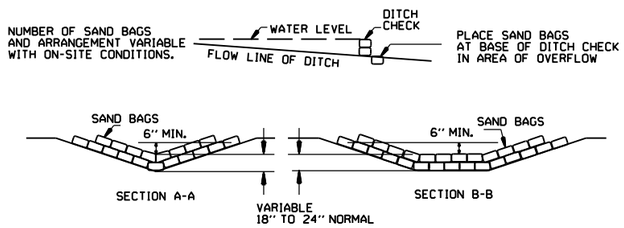
TC-3

GENERAL NOTES

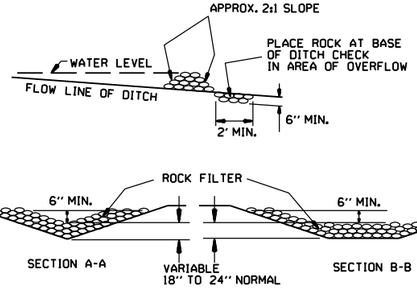
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



SAND BAG DITCH CHECK (E-5)

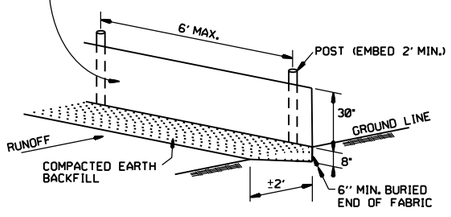


ROCK DITCH CHECK (E-6)

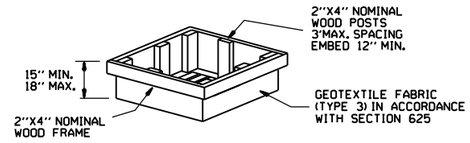
GENERAL NOTES

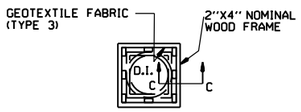
GEOTEXTILE FABRIC (TYPE 4) IN ACCORDANCE WITH SECTION 625

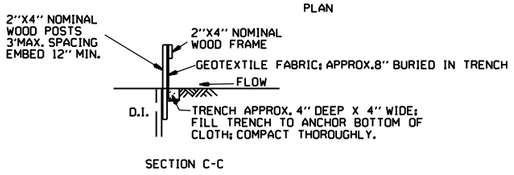
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.



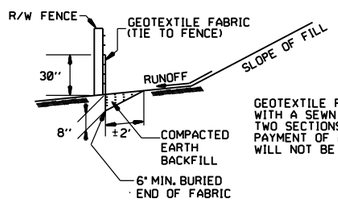
SILT FENCE (E-11)





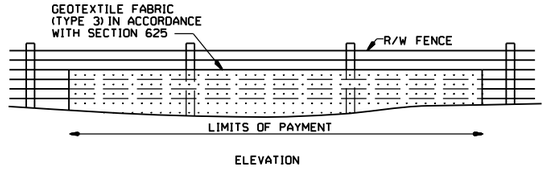


DROP INLET SILT FENCE (E-7)



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.



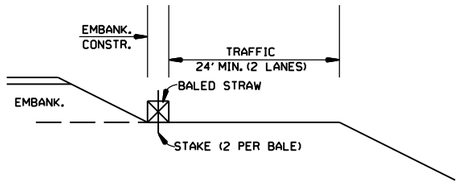
SILT FENCE ON R/W FENCE (E-4)

GENERAL NOTES

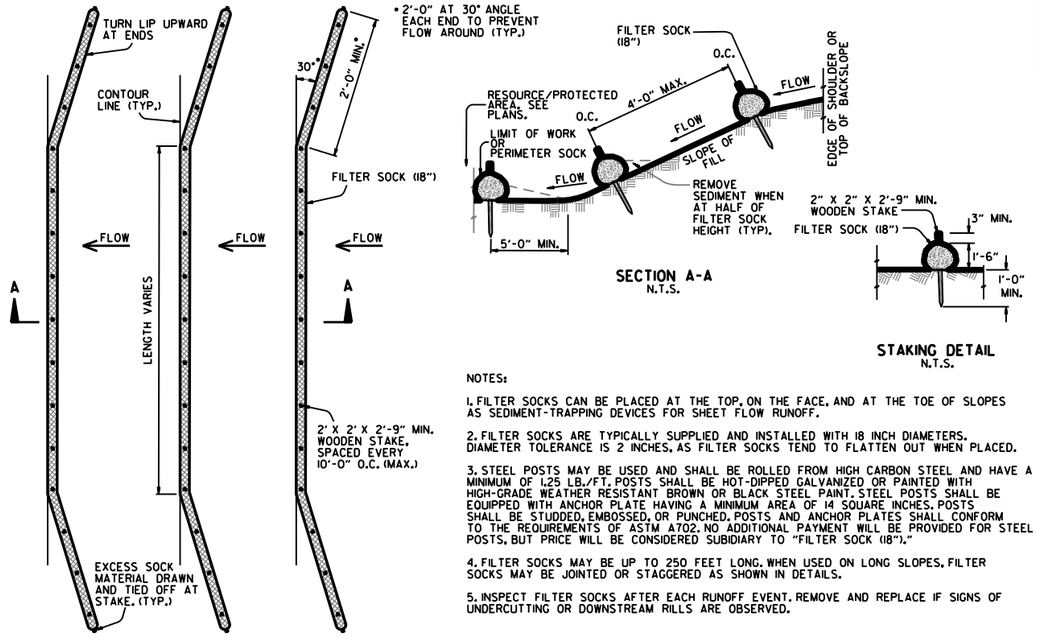
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.

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.

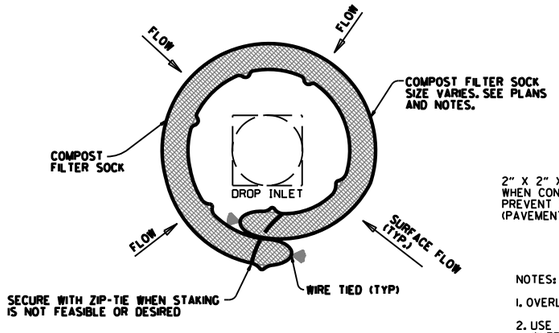
2. FILTER SOCKS ARE TYPICALLY SUPPLIED AND INSTALLED WITH 18 INCH DIAMETERS. DIAMETER TOLERANCE IS 2 INCHES, AS FILTER SOCKS TEND TO FLATTEN OUT WHEN PLACED.

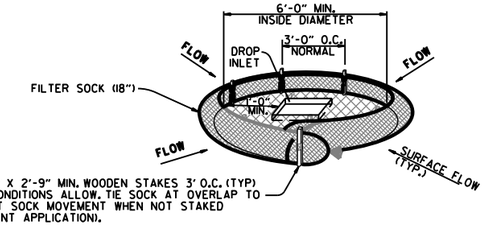
3. STEEL POSTS MAY BE USED AND SHALL BE ROLLED FROM HIGH CARBON STEEL AND HAVE A MINIMUM OF 1.25 LB./FT. POSTS SHALL BE HOT-DIPPED GALVANIZED OR PAINTED WITH HIGH-GRADE WEATHER RESISTANT BROWN OR BLACK STEEL PAINT. STEEL POSTS SHALL BE EQUIPPED WITH ANCHOR PLATE HAVING A MINIMUM AREA OF 14 SQUARE INCHES. 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)





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.

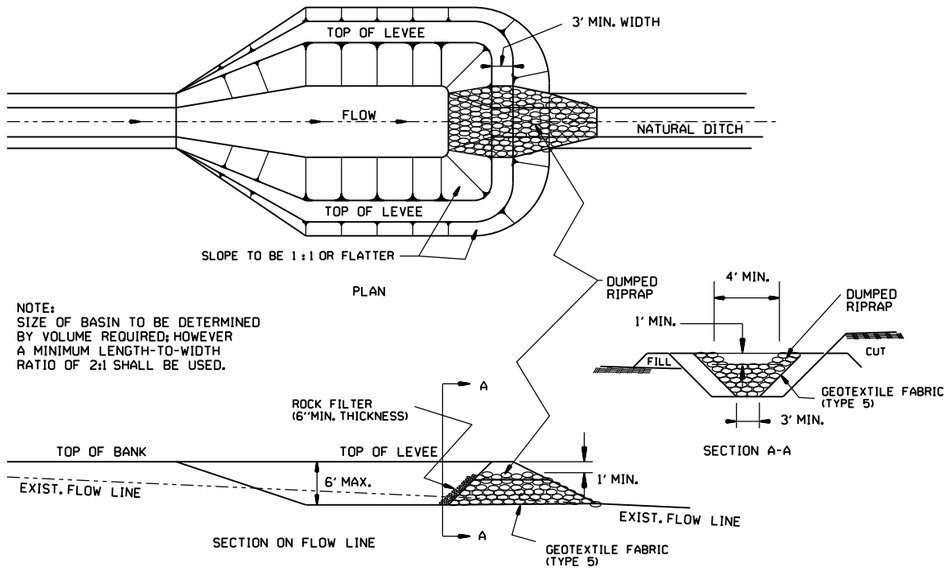
COMPOST FILTER SOCK DROP INLET PROTECTION (E-13)

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

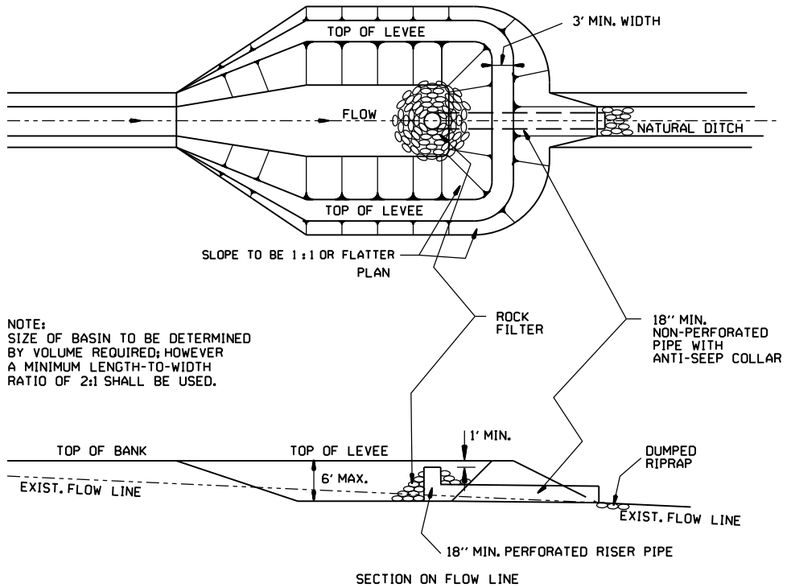
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

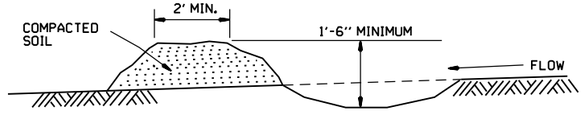
STANDARD DRAWING TEC-1



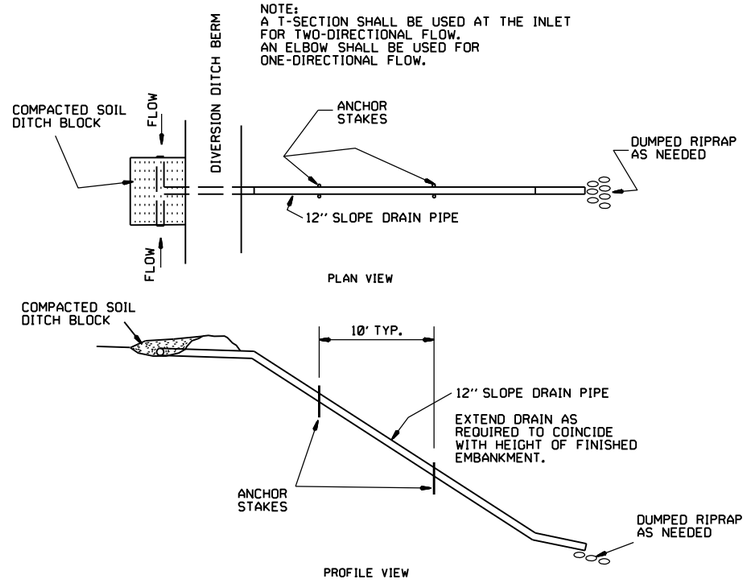
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



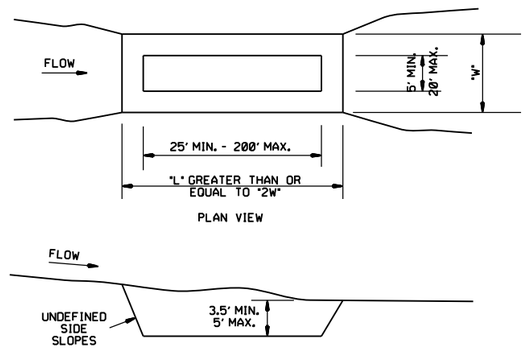
SEDIMENT BASIN WITH PIPE OUTLET (E-10)



