

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.	050261		1	148
				② HWY. 25 SPUR-LOCUST GROVE (PASSING LANES)(S)				

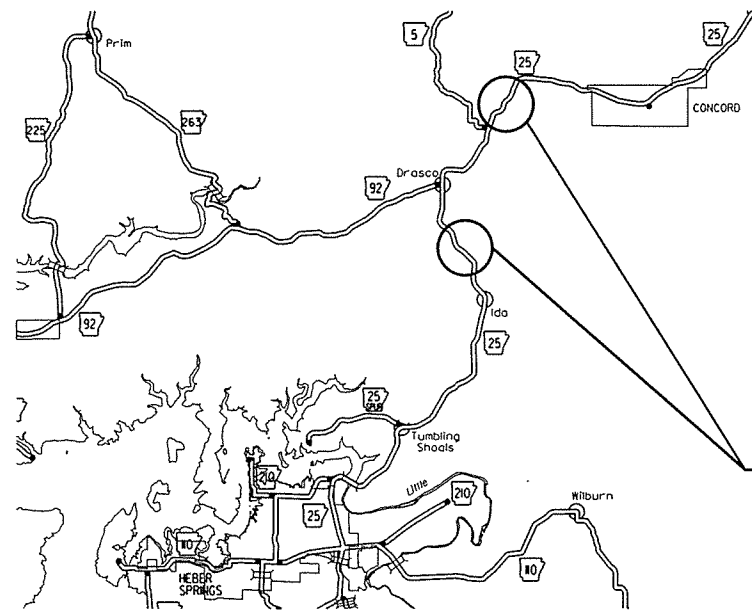
ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
CONSTRUCTION PLANS FOR STATE HIGHWAY

**HWY. 25 SPUR - LOCUST GROVE
(PASSING LANES) (S)**

CLEBURNE COUNTY
ROUTE 25 SECTION 3

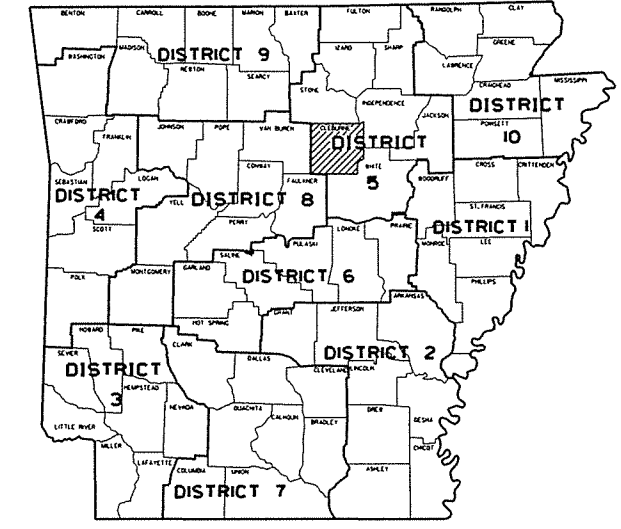
JOB 050261

FED. AID PROJ. STPR-0012(31)



VICINITY MAP

PROJECT
LOCATION

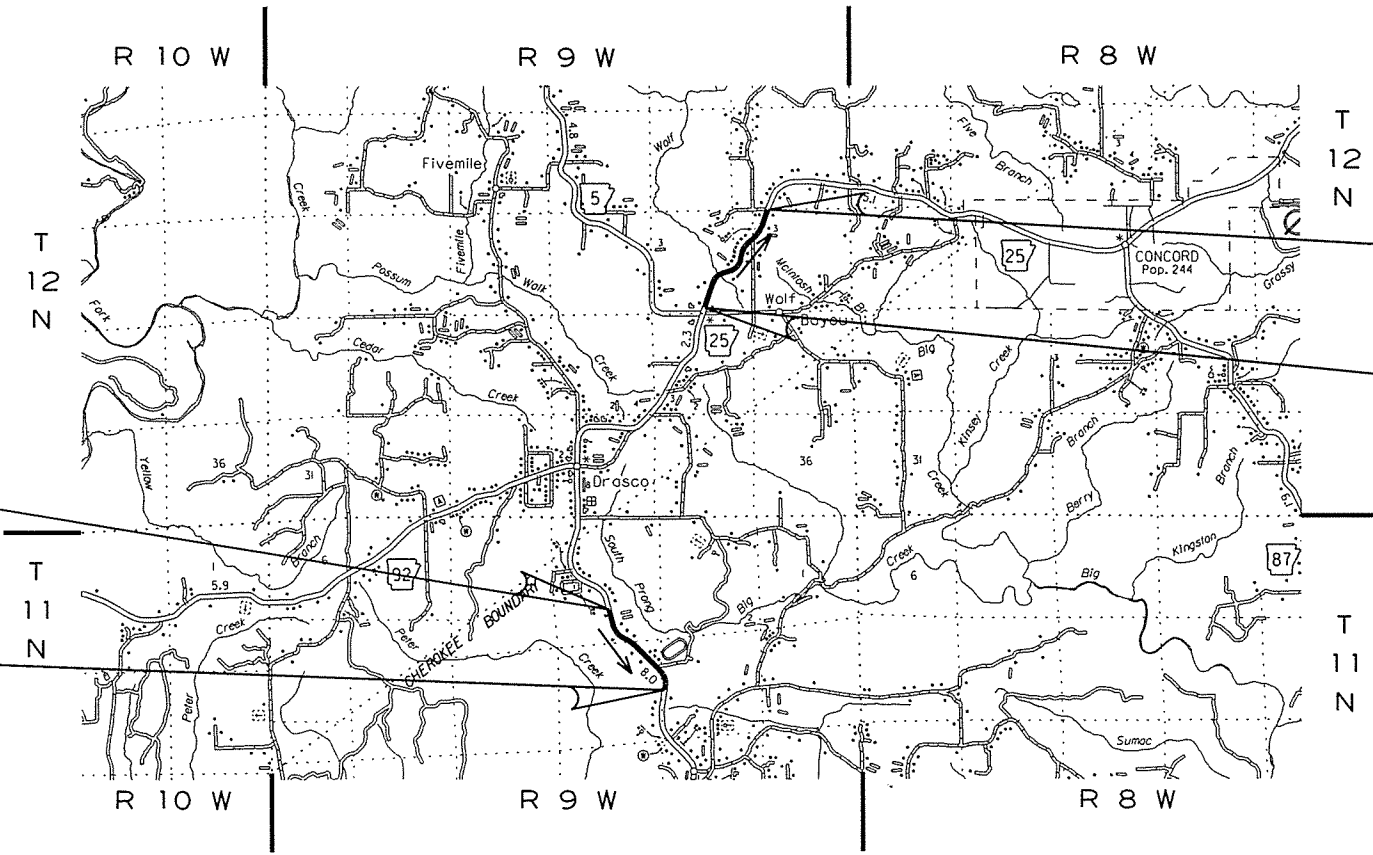


ARK. HWY. DIST. NO. 5

• DESIGN TRAFFIC DATA •

DESIGN YEAR	2035
2015 ADT	5000
2035 ADT	7500
2035 DHV	825
DIRECTIONAL DISTRIBUTION	0.60
TRUCKS	10%
AVERAGE RUNNING SPEED	55 MPH

"NOT TO SCALE"



STA. 262+40.00 - END SITE 2
END JOB 050261
STA. 201+00.00 - BEGIN SITE 2
LOG MILE 19.40

STA. 162+40.00
END SITE 1

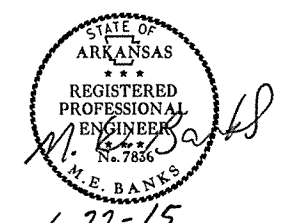
STA. 101+00.00
BEGIN JOB 050261
BEGIN SITE 1
LOG MILE 14.38

SITE 1		SITE 2	
BEGINNING OF PROJECT	LAT. = N 35°36' 00"	BEGINNING OF PROJECT	LAT. = N 35°39' 23"
	LONG. = W 91°56' 00"		LONG. = W 91°55' 25"
MID-POINT OF PROJECT	LAT. = N 35°36' 21"	MID-POINT OF PROJECT	LAT. = N 35°39' 44"
	LONG. = W 91°56' 10"		LONG. = W 91°55' 03"
ENDING OF PROJECT	LAT. = N 35°36' 50"	ENDING OF PROJECT	LAT. = N 35°40' 09"
	LONG. = W 91°56' 34"		LONG. = W 91°54' 44"

GROSS LENGTH OF PROJECT	12280.00	FEET	OR	2.326	MILES
NET " " ROADWAY	12280.00	"	"	2.326	"
NET " " BRIDGES	0.00	"	"	0.000	"
NET " " PROJECT	12280.00	"	"	2.326	"



APPROVED



1-22-15
DEPUTY DIRECTOR
AND CHIEF ENGINEER

P.E. 050261
NON-PART.

1/15/2015
R050261.DGN

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INDEX OF SHEETS

SHEET NO.	DRWG. NO.	DATE
1		
2		
3-6		
7-8		
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21-35		
36		
37-42		
43		
44-50		
51-60		
61	CDP-1	11-17-10
62	FES-1	10-18-96
63	FES-2	10-18-96
64	MB-1	11-18-04
65	PBC-1	1-28-15
66	PCC-1	2-27-14
67	PCM-1	2-27-14
68	PCP-1	2-27-14
69	PCP-2	2-27-14
70	PM-1	9-12-13
71	PU-1	4-10-03
72	RCB-1	7-26-12
73	RCB-2	11-20-03
74	RCB-3	10-12-95
75	SE-2	10-18-96
76	SI-1	9-12-13
77	TC-1	9-02-15
78	TC-2	9-02-15
79	TC-3	9-02-15
80	TC-4	2-27-14
81	TC-5	10-15-09
82	TEC-1	12-15-11
83	TEC-2	6-02-94
84	TEC-3	11-03-94
85	WF-2	4-20-79
86	WF-4	8-22-02
87	W-X003-1	5-10-66
88	R-100X-0	2-08-63
89-148		

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

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
108-1	LIQUIDATED DAMAGES
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 DRAIN
620-1	MULCH COVER
JOB 050261	BIDDING REQUIREMENTS AND CONDITIONS
JOB 050261	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 050261	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 050261	DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES
JOB 050261	EXTENSION FOR PIPE CULVERTS
JOB 050261	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 050261	MANDATORY ELECTRONIC CONTRACT
JOB 050261	NESTING SITES OF MIGRATORY BIRDS
JOB 050261	OFF-SITE RESTRAINING CONDITIONS FOR BATS
JOB 050261	PARTNERING REQUIREMENTS
JOB 050261	PERCENT WITHIN LIMITS/PAVEMENT SMOOTHNESS
JOB 050261	PLASTIC PIPE
JOB 050261	PRICE ADJUSTMENT FOR ASPHALT BINDER
JOB 050261	SHORING FOR CULVERTS
JOB 050261	SOIL STABILIZATION
JOB 050261	SPECIAL CLEARING REQUIREMENTS
JOB 050261	STORM WATER POLLUTION PREVENTION PLAN
JOB 050261	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 050261	UTILITY ADJUSTMENTS
JOB 050261	VALUE ENGINEERING
JOB 050261	WARM MIX ASPHALT

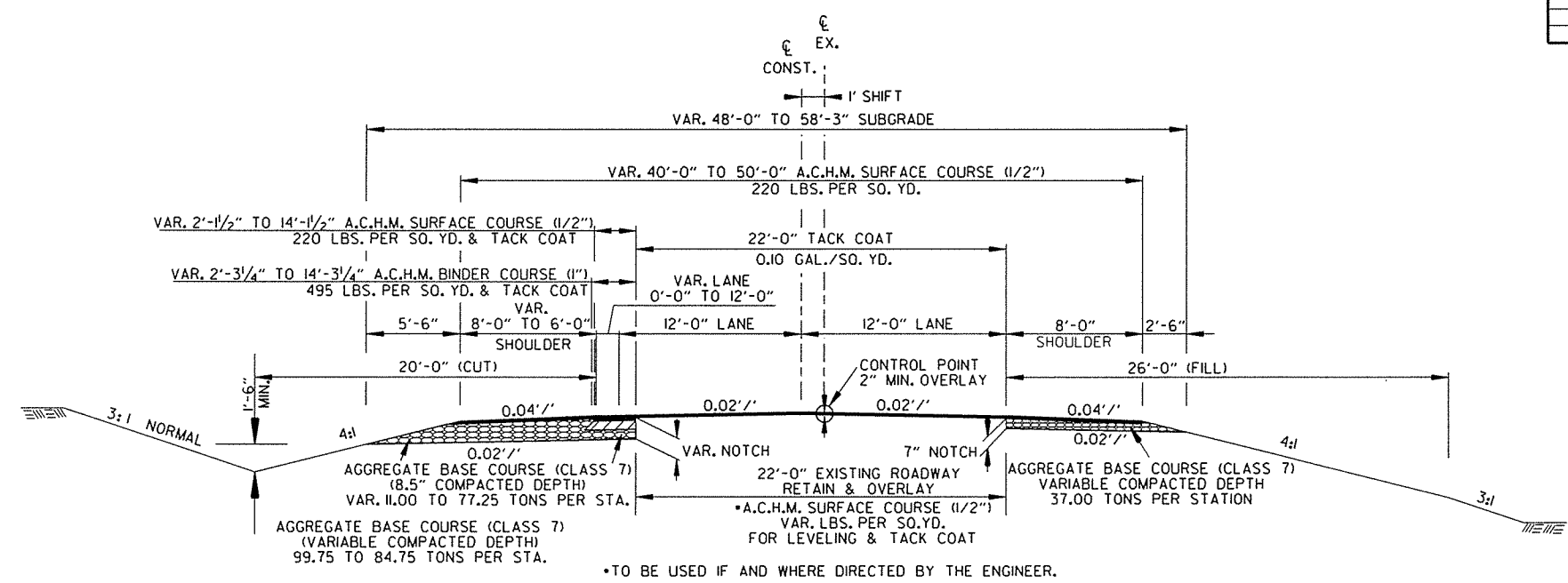
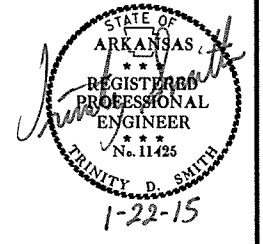
GENERAL NOTES

- GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.
- ALL PIPE LINES, POWER, TELEPHONE, AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
- ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY OF UTILITY SERVICE OF UTILITY SERVICE ORGANIZATIONS SHALL BE MOVED BY THE OWNERS UNLESS OTHERWISE PROVIDED.
- 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.
- ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
- 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.
- 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.
- THIS PROJECT IS COVERED UNDER A SECTION 404 NATIONWIDE 14 PERMIT. REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS, EDITION OF 2014, FOR PERMIT REQUIREMENTS.
- 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.
- ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 UNCLASSIFIED EXCAVATION.



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2 TYPICAL SECTIONS OF IMPROVEMENT



TYPICAL SECTION OF IMPROVEMENT
 SITE I
 NOTCH AND WIDENING
 TANGENT SECTION - SOUTHBOUND PASSING LANE
 STA. 101+00.00 - STA. 104+88.77
 STA. 160+40.00 - STA. 162+40.00

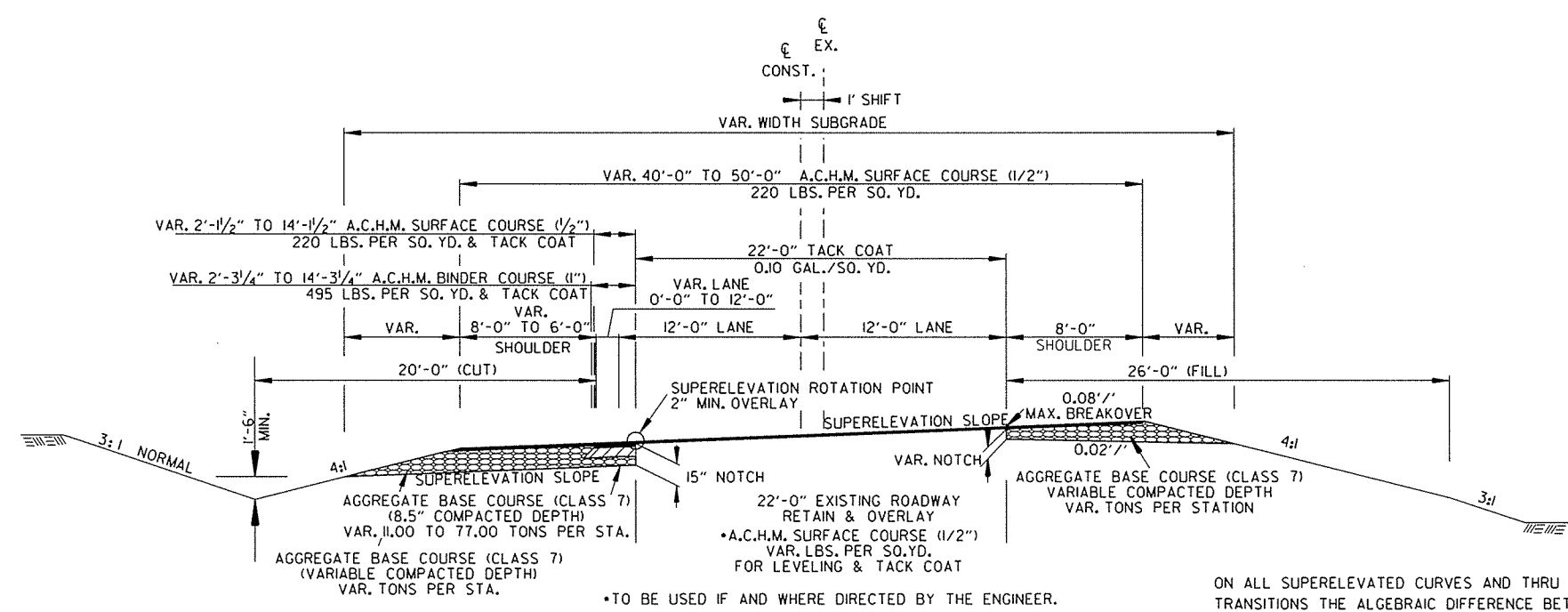
NOTES:
 REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.

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

ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY 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 CONTRACT ITEMS.

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

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 (1/2") IN LIEU OF AGGREGATE BASE COURSE ON THE SHOULDERS.



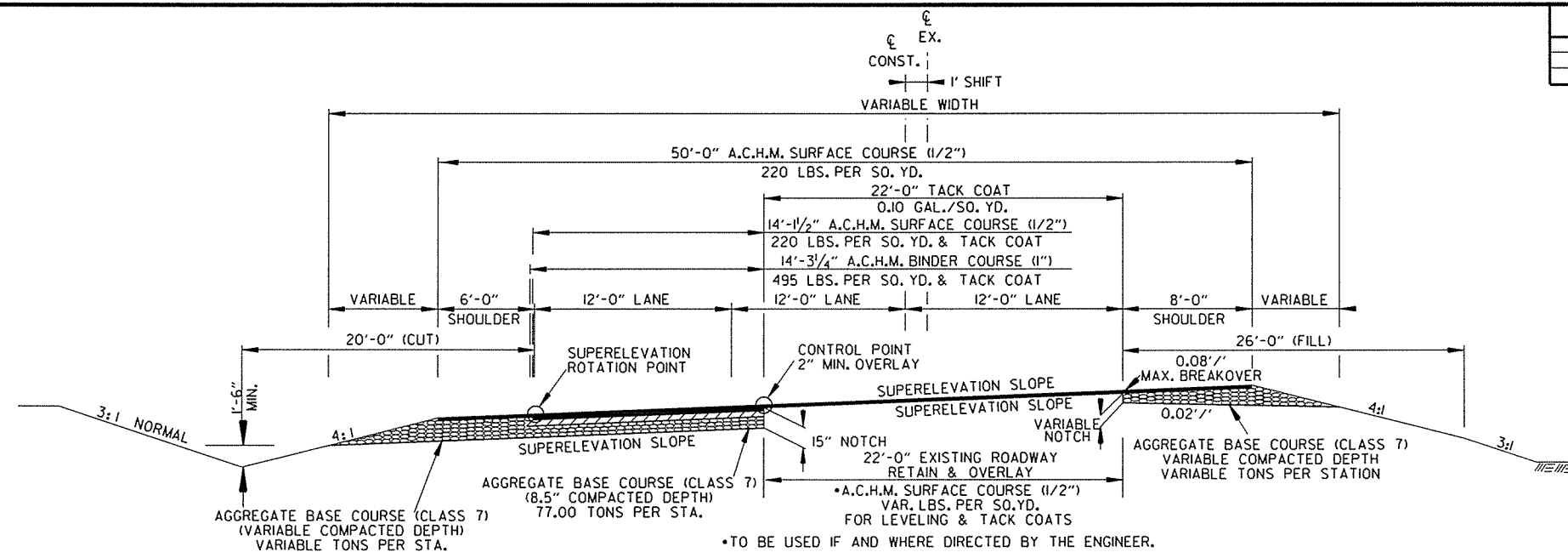
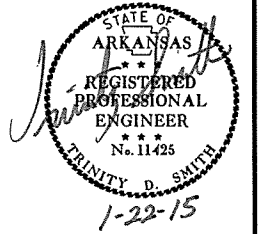
TYPICAL SECTION OF IMPROVEMENT
 SITE I
 NOTCH AND WIDENING
 SUPERELEVATION SECTION - SOUTHBOUND PASSING LANE
 STA. 104+88.77 - STA. 107+60.00

ON ALL SUPERELEVATED CURVES AND THRU SUPERELEVATION TRANSITIONS THE ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 0.08'/'.

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2 TYPICAL SECTIONS OF IMPROVEMENT



TYPICAL SECTION OF IMPROVEMENT
 SITE I
 NOTCH AND WIDENING
 SUPERELEVATION SECTION - SOUTHBOUND PASSING LANE
 STA. 107+60.00 - STA. 119+40.45
 STA. 132+81.86 - STA. 140+56.32
 STA. 140+56.32 - STA. 153+87.13

ON ALL SUPERELEVATED CURVES AND THRU SUPERELEVATION TRANSITIONS THE ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 0.08'/'.
 *TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

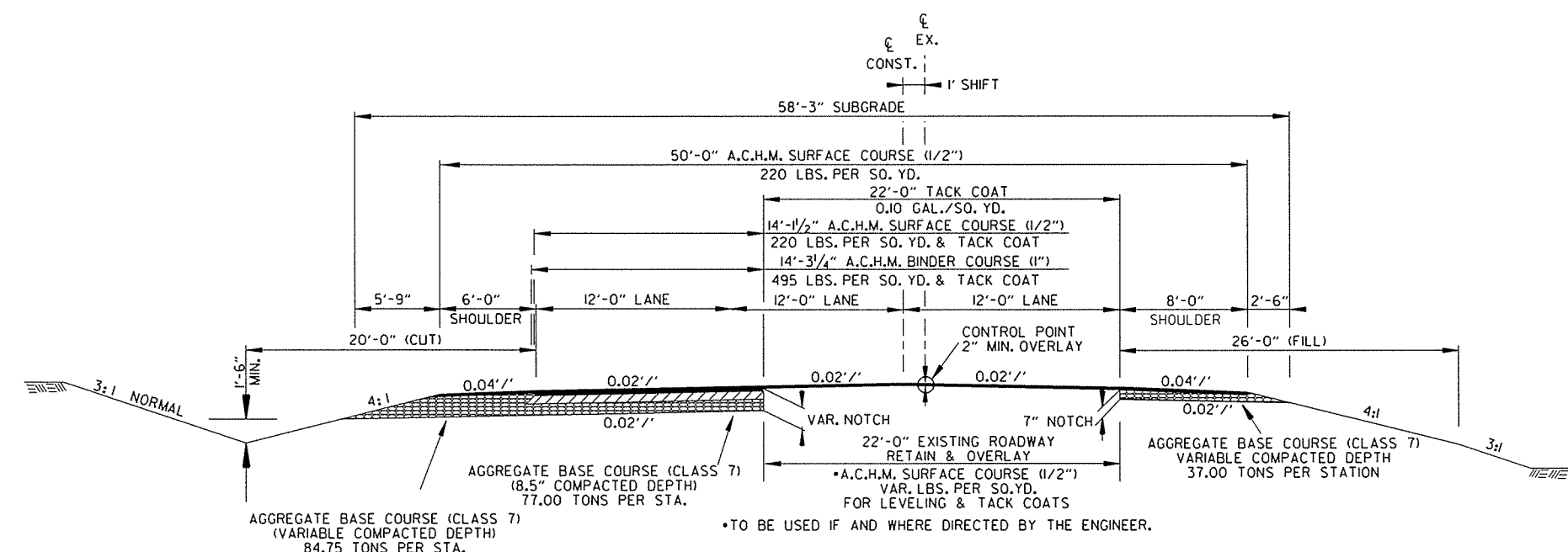
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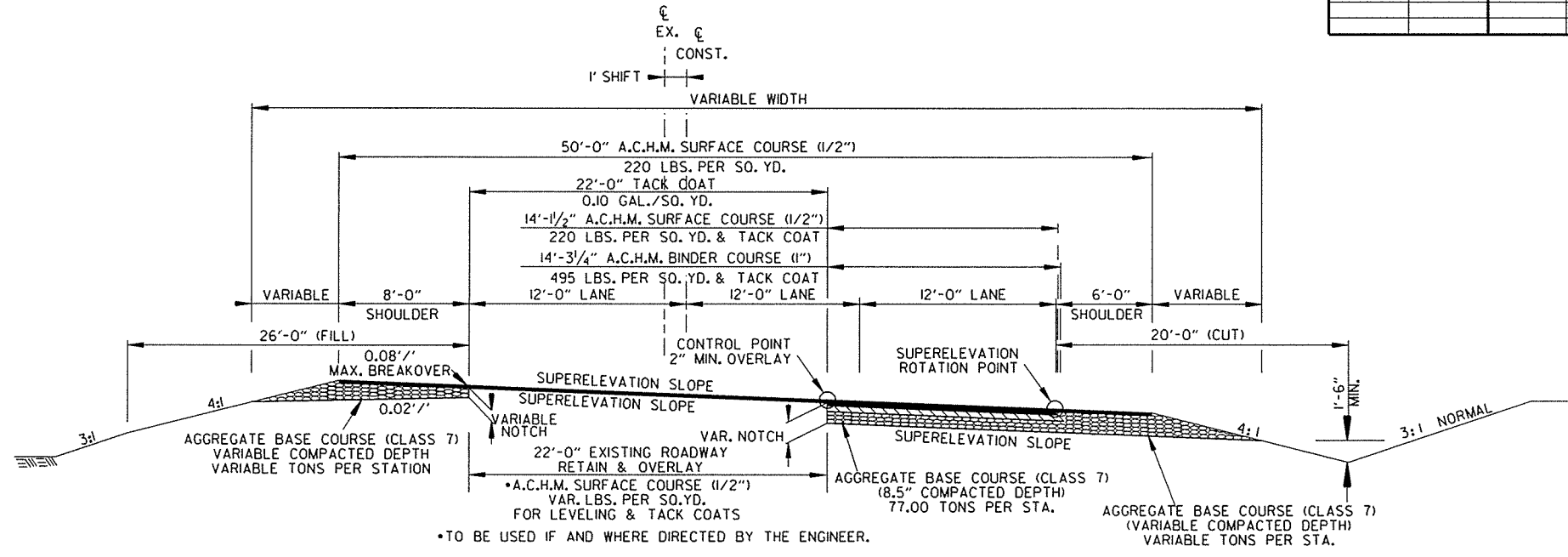
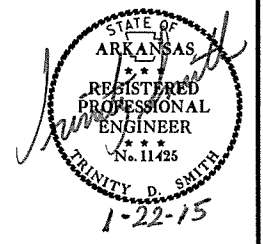
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TYPICAL SECTION OF IMPROVEMENT
 SITE I
 NOTCH AND WIDENING
 TANGENT SECTION - SOUTHBOUND PASSING LANE
 STA. 119+40.45 - STA. 132+81.86
 STA. 153+87.13 - STA. 160+40.00

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2 TYPICAL SECTIONS OF IMPROVEMENT



TYPICAL SECTION OF IMPROVEMENT
 SITE 2
 NOTCH AND WIDENING
 SUPERELEVATION SECTION - NORTHBOUND PASSING LANE
 STA. 210+25.82 - STA. 255+80.00

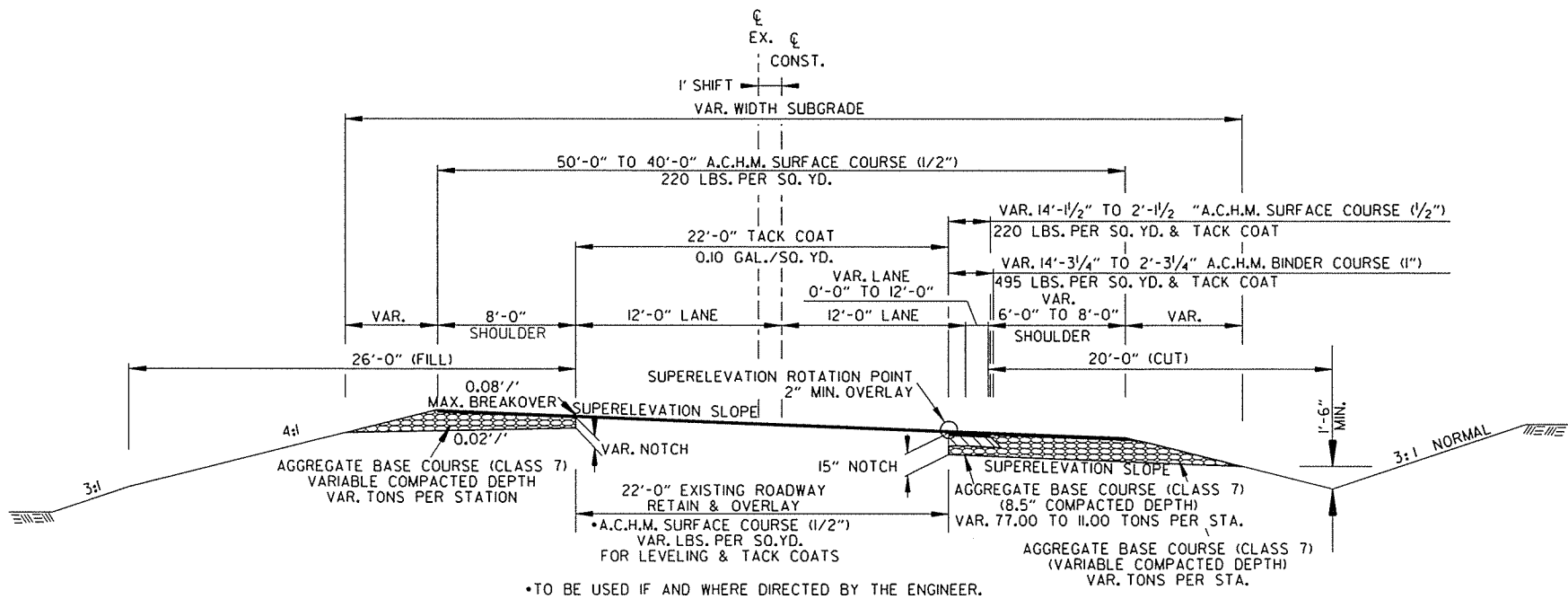
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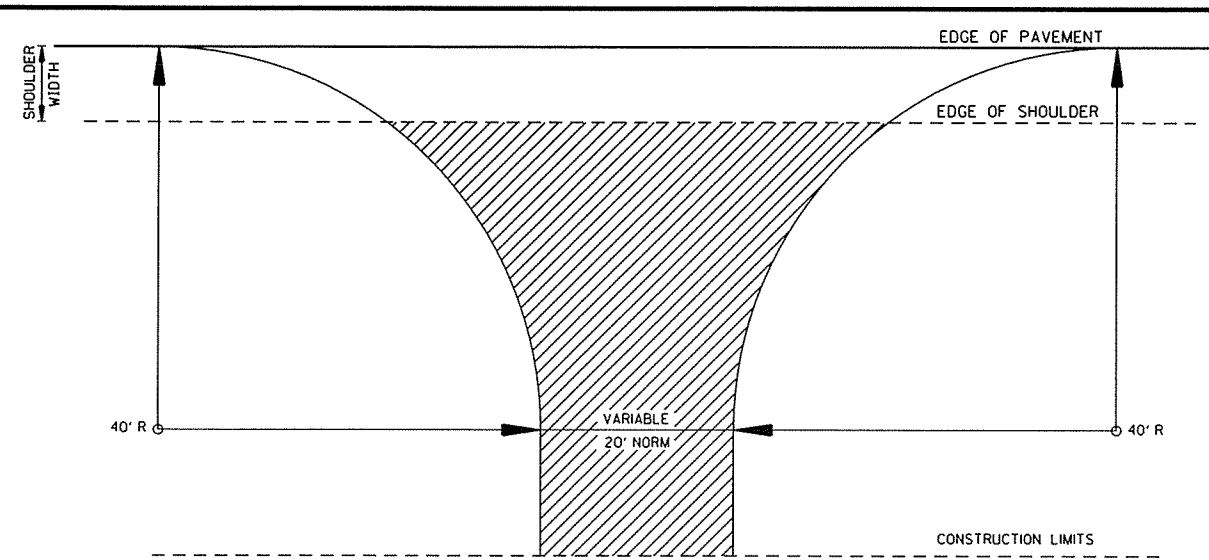
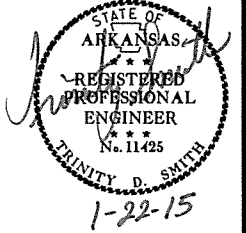
TYPICAL SECTION OF IMPROVEMENT
 SITE 2
 NOTCH AND WIDENING
 SUPERELEVATION SECTION - NORTHBOUND PASSING LANE
 STA. 255+80.00 - STA. 259+19.48

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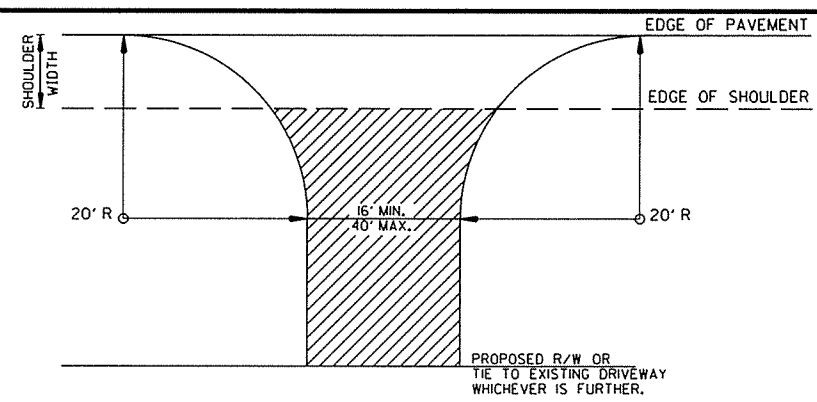
2 SPECIAL DETAILS



DETAIL FOR COUNTY ROAD TURNOUT

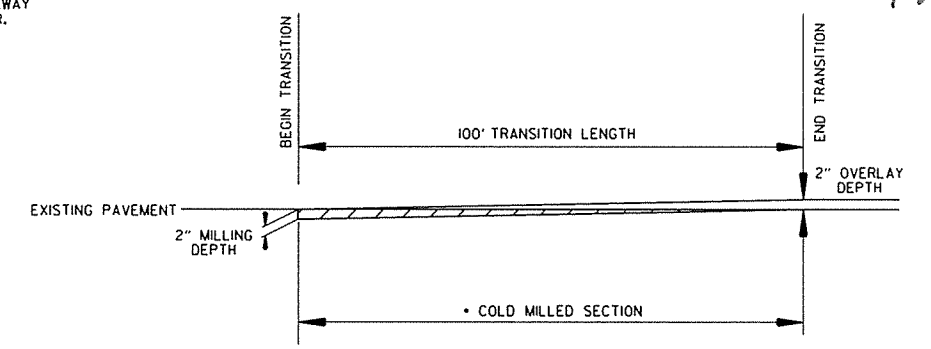
ASPHALT CONCRETE HOT MIX SURFACE COURSE (1/2") (220 LBS. PER SQ. YD.) AND AGGREGATE BASE COURSE (CLASS 7) (7" COMPACTED DEPTH)

NOTE: REFER TO PLAN SHEETS FOR WIDTHS OF COUNTY ROADS.



DETAIL FOR DRIVEWAY TURNOUTS

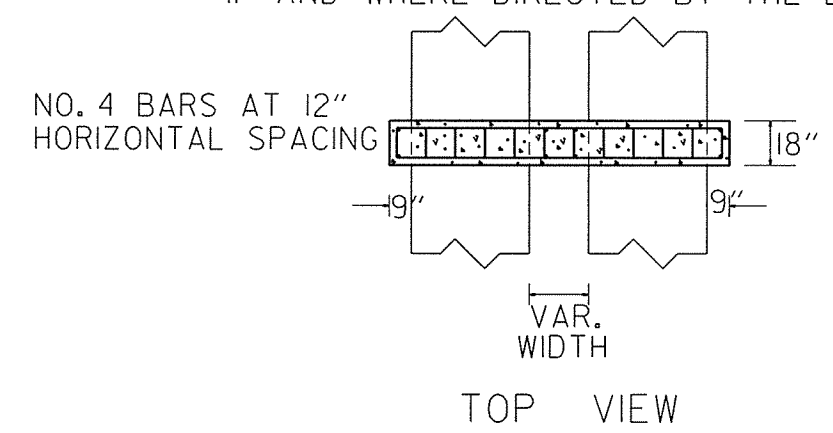
A.C.H.M. SURFACE COURSE (1/2") (220 LBS./SQ. YD.) & AGGREGATE BASE COURSE (CLASS 7) (7" COMPACTED DEPTH) IF ASPHALT DRIVE EXISTS OR 6" CONCRETE IF CONCRETE DRIVE EXISTS.



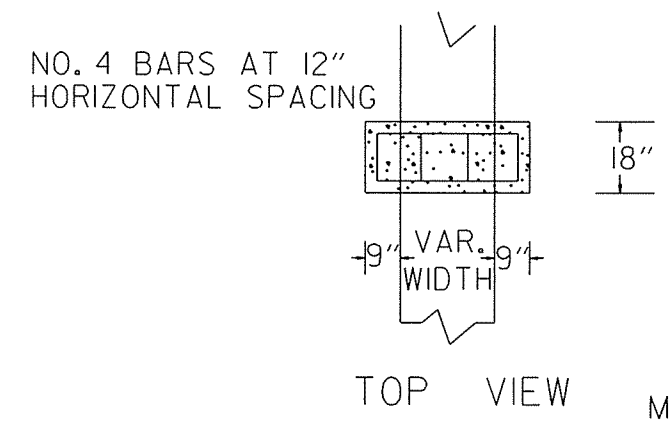
DETAIL SHOWING TRANSITION TO EXISTING PAVEMENT

TO BE USED AS DIRECTED BY THE ENGINEER

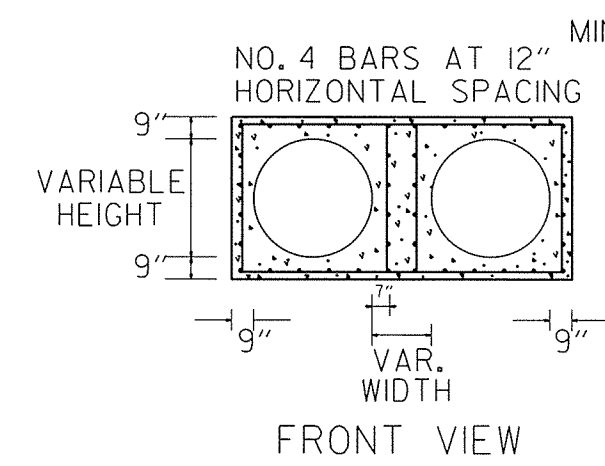
NOTE: PIPE COLLAR TO BE UTILIZED IF AND WHERE DIRECTED BY THE ENGINEER.



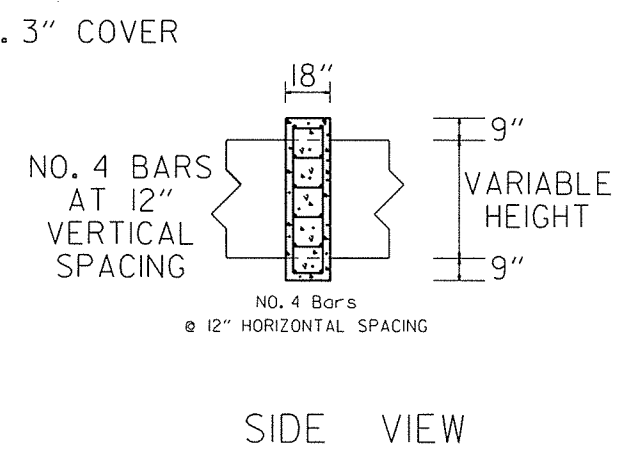
TOP VIEW



TOP VIEW

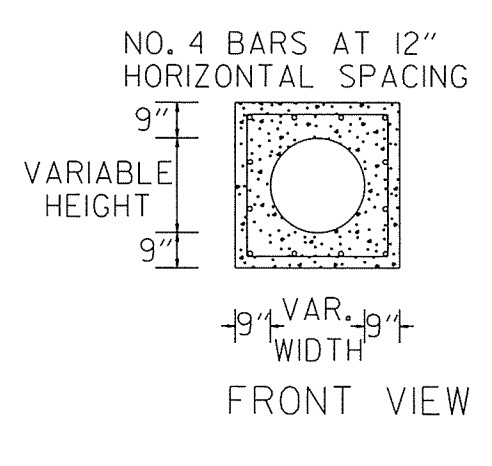


FRONT VIEW

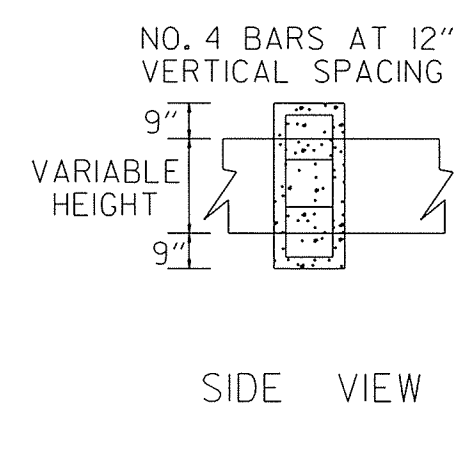


SIDE VIEW

PIPE EXTENSION REINFORCED CONCRETE COLLAR DETAIL

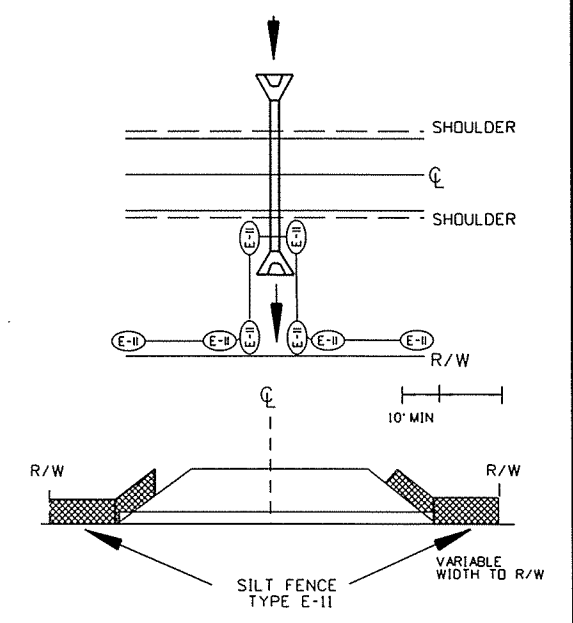


FRONT VIEW



SIDE VIEW

PIPE EXTENSION REINFORCED CONCRETE COLLAR DETAIL



DETAILS OF SILT FENCE AT CROSS DRAINS

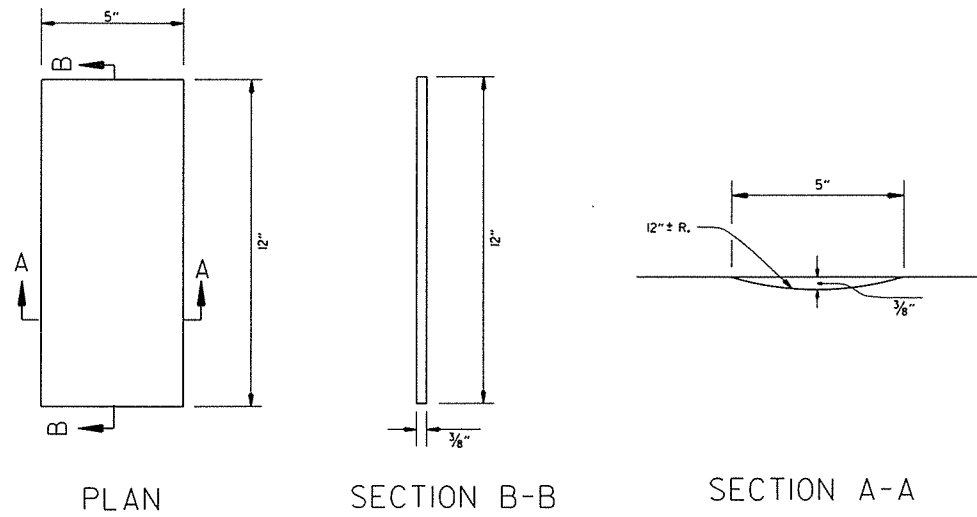
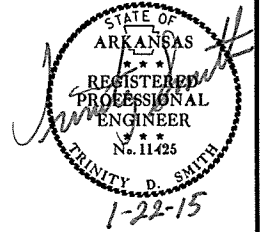
SPECIAL DETAILS

1/15/2015

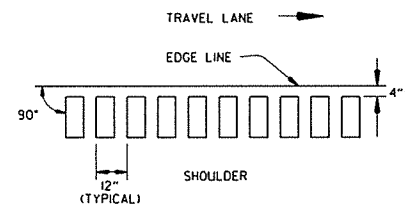
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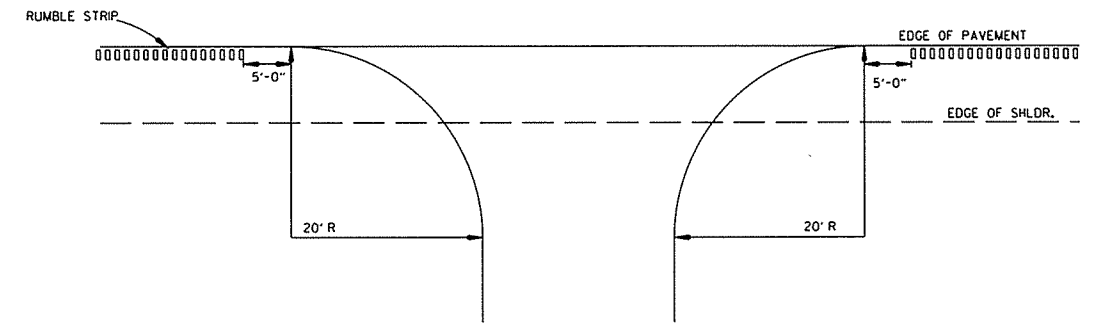
2 SPECIAL DETAILS



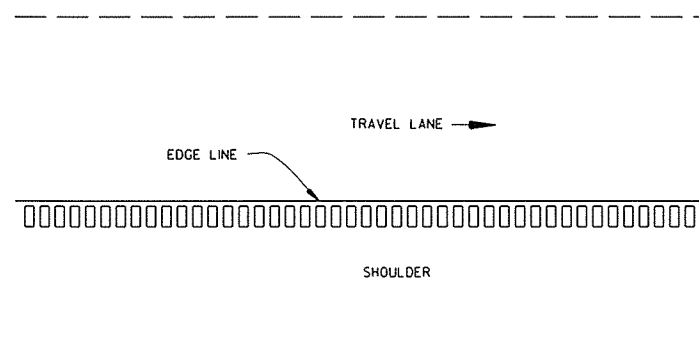
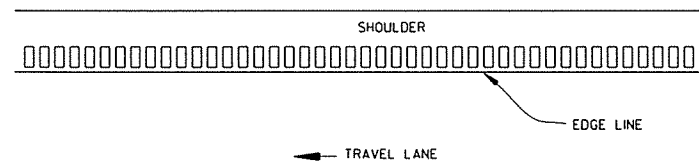
DETAILS OF RUMBLE STRIPS



LOCATION PLAN OF RUMBLE STRIPS
LEFT OR RIGHT SHOULDER



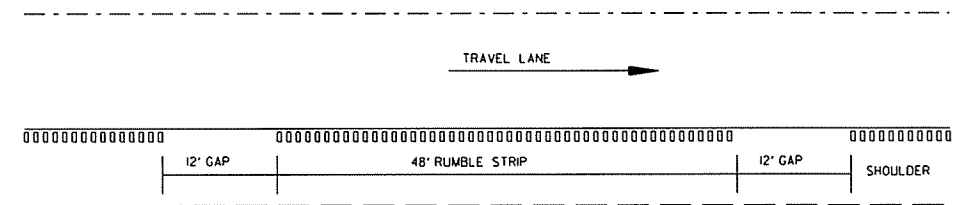
DETAIL FOR RUMBLE STRIP GAP
AT DRIVEWAY TURNOUTS



PLAN VIEW

GENERAL NOTES

- RUMBLE STRIPS SHALL NOT BE INSTALLED ON CURB SECTIONS, BRIDGE DECKS, APPROACH SLABS, INTERSECTING STREETS OR ROADWAYS, RESIDENTIAL OR COMMERCIAL DRIVEWAYS OR ACROSS TRANSVERSE JOINTS OF CONCRETE SHOULDERS.
- RUMBLE STRIPS SHALL NOT BE INSTALLED ON A PAVED SHOULDER THAT IS USED AS A DECELERATION LANE FOR THE LENGTH DEEMED APPROPRIATE BY THE ENGINEER.
- THE 4" OFFSET FROM THE EDGE LINE MAY BE INCREASED TO AVOID LONGITUDINAL JOINTS. IN ALL CASES, THE LATERAL DEVIATION FROM THE PLANNED OFFSET SHOULD BE KEPT TO A MINIMUM.
- RUMBLE STRIPS SHALL BE MEASURED BY THE LINEAR FOOT LONGITUDINALLY ALONG THE SHOULDER. PAYMENT SHALL ONLY INCLUDE THAT PORTION OF THE SHOULDER ON WHICH RUMBLE STRIPS HAVE BEEN CONSTRUCTED. NO MEASUREMENT OR PAYMENT WILL BE MADE FOR GAPS, DRIVEWAYS, TURNOUTS, OR OTHER PUBLIC ROAD INTERSECTIONS WHERE RUMBLE STRIPS HAVE NOT BEEN CONSTRUCTED.
- THE 3/8" DEPTH SHALL GENERALLY APPLY FOR THE ENTIRE 12" LENGTH. SOME VARIATION TO SUIT SHOULDER SLOPE BREAKS MAY BE NECESSARY.



DETAIL FOR GAP PATTERN RUMBLE STRIP

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

SPECIAL DETAILS

1/15/2015

R050261.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. 050261	9 148

2 TEMPORARY EROSION CONTROL DETAILS

CLEARING AND GRUBBING

STA. 100+00 - STA. 115+00 LT. & RT. 15 STA.

SILT FENCE (E-II)

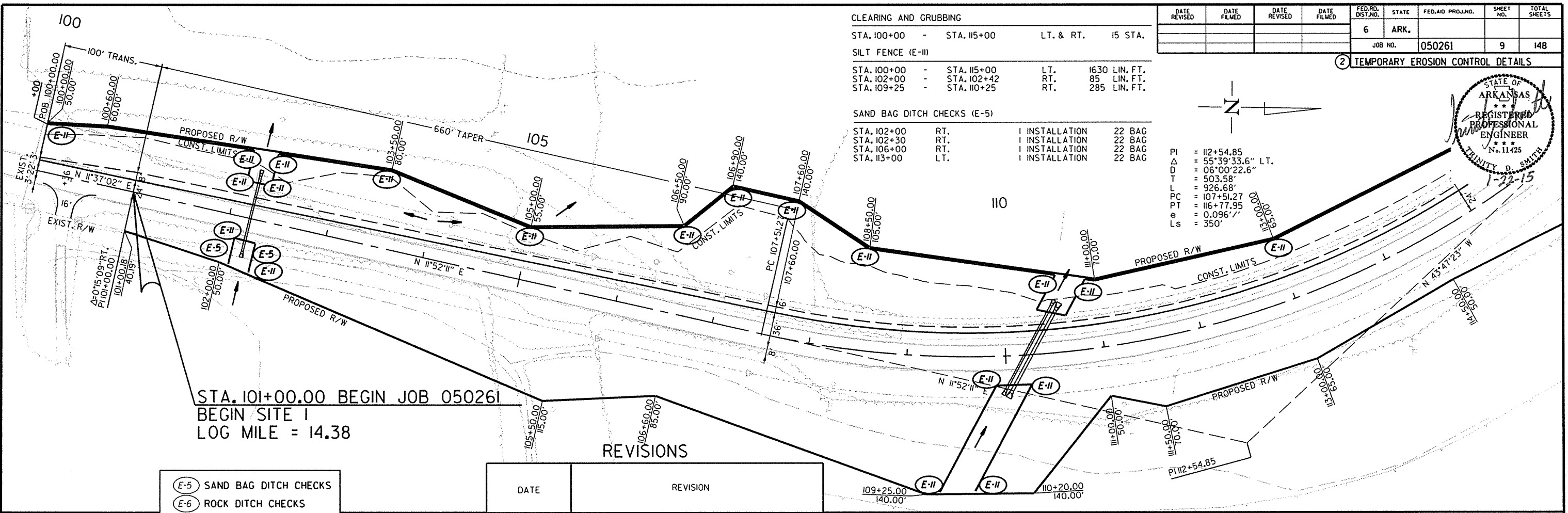
STA. 100+00 - STA. 115+00 LT. 1630 LIN. FT.
 STA. 102+00 - STA. 102+42 RT. 85 LIN. FT.
 STA. 109+25 - STA. 110+25 RT. 285 LIN. FT.

SAND BAG DITCH CHECKS (E-5)

STA. 102+00 RT. 1 INSTALLATION 22 BAG
 STA. 102+30 RT. 1 INSTALLATION 22 BAG
 STA. 106+00 RT. 1 INSTALLATION 22 BAG
 STA. 113+00 LT. 1 INSTALLATION 22 BAG

PI = 112+54.85
 Δ = 55°39'33.6" LT.
 D = 06°00'22.6"
 T = 503.58'
 L = 926.68'
 PC = 107+51.27
 PT = 116+77.95
 e = 0.096'/'
 Ls = 350'

STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 No. 11425
 TRINITY D. SMITH
 1-22-15



- (E-5) SAND BAG DITCH CHECKS
- (E-6) ROCK DITCH CHECKS
- (E-II) SILT FENCE
- (E-14) SEDIMENT BASIN

DATE	REVISION

CLEARING AND GRUBBING

STA. 115+00 - STA. 130+00 LT. & RT. 15 STA.

SILT FENCE (E-II)

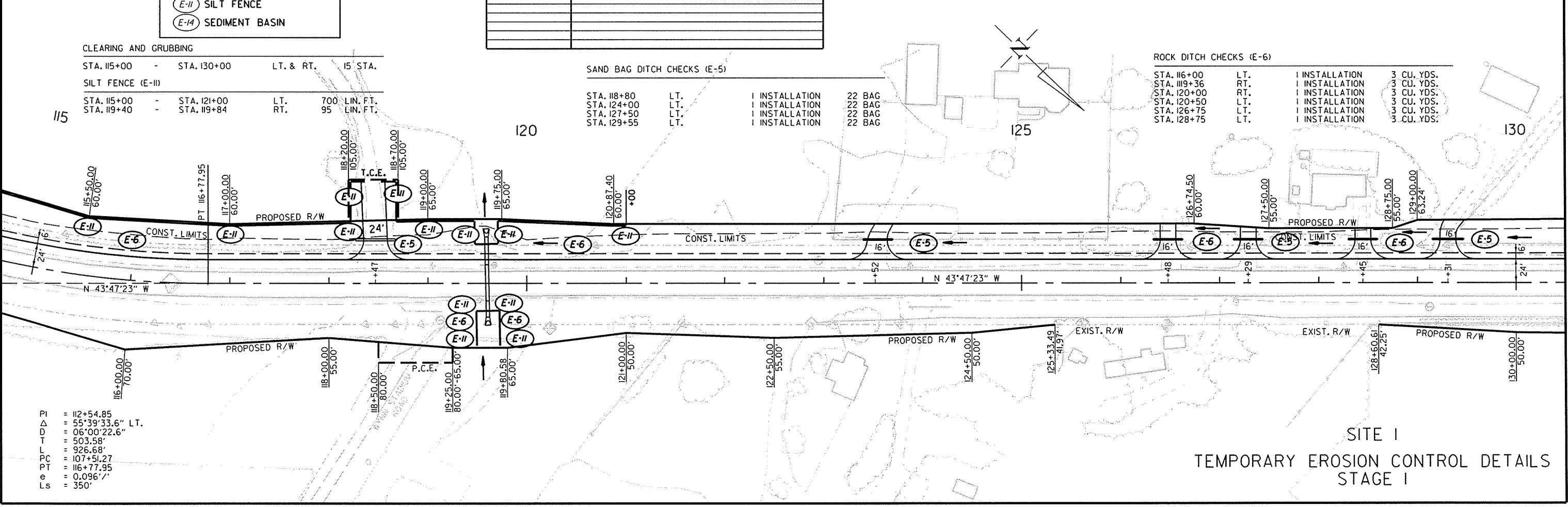
STA. 115+00 - STA. 121+00 LT. 700 LIN. FT.
 STA. 119+40 - STA. 119+84 RT. 95 LIN. FT.

SAND BAG DITCH CHECKS (E-5)

STA. 118+80 LT. 1 INSTALLATION 22 BAG
 STA. 124+00 LT. 1 INSTALLATION 22 BAG
 STA. 127+50 LT. 1 INSTALLATION 22 BAG
 STA. 129+55 LT. 1 INSTALLATION 22 BAG

ROCK DITCH CHECKS (E-6)

STA. 116+00 LT. 1 INSTALLATION 3 CU. YDS.
 STA. 119+36 RT. 1 INSTALLATION 3 CU. YDS.
 STA. 120+00 RT. 1 INSTALLATION 3 CU. YDS.
 STA. 120+50 LT. 1 INSTALLATION 3 CU. YDS.
 STA. 126+75 LT. 1 INSTALLATION 3 CU. YDS.
 STA. 128+75 LT. 1 INSTALLATION 3 CU. YDS.

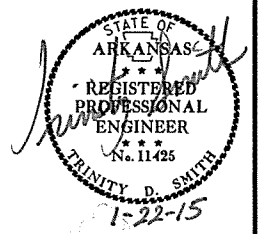


PI = 112+54.85
 Δ = 55°39'33.6" LT.
 D = 06°00'22.6"
 T = 503.58'
 L = 926.68'
 PC = 107+51.27
 PT = 116+77.95
 e = 0.096'/'
 Ls = 350'

SITE I
 TEMPORARY EROSION CONTROL DETAILS
 STAGE I

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		10	148

2 TEMPORARY EROSION CONTROL DETAILS



CLEARING AND GRUBBING

STA. 130+00 - STA. 145+00	LT. & RT.	15 STA.
SILT FENCE (E-II)		
STA. 130+00 - STA. 133+50	RT.	350 LIN. FT.
STA. 137+00 - STA. 140+25	LT.	355 LIN. FT.
STA. 138+15 - STA. 135+55	RT.	85 LIN. FT.

SAND BAG DITCH CHECKS (E-5)

STA. 136+90	LT.	1 INSTALLATION	22 BAG
STA. 142+05	LT.	1 INSTALLATION	22 BAG

ROCK DITCH CHECKS (E-6)

STA. 133+00	LT.	1 INSTALLATION	3 CU. YDS.
STA. 138+10	RT.	1 INSTALLATION	3 CU. YDS.
STA. 138+50	RT.	1 INSTALLATION	3 CU. YDS.
STA. 140+10	LT.	1 INSTALLATION	3 CU. YDS.

PI = 137+16.98
 Δ = 16°42'08.0" LT.
 D = 04°00'10.1"
 L = 210.12'
 T = 417.26'
 PC = 135+06.86
 PT = 139+24.12
 e = 0.083'/'
 Ls = 300'

PI = 146+84.42
 Δ = 46°45'53.3" RT.
 D = 04°59'44.3"
 L = 495.90'
 T = 936.11'
 PC = 141+88.52
 PT = 151+24.63
 e = 0.091'/'
 Ls = 350'

REVISIONS

DATE	REVISION

- (E-5) SAND BAG DITCH CHECKS
- (E-6) ROCK DITCH CHECKS
- (E-II) SILT FENCE
- (E-14) SEDIMENT BASIN

CLEARING AND GRUBBING

STA. 145+00 - STA. 160+00	LT. & RT.	15 STA.
SILT FENCE (E-II)		
STA. 146+00 - STA. 146+35	RT.	85 LIN. FT.
STA. 146+00 - STA. 146+35	LT.	105 LIN. FT.

SAND BAG DITCH CHECKS (E-5)

STA. 150+50	LT.	1 INSTALLATION	22 BAG
STA. 157+55	LT.	1 INSTALLATION	22 BAG

ROCK DITCH CHECKS (E-6)

STA. 146+50	LT.	1 INSTALLATION	3 CU. YDS.
STA. 155+00	LT.	1 INSTALLATION	3 CU. YDS.
STA. 158+50	LT.	1 INSTALLATION	3 CU. YDS.

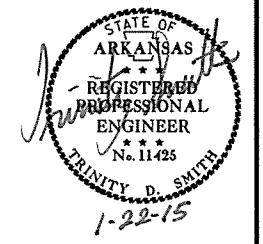
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 Δ = 46°45'53.3" RT.
 D = 04°59'44.3"
 L = 495.90'
 T = 936.11'
 PC = 141+88.52
 PT = 151+24.63
 e = 0.091'/'
 Ls = 350'

SITE I
 TEMPORARY EROSION CONTROL DETAILS
 STAGE I

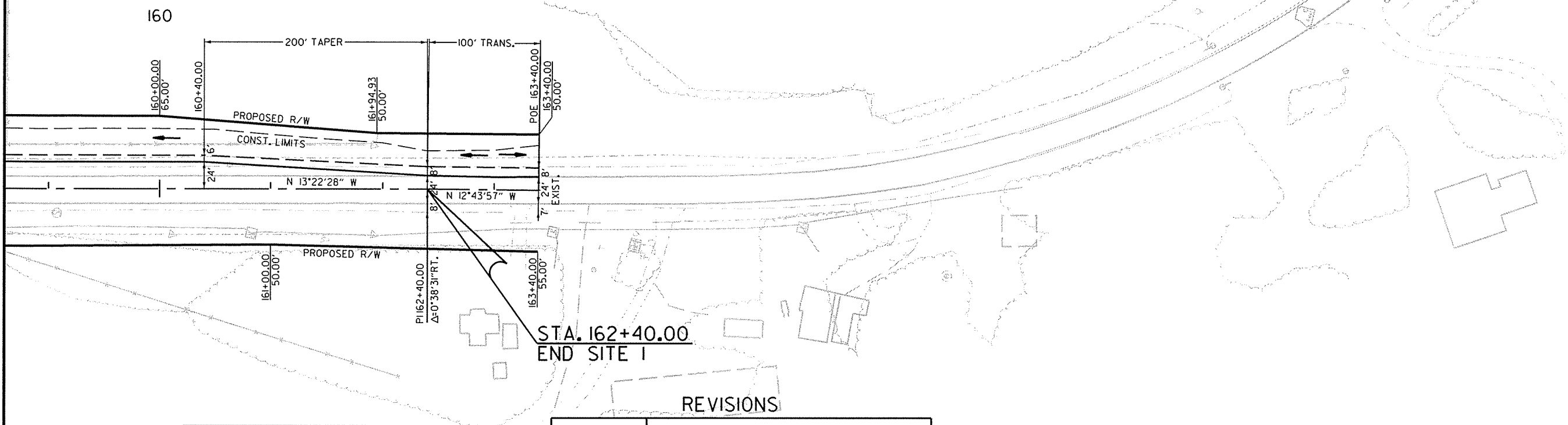
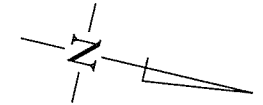
1/15/2015
 R050261.DGN

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

2 TEMPORARY EROSION CONTROL DETAILS



CLEARING AND GRUBBING
 STA. 160+00 - STA. 163+40 LT. & RT. 4.4 STA.



STA. 162+40.00
 END SITE I

REVISIONS

- (E-5) SAND BAG DITCH CHECKS
- (E-6) ROCK DITCH CHECKS
- (E-11) SILT FENCE
- (E-14) SEDIMENT BASIN

DATE	REVISION

SITE I
 TEMPORARY EROSION CONTROL DETAILS
 STAGE I

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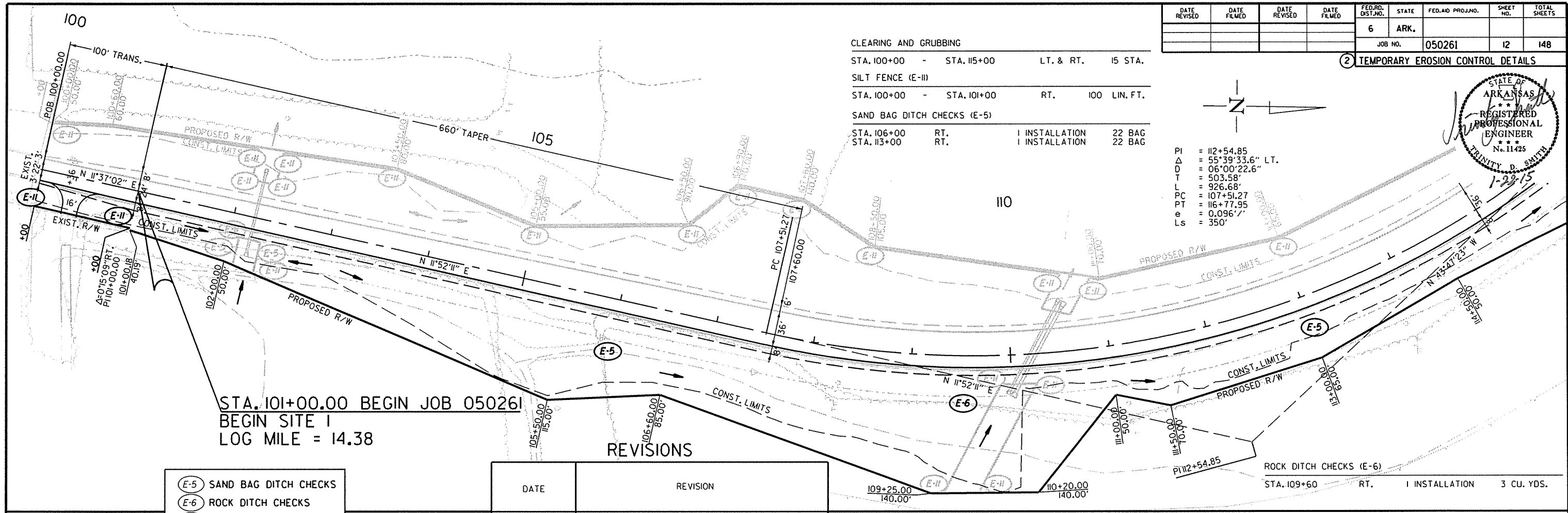
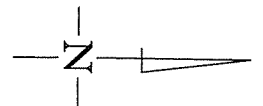
DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		12	148
				JOB NO. 050261				

2 TEMPORARY EROSION CONTROL DETAILS



PI = 112+54.85
 Δ = 55°39'33.6" LT.
 D = 06°00'22.6"
 L = 503.58'
 T = 926.68'
 PC = 107+51.27
 PT = 116+77.95
 e = 0.096' /'
 Ls = 350'

CLEARING AND GRUBBING
 STA. 100+00 - STA. 115+00 LT. & RT. 15 STA.
 SILT FENCE (E-II)
 STA. 100+00 - STA. 101+00 RT. 100 LIN. FT.
 SAND BAG DITCH CHECKS (E-5)
 STA. 106+00 RT. 1 INSTALLATION 22 BAG
 STA. 113+00 RT. 1 INSTALLATION 22 BAG

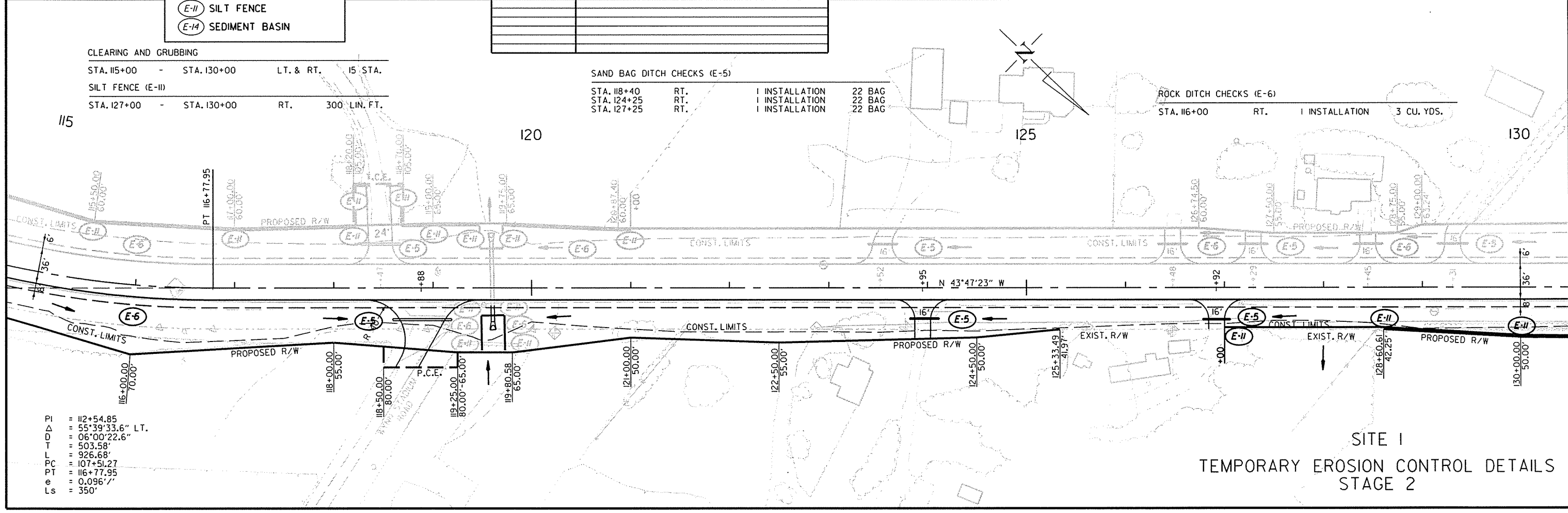


- (E-5) SAND BAG DITCH CHECKS
- (E-6) ROCK DITCH CHECKS
- (E-II) SILT FENCE
- (E-14) SEDIMENT BASIN

CLEARING AND GRUBBING
 STA. 115+00 - STA. 130+00 LT. & RT. 15 STA.
 SILT FENCE (E-II)
 STA. 127+00 - STA. 130+00 RT. 300 LIN. FT.

SAND BAG DITCH CHECKS (E-5)
 STA. 118+40 RT. 1 INSTALLATION 22 BAG
 STA. 124+25 RT. 1 INSTALLATION 22 BAG
 STA. 127+25 RT. 1 INSTALLATION 22 BAG

ROCK DITCH CHECKS (E-6)
 STA. 116+00 RT. 1 INSTALLATION 3 CU. YDS.

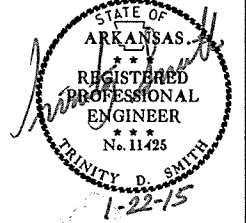


PI = 112+54.85
 Δ = 55°39'33.6" LT.
 D = 06°00'22.6"
 L = 503.58'
 T = 926.68'
 PC = 107+51.27
 PT = 116+77.95
 e = 0.096' /'
 Ls = 350'

SITE I
 TEMPORARY EROSION CONTROL DETAILS
 STAGE 2

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		13	148

2 TEMPORARY EROSION CONTROL DETAILS



CLEARING AND GRUBBING

STA. 130+00 - STA. 145+00	LT. & RT.	15 STA.
SILT FENCE (E-II)		
STA. 130+00 - STA. 144+00	RT.	350 LIN. FT.
STA. 144+00 - STA. 145+00	RT.	100 LIN. FT.

SAND BAG DITCH CHECKS (E-5)

STA. 136+90	RT.	1 INSTALLATION	22 BAG
STA. 141+00	RT.	1 INSTALLATION	22 BAG

PI = 137+16.98
 Δ = 16°42'08.0" LT.
 D = 04°00'10.1"
 T = 210.12'
 L = 417.26'
 PC = 135+06.86
 PT = 139+24.12
 e = 0.083' /'
 Ls = 300'

PI = 146+84.42
 Δ = 46°45'53.3" RT.
 D = 04°59'44.3"
 T = 495.90'
 L = 936.11'
 PC = 141+88.52
 PT = 151+24.63
 e = 0.091' /'
 Ls = 350'

REVISIONS

DATE	REVISION

- (E-5) SAND BAG DITCH CHECKS
- (E-6) ROCK DITCH CHECKS
- (E-II) SILT FENCE
- (E-14) SEDIMENT BASIN

CLEARING AND GRUBBING

STA. 145+00 - STA. 160+00	LT. & RT.	15 STA.
SILT FENCE (E-II)		
STA. 145+00 - STA. 148+00	RT.	365 LIN. FT.

SAND BAG DITCH CHECKS (E-5)

STA. 147+70	RT.	1 INSTALLATION	22 BAG
STA. 151+75	RT.	1 INSTALLATION	22 BAG
STA. 154+40	RT.	1 INSTALLATION	22 BAG

ROCK DITCH CHECKS (E-6)

STA. 148+10	RT.	1 INSTALLATION	3 CU. YDS.
STA. 158+50	RT.	1 INSTALLATION	3 CU. YDS.

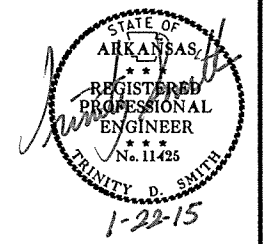
PI = 146+84.42
 Δ = 46°45'53.3" RT.
 D = 04°59'44.3"
 T = 495.90'
 L = 936.11'
 PC = 141+88.52
 PT = 151+24.63
 e = 0.091' /'
 Ls = 350'

SITE I
 TEMPORARY EROSION CONTROL DETAILS
 STAGE 2

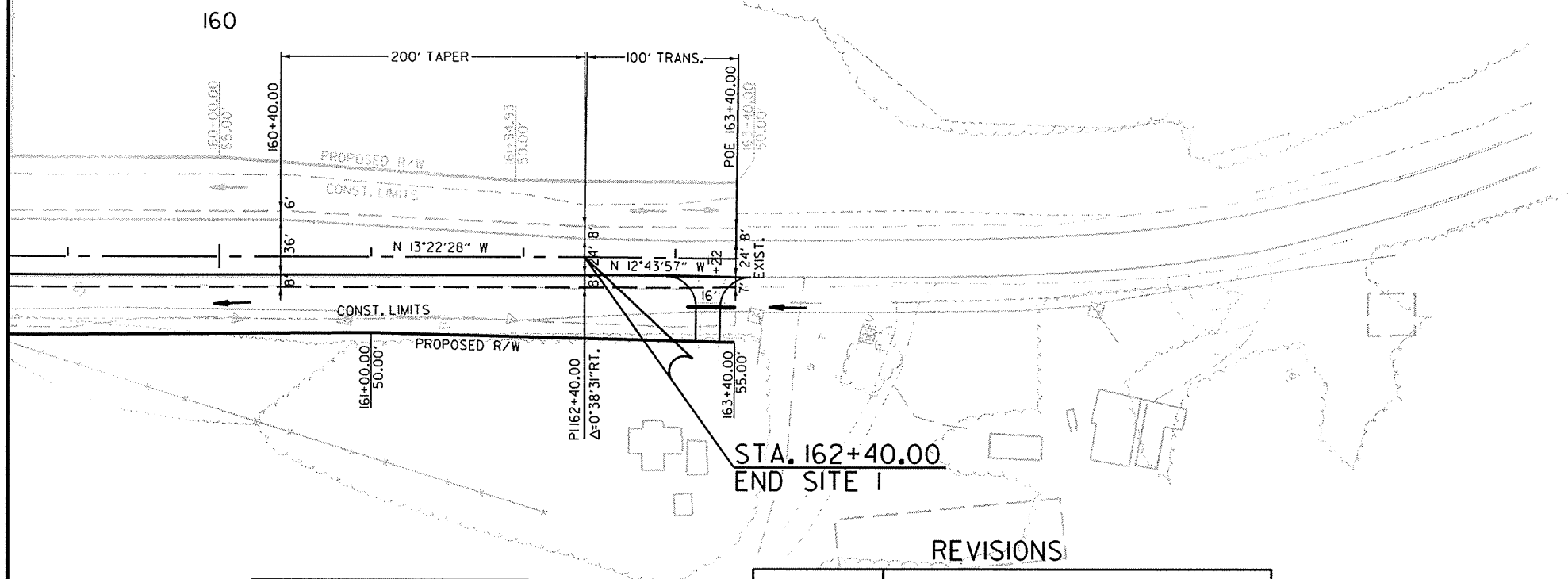
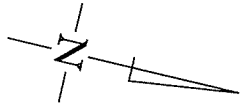
1/15/2015
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO. 050261		14		148

② TEMPORARY EROSION CONTROL DETAILS



CLEARING AND GRUBBING
 STA. 160+00 - STA. 163+40 LT. & RT. 4.4 STA.



STA. 162+40.00
 END SITE 1

REVISIONS

- (E-5) SAND BAG DITCH CHECKS
- (E-6) ROCK DITCH CHECKS
- (E-11) SILT FENCE
- (E-1A) SEDIMENT BASIN

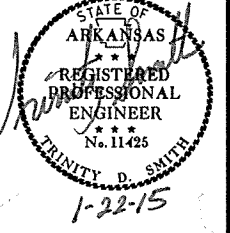
DATE	REVISION

1/15/2015
 R050261.DGN

SITE 1
 TEMPORARY EROSION CONTROL DETAILS
 STAGE 2

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		15	148
				JOB NO. 050261				

2 TEMPORARY EROSION CONTROL DETAILS



SAND BAG DITCH CHECKS (E-5)

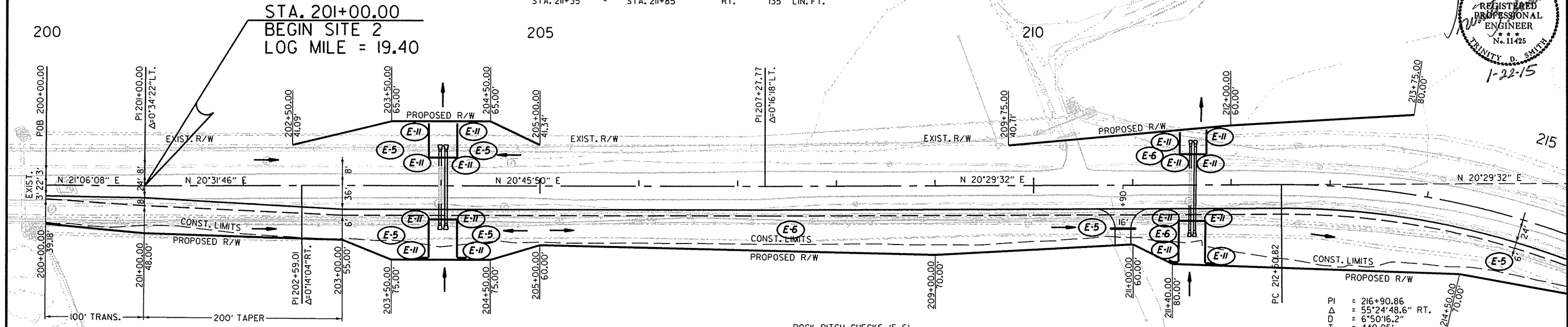
STA. 203+50	LT. & RT.	2 INSTALLATIONS	44 BAG
STA. 204+50	LT. & RT.	2 INSTALLATIONS	44 BAG
STA. 210+50	RT.	1 INSTALLATION	22 BAG
STA. 215+00	RT.	1 INSTALLATION	22 BAG

CLEARING AND GRUBBING

STA. 200+00	-	STA. 215+00	LT. & RT.	15 STA.
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SILT FENCE (E-II)

STA. 203+75	-	STA. 204+25	LT.	100 LIN. FT.
STA. 203+75	-	STA. 204+75	RT.	125 LIN. FT.
STA. 211+50	-	STA. 211+75	LT.	85 LIN. FT.
STA. 211+35	-	STA. 211+85	RT.	135 LIN. FT.



REVISIONS

DATE	REVISION

ROCK DITCH CHECKS (E-6)

STA. 207+50	RT.	2 INSTALLATIONS	6 CU. YDS.
STA. 211+25	LT. & RT.	2 INSTALLATIONS	6 CU. YDS.

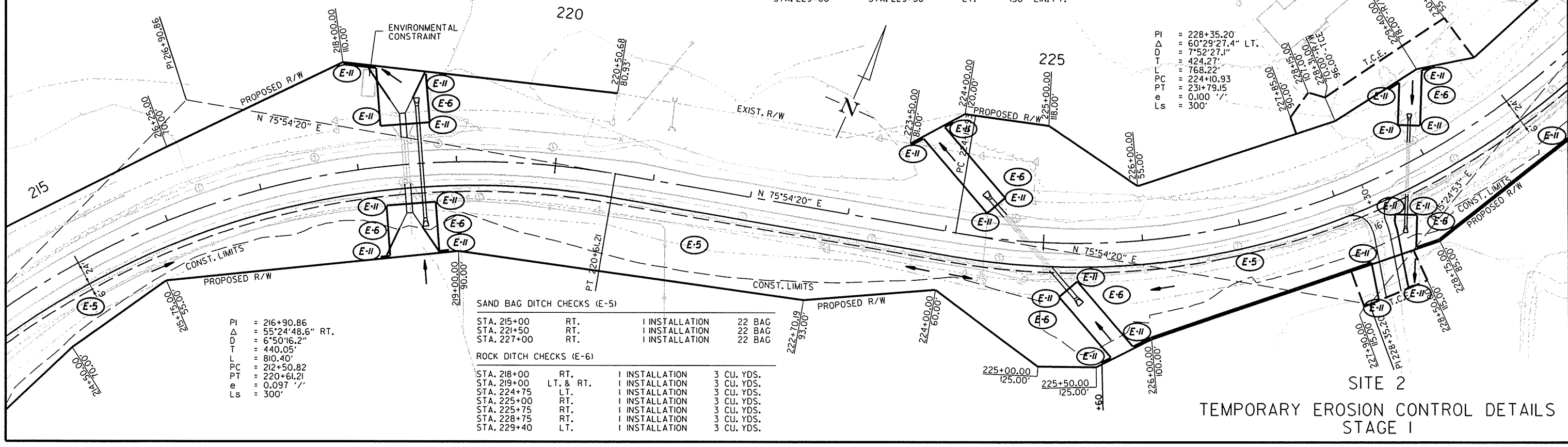
SILT FENCE (E-II)

STA. 218+00	-	STA. 218+86	LT.	770 LIN. FT.
STA. 218+10	-	STA. 218+90	RT.	170 LIN. FT.
STA. 223+50	-	STA. 223+90	LT.	245 LIN. FT.
STA. 225+60	-	STA. 230+00	RT.	800 LIN. FT.
STA. 229+00	-	STA. 229+50	LT.	150 LIN. FT.

- (E-5) SAND BAG DITCH CHECKS
- (E-6) ROCK DITCH CHECKS
- (E-II) SILT FENCE
- (E-14) SEDIMENT BASIN

CLEARING AND GRUBBING

STA. 215+00	-	STA. 230+00	LT. & RT.	15 STA.
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SAND BAG DITCH CHECKS (E-5)

STA. 215+00	RT.	1 INSTALLATION	22 BAG
STA. 221+50	RT.	1 INSTALLATION	22 BAG
STA. 227+00	RT.	1 INSTALLATION	22 BAG

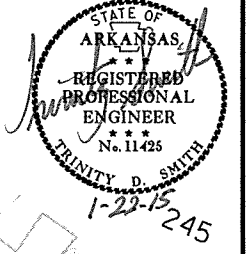
ROCK DITCH CHECKS (E-6)

STA. 218+00	RT.	1 INSTALLATION	3 CU. YDS.
STA. 219+00	LT. & RT.	1 INSTALLATION	3 CU. YDS.
STA. 224+75	LT.	1 INSTALLATION	3 CU. YDS.
STA. 225+00	RT.	1 INSTALLATION	3 CU. YDS.
STA. 225+75	RT.	1 INSTALLATION	3 CU. YDS.
STA. 228+75	RT.	1 INSTALLATION	3 CU. YDS.
STA. 229+40	LT.	1 INSTALLATION	3 CU. YDS.

SITE 2
TEMPORARY EROSION CONTROL DETAILS
STAGE 1

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. 050261							16	148

2 TEMPORARY EROSION CONTROL DETAILS



CLEARING AND GRUBBING

STA. 230+00 - STA. 233+00	LT.	365	LIN. FT.
STA. 233+00 - STA. 238+31	RT.	85	LIN. FT.
STA. 238+31 - STA. 238+65	RT.	120	LIN. FT.

SILT FENCE (E-II)

STA. 230+00 - STA. 233+00	RT.	365	LIN. FT.
STA. 233+00 - STA. 238+31	LT.	85	LIN. FT.
STA. 238+31 - STA. 238+65	RT.	120	LIN. FT.

PI = 228+35.20
 Δ = 60°29'27.4" LT.
 D = 7°52'27.1"
 T = 424.27'
 L = 768.22'
 PC = 224+10.93
 PT = 231+79.15
 e = 0.100' /'
 Ls = 300'

PI = 239+36.13
 Δ = 38°39'43.6" RT.
 D = 4°55'01.2"
 T = 408.78'
 L = 786.29'
 PC = 235+27.35
 PT = 243+13.65
 e = 0.090' /'
 Ls = 350'

SAND BAG DITCH CHECKS (E-5)

STA. 231+60	RT.	1	INSTALLATION	22	BAG
STA. 234+00	RT.	1	INSTALLATION	22	BAG
STA. 238+75	LT. & RT.	2	INSTALLATIONS	44	BAG

ROCK DITCH CHECKS (E-6)

STA. 238+15	LT. & RT.	2	INSTALLATIONS	6	CU. YDS.
STA. 241+50	RT.	1	INSTALLATION	3	CU. YDS.

REVISIONS

DATE	REVISION

- (E-5) SAND BAG DITCH CHECKS
- (E-6) ROCK DITCH CHECKS
- (E-II) SILT FENCE
- (E-14) SEDIMENT BASIN

SAND BAG DITCH CHECKS (E-5)

STA. 246+00	LT.	1	INSTALLATION	22	BAG
STA. 246+75	RT.	1	INSTALLATION	22	BAG
STA. 248+90	LT. & RT.	2	INSTALLATIONS	44	BAG
STA. 250+25	RT.	1	INSTALLATION	22	BAG
STA. 252+50	RT.	1	INSTALLATION	22	BAG

CLEARING AND GRUBBING

STA. 245+00 - STA. 260+00	LT. & RT.	15	STA.
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SILT FENCE (E-II)

STA. 245+50 - STA. 247+50	LT.	220	LIN. FT.
STA. 246+90 - STA. 247+35	RT.	115	LIN. FT.
STA. 254+25 - STA. 260+00	RT.	580	LIN. FT.

ROCK DITCH CHECKS (E-6)

STA. 247+65	LT.	1	INSTALLATION	3	CU. YDS.
STA. 247+65	RT.	1	INSTALLATION	3	CU. YDS.
STA. 259+00	RT.	1	INSTALLATION	3	CU. YDS.

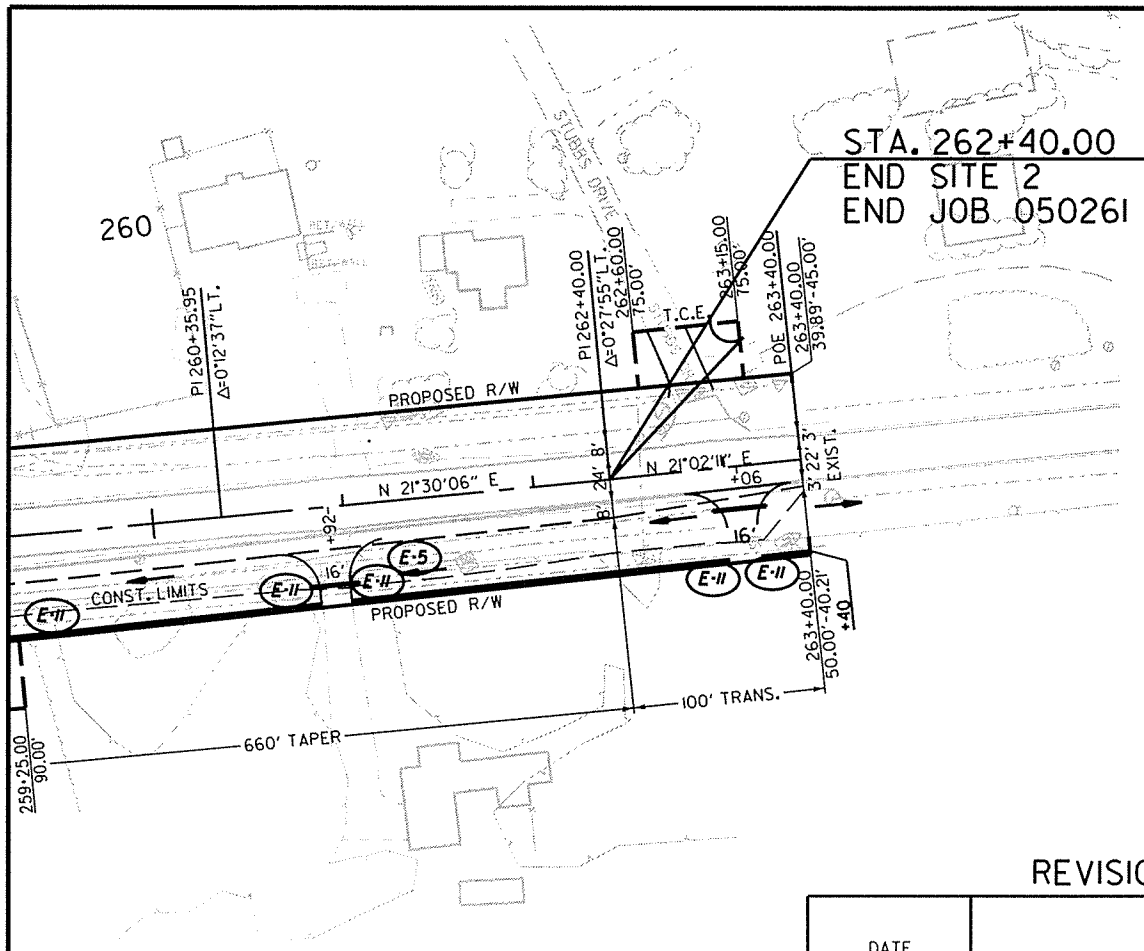
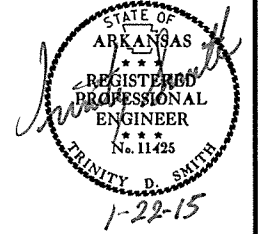
PI = 248+46.94
 Δ = 27°35'01.9" LT.
 D = 5°44'39.2"
 T = 244.85'
 L = 480.20'
 PC = 246+02.09
 PT = 250+82.29
 e = 0.095' /'
 Ls = 350'

PI = 254+55.58
 Δ = 4°46'51.1" LT.
 D = 1°00'00.0"
 T = 239.18'
 L = 478.09'
 PC = 252+16.39
 PT = 256+94.48
 e = 0.026' /'
 Ls = 300'

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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.	050261		17	148

② TEMPORARY EROSION CONTROL DETAILS



STA. 262+40.00
END SITE 2
END JOB 050261

CLEARING AND GRUBBING			
STA. 260+00 -	STA. 263+40	LT. & RT.	3.4 STA.
SILT FENCE (E-11)			
STA. 260+00 -	STA. 263+40	RT.	310 LIN. FT.
SAND BAG DITCH CHECKS (E-5)			
STA. 261+25	RT.	1 INSTALLATION	22 BAG

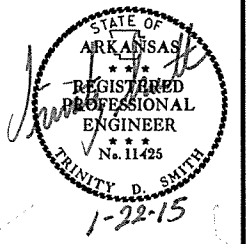
REVISIONS

DATE	REVISION

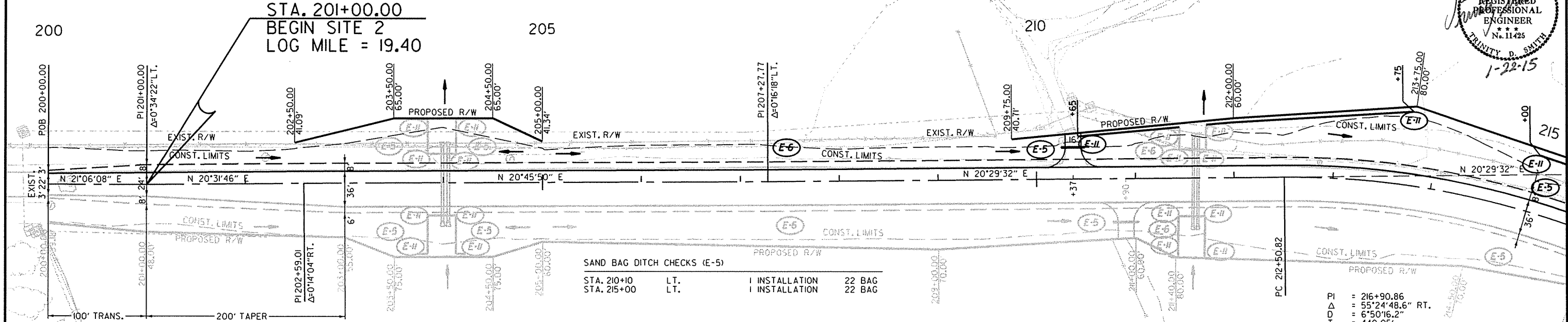
- E-5 SAND BAG DITCH CHECKS
- E-6 ROCK DITCH CHECKS
- E-11 SILT FENCE
- E-14 SEDIMENT BASIN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		18	148
JOB NO. 050261							18	148

2 TEMPORARY EROSION CONTROL DETAILS



CLEARING AND GRUBBING
 STA. 200+00 - STA. 215+00 LT. & RT. 15 STA.
 SILT FENCE (E-II)
 STA. 210+65 - STA. 211+45 LT. 130 LIN. FT.
 STA. 211+70 - STA. 214+75 LT. 360 LIN. FT.

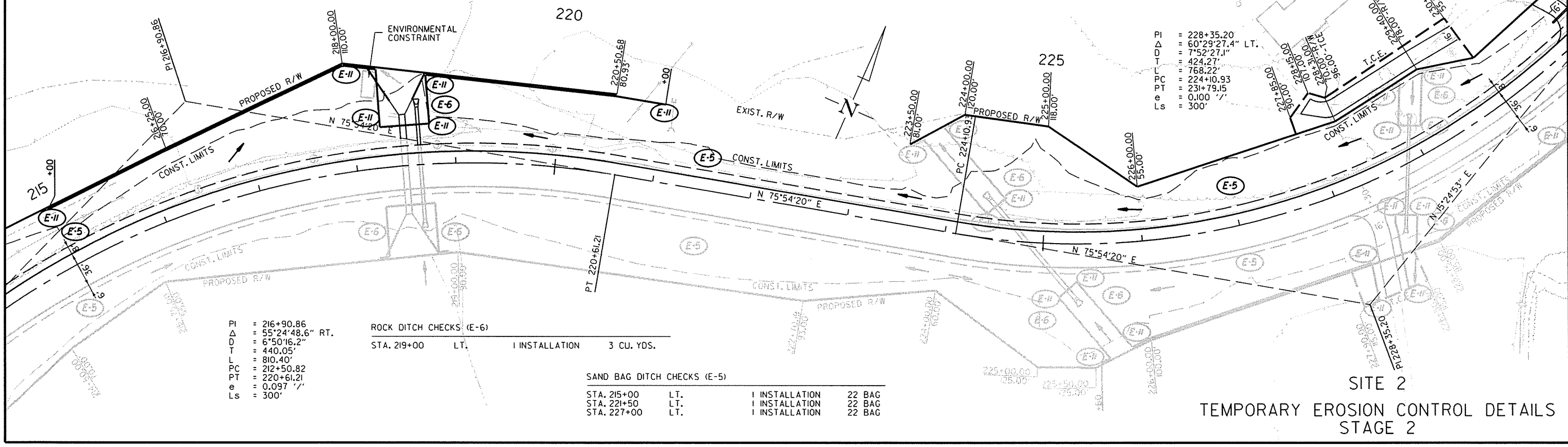


REVISIONS

DATE	REVISION

- (E-5) SAND BAG DITCH CHECKS
- (E-6) ROCK DITCH CHECKS
- (E-II) SILT FENCE
- (E-14) SEDIMENT BASIN

CLEARING AND GRUBBING
 STA. 215+00 - STA. 230+00 LT. & RT. 15 STA.

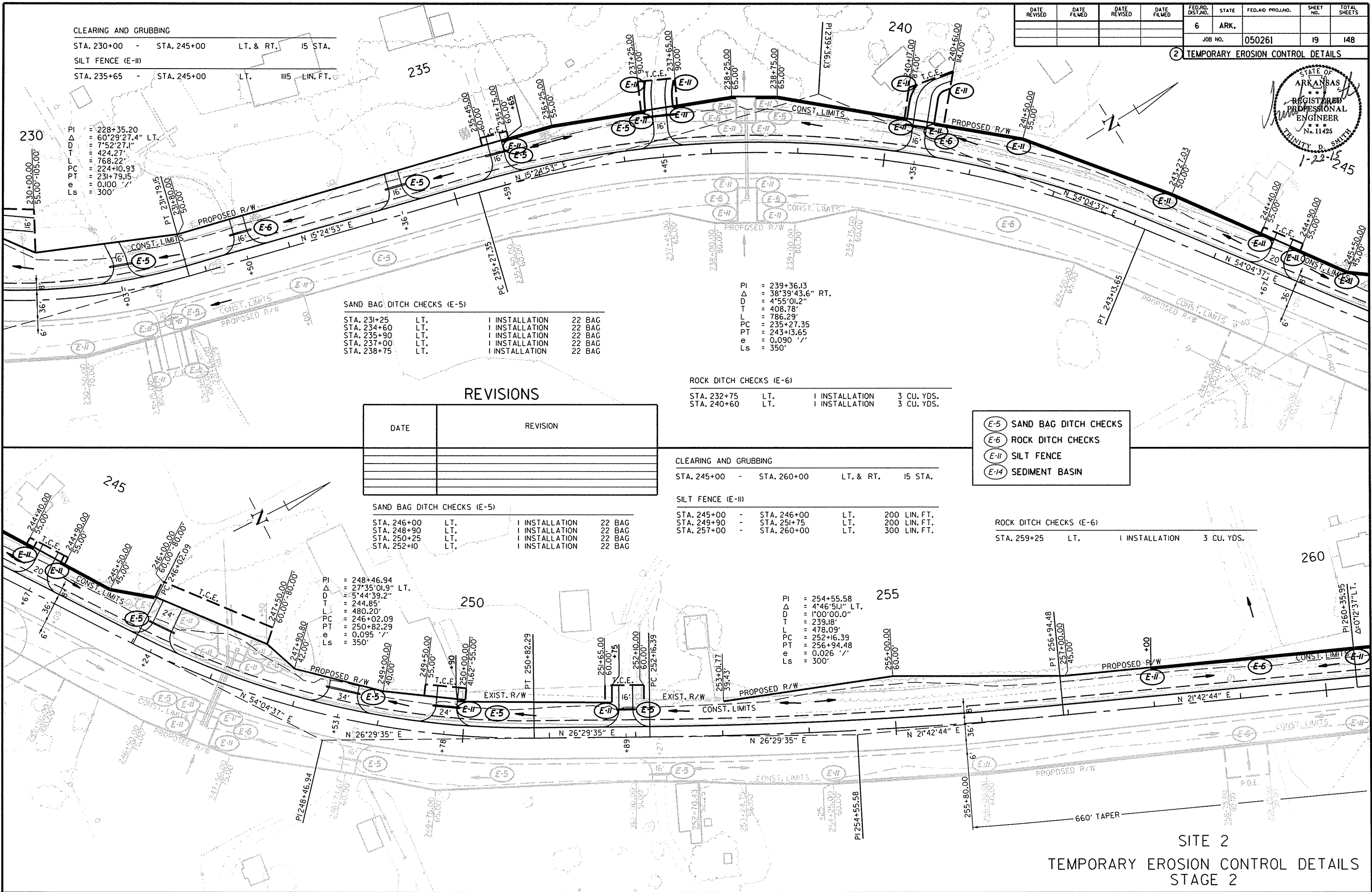
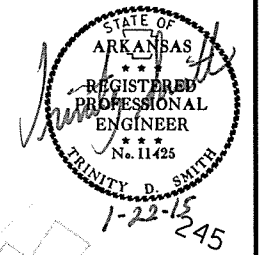


SITE 2
 TEMPORARY EROSION CONTROL DETAILS
 STAGE 2

1/15/2015
 R050261.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		19	148

2 TEMPORARY EROSION CONTROL DETAILS



CLEARING AND GRUBBING

STA. 230+00 - STA. 245+00	LT. & RT.	15 STA.
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SILT FENCE (E-III)

STA. 235+65 - STA. 245+00	LT.	1115 LIN. FT.
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PI = 228+35.20
 Δ = 60°29'27.4" LT.
 D = 7°52'27.1"
 L = 424.27'
 T = 768.22'
 PC = 224+10.93
 PT = 231+79.15
 e = 0.100
 Ls = 300'

PI = 239+36.13
 Δ = 38°39'43.6" RT.
 D = 4°55'01.2"
 L = 408.78'
 T = 786.29'
 PC = 235+27.35
 PT = 243+13.65
 e = 0.090
 Ls = 350'

SAND BAG DITCH CHECKS (E-5)

STA. 231+25	LT.	1 INSTALLATION	22 BAG
STA. 234+60	LT.	1 INSTALLATION	22 BAG
STA. 235+90	LT.	1 INSTALLATION	22 BAG
STA. 237+00	LT.	1 INSTALLATION	22 BAG
STA. 238+75	LT.	1 INSTALLATION	22 BAG

ROCK DITCH CHECKS (E-6)

STA. 232+75	LT.	1 INSTALLATION	3 CU. YDS.
STA. 240+60	LT.	1 INSTALLATION	3 CU. YDS.

REVISIONS

DATE	REVISION

- (E-5) SAND BAG DITCH CHECKS
- (E-6) ROCK DITCH CHECKS
- (E-II) SILT FENCE
- (E-III) SEDIMENT BASIN

CLEARING AND GRUBBING

STA. 245+00 - STA. 260+00	LT. & RT.	15 STA.
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SILT FENCE (E-III)

STA. 245+00 - STA. 246+00	LT.	200 LIN. FT.
STA. 249+90 - STA. 251+75	LT.	200 LIN. FT.
STA. 257+00 - STA. 260+00	LT.	300 LIN. FT.

