

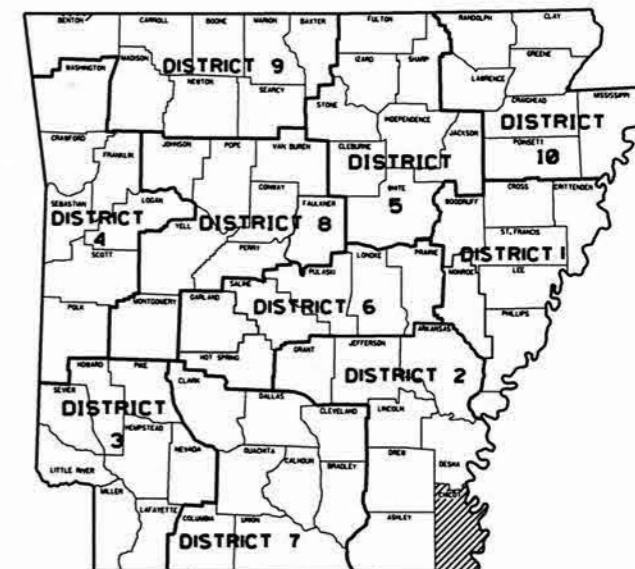
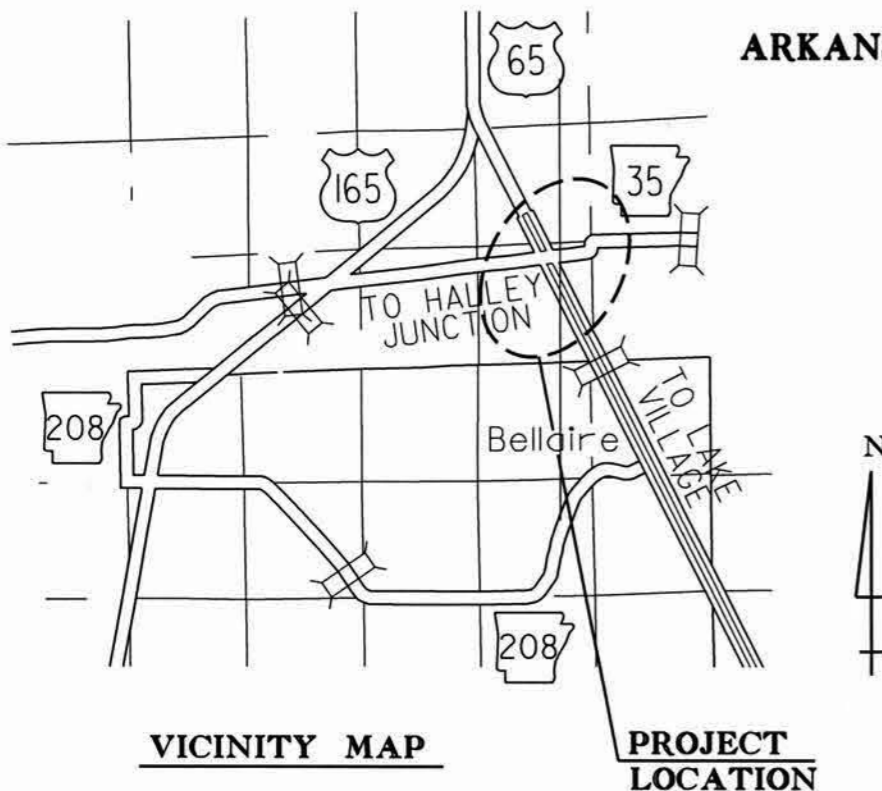
ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT  
CONSTRUCTION PLANS FOR STATE HIGHWAY

HWY. 35 REALIGNMENT  
(SAFETY IMPVTS.) (S)

CHICOT COUNTY  
ROUTE 35 SECTION 9  
F.A.P. NO. PEN-0009(33)  
JOB 020595

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						020595	1	78

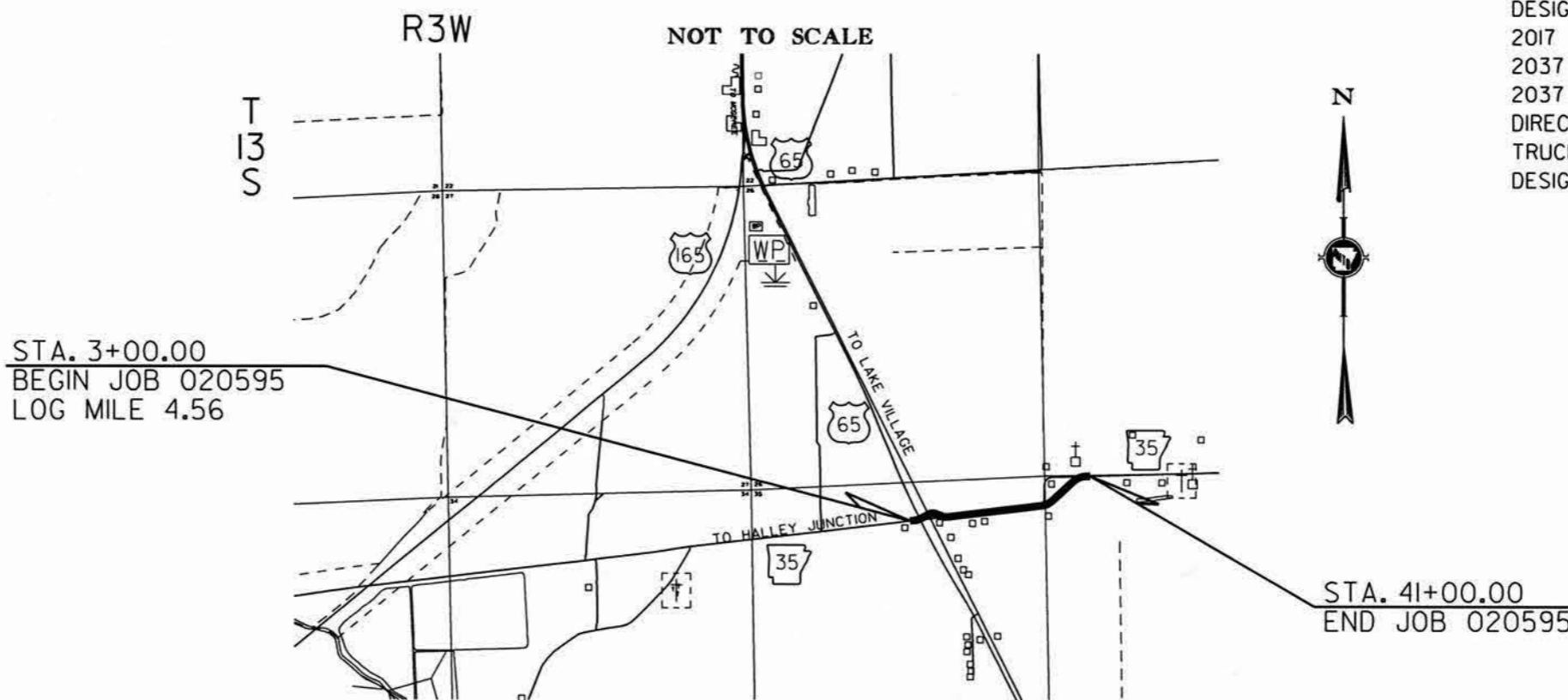
② HWY. 35 REALIGNMENT (SAFETY IMPVTS.) (S)



ARKANSAS HWY. DIST. 2

• DESIGN TRAFFIC DATA •

DESIGN YEAR-----	2037
2017 ADT-----	1,400
2037 ADT-----	1,500
2037 DHV-----	165
DIRECTIONAL DISTRIBUTION-----	0.60
TRUCKS-----	10%
DESIGN SPEED-----	30 MPH



PROJECT COORDINATES:

	BEGIN	MID-POINT	END
LAT.	N33° 31' 56"	N33° 31' 58"	N33° 32' 03"
LON.	W91° 22' 35"	W91° 22' 12"	W91° 21' 50"

GROSS LENGTH OF PROJECT 3800.00 FEET OR 0.720 MILES  
NET LENGTH OF ROADWAY 3800.00 FEET OR 0.720 MILES  
NET LENGTH OF BRIDGES 0.00 FEET OR 0.000 MILES  
NET LENGTH OF PROJECT 3800.00 FEET OR 0.720 MILES

P.E. JOB 020595

APPROVED



10-10-17

DEPUTY DIRECTOR  
AND CHIEF ENGINEER

020595

8/25/2017

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② INDEX OF SHEETS AND STANDARD DRAWINGS



INDEX OF SHEETS

SHEET NO.	TITLE
1	TITLE SHEET
2	INDEX OF SHEETS AND STANDARD DRAWINGS
3	GOVERNING SPECIFICATIONS AND GENERAL NOTES
4 - 8	TYPICAL SECTIONS OF IMPROVEMENT
9 - 11	SPECIAL DETAILS
12 - 20	TEMPORARY EROSION CONTROL DETAILS
21 - 33	MAINTENANCE OF TRAFFIC DETAILS
34 - 36	PERMANENT PAVEMENT MARKING DETAILS
37 - 39	QUANTITIES
40	SUMMARY OF QUANTITIES AND REVISIONS
41 - 44	SURVEY CONTROL DETAILS
45 - 52	PLAN AND PROFILE SHEETS
53 - 78	CROSS SECTIONS

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

ROADWAY STANDARD DRAWINGS

DRWG.NO.	TITLE	DATE
CG-1	CURBING DETAILS	11-29-07
DR-1	DETAILS OF DRIVEWAYS & ISLANDS	2-27-14
FES-1	FLARED END SECTION	10-18-96
FES-2	FLARED END SECTION	10-18-96
MB-1	MAILBOX DETAILS	11-18-04
PCC-1	CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING	2-27-14
PCM-1	METAL PIPE CULVERT FILL HEIGHTS & BEDDING	2-27-14
PCP-1	PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)	2-27-14
PCP-2	PLASTIC PIPE CULVERT (PVC F949)	2-27-14
PM-1	PAVEMENT MARKING DETAILS	6-01-17
PU-1	DETAILS OF PIPE UNDERDRAIN	12-08-16
SE-2	TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC	10-18-96
SI-1	DETAILS OF SPECIAL ITEMS	9-12-13
TC-1	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	4-13-17
TC-2	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	9-02-15
TC-3	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	9-02-15
TEC-1	TEMPORARY EROSION CONTROL DEVICES	12-15-11
TEC-2	TEMPORARY EROSION CONTROL DEVICES	6-02-94
TEC-3	TEMPORARY EROSION CONTROL DEVICES	11-03-94
WF-2	WIRE FENCE WATER GAPS	4-20-79
WF-4	WIRE FENCE TYPE C AND D	8-22-02

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② GOVERNING SPECIFICATIONS & GENERAL NOTES



### GOVERNING SPECIFICATIONS

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

NUMBER	TITLE
ERRATA	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273	REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273	SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273	SUPPLEMENT - WAGE RATE DETERMINATION
100-3	CONTRACTOR'S LICENSE
100-4	DEPARTMENT NAME CHANGE
102-2	ISSUANCE OF PROPOSALS
108-1	LIQUIDATED DAMAGES
108-2	WORK ALLOWED PRIOR TO ISSUANCE OF WORK ORDER
303-1	AGGREGATE BASE COURSE
400-1	TACK COATS
400-4	DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES
410-1	CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
604-1	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
606-1	PIPE CULVERTS FOR SIDE DRAINS
620-1	MULCH COVER
JOB 020595	BIDDING REQUIREMENTS AND CONDITIONS
JOB 020595	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 020595	CARGO PREFERENCE ACT REQUIREMENTS
JOB 020595	CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS
JOB 020595	DELAY IN RIGHT OF WAY OCCUPANCY
JOB 020595	DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES
JOB 020595	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 020595	MANDATORY ELECTRONIC CONTRACT
JOB 020595	MANDATORY ELECTRONIC DOCUMENT SUBMITTAL
JOB 020595	PLASTIC PIPE
JOB 020595	PROTECTION OF WATER QUALITY AND WETLANDS
JOB 020595	RUMBLE STRIPS
JOB 020595	SHORING FOR CULVERTS
JOB 020595	SOIL STABILIZATION
JOB 020595	STORM WATER POLLUTION PREVENTION PLAN
JOB 020595	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 020595	UTILITY ADJUSTMENTS
JOB 020595	WARM MIX ASPHALT

### GENERAL NOTES

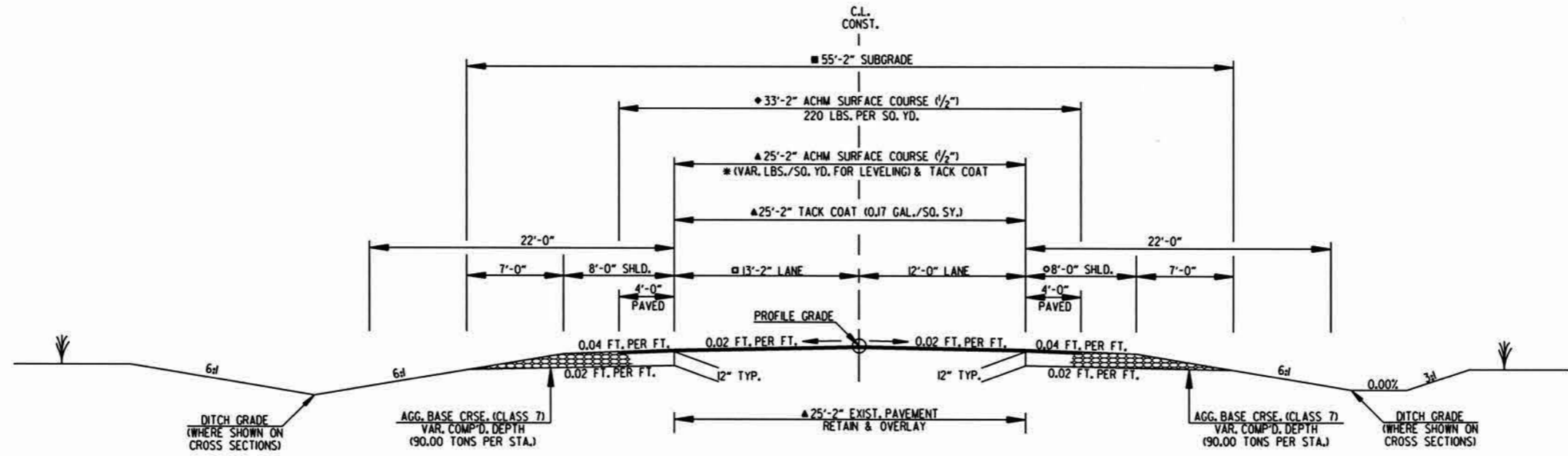
1. GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.
2. ALL PIPE LINES, POWER, TELEPHONE, AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
3. ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY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

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2 TYPICAL SECTIONS OF IMPROVEMENT



TYPICAL SECTION OF IMPROVEMENT  
STA. 3+00.00 - STA. 4+00.00  
(HWY. 35)

\* TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

- TRANSITION FROM 5'-10" AT STA. 3+00.00 TO 6'-0" AT STA. 4+99.72
- ◆ TRANSITION FROM 33'-2" AT STA. 3+00.00 TO 46'-0" AT STA. 4+99.72
- ▲ TRANSITION FROM 25'-2" AT STA. 3+00.00 TO 25'-8" AT STA. 4+00.00 TO 18'-4" AT STA. 4+99.72
- TRANSITION FROM 13'-2" AT STA. 3+00.00 TO 13'-8" AT STA. 4+00.00 TO 18'-0" AT STA. 4+75.00
- TRANSITION FROM 4'-0" AT STA. 3+00.00 TO 8'-0" AT STA. 4+00.00
- TRANSITION FROM 0'-0" AT STA. 4+00.00 TO 1'-9/2" AT STA. 4+99.72
- ▼ TRANSITION FROM 0'-0" AT STA. 4+00.00 TO 1'-8" AT STA. 4+99.72
- ▲ TRANSITION FROM 0'-0" AT STA. 4+00.00 TO 1'-8" AT STA. 4+99.72

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

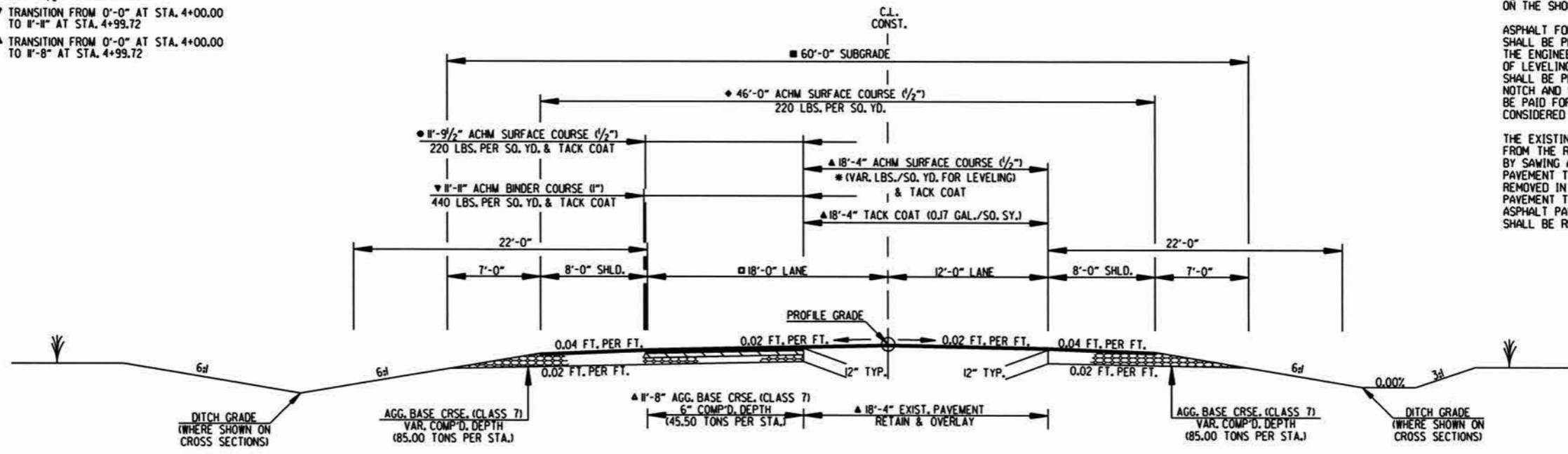
THE FINAL 2 INCHES OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT THE LANE LINES.

THE THICKNESS OF AGG. 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.

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

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

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TYPICAL SECTION OF IMPROVEMENT  
STA. 4+00.00 - STA. 6+15.68  
(HWY. 35)

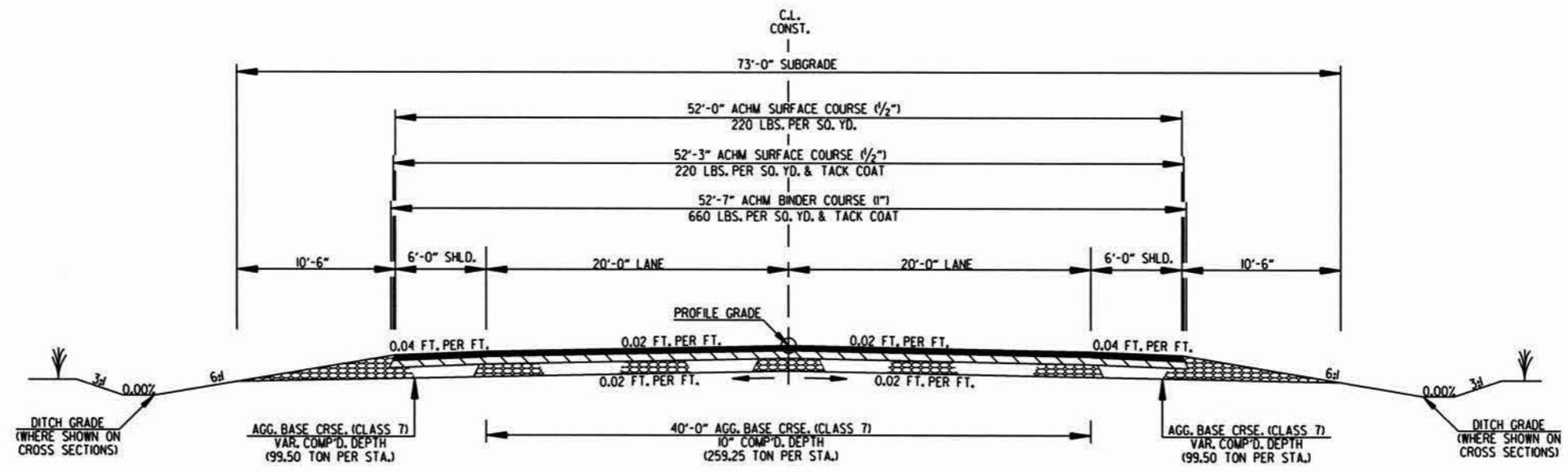
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2 TYPICAL SECTIONS OF IMPROVEMENT



TYPICAL SECTION OF IMPROVEMENT  
CROSSOVER  
STA. 6+39.68 - STA. 7+84.90

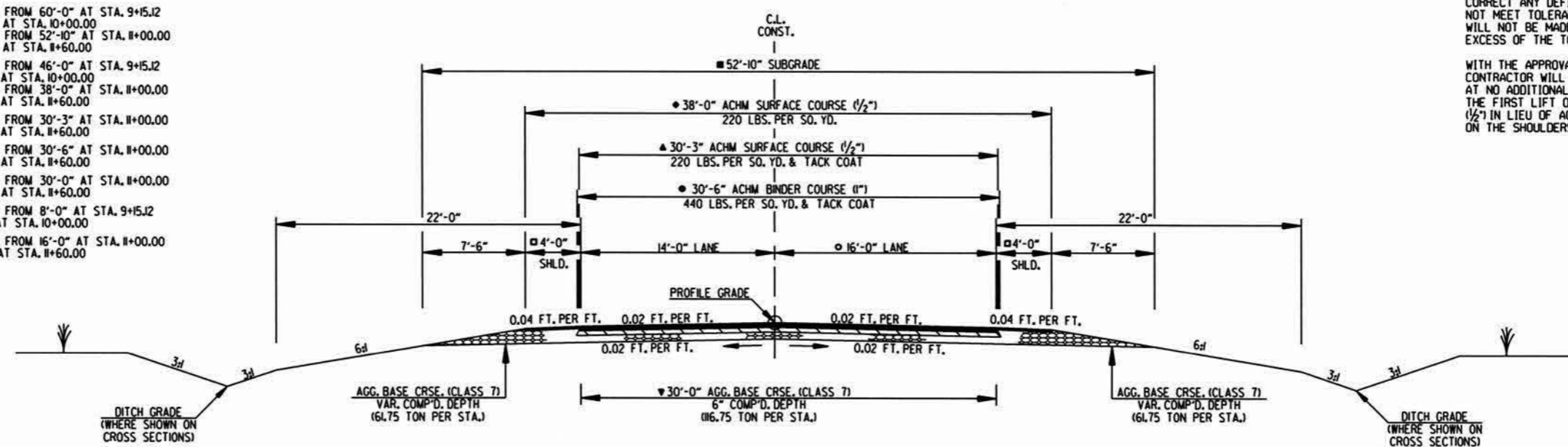
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- TRANSITION FROM 60'-0" AT STA. 9+15J2 TO 52'-10" AT STA. 10+00.00
- ◆ TRANSITION FROM 52'-10" AT STA. 11+00.00 TO 48'-10" AT STA. 11+60.00
- ♦ TRANSITION FROM 46'-0" AT STA. 9+15J2 TO 38'-0" AT STA. 10+00.00
- ◆ TRANSITION FROM 38'-0" AT STA. 11+00.00 TO 34'-0" AT STA. 11+60.00
- ▲ TRANSITION FROM 30'-3" AT STA. 11+00.00 TO 26'-3" AT STA. 11+60.00
- TRANSITION FROM 30'-6" AT STA. 11+00.00 TO 26'-6" AT STA. 11+60.00
- ▼ TRANSITION FROM 30'-0" AT STA. 11+00.00 TO 26'-0" AT STA. 11+60.00
- TRANSITION FROM 8'-0" AT STA. 9+15J2 TO 4'-0" AT STA. 10+00.00
- TRANSITION FROM 16'-0" AT STA. 11+00.00 TO 12'-0" AT STA. 11+60.00



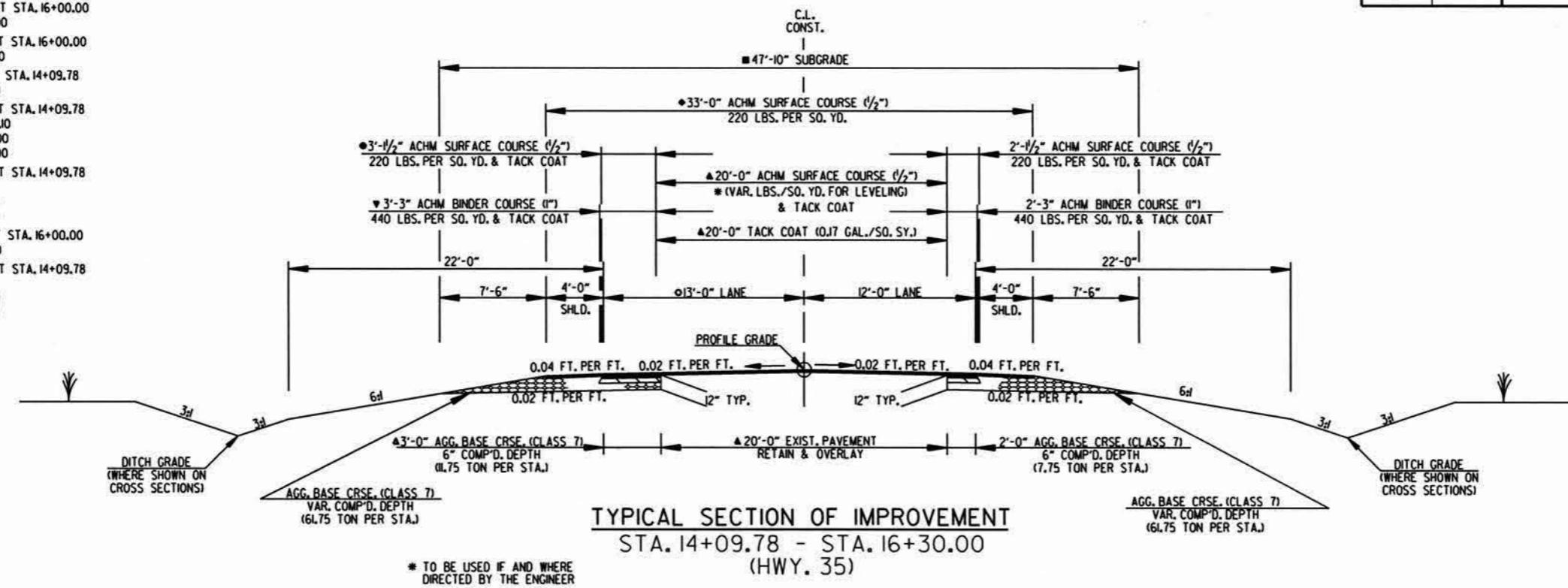
TYPICAL SECTION OF IMPROVEMENT  
STA. 8+09.02 - STA. 14+09.78  
(HWY. 35)

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2 TYPICAL SECTIONS OF IMPROVEMENT



- TRANSITION FROM 48'-10" AT STA. 16+00.00 TO 46'-10" AT STA. 16+30.00
- ◆ TRANSITION FROM 34'-0" AT STA. 16+00.00 TO 32'-0" AT STA. 16+30.00
- ▲ TRANSITION FROM 0'-0" AT STA. 14+09.78 TO 20'-0" AT STA. 15+32.10
- TRANSITION FROM 26'-3" AT STA. 14+09.78 TO 5'-5 1/2" AT STA. 15+32.10 TO 4'-1 1/2" AT STA. 16+00.00 TO 2'-1 1/2" AT STA. 16+30.00
- ▼ TRANSITION FROM 26'-6" AT STA. 14+09.78 TO 5'-7" AT STA. 15+32.10 TO 4'-0" AT STA. 16+00.00 TO 2'-0" AT STA. 16+30.00
- TRANSITION FROM 14'-0" AT STA. 16+00.00 TO 12'-0" AT STA. 16+30.00
- ▲ TRANSITION FROM 26'-0" AT STA. 14+09.78 TO 5'-4" AT STA. 15+32.10 TO 4'-0" AT STA. 16+00.00 TO 2'-0" AT STA. 16+30.00



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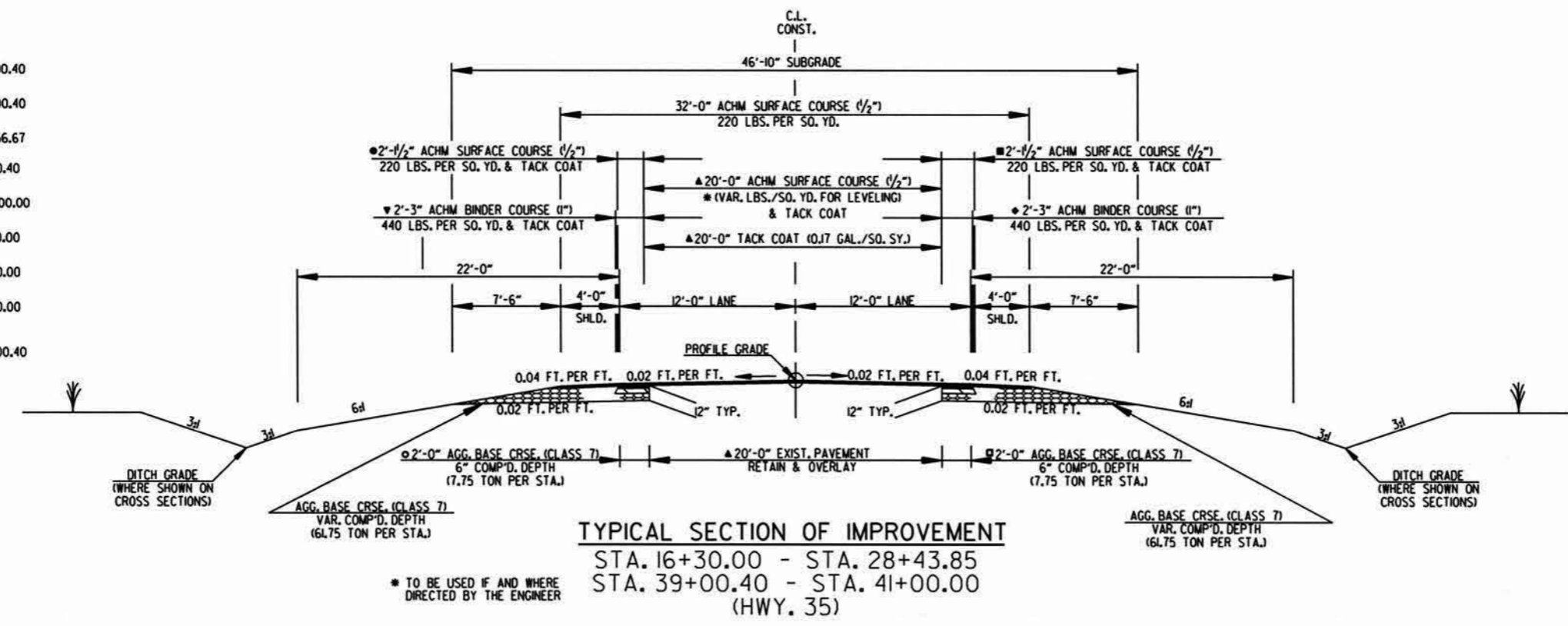
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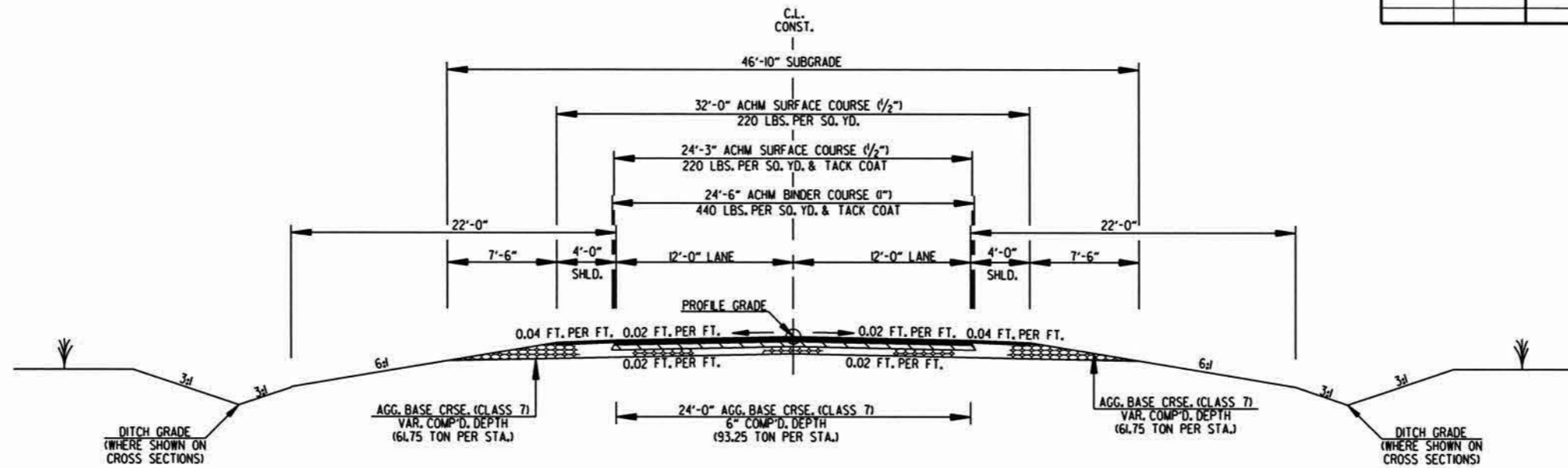
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- TRANSITION FROM 26'-3" AT STA. 39+00.40 TO 4'-1 1/2" AT STA. 40+15.15
- ◆ TRANSITION FROM 26'-6" AT STA. 39+00.40 TO 4'-3" AT STA. 40+15.15
- ▲ TRANSITION FROM 20'-0" AT STA. 27+56.67 TO 0'-0" AT STA. 28+43.85 TO 0'-0" AT STA. 39+00.40 TO 20'-0" AT STA. 40+15.15
- TRANSITION FROM 2'-1 1/2" AT STA. 26+00.00 TO 0'-0" AT STA. 27+56.67
- ▼ TRANSITION FROM 2'-3" AT STA. 26+00.00 TO 0'-0" AT STA. 27+56.67
- TRANSITION FROM 2'-0" AT STA. 26+00.00 TO 0'-0" AT STA. 27+56.37
- ◆ TRANSITION FROM 2'-0" AT STA. 26+00.00 TO 4'-0" AT STA. 27+56.67 TO 24'-0" AT STA. 28+43.85 TO 26'-0" AT STA. 39+00.40 TO 4'-0" AT STA. 40+15.15

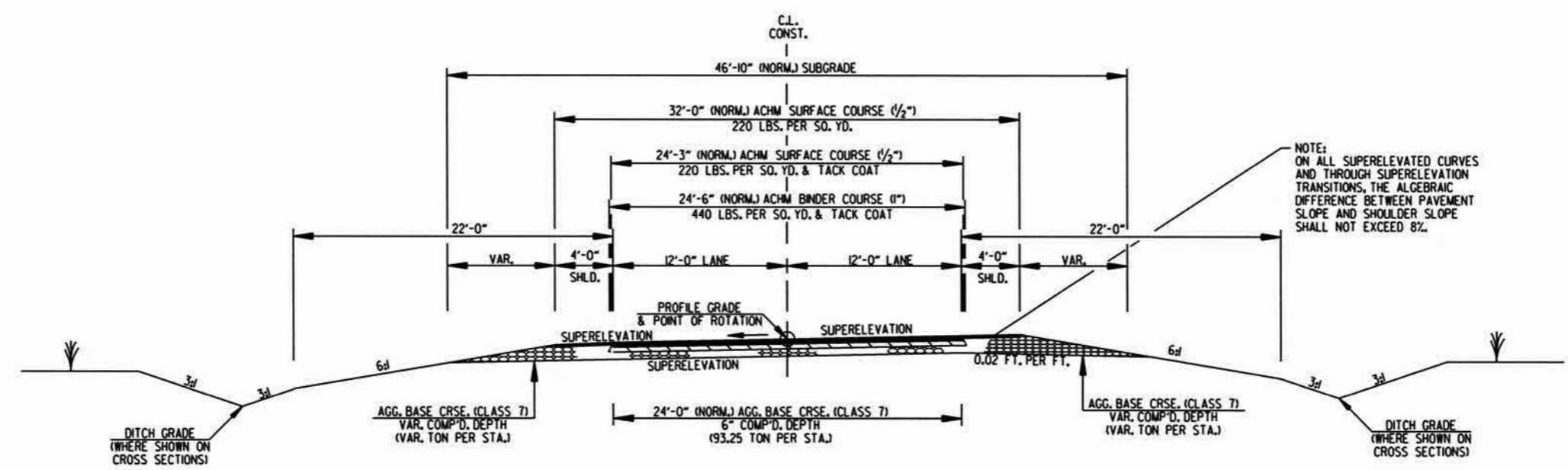


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2 TYPICAL SECTIONS OF IMPROVEMENT



TYPICAL SECTION OF IMPROVEMENT  
STA. 28+43.85 - STA. 39+00.40  
(HWY. 35)



TYPICAL SECTION OF IMPROVEMENT  
SUPERELEVATION - FULL DEPTH

NOTE:  
ON ALL SUPERELEVATED CURVES AND THROUGH SUPERELEVATION TRANSITIONS, THE ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 8%.

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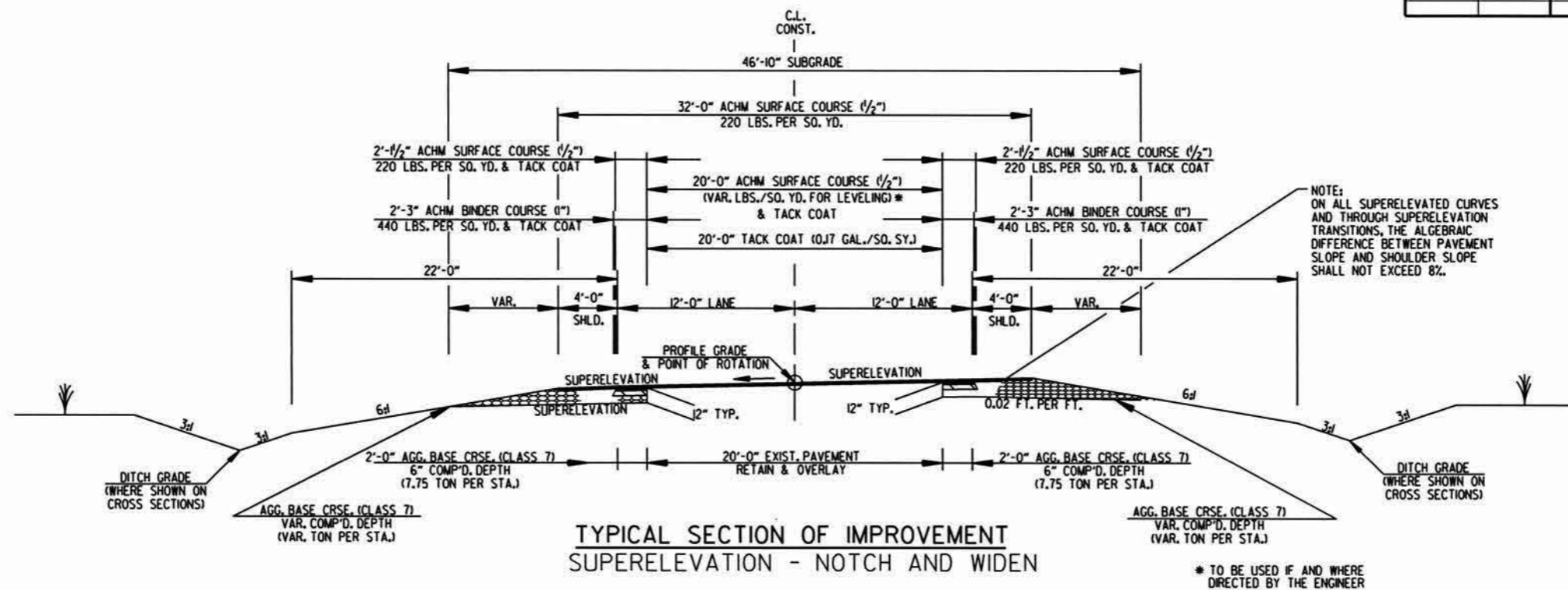
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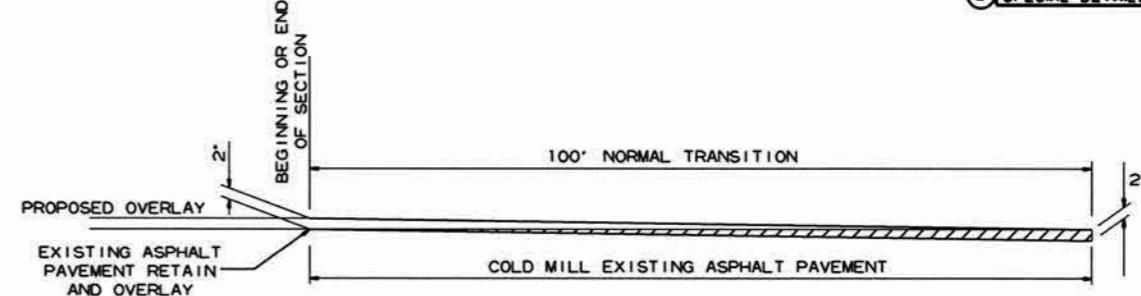
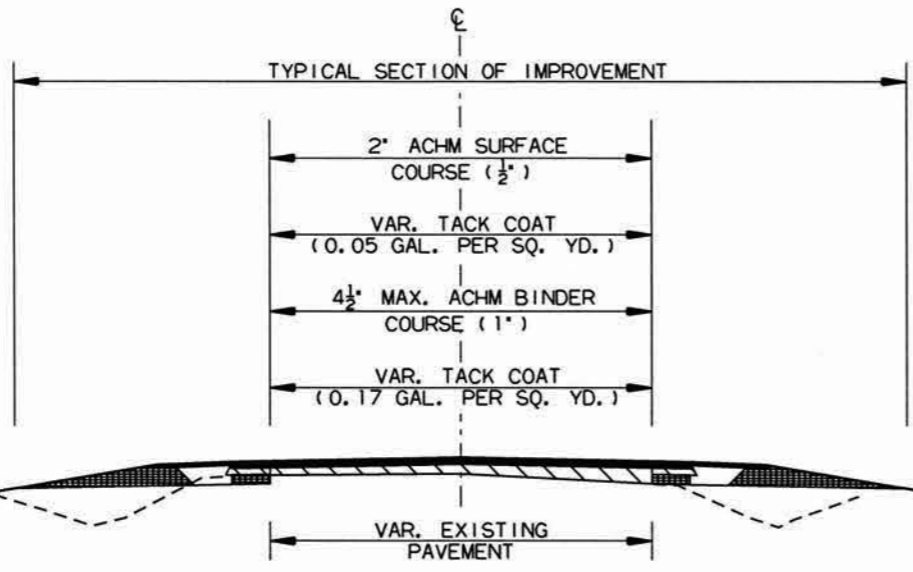
ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING. CALCULATIONS WILL NOT BE PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED INCLUDED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

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



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				6	ARK.		9	78

2 SPECIAL DETAILS

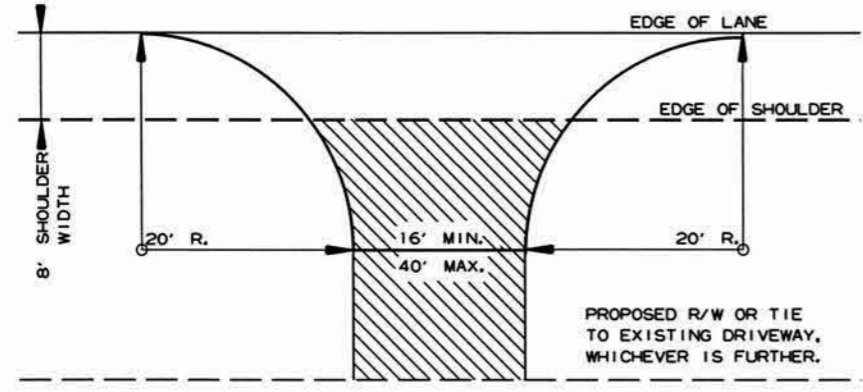


DETAIL FOR TRANSITIONS

METHOD OF RAISING GRADE

NOTES:

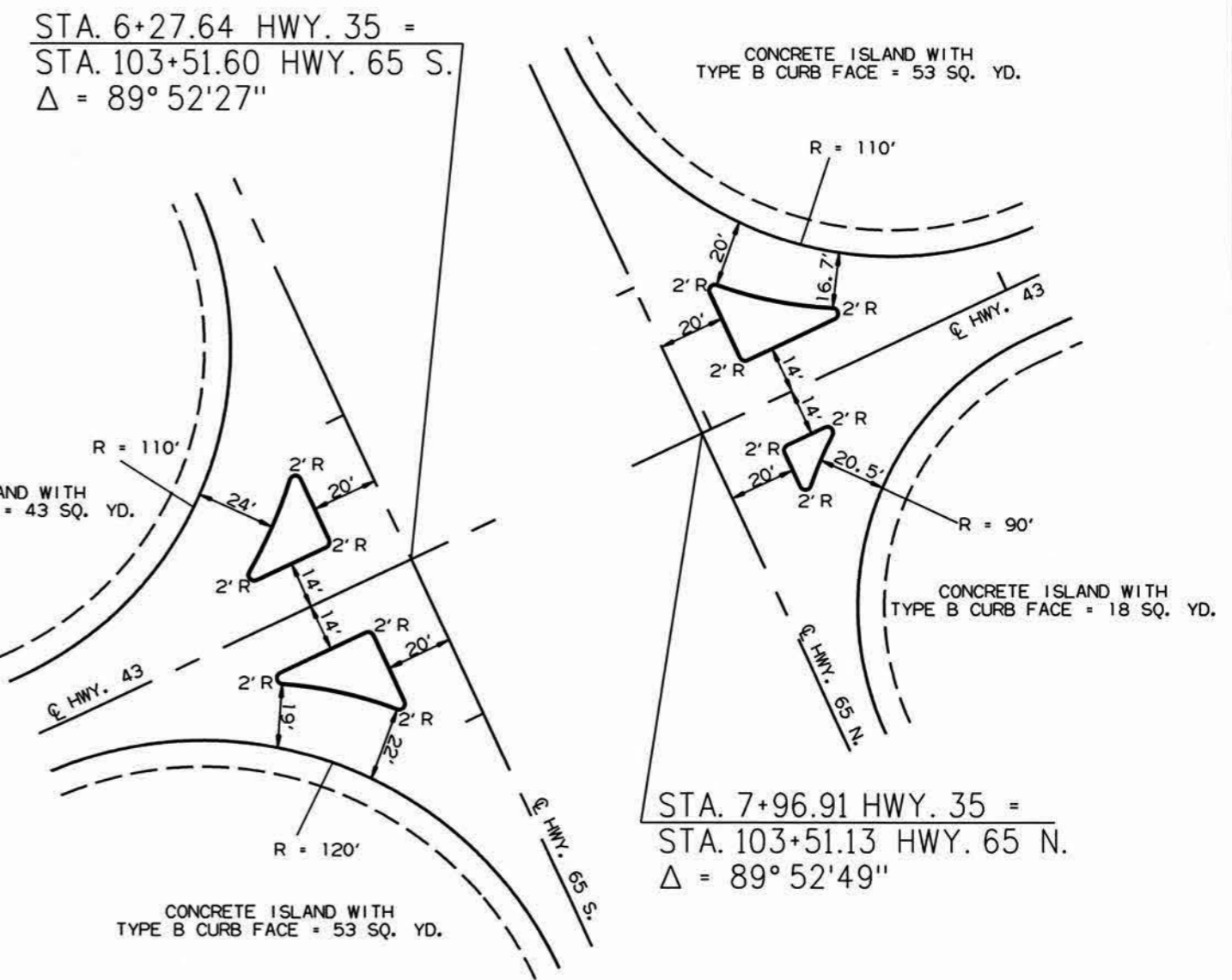
- (1) THIS DETAIL TO BE USED ONLY WHERE DIRECTED BY THE ENGINEER.
- (2) QUANTITIES FOR METHOD OF GRADE RAISE USING ASPHALT WERE CALCULATED ON THIS PROJECT AT LOCATIONS WHERE THE DISTANCE BETWEEN THE EXISTING ASPHALT ROADWAY AND THE PROPOSED SUBGRADE WAS ONE FOOT OR LESS.
- (3) IN LOCATIONS WHERE THE DISTANCE BETWEEN THE PROPOSED SUBGRADE AND THE EXISTING ASPHALT ROADWAY IS MORE THAN ONE FOOT, SCARIFICATION OF THE EXISTING ASPHALT ROADWAY WILL BE REQUIRED AS STATED IN SECTION 210, SUBSECTION 210.09, OF THE STANDARD SPECIFICATIONS, EDITION OF 2014.



DETAIL FOR DRIVEWAY TURNOUTS  
OPEN SHOULDER SECTION  
(ARTERIALS)

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

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



ISLAND DETAILS

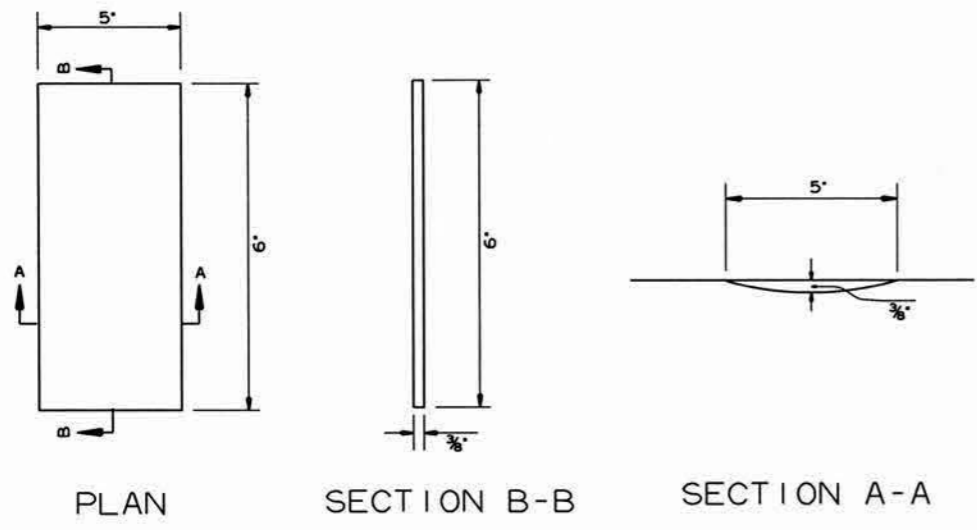
TYPE B CURB FACE

SPECIAL DETAILS

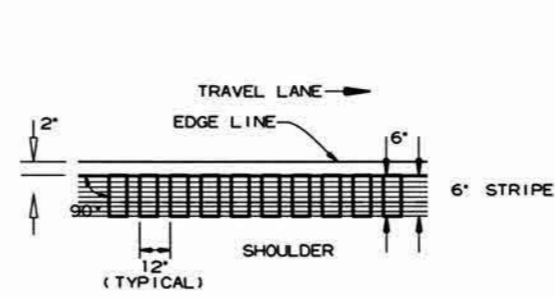
8/25/2017 R020595.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		10	78
				JOB NO. 020595				

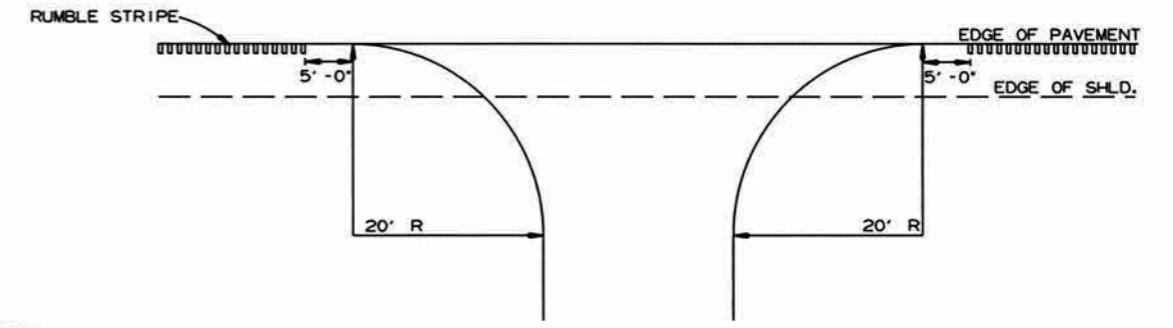
2 SPECIAL DETAILS



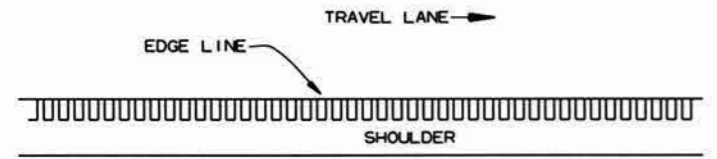
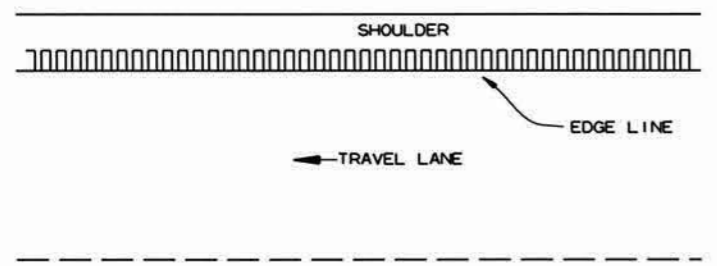
DETAILS OF RUMBLE STRIPE



LOCATION PLAN OF RUMBLE STRIPE  
LEFT OR RIGHT SHOULDER



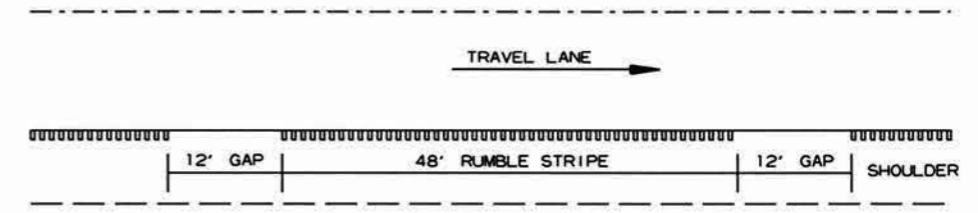
DETAIL FOR RUMBLE STRIPE GAP  
AT DRIVEWAY TURNOUTS



PLAN VIEW

GENERAL NOTES

1. RUMBLE STRIPES SHALL NOT BE INSTALLED ON BRIDGE DECKS, APPROACH SLABS, INTERSECTING STREETS OR ROADWAYS, RESIDENTIAL OR COMMERCIAL DRIVEWAYS OR ACROSS TRANSVERSE JOINTS OF CONCRETE SHOULDERS.
2. RUMBLE STRIPES SHALL NOT BE INSTALLED ON A PAVED SHOULDER THAT IS USED AS A DECELERATION LANE FOR THE LENGTH DEEMED APPROPRIATE BY THE ENGINEER.
3. RUMBLE STRIPES SHALL BE MEASURED BY THE LINEAR FOOT LONGITUDINALLY ALONG THE SHOULDER. PAYMENT SHALL ONLY INCLUDE THAT PORTION OF THE SHOULDER ON WHICH RUMBLE STRIPES HAVE BEEN CONSTRUCTED. NO MEASUREMENT OR PAYMENT WILL BE MADE FOR GAPS, DRIVEWAYS, TURNOUTS, OR OTHER PUBLIC ROAD INTERSECTIONS WHERE RUMBLE STRIPES HAVE NOT BEEN CONSTRUCTED.
4. THE 3/8\"/>



NOTE: GAP PATTERN SHALL BE ADJUSTED BY THE ENGINEER IN THE FIELD ALLOWING FOR DRIVEWAYS TO SERVE AS THE GAP.

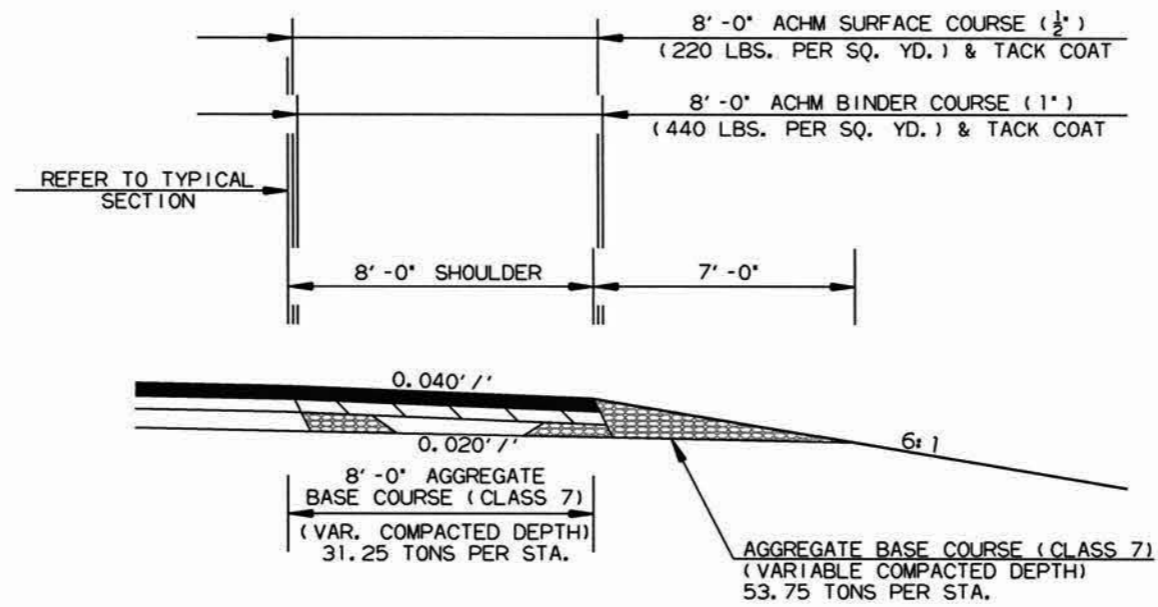
DETAIL FOR GAP PATTERN RUMBLE STRIPE

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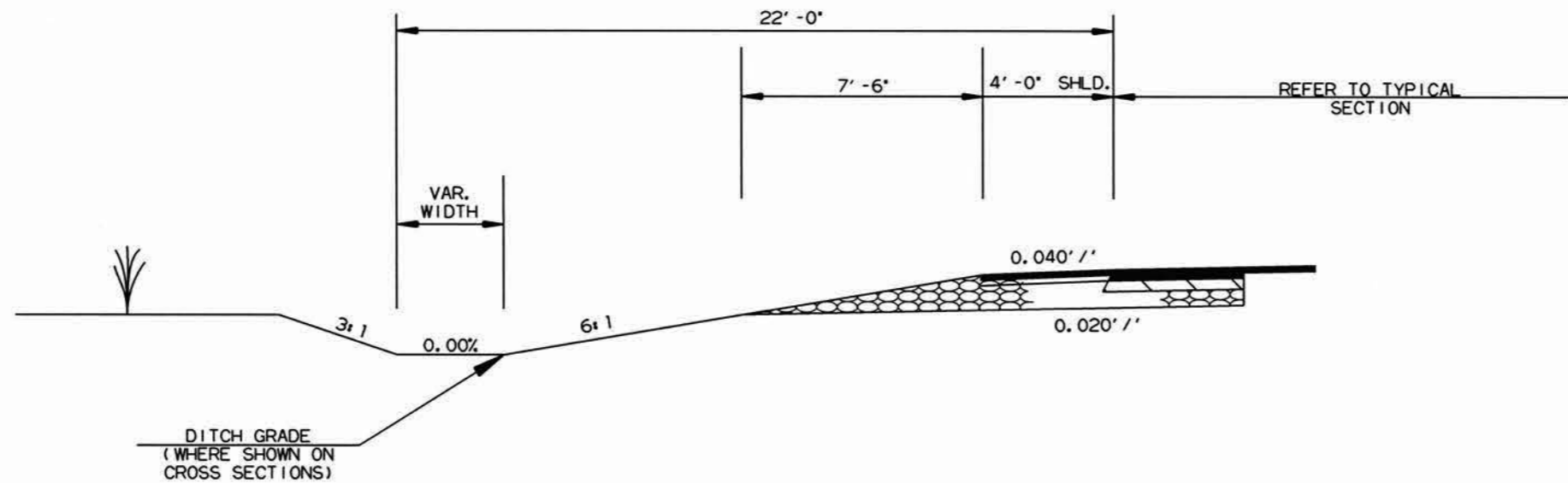
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		11	78
				JOB NO.		020595		

② SPECIAL DETAILS



**FULL DEPTH SHOULDER DETAIL**

HWY. 35  
 STA. 4+99.72 - STA. 6+15.16  
 STA. 8+09.36 - STA. 9+15.12



**FLAT BOTTOM DITCH DETAIL**

HWY. 35  
 STA. 15+32.10 - STA. 17+45.05 LT. & RT.  
 STA. 17+45.05 - STA. 21+01.00 RT.  
 STA. 40+15.15 - STA. 41+00.00 LT.

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. DIST. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020595							12	78

② TEMPORARY EROSION CONTROL DETAILS

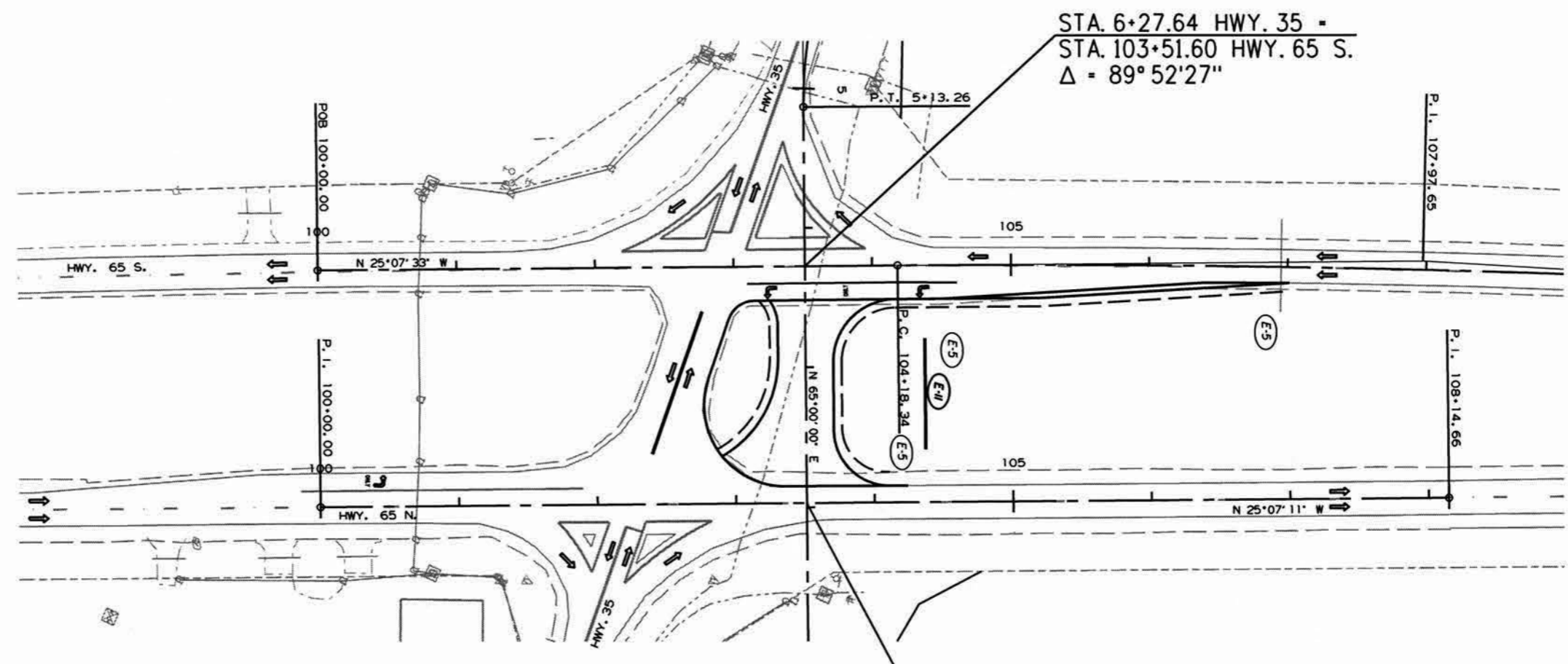


<b>(E-5)</b>	SAND BAG DITCH CHECKS
<b>(E-11)</b>	SILT FENCE

LEGEND

**(E-11)** SILT FENCE ON LT.  
 HWY. 35:  
 STA. 6+79.59 - STA. 7+58.97 = 80 LIN. FT.

**(E-5)** SAND BAG DITCH CHECKS ON RT.  
 HWY. 65 S. :  
 STA. 104+60.00 = 22 BAGS  
 STA. 106+90.00 = 22 BAGS



STA. 6+27.64 HWY. 35 =  
 STA. 103+51.60 HWY. 65 S.  
 $\Delta = 89^\circ 52' 27''$

STA. 7+96.91 HWY. 35 =  
 STA. 103+51.13 HWY. 65 N.  
 $\Delta = 89^\circ 52' 49''$

**(E-5)** SAND BAG DITCH CHECKS ON LT.  
 HWY. 65 N. :  
 STA. 104+11.00 = 22 BAGS

REVISIONS

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO. 020595		13		78

② TEMPORARY EROSION CONTROL DETAILS



**LEGEND**

(E-5) SAND BAG DITCH CHECKS

(E-11) SILT FENCE

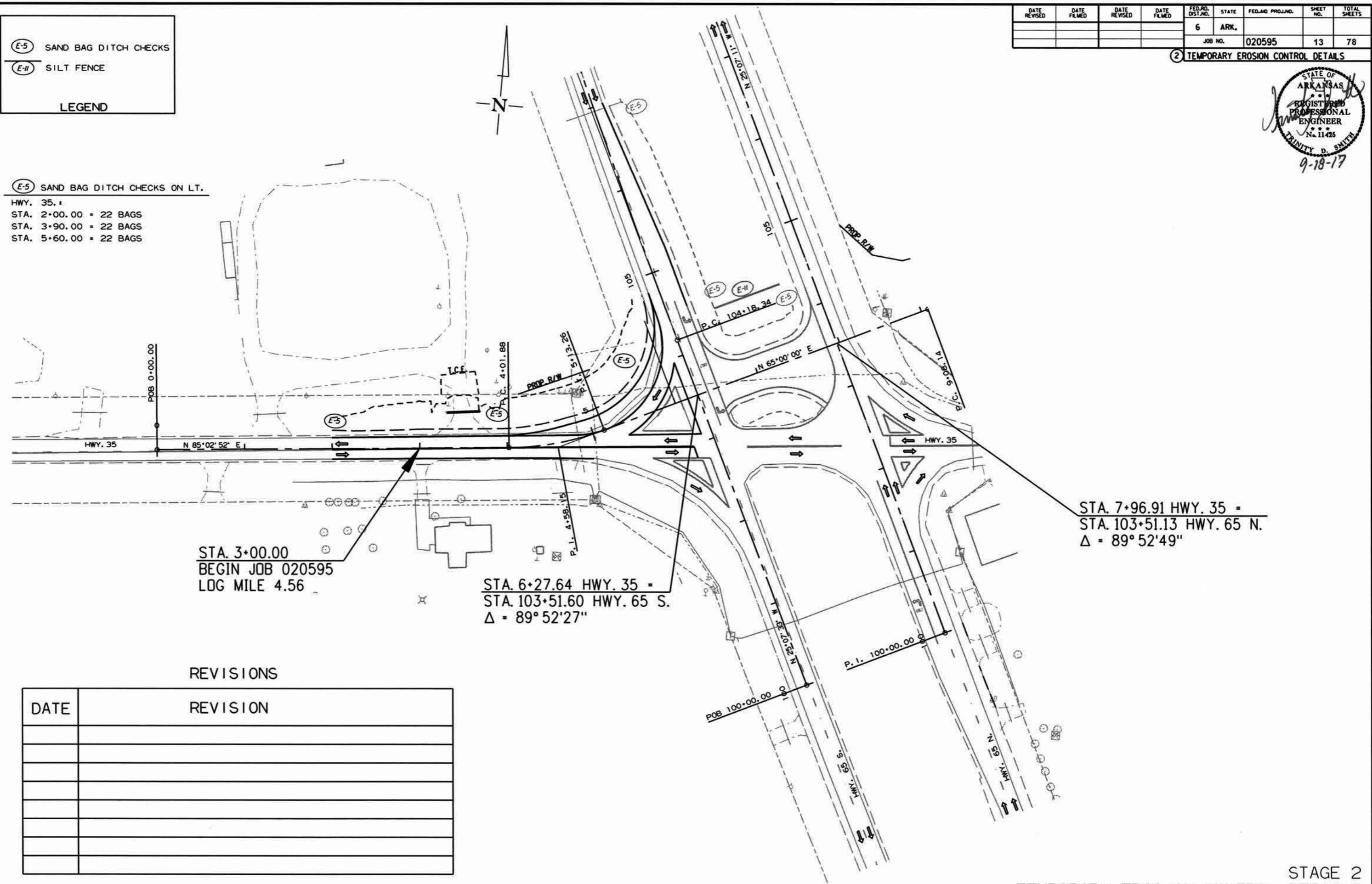
(E-5) SAND BAG DITCH CHECKS ON LT.