DIVERSION DITCH (E-8)



SLOPE DRAIN (E-12)



SEDIMENT BASIN (E-14)

DATE	REVISION	FILMED
6-2-94	Revised E-8 & E-12; Added E-14 & Deleted E-13	
4-1-93	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

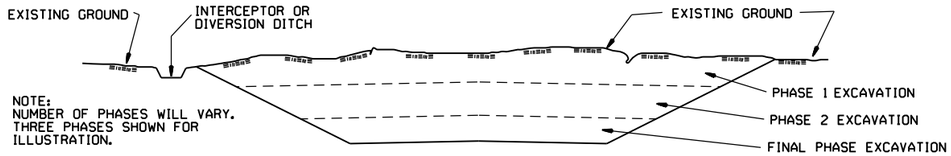
STANDARD DRAWING TEC-2

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



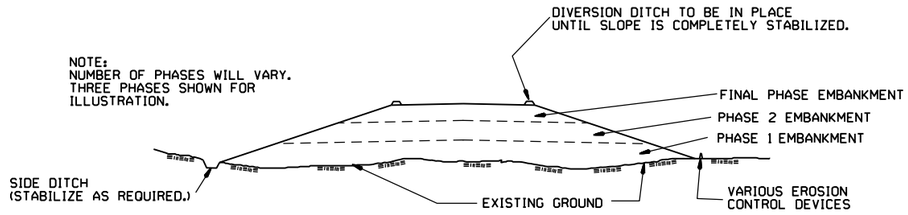
GENERAL NOTE

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

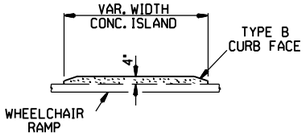
1. CONSTRUCT DIVERSION DITCHES, DITCH CHECKS, SEDIMENT BASINS, SILT FENCES, OR OTHER EROSION CONTROL DEVICES AS SPECIFIED.
2. PLACE PHASE 1 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD 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

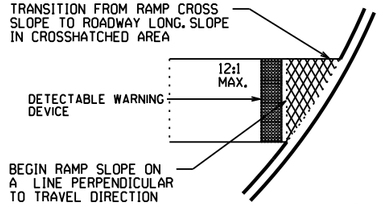
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

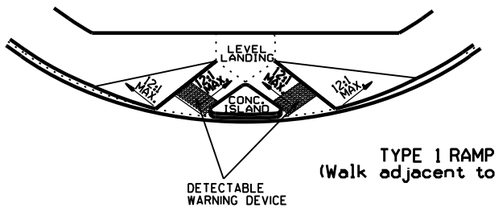
STANDARD DRAWING TEC-3



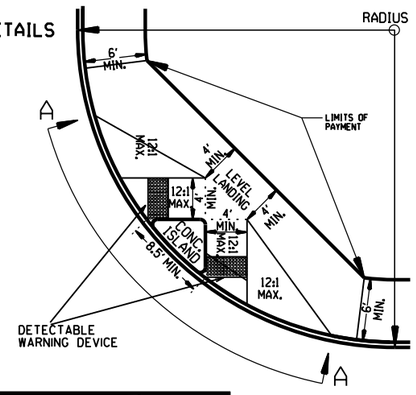
CONCRETE ISLAND DETAIL

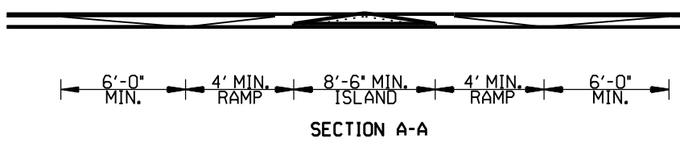


SLOPE TRANSITION DETAILS



TYPE 1 RAMP
(Walk adjacent to curb)

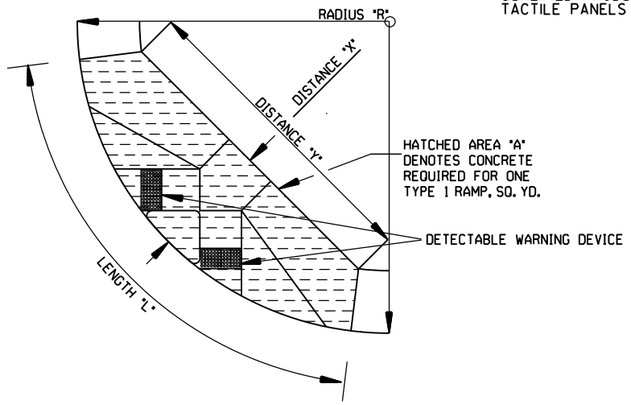




SECTION A-A

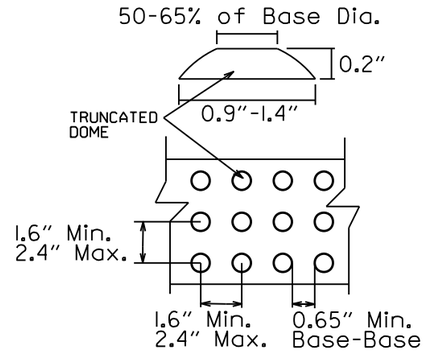
TYPE 1 RAMP DIMENSIONS AND QUANTITIES

RADIUS "R" FEET	DISTANCE "X" FEET	DISTANCE "Y" FEET	LENGTH "L" FEET	RAMP AREA "A" SQ. YD.
15	11.67	18.82	32.18	26.21
20	11.52	22.28	35.46	30.07
25	11.43	26.60	38.77	33.80
30	11.37	30.26	40.93	36.90
35	11.33	33.51	43.11	39.77
40	11.30	36.45	45.26	42.45
45	11.27	39.16	47.34	44.97
50	11.25	41.69	49.36	47.35
55	11.24	44.07	51.31	49.63
60	11.22	46.33	53.21	51.80



GENERAL NOTES FOR DETECTABLE WARNING DEVICES

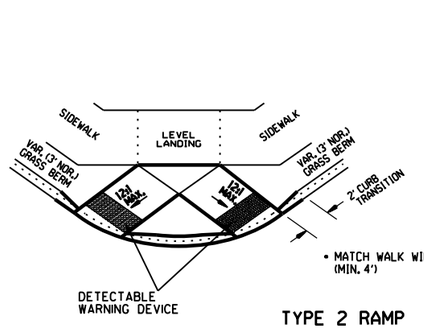
THE DETECTABLE WARNING DEVICE SHALL BE LOCATED SO THAT THE NEAREST EDGE OF THE DEVICE IS 6 TO 8 INCHES FROM THE FACE OF THE CURB.
TRUNCATED DOMES IN THE DETECTABLE WARNING SURFACE SHALL MEET THE REQUIREMENTS OF THE GEOMETRIC CONFIGURATION SHOWN.
DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.
DETECTABLE WARNING DEVICE SHALL BE 24 INCHES IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE.
DETECTABLE WARNING DEVICE SHALL BE ON THE ARDOT QUALIFIED PRODUCTS LIST FOR CAST-IN-PLACE TACTILE PANELS (ADA DETECTABLE WARNING).



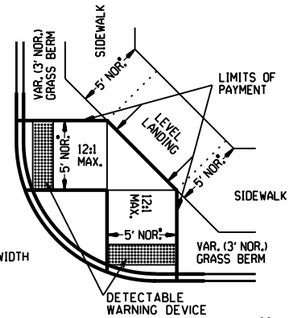
DETECTABLE WARNING DEVICE DETAIL

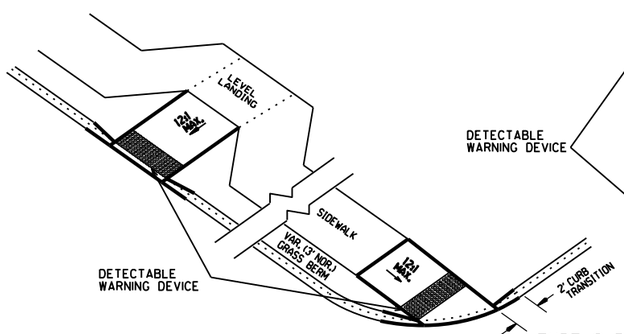
GENERAL NOTES:

IN NEW CONSTRUCTION, UNLESS OTHERWISE INDICATED ON THE PLANS, WHEELCHAIR RAMPS ARE TO BE PROVIDED AT ALL CORNERS OF CURBED STREET INTERSECTIONS AND MID-BLOCK CROSSWALK LOCATIONS.
IN ALTERATIONS WHEELCHAIR RAMPS ARE TO BE PROVIDED AT CURBED STREET INTERSECTIONS WITH PEDESTRIAN TRAFFIC AND MID-BLOCK CROSSWALK LOCATIONS.
THE LENGTH OF THE RAMP SHALL BE SUCH THAT THE SLOPE DOES NOT EXCEED 12:1. THE SURFACE TEXTURE OF THE RAMP SHALL CONFORM TO A CLASS 6 FINISH ACCORDING TO SECTION 802.19.
THE NORMAL GUTTER GRADE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP.
ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION.
THE MINIMUM THICKNESS OF THE RAMP, WALK, & LANDING SHALL BE 4".
THE MINIMUM WIDTH OF THE RAMPS SHALL BE THE WALK WIDTH OR 36", WHICHEVER IS GREATER.
RAMPS SHALL BE MODIFIED AS NECESSARY TO INSURE THAT THEY ARE PARALLEL TO A LINE DRAWN FROM THE CENTER OF ONE RAMP TO THE CENTER OF THE RAMP ON THE OPPOSITE SIDE OF THE INTERSECTION.
THE DIMENSIONS AND QUANTITIES SHOWN ON THIS DRAWING ARE FOR A 90° INTERSECTION ONLY. DIMENSIONS AND QUANTITIES FOR SKEWED INTERSECTIONS WILL VARY, AND ARE TO BE DETERMINED BY THE ENGINEER.

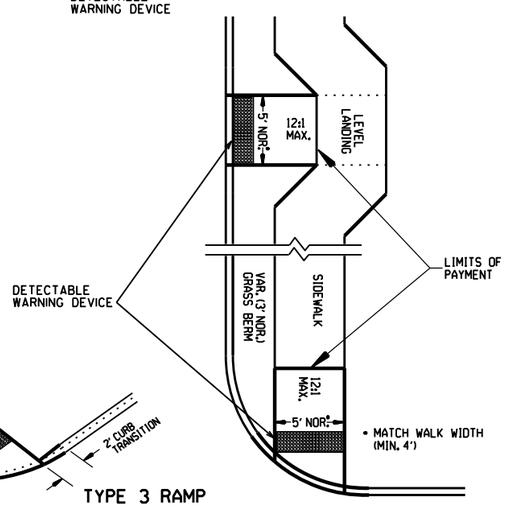


TYPE 2 RAMP

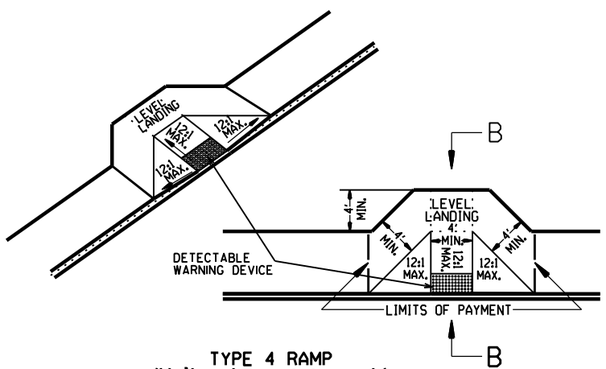




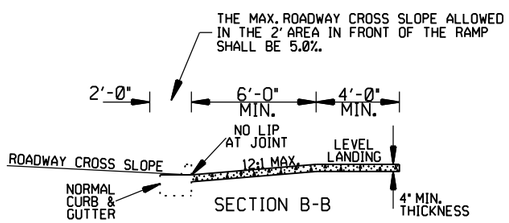
TYPE 3 RAMP



NOTE:
THE CROSS SLOPE OF THE RAMPS, LEVEL LANDINGS, AND SIDEWALKS SHALL NOT EXCEED 2.0% UNLESS REQUIRED TO MATCH STREET LONGTITUDINAL GRADE.