SAND BAG DITCH CHECKS (E-5)

STA. 246+00	LT.	1 INSTALLATION	22 BAG
STA. 248+90	LT.	1 INSTALLATION	22 BAG
STA. 250+25	LT.	1 INSTALLATION	22 BAG
STA. 252+10	LT.	1 INSTALLATION	22 BAG

ROCK DITCH CHECKS (E-6)

STA. 259+25	LT.	1 INSTALLATION	3 CU. YDS.
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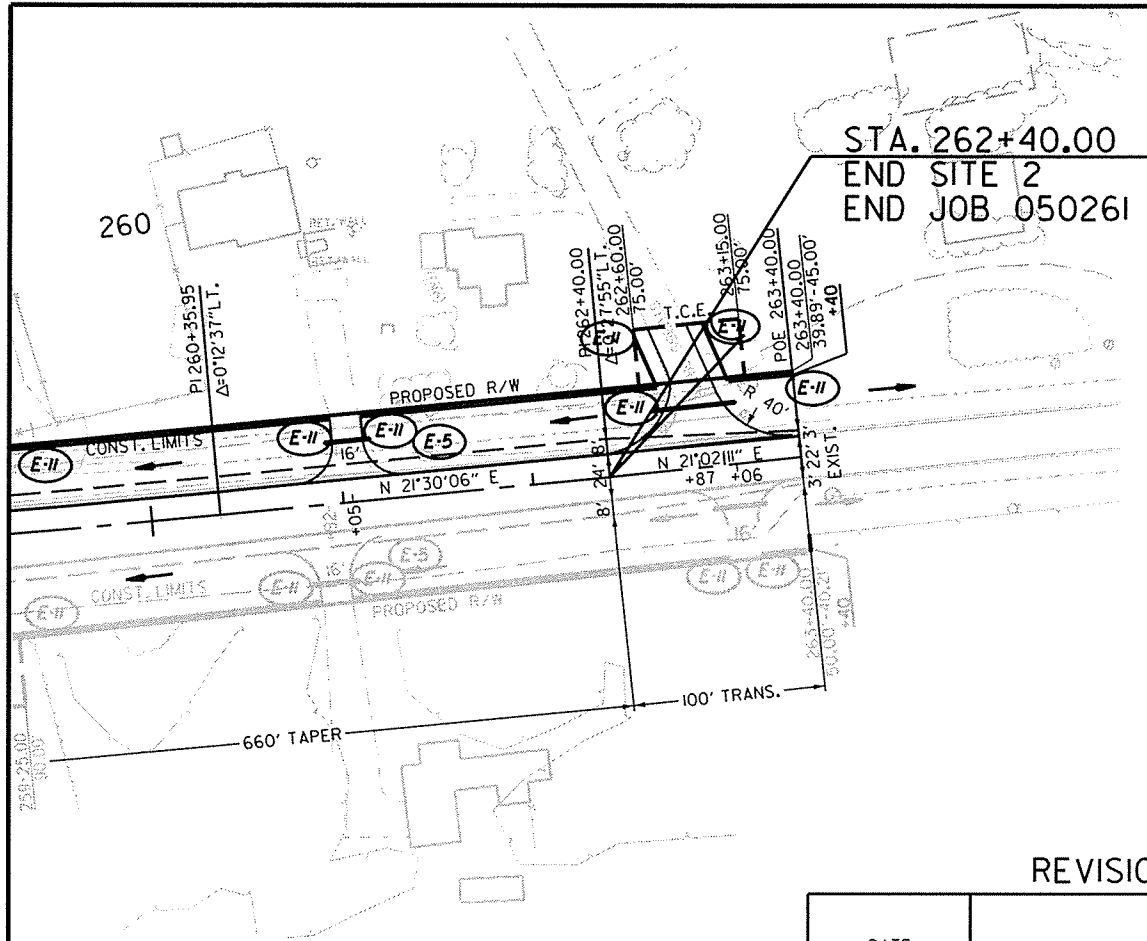
PI = 254+55.58
 Δ = 4°46'51.1" LT.
 D = 1°00'00.0"
 L = 239.18'
 T = 478.09'
 PC = 252+16.39
 PT = 256+94.48
 e = 0.026
 Ls = 300'

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SITE 2
 TEMPORARY EROSION CONTROL DETAILS
 STAGE 2

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.	050261		20	148

② TEMPORARY EROSION CONTROL DETAILS



CLEARING AND GRUBBING			
STA. 260+00 -	STA. 263+40	LT. & RT.	3.4 STA.
SILT FENCE (E-II)			
STA. 260+00 -	STA. 263+40	LT.	350 LIN. FT.
SAND BAG DITCH CHECKS (E-5)			
STA. 261+25	LT.	1 INSTALLATION	22 BAG

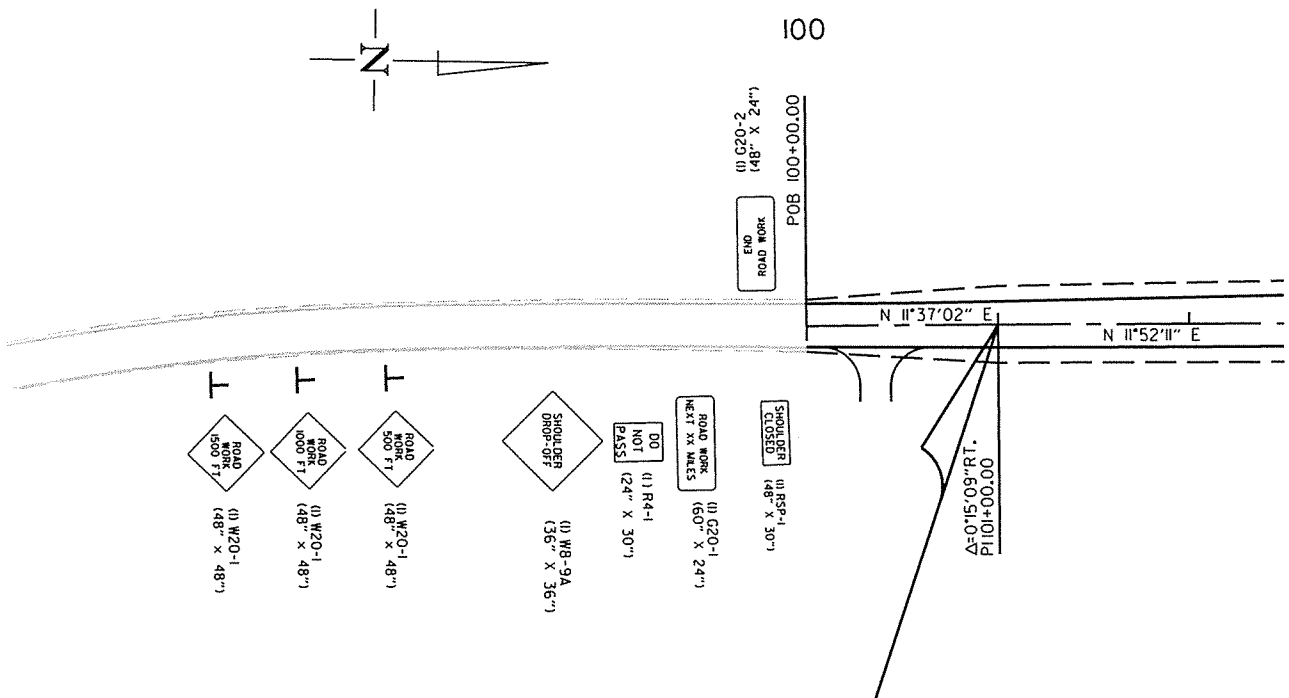
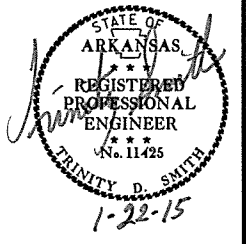
REVISIONS

DATE	REVISION

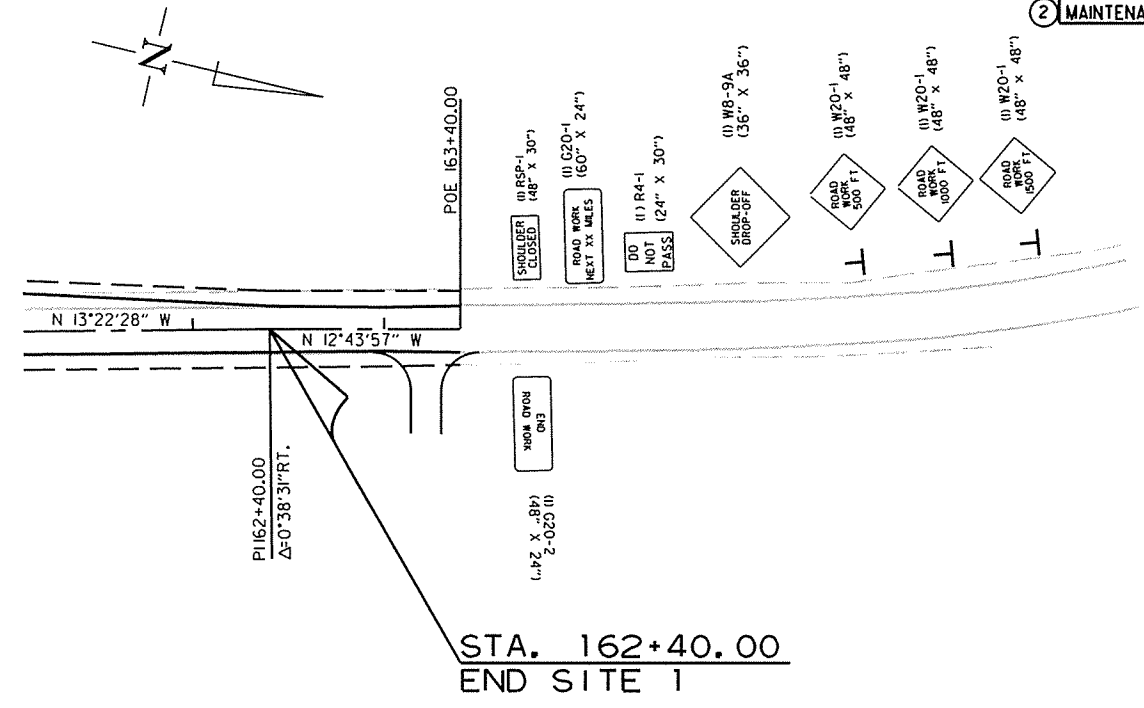
(E-5)	SAND BAG DITCH CHECKS
(E-6)	ROCK DITCH CHECKS
(E-II)	SILT FENCE
(E-14)	SEDIMENT BASIN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		21	148
				JOB NO.	050261		21	148

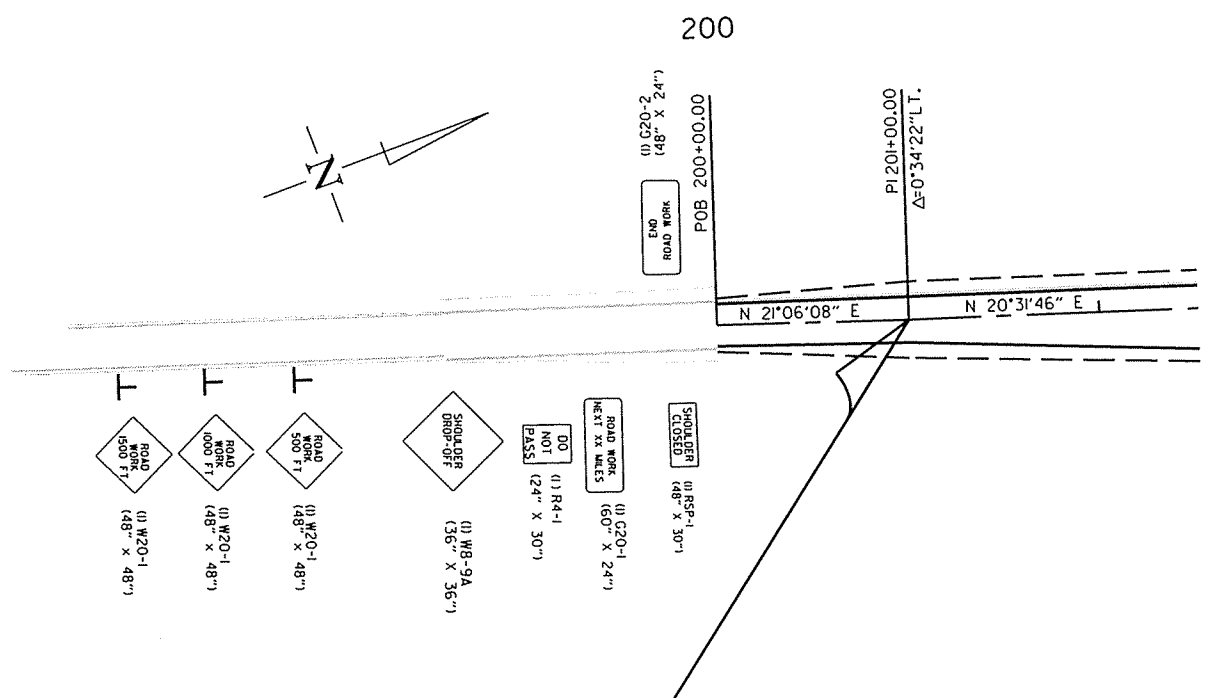
2 MAINTENANCE OF TRAFFIC DETAILS



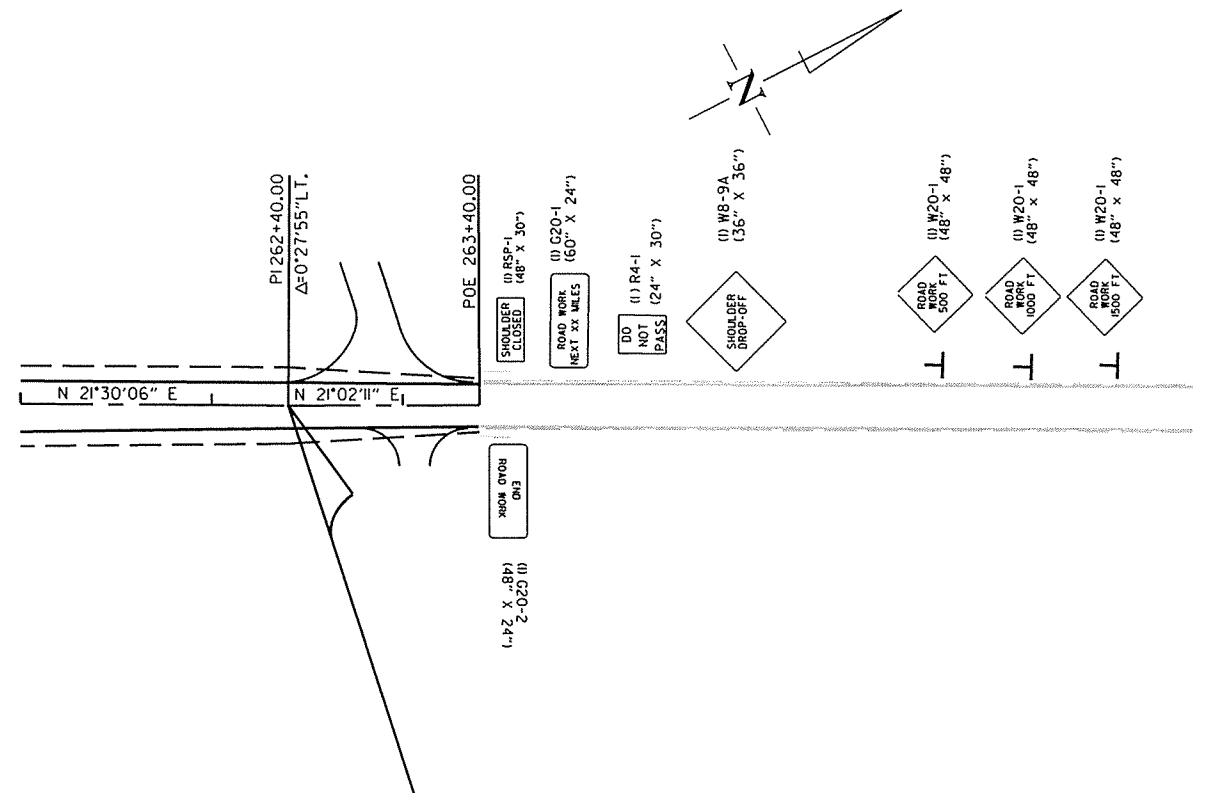
STA. 101+00.00 BEGIN JOB 050261
 BEGIN SITE 1
 LOG MILE = 14.38



STA. 162+40.00
 END SITE 1



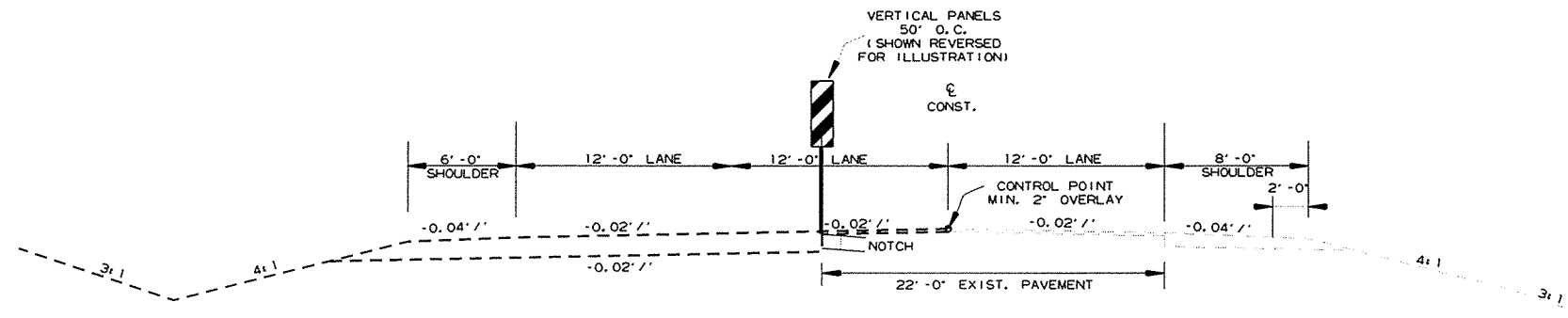
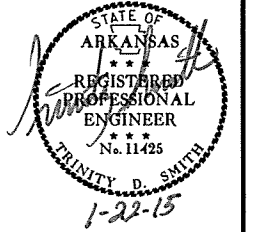
STA. 201+00.00
 BEGIN SITE 2
 LOG MILE = 19.40



STA. 262+40.00
 END SITE 2
 END JOB 050261

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.	050261		22	148

2 MAINTENANCE OF TRAFFIC DETAILS



OVERLAY TANGENT - SOUTHBOUND (LEFT SIDE) WIDENING
STAGE 1

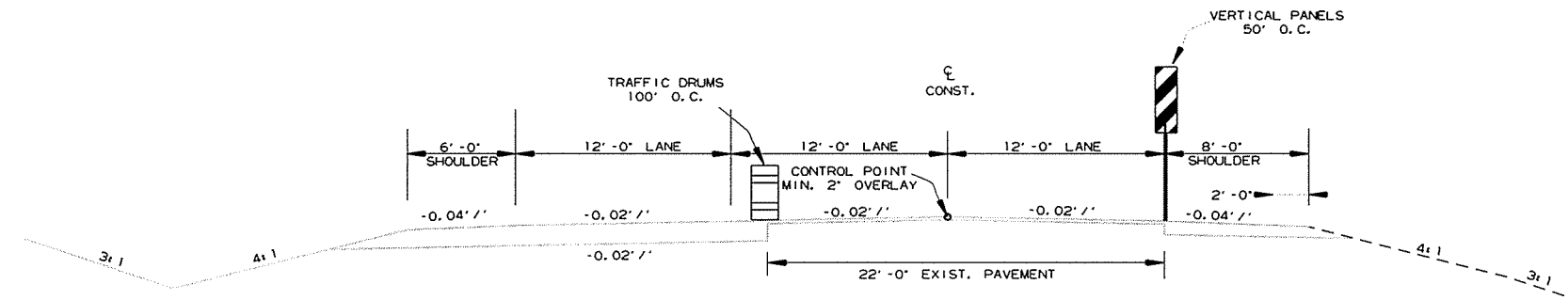
STA. 101+00.00 - STA. 162+40.00

SEQUENCING:

STAGE 1: MAINTAIN TRAFFIC ON EXISTING ROADWAY. EXTEND CULVERTS AND CONSTRUCT NEW CULVERTS. PERFORM LEVELING OPERATIONS WHERE APPLICABLE. PLACE CONSTRUCTION PAVEMENT MARKINGS. NOTCH AND WIDEN FOR LANE ON LT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 50' O.C. SPACING.

STAGE 2: NOTCH AND WIDEN ON RT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 50' O.C. SPACING. UTILIZE TRAFFIC DRUMS AT 100' O.C. SPACING AT EXISTING LANE EDGE ON LT.

STAGE 3: FINAL SURFACE COURSE AND FINAL STRIPING.

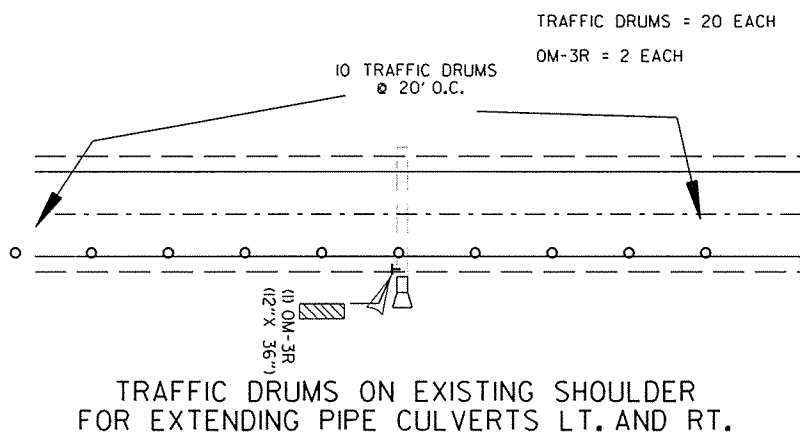


OVERLAY TANGENT - SOUTHBOUND FINAL SURFACING
STAGE 2

STA. 101+00.00 - STA. 162+40.00

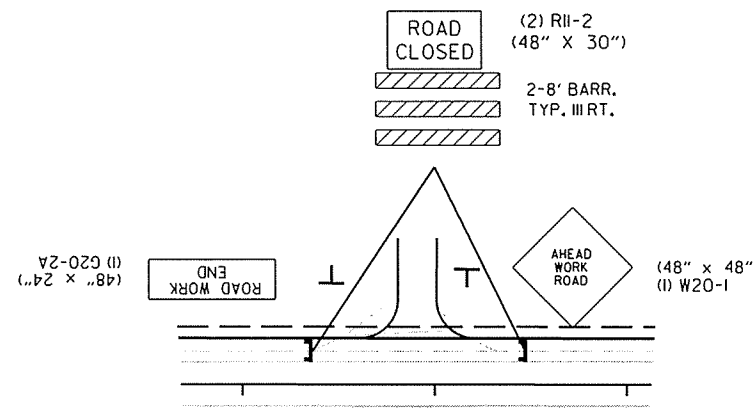
CONSTRUCTION PAVEMENT MARKINGS & RAISED PAVEMENT MARKERS - SITE 1

AS DIRECTED BY THE ENGINEER OVER LEVELING COURSE:
RT. AND LT. EDGE LINES = 12280 LIN. FT.
DBL. CENTERLINE = 12280 LIN. FT.



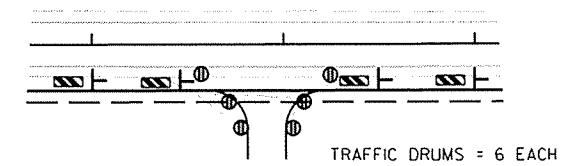
TRAFFIC DRUMS ON EXISTING SHOULDER
FOR EXTENDING PIPE CULVERTS LT. AND RT.

STA. 102+21 STA. 110+18 STA. 119+60
STA. 138+35 STA. 146+18



COUNTY ROAD, STATE HIGHWAY
AND CITY STREET DETAIL

STA. 118+47 STA. 118+88 STA. 154+70



DRIVEWAY/TRAFFIC DRUM DETAIL

MAINTENANCE OF TRAFFIC DETAILS
SITE 1

1/15/2015

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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.		23	148
				JOB NO. 050261				

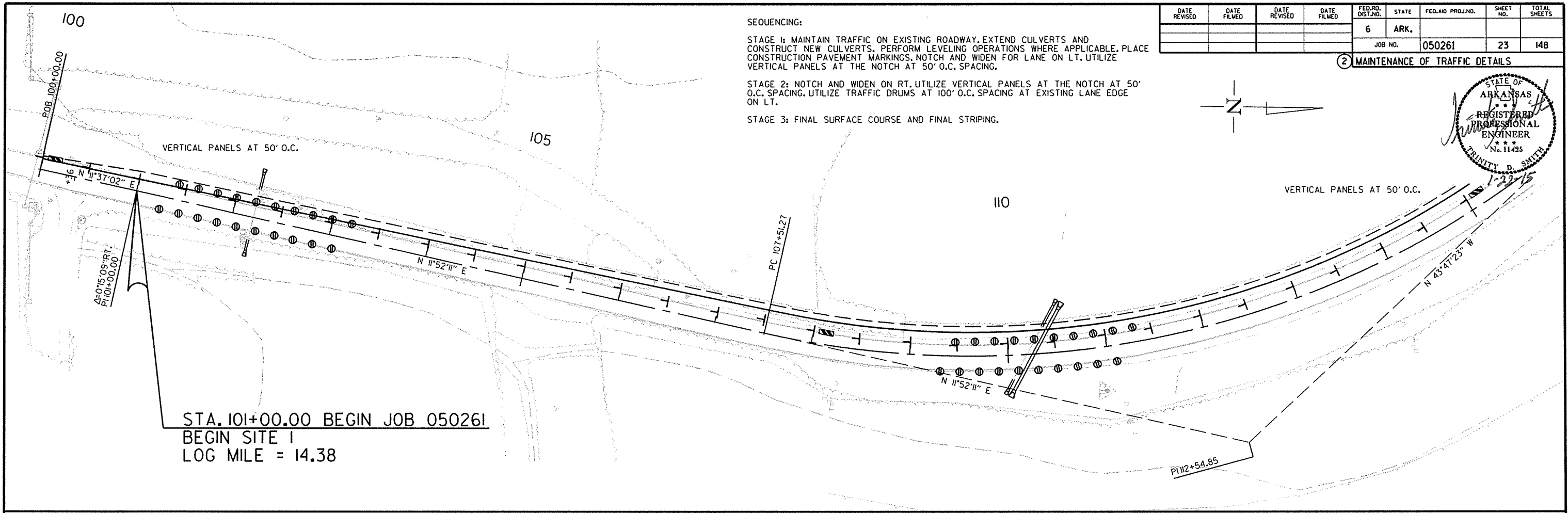
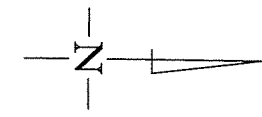
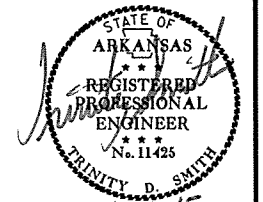
SEQUENCING:

STAGE 1: MAINTAIN TRAFFIC ON EXISTING ROADWAY. EXTEND CULVERTS AND CONSTRUCT NEW CULVERTS. PERFORM LEVELING OPERATIONS WHERE APPLICABLE. PLACE CONSTRUCTION PAVEMENT MARKINGS, NOTCH AND WIDEN FOR LANE ON LT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 50' O.C. SPACING.

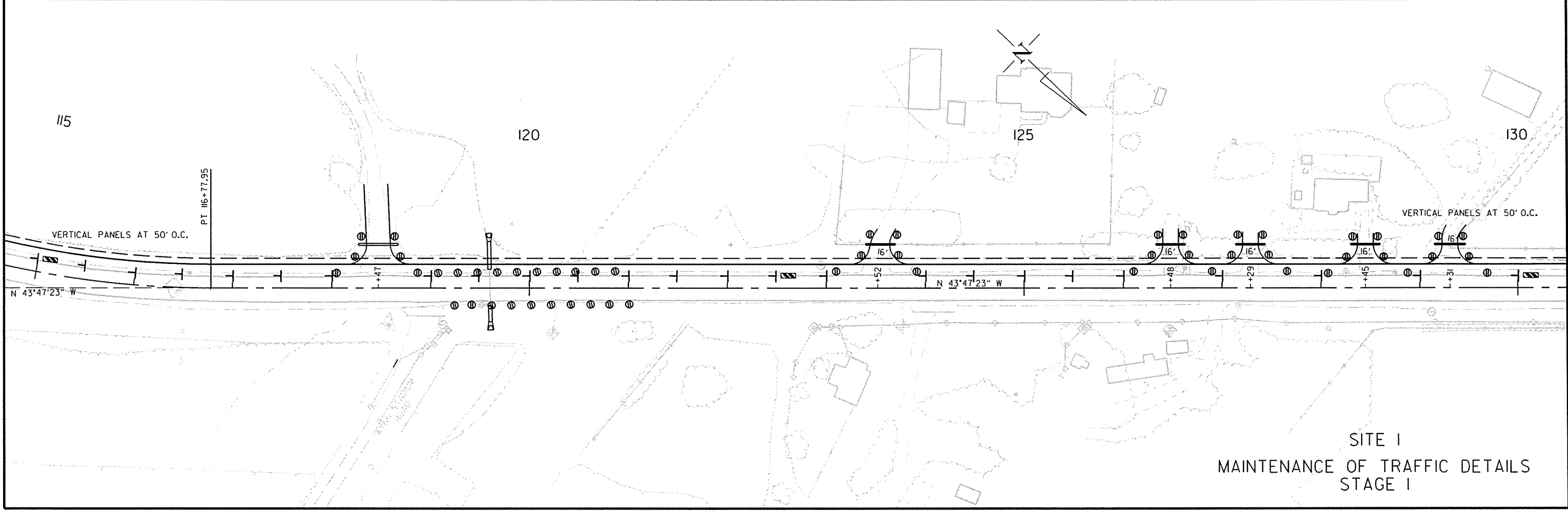
STAGE 2: NOTCH AND WIDEN ON RT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 50' O.C. SPACING. UTILIZE TRAFFIC DRUMS AT 100' O.C. SPACING AT EXISTING LANE EDGE ON LT.

STAGE 3: FINAL SURFACE COURSE AND FINAL STRIPING.

② MAINTENANCE OF TRAFFIC DETAILS



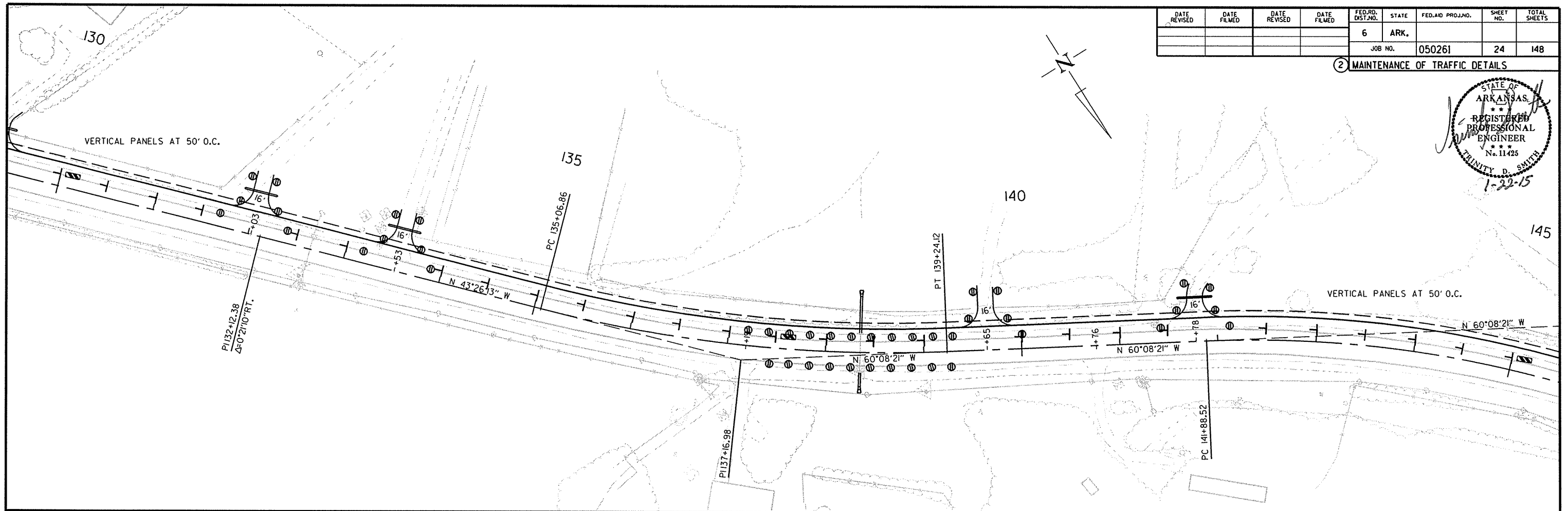
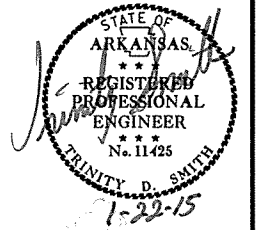
STA. 101+00.00 BEGIN JOB 050261
 BEGIN SITE 1
 LOG MILE = 14.38



SITE 1
 MAINTENANCE OF TRAFFIC DETAILS
 STAGE 1

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. 050261	24	148

② MAINTENANCE OF TRAFFIC DETAILS

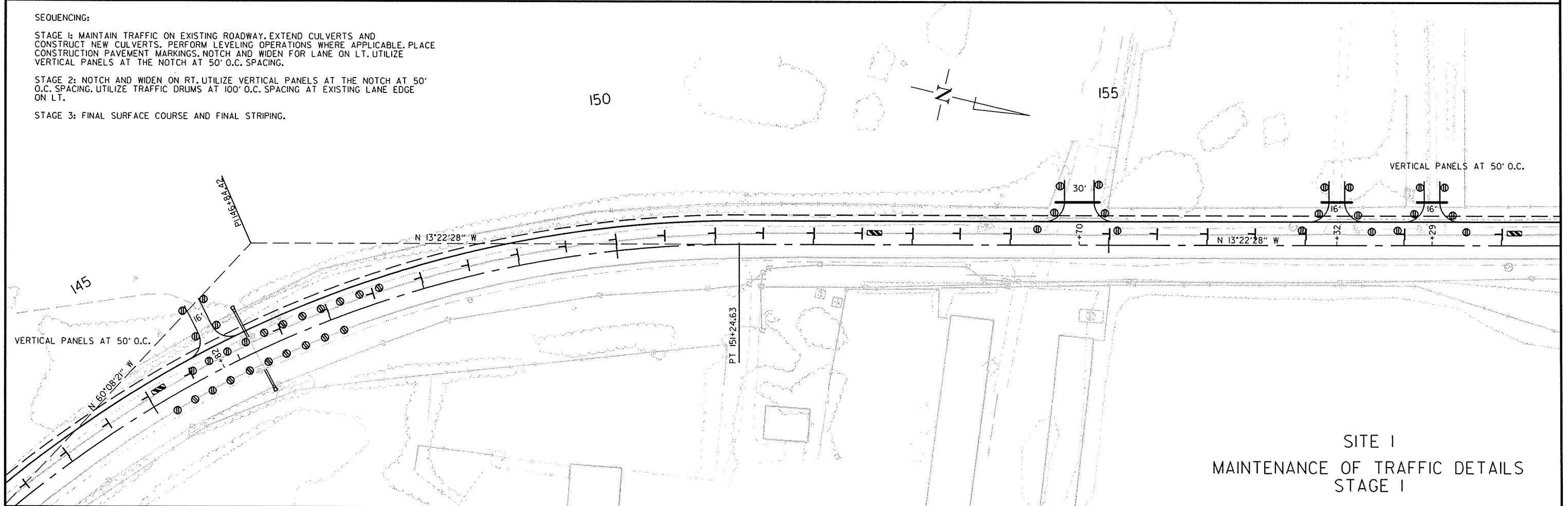


SEQUENCING:

STAGE 1: MAINTAIN TRAFFIC ON EXISTING ROADWAY, EXTEND CULVERTS AND CONSTRUCT NEW CULVERTS, PERFORM LEVELING OPERATIONS WHERE APPLICABLE, PLACE CONSTRUCTION PAVEMENT MARKINGS, NOTCH AND WIDEN FOR LANE ON LT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 50' O.C. SPACING.

STAGE 2: NOTCH AND WIDEN ON RT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 50' O.C. SPACING. UTILIZE TRAFFIC DRUMS AT 100' O.C. SPACING AT EXISTING LANE EDGE ON LT.

STAGE 3: FINAL SURFACE COURSE AND FINAL STRIPING.



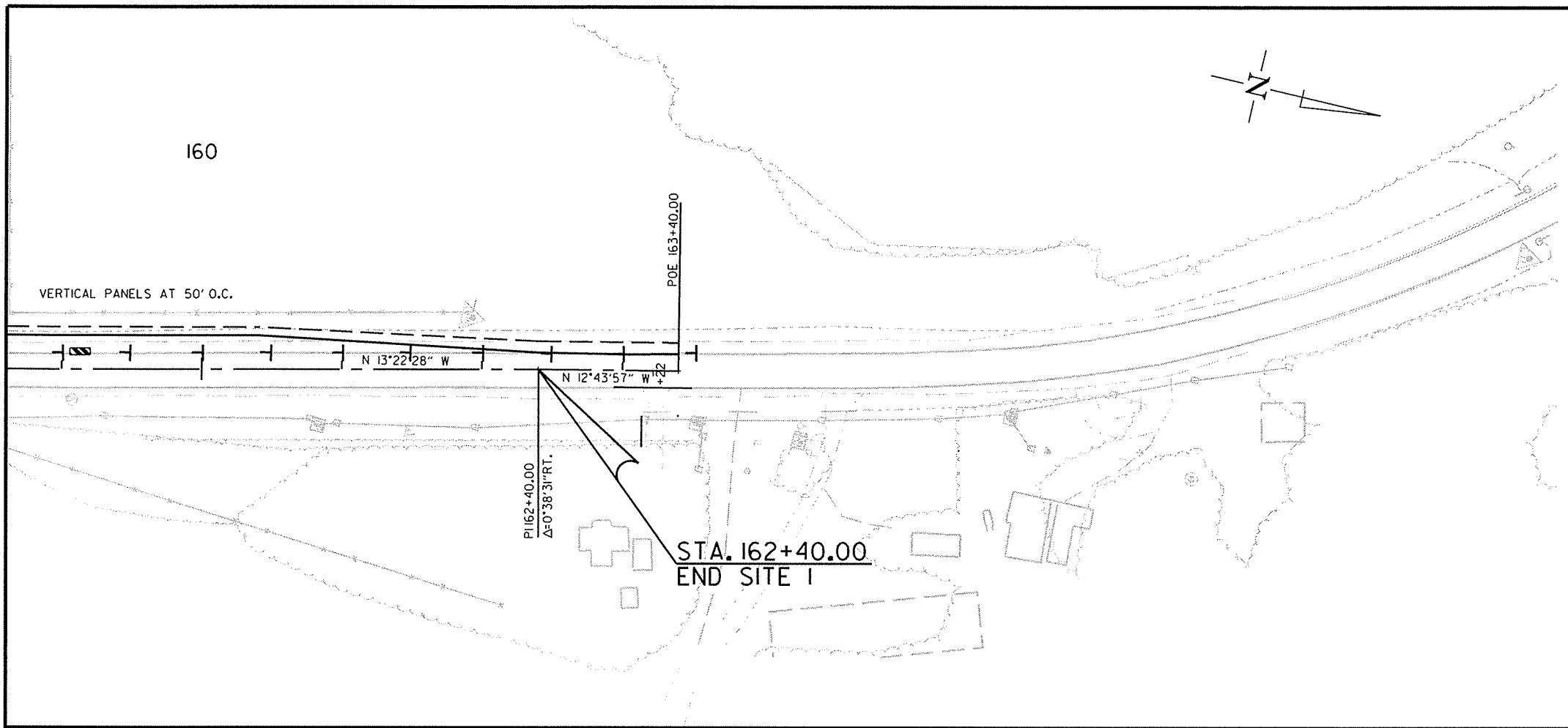
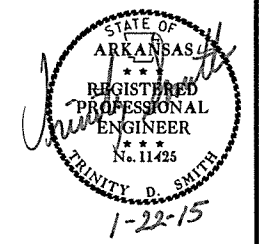
SITE I
MAINTENANCE OF TRAFFIC DETAILS
STAGE I

1/15/2015

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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.	050261		25	148

② MAINTENANCE OF TRAFFIC DETAILS



SEQUENCING:

- STAGE 1: MAINTAIN TRAFFIC ON EXISTING ROADWAY. EXTEND CULVERTS AND CONSTRUCT NEW CULVERTS. PERFORM LEVELING OPERATIONS WHERE APPLICABLE. PLACE CONSTRUCTION PAVEMENT MARKINGS, NOTCH AND WIDEN FOR LANE ON LT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 50' O.C. SPACING.
- STAGE 2: NOTCH AND WIDEN ON RT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 50' O.C. SPACING. UTILIZE TRAFFIC DRUMS AT 100' O.C. SPACING AT EXISTING LANE EDGE ON LT.
- STAGE 3: FINAL SURFACE COURSE AND FINAL STRIPING.

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SITE I
 MAINTENANCE OF TRAFFIC DETAILS
 STAGE I

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. 050261							26	148

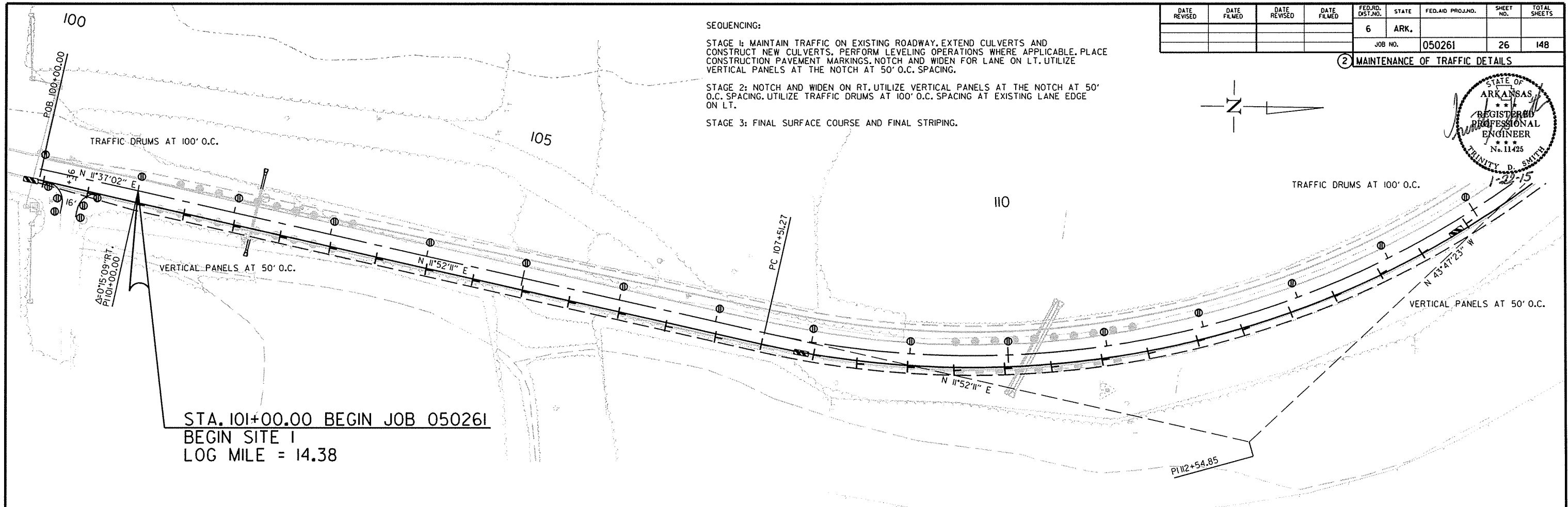
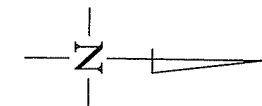
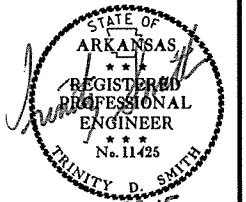
SEQUENCING:

STAGE 1: MAINTAIN TRAFFIC ON EXISTING ROADWAY. EXTEND CULVERTS AND CONSTRUCT NEW CULVERTS. PERFORM LEVELING OPERATIONS WHERE APPLICABLE. PLACE CONSTRUCTION PAVEMENT MARKINGS. NOTCH AND WIDEN FOR LANE ON LT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 50' O.C. SPACING.

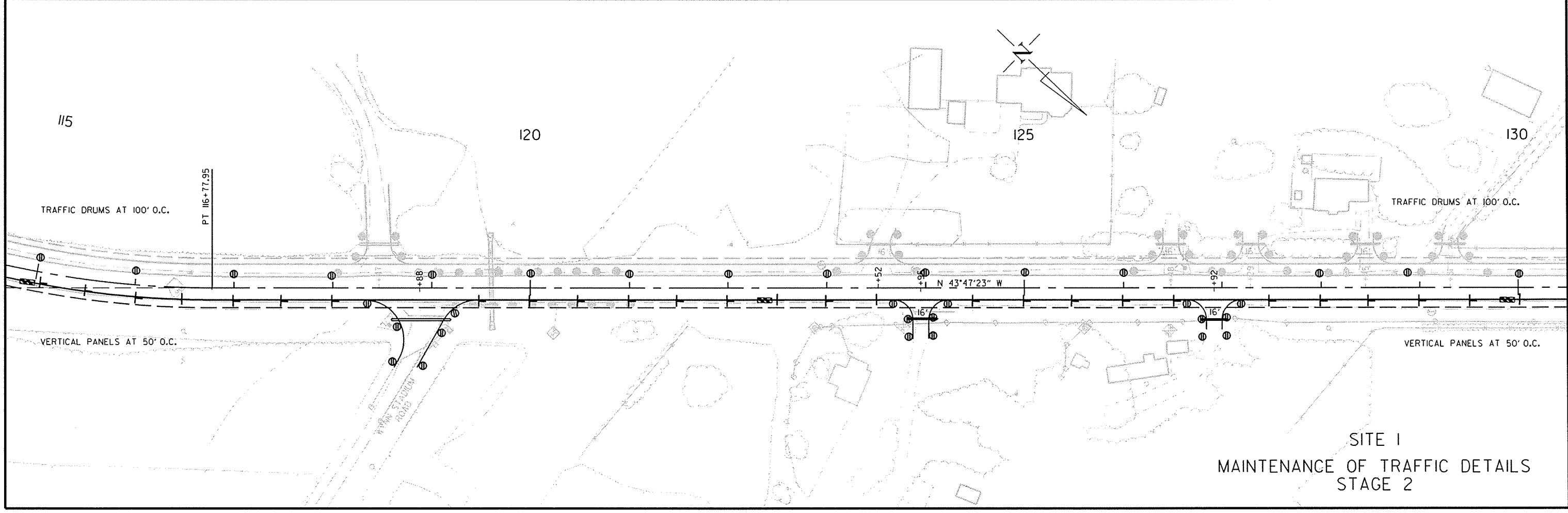
STAGE 2: NOTCH AND WIDEN ON RT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 50' O.C. SPACING. UTILIZE TRAFFIC DRUMS AT 100' O.C. SPACING AT EXISTING LANE EDGE ON LT.

STAGE 3: FINAL SURFACE COURSE AND FINAL STRIPING.

② MAINTENANCE OF TRAFFIC DETAILS



STA. 101+00.00 BEGIN JOB 050261
 BEGIN SITE I
 LOG MILE = 14.38

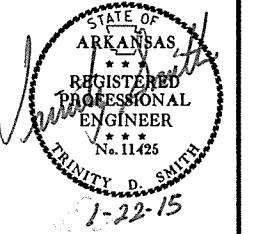


SITE I
 MAINTENANCE OF TRAFFIC DETAILS
 STAGE 2

1/15/2015
 R050261.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		27	148
				JOB NO.	050261			

2 MAINTENANCE OF TRAFFIC DETAILS

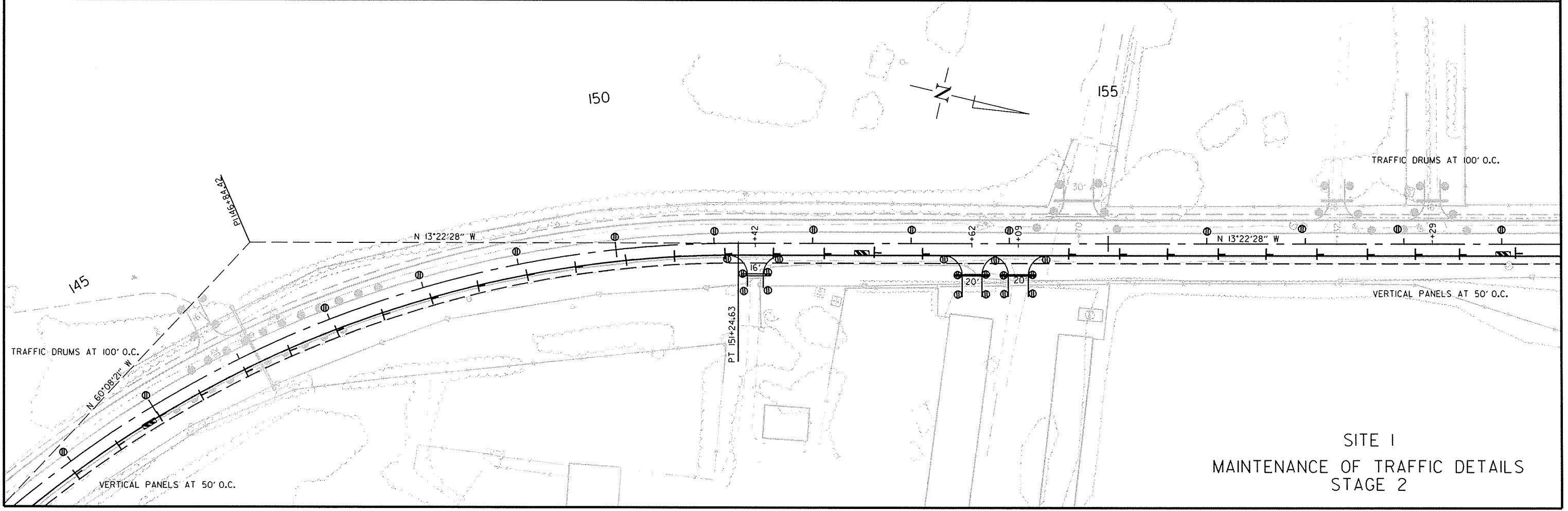
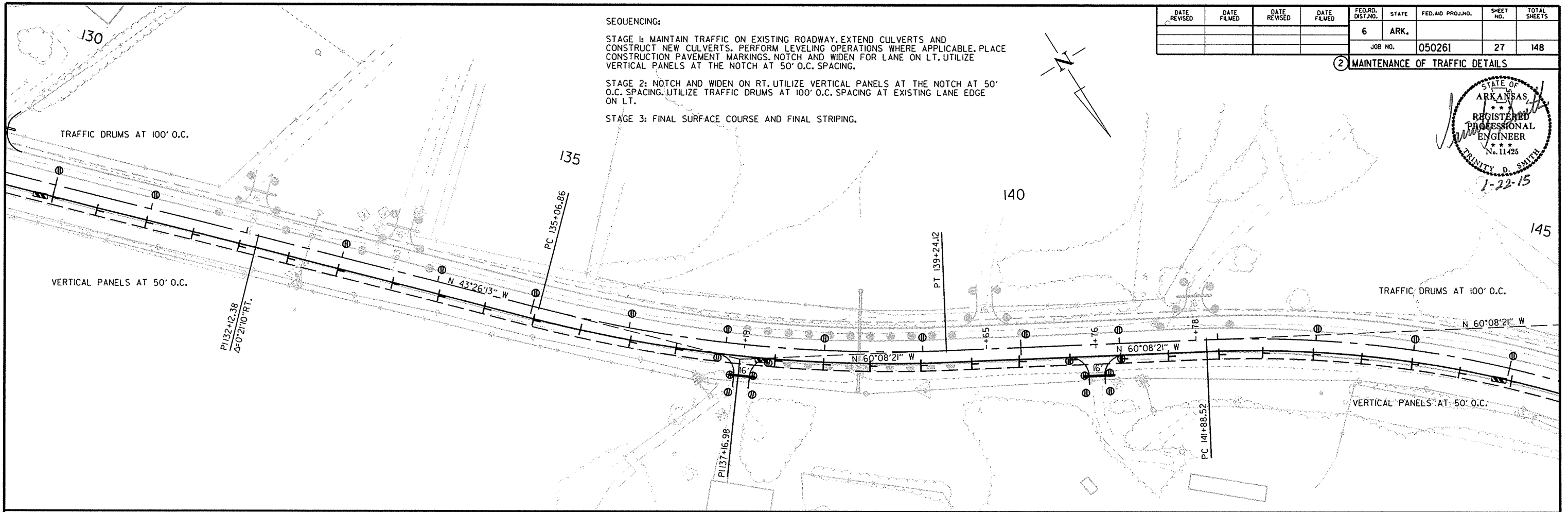


SEQUENCING:

STAGE 1: MAINTAIN TRAFFIC ON EXISTING ROADWAY, EXTEND CULVERTS AND CONSTRUCT NEW CULVERTS, PERFORM LEVELING OPERATIONS WHERE APPLICABLE. PLACE CONSTRUCTION PAVEMENT MARKINGS, NOTCH AND WIDEN FOR LANE ON LT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 50' O.C. SPACING.

STAGE 2: NOTCH AND WIDEN ON RT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 50' O.C. SPACING. UTILIZE TRAFFIC DRUMS AT 100' O.C. SPACING AT EXISTING LANE EDGE ON LT.

STAGE 3: FINAL SURFACE COURSE AND FINAL STRIPING.



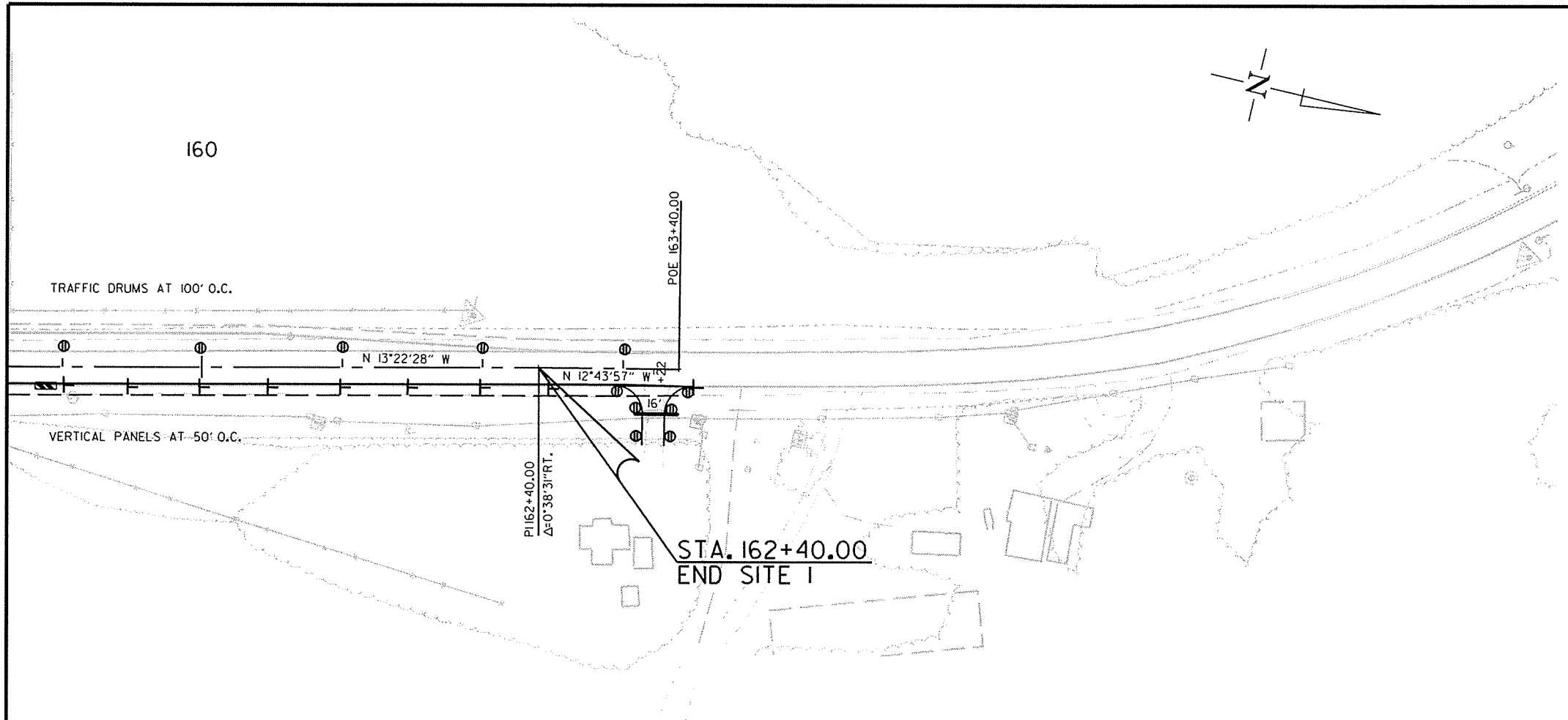
SITE 1
MAINTENANCE OF TRAFFIC DETAILS
STAGE 2

1/15/2015

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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.	050261		28	148

② MAINTENANCE OF TRAFFIC DETAILS



SEQUENCING:

STAGE 1: MAINTAIN TRAFFIC ON EXISTING ROADWAY. EXTEND CULVERTS AND CONSTRUCT NEW CULVERTS. PERFORM LEVELING OPERATIONS WHERE APPLICABLE. PLACE CONSTRUCTION PAVEMENT MARKINGS, NOTCH AND WIDEN FOR LANE ON LT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 50' O.C. SPACING.

STAGE 2: NOTCH AND WIDEN ON RT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 50' O.C. SPACING. UTILIZE TRAFFIC DRUMS AT 100' O.C. SPACING AT EXISTING LANE EDGE ON LT.

STAGE 3: FINAL SURFACE COURSE AND FINAL STRIPING.

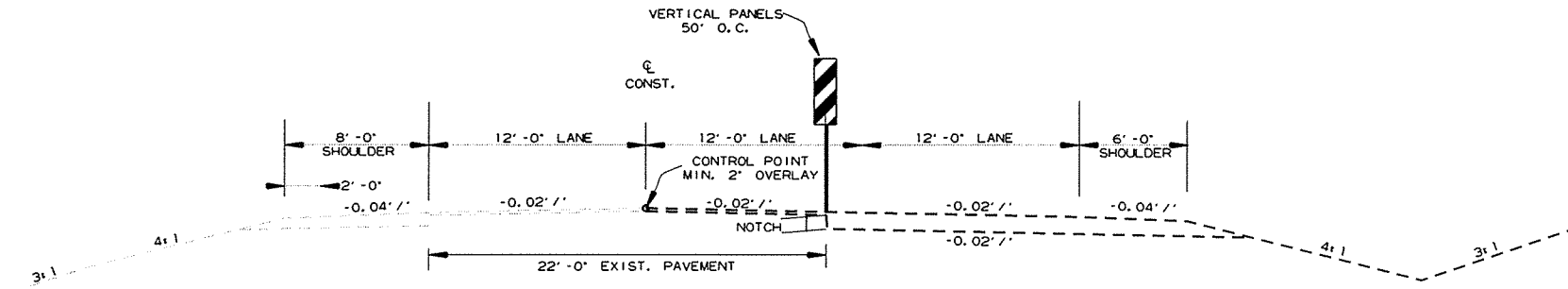
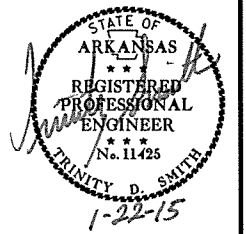
1/15/2015

R050261.DGN

SITE I
MAINTENANCE OF TRAFFIC DETAILS
STAGE 2

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.	050261		29	148

② MAINTENANCE OF TRAFFIC DETAILS



OVERLAY TANGENT - NORTHBOUND (RIGHT SIDE) WIDENING
STAGE 1

STA. 201+00.00 - STA. 262+40.00

SEQUENCING:

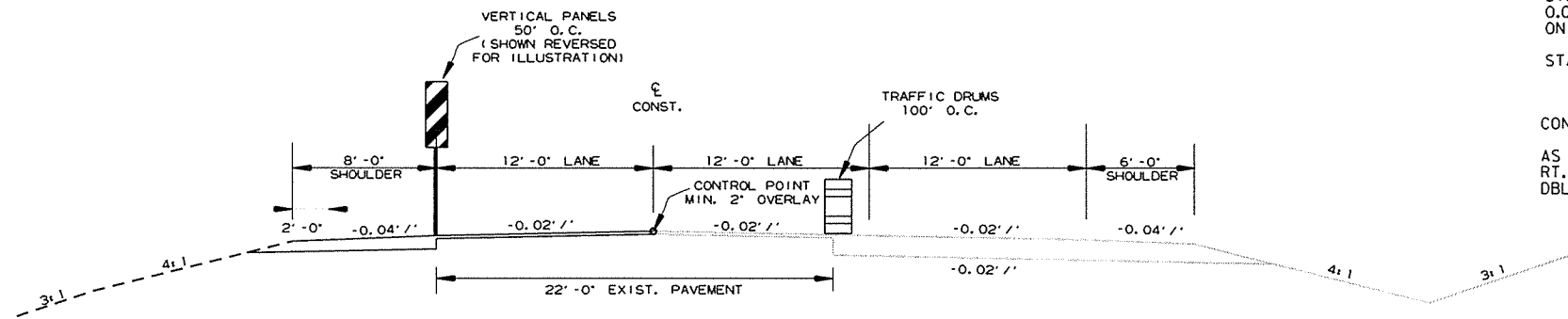
STAGE 1: MAINTAIN TRAFFIC ON EXISTING ROADWAY. EXTEND CULVERTS AND CONSTRUCT NEW CULVERTS. PERFORM LEVELING OPERATIONS WHERE APPLICABLE. PLACE CONSTRUCTION PAVEMENT MARKINGS, NOTCH AND WIDEN FOR LANE ON RT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 50' O.C. SPACING.

STAGE 2: NOTCH AND WIDEN ON LT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 50' O.C. SPACING. UTILIZE TRAFFIC DRUMS AT 100' O.C. SPACING AT EXISTING LANE EDGE ON RT.

STAGE 3: FINAL SURFACE COURSE AND FINAL STRIPING.

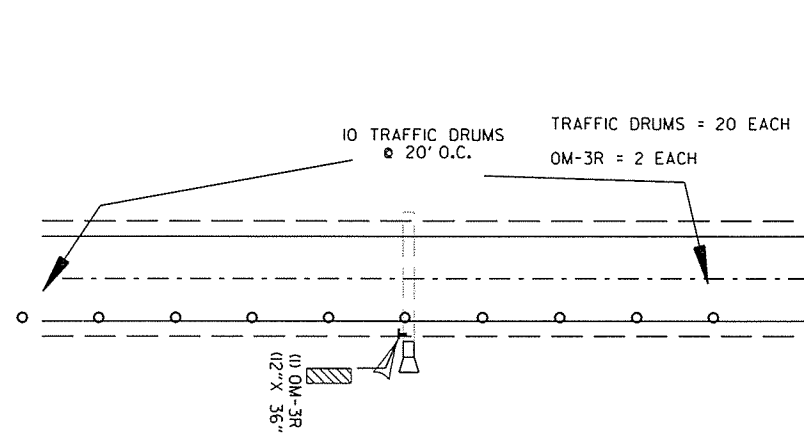
CONSTRUCTION PAVEMENT MARKINGS & RAISED PAVEMENT MARKERS - SITE 2

AS DIRECTED BY THE ENGINEER OVER LEVELING COURSE:
RT. AND LT. EDGE LINES = 12280 LIN. FT.
DBL. CENTERLINE = 12280 LIN. FT.



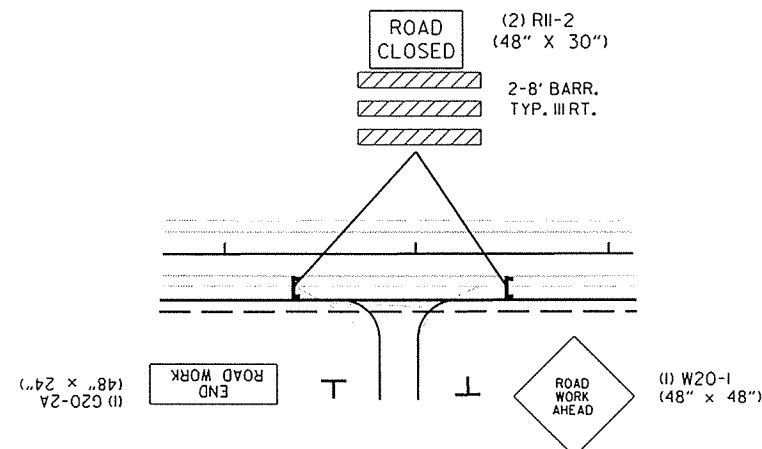
OVERLAY TANGENT - NORTHBOUND FINAL SURFACING
STAGE 2

STA. 201+00.00 - STA. 262+40.00



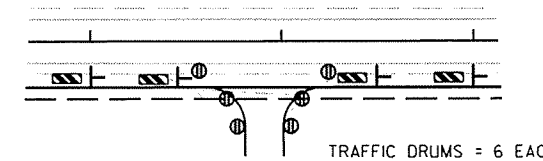
TRAFFIC DRUMS ON EXISTING SHOULDER
FOR EXTENDING PIPE CULVERTS LT. AND RT.

STA. 203+99 STA. 211+59 STA. 224+84
STA. 228+82 STA. 238+41 STA. 247+12



COUNTY ROAD, STATE HIGHWAY
AND CITY STREET DETAIL

STA. 245+09



DRIVEWAY/TRAFFIC DRUM DETAIL

MAINTENANCE OF TRAFFIC DETAILS
SITE 2

1/15/2015

R050261.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		30	148

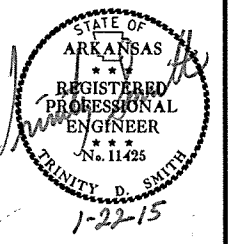
SEQUENCING:

STAGE 1: MAINTAIN TRAFFIC ON EXISTING ROADWAY, EXTEND CULVERTS AND CONSTRUCT NEW CULVERTS, PERFORM LEVELING OPERATIONS WHERE APPLICABLE, PLACE CONSTRUCTION PAVEMENT MARKINGS, NOTCH AND WIDEN FOR LANE ON RT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 50' O.C. SPACING.

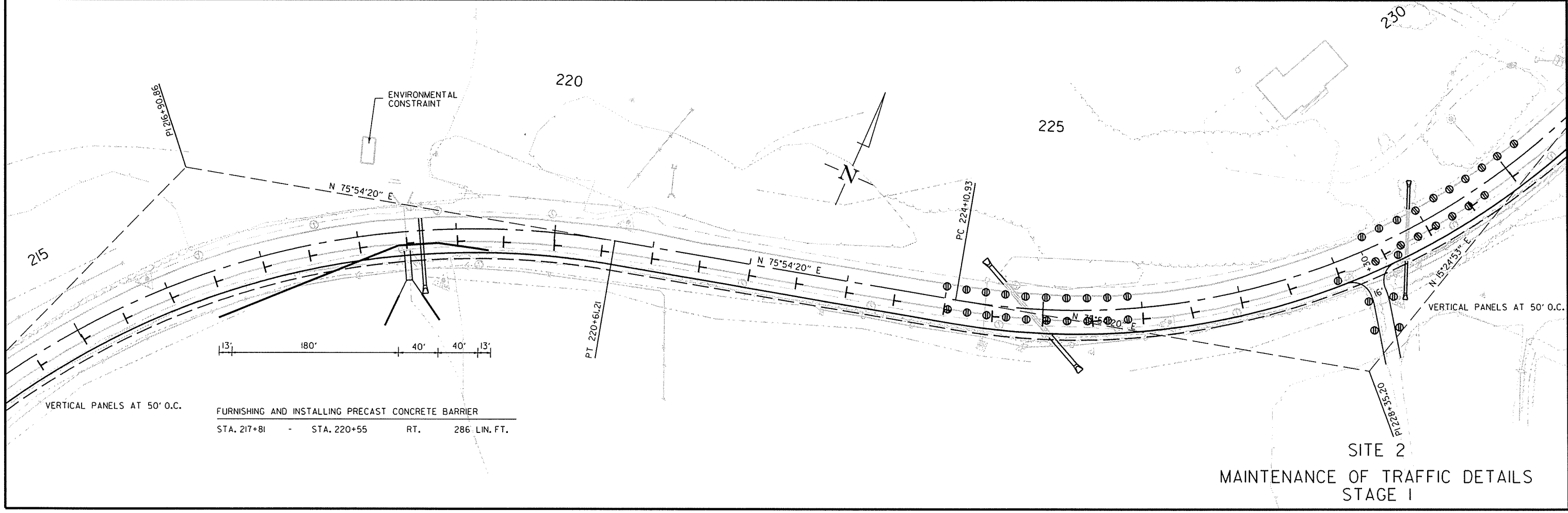
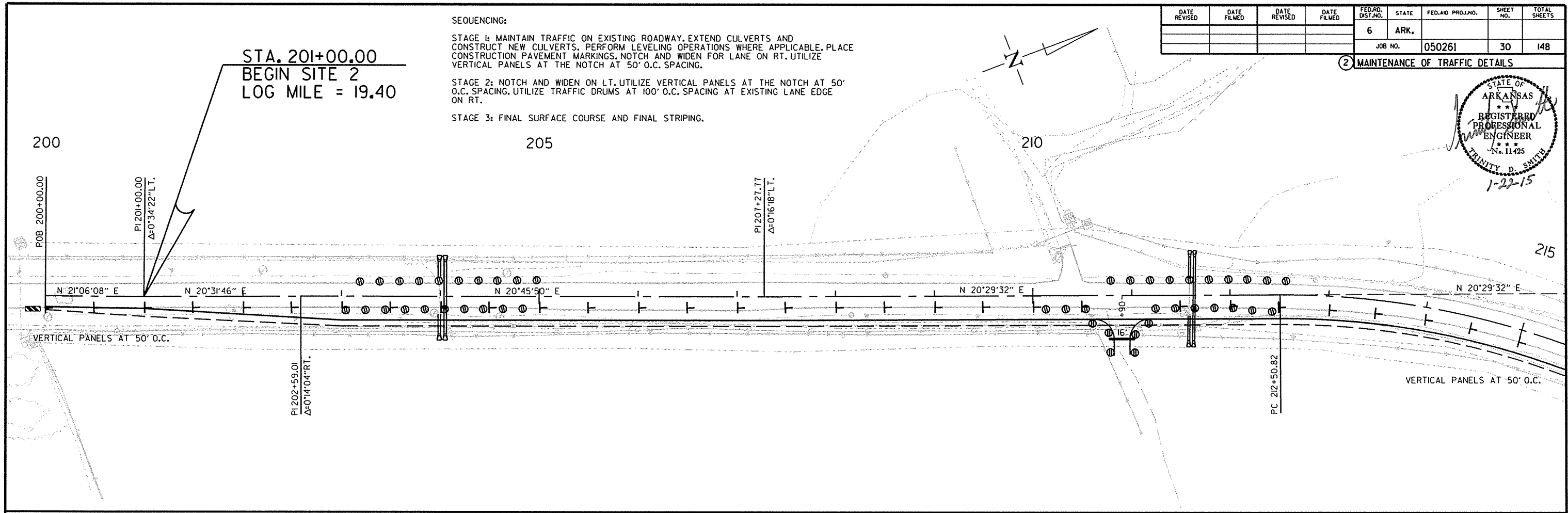
STAGE 2: NOTCH AND WIDEN ON LT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 50' O.C. SPACING. UTILIZE TRAFFIC DRUMS AT 100' O.C. SPACING AT EXISTING LANE EDGE ON RT.

STAGE 3: FINAL SURFACE COURSE AND FINAL STRIPING.

2 MAINTENANCE OF TRAFFIC DETAILS



STA. 201+00.00
BEGIN SITE 2
LOG MILE = 19.40



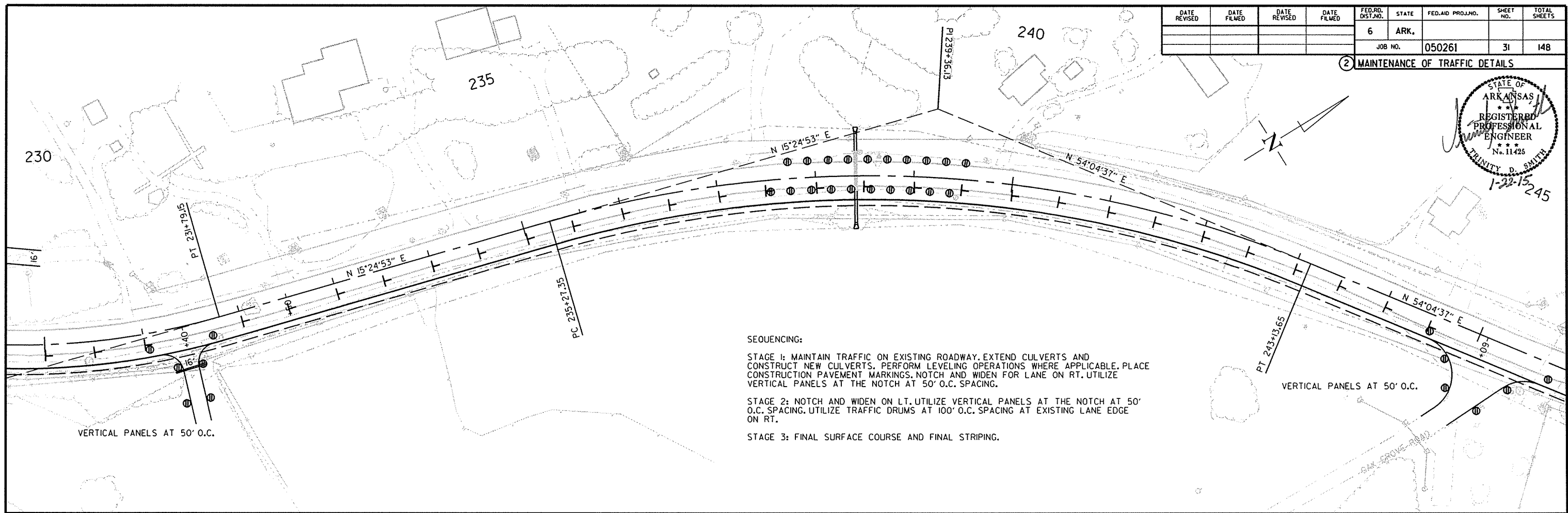
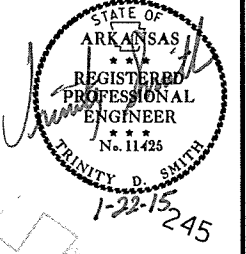
FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER
STA. 217+81 - STA. 220+55 RT. 286 LIN. FT.

SITE 2
MAINTENANCE OF TRAFFIC DETAILS
STAGE 1

1/15/2015
R050261.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		31	148

2 MAINTENANCE OF TRAFFIC DETAILS

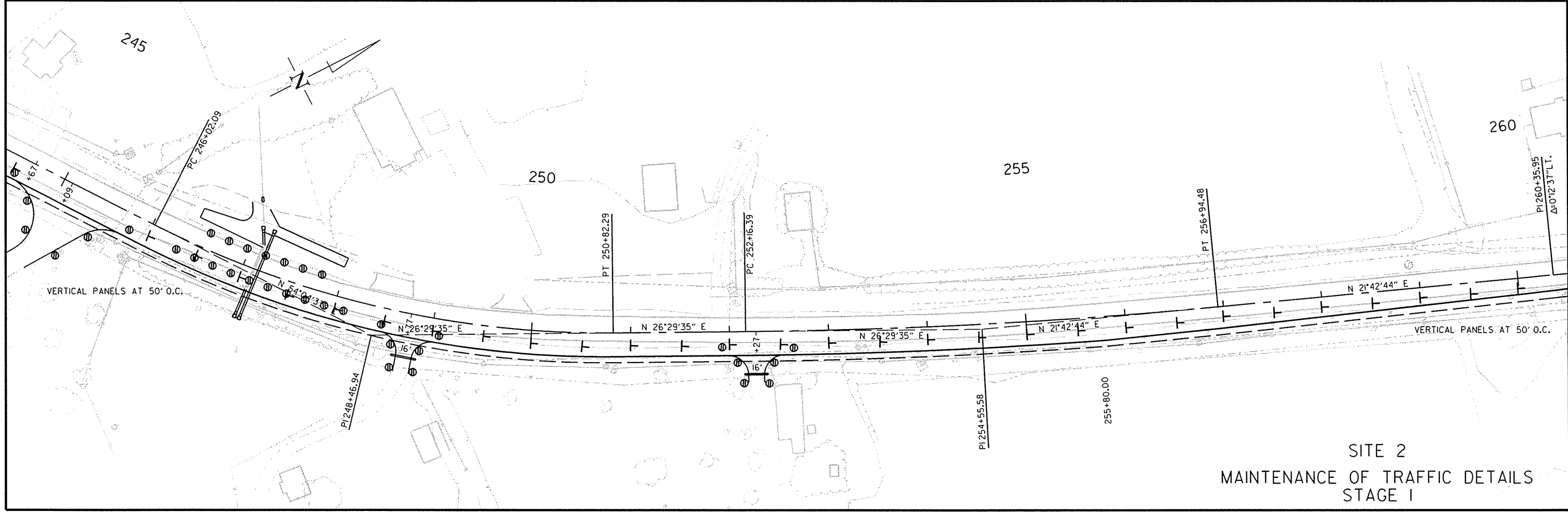


SEQUENCING:

STAGE 1: MAINTAIN TRAFFIC ON EXISTING ROADWAY. EXTEND CULVERTS AND CONSTRUCT NEW CULVERTS. PERFORM LEVELING OPERATIONS WHERE APPLICABLE. PLACE CONSTRUCTION PAVEMENT MARKINGS. NOTCH AND WIDEN FOR LANE ON RT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 50' O.C. SPACING.

STAGE 2: NOTCH AND WIDEN ON LT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 50' O.C. SPACING. UTILIZE TRAFFIC DRUMS AT 100' O.C. SPACING AT EXISTING LANE EDGE ON RT.

STAGE 3: FINAL SURFACE COURSE AND FINAL STRIPING.

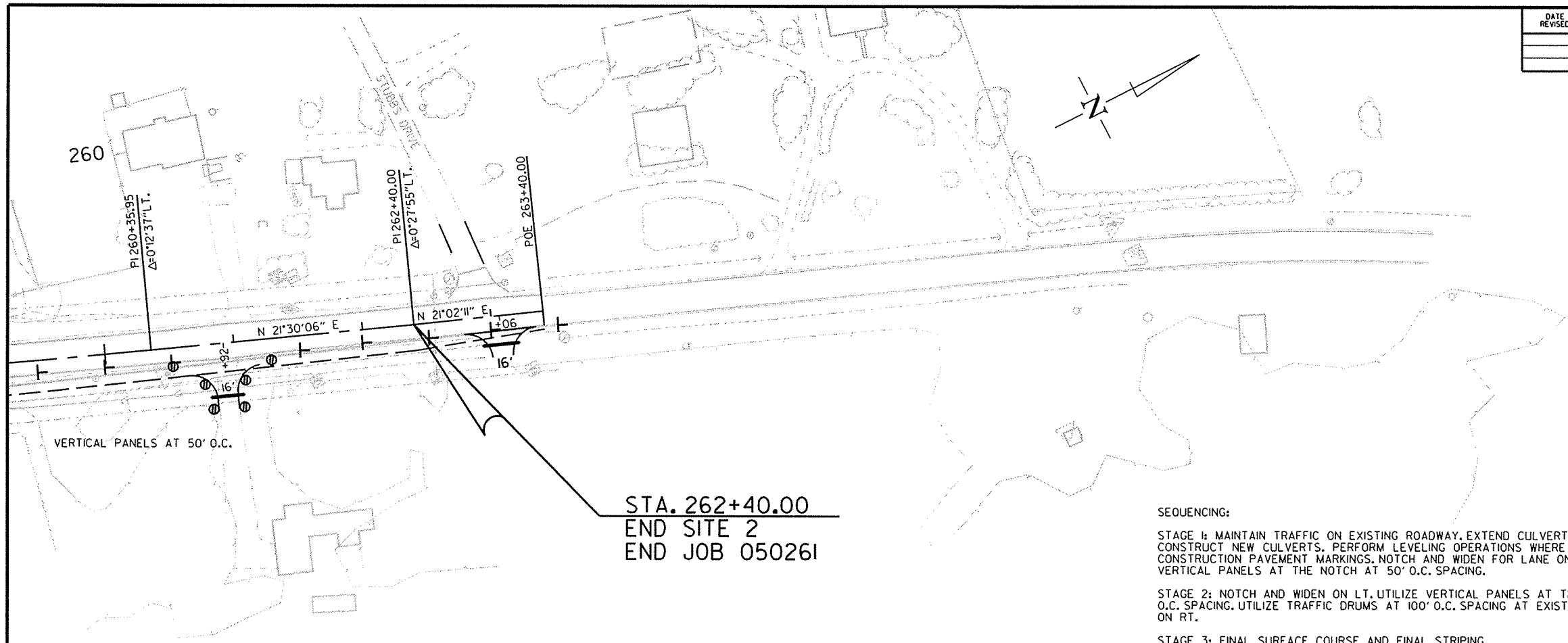
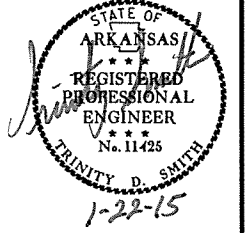


SITE 2
MAINTENANCE OF TRAFFIC DETAILS
STAGE 1

R050261.DGN 1/15/2015

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.	050261		32	148

② MAINTENANCE OF TRAFFIC DETAILS



STA. 262+40.00
 END SITE 2
 END JOB 050261

SEQUENCING:
 STAGE 1: MAINTAIN TRAFFIC ON EXISTING ROADWAY, EXTEND CULVERTS AND CONSTRUCT NEW CULVERTS, PERFORM LEVELING OPERATIONS WHERE APPLICABLE, PLACE CONSTRUCTION PAVEMENT MARKINGS, NOTCH AND WIDEN FOR LANE ON RT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 50' O.C. SPACING.
 STAGE 2: NOTCH AND WIDEN ON LT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 50' O.C. SPACING. UTILIZE TRAFFIC DRUMS AT 100' O.C. SPACING AT EXISTING LANE EDGE ON RT.
 STAGE 3: FINAL SURFACE COURSE AND FINAL STRIPING.

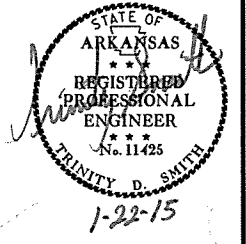
VERTICAL PANELS AT 50' O.C.

1/15/2015
 R050261.DGN

SITE 2
 MAINTENANCE OF TRAFFIC DETAILS
 STAGE 1

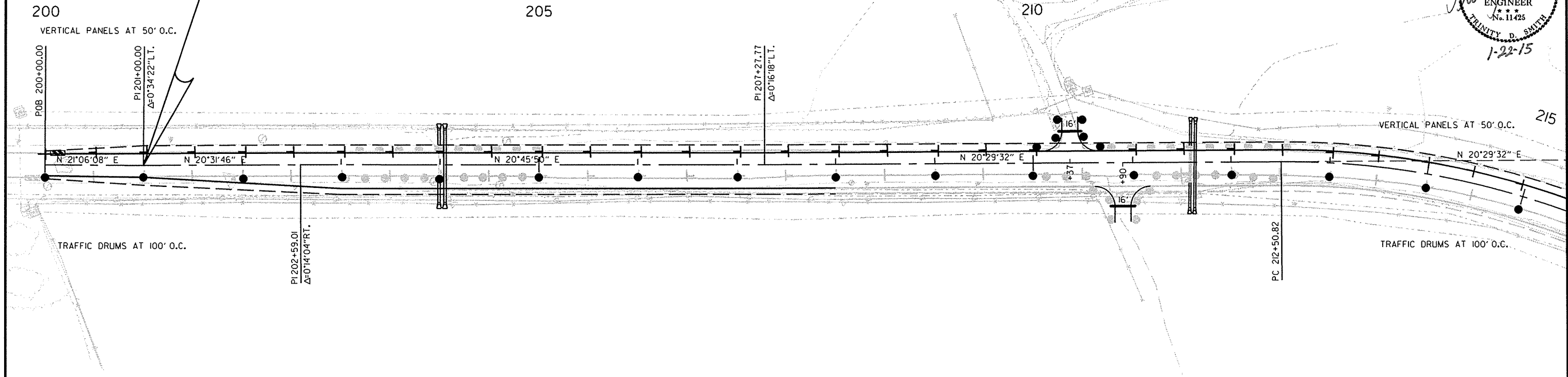
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		33	148
JOB NO. 050261								

② MAINTENANCE OF TRAFFIC DETAILS

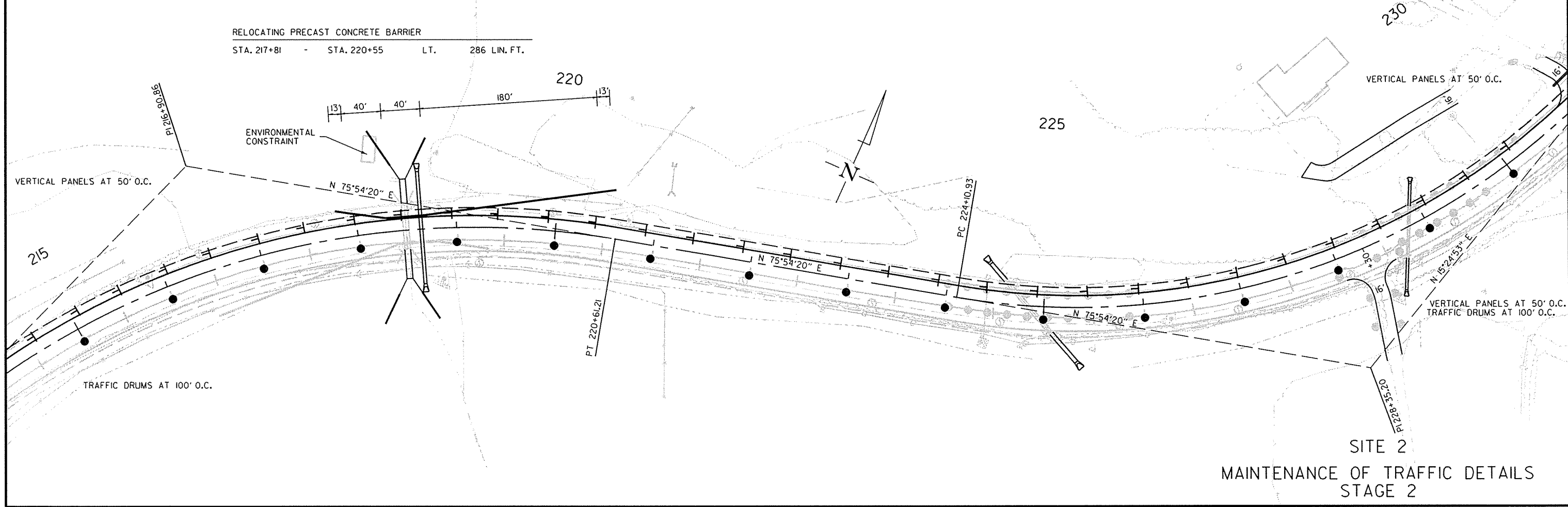


SEQUENCING:
 STAGE 1: MAINTAIN TRAFFIC ON EXISTING ROADWAY. EXTEND CULVERTS AND CONSTRUCT NEW CULVERTS. PERFORM LEVELING OPERATIONS WHERE APPLICABLE. PLACE CONSTRUCTION PAVEMENT MARKINGS. NOTCH AND WIDEN FOR LANE ON RT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 50' O.C. SPACING.
 STAGE 2: NOTCH AND WIDEN ON LT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 50' O.C. SPACING. UTILIZE TRAFFIC DRUMS AT 100' O.C. SPACING AT EXISTING LANE EDGE ON RT.
 STAGE 3: FINAL SURFACE COURSE AND FINAL STRIPING.

STA. 201+00.00
 BEGIN SITE 2
 LOG MILE = 19.40



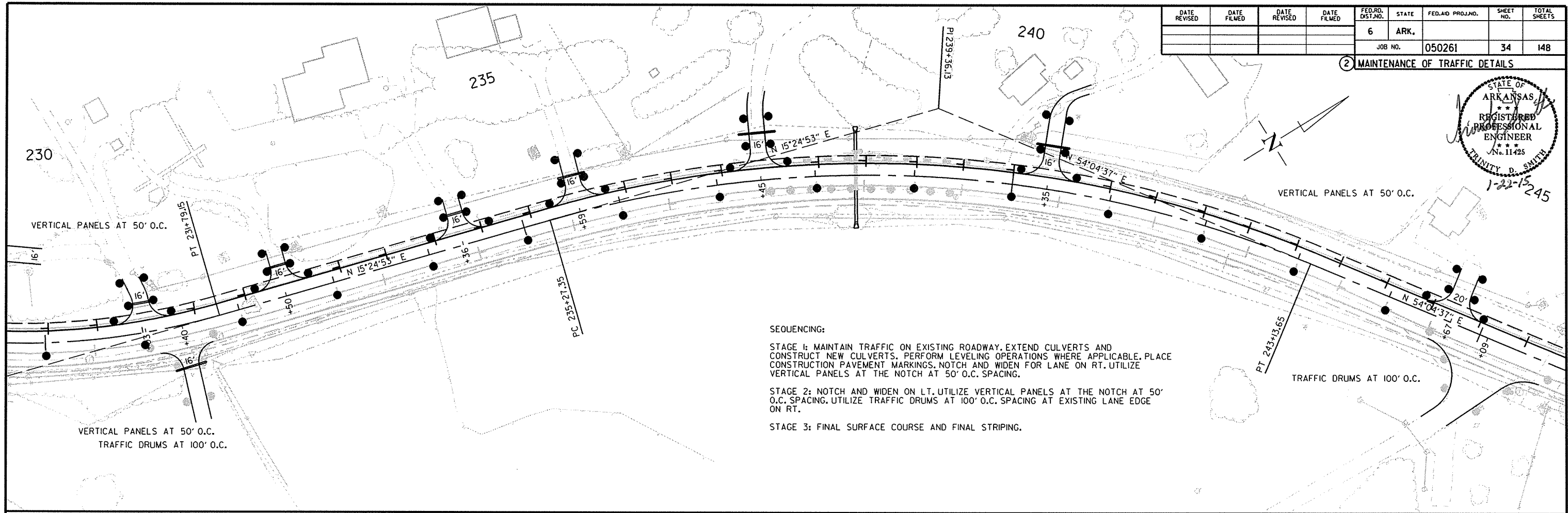
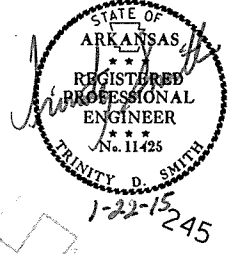
RELOCATING PRECAST CONCRETE BARRIER
 STA. 217+81 - STA. 220+55 LT. 286 LIN. FT.



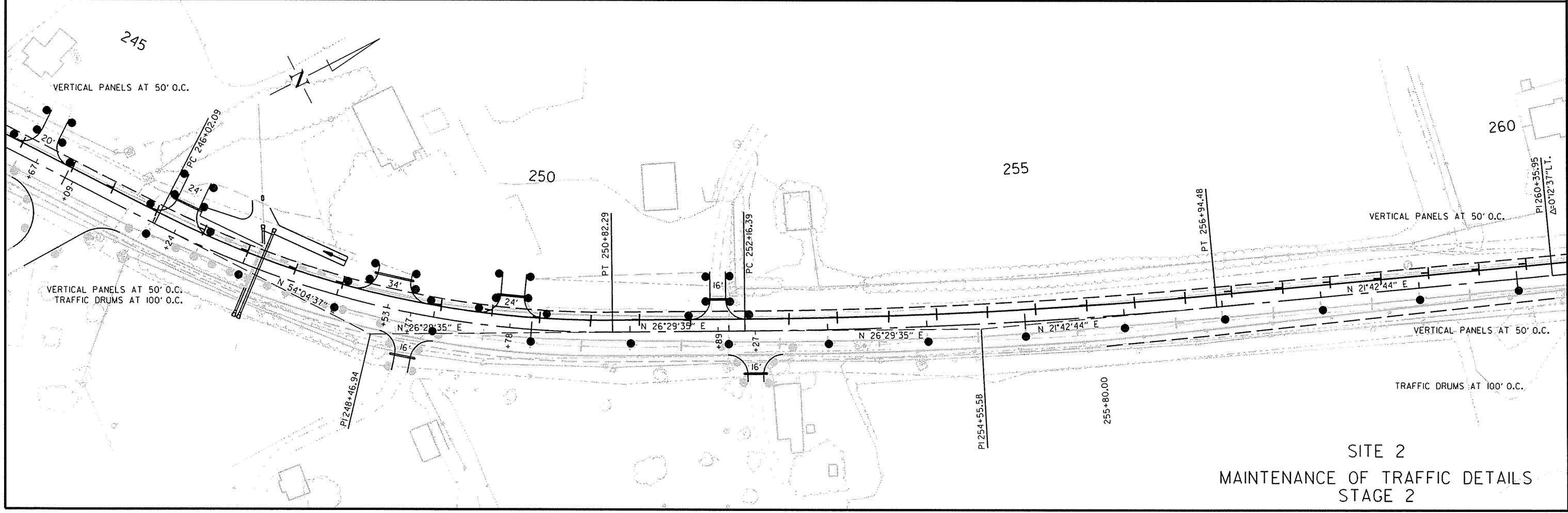
1/15/2015
 R050261.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		34	148
				JOB NO.	050261			

② MAINTENANCE OF TRAFFIC DETAILS



SEQUENCING:
 STAGE 1: MAINTAIN TRAFFIC ON EXISTING ROADWAY. EXTEND CULVERTS AND CONSTRUCT NEW CULVERTS. PERFORM LEVELING OPERATIONS WHERE APPLICABLE. PLACE CONSTRUCTION PAVEMENT MARKINGS. NOTCH AND WIDEN FOR LANE ON RT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 50' O.C. SPACING.
 STAGE 2: NOTCH AND WIDEN ON LT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 50' O.C. SPACING. UTILIZE TRAFFIC DRUMS AT 100' O.C. SPACING AT EXISTING LANE EDGE ON RT.
 STAGE 3: FINAL SURFACE COURSE AND FINAL STRIPING.

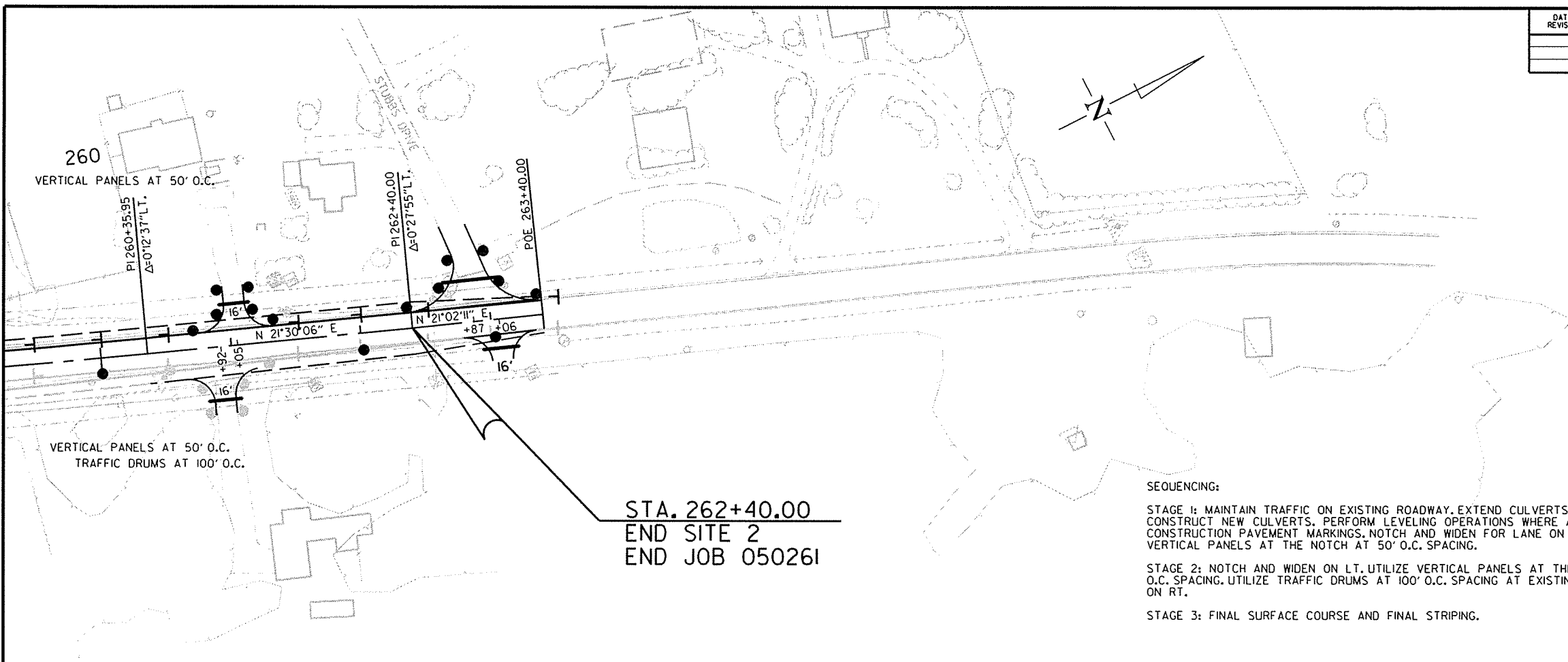
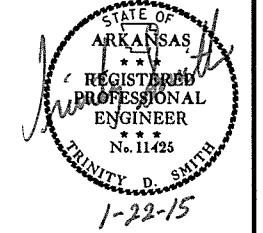


SITE 2
 MAINTENANCE OF TRAFFIC DETAILS
 STAGE 2

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 R050261.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.	050261		35	148

② MAINTENANCE OF TRAFFIC DETAILS



STA. 262+40.00
 END SITE 2
 END JOB 050261

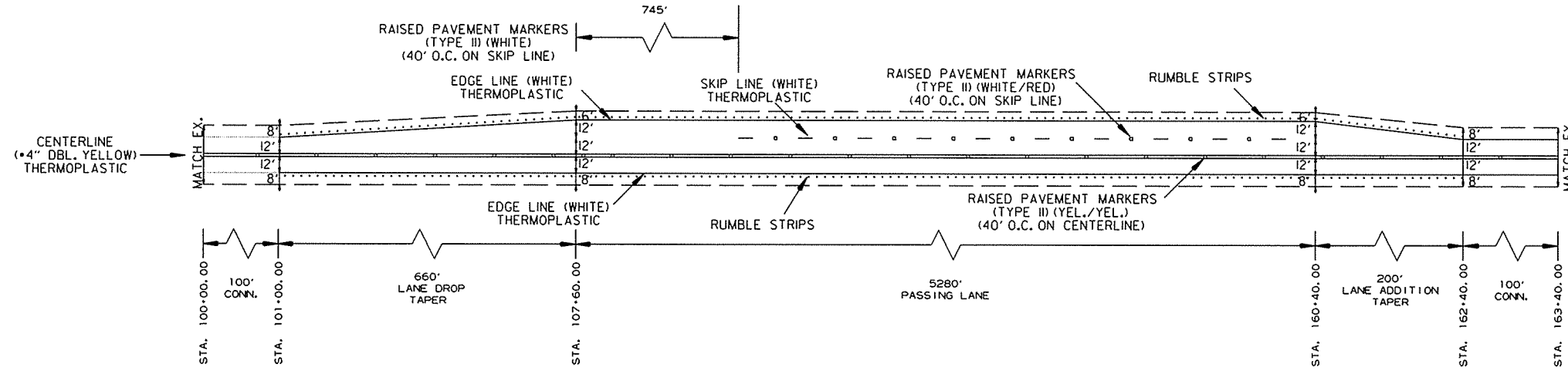
SEQUENCING:
 STAGE 1: MAINTAIN TRAFFIC ON EXISTING ROADWAY. EXTEND CULVERTS AND CONSTRUCT NEW CULVERTS. PERFORM LEVELING OPERATIONS WHERE APPLICABLE. PLACE CONSTRUCTION PAVEMENT MARKINGS. NOTCH AND WIDEN FOR LANE ON RT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 50' O.C. SPACING.
 STAGE 2: NOTCH AND WIDEN ON LT. UTILIZE VERTICAL PANELS AT THE NOTCH AT 50' O.C. SPACING. UTILIZE TRAFFIC DRUMS AT 100' O.C. SPACING AT EXISTING LANE EDGE ON RT.
 STAGE 3: FINAL SURFACE COURSE AND FINAL STRIPING.

1/15/2015
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SITE 2
 MAINTENANCE OF TRAFFIC DETAILS
 STAGE 2

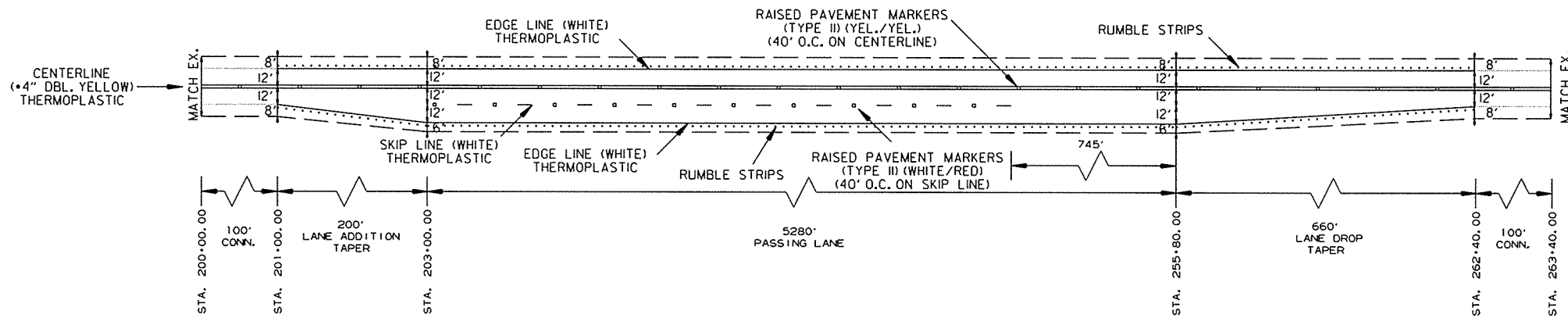
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	050261		36	148

2 PERMANENT PAVEMENT MARKING DETAILS



FINAL STRIPING - SITE 1:
 THERMOPLASTIC PAVEMENT MARKINGS:
 RT. AND LT. EDGE LINES = 12680 LIN. FT. WHITE
 DBL. CENTERLINE = 12680 LIN. FT. YELLOW
 SKIP LINE = 1134 LIN. FT. WHITE
 RAISED PAVEMENT MARKERS:
 TYPE II (YEL./YEL.) 40' O.C. ON CENTERLINE = 159 EACH
 TYPE II (WHITE/RED) 40' O.C. ON SKIP LINE = 113 EACH

• THE 4" 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.
 THE THERMOPLASTIC PAVEMENT MARKING YELLOW (4") QUANTITY IS ESTIMATED AND BASED ON THE PLACEMENT OF A DOUBLE YELLOW CENTERLINE FOR THE ENTIRE PROJECT. THE CONTRACTOR SHALL NOT PLACE ANY PERMANENT PAVEMENT MARKINGS UNTIL THE PASSING/NO PASSING ZONES HAVE BEEN ESTABLISHED BY THE MAINTENANCE DIVISION.

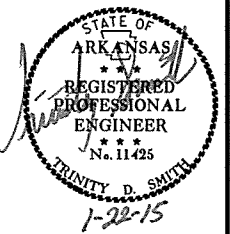


FINAL STRIPING - SITE 2:
 THERMOPLASTIC PAVEMENT MARKINGS:
 RT. AND LT. EDGE LINES = 12680 LIN. FT. WHITE
 DBL. CENTERLINE = 12680 LIN. FT. YELLOW
 SKIP LINE = 1134 LIN. FT. WHITE
 RAISED PAVEMENT MARKERS:
 TYPE II (YEL./YEL.) 40' O.C. ON CENTERLINE = 159 EACH
 TYPE II (WHITE/RED) 40' O.C. ON SKIP LINE = 113 EACH

PERMANENT PAVEMENT MARKING DETAILS
 SITE 1 & 2

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.	050261		37	148

② QUANTITIES



ADVANCE WARNING SIGNS AND DEVICES, CONSTRUCTION PAVEMENT MARKINGS, AND PERMANENT PAVEMENT MARKINGS

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	STAGE 2	END OF JOB	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		**VERTICAL PANELS	**TRAFFIC DRUMS	CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS		* THERMOPLASTIC PAVEMENT MARKINGS		FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER	RELOCATING PRECAST CONCRETE BARRIER	BARRICADES (TYPE III)
							NO.	SQ. FT.				TYPE II (WHITE/RED)	TYPE II (YEL/YEL)	4"				
														WHITE	YELLOW			
SQ. FT. - LIN. FT. - EACH			NO.		SQ. FT.		EACH	EACH	LIN. FT.	EACH		LIN. FT.		LIN. FT.	LIN. FT.			
W20-1	ROAD WORK 1500 FT.	48"x48"	4	4		4	4	64.0										
W20-1	ROAD WORK 1000 FT.	48"x48"	4	4		4	4	64.0										
W20-1	ROAD WORK 500 FT.	48"x48"	4	4		4	4	64.0										
W20-1	ROAD WORK AHEAD	48"x48"	4	4		4	4	64.0										
G20-2	END ROAD WORK	48"x24"	8	8		8	8	64.0										
G20-1	ROAD WORK NEXT xx MILES	60"x24"	4	4		4	4	40.0										
OM-3L	OBJECT MARKER	12"x36"	24	24	24	24	24	72.0										
OM-3R	OBJECT MARKER	12"x36"	24	24	24	24	24	72.0										
W8-9A	SHOULDER DROP-OFF	36"x36"	4	4		4	4	36.0										
R11-2	ROAD CLOSED	48"x30"	8	8		8	8	80.0										
R4-1	DO NOT PASS	24"x30"	4	4		4	4	20.0										
RSP-1	SHOULDER CLOSED	48"x30"	4	4		4	4	40.0										
	VERTICAL PANELS		258	258		258			258									
	TRAFFIC DRUMS		346	492		492			492									
	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER		286	286		286								286				
	RELOCATING PRECAST CONCRETE BARRIER		286	286		286										286		
	CONSTRUCTION PAVEMENT MARKINGS			49120		49120				49120								
	TYPE III BARRICADE-RT. (8')		8	8		8												64
	RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)				114	114					226							
	RAISED PAVEMENT MARKERS TYPE II (YEL/YEL)				318	318						318						
	THERMOPLASTIC PAVEMENT MARKINGS-WHITE (4")				27628	27628							27628					
	THERMOPLASTIC PAVEMENT MARKINGS-YELLOW (4")				25360	25360								25360				
TOTALS:							680.0		258	492	49120	226	318	27628	25360	286	286	64

NOTE: THIS IS A HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014.

* NOTE: THE THERMOPLASTIC PAVEMENT MARKING YELLOW (4") QUANTITY IS ESTIMATED AND IS BASED ON THE PLACEMENT OF A DOUBLE YELLOW CENTERLINE FOR THE ENTIRE PROJECT. THE CONTRACTOR SHALL NOT PLACE ANY PERMANENT PAVEMENT MARKINGS UNTIL THE PASSING/NO PASSING ZONES HAVE BEEN ESTABLISHED BY THE MAINTENANCE DIVISION.

** NOTE: THE QUANTITY OF VERTICAL PANELS PROVIDED IN THE CONTRACT IS FOR ONE SIDE OF THE ROADWAY FOR THE FULL LENGTH OF THE PROJECT.