HWY. 35. +

STA. 2+00.00 = 22 BAGS

STA. 3+90.00 = 22 BAGS

STA. 5+60.00 = 22 BAGS



STA. 3+00.00  
BEGIN JOB 020595  
LOG MILE 4.56

STA. 6+27.64 HWY. 35 =  
STA. 103+51.60 HWY. 65 S.  
 $\Delta = 89^\circ 52' 27''$

STA. 7+96.91 HWY. 35 =  
STA. 103+51.13 HWY. 65 N.  
 $\Delta = 89^\circ 52' 49''$

REVISIONS

DATE	REVISION

12/8/2015  
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	020595
							SHEET NO.	14
							TOTAL SHEETS	78

② TEMPORARY EROSION CONTROL DETAILS



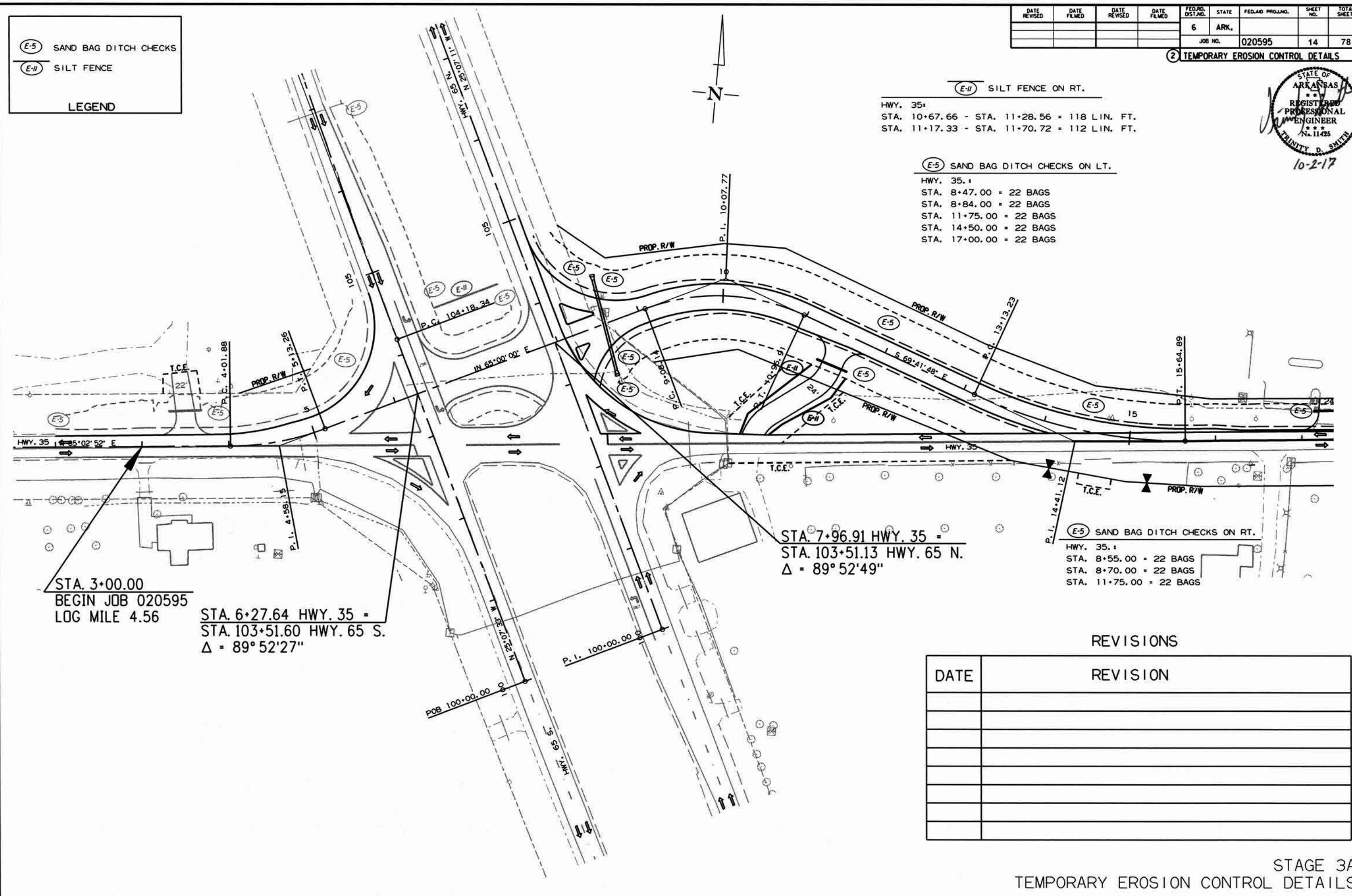
**LEGEND**

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

(E-11) SILT FENCE ON RT.  
 HWY. 35.  
 STA. 10+67.66 - STA. 11+28.56 = 118 LIN. FT.  
 STA. 11+17.33 - STA. 11+70.72 = 112 LIN. FT.

(E-5) SAND BAG DITCH CHECKS ON LT.  
 HWY. 35.  
 STA. 8+47.00 = 22 BAGS  
 STA. 8+84.00 = 22 BAGS  
 STA. 11+75.00 = 22 BAGS  
 STA. 14+50.00 = 22 BAGS  
 STA. 17+00.00 = 22 BAGS

(E-5) SAND BAG DITCH CHECKS ON RT.  
 HWY. 35.  
 STA. 8+55.00 = 22 BAGS  
 STA. 8+70.00 = 22 BAGS  
 STA. 11+75.00 = 22 BAGS



STA. 3+00.00  
 BEGIN JOB 020595  
 LOG MILE 4.56

STA. 6+27.64 HWY. 35 =  
 STA. 103+51.60 HWY. 65 S.  
 $\Delta = 89^\circ 52' 27''$

STA. 7+96.91 HWY. 35 =  
 STA. 103+51.13 HWY. 65 N.  
 $\Delta = 89^\circ 52' 49''$

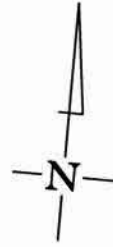
REVISIONS

DATE	REVISION

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020595		15	78

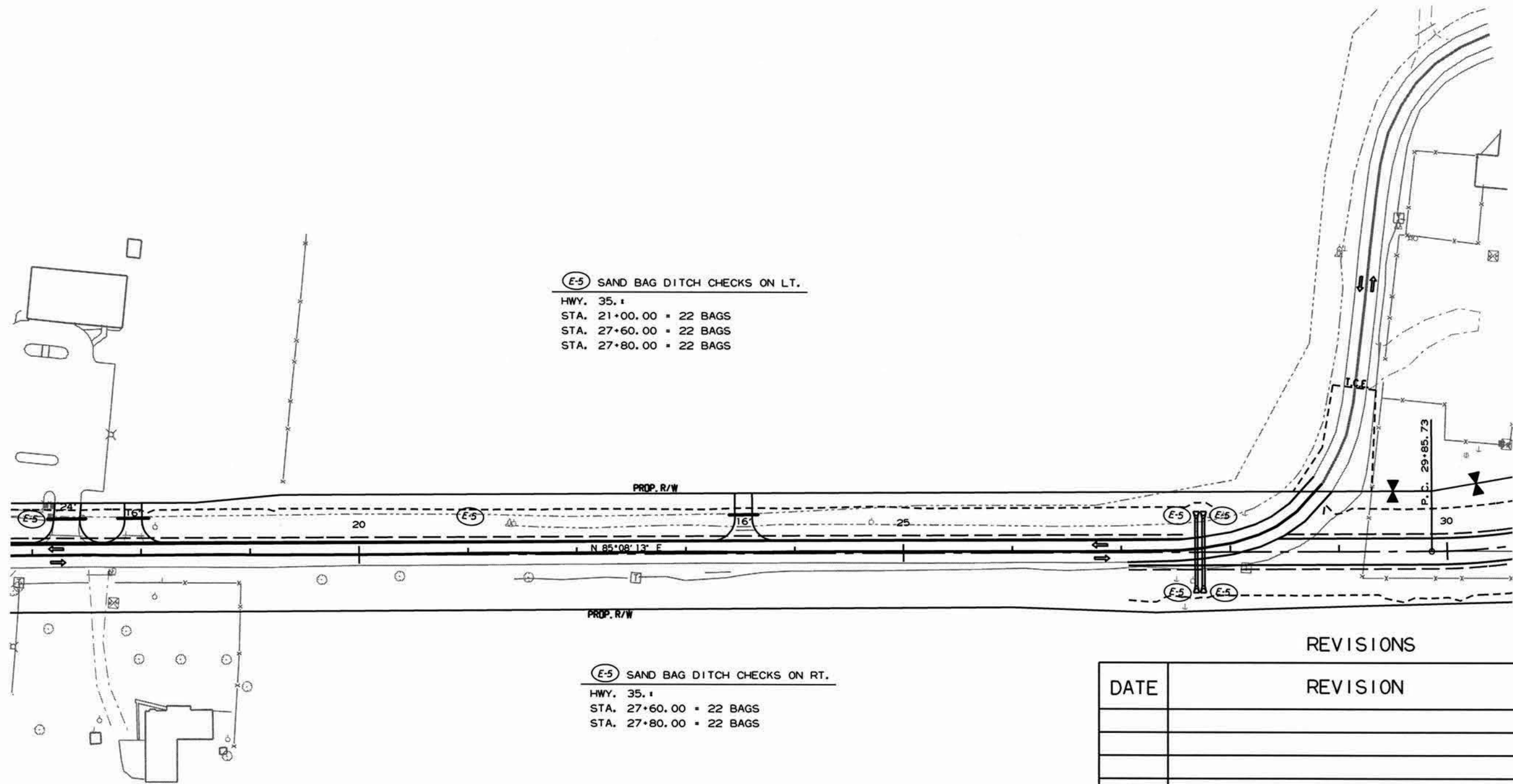
② TEMPORARY EROSION CONTROL DETAILS



(E-5) SAND BAG DITCH CHECKS  
LEGEND

(E-5) SAND BAG DITCH CHECKS ON LT.  
HWY. 35. +  
STA. 21+00.00 = 22 BAGS  
STA. 27+60.00 = 22 BAGS  
STA. 27+80.00 = 22 BAGS

(E-5) SAND BAG DITCH CHECKS ON RT.  
HWY. 35. +  
STA. 27+60.00 = 22 BAGS  
STA. 27+80.00 = 22 BAGS



REVISIONS

DATE	REVISION

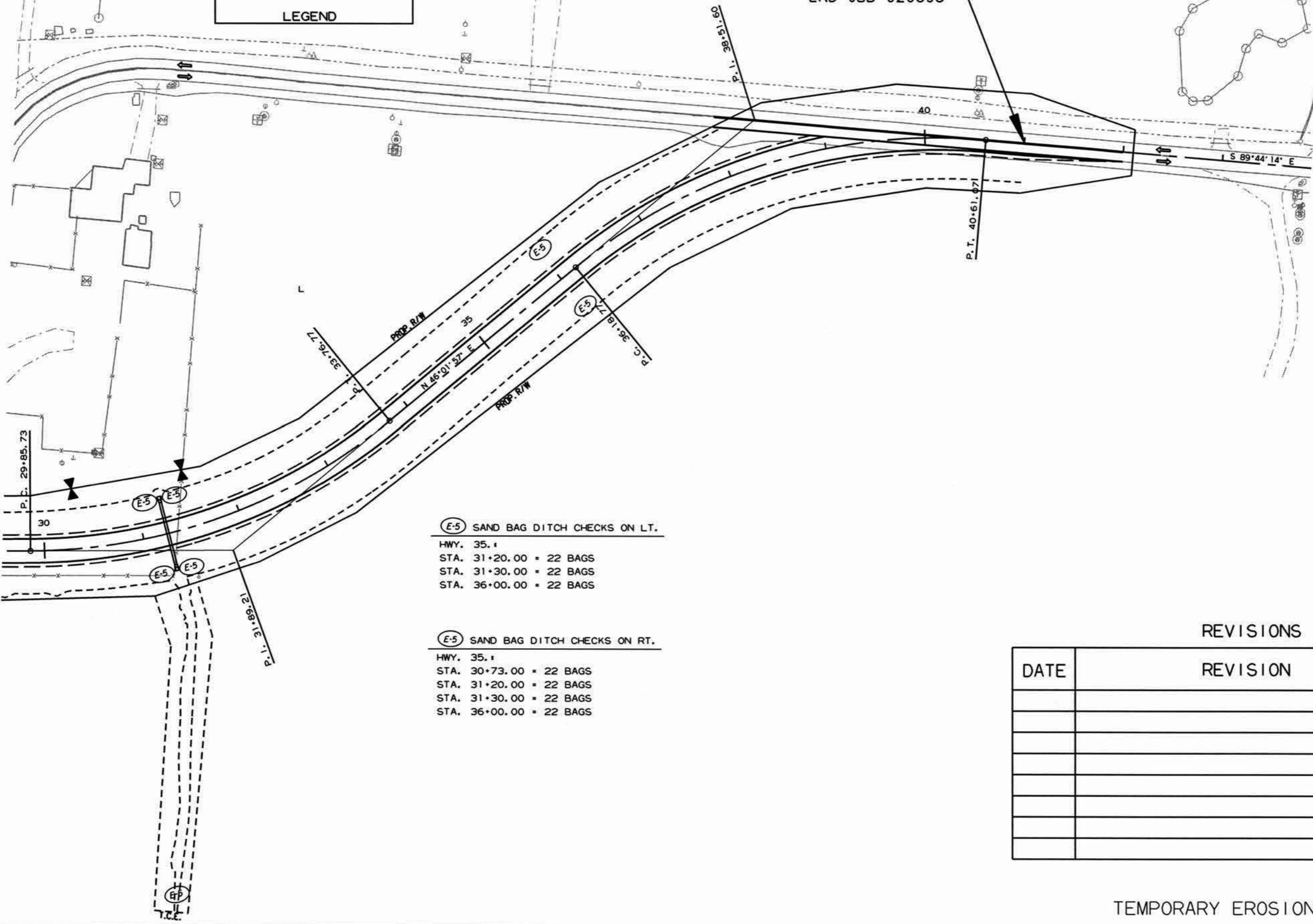
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO. 020595		16		78

② TEMPORARY EROSION CONTROL DETAILS



(E-5) SAND BAG DITCH CHECKS  
LEGEND

STA. 41+00.00  
END JOB 020595



(E-5) SAND BAG DITCH CHECKS ON LT.  
HWY. 35. +  
STA. 31+20.00 = 22 BAGS  
STA. 31+30.00 = 22 BAGS  
STA. 36+00.00 = 22 BAGS

(E-5) SAND BAG DITCH CHECKS ON RT.  
HWY. 35. +  
STA. 30+73.00 = 22 BAGS  
STA. 31+20.00 = 22 BAGS  
STA. 31+30.00 = 22 BAGS  
STA. 36+00.00 = 22 BAGS

REVISIONS

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STAGE 3A  
TEMPORARY EROSION CONTROL DETAILS





	SAND BAG DITCH CHECKS
	SILT FENCE
LEGEND	

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		17	78

② TEMPORARY EROSION CONTROL DETAILS



 SILT FENCE ON RT.  
 HWY. 35+  
 STA. 11+18.24 - STA. 14+02.12 = 321 LIN. FT.  
 STA. 11+23.59 - STA. 13+02.93 = 198 LIN. FT.

 SAND BAG DITCH CHECKS ON RT.  
 HWY. 35+  
 STA. 13+30.00 = 22 BAGS  
 STA. 15+00.00 = 22 BAGS  
 HWY. 65, N.  
 STA. 101+20.00 = 22 BAGS

STA. 7+96.91 HWY. 35 =  
 STA. 103+51.13 HWY. 65 N.  
 $\Delta = 89^\circ 52' 49''$

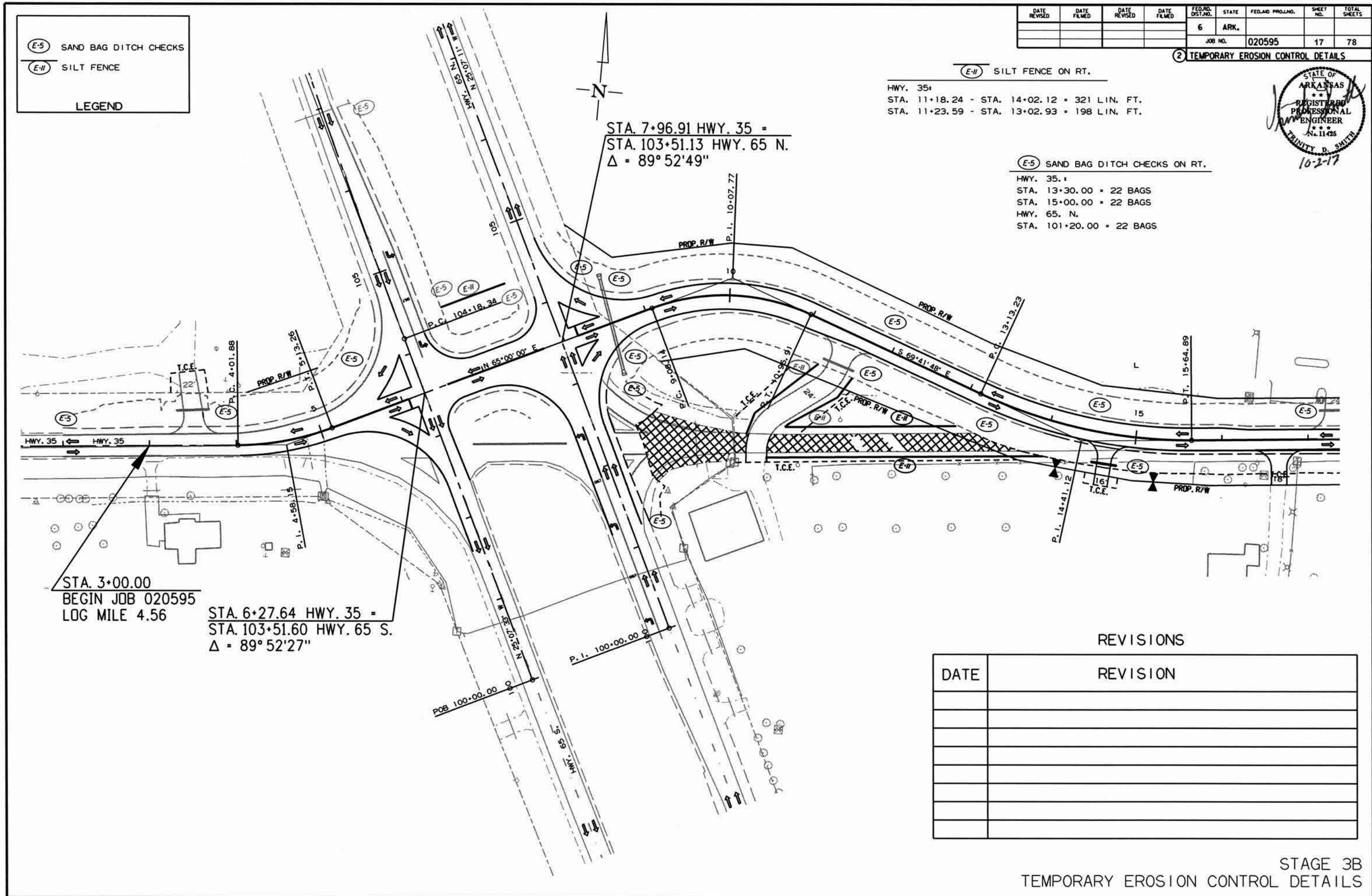
STA. 6+27.64 HWY. 35 =  
 STA. 103+51.60 HWY. 65 S.  
 $\Delta = 89^\circ 52' 27''$

STA. 3+00.00  
 BEGIN JOB 020595  
 LOG MILE 4.56

REVISIONS	
DATE	REVISION

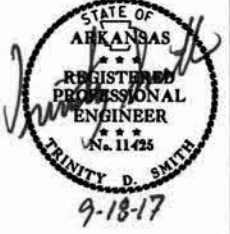
STAGE 3B  
 TEMPORARY EROSION CONTROL DETAILS

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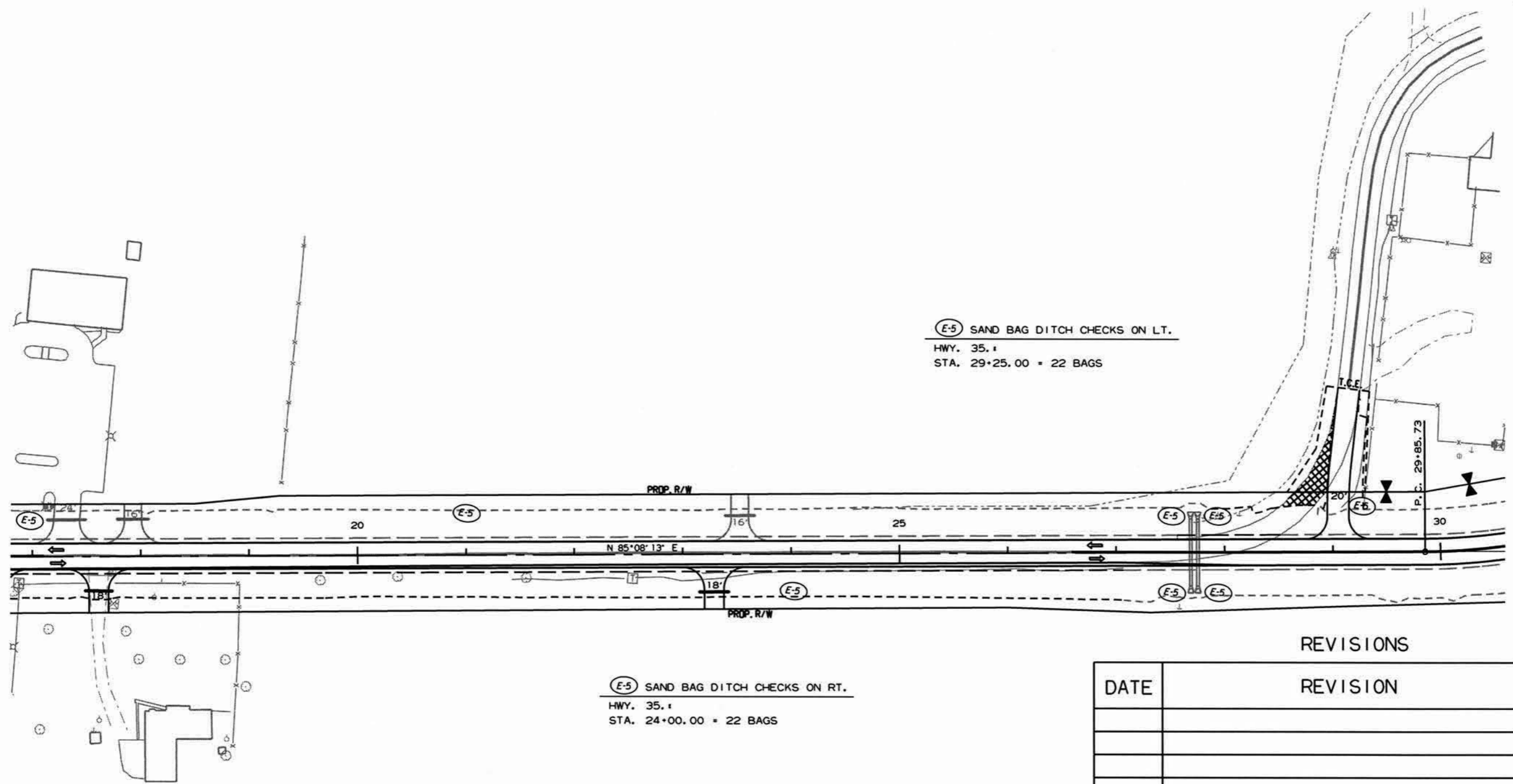
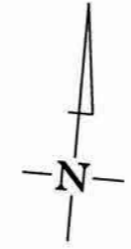
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				6	ARK.		18	78

② TEMPORARY EROSION CONTROL DETAILS



**LEGEND**

(E-5) SAND BAG DITCH CHECKS



(E-5) SAND BAG DITCH CHECKS ON LT.  
 HWY. 35. +  
 STA. 29+25.00 = 22 BAGS

(E-5) SAND BAG DITCH CHECKS ON RT.  
 HWY. 35. +  
 STA. 24+00.00 = 22 BAGS

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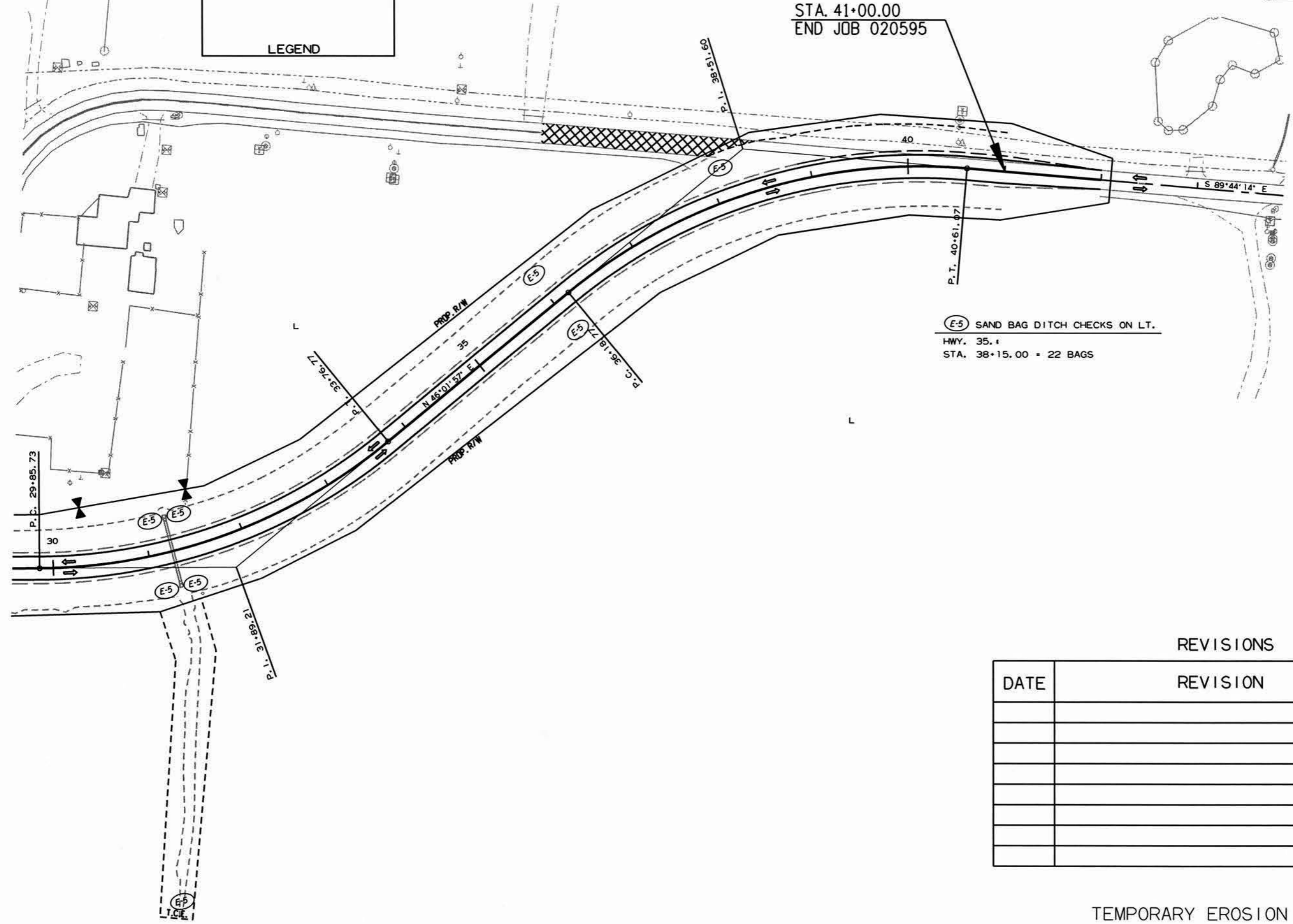
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				6	ARK.		19	78

② TEMPORARY EROSION CONTROL DETAILS



(E-5) SAND BAG DITCH CHECKS  
LEGEND

STA. 41+00.00  
END JOB 020595



(E-5) SAND BAG DITCH CHECKS ON LT.  
HWY. 35. +  
STA. 38+15.00 = 22 BAGS

REVISIONS

DATE	REVISION

STAGE 3B  
TEMPORARY EROSION CONTROL DETAILS

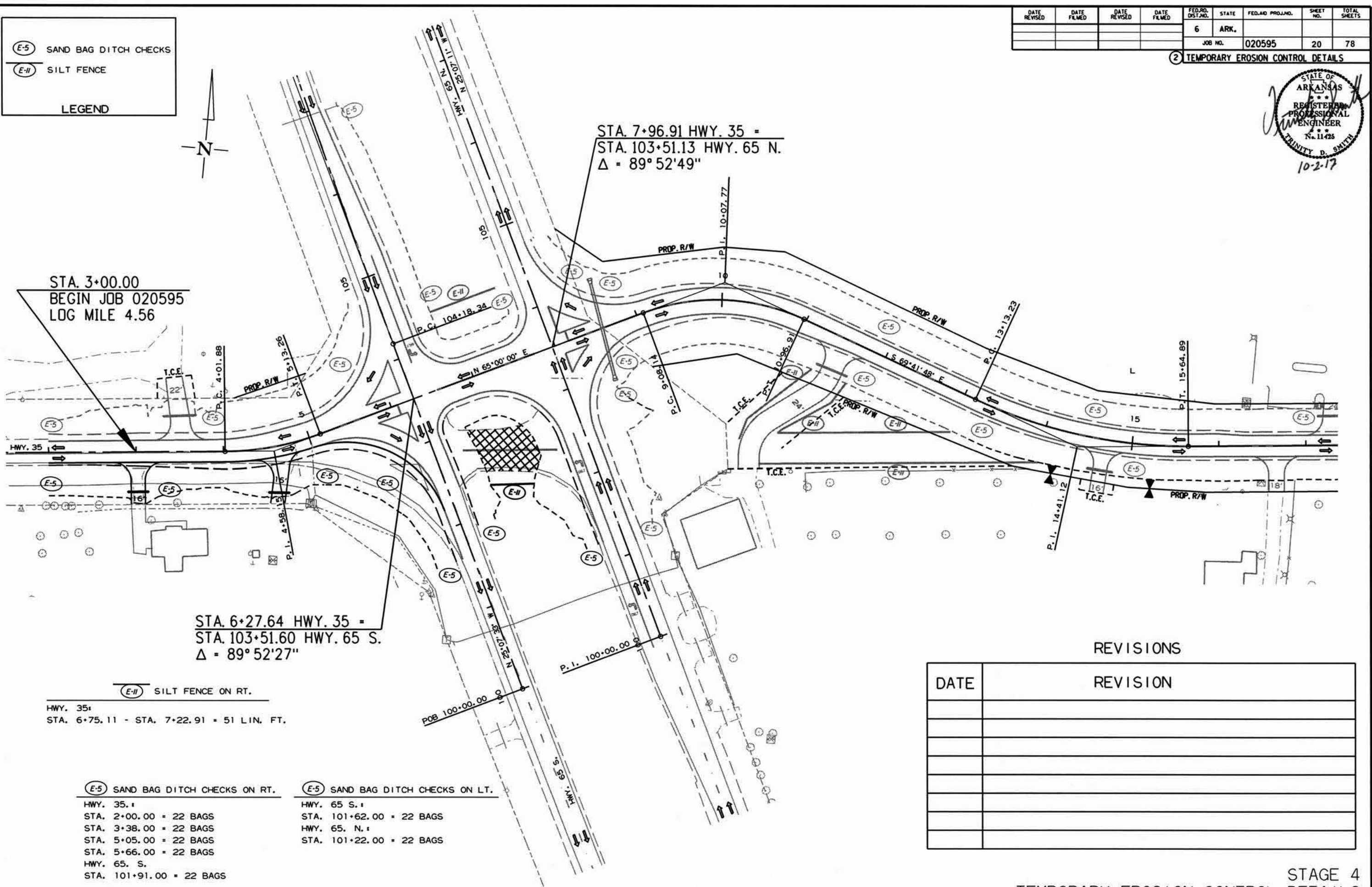
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				6	ARK.			
				JOB NO.	020595		20	78

② TEMPORARY EROSION CONTROL DETAILS



**LEGEND**

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



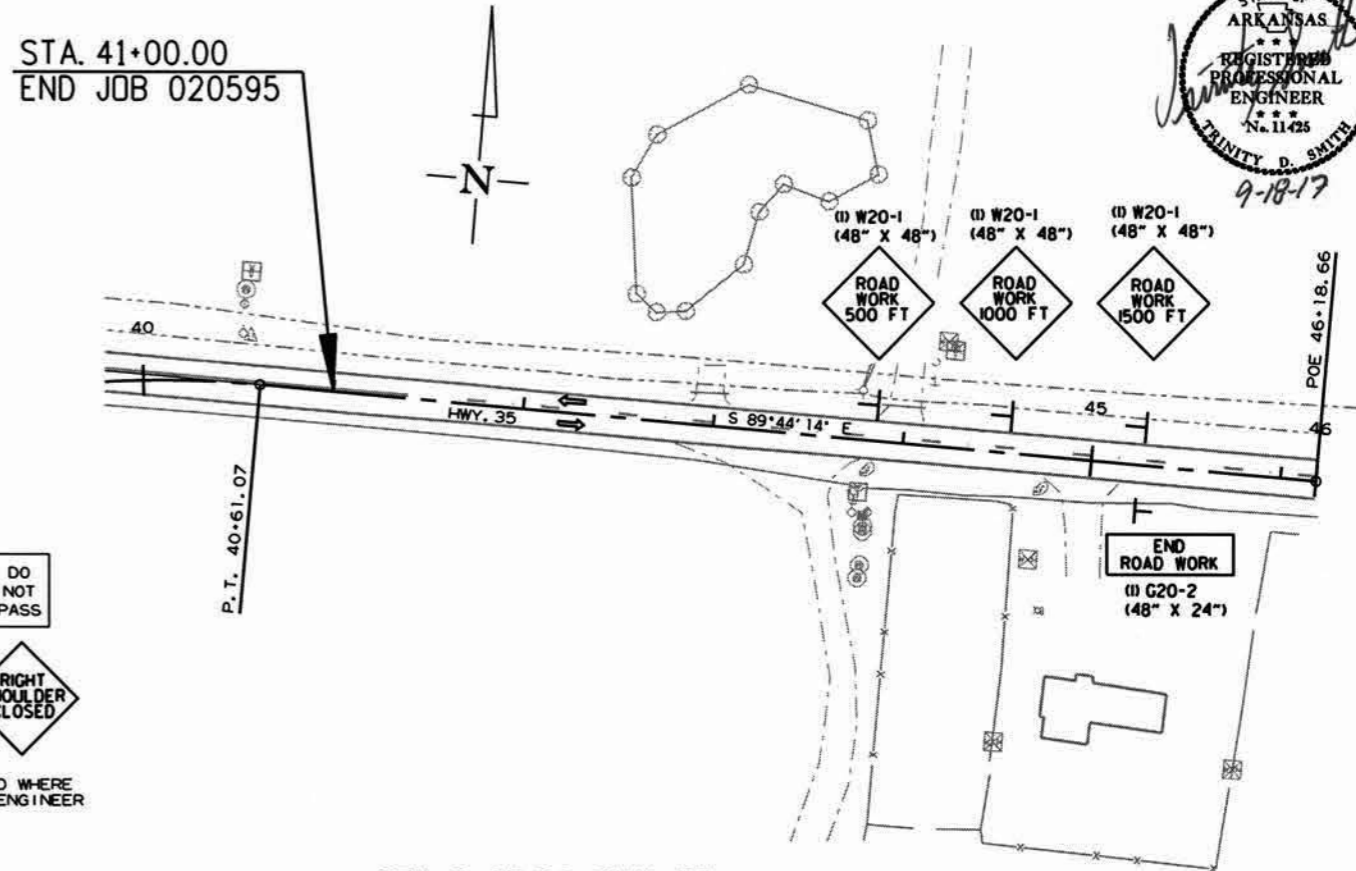
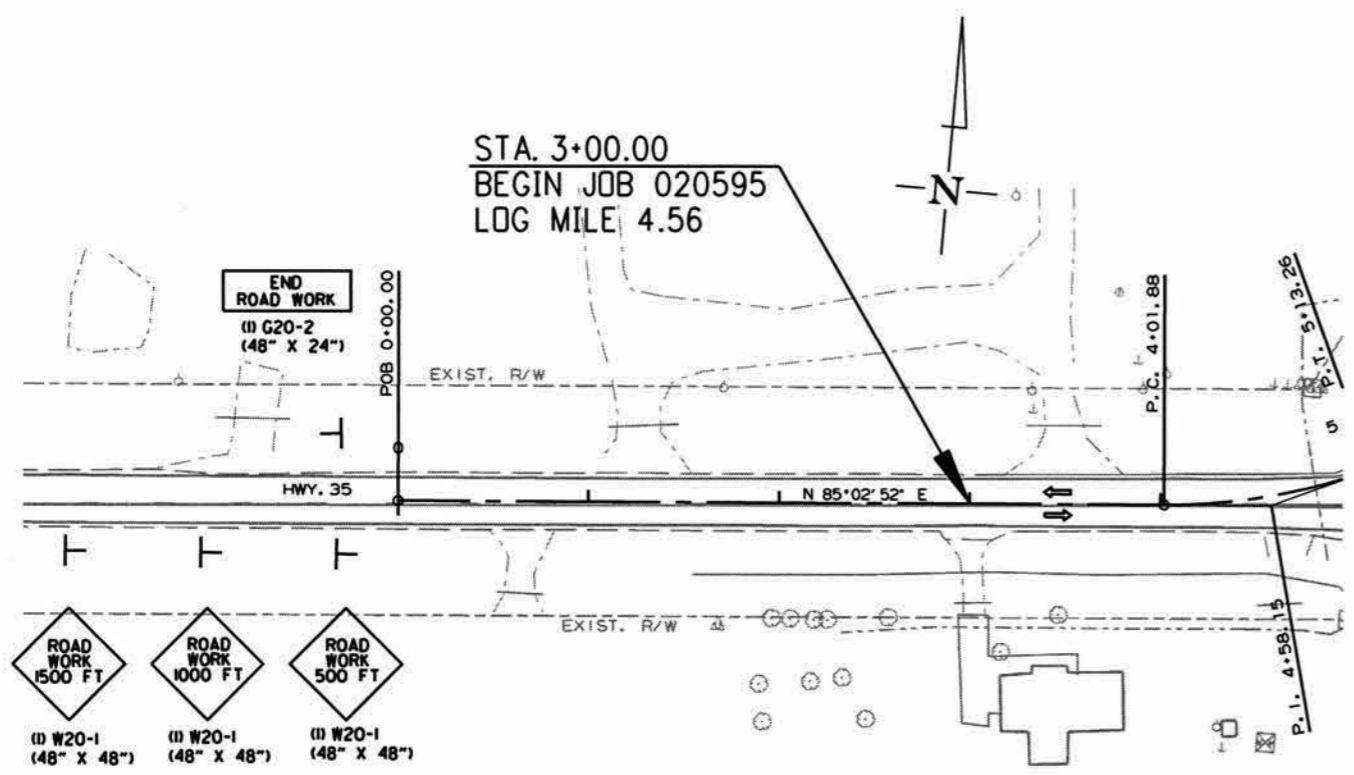
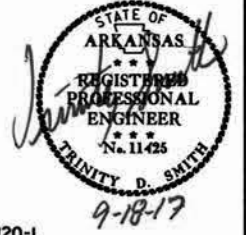
REVISIONS

DATE	REVISION

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		21	78
				JOB NO.		020595		

② MAINTENANCE OF TRAFFIC DETAILS



SEQUENCE OF CONSTRUCTION:

STAGE 1:  
CONSTRUCT MEDIAN CROSSOVER  
CONSTRUCT LEFT TURN LANE HWY. 65 S.  
STA. 104+16.42 - STA. 107+01.44

STAGE 2:  
LEVELING  
CONSTRUCT LEFT SIDE OF HWY. 35  
STA. 2+00.00 - STA. 6+27.64

STAGE 3A:  
CONSTRUCT HWY. 35  
STA. 8+09.02 - STA. 14+09.22  
STA. 28+50.00 - STA. 39+00.00  
LEVELING  
CONSTRUCT LEFT SIDE OF HWY. 35  
STA. 14+09.22 - STA. 27+56.00  
STA. 28+09.00 - STA. 28+50.00  
CONSTRUCT RIGHT SIDE OF HWY. 35  
STA. 27+00.00 - STA. 28+50.00  
STA. 39+00.00 - STA. 42+00.00

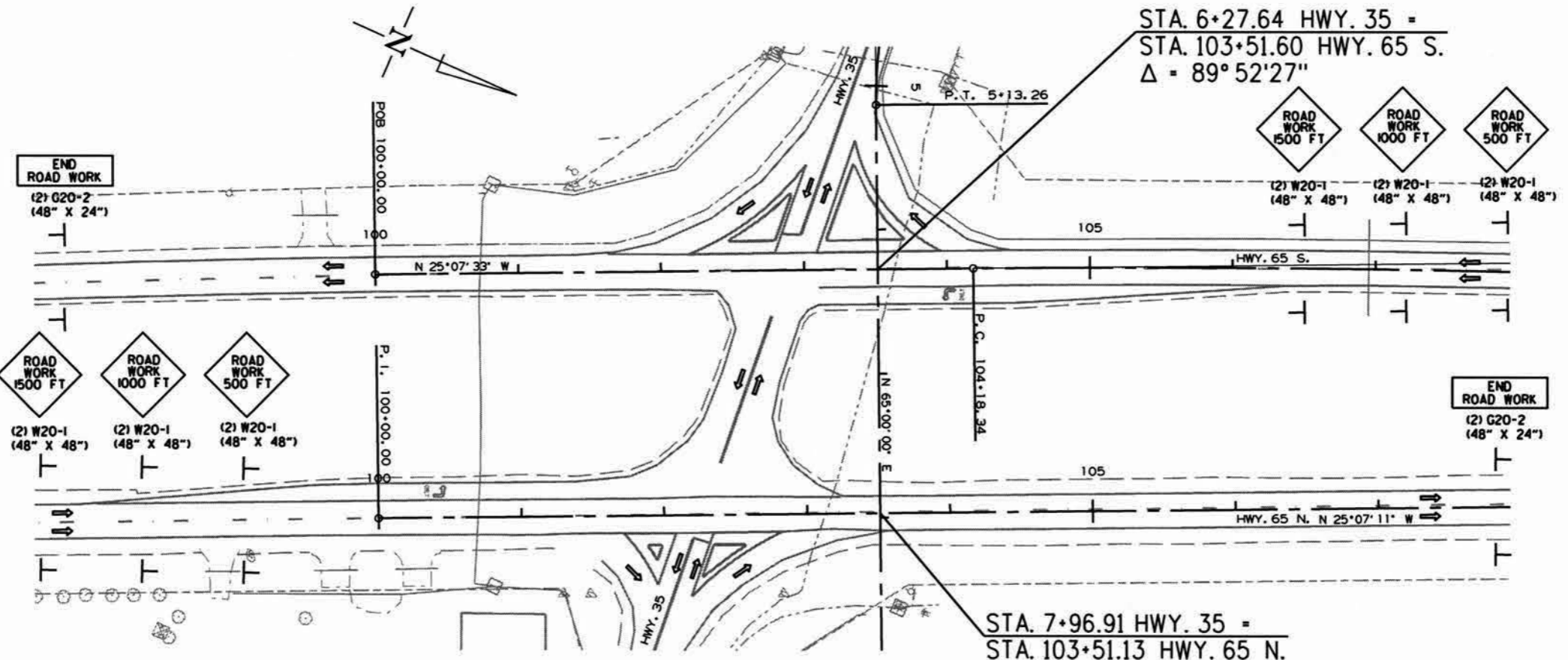
STAGE 3B:  
SHIFT TRAFFIC ONTO NEW HWY. 35  
CLOSE EXISTING CROSSOVER  
OBLITERATE EXISTING HWY. 35  
STA. 8+43.00 - STA. 13+43.00  
STA. 28+50.00 - STA. 28+95.00  
STA. 36+85.00 - STA. 38+60.00  
CONSTRUCT RIGHT SIDE OF HWY. 65 N.  
STA. 101+22.39 - STA. 102+84.91  
CONSTRUCT RIGHT SIDE OF HWY. 35  
STA. 14+09.22 - STA. 27+00.00  
CONSTRUCT LEFT SIDE OF HWY. 35  
STA. 27+56.00 - STA. 28+09.00  
STA. 39+00.00 - STA. 42+00.00

STAGE 4:  
CONSTRUCT RIGHT SIDE OF HWY. 35  
STA. 2+00.00 - STA. 6+27.64  
OBLITERATE EXISTING CROSSOVER  
PLACE FINAL 2" OF SURFACE COURSE  
INSTALL PERMANENT PAVEMENT MARKINGS

(6) R4-1 (24" X 30") DO NOT PASS

(6) W21-5a (36" X 36") RIGHT SHOULDER CLOSED

TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER



STA. 6+27.64 HWY. 35 =  
STA. 103+51.60 HWY. 65 S.  
 $\Delta = 89^\circ 52' 27''$

STA. 7+96.91 HWY. 35 =  
STA. 103+51.13 HWY. 65 N.  
 $\Delta = 89^\circ 52' 49''$

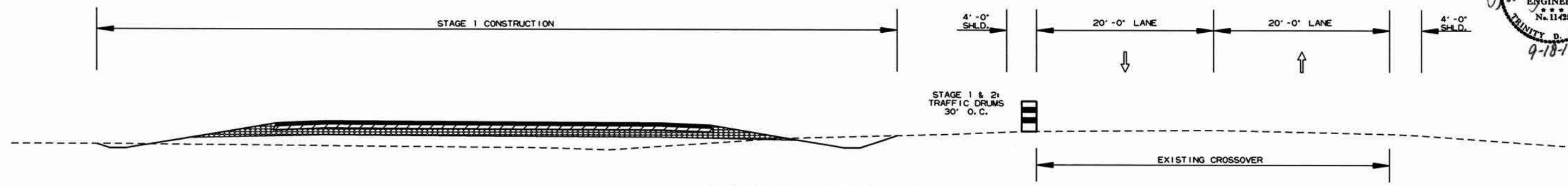
ADVANCE WARNING  
MAINTENANCE OF TRAFFIC DETAILS

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO. 020595	22

② MAINTENANCE OF TRAFFIC DETAILS



STAGE 1 CONSTRUCTION  
HWY. 35 CROSSOVER  
STA. 6+39.68 - STA. 7+84.90

SEQUENCE OF CONSTRUCTION:

STAGE 1:  
CONSTRUCT MEDIAN CROSSOVER  
CONSTRUCT LEFT TURN LANE HWY. 65 S.  
STA. 104+16.42 - STA. 107+01.44

STAGE 2:  
LEVELING  
CONSTRUCT LEFT SIDE OF HWY. 35  
STA. 2+00.00 - STA. 6+27.64

STAGE 3A:  
CONSTRUCT HWY. 35  
STA. 8+09.02 - STA. 14+09.22  
STA. 28+50.00 - STA. 39+00.00

LEVELING  
CONSTRUCT LEFT SIDE OF HWY. 35  
STA. 14+09.22 - STA. 27+56.00  
STA. 28+09.00 - STA. 28+50.00

CONSTRUCT RIGHT SIDE OF HWY. 35  
STA. 27+00.00 - STA. 28+50.00  
STA. 39+00.00 - STA. 42+00.00

STAGE 3B:  
SHIFT TRAFFIC ONTO NEW HWY. 35  
CLOSE EXISTING CROSSOVER  
OBLITERATE EXISTING HWY. 35  
STA. 8+43.00 - STA. 13+43.00  
STA. 28+50.00 - STA. 28+95.00  
STA. 36+85.00 - STA. 38+60.00

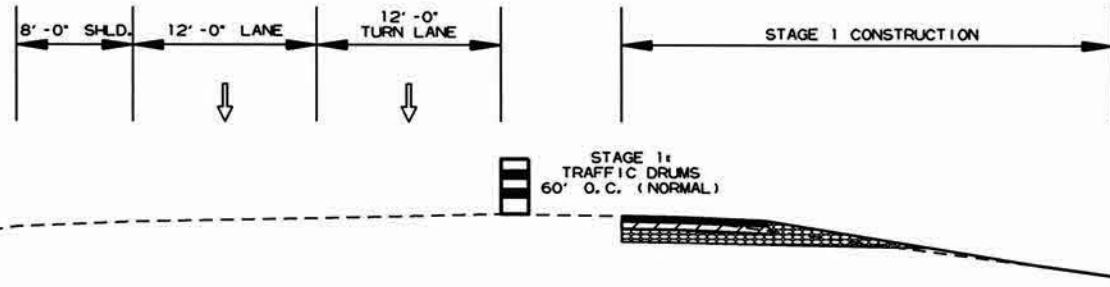
CONSTRUCT RIGHT SIDE OF HWY. 65 N.  
STA. 101+22.39 - STA. 102+84.91

CONSTRUCT RIGHT SIDE OF HWY. 35  
STA. 14+09.22 - STA. 27+00.00

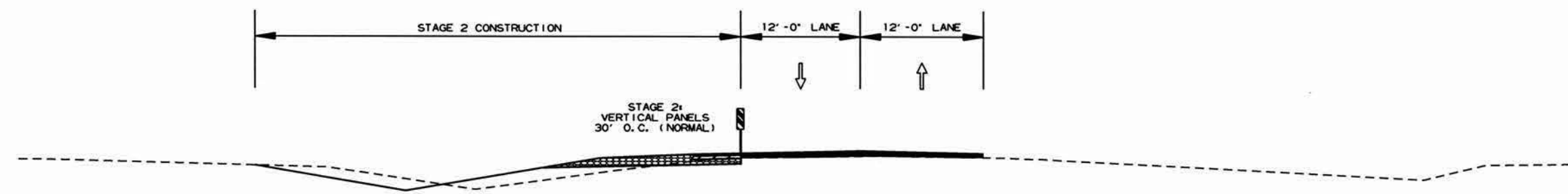
CONSTRUCT LEFT SIDE OF HWY. 35  
STA. 27+56.00 - STA. 28+09.00  
STA. 39+00.00 - STA. 42+00.00

STAGE 4:  
CONSTRUCT RIGHT SIDE OF HWY. 35  
STA. 2+00.00 - STA. 6+27.64  
OBLITERATE EXISTING CROSSOVER

PLACE FINAL 2" OF SURFACE COURSE  
INSTALL PERMANENT PAVEMENT MARKINGS



STAGE 1 CONSTRUCTION  
HWY. 65 S.  
STA. 104+16.42 - STA. 107+01.44



STAGE 2 CONSTRUCTION  
HWY. 35  
STA. 2+00.00 - STA. 6+15.68

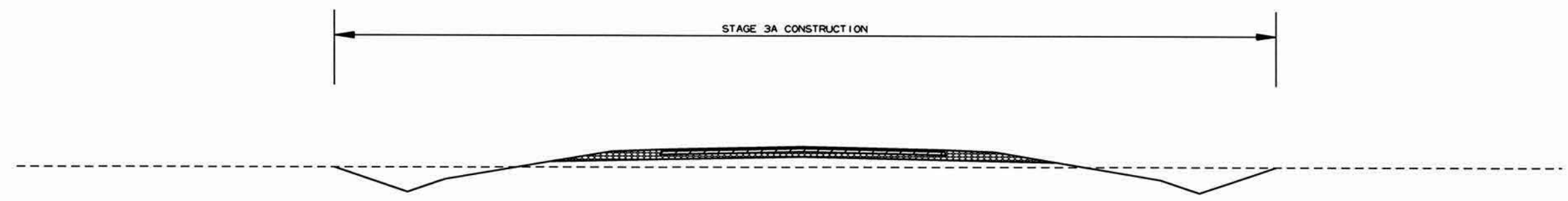
ALL STAGES  
MAINTENANCE OF TRAFFIC DETAILS

8/25/2017

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	020595
							SHEET NO.	23
							TOTAL SHEETS	78

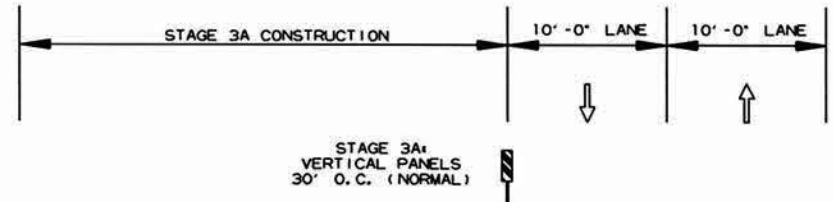
② MAINTENANCE OF TRAFFIC DETAILS



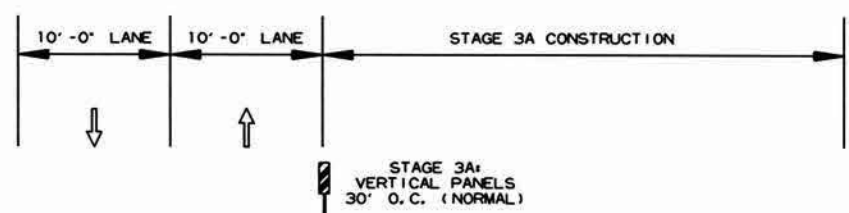
STAGE 3A CONSTRUCTION  
 HWY. 35  
 STA. 8+09.02 - STA. 14+09.22  
 STA. 28+50.00 - STA. 39+00.00

SEQUENCE OF CONSTRUCTION:

- STAGE 1:
- CONSTRUCT MEDIAN CROSSOVER
- CONSTRUCT LEFT TURN LANE HWY. 65 S.
- STA. 104+16.42 - STA. 107+01.44
- STAGE 2:
- LEVELING
- CONSTRUCT LEFT SIDE OF HWY. 35
- STA. 2+00.00 - STA. 6+27.64
- STAGE 3A:
- CONSTRUCT HWY. 35
- STA. 8+09.02 - STA. 14+09.22
- STA. 28+50.00 - STA. 39+00.00
- LEVELING
- CONSTRUCT LEFT SIDE OF HWY. 35
- STA. 14+09.22 - STA. 27+56.00
- STA. 28+09.00 - STA. 28+50.00
- CONSTRUCT RIGHT SIDE OF HWY. 35
- STA. 27+00.00 - STA. 28+50.00
- STA. 39+00.00 - STA. 42+00.00
- STAGE 3B:
- SHIFT TRAFFIC ONTO NEW HWY. 35
- CLOSE EXISTING CROSSOVER
- OBLITERATE EXISTING HWY. 35
- STA. 8+43.00 - STA. 13+43.00
- STA. 28+50.00 - STA. 28+95.00
- STA. 36+85.00 - STA. 38+60.00
- CONSTRUCT RIGHT SIDE OF HWY. 65 N.
- STA. 101+22.39 - STA. 102+84.91
- CONSTRUCT RIGHT SIDE OF HWY. 35
- STA. 14+09.22 - STA. 27+00.00
- CONSTRUCT LEFT SIDE OF HWY. 35
- STA. 27+56.00 - STA. 28+09.00
- STA. 39+00.00 - STA. 42+00.00
- STAGE 4:
- CONSTRUCT RIGHT SIDE OF HWY. 35
- STA. 2+00.00 - STA. 6+27.64
- OBLITERATE EXISTING CROSSOVER
- PLACE FINAL 2" OF SURFACE COURSE
- INSTALL PERMANENT PAVEMENT MARKINGS



STAGE 3A CONSTRUCTION  
 HWY. 35  
 STA. 14+09.22 - STA. 27+56.00  
 STA. 28+09.00 - STA. 28+50.00



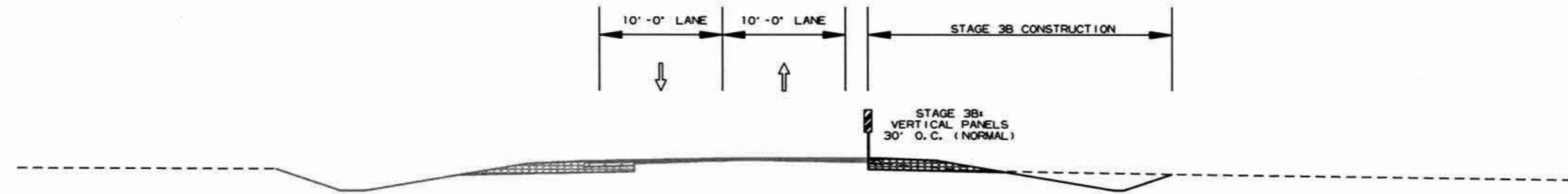
STAGE 3A CONSTRUCTION  
 HWY. 35  
 STA. 27+00.00 - STA. 28+09.00  
 STA. 39+00.00 - STA. 42+00.00

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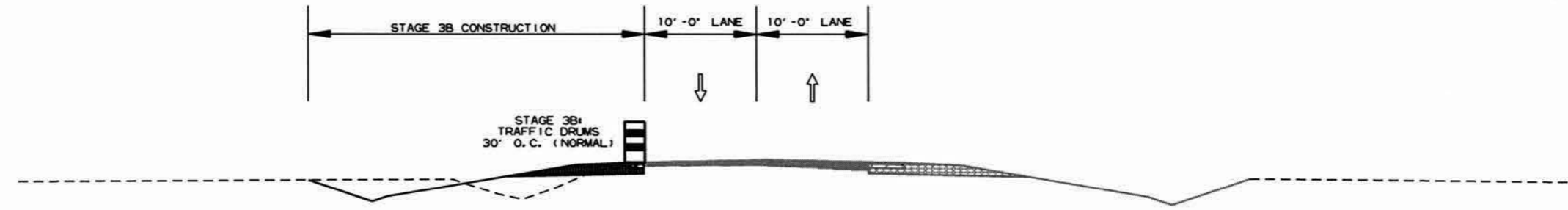
ALL STAGES  
 MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020595	24	78

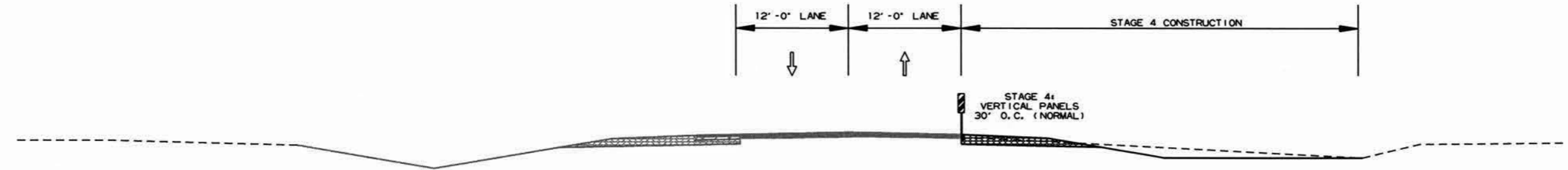
② MAINTENANCE OF TRAFFIC DETAILS



STAGE 3B CONSTRUCTION  
HWY. 35  
STA. 14+09.22 - STA. 27+00.00



STAGE 3B CONSTRUCTION  
HWY. 35  
STA. 27+56.00 - STA. 28+09.00  
STA. 39+00.00 - STA. 42+00.00



STAGE 4 CONSTRUCTION  
HWY. 35  
STA. 2+00.00 - STA. 6+15.68

SEQUENCE OF CONSTRUCTION:

- STAGE 1:  
CONSTRUCT MEDIAN CROSSOVER  
CONSTRUCT LEFT TURN LANE HWY. 65 S.  
STA. 104+16.42 - STA. 107+01.44
- STAGE 2:  
LEVELING  
CONSTRUCT LEFT SIDE OF HWY. 35  
STA. 2+00.00 - STA. 6+27.64
- STAGE 3A:  
CONSTRUCT HWY. 35  
STA. 8+09.02 - STA. 14+09.22  
STA. 28+50.00 - STA. 39+00.00  
LEVELING  
CONSTRUCT LEFT SIDE OF HWY. 35  
STA. 14+09.22 - STA. 27+56.00  
STA. 28+09.00 - STA. 28+50.00  
CONSTRUCT RIGHT SIDE OF HWY. 35  
STA. 27+00.00 - STA. 28+50.00  
STA. 39+00.00 - STA. 42+00.00
- STAGE 3B:  
SHIFT TRAFFIC ONTO NEW HWY. 35  
CLOSE EXISTING CROSSOVER  
OBLITERATE EXISTING HWY. 35  
STA. 8+43.00 - STA. 13+43.00  
STA. 28+50.00 - STA. 28+95.00  
STA. 36+85.00 - STA. 38+60.00  
CONSTRUCT RIGHT SIDE OF HWY. 65 N.  
STA. 101+22.39 - STA. 102+84.91  
CONSTRUCT RIGHT SIDE OF HWY. 35  
STA. 14+09.22 - STA. 27+00.00  
CONSTRUCT LEFT SIDE OF HWY. 35  
STA. 27+56.00 - STA. 28+09.00  
STA. 39+00.00 - STA. 42+00.00
- STAGE 4:  
CONSTRUCT RIGHT SIDE OF HWY. 35  
STA. 2+00.00 - STA. 6+27.64  
OBLITERATE EXISTING CROSSOVER
- PLACE FINAL 2" OF SURFACE COURSE  
INSTALL PERMANENT PAVEMENT MARKINGS

8/25/2017 ZBORNER.CEL

ALL STAGES  
MAINTENANCE OF TRAFFIC DETAILS



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020595		25	78

② MAINTENANCE OF TRAFFIC DETAILS



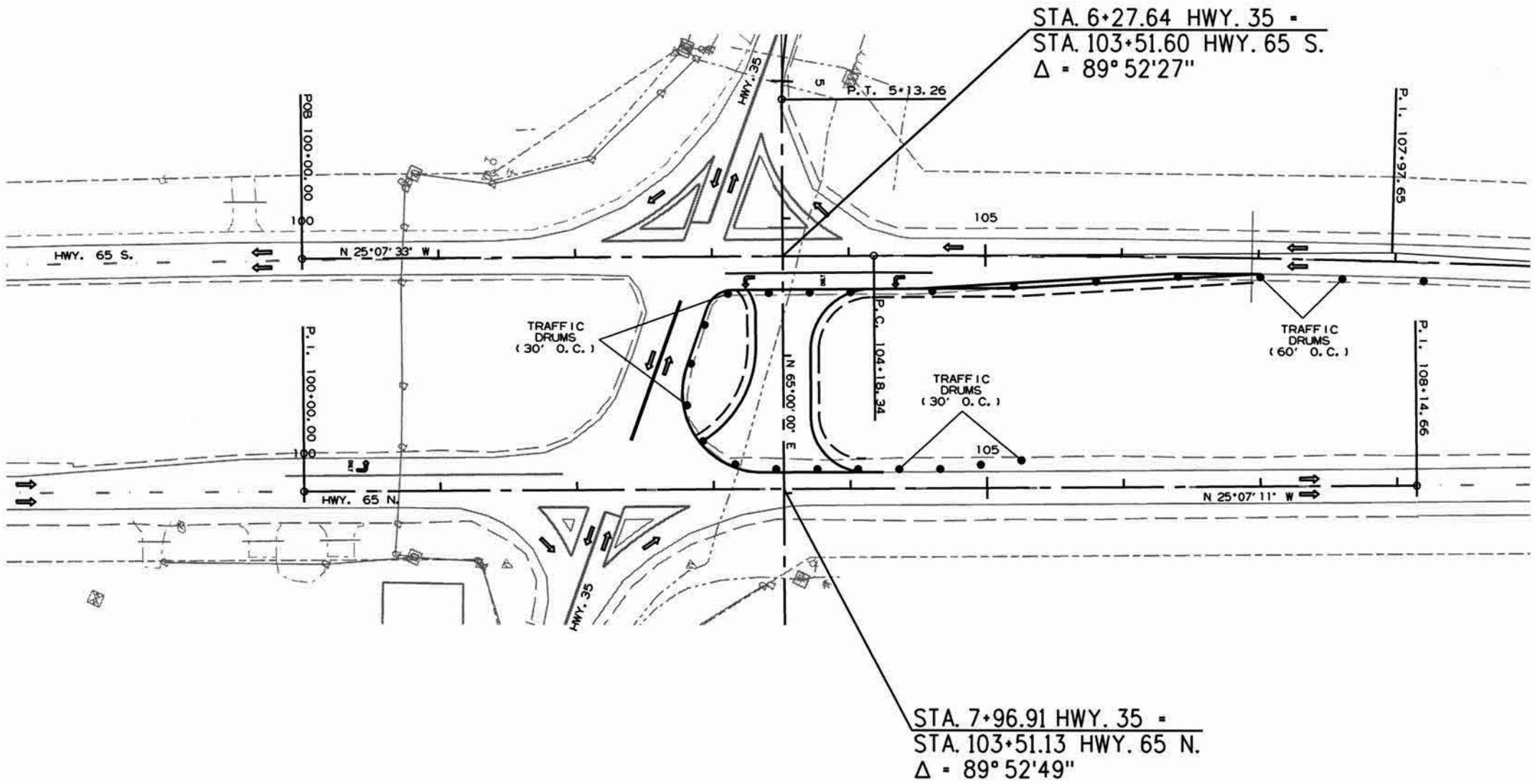
SEQUENCE OF CONSTRUCTION:

- STAGE 1:
  - CONSTRUCT MEDIAN CROSSOVER
  - CONSTRUCT LEFT TURN LANE HWY. 65 S. STA. 104+16.42 - STA. 107+01.44
- STAGE 2:
  - LEVELING
  - CONSTRUCT LEFT SIDE OF HWY. 35 STA. 2+00.00 - STA. 6+27.64
- STAGE 3A:
  - CONSTRUCT HWY. 35 STA. 8+09.02 - STA. 14+09.22 STA. 28+50.00 - STA. 39+00.00
  - LEVELING
  - CONSTRUCT LEFT SIDE OF HWY. 35 STA. 14+09.22 - STA. 27+56.00 STA. 28+09.00 - STA. 28+50.00
  - CONSTRUCT RIGHT SIDE OF HWY. 35 STA. 27+00.00 - STA. 28+50.00 STA. 39+00.00 - STA. 42+00.00
- STAGE 3B:
  - SHIFT TRAFFIC ONTO NEW HWY. 35
  - CLOSE EXISTING CROSSOVER
  - OBLITERATE EXISTING HWY. 35 STA. 8+43.00 - STA. 13+43.00 STA. 28+50.00 - STA. 28+95.00 STA. 36+85.00 - STA. 38+60.00
  - CONSTRUCT RIGHT SIDE OF HWY. 65 N. STA. 101+22.39 - STA. 102+84.91
  - CONSTRUCT RIGHT SIDE OF HWY. 35 STA. 14+09.22 - STA. 27+00.00
  - CONSTRUCT LEFT SIDE OF HWY. 35 STA. 27+56.00 - STA. 28+09.00 STA. 39+00.00 - STA. 42+00.00
- STAGE 4:
  - CONSTRUCT RIGHT SIDE OF HWY. 35 STA. 2+00.00 - STA. 6+27.64
  - OBLITERATE EXISTING CROSSOVER
- PLACE FINAL 2" OF SURFACE COURSE
- INSTALL PERMANENT PAVEMENT MARKINGS

- TRAFFIC DRUMS @ 30' O.C. = 16 EACH
- HWY. 65 S. STA. 103+31.56-104+01.08
- HWY. 65 N. STA. 102+92.00-105+25.00
- EXISTING CROSSOVER
- TRAFFIC DRUMS @ 60' O.C. = 7 EACH
- HWY. 65 S. STA. 104+61.00-108+21.53

- CONSTRUCTION PAVEMENT MARKINGS:
  - 4" WHITE SOLID EDGE LINE ON RT. EXISTING CROSSOVER = 113 LIN. FT.
  - 4" DOUBLE YELLOW EXISTING CROSSOVER = 216 LIN. FT.

- REMOVABLE CONSTRUCTION PAVEMENT MARKINGS:
  - 4" WHITE SOLID FOR TURN LANE LINES: HWY. 65 S. STA. 103+10.00-104+60.00 = 150 LIN. FT.
  - 4" YELLOW SOLID EDGE LINE ON RT.: HWY. 65 S. STA. 103+03.00-107+01.00 = 412 LIN. FT.
  - 4" YELLOW SOLID EDGE LINE ON LT.: HWY. 65 N. STA. 102+88.44-104+25.00 = 145 LIN. FT.
  - ARROWS = 3 EACH
  - WORDS = 2 EACH



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				6	ARK.			
							JOB NO. 020595	26 78

② MAINTENANCE OF TRAFFIC DETAILS



SEQUENCE OF CONSTRUCTION:

STAGE 1:  
CONSTRUCT MEDIAN CROSSOVER  
CONSTRUCT LEFT TURN LANE HWY. 65 S.  
STA. 104+16.42 - STA. 107+01.44

STAGE 2:  
LEVELING  
CONSTRUCT LEFT SIDE OF HWY. 35  
STA. 2+00.00 - STA. 6+27.64

STAGE 3A:  
CONSTRUCT HWY. 35  
STA. 8+09.02 - STA. 14+09.22  
STA. 28+50.00 - STA. 39+00.00

LEVELING  
CONSTRUCT LEFT SIDE OF HWY. 35  
STA. 14+09.22 - STA. 27+56.00  
STA. 28+09.00 - STA. 28+50.00

CONSTRUCT RIGHT SIDE OF HWY. 35  
STA. 27+00.00 - STA. 28+50.00  
STA. 39+00.00 - STA. 42+00.00

STAGE 3B:  
SHIFT TRAFFIC ONTO NEW HWY. 35  
CLOSE EXISTING CROSSOVER  
OBLITERATE EXISTING HWY. 35  
STA. 8+43.00 - STA. 13+43.00  
STA. 28+50.00 - STA. 28+95.00  
STA. 36+85.00 - STA. 38+60.00

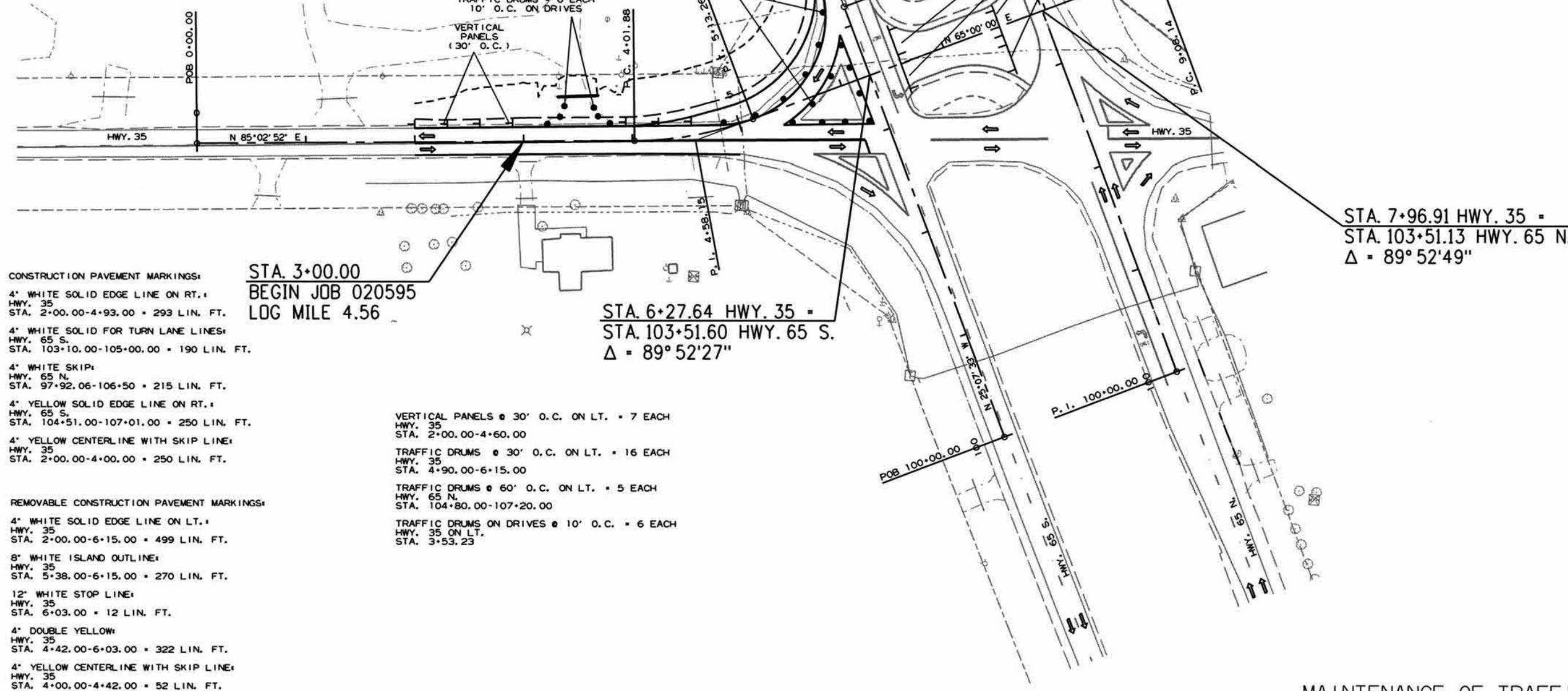
CONSTRUCT RIGHT SIDE OF HWY. 65 N.  
STA. 101+22.39 - STA. 102+84.91

CONSTRUCT RIGHT SIDE OF HWY. 35  
STA. 14+09.22 - STA. 27+00.00

CONSTRUCT LEFT SIDE OF HWY. 35  
STA. 27+56.00 - STA. 28+09.00  
STA. 39+00.00 - STA. 42+00.00

STAGE 4:  
CONSTRUCT RIGHT SIDE OF HWY. 35  
STA. 2+00.00 - STA. 6+27.64  
OBLITERATE EXISTING CROSSOVER

PLACE FINAL 2" OF SURFACE COURSE  
INSTALL PERMANENT PAVEMENT MARKINGS



CONSTRUCTION PAVEMENT MARKINGS:

4" WHITE SOLID EDGE LINE ON RT. HWY. 35  
STA. 2+00.00-4+93.00 = 293 LIN. FT.