TYPE 4 RAMP
(Walk adjacent to curb)



SECTION B-B

RAMP SELECTION CRITERIA

FIRST CHOICE	TYPE 1	CORNER LOCATIONS WITH THE WALK ADJACENT TO THE CURB (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 2	CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE INSUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 3	CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE SUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 4	TANGENT LOCATIONS (BOTH NEW CONSTRUCTION AND ALTERATIONS).
SECOND CHOICE	TYPE 5	TANGENT LOCATIONS (ALTERATIONS ONLY).
THIRD CHOICE	TYPE 6	CORNER LOCATIONS (ALTERATIONS ONLY). THIS RAMP MAY BE USED ONLY IF THE TYPE 5 RAMPS CANNOT BE PLACED AT THE ENDS OF THE RADIUS.
FOURTH CHOICE		IF SITE CONSTRAINTS PREVENT THE CONSTRUCTION OF ANY OF THE TYPES LISTED, THEN AND ONLY THEN CAN THE 12:1 MAX. SLOPE ON THE RAMP BE EXCEEDED TO PROVIDE ACCESS TO THE STREET LEVEL (ALTERATIONS ONLY). THE SLOPE CAN BE STEEPENED TO A 10:1 MAX. FOR A MAX. LENGTH OF 5' OR A 8:1 MAX. FOR A MAX. LENGTH OF 2'. SLOPES STEEPER THAN 8:1 ARE NOT ALLOWED UNDER ANY CIRCUMSTANCES.

NOTE: IN ALTERATIONS, THE SELECTION OF THE TYPE OF WHEELCHAIR RAMP TO BE CONSTRUCTED SHALL BE BASED ON THE AMOUNT OF RIGHT-OF-WAY AVAILABLE, AND ON THE PRESENCE OF OTHER SITE CONSTRAINTS (UTILITIES, BUILDINGS, ETC.). THE TABLE ABOVE LISTS THE ORDER IN WHICH THE RAMPS ARE TO BE CONSIDERED.

AN ALTERATION IS DEFINED AS A PROJECT THAT CHANGES OR AFFECTS THE USE OF A PEDESTRIAN PATHWAY (OVERLAYS, SIGNALIZATION PROJECTS, ETC.) BUT DOES NOT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY. ALL PROJECTS THAT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY WILL USUALLY BE CONSIDERED NEW CONSTRUCTION FOR THE PURPOSES OF THE CHART ABOVE.

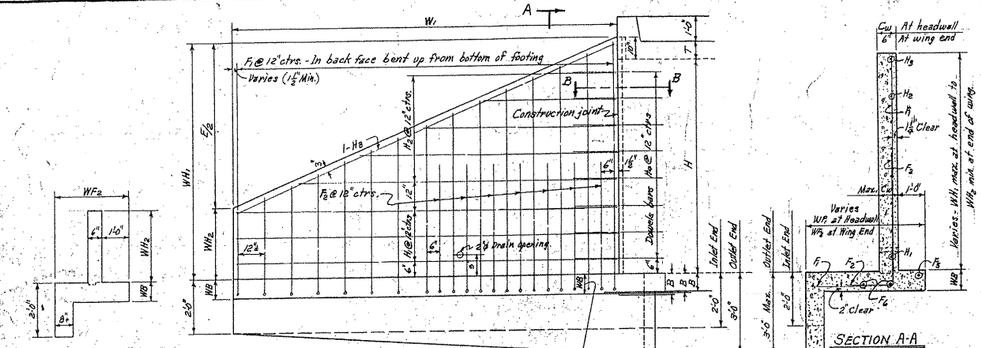
DATE	REVISION	DATE FILM
11-10-05	REVISED TO NEW SIDEWALK POLICY	
10-9-03	REVISED GEN. NOTES & ADDED NOTE	
4-10-03	REV. DETECTABLE WARNING DEVICES	
8-22-02	ADD DETECTABLE WARNING DEVICES	
3-30-00	ADD.SLOPE TRANS. & REV. ISL. DIMS.	
11-18-98	REVISED NOTES	
8-12-98	REVISED TEXTURE	
7-02-98	REDRAWN & REISSUED	
10-18-96	CORRECTED DIMENSIONS	10-18-96
5-24-90	FROM8#TO12#MAX.SLOPES	5-24-90
7-15-88	ADJUSTED MAX. SLOPE	652-7-15-88
7-14-88	INCLUD."CONC. ISLD."IN PAY ITEM	------
6-02-76	ISSUED-P.M.D.	299-7-28-76

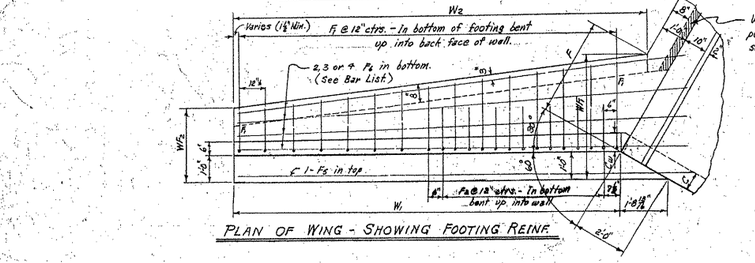
ARKANSAS STATE HIGHWAY COMMISSION

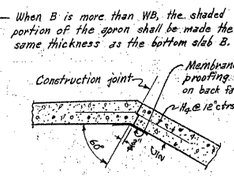
WHEELCHAIR RAMPS NEW CONSTRUCTION AND ALTERATIONS

STANDARD DRAWING WR-1

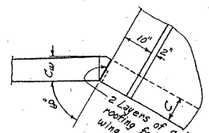
FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.				
JOB No.					







NOTE:- Payment for membrane waterproofing and roofing felt to be included in the price bid for Class S Concrete.



WING DIMENSIONS

CLEAR HEIGHT OF BOX	THICKNESS OF WING FOOTING	THICKNESS OF WING AT HEADWALL "C"	WINGWALL HEIGHTS AT HEADWALL	WINGWALL HEIGHTS AT END OF WING	WIDTHS OF WING FOOTINGS AT HEADWALL	WIDTHS OF WING FOOTINGS AT END OF WING	PERPENDICULAR FOOTING DIMENSION	PERPENDICULAR DIST. FROM HDWL. TO END OF WING	LENGTH OF WINGWALLS	INSIDE FOOTING DIMENSION	* QUANTITY PER WING CLASS S CONCRETE	
											INLET END	OUTLET END
H	WB	Cw	WH1	WH2	WF1	WF2	F	E	W1	W2	CU.YD.	CU.YD.
2'	7"	6"	2'-10"	0'-8"	2'-4"	2'-0"	0'-11⅞"	4'-4"	5'-0"	4'-7½"	0.604	0.670
3'	7"	6"	3'-10"	1'-0"	2'-8"	2'-4"	1'-4⅝"	5'-8"	6'-6⅝"	6'-4⅜"	0.908	0.996
4'	7"	6"	4'-10"	1'-4"	3'-0"	2'-8"	1'-9"	7'-0"	8'-1"	8'-1"	1.267	1.376
5'	7"	6"	5'-10"	1'-8"	3'-4"	2'-4½"	2'-1⅞"	8'-4"	9'-7½"	9'-9⅜"	1.679	1.810
		7"	5'-10"	1'-8"	3'-4"	2'-9½"	2'-1⅞"	8'-4"	9'-7½"	9'-9⅜"	1.750	1.881
6'	8"	7"	6'-10"	2'-0"	3'-8"	2'-6"	2'-6⅝"	9'-8"	11'-2"	11'-6½"	2.330	2.483
		7½"	6'-10"	2'-0"	3'-8"	2'-6"	2'-6⅝"	9'-8"	11'-2"	11'-6½"	2.379	2.531
		8"	6'-10"	2'-0"	3'-8"	2'-6"	2'-6⅝"	9'-8"	11'-2"	11'-6½"	2.427	2.580
7'	8½"	7½"	7'-10"	2'-0"	4'-2"	2'-7½"	3'-1⅝"	11'-0"	12'-8½"	13'-9½"	3.054	3.230
		8"	7'-10"	2'-0"	4'-2"	2'-7½"	3'-1⅝"	11'-0"	12'-8½"	13'-9½"	3.117	3.293
8'	9"	8"	8'-10"	2'-0"	4'-8"	2'-9"	3'-3"	12'-9"	14'-3"	15'-2½"	3.905	4.104

* Quantity per wing does not include headwall or that portion of apron or toewall for the length W3.

APRON DIMENSION W3 = (OW - 2F)

CLEAR SPAN	CLEAR HEIGHT	2 X FOOTING DIMENSION	SINGLE BARREL CULVERT		DOUBLE BARREL CULVERT		TRIPLE BARREL CULVERT		QUADRUPLE BARREL CULVERT		QUINTUPLE BARREL CULVERT	
			OW	W3	OW	W3	OW	W3	OW	W3	OW	W3
S	H	2F										
4'	2'	1'-11⅛"	5'-0"	3'-0⅛"	9'-5⅜"	7'-0⅛"	14'-1"	12'-0⅛"	19'-0"	17'-0⅛"	23'-10"	21'-0⅛"
	3'	2'-8⅛"	5'-0"	2'-3⅛"	9'-5⅜"	6'-11⅛"	14'-1"	11'-7⅛"	19'-0"	16'-7⅛"	23'-10"	20'-11⅛"
	4'	3'-1"	5'-0"	1'-8"	9'-5⅜"	6'-2"	14'-1"	11'-0"	19'-0"	15'-10"	23'-10"	20'-2"
	5'	4'-3⅛"	5'-0"	0'-8⅛"	9'-5⅜"	5'-4⅛"	14'-1"	10'-0⅛"	19'-0"	14'-10⅛"	23'-10"	19'-4⅛"
	6'	5'-0⅛"	5'-8"	0'-1⅛"	9'-11⅛"	4'-10⅛"	14'-8"	9'-7⅛"	19'-5"	14'-4⅛"	24'-2"	19'-1⅛"
5'	3'	2'-8⅛"	6'-0"	3'-3⅛"	11'-8"	8'-11⅛"	17'-4"	14'-7⅛"	23'-0"	20'-3⅛"	28'-8"	25'-11⅛"
	4'	3'-1"	6'-0"	2'-6"	11'-8"	8'-2"	17'-4"	13'-10"	23'-0"	19'-4"	28'-8"	25'-2"
	5'	4'-3⅛"	6'-0"	1'-8⅛"	11'-8"	7'-4⅛"	17'-4"	13'-0⅛"	23'-0"	18'-4⅛"	28'-8"	24'-6⅛"
	6'	5'-0⅛"	6'-2"	1'-1⅛"	11'-11"	6'-10⅛"	17'-8"	12'-7½"	23'-3"	18'-0⅛"	29'-2"	24'-1⅛"
	7'	6'-2⅛"	6'-3"	0'-0⅛"	12'-1"	5'-10⅛"	17'-11"	11'-8½"	23'-5"	17'-8⅛"	29'-7"	23'-9⅛"
6'	3'	2'-8⅛"	7'-0"	3'-3⅛"	13'-8"	10'-11⅛"	20'-4"	17'-7⅛"	27'-0"	24'-3⅛"	33'-8"	30'-11⅛"
	4'	3'-1"	7'-0"	2'-6"	13'-8"	10'-2"	20'-4"	16'-10"	27'-0"	23'-4"	33'-8"	30'-2"
	5'	4'-3⅛"	7'-0"	2'-0⅛"	13'-8"	9'-4⅛"	20'-4"	16'-0⅛"	27'-0"	22'-4⅛"	33'-8"	29'-4⅛"
	6'	5'-0⅛"	7'-2"	2'-1⅛"	13'-11"	8'-10⅛"	20'-8"	15'-7½"	27'-5"	22'-1⅛"	34'-2"	29'-1⅛"
	7'	6'-2⅛"	7'-3"	1'-0⅛"	14'-1"	7'-10⅛"	20'-11"	14'-8⅛"	27'-9"	21'-2⅛"	34'-7"	28'-2⅛"
	8'	7'-1⅝"	7'-4"	0'-0"	14'-2"	6'-10"	21'-0"	13'-8"	27'-10"	20'-2"	34'-8"	27'-2"
7'	4'	3'-1"	8'-0"	2'-6"	15'-8"	12'-2"	23'-4"	19'-10"	31'-0"	27'-4"	38'-8"	35'-2"
	5'	4'-3⅛"	8'-0"	2'-0⅛"	15'-8"	11'-4⅛"	23'-4"	19'-0⅛"	31'-0"	26'-4⅛"	38'-8"	34'-6⅛"
	6'	5'-0⅛"	8'-2"	2'-1⅛"	15'-11"	10'-10⅛"	23'-8"	18'-7½"	31'-5"	26'-1⅛"	39'-2"	34'-1⅛"
	7'	6'-2⅛"	8'-3"	1'-0⅛"	16'-1"	9'-10⅛"	23'-11"	17'-8½"	31'-9"	25'-2⅛"	39'-7"	33'-4⅛"
	8'	7'-1⅝"	8'-4"	0'-0"	16'-2"	8'-10"	24'-0"	16'-8"	31'-10"	24'-2"	39'-8"	32'-8"
8'	4'	3'-1"	9'-0"	2'-6"	17'-8"	14'-2"	26'-4"	22'-10"	35'-0"	31'-4"	43'-8"	40'-2"
	5'	4'-3⅛"	9'-2"	2'-0⅛"	17'-11"	13'-4⅛"	26'-8"	22'-1⅛"	35'-5"	30'-4⅛"	44'-2"	39'-10⅛"
	6'	5'-0⅛"	9'-2"	2'-1⅛"	17'-11"	12'-10⅛"	26'-8"	21'-2⅛"	35'-5"	30'-1⅛"	44'-2"	39'-1⅛"
	7'	6'-2⅛"	9'-3"	1'-0⅛"	18'-1"	11'-10⅛"	26'-11"	20'-3⅛"	35'-9"	29'-2⅛"	44'-7"	38'-4⅛"
	8'	7'-1⅝"	9'-4"	0'-0"	18'-2"	10'-10"	27'-0"	19'-3"	35'-10"	28'-2"	44'-8"	37'-8"
9'	5'	4'-3⅛"	10'-2"	2'-0⅛"	19'-11"	15'-5⅛"	29'-8"	25'-0⅛"	39'-5"	35'-1⅛"	49'-2"	44'-10⅛"
	6'	5'-0⅛"	10'-3"	2'-1⅛"	20'-1"	15'-0⅛"	29'-11"	24'-1⅛"	39'-9"	34'-1⅛"	49'-7"	43'-11⅛"
	7'	6'-2⅛"	10'-3"	1'-0⅛"	20'-1"	13'-10⅛"	29'-11"	23'-0⅛"	39'-9"	32'-10⅛"	49'-7"	42'-4⅛"
	8'	7'-1⅝"	10'-4"	0'-0"	20'-2"	12'-10"	30'-0"	22'-0"	39'-10"	31'-10"	49'-8"	41'-8"
10'	5'	4'-3⅛"	11'-2"	2'-0⅛"	21'-11"	17'-7⅛"	32'-8"	28'-1⅛"	43'-5"	39'-1⅛"	54'-2"	49'-10⅛"
	6'	5'-0⅛"	11'-3"	2'-1⅛"	22'-1"	17'-0⅛"	32'-11"	27'-2⅛"	43'-9"	38'-2⅛"	54'-7"	48'-11⅛"
	7'	6'-2⅛"	11'-3"	1'-0⅛"	22'-1"	15'-10⅛"	32'-11"	26'-1⅛"	43'-9"	37'-1⅛"	54'-7"	47'-5⅛"
	8'	7'-1⅝"	11'-4"	0'-0"	22'-2"	14'-10"	33'-0"	25'-0"	43'-10"	36'-0"	54'-8"	46'-7"
11'	6'	5'-0⅛"	12'-0"	2'-1⅛"	24'-2"	19'-1⅛"	36'-0"	30'-1⅛"	47'-10"	42'-1⅛"		
	7'	6'-2⅛"	12'-0"	1'-0⅛"	24'-2"	17'-10⅛"	36'-0"	28'-10⅛"	47'-10"	40'-10⅛"		
	8'	7'-1⅝"	12'-0"	0'-0"	24'-2"	16'-10"	36'-0"	28'-0"	47'-10"	40'-0"		
12'	6'	5'-0⅛"	13'-0"	2'-1⅛"	26'-2"	21'-1⅛"	39'-0"	33'-1⅛"	51'-10"	46'-1⅛"		
	7'	6'-2⅛"	13'-0"	1'-0⅛"	26'-2"	19'-11⅛"	39'-0"	32'-9⅛"	51'-10"	45'-1⅛"		
	8'	7'-1⅝"	13'-0"	0'-0"	26'-2"	18'-10"	39'-0"	31'-8"	51'-10"	44'-6"		