1/15/2015

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QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
10-09-15				6	ARK.			
JOB NO.						050261	38	148

2 QUANTITIES

BENCH MARKS

STATION	DESCRIPTION	BENCH MARKS
		EACH
124+95	RC BOX HEADWALL ON RT.	1
TOTALS:		1

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

RUMBLE STRIPS IN ASPHALT SHOULDERS

STATION	STATION	LOCATION	RUMBLE STRIPS
			LIN. FT.
100+00	163+40	RT. SIDE MAIN LANES (SITE 1)	5653
100+00	163+40	LT. SIDE MAIN LANES (SITE 1)	5458
200+00	263+40	RT. SIDE MAIN LANES (SITE 2)	5759
200+00	263+40	LT. SIDE MAIN LANES (SITE 2)	5336
TOTAL:			22206

A.C.H.M. PATCHING OF EXISTING ROADWAY

DESCRIPTION	ACHM PATCHING OF EXISTING ROADWAY	TACK COAT
	TON	GALLON
ENTIRE PROJECT - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	100	200
TOTALS:	100	200

NOTE: QUANTITIES ESTIMATED. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

REMOVAL AND DISPOSAL OF ITEMS

STATION	DESCRIPTION	SIGN FOUNDATIONS	SIGNS
		EACH	EACH
100+50	SIGN ON RT.	1	1
248+51	SIGN ON RT.	2	1
TOTALS:		3	2

EARTHWORK

STATION	STATION	LOCATION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT	* SOIL STABILIZATION
			CU. YD.	CU. YD.	TON
SITE 1 - SOUTHBOUND					
101+00	162+40	MAIN LANES - STAGE 1	4917	9602	50
101+00	162+40	MAIN LANES - STAGE 2	11195	3635	
ENTIRE PROJECT		DRIVEWAYS LT. & RT.		315	
SUBTOTALS SITE 1-SB:			16112	13552	50
SITE 2 - NORTHBOUND					
201+00	262+40	MAIN LANES - STAGE 1	14603	7387	50
201+00	262+40	MAIN LANES - STAGE 2	7942	5613	
ENTIRE PROJECT		CHANNEL CHANGE	14		
ENTIRE PROJECT		DRIVEWAYS LT. & RT.		740	
SUBTOTALS SITE 2-NB:			22559	13740	50
TOTALS:			38671	27292	100

* QUANTITIES ESTIMATED. TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

PAVEMENT REPAIR OVER CULVERTS (CONCRETE)

STATION	LOCATION	CONCRETE CU. YD.
SITE 1 - SOUTHBOUND		
110+18	CENTER LINE	7.9
SUBTOTAL SITE 1-SB:		7.9
SITE 2 - NORTHBOUND		
203+99	CENTER LINE	7.4
211+59	CENTER LINE	6.9
218+49	CENTER LINE	7.9
247+12	CENTER LINE	6.9
SUBTOTAL SITE 2-NB:		29.1
TOTAL:		37.0

AVG. DEPTH = 1'-0"

CLEARING AND GRUBBING

STATION	STATION	CLEARING	GRUBBING
SITE 1 - SOUTHBOUND			
101+00	162+40	62	62
SUBTOTALS SITE 1-SB:		62	62
SITE 2 - NORTHBOUND			
201+00	262+40	62	62
SUBTOTALS SITE 2-NB:		62	62
TOTALS:		124	124

4" PIPE UNDERDRAIN

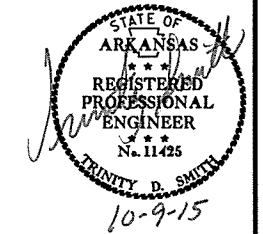
LOCATIONS	4" PIPE UNDERDRAIN	UNDERDRAIN OUTLET PROTECTORS
	LIN. FT.	EACH
* ENTIRE PROJECT - IF AND WHERE DIRECTED BY THE ENGINEER.	1000	8
TOTALS:	1000	8

* NOTE: QUANTITIES ARE ESTIMATED. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

REMOVAL AND DISPOSAL OF CULVERTS

STATION	DESCRIPTION	PIPE CULVERTS
		EACH
SITE 1 - SOUTHBOUND		
118+52	REMOVE 24" X 40' CORR. PLASTIC PIPE CULVERT LT. SIDE DRAIN	1
118+95	REMOVE 24" X 40' C.M. PIPE CULVERT RT. SIDE DRAIN	1
119+60	REMOVE 42" X 37' R.C. PIPE CULVERT RT. SIDE DRAIN	1
123+52	REMOVE 18" X 28' CORR. PLASTIC PIPE CULVERT LT. SIDE DRAIN	1
124+08	REMOVE 18" X 44' C.M. PIPE CULVERT RT. SIDE DRAIN	1
126+51	REMOVE 24" X 28' C.M. PIPE CULVERT LT. SIDE DRAIN	1
127+31	REMOVE 18" X 20' C.M. PIPE CULVERT LT. SIDE DRAIN	1
128+44	REMOVE 18" X 28' C.M. PIPE CULVERT LT. SIDE DRAIN	1
129+21	REMOVE 18" X 26' PIPE CULVERT LT. SIDE DRAIN	1
137+18	REMOVE 18" X 22' C.M. PIPE CULVERT RT. SIDE DRAIN	1
140+78	REMOVE 18" X 25' C.M. PIPE CULVERT RT. SIDE DRAIN	1
141+66	REMOVE 18" X 24' C.M. PIPE CULVERT LT. SIDE DRAIN	1
151+42	REMOVE 24" X 20' C.M. PIPE CULVERT RT. SIDE DRAIN	1
153+67	REMOVE 18" X 26' C.M. PIPE CULVERT RT. SIDE DRAIN	1
154+28	REMOVE 18" X 28' C.M. PIPE CULVERT RT. SIDE DRAIN	1
154+67	REMOVE 18" X 60' C.M. PIPE CULVERT LT. SIDE DRAIN	1
157+32	REMOVE 18" X 22' C.M. PIPE CULVERT LT. SIDE DRAIN	1
158+33	REMOVE 18" X 26' C.M. PIPE CULVERT LT. SIDE DRAIN	1
163+24	REMOVE 18" X 20' C.M. PIPE CULVERT RT. SIDE DRAIN	1
SUBTOTAL SITE 1-SB:		19
SITE 2 - NORTHBOUND		
210+76	REMOVE 12" X 16' C.M. PIPE CULVERT RT. SIDE DRAIN	1
231+09	REMOVE 18" X 33' C.M. PIPE CULVERT LT. SIDE DRAIN	1
232+53	REMOVE 18" X 24' C.M. PIPE CULVERT LT. SIDE DRAIN	1
234+42	REMOVE 18" X 30' C.M. PIPE CULVERT LT. SIDE DRAIN	1
235+59	REMOVE 18" X 24' C.M. PIPE CULVERT LT. SIDE DRAIN	1
237+49	REMOVE 18" X 32' C.M. PIPE CULVERT LT. SIDE DRAIN	1
239+89	REMOVE 18" X 20' C.M. PIPE CULVERT LT. SIDE DRAIN	1
246+12	REMOVE 18" X 37' C.M. PIPE CULVERT LT. SIDE DRAIN	1
248+52	REMOVE 24" X 43' C.M. PIPE CULVERT LT. SIDE DRAIN	1
248+82	REMOVE 18" X 30' C.M. PIPE CULVERT RT. SIDE DRAIN	1
249+79	REMOVE 18" X 24' C.M. PIPE CULVERT LT. SIDE DRAIN	1
251+90	REMOVE 18" X 20' C.M. PIPE CULVERT LT. SIDE DRAIN	1
252+26	REMOVE 18" X 20' C.M. PIPE CULVERT RT. SIDE DRAIN	1
260+93	REMOVE 18" X 24' C.M. PIPE CULVERT RT. SIDE DRAIN	1
261+04	REMOVE 18" X 20' C.M. PIPE CULVERT LT. SIDE DRAIN	1
262+91	REMOVE 18" X 39' C.M. PIPE CULVERT LT. SIDE DRAIN	1
263+06	REMOVE 18" X 28' C.M. PIPE CULVERT RT. SIDE DRAIN	1
SUBTOTAL SITE 2-NB:		17
TOTALS:		36

NOTE: QUANTITIES SHOWN ABOVE INCLUDE THE REMOVAL AND DISPOSAL OF ANY HEADWALLS AND FLARED END SECTIONS.



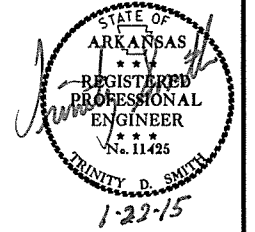
1/15/2015

R050261.DGN

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	050261		39	148

2 QUANTITIES



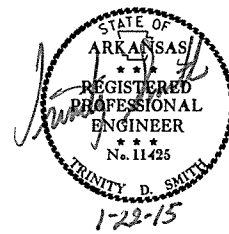
MAIN LANE BASE AND SURFACING

STATION	STATION	LOCATION	LENGTH FEET	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT				ACHM BINDER COURSE (1") (PG 64-22)				ACHM SURFACE COURSE (1/2") (PG 64-22)				ACHM SURFACE COURSE (1/2") (PG 64-22)			
				TON / STATION	TON	TOTAL WID. FEET	SQ. YD.	GALLONS / SQ. YD.	GALLON	AVG. WID. FEET	SQ. YD.	POUND / SQ. YD.	TON	AVG. WID. FEET	SQ. YD.	POUND / SQ. YD.	TON	AVG. WID. FEET	SQ. YD.	POUND / SQ. YD.	TON
SITE 1 - SOUTHBOUND																					
100+00.00	101+00.00	100' TRANSITION FROM EXISTING TO TWO LANE	100.00	110.63	110.63	2.21	24.56	0.03	0.74	1.15	12.78	495.00	3.16	1.06	11.78	220.00	1.30	34.00	377.78	220.00	41.56
101+00.00	104+88.77	NORMAL CROWN - TAPER FROM TWO LANE TO PASSING LANE	388.77	173.50	674.52	16.60	717.06	0.03	21.51	7.72	333.48	495.00	82.54	7.60	328.29	220.00	36.11	45.00	1943.85	220.00	213.82
104+88.77	107+60.00	SUPERELEVATION - TAPER FROM TWO LANE TO PASSING LANE	271.23	173.50	470.58	16.60	500.27	0.03	15.01	7.72	232.66	495.00	57.58	7.60	229.04	220.00	25.19	45.00	1356.15	220.00	149.18
107+60.00	119+40.45	SUPERELEVATION - NOTCH & WIDEN - SOUTHBOUND PASSING LANE	1180.45	198.75	2346.14	28.77	3773.51	0.03	113.21	14.29	1874.29	495.00	463.89	14.13	1853.31	220.00	203.86	50.00	6558.06	220.00	721.39
119+40.45	132+81.86	NORMAL CROWN - NOTCH & WIDEN - SOUTHBOUND PASSING LANE	1341.41	198.75	2666.05	28.77	4288.04	0.03	128.64	14.29	2129.86	495.00	527.14	14.13	2106.01	220.00	231.66	50.00	7452.28	220.00	819.75
132+81.86	140+56.32	SUPERELEVATION - NOTCH & WIDEN - SOUTHBOUND PASSING LANE	774.46	198.75	1539.24	28.77	2475.69	0.03	74.27	14.29	1229.67	495.00	304.34	14.13	1215.90	220.00	133.75	50.00	4302.56	220.00	473.28
140+56.32	153+87.13	SUPERELEVATION - NOTCH & WIDEN - SOUTHBOUND PASSING LANE	1330.81	198.75	2644.98	28.77	4254.16	0.03	127.62	14.29	2113.03	495.00	522.97	14.13	2089.37	220.00	229.83	50.00	7393.39	220.00	813.27
153+87.13	160+40.00	NORMAL CROWN - NOTCH & WIDEN - SOUTHBOUND PASSING LANE	652.87	198.75	1297.58	28.77	2087.01	0.03	62.61	14.29	1036.61	495.00	256.56	14.13	1025.01	220.00	112.75	50.00	3627.06	220.00	398.98
160+40.00	162+40.00	NORMAL CROWN - TAPER FROM TWO LANE TO PASSING LANE	200.00	173.50	347.00	16.60	368.89	0.03	11.07	7.72	171.56	495.00	42.46	7.60	168.89	220.00	18.58	45.00	1000.00	220.00	110.00
162+40.00	163+40.00	100' TRANSITION FROM EXISTING TO TWO LANE	100.00	110.63	110.63	2.21	24.56	0.03	0.74	1.15	12.78	495.00	3.16	1.06	11.78	220.00	1.30	34.00	377.78	220.00	41.56
ADDITIONAL FOR SUPERELEVATION																					
104+88.77	108+38.77	ADDITIONAL FOR TRANSITION SUPERELEVATION	350.00	46.61	163.14																
108+38.77	115+90.45	ADDITIONAL FOR MAX SUPERELEVATION	751.68	93.22	700.72																
115+90.45	119+40.45	ADDITIONAL FOR TRANSITION SUPERELEVATION	350.00	46.61	163.14																
132+81.86	135+81.86	ADDITIONAL FOR TRANSITION SUPERELEVATION	300.00	43.71	131.13																
135+81.86	137+56.32	ADDITIONAL FOR MAX SUPERELEVATION	174.46	87.42	152.51																
137+56.32	140+56.32	ADDITIONAL FOR TRANSITION SUPERELEVATION	300.00	43.71	131.13																
140+56.32	144+06.32	ADDITIONAL FOR TRANSITION SUPERELEVATION	350.00	38.26	133.91																
144+06.32	150+37.13	ADDITIONAL FOR MAX SUPERELEVATION	630.81	76.52	482.70																
150+37.13	153+87.13	ADDITIONAL FOR TRANSITION SUPERELEVATION	350.00	38.26	133.91																
ADDITIONAL FOR LEVELING																					
101+00.00	162+40.00	ADDITIONAL FOR LEVELING	6140.00			22.00	15008.89	0.10	1500.89						22.00	15008.89	220.00	1650.98			
104+88.77	119+40.45	ADDITIONAL FOR SUPERELEVATION	1451.68			10.00	1612.98	0.03	48.39					10.00	1612.98	220.00	177.43				
132+81.86	140+56.32	ADDITIONAL FOR SUPERELEVATION	774.46			10.00	860.51	0.03	25.82					10.00	860.51	220.00	94.66				
140+56.32	153+87.13	ADDITIONAL FOR SUPERELEVATION	1330.81			10.00	1478.68	0.03	44.36					10.00	1478.68	220.00	162.65				
SUBTOTALS SITE 1-SB:					14399.64		37474.81		2174.88		9146.72		2263.80		28000.44		3080.05		34388.91		3782.79
SITE 2 - NORTHBOUND																					
200+00.00	201+00.00	100' TRANSITION FROM EXISTING TO TWO LANE	100.00	110.63	110.63	2.21	24.56	0.03	0.74	1.15	12.78	495.00	3.16	1.06	11.78	220.00	1.30	34.00	377.78	220.00	41.56
201+00.00	203+00.00	200' TAPER FROM TWO LANE TO NORTHBOUND PASSING LANE	200.00	173.50	347.00	16.60	368.89	0.03	11.07	8.41	186.89	495.00	46.26	8.19	182.00	220.00	20.02	45.00	1000.00	220.00	110.00
203+00.00	210+25.82	NORMAL CROWN - NOTCH & WIDEN - NORTHBOUND PASSING LANE	725.82	198.75	1442.57	28.77	2320.20	0.03	69.61	14.52	1170.99	495.00	289.82	14.25	1149.22	220.00	126.41	50.00	4032.33	220.00	443.56
210+25.82	255+80.00	SUPERELEVATION - NOTCH & WIDEN - NORTHBOUND PASSING LANE	4554.18	198.75	9051.43	28.77	14558.20	0.03	436.75	14.52	7347.41	495.00	1818.48	14.25	7210.79	220.00	793.19	50.00	25301.00	220.00	2783.11
255+80.00	259+19.48	SUPERELEVATION - TAPER FROM PASSING LANE TO TWO LANE	339.48	173.50	589.00	16.60	626.15	0.03	18.78	8.41	317.23	495.00	78.51	8.19	308.93	220.00	33.98	45.00	1697.40	220.00	186.71
259+19.48	262+40.00	NORMAL CROWN - TAPER FROM PASSING LANE TO TWO LANE	320.52	173.50	556.10	16.60	591.18	0.03	17.74	8.41	299.51	495.00	74.13	8.19	291.67	220.00	32.08	45.00	1602.60	220.00	176.29
262+40.00	263+40.00	100' TRANSITION FROM EXISTING TO TWO LANE	100.00	110.63	110.63	2.21	24.56	0.03	0.74	1.15	12.78	495.00	3.16	1.06	11.78	220.00	1.30	34.00	377.78	220.00	41.56
ADDITIONAL FOR SUPERELEVATION																					
210+25.82	213+25.82	ADDITIONAL FOR TRANSITION SUPERELEVATION	300.00	51.05	153.15																
213+25.82	219+36.07	ADDITIONAL FOR MAX SUPERELEVATION	610.25	102.10	623.07																
219+36.07	222+36.07	ADDITIONAL FOR TRANSITION SUPERELEVATION	300.00	51.05	153.15																
222+36.07	225+36.07	ADDITIONAL FOR TRANSITION SUPERELEVATION	300.00	41.02	123.06																
225+36.07	230+53.25	ADDITIONAL FOR MAX SUPERELEVATION	517.18	82.04	424.29																
230+53.25	233+53.25	ADDITIONAL FOR TRANSITION SUPERELEVATION	300.00	41.02	123.06																
233+53.25	237+03.25	ADDITIONAL FOR TRANSITION SUPERELEVATION	350.00	47.33	165.66																
237+03.25	241+07.87	ADDITIONAL FOR MAX SUPERELEVATION	404.62	94.65	382.97																
241+07.87	244+57.87	ADDITIONAL FOR TRANSITION SUPERELEVATION	350.00	47.33	165.66																
244+57.87	247+65.02	ADDITIONAL FOR TRANSITION SUPERELEVATION	307.15	35.58	109.28																
247+65.02	248+42.19	ADDITIONAL FOR MAX SUPERELEVATION	77.17	71.16	54.91																
248+42.19	251+49.34	ADDITIONAL FOR TRANSITION SUPERELEVATION	307.15	35.58	109.28																
251+49.34	254+49.34	ADDITIONAL FOR TRANSITION SUPERELEVATION	300.00	19.15	57.45																
254+49.34	256+19.48	ADDITIONAL FOR MAX SUPERELEVATION	170.14	38.29	65.15																
256+19.48	259+19.48	ADDITIONAL FOR TRANSITION SUPERELEVATION	300.00	19.15	57.45																
ADDITIONAL FOR LEVELING																					
201+00.00	262+40.00	ADDITIONAL FOR LEVELING	6140.00			22.00	15008.89	0.10	1500.89						22.00	15008.89	220.00	1650.98			
210+25.82	222+36.07	ADDITIONAL FOR SUPERELEVATION	1210.25			10.00	1344.72	0.03	40.34					10.00	1344.72	220.00	147.92				
222+36.07	233+53.25	ADDITIONAL FOR SUPERELEVATION	1117.18			10.00	1241.31	0.03	37.24					10.00	1241.31	220.00	136.54				
233+53.25	244+57.87	ADDITIONAL FOR SUPERELEVATION	1104.62			10.00	1227.36	0.03	36.82					10.00	1227.36	220.00	135.01				
244+57.87	251+49.34	ADDITIONAL FOR SUPERELEVATION	691.47			10.00	768.30	0.03	23.05					10.00	768.30	220.00	84.51				
251+49.34	259+19.48	ADDITIONAL FOR SUPERELEVATION	770.14			10.00	855.71	0.03	25.67					10.00	855.71	220.00	94.13				
SUBTOTALS SITE 2-NB:					14974.95		38960.03		2219.44		9347.59		2313.52		29612.46		3257.37		34388.89		3782.79
TOTALS:					29374.59		76434.84		4394.32		18494.31		4577.32		57612.90		6337.42		68777.80		7565.58

DRIVEWAYS & TURNOUTS - BASE & SURFACING

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.	050261		40	148

② QUANTITIES



STATION	SIDE	DESCRIPTION	WIDTH FEET	LENGTH FEET	PORTLAND CEMENT CONCRETE DRIVES			ACHM		AGGREGATE BASE CRS. (CLASS 7)	SIDE DRAINS				
					TURNOUT	ADD'L. SQ. YD.	TOTAL	ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG64-22)			18"	24"			
								SQ. YD.	TON	TON	LIN. FT.				
SITE 1 - SOUTHBOUND															
103+36	RT.	CONSTRUCT APPROACH ON RT.	16	23.1				41.07	4.52	14.37					
118+47	LT.	INSTALL 24" X 40' PIPE CULV'T. LT. SIDE DRAIN	24	74.8				199.47	21.94	69.81		40			
118+88	RT.	INSTALL 24" X 60' PIPE CULV'T. RT. SIDE DRAIN	20	69.0				228.00	25.08	53.67		60			
123+52	LT.	INSTALL 18" X 30' PIPE CULV'T. LT. SIDE DRAIN	16	31.0	31.70	38.20	69.90				30				
123+95	RT.	INSTALL 18" X 30' PIPE CULV'T. RT. SIDE DRAIN	16	32.4				57.60	6.34	20.16	30				
126+48	LT.	INSTALL 18" X 30' PIPE CULV'T. LT. SIDE DRAIN	16	30.0				53.33	5.87	18.67	30				
126+92	RT.	INSTALL 18" X 28' PIPE CULV'T. RT. SIDE DRAIN	16	22.1				39.29	4.32	13.75	28				
127+29	LT.	INSTALL 18" X 30' PIPE CULV'T. LT. SIDE DRAIN	16	26.4				46.93	5.16	16.43	30				
128+45	LT.	INSTALL 18" X 30' PIPE CULV'T. LT. SIDE DRAIN	16	25.0				44.44	4.89	15.56	30				
129+31	LT.	INSTALL 18" X 32' PIPE CULV'T. LT. SIDE DRAIN	16	35.2				62.58	6.88	21.90	32				
132+03	LT.	INSTALL 18" X 34' PIPE CULV'T. LT. SIDE DRAIN	16	34.1				60.62	6.67	21.22	34				
133+53	LT.	INSTALL 18" X 34' PIPE CULV'T. LT. SIDE DRAIN	16	32.5				57.78	6.36	20.22	34				
137+18	RT.	INSTALL 18" X 28' PIPE CULV'T. RT. SIDE DRAIN	16	24.2				43.02	4.73	15.06	28				
139+65	LT.	CONSTRUCT APPROACH ON LT.	16	34.9				62.04	6.82	21.72					
140+76	RT.	INSTALL 18" X 32' PIPE CULV'T. RT. SIDE DRAIN	16	20.9				37.16	4.09	13.00	32				
141+78	LT.	INSTALL 18" X 36' PIPE CULV'T. LT. SIDE DRAIN	16	25.8				45.87	5.05	16.05	36				
145+82	LT.	CONSTRUCT APPROACH ON LT.	16	44.7				79.47	8.74	27.81					
151+42	RT.	INSTALL 24" X 30' PIPE CULV'T. RT. SIDE DRAIN	16	24.8				44.09	4.85	15.43		30			
153+62	RT.	INSTALL 18" X 36' PIPE CULV'T. RT. SIDE DRAIN	20	34.3				76.22	8.38	26.68	36				
154+09	RT.	INSTALL 18" X 36' PIPE CULV'T. RT. SIDE DRAIN	20	34.1				75.78	8.34	26.52	36				
154+70	LT.	INSTALL 18" X 46' PIPE CULV'T. LT. SIDE DRAIN	30	42.3				141.00	15.51	49.35	46				
157+32	LT.	INSTALL 18" X 32' PIPE CULV'T. LT. SIDE DRAIN	16	35.7				63.47	6.98	22.21	32				
158+29	LT.	INSTALL 18" X 32' PIPE CULV'T. LT. SIDE DRAIN	16	35.4				62.93	6.92	22.03	32				
163+24	RT.	INSTALL 18" X 32' PIPE CULV'T. RT. SIDE DRAIN	16	35.8				63.64	7.00	22.28	32				
		TEMPORARY DRIVES								150.00					
SUBTOTALS SITE 1-SB:								31.70	38.20	69.90	1685.80	185.44	713.90	588	130
SITE 2 - NORTHBOUND															
210+37	LT.	INSTALL 18" X 28' PIPE CULV'T. LT. SIDE DRAIN	16	26.0				46.22	5.08	16.18	28				
210+90	RT.	INSTALL 18" X 28' PIPE CULV'T. RT. SIDE DRAIN	16	30.5				54.22	5.96	18.98	28				
228+30	RT.	CONSTRUCT APPROACH ON RT.	16	85.6				152.18	16.74	53.26					
230+00	LT.	CONSTRUCT APPROACH ON LT.	16	173.0				307.56	33.83	107.64					
231+03	LT.	INSTALL 18" X 28' PIPE CULV'T. LT. SIDE DRAIN	16	35.2				62.58	6.88	21.90	28				
231+40	RT.	INSTALL 18" X 32' PIPE CULV'T. RT. SIDE DRAIN	16	69.5				123.56	13.59	43.24	32				
232+50	LT.	INSTALL 18" X 28' PIPE CULV'T. LT. SIDE DRAIN	16	30.1				53.51	5.89	18.73	28				
234+36	LT.	INSTALL 18" X 28' PIPE CULV'T. LT. SIDE DRAIN	16	30.4				54.04	5.94	18.92	28				
235+59	LT.	INSTALL 18" X 28' PIPE CULV'T. LT. SIDE DRAIN	16	39.9				70.93	7.80	24.83	28				
237+45	LT.	INSTALL 18" X 38' PIPE CULV'T. LT. SIDE DRAIN	16	70.2				124.80	13.73	43.68	38				
240+35	LT.	INSTALL 18" X 34' PIPE CULV'T. LT. SIDE DRAIN	16	102.7				182.58	20.08	63.90	34				
244+67	LT.	CONSTRUCT APPROACH ON LT.	20	35.0				77.78	8.56	27.22					
245+09	RT.	CONSTRUCT CO. RD. ON RT.	22	84.4				308.00	33.88	72.21					
246+24	LT.	INSTALL 18" X 32' PIPE CULV'T. LT. SIDE DRAIN	24	41.4				110.40	12.14	38.64	32				
248+53	LT.	INSTALL 24" X 46' PIPE CULV'T. LT. SIDE DRAIN	34	22.3				84.24	9.27	29.49		46			
248+77	RT.	INSTALL 18" X 28' PIPE CULV'T. RT. SIDE DRAIN	16	30.0				53.33	5.87	18.67	28				
249+78	LT.	INSTALL 18" X 32' PIPE CULV'T. LT. SIDE DRAIN	24	35.3				94.13	10.35	32.95	32				
251+89	LT.	INSTALL 18" X 28' PIPE CULV'T. LT. SIDE DRAIN	16	40.0				71.11	7.82	24.89	28				
252+27	RT.	INSTALL 18" X 28' PIPE CULV'T. RT. SIDE DRAIN	16	21.4				38.04	4.18	13.32	28				
260+92	RT.	INSTALL 18" X 28' PIPE CULV'T. RT. SIDE DRAIN	16	29.7				52.80	5.81	18.48	28				
261+05	LT.	INSTALL 18" X 28' PIPE CULV'T. LT. SIDE DRAIN	16	26.0				46.22	5.08	16.18	28				
262+87	LT.	INSTALL 18" X 44' PIPE CULV'T. LT. SIDE DRAIN	20	61.4				170.00	18.70	47.76	44				
263+06	RT.	INSTALL 18" X 28' PIPE CULV'T. RT. SIDE DRAIN	16	15.5				27.56	3.03	9.64	28				
		TEMPORARY DRIVES								150.00					
SUBTOTALS SITE 2-NB:								2365.79	260.21	930.71	548	46			
TOTALS:					31.70	38.20	69.90	4051.59	445.65	1644.61	1136	176			

BASIS OF ESTIMATE:
 ACHM SURFACE COURSE (1/2").....94.7% MIN. AGGR.....5.3% 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

** FOR INFORMATION ONLY

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

FENCING

STATION	STATION	SIDE	REMOVAL AND DISPOSAL OF FENCE	REMOVAL AND DISPOSAL OF GATES	WIRE FENCE (TYPE D)	16'-0" GATES	20'-0" GATES
			LIN. FT.	EACH	LIN. FT.	EACH	
SITE 1 - SOUTHBOUND							
123+09	125+85	LT.	274				
128+59	135+66	RT.	710				
129+28	131+77	LT.	249				
133+64	141+53	LT.	889				
144+65	154+44	LT.	1079				
145+10	146+92	RT.	177				
152+33	154+10	RT.	277				
154+10		RT.		1			
154+20		RT.		1			
154+20	155+00	RT.	80				
155+00	157+22	LT.	222				
157+22		LT.		1			
157+35	158+25	LT.	90				
158+38	161+95	LT.	357				
123+11	125+87	LT.			276		
128+61	136+23	RT.			766		
129+51	131+81	LT.			230		
133+66	139+57	LT.			591		
139+73	141+56	LT.			183		
144+70	154+49	LT.			976	1	
145+14	146+97	RT.			178		
152+32	158+45	RT.			613		2
155+04	158+03	LT.			299	1	
158+62	161+15	LT.			334		
SUBTOTALS SITE 1-SB:			4404	3	4446	2	2
SITE 2 - NORTHBOUND							
200+00	221+30	RT.	2180				
200+00	210+76	RT.			1083		
202+50	205+00	LT.	250				
202+50	205+00	LT.			258		
211+00	221+28	RT.			960		
211+30	220+50	LT.	980				
211+23	215+70	LT.			479		
219+03	220+61	LT.			175		
228+52	231+68	RT.	316				
228+55	231+66	RT.			321		
236+16	236+48	LT.			34	1	
245+95	248+40	RT.			265		
253+40	256+91	LT.	364				
253+40	256+91	LT.			347		
SUBTOTALS SITE 2-NB:			4090		3922	1	
TOTALS:			8494	3	8368	3	2

QUANTITIES

1/15/2015

R050261.DGN

SOIL LOG

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.	050261	41	148	

② QUANTITIES

STATION	LOCATION	LATITUDE			LONGITUDE			DEPTH FEET	AASHTO CLASSIFICATION	LIQUID LIMIT	PLASTICITY INDEX	COLOR
		DEG	MIN	SEC	DEG	MIN	SEC					
SITE 1 - SOUTHBOUND												
101+00	6' RT.	35	35	59.90	91	56	0.30	0-5	A-4(0)	39	20	BROWN
101+00	23' RT.	35	35	59.90	91	56	0.10	0-5	A-4(1)	20	7	BROWN
109+00	6' LT.	35	36	7.30	91	55	58.70	0-5	A-4(0)	ND	NP	BROWN
109+00	22' LT.	35	35	7.10	91	55	58.80	0-5	A-6(7)	31	17	BROWN
117+00	6' RT.	35	36	14.50	91	55	1.50	0-5	A6(16)	38	24	BROWN
117+00	22' RT.	35	36	14.50	91	56	1.40	0-5	A-6(9)	ND	NP	BROWN
117+00	22' RT.	35	36	14.50	91	55	1.40	0-5	A-7-6(20)	44	27	BROWN
125+00	6' LT.	35	36	20.40	91	56	8.70	0-5	A-4(0)	21	7	BROWN
125+00	19' LT.	35	36	20.30	91	56	8.80	0-5	A-4(0)	20	7	BROWN
133+00	6' RT.	35	36	26.30	91	56	15.40	0-5	A-4(0)	ND	NP	BROWN
133+00	20' RT.	35	36	26.40	91	56	15.30	0-5	A-4(0)	20	8	BROWN
141+00	6' LT.	35	36	31.00	91	56	22.90	0-4Z	A-2-4(0)	19	7	BROWN
141+00	21' LT.	35	36	30.80	91	56	22.90	0-4Z	A-4(0)	17	5	BROWN
149+00	6' RT.	35	36	35.60	91	56	28.80	0-5	A-4(0)	20	6	BROWN
149+00	19' RT.	35	36	35.70	91	56	28.60	0-3.5Z	A-4(0)	ND	NP	BROWN
157+00	5' LT.	35	36	41.40	91	56	31.20	0-5	A-6(3)	26	12	BROWN
157+00	20' LT.	35	36	41.40	91	56	31.40	0-3.5Z	A-4(0)	20	6	BROWN
SITE 2 - NORTHBOUND												
201+00	6' RT.	35	39	22.10	91	55	25.40	0-2Z	A-4(0)	19	4	BROWN
201+00	21' RT.	35	39	22.10	91	55	25.20	0-8"Z	A-2-4(0)	ND	NP	BROWN
209+00	5' LT.	35	39	28.30	91	55	22.60	0-5	A-4(1)	23	9	BROWN
209+00	23' LT.	35	39	22.40	91	55	22.80	0-3.5Z	A-4(0)	ND	NP	BROWN
217+00	5' RT.	35	39	33.70	91	55	19.90	0-5	A-2-4(0)	ND	NP	BROWN
217+00	19' RT.	35	39	33.60	91	55	19.80	0-5	A-2-4(0)	ND	NP	BROWN
225+00	6' LT.	35	39	38.00	91	55	13.70	0-4Z	A-4(0)	18	3	BROWN
225+00	19' LT.	35	39	38.10	91	55	13.80	0-3Z	A-2-4(0)	ND	NP	BROWN
233+00	6' RT.	35	39	43.50	91	55	3.00	0-5	A-4(0)	ND	NP	BROWN
233+00	21' RT.	35	39	43.50	91	55	2.90	0-5	A-4(0)	21	6	BROWN
241+00	6' LT.	35	39	51.50	91	54	59.00	0-5	A-4(0)	17	3	BROWN
241+00	22' LT.	35	39	51.70	91	54	59.20	0-5	A-4(0)	ND	NP	BROWN
249+00	5' RT.	35	39	57.20	91	54	51.00	0-5	A-2-4(0)	ND	NP	BROWN
249+00	22' RT.	35	39	57.10	91	54	50.80	0-2.5Z	A-2-4(0)	ND	NP	BROWN
257+00	5' LT.	35	40	3.80	91	54	47.10	0-5	A-4(0)	17	4	BROWN
257+00	23' LT.	35	40	3.90	91	54	47.30	0-5	A-4(3)	23	10	BROWN
257+00	23' LT.	35	40	3.90	91	54	47.30	0-5	A-6(8)	39	23	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

CONCRETE DITCH PAVING

STATION	STATION	LOCATION	CONC. DIT. PAVING (TYPE B) (W=6'-0")	SOLID SODDING	*WATER	EROSION CONTROL MATTING (CLASS 2)
			SQ. YD.		M. GAL.	SQ. YD.
246+40	248+00	LT.	260	84	1.1	
ENTIRE PROJECT			200	133	1.7	300.0
TOTALS:			460	217	2.8	300.0

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

MAILBOXES

LOCATION	MAILBOXES	MAILBOX SUPPORTS	
		(SINGLE)	(DOUBLE)
SITE 1 - SOUTHBOUND			
ENTIRE PROJECT	10	8	1
SUBTOTALS SITE 1-SB:	10	8	1
SITE 2 - NORTHBOUND			
ENTIRE PROJECT	11	7	2
SUBTOTALS SITE 2-NB:	11	7	2
TOTALS:	21	15	3

COLD MILLING

STATION	STATION	LOCATION	COLD MILLING ASPHALT PAVEMENT SQ. YD.
SITE 1			
100+00.00	101+00.00	BEGIN SITE 1	244
162+40.00	163+40.00	END SITE 1	244
SUBTOTAL SITE 1-SB:			488
SITE 2			
200+00.00	201+00.00	BEGIN SITE 2	244
262+40.00	263+40.00	END SITE 2	244
SUBTOTAL SITE 2-NB:			488
TOTAL:			976

AVG. 1" DEPTH

ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC

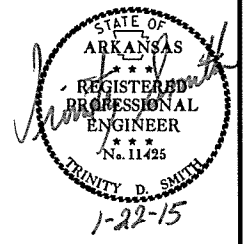
LOCATION	ASPH. CONC. PATCHING FOR M.O.T.	TACK COAT
	TON	GALLON
ENTIRE PROJECT - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	75	150
TOTALS:	75	150

NOTE: QUANTITIES ARE ESTIMATED.
 SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.
 BASIS OF ESTIMATE: ASPH. CONC. PATCHING FOR MOT - 25 TONS/MILE
 TACK COAT- 50 GAL./MILE

SELECTED PIPE BEDDING

LOCATION	SELECTED PIPE BEDDING CU. YD.
ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.	125
TOTAL:	125

NOTE: QUANTITY ESTIMATED.
 SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

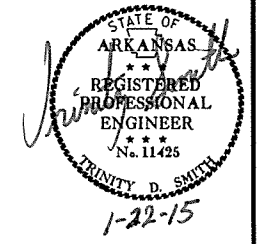


QUANTITIES

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.	050261		42	148

EROSION CONTROL

② QUANTITIES



STATION	STATION	LOCATION	PERMANENT EROSION CONTROL					TEMPORARY EROSION CONTROL								
			SEEDING	LIME	MULCH COVER	WATER	SECOND SEEDING APPLICATION	TEMPORARY SEEDING	MULCH COVER	WATER	SAND BAG DITCH CHECKS (E-5)	ROCK DITCH CHECKS (E-6)	SILT FENCE (E-11)	SEDIMENT BASIN (E-14)	OBLITERATION OF SEDIMENT BASIN	*SEDIMENT REMOVAL & DISPOSAL
			ACRE	TON	ACRE	M.GAL.	ACRE	ACRE	ACRE	M. GAL.	BAG	CU. YD.	LIN. FT.	CU. YD.	CU. YD.	CU. YD.
SITE 1 - SOUTHBOUND																
101+00	162+40	STAGE 1	6.47	13	6.47	659.9	6.47	6.47	6.47	132.0	286	39	3775			378
101+00	162+40	STAGE 2	6.80	14	6.80	693.6	6.80	6.80	6.80	138.7	220	9	1215			122
*ENTIRE PROJECT TO BE USED USED IF AND WHERE DIRECTED BY THE ENGINEER.											150	12	1250	3600	3600	7200
SUBTOTALS SITE 1-SB:			13.27	27	13.27	1353.5	13.27	13.27	13.27	270.7	656	60	6240	3600	3600	7700
SITE 2 - NORTHBOUND																
201+00	262+40	STAGE 1	6.92	14	6.92	705.8	6.92	6.92	6.92	141.2	440	54	4375			438
201+00	262+40	STAGE 2	7.05	14	7.05	719.1	7.05	7.05	7.05	143.8	330	24	3225			323
*ENTIRE PROJECT TO BE USED USED IF AND WHERE DIRECTED BY THE ENGINEER.											193	20	1900	3600	3600	7200
SUBTOTALS SITE 2-NB:			13.97	28	13.97	1424.9	13.97	13.97	13.97	285.0	963	98	9500	3600	3600	7961
TOTALS:			27.24	55	27.24	2778.4	27.24	27.24	27.24	555.7	1619	158	15740	7200	7200	15661

BASIS OF ESTIMATE:
 LIME2 TONS / ACRE OF SEEDING
 WATER.....102.0 M.G. / ACRE OF SEEDING
 WATER.....20.4 M.G. / ACRE OF TEMPORARY SEEDING
 WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING
 SAND BAG DITCH CHECKS.....22 BAGS / LOCATION
 ROCK DITCH CHECKS.....3 CU.YD./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 ARE ESTIMATED.
 SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

STRUCTURES

STATION	DESCRIPTION	R.C. PIPE CULVERT (CLASS III)	R.C. PIPE CULVERT (CLASS IV)				R.C. PIPE CULVERT (CLASS V)		FLARED END SECTION				SPAN	HEIGHT	LENGTH	CLASS S CONCRETE ROADWAY	REINF. STEEL ROADWAY (GRADE 60)	UNC. EXC. FOR STR. ROADWAY	SOLID SODDING	WATER	STD. DWG. NOS.			
		24"	24"	36"	42"	48"	24"	30"	24"	30"	36"	42"										48"		
		LIN. FT.																				EACH		
SITE 1 - SOUTHBOUND																								
102+21	EXTEND 24" X 53" R.C. PIPE CULVERT 14' LT. & 13' RT. W/F.E.S. LT. & RT.	35							2										16	0.2	PCC-1, FES-1, FES-2			
110+18	EXTEND 24" X 61" R.C. PIPE CULVERT@ 30° LT. FWD. SKEW 22' LT. & 11' RT. W/F.E.S. LT. & RT.	41							2										16	0.2	PCC-1, FES-1, FES-2			
110+18	CONSTRUCT 36" X 83" R.C. PIPE CULVERT@ 30° LT. FWD. SKEW W/F.E.S. LT. & RT.			83						2									34	0.4	PCC-1, FES-1, FES-2			
119+60	EXTEND 42" X 37" R.C. PIPE CULVERT 28' LT.& 17' W/F.E.S. LT. & RT.				53						2								46	0.6	PCC-1, FES-1, FES-2			
138+35	EXTEND 24" X 41" R.C. PIPE CULVERT 28' LT. & 15' RT. W/F.E.S. LT. & RT.			51					2										16	0.2	PCC-1, FES-1, FES-2			
146+18	EXTEND 24" X 37" R.C. PIPE CULVERT 31' LT. & 16' RT. W/F.E.S. LT. & RT.			55					2										16	0.2	PCC-1, FES-1, FES-2			
SUBTOTALS SITE 1-SB:		35	147	83	53				8	2	2								144	1.8				
SITE 2 - NORTHBOUND																								
203+99	EXTEND 30" X 38" R.C. PIPE CULVERT 17' LT. & 41' RT. W/F.E.S. LT. & RT.							66	2										26	0.3	PCC-1, FES-1, FES-2			
203+99	CONSTRUCT 30" X 95" R.C. PIPE CULVERT W/F.E.S. LT. & RT.							95	2										26	0.3	PCC-1, FES-1, FES-2			
211+59	EXTEND 24" X 38" R.C. PIPE CULVERT 19' LT. & 27' RT. W/F.E.S. LT. & RT.							54	2										16	0.2	PCC-1, FES-1, FES-2			
211+59	CONSTRUCT 24" X 84" R.C. PIPE CULVERT W/F.E.S. LT. & RT.							84	2										16	0.2	PCC-1, FES-1, FES-2			
218+49	EXTEND 6' X 6' X 47" R.C. BOX CULVERT 26' LT. & 32' RT.											6	6	58	52.61	5421	32		19	0.2	R-100X-0, W-X003-1, RCB-1, RCB-2, RCB-3			
218+49	CONSTRUCT 36" X 121" R.C. PIPE CULVERT W/F.E.S. LT. & RT.			121						2									34	0.4	PCC-1, FES-1, FES-2			
224+84	EXTEND 48" X 70" R.C. PIPE CULVERT@ 45° RT. FWD. SKEW 20' LT. & 38' RT. W/F.E.S. LT. & RT.				66						2								58	0.7	PCC-1, FES-1, FES-2			
228+82	EXTEND 30" X 53" R.C. PIPE CULVERT @ 30° LT. FWD. SKEW 18' LT. & 28' RT. W/F.E.S. LT. & RT.							61	2										26	0.3	PCC-1, FES-1, FES-2			
238+41	EXTEND 30" X 41" R.C. PIPE CULVERT 12' LT. & 15' RT. W/F.E.S. LT. & RT.							59	2										26	0.3	PCC-1, FES-1, FES-2			
247+12	EXTEND 24" X 49" R.C. PIPE CULVERT 12' LT. & 26' RT. W/F.E.S. LT. & RT.			46					2										16	0.2	PCC-1, FES-1, FES-2			
247+12	CONSTRUCT 24" X 86" R.C. PIPE CULVERT W/F.E.S. LT. & RT.			86					2										16	0.2	PCC-1, FES-1, FES-2			
SUBTOTALS SITE 2-NB:		132	121	66	138	281	8	8	2	2					52.61	5421	32		279	3.3				
TOTALS:		167	147	204	53	66	138	281	16	8	4	2	2		52.61	5421	32		423	5.1				

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.

QUANTITIES

1/15/2015 R050261.DGN

SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP & 201	CLEARING	124	STATION
201	GRUBBING	124	STATION
202	REMOVAL AND DISPOSAL OF FENCE	8494	LIN. FT.
202	REMOVAL AND DISPOSAL OF GATES	3	EACH
202	REMOVAL AND DISPOSAL OF SIGN FOUNDATIONS	3	EACH
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS	36	EACH
202	REMOVAL AND DISPOSAL OF SIGNS	2	EACH
210	UNCLASSIFIED EXCAVATION	38671	CU. YD.
210	COMPACTED EMBANKMENT	27292	CU. YD.
SP & 210	SOIL STABILIZATION	100	TON
303	AGGREGATE BASE COURSE (CLASS 7)	31019	TON
401	TACK COAT	4744	GALLON
SP, SS & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")	4376	TON
SP, SS & 406	ASPHALT BINDER (PG 64-22) IN ACHM BINDER COURSE (1")	201	TON
SP, SS & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	13589	TON
SP, SS & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	760	TON
412	COLD MILLING ASPHALT PAVEMENT	976	SQ. YD.
SP & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC	75	TON
SP & 415	ACHM PATCHING OF EXISTING ROADWAY	100	TON
505	PORTLAND CEMENT CONCRETE DRIVEWAY	69.90	SQ. YD.
601	MOBILIZATION	1.00	LUMP SUM
SP & 602	FURNISHING FIELD OFFICE	1	EACH
603	MAINTENANCE OF TRAFFIC	1.00	LUMP SUM
SS & 604	SIGNS	680	SQ. FT.
SS & 604	BARRICADES	64	LIN. FT.
SS & 604	TRAFFIC DRUMS	492	EACH
SS & 604	VERTICAL PANELS	258	EACH
604	CONSTRUCTION PAVEMENT MARKINGS	49120	LIN. FT.
604	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER	286	LIN. FT.
605	RELOCATING PRECAST CONCRETE BARRIER	286	LIN. FT.
605	CONCRETE DITCH PAVING (TYPE B)	460	SQ. YD.
606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	167	LIN. FT.
606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)	147	LIN. FT.
606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)	204	LIN. FT.
606	42" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)	53	LIN. FT.
606	48" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)	66	LIN. FT.
606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)	138	LIN. FT.
606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)	281	LIN. FT.
606	24" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	16	EACH
606	30" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	8	EACH
606	36" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	4	EACH
606	42" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	2	EACH
606	48" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	2	EACH
SP, SS & 606	18" SIDE DRAIN	1136	LIN. FT.
SP, SS & 606	24" SIDE DRAIN	176	LIN. FT.
606	SELECTED PIPE BEDDING	125	CU. YD.
611	4" PIPE UNDERDRAINS	1000	LIN. FT.
611	UNDERDRAIN OUTLET PROTECTORS	8	EACH
615	PAVEMENT REPAIR OVER CULVERTS (CONCRETE)	37.0	CU. YD.
619	WIRE FENCE (TYPE D)	8368	LIN. FT.
619	16" STEEL GATES	3	EACH
619	16" ALUMINUM GATES	3	EACH
619	20" STEEL GATES	2	EACH
619	20" ALUMINUM GATES	2	EACH
620	LIME	55	TON
620	SEEDING	27.24	ACRE
SS & 620	MULCH COVER	54.48	ACRE
620	WATER	3342.0	M. GAL.
621	TEMPORARY SEEDING	27.24	ACRE
621	SILT FENCE	15740	LIN. FT.
621	SAND BAG DITCH CHECKS	1619	BAG
621	ROCK DITCH CHECKS	158	CU. YD.
621	SEDIMENT BASIN	7200	CU. YD.
621	OBLITERATION OF SEDIMENT BASIN	7200	CU. YD.
621	SEDIMENT REMOVAL AND DISPOSAL	15661	CU. YD.
623	SECOND SEEDING APPLICATION	27.24	ACRE
624	SOLID SODDING	640	SQ. YD.
626	EROSION CONTROL MATTING (CLASS 2)	300	SQ. YD.
635	ROADWAY CONSTRUCTION CONTROL	1.00	LUMP SUM
637	MAILBOXES	21	EACH
637	MAILBOX SUPPORTS (SINGLE)	15	EACH
637	MAILBOX SUPPORTS (DOUBLE)	3	EACH
642	RUMBLE STRIPS IN ASPHALT SHOULDERS	22206	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (4")	27628	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (4")	25360	LIN. FT.
721	RAISED PAVEMENT MARKERS (TYPE II)	544	EACH
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-ROADWAY	32	CU. YD.
802	CLASS S CONCRETE-ROADWAY	52.61	CU. YD.
804	REINFORCING STEEL-ROADWAY (GRADE 60)	5421	POUND

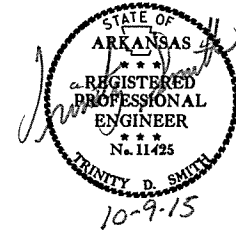
*DENOTES ALTERNATE BID ITEMS.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
9-28-15				6	ARK.			
10-06-15								
10-09-15								
				JOB NO.	050261		43	148

2 SUMMARY OF QUANTITIES AND REVISIONS

REVISIONS

DATE	REVISION	SHEET NUMBER
9-28-15	ADDED SPECIAL PROVISIONS - "SPECIAL CLEARING REQUIREMENTS" & "OFF-SITE RESTRAINING CONDITIONS FOR BATS", AND ADDED SPECIAL PROVISION TO PAY ITEM "CLEARING" IN THE SUMMARY OF QUANTITIES	2 & 43
10-06-15	REVISED SPECIAL PROVISION "PRICE ADJUSTMENT FOR ASPHALT BINDER"	43
10-09-15	REVISED QUANTITIES FOR "UNCLASSIFIED EXCAVATION" AND "COMPACTED EMBANKMENT" AND REVISED CROSS SECTIONS	38, 43, & 89-148



SURVEY CONTROL COORDINATES
Project Name: 050261
Date: 10/09/2014
Arkansas State Plane Coordinates
Based on AHTD GPS PTS : 120014, 120014A, 120015, 120015A, 12006-12006A, & 120017-120017A
Projected to Ground Coordinates
U.S. Survey Foot
Units:

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

Table with columns: Point No., Northing, Easting, SX, Elevation, SZ, Feature Code, Point Description. Contains 926 rows of coordinate data.

ALIGNMENT NAME: CONST 1

Table with columns: POINT NAME, TYPE, STATION, NORTHING, EASTING. Contains 10 rows of alignment data for CONST 1.

ALIGNMENT NAME: CONST 2

Table with columns: POINT NAME, TYPE, STATION, NORTHING, EASTING. Contains 20 rows of alignment data for CONST 2.

*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 "Ark. State Hwy Trans. Dept.", "GPS Survey", & "Point No. #####".

**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. #####".

SK, 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 tag definition for SK, SZ, 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: Horizontal - GPS (1.0 cm ± 1PPM)
Horizontal - Primary (2.0 cm ± 20PPM)
Horizontal - Secondary (3 cm ± 50PPM)
Vertical - NGS 1st Order (±4mm x vdist in km)
Vertical - NGS 2nd Order (±6mm x vdist in km)
Vertical - NGS 3rd Order (±8mm x vdist in km)

Horizontal Datum: NAD 1983 (1997) State Plane Zone: 0303 - North Zone
The adjustment year is based on metadata in the SDMS Control file
A project CAF of: 0.9999918550 has been used to compute the above coordinates.

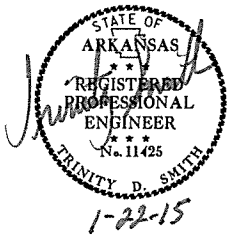
This CAF is intended for use within the project limits only.
Grid Distance = Ground Distance X CAF
If Coordinates are listed as Ground:
To compute Grid Coordinates, multiply the Ground Coordinates by CAF about the origin of X=0 & Y=0
If Coordinates are listed as Grid:
To compute Ground Coordinates, divide 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: 0.999991888 has been computed and incorporated in the above CAF.
This is based on the average elevation of the project: 1028.23 Feet
3-Wire leveling techniques have been used to establish elevations on
Points: 1,351, 100-107
From NGS BM: 3.DWB, 5.DWB, & 7.IWO.1972

Basis of Bearing: Grid Bearings based on AHTD GPS points:
Convergence Angle is: 00 01 51.4 RIGHT at PN: 26
LG: 091-56-48.63 W
Grid Azimuth = Astronomical Azimuth - Convergence Angle

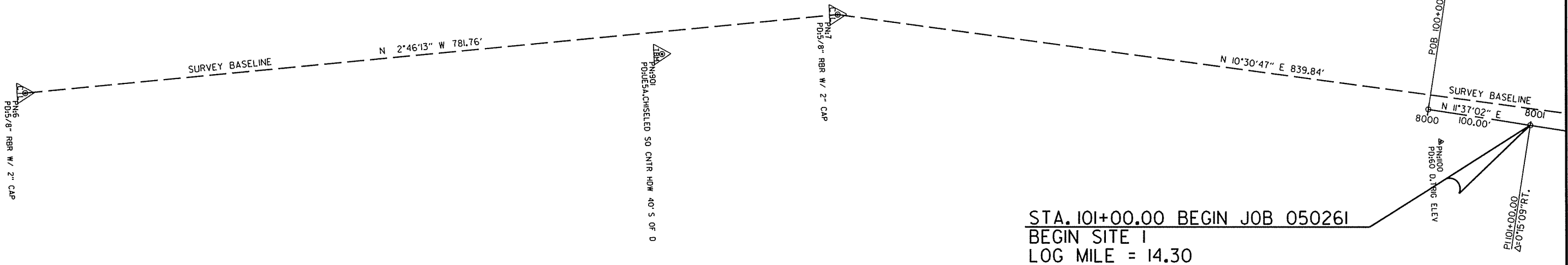
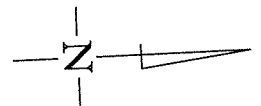
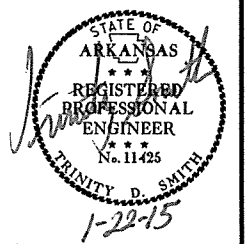
Table with columns: DATE REVISED, DATE FILED, DATE REISED, DATE FILED, FED. RD. DIST. NO., STATE, FED. AID PROJ. NO., SHEET NO., TOTAL SHEETS. Values: 6, ARK., 050261, 44, 148.

2 SURVEY CONTROL DETAILS

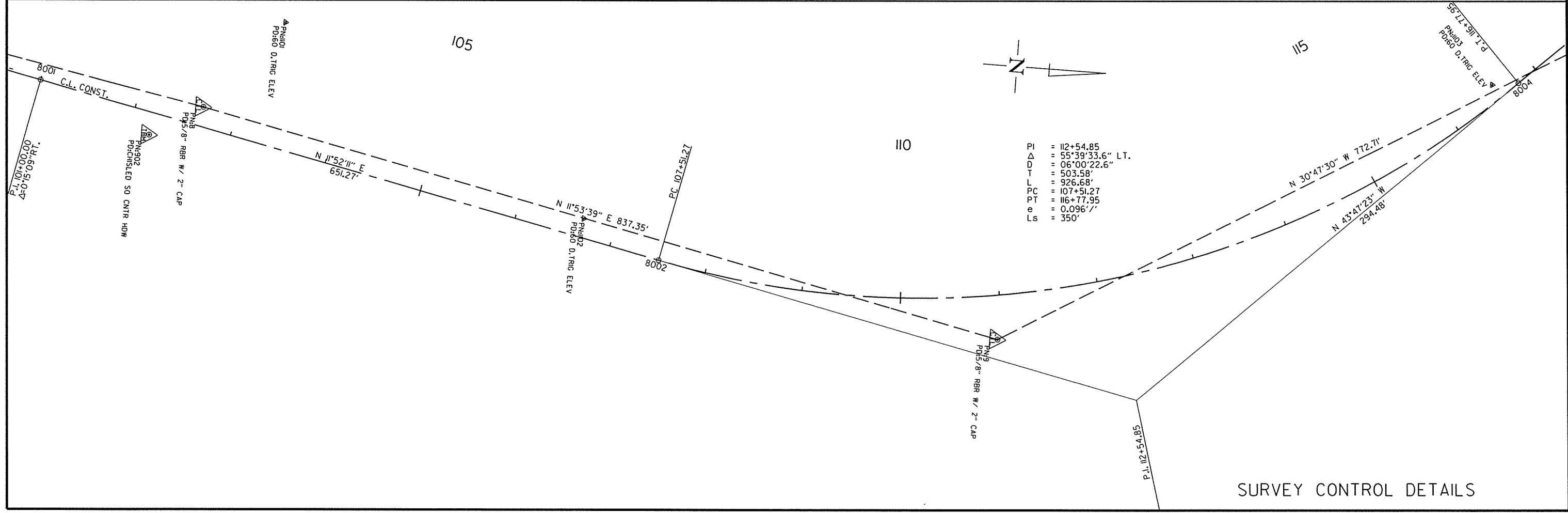
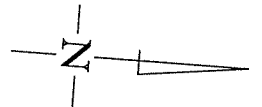


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	050261		45	148

2 SURVEY CONTROL DETAILS



STA. 101+00.00 BEGIN JOB 050261
 BEGIN SITE 1
 LOG MILE = 14.30

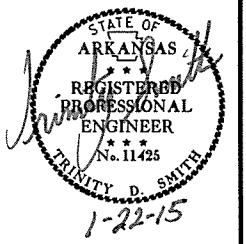


PI = 102+54.85
 Δ = 55°39'33.6" LT.
 D = 503.58'
 L = 926.68'
 PC = 107+51.27
 PT = 116+77.95
 e = 0.096' /'
 Ls = 350'

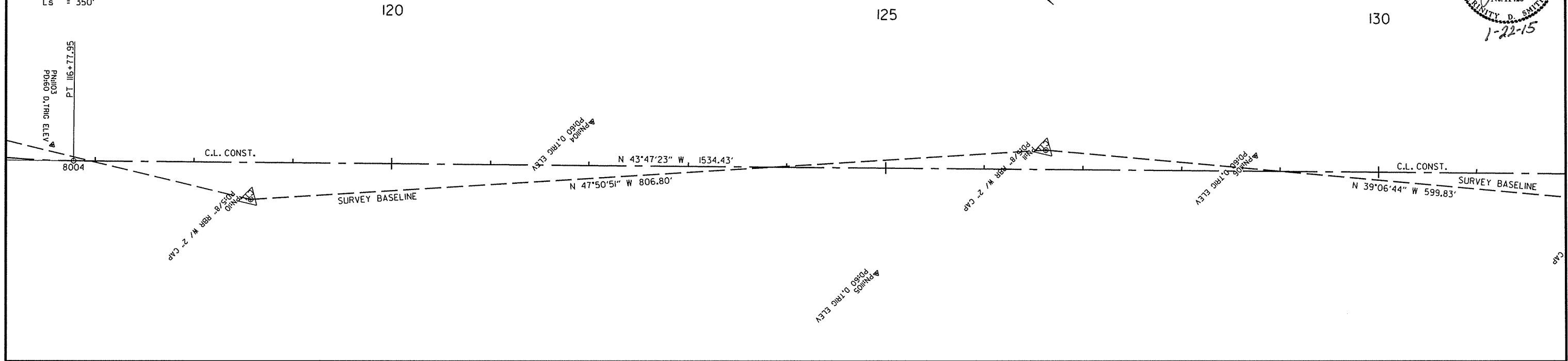
SURVEY CONTROL DETAILS

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.	050261		46	148

2 SURVEY CONTROL DETAILS

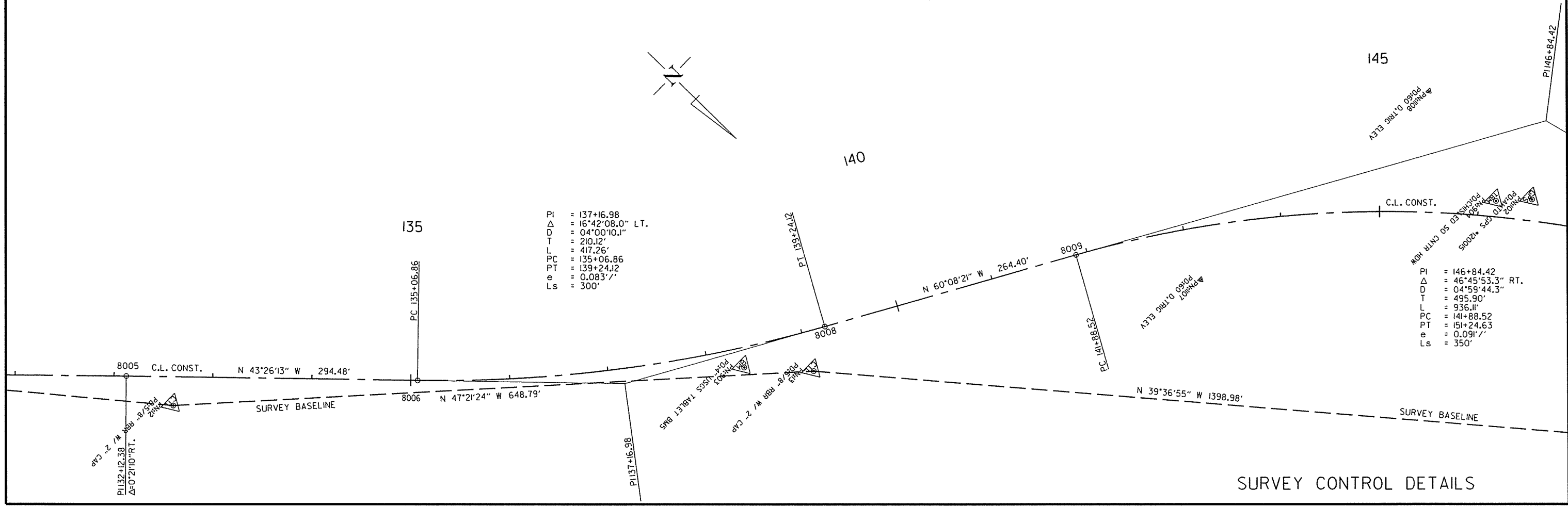


PI = 112+54.85
 Δ = 55°39'33.6" LT.
 D = 06°00'22.6"
 T = 503.58'
 L = 926.68'
 PC = 107+51.27
 PT = 116+77.95
 e = 0.096'/'
 Ls = 350'



PI = 137+16.98
 Δ = 16°42'08.0" LT.
 D = 04°00'10.1"
 T = 210.12'
 L = 417.26'
 PC = 135+06.86
 PT = 139+24.12
 e = 0.083'/'
 Ls = 300'

PI = 146+84.42
 Δ = 46°45'53.3" RT.
 D = 04°59'44.3"
 T = 495.90'
 L = 936.11'
 PC = 141+88.52
 PT = 151+24.63
 e = 0.091'/'
 Ls = 350'

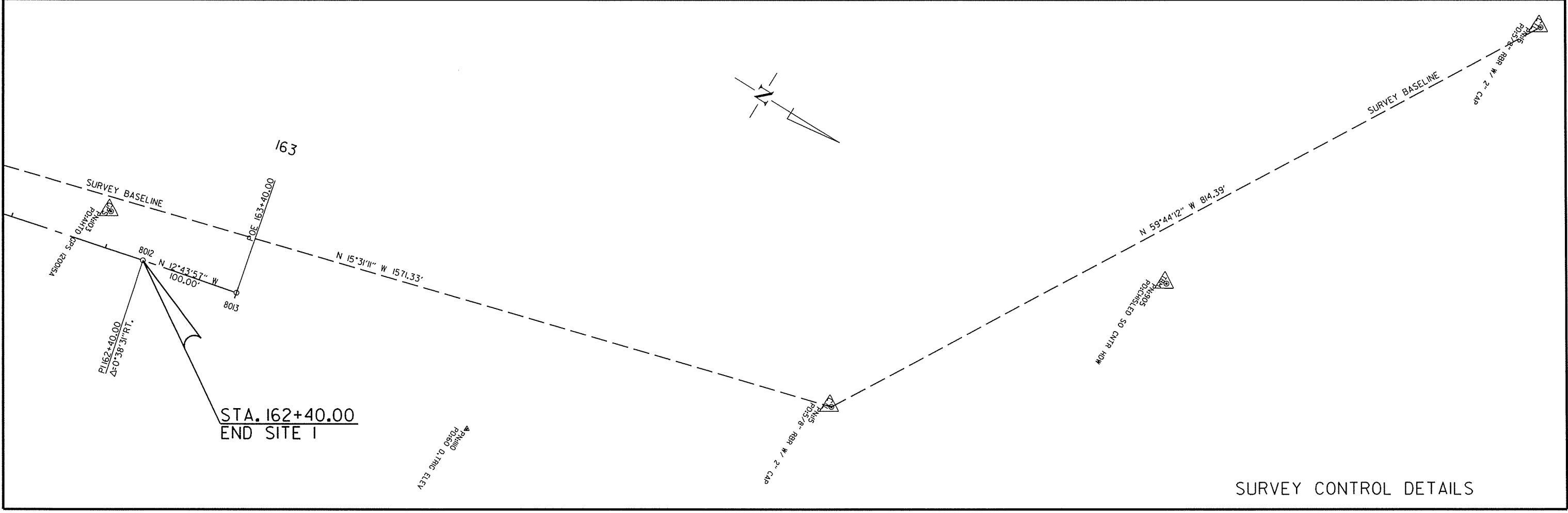
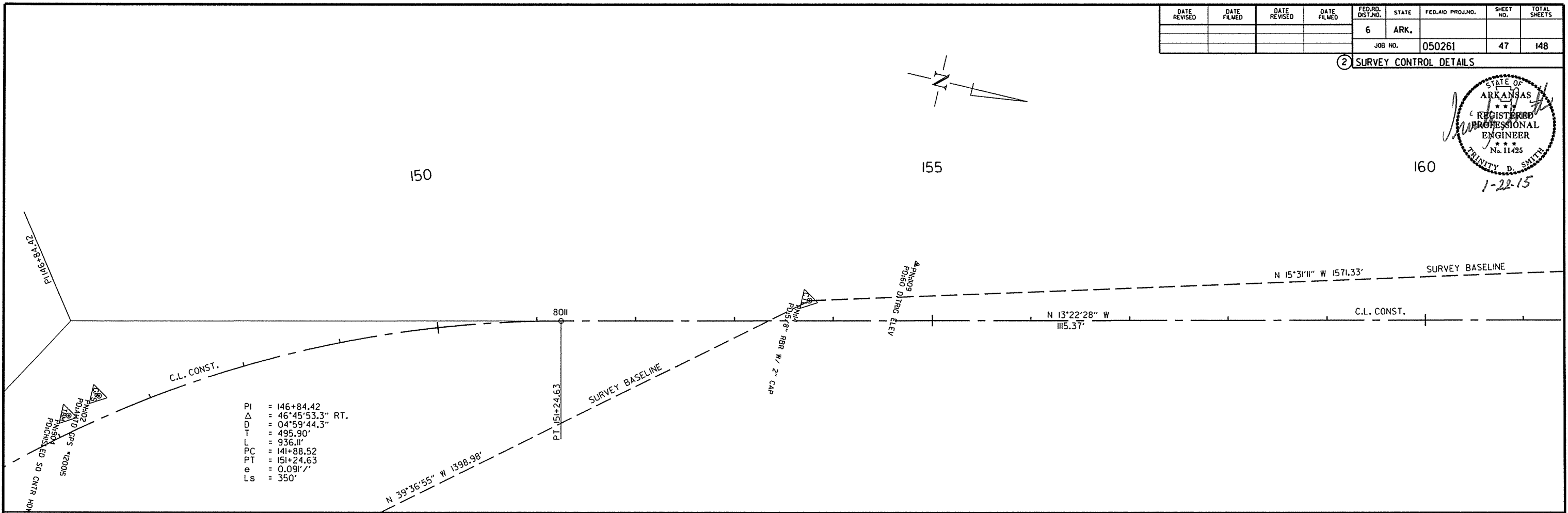
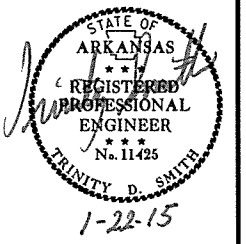


SURVEY CONTROL DETAILS

1/15/2015
 R050261.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. 050261							47	148

2 SURVEY CONTROL DETAILS



STA. 162+40.00
END SITE 1

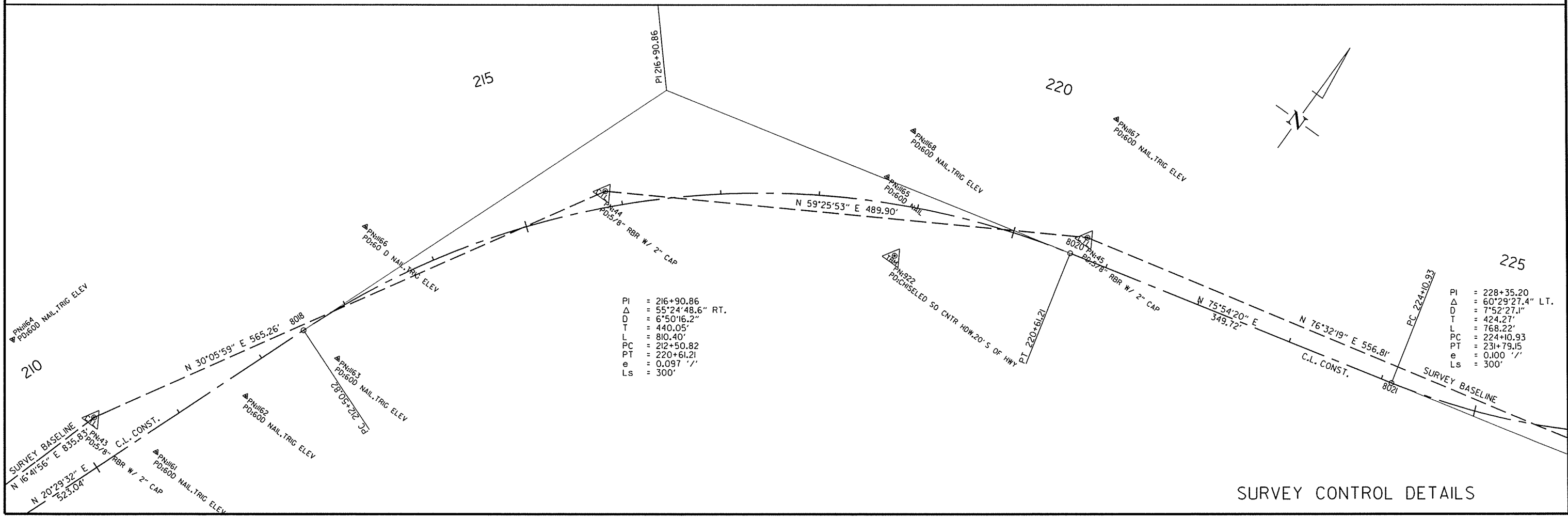
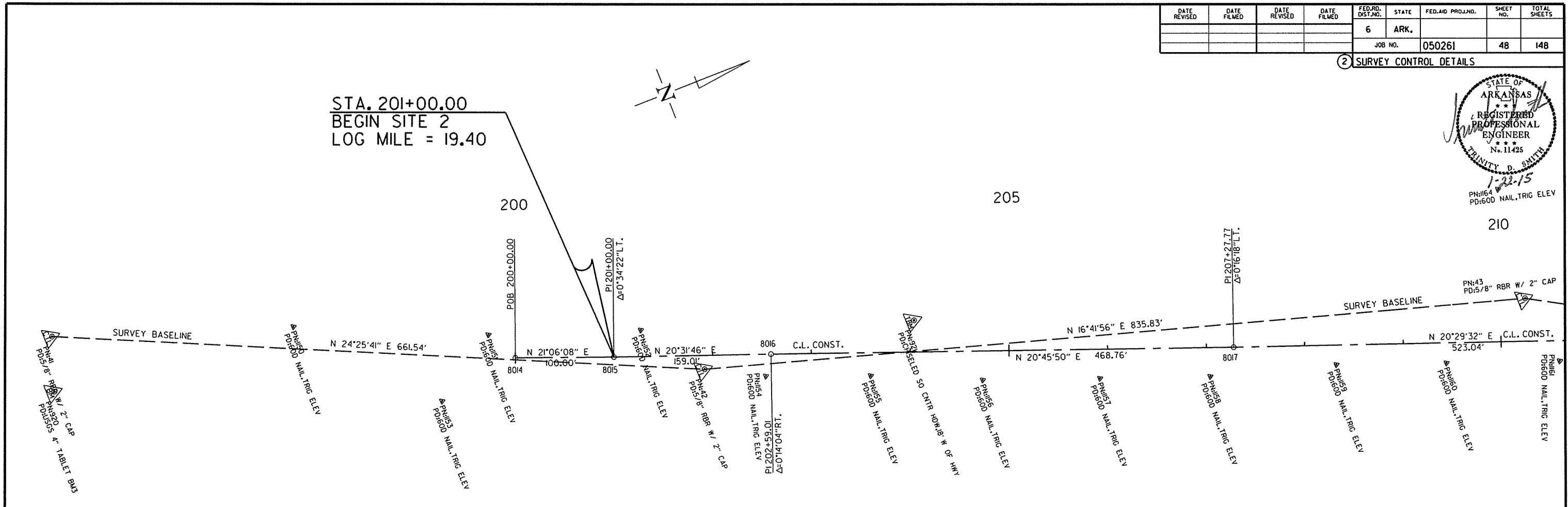
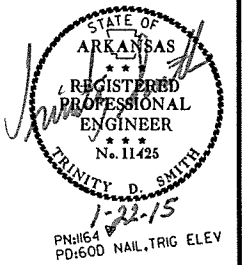
SURVEY CONTROL DETAILS

1/15/2015

R050261.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.	050261		48	148

2 SURVEY CONTROL DETAILS

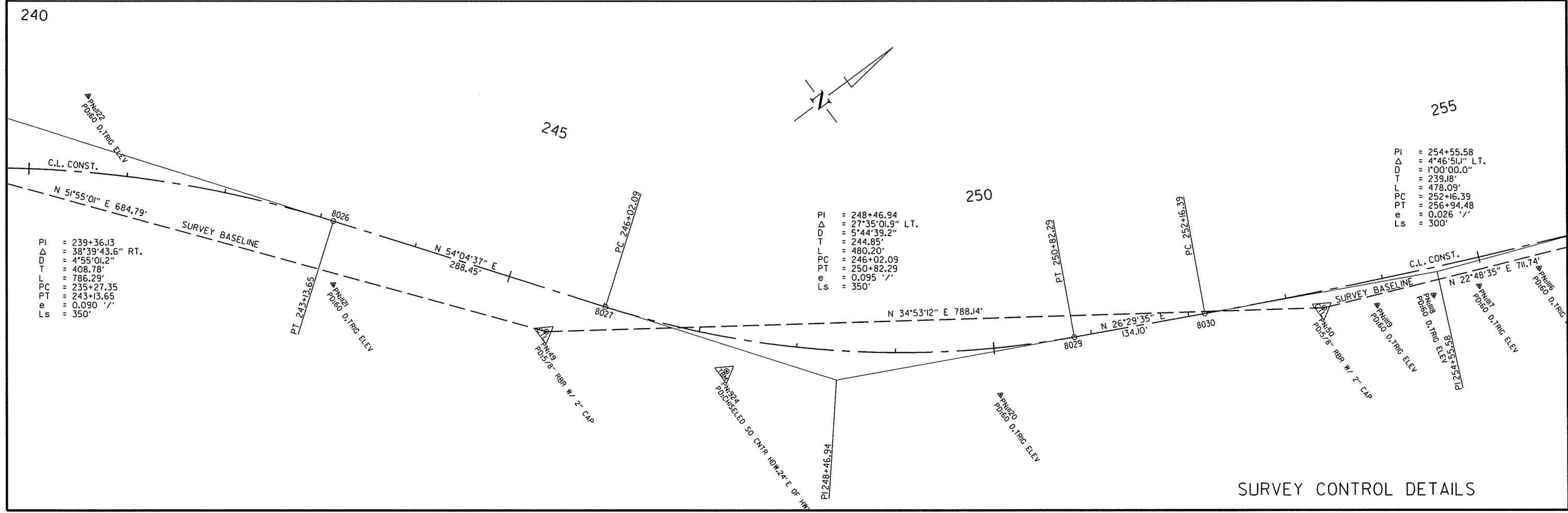
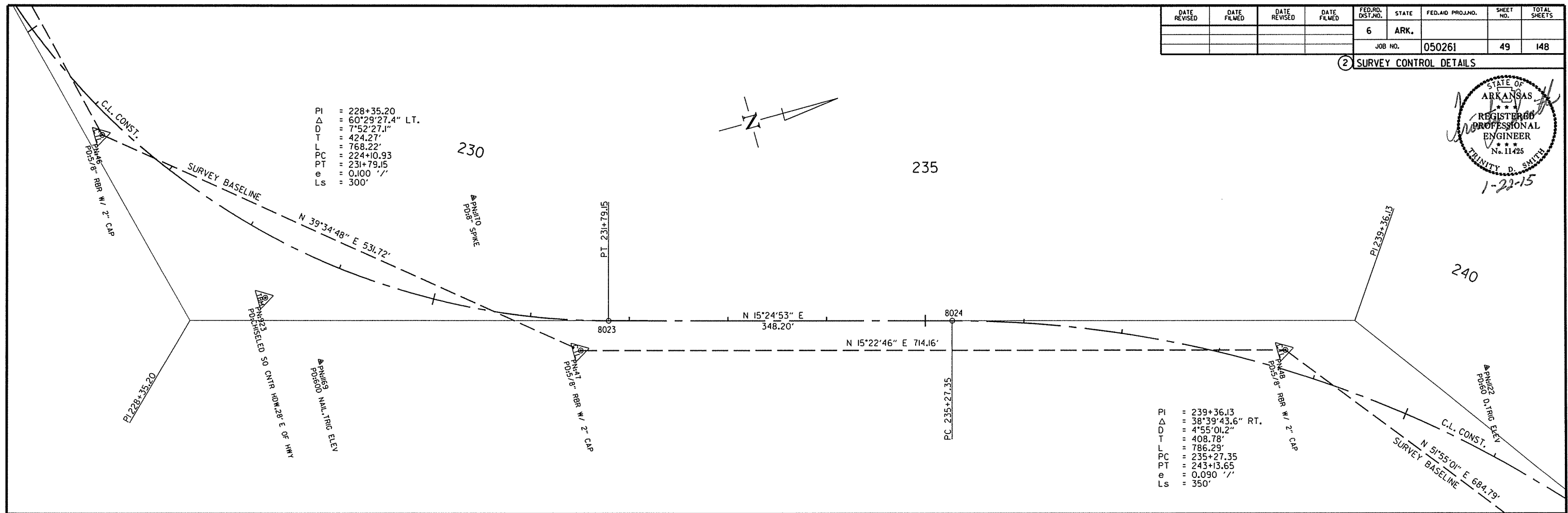
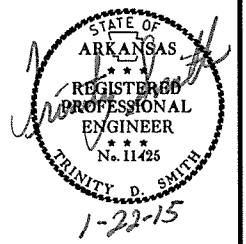


R050261.DGN 1/15/2015

SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		49	148
				JOB NO.		050261		

2 SURVEY CONTROL DETAILS

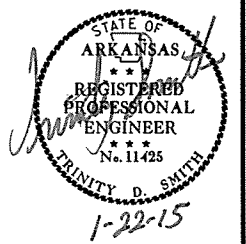


SURVEY CONTROL DETAILS

1/15/2015
R050261.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.	050261		50	148

2 SURVEY CONTROL DETAILS

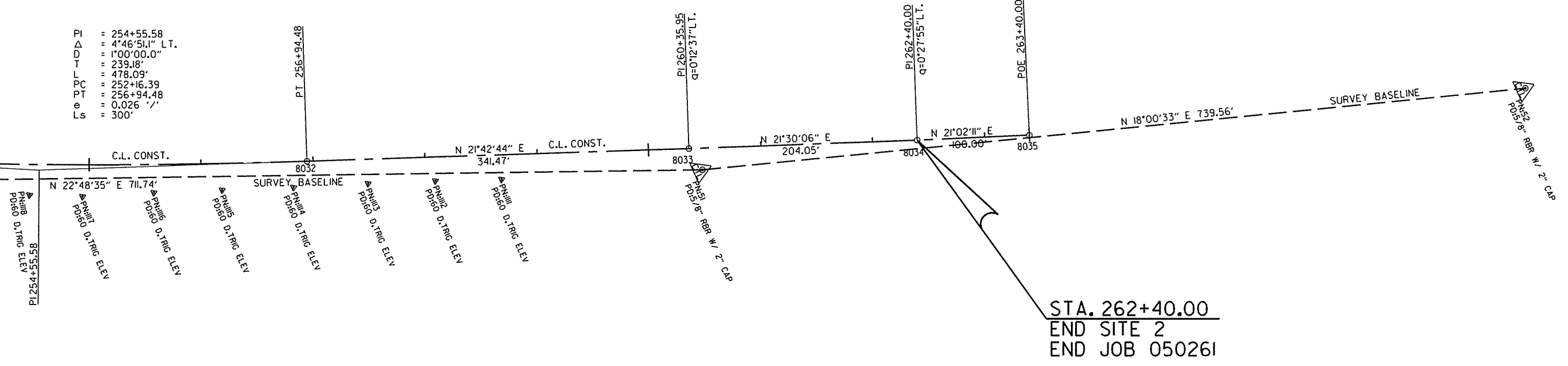


255

PI = 254+55.58
 Δ = 4°46'51.1" LT.
 D = 1°00'00.0"
 T = 239.18'
 L = 478.09'
 PC = 252+16.39
 PT = 256+94.48
 e = 0.026 ' / '
 Ls = 300'

260

263



STA. 262+40.00
 END SITE 2
 END JOB 050261

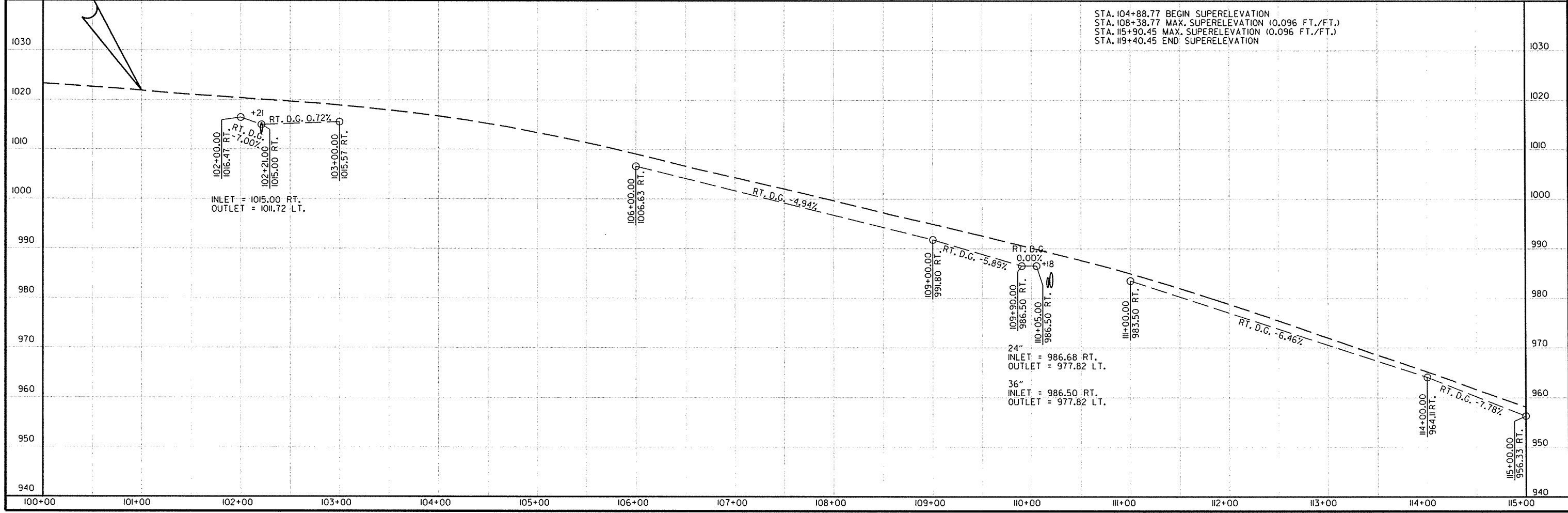
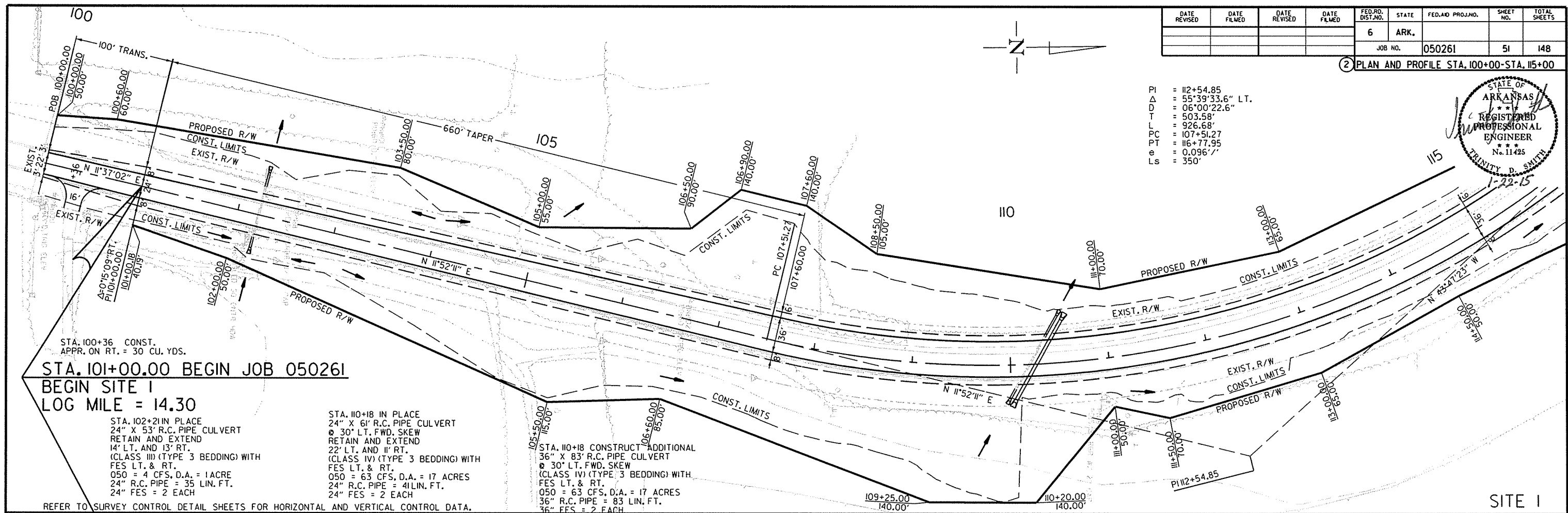
1/15/2015

R050261.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	050261	51	148

2 PLAN AND PROFILE STA. 100+00-STA. 115+00

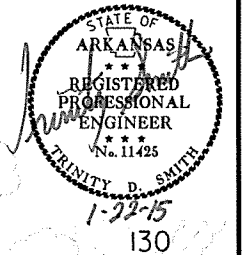
PI = 112+54.85
 Δ = 55°39'33.6" LT.
 D = 06°00'22.6"
 T = 503.58'
 L = 926.68'
 PC = 107+51.27
 PT = 116+77.95
 e = 0.096' /'
 Ls = 350'



R050261.DGN 1/15/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		52	148
				JOB NO.	050261			

2 PLAN AND PROFILE STA. 115+00-STA. 130+00



STA. 118+52 IN PLACE
24" X 40' CORR. PLASTIC PIPE CULVERT
LT. SIDE DRAIN
REMOVE & INSTALL @ STA. 118+47
24" X 40' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. = 65 CU. YDS.

REMOVAL AND DISPOSAL OF FENCE

STA.	STA.	SIDE	LIN. FT.
123+09	125+85	LT.	274
128+59	135+66	RT.	710
129+28	131+77	LT.	249
133+64	141+53	LT.	889

STA. 123+52 IN PLACE
18" X 28' CORR. PLASTIC PIPE CULVERT
LT. SIDE DRAIN
REMOVE & INSTALL
18" X 30' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. = 5 CU. YDS.
CONST. CONC. DRWY. = 70 SQ. YDS.

STA. 126+51 IN PLACE
24" X 28' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE & INSTALL @ STA. 126+48
18" X 30' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. = 5 CU. YDS.

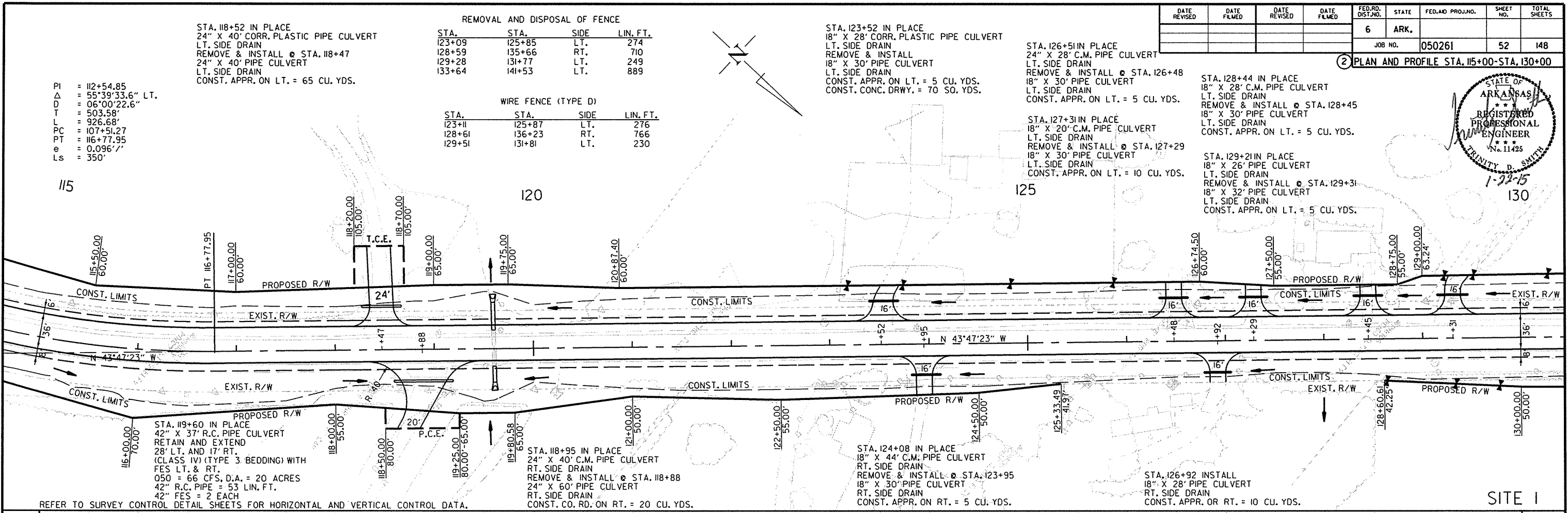
STA. 128+44 IN PLACE
18" X 28' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE & INSTALL @ STA. 128+45
18" X 30' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. = 5 CU. YDS.

STA. 129+21 IN PLACE
18" X 26' PIPE CULVERT
LT. SIDE DRAIN
REMOVE & INSTALL @ STA. 129+31
18" X 32' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. = 5 CU. YDS.

PI = 112+54.85
Δ = 55°39'33.6" LT.
D = 06°00'22.6"
T = 503.58'
L = 926.68'
PC = 107+51.27
PT = 116+77.95
e = 0.096'/'
Ls = 350'

WIRE FENCE (TYPE D)

STA.	STA.	SIDE	LIN. FT.
123+11	125+87	LT.	276
128+61	136+23	RT.	766
129+51	131+81	LT.	230



STA. 119+60 IN PLACE
42" X 37' R.C. PIPE CULVERT
RETAIN AND EXTEND
28' LT. AND 17' RT.
(CLASS IV) (TYPE 3 BEDDING) WITH
FES LT. & RT.
O50 = 66 CFS, D.A. = 20 ACRES
42" R.C. PIPE = 53 LIN. FT.
42" FES = 2 EACH

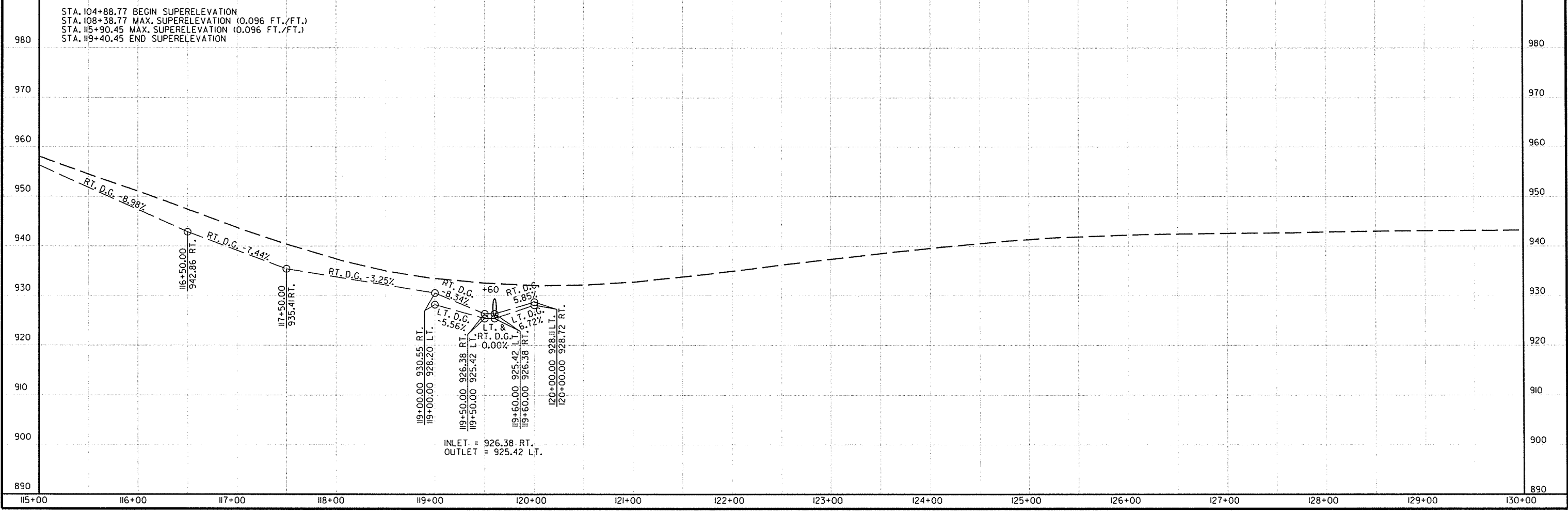
STA. 118+95 IN PLACE
24" X 40' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE & INSTALL @ STA. 118+88
24" X 60' PIPE CULVERT
RT. SIDE DRAIN
CONST. CO. RD. ON RT. = 20 CU. YDS.

STA. 124+08 IN PLACE
18" X 44' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE & INSTALL @ STA. 123+95
18" X 30' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. ON RT. = 5 CU. YDS.

STA. 126+92 INSTALL
18" X 28' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. OR RT. = 10 CU. YDS.

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

STA. 104+88.77 BEGIN SUPERELEVATION
STA. 108+38.77 MAX. SUPERELEVATION (0.096 FT./FT.)
STA. 115+90.45 MAX. SUPERELEVATION (0.096 FT./FT.)
STA. 119+40.45 END SUPERELEVATION



R050261.DGN 1/15/2015

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. 050261							53	148

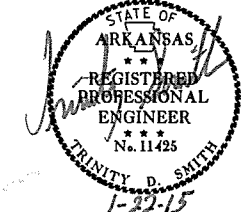
REMOVAL AND DISPOSAL OF FENCE				WIRE FENCE (TYPE D)				16' GATE EACH	
STA.	STA.	SIDE	LIN. FT.	STA.	STA.	SIDE	LIN. FT.		
128+59	135+66	RT.	710	128+61	136+23	RT.	766		
129+28	131+77	LT.	249	129+51	131+81	LT.	230		
133+64	141+53	LT.	889	133+66	139+57	LT.	591		
144+65	154+44	LT.	1079	139+73	141.56	LT.	183		
145+10	146+92	RT.	177	144+70	154+49	LT.	979		

STA. 132+03 INSTALL
18" X 34" PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. = 5 CU. YDS.

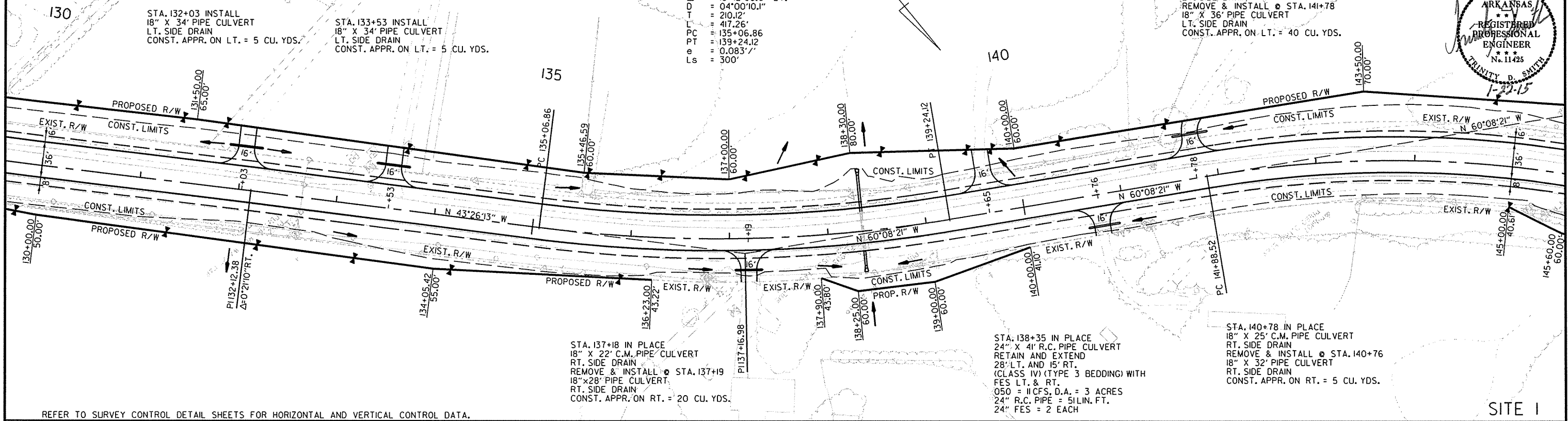
STA. 133+53 INSTALL
18" X 34" PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. = 5 CU. YDS.

STA. 139+65 CONST.
APPR. ON LT. = 35 CU. YDS.

STA. 141+66 IN PLACE
18" X 24" C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE & INSTALL @ STA. 141+78
18" X 36" PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. = 40 CU. YDS.



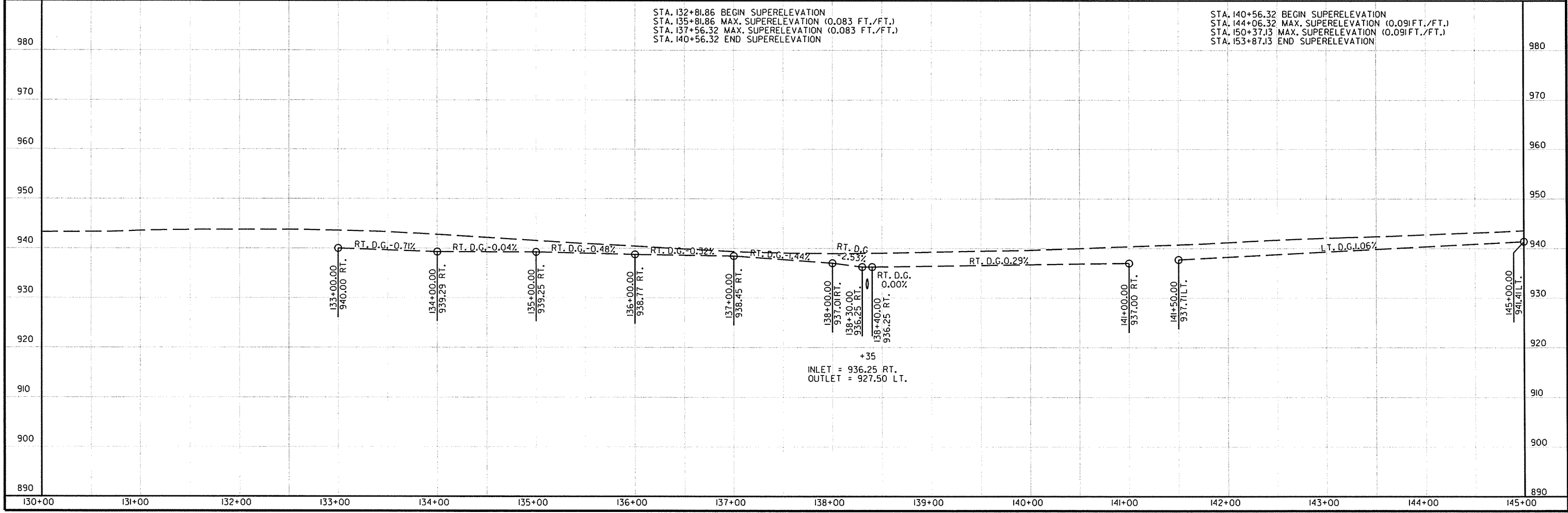
PI = 137+16.98
Δ = 16°42'08.0" LT.
D = 04°00'10.1"
L = 210.12'
T = 417.26'
PC = 135+06.86
PT = 139+24.12
e = 0.083'/
Ls = 300'



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

STA. 132+81.86 BEGIN SUPERELEVATION
STA. 135+81.86 MAX. SUPERELEVATION (0.083 FT./FT.)
STA. 137+56.32 MAX. SUPERELEVATION (0.083 FT./FT.)
STA. 140+56.32 END SUPERELEVATION

STA. 140+56.32 BEGIN SUPERELEVATION
STA. 144+06.32 MAX. SUPERELEVATION (0.091 FT./FT.)
STA. 150+37.13 MAX. SUPERELEVATION (0.091 FT./FT.)
STA. 153+87.13 END SUPERELEVATION

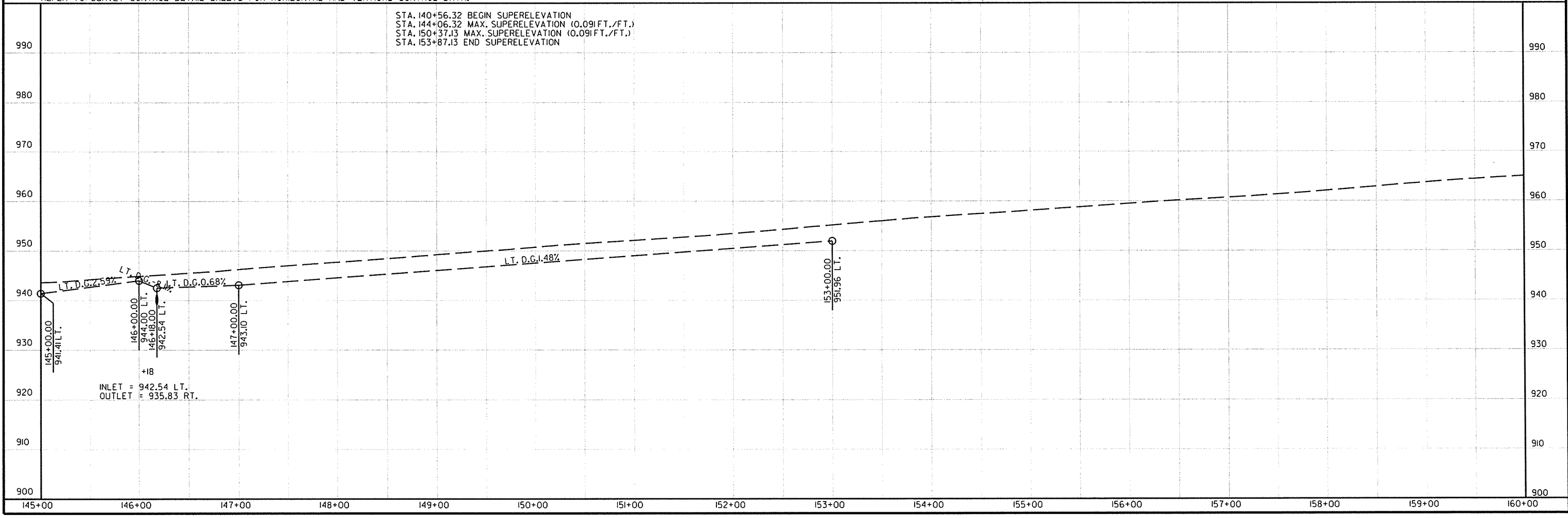
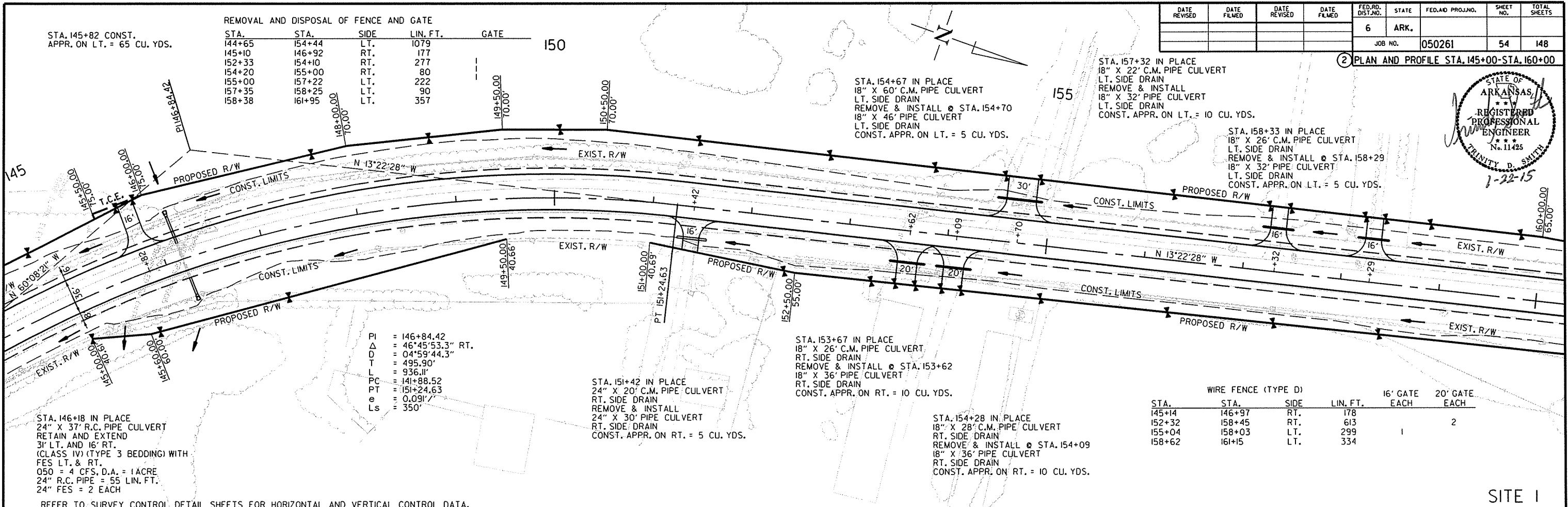
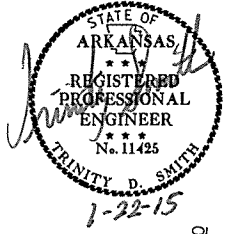


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SITE I

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		54	148
				JOB NO.	050261			

2 PLAN AND PROFILE STA. 145+00-STA. 160+00



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 R050261.DGN

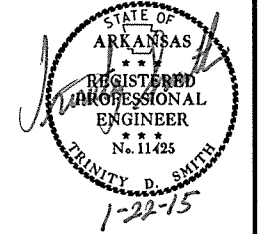
SITE 1

REMOVAL AND DISPOSAL OF FENCE			
STA.	STA.	SIDE	LIN. FT.
158+38	161+95	LT.	357

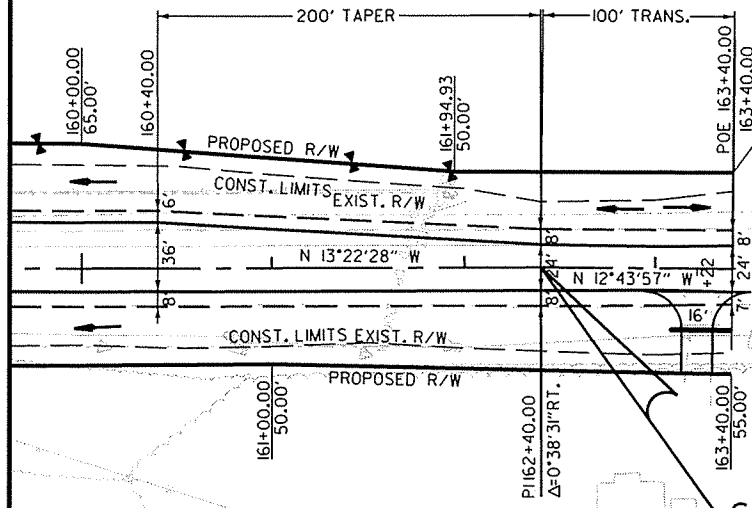
WIRE FENCE (TYPE D)			
STA.	STA.	SIDE	LIN. FT.
158+62	161+96	LT.	334

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		55	148

2 PLAN AND PROFILE STA. 160+00-STA. 162+40



160

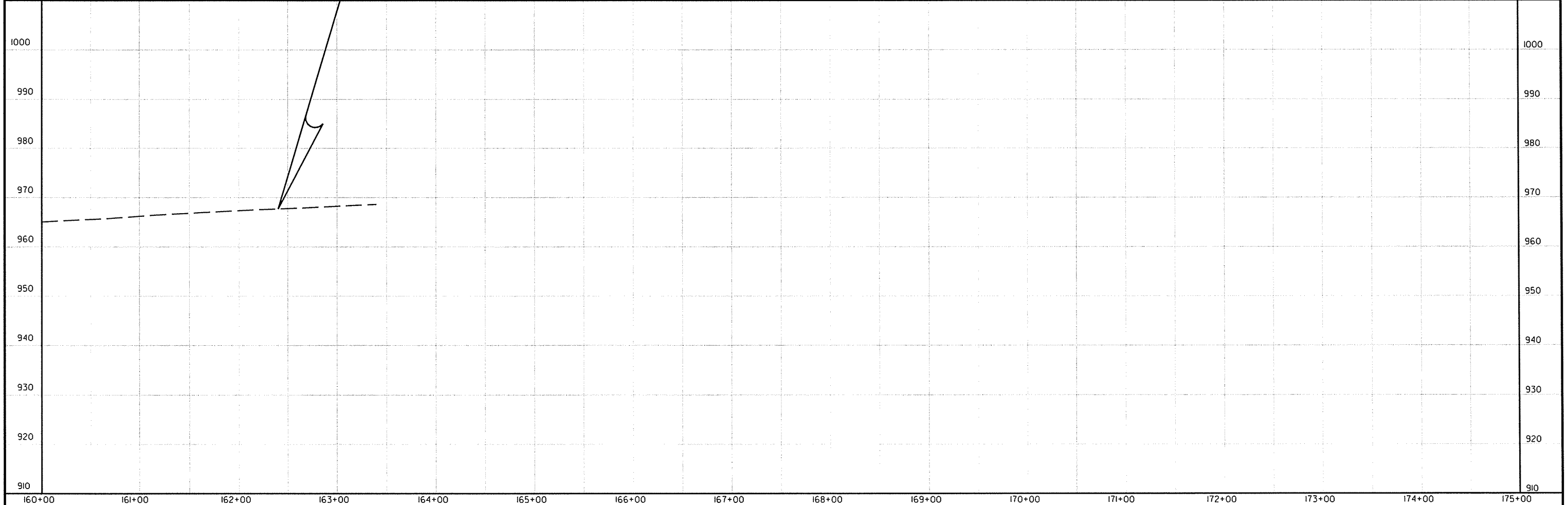


STA. 163+24 IN PLACE
 18" X 20' C.M. PIPE CULVERT
 RT. SIDE DRAIN
 REMOVE & INSTALL @ STA. 163+22
 18" X 32' PIPE CULVERT
 RT. SIDE DRAIN
 CONST. APPR. ON RT. = 5 CU. YDS.