4" WHITE SOLID FOR TURN LANE LINES HWY. 65 S.  
STA. 103+10.00-105+00.00 = 190 LIN. FT.

4" WHITE SKIP HWY. 65 N.  
STA. 97+92.06-106+50 = 215 LIN. FT.

4" YELLOW SOLID EDGE LINE ON RT. HWY. 65 S.  
STA. 104+51.00-107+01.00 = 250 LIN. FT.

4" YELLOW CENTERLINE WITH SKIP LINE HWY. 35  
STA. 2+00.00-4+00.00 = 250 LIN. FT.

REMOVABLE CONSTRUCTION PAVEMENT MARKINGS:

4" WHITE SOLID EDGE LINE ON LT. HWY. 35  
STA. 2+00.00-6+15.00 = 499 LIN. FT.

8" WHITE ISLAND OUTLINE HWY. 35  
STA. 5+38.00-6+15.00 = 270 LIN. FT.

12" WHITE STOP LINE HWY. 35  
STA. 6+03.00 = 12 LIN. FT.

4" DOUBLE YELLOW HWY. 35  
STA. 4+42.00-6+03.00 = 322 LIN. FT.

4" YELLOW CENTERLINE WITH SKIP LINE HWY. 35  
STA. 4+00.00-4+42.00 = 52 LIN. FT.

VERTICAL PANELS @ 30' O.C. ON LT. = 7 EACH  
HWY. 35  
STA. 2+00.00-4+60.00

TRAFFIC DRUMS @ 30' O.C. ON LT. = 16 EACH  
HWY. 35  
STA. 4+90.00-6+15.00

TRAFFIC DRUMS @ 60' O.C. ON LT. = 5 EACH  
HWY. 65 N.  
STA. 104+80.00-107+20.00

TRAFFIC DRUMS ON DRIVES @ 10' O.C. = 6 EACH  
HWY. 35 ON LT.  
STA. 3+53.23

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		27	78

② MAINTENANCE OF TRAFFIC DETAILS



SEQUENCE OF CONSTRUCTION:

STAGE 1:  
CONSTRUCT MEDIAN CROSSOVER  
CONSTRUCT LEFT TURN LANE HWY. 65 S.  
STA. 104+16.42 - STA. 107+01.44

STAGE 2:  
LEVELING  
CONSTRUCT LEFT SIDE OF HWY. 35  
STA. 2+00.00 - STA. 6+27.64

STAGE 3A:  
CONSTRUCT HWY. 35  
STA. 8+09.02 - STA. 14+09.22  
STA. 28+50.00 - STA. 39+00.00

LEVELING  
CONSTRUCT LEFT SIDE OF HWY. 35  
STA. 14+09.22 - STA. 27+56.00  
STA. 28+09.00 - STA. 28+50.00

CONSTRUCT RIGHT SIDE OF HWY. 35  
STA. 27+00.00 - STA. 28+50.00  
STA. 39+00.00 - STA. 42+00.00

STAGE 3B:  
SHIFT TRAFFIC ONTO NEW HWY. 35  
CLOSE EXISTING CROSSOVER  
OBLITERATE EXISTING HWY. 35  
STA. 8+43.00 - STA. 13+43.00  
STA. 28+50.00 - STA. 28+95.00  
STA. 36+85.00 - STA. 38+60.00

CONSTRUCT RIGHT SIDE OF HWY. 65 N.  
STA. 101+22.39 - STA. 102+84.91

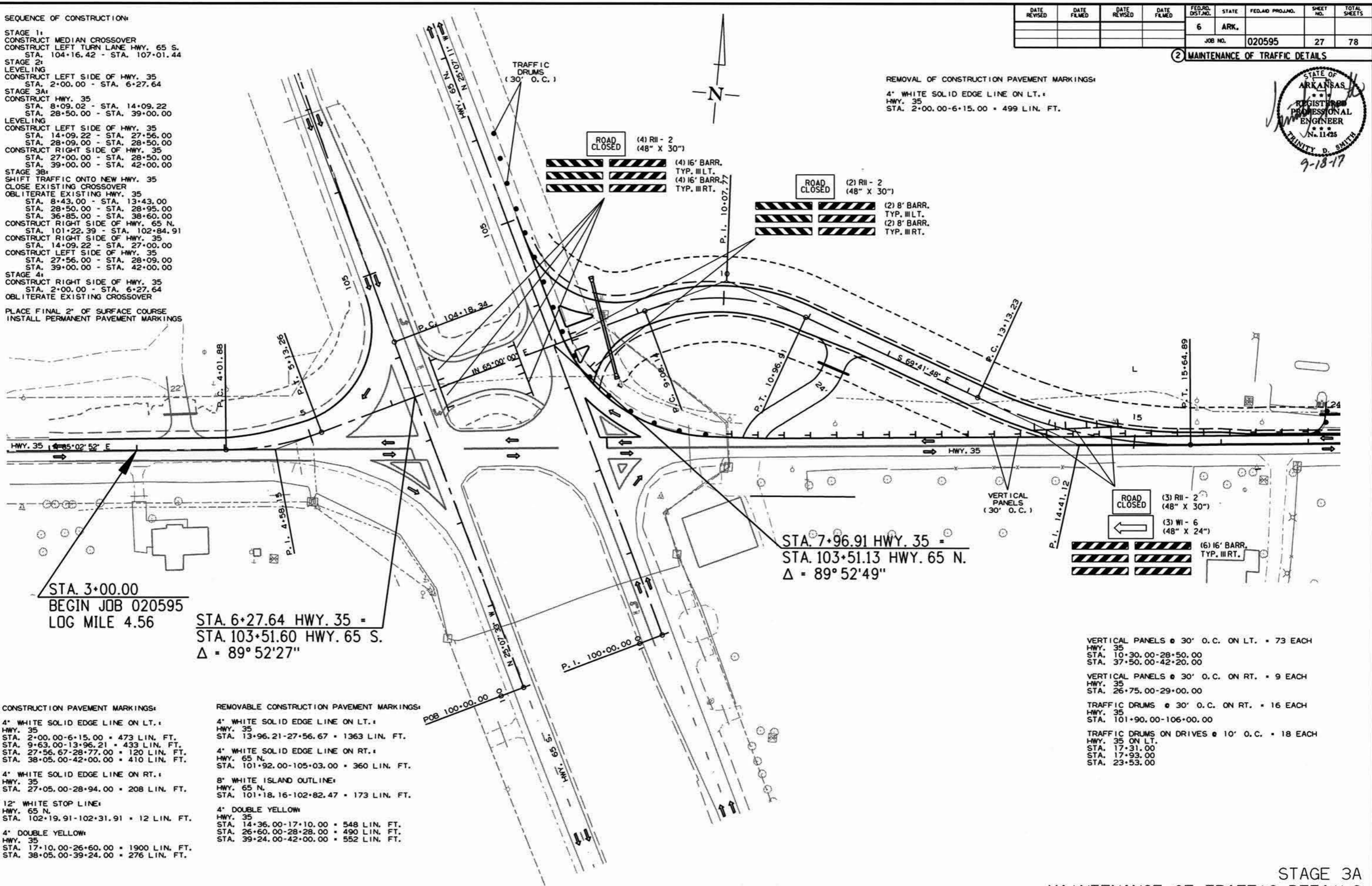
CONSTRUCT RIGHT SIDE OF HWY. 35  
STA. 14+09.22 - STA. 27+00.00

CONSTRUCT LEFT SIDE OF HWY. 35  
STA. 27+56.00 - STA. 28+09.00  
STA. 39+00.00 - STA. 42+00.00

STAGE 4:  
CONSTRUCT RIGHT SIDE OF HWY. 35  
STA. 2+00.00 - STA. 6+27.64  
OBLITERATE EXISTING CROSSOVER

PLACE FINAL 2" OF SURFACE COURSE  
INSTALL PERMANENT PAVEMENT MARKINGS

REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS:  
4" WHITE SOLID EDGE LINE ON LT. HWY. 35  
STA. 2+00.00-6+15.00 = 499 LIN. FT.



STA. 7+96.91 HWY. 35 =  
STA. 103+51.13 HWY. 65 N.  
 $\Delta = 89^\circ 52' 49''$

STA. 3+00.00  
BEGIN JOB 020595  
LOG MILE 4.56

STA. 6+27.64 HWY. 35 =  
STA. 103+51.60 HWY. 65 S.  
 $\Delta = 89^\circ 52' 27''$

CONSTRUCTION PAVEMENT MARKINGS:

4" WHITE SOLID EDGE LINE ON LT. HWY. 35  
STA. 2+00.00-6+15.00 = 473 LIN. FT.  
STA. 9+63.00-13+96.21 = 433 LIN. FT.  
STA. 27+56.67-28+77.00 = 120 LIN. FT.  
STA. 38+05.00-42+00.00 = 410 LIN. FT.

4" WHITE SOLID EDGE LINE ON RT. HWY. 35  
STA. 27+05.00-28+94.00 = 208 LIN. FT.

12" WHITE STOP LINE HWY. 65 N.  
STA. 102+19.91-102+31.91 = 12 LIN. FT.

4" DOUBLE YELLOW HWY. 35  
STA. 17+10.00-26+60.00 = 1900 LIN. FT.  
STA. 38+05.00-39+24.00 = 276 LIN. FT.

REMOVABLE CONSTRUCTION PAVEMENT MARKINGS:

4" WHITE SOLID EDGE LINE ON LT. HWY. 35  
STA. 13+96.21-27+56.67 = 1363 LIN. FT.

4" WHITE SOLID EDGE LINE ON RT. HWY. 65 N.  
STA. 101+92.00-105+03.00 = 360 LIN. FT.

8" WHITE ISLAND OUTLINE HWY. 65 N.  
STA. 101+18.16-102+82.47 = 173 LIN. FT.

4" DOUBLE YELLOW HWY. 35  
STA. 14+36.00-17+10.00 = 548 LIN. FT.  
STA. 26+60.00-28+28.00 = 490 LIN. FT.  
STA. 39+24.00-42+00.00 = 552 LIN. FT.

VERTICAL PANELS  $\bullet$  30" O.C. ON LT. = 73 EACH  
HWY. 35  
STA. 10+30.00-28+50.00  
STA. 37+50.00-42+20.00

VERTICAL PANELS  $\bullet$  30" O.C. ON RT. = 9 EACH  
HWY. 35  
STA. 26+75.00-29+00.00

TRAFFIC DRUMS  $\bullet$  30" O.C. ON RT. = 16 EACH  
HWY. 35  
STA. 101+90.00-106+00.00

TRAFFIC DRUMS ON DRIVES  $\bullet$  10" O.C. = 18 EACH  
HWY. 35 ON LT.  
STA. 17+31.00  
STA. 17+93.00  
STA. 23+53.00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020595		28	78

② MAINTENANCE OF TRAFFIC DETAILS



SEQUENCE OF CONSTRUCTION:

STAGE 1:  
CONSTRUCT MEDIAN CROSSOVER  
CONSTRUCT LEFT TURN LANE HWY. 65 S.  
STA. 104+16.42 - STA. 107+01.44

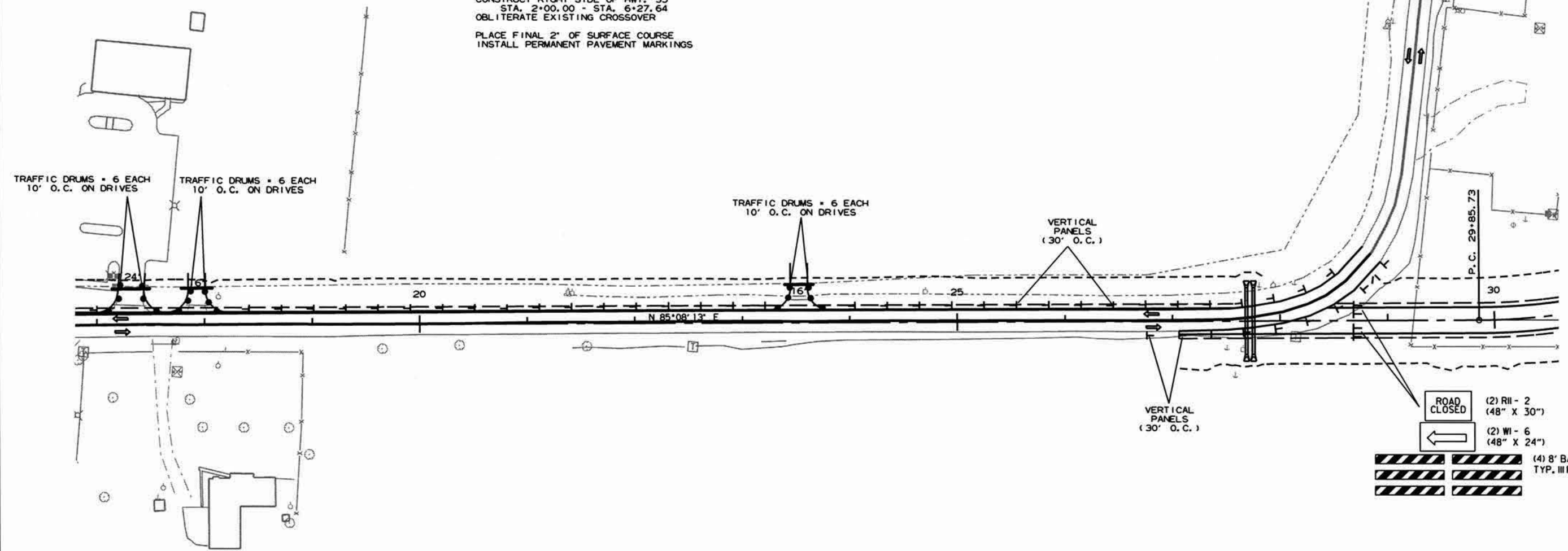
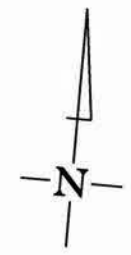
STAGE 2:  
LEVELING  
CONSTRUCT LEFT SIDE OF HWY. 35  
STA. 2+00.00 - STA. 6+27.64

STAGE 3A:  
CONSTRUCT HWY. 35  
STA. 8+09.02 - STA. 14+09.22  
STA. 28+50.00 - STA. 39+00.00  
LEVELING  
CONSTRUCT LEFT SIDE OF HWY. 35  
STA. 14+09.22 - STA. 27+56.00  
STA. 28+09.00 - STA. 28+50.00  
CONSTRUCT RIGHT SIDE OF HWY. 35  
STA. 27+00.00 - STA. 28+50.00  
STA. 39+00.00 - STA. 42+00.00

STAGE 3B:  
SHIFT TRAFFIC ONTO NEW HWY. 35  
CLOSE EXISTING CROSSOVER  
OBLITERATE EXISTING HWY. 35  
STA. 8+43.00 - STA. 13+43.00  
STA. 28+50.00 - STA. 28+95.00  
STA. 36+85.00 - STA. 38+60.00  
CONSTRUCT RIGHT SIDE OF HWY. 65 N.  
STA. 101+22.39 - STA. 102+84.91  
CONSTRUCT RIGHT SIDE OF HWY. 35  
STA. 14+09.22 - STA. 27+00.00  
CONSTRUCT LEFT SIDE OF HWY. 35  
STA. 27+56.00 - STA. 28+09.00  
STA. 39+00.00 - STA. 42+00.00

STAGE 4:  
CONSTRUCT RIGHT SIDE OF HWY. 35  
STA. 2+00.00 - STA. 6+27.64  
OBLITERATE EXISTING CROSSOVER

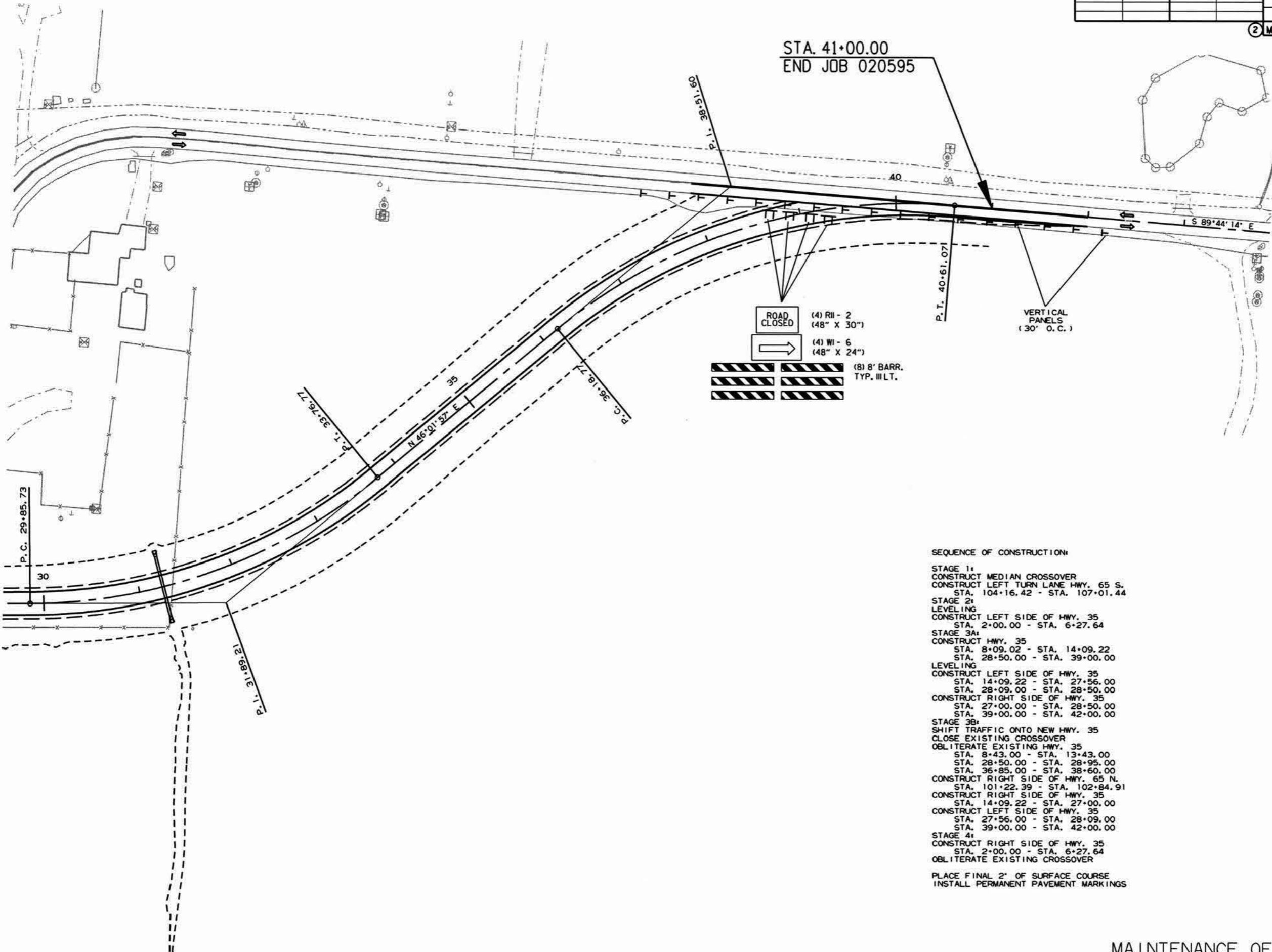
PLACE FINAL 2" OF SURFACE COURSE  
INSTALL PERMANENT PAVEMENT MARKINGS



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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020595		29	78

② MAINTENANCE OF TRAFFIC DETAILS



SEQUENCE OF CONSTRUCTION:

STAGE 1:  
 CONSTRUCT MEDIAN CROSSOVER  
 CONSTRUCT LEFT TURN LANE HWY. 65 S.  
 STA. 104+16.42 - STA. 107+01.44

STAGE 2:  
 LEVELING  
 CONSTRUCT LEFT SIDE OF HWY. 35  
 STA. 2+00.00 - STA. 6+27.64

STAGE 3A:  
 CONSTRUCT HWY. 35  
 STA. 8+09.02 - STA. 14+09.22  
 STA. 28+50.00 - STA. 39+00.00

LEVELING  
 CONSTRUCT LEFT SIDE OF HWY. 35  
 STA. 14+09.22 - STA. 27+56.00  
 STA. 28+09.00 - STA. 28+50.00

CONSTRUCT RIGHT SIDE OF HWY. 35  
 STA. 27+00.00 - STA. 28+50.00  
 STA. 39+00.00 - STA. 42+00.00

STAGE 3B:  
 SHIFT TRAFFIC ONTO NEW HWY. 35  
 CLOSE EXISTING CROSSOVER  
 OBLITERATE EXISTING HWY. 35  
 STA. 8+43.00 - STA. 13+43.00  
 STA. 28+50.00 - STA. 28+95.00  
 STA. 36+85.00 - STA. 38+60.00

CONSTRUCT RIGHT SIDE OF HWY. 65 N.  
 STA. 101+22.39 - STA. 102+84.91

CONSTRUCT RIGHT SIDE OF HWY. 35  
 STA. 14+09.22 - STA. 27+00.00

CONSTRUCT LEFT SIDE OF HWY. 35  
 STA. 27+56.00 - STA. 28+09.00  
 STA. 39+00.00 - STA. 42+00.00

STAGE 4:  
 CONSTRUCT RIGHT SIDE OF HWY. 35  
 STA. 2+00.00 - STA. 6+27.64  
 OBLITERATE EXISTING CROSSOVER

PLACE FINAL 2" OF SURFACE COURSE  
 INSTALL PERMANENT PAVEMENT MARKINGS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020595		30	78

② MAINTENANCE OF TRAFFIC DETAILS



SEQUENCE OF CONSTRUCTION:

- STAGE 1:  
CONSTRUCT MEDIAN CROSSOVER  
CONSTRUCT LEFT TURN LANE HWY. 65 S.  
STA. 104+16.42 - STA. 107+01.44
- STAGE 2:  
LEVELING  
CONSTRUCT LEFT SIDE OF HWY. 35  
STA. 2+00.00 - STA. 6+27.64
- STAGE 3A:  
CONSTRUCT HWY. 35  
STA. 8+09.02 - STA. 14+09.22  
STA. 28+50.00 - STA. 39+00.00
- LEVELING  
CONSTRUCT LEFT SIDE OF HWY. 35  
STA. 14+09.22 - STA. 27+56.00  
STA. 28+09.00 - STA. 28+50.00
- CONSTRUCT RIGHT SIDE OF HWY. 35  
STA. 27+00.00 - STA. 28+50.00  
STA. 39+00.00 - STA. 42+00.00
- STAGE 3B:  
SHIFT TRAFFIC ONTO NEW HWY. 35  
CLOSE EXISTING CROSSOVER  
OBLITERATE EXISTING HWY. 35  
STA. 8+43.00 - STA. 13+43.00  
STA. 28+50.00 - STA. 28+95.00  
STA. 36+85.00 - STA. 38+60.00
- CONSTRUCT RIGHT SIDE OF HWY. 65 N.  
STA. 101+22.39 - STA. 102+84.91
- CONSTRUCT RIGHT SIDE OF HWY. 35  
STA. 14+09.22 - STA. 27+00.00
- CONSTRUCT LEFT SIDE OF HWY. 35  
STA. 27+56.00 - STA. 28+09.00  
STA. 39+00.00 - STA. 42+00.00
- STAGE 4:  
CONSTRUCT RIGHT SIDE OF HWY. 35  
STA. 2+00.00 - STA. 6+27.64  
OBLITERATE EXISTING CROSSOVER
- PLACE FINAL 2" OF SURFACE COURSE  
INSTALL PERMANENT PAVEMENT MARKINGS

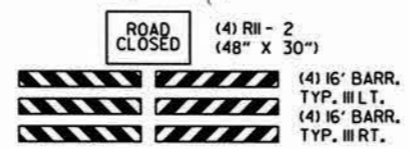
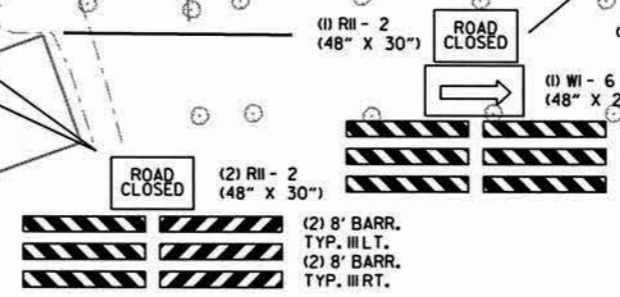
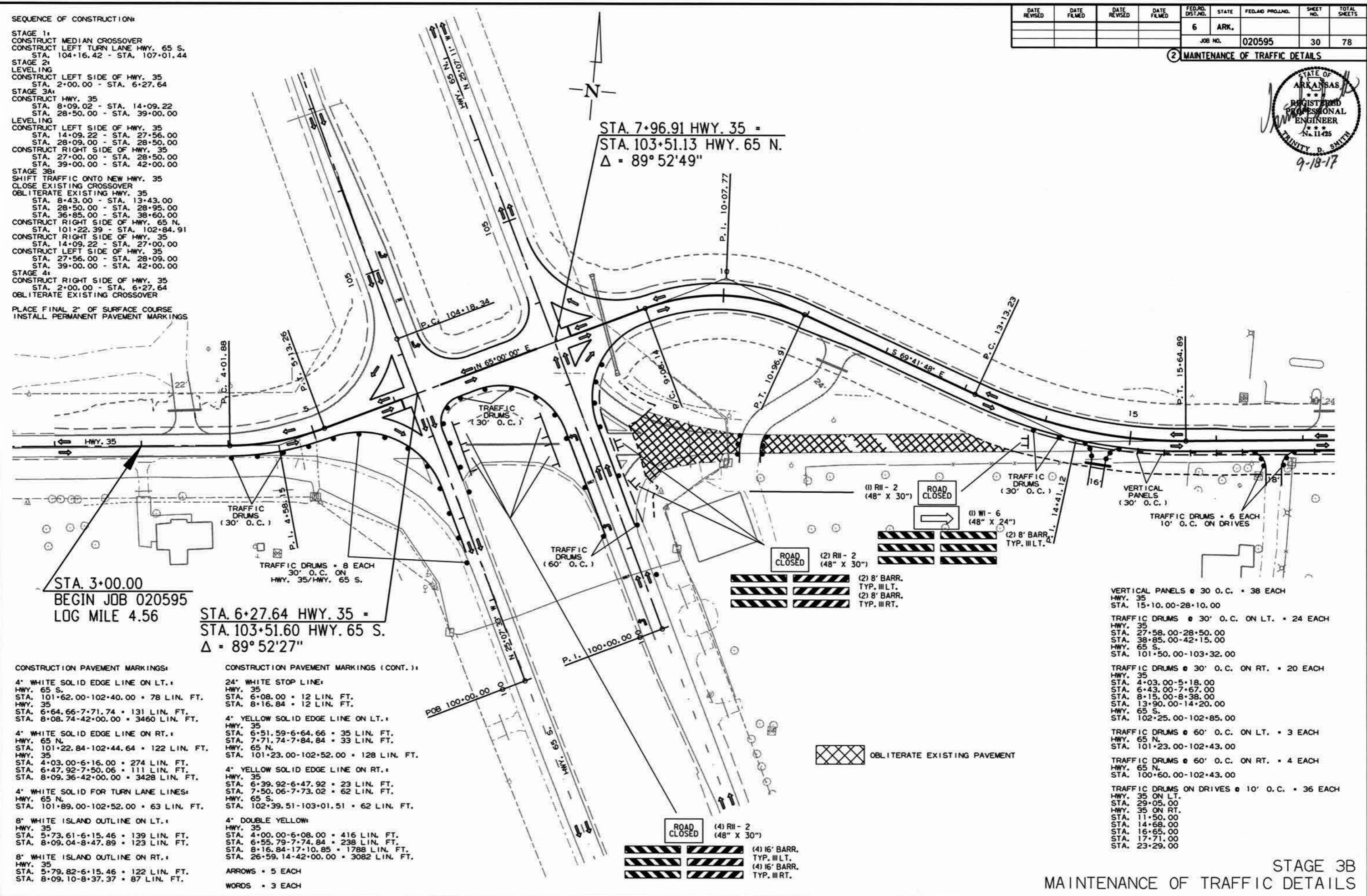
STA. 7+96.91 HWY. 35 =  
STA. 103+51.13 HWY. 65 N.  
 $\Delta = 89^\circ 52' 49''$

STA. 6+27.64 HWY. 35 =  
STA. 103+51.60 HWY. 65 S.  
 $\Delta = 89^\circ 52' 27''$

STA. 3+00.00  
BEGIN JOB 020595  
LOG MILE 4.56

- CONSTRUCTION PAVEMENT MARKINGS:
- 4" WHITE SOLID EDGE LINE ON LT. HWY. 65 S.  
STA. 101+62.00-102+40.00 = 78 LIN. FT.
  - 4" WHITE SOLID EDGE LINE ON RT. HWY. 65 N.  
STA. 101+22.84-102+44.64 = 122 LIN. FT.
  - 4" WHITE SOLID FOR TURN LANE LINES HWY. 65 N.  
STA. 101+89.00-102+52.00 = 63 LIN. FT.
  - 8" WHITE ISLAND OUTLINE ON LT. HWY. 35  
STA. 5+73.61-6+15.46 = 139 LIN. FT.  
STA. 8+09.04-8+47.89 = 123 LIN. FT.
  - 8" WHITE ISLAND OUTLINE ON RT. HWY. 35  
STA. 5+79.82-6+15.46 = 122 LIN. FT.  
STA. 8+09.10-8+37.37 = 87 LIN. FT.

- CONSTRUCTION PAVEMENT MARKINGS (CONT.):
- 24" WHITE STOP LINE HWY. 35  
STA. 6+08.00 = 12 LIN. FT.  
STA. 8+16.84 = 12 LIN. FT.
  - 4" YELLOW SOLID EDGE LINE ON LT. HWY. 35  
STA. 6+51.59-6+64.66 = 35 LIN. FT.  
STA. 7+71.74-7+84.84 = 33 LIN. FT.
  - 4" YELLOW SOLID EDGE LINE ON RT. HWY. 35  
STA. 6+39.92-6+47.92 = 23 LIN. FT.  
STA. 7+50.06-7+73.02 = 62 LIN. FT.
  - 4" DOUBLE YELLOW HWY. 35  
STA. 4+00.00-6+08.00 = 416 LIN. FT.  
STA. 6+55.79-7+74.84 = 238 LIN. FT.  
STA. 8+16.84-17+10.85 = 1788 LIN. FT.  
STA. 26+59.14-42+00.00 = 3082 LIN. FT.
  - ARROWS = 5 EACH
  - WORDS = 3 EACH



OBLITERATE EXISTING PAVEMENT

- VERTICAL PANELS @ 30' O.C. = 38 EACH  
HWY. 35  
STA. 15+10.00-28+10.00
- TRAFFIC DRUMS @ 30' O.C. ON LT. = 24 EACH  
HWY. 35  
STA. 27+58.00-28+50.00  
STA. 38+85.00-42+15.00  
HWY. 65 S.  
STA. 101+50.00-103+32.00
- TRAFFIC DRUMS @ 30' O.C. ON RT. = 20 EACH  
HWY. 35  
STA. 4+03.00-5+18.00  
STA. 6+43.00-7+67.00  
STA. 8+15.00-8+38.00  
STA. 13+90.00-14+20.00  
HWY. 65 S.  
STA. 102+25.00-102+85.00
- TRAFFIC DRUMS @ 60' O.C. ON LT. = 3 EACH  
HWY. 65 N.  
STA. 101+23.00-102+43.00
- TRAFFIC DRUMS @ 60' O.C. ON RT. = 4 EACH  
HWY. 65 N.  
STA. 100+60.00-102+43.00
- TRAFFIC DRUMS ON DRIVES @ 10' O.C. = 36 EACH  
HWY. 35 ON LT.  
STA. 29+05.00  
HWY. 35 ON RT.  
STA. 11+50.00  
STA. 14+68.00  
STA. 16+65.00  
STA. 17+71.00  
STA. 23+29.00

STAGE 3B  
MAINTENANCE OF TRAFFIC DETAILS

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	020595
							SHEET NO.	31
							TOTAL SHEETS	78

② MAINTENANCE OF TRAFFIC DETAILS



SEQUENCE OF CONSTRUCTION:

STAGE 1:  
 CONSTRUCT MEDIAN CROSSOVER  
 CONSTRUCT LEFT TURN LANE HWY. 65 S.  
 STA. 104+16.42 - STA. 107+01.44

STAGE 2:  
 LEVELING  
 CONSTRUCT LEFT SIDE OF HWY. 35  
 STA. 2+00.00 - STA. 6+27.64

STAGE 3A:  
 CONSTRUCT HWY. 35  
 STA. 8+09.02 - STA. 14+09.22  
 STA. 28+50.00 - STA. 39+00.00

LEVELING  
 CONSTRUCT LEFT SIDE OF HWY. 35  
 STA. 14+09.22 - STA. 27+56.00  
 STA. 28+09.00 - STA. 28+50.00

CONSTRUCT RIGHT SIDE OF HWY. 35  
 STA. 27+00.00 - STA. 28+50.00  
 STA. 39+00.00 - STA. 42+00.00

STAGE 3B:  
 SHIFT TRAFFIC ONTO NEW HWY. 35  
 CLOSE EXISTING CROSSOVER  
 OBLITERATE EXISTING HWY. 35  
 STA. 8+43.00 - STA. 13+43.00  
 STA. 28+50.00 - STA. 28+95.00  
 STA. 36+85.00 - STA. 38+60.00

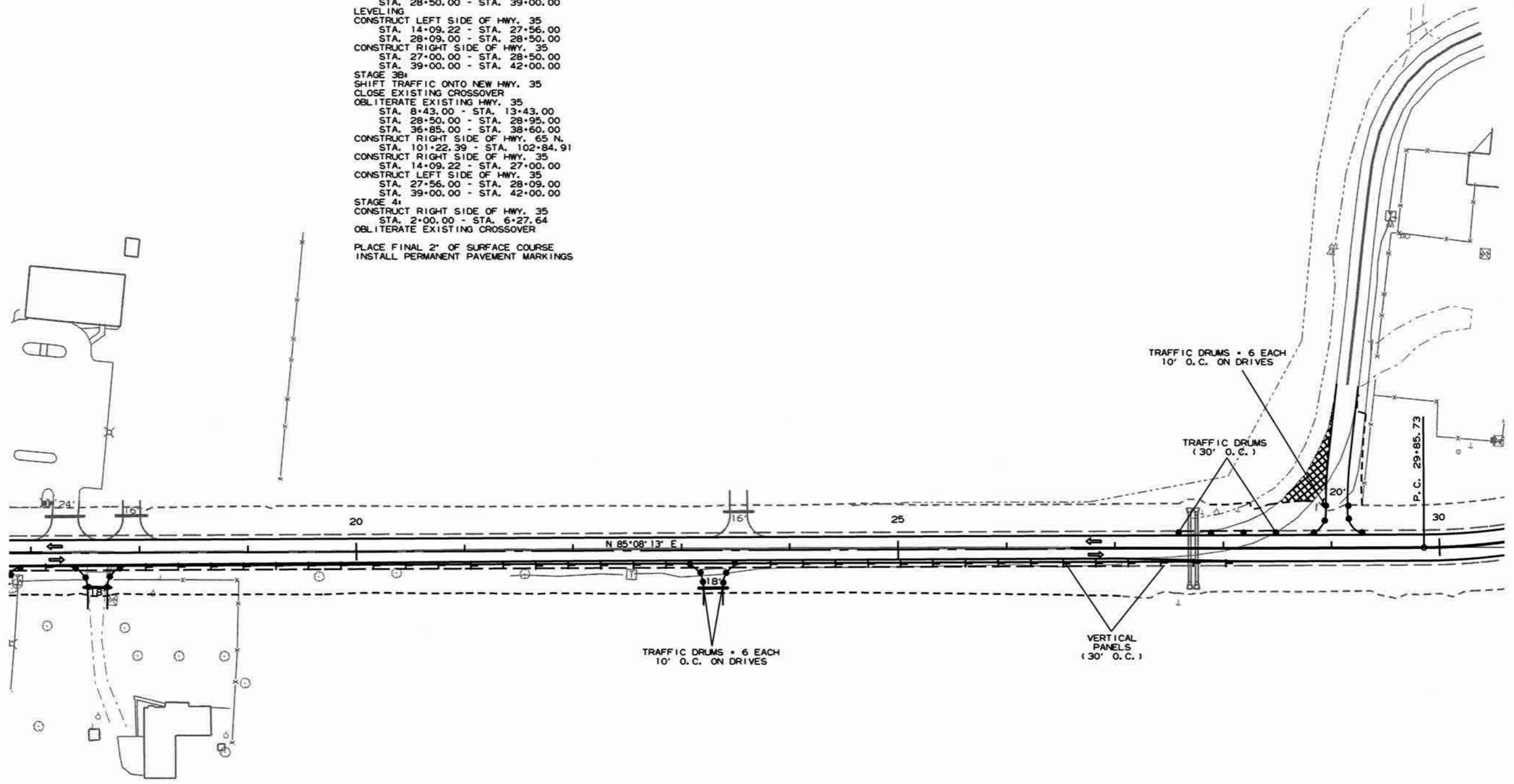
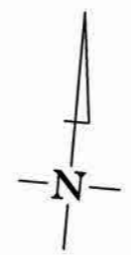
CONSTRUCT RIGHT SIDE OF HWY. 65 N.  
 STA. 101+22.39 - STA. 102+84.91

CONSTRUCT RIGHT SIDE OF HWY. 35  
 STA. 14+09.22 - STA. 27+00.00

CONSTRUCT LEFT SIDE OF HWY. 35  
 STA. 27+56.00 - STA. 28+09.00  
 STA. 39+00.00 - STA. 42+00.00

STAGE 4:  
 CONSTRUCT RIGHT SIDE OF HWY. 35  
 STA. 2+00.00 - STA. 6+27.64  
 OBLITERATE EXISTING CROSSOVER

PLACE FINAL 2" OF SURFACE COURSE  
 INSTALL PERMANENT PAVEMENT MARKINGS

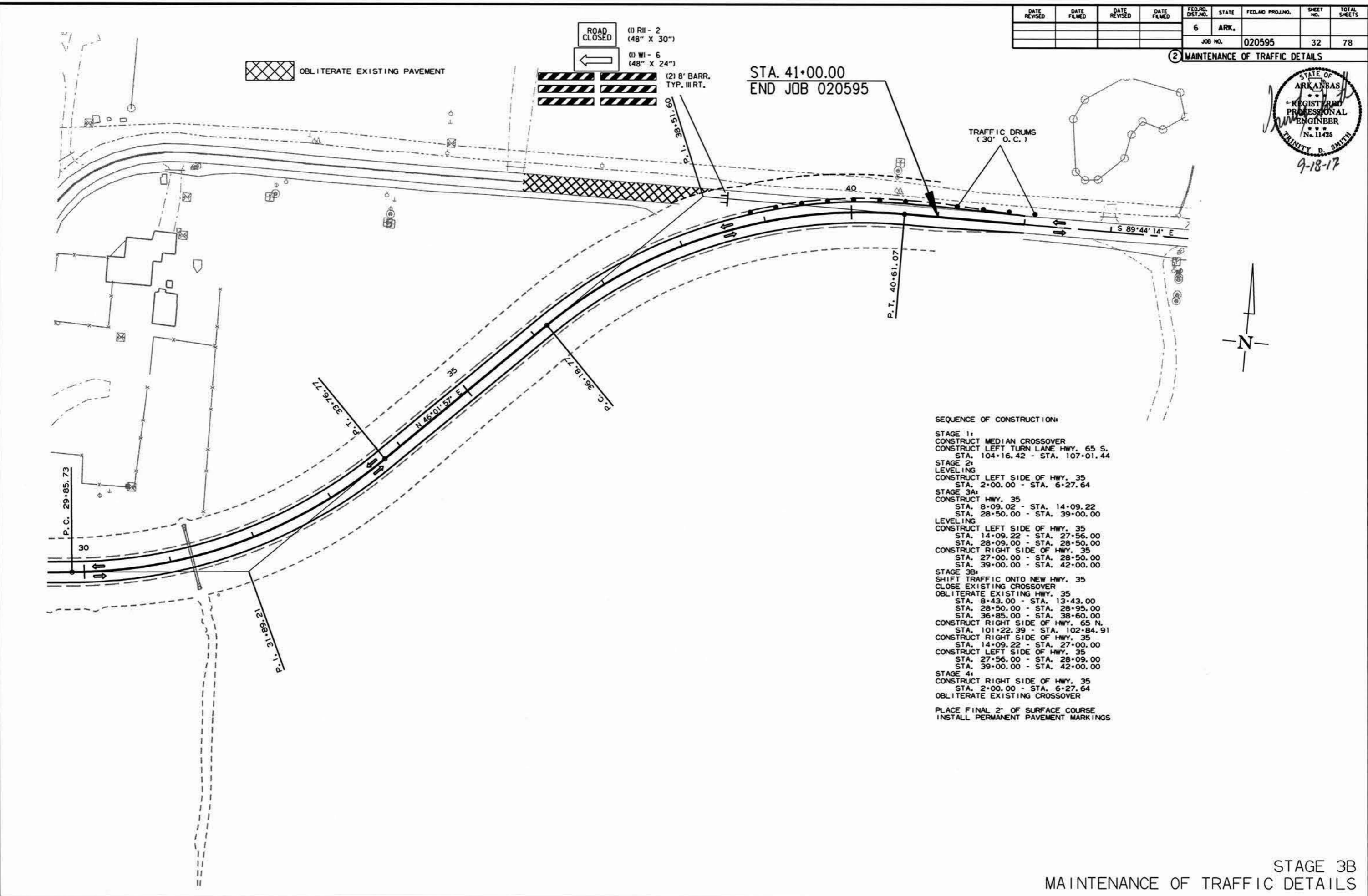


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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020595		32	78

② MAINTENANCE OF TRAFFIC DETAILS



STA. 41+00.00  
END JOB 020595

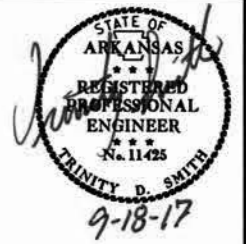
- SEQUENCE OF CONSTRUCTION:
- STAGE 1:
    - CONSTRUCT MEDIAN CROSSOVER
    - CONSTRUCT LEFT TURN LANE HWY. 65 S.
    - STA. 104+16.42 - STA. 107+01.44
  - STAGE 2:
    - LEVELING
    - CONSTRUCT LEFT SIDE OF HWY. 35
    - STA. 2+00.00 - STA. 6+27.64
  - STAGE 3A:
    - CONSTRUCT HWY. 35
    - STA. 8+09.02 - STA. 14+09.22
    - STA. 28+50.00 - STA. 39+00.00
    - LEVELING
    - CONSTRUCT LEFT SIDE OF HWY. 35
    - STA. 14+09.22 - STA. 27+56.00
    - STA. 28+09.00 - STA. 28+50.00
    - CONSTRUCT RIGHT SIDE OF HWY. 35
    - STA. 27+00.00 - STA. 28+50.00
    - STA. 39+00.00 - STA. 42+00.00
  - STAGE 3B:
    - SHIFT TRAFFIC ONTO NEW HWY. 35
    - CLOSE EXISTING CROSSOVER
    - OBLITERATE EXISTING HWY. 35
    - STA. 8+43.00 - STA. 13+43.00
    - STA. 28+50.00 - STA. 28+95.00
    - STA. 36+85.00 - STA. 38+60.00
    - CONSTRUCT RIGHT SIDE OF HWY. 65 N.
    - STA. 101+22.39 - STA. 102+84.91
    - CONSTRUCT RIGHT SIDE OF HWY. 35
    - STA. 14+09.22 - STA. 27+00.00
    - CONSTRUCT LEFT SIDE OF HWY. 35
    - STA. 27+56.00 - STA. 28+09.00
    - STA. 39+00.00 - STA. 42+00.00
  - STAGE 4:
    - CONSTRUCT RIGHT SIDE OF HWY. 35
    - STA. 2+00.00 - STA. 6+27.64
    - OBLITERATE EXISTING CROSSOVER
- PLACE FINAL 2" OF SURFACE COURSE  
INSTALL PERMANENT PAVEMENT MARKINGS

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R020595.DGN

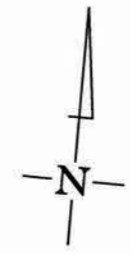


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020595		33	78

② MAINTENANCE OF TRAFFIC DETAILS

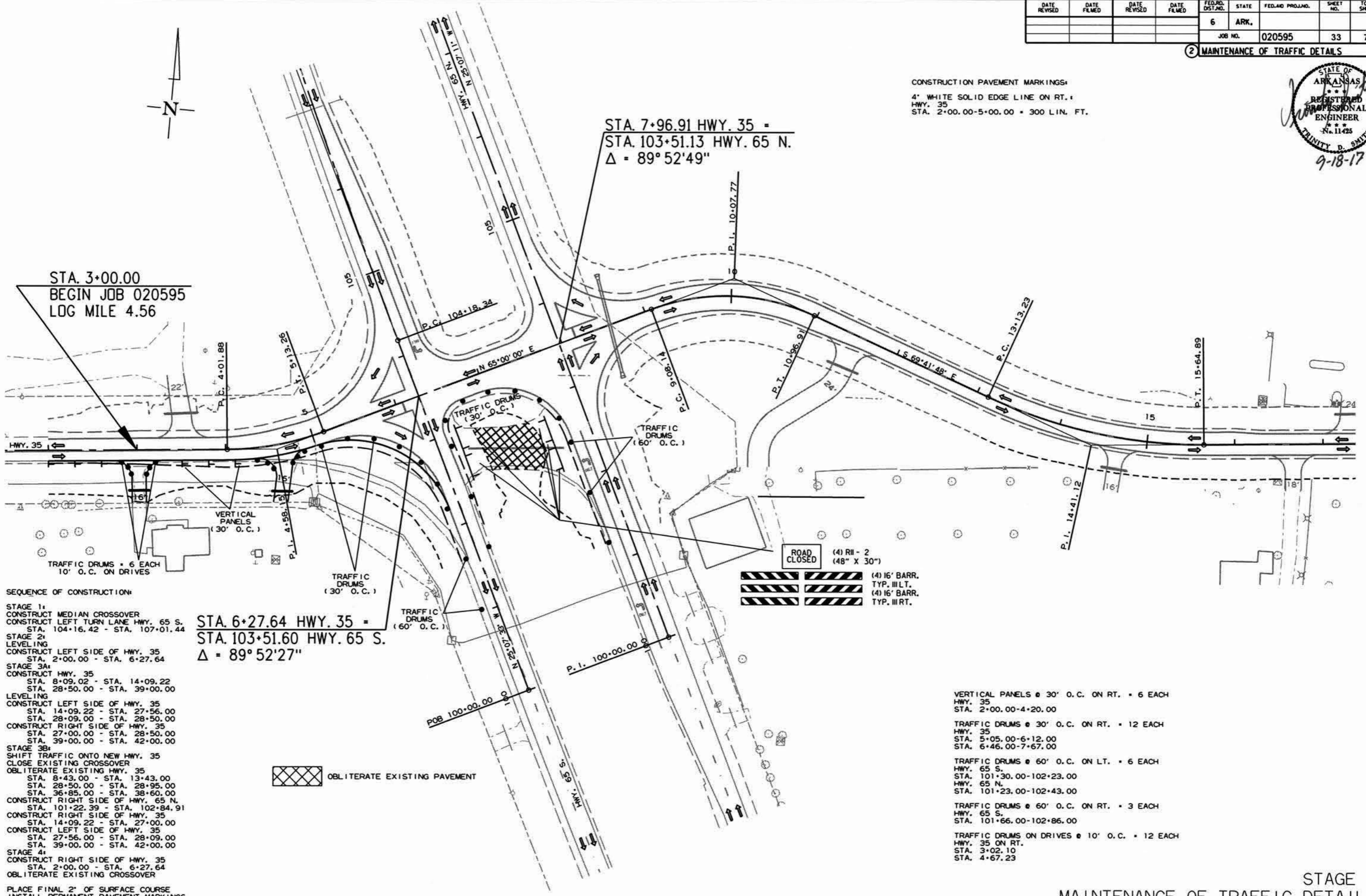


CONSTRUCTION PAVEMENT MARKINGS:  
 4" WHITE SOLID EDGE LINE ON RT. +  
 HWY. 35  
 STA. 2+00.00-5+00.00 = 300 LIN. FT.



STA. 7+96.91 HWY. 35 =  
 STA. 103+51.13 HWY. 65 N.  
 $\Delta = 89^\circ 52' 49''$

STA. 3+00.00  
 BEGIN JOB 020595  
 LOG MILE 4.56



SEQUENCE OF CONSTRUCTION:

STAGE 1:  
 CONSTRUCT MEDIAN CROSSOVER  
 CONSTRUCT LEFT TURN LANE HWY. 65 S.  
 STA. 104+16.42 - STA. 107+01.44

STAGE 2:  
 LEVELING  
 CONSTRUCT LEFT SIDE OF HWY. 35  
 STA. 2+00.00 - STA. 6+27.64

STAGE 3A:  
 CONSTRUCT HWY. 35  
 STA. 8+09.02 - STA. 14+09.22  
 STA. 28+50.00 - STA. 39+00.00

LEVELING  
 CONSTRUCT LEFT SIDE OF HWY. 35  
 STA. 14+09.22 - STA. 27+56.00  
 STA. 28+09.00 - STA. 28+50.00

CONSTRUCT RIGHT SIDE OF HWY. 35  
 STA. 27+00.00 - STA. 28+50.00  
 STA. 39+00.00 - STA. 42+00.00

STAGE 3B:  
 SHIFT TRAFFIC ONTO NEW HWY. 35  
 CLOSE EXISTING CROSSOVER  
 OBLITERATE EXISTING HWY. 35  
 STA. 8+43.00 - STA. 13+43.00  
 STA. 28+50.00 - STA. 28+95.00  
 STA. 36+85.00 - STA. 38+60.00

CONSTRUCT RIGHT SIDE OF HWY. 65 N.  
 STA. 101+22.39 - STA. 102+84.91

CONSTRUCT RIGHT SIDE OF HWY. 35  
 STA. 14+09.22 - STA. 27+00.00

CONSTRUCT LEFT SIDE OF HWY. 35  
 STA. 27+56.00 - STA. 28+09.00  
 STA. 39+00.00 - STA. 42+00.00

STAGE 4:  
 CONSTRUCT RIGHT SIDE OF HWY. 35  
 STA. 2+00.00 - STA. 6+27.64  
 OBLITERATE EXISTING CROSSOVER

PLACE FINAL 2" OF SURFACE COURSE  
 INSTALL PERMANENT PAVEMENT MARKINGS

STA. 6+27.64 HWY. 35 =  
 STA. 103+51.60 HWY. 65 S.  
 $\Delta = 89^\circ 52' 27''$

OBLITERATE EXISTING PAVEMENT

ROAD CLOSED (4) RII - 2 (48" X 30")

(4) 16' BARR. TYP. III LT.  
 (4) 16' BARR. TYP. III RT.

VERTICAL PANELS @ 30' O.C. ON RT. = 6 EACH  
 HWY. 35  
 STA. 2+00.00-4+20.00

TRAFFIC DRUMS @ 30' O.C. ON RT. = 12 EACH  
 HWY. 35  
 STA. 5+05.00-6+12.00  
 STA. 6+46.00-7+67.00

TRAFFIC DRUMS @ 60' O.C. ON LT. = 6 EACH  
 HWY. 65 S.  
 STA. 101+30.00-102+23.00  
 HWY. 65 N.  
 STA. 101+23.00-102+43.00

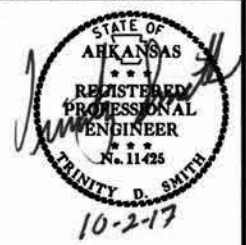
TRAFFIC DRUMS @ 60' O.C. ON RT. = 3 EACH  
 HWY. 65 S.  
 STA. 101+66.00-102+86.00

TRAFFIC DRUMS ON DRIVES @ 10' O.C. = 12 EACH  
 HWY. 35 ON RT.  
 STA. 3+02.10  
 STA. 4+67.23

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				6	ARK.			
JOB NO. 020595							34	78

2 PERMANENT PAVEMENT MARKING DETAILS



**RAISED PAVEMENT MARKERS:**

TYPE II (YELLOW/YELLOW) ON DOUBLE YELLOW  
 HWY. 35:  
 STA. 4+42.00 - STA. 6+08.82 = 4 EACH  
 STA. 6+65.00 - STA. 7+52.00 = 5 EACH  
 STA. 8+16.84 - STA. 11+00.00 = 8 EACH  
 STA. 29+85.73 - STA. 41+00.00 = 28 EACH

TYPE II (YELLOW/YELLOW) ON SKIP FOR CENTERLINE  
 HWY. 35:  
 STA. 2+00.00 - STA. 4+42.00 = 7 EACH  
 STA. 11+00.00 - STA. 29+85.73 = 47 EACH  
 STA. 41+00.00 - STA. 42+00.00 = 2 EACH

TYPE II (WHITE/RED) ON WHITE TURN LANE LINES  
 HWY. 65 S.:  
 STA. 103+88.65 - STA. 105+23.16 = 8 EACH  
 HWY. 65 N.:  
 STA. 99+91.10 - STA. 103+04.10 = 17 EACH

TYPE II (WHITE/RED) ON WHITE SKIP LINES  
 HWY. 65 S.:  
 STA. 101+41.79 - STA. 107+01.00 = 7 EACH  
 HWY. 65 N.:  
 STA. 99+91.10 - STA. 104+74.32 = 6 EACH

RAISED PAVEMENT MARKERS (TYPE II)(YELLOW/YELLOW) ARE TO BE PLACED ON THE DOUBLE YELLOW AT 40' INTERVALS.

RAISED PAVEMENT MARKERS (TYPE II)(YELLOW/YELLOW) ARE TO BE PLACED ON THE YELLOW CENTERLINE WITH SKIP AT 40' INTERVALS.

RAISED PAVEMENT MARKERS (TYPE II)(WHITE/RED) ARE TO BE PLACED ON THE LANE LINES AT 80' INTERVALS.

REFER TO THE PERMANENT PAVEMENT MARKING DETAILS, STD. DRWG. PM-1, AND THE LATEST EDITION OF THE MUTCD FOR ADDITIONAL PAVEMENT MARKING DETAILS.

**REFLECTORIZED PAINT PAVEMENT MARKINGS:**

6" WHITE SOLID FOR EDGE LINES:  
 HWY. 35 ON RT.:  
 STA. 2+00.00 - STA. 4+99.72 = 304 LIN. FT.  
 STA. 9+15.12 - STA. 42+00.00 = 3279 LIN. FT.  
 HWY. 35 ON LT.:  
 STA. 2+00.00 - STA. 4+99.72 = 295 LIN. FT.  
 STA. 9+15.12 - STA. 42+00.00 = 3290 LIN. FT.

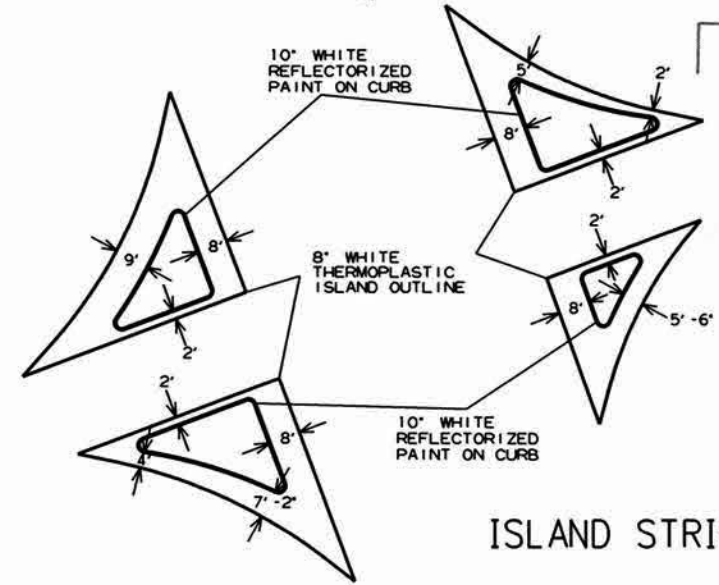
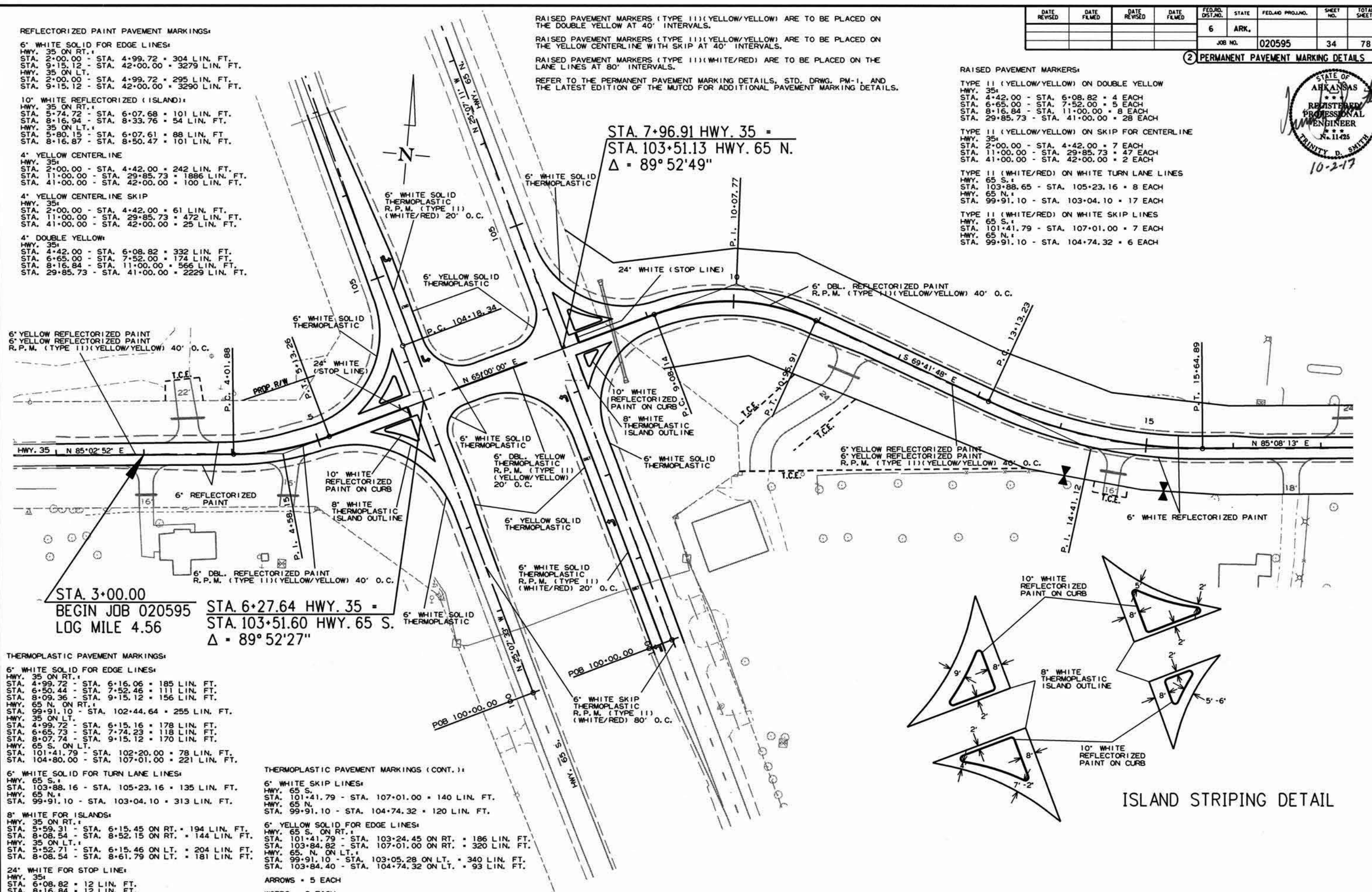
10" WHITE REFLECTORIZED (ISLAND):  
 HWY. 35 ON RT.:  
 STA. 5+74.72 - STA. 6+07.68 = 101 LIN. FT.  
 STA. 8+16.94 - STA. 8+33.76 = 54 LIN. FT.  
 HWY. 35 ON LT.:  
 STA. 5+80.15 - STA. 6+07.61 = 88 LIN. FT.  
 STA. 8+16.87 - STA. 8+50.47 = 101 LIN. FT.

4" YELLOW CENTERLINE  
 HWY. 35:  
 STA. 2+00.00 - STA. 4+42.00 = 242 LIN. FT.  
 STA. 11+00.00 - STA. 29+85.73 = 1886 LIN. FT.  
 STA. 41+00.00 - STA. 42+00.00 = 100 LIN. FT.

4" YELLOW CENTERLINE SKIP  
 HWY. 35:  
 STA. 2+00.00 - STA. 4+42.00 = 61 LIN. FT.  
 STA. 11+00.00 - STA. 29+85.73 = 472 LIN. FT.  
 STA. 41+00.00 - STA. 42+00.00 = 25 LIN. FT.

4" DOUBLE YELLOW:  
 HWY. 35:  
 STA. 4+42.00 - STA. 6+08.82 = 332 LIN. FT.  
 STA. 6+65.00 - STA. 7+52.00 = 174 LIN. FT.  
 STA. 8+16.84 - STA. 11+00.00 = 566 LIN. FT.  
 STA. 29+85.73 - STA. 41+00.00 = 2229 LIN. FT.

STA. 7+96.91 HWY. 35 =  
 STA. 103+51.13 HWY. 65 N.  
 $\Delta = 89^\circ 52' 49''$



ISLAND STRIPING DETAIL

**THERMOPLASTIC PAVEMENT MARKINGS:**

6" WHITE SOLID FOR EDGE LINES:  
 HWY. 35 ON RT.:  
 STA. 4+99.72 - STA. 6+16.06 = 185 LIN. FT.  
 STA. 6+50.44 - STA. 7+52.46 = 111 LIN. FT.  
 STA. 8+09.36 - STA. 9+15.12 = 156 LIN. FT.  
 HWY. 65 N. ON RT.:  
 STA. 99+91.10 - STA. 102+44.64 = 255 LIN. FT.  
 HWY. 35 ON LT.:  
 STA. 4+99.72 - STA. 6+15.16 = 178 LIN. FT.  
 STA. 6+65.73 - STA. 7+74.23 = 118 LIN. FT.  
 STA. 8+07.74 - STA. 9+15.12 = 170 LIN. FT.  
 HWY. 65 S. ON LT.:  
 STA. 101+41.79 - STA. 102+20.00 = 78 LIN. FT.  
 STA. 104+80.00 - STA. 107+01.00 = 221 LIN. FT.

6" WHITE SOLID FOR TURN LANE LINES:  
 HWY. 65 S.:  
 STA. 103+88.16 - STA. 105+23.16 = 135 LIN. FT.  
 HWY. 65 N.:  
 STA. 99+91.10 - STA. 103+04.10 = 313 LIN. FT.

8" WHITE FOR ISLANDS:  
 HWY. 35 ON RT.:  
 STA. 5+59.31 - STA. 6+15.45 ON RT. = 194 LIN. FT.  
 STA. 8+08.54 - STA. 8+52.15 ON RT. = 144 LIN. FT.  
 HWY. 35 ON LT.:  
 STA. 5+52.71 - STA. 6+15.46 ON LT. = 204 LIN. FT.  
 STA. 8+08.54 - STA. 8+61.79 ON LT. = 181 LIN. FT.

24" WHITE FOR STOP LINE:  
 HWY. 35:  
 STA. 6+08.82 = 12 LIN. FT.  
 STA. 8+16.84 = 12 LIN. FT.

**THERMOPLASTIC PAVEMENT MARKINGS (CONT.):**

6" WHITE SKIP LINES:  
 HWY. 65 S.:  
 STA. 101+41.79 - STA. 107+01.00 = 140 LIN. FT.  
 HWY. 65 N.:  
 STA. 99+91.10 - STA. 104+74.32 = 120 LIN. FT.

6" YELLOW SOLID FOR EDGE LINES:  
 HWY. 65 S. ON RT.:  
 STA. 101+41.79 - STA. 103+24.45 ON RT. = 186 LIN. FT.  
 STA. 103+84.82 - STA. 107+01.00 ON RT. = 320 LIN. FT.  
 HWY. 65 N. ON LT.:  
 STA. 99+91.10 - STA. 103+05.28 ON LT. = 340 LIN. FT.  
 STA. 103+84.40 - STA. 104+74.32 ON LT. = 93 LIN. FT.

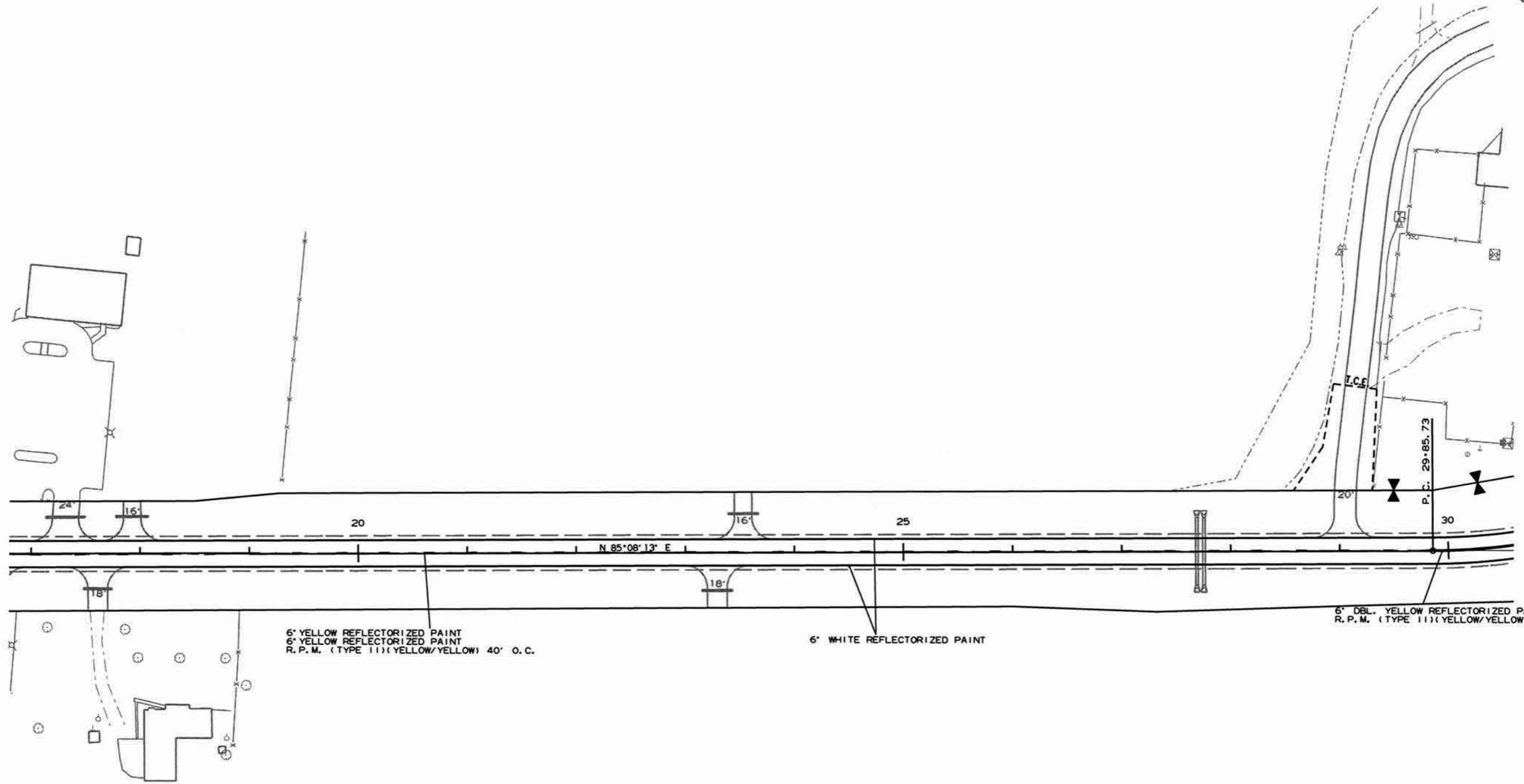
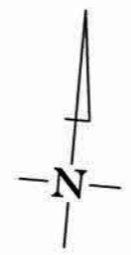
ARROWS = 5 EACH  
 WORDS = 3 EACH

PERMANENT PAVEMENT MARKING DETAILS

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020595		35	78

② PERMANENT PAVEMENT MARKING DETAILS



6" YELLOW REFLECTORIZED PAINT  
 6" YELLOW REFLECTORIZED PAINT  
 R.P.M. (TYPE II) (YELLOW/YELLOW) 40' O.C.

6" WHITE REFLECTORIZED PAINT

6" DBL. YELLOW REFLECTORIZED PAINT  
 R.P.M. (TYPE II) (YELLOW/YELLOW) 40' O.C.