QUANTITIES

CLEAR SPAN	CLEAR HEIGHT	THICKNESS OF WING AT HEADWALL	THICKNESS OF WING FOOTING	REINFORCING STEEL ® FOR 4 WINGS	CLASS S CONCRETE - 4 WINGS HEADWALLS, WINGWALLS, FOOTINGS, TOEWALLS AND APRONS				
					SINGLE BARREL CULVERT	DOUBLE BARREL CULVERT	TRIPLE BARREL CULVERT	QUADRUPLE BARREL CULVERT	QUINTUPLE BARREL CULVERT
S	H	Cw	WB	LB.	CU.YD.	CU.YD.	CU.YD.	CU.YD.	CU.YD.
4'	2'	6"	7"	81.0	3.30	4.25	5.21	6.17	7.13
	3'	6"	7"	119.8	4.45	5.41	6.37	7.33	8.29
	4'	6"	7"	183.3	5.83	6.78	7.74	8.70	9.66
	5'	6"	7"	253.2	7.41	8.37	9.33	10.29	11.25
	6'	7"	8"	415.4	9.97	10.95	11.94	12.93	13.92
5'	3'	6'	7"	119.8	4.67	5.83	6.99	8.16	9.33
	4'	6"	7"	183.3	6.04	7.20	8.36	9.53	10.70
	5'	6"	7"	253.2	7.63	8.78	9.95	11.12	12.28
	6'	7"	8"	415.4	10.19	11.38	12.57	13.77	14.96
	7'	7½	8½	797.6	12.98	14.19	15.41	16.63	17.85
6'	3'	6"	7"	119.8	4.88	6.26	7.62	9.00	10.38
	4'	6"	7"	183.3	6.25	7.63	8.99	10.37	11.75
	5'	6"	7"	253.2	7.83	9.22	10.57	11.96	13.33
	6'	7"	8"	415.4	10.40	11.81	13.20	14.61	16.01
	7'	7½	8½	797.6	13.19	14.63	16.04	17.47	18.90
	8'	8	9"	1004.9	16.50	17.93	19.36	20.79	22.23
7'	4'	6"	7"	183.3	6.47	8.07	9.66	11.25	12.85
	5'	6"	7"	253.2	8.05	9.66	11.23	12.84	14.44
	6'	7"	8"	415.4	10.62	12.25	13.88	15.46	17.08
	7'	7½	8½	797.6	13.42	15.06	16.68	18.32	19.96
	8'	8	9"	1004.9	16.72	18.37	20.00	21.65	23.29
8'	4'	6"	7"	183.3	6.69	8.52	10.32	12.15	13.95
	5'	7"	7"	253.2	8.59	10.44	12.26	14.11	15.92
	6'	7"	8"	415.4	10.86	12.69	14.51	16.36	18.17
	7'	7½	8½	797.6	13.68	15.50	17.34	19.21	21.08
	8'	8	9"	1004.9	16.96	18.81	20.65	22.51	24.36
9'	5'	7"	7"	253.2	8.81	10.90	12.92	15.00	17.02
	6'	7½	8"	415.4	11.27	13.38	15.42	17.52	19.56
	7'	7½	8½	797.6	13.85	15.96	18.00	20.10	22.14
	8'	8	9"	1004.9	17.16	19.26	21.31	23.41	25.45
10'	5'	7"	7"	253.2	9.04	11.35	13.60	15.81	18.08
	6'	7½	8"	415.4	11.50	13.83	16.10	18.33	20.61
	7'	7½	8½	797.6	14.08	16.41	18.68	20.91	23.20
	8'	8	9"	1004.9	17.38	19.71	21.98	24.22	26.50
11'	6'	6"	8"	415.4	11.93	14.51	17.00	19.47	
	7'	8"	8½	797.6	14.56	17.15	19.64	22.11	
	8'	8"	9"	1004.9	17.53	20.18	22.67	25.14	
12'	6'	8"	8"	415.4	12.16	14.99	17.70	20.42	
	7'	8"	8½	797.6	14.79	17.62	20.33	23.06	
	8'	8"	9"	1004.9	17.82	20.65	23.36	26.08	

® For reinforcing steel in Headwalls and Aprons, see Details of Standard Barrel Sections for R.C. Box Culverts for the desired Span and Height.

GENERAL NOTES:-

CONCRETE:- All concrete to be Class S, and shall be poured in the dry. All exposed corners to have ¾ chamfers.

REINFORCING STEEL:- Reinforcing steel to be deformed bars of intermediate or hard grade.

CONSTRUCTION JOINTS:- Construction joints between wingwall, footings and sidewalls shall be only where shown on plans.

SPECIFICATIONS:- Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.

UNIT STRESSES:-

Class S Concrete (n=10) 1200 #/in²

Reinforcing Steel 24,000 #/in²

NOTE:- This drawing to be used in conjunction with Standard Barrel Sections, Drawing Nos. as listed below.

SINGLES	DOUBLES	TRIPLES	QUADRUPLES	QUINTUPLES
R-100X-0	R-200X-0	R-300X-0	R-400X-0	R-500X-0
R-100X-X1	R-200X-X1	R-300X-X1	R-400X-X1	R-500X-X1
R-100X-X2	R-200X-X2	R-300X-X2	R-400X-X2	
	R-200X-X3	R-300X-X3		

CLASS S CONCRETE

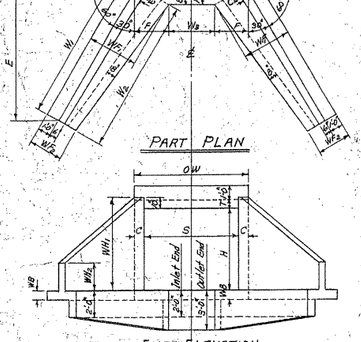
ARKANSAS STATE HIGHWAY COMMISSION

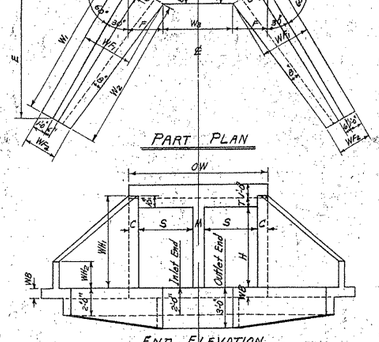
DETAILS OF STANDARD WINGS FOR REINFORCED CONCRETE BOX CULVERTS

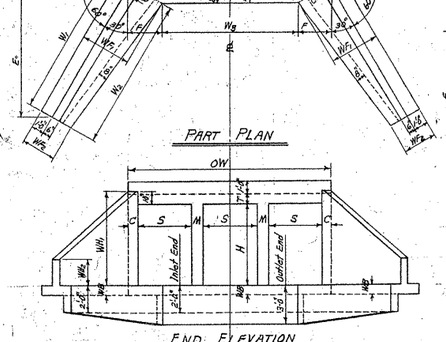
4', 5', 6', 7', 8', 9', 10', 11' & 12' SPANS — 2:1 SLOPES

SINGLES, DOUBLES, TRIPLES, QUADRUPLES & QUINTUPLES. — ALL DEPTHS OF COVER FOR H = 8'-0" OR LESS

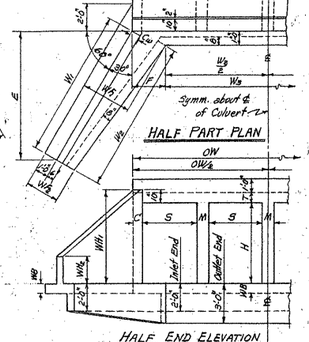
STANDARD DRAWING NO. W-X002-1

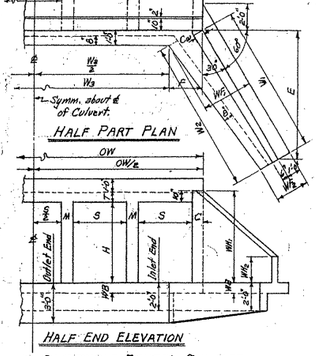






NOTE:- Plans and Elevations are not to scale.





MEMBRANE:- A membrane waterproofing 12" wide, consisting of three mopplings of waterproofing asphalt and two alternate layers of treated cotton fabric shall be applied to the back face of wing to cover the construction joints in wings.