STA. 162+40.00
 END SITE 1

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

SITE 1

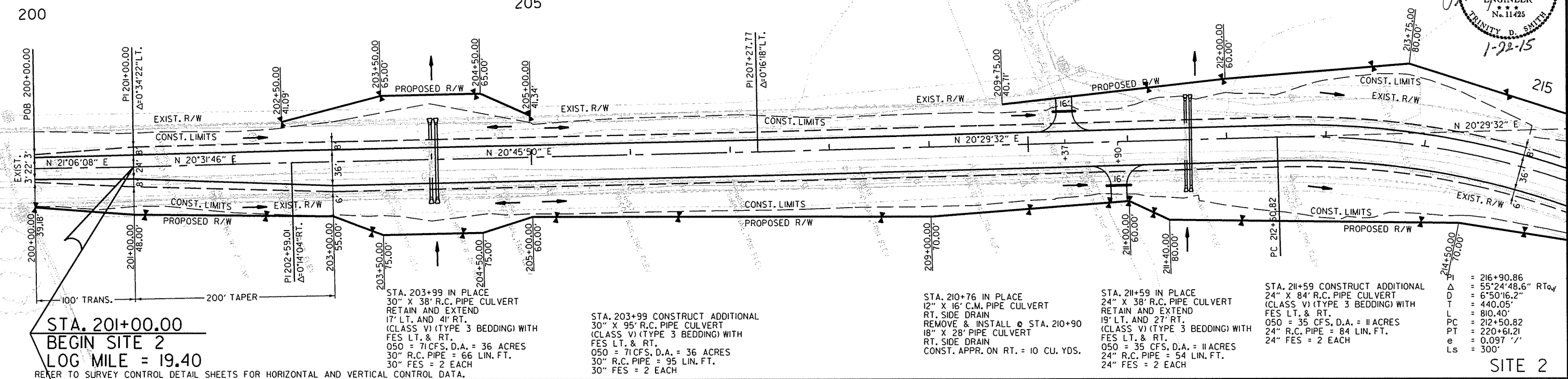
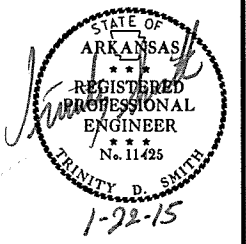


R050261.DGN 1/15/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. NO. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 050261							56	148

REMOVAL AND DISPOSAL OF FENCE				WIRE FENCE (TYPE D)			
STA.	STA.	SIDE	LIN. FT.	STA.	STA.	SIDE	LIN. FT.
200+00	221+30	RT.	2180	200+00	210+76	RT.	1083
202+50	205+00	LT.	250	202+50	205+00	LT.	258
211+30	220+50	LT.	980	211+00	221+28	RT.	960
228+52	231+68	RT.	316	211+23	215+70	LT.	479
253+40	256+91	LT.	364				

2 PLAN AND PROFILE STA. 200+00-STA. 215+00



STA. 201+00.00
BEGIN SITE 2
LOG MILE = 19.40
 REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

STA. 203+99 IN PLACE
 30" X 38" R.C. PIPE CULVERT
 RETAIN AND EXTEND
 17' LT. AND 4' RT.
 (CLASS V) (TYPE 3 BEDDING) WITH
 FES LT. & RT.
 050 = 71CFS, D.A. = 36 ACRES
 30" R.C. PIPE = 66 LIN. FT.
 30" FES = 2 EACH

STA. 203+99 CONSTRUCT ADDITIONAL
 30" X 95" R.C. PIPE CULVERT
 (CLASS V) (TYPE 3 BEDDING) WITH
 FES LT. & RT.
 050 = 71CFS, D.A. = 36 ACRES
 30" R.C. PIPE = 95 LIN. FT.
 30" FES = 2 EACH

STA. 210+76 IN PLACE
 12" X 16" C.M. PIPE CULVERT
 RT. SIDE DRAIN
 REMOVE & INSTALL @ STA. 210+90
 18" X 28" PIPE CULVERT
 RT. SIDE DRAIN
 CONST. APPR. ON RT. = 10 CU. YDS.

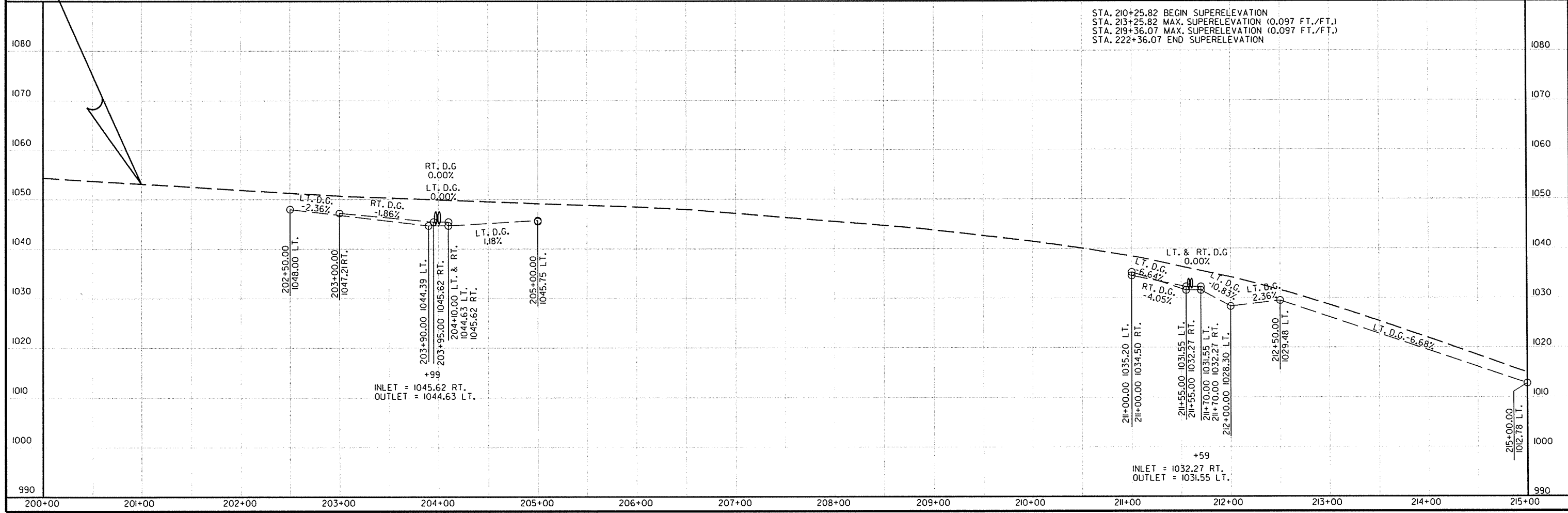
STA. 211+59 IN PLACE
 24" X 38" R.C. PIPE CULVERT
 RETAIN AND EXTEND
 19' LT. AND 27' RT.
 (CLASS V) (TYPE 3 BEDDING) WITH
 FES LT. & RT.
 050 = 35 CFS, D.A. = 11 ACRES
 24" R.C. PIPE = 54 LIN. FT.
 24" FES = 2 EACH

STA. 211+59 CONSTRUCT ADDITIONAL
 24" X 84" R.C. PIPE CULVERT
 (CLASS V) (TYPE 3 BEDDING) WITH
 FES LT. & RT.
 050 = 35 CFS, D.A. = 11 ACRES
 24" R.C. PIPE = 84 LIN. FT.
 24" FES = 2 EACH

Δ = 216+90.86
 Δ = 55°24'48.6" RT_Q
 D T = 6°50'16.2"
 L = 440.05'
 L = 810.40'
 PC = 212+50.82
 PT = 220+61.21
 e = 0.097'
 Ls = 300'

SITE 2

STA. 210+25.82 BEGIN SUPERELEVATION
 STA. 213+25.82 MAX. SUPERELEVATION (0.097 FT./FT.)
 STA. 219+36.07 MAX. SUPERELEVATION (0.097 FT./FT.)
 STA. 222+36.07 END SUPERELEVATION



RT. D.G. 0.00%
 LT. D.G. 0.00%
 LT. D.G. -2.36%
 RT. D.G. -1.86%
 LT. D.G. 1.18%
 202+50.00 1048.00 LT.
 203+00.00 1047.21 RT.
 203+90.00 1044.39 LT.
 203+95.00 1045.62 RT.
 204+10.00 LT. & RT.
 1044.63 LT.
 1045.62 RT.
 +99
 INLET = 1045.62 RT.
 OUTLET = 1044.63 LT.

LT. & RT. D.G. 0.00%
 LT. D.G. -6.64%
 RT. D.G. -4.05%
 LT. D.G. 0.83%
 LT. D.G. 2.36%
 211+00.00 1035.20 LT.
 211+00.00 1034.50 RT.
 211+55.00 1031.55 LT.
 211+55.00 1032.27 RT.
 211+70.00 1031.55 LT.
 211+70.00 1032.27 RT.
 212+00.00 1028.30 LT.
 212+50.00 1029.48 LT.
 +59
 INLET = 1032.27 RT.
 OUTLET = 1031.55 LT.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		57	148

2 PLAN AND PROFILE STA. 215+00-STA. 230+00



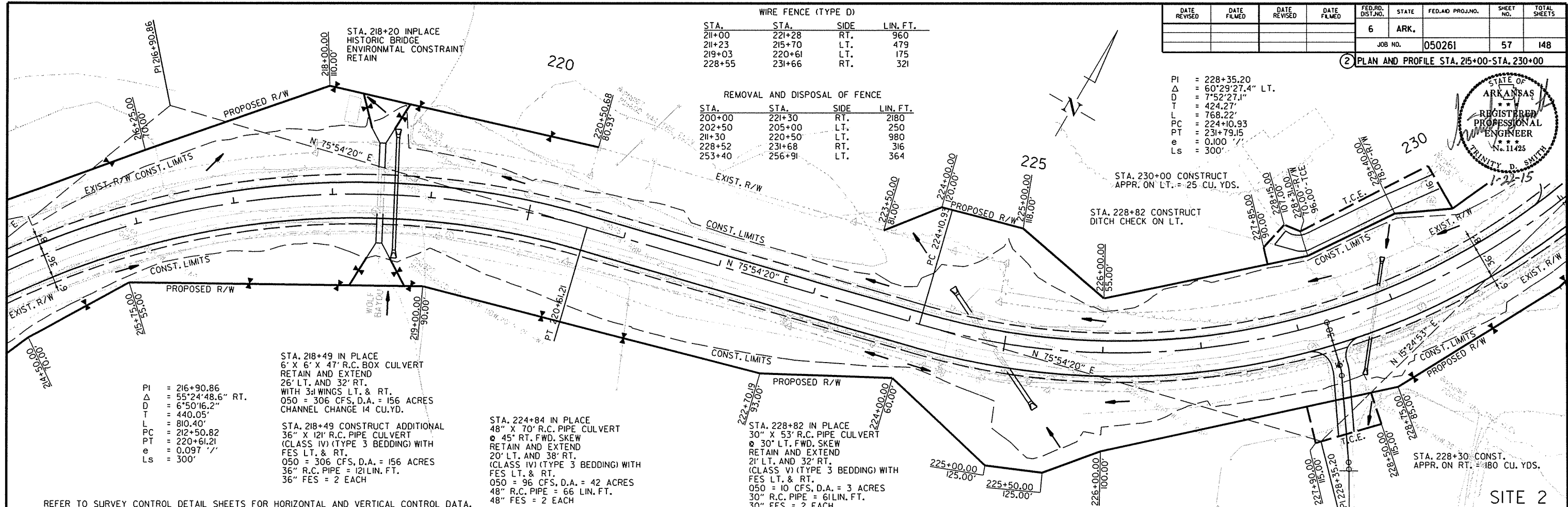
WIRE FENCE (TYPE D)

STA.	STA.	SIDE	LIN. FT.
211+00	221+28	RT.	960
211+23	215+70	LT.	479
219+03	220+61	LT.	175
228+55	231+66	RT.	321

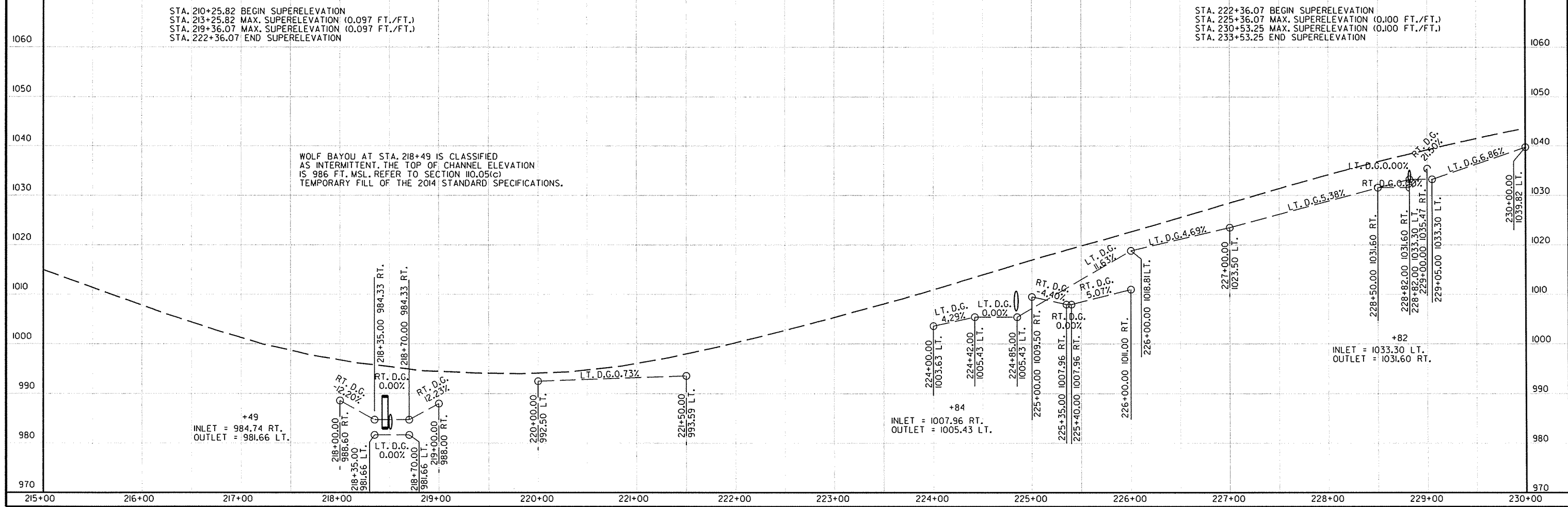
REMOVAL AND DISPOSAL OF FENCE

STA.	STA.	SIDE	LIN. FT.
200+00	221+30	RT.	2180
202+50	205+00	LT.	250
211+30	220+50	LT.	980
228+52	231+68	RT.	316
253+40	256+91	LT.	364

PI = 228+35.20
 Δ = 60°29'27.4" LT.
 D = 7°52'27.1"
 T = 424.27'
 L = 768.22'
 PC = 224+10.93
 PT = 231+79.15
 e = 0.100'
 Ls = 300'



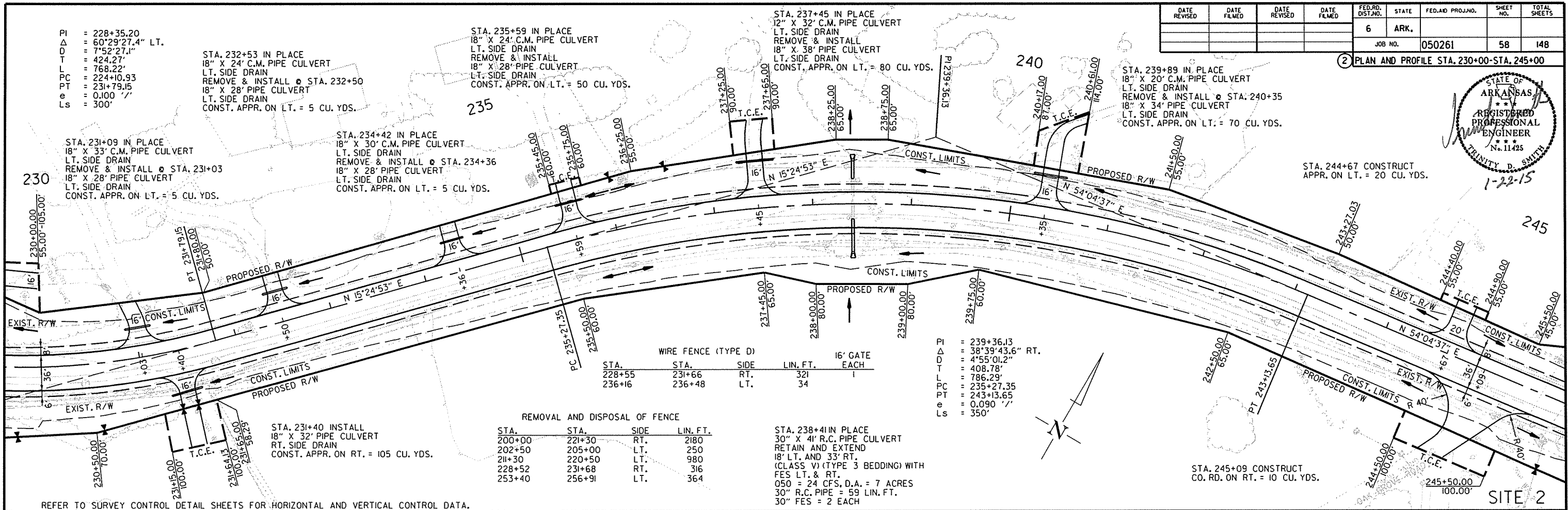
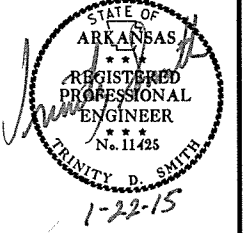
REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.



R050261.DGN 1/15/2015

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. 050261							58	148

2 PLAN AND PROFILE STA. 230+00-STA. 245+00



WIRE FENCE (TYPE D)

STA.	STA.	SIDE	LIN. FT.	16' GATE EACH
228+55	231+66	RT.	321	1
236+16	236+48	LT.	34	

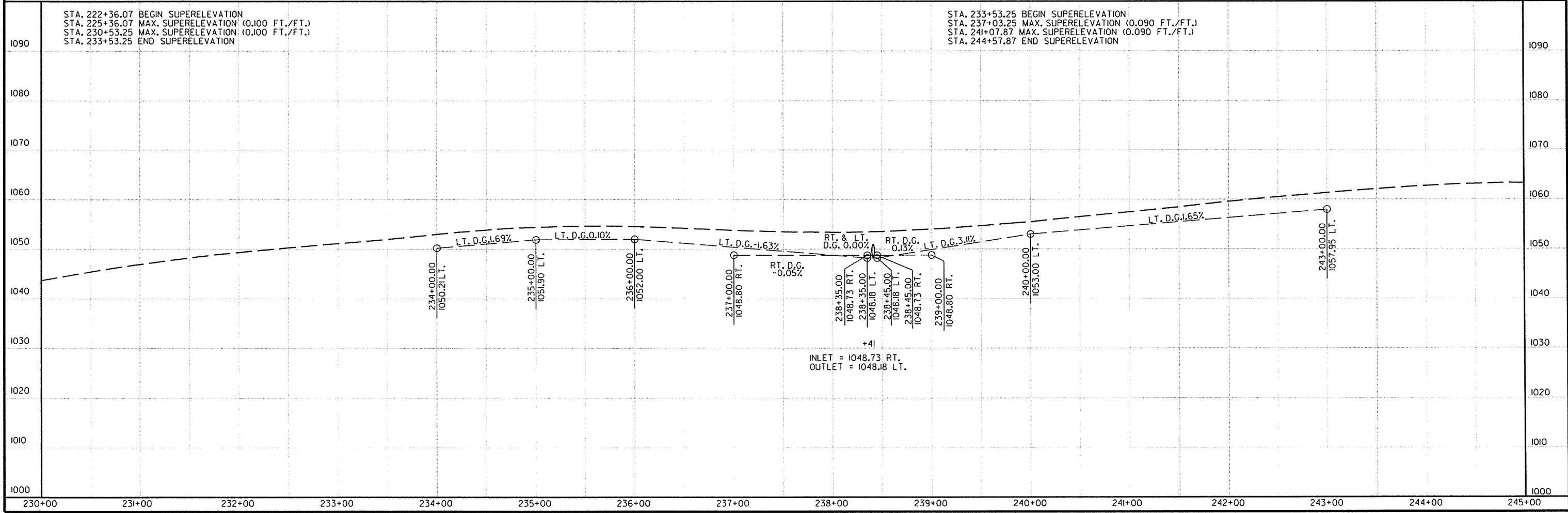
REMOVAL AND DISPOSAL OF FENCE

STA.	STA.	SIDE	LIN. FT.
200+00	221+30	RT.	2180
202+50	205+00	LT.	250
211+30	220+50	LT.	980
228+52	231+68	RT.	316
253+40	256+91	LT.	364

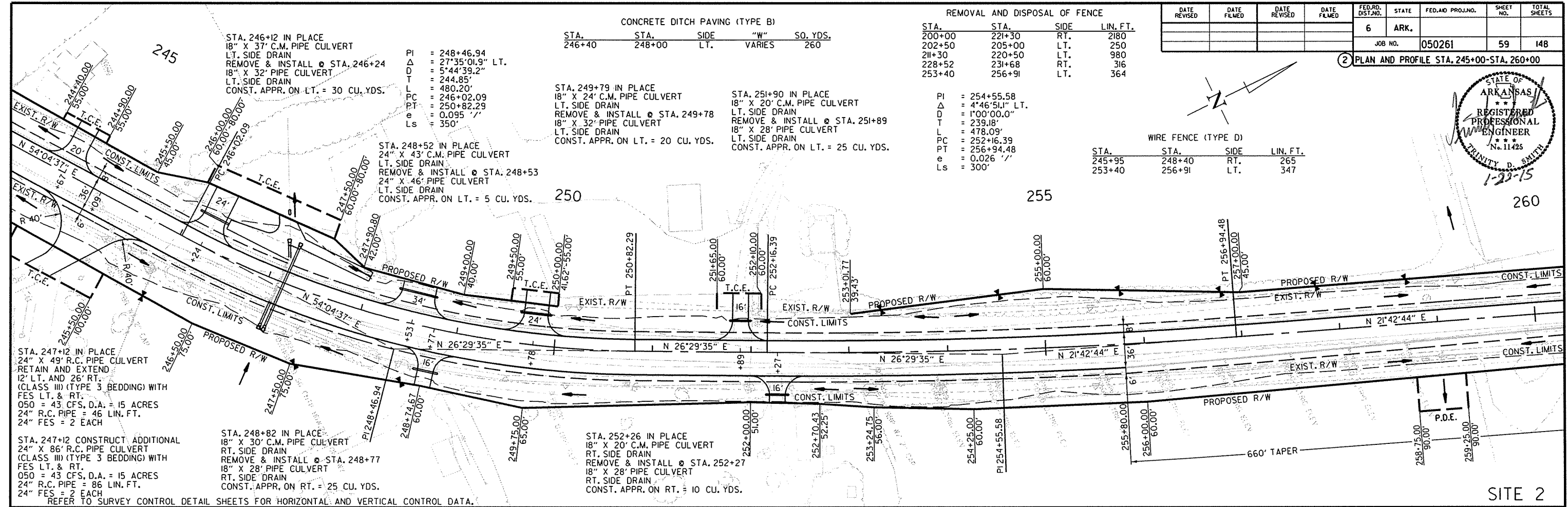
PI = 239+36.13
 Δ = 38°39'43.6" RT.
 D = 4°55'01.2"
 T = 408.78'
 L = 786.29'
 PC = 235+27.35
 PT = 243+13.65
 e = 0.090' /'
 Ls = 350'

STA. 238+41 IN PLACE
 30" X 41' R.C. PIPE CULVERT
 RETAIN AND EXTEND
 18' LT. AND 33' RT.
 (CLASS V) (TYPE 3 BEDDING) WITH
 FES LT. & RT.
 050 = 24 CFS, D.A. = 7 ACRES
 30" R.C. PIPE = 59 LIN. FT.
 30" FES = 2 EACH

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

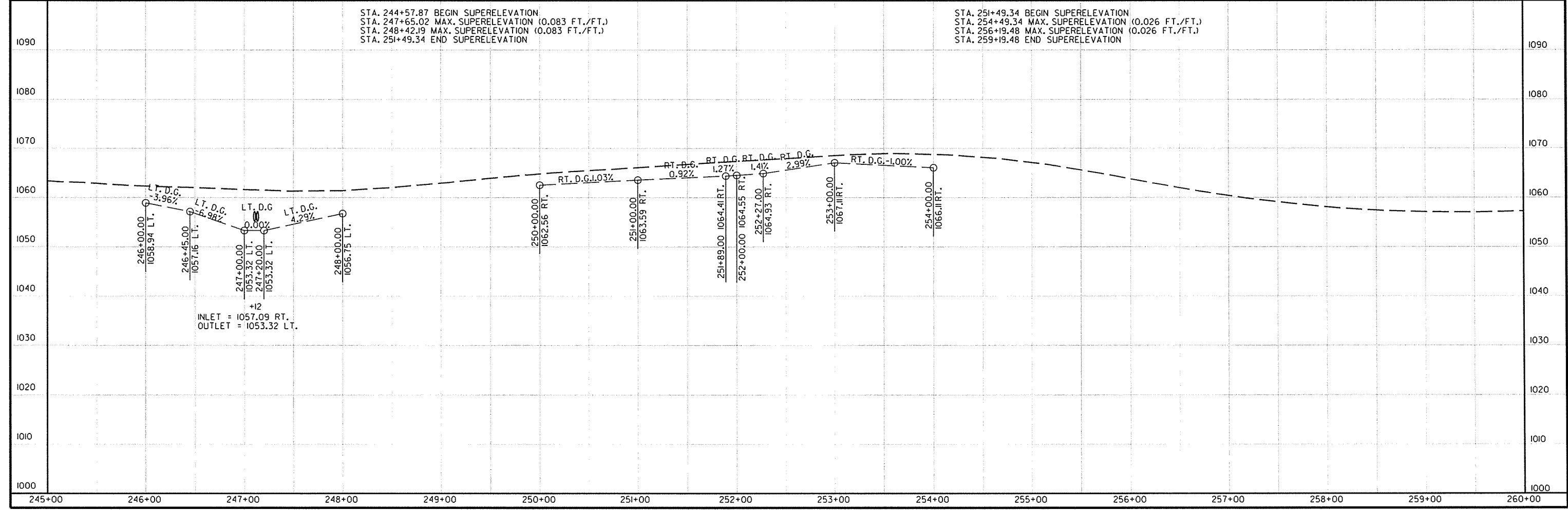
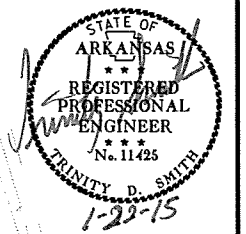


1/15/2015 R050261.DGN



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. 050261							59	148

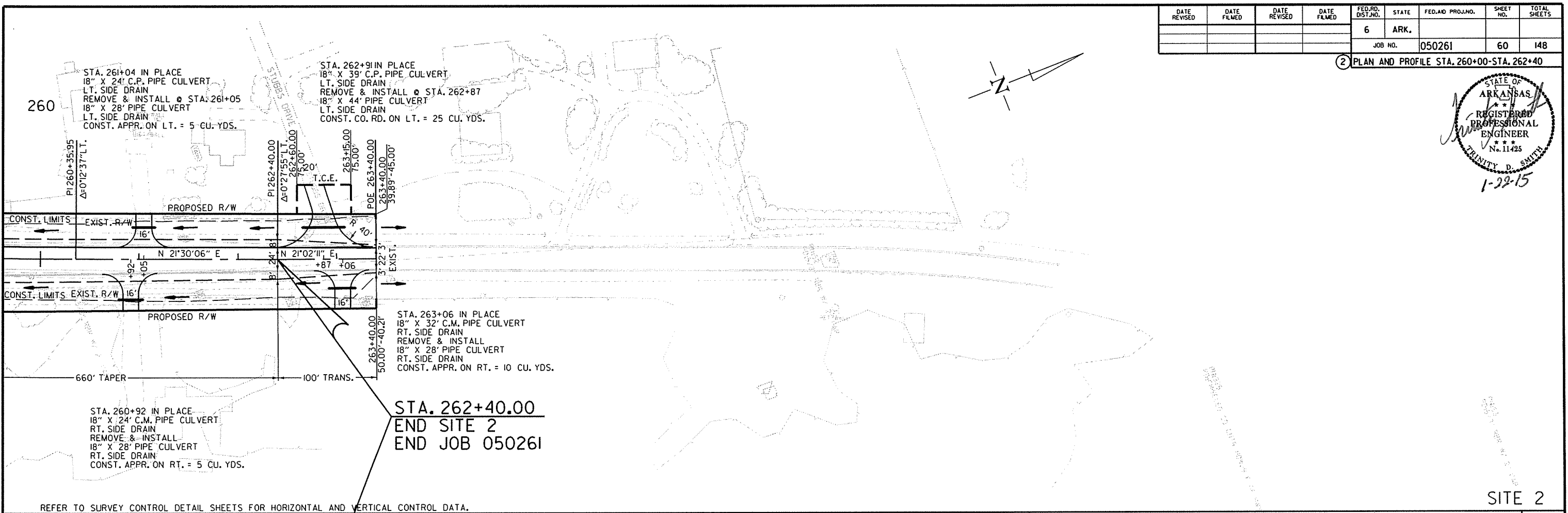
2 PLAN AND PROFILE STA. 245+00-STA. 260+00



SITE 2

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.	050261		60	148

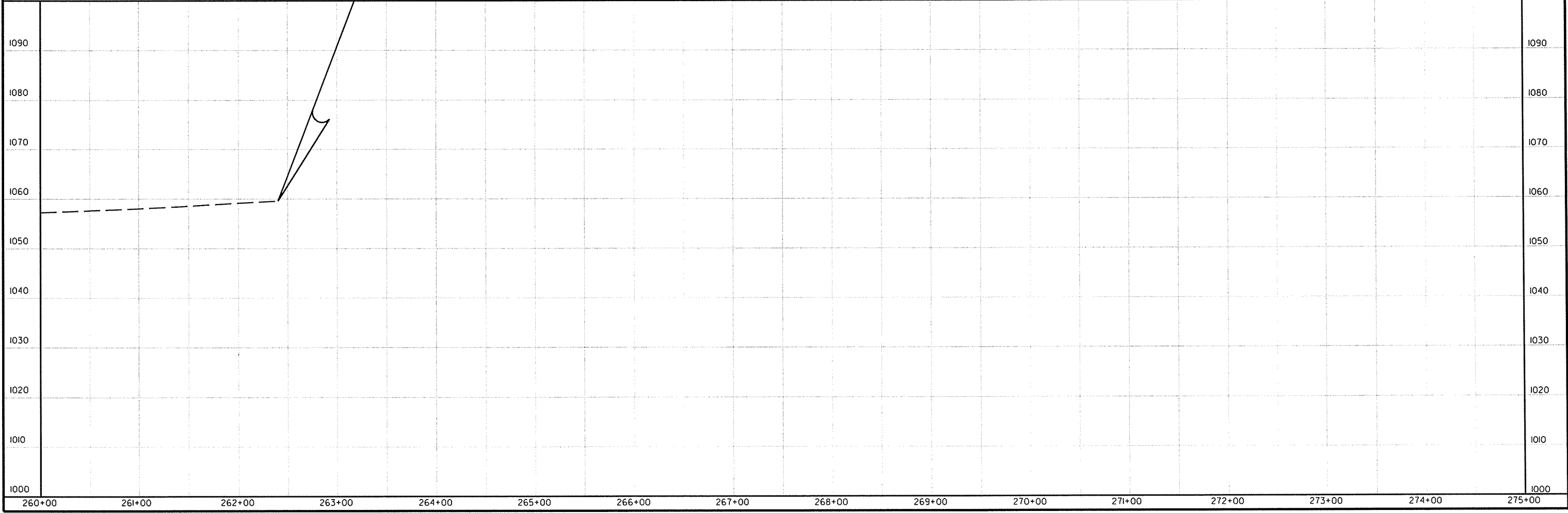
2 PLAN AND PROFILE STA. 260+00-STA. 262+40



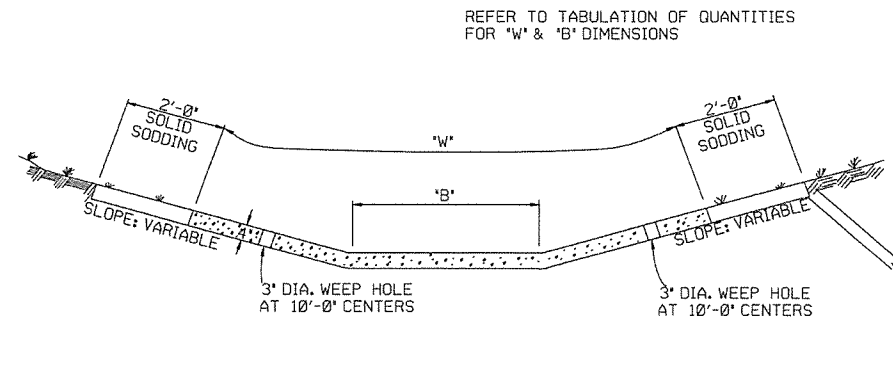
STA. 262+40.00
END SITE 2
END JOB 050261

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

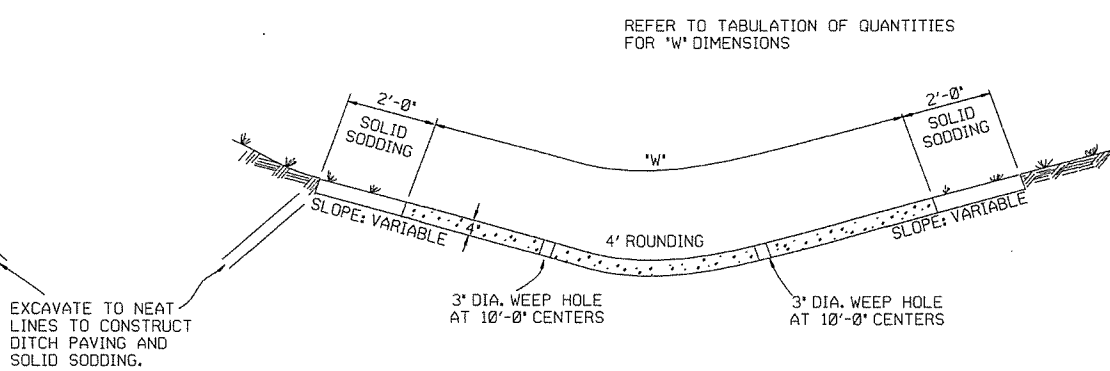
SITE 2



R050261.DGN 1/15/2015



TYPE A



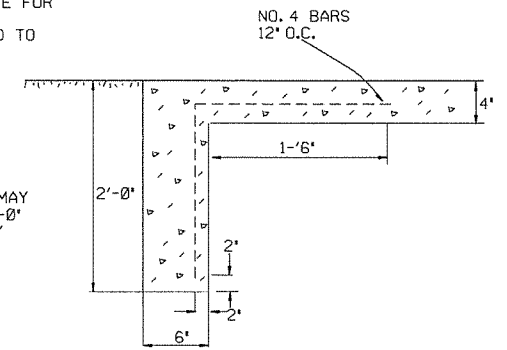
TYPE B

REFER TO TABULATION OF QUANTITIES FOR 'W' & 'B' DIMENSIONS

REFER TO TABULATION OF QUANTITIES FOR 'W' DIMENSIONS

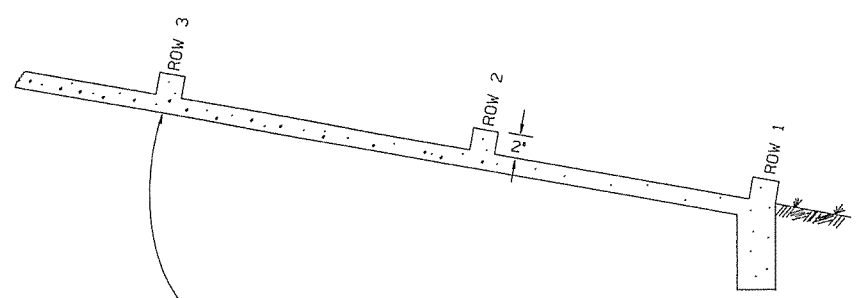
EXCAVATE TO NEAT LINES TO CONSTRUCT DITCH PAVING AND SOLID SODDING.

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



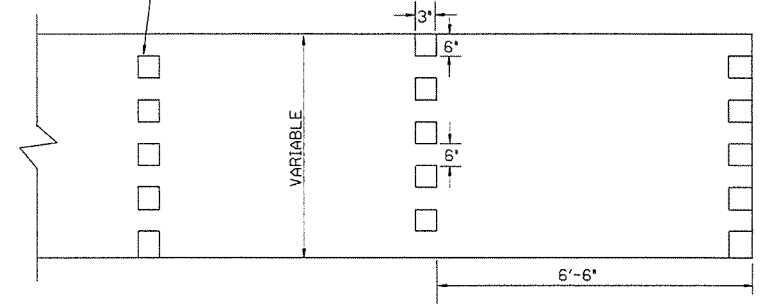
TOE WALL DEPTH MAY BE ALTERED TO 1'-0" WHEN DIRECTED BY THE ENGINEER IN ROCK EXCAVATION

TOE WALL DETAIL FOR CONCRETE DITCH PAVING



NUMBER OF ELEMENTS PER ROW VARIES WITH WIDTH OF PAVING SPECIFIED

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



ENERGY DISSIPATORS (NO SCALE)

GENERAL NOTES:

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

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

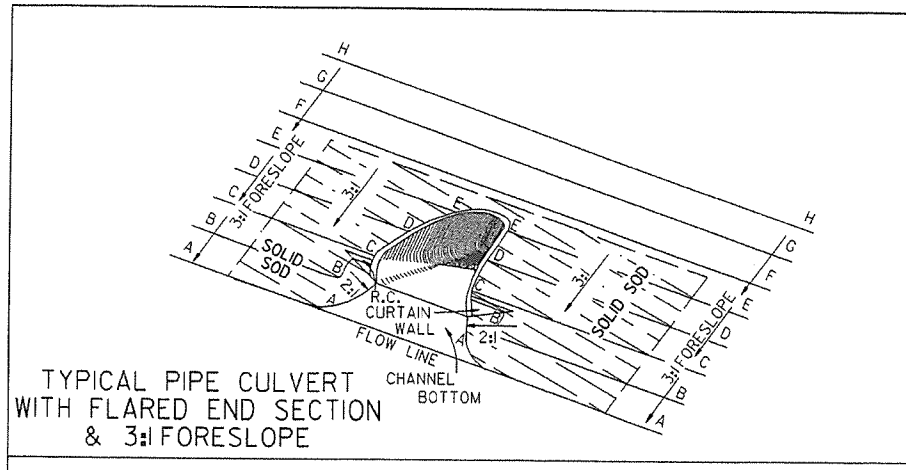
1" WIDE TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE DITCH PAVING AT 45' INTERVALS. THE SPACE SHALL BE FILLED WITH APPROVED JOINT FILLER COMPLYING WITH AASHTO M213.

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

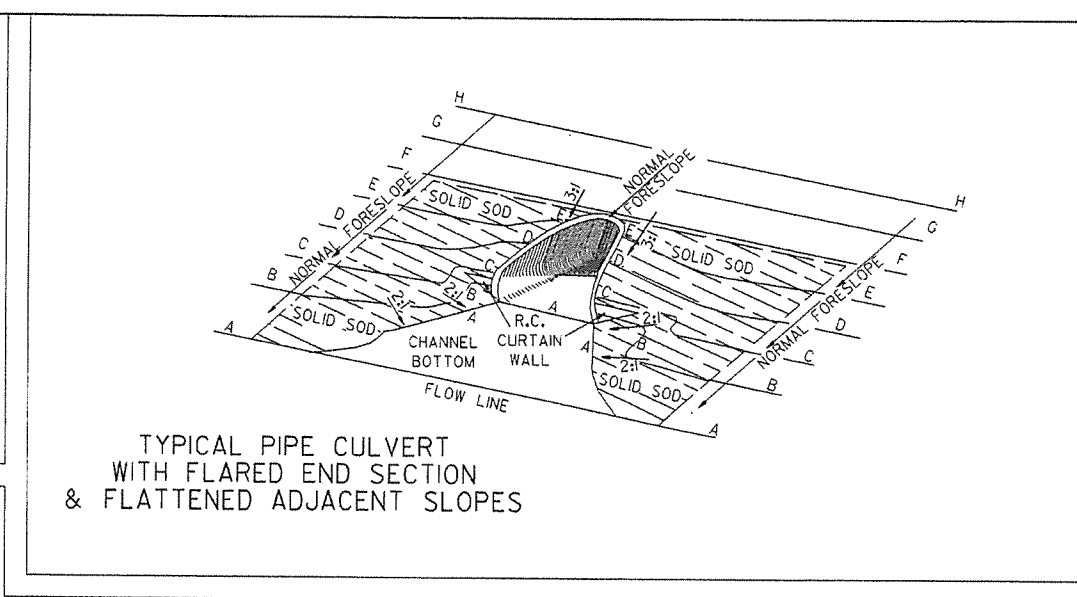
ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE DITCH PAVING

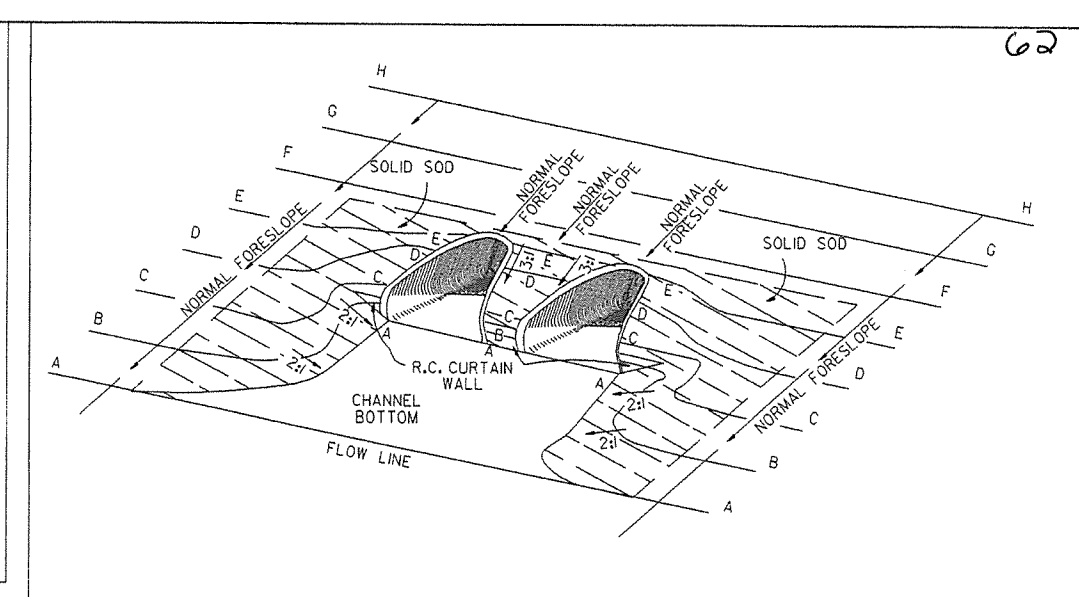
STANDARD DRAWING CDP-1



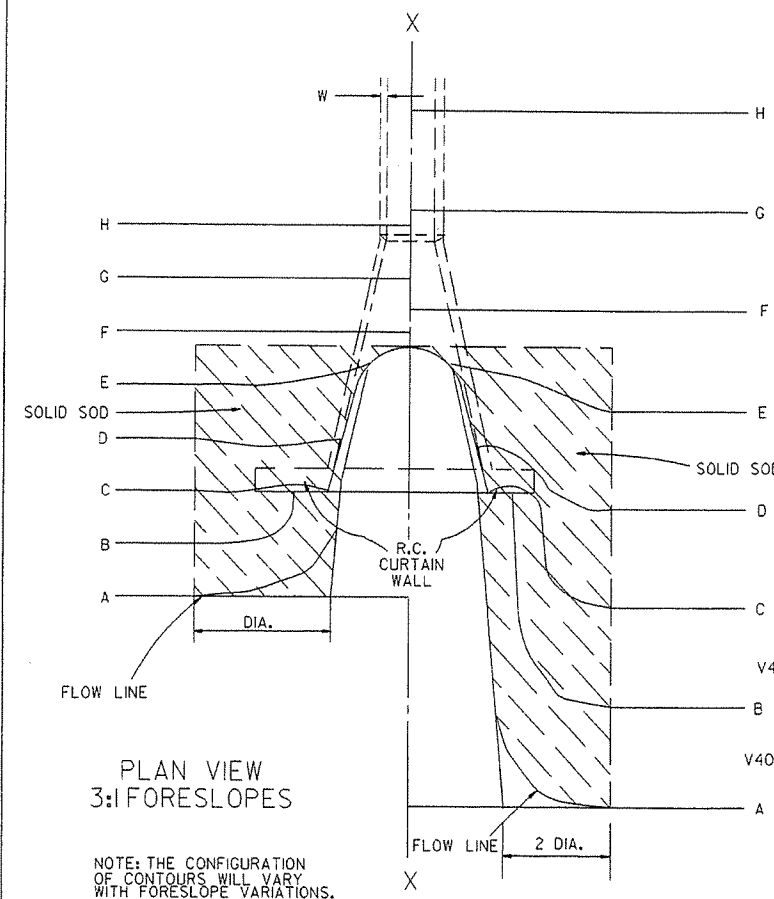
TYPICAL PIPE CULVERT WITH FLARED END SECTION & 3:1 FORESLOPE



TYPICAL PIPE CULVERT WITH FLARED END SECTION & FLATTENED ADJACENT SLOPES



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



PLAN VIEW 3:1 FORESLOPES

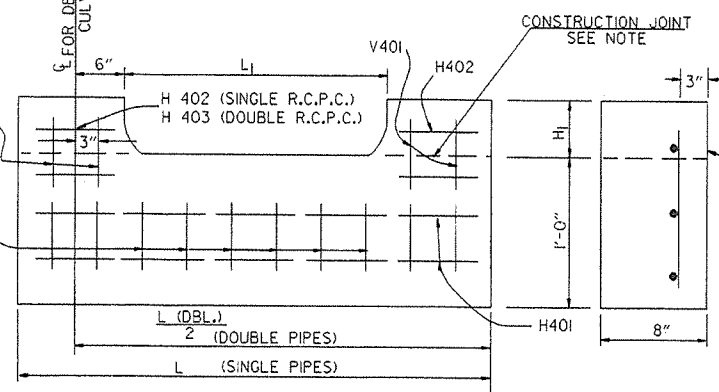
NOTE: THE CONFIGURATION OF CONTOURS WILL VARY WITH FORESLOPE VARIATIONS.

PLAN VIEW FLATTENED FORESLOPES

R.C. CURTAIN WALL DIMENSIONS & QUANTITIES

PIPE DIA.	H ₁	L ₁	L	L (DBL.) / 2	SINGLE R.C.P.C.		DOUBLE R.C.P.C.	
					CONC.	REINF. STEEL	CONC.	REINF. STEEL
					CU. YDS.	LBS.	CU. YDS.	LBS.
18"	11 1/2"	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

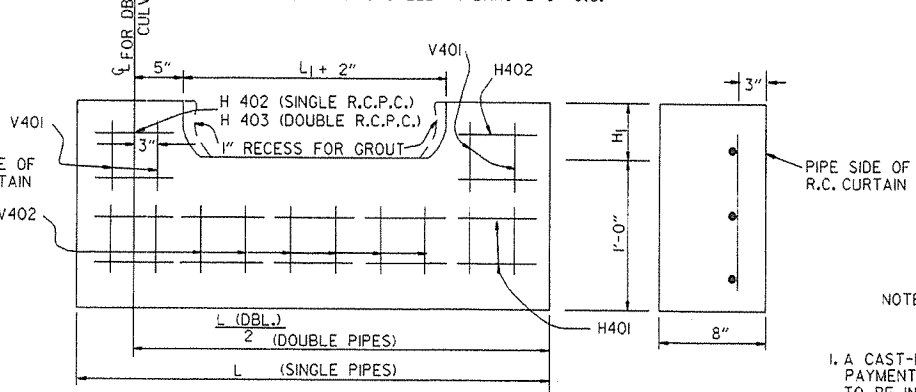
NOTE: QUANTITIES SHOWN ARE FOR ONE (1) CURTAIN WALL.



CAST-IN-PLACE

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

R.C. CURTAIN WALL DETAILS



PRECAST

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

REINFORCING STEEL SCHEDULE

PIPE DIA.	SINGLE R.C. PIPE CULVERT								DOUBLE R.C. PIPE CULVERT									
	H401		H402		V401		V402		H401		H402		V401		V402			
	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.		
18"	7'-8"	2	1'-11 1/2"	4	1'-7 1/2"	8	8"	8	12'-2"	2	1'-11 1/2"	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

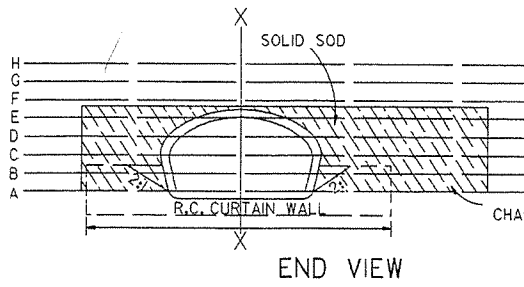
ALL REINFORCING STEEL #4 BARS @ 6" O.C.

SOLID SODDING

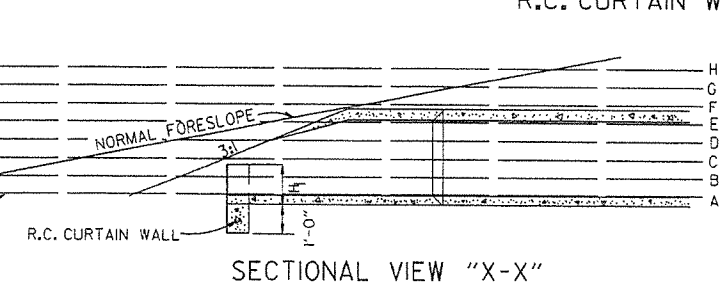
PIPE DIA.	SINGLE R.C.P.C.						DOUBLE R.C.P.C.												
	3:1			4:1			3:1			4:1			6:1						
	SO. YDS.						SO. YDS.												
18"	5	7	12	6	8	13	8	12	19	9	13	20	13	18	24	15	21	36	24
24"	8	12	19	9	13	20	13	18	29	14	19	30	20	27	36	24	33	54	36
30"	13	18	29	14	19	30	20	27	41	18	28	43	30	39	48	36	48	72	48
36"	17	26	41	18	28	43	30	39	55	25	37	57	40	51	60	48	63	96	60
42"	23	35	55	25	37	57	40	51	73	33	48	70	50	65	84	60	81	120	80
48"	29	46	68	31	47	70	50	65	91	41	57	84	60	77	96	72	96	144	96
54"	35	57	85	37	59	87	60	77	111	49	69	102	70	91	116	84	111	168	112
60"	45	62	104	48	65	107	80	105	141	63	87	132	90	117	156	108	141	216	144
72"	64	92	156	67	95	159	110	147	211	87	121	180	120	157	204	144	189	288	192

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

- GENERAL NOTES
- 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.
 - ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4".
 - 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.
 - WELDED WIRE MESH 3 x 3 W/10 x W/10 MAY BE USED IN LIEU OF REINFORCING BARS.



END VIEW



SECTIONAL VIEW "X-X"

10-18-98	ADDED NOTE TO SOLID SODDING		ARKANSAS STATE HIGHWAY COMMISSION
10-12-95	CORRECTED SPELLING	10-18-94	
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

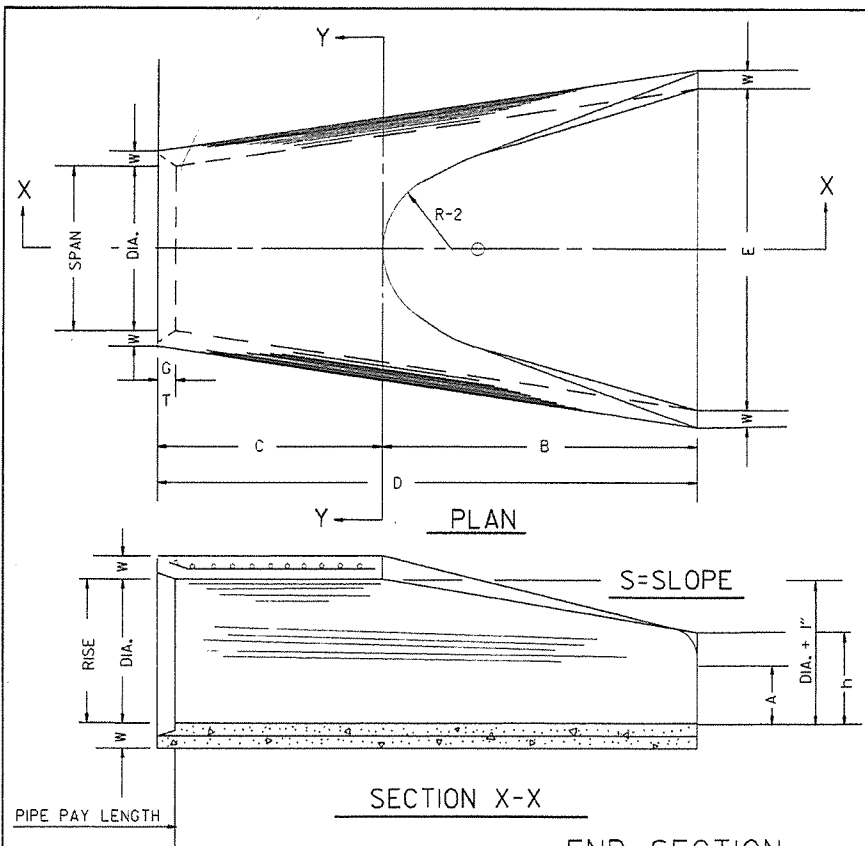


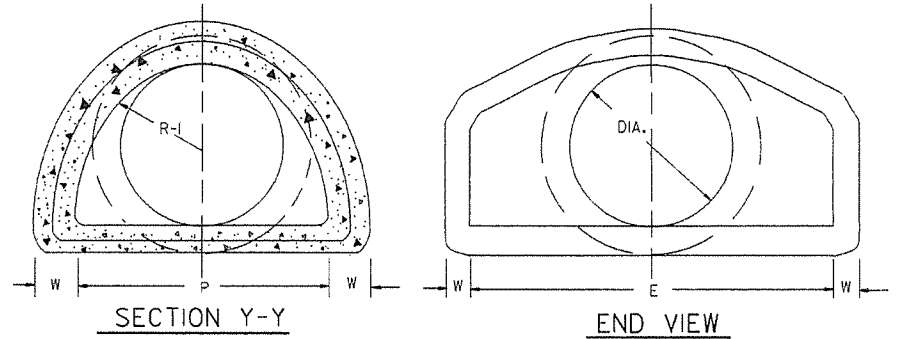
TABLE OF DIMENSIONS

DIA.	WALL	A	B	C	D	E	S	DIA. ± 1/2"	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 9/16"	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 3/8"	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 1/8"	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 9/16"	24"	5"	13250	4'-6"

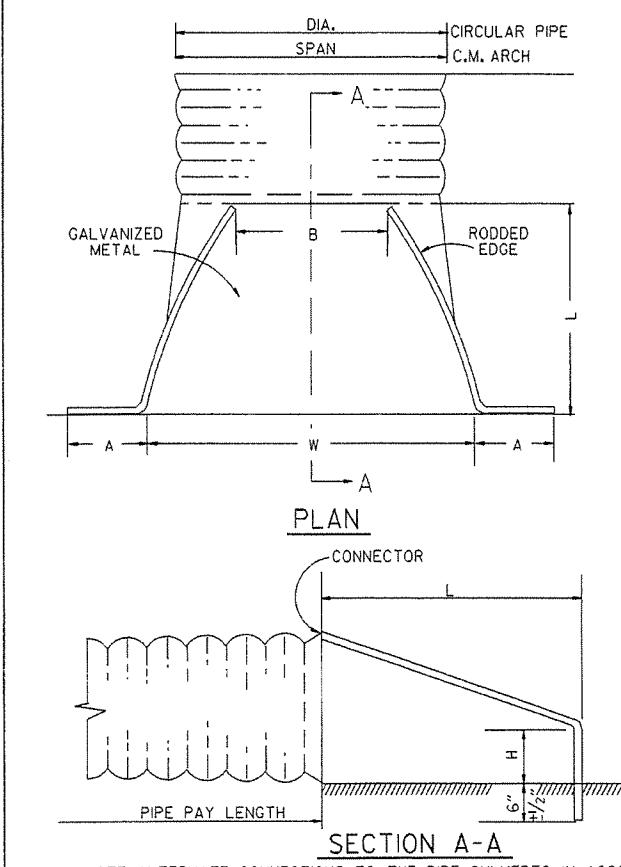
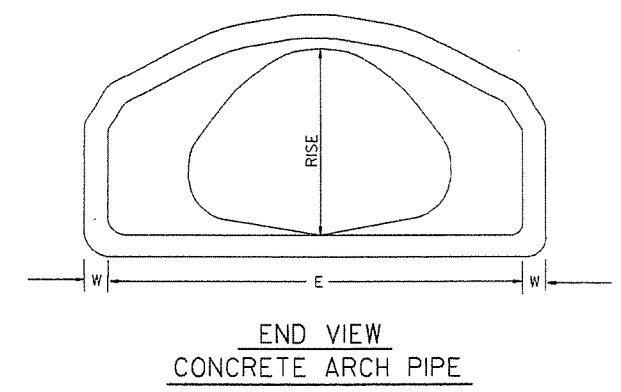
ARCH PIPE

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 3/8"	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 3/8"	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 3/8"	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 1/16"	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 1/16"	24"	5"	2 1/4:1

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



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

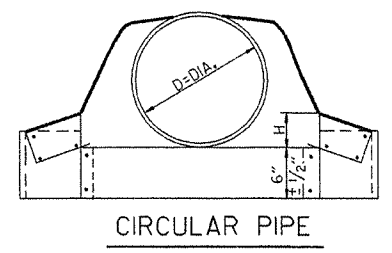


NOTE: ALTERNATE CONNECTIONS TO THE PIPE CULVERTS, IN ACCORDANCE WITH MANUFACTURER'S STANDARD PRACTICES, MAY BE MADE SUBJECT TO THE APPROVAL OF THE ENGINEER.

END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS

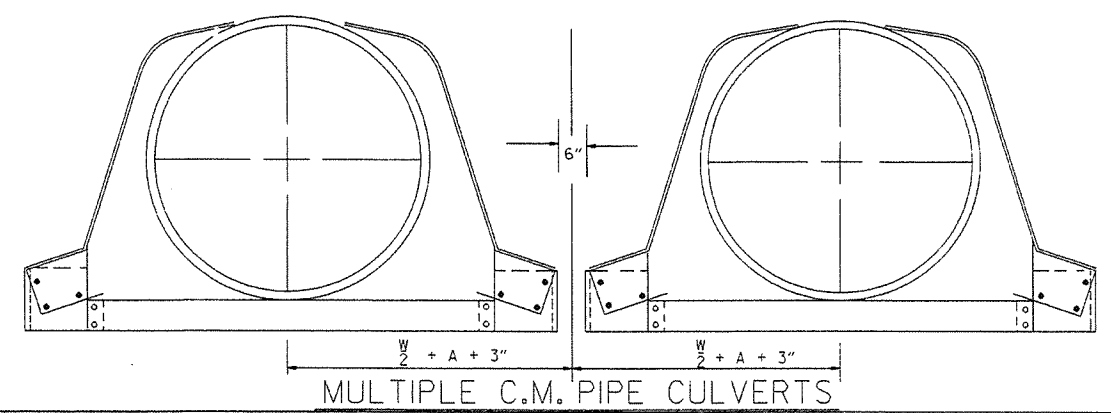
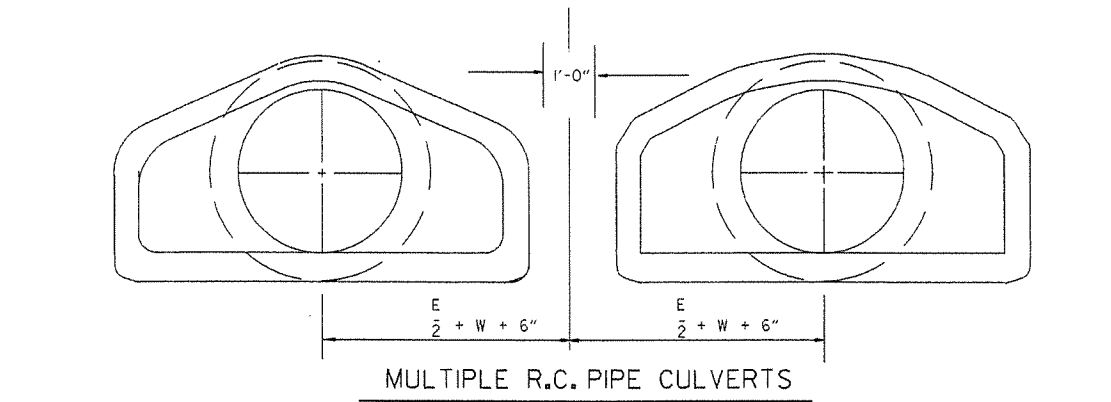
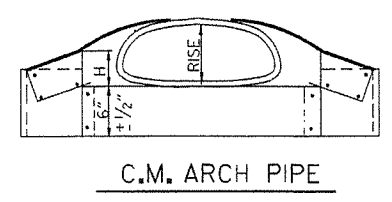
CIRCULAR PIPE

D. DIA.	GAUGE	A ± 1"	B. MAX.	H ± 1/2"	L ± 2"	W ± 2"	S
INCHES							
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

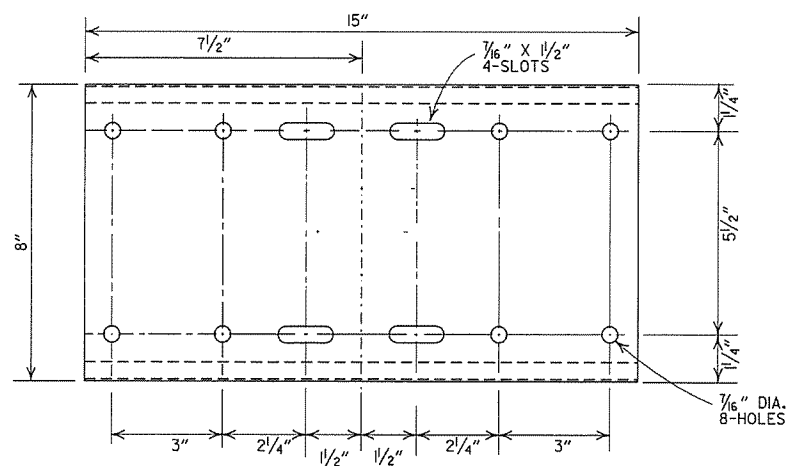


C.M. ARCH PIPE

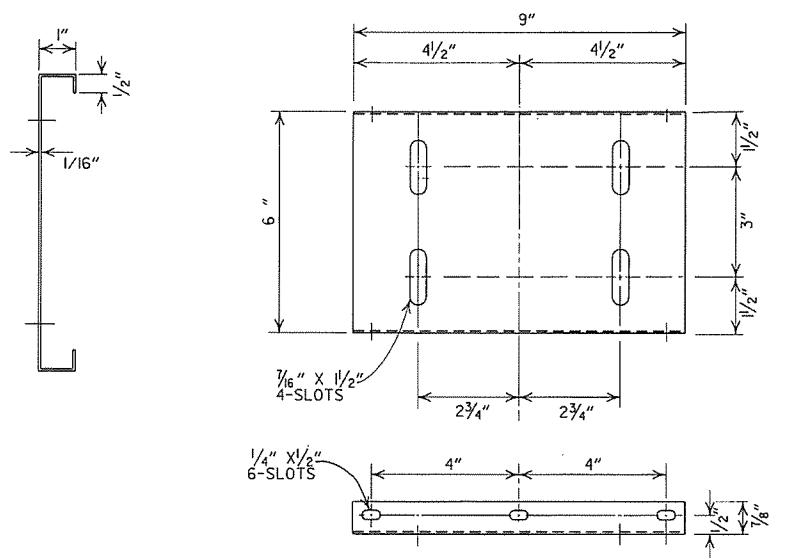
EQUIV. DIA.	SPAN	RISE	A ± 1"	B. MAX.	H ± 1/2"	L ± 2"	W ± 2"	S	GAUGE
INCHES									
15"	17	13	7	9	6	19	30	2 1/2:1	16
18"	21	15	7	10	6	23	36	2 1/2:1	16
21"	24	18	8	12	6	28	42	2 1/2:1	16
24"	28	20	9	14	6	32	48	2 1/2:1	16
30"	35	24	10	16	6	39	60	2 1/2:1	14
36"	42	29	12	18	8	46	75	2 1/2:1	14
42"	49	33	13	21	9	53	85	2 1/2:1	12
48"	57	38	18	26	12	63	90	2 1/2:1	12
54"	64	43	18	30	12	70	102	2 1/4:1	12
60"	71	47	18	33	12	77	114	2 1/4:1	12



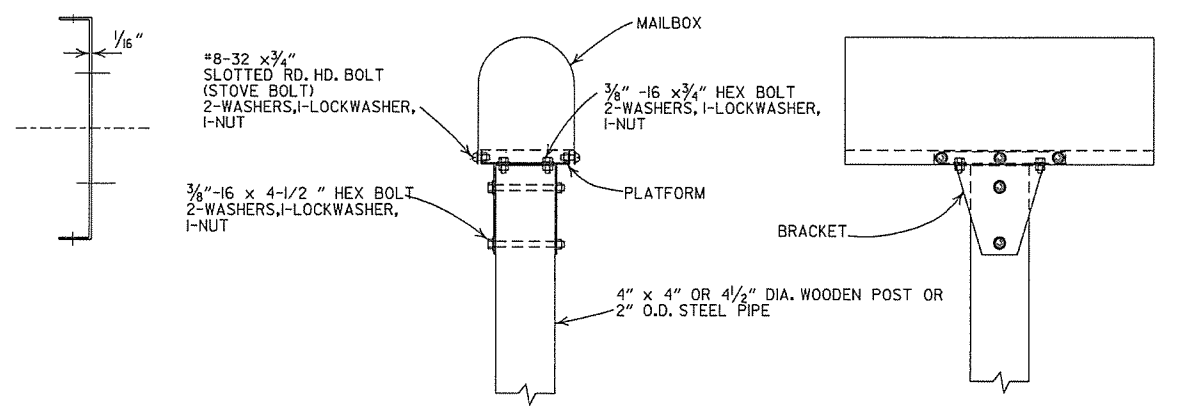
10-18-96	REVISED ASTM REF. TO AASHTO	10-18-96	ARKANSAS STATE HIGHWAY COMMISSION
5-15-80	REVISED DISTANCE BETWEEN MULTIPLE R.C.P. F.E.S.	564-5-15-80	
7-14-78	C.M. ARCH SIZES TO CONFORM WITH AASHTO SIZES	752-7-14-78	
8-22-75	ADDED MULTIPLE PIPE CULVERTS	517-8-22-75	FLARED END SECTION
12-5-74	REMOVED NOTE 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
DATE	REVISION	FILMED	



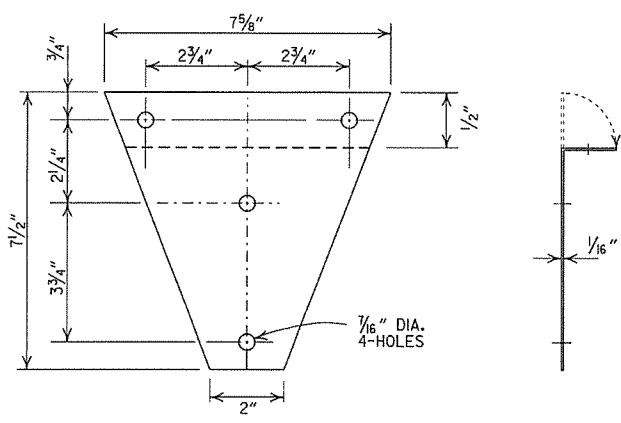
SHELF



PLATFORM

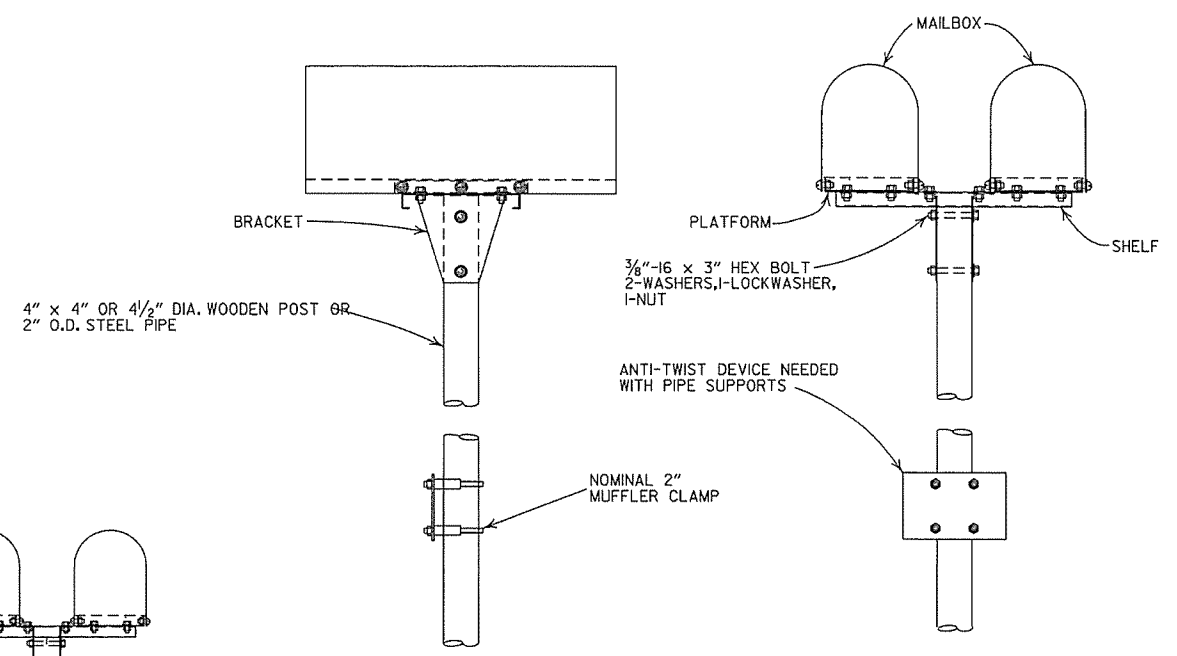


SINGLE INSTALLATION

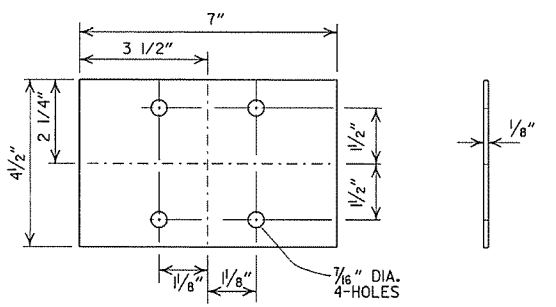


BRACKET

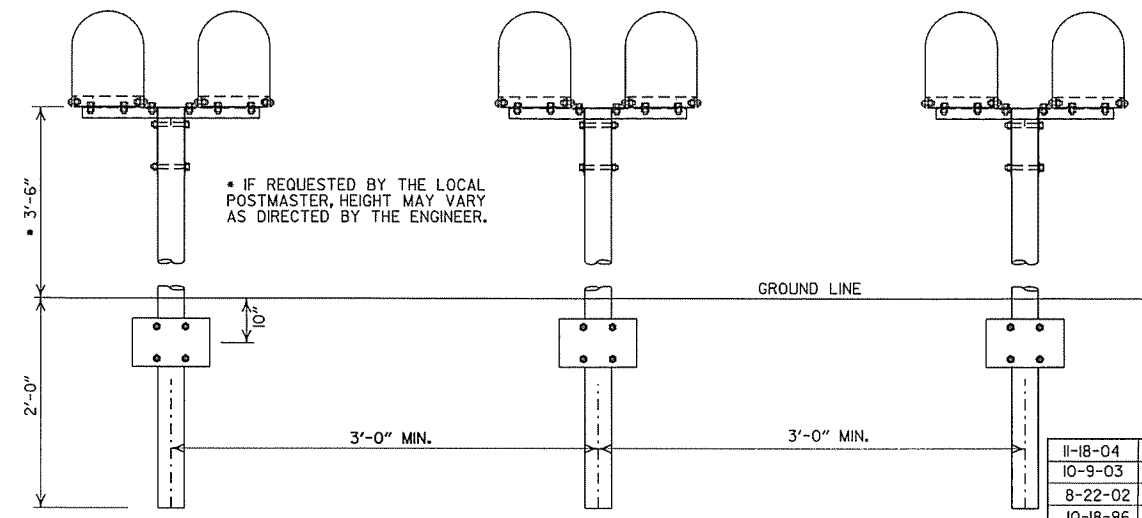
- GENERAL NOTES
1. MAILBOX POSTS MAY BE WOOD OR METAL. WOOD POSTS SHALL BE PRESSURE TREATED FOR GROUND CONTACT IN ACCORDANCE WITH SECTION 637.02 OF THE STANDARD SPECIFICATIONS.
 2. ANTI-TWIST PLATES SHALL BE USED ONLY ON METAL POSTS.
 3. MAILBOX SHELF, BRACKET & PLATFORM SHALL BE GALVANIZED OR PAINTED 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.



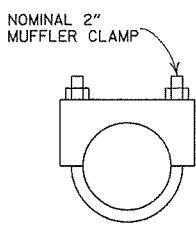
DOUBLE INSTALLATION



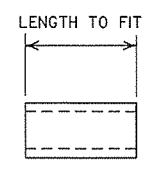
ANTI-TWIST PLATE



SPACING FOR MULTIPLE POST INSTALLATION



CLAMP



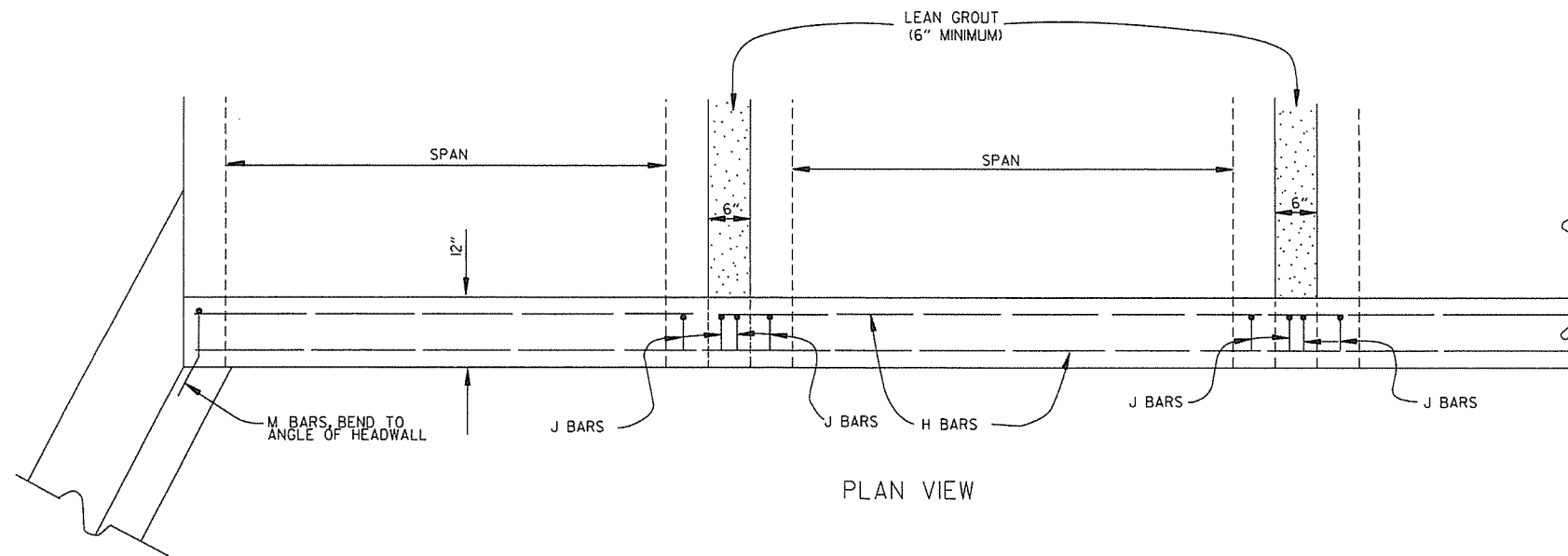
SPACER

DATE	FILED	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
		REVISION

ARKANSAS STATE HIGHWAY COMMISSION

MAILBOX DETAILS

STANDARD DRAWING MB-1



BAR LIST

BAR	NO.	SIZE	LENGTH	BAR BENDING DIAGRAM
H	2	#4	•	
I	•	#4	•	
J	•	#4	1'-5"	
L	•	#4	3'-2"	
M	•	#4	1'-8"	

• NOTE: LENGTH AND NUMBER OF BARS VARIES WITH SIZE OF CULVERT

GENERAL NOTES

WINGS, CURTAIN WALLS AND APRONS SHALL BE TIED TO THE PRECAST CULVERT SECTION BY CASTING BARS IN CULVERT END SECTIONS AS SHOWN OR BY DOWELING AND GROUTING. J BARS AND M BARS SHALL BE EMBEDDED A MINIMUM OF 10" IN PRECAST BOX.

WINGS, FOOTINGS, APRONS AND CURTAIN WALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE WING DRAWING, STEEL AND CONCRETE QUANTITIES WILL BE ADJUSTED TO FIT THE IN-PLACE WIDTH & HEIGHT OF THE PRECAST CONCRETE BOX CULVERTS.

ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFERS.

WINGWALLS AND FOOTINGS MAY BE ADJUSTED IN THE FIELD AS DIRECTED BY THE ENGINEER.

ALL CONCRETE, REINFORCING STEEL, LEAN GROUT, MEMBRANE WATERPROOFING, DRAINAGE FILL MATERIAL, GEOTEXTILE FILTER FABRIC, LABOR, MATERIALS AND EQUIPMENT REQUIRED FOR INSTALLING PRECAST BOX CULVERTS WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID FOR THE ITEMS AS SPECIFIED IN SECTION 607 OF THE STANDARD SPECIFICATIONS.

LEAN GROUT SHALL CONSIST OF A SAND CEMENT MIXTURE MEETING THE FOLLOWING REQUIREMENTS:
 PORTLAND CEMENT SHALL BE TYPE I AND SHALL MEET THE REQUIREMENTS OF AASHTO M 85.

SAND SHALL MEET THE REQUIREMENTS OF FINE AGGREGATE AS SPECIFIED IN SECTION 802.02 OF THE STANDARD SPECIFICATIONS. THE SAND CEMENT MIXTURE SHALL CONSIST OF NOT LESS THAN 1.5 SACKS OF PORTLAND CEMENT PER TON OF MATERIAL MIXTURE. THE MIXTURE SHALL CONTAIN SUFFICIENT WATER TO HYDRATE THE CEMENTS. THE SAND CEMENT MIXTURE SHALL BE PLACED IN MAXIMUM 8 INCH THICK LIFTS, LOOSE MEASURE, AND THOROUGHLY RODDED AND TAMPED AROUND BOX TO THOROUGHLY FILL ALL VOIDS.

MEMBRANE WATERPROOFING CONFORMING TO THE REQUIREMENTS OF SECTION 815 OF THE STANDARD SPECIFICATIONS SHALL BE APPLIED TO ALL BOX CULVERT JOINTS.

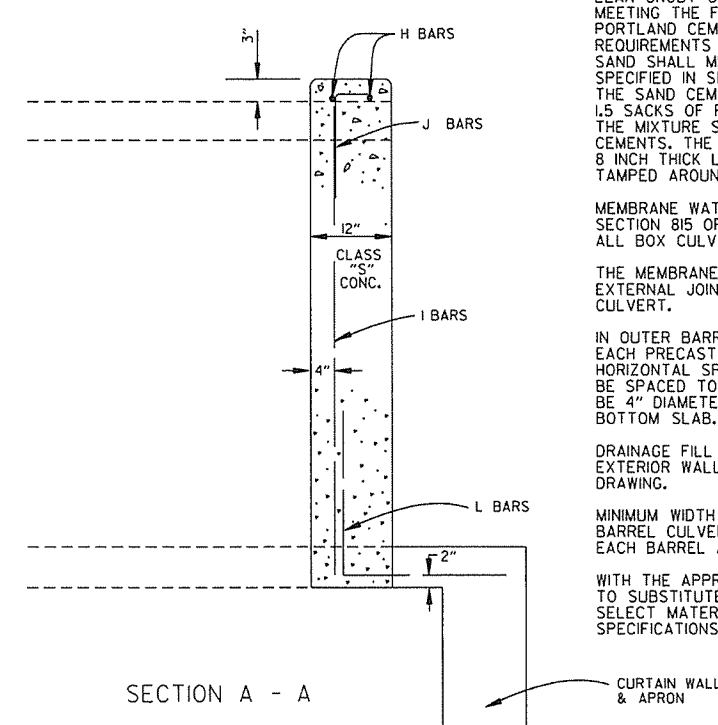
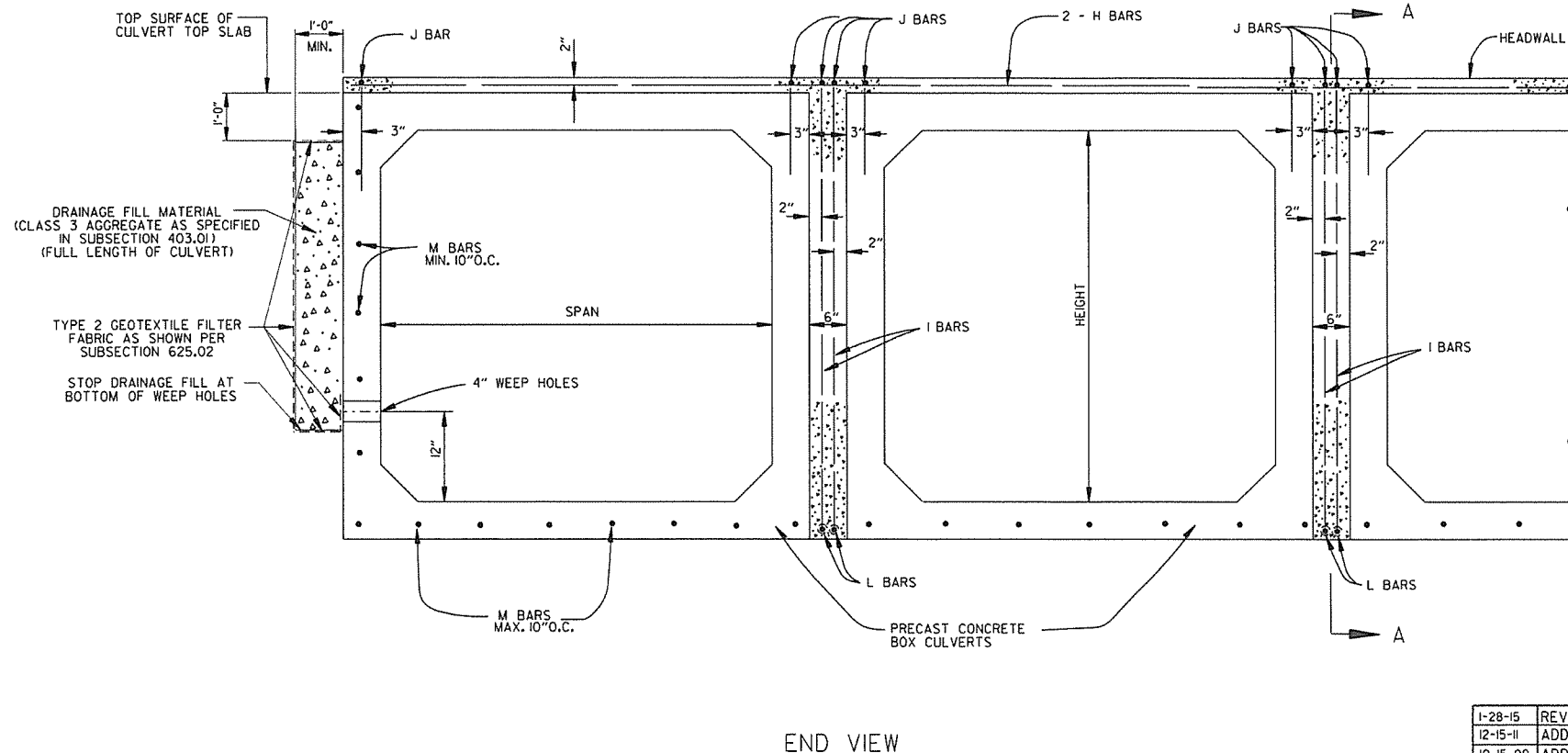
THE MEMBRANE WATERPROOFING WILL BE REQUIRED ON THE TOP EXTERNAL JOINT AND SHALL EXTEND 1 FOOT DOWN THE SIDES OF THE CULVERT.

IN OUTER BARRELS, ONE WEEP HOLE IS REQUIRED IN EXTERIOR WALLS OF EACH PRECAST CULVERT SECTION. WEEP HOLES SHALL HAVE A MAXIMUM HORIZONTAL SPACING OF 10'-0" IN THE ASSEMBLED CULVERT AND SHALL BE SPACED TO CLEAR ALL REINFORCING STEEL. THE DRAIN OPENING SHALL BE 4" DIAMETER AND SHALL BE PLACED 12" ABOVE THE TOP OF THE BOTTOM SLAB.

DRAINAGE FILL MATERIAL WITH GEOTEXTILE FABRIC IS REQUIRED AT THE EXTERIOR WALLS OF THE ASSEMBLED CULVERT, SEE DETAILS ON THIS DRAWING.

MINIMUM WIDTH SHALL BE 12" (6" ON EACH SIDE OF JOINT). ON MULTIPLE BARREL CULVERTS, MEMBRANE WATERPROOFING SHALL BE APPLIED TO EACH BARREL AS DESCRIBED ABOVE.

WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE, AT NO ADDITIONAL COST TO THE DEPARTMENT, FLOWABLE SELECT MATERIAL CONFORMING TO SECTION 206 OF THE STANDARD SPECIFICATIONS IN LIEU OF LEAN GROUT.



DATE	REVISION	DATE FILMED
1-28-15	REVISED GEOTEXTILE FABRIC PLACEMENT	
12-15-11	ADDED NOTE & DTLS FOR WEEP HOLE AND DRAINAGE FILL	
10-15-09	ADDED GENERAL NOTE	
11-10-05	REVISED SPACING OF "M" BARS	
4-10-03	REVISED GENERAL NOTES	
10-18-96	CORRECTED AASHTO REF.	
10-1-92	ADDED NOTE FOR MEMBRANE WATERPROOFING	
8-15-91	ADDED NOTE FOR LEAN GROUT	
11- 8-90	REVISED FOR 1991 SPECS	
11-30-89	ISSUED; JABE	

ARKANSAS STATE HIGHWAY COMMISSION

PRECAST CONCRETE BOX CULVERTS

STANDARD DRAWING PBC-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	13½	14
21	26	26	15½	16
24	28½	29	18	18
30	36¼	36	22½	23
36	43¾	44	26¾	27
42	51½	51	31¾	31
48	58½	59	36	36
54	65	65	40	40
60	73	73	45	45
72	88	88	54	54
84	102	102	62	62
90	115	115	72	72
96	122	122	77½	77
108	138	138	87½	87
120	154	154	96¾	97
132	168¾	169	106½	107

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

REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE DIMENSIONS

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

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

CONSTRUCTION SEQUENCE

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

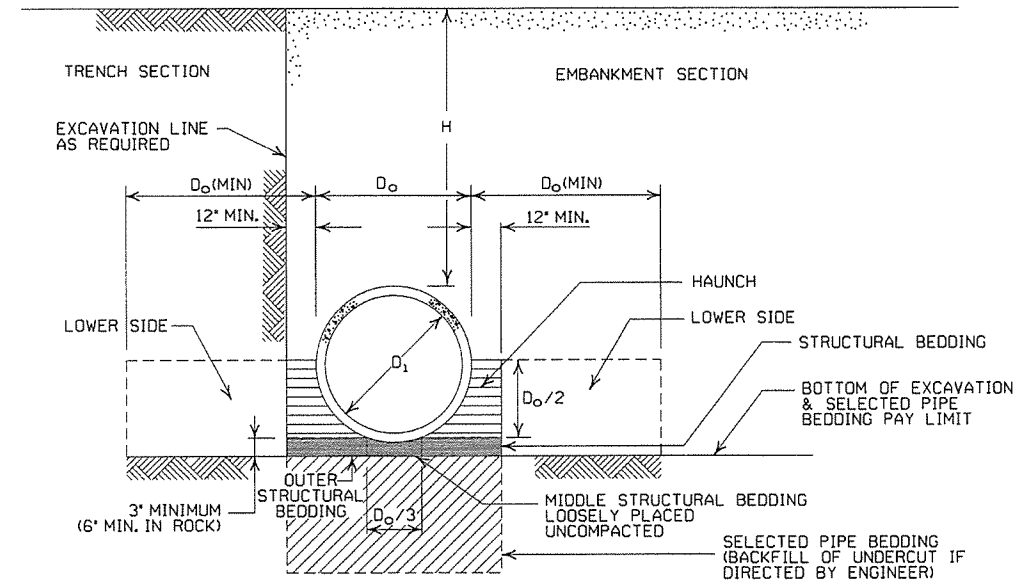
- LEGEND -

- D₁ = NORMAL INSIDE DIAMETER OF PIPE
- D_o = OUTSIDE DIAMETER OF PIPE
- H = FILL COVER HEIGHT OVER PIPE (FEET)
- MIN. = MINIMUM
- UNDISTURBED SOIL

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

*SM-3 WILL NOT BE ALLOWED.

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



EMBANKMENT AND TRENCH INSTALLATIONS

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

GENERAL NOTES

1. CONCRETE PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS 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
	TYPE 1 OR 2	TYPE 3	ALL	ALL
PIPE ID (IN.)	FEET			
12-15	2	2.5	2	1
18-24	2.5	3	2	1
27-33	3	4	2	1
36-42	3.5	5	2	1
48	4.5	5.5	2	1
54-60	5	7	2	1
66-78	6	8	2	1
84-108	7.5	8	2	1

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

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

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

NOTE: IF FILL HEIGHT EXCEEDS 50 FEET, A SPECIAL DESIGN CONCRETE PIPE WILL BE REQUIRED USING TYPE 1 INSTALLATION.

MINIMUM HEIGHT OF FILL "H" OVER R.C. ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE	
	CLASS III	CLASS IV
	FEET	
TYPE 2 OR TYPE 3	2.5	1.5

NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

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

MAXIMUM HEIGHT OF FILL "H" OVER R.C. ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE	
	CLASS III	CLASS IV
	FEET	
TYPE 2	13	21
TYPE 3	10	16

NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

DATE	ISSUED	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 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 3/4 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	73
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 WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF METAL PIPE.

INSTALLATION TYPE	MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 1	AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7)
TYPE 2	SELECTED MATERIALS (CLASS SM-1, SM-2, OR SM-4) OR TYPE 1 INSTALLATION MATERIAL ③

③ SM-3 WILL NOT BE ALLOWED.

EQUIVALENT METAL THICKNESSES AND GAUGES

METAL THICKNESS IN INCHES			GAUGE NUMBER	
STEEL				
ZINC COATED	UNCOATED	ALUMINUM		
0.064	0.0598	0.060		16
0.079	0.0747	0.075		14
0.109	0.1046	0.105		12
0.138	0.1345	0.135		10
0.168	0.1644	0.164	8	

CORRUGATED 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	0.135	0.164
2 3/4 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	34
36	2.5		15	26	27	28
42	2			43	43	44
48	2			40	41	43
54	2			35	37	38
60	2				33	34
66	2					31
72	2					29

CORRUGATED METAL PIPE ARCHES

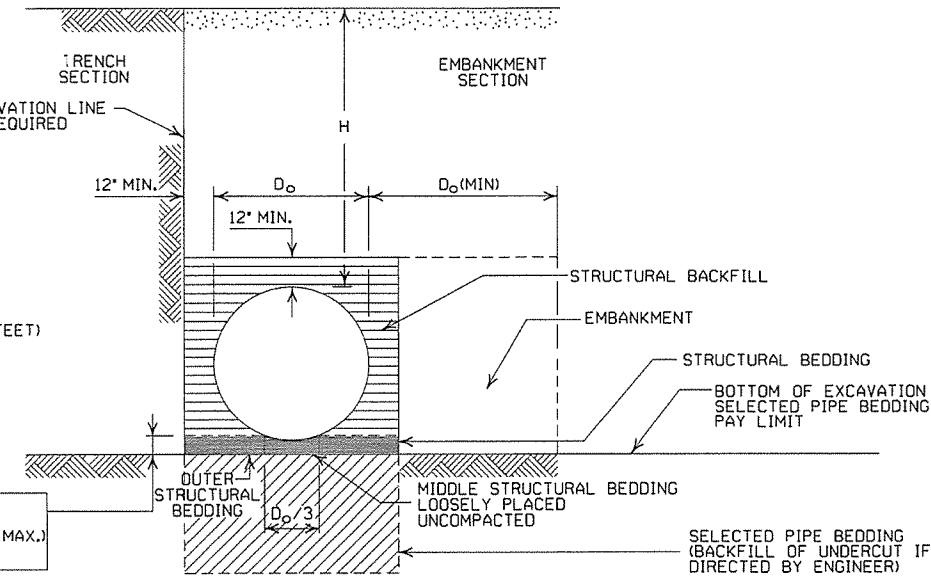
EQUIV. DIA. (INCHES)	PIPE DIMENSION SPAN X RISE (INCHES)	MINIMUM CORNER RADIUS (INCHES)	STEEL				ALUMINUM			
			MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)		MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)			
				INSTALLATION TYPE 1	INSTALLATION TYPE 1		INSTALLATION TYPE 1	INSTALLATION TYPE 1		
2 3/4 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 1/2	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	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.

- LEGEND -

- D_o = OUTSIDE DIAMETER OF PIPE
- MAX. = MAXIMUM
- MIN. = MINIMUM
- [Hatched Pattern] = STRUCTURAL BACKFILL MATERIAL
- [Diagonal Lines] = UNDISTURBED SOIL
- [Dotted Pattern] = 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 3/4" 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."

ARKANSAS STATE HIGHWAY COMMISSION		
METAL PIPE CULVERT FILL HEIGHTS & BEDDING		
2-27-14	REVISED GENERAL NOTE 1	
12-15-11	REVISED FOR LRFD DESIGN SPECS	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	
DATE	REVISION	DATE FILMED

STANDARD DRAWING PCM-1

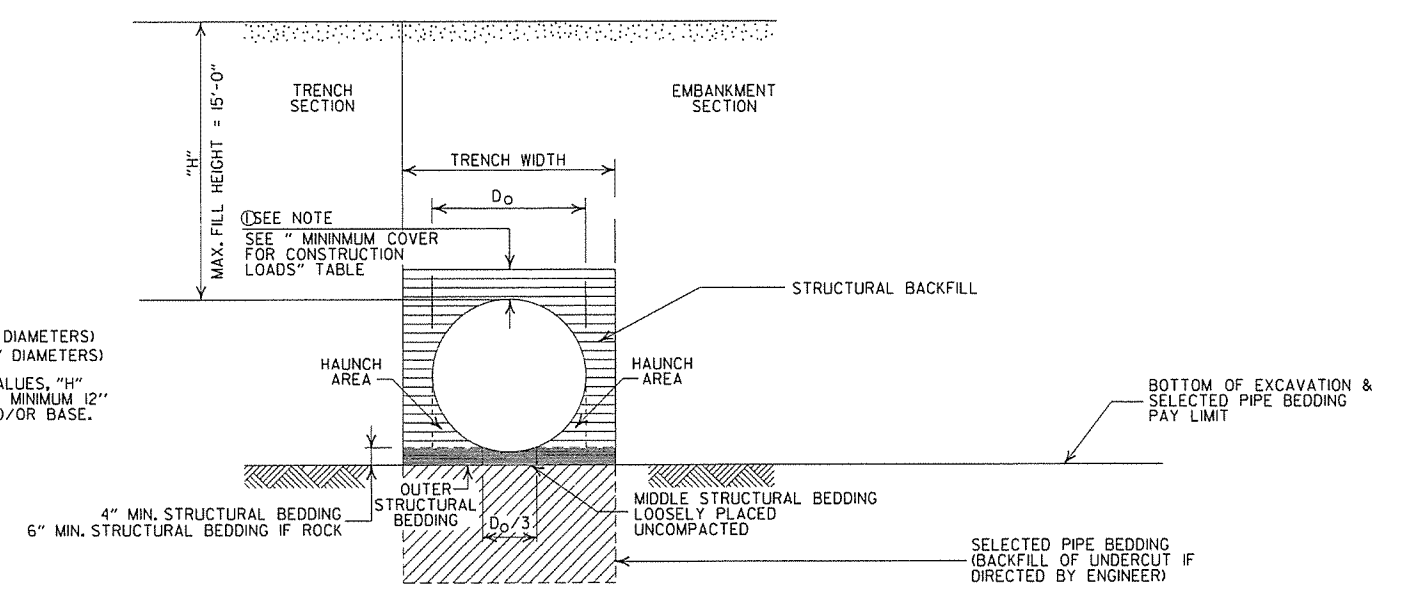
INSTALLATION TYPE	•• MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 2	•SELECTED MATERIALS (CLASS SM-1, SM-2 OR SM-4)

- 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 1/2 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"

NOTE:
 18" MIN. (18" - 30" DIAMETERS)
 24" MIN. (36" - 48" DIAMETERS)
 MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

- 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.

MULTIPLE INSTALLATION OF HIGH DENSITY POLYETHYLENE PIPES

PIPE DIAMETER	CLEAR DISTANCE BETWEEN PIPES
18"	1'-6"
24"	2'-0"
30"	2'-6"
36"	3'-0"
42"	3'-6"
48"	4'-0"

MINIMUM COVER FOR CONSTRUCTION LOADS

PIPE DIAMETER	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"

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

CONSTRUCTION SEQUENCE

- PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
- INSTALL PIPE TO GRADE.
- COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
- 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.
- PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING OR OTHER APPROVED METHODS IN ORDER TO HELP MAINTAIN GRADE AND ALIGNMENT.

GENERAL NOTES

- 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).
- PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
- 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.
- 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.
- 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."
- 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."
- 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.
- HIGH DENSITY POLYETHYLENE PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
- JOINTS FOR HDPE PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN AASHTO SECTION 26.4.2.4 AND 30.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

- LEGEND -

- H = FILL HEIGHT (FT.)
- D_o = OUTSIDE DIAMETER OF PIPE
- MAX. = MAXIMUM
- MIN. = MINIMUM
- [Symbol] = STRUCTURAL BACKFILL MATERIAL
- [Symbol] = 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 1/2 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.

MAXIMUM FILL HEIGHT BASED ON STRUCTURAL BACKFILL

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

① NOTE:
12" MIN. (18" - 36" DIAMETERS)
MINIMUM COVER VALUE, "H"
SHALL INCLUDE A MINIMUM 12"
OF PAVEMENT AND/OR BASE.

MINIMUM 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"

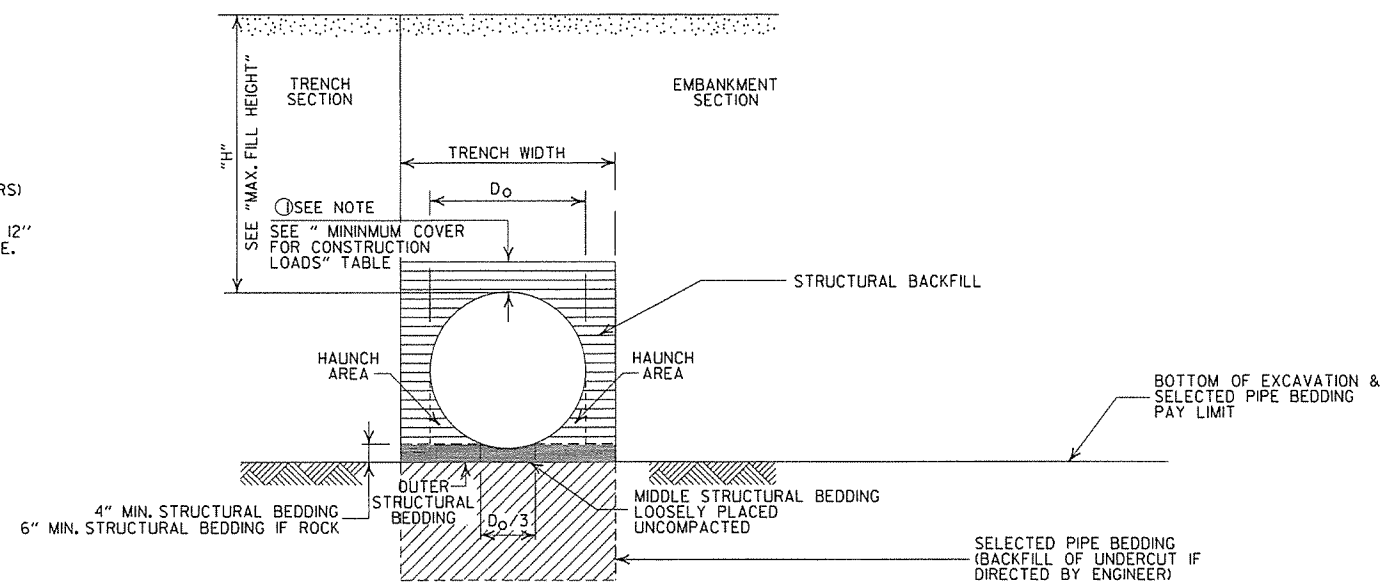
MULTIPLE INSTALLATION OF PVC PIPES

PIPE DIAMETER	CLEAR DISTANCE BETWEEN PIPES
18"	1'-6"
24"	2'-0"
30"	2'-6"
36"	3'-0"

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.