8/25/2017

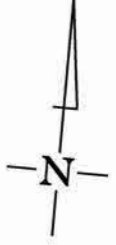
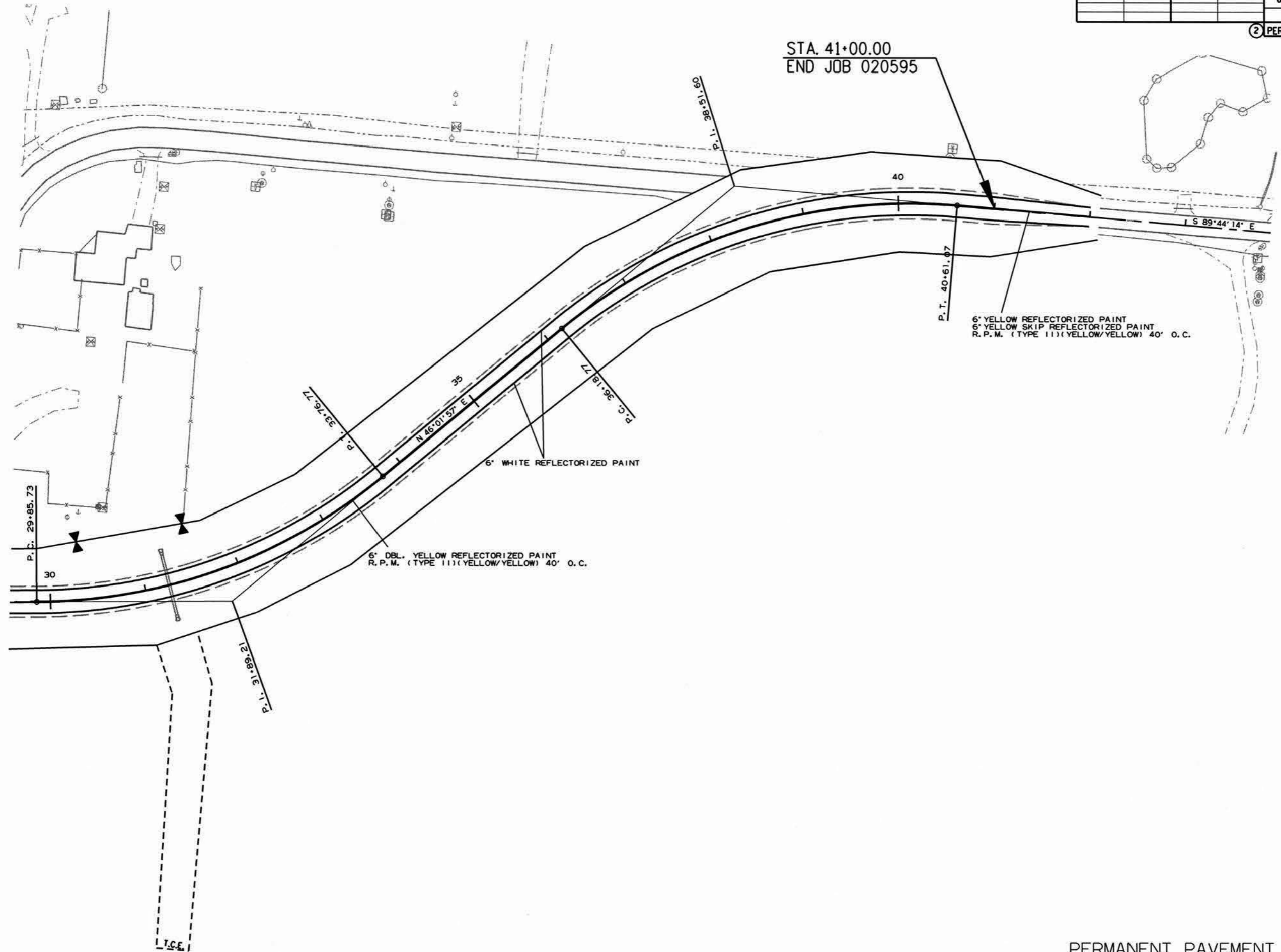
R020595.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020595		36	78

② PERMANENT PAVEMENT MARKING DETAILS



STA. 41+00.00  
END JOB 020595



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**ADVANCE WARNING SIGNS AND DEVICES**

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	STAGE 2	STAGE 3A	STAGE 3B	STAGE 4	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		VERTICAL PANELS	TRAFFIC DRUMS	BARRICADES (TYPE III)	
									NO.	SQ. FT.			EACH	RIGHT
			LIN. FT. - EACH											
W20-1	ROAD WORK 1500 FT.	48"x48"	6	6	6	6	6	6	6	96.0				
W20-1	ROAD WORK 1000 FT.	48"x48"	6	6	6	6	6	6	6	96.0				
W20-1	ROAD WORK 500 FT.	48"x48"	6	6	6	6	6	6	6	96.0				
G20-2	END ROAD WORK	48"x24"	6	6	6	6	6	6	6	48.0				
R11-2	ROAD CLOSED	48"x30"		4	15	8	4	15	15	150.0				
W1-6	LARGE ARROW	48"x24"			9	2		9	9	72.0				
R4-1	DO NOT PASS	24"x30"	6	6	6	6	6	6	6	30.0				
W21-5a	RIGHT SHOULDER CLOSED	36"x36"	6	6	6	6	6	6	6	54.0				
VERTICAL PANELS				7	82	38	6	82			82			
TRAFFIC DRUMS			23	27	34	87	33	87				87		
TYPE III BARRICADE-RT. (8')					6	4		6					48	
TYPE III BARRICADE-LT. (8')					10	4		10						80
TYPE III BARRICADE-RT. (16')				4	6	4	4	6					96	
TYPE III BARRICADE-LT. (16')				4	4	4	4	4						64
<b>TOTALS:</b>									<b>642.0</b>	<b>82</b>	<b>87</b>	<b>144</b>	<b>144</b>	

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

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	020595
							SHEET NO.	37
							TOTAL SHEETS	78

② QUANTITIES



**CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS**

DESCRIPTION	STAGE 1	STAGE 2	STAGE 3A	STAGE 3B	STAGE 4	END OF JOB	CONSTRUCTION PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS		REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS		RAISED PAVEMENT MARKERS		THERMOPLASTIC PAVEMENT MARKING					REFLECTORIZED PAINT PAVEMENT MARKING									
								WORDS	ARROWS		WORDS	ARROWS	TYPE II (WHITE/RED)	TYPE II (YEL/YEL)	6"					WORDS	ARROWS	6"							
															WHITE	YELLOW	WHITE	WHITE	WHITE			WHITE	WHITE	WHITE	WHITE				
													LIN. FT. - EACH			LIN. FT.		EACH		EACH		LIN. FT.					LIN. FT.		
CONSTRUCTION PAVEMENT MARKINGS	329	1198	3832	14031	300		19690																						
CONSTRUCTION PAVEMENT MARKINGS (WORDS)				3				3																					
CONSTRUCTION PAVEMENT MARKINGS (ARROWS)				5					5																				
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	707	1155	3486							5348																			
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS (WORDS)	2										2																		
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS (ARROWS)	3											3																	
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)						25							25																
RAISED PAVEMENT MARKERS TYPE II (YEL/YEL)						114								114															
THERMOPLASTIC PAVEMENT MARKING WHITE (6")						2180										2180													
THERMOPLASTIC PAVEMENT MARKING YELLOW (6")						939											939												
THERMOPLASTIC PAVEMENT MARKING WHITE (8")						723												723											
THERMOPLASTIC PAVEMENT MARKING WHITE (24")						24														24									
THERMOPLASTIC PAVEMENT MARKING (WORDS)						3														3									
THERMOPLASTIC PAVEMENT MARKING (ARROWS)						5															5								
REFLECTORIZED PAINT PAVEMENT MARKING WHITE (6")						7168																7168							
REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (6")						6077																	6077						
REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")						344																		344					
<b>TOTALS:</b>							<b>19690</b>	<b>3</b>	<b>5</b>	<b>5348</b>	<b>2</b>	<b>3</b>	<b>25</b>	<b>114</b>	<b>2180</b>	<b>939</b>	<b>723</b>	<b>24</b>	<b>3</b>	<b>5</b>	<b>7168</b>	<b>6077</b>	<b>344</b>						

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

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

**EROSION CONTROL**

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL					TEMPORARY EROSION CONTROL																
			SEEDING	LIME	MULCH COVER	WATER	SECOND SEEDING APPLICATION	TEMPORARY SEEDING	MULCH COVER	WATER	SAND BAG DITCH CHECKS	SILT FENCE	SEDIMENT BASIN	OBLITERATION OF SEDIMENT BASIN	*SEDIMENT REMOVAL & DISPOSAL									
																ACRE	TON	ACRE	M.GAL.	ACRE	ACRE	M.GAL.	(E-5) BAG	(E-11) LIN. FT.
ENTIRE PROJECT	STAGE 1		0.30	0.60	0.30	30.6	0.30	0.34	0.34	6.9														
ENTIRE PROJECT	STAGE 2		0.34	0.68	0.34	34.7	0.34	0.60	0.60	12.2														
ENTIRE PROJECT	STAGE 3A		3.26	6.52	3.26	332.5	3.26	6.93	6.93	141.4	66	230												
ENTIRE PROJECT	STAGE 3B		1.08	2.16	1.08	110.2	1.08	2.02	2.02	41.2	440	519												
ENTIRE PROJECT	STAGE 4		0.65	1.30	0.65	66.3	0.65	1.17	1.17	23.9	132													
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.			1.40	2.80	1.40	142.8	1.40	3.00	3.00	61.2	418	220	133	133										160
<b>TOTALS:</b>			<b>7.03</b>	<b>14.06</b>	<b>7.03</b>	<b>717.1</b>	<b>7.03</b>	<b>14.06</b>	<b>14.06</b>	<b>286.8</b>	<b>1276</b>	<b>1100</b>	<b>133</b>	<b>133</b>										<b>232</b>

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

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.

8/25/2017

R020595.DGN

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020595		38	78

**QUANTITIES**



**CLEARING AND GRUBBING**

STATION	STATION	LOCATION	CLEARING STATION	GRUBBING STATION
14+00.00	17+00.00	HWY. 35	3	3
19+00.00	23+00.00	HWY. 35	4	4
27+00.00	30+00.00	HWY. 35	3	3
<b>TOTALS:</b>			<b>10</b>	<b>10</b>

**REMOVAL AND DISPOSAL OF CULVERTS**

STATION	DESCRIPTION	PIPE CULVERTS EACH
3+02.10	18" x 20' C.M. PIPE CULVERT ON RIGHT	1
3+53.23	12" x 38' PIPE CULVERT ON LEFT	1
4+67.23	18" x 24' C.M. PIPE CULVERT ON RIGHT	1
9+01.00	24" x 54' R.C. PIPE CULVERT ON RIGHT	1
14+68.00	12" x 30' C.M. PIPE CULVERT ON RIGHT	1
17+31.00	18" x 31' C.M. PIPE CULVERT ON LEFT	1
17+61.00	15" x 27' C.M. PIPE CULVERT ON RIGHT	1
17+93.00	15" x 20' C.M. PIPE CULVERT ON LEFT	1
23+29.00	24" x 24' C.M. PIPE CULVERT ON RIGHT	1
23+53.00	24" x 18' C.M. PIPE CULVERT ON LEFT	1
27+68.89	24" x 29' PIPE CULVERT	1
<b>TOTAL:</b>		<b>11</b>

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

**EARTHWORK**

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION CU. YD.	COMPACTED EMBANKMENT CU. YD.	* SOIL STABILIZATION TON
104+16.42	107+01.00	STAGE 1 - HWY. 65 S.	208	7	
6+39.68	7+84.90	STAGE 1 - NEW MEDIAN CROSSOVER	113	279	24
ENTIRE PROJECT		STAGE 2 - HWY. 35	382	156	
ENTIRE PROJECT		STAGE 3A - HWY. 35	3835	3185	
9+00.00	13+00.00	STAGE 3A - HWY. 35			120
ENTIRE PROJECT		STAGE 3B - HWY. 65 N.	324		
ENTIRE PROJECT		STAGE 3B - HWY. 35	1067	369	
ENTIRE PROJECT		STAGE 4 - HWY. 65 N.	154		
ENTIRE PROJECT		STAGE 4 - HWY. 65 S.	214		
ENTIRE PROJECT		STAGE 4 - HWY. 35	679		
ENTIRE PROJECT		APPROACHES	15	665	
6+71.53	7+41.33	PAVEMENT OBLITERATION - EXISTING CROSSOVER	122		
8+43.63	13+78.00	PAVEMENT OBLITERATION - HWY. 35	420		
28+50.00	28+83.00	PAVEMENT OBLITERATION - HWY. 35	42		
36+80.00	38+62.29	PAVEMENT OBLITERATION - HWY. 35	151		
31+25.00		CHANNEL CLEAN OUT	50		
ENTIRE PROJECT		TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER			180
<b>TOTALS:</b>			<b>7776</b>	<b>4661</b>	<b>324</b>

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

NOTE: EARTHWORK QUANTITIES SHOWN ABOVE SHALL BE PAID AS PLAN QUANTITY.

**EROSION CONTROL MATTING**

STATION	STATION	LOCATION	LENGTH LIN. FT.	CLASS 2 SQ. YD.
ENTIRE PROJECT		TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	2000.00	1777.78
<b>TOTAL:</b>				<b>1777.78</b>

NOTE: AVERAGE WIDTH = 8'-0"  
\* QUANTITY ESTIMATED. SEE SECTION 104.03 OF THE STD. SPECS.

**CONCRETE ISLAND**

STATION	LOCATION	CURB FACE TYPE	CONCRETE ISLAND SQ. YD.
5+96.00	HWY. 35 ON RIGHT	B	53
5+98.00	HWY. 35 ON LEFT	B	43
8+22.00	HWY. 35 ON RIGHT	B	18
8+28.00	HWY. 35 ON LEFT	B	53
<b>TOTAL:</b>			<b>167</b>

**FENCING**

STATION	STATION	LOCATION	WIRE FENCE (TYPE D) LIN. FT.
13+94.00	14+50.00	HWY. 35 ON RIGHT	62
14+85.00	15+66.00	HWY. 35 ON RIGHT	88
29+30.00	31+58.00	HWY. 35 ON LEFT	228
<b>TOTAL:</b>			<b>378</b>

**SELECTED PIPE BEDDING**

LOCATION	SELECTED PIPE BEDDING CU. YD.
ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	50
<b>TOTAL:</b>	

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

**ACHM PATCHING OF EXISTING ROADWAY**

DESCRIPTION	TON
ENTIRE PROJECT - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	50
<b>TOTAL:</b>	

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

**MAILBOXES**

LOCATION	MAILBOXES	MAILBOX SUPPORTS (SINGLE) EACH
ENTIRE PROJECT	1	1
<b>TOTALS:</b>		<b>1</b>

**SOIL LOG**

STATION	LOCATION	DEPTH FEET	LIQUID LIMIT	PLASTICITY INDEX	AASHTO CLASSIFICATION	COLOR
3+00	21' RT.	0-5	ND	NP	A-4(0)	BROWN
3+00	6' RT.	0-5	46	29	A-7-6(31)	BROWN
3+00	21' RT.	0-5	48	30	A-7-6(25)	BROWN
11+00	162' LT.	0-5	ND	NP	A-4(0)	BROWN
17+00	6' LT.	0-5	ND	NP	A-4(0)	BROWN
17+00	20' LT.	0-5	ND	NP	A-4(0)	BROWN

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

**RUMBLE STRIPES IN ASPHALT SHOULDERS**

STATION	STATION	LOCATION	* RUMBLE STRIPES IN ASPHALT SHOULDERS LIN. FT.
100+95.00	102+44.00	HWY. 65 N. ON RT.	149
101+15.00	102+20.00	HWY. 65 S. ON LT.	105
101+90.00	103+01.00	HWY. 65 S. ON RT.	111
<b>TOTAL:</b>			<b>365</b>

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

**4" PIPE UNDERDRAIN**

STATION	STATION	LOCATIONS	4" PIPE UNDERDRAINS LIN. FT.	UNDERDRAIN OUTLET PROTECTORS EACH
15+50.00	16+50.00	HWY. 35 ON LEFT	150	2
15+50.00	16+50.00	HWY. 35 ON RIGHT	150	2
28+50.00	29+50.00	HWY. 35 ON LEFT	150	2
28+50.00	29+50.00	HWY. 35 ON RIGHT	150	2
* ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER			1200	8
<b>TOTALS:</b>			<b>1800</b>	<b>16</b>

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

**PAVEMENT REPAIR OVER CULVERTS (ASPHALT)**

STATION	LOCATION	WIDTH FEET	LENGTH FEET	TON
27+68.89	HWY. 35	15.00	20	22
<b>TOTAL:</b>				<b>22</b>

AVG. DEPTH = 12"

**REMOVAL AND DISPOSAL OF FENCE**

STATION	STATION	LOCATION	FENCE LIN. FT.	GATES EACH
13+93.74	14+50.90	HWY. 35 ON RIGHT	64	
14+83.94	16+84.00	HWY. 35 ON RIGHT	206	
17+70.00	18+90.00	HWY. 35 ON LEFT	190	
29+21.30	31+58.00	HWY. 35 ON LEFT AND RIGHT	395	
17+31.00		HWY. 35 ON LEFT		1
<b>TOTAL:</b>			<b>855</b>	<b>1</b>

**STRUCTURES**

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE CULVERT (CLASS III)	FLARED END SECTIONS FOR R.C. PIPE CULVERTS	SOLID SODDING	WATER	STD. DWG. NOS.
		29"X18" LIN. FT.	29"X18" EACH	SQ. YD.	M. GAL.	
8+57.91	CONSTRUCT CROSS DRAIN ON HWY. 35	108	2	24	0.30	FES-1, FES-2, PCC-1
27+68.89	CONSTRUCT DBL. CROSS DRAIN ON HWY. 35	124	4	18	0.23	FES-1, FES-2, PCC-1
31+25.00	CONSTRUCT CROSS DRAIN ON HWY. 35	64	2	24	0.30	FES-1, FES-2, PCC-1
<b>TOTALS:</b>		<b>296</b>	<b>8</b>	<b>66</b>	<b>0.83</b>	

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.

**REMOVAL AND DISPOSAL OF ITEMS**

STATION	STATION	LOCATION	BRICK COLUMNS EACH	WELL EACH	CONCRETE ISLANDS SQ. YD.	SIGNS EACH	PLANTERS EACH
5+54.65	6+06.58	HWY. 35 ON RIGHT			150		
5+74.73	6+06.67	HWY. 35 ON RIGHT			60		
8+17.40	8+28.03	HWY. 35 ON RIGHT			7		
8+17.50	8+40.28	HWY. 35 ON RIGHT			31		
16+45.00		HWY. 35 ON RIGHT		1			
16+75.00		HWY. 35 ON LEFT					1
17+10.00		HWY. 35 ON LEFT	2				
17+10.00		HWY. 35 ON LEFT				1	
<b>TOTAL:</b>			<b>2</b>	<b>1</b>	<b>248</b>	<b>1</b>	<b>1</b>

**QUANTITIES**

DRIVEWAYS & TURNOUTS																
STATION	SIDE	LOCATION	WIDTH FEET	PORTLAND CEMENT CONCRETE DRIVEWAY SQ. YD.	ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG 64-22)			AGGREGATE BASE COURSE (CLASS 7) TON	SIDE DRAINS		STANDARD DRAWINGS					
					SQ. YD.	TON	TON		18" LIN. FT.	24"						
3+02	RT.	HWY. 35	16		113.10	12.44	46.18	28		PCC-1, PCM-1, PCP-1, PCP-2						
3+53	LT.	HWY. 35	22		189.76	20.87	77.49	38		PCC-1, PCM-1, PCP-1, PCP-2						
4+67	RT.	HWY. 35	16		106.03	11.66	43.30	28		PCC-1, PCM-1, PCP-1, PCP-2						
11+50	RT.	HWY. 35	24		500.16	55.02	204.23	38		PCC-1, PCM-1, PCP-1, PCP-2						
14+68	RT.	HWY. 35	16		116.62	12.83	47.62	30		PCC-1, PCM-1, PCP-1, PCP-2						
16+65	RT.	HWY. 35	18		110.16	12.12	44.98									
17+31	LT.	HWY. 35	24	88.27	51.23	5.64	20.92	36		PCC-1, PCM-1, PCP-1, PCP-2						
17+61	RT.	HWY. 35	18		108.56	11.94	44.33	28		PCC-1, PCM-1, PCP-1, PCP-2						
17+93	LT.	HWY. 35	16		93.90	10.33	38.34	30		PCC-1, PCM-1, PCP-1, PCP-2						
23+29	RT.	HWY. 35	18		108.70	11.96	44.39		28	PCC-1, PCM-1, PCP-1, PCP-2						
23+53	LT.	HWY. 35	16		106.40	11.70	43.45		28	PCC-1, PCM-1, PCP-1, PCP-2						
29+05	LT.	HWY. 35	20		342.12	37.63	139.70									
<b>TOTALS:</b>								200.00								
<b>TOTALS:</b>								88.27	1946.74	214.14	994.93	256	56			

BASIS OF ESTIMATE:  
 ACHM SURFACE COURSE (1/2").....94.8% MIN. AGGR.....5.2% ASPHALT BINDER  
 MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22

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

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.

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.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		39	78

COLD MILLING ASPHALT PAVEMENT				
STATION	STATION	LOCATION	AVG. WIDTH FEET	COLD MILLING ASPHALT PAVEMENT SQ. YD.
2+00.00	3+00.00	MAIN LANES - HWY. 35	25.00	277.78
5+87.00	6+15.16	MAIN LANES - HWY. 35	VAR.	328.77
41+00.00	42+00.00	MAIN LANES - HWY. 35	22.00	244.44
103+01.51	107+01.00	HWY. 65 SOUTH	VAR.	405.49
<b>TOTAL:</b>				1256.48

NOTE: AVERAGE MILLING DEPTH 1".

ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC			
LOCATION	TON	TACK COAT GALLON	
ENTIRE PROJECT - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	20	40	
<b>TOTALS:</b>		20	40

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

**QUANTITIES**



**BASE AND SURFACING**

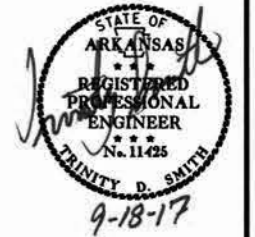
STATION	STATION	LOCATION	LENGTH FEET	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT				ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")								
				TON / STATION	TON	AVG. WID. FEET	SQ. YD.	GALLONS / SQ. YD.	GALLON	AVG. WID. FEET	SQ. YD.	POUND / SQ. YD.	PG 64-22 TON	AVG. WID. FEET	SQ. YD.	POUND / SQ. YD.	PG 76-22 TON	AVG. WID. FEET	SQ. YD.	POUND / SQ. YD.	PG 76-22 TON	TOTAL PG 76-22 TON
<b>MAIN LANES</b>																						
2+00.00	3+00.00	FINAL 2" - HWY. 35 - TRANSITION	100.00	152.00	152.00	25.00	277.78	0.17	47.22													
3+00.00	4+00.00	HWY. 35	100.00	166.25	166.25	24.94	277.11	0.05	13.86													
4+00.00	4+75.00	HWY. 35	75.00	196.00	147.00	32.64	272.00	0.05	13.60	4.65	38.75	440.00	8.53	4.53	37.75	220.00	4.15	43.58	363.17	220.00	39.95	44.10
4+75.00	4+99.72	HWY. 35	24.72	141.75	35.04	52.22	143.43	0.05	7.17	13.98	38.40	440.00	8.45	13.86	38.07	220.00	4.19	45.57	125.17	220.00	13.77	17.96
4+99.72	5+87.00	HWY. 35	87.28	VAR.	118.75	102.46	993.63	0.05	49.68	30.42	295.01	440.00	64.90	30.29	293.75	220.00	32.31	71.91	697.37	220.00	76.71	109.02
5+87.00	6+15.16	HWY. 35	28.16	VAR.	26.29	VAR.	770.03	0.05	38.50	VAR.	142.05	440.00	31.25	VAR.	141.15	220.00	15.53	VAR.	627.01	220.00	68.97	84.50
6+15.16	6+51.68	CROSSOVER	12.00			VAR.	148.93	0.17	25.32									VAR.	148.93	220.00	16.38	16.38
6+51.68	7+84.90	CROSSOVER	133.22	VAR.	557.49	VAR.	2094.08	0.05	104.70	VAR.	1052.78	660.00	347.42	VAR.	1048.88	220.00	115.38	VAR.	1045.20	220.00	114.97	230.35
8+09.36	9+20.00	HWY. 35	110.64	VAR.	413.25	VAR.	2302.03	0.05	115.10	VAR.	1153.48	440.00	253.77	VAR.	1148.55	220.00	126.34	VAR.	1147.51	220.00	126.23	252.57
9+20.00	10+00.00	HWY. 35	80.00	264.25	211.40	60.75	540.00	0.05	27.00	30.50	271.11	440.00	59.64	30.25	268.89	220.00	29.58	38.00	337.78	220.00	37.16	66.74
10+00.00	11+00.00	HWY. 35	100.00	240.25	240.25	60.75	675.00	0.05	33.75	30.50	338.89	440.00	74.56	30.25	336.11	220.00	36.97	38.00	422.22	220.00	46.44	83.41
11+00.00	11+60.00	HWY. 35	60.00	232.50	139.50	56.75	378.33	0.05	18.92	28.50	190.00	440.00	41.80	28.25	188.33	220.00	20.72	36.00	240.00	220.00	26.40	47.12
11+60.00	14+09.78	HWY. 35	249.78	224.50	560.76	52.75	1463.99	0.05	73.20	26.50	735.46	440.00	161.80	26.25	728.53	220.00	80.14	34.00	943.61	220.00	103.80	183.94
14+09.78	15+32.10	HWY. 35	122.32	184.50	225.68	44.35	602.77	0.05	30.14	16.04	218.00	440.00	47.96	15.85	215.42	220.00	23.70	34.00	462.10	220.00	50.83	74.53
15+32.10	16+00.00	HWY. 35	67.90	146.75	99.64	32.75	247.08	0.05	12.35	6.50	49.04	440.00	10.79	6.25	47.15	220.00	5.19	34.00	256.51	220.00	28.22	33.41
16+00.00	16+30.00	HWY. 35	30.00	143.00	42.90	30.75	102.50	0.05	5.13	5.50	18.33	440.00	4.03	5.25	17.50	220.00	1.93	33.00	110.00	220.00	12.10	14.03
16+30.00	26+00.00	HWY. 35	970.00	139.00	1348.30	28.75	3098.61	0.05	154.93	4.50	485.00	440.00	106.70	4.25	458.06	220.00	50.39	32.00	3448.89	220.00	379.38	429.77
26+00.00	27+56.67	HWY. 35	156.67	139.00	217.77	28.57	497.34	0.05	24.87	4.38	76.25	440.00	16.78	4.19	72.94	220.00	8.02	32.00	557.05	220.00	61.28	69.30
27+56.67	28+43.85	HWY. 35	87.18	116.25	101.35	41.32	400.25	0.05	20.01	14.38	139.29	440.00	30.64	14.19	137.45	220.00	15.12	32.00	309.97	220.00	34.10	49.22
28+43.85	39+00.40	HWY. 35	1056.55	216.75	2290.07	48.75	5722.98	0.05	286.15	24.50	2876.16	440.00	632.76	24.25	2846.82	220.00	313.15	32.00	3756.62	220.00	413.23	726.38
39+00.40	40+10.15	HWY. 35	109.75	181.75	199.47	42.77	521.56	0.05	26.08	15.38	187.55	440.00	41.26	15.19	185.23	220.00	20.38	32.00	390.22	220.00	42.92	63.30
40+10.15	41+00.00	HWY. 35	89.85	139.00	124.89	28.75	287.02	0.05	14.35	4.50	44.93	440.00	9.88	4.25	42.43	220.00	4.67	32.00	319.47	220.00	35.14	39.81
41+00.00	42+00.00	HWY. 35 - TRANSITION	100.00	69.50	69.50	24.84	276.00	0.05	13.80	2.25	25.00	440.00	5.50	2.13	23.67	220.00	2.60					2.60
41+00.00	42+00.00	FINAL 2" - HWY. 35 - TRANSITION	100.00			20.00	222.22	0.17	37.78									26.00	288.89	220.00	31.78	31.78
104+16.42	107+01.00	HWY. 65 SOUTH	284.58	101.50	288.85	24.53	775.64	0.05	38.78	8.58	271.30	440.00	59.69	8.45	267.19	220.00	29.39	14.17	448.06	220.00	49.29	78.68
<b>ADDITIONAL FOR LEVELING &amp; GRADE RAISE</b>																						
3+00.00	4+00.00	HWY. 35 - LEVELING	100.00			24.94	277.11	0.17	47.11						24.94	277.11	220.00	30.48				30.48
4+00.00	5+00.00	HWY. 35 - LEVELING	100.00			22.37	248.56	0.17	42.26						22.37	248.56	220.00	27.34				27.34
4+00.00	5+00.00	HWY. 35 - GRADE RAISE	100.00			22.37	248.56	0.05	12.43	22.37	248.56	330.00	41.01									
5+00.00	5+87.00	HWY. 35 - LEVELING	87.00			54.83	530.02	0.17	90.10						54.83	530.02	275.00	72.88				72.88
14+09.78	15+63.24	HWY. 35 - LEVELING	153.46			14.19	241.96	0.17	41.13						14.91	254.23	220.00	27.97				27.97
14+09.78	15+63.24	HWY. 35 - GRADE RAISE	153.46			14.19	241.96	0.05	12.10	14.91	254.23	495.00	62.92									
15+63.24	19+00.00	HWY. 35 - LEVELING	336.76			20.00	748.36	0.17	127.22						20.00	748.36	275.00	102.90				102.90
19+00.00	27+56.67	HWY. 35 - LEVELING	856.67			20.00	1903.71	0.17	323.63						20.00	1903.71	220.00	209.41				209.41
19+00.00	27+56.67	HWY. 35 - GRADE RAISE	856.67			20.00	1903.71	0.05	95.19	20.00	1903.71	440.00	418.82									
27+56.67	28+43.85	HWY. 35 - LEVELING	87.18			12.75	123.51	0.17	21.00						12.75	123.51	385.00	23.78				23.78
39+00.40	40+26.47	HWY. 35 - LEVELING	126.07			14.88	208.44	0.17	35.43						14.88	208.44	220.00	22.93				22.93
39+00.40	40+26.47	HWY. 35 - GRADE RAISE	126.07			14.88	208.44	0.05	10.42	14.88	208.44	330.00	34.39									
40+26.47	41+00.00	HWY. 35 - LEVELING	73.53			20.46	167.16	0.17	28.42						20.46	167.16	220.00	18.39				18.39
<b>ADDITIONAL FOR SUPERELEVATION</b>																						
27+98.23	30+48.23	SUPERELEVATION TRANSITION	250.00	30.00	75.00																	
30+48.23	32+47.00	MAXIMUM SUPERELEVATION	198.77	60.00	119.26																	
32+47.00	34+97.00	SUPERELEVATION TRANSITION	250.00	30.00	75.00				</													





DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020595	41	78

2 SURVEY CONTROL DETAILS



SURVEY CONTROL COORDINATES  
 Project Name: s020595  
 Date: 10/26/2015  
 Coordinate System: Arkansas State Plane Coordinates  
 Based on AHTD GPS PTS : 090005 - 090022  
 Projected to Ground Coordinates  
 Units: U.S. Survey Foot

COORDINATES LISTED BELOW ARE GROUND (Localized) COORDINATES !!!!

Point No.	Northing	SY	Easting	SX	Elevation	SZ	Feature Code	Point Description
1	1627577.1091	0.0070	1503161.5571	0.0080	133.485	0.008	CTL	5/8 REBAR W/2"CAP
2	1628048.9163	0.0060	1502943.7914	0.0080	135.290	0.009	CTL	5/8 REBAR W/2"CAP
3	1628516.4243	0.0060	1502722.3325	0.0070	135.473	0.009	CTL	5/8 REBAR W/2"CAP
4	1627939.2209	0.0060	1502327.5661	0.0070	134.021	0.008	CTL	5/8 REBAR W/2"CAP
5	1628083.4970	0.0070	1503631.3052	0.0080	136.031	0.009	CTL	5/8 REBAR W/2"CAP
100	1633248.1948	0.0000	1500413.1670	0.0000	138.122	0.000	GPS	PD:AHTD GPS MON 90005
101	1618496.0298	0.0000	1484742.0708	0.0000	135.972	0.000	GPS	PD:AHTD GPS MON 90022
901	1630620.7987	30.0000	1501735.4680	30.0000	136.009	0.006	TBM	SQ. CUT CONC. BASE OF GATE POST AT GRAIN BINS
902	1628044.3931	30.0000	1502830.9918	30.0000	136.677	0.007	TBM	SQ. CUT IN TRAFFIC ISLAND INTERSEC HWY 65-35 WEST OF S BOUND LANES HWY 65
903	1627774.2018	0.0070	1499922.9179	0.0090	134.983	0.007	TBM	SQ CUT IN NORTH HEADWALL OF CULVERT SW OF GAS LINE PUMPING STA
904	1627568.1426	0.0080	1497028.9957	0.0100	135.365	0.006	TBM	X CUT ON TOP OF BOLT ON ELEC. WELL HEAD 1.1 MILE W OF INTERSEC.
912	1627175.5304	0.0090	1493295.2912	0.0110	132.699	0.000	TBM	SQ. CUT IN HW ON OLD JOB 020535

\*Standard Primary Control Monument - Rebar and Cap - Standard - 5/8" x 24" Rebar with 2" Aluminum Cap stamped: "(include all common information here)" plus other markings indicated in the point description of the individual point. AHTD monuments will be stamped "Arkansas Hwy & Trans Dept" with "PN: ####" & "Job #####".  
 Monuments that are set by Consultants will be stamped "Arkansas Hwy & Trans Dept" with "PN:####", "Job#####", & "PS#####". The consultant Professional Surveyor in charge will stamp his/her PS license number on the cap.

\*\*Standard GPS Control Point Monument - 5/8" x 48" Rebar with 2.5" Aluminum Cap stamped: "(include all common information here)" plus other markings indicated in the point description of the individual point. These monuments will be stamped "Ark. State Hwy Trans. Dept.", "GPS Survey", & "Point No. #####".

SX, SY, SZ - Represents the standard error estimate of the coordinate values of each point at the 67% confidence level (one sigma) based on the least squares analysis of the control network. See the AASHTO SDMS Technical Data Guide data tag definition for SX, SY, and SZ: for additional information. These values shall be used when control points are added and the entire network is reprocessed using least square analysis. A value of 0.001 is defined as fixed (no adjustment) in the least square analysis process. A value of 30 is defined as location by handheld GPS device or scaled from USGS Quadmap.

Reference Control points (1500 series) shall be used to re-establish horizontal datum if the primary control has been destroyed. These reference control points shall not be used for vertical control unless the elevation has been established from the project datum with 3-wire level techniques.

All additional project control shall be occupied, measured, and adjusted with direct survey ties to at least two of the control points listed in the table above. New survey control shall not be independent of the survey control listed above. This includes horizontal coordinates and elevations.

Positional Accuracy:		PN:
Horizontal - GPS (1.0 cm ± 1PPM)		100-101
Horizontal - Primary (2.0cm ± 20PPM):		1-5
Horizontal - Secondary (3 cm ± 50PPM):		N/A
Vertical - NGS 1st Order (±4mm x vdist in km)		N/A
Vertical - NGS 2nd Order (±6mm x vdist in km)		N/A
Vertical - NGS 3rd Order (±8mm x vdist in km)		1-5

Horizontal Datum: NAD 1983 (1997) State Plane Zone: 0302 - South Zone  
 The adjustment year is based on metadata in the SDMS Control file  
 A project CAF of: 0.99995085 has been used to compute the above coordinates.  
 The project CAF shall have a minimum precision of 9 digits right of the decimal.  
 This CAF is intended for use within the project limits only.  
 Grid Distance = Ground Distance X CAF  
 If Coordinates are listed as Ground:  
 To compute Grid Coordinates, multiply the Ground Coordinates by CAF about the origin of X=0 & Y=0  
 If Coordinates are listed as Grid:  
 To compute Ground Coordinates, divide the Grid Coordinates by CAF about the origin of X=0 & Y=0

Vertical Datum: NAVD 1988 based NGS BM:  
 A project Elevation Factor of: 0.9999935261 has been computed and incorporated in the above CAF.  
 This is based on the average elevation of the project: 135.34 Feet  
 3-Wire Leveling techniques have been used to establish elevations on  
 Points: 1-5, 900-912 From NGS BM: N/A

Basis of Bearing: Grid Bearings based on AHTD GPS points: 090005-090022  
 Convergence Angle is: 00-21-00 RIGHT at PN: 2  
 LT: N 33-31-56 LG: W 091-22-29  
 Grid Azimuth = Astronomical Azimuth - Convergence Angle

Note: Information in Italics is for clarification only. It is not to be part of the actual Control Table or Control Detail Sheets.

HWY. 35

POINT NO.	TYPE	STATION	NORTHING	EASTING
8000	POB	0+00.00	1627951.4650	1502234.6490
8001	PC	4+01.88	1627986.1579	1502635.0322
8003	PT	5+13.26	1628014.7926	1502742.0769
8004	PC	9+08.14	1628181.6769	1503099.9630
8006	PT	10+96.91	1628189.2111	1503283.6936
8007	PC	13+13.23	1628114.1490	1503486.5754
8009	PT	15+64.89	1628080.6124	1503733.9582
8010	PC	29+85.73	1628201.0602	1505149.6811
8012	PT	33+76.77	1628359.5779	1505498.8856
8013	PC	36+18.77	1628527.5806	1505673.0556
8015	PT	40+61.07	1628688.1547	1506073.4587
8016	POE	46+18.66	1628685.5977	1506631.0407

HWY. 65 SOUTH

POINT NO.	TYPE	STATION	NORTHING	EASTING
8017	POB	100+00.00	1627744.7991	1502995.0364
8018	PC	104+18.34	1628123.5545	1502817.4052
8020	PT	111+76.67	1628820.2813	1502518.3543
8021	POE	115+41.88	1629160.4647	1502385.4879

HWY. 65 NORTH

POINT NO.	TYPE	STATION	NORTHING	EASTING
8022	POB	100+00.00	1627816.7483	1503148.2082
8023	POE	108+14.66	1628554.3576	1502802.3751

DRIVEWAY

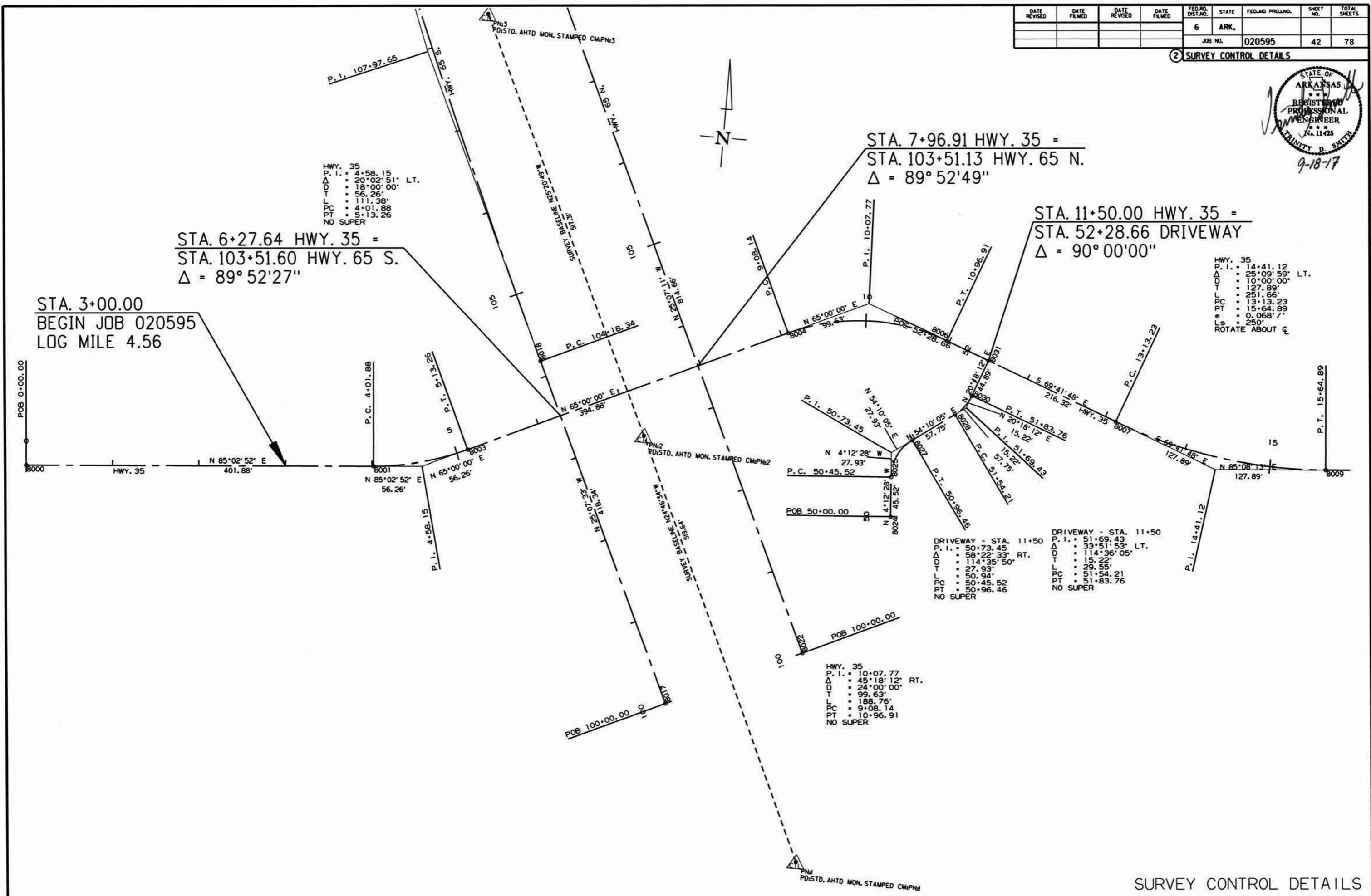
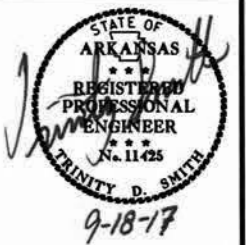
POINT NO.	TYPE	STATION	NORTHING	EASTING
8024	POB	50+00.00	1627982.0890	1503236.2133
8025	PC	50+45.52	1628027.4840	1503232.8735
8027	PT	50+96.46	1628071.6896	1503253.4683
8028	PC	51+54.21	1628105.4965	1503300.2876
8030	PT	51+83.76	1628128.6838	1503317.9106
8031	POE	52+28.66	1628170.7881	1503333.4883

8/25/2017

R020595.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		42	78
				JOB NO.		020595		

2 SURVEY CONTROL DETAILS



SURVEY CONTROL DETAILS

8/25/2017

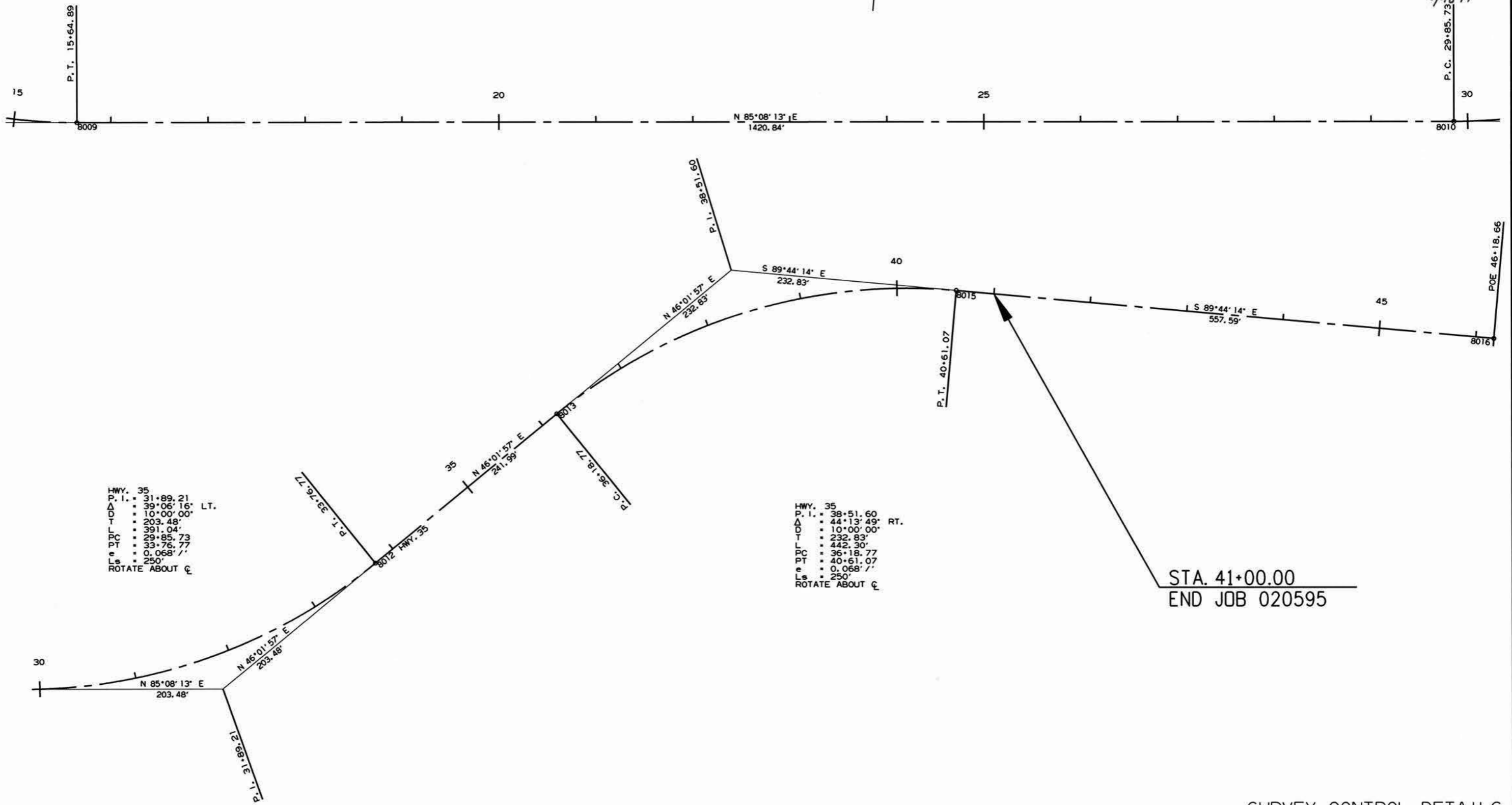
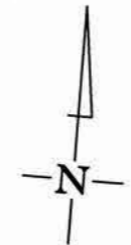
R020595.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						020595	43	78

② SURVEY CONTROL DETAILS



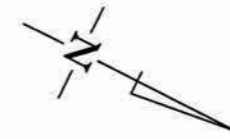
HWY. 35  
P.I. = 14+41.12  
Δ = 25°09'59" LT.  
D = 10°00'00"  
T = 127.89'  
L = 251.66'  
PC = 13+13.23  
PT = 15+64.89  
e = 0.068' /'  
Ls = 250'  
ROTATE ABOUT C



8/25/2017  
R020595.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						020595	44	78

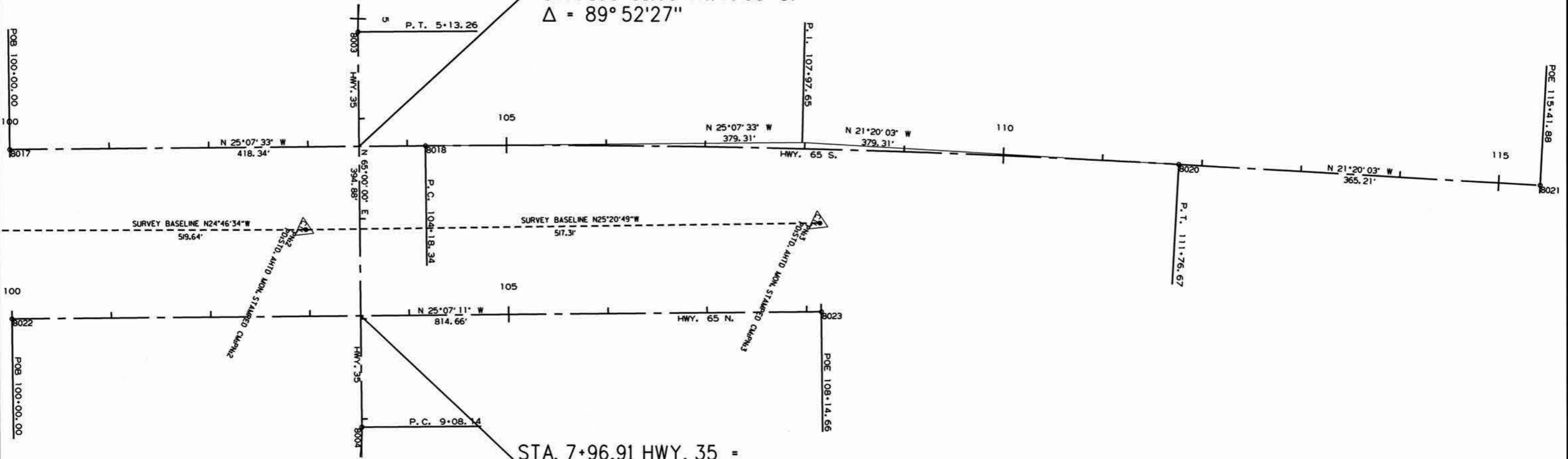
2 SURVEY CONTROL DETAILS



HWY. 65 S.  
 P. I. = 107+97.65  
 $\Delta$  = 3°47'30" RT.  
 D = 0°30'00"  
 T = 379.31'  
 L = 758.33'  
 PC = 104+18.34  
 PT = 111+76.67  
 NO SUPER

STA. 6+27.64 HWY. 35 =  
 STA. 103+51.60 HWY. 65 S.  
 $\Delta = 89^\circ 52' 27''$

STA. 7+96.91 HWY. 35 =  
 STA. 103+51.13 HWY. 65 N.  
 $\Delta = 89^\circ 52' 49''$



8/25/2017

R020595.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020595							45	78

2 PLAN AND PROFILE SHEETS



STA. 8+57.91 - CONSTRUCT  
29" x 18" x 108' R.C. PIPE CULVERT  
WITH FES LT. & RT.  
Q25 = 8 CFS D.A. = 31 ACRES

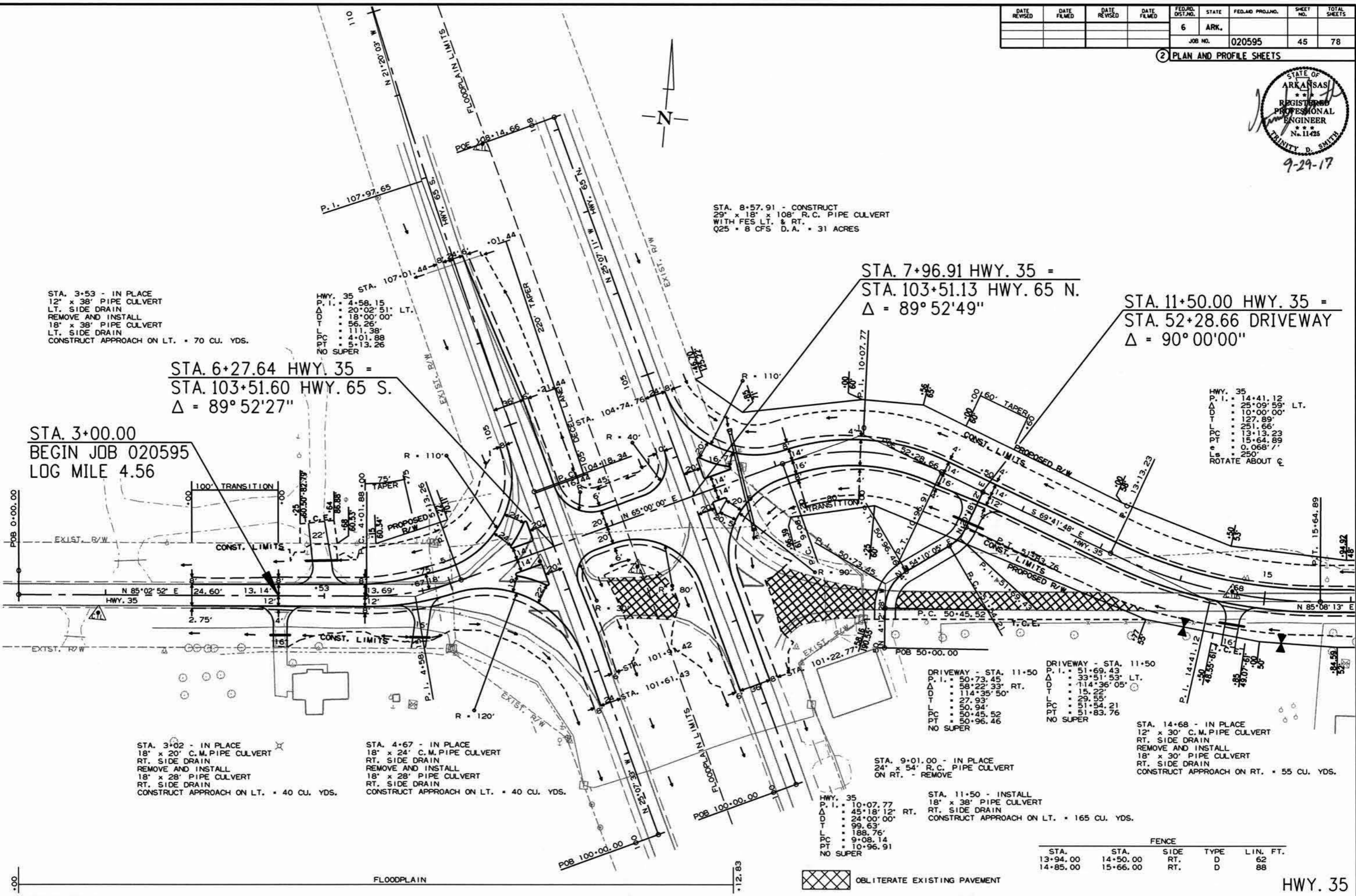
STA. 7+96.91 HWY. 35 =  
STA. 103+51.13 HWY. 65 N.  
 $\Delta = 89^\circ 52' 49''$

STA. 11+50.00 HWY. 35 =  
STA. 52+28.66 DRIVEWAY  
 $\Delta = 90^\circ 00' 00''$

HWY. 35  
P.I. = 14+41.12  
 $\Delta = 25^\circ 09' 59''$  LT.  
D = 10'00'00"  
T = 127.89'  
L = 251.66'  
PC = 13+13.23  
PT = 15+64.89  
e = 0.068' /'  
Ls = 250'  
ROTATE ABOUT C

STA. 6+27.64 HWY. 35 =  
STA. 103+51.60 HWY. 65 S.  
 $\Delta = 89^\circ 52' 27''$

STA. 3+00.00  
BEGIN JOB 020595  
LOG MILE 4.56



STA. 3+02 - IN PLACE  
18" x 20' C.M. PIPE CULVERT  
RT. SIDE DRAIN  
REMOVE AND INSTALL  
18" x 28' PIPE CULVERT  
RT. SIDE DRAIN  
CONSTRUCT APPROACH ON LT. = 40 CU. YDS.

STA. 4+67 - IN PLACE  
18" x 24' C.M. PIPE CULVERT  
RT. SIDE DRAIN  
REMOVE AND INSTALL  
18" x 28' PIPE CULVERT  
RT. SIDE DRAIN  
CONSTRUCT APPROACH ON LT. = 40 CU. YDS.

STA. 9+01.00 - IN PLACE  
24" x 54' R.C. PIPE CULVERT  
ON RT. - REMOVE

HWY. 35  
P.I. = 10+07.77  
 $\Delta = 45^\circ 18' 12''$  RT.  
D = 24'00'00"  
T = 99.63'  
L = 188.76'  
PC = 9+08.14  
PT = 10+96.91  
NO SUPER

STA. 11+50 - INSTALL  
18" x 38' PIPE CULVERT  
RT. SIDE DRAIN  
CONSTRUCT APPROACH ON LT. = 165 CU. YDS.

STA. 14+68 - IN PLACE  
12" x 30' C.M. PIPE CULVERT  
RT. SIDE DRAIN  
REMOVE AND INSTALL  
18" x 30' PIPE CULVERT  
RT. SIDE DRAIN  
CONSTRUCT APPROACH ON RT. = 55 CU. YDS.

DRIVEWAY - STA. 11+50  
P.I. = 50+73.45  
 $\Delta = 58^\circ 22' 33''$  RT.  
D = 114'35'50"  
T = 27.93'  
L = 50.94'  
PC = 50+45.52  
PT = 50+96.46  
NO SUPER

DRIVEWAY - STA. 11+50  
P.I. = 51+69.43  
 $\Delta = 33^\circ 51' 53''$  LT.  
D = 114'36'05"  
T = 15.22'  
L = 29.55'  
PC = 51+54.21  
PT = 51+83.76  
NO SUPER

STA.	STA.	SIDE	TYPE	LIN. FT.
13+94.00	14+50.00	RT.	D	62
14+85.00	15+66.00	RT.	D	88

OBLITERATE EXISTING PAVEMENT

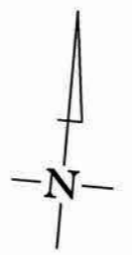
HWY. 35

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020595		45	78

2 PLAN AND PROFILE SHEETS



STA. 8+57.91 - CONSTRUCT  
29' x 18' x 108' R.C. PIPE CULVERT  
WITH FES LT. & RT.  
Q25 = 8 CFS D.A. = 31 ACRES

STA. 7+96.91 HWY. 35 =  
STA. 103+51.13 HWY. 65 N.  
 $\Delta = 89^\circ 52' 49''$

STA. 11+50.00 HWY. 35 =  
STA. 52+28.66 DRIVEWAY  
 $\Delta = 90^\circ 00' 00''$

STA. 3+53 - IN PLACE  
12' x 38' PIPE CULVERT  
LT. SIDE DRAIN  
REMOVE AND INSTALL  
18' x 38' PIPE CULVERT  
LT. SIDE DRAIN  
CONSTRUCT APPROACH ON LT. = 70 CU. YDS.

HWY. 35  
P.I. = 4+58.15  
 $\Delta$  = 20°02'51" LT.  
D = 18°00'00"  
T = 56.26'  
L = 111.38'  
PC = 4+01.88  
PT = 5+13.26  
NO SUPER

STA. 6+27.64 HWY. 35 =  
STA. 103+51.60 HWY. 65 S.  
 $\Delta = 89^\circ 52' 27''$

STA. 3+00.00  
BEGIN JOB 020595  
LOG MILE 4.56

HWY. 35  
P.I. = 14+41.12  
 $\Delta$  = 25°09'59" LT.  
D = 10°00'00"  
T = 127.89'  
L = 251.66'  
PC = 13+13.23  
PT = 15+64.89  
L.S. = 0.068'/  
L.S. = 250'  
ROTATE ABOUT  $\epsilon$

DRIVEWAY - STA. 11+50  
P.I. = 50+73.45  
 $\Delta$  = 58°22'33" RT.  
D = 114°35'50"  
T = 27.93'  
L = 60.94'  
PC = 50+45.52  
PT = 50+96.46  
NO SUPER

DRIVEWAY - STA. 11+50  
P.I. = 51+69.43  
 $\Delta$  = 33°51'53" LT.  
D = 114°36'05"  
T = 15.22'  
L = 29.55'  
PC = 51+54.21  
PT = 51+83.76  
NO SUPER

STA. 14+68 - IN PLACE  
12' x 30' C.M. PIPE CULVERT  
RT. SIDE DRAIN  
REMOVE AND INSTALL  
18' x 30' PIPE CULVERT  
RT. SIDE DRAIN  
CONSTRUCT APPROACH ON RT. = 55 CU. YDS.

STA. 3+02 - IN PLACE  
18' x 20' C.M. PIPE CULVERT  
RT. SIDE DRAIN  
REMOVE AND INSTALL  
18' x 28' PIPE CULVERT  
RT. SIDE DRAIN  
CONSTRUCT APPROACH ON LT. = 40 CU. YDS.

STA. 4+67 - IN PLACE  
18' x 24' C.M. PIPE CULVERT  
RT. SIDE DRAIN  
REMOVE AND INSTALL  
18' x 28' PIPE CULVERT  
RT. SIDE DRAIN  
CONSTRUCT APPROACH ON LT. = 40 CU. YDS.

STA. 9+01.00 - IN PLACE  
24' x 54' R.C. PIPE CULVERT  
ON RT. - REMOVE

HWY. 35  
P.I. = 10+07.77  
 $\Delta$  = 45°18'12" RT.  
D = 24°00'00"  
T = 99.63'  
L = 188.76'  
PC = 9+08.14  
PT = 10+96.91  
NO SUPER

STA. 11+50 - INSTALL  
18' x 38' PIPE CULVERT  
RT. SIDE DRAIN  
CONSTRUCT APPROACH ON LT. = 165 CU. YDS.

STA.	STA.	SIDE	TYPE	LIN. FT.
13+94.00	14+50.00	RT.	D	62
14+85.00	15+66.00	RT.	D	88

OBLITERATE EXISTING PAVEMENT

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HWY. 35

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020595		47	78

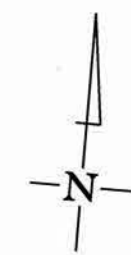
2 PLAN AND PROFILE SHEETS



OBLITERATE EXISTING PAVEMENT

STA. 29+05 - CONSTRUCT  
 APPROACH ON LT. = 110 CU. YDS.  
 UNCLASSIFIED EXCAVATION = 15 CU. YDS.

HWY. 35  
 P. I. = 31+89.21  
 Δ = 39°06'16" LT.  
 D = 10°00'00"  
 T = 203.48'  
 L = 391.04'  
 PC = 29+85.73  
 PT = 33+76.77  
 e = 0.068' /'  
 Ls = 250'  
 ROTATE ABOUT C

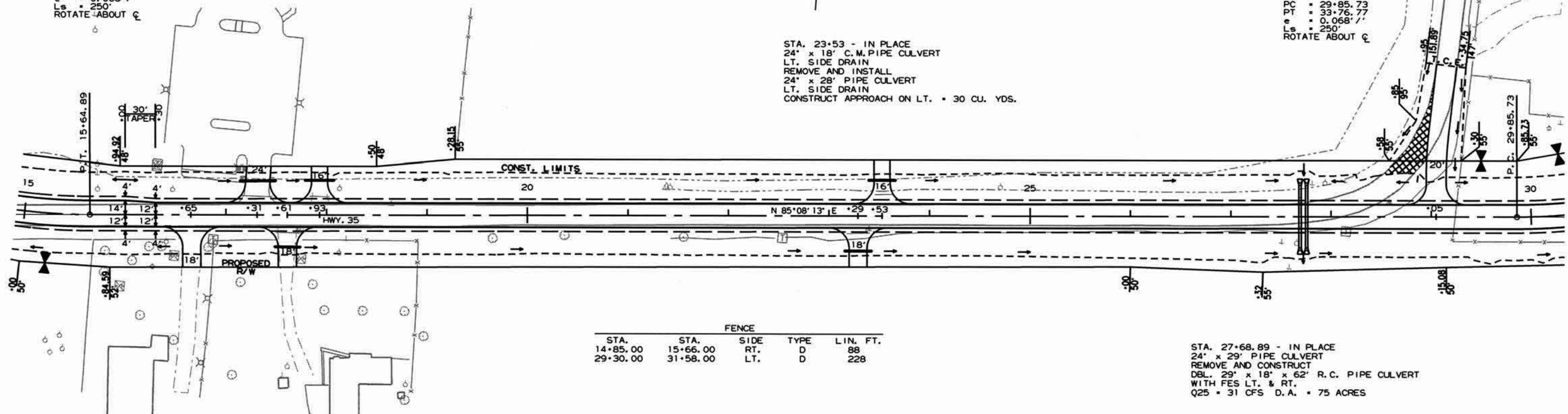


STA. 23+53 - IN PLACE  
 24' x 18' C.M. PIPE CULVERT  
 LT. SIDE DRAIN  
 REMOVE AND INSTALL  
 24' x 28' PIPE CULVERT  
 LT. SIDE DRAIN  
 CONSTRUCT APPROACH ON LT. = 30 CU. YDS.

STA. 17+93.00 - IN PLACE  
 15' x 20' C.M. PIPE CULVERT  
 LT. SIDE DRAIN  
 REMOVE AND INSTALL  
 18' x 30' PIPE CULVERT  
 LT. SIDE DRAIN  
 CONSTRUCT APPROACH ON LT. = 35 CU. YDS.

STA. 17+31 - IN PLACE  
 18' x 31' C.M. PIPE CULVERT  
 LT. SIDE DRAIN  
 REMOVE AND INSTALL  
 18' x 36' PIPE CULVERT  
 LT. SIDE DRAIN  
 CONSTRUCT APPROACH ON LT. = 45 CU. YDS.

HWY. 35  
 P. I. = 14+41.12  
 Δ = 25°09'59" LT.  
 D = 10°00'00"  
 T = 127.89'  
 L = 251.66'  
 PC = 13+13.23  
 PT = 15+64.89  
 e = 0.068' /'  
 Ls = 250'  
 ROTATE ABOUT C



FENCE				
STA.	STA.	SIDE	TYPE	LIN. FT.
14+85.00	15+66.00	RT.	D	88
29+30.00	31+58.00	LT.	D	228

STA. 27+68.89 - IN PLACE  
 24' x 29' PIPE CULVERT  
 REMOVE AND CONSTRUCT  
 DBL. 29' x 18' x 62' R.C. PIPE CULVERT  
 WITH FES LT. & RT.  
 Q25 = 31 CFS D.A. = 75 ACRES

STA. 16+65 - CONSTRUCT  
 APPROACH ON RT. = 25 CU. YDS.

STA. 17+61 - IN PLACE  
 15' x 27' C.M. PIPE CULVERT  
 RT. SIDE DRAIN  
 REMOVE AND INSTALL  
 18' x 28' PIPE CULVERT  
 RT. SIDE DRAIN  
 CONSTRUCT APPROACH ON RT. = 30 CU. YDS.

STA. 23+29 - IN PLACE  
 24' x 24' C.M. PIPE CULVERT  
 RT. SIDE DRAIN  
 REMOVE AND INSTALL  
 24' x 28' PIPE CULVERT  
 RT. SIDE DRAIN  
 CONSTRUCT APPROACH ON RT. = 25 CU. YDS.

