

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

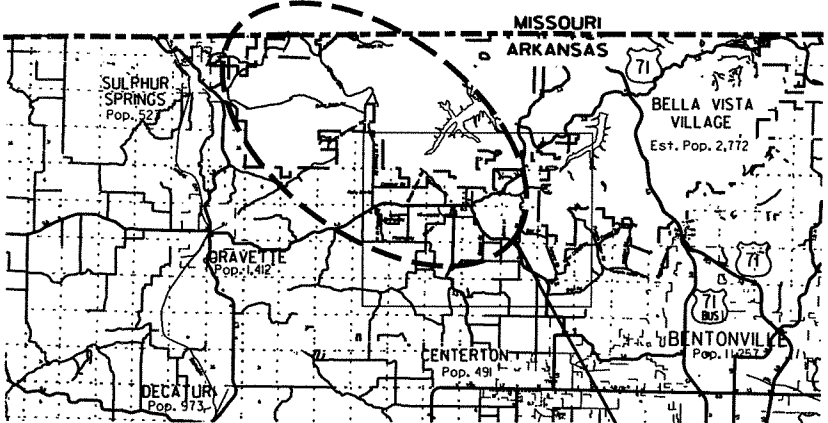
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 090293	1	266

2 HWY. 72 NORTH-CO. RD. 34(B.V. BYPASS)(F)

HWY. 72 NORTH - CO. RD. 34
(B.V. BYPASS)(F)

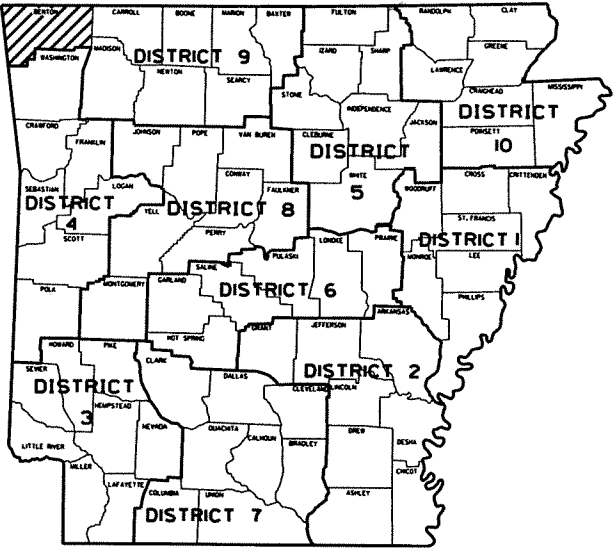
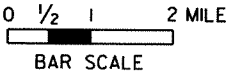
BENTON COUNTY
ROUTE 71 SECTION 19

FEDERAL AID PROJ. NH-HPP2-0004(42)
JOB 090293



VICINITY MAP

PROJECT LOCATION



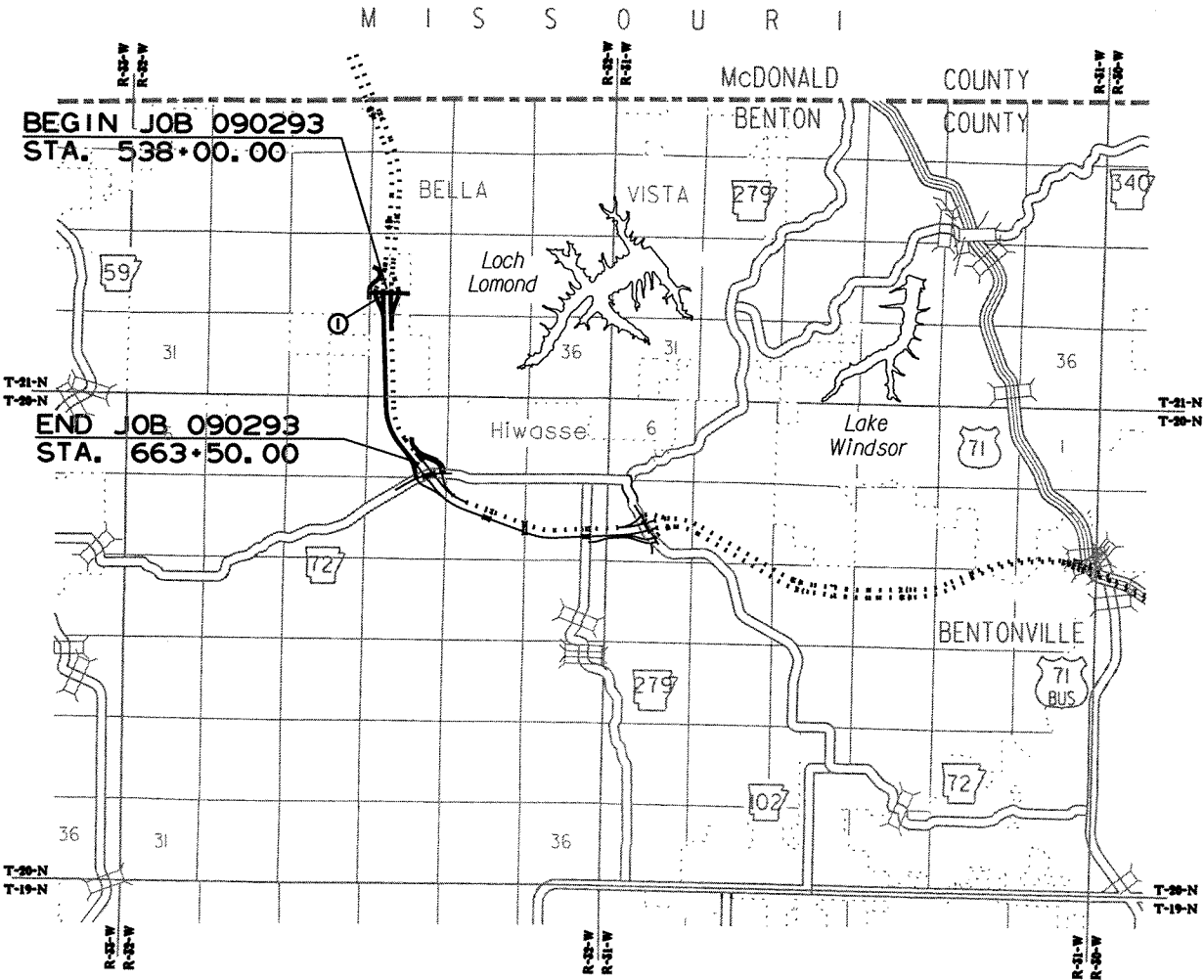
ARK. HWY. DIST. NO. 9

DESIGN TRAFFIC DATA

DESIGN YEAR	2012
2012 ADT	23500
2032 ADT	33000
2032 DHV	3630
DIRECTIONAL DISTRIBUTION	0.60
TRUCKS	8%
DESIGN SPEED	70 MPH

BRIDGE DATA

- ① CO. RD. 34
STA. 16+81.19 BRIDGE END
BR. NO. 07220
190'-0" CONTINUOUS COMP. PLATE GIRDER (95'-95')
52'-0" CLEAR ROADWAY
192'-1 1/2" BRIDGE LENGTH
STA. 18+73.31 BRIDGE END



APPROVED



DEPUTY DIRECTOR
AND CHIEF ENGINEER

	BEGIN PROJECT	MID POINT OF PROJECT	END PROJECT
LATITUDE	N 36°27' 55"	N 36°28' 00"	N 36°25' 59"
LONGITUDE	W 94°22' 43"	W 94°22' 42"	W 94°22' 11"

LENGTH OF PROJECT CALCULATED ALONG C.L.

GROSS LENGTH OF PROJECT	12550.00	FEET	OR	2.377	MILES
NET ROADWAY	12550.00			2.377	MILES
NET BRIDGES	000.00			0.000	MILES
NET PROJECT	12550.00			2.377	MILES

P.E. JOB 090224
NON-PART.

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2 INDEX OF SHEETS



INDEX OF SHEETS

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175 - 266	CROSS SECTIONS			

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

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② GOVERNING SPECIFICATIONS AND GENERAL NOTES								

GOVERNING SPECIFICATIONS

ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2003, AND THE FOLLOWING SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS:

NUMBER	TITLE
ERRATA	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273	FHWA-1273 REVISIONS
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 - TRAINING PROGRAM - JOB 090293
FHWA-1273	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273	SUPPLEMENT - WAGE RATE DETERMINATION
100-2	MANUAL FOR ASSESSING SAFETY HARDWARE (MASH)
102-1	BIDDING REQUIREMENTS AND CONDITIONS
103-1	DETERMINATION OF DBE PARTICIPATION
105-1	CONSTRUCTION CONTROL MARKINGS
105-2	EQUIPMENT AND MATERIAL STORAGE ON BRIDGE STRUCTURES
107-1	WORKER VISIBILITY
108-1	LIQUIDATED DAMAGES
110-1	PROTECTION OF WATER QUALITY AND WETLANDS
303-1	AGGREGATE BASE COURSE
404-1	PRODUCTION VERIFICATION OF ASPHALT CONCRETE HOT MIX
409-1	MINERAL AGGREGATES
410-3	DENSITY TESTING FOR ACHM LEVELING COURSES AND BOND BREAKERS
411-1	ASPHALT CONCRETE COLD PLANT MIX
501-1	INSTALLATION OF TIE BARS
600-1	WATER FOR VEGETATION
603-1	MAINTENANCE OF TRAFFIC
604-1	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
606-1	PIPE CULVERTS FOR SIDE DRAINS
606-2	PIPE CULVERTS
718-2	REFLECTORIZED PAINT PAVEMENT MARKINGS
719-2	THERMOPLASTIC PAVEMENT MARKING MATERIAL
723-1	GENERAL REQUIREMENTS FOR SIGNS
804-1	INSTALLATION OF DOWEL BARS AND TIE BARS
JOB 090293	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 090293	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 090293	CAVE DISCOVERY
JOB 090293	CLEARING AND GRUBBING
JOB 090293	COMPACTED EMBANKMENT
JOB 090293	COORDINATION OF WORK
JOB 090293	EXPLORATORY HOLES
JOB 090293	FURNISHING, INSTALLING AND LEAVING IN PLACE PRECAST CONCRETE BARRIER WALL
JOB 090293	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 090293	HIGH PERFORMANCE PAVEMENT MARKING
JOB 090293	INTERNET BIDDING
JOB 090293	PARTNERING REQUIREMENTS
JOB 090293	RETAINING WALLS
JOB 090293	ROCK DITCH LINER
JOB 090293	SHORING
JOB 090293	SILICONE JOINT SEALANT
JOB 090293	SOIL STABILIZATION
JOB 090293	STORM WATER POLLUTION PREVENTION PLAN
JOB 090293	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 090293	TEXTURED COATING FINISH
JOB 090293	TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES LEFT IN PLACE
JOB 090293	UTILITY ADJUSTMENTS
JOB 090293	VALUE ENGINEERING
JOB 090293	WARM MIX ASPHALT

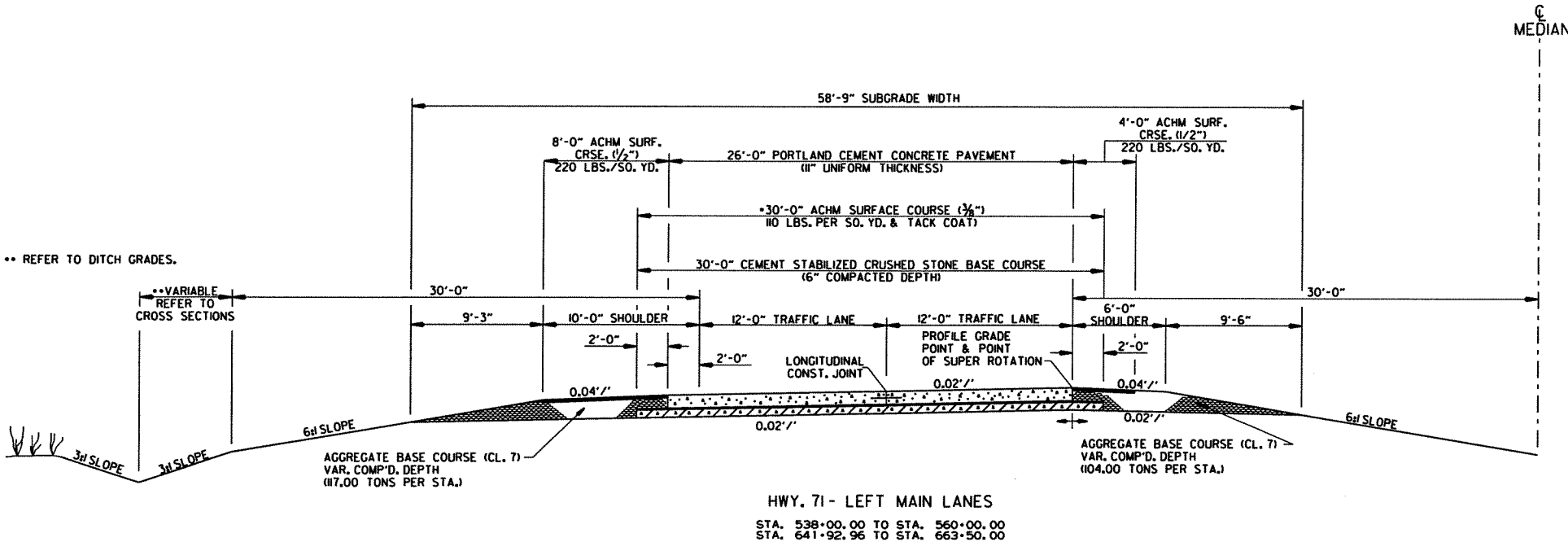
GENERAL NOTES

- 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 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 PERMITTED UNDER AN INDIVIDUAL SECTION 404 PERMIT. REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS, EDITION OF 2003, FOR PERMIT REQUIREMENTS.
- ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 - UNCLASSIFIED EXCAVATION.
- THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.



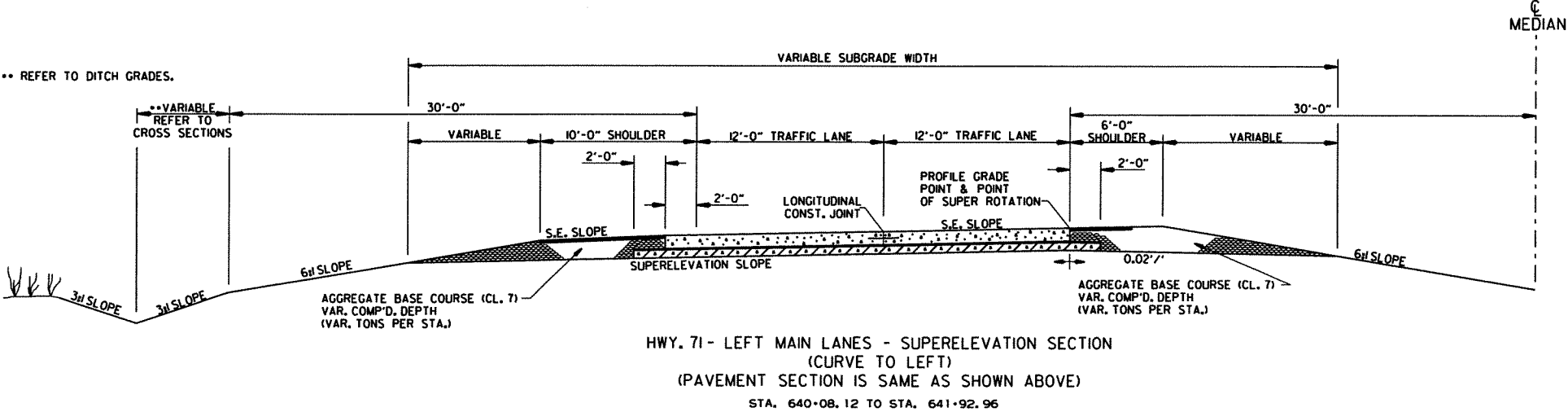
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2 TYPICAL SECTIONS OF IMPROVEMENT



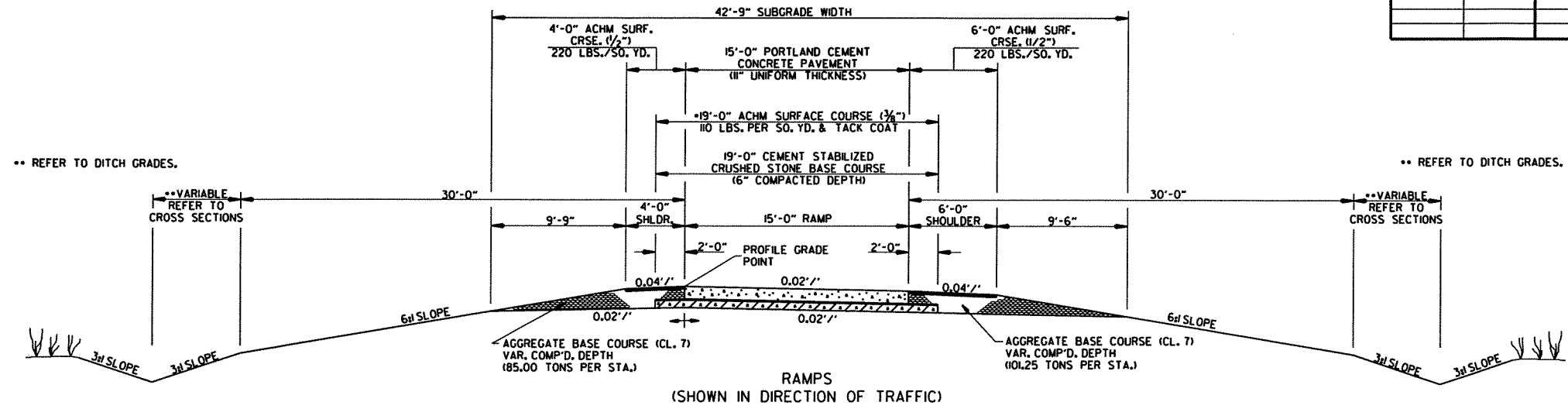
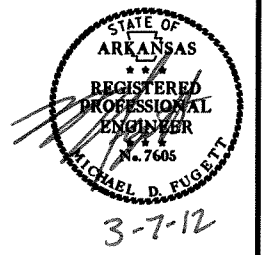
*DENSITY REQUIREMENTS WAIVED.

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.



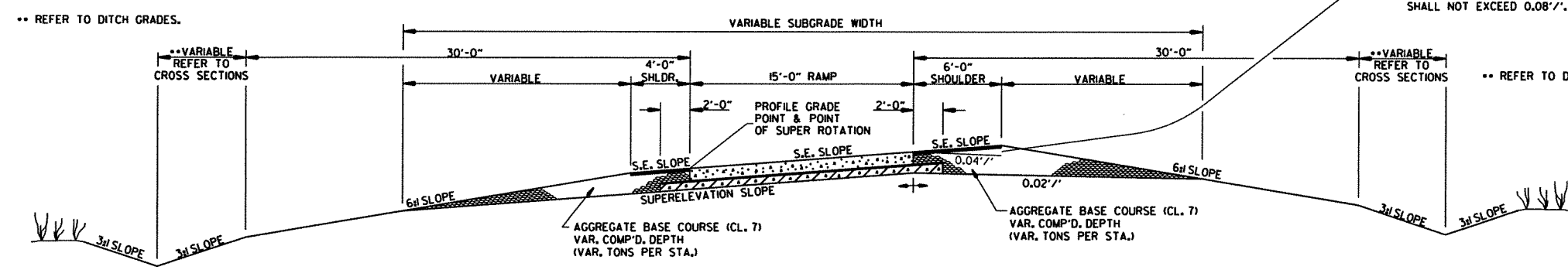
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2 TYPICAL SECTIONS OF IMPROVEMENT



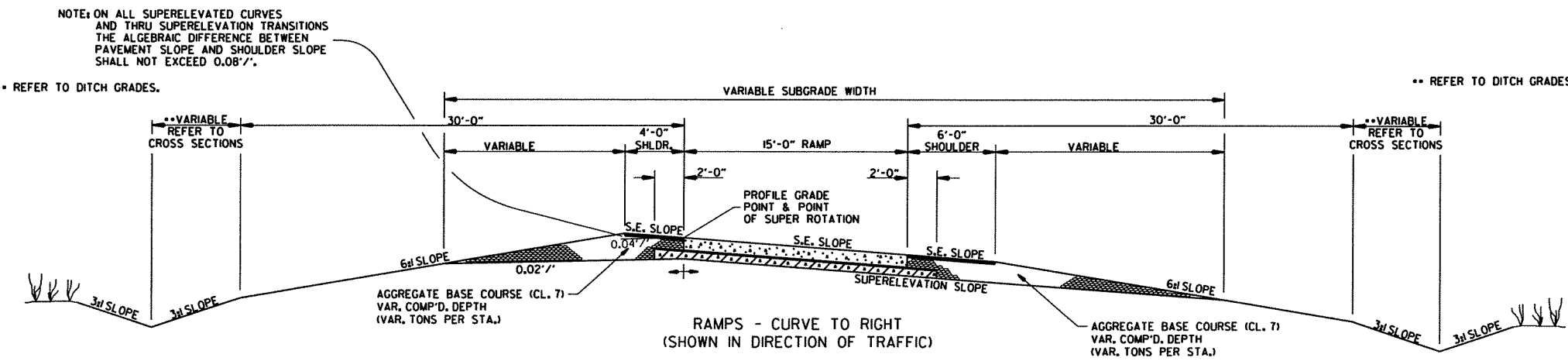
*DENSITY REQUIREMENTS WAIVED.

CO. RD. 34 - RAMP 2 STA. 538+22.79 TO STA. 539+05.86	HWY. 72 (NORTH) - RAMP 1 STA. 649+70.25 TO STA. 649+87.40 STA. 663+49.03 TO STA. 664+58.97
CO. RD. 34 - RAMP 3 STA. 538+75.08 TO STA. 539+05.46 STA. 553+03.68 TO STA. 553+39.68	HWY. 72 (NORTH) - RAMP 4 STA. 657+27.67 TO STA. 660+23.11 STA. 670+58.98 TO STA. 670+91.90



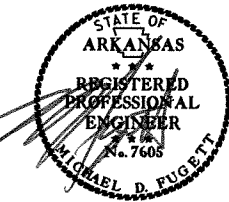
*DENSITY REQUIREMENTS WAIVED.

CO. RD. 34 - RAMP 2 STA. 539+05.86 TO STA. 544+68.72	HWY. 72 (NORTH) - RAMP 4 STA. 660+23.11 TO STA. 670+58.98
CO. RD. 34 - RAMP 3 STA. 539+05.46 TO STA. 544+28.92	

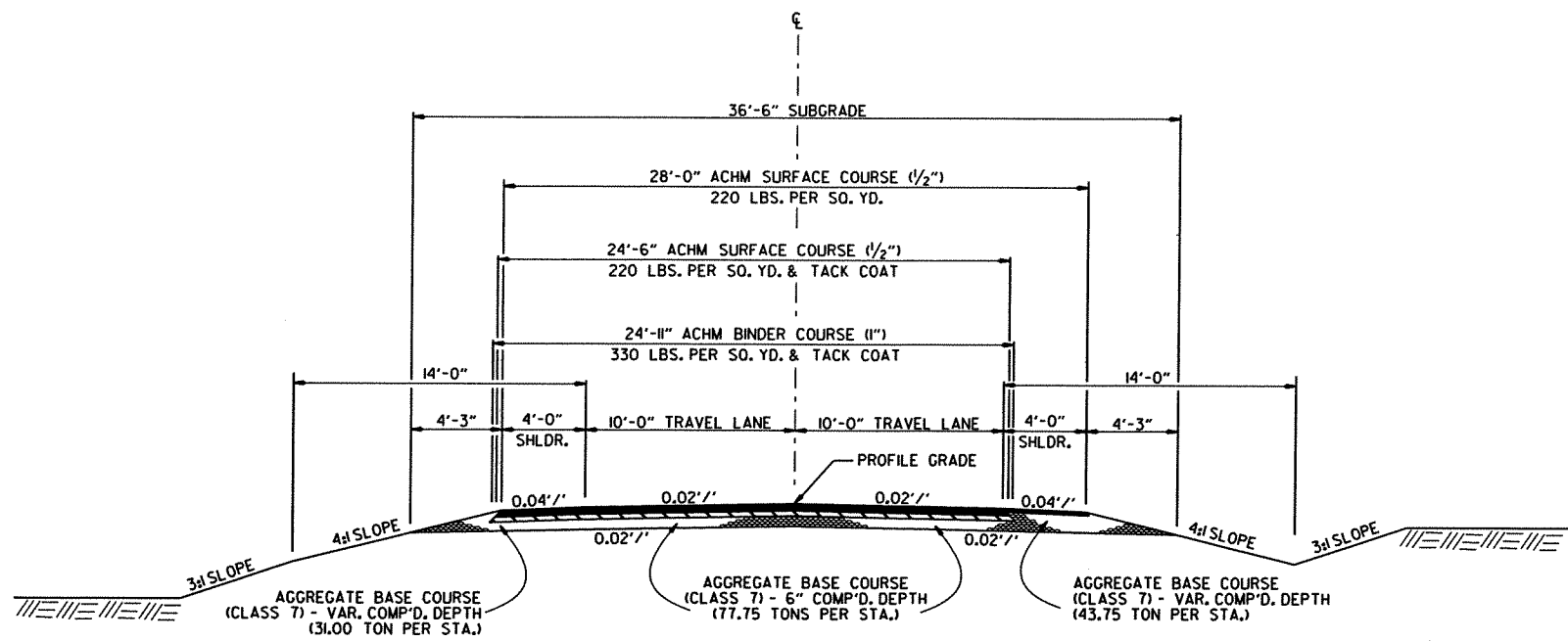


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2 TYPICAL SECTIONS OF IMPROVEMENT

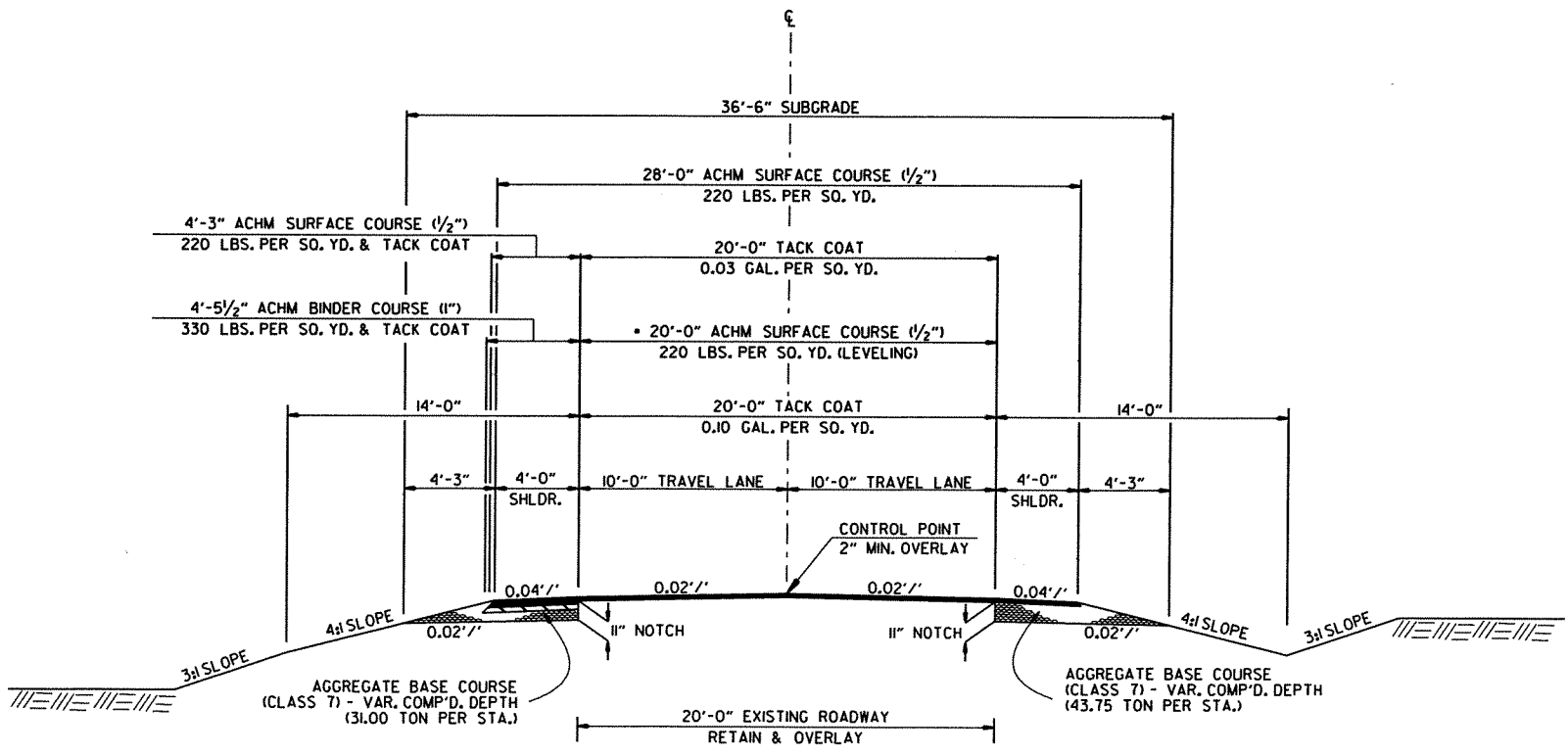


3-7-12



COUNTY ROAD 34 - REALIGNMENT TO WEST
STA. 10+00 - STA. 16+00

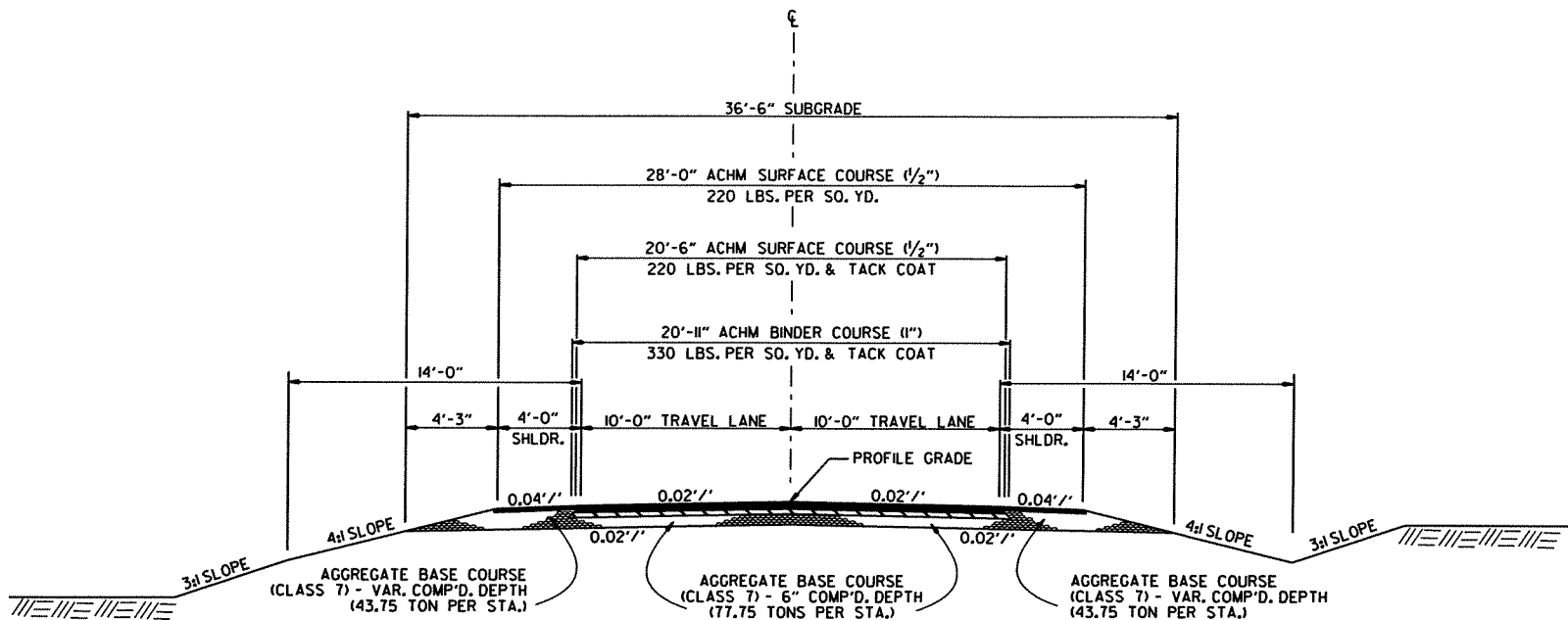
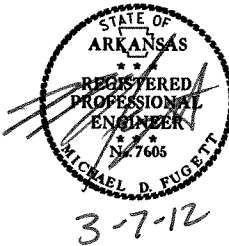
- NOTES:
- THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.
 - REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.
 - THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.
 - ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTION NOTCH AND WIDENING. CALCULATIONS WILL NOT BE PAID FOR DIRECTLY BUT PAYMENT WILL BE CONSIDERED INCLUDED IN THE VARIOUS PAY ITEMS.



COUNTY ROAD 34 - REALIGNMENT TO WEST
FULL DEPTH LT. SHOULDER - NOTCH & WIDENING

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2 TYPICAL SECTIONS OF IMPROVEMENT



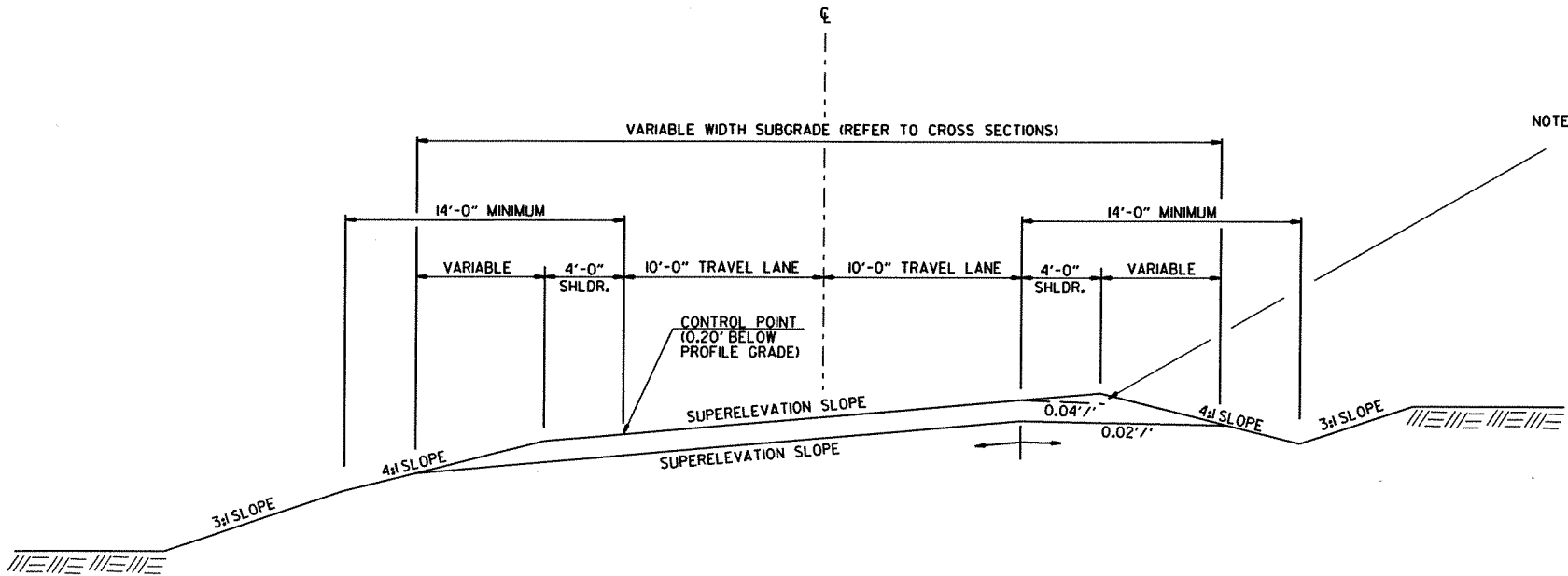
COUNTY ROAD 34 - REALIGNMENT TO WEST
STA. 16+00 TO STA. 39+18

NOTES:

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

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

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



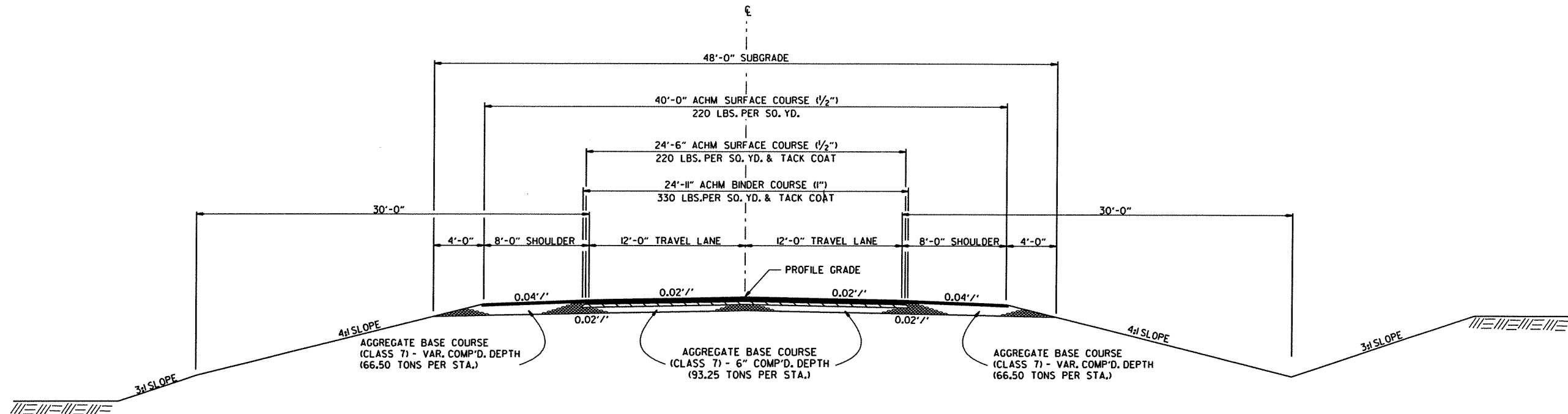
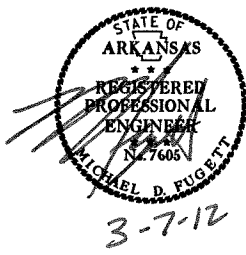
NOTE: ON ALL SUPERELEVATED CURVES AND THRU SUPERELEVATION TRANSITIONS THE ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 0.08'/'.

COUNTY ROAD 34 - REALIGNMENT TO WEST - SUPERELEVATION
(PAVEMENT SECTION IS SAME AS SHOWN ABOVE)

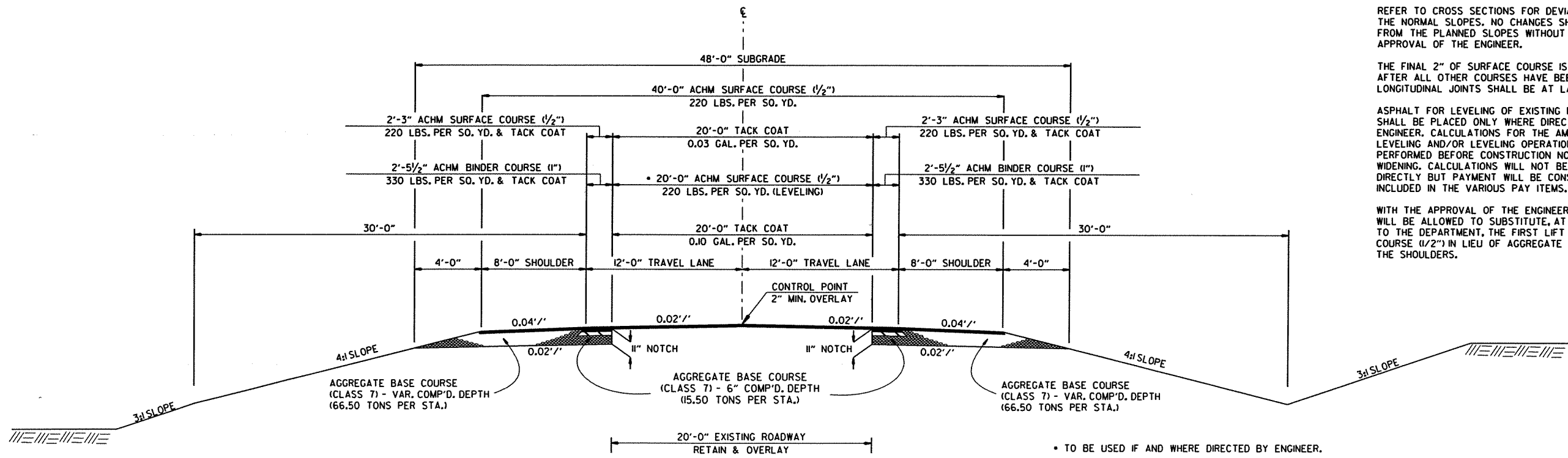
NOTE: REVOLVE SUPERELEVATION AROUND THE INSIDE PAVEMENT EDGE.

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2 TYPICAL SECTIONS OF IMPROVEMENT



COUNTY ROAD 34 - 2 LANE SECTION



COUNTY ROAD 34 - NOTCH & WIDENING

NOTES:

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

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

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

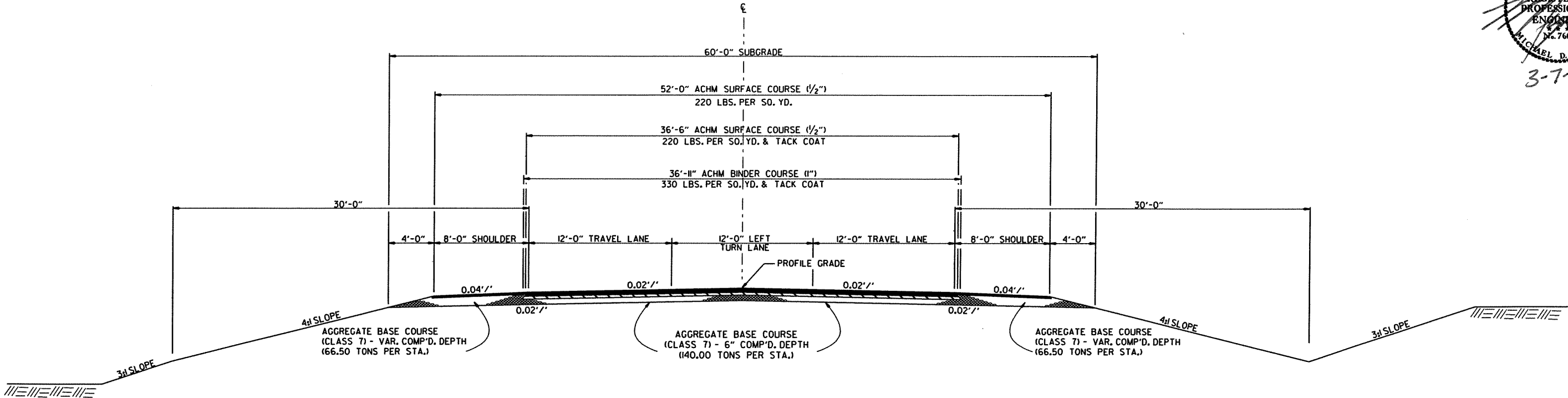
ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTION NOTCH AND WIDENING. CALCULATIONS WILL NOT BE PAID FOR DIRECTLY BUT PAYMENT WILL BE CONSIDERED INCLUDED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

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

• TO BE USED IF AND WHERE DIRECTED BY ENGINEER.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		11	266
				JOB NO.		090293		

2 TYPICAL SECTIONS OF IMPROVEMENT



COUNTY ROAD 34 - 3 LANE SECTION

NOTES:

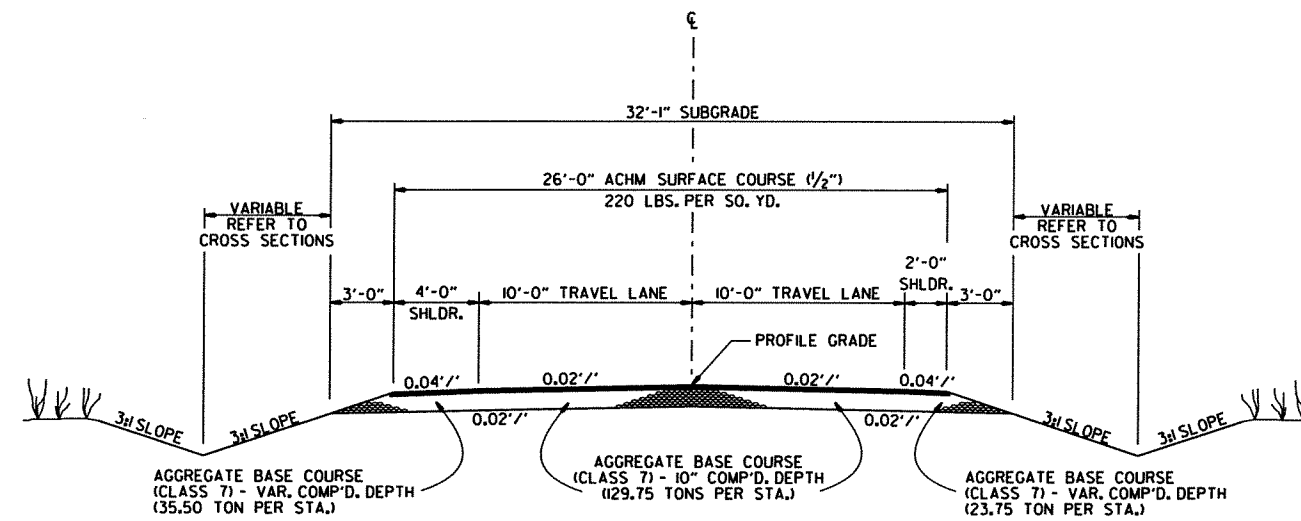
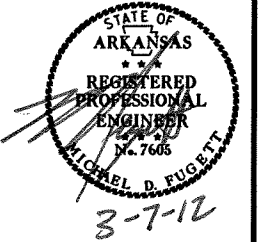
THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

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

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

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.		090293	12	266

2 TYPICAL SECTIONS OF IMPROVEMENT



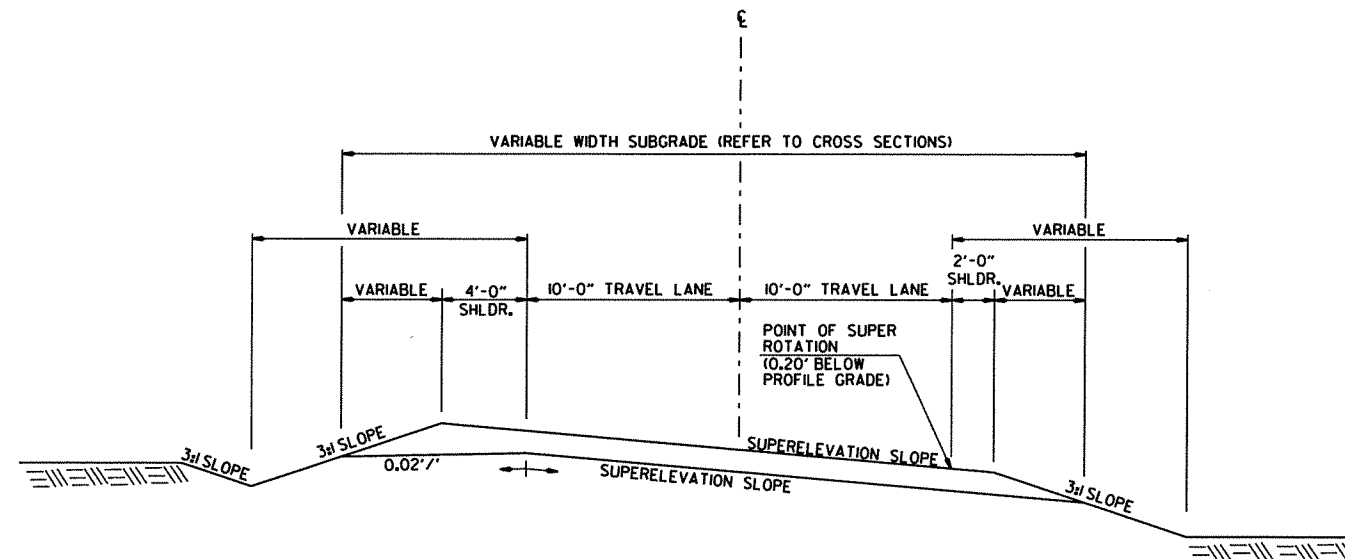
COUNTY RD. 34 M.O.T. - FULL DEPTH CONSTRUCTION

COUNTY RD. 34 M.O.T.
STA. 10+00.00 TO STA. 13+00.00
STA. 20+00.00 TO STA. 36+50.17

NOTES:

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

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



COUNTY RD. 34 M.O.T. - SUPERELEVATION
(PAVEMENT SECTION IS SAME AS SHOWN ABOVE)

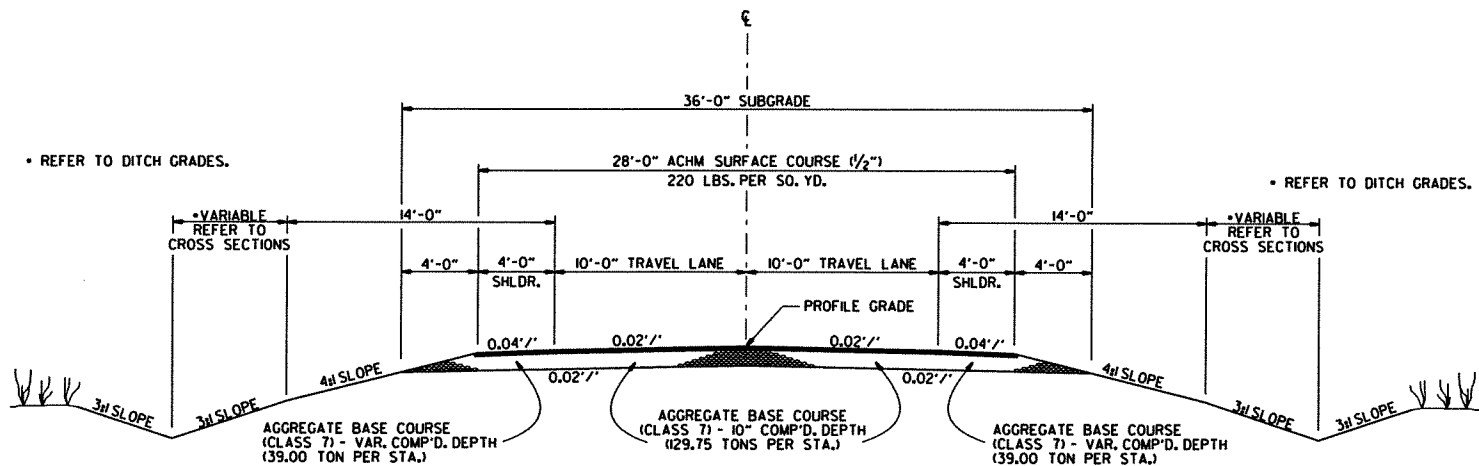
NOTE: REVOLVE SUPERELEVATION AROUND THE INSIDE PAVEMENT EDGE.

COUNTY RD. 34 M.O.T.
STA. 13+00.00 TO STA. 20+00.00

TYPICAL SECTIONS OF IMPROVEMENT

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.	090293		13	266

2 TYPICAL SECTIONS OF IMPROVEMENT

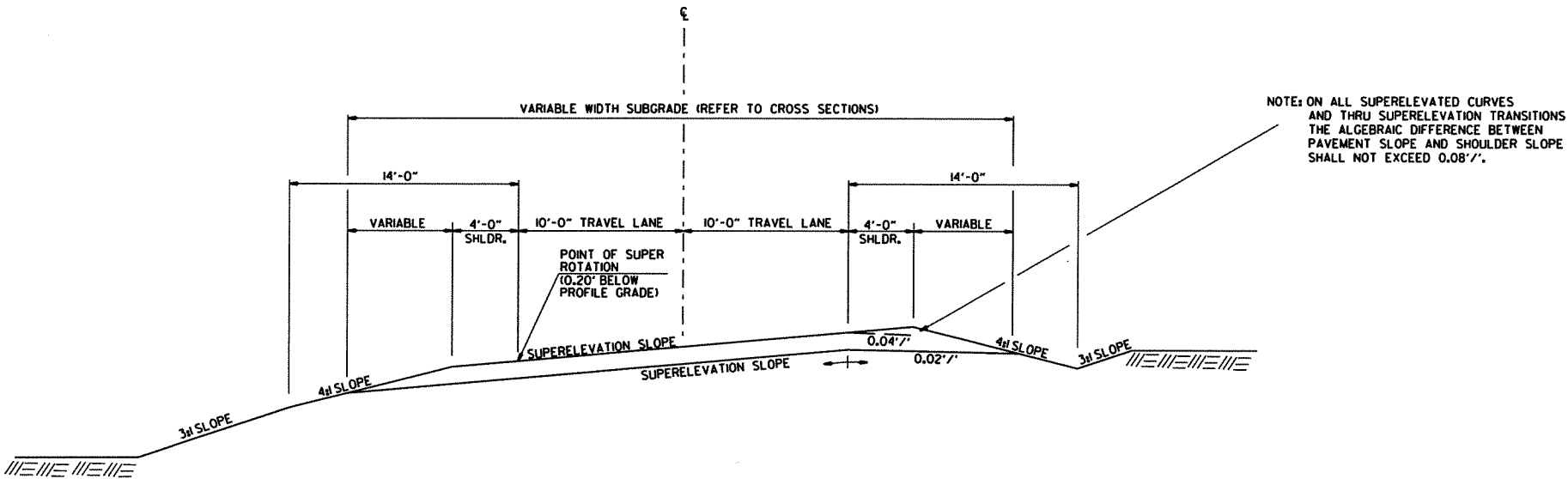


SOUTH FRONTAGE ROAD (COUNTY RD. 34) & COUNTY RD. 21- FULL DEPTH CONSTRUCTION

SOUTH FRONTAGE ROAD (COUNTY RD. 34)
 STA. 10+00.00 TO STA. 10+27.02
 STA. 19+65.70 TO STA. 19+91.71
 STA. 29+43.25 TO STA. 53+31.85
 STA. 60+07.90 TO STA. 63+76.44
 STA. 69+31.91 TO STA. 76+61.00

COUNTY RD. 21
 STA. 18+82.50 TO STA. 19+20.37
 STA. 26+35.60 TO STA. 34+50.00

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



SOUTH FRONTAGE ROAD (COUNTY RD. 34) & COUNTY RD. 21- SUPERELEVATION (PAVEMENT SECTION IS SAME AS SHOWN ABOVE)

NOTE: REVOLVE SUPERELEVATION AROUND THE INSIDE PAVEMENT EDGE.
 SOUTH FRONTAGE ROAD (COUNTY RD. 34)
 STA. 10+27.02 TO STA. 19+65.70
 STA. 19+91.71 TO STA. 29+43.25
 STA. 53+31.85 TO STA. 60+07.90
 STA. 63+76.44 TO STA. 69+31.91

COUNTY RD. 21
 STA. 9+97.53 TO STA. 18+82.50
 STA. 19+20.37 TO STA. 26+35.60

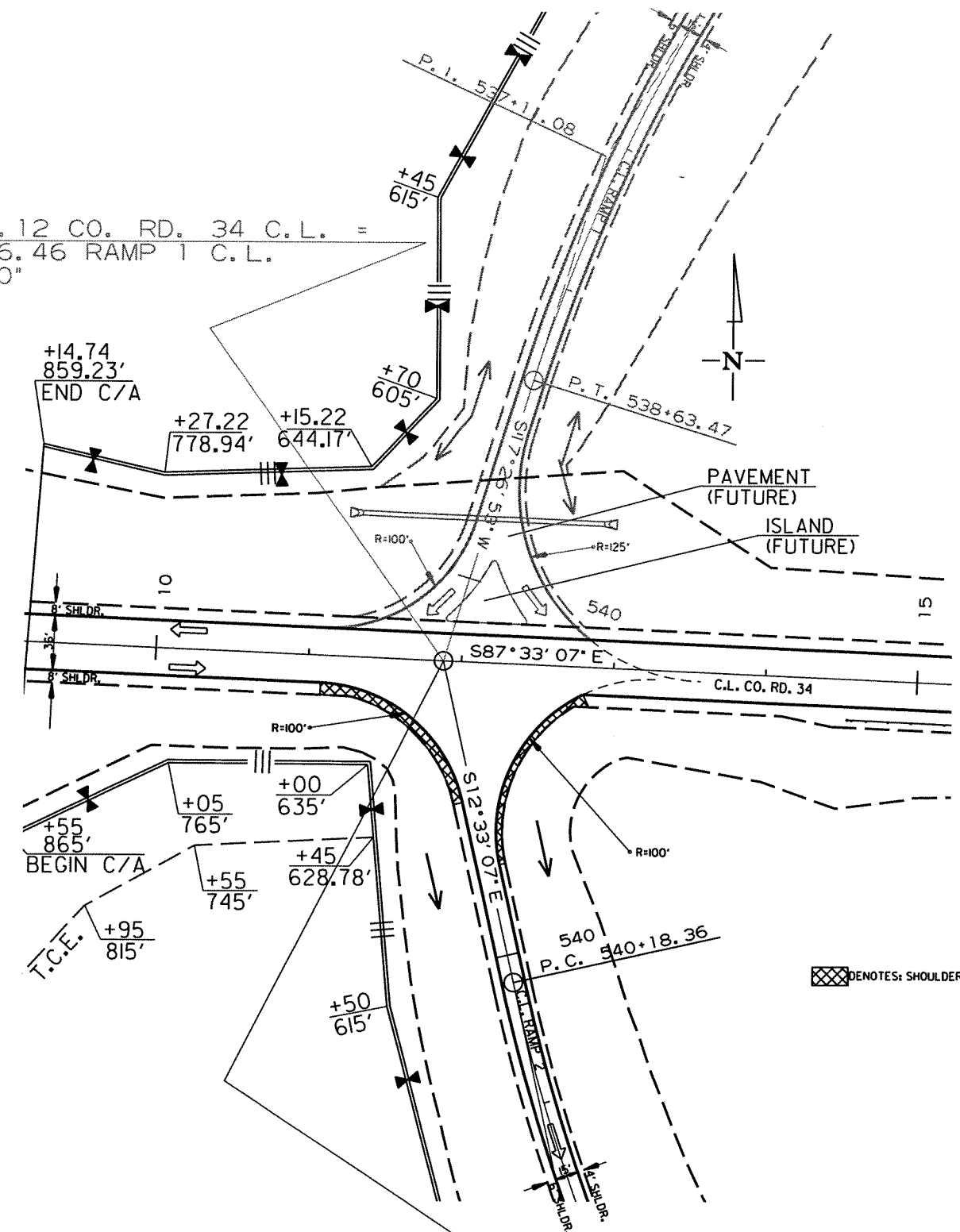
TYPICAL SECTIONS OF IMPROVEMENT

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.	090293		16	266

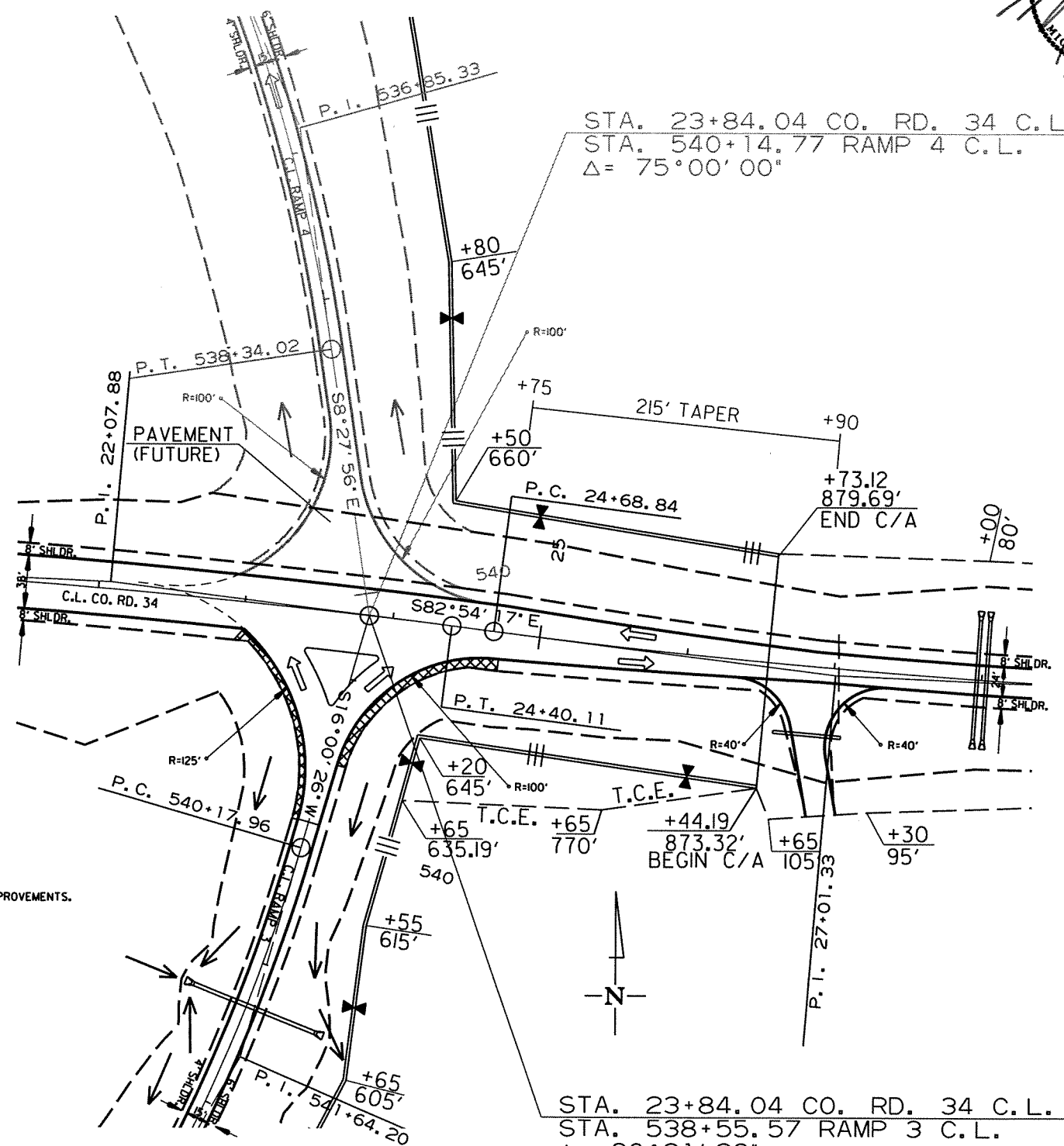
2 SPECIAL DETAILS



STA. 11+88.12 CO. RD. 34 C.L. =
STA. 540+56.46 RAMP 1 C.L.
 $\Delta = 75^{\circ}00'00''$



STA. 11+88.12 CO. RD. 34 C.L. =
STA. 538+02.14 RAMP 2 C.L.
 $\Delta = 75^{\circ}00'00''$

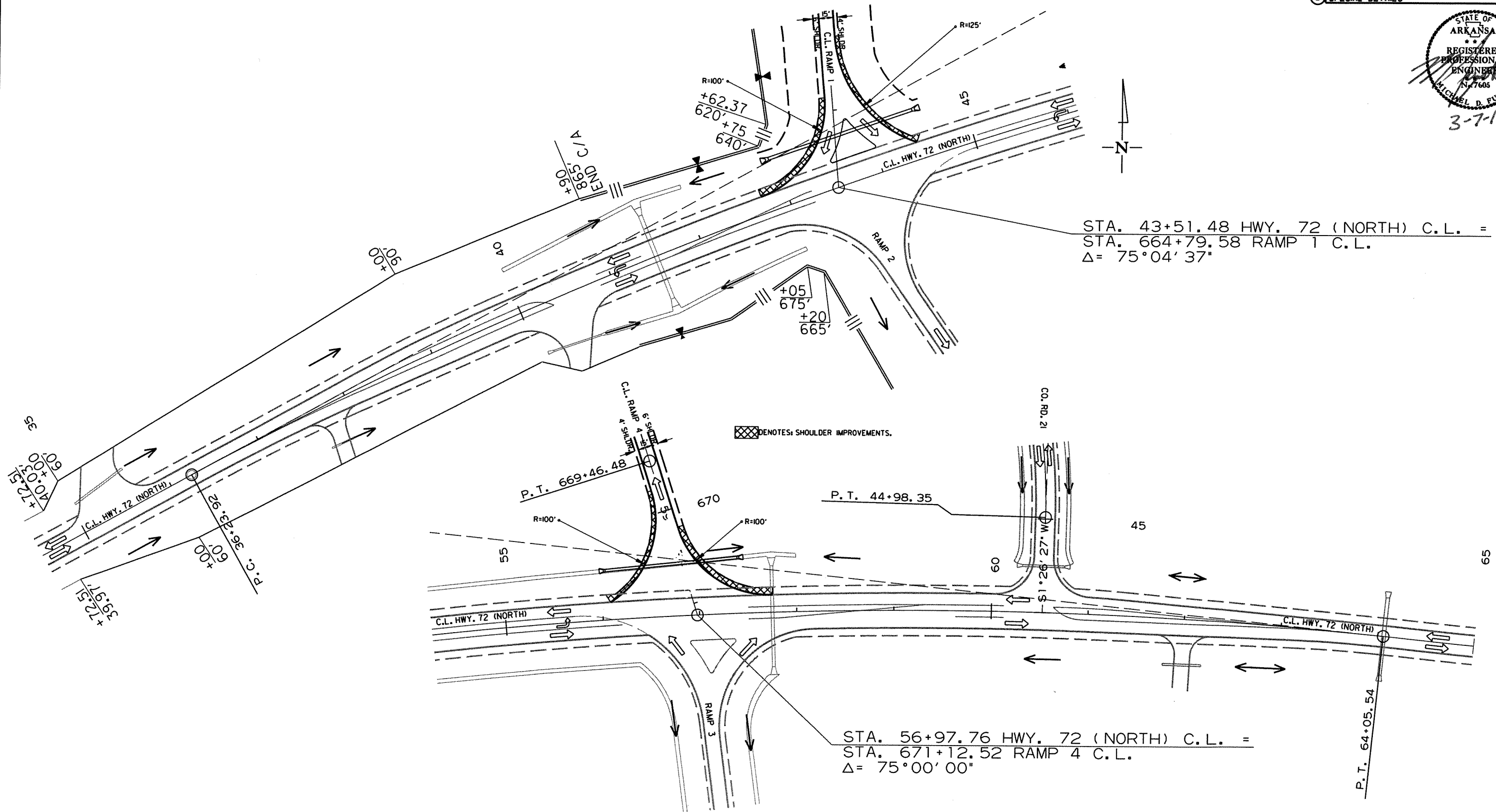
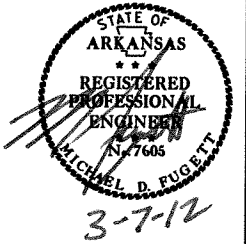


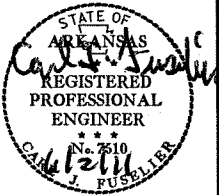
STA. 23+84.04 CO. RD. 34 C.L. =
STA. 538+55.57 RAMP 3 C.L.
 $\Delta = 80^{\circ}31'38''$

SPECIAL DETAILS
CO. RD. 34

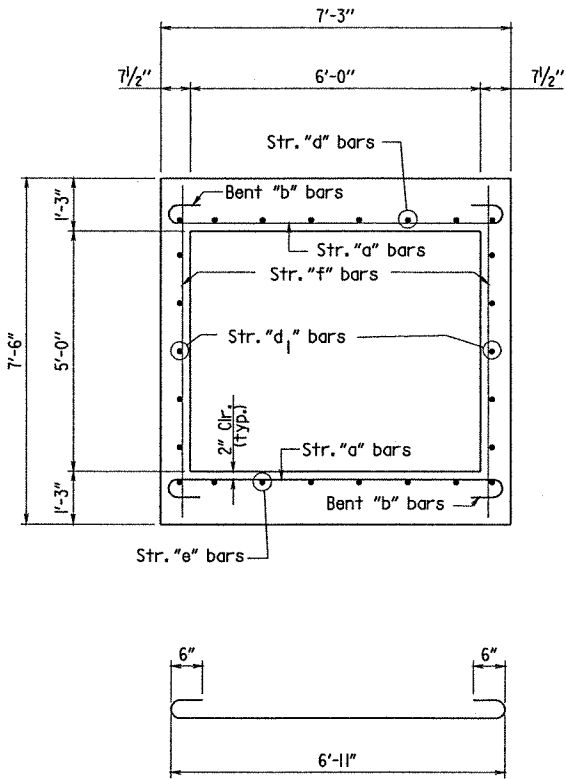
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 090293	17	266

② SPECIAL DETAILS





SECTION G
45' Maximum Fill Height



Str. "a" bars - #6 @ 9"
Bent "b" bars - #6 @ 9"
Str. "d" bars - #4 @ 12"
Str. "d ₁ " bars - #4 @ 12"
Str. "e" bars - #4 @ 12"
Str. "f" bars - #5 @ 9"

Note: Top and Bottom Slab
Str. "a" bars shall alternate with Bent "b" bars

* QUANTITIES

Description	Class "S" Concrete (cu. yd./ L.F.)	Reinforcing Steel (lbs / L.F.)
Section G	0.90	98.03

* Per Linear Foot of Barrel Length.

ADDITIONAL QUANTITIES

Reinforcing Steel = 21.71 lbs/ lap

Bent "b" bars

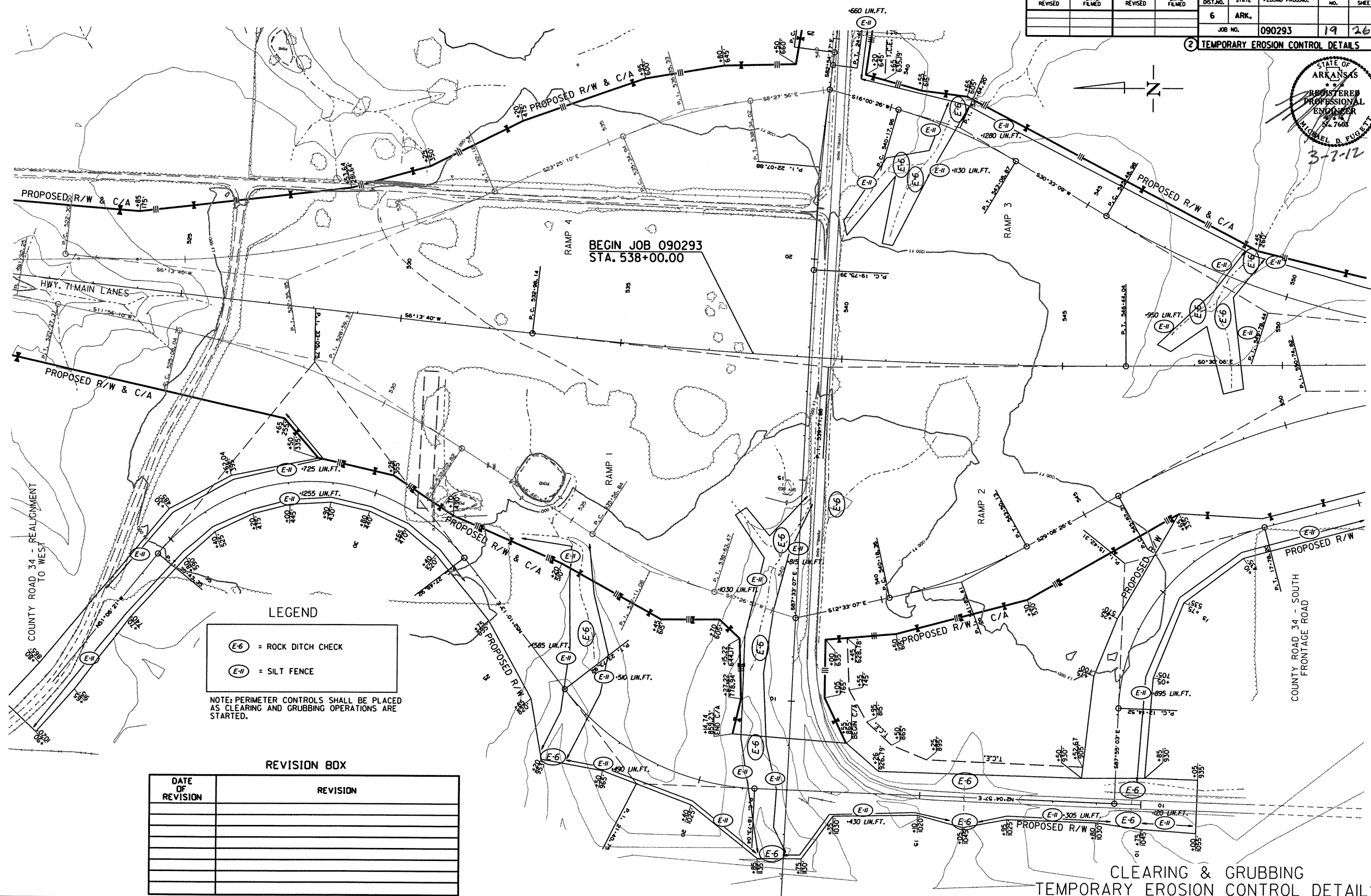
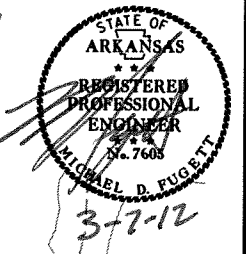
Dimensions are out to out of bars.
Total Length = 8'-3"
Pin Dia. = 4 1/2"

Single Box Culvert 6' x 5' x 305'
Sta. 600+72

SPECIAL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		19	266
				JOB NO.		090293	19	266

2 TEMPORARY EROSION CONTROL DETAILS



LEGEND

- E-6 = ROCK DITCH CHECK
- E-11 = SILT FENCE

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

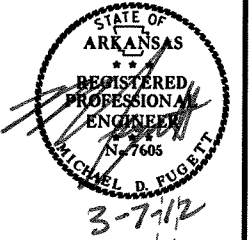
REVISION BOX

DATE OF REVISION	REVISION

CLEARING & GRUBBING
TEMPORARY EROSION 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.	090293		20	266

2 TEMPORARY EROSION CONTROL DETAILS



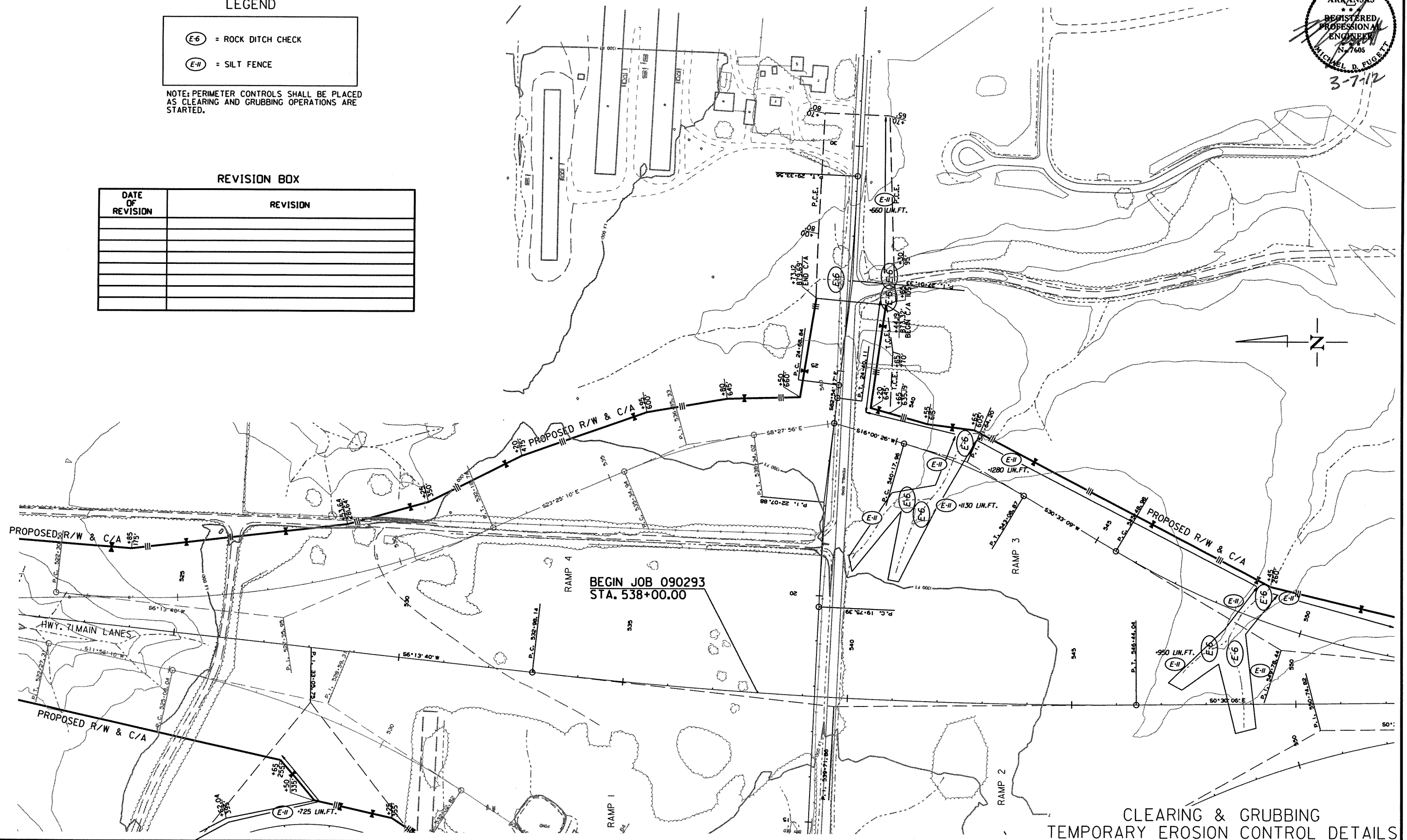
LEGEND

- (E-6) = ROCK DITCH CHECK
- (E-11) = SILT FENCE

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

REVISION BOX

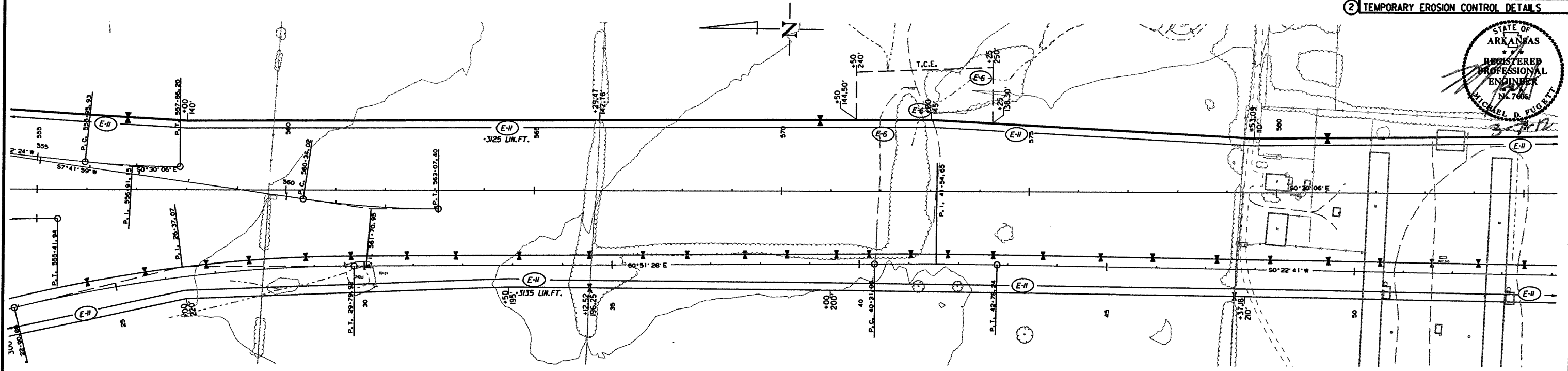
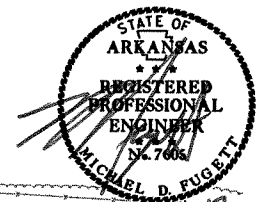
DATE OF REVISION	REVISION



CLEARING & GRUBBING
TEMPORARY EROSION 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.	090293		21	266

2 TEMPORARY EROSION CONTROL DETAILS



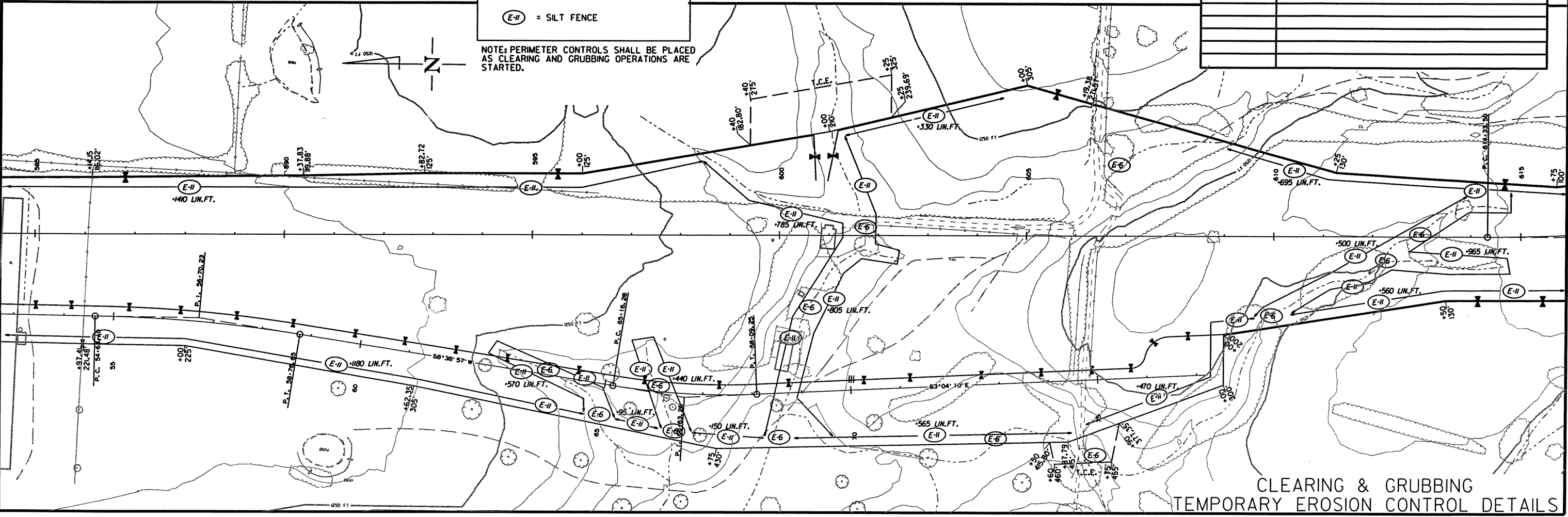
LEGEND

- (E-6) = ROCK DITCH CHECK
- (E-11) = SILT FENCE

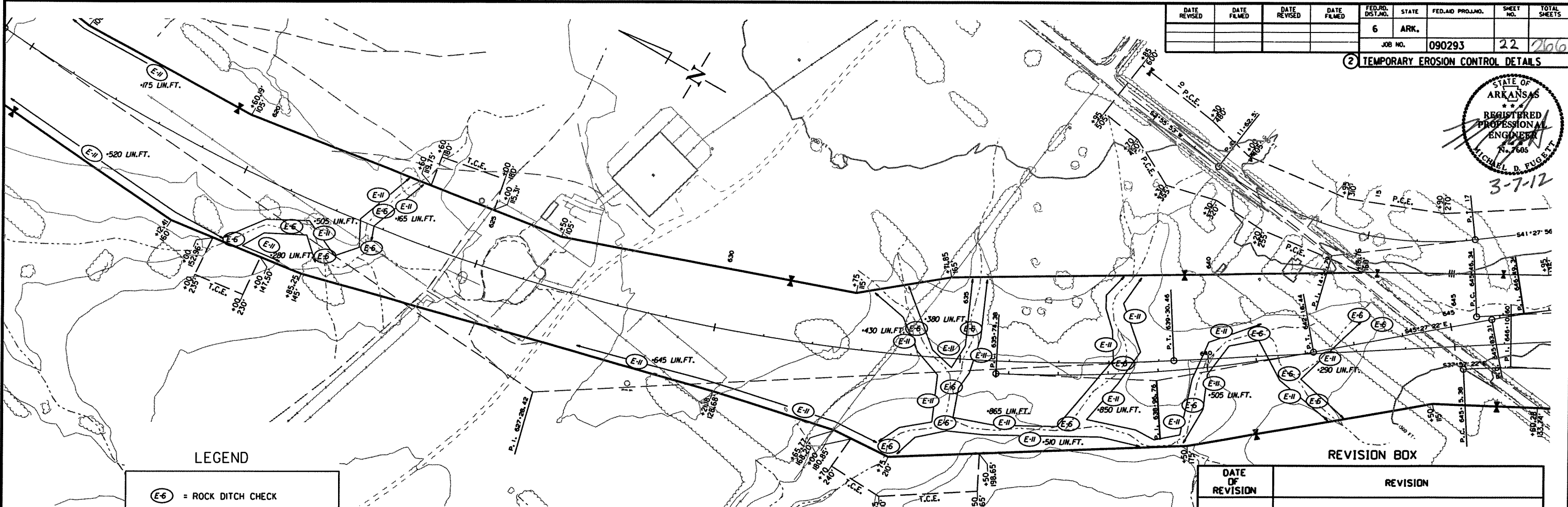
NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED.

DATE OF REVISION	REVISION

REVISION BOX



CLEARING & GRUBBING
TEMPORARY EROSION CONTROL DETAILS



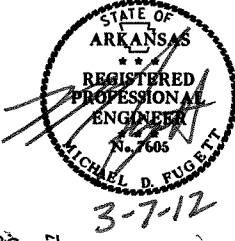
LEGEND

- (E-6) = ROCK DITCH CHECK
- (E-II) = SILT FENCE

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

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		22	266
				JOB NO.	090293		22	266

2 TEMPORARY EROSION CONTROL DETAILS



REVISION BOX

DATE OF REVISION	REVISION

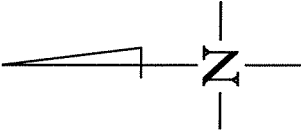
REVISION BOX

DATE OF REVISION	REVISION

LEGEND

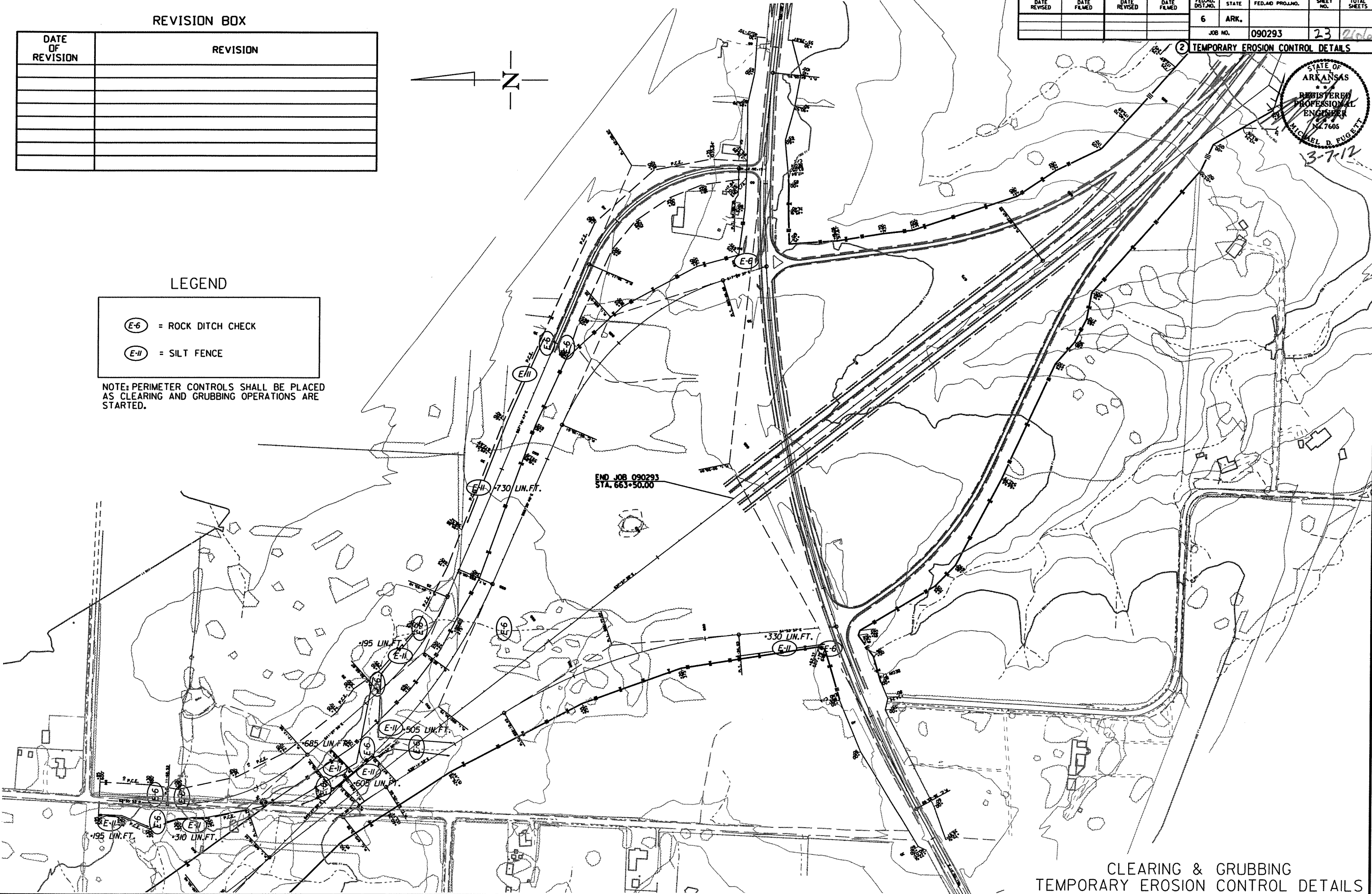
	= ROCK DITCH CHECK
	= SILT FENCE

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



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		23	266

JOB NO. 090293



CLEARING & GRUBBING
TEMPORARY EROSION CONTROL DETAILS

REVISION BOX

DATE OF REVISION	REVISION

LEGEND

- (E-6) = ROCK DITCH CHECK
- (E-7) = DROP INLET SILT FENCE
- (E-8) = DIVERSION DITCH
- (E-11) = SILT FENCE

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

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		24	206
				JOB NO.	090293			

2 TEMPORARY EROSION CONTROL DETAILS



BEGIN JOB 090293
STA. 538+00.00

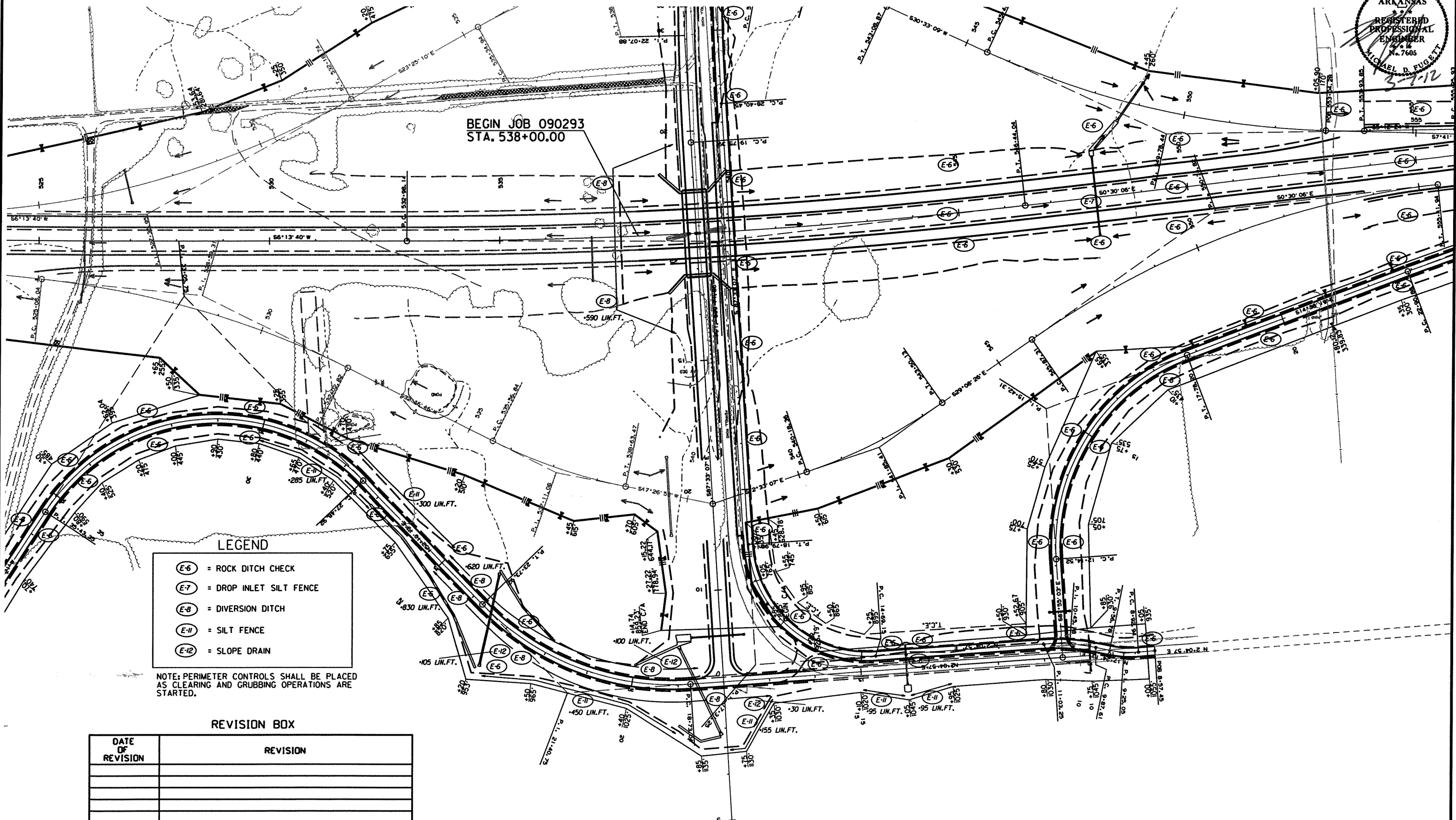
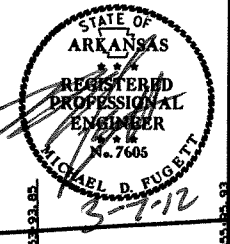
STAGE I
TEMPORARY EROSION CONTROL DETAILS

2/27/2012

R090293_REV.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		25	266
				JOB NO.	090293			

2 TEMPORARY EROSION CONTROL DETAILS



- LEGEND**
- (E-6) = ROCK DITCH CHECK
 - (E-7) = DROP INLET SILT FENCE
 - (E-8) = DIVERSION DITCH
 - (E-11) = SILT FENCE
 - (E-12) = SLOPE DRAIN

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

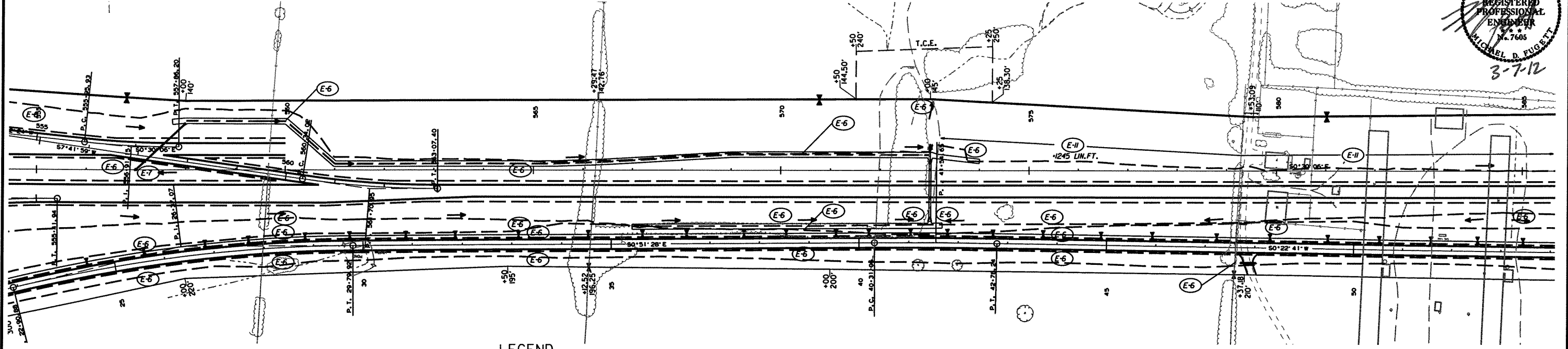
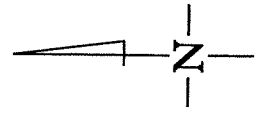
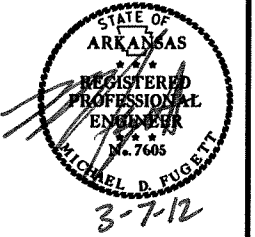
REVISION BOX

DATE OF REVISION	REVISION

STAGE I
TEMPORARY EROSION 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.		26	266
				JOB NO.	090293			

2 TEMPORARY EROSION CONTROL DETAILS



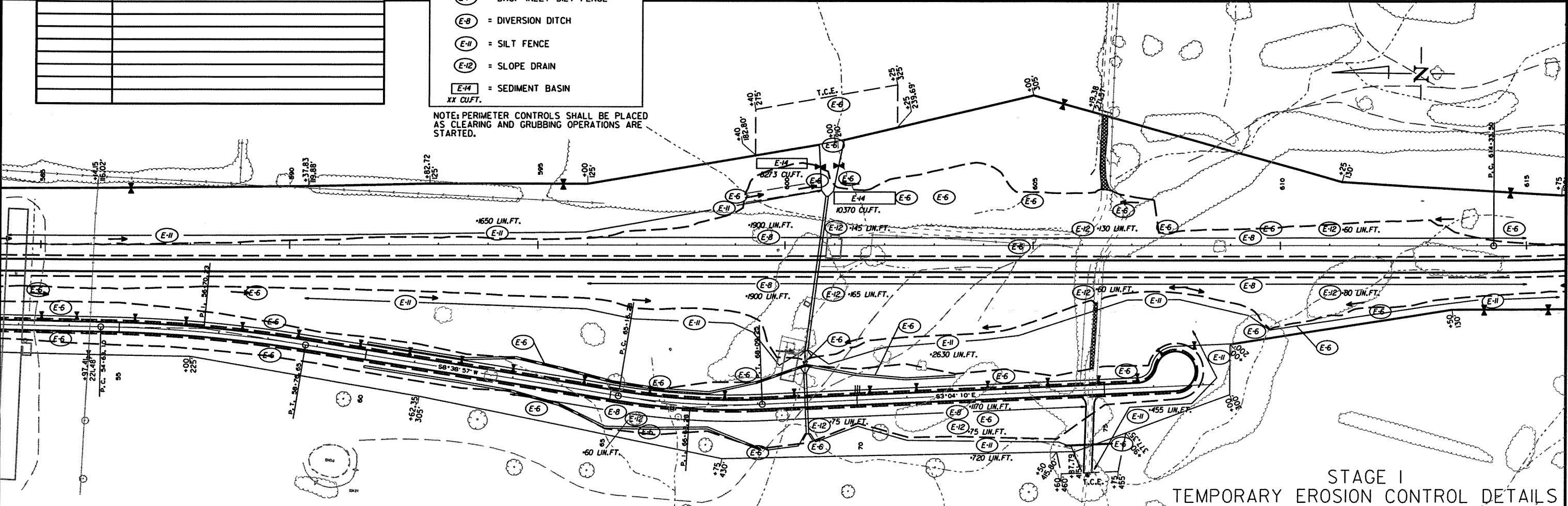
REVISION BOX

DATE OF REVISION	REVISION

LEGEND

- (E-6) = ROCK DITCH CHECK
- (E-7) = DROP INLET SILT FENCE
- (E-8) = DIVERSION DITCH
- (E-11) = SILT FENCE
- (E-12) = SLOPE DRAIN
- (E-14) = SEDIMENT BASIN
XX CUFT.

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



STAGE I
TEMPORARY EROSION 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.		27	2166
				JOB NO.	090293			

2 TEMPORARY EROSION CONTROL DETAILS



LEGEND

- (E-6) = ROCK DITCH CHECK
- (E-7) = DROP INLET SILT FENCE
- (E-8) = DIVERSION DITCH
- (E-11) = SILT FENCE
- (E-12) = SLOPE DRAIN

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

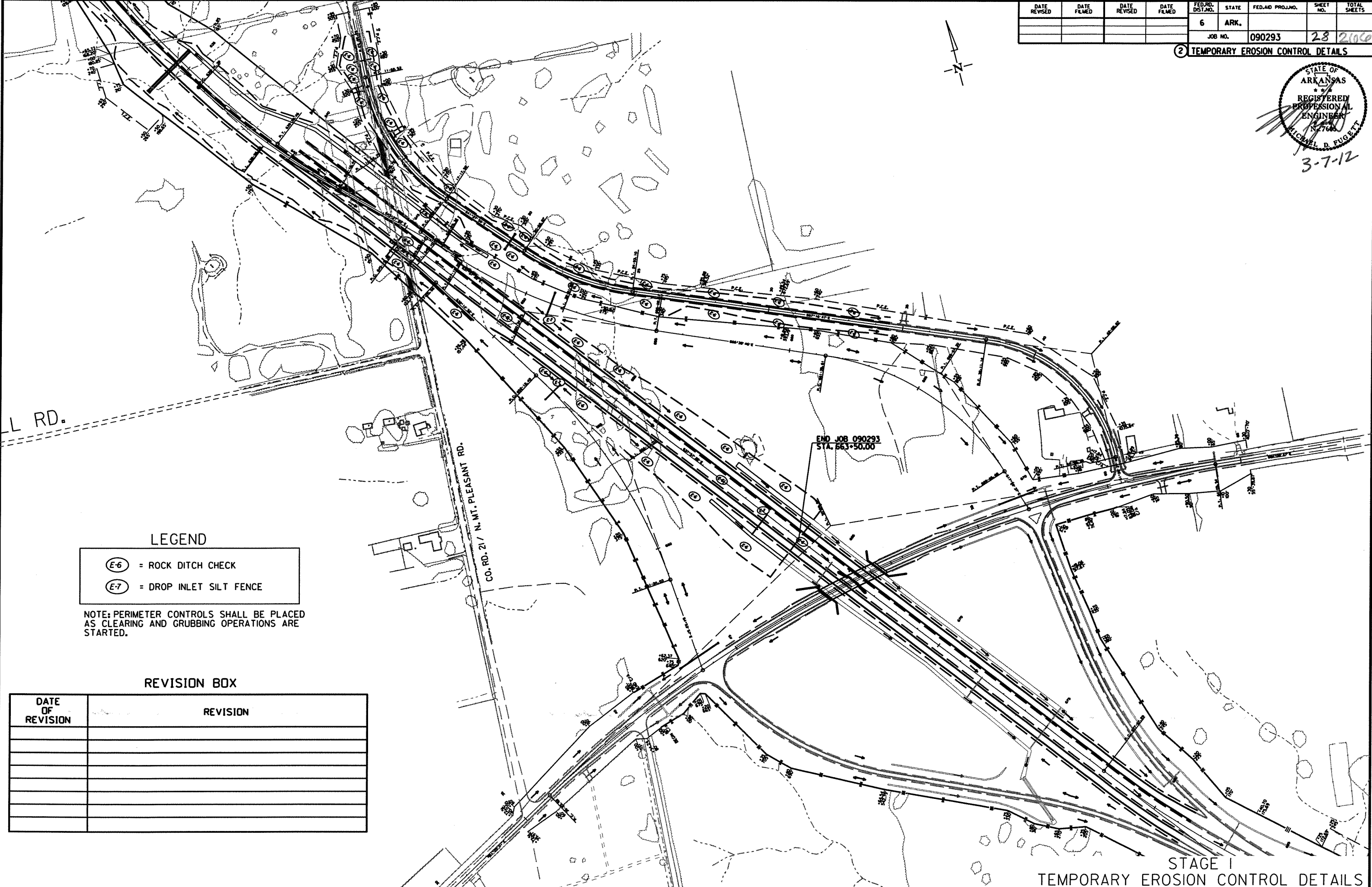
REVISION BOX

DATE OF REVISION	REVISION

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		28	2106
				JOB NO. 090293				

2 TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
MICHAEL D. FUGITT
3-7-12



LEGEND

- E-6 = ROCK DITCH CHECK
- E-7 = DROP INLET SILT FENCE

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

REVISION BOX

DATE OF REVISION	REVISION

STAGE I
TEMPORARY EROSION 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.	090293		29	266

2 TEMPORARY EROSION CONTROL DETAILS



3-7-12

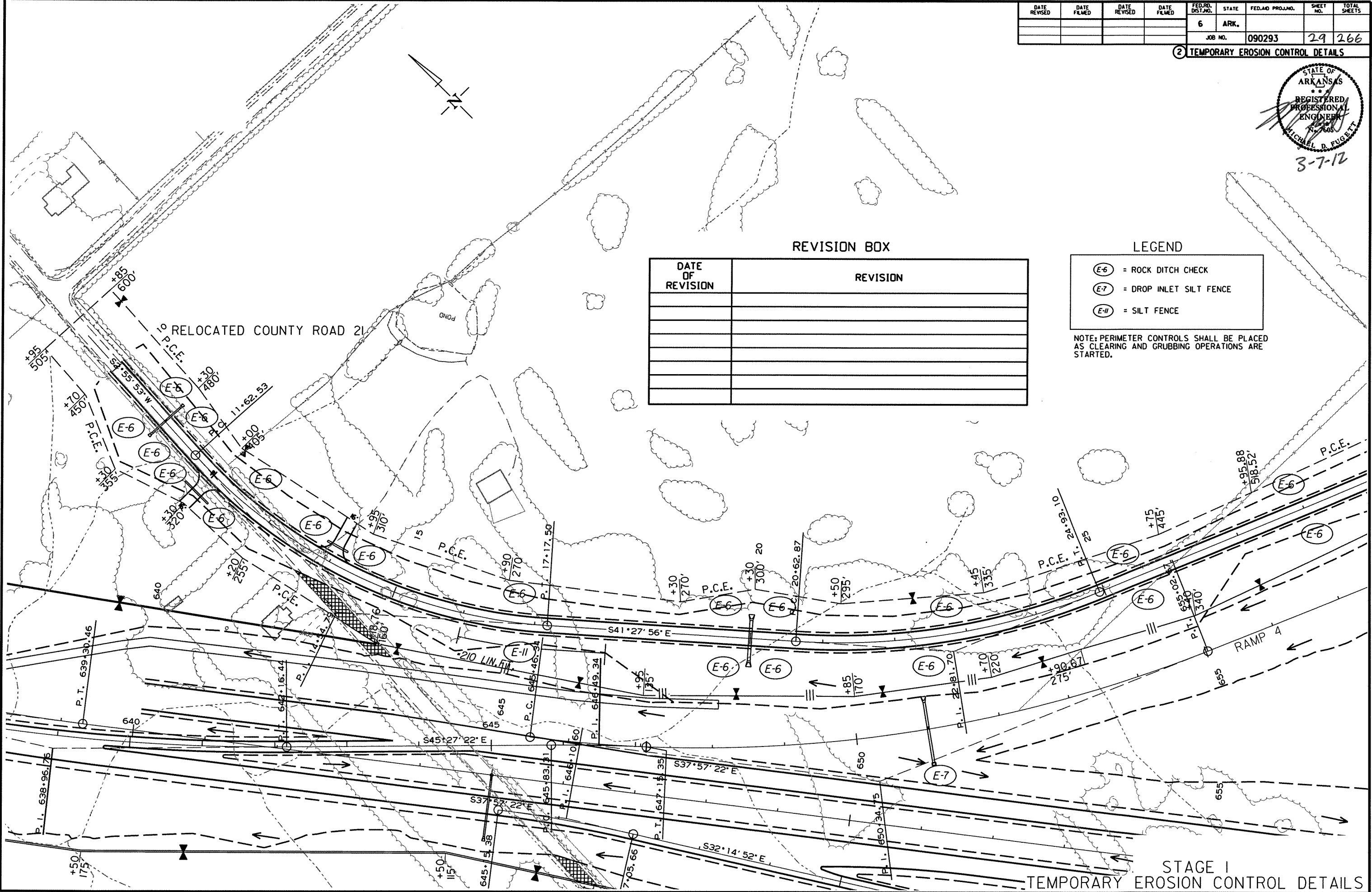
REVISION BOX

DATE OF REVISION	REVISION

LEGEND

- (E-6) = ROCK DITCH CHECK
- (E-7) = DROP INLET SILT FENCE
- (E-11) = SILT FENCE

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



LEGEND

- (E-6) = ROCK DITCH CHECK
- (E-7) = DROP INLET SILT FENCE
- (E-8) = DIVERSION DITCH
- (E-11) = SILT FENCE
- (E-12) = SLOPE DRAIN

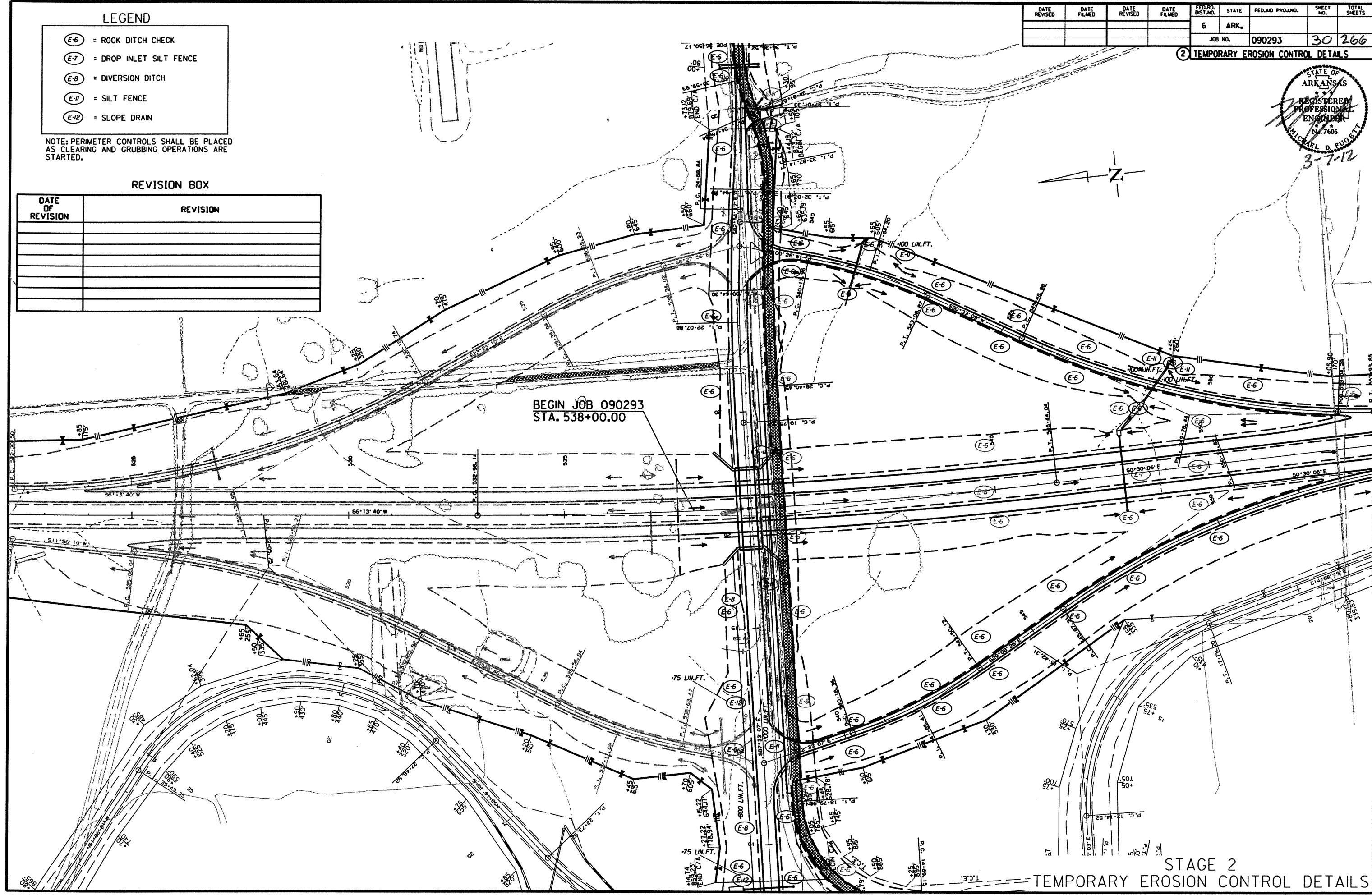
NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED.

REVISION BOX

DATE OF REVISION	REVISION

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		30	266
				JOB NO.	090293		30	266

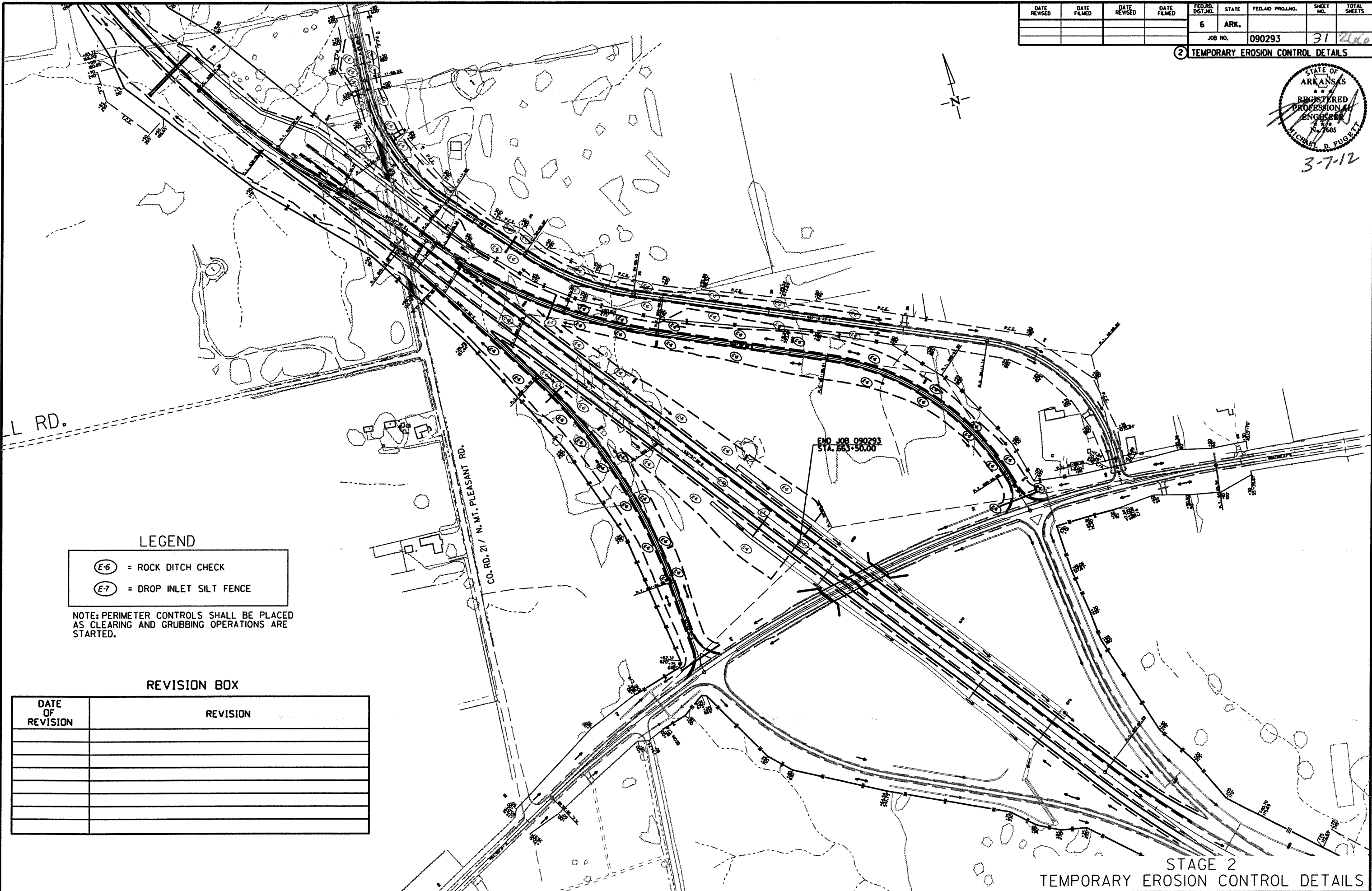
2 TEMPORARY EROSION CONTROL DETAILS



STAGE 2
TEMPORARY EROSION 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.		31	246
				JOB NO. 090293				

2 TEMPORARY EROSION CONTROL DETAILS



LEGEND

- (E-6) = ROCK DITCH CHECK
- (E-7) = DROP INLET SILT FENCE

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

REVISION BOX

DATE OF REVISION	REVISION

2/27/2012

R090293_REV.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.	090293		32	266

2 TEMPORARY EROSION CONTROL DETAILS



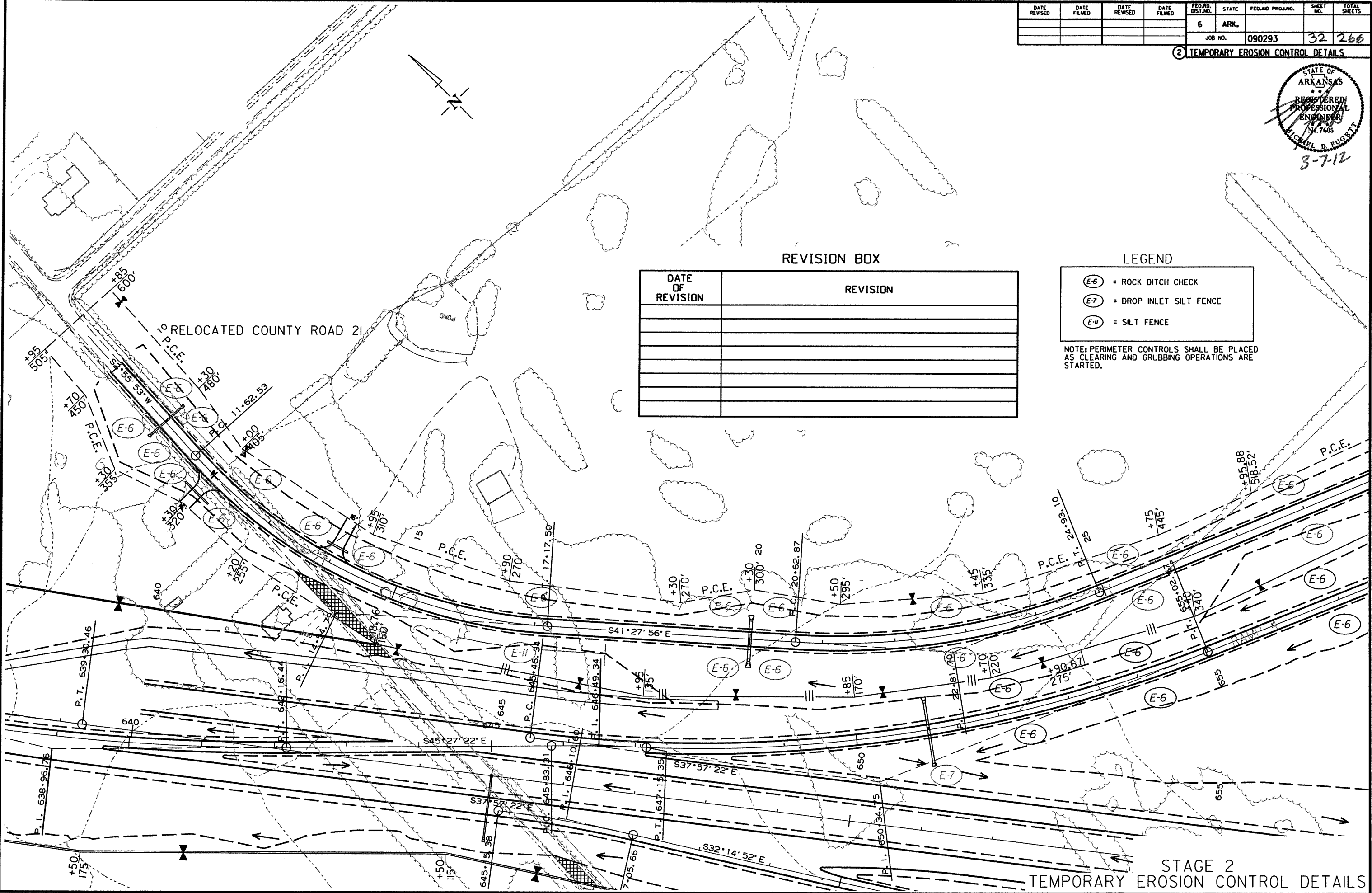
REVISION BOX

DATE OF REVISION	REVISION

LEGEND

- E-6 = ROCK DITCH CHECK
- E-7 = DROP INLET SILT FENCE
- E-11 = SILT FENCE

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



STAGE 2
TEMPORARY EROSION 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. 090293	33	266

2 MAINTENANCE OF TRAFFIC



3-7-12

BYPASS STA.	ROAD	WEST/SOUTH CROSS ROAD	XX MI.	EAST/NORTH CROSS ROAD	XX MI.
526+10	N.MT.PLEASANT RD.			HIGHLANDS	0.60 MI.
645+00	N.MT.PLEASANT RD.	ROCKY DELL	0.04 MI.		

ADVANCE SIGNING AND QUANTITIES FOR STAGE I

SIGNS = 582.5 SQ. FT.
TRAFFIC DRUMS = 124 EACH
TYPE III BARRICADES = 160 LIN. FT.

CO. RD. 34 REALIGNMENT TO WEST (STA. 16+00 TO STA. 39+18)
CONSTRUCTION PAVEMENT MARKING = 9272 LIN. FT.

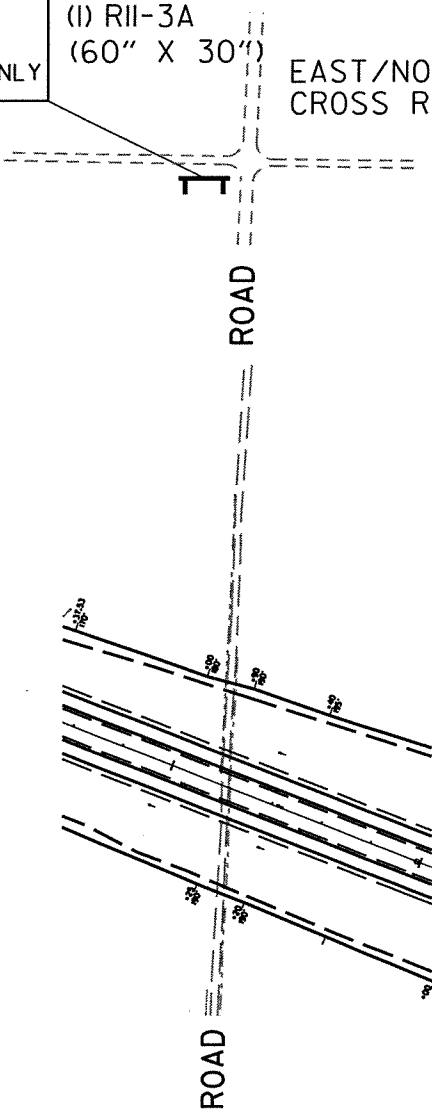
CO. RD. 34 M.O.T. (STA. 8+57 TO STA. 36+50)
CONSTRUCTION PAVEMENT MARKING = 11172 LIN. FT.

CO. RD. 34-SOUTH FRONTAGE RD. (STA. 10+10 TO STA. 76+61)
REFLECTORIZED PAINT PAVEMENT MARKING
YELLOW (4") = 13164 LIN. FT.
WHITE (4") = 13466 LIN. FT.

RELOCATED CO. RD. 21 (STA. 9+98 TO STA. 34+50)
REFLECTORIZED PAINT PAVEMENT MARKING
YELLOW (4") = 4905 LIN. FT.
WHITE (4") = 4905 LIN. FT.

SIGN TO BE INSTALLED
AFTER RIGHT-OF-WAY IS FENCED.

ROAD CLOSED
XX MILES AHEAD
LOCAL TRAFFIC ONLY
(1) RII-3A
(60" X 30")
EAST/NORTH
CROSS ROAD



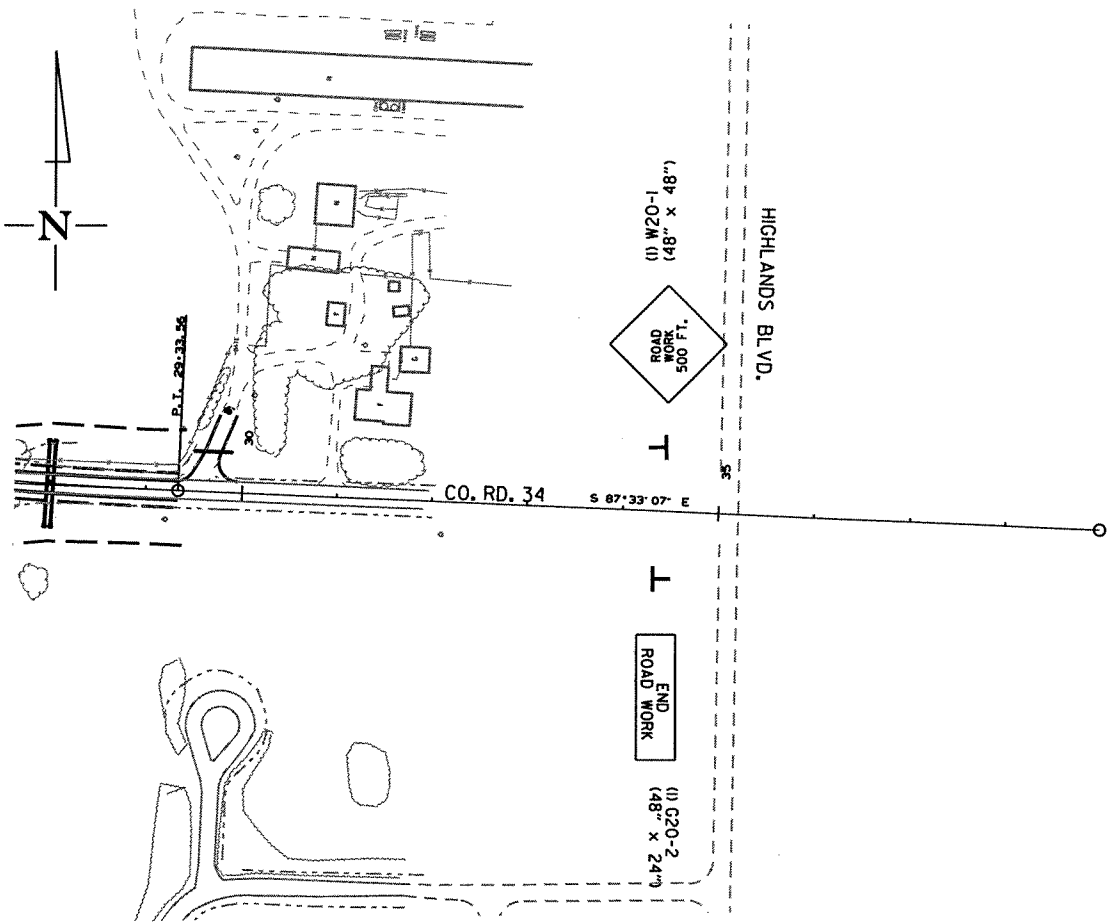
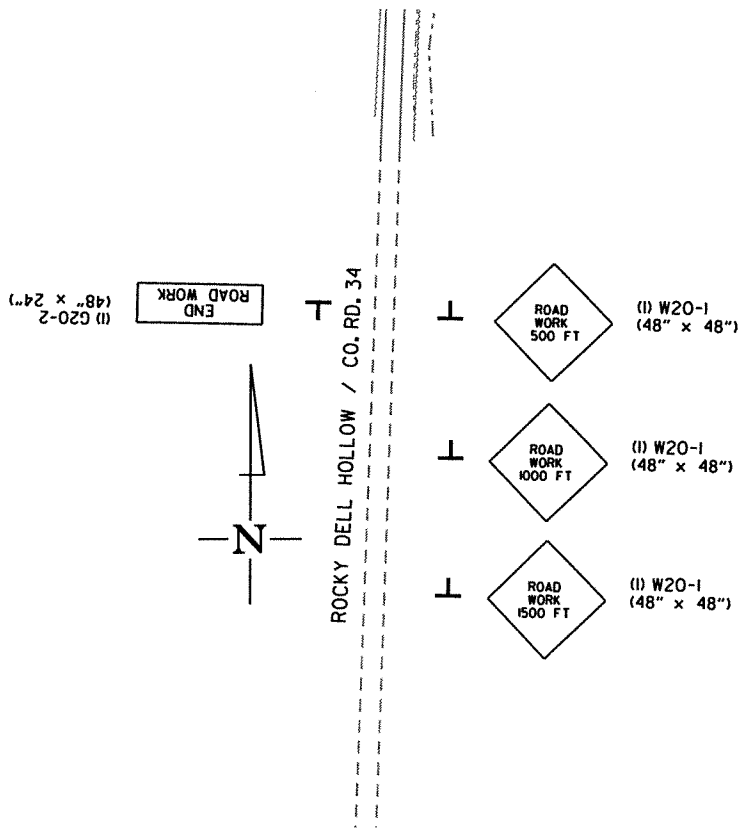
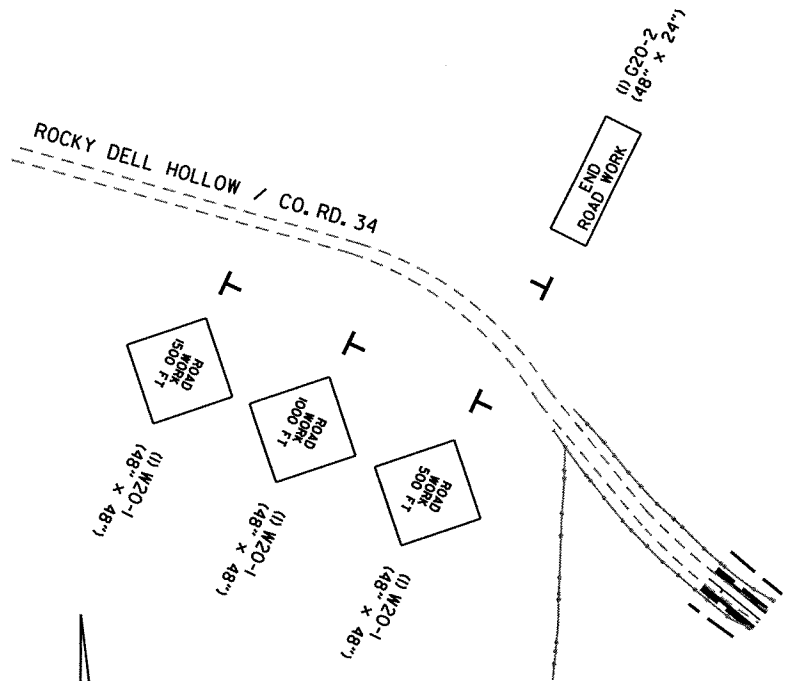
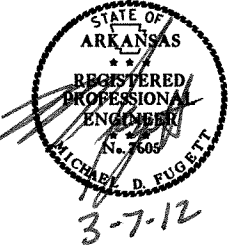
SIGN TO BE INSTALLED
AFTER RIGHT-OF-WAY IS FENCED.

ROAD CLOSED
XX MILES AHEAD
LOCAL TRAFFIC ONLY
(1) RII-3A
(60" X 30")
WEST/SOUTH
CROSS ROAD

MAINTENANCE OF TRAFFIC
ADVANCE SIGNING FOR
COUNTY ROAD CLOSURES

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.		090293	34	266

2 MAINTENANCE OF TRAFFIC



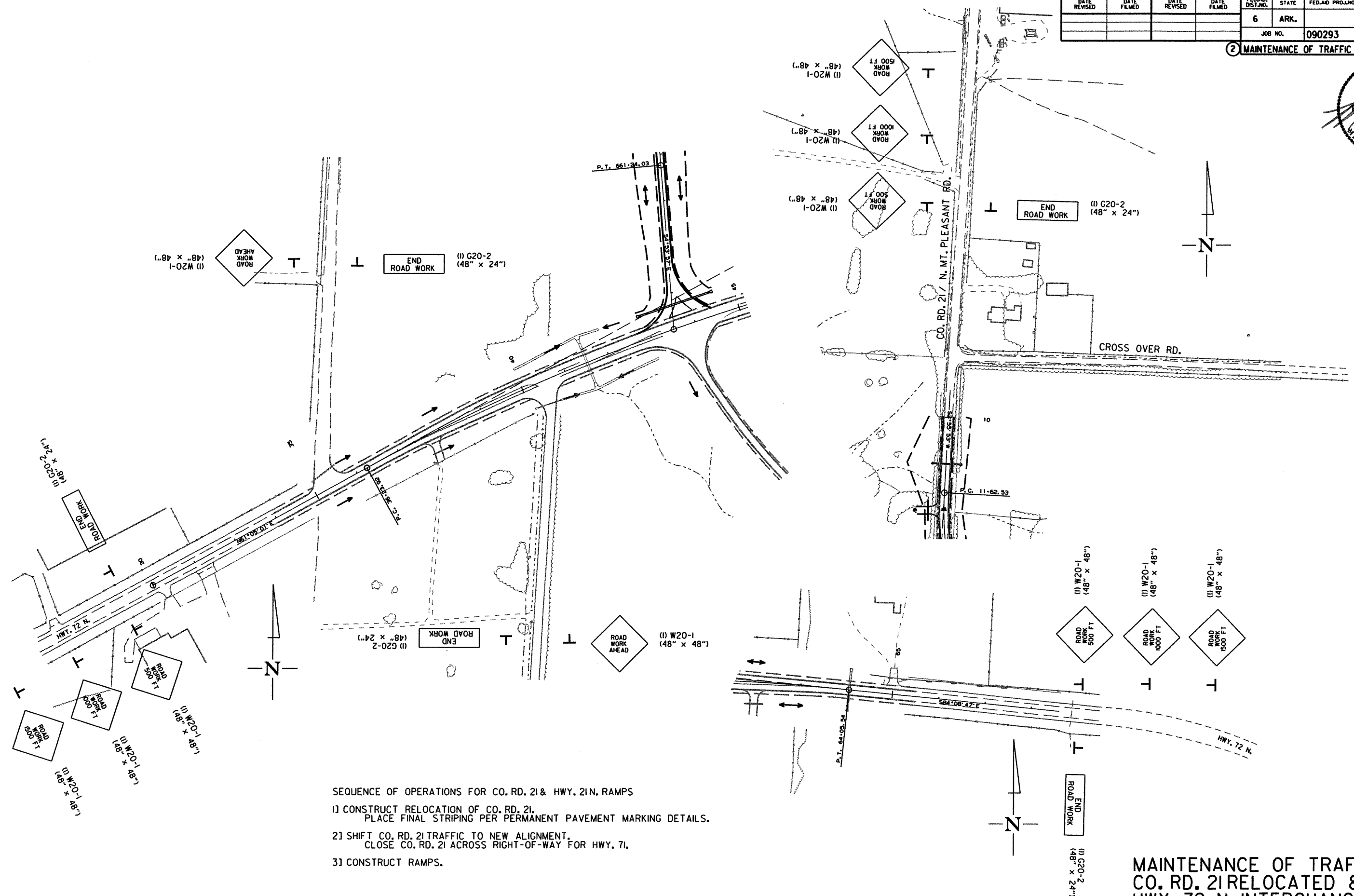
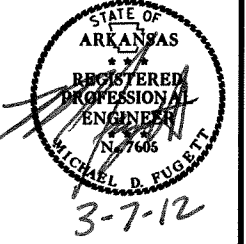
SEQUENCE OF OPERATIONS FOR CO. RD. 34

- 1) CONSTRUCT TEMPORARY ALIGNMENT FOR CO. RD. 34.
CONSTRUCT CO. RD. 34 SOUTH FRONTAGE RD.
CONSTRUCT RELOCATED CO. RD. 34 FROM STA. 16+00 NORTHWARD.
- 2) SHIFT CO. RD. 34 TRAFFIC TO RELOCATED-WEST PAVEMENT AND TEMPORARY ALIGNMENT.
REMOVE SECTION CONNECTING TO MT. PLEASANT ACROSS HWY. 71 RIGHT-OF-WAY.
CLOSE OFF MT. PLEASANT AT HWY. 71 RIGHT-OF-WAY AND SHIFT MT. PLEASANT THROUGH TRAFFIC TO HIGHLANDS BLVD.
CONSTRUCT OVERPASS AND APPROACHES.
CONSTRUCT MAIN LANES SOUTH OF OVERPASS.
PARTIALLY CONSTRUCT RELOCATED CO. RD. 34 FROM STA. 10+00 TO STA. 16+00.
- 3) SHIFT CO. RD. 34 TRAFFIC TO OVERPASS AND APPROACHES.
REMOVE TEMPORARY ALIGNMENT.
FINISH RIGHT SIDE OF RELOCATED CO. RD. 34 AND MAIN LANES UNDER OVERPASS.
CONSTRUCT RAMPS.
PLACE FINAL LIFT OF ACHM SURFACE COURSE ON OVERPASS AND CO. RD. 34.
INSTALL FINAL STRIPING PER PERMANENT PAVEMENT MARKING DETAILS.