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.

- LEGEND -

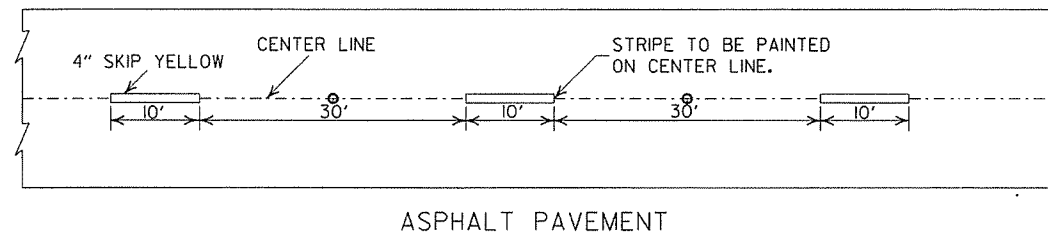
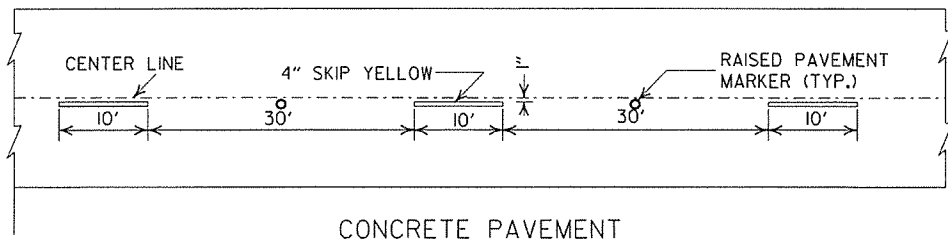
H = FILL HEIGHT (FT.)
D_o = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM

==== = STRUCTURAL BACKFILL MATERIAL
|||||| = UNDISTURBED SOIL

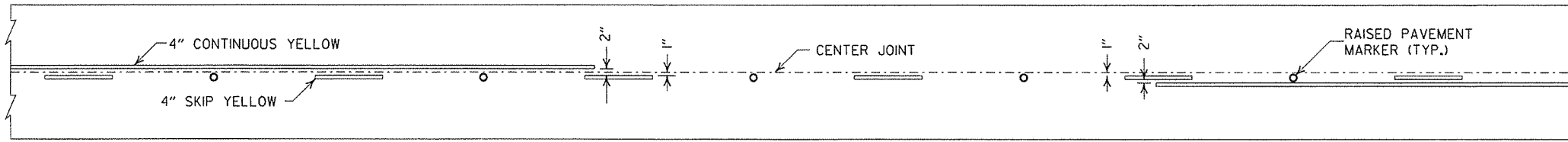
GENERAL NOTES

1. PIPE SHALL CONFORM TO ASTM F949, CELL CLASS 12454. INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
2. PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
4. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
5. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
6. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
7. FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
8. PVC PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
9. JOINTS FOR PVC PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN AASHTO SECTION 26.4.2.4 AND 30.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

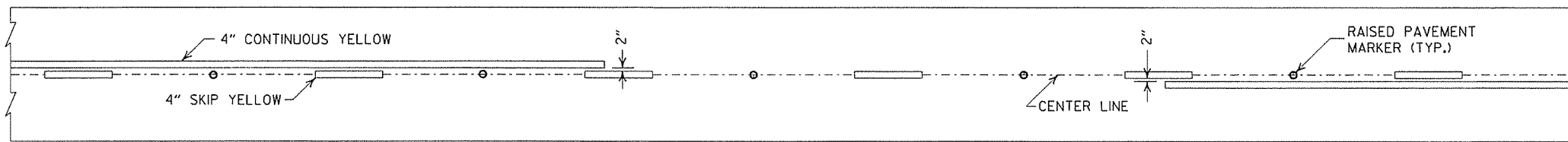
		ARKANSAS STATE HIGHWAY COMMISSION	
		PLASTIC PIPE CULVERT (PVC F949)	
		STANDARD DRAWING PCP-2	
2-27-14	REVISED GENERAL NOTE 1.		
12-15-11	REV GENERAL NOTES & MINIMUM COVER NOTE; DELETED SM3 MATERIAL		
11-17-10	ISSUED		
DATE	REVISION		DATE FILMED



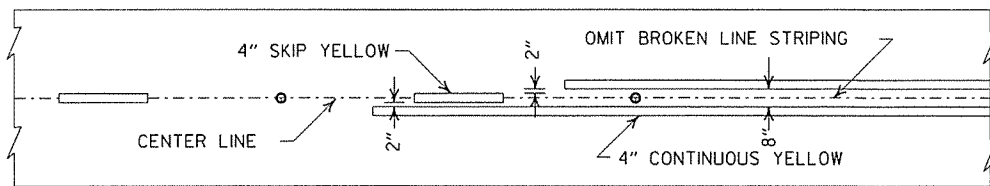
BROKEN LINE STRIPING



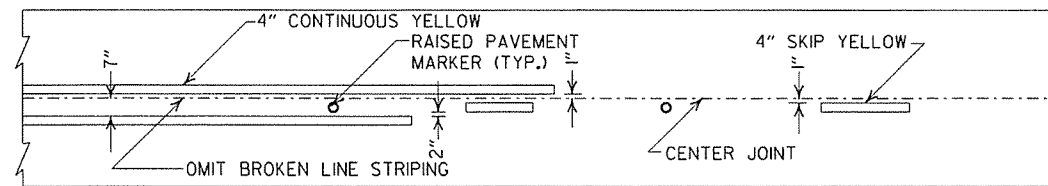
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

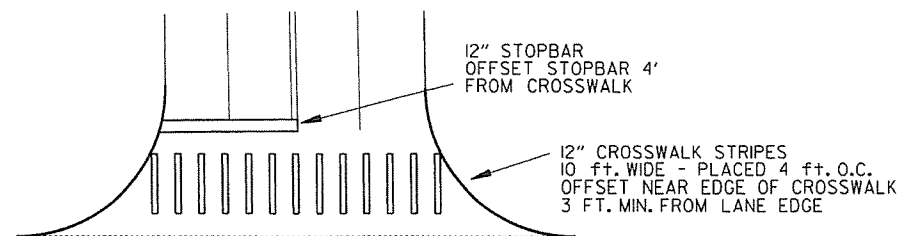


ASPHALT PAVEMENT



CONCRETE PAVEMENT

STRIPING AT ADJACENT NO PASSING LANES

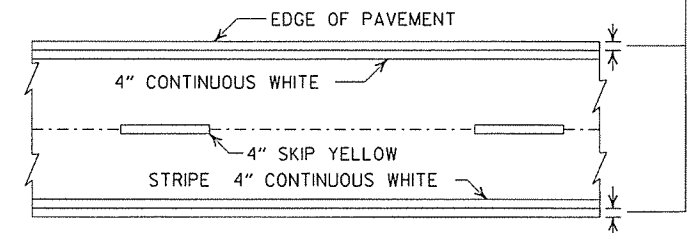


CROSSWALK AND STOPBAR DETAILS

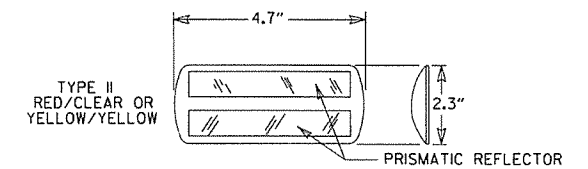
NOTES:

1. ALL LINES SHALL HAVE A WIDTH OF 4 INCHES.
2. THE THICKNESS AND RATE OF PAINT APPLICATION SHALL BE AS SPECIFIED IN SECTION 718 OF THE STANDARD SPECIFICATIONS.
3. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
4. RAISED PAVEMENT MARKERS SHALL BE CENTERED BETWEEN SKIP LINES ON 40 FEET SPACING UNLESS OTHERWISE SHOWN ON THE PLANS.

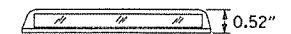
2" FOR ASPHALT OR CONCRETE PAVEMENT
6" FOR BITUMINOUS SURFACE TREATMENT



PAVEMENT EDGE LINE MARKING



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



DETAIL OF STANDARD RAISED PAVEMENT MARKERS

GENERAL NOTES:

THIS DRAWING SHOULD BE CONSIDERED AS TYPICAL ONLY AND THE FINAL LOCATION OF THE STRIPING AND RAISED PAVEMENT MARKERS SHALL BE DETERMINED BY THE ENGINEER.

THIS DRAWING SHOULD BE USED IN CONJUNCTION WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST REVISION.

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

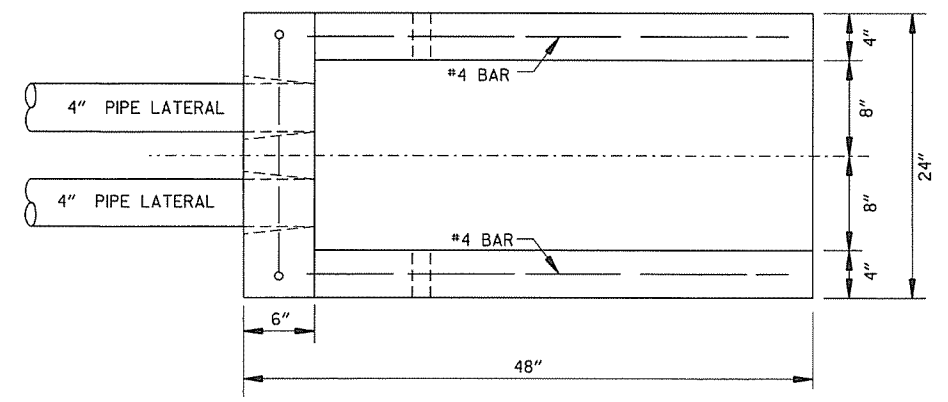
9-12-13	REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS	
11-17-10	REVISED GENERAL NOTES & REMOVED PLOWABLE PAVT MRKRS	
11-18-04	REVISED NOTE 2 & GENERAL NOTES	
8-22-02	ADDED CROSSWALK & STOPBAR DTLS.	
7-02-98	ADDED DETAILS OF STD. RAISED PAVT. MARKERS	
4-26-96	REV. NOTES 3&4; ADDED R.P.M.	
9-30-80	DRAWN	1-9-30-80
DATE	REVISION	FILMED

ARKANSAS STATE HIGHWAY COMMISSION

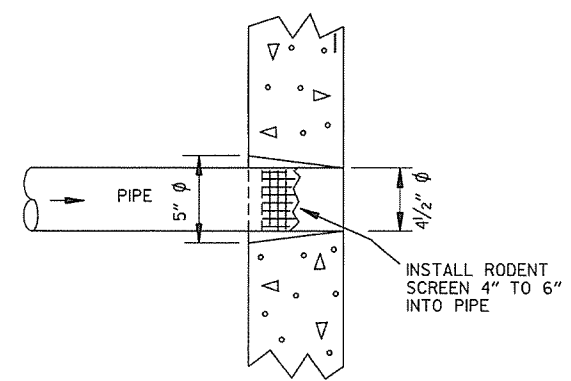
PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1

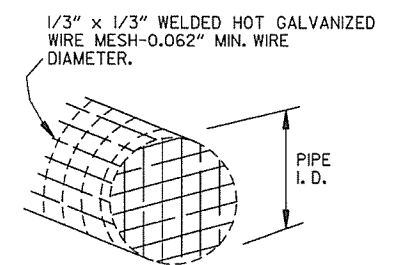
NOTE:
 1. GRANULAR BACKFILL TO BE SUBSIDIARY TO PIPE UNDERDRAIN.
 2. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THOROUGHLY COMPACTED EARTH AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.
 3. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC, LAP FABRIC 12" OR THE WIDTH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



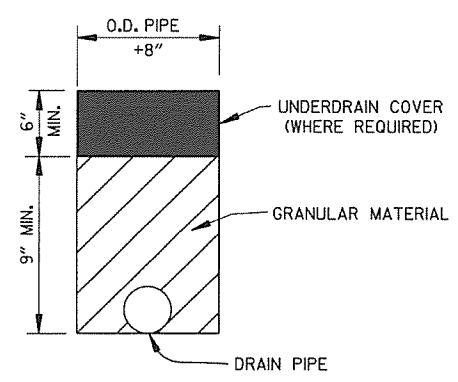
PLAN VIEW



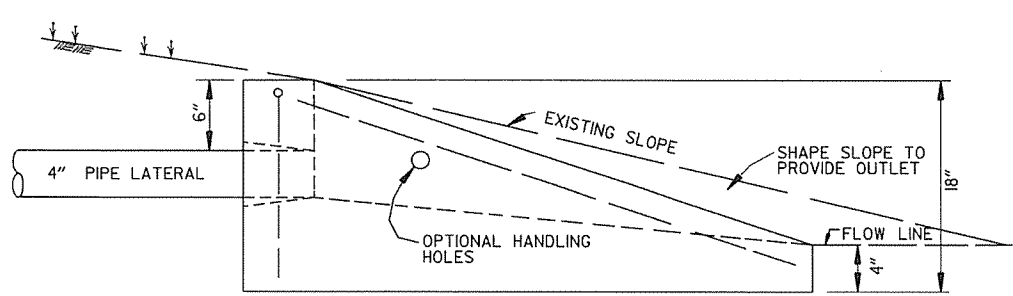
DETAIL OF HOLE FOR 4" PIPE



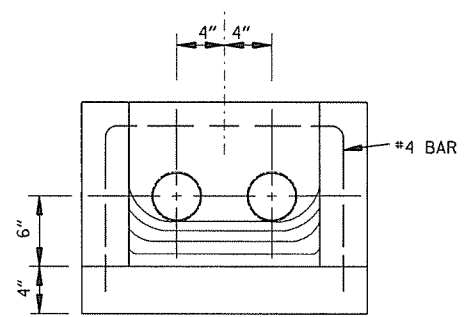
DETAIL OF RODENT SCREEN



DETAILS OF PIPE UNDERDRAIN



SIDE VIEW

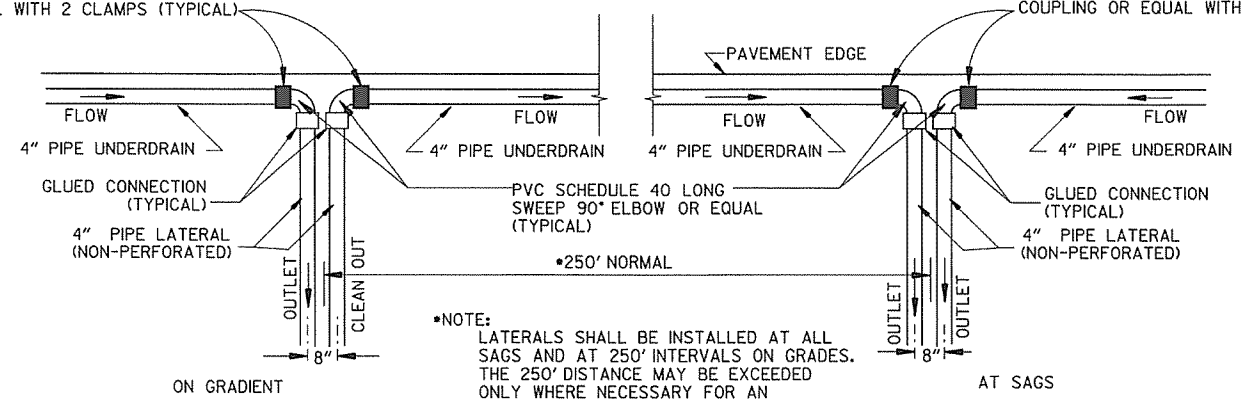


FRONT VIEW

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



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.

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

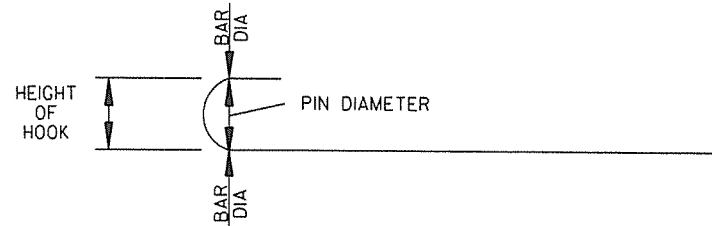
DETAILS OF PIPE UNDERDRAIN

STANDARD DRAWING PU-1

STEEL FABRICATION: REINFORCING STEEL FABRICATION SHALL CONFORM TO THE DIMENSIONS LISTED IN THE TABLE BELOW:

BAR SIZE	PIN DIAMETER	HOOK EXTENSION "K"
3	2 1/4"	4"
4	3 "	4 1/2"
5	3 3/4"	5"
6	4 1/2"	6"
7	5 1/4"	7"
8	6"	8"

IF THE OVERALL HEIGHT OF THE HOOK (SEE DIAGRAM BELOW) FOR A "b", "b1", "b2" or "b3" BENT BAR IS GREATER THAN THE CORRESPONDING TOP OR BOTTOM SLAB THICKNESS, LESS 2 3/4 INCHES, EACH BENT BAR SHALL BE REPLACED WITH ONE HOOKED BAR AND ONE STRAIGHT BAR, USING LENGTHS AS SHOWN IN THE TABLE BELOW. THE TWO BARS SHALL BE THE SAME DIAMETER AS, AND PLACED AT THE SAME SPACING AS, THE "b", "b1", "b2" OR "b3" BENT BARS THEY REPLACE.



NOTE: DIMENSIONS OF BARS ARE MEASURED OUT TO OUT OF BARS.

OVERALL HEIGHT OF HOOKED BAR DIAGRAM

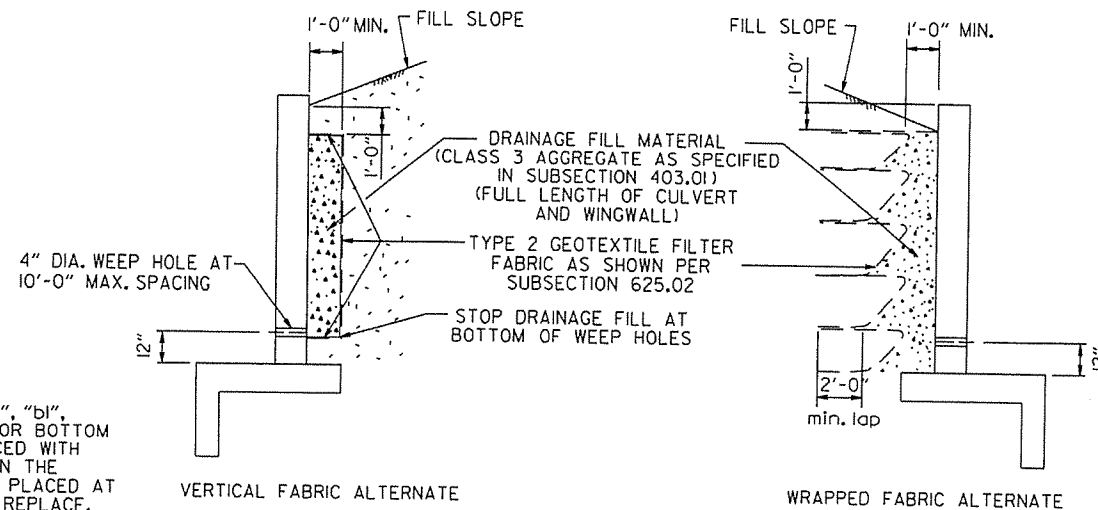
THE HOOKED BARS SHALL BE PLACED IN THE BOTTOM OF THE TOP SLAB AND THE TOP OF THE BOTTOM SLAB. THE STRAIGHT BARS SHALL BE PLACED IN THE TOP OF THE TOP SLAB AND THE BOTTOM OF THE BOTTOM SLAB. SEE TABLE BELOW FOR LENGTHS OF REPLACEMENT HOOKED AND STRAIGHT BARS.

FOR SKEWED CULVERTS, THE REPLACEMENT STRAIGHT BAR MAY HAVE TO BE CUT IN FIELD TO FIT.

REPLACEMENT BAR LENGTHS TABLE

BAR SIZE: "b", "b1", "b2" OR "b3"	LENGTH OF HOOKED BAR	LENGTH OF STRAIGHT BAR
#4	L + 1' - 0"	SEE "c" BAR LENGTH
#5	L + 1' - 2"	SEE "c" BAR LENGTH
#6	L + 1' - 4"	SEE "c" BAR LENGTH
#7	L + 1' - 8"	SEE "c" BAR LENGTH
#8	L + 1' - 10"	SEE "c" BAR LENGTH
#9	L + 2' - 6"	SEE "c" BAR LENGTH

L = "OW" - 3 INCHES



WINGWALL & CULVERT DRAINAGE DETAIL

REINFORCED CONCRETE BOX CULVERT GENERAL NOTES

CONCRETE SHALL BE CLASS S WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3500 PSI. REINFORCING STEEL SHALL BE AASHTO M 31 OR M 53, GRADE 60.

CONSTRUCTION AND MATERIALS FOR WINGWALL & CULVERT DRAINAGE, INCLUDING WEEP HOLES AND GRANULAR MATERIAL, SHALL BE SUBSIDIARY TO THE BID ITEM, "CLASS S CONCRETE".

MEMBRANE WATERPROOFING SHALL CONFORM TO THE REQUIREMENTS OF SECTION 815 OF THE STANDARD SPECIFICATIONS.

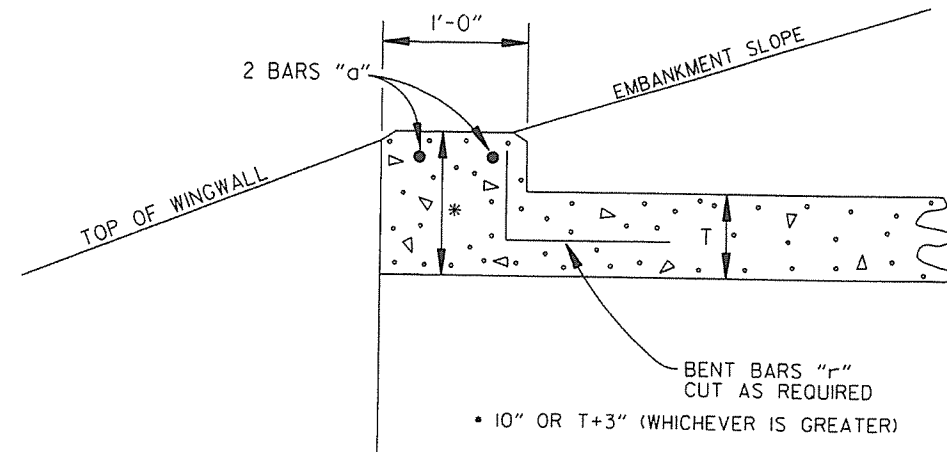
MEMBRANE WATERPROOFING SHALL BE APPLIED TO ALL CONSTRUCTION JOINTS IN THE TOP SLAB AND THE SIDEWALLS OF R.C. BOX CULVERTS AS DIRECTED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FOR THIS ITEM, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS BID FOR THE R.C. BOX CULVERT.

REINFORCING STEEL TOLERANCES: THE TOLERANCES FOR REINFORCING STEEL SHALL MEET THOSE LISTED IN "MANUAL OF STANDARD PRACTICE" PUBLISHED BY CONCRETE REINFORCING STEEL INSTITUTE (CRSI) EXCEPT THAT THE TOLERANCE FOR TRUSS BARS SUCH AS FIGURE 3 ON PAGE 7-4 OF THE CRSI MANUAL SHALL BE MINUS ZERO TO PLUS 1/2 INCH.

WEEP HOLES IN BOX CULVERT WALLS SHALL HAVE A MAXIMUM HORIZONTAL SPACING OF 10'-0" AND SHALL BE SPACED TO CLEAR ALL REINFORCING STEEL. THE DRAIN OPENING SHALL BE 4" DIAMETER AND SHALL BE PLACED 12" ABOVE THE TOP OF THE BOTTOM SLAB.

WEEP HOLES IN WINGWALLS SHALL HAVE A MAXIMUM HORIZONTAL SPACING OF 10'-0" AND SHALL BE SPACED TO CLEAR ALL REINFORCING STEEL. THERE SHALL BE A MINIMUM OF TWO (2) WEEP HOLES IN EACH WINGWALL. THE DRAIN OPENING SHALL BE 4" DIAMETER AND SHALL BE PLACED 12" ABOVE THE TOP OF THE WINGWALL FOOTING.

THE REQUIREMENTS SHOWN ON THIS DRAWING SHALL SUPERCEDE THE CORRESPONDING REQUIREMENTS ON ALL REINFORCED CONCRETE BOX CULVERT STANDARD DRAWINGS.



NOTE: FOR ALL SKEWED R.C. BOX CULVERTS THE LENGTH "K" OF THE MODIFIED HEADWALL SHALL BE EQUAL TO THE ROADWAY LENGTH "RL". THE ENDS OF THE HEADWALL SHALL BE CONSTRUCTED PARALLEL TO THE SKEW ANGLE OF THE BOX CULVERT.

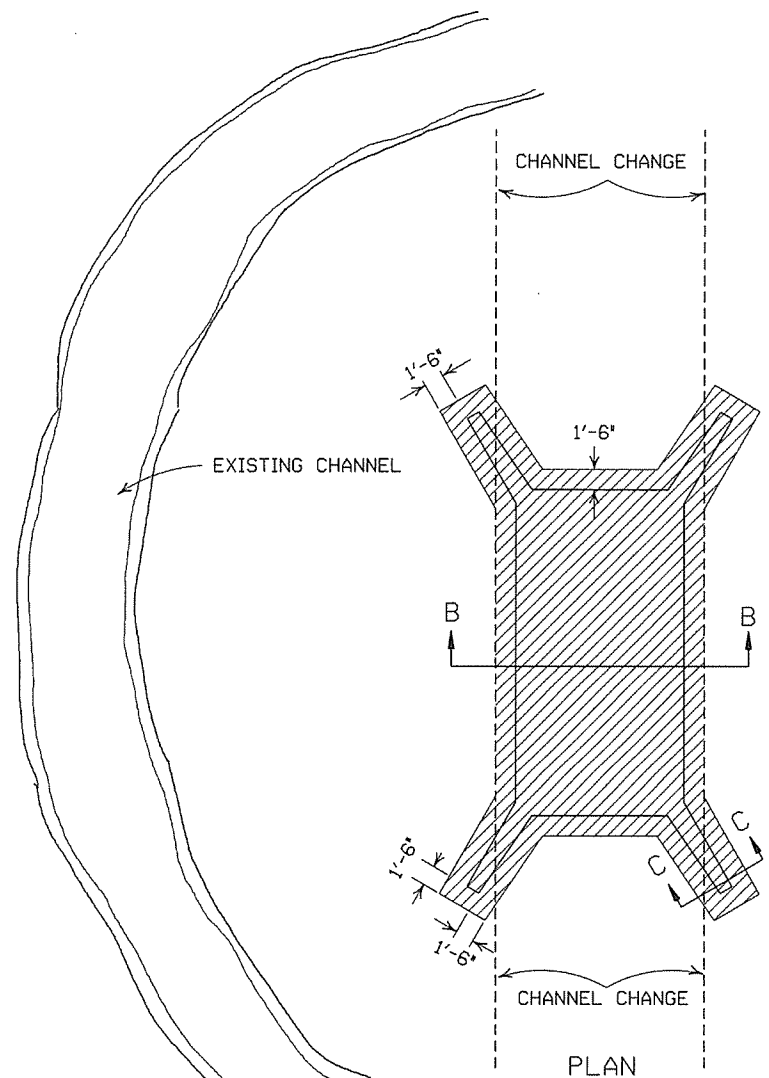
R.C. BOX CULVERT HEADWALL MODIFICATIONS

DATE	REVISION	DATE FILMED
7/26/12	REV. DRAINAGE FILL MATERIAL & DETAIL	
12/15/11	REQUIRE WEEP HOLES IN BOX CULVERT WALLS	
5-25-06	REV. GEN. NOTES AND DETAILS FOR WEEP HOLES; BAR DIAGRAM	
11-16-01	ADDED WINGWALL DRAINAGE DETAIL/EDITED GEN. NOTES	
10-18-96	REV. ASTM REF. TO AASHTO & ADDED BAR DIAGRAM	
10-12-95	MOVED SOLID SODDING DETAIL TO RCB-2	
6-2-94	ADDED SOLID SODDING PLAN DETAIL	
8-5-93	REVISED PIN DIAMETER TO SPECS.	
8-15-91	DRAWN AND ISSUED	

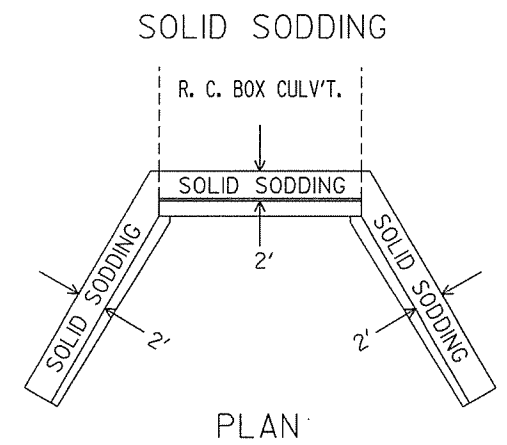
ARKANSAS STATE HIGHWAY COMMISSION

REINFORCED CONCRETE BOX CULVERT DETAILS

STANDARD DRAWING RCB-1



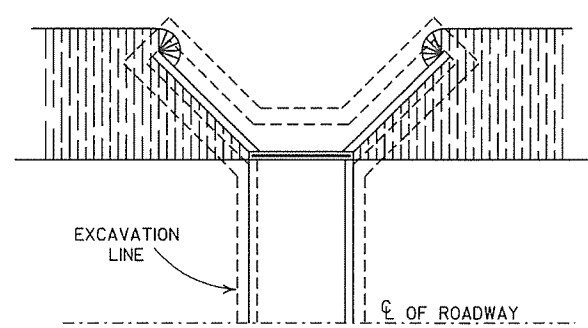
PLAN



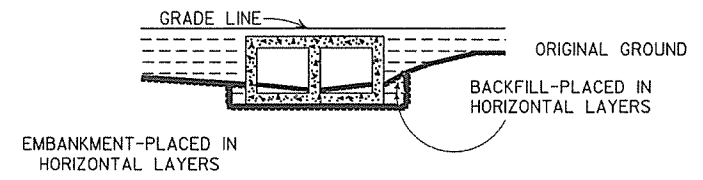
PLAN

PARTIAL SECTION SHOWING SOLID SODDING AT HEADWALLS AND WING WALLS

NOTE: LENGTH MEASURED ALONG THE CENTER OF 2' STRIP OF SOLID SODDING.

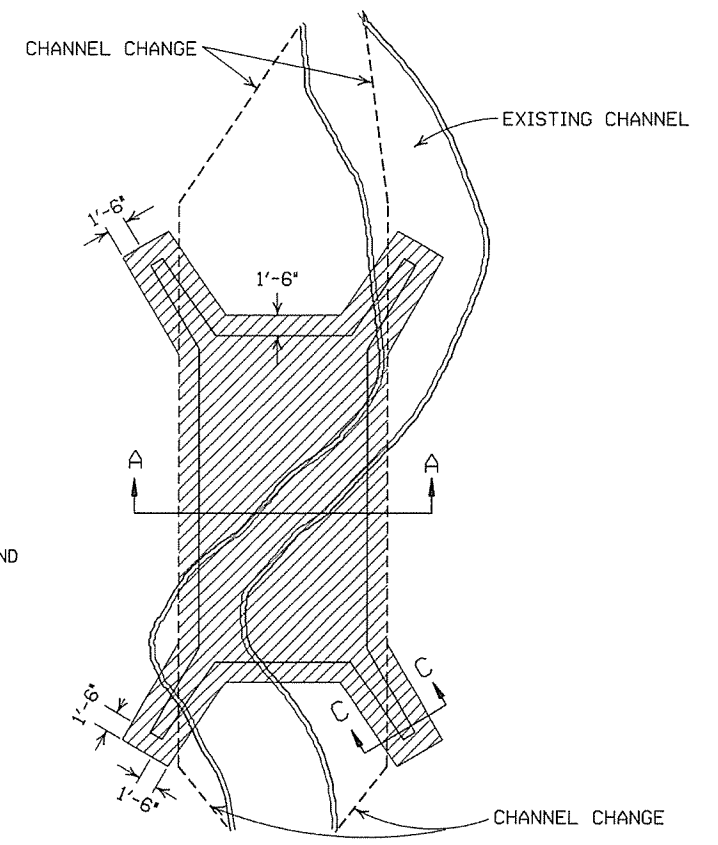


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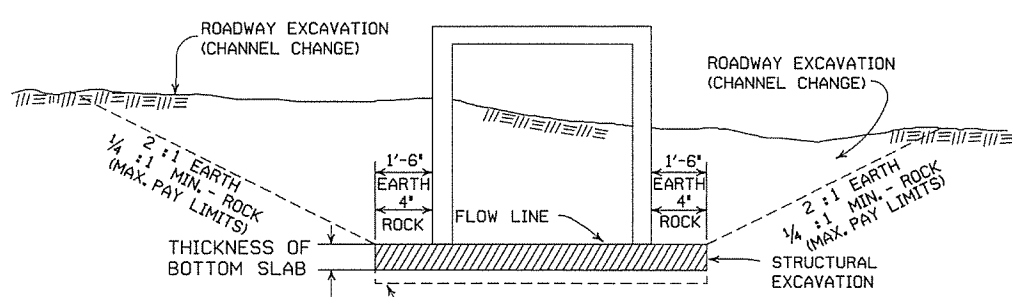


LONGITUDINAL SECTION

BACKFILL DETAILS FOR BOX CULVERT

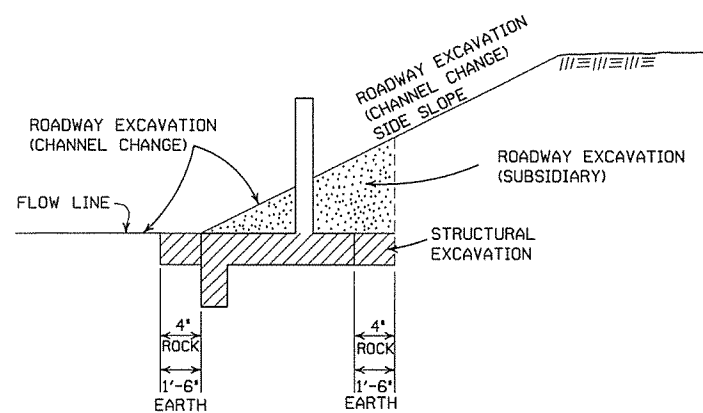


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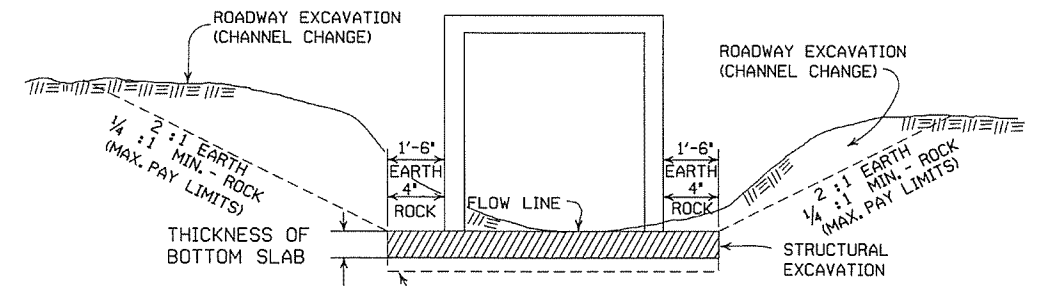


SECTION B-B
DETAILS FOR NEW CHANNELS

UNDERCUT SHALL BE MEASURED AND PAID FOR ACCORDING TO SECTIONS 801.10 AND 801.11, RESPECTIVELY, OF THE STANDARD SPECIFICATIONS.



SECTION C-C



SECTION A-A

DETAILS THROUGH EXISTING CHANNELS

UNDERCUT SHALL BE MEASURED AND PAID FOR ACCORDING TO SECTIONS 801.10 AND 801.11, RESPECTIVELY, OF THE STANDARD SPECIFICATIONS.

GENERAL NOTES:

ROADWAY EXCAVATION (CHANNEL CHANGE) WILL BE PAID FOR AT R.C. BOX CULVERT LOCATIONS. IT WILL BE PAID TO THE LIMITS ACTUALLY CUT AND WILL BE CONFINED TO THAT PORTION OF THE INDICATED AREA THAT IS ABOVE THE FLOW LINE. ROADWAY EXCAVATION (CHANNEL CHANGE) SHALL BE MEASURED BY CROSS SECTIONS AND VOLUMES COMPUTED BY AVERAGE END AREA METHOD. ALL CHANNEL CHANGES SHALL BE BROUGHT TO GRADE PRIOR TO MAKING ANY EXCAVATION FOR STRUCTURES.

EXCAVATION FOR STRUCTURES WILL BE PAID FOR AT ALL R.C. BOX CULVERT LOCATIONS. IT WILL BE PAID TO THE LIMITS SHOWN AND SHALL BE CONFINED TO THAT PORTION OF THE INDICATED AREA THAT IS BELOW THE CHANNEL FLOW LINE.

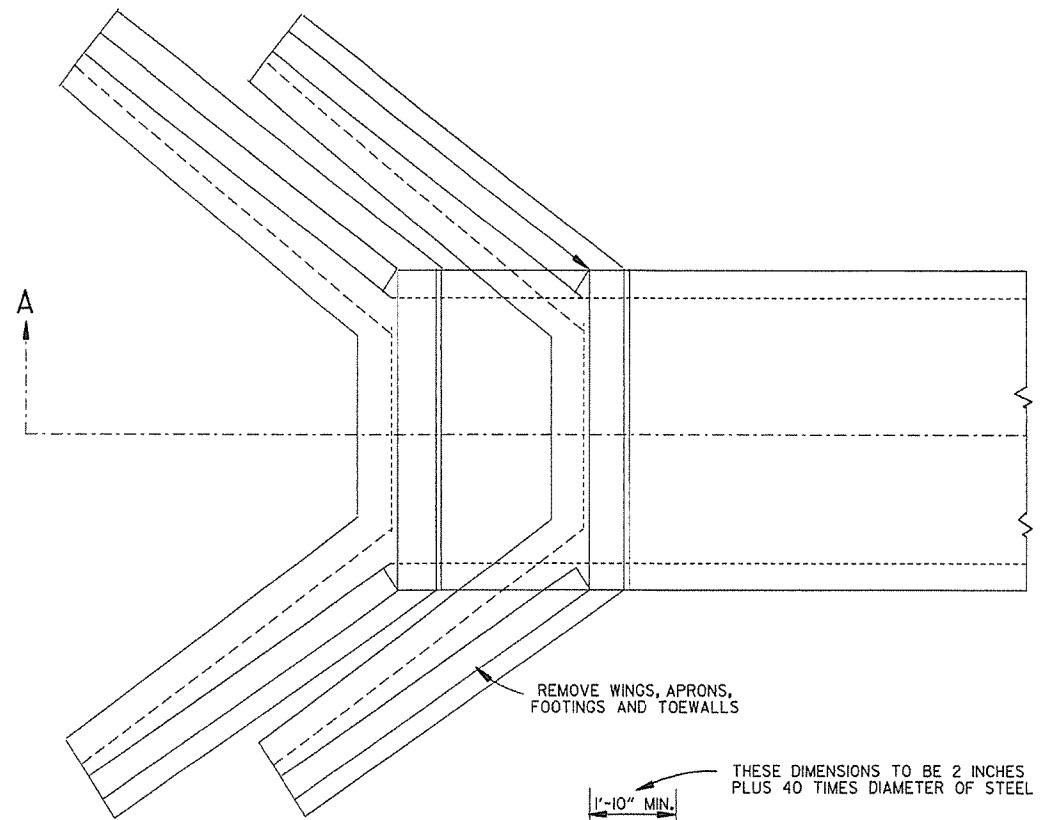
ROADWAY EXCAVATION SHOWN IN SECTION C-C ABOVE AS SUBSIDIARY WILL NOT BE MEASURED OR PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION.

DATE	REVISION	FILMED
11-20-03	REVISED SECTION A-A NOTE	
8-22-02	REVISED SECTION B-B NOTE	
10-12-95	COMBINED 1891B AND 1888A	
1-4-83	REVISED GENERAL NOTES AND ADDED MAXIMUM PAY LIMIT NOTES	674-1-4-83
2-2-76	EXCAV. PAY LIMITS	917-2-2-76
10-2-72	REVISED AND REDRAWN	564-10-16-72

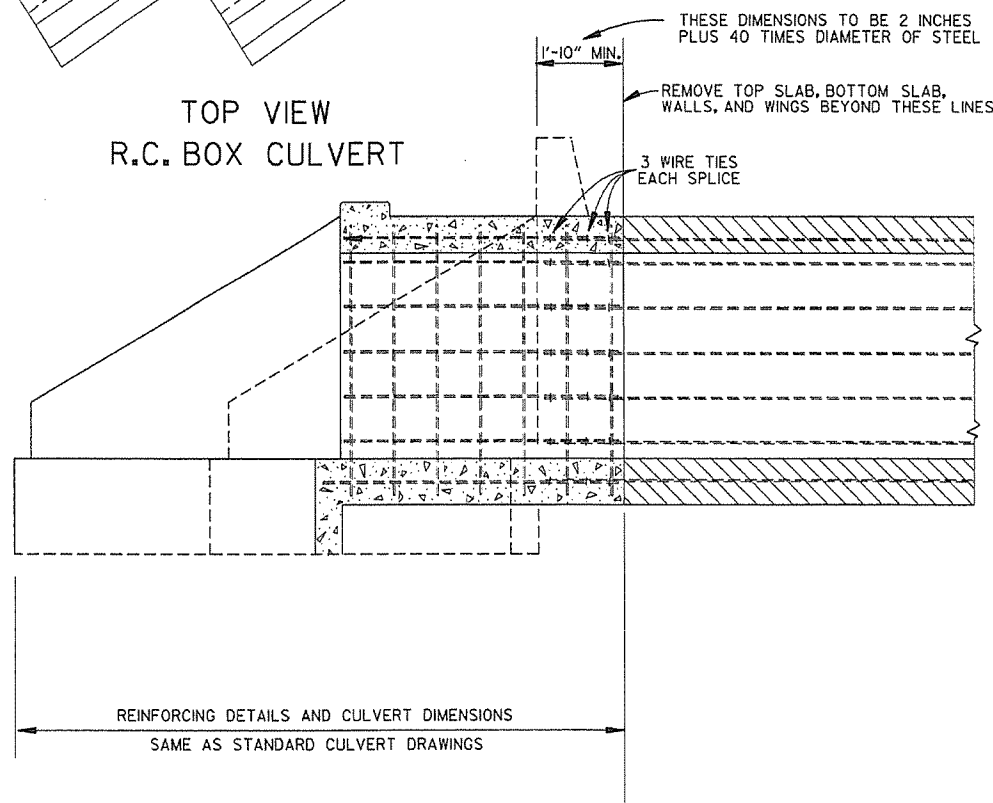
ARKANSAS STATE HIGHWAY COMMISSION

EXCAVATION PAY LIMITS, BACKFILL, & SOLID SODDING FOR BOX CULVERTS

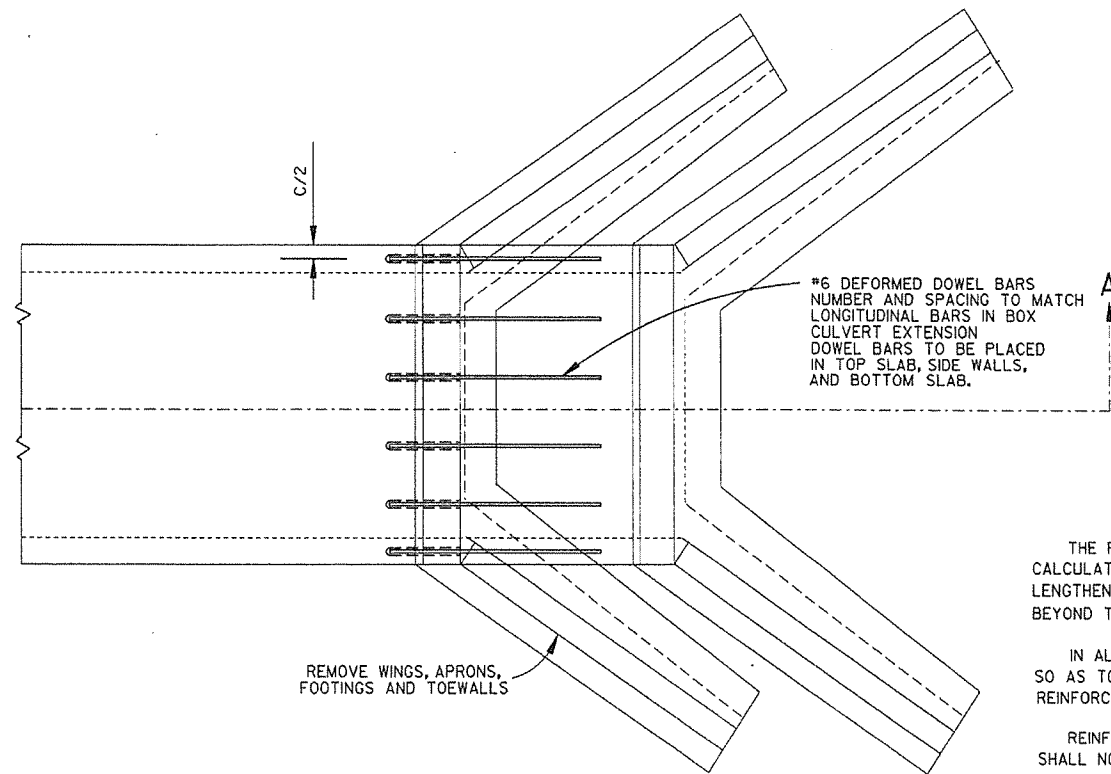
STANDARD DRAWING RCB-2



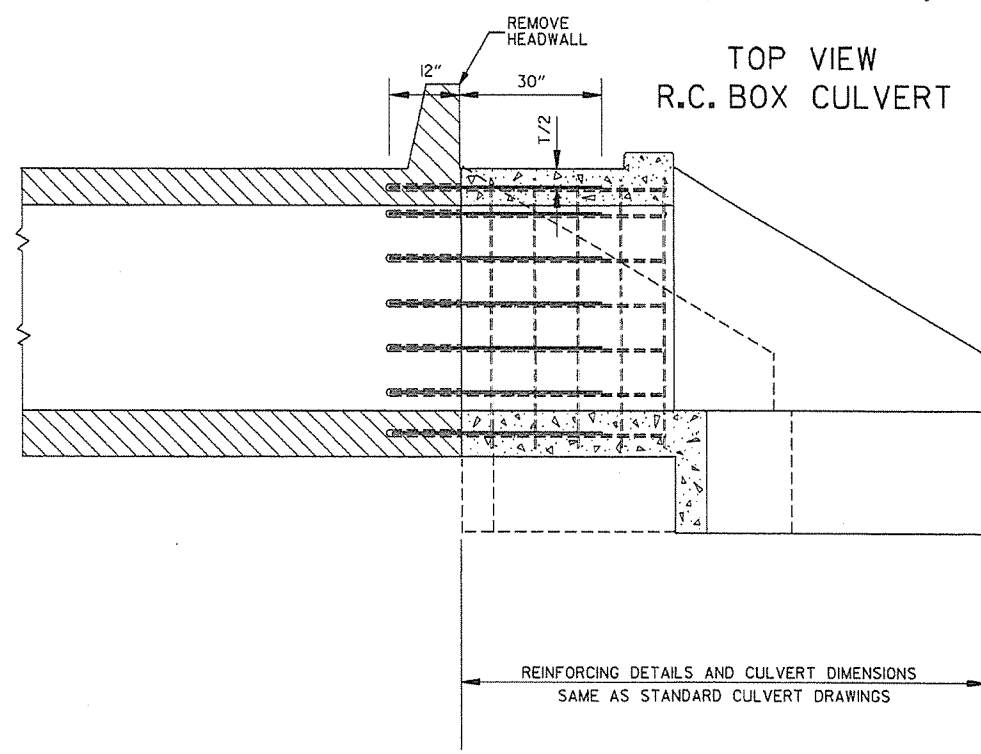
TOP VIEW
R.C. BOX CULVERT



SECTION A-A
METHOD 1



TOP VIEW
R.C. BOX CULVERT



SECTION A-A
METHOD 2

- GENERAL NOTES
- 1 THE RESIDENT ENGINEER WILL MAKE INDIVIDUAL CALCULATIONS OF QUANTITIES FOR EACH STRUCTURE LENGTHENED, MAKING NO ALLOWANCE FOR OVERBREAKAGE BEYOND THE LINES INDICATED.
 - 1 IN ALL INSTANCES CONCRETE SHALL BE REMOVED SO AS TO PERMIT FULL 40 DIAMETER SPLICE OF REINFORCING STEEL.
 - 1&2 REINFORCING STEEL REMOVED FROM EXISTING STRUCTURE SHALL NOT BE REUSED IN CONSTRUCTING EXTENSION.
 - 1&2 ON R.C. BOX CULVERTS THAT HAVE AN EXISTING CONCRETE APRON; THE CONCRETE APRON SHALL BE REMOVED WITH THE WINGS. THE COST OF REMOVING ALL OLD CONCRETE WILL BE INCLUDED IN THE PRICE BID PER CUBIC YARD FOR NEW CONCRETE OF THE CLASS SPECIFIED AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
 - 2 MATERIALS FOR SECURING DOWEL BARS SHALL MEET THE REQUIREMENTS OF SECTION 507.02 OF THE STANDARD SPECIFICATIONS.
 - 2 DOWEL BARS SHALL BE INSTALLED AS FOLLOWS: THE DRILLING PROCEDURE SHALL BE APPROVED BY THE ENGINEER, THE FILLING SYSTEM SHALL BE APPROVED BY THE ENGINEER, AND SHALL BE AN INJECTION-TYPE SYSTEM WHICH WILL INSURE THAT SUFFICIENT MATERIAL IS INJECTED SO IT COMPLETELY SURROUNDS THE BARS AND FILLS THE HOLES.
 - 1&2 THE CONTRACTOR SHALL HAVE THE OPTION OF USING EITHER METHOD 1 OR METHOD 2, REGARDLESS OF WHICH METHOD IS USED, PAY QUANTITIES WILL BE CALCULATED BASED ON METHOD 1.

NOTE:
NO PART OF THIS STANDARD IS TO BE USED FOR ANY DETAILS RELATIVE TO NEW CONSTRUCTION.
SEE STANDARD DRAWING LISTED IN TABULATION OF STRUCTURES FOR ALL NEW CONSTRUCTION DETAILS.

ARKANSAS STATE HIGHWAY COMMISSION		
METHOD OF EXTENDING EXISTING R.C. BOX CULVERTS		
STANDARD DRAWING RCB-3		
10-12-95	CHANGED DRAWING # FROM 144-A	
4-1-93	ADDED GENERAL NOTE	
10-1-92	ADDED ALT. METHOD OF EXTENSION	
11-30-89	REDRAWN	
1-4-83	ELIMINATED CONCRETE CLASS	
12-20-56	RETRACED	
DATE	REVISION	DATE FILM

SUPERELEVATION TABLE FOR TWO - WAY TRAFFIC

DEGREE OF CURVE	30 MPH		40 MPH		50 MPH		55 MPH		60 MPH		70 MPH	
	Ls (FT)		Ls (FT)		Ls (FT)		Ls (FT)		Ls (FT)		Ls (FT)	
	e	MINIMUM DESIRABLE	e	MINIMUM DESIRABLE	e	MINIMUM DESIRABLE	e	MINIMUM DESIRABLE	e	MINIMUM DESIRABLE	e	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.		N.C.		N.C.		N.C.		N.C.	
1° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
1° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
1° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
1° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
2° 00'	R.C.		0.021	175	0.026	200	0.031	225	0.037	250	0.043	300
2° 15'	R.C.		0.025		0.031		0.037		0.043		0.049	
2° 30'	R.C.		0.028		0.034		0.040		0.046		0.052	
2° 45'	R.C.		0.031		0.037		0.043		0.049		0.055	
3° 00'	R.C.		0.034		0.040		0.046		0.052		0.058	
3° 15'	0.021	150	0.025		0.031		0.037		0.043		0.049	
3° 30'	0.023		0.028		0.034		0.040		0.046		0.052	
3° 45'	0.025		0.031		0.037		0.043		0.049		0.055	
4° 00'	0.027		0.034		0.040		0.046		0.052		0.058	
4° 15'	0.029		0.036		0.042		0.048		0.054		0.060	
4° 30'	0.031		0.038		0.044		0.050		0.056		0.062	
4° 45'	0.033		0.040		0.046		0.052		0.058		0.064	
5° 00'	0.037		0.044		0.050		0.056		0.062		0.068	
5° 15'	0.040		0.047		0.053		0.059		0.065		0.071	
5° 30'	0.043		0.050		0.056		0.062		0.068		0.074	
5° 45'	0.046		0.053		0.059		0.065		0.071		0.077	
6° 00'	0.050		0.057		0.063		0.069		0.075		0.081	
6° 15'	0.053		0.060		0.066		0.072		0.078		0.084	
6° 30'	0.057		0.064		0.070		0.076		0.082		0.088	
6° 45'	0.061		0.068		0.074		0.080		0.086		0.092	
7° 00'	0.066		0.073		0.079		0.085		0.091		0.097	
7° 15'	0.070		0.077		0.083		0.089		0.095		0.101	
7° 30'	0.075		0.082		0.088		0.094		0.100			
7° 45'	0.080		0.087		0.093		0.099					
8° 00'	0.085		0.092		0.098		0.104					
8° 15'	0.090		0.097		0.103							
8° 30'	0.095		0.102									
8° 45'	0.100											
9° 00'												
10° 00'												
11° 00'												
12° 00'												
13° 00'												
14° 00'												
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21° 00'												
22° 00'												
23° 00'												
24° 00'												

ABBREVIATIONS

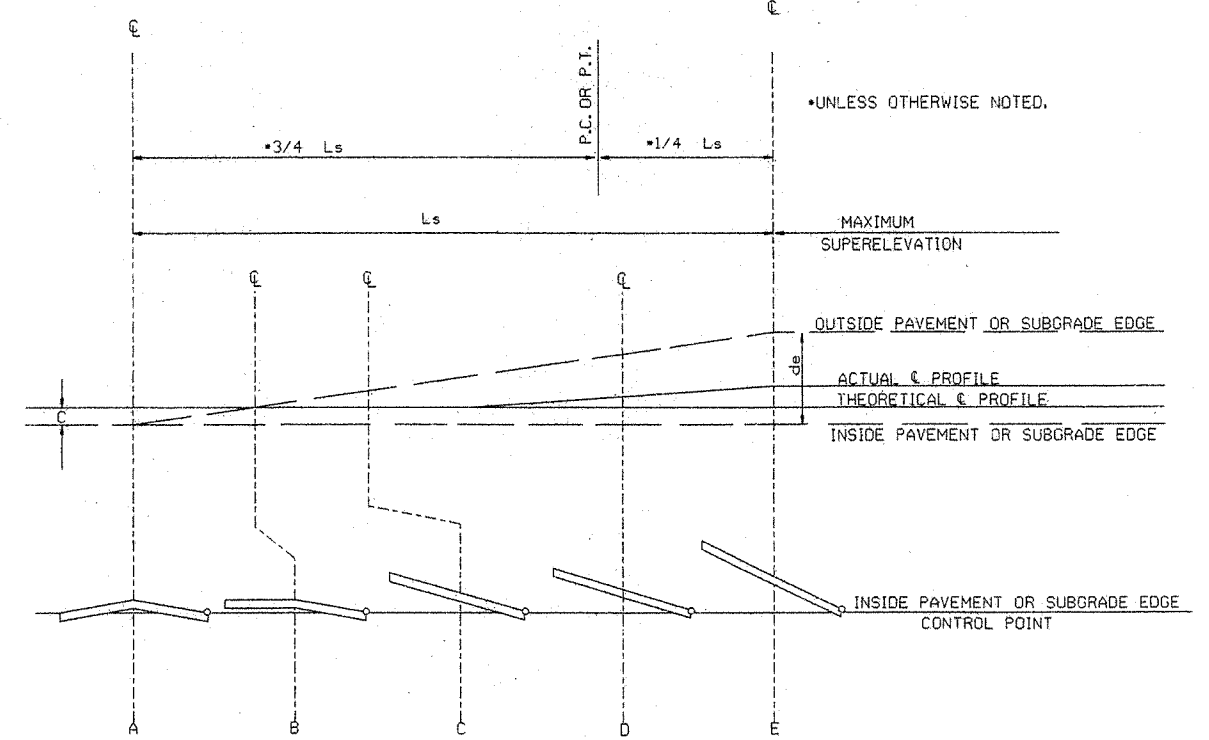
- NC - NORMAL CROWN
- RC - REVERSE CROWN, SUPERELEVATION AT NORMAL CROWN SLOPE
- e - RATE OF SUPERELEVATION (FT. PER FT.)
- Ls - LENGTH OF SUPERELEVATION TRANSITION (FT.)
- L - DISTANCE FROM BEGINNING OF SUPERELEVATION TRANSITION TO ANY POINT (FT.)
- d - WIDTH OF PAVEMENT (FT.) OR WIDTH OF SUBGRADE (FT.)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

GENERAL NOTES

1. ON PAVEMENT WITH TWO-WAY TRAFFIC, THE SUPERELEVATION SHALL BE REVOLVED ON THE INSIDE PAVEMENT EDGE UNLESS OTHERWISE NOTED ON THE PLANS
2. SUPERELEVATION VALUES SHOWN ON THE CROSS SECTIONS ARE VALUES (+) OR (-) TO BE ADDED TO OR SUBTRACTED FROM THE POINT OF CONTROL.
3. LENGTHS FOR L MAY BE ROUNDED IN MULTIPLES OF 25 FT. OR 50 FT. TO PERMIT SIMPLER CALCULATIONS.
4. PAVEMENTS WIDER THAN 2 LANES SHALL HAVE ADDITIONAL TRANSITION LENGTHS AS FOLLOWS:

- 3 LANE UNDIVIDED - - - - - +20%
- 4 LANE UNDIVIDED - - - - - +50%
- 5 LANE UNDIVIDED - - - - - +80%
- 6 LANE UNDIVIDED - - - - - +100%

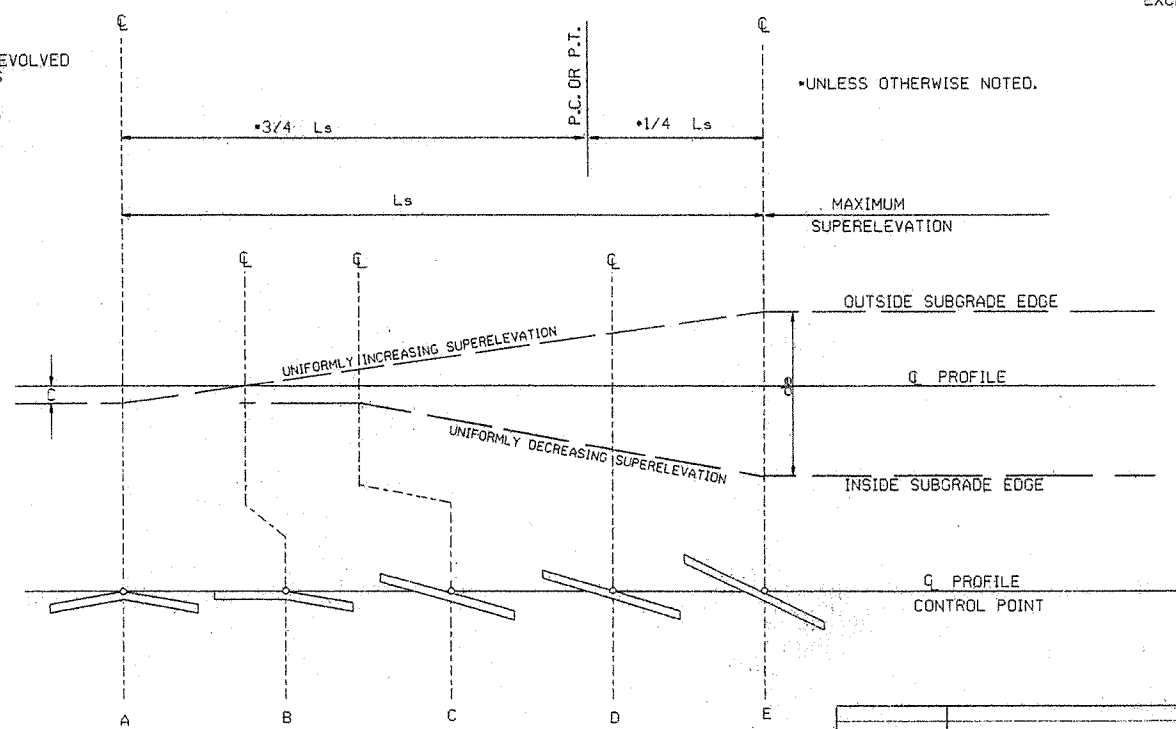
NOTE: MAINTAIN NORMAL CROWN ON INSIDE UNTIL SUPERELEVATION EXCEEDS 2C. RATE OF SUPERELEVATION SHALL BE COMPUTED ON STRAIGHT LINE METHOD USING APPLICABLE Ls.



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

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

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



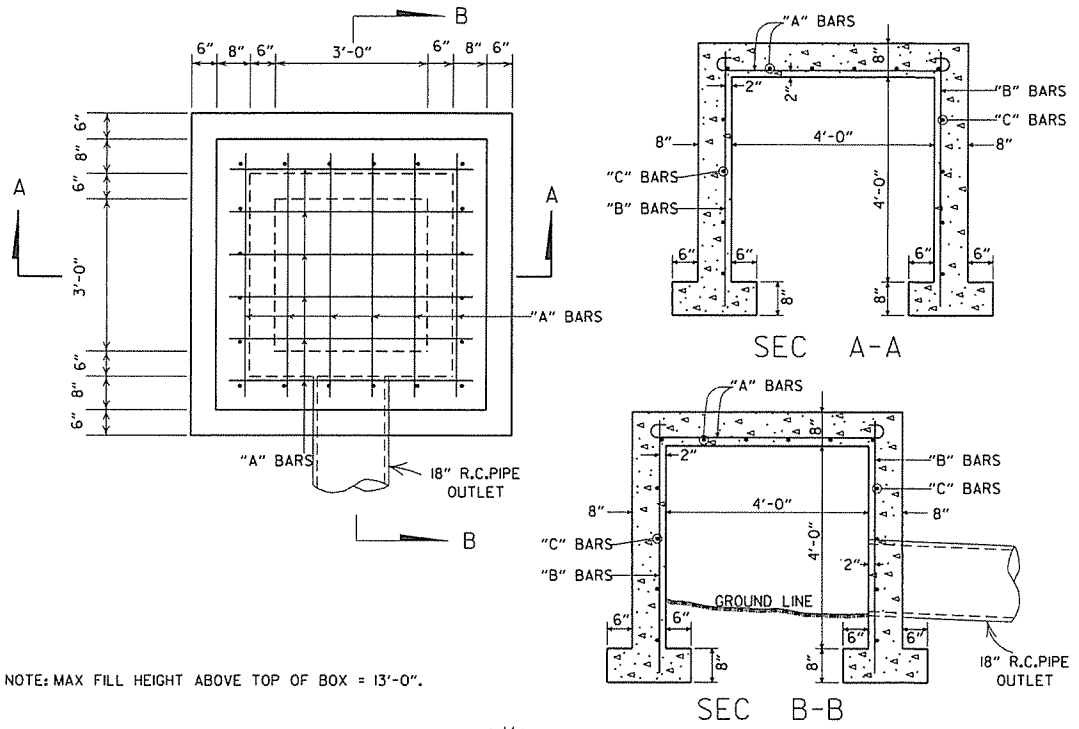
STANDARD METHOD WHEN SUPERELEVATION REVOLVES AROUND CENTER LINE

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

ARKANSAS STATE HIGHWAY COMMISSION

TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC

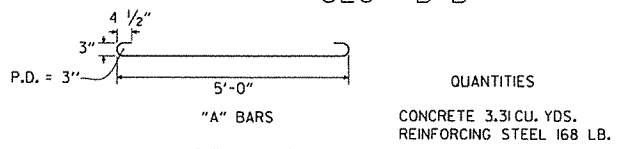
STANDARD DRAWING SE-2



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

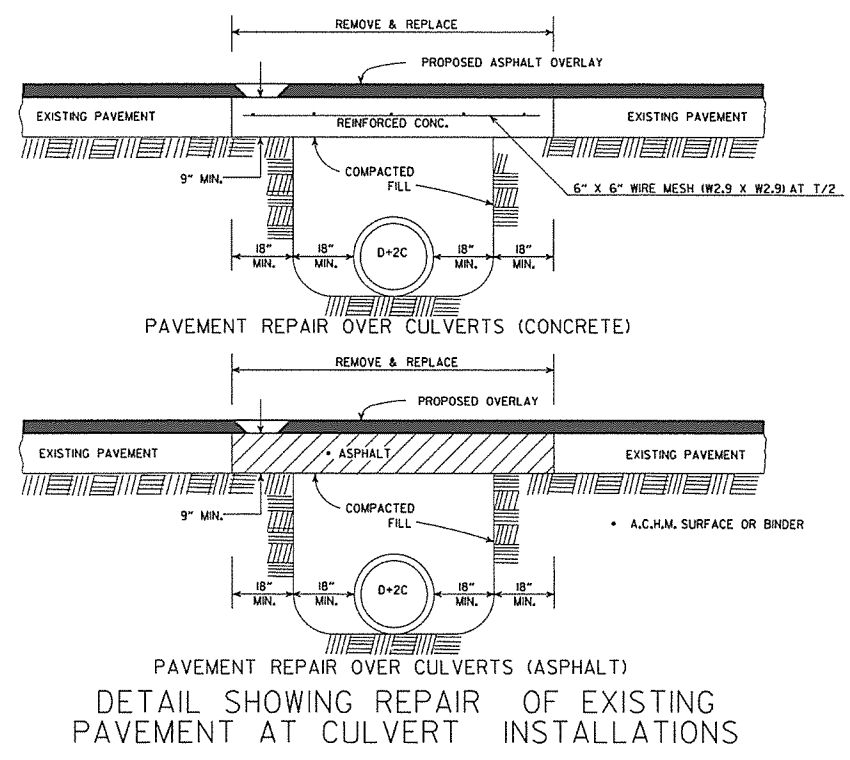
STEEL SCHEDULE

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

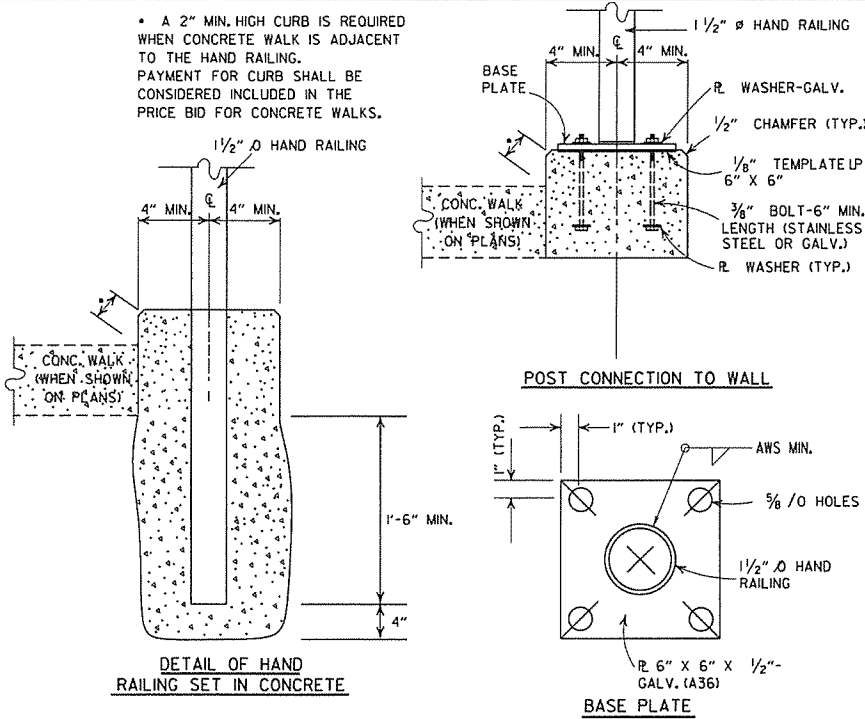


GENERAL NOTE:
THE PAY ITEMS FOR REINFORCED CONCRETE SPRING BOXES SHALL BE FOR THE QUANTITIES OF CONCRETE OF THE CLASS SPECIFIED, REINFORCING STEEL, EXCAVATION FOR STRUCTURES AND 18" R.C. PIPE CULVERT.

REINFORCED CONCRETE SPRING BOX



DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS

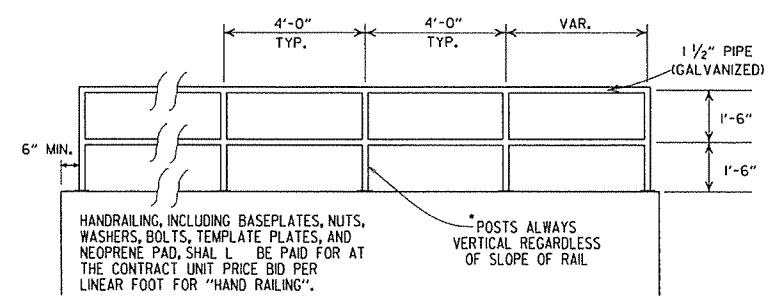


DETAIL OF HAND RAILING SET IN CONCRETE

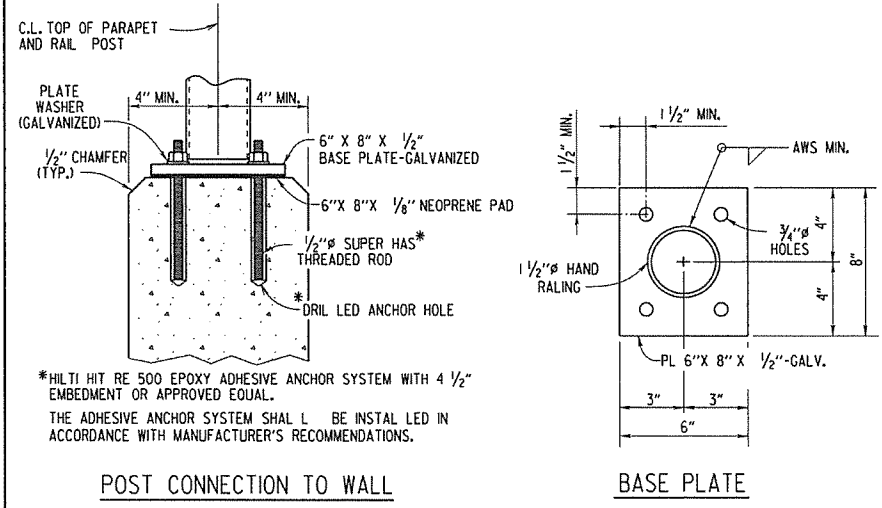
POST CONNECTION TO WALL

BASE PLATE

POST CONNECTION DETAILS



HAND RAILING SHALL CONFORM TO SECTION 633.

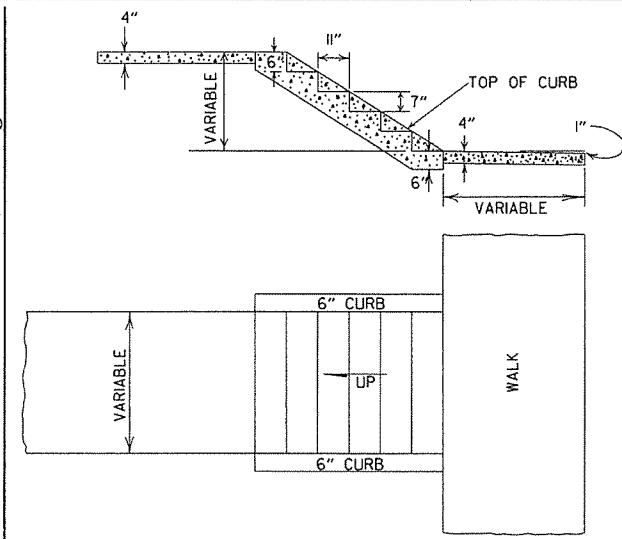


POST CONNECTION TO WALL

BASE PLATE

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

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF SPECIAL ITEMS

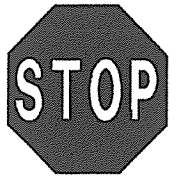
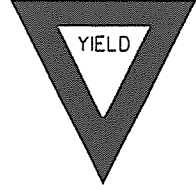
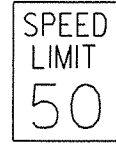


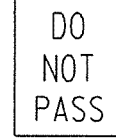
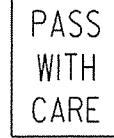
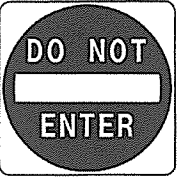

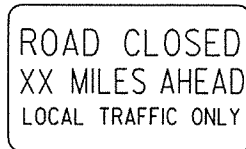
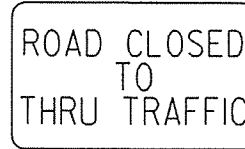

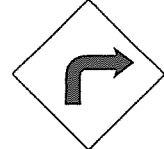
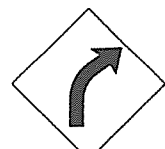
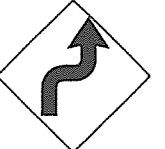

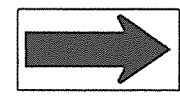
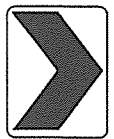
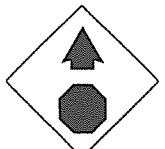
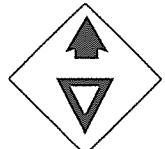
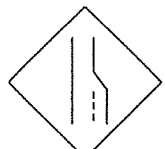

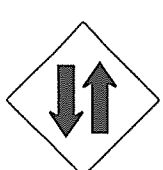


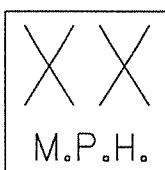


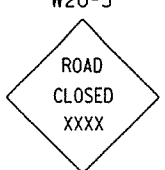





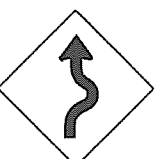



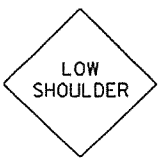
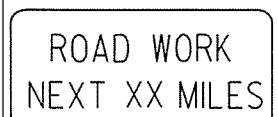
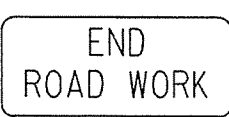
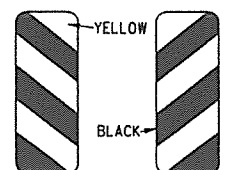
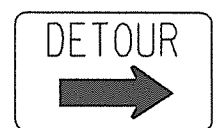

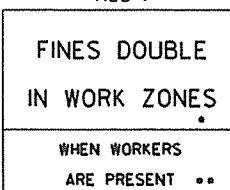
STANDARD DRAWING SI - 1

ADVANCE DISTANCES
(XXXX)

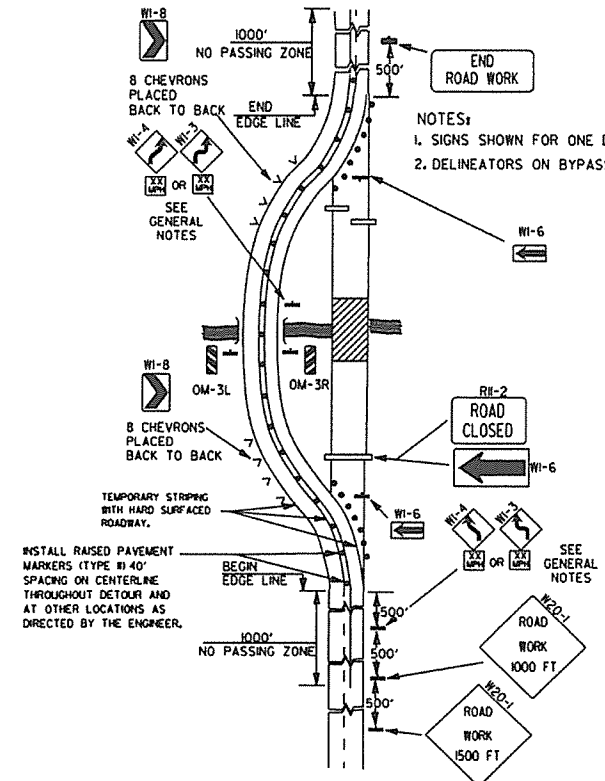
500 FT	1/2 MILE
1000 FT	3/4 MILE
1500 FT	1 MILE AHEAD

GENERAL NOTES:

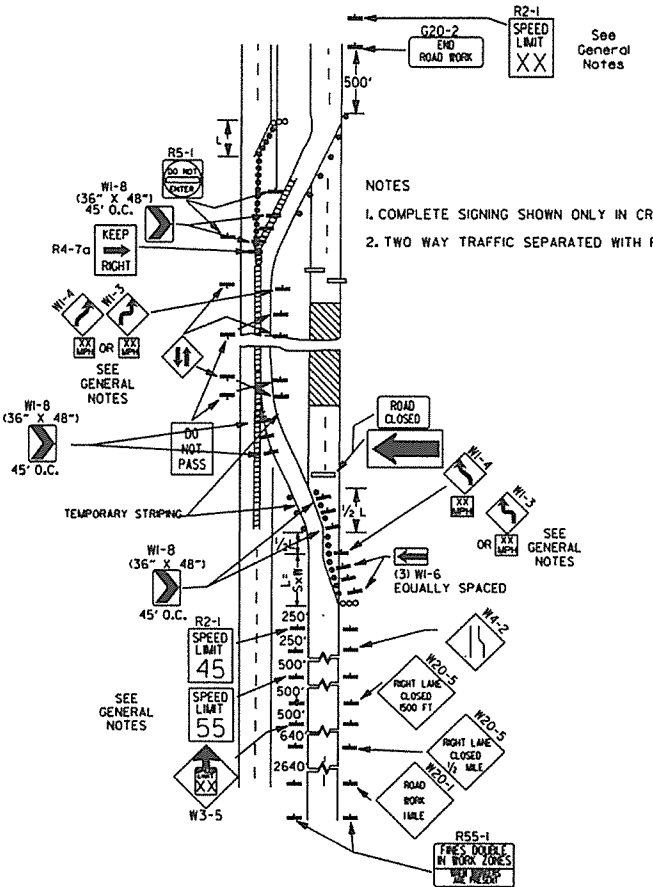
- ALL TRAFFIC CONTROL DEVICES USED ON ROAD CONSTRUCTION SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND TO THE STANDARD HIGHWAY SIGNS, LATEST EDITION, OR AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION.
 - TRAFFIC CONTROL DEVICES SHALL BE SET UP JUST BEFORE THE START 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.

<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>RSP-1</p>  <p>48"x30"</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>500 FEET 24" W6-2</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> <ul style="list-style-type: none"> USE 6" C LETTERS USE 4" D LETTERS

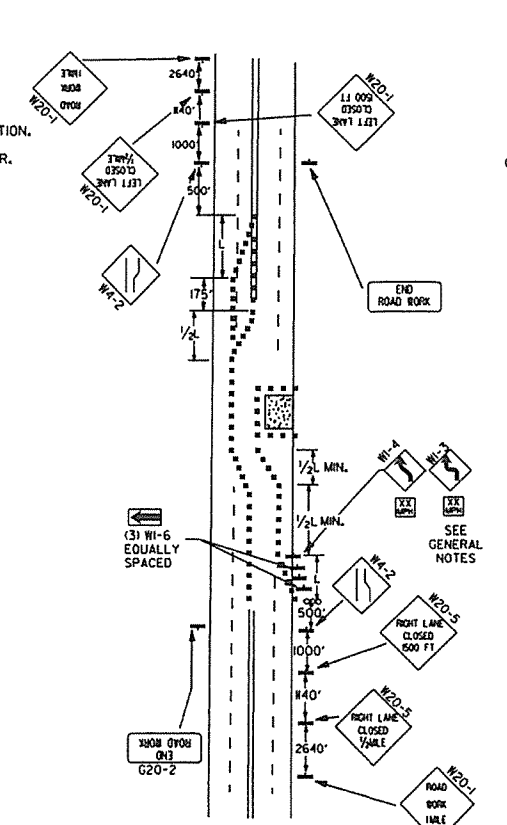
9-2-15	REVISED REDUCED SPEED LIMIT AHEAD SIGNS	
	REVISED ROAD WORK NEXT XX MILES	
12-5-1	REVISED W24-1	
1-17-10	DELETED W8-9a & ADDED W8-9	
10-15-09	ADDED REFERENCE TO MASH & ADDED SIGN W24-1	
4-17-08	REVISED SIGN DESIGNATIONS	
1-18-04	REVISED NOTES	
10-9-03	REVISED NOTE 1	
1-16-01	REVISED NOTE 7	
9-28-00	REVISED NOTE	
1-18-98	ADDED NOTE	
6-26-97	REVISED NOTE 5	
4-03-97	REVISED NOTE 5	
10-18-95	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	
8-15-93	DRAWN AND PLACED IN USE	
DATE	REVISION	FILED



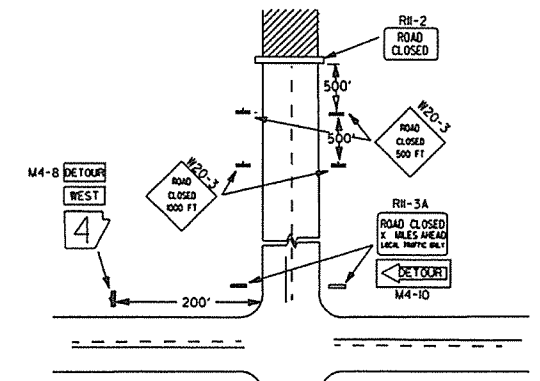
(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.



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

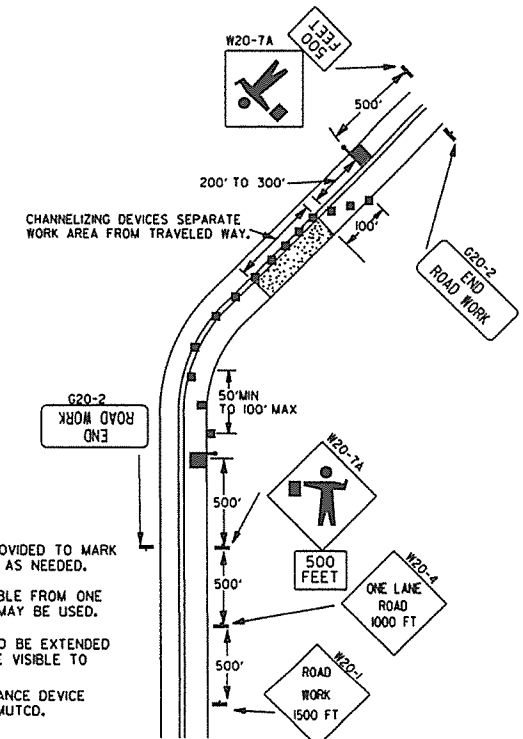


(C) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



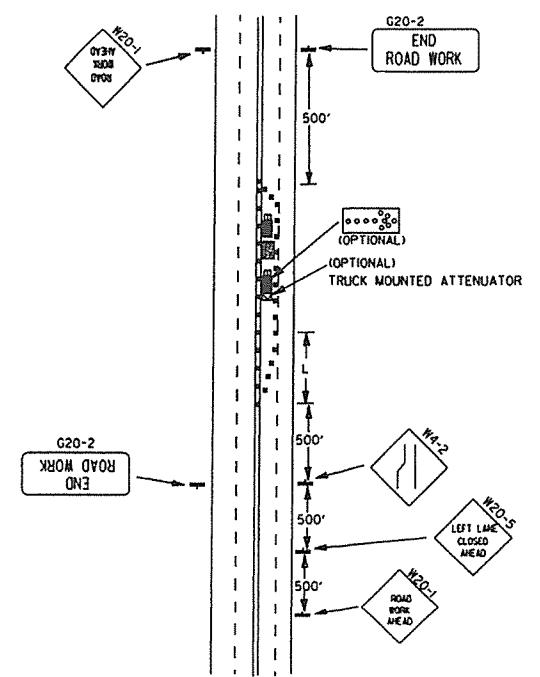
NOTES:
 1. REGULATORY TRAFFIC CONTROL DEVICES TO BE MODIFIED AS NEEDED FOR THE DURATION OF THE DETOUR.
 2. STREET NAMES MAY BE USED WHEN DESIRABLE FOR DIRECTING DETOURED TRAFFIC.

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

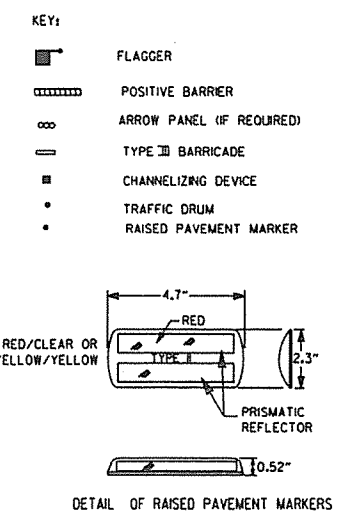


NOTES:
 1. FLOOD LIGHTS SHOULD BE PROVIDED TO MARK FLAGGER STATIONS AT NIGHT AS NEEDED.
 2. IF ENTIRE WORK AREA IS VISIBLE FROM ONE STATION, A SINGLE FLAGGER MAY BE USED.
 3. CHANNELIZING DEVICES ARE TO BE EXTENDED TO A POINT WHERE THEY ARE VISIBLE TO APPROACHING TRAFFIC.
 4. AUTOMATED FLAGGER ASSISTANCE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

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



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



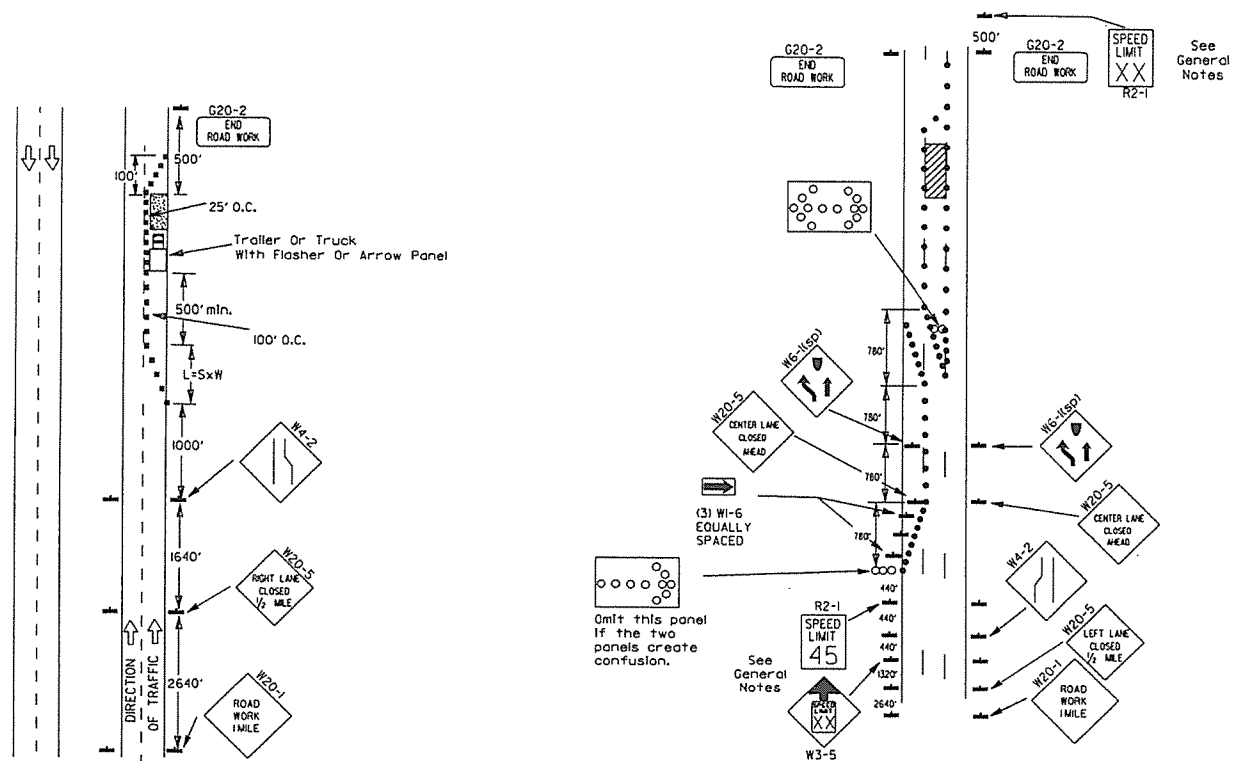
TYPICAL ADVANCE WARNING SIGN PLACEMENT

TAPER FORMULAE:
 L=SW 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.

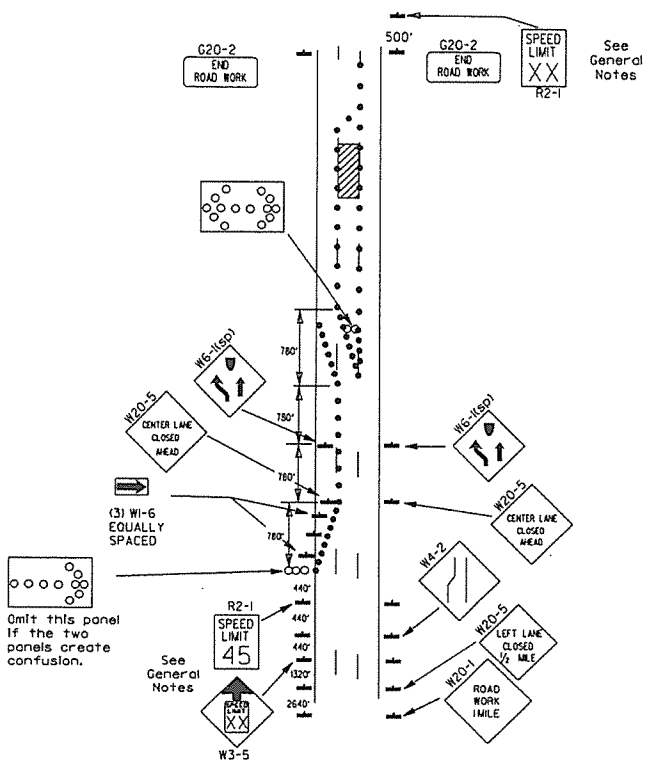
- GENERAL NOTES:
 1. ADVISORY SPEED POSTED ON W1-3 OR W1-4 CURVE WARNING SIGNS TO BE DETERMINED AT SITE. USE W1-4 WHEN SPEED IS GREATER THAN 30MPH AND W1-3 WHEN 30MPH OR LESS.
 2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-(155) SHALL BE OMITTED AND THE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

9-2-15	REVISED NOTE 2, ADDED NOTE B, REVISED DRAWING (A) & REPLACED R2-5A WITH R3-5	
9-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKERS	
3-8-10	ADDED (AFAD)	
1-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED GENERAL NOTE	
10-18-96	ADDED R55-1	
4-26-96	CORRECTED (a) BEHIND G20-2	
6-8-95	CORRECTED SIGN IDENT. ON W1-4A	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

Channelizing devices



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



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

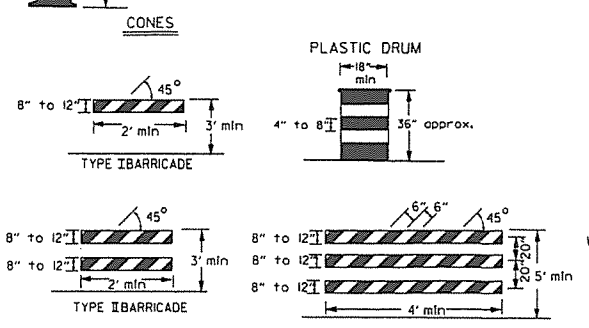
- KEY:
- ◻ Arrow Panel (if Required)
 - Channelizing Device
 - Traffic drum

GENERAL NOTES:

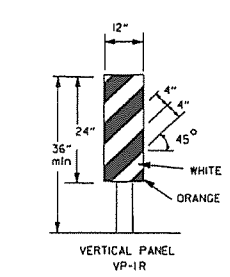
1. A speed limit reduction may be implemented ONLY when designated in the plan or when recommended by the Roadway Design Division.
2. When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(55) shall be omitted and the W3-5 shall be installed at that location. Additional R2-145mph speed limit signs shall be installed at a maximum of 1/2 mile intervals. At the end of the work area a R2-1(XX) shall be installed to match original speed limit.
3. When the existing speed limit is 65mph and the plans require a speed limit of 55mph, the R2-1(45) shall be omitted. Additional R2-155mph speed limit signs shall be installed at a maximum of 1/2 mile intervals. At the end of the work area a R2-1(XX) shall be installed to match original speed limit.
4. The maximum spacing between channelizing devices in a taper should be approximately equal in feet to the speed limit. Beyond the taper, maximum spacing shall be two times the speed limit or as directed by the Engineer.
5. Warning lights and/or flags may be mounted to signs or channelizing devices at night as needed.
6. Pavement markings no longer applicable which might create confusion in the minds of vehicle operators shall be removed or obliterated as soon as practicable.
7. The G20-1 sign will be required on jobs of over two miles in length. When the lane closure is not at the beginning of the project, the G20-1 sign shall be erected 125' in advance of the job limit. Additional W20-1(1/2 MILE) signs are not required in advance of lane closures that begin inside the project limits.
8. Flaggers shall use STOP/SLOW paddles for controlling traffic through work zones. Flags may be used only for emergency situations.
9. All plastic drums and cones shall meet the requirements of NCHRP-350 or Manual for Assessing Safety Hardware (MASH).
10. Trailer mounted devices such as arrow panels and portable changeable message signs shall be delineated by affixing conspicuity material in a continuous line on the face of the trailer. When placed on or adjacent to the shoulder and not behind a positive barrier, these devices shall be delineated by placing five (5) traffic drums, equally spaced along the traffic side of the device.

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

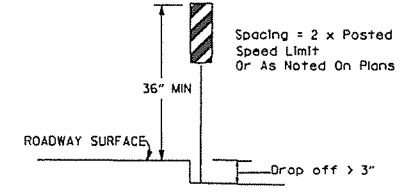
When cones are used on freeways and multi-lane highways, they shall be 28" min. During hours of darkness, 28" cones shall be used on all roadways, and shall be reflectorized in accordance with the M.U.T.C.D.



NOTE: For all road closures, the Type III barricades shall be of sufficient length to extend across entire roadway.



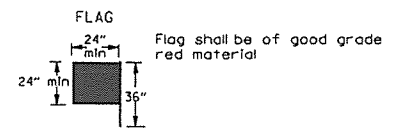
VERTICAL PANEL PLACEMENT



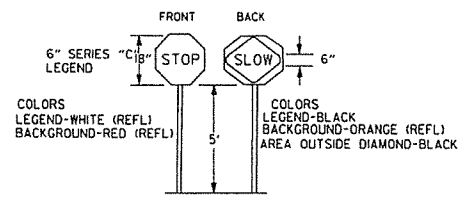
TRAFFIC CONTROL DEVICES FOR VERTICAL PAVEMENT DIFFERENTIALS

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-1 and vertical panels, drums or concrete barrier
Greater than 3"	Edge of shoulder	*Vertical panels, drums or concrete barrier

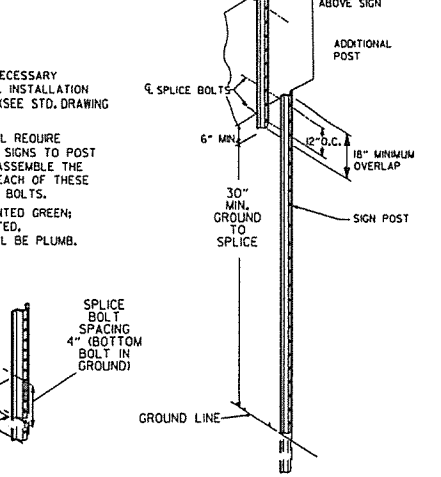
* When shown on the plans concrete barrier will be used. When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.



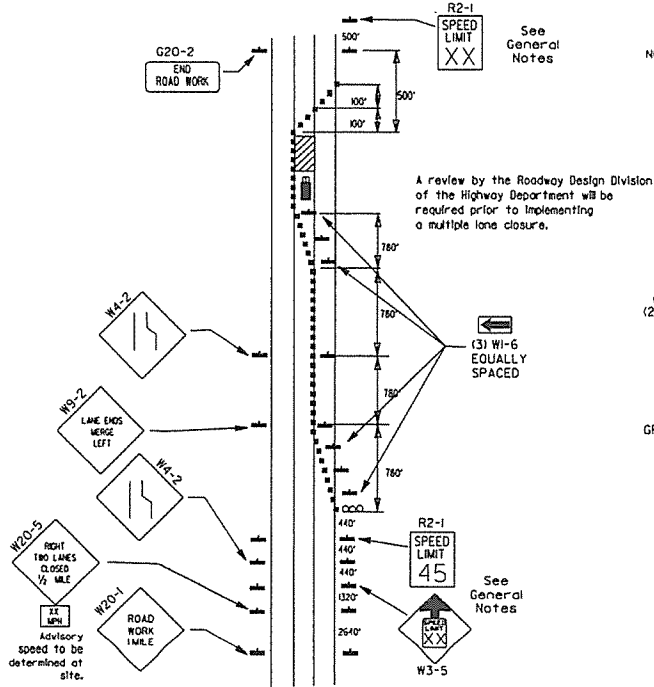
STOP SLOW PADDLE



DETAIL OF SPLICES



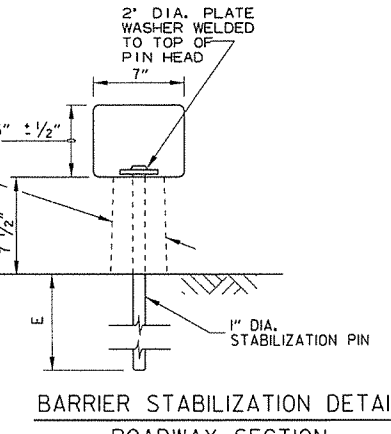
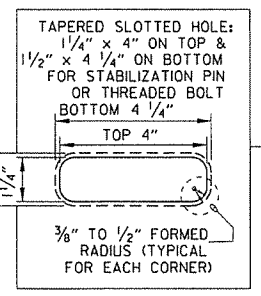
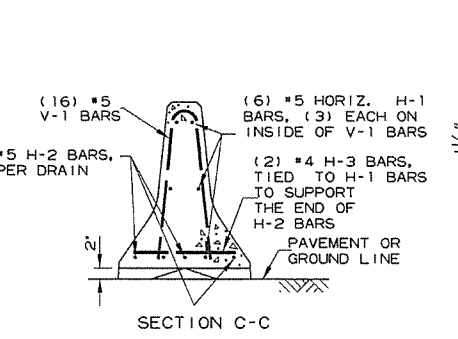
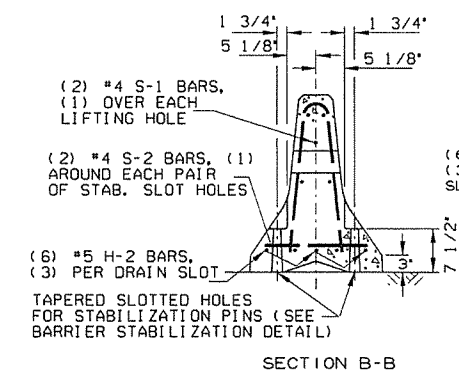
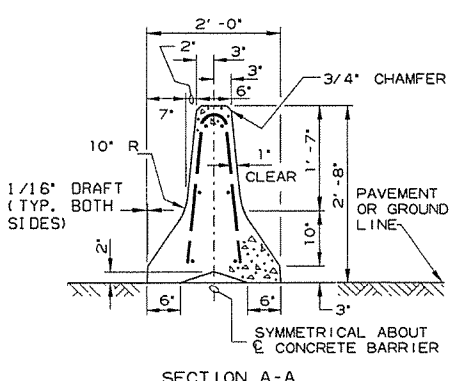
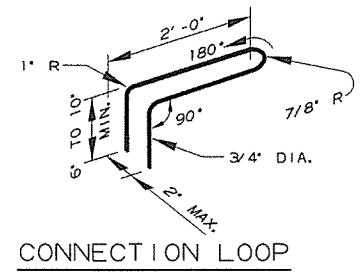
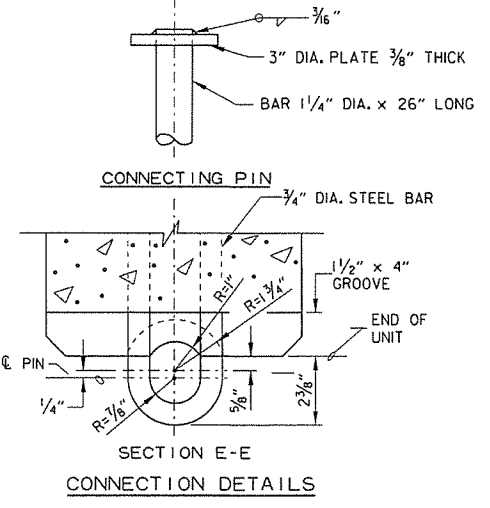
NOTES: USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-2). NORMAL INSTALLATIONS WILL REQUIRE 1/4" DIA. BOLTS TO MOUNT SIGNS TO POST AND 5/16" DIA. BOLTS TO ASSEMBLE THE VARIOUS POST SUPPORTS. EACH OF THESE BOLTS SHALL BE CARRIAGE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



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

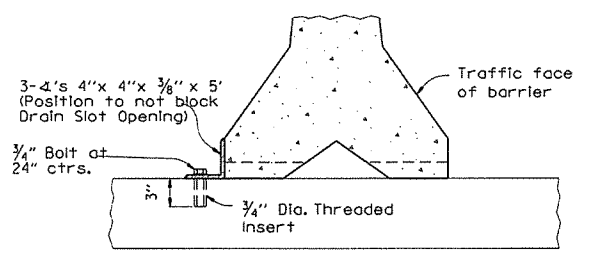
DATE	REVISION	FILMED
9-2-15	REVISED NOTE 2 & REPLACED R2-5A WITH W3-5	
10-15-09	ADDED REFERENCE TO MASH	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED NOTE	
10-1-98	ADDED NOTE	
4-03-97	ADDED (SPI) TO W6-16 REVISED TRAFFIC CONTROL DEVICES NOTE	
10-18-96	ADDED R55-1	
10-12-95	MOVED UPPER SPLICE	
6-8-95	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	

REINFORCING BAR TABLE PER BARRIER UNIT			
MARK	LOCATION	BAR SIZE (NO. BARS)	SKETCH
H-1	HORIZONTAL IN BARRIER TIED INSIDE V-1 BARS	#5 (6)	19'-3"
H-2	CENTERED ABOVE DRAIN SLOTS LONG. & TRANSVERSELY	#5 (6)	6'-6"
H-3	TIED ABOVE H-1 BARS TO SUPPORT H-2, TIED TO V-1	#4 (2)	1'-6"
S-1	OVER LIFT HOLES	#4 (2)	
S-2	HORIZ. AROUND SLOTS BETWEEN V-1'S & DRAIN SLOTS	#4 (2)	
V-1	VERTICAL IN BARRIER (3) EACH END & (2) AT EACH DRAIN SLOTS	#5 (16)	

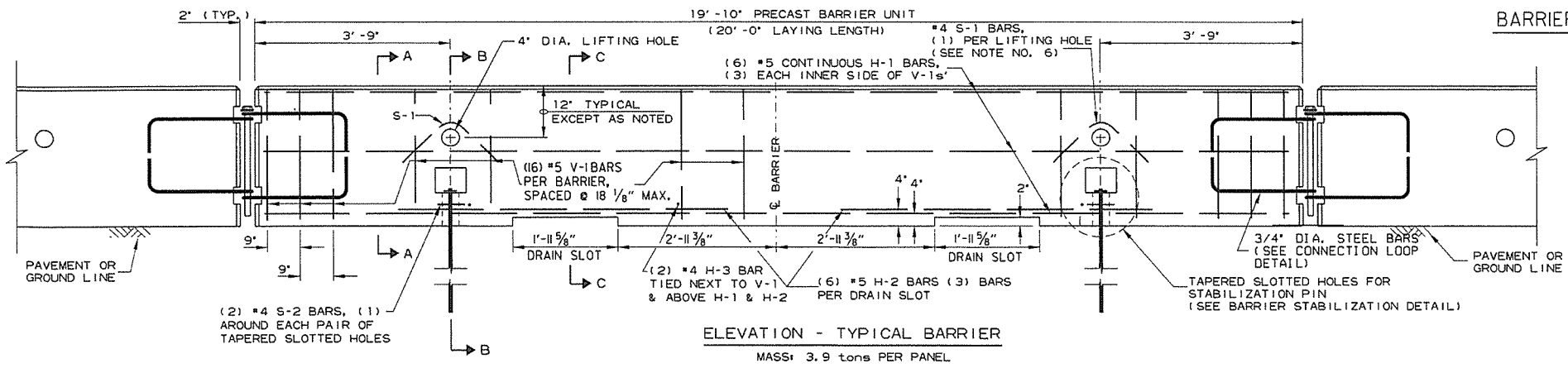
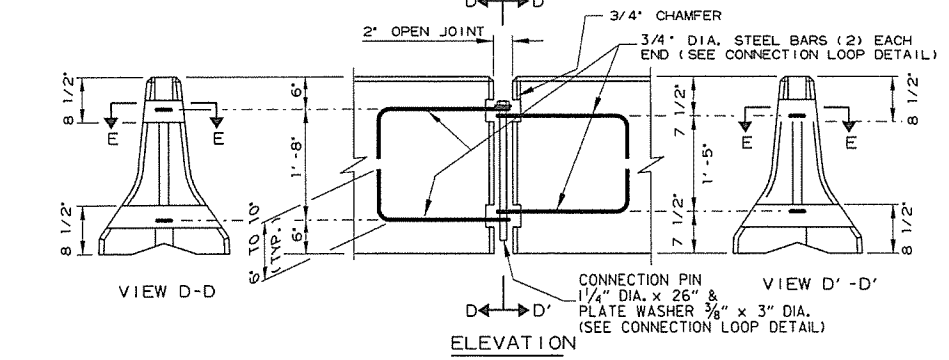
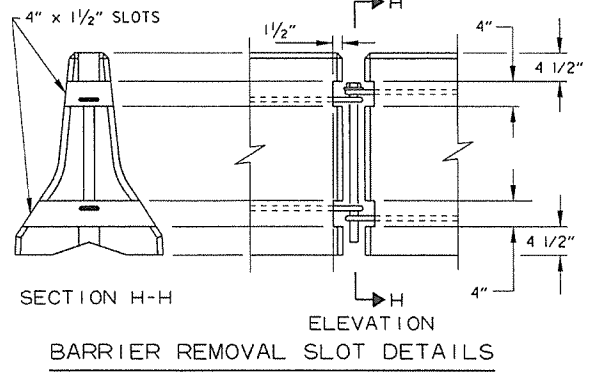


ROADWAY SECTION

(E) 4" - Concrete Pavement
8" - Asphalt Pavement
12" - Shoulder Areas



NOTE: 3/4" Threaded Inserts shall be cast in place for all new bridge decks and drilled and grouted for existing bridge decks. Inserts shall have a minimum ultimate load capacity of 8000 lbs. in tension. After removal of barrier, bolts, and angles, the inserts shall be filled with approved non-shrink epoxy.