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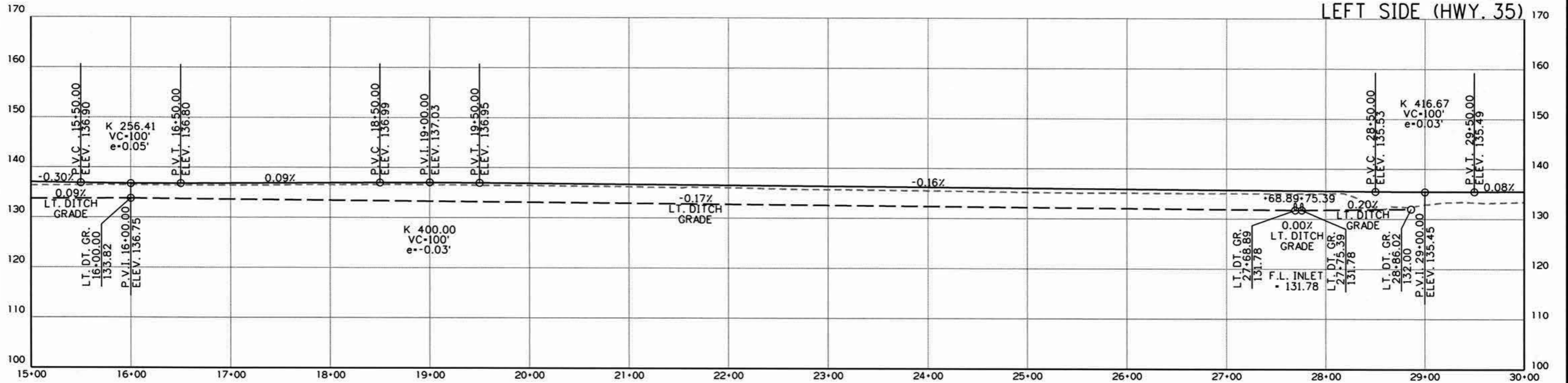
R020595.DGN

ALL R.C. PIPE CULVERTS SHALL BE CLASS III UNLESS OTHERWISE SPECIFIED. FOR ALL R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED. FOR ALL C.M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

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

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020595							48	78

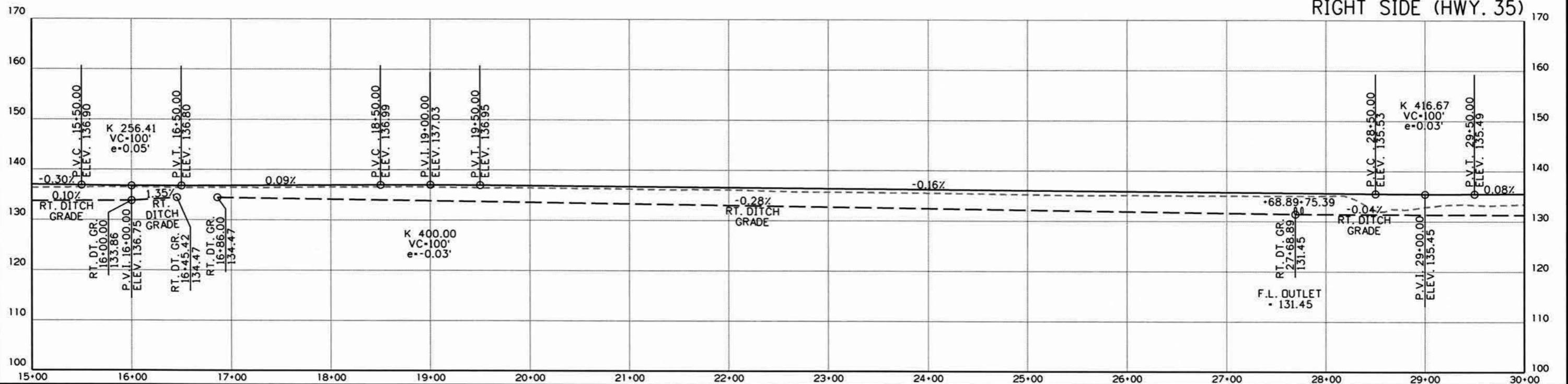
② PLAN AND PROFILE SHEETS



LEFT SIDE (HWY. 35)

ROTATE ABOUT CENTERLINE  
 STA. 11+25.73 BEGIN SUPERELEVATION  
 STA. 11+99.26 MAX. SUPERELEVATION (0.020'/'')  
 STA. 15+26.47 MAX. SUPERELEVATION (0.020'/'')  
 STA. 16+00.00 END SUPERELEVATION

ROTATE ABOUT CENTERLINE  
 STA. 27+98.23 BEGIN SUPERELEVATION  
 STA. 30+48.23 MAX. SUPERELEVATION (0.068'/'')  
 STA. 32+47.00 MAX. SUPERELEVATION (0.068'/'')  
 STA. 34+97.00 END SUPERELEVATION



RIGHT SIDE (HWY. 35)

8/25/2017

R020595.DGN

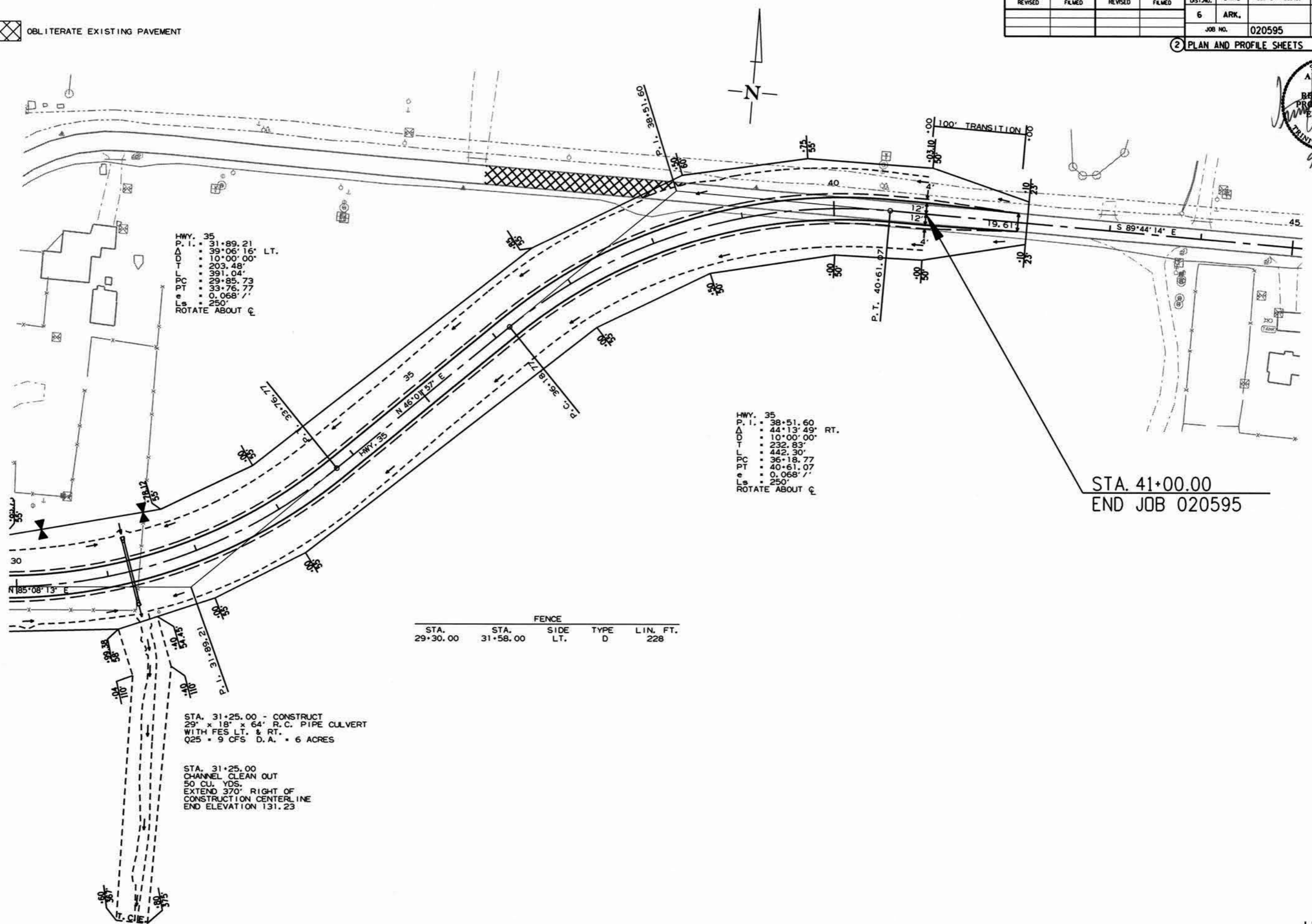


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020595							49	78

2 PLAN AND PROFILE SHEETS



OBLITERATE EXISTING PAVEMENT



HWY. 35  
 P. I. 31+89.21  
 Δ 39° 06' 16" LT.  
 D 10° 00' 00"  
 T 203.48'  
 L 391.04'  
 PC 29+85.73  
 PT 33+76.77  
 e 0.068' /'  
 Ls 250'  
 ROTATE ABOUT C

HWY. 35  
 P. I. 38+51.60  
 Δ 44° 13' 49" RT.  
 D 10° 00' 00"  
 T 232.83'  
 L 442.30'  
 PC 36+18.77  
 PT 40+61.07  
 e 0.068' /'  
 Ls 250'  
 ROTATE ABOUT C

FENCE				
STA.	STA.	SIDE	TYPE	LIN. FT.
29+30.00	31+58.00	LT.	D	228

STA. 41+00.00  
 END JOB 020595

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 R020595.DGN

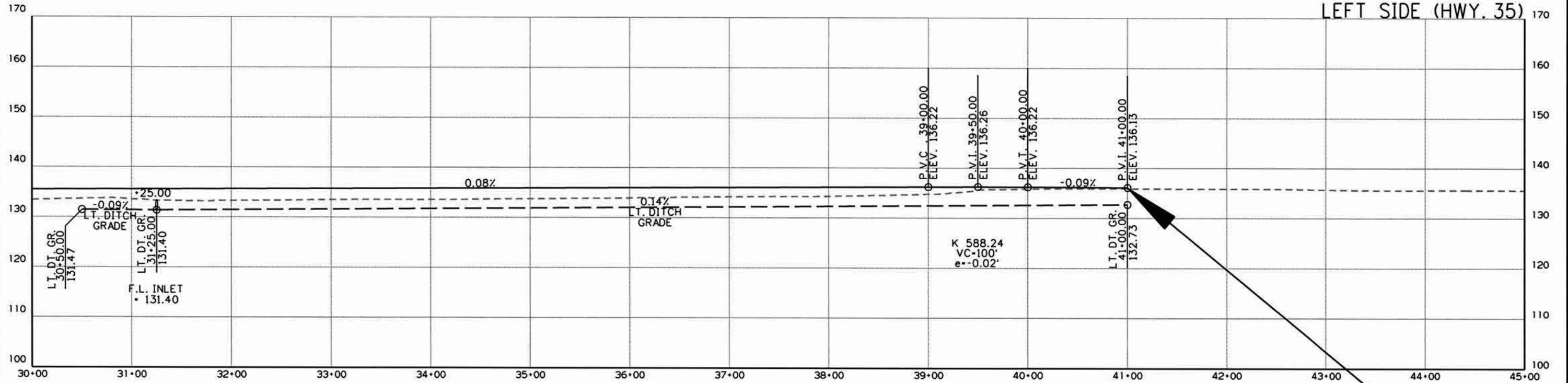
HWY. 35

ALL R. C. PIPE CULVERTS SHALL BE CLASS III UNLESS OTHERWISE SPECIFIED. FOR ALL R. C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED. FOR ALL C. M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

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

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020595							50	78

2 PLAN AND PROFILE SHEETS

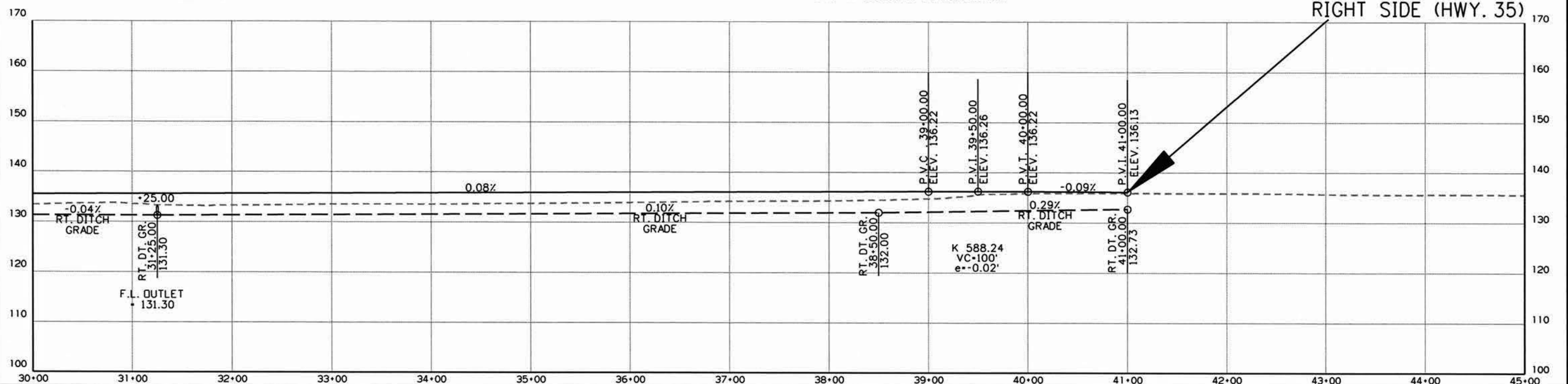


LEFT SIDE (HWY. 35)

ROTATE ABOUT CENTERLINE  
 STA. 27+98.23 BEGIN SUPERELEVATION  
 STA. 30+48.23 MAX. SUPERELEVATION (0.068'/'')  
 STA. 32+47.00 MAX. SUPERELEVATION (0.068'/'')  
 STA. 34+97.00 END SUPERELEVATION

ROTATE ABOUT CENTERLINE  
 STA. 34+97.00 BEGIN SUPERELEVATION  
 STA. 37+47.00 MAX. SUPERELEVATION (0.068'/'')  
 STA. 38+50.00 MAX. SUPERELEVATION (0.068'/'')  
 STA. 41+00.00 END SUPERELEVATION

STA. 41+00.00  
 END JOB 020595



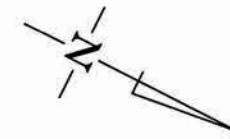
RIGHT SIDE (HWY. 35)

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						020595	51	78

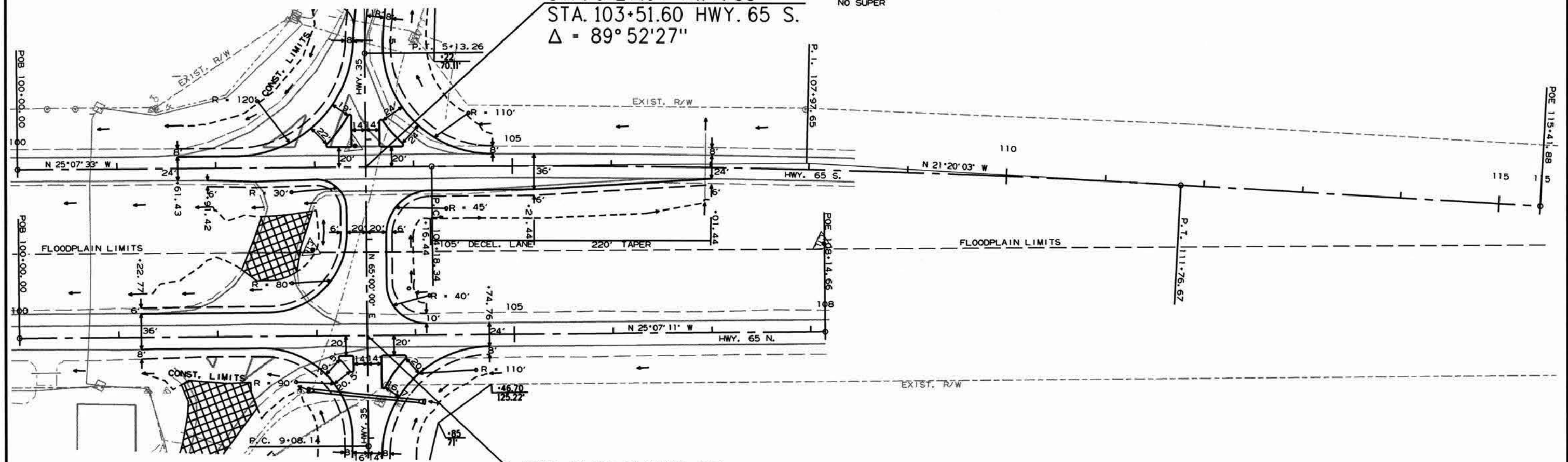
2 PLAN AND PROFILE SHEETS



HWY. 65 S.  
P.I. = 107+97.65  
 $\Delta$  = 3°47'30" RT.  
D = 0°30'00"  
T = 379.31'  
L = 758.33'  
P.C. = 104+18.34  
P.T. = 111+76.67  
NO SUPER

STA. 6+27.64 HWY. 35 =  
STA. 103+51.60 HWY. 65 S.  
 $\Delta$  = 89°52'27"

STA. 7+96.91 HWY. 35 =  
STA. 103+51.13 HWY. 65 N.  
 $\Delta$  = 89°52'49"



OBLITERATE EXISTING PAVEMENT

8/25/2017  
R020595.DGN

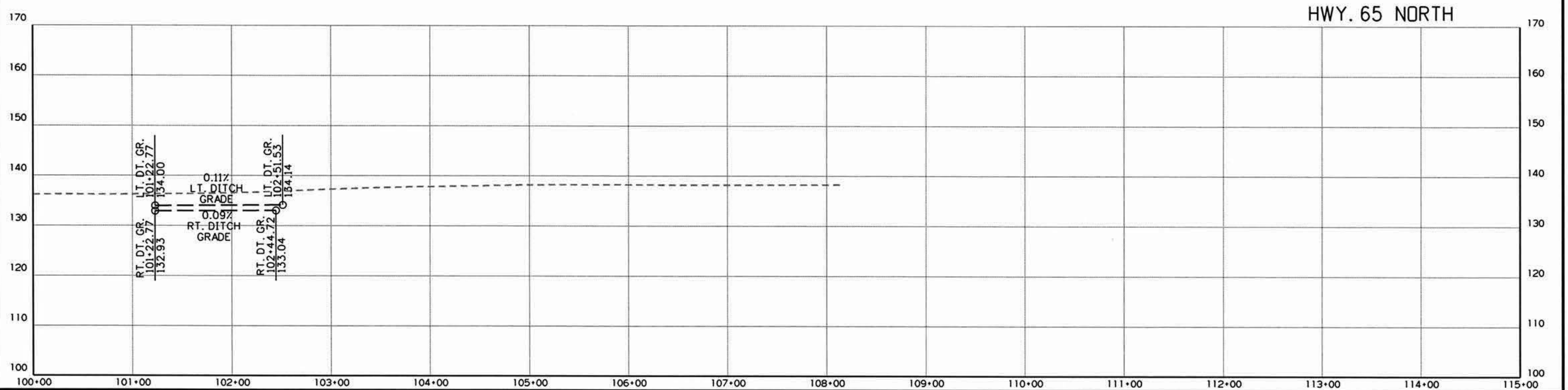
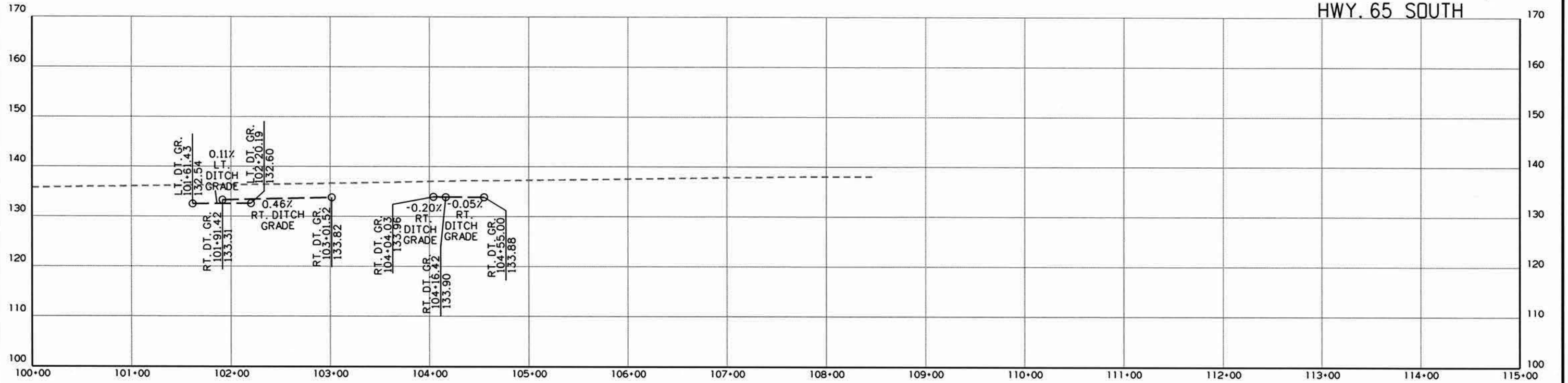
HWY. 65

ALL R. C. PIPE CULVERTS SHALL BE CLASS III UNLESS OTHERWISE SPECIFIED. FOR ALL R. C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED. FOR ALL C. M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

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

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 020595							52	78

② PLAN AND PROFILE SHEETS

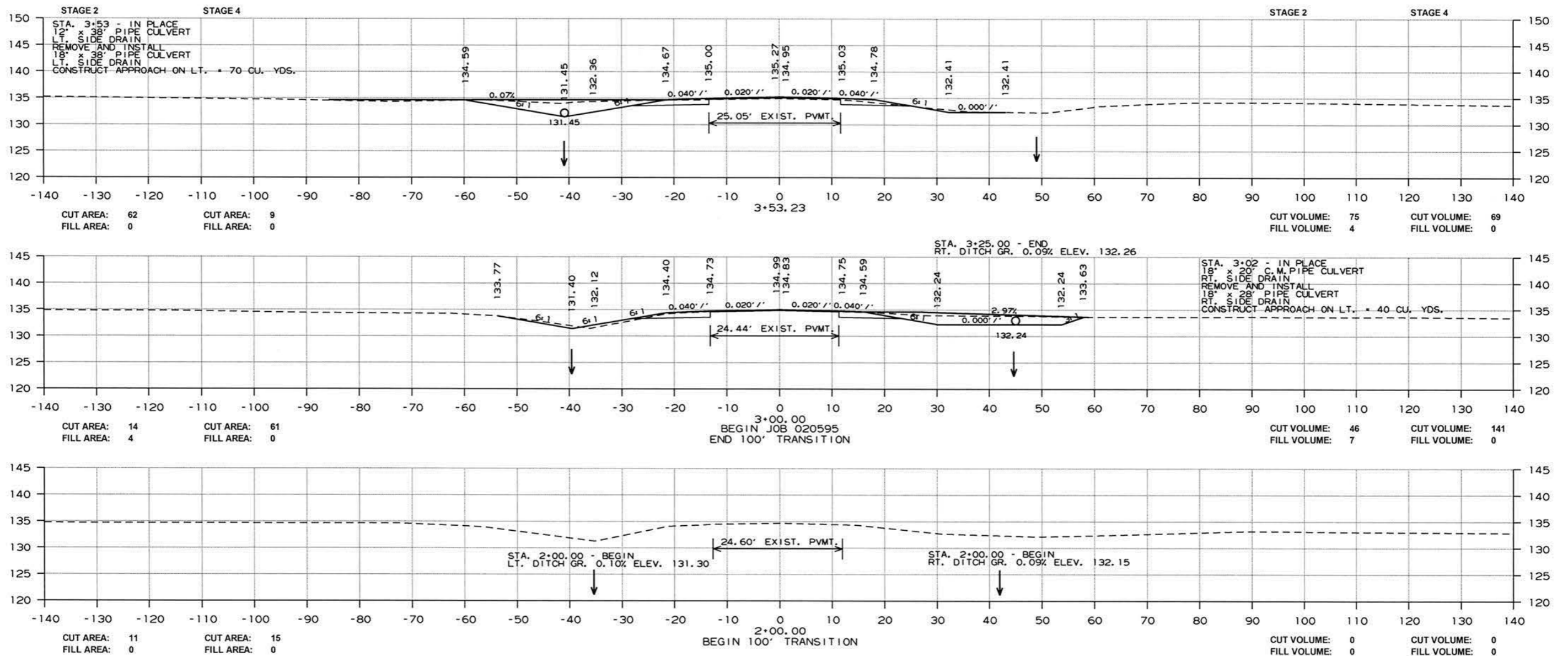


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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020595	53	78

2 CROSS SECTIONS

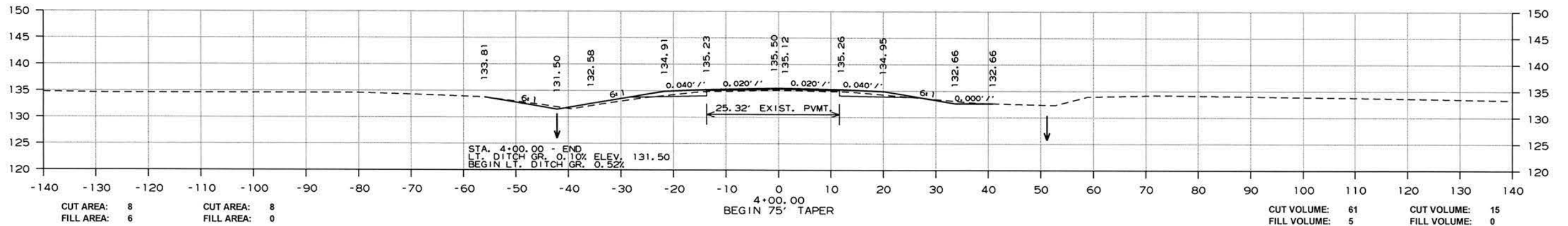
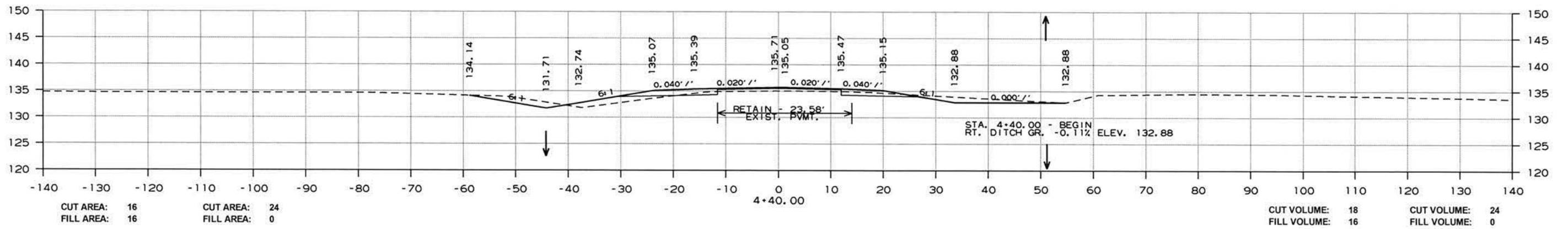
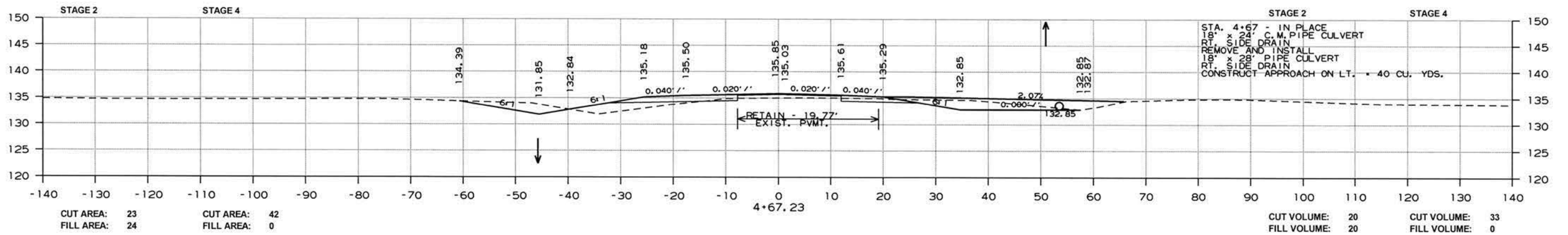


CROSS SECTION STA. 2+00.00 TO STA. 3+53.23

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R020595.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						020595	54	78

② CROSS SECTIONS



CROSS SECTION STA. 4+00.00 TO STA. 4+67.23

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	020595	55

2 CROSS SECTIONS

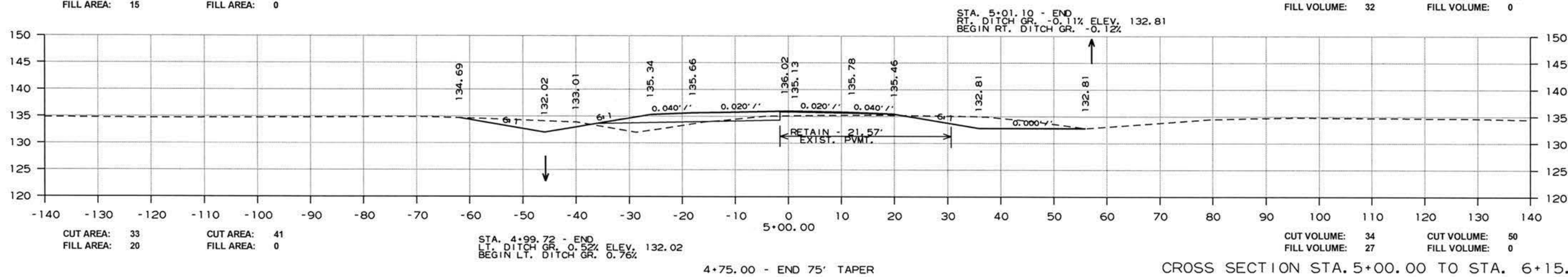
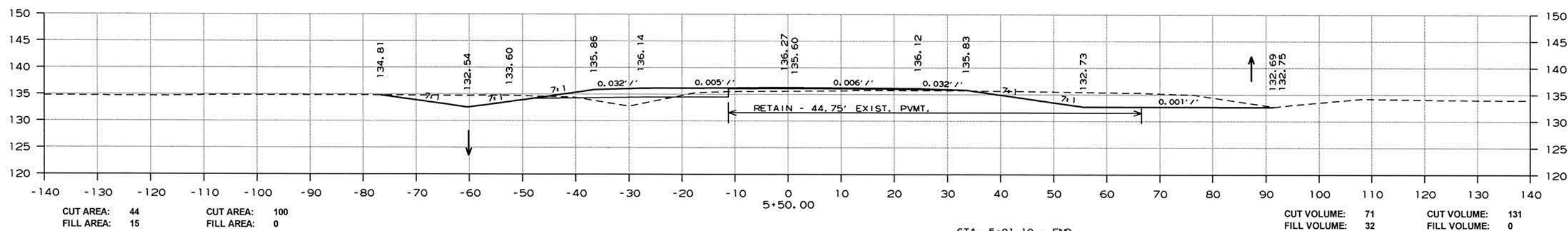
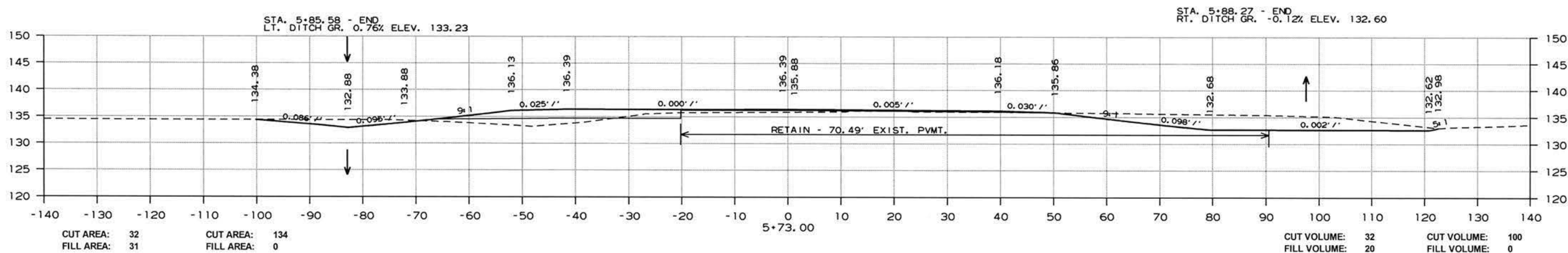
STAGE 2                      STAGE 4

CUT AREA: 0                      CUT AREA: 0  
 FILL AREA: 0                      FILL AREA: 0

6+15.68 - TIE TO HWY. 65 SOUTH RIGHT LANE EDGE  
 ELEVATION = 136.61

STAGE 2                      STAGE 4

CUT VOLUME: 25                      CUT VOLUME: 106  
 FILL VOLUME: 25                      FILL VOLUME: 0



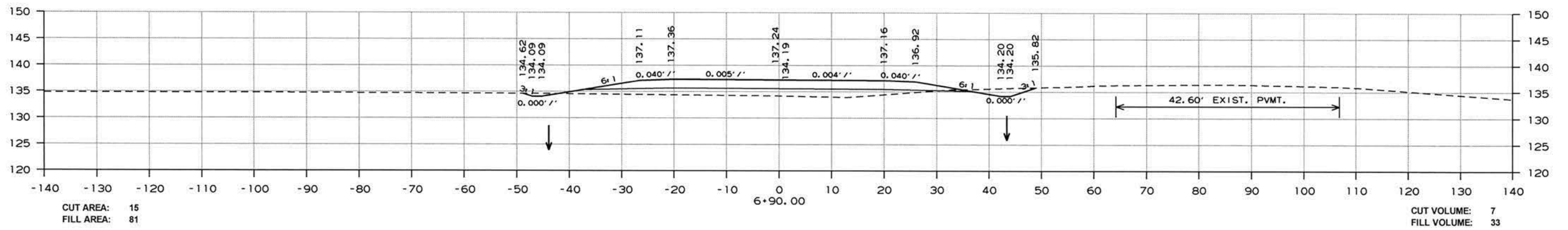
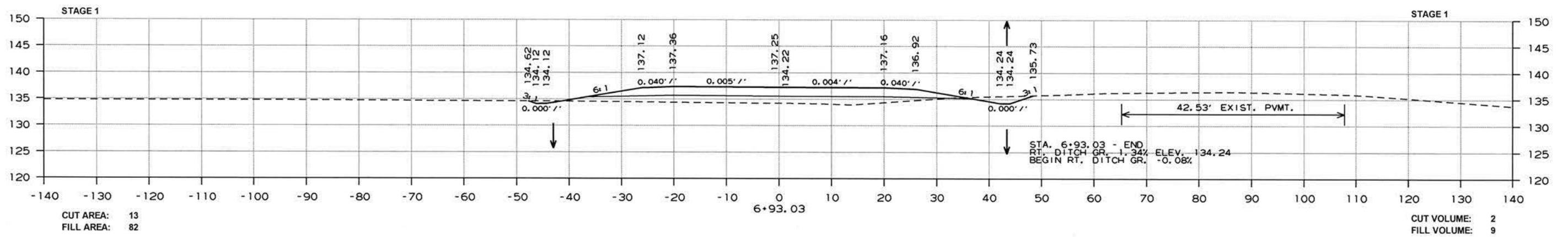
CROSS SECTION STA. 5+00.00 TO STA. 6+15.68

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020595	56	78

② CROSS SECTIONS



CUT AREA: 19 FILL AREA: 87	STA. 6+79.33 - BEGIN LT. DITCH GR. 0.47% ELEV. 133.96	6+79.33		CUT VOLUME: 9 FILL VOLUME: 18
CUT AREA: 30 FILL AREA: 15		6+69.91	STA. 6+69.91 - END RT. DITCH GR. 0.23% ELEV. 133.93 BEGIN RT. DITCH GR. 1.34%	CUT VOLUME: 17 FILL VOLUME: 2
CUT AREA: 82 FILL AREA: 0		6+61.77	STA. 6+61.77 - BEGIN RT. DITCH GR. 0.23% ELEV. 133.82	CUT VOLUME: 34 FILL VOLUME: 0
CUT AREA: 0 FILL AREA: 0	6+39.68 - TIE TO HWY. 65 SOUTH LEFT LANE EDGE ELEVATION = 137.12			CUT VOLUME: 0 FILL VOLUME: 0

CROSS SECTION STA. 6+39.38 TO STA. 6+93.03

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020595		57	78

② CROSS SECTIONS

STAGE 1

CUT AREA: 0  
FILL AREA: 0

CUT AREA: 20  
FILL AREA: 56

CUT AREA: 20  
FILL AREA: 59

7+84.90 - TIE TO HWY. 65 NORTH LEFT LANE EDGE  
ELEVATION = 137.49

7+54.50

STA. 7+54.50 - END  
RT. DITCH GR. -0.08% ELEV. 134.14

7+54.35

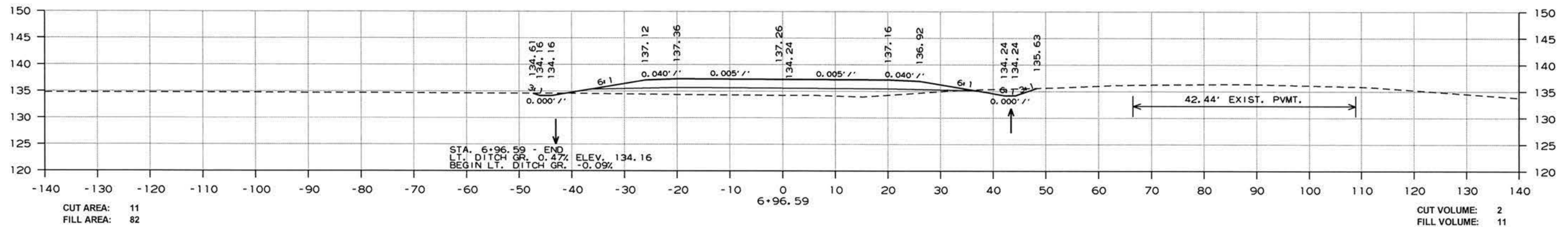
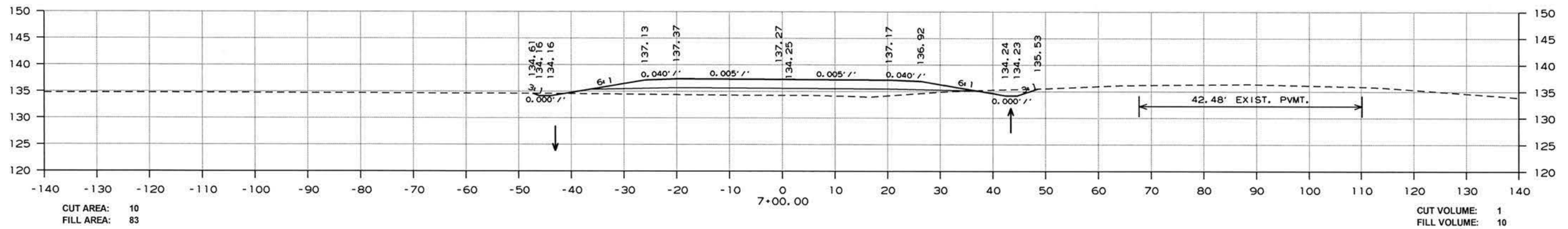
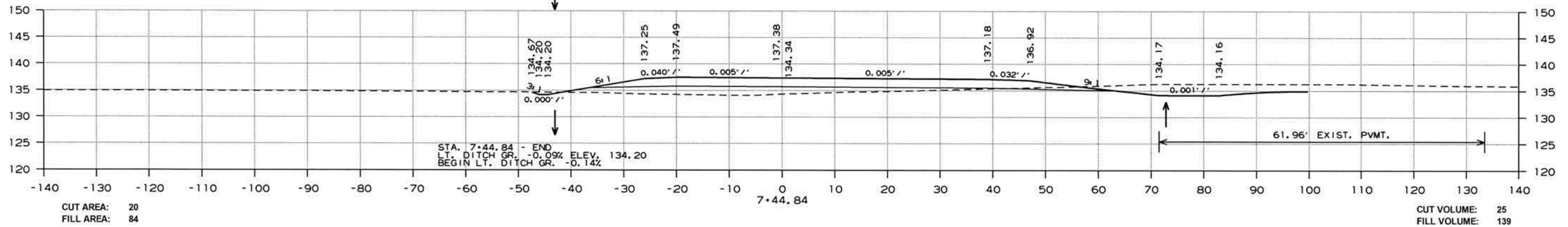
STA. 7+54.35 - END  
LT. DITCH GR. -0.14% ELEV. 134.24

STAGE 1

CUT VOLUME: 11  
FILL VOLUME: 32

CUT VOLUME: 0  
FILL VOLUME: 0

CUT VOLUME: 7  
FILL VOLUME: 25



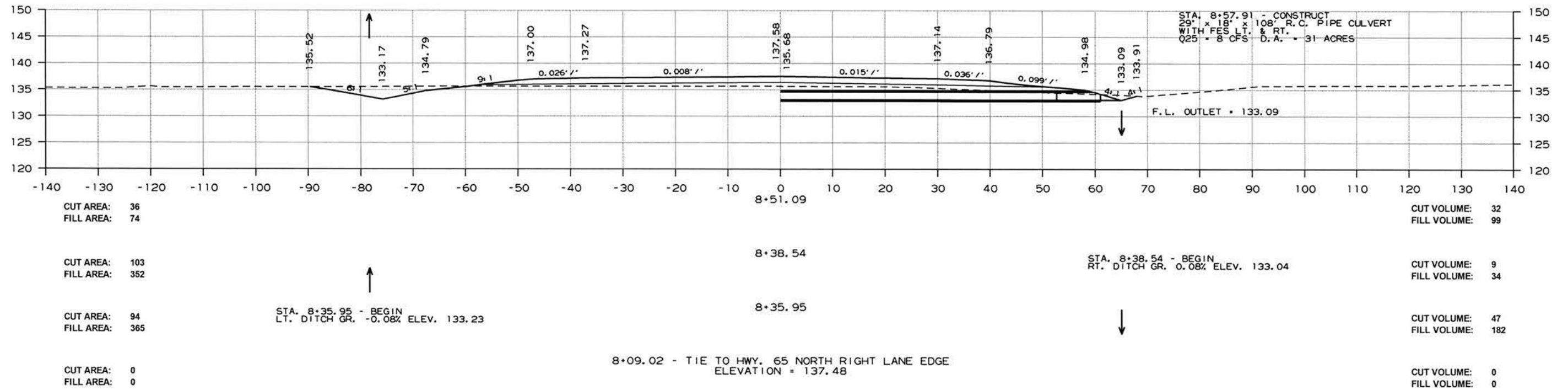
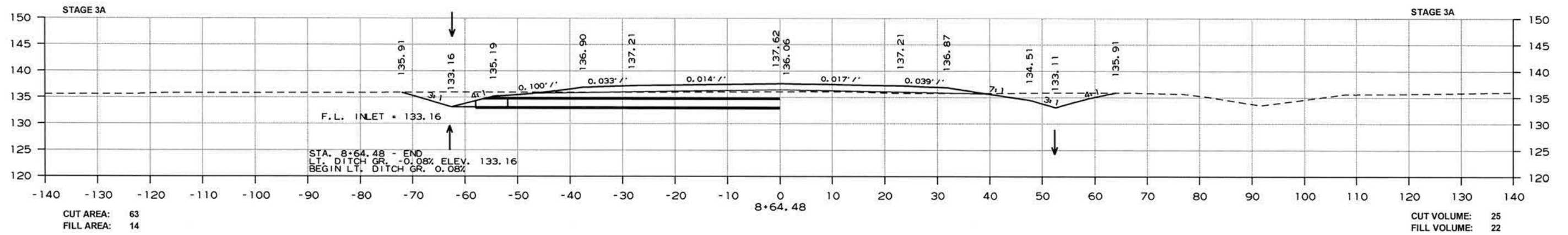
CROSS SECTION STA. 6+96.59 TO STA. 7+84.90

8/25/2017

R020595.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020595	58	78

2 CROSS SECTIONS



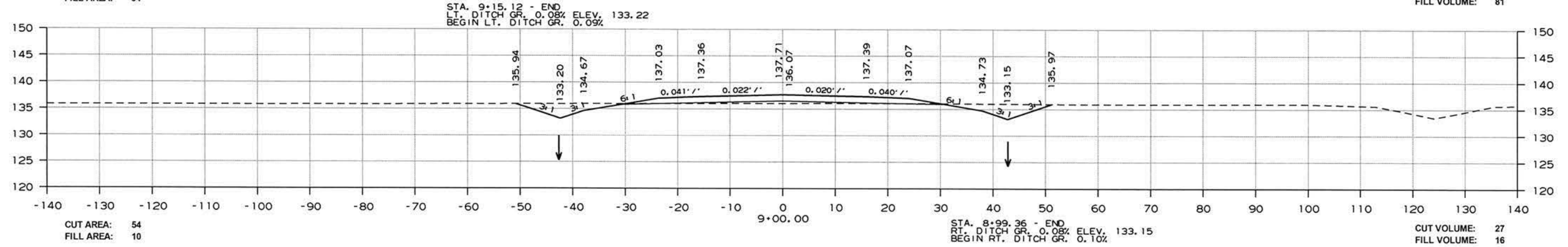
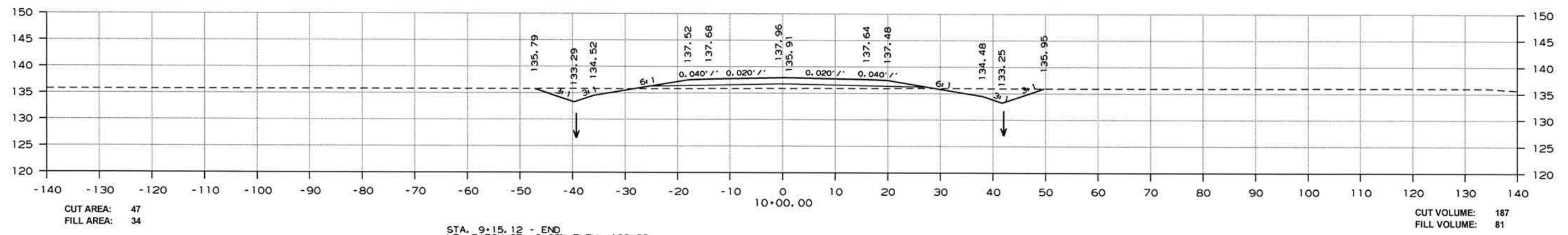
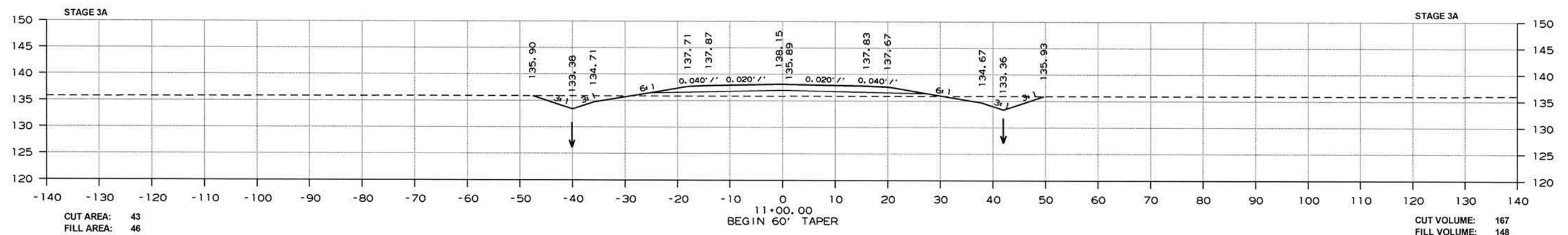
CROSS SECTION STA. 8+09.02 TO STA. 8+64.48

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						020595	59	78

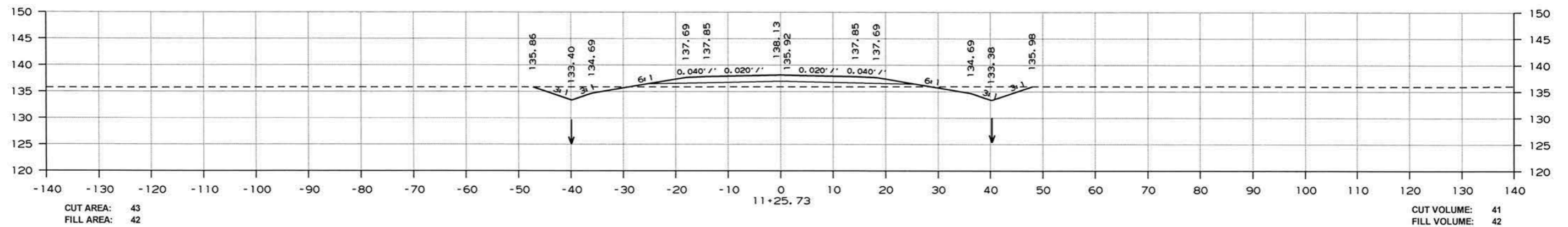
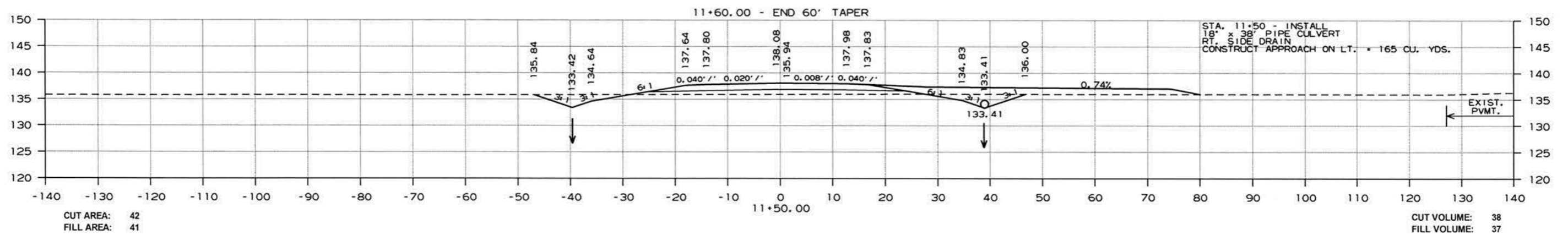
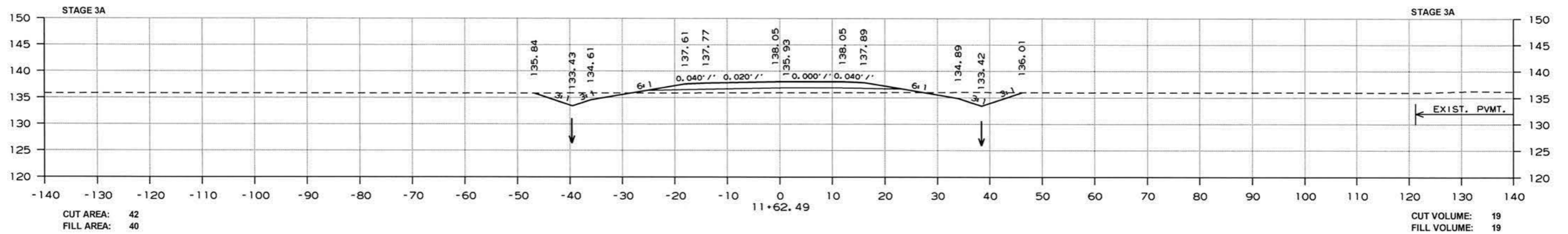
② CROSS SECTIONS



CROSS SECTION STA. 9+00.00 TO STA. 11+00.00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	020595
							SHEET NO.	60
							TOTAL SHEETS	78

2 CROSS SECTIONS



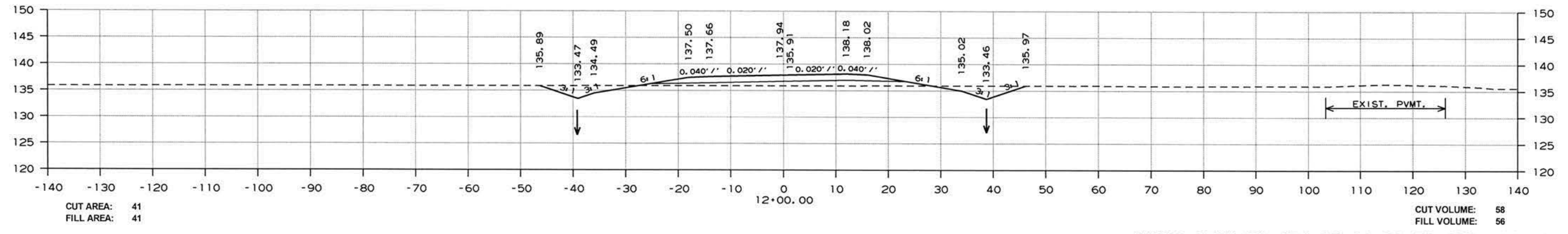
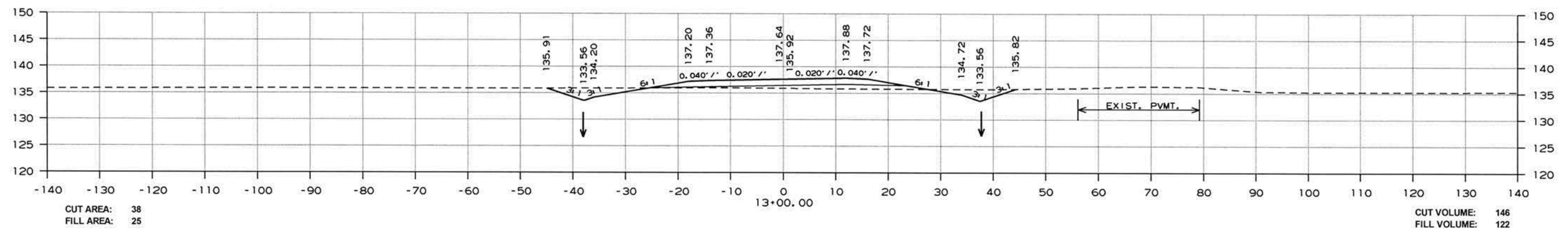
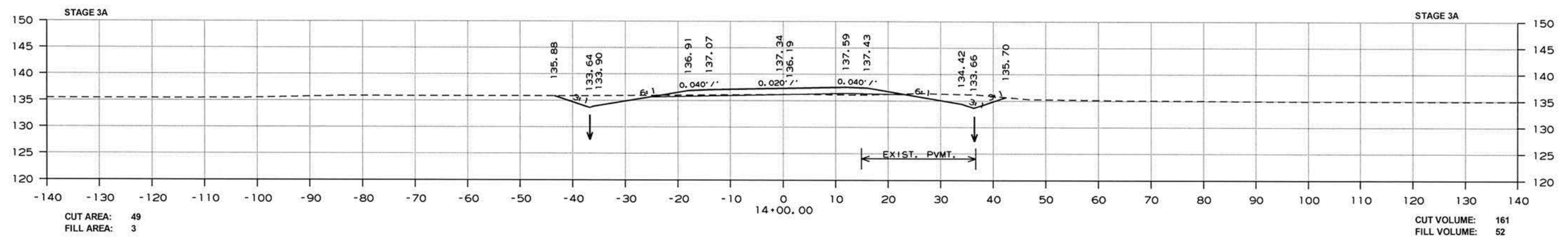
CROSS SECTION STA. 11+25.73 TO STA. 11+62.49

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	020595
								61
								78

2 CROSS SECTIONS

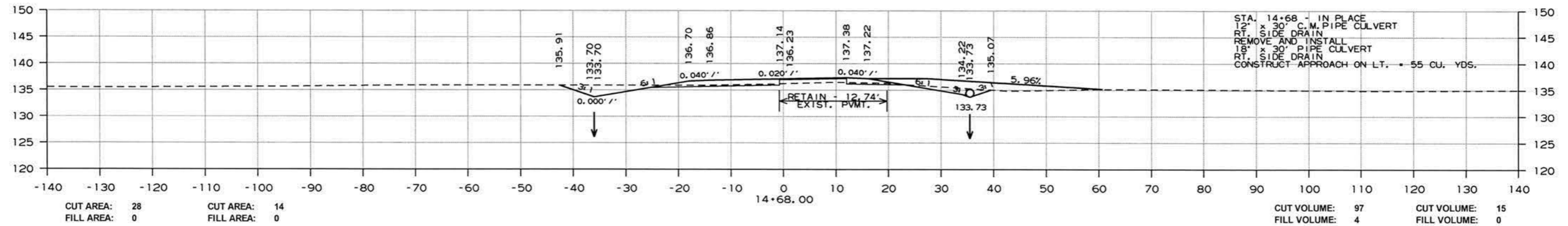
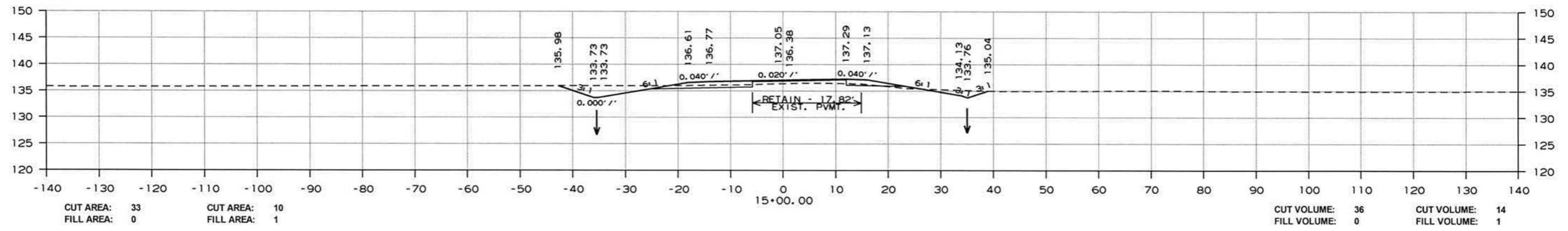
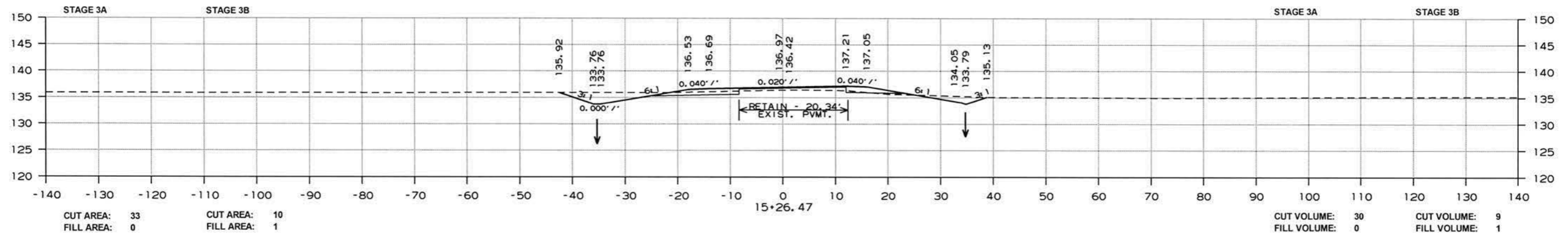


CROSS SECTION STA. 12+00.00 TO STA. 14+00.00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						020595	62	78

2 CROSS SECTIONS



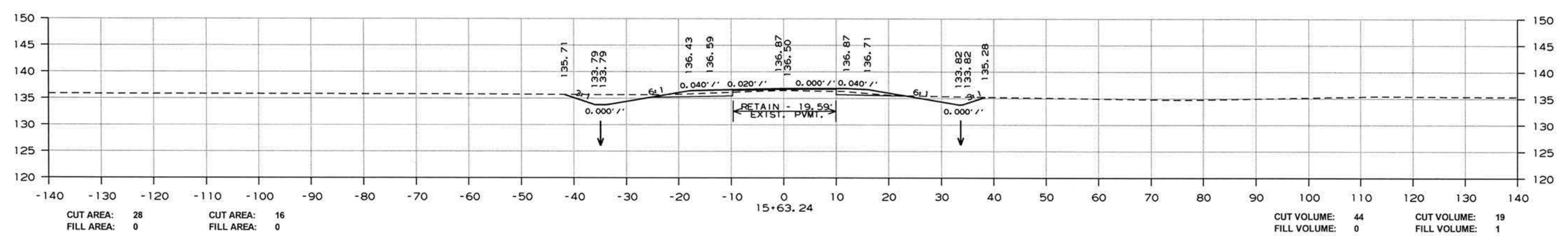
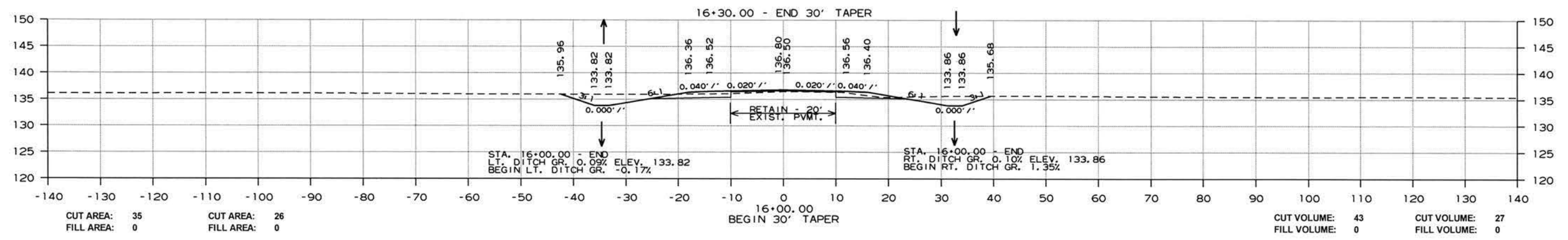
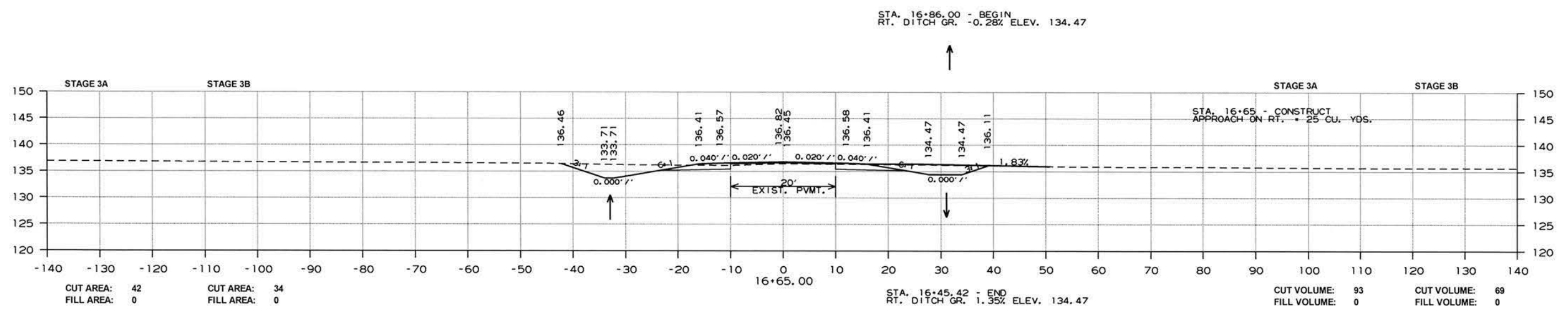
CROSS SECTION STA. 14+68.00 TO STA. 15+26.47

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R020595.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						020595	63	78

2 CROSS SECTIONS

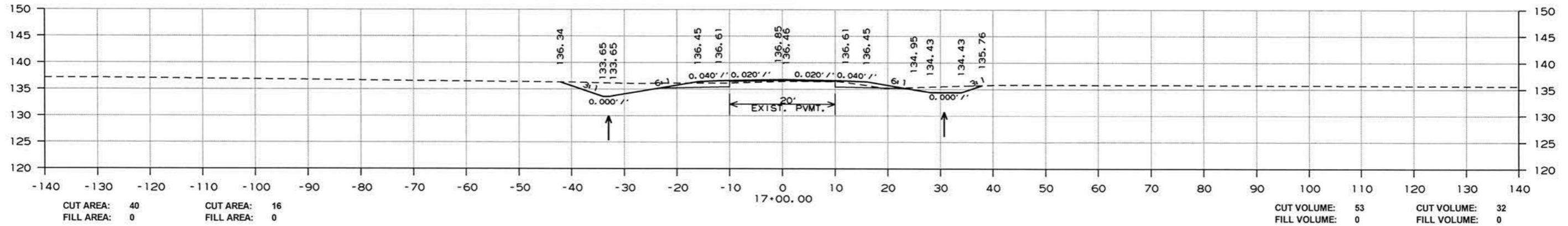
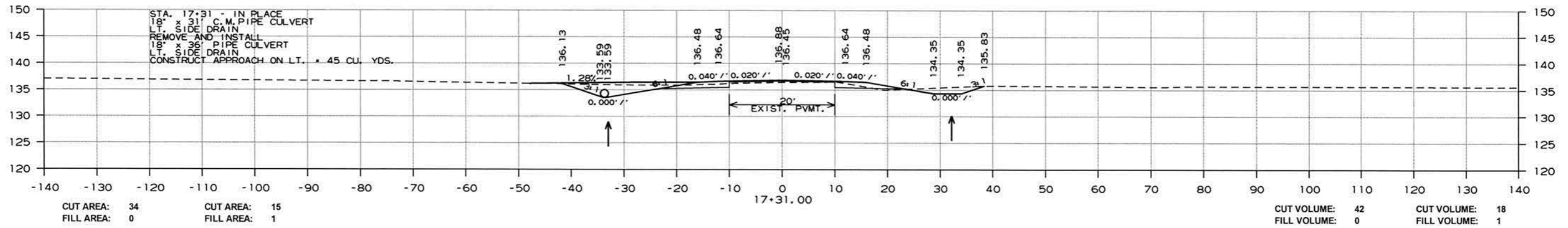
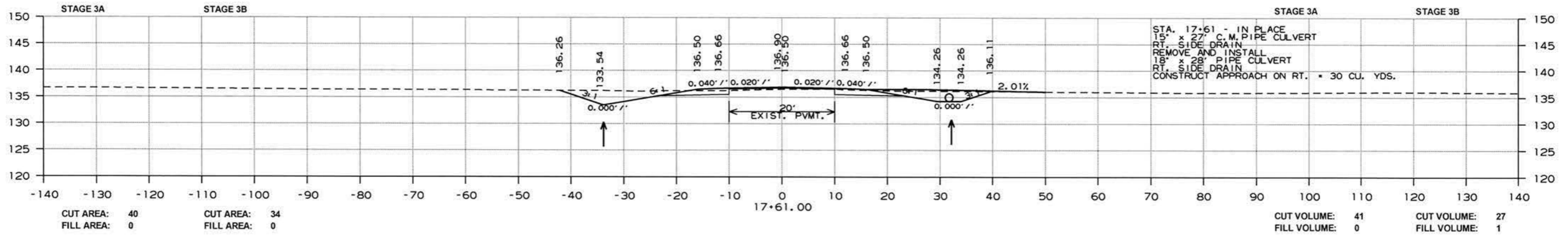


CROSS SECTION STA. 15+63.24 TO STA. 16+65.00

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R020595.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020595	64	78

② CROSS SECTIONS



CROSS SECTION STA. 17+00.00 TO STA. 17+61.00

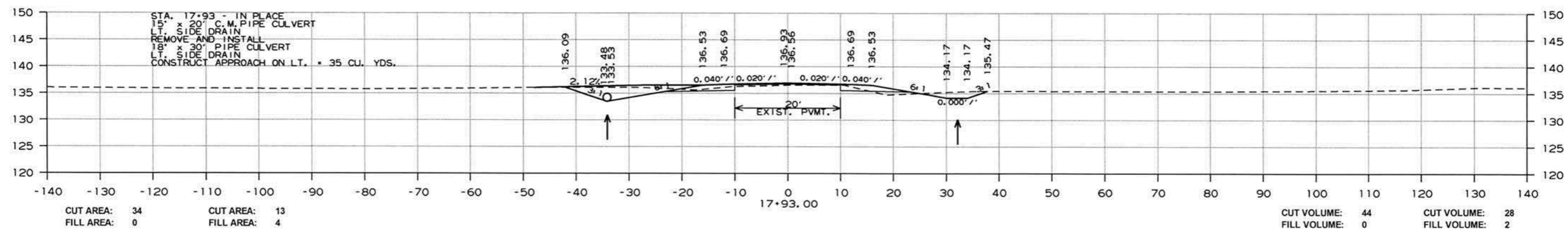
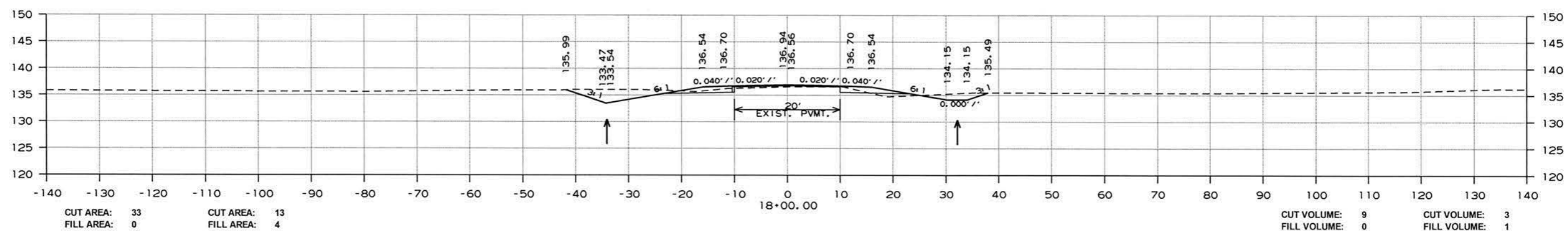
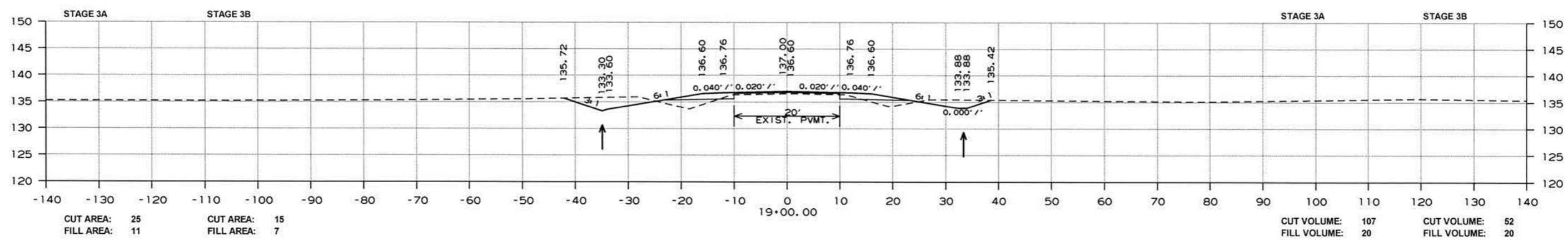
8/25/2017

R020595.DGN



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						020595	65	78

② CROSS SECTIONS

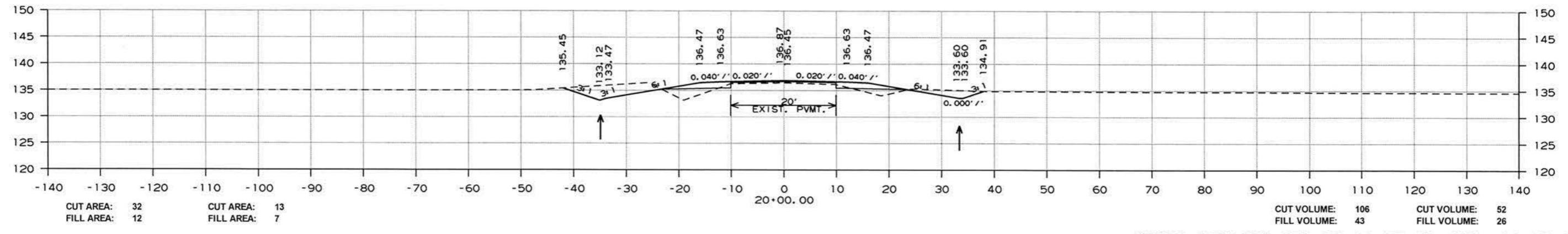
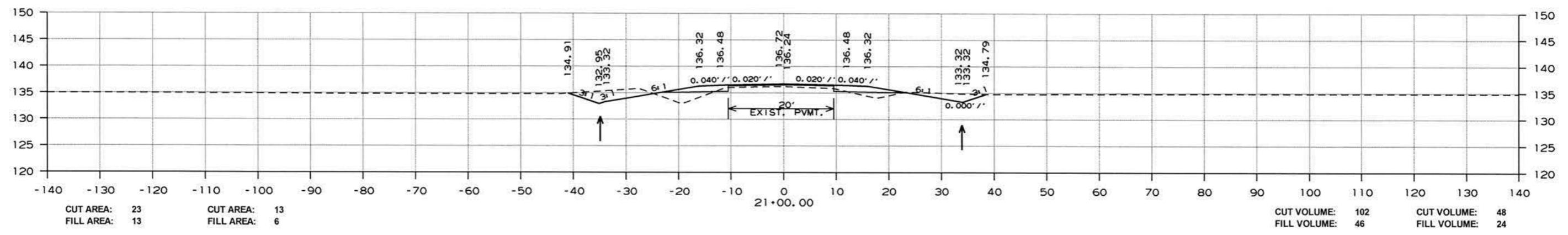
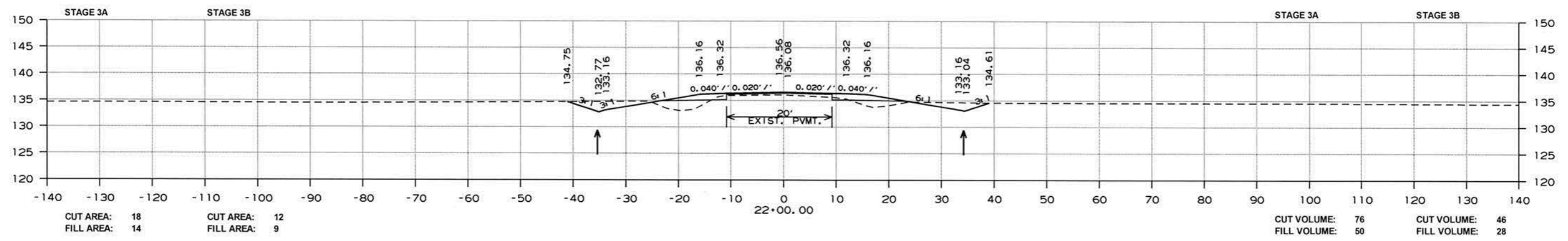


CROSS SECTION STA. 17+93.00 TO STA. 19+00.00

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R020595.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						020595	66	78

2 CROSS SECTIONS

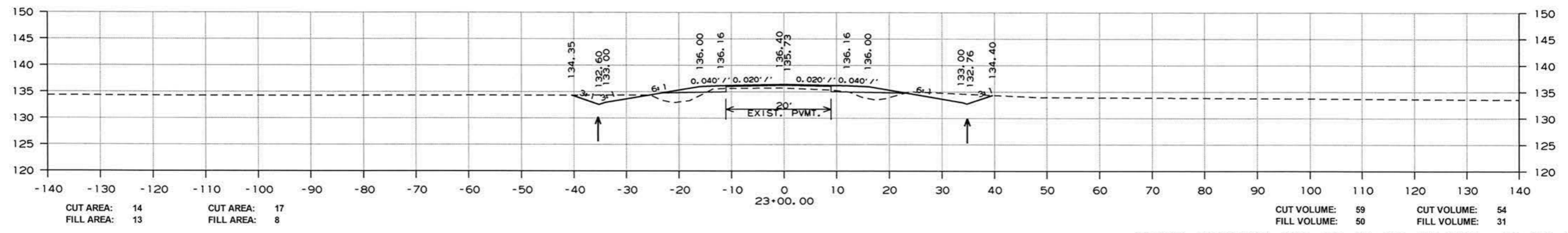
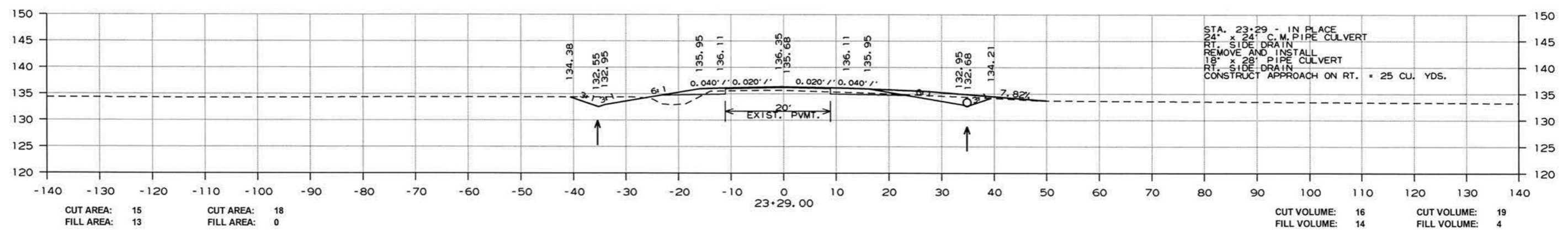
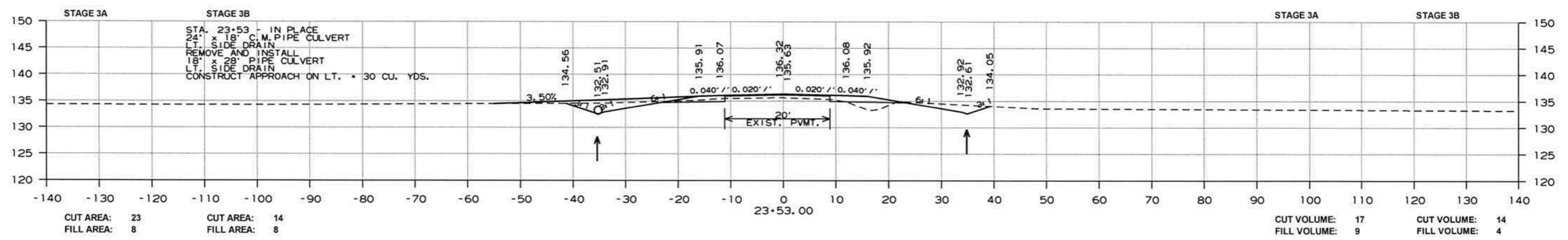


CROSS SECTION STA. 20+00.00 TO STA. 22+00.00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						020595	67	78