MAINTENANCE OF TRAFFIC
CO. RD. 34 INTERCHANGE
ADVANCE SIGNS ALL STAGES

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. 090293	35	266

2 MAINTENANCE OF TRAFFIC

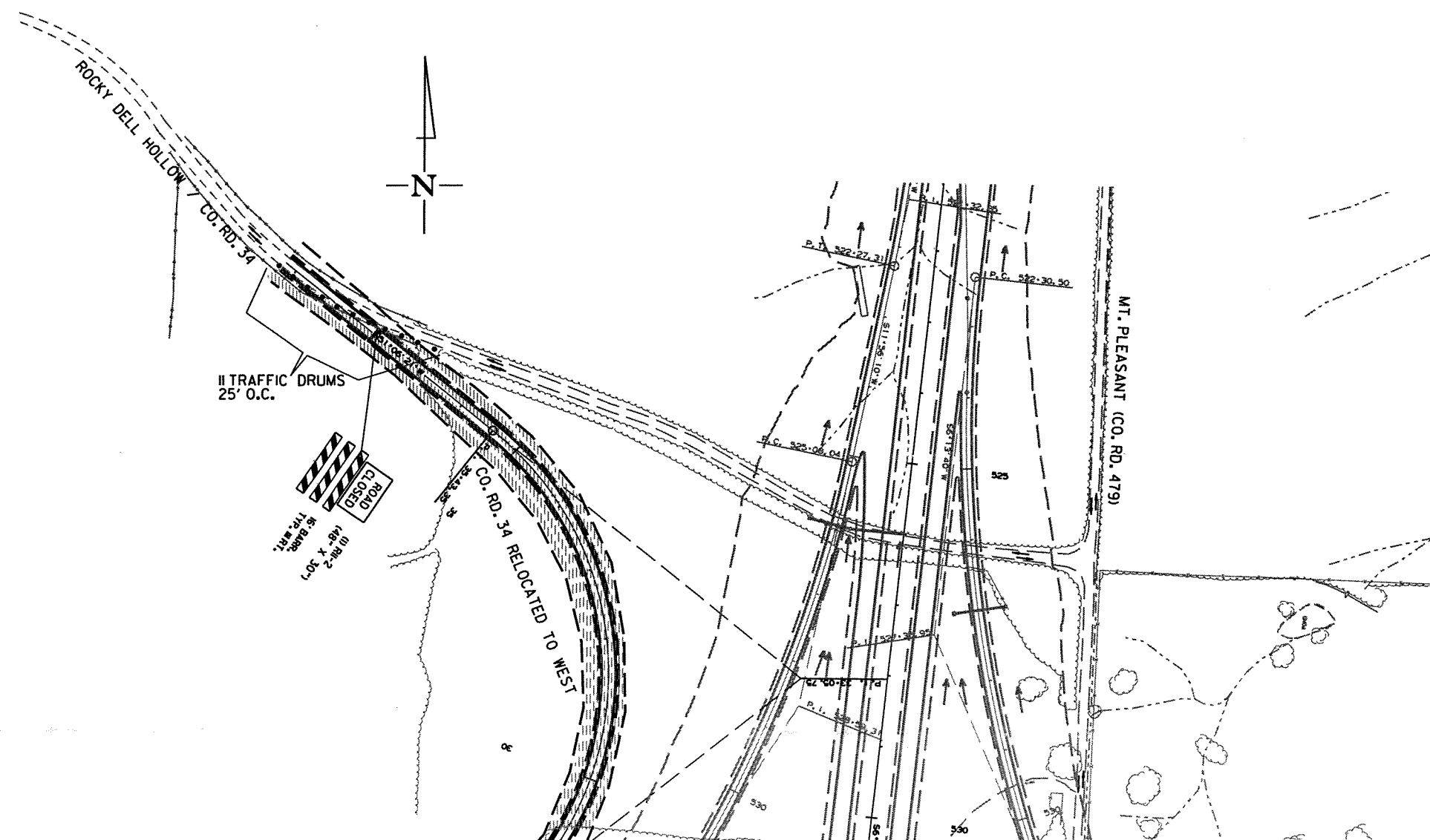
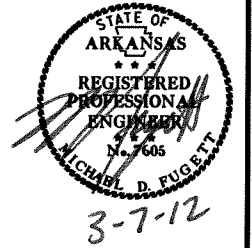


- SEQUENCE OF OPERATIONS FOR CO. RD. 21 & HWY. 72 N. RAMP
- 1) CONSTRUCT RELOCATION OF CO. RD. 21.
PLACE FINAL STRIPING PER PERMANENT PAVEMENT MARKING DETAILS.
 - 2) SHIFT CO. RD. 21 TRAFFIC TO NEW ALIGNMENT.
CLOSE CO. RD. 21 ACROSS RIGHT-OF-WAY FOR HWY. 71.
 - 3) CONSTRUCT RAMP.

MAINTENANCE OF TRAFFIC
CO. RD. 21 RELOCATED &
HWY. 72-N INTERCHANGE
ADVANCE SIGNS ALL STAGES

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.	090293		36	2666

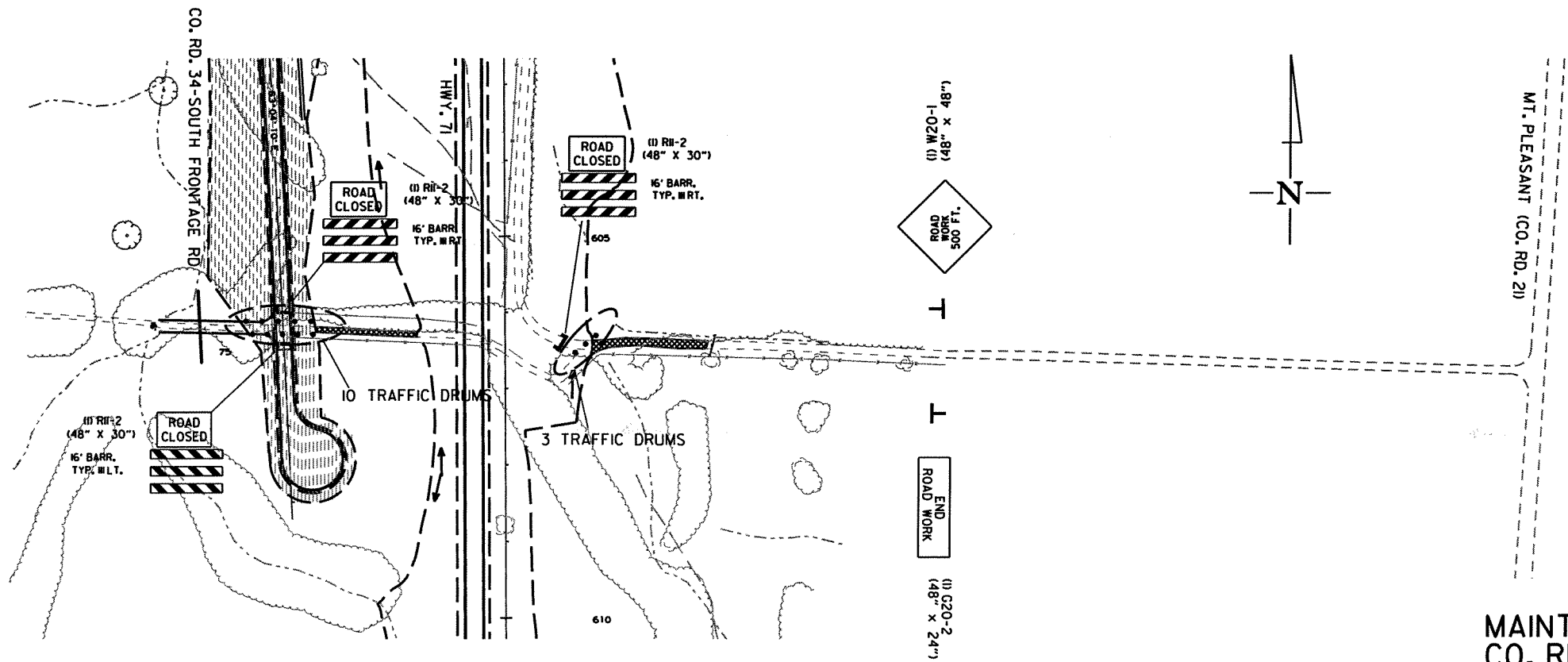
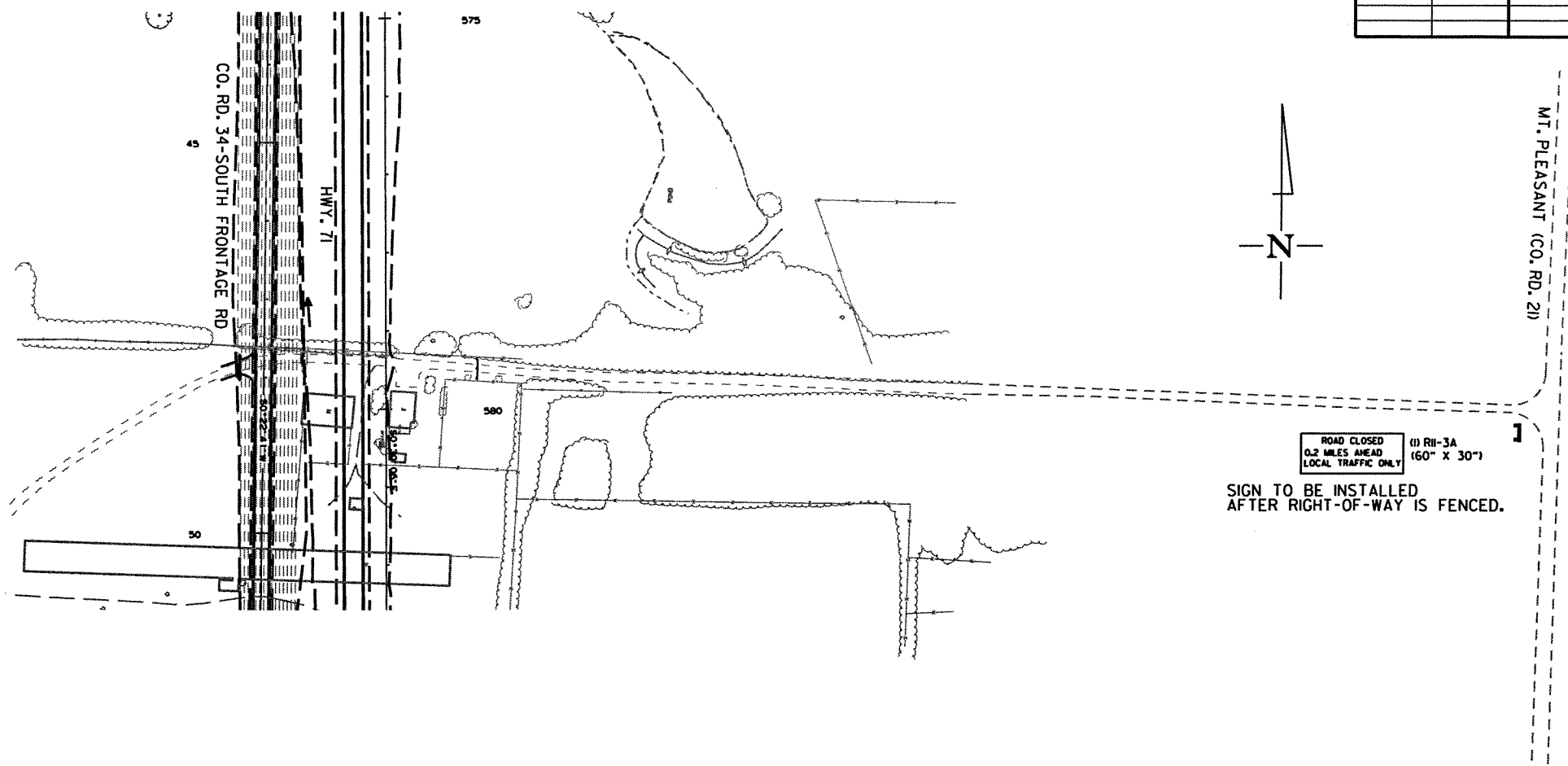
2 MAINTENANCE OF TRAFFIC



MAINTENANCE OF TRAFFIC
CO. RD. 34 INTERCHANGE
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. 090293	38	266

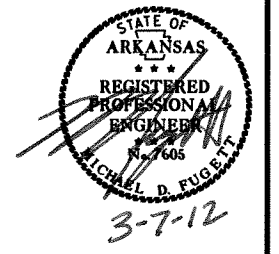
2 MAINTENANCE OF TRAFFIC



MAINTENANCE OF TRAFFIC
CO. RD. 34 INTERCHANGE
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.		090293	40	266

② MAINTENANCE OF TRAFFIC



QUANTITIES FOR STAGE 2

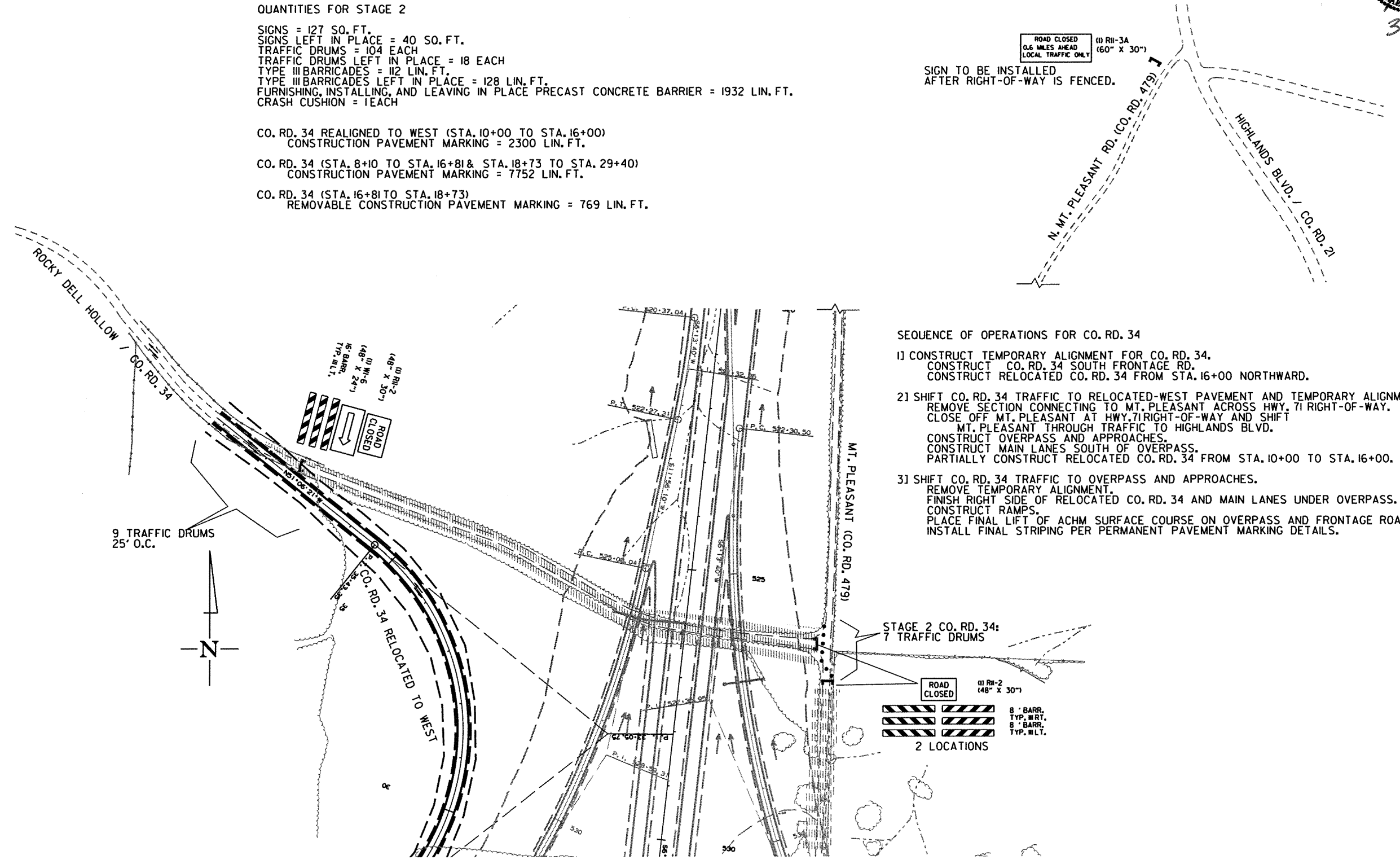
SIGNS = 127 SQ. FT.
SIGNS LEFT IN PLACE = 40 SQ. FT.
TRAFFIC DRUMS = 104 EACH
TRAFFIC DRUMS LEFT IN PLACE = 18 EACH
TYPE III BARRICADES = 112 LIN. FT.
TYPE III BARRICADES LEFT IN PLACE = 128 LIN. FT.
FURNISHING, INSTALLING, AND LEAVING IN PLACE PRECAST CONCRETE BARRIER = 1932 LIN. FT.
CRASH CUSHION = 1 EACH

CO. RD. 34 REALIGNED TO WEST (STA. 10+00 TO STA. 16+00)
CONSTRUCTION PAVEMENT MARKING = 2300 LIN. FT.

CO. RD. 34 (STA. 8+10 TO STA. 16+81 & STA. 18+73 TO STA. 29+40)
CONSTRUCTION PAVEMENT MARKING = 7752 LIN. FT.

CO. RD. 34 (STA. 16+81 TO STA. 18+73)
REMOVABLE CONSTRUCTION PAVEMENT MARKING = 769 LIN. FT.

ROAD CLOSED
0.6 MILES AHEAD
LOCAL TRAFFIC ONLY
(1) RII-3A
(60" X 30")
SIGN TO BE INSTALLED
AFTER RIGHT-OF-WAY IS FENCED.



SEQUENCE OF OPERATIONS FOR CO. RD. 34

- 1) CONSTRUCT TEMPORARY ALIGNMENT FOR CO. RD. 34.
CONSTRUCT CO. RD. 34 SOUTH FRONTAGE RD.
CONSTRUCT RELOCATED CO. RD. 34 FROM STA. 16+00 NORTHWARD.
- 2) SHIFT CO. RD. 34 TRAFFIC TO RELOCATED WEST PAVEMENT AND TEMPORARY ALIGNMENT.
REMOVE SECTION CONNECTING TO MT. PLEASANT ACROSS HWY. 71 RIGHT-OF-WAY.
CLOSE OFF MT. PLEASANT AT HWY. 71 RIGHT-OF-WAY AND SHIFT
MT. PLEASANT THROUGH TRAFFIC TO HIGHLANDS BLVD.
CONSTRUCT OVERPASS AND APPROACHES.
CONSTRUCT MAIN LANES SOUTH OF OVERPASS.
PARTIALLY CONSTRUCT RELOCATED CO. RD. 34 FROM STA. 10+00 TO STA. 16+00.
- 3) SHIFT CO. RD. 34 TRAFFIC TO OVERPASS AND APPROACHES.
REMOVE TEMPORARY ALIGNMENT.
FINISH RIGHT SIDE OF RELOCATED CO. RD. 34 AND MAIN LANES UNDER OVERPASS.
CONSTRUCT RAMPS.
PLACE FINAL LIFT OF ACHM SURFACE COURSE ON OVERPASS AND FRONTAGE ROADS.
INSTALL FINAL STRIPING PER PERMANENT PAVEMENT MARKING DETAILS.

9 TRAFFIC DRUMS
25' O.C.

STAGE 2 CO. RD. 34:
7 TRAFFIC DRUMS

ROAD CLOSED
(1) RII-2
(48" X 30")
8' BARR.
TYP. WRT.
8' BARR.
TYP. M.L.T.
2 LOCATIONS

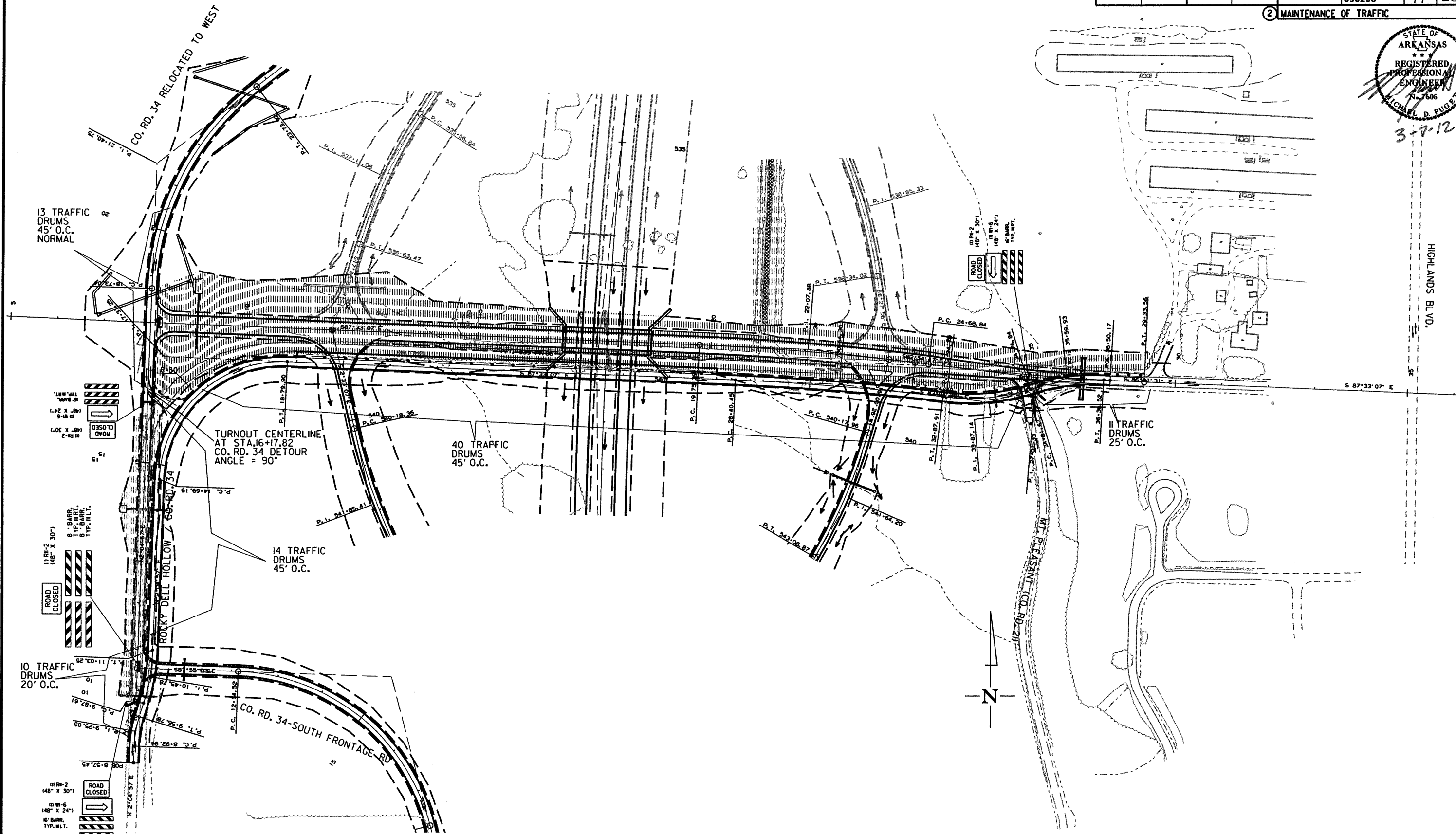
MAINTENANCE OF TRAFFIC
CO. RD. 34 INTERCHANGE
STAGE 2

3/5/2012

R090293_REV.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.	090293	41 266

2 MAINTENANCE OF TRAFFIC



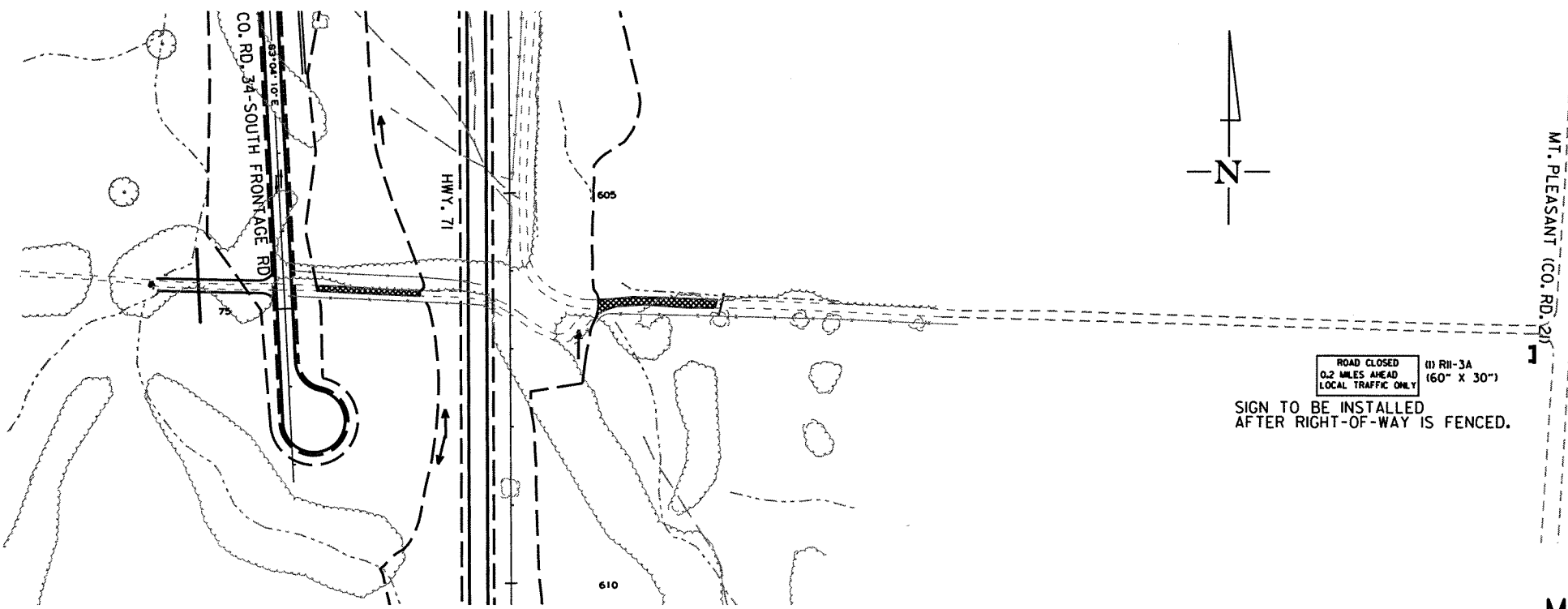
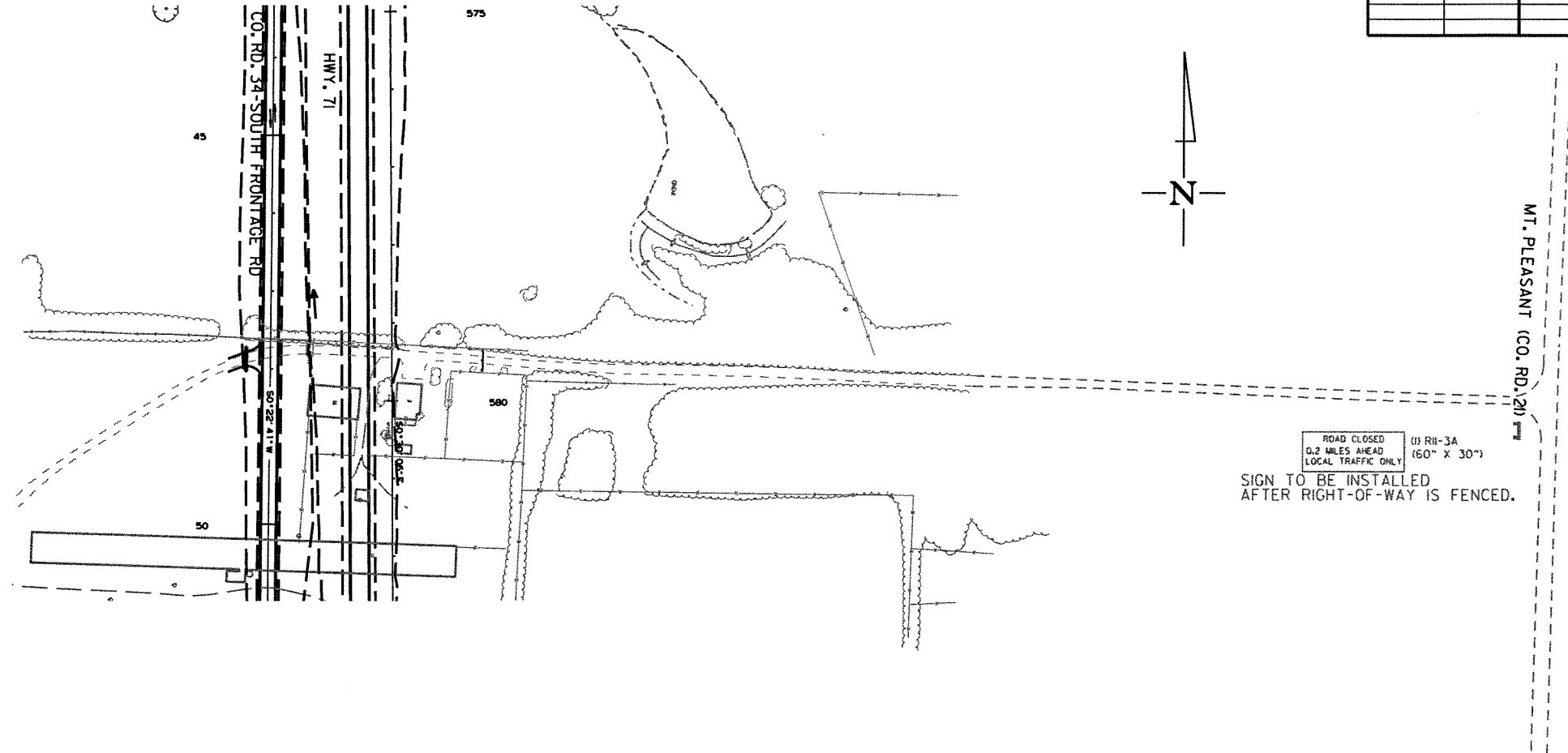
MAINTENANCE OF TRAFFIC
CO. RD. 34 INTERCHANGE
STAGE 2

3/5/2012

R090293_REV.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. 090293			42	266

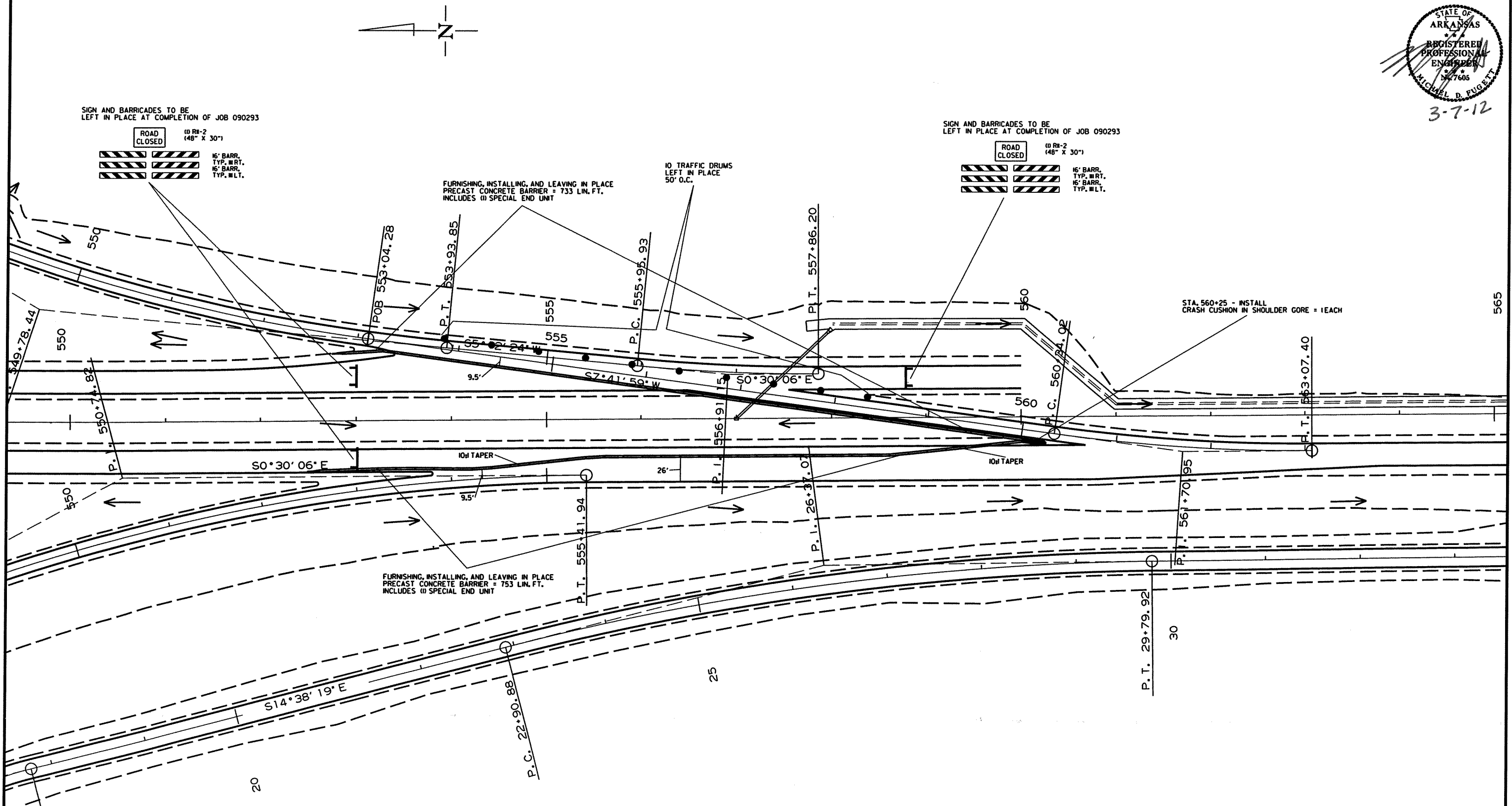
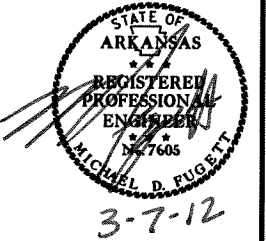
② MAINTENANCE OF TRAFFIC



MAINTENANCE OF TRAFFIC
CO. RD. 34 INTERCHANGE
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.		43	250
				JOB NO.		090293		

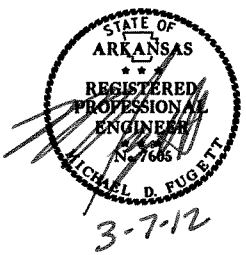
② MAINTENANCE OF TRAFFIC



MAINTENANCE OF TRAFFIC
HWY. 71
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. 090293		44	216	

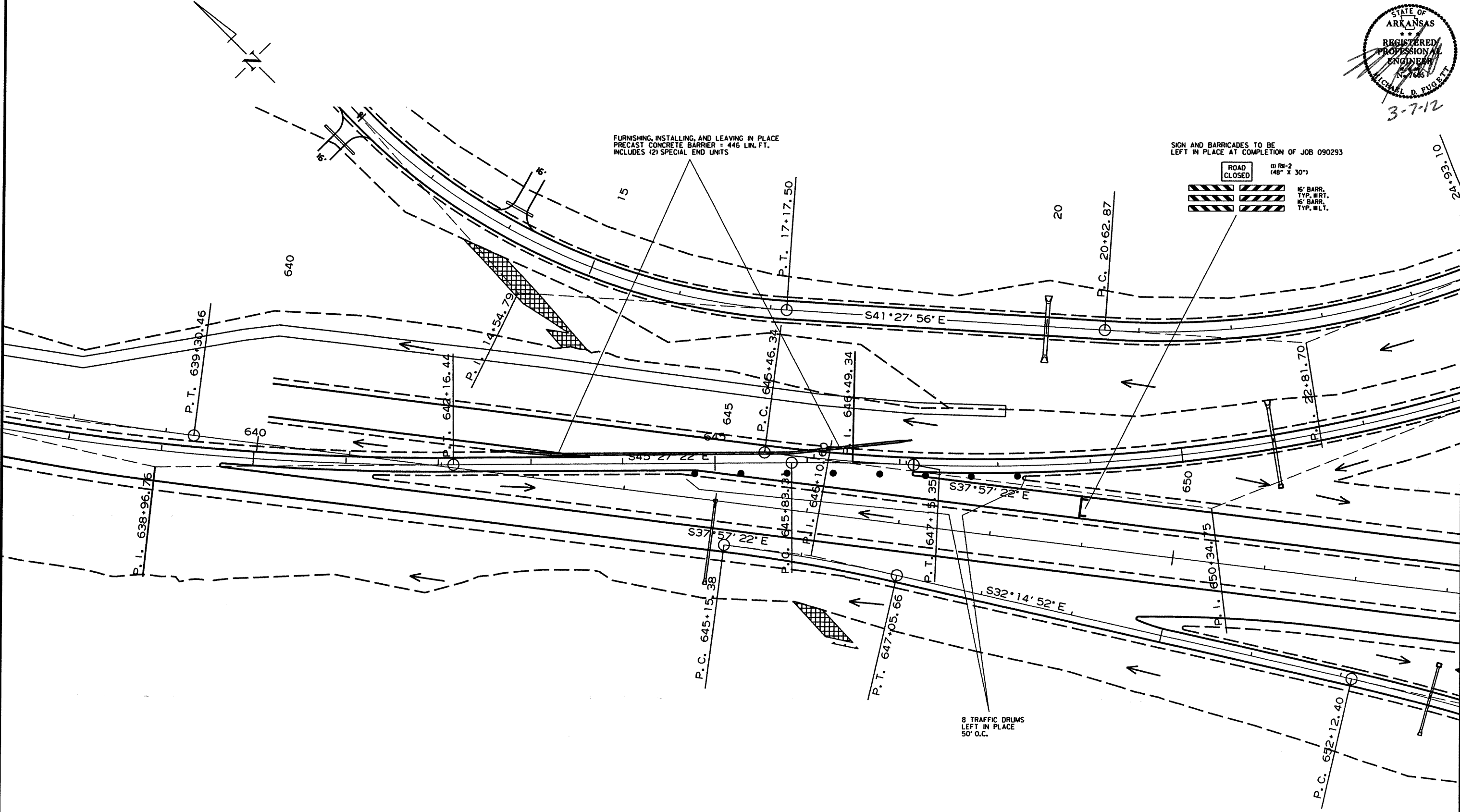
2 MAINTENANCE OF TRAFFIC



FURNISHING, INSTALLING, AND LEAVING IN PLACE
PRECAST CONCRETE BARRIER - 446 LIN. FT.
INCLUDES (2) SPECIAL END UNITS

SIGN AND BARRICADES TO BE
LEFT IN PLACE AT COMPLETION OF JOB 090293

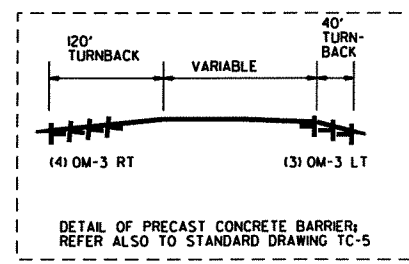
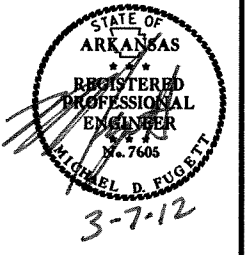
- ROAD CLOSED
- 15' BARR. TYP. WRT.
- 15' BARR. TYP. WLT.



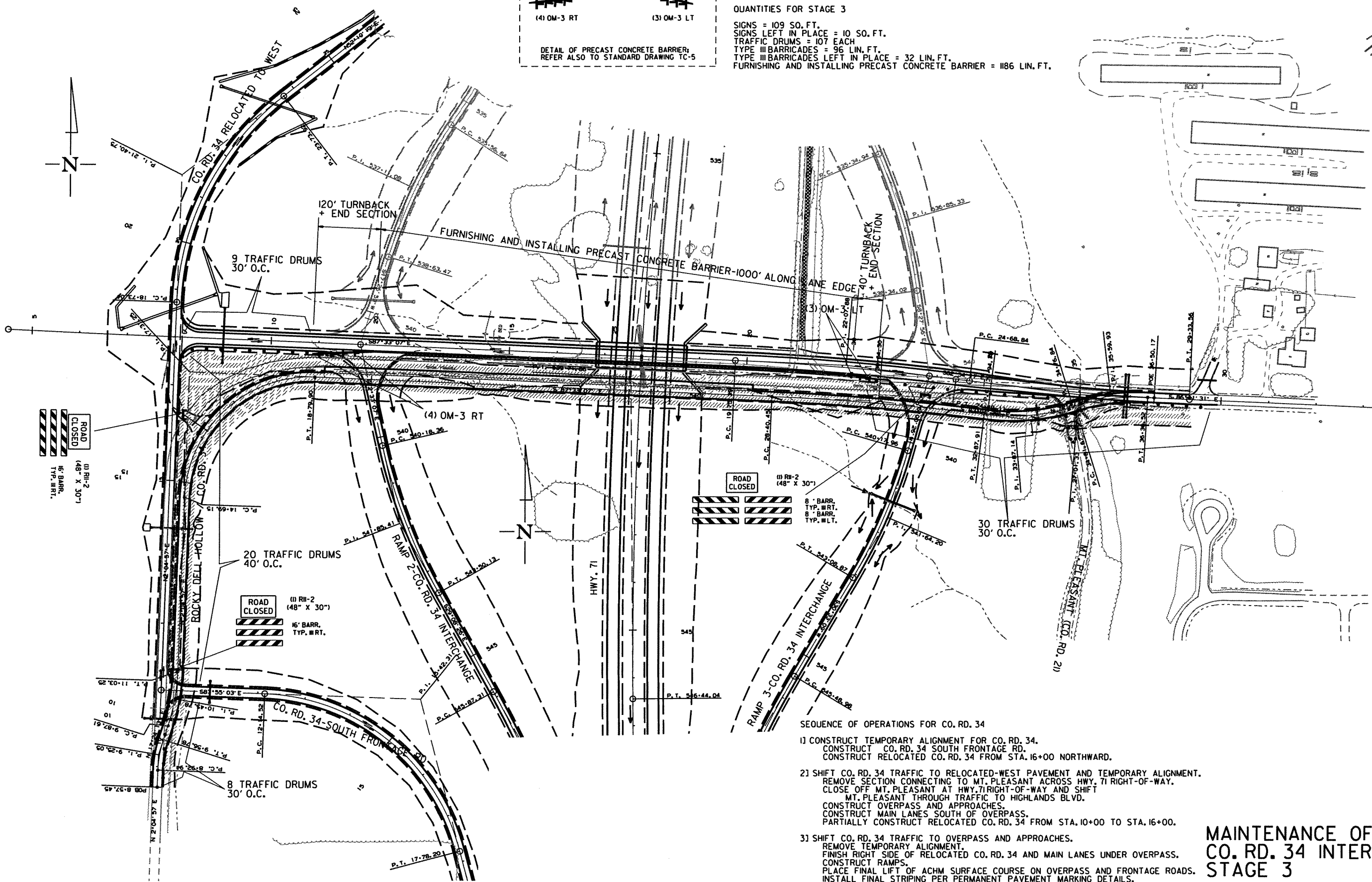
MAINTENANCE OF TRAFFIC
HWY. 71
STAGE 2

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.		090293	45	266

2 MAINTENANCE OF TRAFFIC



QUANTITIES FOR STAGE 3
SIGNS = 109 SQ. FT.
SIGNS LEFT IN PLACE = 10 SQ. FT.
TRAFFIC DRUMS = 107 EACH
TYPE III BARRICADES = 96 LIN. FT.
TYPE III BARRICADES LEFT IN PLACE = 32 LIN. FT.
FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER = 1186 LIN. FT.

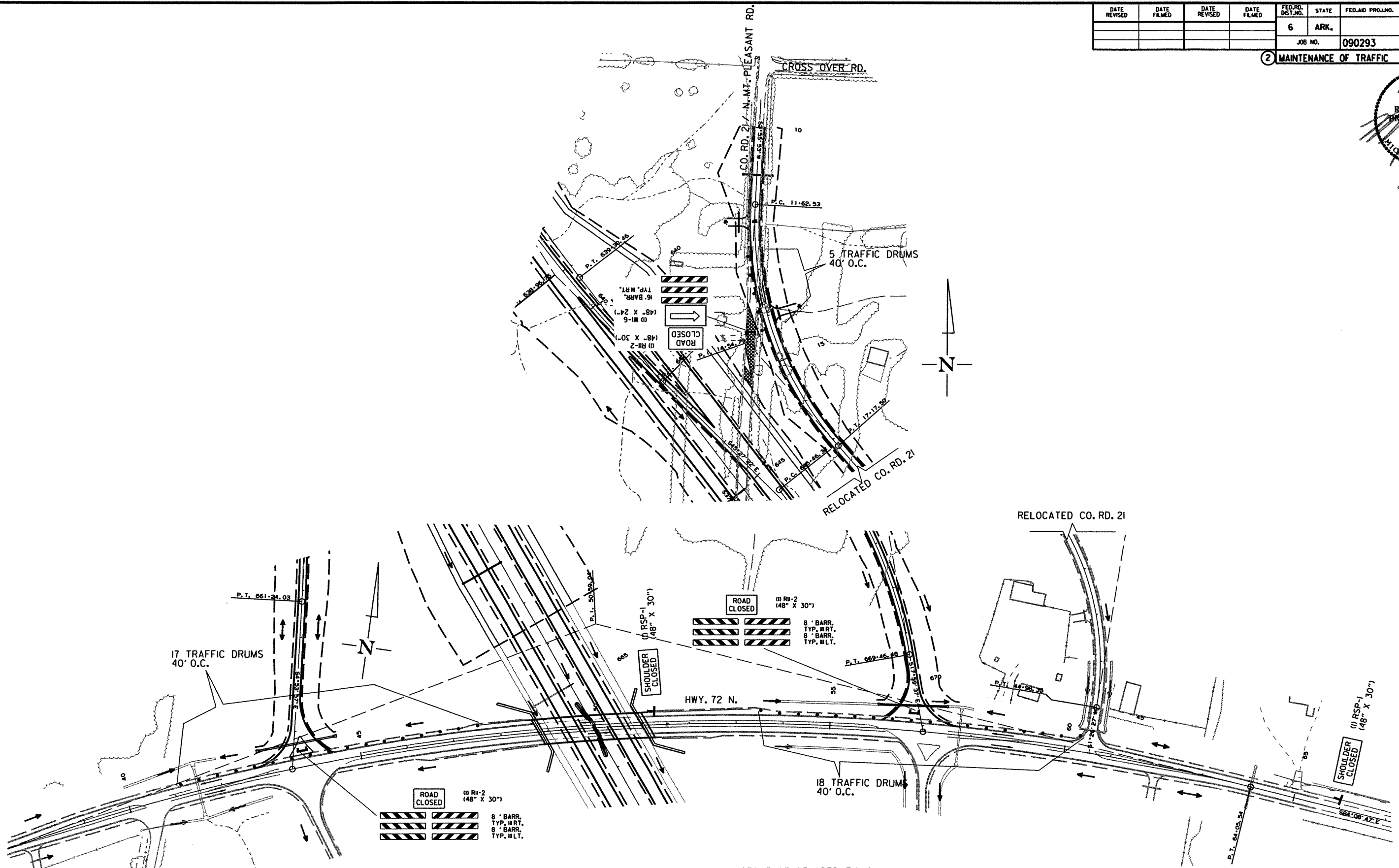
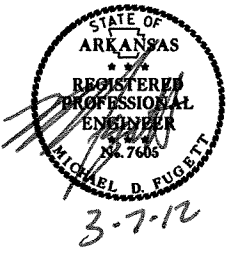


- SEQUENCE OF OPERATIONS FOR CO. RD. 34
- 1] CONSTRUCT TEMPORARY ALIGNMENT FOR CO. RD. 34.
CONSTRUCT CO. RD. 34 SOUTH FRONTAGE RD.
CONSTRUCT RELOCATED CO. RD. 34 FROM STA. 16+00 NORTHWARD.
 - 2] SHIFT CO. RD. 34 TRAFFIC TO RELOCATED-WEST PAVEMENT AND TEMPORARY ALIGNMENT.
REMOVE SECTION CONNECTING TO MT. PLEASANT ACROSS HWY. 71 RIGHT-OF-WAY.
CLOSE OFF MT. PLEASANT AT HWY. 71 RIGHT-OF-WAY AND SHIFT
MT. PLEASANT THROUGH TRAFFIC TO HIGHLANDS BLVD.
CONSTRUCT OVERPASS AND APPROACHES.
CONSTRUCT MAIN LANES SOUTH OF OVERPASS.
PARTIALLY CONSTRUCT RELOCATED CO. RD. 34 FROM STA. 10+00 TO STA. 16+00.
 - 3] SHIFT CO. RD. 34 TRAFFIC TO OVERPASS AND APPROACHES.
REMOVE TEMPORARY ALIGNMENT.
FINISH RIGHT SIDE OF RELOCATED CO. RD. 34 AND MAIN LANES UNDER OVERPASS.
CONSTRUCT RAMPS.
PLACE FINAL LIFT OF ACHM SURFACE COURSE ON OVERPASS AND FRONTAGE ROADS.
INSTALL FINAL STRIPING PER PERMANENT PAVEMENT MARKING DETAILS.

MAINTENANCE OF TRAFFIC
CO. RD. 34 INTERCHANGE
STAGE 3

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.		090293	46	266

2 MAINTENANCE OF TRAFFIC

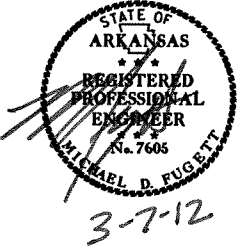


- SEQUENCE OF OPERATIONS
- 1) CONSTRUCT RELOCATION OF CO. RD. 21.
PLACE FINAL STRIPING PER PERMANENT PAVEMENT MARKING DETAILS.
 - 2) SHIFT CO. RD. 21 TRAFFIC TO NEW ALIGNMENT.
CLOSE CO. RD. 21 ACROSS RIGHT-OF-WAY FOR HWY. 71.
 - 3) CONSTRUCT RAMPS.

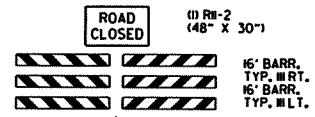
MAINTENANCE OF TRAFFIC
CO. RD. 21 RELOCATED &
HWY. 72-N INTERCHANGE
STAGE 3

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.	090293		47	206

② MAINTENANCE OF TRAFFIC

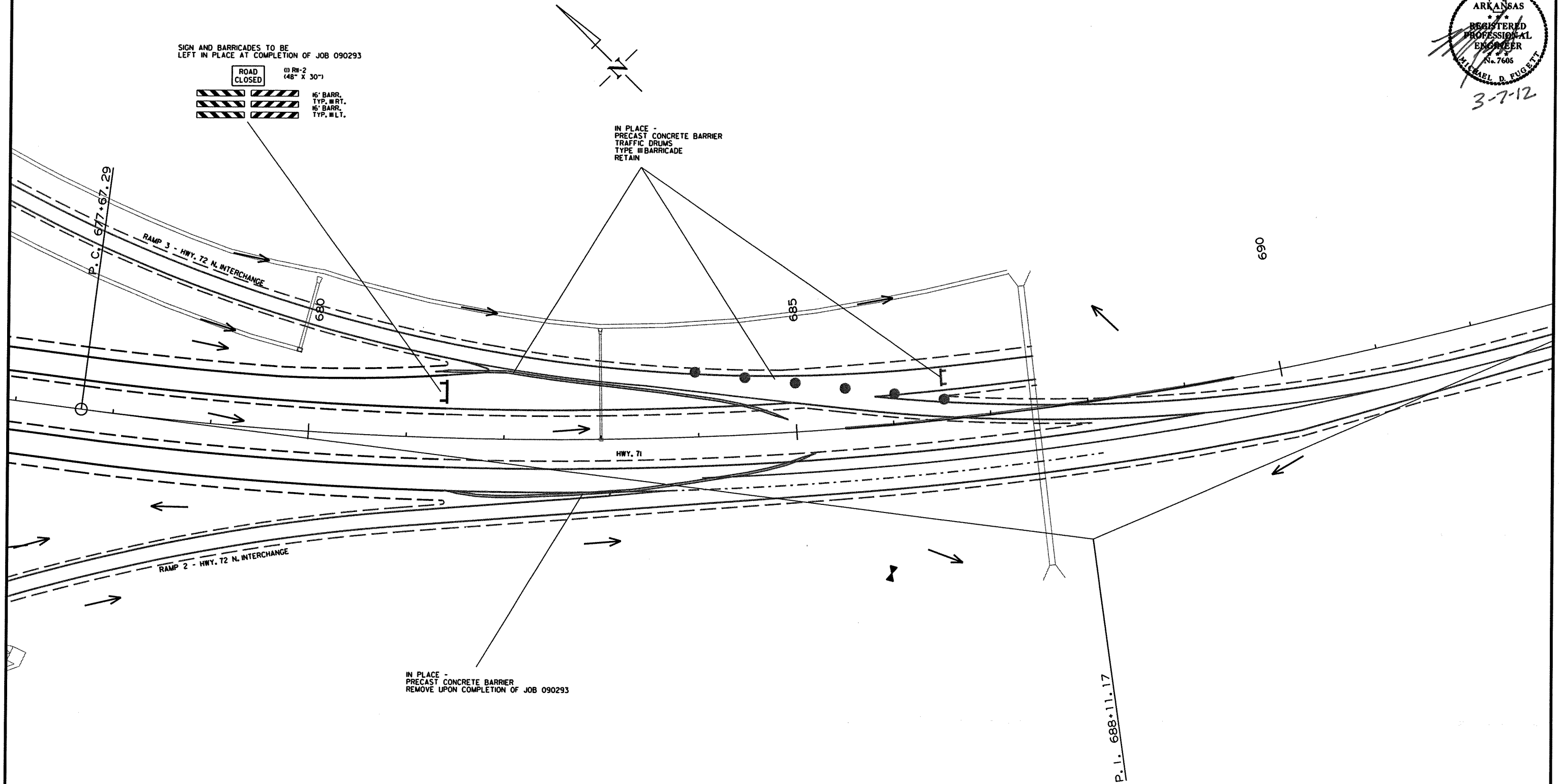


SIGN AND BARRICADES TO BE LEFT IN PLACE AT COMPLETION OF JOB 090293



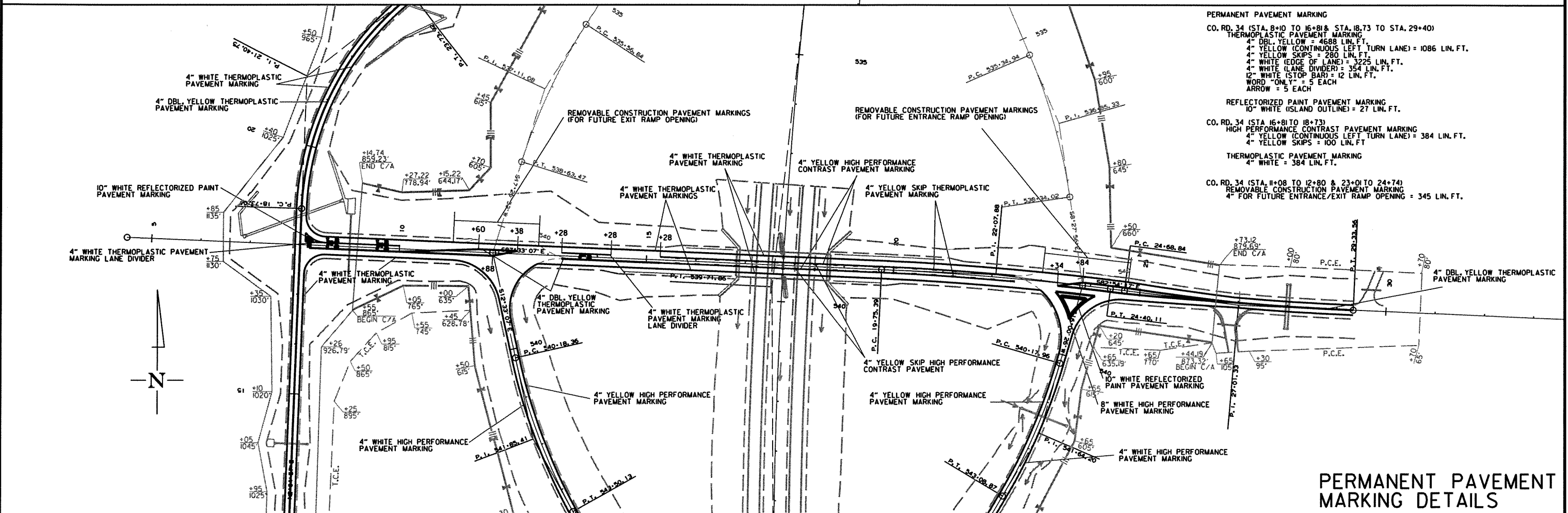
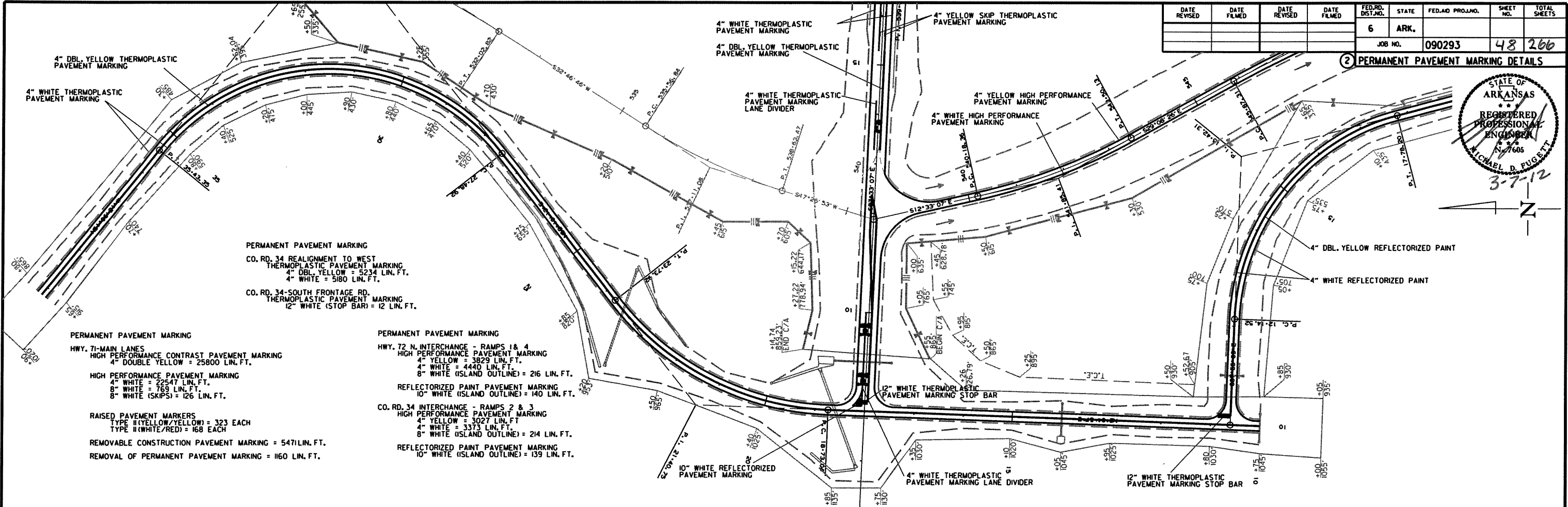
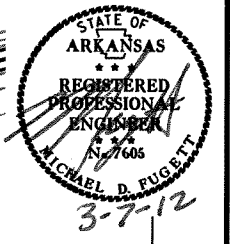
IN PLACE - PRECAST CONCRETE BARRIER TRAFFIC DRUMS TYPE III BARRICADE RETAIN

IN PLACE - PRECAST CONCRETE BARRIER REMOVE UPON COMPLETION OF JOB 090293



MAINTENANCE OF TRAFFIC
HWY. 71
STAGE 3

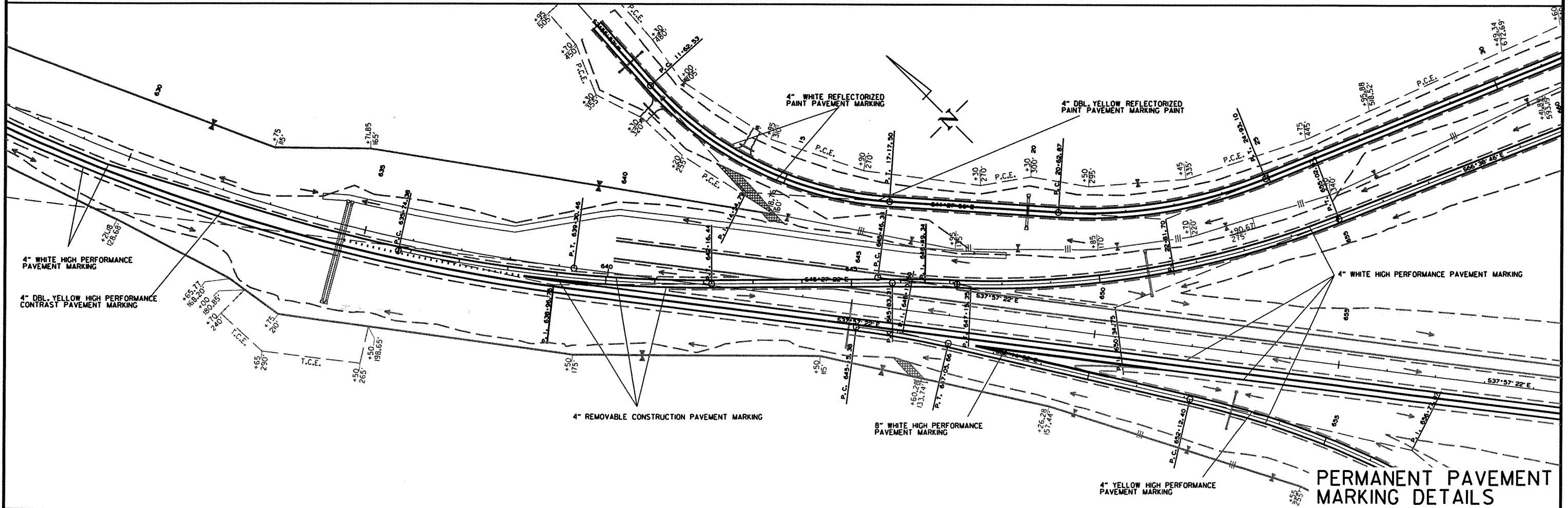
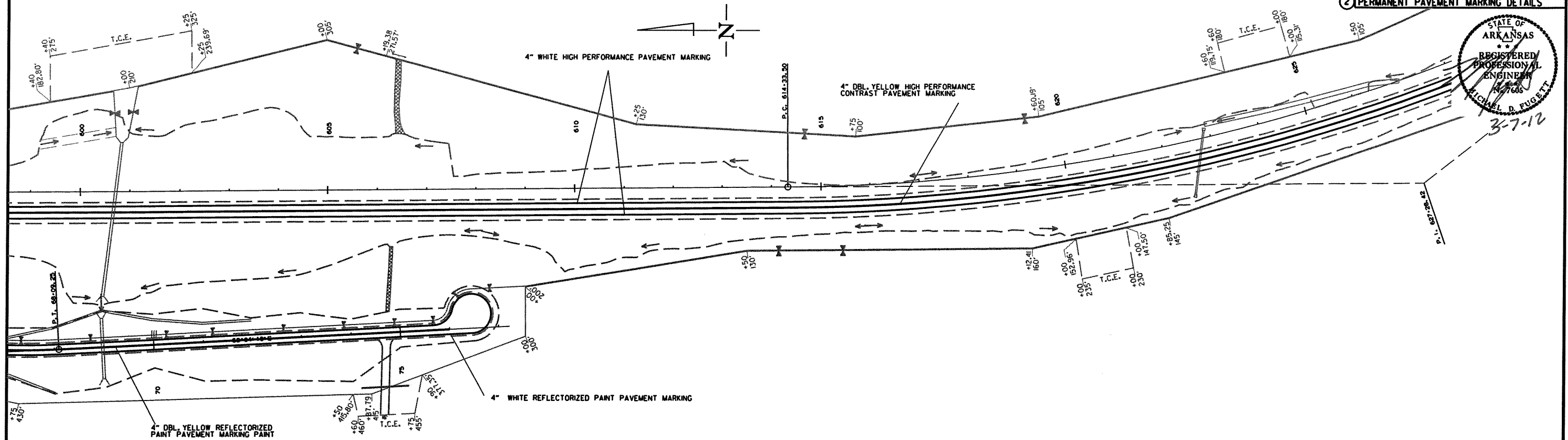
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090293	48	266	
② PERMANENT PAVEMENT MARKING DETAILS								



PERMANENT PAVEMENT MARKING DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		50	200
				JOB NO.		090293	50	200

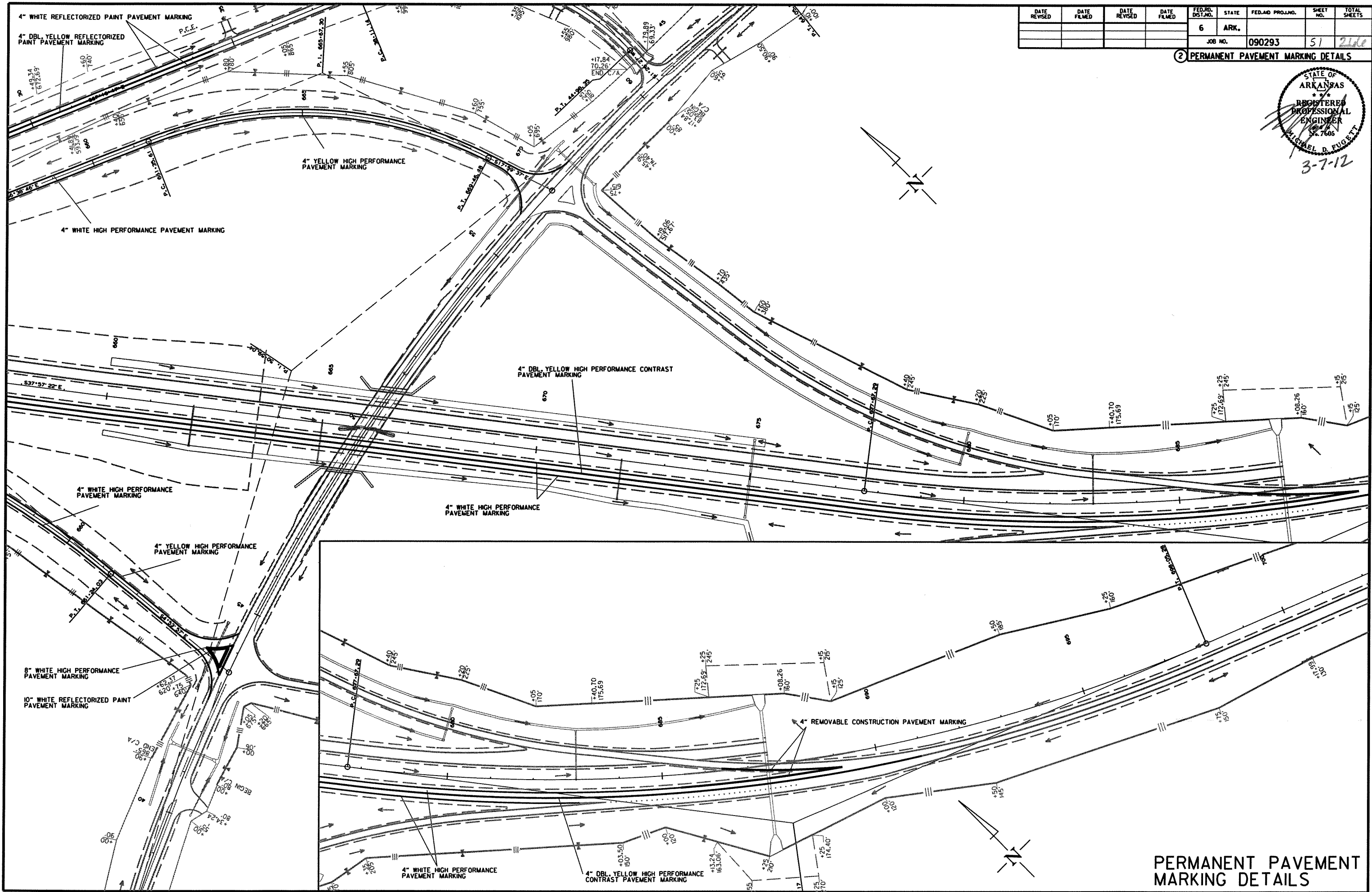
2 PERMANENT PAVEMENT MARKING DETAILS



PERMANENT PAVEMENT
MARKING DETAILS

2/28/2012

R090293_REV.DGN



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		51	246
				JOB NO.		090293		

2 PERMANENT PAVEMENT MARKING DETAILS



ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGES			MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		TRAFFIC DRUMS	FURNISHING & INSTALLING PRECAST CONCRETE BARRIER	BARRICADES (TYPE III)			
			STAGE 1	STAGE 2	STAGE 3		NO.	SQ. FT.			EACH	LIN.FT.	RIGHT	LEFT
													SQ. FT.-LIN.FT.-EACH	
W20-1	ROAD WORK 1500 FT.	48"x48"	5			5	5	80.0						
W20-1	ROAD WORK 1000 FT.	48"x48"	5			5	5	80.0						
W20-1	ROAD WORK 500 FT.	48"x48"	7			7	7	112.0						
W20-1	ROAD WORK AHEAD	48"x48"	2			2	2	32.0						
G20-2	END ROAD WORK	48"x24"	9			9	9	72.0						
R4-1	DO NOT PASS**	24"x30"	5			5	5	25.0						
RSP-1	SHOULDER CLOSED	48"x30"			2	2	2	20.0						
OM-3R	OBJECT MARKER	12"x36"			4	4	4	12.0						
OM-3L	OBJECT MARKER	12"x36"			3	3	3	9.0						
R11-2	ROAD CLOSED	48"x30"	9	7	6	9	9	90.0						
R11-3A	ROAD CLOSED XX MILES AHEAD/LOCAL TRAFFIC ONLY	60"x30"	3	2		5	5	62.5						
W1-6	LARGE ARROW	48"x24"		4	1	4	4	32.0						
	TRAFFIC DRUMS		124	104	107	124			124					
	TYPE III BARRICADE-RT. (8')			3	3	3					24			
	TYPE III BARRICADE-LT. (8')			3	3	3						24		
	TYPE III BARRICADE-RT. (16')		5	2	3	5					80			
	TYPE III BARRICADE-LT. (16')		3	2		3						48		
	TYPE III BARRICADE-LT. (32')		1			1						32		
	FURNISHING & INSTALLING PRECAST CONCRETE BARRIER				1186	1186				1186				
TOTALS:								626.5	124	1186	104	104		

THIS IS A HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2003 EDITION.
** USE IF AND WHERE DIRECTED BY THE ENGINEER

SIGNS AND DEVICES LEFT IN PLACE

DESCRIPTION	SIGN SIZE	STAGE 2	STAGE 3	TOTAL NUMBER REQUIRED	FURNISHING, INSTALLING, AND LEAVING IN PLACE PRECAST CONCRETE BARRIER	TOTAL SIGNS REQUIRED		TRAFFIC DRUMS LEFT IN PLACE	BARRICADE LEFT IN PLACE
						NO.	SQ. FT.		
		SQ.FT.-LIN.FT.-EACH			LIN.FT.				
SIGNS R11-2 (ROAD CLOSED)	48"x30"	4	1	5		5	50		
TRAFFIC DRUMS		18		18				18	
TYPE III BARRICADE-RT. (16')		4	1	5					80
TYPE III BARRICADE-LT. (16')		4	1	5					80
PRECAST CONCRETE BARRIER		1932		1932	1932				
TOTALS:					1932		50	18	160

CONSTRUCTION PAVEMENT MARKINGS & PERMANENT PAVEMENT MARKINGS

DESCRIPTION	STAGES			CONSTRUCTION PAVEMENT MARKINGS	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	REMOVAL OF PERMANENT PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS		REFLECTORIZED PAINT PAVEMENT MARKING			THERMOPLASTIC PAVEMENT MARKING					HIGH PERFORMANCE PAVEMENT MARKING			HIGH PERFORMANCE CONTRAST PAVEMENT MARKING	
	STAGE 1	STAGE 2	END OF JOB				TYPE II (YEL/YEL)	TYPE II (WHITE/RED)	4" WHITE	4" YELLOW	10" WHITE	4" WHITE	4" YELLOW	12" WHITE	WORD	ARROW	YELLOW		WHITE		YELLOW
																	4"	8"	4"	8"	
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS		769.0	5816		6585																
CONSTRUCTION PAVEMENT MARKINGS	20444	10052		30496																	
REMOVAL OF PERMANENT PAVEMENT MARKINGS			1160			1160															
REFLECTORIZED PAINT PAVEMENT MARKING-WHITE(4")	18371							18371													
REFLECTORIZED PAINT PAVEMENT MARKING-YELLOW (4")	18069								18069												
REFLECTORIZED PAINT PAVEMENT MARKING -WHITE (10")			306							306											
THERMOPLASTIC PAVEMENT MARKING-WHITE (4")			9143								9143										
THERMOPLASTIC PAVEMENT MARKING-YELLOW (4")			11288									11288									
THERMOPLASTIC PAVEMENT MARKING-WHITE (12")			24										24								
THERMOPLASTIC PAVEMENT MARKING-WORD			5											5							
THERMOPLASTIC PAVEMENT MARKING-ARROW			5												5						
HIGH PERFORMANCE PAVEMENT MARKING - YELLOW (4")			6856													6856					
HIGH PERFORMANCE PAVEMENT MARKING-WHITE(4")			30360														30360				
HIGH PERFORMANCE PAVEMENT MARKING-WHITE (8")			1325															1325			
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING-YELLOW(4")			26284																26284		
RAISED PAVEMENT MARKERS (TYPE II) (YELLOW/YELLOW)			323				323														
RAISED PAVEMENT MARKERS (TYPE II) (WHITE/RED)			168					168													
TOTALS:				30496	6585	1160	323	168	18371	18069	306	9143	11288	24	5	5	6856	30360	1325	26284	

THIS IS A HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2003 EDITION.

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.		090293	52	266

QUANTITIES



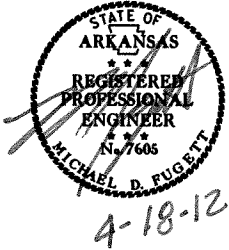
CRASH CUSHION

STATION	LOCATION	EACH
560+25	CO. RD. 34 INTERCHANGE - TEMPORARY	1
	RAMP 3 SHOULDER GORE	
TOTAL:		1

NOTE: THE CRASH CUSHION SHALL BE NON-GATING AND REDIRECTIVE AND COMPATIBLE WITH THE SITE GEOMETRY SHOWN ON THE PLANS.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
4-18-12				6	ARK.			
					JOB NO.	090293	53	266

2 QUANTITIES



CLEARING AND GRUBBING

STATION	STATION	LOCATION	CLEARING	GRUBBING
			STATION	
538+00	663+50	MAIN LANES	126	126
8+10	11+28	COUNTY ROAD 34	4	4
24+44	29+40	COUNTY ROAD 34	6	6
10+00	39+18	COUNTY ROAD 34-REALIGN. TO WEST	30	30
9+98	35+00	RELOCATED COUNTY ROAD 21	26	26
TOTALS:			192	192

REMOVAL AND DISPOSAL OF PIPE CULVERTS

STATION	LOCATION	DESCRIPTION	EACH
27+04.00	COUNTY ROAD 34	24" x 59' C.M. PIPE CULV'T.	1
10+21.00	CO. RD. 34 REALIGNMENT TO WEST	12" x 33' C.M. PIPE CULV'T.	1
14+00.00	CO. RD. 34 REALIGNMENT TO WEST	24" x 60' C.M. PIPE CULV'T.	1
TOTAL:			3

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

REMOVAL AND DISPOSAL OF ITEMS

STATION	STATION	LOCATION	LENGTH	AVG. WIDTH	CONCRETE DITCH PAVING	CONCRETE DRIVEWAYS	CATTLE GUARD
			LIN. FT.	FEET	SQ. YD.	SQ. YD.	EACH
47+75		LT OF CO. RD. 34 - S. FRONT. RD.					1
56+00	57+50	LT. OF HWY. 72 NORTH	150	6.5	108.3		
642+25		LT. OF MAIN LANES				11	
TOTALS:					108.3	11	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.	090293		54	266

2 QUANTITIES

EARTHWORK									
STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION			COMPACTED EMBANKMENT			* SOIL STABILIZATION
			NORMAL	ADDITIONAL	TOTAL	NORMAL	ADDITIONAL	TOTAL	
			CU. YD.			CU. YD.			
538+00.00	663+50.00	HWY. 71 - MAIN LANES	298899		298899	499121		499121	
10+00.00	39+18.00	COUNTY ROAD 34 - REALIGNMENT TO WEST	2888		2888	39854		39854	
9+00.00	16+81.19	COUNTY ROAD 34	1944		1944	30461		30461	
18+73.31	29+40.00	COUNTY ROAD 34	3578		3578	7340		7340	
8+57.45	36+50.17	COUNTY ROAD 34 - M.O.T.	11353		11353	1577		1577	
8+57.45	36+50.17	COUNTY ROAD 34 - M.O.T. OBLITERATION	3430		3430	2995		2995	
538+22.79	553+80.60	COUNTY ROAD 34 - RAMP 2	70627		70627	9939		9939	
538+75.08	553+39.68	COUNTY ROAD 34 - RAMP 3	24156		24156	3969		3969	
9+41.00	34+50.00	COUNTY ROAD 21 - RELOCATED	14223		14223	7374		7374	
649+70.25	664+58.67	HWY. 72 (NORTH) - RAMP 1	29147		29147	432		432	
647+07.68	670+91.90	HWY. 72 (NORTH) - RAMP 4	33187		33187	8172		8172	
11+00.00	77+00.00	SOUTH FRONTAGE ROAD	19475		19475	47925		47925	
ENTIRE	PROJECT	CHANNEL CHANGE		769	769		178	178	
ENTIRE	PROJECT	OBLITERATION OF EXISTING ROADWAY		424	424				
ENTIRE	PROJECT	DRMEWAYS		2770	2770		20	20	
ENTIRE	PROJECT	* TO BE USED IF AND WHERE							500
		DIRECTED BY THE ENGINEER							
TOTALS:			512907	3963	516870	659159	198	659357	500

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

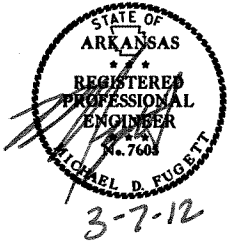
BENCH MARKS

STATION	LOCATION	EACH
18+73.31	BR. NO. 07220	1
600+72.00	MAIN LANES - HEADWALL ON RT.	1
68+89.00	CO. RD. 34 - S. FRONT. RD. - HEADWALL ON RT.	1
TOTAL:		3

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

MAILBOXES

STATION	LOCATION	MAILBOXES	MAILBOX SUPPORTS
			(SINGLE)
			EACH
29+31.00	CO. RD. 34 LT.	1	1
47+88.00	FRONTAGE RD. RT.	1	1
TOTALS:		2	2



EROSION CONTROL

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL					TEMPORARY EROSION CONTROL											
			SEEDING	LIME	MULCH COVER	WATER	SECOND SEEDING APPLICATION	TEMPORARY SEEDING	MULCH COVER	WATER	SAND BAG DITCH CHECKS	ROCK DITCH CHECKS	DROP INLET SILT FENCE	SILT FENCE	DIVERSION DITCH	SLOPE DRAIN (E-12)	SEDIMENT BASIN	OBLITERATION OF SEDIMENT BASIN	*SEDIMENT REMOVAL & DISPOSAL
			ACRE	TON	ACRE	M.GAL.	ACRE	ACRE	ACRE	M.GAL.	(E-5) BAG	(E-6) CU.YD.	(E-7) LIN.FT.	(E-11) LIN.FT.	(E-8) LIN.FT.	PIPE FOR SLOPE DRAINS	DUMPED RIPRAP	(E-14) CU.YD.	CU.YD.
538+00.00	663+50.00	MAIN LANES	29.30	58.60	29.30	2988.6	29.30	54.28	54.28	1107.3									
10+00.00	39+18.00	CO. RD. 34 - REALIGNMENT TO WEST	3.66	7.32	3.66	373.3	3.66	5.23	5.23	106.7									
9+00.00	16+81.19	CO. RD. 34 - OVERPASS	2.66	5.32	2.66	271.3	2.66	2.84	2.84	57.9									
18+73.31	29+40.00	CO. RD. 34 - OVERPASS	2.36	4.72	2.36	240.7	2.36	2.36	2.36	48.1									
11+00.00	16+00.00	CO. RD. 34 - OVERPASS TEMP. SLOPES						0.21	0.21	4.3									
19+00.00	23+00.00	CO. RD. 34 - OVERPASS TEMP. SLOPES						0.11	0.11	2.2									
8+57.00	37+00.00	CO. RD. 34 - DETOUR																	
538+22.79	553+80.60	CO. RD. 34 - RAMP 2	3.31	6.62	3.31	337.6	3.31	4.75	4.75	96.9									
538+75.08	553+39.68	CO. RD. 34 - RAMP 3	2.17	4.34	2.17	221.3	2.17	3.75	3.75	76.5									
11+00.00	77+00.00	CO. RD. 34 - SO. FRONTAGE ROAD	6.49	12.98	6.49	662.0	6.49	12.31	12.31	251.1									
9+41.00	34+50.00	RELOCATED CO. RD. 21	3.15	6.30	3.15	321.3	3.15	5.39	5.39	110.0									
649+70.25	664+58.67	HWY. 72 NORTH - RAMP 1	2.19	4.38	2.19	223.4	2.19	3.87	3.87	78.9									
647+07.68	670+91.90	HWY. 72 NORTH - RAMP 4	3.20	6.40	3.20	326.4	3.20	5.84	5.84	119.1									
ENTIRE PROJECT		CLEARING AND GRUBBING										201		36635					1424
ENTIRE PROJECT		STAGE 1										558	120		11495	1650	66	690	880
ENTIRE PROJECT		STAGE 2										198			800	150	6		66
*ENTIRE PROJECT		TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.									1760	243	30	11750	3074	450	18	173	770
TOTALS:			58.49	116.98	58.49	5965.9	58.49	100.94	100.94	2059.0	1760	1200	150	48385	15369	2250	90	863	3140

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 STD. SPECS.

QUANTITIES

2/27/2012

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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. 090293		55	266	

2 QUANTITIES



CONCRETE ISLAND

STATION	LOCATION	CURB FACE TYPE	CONCRETE ISLAND SQ. YD.
8+15	LT. OF CO. RD. 34	B	2
538+95	RT. OF CO. RD. 34 RAMP 3	B	104
664+35	LT. OF HWY. 72 (NORTH) RAMP 1	B	106
TOTAL:			212

EROSION CONTROL MATTING

STATION	STATION	LOCATION	LENGTH LIN. FT.	CLASS 3 SQ. YD.
* ENTIRE PROJECT		IF AND WHERE DIRECTED BY THE ENGINEER.	1000.0	888.9
TOTAL:				888.9

NOTE: AVERAGE WIDTH = 8'-0"

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

ROCK DITCH LINER, DUMPED RIPRAP AND FILTER BLANKET

LOCATION	ROCK DITCH LINER	DUMPED RIPRAP	FILTER BLANKET
	TON	CU. YDS.	SQ. YDS.
* TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	500	125	250
TOTALS:	500	125	250

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

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

4" PIPE UNDERDRAIN

STATION	STATION	LOCATIONS	4" PIPE UNDERDRAINS LIN. FT.	UNDERDRAIN OUTLET PROTECTORS EACH
* ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER			2000	9
TOTALS:			2000	9

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

CONCRETE DITCH PAVING

STATION	STATION	LOCATION	LENGTH	"W"	"B"	CONC. DITCH PAVING		SOLID SODDING	WATER
			LIN. FT.	FEET	FEET	(TYPE A) SQ. YD.	(TYPE B) SQ. YD.	SQ. YD.	M. GAL.
538+48	540+02	LT. OF MAIN LANES	154	9.0			158.2	68.44	0.9
538+59	539+97	RT. OF MAIN LANES	138	9.0			141.8	61.33	0.8
547+96	548+66	LT. OF MAIN LANES	96	6.0			67.5	42.67	0.5
557+73	573+04	LT. OF MAIN LANES	1531	11.0	2.0	1954.0		680.44	8.6
567+00	573+25	RT. OF MAIN LANES	625	9.0			658.8	277.78	3.5
573+04	574+00	LT. OF MAIN LANES	96	6.0			67.5	42.67	0.5
622+94	627+00	LT. OF MAIN LANES	406	6.0			285.3	180.44	2.3
633+99	648+00	LT. OF MAIN LANES	1401	12.0			1969.0	622.67	7.8
660+00	663+50	LT. OF MAIN LANES	350	17.5	4.0	694.8	539.3	155.56	2.0
660+00	663+50	RT. OF MAIN LANES	350	13.0	4.0	524.5	368.9	155.56	2.0
0+00	1+76	CO. RD. 34 - WALL A - C	176	4.0			123.7	78.22	1.0
0+00	1+88	CO. RD. 34 - WALL D - F	188	4.0			132.1	83.56	1.1
540+00	542+30	LT. OF COUNTY ROAD 34 - RAMP 3	230	6.0			161.6	102.2	1.3
540+00	541+55	RT. OF COUNTY ROAD 34 - RAMP 3	155	6.0			108.9	68.9	0.9
13+92	14+08	LT. OF COUNTY ROAD 34 - REALIGNMENT TO WEST	16	15.0	6	34.0		7.1	0.1
18+14	19+01	LT. OF COUNTY ROAD 34 - REALIGNMENT TO WEST	87	6.0			61.1	38.7	0.5
18+65	19+99	RT. OF COUNTY ROAD 34 - REALIGNMENT TO WEST	134	6.0			94.2	59.6	0.8
21+99	24+00	RT. OF COUNTY ROAD 34 - REALIGNMENT TO WEST	201	6.0			141.2	89.3	1.1
22+99	27+00	LT. OF COUNTY ROAD 34 - REALIGNMENT TO WEST	401	6.0			281.8	178.2	2.2
8+93	9+07	LT. OF COUNTY ROAD 34	32	15.0	6	52.0		14.2	0.2
60+00	72+00	LT. OF COUNTY ROAD 34 - SOUTH FRONTAGE ROAD	1205	6.0			846.8	535.6	6.7
60+00	68+00	RT. OF COUNTY ROAD 34 - SOUTH FRONTAGE ROAD	825	6.0			579.8	366.7	4.6
* ENTIRE PROJECT		IF AND WHERE DIRECTED BY THE ENGINEER.	1500	6.0			1054.1	666.67	8.4
TOTALS:						3259.30	7841.60	4576.51	57.8

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

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

GUARDRAIL

STATION	STATION	LOCATION	GUARDRAIL (TYPE A)	GUARDRAIL (TYPE C)	THRIE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)	STD. SIGN OM4-3 RED DIAMOND REFLECTORIZED END OF ROAD MARKER	CHANNEL POST SIGN SUPPORT (TYPE C)
			LIN. FT.	EACH		SQ. FT.	EACH	
526+00.00	526+25.00	LT. OF L.M.L.		25		6.75	3	
528+14.00		LT. OF L.M.L.		25		6.75	3	
579+35.00	579+60.00	LT. OF L.M.L.		25		6.75	3	
606+30.00	606+55.00	LT. OF L.M.L.		25		6.75	3	
646+45.00	646+70.00	RT. OF R.M.L.		25		6.75	3	
14+54.94	16+73.69	RT. OF CO. RD. 34	150		1	1		
15+79.91	16+73.69	LT. OF CO. RD. 34	50		1	1		
18+80.81	20+99.56	LT. OF CO. RD. 34	150		1	1		
18+80.81	19+74.56	RT. OF CO. RD. 34	50		1	1		
TOTALS:			400	125	4	4	33.75	15

IMPACT ATTENUATION BARRIER

STATION	LOCATION	TYPE A EACH
665+82.09	CENTERLINE MEDIAN HWY. 71	1
666+26.09	CENTERLINE MEDIAN HWY. 71	1
TOTAL:		2

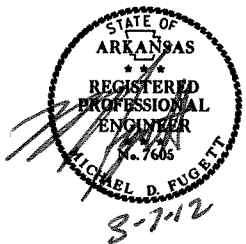
CONCRETE BARRIER WALL

STATION	STATION	LOCATION	PIER PROTECTION (TYPE A) LIN. FT.
665+82.09	666+26.09	LT. OF CENTERLINE HWY. 71	44
665+82.09	666+26.09	RT. OF CENTERLINE HWY. 71	44
TOTAL:			88

3/5/2012
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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.	090293		56	266

2 QUANTITIES



FENCING

STATION	LOCATION	STATION	LOCATION	WIRE FENCE		* 16'-0" GATES
				(TYPE A)	(TYPE D)	
				LIN.FT.		EACH
553+05.90	LT. OF L.M.L.	600+82.69	LT. OF L.M.L.	4884	147	1
601+06.85	LT. OF L.M.L.	669+05.00	LT. OF L.M.L.	7035		
521+00.00	RT. OF R.M.L.	527+65.00	RT. OF R.M.L.	670		
608+99.69	RT. OF R.M.L.	649+26.28	RT. OF R.M.L.	4145		
26+55	LT. OF COUNTY ROAD 34 - RAMP 4	29+55.05	LT. OF COUNTY ROAD 34		300	
20+97.58	RT. OF COUNTY ROAD 34 SOUTH FRONTAGE ROAD	54+38.66	RT. OF COUNTY ROAD 34 SOUTH FRONTAGE ROAD		3310	1
9+20.00	LT. OF COUNTY ROAD 34	528+02.55	RT. OF COUNTY ROAD 34 - RAMP 1	1395		
523+94.63	LT. OF COUNTY ROAD 34 - RAMP 4	26+55.00	LT. OF COUNTY ROAD 34	1755		
9+11.55	RT. OF COUNTY ROAD 34	546+93.88	RT. OF COUNTY ROAD 34 - RAMP 2	1110		
552+91.14	LT. OF COUNTY ROAD 34 - RAMP 3	26+55.10	RT. OF COUNTY ROAD 34	1590		
16+30.18	LT. OF COUNTY ROAD 34 SOUTH FRONTAGE ROAD	608+99.69	RT. OF HWY. 71 MAIN LANES	6205		
41+00.00	LT. OF HWY. 72 (NORTH)	649+35.59	RT. OF HWY. 72 (NORTH) - RAMP 1	1645		
9+15.00	LT. OF RELOCATED COUNTY ROAD 21	12+07.68	LT. OF RELOCATED COUNTY ROAD 21		335	
12+07.68	LT. OF RELOCATED COUNTY ROAD 21	35+77.75	LT. OF RELOCATED COUNTY ROAD 21		2315	2
TOTALS:				30434	6407	4

* DENOTES ALTERNATE BID ITEM.

SELECTED PIPE BEDDING & BACKFILL

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

NOTE: QUANTITIES ARE ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.

FLOWABLE SELECT MATERIAL

STATION	LOCATION	CU. YD.
16+81.19	COUNTY ROAD 34 - BRIDGE END	23.7
18+73.31	COUNTY ROAD 34 - BRIDGE END	23.7
TOTAL:		47.4

PAVEMENT REPAIR OVER CULVERTS (ASPHALT)

STATION	LOCATION	PAVEMENT REPAIR OVER CULVERTS (ASPHALT)	TACK COAT (0.03 GALLON /SQ. YD.)	FLOWABLE SELECT MATERIAL
		TON	GALLON	CU. YD.
10+00	CO. RD. 34 - REALIGN. TO WEST	11.0	1.0	17.0
14+00	CO. RD. 34 - REALIGN. TO WEST	11.9	1.1	17.0
28+00	CO. RD. 34	19.1	1.7	42.0
11+00	RELOCATED CO. RD. 21	11.0	1.0	17.0
TOTALS:		53.0	4.8	93.0

AVG. DEPTH = 1'-0"

RETAINING WALLS

STATION	STATION	LOCATION	RETAINING WALL	SELECT GRANULAR BACKFILL	UNCLASSIFIED EXCAVATION
			SQ. FT.	CU. YD.	CU. YD.
0+00	1+76	CO. RD. 34 - WALL A - C	3260	2230	1002
0+00	1+88	CO. RD. 34 - WALL D - F	3488	2362	1062
TOTALS:			6748	4592	2064

APPROACH GUTTERS

STATION	STATION	LOCATION	APPROACH GUTTER (TYPE B)	REINFORCING STEEL - RDWY. (GR 60)	DROP INLETS (TYPE N-3)	CONCRETE SPILLWAY (TYPE A)	12" ZINC COATED (GALVANIZED) CORRUGATED STEEL PIPE CULVERT (16 GAUGE)	STD. DWG. NOS.
			CU. YD.	POUND	EACH		LIN. FT.	
16+54.19	16+81.19	RT. OF COUNTY ROAD 34	6.75	590	1	1	40	2016B, FPC-9N, PCM-1
16+54.19	16+81.19	LT. OF COUNTY ROAD 34	6.75	590	1	1	36	2016B, FPC-9N, PCM-1
18+73.31	19+00.31	RT. OF COUNTY ROAD 34	6.75	590	1	1	32	2016B, FPC-9N, PCM-1
18+73.31	19+00.31	LT. OF COUNTY ROAD 34	6.75	590	1	1	30	2016B, FPC-9N, PCM-1
TOTALS:			27.00	2360	4	4	138	

NOTE: USE T =13" FOR 8' SHOULDER.

R.C. BOX CULVERTS

STATION	DESCRIPTION	LOCATION	SPAN	HEIGHT	LENGTH	CLASS S CONCRETE- ROADWAY	REINF. STEEL- ROADWAY (GRADE 60)	UNCL. EXC. FOR STR.- ROADWAY	SOLID SODDING	WATER	STD. DWG. NOS.
				LIN. FT.		CU. YD.	POUND	CU. YD.	SQ. YD.	M. GAL	
600+72	6' X 5' X 305' BOX CULV'T. ON 7° 30' LT. FWD. SKEW	MAIN LANES	6	5	305	258.14	28343.39	83	18	0.23	R-100X-X1, W-X003-1, RCB-1, RCB-2, SPECIAL DETAIL
68+89	6' X 5' X 124' R.C. BOX CULVERT	CO. RD. 34 - SOUTH FRONTAGE ROAD	6	5	124	76.61	8588.95	44	18	0.23	R-100X-X1, W-X003-1, RCB-1, RCB-2
TOTALS:						334.75	36932.34	127	36	0.46	

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

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.	090293		57	260

2 QUANTITIES



SIDE DRAINS

STATION	LOCATION	SIDE DRAIN	
		24"	28" x 20" ARCH
		LIN. FT.	
26+97	COUNTY ROAD 34	46	
29+55	COUNTY ROAD 34	40	
47+75	COUNTY ROAD 34 SOUTH FRONTAGE ROAD	32	
74+72	COUNTY ROAD 34 SOUTH FRONTAGE ROAD	96	
12+00	RELOCATED COUNTY ROAD 21	44	
14+00	RELOCATED COUNTY ROAD 21		32
TOTALS:		258	32

NOTE: FOR R.C. PIPE CULV'T. INSTALLATIONS, USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
FOR C.M. PIPE CULV'T. INSTALLATIONS, USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

TEMPORARY CULVERTS

STATION	LOCATION	TEMPORARY CULVERTS	
		24"	21" X 15" ARCH
		LIN. FT.	
10+00	COUNTY ROAD 34 - M.O.T.	18	
14+00	COUNTY ROAD 34 - M.O.T.	22	
34+97	COUNTY ROAD 34 - M.O.T.	24	
34+00	COUNTY ROAD 34 - M.O.T.		34
34+65	COUNTY ROAD 34 - M.O.T. - RT. SIDE DRAIN	50	
TOTALS:		114	34

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

STRUCTURES

STATION	LOCATION	DESCRIPTION	DROP INLET TYPE RM	REINFORCED CONCRETE PIPE CULVERT								REINFORCED CONCRETE ARCH PIPE CULVERTS		FLARED END SECTIONS FOR R.C. PIPE CULVERTS								SOLID SODDING	WATER	STD. DWG. NOS.
				(CLASS III)					(CLASS V)			(CLASS III)												
				24"	30"	36"	42"	48"	36"	42"	48"	22" x 14"	36" x 23"	24"	30"	36"	42"	48"	22" x 14"	36" x 23"				
				LIN. FT.								LIN. FT.		EACH										
548+00	MAIN LANES	DROP INLET W/ PIPE INLET & OUTLET	1	166										2							22	0.3	FES-1, FES-2, FPC-9D, PCC-1	
557+00	MAIN LANES	DROP INLET W/ PIPE OUTLET	1	130										1							14	0.2	FES-1, FES-2, FPC-9D, PCC-1	
573+00	MAIN LANES	PIPE CULVERT					114										2				46	0.6	FES-1, FES-2, PCC-1	
622+84	MAIN LANES	PIPE CULVERT ON 19° 42" LT. FWD. SKEW				132										2					34	0.4	FES-1, FES-2, PCC-1	
634+56	MAIN LANES	DOUBLE PIPE CULVERT								400							4				50	0.6	FES-1, FES-2, PCC-1	
645+00	MAIN LANES	DROP INLET W/ PIPE OUTLET	1	84										1							14	0.2	FES-1, FES-2, FPC-9D, PCC-1	
662+00	MAIN LANES	DROP INLET W/ PIPE OUTLET	1	86										1							14	0.2	FES-1, FES-2, FPC-9D, PCC-1	
9+00.00	COUNTY ROAD 34	CONSTRUCT 24" x 106' R.C. PIPE CULV'T		106										2							16	0.2	FES-1, FES-2, PCC-1	
28+00.00	COUNTY ROAD 34	CONSTRUCT DBL. 24" x 80' R.C. PIPE CULV'T.		160										4							18	0.2	FES-1, FES-2, PCC-1	
541+30.00	COUNTY ROAD 34 - RAMP 3	CONSTRUCT 30" x 88' R.C. PIPE CULV'T.			88										2						26	0.3	FES-1, FES-2, PCC-1	
548+78.00	COUNTY ROAD 34 - RAMP 3	CONSTRUCT 36" x 88' R.C. PIPE CULV'T. ON 29.59° LT. FWD. SKEW				88										2					34	0.4	FES-1, FES-2, PCC-1	
10+00.00	COUNTY ROAD 34 - REALIGNMENT TO WEST	CONSTRUCT 24" x 48' R.C. PIPE CULV'T.		48										2							16	0.2	FES-1, FES-2, PCC-1	
14+00.00	COUNTY ROAD 34 - REALIGNMENT TO WEST	CONSTRUCT 30" x 56' R.C. PIPE CULV'T.			56										2						26	0.3	FES-1, FES-2, PCC-1	
18+59.22	COUNTY ROAD 34 - REALIGNMENT TO WEST	CONSTRUCT 48" x 204' R.C. PIPE CULV'T. ON 22° RT. FWD. SKEW								204								2			58	0.7	FES-1, FES-2, PCC-1	
23+47.64	COUNTY ROAD 34 - REALIGNMENT TO WEST	CONSTRUCT 36" x 194' R.C. PIPE CULV'T. ON 30° RT. FWD. SKEW							194							2					34	0.4	FES-1, FES-2, PCC-1	
11+00.00	COUNTY ROAD 34 SOUTH FRONTAGE ROAD	CONSTRUCT 22" x 14" x 40' R.C. ARCH PIPE CULV'T.										40							2		10	0.1	FES-1, FES-2, PCC-1	
653+00.00	HWY. 72 (NORTH) - RAMP 1	CONSTRUCT D.I. W/ 24' x 72' R.C. PIPE OUTLET	1	72										1							16	0.2	FES-1, FES-2, FPC-9D, PCC-1	
664+27.00	HWY. 72 (NORTH) - RAMP 1	CONSTRUCT 36" x 156' R.C. PIPE CULV'T. ON 14° RT. FWD. SKEW				156										2					34	0.4	FES-1, FES-2, PCC-1	
651+00.00	HWY. 72 (NORTH) - RAMP 4	CONSTRUCT D.I. W/ 36" x 23" x 88' R.C. ARCH PIPE CULV'T.	1									88							1		19	0.2	FES-1, FES-2, FPC-9D, PCC-1	
670+56.00	HWY. 72 (NORTH) - RAMP 4	CONSTRUCT 30" x 138' R.C. PIPE CULV'T. ON 12° LT. FWD. SKEW			138										2						26	0.3	FES-1, FES-2, PCC-1	
11+00.00	RELOCATED COUNTY ROAD 21	CONSTRUCT 24" x 48' R.C. PIPE CULV'T.		48										2							16	0.2	FES-1, FES-2, PCC-1	
20+00.00	RELOCATED COUNTY ROAD 21	CONSTRUCT 48" x 56' R.C. PIPE CULV'T.					56											2			58	0.7	FES-1, FES-2, PCC-1	
TOTALS:			6	900	282	376	114	56	194	400	204	40	88	16	6	8	6	4	2	1	601	7.3		

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

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.	090293		58	266

2 QUANTITIES



JOINT SUPPORTS			
STATION	LOCATION	AVG. WIDTH	CLASS S CONCRETE-ROADWAY
		FEET	CU. YD.
545+00.00	HWY. 71 LT. LANES	26	2.89
559+00.00	HWY. 71 LT. LANES	26	2.89
641+00.00	HWY. 71 LT. LANES	36	4.00
545+00.00	HWY. 71 RT. LANES	28	3.11
553+04.39	CO. RD. 34 INTERCHANGE RAMP 3	15	1.67
552+89.39	CO. RD. 34 INTERCHANGE RAMP 3	15	1.67
552+74.39	CO. RD. 34 INTERCHANGE RAMP 3	15	1.67
553+80.16	CO. RD. 34 INTERCHANGE RAMP 2	15	1.67
553+65.16	CO. RD. 34 INTERCHANGE RAMP 2	15	1.67
553+50.16	CO. RD. 34 INTERCHANGE RAMP 2	15	1.67
647+08.12	HWY. 72 NORTH INTERCHANGE RAMP 4	15	1.67
647+23.12	HWY. 72 NORTH INTERCHANGE RAMP 4	15	1.67
647+38.12	HWY. 72 NORTH INTERCHANGE RAMP 4	15	1.67
650+05.37	HWY. 72 NORTH INTERCHANGE RAMP 1	15	1.67
650+20.37	HWY. 72 NORTH INTERCHANGE RAMP 1	15	1.67
650+35.37	HWY. 72 NORTH INTERCHANGE RAMP 1	15	1.67
TOTAL:			32.93

COLD MILLING ASPHALT PAVEMENT				
STATION	STATION	LOCATION	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT
			FEET	SQ. YD.
29+40.00	30+40.00	COUNTY ROAD 34	20.00	222.2
9+00.00	10+00.00	COUNTY ROAD 34 - REALIGNMENT TO WEST	20.00	222.2
TOTAL:				444.4

NOTE: AVERAGE MILLING DEPTH 1".

ASPHALT CONCRETE PATCHING FOR
MAINTENANCE OF TRAFFIC

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

NOTE: QUANTITIES ARE ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.
BASIS OF ESTIMATE: PATCHING - 25 TONS/MILE
TACK COAT - 50 GALS./MILE

ACHM PATCHING OF EXISTING ROADWAY

DESCRIPTION	TON
ENTIRE PROJECT - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	100
TOTAL:	100

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

PORTLAND CEMENT CONCRETE CORRUGATION

STATION	STATION	LOCATION	SQ. YDS.
552+97.99	553+40.39	CO. ROAD 34 INTERCHANGE RAMP 3 GORE	52
649+69.37	650+20.39	HWY. 72 INTERCHANGE RAMP 1 GORE	65
TOTAL:			117

CONCRETE PAVING

STATION	STATION	LOCATION	LENGTH FEET	CEMENT STABILIZED CRUSHED STONE BASE COURSE (6" COMP'D. DEPTH)				ACHM SURFACE COURSE (3/8") 110 LBS. PER SQ. YD.			TACK COAT 0.03 GAL. PER SQ. YD.			PORTLAND CEMENT CONCRETE PAVEMENT	
				AVG. WID.	PROCESSING	CEMENT	AGGREGATE	AVG. WID.	SQ. YD.	TON	AVG. WID.	SQ. YD.	GAL.	AVG. WID.	11" U.T.
				FEET	SQ. YD.	TON	TON	FEET			FEET			FEET	SQ. YD.
545+00.00	552+08.41	HWY. 71 LT. LANES	708.41	30.0	2361.4	49.6	776.9	30.0	2361.4	129.9	30.0	2361.4	70.8	26.0	2046.5
552+08.41	556+99.00	HWY. 71 LT. LANES	490.59	VAR.	2424.2	50.9	797.6	VAR.	2424.2	133.3	VAR.	2424.2	72.7	VAR.	2190.6
556+99.00	559+00.00	HWY. 71 LT. LANES	201.00	30.0	670.0	14.1	220.4	30.0	670.0	36.9	30.0	670.0	20.1	26.0	580.7
641+00.00	645+46.33	HWY. 71 LT. LANES	446.33	40.0	1983.7	41.7	652.6	40.0	1983.7	109.1	40.0	1983.7	59.5	36.0	1785.3
645+46.33	647+08.12	HWY. 71 LT. LANES	161.79	VAR.	762.9	16.0	251.0	VAR.	762.9	42.0	VAR.	762.9	22.9	VAR.	690.5
647+08.12	680+21.57	HWY. 71 LT. LANES	3313.45	30.0	11044.8	231.9	3633.7	30.0	11044.8	607.5	30.0	11044.8	331.3	26.0	9572.2
680+21.57	681+40.00	HWY. 71 LT. LANES	118.43	VAR.	446.8	9.4	147.0	VAR.	446.8	24.6	VAR.	446.8	13.4	VAR.	394.8
545+00.00	553+80.16	HWY. 71 RT. LANES	880.16	32.0	3129.5	65.7	1029.6	32.0	3129.5	172.1	32.0	3129.5	93.9	28.0	2738.3
553+80.16	555+41.93	HWY. 71 RT. LANES	161.77	VAR.	798.8	16.8	262.8	VAR.	798.8	43.9	VAR.	798.8	24.0	VAR.	726.4
555+41.93	560+80.16	HWY. 71 RT. LANES	538.23	42.0	2511.7	52.7	826.3	42.0	2511.7	138.1	42.0	2511.7	75.4	38.0	2272.5
560+80.16	563+30.16	HWY. 71 RT. LANES	250.00	37.0	1027.8	21.6	338.1	37.0	1027.8	56.5	37.0	1027.8	30.8	33.0	916.7
563+30.16	646+02.59	HWY. 71 RT. LANES	8272.43	32.0	29413.1	617.7	9676.9	32.0	29413.1	1617.7	32.0	29413.1	882.4	28.0	25736.4
646+02.59	651+01.15	HWY. 71 RT. LANES	498.56	VAR.	2590.8	54.4	852.4	VAR.	2590.8	142.5	VAR.	2590.8	77.7	VAR.	2353.5
651+01.15	681+40.00	HWY. 71 RT. LANES	3038.85	32.0	10804.8	226.9	3554.8	32.0	10804.8	594.3	32.0	10804.8	324.1	28.0	9454.2
538+02.14	539+40.69	CO. RD. 34 INTERCHANGE RAMP 2	138.55	VAR.	694.5	14.6	228.5	VAR.	635.7	35.0	VAR.	694.5	20.8	VAR.	626.3
539+40.69	553+78.77	CO. RD. 34 INTERCHANGE RAMP 2	1438.08	19.0	3035.9	63.8	998.8	19.0	3035.9	167.0	19.0	3035.9	91.1	15.0	2396.8
538+59.10	540+00.48	CO. RD. 34 INTERCHANGE RAMP 3	141.38	VAR.	749.7	15.7	246.7	VAR.	687.0	37.8	VAR.	749.7	22.5	VAR.	678.1
540+00.48	553+04.39	CO. RD. 34 INTERCHANGE RAMP 3	1303.91	19.0	2752.7	57.8	905.6	19.0	2752.7	151.4	19.0	2752.7	82.6	15.0	2173.2
647+09.50	669+76.12	HWY. 72 NORTH INTERCHANGE RAMP 4	2266.62	19.0	4785.1	100.5	1574.3	19.0	4785.1	263.2	19.0	4785.1	143.6	15.0	3777.7
669+76.12	671+12.52	HWY. 72 NORTH INTERCHANGE RAMP 4	136.40	VAR.	671.0	14.1	220.8	VAR.	613.1	33.7	VAR.	671.0	20.1	VAR.	604.0
650+05.37	663+24.22	HWY. 72 NORTH INTERCHANGE RAMP 1	1318.85	19.0	2784.2	58.5	916.0	19.0	2784.2	153.1	19.0	2784.2	83.5	15.0	2198.1
663+24.22	664+79.58	HWY. 72 NORTH INTERCHANGE RAMP 1	155.36	VAR.	779.1	16.4	256.3	VAR.	717.8	39.5	VAR.	779.1	23.4	VAR.	704.4
TOTALS:					86222.5	1810.8	28367.1			4729.1			2586.6		74617.2

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94% MIN. AGGR.....6% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22
CEMENT STABILIZED CRUSHED STONE BASE COURSE = 94.0% AGGR. 6.0% CEMENT

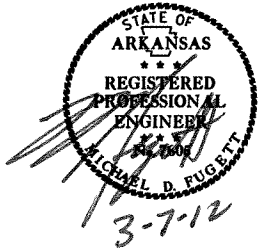
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO. 090293			59	266

DRIVEWAY SURFACING

STATION	LOCATION	WIDTH	AGGREGATE BASE COURSE (CLASS 7)	ACHM SURFACE COURSE (1/2") (PG 64-22) 220 LBS. PER SQ. YD.				
				TURNOUT		ADDITIONAL		TOTAL
		FEET	TON	SQ. YD.	TON	SQ. YD.	TON	TON
26+97.00	RT. OF CO. RD. 34	20	96.00	179.4	19.7	92.8	10.2	29.9
29+55.00	LT. OF CO. RD. 34	16	59.00	90.6	10.0	77.8	8.6	18.6
47+75.00	RT. OF CO. RD. 34 SOUTH FRONTAGE ROAD	16	39.00	63.2	7.0	47.0	5.2	12.2
74+70.00	RT. OF CO. RD. 34 SOUTH FRONTAGE ROAD	16	105.00	57.2	6.3	240.6	26.5	32.8
12+00.00	RT. OF RELOCATED CO. RD. 21	16	37.00	54.9	6.0	49.8	5.5	11.5
14+00.00	LT. OF RELOCATED CO. RD. 21	16	41.00	55.1	6.1	61.8	6.8	12.9
*ENTIRE PROJECT - TEMPORARY DRIVEWAYS FOR MAINT. OF TRAFFIC			100.00					
TOTALS:			477.00	500.4	55.1	569.8	62.8	117.9

NOTE: THE CONTRACTOR, WITH THE APPROVAL OF THE ENGINEER, WILL BE ALLOWED TO SUBSTITUTE A HIGHER PERFORMANCE GRADE ACHM SURFACE COURSE FOR DRIVEWAYS AT NO COST TO THE DEPARTMENT.
*NOTE: QUANTITY ESTIMATED. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.
BASIS FOR ESTIMATE: ACHM SURFACE COURSE (1/2") - MIN. AGG.=94.0%, ASPH. BINDER (PG 64-22)=6.0%
Nmax = 115

2 QUANTITIES



BASE & SURFACING (BOX 1 OF 3)

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		ACHM SURFACE COURSE (1/2")			
			LIN. FT.	TONS/STA.	TONS	AVG. WIDTH	LBS./SQ. YD.	SQ. YD.	(64-22)
						FEET			
LT. MAIN LANES - SHOULDERS									
545+00.00	556+63.16	INSIDE SHOULDER	1163.16	104.00	1209.69	4.00	220	517.0	56.9
557+96.78	559+00.00	INSIDE SHOULDER	103.22	104.00	107.35	4.00	220	45.9	5.0
641+00.00	642+82.38	INSIDE SHOULDER	182.38	104.00	189.68	4.00	220	81.1	8.9
644+58.72	681+40.00	INSIDE SHOULDER	3681.28	104.00	3828.53	4.00	220	1636.1	180.0
545+00.00	552+97.25	OUTSIDE SHOULDER	797.25	117.00	932.78	8.00	220	708.7	78.0
552+97.25	553+40.39	OUTSIDE SHOULDER - CO. RD. 34 INTERCHANGE RAMP 3 GORE	43.14	VAR.	47.69	VAR.	220	51.1	5.6
553+07.48	556+63.09	OUTSIDE SHOULDER	355.61	101.25	360.06	6.00	220	237.1	26.1
556+63.09	559+00.00	OUTSIDE SHOULDER	236.91	117.00	277.18	8.00	220	210.6	23.2
641+00.00	647+08.66	OUTSIDE SHOULDER	608.66	101.25	616.27	6.00	220	405.8	44.6
647+32.09	648+29.78	OUTSIDE SHOULDER - HWY. 72 N. INTERCHANGE RAMP 4 GORE	97.69	VAR.	55.16	VAR.	220	59.1	6.5
648+29.78	681+40.00	OUTSIDE SHOULDER	3310.22	117.00	3872.96	8.00	220	2942.4	323.7
RT. MAIN LANES - SHOULDERS									
545+00.00	560+10.08	INSIDE SHOULDER	1510.08	101.25	1528.96	6.00	220	1006.7	110.7
562+20.33	608+21.00	INSIDE SHOULDER	4600.67	101.25	4658.18	6.00	220	3067.1	337.4
608+21.00	611+71.00	INSIDE SHOULDER - TRANSITION	350.00	101.25	354.38	6.00	220	233.3	25.7
611+71.00	615+21.00	INSIDE SHOULDER - SUPER TRANSITION	350.00	116.00	406.00	6.00	220	233.3	25.7
615+21.00	629+88.74	INSIDE SHOULDER - FULL SUPER	1467.74	130.50	1915.40	6.00	220	978.5	107.6
639+62.73	641+30.14	INSIDE SHOULDER - SUPER TRANSITION - HWY. 72 N. INTERCHANGE TEMP. RAMP 4 GORE	167.41	VAR.	123.29	VAR.	220	132.1	14.5
641+30.14	641+92.96	INSIDE SHOULDER - SUPER TRANSITION	62.82	116.00	72.87	6.00	220	41.9	4.6
641+92.96	645+42.96	INSIDE SHOULDER - TRANSITION	350.00	101.25	354.38	6.00	220	233.3	25.7
645+42.96	681+40.00	INSIDE SHOULDER	3597.04	101.25	3642.00	6.00	220	2398.0	263.8
545+00.00	552+58.49	OUTSIDE SHOULDER	758.49	117.00	887.43	8.00	220	674.2	74.2
552+58.49	553+80.16	OUTSIDE SHOULDER - CO. RD. 34 INTERCHANGE RAMP 2 GORE	121.67	VAR.	56.28	VAR.	220	60.3	6.6
553+79.61	562+80.28	OUTSIDE SHOULDER	900.67	101.25	911.93	6.00	220	600.4	66.0
562+80.28	608+21.00	OUTSIDE SHOULDER	4540.72	117.00	5312.64	8.00	220	4036.2	444.0
608+21.00	611+71.00	OUTSIDE SHOULDER - TRANSITION	350.00	117.00	409.50	8.00	220	311.1	34.2
611+71.00	615+21.00	OUTSIDE SHOULDER - SUPER TRANSITION	350.00	162.75	569.63	8.00	220	311.1	34.2
615+21.00	638+42.96	OUTSIDE SHOULDER - FULL SUPER	2321.96	208.25	4835.48	8.00	220	2064.0	227.0
638+42.96	641+92.96	OUTSIDE SHOULDER - SUPER TRANSITION	350.00	162.75	569.63	8.00	220	311.1	34.2
641+92.96	645+42.96	OUTSIDE SHOULDER - TRANSITION	350.00	117.00	409.50	8.00	220	311.1	34.2
645+42.96	646+38.49	OUTSIDE SHOULDER	95.53	117.00	111.77	8.00	220	84.9	9.3
646+38.49	650+02.82	OUTSIDE SHOULDER	364.33	101.25	368.88	6.00	220	242.9	26.7
649+69.37	650+20.97	OUTSIDE SHOULDER - HWY. 72 N. INTERCHANGE RAMP 1 GORE	51.60	VAR.	55.25	VAR.	220	59.2	6.5
650+20.97	681+40.00	OUTSIDE SHOULDER	3119.03	117.00	3649.27	8.00	220	2772.5	305.0
SUBTOTALS:					42700.00			27058.1	2976.3

BASIS OF ESTIMATE: ACHM SURFACE COURSE (1/2") - MIN. AGG. = 94.0%; ASPH. BINDER (PG 64-22) = 6.0%
Nmax = 115

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. 090293			60	266

2 QUANTITIES



BASE & SURFACING (BOX 2 OF 3)

STATION	STATION	LOCATION	LENGTH LIN. FT.	TACK COAT						AGGREGATE BASE COURSE (CLASS 7)		ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")				ACHM SURFACE COURSE (1/2")					
				0.10 GAL. PER SQ. YD.			0.03 GAL. PER SQ. YD.					TOTAL GALLONS	TONS/STA.	TONS	AVG. WIDTH		(76-22) TON	AVG. WIDTH FEET	LBS./SQ. YD.	SQ. YD.	(76-22) TON	AVG. WIDTH FEET	LBS./SQ. YD.	SQ. YD.	(76-22) TON
				AVG. WIDTH FEET	SQ. YD.	GALLON	AVG. WIDTH FEET	SQ. YD.	GALLON																
8+10.23	8+50.00	COUNTY ROAD 34 - TURNOUT	39.77				VAR.	480.0	14.4	14.4	397.50	158.09	VAR.	330	240.0	39.6	VAR.	220	240.0	26.4	VAR.	220	331.0	36.4	
8+50.00	16+81.19	COUNTY ROAD 34 - 3 LANES	831.19				73.42	6780.7	203.4	203.4	273.00	2269.15	36.92	330	3409.7	562.6	36.50	220	3370.9	370.8	52.00	220	4802.4	528.3	
18+73.31	24+75.00	COUNTY ROAD 34 - 3 LANES	601.69				73.42	4908.5	147.3	147.3	273.00	1642.61	36.92	330	2468.3	407.3	36.50	220	2440.2	268.4	52.00	220	3476.4	382.4	
24+75.00	26+90.00	COUNTY ROAD 34 - TAPER	215.00				61.42	1467.3	44.0	44.0	249.63	536.70	30.92	330	738.6	121.9	30.50	220	728.6	80.1	46.00	220	1098.9	120.9	
26+90.00	29+40.00	COUNTY ROAD 34 - NOTCH AND WIDENING (INCLUDES LEVELING)	250.00	20.00	555.6	55.6	29.42	817.2	24.5	80.1	148.50	371.25	4.92	330	136.7	22.6	4.50	220	125.0	13.8	40.00	220	1111.1	122.2	
14+44.90	16+81.19	RT. OF COUNTY ROAD 34 - ADDITIONAL FOR GUARDRAIL INSTALLATION	236.29								26.75	63.21									5.50	220	144.4	15.9	
15+69.97	16+81.19	LT. OF COUNTY ROAD 34 - ADDITIONAL FOR GUARDRAIL INSTALLATION	111.22								26.75	29.75									5.50	220	68.0	7.5	
18+73.31	19+84.59	RT. OF COUNTY ROAD 34 - ADDITIONAL FOR GUARDRAIL INSTALLATION	111.28								26.75	29.77									5.50	220	68.0	7.5	
18+73.31	21+08.22	LT. OF COUNTY ROAD 34 - ADDITIONAL FOR GUARDRAIL INSTALLATION	234.91								26.75	62.84									5.50	220	143.6	15.8	
10+00.00	11+00.00	COUNTY ROAD 34 - REALIGNMENT TO WEST - NOTCH AND WIDENING	100.00	20.00	222.2	22.2				22.2	87.50	87.50									28.00	220	311.1	34.2	
10+00.00	16+00.00	LT. OF COUNTY ROAD 34 - REALIGNMENT TO WEST	600.00				8.71	580.7	17.4	17.4			4.46	330	297.3	49.1	4.25	220	283.3	31.2					
11+00.00	39+18.00	COUNTY ROAD 34 - REALIGNMENT TO WEST	2818.00				41.42	12969.1	389.1	389.1	165.25	4656.75	20.92	330	6550.3	1080.8	20.50	220	6418.8	706.1	28.00	220	8767.1	964.4	
16+85.54	19+35.54	ADDITIONAL FOR SUPERELEVATION TRANSITION	250.00								46.63	116.58													
19+35.54	23+11.42	ADDITIONAL FOR SUPERELEVATION	375.88								93.25	350.51													
23+11.42	25+61.42	ADDITIONAL FOR SUPERELEVATION TRANSITION	250.00								46.63	116.58													
25+61.42	28+11.42	ADDITIONAL FOR SUPERELEVATION TRANSITION	250.00								50.63	126.58													
28+11.42	34+80.85	ADDITIONAL FOR SUPERELEVATION	669.43								101.25	677.80													
34+80.85	37+30.85	ADDITIONAL FOR SUPERELEVATION TRANSITION	250.00								50.63	126.58													
10+10.00	10+50.00	COUNTY ROAD 34 SOUTH FRONTAGE ROAD - TURNOUT	40.00								VAR.	190.00									68.00	220	302.2		33.2
10+50.00	75+68.41	COUNTY ROAD 34 SOUTH FRONTAGE ROAD	6518.41								207.75	13542.00									28.00	220	20279.5		2230.7
75+68.41	76+87.20	COUNTY ROAD 34 SOUTH FRONTAGE ROAD CUL DE SAC	118.79								VAR.	412.25									VAR.	220	848.9		93.4
10+27.02	12+77.02	ADDITIONAL FOR SUPERELEVATION TRANSITION	250.00								40.25	100.63													
12+77.02	17+15.70	ADDITIONAL FOR SUPERELEVATION	438.68								80.50	353.14													
17+15.70	19+65.70	ADDITIONAL FOR SUPERELEVATION TRANSITION	250.00								40.25	100.63													
21+40.88	23+40.88	ADDITIONAL FOR SUPERELEVATION TRANSITION	200.00								12.75	25.50													
23+40.88	27+79.92	ADDITIONAL FOR SUPERELEVATION	439.04								25.50	111.96													
27+79.92	29+79.92	ADDITIONAL FOR SUPERELEVATION TRANSITION	200.00								12.75	25.50													
53+31.85	55+06.85	ADDITIONAL FOR SUPERELEVATION TRANSITION	175.00								12.75	22.31													
55+06.85	58+32.90	ADDITIONAL FOR SUPERELEVATION	326.05								25.50	83.14													
58+32.90	60+07.90	ADDITIONAL FOR SUPERELEVATION TRANSITION	175.00								12.75	22.31													
63+76.44	65+51.44	ADDITIONAL FOR SUPERELEVATION TRANSITION	175.00								19.25	33.69													
65+51.44	67+56.91	ADDITIONAL FOR SUPERELEVATION	205.47								38.50	79.11													
67+56.91	69+31.91	ADDITIONAL FOR SUPERELEVATION TRANSITION	175.00								19.25	33.69													
9+00.00	10+00.00	COUNTY ROAD 34 - M.O.T. WIDENING	100.00								100.25	100.25									12.33	220	137.0	15.1	
10+00.00	18+00.00	COUNTY ROAD 34 - M.O.T. CONSTRUCTION	800.00								194.50	1556.00									26.00	220	2311.1	254.2	
18+00.00	30+00.00	COUNTY ROAD 34 - M.O.T. WIDENING	1200.00								268.50	3222.00									35.25	220	4700.0	517.0	
30+00.00	34+00.00	COUNTY ROAD 34 - M.O.T. CONSTRUCTION	400.00								194.50	778.00									26.00	220	1155.6	127.1	
34+00.00	36+00.00	COUNTY ROAD 34 - M.O.T. WIDENING	200.00								128.50	257.00									13.54	220	300.9	33.1	
9+97.53	35+00.00	RELOCATED COUNTY ROAD 21	2502.47								207.75	5198.88									28.00	220	7785.5		856.4
9+97.53	12+17.53	ADDITIONAL FOR SUPERELEVATION TRANSITION	220.00								14.75	32.45													
12+17.53	16+62.50	ADDITIONAL FOR SUPERELEVATION	444.97								29.50	131.27													
16+62.50	18+82.50	ADDITIONAL FOR SUPERELEVATION TRANSITION	220.00								14.75	32.45													
19+20.37	21+10.37	ADDITIONAL FOR SUPERELEVATION TRANSITION	190.00								12.13	23.05													
21+10.37	24+45.60	ADDITIONAL FOR SUPERELEVATION	335.23								24.25	81.29													
24+45.60	26+35.60	ADDITIONAL FOR SUPERELEVATION TRANSITION	190.00								12.13	23.05													
SUBTOTALS:					777.8	77.8		28003.5	840.1	917.9		37993.80			13840.9	2283.9			13606.8	1496.8			58142.7	3182.0	3213.7

BASIS OF ESTIMATE: ACHM SURFACE COURSE (1/2") - MIN. AGG. = 94.0%; ASPH. BINDER (PG 76-22) = 6.0%
ACHM BINDER COURSE (1") - MIN. AGG. = 95.0% ; ASPH. BINDER (PG 76-22) = 5.0%
Nmax = 205
ACHM SURFACE COURSE (1/2") - MIN. AGG. = 94.0%; ASPH. BINDER (PG 64-22) = 6.0%
Nmax = 115

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.	090293		61	266

BASE & SURFACING (BOX 3 OF 3)																						
STATION	STATION	LOCATION	LENGTH LIN. FT.	TACK COAT 0.03 GAL. PER SQ. YD.			AGGREGATE BASE COURSE (CLASS 7)		ACHM BASE COURSE (1 1/2")				ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")					
				TOTAL WIDTH FEET	SQ. YD.	GALLON	TONS/STA.	TONS	AVG. WIDTH FEET	LBS./SQ. YD.	SQ. YD.	(76-22) TON	AVG. WIDTH FEET	LBS./SQ. YD.	SQ. YD.	(76-22) TON	AVG. WIDTH FEET	LBS./SQ. YD.	SQ. YD.	(76-22) TON	(64-22) TON	
CO. RD. 34 INTERCHANGE RAMP SHOULDERS																						
538+43.39	539+05.86	RAMP 2 - LT. SHOULDER	98.19	12.67	138.2	4.1	74.25	72.91	4.38	880	47.8	21.0	4.15	330	45.3	7.5	4.00	220	43.6	4.8		
539+05.86	539+40.69	RAMP 2 - LT. SHOULDER - SUPER TRANSITION	35.57	12.67	50.1	1.5	83.38	29.66	4.38	880	17.3	7.6	4.15	330	16.4	2.7	4.00	220	15.8	1.7		
539+40.69	540+55.86	RAMP 2 - LT. SHOULDER - SUPER TRANSITION	115.17				98.50	113.44									4.00	220	51.2		5.6	
540+55.86	543+18.72	RAMP 2 - LT. SHOULDER - FULL SUPER	262.86				112.00	294.40									4.00	220	116.8		12.8	
543+18.72	544+68.72	RAMP 2 - LT. SHOULDER - SUPER TRANSITION	150.00				98.50	147.75									4.00	220	66.7		7.3	
544+68.72	547+68.72	RAMP 2 - LT. SHOULDER - SUPER TRANSITION	300.00				122.50	367.50									4.00	220	133.3		14.7	
547+68.72	553+78.77	RAMP 2 - LT. SHOULDER - FULL SUPER	610.05				160.00	976.08									4.00	220	271.1		29.8	
538+02.14	538+95.50	RAMP 2 - RT. SHOULDER	130.90	18.67	271.5	8.1	77.50	101.45	6.38	880	92.8	40.8	6.15	330	89.4	14.8	6.00	220	87.3	9.6		
538+95.50	539+05.86	RAMP 2 - RT. SHOULDER	10.36				101.25	10.49									6.00	220	6.9		0.8	
539+05.86	540+55.86	RAMP 2 - RT. SHOULDER - SUPER TRANSITION	150.00				101.25	151.88									6.00	220	100.0		11.0	
540+55.86	543+18.72	RAMP 2 - RT. SHOULDER - FULL SUPER	262.86				101.25	266.15									6.00	220	175.2		19.3	
543+18.72	544+68.72	RAMP 2 - RT. SHOULDER - SUPER TRANSITION	150.00				101.25	151.88									6.00	220	100.0		11.0	
544+68.72	547+68.72	RAMP 2 - RT. SHOULDER - SUPER TRANSITION	300.00				123.75	371.25									6.00	220	200.0		22.0	
547+68.72	553+78.77	RAMP 2 - RT. SHOULDER - FULL SUPER	610.05				146.25	892.20									6.00	220	406.7		44.7	
538+59.10	539+05.46	RAMP 3 - LT. SHOULDER	86.26	18.67	178.9	5.4	77.50	66.85	6.38	880	61.1	26.9	6.15	330	58.9	9.7	6.00	220	57.5	6.3		
539+05.46	539+57.87	RAMP 3 - LT. SHOULDER - SUPER TRANSITION	55.17	18.67	114.4	3.4	89.38	49.31	6.38	880	39.1	17.2	6.15	330	37.7	6.2	6.00	220	36.8	4.0		
539+57.87	540+55.46	RAMP 3 - LT. SHOULDER - SUPER TRANSITION	97.59				101.25	98.81									6.00	220	65.1		7.2	
540+55.46	542+78.92	RAMP 3 - LT. SHOULDER - FULL SUPER	223.46				101.25	226.25									6.00	220	149.0		16.4	
542+78.92	544+28.92	RAMP 3 - LT. SHOULDER - SUPER TRANSITION	150.00				101.25	151.88									6.00	220	100.0		11.0	
544+28.92	547+28.92	RAMP 3 - LT. SHOULDER - SUPER TRANSITION	300.00				123.75	371.25									6.00	220	200.0		22.0	
547+28.92	550+03.68	RAMP 3 - LT. SHOULDER - FULL SUPER	274.76				146.25	401.84									6.00	220	183.2		20.2	
550+03.68	553+03.68	RAMP 3 - LT. SHOULDER - SUPER TRANSITION	300.00				123.75	371.25									6.00	220	200.0		22.0	
553+03.68	553+04.39	RAMP 3 - LT. SHOULDER	0.71				101.25	0.72									6.00	220	0.5		0.1	
538+87.58	539+05.46	RAMP 3 - RT. SHOULDER	32.94	12.67	46.4	1.4	74.25	24.46	4.38	880	16.0	7.0	4.15	330	15.2	2.5	4.00	220	14.6	1.6		
539+05.46	540+00.48	RAMP 3 - RT. SHOULDER - SUPER TRANSITION	107.95	12.67	152.0	4.6	83.38	90.01	4.38	880	52.5	23.1	4.15	330	49.8	8.2	4.00	220	48.0	5.3		
540+00.48	540+55.46	RAMP 3 - RT. SHOULDER - SUPER TRANSITION	54.98				98.50	54.16									4.00	220	24.4		2.7	
540+55.46	542+78.92	RAMP 3 - RT. SHOULDER - FULL SUPER	223.46				112.00	250.28									4.00	220	99.3		10.9	
542+78.92	544+28.92	RAMP 3 - RT. SHOULDER - SUPER TRANSITION	150.00				98.50	147.75									4.00	220	66.7		7.3	
544+28.92	547+28.92	RAMP 3 - RT. SHOULDER - SUPER TRANSITION	300.00				122.50	367.50									4.00	220	133.3		14.7	
547+28.92	550+03.68	RAMP 3 - RT. SHOULDER - FULL SUPER	274.76				160.00	439.62									4.00	220	122.1		13.4	
550+03.68	553+03.68	RAMP 3 - RT. SHOULDER - SUPER TRANSITION	300.00				122.50	367.50									4.00	220	133.3		14.7	
553+03.68	553+04.39	RAMP 3 - RT. SHOULDER	0.71				85.00	0.60									4.00	220	0.3		0.0	
HWY. 72 NORTH INTERCHANGE RAMP SHOULDERS																						
647+09.50	654+27.67	RAMP 4 - LT. SHOULDER - FULL SUPER	718.17				146.25	1050.32									6.00	220	478.8		52.7	
654+27.67	657+27.67	RAMP 4 - LT. SHOULDER - SUPER TRANSITION	300.00				123.75	371.25									6.00	220	200.0		22.0	
657+27.67	660+23.11	RAMP 4 - LT. SHOULDER	295.44				101.25	299.13									6.00	220	197.0		21.7	
660+23.11	661+73.11	RAMP 4 - LT. SHOULDER - SUPER TRANSITION	150.00				135.75	203.63									6.00	220	100.0		11.0	
661+73.11	669+08.98	RAMP 4 - LT. SHOULDER - FULL SUPER	735.87				170.25	1252.82									6.00	220	490.6		54.0	
669+08.98	670+19.87	RAMP 4 - LT. SHOULDER - SUPER TRANSITION	110.89				135.75	150.53									6.00	220	73.9		8.1	
670+19.87	670+58.98	RAMP 4 - LT. SHOULDER - SUPER TRANSITION	40.18	18.67	83.4	2.5	107.00	42.99	6.38	880	28.5	12.5	6.15	330	27.5	4.5	6.00	220	26.8	2.9		
670+58.98	671+12.52	RAMP 4 - LT. SHOULDER	89.02	18.67	184.7	5.5	77.50	68.99	6.38	880	63.1	27.8	6.15	330	60.8	10.0	6.00	220	59.3	6.5		
647+09.50	654+27.67	RAMP 4 - RT. SHOULDER - FULL SUPER	718.17				160.00	1149.07									4.00	220	319.2		35.1	
654+27.67	657+27.67	RAMP 4 - RT. SHOULDER - SUPER TRANSITION	300.00				122.50	367.50									4.00	220	133.3		14.7	
657+27.67	660+23.11	RAMP 4 - RT. SHOULDER	295.44				85.00	251.12									4.00	220	131.3		14.4	
660+23.11	661+73.11	RAMP 4 - RT. SHOULDER - SUPER TRANSITION	150.00				100.00	150.00									4.00	220	66.7		7.3	
661+73.11	669+08.98	RAMP 4 - RT. SHOULDER - FULL SUPER	735.87				115.00	846.25									4.00	220	327.1		36.0	
669+08.98	669+76.12	RAMP 4 - RT. SHOULDER - SUPER TRANSITION	67.14				100.00	67.14									4.00	220	29.8		3.3	
669+76.12	670+58.98	RAMP 4 - RT. SHOULDER - SUPER TRANSITION	97.66	12.67	137.5	4.1	85.00	83.01	4.38	880	47.5	20.9	4.15	330	45.0	7.4	4.00	220	43.4	4.8		
670+58.98	670+72.82	RAMP 4 - RT. SHOULDER	33.64	12.67	47.4	1.4	74.25	24.98	4.38	880	16.4	7.2	4.15	330	15.5	2.6	4.00	220	15.0	1.7		
650+05.37	652+87.40	RAMP 1 - LT. SHOULDER - SUPER TRANSITION	282.03				122.50	345.49									4.00	220	125.3		13.8	
652+87.40	660+49.03	RAMP 1 - LT. SHOULDER - FULL SUPER	761.63				160.00	1218.61									4.00	220	338.5		37.2	
660+49.03	663+24.22	RAMP 1 - LT. SHOULDER - SUPER TRANSITION	275.19				122.50	337.11									4.00	220	122.3		13.5	
663+24.22	663+49.03	RAMP 1 - LT. SHOULDER - SUPER TRANSITION	24.97	12.67	35.2	1.1	95.25	23.78	4.38	880	12.2	5.4	4.15	330	11.5	1.9	4.00	220	11.1	1.2		
663+49.03	664+39.48	RAMP 1 - LT. SHOULDER	121.69	12.67	171.3	5.1	74.25	90.35	4.38													

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						090293	62	266
① 07220 - QUANTITIES - 52067								

SCHEDULE OF BRIDGE QUANTITIES - JOB NO. 090293

BRIDGE NO. 07220	CODE NO. X771	NAME PLATE TITLE C.R. 34	UNIT OF STRUCTURE	ITEM NO.	801	802	802	803	SS & 804	SS & 804	805	805	807	808	812	816	SP JOB 090293	SP JOB 090293	SP JOB 090293	SP JOB 090293
				ITEM	UNCLASSIFIED EXCAVATION FOR STRUCTURES- BRIDGE	CLASS S CONCRETE- BRIDGE	CLASS S(AE) CONCRETE- BRIDGE	CLASS 2 PROTECTIVE SURFACE TREATMENT	REINFORCING STEEL- BRIDGE (GRADE 60)	EPOXY COATED REINFORCING STEEL (GRADE 60)	STEEL PILING (HP12X53) ①	PREBORING ②	STRUCTURAL STEEL IN PLATE GIRDER SPANS (M270, GRADE 50W)	ELASTOMERIC BEARINGS	BRIDGE NAME PLATE (TYPE D)	CONCRETE RIPRAP	EXPLORATORY HOLES ②	SILICONE JOINT SEALANT	TEXTURED COATING FINISH	SHORING
				UNIT	CU. YD.	CU. YD.	CU. YD.	SQ. YD.	LB.	LB.	LIN. FT.	LIN. FT.	LB.	CU. IN.	EACH	CU. YD.	LIN. FT.	LIN. FT.	SQ. YD.	LUMP SUM
			BENT NO. 1			39.29		14.1	4412		192	20	1071			6	24		44.2	
			BENT NO. 2		139	116.02			14706		270	60					48		152.1	
			BENT NO. 3			39.29		14.1	4412		228	20	1071			6	24		44.2	
			190'-0" CONT. COMPOSITE PLATE GIRDER UNIT				313.90	1249.3		71580			248748	11377.0	1			111	279.0	
			TOTALS FOR JOB NO. 090293		139	194.60	313.90	1277.5	23530	71580	690	100	250890	11377.0	1	12	96	111	519.5	1

① These steel piling are required to be Grade 50 and have special points which will not be paid for directly, but will be considered subsidiary to the item "Steel Piling (HP12x53)".