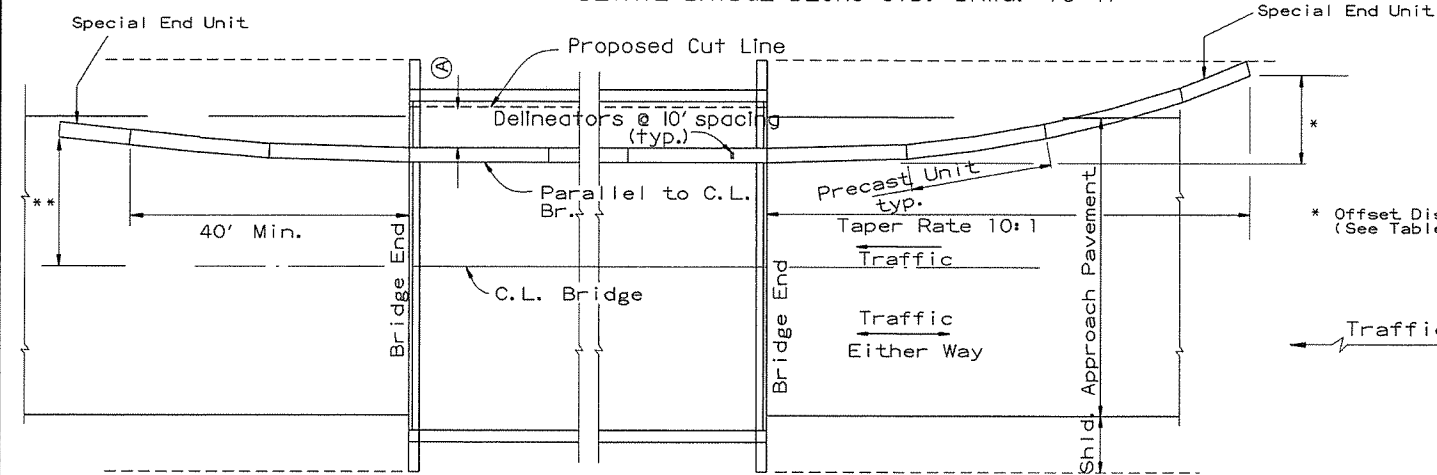


- General Notes**
- The contractor shall furnish the Precast Concrete Barrier Units and shall be responsible for the manufacture, shipment, storage, placement and removal. At the completion of the project, the precast units will remain the property of the contractor.
 - Materials shall meet the following minimum requirements:
Concrete: 2500 psi compressive strength at 28 days.
Reinforcing Steel: AASHTO M 31 or M 53, Grade 60
Structural Steel: AASHTO-M270 Grade 36 shall be used for the Connection Pin, Connection Loops, and Stabilization Pins. A One Piece Pin with a 3" rounded top may be used in place of the detailed Connection Pin.
Delineators: Delineators shall be mounted at 10' spacing on top of precast barrier.
 - In applications where barrier walls within 6 feet of a traffic lane, additional delineators shall be placed on the barrier at 10' spacing approximately one (1) foot from the top of the barrier. Delineators shall be on the AHTD Qualified Products List for Construction Concrete Barrier Markers. Delineator color shall be in accordance with the Manual on Uniform Traffic Control Devices. Payment for delineators shall be considered included in the price bid per Lin. Ft. for "Furnishing and Installing Precast Concrete Barrier". The contractor shall certify to the Engineer that the material and the design used in the precast barrier units meets the requirements as shown on this standard drawing.
 - Other Precast Concrete Barriers that have been crash tested and approved by the Federal Highway Administration to meet the requirements of NCHRP-350 test level 3 or Manual For Assessing Safety Hardware (MASH) will be accepted in lieu of the barrier shown. Drain slots shall be provided as needed or as directed by the Engineer. The Contractor shall furnish a certification of NCHRP Report 350 or Manual For Assessing Safety Hardware (MASH) compliance for any other types of precast barrier to be used. The certification shall state that the precast concrete barrier meets the requirements of NCHRP Report 350 or Manual For Assessing Safety Hardware (MASH) and include a copy of the Federal Highway Administration's (FHWA) approval letter with all attachments. Precast concrete barrier units shall be fabricated and installed in accordance with crash testing and documentation provided in the FHWA approval letter. Mixing of shapes will not be allowed in a continuous line of units.
 - Dowel holes in pavement or bridge slabs that are to remain in place shall be filled. Holes in concrete pavement and bridge slabs shall be filled with an approved non-shrink epoxy grout. Holes in asphalt pavement shall be filled with an approved asphalt joint filler. Payment for drilling and filling holes to be included in the price for various barrier items.
 - Attach Units To Roadway Surface with Stabilization Pins and to Deck Slabs using bolts when required.
 - A 4" White PVC Sleeve may be used to form the Lifting Hole and if used the Sleeve is to be left in place.

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

ARKANSAS STATE HIGHWAY COMMISSION
STANDARD TRAFFIC CONTROLS
FOR HIGHWAY CONSTRUCTION -
TEMPORARY PRECAST BARRIER
STANDARD DRAWING TC-4

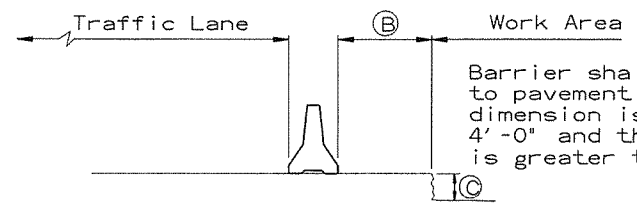
(A) 4 feet or greater preferred. If less than 4 feet, Precast Units shall be connected to slab (SEE BARRIER STABILIZATION DETAIL-BRIDGE DECKS STD. DRWG. TC-4)



BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET

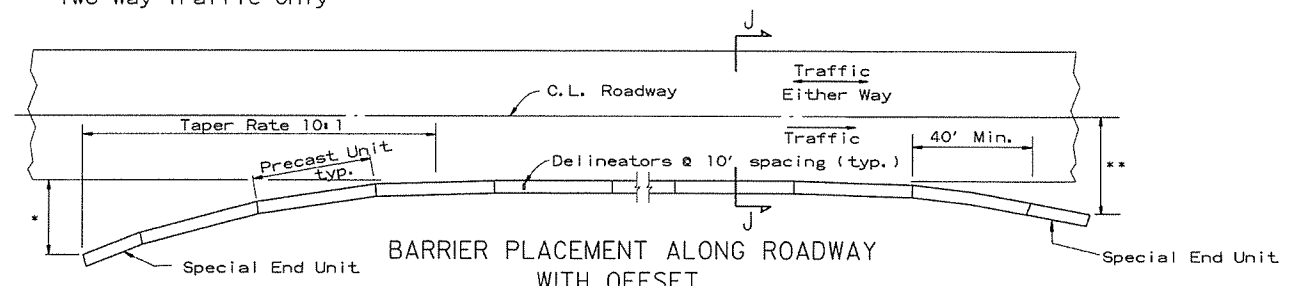
No Scale

** Offset Distance for Two Way Traffic Only



SECTION J-J

No Scale



BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET

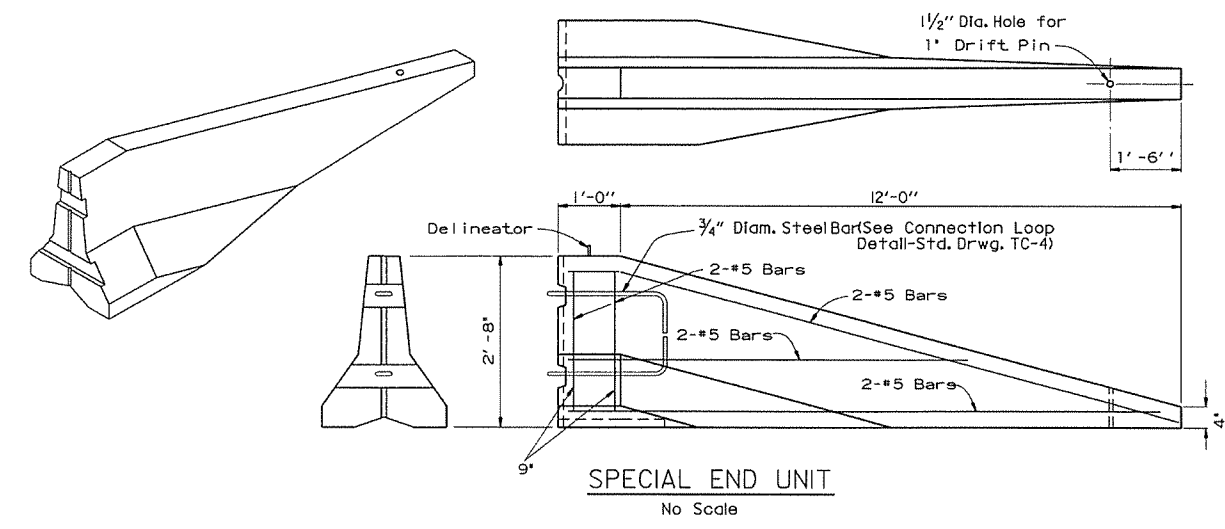
No Scale

* Offset Distance (See Table)

** Offset Distance For Two Way Traffic Only

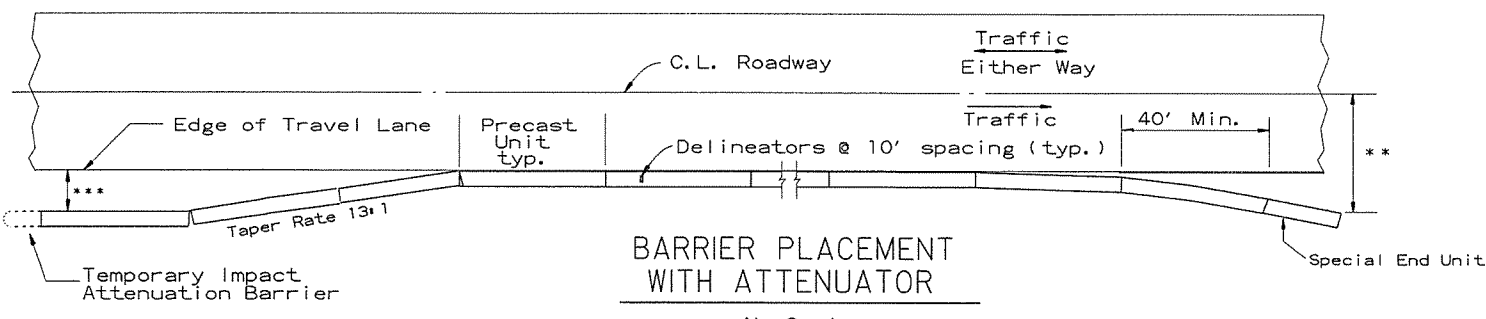
Speed (MPH)	Offset Distance (FT.)
≤ 45	12
> 45	18

If offset distance is not attainable, then see 'Barrier Placement With Attenuator' Detail shown below.



General Notes

When shown on the Plans, the ends of the Temporary Precast Concrete Barrier shall be protected with an NCHRP-350 or Manual For Assessing Safety Hardware (MASH) approved Crash Cushion. Payment for Crash Cushions shall be made under the item of 'Temporary Impact Attenuation Barrier.'



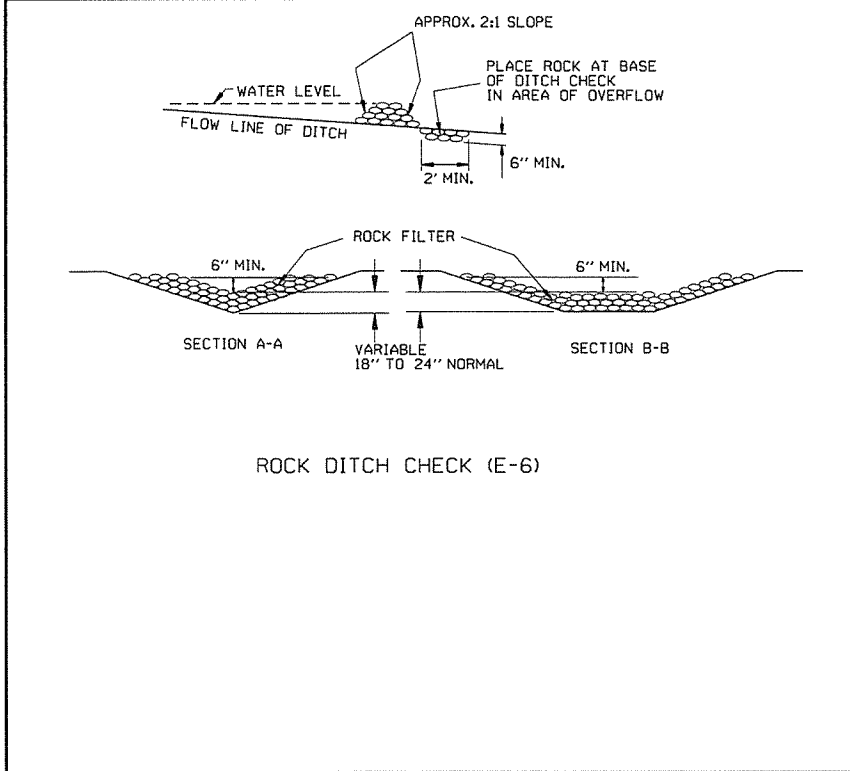
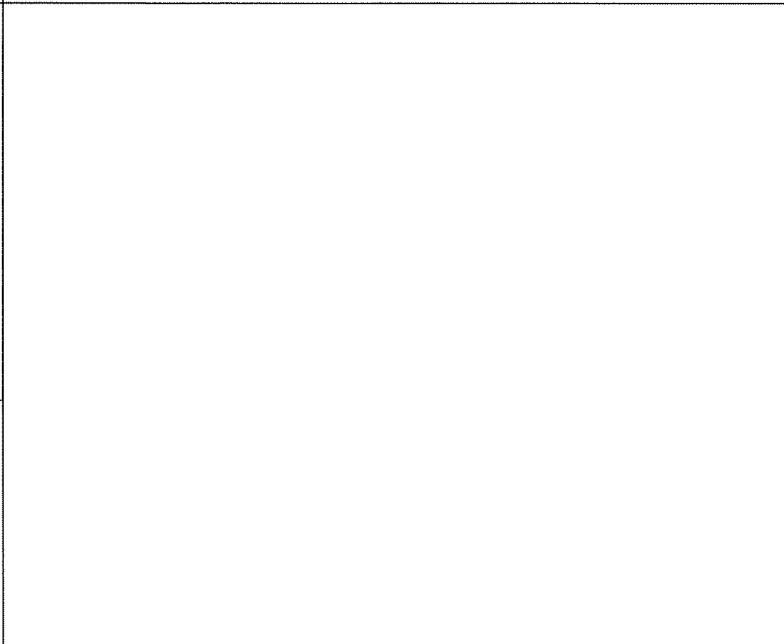
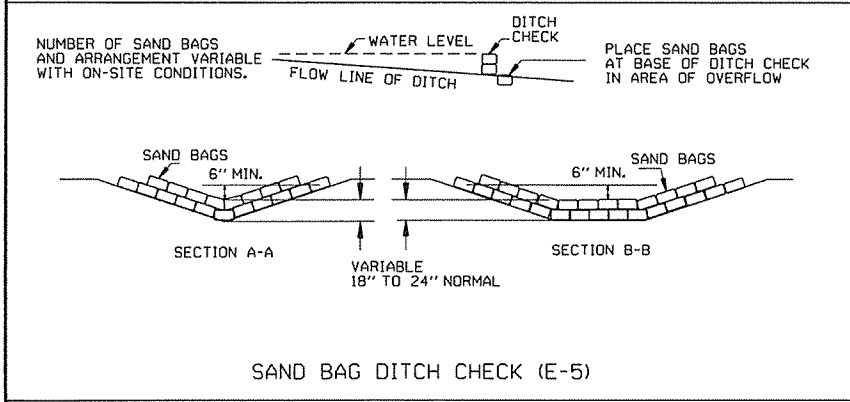
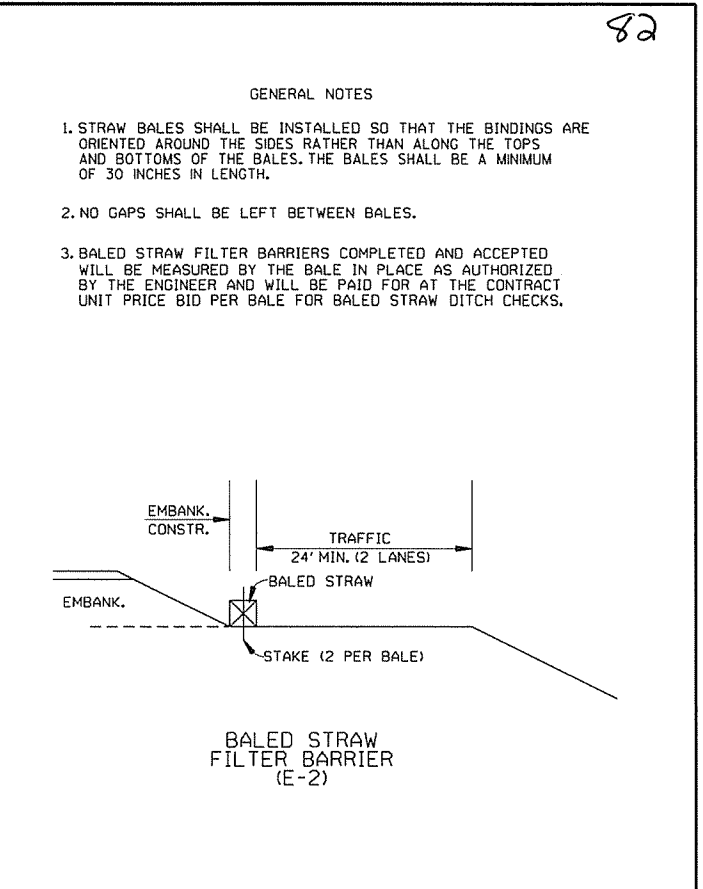
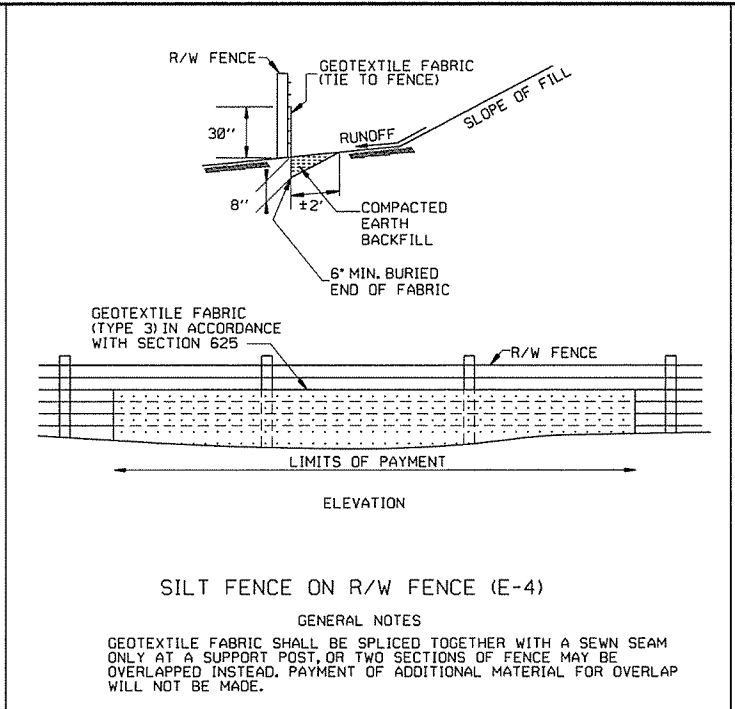
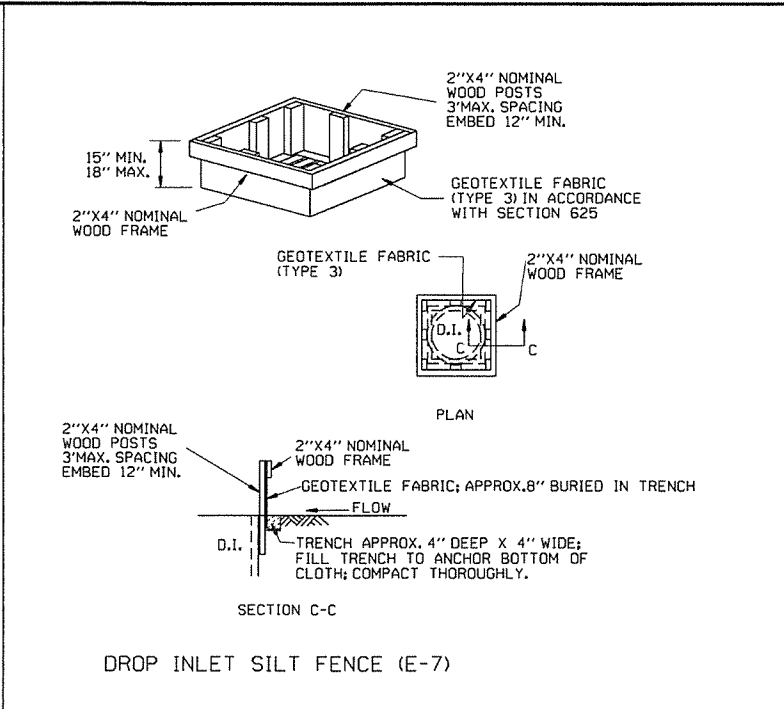
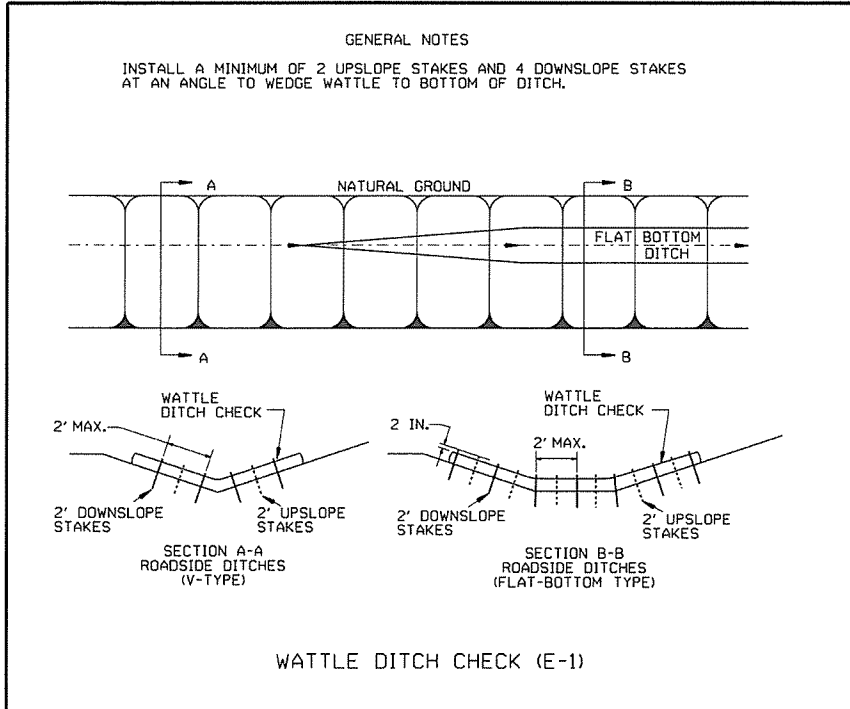
BARRIER PLACEMENT WITH ATTENUATOR

No Scale

** Offset Distance For Two Way Traffic Only

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

			ARKANSAS STATE HIGHWAY COMMISSION
			STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER
			STANDARD DRAWING TC-5
10-15-09	ADDED REFERENCE TO MASH		
5-25-06	REVISED BARRIER PLACEMENT		
8-22-02	ISSUED NEW DRAWING		
DATE	REVISION	FILMED	

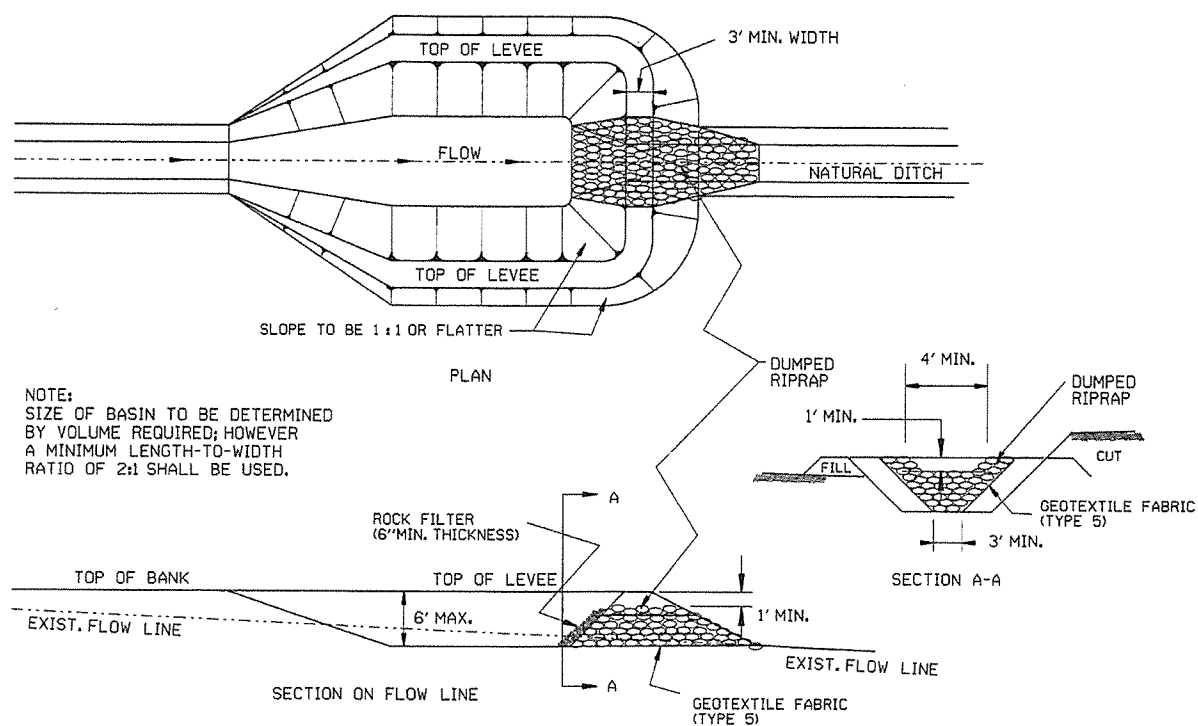


12-15-11	DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK	
11-18-98	ADDED NOTES	
7-02-98	ADDED BALED STRAW FILTER BARRIER (E-2)	
7-20-95	REVISED SILT FENCE E-4 AND E-11	7-20-95
7-15-94	REV. E-4 & E-11 MIN. 13\"/>	
6-2-94	REVISED E-1,4,7 & 11; DELETED E-2 & 3	6-2-94
4-1-93	REDRAWN	
10-1-92	REDRAWN	
8-2-76	ISSUED R.D.M.	298-7-28-76
DATE	REVISION	FILMED

ARKANSAS STATE HIGHWAY COMMISSION

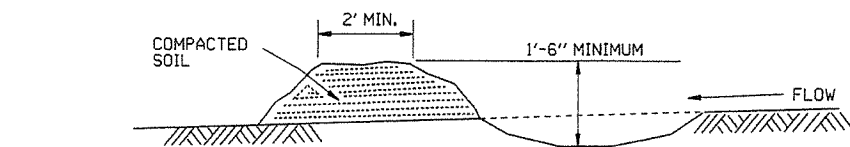
TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-1

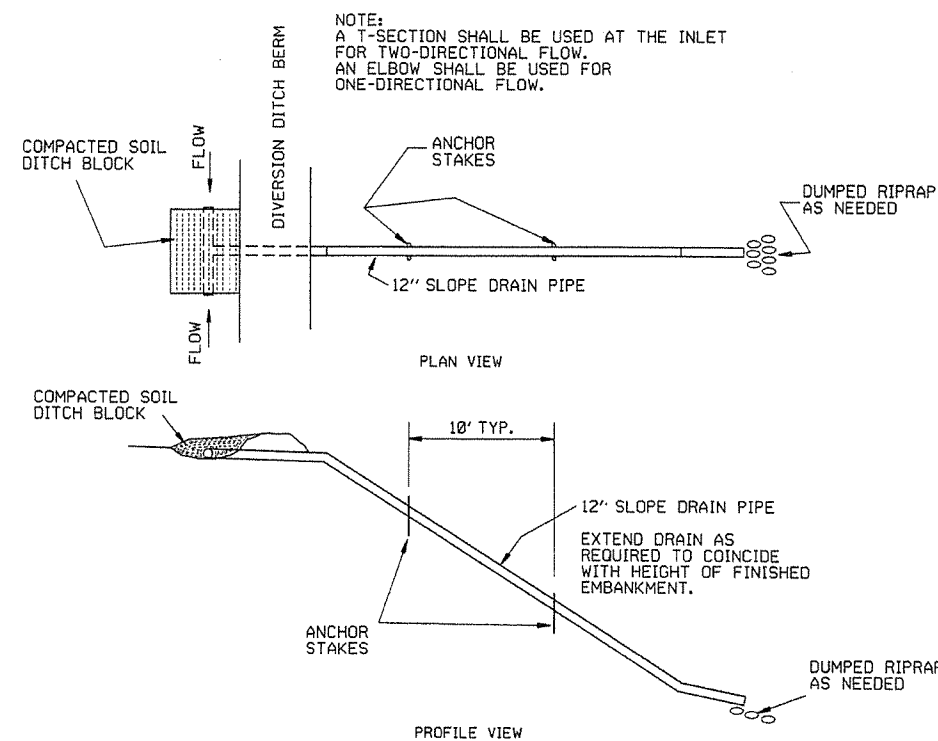


SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)

NOTE:
SIZE OF BASIN TO BE DETERMINED
BY VOLUME REQUIRED; HOWEVER
A MINIMUM LENGTH-TO-WIDTH
RATIO OF 2:1 SHALL BE USED.

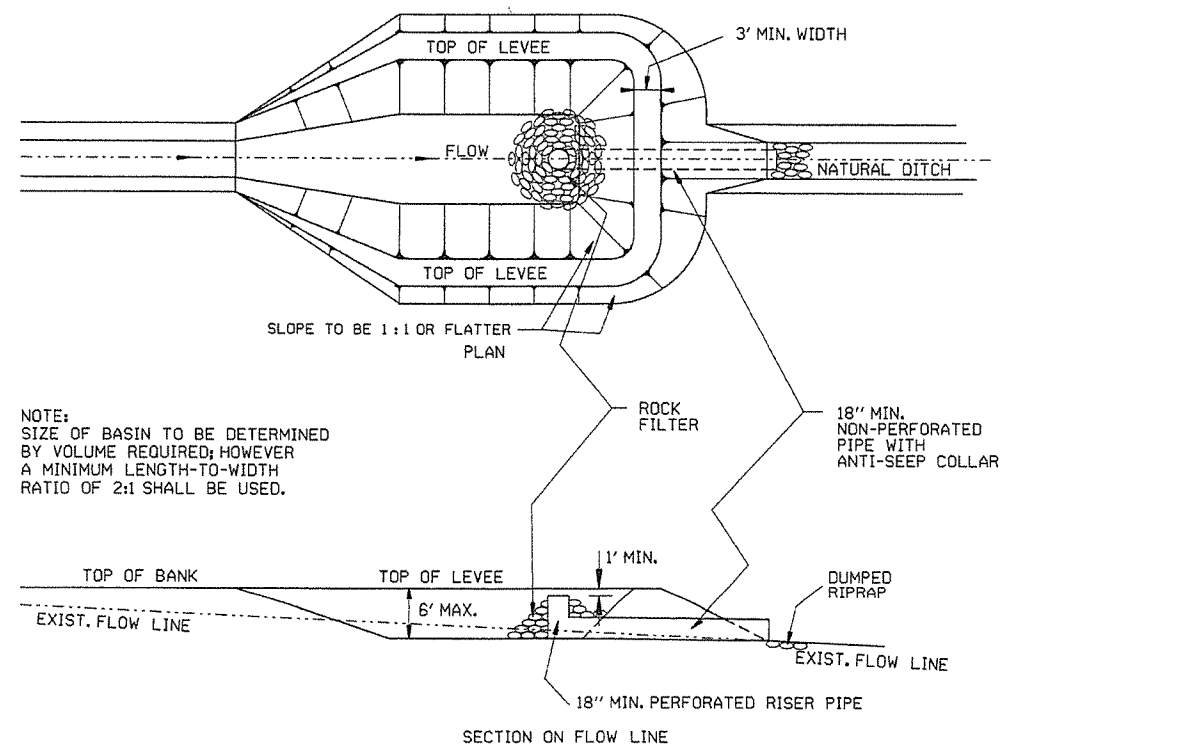


DIVERSION DITCH (E-8)



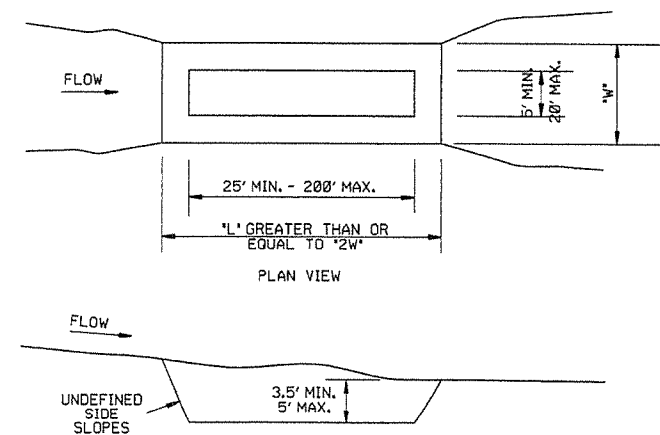
SLOPE DRAIN (E-12)

NOTE:
A T-SECTION SHALL BE USED AT THE INLET
FOR TWO-DIRECTIONAL FLOW.
AN ELBOW SHALL BE USED FOR
ONE-DIRECTIONAL FLOW.



SEDIMENT BASIN WITH PIPE OUTLET (E-10)

NOTE:
SIZE OF BASIN TO BE DETERMINED
BY VOLUME REQUIRED; HOWEVER
A MINIMUM LENGTH-TO-WIDTH
RATIO OF 2:1 SHALL BE USED.



SEDIMENT BASIN (E-14)

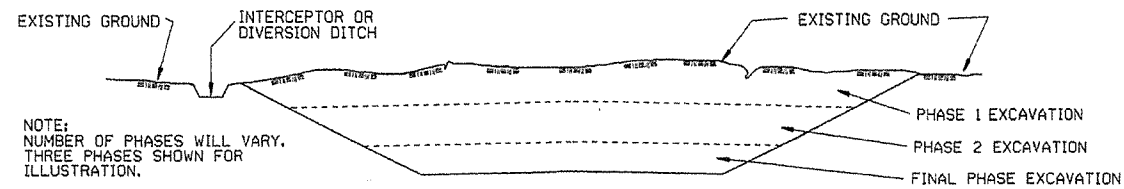
		ARKANSAS STATE HIGHWAY COMMISSION	
		TEMPORARY EROSION CONTROL DEVICES	
6-2-94	Revised E-8 & E-12; Added E-14 & Deleted E-13		
4-1-93	ISSUED		
DATE	REVISION		FILMED

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



NOTE:
NUMBER OF PHASES WILL VARY.
THREE PHASES SHOWN FOR
ILLUSTRATION.

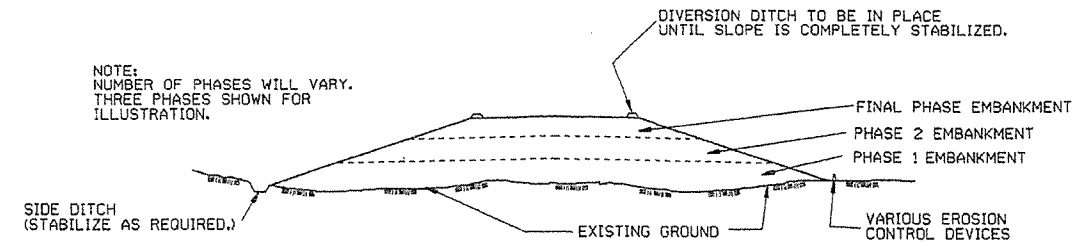
GENERAL NOTE

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



NOTE:
NUMBER OF PHASES WILL VARY.
THREE PHASES SHOWN FOR
ILLUSTRATION.

GENERAL NOTE

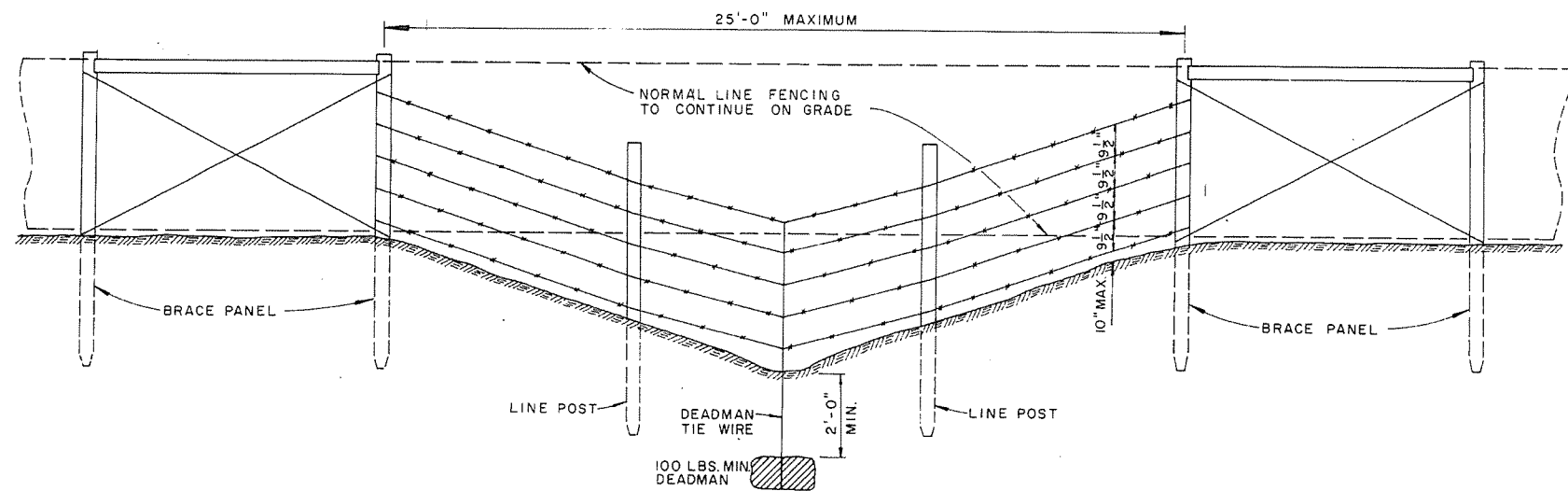
ALL EMBANKMENT SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE CONSTRUCTED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 25 FEET, MEASURED VERTICALLY.

CONSTRUCTION SEQUENCE

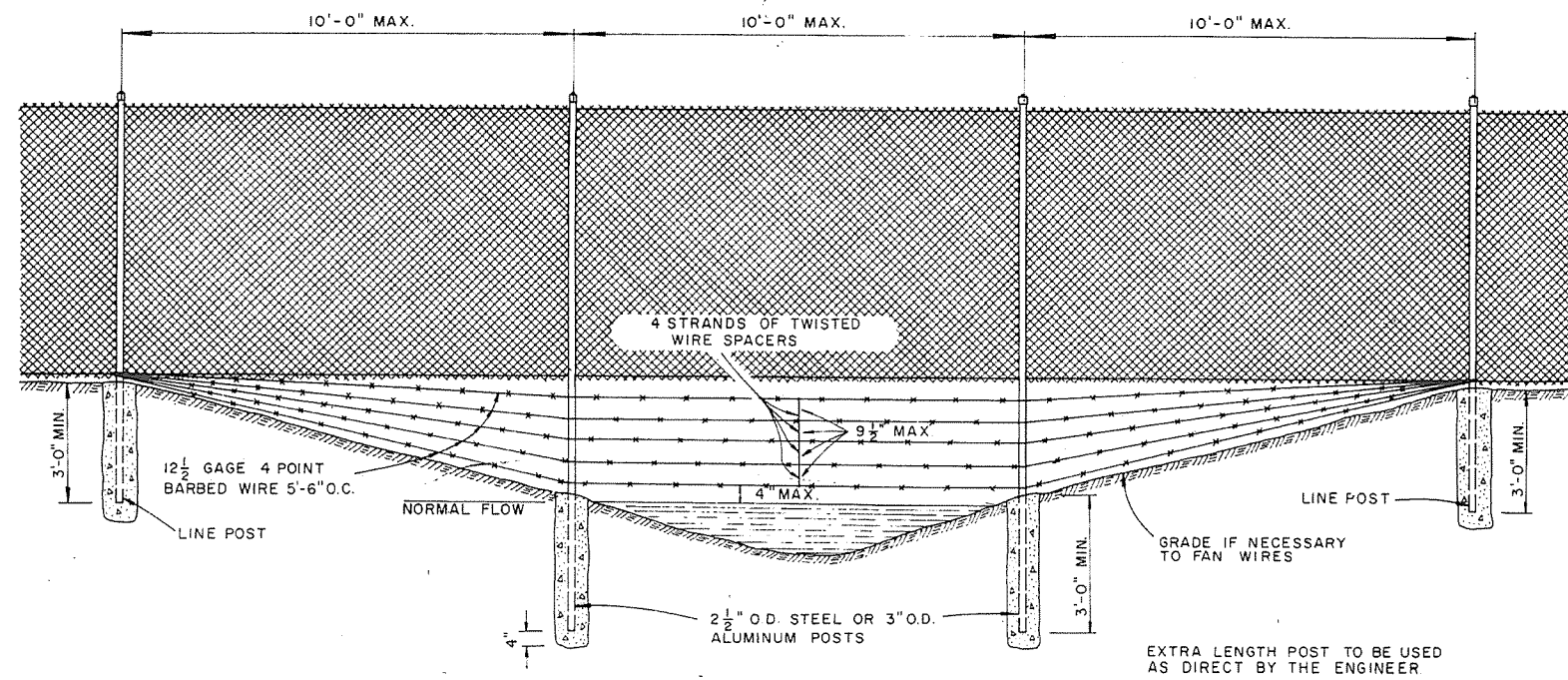
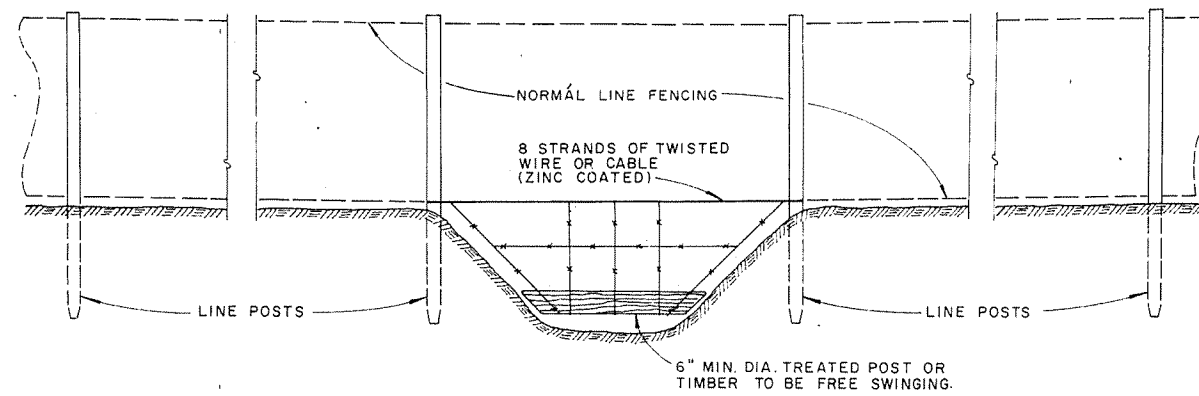
1. CONSTRUCT DIVERSION DITCHES, DITCH CHECKS, SEDIMENT BASINS, SILT FENCES, OR OTHER EROSION CONTROL DEVICES AS SPECIFIED.
2. PLACE PHASE 1 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD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

84

ARKANSAS STATE HIGHWAY COMMISSION		
TEMPORARY EROSION CONTROL DEVICES		
STANDARD DRAWING TEC-3		
11-03-94	CORRECTED SPELLING	
6-2-94	Drawn & Issued	6-2-94
DATE	REVISION	FILMED

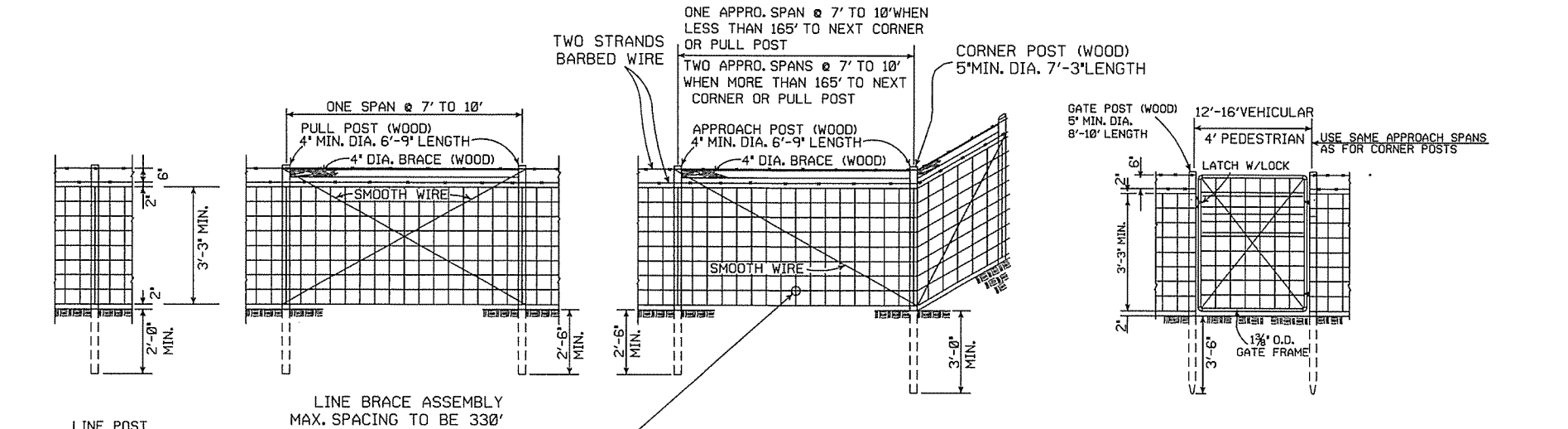


GENERAL NOTES:
 THESE INSTALLATIONS TO BE USED WHERE NORMAL FENCING INSTALLATION WOULD CAUSE THE COLLECTING OF DRIFT IN THE CHANNEL OR THE DEPRESSION WILL NOT PERMIT NORMAL INSTALLATION. INSTALLATIONS WILL BE MADE ONLY WHERE DIRECTED BY THE ENGINEER.
 WHEN A FENCE LINE APPROACHES A DITCH, GULLY OR DEPRESSION, 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		
4-20-79	REVISED TOP RAIL & TENSION WIRE	696-4-20-79
10-2-72	REVISED & REDRAWN	529-10-2-72
DATE	REVISION	DATE FILMED

WF-2



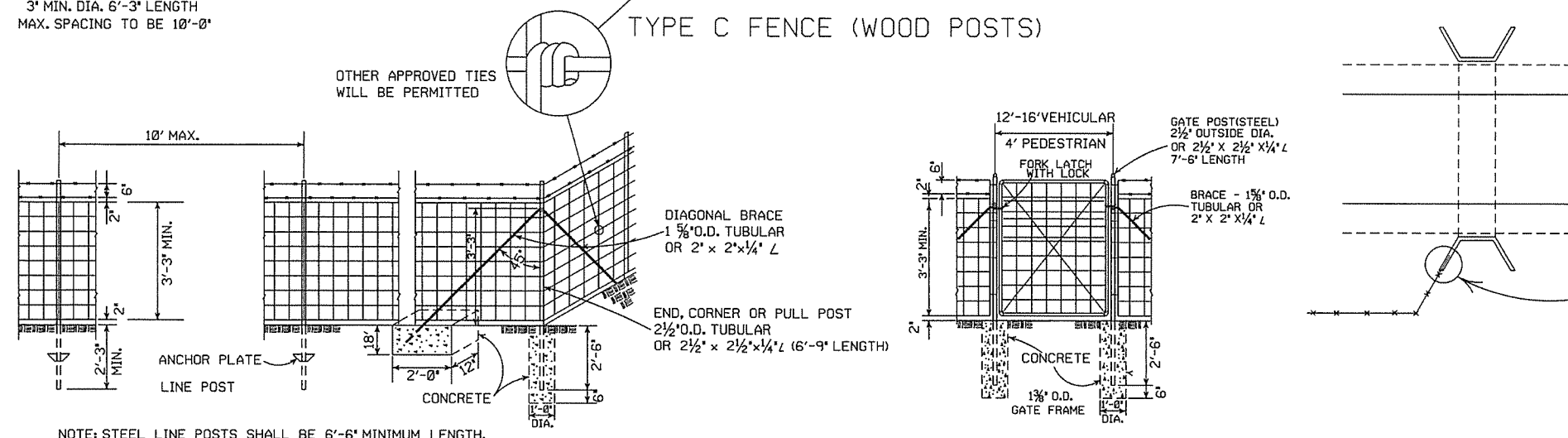
GENERAL NOTES:

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.

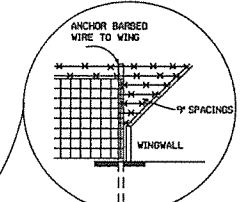
THE CONTRACTOR SHALL FURNISH AT LEAST 25% OF TIMBER LINE POSTS OF 7 FOOT LENGTHS IN ORDER TO PROVIDE SUFFICIENT SET IN SOFT GROUND OR SMALL DEPRESSIONS.

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 3/8" x 1 1/2" LAG BOLT & SHIELD OR AS APPROVED BY THE ENGINEER.



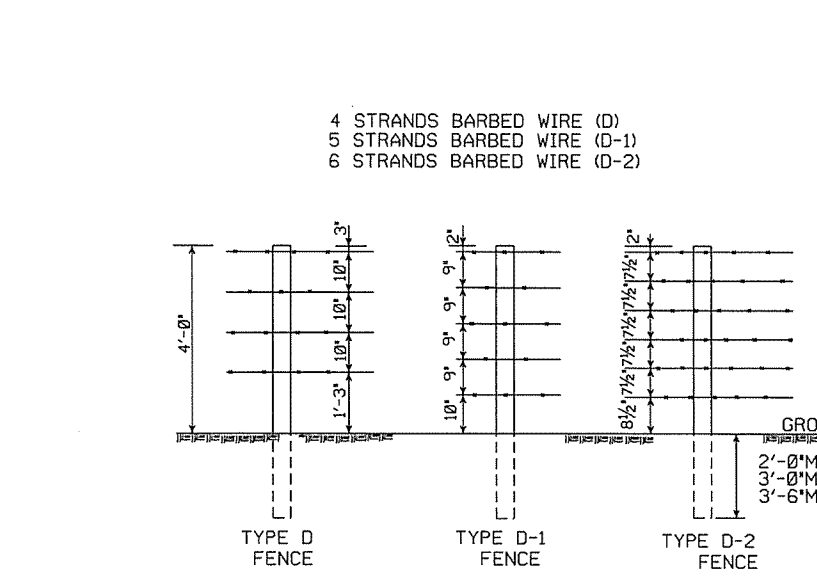
DETAIL OF FENCE CONSTRUCTION AT LARGE CULVERTS (5' IN HEIGHT AND OVER)

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.

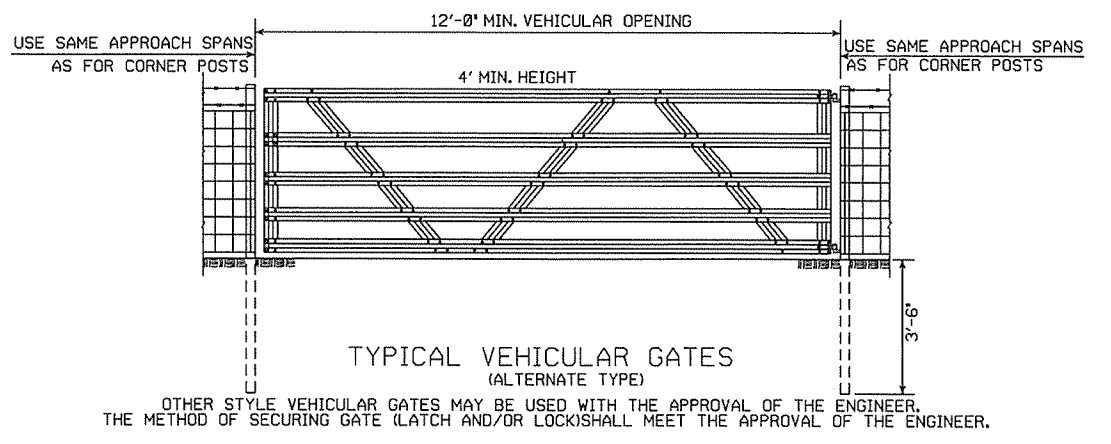
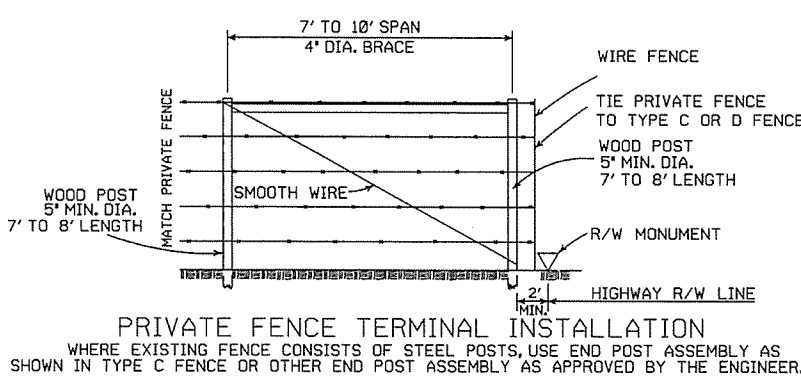
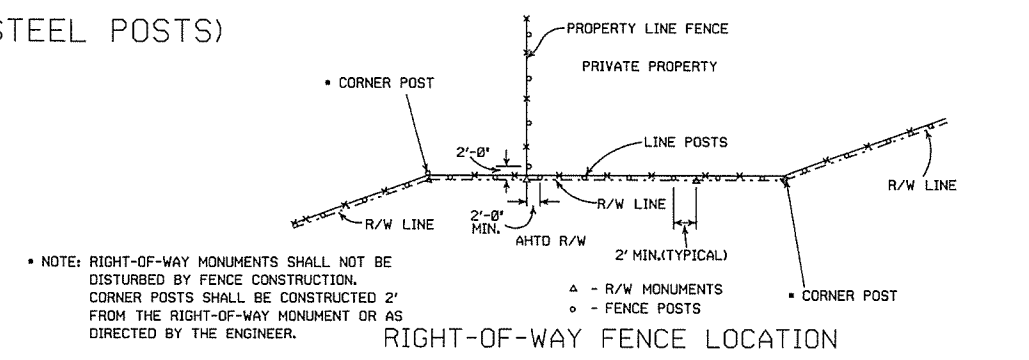
SPLICE FOR WOVEN WIRE BETWEEN PULL POST SHALL BE BY THE 'WESTERN UNION METHOD' AS DESCRIBED AS FOLLOWS: THE VERTICAL WIRES FOR EACH END OF THE FENCE FABRIC SHALL BE PLACED SIDE BY SIDE AND THE PROJECTING HORIZONTAL WIRES SHALL BE WRAPPED A MINIMUM OF 4 TIMES AROUND THE HORIZONTAL WIRES OF THE FIRST WEB.

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

TYPE C FENCE (STEEL POSTS)



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



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

FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			58	
JOB No.					

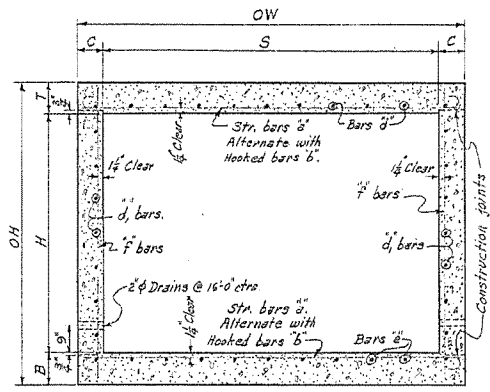
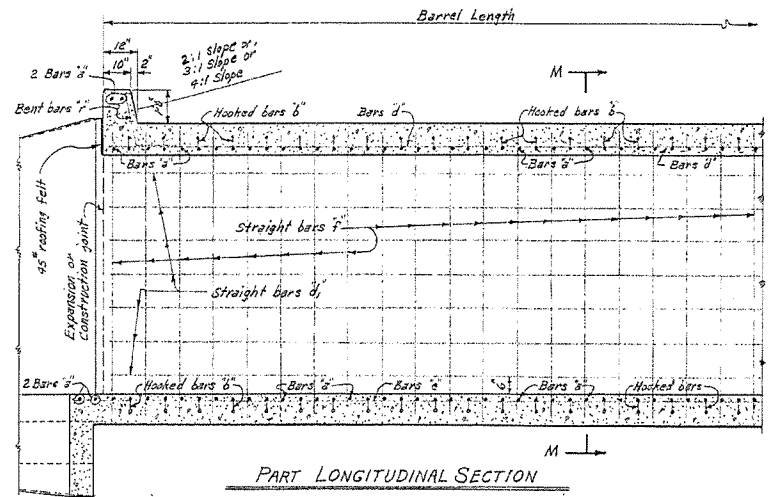
BAR LIST FOR BARREL SECTION 60'-0" IN LENGTH

DEPTH OF COVER	CLEAR SPAN	CLEAR HEIGHT	BAR LIST											
			6" bars				8" bars				10" bars			
			STRAIGHT				BENT - See Diagram below				STRAIGHT			
			In Top and Bottom Slabs of Barrel. 2 Add'l in Abon and Headwall - each.				In Top and Bottom Slabs of Barrel. Alternate with "a" bars.				Longitudinal in Top Slab of Barrel			
D	S	H	Span	Span	Span	Span	Span	Span	Span	Span	Span	Span	Span	
0'-0" TO 5'-0" MAXIMUM	1 @ 10'	2'	120	120	4'-9"	110	110	5'-0"	4'-8"	6	6	120	120	2'-11"
		3'	120	120	4'-9"	110	110	5'-0"	4'-8"	6	6	120	120	2'-11"
		4'	120	120	4'-9"	110	110	5'-0"	4'-8"	6	6	120	120	2'-11"
	1 @ 15'	2'	120	120	5'-9"	110	110	6'-0"	5'-9"	7	7	120	120	3'-11"
		3'	120	120	5'-9"	110	110	6'-0"	5'-9"	7	7	120	120	3'-11"
		4'	120	120	5'-9"	110	110	6'-0"	5'-9"	7	7	120	120	3'-11"
	1 @ 20'	2'	120	120	6'-9"	110	110	7'-0"	6'-8"	8	8	120	120	4'-11"
		3'	120	120	6'-9"	110	110	7'-0"	6'-8"	8	8	120	120	4'-11"
		4'	120	120	6'-9"	110	110	7'-0"	6'-8"	8	8	120	120	4'-11"
	1 @ 30'	2'	120	120	7'-9"	110	110	8'-0"	7'-8"	9	9	120	120	5'-11"
		3'	120	120	7'-9"	110	110	8'-0"	7'-8"	9	9	120	120	5'-11"
		4'	120	120	7'-9"	110	110	8'-0"	7'-8"	9	9	120	120	5'-11"

DIMENSIONS QUANTITIES

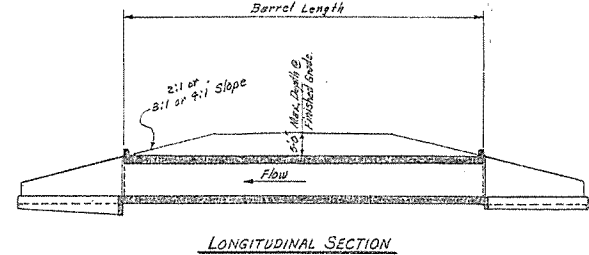
MAX. DESIGN DEPTH OF COVER	BARREL DIMENSIONS										UNIT QUANTITIES			
	D	S	H	A	OW	T	C	B	OH	CLASS S CONC. PER LIN. FT. OF BARREL	REINFORCING STEEL			
											PER LIN. FT. OF BARREL	PER LAP	THO. HEADWALLS & APPROXS.	
5'-0"	1 @ 10'	2'	120	120	4'-9"	6'	6'	3'-11"	0.282	41.99	17.95	66.35		
		3'	120	120	4'-9"	6'	6'	3'-11"	0.319	44.16	19.62	66.35		
		4'	120	120	4'-9"	6'	6'	3'-11"	0.356	46.33	21.29	66.35		
	1 @ 15'	2'	120	120	5'-9"	7'	7'	4'-11"	0.394	49.50	22.94	66.35		
		3'	120	120	5'-9"	7'	7'	4'-11"	0.431	52.67	24.59	66.35		
		4'	120	120	5'-9"	7'	7'	4'-11"	0.468	55.84	26.24	66.35		
	1 @ 20'	2'	120	120	6'-9"	8'	8'	5'-11"	0.506	59.01	27.89	66.35		
		3'	120	120	6'-9"	8'	8'	5'-11"	0.543	62.18	29.54	66.35		
		4'	120	120	6'-9"	8'	8'	5'-11"	0.580	65.35	31.19	66.35		

W-X002-1, W-X003-1 or W-X004-1 or W-X005-1 or W-X006-1 or W-X007-1



PART LONGITUDINAL SECTION

TYPICAL SECTION M-M



LONGITUDINAL SECTION

GENERAL NOTES:-

- CONCRETE:- All concrete to be Class S, and shall be poured in the dry.
- All exposed corners to have 3/8" chamfers.
- REINFORCING STEEL:- Reinforcing to be deformed bars of intermediate or hard grade.
- BAR LAP:- In computing the quantities of steel from the tables add one lap for each additional 33'-0" length of barrel over 32'-0". Lap longitudinal bars 30 diameters.
- CONSTRUCTION JOINTS:- Construction joints between wingwalls, side walls and slabs shall be only where shown on plans.
- SPECIFICATIONS:- Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.

DESIGN LIVE LOAD

H20-S16 LOADING A.A.S.H.O. 1961 AND SPECIAL MILITARY LOADING

Two 25,000 lb. Axles @ 9'-0" c/c

UNIT STRESSES:-

Class S Concrete (n=10) 1800 psi Reinforcing Steel 20,000 psi

CLASS S CONCRETE

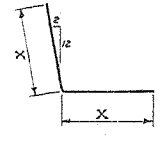
NOTE:- This drawing to be used in conjunction with Standard Drawing Nos. W-X003-1 or W-X003-2 and W-X004-1 or W-X004-2. Also Drawing Nos. W-X002-1 or W-X002-2.

ARKANSAS STATE HIGHWAY COMMISSION
 DETAILS OF STANDARD BARREL SECTIONS
 FOR
 REINFORCED CONCRETE BOX CULVERTS
 4, 5, 6, 7, 8, 9, 10, 11, 12' SPANS 3:1 OR 4:1 SLOPES
 SINGLES UNDER 5'-0" COVER
 STANDARD DRAWING NO. R-100X-0

BAR SIZE	PIN DIAM.	K	ADD FOR 2 HOOKS	BENDING DIAGRAM Bars b.
#6	3"	5"	1'-2"	
#7	3 1/2"	5 3/4"	1'-4"	

NOTE:- Dimensions are to centers of bars.

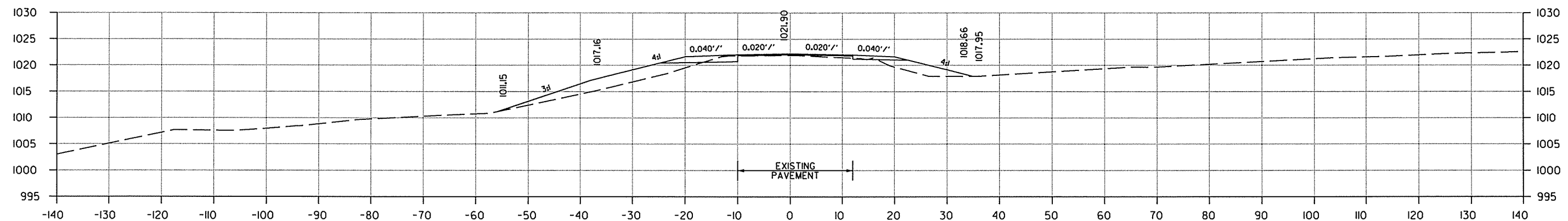
DOWEL BARS FOR TWO HEADWALLS				
SPAN	SIZE	SPACING	NO. BARS	LENGTH
4'	#4	11"	12	2'-6"
5'	#4	11"	14	2'-7"
6'	#4	11"	16	2'-8"
7'	#4	11"	18	2'-9"
8'	#4	11 1/2"	20	2'-11"
9'	#4	11 1/2"	22	3'-0"
10'	#4	11 1/2"	24	3'-1"
11'	#4	12"	26	3'-2"
12'	#4	12"	28	3'-3"



Designed By: W.C.H. 1-23-63. Checked By: T.M.S. 5-8-63.
 Drawn By: W.C.H. 2-8-63. Checked By: T.M.S. 5-24-63.
 Quantities By: W.C.H. 2-12-63.

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						JOB NO. 050261	89	148

2 CROSS SECTIONS - SITE I



STAGE 1
AREA CUT 5
AREA FILL 61

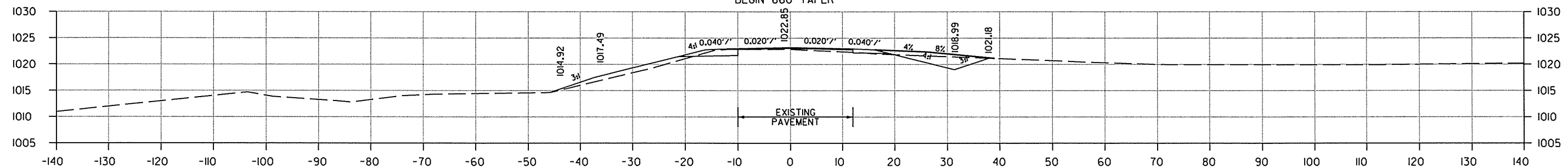
STAGE 2
AREA CUT 0
AREA FILL 27

101+00
BEGIN JOB 050261
BEGIN SITE I
END 100' TRANS.
BEGIN 660' TAPER

STA. 100+36 CONST.
APPR. ON RT. = 30 CU. YDS.

STAGE 1
CUT VOLUME 14
FILL VOLUME 96

STAGE 2
CUT VOLUME 27
FILL VOLUME 38



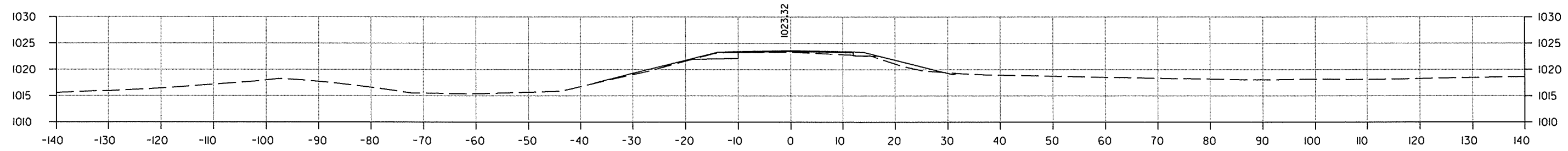
STAGE 1
AREA CUT 7
AREA FILL 20

STAGE 2
AREA CUT 22
AREA FILL 5

100+36

STAGE 1
CUT VOLUME 9
FILL VOLUME 17

STAGE 2
CUT VOLUME 15
FILL VOLUME 11



STAGE 1
AREA CUT 7
AREA FILL 5

STAGE 2
AREA CUT 1
AREA FILL 11

100+00
BEGIN 100' TRANS.

CROSS SECTION STA. 100+00 TO STA. 101+00

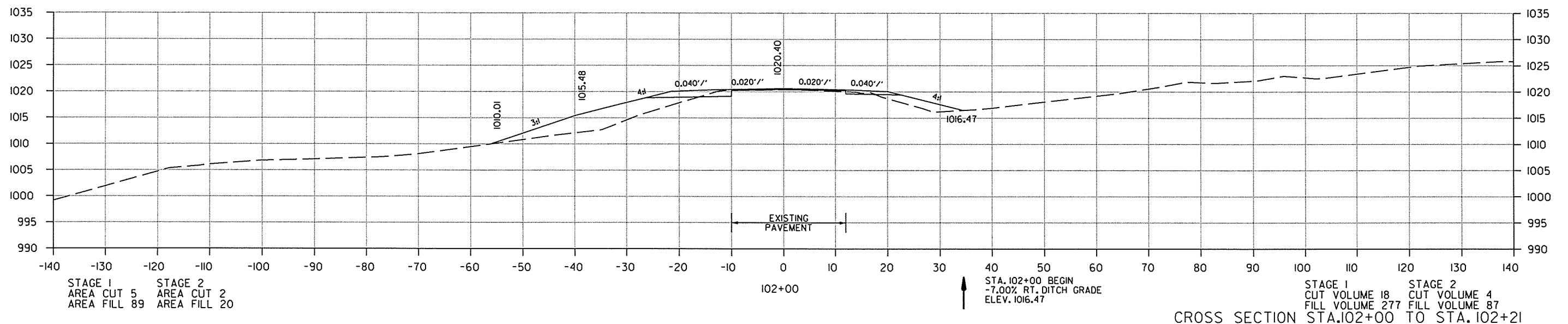
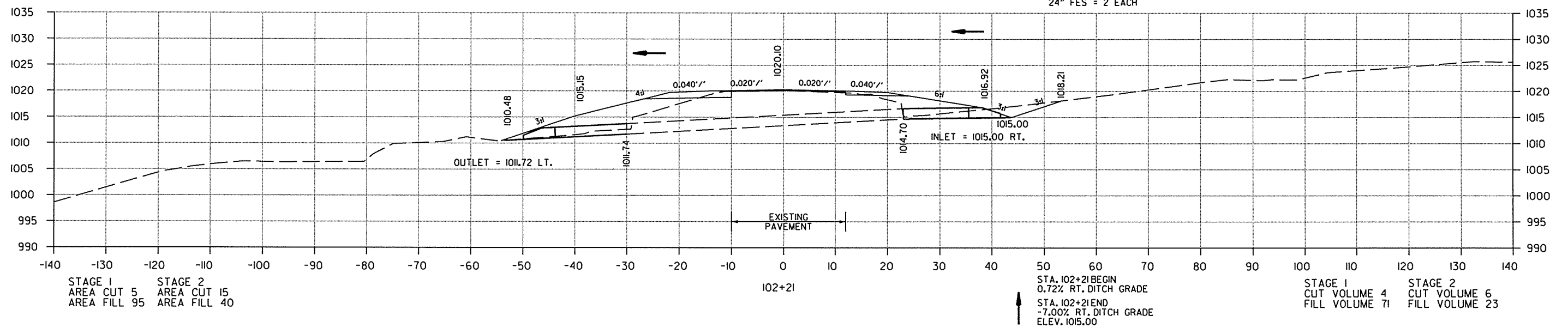
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2 CROSS SECTIONS - SITE 1

STA. 102+21 IN PLACE
 24" X 53' R.C. PIPE CULVERT
 RETAIN AND EXTEND
 14' LT. AND 13' RT.
 (CLASS III) (TYPE 3 BEDDING) WITH
 FES LT. & RT.
 050 = 4 CFS, D.A. = 1 ACRE
 24" R.C. PIPE = 35 LIN. FT.
 24" FES = 2 EACH

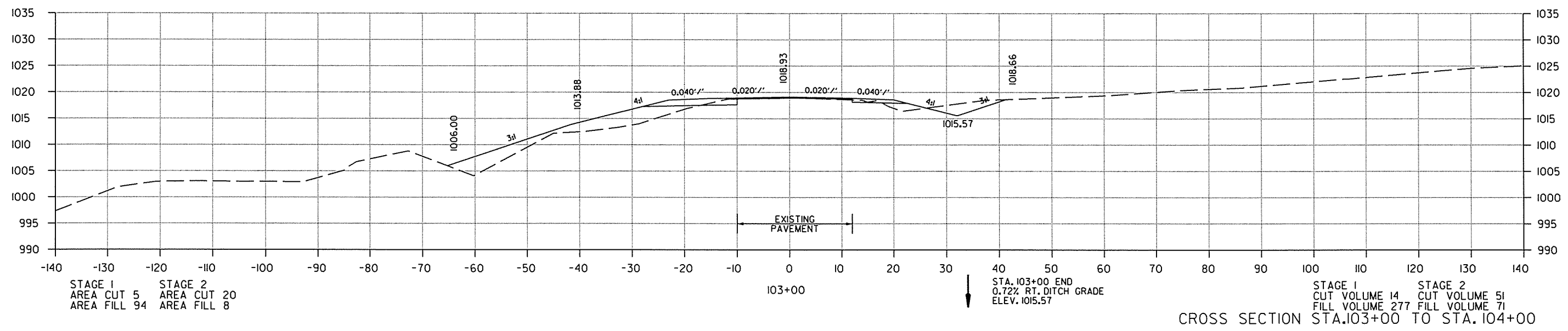
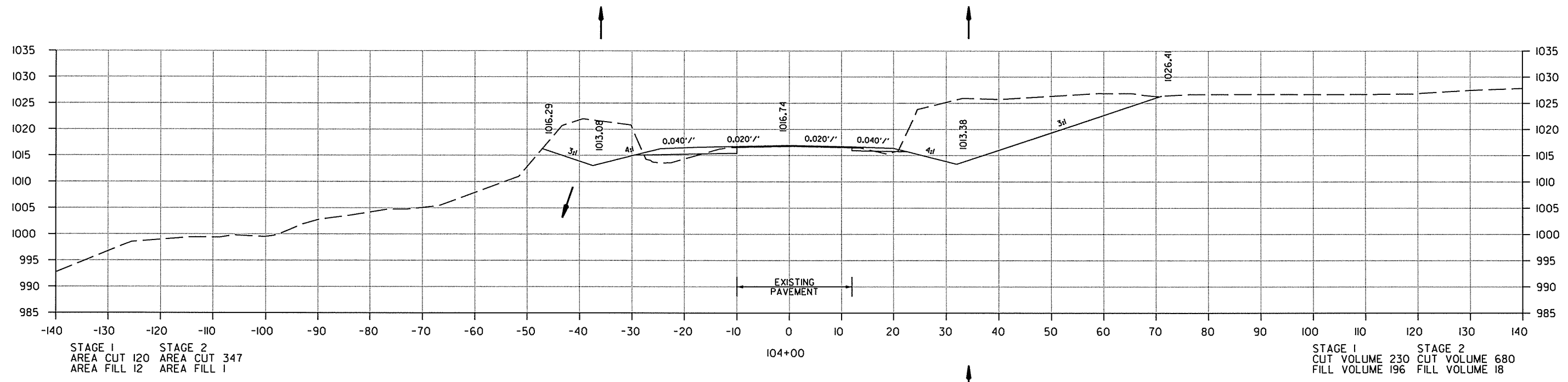


CROSS SECTION STA. 102+00 TO STA. 102+21

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						JOB NO. 050261	91	148

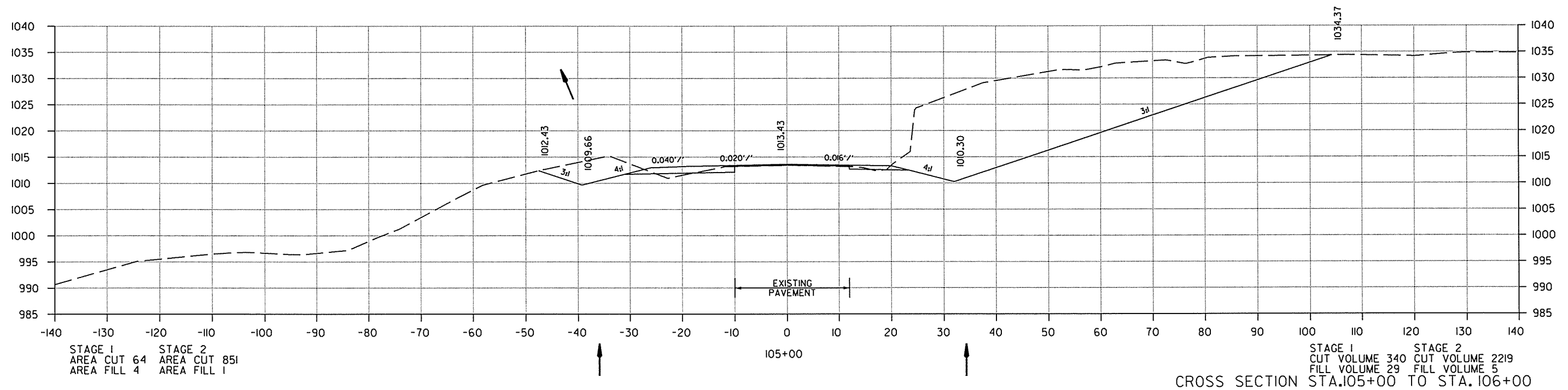
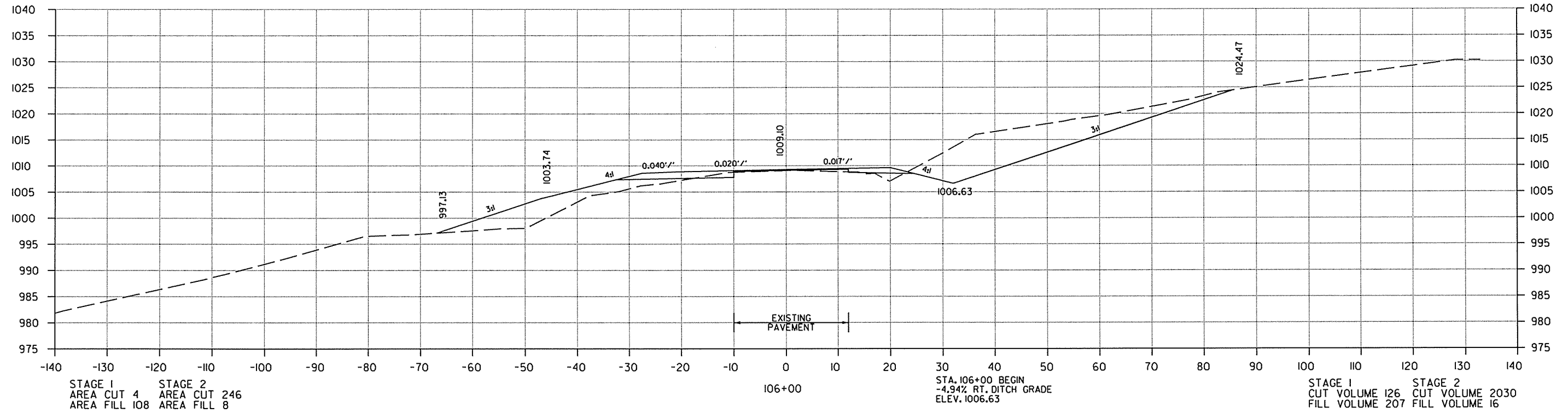
2 CROSS SECTIONS - SITE 1



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						JOB NO. 050261	92	148

② CROSS SECTIONS - SITE 1



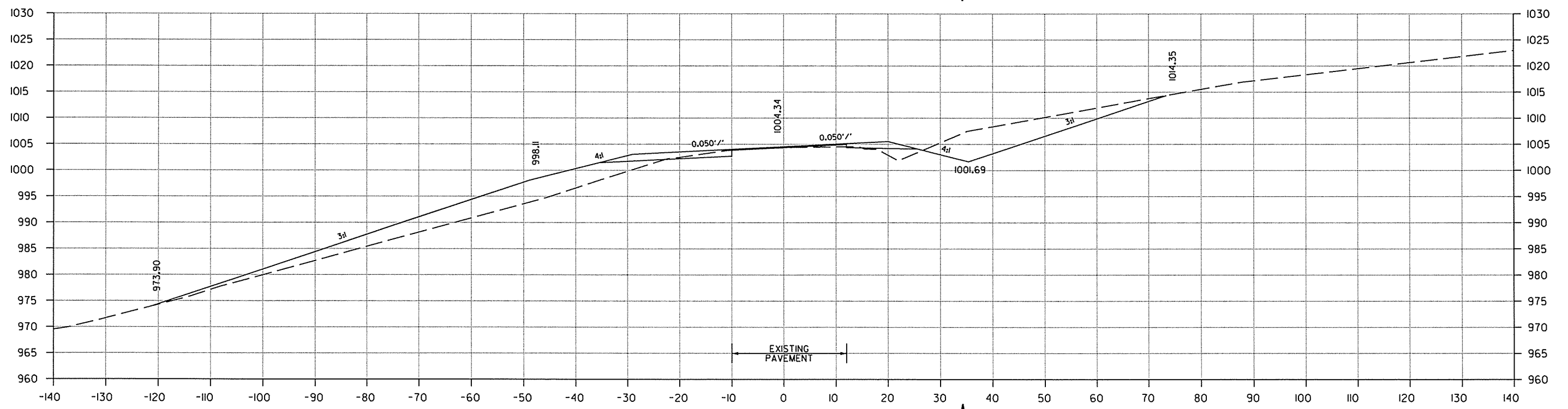
1/15/2015

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② CROSS SECTIONS - SITE 1

END 660' TAPER @ STA. 107+40.00



STAGE 1
AREA CUT 8
AREA FILL 221

STAGE 2
AREA CUT 137
AREA FILL 14

STAGE 1
CUT VOLUME 22
FILL VOLUME 610

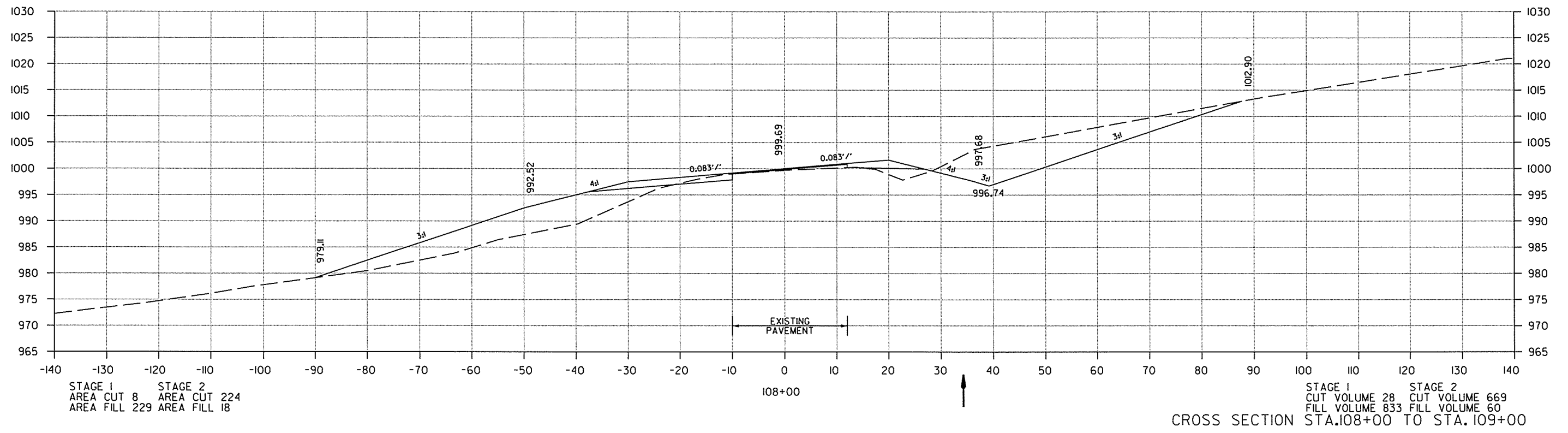
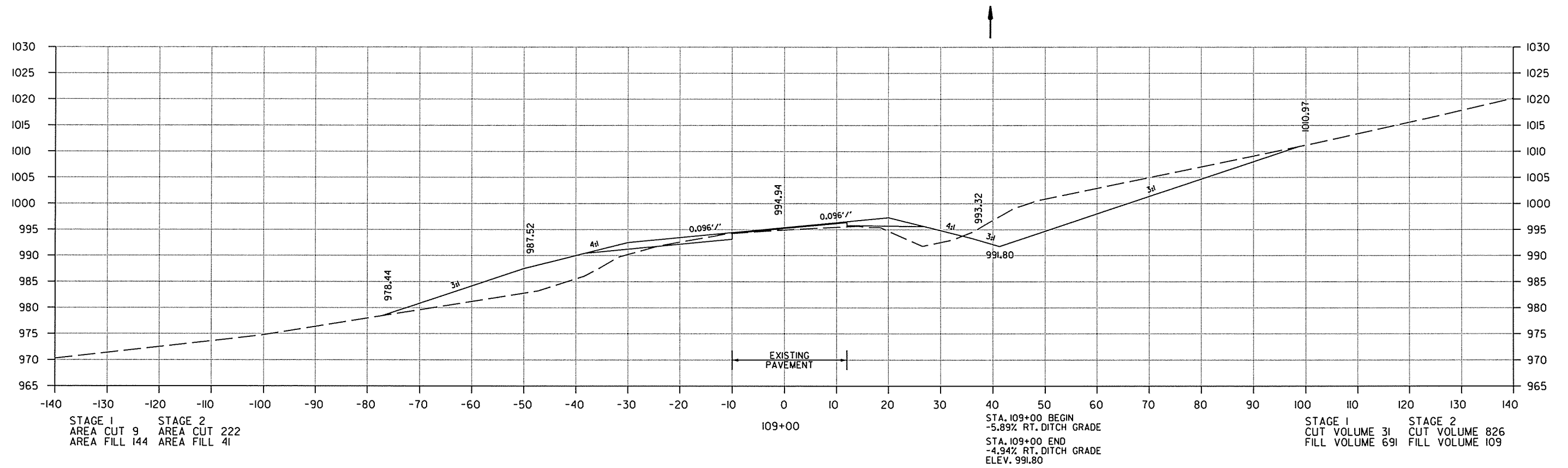
STAGE 2
CUT VOLUME 709
FILL VOLUME 40

CROSS SECTION STA. 107+00 TO STA. 107+00

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						JOB NO. 050261	94	148

② CROSS SECTIONS - SITE 1

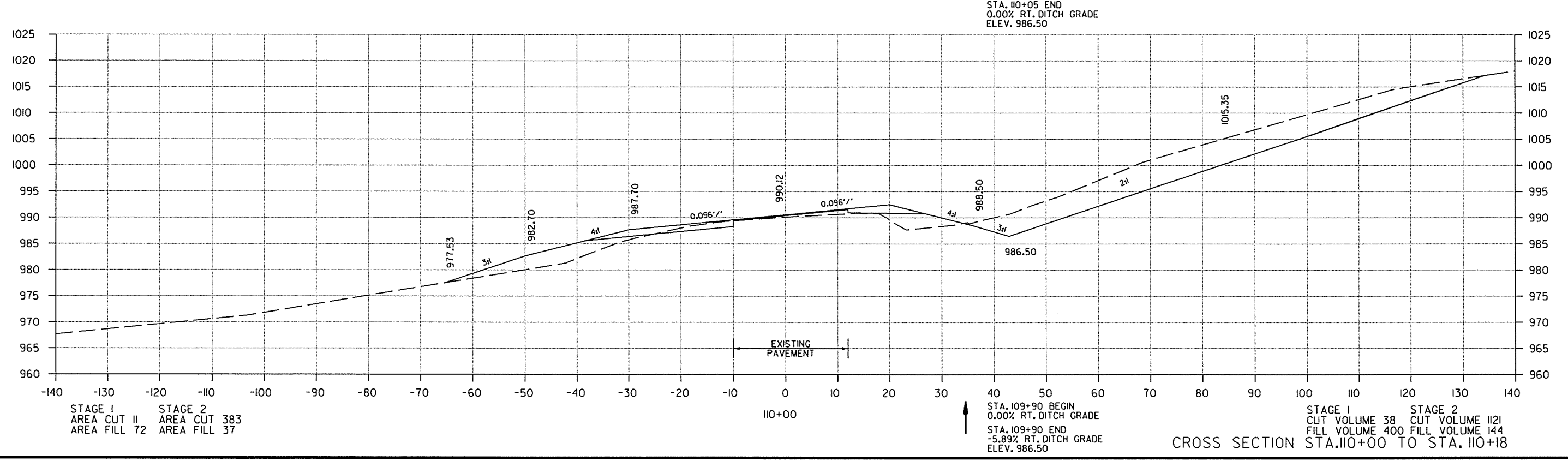
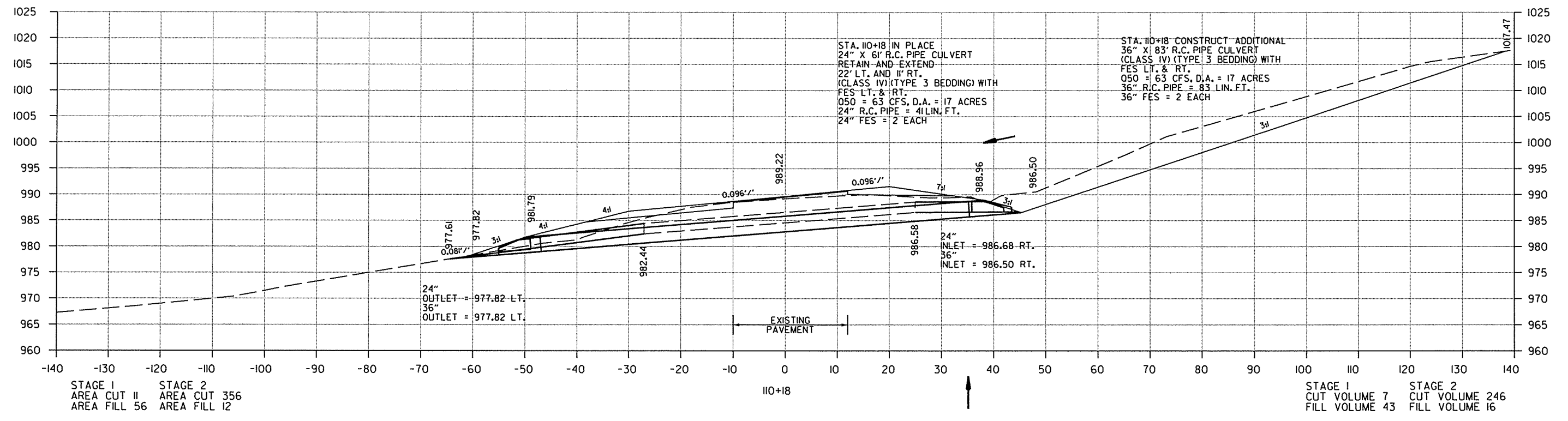


CROSS SECTION STA. 108+00 TO STA. 109+00

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10-09-15				6	ARK.			
JOB NO. 050261							95	148

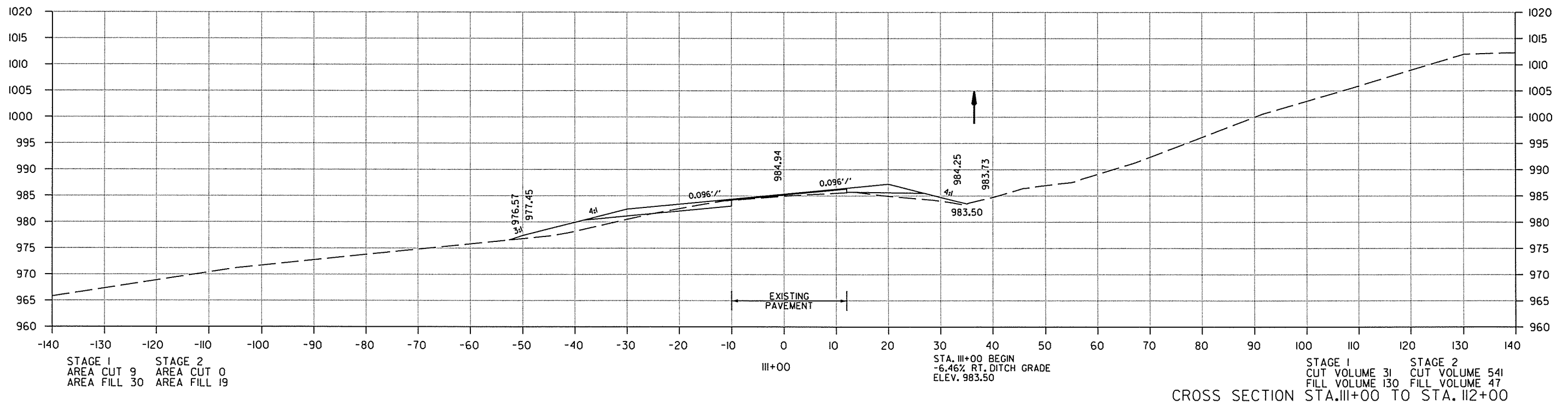
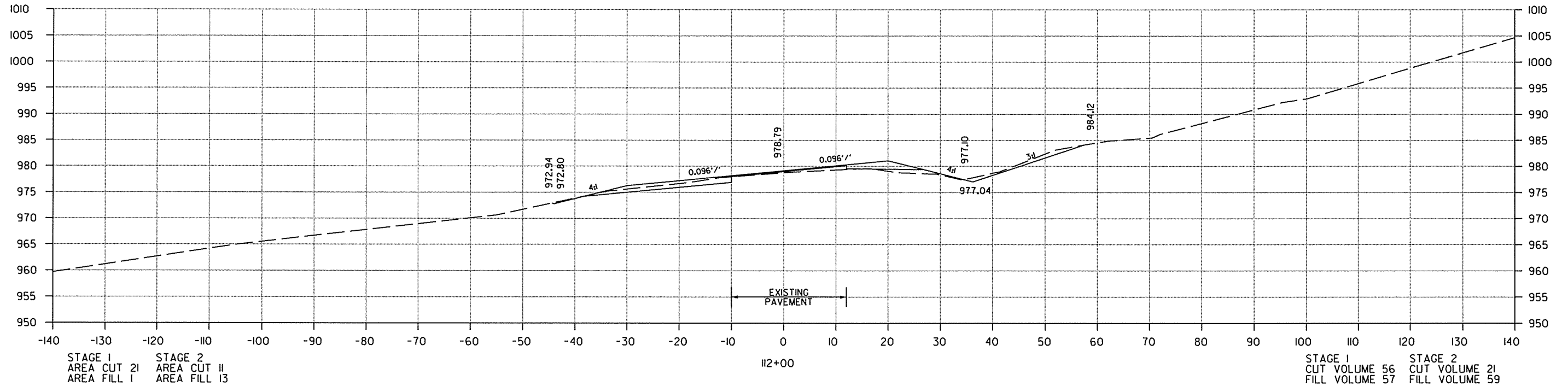
2 CROSS SECTIONS - SITE I



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						JOB NO. 050261	96	148

② CROSS SECTIONS - SITE I



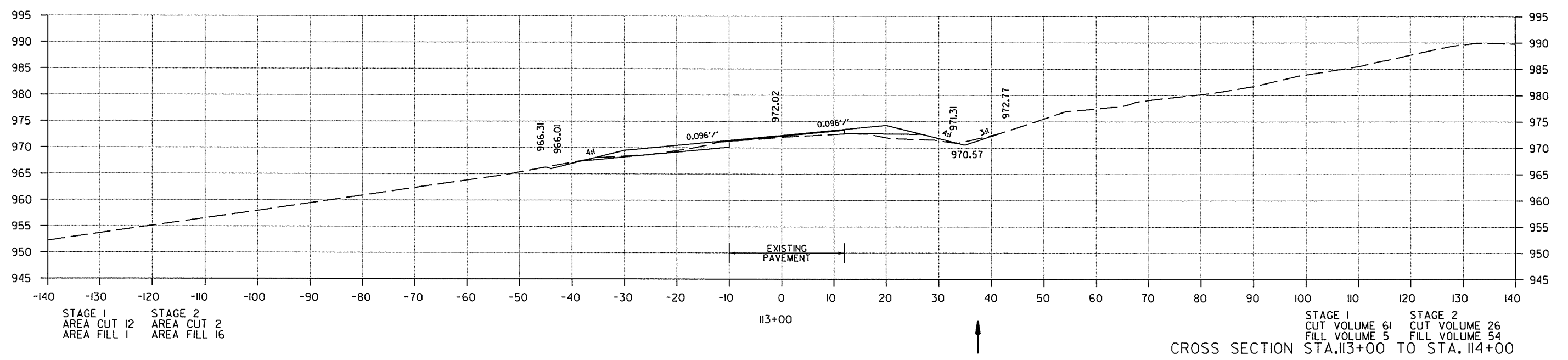
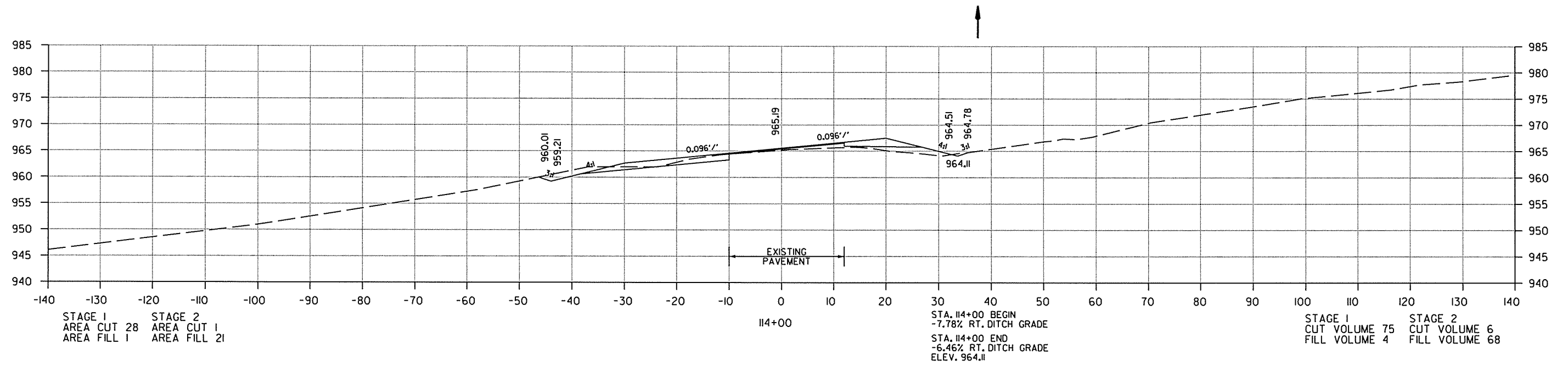
CROSS SECTION STA. III+00 TO STA. II+00

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10-09-15				6	ARK.			
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2 CROSS SECTIONS - SITE 1

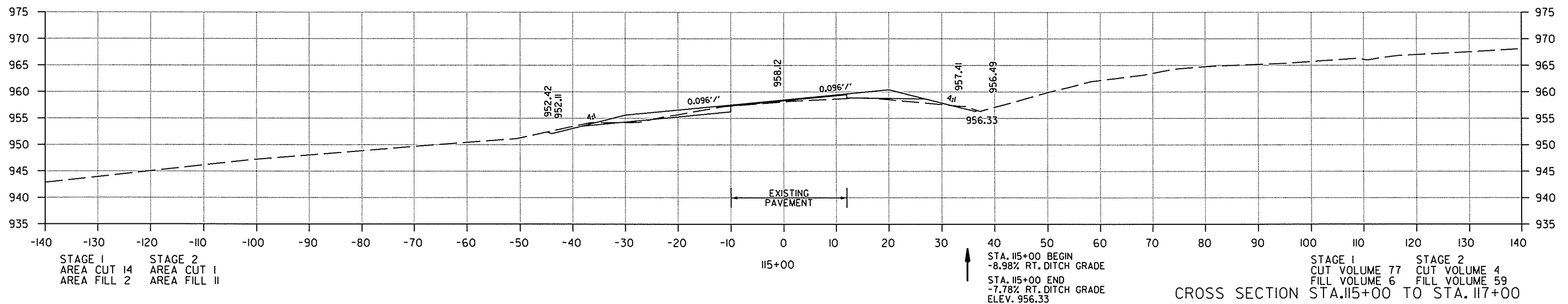
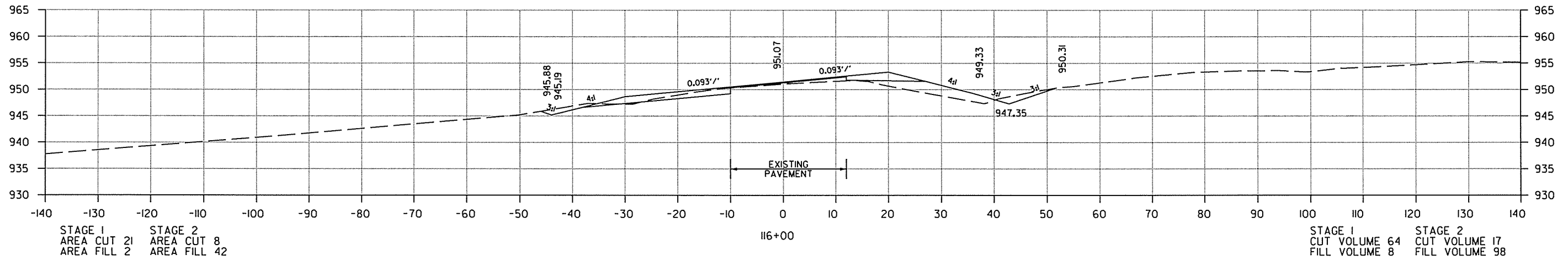
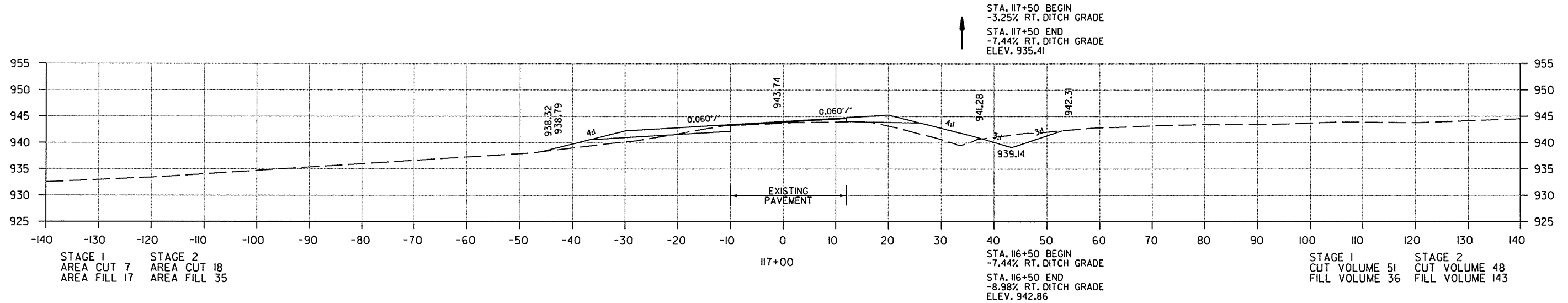


CROSS SECTION STA. 113+00 TO STA. 114+00

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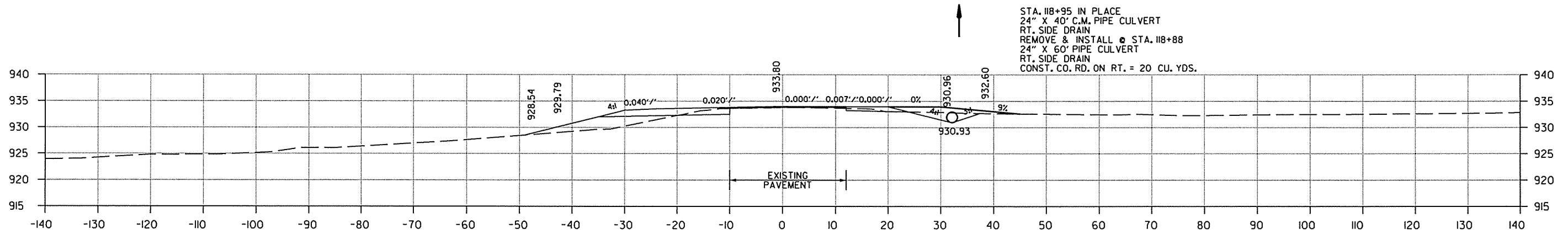
2 CROSS SECTIONS - SITE 1



CROSS SECTION STA. 115+00 TO STA. 117+00

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2 CROSS SECTIONS - SITE 1



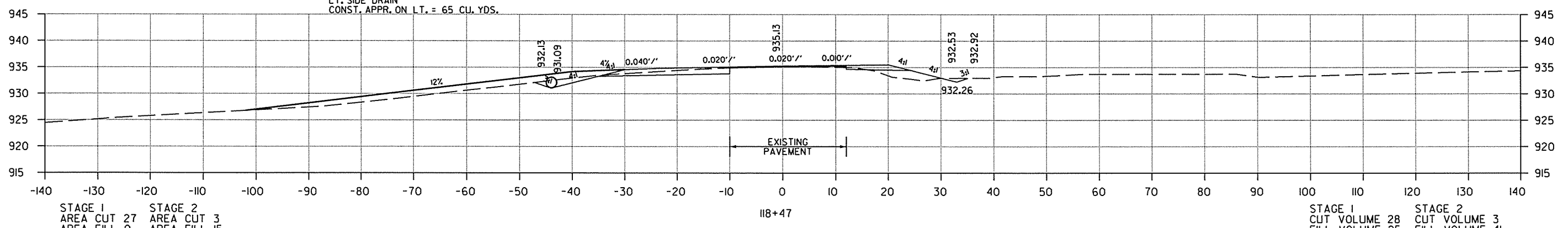
STAGE 1
AREA CUT 7
AREA FILL 38

STAGE 2
AREA CUT 15
AREA FILL 1

STA. 118+52 IN PLACE
24" X 40' CORR. PLASTIC PIPE CULV'T.
LT. SIDE DRAIN
REMOVE & INSTALL @ STA. 118+47
24" X 40' PIPE CULV'T.
LT. SIDE DRAIN
CONST. APPR. ON LT. = 65 CU. YDS.