2 CROSS SECTIONS

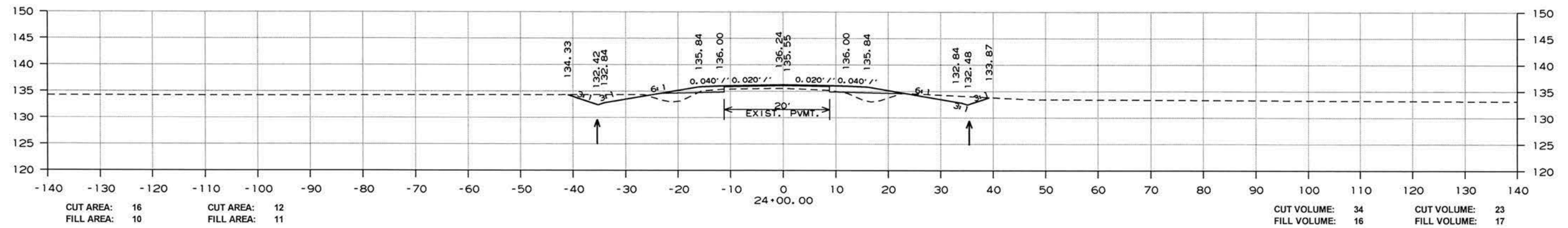
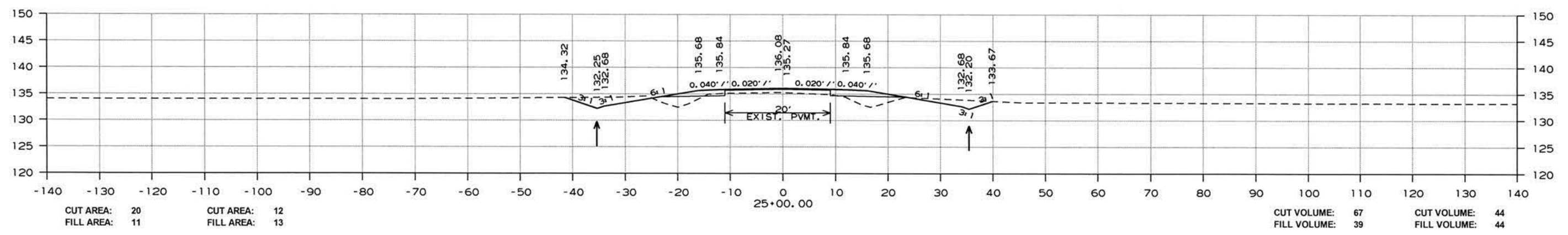
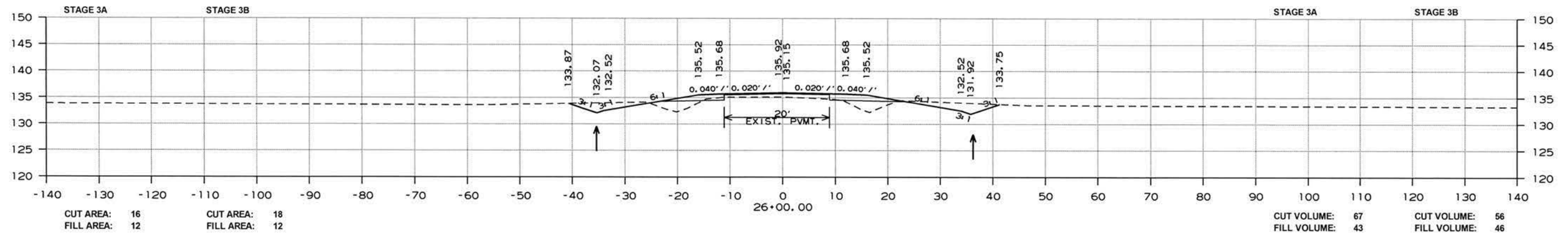


CROSS SECTION STA. 23+00.00 TO STA. 23+53.00

8/25/2017 R020595.DCN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	020595	
							68	78

② CROSS SECTIONS

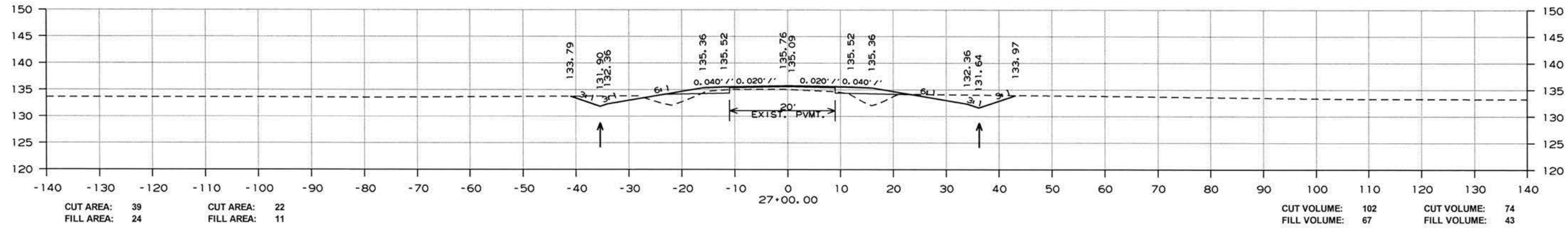
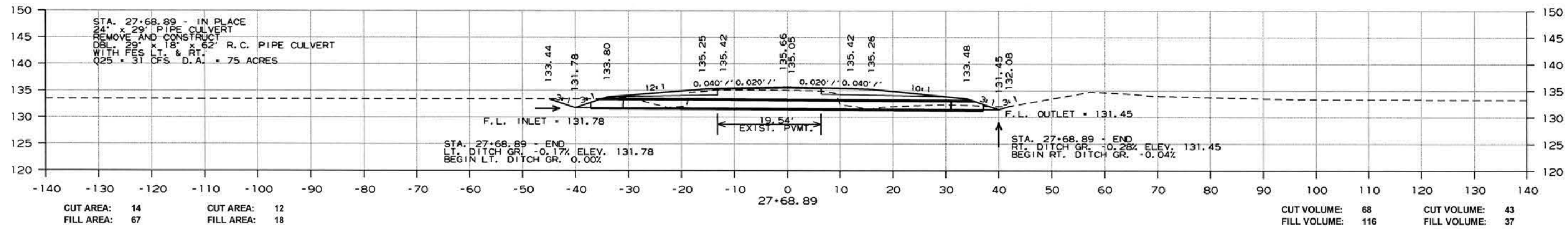
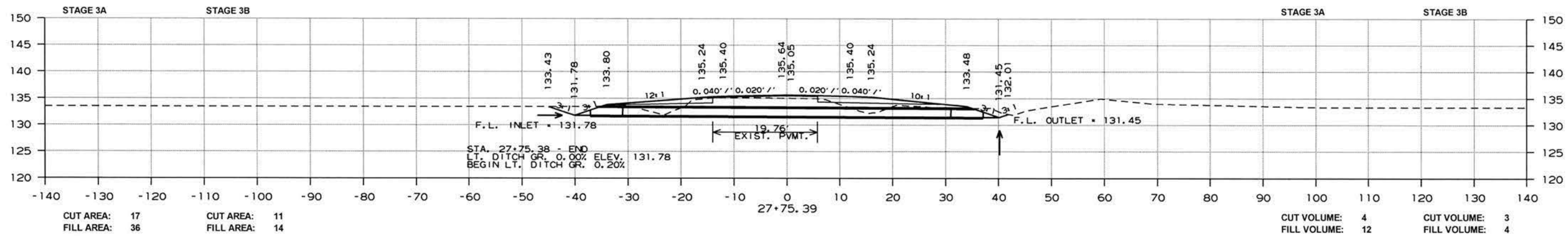


CROSS SECTION STA. 24+00.00 TO STA. 26+00.00

8/25/2017 R020595.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020595	69	78

2 CROSS SECTIONS



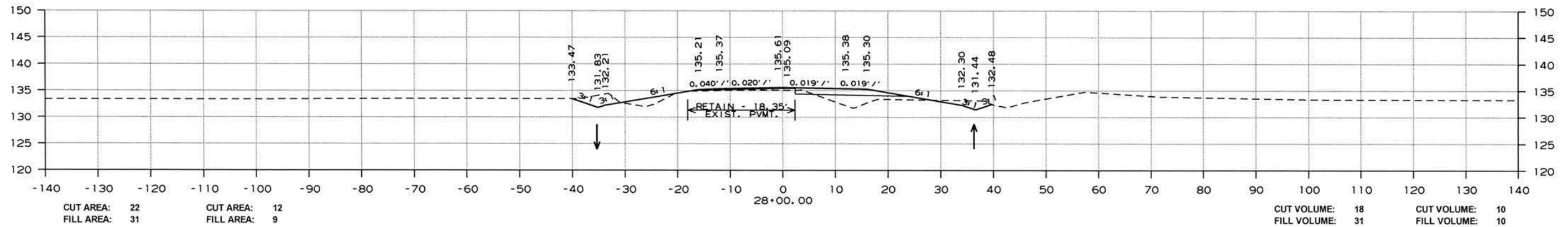
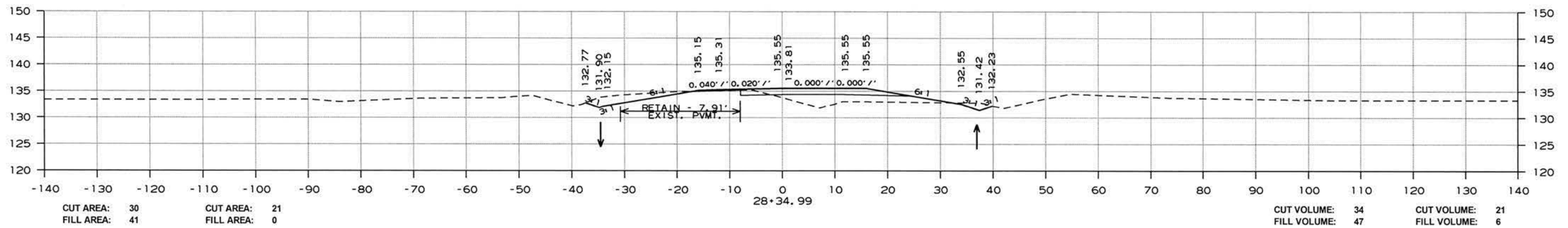
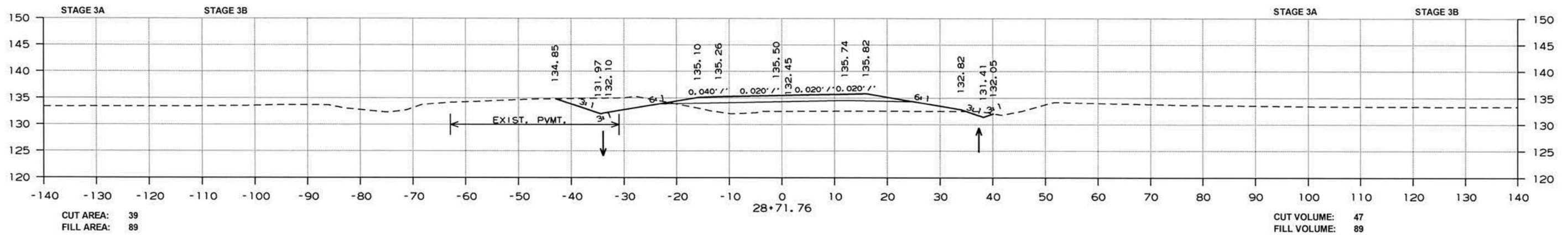
CROSS SECTION STA. 27+00.00 TO STA. 27+75.39

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R020595.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						020595	70	78

2 CROSS SECTIONS

STA. 28+86.02 - END  
 IT. DITCH GR. 0.20% ELEV. 132.00



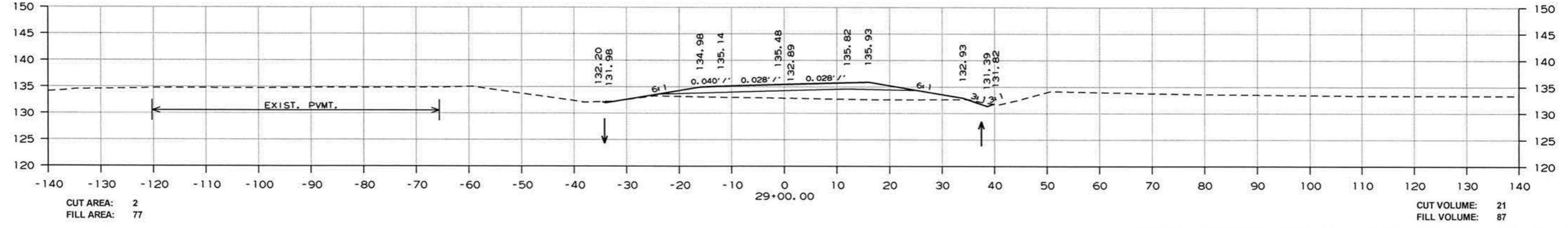
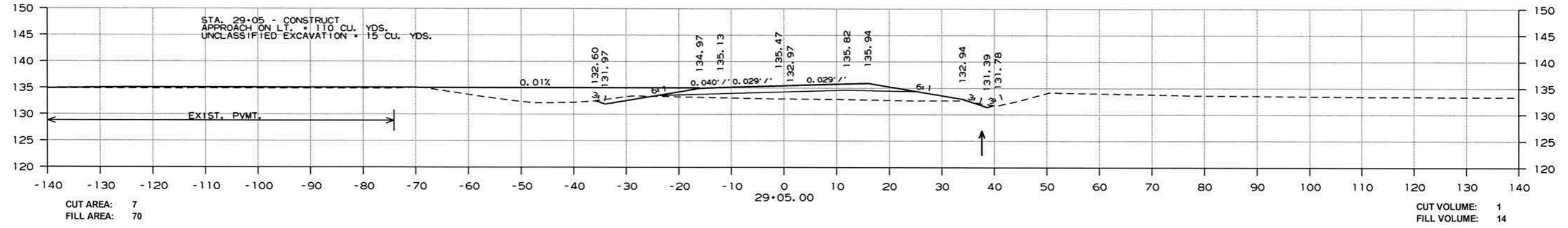
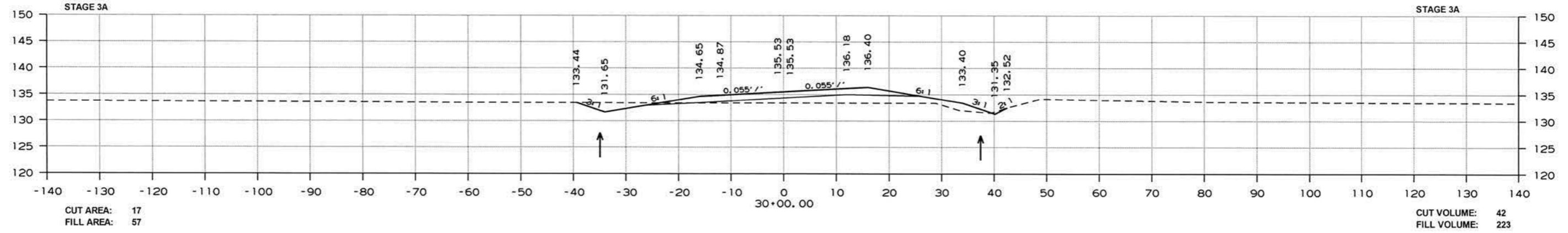
CROSS SECTION STA. 28+00.00 TO STA. 28+71.76

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R020595.DCN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020595	71	78

② CROSS SECTIONS

STA. 30+50.00 - BEGIN  
LT. DITCH GR. -0.09% ELEV. 131.47

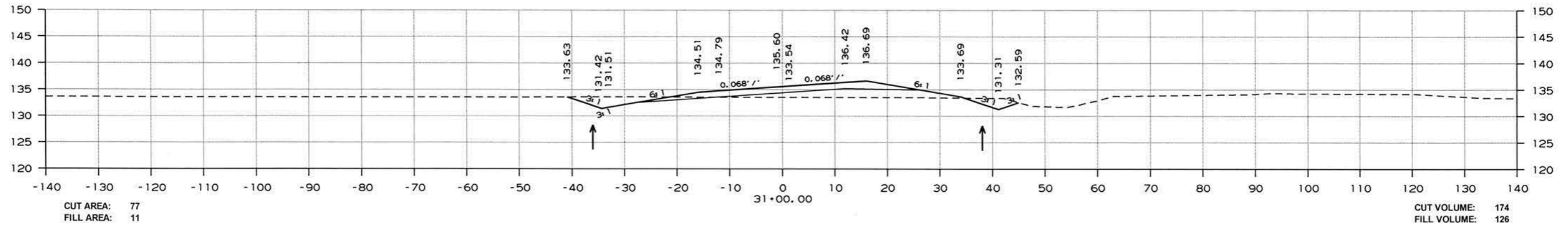
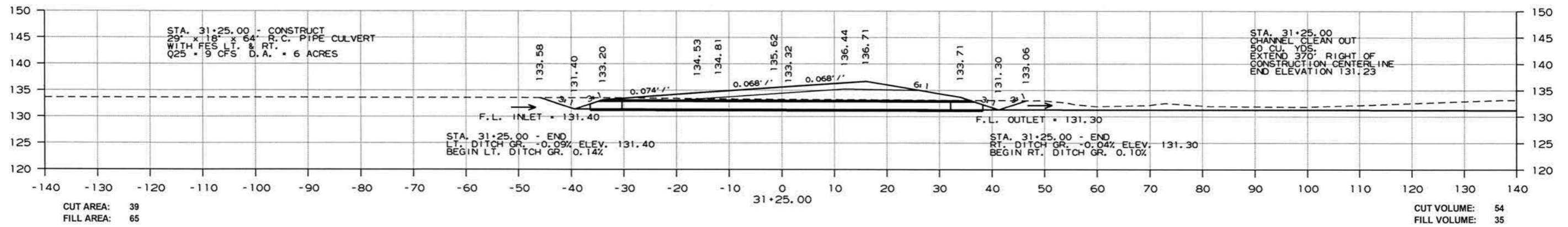
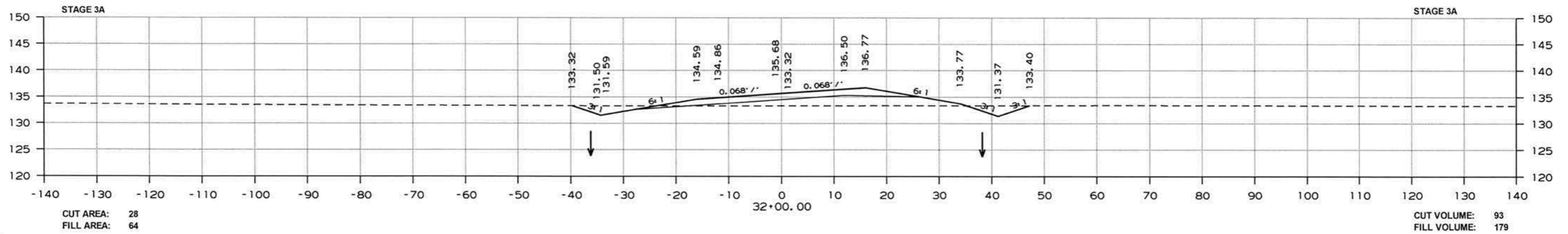


CROSS SECTION STA. 29+00.00 TO STA. 30+00.00

8/25/2017 R020595.DCN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020595		72	78

② CROSS SECTIONS



CROSS SECTION STA. 31+00.00 TO STA. 32+00.00

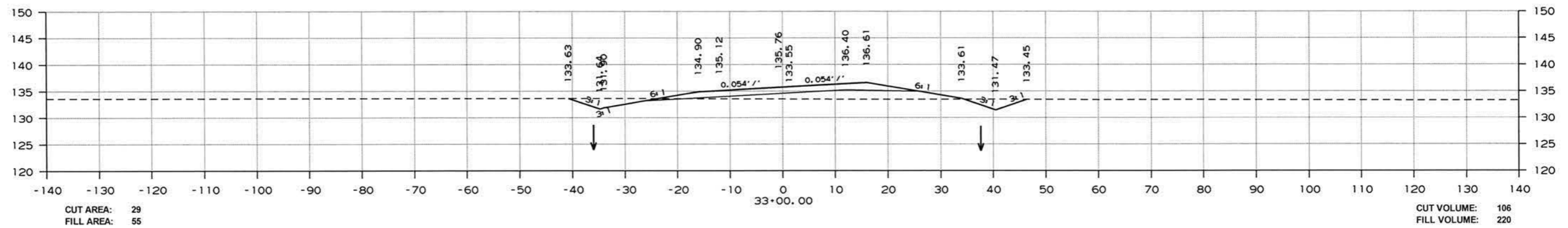
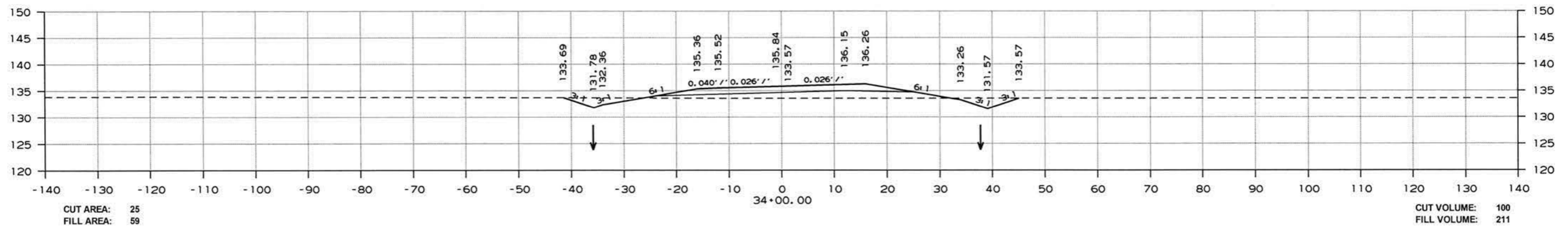
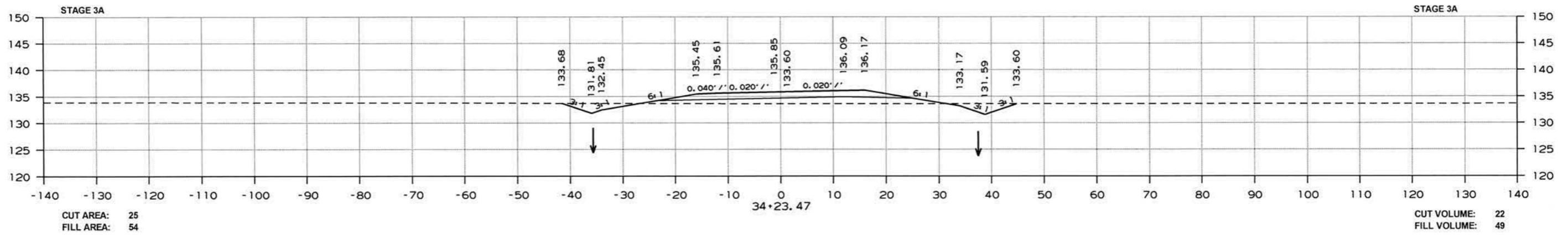
8/25/2017

R020595.DGN



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020595	73	78

② CROSS SECTIONS



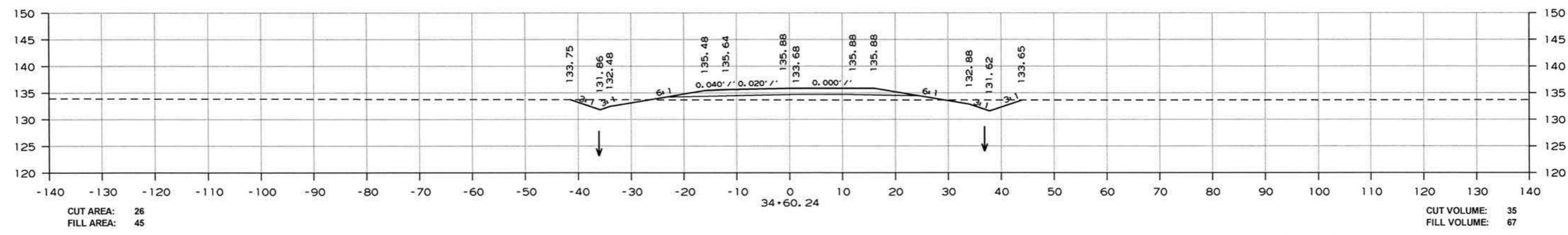
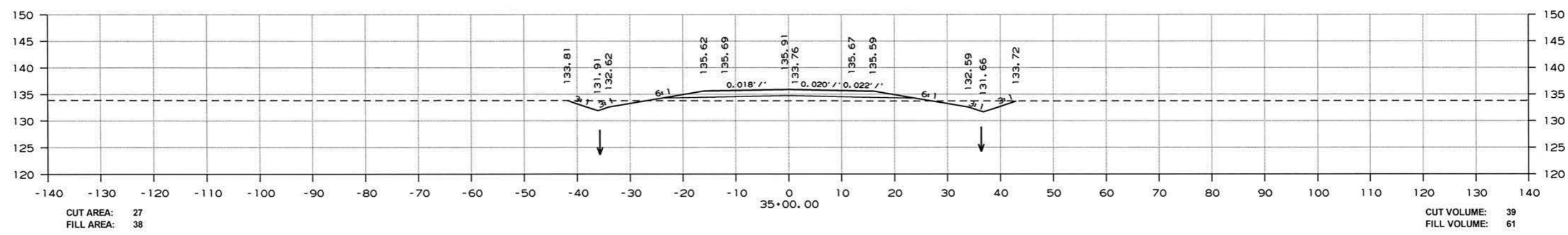
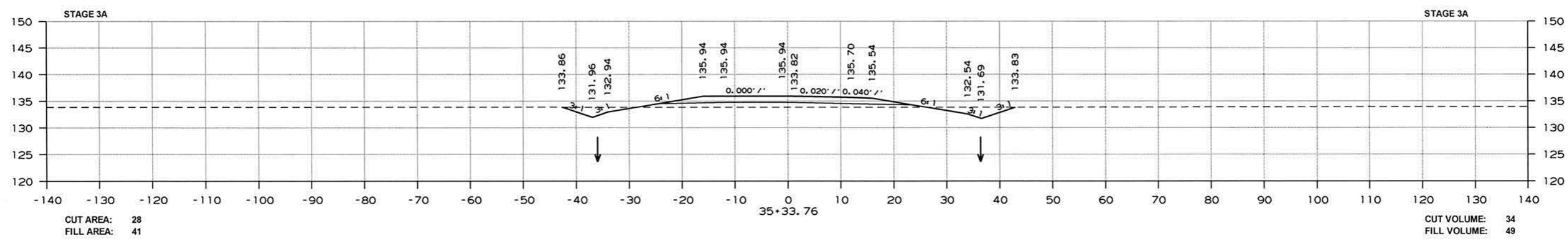
CROSS SECTION STA. 33+00.00 TO STA. 34+23.47

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R020595.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 020595	74	78

2 CROSS SECTIONS

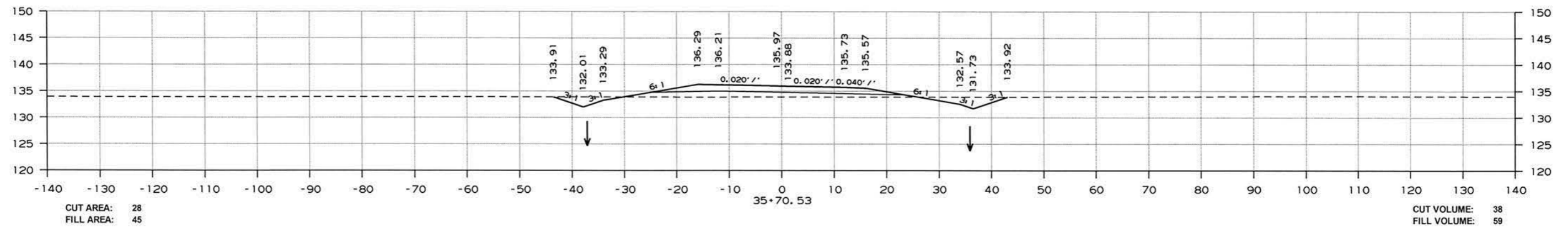
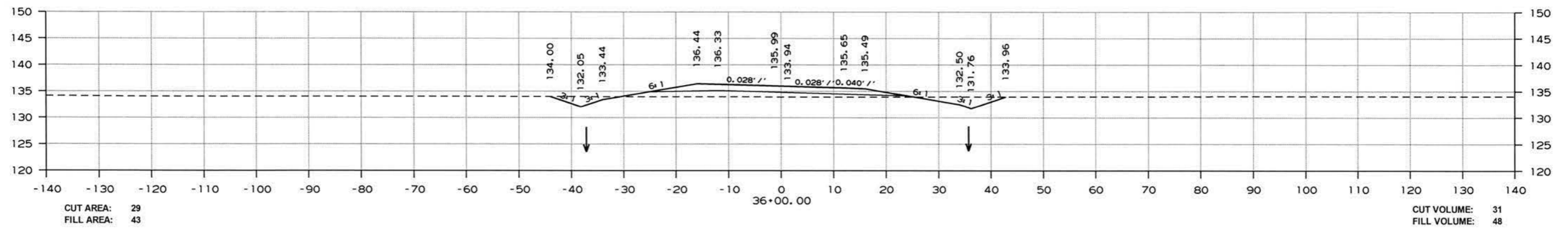
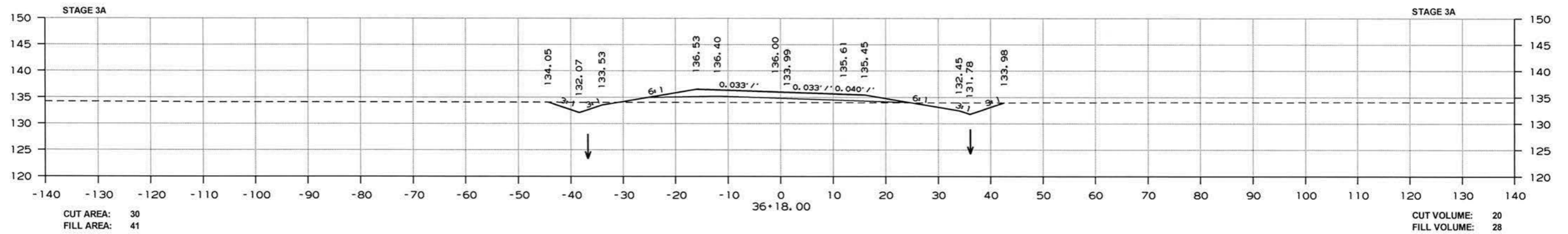


CROSS SECTION STA. 34+60.24 TO STA. 35+33.76

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R020595.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		75	78
				JOB NO.	020595			

② CROSS SECTIONS



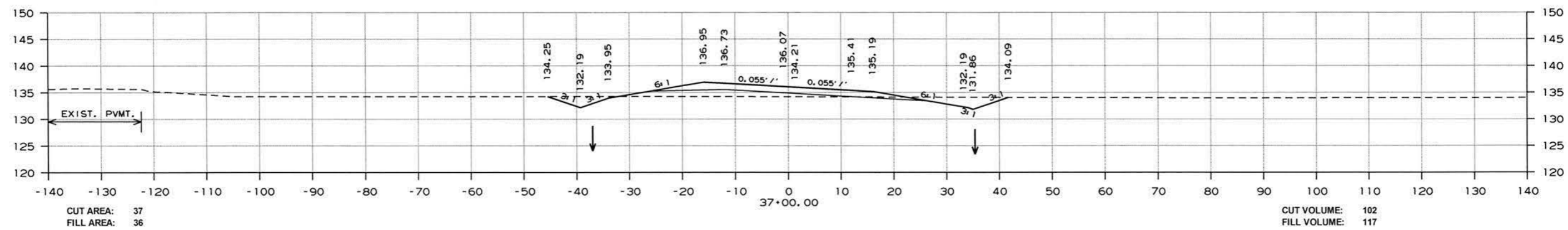
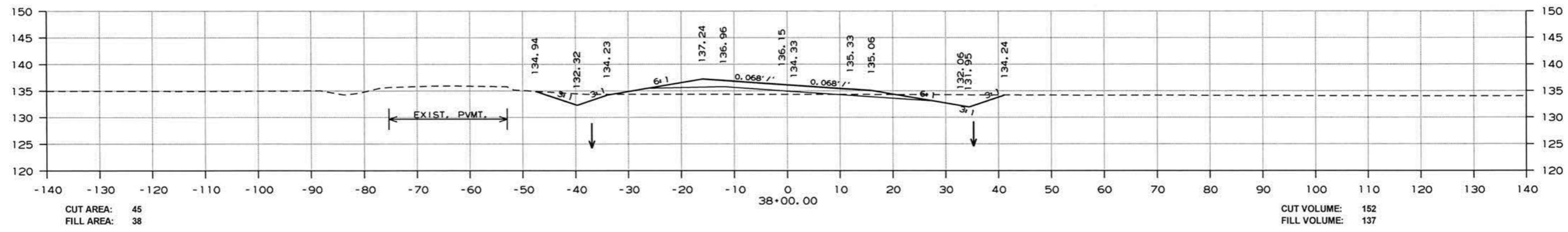
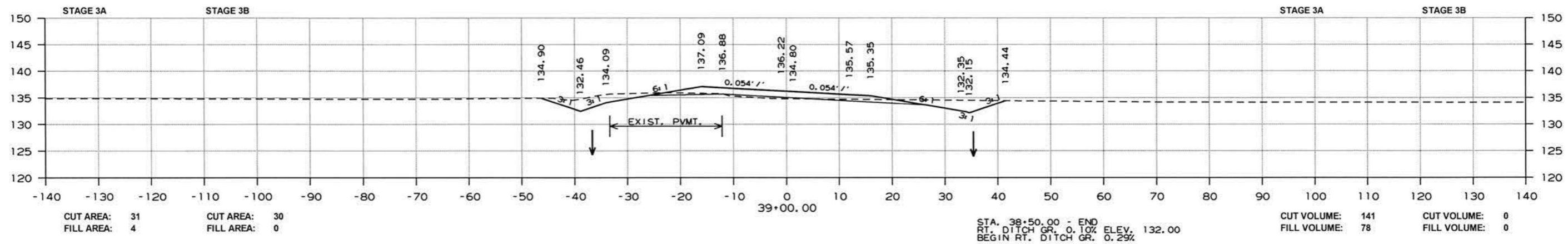
CROSS SECTION STA. 35+70.53 TO STA. 36+18.00

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R020595.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020595		76	78

② CROSS SECTIONS

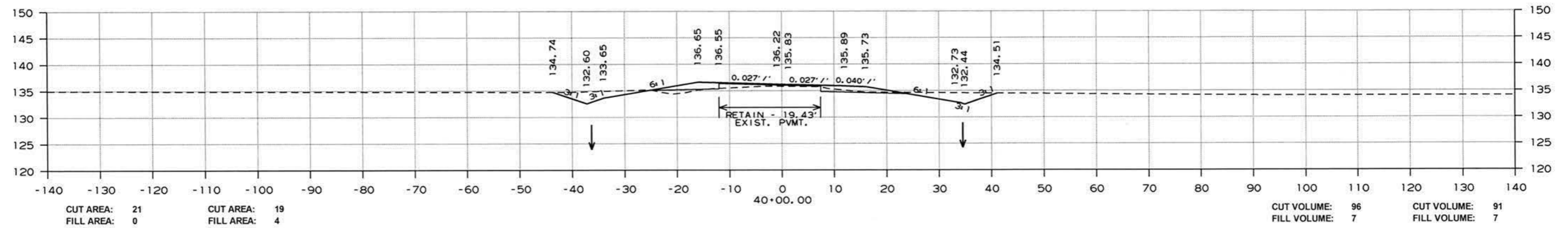
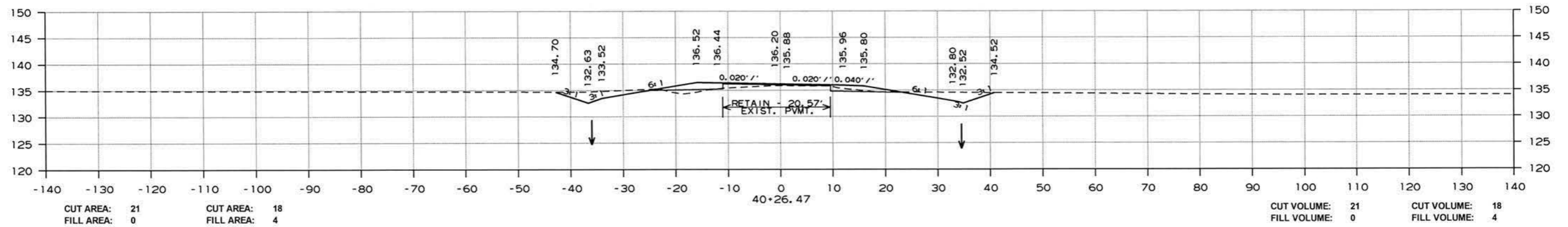
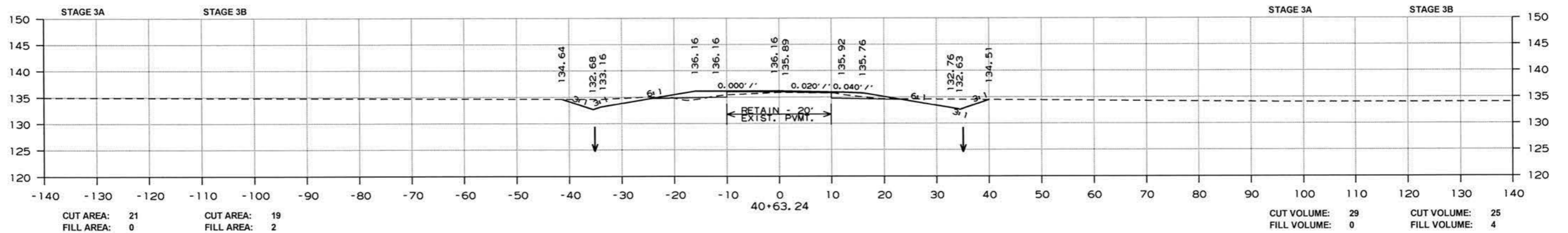


CROSS SECTION STA. 37+00.00 TO STA. 39+00.00

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R020595.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						020595	77	78

② CROSS SECTIONS



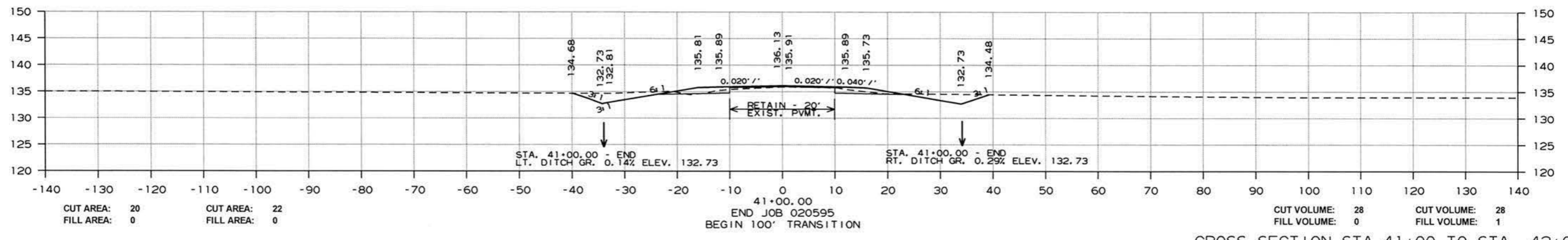
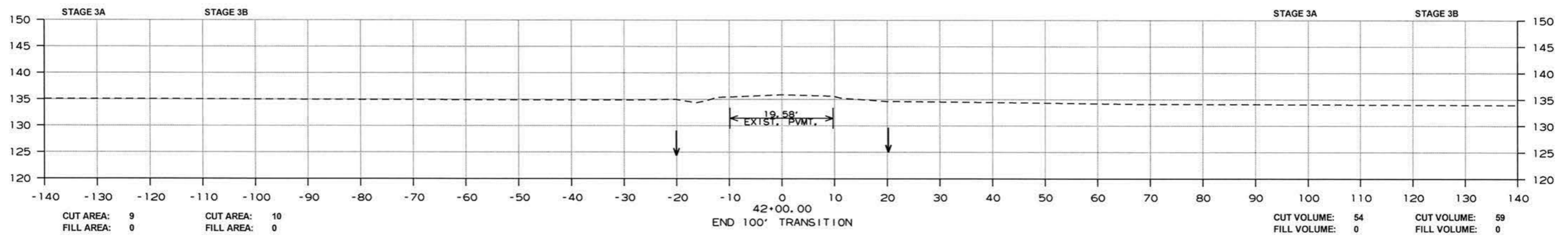
CROSS SECTION STA. 40+00 TO STA. 40+63.24

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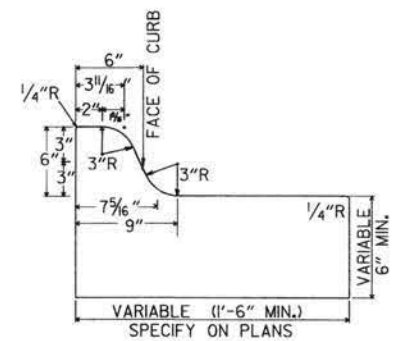
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						020595	78	78

② CROSS SECTIONS

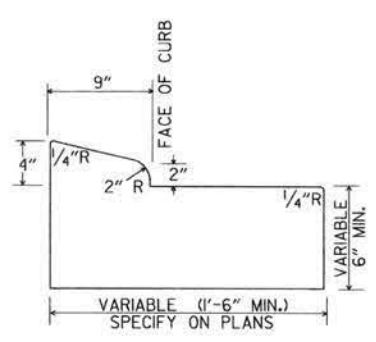


CROSS SECTION STA. 41+00 TO STA. 42+00

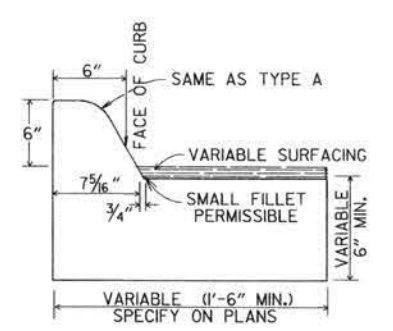
8/25/2017  
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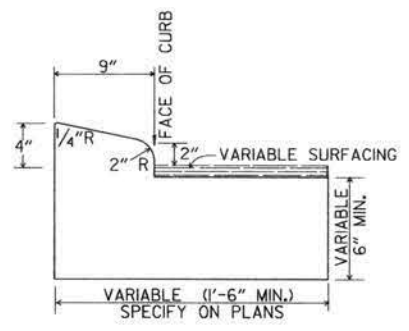
TYPE A



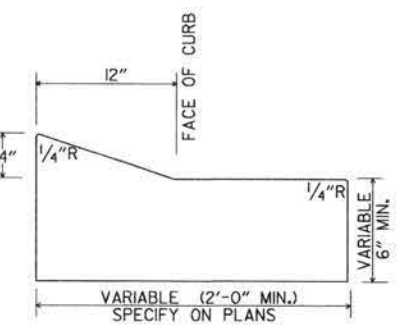
TYPE B-1



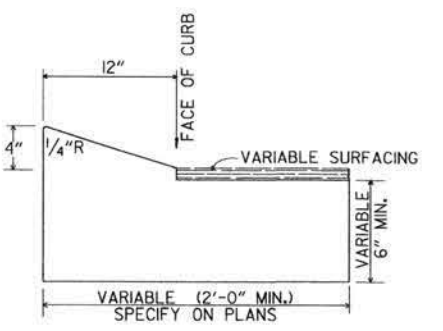
TYPE C



TYPE B-2

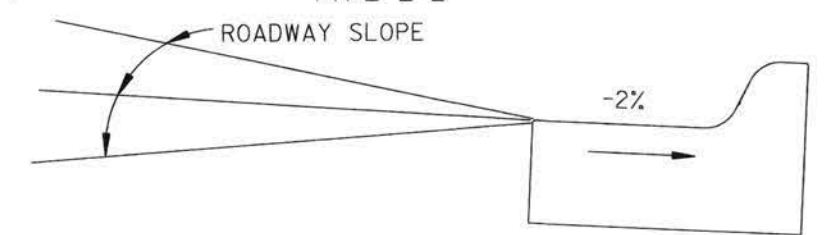


TYPE E-1

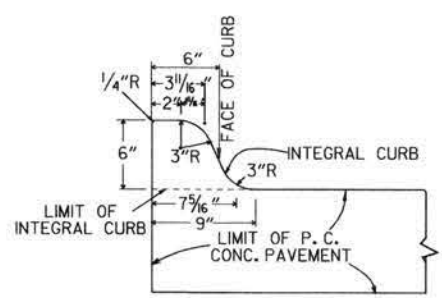


TYPE E-2

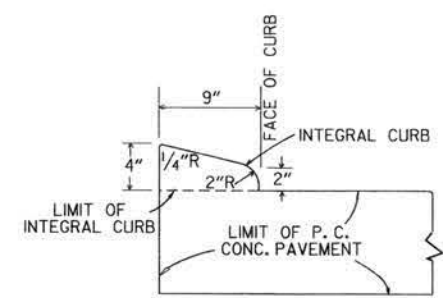
CONCRETE COMBINATION CURB AND GUTTER



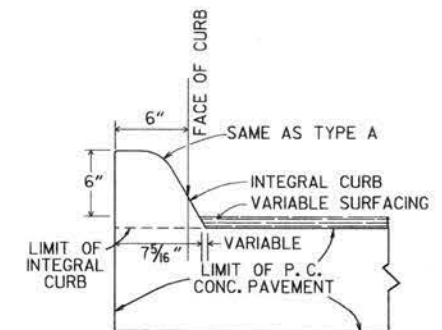
DETAIL OF GUTTER SLOPE  
GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.



TYPE A

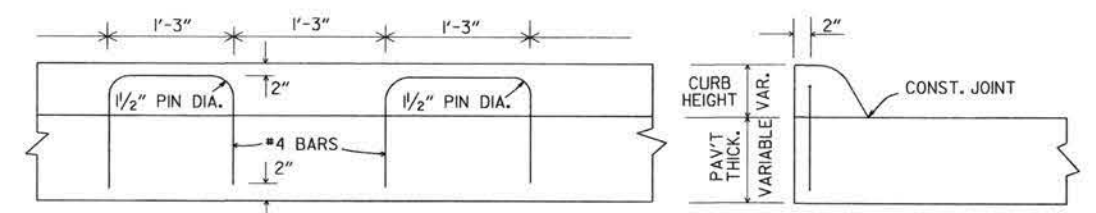


TYPE B



TYPE C

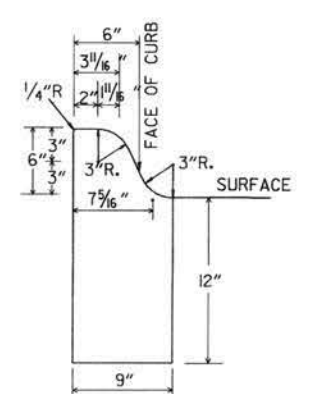
INTEGRAL CURB



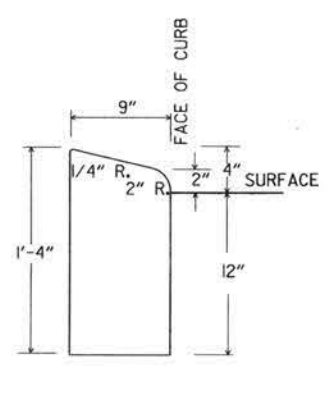
LONGITUDINAL SECTION

ELEVATION

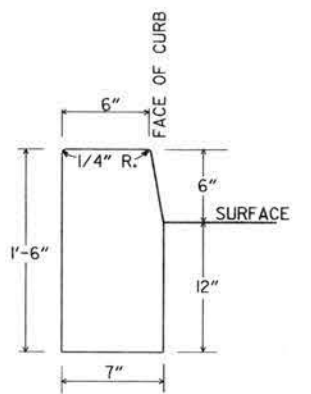
ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



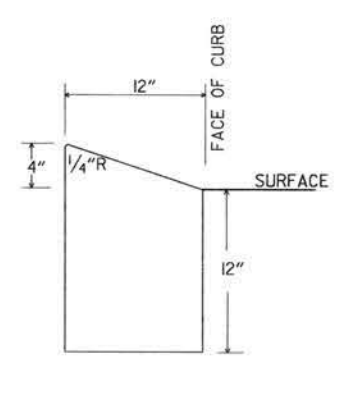
TYPE A



TYPE B

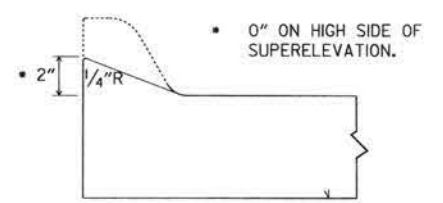


TYPE D



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.

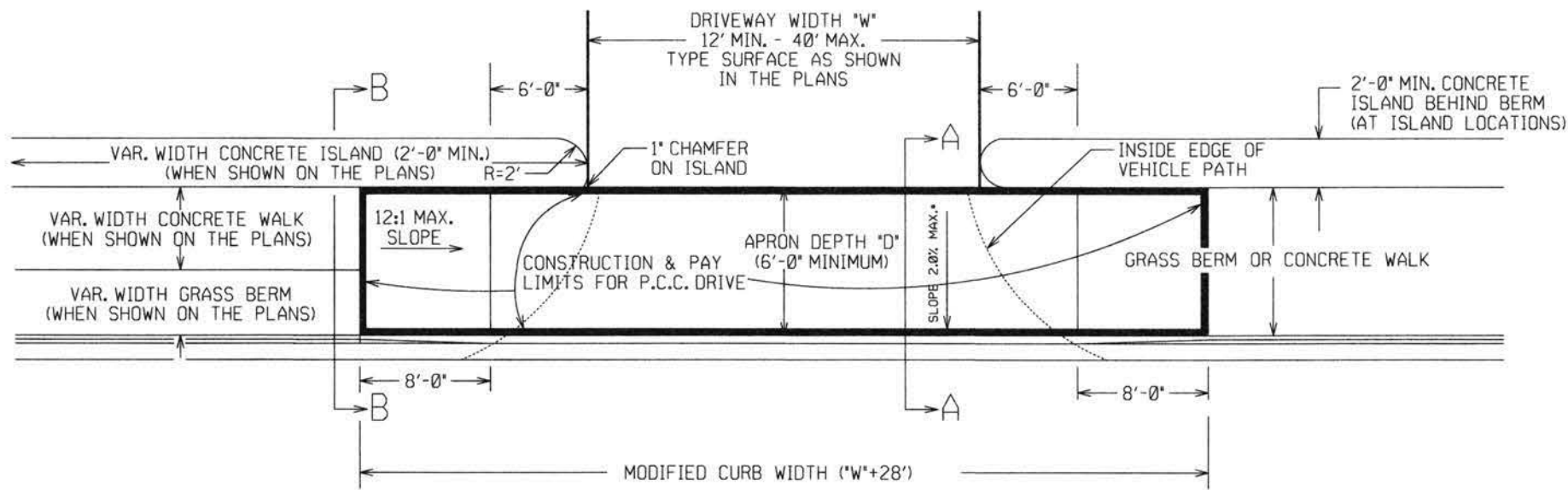
DETAILS OF MODIFIED CURB

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	VARIABLE DEPTH TYPE A & B 1	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

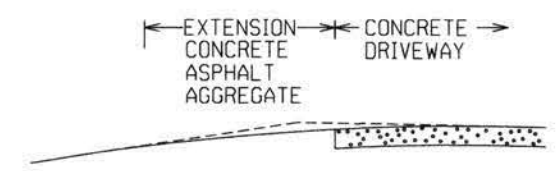
ARKANSAS STATE HIGHWAY COMMISSION

CURBING DETAILS

STANDARD DRAWING CG-1



PLAN VIEW

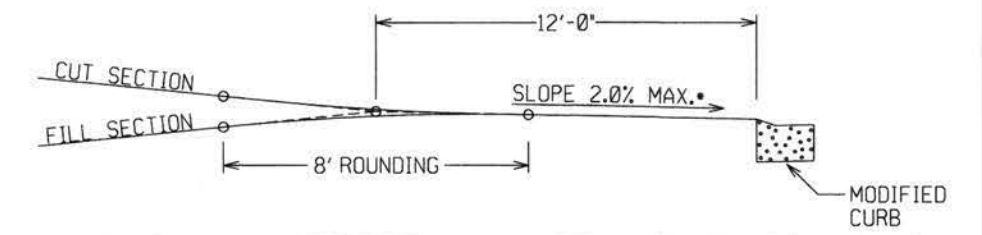


EXTENSION TYPICAL SECTIONS

- 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

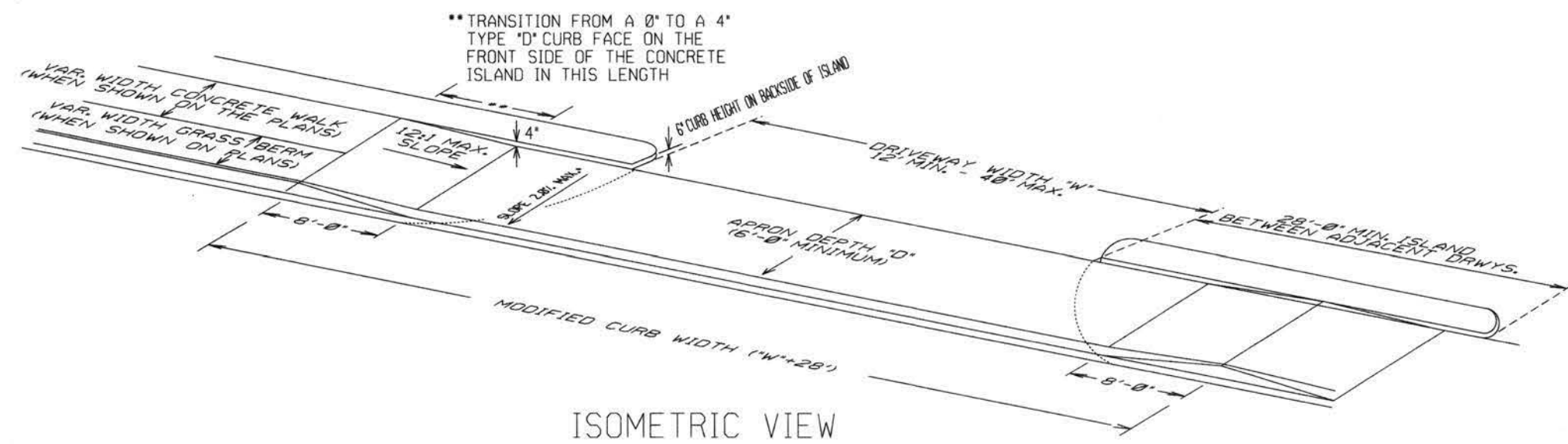
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS



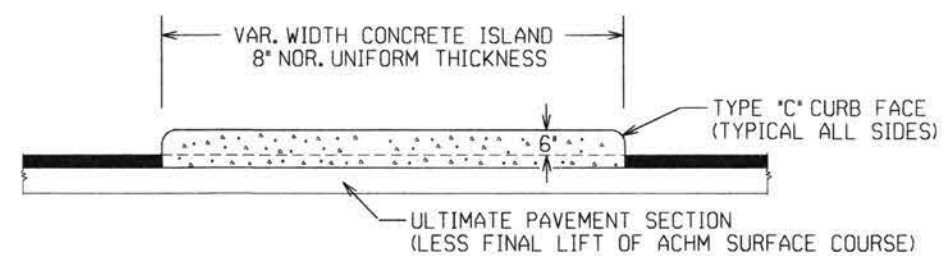
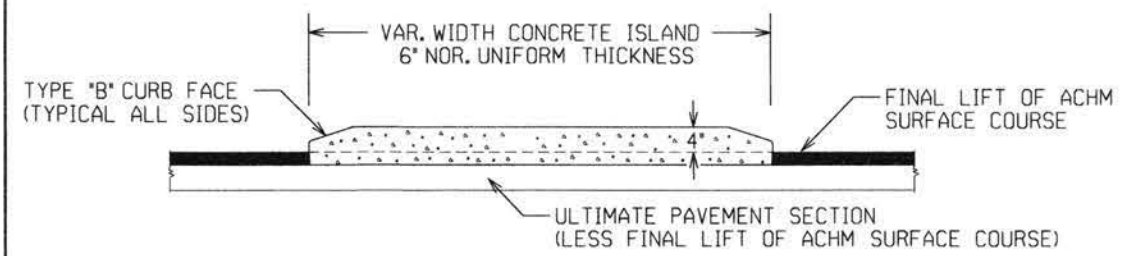
DRIVEWAY VERTICAL ALIGNMENT DETAILS

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

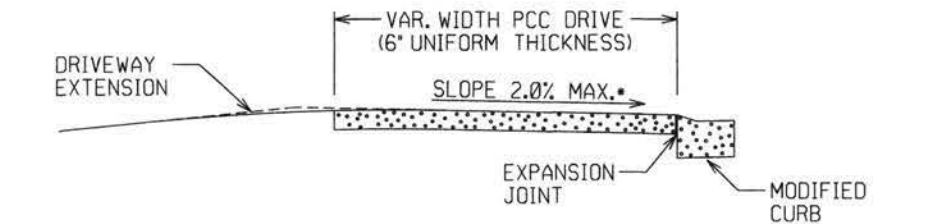


ISOMETRIC VIEW

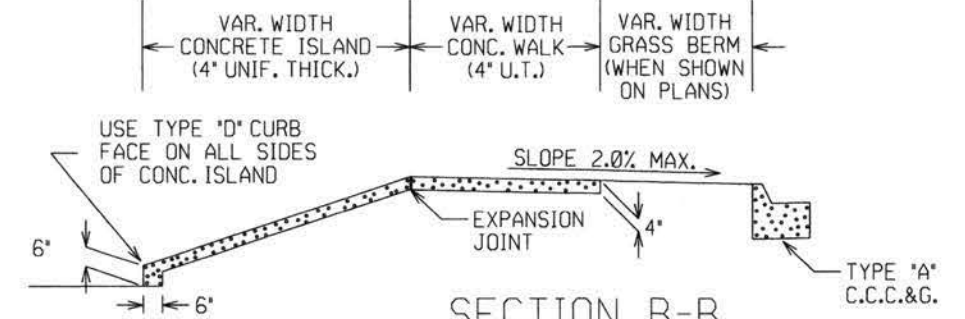
REFER TO PLANS FOR TYPE OF CURB FACE TO BE USED. NO DIRECT PAYMENT WILL BE MADE FOR THE CURB FACES SHOWN ON THE ISLAND DETAILS. PAYMENT FOR THE CURB FACE WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEM "CONCRETE ISLAND".



CURBED ISLANDS FOR CHANNELIZATION



SECTION A-A

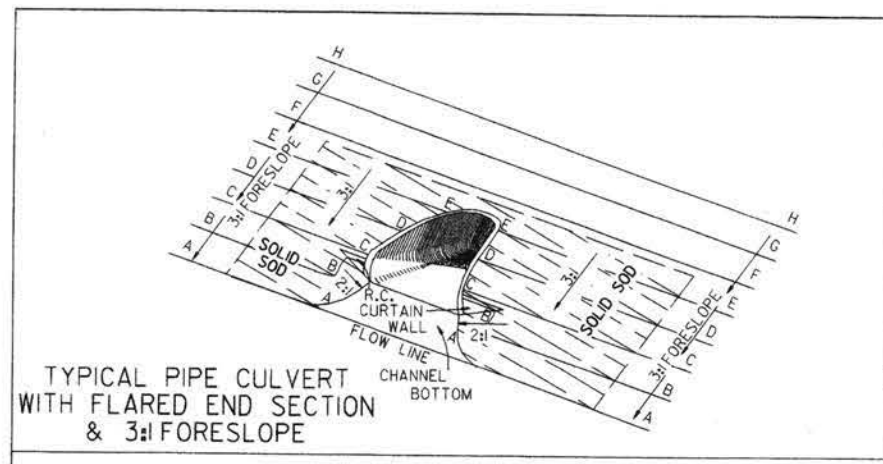


SECTION B-B  
CURBED ISLAND BEHIND WALK

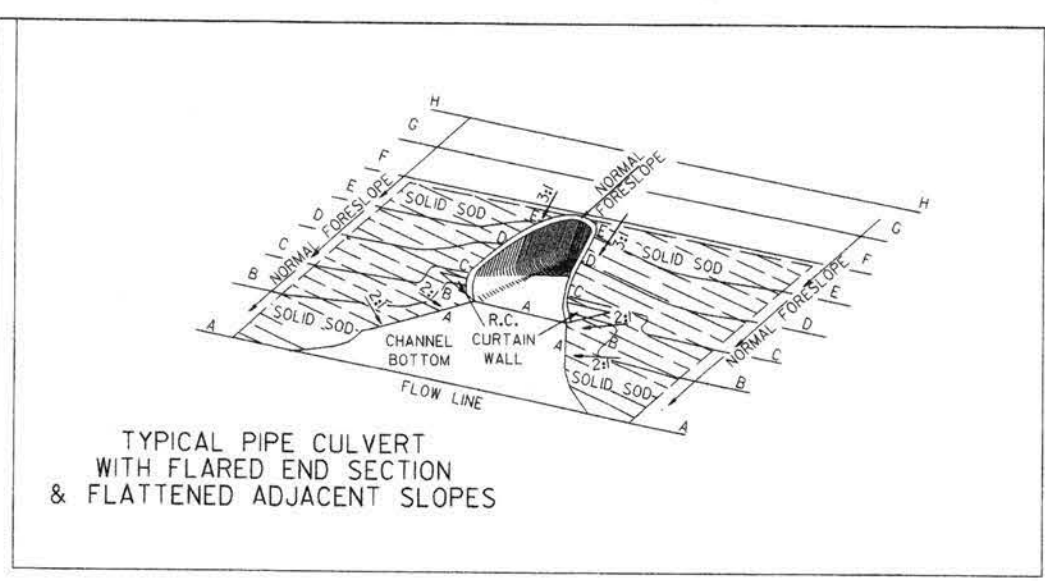
DATE	REV	DATE FILMED	DESCRIPTION
2-27-14			REVISED PLAN & ISOMETRIC VIEW
11-29-07			ADDED CHANNELIZATION ISLAND WITH TYPE C CURB FACE & REVISED DRIVEWAY SLOPE NOTE & VERTICAL ALIGNMENT DETAIL
11-10-05			REV. APRON SLOPE & DEPTH OF AGG. BASE.
8-22-02			ADDED ISLAND DETAILS & NOTES
3-30-00			REV. MOD. CURB WIDTH & TRANS. NOTE
11-19-98			REVISED NOTES
11-18-98			REDRAWN AND REISSUED

ARKANSAS STATE HIGHWAY COMMISSION  
DETAILS OF DRIVEWAYS & ISLANDS  
STANDARD DRAWING DR-1

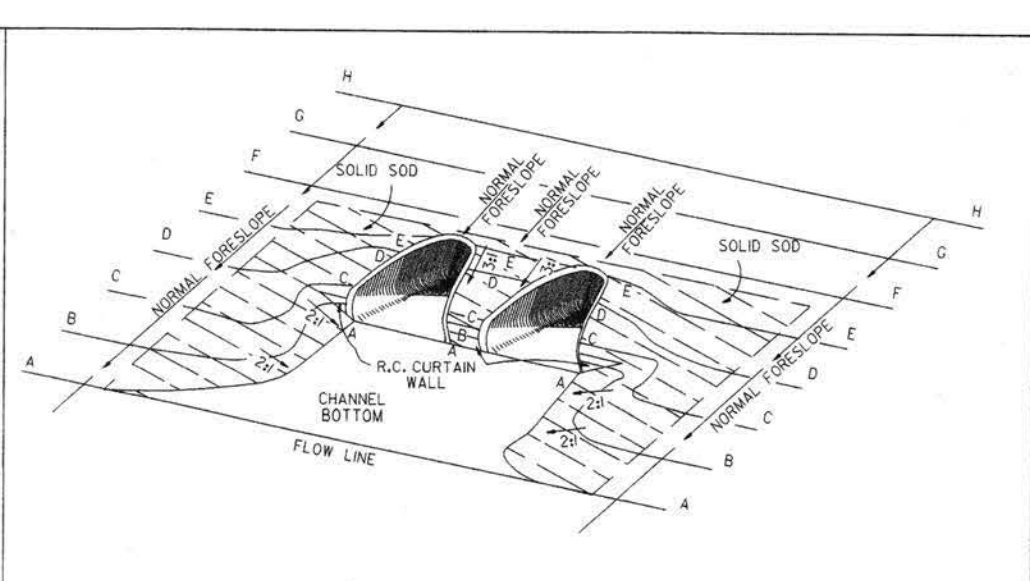




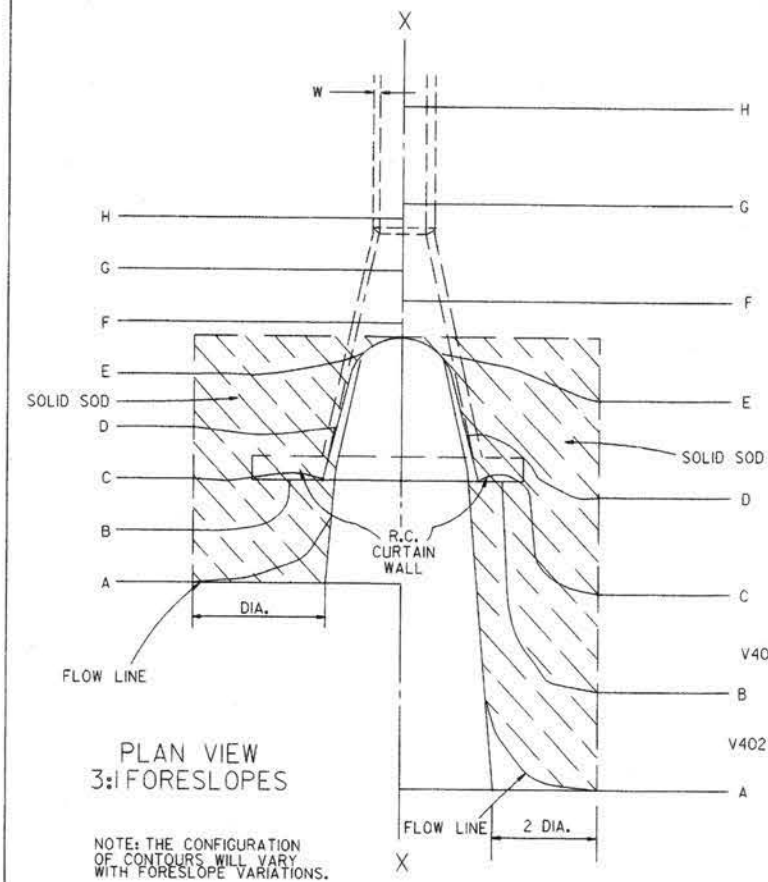
TYPICAL PIPE CULVERT WITH FLARED END SECTION & 3:1 FORESLOPE



TYPICAL PIPE CULVERT WITH FLARED END SECTION & FLATTENED ADJACENT SLOPES



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

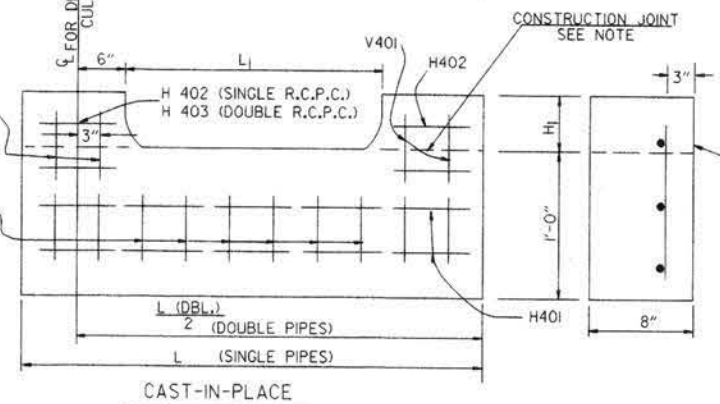


PLAN VIEW FLATTENED FORESLOPES

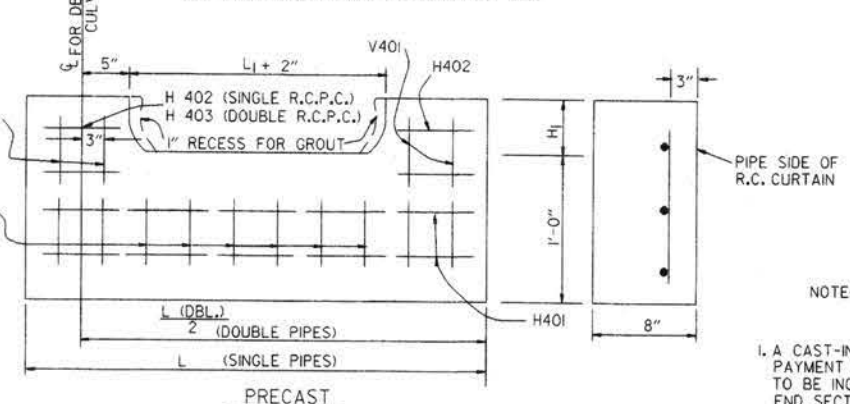
R.C. CURTAIN WALL DIMENSIONS & QUANTITIES

PIPE DIA.	H <sub>1</sub>	L <sub>1</sub>	L	L (DBL.) / 2	SINGLE R.C.P.C.		DOUBLE R.C.P.C.	
					CONC. CU. YDS.	REINF. STEEL LBS.	CONC. CU. YDS.	REINF. STEEL LBS.
18"	11/2"	3'-5"	8'-0"	6'-3"	0.31	27.7	0.45	39.5
24"	1'-0 1/2"	4'-6"	9'-6"	7'-6"	0.37	33.4	0.53	48.0
30"	1'-3 1/2"	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'-1 1/2"	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'-9 1/2"	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.



R.C. CURTAIN WALL DETAILS



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.

REINFORCING STEEL SCHEDULE

PIPE DIA.	SINGLE R.C. PIPE CULVERT								DOUBLE R.C. PIPE CULVERT									
	H401		H402		V401		V402		H401		H402		H403		V401		V402	
	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.
18"	7'-8"	2	1'-11/2"	4	1'-7 1/2"	8	8"	8	12'-2"	2	1'-11/2"	4	8"	2	1'-7 1/2"	10	8"	14
24"	9'-2"	2	2'-2"	4	1'-8 1/2"	10	8"	9	14'-8"	2	2'-2"	4	8"	2	1'-8 1/2"	12	8"	18
30"	10'-8"	2	2'-4 1/2"	4	1'-11 1/2"	10	8"	12	17'-8"	2	2'-4 1/2"	4	8"	2	1'-11 1/2"	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'-9 1/2"	8	2'-9 1/2"	16	8"	15	23'-8"	2	3'-9 1/2"	8	8"	4	2'-9 1/2"	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'-8 1/2"	12	3'-5 1/2"	20	8"	17	27'-8"	2	4'-9"	12	8"	6	3'-5 1/2"	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

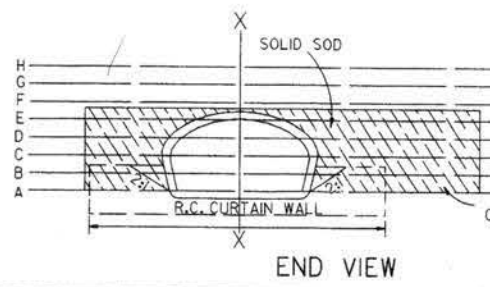
ALL REINFORCING STEEL #4 BARS @ 6" O.C.

SOLID SODDING

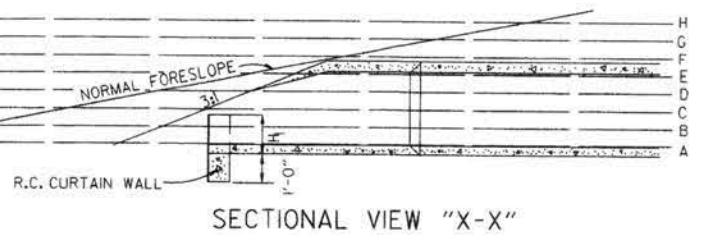
PIPE DIA.	SINGLE R.C.P.C.			DOUBLE R.C.P.C.		
	3:1	4:1	6:1	3:1	4:1	6:1
18"	5	7	12	6	8	13
24"	8	12	19	9	13	20
30"	13	18	29	14	19	30
36"	17	26	41	18	28	43
42"	23	35	55	25	37	57
48"	29	46	68	31	48	70
54"	35	57	85	37	59	87
60"	45	62	104	48	65	107
72"	64	92	156	67	95	159

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 3/4".
  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 W/10 x W10 MAY BE USED IN LIEU OF REINFORCING BARS.