② The quantities shown for Preboring and Exploratory Holes are for estimating and bidding purposes only. Actual quantities will be determined in the field.

BRYAN FREELING
DESIGN SECTION SUPERVISOR



BRIDGE ENGINEER

SCHEDULE OF BRIDGE QUANTITIES
HWY. 72 NORTH-CO. RD. 34
(B.V. BYPASS) (F)
BENTON COUNTY
ROUTE 71 SEC. 19
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

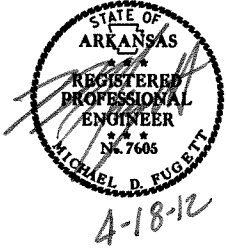
DRAWN BY: KDH DATE: 2-10-12 FILENAME: b090293.qldgn
CHECKED BY: MCB DATE: 2/14/12 SCALE: NO SCALE
DESIGNED BY: DATE: BRIDGE NO. 07220 DRAWING NO. 52067

SUMMARY OF QUANTITIES (BOX 1 OF 2)

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP & 201	CLEARING	192	STATION
SP & 201	GRUBBING	192	STATION
202	REMOVAL AND DISPOSAL OF CONCRETE DITCH PAVING	108	SQ. YD.
202	REMOVAL AND DISPOSAL OF CONCRETE DRIVEWAYS	11	SQ. YD.
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS	3	EACH
202	REMOVAL AND DISPOSAL OF CATTLE GUARD	1	EACH
206	FLOWABLE SELECT MATERIAL	140	CU. YD.
210	UNCLASSIFIED EXCAVATION	518934	CU. YD.
SP	SELECT GRANULAR BACKFILL	4592	CU. YD.
SP & 210	COMPACTED EMBANKMENT	659357	CU. YD.
SP & 210	SOIL STABILIZATION	500	TON
SS & 303	AGGREGATE BASE COURSE (CLASS 7)	102852	TON
308	AGGREGATE IN CEMENT STABILIZED CRUSHED STONE BASE COURSE	28367	TON
308	CEMENT IN CEMENT STABILIZED CRUSHED STONE BASE COURSE	1811	TON
308	PROCESSING CEMENT STABILIZED CRUSHED STONE BASE COURSE	86223	SQ. YD.
401	TACK COAT	3850	GAL.
SP, SS, & 405	MINERAL AGGREGATE IN ACHM BASE COURSE (1 1/2")	1398	TON
SP, SS, & 405	ASPHALT BINDER (PG 76-22) IN ACHM BASE COURSE (1 1/2")	80	TON
SP, SS, & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")	2673	TON
SP, SS, & 406	ASPHALT BINDER (PG 76-22) IN ACHM BINDER COURSE (1")	141	TON
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (3/8")	4445	TON
SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (3/8")	284	TON
SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	426	TON
SP, SS, & 407	ASPHALT BINDER (PG 76-22) IN ACHM SURFACE COURSE (1/2")	312	TON
412	COLD MILLING ASPHALT PAVEMENT	444	SQ. YD.
SP, SS, & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC	25	TON
SP, SS, & 415	ACHM PATCHING OF EXISTING ROADWAY	100	TON
SS & 501	PORTLAND CEMENT CONCRETE PAVEMENT (11" UNIFORM THICKNESS)	74617	SQ. YD.
504	APPROACH GUTTERS (TYPE B)	27.00	CU. YD.
506	PORTLAND CEMENT CONCRETE CORRUGATION	117	SQ. YD.
601	MOBILIZATION	1.00	LUMP SUM
SP & 602	FURNISHING FIELD OFFICE	1	EACH
602	FURNISHING FIELD LABORATORY	1	EACH
SS & 603	MAINTENANCE OF TRAFFIC	1.00	LUMP SUM
603	24" TEMPORARY CULVERT	114	LN. FT.
603	21" X 15" TEMPORARY CULVERT	34	LN. FT.
SS & 604	SIGNS	627	SQ. FT.
SP, SS, & 604	SIGNS LEFT IN PLACE	50	SQ. FT.
SS & 604	BARRICADES	208	LN. FT.
SP, SS, & 604	BARRICADES LEFT IN PLACE	160	LN. FT.
SS & 604	TRAFFIC DRUMS	124	EACH
SP, SS, & 604	TRAFFIC DRUMS LEFT IN PLACE	18	EACH
SS & 604	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER	1186	LN. FT.
SP, SS, & 604	FURNISHING, INSTALLING AND LEAVING IN PLACE PRECAST CONCRETE BARRIER	1932	LN. FT.
SS & 604	CONSTRUCTION PAVEMENT MARKINGS	30496	LN. FT.
604	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	6585	LN. FT.
604	REMOVAL OF PERMANENT PAVEMENT MARKINGS	1160	LN. FT.
605	CONCRETE DITCH PAVING (TYPE A)	3259	SQ. YD.
605	CONCRETE DITCH PAVING (TYPE B)	7842	SQ. YD.
SS & 606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	900	LN. FT.
SS & 606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	282	LN. FT.
SS & 606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	376	LN. FT.
SS & 606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)	194	LN. FT.
SS & 606	42" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	114	LN. FT.
SS & 606	42" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)	400	LN. FT.
SS & 606	48" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	56	LN. FT.
SS & 606	48" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)	204	LN. FT.
606	12" ZINC COATED (GALVANIZED) CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)	138	LN. FT.
SS & 606	22" X 14" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS III)	40	LN. FT.
SS & 606	36" X 23" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS III)	88	LN. FT.
SS & 606	24" SIDE DRAIN	258	LN. FT.
SS & 606	28" X 20" SIDE DRAIN	32	LN. FT.
606	24" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	16	EACH
606	30" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	6	EACH
606	36" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	8	EACH
606	42" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	6	EACH
606	48" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	4	EACH
606	22" X 14" FLARED END SECTIONS FOR REINFORCED CONCRETE ARCH PIPE CULVERTS	2	EACH
606	36" X 23" FLARED END SECTIONS FOR REINFORCED CONCRETE ARCH PIPE CULVERTS	1	EACH
606	SELECTED PIPE BEDDING	100	CU. YD.
606	SELECTED PIPE BACKFILL	100	CU. YD.
609	DROP INLETS (TYPE N3)	4	EACH
609	DROP INLETS (TYPE RM)	6	EACH
611	UNDERDRAIN OUTLET PROTECTORS	9	EACH
611	4" PIPE UNDERDRAINS	2000	LN. FT.
615	CONCRETE SPILLWAY (TYPE A)	4	EACH
SS & 617	PAVEMENT REPAIR OVER CULVERTS (ASPHALT)	53.0	TON
SS & 617	GUARDRAIL (TYPE A)	400	LN. FT.
SS & 617	GUARDRAIL (TYPE C)	125	LN. FT.
SS & 617	GUARDRAIL TERMINAL (TYPE 2)	4	EACH
SS & 617	THRE BEAM GUARDRAIL TERMINAL	4	EACH

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
4-18-12				6	ARK.			
				JOB NO.	090293		63	266

2 SUMMARY OF QUANTITIES



SUMMARY OF QUANTITIES (BOX 2 OF 2)

ITEM NUMBER	ITEM	QUANTITY	UNIT
619	WIRE FENCE (TYPE A)	30434	LIN. FT.
619	WIRE FENCE (TYPE D)	6407	LIN. FT.
619	16" STEEL GATES	4	EACH
619	16" ALUMINUM GATES	4	EACH
620	LIME	117	TON
620	SEEDING	58.49	ACRE
620	MULCH COVER	159.43	ACRE
SS & 620	WATER	8090.5	M.GAL.
621	TEMPORARY SEEDING	100.94	ACRE
621	SILT FENCE	48385	LIN. FT.
621	SAND BAG DITCH CHECKS	1760	BAG
621	DIVERSION DITCH	15369	LIN. FT.
621	DROP INLET SILT FENCE	150	LIN. FT.
621	SEDIMENT BASIN	863	CU. YD.
621	OBLITERATION OF SEDIMENT BASIN	863	CU. YD.
621	SEDIMENT REMOVAL AND DISPOSAL	3140	CU. YD.
621	PIPE FOR SLOPE DRAINS	2250	LIN. FT.
621	ROCK DITCH CHECKS	1200	CU. YD.
SP	ROCK DITCH LINER	500	TON
623	SECOND SEEDING APPLICATION	58.49	ACRE
624	SOLID SODDING	5214	SQ. YD.
626	EROSION CONTROL MATTING (CLASS 3)	889	SQ. YD.
631	CONCRETE BARRIER WALL (PIER PROTECTION TYPE A)	88	LIN. FT.
632	CONCRETE ISLAND	212	SQ. YD.
635	ROADWAY CONSTRUCTION CONTROL	1.00	LUMP SUM
637	MAILBOXES	2	EACH
637	MAILBOX SUPPORTS (SINGLE)	2	EACH
SS & 718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (4")	18371	LIN. FT.
SS & 718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")	306	LIN. FT.
SS & 718	REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (4")	18069	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING WHITE (4")	9143	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING WHITE (12")	24	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING YELLOW (4")	11288	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING (WORDS)	5	EACH
SS & 719	THERMOPLASTIC PAVEMENT MARKING (ARROWS)	5	EACH
SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING WHITE (4")	30360	LIN. FT.
SP	HIGH PERFORMANCE MARKING TAPE WHITE (4")	30360	LIN. FT.
SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING YELLOW (4")	8856	LIN. FT.
SP	HIGH PERFORMANCE MARKING TAPE YELLOW (4")	8856	LIN. FT.
SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING WHITE (8")	1325	LIN. FT.
SP	HIGH PERFORMANCE MARKING TAPE WHITE (8")	1325	LIN. FT.
SP & 719	INVERTED PROFILE THERMOPLASTIC CONTRAST PAVEMENT MARKING YELLOW (4")	26284	LIN. FT.
SP	HIGH PERFORMANCE CONTRAST MARKING TAPE YELLOW (4")	26284	LIN. FT.
721	RAISED PAVEMENT MARKERS (TYPE II)	491	EACH
SS & 726	STANDARD SIGN	34	SQ. FT.
729	CHANNEL POST SIGN SUPPORT (TYPE C)	15	EACH
SS & 731	IMPACT ATTENUATION BARRIER (TYPE A)	2	EACH
SS & 732	CRASH CUSHION	1	EACH
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-ROADWAY	127	CU. YD.
802	CLASS S CONCRETE-ROADWAY	367.68	CU. YD.
SS & 804	REINFORCING STEEL - ROADWAY (GRADE 60)	39292	POUND
816	FILTER BLANKET	250	SQ. YD.
816	DUMPED RIPRAP	215	CU. YD.
SP	RETAINING WALL	6748	SQ. FT.
STRUCTURES OVER 20' SPAN			
636	BRIDGE CONSTRUCTION CONTROL	1.00	LUMP SUM
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-BRIDGE	139	CU. YD.
802	CLASS S CONCRETE-BRIDGE	194.60	CU. YD.
803	CLASS S(AE) CONCRETE-BRIDGE	313.90	CU. YD.
803	CLASS 2 PROTECTIVE SURFACE TREATMENT	1277.5	SQ. YD.
SS & 804	REINFORCING STEEL - BRIDGE (GRADE 60)	23530	POUND
SS & 804	EPOXY COATED REINFORCING STEEL (GRADE 60)	71580	POUND
805	STEEL PILING (HP 12X53)	690	LIN. FT.
805	PREBORING	100	LIN. FT.
807	STRUCTURAL STEEL IN PLATE GIRDER SPANS (M270-GR50W)	250890	POUND
808	ELASTOMERIC BEARINGS	11377.0	CU. IN.
812	BRIDGE NAME PLATE (TYPE D)	1	EACH
816	CONCRETE RIPRAP	12	CU. YD.
SP	TEXTURED COATING FINISH	519.5	SQ. YD.
SP	SILICONE JOINT SEALANT	111	LIN. FT.
SP	EXPLORATORY HOLES	96	LIN. FT.
SP	SHORING	1.00	LUMP SUM

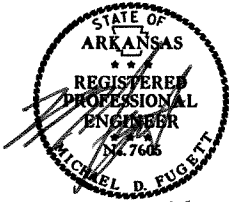
* DENOTES ALTERNATE BID ITEMS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
4-18-12				6	ARK.			
						JOB NO. 090293	64	266

2 SUMMARY OF QUANTITIES AND REVISIONS



DATE	REVISION	SHEET NUMBER
4/18/2012	DELETED PAY ITEM "REMOVAL AND DISPOSAL OF FENCE"	53, 63, 64



3-7-12

SOIL LOG

Boring No.	Northing	Easting	Station	Location	Depth (feet)	Moisture Content (%)	Atterberg Limits			Sieve Analysis (percent passing)						Unconfined (psi)	AASHTO Classification
				Hwy. 71			LL	PL	PI	3/4"	3/8"	No. 4	No. 10	No. 40	No. 200		
AC-2	794902.226	612660.396	431+98.00	125' RT.	4.5-10.0	26.0											
					20-25	20.3											
					30-35	18.3											
AC-5	794343.886	612888.355	438+01.00	115' RT.	10-35'		33	23	10				70		50		A-4(1)
					10-35	14.0	31	21	10	100	91	79	66	52	44		
					38-39											3500	
AC-7	793665.383	613374.088	446+00.00	120' LT.													
AC-12	793049.930	613415.388	452+02.00	10' LT.	21-28.7	9.9	44	23	21								
					57											3820	
					44.5											6690	
AC-17	792448.687	613391.645	457+95.00	114' RT.	7.5-16	12.4	33	31	2								
					21.5-29	28.3	50	25	25								
AC-20	792056.924	613421.090	461+94.00	125' RT.	12-18	3.2	27	20	7								
					35-35.6											5100	
AC-23	791254.571	613688.033	470+03.00	123' LT.	7-25	14.5	37	20	17								
AC-25	791062.041	613561.882	471+99.00	5' LT.	1.5-9.5	17.0	48	19	29	100	86	76	72	66	62		A-7-6(15)
					29-34	14.4	46	20	26								
					41-47	17.0	43	19	24								
					68-68.8											6370	
AC-28	790663.238	613528.571	475+99.00	4' LT.	3.5-6.5	31.3											
					6.5-11.5	32.1											
					11.5-16	26.0											
					16-20	24.2											
AC-30	790171.680	613350.204	481+07.00	120' RT.	2-9	27.6											
					19-24	29.4											
AC-31	789970.886	613447.999	482+96.00	1' RT.	2.5-9.5	29.8	39	21	18	100	96	88	79	71	64		A-6(10)
AC-33	789557.124	613404.859	487+12.00	1' LT.	2-4	25.2											
					9-12	24.1											
AC-36	788370.623	613280.411	499+05.00	6' LT.													
AC-37	788164.063	613366.511	501+01.00	114' LT.	7-26	31.8	45	24	21								
AC-44	787402.230	613046.980	508+93.00	121' RT.	3.5-13.5	19.3	48	19	29								
					23.5-33.5	3.0	49	20	19								
AC-52	785493.358	612960.392	528+00.00	C.L.	3-23	30.5	47	23	24								
AC-57	784657.375	613365.902	536+00.00	490' LT.	3.5-7	23.7	45	21	24								
AC-61	783898.746	612839.627	544+00.00	C.L.	0-2	21.9	22	19	3								
					2-4.5	10.5											
					4.5-10	25.8											
					10-15	32.8											
AC-67	783098.772	612844.033	552+00.00	C.L.	0-2	20.8											
					2-8	14.7	32	17	15								
AC-80	773019.047	614621.310	657+00.00	220' RT.	0-2.5	15.6											
					2.5-5	19.6	33	18	15								
					5-10	23.3											

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.

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. 090293			66	2660

2 SURVEY CONTROL DETAILS



SURVEY CONTROL COORDINATES
Coordinate System: ARKANSAS STATE PLANE - NORTH ZONE BASED ON GPS CONTROL,
PROJECTED TO GROUND.
Units: U.S. SURVEY FOOT

Point Name	Northing	Easting	Elev	Feature	Description
24	772346.1873	614936.2667	0.000	CTL	T-24 RBR CAP
28	784314.6826	613657.7333	1288.723	CTL	T-28 RBR CAP
29	784257.2700	614349.4503	1290.247	CTL	T-29 RBR CAP
31	788522.6538	614353.3026	0.000	CTL	T-31 RBR CAP
32	789450.5137	614105.0032	0.000	CTL	T-32 RBR CAP
34	788699.3436	612779.0470	1177.694	CTL	T-34 RBR CAP
35	795883.7571	614972.8834	1225.595	CTL	T-35 RBR CAP
36	795641.2779	614523.1817	1184.838	CTL	T-36 RBR CAP
70	772574.5414	615403.3323	1315.266	CTL	2' REBAR with 2' Aluminum Cap
71	772877.2079	615205.2640	1322.900	CTL	2' REBAR with 2' Aluminum Cap
72	773289.0306	615013.3160	1320.916	CTL	2' REBAR with 2' Aluminum Cap
73	773662.3823	614976.5933	1312.628	CTL	2' REBAR with 2' Aluminum Cap
74	774079.6049	614494.0612	1306.299	CTL	2' REBAR with 2' Aluminum Cap
75	774527.5357	614048.4893	1301.544	CTL	2' REBAR with 2' Aluminum Cap
76	773839.2408	614060.4732	1307.236	CTL	2' REBAR with 2' Aluminum Cap 4' W FENCE
77	774873.8831	613731.8913	1294.173	CTL	2' REBAR with 2' Aluminum Cap
78	775473.7019	613351.4175	1294.541	CTL	2' REBAR with 2' Aluminum Cap
79	776110.1839	613107.2182	1280.082	CTL	2' REBAR with 2' Aluminum Cap 86.5' N 24' SYCAMORE
80	776838.1559	613077.4758	1270.953	CTL	2' REBAR with 2' Aluminum Cap
81	777233.4380	612423.4629	1254.660	CTL	2' REBAR with 2' Aluminum Cap
82	778026.4732	612342.1298	1220.080	CTL	2' REBAR with 2' Aluminum Cap
83	778586.3309	612501.1665	1228.605	CTL	2' REBAR with 2' Aluminum Cap
84	779108.8320	612653.2601	1261.865	CTL	2' REBAR with 2' Aluminum Cap
85	779926.9242	612654.0175	1266.412	CTL	2' REBAR with 2' Aluminum Cap
86	780720.6540	612676.5458	1267.701	CTL	2' REBAR with 2' Aluminum Cap
87	781477.3885	612626.2630	1269.710	CTL	2' REBAR with 2' Aluminum Cap
88	782283.6838	612597.6237	1276.356	CTL	2' REBAR with 2' Aluminum Cap
89	782988.7680	612506.1595	1288.557	CTL	2' REBAR with 2' Aluminum Cap
90	782978.7993	612858.9962	1290.648	CTL	2' REBAR with 2' Aluminum Cap
91	783577.8173	612798.8733	1291.315	CTL	2' REBAR with 2' Aluminum Cap CNT LINE LOGGING ROAD
92	784354.9330	612876.2731	1301.976	CTL	2' REBAR with 2' Aluminum Cap
93	784319.0416	611898.2437	1291.663	CTL	2' REBAR with 2' Aluminum Cap
94	783486.3611	611801.5054	1289.992	CTL	2' REBAR with 2' Aluminum Cap
95	784955.7075	612977.2069	1307.332	CTL	2' REBAR with 2' Aluminum Cap 36.2759
96	785635.6452	613074.3446	1303.784	CTL	2' REBAR with 2' Aluminum Cap
97	785649.7331	612340.6688	1300.077	CTL	2' REBAR with 2' Aluminum Cap 11.2' E FENCE 25' SE PP
98	786432.4271	613220.4122	1274.343	CTL	2' REBAR with 2' Aluminum Cap 50.5' W C/L DIRT ROAD
99	786912.1247	613009.6749	1264.591	CTL	2' REBAR with 2' Aluminum Cap
109	771646.3139	613416.6919	1320.461	GPS	AHTD GPS #040030
112	784639.0702	614554.0001	1293.249	GPS	AHTD GPS #040031
113	795801.5313	615492.6258	1246.871	GPS	AHTD GPS #040032
150	787194.4049	613130.6181	1258.749	CTL	2' REBAR with 2' Aluminum Cap
151	787466.9609	613073.4343	1269.726	CTL	2' REBAR with 2' Aluminum Cap
152	787800.1781	612992.8794	1273.369	CTL	2' REBAR with 2' Aluminum Cap
153	788135.1177	613402.1398	1257.688	CTL	2' REBAR with 2' Aluminum Cap
154	788758.2733	613496.4172	1239.346	CTL	2' REBAR with 2' Aluminum Cap
155	788983.2283	613237.7369	1166.881	CTL	2' REBAR with 2' Aluminum Cap
156	789485.8352	613366.5601	1224.441	CTL	2' REBAR with 2' Aluminum Cap
157	790136.2869	613475.5850	1238.133	CTL	2' REBAR with 2' Aluminum Cap
158	790622.9180	613711.1296	1211.905	CTL	2' REBAR with 2' Aluminum Cap
159	791053.7920	613256.2152	1262.098	CTL	2' REBAR with 2' Aluminum Cap
160	791352.5526	613677.7297	1247.547	CTL	2' REBAR with 2' Aluminum Cap
161	791712.2166	613325.8031	1216.906	CTL	2' REBAR with 2' Aluminum Cap
162	792344.0533	613205.9062	1259.046	CTL	2' REBAR with 2' Aluminum Cap
163	792857.5714	613065.2878	1242.372	CTL	2' REBAR with 2' Aluminum Cap
164	793457.2407	613372.7338	1221.373	CTL	2' REBAR with 2' Aluminum Cap
165	794022.3298	613345.0458	1148.314	CTL	2' REBAR with 2' Aluminum Cap
166	794727.1030	613311.6103	1068.334	CTL	2' REBAR with 2' Aluminum Cap
167	795075.2652	612773.9514	1094.028	CTL	2' REBAR with 2' Aluminum Cap
168	795707.1244	612723.7882	1068.000	CTL	2' REBAR with 2' Aluminum Cap
169	796203.7454	612326.2442	1063.091	CTL	2' REBAR with 2' Aluminum Cap
170	796209.8045	611927.9902	1051.273	CTL	2' REBAR with 2' Aluminum Cap
171	796750.3460	611798.2818	1039.886	CTL	2' REBAR with 2' Aluminum Cap
981	776711.2844	613095.1092	1276.580	TBM	CPS IN SIDE OF 10' OAK

*Note - Rebar and Cap - Standard - * Rebar with 2' Aluminum Cap stamped
*(standard markings common to all caps), or as indicated
(other markings indicated in the point description of the individual point).
USE CAF = 1.0 FOR STAKEOUT FOR THIS PROJECT
A PROJECT CAF OF 1.000002867 HAS BEEN USED TO COMPUTE THE ABOVE GROUND COORDINATES.
THIS CAF IS INTENDED FOR USE WITHIN THE PROJECT LIMITS.
GRID DISTANCE = GROUND DISTANCE X CAF.
GRID COORDINATES ARE STORED UNDER FILE NAME s090293gi.CTL
HORIZONTAL DATUM: NAD 83 (1997)
VERTICAL DATUM: NAVD 88 POSITIONAL ACCURACY THIRD ORDER, UNLESS SPECIFIED OTHERWISE
AT A SPECIFIC POINT.

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

BASIS OF BEARING:
ARKANSAS STATE PLANE GRID BEARINGS - 0301-NORTH ZONE
DETERMINED FROM GPS CONTROL POINTS: 040030-040031 040031-040032
CONVERGENCE ANGLE: 1-22-51.0 LEFT AT LT: 36-27-57.0 LG: 094-22-22.76
GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.

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. 090293	67	206

2 SURVEY CONTROL DETAILS



HWY. 71

POINT NO.	TYPE	STATION	NORTHING	EASTING
8071	POB	103+39.00	826496.8400	609425.2380
8072	PC	109+76.36	825936.7454	609729.4195
	PI	127+27.31	824398.0680	610565.0590
8073	PT	142+59.91	822760.6646	609944.7916
8074	PC	193+90.42	817962.8561	608127.3261
	PI	208+15.70	916630.0060	607622.4270
8075	PT	221+84.27	815215.9410	607800.8440
8076	PC	319+25.94	805550.8950	609020.3131
	PI	333+39.84	804148.1170	609197.3060
8077	PT	347+39.52	802830.4325	609709.9660
8078	PC	439+46.91	794249.5972	613048.4364
	PI	458+15.35	792508.3120	613725.9030
8079	PT	476+11.83	790650.9074	613523.2125
8080	PC	532+98.14	784998.1577	612906.3526
	PI	539+71.86	784328.4100	612833.2660
8081	PT	546+44.04	783654.7122	612839.1652
8082	PC	614+33.50	776865.5111	612898.6145
	PI	627+28.42	775570.6350	612909.9530
8083	PT	639+30.46	774549.6093	613706.4072
8084	PC	677+67.29	771524.3398	616066.2779
	PI	688+11.17	770701.2610	616708.3230
8085	PT	698+05.28	770319.1193	617679.7386
8086	PC	744+93.36	768602.9116	622042.3899
	PI	752+64.15	768320.7410	622759.6760
8087	PT	760+14.52	768338.8109	623530.2557
8088	PC	804+62.15	768443.0783	627976.6632
	PI	811+15.11	768458.3860	628629.4470
8089	PT	817+62.46	768620.1806	629262.0476
8090	PC	826+67.64	768844.4708	630138.9995
	PI	842+88.35	769246.0580	631709.1650
8091	PT	857+33.18	768395.9498	633089.0230
8092	PC	917+75.67	765226.4877	638233.5532
	PI	929+76.70	764596.5100	639256.1050
8093	PT	941+43.45	764430.2158	640445.5714
8094	PC	962+37.44	764140.2844	642519.3870
	PI	970+04.24	764034.1140	643278.8010
8095	PT	977+68.75	764030.0708	644045.5900
8096	PC	1011+07.14	764012.4679	647383.9281
	PI	1021+01.84	764007.2230	648378.6158
8097	PT	1030+85.41	764256.8635	649341.4816
8098	PC	1078+22.12	765445.6375	653926.5943
	PI	a 1094+25.61	765832.8743	655420.1702
8099	PT	a 1108+97.06	765417.7055	656906.2240
8100	PC	a 1141+01.72	764555.4172	659992.6962
	PI	a 1151+19.25	764281.6269	660972.7003
8042	PT	a 1161+15.78	763687.1384	661798.5044
8101	POE	a 1184+82.06	762304.6510	663718.9180

AR 72N

POINT NO.	TYPE	STATION	NORTHING	EASTING
8291	POB	30+98.53	771711.4770	613605.3190
8292	PC	36+23.92	771965.5212	614065.2062
	PI	50+59.04	772659.4541	615321.4083
8294	PT	64+05.54	772513.0862	616749.0507
8295	POE	68+60.80	772466.6540	617201.9410

AR 72N RAMP 1

POINT NO.	TYPE	STATION	NORTHING	EASTING
8297	PC	645+15.38	774059.8100	614029.5023
	PI	646+10.60	773984.7326	614088.0667
8299	PT	647+05.66	773904.2024	614138.8731
8300	PC	652+12.40	773475.6230	614409.2633
	PI	656+77.07	773082.6309	614657.2015
8302	PT	661+24.03	772619.6608	614696.8846
8303	POE	664+79.58	772265.4088	614727.2489

AR 72N RAMP 2 (SHOWN FOR INFORMATION ONLY)

POINT NO.	TYPE	STATION	NORTHING	EASTING
8303	POB	662+32.37	772265.4088	614727.2489
8304	PC	664+35.55	772098.7654	614843.4970
	PI	667+50.44	771840.5033	615023.6570
8306	PT	670+50.17	771710.5689	615310.4915
8307	PC	675+48.22	771505.0571	615764.1658
	PI	678+19.01	771393.3205	616010.8281
8309	PT	680+86.21	771217.4201	616216.7076
8310	POE	685+36.21	770925.1090	616558.8380

AR 72N RAMP 3 (SHOWN FOR INFORMATION ONLY)

POINT NO.	TYPE	STATION	NORTHING	EASTING
8311	POB	668+60.15	772530.7333	616042.1934
8312	PC	674+02.49	771993.2114	616114.3374
	PI	680+65.17	771336.4158	616202.4898
8314	PT	686+61.84	770925.8939	616722.7043

AR 72N RAMP 4

POINT NO.	TYPE	STATION	NORTHING	EASTING
8317	PC	645+46.34	774099.9842	614131.3312
	PI	650+34.75	773714.8786	614431.7338
8319	PT	655+02.67	773521.2665	614880.1336
8320	PC	661+35.61	773270.3622	615461.2202
	PI	665+67.30	773099.2341	615857.5475
8322	PT	669+46.48	772688.6531	615990.9020
8311	POE	671+12.52	772530.7333	616042.1934

AR 72N - TEMPORARY RAMP 4

POINT NO.	TYPE	STATION	NORTHING	EASTING
8357	PC	635+74.38	774826.4262	613479.3097
	PI	638+96.76	774554.8793	613653.0704
8359	PT	642+16.44	774328.7424	613882.8367
8360	PC	645+83.31	774071.3993	614144.3101
	PI	646+49.34	774025.0817	614191.3711
8362	PT	647+15.35	773976.6450	614236.2481

CO. RD. 34 - SOUTH FRONTAGE RD.

POINT NO.	TYPE	STATION	NORTHING	EASTING
8273	POB	10+00.00	783673.5900	611852.2990
8274	PC	12+14.52	783665.7950	612066.6774
	PI	15+42.31	783653.8840	612394.2520
8276	PT	17+78.20	783336.7334	612477.0922
8277	PC	22+90.88	782840.6963	612606.6578
	PI	26+37.07	782505.7428	612694.1482
8279	PT	29+79.92	782159.5903	612699.3313
8280	PC	40+31.06	781108.5769	612715.0685
	PI	41+54.65	780984.9955	612716.9190
8282	PT	42+78.24	780861.4030	612716.1035
8283	PC	54+63.10	779676.5701	612708.2855
	PI	56+70.23	779469.4360	612706.9187
8285	PT	58+76.65	779264.6530	612675.7683
8286	PC	65+16.28	778632.2965	612579.5778
	PI	66+63.28	778486.9730	612557.4720
8288	PT	68+09.25	778340.1887	612565.3429
8289	PI	76+12.31	777538.2810	612608.3430
8290	POE	77+22.52	777428.2255	612614.2444

RELOCATED CO. RD. 21

POINT NO.	TYPE	STATION	NORTHING	EASTING
8323	POB	9+40.61	774925.3330	614089.3760
8324	PC	11+62.53	774703.6991	614078.0268
	PI	14+54.79	774411.8290	614063.0810
8326	PT	17+17.50	774192.8285	614256.6018
8327	PC	20+62.87	773934.0244	614485.2953
	PI	22+81.70	773770.0410	614630.2000
8329	PT	24+93.10	773685.5209	614832.0521
8330	PC	38+11.14	773176.4543	616047.8126
	PI	42+02.87	773025.1557	616409.1461
8332	PT	44+98.35	772633.5487	616399.2953
8333	POE	45+96.39	772535.5383	616396.8299

CO. RD. 34

POINT NO.	TYPE	STATION	NORTHING	EASTING
8200	POB	4+50.23	784428.3209	611529.5172
8202	PC	19+75.39	784363.1753	613053.2863
	PI	22+07.88	784353.2448	613285.5621
8204	PT	24+40.11	784324.5279	613516.2696
8205	PC	24+68.84	784320.9794	613544.7777
	PI	27+01.33	784292.2626	613775.4853
8207	PT	29+33.56	784282.3321	614007.7611
8208	POE	39+00.00	784241.0518	614973.3165

CO. RD. 34 REALIGNMENT

POINT NO.	TYPE	STATION	NORTHING	EASTING
8265	POB	10+00.00	783613.6680	611850.1200
8266	PC	18+73.04	784486.1308	611881.8433
	PI	21+40.75	754753.6630	611891.5710
8268	PT	23+73.92	784917.8539	612103.0171
8269	PC	27+48.92	785147.8483	612399.2053
	PI	33+05.75	785489.3630	612839.0100
8271	PT	35+43.35	785838.9871	612405.6240
8272	POE	39+18.35	786074.4420	612113.7594

CO. RD. 34 MOT

POINT NO.	TYPE	STATION	NORTHING	EASTING
8209	POB	8+57.45	783471.2146	611844.9403
8210	PC	8+92.94	783506.6842	611846.2300
	PI	9+25.05	783538.7740	611847.3968
8212	PT	9+56.78	783569.4151	611857.0013
8213	PC	9+87.61	783598.6347	611866.2230
	PI	10+45.78	783654.3354	611883.6198
8215	PT	11+03.25	783712.4604	611885.7333
8216	PC	14+69.15	784078.1204	611899.0290
	PI	17+31.25	784340.0502	611908.5529
8218	PT	18+79.90	784328.8548	612170.4165
8219	PC	28+40.45	784287.8258	613130.0927
	PI	30+64.30	784278.2645	613353.7321
8221	PT	32+87.91	784251.2847	613575.9440
8222	PC	32+94.70	784250.4662	613582.6853
	PI	33+87.14	784239.3248	613674.4486
8224	PT	34+76.84	784266.6747	613762.7472
8225	PC	34+81.67	784268.1033	613767.3595
	PI	35+59.93	784291.2599	613842.1202
8227	PT	36+36.52	784286.7436	613920.2546
8228	POE	36+50.17	784285.9556	613933.8873

CO. RD. 34 - RAMP 1 (SHOWN FOR INFORMATION ONLY)

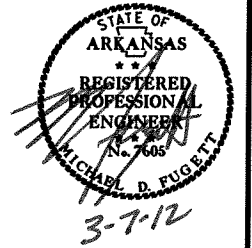
POINT NO.	TYPE	STATION	NORTHING	EASTING
8230	PC	520+37.04	786256.8639	612996.9345
	PI	521+32.25	786162.2082	612986.6051
8232	PT	522+27.31	786069.0493	612966.9121
8233	PC	525+08.04	785794.3899	612908.8514
	PI	528+59.31	785450.7131	612836.2009
8235	PT	532+02.82	785155.3777	612646.0199
8236	PC	535+56.84	784857.7310	612454.3505
	PI	537+11.08	784728.0559	612370.8464
8238	PT	538+63.47	784580.9169	612324.6002
8239	POE	540+56.46	784396.8027	612266.7326

CO. RD. 34 - RAMP 2

POINT NO.	TYPE	STATION	NORTHING	EASTING
8239	POB	538+02. 14	784396. 8027	612266. 7326
8240	PC	540+18. 36	784185. 7568	612313. 7211
	PI	541+85. 41	784022. 6960	612350. 0259
8242	PT	543+50. 13	783876. 7867	612431. 3728
8243	PC	545+87. 31	783669. 6237	612546. 8698
	PI	550+74. 82	783243. 8232	612784. 2609
8245	PT	555+41. 94	782756. 3375	612788. 5295

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		68	266
				JOB NO.		090293		

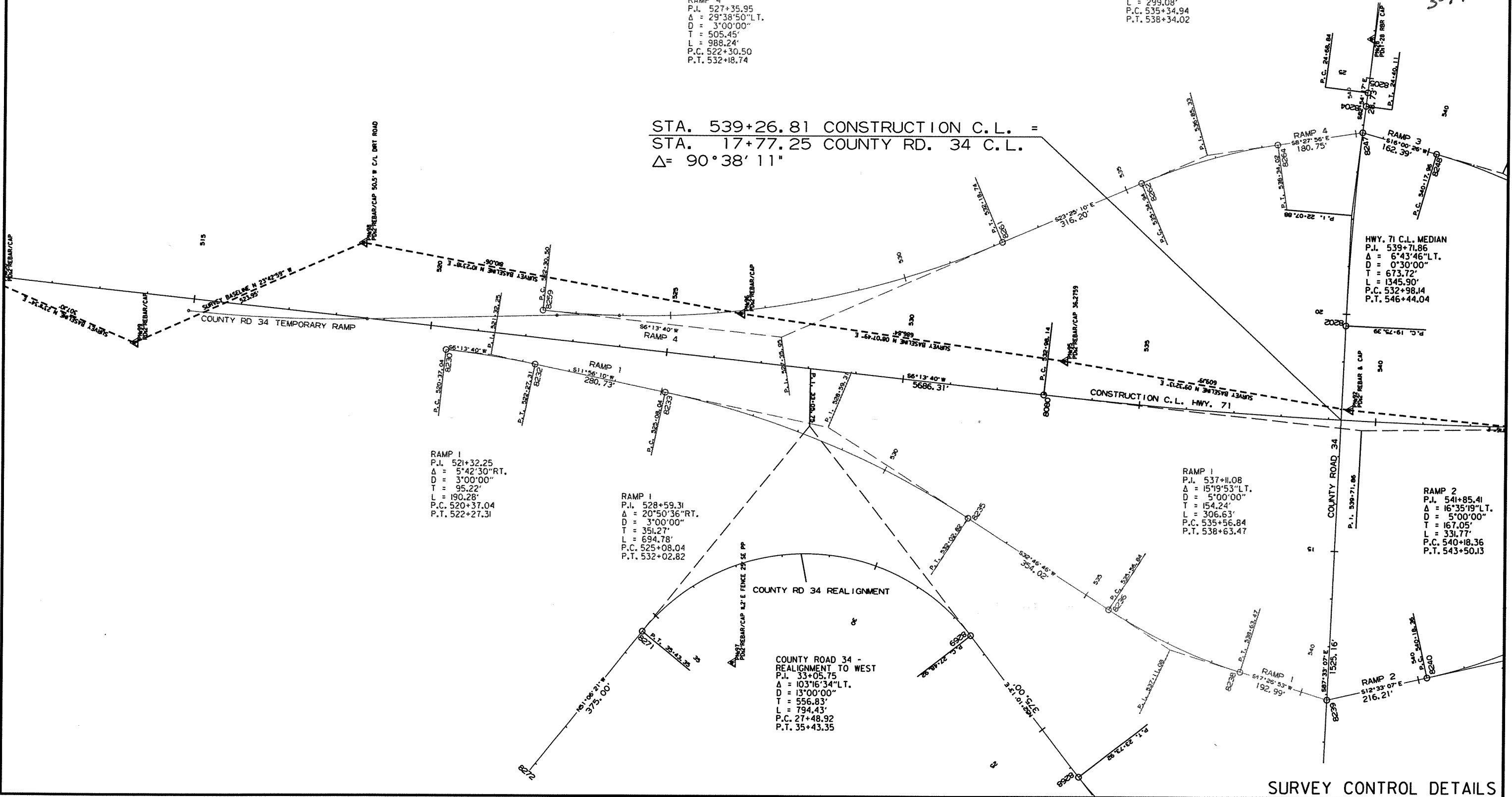
2 SURVEY CONTROL DETAILS



RAMP 4
P.I. 527+35.95
 $\Delta = 29^{\circ}38'50''$ LT.
D = 3'00'00"
T = 505.45'
L = 988.24'
P.C. 522+30.50
P.T. 532+18.74

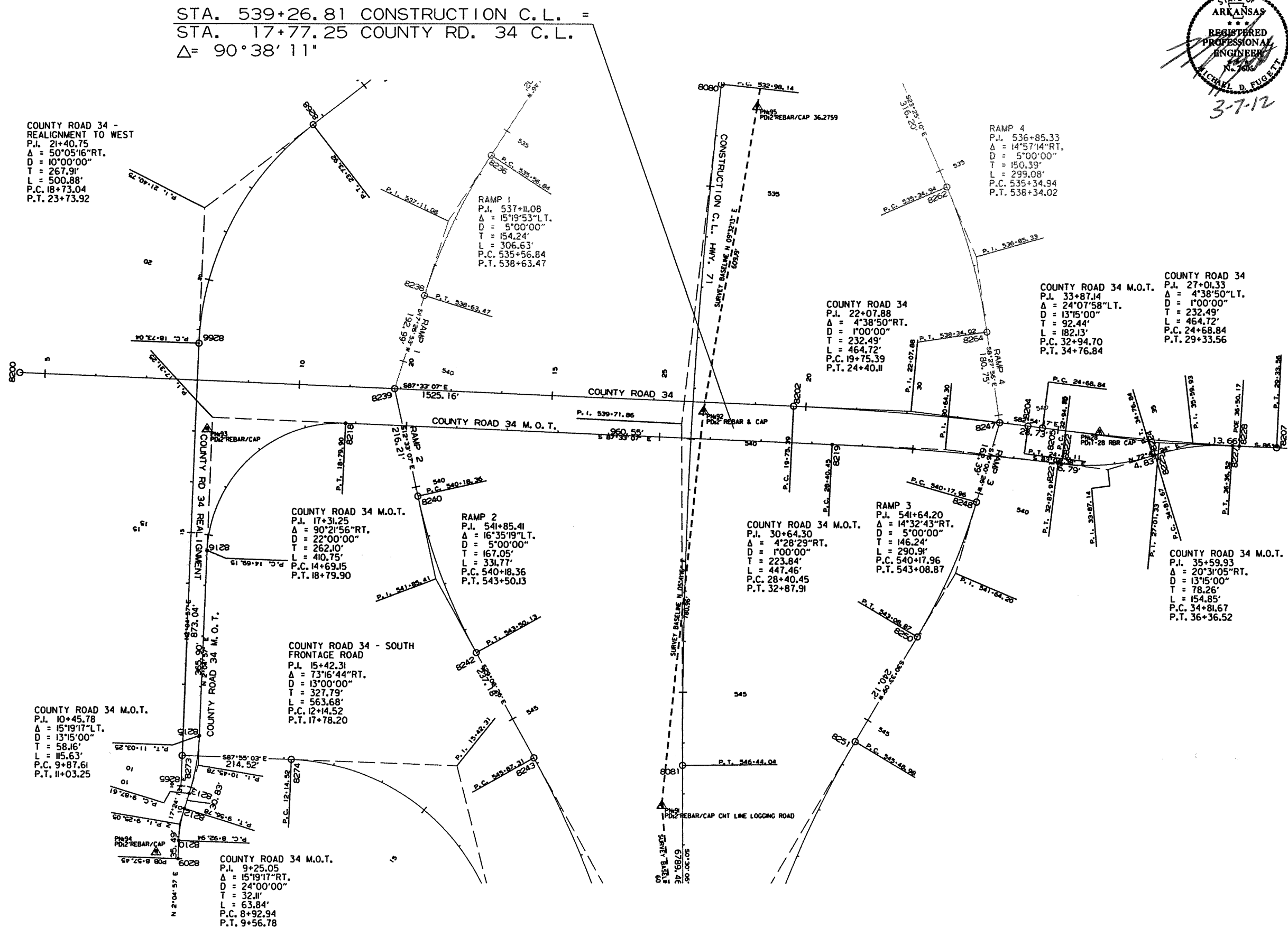
RAMP 4
P.I. 536+85.33
 $\Delta = 14^{\circ}57'14''$ RT.
D = 5'00'00"
T = 150.39'
L = 299.08'
P.C. 535+34.94
P.T. 538+34.02

STA. 539+26.81 CONSTRUCTION C.L. =
STA. 17+77.25 COUNTY RD. 34 C.L.
 $\Delta = 90^{\circ}38'11''$

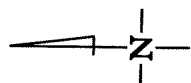


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		70	266
				JOB NO. 090293				

2 SURVEY CONTROL DETAILS

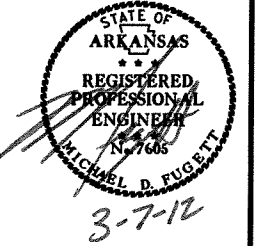


2 SURVEY CONTROL DETAILS



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.	090293		73	246

2 SURVEY CONTROL DETAILS

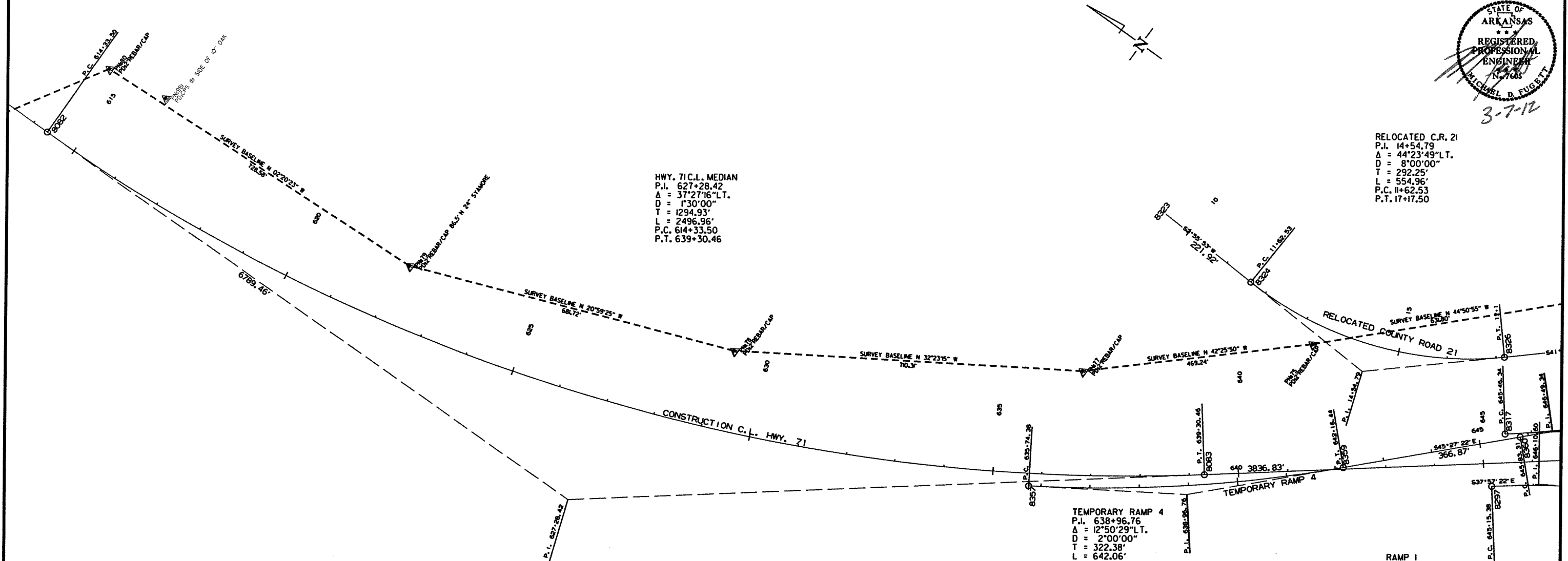


RELOCATED C.R. 21
P.I. 14+54.79
 $\Delta = 44^{\circ}23'49''$ L.T.
 $D = 8^{\circ}00'00''$
 $T = 292.25'$
 $L = 554.96'$
P.C. 11+62.53
P.T. 17+17.50

HWY. 71 C.L. MEDIAN
P.I. 627+28.42
 $\Delta = 37^{\circ}27'16''$ L.T.
 $D = 1^{\circ}30'00''$
 $T = 1294.93'$
 $L = 2496.96'$
P.C. 614+33.50
P.T. 639+30.46

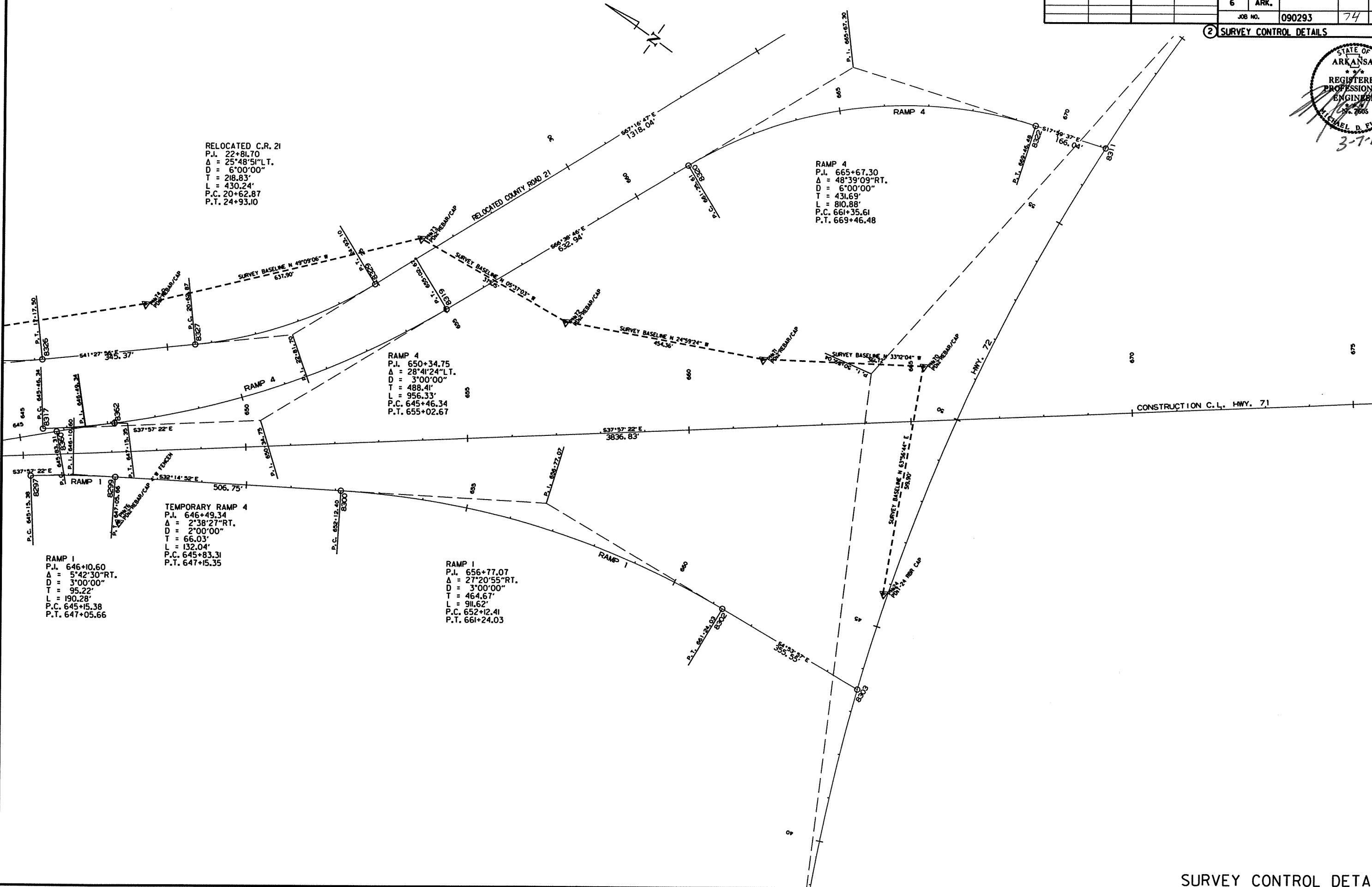
TEMPORARY RAMP 4
P.I. 638+96.76
 $\Delta = 12^{\circ}50'29''$ L.T.
 $D = 2^{\circ}00'00''$
 $T = 322.38'$
 $L = 642.06'$
P.C. 635+74.38
P.T. 642+16.44

RAMP 1
P.I. 646+10.60
 $\Delta = 5^{\circ}42'30''$ RT.
 $D = 3^{\circ}00'00''$
 $T = 95.22'$
 $L = 190.28'$
P.C. 645+15.38
P.T. 647+05.66



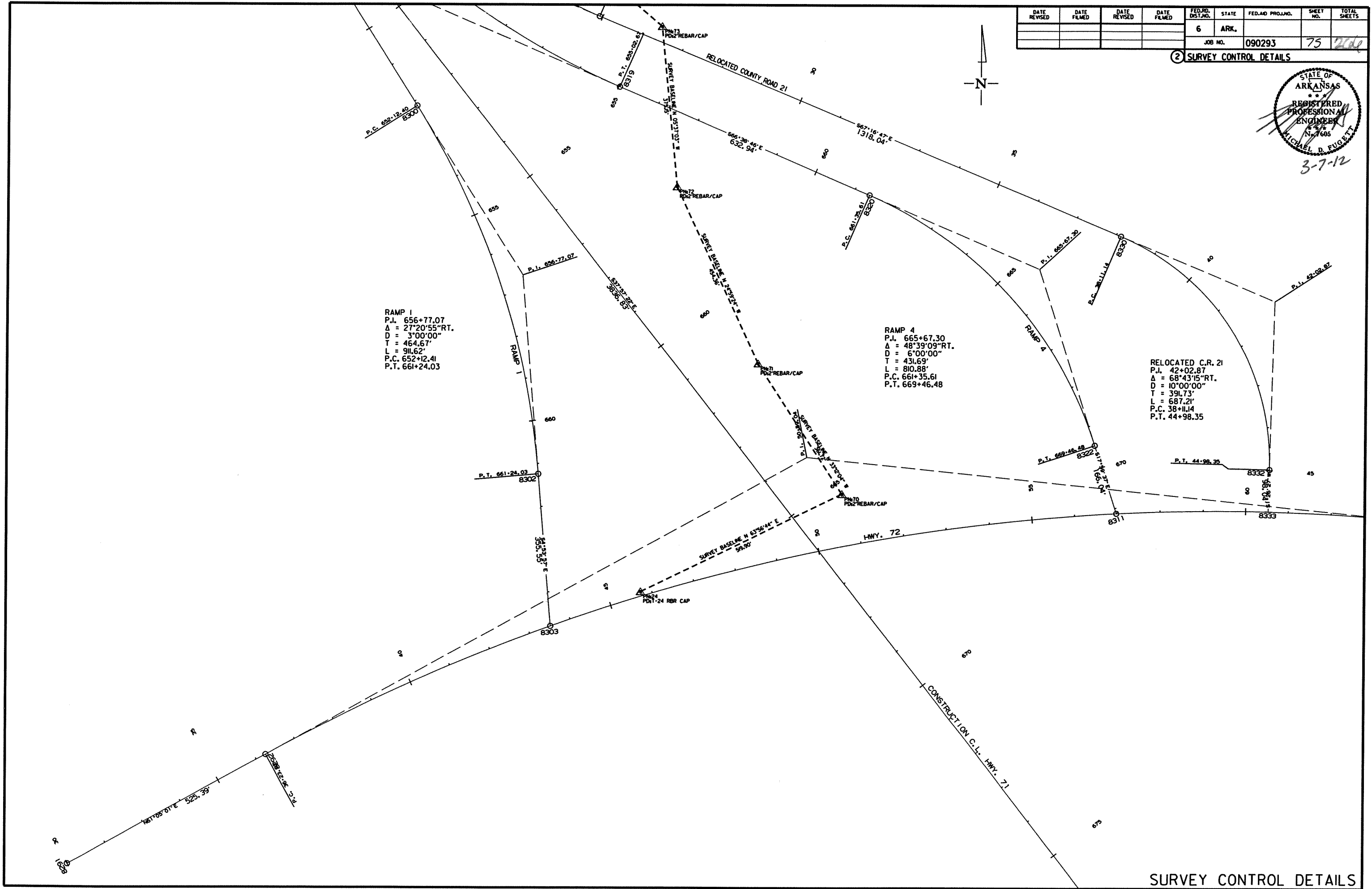
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		74	200
				JOB NO.		090293		

2 SURVEY CONTROL DETAILS



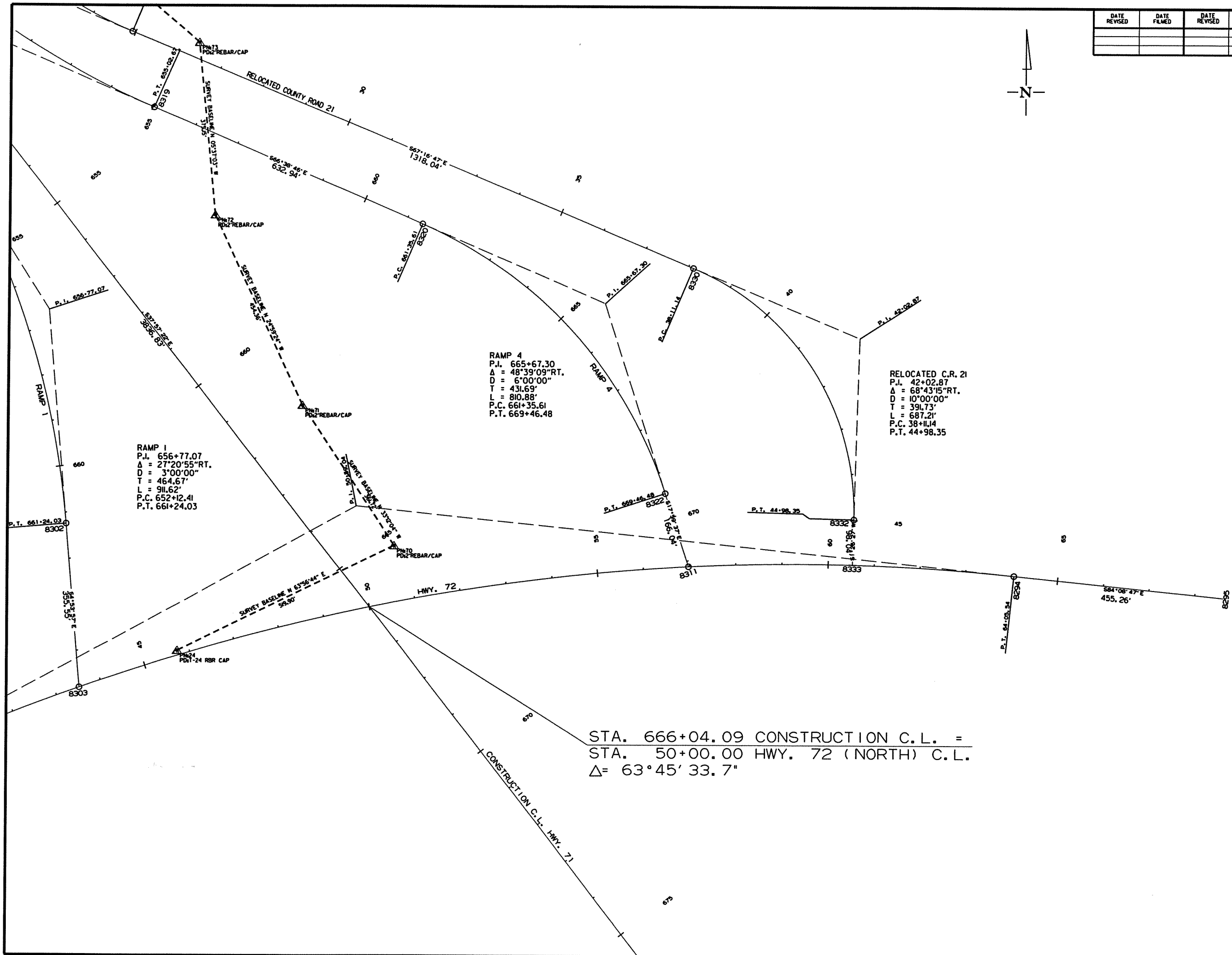
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		75	260
				JOB NO.		090293		

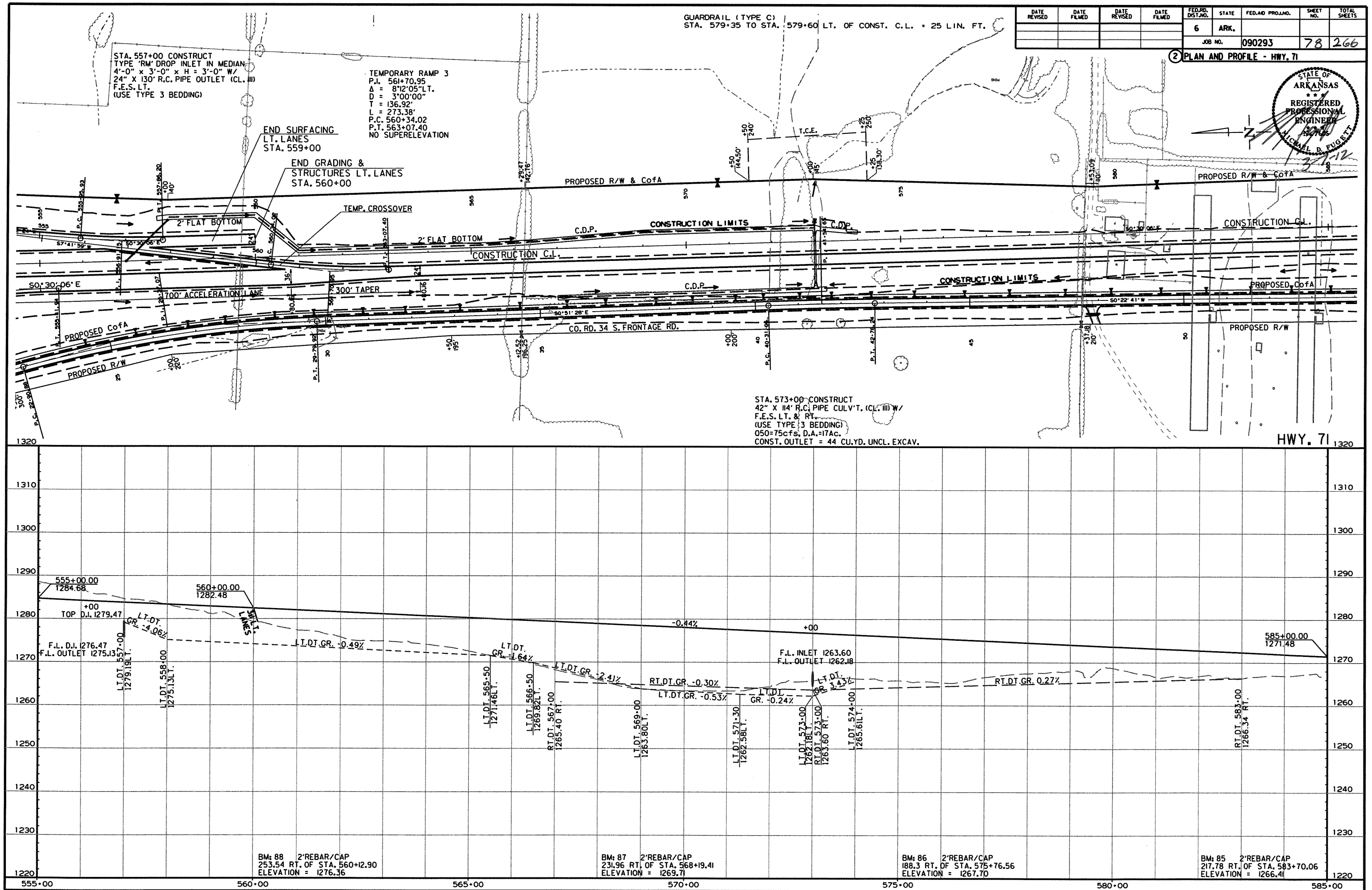
2 SURVEY CONTROL DETAILS



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		76	0160
				JOB NO.		090293		

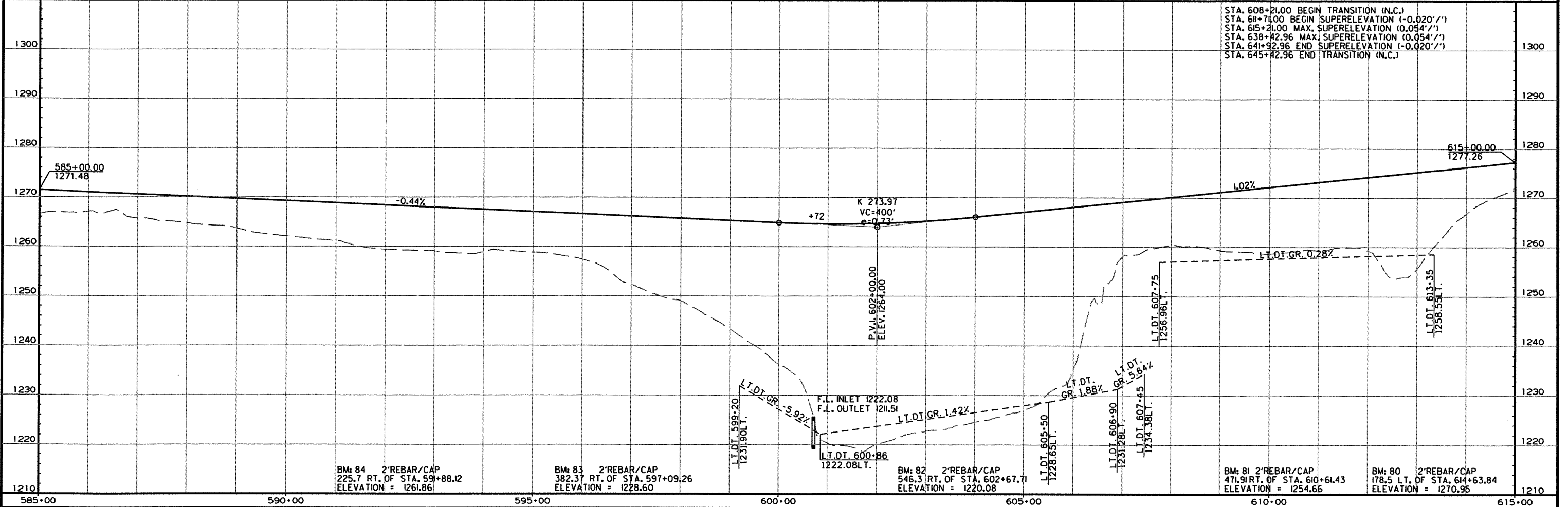
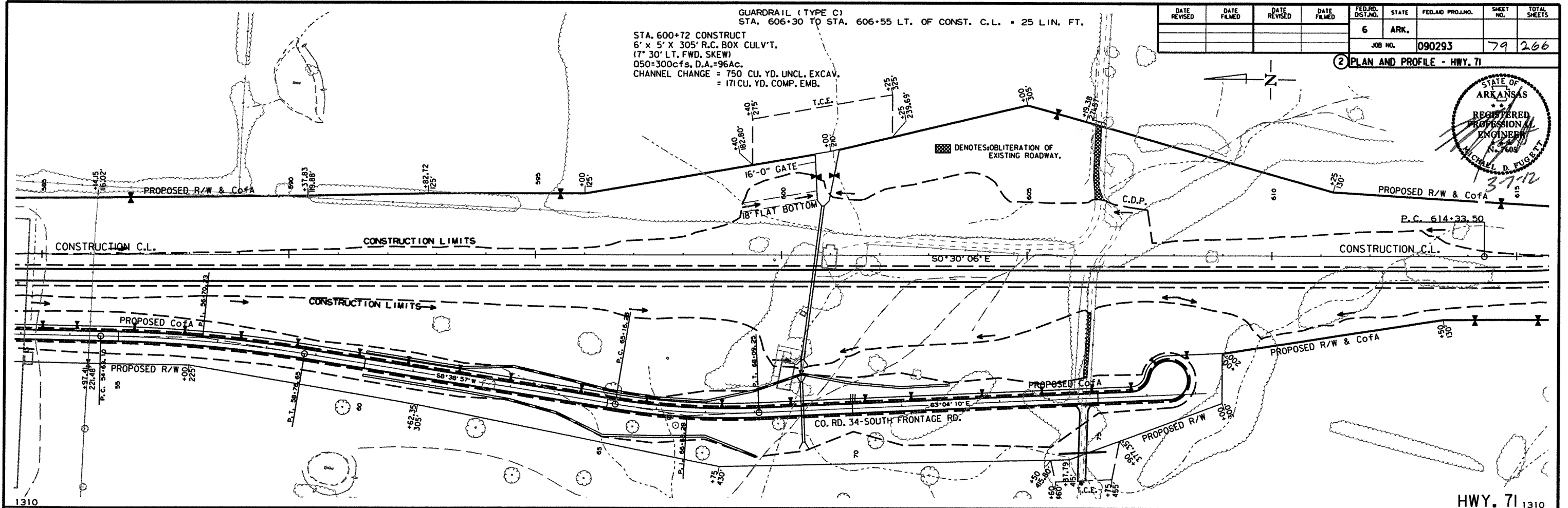
2 SURVEY CONTROL DETAILS





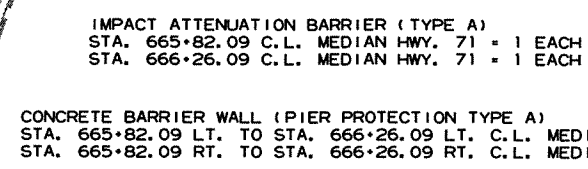
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				6	ARK.			
				JOB NO.	090293	79	266	

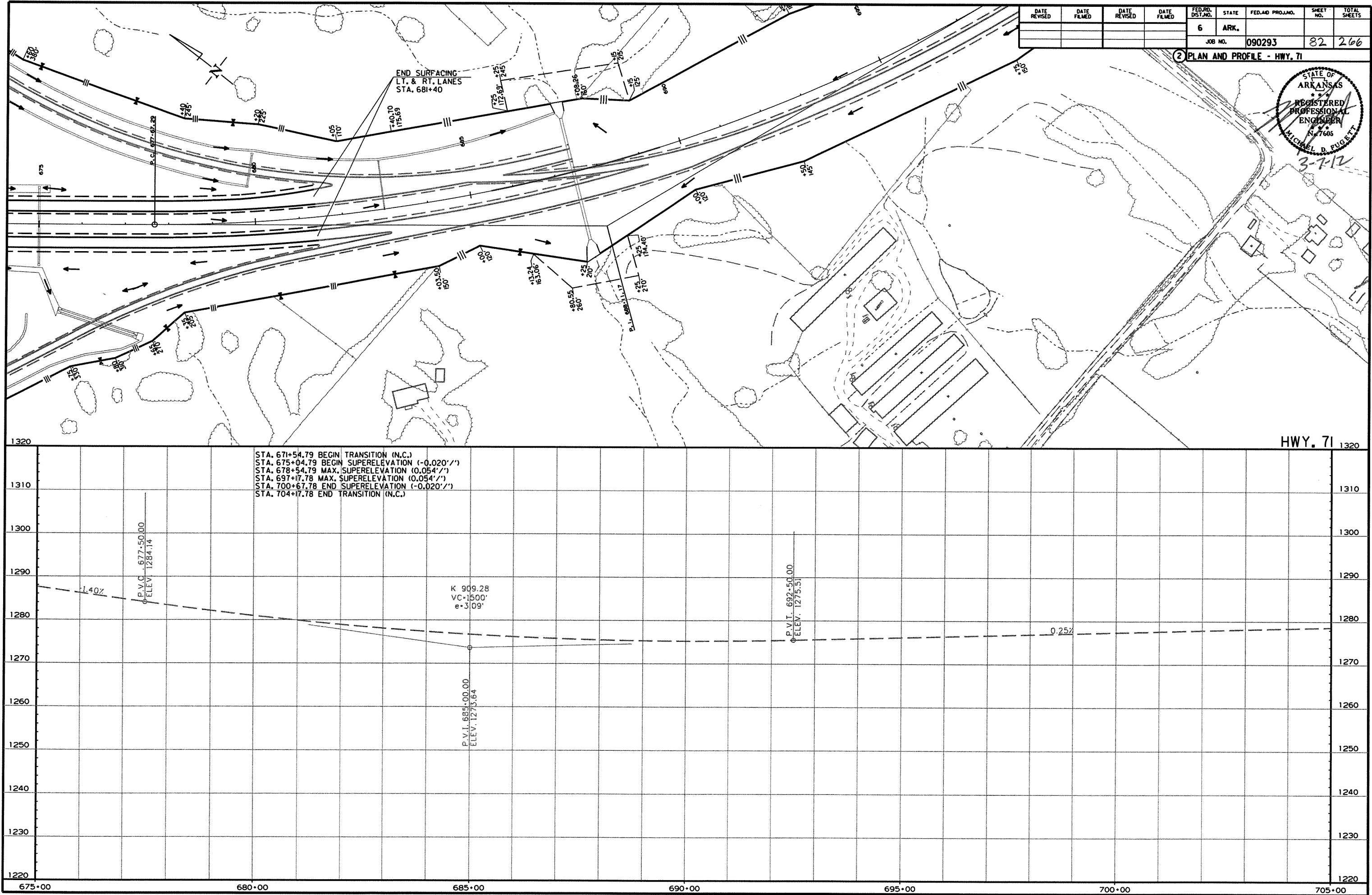
(2) PLAN AND PROFILE - HWY. 71



(2) PLAN AND PROFILE - HWY. 71

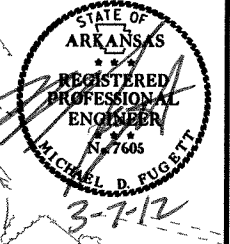
STATE OF
ARKANSAS
REGISTERED
PROFESSIONAL
ENGINEER
No. 7605
MICHAEL D. FUGETT
3-7-12

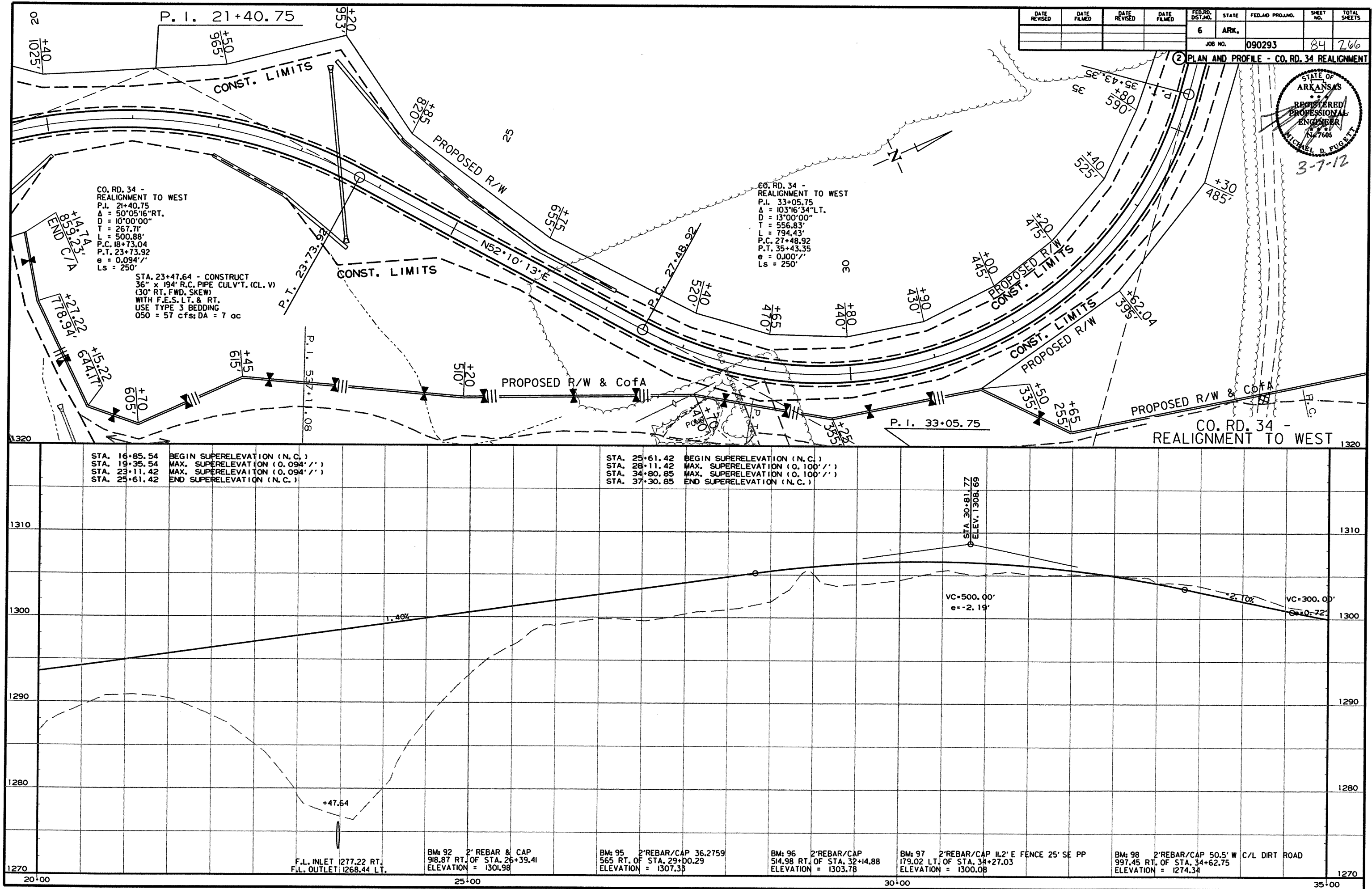




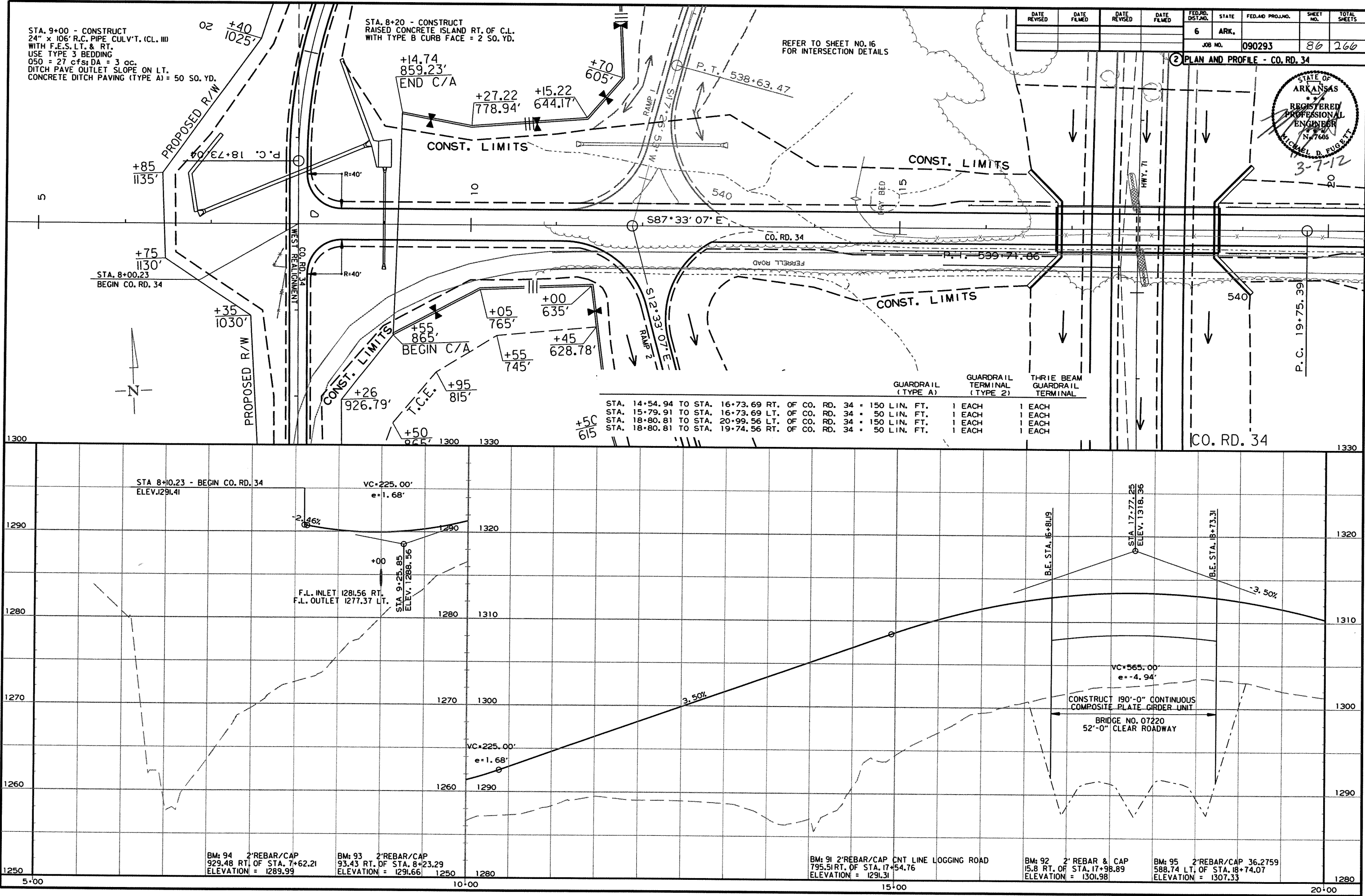
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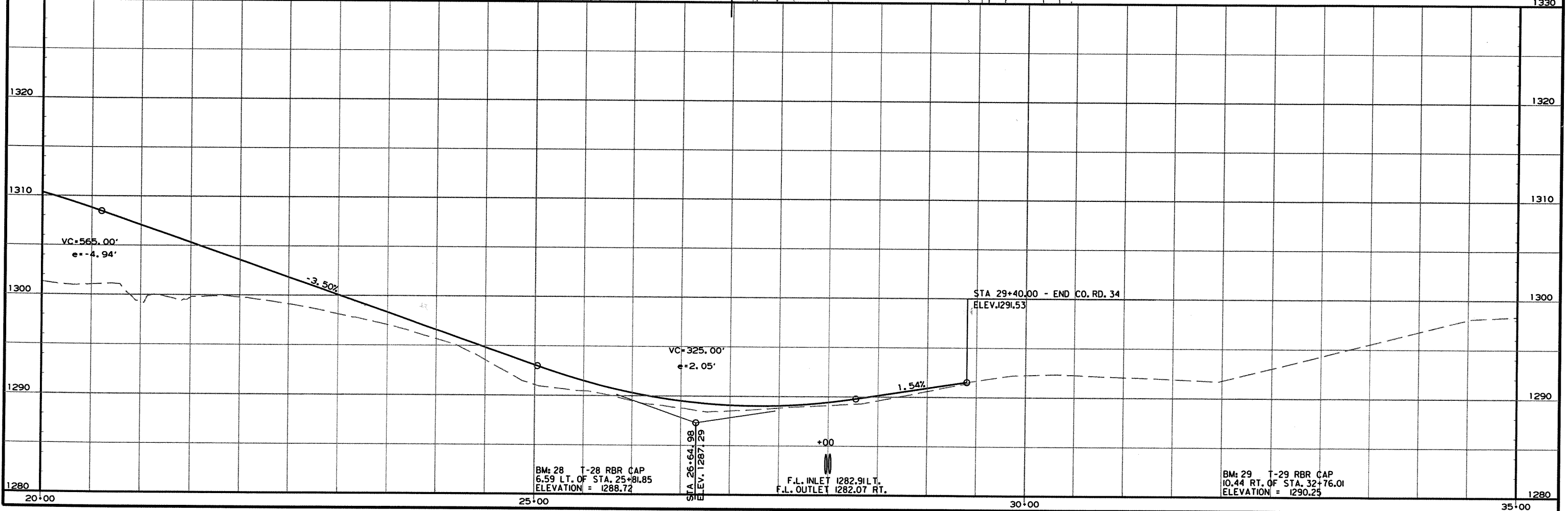
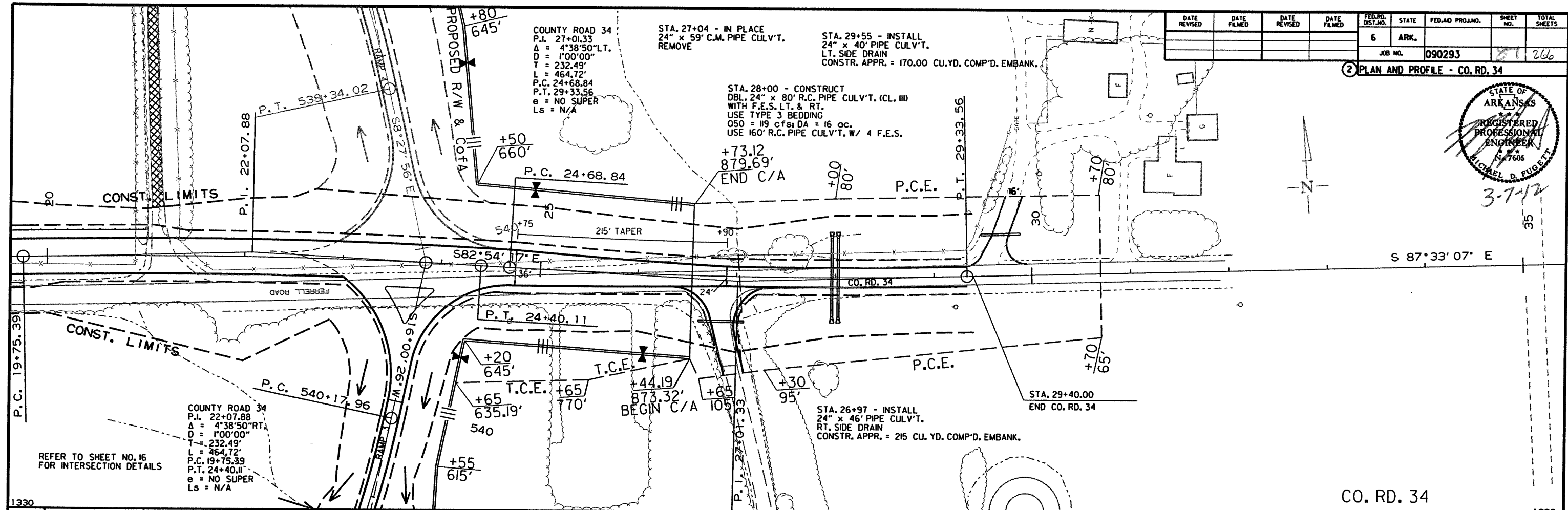
2 PLAN AND PROFILE - HWY. 71





R090293_REV.DGN 3/5/2012





STA. 10+00 CO. RD. 34 REALIGNMENT - CONSTRUCT
24" x 48" R.C. PIPE CULV'T. (CL. III)
WITH F.E.S. LT. & RT.
USE TYPE 3 BEDDING
050 = 27 cfs; DA = 3 ac
WITH 24" x 20" TEMP. PIPE CULV'T
ON INLET FOR STAGE 2

COUNTY ROAD 34 M.O.T.
P.I. 10+45.78
Δ = 15°19'17" LT.
D = 13°15'00"
T = 58.16'
L = 115.63'
P.C. 9+87.61
P.T. 11+03.25
e = MATCH EXIST. SUPER.

STA. 10+21 - IN PLACE
12" x 33" C.M. PIPE CULV'T.
REMOVE

PROPOSED R/W

CONST. LIMITS

T.C.E.

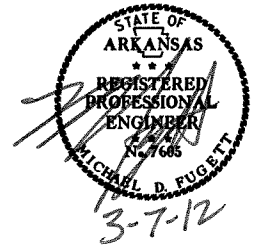
STA. 14+03 - IN PLACE
24" x 60" C.M. PIPE CULV'T.
STAGE 1 - RETAIN & EXTEND W/TEMP. PIPE
30' TO A COMPLETED LENGTH OF 90'
USE 34" TEMP. PIPE CULV'T.
STAGE 3 - REMOVE & CONSTRUCT
30" x 56" R.C. PIPE CULV'T. (CL III)
WITH F.E.S. LT. & RT.
USE TYPE 3 BEDDING
050 = 42 cfs; DA = 5 ac
DITCH PAVE OUTLET SLOPE ON LT.
CONCRETE DITCH PAVING (TYPE A) = 34 SQ. YD.

COUNTY ROAD 34 M.O.T.
P.I. 9+25.05
Δ = 15°19'17" RT.
D = 24°00'00"
T = 32.11'
L = 63.84'
P.C. 8+92.94
P.T. 9+56.78
e = NO SUPER
Ls = N/A

COUNTY ROAD 34 M.O.T.
P.I. 17+31.25
Δ = 90°21'56" RT.
D = 22°00'00"
T = 262.10'
L = 410.75'
P.C. 14+69.15
P.T. 18+79.90
e = 0.099'/'
Ls = 215'

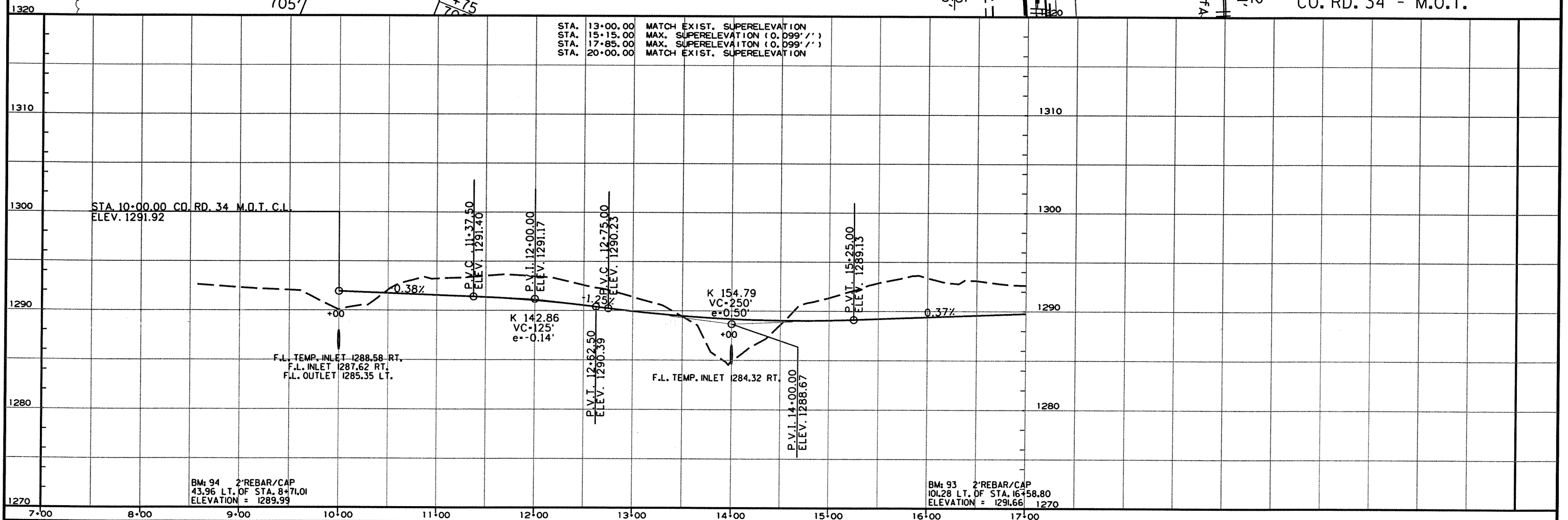
CO. RD. 34 -
REALIGNMENT TO WEST

CO. RD. 34 - M.O.T.



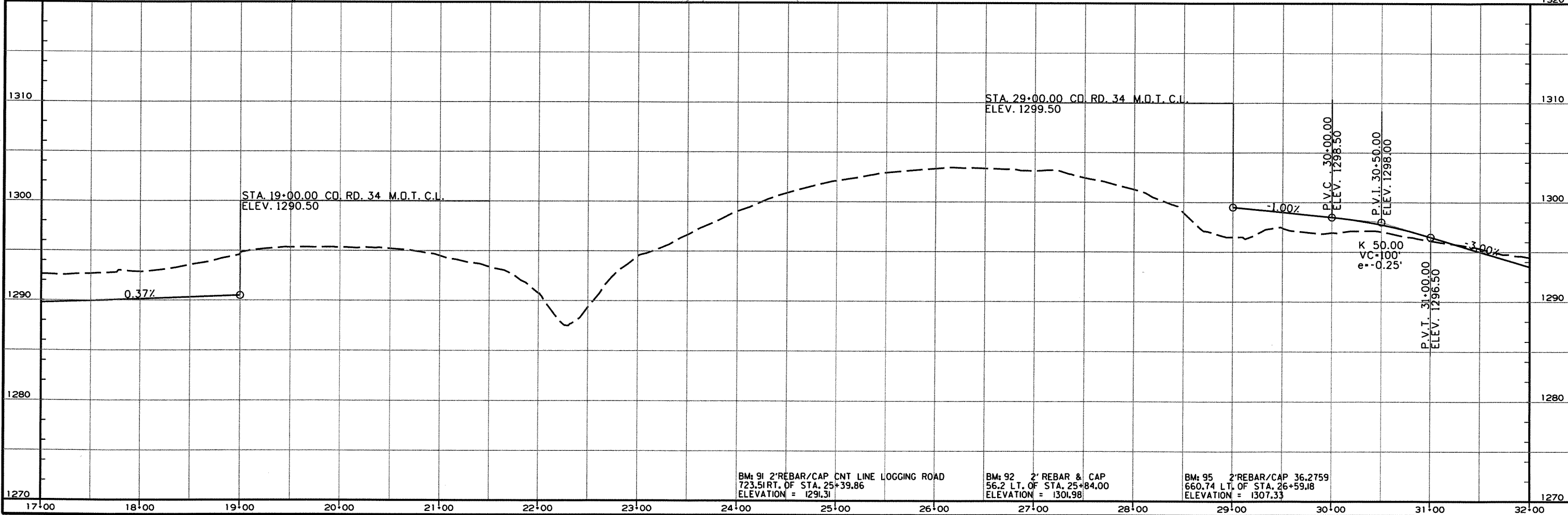
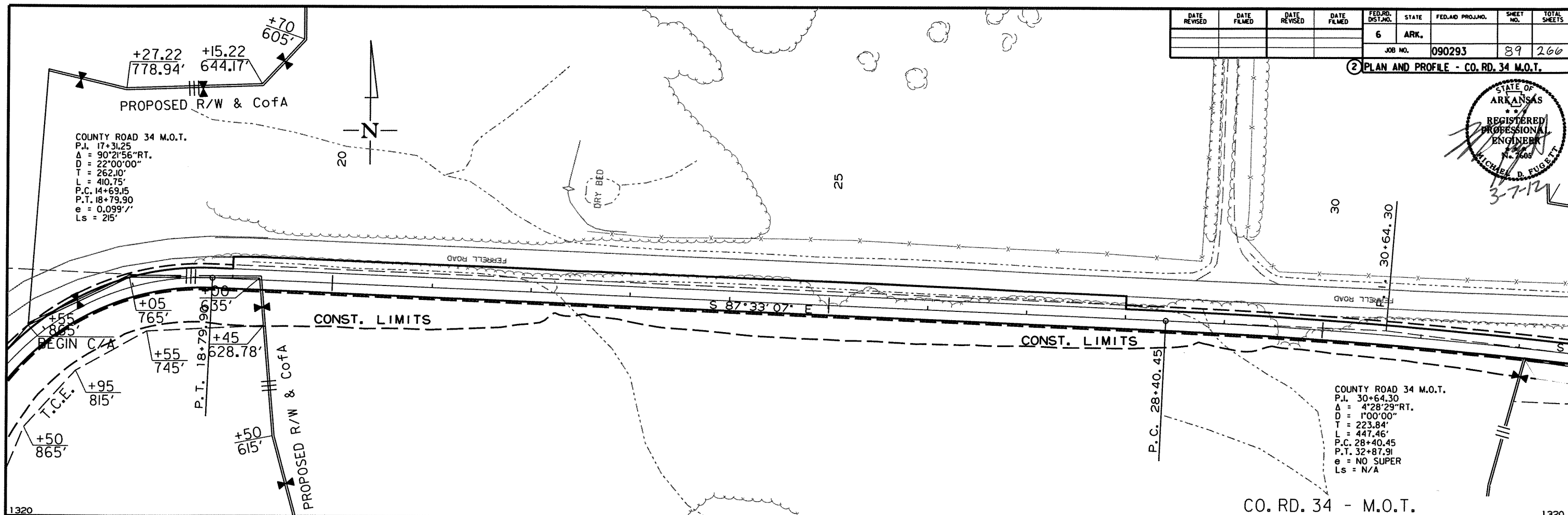
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				6	ARK.			
				JOB NO.	090293		88	266

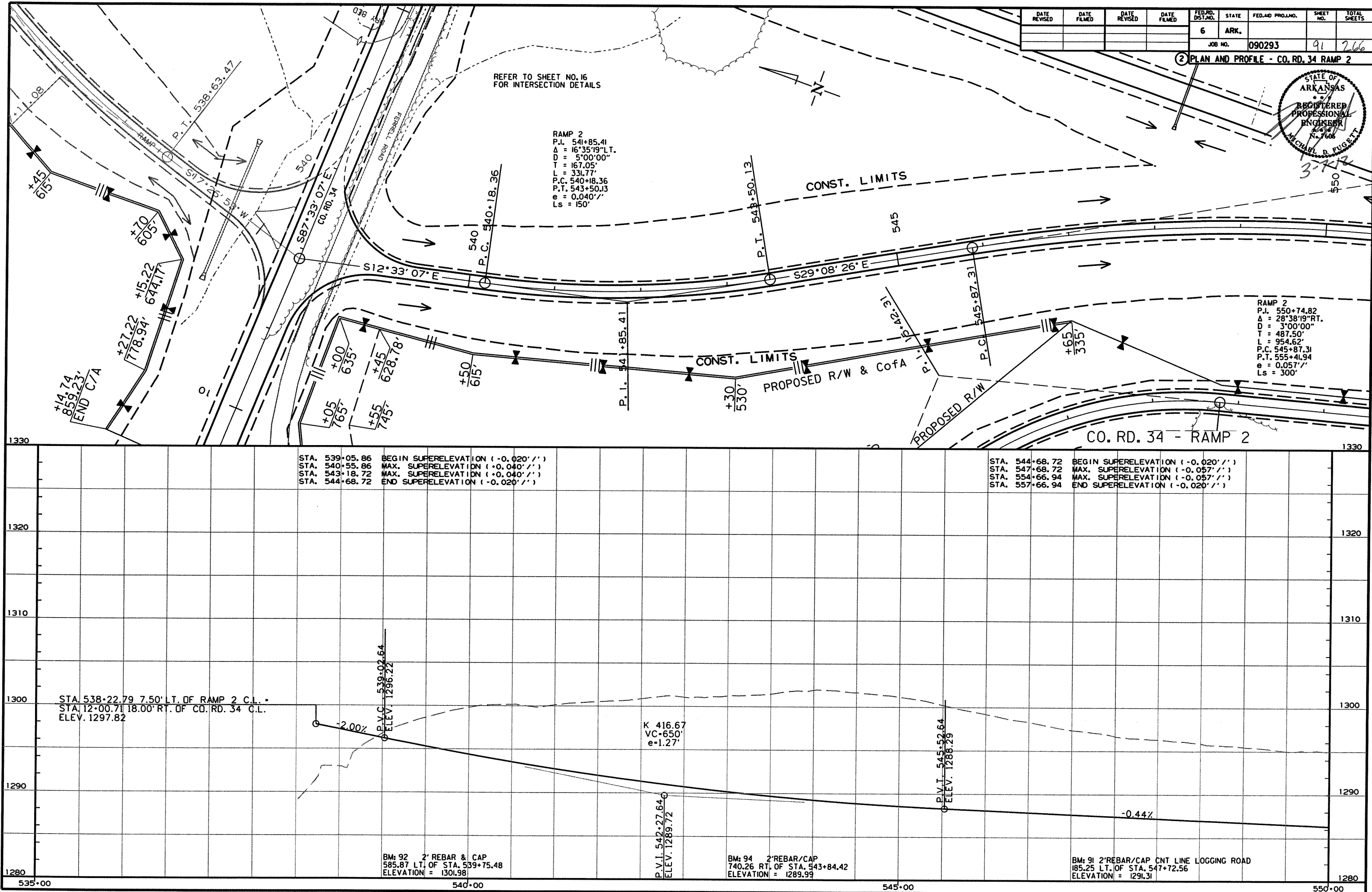
② PLAN AND PROFILE - CO. RD. 34 M.O.T.

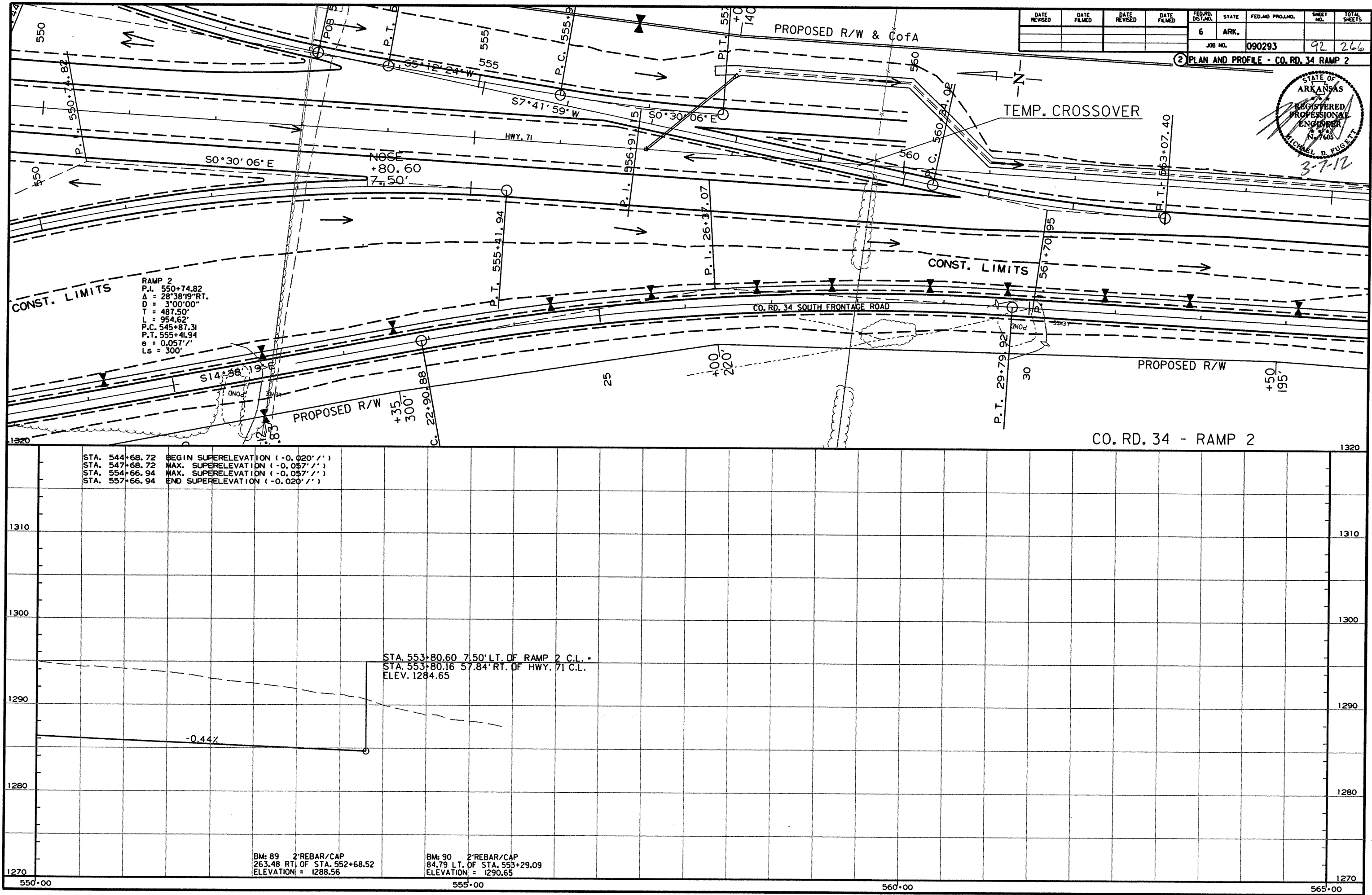


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				JOB NO.	090293			

2 PLAN AND PROFILE - CO. RD. 34 M.O.T.

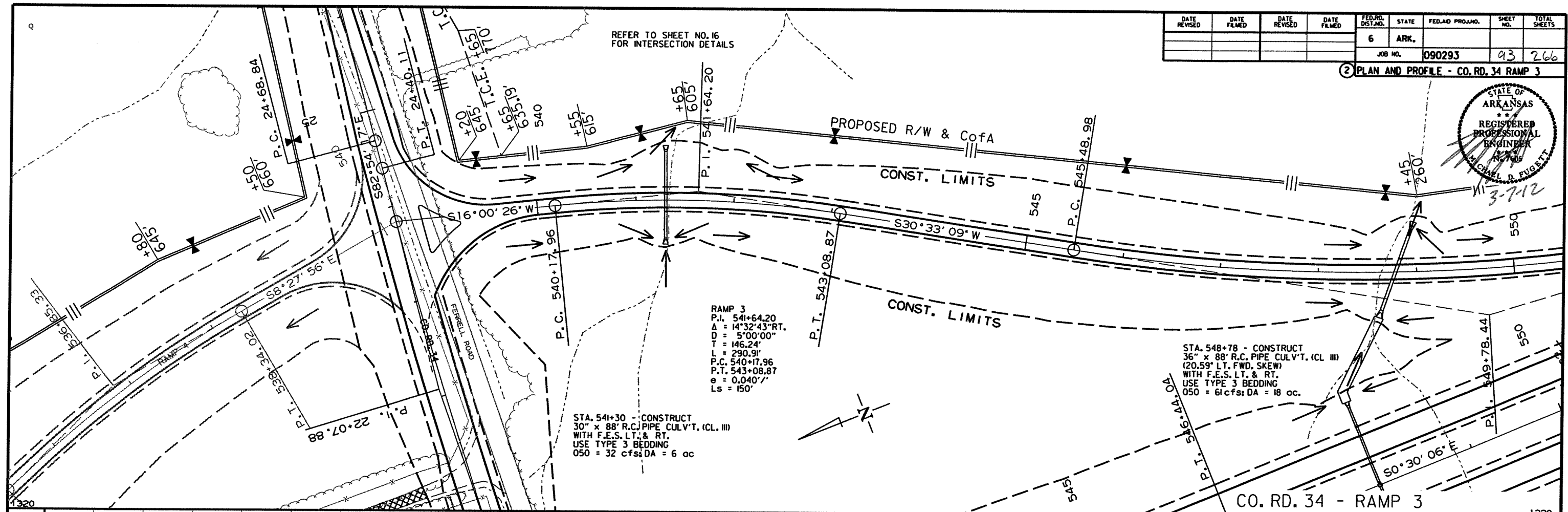






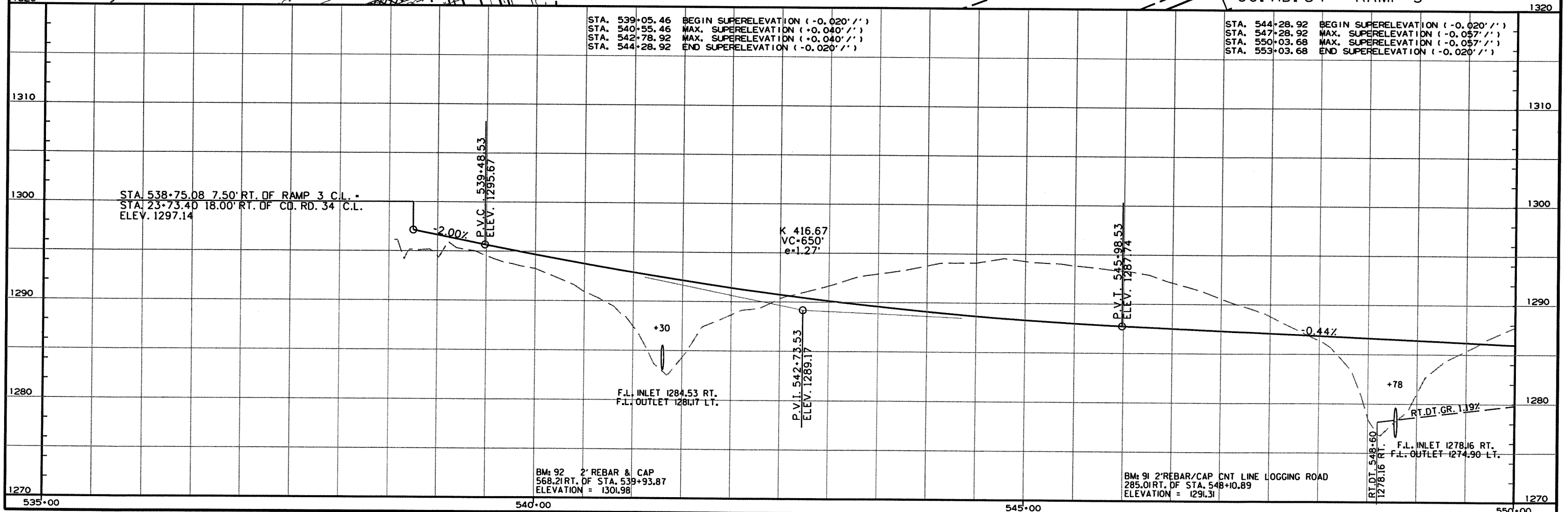
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				6	ARK.		93	266
				JOB NO. 090293				

② PLAN AND PROFILE - CO. RD. 34 RAMP 3

REFER TO SHEET NO. 16
FOR INTERSECTION DETAILS

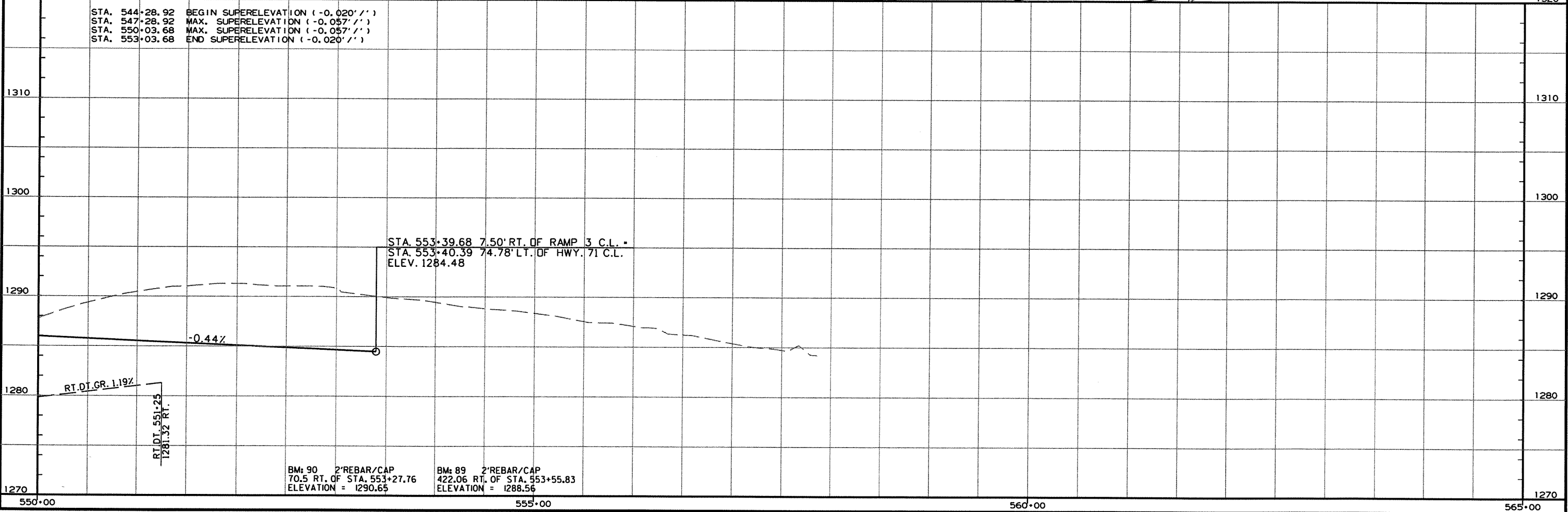
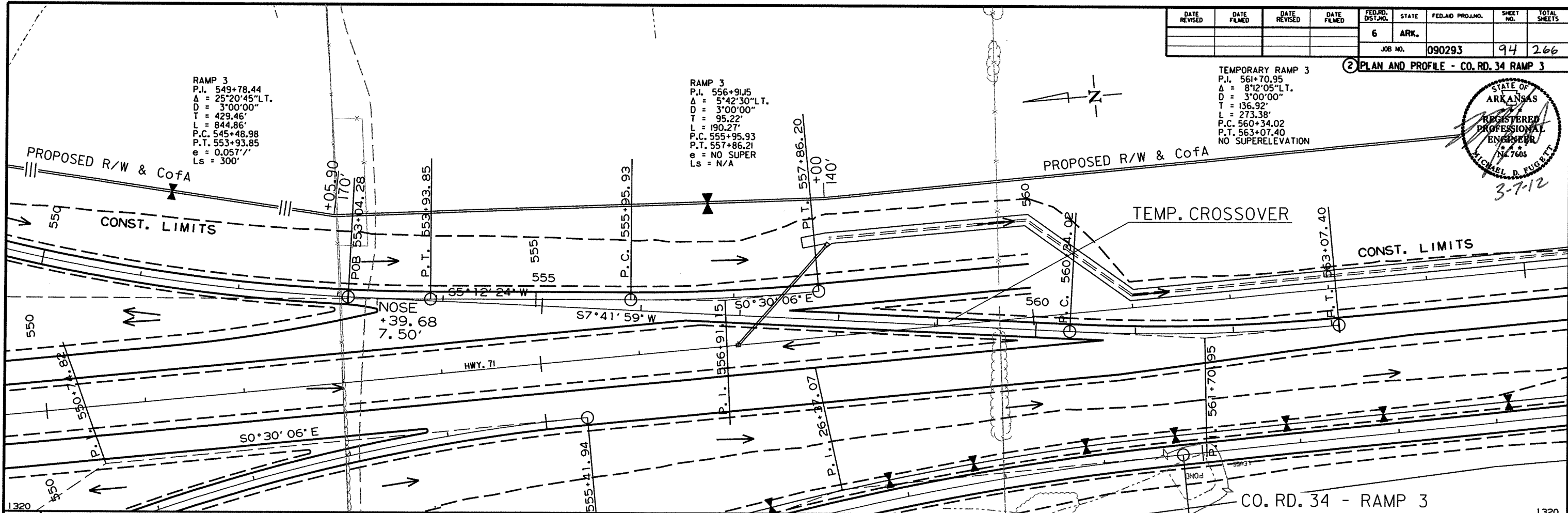
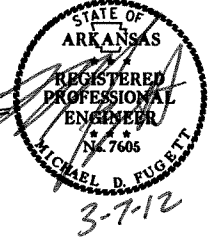
STA. 539+05.46 BEGIN SUPERELEVATION (-0.020'/'')
 STA. 540+55.46 MAX. SUPERELEVATION (+0.040'/'')
 STA. 542+78.92 MAX. SUPERELEVATION (+0.040'/'')
 STA. 544+28.92 END SUPERELEVATION (-0.020'/'')

STA. 544+28.92 BEGIN SUPERELEVATION (-0.020'/'')
 STA. 547+28.92 MAX. SUPERELEVATION (-0.057'/'')
 STA. 550+03.68 MAX. SUPERELEVATION (-0.057'/'')
 STA. 553+03.68 END SUPERELEVATION (-0.020'/'')

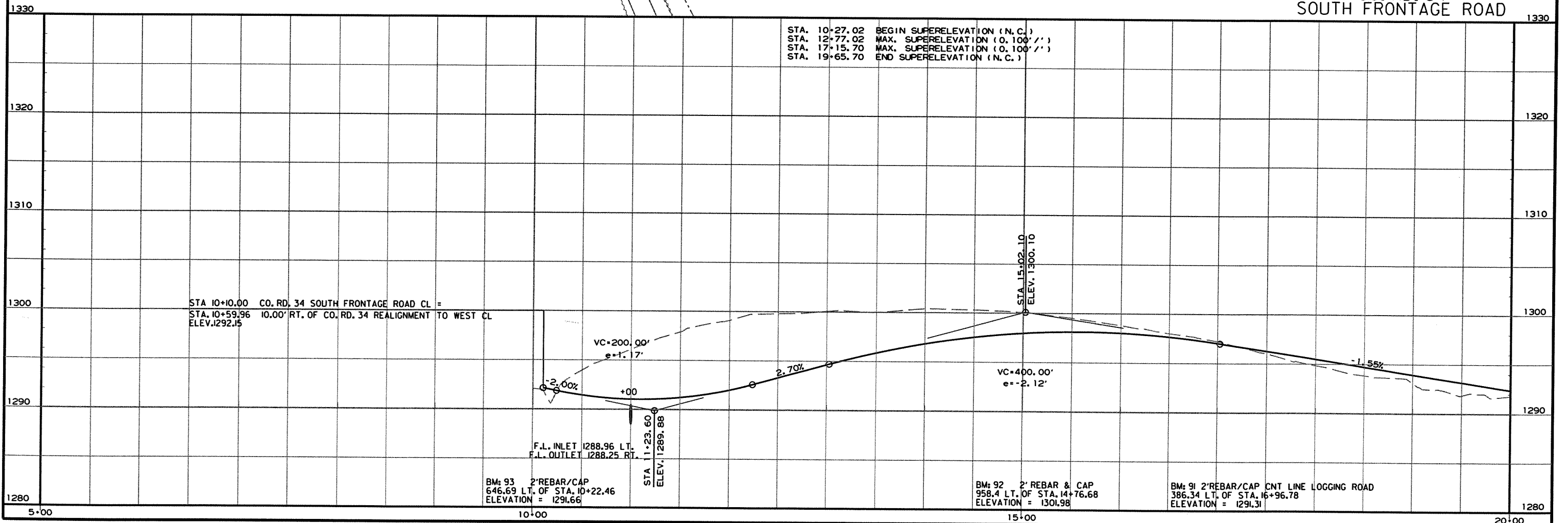


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				JOB NO.	090293		94	266

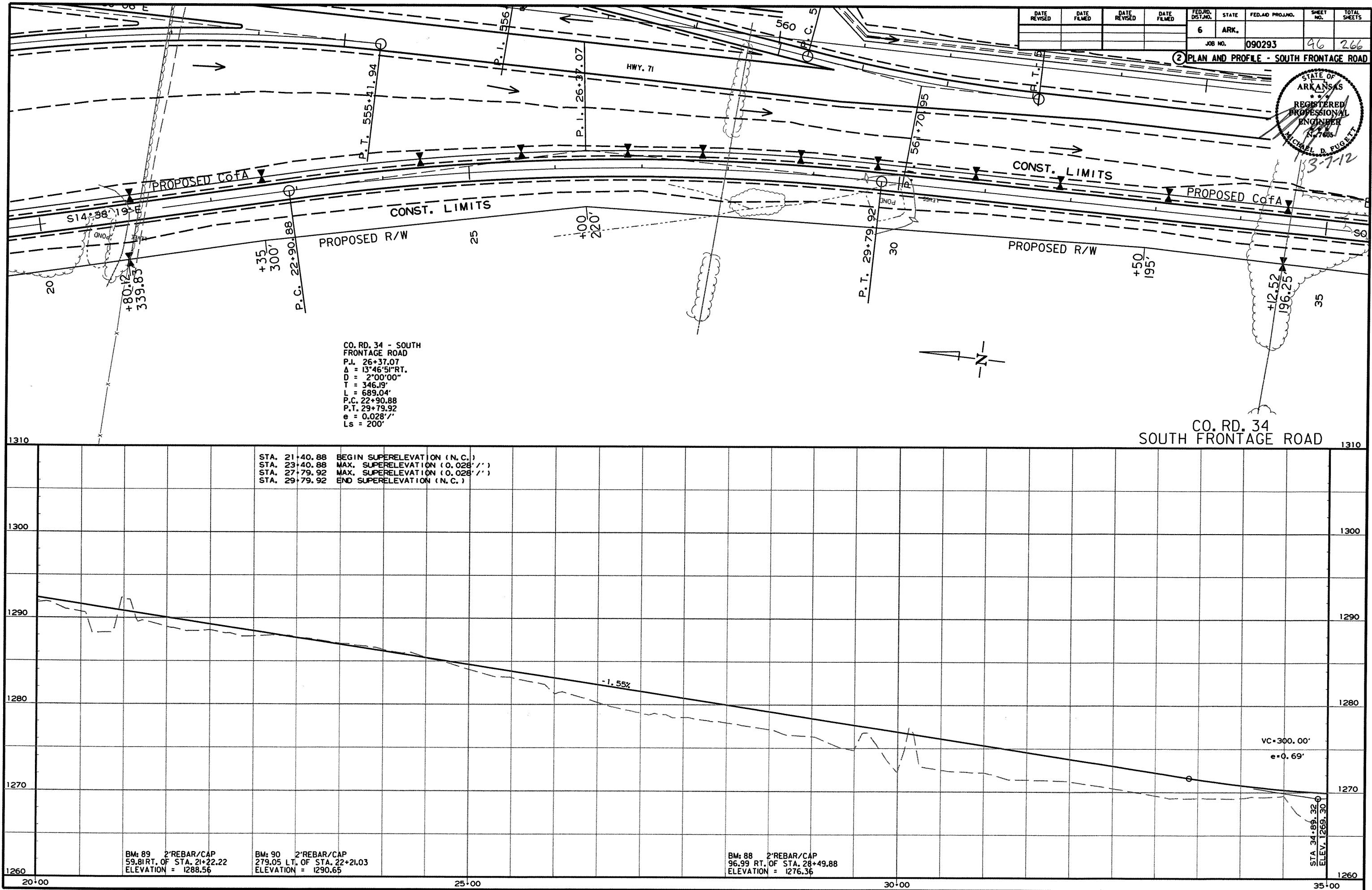
2 PLAN AND PROFILE - CO. RD. 34 RAMP 3



3-7-12

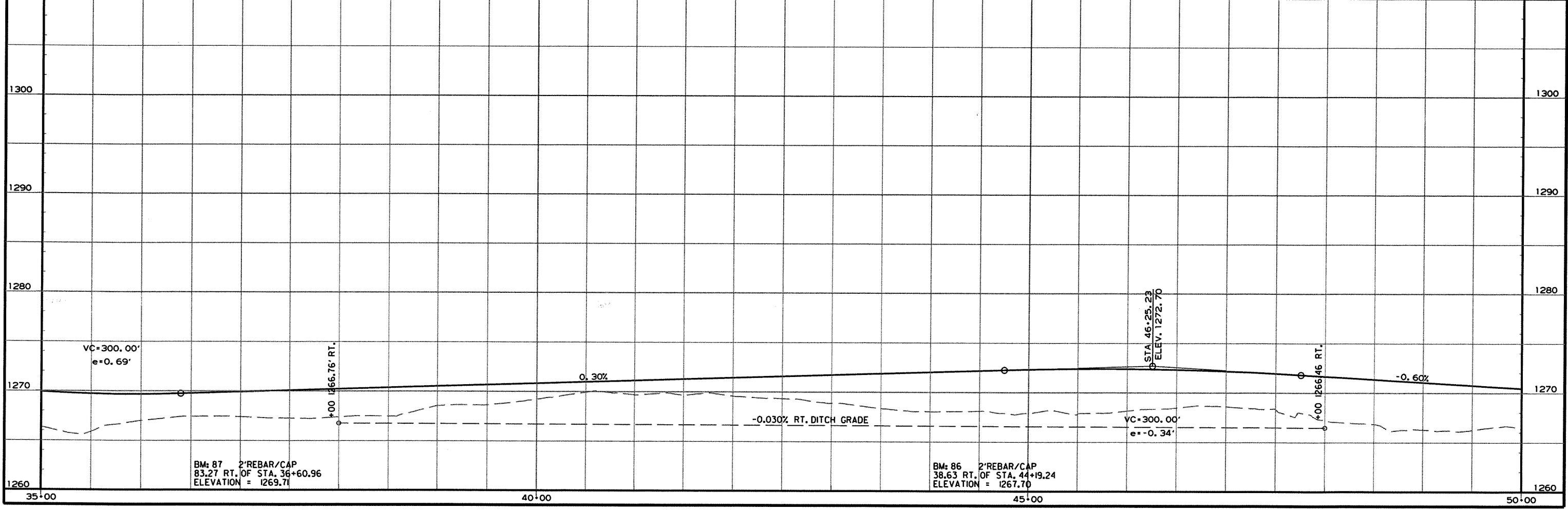
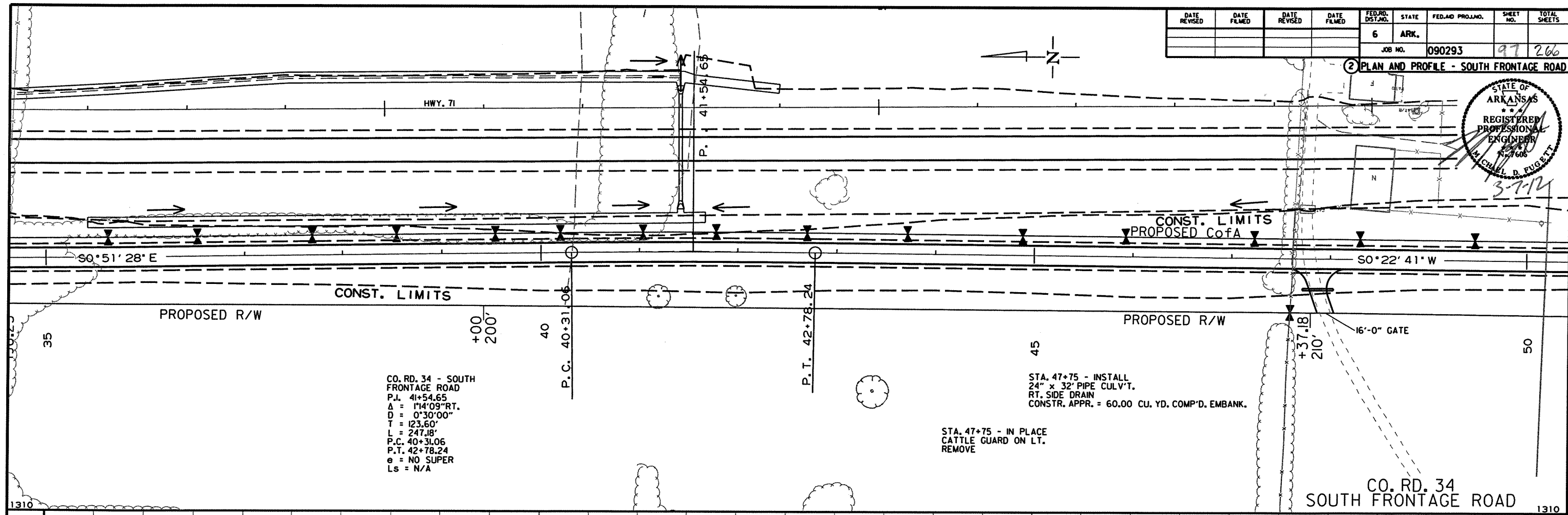
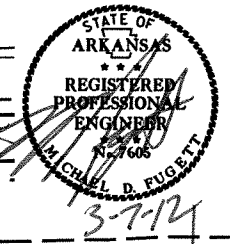


R090293_REV.DGN 2/28/2012

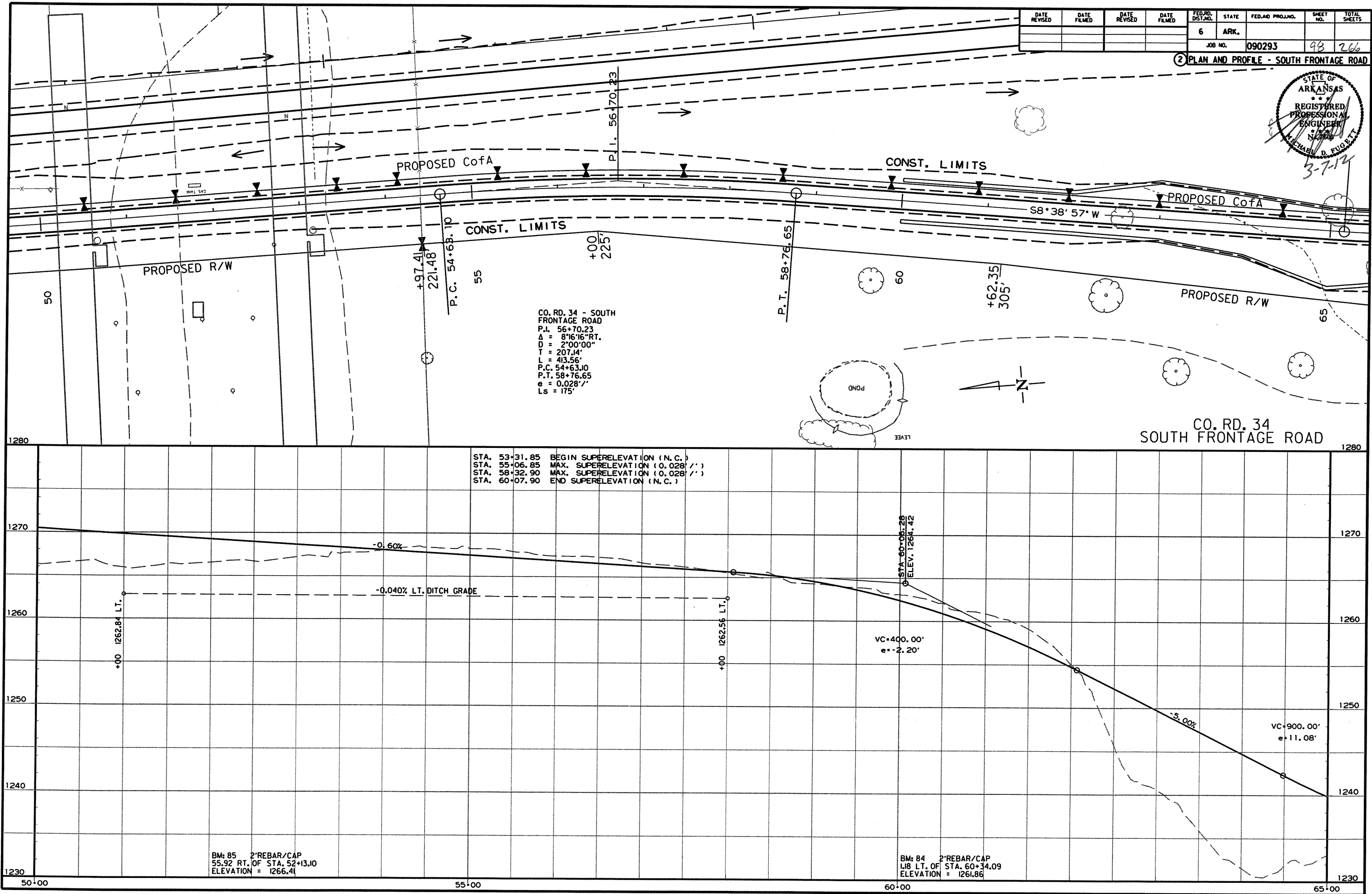


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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				JOB NO.	090293			

2 PLAN AND PROFILE - SOUTH FRONTAGE ROAD

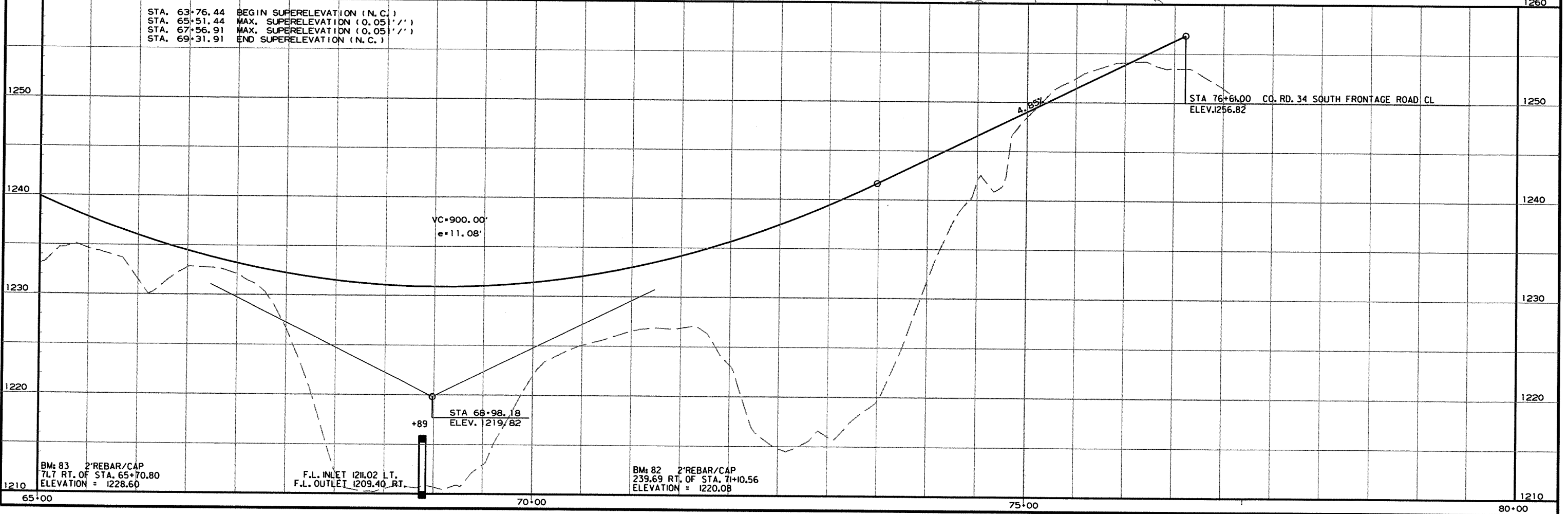
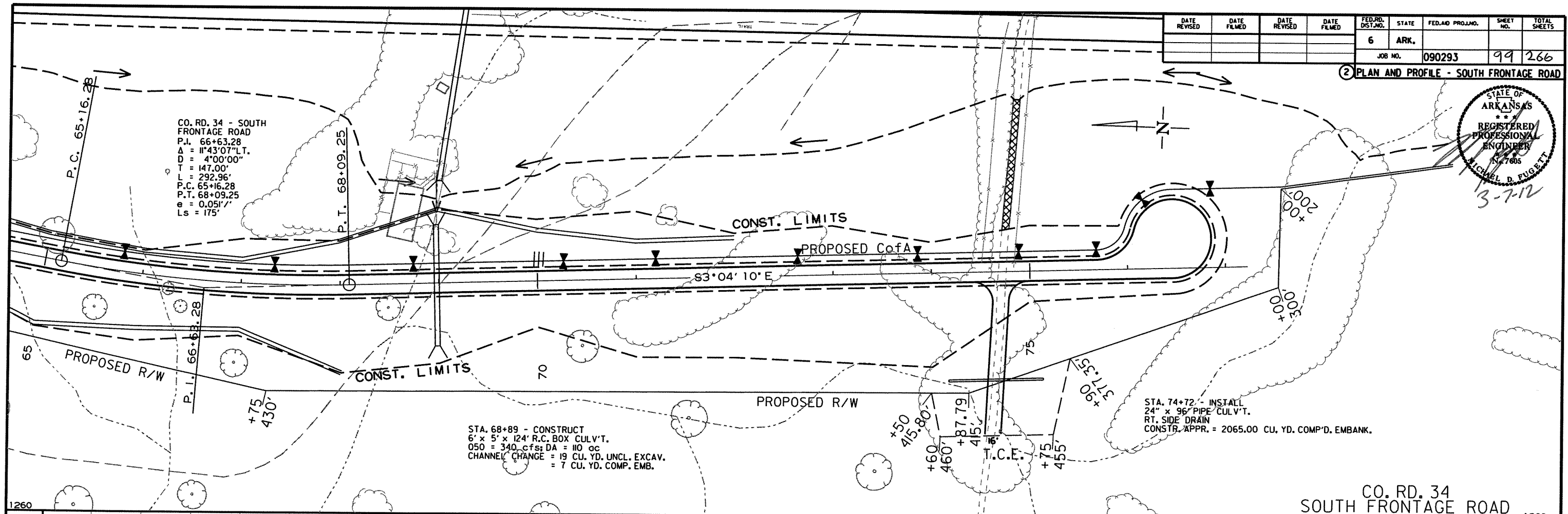
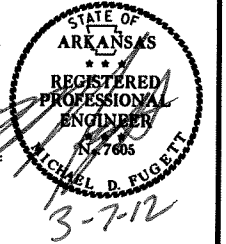