STAGE 1
CUT VOLUME 26
FILL VOLUME 29

STAGE 2
CUT VOLUME 14
FILL VOLUME 12

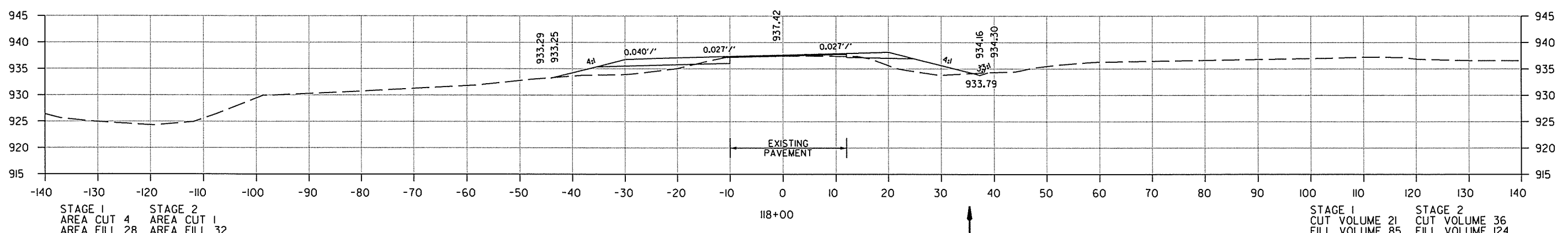


STAGE 1
AREA CUT 27
AREA FILL 0

STAGE 2
AREA CUT 3
AREA FILL 15

STAGE 1
CUT VOLUME 28
FILL VOLUME 25

STAGE 2
CUT VOLUME 3
FILL VOLUME 41



STAGE 1
AREA CUT 4
AREA FILL 28

STAGE 2
AREA CUT 1
AREA FILL 32

STAGE 1
CUT VOLUME 21
FILL VOLUME 85

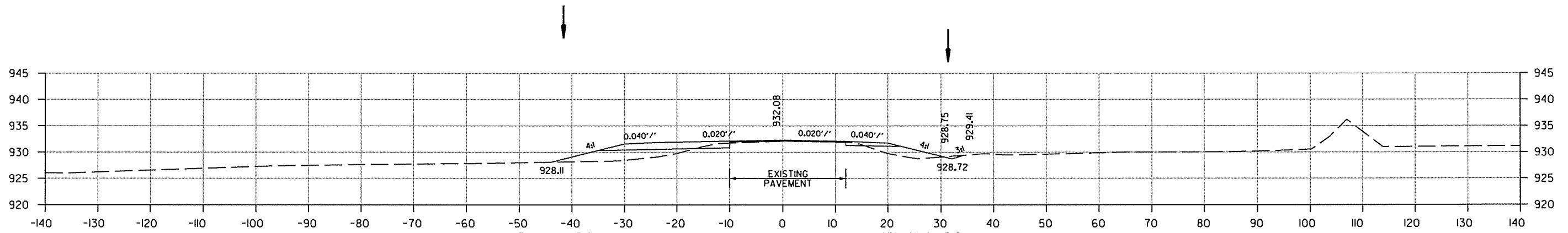
STAGE 2
CUT VOLUME 36
FILL VOLUME 124

CROSS SECTION STA. 118+00 TO STA. 118+88

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2 CROSS SECTIONS - SITE 1



STAGE 1
AREA CUT 4
AREA FILL 37

STAGE 2
AREA CUT 2
AREA FILL 17

STA. 120+00 END
6.72% RT. DITCH GRADE
ELEV. 928.11

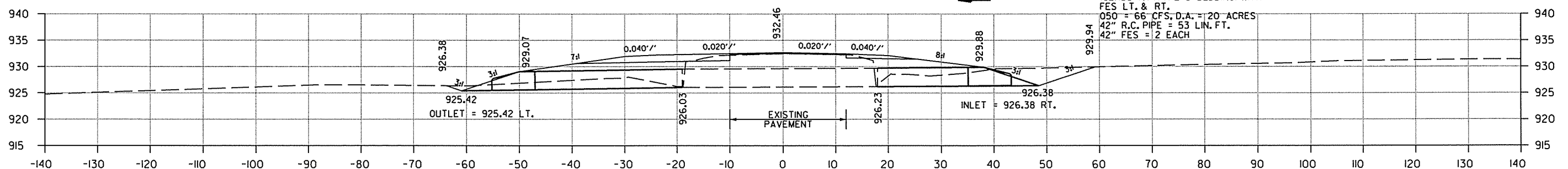
120+00

STA. 120+00 END
5.85% RT. DITCH GRADE
ELEV. 928.72

STA. 119+60 IN PLACE
42" X 37" R.C. PIPE CULVERT
RETAIN AND EXTEND
28' LT. AND 17' RT.
(CLASS IV) (TYPE 3 BEDDING) WITH
FES LT. & RT.
050 = 66 CFS, D.A. = 20 ACRES
42" R.C. PIPE = 53 LIN. FT.
42" FES = 2 EACH

STAGE 1
CUT VOLUME 9
FILL VOLUME 128

STAGE 2
CUT VOLUME 28
FILL VOLUME 52



STAGE 1
AREA CUT 8
AREA FILL 135

STAGE 2
AREA CUT 35
AREA FILL 54

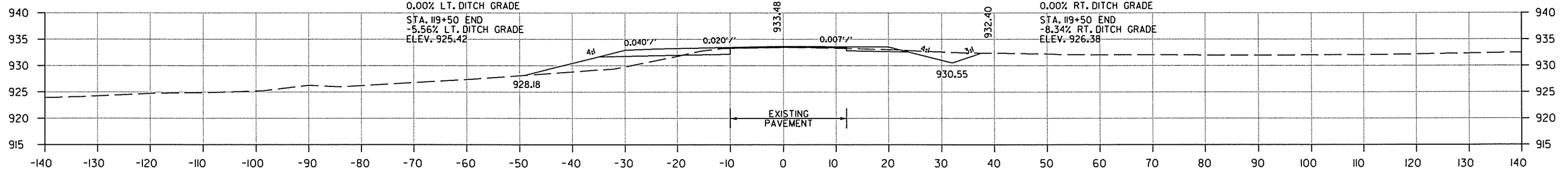
STA. 119+60 BEGIN
6.72% RT. DITCH GRADE
STA. 119+60 END
0.00% LT. DITCH GRADE
ELEV. 925.42

119+60

STA. 119+60 BEGIN
5.85% RT. DITCH GRADE
STA. 119+60 END
0.00% RT. DITCH GRADE
ELEV. 926.38

STAGE 1
CUT VOLUME 16
FILL VOLUME 135

STAGE 2
CUT VOLUME 60
FILL VOLUME 61



STAGE 1
AREA CUT 7
AREA FILL 41

STAGE 2
AREA CUT 19
AREA FILL 1

STA. 119+00 BEGIN
-5.56% LT. DITCH GRADE
ELEV. 928.20

119+00

STA. 119+00 BEGIN
-8.34% RT. DITCH GRADE
STA. 119+00 END
-3.25% RT. DITCH GRADE
ELEV. 930.55

STAGE 1
CUT VOLUME 3
FILL VOLUME 18

STAGE 2
CUT VOLUME 8
FILL VOLUME 0

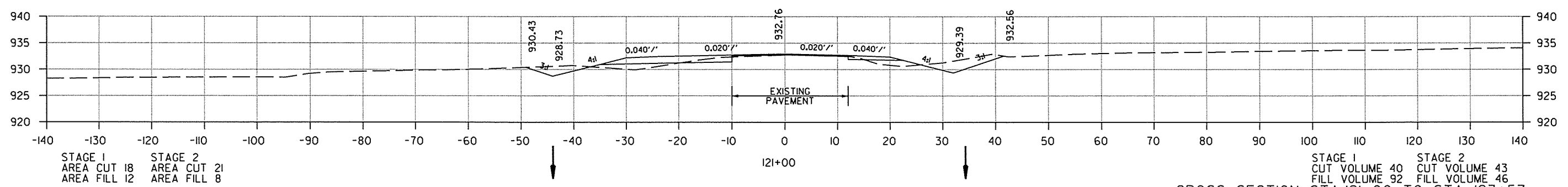
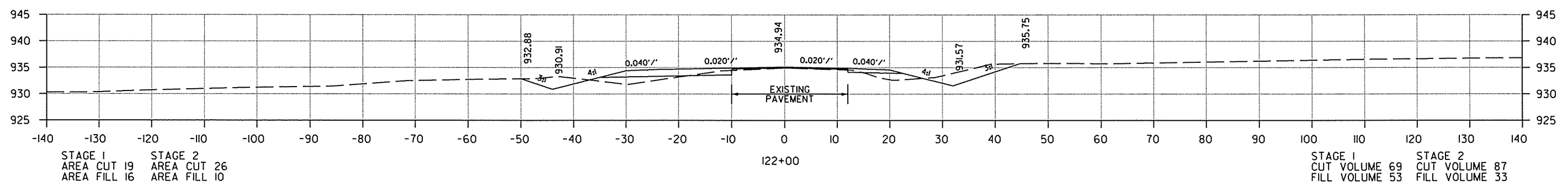
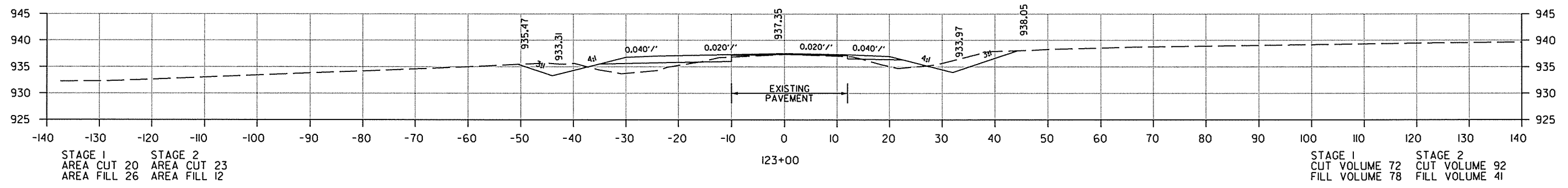
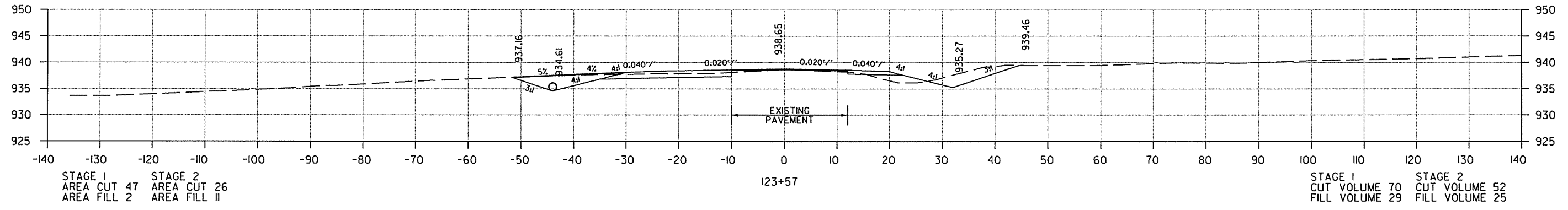
CROSS SECTION STA. 119+00 TO STA. 120+00

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2 CROSS SECTIONS - SITE 1

STA. 123+52 IN PLACE
 18" X 28' CORR. PLASTIC PIPE CULV'T.
 LT. SIDE DRAIN
 REMOVE & INSTALL
 18" X 30' PIPE CULV'T.
 LT. SIDE DRAIN
 CONST. APPR. ON LT. = 5 CU. YDS.
 CONST. CONC. DRWY. = 70 SQ. YDS.

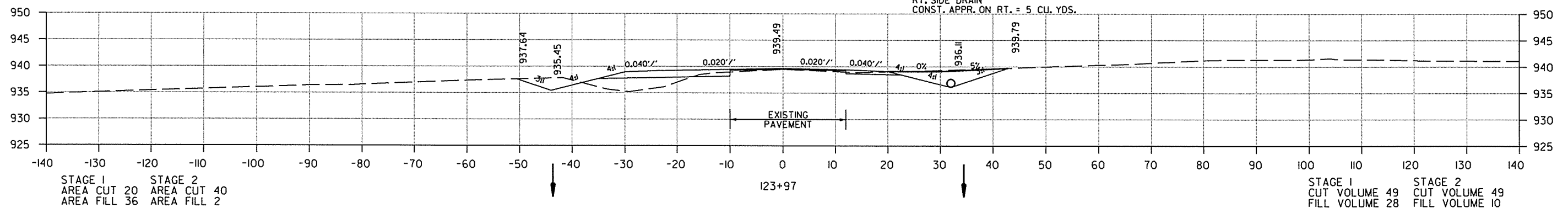
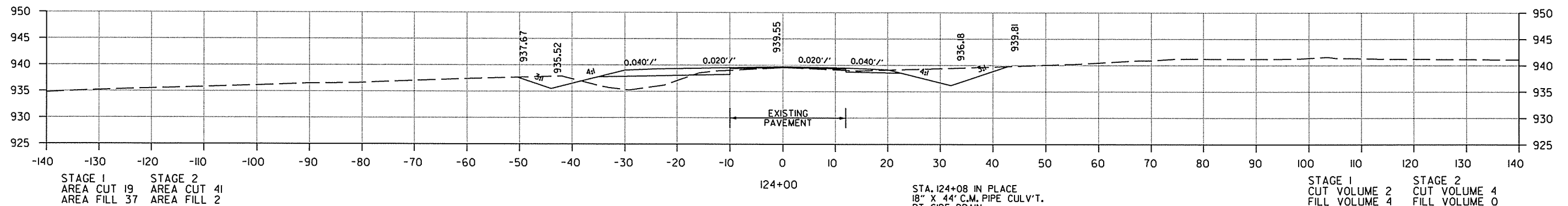
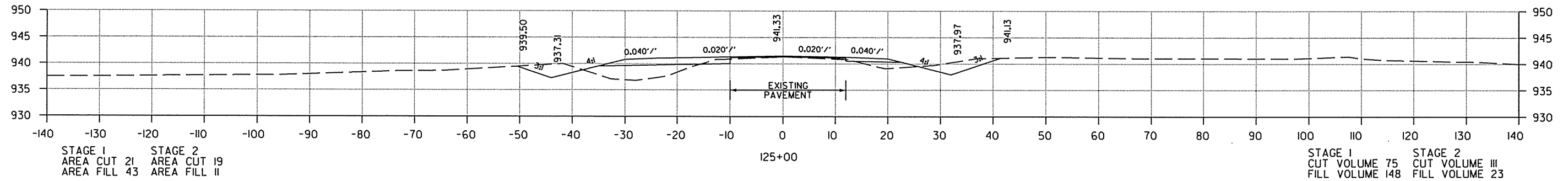
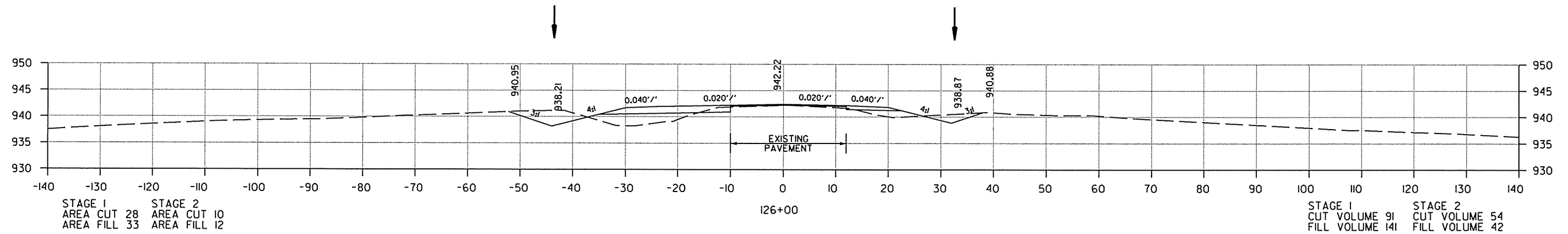


CROSS SECTION STA. 121+00 TO STA. 123+57

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2 CROSS SECTIONS - SITE 1



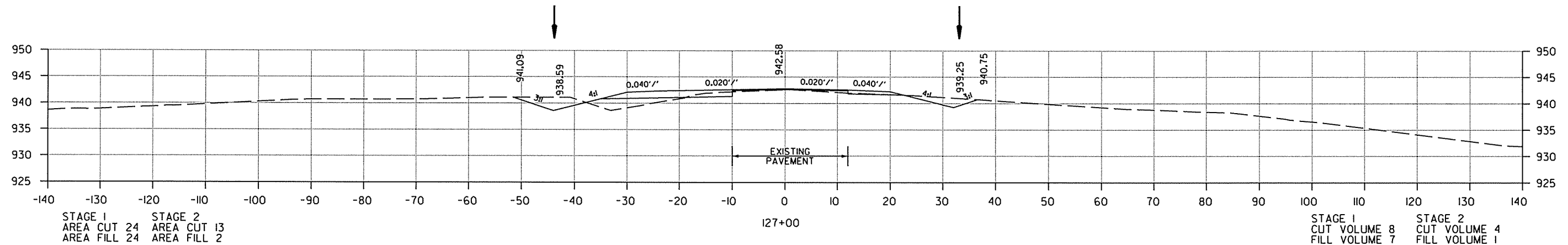
CROSS SECTION STA. 123+97 TO STA. 126+00

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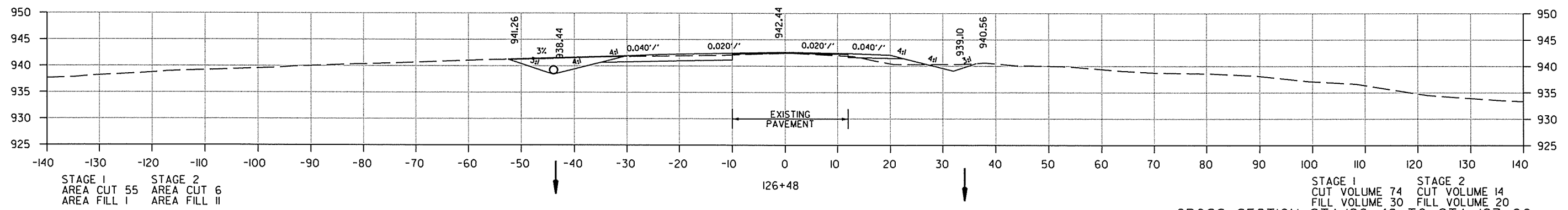
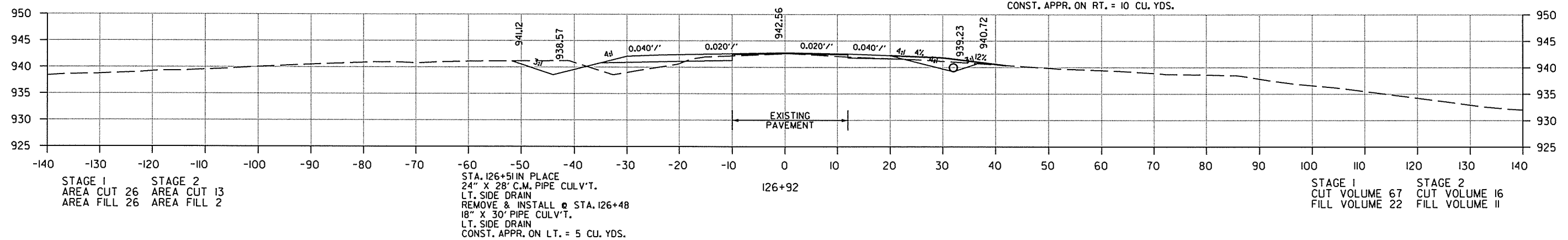
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2 CROSS SECTIONS - SITE 1



STA. 126+92 INSTALL
18" X 28' PIPE CULV'T.
RT. SIDE DRAIN
CONST. APPR. ON RT. = 10 CU. YDS.

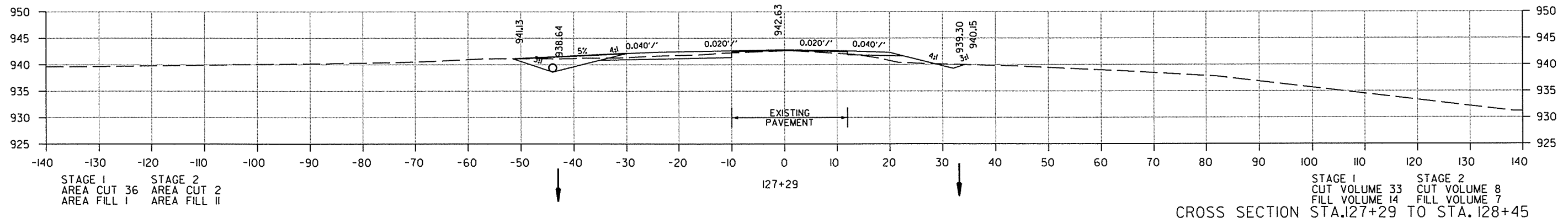
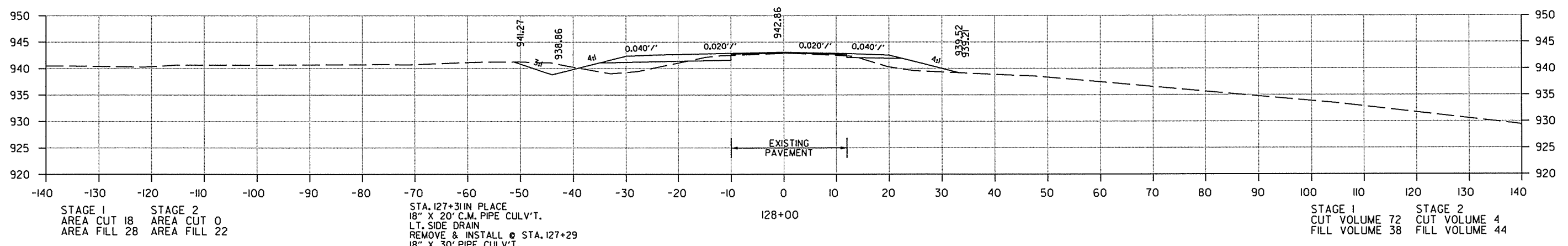
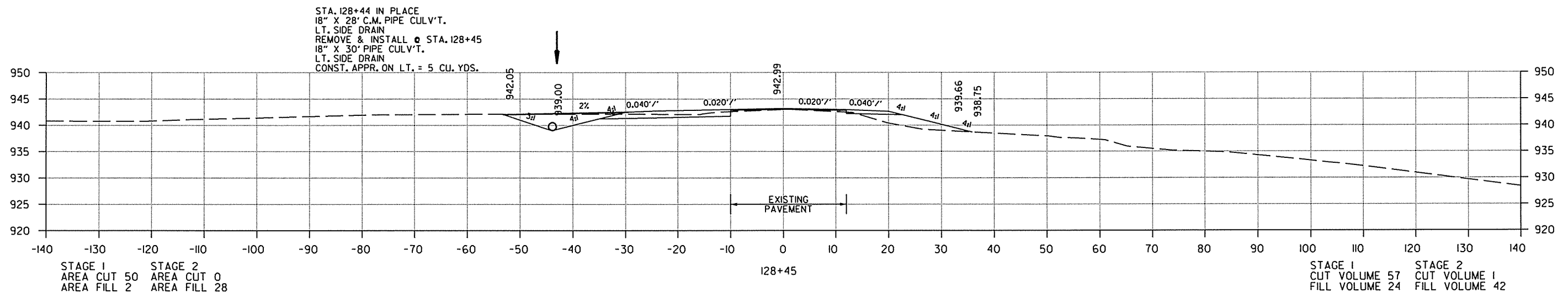


CROSS SECTION STA. 126+48 TO STA. 127+00

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2 CROSS SECTIONS - SITE 1

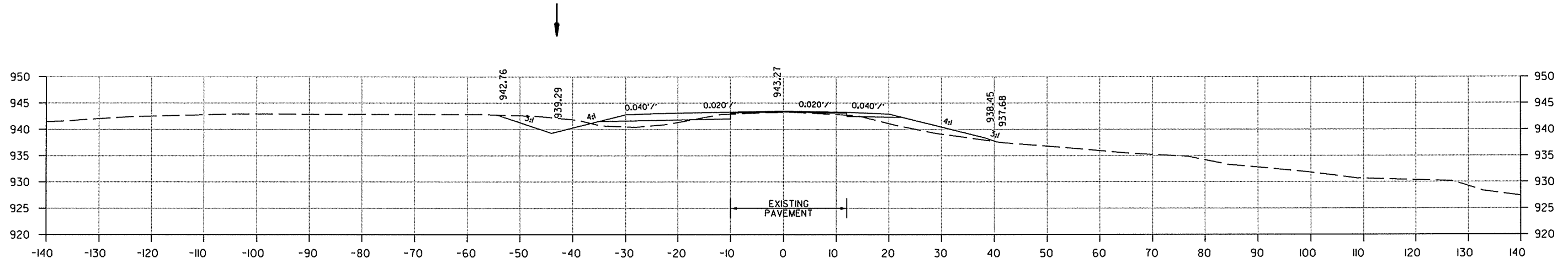


CROSS SECTION STA. 127+29 TO STA. 128+45

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② CROSS SECTIONS - SITE 1



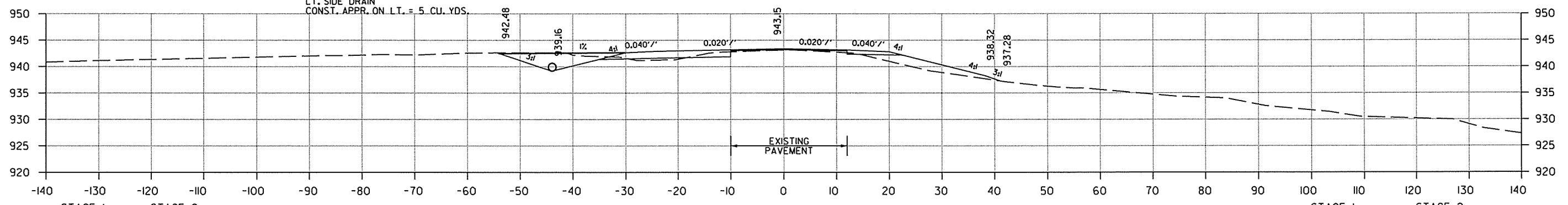
STAGE 1
AREA CUT 32
AREA FILL 17

STAGE 2
AREA CUT 0
AREA FILL 29

STA. 129+21 IN PLACE
18" X 26" PIPE CULV'T.
LT. SIDE DRAIN
REMOVE & INSTALL @ STA. 129+31
18" X 32" PIPE CULV'T.
LT. SIDE DRAIN
CONST. APPR. ON LT. = 5 CU. YDS.

STAGE 1
CUT VOLUME 96
FILL VOLUME 28

STAGE 2
CUT VOLUME 1
FILL VOLUME 76

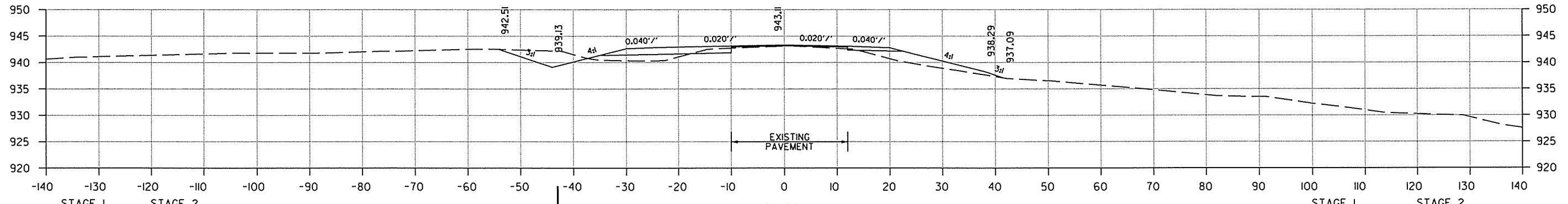


STAGE 1
AREA CUT 43
AREA FILL 5

STAGE 2
AREA CUT 0
AREA FILL 31

STAGE 1
CUT VOLUME 43
FILL VOLUME 14

STAGE 2
CUT VOLUME 0
FILL VOLUME 36



STAGE 1
AREA CUT 32
AREA FILL 19

STAGE 2
AREA CUT 0
AREA FILL 32

STAGE 1
CUT VOLUME 84
FILL VOLUME 21

STAGE 2
CUT VOLUME 1
FILL VOLUME 61

CROSS SECTION STA. 129+00 TO STA. 130+00

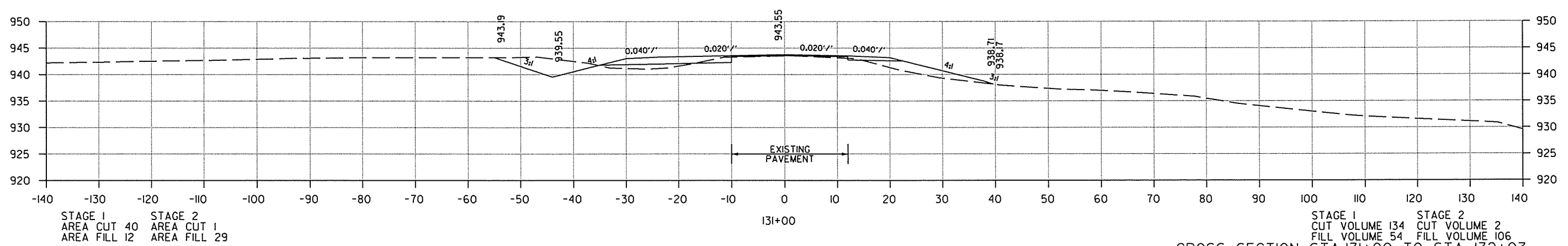
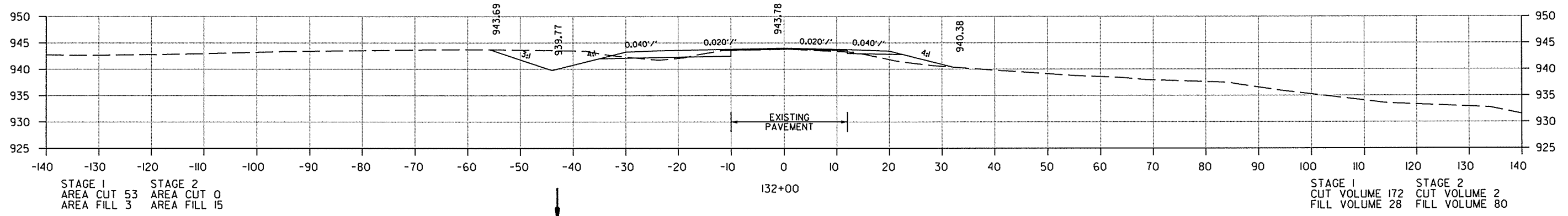
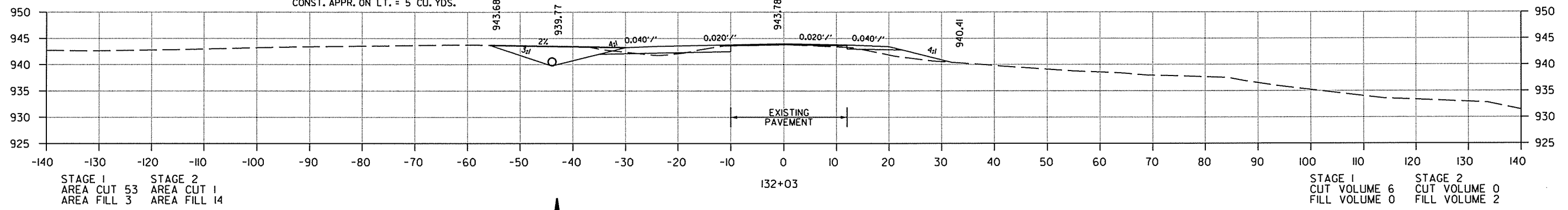
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② CROSS SECTIONS - SITE 1

STA. 132+03 INSTALL
18" X 34' PIPE CULV.T.
L.T. SIDE DRAIN
CONST. APPR. ON LT. = 5 CU. YDS.

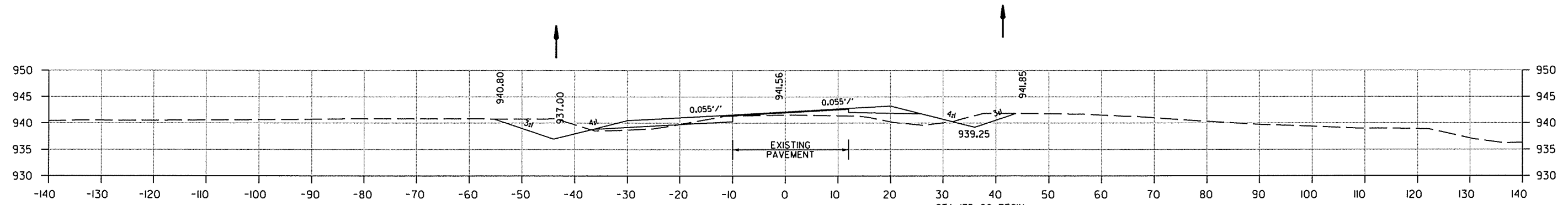


CROSS SECTION STA. 131+00 TO STA. 132+03

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						JOB NO. 050261	107	148

② CROSS SECTIONS - SITE 1



STAGE 1
AREA CUT 42
AREA FILL 9

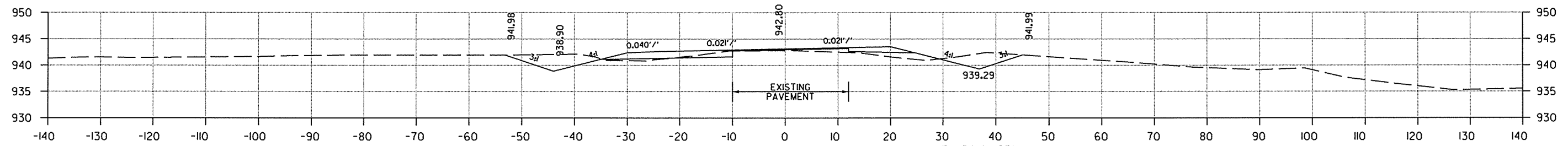
STAGE 2
AREA CUT 14
AREA FILL 36

135+00

STA. 135+00 BEGIN
-0.48% RT. DITCH GRADE
STA. 135+00 END
-0.04% RT. DITCH GRADE
ELEV. 939.25

STAGE 1
CUT VOLUME 148
FILL VOLUME 25

STAGE 2
CUT VOLUME 71
FILL VOLUME 98



STAGE 1
AREA CUT 38
AREA FILL 4

STAGE 2
AREA CUT 24
AREA FILL 17

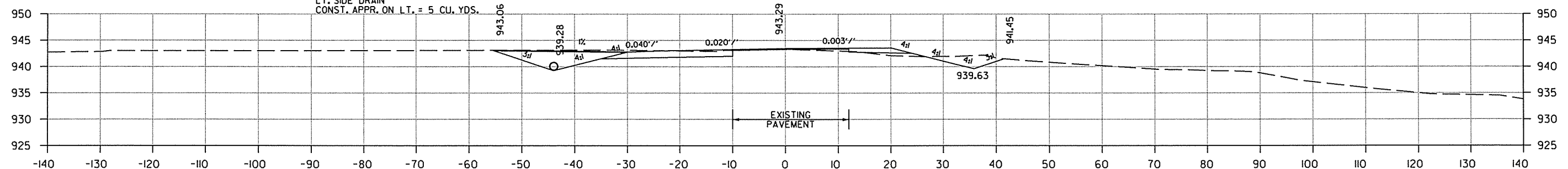
134+00

STA. 134+00 BEGIN
-0.04% RT. DITCH GRADE
STA. 134+00 END
-0.71% RT. DITCH GRADE
ELEV. 939.29

STAGE 1
CUT VOLUME 103
FILL VOLUME 4

STAGE 2
CUT VOLUME 37
FILL VOLUME 21

STA. 133+53 INSTALL
18" X 34' PIPE CULV'T.
LT. SIDE DRAIN
CONST. APPR. ON LT. = 5 CU. YDS.



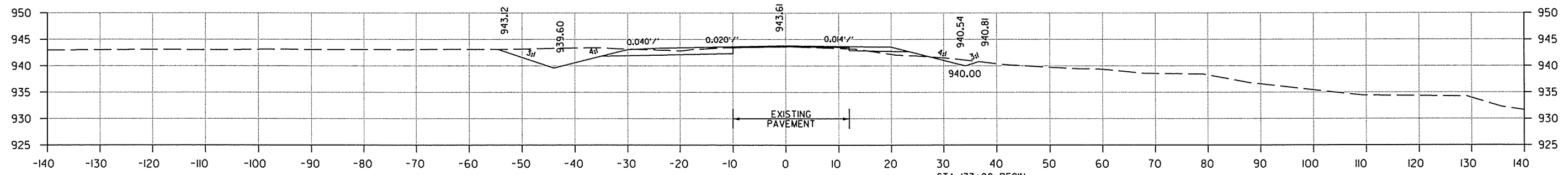
STAGE 1
AREA CUT 80
AREA FILL 0

STAGE 2
AREA CUT 19
AREA FILL 7

133+53

STAGE 1
CUT VOLUME 148
FILL VOLUME 0

STAGE 2
CUT VOLUME 24
FILL VOLUME 13



STAGE 1
AREA CUT 71
AREA FILL 0

STAGE 2
AREA CUT 6
AREA FILL 7

133+00

STA. 133+00 BEGIN
-0.71% RT. DITCH GRADE
ELEV. 940.00

STAGE 1
CUT VOLUME 223
FILL VOLUME 6

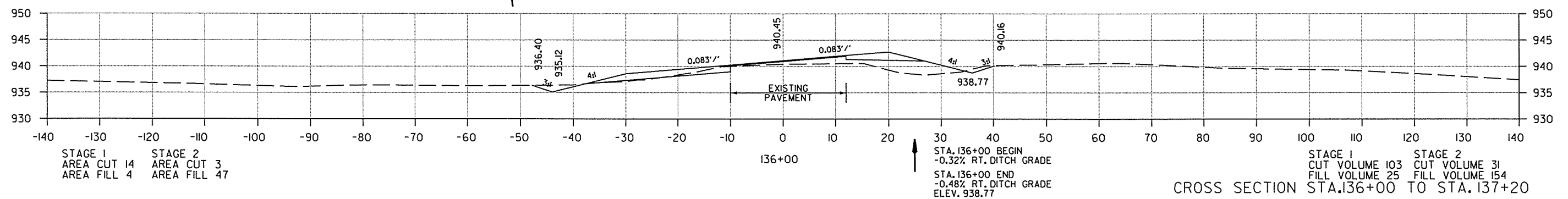
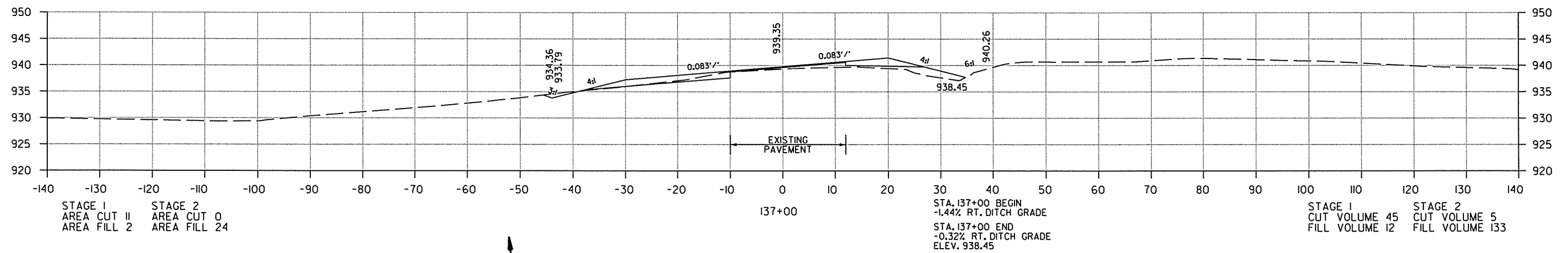
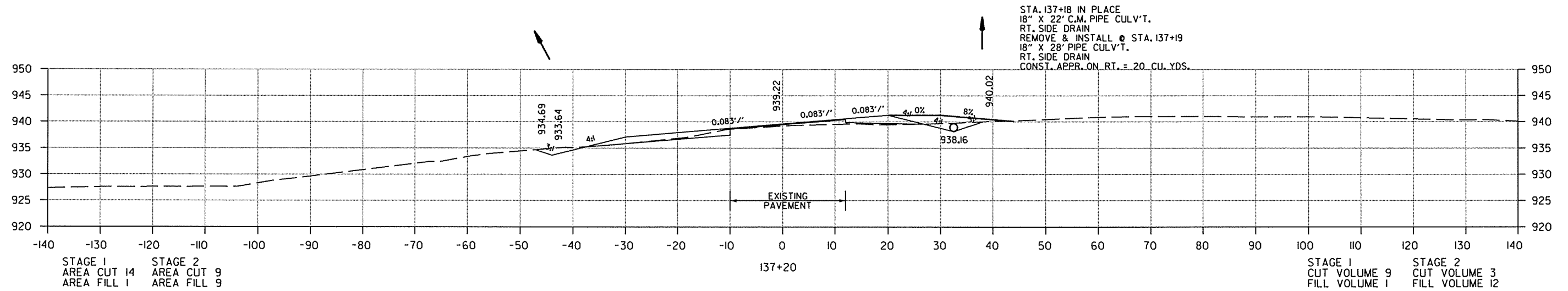
STAGE 2
CUT VOLUME 12
FILL VOLUME 38

CROSS SECTION STA. 133+00 TO STA. 135+00

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2 CROSS SECTIONS - SITE 1



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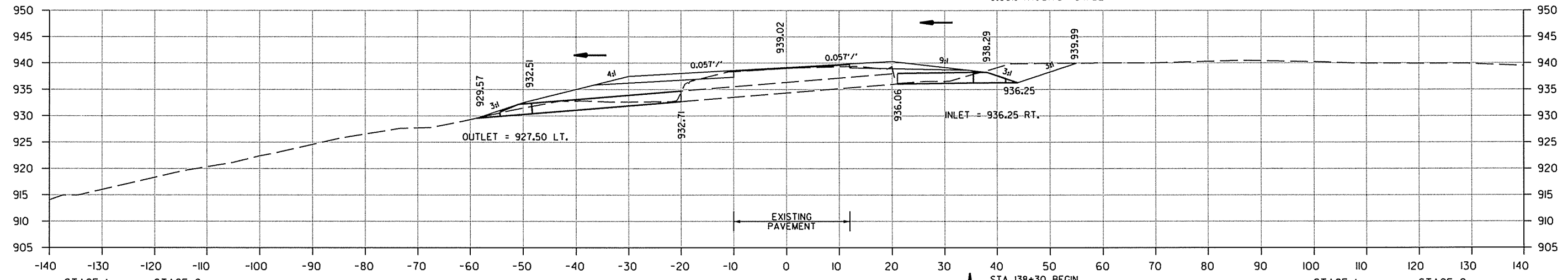
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2 CROSS SECTIONS - SITE 1

STA. 138+35 IN PLACE
 24" X 41' R.C. PIPE CULVERT
 RETAIN AND EXTEND
 28' LT. AND 15' RT.
 (CLASS IV) (TYPE 3 BEDDING) WITH
 FES LT. & RT.
 050 = 11 CFS, D.A. = 3 ACRES
 24" R.C. PIPE = 51 LIN. FT.
 24" FES = 2 EACH

STA. 138+40 BEGIN
 0.29% RT. DITCH GRADE
 STA. 138+40 END
 0.00% RT. DITCH GRADE

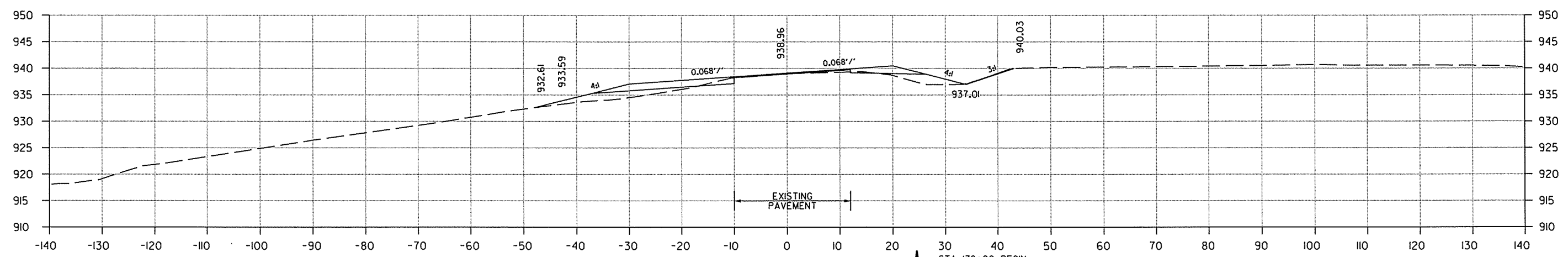


STAGE 1 STAGE 2
 AREA CUT 4 AREA CUT 33
 AREA FILL 90 AREA FILL 35

138+35

STA. 138+30 BEGIN
 0.00% RT. DITCH GRADE
 STA. 138+30 END
 -2.53% RT. DITCH GRADE
 ELEV. 936.25

STAGE 1 STAGE 2
 CUT VOLUME 5 CUT VOLUME 23
 FILL VOLUME 76 FILL VOLUME 34



STAGE 1 STAGE 2
 AREA CUT 4 AREA CUT 2
 AREA FILL 27 AREA FILL 17

138+00

STA. 138+00 BEGIN
 -2.53% RT. DITCH GRADE
 STA. 138+00 END
 -1.44% RT. DITCH GRADE
 ELEV. 937.01

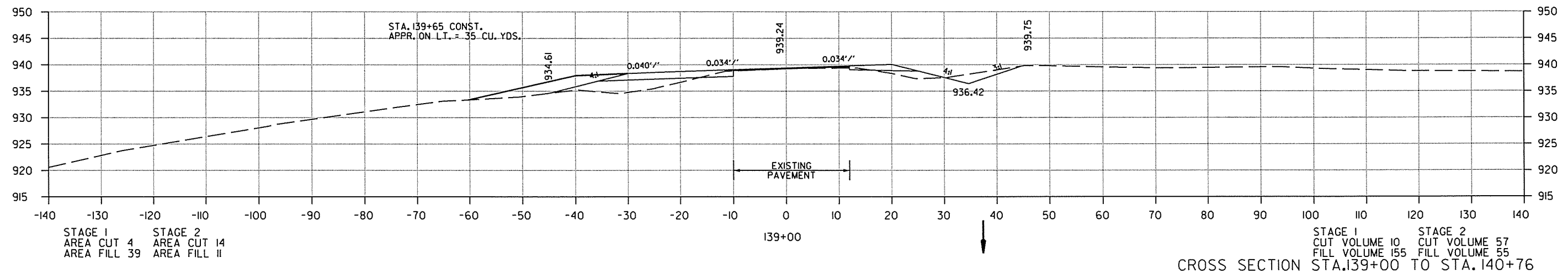
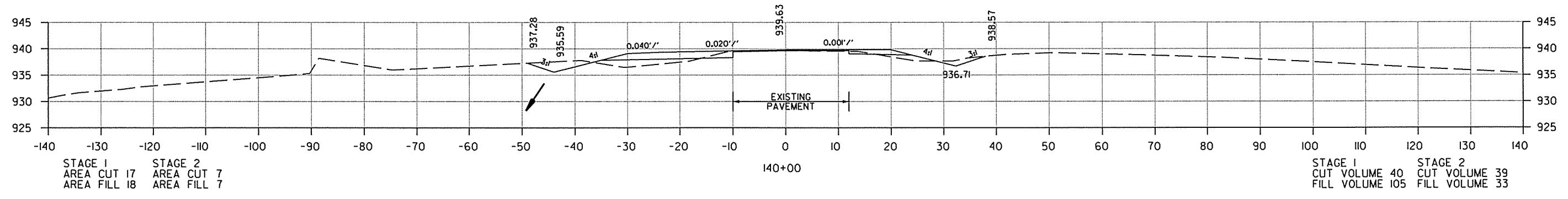
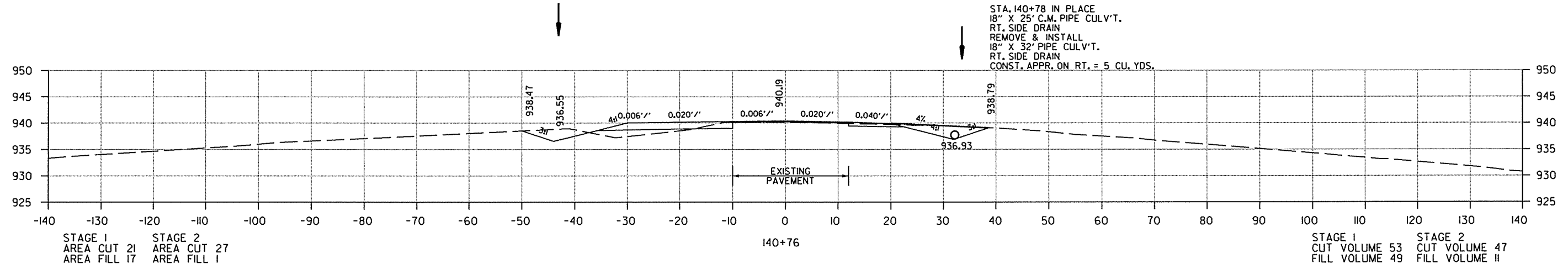
STAGE 1 STAGE 2
 CUT VOLUME 26 CUT VOLUME 16
 FILL VOLUME 42 FILL VOLUME 40

CROSS SECTION STA. 138+00 TO STA. 138+35

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10-09-15				6	ARK.			
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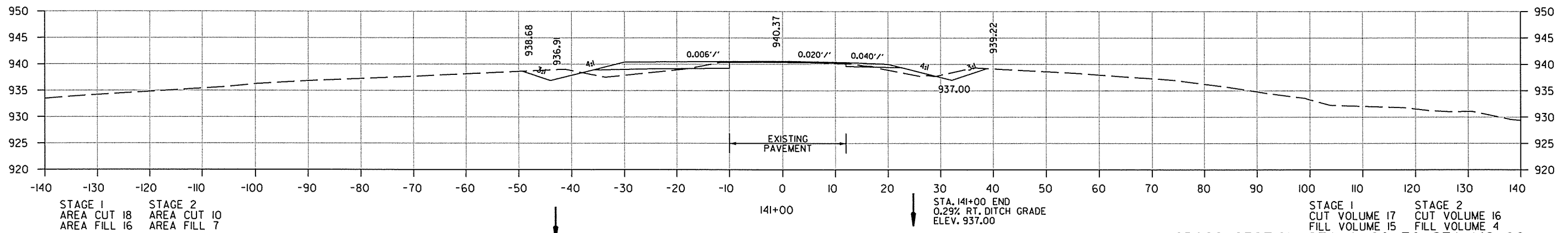
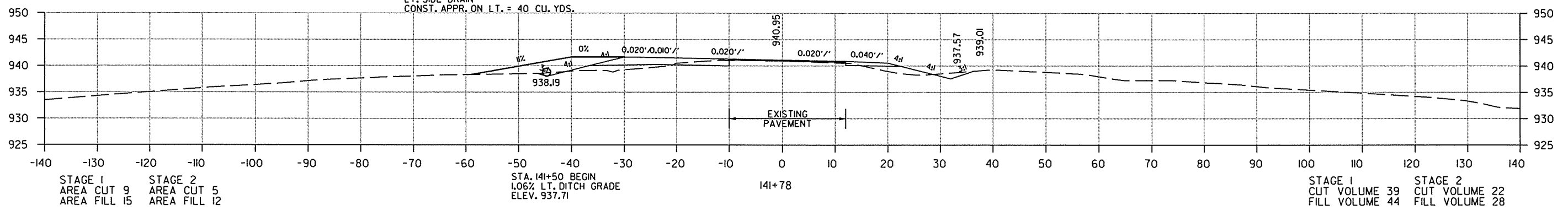
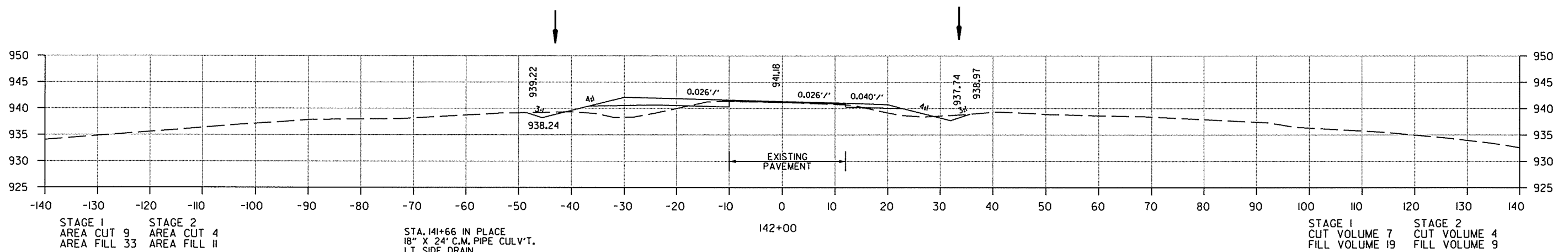
2 CROSS SECTIONS - SITE I



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						JOB NO. 050261	III	148

② CROSS SECTIONS - SITE I

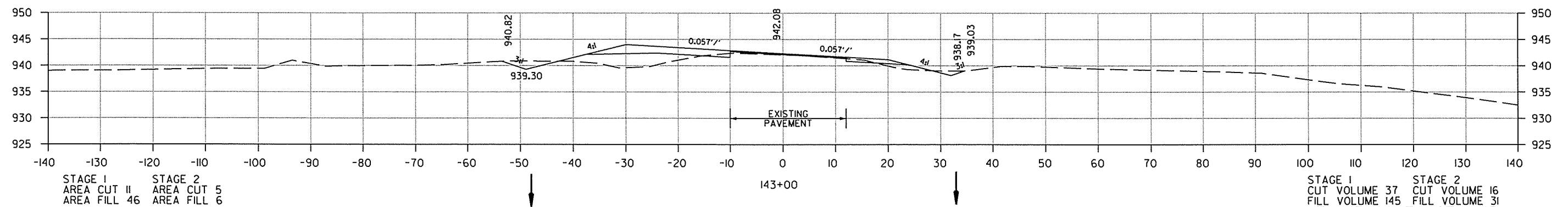
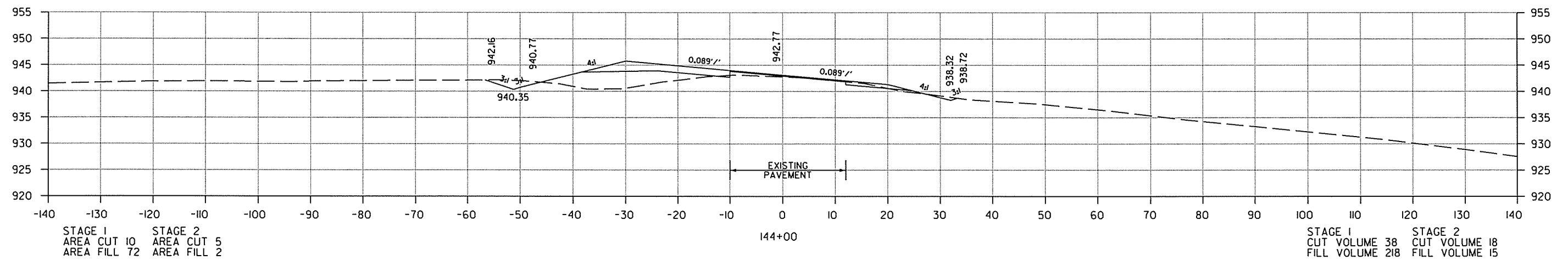
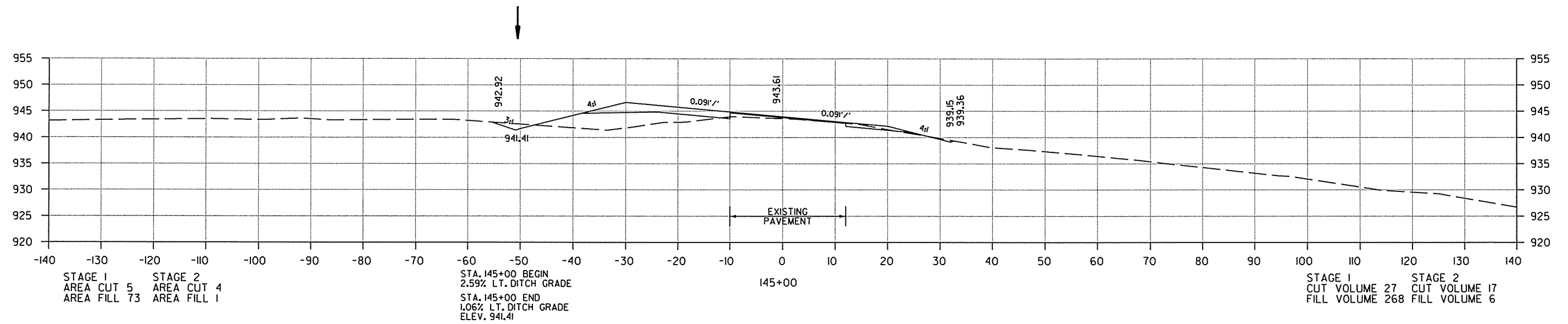


CROSS SECTION STA. 141+00 TO STA. 142+00

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						JOB NO. 050261	#2	148

2 CROSS SECTIONS - SITE 1



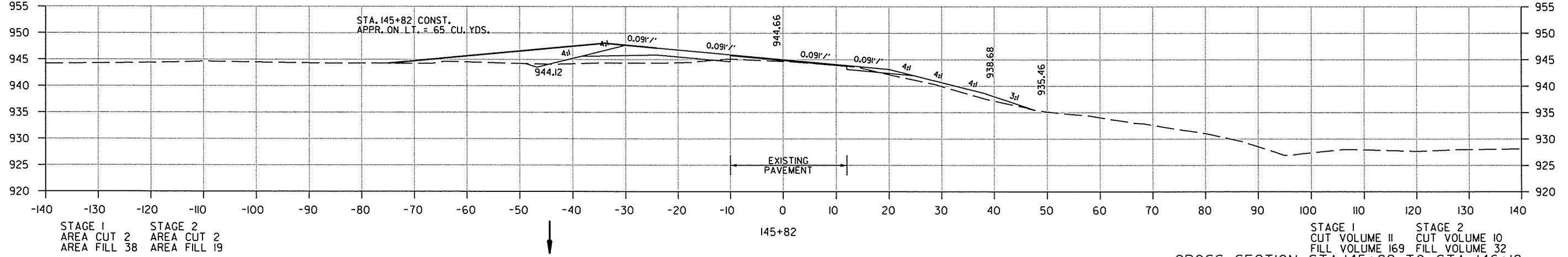
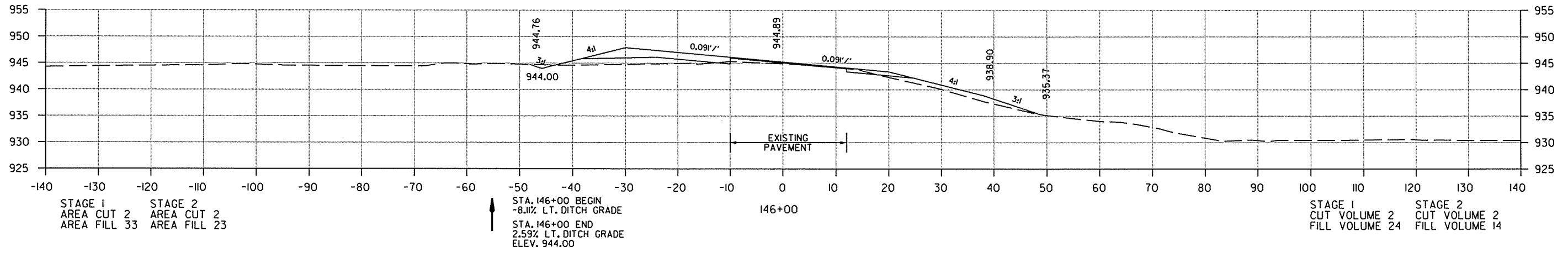
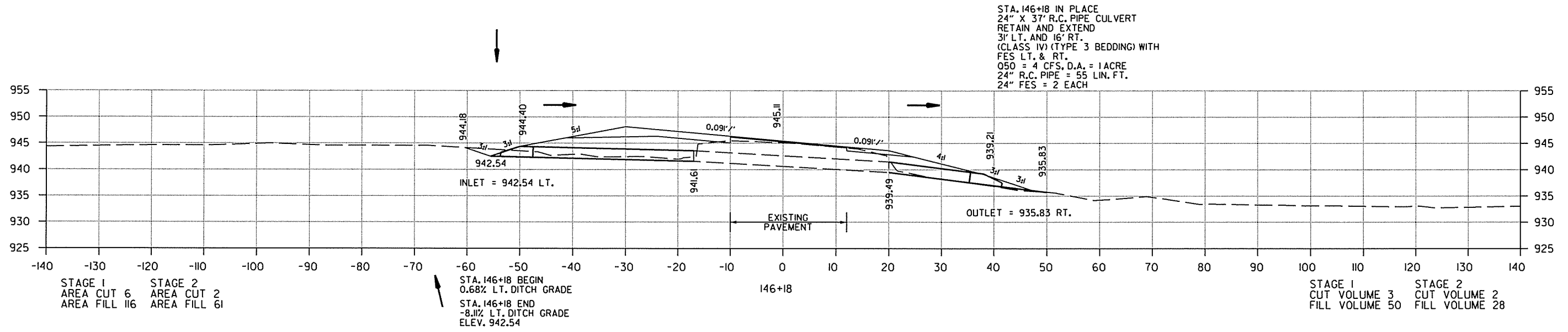
CROSS SECTION STA. 143+00 TO STA. 145+00

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				JOB NO.	050261		113	148

2 CROSS SECTIONS - SITE 1

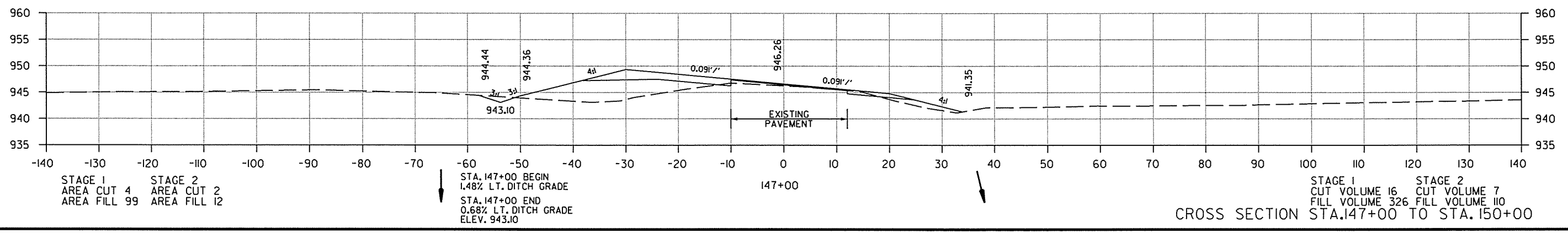
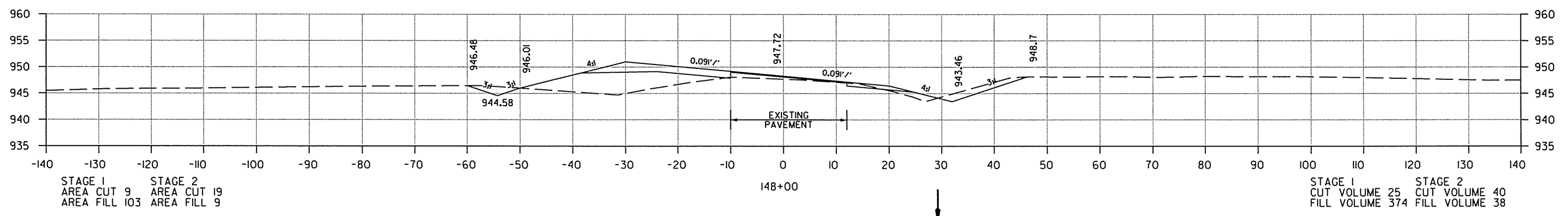
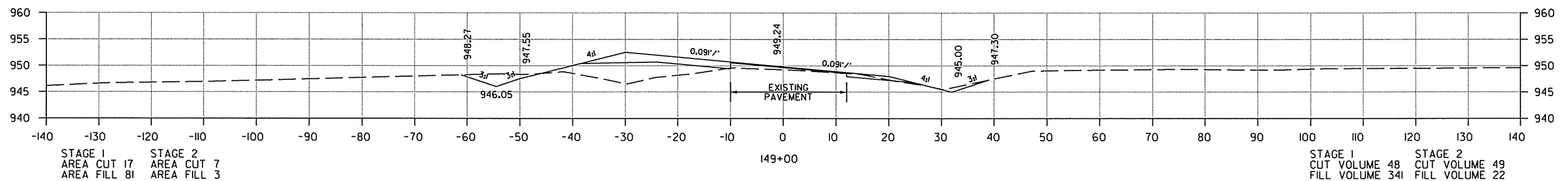
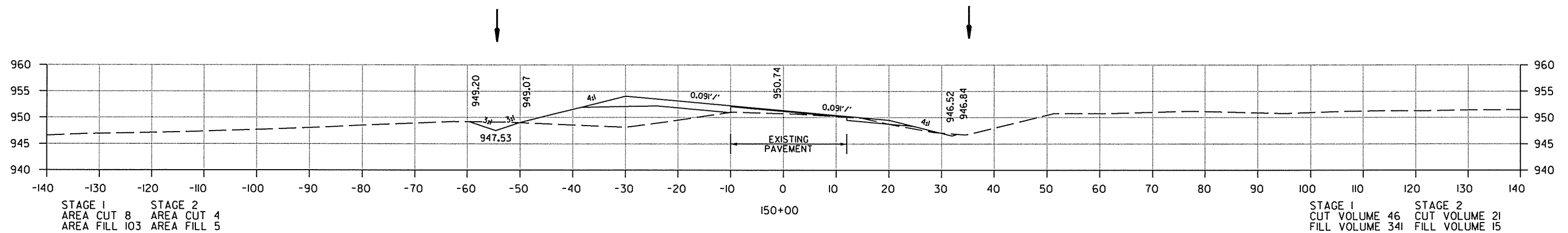


CROSS SECTION STA. 145+82 TO STA. 146+18

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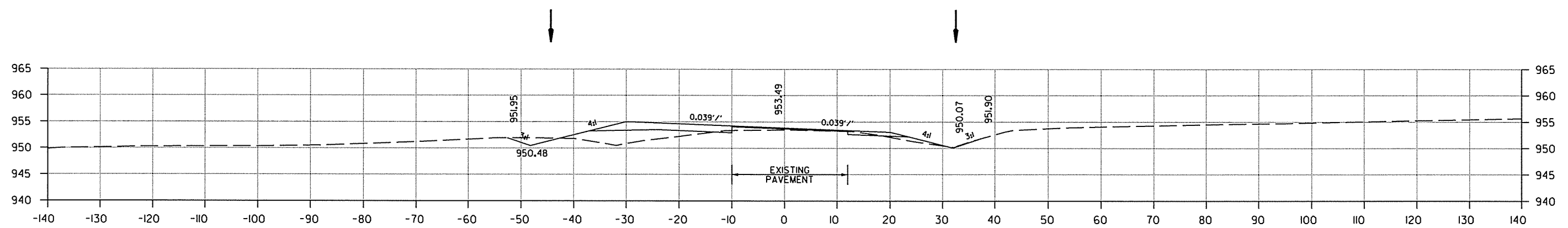
2 CROSS SECTIONS - SITE 1



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② CROSS SECTIONS - SITE I



STAGE 1
AREA CUT 8
AREA FILL 48

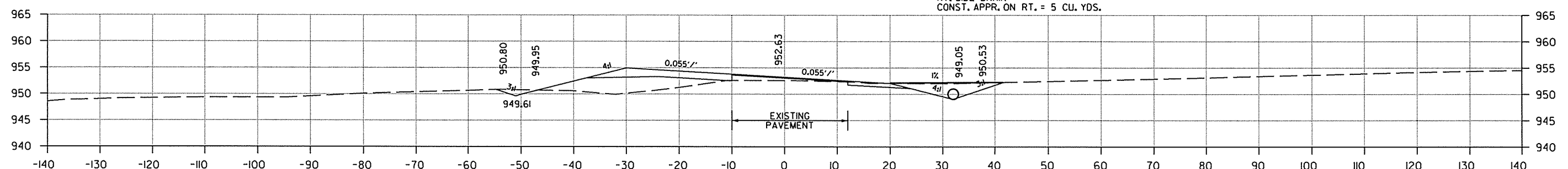
STAGE 2
AREA CUT 3
AREA FILL 6

152+00

STA. 151+42 IN PLACE
24" X 20' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE & INSTALL
24" X 30' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. ON RT. = 5 CU. YDS.

STAGE 1
CUT VOLUME 14
FILL VOLUME 135

STAGE 2
CUT VOLUME 45
FILL VOLUME 9



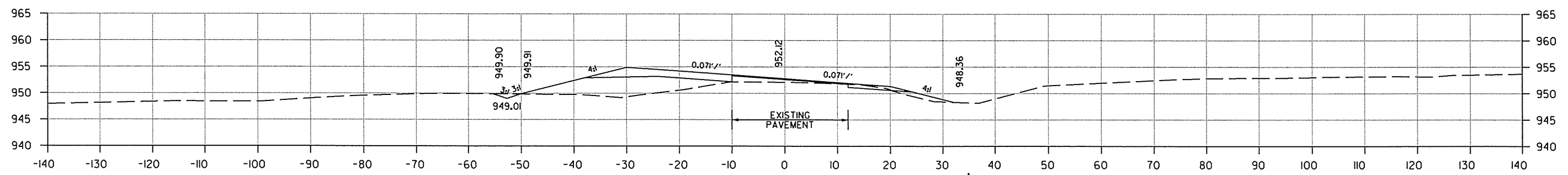
STAGE 1
AREA CUT 5
AREA FILL 76

STAGE 2
AREA CUT 39
AREA FILL 2

151+42

STAGE 1
CUT VOLUME 5
FILL VOLUME 133

STAGE 2
CUT VOLUME 32
FILL VOLUME 9



STAGE 1
AREA CUT 2
AREA FILL 99

STAGE 2
AREA CUT 4
AREA FILL 9

151+00

STAGE 1
CUT VOLUME 19
FILL VOLUME 375

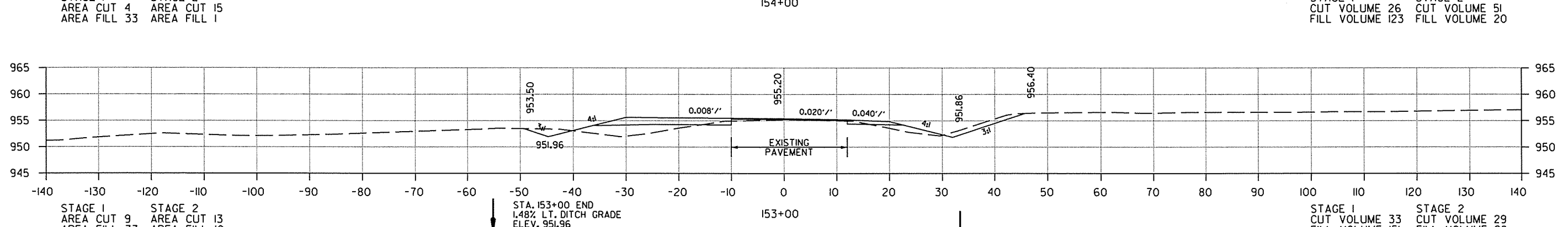
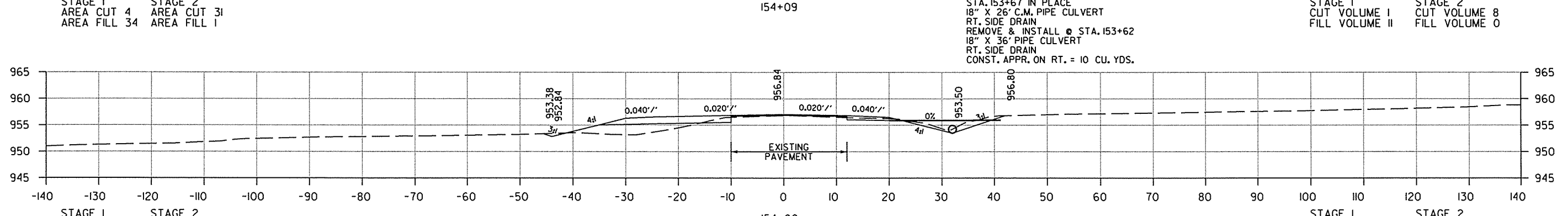
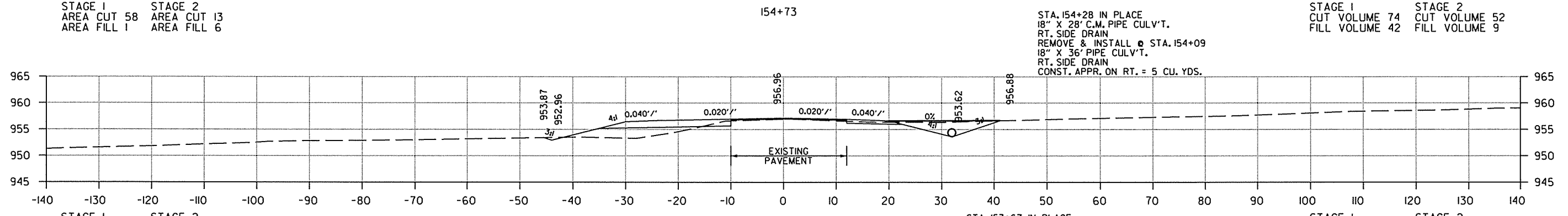
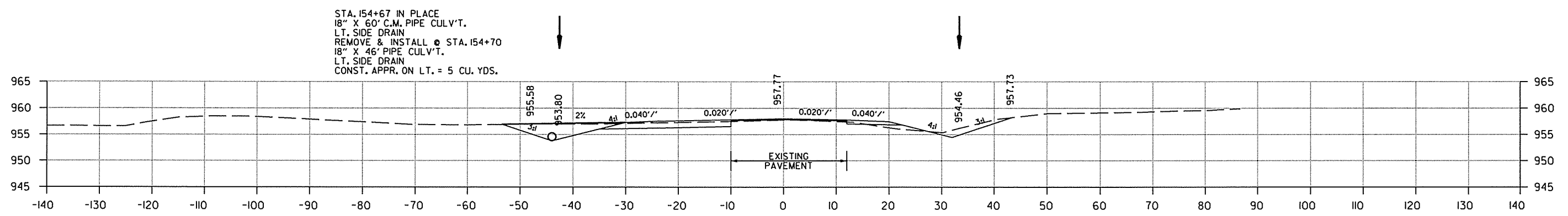
STAGE 2
CUT VOLUME 15
FILL VOLUME 26

CROSS SECTION STA. 151+00 TO STA. 152+00

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② CROSS SECTIONS - SITE 1



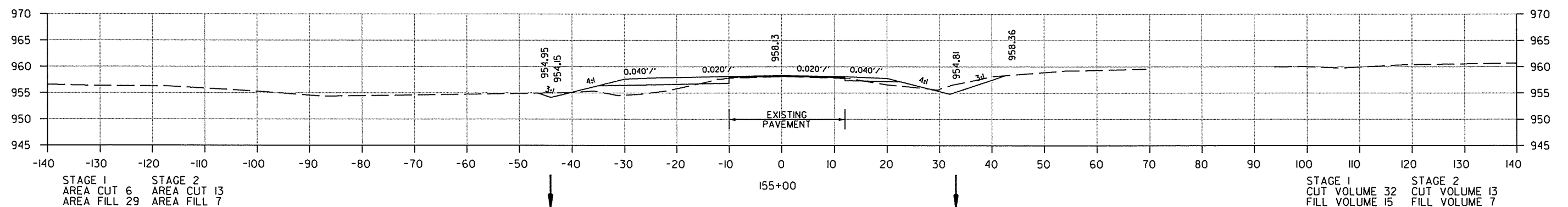
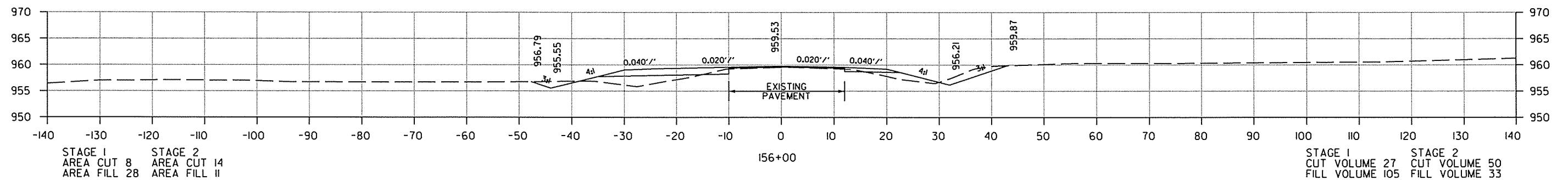
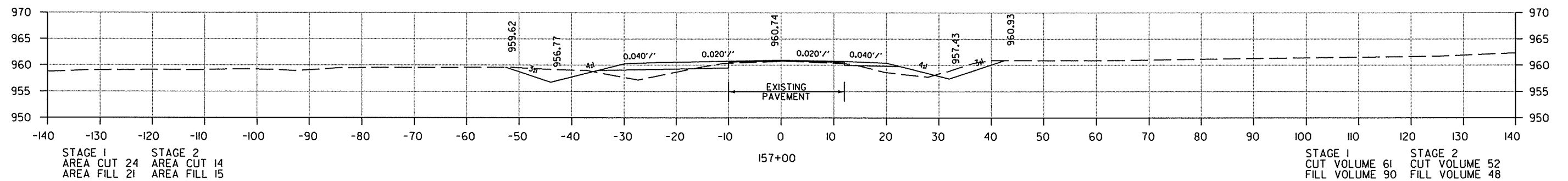
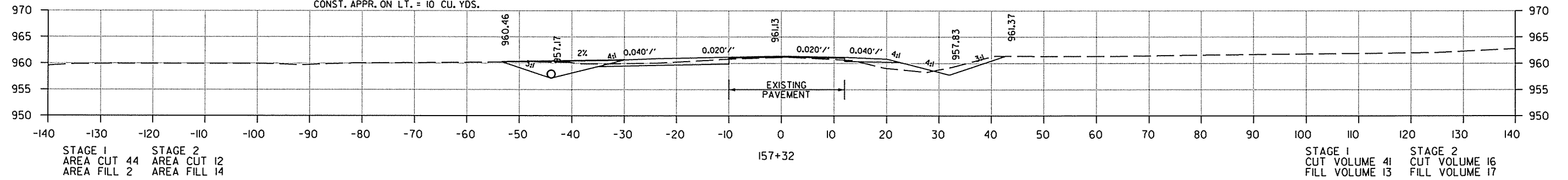
CROSS SECTION STA. 153+00 TO STA. 154+73

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2 CROSS SECTIONS - SITE 1

STA. 157+32 IN PLACE
 18" X 22' C.M. PIPE CULV'T.
 L.T. SIDE DRAIN
 REMOVE & INSTALL
 18" X 32' PIPE CULV'T.
 L.T. SIDE DRAIN
 CONST. APPR. ON L.T. = 10 CU. YDS.



CROSS SECTION STA. 155+00 TO STA. 157+32

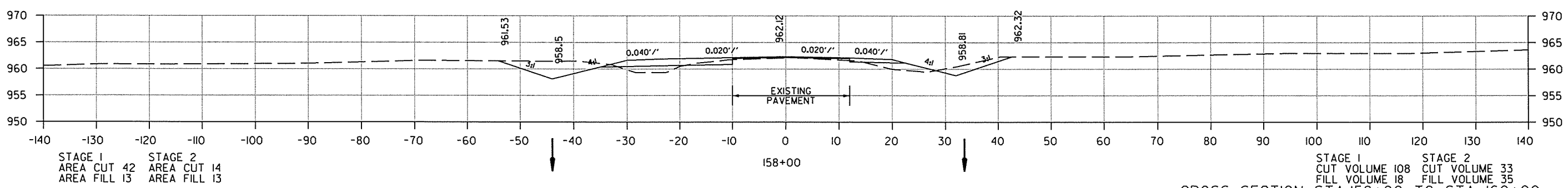
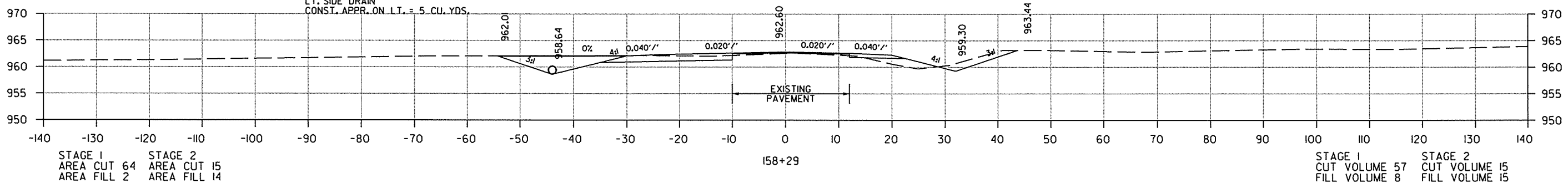
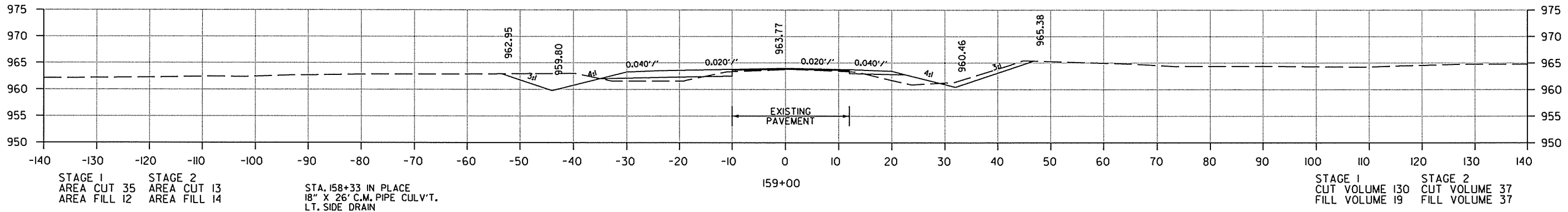
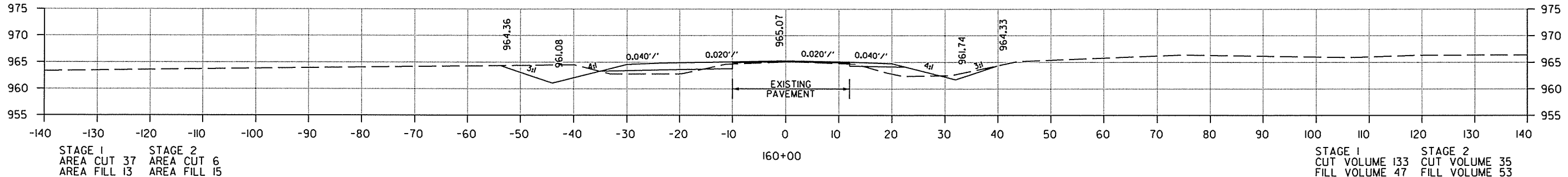
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2 CROSS SECTIONS - SITE 1

BEGIN 200' TAPER @ STA. 160+40



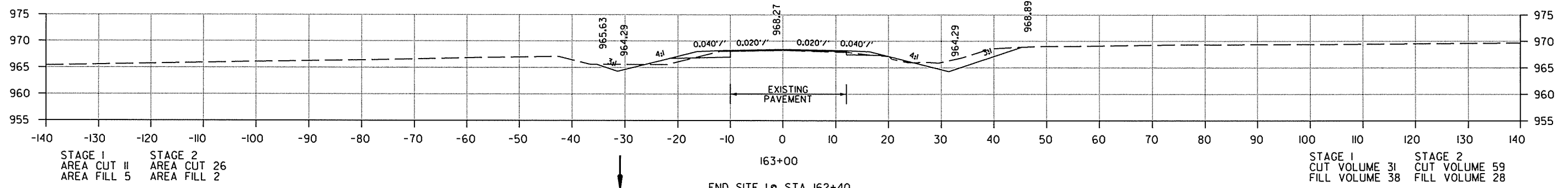
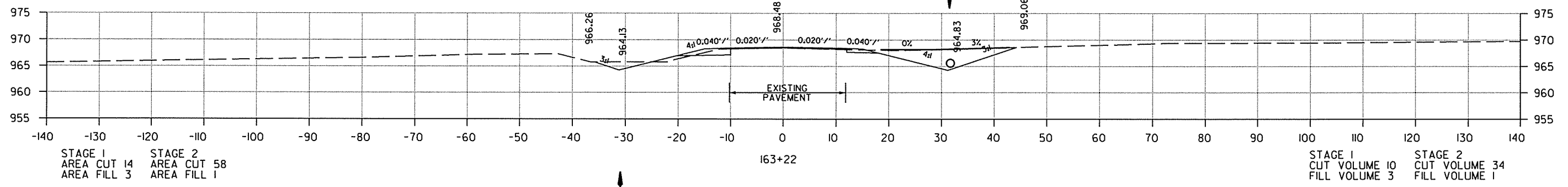
CROSS SECTION STA. 158+00 TO STA. 160+00

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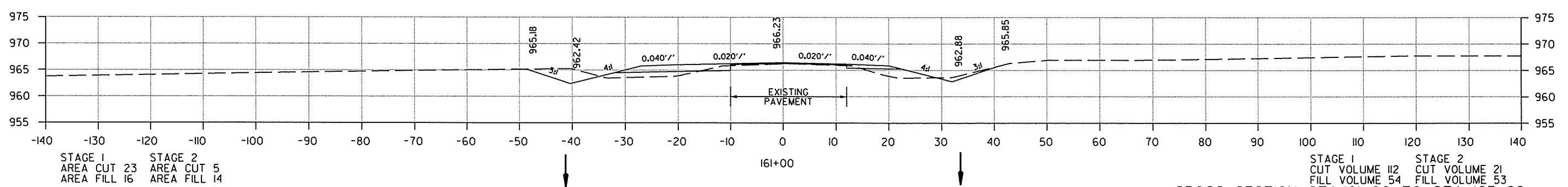
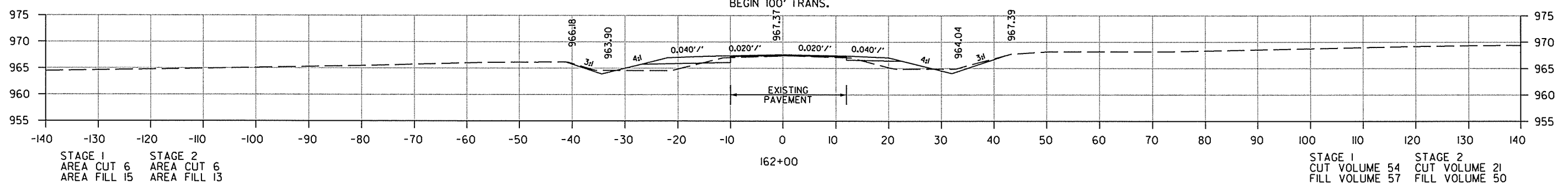
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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2 CROSS SECTIONS - SITE 1

STA. 163+24 IN PLACE
 18" X 20' C.M. PIPE CULV'T.
 RT. SIDE DRAIN
 REMOVE & INSTALL @ STA. 163+22
 18" X 32' PIPE CULV'T.
 RT. SIDE DRAIN
 CONST. APPR. ON RT. = 5 CU. YDS.



END SITE @ STA. 162+40
 END 200' TAPER
 BEGIN 100' TRANS.

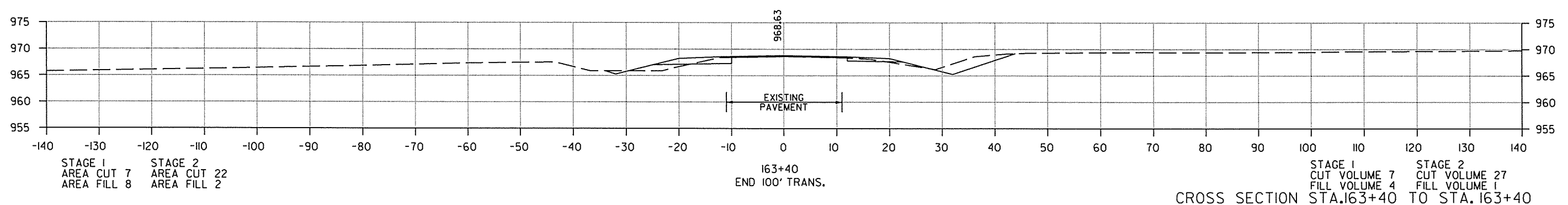


CROSS SECTION STA. 161+00 TO STA. 163+22

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						JOB NO. 050261	120	148

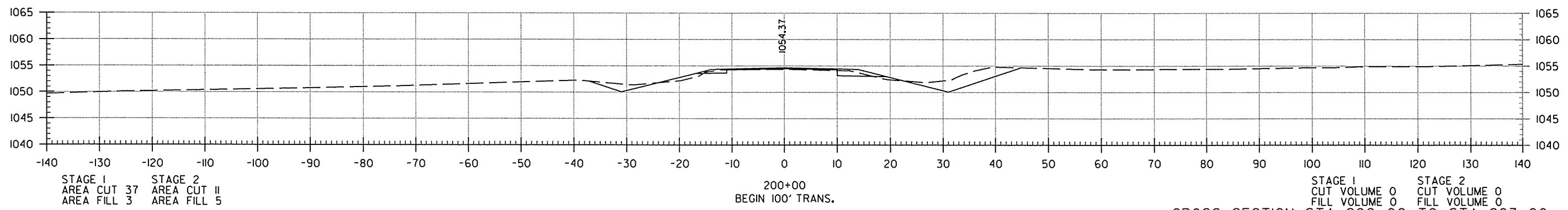
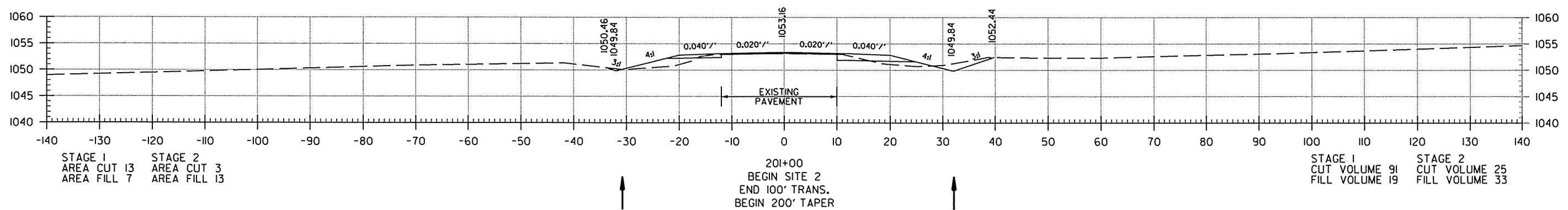
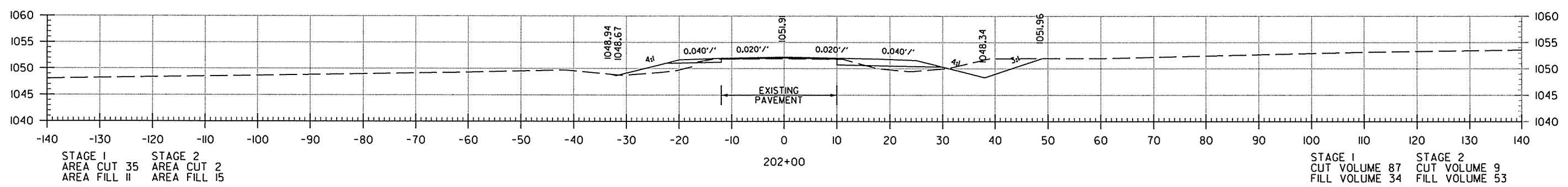
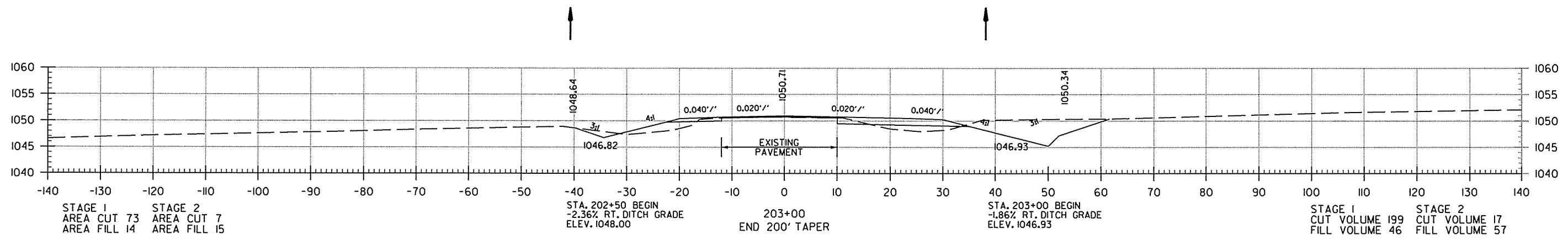
② CROSS SECTIONS - SITE 1



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2 CROSS SECTIONS - SITE 2

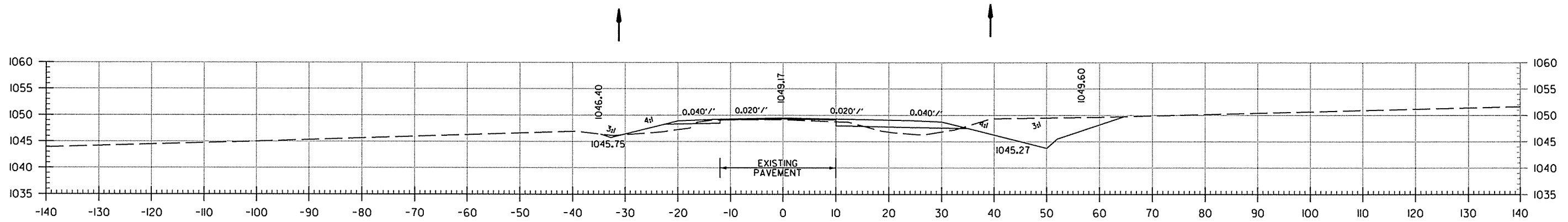


CROSS SECTION STA. 200+00 TO STA. 203+00

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2 CROSS SECTIONS - SITE 2



STAGE 1
AREA CUT 92
AREA FILL 18

STAGE 2
AREA CUT 3
AREA FILL 12

STA. 205+00 END
1.18% LT. DITCH GRADE
ELEV. 1045.75

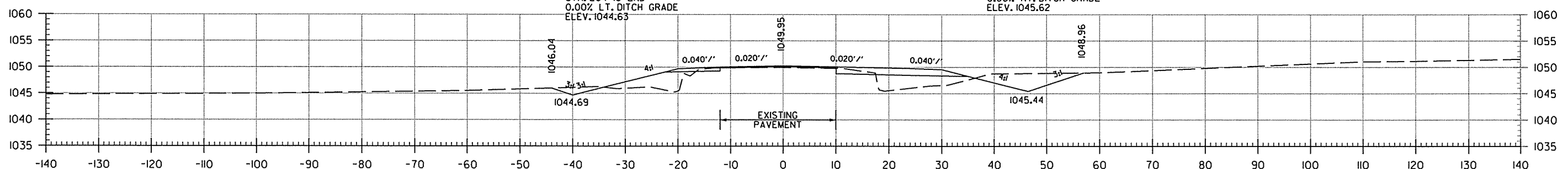
STA. 204+10 BEGIN
1.18% LT. DITCH GRADE
ELEV. 1044.63

205+00

STA. 204+10 END
0.00% RT. DITCH GRADE
ELEV. 1045.62

STAGE 1
CUT VOLUME 250
FILL VOLUME 105

STAGE 2
CUT VOLUME 24
FILL VOLUME 82



STAGE 1
AREA CUT 43
AREA FILL 39

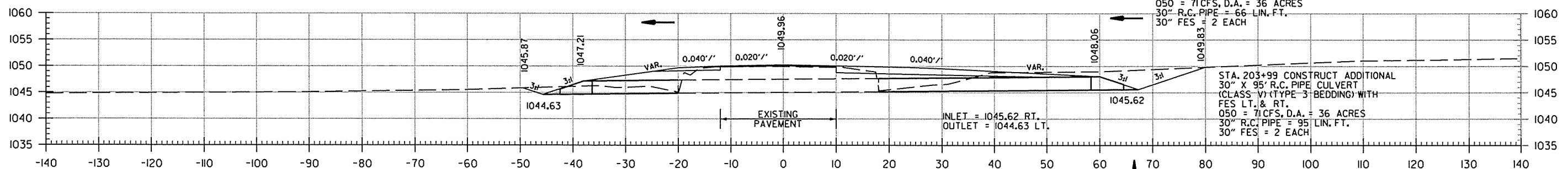
STAGE 2
AREA CUT 10
AREA FILL 32

204+00

STA. 203+99 IN PLACE
30" X 38" R.C. PIPE CULVERT
RETAIN AND EXTEND
17' LT. AND 4' RT.
(CLASS V) (TYPE 3 BEDDING) WITH
FES LT. & RT.
050 = 71 CFS, D.A. = 36 ACRES
30" R.C. PIPE = 66 LIN. FT.
30" FES = 2 EACH

STAGE 1
CUT VOLUME 2
FILL VOLUME 1

STAGE 2
CUT VOLUME 0
FILL VOLUME 2



STAGE 1
AREA CUT 63
AREA FILL 39

STAGE 2
AREA CUT 8
AREA FILL 49

STA. 203+90 BEGIN
0.00% LT. DITCH GRADE
ELEV. 1044.63

STA. 203+90 END
-2.36% LT. DITCH GRADE
ELEV. 1044.63

203+99

STA. 203+95 BEGIN
0.00% RT. DITCH GRADE
ELEV. 1045.32

STA. 203+95 END
-1.86% RT. DITCH GRADE
ELEV. 1045.32

STAGE 1
CUT VOLUME 250
FILL VOLUME 97

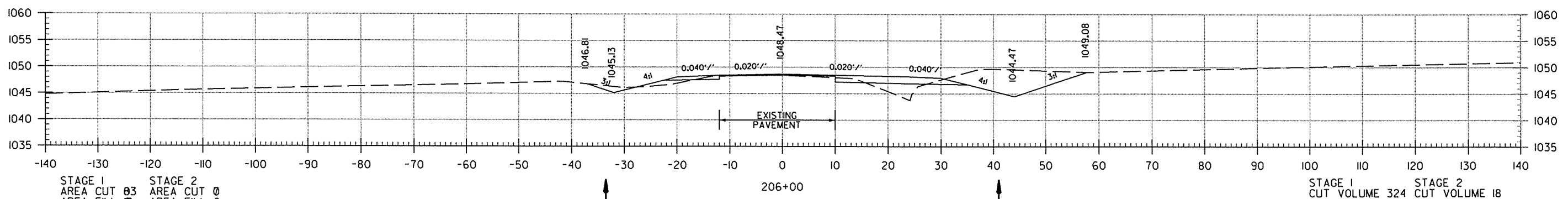
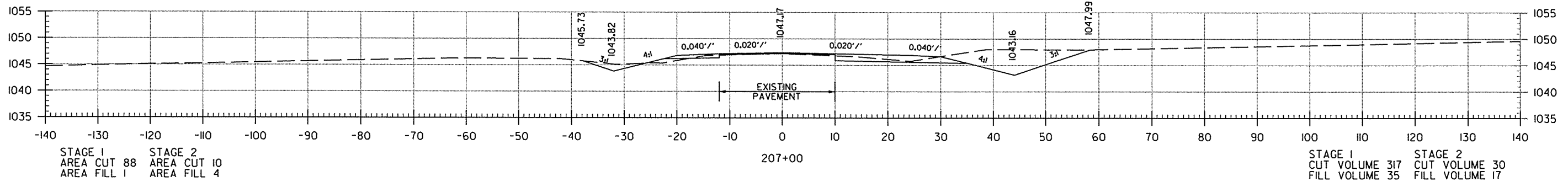
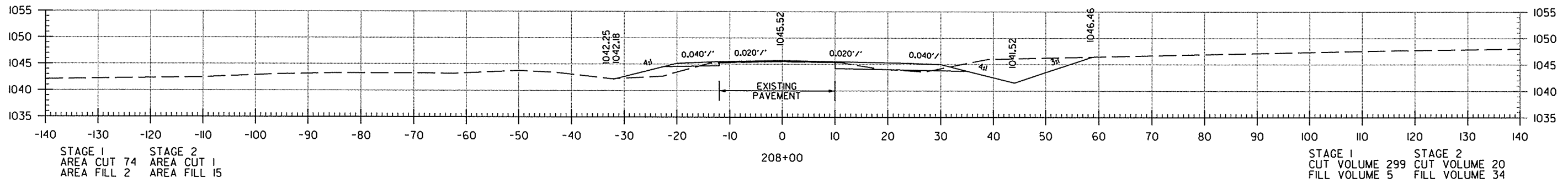
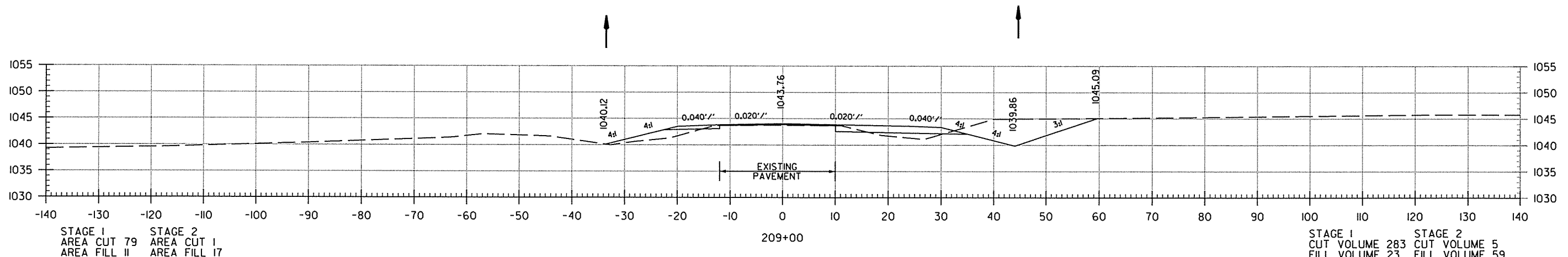
STAGE 2
CUT VOLUME 26
FILL VOLUME 118

CROSS SECTION STA. 203+99 TO STA. 205+00

1/15/2015
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DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
10-09-15				6	ARK.			
						JOB NO. 050261	123	148

2 CROSS SECTIONS - SITE 2

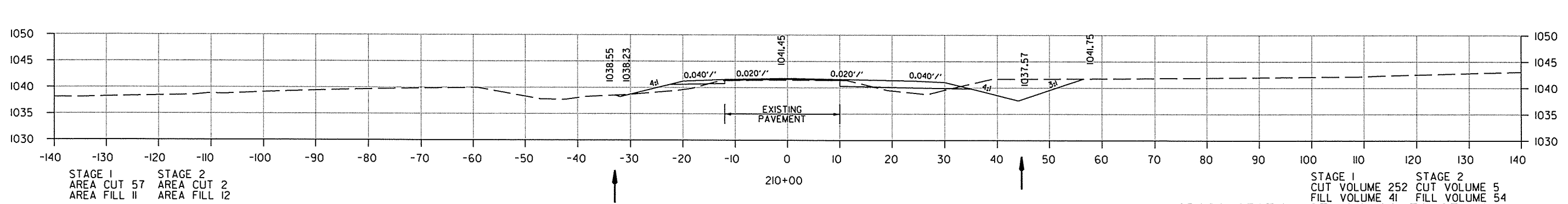
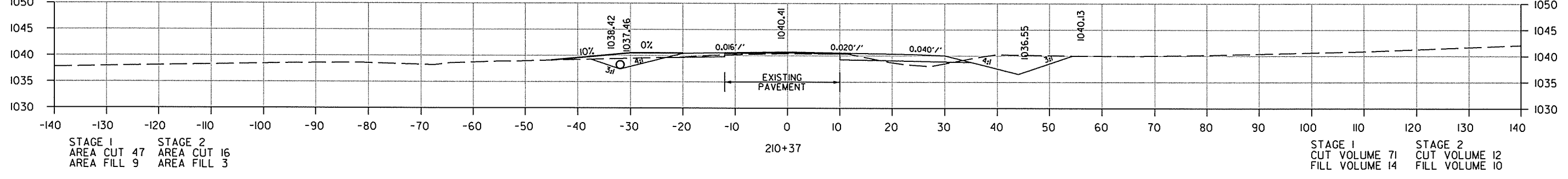
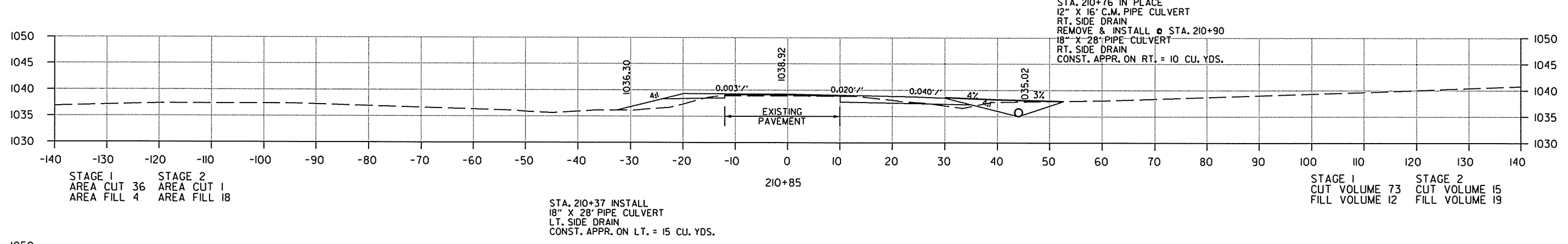
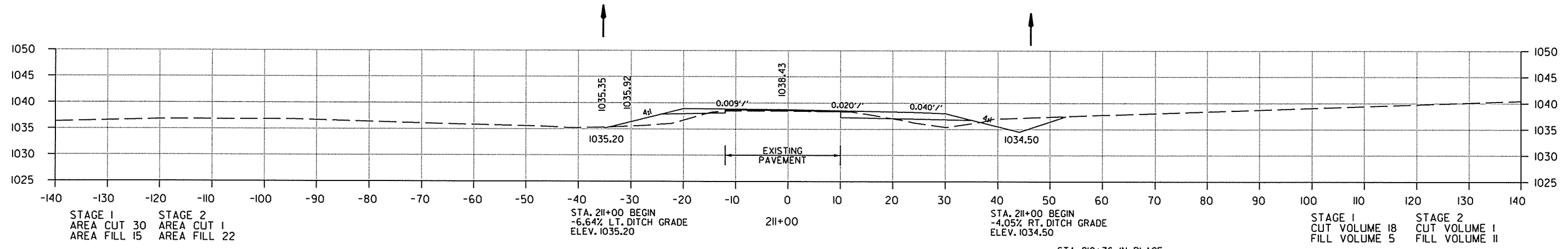


CROSS SECTION STA. 206+00 TO STA. 209+00

1/15/2015
R050261.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
10-09-15				6	ARK.			
						JOB NO. 050261	124	148

2 CROSS SECTIONS - SITE 2

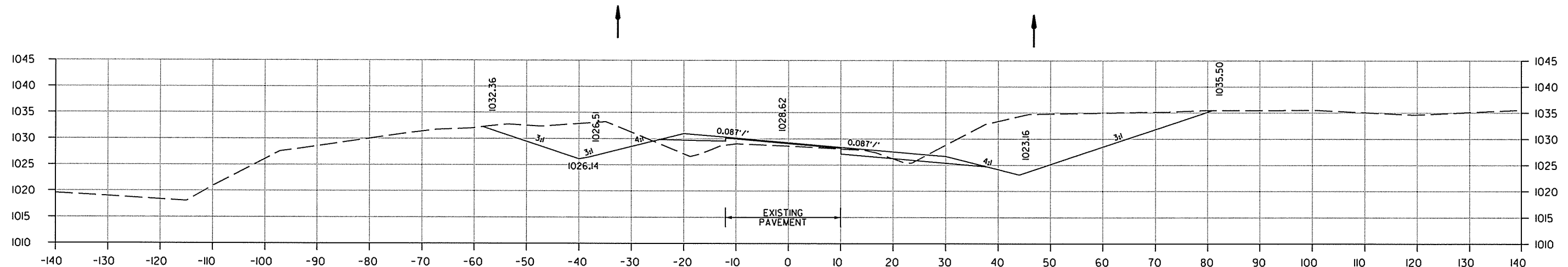


CROSS SECTION STA. 210+00 TO STA. 211+00

1/15/2015
R050261.DGN

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
10-09-15				6	ARK.			
						JOB NO. 050261	125	148

2 CROSS SECTIONS - SITE 2



STAGE 1
AREA CUT 335
AREA FILL 5

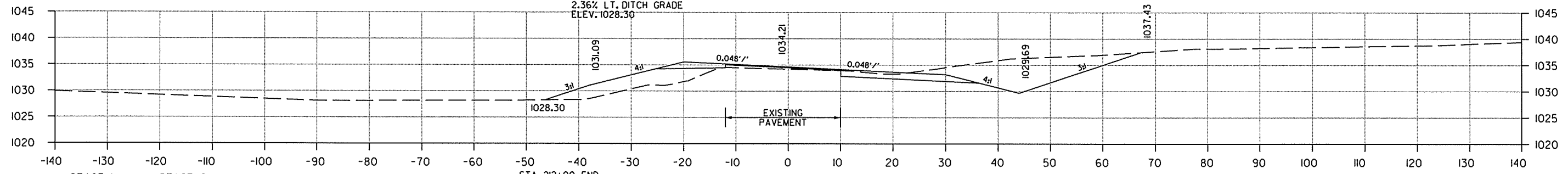
STAGE 2
AREA CUT 122
AREA FILL 35

STA. 212+50 BEGIN
-6.68% LT. DITCH GRADE
STA. 212+50 END
2.36% LT. DITCH GRADE
ELEV. 1029.48
STA. 212+00 BEGIN
2.36% LT. DITCH GRADE
ELEV. 1028.30

213+00

STAGE 1
CUT VOLUME 921
FILL VOLUME 12

STAGE 2
CUT VOLUME 226
FILL VOLUME 201



STAGE 1
AREA CUT 162
AREA FILL 2

STAGE 2
AREA CUT 0
AREA FILL 74

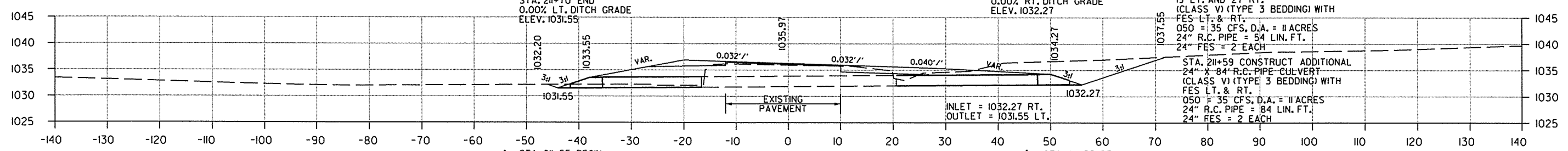
STA. 212+00 END
-10.83% LT. DITCH GRADE
ELEV. 1028.30
STA. 211+70 BEGIN
-10.83% LT. DITCH GRADE
STA. 211+70 END
0.00% LT. DITCH GRADE
ELEV. 1031.55

212+00

STA. 211+70 END
0.00% RT. DITCH GRADE
ELEV. 1032.27

STAGE 1
CUT VOLUME 199
FILL VOLUME 5

STAGE 2
CUT VOLUME 1
FILL VOLUME 110



STAGE 1
AREA CUT 99
AREA FILL 5

STAGE 2
AREA CUT 2
AREA FILL 71

STA. 211+55 BEGIN
0.00% LT. DITCH GRADE
STA. 211+55 END
-6.64% LT. DITCH GRADE
ELEV. 1031.55

211+59

INLET = 1032.27 RT.
OUTLET = 1031.55 LT.