BAR LIST FOR ONE WING. - 4 REQUIRED

CLEAR HEIGHT	F1 BENT: In bottom of footing, bent up into back face of wing. One bar of each length. SIZE	SPACING	NO. REQD	LENGTHS VARY X MIN.	X MAX.	Y MIN.	Y MAX.
H							
2'	#3	12"	6	1'-6"	3'-10"	0'-8"	1'-0"
3'	#3	12"	7	2'-12"	5'-3"	0'-10"	1'-4"
4'	#3	12"	9	2'-2¼"	6'-7"	0'-11"	1'-8"
5'	#3	12"	10	3'-0"	7'-10"	1'-1"	1'-11"
6'	#4	12"	12	3'-5"	9'-3"	1'-2"	2'-3"
7'	#4	12"	13	4'-1"	10'-9"	1'-4"	2'-9"
8'	#4	12"	15	4'-5"	12'-3"	1'-5"	3'-2"

CLEAR HEIGHT	F2 BENT: In bottom of footing, bent up into back face of wing. Alt. with F1 bars. SIZE	SPACING	NO. REQD	LENGTH	X	Y
H						
2'	#3	12"	3	3'-6"	1'-1"	2'-8"
3'	#3	12"	3	4'-6"	1'-4"	3'-3"
4'	#3	12"	3	5'-6"	1'-7"	4'-0"
5'	#3	12"	3	6'-6"	1'-10"	4'-9"
6'	#4	12"	4	7'-6"	2'-1"	5'-5"
7'	#4	12"	5	8'-6"	2'-4"	6'-2"
8'	#4	12"	6	9'-6"	2'-7"	6'-11"

CLEAR HEIGHT	F3 STRAIGHT: Longitudinal in top of wing footing heel. SIZE	SPACING	NO. REQD	LENGTH
H				
2'	#3	\ /	1	7'-6"
3'	#3	\ /	1	9'-0"
4'	#3	\ /	1	10'-7"
5'	#3	\ /	1	12'-1"
6'	#3	\ /	1	13'-8"
7'	#3	\ /	1	15'-2"
8'	#4	\ /	1	16'-9"

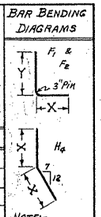
CLEAR HEIGHT	F4 STRAIGHT: Longitudinal in bottom of wing footing toe. SIZE	NO. REQD	LENGTH
H			
2'	#3	2	6'-3"
3'	#3	2	8'-0"
4'	#3	3	9'-9"
5'	#3	3	11'-6"
6'	#3	3	13'-3"
7'	#4	4	15'-0"
8'	#4	4	16'-9"

CLEAR HEIGHT	H1 Horizontal in back face of wing. SIZE	SPACING	NO. REQD	LENGTH
H				
2'	#3	12"	1	4'-9"
3'	#3	12"	1	6'-3"
4'	#3	12"	1	7'-10"
5'	#3	12"	2	9'-4"
6'	#3	12"	2	10'-11"
7'	#4	12"	2	10'-5"
8'	#4	12"	3	14'-0"

CLEAR HEIGHT	H2 STRAIGHT: Horizontal in back face of wing. One bar of each length. SIZE	SPACING	NO. REQD	LENGTHS VARY MAX.	MIN.	H3 In back face of wing at top - on slope. SIZE	NO. REQD	LENGTH
H								
2'	#3	12"	1	——	2'-8"	#3	1	5'-1"
3'	#3	12"	2	5'-0"	2'-8"	#3	1	6'-8"
4'	#3	12"	3	7'-4"	2'-8"	#3	1	8'-8"
5'	#3	12"	3	7'-4"	2'-8"	#3	1	10'-1"
6'	#3	12"	4	9'-8"	2'-8"	#3	1	11'-9"
7'	#4	12"	5	12'-0"	2'-8"	#4	1	13'-5"
8'	#4	12"	5	12'-0"	2'-8"	#4	1	15'-2"

CLEAR HEIGHT	H4 BENT: Dowels thru construction joint at headwall. SIZE	SPACING	NO. REQD	LENGTH	X	QUANTITY REINFORCING STEEL PER WING LB.
H						
2'	#3	12"	2	2'-8"	1'-4"	20.8
3'	#3	12"	3	2'-8"	1'-4"	29.9
4'	#3	12"	4	2'-8"	1'-4"	45.8
5'	#3	12"	5	2'-8"	1'-4"	68.3
6'	#3	12"	6	2'-8"	1'-5"	103.8
7'	#4	12"	7	3'-6"	1'-9"	199.4
8'	#4	12"	8	3'-6"	1'-9"	251.2

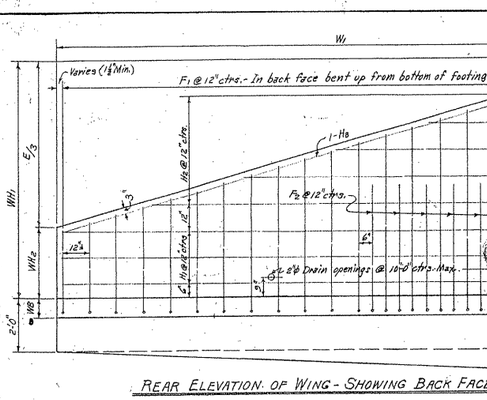
BAR BENDING DIAGRAMS



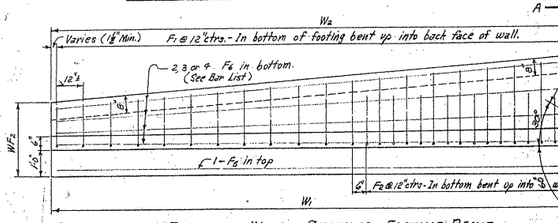
REVISIONS:- Membrane added: 5-10-64 W.C.H.

Designed by - W.C.H. 7-25-62 Checked by - J.S.M. - 5-7-63
Drawn by - W.C.H. 4-16-63 Checked by - J.S.M. - 5-7-63
Quantities by - W.C.H. Checked by - J.S.M. - 5-7-63

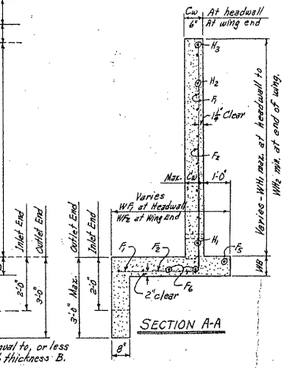
FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.				
JOB No.					



REAR ELEVATION OF WING - SHOWING BACK FACE REINF.



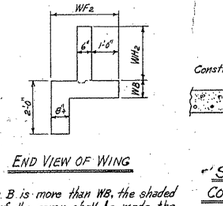
PLAN OF WING - SHOWING FOOTING REINF.



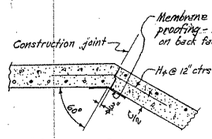
SECTION A-A

WB may be more, equal to, or less than the bottom slab thickness B.

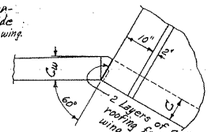
When B is more than W8, the shaded portion of the apron shall be made the same thickness as the barrel base B.



END VIEW OF WING



SECTION B-B THRU CONSTRUCTION JOINT



DETAIL AT TOP OF WING

NOTE:- Payment for membrane waterproofing and roofing felt to be included in the price bid for Class S Concrete.

WING DIMENSIONS

CLEAR HEIGHT OF BOX	THICKNESS OF WING FOOTING	THICKNESS OF WING AT HEADWALL = C	WINGWALL HEIGHTS		WIDTHS OF WING FOOTINGS		PERPENDICULAR FOOTING DIMENSION	PERPENDICULAR DIST. FROM HDWL. TO END OF WING	LENGTH OF WING WALLS	INSIDE FOOTING DIMENSION	* QUANTITY PER WING CLASS S CONCRETE	
			AT HEADWALL	AT END OF WING	AT HEADWALL	AT END OF WING					INLET END	OUTLET END
H	WB	Cw	WH1	WH2	WF1	WF2	F	E	W1	W2	Cu.Yd.	Cu.Yd.
2'	7"	6"	2'-10"	0'-8"	2'-4"	2'-0"	0'-11⅜"	6'-6"	7'-6"	7'-1½"	0.889	0.986
3'	7"	6"	3'-10"	1'-0"	2'-8"	2'-1½"	1'-3⅜"	8'-6"	9'-3⅜"	9'-2⅝"	1.338	1.466
4'	7"	6"	4'-10"	1'-3"	3'-0"	2'-3"	1'-5"	10'-6"	12'-1⅝"	12'-1⅝"	1.868	2.027
5'	7'	6"	5'-10"	1'-8"	3'-4"	2'-4½"	2'-1⅜"	12'-6"	14'-5⅝"	14'-7⅛"	2.478	2.668
		7"	5'-10"	1'-8"	3'-4"	2'-4½"	2'-1⅜"	12'-6"	14'-5⅝"	14'-7⅛"	2.582	2.772
6'	8"	7"	6'-10"	2'-0"	3'-8"	2'-6"	2'-6⅛"	14'-6"	16'-9"	17'-1⅝"	3.440	3.661
		7⅝"	6'-10"	2'-0"	3'-8"	2'-6"	2'-6⅛"	14'-6"	16'-9"	17'-1⅝"	3.511	3.732
		8"	6'-10"	2'-0"	3'-8"	2'-6"	2'-6⅛"	14'-6"	16'-9"	17'-1⅝"	3.582	3.803
7'	8⅝"	7⅝"	7'-10"	2'-4"	4'-2"	2'-7½"	3'-1⅜"	16'-6"	19'-0⅝"	19'-8⅜"	4.505	4.758
		8"	7'-10"	2'-4"	4'-2"	2'-7½"	3'-1⅜"	16'-6"	19'-0⅝"	19'-8⅜"	4.597	4.851
8'	9"	8"	8'-10"	2'-8"	4'-8"	2'-9"	3'-8"	18'-6"	21'-4⅝"	22'-0"	5.761	6.097

* Quantity per wing does not include headwall or that portion of apron or toewall for the length W8.

APRON DIMENSION W8

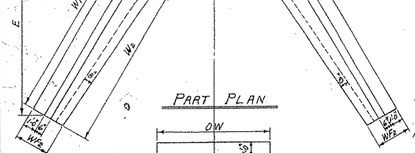
W8 = (OW - 2F)