R090293_REV.DGN 2/28/2012



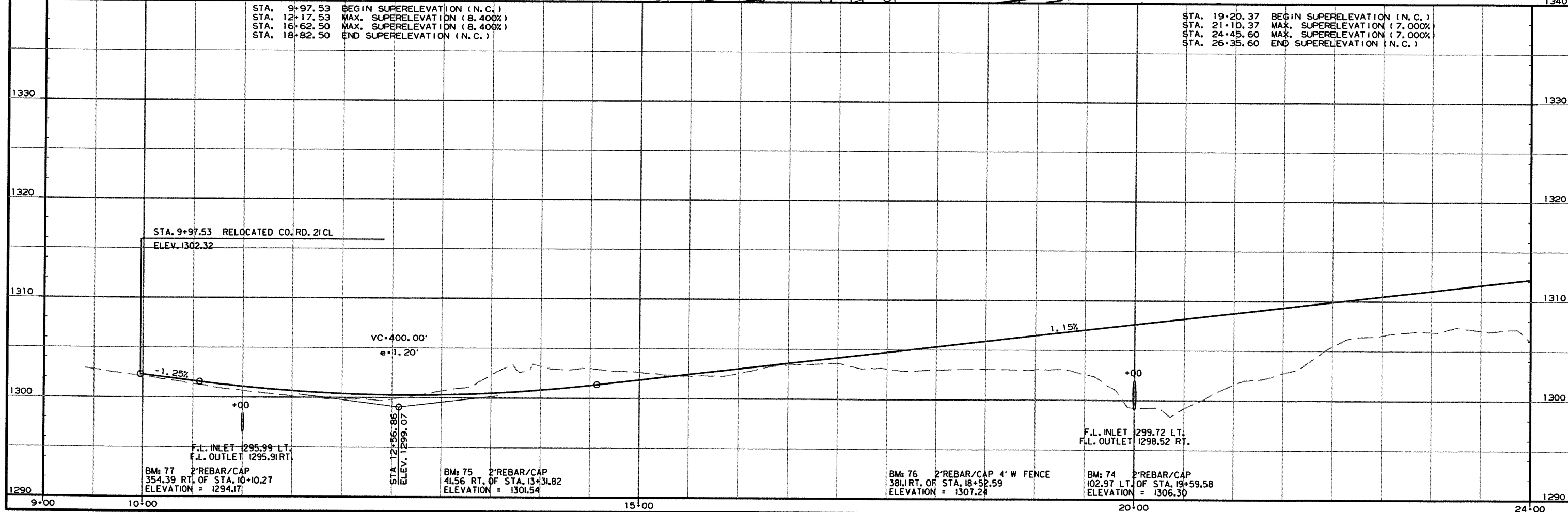
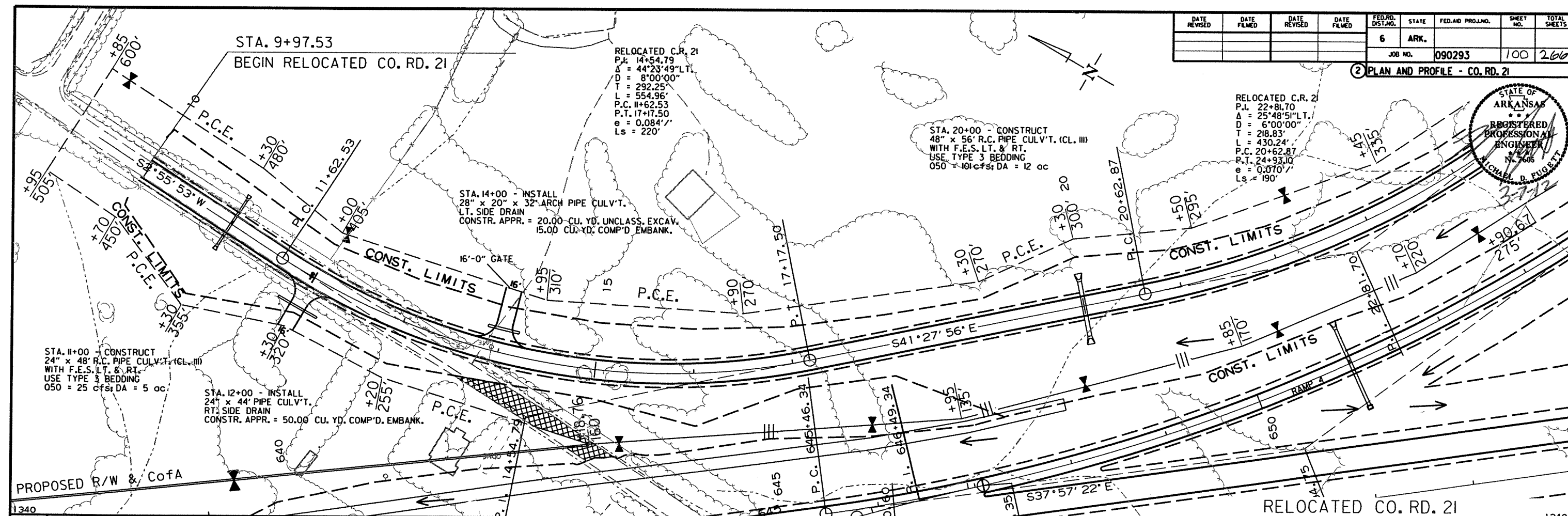
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				6	ARK.			
				JOB NO.	090293		99	266

2 PLAN AND PROFILE - SOUTH FRONTAGE ROAD



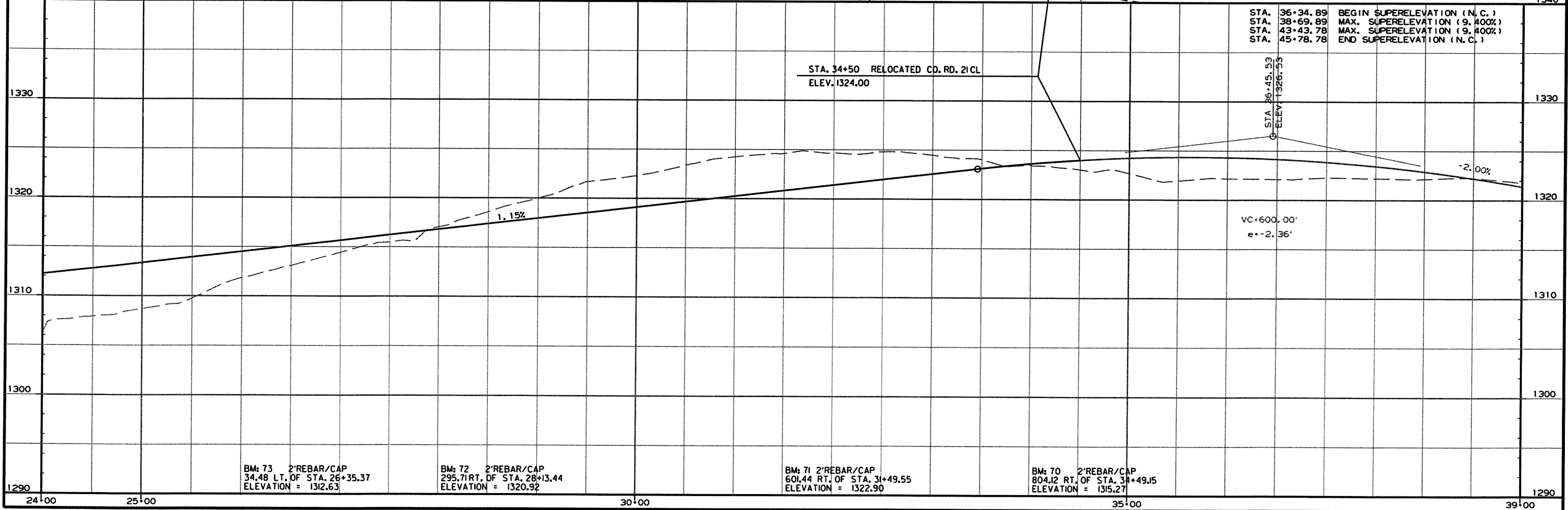
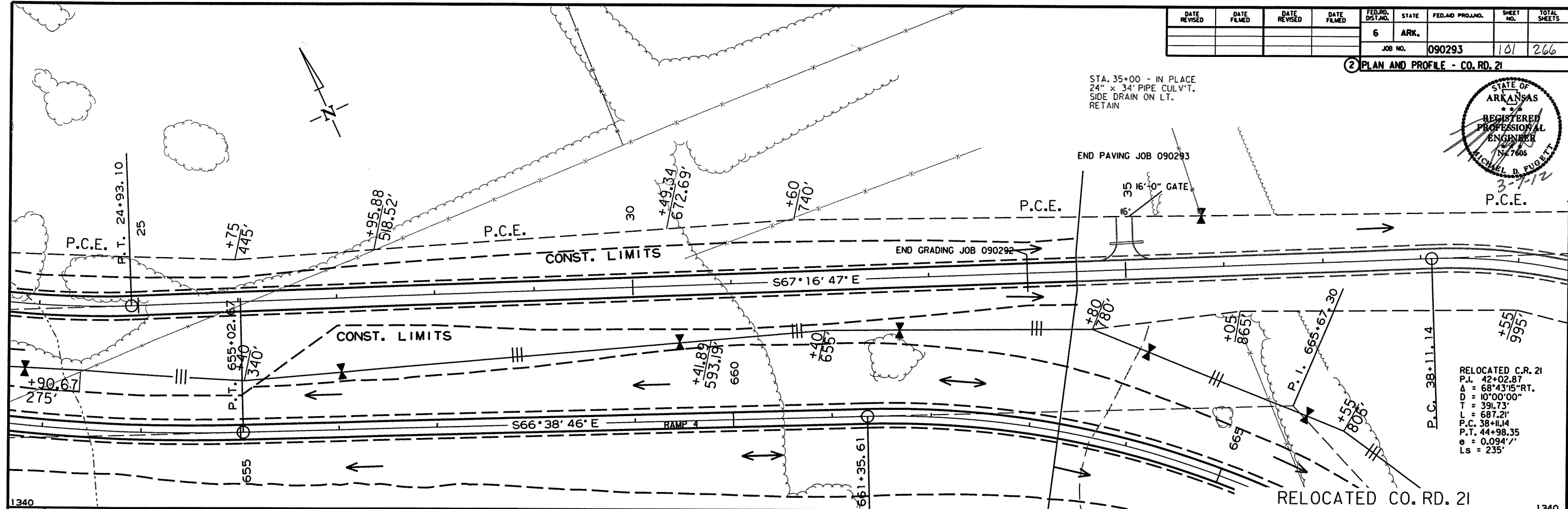
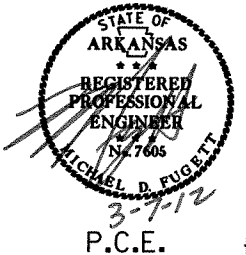
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						JOB NO. 090293	100	266

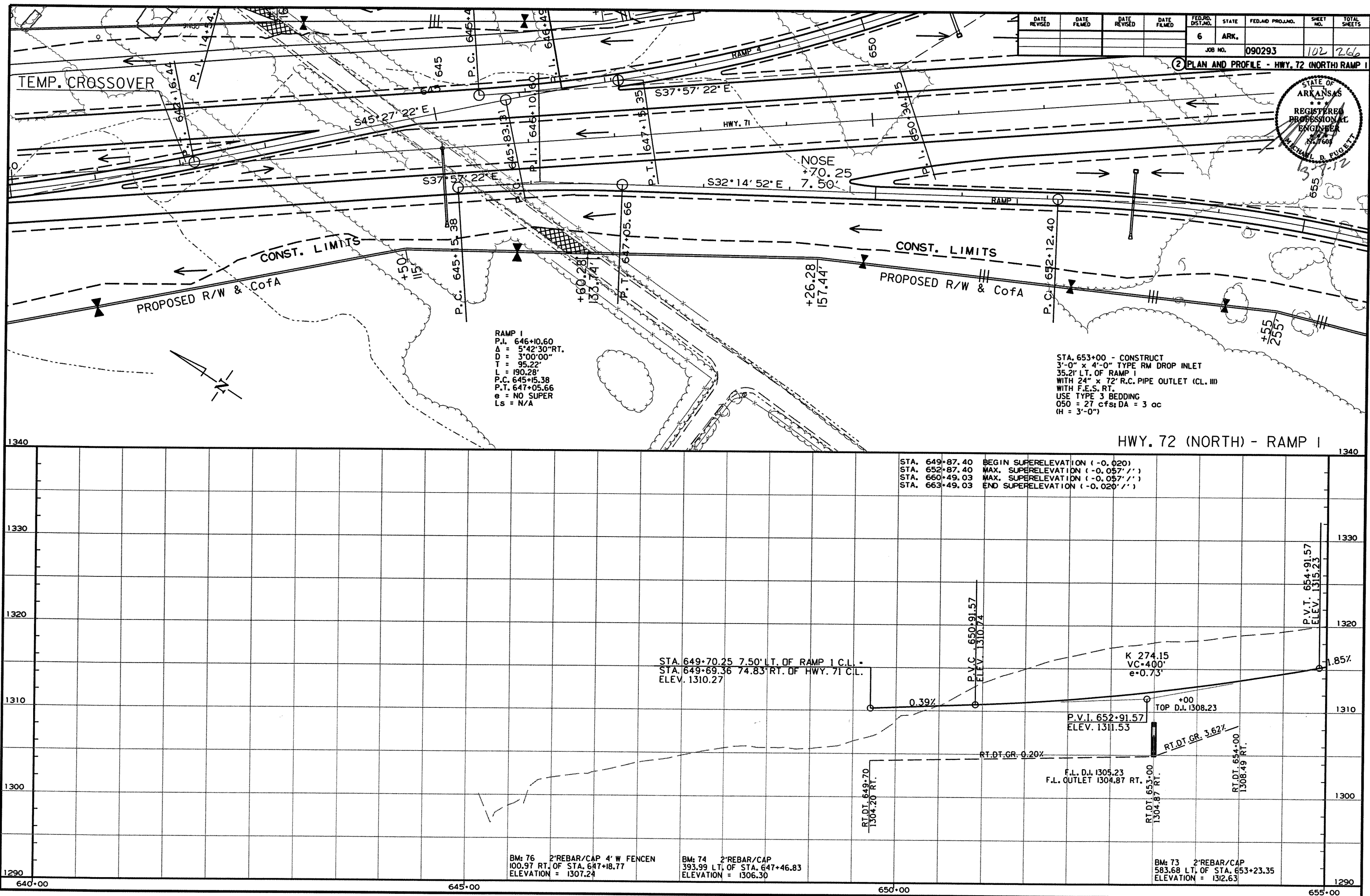
2 PLAN AND PROFILE - CO. RD. 21



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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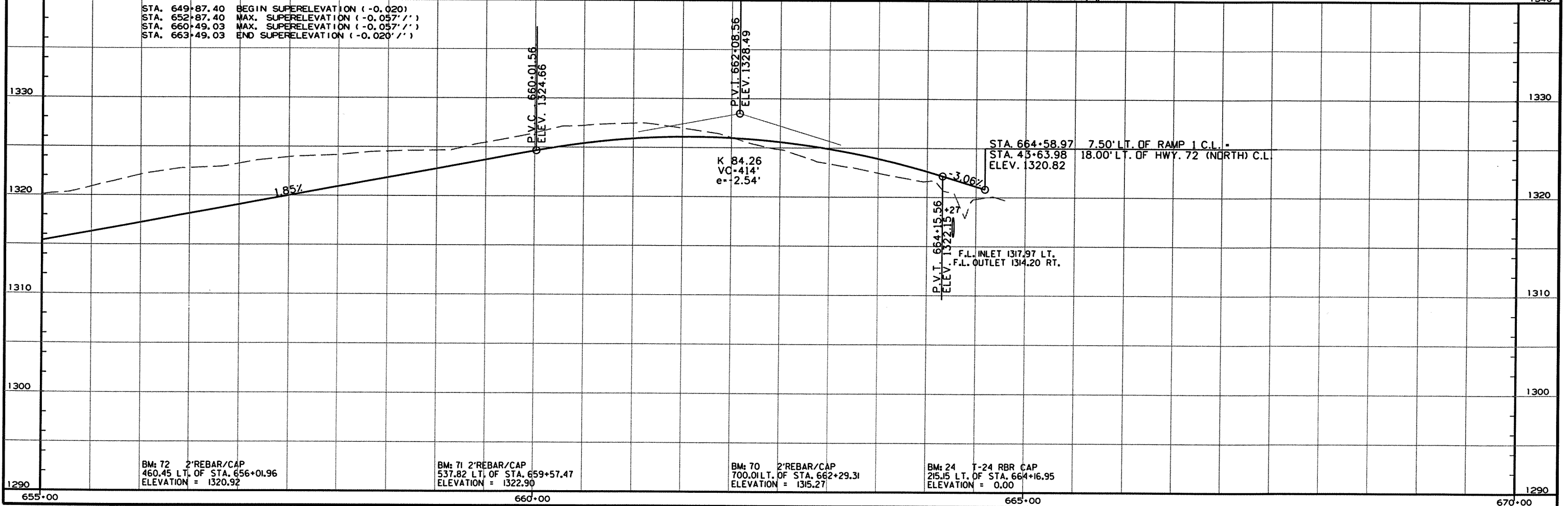
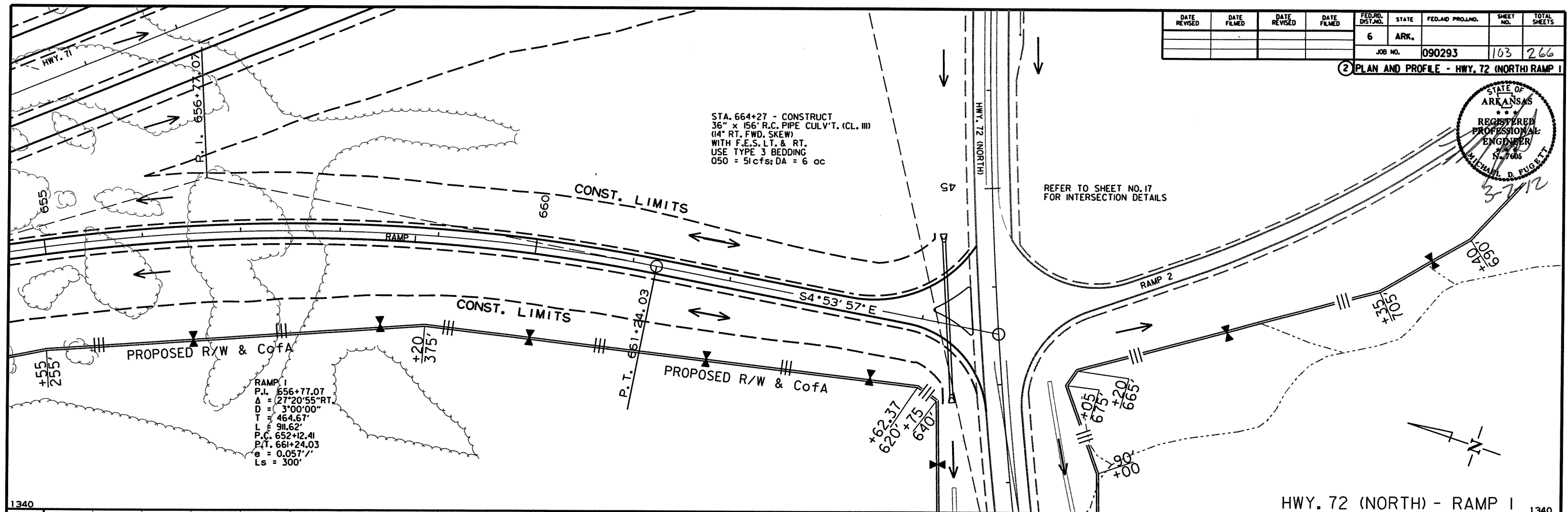
2 PLAN AND PROFILE - CO. RD. 21





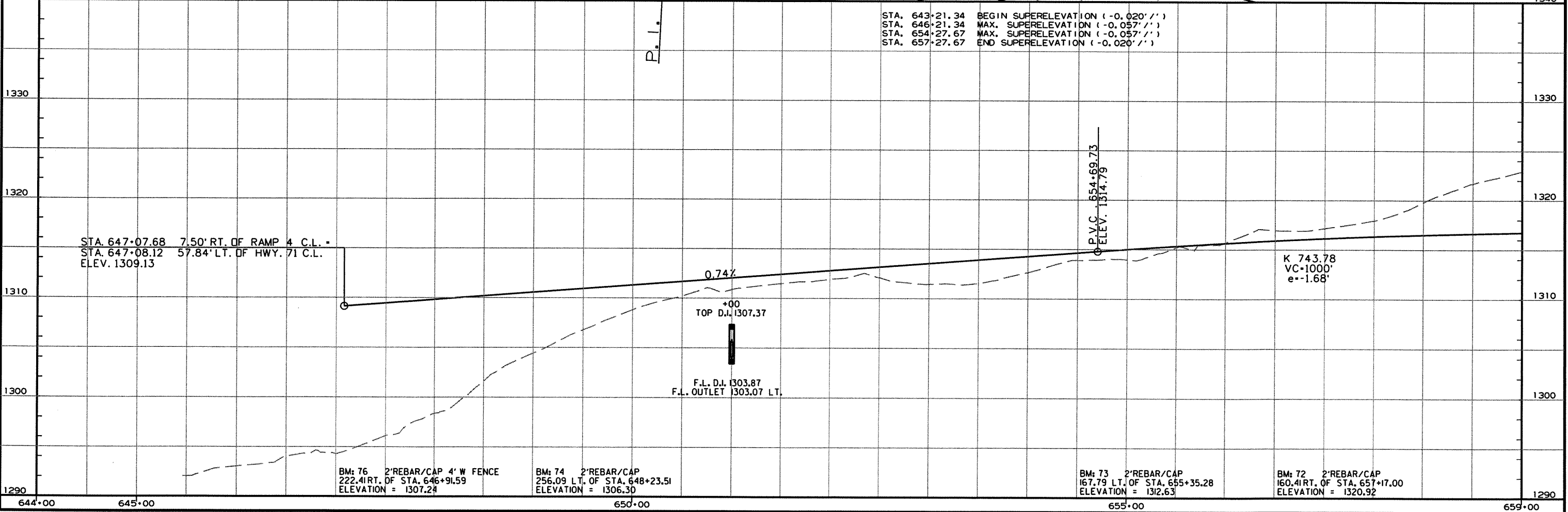
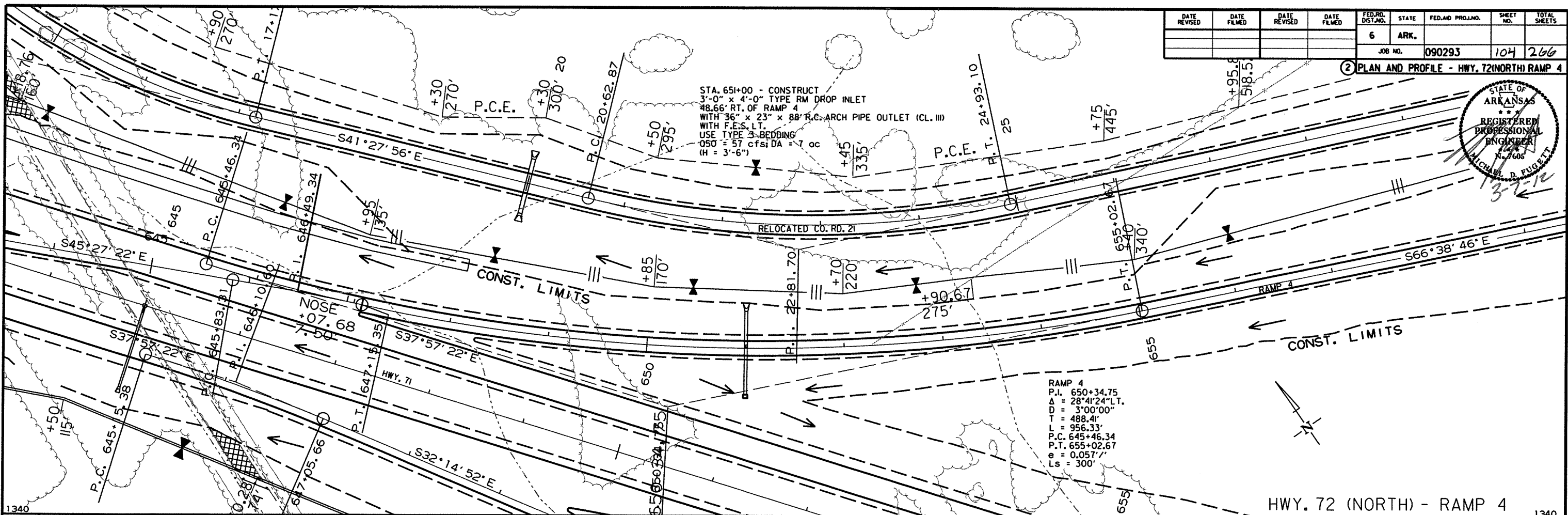
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				JOB NO. 090293				

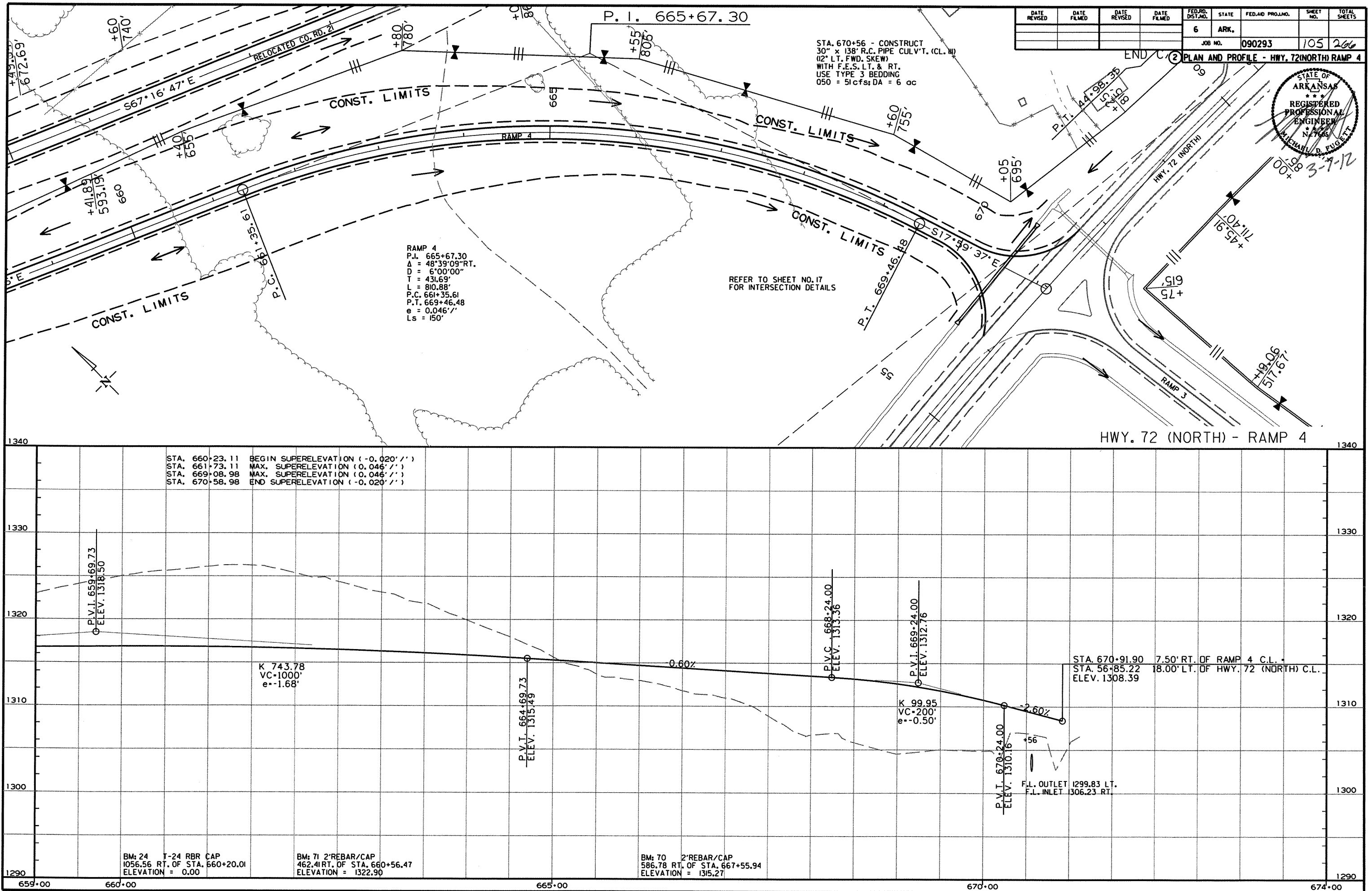
② PLAN AND PROFILE - HWY. 72 (NORTH) RAMP 1



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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				JOB NO.	090293			

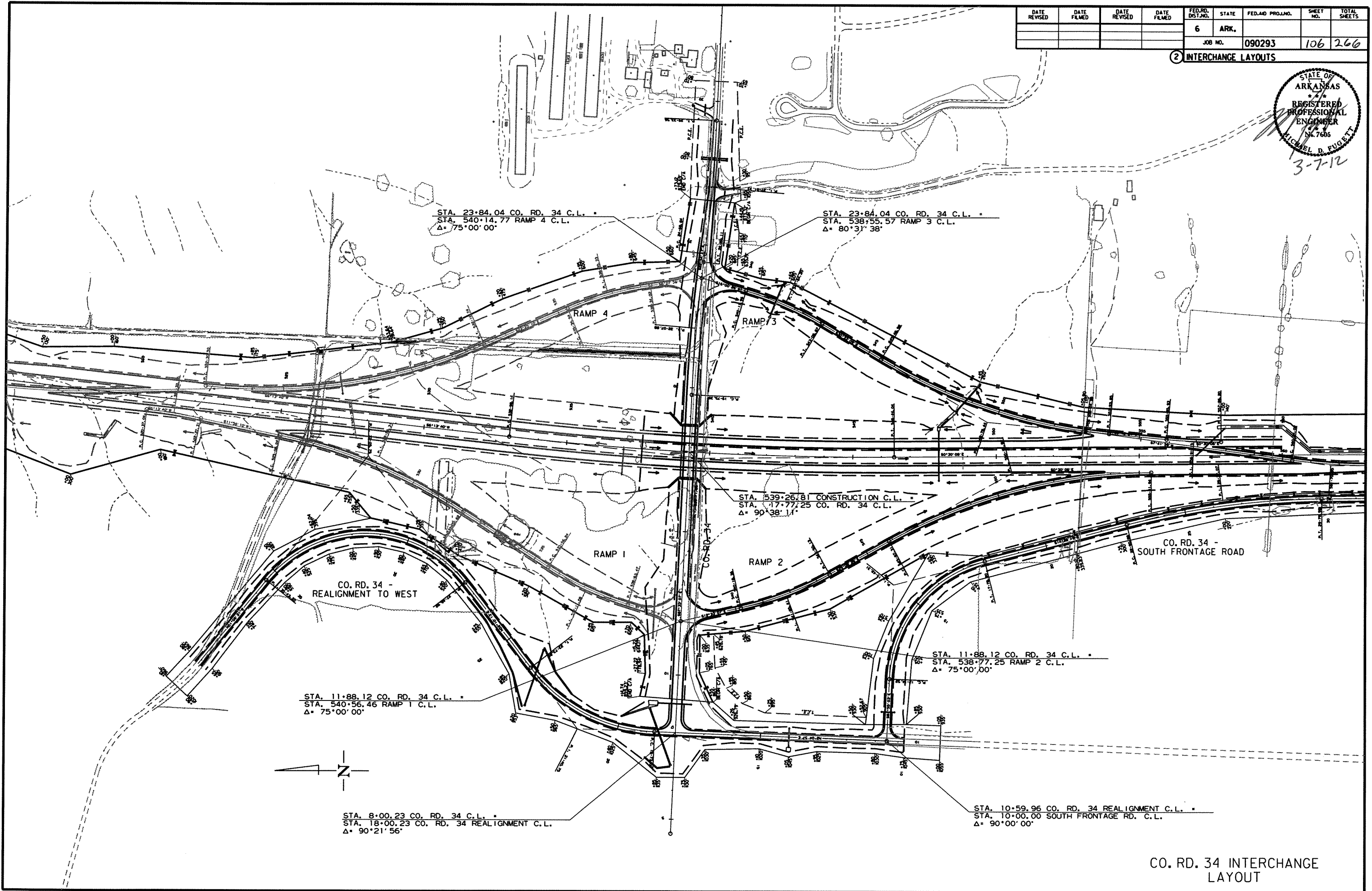
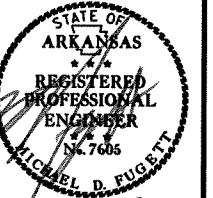
② PLAN AND PROFILE - HWY. 72(NORTH) RAMP 4





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.		090293	106	266

2 INTERCHANGE LAYOUTS



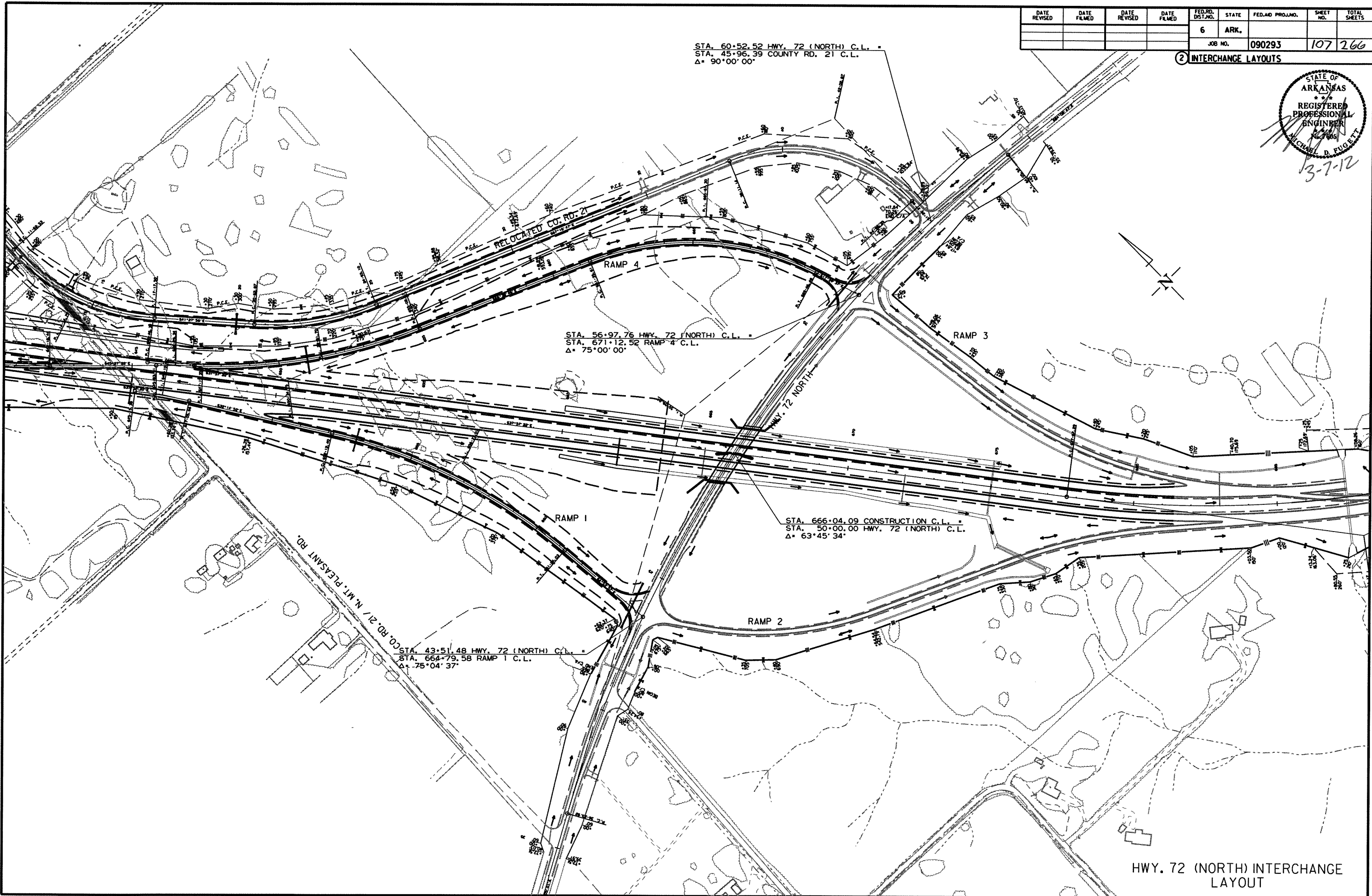
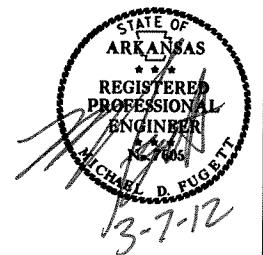
CO. RD. 34 INTERCHANGE
LAYOUT

3/5/2012

R090293_REV.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. 090293	107	266

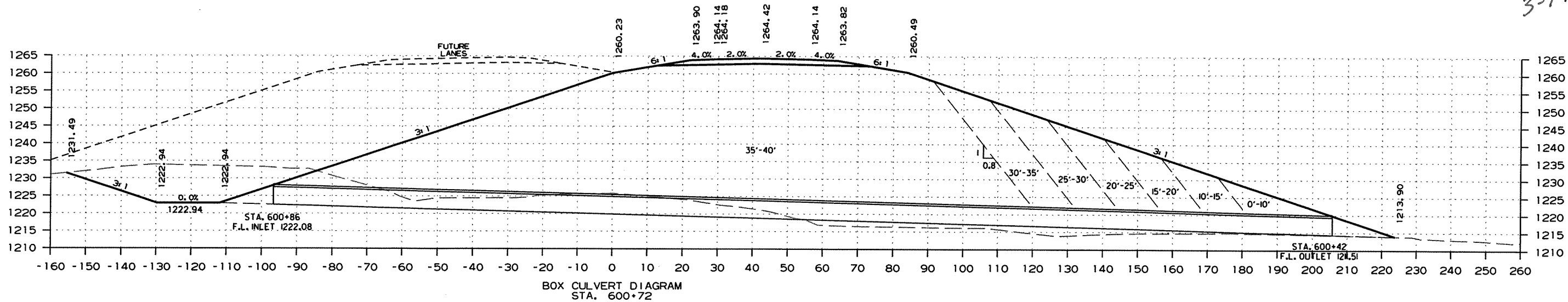
2 INTERCHANGE LAYOUTS



HWY. 72 (NORTH) INTERCHANGE LAYOUT

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.	090293		108	266

2 CULVERT DIAGRAM



217.77'						12.34'	12.34'	12.34'	12.34'	12.34'	24.86'
SECT. "G"						"F"	"E"	"D"	"C"	"B"	SECT. "A"

STA. 600+72 CONSTRUCT
6' x 5' x 305' R.C. BOX CULV'T.
(7° 30' LT. FWD. SKEW)
Q50=300cfs, D.A.=96Ac.

DESCRIPTION	LENGTH	CLASS "S" CONCRETE - ROADWAY		REINFORCING STEEL (GR. 60) - ROADWAY		UNCLASSIFIED EXCAVATION FOR STRUCTURES - ROADWAY	SOLID SODDING	WATER
		LIN. FT.	CU. YD. / L.F.	CU. YD.	LBS. / L.F.	LBS.		
SECTION "A"	24.86	0.509	12.65	61.66	1532.87	5.74		
SECTION "B"	12.34	0.536	6.61	66.63	822.21	2.85		
SECTION "C"	12.34	0.563	6.95	72.06	889.22	2.85		
SECTION "D"	12.34	0.616	7.60	76.21	940.43	2.85		
SECTION "E"	12.34	0.669	8.26	83.78	1033.85	2.85		
SECTION "F"	12.34	0.724	8.93	91.60	1130.34	2.85		
SECTION "G"	217.77	0.900	195.99	96.03	21347.99	50.30		
HEADWALLS & APRONS				93.29			3	0.04
WINGS			** 11.15	357.80			15	0.19
LAPS (9 LAPS @ 21.71 LBS. EACH)				195.39				
V.I.					6.02			
V.O.					6.47			
TOTALS			258.14	26343.39	82.78	18	0.23	

** INCLUDES: HEADWALLS, WINGWALLS, FOOTINGS, TOE WALLS, AND APRONS

STANDARD DRAWINGS: RCB-1, RCB-2, R-100X-X1, W-X003-1, SPECIAL DETAIL (SHEET NO. 18)

STA. 600+72 - HWY. 71
R.C. BOX CULVERT DIAGRAM

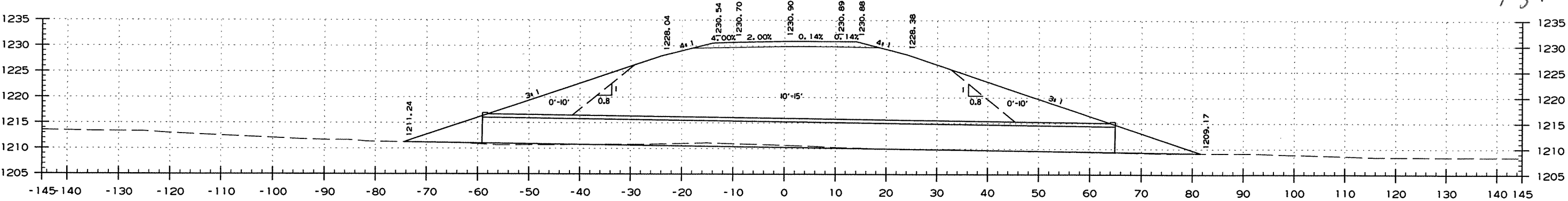
HWY. 71- STA. 600+72
CULVERT DIAGRAM

3/5/2012

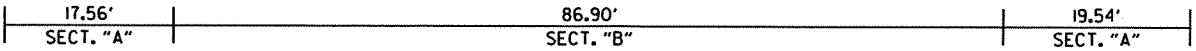
R090293_REV.DGN

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.		090293	109	266

2 CULVERT DIAGRAM



STA. 69+00 - CO. RD. 34 SOUTH FRONTAGE ROAD



STA. 68+89 - CONSTRUCT
6' x 5' x 124' R.C. BOX CULV'T.
Q50 = 340 cfs; DA = 110 ac

DESCRIPTION	LENGTH	CLASS "S" CONCRETE - ROADWAY		REINFORCING STEEL (GR. 60) - ROADWAY		UNCLASSIFIED EXCAVATION FOR STRUCTURES - ROADWAY	SOLID SODDING	WATER
		LIN.FT.	CU.YD. / L.F.	CU. YD.	LBS. / L.F.	LBS.	CU. YD.	SQ.YD.
SECTION "A"	37.10	0.509	18.88	61.66	2287.59	8.59		
SECTION "B"	86.90	0.536	46.58	66.63	5790.15	22.13		
HEADWALLS & APRONS					93.29		3	0.04
WINGS			** 11.15		357.80		15	0.19
LAPS (3 LAPS @ 20.04 LBS. EACH)					60.12			
V.I.						6.02		
V.O.						6.45		
TOTALS			76.61		8588.95	43.19	18	0.23

** INCLUDES: HEADWALLS, WINGWALLS, FOOTINGS, TOE WALLS, AND APRONS

STANDARD DRAWING: RCB-1, RCB-2, R-100X-X1; W-X003-1

STA. 68+89 - CO. RD. 34
SOUTH FRONTAGE ROAD
R.C. BOX CULVERT DIAGRAM

CO. RD. 34 - S. FRONTAGE RD. - STA. 68+89
CULVERT DIAGRAM

3/5/2012

R090293_REV.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		090293	111	266
				07220 -	LAYOUT		-	52068

GENERAL NOTES

BENCH MARK 927: Chiseled square in SW church 1571.96' Lt. Construction C.L.-U.S. Hwy. 71 Sta. 540+25.33, Elev. 1289.86.

CONSTRUCTION SPECIFICATION: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2003 edition) with applicable supplemental specifications and special provisions. Unless otherwise noted, section and subsection numbers in the plans refer to the Standard Construction Specifications.

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications (Third Edition, with 2005 and 2006 Interim Revisions).

LIVE LOADING: HL93 SEISMIC ZONE: I

MATERIALS AND STRENGTHS:
Class (S/AE) Concrete (superstructure) f'c = 4,000 psi
Class S Concrete (substructure) f'c = 3,500 psi
Reinforcing Steel (AASHTO M31 or M53, Gr. 60) fy = 60,000 psi
Structural Steel (AASHTO M270, Gr. 36) Fy = 36,000 psi
Structural Steel (AASHTO M270, Gr. 50W) Fy = 50,000 psi

BORING LOGS: Boring logs may be obtained from the Programs and Contracts Division.

STEEL PILING: Piling in Bent 1 thru 3 shall be HP 12x53 (Gr. 50) and shall be driven with an approved air, steam or diesel hammer to a minimum safe bearing capacity of 80 tons per pile for Bents 1 & 3 and 95 tons per pile for Bent 2 and into material designated as limestone or chert on the boring legend. Lengths of piling shown are for estimating quantities and for use in determining payment for cut-off and build-up in accordance with the standard specifications. In all piles the Contractor shall use approved steel H-Pile driving points. Actual pile lengths to be determined in the field.

Pile casings are required for all piling in Bents 1 and 3. Casings shall be installed prior to or during embankment construction and shall extend from bottom of leveling pad to bottom of cap. Pile casing material shall be of sufficient strength to retain its original form free from harmful distortions after compaction of the fill material surrounding it. The minimum inside diameter of the casing shall be 18". Piles shall be driven after any required preboring and through the open casings after embankment to the bottom of cap is in place. After driving is completed, the pile casing shall be backfilled with an approved non-shrink grout or other approved material in a single continuous operation to completely fill voids. Pile casings and backfill will not be paid for directly but shall be considered subsidiary to the item "Steel Piling (HP 12x53)".

EXPLORATORY HOLES: The Contractor shall drill exploratory holes at Bents 1 thru 3 in accordance with SP Job 090293 "Exploratory Holes". The quantities of exploratory holes shown are for bidding purposes only. The actual locations, number, and depths of exploratory holes are to be determined in the field by the Engineer.

PREBORING: Preboring is required for all piling in Bents 1 thru 3 if exploratory holes indicate that the depth to rock is less than 8'. Preboring shall be to a 3' depth into material designated as limestone or chert on the boring legend. The quantities of preboring shown are for bidding purposes only. The actual size and depths of preboring are to be determined in the field by the Engineer. The Contractor shall be responsible for keeping prebored holes free from debris prior to backfilling which may require casings or other methods. After driving is completed, the prebored hole shall be backfilled with Class S Concrete to the top of rock and the remaining length of prebored hole shall be backfilled with an approved non-shrink grout or other approved material to completely fill voids. The backfill and any required casings will not be paid for directly but shall be considered subsidiary to the item "Preboring".

FOOTINGS: The footings for Bent 2 shall have a minimum cover of 2'-0" above the top of the footings. Foundations for footings shall be prepared in accordance with Subsection 801.04 and backfilled according to Subsection 801.08

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

CLASS 2 PROTECTIVE SURFACE TREATMENT: Class 2 Protective Surface Treatment shall be applied to the roadway surface and to the face and top of the concrete parapet rail.

FORM INSERT: State of Arkansas Form Insert to be used at MSE Walls (4 locations). See Dwg. No. 52073.

MAINTENANCE OF TRAFFIC: For maintenance of traffic, see Roadway Plans.

DETAIL DRAWINGS:	DRAWING NOS.
MSE Walls	52071-52072
Form Inserts	52073
End Bents	52074-52075
Intermediate Bent	52076-52077
190' Continuous Composite Plate Girder Unit	52078-52082
Elastomeric Bearings	52083
Steel Piling	14995A
Type B Approach Gutter	2016B

TEXTURED COATING FINISH: Class 3 Textured Coating Finish shall be applied to bridge and retaining wall surfaces as specified in SP Job 090293 "Textured Coating Finish" and in accordance with Subsection 802.19. Textured Coating Finish shall not be applied on surfaces where Class 2 Protective Surface Treatment is applied.



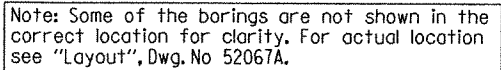
BRIDGE ENGINEER

SHEET 2 OF 4
LAYOUT OF BRIDGE
AT COUNTY ROAD 34
HWY. 72 NORTH-CO. RD. 34
(B.V. BYPASS) (F)
BENTON COUNTY

ROUTE 71 SEC. 19
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 9-28-06 FILENAME: b090293x3.12.dgn
CHECKED BY: CRE DATE: 10-1-07 SCALE: 1" = 20'
DESIGNED BY: ARW DATE: 9-06
BRIDGE NO. 07220 DRAWING NO. 52068

① 07220 - LAYOUT - 52069

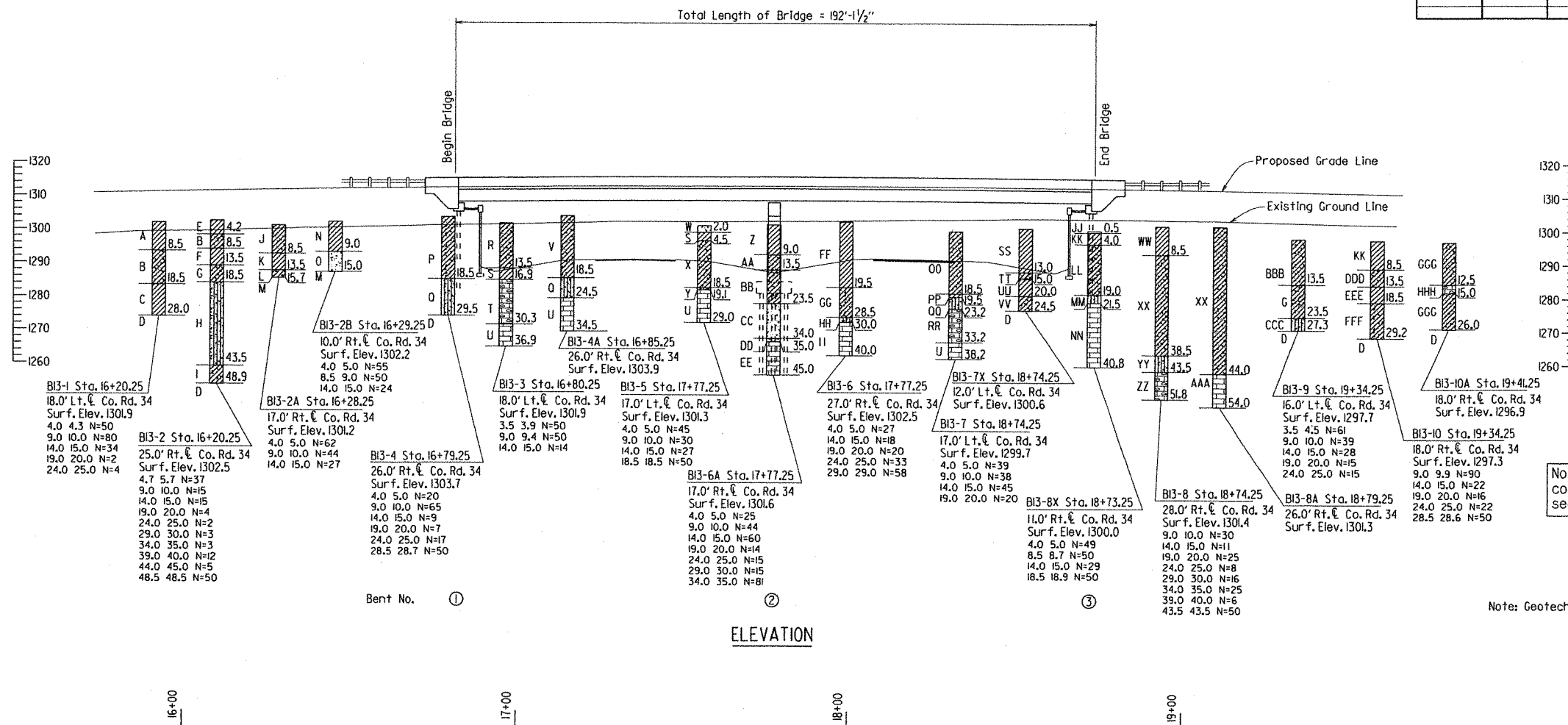


Note: C Median is Construction C.L.-U.S. Hwy. 71

Al-Moist, Very Stiff, Reddish Brown Gravely (Chert Fragments) Clay
Bl-Moist, Dense, Reddish Brown and Gray Clayey Gravel (Chert Fragments)
Cl-Moist, Medium Dense, Reddish Brown and Gray Clayey Gravel (Chert Fragments)
DI-Hard, Chert Boulder
El-Moist, Stiff, Reddish Brown Gravely (Chert Fragments) Clay
Fl-Moist, Loose, Reddish Brown and Gray Clayey Gravel (Chert Fragments) with Sand
Gl-Moist, Very Loose, Reddish Brown and Gray Clayey Gravel (Chert Fragments) with Sand
Hi-Hard, Gray Cherty Limestone
Jl-Moist, Hard, Reddish Brown Gravely (Chert Fragments) Clay
Kl-Hard, Gray Chert Boulder
Li-Moist, Very Dense, Reddish Brown and Gray Clayey Gravel (Chert Fragments)
Ml-Moist, Medium Dense, Brown and Gray Clayey Gravel (Chert Fragments)
Ni-Moist, Very Dense, Reddish Brown Clayey Sand with Gravel (Chert Fragments)
Pi-Hard, Gray Cherty Limestone
Ql-Moist, Dense, Brown and Gray Clayey Gravel (Chert Fragments)
Rl-Moist, Loose, Reddish Brown and Gray Clayey Gravel (Chert Fragments)
Sl-Asphalt Pavement (0 - 0.2')
Ti-Moist, Hard, Reddish Brown Gravely (Chert Fragments) Clay with Sand
Ul-Moist, Very Stiff, Reddish Brown Gravely (Chert Fragments) Clay with Sand
Vi-Moist, Medium Dense, Reddish Brown and Gray Clayey Gravel (Chert Fragments) with Sand
Wi-Moist, Medium Stiff, Reddish Brown Gravely (Chert Fragments) Clay with Sand
Xi-Hard, Gray Limestone
Yl-Moist, Very Hard, Reddish Brown Gravely (Chert Fragments) Clay with Sand
Zl-Moist, Soft, Reddish Brown Gravely (Chert Fragments) Clay with Sand
A2-Moist, Very Dense, Reddish Brown and Gray Clayey Gravel (Chert Fragments) with Sand
B2-Moist, Loose, Brown and Gray Clayey Gravel (Chert Fragments) with Sand
C2-Moist, Medium Dense, Brown and Gray Clayey Gravel (Chert Fragments) with Sand
D2-Moist, Stiff, Reddish Brown Gravely (Chert Fragments) Clay with Sand
E2-Hard, Gray Chert Boulder (22.1' to 22.4')
F2-Hard, Gray Cherty Limestone
G2-Moist, Very Stiff to Stiff, Reddish Brown Gravely (Chert Fragments) Clay with Sand
H2-Hard, Gray Chert Cobbles (22.2' to 23.7')
J2-Moist, Very Dense, Reddish Brown and Gray Sand with Gravel (Chert Fragments)

ROUTE 71 SEC.19
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: KDH DATE: 9-29-06 FILENAME: b090293x3.13.dwg
CHECKED BY: CAE DATE: 10-1-07 SCALE: 1" = 20'
DESIGNED BY: ARW DATE: 9-06
BRIDGE NO. 07220 DRAWING NO. 52069

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090293		113	266
				07220 - LAYOUT			- 52070	



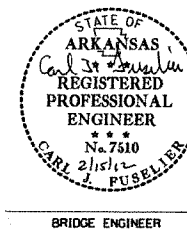
Note: Some of the borings are not shown in the correct location for clarity. For actual location see "Layout", Dwg. No 52067A.

Note: Geotechnical information provided by others.

BORING LEGEND

A LEAN CLAY, few to some chert gravel reddish brown, very stiff, moist (CL)
 B FAT CLAYEY GRAVEL white and reddish brown, dense, moist (GC)
 C FAT CLAY, trace to few chert gravel reddish brown, soft, moist to wet (CH)
 D Auger refusal on apparent chert or limestone
 E LEAN CLAY, trace chert gravel reddish brown, moist (CL)
 F LEAN CLAY, few highly weathered chert gravel reddish brown, very stiff, moist (CL)
 G FAT CLAYEY GRAVEL white and reddish brown, medium dense, moist (GC)
 H SILTY GRAVEL white and brown, loose to very loose, moist to wet (GM)
 I LEAN CLAYEY GRAVEL white and reddish brown, loose, wet (GC)
 J CLAYEY GRAVEL, few chert seams reddish brown, very dense, moist (GC)
 K LEAN CLAY, few highly weathered chert seams reddish brown, very stiff, moist (CL)
 L SANDY GRAVEL, trace clay light brown, dense (GP)
 M Auger refusal on apparent limestone
 N 3" Asphalt over aggregate base surface LEAN CLAY, few highly weathered chert seams reddish brown, very stiff, dry (CL)
 O SANDY GRAVEL, trace clay light reddish brown and light brown, very dense to dense, dry (GP)
 P LEAN CLAYEY GRAVEL white and reddish brown, dense and medium dense, moist (GC)
 Q SILTY GRAVEL white and brown, loose to medium dense, moist to wet (GM)
 R LEAN CLAYEY GRAVEL, few to some chert gravel white and reddish brown, dense, moist (GC)
 S LEAN CLAY, some highly weathered chert gravel reddish brown, very stiff, moist (CL)
 T CHERT, clay filled joints light gray, very fine grained, thin bedded, very weathered and weathered, hard
 U LIMESTONE, stratified, chert seams light gray, fine grained to very fine grained, thin bedded, slightly weathered to fresh, hard
 V LEAN CLAYEY GRAVEL white and reddish brown, moist (GC)
 W CHERT COBBLES, trace clay and trace organics dark brown, moist (GP)
 X LEAN CLAYEY GRAVEL, some chert gravel white and reddish brown, dense, moist (GC)
 Y SILTY GRAVEL, fine and coarse sized white and brown, loose, wet (GM)
 Z LEAN CLAY, little chert gravel mottled light brown and reddish brown, very stiff, dry (CL)
 AA SANDY LEAN CLAY light reddish brown, very stiff (CL)
 BB LEAN CLAYEY GRAVEL, few chert seams reddish brown, very dense, dry (GC)
 CC SANDY GRAVEL, trace clay light brown, medium dense, moist (GP)
 DD SANDY GRAVEL, few sandy lean clay seams, brown, very dense, wet (GP)
 EE LIMESTONE, stratified, chert seams and inclusions, clay filled joints light gray, fine grained to very fine grained, thin bedded, slightly weathered to fresh, hard

FF LEAN CLAY, trace to some highly weathered chert gravel reddish brown, very stiff, moist (CL)
 GG FAT CLAYEY GRAVEL, some chert gravel white and reddish brown, medium dense to dense, moist (GC)
 HH SILTY GRAVEL, fine white and brown, loose, wet (GM)
 II LIMESTONE, stratified chert seams light gray, fine grained to very fine grained, thin bedded, slightly weathered, hard
 JJ PAVEMENT, 3" asphalt, 3" crushed limestone
 KK LEAN CLAY, trace chert gravel reddish brown, very stiff, moist (CL)
 LL FAT CLAYEY GRAVEL chert seams 4 to 6 inches thick white and reddish brown, medium dense and dense, moist (GC)
 MM SILTY GRAVEL, coarse sized white and brown, dense, moist (GM)
 NN LIMESTONE, stratified, chert seams and inclusions light gray, fine grained to very fine grained, thin bedded, fresh, hard
 OO LEAN CLAYEY GRAVEL white and reddish brown, dense, moist (GC)
 PP LEAN CLAY, some highly weathered chert reddish brown, very stiff, moist (CL)
 QQ SILTY GRAVEL, sand and fine gravel sized white and brown, medium dense (GM)
 RR CHERT, stratified, limestone seams light gray and white, very fine grained, thin bedded, slightly weathered, hard
 SS LEAN CLAY, trace to some chert gravel reddish brown, moist (CL)
 TT FAT CLAYEY GRAVEL reddish brown and white, moist (GC)
 UU FAT CLAY, trace to some chert gravel reddish brown, moist (CH)
 VV FAT CLAYEY GRAVEL reddish brown and white, moist, chert gravel to cobble size (GC)
 WW LEAN CLAY, trace highly weathered chert gravel reddish brown, very stiff, moist (CL)
 XX LEAN CLAYEY GRAVEL white and reddish brown, medium dense, moist
 YY SILTY GRAVEL, sand and fine gravel sized white and brown, loose, wet (GM)
 ZZ CHERT, stratified, limestone seams light gray, very fine grained, thin bedded, slightly weathered, hard
 AAA LIMESTONE, stratified, chert seams light gray, fine grained, thin bedded, slightly weathered to fresh, hard
 BBB FAT CLAYEY GRAVEL white and reddish brown, dense (GC)
 CCC SILTY GRAVEL, sand and fine sized gravel white, medium dense, moist (GM)
 DDD LEAN CLAYEY GRAVEL, some chert gravel white and reddish brown, very dense, moist (GC)
 EEE LEAN CLAY, some chert gravel reddish brown, very stiff, moist (CL)
 FFF FAT CLAYEY GRAVEL, few to some highly weathered chert gravel white and reddish brown, medium dense to dense, moist (GC)
 GGG LEAN CLAYEY GRAVEL reddish brown, moist (GC)
 HHH CHERT light gray, hard



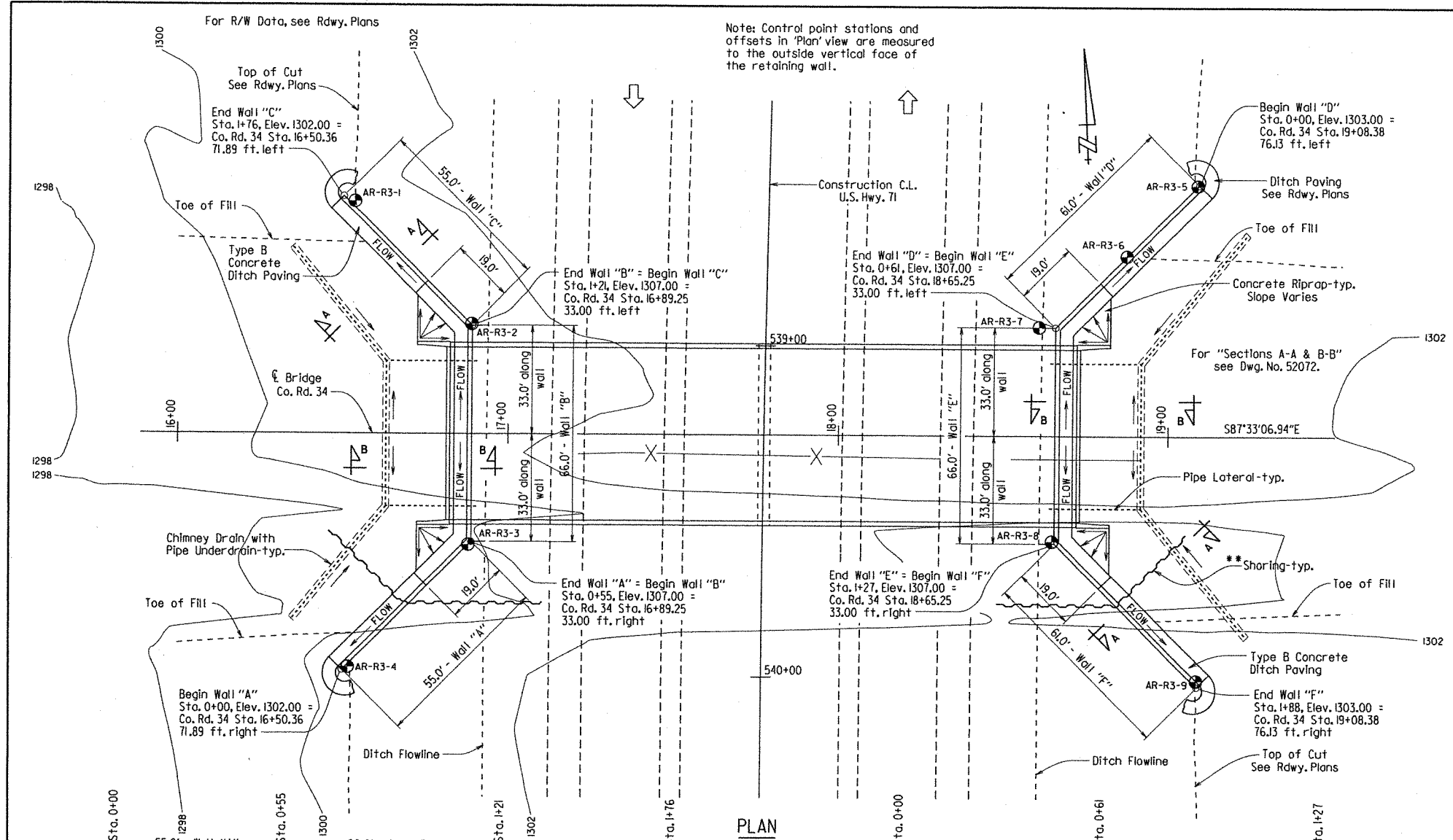
SHEET 4 OF 4
 LAYOUT OF BRIDGE
 AT COUNTY ROAD 34
 HWY. 72 NORTH-CO. RD. 34
 (B.V. BYPASS) (F)
 BENTON COUNTY

ROUTE 71 SEC. 19
 ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 9-29-06 FILENAME: b090293x3.14.dgn
 CHECKED BY: CAE DATE: 10-1-07 SCALE: 1" = 20'
 DESIGNED BY: ARW DATE: 9-06
 BRIDGE NO. 07220 DRAWING NO. 52070

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		090293	114	266
						07220 - RETAINING WALLS - 52071		



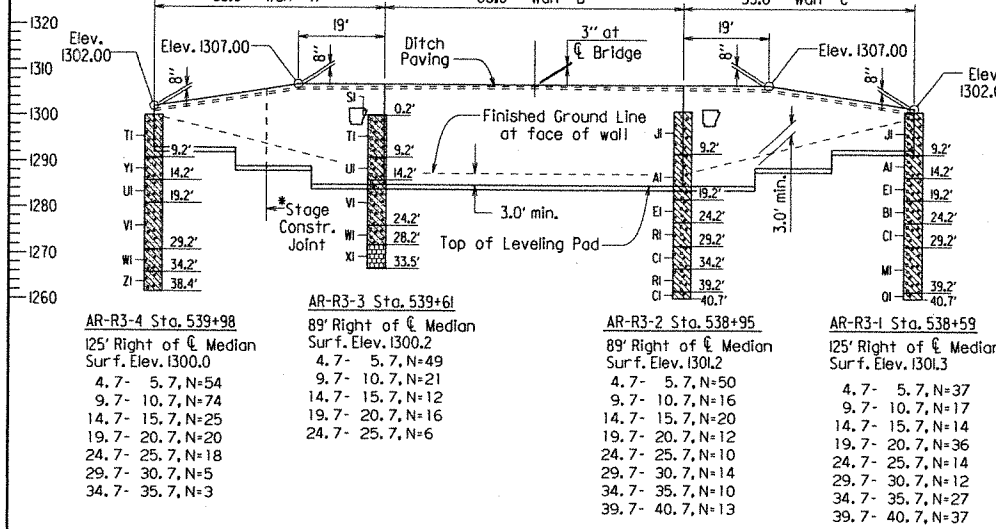
BORING LEGEND

- AI-Moist, Very Stiff, Reddish Brown Gravelly (Chert Fragments) Clay
- BI-Moist, Dense, Reddish Brown and Gray Clayey Gravel (Chert Fragments)
- CI-Moist, Medium Dense, Reddish Brown and Gray Clayey Gravel (Chert Fragments)
- DI-Hard, Chert Boulder
- EI-Moist, Stiff, Reddish Brown Gravelly (Chert Fragments) Clay
- FI-Moist, Loose, Reddish Brown and Gray Clayey Gravel (Chert Fragments) with Sand
- J1-Moist, Hard, Reddish Brown Gravelly (Chert Fragments) Clay
- J2-Moist, Very Dense, Reddish Brown and Gray Clayey Gravel (Chert Fragments)
- MI-Moist, Medium Dense, Brown and Gray Clayey Gravel (Chert Fragments)
- OI-Moist, Dense, Brown and Gray Clayey Gravel (Chert Fragments)
- RI-Moist, Loose, Reddish Brown and Gray Clayey Gravel (Chert Fragments)
- SI-Asphalt Pavement (0 - 0.2')
- TI-Moist, Hard, Reddish Brown Gravelly (Chert Fragments) Clay with Sand
- UI-Moist, Very Stiff, Reddish Brown Gravelly (Chert Fragments) Clay with Sand
- VI-Moist, Medium Dense, Reddish Brown and Gray Clayey Gravel (Chert Fragments) with Sand
- WI-Moist, Medium Stiff, Reddish Brown Gravelly (Chert Fragments) Clay with Sand
- XI-Hard, Gray Limestone
- YI-Moist, Very Hard, Reddish Brown Gravelly (Chert Fragments) Clay with Sand
- ZI-Moist, Soft, Reddish Brown Gravelly (Chert Fragments) Clay with Sand
- A2-Moist, Very Dense, Reddish Brown and Gray Clayey Gravel (Chert Fragments) with Sand
- B2-Moist, Loose, Brown and Gray Clayey Gravel (Chert Fragments) with Sand
- C2-Moist, Medium Dense, Brown and Gray Clayey Gravel (Chert Fragments) with Sand
- D2-Moist, Stiff, Reddish Brown Gravelly (Chert Fragments) Clay with Sand
- E2-Hard, Gray Chert Boulder (22.1' to 22.4')
- F2-Hard, Gray Chert Limestone
- G2-Moist, Very Stiff to Stiff, Reddish Brown Gravelly (Chert Fragments) Clay with Sand
- H2-Hard, Gray Chert Cobbles (22.2' to 23.7')
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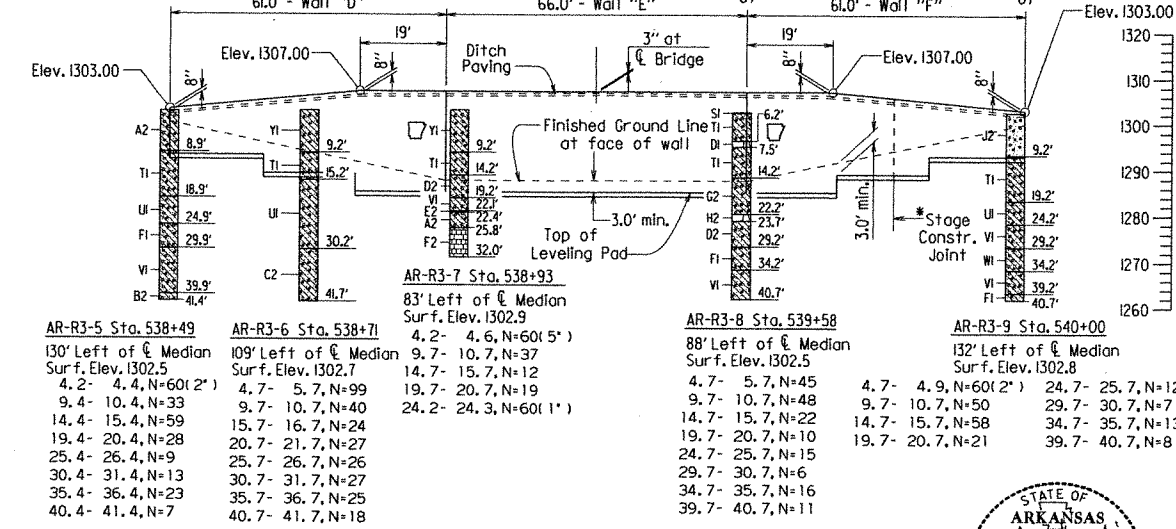
* Retaining Walls "A" and "F" shall be constructed in two stages to coincide with the Shoring and the Maintenance of Traffic details. See Roadway Plans.

** Shoring, normal to the retaining wall as needed, will be required to construct embankment and MSE Wall while maintaining traffic on Co. Rd. 34 M.O.T. See SP Job 090293 "Shoring".

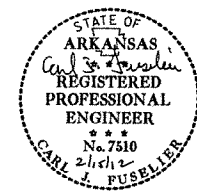
Note:
Geotechnical Information provided by the Arkansas Highway & Transportation Department.
Reference to E Median shown in boring information = Construction Centerline U.S. Hwy. 71.
For additional borings in the vicinity of the retaining wall, see Dwg. Nos. 52069 & 52070.
For "Section A-A" and "Section B-B", see Dwg. No. 52072.



ELEVATION - WALL AT BEGINNING OF BRIDGE
Looking Back



ELEVATION - WALL AT END OF BRIDGE
Looking Ahead



SHEET 1 OF 2
DETAILS OF RETAINING WALLS
AT COUNTY ROAD 34
HWY. 72 NORTH-CO. RD. 34
(B.V. BYPASS) (F)
BENTON COUNTY
ROUTE 71 SEC. 19
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: KDH DATE: 10-25-06 FILENAME: b090293x3-rwl.dgn
CHECKED BY: SWP DATE: 10-26-06 SCALE: 1" = 20'
DESIGNED BY: ARW DATE: 9-06
BRIDGE NO. 07220 DRAWING NO. 52071

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		090293	115	266
07220 - RETAINING WALLS - 52072								

NOTES FOR UNDERCUTTING & BACKFILL:

Large scale undercut is not anticipated. However, due to the irregular bedrock surface and the tendency for the gravelly clay and clayey gravel in the low areas of the bedrock surface to stay saturated, some isolated undercut is anticipated. If soft or unstable material is encountered beneath the retaining wall and reinforcement zone, it shall be removed and backfilled with Select Granular Backfill. Depth and area of any required undercutting shall be as determined by the Engineer.

Any excavation and backfill required for undercutting shall be paid for as "Unclassified Excavation" and "Select Granular Backfill" in accordance with Job SP "Retaining Walls".

GENERAL NOTES:

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications Fifth Edition (2010) with 2010 Interims.

Seismic Performance Zone I

Retaining Wall Stations are measured along outside vertical face of wall. Elevations shown are profile grade for top of wall. Wall and ground elevations are approximate. Wall dimensions may vary depending on wall design selected and field conditions.

Reinforcement placement and details for retaining walls may be affected by end bent construction and proposed roadway drainage structures. See End Bent drawings for pile locations and wingwall details. See Roadway Plans for locations and details of drainage structures.

For ditch paving, See Standard Dwg. No. CDP-1.

Preformed joint filler, joint sealer, polystyrene board, and pipe underdrains will not be paid for directly, but will be considered subsidiary to the item "Retaining Wall".

A Class 3 Textured Coating Finish shall be applied to retaining wall surfaces as specified in Job Special Provision "Textured Coating Finish" and in accordance with subsection 802.19(b)(3).

State of Arkansas Form Inserts shall be placed on each turned back section of retaining wall in accordance with Dwg. No. 52073.

See Job Special Provision "Retaining Walls" for additional information.

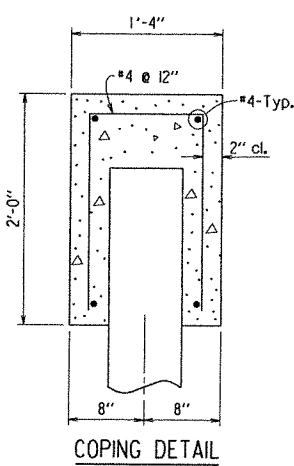
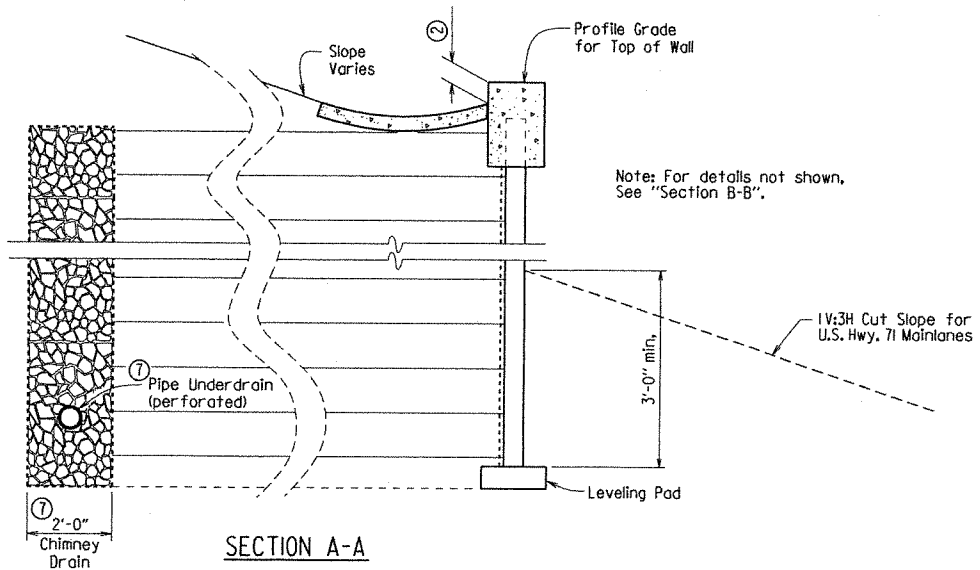
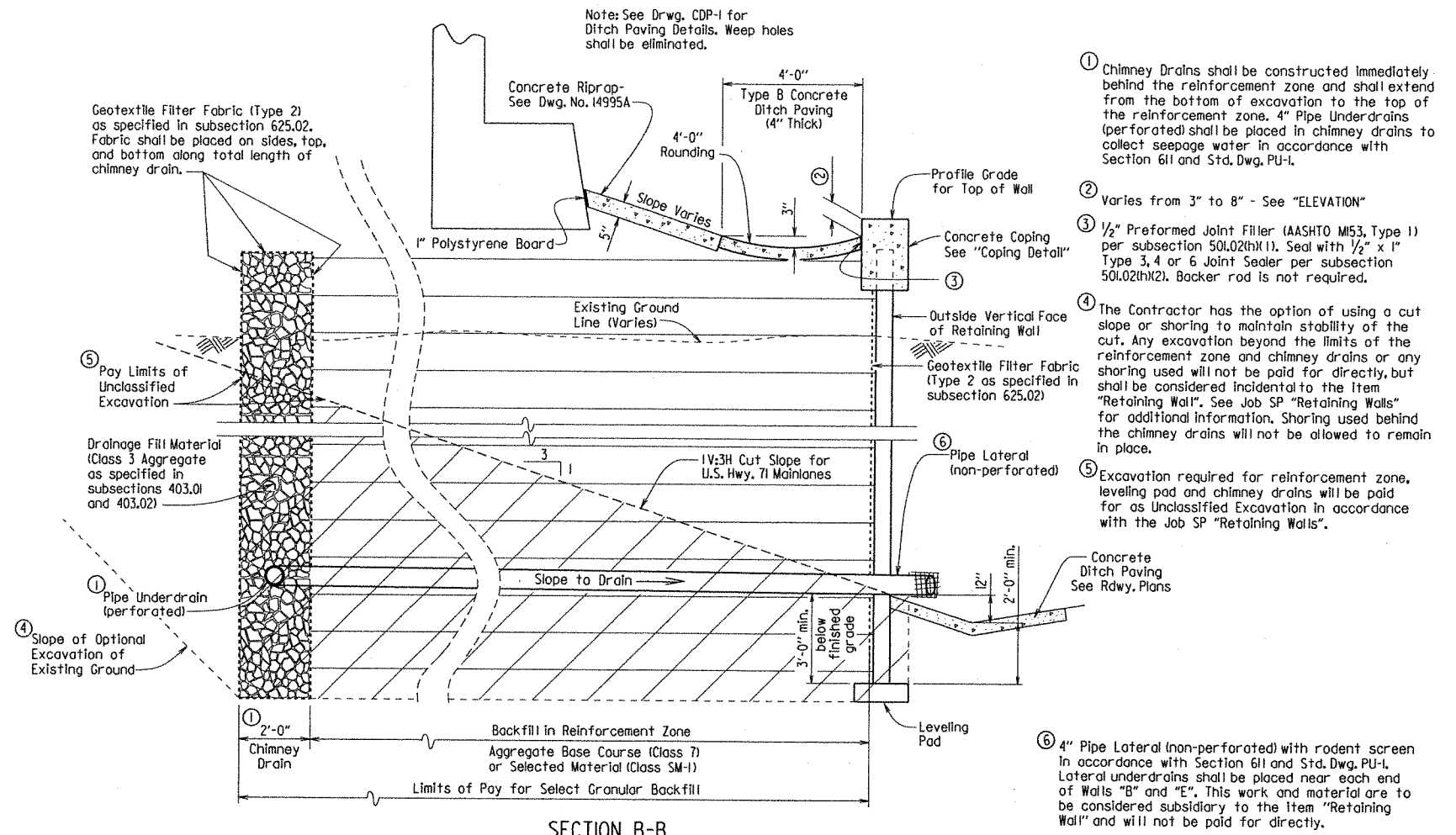
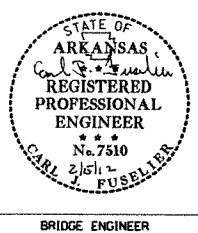
TABLE OF QUANTITIES
(FOR INFORMATION ONLY)

LOCATION	ITEM NO.	210	SP 090293	SP 090293
		UNCLASSIFIED EXCAVATION	SELECT GRANULAR BACKFILL	RETAINING WALL
UNIT		CU. YD.	CU. YD.	SQ. FT.
WALL A: STA. 0+00 TO STA. 0+55		281	510	904
WALL B: STA. 0+55 TO STA. 1+21		430	1210	1452
WALL C: STA. 1+21 TO STA. 1+76		291	510	904
WALL D: STA. 0+00 TO STA. 0+61		313	576	1018
WALL E: STA. 0+61 TO STA. 1+27		430	1210	1452
WALL F: STA. 1+27 TO STA. 1+88		319	576	1018
TOTALS		2064	4592	6748

SHEET 2 OF 2
DETAILS OF RETAINING WALLS
AT COUNTY ROAD 34
HWY. 72 NORTH-CO. RD. 34
(B.V. BYPASS) (F)
BENTON COUNTY

ROUTE 71 SEC. 19
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 10-30-06 FILENAME: b090293x3_rw2.dgn
CHECKED BY: GUP DATE: 10-6-09 SCALE: NONE
DESIGNED BY: ARW DATE: 9-06
BRIDGE NO. 07220 DRAWING NO. 52072

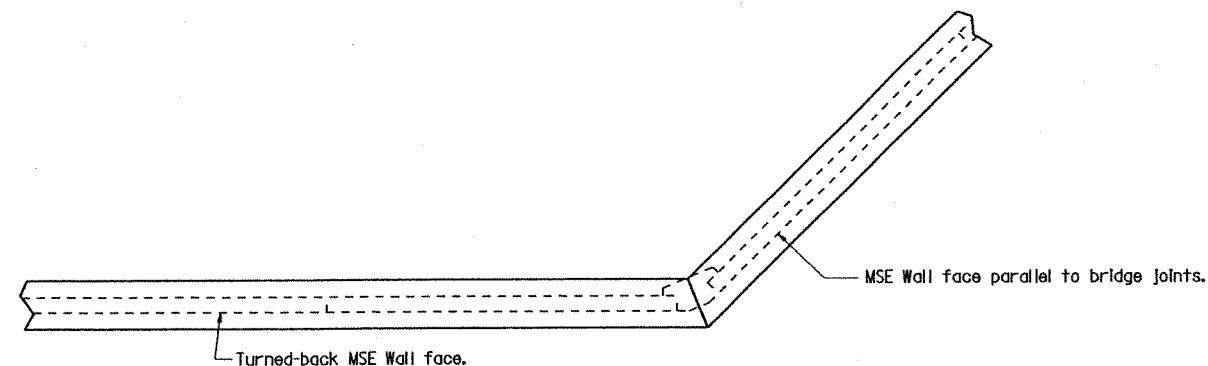


Note:

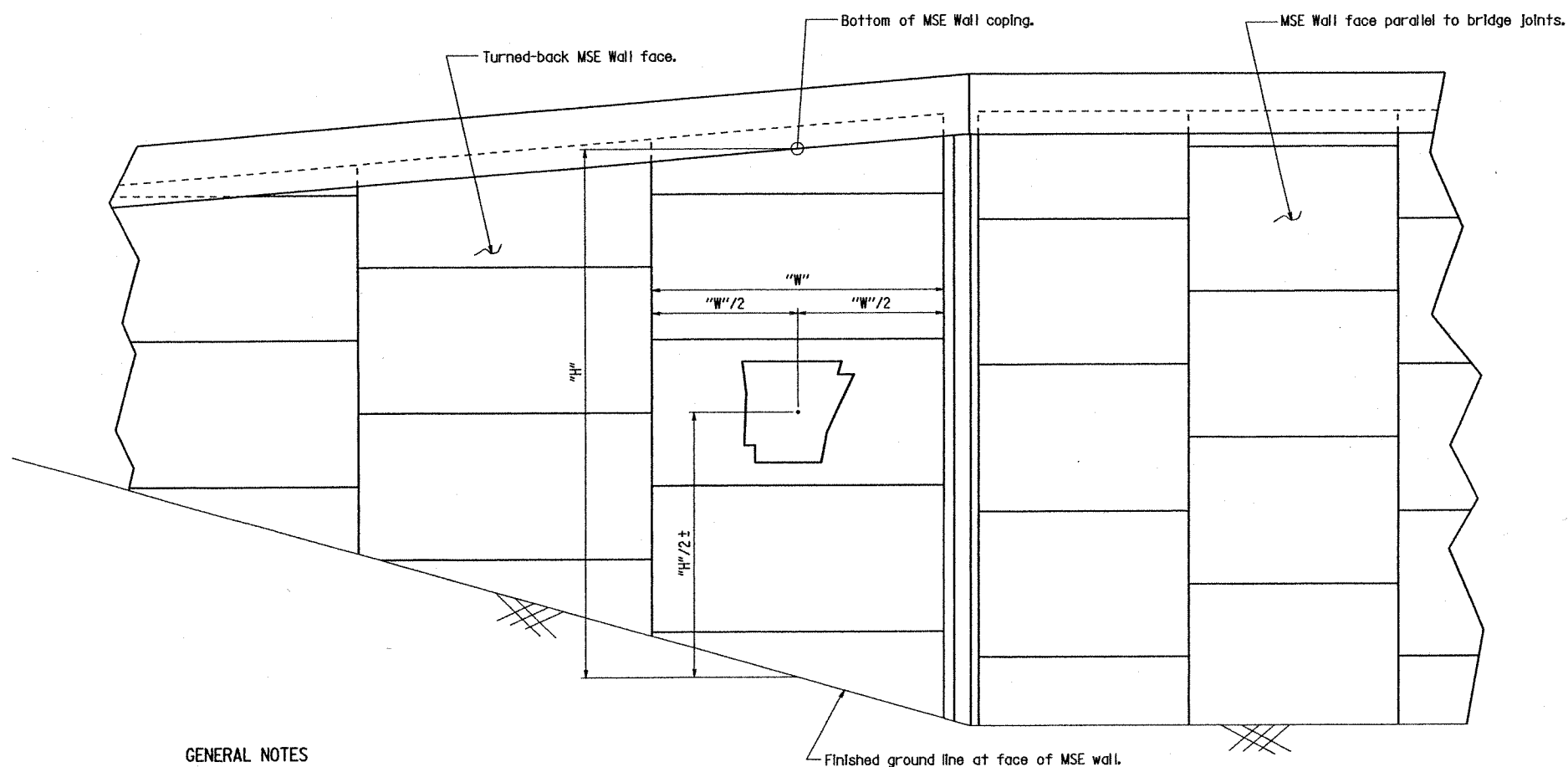
Reinforcing Steel and Class (S) Concrete for Concrete Coping shall not be paid for directly but will be considered subsidiary to the item "Retaining Walls".

Precast concrete coping may be substituted for the cast-in-place coping shown.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		090293	116	266
① 07220 - FORM INSERT - 52073								



PLAN OF MSE WALLS
3/8" = 1'-0"



ELEVATION OF MSE WALLS
3/8" = 1'-0"

GENERAL NOTES

Place center of Insert in the first full-width MSE Wall panel along the turned-back wall face at the approximate height shown.

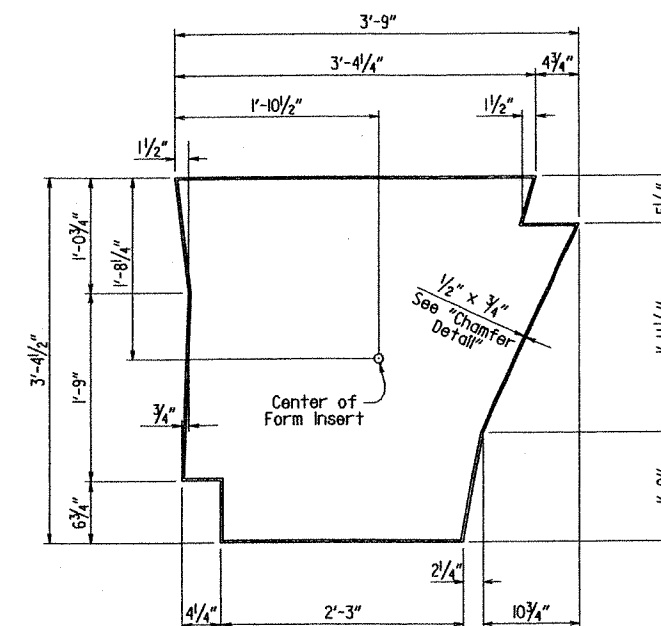
Fabricate form Insert as a one piece unit, without the use of splices, joints or glue.

Wash and clean multi-use form Inserts before each use.

All work and materials for form Inserts shall be included in the unit price bid for "Retaining Wall".

The form Insert shall be approved by the Engineer before its use.

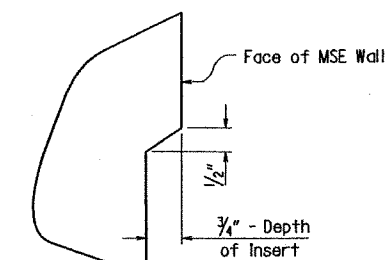
Paint Insert with a Class 3 Textured Coating Finish as specified in Job Special Provision "Textured Coating Finish" and in accordance with subsection 802.19(b)(3).



NOTE: See Bridge Layouts for actual locations of form insert.

FORM INSERT DETAILS AT MSE WALL

No Scale



CHAMFER DETAIL

No Scale

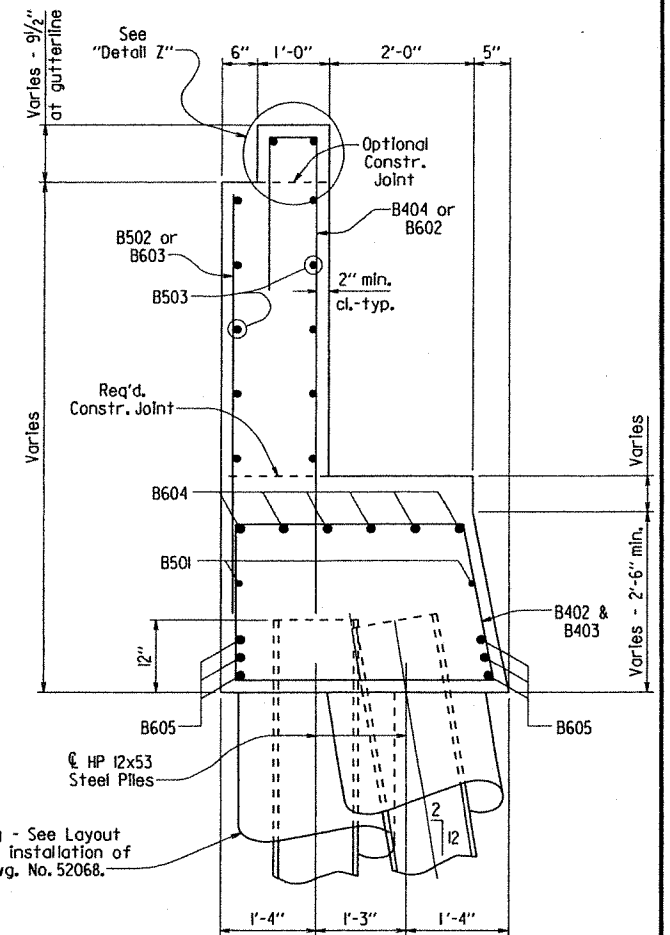
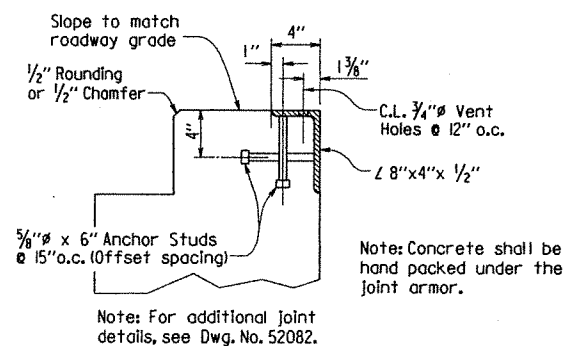
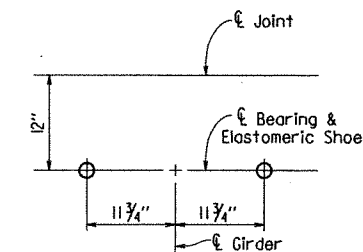
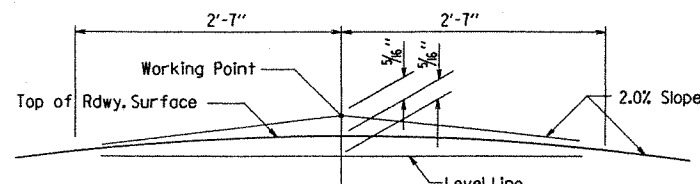
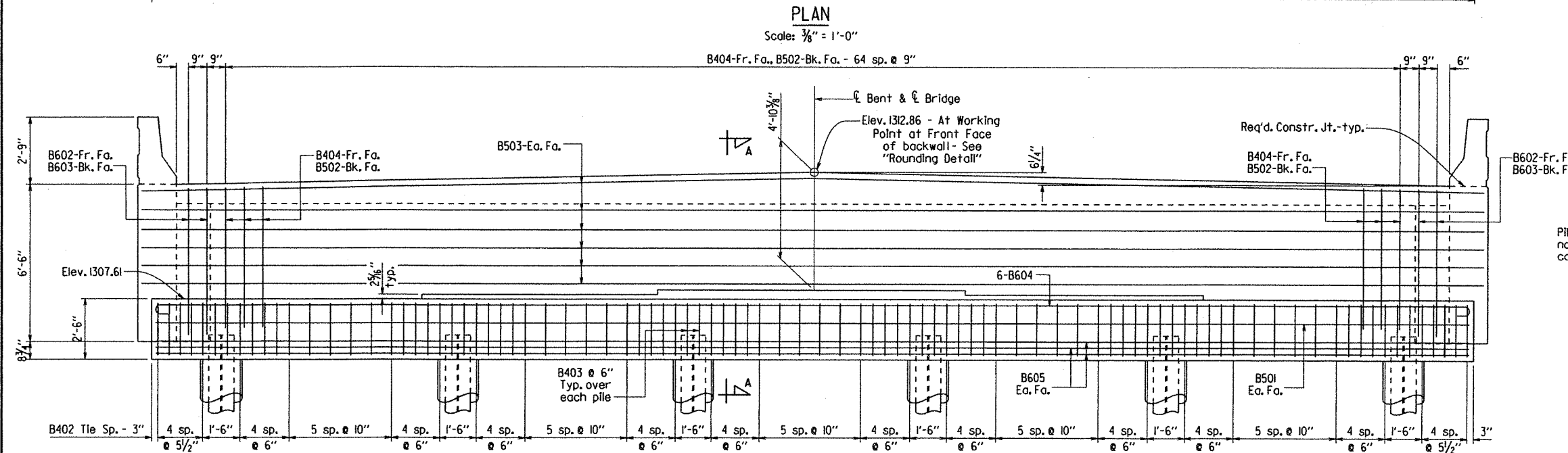
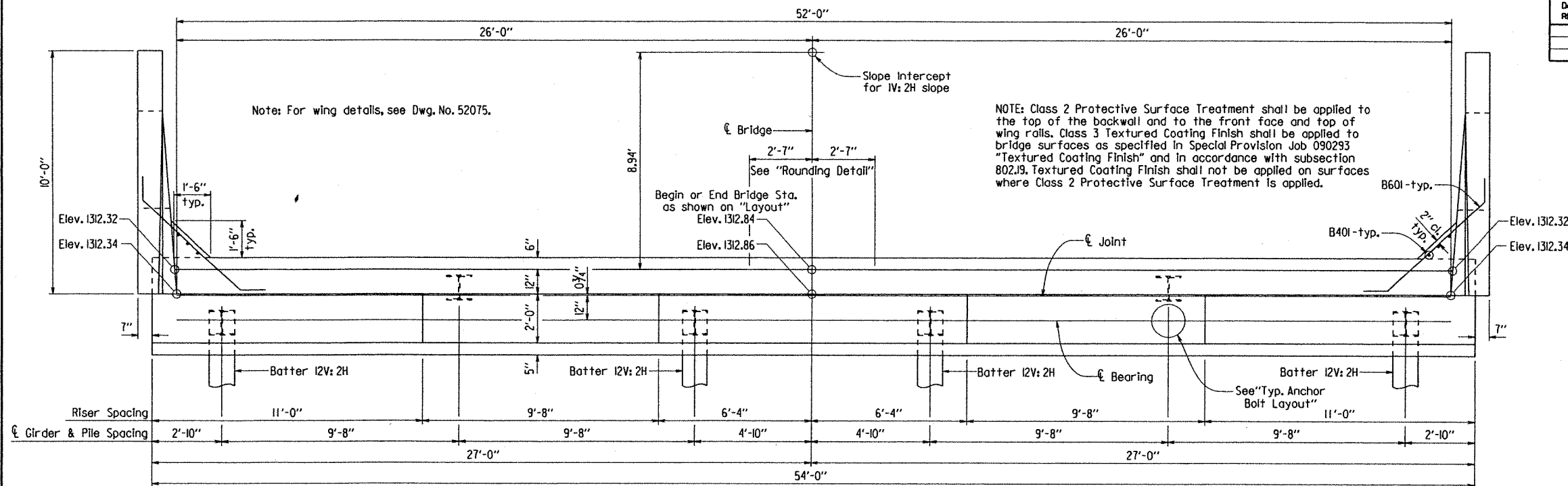


BRIDGE ENGINEER

DETAILS OF
STATE OF ARKANSAS
FORM INSERT
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CRE DATE: 3-8-11 FILENAME: b090293_ins.dgn
CHECKED BY: KDH DATE: 4-18-11 SCALE: AS NOTED
DESIGNED BY: CRE DATE: 3-11
BRIDGE NO. 07220 DRAWING NO. 52073

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		090293	117	266
				07220 -	END BENTS	-	52074	



GENERAL NOTES

All concrete shall be Class S and shall be poured in the dry. All exposed corners to be chamfered $\frac{3}{4}"$ unless otherwise noted.

All reinforcing steel shall conform to AASHTO M31 or M53, Grade 60.

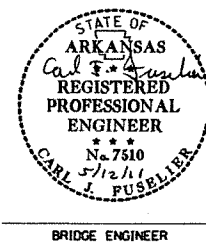
All piles shall be HP12x53 (AASHTO M270, Gr. 50).

No portion of the backwall shall be poured until the girders are in place. Refer to "Expansion Device Installation" notes, Dwg. No. 52082.

Structural steel in end bents shall be AASHTO M270, Gr. 50W and shall be paid for as "Structural Steel in Plate Girder Spans (M270, Gr. 50W)".

If anchor bolts are drilled into cap, top reinforcing bars shall be placed to avoid damage.

For additional information, see layout.



SHEET 1 OF 2
DETAILS OF END BENTS
COUNTY ROAD 34

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

DRAWN BY: KDH DATE: 4-6-07 FILENAME: b090293x3-bl.dgn
CHECKED BY: CRE DATE: 10-1-07 SCALE: AS NOTED
DESIGNED BY: CAB DATE: 4-07
BRIDGE NO. 07220 DRAWING NO. 52074

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		118	266
				JOB NO.	090293		118	266
				07220 - END BENTS		- 52075		

BAR LIST-PER BENT

MARK	NO. REQ'D.	LENGTH	P.D.	BENDING DIAGRAMS
				Dimensions are out to out of bars.
B401	6	5'-4"	Str.	
B402	80	11'-5"	2"	
B403	12	7'-4"	2"	
B404	65	8'-8"	3"	
R401	8	3'-11"	2"	
R402	8	4'-0"	2"	
R403	12	9'-8"	Str.	
W401	8	8'-7"	2"	
W402	8	8'-11"	Str.	
W403-W406	2 each	Var. 3'-5" to 6'-10"	2"	
W407-W410	2 each	Var. 4'-7" to 8'-0"	Str.	
W411	6	8'-4"	2"	
B501	2	53'-8"	Str.	
B502	65	5'-1"	Str.	
B503	12	54'-10"	Str.	
B601	10	7'-2"	4 1/2"	
B602	4	8'-10"	4 1/2"	
B603	4	5'-4"	Str.	
B604	6	55'-0"	4 1/2"	
B605	6	53'-8"	Str.	
R601	20	4'-5"	Str.	
R602	6	5'-0"	Str.	
W701	12	9'-8"	Str.	
W702	4	6'-8"	Str.	
W703	4	6'-0"	Str.	
W704	4	5'-4"	Str.	
W705	4	4'-8"	Str.	
W706	4	4'-0"	Str.	
W707	4	11'-0"	5 1/4"	

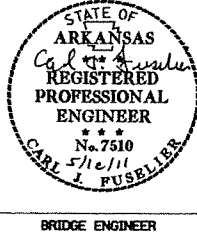
SECTION Z-Z

Scale: 3/8" = 1'-0"

SHEET 2 OF 2 DETAILS OF END BENTS COUNTY ROAD 34

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

DRAWN BY: KDH DATE: 4-9-07
CHECKED BY: CRE DATE: 10-1-07
DESIGNED BY: CAB DATE: 4-07
BRIDGE NO. 07220 DRAWING NO. 52075



THREE DIMENSIONAL VIEW OF RAIL

No Scale

For details of guard rail connection,
See Std. Dwg. no. GR-10.

VIEW W-W

Scale: 3/4" = 1'-0"

SECTION X-X

Scale: 3/4" = 1'-0"

SECTION Y-Y

Scale: 3/4" = 1'-0"

PLAN OF RAIL

Scale: 3/8" = 1'-0"

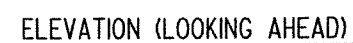
VIEW T-T

Scale: 1/2" = 1'-0"

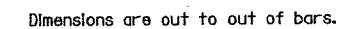
VIEW V-V

Scale: 1/2" = 1'-0"

① 07220 - INT. BENT - 52076



BENDING DIAGRAMS



GENERAL NOTES

For additional information, see Layout.

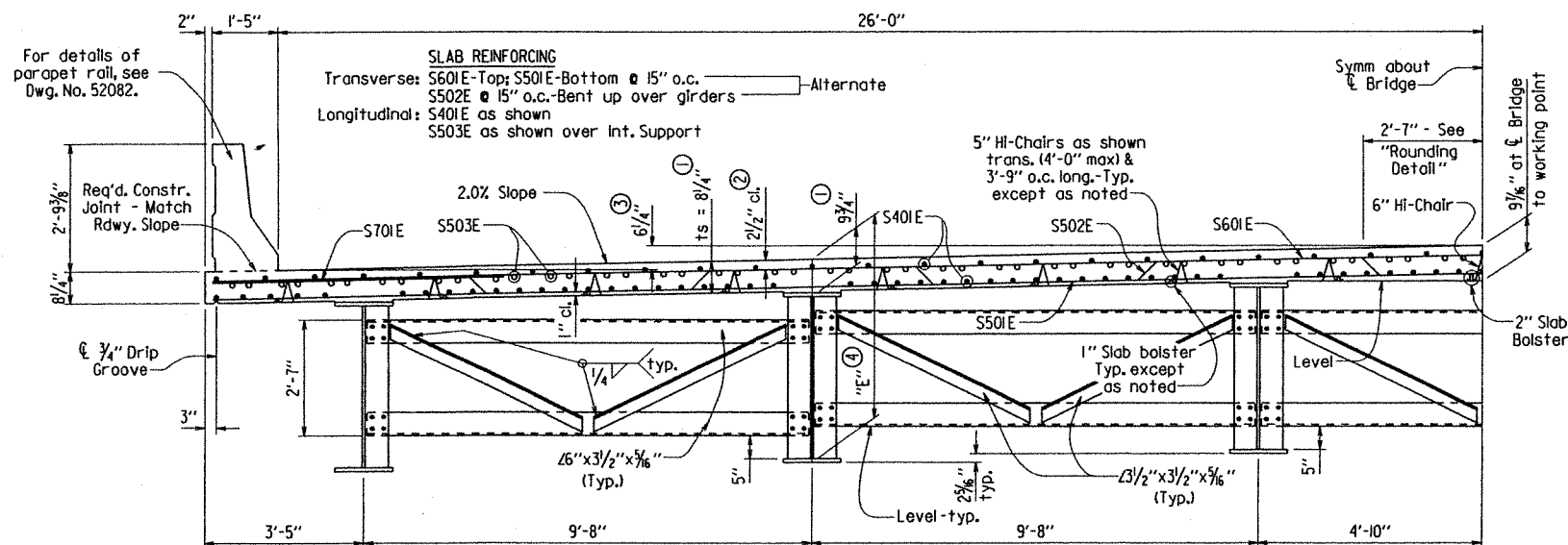
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 CHECKED BY: DMH DATE: 11-26-07 SCALE: $\frac{3}{8}" = 1'-0"$
 DESIGNED BY: ESR DATE: 7/07
 BRIDGE NO. 07220 DRAWING NO. 52076



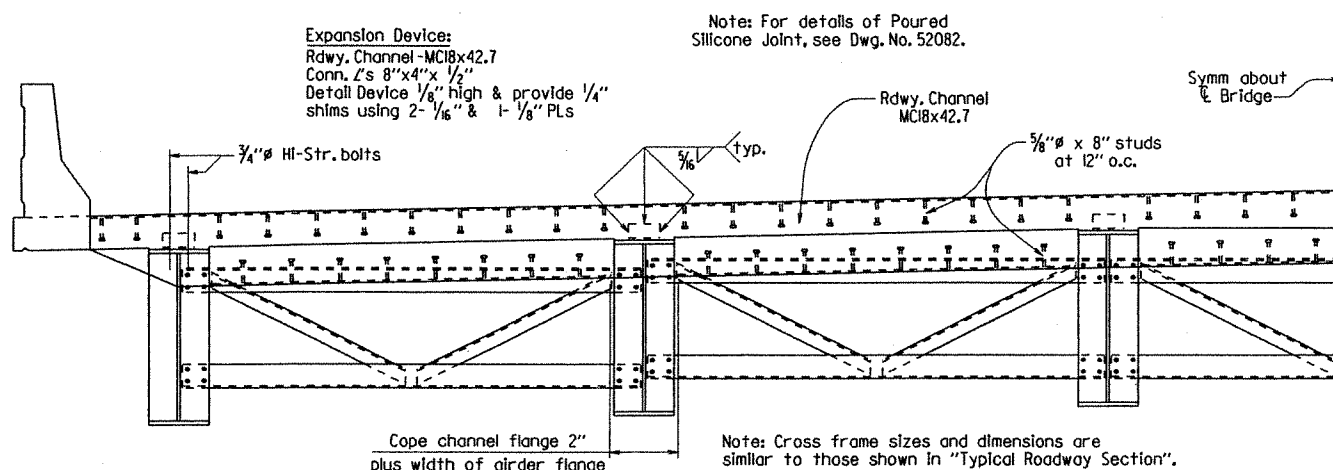
BRIDGE ENGINEER

NOTE: Class 2 Protective Surface Treatment shall be applied to the roadway surface and to the face and top of concrete parapet walls. Class 3 Textured Coating Finish shall be applied to bridge surfaces as specified in Special Provision Job 090293 "Textured Coating Finish" and in accordance with subsection 802.9. Textured Coating Finish shall not be applied on surfaces where Class 2 Protective Surface Treatment is applied.

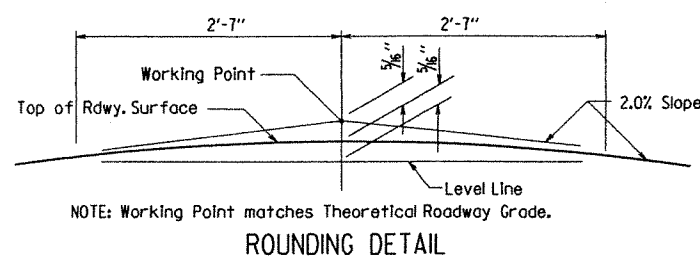
NOTE: At the Contractor's option, two straight epoxy coated #5 bars may be substituted for bar S502E. Payment for reinforcing will be based on the weight of bar S502E.



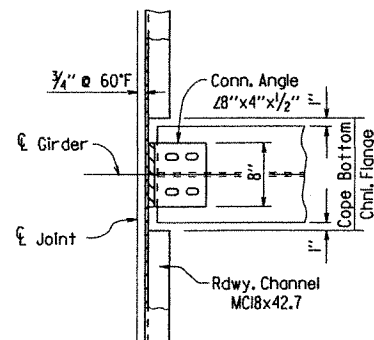
TYPICAL ROADWAY SECTION
Scale: 1/2" = 1'-0"



SECTION THRU JOINT
Scale: 1/2" = 1'-0"

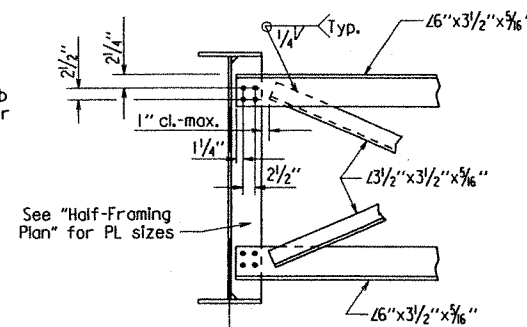


ROUNDING DETAIL
No Scale

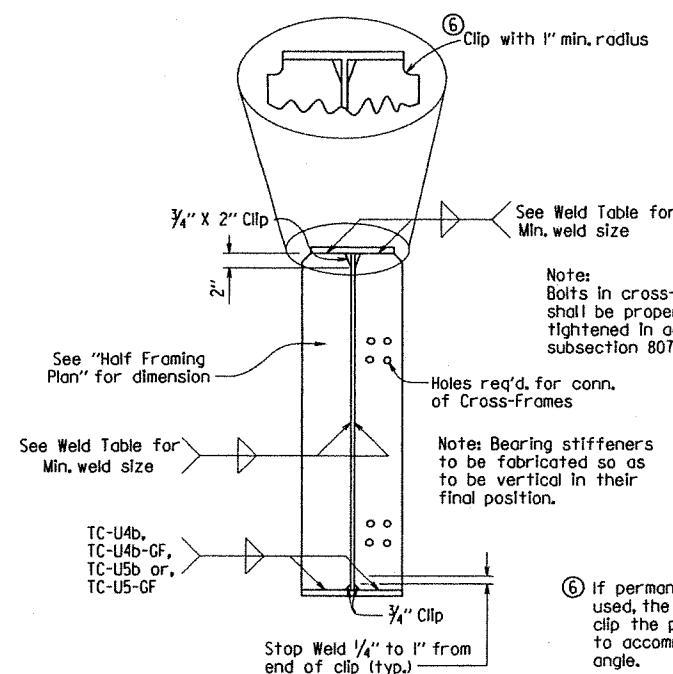


CHANNEL CONNECTION DETAIL
No Scale

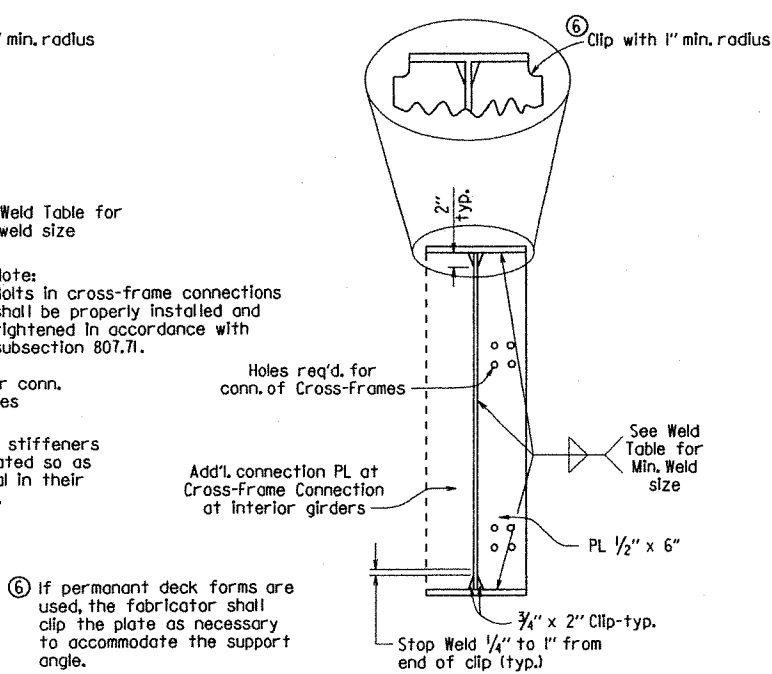
- ① See "Adjustment for Slab Thickness Tolerance"
- ② Tolerance: Minus = 1/4"; Plus equal to the amount of slab thickening used to meet slab thickness tolerance. See "Adjustment for Slab Thickness Tolerance".
- ③ Working Point to Gutterline
- ④ "E" = 4'-3 3/4" + bottom flange thickness measured at Bearing & Girder



TYPICAL CROSS-FRAME CONNECTION
No Scale



BEARING STIFFENER DETAILS
No Scale

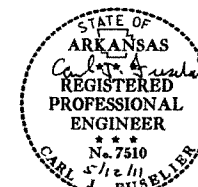


CONNECTION PLATE DETAILS
No Scale

TABLE FOR WELD

Material Thickness of Thicker Part Joined (Inches)	Minimum Size of Fillet Weld (Inches)	Single Pass Weld Must Be Used
To 3/4" Inclusive	1/4"	
Over 3/4"	3/8"	

NOTE: When a fillet weld size, as shown on the plans, is larger than the minimum, the first pass shall be that specified for minimum size of fillet weld.



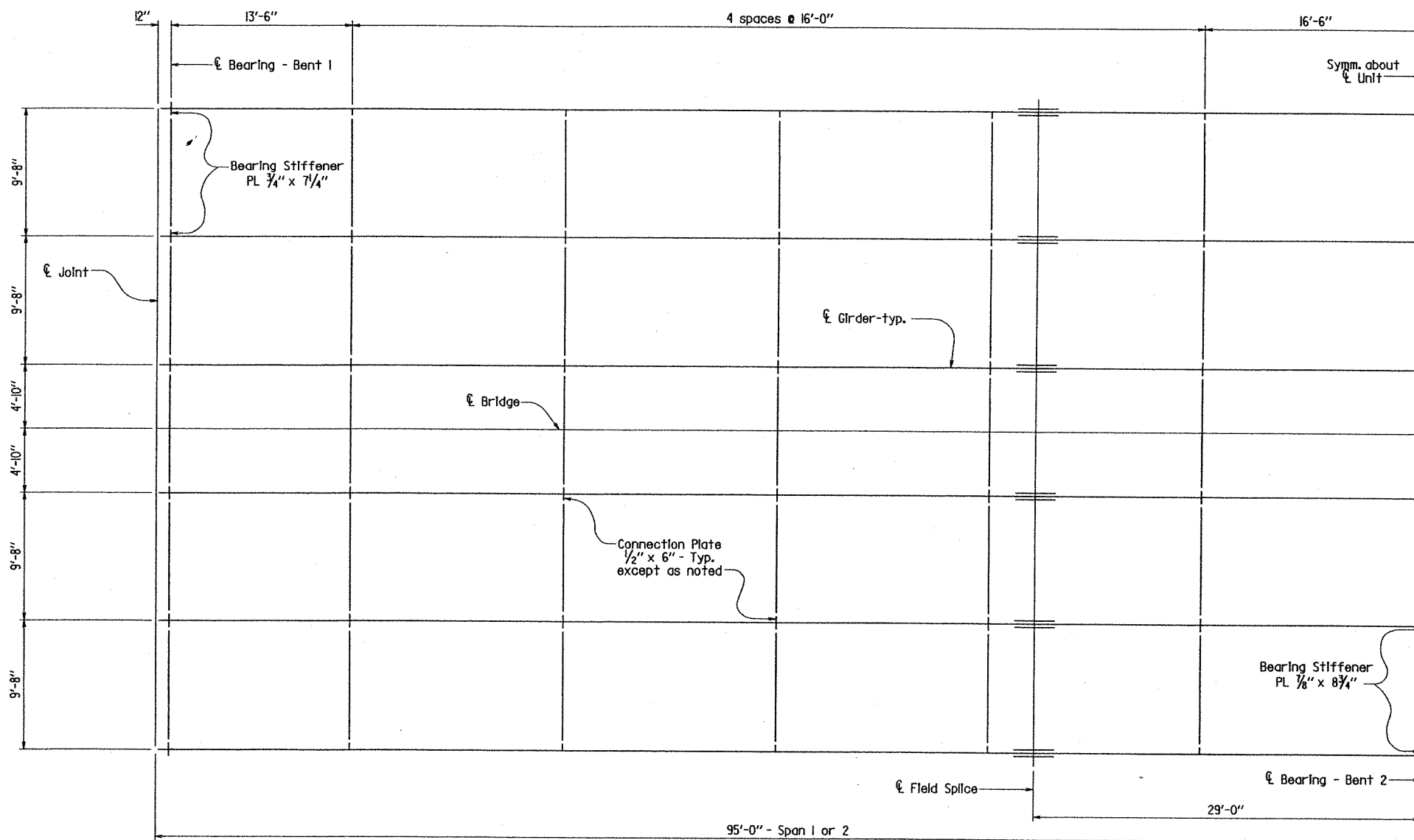
SHEET 1 OF 5
DETAILS OF 190' CONTINUOUS
COMPOSITE PLATE GIRDER UNIT
COUNTY ROAD 34

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

DRAWN BY: KDH DATE: 1-2-07
CHECKED BY: CRE DATE: 10-3-07
DESIGNED BY: PJT DATE: 12-06
BRIDGE NO. 07220 DRAWING NO. 52078

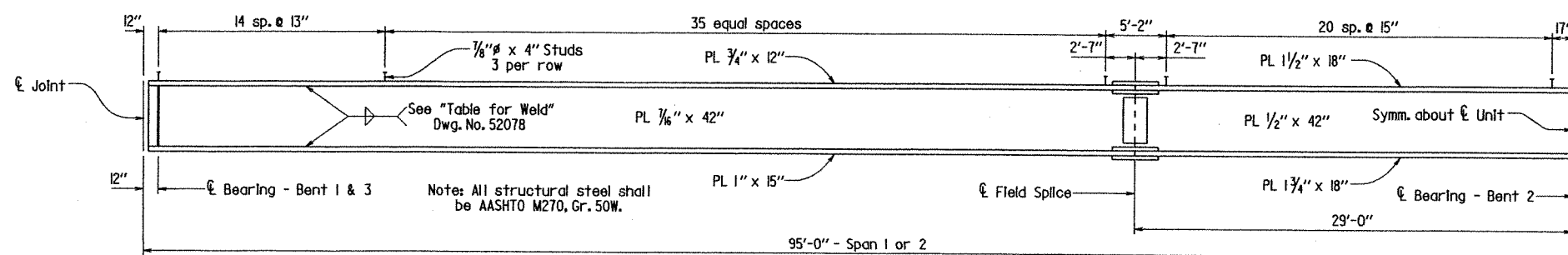
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				6	ARK.	090293	121	266
				JOB NO.				

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FEEL. NO. OR COPY. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						090293	122	266
						07220 - 190 FT. UNIT	- 52079	



HALF FRAMING PLAN

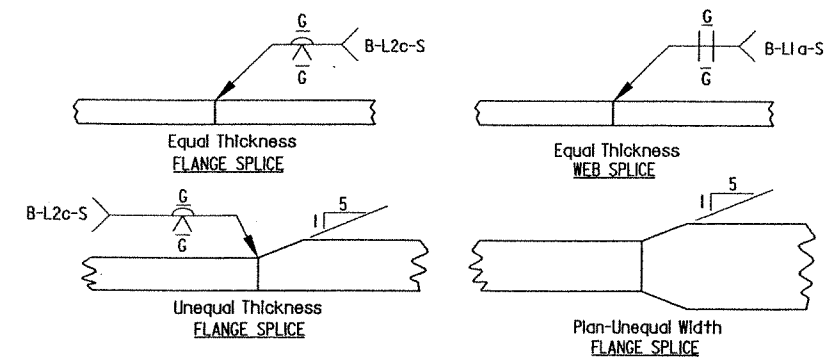
Scale: $\frac{3}{16}'' = 1'-0''$



HALF GIRDER ELEVATION

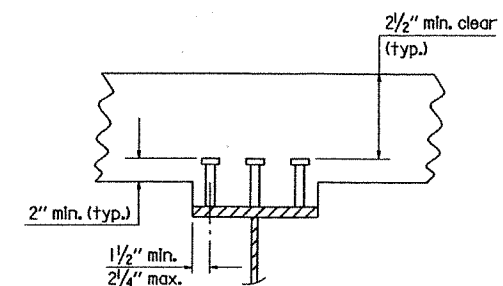
Scale: $\frac{3}{16}'' = 1'-0''$

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



DETAILS OF WELDED SPLICES

No Scale



Stud Shear Connectors shown shall be $\frac{3}{4}'' \times 4''$ long, granular flux filled, solid fluxed or equal, and automatically welded to the girder flange in accordance with the recommendations of the Manufacturer. $\frac{3}{4}'' \phi$ studs may be used in place of the $\frac{1}{2}'' \phi$ studs shown, at the ratio of 1.361- $\frac{3}{4}'' \phi$ studs in place of one $\frac{1}{2}'' \phi$ stud. $\frac{1}{2}'' \phi$ studs will be used as basis for measurement of structural steel in shear connectors. Maximum stud spacing = 24".

SHEAR CONNECTOR DETAIL

No Scale



BRIDGE ENGINEER

SHEET 2 OF 5
DETAILS OF 190' CONTINUOUS
COMPOSITE PLATE GIRDER UNIT
COUNTY ROAD 34

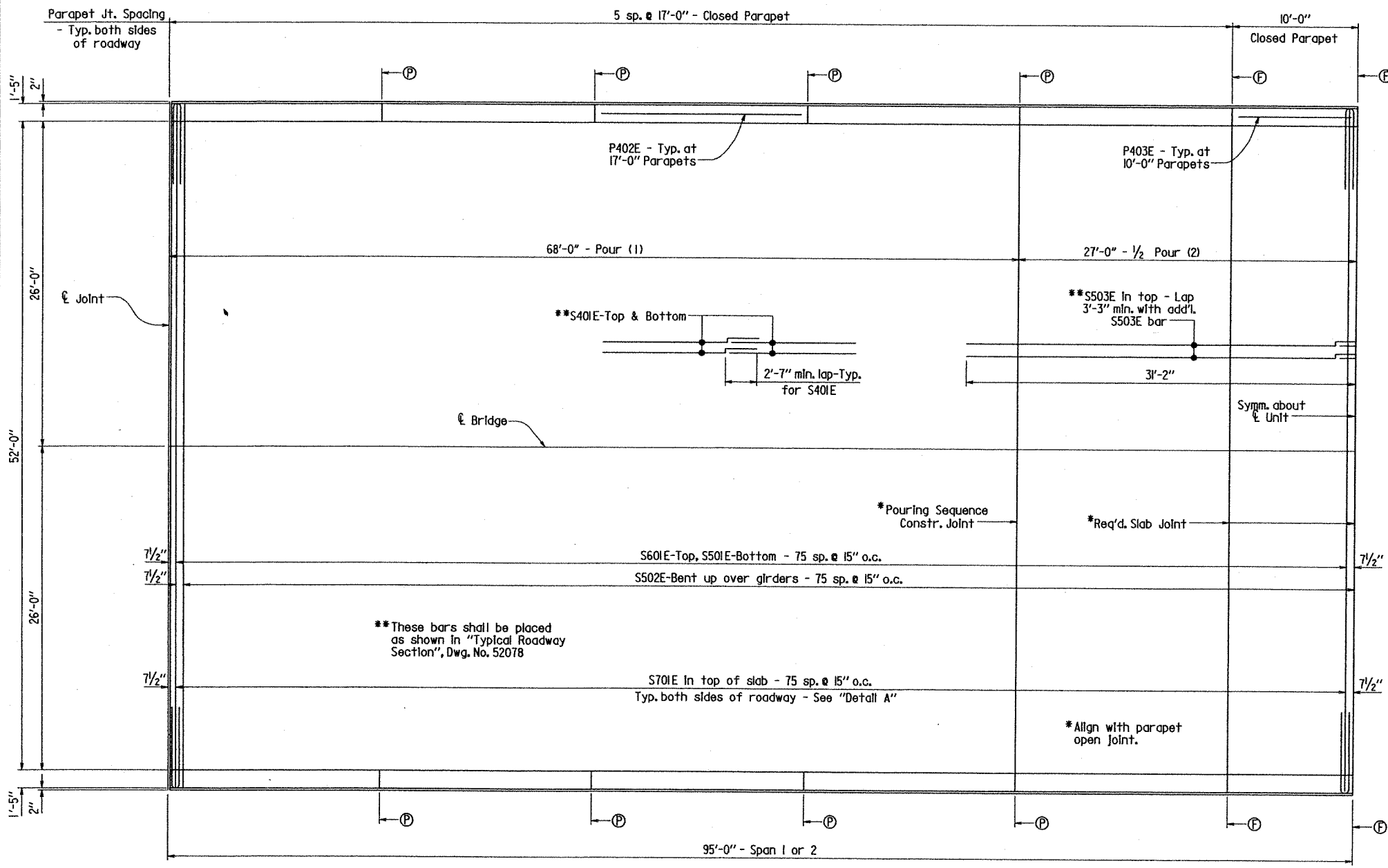
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 1-3-07 FILENAME: b090293x3_s2.dgn
CHECKED BY: CRE DATE: 10-3-07 SCALE: AS NOTED
DESIGNED BY: PJT DATE: 12-06
BRIDGE NO. 07220 DRAWING NO. 52079

NOTE: Pours with the same number may be placed simultaneously or separately. All Pours (1) must be placed before Pour (2) can be placed. 48 hours shall elapse between the end of a pour and the start of the next pour. 72 hours shall elapse between the end of a pour and the start of an adjacent pour. Any railing pours made before the entire slab unit has been placed must be approved by the Engineer. The contractor must obtain approval from the Engineer for any deviations from the pouring sequence shown.

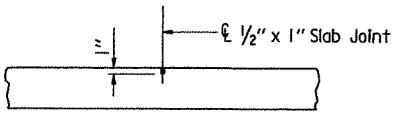
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				6	ARK.			
				JOB NO.		090293	124	266

① 07220 - 190 FT. UNIT - 52081

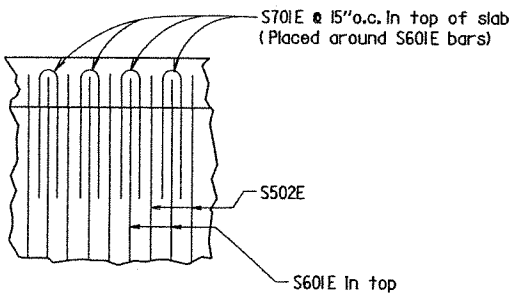


REINFORCING PLAN & DECK POURING SEQUENCE
Scale: 3/16" = 1'-0"

Use Type 3, 4, or 6 Joint Sealer. See subsections 501.02 (h) and 501.05 (j). Backer Rod filler will not be required. Joint Sealer shall be measured and paid for as Class S(AE) Concrete-Bridge. Slab joints shall extend to the outside edge of the deck slab. Slab joints shall be installed before the parapet railing is poured. If slab joints are to be sawed, they shall be sawed as soon as the concrete has sufficiently set to allow sawing of the joint without damage to the slab. Slab joints shall be placed at all pouring sequence construction joints and required slab joint locations. The joint sealer shall extend across the deck slab (gutterline to gutterline). Slab joints shall align with parapet open joints.



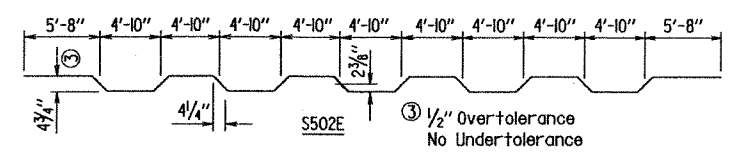
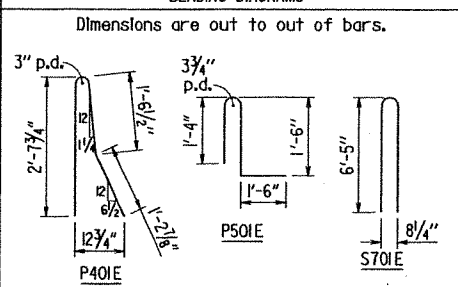
SLAB JOINT DETAIL
No Scale



DETAIL A
No Scale

BAR LIST

MARK	NO. REQ'D.	LENGTH	P.D.
S401E	710	40'-0"	Str.
P401E	760	5'-6"	2"
P402E	60	16'-8"	Str.
P403E	28	9'-8"	Str.
P404E	48	30'-0"	Str.
S501E	152	54'-10"	Str.
S502E	151	56'-1"	3"
S503E	184	32'-10"	Str.
P501E	760	4'-6"	3 3/4"
S601E	152	54'-8"	Str.
S701E	304	13'-1"	6 1/2"



Note: Bars marked with an "E" suffix shall be epoxy coated.

- ① Full-Depth Parapet Joint (1/4" to 1" max.) Stop 4" from top of slab.
- ② Partial-Depth Parapet Joint (1/4" to 1" max.) Stop 1'-2" from top of slab.

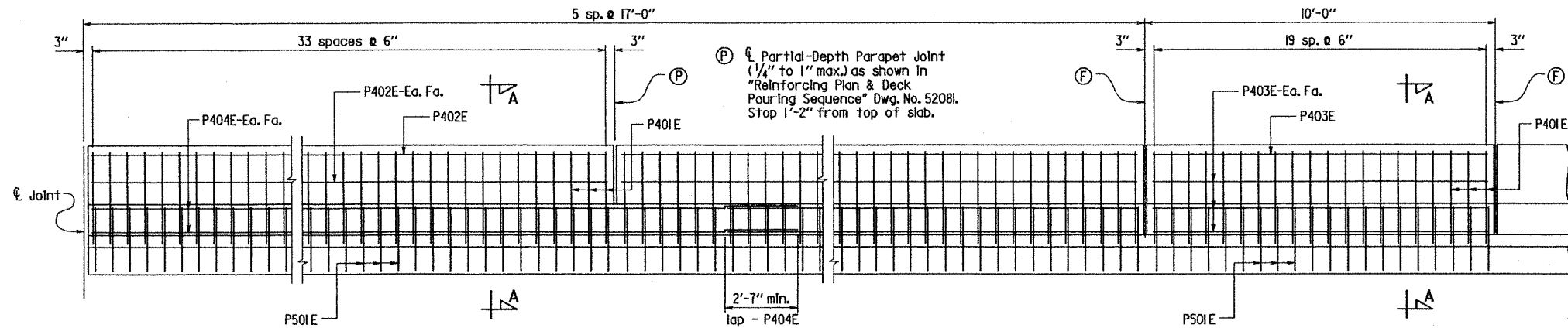
SHEET 4 OF 5
DETAILS OF 190' CONTINUOUS
COMPOSITE PLATE GIRDER UNIT
COUNTY ROAD 34

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

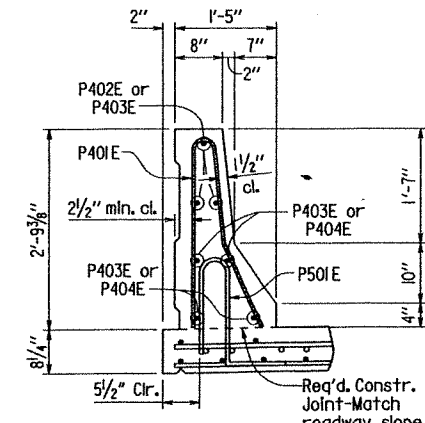


DRAWN BY: KDH DATE: 1-8-07
CHECKED BY: CRE DATE: 10-3-07
DESIGNED BY: PJT DATE: 12-06
BRIDGE NO. 07220 DRAWING NO. 52081
FILENAME: b090293x3_s4.dgn
SCALE: AS NOTED

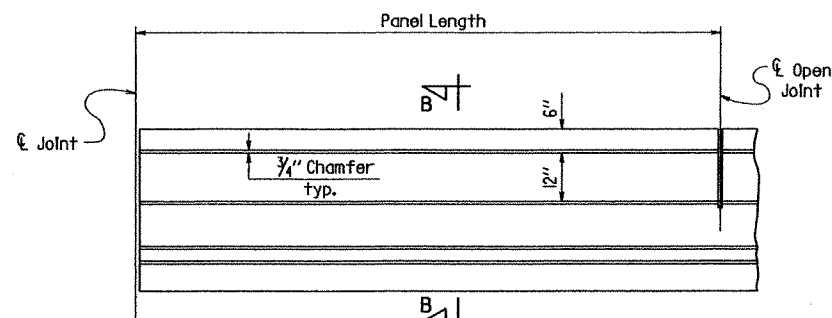
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		090293	125	266
						07220 - 190 FT. UNIT - 52082		



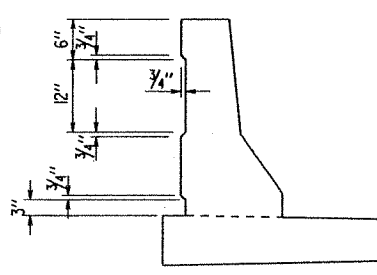
DETAILS OF PARAPET RAILING
Scale: 1/2" = 1'-0"



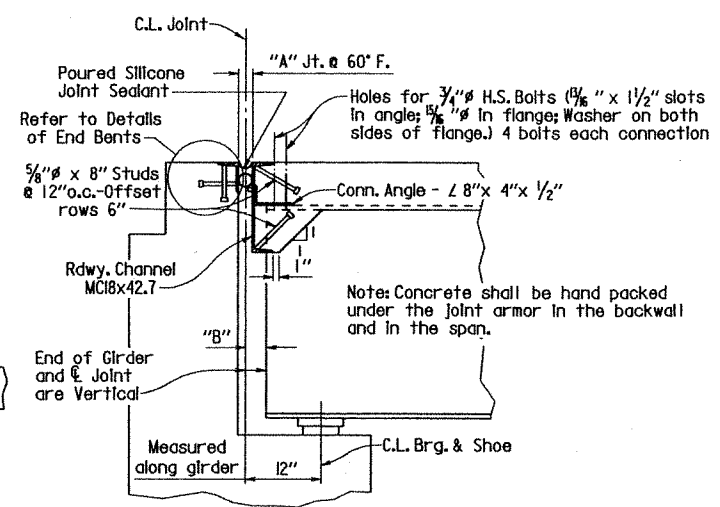
SECTION A-A
Scale: 3/4" = 1'-0"



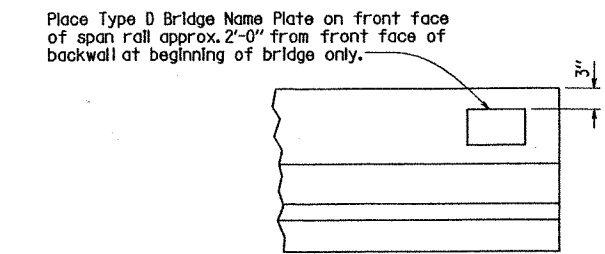
DETAILS OF PARAPET ENHANCEMENT
No Scale



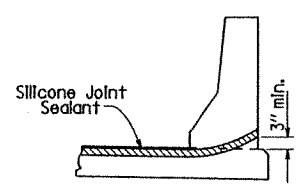
SECTION B-B
No Scale



SECTION THRU JOINT AT BENTS 1 & 3
Scale: 3/4" = 1'-0"

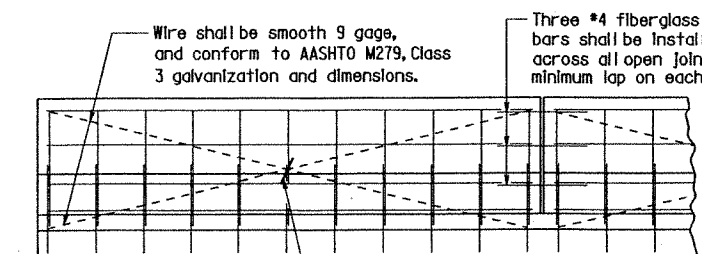


NAME PLATE DETAIL
No Scale



JOINT SEAL
PLACEMENT AT CURB
No Scale

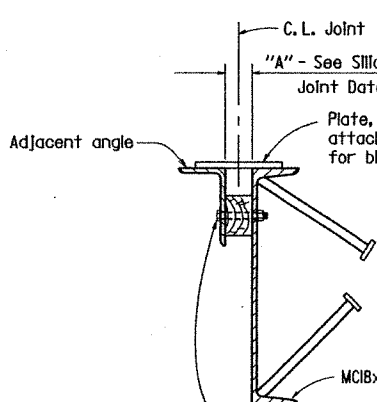
Note: Vertical joints may require forming. The clearance from deck surface to joint material shall be maintained.