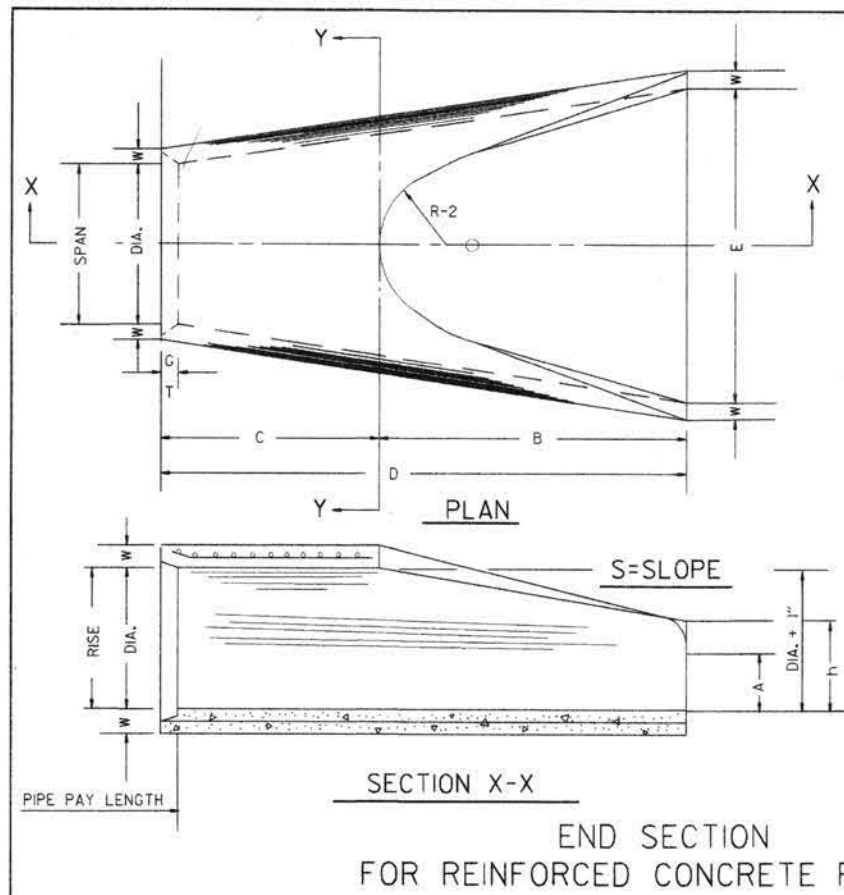


END VIEW



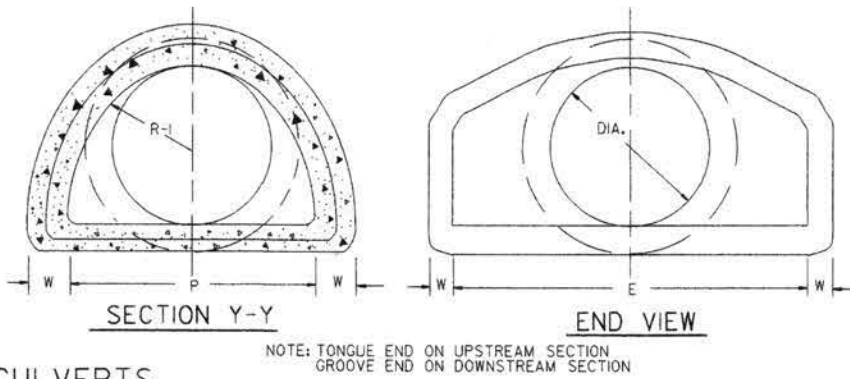
SECTIONAL VIEW "X-X"

10-18-96 ADDED NOTE TO SOLID SODDING	10-18-96	ARKANSAS STATE HIGHWAY COMMISSION
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		
DATE	REVISION	FILMED
		STANDARD DRAWING FES-1



**TABLE OF DIMENSIONS**

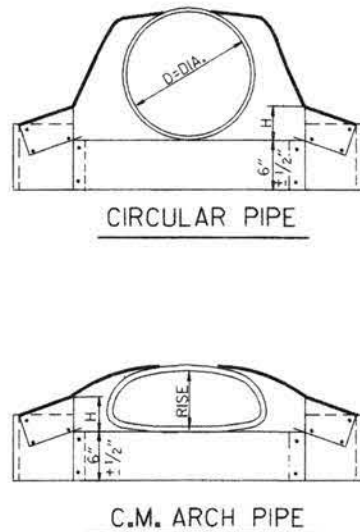
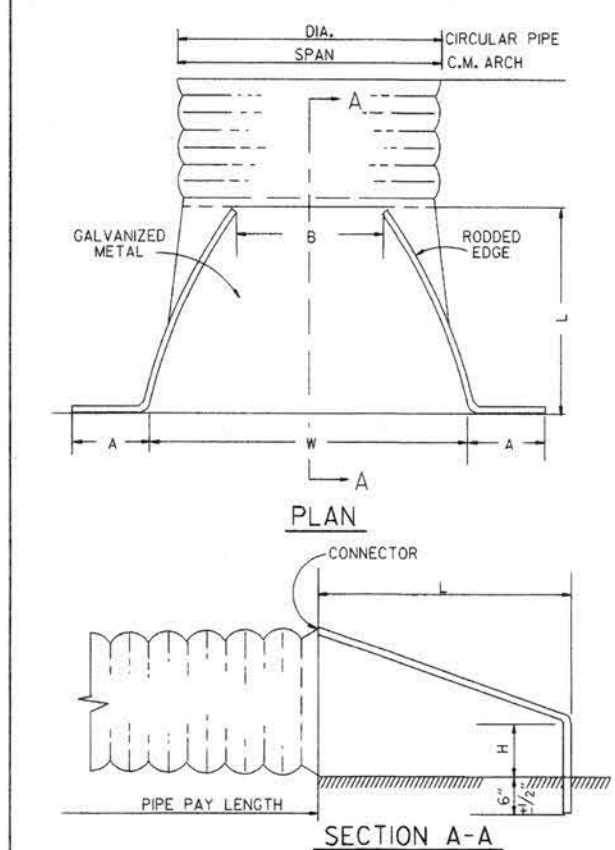
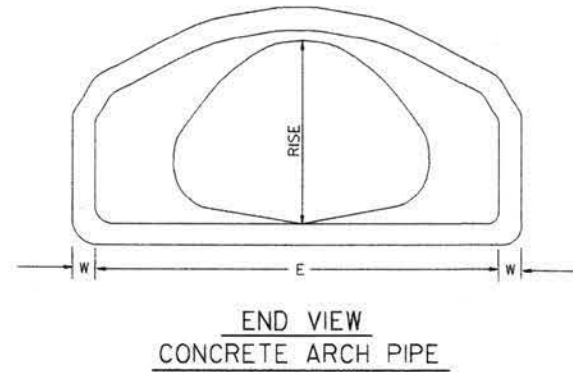
DIA.	WALL	A	B	C	D	E	S	DIA. + 1"	P	R-1	R-2	G-T	WT.	h
18"	2 1/2"	9"	2'-3"	3'-10"	6'-1"	3'-0"	3:1	19"	29"	15 1/2"	12"	2"	1000	1'-0 1/2"
24"	3"	9 1/2"	3'-7 1/2"	2'-6"	6'-1 1/2"	4'-0"	3:1	25"	33 3/8"	16 1/8"	14"	2 1/2"	1600	1'-1 1/2"
30"	3 1/2"	1'-0"	4'-6"	1'-7 3/4"	6'-1 3/4"	5'-0"	3:1	31"	37"	18 1/2"	15"	3 1/4"	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 1/8"	24 5/8"	20"	3 1/2"	4100	1'-8"
42"	4 1/2"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	3:1	43"	53 3/8"	27 1/2"	22"	3 1/2"	5380	2'-2 1/2"
48"	5"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	3:1	49"	56 1/2"	28 1/2"	22"	3 1/2"	6550	2'-6"
54"	5 1/2"	2'-4"	6'-6"	1'-10"	8'-4"	7'-6"	3:1	55"	65 1/2"	33 3/8"	24"	4"	8750	2'-10 1/2"
60"	6"	2'-10"	6'-6"	1'-10"	8'-4"	8'-0"	3:1	61"	72 1/2"	36 1/8"	24"	4"	9270	3'-5"
72"	7"	3'-10"	6'-6"	1'-10"	8'-4"	9'-0"	3:1	73"	77 1/8"	38 5/8"	24"	5"	13250	4'-6"



**ARCH PIPE**

EQUIV. DIA.	• SPAN		• RISE		W	A	B	C	D	E	P	R2	G-T	S
	AASHTO M 206	AHD NOMINAL	AASHTO M 206	AHD NOMINAL										
INCHES														
15	18	18	11	11	2"	4"	2'-0"	4'-0"	6'-0"	3'-0"	29"	12"	1 1/2"	2 1/2:1
18	22	22	13 1/2	14	2 1/2"	5"	2'-0"	4'-1"	6'-1"	3'-6"	32 1/8"	13"	2 1/2"	2 1/2:1
21	26	26	15 1/2	16	2 3/4"	7"	2'-3"	3'-10"	6'-1"	4'-0"	34 1/8"	14"	2 1/2"	2 1/2:1
24	28 1/2	29	18	18	3"	9"	2'-3"	3'-10"	6'-1"	5'-0"	36 1/8"	15"	2 1/2"	2 1/2:1
30	36 1/4	36	22 1/2	23	3 1/2"	10"	3'-1"	3'-0 1/2"	6'-1 1/2"	6'-0"	47 1/8"	20"	3"	2 1/2:1
36	43 3/4	44	26 3/8	27	4"	10 1/2"	4'-0"	2'-1 1/2"	6'-1 1/2"	6'-6"	54 1/8"	22"	3 1/2"	2 1/2:1
42	51 1/8	51	31 1/8	31	4 1/2"	11 1/2"	4'-7"	1'-10 1/4"	6'-5 1/4"	7'-2"	59 1/2"	23"	3 3/4"	2 1/2:1
48	58 1/2	59	36	36	5"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	7'-10"	70 5/8"	24"	4 1/4"	2 1/2:1
54	65	65	40	40	5 1/2"	1'-7"	5'-3"	2'-11"	8'-2"	8'-6"	72 1/8"	24"	4 3/4"	2 1/2:1
60	73	73	45	45	6"	1'-10"	5'-6"	2'-8"	8'-2"	9'-0"	77 1/8"	24"	5"	2 1/2:1

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

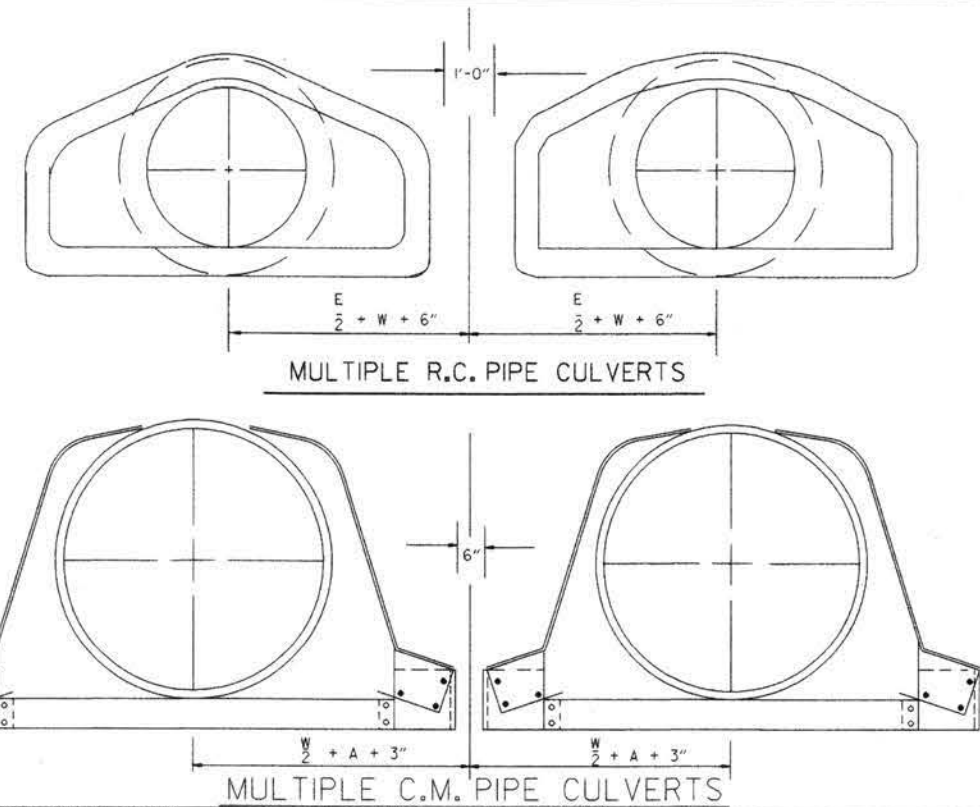


**CIRCULAR PIPE**

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

**C.M. ARCH PIPE**

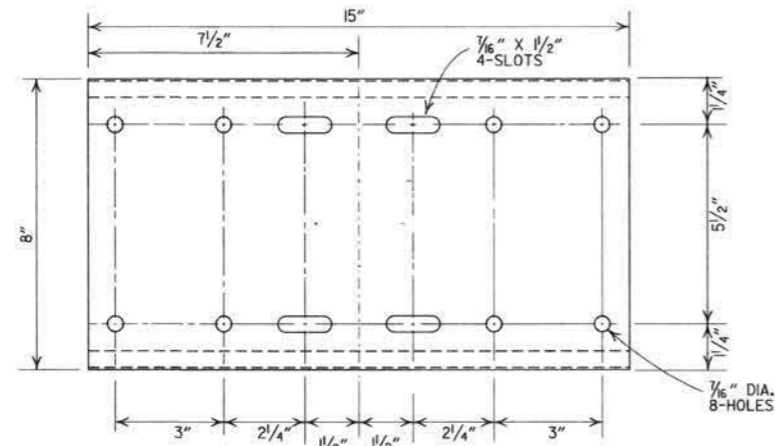
EQUIV. DIA.	SPAN	RISE	A ±	B MAX.	H ±	L ±	W ±	S	GAUGE
15"	17	13	7	9	6	19	30	2 1/2:1	16
18"	21	15	7	10	6	23	36	2 1/2:1	16
21"	24	18	8	12	6	28	42	2 1/2:1	16
24"	28	20	9	14	6	32	48	2 1/2:1	16
30"	35	24	10	16	6	39	60	2 1/2:1	14
36"	42	29	12	18	8	46	75	2 1/2:1	14
42"	49	33	13	21	9	53	85	2 1/2:1	12
48"	57	38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



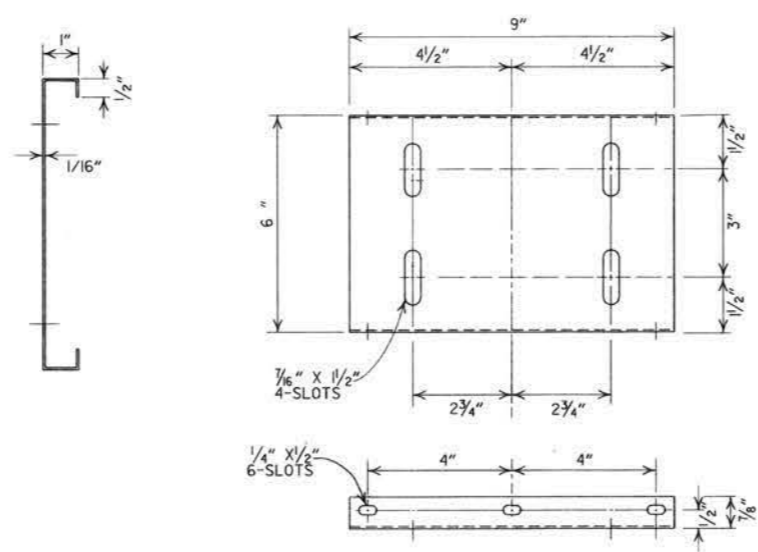
NOTE: ALTERNATE CONNECTIONS TO THE PIPE CULVERTS, IN ACCORDANCE WITH MANUFACTURER'S STANDARD PRACTICES, MAY BE MADE SUBJECT TO THE APPROVAL OF THE ENGINEER.

**END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS**

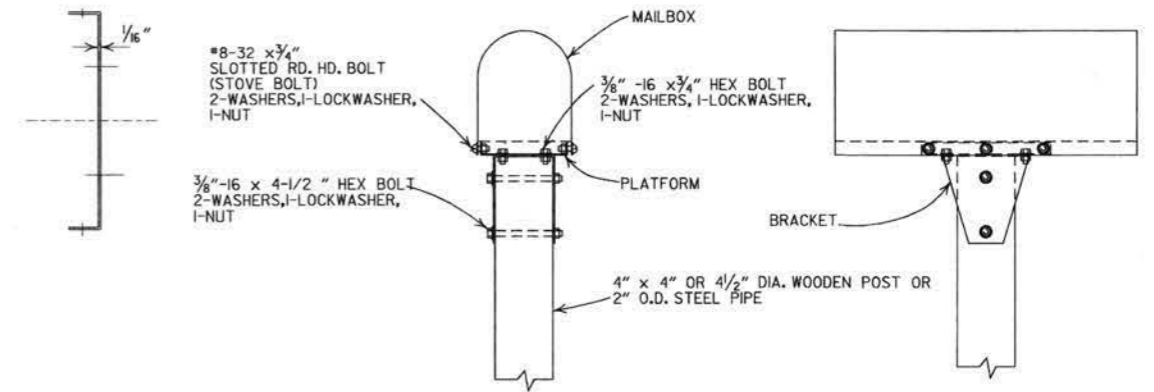
DATE	REVISION	FILE NO.	PROJECT
10-18-96	REVISED ASTM REF. TO AASHTO	10-18-96	ARKANSAS STATE HIGHWAY COMMISSION
5-15-80	REVISED DISTANCE BETWEEN MULTIPLE R.C.P. F.E.S.	664-5-15-80	
7-14-78	C.M. ARCH SIZES TO CONFORM WITH AASHTO SIZES	752-7-14-78	
8-22-75	ADDED MULTIPLE PIPE CULVERTS	517-8-22-75	FLARED END SECTION
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	STANDARD DRAWING FES-2



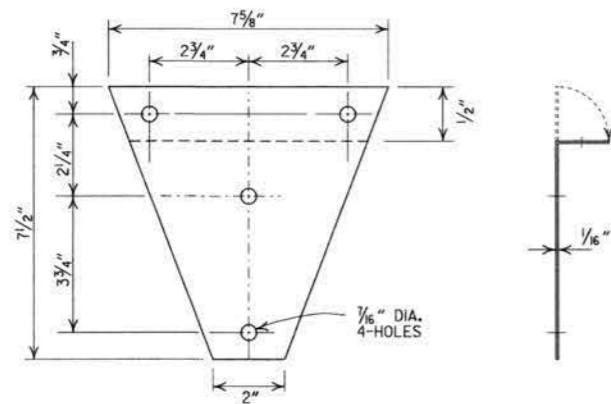
SHELF



PLATFORM

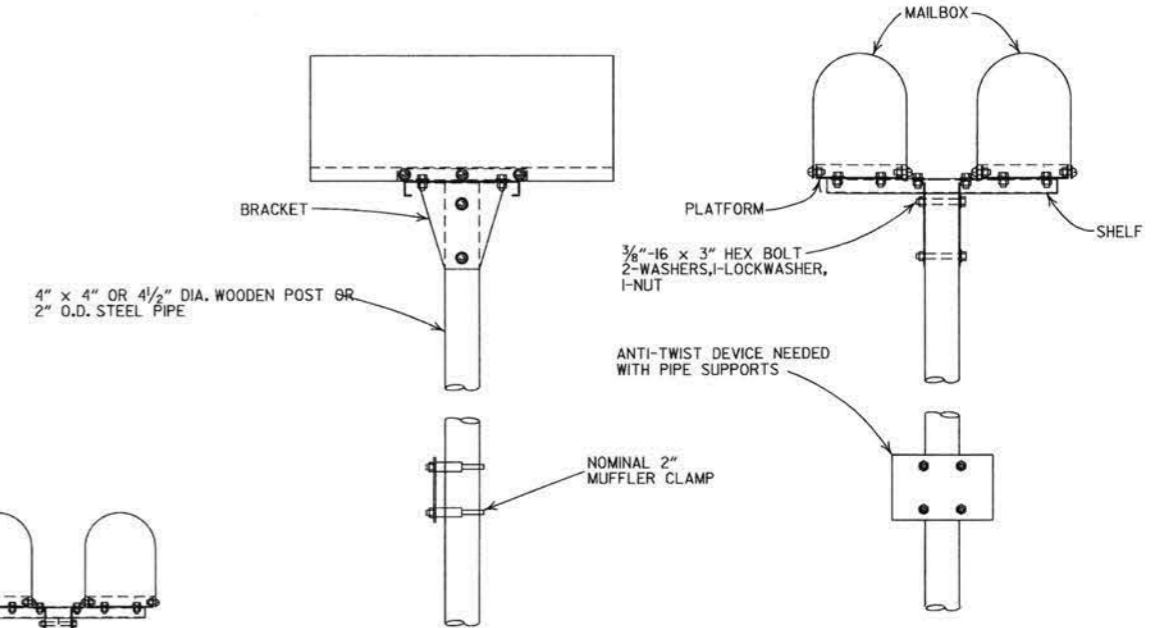


SINGLE INSTALLATION

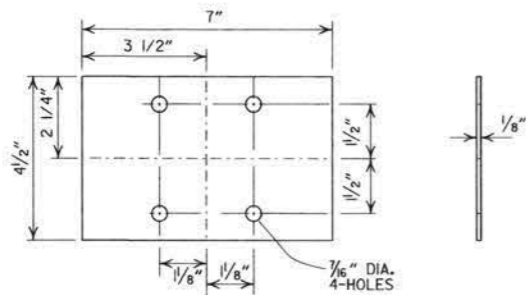


BRACKET

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



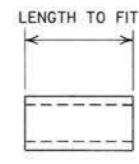
DOUBLE INSTALLATION



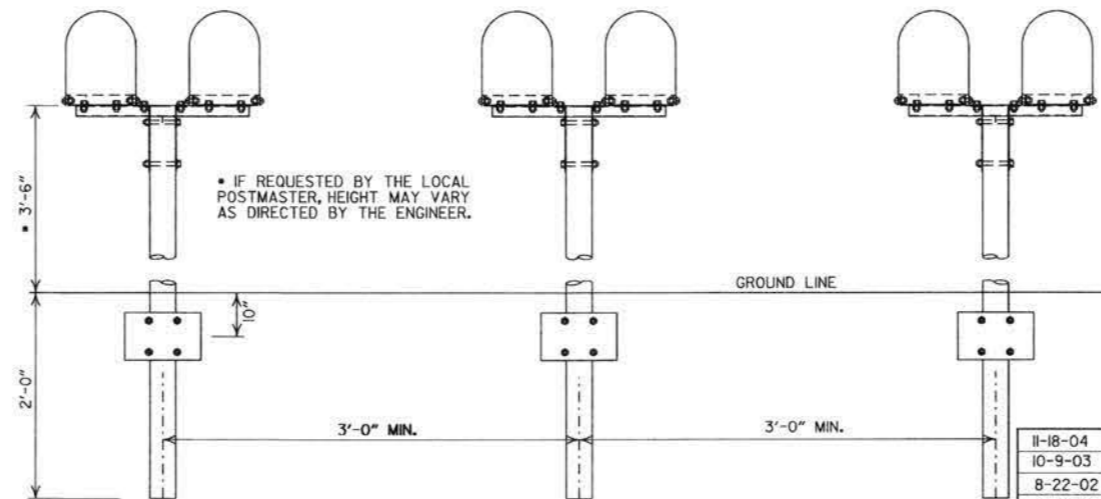
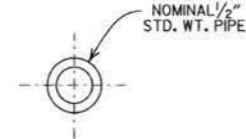
ANTI-TWIST PLATE



CLAMP



SPACER



SPACING FOR MULTIPLE POST INSTALLATION

DATE	FILMED	REVISION
11-18-04		REVISED NOTES
10-9-03		REVISED NOTE 6
8-22-02		REVISED NOTE 6
10-18-96		CORRECTED AASHTO
10-1-92		CORRECTED SPELLING
9-26-91		NEW PHONE NUMBER
8-15-91		ADDED NOTE
11-30-89		ADJUSTED HEIGHT & ADDED NOTE
2-16-89		DELETED SLOTS FROM SHELF & PLTF
11-17-88	10-1-92	ADJUSTED DIMENSIONS OF STEEL POSTS
7-15-88	120-7-15-88	ISSUED

ARKANSAS STATE HIGHWAY COMMISSION

MAILBOX DETAILS

STANDARD DRAWING MB-1

REINFORCED CONCRETE ARCH PIPE DIMENSIONS

EQUIV. DIA.	SPAN		RISE	
	AASHTO M 206	AHTD NOMINAL	AASHTO M 206	AHTD NOMINAL
INCHES	INCHES			
15	18	18	11	11
18	22	22	13 1/2	14
21	26	26	15 1/2	16
24	28 1/2	29	18	18
30	36 1/4	36	22 1/2	23
36	43 3/8	44	26 5/8	27
42	51 1/8	51	31 3/8	31
48	58 1/2	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	77 1/2	77
108	138	138	87 1/8	87
120	154	154	96 3/8	97
132	168 3/4	169	106 1/2	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)(ii).

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.

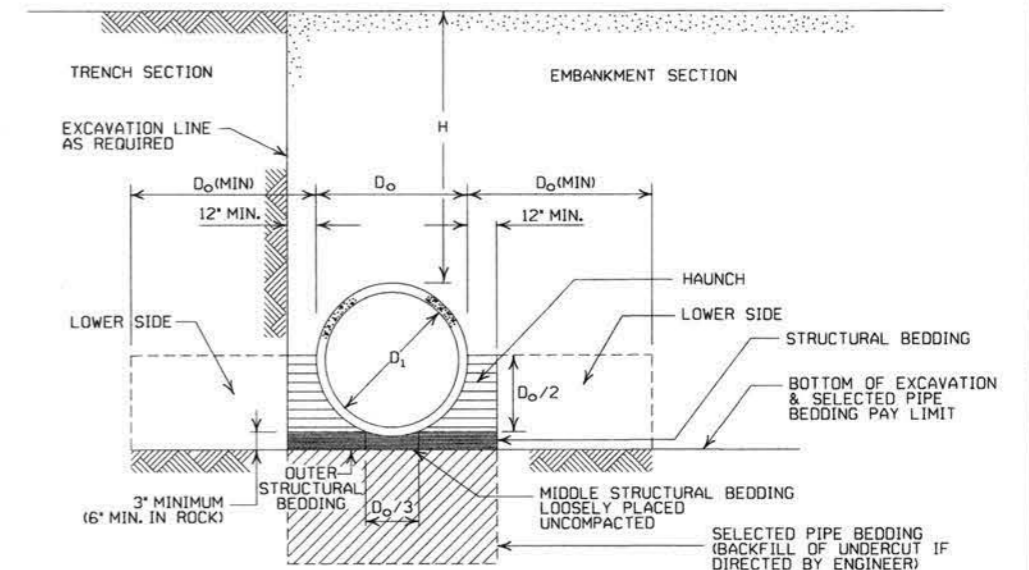
- LEGEND -

- D<sub>1</sub> = NORMAL INSIDE DIAMETER OF PIPE
- D<sub>o</sub> = 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 STATE HIGHWAY AND TRANSPORTATION DEPARTMENT 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

INSTALLATION TYPE	CLASS OF PIPE			
	CLASS III	CLASS IV	CLASS V	CLASS V
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 MINIMUM 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
2 3/8 INCH BY 1/2 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

**CONSTRUCTION SEQUENCE**

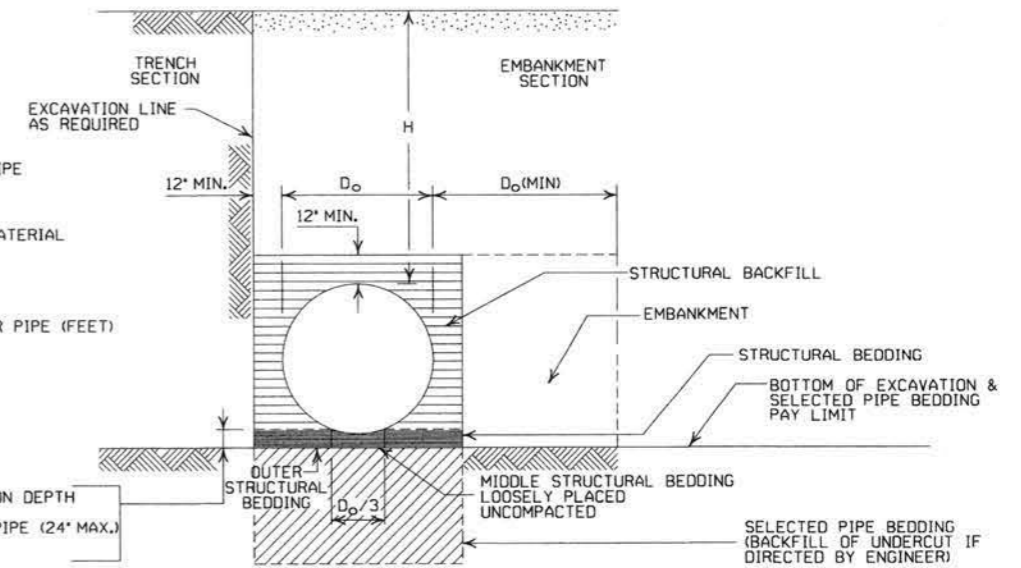
1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. COMPLETE STRUCTURAL BACKFILL OPERATION BY WORKING FROM SIDE TO SIDE OF THE PIPE. THE SIDE TO SIDE STRUCTURAL BACKFILL DIFFERENTIAL SHALL NOT 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.

- LEGEND -**
- D<sub>o</sub> = OUTSIDE DIAMETER OF PIPE
  - MAX. = MAXIMUM
  - MIN. = MINIMUM
  - [Hatched Pattern] = STRUCTURAL BACKFILL MATERIAL
  - [Dotted Pattern] = UNDISTURBED SOIL
  - [Diagonal Lines] = 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. INSTALLATION TYPE 1 SHALL BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE ARCHES WITH 2 3/8" X 1/2" 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 STATE HIGHWAY AND TRANSPORTATION DEPARTMENT 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."

**CORRUGATED ALUMINUM PIPE (ROUND)**

PIPE DIAMETER (INCHES)	① MINIMUM 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	0.164
2 3/8 INCH BY 1/2 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
36	2.5		15	26	27
42	2			43	43
48	2			40	41
54	2			35	37
60	2				33
66	2				
72	2				

**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)	MINIMUM CORNER RADIUS (INCHES)	STEEL				ALUMINUM		
			MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)		MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)		
				INSTALLATION TYPE 1	INSTALLATION TYPE 1		INSTALLATION TYPE 1	INSTALLATION TYPE 1	
2 3/8 INCH BY 1/2 INCH CORRUGATION RIVETED, WELDED, 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	3/2	0.079	3	12	0.105	3	12	
42	49x33	4	0.079	3	12	0.105	3	12	
48	57x38	5	0.109	3	13	0.135	3	13	
54	64x43	6	0.109	3	14	0.135	3	14	
60	71x47	7	0.138	3	15	0.164	3	15	
66	77x52	8	0.168	3	15				
72	83x57	9	0.168	3	15				
② 3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM									
			INSTALLATION		INSTALLATION				
			TYPE 2	TYPE 1	TYPE 2	TYPE 1			
36	40x31	5	0.079	3	2	12	15		
42	46x36	6	0.079	3	2	13	15		
48	53x41	7	0.079	3	2	13	15		
54	60x46	8	0.079	3	2	13	15		
60	66x51	9	0.079	3	2	13	15		
66	73x55	12	0.079	3	2	15	15		
72	81x59	14	0.079	3	2	15	15		
78	87x63	14	0.079	3	2	15	15		
84	95x67	16	0.109	3	2	15	15		
90	103x71	16	0.109	3	2	15	15		
96	112x75	18	0.109	3	2	15	15		
102	117x79	18	0.109	3	2	15	15		
108	128x83	18	0.138	3	2	15	15		

① FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.

② WHERE THE STANDARD 2 2/3" X 1/2" 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.

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 1/4 INCH. 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.

### 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.

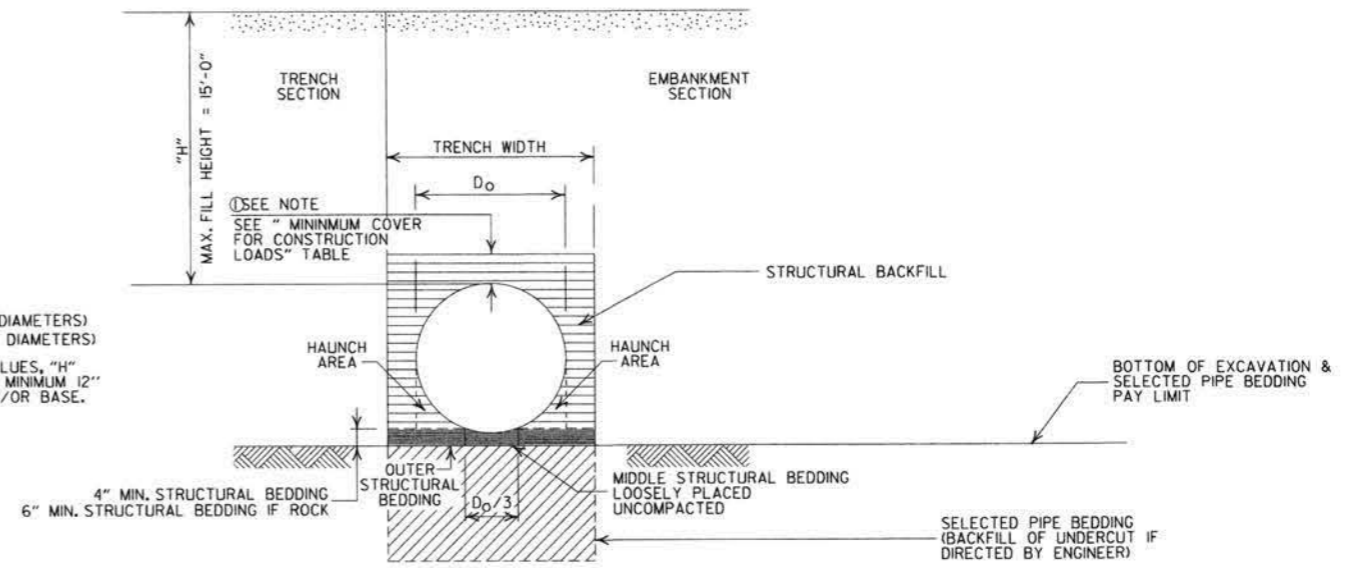
### MINIMUM COVER FOR CONSTRUCTION LOADS

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.

### 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"



### 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 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. 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<sub>o</sub> = 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 1/4 INCH. 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"

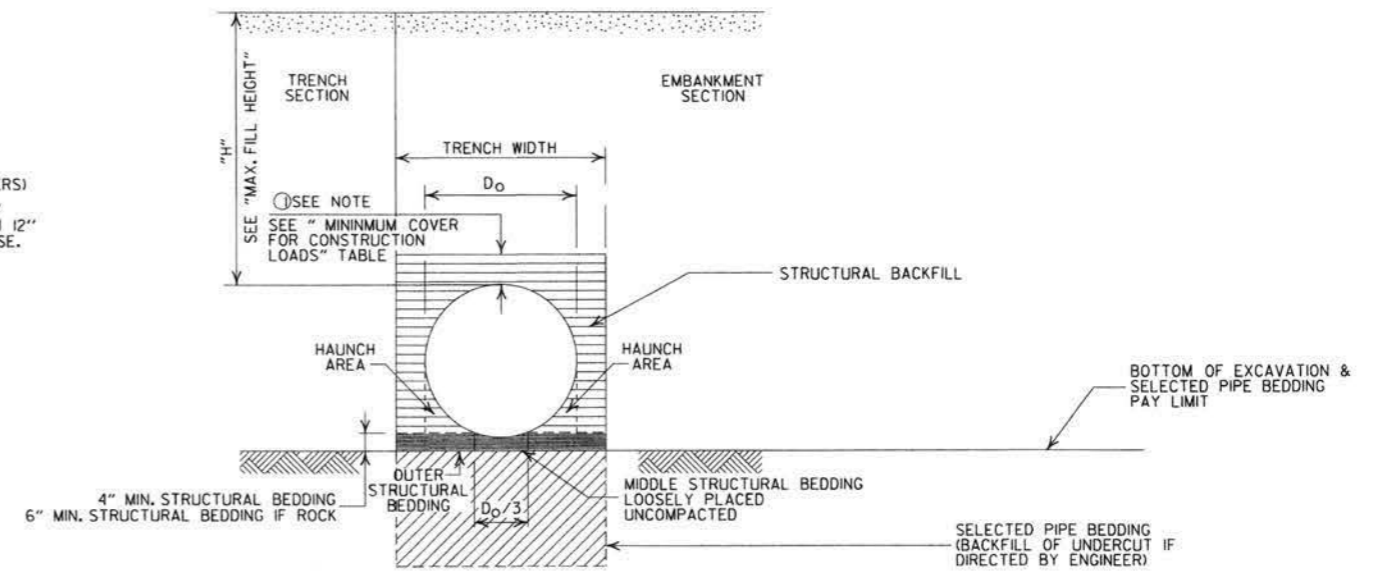
MULTIPLE INSTALLATION OF PVC PIPES

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.



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.

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"

② MINIMUM COVER SHALL BE MEASURED FROM TOP OF PIPE TO TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE. THE SURFACE SHALL BE MAINTAINED.

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 I2454. 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<sub>o</sub> = OUTSIDE DIAMETER OF PIPE
- MAX. = MAXIMUM
- MIN. = MINIMUM
- = STRUCTURAL BACKFILL MATERIAL
- = UNDISTURBED SOIL

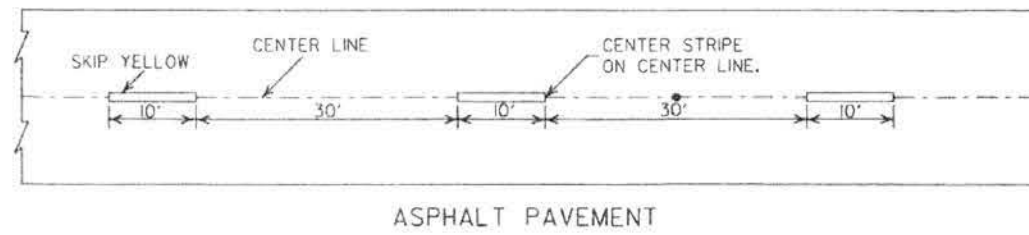
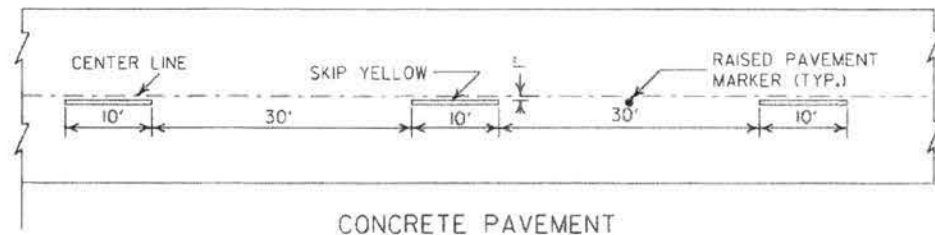
DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REV GENERAL NOTES & MINIMUM COVER NOTE; DELETED SM3 MATERIAL	
11-17-10	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

PLASTIC PIPE CULVERT  
(PVC F949)

STANDARD DRAWING PCP-2

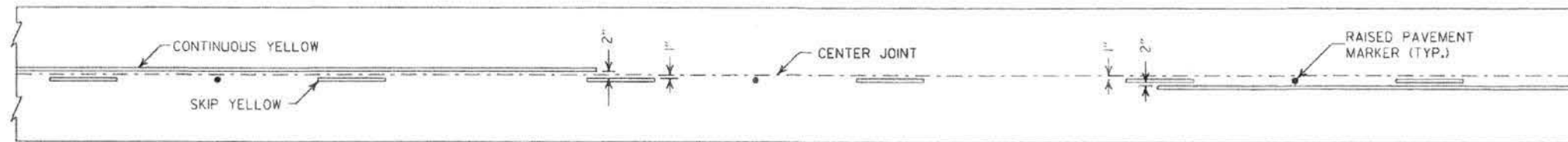




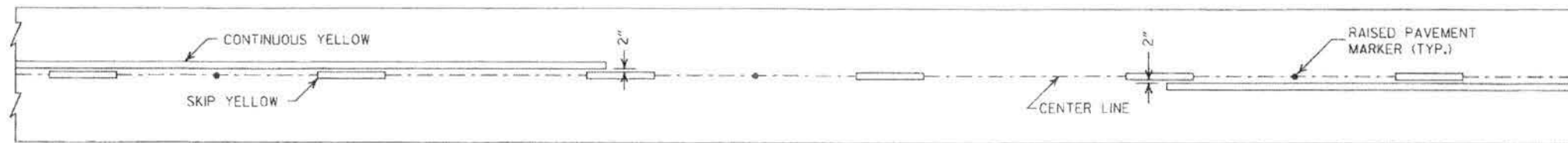
CONCRETE PAVEMENT

ASPHALT PAVEMENT

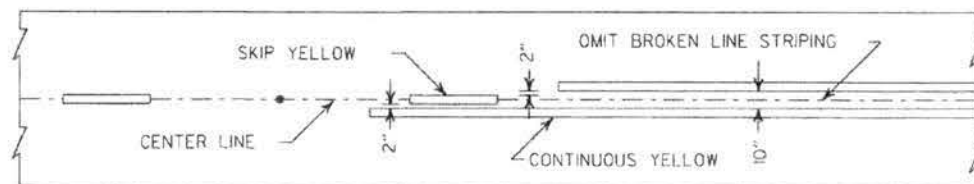
**BROKEN LINE STRIPING**



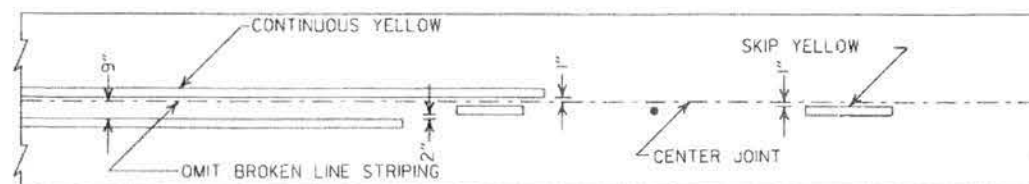
**SOLID LINE STRIPING ON CONCRETE PAVEMENT**



**SOLID LINE STRIPING ON ASPHALT PAVEMENT**

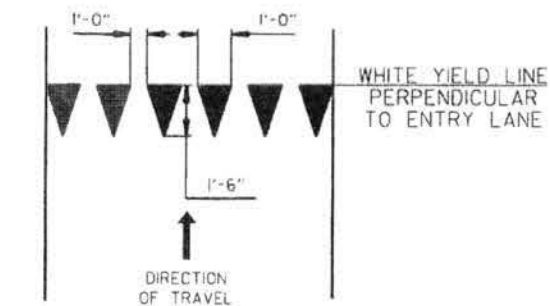


ASPHALT PAVEMENT

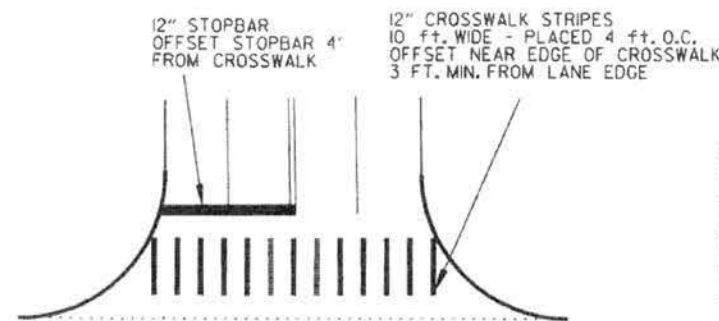


CONCRETE PAVEMENT

**STRIPING AT ADJACENT NO PASSING LANES**



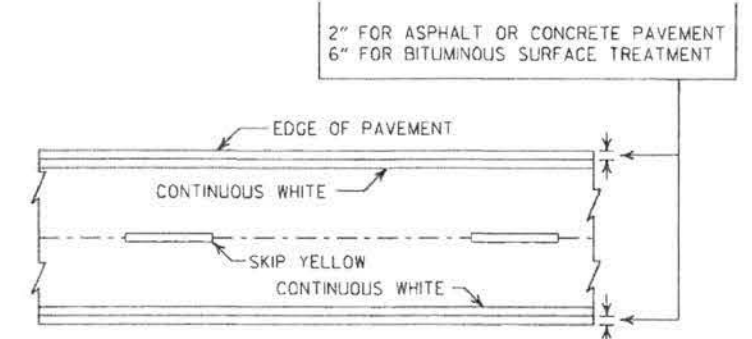
**YIELD LINE DETAIL**



**CROSSWALK AND STOPBAR DETAILS**

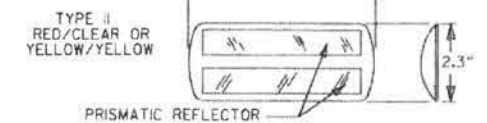
**NOTES:**

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

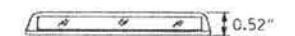


**PAVEMENT EDGE LINE MARKING**

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



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 AHTD QUALIFIED PRODUCTS LIST.



**DETAIL OF STANDARD RAISED PAVEMENT MARKERS**

DATE	REVISION	FILED
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 PAVT MRKRS	
11-18-04	REVISED NOTE 2 & GENERAL NOTES	
8-22-02	ADDED CROSSWALK & STOPBAR DTLS.	
7-02-98	ADDED DETAILS OF STD. RAISED PAVT. MARKERS	
4-26-96	REV. NOTES 3&4; ADDED R.P.M.	
9-30-80	DRAWN	1-9-30-80

ARKANSAS STATE HIGHWAY COMMISSION

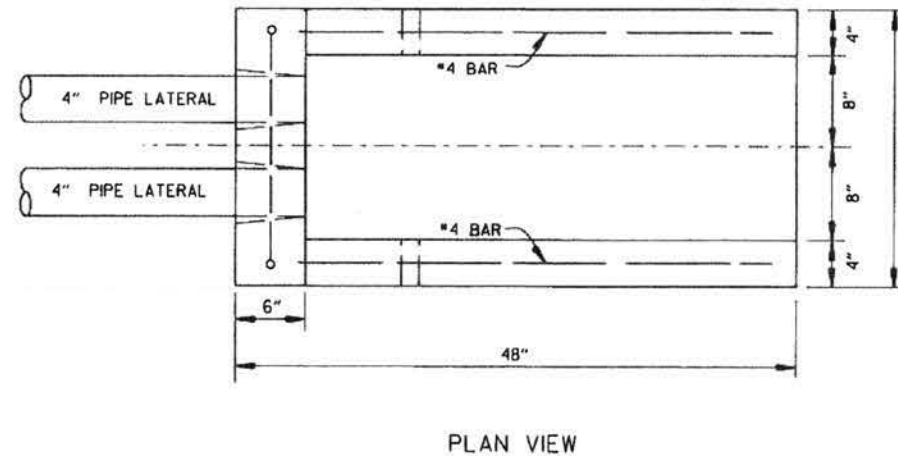
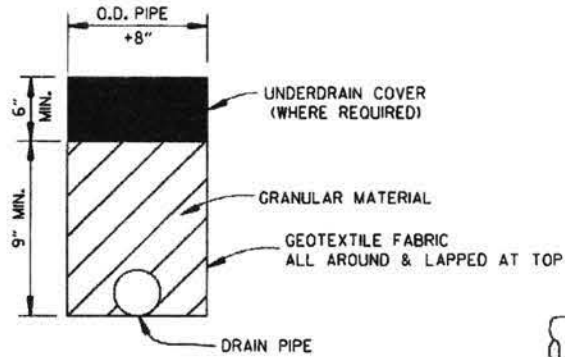
**PAVEMENT MARKING DETAILS**

STANDARD DRAWING PM-1

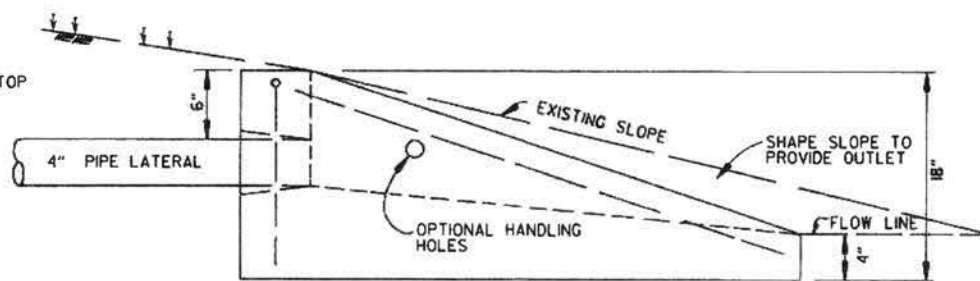


**NOTE:**

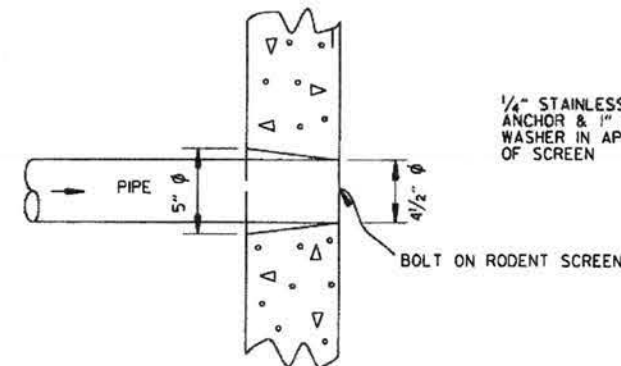
1. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THOROUGHLY COMPACTED EARTH AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.
2. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC, LAP FABRIC 12" OR THE WIDTH OF THE TRENCH AT THE TOP.



PLAN VIEW

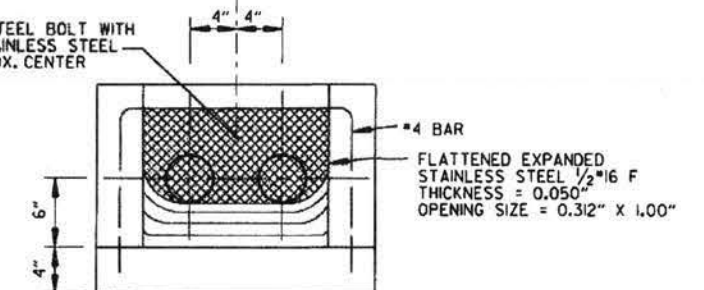


SIDE VIEW

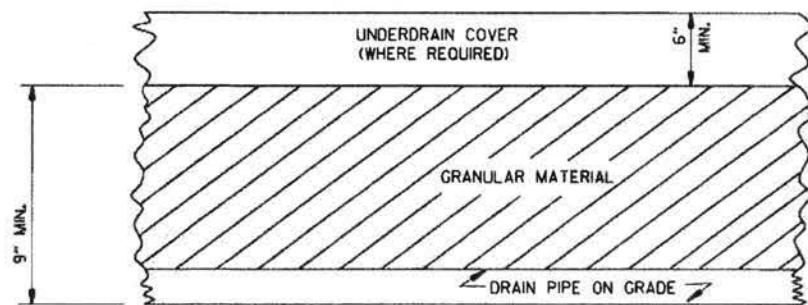


DETAIL OF HOLE FOR 4" PIPE

1/4" STAINLESS STEEL BOLT WITH ANCHOR & 1" STAINLESS STEEL WASHER IN APPROX. CENTER OF SCREEN



FRONT VIEW (DETAIL OF RODENT SCREEN)

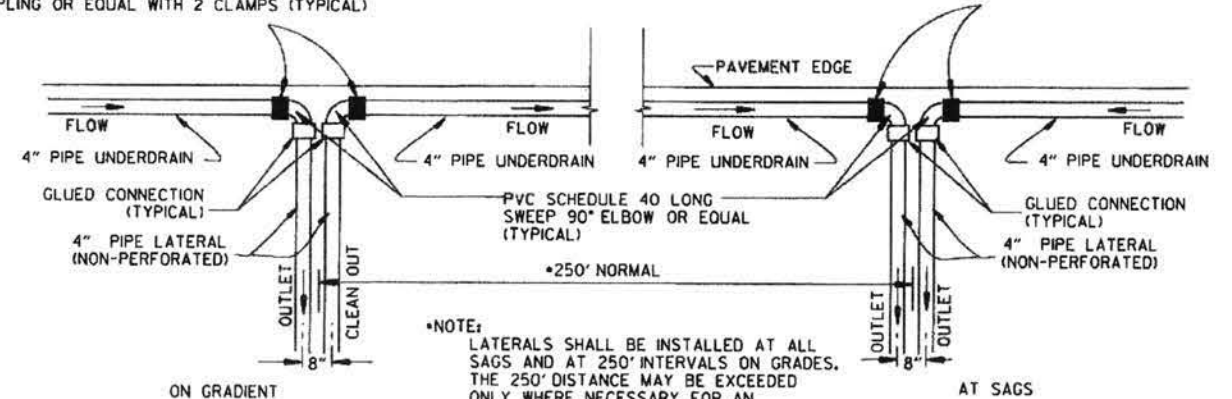


DETAILS OF PIPE UNDERDRAIN

FERNCO 1056-44 (4" CI/PLASTIC) OR FERNCO 1051-44 (4" AC/DI OR 4" CI/PLASTIC) COUPLING OR EQUAL WITH 2 CLAMPS (TYPICAL)

**UNDERDRAIN OUTLET PROTECTORS**

FERNCO 1056-44 (4" CI/PLASTIC) OR FERNCO 1051-44 (4" AC/DI OR 4" CI/PLASTIC) COUPLING OR EQUAL WITH 2 CLAMPS (TYPICAL)



**\*NOTE:**

LATERALS SHALL BE INSTALLED AT ALL SAGS AND AT 250' INTERVALS ON GRADES. THE 250' DISTANCE MAY BE EXCEEDED ONLY WHERE NECESSARY FOR AN ACCEPTABLE OUTLET.

**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.

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; 5 1/2" 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 POLYETHYLENE 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
DATE	REVISION	DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF PIPE UNDERDRAIN

STANDARD DRAWING PU-1

SUPERELEVATION TABLE FOR TWO - WAY TRAFFIC

DEGREE OF CURVE	30 MPH		40 MPH		50 MPH		55 MPH		60 MPH		70 MPH	
	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE
0° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
0° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
0° 45'	N.C.		N.C.		R.C.		0.022		0.023		0.028	
1° 00'	N.C.		N.C.		N.C.		0.026		0.030		0.037	
1° 15'	N.C.		R.C.		0.021		0.032		0.037		0.046	
1° 30'	N.C.		0.021		0.031	200	0.043		0.043		0.054	275
1° 45'	N.C.		0.025		0.040		0.048	300	0.049		0.062	300
2° 00'	N.C.		0.028	175	0.045		0.053		0.055	250	0.070	
2° 15'	R.C.		0.031		0.048		0.058		0.067		0.085	350
2° 30'	0.021		0.034		0.049	250	0.058		0.072		0.091	350
2° 45'	0.023		0.037		0.053		0.063		0.077	260	0.096	400
3° 00'	0.025		0.040	200	0.057		0.067	230	0.082	275	0.098	350
3° 15'	0.027		0.043		0.061		0.072	245	0.086	285	0.100	350
3° 30'	0.029		0.046		0.065	205	0.076	255	0.090	295		
3° 45'	0.031	200	0.049		0.069	215	0.080	265	0.093	305		
4° 00'	0.033		0.051		0.072	225	0.083	270	0.096	315		
4° 30'	0.037		0.056		0.078	240	0.087	280	0.098	320		
5° 00'	0.040		0.061		0.083	250	0.091	295	0.098	320		
5° 30'	0.043		0.066	185	0.088	260	0.094	300				
6° 00'	0.046		0.070	190	0.092	270	0.096	305				
6° 30'	0.050		0.074	200	0.095	280						
7° 00'	0.053		0.078	210	0.098	285						
7° 30'	0.056		0.081	215	0.094	290						
8° 00'	0.058		0.084	220	0.097	295						
8° 30'	0.061		0.087	225	0.099	290						
9° 00'	0.063		0.089	230	0.100	290						
10° 00'	0.068	150	0.094	235								
11° 00'	0.072		0.097	250								
12° 00'	0.076	175	0.099	250								
13° 00'	0.080		0.100	250								
14° 00'	0.083	190										
15° 00'	0.086	195										
16° 00'	0.089	200										
17° 00'	0.091	200										
18° 00'	0.093	205										
19° 00'	0.095	210										
20° 00'	0.097	215										
21° 00'	0.098	215										
22° 00'	0.099	215										
23° 00'	0.099	215										
24° 00'	0.100	220										

D MAX = 24' 45"

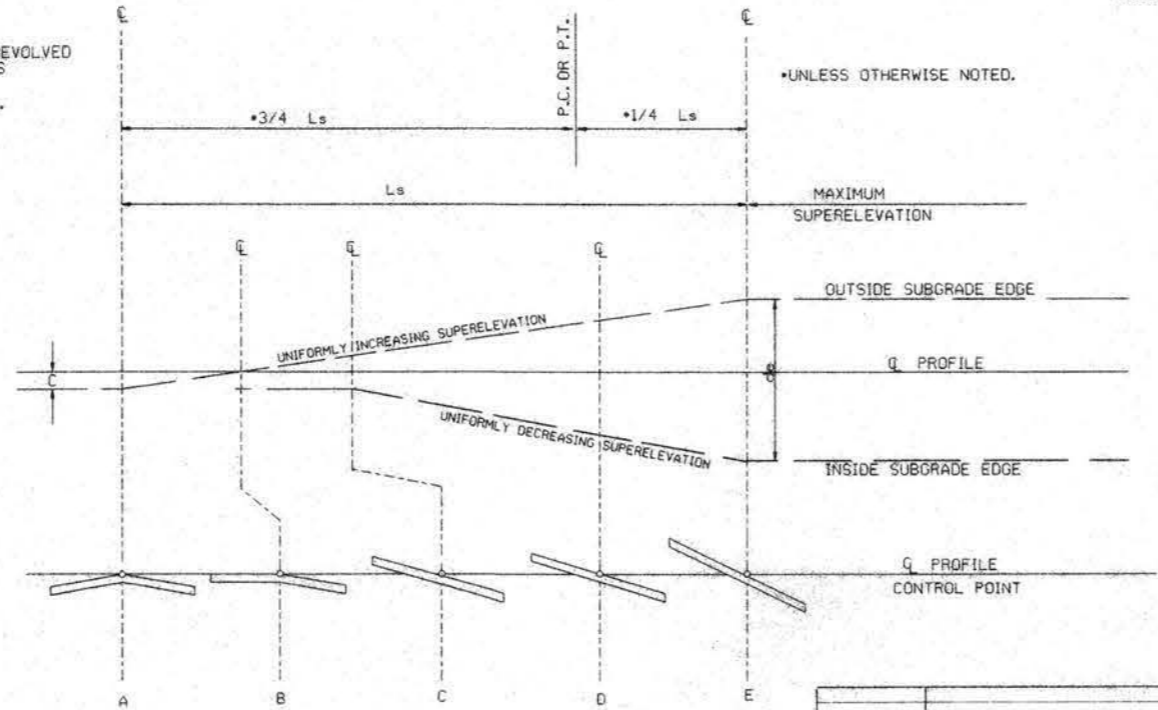
ABBREVIATIONS

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

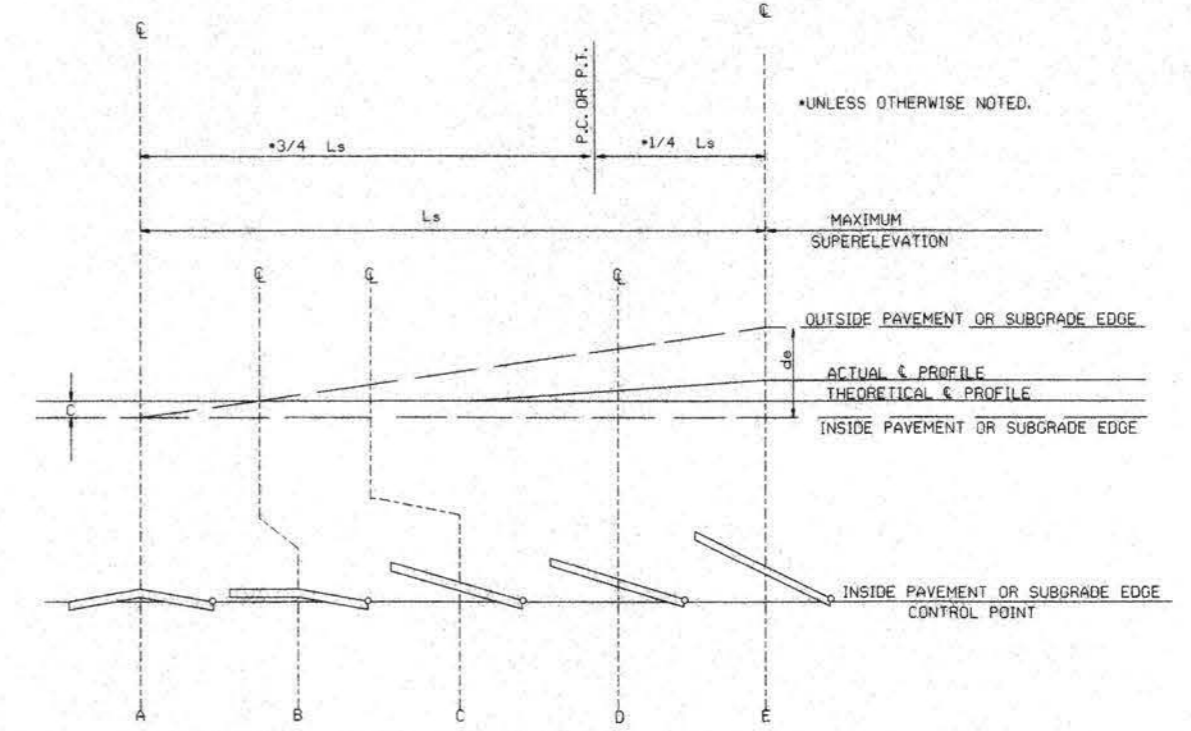
GENERAL NOTES

- ON PAVEMENT WITH TWO-WAY TRAFFIC, THE SUPERELEVATION SHALL BE REVOLVED ON THE INSIDE PAVEMENT EDGE UNLESS OTHERWISE NOTED ON THE PLANS
- SUPERELEVATION VALUES SHOWN ON THE CROSS SECTIONS ARE VALUES (+) OR (-) TO BE ADDED TO OR SUBTRACTED FROM THE POINT OF CONTROL.
- LENGTHS FOR L MAY BE ROUNDED IN MULTIPLES OF 25 FT. OR 50 FT. TO PERMIT SIMPLER CALCULATIONS.
- 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



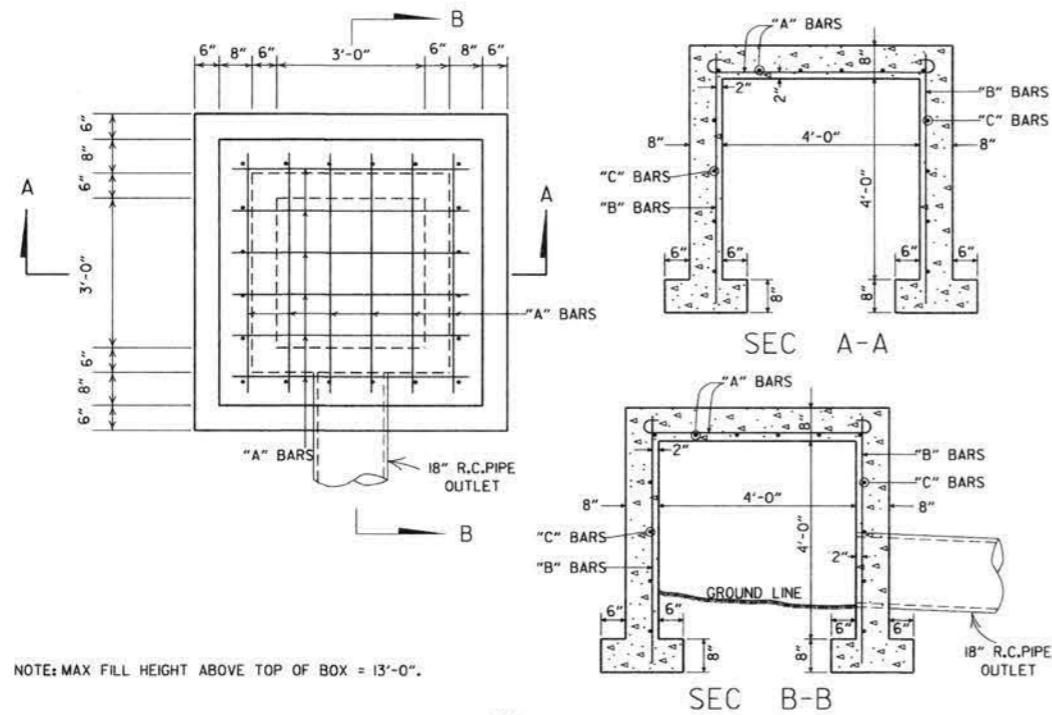
STANDARD METHOD WHEN SUPERELEVATION REVOLVES AROUND INNER SUBGRADE POINT OR INNER PAVEMENT EDGE

NOTE: MAINTAIN NORMAL CROWN ON INSIDE UNTIL SUPERELEVATION EXCEEDS 2C.

SUPERELEVATION FORMULA =  $\frac{Lde}{Ls}$

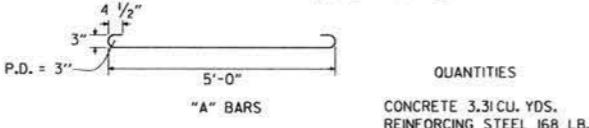
ARKANSAS STATE HIGHWAY COMMISSION  
TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC  
STANDARD DRAWING SE-2

10-18-96	ADDED FORMULA	10-18-96
01-09-87	ISSUED	534-1-9-87
DATE	REVISION	DATE FILLED



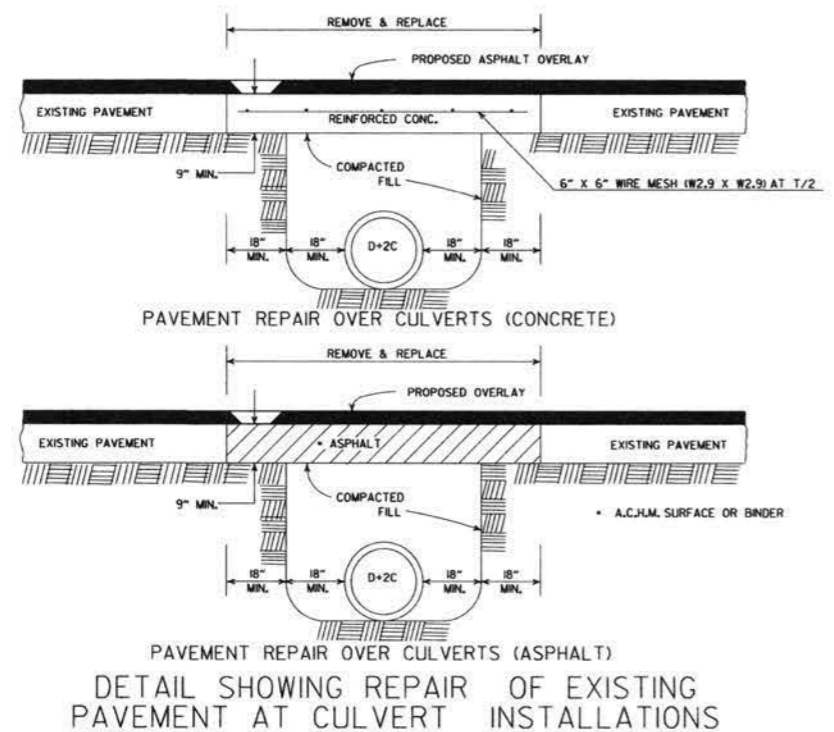
NOTE: MAX FILL HEIGHT ABOVE TOP OF BOX = 13'-0".

STEEL SCHEDULE			
BARS	NUMBER	LENGTH	SPACING
"A"	12	6'-0"	10"
"B"	20	5'-0"	10 1/2"
"C"	16	5'-0"	12"

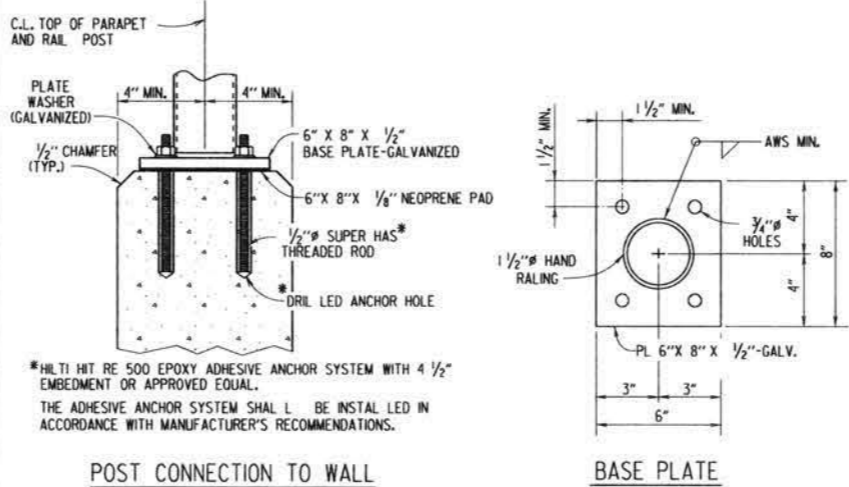
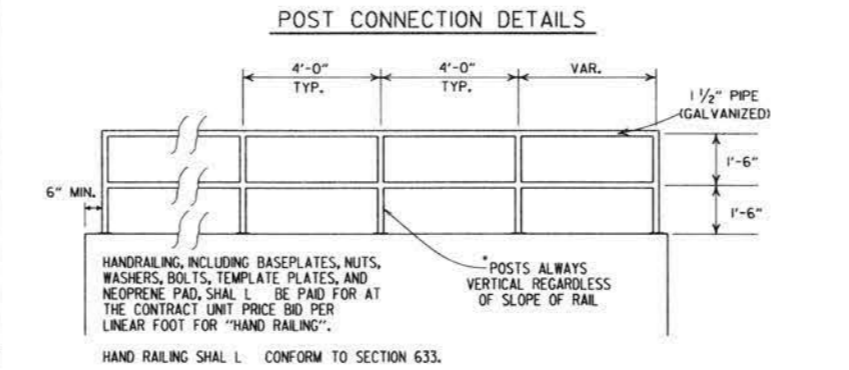
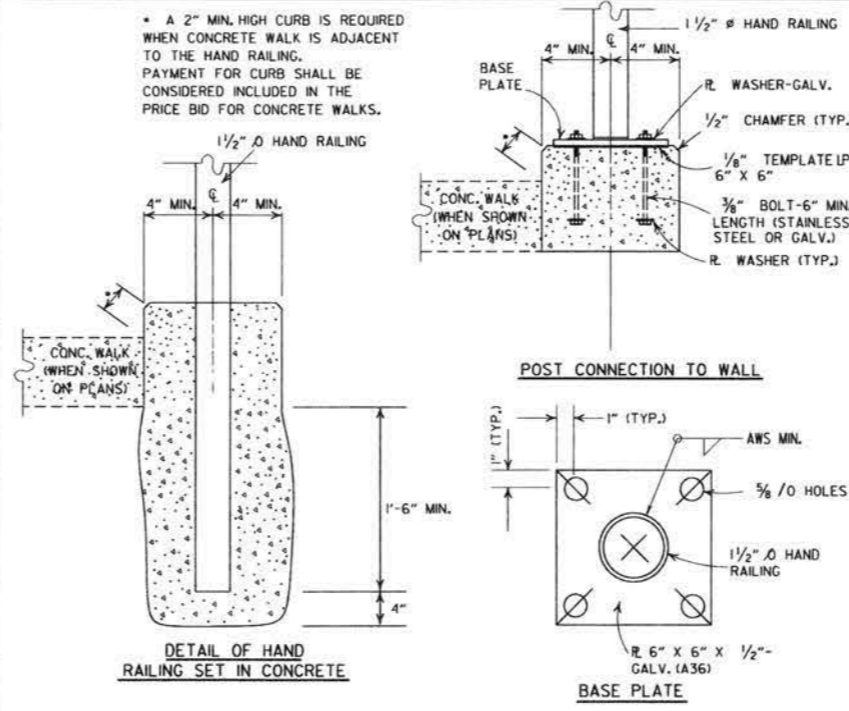


QUANTITIES  
 CONCRETE 3.31 CU. YDS.  
 REINFORCING STEEL 168 LB.  
 GENERAL NOTE:  
 THE PAY ITEMS FOR REINFORCED CONCRETE SPRING BOXES SHALL BE FOR THE QUANTITIES OF CONCRETE OF THE CLASS SPECIFIED, REINFORCING STEEL, EXCAVATION FOR STRUCTURES AND 18" R.C. PIPE CULVERT.