CLEAR SPAN	CLEAR HEIGHT	2 x FOOTING DIMENSION	SINGLE BARREL CULVERT		DOUBLE BARREL CULVERT		TRIPLE BARREL CULVERT		QUADRUPLE BARREL CULVERT		QUINTUPLE BARREL CULVERT	
S	H	2F	OW	W8	OW	W8	OW	W8	OW	W8	OW	W8
4'	2'	1'-11⅞"	5'-0"	3'-0⅛"	9'-8"	7'-8⅛"	14'-4"	12'-4⅛"	19'-0"	17'-0⅛"	23'-8"	21'-8⅛"
	3'	2'-8⅜"	5'-0"	2'-3⅜"	9'-8"	6'-11⅜"	14'-4"	11'-7⅜"	19'-0"	16'-3⅜"	23'-8"	20'-11⅜"
	4'	3'-6"	5'-0"	1'-6"	9'-8"	6'-2"	14'-4"	10'-10"	19'-0"	15'-6"	23'-8"	20'-2"
	5'	4'-3⅜"	5'-0"	0'-8⅜"	9'-8"	5'-4⅜"	14'-4"	10'-0⅜"	19'-0"	14'-8⅜"	23'-8"	19'-8⅜"
	6'	5'-0⅜"	5'-2"	0'-1⅜"	9'-11"	4'-10⅜"	14'-8"	9'-7⅜"	19'-5"	14'-4⅜"	24'-2"	19'-1⅜"
5'	3'	2'-8⅜"	6'-0"	3'-3⅜"	11'-8"	8'-11⅜"	17'-4"	14'-7⅜"	23'-0"	20'-3⅜"	28'-8"	25'-11⅜"
	4'	3'-6"	6'-0"	2'-6"	11'-8"	8'-2"	17'-4"	13'-10"	23'-0"	19'-6"	28'-8"	25'-2"
	5'	4'-3⅜"	6'-0"	1'-8⅜"	11'-8"	7'-5⅜"	17'-4"	13'-0⅜"	23'-0"	18'-8⅜"	28'-8"	24'-8⅜"
	6'	5'-0⅜"	6'-2"	1'-1⅜"	11'-11"	6'-10⅜"	17'-8"	12'-7⅜"	23'-5"	18'-4⅜"	29'-2"	24'-1⅜"
	7'	6'-2⅛"	6'-5"	0'-0⅝"	12'-1"	5'-10⅝"	17'-11"	11'-8⅝"	23'-9"	17'-8⅝"	29'-7"	23'-6⅝"
6'	3'	2'-8⅜"	7'-0"	4'-3⅜"	13'-8"	10'-11⅜"	20'-4"	17'-7⅜"	27'-0"	24'-3⅜"	33'-8"	30'-11⅜"
	4'	3'-6"	7'-0"	3'-6"	13'-8"	10'-2"	20'-4"	16'-10"	27'-0"	23'-6"	33'-8"	30'-2"
	5'	4'-3⅜"	7'-0"	2'-8⅜"	13'-8"	9'-5⅜"	20'-4"	16'-0⅜"	27'-0"	22'-8⅜"	33'-8"	29'-5⅜"
	6'	5'-0⅜"	7'-2"	2'-1⅜"	13'-11"	8'-10⅜"	20'-8"	15'-7⅜"	27'-5"	22'-2⅜"	34'-2"	28'-10⅜"
	7'	6'-2⅛"	7'-5"	1'-0⅝"	14'-1"	7'-10⅝"	20'-11"	14'-8⅝"	27'-9"	21'-4⅝"	34'-7"	28'-0⅝"
	8'	7'-1⅝"	7'-8"	0'-0"	14'-2"	6'-10"	21'-0"	13'-8"	27'-10"	20'-4"	34'-8"	27'-0"
8'	4'	3'-6"	9'-0"	5'-6"	17'-6"	14'-2"	26'-0"	22'-10"	35'-0"	31'-6"	43'-8"	40'-2"
	5'	4'-3⅜"	9'-2"	4'-10⅜"	17'-11"	13'-7⅜"	26'-6"	23'-6⅜"	35'-5"	31'-1⅜"	44'-2"	39'-10⅜"
	6'	5'-0⅜"	9'-2"	4'-1⅜"	17'-11"	12'-10⅜"	26'-6"	21'-7⅜"	35'-5"	30'-2⅜"	44'-2"	39'-1⅜"
	7'	6'-2⅛"	9'-5"	3'-0⅝"	18'-1"	11'-10⅝"	26'-11"	20'-8⅝"	35'-9"	29'-4⅝"	44'-7"	38'-0⅝"
	8'	7'-1⅝"	9'-8"	2'-0"	18'-2"	10'-10"	27'-0"	19'-8"	35'-10"	28'-4"	44'-8"	37'-0"
9'	5'	4'-3⅜"	10'-2"	5'-10⅜"	19'-11"	15'-7⅜"	29'-8"	25'-4⅜"	39'-5"	35'-1⅜"	49'-2"	44'-10⅜"
	6'	5'-0⅜"	10'-3"	5'-2⅜"	20'-1"	15'-0⅜"	29'-11"	24'-5⅜"	39'-9"	34'-5⅜"	49'-7"	44'-1⅜"
	7'	6'-2⅛"	10'-5"	4'-0⅝"	20'-1"	13'-10⅝"	29'-11"	23'-2⅝"	39'-9"	33'-2⅝"	49'-7"	43'-0⅝"
	8'	7'-1⅝"	10'-8"	3'-0"	20'-2"	12'-10"	30'-0"	22'-2"	39'-10"	32'-2"	49'-8"	42'-0"
10'	5'	4'-3⅜"	11'-2"	6'-10⅜"	21'-11"	17'-7⅜"	32'-8"	28'-4⅜"	43'-5"	39'-1⅜"	54'-2"	49'-10⅜"
	6'	5'-0⅜"	11'-3"	6'-2⅜"	22'-1"	17'-0⅜"	32'-11"	27'-10⅜"	43'-9"	38'-6⅜"	54'-7"	49'-1⅜"
	7'	6'-2⅛"	11'-5"	5'-0⅝"	22'-1"	15'-10⅝"	32'-11"	26'-7⅝"	43'-9"	37'-4⅝"	54'-7"	48'-0⅝"
	8'	7'-1⅝"	11'-8"	4'-0"	22'-2"	14'-10"	33'-0"	25'-8"	43'-10"	36'-4"	54'-8"	47'-0"
11'	6'	5'-0⅜"	12'-4"	7'-3⅜"	24'-2"	19'-1⅜"	36'-0"	30'-11⅜"	47'-10"	42'-3⅜"		
	7'	6'-2⅛"	12'-6"	6'-1⅝"	24'-2"	17'-11⅝"	36'-0"	29'-8⅝"	47'-10"	41'-1⅝"		
	8'	7'-1⅝"	12'-8"	5'-0"	24'-2"	16'-10"	36'-0"	28'-8"	47'-10"	40'-6"		
12'	6'	5'-0⅜"	13'-4"	8'-3⅜"	26'-2"	21'-1⅜"	39'-0"	33'-11⅜"	51'-10"	46'-3⅜"		
	7'	6'-2⅛"	13'-6"	7'-1⅝"	26'-2"	19'-11⅝"	39'-0"	32'-10⅝"	51'-10"	45'-1⅝"		
	8'	7'-1⅝"	13'-8"	6'-0"	26'-2"	18'-10"	39'-0"	31'-8"	51'-10"	44'-6"		

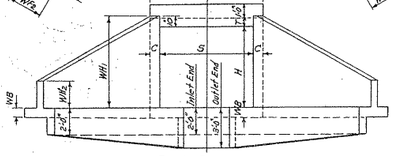
QUANTITIES

CLEAR SPAN	CLEAR HEIGHT	THICKNESS OF WING AT HEADWALL	THICKNESS OF WING FOOTING	REINFORCING STEEL - FOR 4 WINGS @	CLASS S CONCRETE - 4 WINGS HEADWALLS, WINGWALLS, FOOTINGS, TOEWALLS AND APRONS				
					SINGLE BARREL CULVERT	DOUBLE BARREL CULVERT	TRIPLE BARREL CULVERT	QUADRUPLE BARREL CULVERT	QUINTUPLE BARREL CULVERT
S	H	Cw	WB	LB.	CU.YD.	CU.YD.	CU.YD.	CU.YD.	CU.YD.
4'	2'	6"	7"	108.0	4.50	5.96	6.42	7.38	8.34
	3'	6"	7"	169.4	6.26	7.21	8.17	9.13	10.09
	4'	6"	7"	259.6	8.33	9.28	10.24	11.20	12.16
	5'	6"	7"	357.8	10.72	11.68	12.64	13.60	14.56
	6'	7"	8"	583.1	14.55	15.53	16.52	17.51	18.49
5'	3'	6"	7"	169.4	6.97	7.68	8.79	9.96	11.12
	4'	6"	7"	259.6	8.54	9.70	10.87	10.03	12.20
	5'	6"	7"	357.8	10.94	12.10	13.26	14.43	15.59
	6'	7"	8"	583.1	14.77	15.96	17.15	18.34	19.54
	7'	7⅞	8⅝	1139.6	18.94	20.15	21.37	22.59	23.80
6'	3'	6"	7"	169.4	6.68	8.06	9.42	10.80	12.18
	4'	6"	7"	259.6	8.75	10.12	11.49	12.87	14.25
	5'	7"	7"	357.8	11.15	12.53	13.89	15.27	16.65
	6'	7"	8"	583.1	14.98	16.39	17.78	19.18	20.59
	7'	7⅞	8⅝	1139.6	19.15	20.58	22.00	23.43	24.86
	8'	8"	9"	1925.6	25.09	25.53	26.96	28.39	29.83
7'	4'	6"	7"	259.6	8.97	10.58	12.15	13.76	15.35
	5'	6"	7"	357.8	11.36	12.97	14.58	16.15	17.75
	6'	7"	8"	583.1	15.20	16.82	18.42	20.04	21.66
	7'	7⅞	8⅝	1139.6	19.38	21.02	22.68	24.28	25.92
	8'	8"	9"	1925.6	24.32	25.97	27.60	29.25	30.89
8'	4'	6"	7"	259.6	9.19	11.03	12.82	14.65	16.45
	5'	7"	7"	357.8	12.03	13.89	15.70	17.55	19.34
	6'	7"	8"	583.1	15.92	17.27	19.09	20.93	22.75
	7'	7⅞	8⅝	1139.6	19.59	21.46	23.30	25.16	26.99
	8'	8"	9"	1925.6	24.54	26.41	28.28	30.11	31.96
9'	5'	7"	7"	357.8	12.26	14.39	16.87	18.95	20.97
	6'	7⅞	8"	583.1	15.94	18.09	20.09	22.19	24.23
	7'	7⅞	8⅝	1139.6	19.81	21.91	23.96	26.06	28.10
	8'	8"	9"	1925.6	24.76	26.86	28.91	31.00	33.05
10'	5'	7"	7"	357.8	12.49	14.80	17.05	19.24	21.52
	6'	7⅞	8"	583.1	16.17	18.50	20.77	22.99	25.28
	7'	7⅞	8⅝	1139.6	20.04	22.37	24.64	26.87	29.15
	8'	8"	9"	1925.6	24.98	27.31	29.58	31.81	34.10
11'	6'	8"	8"	583.1	16.69	19.27	21.76	24.23	
	7'	8"	8⅝	1139.6	20.64	23.22	25.71	28.18	
	8'	8"	9"	1925.6	25.19	27.77	30.27	32.74	
12'	6'	8"	8"	583.1	16.92	19.75	22.95	25.18	
	7'	8"	8⅝	1139.6	20.87	23.69	26.90	29.18	
	8'	8"	9"	1925.6	25.42	28.25	30.96	33.69	

* For reinforcing steel in Headwalls and Aprons, See Details of Standard Barrel Sections for R.C. Box Culverts for the desired Span and Height.

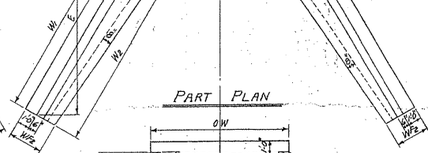


PART PLAN

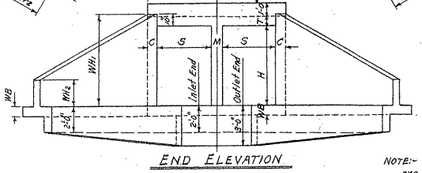


END ELEVATION

SINGLE BARREL CULVERT



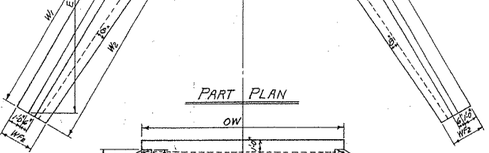
PART PLAN



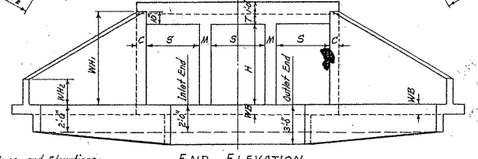
END ELEVATION

DOUBLE BARREL CULVERT

NOTE:- Plans and Elevations are not to scale.

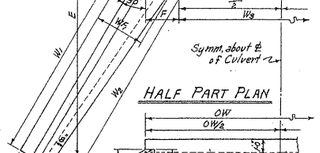


PART PLAN

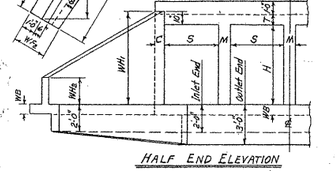


END ELEVATION

TRIPLE BARREL CULVERT

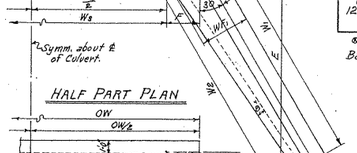


HALF PART PLAN

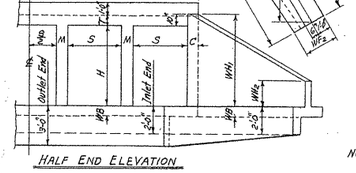


HALF END ELEVATION

QUADRUPLE BARREL CULVERT



HALF PART PLAN



HALF END ELEVATION

QUINTUPLE BARREL CULVERT

MEMBRANE:- A membrane waterproofing 12" wide, consisting of three mopings of waterproofing asphalt and two alternate layers of treated cotton fabric shall be applied to the back face of wing to cover the construction joints in wings.