DETAILS OF OPTIONAL SLIPFORMING OF CONCRETE PARAPET RAIL
No Scale

All panels shall be braced as required to prevent racking. All open joints shall be sawed as soon as practical to a minimum width of 1/4". To control cracking before sawing all joints must be grooved before the concrete is set. Sawing of the joints must be controlled so it will follow the grooved joint.

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

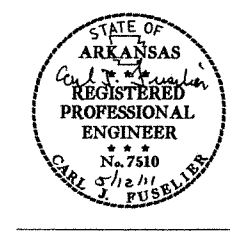


DETAILS FOR BLOCKING EXPANSION JOINT DEVICE
No Scale

EXPANSION DEVICE INSTALLATION

The Contractor may elect to install the expansion device for the end bents using one of the following two alternatives:

- 1) The concrete span pour adjacent to joint shall be placed before the end bent backwall is placed. After the end bent backwall forms are in place and the girders erected, the blocked expansion device shall be installed and adjusted for grade. All connection bolts shall be fully tightened prior to placing the deck concrete adjacent to the bent. Immediately prior to pouring the backwall concrete, the blocking shall be removed, the opening adjusted for temperature, and the backwall constructed.
- 2) The backwall shall be poured to the optional construction joint after girders are erected. The blocked expansion device shall be installed and adjusted for grade. All connection bolts shall be fully tightened prior to placing the deck concrete adjacent to the bent. Immediately prior to pouring the remainder of the backwall concrete, the blocking shall be removed and the opening adjusted for temperature. Backfill shall not be placed behind the backwall until the deck concrete on the adjacent span has been placed.



BRIDGE ENGINEER

SILICONE JOINT DATA

Bent Number	"A" Width Perpendicular to Joint at 24 Hour Average Temperature* Of:			"B" Perpendicular to Joint at 60°F	"D"
	40°F	60°F	80°F		
1 & 3	1 5/8"	1 1/2"	1 3/4"	2" ±	4"

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

Notes: The temperature limitations recommended by the sealant manufacturer shall be observed.

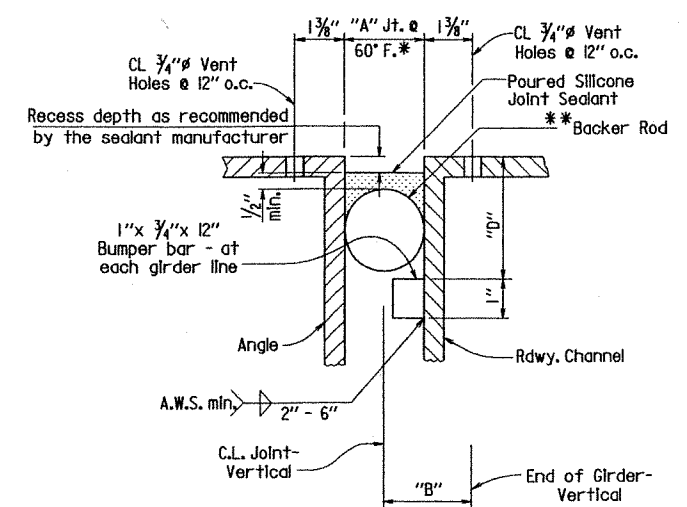
The sealant shall be installed only when the average 24 hour air temperature is between 40° and 80°F.

BACKER ROD NOTE:

Use an appropriately sized backer rod at the depth shown in the manufacturer's literature based on the joint width at the time of sealing.

Except as noted, do not install more backer rod that can be sealed in the same day.

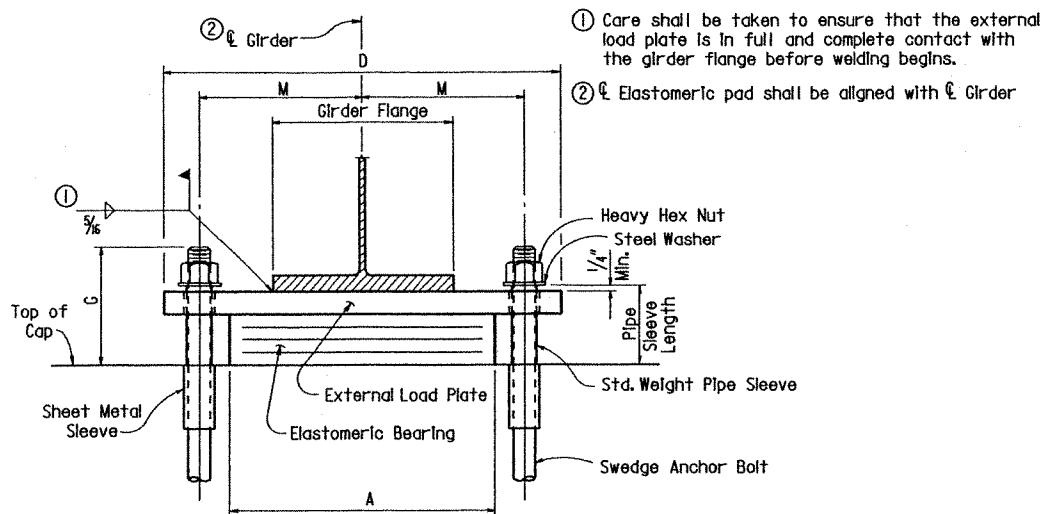
The contractor shall verify separation of the backer rod from the joint material after the joint material has set.



DETAIL OF POURED SILICONE JOINT SEAL
No Scale

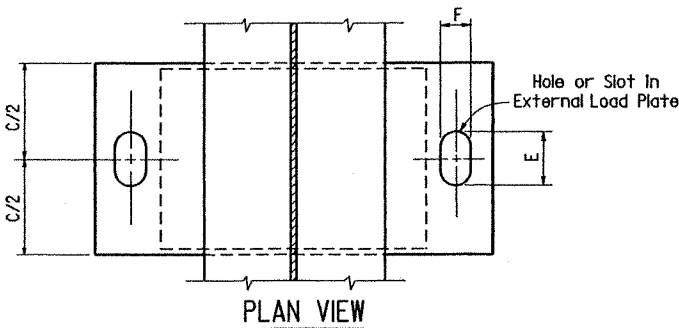
SHEET 5 OF 5
DETAILS OF 190' CONTINUOUS COMPOSITE PLATE GIRDER UNIT
COUNTY ROAD 34
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: KDH DATE: 1-8-07
CHECKED BY: CRE DATE: 10-3-07
DESIGNED BY: PJT DATE: 12-06
BRIDGE NO. 07220 DRAWING NO. 52082

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		090293	126	266
						07220 - ELASTO. BRGS. - 52083		

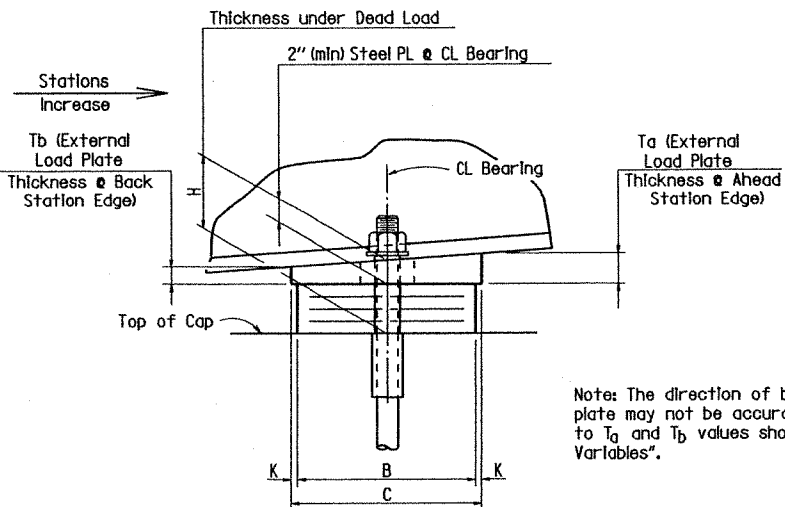


FRONT VIEW

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

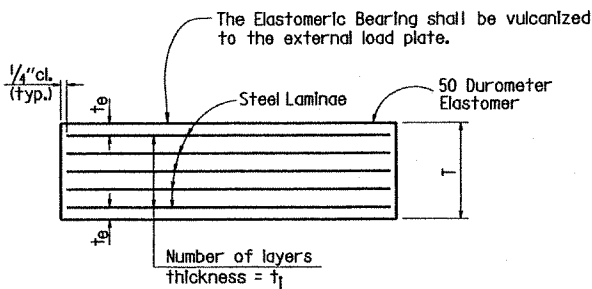


PLAN VIEW



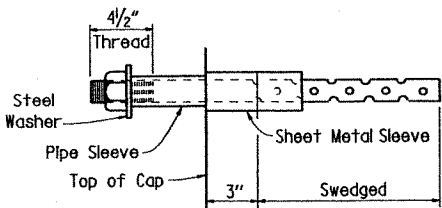
SIDE VIEW

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



t_e = thickness of elastomer cover on top and bottom of pad
 t_1 = thickness of elastomer between steel laminas
 N = number of elastomer layers of thickness t_1

ELASTOMERIC BEARING



ANCHOR BOLT DETAIL

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

If Anchor Bolts are to be drilled and grouted in place, the Galvanized Sheet Metal Sleeves shall be cast in place as shown. Sleeves shall be dry packed with styrofoam, urethane foam or approved equal prior to pouring of concrete. After pouring of the cap and prior to erection of Structural Steel, the dry pack shall be removed and holes for the anchor bolts shall be accurately drilled into the masonry. Bolts placed in drilled holes shall be accurately set and fixed using a DPL approved epoxy or non-shrink grout that completely fills the holes. Galvanized Sheet Metal Sleeves will not be paid for directly, but will be considered subsidiary to the Item "Structural Steel in Plate Girder Spans (M270, Gr. 50W)".

GENERAL NOTES

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

External load plates shall conform to AASHTO M270, Grade 50W. Pipe sleeves shall be ASTM A53, Grade B, and shall be galvanized to conform to AASHTO M 232, Class C or AASHTO M 298, Class 50.

External load plates shall be completely fabricated (including bevel and bolt holes) and shall be cleaned before vulcanizing to the elastomeric bearing. The surface in contact with the elastomeric bearing shall be cleaned in accordance with subsection 808.03. Other surfaces shall be blast cleaned in accordance with subsection 807.84(e) for unpainted Grade 50W steel.

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

Pipe sleeves, anchor bolts, washers and nuts shall be paid for at the unit price bid for "Structural Steel in Plate Girder Spans (M270, Gr. 50W)". External load plates will not be measured or paid for separately but will be considered included in the unit bid price for "Elastomeric Bearings".

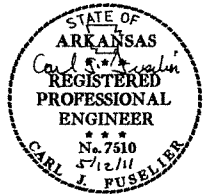
Bearings shall be firmly seated in accordance with Subsection 808.08. This work and materials shall be considered subsidiary to the Item "Elastomeric Bearings" and shall not be paid for directly.

TABLE OF FABRICATOR VARIABLES

TABLE OF FABRICATOR VARIABLES							ELASTOMERIC PAD							EXTERNAL LOAD PLATE								ANCHOR BOLT						
BRIDGE NO.	LOCATION			BEARING TYPE	NO. of BEARINGS EACH BENT	*MAXIMUM DESIGN LOAD (KIPS)	G	H	A	B	N	t ₁	t _e	NO. & THICKNESS OF STEEL LAMINAE	T	C	D	E	F	K	M	T _a	T _b	ANCHOR BOLT		PIPE SLEEVE SIZE (ø x L)	SHEET METAL SLEEVE SIZE (ø x L)	STEEL WASHER SIZE (O.D.)
	BENT NO(S).	UNIT	BEAM NO.																					(ø x L)	GRADE			
07220	1	190'	AI1	Exp.	6	138	7"	4 1/2"	19"	11"	3	1/2"	5/16"	4 @ 12 Gauge	2 3/16"	12"	29"	3 3/8"	2 1/4"	1/2"	11 3/4"	2.07"	1.93"	1 1/2"øx23 1/2"	55	1 1/2"øx4 3/4"	3"øx6"	3"ø
	2	190'	AI1	Fix	6	364	8 7/8"	5 1/16"	22"	12"	4	1/2"	5/16"	5 @ 12 Gauge	3 1/8"	13"	35"	3 3/4"	3 3/4"	1/2"	14"	2.00"	2.00"	2 1/2"øx35 1/2"	55	3"øx5 3/8"	4"øx6"	4 1/2"ø
	3	190'	AI1	Exp.	6	138	7"	4 1/2"	19"	11"	3	1/2"	5/16"	4 @ 12 Gauge	2 3/16"	12"	29"	3 3/8"	2 1/4"	1/2"	11 3/4"	1.93"	2.07"	1 1/2"øx23 1/2"	55	1 1/2"øx4 3/4"	3"øx6"	3"ø

* Maximum Design Load = Service I Limit State

Tabular Data by : KDH Date: 11-07
Checked by : CRE Date: 10-3-07
Designed by : PJT Date: 12-06

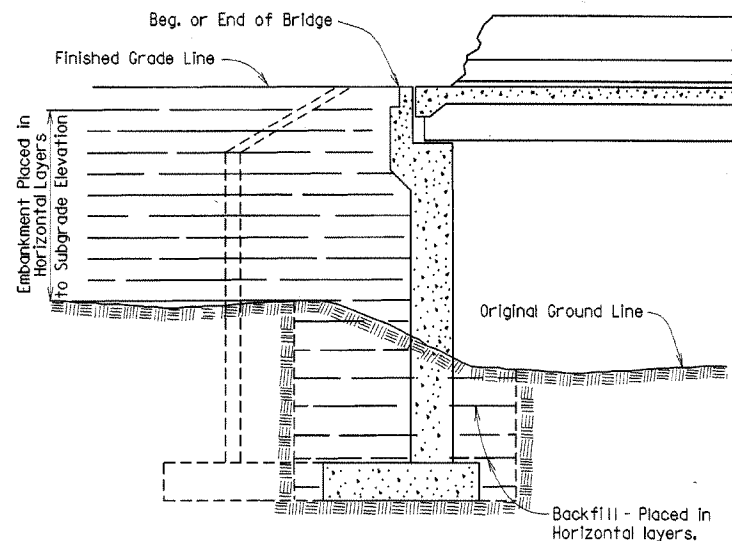


BRIDGE ENGINEER

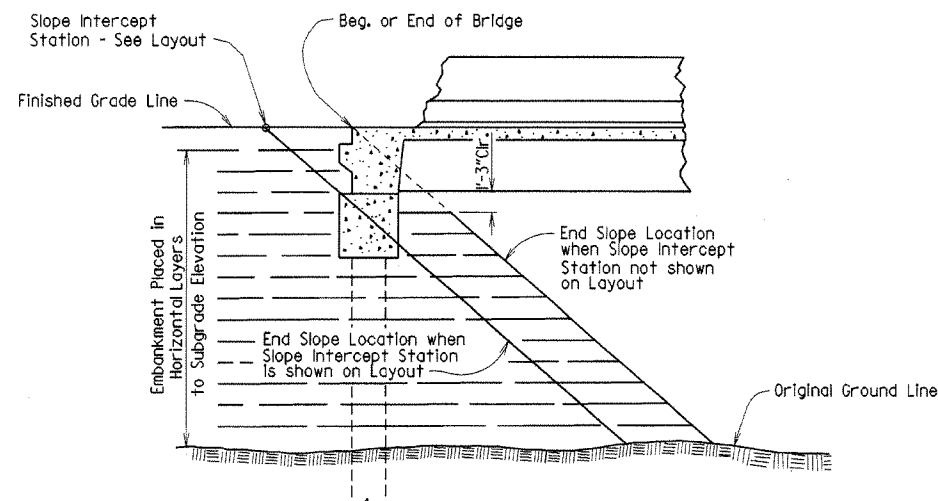
DETAILS OF ELASTOMERIC BEARINGS
COUNTY ROAD 34
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: MJT DATE: Nov. 12, 96 FILENAME: b090293x3_el.dgn
CHECKED BY: AMS DATE: Nov. 15, 96 SCALE: NONE
DESIGNED BY: SHD DATE:
BRIDGE NO. 07220 DRAWING NO. 52083

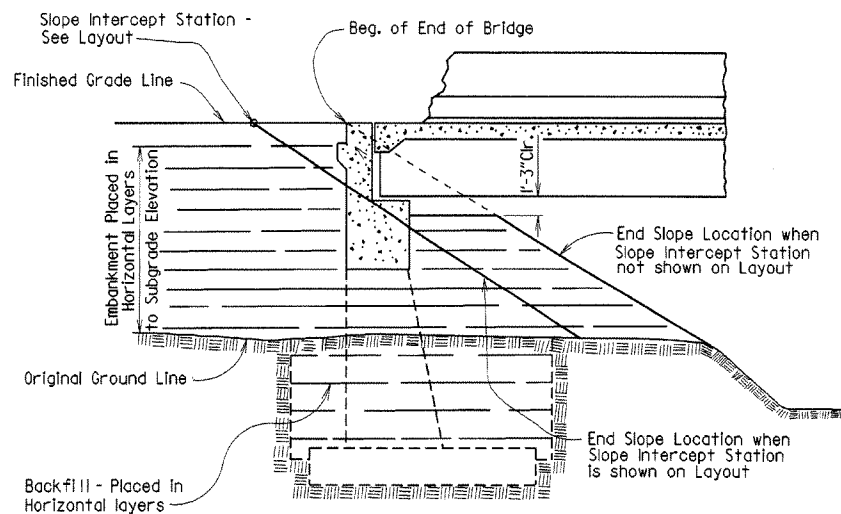
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04-10-2003				6	ARK.		127	
				JOB NO.				
				①	EMBANKMENT & BACKFILL			1888A



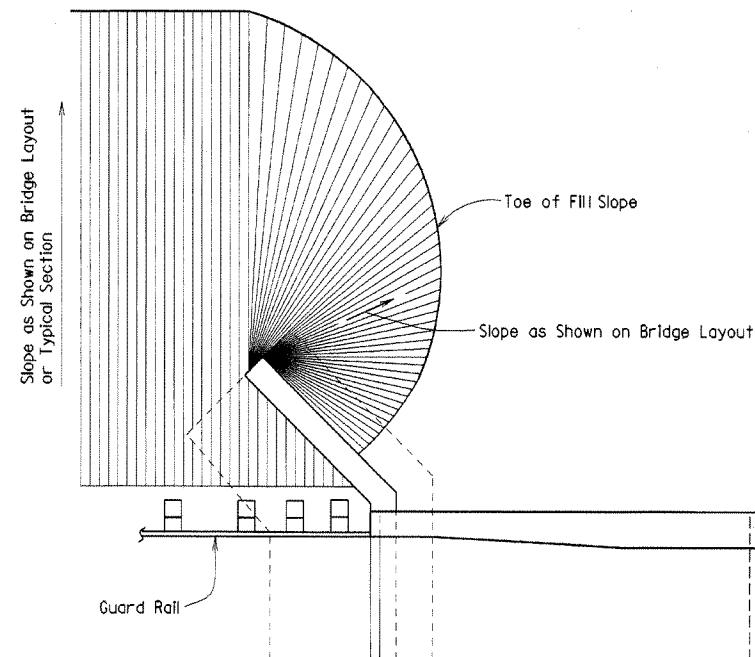
EMBANKMENT CONSTRUCTION AND FOOTING BACKFILL AT VERTICAL WALL ABUTMENTS



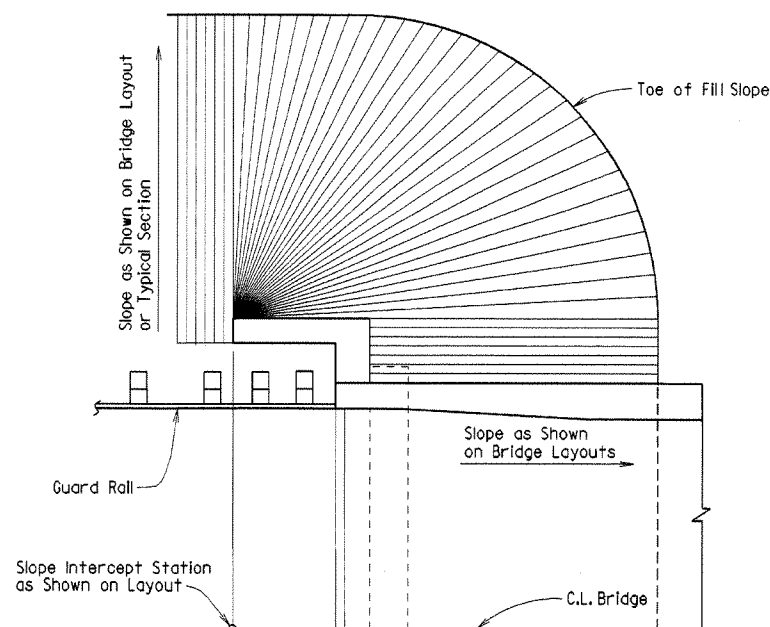
EMBANKMENT CONSTRUCTION AT SPILL-THROUGH PILE END BENTS



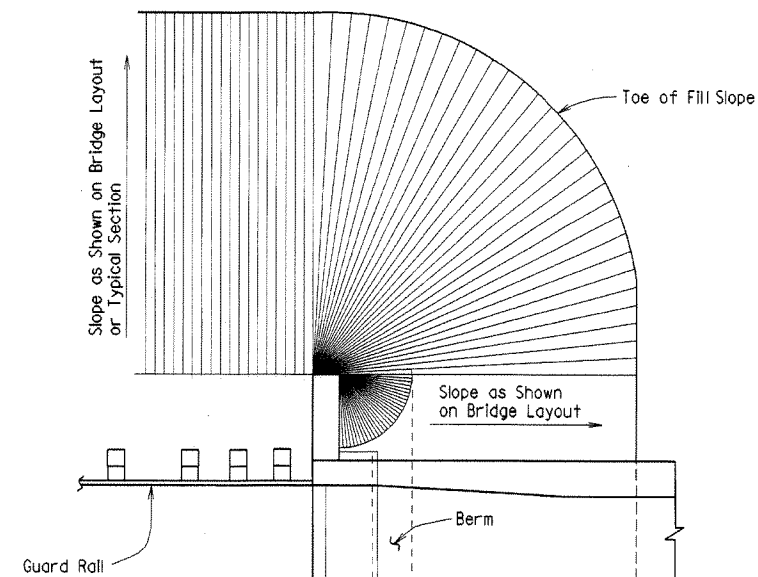
EMBANKMENT CONSTRUCTION AND FOOTING BACKFILL AT SPILL-THROUGH END BENTS



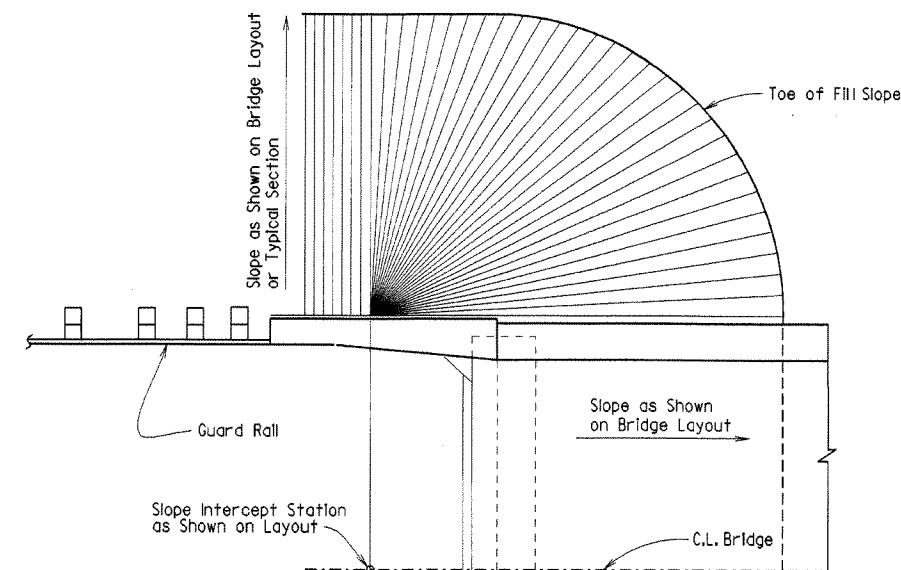
VERTICAL WALL ABUTMENTS



SPILL-THROUGH END BENTS WITH TURNBACK WING



SPILL-THROUGH END BENTS WITH STUB WING



SPILL-THROUGH END BENTS WITH TRANSITION WING

METHOD OF DETERMINING FILL SLOPE LOCATION AT BRIDGE ENDS

GENERAL NOTES

The Bridge End Embankment shall be defined as a section of embankment, not less than 20 feet long adjacent to the bridge end, together with the side slopes and slopes under the bridge end including around the end of wingwalls. Embankment adjacent to structures shall be constructed in 4 inch horizontal layers (loose measure) and compacted by the use of mechanical equipment to the satisfaction of the Engineer. Refer to subsections 210.09, 210.10 and 801.08 of the Specifications for construction requirements.

Revised and redrawn MJT 04-10-2003
Chk'd. By: CJF 04-10-2003



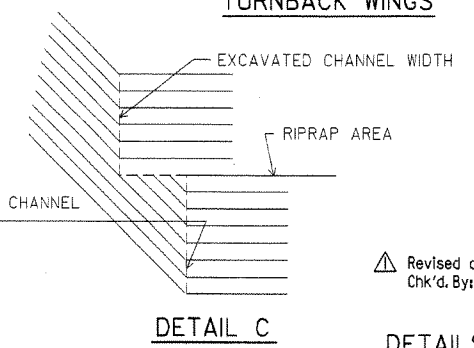
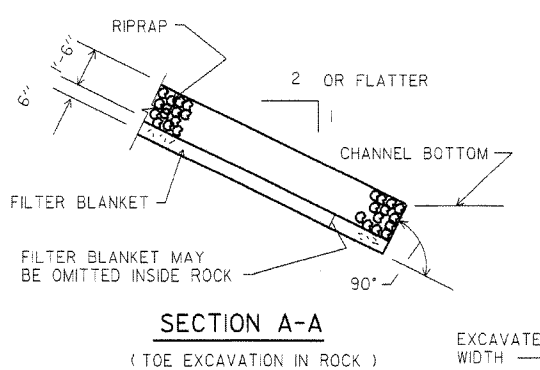
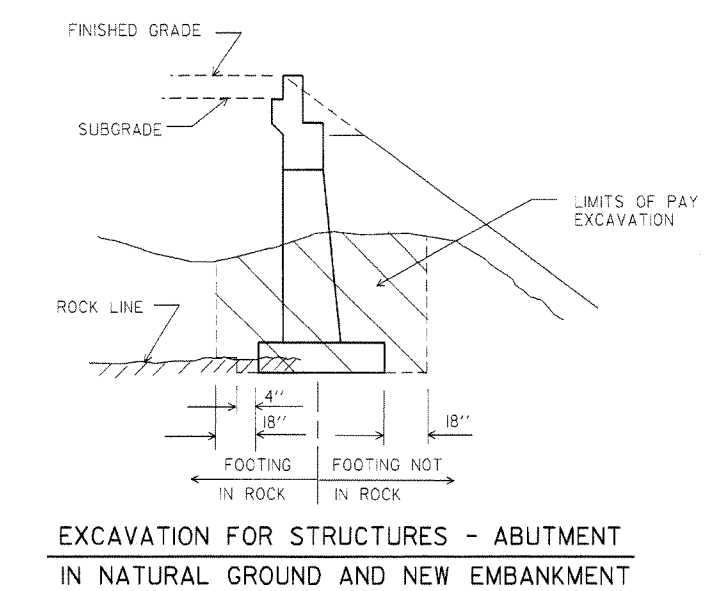
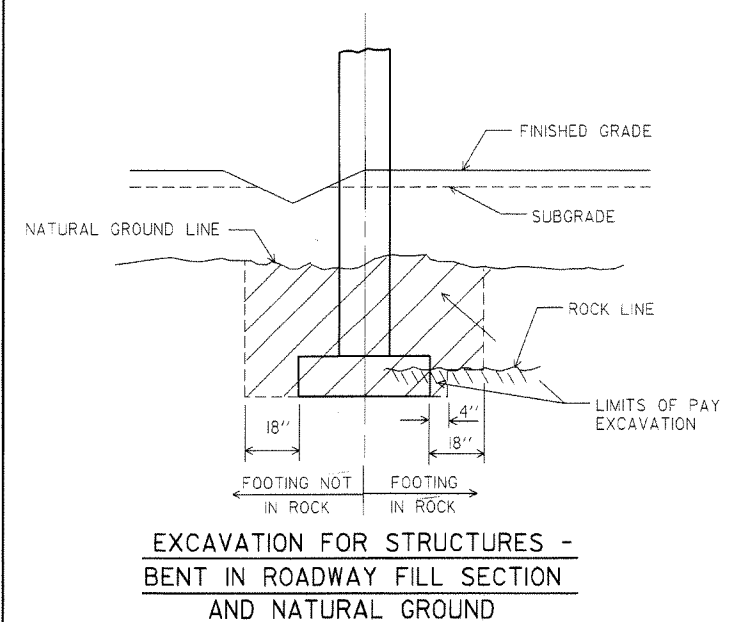
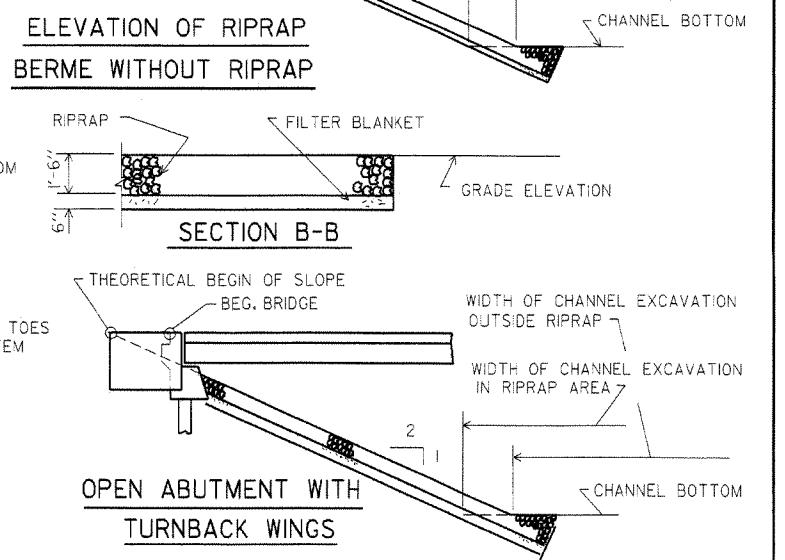
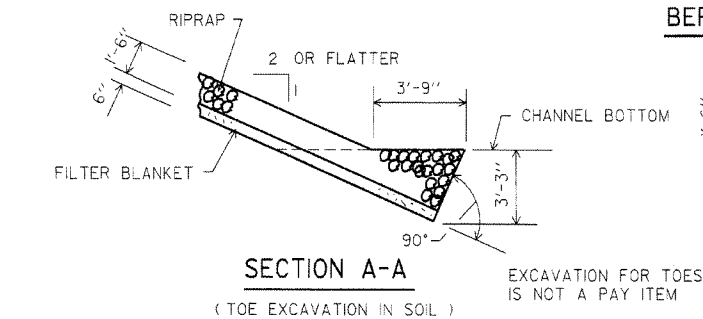
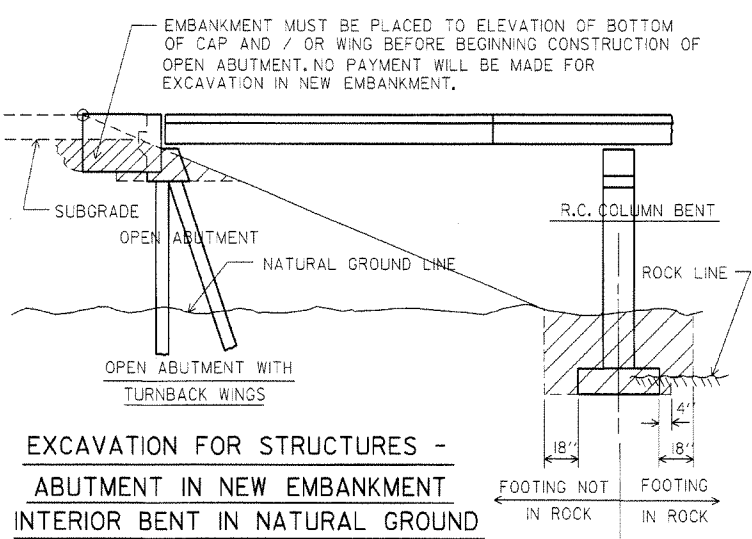
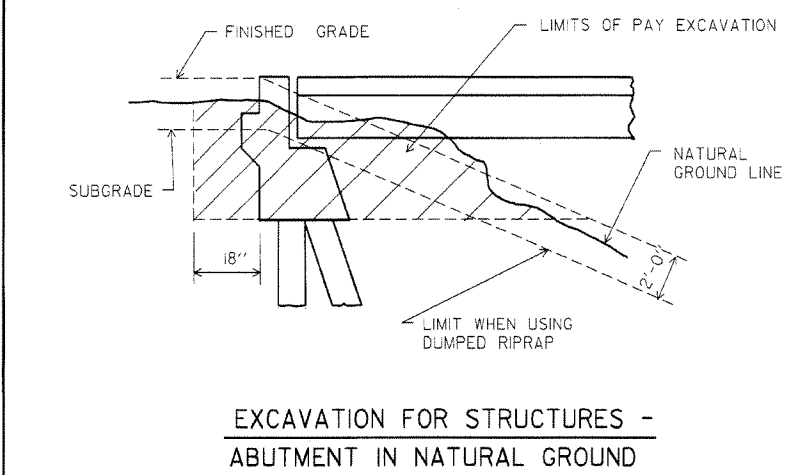
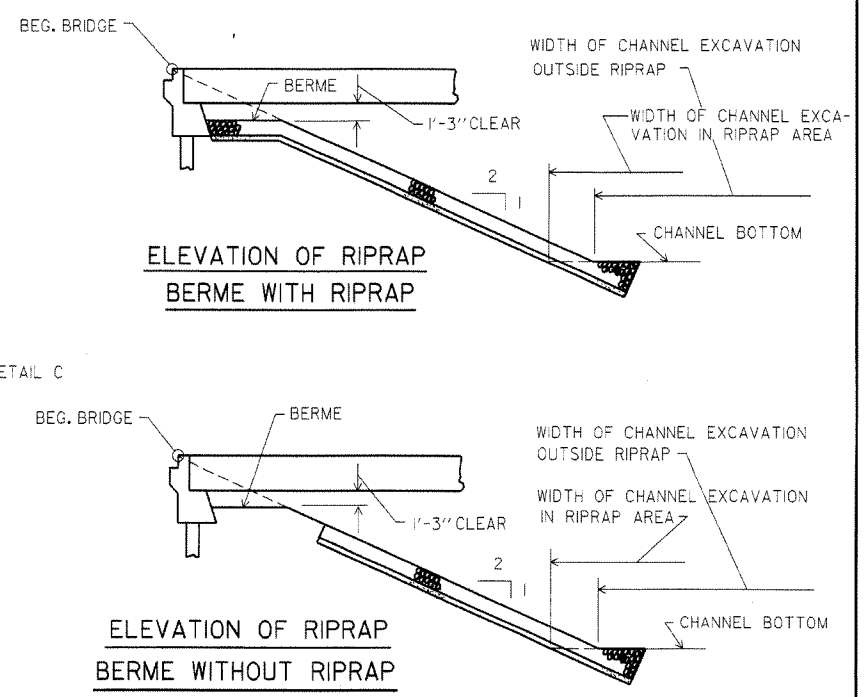
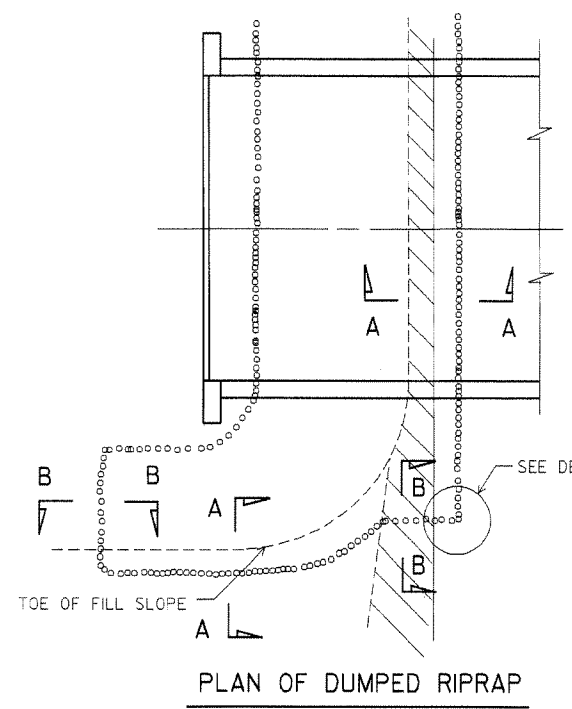
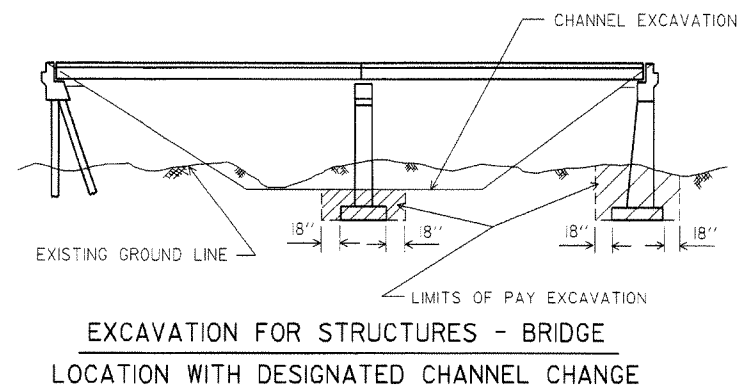
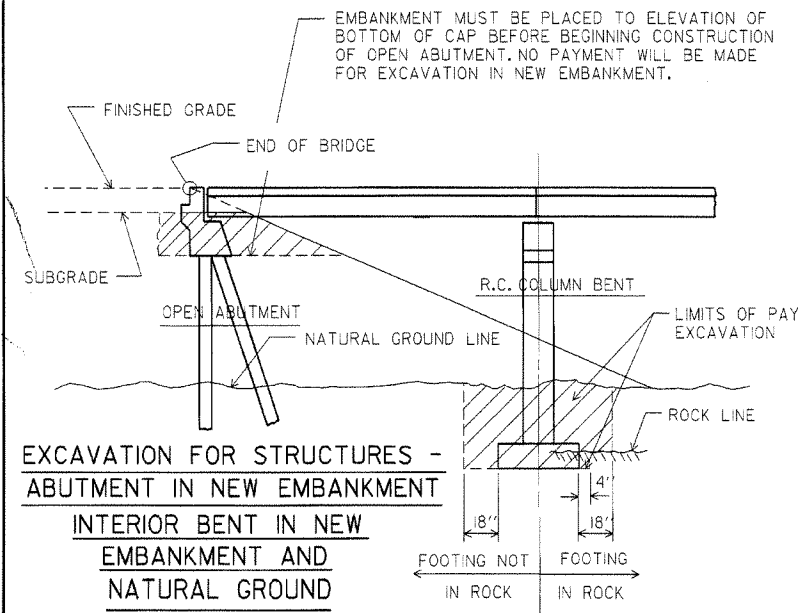
BRIDGE ENGINEER

EMBANKMENT CONSTRUCTION AND BACKFILL AT BRIDGE ENDS

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

DRAWN BY: MJT DATE: 04-10-2003 FILENAME: B1888A.STD
CHECKED BY: CJF DATE: 04-10-2003 SCALE: NO SCALE
DESIGNED BY: STD DATE: NO SCALE
BRIDGE NO. DRAWING NO. 1888A

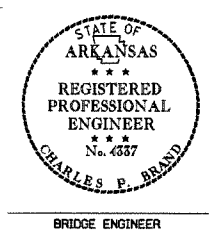
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04-10-2003				6	ARK.		128	
				JOB NO.				
				RIP. & EXCAV. 1891F				



NOTE: USE THIS TYPE OF TOE WHEN ROCK IS ENCOUNTERED WHICH IS IN A STABLE CONDITION.

NOTE: IN LIEU OF AN AGGREGATE FILTER BLANKET, A SYNTHETIC FIBER GEOTEXTILE FABRIC COMPLYING WITH THE REQUIREMENTS OF SUBSECTION 816.02(a) MAY BE USED.

NOTE: DETAILS FOR COMPUTING EXCAVATION FOR STRUCTURES ARE INCLUDED FOR INFORMATION AS TO HOW PLAN QUANTITIES WERE CALCULATED AND FOR USE WHEN ADJUSTING QUANTITIES WHEN CHANGING FOOTING ELEVATION.

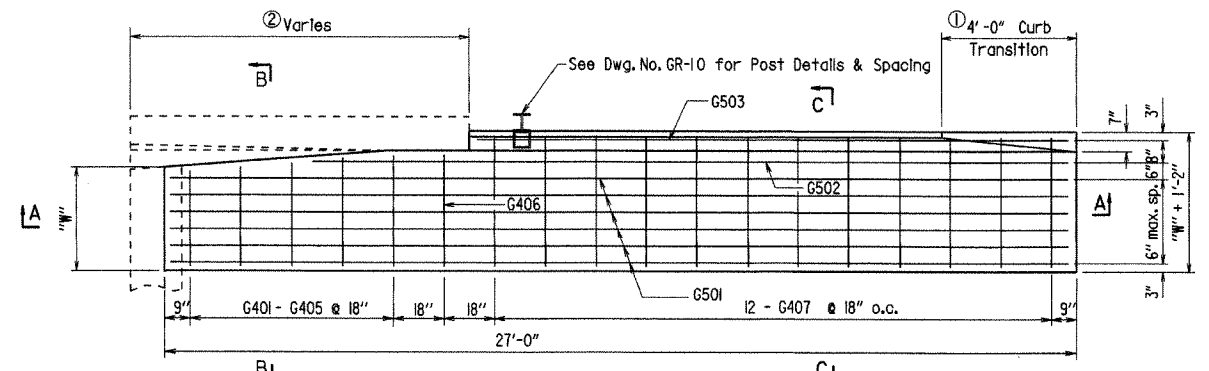


Revised and redrawn MJT 04-10-2003
Chk'd. By: CJF 04-10-2003

DETAILS FOR DUMPED RIPRAP
AND FILTER BLANKET AND
DETAILS FOR COMPUTING
EXCAVATION FOR STRUCTURES
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

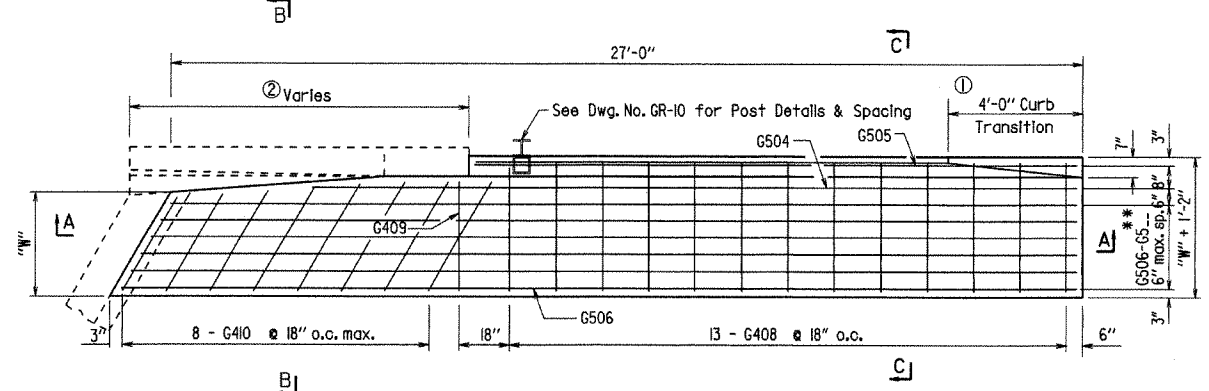
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DESIGNED BY: STD DATE: BRIDGE NO. DRAWING NO. 1891F

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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07-14-2010								
				JOB NO.				
				TYPE B GUTTERS			2016B	



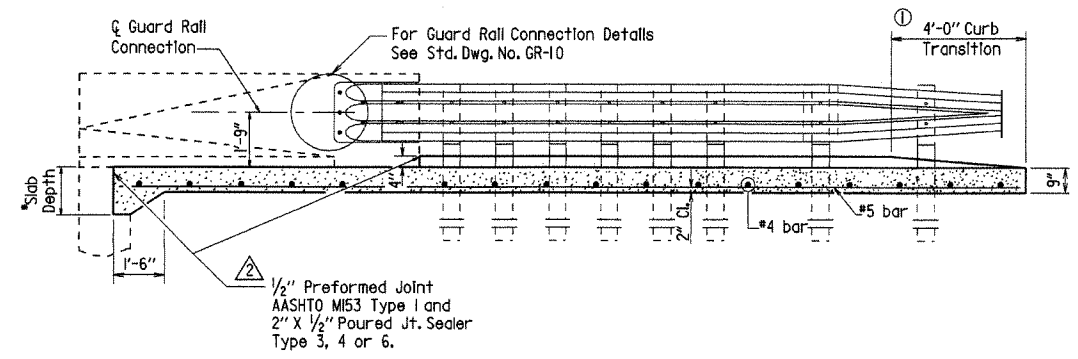
HALF PLAN OF APPROACH GUTTERS FOR SQUARE BRIDGE

② Length varies. See End Bent details for actual length. Quantities shown are for 10'-0" Transition Rail.



PLAN OF APPROACH GUTTERS FOR SKEWED BRIDGE

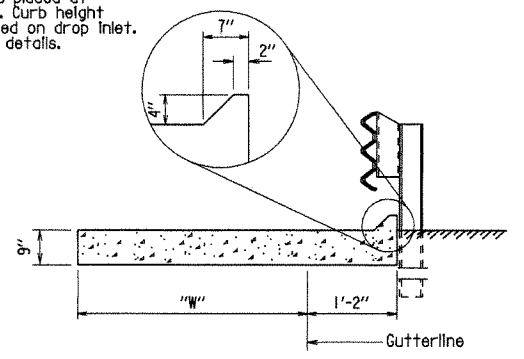
NOTE: Reinforcing Steel is similar as shown for opposite side



SECTION A - A

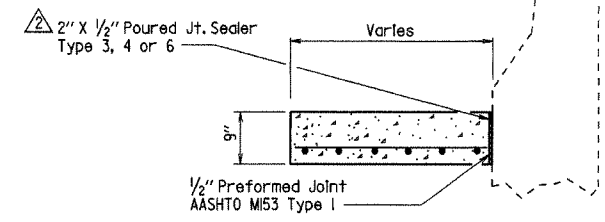
* Slab Depth Varies - See Span and Bent Details

① Construct gutter curb with height-transition as shown. If drop inlet is not placed at end of gutter.
Construct gutter curb full height (no height-transition) if drop inlet is placed at end of gutter. Curb height transition placed on drop inlet. See drop inlet details.



SECTION C - C

N.T.S.



SECTION B - B

N.T.S.

*** BAR LIST ②
TYPE B GUTTER

Mark	No. Required for Width "W"				Length	Square or Skewed
	3'-0"	4'-0"	6'-0"	8'-0"		
G401 - G405	1 each	1 each	1 each	1 each	"W" - 3" to "W" + 3"	Square
G406	1	1	1	1	"W" + 3"	Square
G407	12	12	12	12	"W" + 10"	Square
G408	13	13	13	13	"W" + 10"	Skewed
G409	1	1	1	1	"W" + 3"	Skewed
G410	8	8	8	8	*	Skewed
G501	6	8	12	16	26'-8"	Square
G502	1	1	1	1	22'-2"	Square
G503	1	1	1	1	17'-8"	Square
G504	1	1	1	1	*	Skewed
G505	1	1	1	1	*	Skewed
G506 - G5**	1 each	1 each	1 each	1 each	*	Skewed

* Bar Lengths vary with Skew,
** G512 for "W" = 3'
G514 for "W" = 4'
G518 for "W" = 6'
G522 for "W" = 8'

QUANTITIES FOR ONE SQUARE APPROACH GUTTER

"W" Width (ft.)	Reinforcing Steel (lbs.)	Concrete (cubic yards)
3	252	3.00
4	319	3.75
6	459	5.25
8	590	6.75

GENERAL NOTES

Concrete shall be Class S or Class S(AE) or mixture used for Portland Cement Concrete Pavement.
Reinforcement Steel shall conform to AASHTO M31 or M53, Grade 60 (fy = 60,000 psi).
Approach Gutters will be measured and paid for in accordance with Section 504 of the Standard Specifications.

△ Revised and redrawn 4-10-2003. By KDH Ck. By: CJF 4-10-2003
△ Added joint sealer type & revised transition rail length 07-14-2010 by MJT Checked by: CJF 07-14-2010

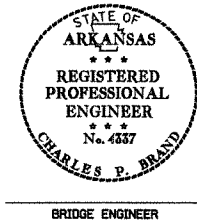
*** Special bar list required when skew angle exceeds 40° for W = 8'; 50° for W = 6'; or 60° for W = 4'.

DETAILS OF STANDARD TYPE B APPROACH GUTTERS

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 4-10-2003 FILENAME: B2016B.STD
CHECKED BY: CJF DATE: 4-10-2003 SCALE: 3/8" = 1'-0"
DESIGNED BY: STD DATE:
BRIDGE NO. DRAWING NO. 2016B

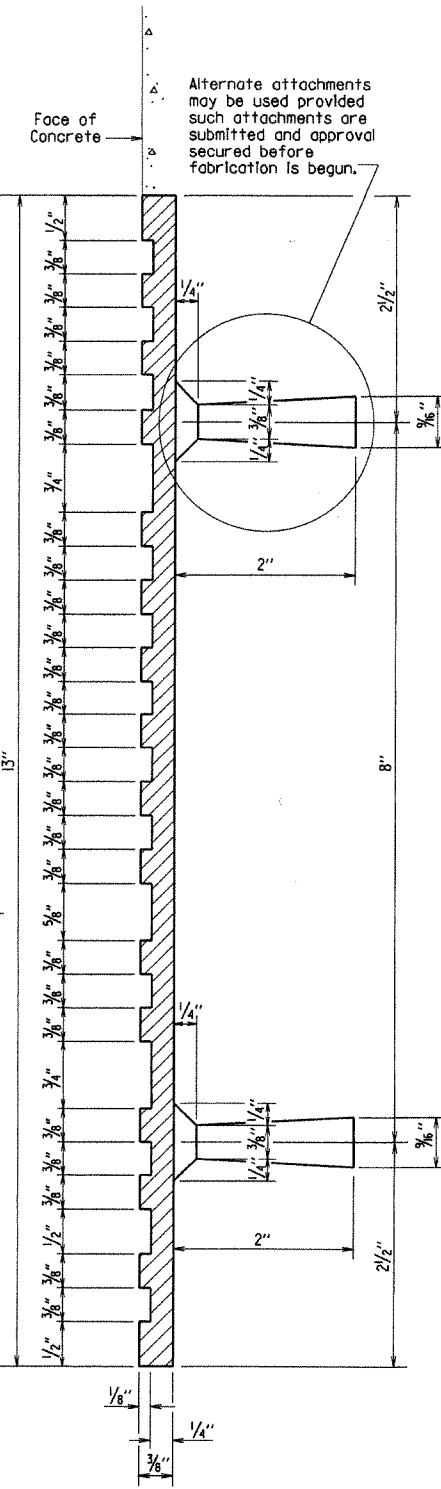
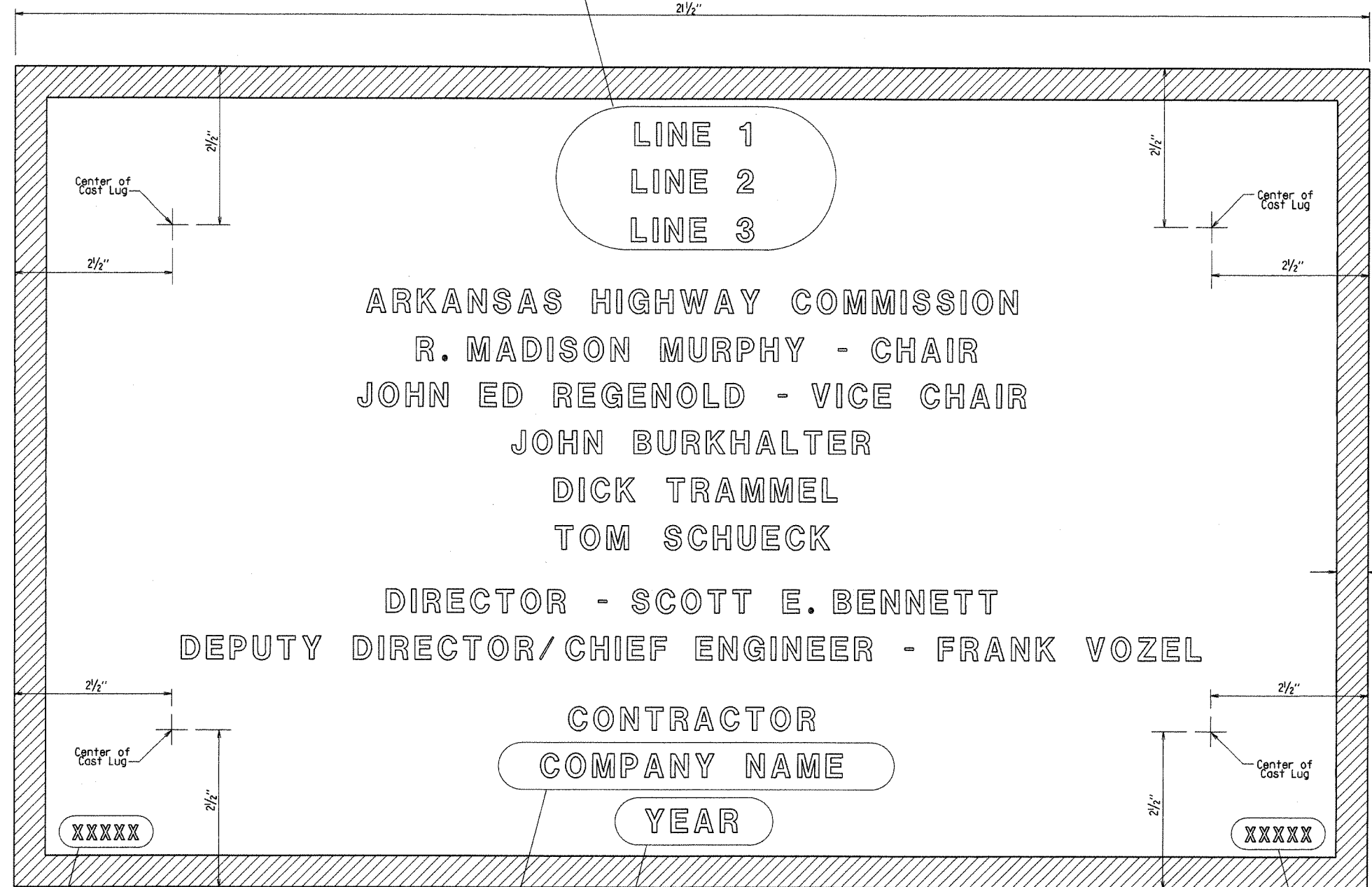


BRIDGE ENGINEER

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
9-8-11				6	ARK.		130	
				JOB NO.			NAME PLATE	2387

The name of the bridge as shown on the plans shall be placed on Lines 1 - 3 using 1/8" raised letters and numerals 3/8" high.

Line 1	Example 1 Red River Relief	Example 2 Southern Railroad Overpass	Example 3 Saline River Relief	Example 4 Highway 5
--------	----------------------------------	---	--	------------------------



GENERAL NOTES

Specifications: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, (2003 Edition) with applicable Supplemental Specifications and Special Provisions.

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

Body of plate shall be 1/4" thick and shall include four tapering cone lugs 3/8" to 5/8" x 2" long. The border and all lettering shall be raised 1/8" above the face of plate and shall be polished.

All lettering shall be plain gothic, square cut and not tapered. The number of plates required and the location and name on the plate for each bridge shall be as designated on the plans.

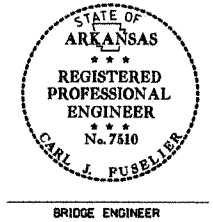
Place the design live loading here using 1/8" raised letters and numerals 1/4" high. Examples: HS 20 HL-93

Place the Year in which Contract was awarded here using 1/8" raised numerals 3/8" high. Example: 2001

Place the name of the company awarded the construction contract here using 1/8" raised letters and numerals 3/8" high. Example: ABCD CONSTRUCTION, INC.

Place the Bridge number here using 1/8" raised letters and numerals 1/4" high. Examples: A1234 05432

TYPICAL BRIDGE NAME PLATE



**DETAILS OF STANDARD TYPE D
BRIDGE NAME PLATE**

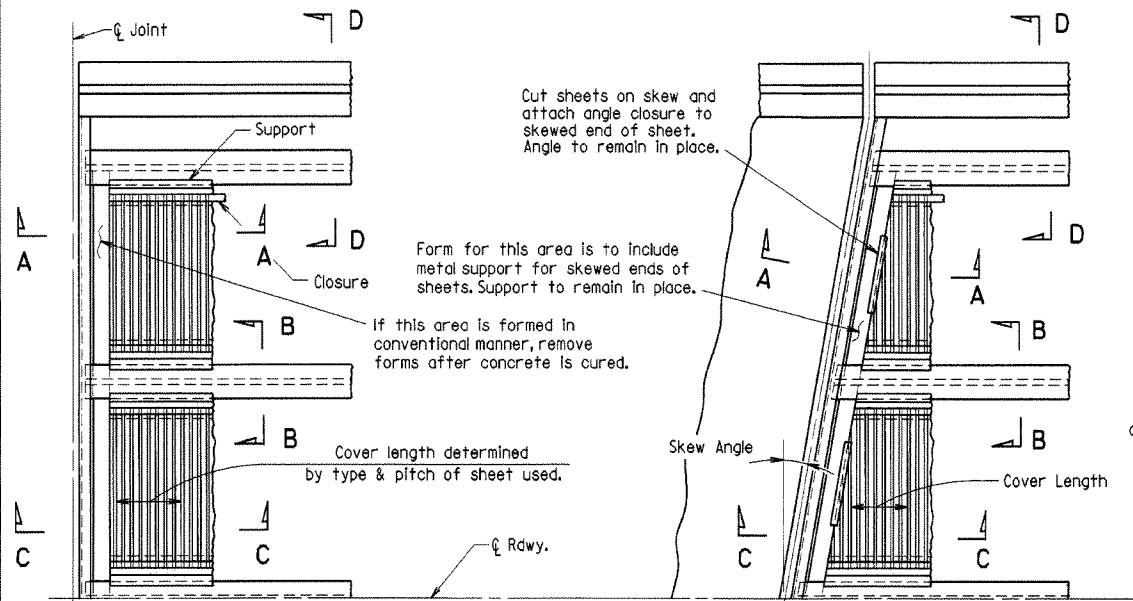
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 9-8-11 FILENAME: B2387.STD
CHECKED BY: CRE DATE: 9-8-11 SCALE: 1'-0" = 1'-0"
DESIGNED BY: STD. DATE: OR AS NOTED
BRIDGE NO. DRAWING NO. 2387

Revised and Redrawn
9-8-11 KDH Checked By: CRE

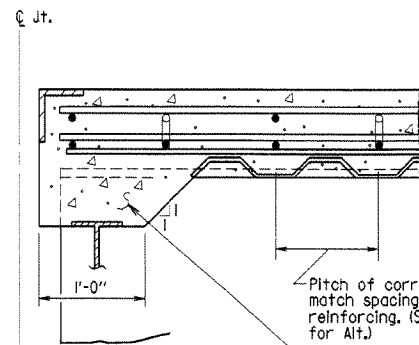
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04-10-2003										

BR. DECK FORMS 14991



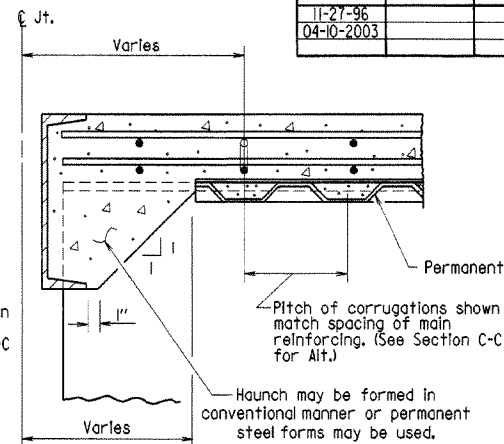
PART PLAN - SQUARE SPAN

PART PLAN - SKEWED SPAN



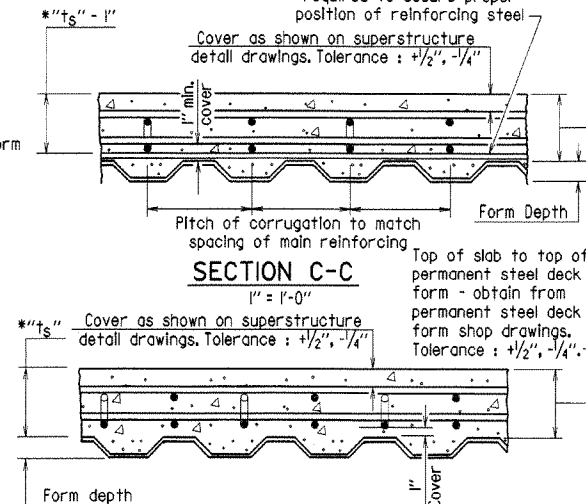
SECTION A-A

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



SECTION A-A

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



SECTION C-C - ALTERNATE

N.T.S.
(Applicable when corrugations do not match spacing of main reinforcement)

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

GENERAL NOTES

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

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

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

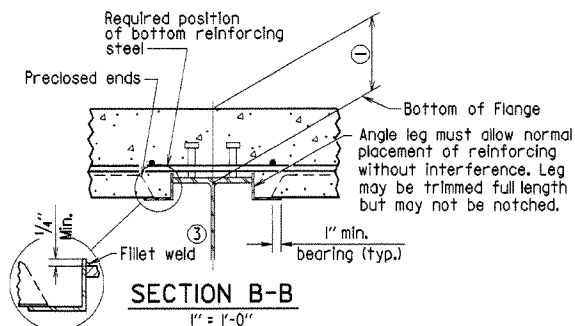
Form sheets shall be fastened to supporting members and to each other with galvanized metal screws sufficient in size and number to provide a secure attachment. Alternate methods of attachment must be approved by the Bridge Engineer.

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

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

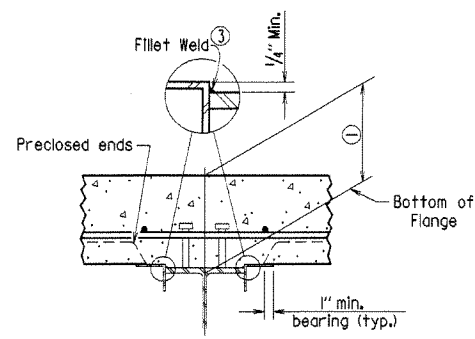
High chairs shall be sized to support the top mat of reinforcing at the proper position. High chairs shall be placed at locations shown on the detail drawings.

Specifications: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2003 Edition), with applicable supplemental specifications and special provisions.



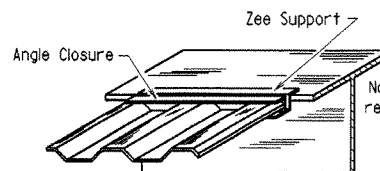
SECTION B-B

(Showing permissible support for tension flange where shear connectors are used, and for all compression flanges)

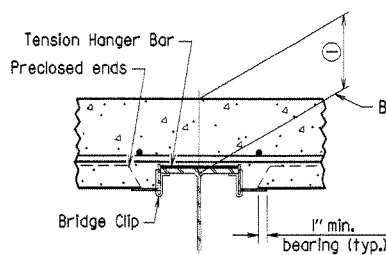


SECTION B-B

(Showing permissible support for tension flange where shear connectors are used and for all compression flanges)

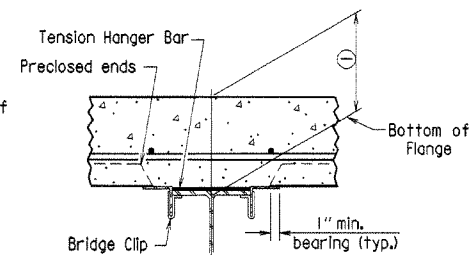


SKETCH OF PERMISSIBLE SUPPORTS



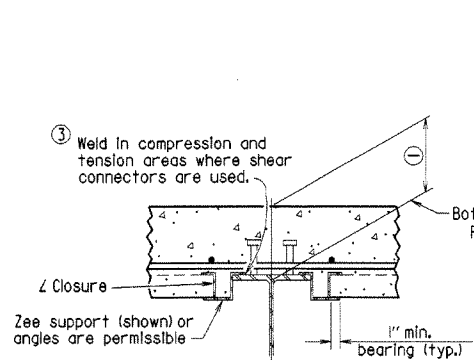
SECTION B-B

(Showing permissible support for tension flange where shear connectors are not used)



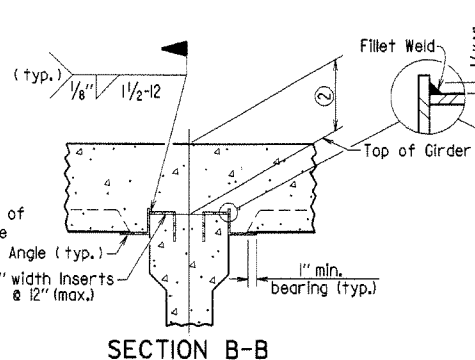
SECTION B-B

(Showing permissible support for tension flange where shear connectors are not used)



SECTION B-B

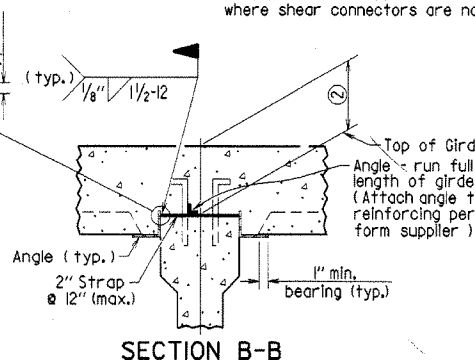
(Showing Z Closure)



SECTION B-B

(FOR CONCRETE GIRDERS)

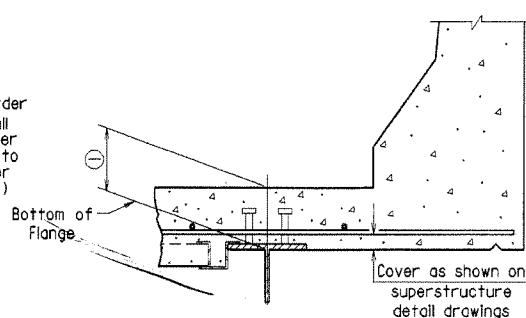
(Showing support by Insert cast in girder)



SECTION B-B

(FOR CONCRETE GIRDERS)

(Showing support by Strap)



SECTION D-D

Note: Only Bottom Reinforcing is shown.

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

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

Revised for 2003 AHTD Construction Specifications and CPB Sed. MJT 04-10-2003
Chk'd. By: C.S.F 04-10-2003

Redrawn and revised 11/27/96; MJT



BRIDGE ENGINEER

DETAILS OF PERMISSIBLE TYPE PERMANENT STEEL BRIDGE DECK FORMS FOR STEEL & CONCRETE GIRDER SPANS

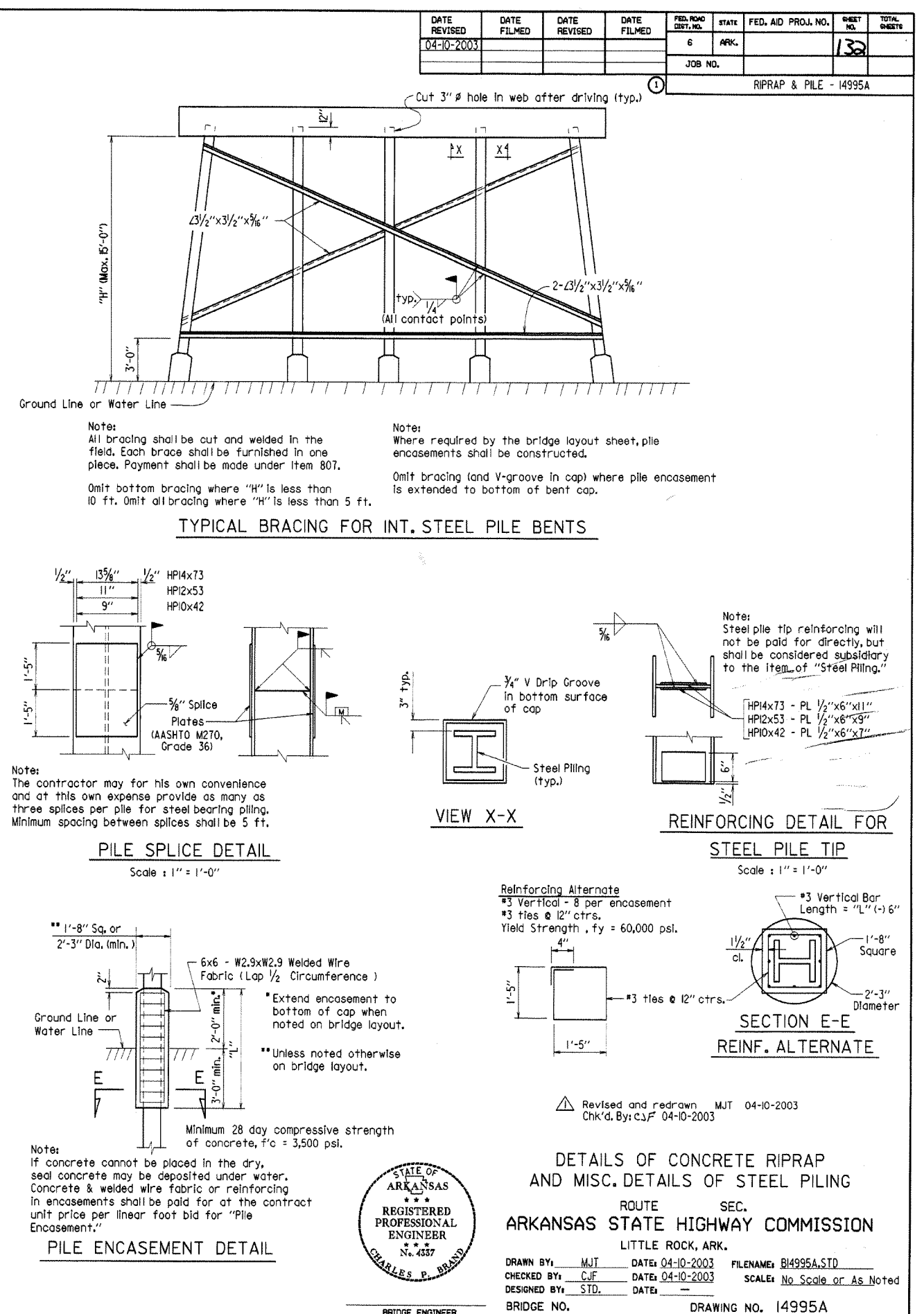
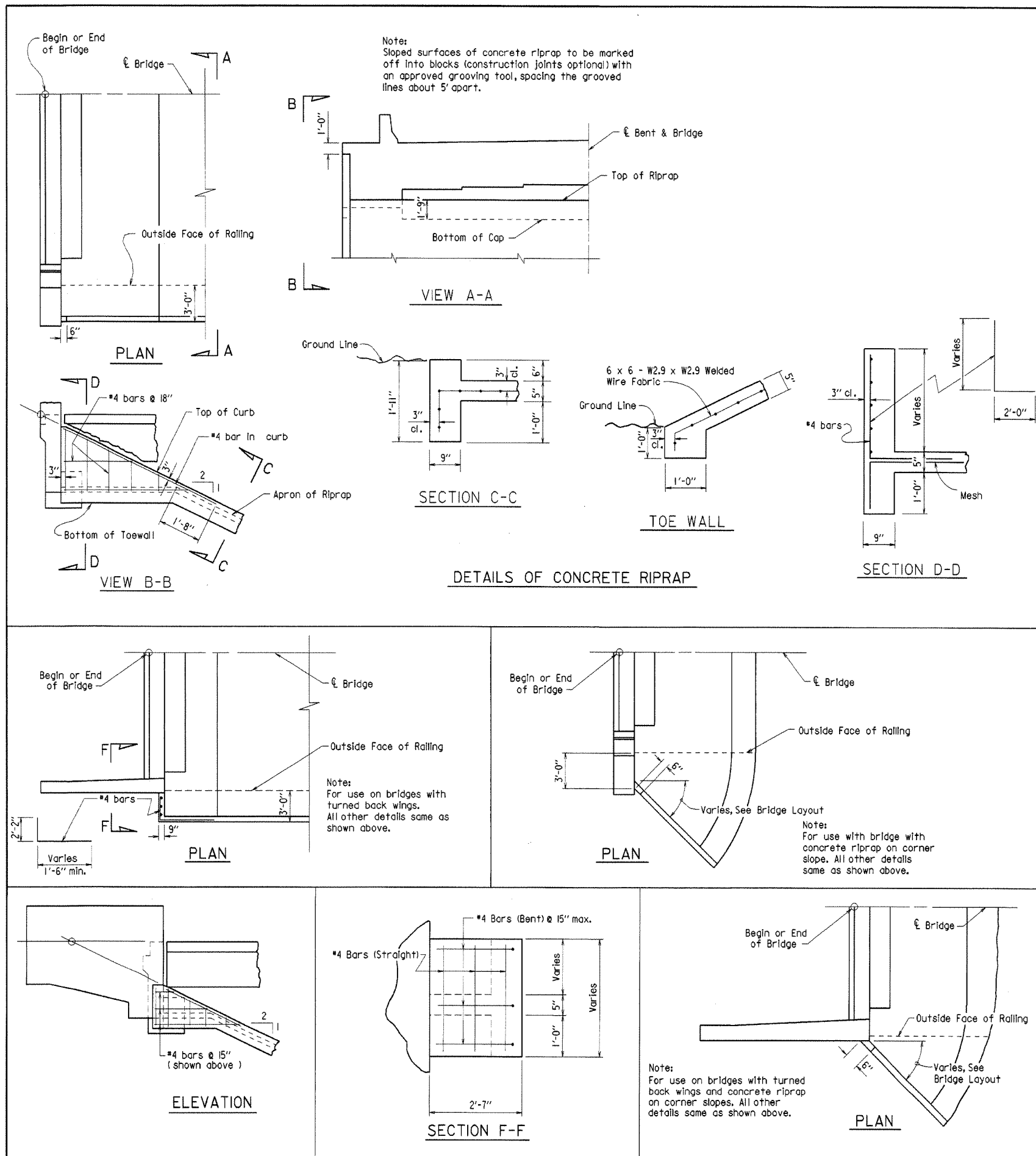
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION

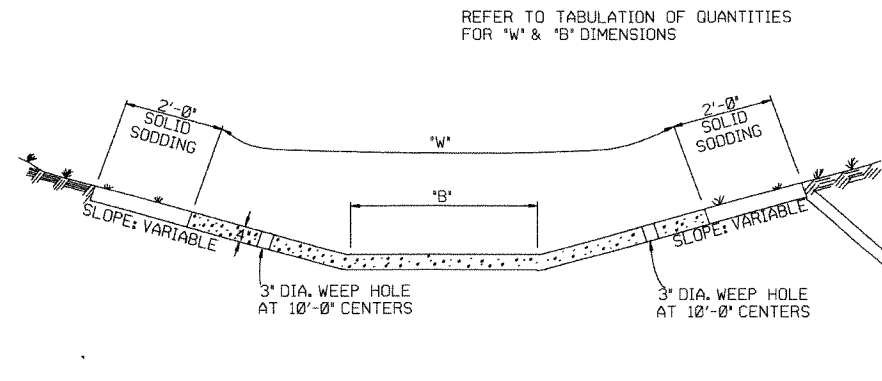
LITTLE ROCK, ARK.

DRAWN BY: MJT DATE: 10-17-96
CHECKED BY: CPB DATE: 10-17-96
DESIGNED BY: STD DATE: ---

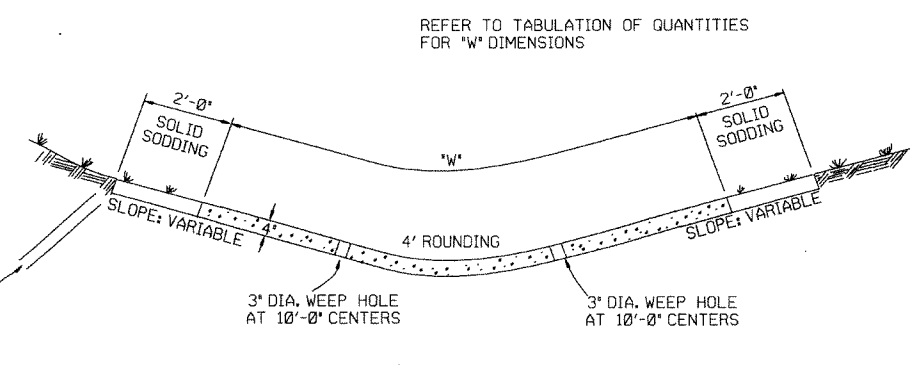
BRIDGE NO. DRAWING NO. 14991

B14991 STD



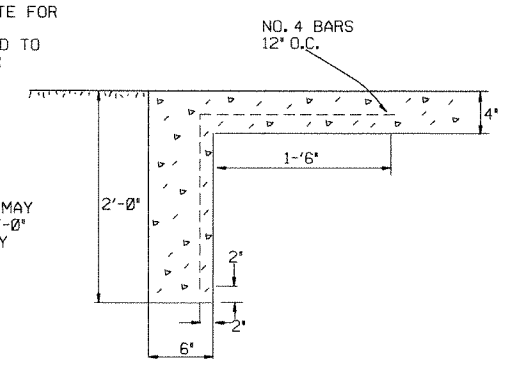


TYPE A



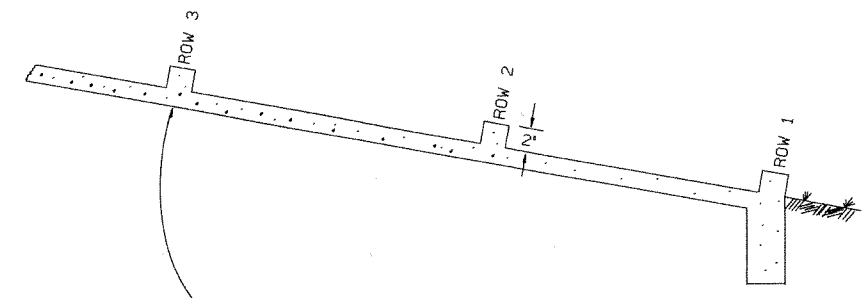
TYPE B

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



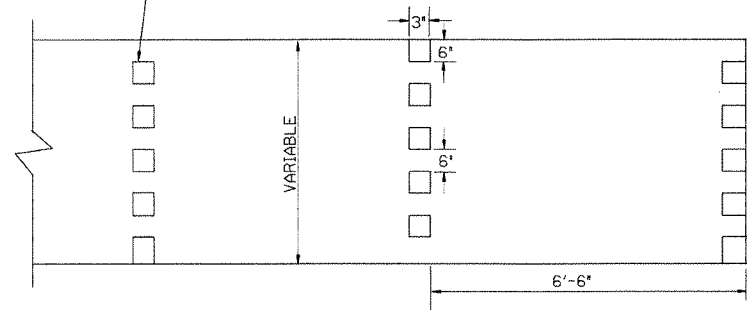
TOE WALL DETAIL FOR CONCRETE DITCH PAVING

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



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 UNCLUDED IN THE PRICE BID FOR CONCRETE DITCH PAVING.

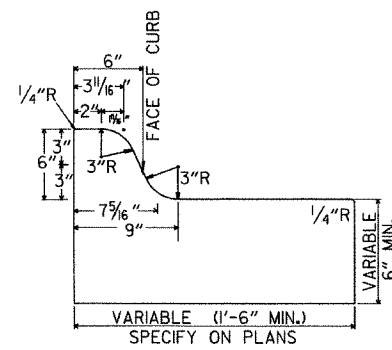


ENERGY DISSIPATORS
(NO SCALE)

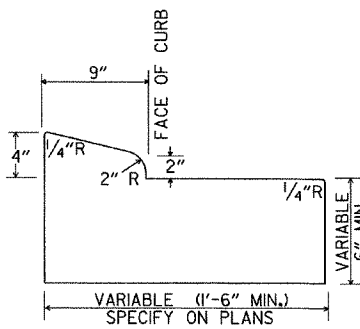
GENERAL NOTES:

- 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.

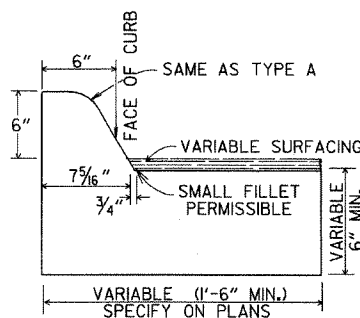
ARKANSAS STATE HIGHWAY COMMISSION		
CONCRETE DITCH PAVING		
STANDARD DRAWING CDP-1		
11-17-10	ADDED GENERAL NOTE	
6-2-94	ADDED GENERAL NOTE ABOUT SOLID SODDING	
11-30-8	ELIMINATED MIN. ROWS OF ELEMENTS	111-30-89
7-15-88	REVISED DISSIPATOR NOTE	653-7-15-88
4-3-87	REVISED ENERGY DISSIPATOR	671-4-3-87
1-9-87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



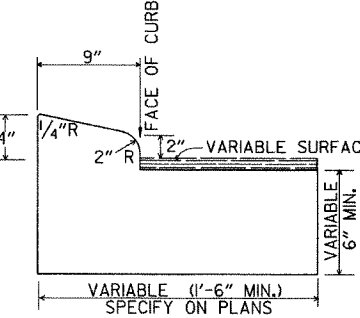
TYPE A



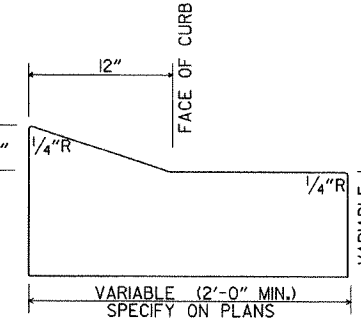
TYPE B-1



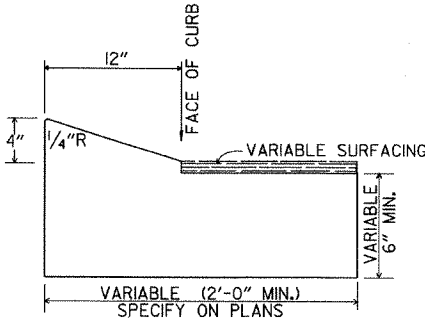
TYPE C



TYPE B-2

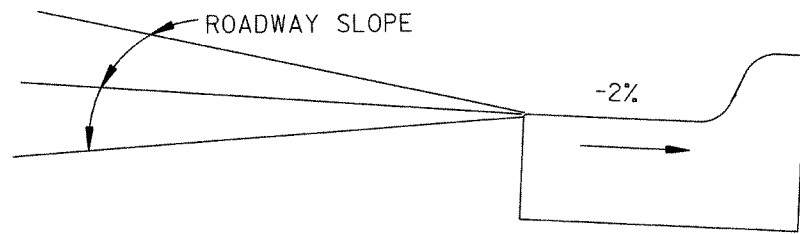


TYPE E-1

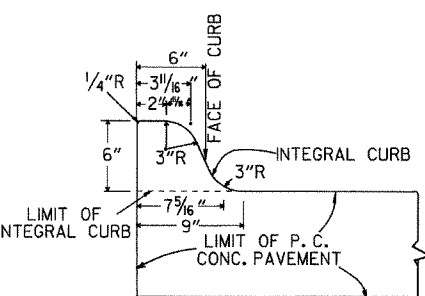


TYPE E-2

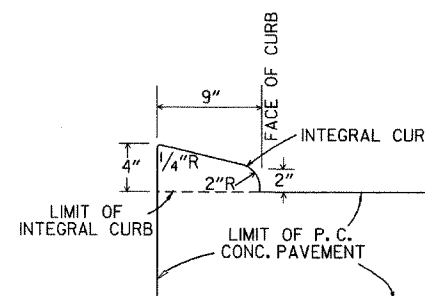
CONCRETE COMBINATION CURB AND GUTTER



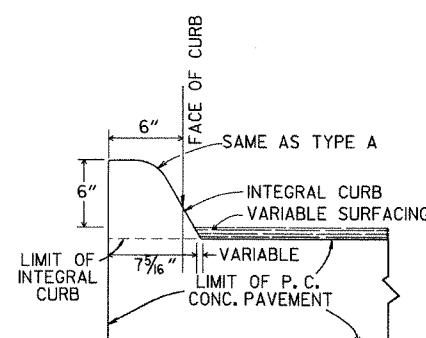
DETAIL OF GUTTER SLOPE
GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.



TYPE A

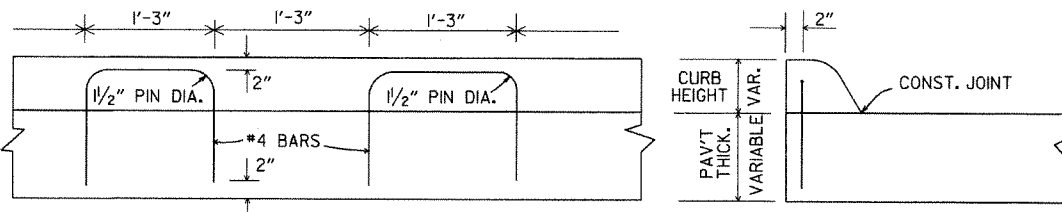


TYPE B



TYPE C

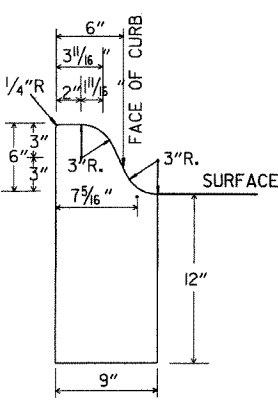
INTEGRAL CURB



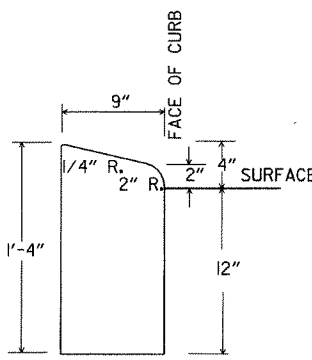
LONGITUDINAL SECTION

ELEVATION

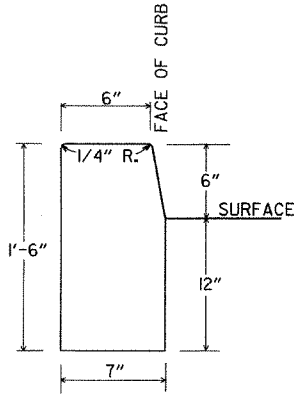
ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



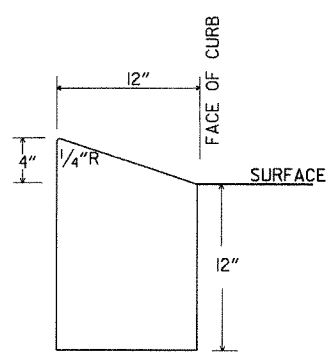
TYPE A



TYPE B

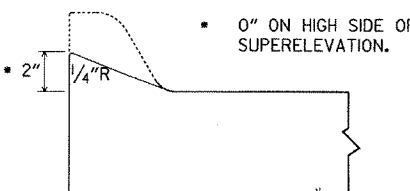


TYPE D



TYPE E

CONCRETE CURB



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

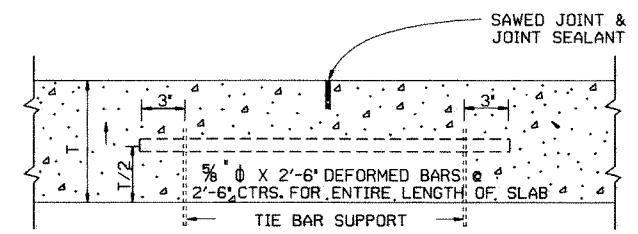
DETAILS OF MODIFIED CURB

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

ARKANSAS STATE HIGHWAY COMMISSION

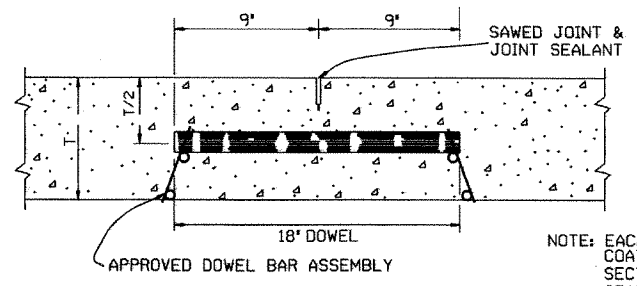
CURBING DETAILS

STANDARD DRAWING CG-1

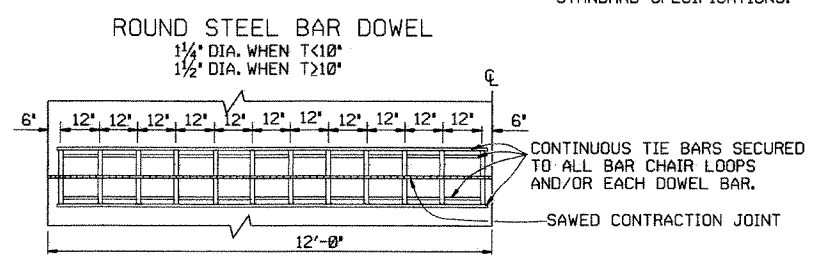


LONGITUDINAL JOINT

NOTE: THE TIE BAR SUPPORT SHOWN ABOVE MAY BE ELIMINATED IF OTHER APPROVED METHODS FOR PLACING AND SUPPORTING THE TIE BARS ARE PROVIDED.
TIE BARS SHALL BE 15' FROM TRANSVERSE JOINTS.



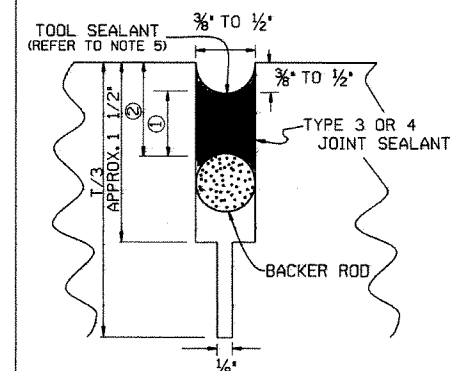
NOTE: EACH DOWEL TO BE COATED ACCORDING TO SECTION 502 OF THE STANDARD SPECIFICATIONS.



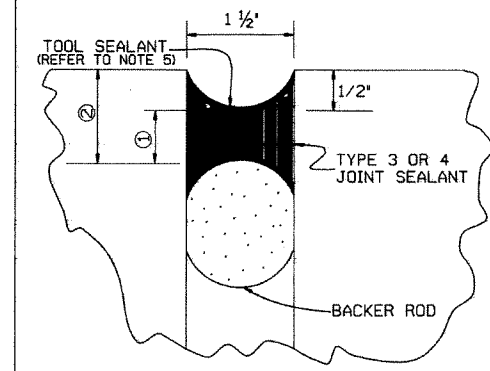
ONE-HALF 24' PAVEMENT
12 DOWELS
PLAN

NOTE: FOR 20' PAVEMENT USE 20 DOWELS @ 12" CTRS. WITH 6" SPACING FROM C.L. AND EDGE OF SLAB TO FIRST BAR. FOR 15' PAVEMENT USE 15 DOWELS @ 12" CTRS. WITH 6" SPACING FROM C.L. AND EDGE OF SLAB TO FIRST BAR. FOR 26' PAVEMENT USE 26 DOWELS @ 12" CTRS. WITH 6" SPACING FROM C.L. AND EDGE OF SLAB TO FIRST BAR. FOR PAVEMENT WIDTHS OTHER THAN THOSE SHOWN ABOVE, USE DOWELS AT 12" CTRS. WITH 6" MAX. SPACING FROM C.L. TO FIRST BAR. DISTANCE FROM EDGE OF SLAB TO FIRST BAR SHALL BE ADJUSTED TO MAINTAIN 12" DOWEL BAR SPACING

CONTRACTION JOINT DETAILS



DETAIL OF SAWED CONTRACTION JOINT



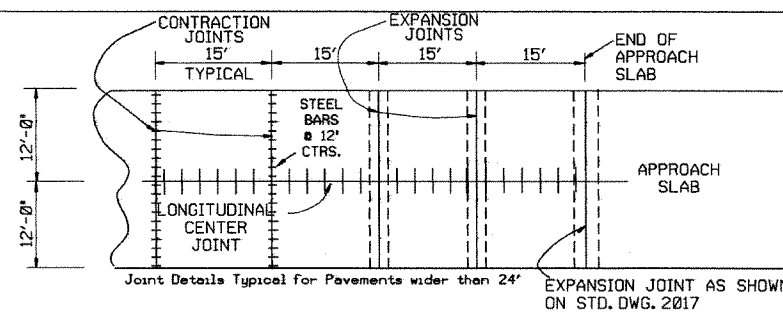
DETAIL OF EXPANSION JOINT

JOINT CONFIGURATION FOR
TYPE 3 OR 4 JOINT SEALANT

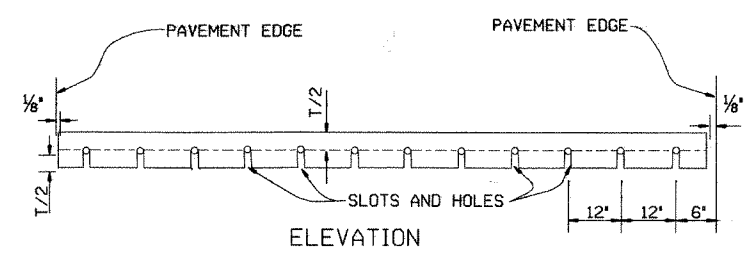
JOINT WIDTH	SEALANT THICKNESS ①	BACKER ROD DIAMETER	BACKER ROD PLACEMENT DEPTH ②
INCHES			
1/4	1/4	3/8	1/2
3/8	1/4	1/2	1/2
1/2	1/4	3/8	1/2
3/4	3/8	1/2	1/2
1	3/8	3/4	1/2
1 1/2	3/4	2	1 1/4

JOINT CONFIGURATION FOR
TYPE 5 JOINT SEALANT

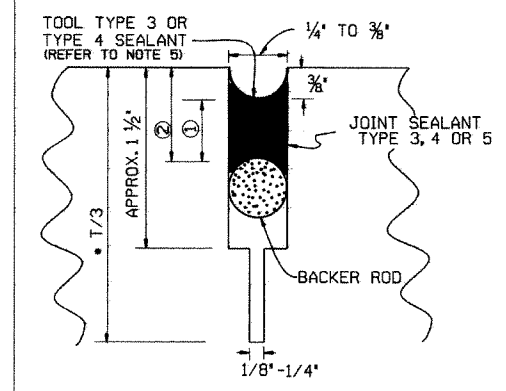
JOINT WIDTH	SEALANT THICKNESS ①	BACKER ROD DIAMETER	BACKER ROD PLACEMENT DEPTH ②
INCHES			
1/4	1/4	3/8	3/4
3/8	1/2	1/2	1



PLAN SHOWING EXPANSION JOINTS AT
BRIDGE APPROACH SLABS



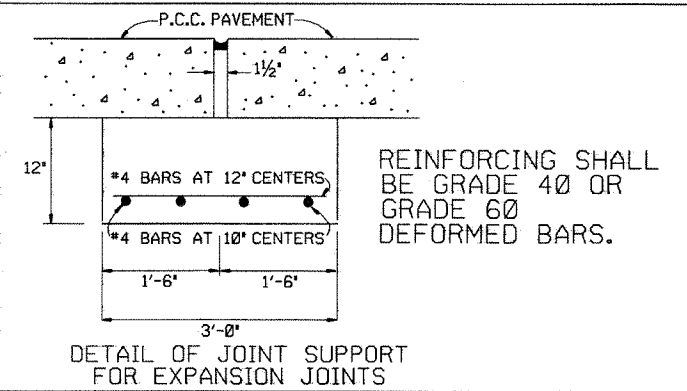
NOTE: ALL DOWEL BARS SHALL CONFORM TO THE DETAILS FOR CONTRACTION JOINTS.



*NOTE: T/3 SAW CUT NOT REQUIRED FOR LONGITUDINAL CONSTRUCTION JOINT.

DETAIL OF SAWED
LONGITUDINAL JOINT
AND LONGITUDINAL CONSTRUCTION JOINT

DATE	REVISION	DATE FILMED
5-25-06	ADDED GENERAL NOTE 7	
10-9-03	REMOVED TIE BAR COATING & REVISED GENERAL NOTES	
11-16-01	ADDED TOOL SEALANT AND NOTE 5; REVISED NOTE 3	
4-26-96	REVISED CONTRACTION JOINT NOTE	
11-3-94	ADDED NOTE RE: REINF. BARS	
4-1-93	REVISED DOWEL BARS & GEN. NOTES	4-1-93
10-1-92	REVISED DOWEL SPACING	10-1-92
8-15-91	ADDED SPAC FOR CONTR JTS & DEL KEYWAY	
05-24-90	REVISED TIE BAR, DOWEL & JOINT SIZE	
01-25-90	ADDED EXPANSION JOINT	01-25-90
11-30-89	CHANGED T/4+1 TO T/3+1	11-30-89
03-23-89	ALTERED SAWED JOINT & ADDED NOTE	512-03-23-89
07-15-88	REVISED AND REDRAWN	632-07-15-88



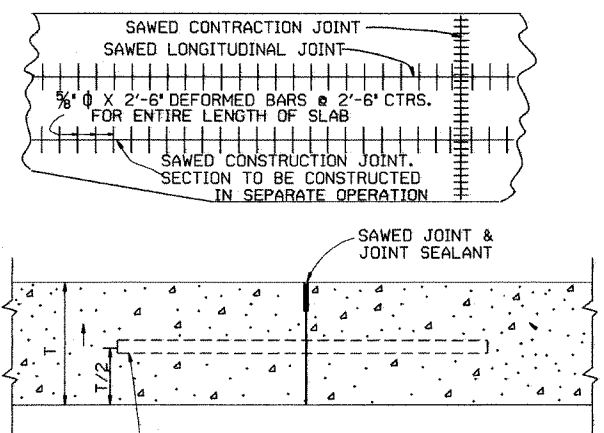
DETAIL OF JOINT SUPPORT
FOR EXPANSION JOINTS

- GENERAL NOTES
1. 'T' DENOTES THICKNESS OF SLAB.
 2. DOWEL BARS SHALL BE PLACED IN ACCORDANCE WITH THE DIMENSIONS SHOWN. A TOLERANCE OF PLUS OR MINUS ONE INCH WILL BE ALLOWED FOR THE VERTICAL AND LATERAL PLACEMENT AND A TOLERANCE OF PLUS OR MINUS 1/4" WILL BE ALLOWED FOR THE TILT AND SKEW. DOWEL BARS SHALL BE FIELD COATED FOR A MINIMUM DISTANCE OF 2' GREATER THAN HALF THE LENGTH OF THE BAR WITH AN APPROVED GREASE AS A BOND BREAKER JUST PRIOR TO PLACEMENT OF CONCRETE.
 3. THE EXPANSION JOINT SUPPORT MAY BE CONSTRUCTED WITH CLASS 'A', 'S' OR PAVING CONCRETE. PAYMENT FOR THE JOINT SUPPORT SHALL BE FOR THE CONTRACT UNIT PRICE BID FOR THE CLASS OF CONCRETE SPECIFIED IN THE PLANS. PAYMENT FOR ALL OTHER WORK AND MATERIALS REQUIRED FOR THE CONSTRUCTION OF THE JOINT SUPPORT SHALL BE INCLUDED IN THE PRICE BID FOR THE ABOVE ITEMS.
 4. CONTRACTION JOINTS SHALL BE CONSTRUCTED ON 15' CENTERS.
 5. TOOLING NOT REQUIRED FOR SELF-LEVELING SILICONE.
 6. UNLESS OTHERWISE SPECIFIED IN THE PLANS, CONCRETE SHOULDERS SHALL BE CONSTRUCTED ACCORDING TO THE DETAILS SHOWN HEREON. CONTRACTION JOINTS SHALL MATCH CONTRACTION JOINTS IN THE LANES.
 7. TIE WIRES IN DOWEL BAR ASSEMBLIES SHALL NOT BE CUT PRIOR TO PLACEMENT OF PAVING CONCRETE.

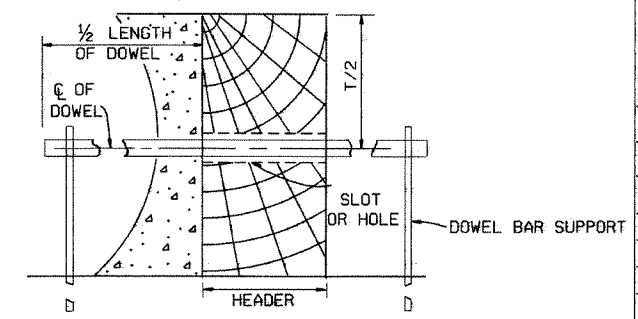
ARKANSAS STATE HIGHWAY COMMISSION

TRANSVERSE & LONGITUDINAL JOINTS
FOR CONCRETE PAVEMENT (NON-REINFORCED)

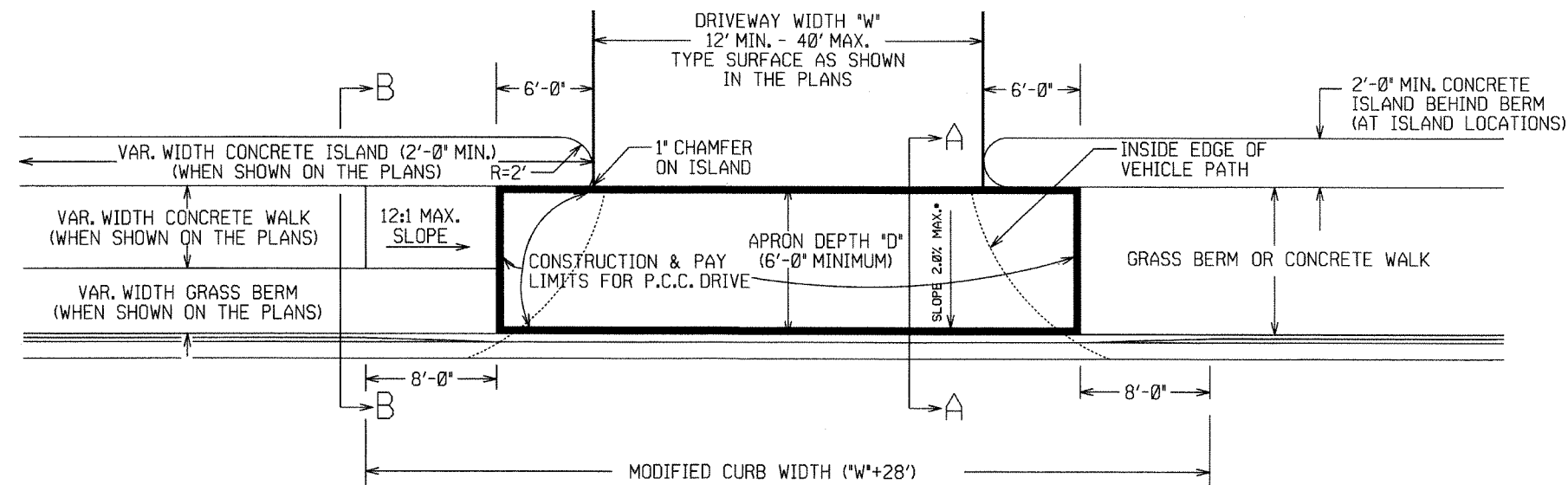
STANDARD DRAWING CPTJ - 6A



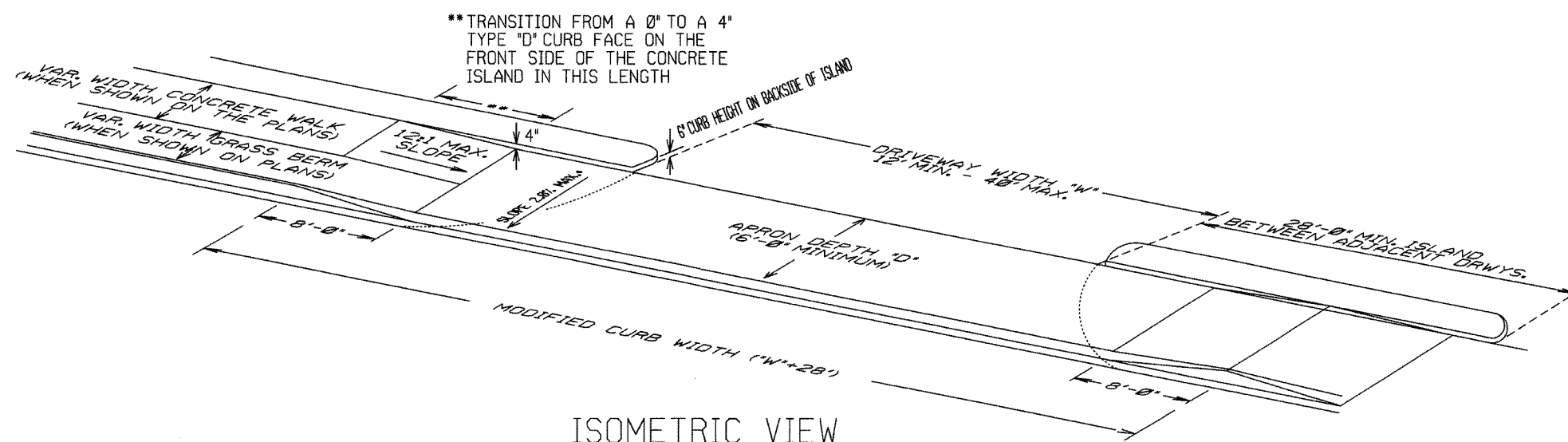
NOTE: TIE BARS SHALL BE 15' FROM TRANSVERSE JOINTS.
LONGITUDINAL CONSTRUCTION JOINT



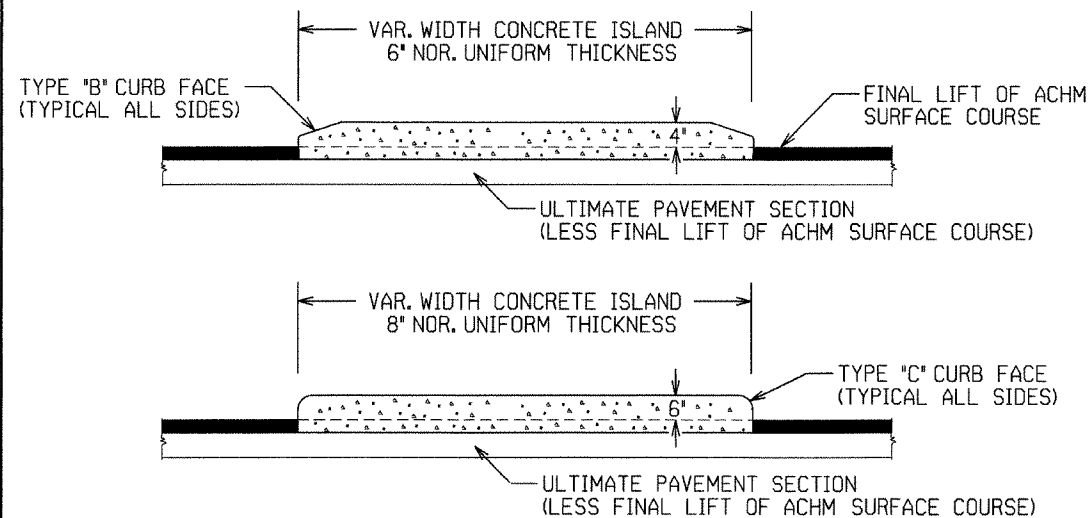
SECTION
TRANSVERSE
CONSTRUCTION JOINT



PLAN VIEW



ISOMETRIC VIEW



CURBED ISLANDS FOR CHANNELIZATION

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

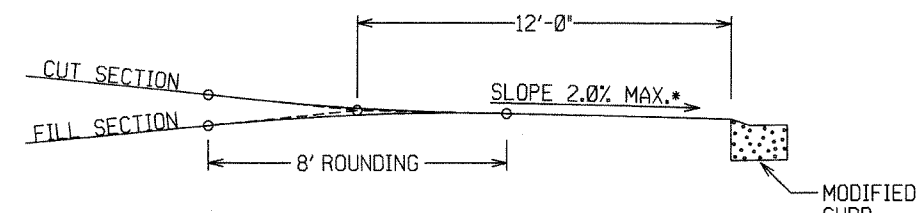


EXTENSION TYPICAL SECTIONS

- 1: CONCRETE - 6" P.C. CONCRETE DRIVEWAY
- 2: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
4" ACHM BINDER COURSE (1/2") OR
4" ACHM BASE COURSE (1-1/2")
- 3: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
7" AGGREGATE BASE COURSE
- 4: AGGREGATE - 6" AGGREGATE BASE COURSE

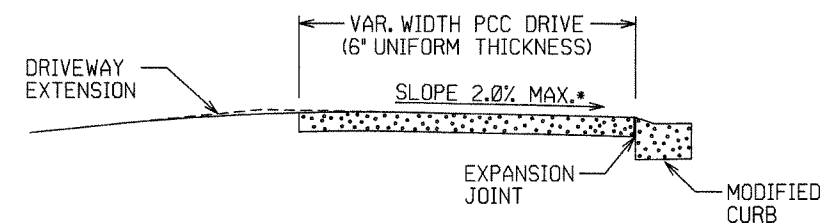
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS.
THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER,
SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU
OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL
COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

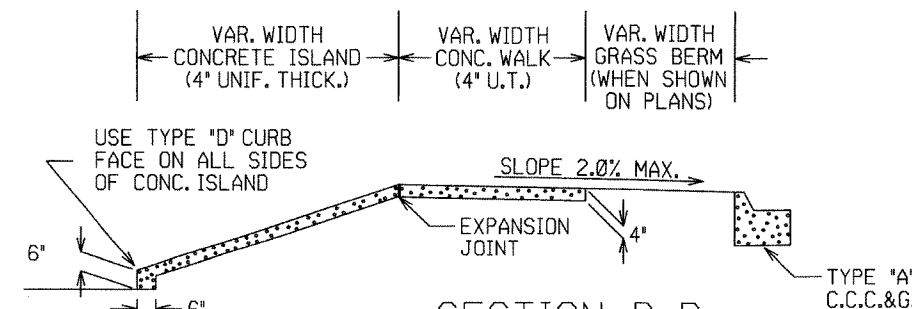


DRIVEWAY VERTICAL ALIGNMENT DETAILS

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



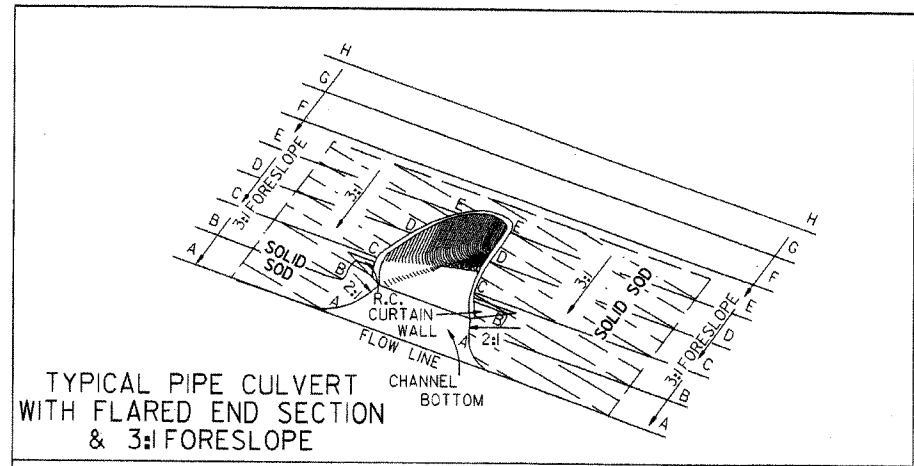
SECTION A-A



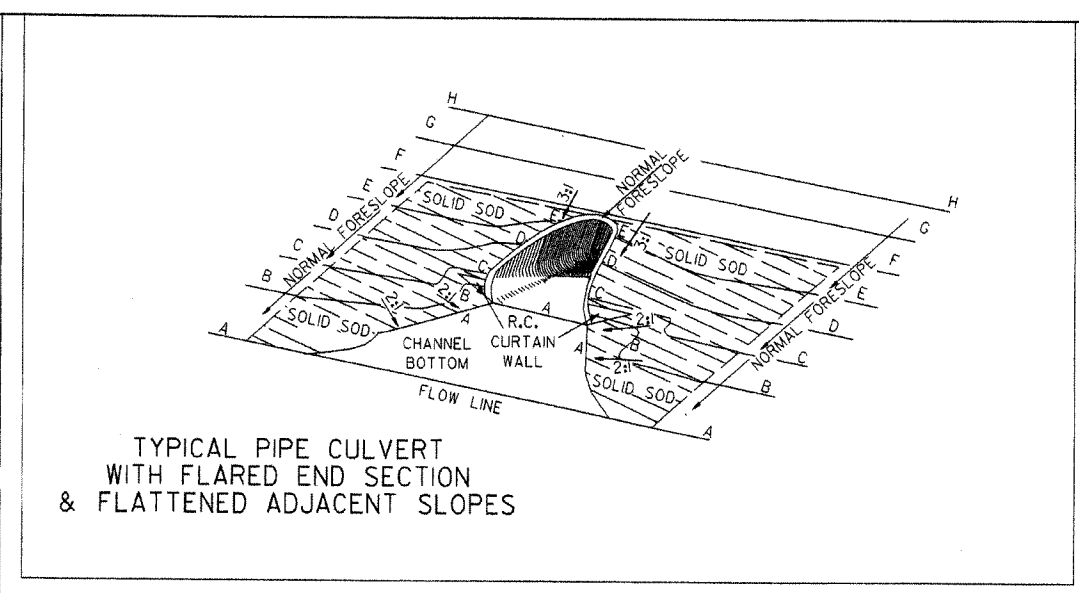
SECTION B-B
CURBED ISLAND BEHIND WALK

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

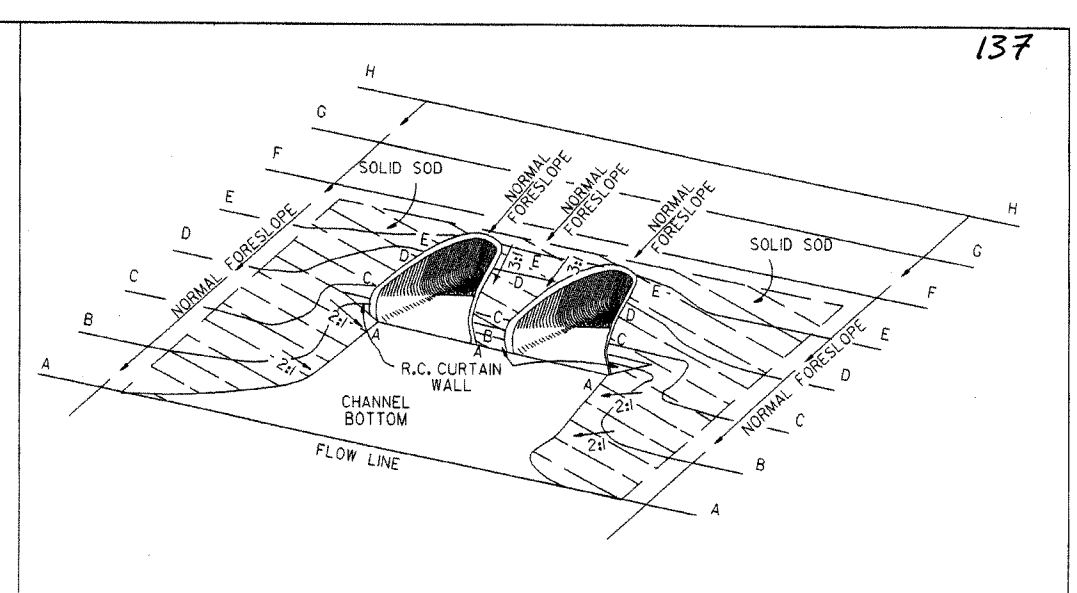
ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF DRIVEWAYS & ISLANDS
STANDARD DRAWING DR-1



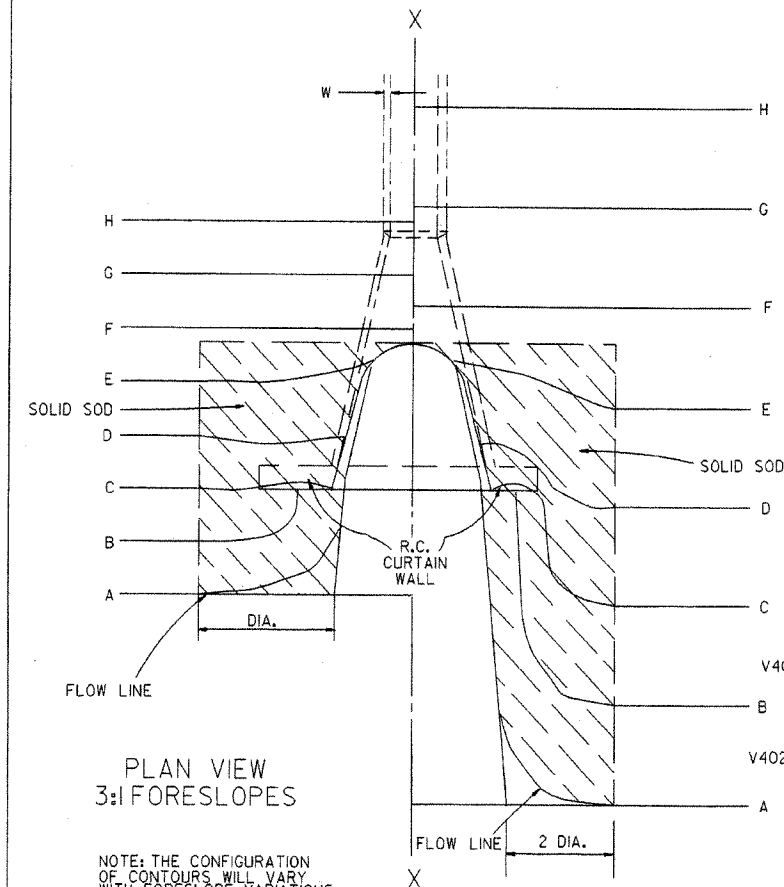
TYPICAL PIPE CULVERT WITH FLARED END SECTION & 3:1 FORESLOPE



TYPICAL PIPE CULVERT WITH FLARED END SECTION & FLATTENED ADJACENT SLOPES



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



PLAN VIEW 3:1 FORESLOPES

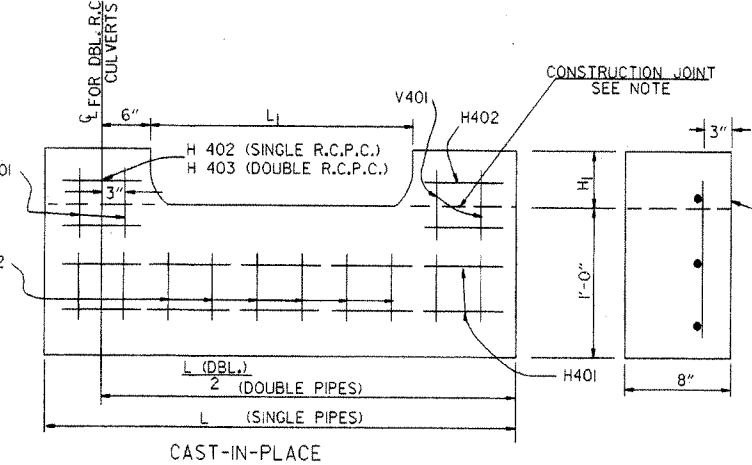
NOTE: THE CONFIGURATION OF CONTOURS WILL VARY WITH FORESLOPE VARIATIONS.

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

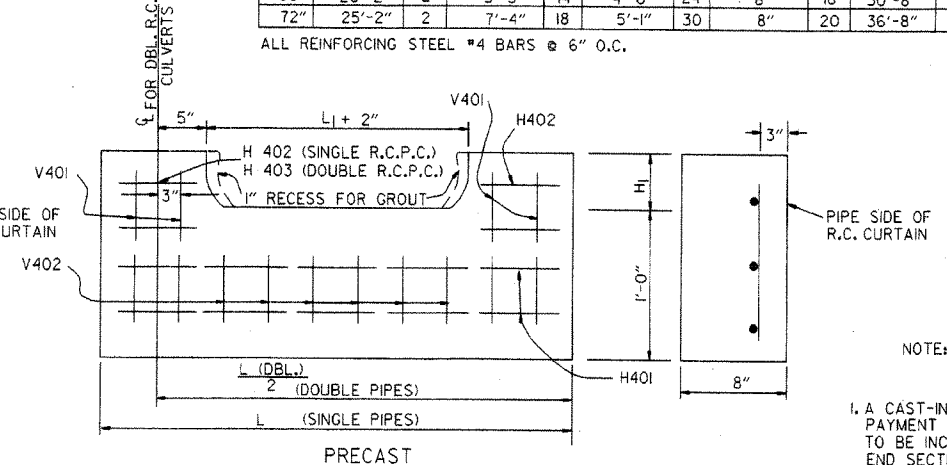
NOTE: QUANTITIES SHOWN ARE FOR ONE (1) CURTAIN WALL.



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



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

REINFORCING STEEL SCHEDULE

PIPE DIA.	SINGLE R.C. PIPE CULVERT								DOUBLE R.C. PIPE CULVERT							
	H401		H402		V401		V402		H401		H402		H403		V401	
	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
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
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
36"	12'-8"	2	2'-10"	6	2'-3"	12	8"	14	20'-8"	2	2'-10"	6	8"	3	2'-3"	14
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
48"	16'-8"	2	4'-3"	10	3'-1"	18	8"	16	25'-8"	2	4'-3"	10	8"	5	3'-1"	20
54"	18'-2"	2	4'-8 1/2"	12	3'-5 1/2"	20	8"	17	27'-8"	2	4'-8 1/2"	12	8"	6	3'-5 1/2"	22
60"	20'-2"	2	5'-5"	14	4'-0"	24	8"	18	30'-8"	2	5'-5"	14	8"	7	4'-0"	26
72"	25'-2"	2	7'-4"	18	5'-1"	30	8"	20	36'-8"	2	7'-4"	18	8"	9	5'-1"	33

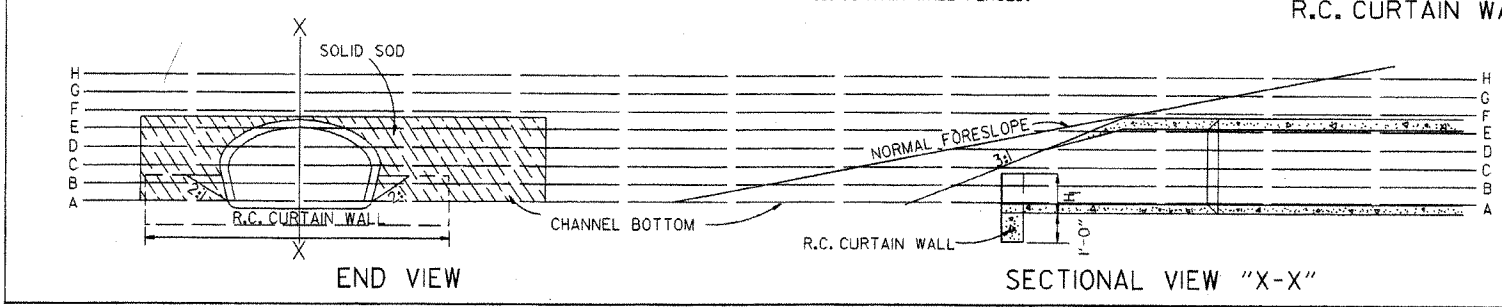
ALL REINFORCING STEEL #4 BARS @ 6" O.C.

SOLID SODDING

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

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

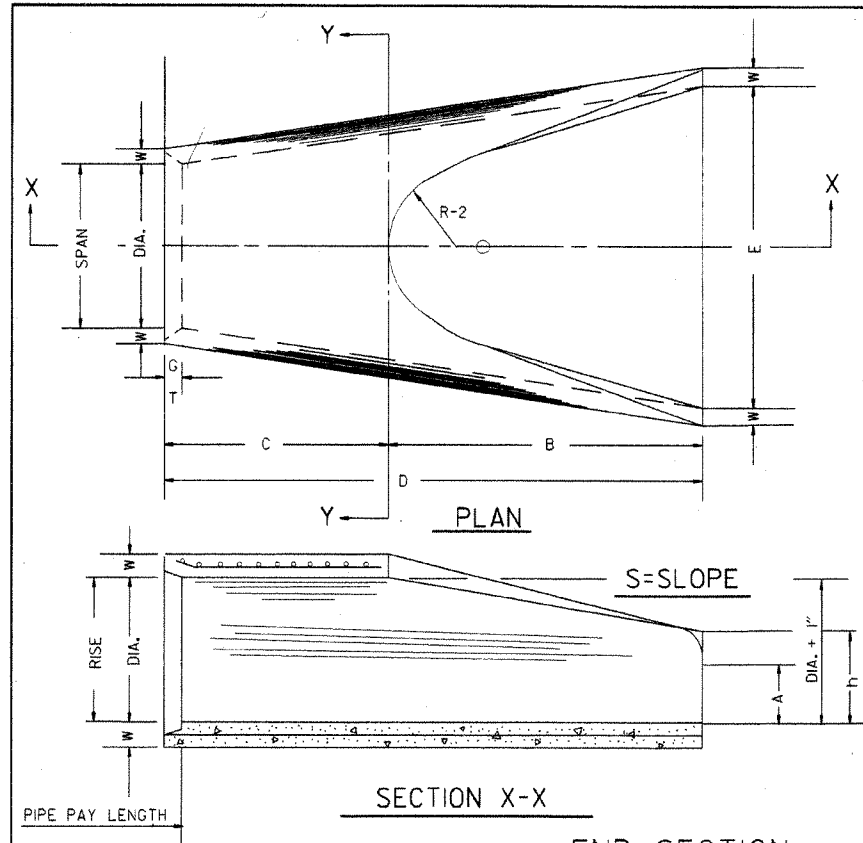
- GENERAL NOTES
1. A CAST-IN-PLACE OR PRECAST CURTAIN WALL MAY BE USED. PAYMENT FOR THE CURTAIN WALL SHALL BE CONSIDERED TO BE INCLUDED IN THE UNIT PRICE BID EACH FOR FLARED END SECTIONS OF THE SEVERAL SIZES, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS INCLUDING REINFORCING STEEL AND CONCRETE; FOR FORMS, MIXING AND PLACING; FOR EXCAVATION AND BACKFILL; AND FOR ALL LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.
 2. ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4".
 3. CONCRETE FOR CURTAIN WALL SHALL MEET THE REQUIREMENTS FOR CLASS A OR S CONCRETE AS PROVIDED IN SECTION 802 OF THE STANDARD SPECIFICATIONS OR FOR PAVING CONCRETE AS PROVIDED IN SECTION 501 OF THE STANDARD SPECIFICATIONS.
 4. WELDED WIRE MESH 3 x 3 W/10 x W10 MAY BE USED IN LIEU OF REINFORCING BARS.



END VIEW

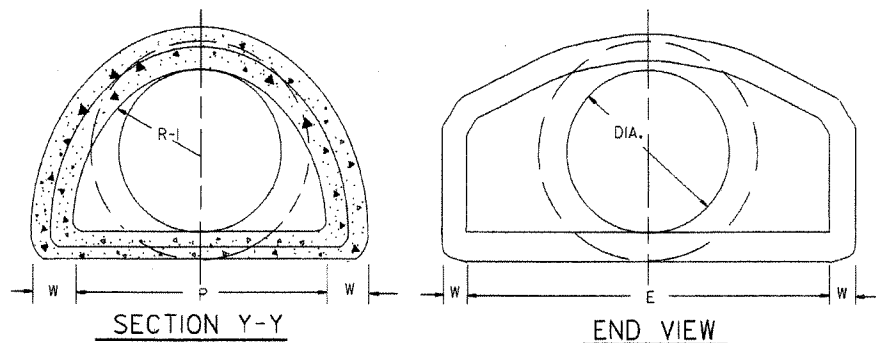
SECTIONAL VIEW "X-X"

10-18-96	ADDED NOTE TO SOLID SODDING		10-18-96	ARKANSAS STATE HIGHWAY COMMISSION
10-12-95	CORRECTED SPELLING			
11-3-94	ADDED GENERAL NOTE NO. 4			
8-15-91	REV. CURTAIN WALL QUANT. STEEL SCH. & SOLID SOD QUANT.			
3-2-81	ALLOW PRECAST IN 2 OR MORE PIECES CHAMFER EDGES			
5-15-80	ADDED PRECAST WALL & GENERAL NOTES			
10-2-72	REVISED AND REDRAWN			
DATE	REVISION		FILMED	STANDARD DRAWING FES-1



END SECTION
FOR REINFORCED CONCRETE PIPE CULVERTS

DIA.	WALL	A	B	C	D	E	S	DIA. + 1"	P	R-1	R-2	G-T	WT.	h
18"	2 1/2"	9"	2'-3"	3'-10"	6'-1"	3'-0"	3:1	19"	29"	15 1/2"	12"	2"	1000	1'-0 1/2"
24"	3"	9 1/2"	3'-7 1/2"	2'-6"	6'-1 1/2"	4'-0"	3:1	25"	33 3/8"	16 1/8"	14"	2 1/2"	1600	1'-1 1/2"
30"	3 1/2"	1'-0"	4'-6"	1'-7 3/4"	6'-1 3/4"	5'-0"	3:1	31"	37"	18 1/2"	15"	3 1/4"	1940	1'-4 5/8"
36"	4"	1'-3"	5'-3"	2'-10 3/4"	8'-1 1/4"	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 1/8"	24"	4"	8750	2'-10 1/2"
60"	6"	2'-0"	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 1/8"	24"	5"	13250	4'-6"

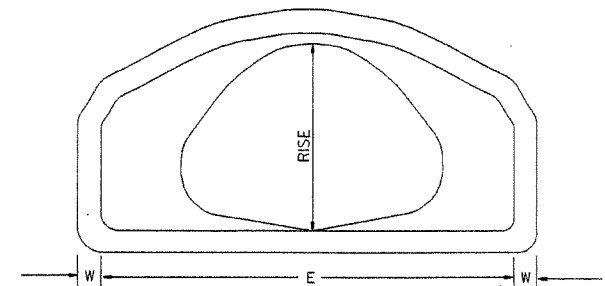


NOTE: TONGUE END ON UPSTREAM SECTION
GROOVE END ON DOWNSTREAM SECTION

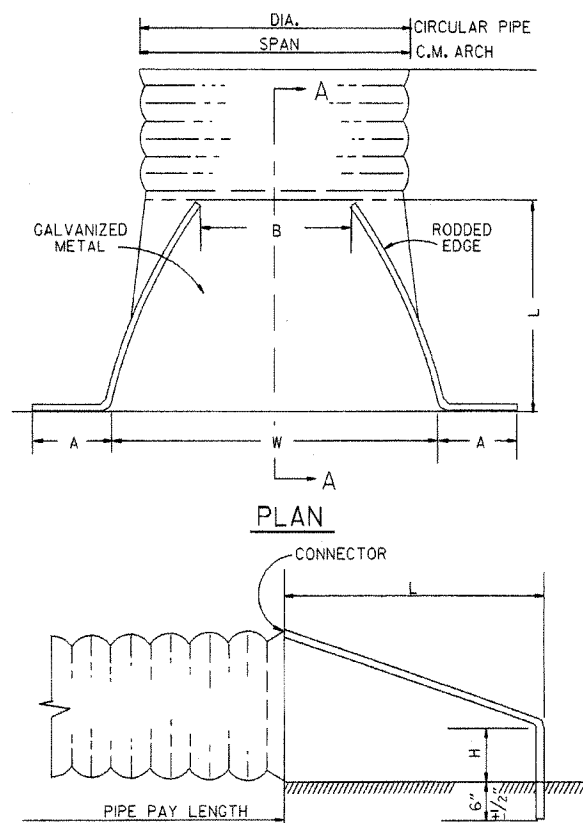
ARCH PIPE

EQUIV. DIA.	• SPAN		• RISE		W	A	B	C	D	E	P	R2	G-T	S
	AASHTO M 206	NOMINAL	AASHTO M 206	NOMINAL										
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'-0"	2'-10 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'-10 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 1/8"	24"	4 1/4"	2 1/2:1
54	65	65	40	40	5 1/2"	1'-7"	5'-3"	2'-11"	8'-2"	8'-6"	72 1/8"	24"	4 3/4"	2 1/2:1
60	73	73	45	45	6"	1'-10"	5'-6"	2'-8"	8'-2"	9'-0"	77 1/8"	24"	5"	2 1/2:1

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



END VIEW
CONCRETE ARCH PIPE

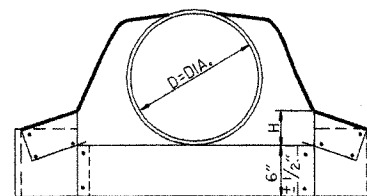


NOTE: ALTERNATE CONNECTIONS TO THE PIPE CULVERTS, IN ACCORDANCE WITH MANUFACTURER'S STANDARD
PRACTICES, MAY BE MADE SUBJECT TO THE APPROVAL OF THE ENGINEER.