STA. 211+55 BEGIN
0.00% RT. DITCH GRADE
STA. 211+55 END
-4.05% RT. DITCH GRADE
ELEV. 1032.27

STA. 211+59 IN PLACE
24" X 38" R.C. PIPE CULVERT
RETAIN AND EXTEND
19' LT. AND 27' RT.
(CLASS V) (TYPE 3 BEDDING) WITH
FES LT. & RT.
050 = 35 CFS, D.A. = 11 ACRES
24" R.C. PIPE = 54 LIN. FT.
24" FES = 2 EACH

STA. 211+59 CONSTRUCT ADDITIONAL
24" X 84" R.C. PIPE CULVERT
(CLASS V) (TYPE 3 BEDDING) WITH
FES LT. & RT.
050 = 35 CFS, D.A. = 11 ACRES
24" R.C. PIPE = 84 LIN. FT.
24" FES = 2 EACH

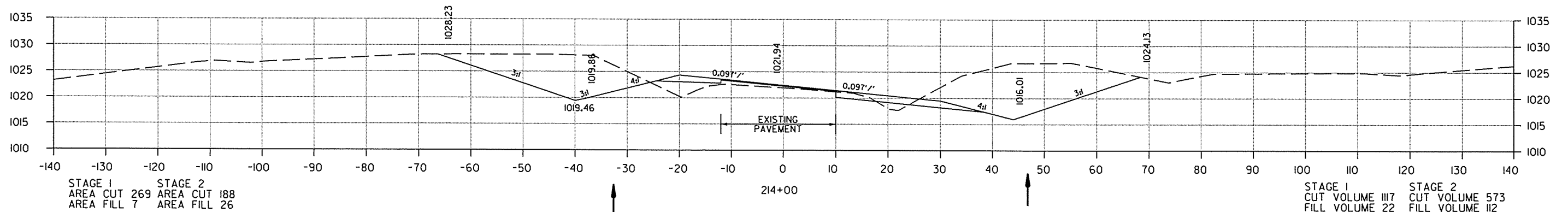
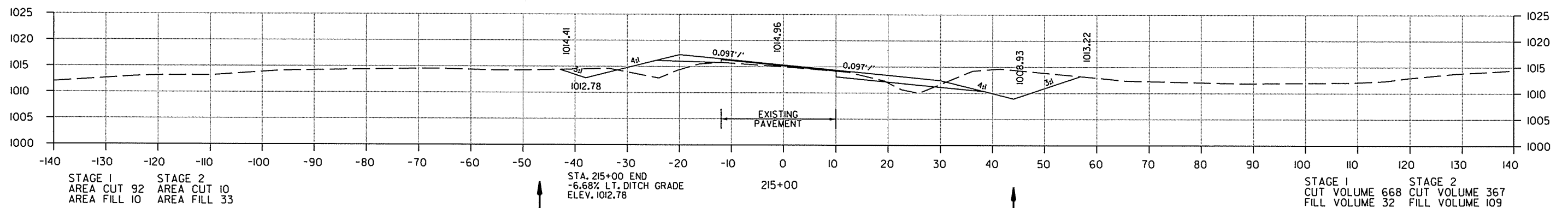
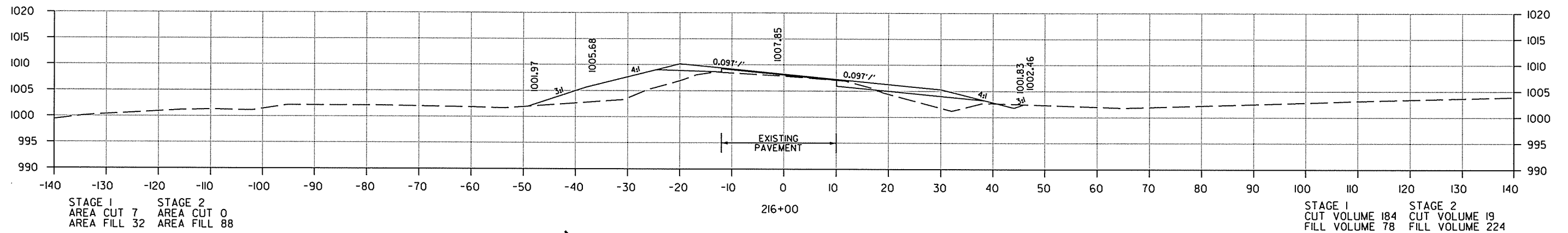
STAGE 1
CUT VOLUME 141
FILL VOLUME 21

STAGE 2
CUT VOLUME 3
FILL VOLUME 102

CROSS SECTION STA. 211+59 TO STA. 213+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
10-09-15				6	ARK.			
						JOB NO. 050261	126	148

2 CROSS SECTIONS - SITE 2



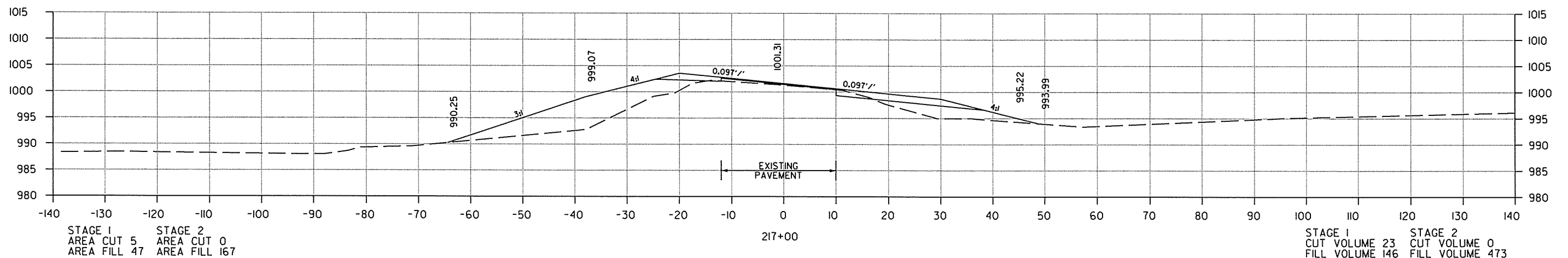
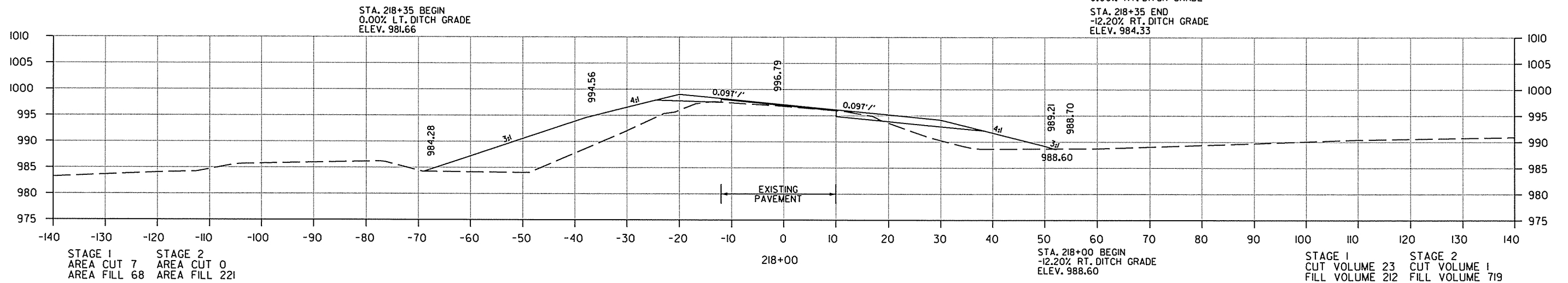
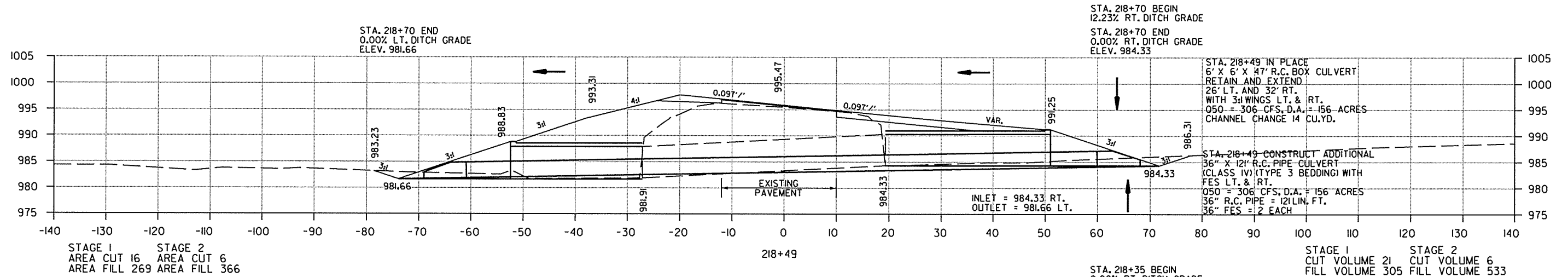
CROSS SECTION STA. 214+00 TO STA. 216+00

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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
10-09-15				6	ARK.			
						JOB NO. 050261	127	148

2 CROSS SECTIONS - SITE 2



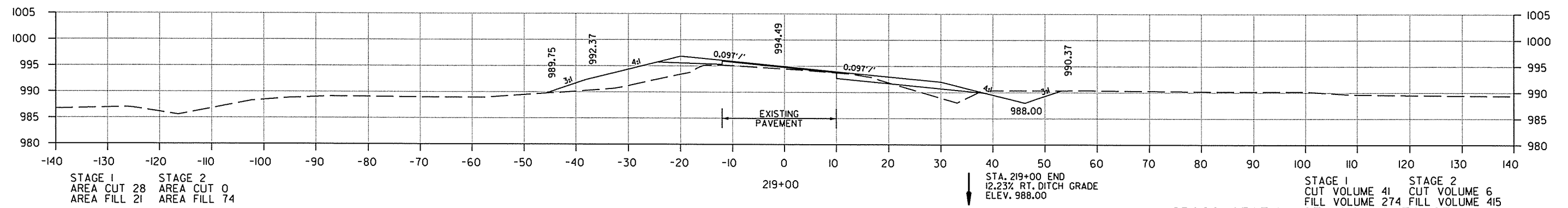
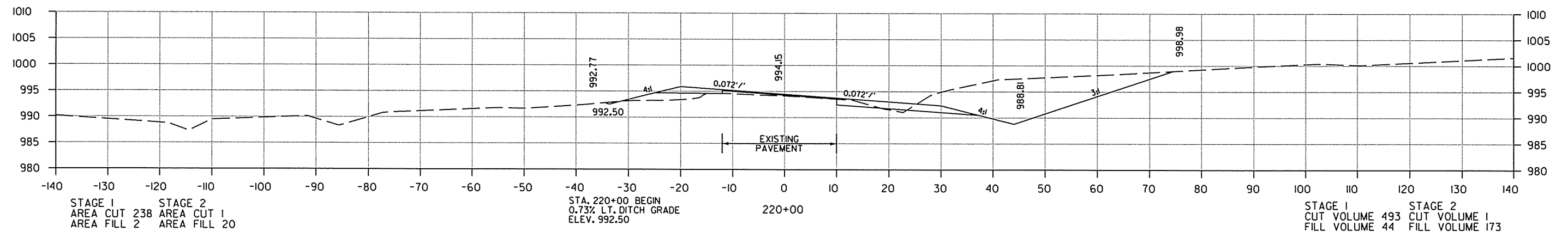
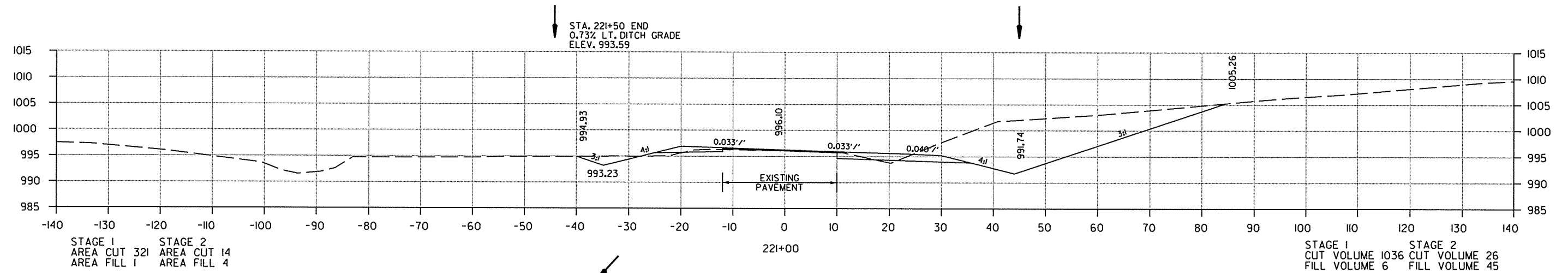
CROSS SECTION STA. 217+00 TO STA. 218+49

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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
10-09-15				6	ARK.			
						JOB NO. 050261	128	148

② CROSS SECTIONS - SITE 2



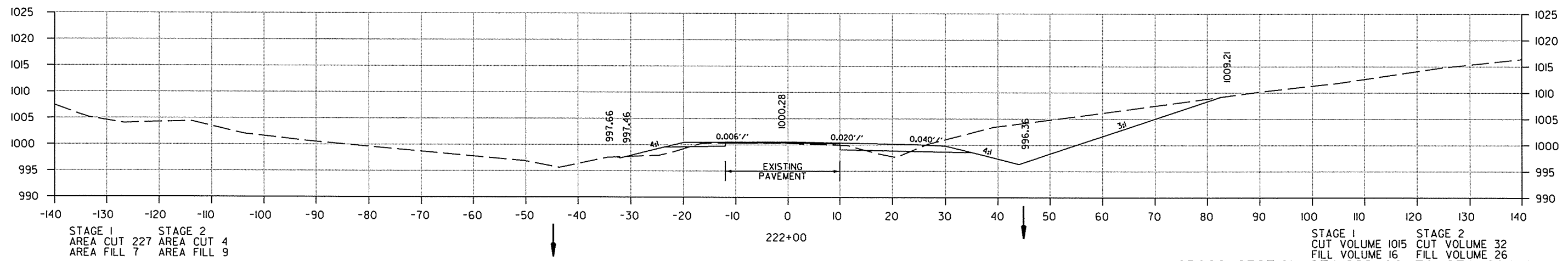
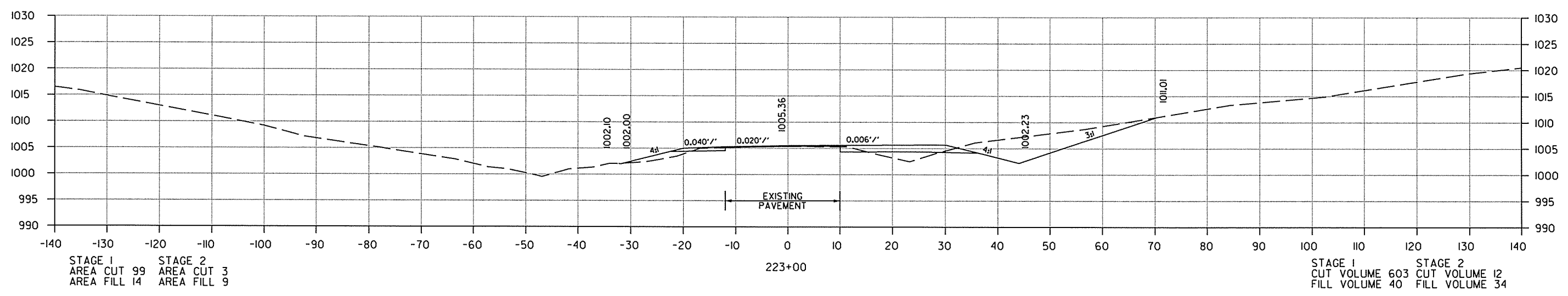
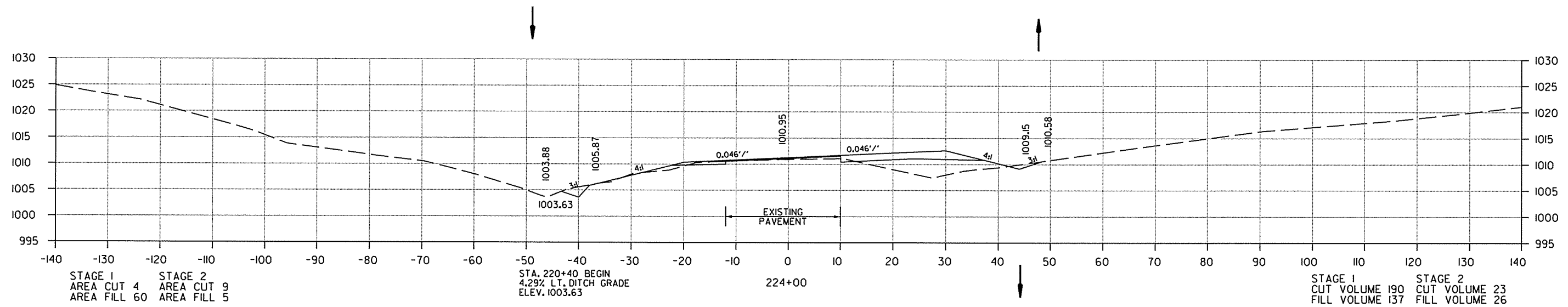
CROSS SECTION STA. 219+00 TO STA. 221+00

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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
10-09-15				6	ARK.			
						JOB NO. 050261	129	148

2 CROSS SECTIONS - SITE 2

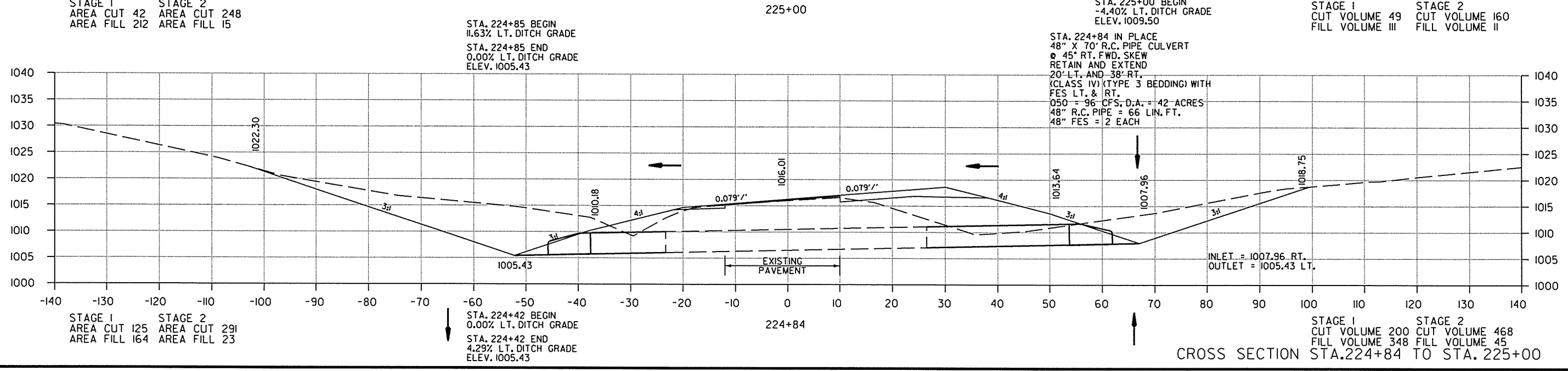
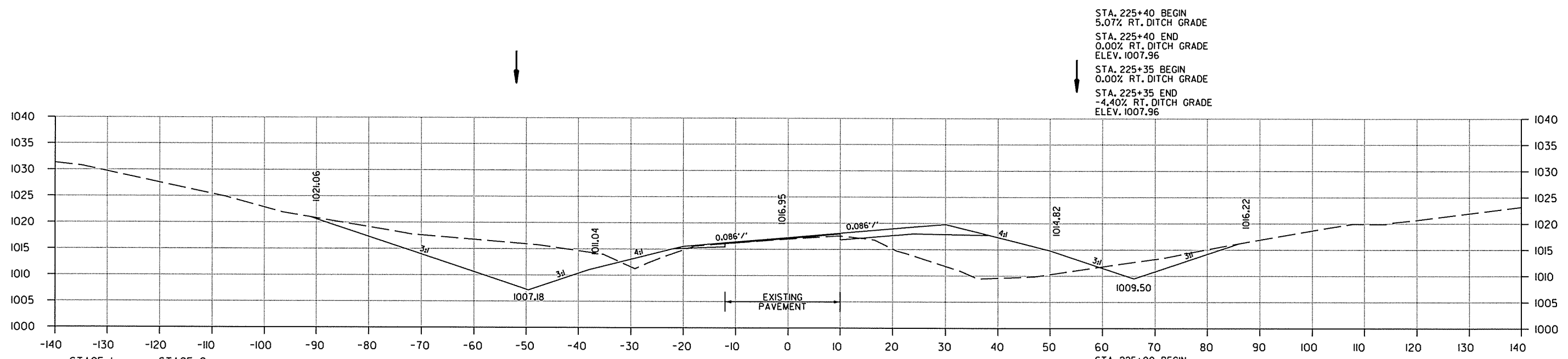


CROSS SECTION STA. 222+00 TO STA. 224+00

1/15/2015
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10-09-15				6	ARK.			
				JOB NO.	050261		130	148

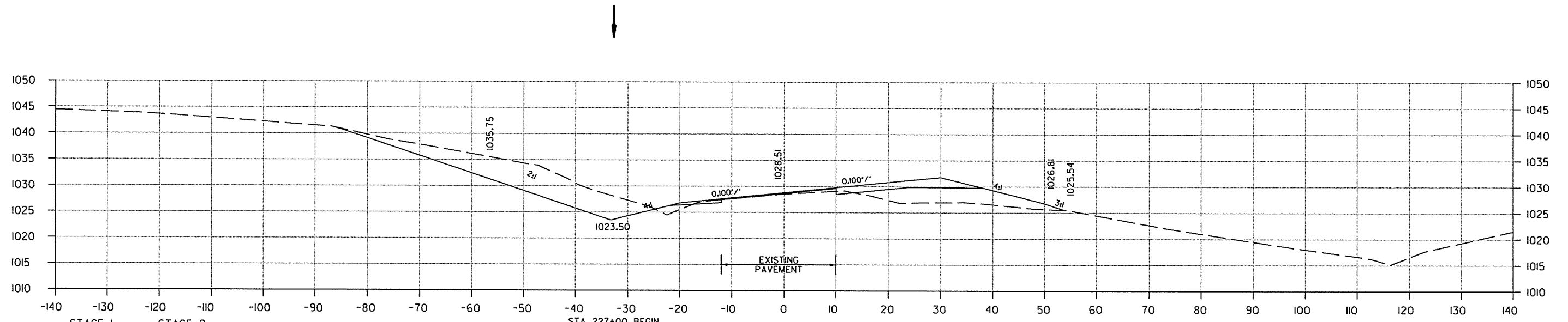
2 CROSS SECTIONS - SITE 2



1/15/2015
R050261.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
10-09-15				6	ARK.			
						JOB NO. 050261	131	148

2 CROSS SECTIONS - SITE 2



STAGE 1
AREA CUT 1
AREA FILL 89

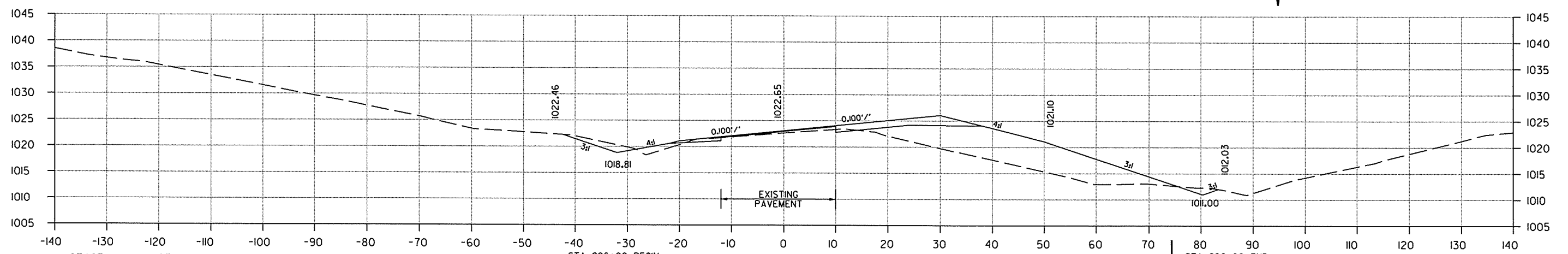
STAGE 2
AREA CUT 197
AREA FILL 7

STA. 227+00 BEGIN
5.38% LT. DITCH GRADE

STA. 227+00 END
4.69% LT. DITCH GRADE
ELEV. 1023.50

STAGE 1
CUT VOLUME 15
FILL VOLUME 610

STAGE 2
CUT VOLUME 393
FILL VOLUME 31



STAGE 1
AREA CUT 7
AREA FILL 241

STAGE 2
AREA CUT 15
AREA FILL 9

STA. 226+00 BEGIN
4.69% LT. DITCH GRADE

STA. 226+00 END
11.63% LT. DITCH GRADE
ELEV. 1018.81

STA. 226+00 END
5.07% RT. DITCH GRADE
ELEV. 1011.00

STAGE 1
CUT VOLUME 89
FILL VOLUME 838

STAGE 2
CUT VOLUME 488
FILL VOLUME 45

CROSS SECTION STA. 226+00 TO STA. 227+00

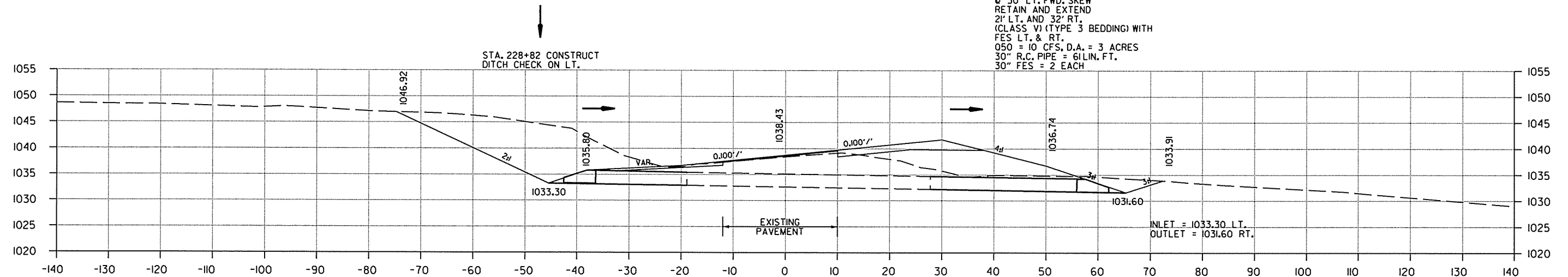
1/15/2015

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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
10-09-15				6	ARK.			
						JOB NO. 050261	132	148

2 CROSS SECTIONS - SITE 2

STA. 228+82 IN PLACE
 30" X 53" R.C. PIPE CULVERT
 @ 30' LT. FWD. SKEW
 RETAIN AND EXTEND
 2' LT. AND 32' RT.
 (CLASS V) (TYPE 3 BEDDING) WITH
 FES LT. & RT.
 Q50 = 10 CFS, D.A. = 3 ACRES
 30" R.C. PIPE = 6 LIN. FT.
 30" FES = 2 EACH



STAGE 1
 AREA CUT 22
 AREA FILL 121

STAGE 2
 AREA CUT 291
 AREA FILL 1

STA. 228+82 BEGIN
 0.00% LT. DITCH GRADE
 STA. 228+82 END
 5.38% LT. DITCH GRADE
 ELEV. 1033.30

228+82

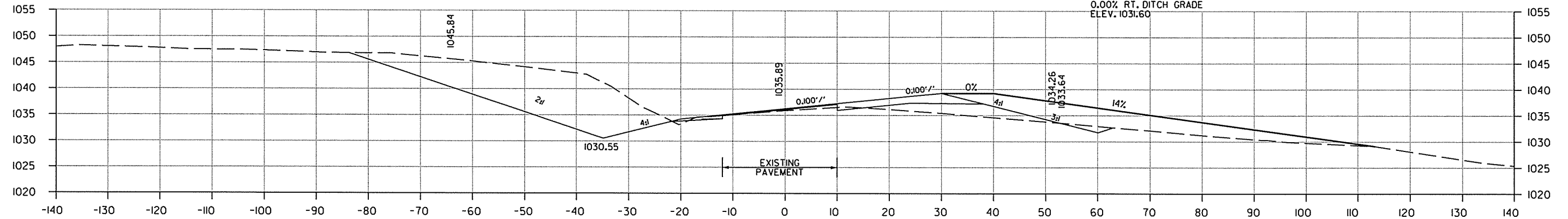
STA. 228+82 BEGIN
 21.50% RT. DITCH GRADE
 STA. 228+82 END
 0.00% RT. DITCH GRADE
 ELEV. 1031.60

STAGE 1
 CUT VOLUME 27
 FILL VOLUME 206

STAGE 2
 CUT VOLUME 634
 FILL VOLUME 3

STA. 228+30 CONST.
 APPR. ON RT. = 180 CU. YDS.

STA. 228+50 BEGIN
 0.00% RT. DITCH GRADE
 ELEV. 1031.60



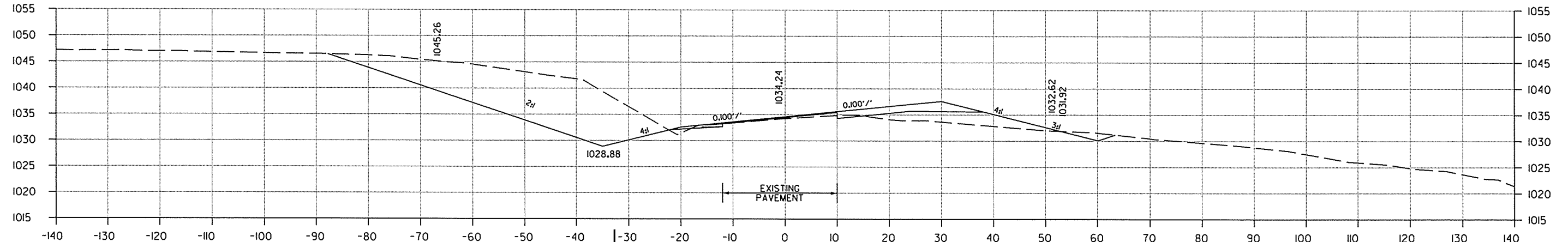
STAGE 1
 AREA CUT 6
 AREA FILL 97

STAGE 2
 AREA CUT 380
 AREA FILL 2

228+31

STAGE 1
 CUT VOLUME 8
 FILL VOLUME 116

STAGE 2
 CUT VOLUME 458
 FILL VOLUME 3



STAGE 1
 AREA CUT 8
 AREA FILL 104

STAGE 2
 AREA CUT 418
 AREA FILL 4

228+00

STAGE 1
 CUT VOLUME 17
 FILL VOLUME 357

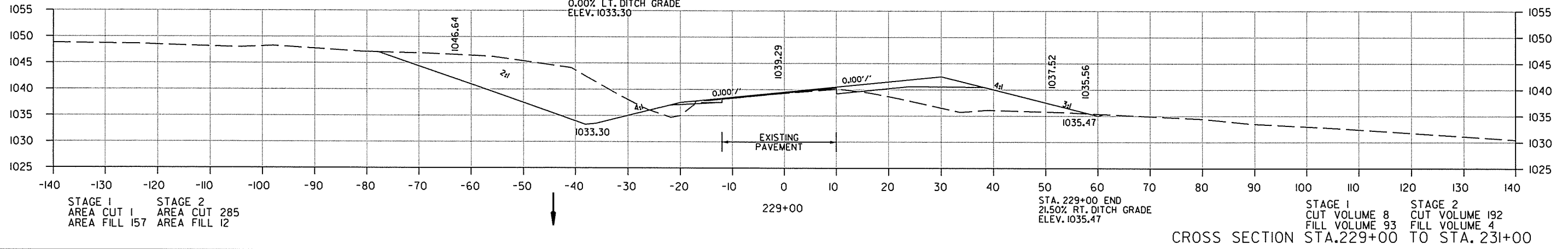
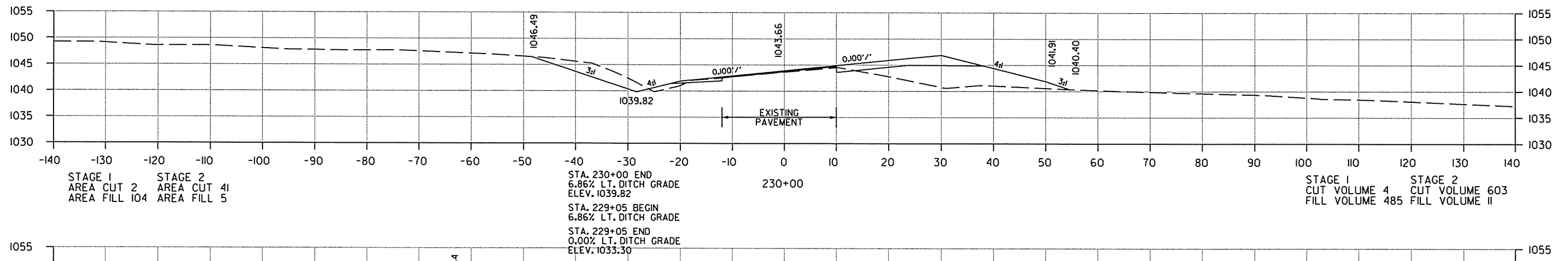
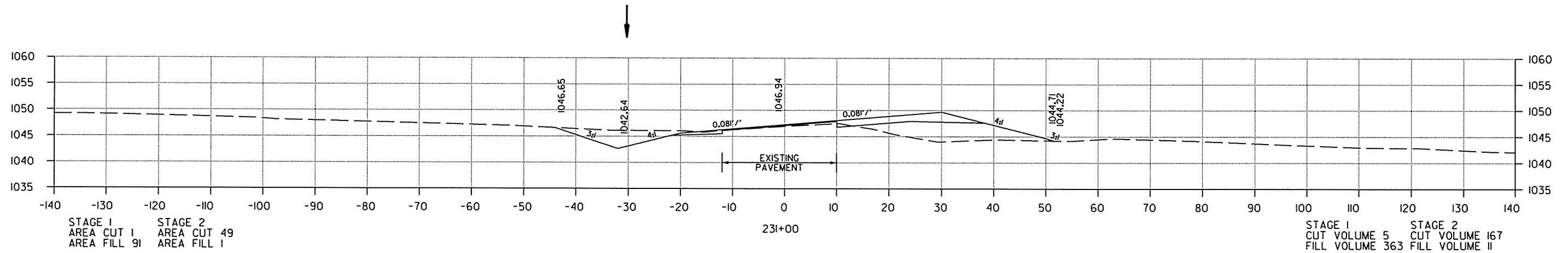
STAGE 2
 CUT VOLUME 1138
 FILL VOLUME 20

CROSS SECTION STA. 228+00 TO STA. 228+82

1/15/2015
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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
10-09-15				6	ARK.			
						JOB NO. 050261	133	148

2 CROSS SECTIONS - SITE 2

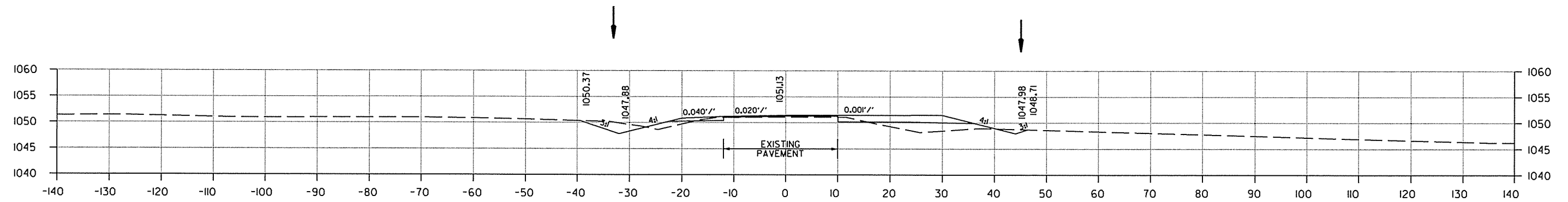


1/15/2015

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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
10-09-15				6	ARK.			
						JOB NO. 050261	134	148

2 CROSS SECTIONS - SITE 2



STAGE 1
AREA CUT 6
AREA FILL 30

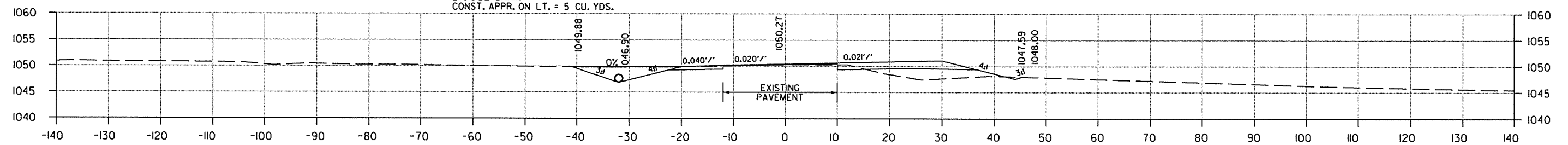
STAGE 2
AREA CUT 16
AREA FILL 7

STA. 232+53 IN PLACE
18" X 24' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE & INSTALL @ STA. 232+50
18" X 28' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. = 5 CU. YDS.

233+00

STAGE 1
CUT VOLUME 9
FILL VOLUME 61

STAGE 2
CUT VOLUME 48
FILL VOLUME 7



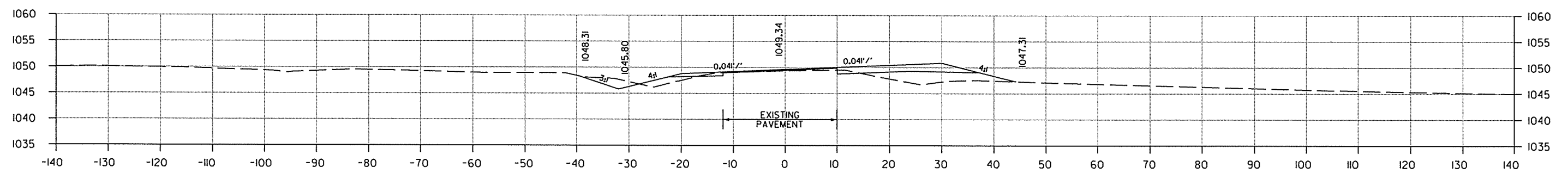
STAGE 1
AREA CUT 4
AREA FILL 36

STAGE 2
AREA CUT 36
AREA FILL 0

232+50

STAGE 1
CUT VOLUME 6
FILL VOLUME 75

STAGE 2
CUT VOLUME 45
FILL VOLUME 9



STAGE 1
AREA CUT 2
AREA FILL 45

STAGE 2
AREA CUT 13
AREA FILL 10

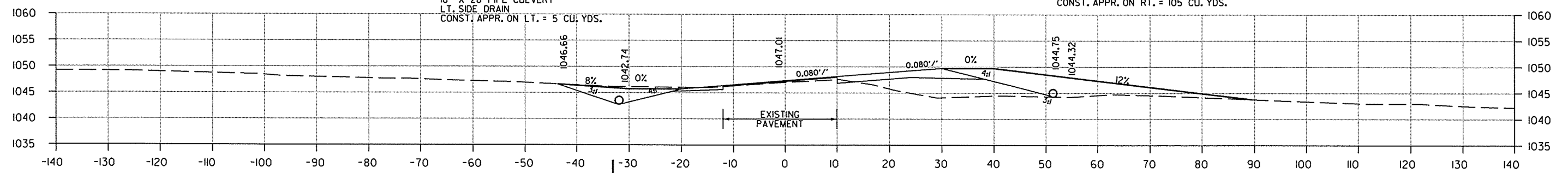
STA. 231+09 IN PLACE
18" X 33' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE & INSTALL @ STA. 231+03
18" X 28' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. = 5 CU. YDS.

232+00

STA. 231+40 INSTALL
18" X 32' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. ON RT. = 105 CU. YDS.

STAGE 1
CUT VOLUME 6
FILL VOLUME 241

STAGE 2
CUT VOLUME 107
FILL VOLUME 19



STAGE 1
AREA CUT 1
AREA FILL 90

STAGE 2
AREA CUT 47
AREA FILL 1

231+03

STAGE 1
CUT VOLUME 0
FILL VOLUME 10

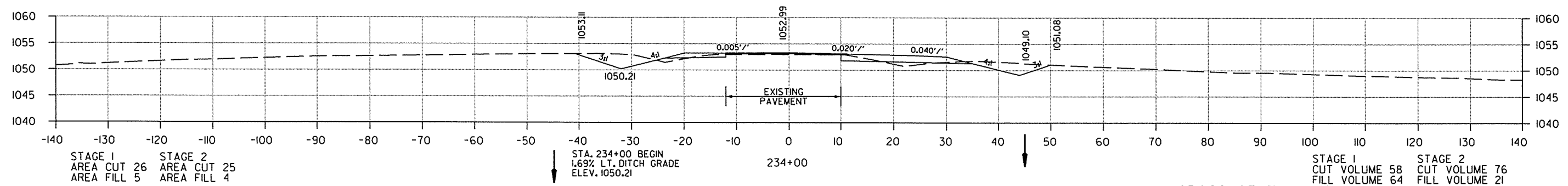
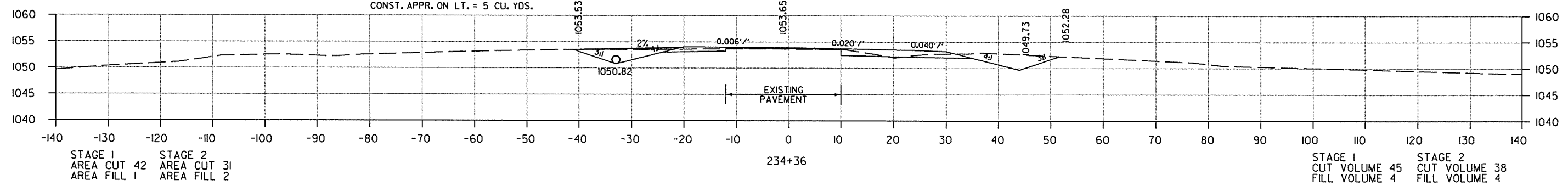
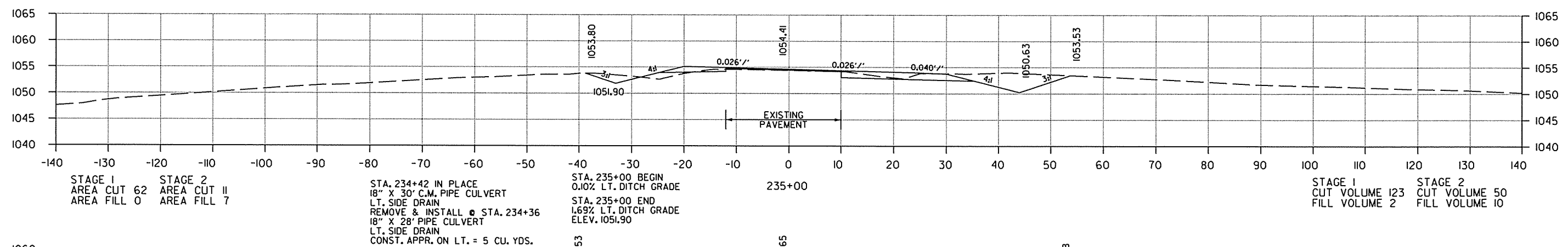
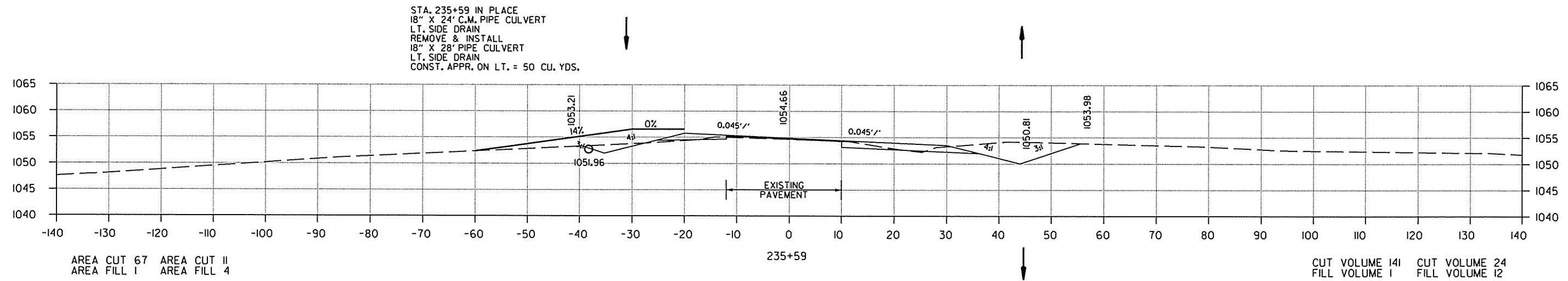
STAGE 2
CUT VOLUME 5
FILL VOLUME 0

CROSS SECTION STA. 231+03 TO STA. 233+00

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10-09-15				6	ARK.			
						JOB NO. 050261	135	148

2 CROSS SECTIONS - SITE 2



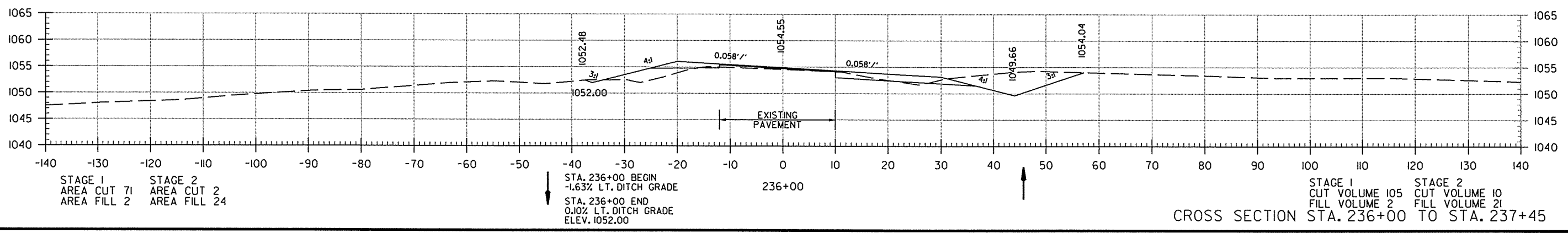
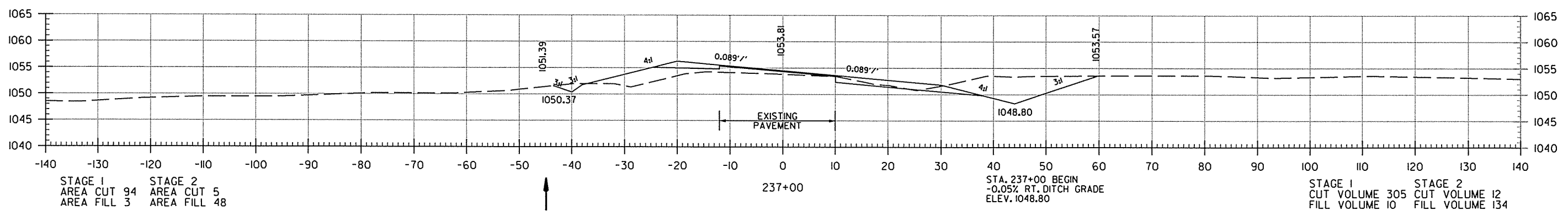
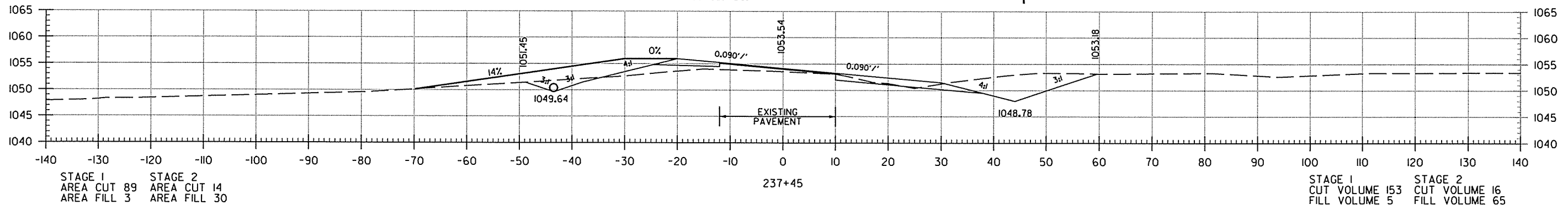
CROSS SECTION STA. 234+00 TO STA. 235+59

1/15/2015
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10-09-15				6	ARK.			
						JOB NO. 050261	136	148

② CROSS SECTIONS - SITE 2

STA. 237+45 IN PLACE
 12" X 32' C.M. PIPE CULVERT
 LT. SIDE DRAIN
 REMOVE & INSTALL
 18" X 38' PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPR. ON LT. = 80 CU. YDS.

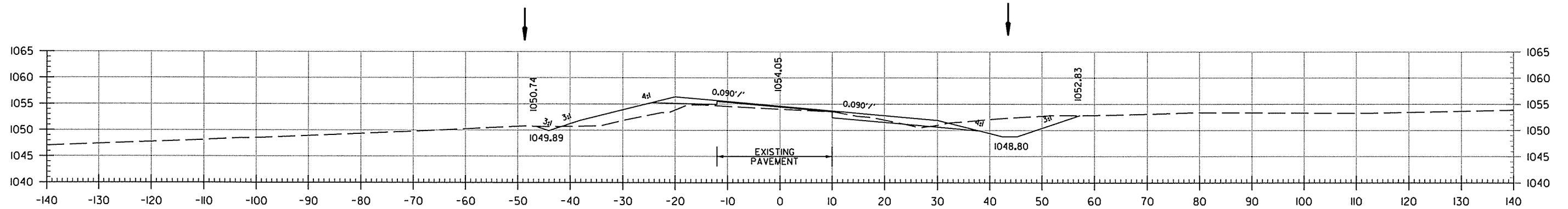


CROSS SECTION STA. 236+00 TO STA. 237+45

1/15/2015
 R050261.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
10-09-15				6	ARK.			
						JOB NO. 050261	137	148

2 CROSS SECTIONS - SITE 2



STAGE 1
AREA CUT 64
AREA FILL 3

STAGE 2
AREA CUT 2
AREA FILL 47

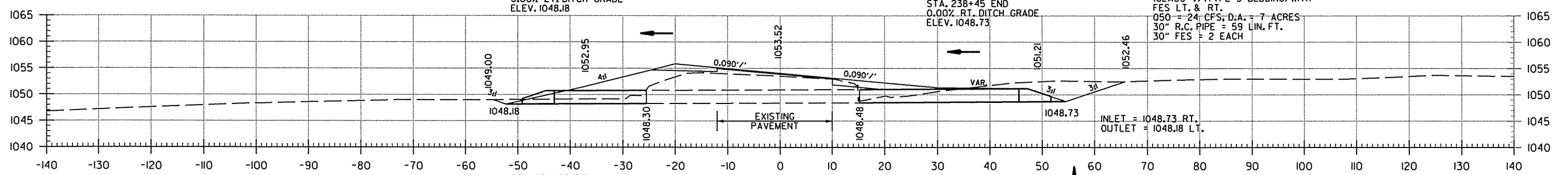
STA. 238+45 BEGIN
3.11% LT. DITCH GRADE
STA. 238+45 END
0.00% LT. DITCH GRADE
ELEV. 1048.18

STA. 239+00 END
0.13% RT. DITCH GRADE
ELEV. 1048.80
STA. 238+45 BEGIN
0.13% RT. DITCH GRADE
STA. 238+45 END
0.00% RT. DITCH GRADE
ELEV. 1048.73

STA. 238+41 IN PLACE
30" X 41" R.C. PIPE CULVERT
RETAIN AND EXTEND
18' LT. AND 33' RT.
(CLASS V) (TYPE 3 BEDDING) WITH
FES LT. & RT.
050 = 24' CFS; D.A. = 7 ACRES
30" R.C. PIPE = 59 LIN. FT.
30" FES = 2 EACH

STAGE 1
CUT VOLUME 128
FILL VOLUME 30

STAGE 2
CUT VOLUME 5
FILL VOLUME 138



STAGE 1
AREA CUT 52
AREA FILL 24

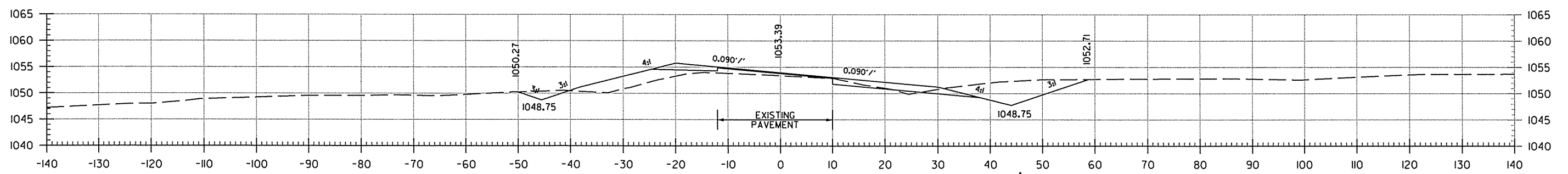
STAGE 2
AREA CUT 3
AREA FILL 79

STA. 238+35 BEGIN
0.00% LT. DITCH GRADE
STA. 238+35 END
-1.63% LT. DITCH GRADE
ELEV. 1048.18

STA. 238+35 BEGIN
0.00% RT. DITCH GRADE
STA. 238+35 END
-0.05% RT. DITCH GRADE
ELEV. 1048.73

STAGE 1
CUT VOLUME 99
FILL VOLUME 21

STAGE 2
CUT VOLUME 8
FILL VOLUME 98



STAGE 1
AREA CUT 78
AREA FILL 4

STAGE 2
AREA CUT 8
AREA FILL 51

STAGE 1
CUT VOLUME 170
FILL VOLUME 7

STAGE 2
CUT VOLUME 24
FILL VOLUME 82

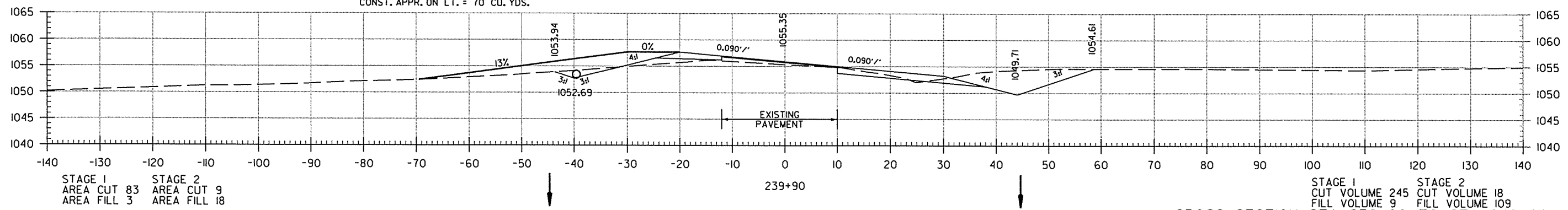
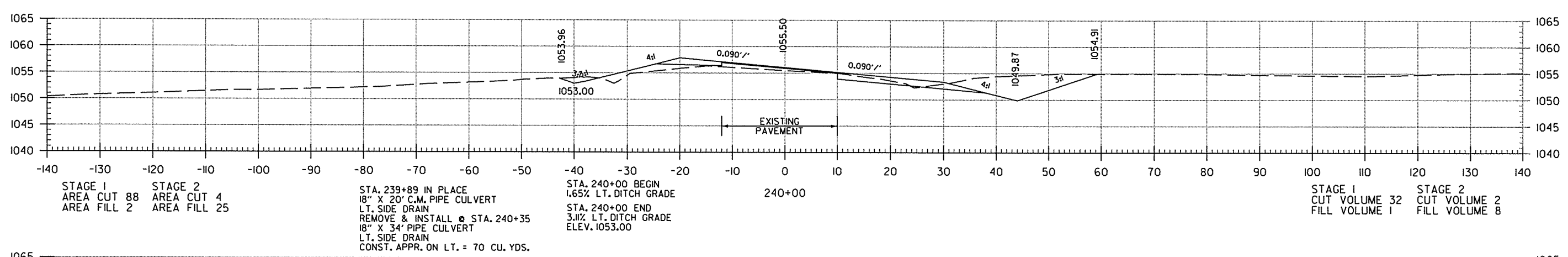
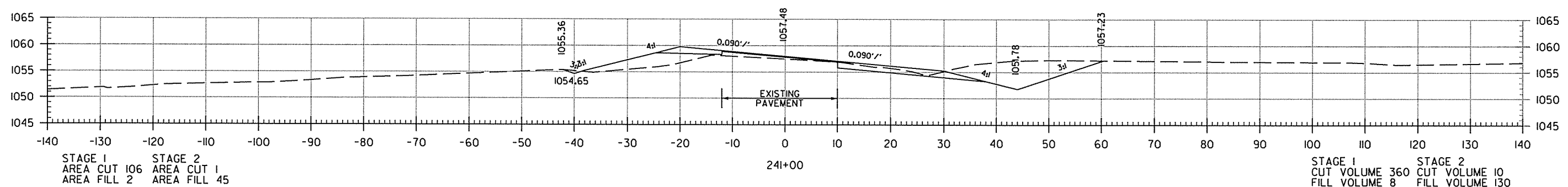
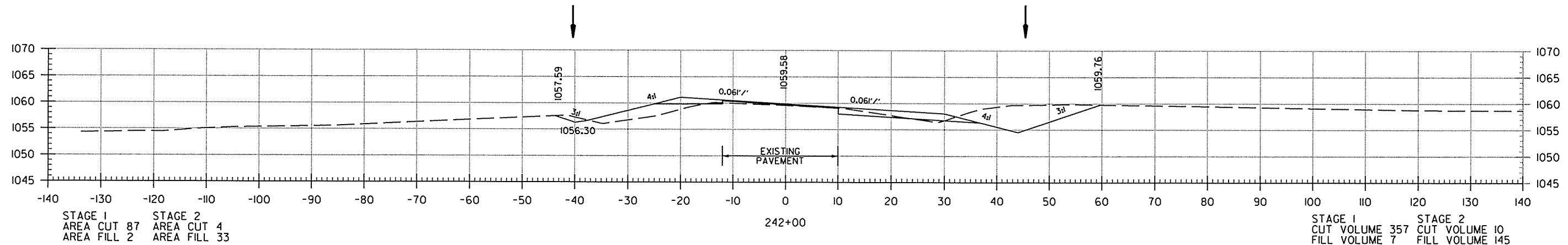
CROSS SECTION STA. 238+00 TO STA. 239+00

1/15/2015

R050261.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
10-09-15				6	ARK.			
						JOB NO. 050261	138	148

2 CROSS SECTIONS - SITE 2



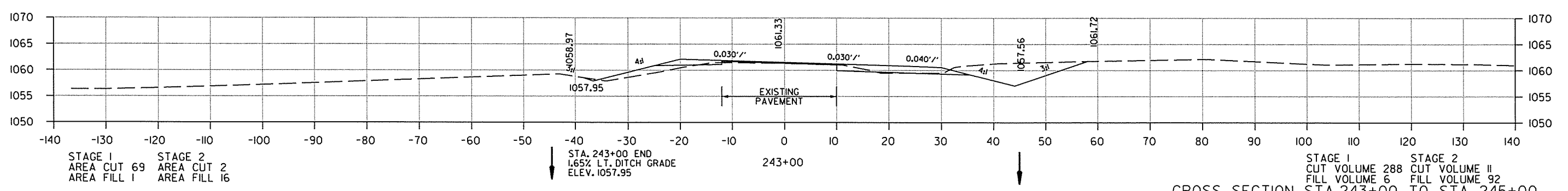
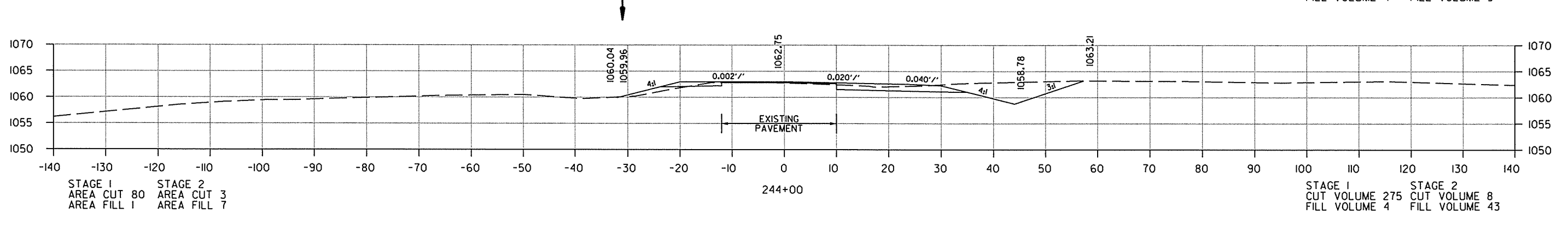
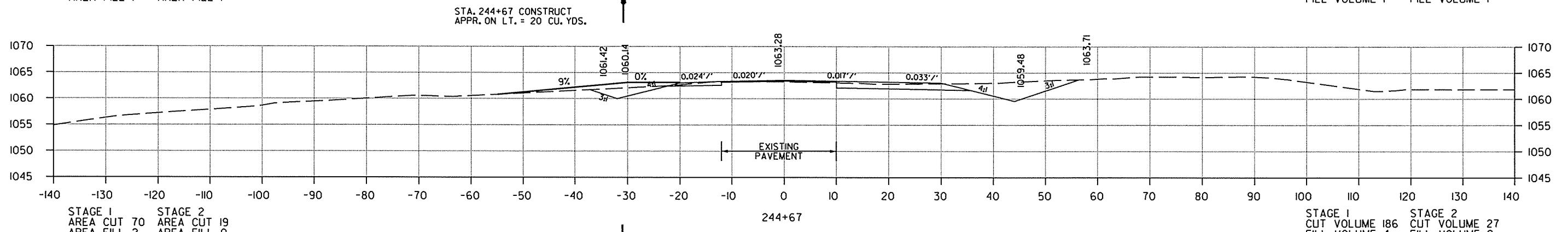
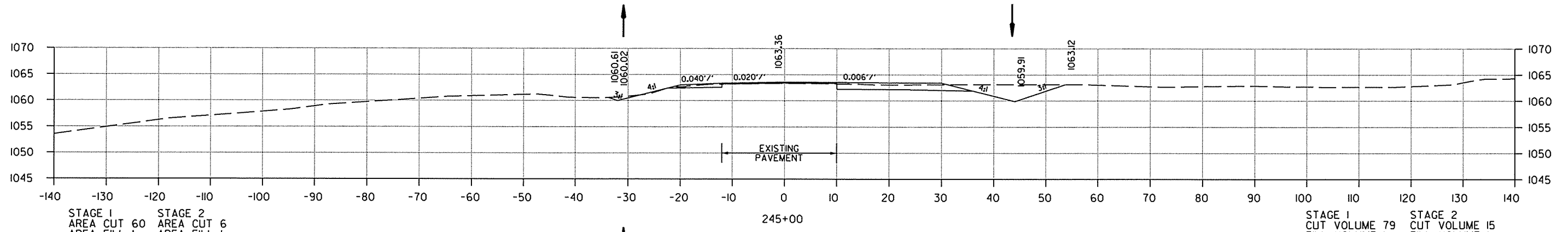
CROSS SECTION STA. 239+90 TO STA. 242+00

1/15/2015

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
10-09-15				6	ARK.			
						JOB NO. 050261	139	148

2 CROSS SECTIONS - SITE 2



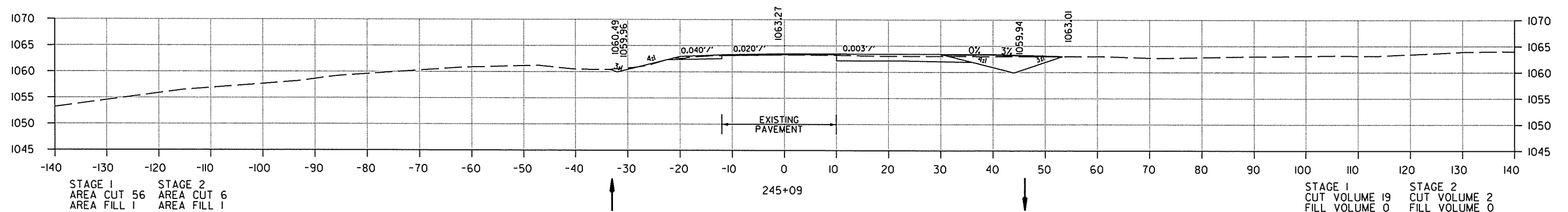
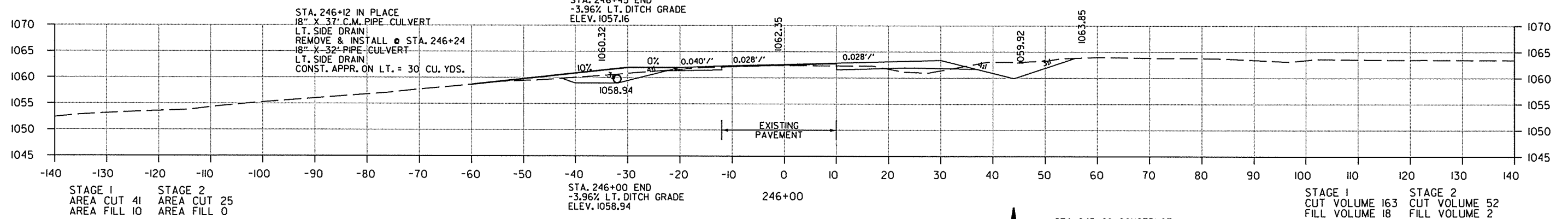
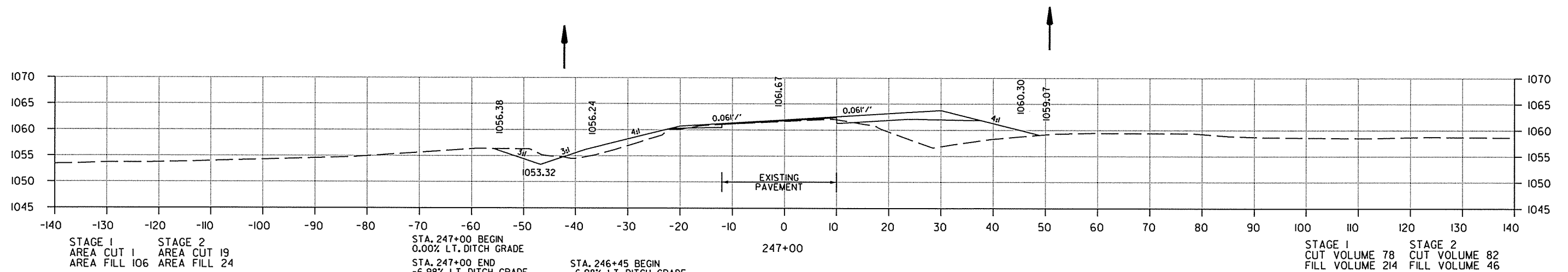
CROSS SECTION STA. 243+00 TO STA. 245+00

1/15/2015

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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
10-09-15				6	ARK.			
						JOB NO. 050261	140	148

2 CROSS SECTIONS - SITE 2



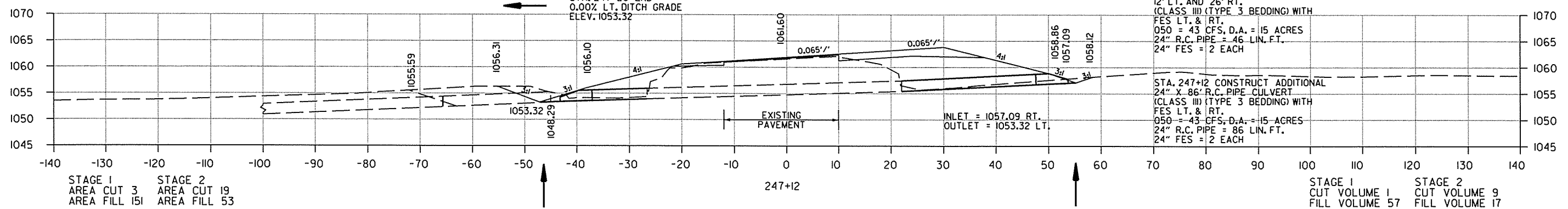
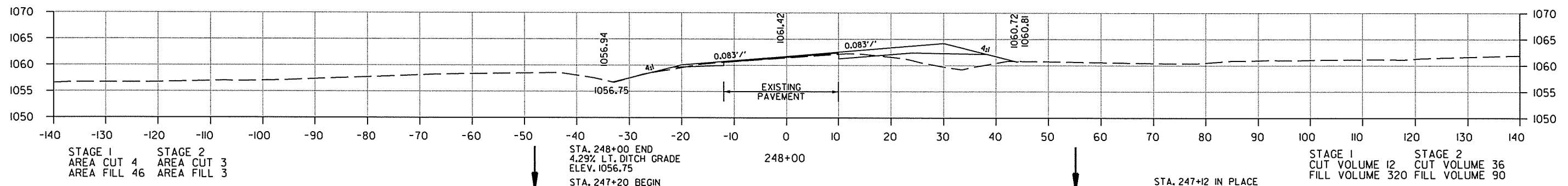
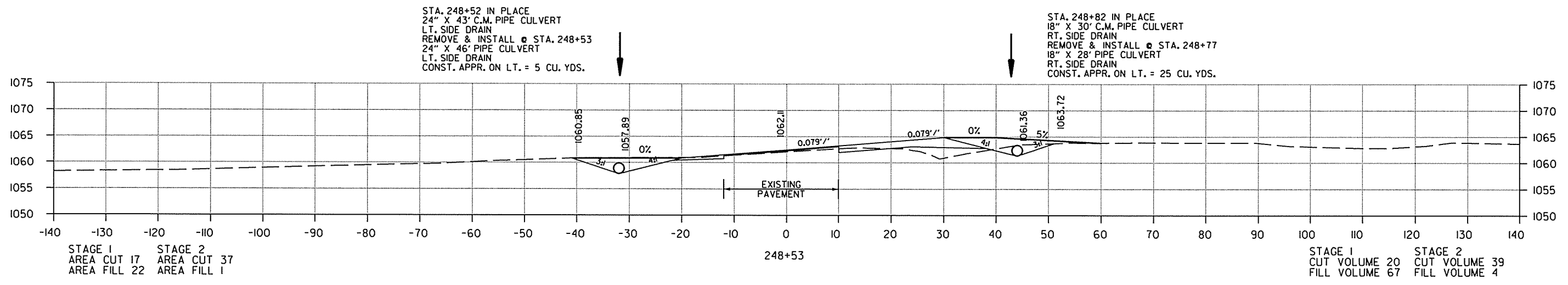
CROSS SECTION STA. 245+09 TO STA. 247+00

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10-09-15				6	ARK.			
						JOB NO. 050261	141	148

2 CROSS SECTIONS - SITE 2

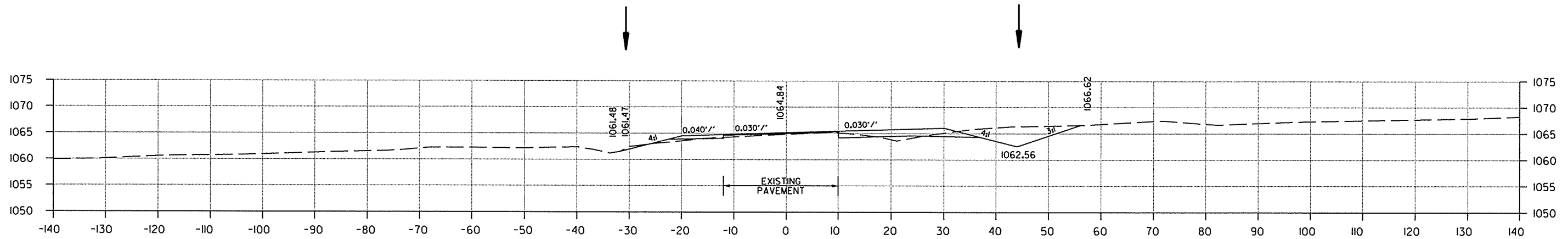


CROSS SECTION STA. 247+12 TO STA. 248+53

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R050261.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
10-09-15				6	ARK.			
						JOB NO. 050261	142	148

2 CROSS SECTIONS - SITE 2

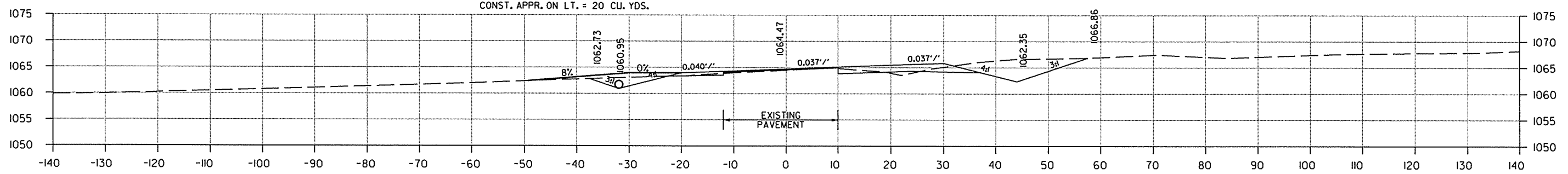


STAGE 1 AREA CUT 55 AREA FILL 5 STAGE 2 AREA CUT 2 AREA FILL 6

STA. 249+79 IN PLACE
18" X 24' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE & INSTALL @ STA. 249+78
18" X 32' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. ON LT. = 20 CU. YDS.

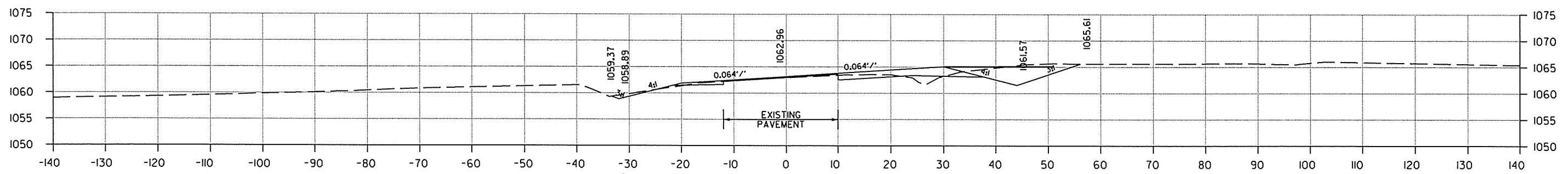
STA. 250+00 BEGIN
1.03% RT. DITCH GRADE
ELEV. 1062.56

STAGE 1 CUT VOLUME 50 FILL VOLUME 3 STAGE 2 CUT VOLUME 8 FILL VOLUME 3



STAGE 1 AREA CUT 68 AREA FILL 3 STAGE 2 AREA CUT 17 AREA FILL 2

STAGE 1 CUT VOLUME 177 FILL VOLUME 15 STAGE 2 CUT VOLUME 32 FILL VOLUME 4



STAGE 1 AREA CUT 54 AREA FILL 7 STAGE 2 AREA CUT 6 AREA FILL 1

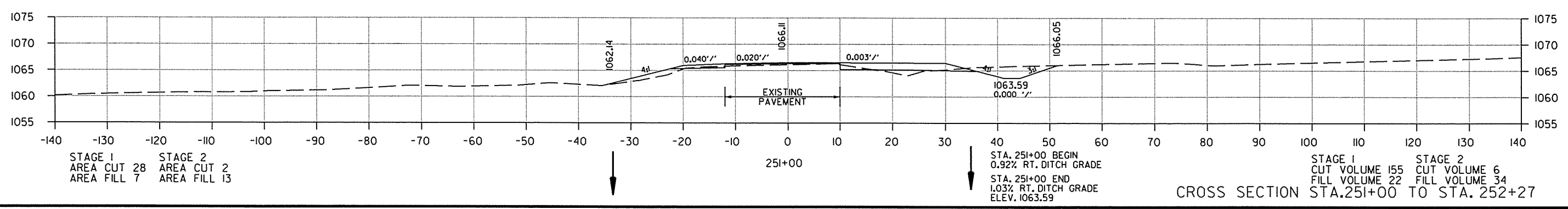
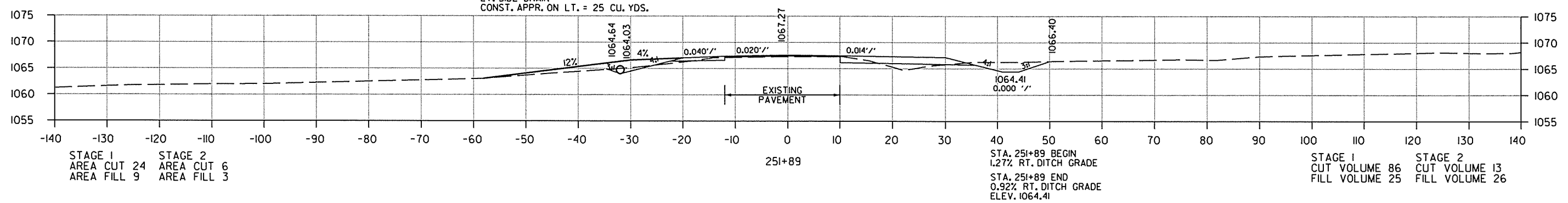
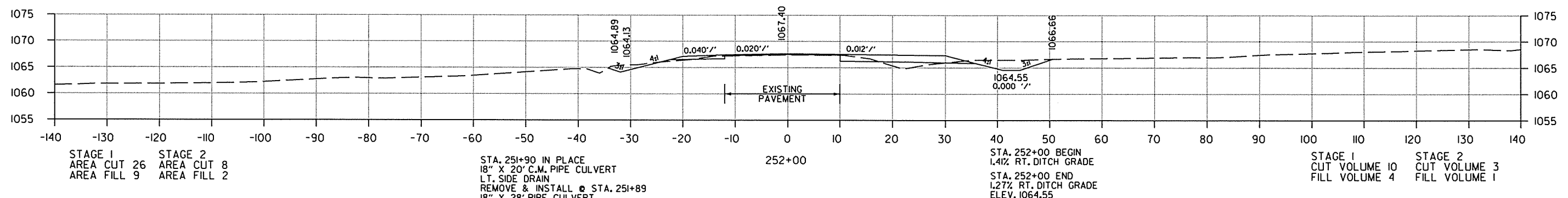
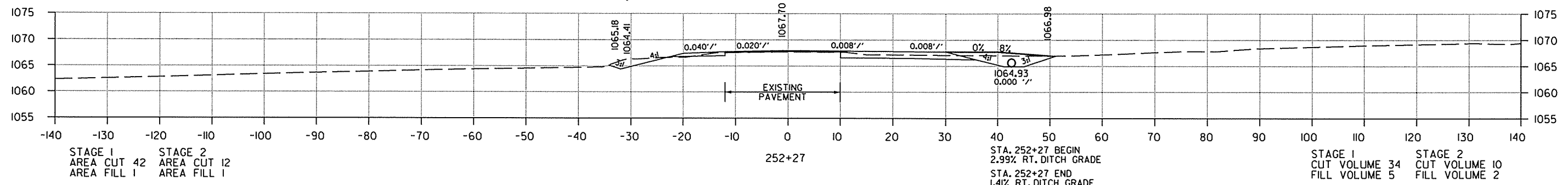
STAGE 1 CUT VOLUME 62 FILL VOLUME 26 STAGE 2 CUT VOLUME 37 FILL VOLUME 2

CROSS SECTION STA. 249+00 TO STA. 250+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
10-09-15				6	ARK.			
						JOB NO. 050261	143	148

② CROSS SECTIONS - SITE 2

STA. 252+26 IN PLACE
 18" X 20' C.M. PIPE CULVERT
 RT. SIDE DRAIN
 REMOVE & INSTALL @ STA. 252+27
 18" X 28' PIPE CULVERT
 RT. SIDE DRAIN
 CONST. APPR. ON RT. = 10 CU. YDS.

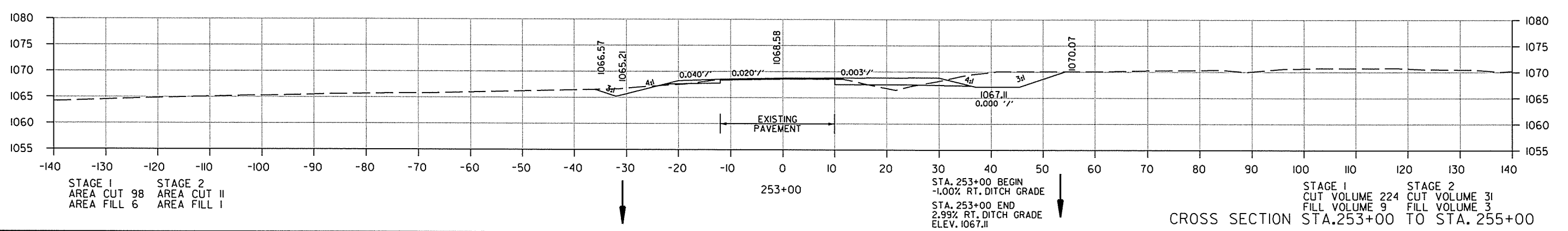
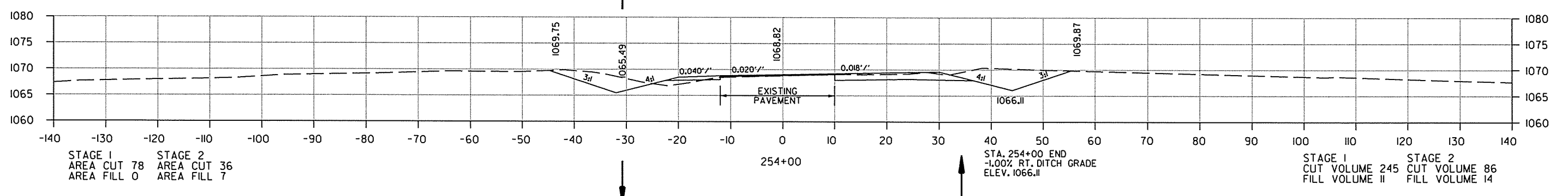
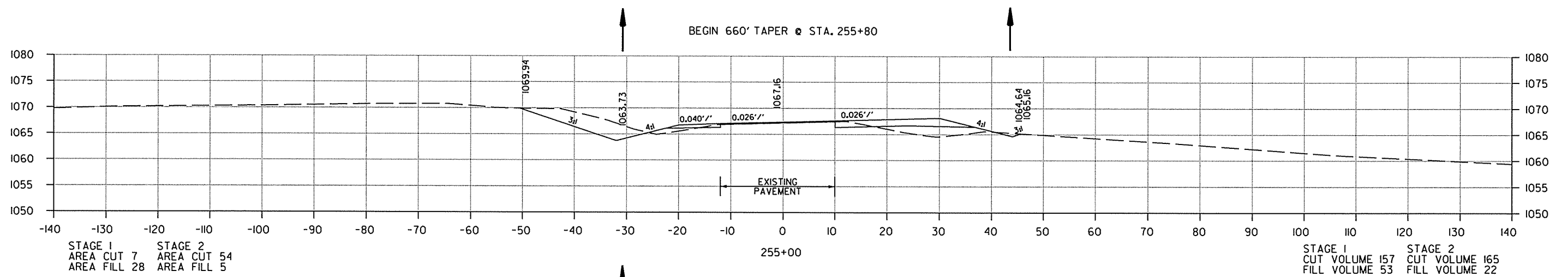


CROSS SECTION STA. 251+00 TO STA. 252+27

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10-09-15				6	ARK.			
						JOB NO. 050261	144	148

2 CROSS SECTIONS - SITE 2

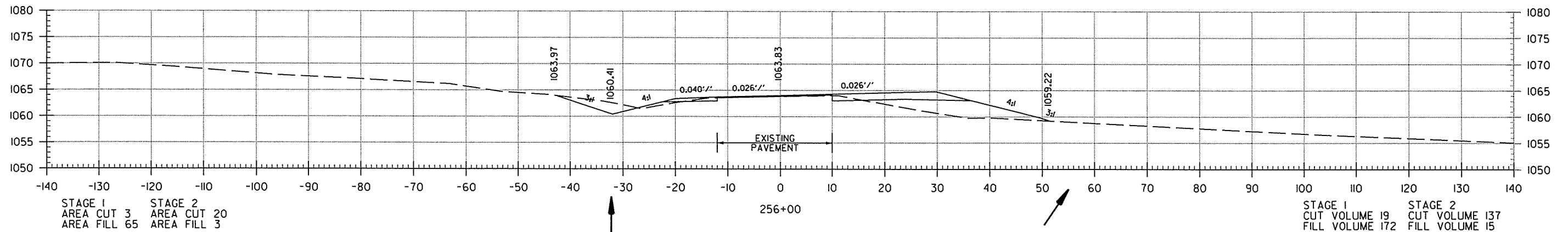
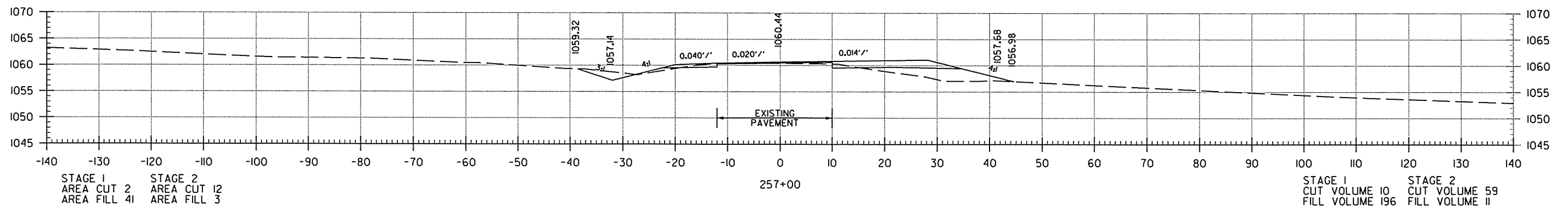
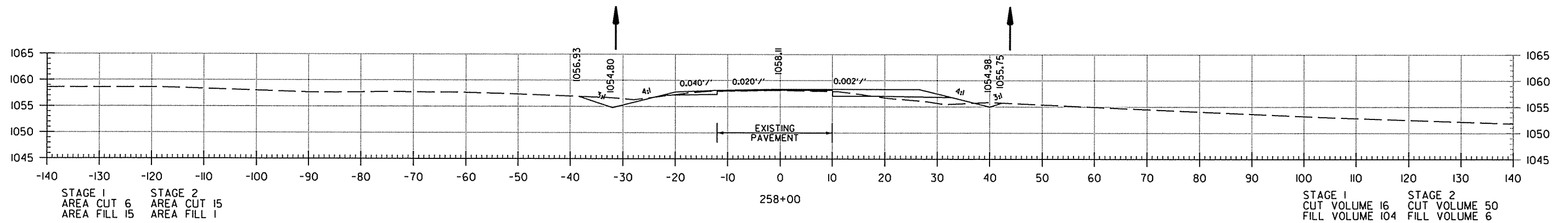


CROSS SECTION STA. 253+00 TO STA. 255+00

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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
10-09-15				6	ARK.			
						JOB NO. 050261	145	148

② CROSS SECTIONS - SITE 2

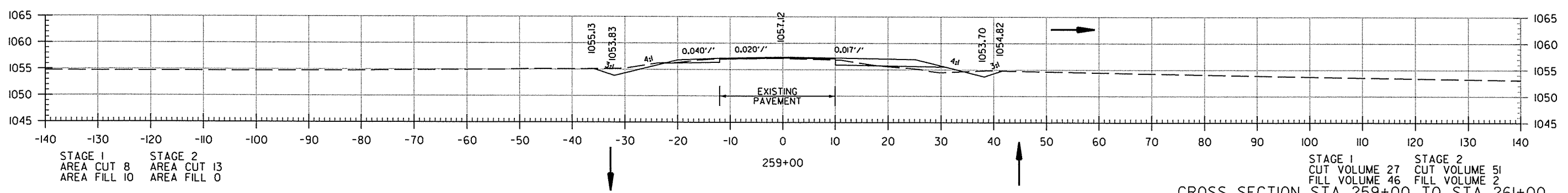
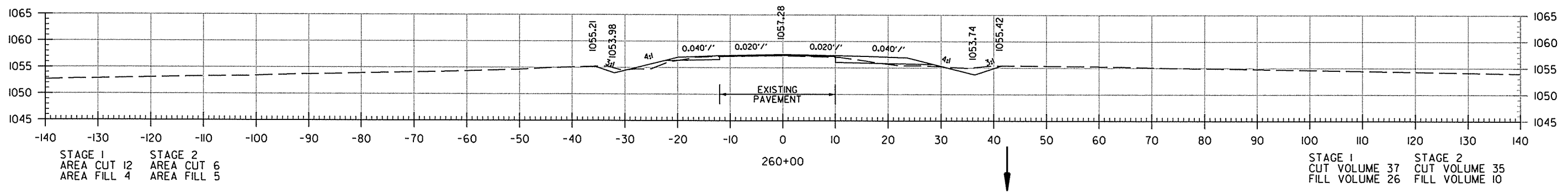
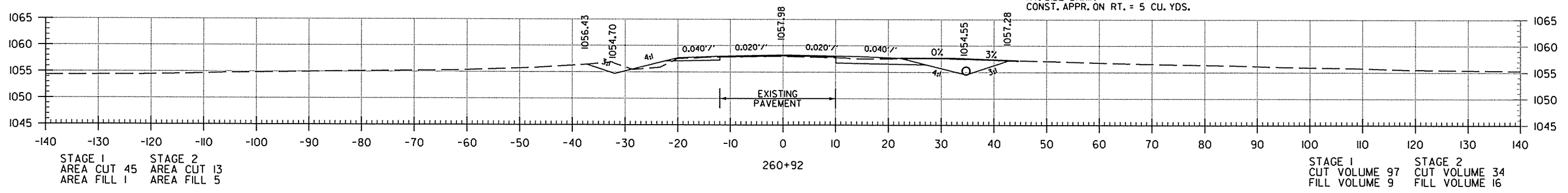
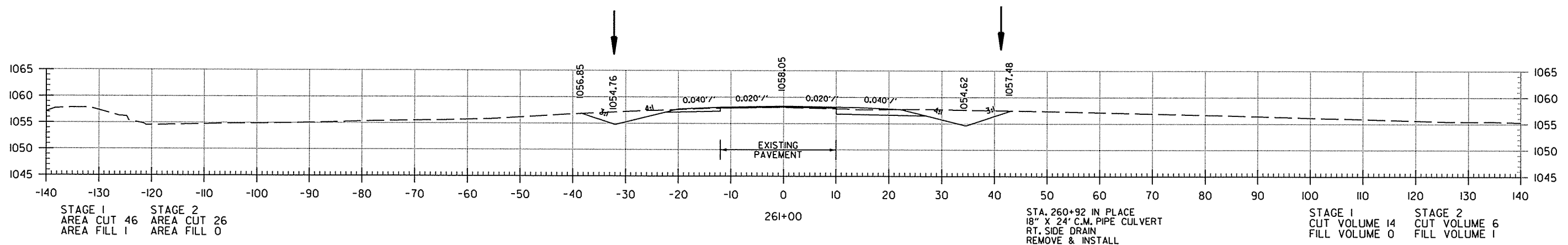


CROSS SECTION STA. 256+00 TO STA. 258+00

1/15/2015
R050261.DGN

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10-09-15				6	ARK.			
						JOB NO. 050261	146	148

2 CROSS SECTIONS - SITE 2

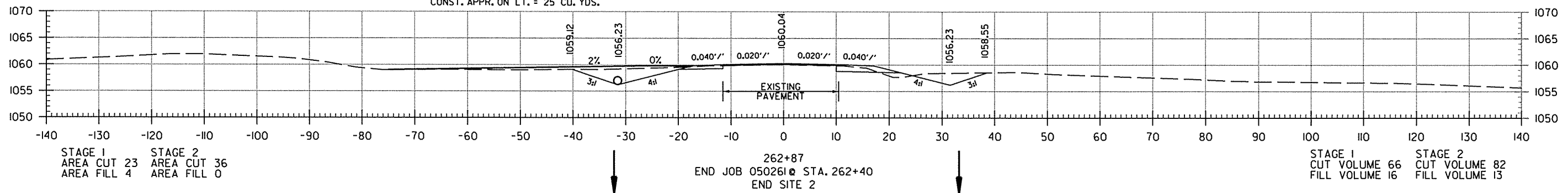
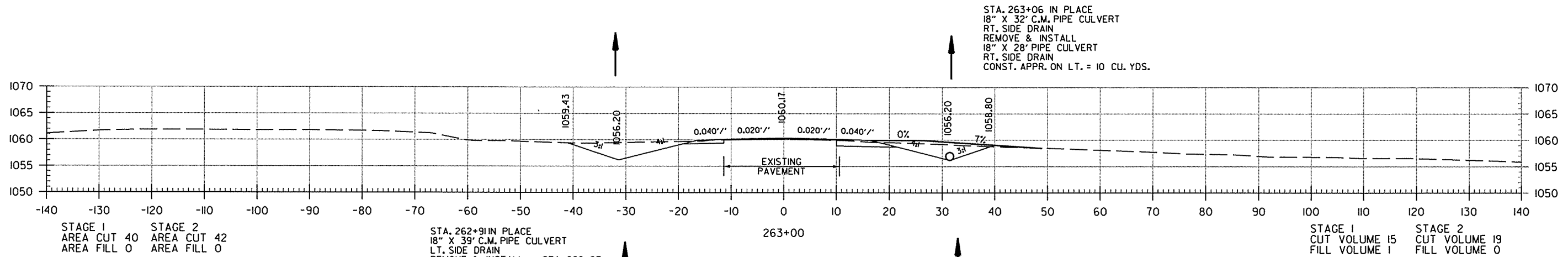


CROSS SECTION STA. 259+00 TO STA. 261+00

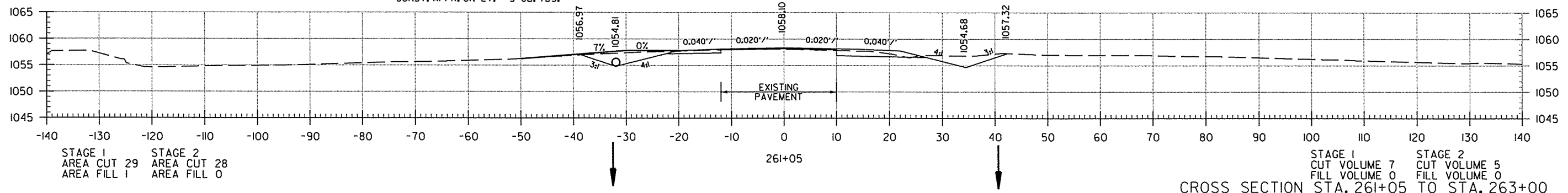
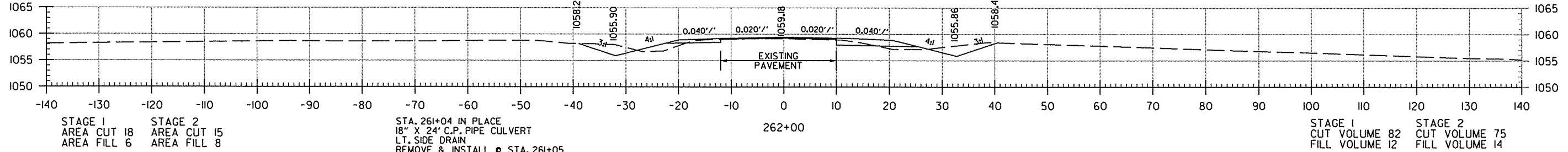
1/15/2015
R050261.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
10-09-15				6	ARK.			
						JOB NO. 050261	147	148

2 CROSS SECTIONS - SITE 2



262+87
END JOB 050261 @ STA. 262+40
END SITE 2
END 660' TAPER
BEGIN 100' TRANS.

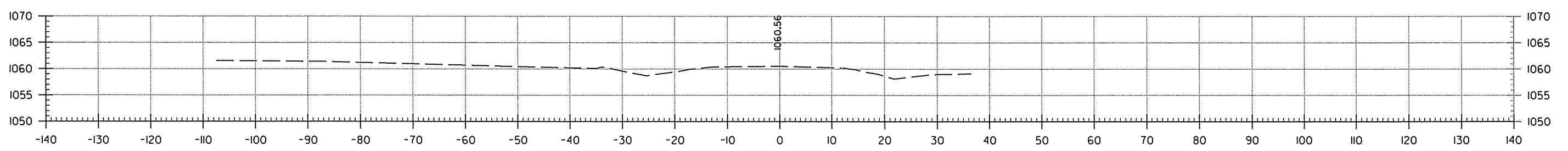


CROSS SECTION STA. 261+05 TO STA. 263+00

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						JOB NO. 050261	148	148

② CROSS SECTIONS - SITE 2



STAGE 1
AREA CUT 0
AREA FILL 0

STAGE 2
AREA CUT 0
AREA FILL 0

263+40
END 100' TRANS.

STAGE 1
CUT VOLUME 33
FILL VOLUME 1

STAGE 2
CUT VOLUME 64
FILL VOLUME 1

CROSS SECTION STA. 263+40 TO STA. 263+40

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