BAR LIST FOR ONE WING - 4 REQUIRED

CLEAR HEIGHT	F1 BENT: In bottom of footing, bent up into back face of wing. One bar of each length.								F2 BENT: In bottom of footing, bent up into back face of wing. Alt. with F1 bars.						F3 STRAIGHT: Longitudinal in top of wing footing heel.			F4 STRAIGHT: Longitudinal in bottom of wing footing toe.			H1 STRAIGHT: Horizontal in back face of wing.				H2 STRAIGHT: Horizontal in back face of wing. One bar of each length.				H3 STRAIGHT: In back face of wing at top - on slope.			H4 BENT: Dowels thru construction joint at headwall.				QUANTITY REINFORCING STEEL PER WING	BAR BENDING DIAGRAMS
	SIZE	SPACING	NO. REQD	LENGTHS VARY MIN.	LENGTHS VARY MAX.	X MIN.	X MAX.	Y MIN.	Y MAX.	SIZE	SPACING	NO. REQD	LENGTH	X	Y	SIZE	NO. REQD	LENGTH	SIZE	NO. REQD	LENGTH	SIZE	SPACING	NO. REQD	LENGTH	SIZE	SPACING	NO. REQD	LENGTHS VARY MAX.	LENGTHS VARY MIN.	SIZE	NO. REQD	LENGTH	SIZE	SPACING	NO. REQD	LENGTH	X		
H																																						LB.	
2'	#3	12"	8	1'-6"	3'-10"	0'-8"	1'-0"	0'-11"	2'-11"	—	—	—	—	—	—	#3	1	9'-8"	#3	2	8'-6"	#3	12"	1	7'-2"	#3	12"	2	7'-6"	9'-0"	#3	1	——	9'-0"	#3	1	7'-9"	#3	12"	2	2'-8"	1'-9"	27.0	
3'	#3	12"	10	2'-2"	5'-2"	0'-10"	1'-3"	1'-5"	4'-0"	—	—	—	—	—	—	#3	1	12'-0"	#3	2	11'-0"	#3	12"	1	9'-6"	#3	12"	2	7'-6"	9'-0"	#3	1	9'-9"	#3	12"	3	2'-8"	1'-9"	41.1	
4'	#3	12"	13	2'-8"	6'-6"	0'-11"	1'-7"	1'-6"	5'-0"	—	—	—	—	—	—	#3	1	14'-9"	#3	3	13'-6"	#3	12"	1	11'-10"	#3	12"	3	10'-11"	9'-0"	#3	1	10'-2"	#3	12"	4	2'-8"	1'-9"	63.7	
5'	#3	12"	15	2'-11"	7'-10"	1'-1"	1'-11"	1'-11"	6'-0"	#3	12"	4	3'-6"	1'-1"	2'-6"	#3	1	16'-8"	#3	3	16'-0"	#3	12"	2	14'-2"	#3	12"	3	10'-11"	9'-0"	#3	1	10'-7"	#3	12"	5	2'-8"	1'-9"	89.5	
6'	#4	12"	17	3'-6"	9'-3"	1'-2"	2'-3"	2'-5"	7'-1"	#3	12"	4	4'-6"	1'-4"	3'-3"	#3	1	19'-0"	#3	3	18'-6"	#3	12"	2	16'-6"	#3	12"	4	14'-5"	9'-0"	#3	1	11'-0"	#3	12"	6	2'-8"	1'-9"	145.8	
7'	#4	12"	20	3'-9"	10'-9"	1'-3"	2'-9"	2'-7"	8'-1"	#4	12"	7	5'-6"	1'-7"	4'-0"	#4	1	21'-4"	#4	4	21'-0"	#4	12"	2	18'-9"	#4	12"	5	17'-9"	9'-0"	#4	1	11'-5"	#4	12"	7	3'-6"	1'-9"	283.7	
8'	#4	12"	22	4'-4"	12'-3"	1'-5"	3'-2"	3'-0"	9'-2"	#4	12"	10	6'-6"	1'-10"	4'-9"	#4	1	23'-8"	#4	4	23'-6"	#4	12"	3	21'-1"	#4	12"	5	17'-9"	9'-0"	#4	1	21'-10"	#4	12"	8	3'-6"	1'-9"	356.4	

NOTE:- Dimensions are to bar centers.

REVISIONS:- Membrane added. 5-10-66 W.C.H.

Designed By:- W.C.H. 8-20-62.
Drawn By:- W.C.H. 12-4-62.
Quantities By:- W.C.H. 12-14-62.
Checked By:- RMS 1-9-63
Checked By:- RMS 1-31-63
Rechecked By:- RMS 3-29-63

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF STANDARD WINGS FOR REINFORCED CONCRETE BOX CULVERTS

4', 5', 6', 7', 8', 9', 10', 11' & 12' SPANS — 3:1 SLOPES

SINGLES, DOUBLES, TRIPLES, QUADRUPLES & QUINTUPLES — ALL DEPTHS OF COVER FOR H = 8'-0" OR LESS

STANDARD DRAWING NO. W-X003-1

GENERAL NOTES:-

CONCRETE:- All concrete to be Class S, and shall be poured in the dry. All exposed corners to have ¾ chamfers.

REINFORCING STEEL:- Reinforcing steel to be deformed bars of intermediate or hard grade.

CONSTRUCTION JOINTS:- Construction joints between wingwall, footings and sidewalls shall be only where shown on plans.

SPECIFICATIONS:- Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.

UNIT STRESSES:-

Class S Concrete (n=10) 1200#/□"
Reinforcing Steel 20,000#/□"

NOTE:- This drawing to be used in conjunction with Standard Barrel Sections, Drawing Nos. as listed below.

SINGLES	DOUBLES	TRIPLES	QUADRUPLES	QUINTUPLES
R-100X-0	R-200X-0	R-300X-0	R-400X-0	R-500X-0
R-100X-X1	R-200X-X1	R-300X-X1	R-400X-X1	R-500X-X1
R-100X-X2	R-200X-X2	R-300X-X2	R-400X-X2	
	R-200X-X3	R-300X-X3		

CLASS S CONCRETE

MYLAR

FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.				
JOB No.					

BAR LIST FOR BARREL SECTION 60'-0" IN LENGTH

DEPTH OF COVER	CLEAR SPAN	CLEAR HEIGHT	"a" bars STRAIGHT In Top and Bottom Slabs of Barrel. 2 Add'l in Apron and Headwall- Each. SIZE	SPACING	NUMBER REQ'D 3:1	NUMBER REQ'D 4:1	LENGTH	"b" bars BENT - See Diagram below. In Top and Bottom Slabs of Barrel. Alternate with "a" bars. SIZE	SPACING	NUMBER REQ'D 3:1	NUMBER REQ'D 4:1	LENGTH	X	"d" bars STRAIGHT Longitudinal in Top Slab of Barrel SIZE	SPACING	No. REQ'D	LENGTH	"d1" bars STRAIGHT Longitudinal in Sidewalls SIZE	SPACING	No. REQ'D	LENGTH	"e" bars. STRAIGHT Longitudinal in Bottom Slab of Barrel SIZE	SPACING	No. REQ'D	LENGTH	"f" bars STRAIGHT Verticals in Sidewalls SIZE	SPACING	NUMBER REQ'D 3:1	NUMBER REQ'D 4:1	LENGTH
D	S	H																											
0'-0" TO 5'-0" MAXIMUM	1 @ 4'	2'	#5	13"	120	120	4'-9"	#6	13"	110	110	5'-10"	4'-8"	#5	10½"	6	#4	16"	4	#4	12"	5	#4	12"	5	#4	12"	120	120	2'-11"
		3'			120	120	4'-9"			110	110	5'-10"	4'-8"			6			6			5			5			120	120	3'-11"
		4'			120	120	4'-9"			110	110	5'-10"	4'-8"			6			8			5			5			120	120	4'-11"
		5'			120	120	4'-9"			110	110	5'-10"	4'-8"			6			10			5			5			120	120	6'-11"
		6'			120	120	4'-11"			110	110	6'-0"	4'-10"			6			12			5			5			120	120	6'-11"
	1 @ 5'	3'			120	120	5'-9"			110	110	6'-10"	5'-8"			7			6			6			6			120	120	5'-0"
		4'			120	120	5'-9"			110	110	6'-10"	5'-8"			7			8			6			6			120	120	6'-0"
		5'	#6	13"	120	120	5'-9"	#6	13"	110	110	6'-10"	5'-8"	#5	10½"	7	#4	12"	10	#4	12"	6	#4	12"	6	#4	12"	120	120	7'-0"
		6'			120	120	5'11"			110	110	7'-0"	5'-10"			7			12			6			6			120	120	8'-0"
		7'			120	120	6'0"			110	110	7'-1"	5'11"			7			14			6			6					
	1 @ 6'	3'			128	128	6'-9"			118	118	7'-10"	6'-8"			8			6			7			7			120	120	4'-1"
		4'			128	128	6'9"			118	118	7'-10"	6'-8"			8			8			7			7			120	120	5'-1"
		5'			128	128	6'9"			118	118	7'-10"	6'-8"			8			10			7			7			120	120	6'-1"
		6'	#6	12"	128	128	6'11"	#6	12"	118	118	7'-10"	6'-8"	#5	10½"	8	#4	12"	12	#4	12"	7	#4	12"	7	#4	12"	120	120	7'-1"
		7'			128	128	7'0"			118	118	8'-1"	6'-10"			8			14			7			7			120	120	8'-1"
		8'			128	128	7'1"			118	118	8'-2"	7'-0"			8			16			7			7			120	120	9'-1"
		9'			128	128	7'1"			118	118	8'-3"	7'-0"			8			18			7			7	#5	12"	120	120	10'-1"
	1 @ 7'	4'			140	140	7'-9"			130	130	8'-10"	7'-8"			9			8			8			8			120	120	5'-2"
		5'			140	140	7'-9"			130	130	8'-10"	7'-8"			9			10			8			8	#4	12"	120	120	6'-2"
		6'	#6	11"	140	140	7'-11"	#6	11"	130	130	9'-0"	7'-10"	#5	10½"	9	#4	12"	12	#4	12"	8	#4	12"	8			120	120	7'-2"
		7'			140	140	8'-0"			130	130	9'-1"	7'-11"			9			14			8			8			120	120	8'-2"
		8'			140	140	8'-1"			130	130	9'-2"	8'-0"			9			16			8			8			120	120	9'-2"
		9'			140	140	8'-3"			130	130	9'-4"	8'-2"			9			18			8			8	#5	12"	120	120	10'-2"
	1 @ 8'	4'			128	128	8'-9"			118	118	9'-10"	8'-8"			9			8			9			9			120	120	5'-6"
		5'			128	128	8'-11"			118	118	10'-0"	8'-10"			9			10			9			9	#4	12"	120	120	6'-6"
		6'			128	128	8'-11"			118	118	10'-0"	8'-10"			9			12			9			9			120	120	7'-8"
		7'	#7	12"	128	128	8'-11"	#6	12"	118	118	10'-1"	8'-11"	#5	10'	11	#4	12"	14	#4	12"	9	#4	12"	9			120	120	8'-10"
		8'			128	128	9'-0"			118	118	10'-2"	9'-0"			11			16			9			9			10"	144	144	9'-2"
		9'			128	128	9'-1"			118	118	10'-4"	9'-2"			11			18			9			9			10"	144	144	9'-5"
		10'			128	128	9'-3"			118	118	10'-5"	9'-3"			11			20			9			9			11"	132	132	11'-9"
	1 @ 9'	5'			140	140	9'-11"			130	130	11'-0"	9'-10"			12			10			10			10	#5	12"	120	120	6'-5"
		6'			140	140	10'-0"			130	130	11'-1"	9'-11"			12			12			10			10			120	120	7'-5"
		7'			140	140	10'-0"			130	130	11'-1"	9'-11"			12			14			10			10	#4	12"	120	120	8'-5"
		8'	#7	11"	140	140	10'-1"	#6	11"	130	130	11'-2"	10'-0"	#5	10'	12	#4	12"	16	#4	12"	10	#4	12"	10			10"	144	144	9'-5"
		9'			140	140	10'-3"			130	130	11'-4"	10'-2"			12			18			10			10			11"	132	132	11'-5"
		10'			140	140	10'-5"			130	130	11'-6"	10'-4"			12			20			10			10	#5	12"	120	120	6'-8"
		11'			140	140	10'-7"			130	130	11'-8"	10'-6"			12			22			10			10			120	120	7'-8"
	1 @ 10'	5'			128	128	10'-11"			118	118	12'-2"	10'-10"			13			10			11			11			120	120	8'-8"
		6'			128	128	11'-0"			118	118	12'-3"	10'-11"			13			12			11			11			120	120	9'-8"
		7'			128	128	11'-0"			118	118	12'-3"	10'-11"			13			14			11			11			120	120	10'-8"
		8'	#7	12"	128	128	11'-1"	#7	12"	118	118	12'-4"	11'-0"	#5	10"	13	#4	12"	16	#4	12"	11	#4	12"	11			120	120	11'-8"
		9'			128	128	11'-3"			118	118	12'-6"	11'-2"			13			18			11			11	#5	11"	132	132	11'-6"
		10'			128	128	11'-5"			118	118	12'-8"	11'-4"			13			20			11			11			144	144	12'-6"
		11'			128	128	11'-7"			118	118	12'-10"	11'-6"			13			22			11			11	#6	12"	120	120	13'-6"
		12'			128	128	11'-9"			118	118	13'-0"	11'-8"			13			24			11			11					
	1 @ 11'	6'			140	140	12'-1"			130	130	13'-6"	12'-0"			15			12			12			12	#4	12"	120	120	7'-7"
		7'			140	140	12'-1"			130	130	13'-6"	12'-0"			15			14			12			12			120	120	8'-7"
		8'			140	140	12'-1"			130	130	13'-6"	12'-0"			15			16			12			12			10"	144	144	9'-7"
		9'	#7	11"	140	140	12'-3"	#7	11"	130	130	13'-6"	12'-2"	#5	9½"	15	#4	12"	18	#4	12"	12	#4	12"	12			120	120	10'-7"
		10'			140	140	12'-5"			130	130	13'-8"	12'-4"			15			20			12			12	#5	11"	132	132	11'-7"
		11'			140	140	12'-7"			130	130	13'-10"	12'-6"			15			22			12			12			144	144	12'-7"
		12'			140	140	12'-9"			130	130	14'-0"	12'-8"			15			24			12			12	#6	12"	120	120	13'-7"
	1 @ 12'	6'			128	128	13'-1"			118	118	14'-4"	13'-0"			16			12			13			13					
		7'			128	128	13'-1"			118	118	14'-4"	13'-0"			16			14			13			13	#4	12"	120	120	8'-9"
		8'			128	128	13'-1"			118	118	14'-4"	13'-0"			16			16			13			13			10"	144	144	9'-9"
		9'	#8	12"	128	128	13'-3"	#7	12"	118	118	14'-6"	13'-2"	#5	9½"	16	#4	12"	18	#4	12"	13	#4	12"	13			120	120	10'-9"
		10'			128	128	13'-5"			118	118	14'-8"	13'-4"			16			20			13			13	#5	11"	132	132	11'-9"
		11'			128	128	13'-7"			118	118	14'-10"	13'-6"			16			22			13			13			144	144	12'-9"
		12'			128	128	13'-9"			118	118	15'-0"	13'-8"			16			24			13			13	#6	12"	120	120	13'-9"

BAR SIZE	PIN DIAM.	K	ADD FOR 2 HOOKS	BENDING DIAGRAM Bars "b".
#6	3"	5"	1'-2"	K, Pin Diam., X
#7	3½"	5⅜"	1'-4"	

NOTE:- Dimensions are to centers of bars.