END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS

CIRCULAR PIPE

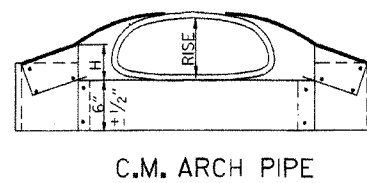
D. DIA.	GAUGE	A 1" $\pm$	B. MAX. 1" $\pm$	H 1" $\pm$	L 1 1/2" $\pm$	W 2" $\pm$	S
12	16	6	6	6	21	24	2 1/2:1
15	16	7	8	6	26	30	2 1/2:1
18	16	8	10	6	31	36	2 1/2:1
21	16	9	12	6	36	42	2 1/2:1
24	16	10	13	6	41	48	2 1/2:1
30	14	12	16	8	51	60	2 1/2:1
36	14	14	19	9	60	72	2 1/2:1
42	12	16	22	11	69	84	2 1/2:1
48	12	18	27	12	78	90	2 1/2:1
54	12	18	30	12	84	102	2:1
60	12	18	33	12	87	114	1 3/4:1
66	12	18	36	12	87	120	1 1/2:1
72	12	18	39	12	87	126	1 1/3:1



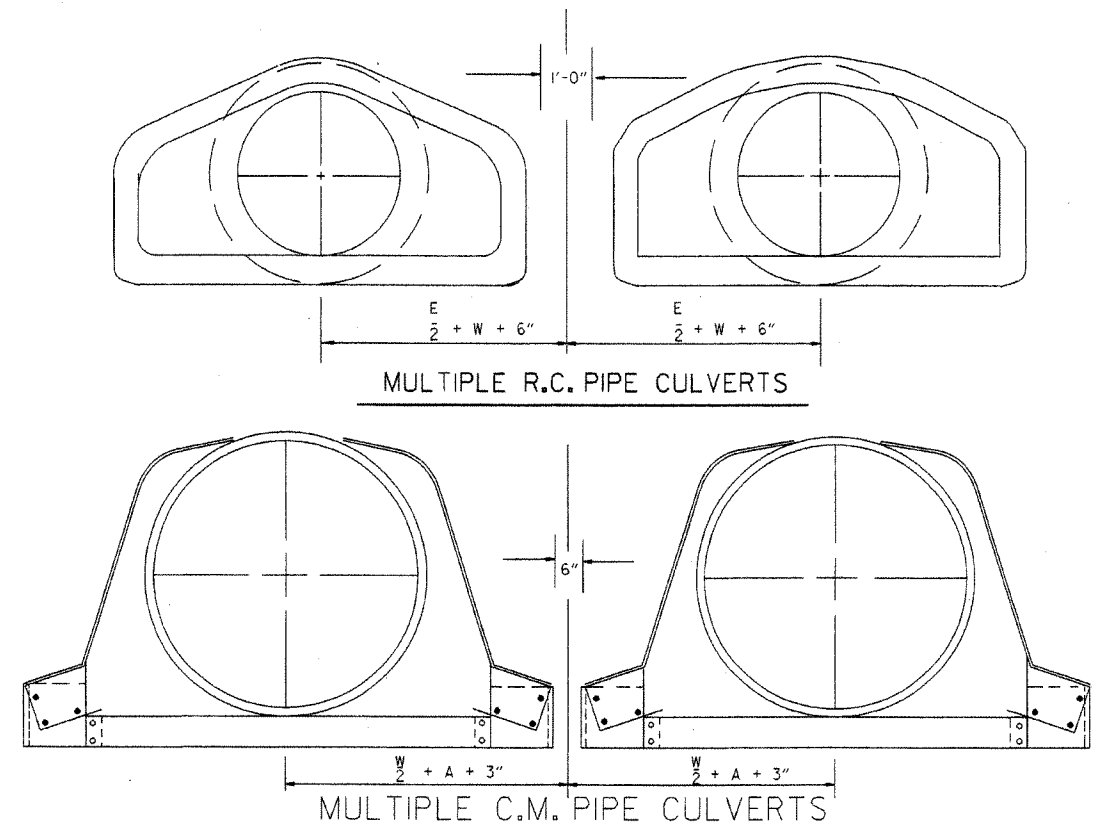
CIRCULAR PIPE

C.M. ARCH PIPE

EQUIV. DIA.	SPAN	RISE	A 1" $\pm$	B. MAX. 1" $\pm$	H 1" $\pm$	L 1 1/2" $\pm$	W 2" $\pm$	S	GAUGE
15"	17	13	7	9	6	19	30	2 1/2:1	16
18"	21	15	7	10	6	23	36	2 1/2:1	16
21"	24	18	8	12	6	28	42	2 1/2:1	16
24"	28	20	9	14	6	32	48	2 1/2:1	16
30"	35	24	10	16	6	39	60	2 1/2:1	14
36"	42	29	12	18	8	46	75	2 1/2:1	14
42"	49	33	13	21	9	53	85	2 1/2:1	12
48"	57	38	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



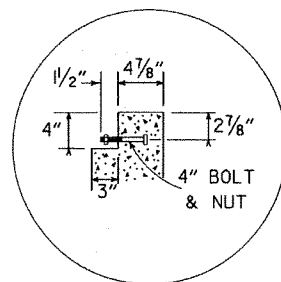
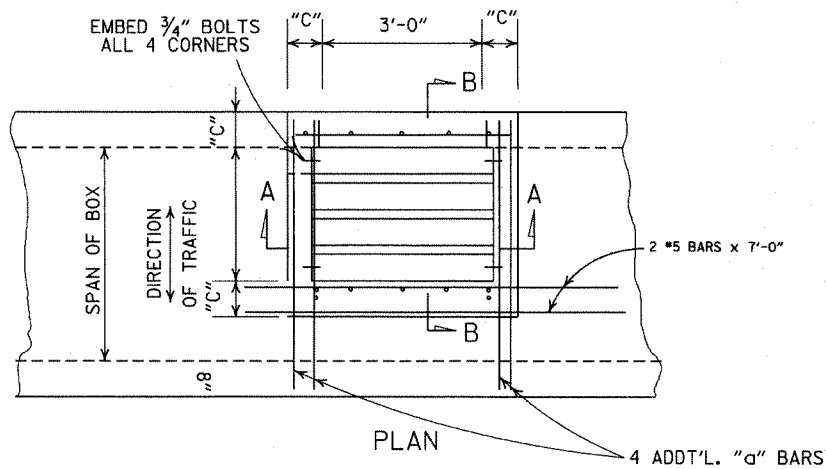
C.M. ARCH PIPE



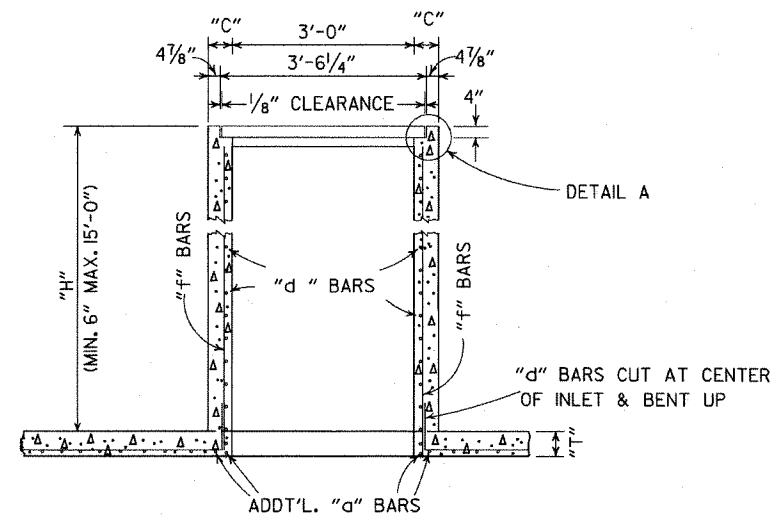
MULTIPLE R.C. PIPE CULVERTS

MULTIPLE C.M. PIPE CULVERTS

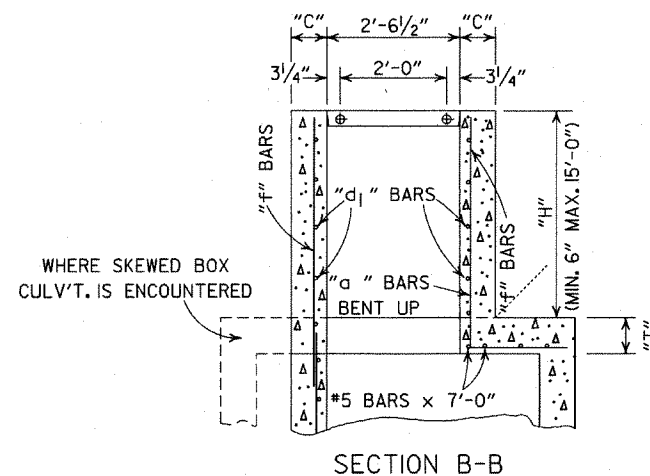
10-18-96	REVISED ASTM REF. TO AASHTO	10-18-96	ARKANSAS STATE HIGHWAY COMMISSION
5-15-80	REVISED DISTANCE BETWEEN MULTIPLE R.C.P.F.E.S.	664-5-15-80	
7-14-78	C.M. ARCH SIZES TO CONFORM WITH AASHTO SIZES	752-7-14-78	
8-22-75	ADDED MULTIPLE PIPE CULVERTS	517-8-22-75	FLARED END SECTION
12-5-74	REMOVED NOTE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



DETAIL A



SECTION A-A

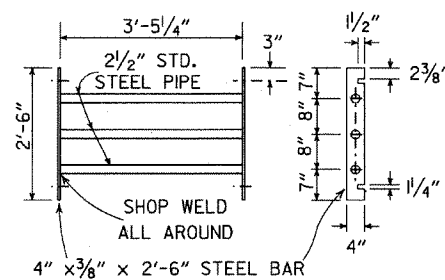


SECTION B-B

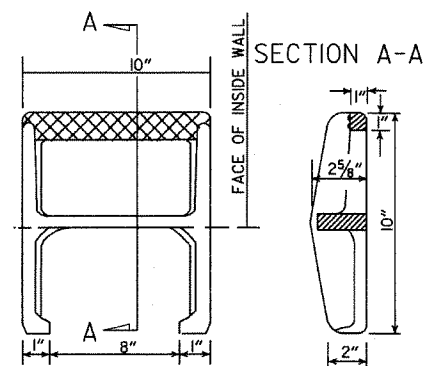
NOTE: ADDT'L. REINF. STEEL TO BE INCLUDED IN UNIT PRICE BID PER TYPE "TM" D.I.

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

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



GRATE DETAIL



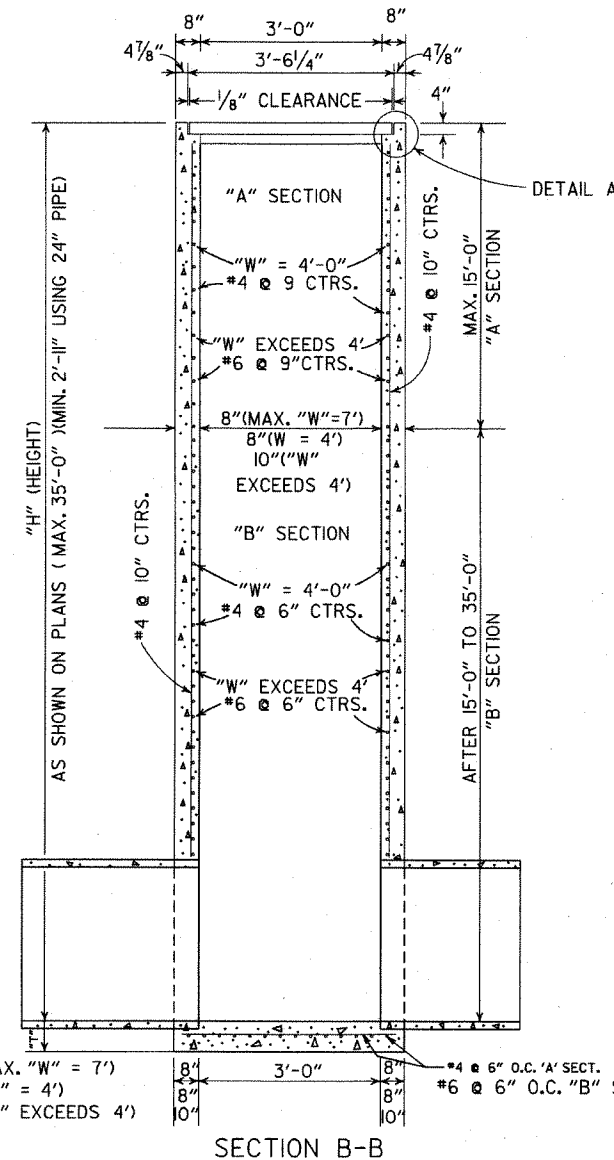
APPROX. WEIGHT = 11 LBS. (CAST IRON)

PLAN

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

DETAIL OF STEP FOR DROP INLET

- GENERAL NOTES:
1. STEEL PIPE FOR GRATES AND BOLTS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 807. BOLTS SHALL CONFORM TO ONE OF THE FOLLOWING: ASTM A193, GRADE B8 CLASS 10R 2, ASTM A307 OR AASHTO M 164.
 2. STEEL PIPE FOR GRATES SHALL BE "STANDARD WEIGHT" PIPE CONFORMING TO ASTM A53 NATIONAL STANDARD PIPE.
 3. BOLTS, NUTS, WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M 232 OR AASHTO M 298, CLASS 40 OR 50.
 4. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
 5. ALL #4 AND #5 REINFORCING BARS TO HAVE 1/2" COVER. LARGER SIZES TO HAVE 2" COVER.
 6. THE COMPLETE PIPE GRATE SHALL BE PAINTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.



SECTION B-B

DROP INLET (TYPE RM)

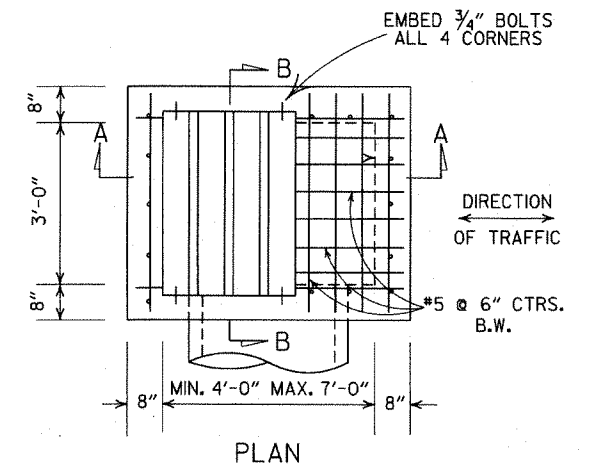
8-22-02	ADDED & REVISED DIMENSION TO SECTION A-A	
1-12-00	CORRECTED DIMENSION ON SECTION B-B	
11-06-97	ADDED DIMENSION TO SECTION A-A	
10-18-96	REVISED ASTM REF. TO AASHTO AND ADDED NOTE TO TABLE OF "W" DIMENSIONS	
10-1-92	ADDED DIRECTION OF TRAFFIC	10-1-92
8-15-91	ADDED NOTE ABOUT PAINTING OF GRATE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

TABLE OF "W" DIMENSIONS

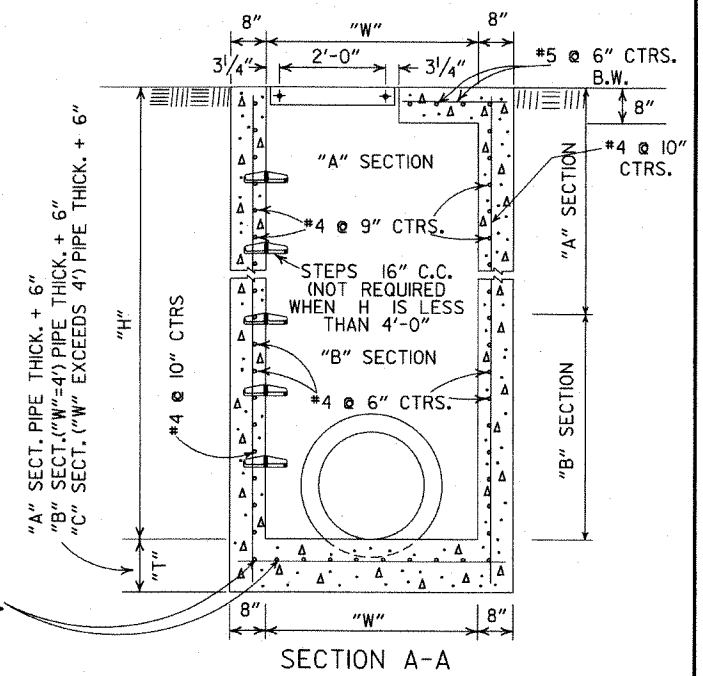
I.D. PIPE	SKEW OF CROSS DRAIN		
	STRAIGHT	30°	45°
24"	4'-0"	4'-0"	4'-0"
30"	4'-0"	4'-0"	4'-0"
36"	4'-0"	4'-3"	5'-3"
42"	4'-3"	4'-11"	6'-1"
48"	4'-10"	5'-7"	6'-11"

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



PLAN

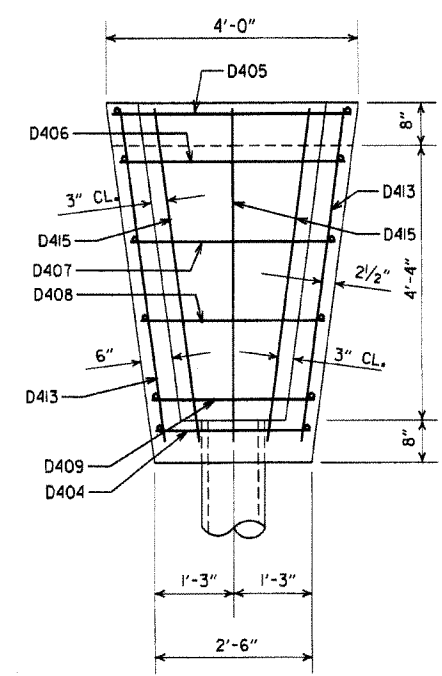


SECTION A-A

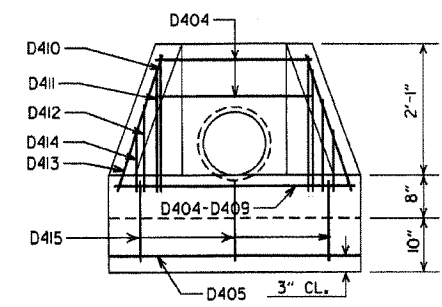
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS

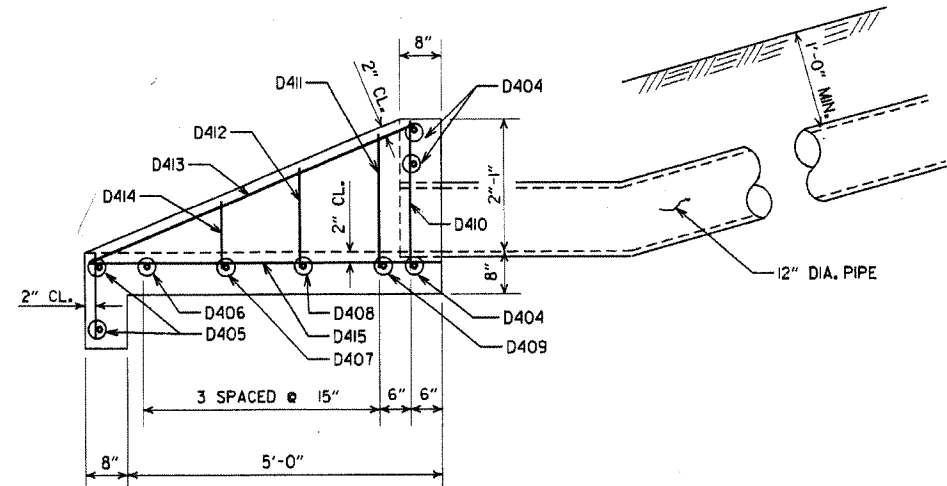
STANDARD DRAWING FPC-9D



PLAN



FRONT ELEVATION



SIDE ELEVATION
CONCRETE SPILLWAY

DETAILS OF CONCRETE SPILLWAY (TYPE A)

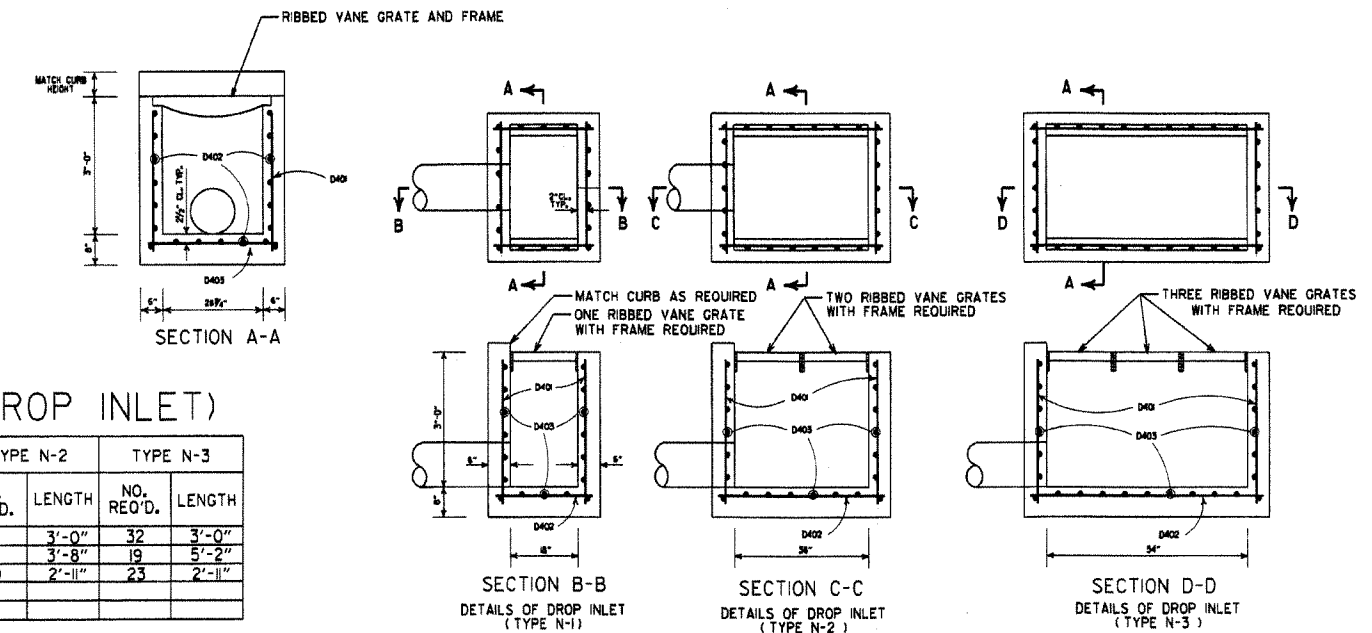
BAR LIST
(CONCRETE SPILLWAY)

MARK	NO. REQ'D.	LENGTH	BENDING DIAGRAM
D404	3	2'-2"	
D405	2	3'-8"	
D406	2	3'-5"	
D407	1	3'-1"	
D408	1	2'-9"	
D409	1	2'-5"	
D410	2	2'-5"	
D411	2	2'-2"	
D412	2	1'-9"	
D413	2	5'-6"	
D414	2	1'-2"	
D415	3	6'-5"	

BAR LIST (DROP INLET)

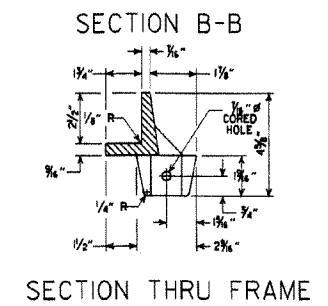
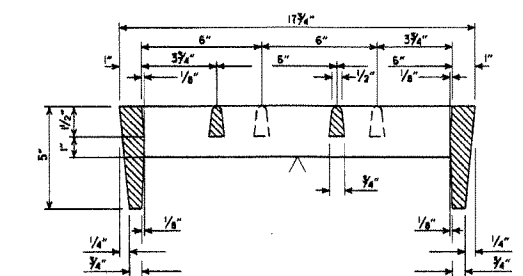
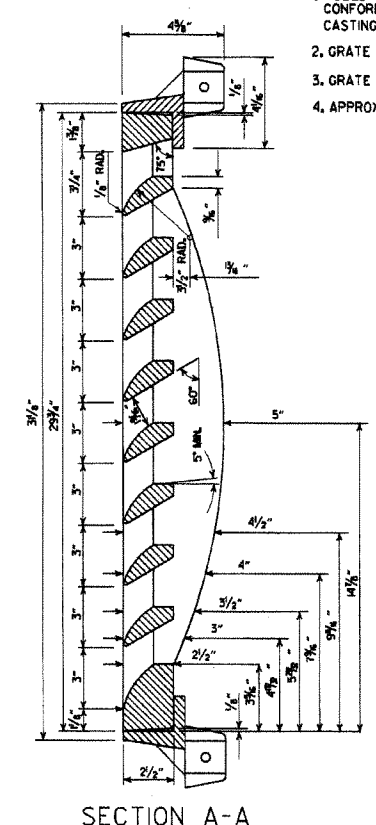
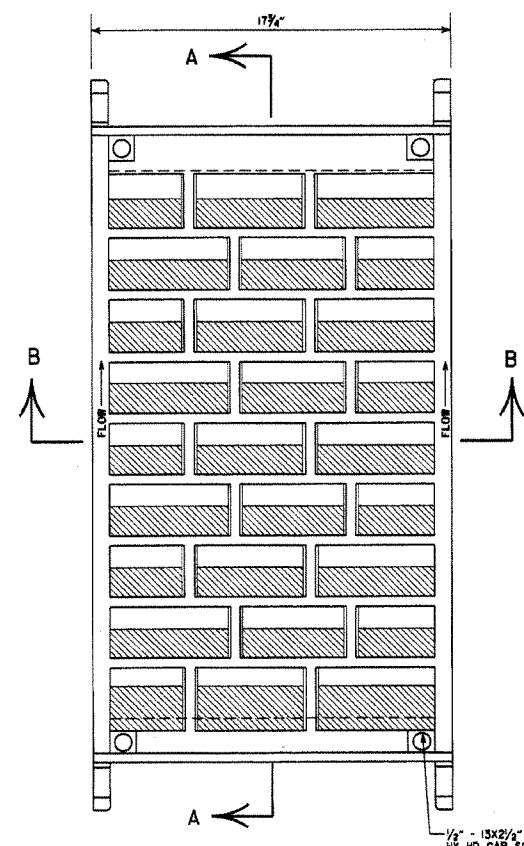
MARK	TYPE N-1		TYPE N-2		TYPE N-3	
	NO. REQ'D.	LENGTH	NO. REQ'D.	LENGTH	NO. REQ'D.	LENGTH
D401	20	3'-0"	26	3'-0"	32	3'-0"
D402	19	2'-2"	19	3'-8"	19	5'-2"
D403	17	2'-11"	20	2'-11"	23	2'-11"

ALL BARS #4 @ 6" SPACING



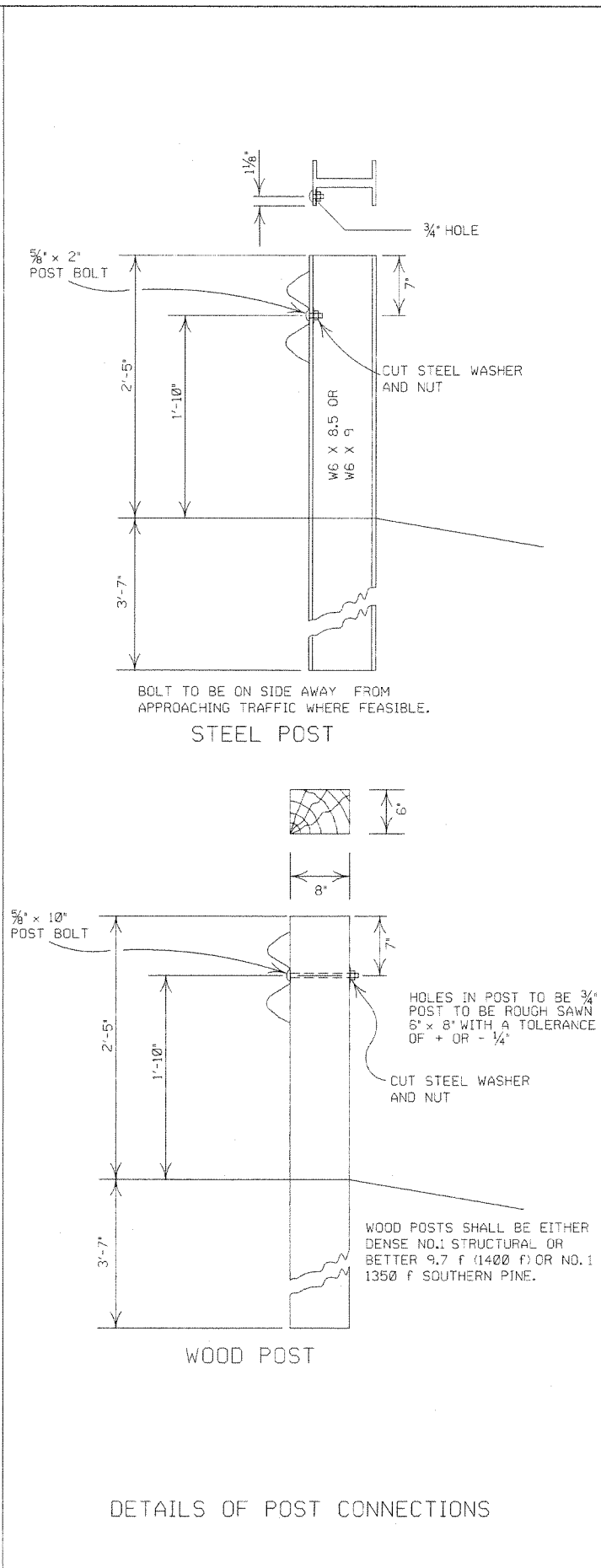
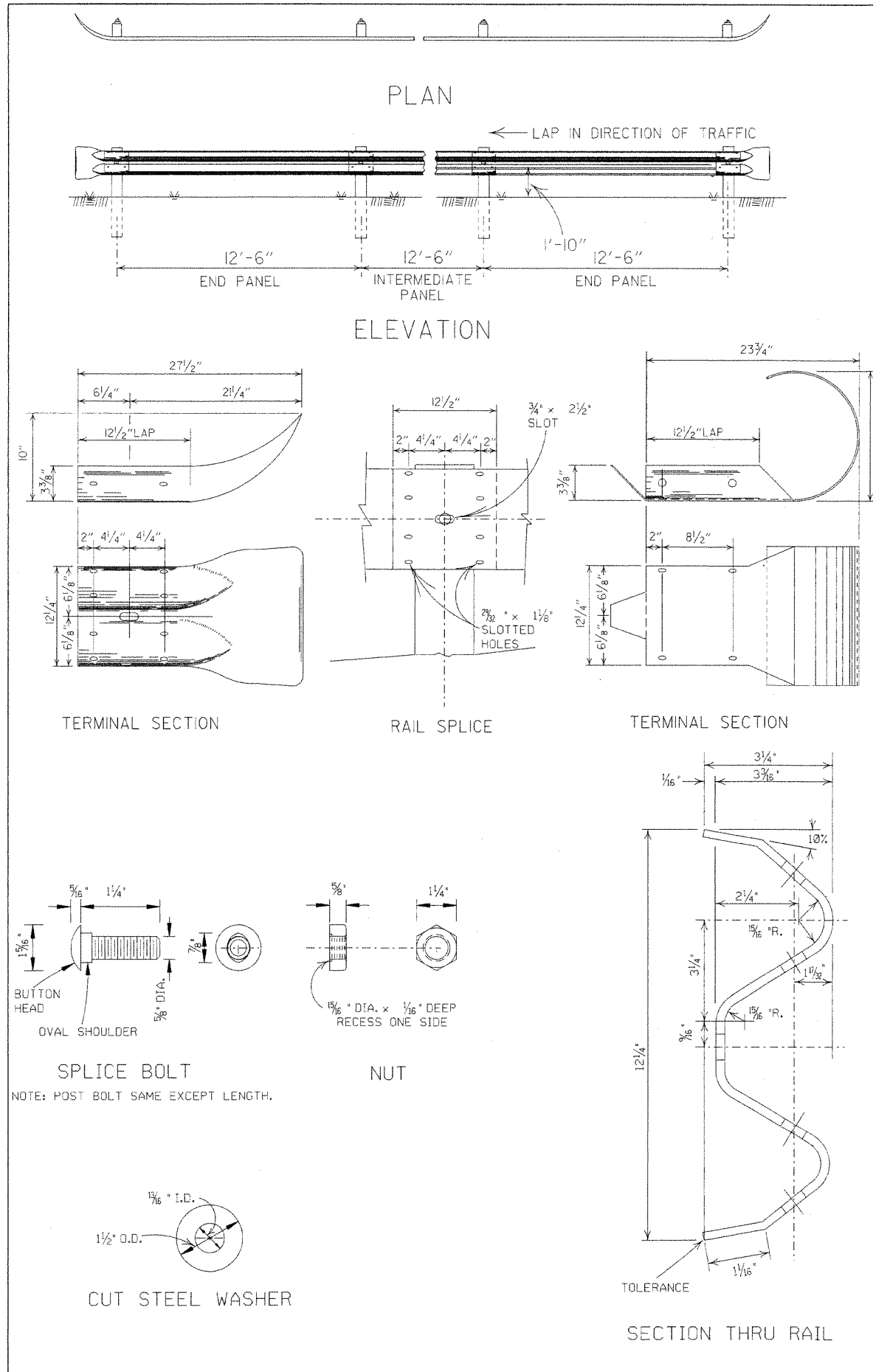
DETAILS OF DROP INLET

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

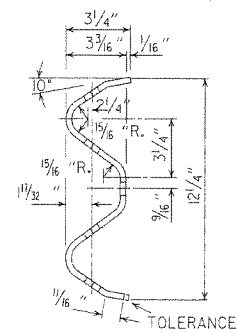
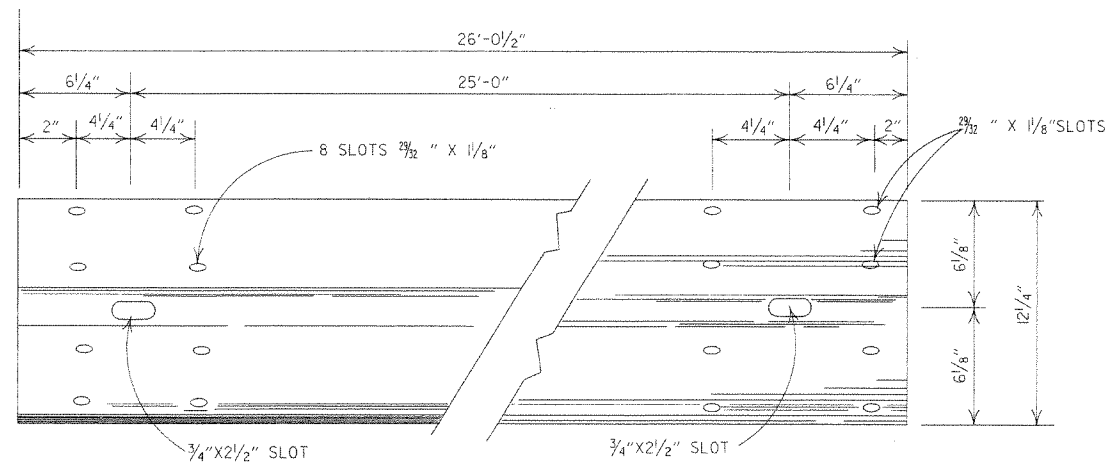


DETAILS OF RIBBED VANE GRATE AND FRAME

			ARKANSAS STATE HIGHWAY COMMISSION
			DETAILS OF DROP INLETS AND SPILLWAY OUTLET
			STANDARD DRAWING FPC-9N
7-02-98	7-2-98	REVISED SECT. A-A DETAIL OF DROP INLET & ADDED AASHTO REF. TO NOTE 1, REVISED GRATE	
10-18-96		REVISED ASTM REF. TO AASHTO	
8-15-91		ISSUED	
DATE REVISED	DATE FILMED	DESCRIPTION	

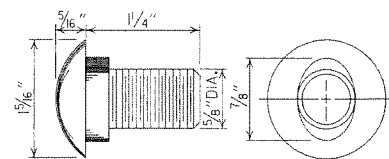


7-14-10	RAISED HEIGHT OF GUARD RAIL 1'		ARKANSAS STATE HIGHWAY COMMISSION
8-22-22	REVISED DIMENSION ON STEEL POST		
11-16-01	REVISED STEEL AND WOOD POST		
8-12-98	REMOVED CONCRETE POST		
10-18-96	CHANGED WOOD POST NOTE	10-18-96	
6-2-94	ADDED ALTERNATE STEEL POST SIZE		GUARD RAIL DETAILS (TYPE C) STREET / ROAD BARRICADE OR TEMPORARY INSTALLATION
8-5-93	REVISED STEEL POSTS SIZE	8-5-93	
8-15-91	DELETE STEEL PLATE WASHER & ADDED TYPE C TO TITLE	8-15-91	
10-30-87	REMOVED DET. PLCMNT. ON HWY.	555-11-20-87	
1-4-83	GRADE FOR WOOD POSTS	679-1-4-83	
10-1-77	HARDENED WASHER	922-10-1-72	STANDARD DRAWING GR-7
10-2-72	REVISED & REDRAWN	521-10-2-72	
DATE	REVISION	DATE FILM	

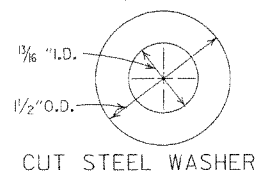


DETAILS OF W-BEAM GUARD RAIL

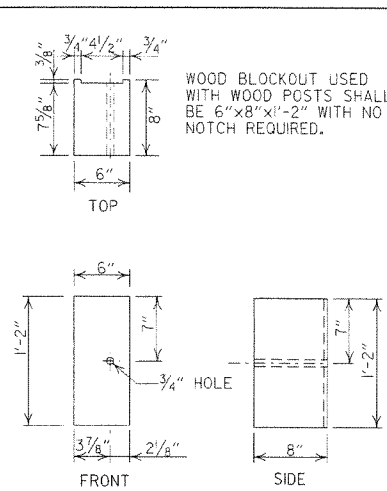
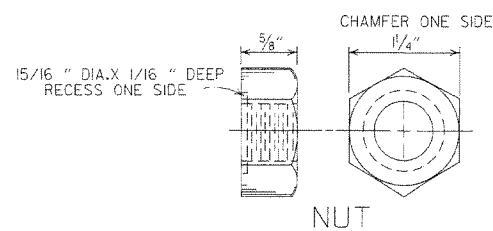
RAIL SECTION OF CLOSELY SIMILAR DIMENSIONS AND
COMPARABLE STRENGTH MAY BE SUBSTITUTED
IF APPROVED BY THE ENGINEER.



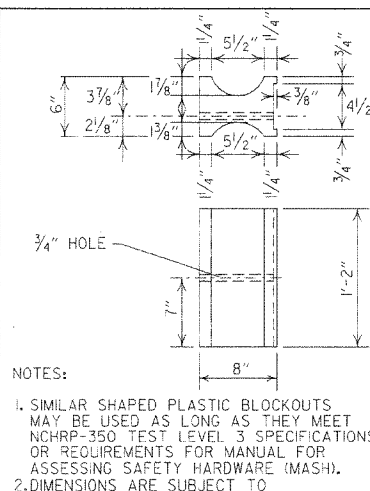
SPLICE BOLT
POST BOLT - SAME EXCEPT LENGTH



CUT STEEL WASHER



WOOD BLOCKOUT
(W-BEAM)

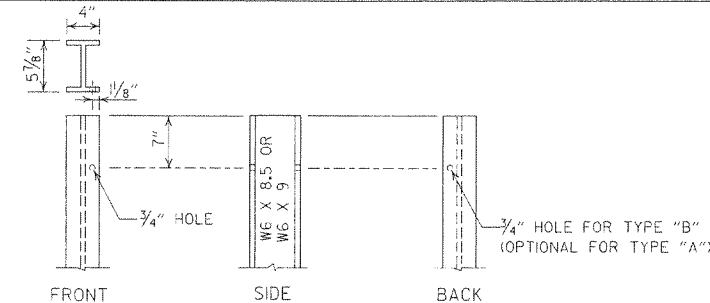


PLASTIC BLOCKOUT
(W-BEAM)

NOTES:

1. SIMILAR SHAPED PLASTIC BLOCKOUTS MAY BE USED AS LONG AS THEY MEET NCHRP-350 TEST LEVEL 3 SPECIFICATIONS OR REQUIREMENTS FOR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).

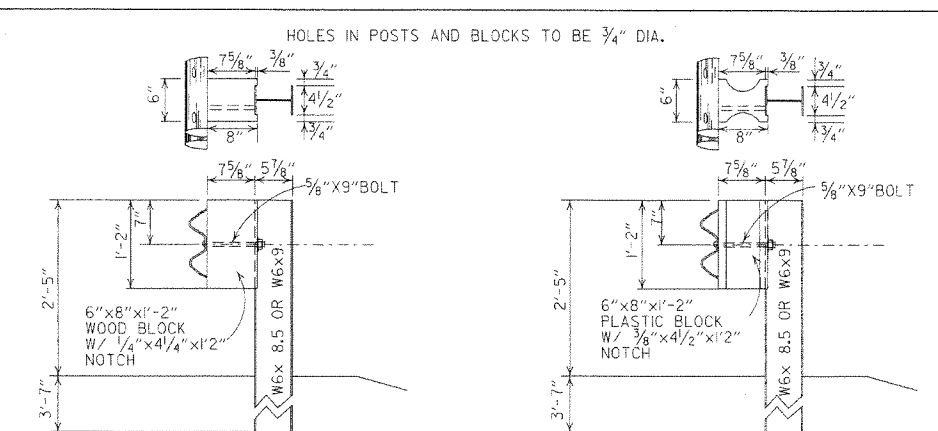
2. DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCES.



STEEL POST

TYPE "B" TYPE "A"

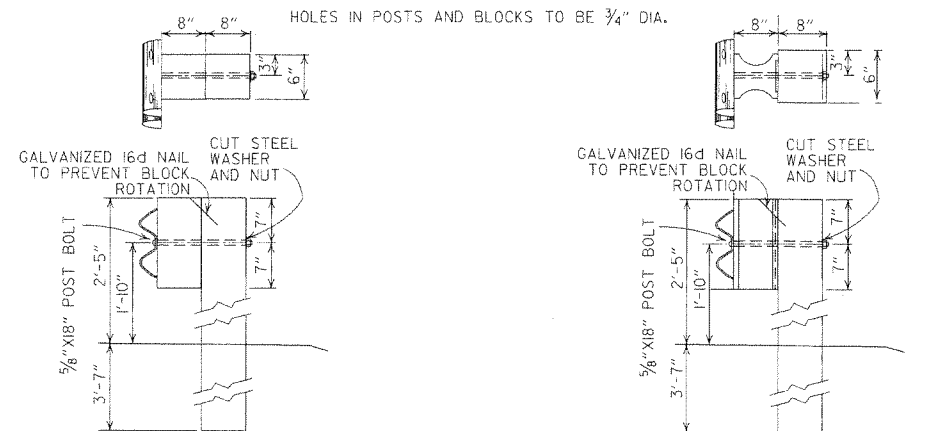
DETAILS OF STEEL LINE POST CONNECTIONS (W-BEAM)



WOOD BLOCKOUT CONNECTIONS

PLASTIC BLOCKOUT CONNECTIONS

DETAILS OF STEEL LINE POST CONNECTIONS (W-BEAM)



POSTS AND BLOCKS TO BE ROUGH SAWN 6"x8"
WITH A TOLERANCE OF + OR - 1/4".

WOOD BLOCKOUT CONNECTIONS

PLASTIC BLOCKOUT CONNECTIONS

DETAILS OF WOOD LINE POST CONNECTIONS (W-BEAM)

-GENERAL NOTES-

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

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

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

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

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

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

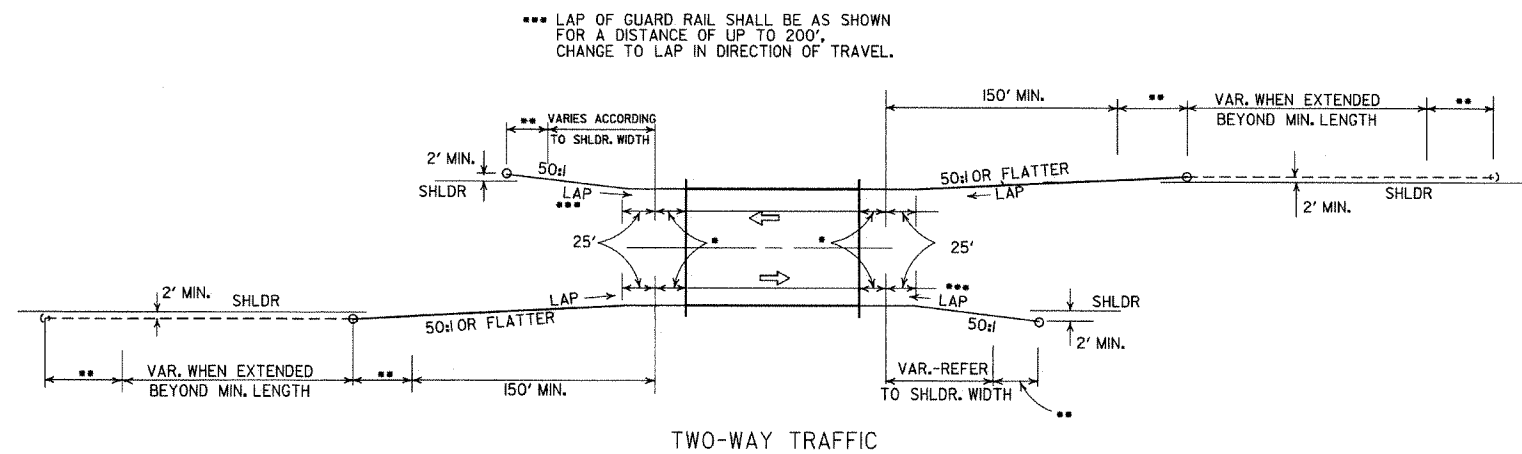
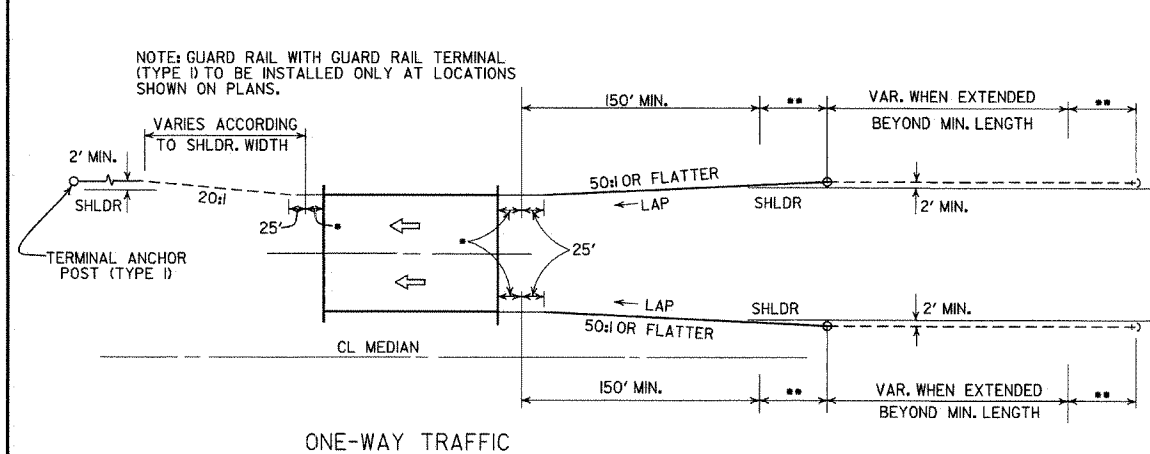
CONTRACTOR SHALL HAVE THE OPTION OF USING WOOD BLOCKOUTS FOR W-BEAM GUARD RAIL OR PLASTIC BLOCKOUTS, AS LONG AS BLOCKOUT USED MEETS NCHRP-350 TEST LEVEL 3 SPECIFICATIONS OR REQUIREMENTS FOR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) FOR W-BEAM GUARD RAIL.

7-14-80	RAISED HEIGHT OF GUARD RAIL 1"	
10-15-89	ADDED REFERENCE TO MASH	
4-10-83	REVISED GENERAL NOTES	
8-22-82	REVISED DIMENSION ON WOOD & PLASTIC BLOCKOUT CONNECTIONS & ON STEEL POST	
11-16-01	REVISED WOOD BLOCKOUT & DETAILS OF WOOD LINE POST CONNECTIONS	
3-30-00	REMOVED GUARD RAIL AT BRIDGE ENDS	
1-2-00	ADDED PLASTIC BLOCKOUT	
8-12-98	REV. BLOCKOUTS TO WOOD, DELETED CONC. POST & REV. GENERAL NOTE, DELETED DET. OF GUARD RAIL REPLACEMENT BEHIND CURB & DET. OF POST PLATE, IN SOLD ROCK, & ADDED DETAILS OF STEEL LINE POST CONN. REMOVED BACK-UP PLATE, REVISED HOLES IN STEEL POLES	
4-3-97	REMOVED "LAP IN DIRECTION OF TRAFFIC" NOTE & PLACED ARROWS ON WASHERS	
10-18-96	REVISED WOOD POST NOTE	
6-2-94	ADDED ALT. STEEL POST SIZE	
8-5-93	REVISED STEEL POST SIZE	8-5-93
10-1-92	REDRAWN & REVISED	10-1-92
8-15-91	REVISED WASHER NOTE	8-15-91
8-2-90	REV. GEN. NOTE & DEPTH OF ANC. POST IN ROCK	8-2-90
7-15-88	REVISED SECTION 3 & GENERAL NOTES	
3-4-88	REV. ANCHOR POST, ELEV. NOTES & POST IN ROCK	780-3-4-88
10-30-87	REVISED WOOD LINE POST DETAIL	546-10-30-87
10-9-87	REDRAWN & REVISED	802-10-9-87
DATE	REVISION	DATE FILED

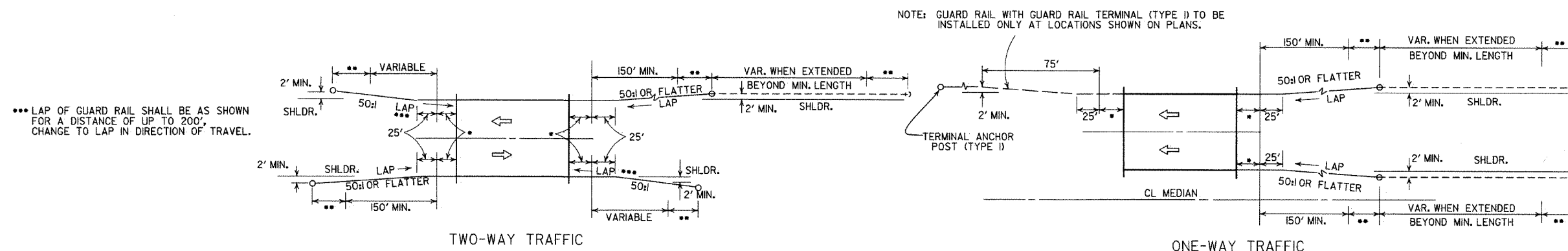
ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

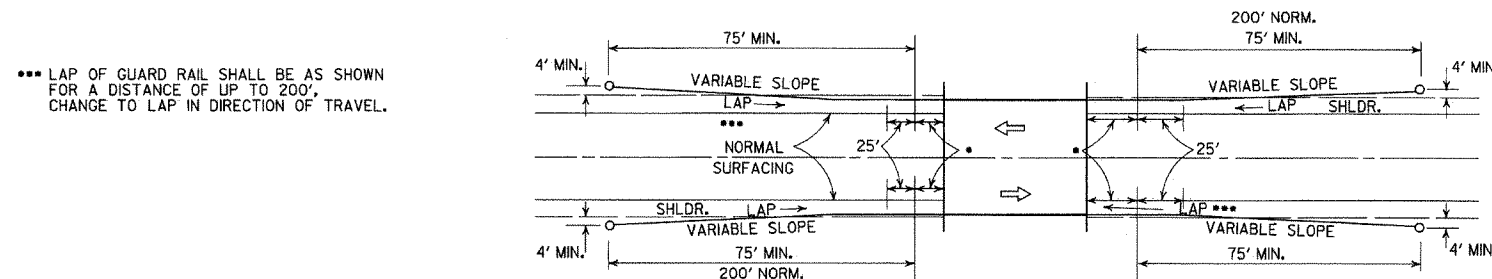
STANDARD DRAWING GR-8



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



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

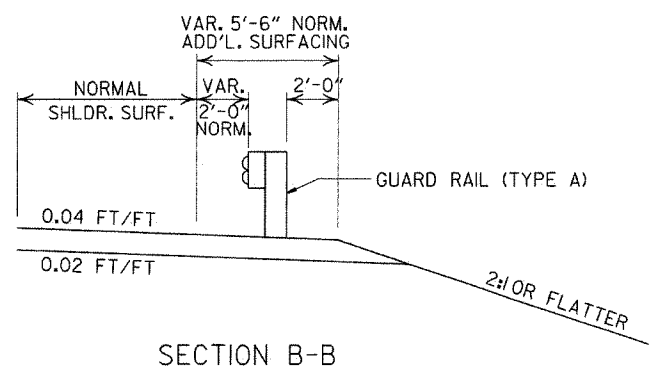
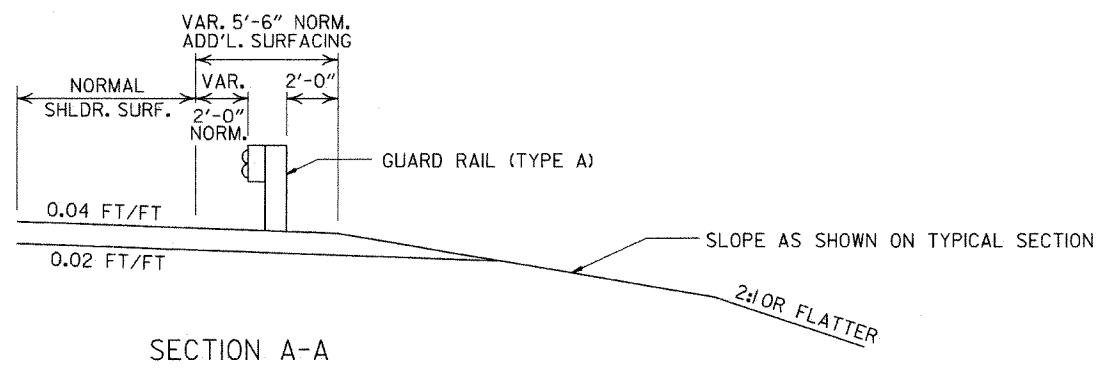
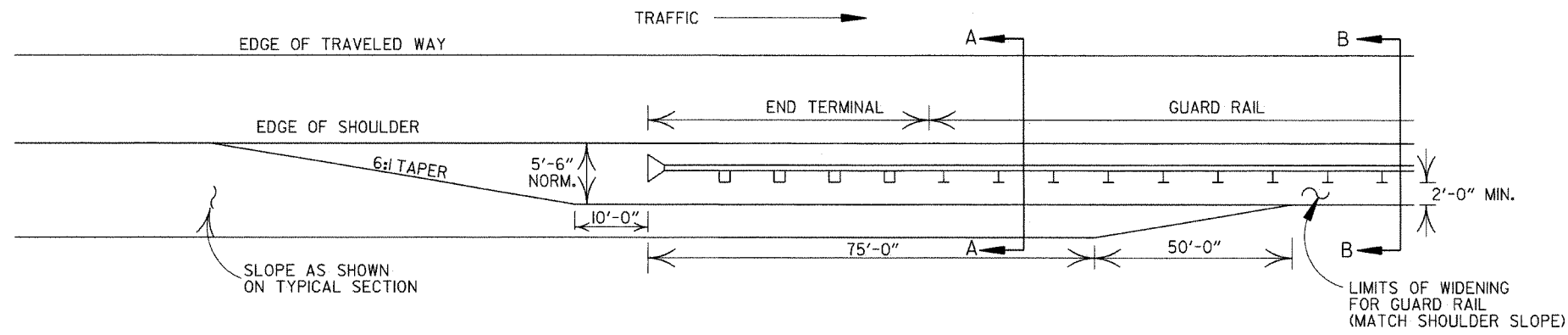


LEGEND

- THRE BEAM GUARD RAIL TERMINAL
- GUARD RAIL TERMINAL (TYPE 2)

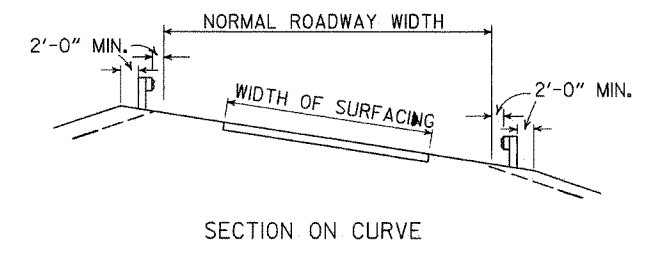
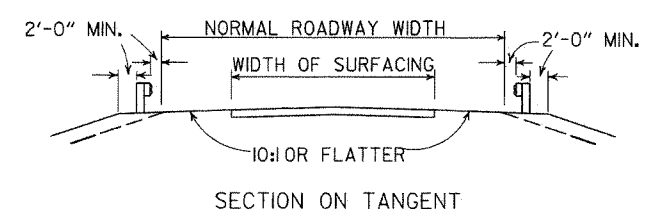
METHOD OF INSTALLATION OF GUARD RAIL USING GUARD RAIL TERMINAL (TYPE 1) (FULL SHOULDER WIDTH OR LESS BRIDGES)

ARKANSAS STATE HIGHWAY COMMISSION		
GUARD RAIL DETAILS		
STANDARD DRAWING GR-9		
4-17-08	REVISED LAYOUTS	
11-10-05	REMOVED GUARD RAIL NOTES AND DETAILS	
11-16-01	DELETED NOTE-METHOD OF INSTALLATION OF GUARD RAIL USING GUARD RAIL TERM. (TY. 1)	
1-12-00	ADDED CONSTRUCTION NOTE	1-12-00
6-26-97	REVISED LAYOUT	
10-1-92	REDRAWN & REVISED	10-1-92
10-9-87	ADDED NOTE	
10-9-87	REDRAWN & REVISED	
DATE	REVISION	DATE FILM

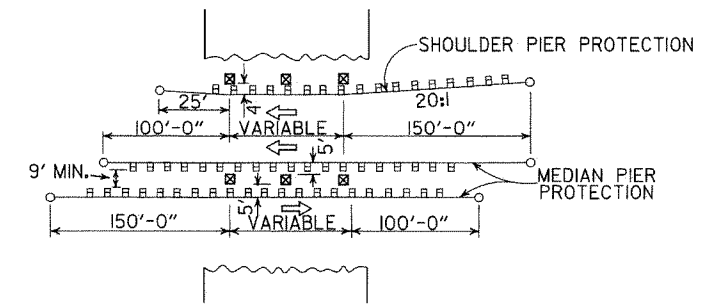


DETAILS OF WIDENING FOR GUARD RAIL

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

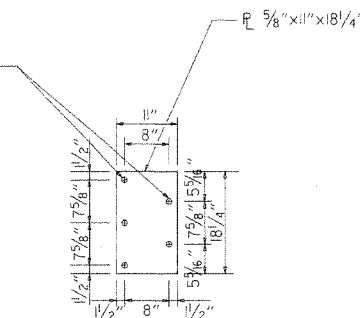
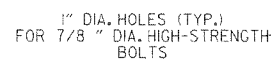
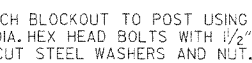
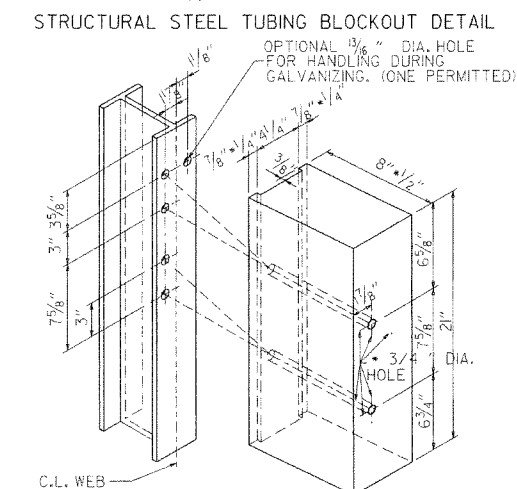
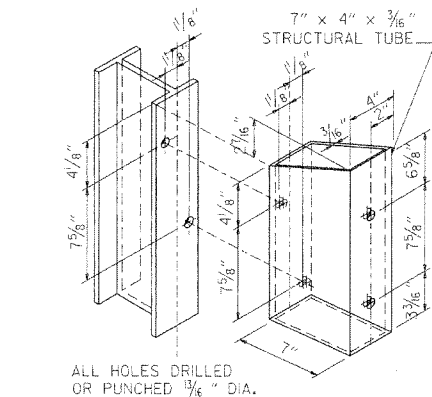
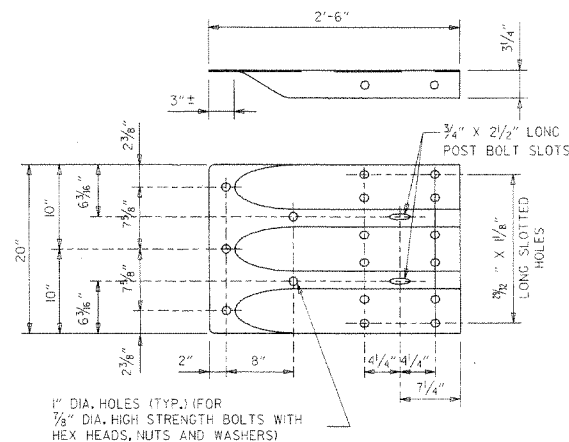
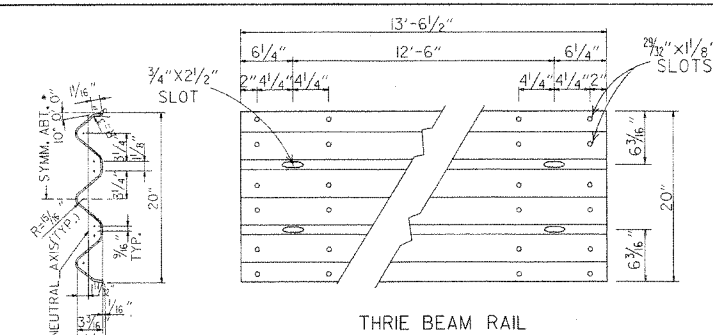


DETAILS SHOWING POSITION OF GUARD RAIL ON HIGHWAY

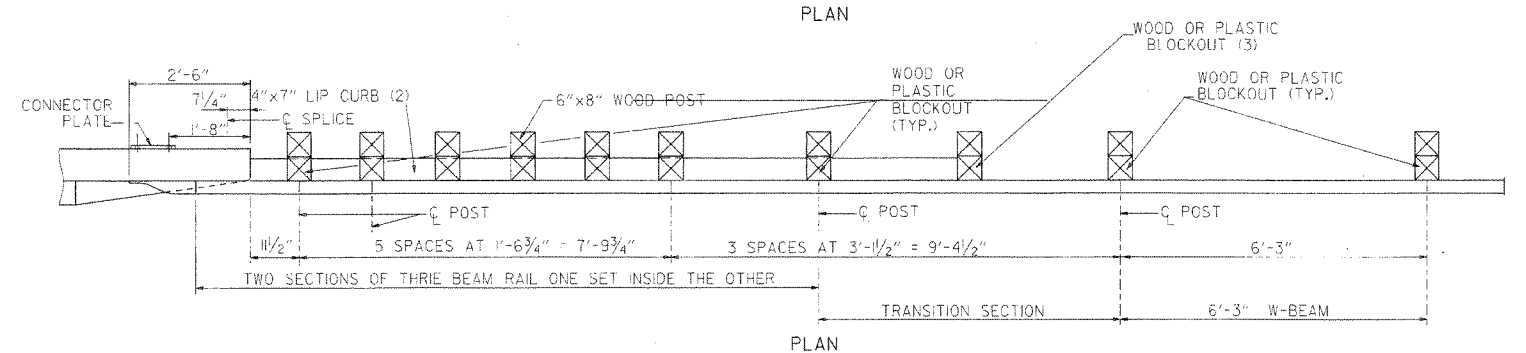
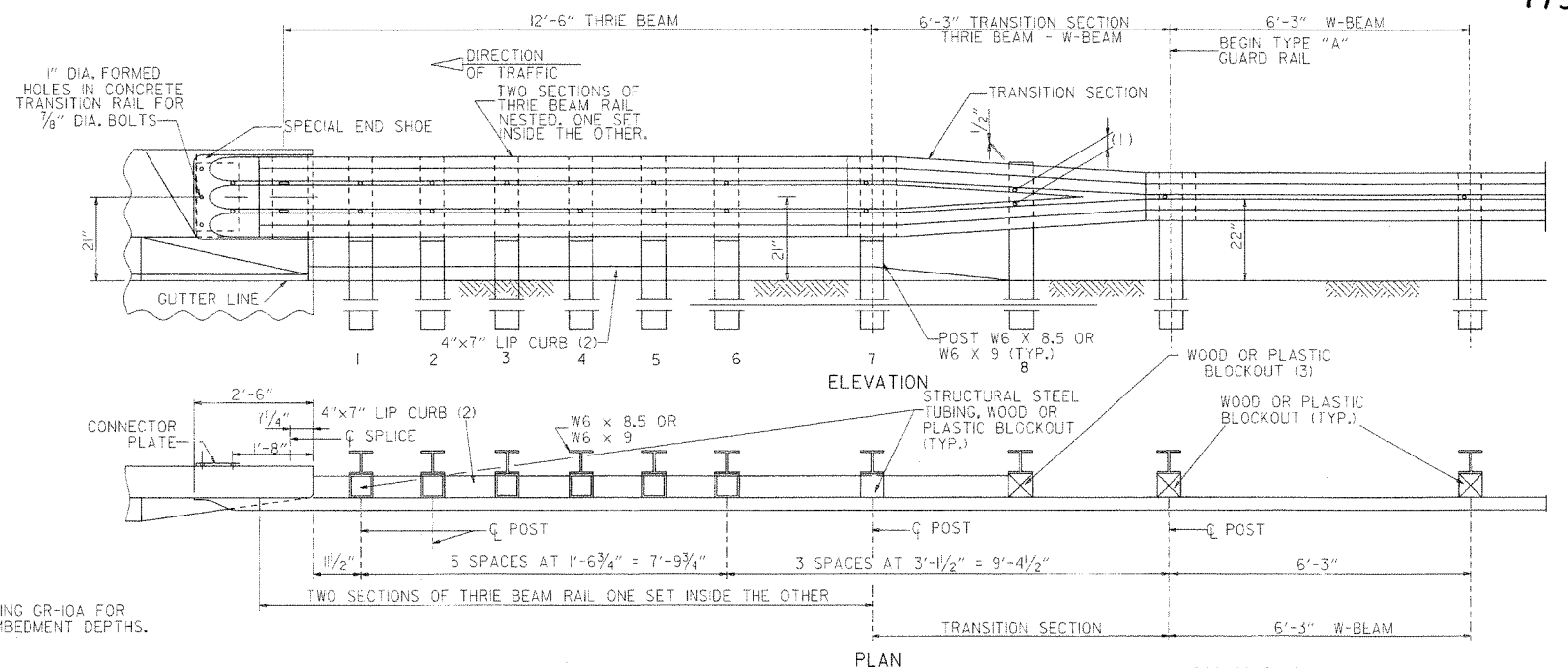
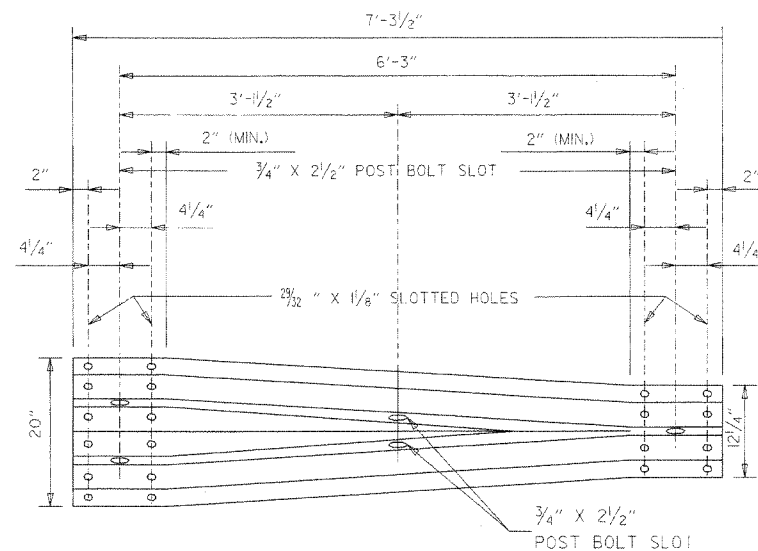
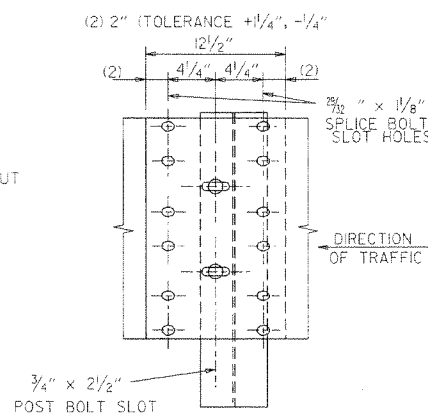


METHOD OF INSTALLATION OF GUARD RAIL AT FIXED OBSTACLE

			ARKANSAS STATE HIGHWAY COMMISSION
			GUARD RAIL DETAILS
			STANDARD DRAWING GR-9A
4-17-08	MINOR REVISION		
11-10-05	DRAWN		
DATE	REVISION	DATE	FILM



CONNECTOR PLATE SHALL BE AASHTO M270, GR. 36 AND SHALL BE GALVANIZED AFTER FABRICATION. GALVANIZING SHALL CONFORM TO SUBSECTION 807.9 OF THE STANDARD SPECIFICATIONS. CONNECTOR PLATE TO BE BOLTED TO SPECIAL END SHOE USING $\frac{1}{2}$ " DIA. HIGH STRENGTH BOLTS, WITH THE HEADS PLACED ON THE TRAFFIC FACE. WASHERS SHALL BE USED UNDER THE HEAD AND NUT. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AND SHALL CONFORM TO SUBSECTION 807.06.



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

THREE BEAM GUARD RAIL CONNECTION AT BRIDGE ENDS

GENERAL NOTES:

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

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

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

ALL LAP SPLICES, INCLUDING SPECIAL END SHOES, SHALL BE MADE IN THE DIRECTION SHOWN ON STANDARD DRAWINGS GR-9 & GR-11.

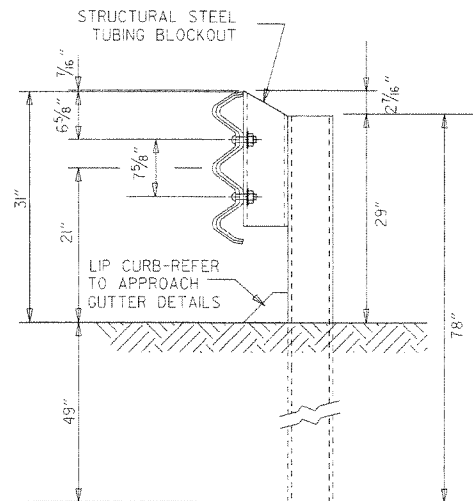
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7f (1400 f) OR NO. 1 1350 f SOUTHERN PINE.

REFER TO STD. DRWG. GR-10A FOR POST DETAILS.

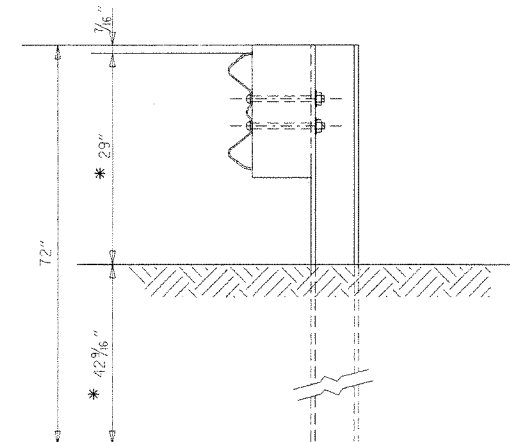
USE THRIE BEAM GUARD RAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB.

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

7-14-10	RAISED HEIGHT OF W-BEAM 1"	ARKANSAS STATE HIGHWAY COMMISSION
11-29-07	ADDED PLASTIC BLOCKOUTS	
11-10-05	ADDED NOTE FOR ATTACHING STEEL BLOCKOUT	GUARD RAIL DETAILS
11-18-04	REVISED GENERAL NOTES	
10-9-03	REVISED GENERAL NOTES	STANDARD DRAWING GR-10
4-10-03	REVISED GENERAL NOTES	
8-22-02	REVISED NOTE (2)	
6-29-00	MOVED DIMENSION LINES	
5-18-00	ADDED NOTE	
3-30-00	DRAWN & ISSUED	
DATE	REVISION	DATE FILED

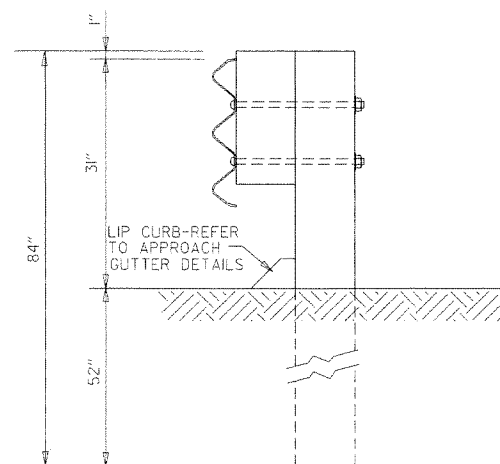


THREE BEAM RAIL WITH STEEL TUBING BLOCKOUT
AND STEEL POST
POSTS 1-7

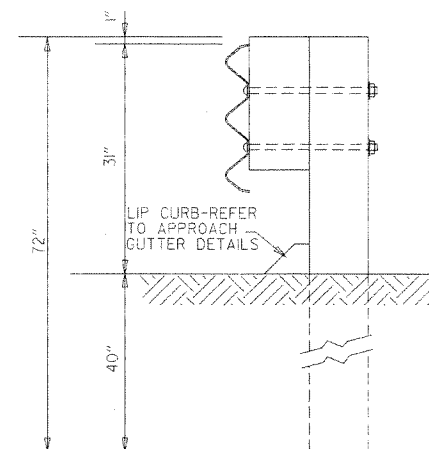


W-BEAM TO THRIE BEAM TRANSITION RAIL
WITH WOOD OR PLASTIC BLOCKOUT AND STEEL POST
POST 8

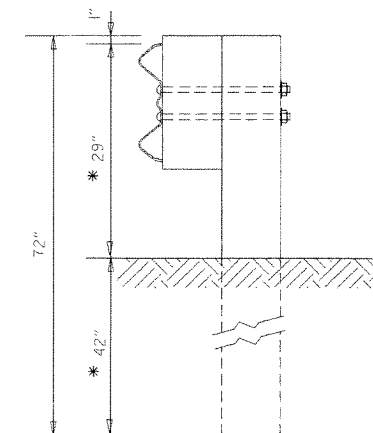
* NOTE:
THESE DIMENSIONS WILL NEED TO BE ADJUSTED
IN THE FIELD TO MAKE THE TRANSITION FROM
21" MID POINT OF THRIE BEAM TO 22" MID POINT
OF W-BEAM.



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



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



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

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

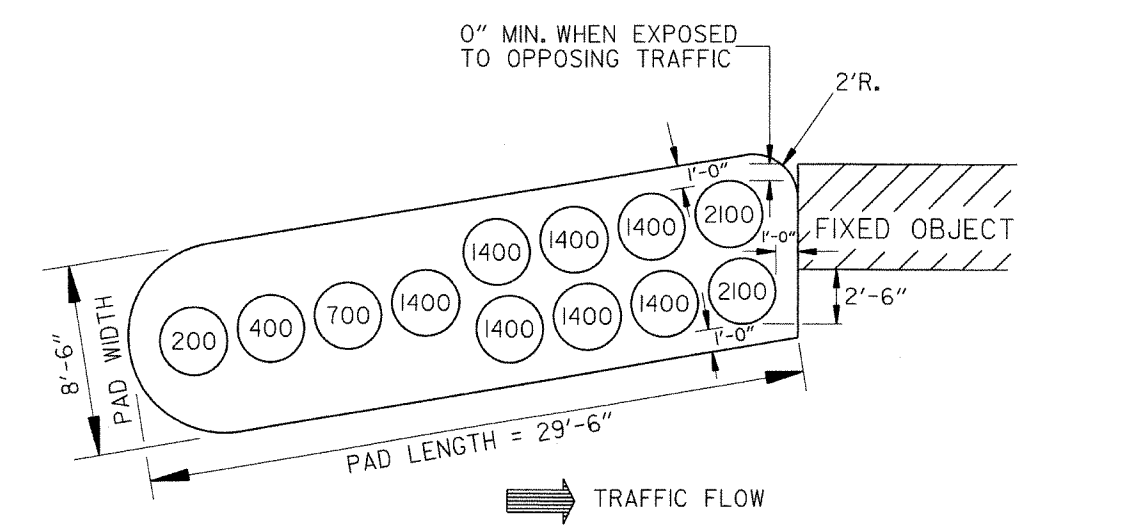
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7f (1400 f) OR NO. 1 350 f SOUTHERN PINE.

7-14-10	REVISED POST & DIMENSIONS	
11-29-07	ADDED PLASTIC BLOCKOUTS	
8-22-02	REVISED LIP CURB NOTE	
3-30-00	DRAWN & ISSUED	
DATE	REVISION	DATE FILED

ARKANSAS STATE HIGHWAY COMMISSION

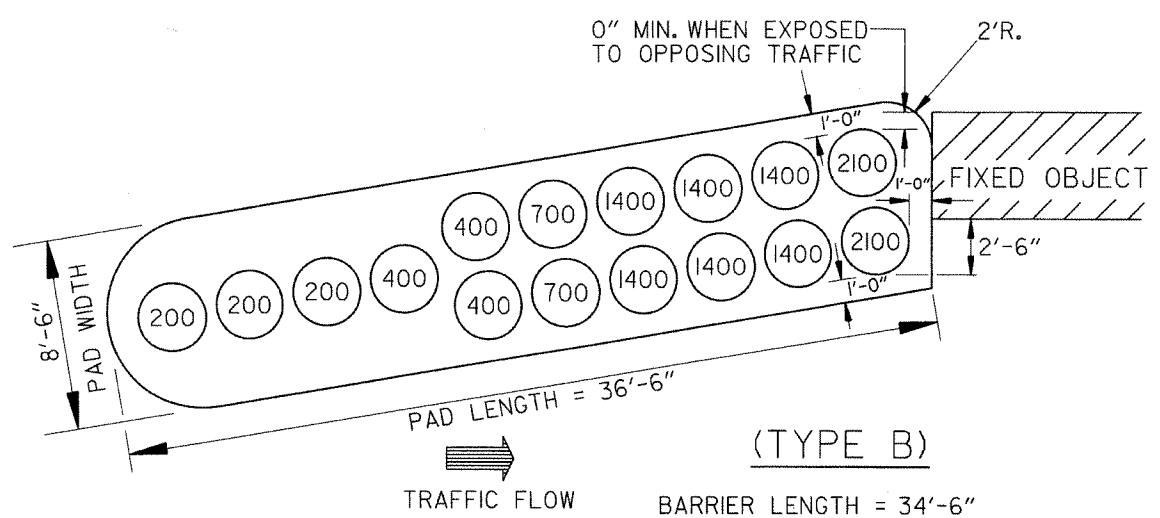
GUARD RAIL DETAILS

STANDARD DRAWING GR-10A



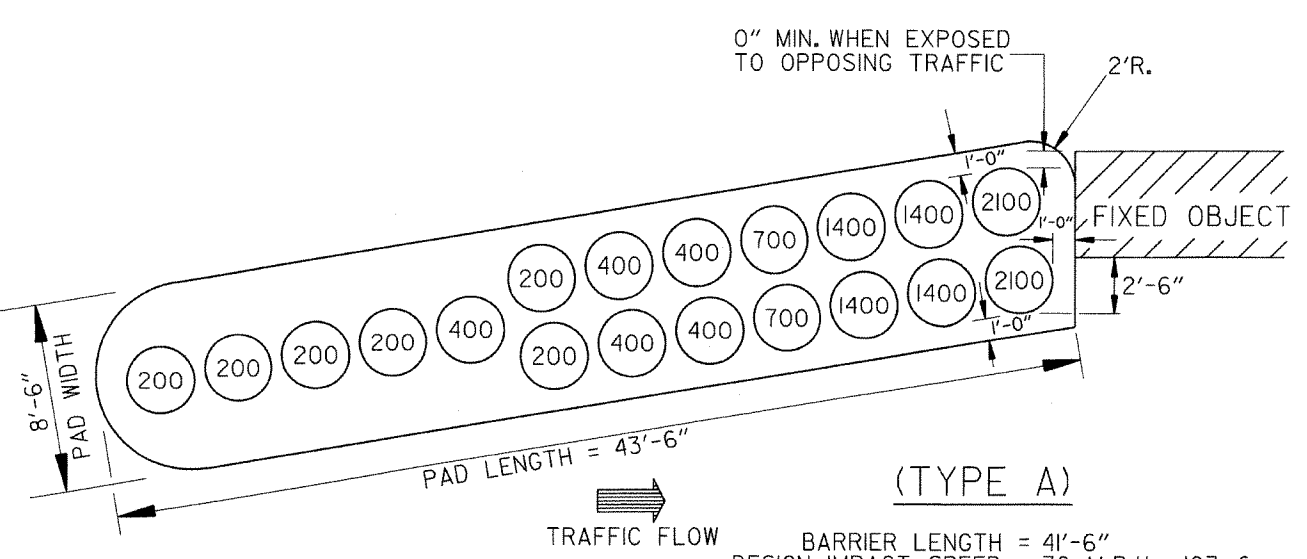
(TYPE C)

BARRIER LENGTH = 27'-6"
DESIGN IMPACT SPEED = 50 M.P.H. = 73.3 fps



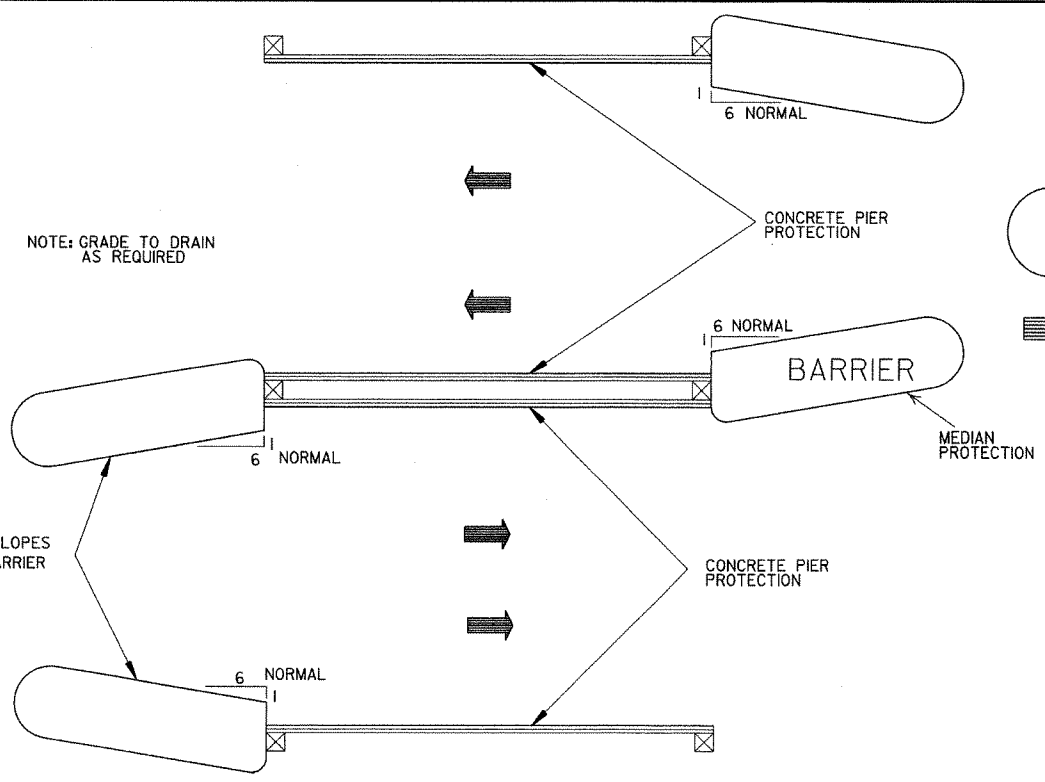
(TYPE B)

BARRIER LENGTH = 34'-6"
DESIGN IMPACT SPEED = 60 M.P.H. = 88 fps



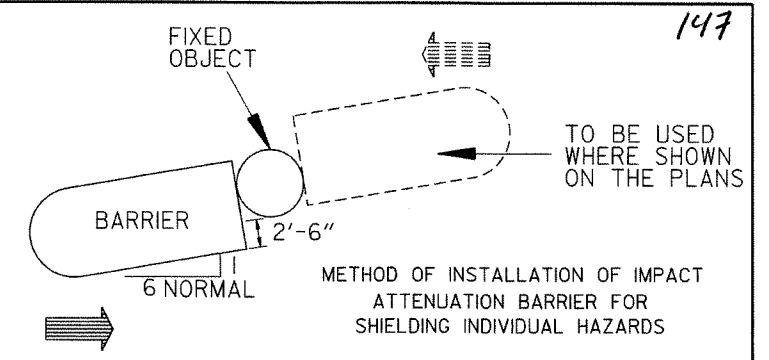
(TYPE A)

BARRIER LENGTH = 41'-6"
DESIGN IMPACT SPEED = 70 M.P.H. = 103 fps



METHOD OF INSTALLATION OF
IMPACT ATTENUATION BARRIER
FOR PIER PROTECTION

- GENERAL NOTES
1. DIMENSIONS SHOWN ARE TO TOP OF PLASTIC MODULES.
 2. SPACING BETWEEN PLASTIC MODULES SHALL NOT EXCEED 6" AT THE TOP.
 3. PLASTIC MODULES SHALL MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).



METHOD OF INSTALLATION OF IMPACT
ATTENUATION BARRIER FOR
SHIELDING INDIVIDUAL HAZARDS

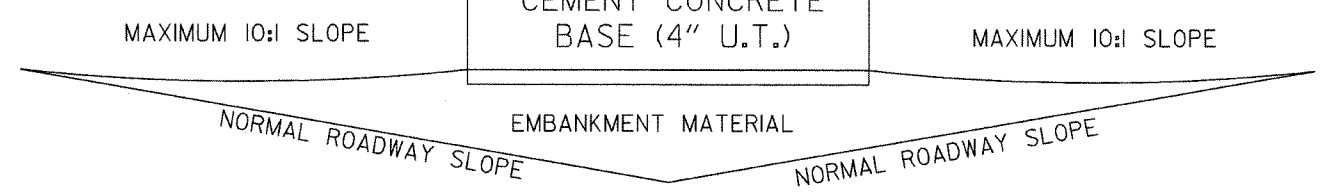
APPROXIMATE QUANTITIES PER PAD

TYPE	ALTERNATE #1		ALTERNATE #2
	AGGR. BASE COURSE	A.C.H.M. SURFACE COURSE	P.C.CONC. BASE (4" U.T.)
	TONS	TONS	SQ.YDS.
A	9.7	4.6	41.6
B	8.1	3.8	34.9
C	6.6	3.1	28.3

NOTE: APPROXIMATE QUANTITIES SHOWN ARE FOR INFORMATIONAL PURPOSES ONLY. PAYMENT TO BE INCLUDED IN UNIT PRICE BID FOR IMPACT ATTENUATION BARRIER.

ALTERNATE #1
AVG. 8'-6" A.C.H.M. SURF. COURSE (1 1/2")
220 LBS. PER SQ. YD. &
AGGREGATE BASE COURSE
(4" COMPACTED DEPTH)

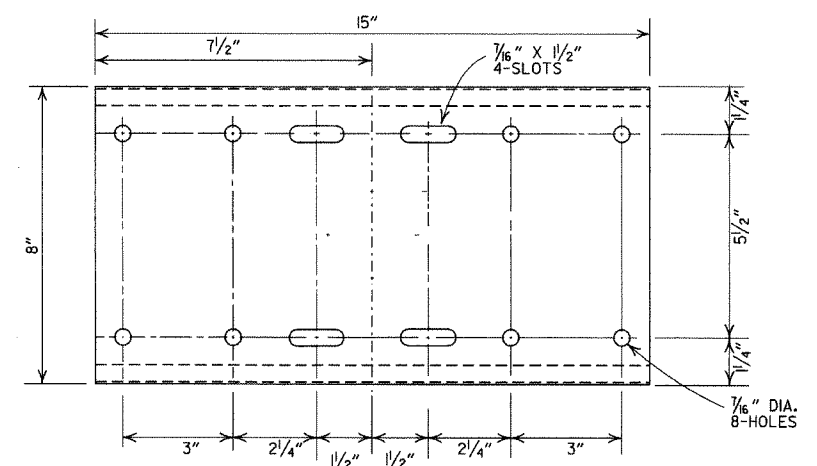
OR ALTERNATE #2
AVG. 8'-6" PORTLAND
CEMENT CONCRETE
BASE (4" U.T.)



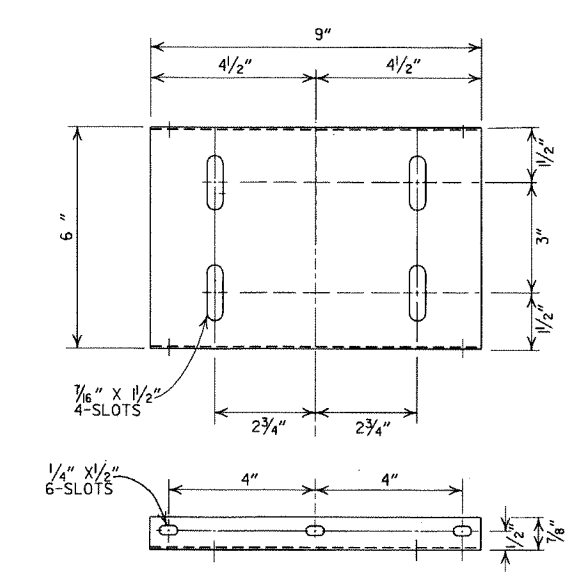
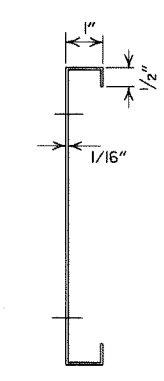
DETAIL OF BARRIER PAD

NOTE: BARRIER PAD TO BE SKEWED TOWARD ONCOMING TRAFFIC
A MAXIMUM OF 6:1 WITH 6:1 BEING NORMAL

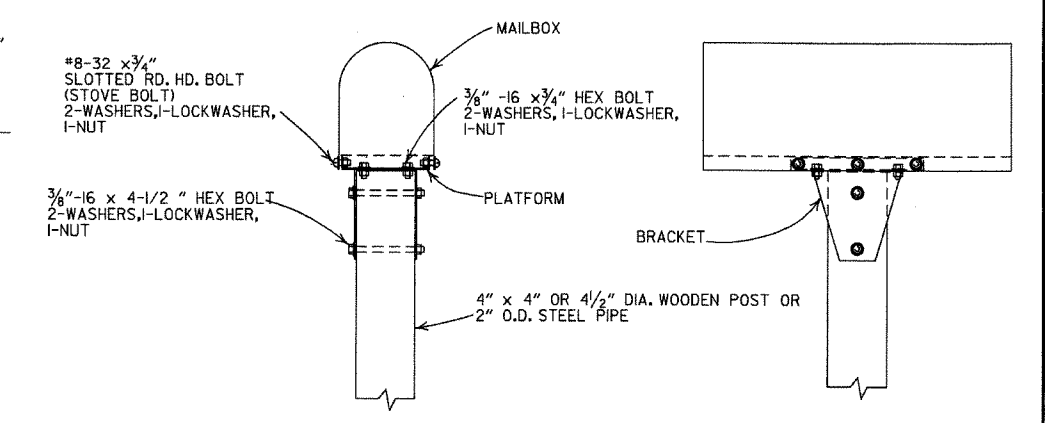
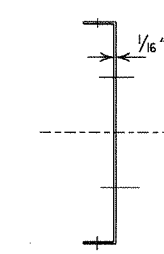
10-15-09	ADDED REFERENCE TO MASH		ARKANSAS STATE HIGHWAY COMMISSION
11-29-07	REVISED TY. A & TY. C ARRAYS		
11-19-98	REVISED FIXED OBJECT		
11-18-98	REV. NOTES & TYPE A MOD. WTS.		
10-18-96	REDRAWN		
7-15-88	CONFORMED TO 1988 SPECS		IMPACT ATTENUATION BARRIER
7-29-87	REDRAWN		
DATE	REVISION	DATE FILMED	STANDARD DRAWING IB-1



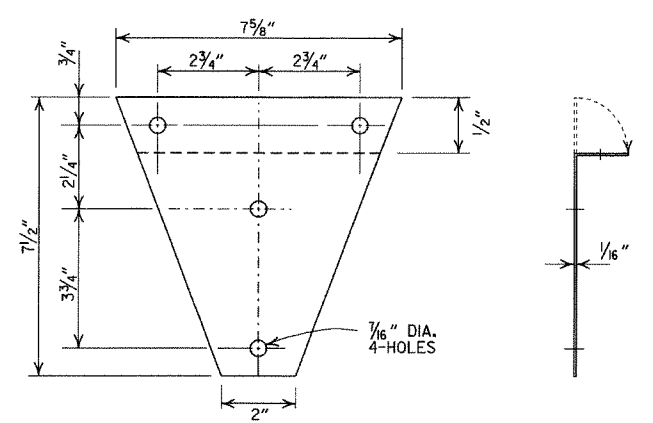
SHELF



PLATFORM

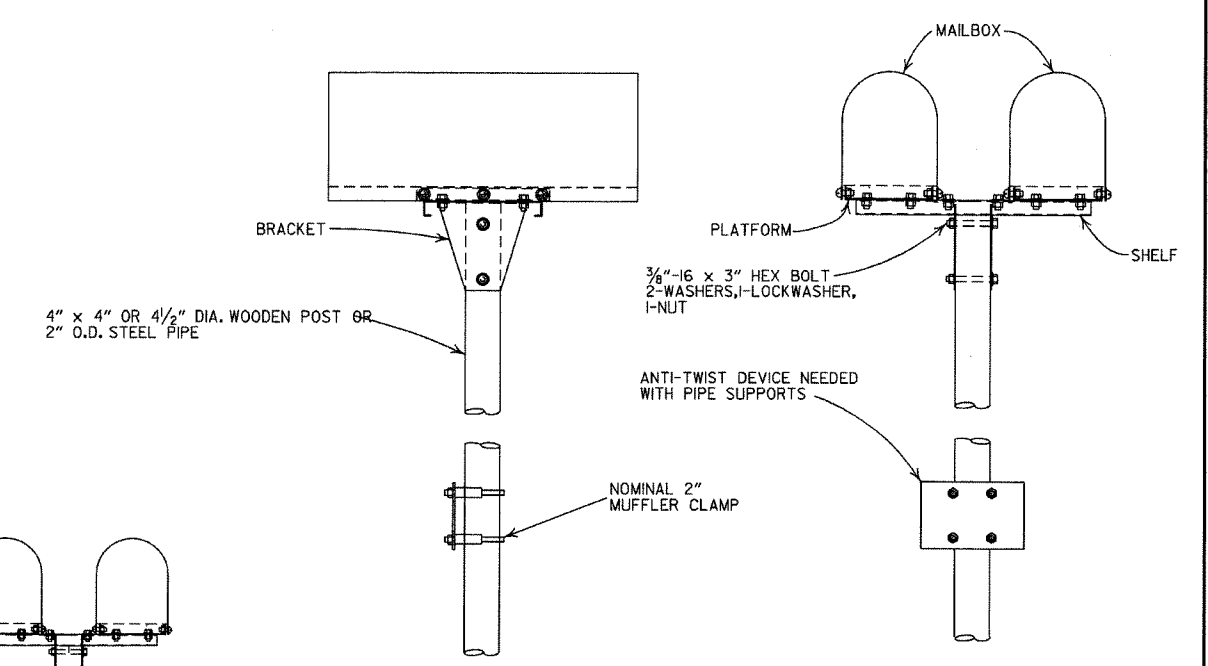


SINGLE INSTALLATION

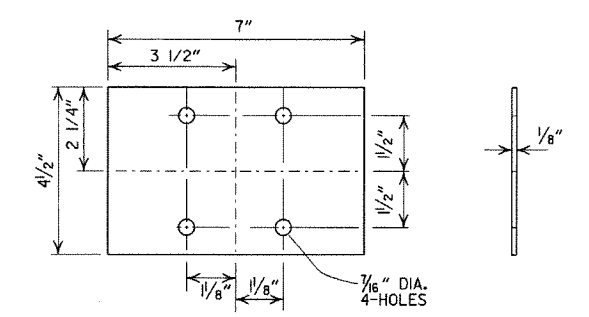


BRACKET

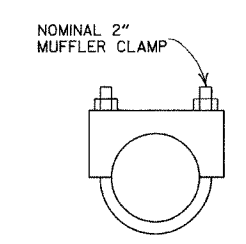
- GENERAL NOTES
1. MAILBOX POSTS MAY BE WOOD OR METAL. WOOD POSTS SHALL BE PRESSURE TREATED FOR GROUND CONTACT IN ACCORDANCE WITH SECTION 637.02 OF THE STANDARD SPECIFICATIONS.
 2. ANTI-TWIST PLATES SHALL BE USED ONLY ON METAL POSTS.
 3. MAILBOX SHELF, BRACKET & PLATFORM SHALL BE GALVANIZED OR PAINTED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



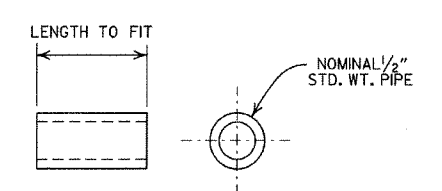
DOUBLE INSTALLATION



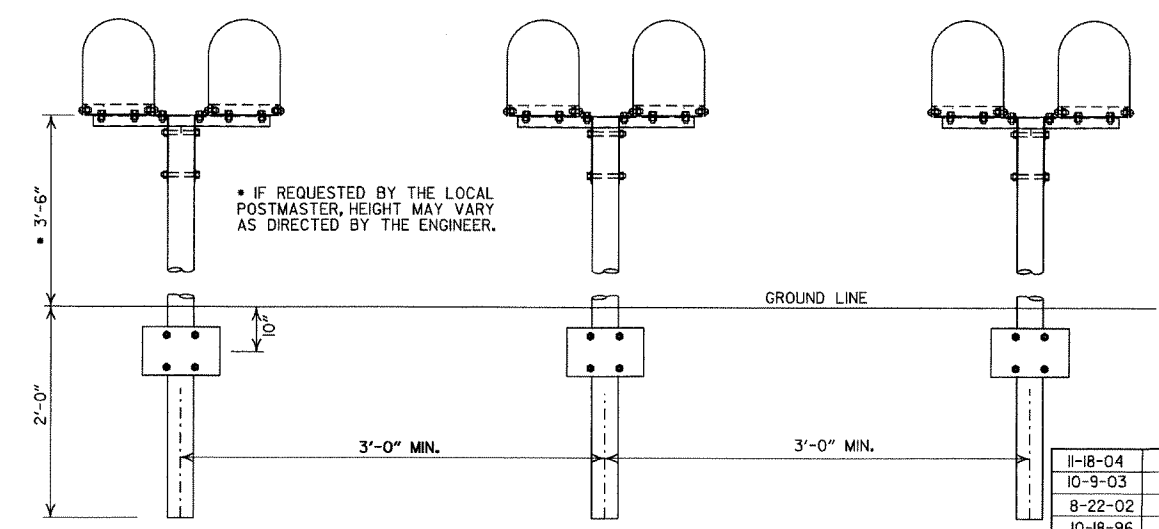
ANTI-TWIST PLATE



CLAMP



SPACER

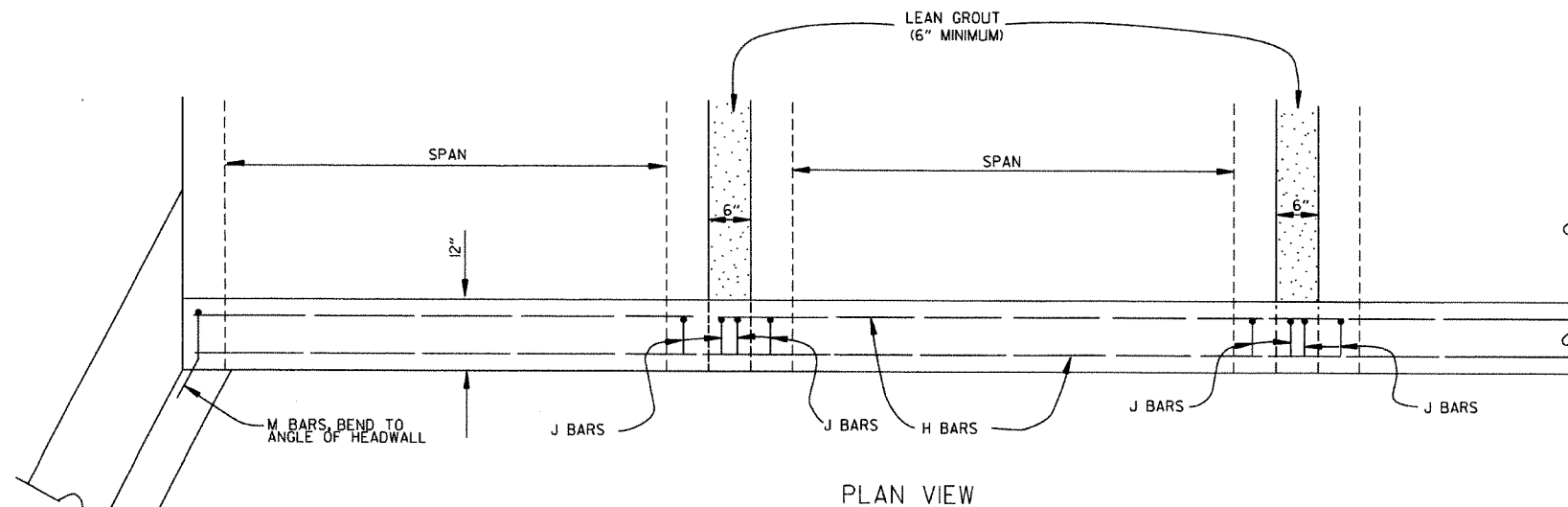


SPACING FOR MULTIPLE POST INSTALLATION

DATE	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

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.

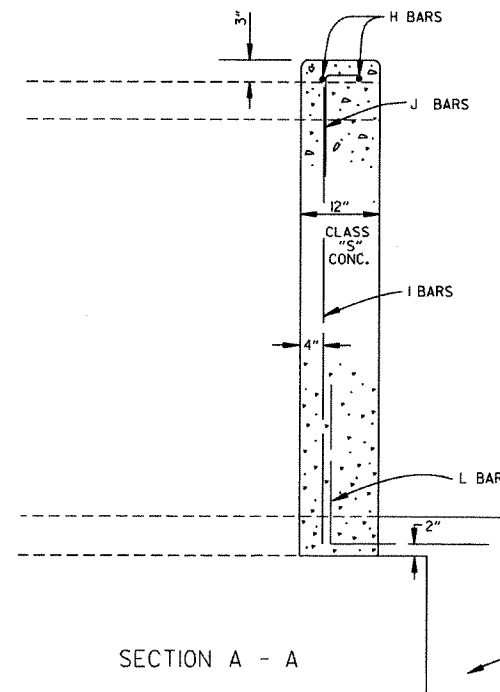
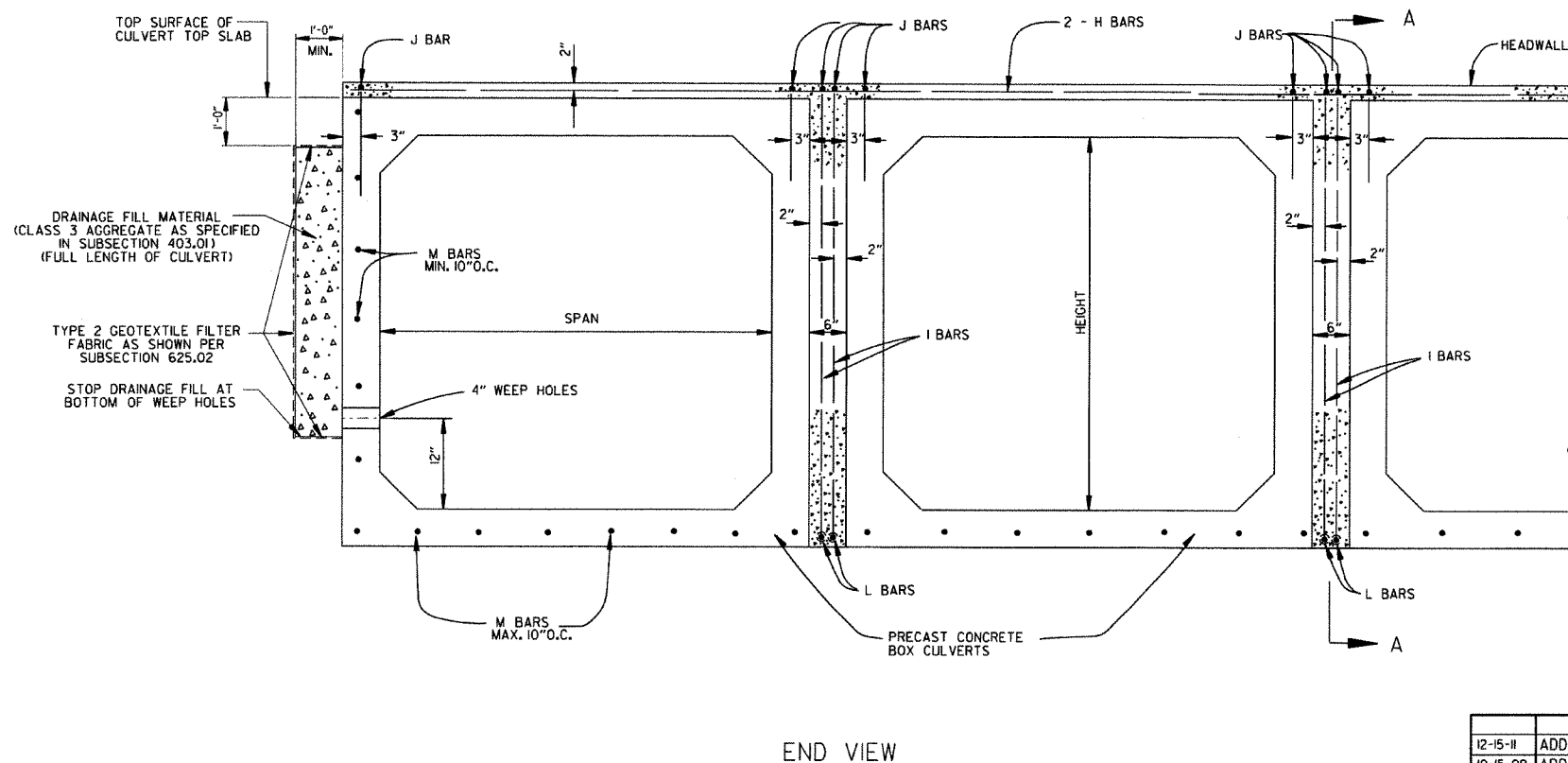
THE MEMBRANE WATERPROOFING WILL BE REQUIRED ON THE TOP EXTERNAL JOINT AND SHALL EXTEND 1 FOOT DOWN THE SIDES OF THE CULVERT.

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.



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	
DATE	REVISION	DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION

PRECAST CONCRETE BOX CULVERTS

STANDARD DRAWING PBC-1

CORRUGATED STEEL PIPE (ROUND)

PIPE DIAMETER (INCHES)	① MINIMUM COVER TOP OF PIPE TO TOP OF GROUND "H" (FEET)	MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET)				
		METAL THICKNESS (INCHES)				
		0.064	0.079	0.109	0.138	0.168
2 3/8 INCH BY 1/2 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM						
12	1	84	91			
15	1	67	73			
18	1	56	61			
24	1	42	46	59		
30	2	34	36	47		
36	2		30	39	41	
42	2		43	67	70	73
48	2		37	58	61	64
② 3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION RIVETED, WELDED, BOLTED, OR HELICAL LOCK-SEAM						
36	1	48	60	88	111	118
42	1	41	51	72	90	102
48	1	36	45	64	77	85
54	2	32	40	59	71	79
60	2	29	36	53	64	71
66	2	26	33	47	58	64
72	2	24	30	44	53	59
78	2		28	41	49	54
84	2		26	38	45	51
90	2		24	35	43	45
96	2		22	33	40	44
102	2			31	38	42
108	2			30	35	39
114	2			28	34	37
120	2			27	32	35

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. COMPLETE STRUCTURAL BACKFILL OPERATION BY WORKING FROM SIDE TO SIDE OF THE PIPE. THE SIDE TO SIDE STRUCTURAL BACKFILL DIFFERENTIAL SHALL NOT EXCEED 24 INCHES OR 1/3 THE SIZE OF THE PIPE, WHICHEVER IS LESS.

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

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

③ SM-3 WILL NOT BE ALLOWED.

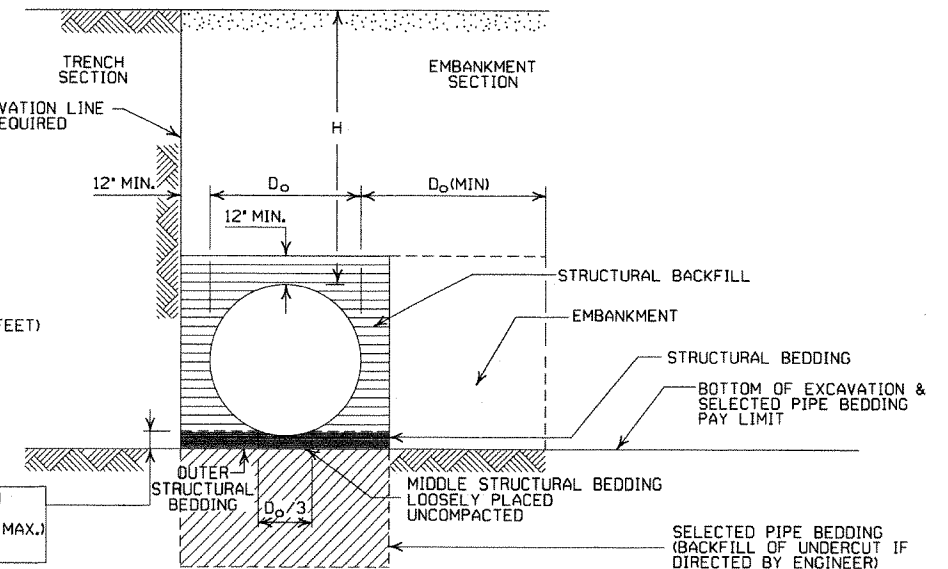
EQUIVALENT METAL THICKNESSES AND GAUGES

METAL THICKNESS IN INCHES			GAUGE NUMBER
STEEL		ALUMINUM	
ZINC COATED	UNCOATED		
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

- LEGEND -

- D_o = OUTSIDE DIAMETER OF PIPE
 MAX. = MAXIMUM
 MIN. = MINIMUM
 = STRUCTURAL BACKFILL MATERIAL
 = UNDISTURBED SOIL
 EQUIV. DIA. = EQUIVALENT DIAMETER
 H = FILL COVER HEIGHT OVER PIPE (FEET)

IN SOIL-MIN. EQUALS TWICE CORRUGATION DEPTH
 IN ROCK-MIN. EQUALS GREATER OF:
 1/2' PER FOOT OF FILL OVER PIPE (24" MAX.)
 TWICE CORRUGATION DEPTH



EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.
2. INSTALLATION TYPE 1 OR 2 MAY BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE (ROUND).
3. INSTALLATION TYPE 1 SHALL BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE ARCHES WITH 2 3/8" x 1/2" CORRUGATION.
4. INSTALLATION TYPE 1 OR 2 MAY BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE ARCHES WITH 3" x 1" OR 5" x 1" CORRUGATION.

GENERAL NOTES

1. METAL PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2003 EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS. UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER TO THE STANDARD CONSTRUCTION SPECIFICATIONS.
2. METAL PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. METAL PIPE CULVERT MATERIALS AND INSTALLATIONS SHALL CONFORM TO SECTION 606 AND JOB SPECIAL PROVISION "METAL PIPE".
4. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
5. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PRACTICABLE FOR WORKING CONDITIONS.
6. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE. REFER TO STD. DWG. FES-2 FOR MINIMUM CLEARANCE WHERE FLARED END SECTIONS ARE USED.
7. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
8. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
9. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."

CORRUGATED ALUMINUM PIPE (ROUND)

PIPE DIAMETER (INCHES)	① MINIMUM COVER TOP OF PIPE TO TOP OF GROUND "H" (FEET)	MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET)				
		METAL THICKNESS IN INCHES				
		0.060	0.075	0.105	0.135	0.164
		2 3/8 INCH BY 1/2 INCH CORRUGATION RIVETED OR HELICAL LOCK-SEAM				
12	1	45	45	52		
18	2	30	30	39	41	
24	2	22	22	31	32	34
30	2		18	26	27	28
36	2.5		15	43	43	44
42	2			40	41	43
48	2			35	37	38
54	2				33	34
60	2					31
66	2					29
72	2					

CORRUGATED METAL PIPE ARCHES

STEEL						ALUMINUM						
EQUIV. DIA. (INCHES)	PIPE DIMENSION SPAN X RISE (INCHES)	MINIMUM CORNER RADIUS (INCHES)	MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)	MAX. HEIGHT OF FILL, "H" (FT.)	MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)	MAX. HEIGHT OF FILL, "H" (FT.)				
				INSTALLATION	INSTALLATION		INSTALLATION	INSTALLATION				
				TYPE 1	TYPE 1		TYPE 1	TYPE 1				
2 3/8 INCH BY 1/2 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM						2 3/8 INCH BY 1/2 INCH CORRUGATION RIVETED OR HELICAL LOCK-SEAM						
15	17x13	3	0.064	2	15	0.060	2	15				
18	21x15	3	0.064	2	15	0.060	2	15				
21	24x18	3	0.064	2.25	15	0.060	2.25	15				
24	28x20	3	0.064	2.5	15	0.075	2.5	15				
30	35x24	3	0.079	3	12	0.075	3	12				
36	42x29	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	0.135	3	14				
66	77x52	8	0.168	3	15	0.164	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						① FOR MINIMUM COVER VALUES, "H" SHALL ② WHERE THE STANDARD 2 2/3"x 1/2" COR WITH A 3' x 1' OR 5' x 1' CORRUGATION OR GREATER THAN THE MAXIMUM FILL						
									INSTALLATION		INSTALLATION	
									TYPE 2	TYPE 1	TYPE 2	TYPE 1
36	40x31	5	0.079	3	2	12	15					
42	46x36	6	0.079	3	2	13	15					
48	53x41	7	0.079	3	2	13	15					
54	60x46	8	0.079	3	2	13	15					
60	66x51	9	0.079	3	2	13	15					
66	73x55	12	0.079	3	2	15	15					
72	81x59	14	0.079	3	2	15	15					
78	87x63	14	0.079	3	2	15	15					
84	95x67	16	0.109	3	2	15	15					
90	103x71	16	0.109	3	2	15	15					
96	112x75	18	0.109	3	2	15	15					
102	117x79	18	0.109	3	2	15	15					
108	128x83	18	0.138	3	2	15	15					

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

② WHERE THE STANDARD 2 2/3" x 1/2" CORRUGATION AND GAUGE IS SPECIFIED FOR A GIVEN DIAMETER, A PIPE OF THE SAME DIAMETER WITH A 3" x 1" OR 5" x 1" CORRUGATION MAY BE SUBSTITUTED, PROVIDING IT IS GAUGED FOR A FILL HEIGHT CONDITION EQUAL TO OR GREATER THAN THE MAXIMUM FILL HEIGHT CONDITION FOR THE SPECIFIED GAUGE AND CORRUGATION.

12-15-11	REVISED FOR LRFD DESIGN SPECS	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	
DATE	REVISION	DATE FILMED

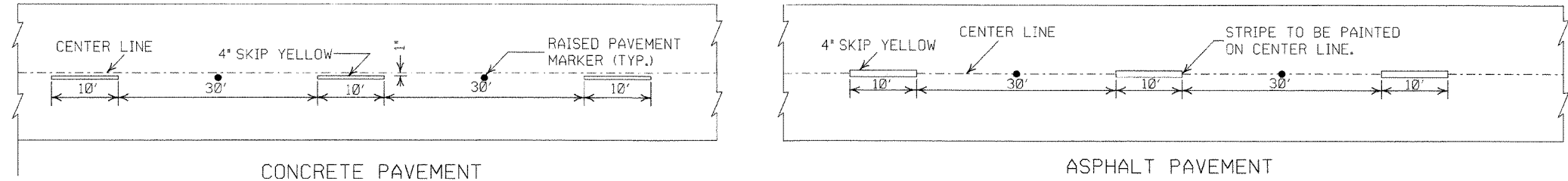
ARKANSAS STATE HIGHWAY COMMISSION

METAL PIPE CULVERT
FILL HEIGHTS & BEDDING

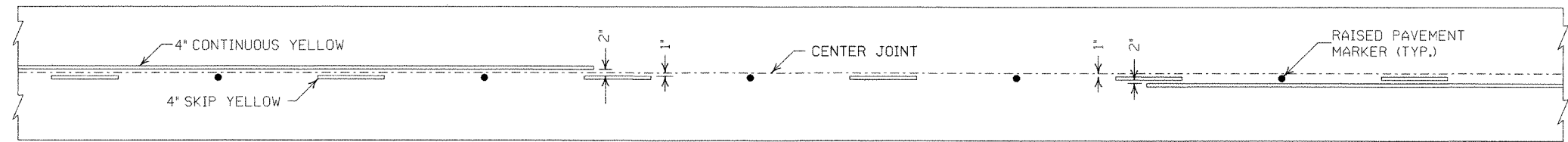
STANDARD DRAWING PCM-1



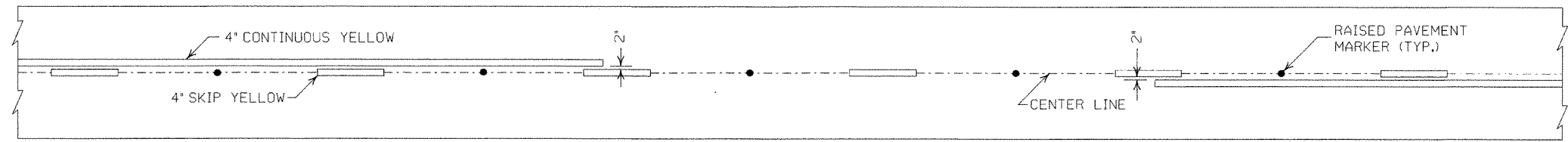
- NOTES:
- 1. ALL LINES SHALL HAVE A WIDTH OF 4 INCHES.
 - 2. THE THICKNESS AND RATE OF PAINT APPLICATION SHALL BE AS SPECIFIED IN SECTION 718 OF THE STANDARD SPECIFICATIONS.
 - 3. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."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



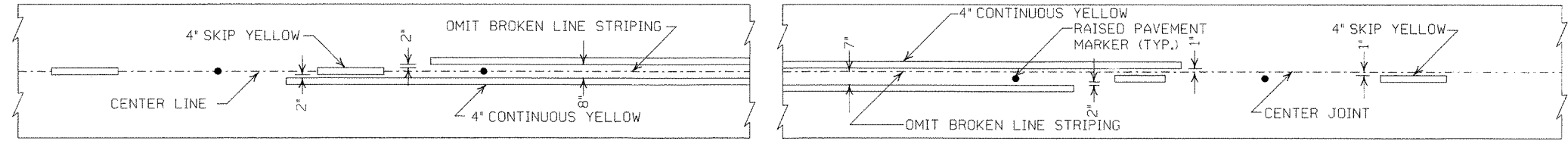
BROKEN LINE STRIPING



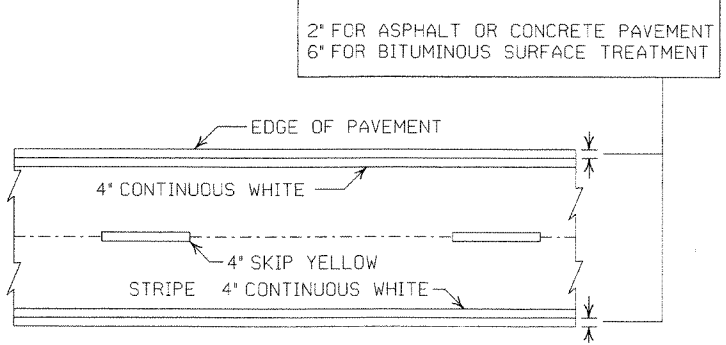
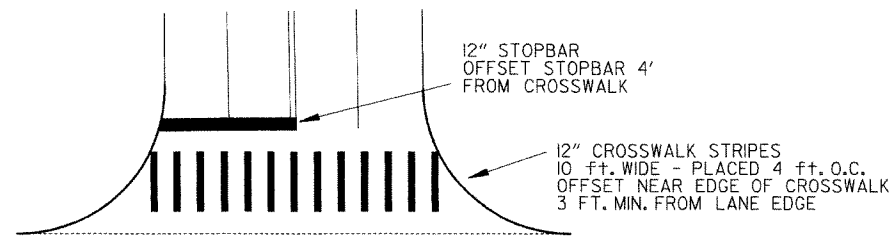
SOLID LINE STRIPING ON CONCRETE PAVEMENT



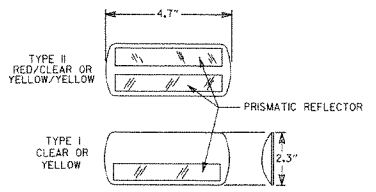
SOLID LINE STRIPING ON ASPHALT PAVEMENT



STRIPING AT ADJACENT NO PASSING LANES



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.

DATE	REVISION	FILMED
11-17-10	REVISED GENERAL NOTES & REMOVED PLOWABLE PVMT MRKRS	
11-18-04	REVISED NOTE 2 & GENERAL NOTES	
8-22-02	ADDED CROSSWALK & STOPBAR DTLS.	
7-02-98	ADDED DETAILS OF STD. RAISED PAV'T. MARKERS	
4-26-96	REV. NOTES 3&4; ADDED R.P.M.	
9-30-80	DRAWN	1-9-30-80

ARIZONA STATE HIGHWAY COMMISSION
PAVEMENT MARKING DETAILS
STANDARD DRAWING PM-1

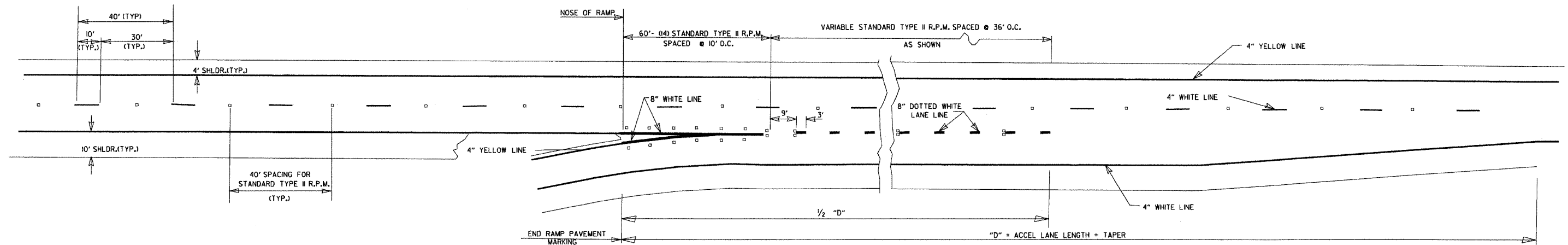
PAVEMENT MARKING QUANTITIES
(BASED ON 700' ACCEL. LANE + 300' TAPER)

ENTRANCE RAMP

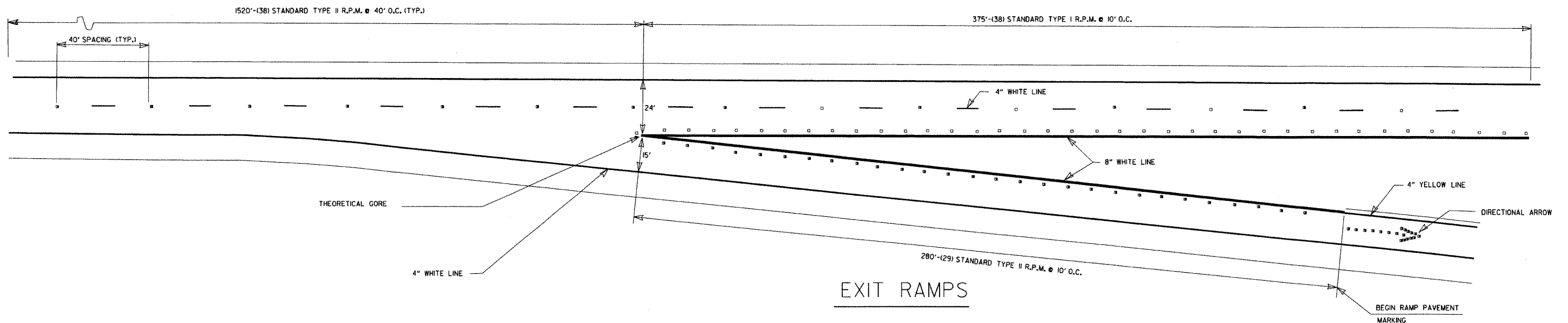
8" WHITE = 228 LIN. FT.
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH

EXIT RAMP

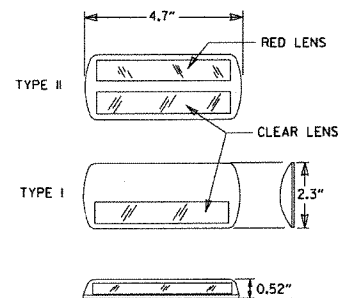
4" WHITE = 280 LIN. FT.
8" WHITE = 655 LIN. FT.
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 48 EACH
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH



ENTRANCE RAMP

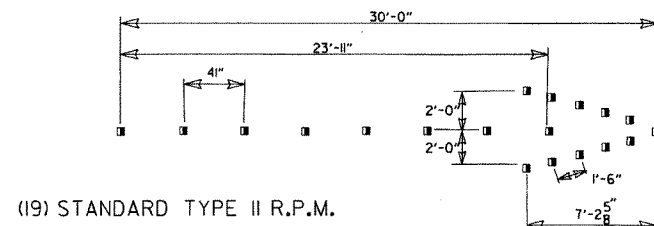


EXIT RAMP



DETAIL OF
STANDARD
RAISED PAVEMENT MARKERS

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



(19) STANDARD TYPE II R.P.M.

DIRECTIONAL ARROWS

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

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

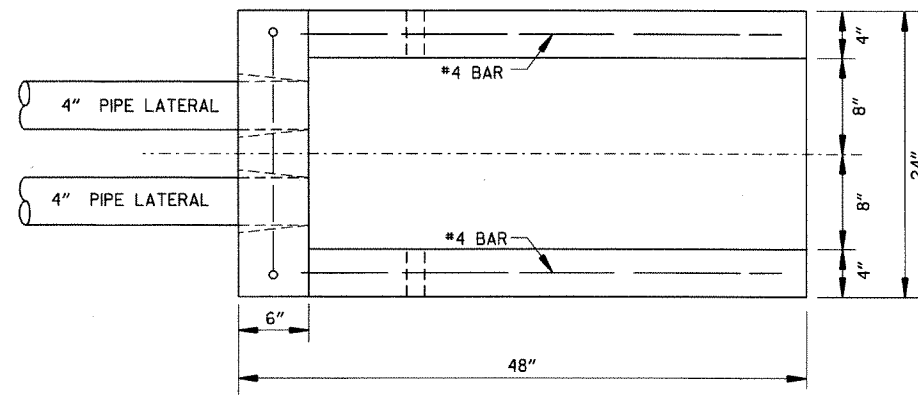
NOTE:
DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE
TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR
MARKERS WITH THE APPROVAL OF THE ENGINEER. REQUESTING
APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING
TO THE AHTD QUALIFIED PRODUCTS LIST.

DATE	REVISION	FILMED
12-15-11	REVISED RPMs ACCORDING TO LATEST POLICY	
11-17-10	REMOVED PLOWABLE PAVEMENT MARKERS	
6-3-10	REVISED PER 2009 MUTCD	
11-18-04	REVISED NOTES	
8-22-02	ADDED & REVISED NOTES; REV. ENTRANCE & EXIT RAMP	
5-18-00	REMOVED HASHMARKS	
7-02-98	CHANGED TYPES TO ROMAN NUMERALS	
4-26-96	ADDED DIMENSIONS & QUANTITIES; REVISED LANE WIDTH ON EXIT RAMP	
2-2-95	PLACED IN USE	2-2-95

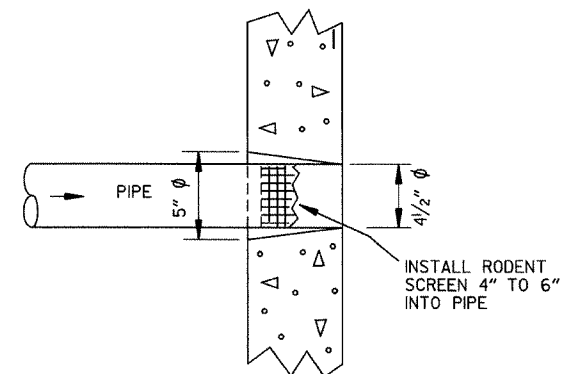
ARKANSAS STATE HIGHWAY COMMISSION
PERMANENT PAVEMENT MARKING
ON ACCESS CONTROLLED ROADWAYS

STANDARD DRAWING PM-2

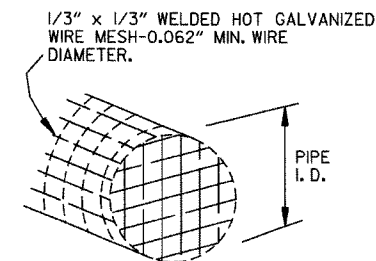
- NOTE:
1. GRANULAR BACKFILL TO BE SUBSIDIARY TO PIPE UNDERDRAIN.
 2. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THOROUGHLY COMPACTED EARTH AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.
 3. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC. LAP FABRIC 12" OR THE WIDTH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



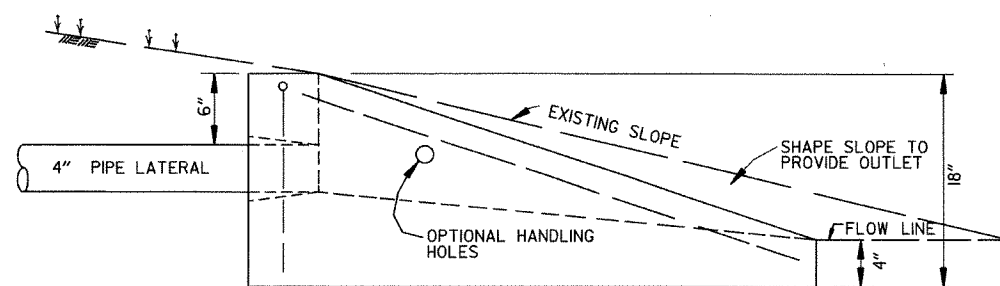
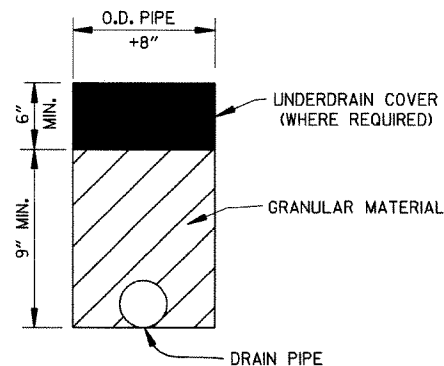
PLAN VIEW



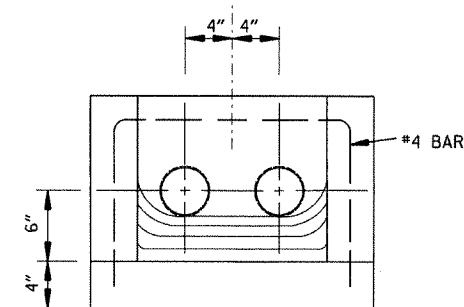
DETAIL OF HOLE FOR 4" PIPE



DETAIL OF RODENT SCREEN



SIDE VIEW

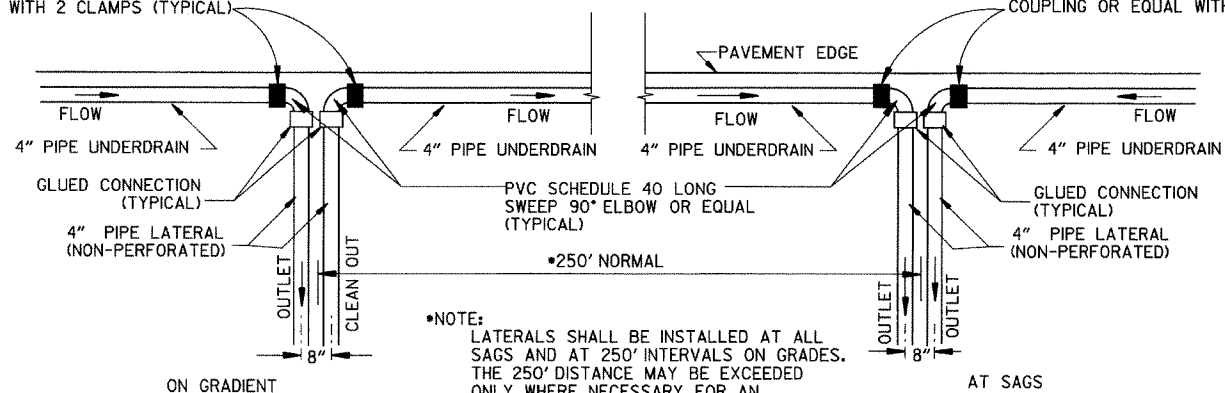


FRONT VIEW

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

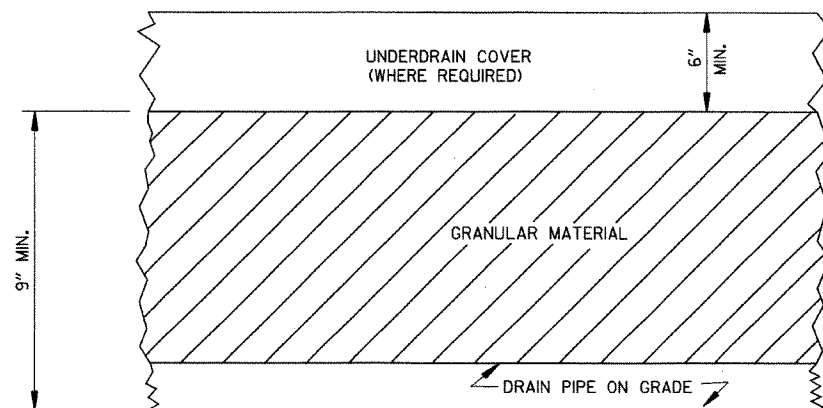
FERNCO 1056-44 (4" CI/PLASTIC) OR
FERNCO 1051-44 (4" AC/DIOR 4" CI/PLASTIC)
COUPLING OR EQUAL WITH 2 CLAMPS (TYPICAL)



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

DETAIL OF PIPE UNDERDRAIN LATERALS WHEN PLACED ALONG PAVEMENT EDGE

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



DETAILS OF PIPE UNDERDRAIN

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

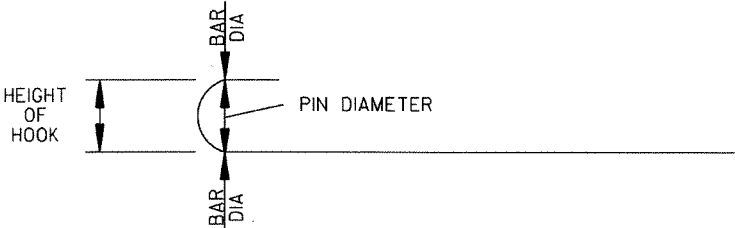
DETAILS OF PIPE UNDERDRAIN

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

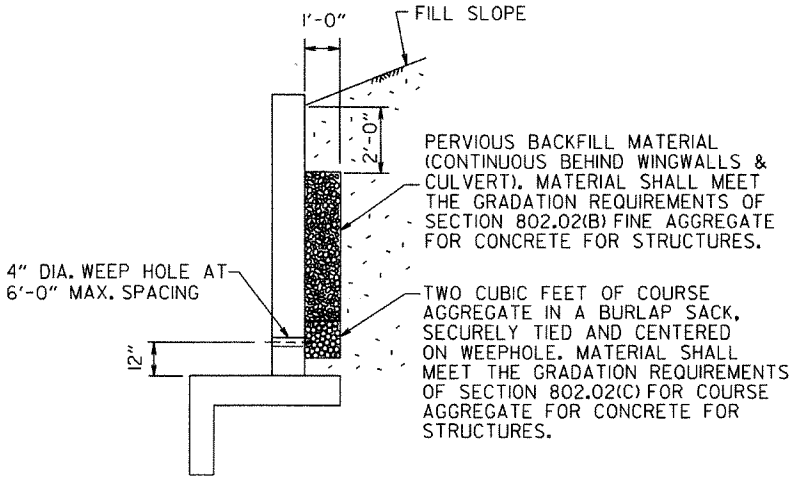
THE HOOKED BARS SHALL BE PLACED IN THE BOTTOM OF THE TOP SLAB AND THE TOP OF THE BOTTOM SLAB. THE STRAIGHT BARS SHALL BE PLACED IN THE TOP OF THE TOP SLAB AND THE BOTTOM OF THE BOTTOM SLAB. SEE TABLE BELOW FOR LENGTHS OF REPLACEMENT HOOKED AND STRAIGHT BARS.