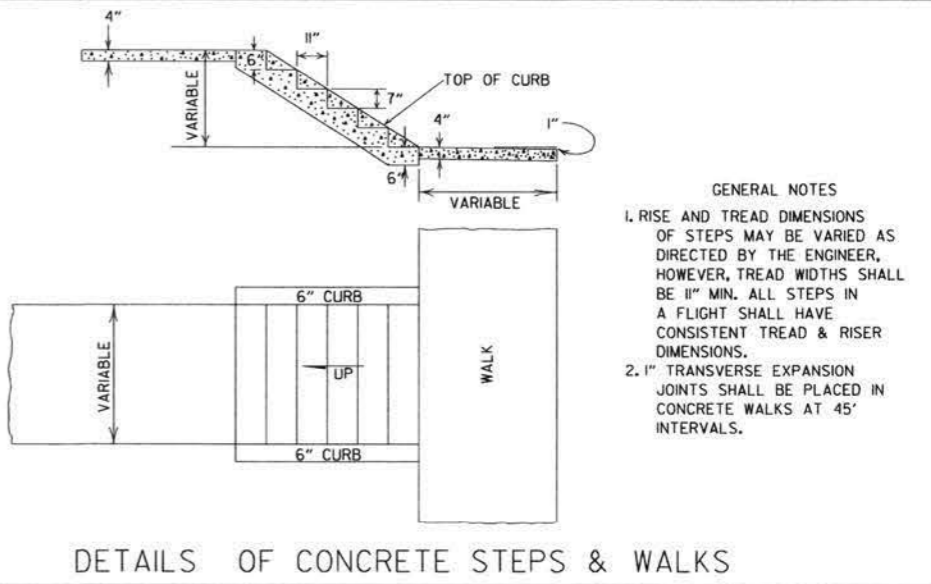
REINFORCED CONCRETE SPRING BOX



DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS












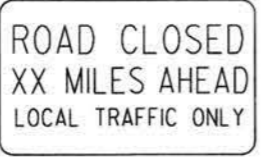
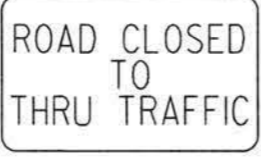









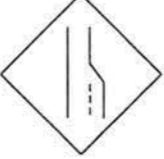


















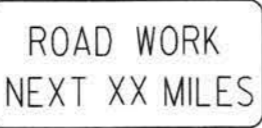

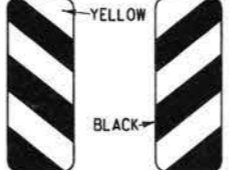


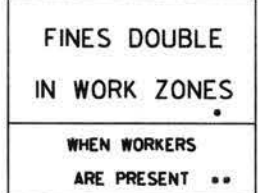
DETAILS OF ALTERNATE POST ANCHOR SYSTEM (EPOXY ADHESIVE ANCHORS)  
 HAND RAILING DETAILS



DETAILS OF CONCRETE STEPS & WALKS

DATE	REVISION	DATE FILMED
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	
4-26-96	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	649-7-15-88
11-1-84	ADDED HDWL. MODS. DEL. PIPE UNDERDRAINS	
1-4-83	REV. TRENCH FOR PIPE UNDERDRAIN	510-11-1-84
3-2-81	ELIMINATED CONC. CLASS & ADDED CHAMFER NOTE	682-1-4-83
4-20-79	SPELLING OF "UNDERDRAIN"	721-3-2-81
2-2-76	REV. UNDERDRAIN DET & PAVEMENT REPAIR	674-4-20-79
4-10-75	12" MIN. GRAN. MAT'L. OVER PIPE	919-2-2-76
5-22-74	REM. SPECS. FOR GRAN. MAT'L.	568-4-10-75-853
10-2-72	GRANULAR MAT'L. TO BE SB-3	567-5-22-74-740
	REVISED AND REDRAWN	564-10-16-72

ARKANSAS STATE HIGHWAY COMMISSION  
 DETAILS OF SPECIAL ITEMS  
 STANDARD DRAWING SI-1

<p>RI-1</p>  <p>STANDARD 30"x30" EXPRESSWAY 36"x36" SPECIAL 48"x48"</p>	<p>RI-2</p>  <p>STD. 36"x36"x36" EXPWY. 48"x48"x48" FWY. 60"x60"x60"</p>	<p>R2-1</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>W3-5</p>  <p>STD. 36"x36" EXPWY. 48"x48" FWY. 48"x48"</p>	<p>W3-5a</p>  <p>STD. 36"x36" EXPWY. 48"x48" FWY. 48"x48"</p>	<p>R4-1</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>R4-2</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	
<p>R5-1</p>  <p>STD. 30"x30" EXPWY. 36"x36" SPECIAL 48"x48"</p>	<p>R11-2</p>  <p>48"x30"</p>	<p>R11-3A</p>  <p>60"x30"</p>	<p>R11-4</p>  <p>60"x30"</p>	<p>W21-5a</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W1-1</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W1-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	
<p>W1-3</p>  <p>STD. 48"x48"</p>	<p>W1-4</p>  <p>STD. 48"x48"</p>	<p>W1-6</p>  <p>STD. 48"x24" SPECIAL 60"x30"</p>	<p>W1-8</p>  <p>STD. 18"x24" SPECIAL 24"x30" EXPWY. 30"x36" FWY. 36"x48"</p>	<p>W3-1</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W3-2</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W4-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	
<p>W5-1</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W6-3</p>  <p>EXPWY. 36"x36" SPECIAL 48"x48"</p>	<p>W8-7</p>  <p>EXPWY. 36"x36" FWY. 48"x48"</p>	<p>W9-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W13-1</p>  <p>STD. 24"x24"</p>	<p>W20-1</p>  <p>STD. 48"x48"</p>	<p>W20-2</p>  <p>STD. 48"x48"</p>	<p>W20-3</p>  <p>STD. 48"x48"</p>
<p>W20-4</p>  <p>STD. 48"x48"</p>	<p>W20-5</p>  <p>STD. 48"x48"</p>	<p>W20-7a</p>  <p>18" 500 FEET W6-2 24"</p> <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W21-2</p>  <p>STD. 30"x30" SPECIAL 36"x36"</p>	<p>W21-5</p>  <p>STD. 30"x30" SPECIAL 36"x36"</p>	<p>W24-1</p>  <p>STD. 36"x36"</p>	<p>W1-4b</p>  <p>STD. 48"x48"</p>	<p>R56-1</p>  <p>STD. 18"x18"</p>
<p>W8-11</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W8-9</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>G20-1</p>  <p>60"x24"</p>	<p>G20-2</p>  <p>48"x24"</p>	<p>OM-3L OM-3R</p>  <p>12"x36"</p>	<p>M4-9</p>  <p>STD. 30"x24" SPECIAL 48"x36" SPECIAL 60"x48"</p>	<p>M4-10</p>  <p>48"x18"</p>	<p>R55-1</p>  <p>36"x60"</p> <p>• USE 6" C LETTERS •• USE 4" D LETTERS</p>

ADVANCE DISTANCES  
(XXXX)

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

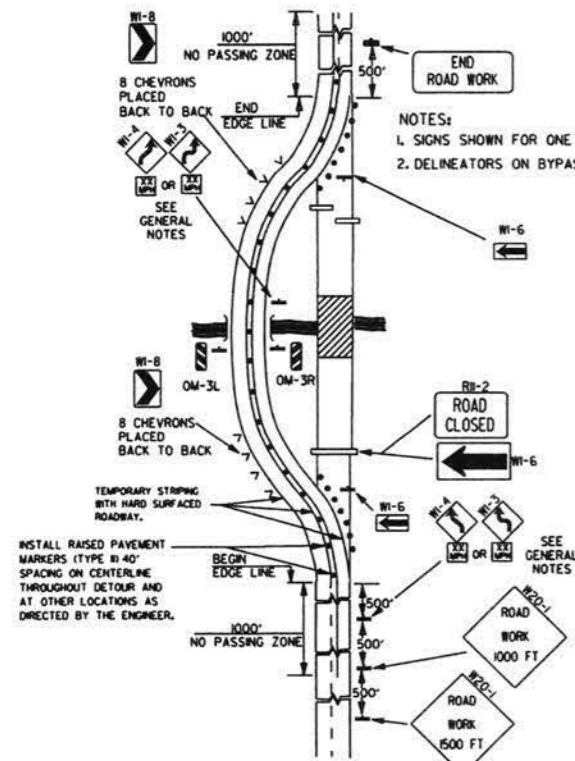
GENERAL NOTES:

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

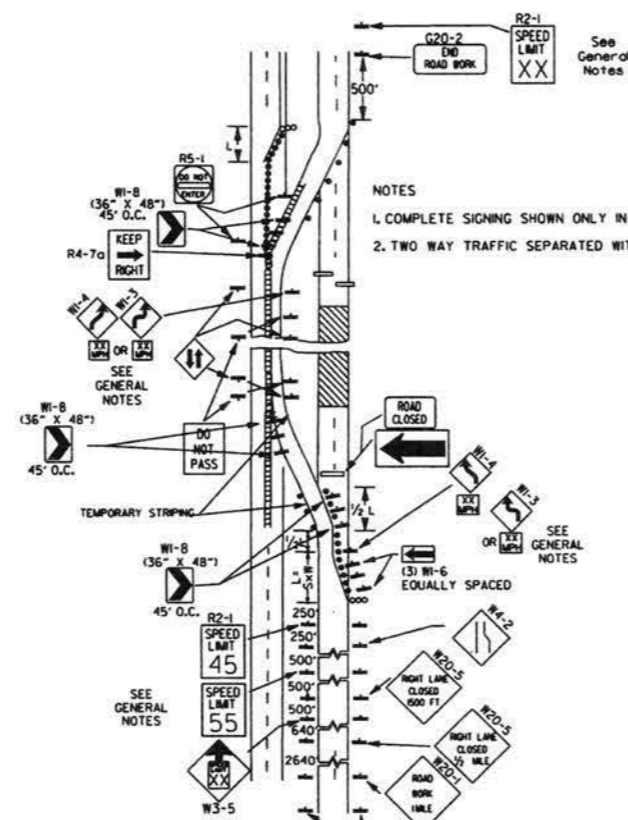
• NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) IS REQUIRED FOR ALL PROJECTS.

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

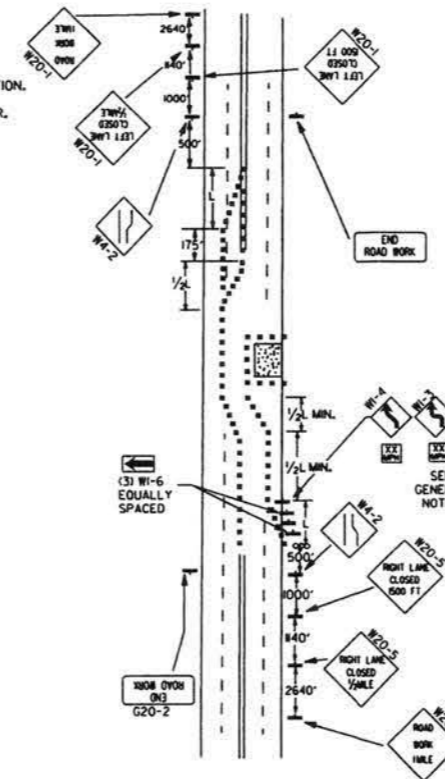
ARKANSAS STATE HIGHWAY COMMISSION  
STANDARD TRAFFIC CONTROLS  
FOR HIGHWAY CONSTRUCTION  
STANDARD DRAWING TC-1



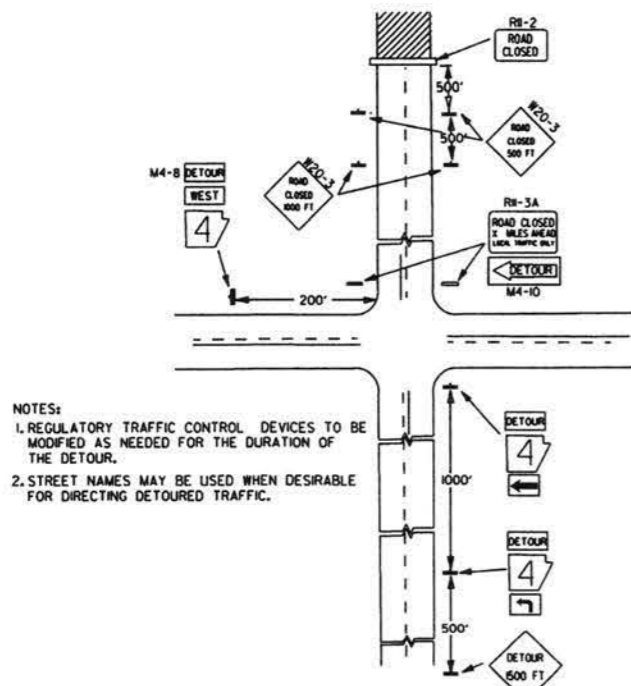
(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.



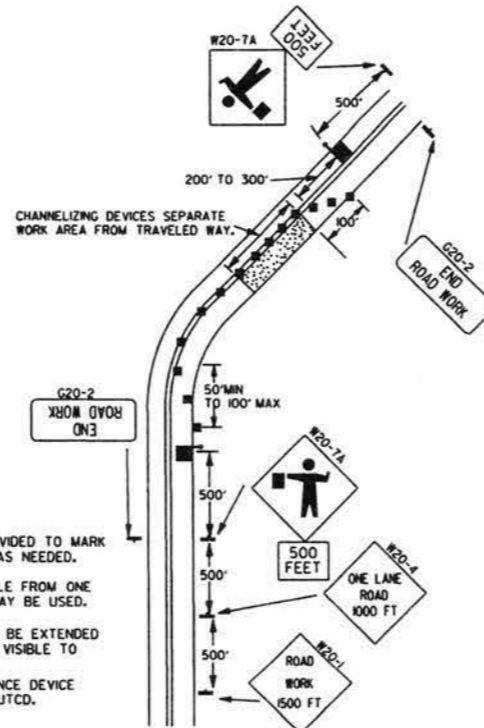
(B) TYPICAL APPLICATION - 4-LANE DIVIDED ROADWAY WHERE ONE ROADWAY IS CLOSED.



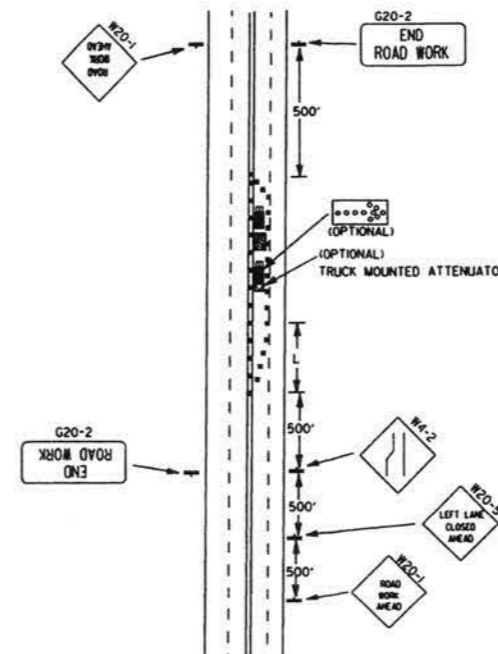
(C) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



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

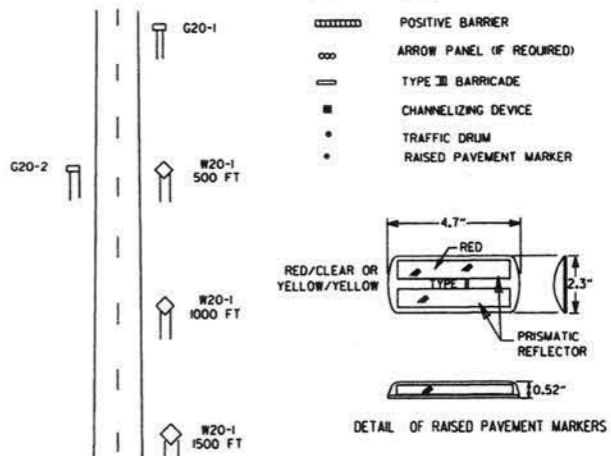


(E) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON 2-LANE HIGHWAY WHERE ONE LANE IS CLOSED AND FLAGGING IS PROVIDED.



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

- KEY:
- FLAGGER
  - ▬ POSITIVE BARRIER
  - ◊ ARROW PANEL (IF REQUIRED)
  - ▬ TYPE III BARRICADE
  - ▬ CHANNELIZING DEVICE
  - TRAFFIC DRUM
  - RAISED PAVEMENT MARKER



TYPICAL ADVANCE WARNING SIGN PLACEMENT

TAPER FORMULAE:

$L = 5XW$  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:

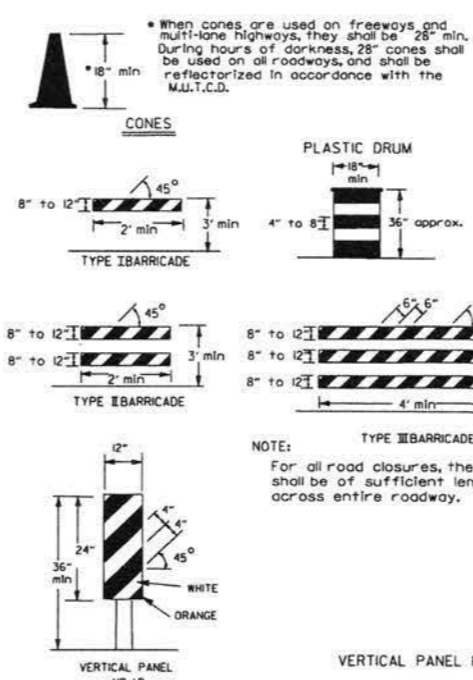
1. ADVISORY SPEED POSTED ON W1-3 OR W1-4 CURVE WARNING SIGNS TO BE DETERMINED AT SITE. USE W1-4 WHEN SPEED IS GREATER THAN 30MPH AND W1-3 WHEN 30MPH OR LESS.
2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-145 SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-145MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-145 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 R2-145 SHALL BE OMITTED. ADDITIONAL R2-155MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-155 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.
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 AHTD QUALIFIED PRODUCTS LIST.

DATE	REVISION	FILED
9-2-95	REVISED NOTE 2, ADDED NOTE 8, REVISED DRAWING (A) & REPLACED R2-5A WITH W3-5	
9-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKERS	
3-8-10	ADDED (AFAD)	
8-20-08	REVISED SIGN DESIGNATIONS	
8-18-04	ADDED GENERAL NOTE	
10-18-96	ADDED R55-1	
4-26-96	CORRECTED (a) BEHIND G20-2	
6-8-95	CORRECTED SIGN IDENT. ON W1-4A	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

ARKANSAS STATE HIGHWAY COMMISSION  
 STANDARD TRAFFIC CONTROLS  
 FOR HIGHWAY CONSTRUCTION

STANDARD DRAWING TC-2

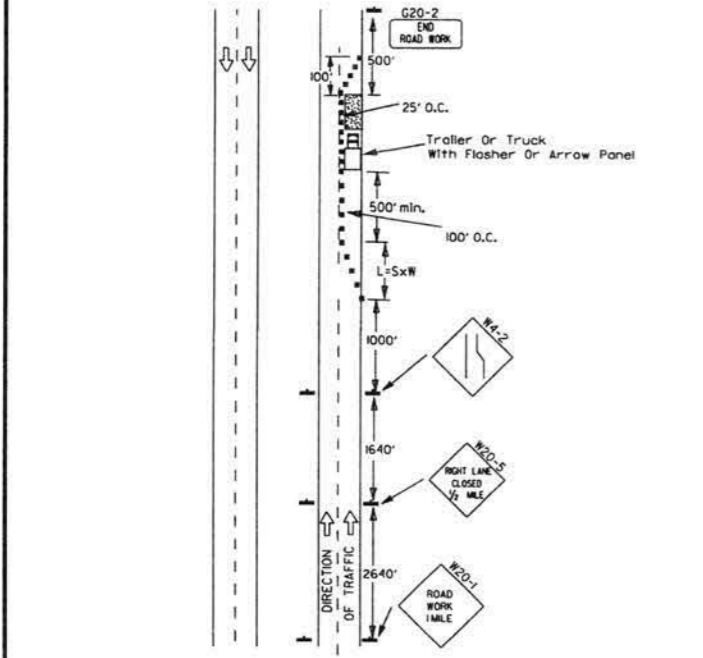
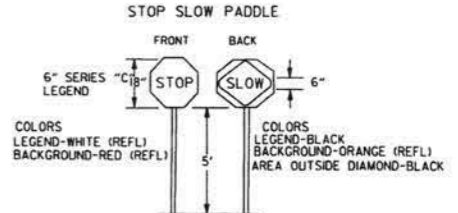
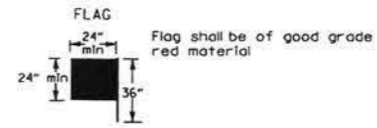
Channelizing devices



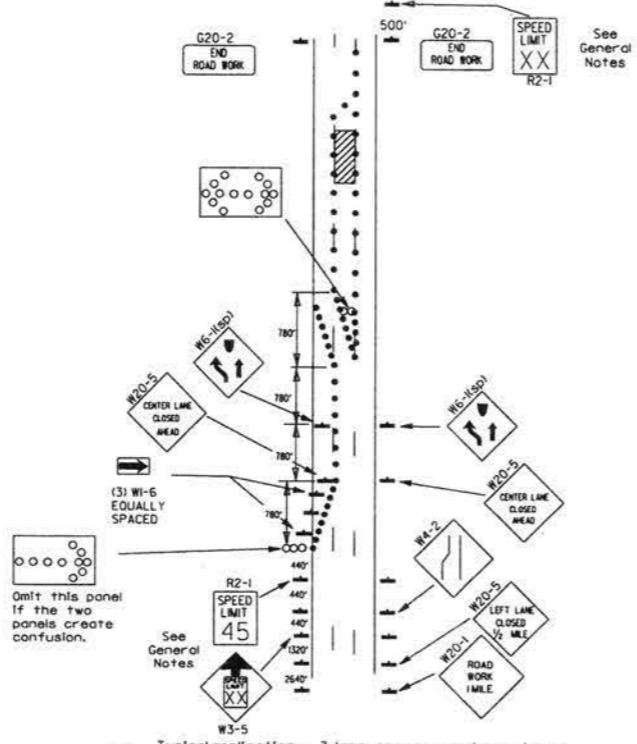
TRAFFIC CONTROL DEVICES FOR VERTICAL PAVEMENT DIFFERENTIALS

VERTICAL DIFFERENTIAL	LOCATIONS	TRAFFIC CONTROL
1" to 3"	Centerline, lane lines	WB-11
1" to 3"	Edge of shoulder	WB-9
Greater than 3"	Lane lines	Standard lane closure required
Greater than 3"	Edge of traveled lane	*RSP-land vertical panels, drums or concrete barrier
Greater than 3"	Edge of shoulder	*Vertical panels, drums or concrete barrier

\* When shown on the plans concrete barrier will be used.  
When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.



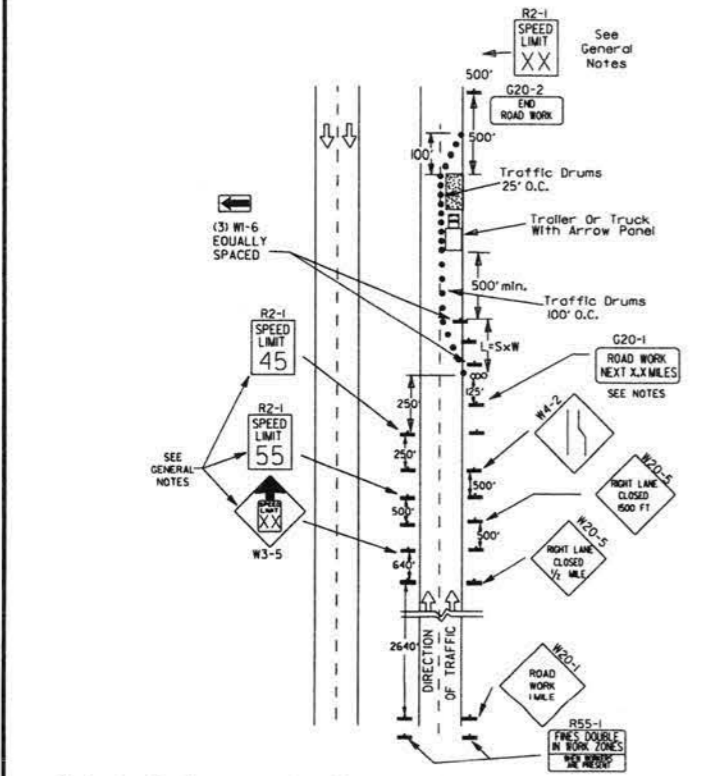
(A) Typical application - daytime maintenance operations of short duration on a 4-lane divided roadway where half of the roadway is closed.



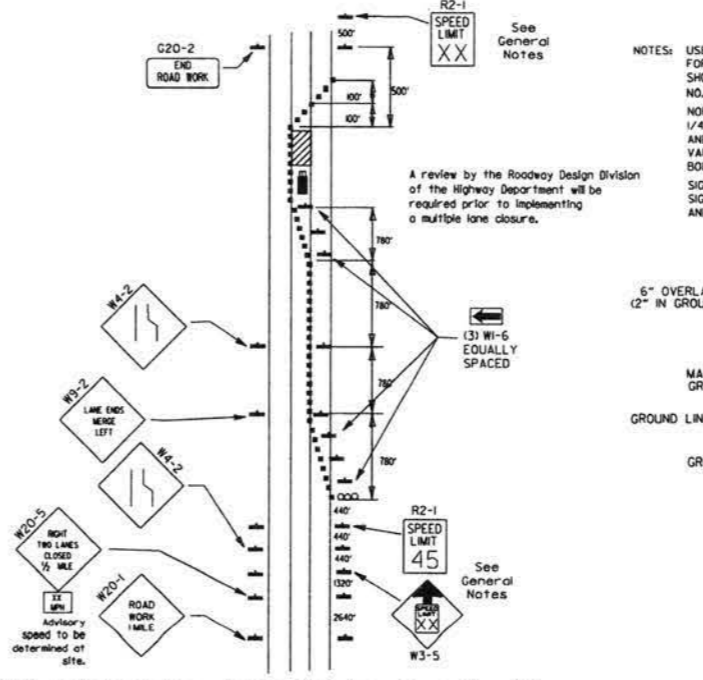
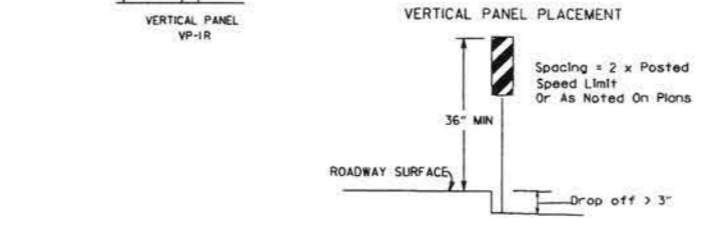
(B) Typical application - 3-lane oneway roadway where center lane is closed.

- KEY:
- ◻ Arrow Panel (if Required)
  - Channelizing Device
  - Traffic drum

- GENERAL NOTES:
- A speed limit reduction may be implemented ONLY when designated in the plan or when recommended by the Roadway Design Division.
  - When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-145 shall be omitted and the W3-5 shall be installed at that location. Additional R2-145mph speed limit signs shall be installed at a maximum of 1 mile intervals. At the end of the work area a R2-1XX shall be installed to match original speed limit.
  - When the existing speed limit is 65mph and the plans require a speed limit of 55mph, the R2-145 shall be omitted. Additional R2-155mph speed limit signs shall be installed at a maximum of 1 mile intervals. At the end of the work area a R2-1XX shall be installed to match original speed limit.
  - 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.
  - Warning lights and/or flags may be mounted to signs or channelizing devices at night as needed.
  - Pavement markings no longer applicable which might create confusion in the minds of vehicle operators shall be removed or obliterated as soon as practicable.
  - The G20-1 sign will be required on jobs of over two miles in length. When the lane closure is not at the beginning of the project, the G20-1 sign shall be erected 125' in advance of the job limit. Additional W20-1 (1 MILE) signs are not required in advance of lane closures that begin inside the project limits.
  - Flaggers shall use STOP/SLOW paddles for controlling traffic through work zones. Flags may be used only for emergency situations.
  - All plastic drums and cones shall meet the requirements of NCHRP-350 or Manual for Assessing Safety Hardware (MASH).
  - 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.



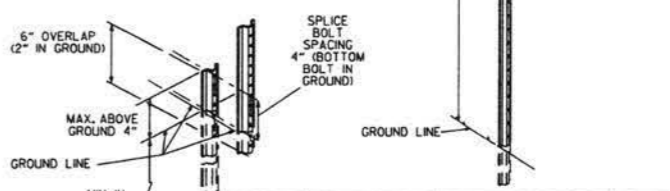
(C) Typical application - construction operations of intermediate to long term duration on a 4-lane divided roadway where half of the roadway is closed.



(D) Typical application - closing multiple lanes of a multilane highway.

NOTES:

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

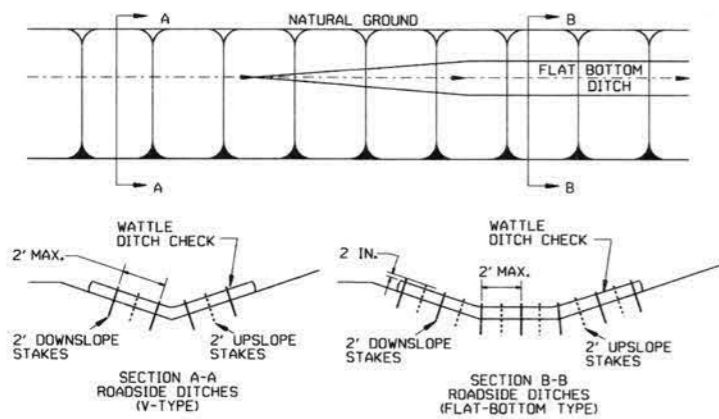


DATE	REVISION	FILED
9-2-15	REVISED NOTE 2 & REPLACED R2-5A WITH W3-5	
10-15-09	ADDED REFERENCE TO MASH	
8-20-08	REVISED SIGN DESIGNATIONS	
8-18-04	ADDED NOTE	
10-1-98	ADDED NOTE	
4-03-97	ADDED (SP) TO W6-1A REVISED TRAFFIC CONTROL DEVICES NOTE	
10-18-96	ADDED R55-1	
10-12-95	MOVED UPPER SPLICE	
6-8-95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

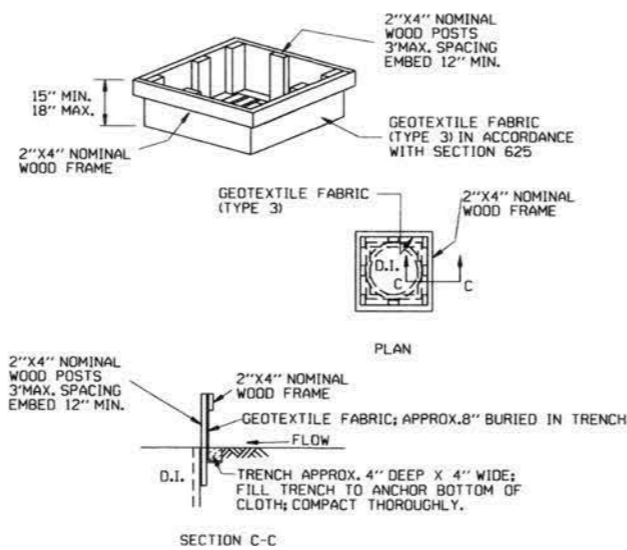
ARKANSAS STATE HIGHWAY COMMISSION  
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION  
STANDARD DRAWING TC-3

GENERAL NOTES

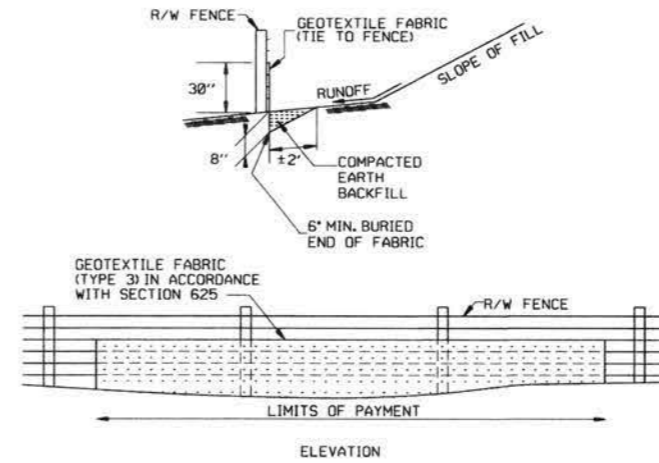
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



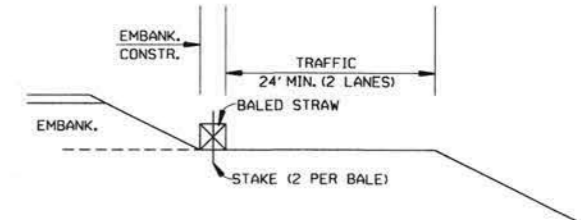
DROP INLET SILT FENCE (E-7)



SILT FENCE ON R/W FENCE (E-4)

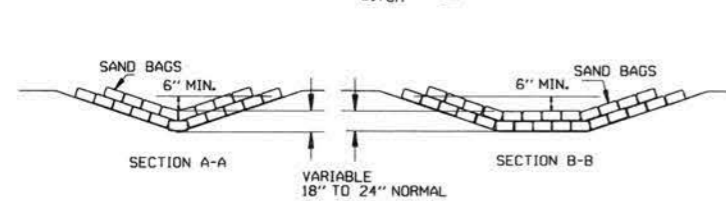
GENERAL NOTES  
 GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST, OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.

- 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.

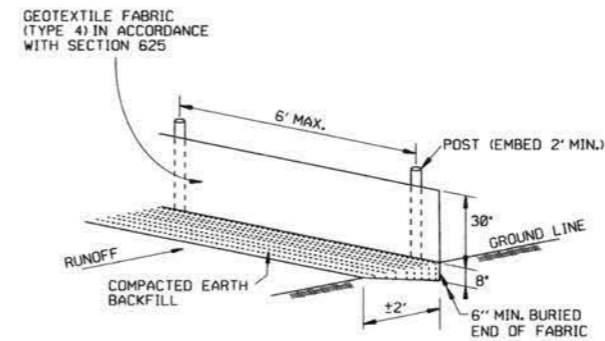


BALED STRAW FILTER BARRIER (E-2)

NUMBER OF SAND BAGS AND ARRANGEMENT VARIABLE WITH ON-SITE CONDITIONS. PLACE SAND BAGS AT BASE OF DITCH CHECK IN AREA OF OVERFLOW.

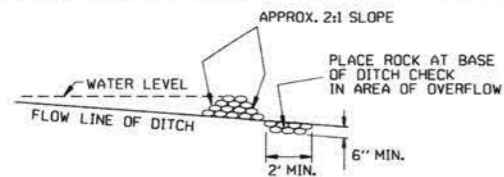


SAND BAG DITCH CHECK (E-5)



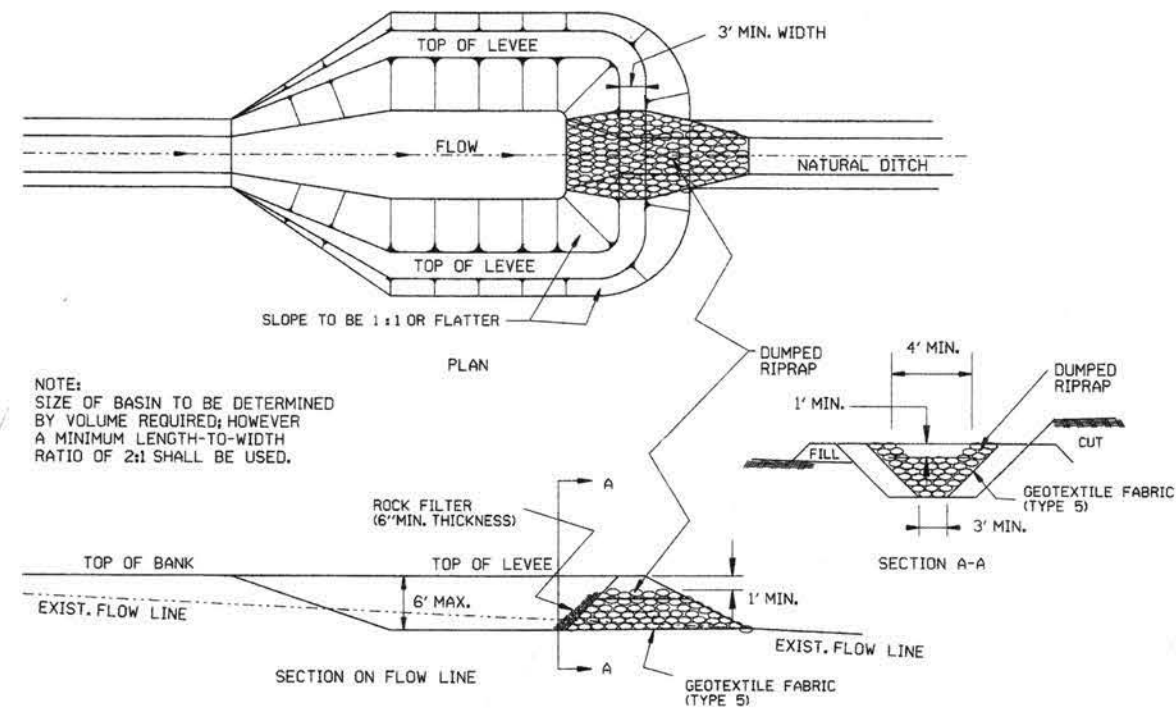
SILT FENCE (E-11)

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.

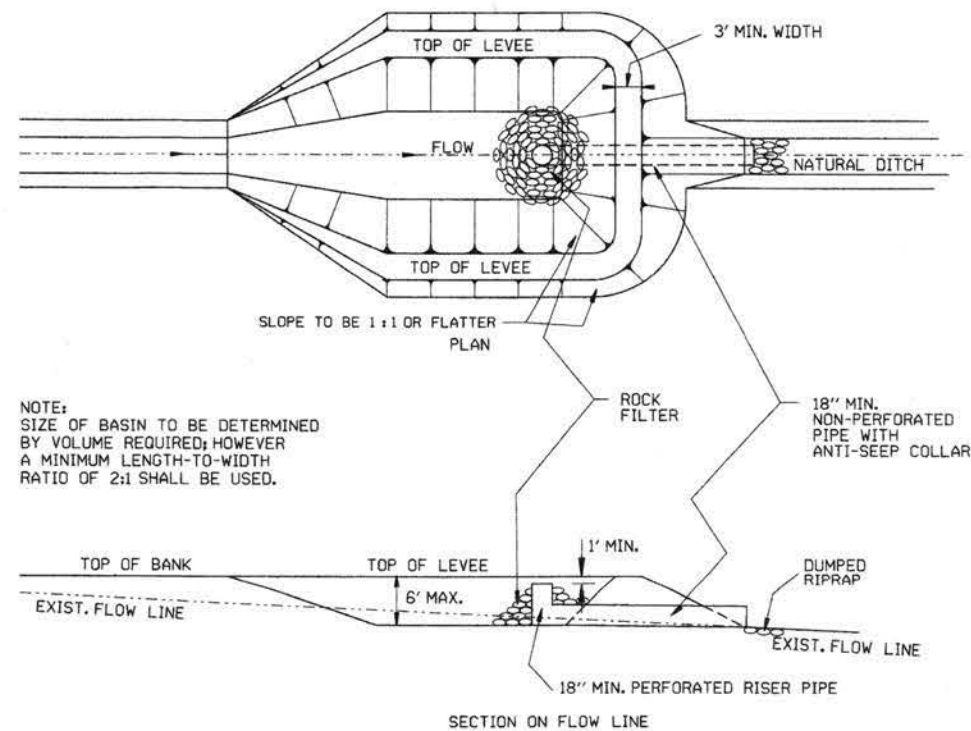


ROCK DITCH CHECK (E-6)

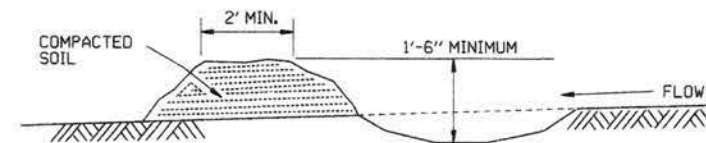
12-15-11	DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK		ARKANSAS STATE HIGHWAY COMMISSION
11-18-98	ADDED NOTES		
7-02-98	ADDED BALED STRAW FILTER BARRIER (E-2)		
7-20-95	REVISED SILT FENCE E-4 AND E-11	7-20-95	TEMPORARY EROSION CONTROL DEVICES
7-15-94	REV. E-4 & E-11 MIN. 13" BURIED END OF FABRIC		
6-2-94	REVISED E-1, 4, 7 & 11; DELETED E-2 & 3	6-2-94	
4-1-93	REDRAWN		
10-1-92	REDRAWN		
8-2-76	ISSUED R.D.M.	298-7-28-76	STANDARD DRAWING TEC-1
DATE	REVISION	FILMED	



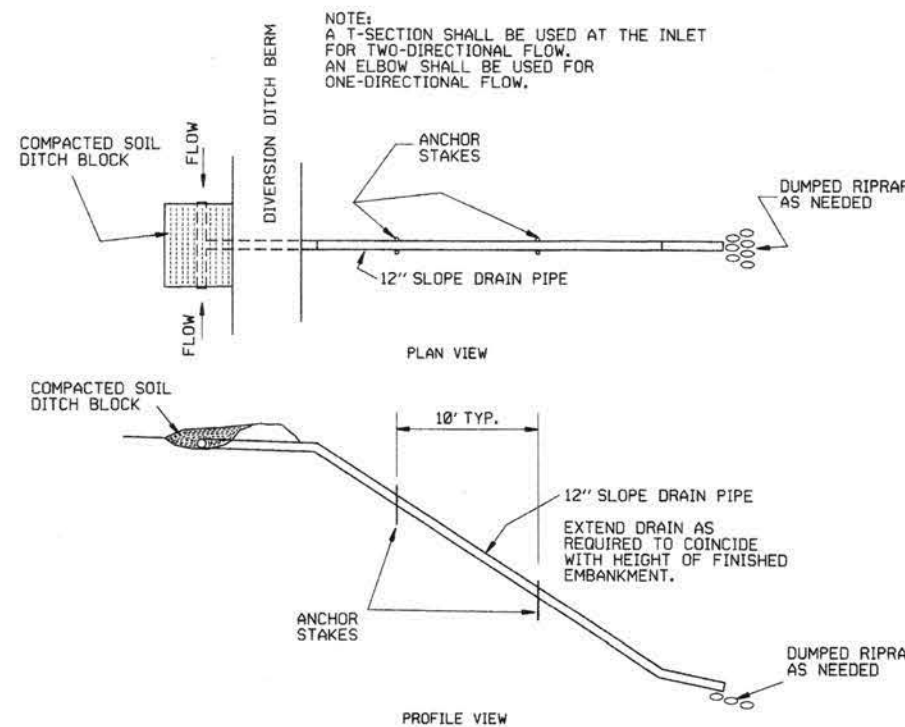
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



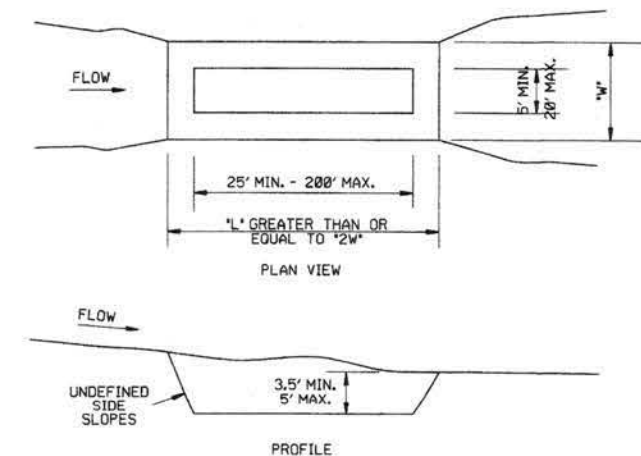
SEDIMENT BASIN WITH PIPE OUTLET (E-10)



DIVERSION DITCH (E-8)



SLOPE DRAIN (E-12)



SEDIMENT BASIN (E-14)

6-2-94	Revised E-8 & E-12; Added E-14 & Deleted E-13
4-1-93	ISSUED
DATE	REVISION
	FILMED

ARKANSAS STATE HIGHWAY COMMISSION  
 TEMPORARY EROSION CONTROL DEVICES  
 STANDARD DRAWING TEC-2

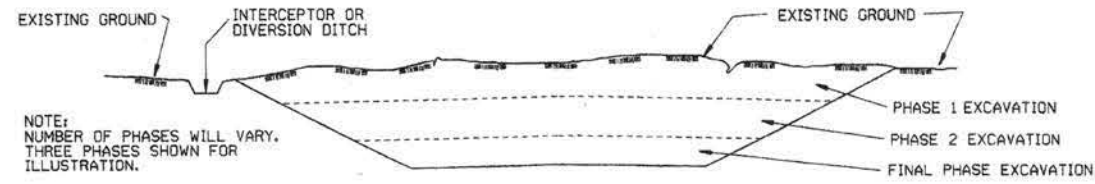


## CLEARING AND GRUBBING

### CONSTRUCTION SEQUENCE

1. PLACE PERIMETER CONTROLS (I.E. SILT FENCES, DIVERSION DITCHES, SEDIMENT BASINS, ETC.)
2. PERFORM CLEARING AND GRUBBING OPERATION.

## EXCAVATION

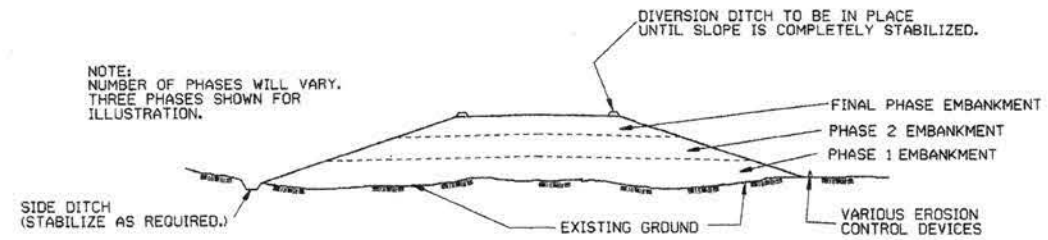


GENERAL NOTE  
ALL CUT SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE EXCAVATED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 25 FEET, MEASURED VERTICALLY.

### 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

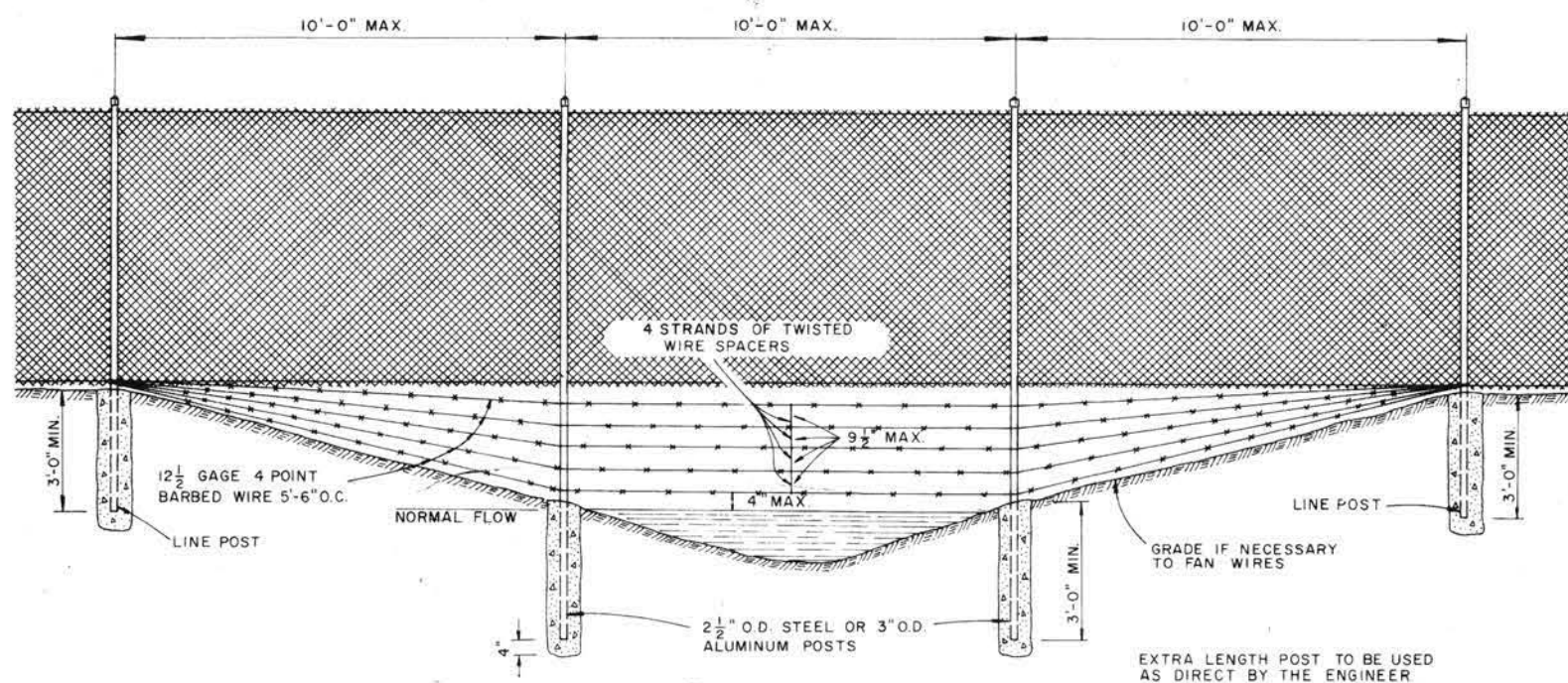
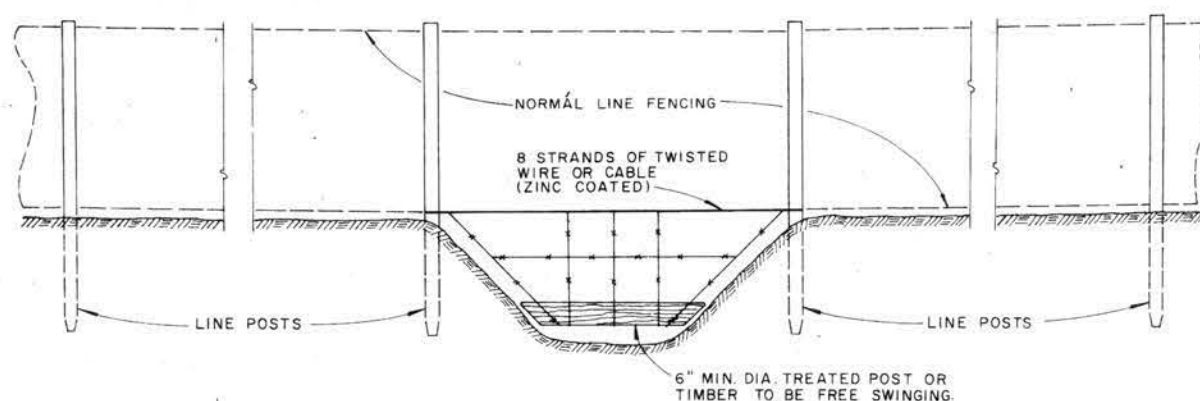
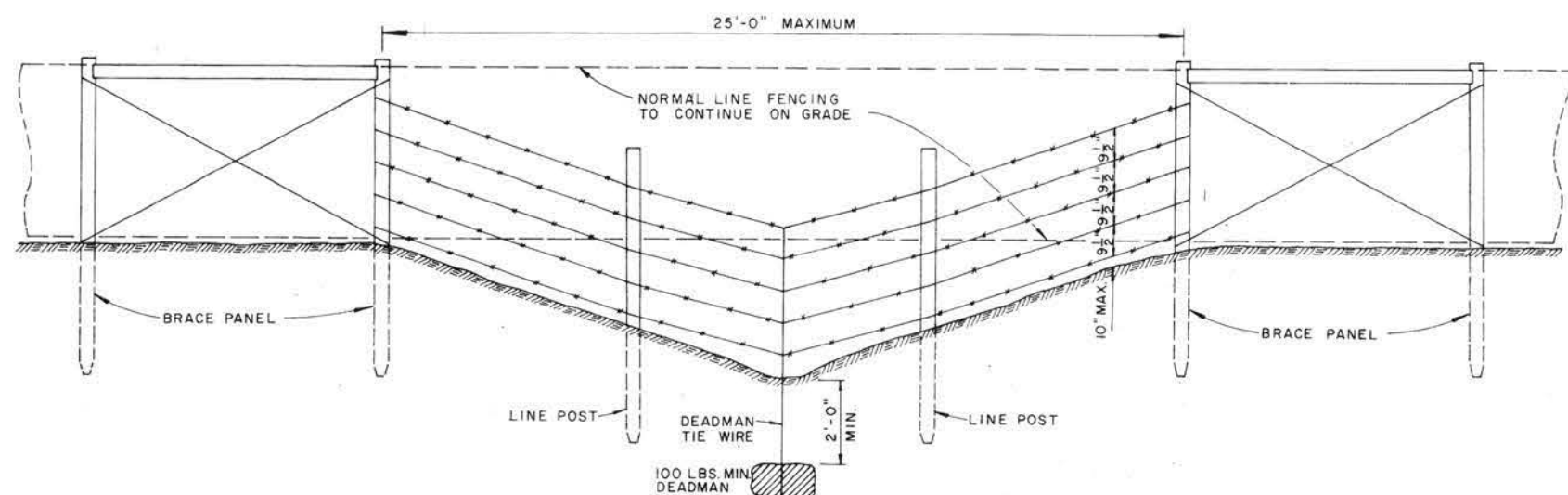


GENERAL NOTE  
ALL EMBANKMENT SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE CONSTRUCTED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 25 FEET, MEASURED VERTICALLY.

### CONSTRUCTION SEQUENCE

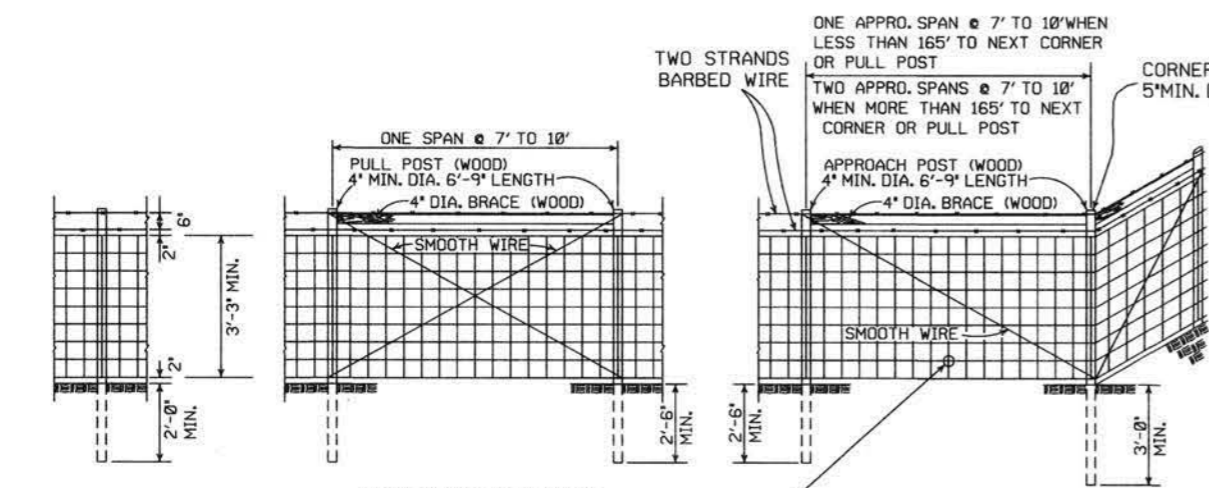
1. CONSTRUCT DIVERSION DITCHES, DITCH CHECKS, SEDIMENT BASINS, SILT FENCES, OR OTHER EROSION CONTROL DEVICES AS SPECIFIED.
2. PLACE PHASE 1 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD 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.

ARKANSAS STATE HIGHWAY COMMISSION			
TEMPORARY EROSION CONTROL DEVICES			
STANDARD DRAWING TEC-3			
11-23-94	CORRECTED SPELLING		
6-2-94	Drawn & Issued		6-2-94
DATE	REVISION		FILMED



GENERAL NOTES:  
 THESE INSTALLATIONS TO BE USED WHERE NORMAL FENCING INSTALLATION WOULD CAUSE THE COLLECTING OF DRIFT IN THE CHANNEL OR THE DEPRESSION WILL NOT PERMIT NORMAL INSTALLATION. INSTALLATIONS WILL BE MADE ONLY WHERE DIRECTED BY THE ENGINEER.  
 WHEN A FENCE LINE APPROACHES A DITCH, GULLY OR DEPRESSION, THE LAST POST ON LEVEL GROUND SHALL BE PLACED CLOSE ENOUGH TO THE EDGE OF THE DROP OFF THAT THE FENCE MAY BE STRUNG TO THE POST IN THE DEPRESSION WITHOUT TOUCHING THE GROUND.  
 IN TERRAIN OF SUCH EXTREME IRREGULARITY THAT MINOR GRADING WILL NOT BE FEASIBLE, THE NORMAL FENCE SHALL CONTINUE ON GRADE AND THE GULLIES OR DEPRESSIONS TREATED BY AUXILIARY FENCES AS SHOWN.  
 PAYMENT FOR THE TYPE INSTALLATION USED WILL NOT BE MADE DIRECTLY BUT WILL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR WIRE FENCE OR CHAIN LINK FENCE.

			ARKANSAS STATE HIGHWAY COMMISSION
			WIRE FENCE WATER GAPS
			STANDARD DRAWING
			WF-2
4-20-79	REVISED TOP RAIL & TENSION WIRE	691-4-20-79	
10-2-72	REVISED & REDRAWN	529-10-2-72	
DATE	REVISION	DATE FILMD	

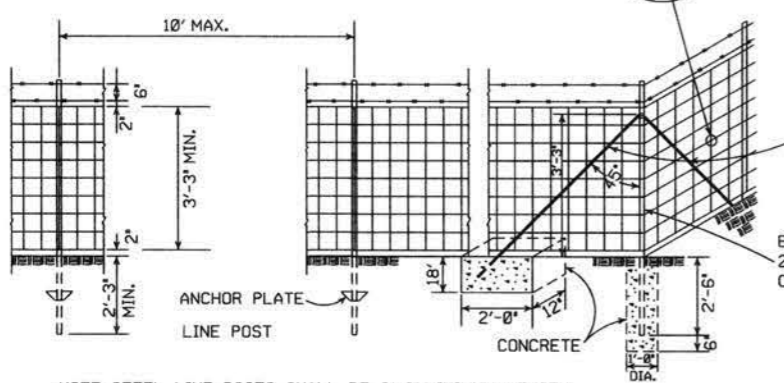


LINE POST  
3" MIN. DIA. 6'-3" LENGTH  
MAX. SPACING TO BE 10'-0"

LINE BRACE ASSEMBLY  
MAX. SPACING TO BE 330'

TYPE C FENCE (WOOD POSTS)

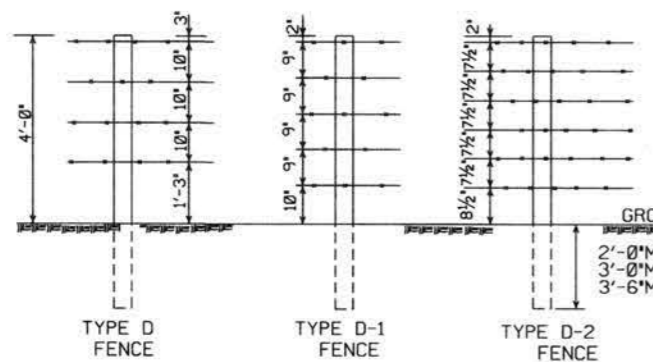
OTHER APPROVED TIES  
WILL BE PERMITTED



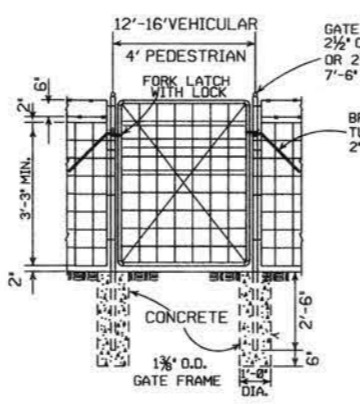
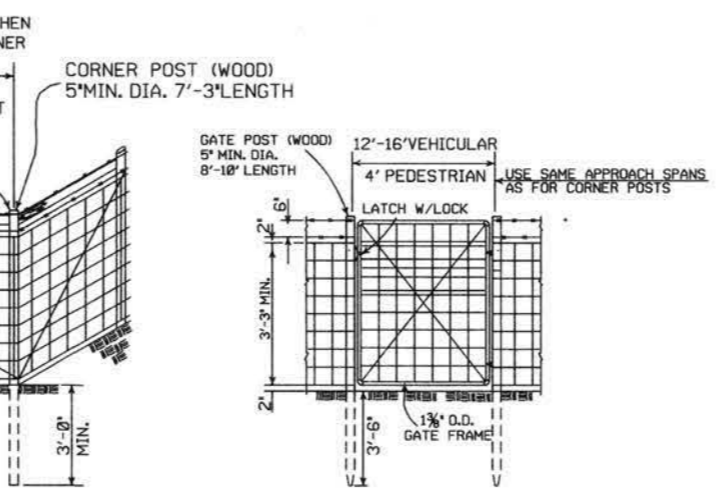
NOTE: STEEL LINE POSTS SHALL BE 6'-6" MINIMUM LENGTH.

TYPE C FENCE (STEEL POSTS)

- 4 STRANDS BARBED WIRE (D)
- 5 STRANDS BARBED WIRE (D-1)
- 6 STRANDS BARBED WIRE (D-2)



NOTE: SPACING AND SIZE (EXCEPT LENGTH) OF POSTS, APPROACH SPANS, PULL POST ASSEMBLIES, AND CORNER BRACING FOR TYPE D FENCE SHALL CONFORM TO TYPE C FENCE. USE GALVANIZED STAPLES ON WOOD POSTS AND APPROVED FASTENERS ON STEEL POSTS.



GENERAL NOTES:

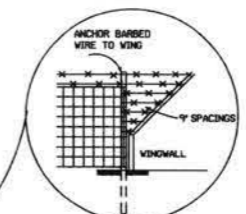
STEEL LINE POSTS SHALL BE PAINTED OR GALVANIZED. TUBULAR END, CORNER, PULL, OR DIAGONAL BRACES MUST CONFORM TO THE DIMENSIONS AND WEIGHTS SPECIFIED ON STANDARD DRAWING WF-3 (CHAIN LINK). APPROVED ALTERNATES ARE ACCEPTABLE. AN ACCEPTABLE TOLERANCE IN LENGTH OF TUBULAR OR WOODEN POSTS SHALL BE -1" TO +2". TUBULAR POSTS MUST BE PAINTED OR GALVANIZED.

THE CONTRACTOR SHALL FURNISH AT LEAST 25% OF TIMBER LINE POSTS OF 7 FOOT LENGTHS IN ORDER TO PROVIDE SUFFICIENT SET IN SOFT GROUND OR SMALL DEPRESSIONS.

DRIVEWAY GATES, EITHER SINGLE 12' TO 16' OR DOUBLE 6' TO 8' OPENING OF THE SAME TYPE AS THE PEDESTRIAN GATE, SHALL BE INSTALLED ON THE RIGHT SIDE OF EACH THROUGH LANE ROAD AT LARGE CULVERTS OR BRIDGE CROSS FENCE, FOR USE OF MAINTENANCE EQUIPMENT. LOCATION OF GATES TO BE SHOWN ON PLANS OR AS DESIGNATED BY THE ENGINEER.

AT STREAM CROSSINGS, THE FENCE SHALL NOT BE CONSTRUCTED ACROSS LARGE STREAMS. WHERE CLEARANCE IS SUFFICIENT FROM THE TOP OF THE BANK TO THE BRIDGE STRUCTURE A CROSS CONNECTION SHALL BE CONSTRUCTED BETWEEN THE FENCE ON EACH SIDE OF THE ROAD. WHERE THE CLEARANCE IS NOT SUFFICIENT, THE FENCE SHALL BE TERMINATED WITH CROSS CONNECTIONS AND END POSTS ADJACENT TO BRIDGE ABUTMENTS OR CULVERT WINGWALLS.

NOTE: USE 3/4" X 1 1/2" LAG BOLT & SHIELD OR AS APPROVED BY THE ENGINEER.

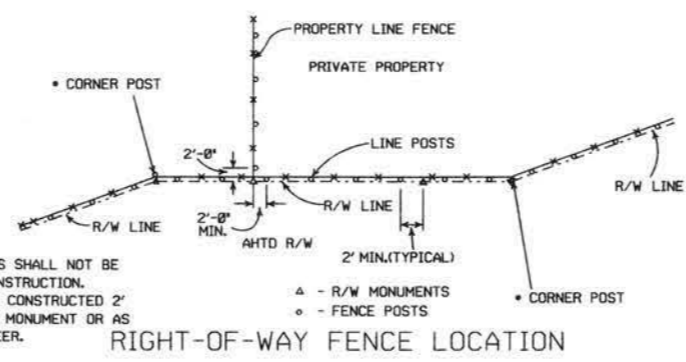


SPLICE FOR BARBED WIRE BETWEEN PULL POST ASSEMBLY SHALL BE BY THE 'EYE METHOD' AS DESCRIBED AS FOLLOWS: THE ENDS OF THE BARBED WIRE SHALL BE BENT TO FORM A LOOP. THE LOOPS SHALL BE CONNECTED. AFTER THE LOOPS ARE CONNECTED THE ENDS OF THE WIRE SHALL BE WRAPPED AROUND THE PROJECTING WIRES A MINIMUM OF 4 TIMES FOR EACH WIRE LOOP.

SPLICE FOR WOVEN WIRE BETWEEN PULL POST SHALL BE BY THE 'WESTERN UNION METHOD' AS DESCRIBED AS FOLLOWS: THE VERTICAL WIRES FOR EACH END OF THE FENCE FABRIC SHALL BE PLACED SIDE BY SIDE AND THE PROJECTING HORIZONTAL WIRES SHALL BE WRAPPED A MINIMUM OF 4 TIMES AROUND THE HORIZONTAL WIRES OF THE FIRST WEB.

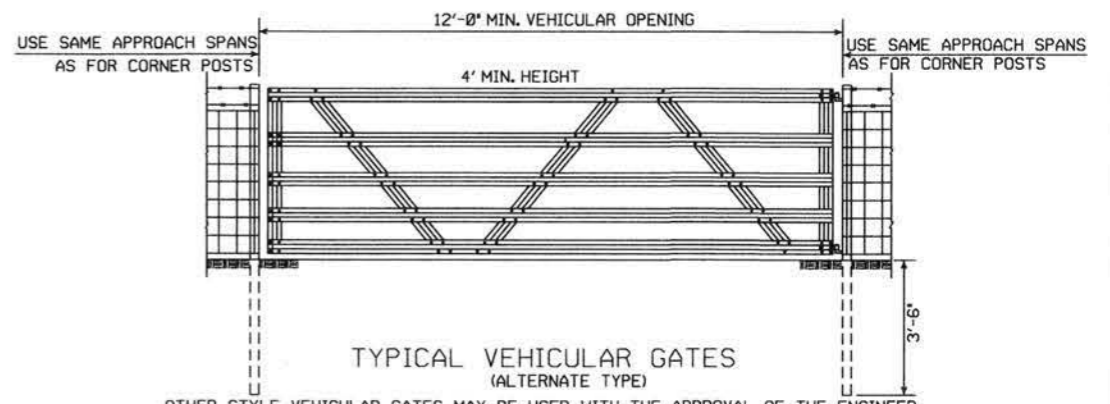
STAPLE AT LEAST TOP, BOTTOM AND ALTERNATE WIRES OF WOVEN FABRIC FOR WOOD LINE POSTS.

DETAIL OF FENCE CONSTRUCTION AT LARGE CULVERTS (5' IN HEIGHT AND OVER)

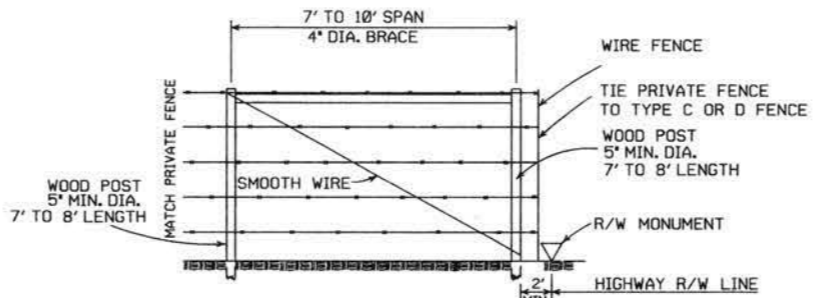


NOTE: RIGHT-OF-WAY MONUMENTS SHALL NOT BE DISTURBED BY FENCE CONSTRUCTION. CORNER POSTS SHALL BE CONSTRUCTED 2' FROM THE RIGHT-OF-WAY MONUMENT OR AS DIRECTED BY THE ENGINEER.

RIGHT-OF-WAY FENCE LOCATION



OTHER STYLE VEHICULAR GATES MAY BE USED WITH THE APPROVAL OF THE ENGINEER. THE METHOD OF SECURING GATE (LATCH AND/OR LOCK) SHALL MEET THE APPROVAL OF THE ENGINEER.



WHERE EXISTING FENCE CONSISTS OF STEEL POSTS, USE END POST ASSEMBLY AS SHOWN IN TYPE C FENCE OR OTHER END POST ASSEMBLY AS APPROVED BY THE ENGINEER.

8-22-02	REVISED GENERAL NOTES	
10-18-96	REVISED AASHTO	
11-22-95	REVISED R-O-W LOCATION DETAIL	
6-2-94	REVISED BARB WIRE AND ADDED CORNER POST NOTES	6-2-94
8-5-93	REVISED R/W INSTALLATION FENCE	8-5-93
10-1-92	ADDED STAPLE NOTE	10-1-92
8-15-91	ADDED TYPE D-2 FENCE	8-15-91
11-30-89	DELETED CLASS CONCRETE	11-30-89
7-15-88	ADDED SPLICE NOTE	700-7-15-88
10-30-87	GENERAL REVISIONS	549-10-30-87
11-1-84	MAX. POST SPACING MIN. WIRE GAUGE	507-11-1-84
1-4-83	MIN. DIA. LINE POST	648-1-4-83
3-2-81	TOLERANCE FOR POST LENGTH	722-3-2-81
12-1-72	ADDED D-1 & FENCE INSTALLATION	564-12-1-72
10-2-72	REVISED AND REDRAWN	540-10-2-72
DATE	REVISION	FILMED

ARKANSAS STATE HIGHWAY COMMISSION

WIRE FENCE  
TYPE C AND D

STANDARD DRAWING WF-4