DOWEL BARS FOR TWO HEADWALLS

SPAN	SIZE	SPACING	NO. REQD	LENGTH	X
4'	#4	11"±	12	2'-6"	1'-3"
5'	#4	11"±	14	2'-7"	1'-3⅛"
6'	#4	11"±	16	2'-8"	1'-4"
7'	#4	11"±	18	2'-9"	1'-4⅛"
8'	#4	11⅛"±	20	2'-11"	1'-5⅛"
9'	#4	11⅛"±	22	3'-0"	1'-6"
10'	#4	11⅛"±	24	3'-1"	1'-6⅛"
11'	#4	12"±	26	3'-2"	1'-7"
12'	#4	12"±	28	3'-3"	1'-7⅛"

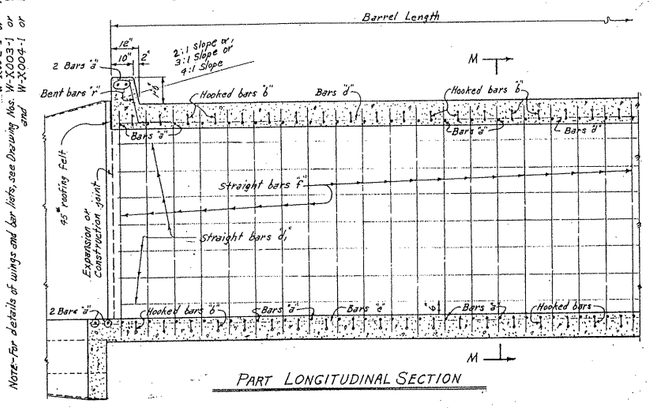
Bars "r" Dowel bars in Headwalls. (X, 2, 12)

Designed By:- W.C.H. 1-23-63. Checked By:- RBG. 5-8-63.
Drawn By:- W.C.H. 2-8-63. Checked By:- RBG. 5-8-63.
Quantities By:- W.C.H. 2-12-63. Checked By:- RBG. 5-24-63.

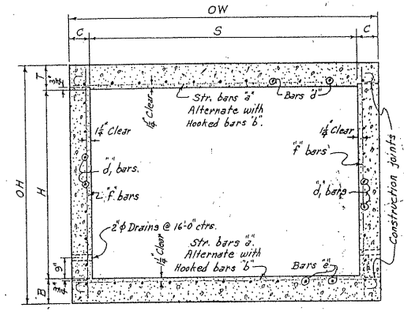
DIMENSIONS AND QUANTITIES

MAX. DESIGN DEPTH OF COVER	BARREL DIMENSIONS: CLEAR SPAN	CLEAR HEIGHT	SQ. FT. OPENING	OVERALL WIDTH	THICKNESS OF TOP SLAB	THICKNESS OF SIDEWALLS	THICKNESS OF BOTTOM SLAB	OVERALL HEIGHT	UNIT QUANTITIES: CLASS S CONC. PER LIN. FT. OF BARREL	REINFORCING STEEL PER LIN. FT. OF BARREL	ADDITIONAL PER LAP	ADDITIONAL TWO HEADWALLS & APRONS
D	S	H	A	OW	T	C	B	OH	CU.YD.	LB.	LB.	LB.
5'-0"	1 @ 4'	2'	8	5'-0"	7"	6"	6½"	3'-1½"	0.282	41.99	17.95	66.35
		3'	12	5'-0"		6"		4'-1½"	0.319	44.16	19.62	66.35
		4'	16	5'-0"		6"		5'-1½"	0.356	46.83	21.29	66.35
		5'	20	5'-0"		6"		6'-1½"	0.394	49.50	22.96	66.35
		6'	24	5'-2"		7"		7'-1½"	0.474	52.96	24.63	67.75
	1 @ 5'	3'	15	6'-0"	7"	6"	7½"	4'-2⅝"	0.380	55.55	22.19	101.27
		4'	20	6'-0"		6"		5'-2⅝"	0.417	58.23	23.86	101.27
		5'	25	6'-0"		6"		6'-2⅝"	0.454	60.90	25.53	101.27
		6'	30	6'-2"		7"		7'-2⅝"	0.535	64.99	27.20	103.27
		7'	35	6'-3"		7½"		8'-2⅝"	0.609	67.63	28.87	104.27
	1 @ 6'	3'	18	7'-0"	8"	6"	7½"	4'-3½"	0.496	66.29	29.76	118.96
		4'	24	7'-0"		6"		5'-3½"	0.983	68.96	26.93	118.96
		5'	30	7'-0"		6"		6'-3½"	0.520	71.64	28.10	118.96
		6'	36	7'-2"		7"		7'-3½"	0.602	75.31	29.77	120.96
		7'	42	7'-3"		7½"		8'-3½"	0.671	78.98	31.44	121.97
		8'	48	7'-4"		8"		9'-3½"	0.746	88.47	33.11	122.97
	1 @ 7'	4'	28	8'-0"	8½"	6"	8½"	5'-5"	0.568	81.32	29.01	136.88
		5'	35	8'-0"		6"		6'-5"	0.605	84.00	30.68	136.88
		6'	42	8'-2"		7"		7'-5"	0.688	87.76	32.35	138.88
		7'	49	8'-3"		7½"		8'-5"	0.757	90.98	39.02	139.88
		8'	56	8'-4"		8"		9'-5"	0.832	96.65	35.69	140.88
		9'	63	8'-6"		9"		10'-5"	0.996	105.59	32.36	142.89
	1 @ 8'	4'	32	9'-0"	9½"	6"	9½"	5'-7"	0.676	95.26	33.32	196.07
		5'	40	9'-2"		7"		6'-7"	0.759	99.12	34.99	196.80
		6'	48	9'-2"		7"		7'-7"	0.797	101.79	36.66	196.80
		7'	56	9'-3"		7½"		8'-7"	0.867	105.05	38.33	198.16
		8'	64	9'-4"		8"		9'-7"	0.942	110.81	40.00	199.52
		9'	72	9'-6"		9"		10'-7"	1.057	119.92	41.67	202.25
		10'	80	9'-8"		10"		11'-7"	1.186	126.67	43.34	204.97
	1 @ 9'	5'	45	10'-2"	10"	7"	10"	6'-8"	0.849	119.72	37.56	213.61
		6'	54	10'-3"		7½"		7'-8"	0.910	118.04	39.23	220.97
		7'	63	10'-3"		7½"		8'-8"	0.957	120.71	40.90	220.97
		8'	72	10'-4"		8"		9'-8"	1.033	126.54	42.57	222.33
		9'	81	10'-6"		9"		10'-8"	1.148	135.80	44.24	225.06
		10'	90	10'-8"		10"		11'-8"	1.276	142.68	45.91	227.78
		11'	99	10'-10"		11"		12'-8"	1.416	150.90	47.58	230.51
	1 @ 10'	5'	50	11'-2"	10½"	7"	11"	6'-9½"	0.957	130.64	40.13	242.64
		6'	60	11'-3"		7½"		7'-9½"	1.024	133.99	41.80	244.00
		7'	70	11'-3"		7½"		8'-9½"	1.071	136.66	43.47	244.00
		8'	80	11'-4"		8"		9'-9½"	1.147	142.55	45.14	245.36
		9'	90	11'-6"		9"		10'-9½"	1.263	151.92	96.81	248.09
		10'	100	11'-8"		10"		11'-9½"	1.391	158.89	98.98	250.81
		11'	110	11'-10"		11"		12'-9½"	1.532	166.71	50.15	253.54
		12'	120	12'-0"		12"		13'-9½"	1.685	178.67	51.82	256.26
	1 @ 11'	6'	66	12'-3"	11"	8"	11½"	7'-10⅝"	1.153	155.16	96.12	268.62
		7'	77	12'-3"		8"		8'-10⅝"	1.202	157.83	97.79	268.62
		8'	88	12'-4"		8"		9'-10⅝"	1.252	163.06	99.46	268.62
		9'	99	12'-6"		9"		10'-10⅝"	1.368	172.60	51.13	271.39
		10'	110	12'-8"		10"		11'-10⅝"	1.497	179.70	52.80	274.07
		11'	121	12'-10"		11"		12'-10⅝"	1.638	187.67	54.97	276.79
		12'	132	13'-0"		12"		13'-10⅝"	1.792	199.79	56.14	279.52
	1 @ 12'	6'	72	13'-9"	11½"	8"	12½"	8'-0"	1.284	172.20	98.69	357.62
		7'	84	13'-9"		8"		9'-0"	1.333	176.87	50.36	357.62
		8'	96	13'-9"		8"		10'-0"	1.383	180.15	52.03	357.62
		9'	108	13'-6"		9"		11'-0"	1.500	189.85	58.70	361.18
		10'	120	13'-8"		10"		12'-0"	1.630	197.07	55.37	364.74
		11'	132	13'-10"		11"		13'-0"	1.772	205.16	57.04	368.30
		12'	144	14'-0"		12"		14'-0"	1.926	217.95	58.71	371.86

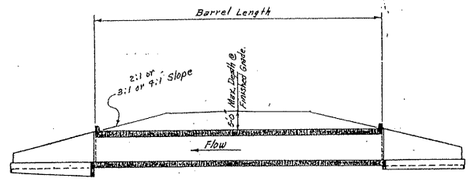
W-X002-1, W-X003-2, or W-X004-2.
W-X002-1 or W-X003-2 or W-X004-2.



PART LONGITUDINAL SECTION



TYPICAL SECTION M-M



LONGITUDINAL SECTION

NOTE:- For details of wings and bar lists, see Drawing Nos. W-X002-1 or W-X002-2 and W-X004-1 or W-X004-2.

GENERAL NOTES:-
- CONCRETE:- All concrete to be Class S, and shall be poured in the dry. All exposed corners to have ¾" chamfers.
- REINFORCING STEEL:- Reinforcing to be deformed bars of intermediate or hard grade.
- BAR LAP:- In computing the quantities of steel from the tables add one lap for each additional 33'-0" length of barrel over 32'-0". Lap longitudinal bars 30 diameters.
- CONSTRUCTION JOINTS:- Construction joints between wingwalls, sidewalls and slabs shall be only where shown on plans.
- SPECIFICATIONS:- Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.

DESIGN LIVE LOAD

H20-S16 LOADING A.A.S.H.O. 1961
AND
SPECIAL MILITARY LOADING
Two 24,000 Lb. Axles @ 4'-0" ctrs.

UNIT STRESSES:-
Class S Concrete (n=10) 1200 #/□"
Reinforcing Steel 20,000 #/□"

NOTE:- This drawing to be used in conjunction with Standard Drawing Nos. W-X003-1 or W-X003-2 and W-X004-1 or W-X004-2. Also Drawing Nos. W-X002-1 or W-X002-2.

CLASS S CONCRETE

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF STANDARD BARREL SECTIONS FOR REINFORCED CONCRETE BOX CULVERTS

4', 5', 6', 7', 8', 9', 10', 11' & 12' SPANS — 3:1 OR 4:1 SLOPES
SINGLES — UNDER 5'-0" COVER

STANDARD DRAWING NO. R-100X-0