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 31OR 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.

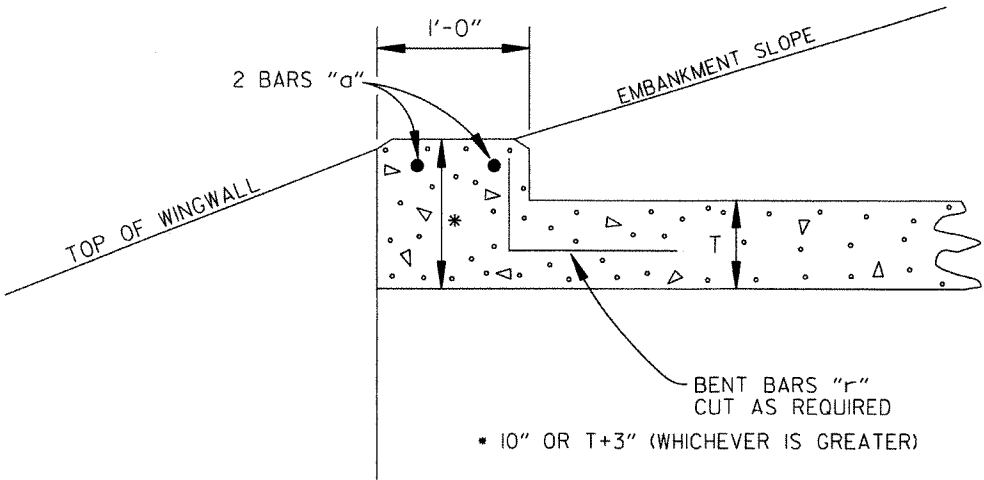
MEMBRANE WATERPROOFING SHALL BE APPLIED TO ALL CONSTRUCTION JOINTS IN THE TOP SLAB AND THE SIDEWALLS OF R.C. BOX CULVERTS AS DIRECTED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FOR THIS ITEM, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS BID FOR THE R.C. BOX CULVERT.

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.

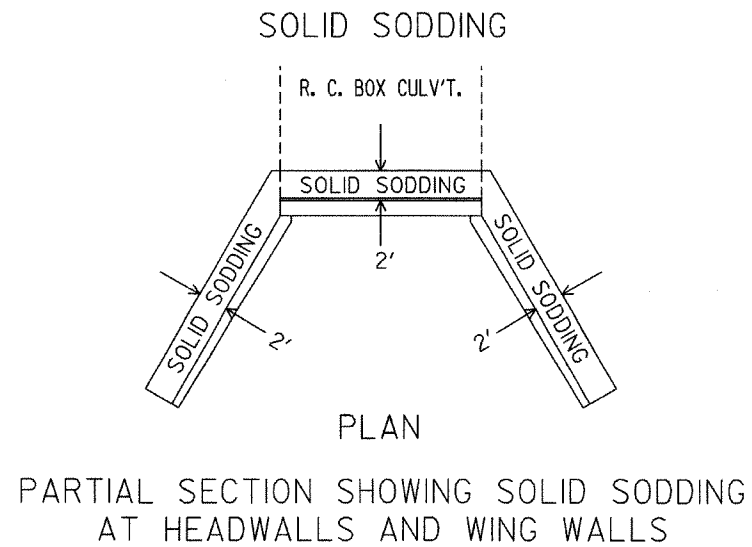
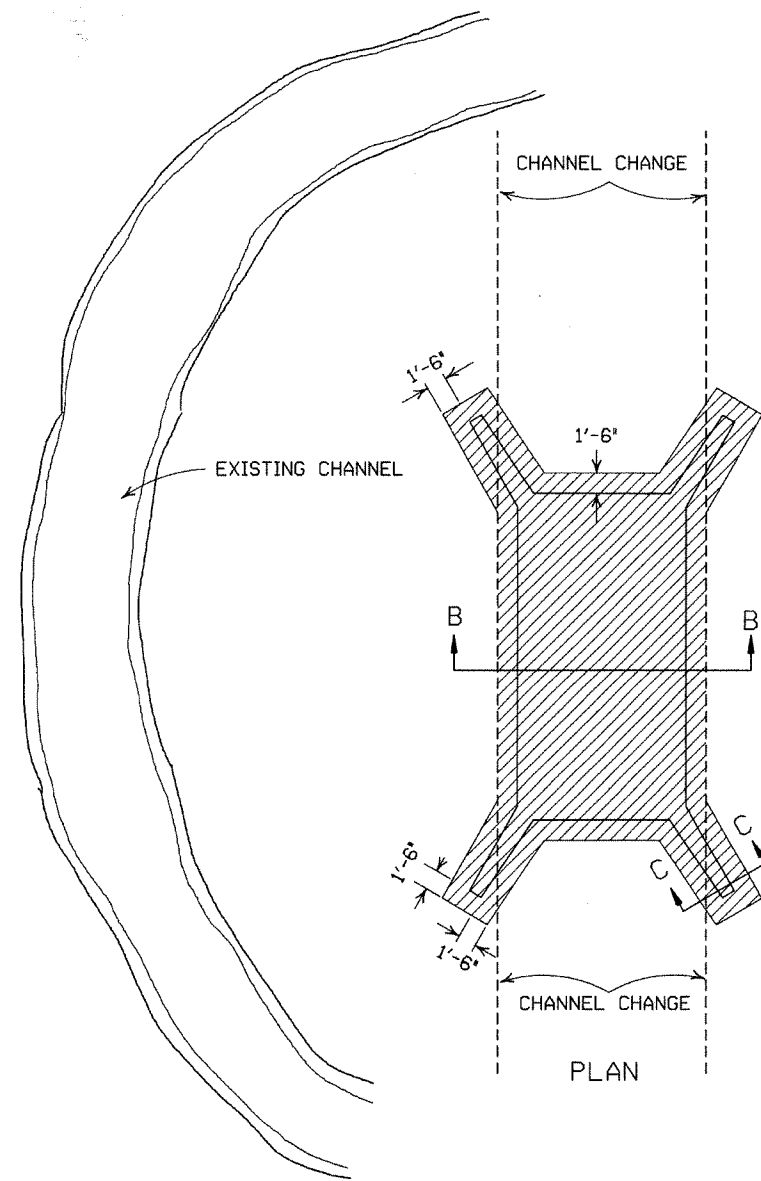
THE REQUIREMENTS SHOWN ON THIS DRAWING SHALL SUPERCEDE THE CORRESPONDING REQUIREMENTS ON ALL REINFORCED CONCRETE BOX CULVERT STANDARD DRAWINGS.



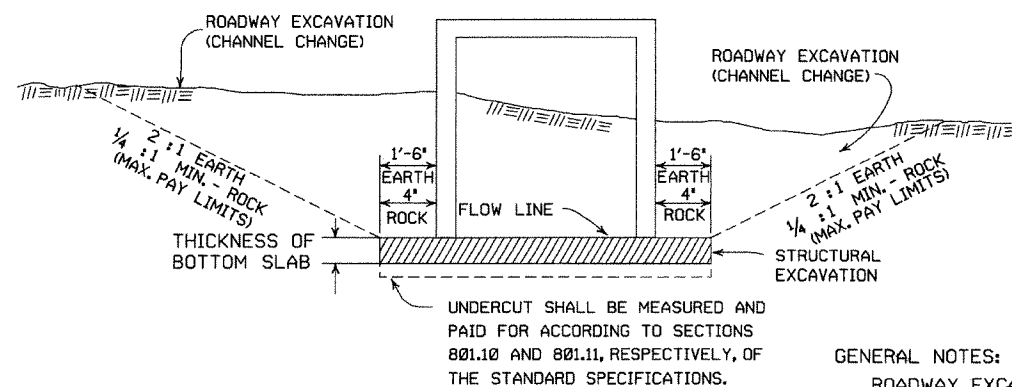
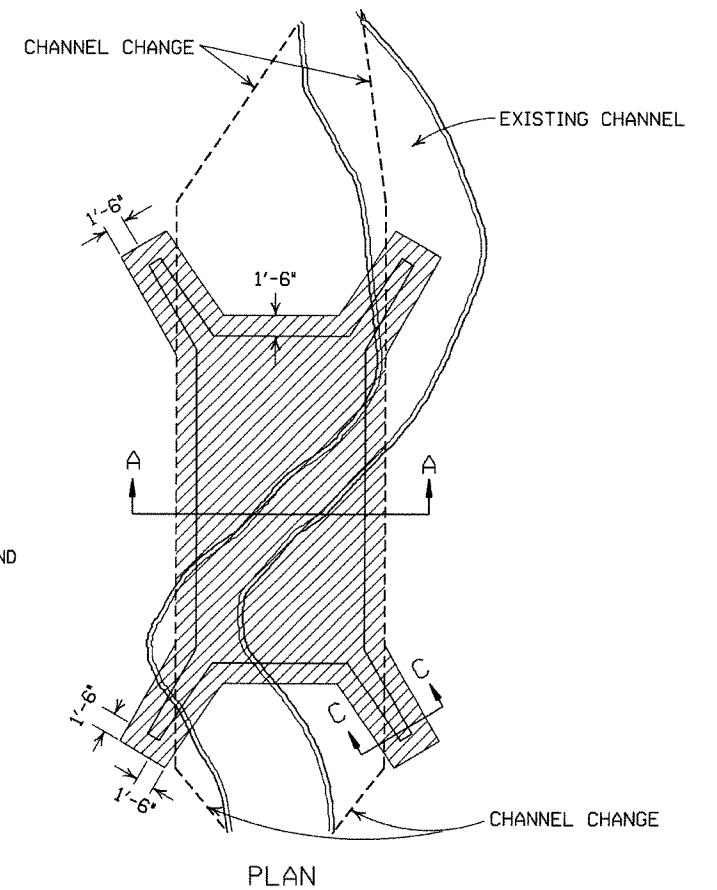
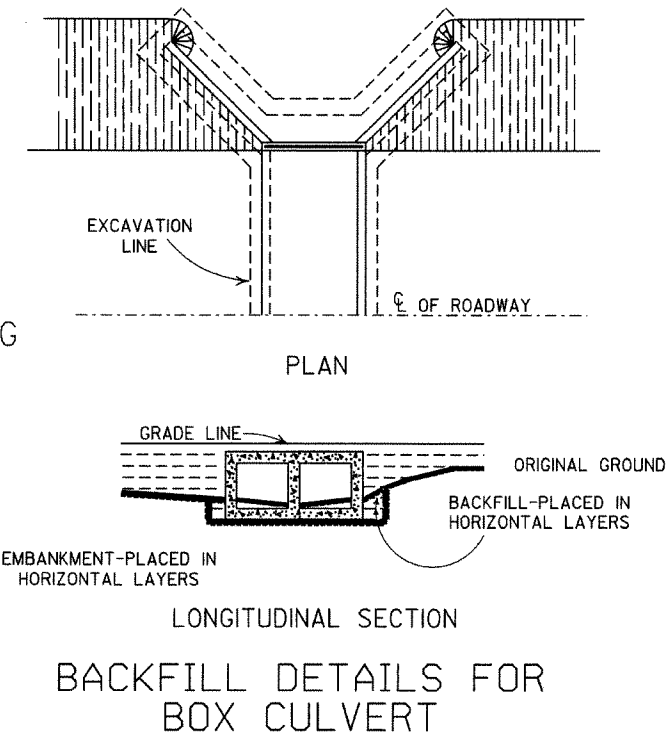
NOTE: FOR ALL SKEWED R.C. BOX CULVERTS THE LENGTH "K" OF THE MODIFIED HEADWALL SHALL BE EQUAL TO THE ROADWAY LENGTH "RL". THE ENDS OF THE HEADWALL SHALL BE CONSTRUCTED PARALLEL TO THE SKEW ANGLE OF THE BOX CULVERT.

R.C. BOX CULVERT HEADWALL MODIFICATIONS

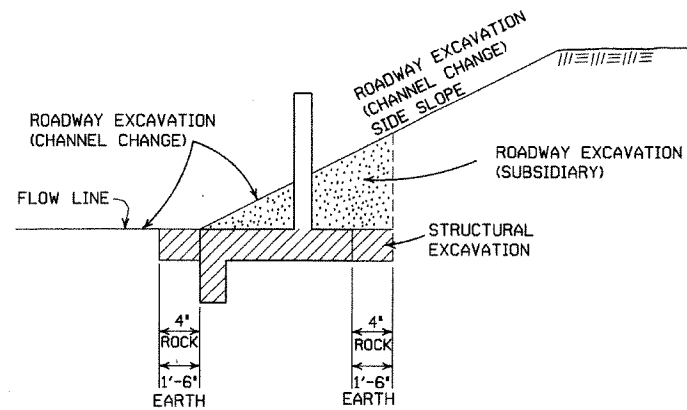
12-15-11	REQUIRE WEEP HOLES IN BOX CULVERT WALLS		ARKANSAS STATE HIGHWAY COMMISSION
5-25-06	REV. GEN. NOTES AND DETAILS FOR WEEP HOLES; BAR DIAGRAM		
11-16-01	ADDED WINGWALL DRAINAGE DETAIL/EDITED GEN. NOTES		
10-18-96	REV. ASTM REF. TO AASHTO & ADDED BAR DIAGRAM		
10-12-95	MOVED SOLID SODDING DETAIL 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		
DATE	REVISION	DATE FILMED	REINFORCED CONCRETE BOX CULVERT DETAILS
			STANDARD DRAWING RCB-1



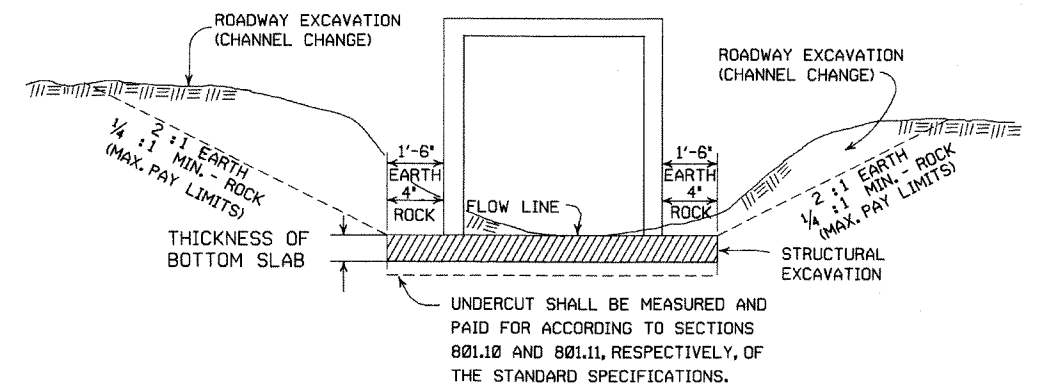
NOTE: LENGTH MEASURED ALONG THE CENTER OF 2' STRIP OF SOLID SODDING.



SECTION B-B
DETAILS FOR NEW CHANNELS



SECTION C-C



SECTION A-A
DETAILS THROUGH EXISTING CHANNELS

GENERAL NOTES:

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

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

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

DATE	REVISION	FILED
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

SUPERELEVATION TABLE FOR ONE - WAY TRAFFIC

DEGREE OF CURVE	30 MPH		40 MPH		50 MPH		55 MPH		60 MPH		65 MPH		70 MPH	
	Ls (FT)		Ls (FT)		Ls (FT)		Ls (FT)		Ls (FT)		Ls (FT)		Ls (FT)	
	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE
0° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
0° 30'	N.C.		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.		N.C.	
1° 00'	N.C.		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.		N.C.	
1° 30'	N.C.		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.		N.C.	
2° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
2° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
2° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
2° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
3° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
3° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
3° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
3° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
4° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
4° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
4° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
4° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
5° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
5° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
5° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
5° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
6° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
6° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
6° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
6° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
7° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
7° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
7° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
7° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
8° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
8° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
8° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
8° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
9° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
9° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
9° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
9° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
10° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
10° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
10° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
10° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
11° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
11° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
11° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
11° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
12° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
12° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
12° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
12° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
13° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
13° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
13° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
13° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
14° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
14° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
14° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
14° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
15° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
15° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
15° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
15° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
16° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
16° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
16° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
16° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
17° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
17° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
17° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
17° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
18° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
18° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
18° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
18° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
19° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
19° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
19° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
19° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
20° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
20° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
20° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
20° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
21° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
21° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
21° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
21° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
22° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
22° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
22° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
22° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
23° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
23° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
23° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
23° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
24° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	

D MAX = 24° 45'

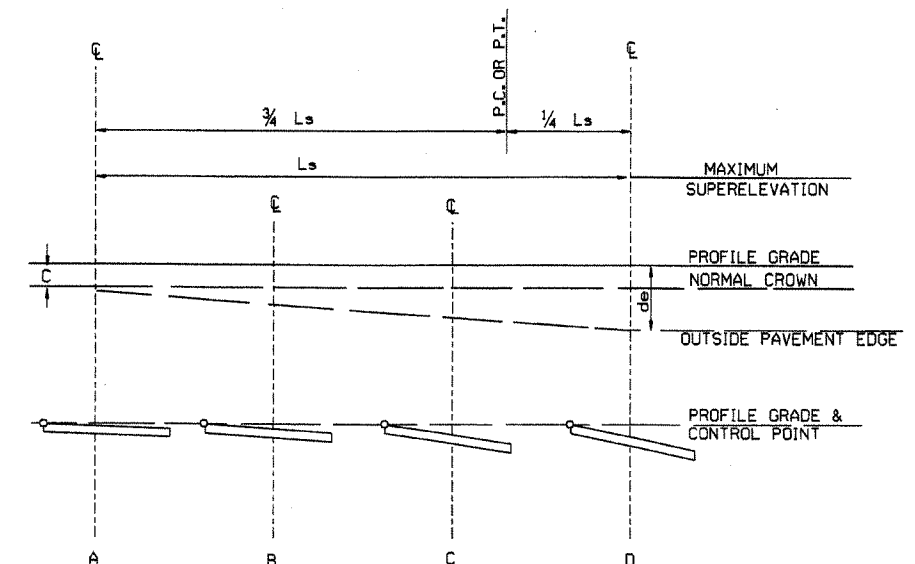
GENERAL NOTES

- ON PAVEMENT WITH ONE-WAY TRAFFIC, THE SUPERELEVATION SHALL BE REVOLVED ON THE PROFILE GRADE POINT.
- SUPERELEVATION VALUES SHOWN ON THE CROSS SECTIONS ARE VALUES (+) OR (-) TO BE ADDED OR SUBTRACTED FROM THE POINT OF CONTROL.
- LENGTHS FOR Ls MAY BE ROUNDED IN MULTIPLES OF 25 FT. OR 50 FT. TO PERMIT SIMPLER CALCULATIONS.
- MINIMUM Ls VALUES MAY BE USED FOR RAMPS; DESIRABLE VALUES SHALL APPLY TO MAIN LANES.
- DIVIDED PAVEMENTS WIDER THAN 4 LANES SHALL HAVE ADDITIONAL TRANSITION LENGTHS AS FOLLOWS:

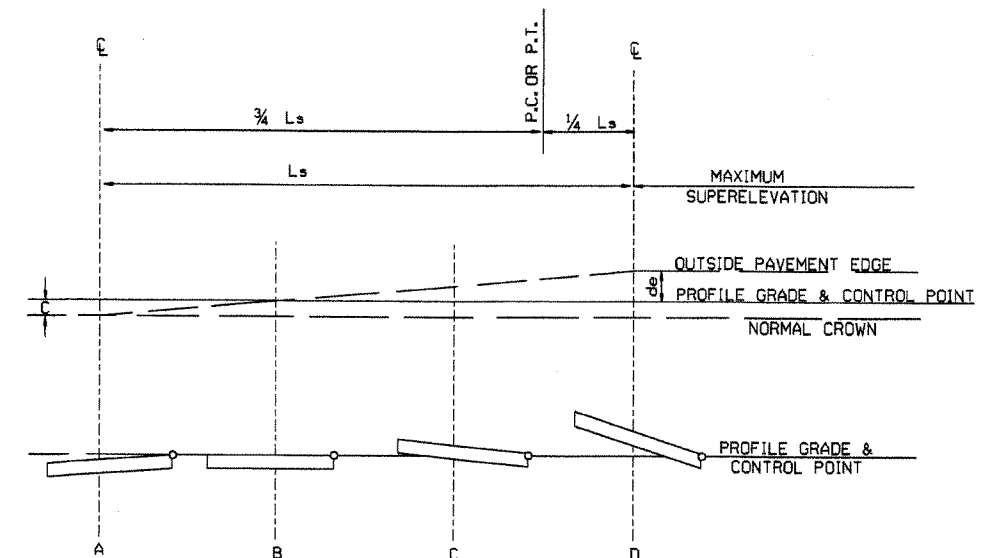
6 LANE DIVIDED-----+20%
8 LANE DIVIDED-----+50%

ABBREVIATIONS

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



$$\text{SUPERELEVATION FORMULA} = S = - \frac{L(d+C)}{L_s} - C$$



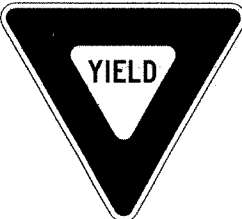
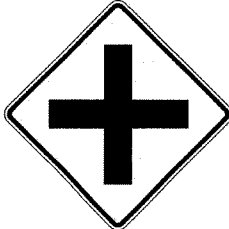
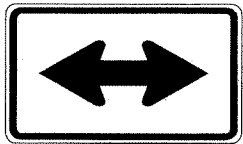
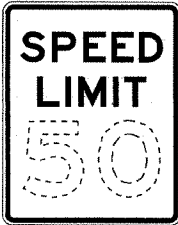
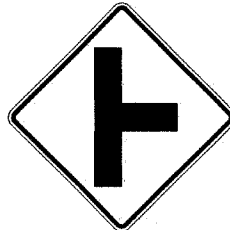
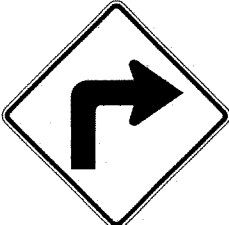
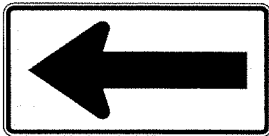
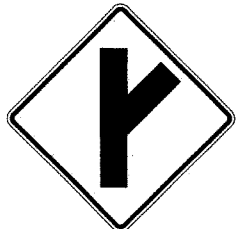
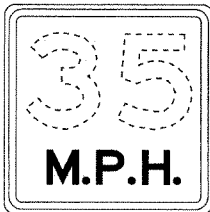
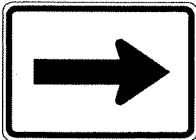
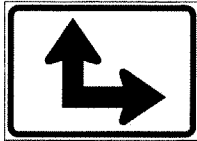
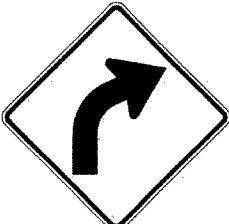
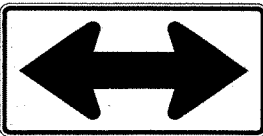
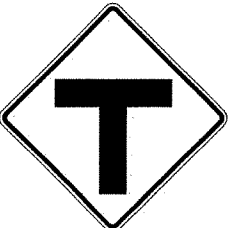
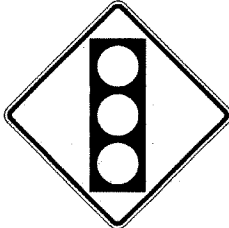
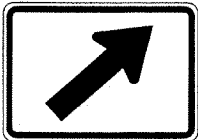
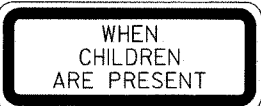
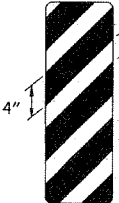
$$\text{SUPERELEVATION FORMULA} = S = + \frac{L(d+C)}{L_s} - C$$

01-09-87	ISSUED	578-1-15-87
DATE	REVISION	DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION

TABLES AND METHOD OF SUPERELEVATION
FOR ONE-WAY TRAFFIC

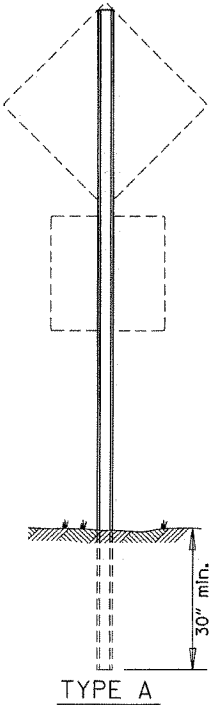
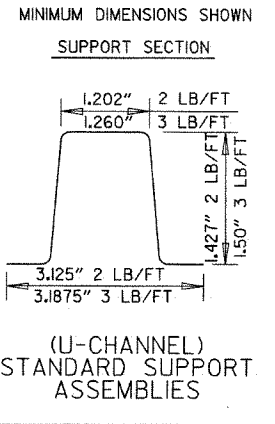
STANDARD DRAWING SE-1

						
RI-1 30"X30"	WI-3 30"X30" (LT. OR RT.)	WI-8 18"X24"	W2-5 30"X30"	W3-1 36"X36"	W5-1 36"X36"	M6-3 21"X15"
						
RI-2 36"X36"X36"	WI-4 30"X30" (LT. OR RT.)	W2-1 30"X30"	SI-1 36"X36"	W3-2 36"X36"	County Route Marker MI-5 24"X24"	M6-4 21"X15"
					NOTE: REFLECTORIZED YELLOW LEGEND (COUNTY NAME, ROUTE LETTER & NUMBER) & BORDER ON A BLUE BACKGROUND.	
R2-1 24"X30"	WI-5 30"X30" (LT. OR RT.)	W2-2 30"X30"	W5-2 36"X36"	W8-3 36"X36"		M6-5 21"X15"
						
WI-1 30"X30" (LT. OR RT.)	WI-6 48"X24"	W2-3 30"X30" (LT. OR RT.)	W5-3 36"X36"	W13-1 18"X18"	NOTE: ALL M6 SIGNS TO BE MADE WITH REFLECTORIZED YELLOW ARROW & BORDER WITH BLUE BACKGROUND.	M6-6 21"X15"
						
WI-2 30"X30" (LT. OR RT.)	WI-7 48"X24"	W2-4 30"X30"	W10-1 36" DIAMETER	W3-3 36"X36"		
						
						OM-3 12"X36" (LT. OR RT.)

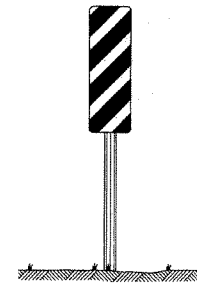
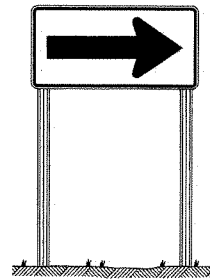
STANDARD HIGHWAY SIGNS

4-17-08	REVISED SIGN DESIGNATION - W3-1 & W3-2	
4-10-03	REVISED W5-2, W8-3, OM-3; ADDED W1-8	
1-5-81	REDRAWN	960-1-15-81
9-15-78	ADDED W14-3	877-9-15-78
9-2-76	POST WT.	623-9-3-76
5-3-76	STEEL POST WT. FROM 2" - 3"	
8-12-74	REV. HY. TYPE "C" ASSEMBLY	504-5-3-76
12-21-72	ADDED M6-2, 3, 4, 5, 6	500-8-21-74
12-1-72	ISSUED	500-12-21-72
DATE	REVISION	DATE FILMED

FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.		159	
JOB NO.				
④ STD. HWY. SIGNS & SUP ASSEMB				



NOTE: LENGTH OF SIGN POSTS SHALL BE DETERMINED SO AS TO PROVIDE FOR MINIMUM VERTICAL CLEARANCES AS CALLED FOR IN THE SPECIFICATIONS PLUS A MINIMUM VERTICAL PENETRATION OF 30" IN THE SOIL.



TYPE B

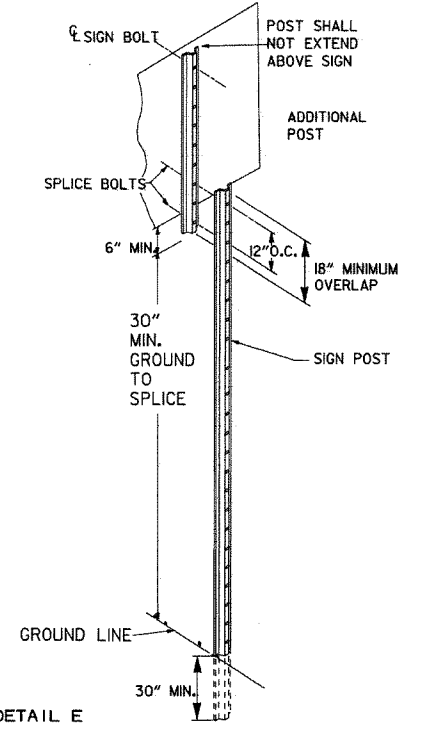
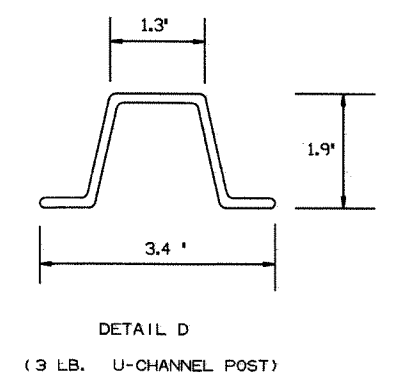
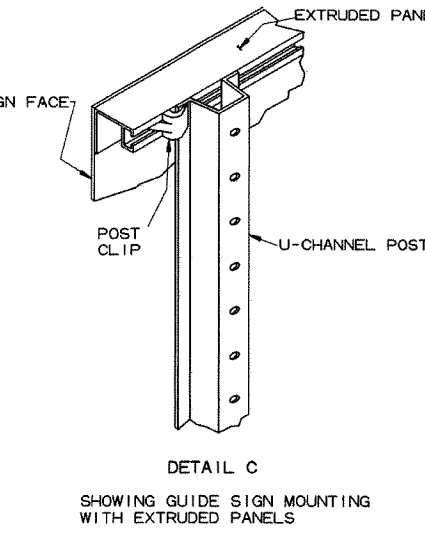
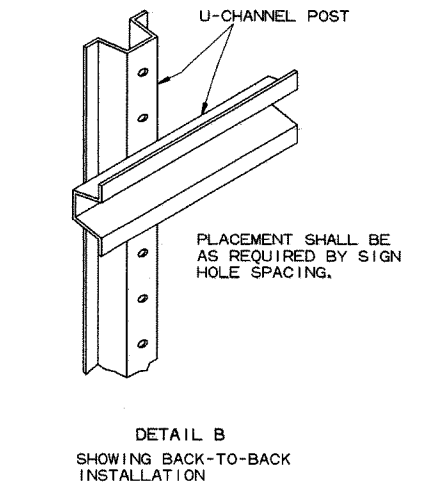
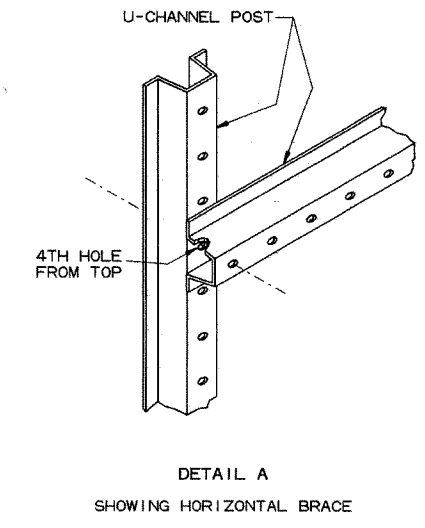
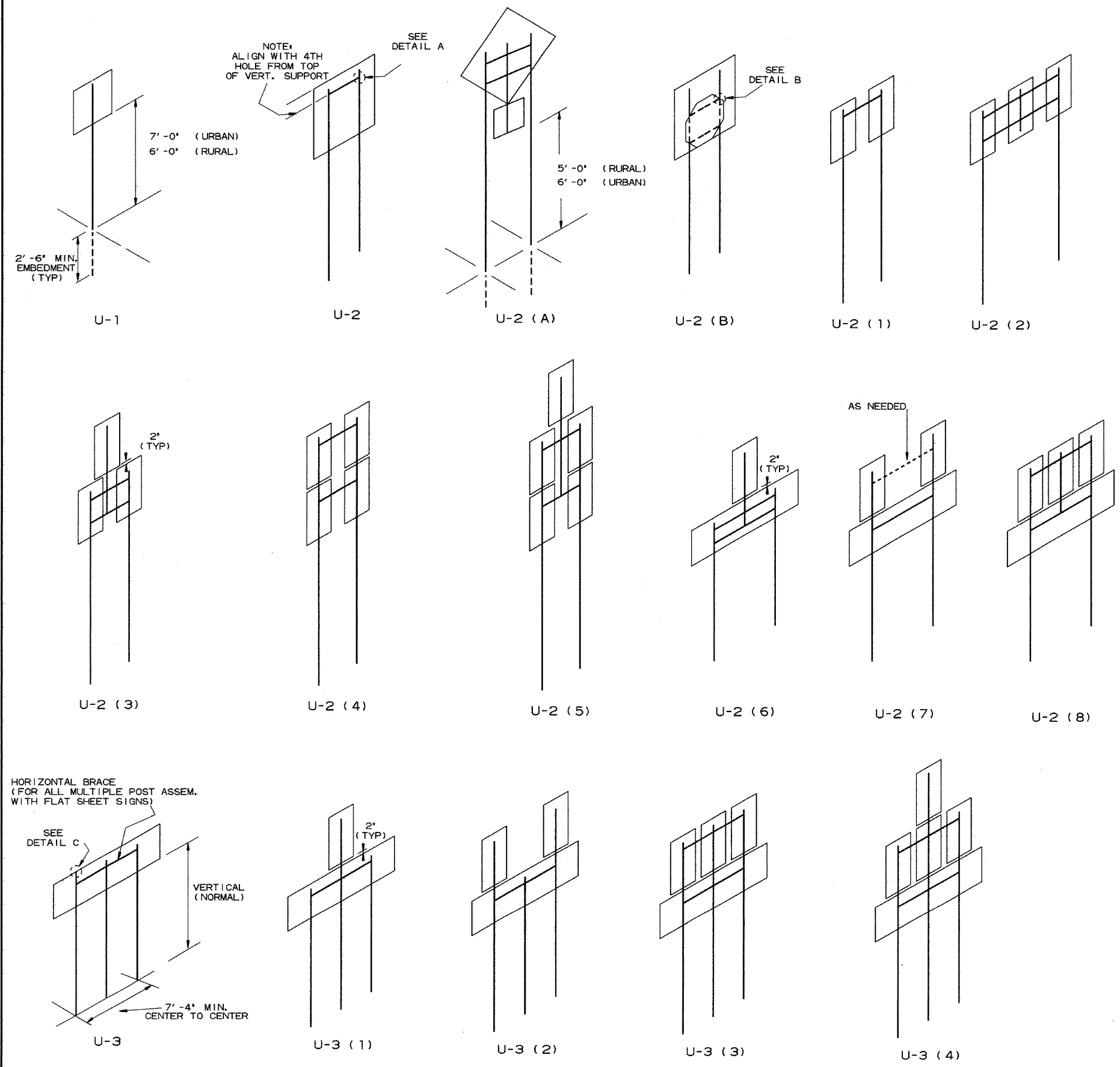
TYPE C

MINIMUM WEIGHT

TYPE A & B = 3 LBS./FT.
TYPE C = 2 LBS./FT.

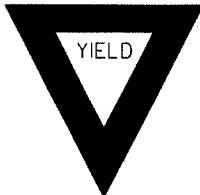
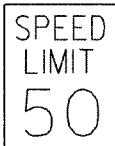
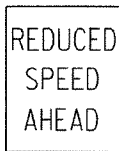
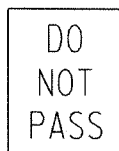
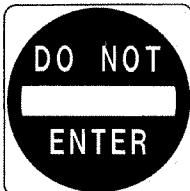
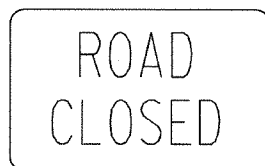
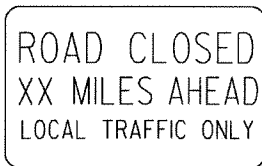
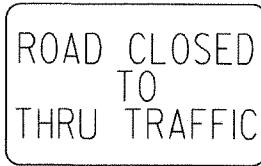
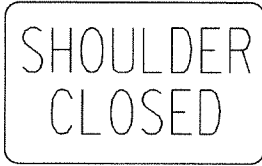
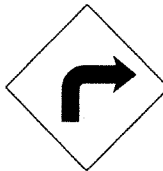
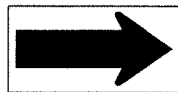
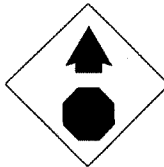
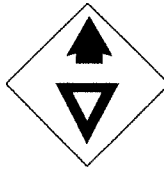
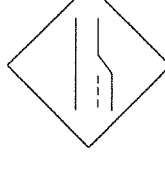
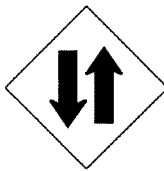
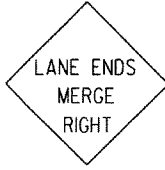
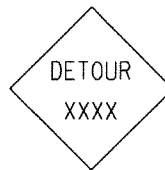
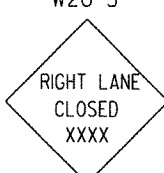
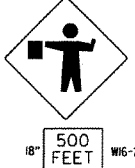
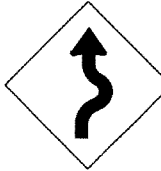
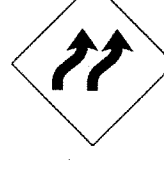
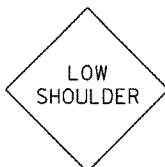
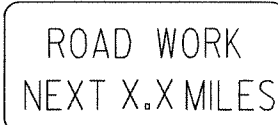
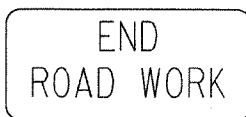
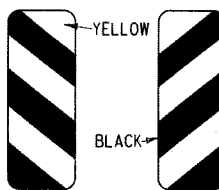
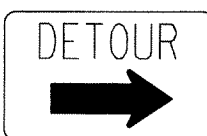
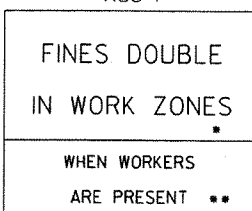
SUPPORT ASSEMBLIES

ARKANSAS STATE HIGHWAY COMMISSION
STANDARD HIGHWAY SIGNS
AND SUPPORT ASSEMBLIES
STANDARD DRAWING SHS-1

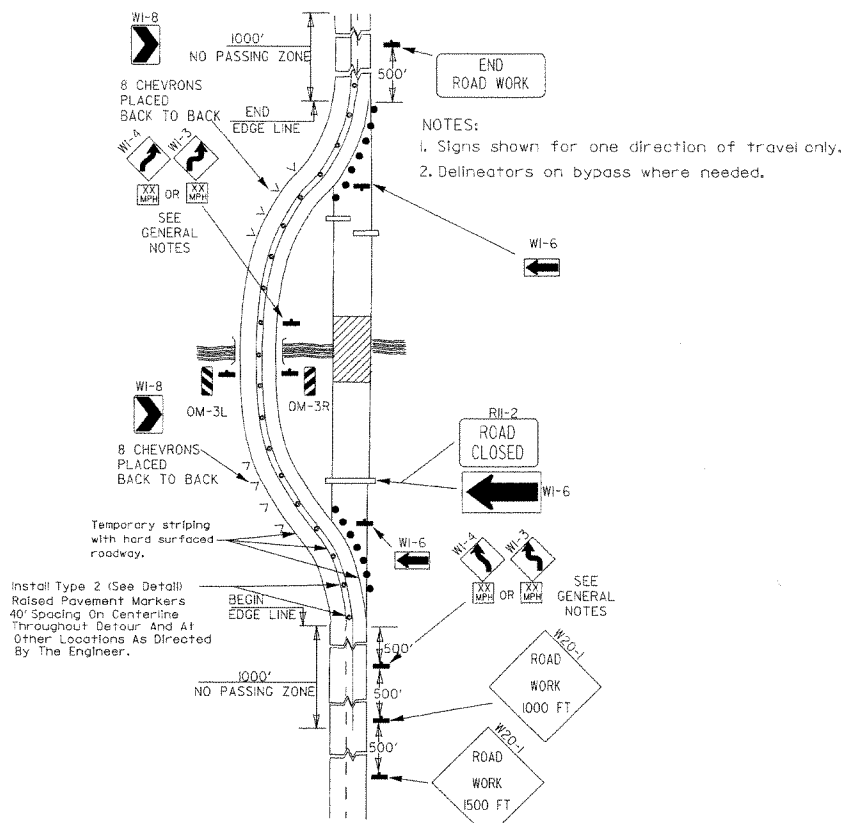


NOTES:
SIGNS AT LEAST 8' IN LENGTH MAY BE INSTALLED ON THREE 3 LB. POST. IN NO CASE SHALL THERE BE MORE THAN TWO 3 LB. POSTS WITHIN A 7' PATH.
SPLICES NECESSARY TO ATTAIN PROPER MOUNTING HEIGHT SHALL BE AS SHOWN IN DETAIL (E).
NORMAL INSTALLATIONS WILL REQUIRE 1/4" DIA. CARRIAGE BOLTS TO MOUNT SIGNS TO POST AND 5/16" DIA. CARRIAGE BOLTS TO ASSEMBLE THE VARIOUS POST SUPPORTS.
ALL SIGN POSTS SHALL BE PLUMB.

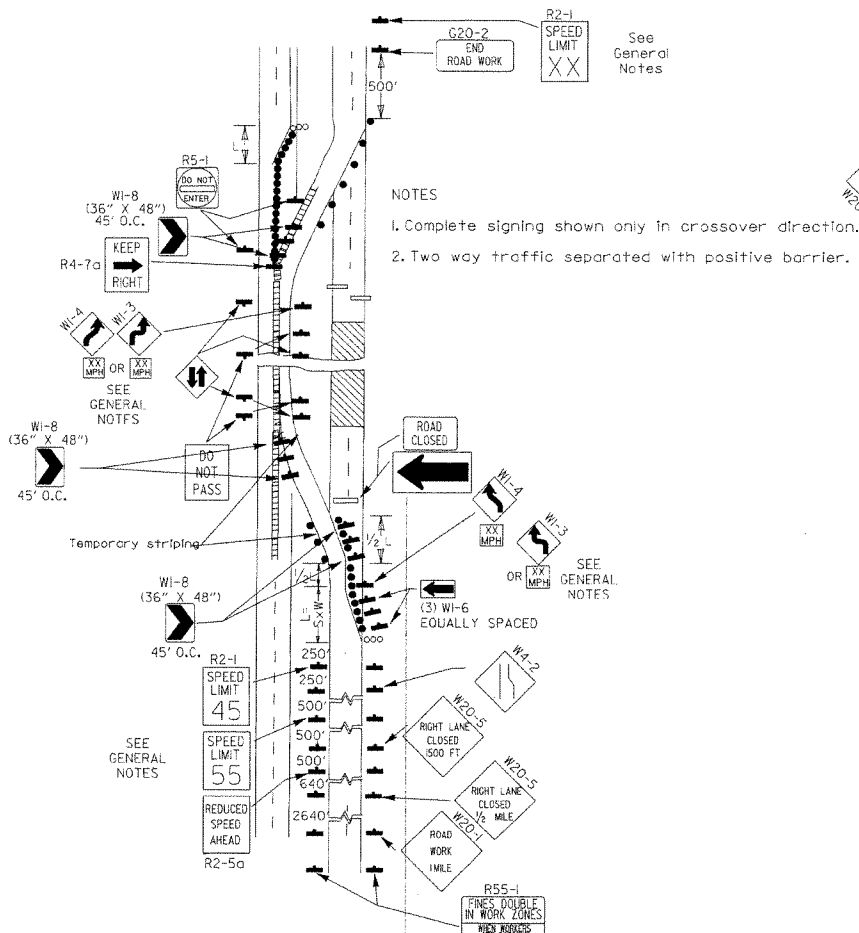
ARKANSAS STATE HIGHWAY COMMISSION		
U-CHANNEL POST ASSEMBLIES		
STANDARD DRAWING SHS-2		
10-9-03	REMOVED ROUND POST & REVISED SPACING	10-9-03
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL	6-8-95
2-2-95	REDRAWN	2-2-95
DATE	REVISION	FILMED

RI-1  STANDARD 30"x30" EXPRESSWAY 36"x36" SPECIAL 48"x48"	RI-2  STD. 36"x36"x36" EXPWY. 48"x48"x48" FWY. 60"x60"x60"	R2-1  STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"	R2-5A  STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"	R2-5C  STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"	R4-1  STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"	R4-2  STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"	ADVANCE DISTANCES (XXXX) 500 FT 1/2 MILE 1000 FT 3/4 MILE 1500 FT 1 MILE AHEAD GENERAL NOTES: 1. ALL TRAFFIC CONTROL DEVICES USED ON ROAD CONSTRUCTION SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND TO THE STANDARD HIGHWAY SIGNS, LATEST EDITION, OR AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION. 2. TRAFFIC CONTROL DEVICES SHALL BE SET UP JUST BEFORE THE START OF CONSTRUCTION OPERATIONS AND SHALL BE PROPERLY MAINTAINED DURING THE TIME SUCH CONDITIONS EXIST. THEY SHALL REMAIN IN PLACE ONLY AS LONG AS NEEDED AND REMOVED THEREAFTER. 3. EXISTING SIGNS AND CONSTRUCTION SIGNS SHALL BE KEPT IN PROPER POSITION, AND BE CLEAN AND LEGIBLE AT ALL TIMES. SIGNS THAT DO NOT APPLY TO EXISTING CONDITIONS SHALL BE REMOVED. SIGNS THAT ARE DAMAGED, DEFACED, OR THAT ACCUMULATE DIRT DURING CONSTRUCTION SHALL BE CLEANED, REPAIRED, OR REPLACED. 4. SIGNS ARE USUALLY MOUNTED ON A SINGLE POST, ALTHOUGH THOSE WIDER THAN 36" OR LARGER THAN 10 SQ. FT. SHALL BE MOUNTED ON TWO POSTS OR ABOVE A TYPE III BARRICADE. 5. SIGN POSTS DIRECT BURIED IN SOIL SHALL BE 2 LB. MINIMUM CHANNEL POST OR 4"x4" WOOD POSTS. CHANNEL POSTS SHALL BE PAINTED GREEN. WOOD POSTS SHALL BE PAINTED WHITE. ALL POSTS SHALL BE NEATLY CONSTRUCTED, AND SHALL BE REPLUMBED, CLEANED, OR REPAIRED AS NEEDED FOR THE DURATION OF THE JOB. THERE SHALL NOT BE MORE THAN 2 POSTS IN A 7' PATH FOR WOOD OR CHANNEL POSTS. ANY CHANNEL POST SPLICE SHALL BE IN ACCORDANCE WITH STANDARD DRAWING TC-3. 6. POST MOUNTED SIGNS IN RURAL AREAS SHALL BE CONSTRUCTED WITH THE NEAR EDGE OF THE SIGN FROM 6 TO 12 FEET FROM THE PAVEMENT EDGE. SIGNS IN URBAN AREAS AND BARRICADE MOUNTED SIGNS SHALL BE MOUNTED A MINIMUM OF 2 FEET FROM THE PAVEMENT EDGE. 7. ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN URBAN AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE. ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN RURAL AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE, EXCEPT A MINIMUM OF 6' SHALL BE USED WHEN MOUNTING AN ADVISORY SIGN BELOW A WARNING SIGN. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR INTERMEDIATE TERM STATIONARY WORK CONDITIONS. THE SIGNS MINIMUM MOUNTING HEIGHT SHALL BE 5'. RETROREFLECTIVE DEVICES SHALL BE USED. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR SHORT-TERM, SHORT DURATION, AND MOBILE CONDITIONS. THEY SHALL BE NO LESS THAN ONE (1) FOOT ABOVE THE TRAVELED WAY. LONG-TERM STATIONARY SIGNS SHALL BE DIRECT BURIED IN SOIL, UNLESS CONDITIONS NECESSITATE THE USE OF PORTABLE SIGNS, OR AS APPROVED BY THE ENGINEER. CONCRETE PADS, CONCRETE OR ROCK BALLAST, OR OTHER SOLID MATERIALS SHALL NOT BE UTILIZED WITH PORTABLE SIGN SUPPORTS. 8. FLAGGERS SHALL USE REFLECTORIZED STOP-SLOW PADDLES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS. 9. MOST OF THE SIGNS SHOWN ARE ORIENTED TO THE RIGHT. HOWEVER, THIS DOES NOT PRECLUDE THE USE OF MIRROR IMAGES OF THESE SIGNS WHERE THE REVERSE ORIENTATION MIGHT BETTER CONVEY TO MOTORISTS THE PROPER DIRECTION OF MOVEMENT. 10. 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.	
R5-1  STD. 30"x30" EXPWY. 36"x36" SPECIAL 48"x48"	R11-2  48"x30"	R11-3A  60"x30"	R11-4  60"x30"	RSP-1  48"x30"	W1-1  STD. 36"x36" FWY. 48"x48"	W1-2  STD. 36"x36" FWY. 48"x48"		
W1-3  STD. 48"x48"	W1-4  STD. 48"x48"	W1-6  STD. 48"x24" SPECIAL 60"x30"	W1-8  STD. 18"x24" SPECIAL 24"x30" EXPWY. 30"x36" FWY. 36"x48"	W3-1  STD. 36"x36" SPECIAL 48"x48"	W3-2  STD. 36"x36" SPECIAL 48"x48"	W4-2  STD. 36"x36" FWY. 48"x48"		
W5-1  STD. 36"x36" SPECIAL 48"x48"	W6-3  EXPWY. 36"x36" SPECIAL 48"x48"	W8-7  EXPWY. 36"x36" FWY. 48"x48"	W9-2  STD. 36"x36" FWY. 48"x48"	W13-1  STD. 24"x24"	W20-1  STD. 48"x48"	W20-2  STD. 48"x48"	W20-3  STD. 48"x48"	
W20-4  STD. 48"x48"	W20-5  STD. 48"x48"	W20-7a  18" 500 FEET W6-2 24" STD. 36"x36" FWY. 48"x48"	W21-2  STD. 30"x30" SPECIAL 36"x36"	W21-5  STD. 30"x30" SPECIAL 36"x36"	W24-1  STD. 36"x36"	W1-4b  STD. 48"x48"	R56-1  STD. 18"x18"	
W8-11  STD. 36"x36" FWY. 48"x48"	W8-9  STD. 36"x36" FWY. 48"x48"	G20-1  60"x24"	G20-2  48"x24"	OM-3L OM-3R  12"x36"	M4-9  STD. 30"x24" SPECIAL 48"x36" SPECIAL 60"x48"	M4-10  48"x18"	R55-1  36"x60" • USE 6" C LETTERS •• USE 4" D LETTERS	12-15-11 REVISED W24-1 11-17-10 DELETED W8-9a & ADDED W8-9 10-15-09 ADDED REFERENCE TO MASH & ADDED SIGN W24-1 4-17-08 REVISED SIGN DESIGNATIONS 11-18-04 REVISED NOTES 10-9-03 REVISED NOTE 1 11-16-01 REVISED NOTE 7 9-28-00 REVISED NOTE 11-18-98 ADDED NOTE 6-26-97 REVISED NOTE 5 4-03-97 REVISED NOTE 5 10-18-96 ADDED CONTROLLED ACCESS HWY. SIGN & TO NOTE 7 10-12-95 ADDED R55-1 6-8-95 REVISED TO CORRECT SIGN ILLUSTRATIONS 2-2-95 REVISED PER PART VI, MUTCD SEPT. 3, 1993 8-15-91 DRAWN AND PLACED IN USE DATE REVISION FILMED ARKANSAS STATE HIGHWAY COMMISSION STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION STANDARD DRAWING TC-1

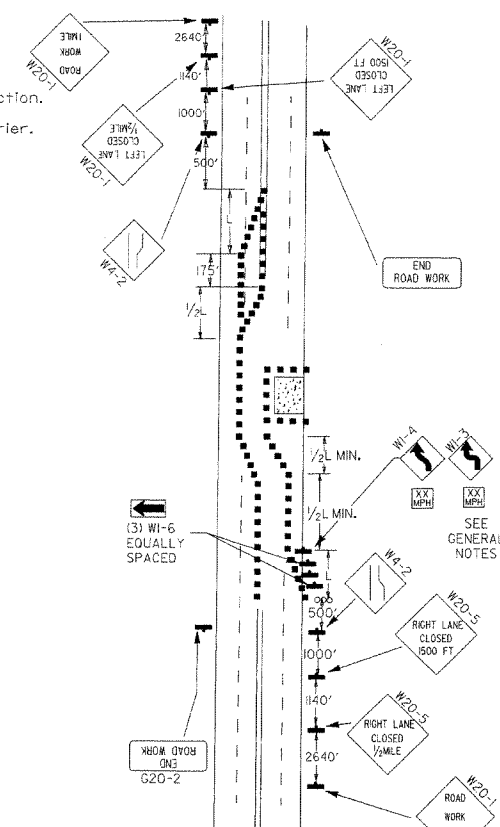
12-15-11	REVISED W24-1	
11-17-10	DELETED W8-9a & ADDED W8-9	
10-15-09	ADDED REFERENCE TO MASH & ADDED SIGN W24-1	
4-17-08	REVISED SIGN DESIGNATIONS	
11-18-04	REVISED NOTES	
10-9-03	REVISED NOTE 1	
11-16-01	REVISED NOTE 7	
9-28-00	REVISED NOTE	
11-18-98	ADDED NOTE	
6-26-97	REVISED NOTE 5	
4-03-97	REVISED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



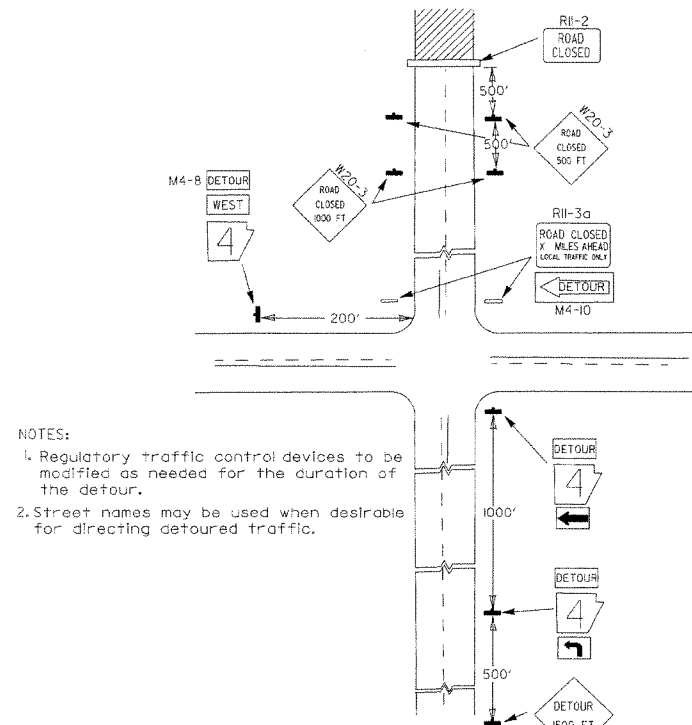
(A) Typical application of traffic control devices on a 2-lane highway where the entire roadway is closed and a bypass detour is provided.



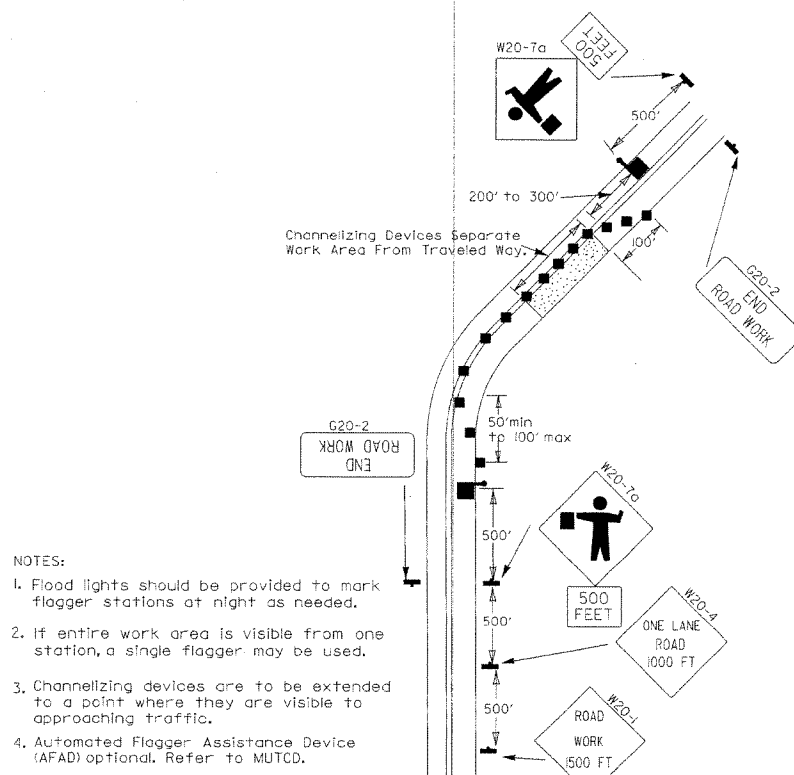
(B) Typical application - 4-lane divided roadway where one roadway is closed.



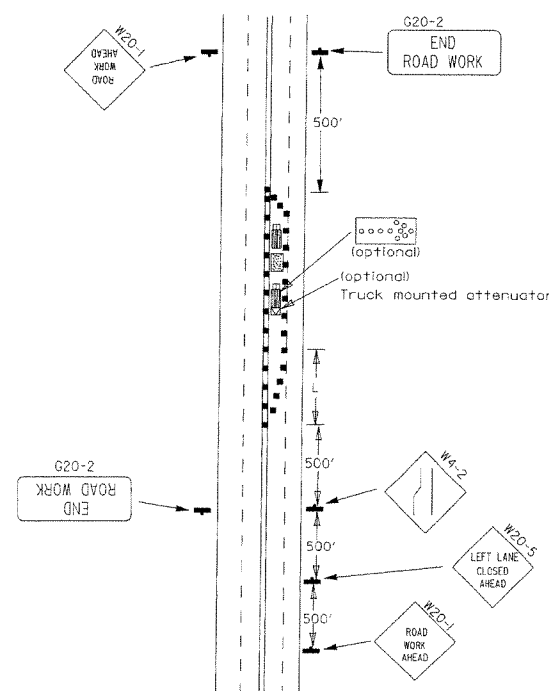
(C) Typical application - 4-lane undivided roadway where half of the roadway is closed.



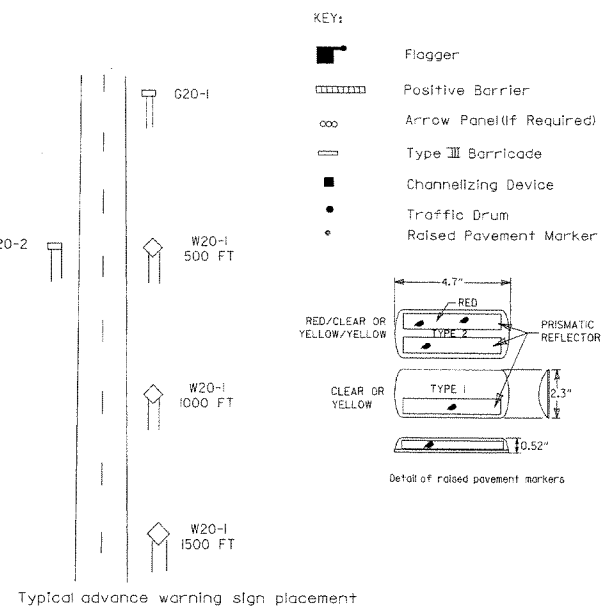
(D) Typical application - roadway closed beyond detour point.



(E) Typical application of traffic control devices on 2-lane highway where one lane is closed and flagging is provided.



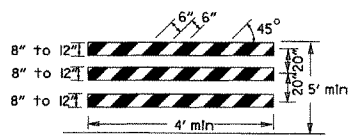
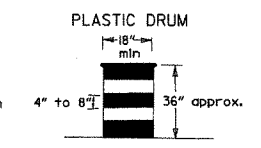
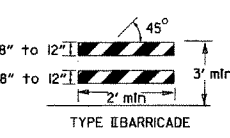
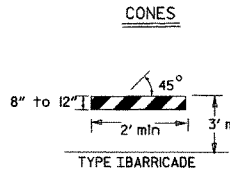
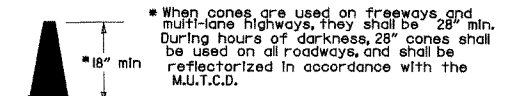
(F) Typical application - 4-lane undivided roadway with inside lane closed.



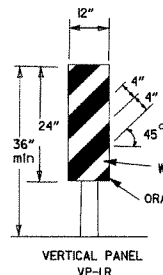
3-11-10	ADDED (AFAD)	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED GENERAL NOTE	
10-18-96	ADDED R55-1	
4-26-96	CORRECTED (a) BEHIND G20-2	
6-8-95	CORRECTED SIGN IDENT. ON W1-4A	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	
DATE	REVISION	FILMED

ARKANSAS STATE HIGHWAY COMMISSION
STANDARD TRAFFIC CONTROLS
FOR HIGHWAY CONSTRUCTION
STANDARD DRAWING TC-2

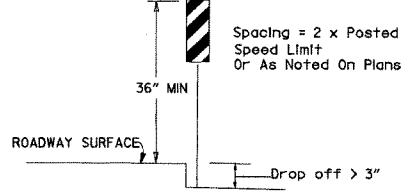
Channelizing devices



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



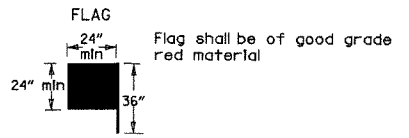
VERTICAL PANEL PLACEMENT



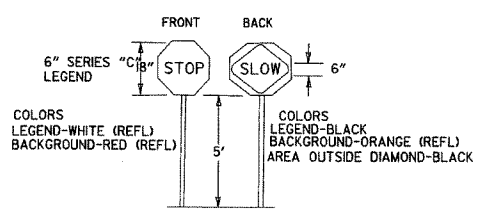
TRAFFIC CONTROL DEVICES FOR VERTICAL PAVEMENT DIFFERENTIALS

VERTICAL DIFFERENTIAL	LOCATIONS	TRAFFIC CONTROL
1" to 3"	Centerline, lane lines	W8-11
1" to 3"	Edge of shoulder	W8-9
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

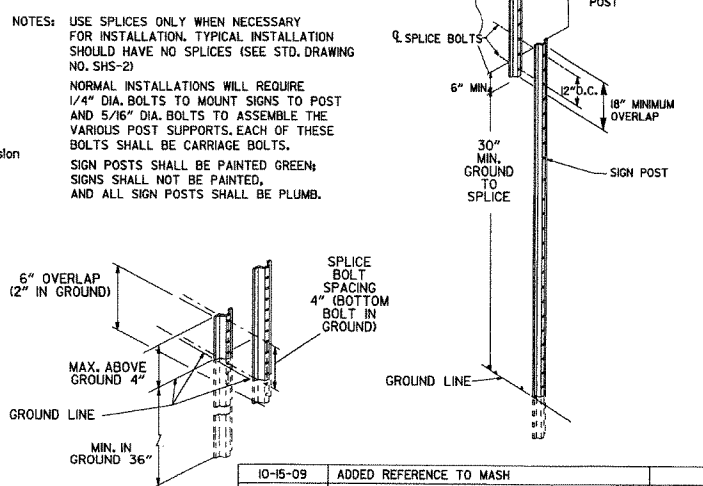
* When shown on the plans concrete barrier will be used.
When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.



STOP SLOW PADDLE

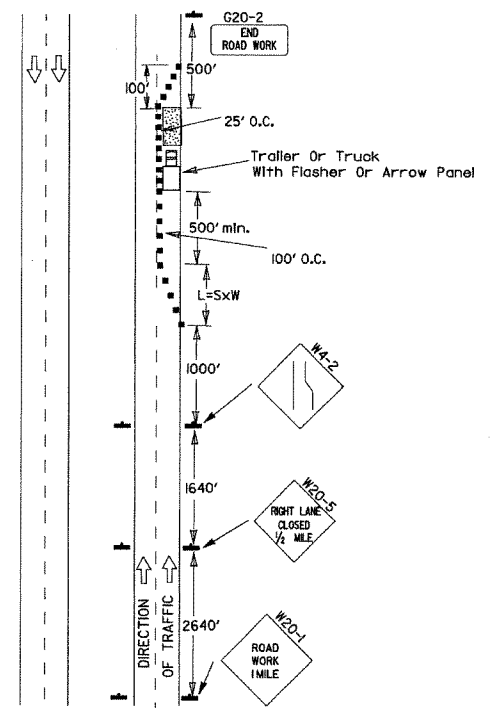


DETAIL OF SPLICES

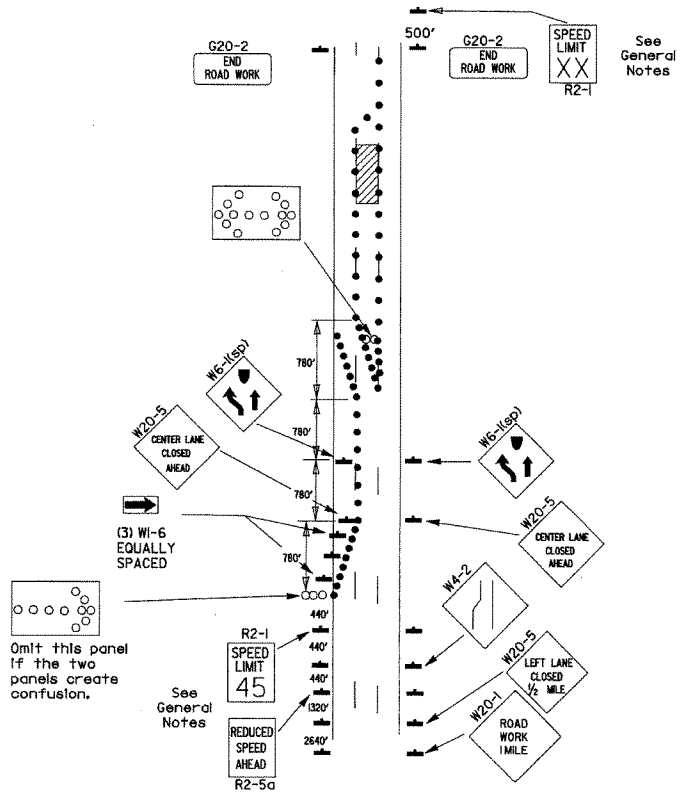


DATE	REVISION	FILMED
10-15-09	ADDED REFERENCE TO MASH	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED NOTE	
10-1-98	ADDED NOTE	
4-03-97	ADDED (SP) TO W6-1 & REVISED TRAFFIC CONTROL DEVICES NOTE	
10-18-96	ADDED R55-1	
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL, TEXT	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

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



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

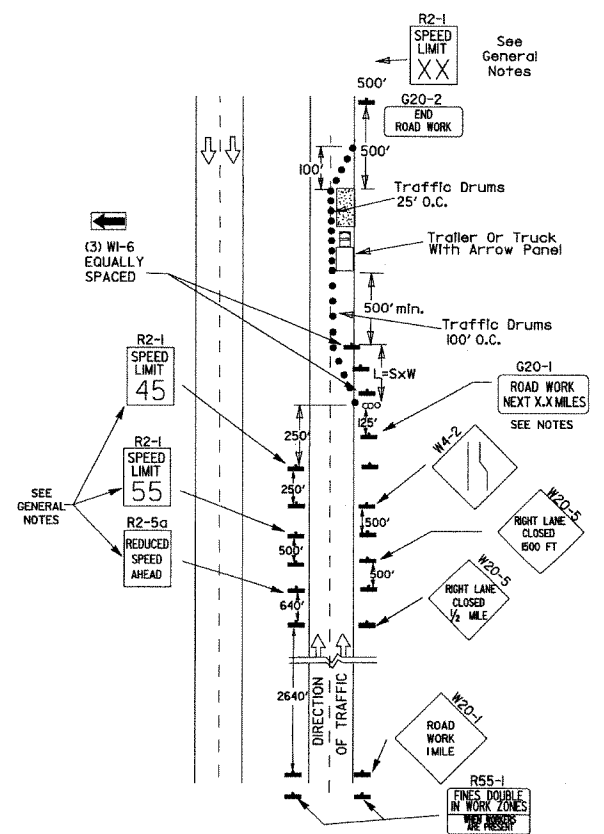


(B) Typical application - 3-lane oneway roadway where center lane is closed.

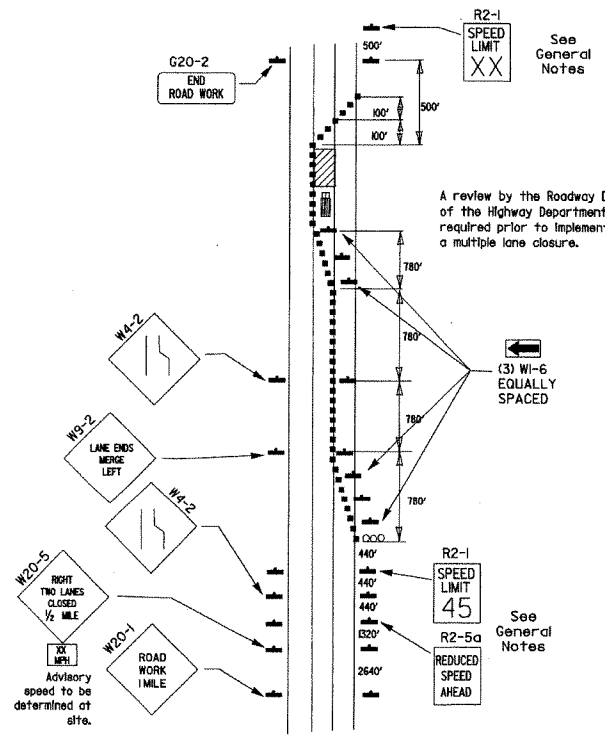
- KEY:
- Arrow Panel (if Required)
 - Channelizing Device
 - Traffic drum

GENERAL NOTES:

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

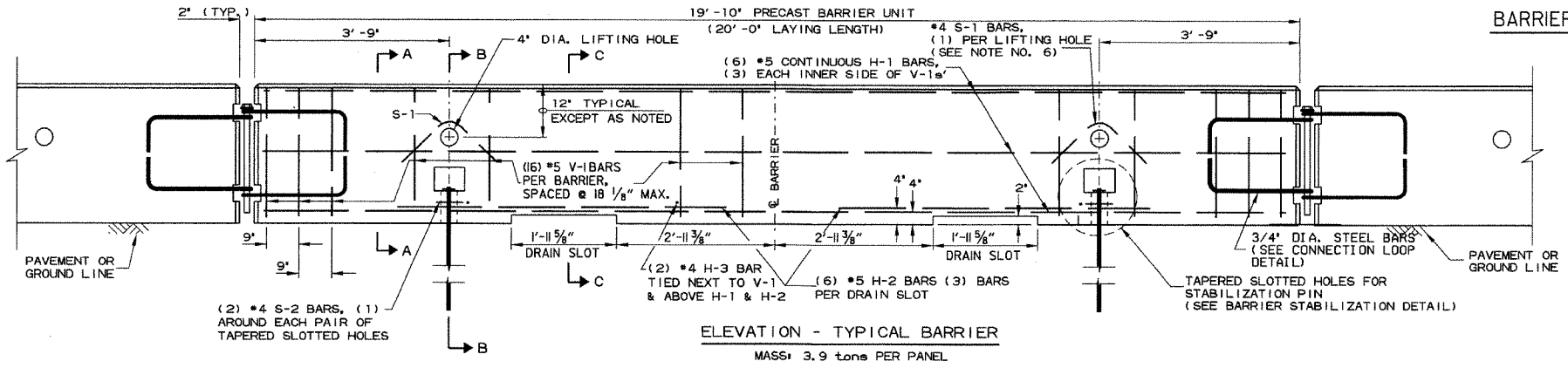
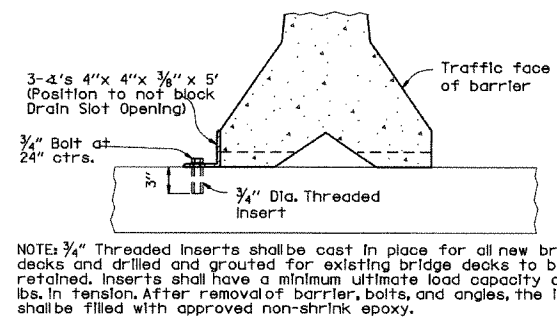
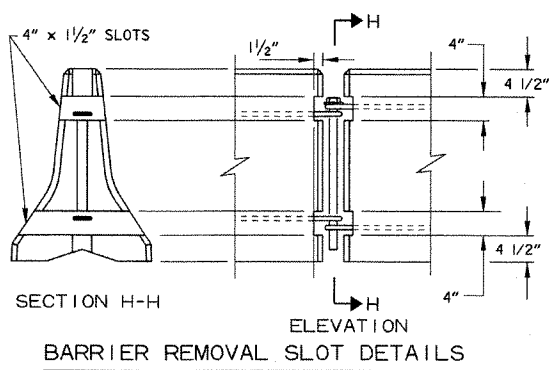
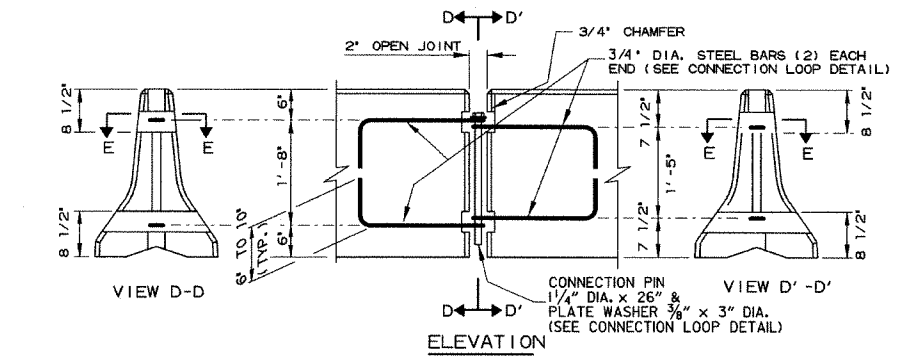
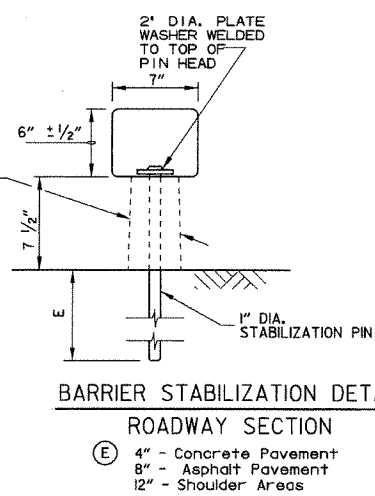
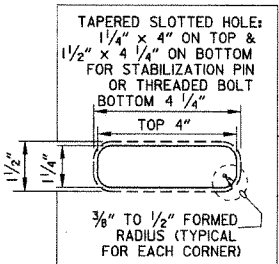
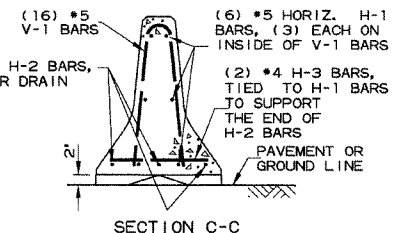
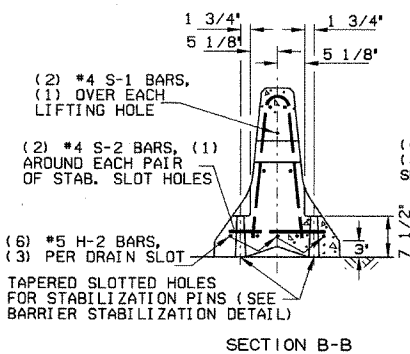
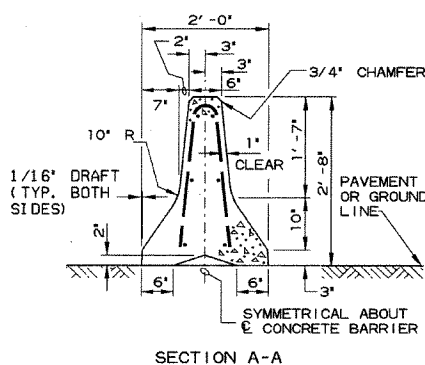
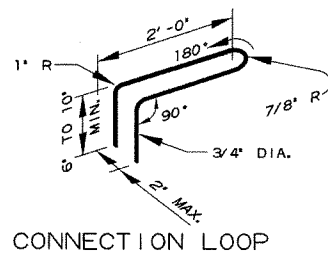
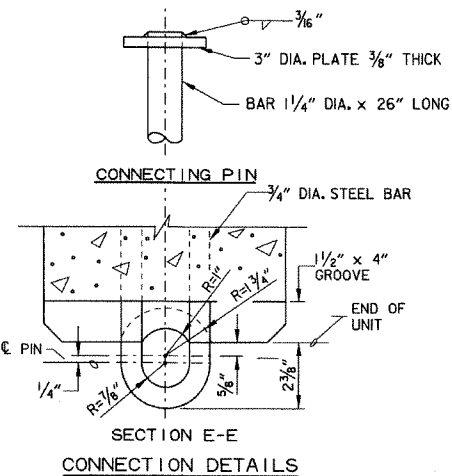


(C) Typical application - construction operations of intermediate to long term duration on a 4-lane divided roadway where half of the roadway is closed.



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

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)	



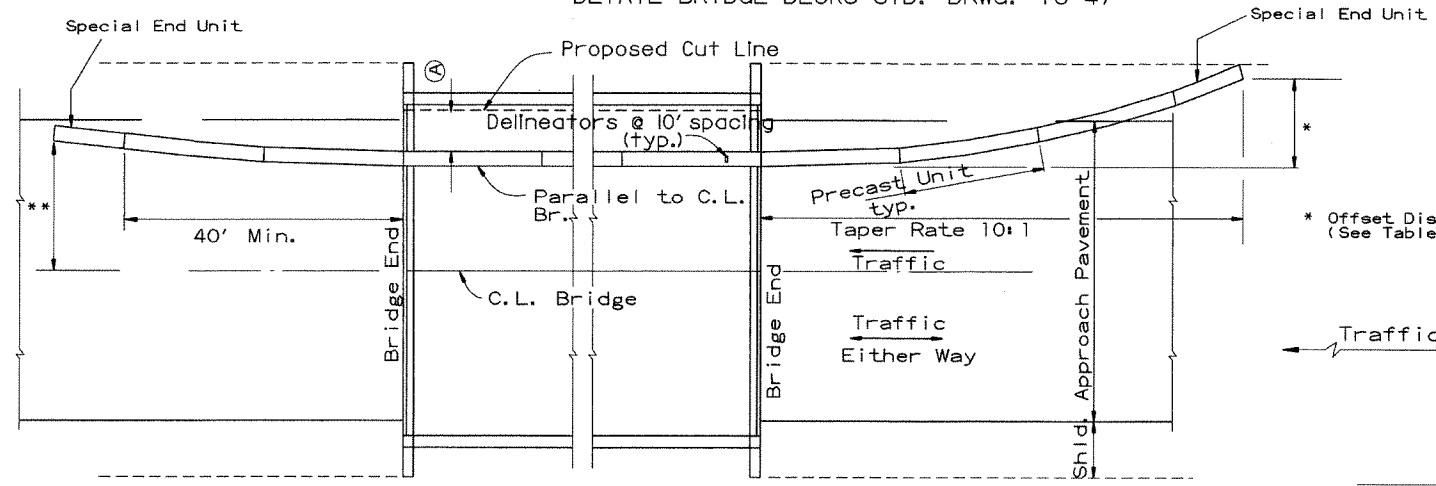
- General Notes**
- The contractor shall furnish the Precast Concrete Barrier Units and shall be responsible for the manufacture, shipment, storage, placement and removal. At the completion of the project, the precast units will remain the property of the contractor.
 - Materials shall meet the following 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 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.

10-15-09	ADDED REFERENCE TO MASH	
8-5-09	REV. NOTE 3 CONCERNING DRAIN SLOTS	
8-29-07	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	
DATE	REVISION	FILED

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

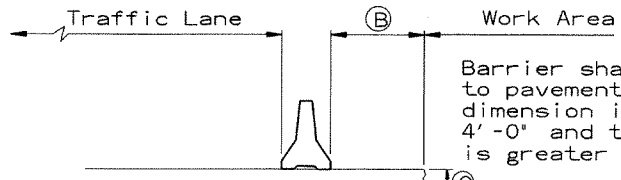
(A) 4 feet or greater preferred. If less than 4 feet, Precast Units shall be connected to slab (SEE BARRIER STABILIZATION DETAIL-BRIDGE DECKS STD. DRWG. TC-4)



BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET

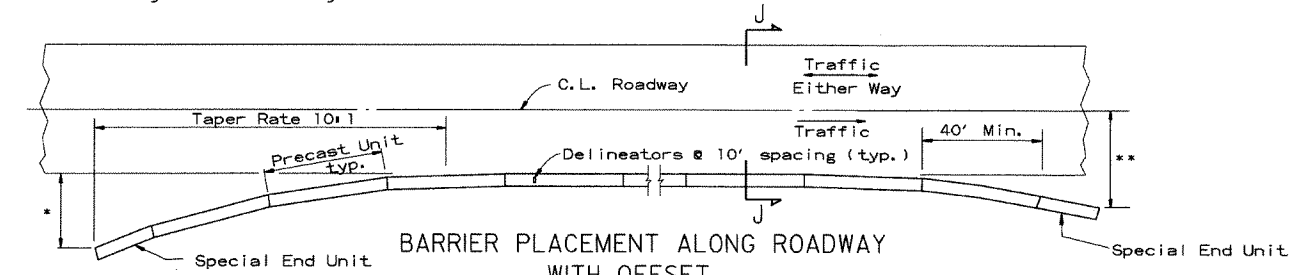
No Scale

** Offset Distance for Two Way Traffic Only



SECTION J-J

No Scale



BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET

No Scale

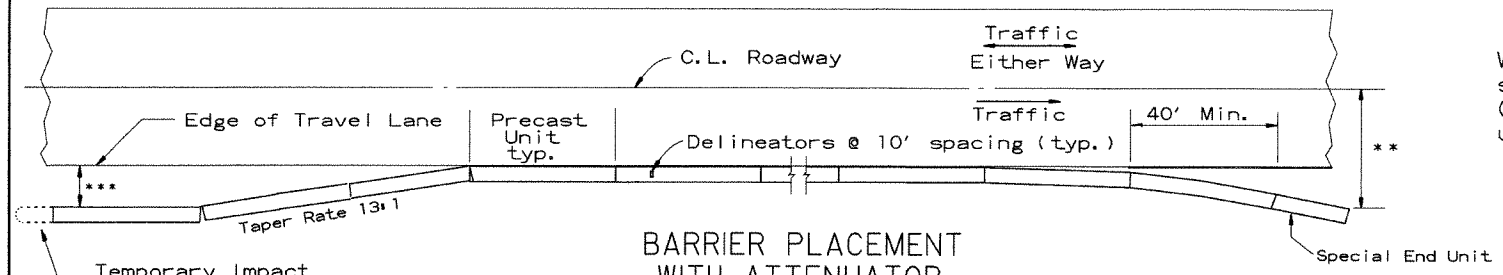
** Offset Distance for Two Way Traffic Only

* Offset Distance (See Table)

Offset Distance Table

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

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

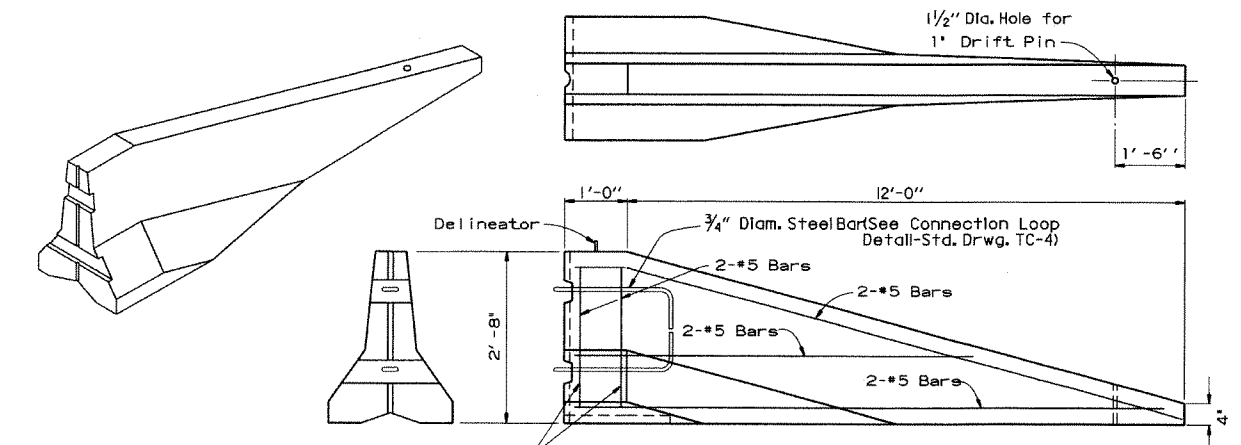


BARRIER PLACEMENT WITH ATTENUATOR

No Scale

** Offset Distance for Two Way Traffic Only

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



SPECIAL END UNIT

No Scale

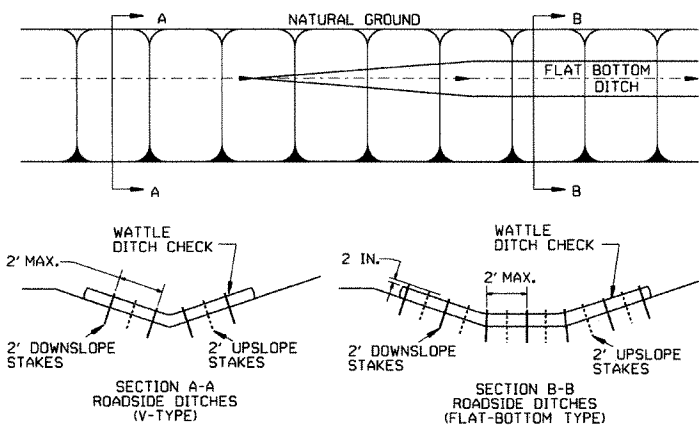
General Notes

When shown on the Plans, the ends of the Temporary Precast Concrete Barrier shall be protected with 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.'

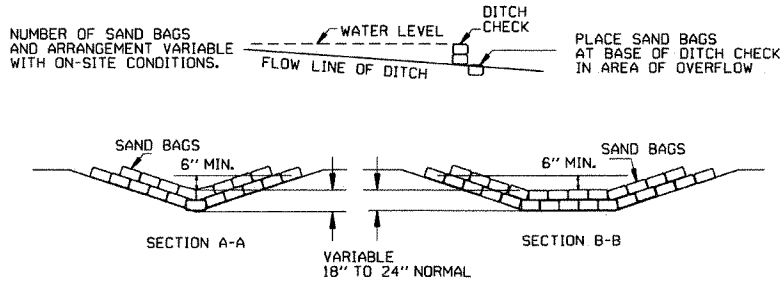
ARKANSAS STATE HIGHWAY COMMISSION		
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER		
STANDARD DRAWING TC-5		
10-15-09	ADDED REFERENCE TO MASH	
5-25-06	REVISED BARRIER PLACEMENT	
8-22-02	ISSUED NEW DRAWING	
DATE	REVISION	FILMED

GENERAL NOTES

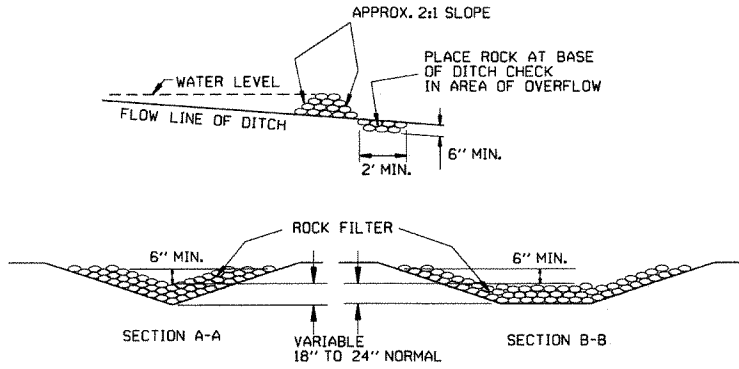
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



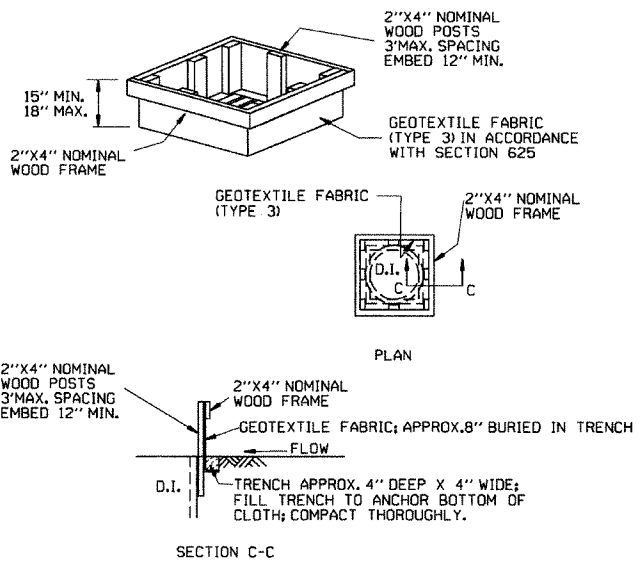
WATTLE DITCH CHECK (E-1)



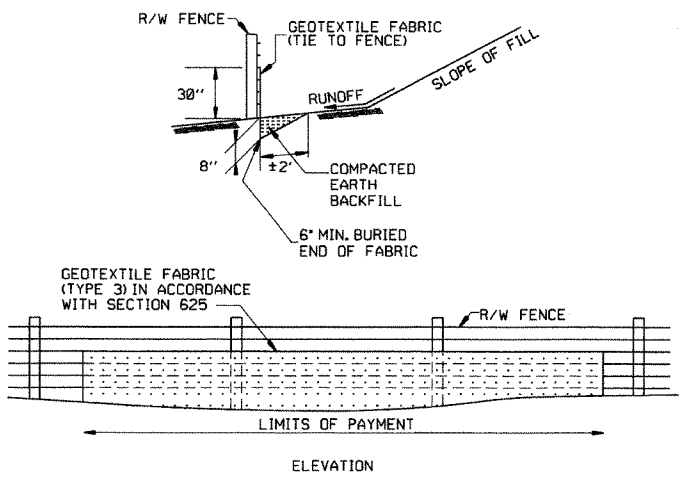
SAND BAG DITCH CHECK (E-5)



ROCK DITCH CHECK (E-6)

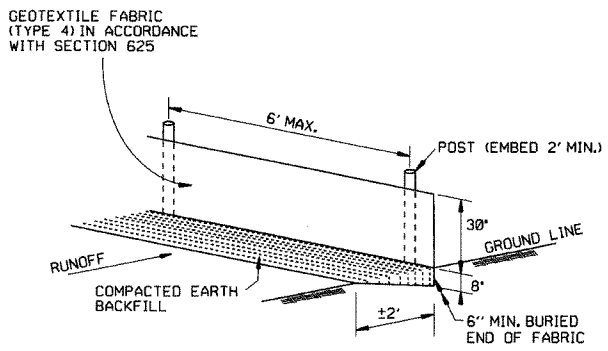


DROP INLET SILTS FENCE (E-7)



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

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

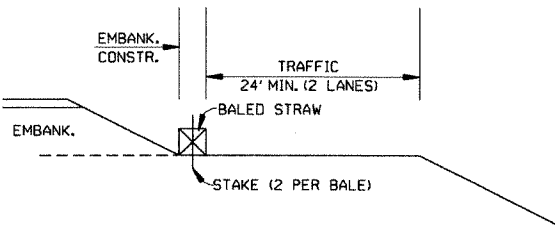


SILTS FENCE (E-11)

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

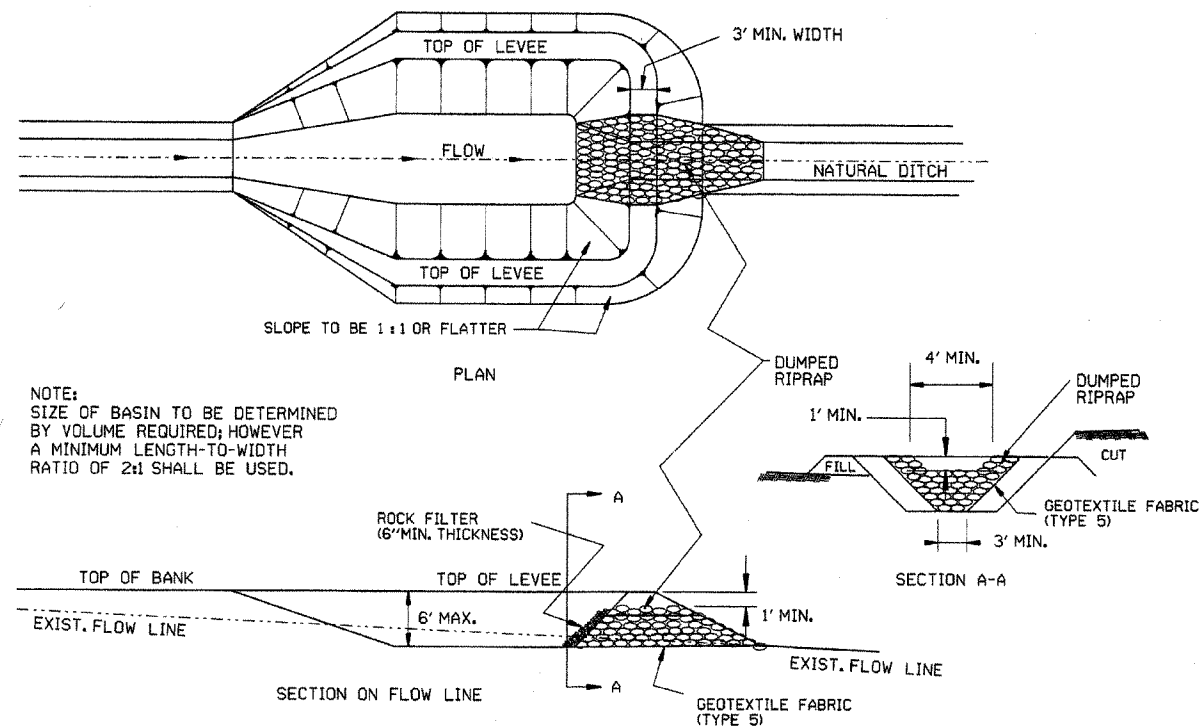
GENERAL NOTES

1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.
2. NO GAPS SHALL BE LEFT BETWEEN BALES.
3. BALED STRAW FILTER BARRIERS COMPLETED AND ACCEPTED WILL BE MEASURED BY THE BALE IN PLACE AS AUTHORIZED BY THE ENGINEER AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER BALE FOR BALED STRAW DITCH CHECKS.

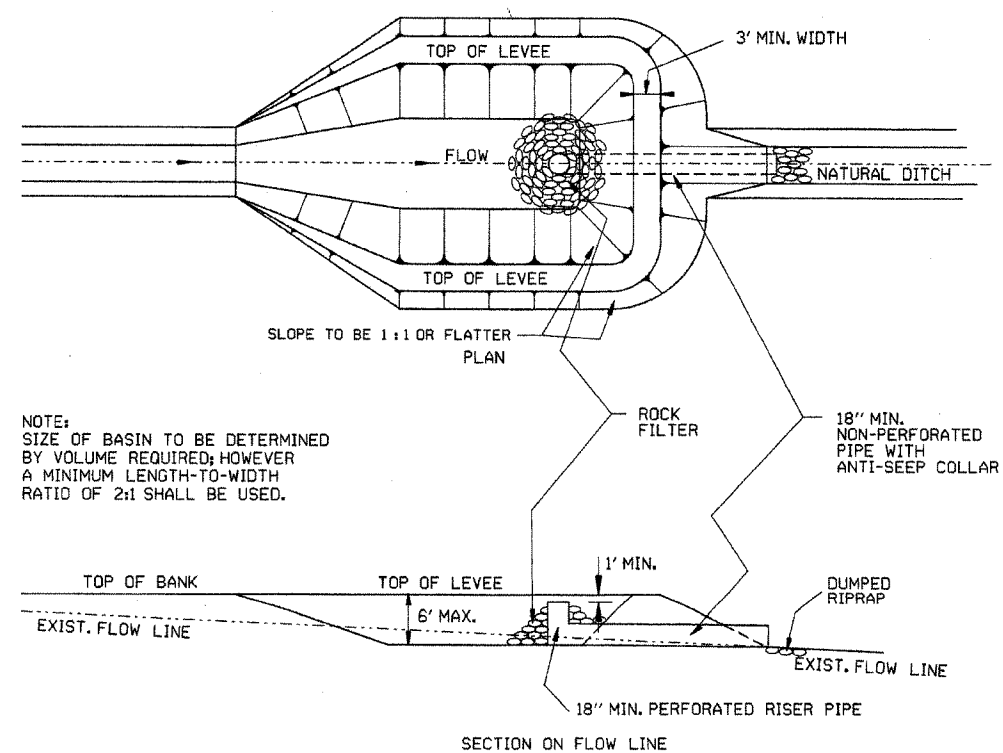


BALED STRAW FILTER BARRIER (E-2)

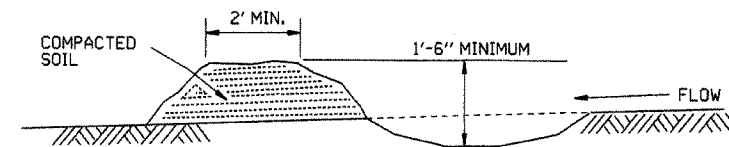
12-15-11	DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK		ARKANSAS STATE HIGHWAY COMMISSION
11-18-98	ADDED NOTES		
7-02-98	ADDED BALED STRAW FILTER BARRIER (E-2)		
7-20-95	REVISED SILTS FENCE E-4 AND E-11	7-20-95	
7-15-94	REV. E-4 & E-11 MIN. 13" BURIED END OF FABRIC		
6-2-94	REVISED E-1,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



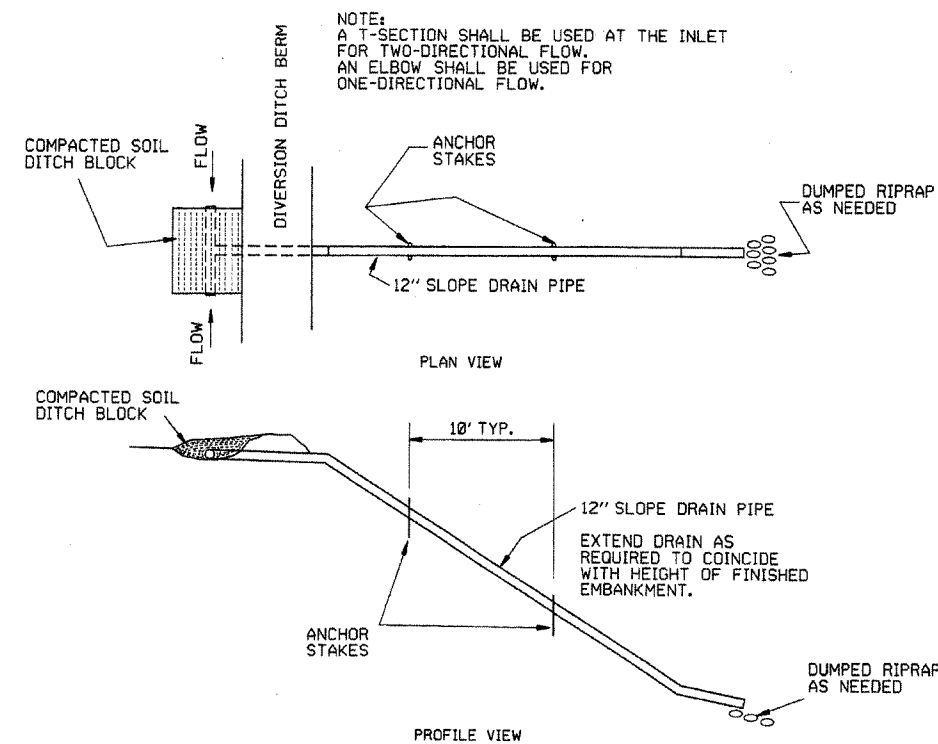
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



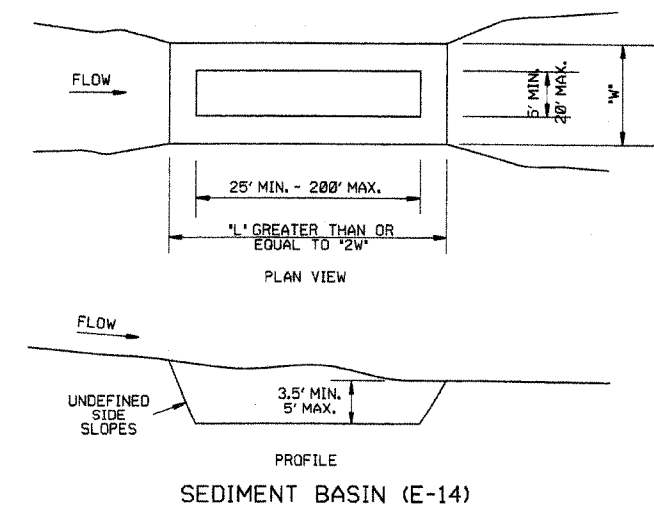
SEDIMENT BASIN WITH PIPE OUTLET (E-10)



DIVERSION DITCH (E-8)



SLOPE DRAIN (E-12)



SEDIMENT BASIN (E-14)

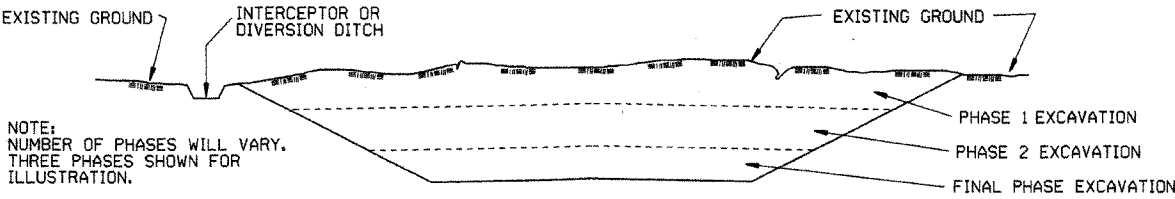
ARKANSAS STATE HIGHWAY COMMISSION			
TEMPORARY EROSION CONTROL DEVICES			
STANDARD DRAWING TEC-2			
6-2-94	Revised E-8 & E-12; Added E-14 & Deleted E-13		
4-1-93	ISSUED		
DATE	REVISION		FILMED

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



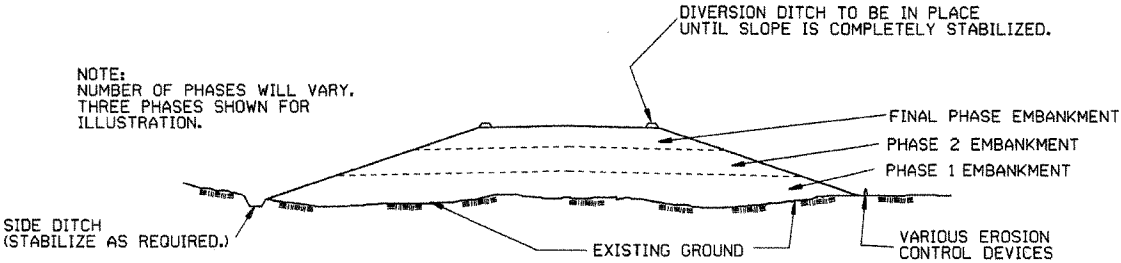
GENERAL NOTE

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

CONSTRUCTION SEQUENCE

1. EXCAVATE AND STABILIZE INTERCEPTOR AND/OR DIVERSION DITCHES.
2. PERFORM PHASE 1 EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING.
3. PERFORM PHASE 2 EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING.
4. PERFORM FINAL PHASE OF EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING. STABILIZE DITCHES. CONSTRUCT DITCH CHECKS, DIVERSION DITCHES, SEDIMENT BASINS, OR OTHER EROSION CONTROL DEVICES AS REQUIRED.

EMBANKMENT



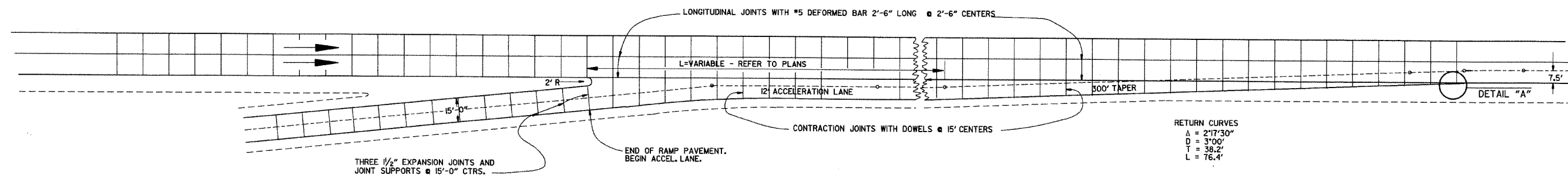
GENERAL NOTE

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

CONSTRUCTION SEQUENCE

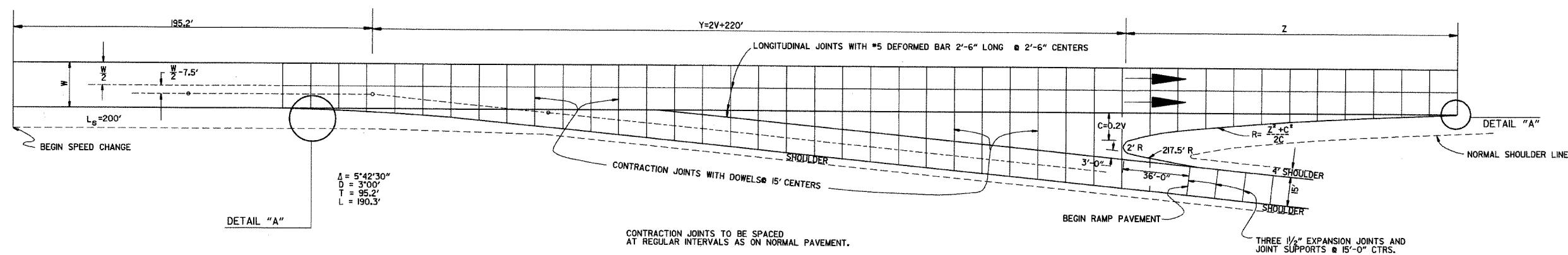
1. CONSTRUCT DIVERSION DITCHES, DITCH CHECKS, SEDIMENT BASINS, SILT FENCES, OR OTHER EROSION CONTROL DEVICES AS SPECIFIED.
2. PLACE PHASE 1 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD OF GREATER THAN 21 DAYS.
3. PLACE PHASE 2 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD OF GREATER THAN 21 DAYS.
4. PLACE FINAL PHASE OF EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PLACE DIVERSION DITCHES AND SLOPE DRAINS AND MAINTAIN UNTIL ENTIRE SLOPE IS STABILIZED.

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



ENTRANCE RAMP

NOTE: JOINT SPACING ON THE MAIN LANES SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO THESE JOINT LAYOUTS. THE MAIN LANE JOINT SPACING MAY BE REDUCED TO A 12' MINIMUM.



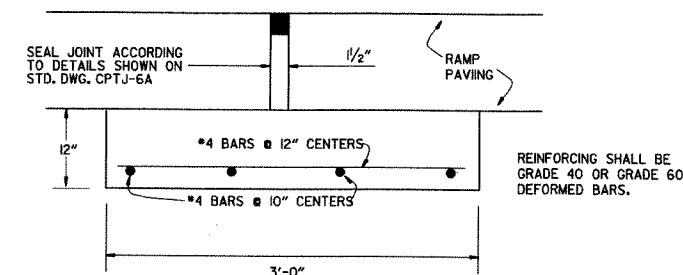
EXIT RAMP

EXIT RAMP

DESIGN SPEED V	Y	NOSE OFFSET C	LENGTH NOSE TAPER Z	RETURN RADIUS R	ADDITIONAL SURFACING SQ. YDS.
40	300.0	8.0	96.0	580.0	602.43
50	320.0	10.0	120.0	725.0	687.29
60	340.0	12.0	168.0	1182.0	790.55
70	360.0	14.0	210.0	1582.0	902.27



DETAIL "A"



DETAIL OF EXPANSION JOINT & JOINT SUPPORT

NOTE: THE EXPANSION JOINTS SHALL BE MEASURED AND PAID FOR AS P.C.C. PAVEMENT (RAMP THICKNESS). WHEN RAMP PAVING IS ASPHALT, EXPANSION JOINT IS NOT REQUIRED. THE JOINT SUPPORT MAY BE CONSTRUCTED WITH CLASS "A", "S", OR PAVING CONCRETE. PAYMENT FOR THE JOINT SUPPORT SHALL BE FOR THE CONTRACT UNIT PRICE BID FOR THE CLASS OF CONCRETE USED, ALL OTHER WORK AND MATERIALS REQUIRED FOR THE CONSTRUCTION OF THE JOINT SUPPORT SHALL BE INCLUDED IN THE PRICE BID FOR THE ABOVE ITEMS.

DATE	REVISION	DATE FILM'D
8-22-02	DELETED NOTE	
11-16-01	CORRECTED SPELLING ON ENTRANCE RAMP NOTE	
5-13-99	ADDED, EDITED AND DELETED NOTES	
11-03-94	ADDED NOTE RE: REINF. BARS	
10-1-92	ADDED DETAIL "A" & OTHER MINOR CHANGES	10-1-92
1-25-90	REVISED EXPANSION JOINT	1-25-90
7-15-88	CONFORM D TO 1988 SPECIFICATIONS	65C-7-15-88
3-2-81	ISSUED	511-10-2-72

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF STANDARD TURNOUT
FOR

ENTRANCE & EXIT RAMPS (NON-REINFORCED)

STANDARD DRAWING TR-1A

GENERAL NOTES:

STEEL LINE POSTS SHALL BE GALVANIZED, 7 FT. IN LENGTH.

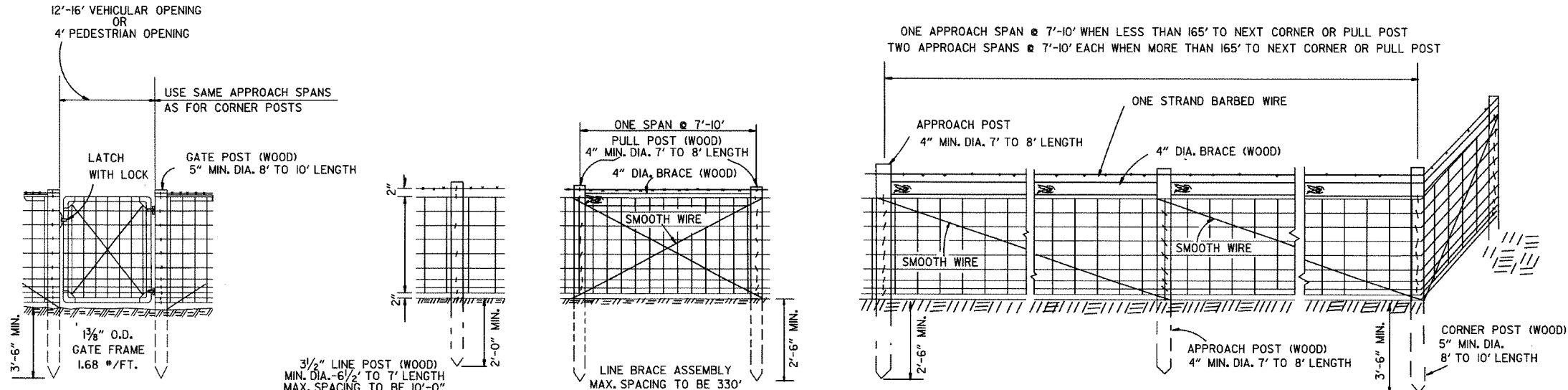
TUBULAR END, CORNER, PULL, OR DIAGONAL BRACES MUST CONFORM TO THE DIMENSIONS AND WEIGHTS SPECIFIED ON STANDARD DRAWING WF-3 (CHAIN LINK).

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

GATE HINGES AND LATCHES WITH LOCKS TO BE OF A TYPE APPROVED BY THE ENGINEER. DRIVEWAY GATES, EITHER SINGLE 12' OR 16' OR DOUBLE 6' TO 8' OPENINGS 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 BY MAINTENANCE EQUIPMENT. LOCATION OF GATES TO BE SHOWN ON THE PLANS OR AS DESIGNATED BY THE ENGINEER.

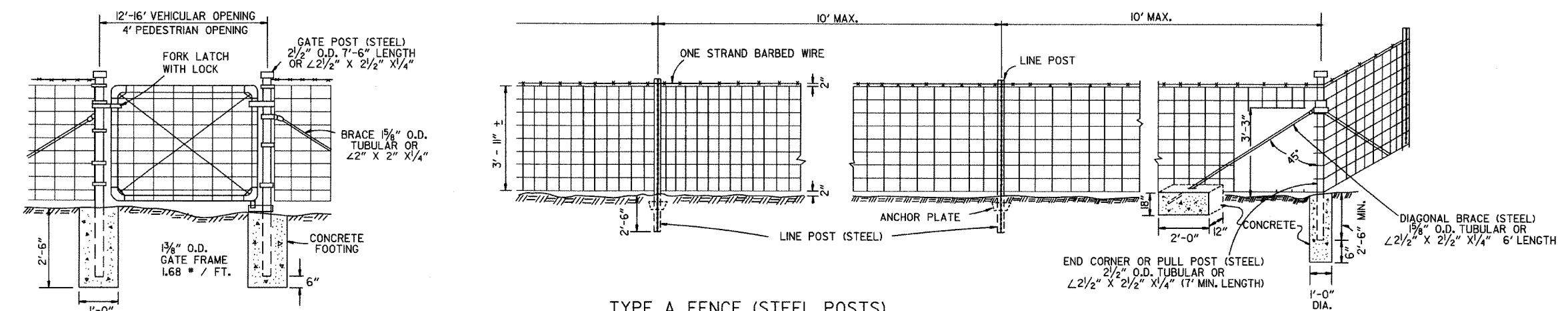
AT STREAM CROSSINGS THE FENCE SHALL NOT BE CONSTRUCTED ACROSS LARGE STREAMS. WHERE CLEARANCE IS SUFFICIENT FROM THE TOP OF BANK TO THE BRIDGE STRUCTURE, A CROSS CONNECTION SHALL BE CONSTRUCTED BETWEEN THE FENCE ON EACH SIDE OF THE ROAD. WHERE THE CLEARANCE IS NOT SUFFICIENT, THE FENCE SHALL BE TERMINATED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

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

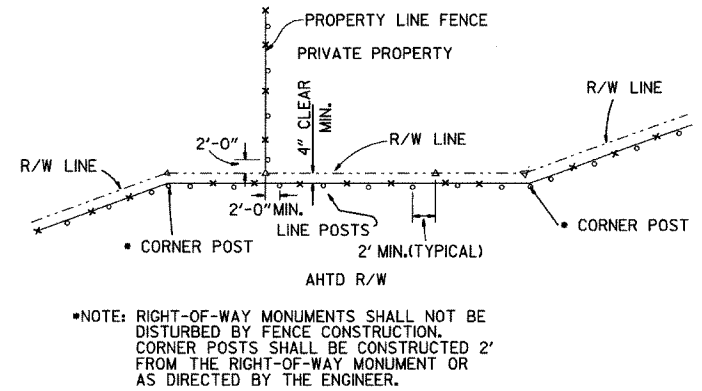


NOTE: STAPLE AT LEAST TOP, BOTTOM AND ALTERNATE WIRES OF WOVEN FABRIC FOR WOOD LINE POSTS.

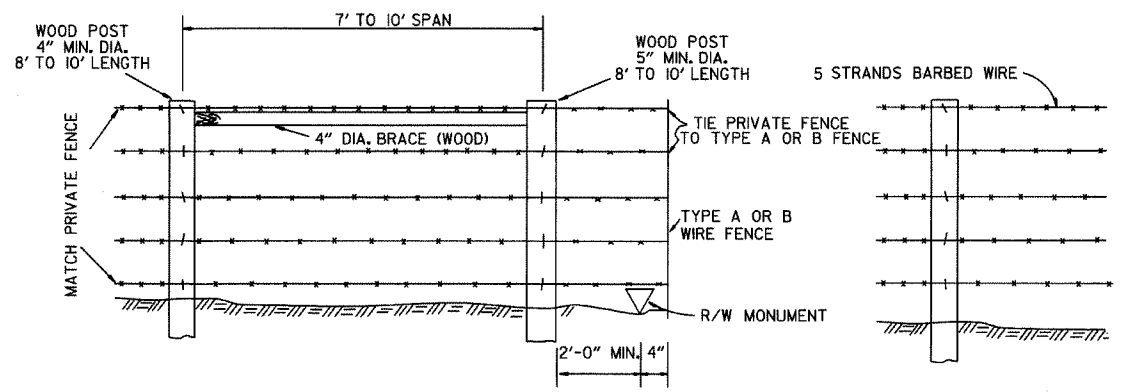
TYPE A FENCE (WOOD POSTS)



TYPE A FENCE (STEEL POSTS)



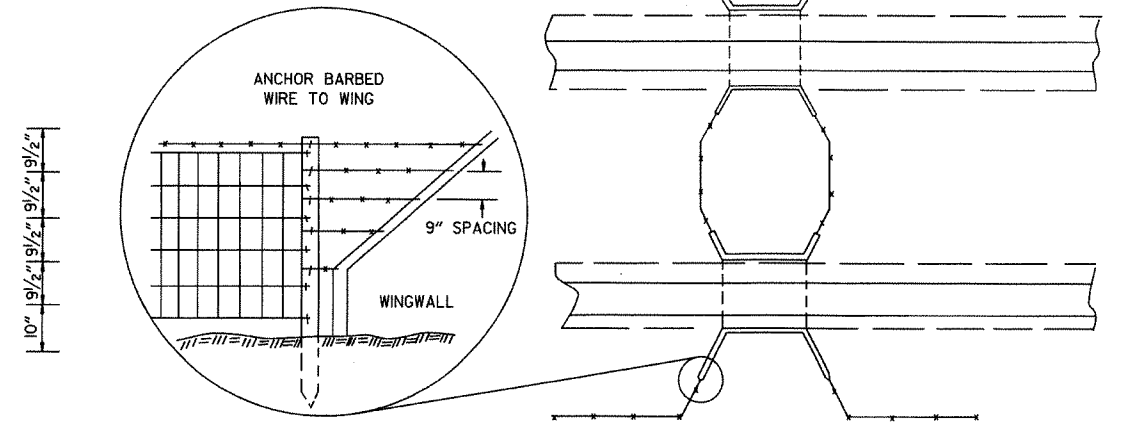
RIGHT-OF-WAY FENCE LOCATION



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

PRIVATE FENCE TERMINAL INSTALLATION

TYPE B FENCE



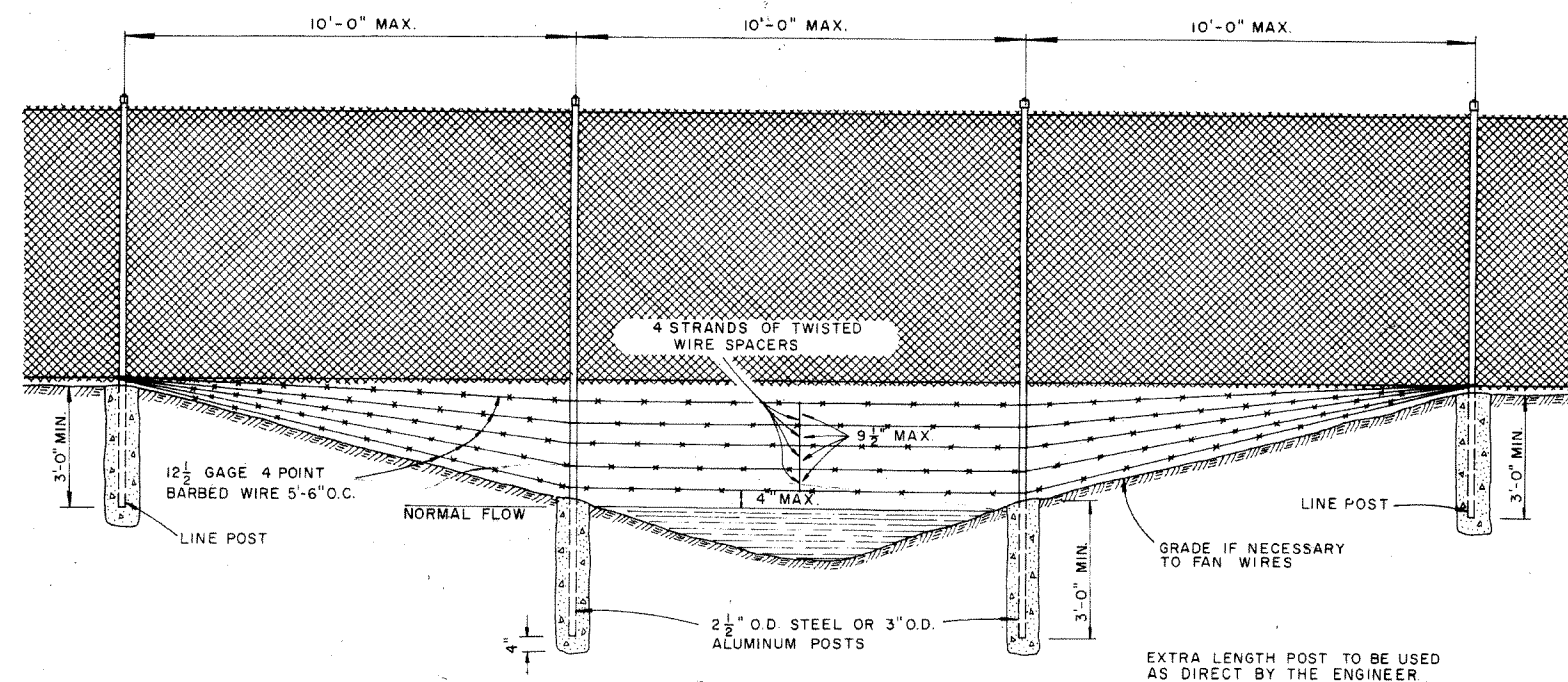
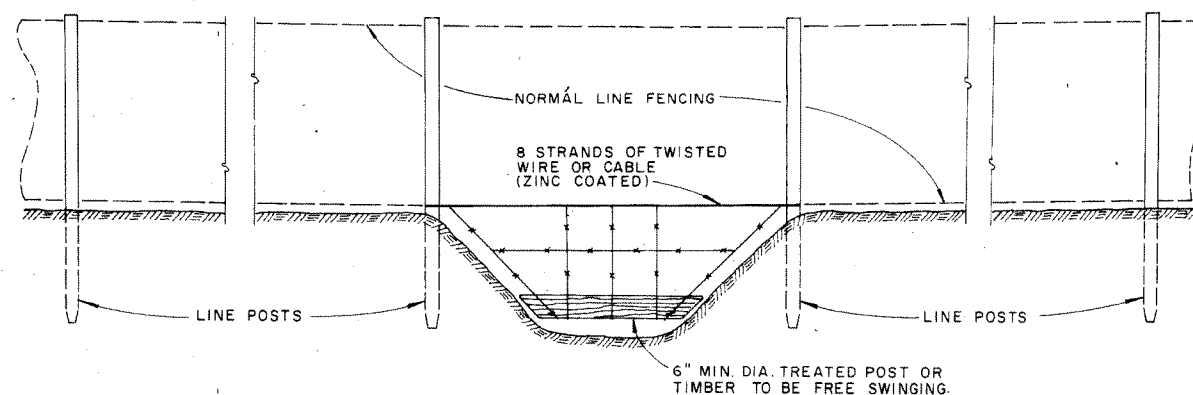
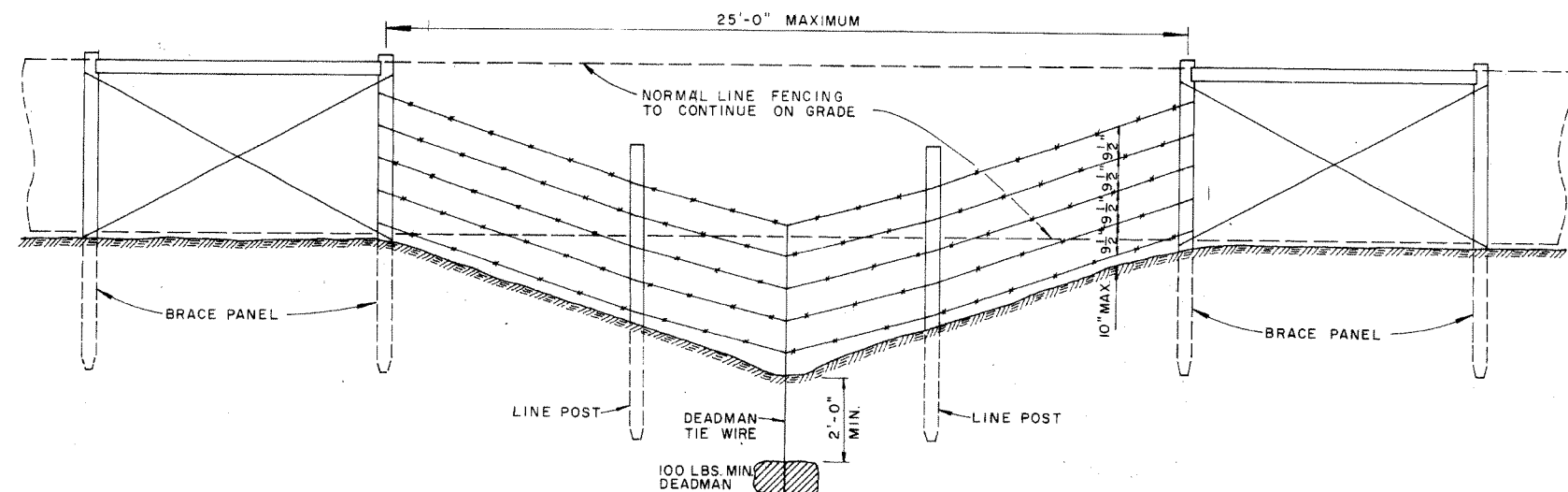
8-22-02	REVISED GENERAL NOTES	
10-18-96	REVISED ASTM REF. TO AASHTO	
11-22-95	REVISED R-O-W LOCATION DETAIL	
6-2-94	ADDED CORNER POST NOTE	6-2-94
8-5-93	REVISED R-O-W LOCATION DETAIL	8-5-93
10-1-92	ADDED STAPLE NOTE	
8-2-90	REV'D PULL POST LENGTH	
11-30-89	DELETED CLASS CONC.	
7-15-88	ADDED SPLICE NOTES	
7-15-88	ADDED HEIGHT DIMENSION	
4-3-87	REVISED VARIOUS NOTES	
	AND GENERAL NOTES	
11-1-84	MAX. POST SPACING	
1-4-83	MIN. DIA. LINE POST	
10-2-72	REVISED & REDRAWN	
DATE	REVISION	DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION

WIRE FENCE

TYPE A AND B

STANDARD DRAWING WF-1



GENERAL NOTES:

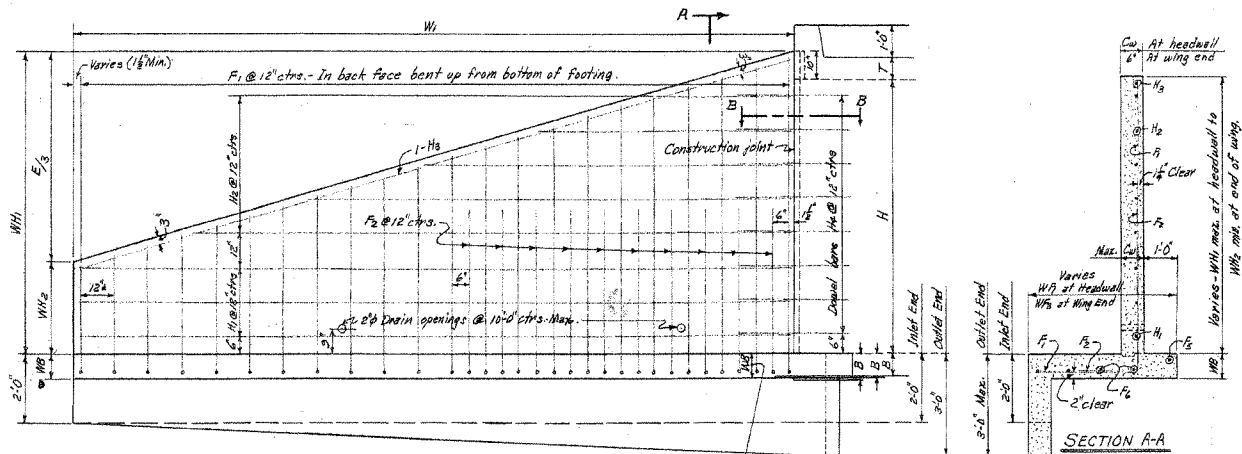
THESE INSTALLATIONS TO BE USED WHERE NORMAL FENCING INSTALLATION WOULD CAUSE THE COLLECTING OF DRIFT IN THE CHANNEL OR THE DEPRESSION WILL NOT PERMIT NORMAL INSTALLATION. INSTALLATIONS WILL BE MADE ONLY WHERE DIRECTED BY THE ENGINEER.

WHEN A FENCE LINE APPROACHES A DITCH, GULLY OR DEPRESSION, THE LAST POST ON LEVEL GROUND SHALL BE PLACED CLOSE ENOUGH TO THE EDGE OF THE DROP OFF THAT THE FENCE MAY BE STRUNG TO THE POST IN THE DEPRESSION WITHOUT TOUCHING THE GROUND.

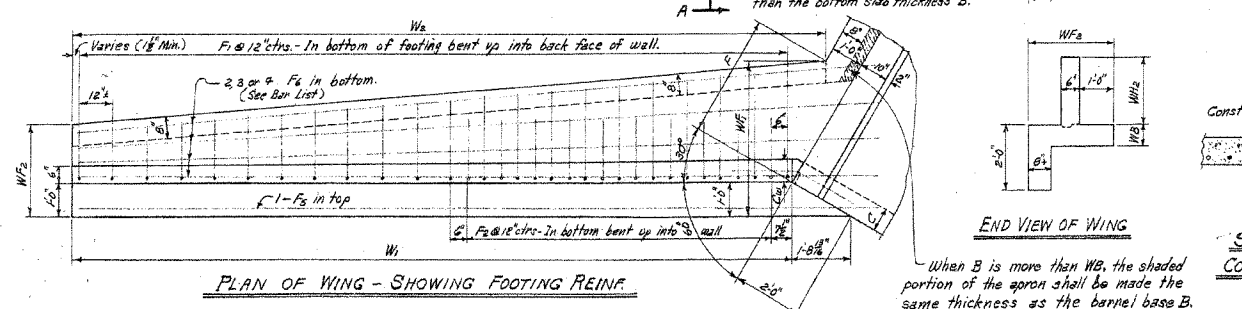
IN TERRAIN OF SUCH EXTREME IRREGULARITY THAT MINOR GRADING WILL NOT BE FEASIBLE, THE NORMAL FENCE SHALL CONTINUE ON GRADE AND THE GULLIES OR DEPRESSIONS TREATED BY AUXILIARY FENCES AS SHOWN.

PAYMENT FOR THE TYPE INSTALLATION USED WILL NOT BE MADE DIRECTLY BUT WILL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR WIRE FENCE OR CHAIN LINK FENCE.

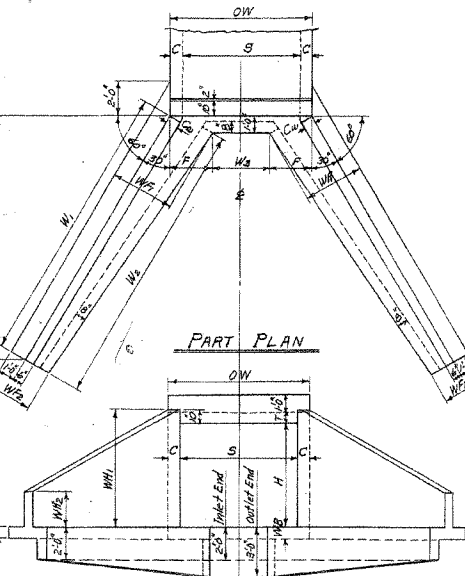
			ARKANSAS STATE HIGHWAY COMMISSION
			WIRE FENCE WATER GAPS
			STANDARD DRAWING
			WF-2
4-20-79	REVISED TOP RAIL & TENSION WIRE	69-4-20-79	
10-2-72	REVISED & REDRAWN	529 10-2-72	
DATE	REVISION	DATE FILMD	



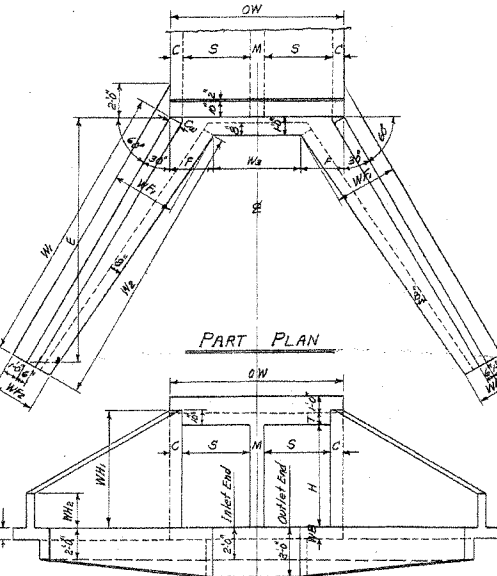
REAR ELEVATION OF WING - SHOWING BACK FACE REINF.



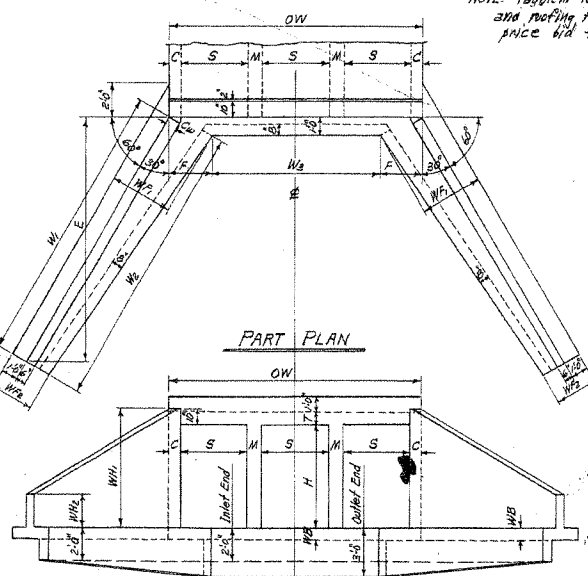
PLAN OF WING - SHOWING FOOTING REINF.



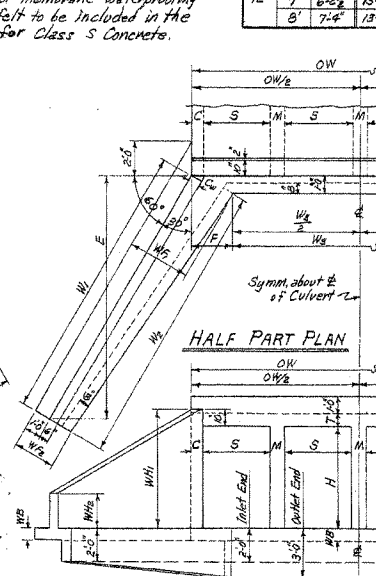
END ELEVATION
SINGLE BARREL CULVERT



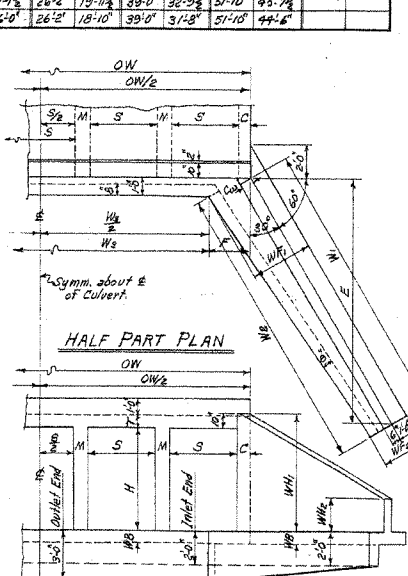
END ELEVATION
DOUBLE BARREL CULVERT



END ELEVATION
TRIPLE BARREL CULVERT



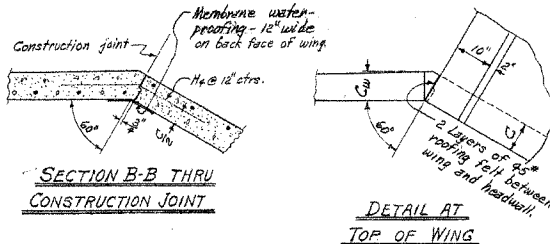
HALF END ELEVATION
QUADRUPLE BARREL CULVERT



HALF END ELEVATION
QUINTUPLE BARREL CULVERT

WING DIMENSIONS													
CLEAR HEIGHT OF BOX	THICKNESS OF WING FOOTING	THICKNESS OF WING AT HEADWALL	WING WALL HEIGHTS	WIDTH OF WING FOOTINGS	PERPENDICULAR DIST. FROM HEADWALL TO END OF WING	LENGTH OF WING WALLS	INSIDE FOOTING DIMENSION	QUANTITY PER WING	CLASS S CONCRETE	INLET END	OUTLET END	CULVERT	CULVERT
H	WB	CW	WH	WF	W5	F	E	W1	W2	W3	W4	W5	W6
2'	7"	6"	2'-0"	0'-8"	2'-0"	0'-10"	6'-6"	7'-6"	7'-1 1/2"	0.889	0.986		
3'	7"	6"	3'-0"	1'-0"	2'-8"	1'-4"	8'-6"	9'-6"	9'-2 1/2"	1.338	1.466		
4'	7"	6"	4'-0"	1'-4"	3'-0"	2'-8"	10'-6"	12'-6"	12'-1 1/2"	1.668	2.027		
5'	7"	6"	5'-0"	1'-8"	3'-4"	2'-8"	12'-6"	14'-6"	14'-7 1/2"	2.978	2.668		
6'	7"	6"	6'-0"	2'-0"	3'-8"	2'-8"	14'-6"	16'-6"	17'-1 1/2"	3.940	3.661		
7'	8"	7"	7'-0"	2'-4"	4'-2"	2'-8"	16'-6"	18'-6"	19'-1 1/2"	5.505	4.758		
8'	8"	7"	8'-0"	2'-8"	4'-6"	2'-8"	18'-6"	20'-6"	21'-1 1/2"	6.597	4.851		
9'	8"	7"	9'-0"	3'-0"	5'-0"	2'-8"	20'-6"	22'-6"	23'-1 1/2"	8.561	6.099		

* Quantity per wing does not include headwall or that portion of apron or footwall for the length W6.



SECTION B-B THRU
CONSTRUCTION JOINT

DETAIL AT
TOP OF WING
NOTE: Payment for membrane waterproofing and roofing felt to be included in the price bid for Class S Concrete.

APRON DIMENSION W6													
CLEAR SPAN	CLEAR HEIGHT	THICKNESS OF WING AT HEADWALL	THICKNESS OF WING FOOTING	SINGLE BARREL CULVERT	DOUBLE BARREL CULVERT	TRIPLE BARREL CULVERT	QUADRUPLE BARREL CULVERT	QUINTUPLE BARREL CULVERT	W6	W7	W8	W9	W10
2'	7"	6"	2'-0"	0'-8"	2'-0"	0'-10"	6'-6"	7'-6"	7'-1 1/2"	0.889	0.986		
3'	7"	6"	3'-0"	1'-0"	2'-8"	1'-4"	8'-6"	9'-6"	9'-2 1/2"	1.338	1.466		
4'	7"	6"	4'-0"	1'-4"	3'-0"	2'-8"	10'-6"	12'-6"	12'-1 1/2"	1.668	2.027		
5'	7"	6"	5'-0"	1'-8"	3'-4"	2'-8"	12'-6"	14'-6"	14'-7 1/2"	2.978	2.668		
6'	7"	6"	6'-0"	2'-0"	3'-8"	2'-8"	14'-6"	16'-6"	17'-1 1/2"	3.940	3.661		
7'	8"	7"	7'-0"	2'-4"	4'-2"	2'-8"	16'-6"	18'-6"	19'-1 1/2"	5.505	4.758		
8'	8"	7"	8'-0"	2'-8"	4'-6"	2'-8"	18'-6"	20'-6"	21'-1 1/2"	6.597	4.851		
9'	8"	7"	9'-0"	3'-0"	5'-0"	2'-8"	20'-6"	22'-6"	23'-1 1/2"	8.561	6.099		
10'	8"	7"	10'-0"	3'-4"	5'-4"	2'-8"	22'-6"	24'-6"	25'-1 1/2"	10.525	7.637		
11'	8"	7"	11'-0"	3'-8"	5'-8"	2'-8"	24'-6"	26'-6"	27'-1 1/2"	12.489	9.599		
12'	8"	7"	12'-0"	4'-0"	6'-0"	2'-8"	26'-6"	28'-6"	29'-1 1/2"	14.453	11.563		

QUANTITIES													
CLEAR SPAN	CLEAR HEIGHT	THICKNESS OF WING AT HEADWALL	THICKNESS OF WING FOOTING	SINGLE BARREL CULVERT	DOUBLE BARREL CULVERT	TRIPLE BARREL CULVERT	QUADRUPLE BARREL CULVERT	QUINTUPLE BARREL CULVERT	W6	W7	W8	W9	W10
2'	7"	6"	2'-0"	0'-8"	2'-0"	0'-10"	6'-6"	7'-6"	7'-1 1/2"	0.889	0.986		
3'	7"	6"	3'-0"	1'-0"	2'-8"	1'-4"	8'-6"	9'-6"	9'-2 1/2"	1.338	1.466		
4'	7"	6"	4'-0"	1'-4"	3'-0"	2'-8"	10'-6"	12'-6"	12'-1 1/2"	1.668	2.027		
5'	7"	6"	5'-0"	1'-8"	3'-4"	2'-8"	12'-6"	14'-6"	14'-7 1/2"	2.978	2.668		
6'	7"	6"	6'-0"	2'-0"	3'-8"	2'-8"	14'-6"	16'-6"	17'-1 1/2"	3.940	3.661		
7'	8"	7"	7'-0"	2'-4"	4'-2"	2'-8"	16'-6"	18'-6"	19'-1 1/2"	5.505	4.758		
8'	8"	7"	8'-0"	2'-8"	4'-6"	2'-8"	18'-6"	20'-6"	21'-1 1/2"	6.597	4.851		
9'	8"	7"	9'-0"	3'-0"	5'-0"	2'-8"	20'-6"	22'-6"	23'-1 1/2"	8.561	6.099		
10'	8"	7"	10'-0"	3'-4"	5'-4"	2'-8"	22'-6"	24'-6"	25'-1 1/2"	10.525	7.637		
11'	8"	7"	11'-0"	3'-8"	5'-8"	2'-8"	24'-6"	26'-6"	27'-1 1/2"	12.489	9.599		
12'	8"	7"	12'-0"	4'-0"	6'-0"	2'-8"	26'-6"	28'-6"	29'-1 1/2"	14.453	11.563		

For reinforcing steel in Headwalls and Aprons, See Details of Standard Barrel Sections for R.C. Box Culverts for the desired Span and Height.

GENERAL NOTES:-
CONCRETE:- All concrete to be Class S, and shall be poured in the dry. All exposed corners to have 1/4 chamfers.
REINFORCING STEEL:- Reinforcing steel to be deformed bars of intermediate or hard grade.
CONSTRUCTION JOINTS:- Construction joints between wingwall, footings and sidewalls shall be only where shown on plans.
SPECIFICATIONS:- Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.
UNIT STRESSES:-
Class S Concrete (n=10) 1200 PSI
Reinforcing Steel 20000 PSI

NOTE:- This drawing to be used in conjunction with Standard Barrel Sections, Drawing Nos. as listed below.

SINGLES	DOUBLES	TRIPLES	QUADRUPLES	QUINTUPLES
R-100X-0	R-200X-0	R-300X-0	R-400X-0	R-500X-0
R-100X-1	R-200X-1	R-300X-1	R-400X-1	R-500X-1
R-100X-2	R-200X-2	R-300X-2	R-400X-2	R-500X-2
	R-200X-3	R-300X-3		

CLASS S CONCRETE
ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF STANDARD WINGS
FOR
REINFORCED CONCRETE BOX CULVERTS
4.5, 6, 7, 8, 9, 10, 11 & 12 SPANS
SINGLES, DOUBLES, TRIPLES,
QUADRUPLES & QUINTUPLES.
3:1 SLOPES
ALL DEPTHS OF COVER
FOR H = 8'-0" OR LESS
STANDARD DRAWING NO. W-X003-1

BAR LIST FOR ONE WING - 4 REQUIRED													
CLEAR HEIGHT	SIZE	SPACING	No. Bars	LENGTHS VARY	X	Y	BENT	BENT	STRAIGHT	STRAIGHT	STRAIGHT	STRAIGHT	STRAIGHT
2'	3"	12"	8	1'-6"	3'-0"	0'-8"	1'-0"	0'-11"	2'-11"				
3'	3"	12"	10	2'-2"	5'-2"	0'-10"	1'-3"	1'-5"	4'-0"				
4'	3"	12"	13	2'-4"	6'-6"	0'-11"	1'-7"	1'-6"	5'-0"				
5'	3"	12"	15	2'-11"	7'-10"	1'-1"	1'-11"	1'-11"	6'-0"				
6'	3"	12"	17	3'-6"	9'-3"	1'-2"	2'-3"	2'-5"	7'-1"				
7'	3"	12"	20	3'-9"	10'-5"	1'-3"	2'-9"	2'-7"	8'-1"				
8'	3"	12"	22	4'-4"	12'-3"	1'-5"	3'-2"	3'-0"	9'-2"				

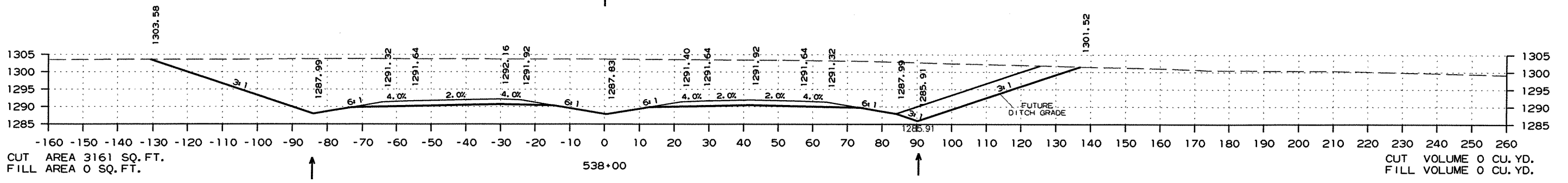
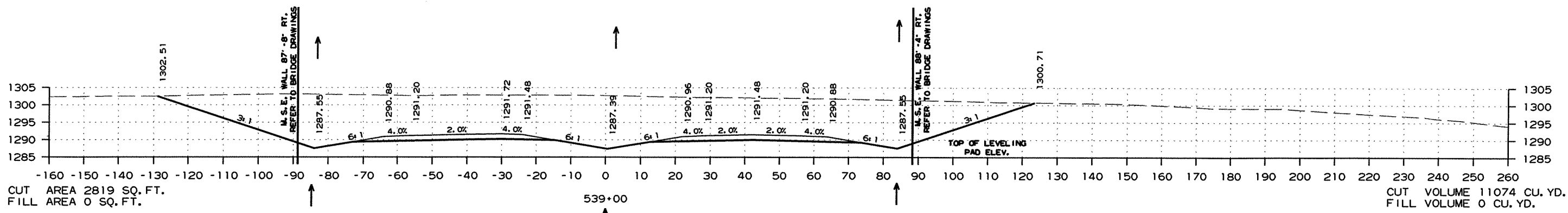
MEMBRANE:- A membrane waterproofing 12" wide, consisting of three layers of waterproofing asphalt and two alternate layers of treated cotton fabric shall be applied to the back face of wing to cover the construction joints in wings.

REVISIONS:- Membrane added, 5-10-66 W.C.H.

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. 090293	175	266

2 CROSS SECTIONS - HWY. 71 (MAIN LANES)

C.L. HWY. 71 - STA. 539+26.81 =
C.L. CO. RD. 34 - STA. 17+77.25

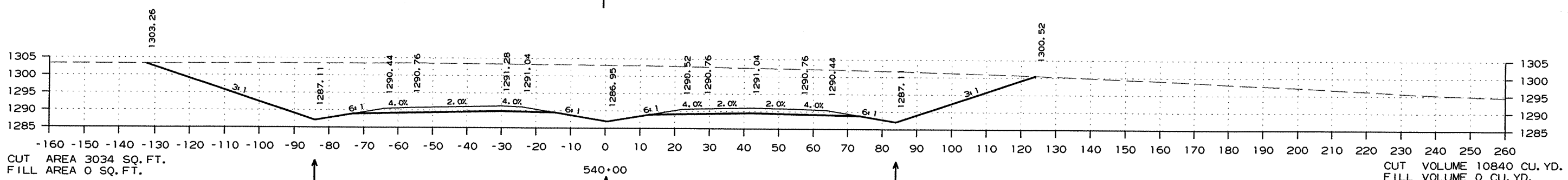
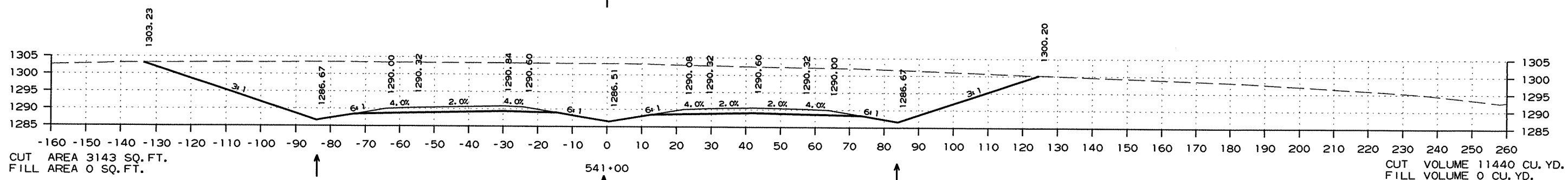
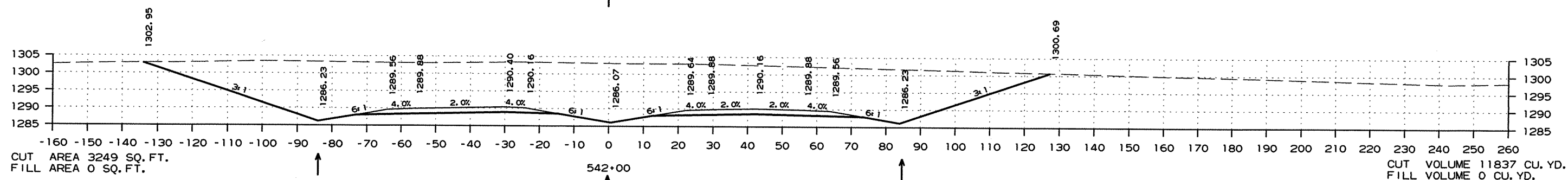
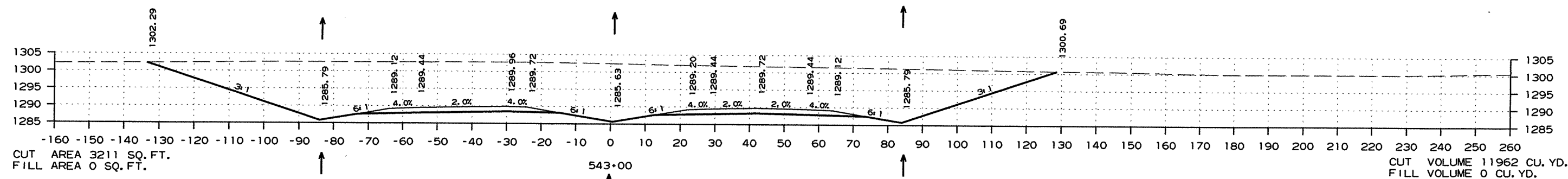


BEGIN JOB 090293

HWY. 71 - CROSS SECTION STA. 538+00 TO STA. 539+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						090293	176	266

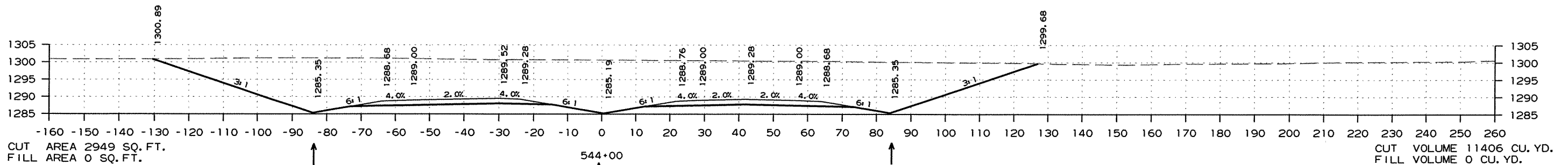
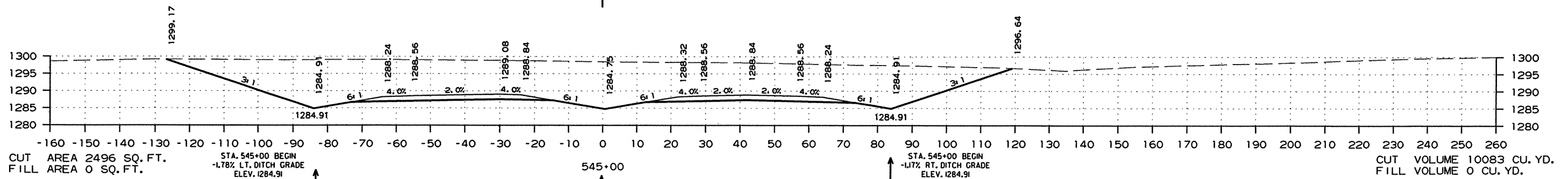
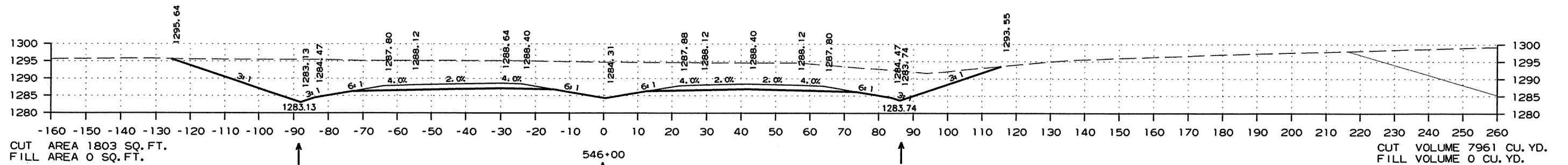
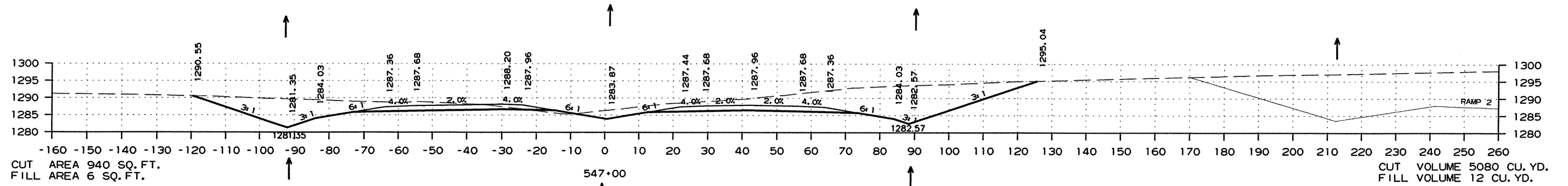
② CROSS SECTIONS - HWY. 71 (MAIN LANES)



HWY. 71 - CROSS SECTION STA. 540+00 TO STA. 543+00

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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				JOB NO.	090293		177	260

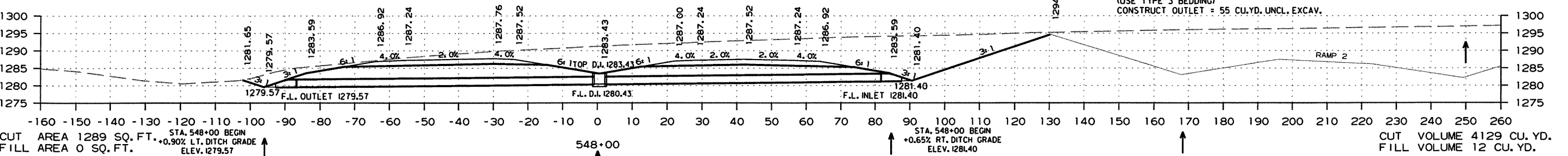
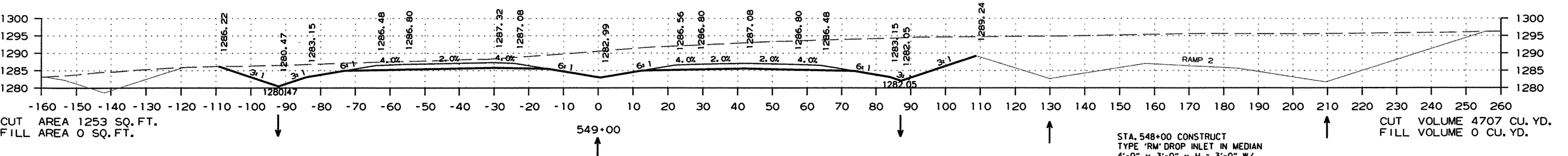
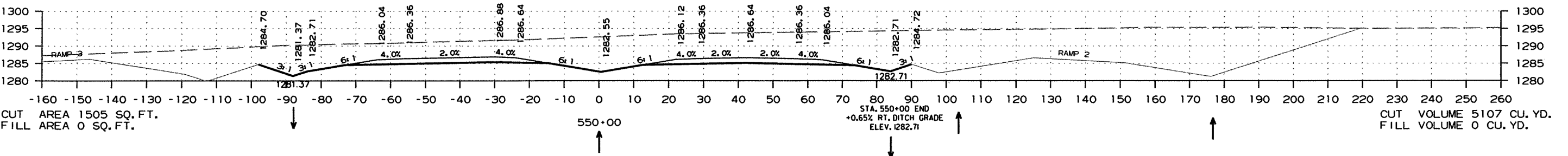
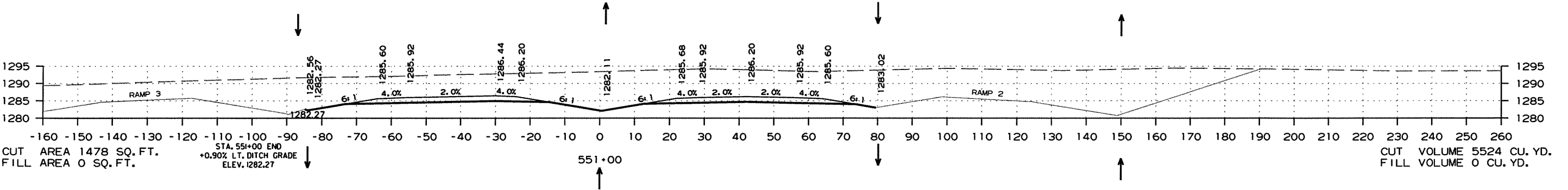
② CROSS SECTIONS - HWY. 71 (MAIN LANES)



HWY. 71 - CROSS SECTION STA. 544+00 TO STA. 547+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 090293	178	266

2 CROSS SECTIONS - HWY. 71 (MAIN LANES)

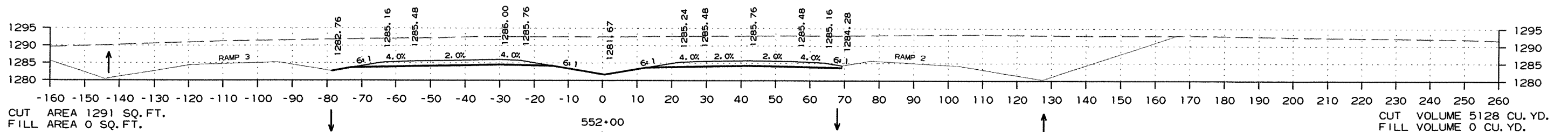
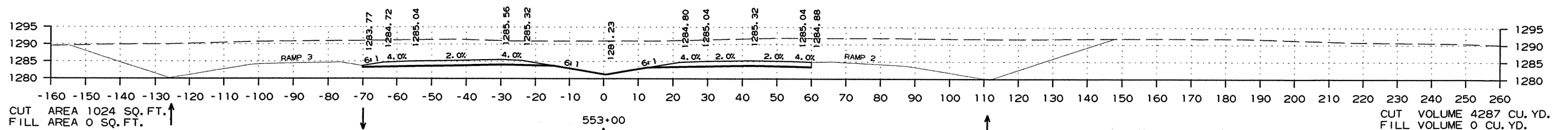
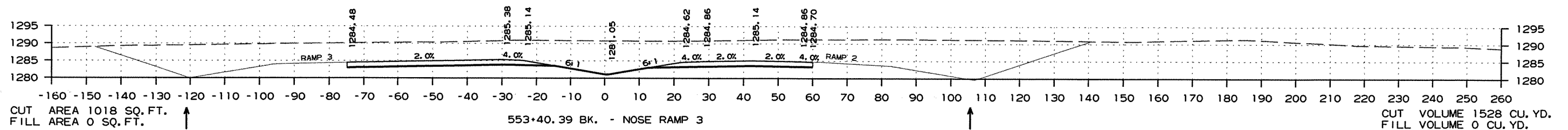
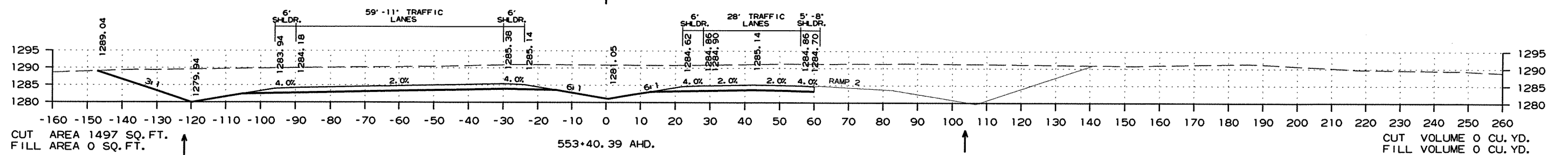
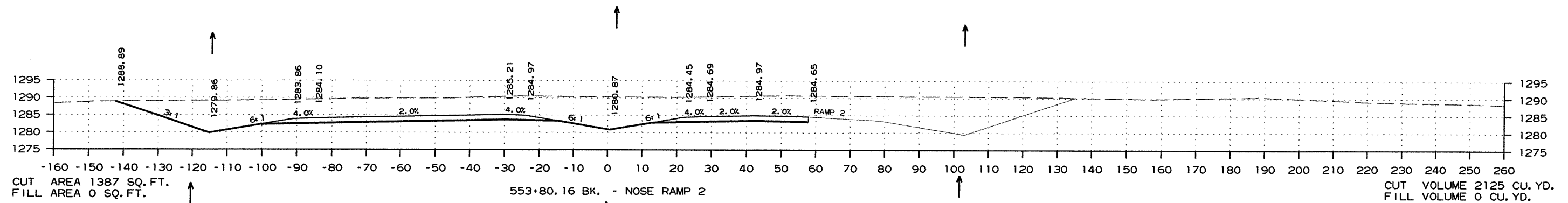


STA. 548+00 CONSTRUCT
TYPE 'RM' DROP INLET IN MEDIAN
4'-0" x 3'-0" x H = 3'-0" W/
24" x 80' R.C. PIPE INLET (CL. III)
24" x 86' R.C. PIPE OUTLET (CL. III)
F.E.S. LT. & RT.
(USE TYPE 3 BEDDING)
CONSTRUCT OUTLET = 55 CU. YD. UNCL. EXCAV.

HWY. 71 - CROSS SECTION STA. 548+00 TO STA. 551+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090293		171	266

② CROSS SECTIONS - HWY. 71 (MAIN LANES)

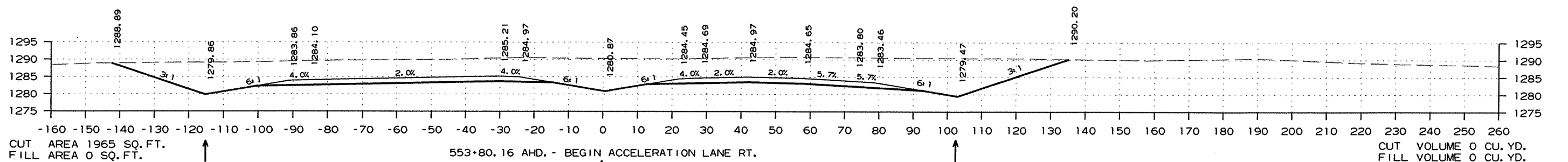
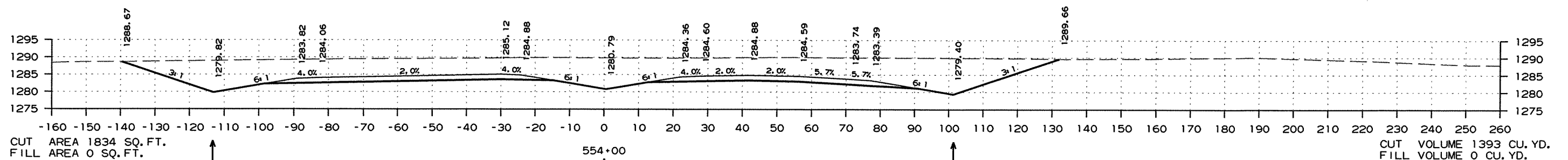
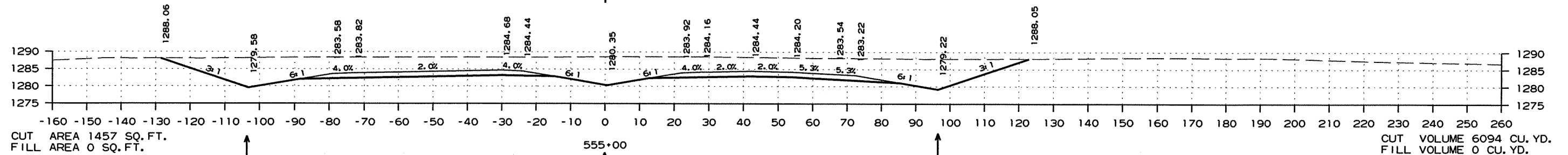
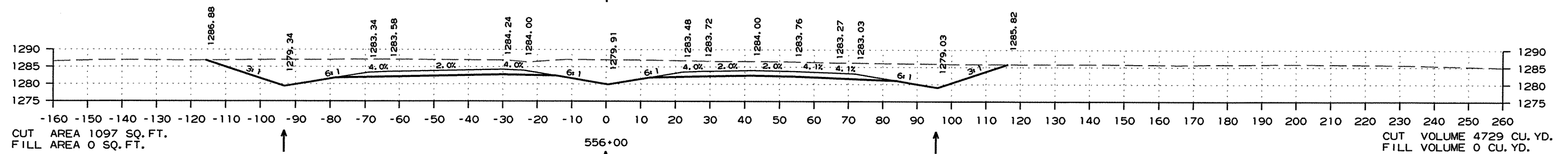
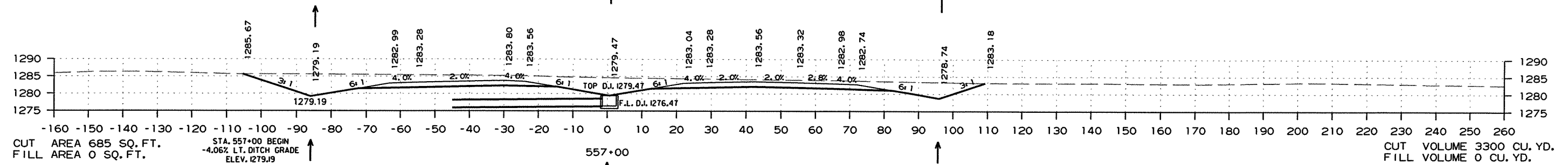


HWY. 71 - CROSS SECTION STA. 552+00 TO STA. 553+80

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.	090293		80	266

② CROSS SECTIONS - HWY. 71 (MAIN LANES)

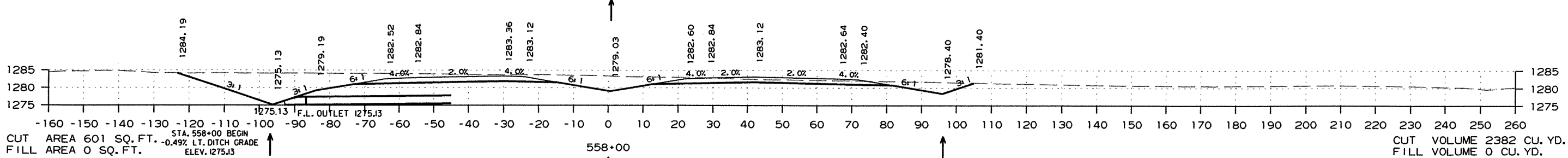
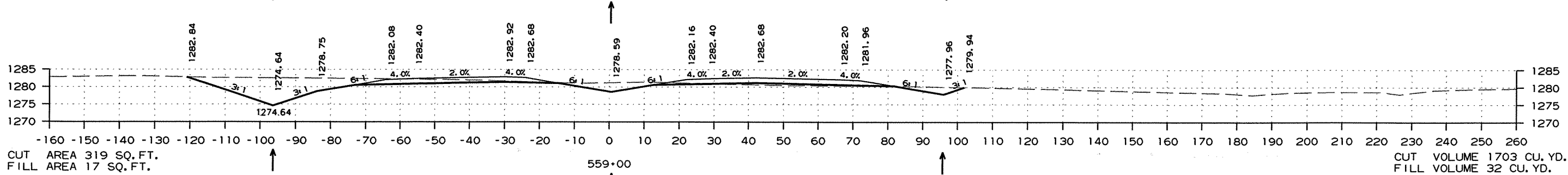
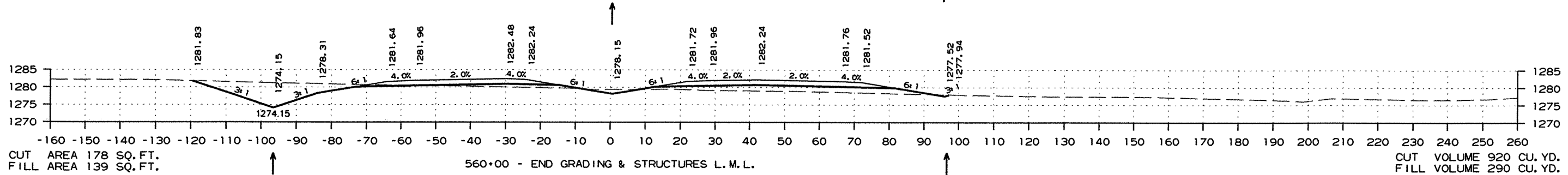
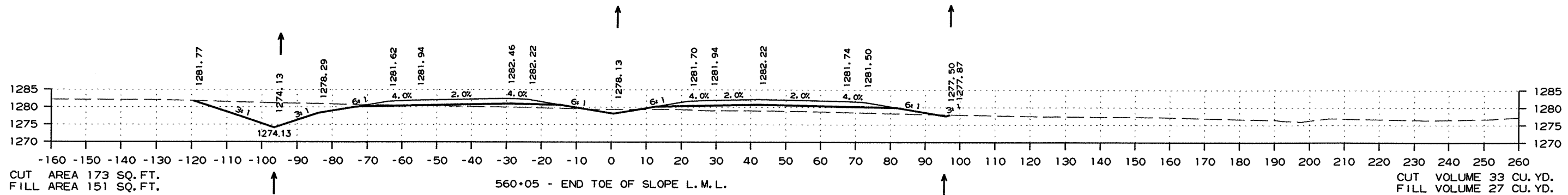
STA. 557+00 CONSTRUCT
TYPE "RM" DROP INLET IN MEDIAN
4'-0" x 3'-0" x H = 3'-0" W/
24" x 130' R.C. PIPE OUTLET (CL. III)
F.E.S. LT.
(USE TYPE 3 BEDDING)



HWY. 71 - CROSS SECTION STA. 553+80 TO STA. 557+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090293		266	

2 CROSS SECTIONS - HWY. 71 (MAIN LANES)

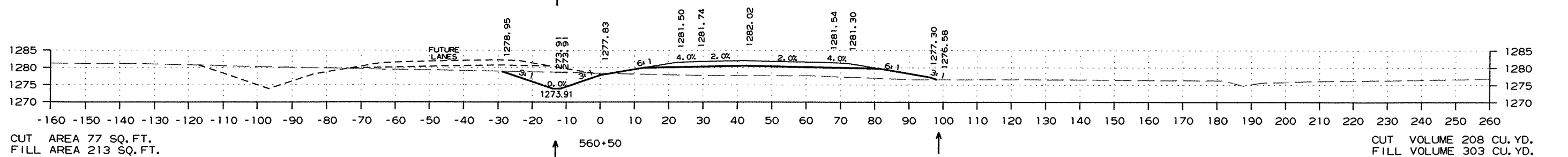


HWY. 71 - CROSS SECTION STA. 558+00 TO STA. 560+05

2/28/2012

R090293_REV.DGN

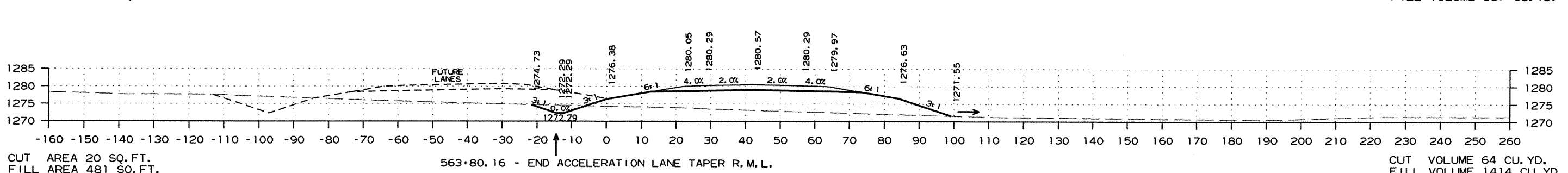
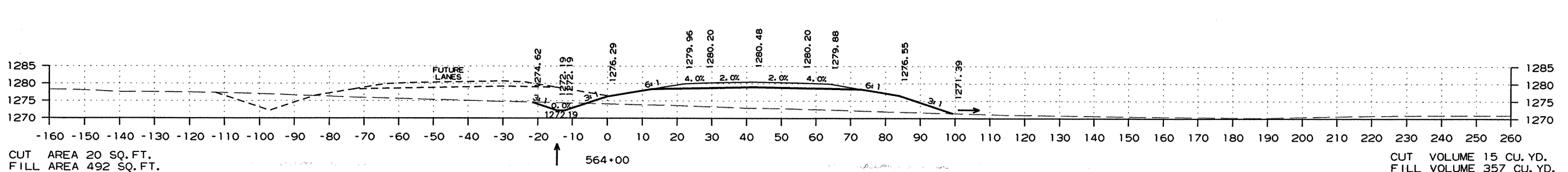
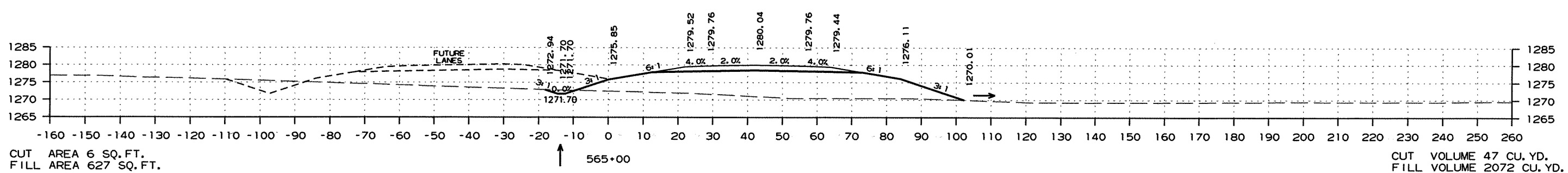
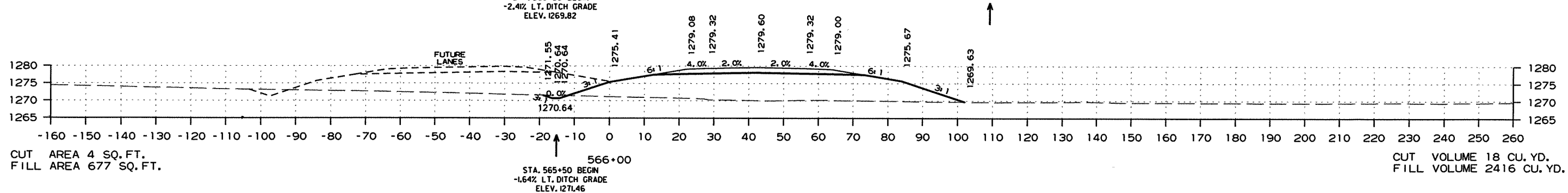
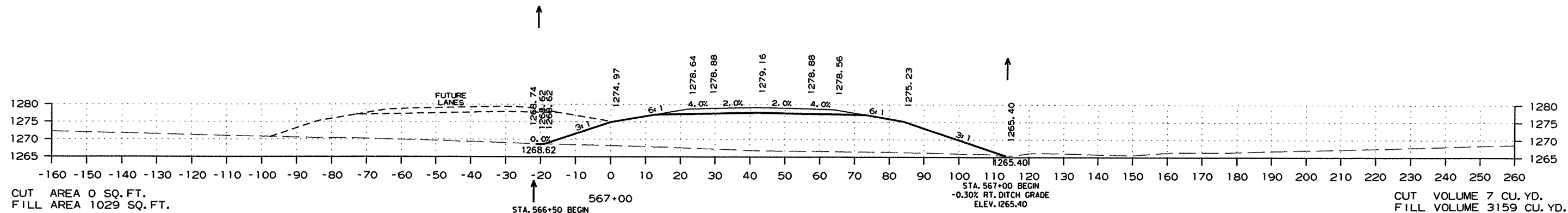
② CROSS SECTIONS - HWY. 71 (MAIN LANES)



HWY. 71 - CROSS SECTION STA. 560+50 TO STA. 563+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090293		183	266

② CROSS SECTIONS - HWY. 71 (MAIN LANES)



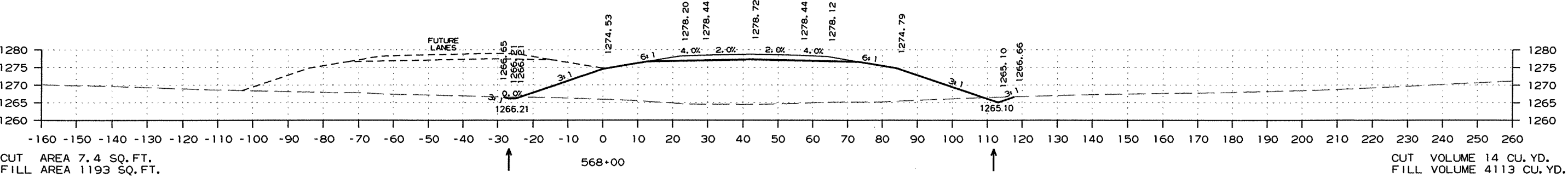
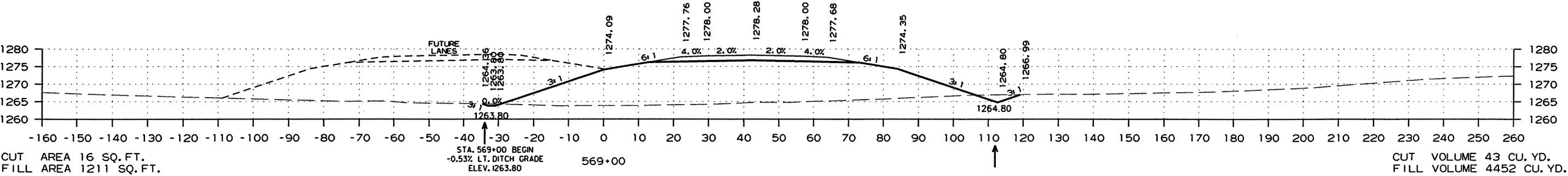
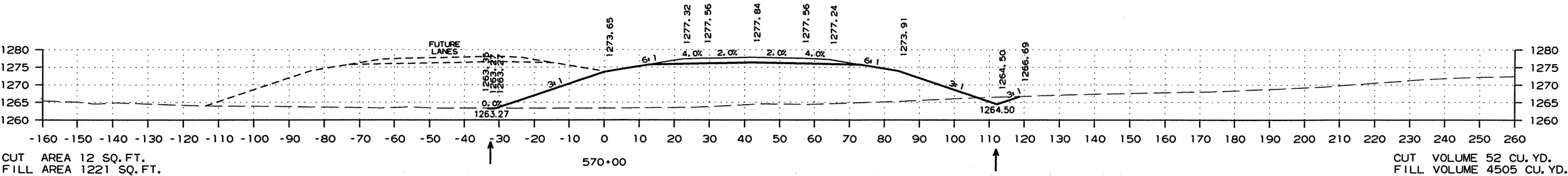
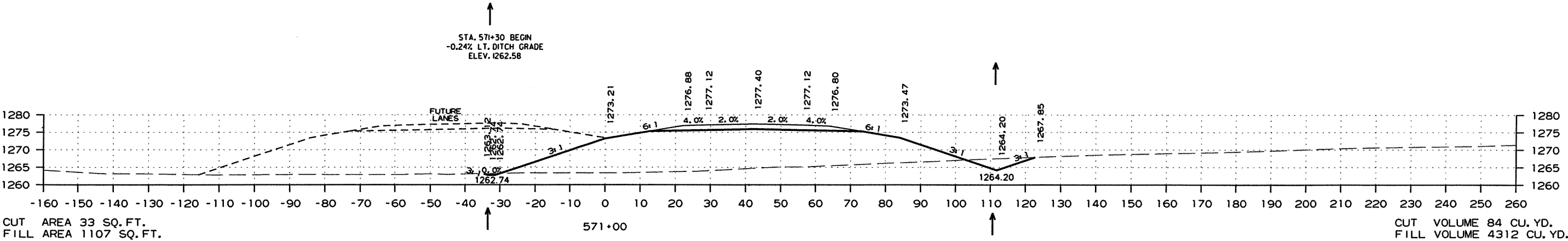
HWY. 71 - CROSS SECTION STA. 563+80 TO STA. 567+00

2/28/2012

R090293_REV.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. 090293	184	2660

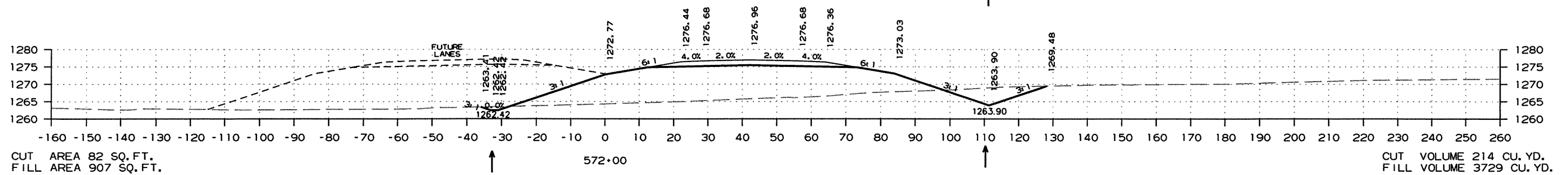
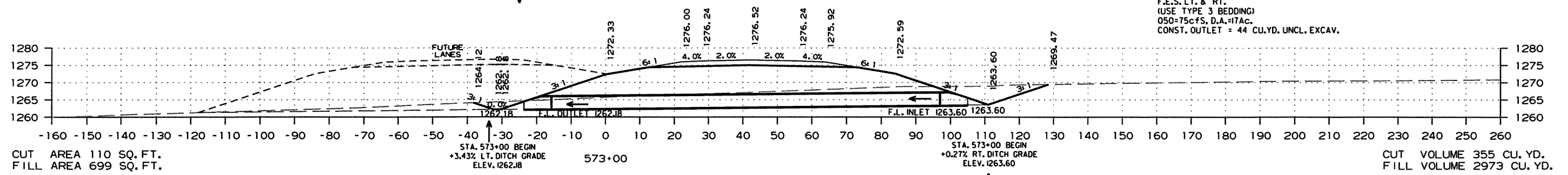
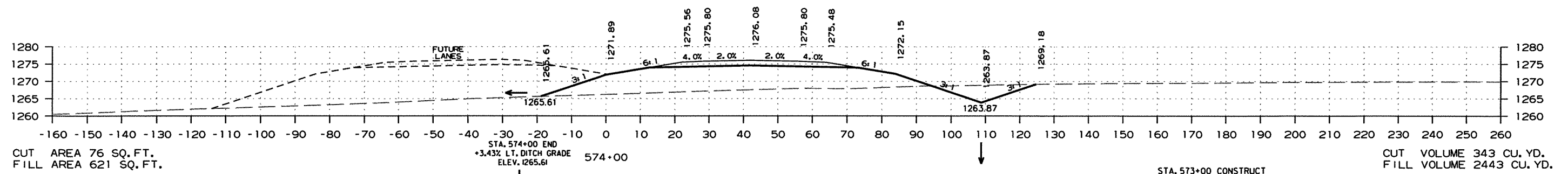
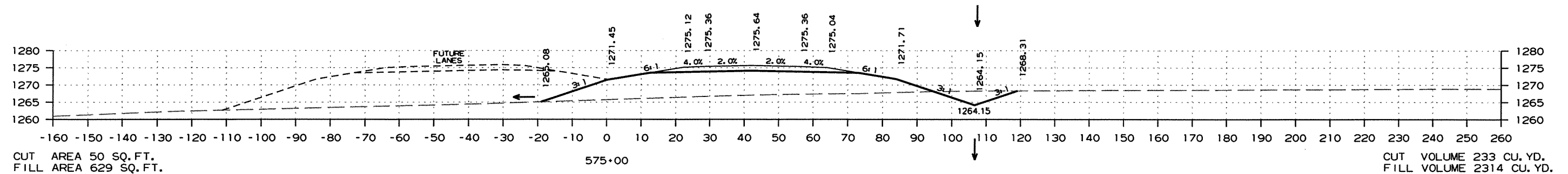
2 CROSS SECTIONS - HWY. 71 (MAIN LANES)



HWY. 71 - CROSS SECTION STA. 568+00 TO STA. 571+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		090293	185	266

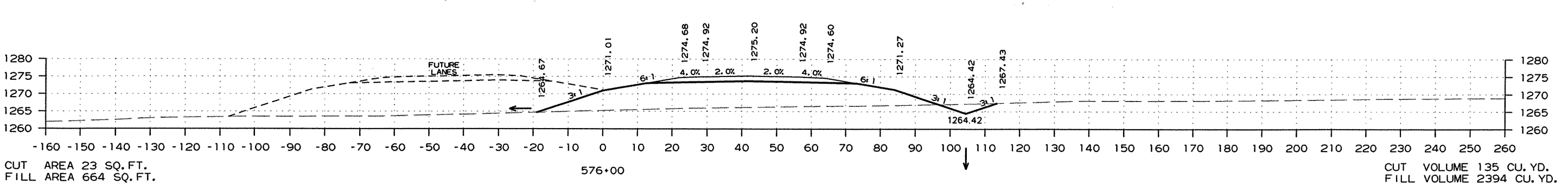
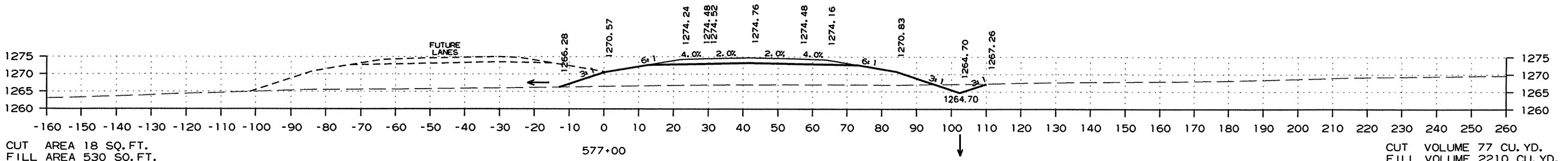
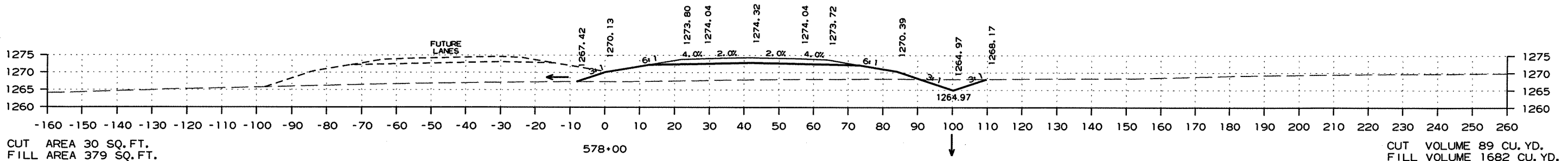
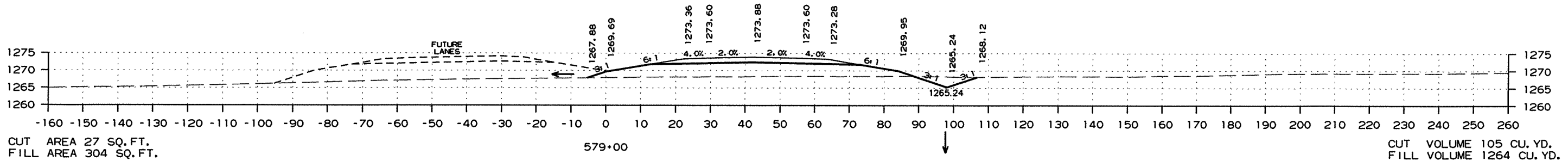
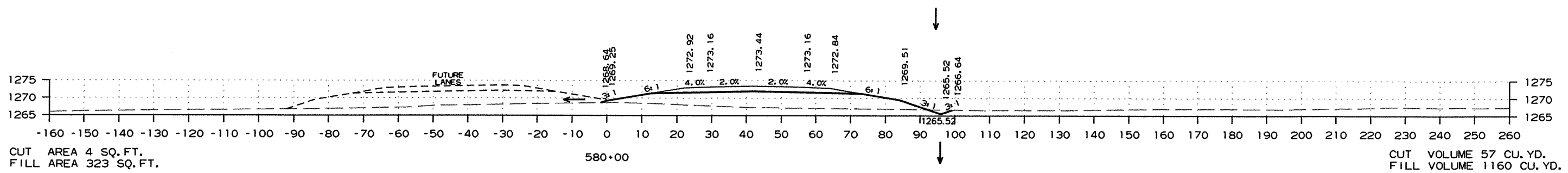
2 CROSS SECTIONS - HWY. 71 (MAIN LANES)



HWY. 71 - CROSS SECTION STA. 572+00 TO STA. 575+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 090293	186	266

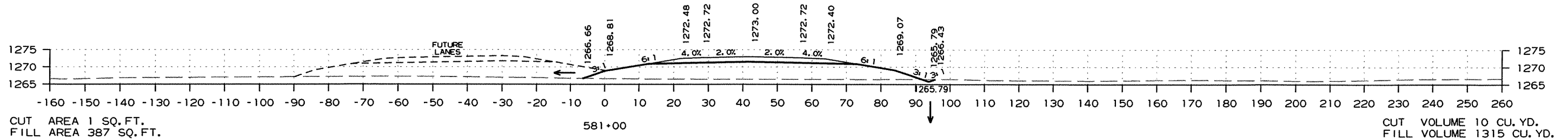
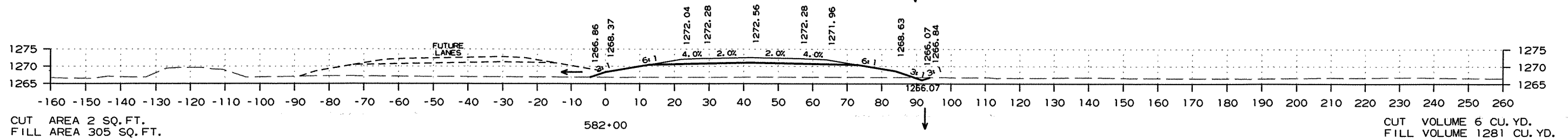
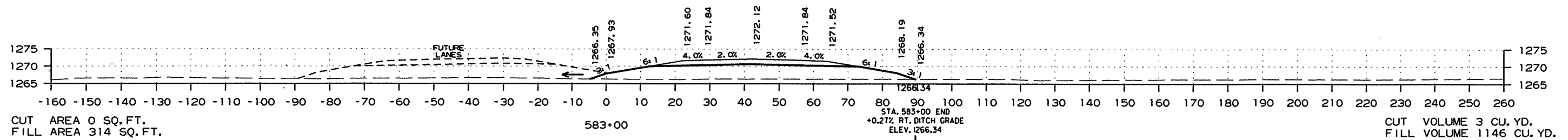
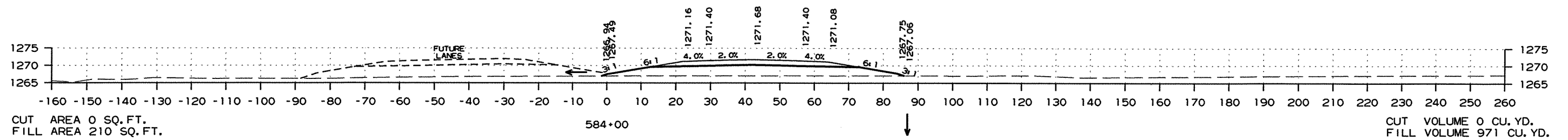
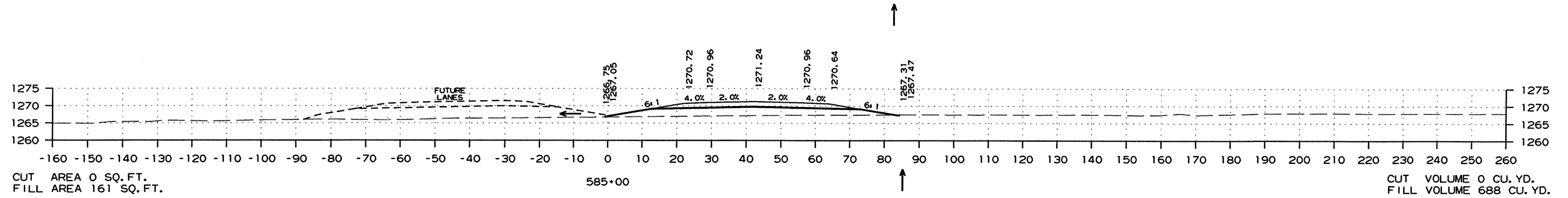
2 CROSS SECTIONS - HWY. 71 (MAIN LANES)



HWY. 71 - CROSS SECTION STA. 576+00 TO STA. 580+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090293		187	266

② CROSS SECTIONS - HWY. 71 (MAIN LANES)

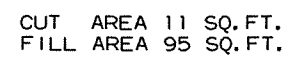
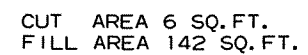
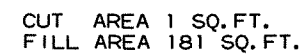
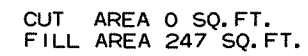
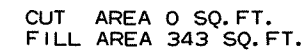


HWY. 71 - CROSS SECTION STA. 581+00 TO STA. 585+00

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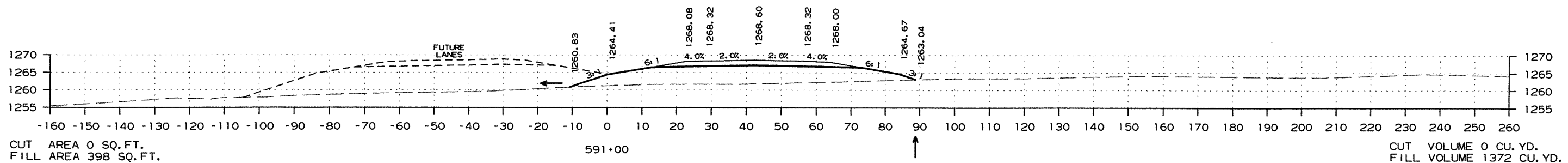
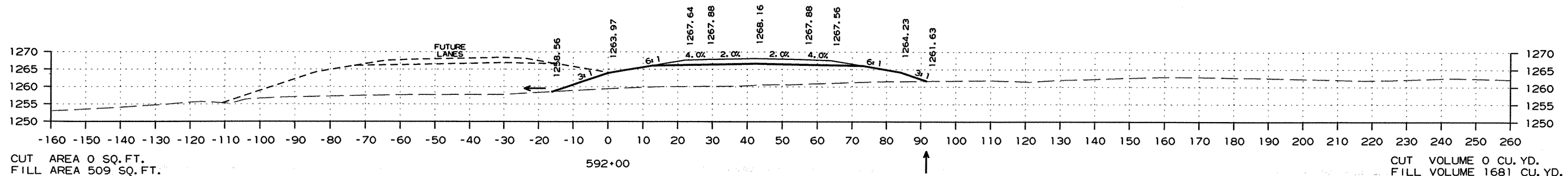
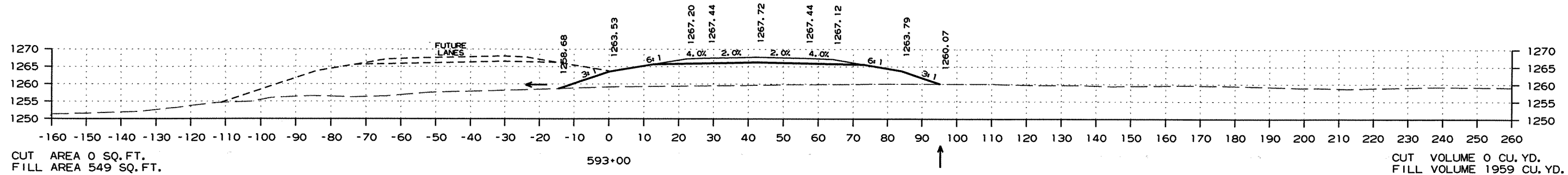
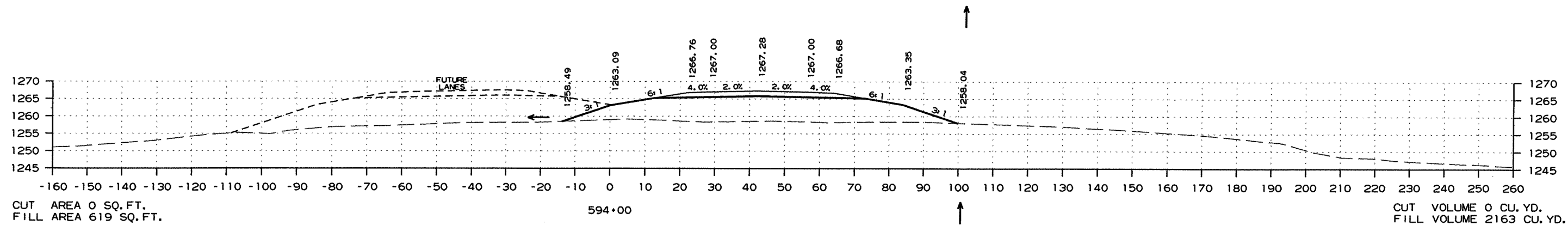
② CROSS SECTIONS - HWY. 71 (MAIN LANES)



HWY. 71 - CROSS SECTION STA. 586+00 TO STA. 590+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 090293	189	206

② CROSS SECTIONS - HWY. 71 (MAIN LANES)

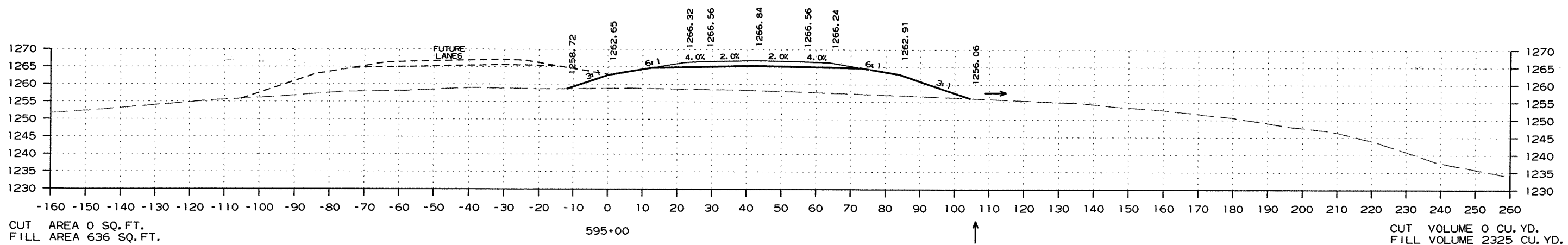
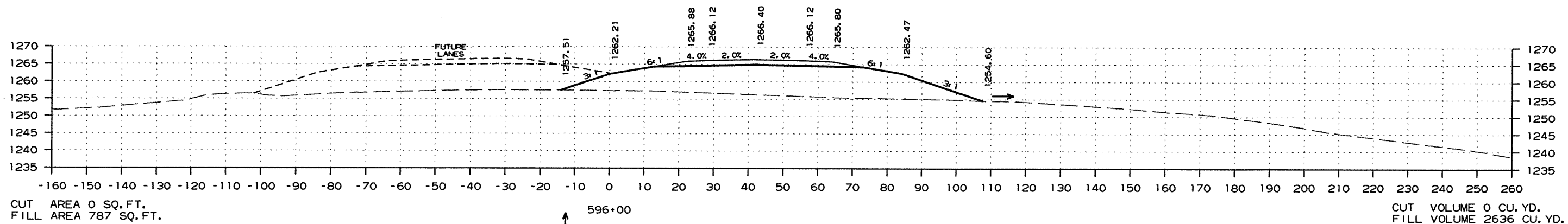
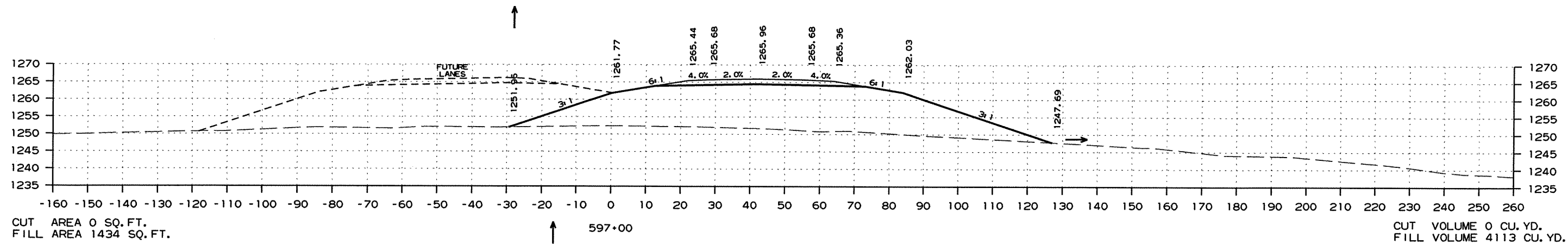


HWY. 71 - CROSS SECTION STA. 591+00 TO STA. 594+00

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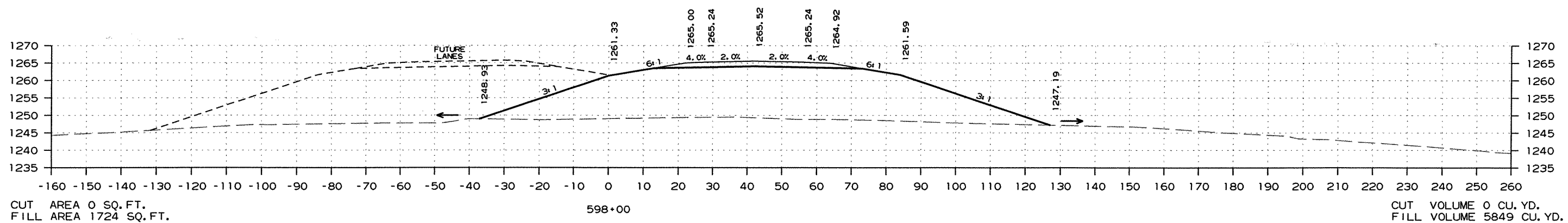
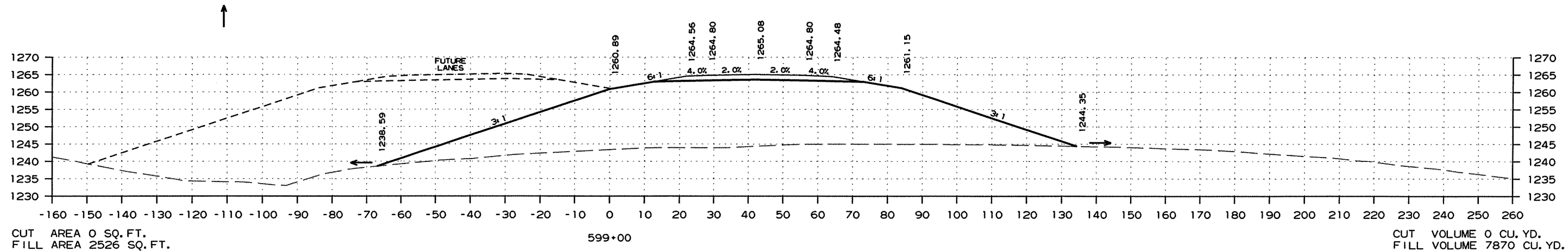
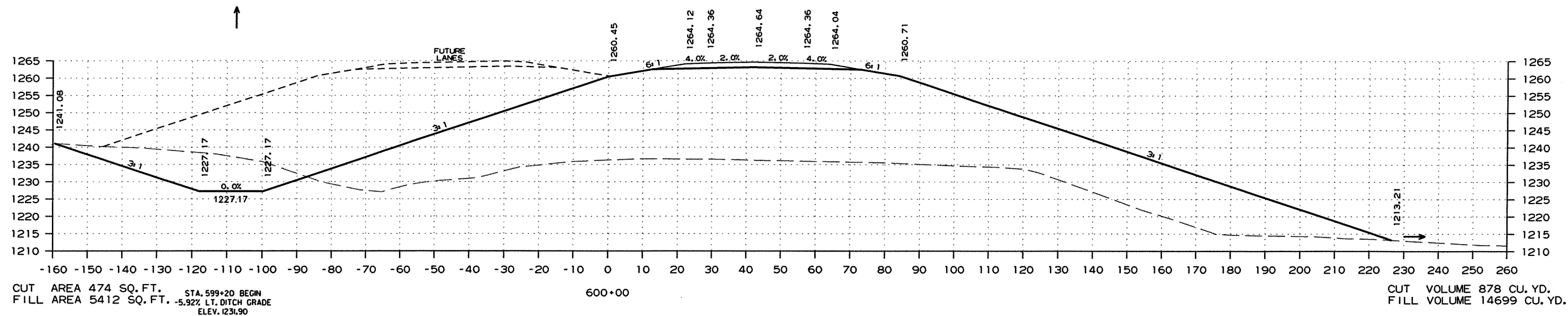
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		090293	190266	
② CROSS SECTIONS - HWY. 71 (MAIN LANES)								



HWY. 71 - CROSS SECTION STA. 595+00 TO STA. 597+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090293		191	266

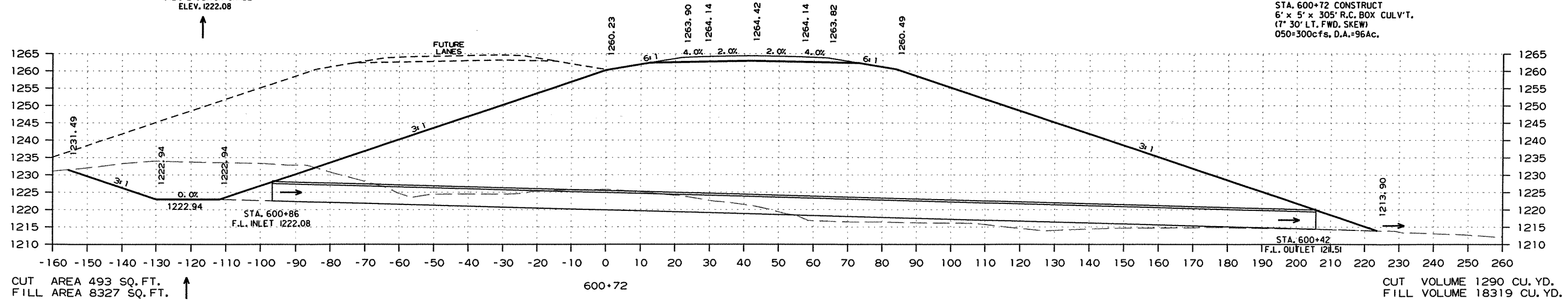
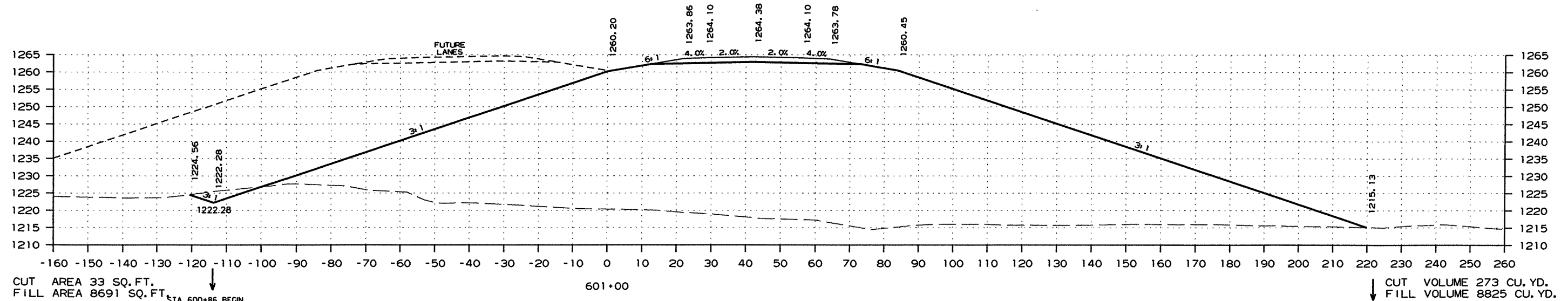
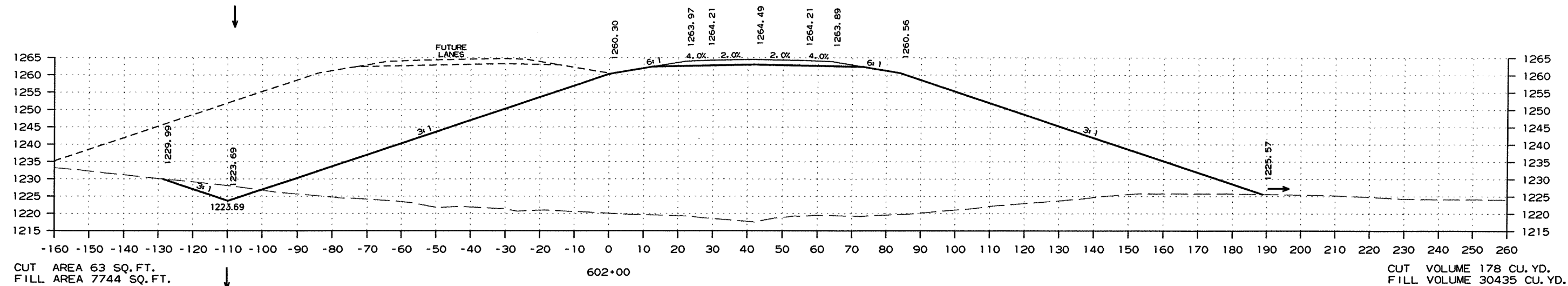
② CROSS SECTIONS - HWY. 71 (MAIN LANES)



HWY. 71 - CROSS SECTION STA. 598+00 TO STA. 600+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 090293	192266	

2 CROSS SECTIONS - HWY. 71 (MAIN LANES)

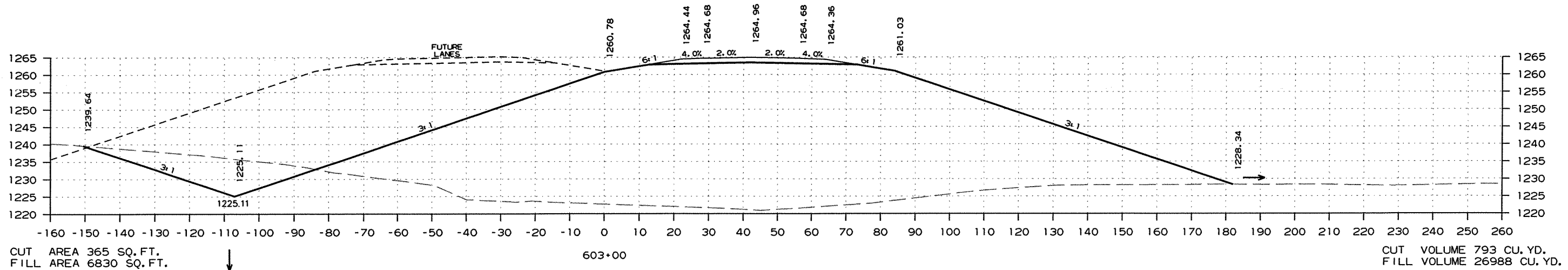
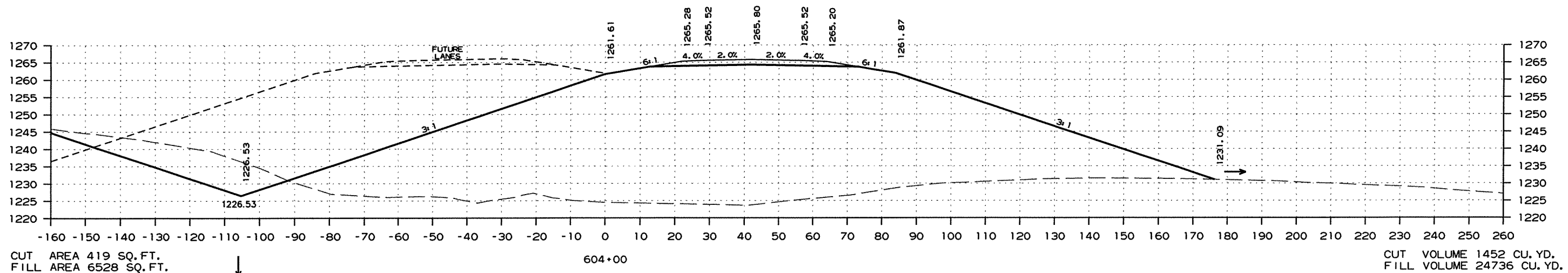
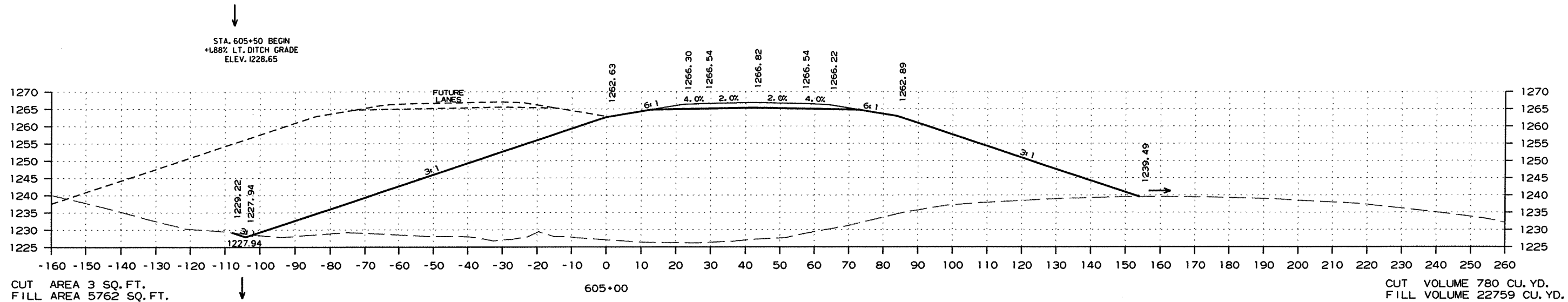


HWY. 71 - CROSS SECTION STA. 600+72 TO STA. 602+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 090293	193	266

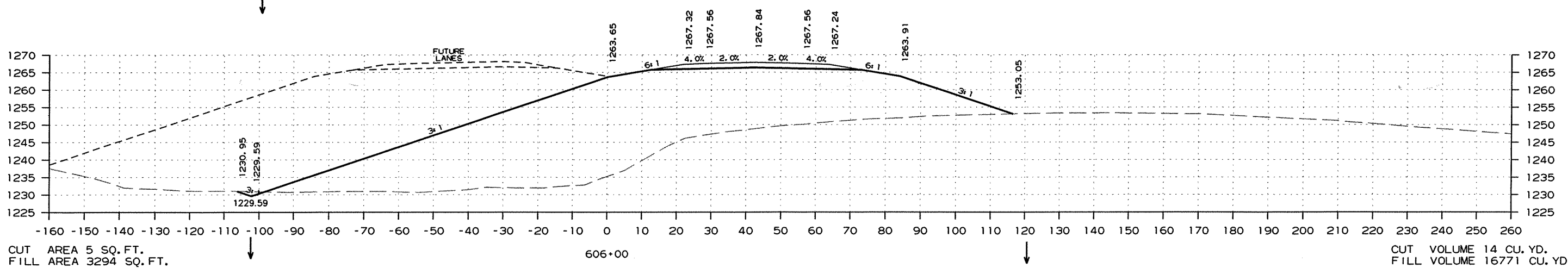
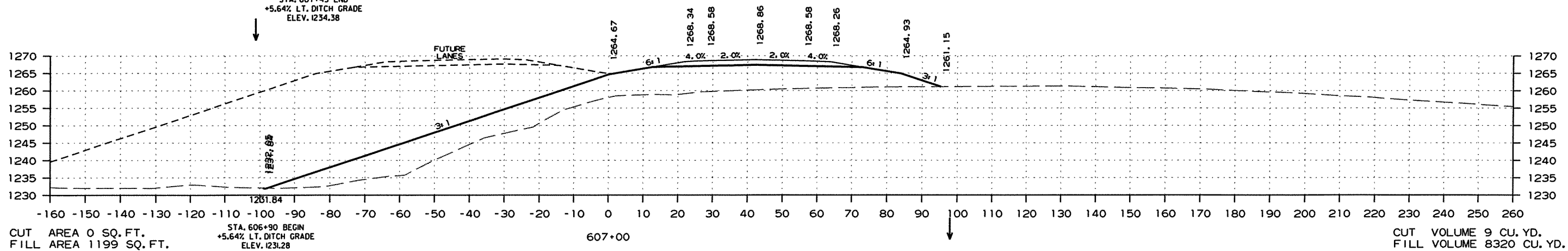
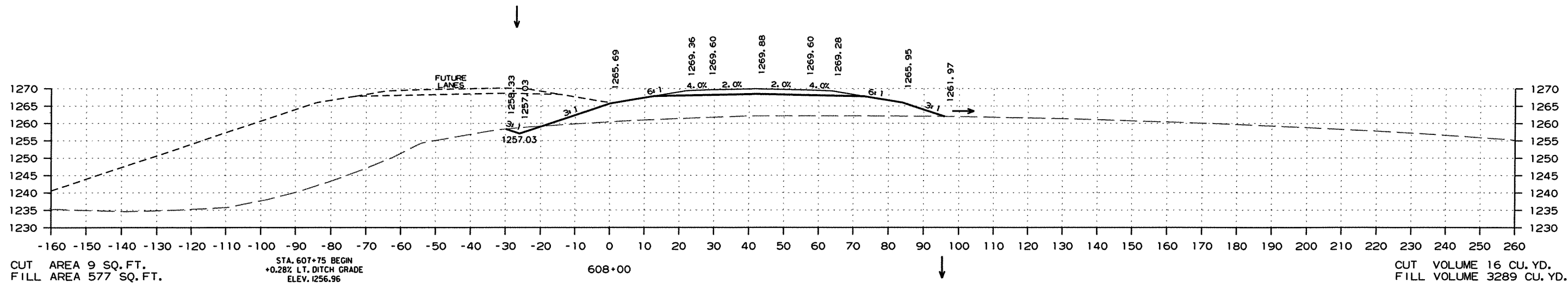
② CROSS SECTIONS - HWY. 71 (MAIN LANES)



HWY. 71 - CROSS SECTION STA. 603+00 TO STA. 605+00

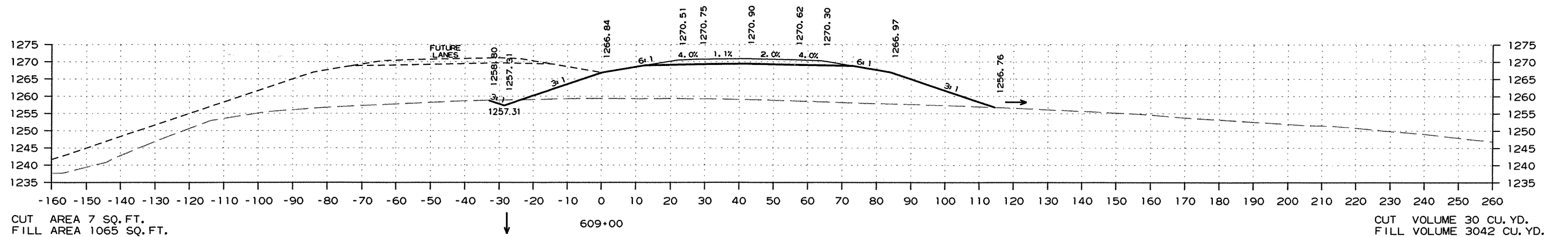
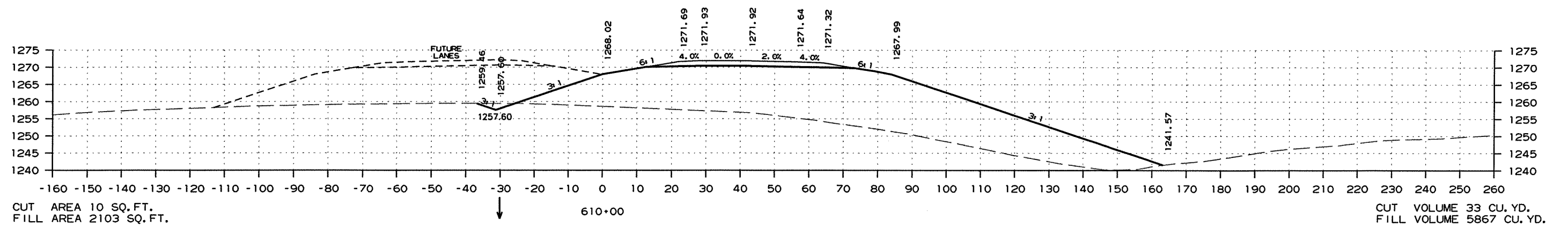
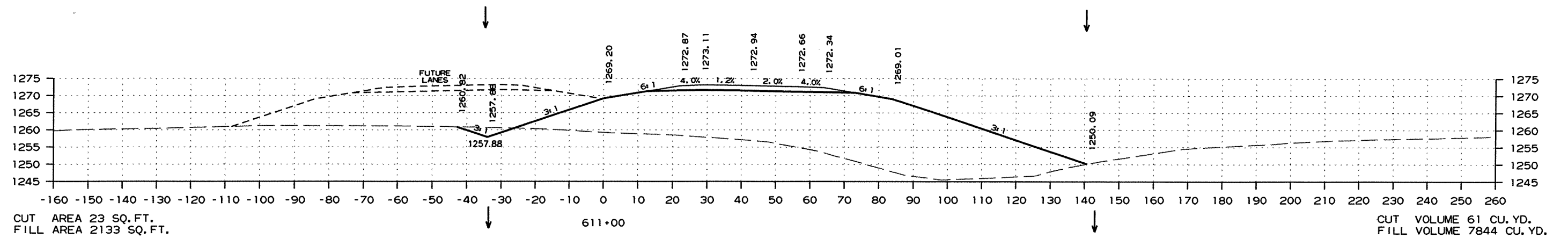
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090293		194	260

② CROSS SECTIONS - HWY. 71 (MAIN LANES)



HWY. 71 - CROSS SECTION STA. 606+00 TO STA. 608+00

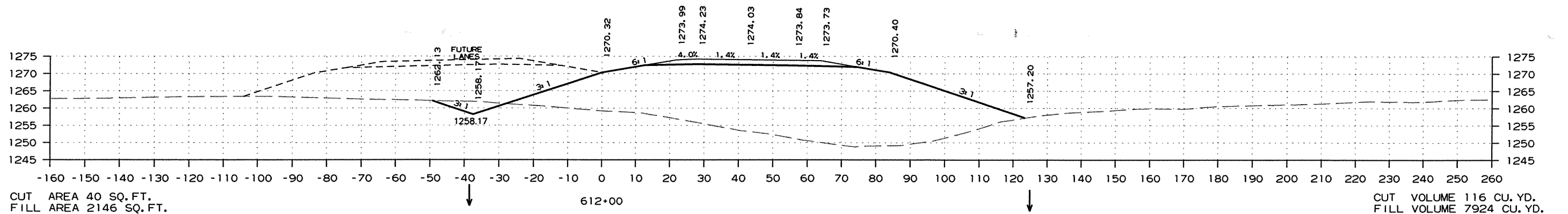
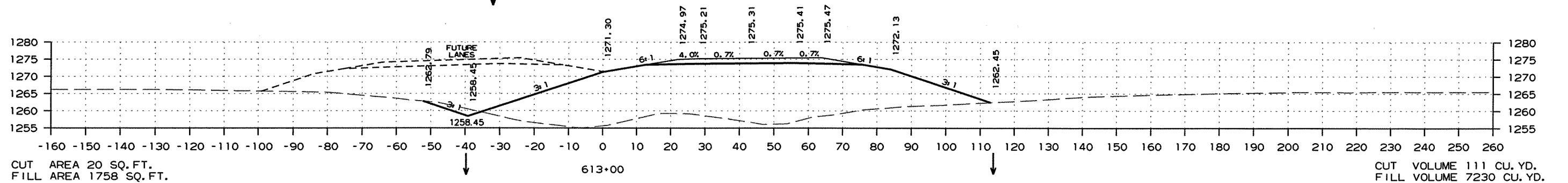
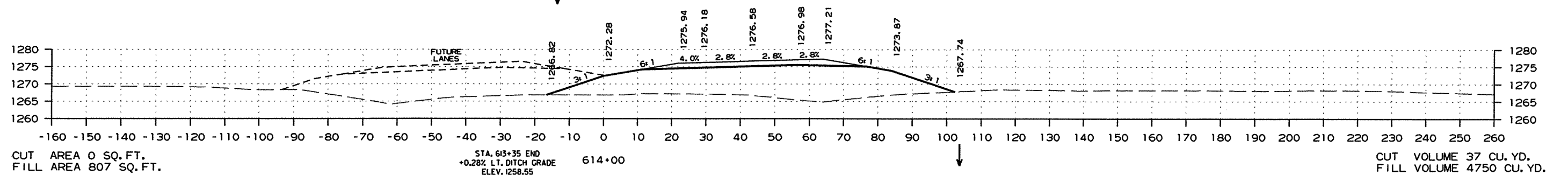
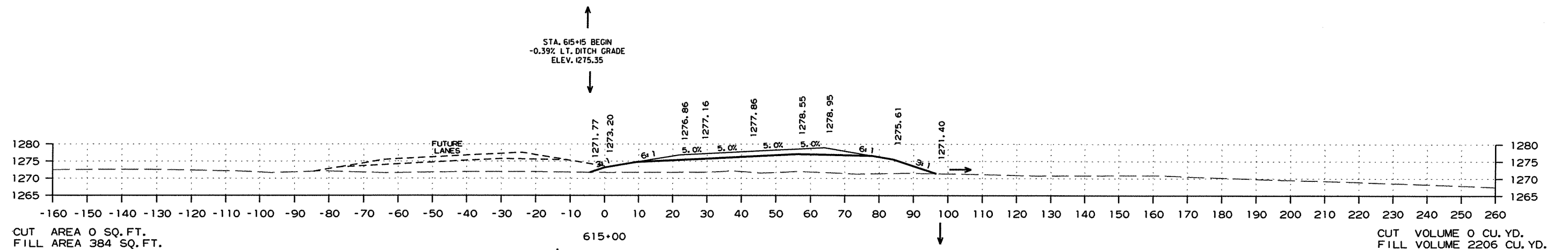
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		090293	195	206



HWY. 71 - CROSS SECTION STA. 609+00 TO STA. 611+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 090293	196	266

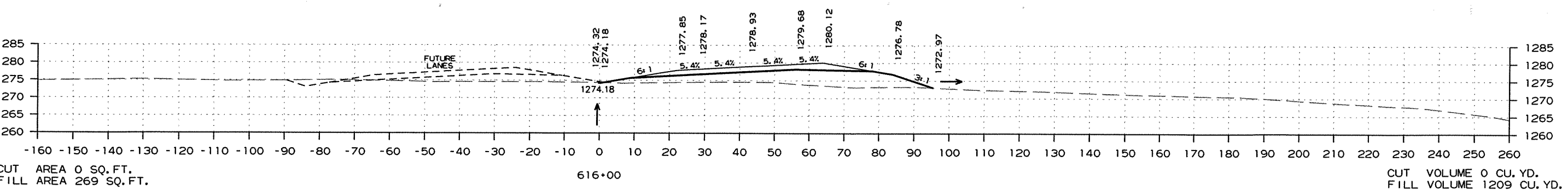
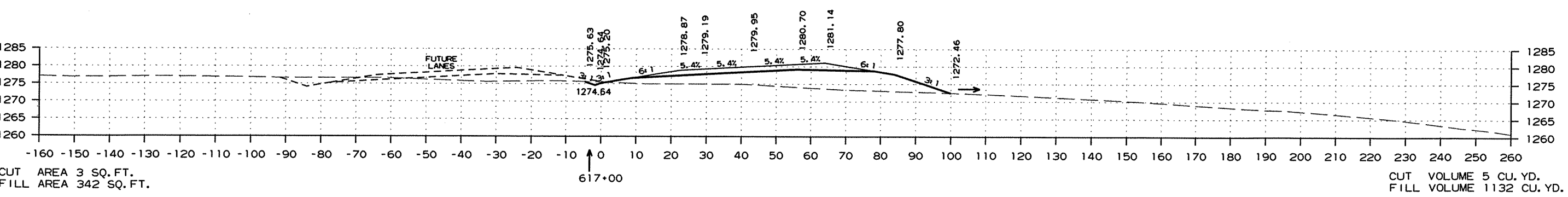
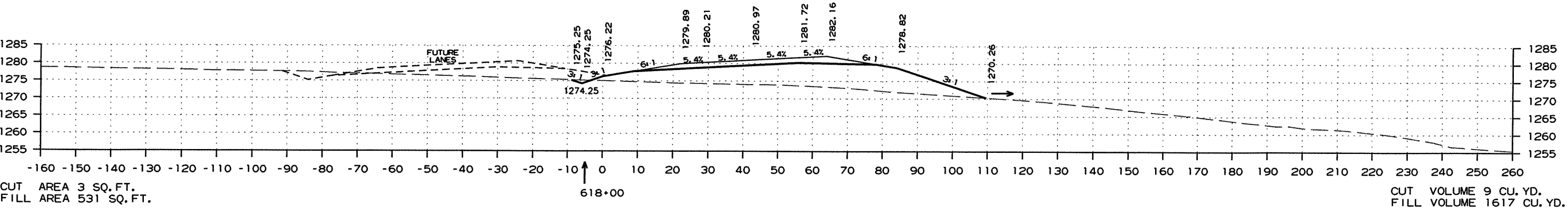
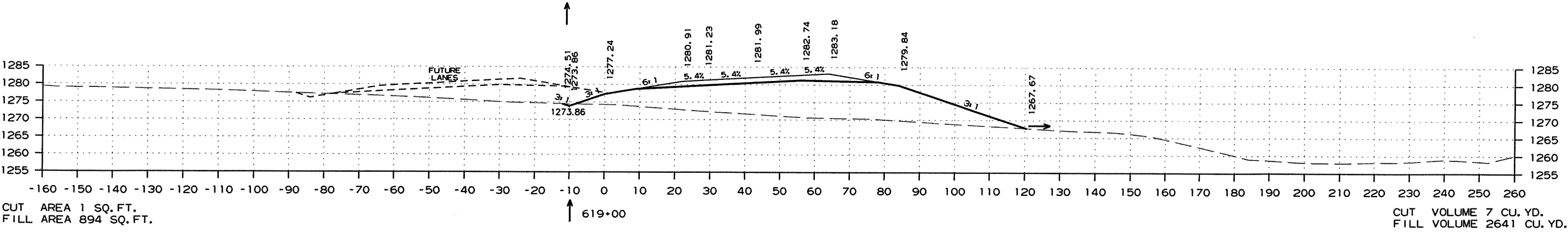
2 CROSS SECTIONS - HWY. 71 (MAIN LANES)



HWY. 71 - CROSS SECTION STA. 612+00 TO STA. 615+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090293	197	Kale	

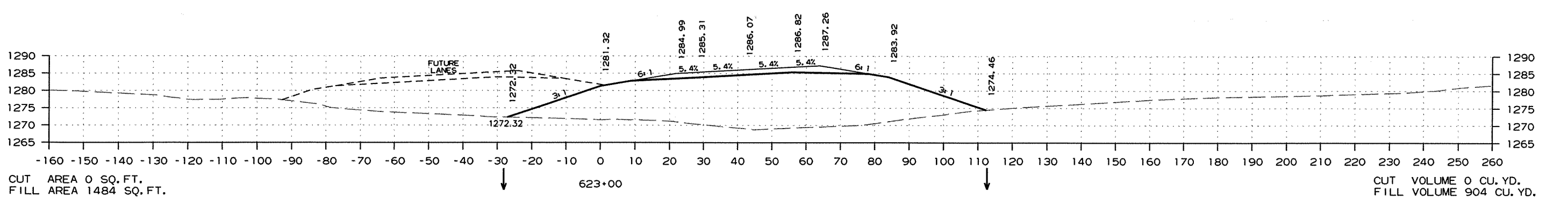
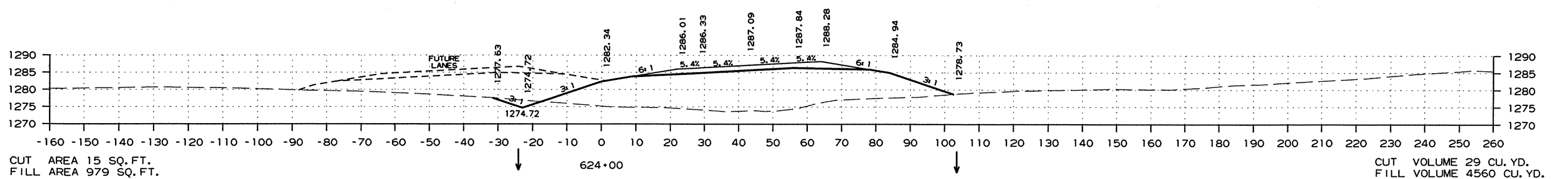
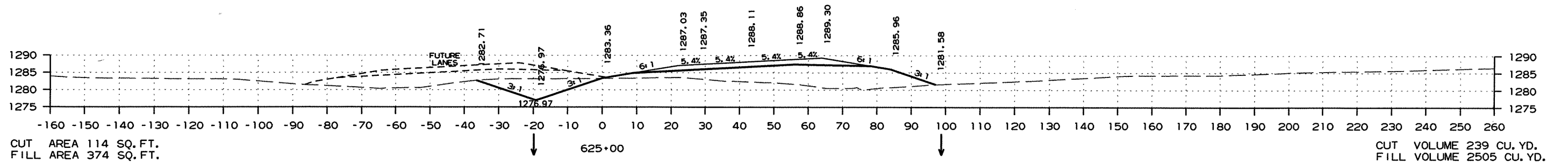
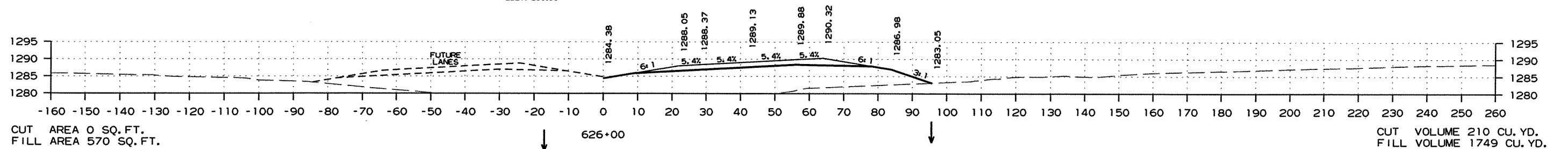
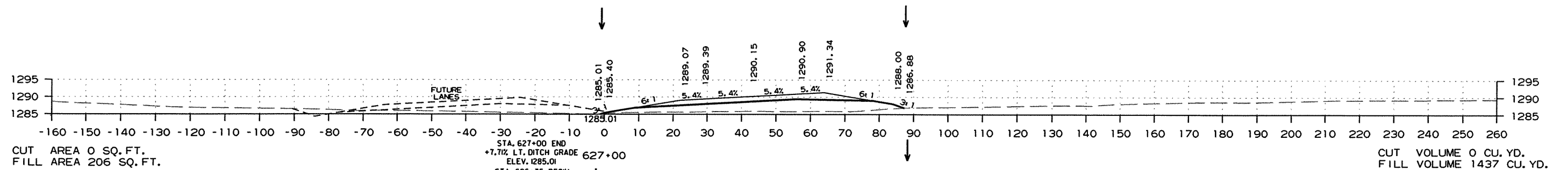
2 CROSS SECTIONS - HWY. 71 (MAIN LANES)



HWY. 71 - CROSS SECTION STA. 616+00 TO STA. 619+00

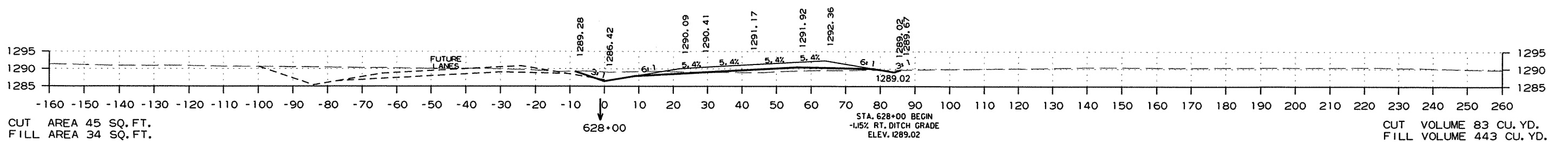
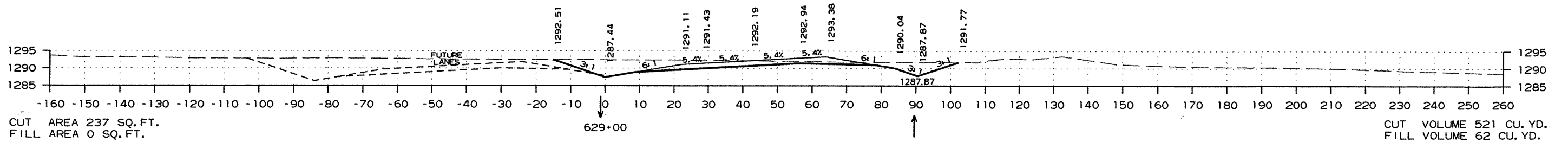
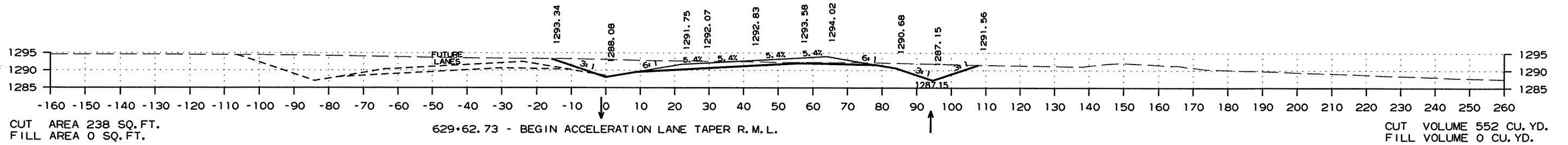
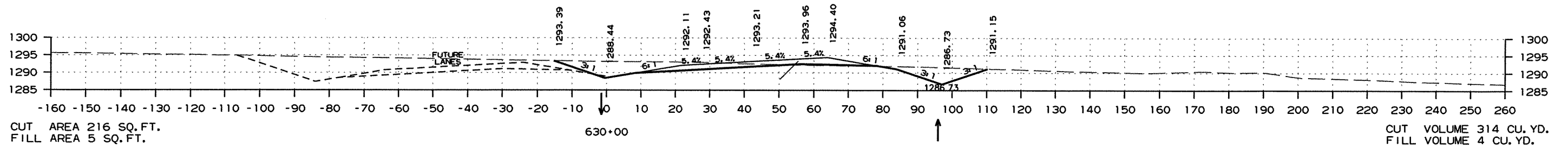
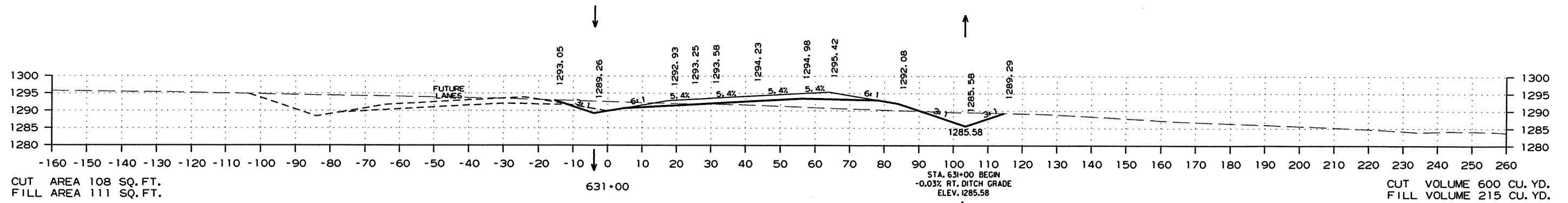
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 090293	199	266

② CROSS SECTIONS - HWY. 71 (MAIN LANES)



HWY. 71 - CROSS SECTION STA. 623+00 TO STA. 627+00

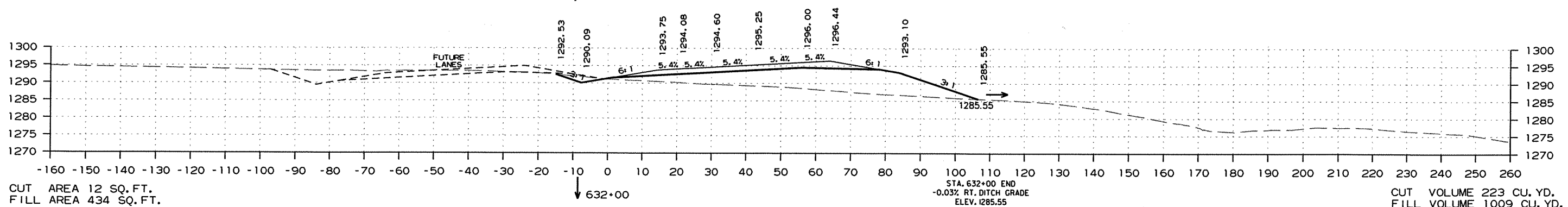
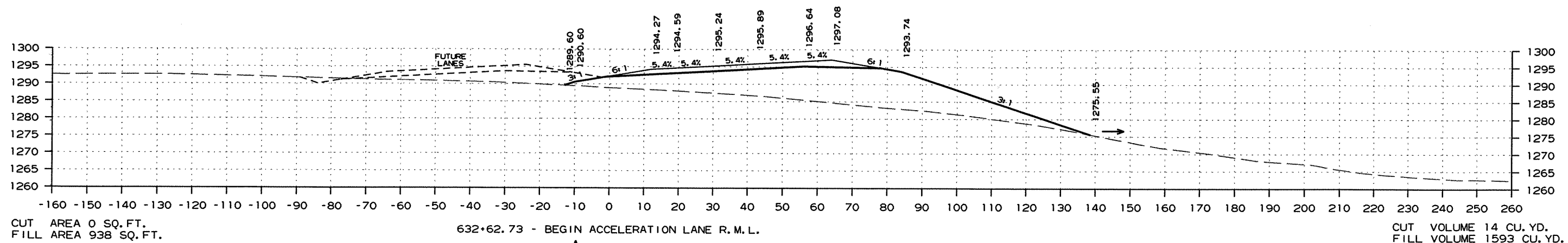
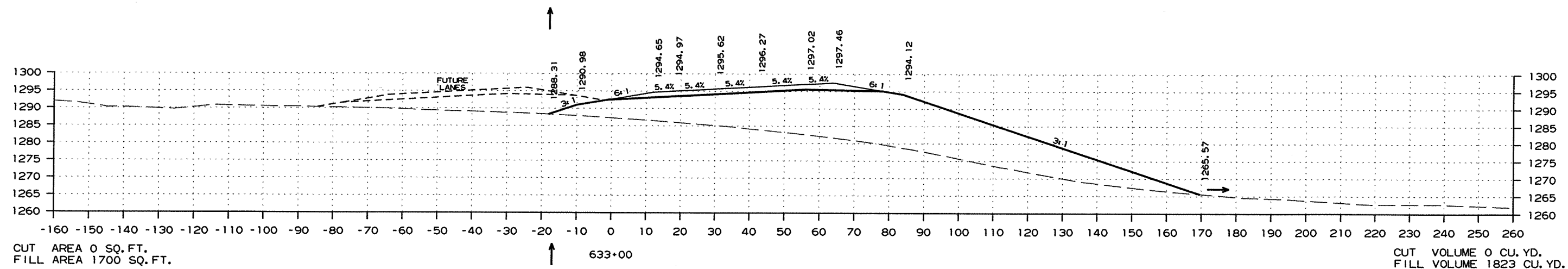
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090293		200	266
② CROSS SECTIONS - HWY. 71 (MAIN LANES)								



HWY. 71 - CROSS SECTION STA. 628+00 TO STA. 631+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090293		201	266

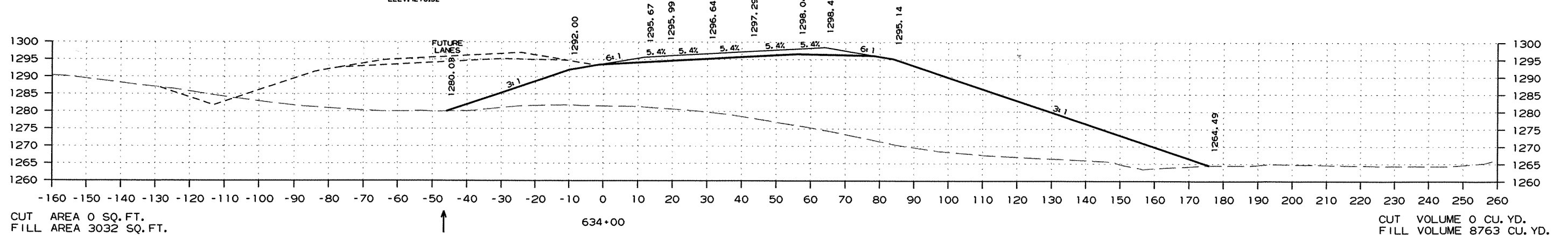
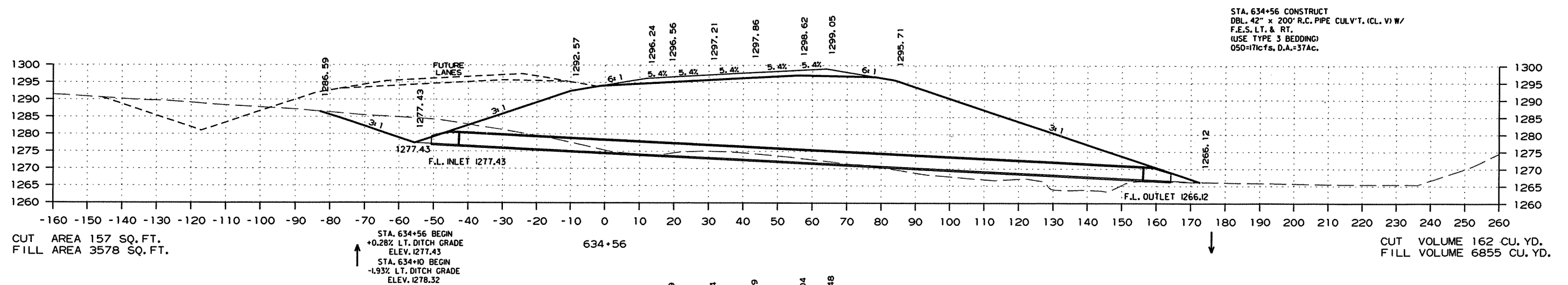
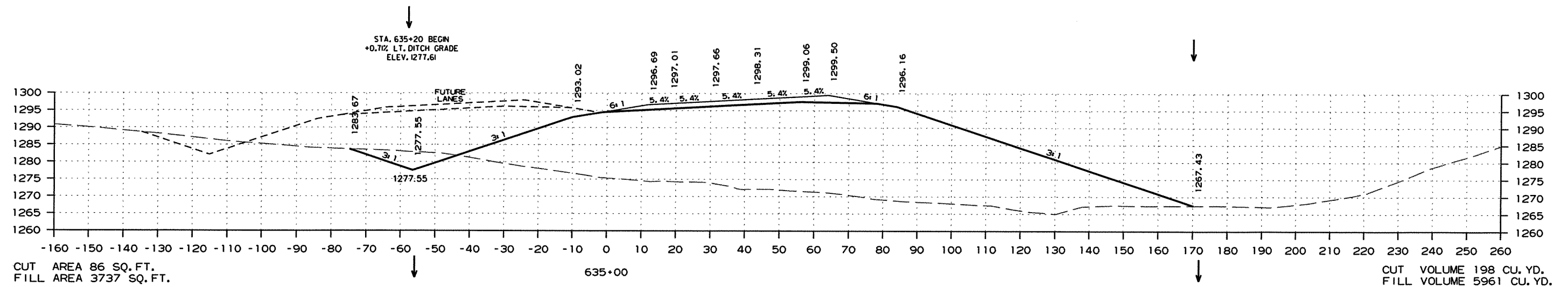
② CROSS SECTIONS - HWY. 71 (MAIN LANES)



HWY. 71 - CROSS SECTION STA. 632+00 TO STA. 633+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090293		202	266

② CROSS SECTIONS - HWY. 71 (MAIN LANES)



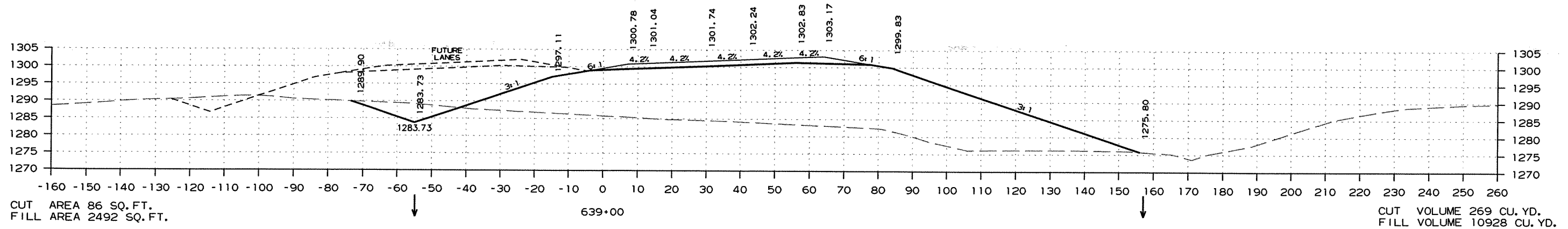
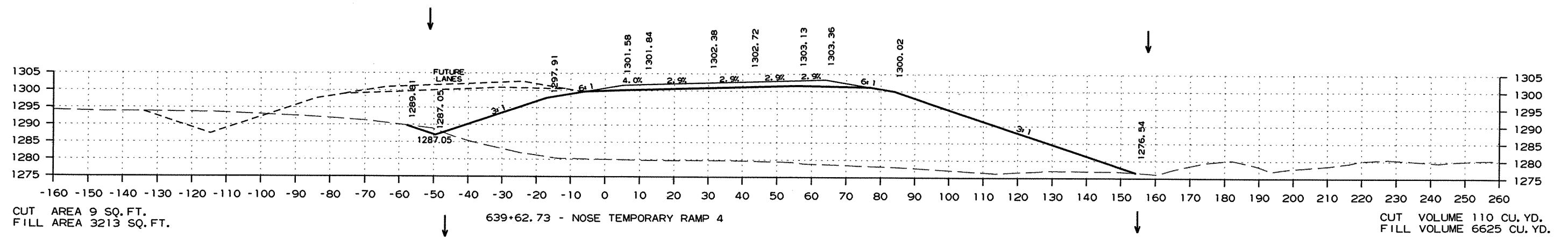
HWY. 71 - CROSS SECTION STA. 634+00 TO STA. 635+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090293		204	206

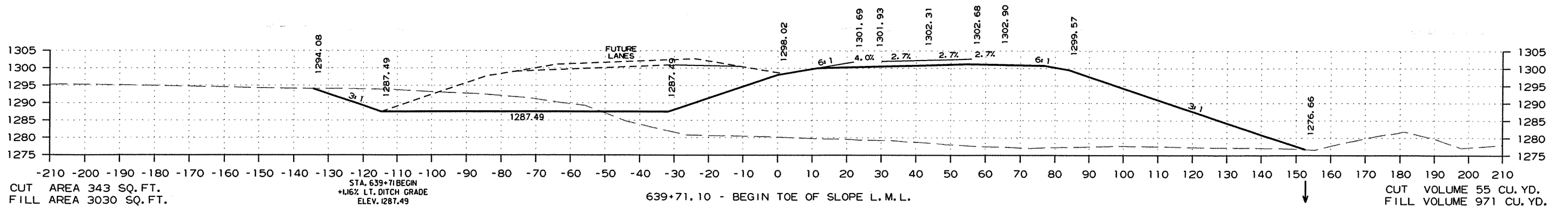
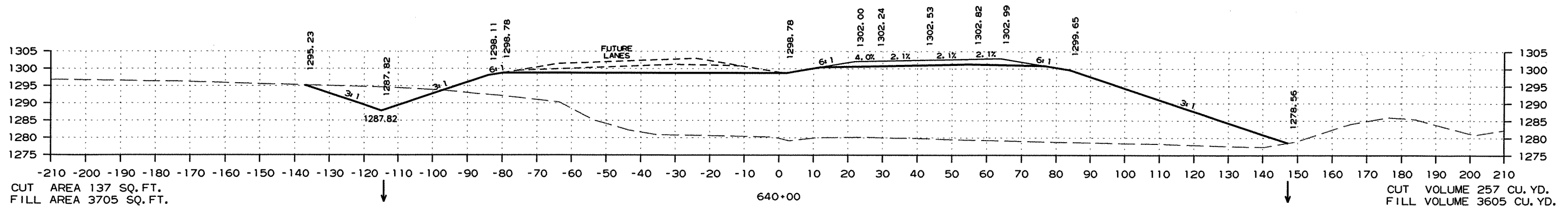
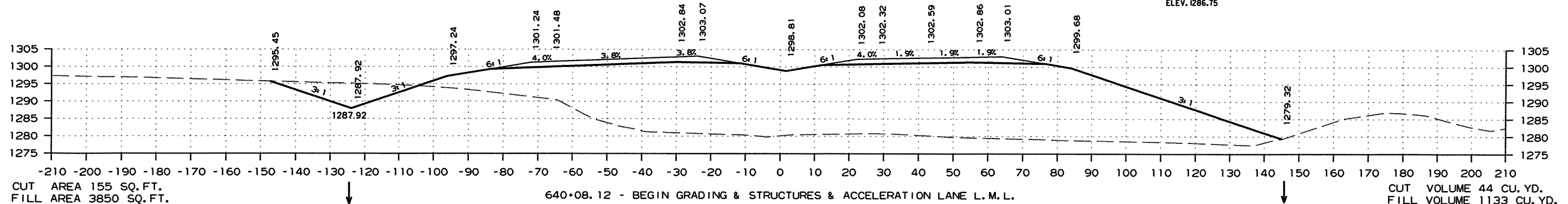
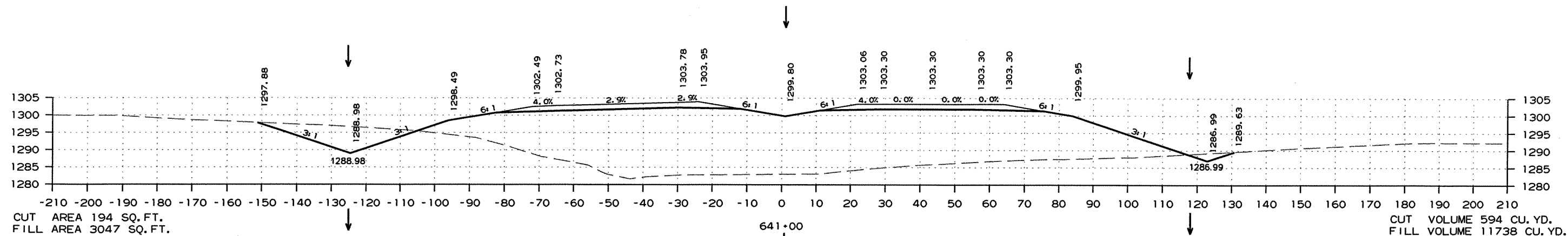
2 CROSS SECTIONS - HWY. 71 (MAIN LANES)



HWY. 71 - CROSS SECTION STA. 639+00 TO STA. 639+63

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.	090293		205	7060

② CROSS SECTIONS - HWY. 71 (MAIN LANES)

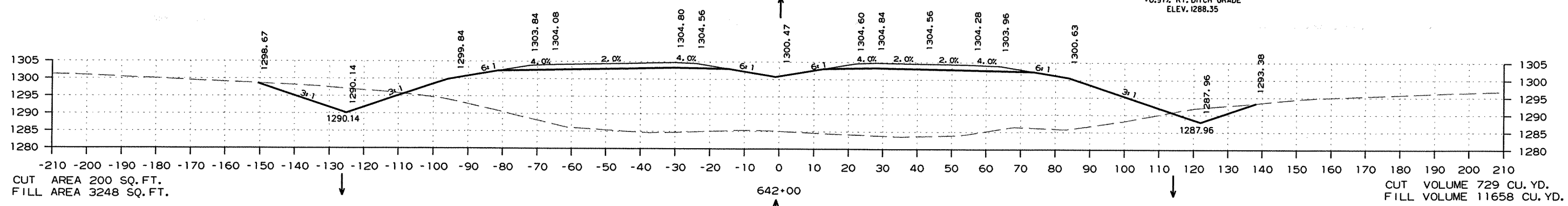
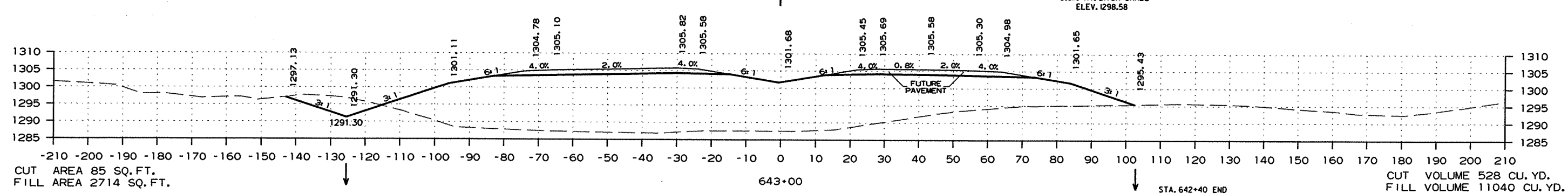
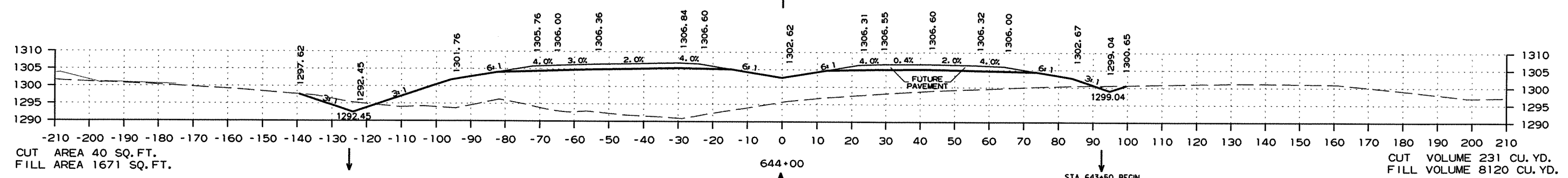
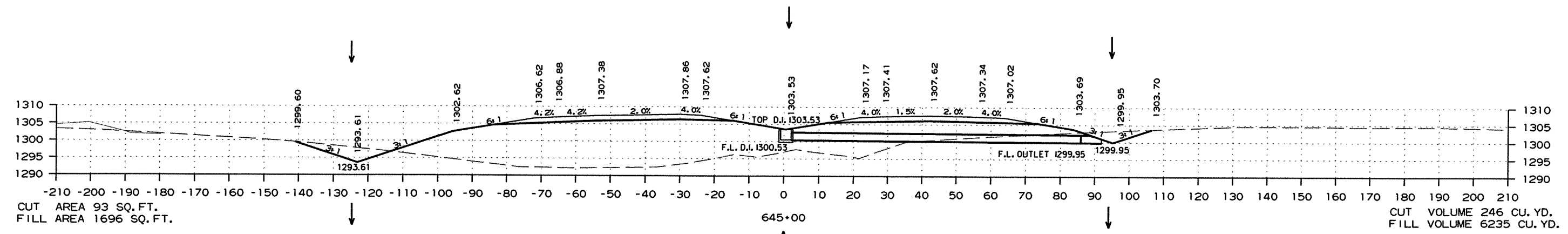


HWY. 71 - CROSS SECTION STA. 639+71 TO STA. 641+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090293		206	206

2 CROSS SECTIONS - HWY. 71 (MAIN LANES)

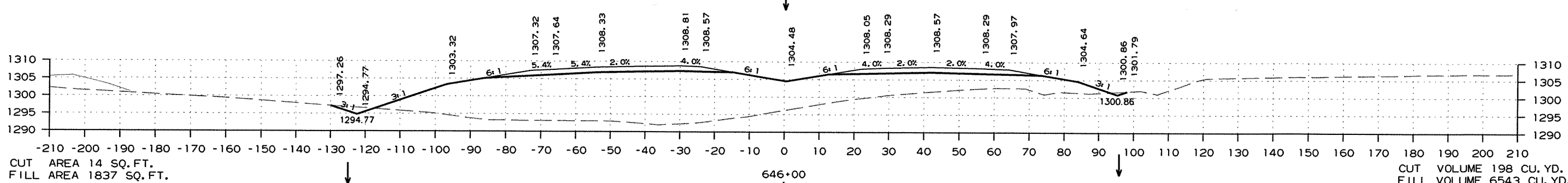
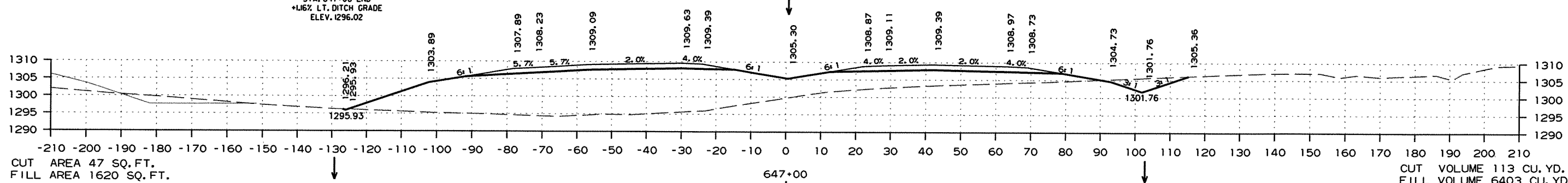
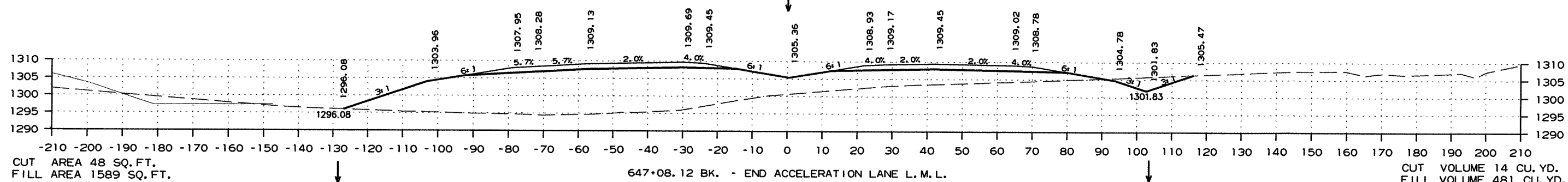
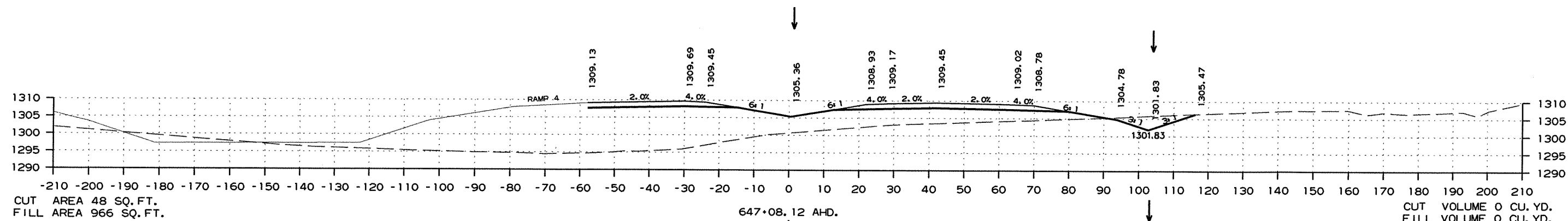
STA. 645+00 CONSTRUCT
TYPE 'RM' DROP INLET IN MEDIAN
4'-0" x 3'-0" x H = 3'-0"
24" x 84' R.C. PIPE CULV'T. (CL. III) W/
F.E.S. RT.
(USE TYPE 3 BEDDING)



HWY. 71 - CROSS SECTION STA. 642+00 TO STA. 645+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090293		207	266

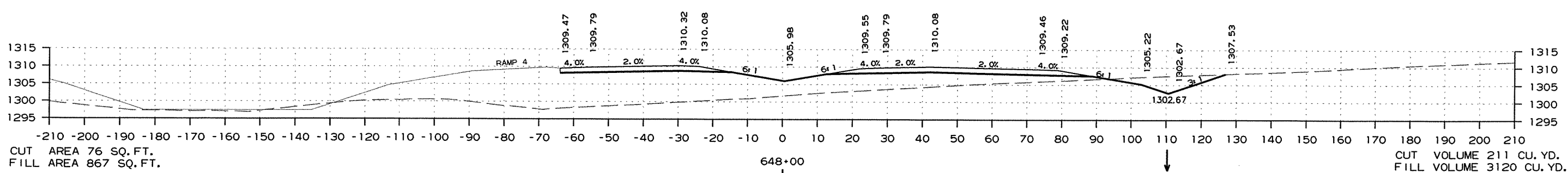
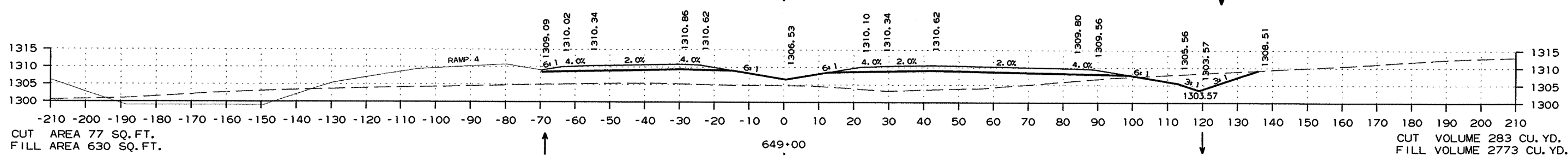
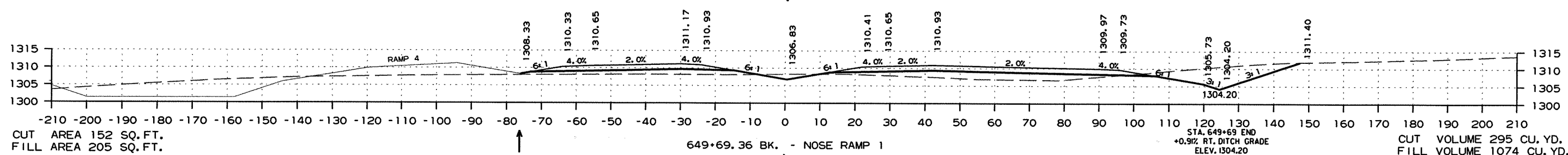
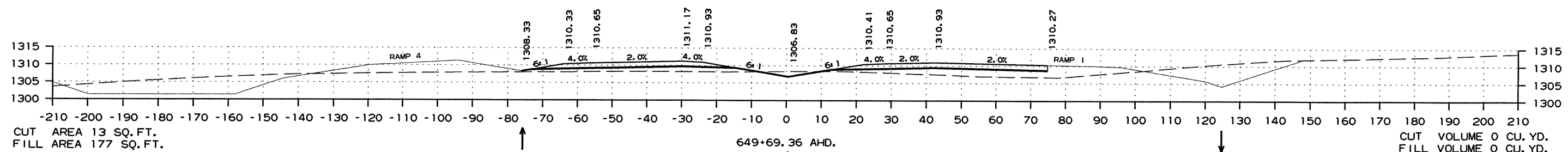
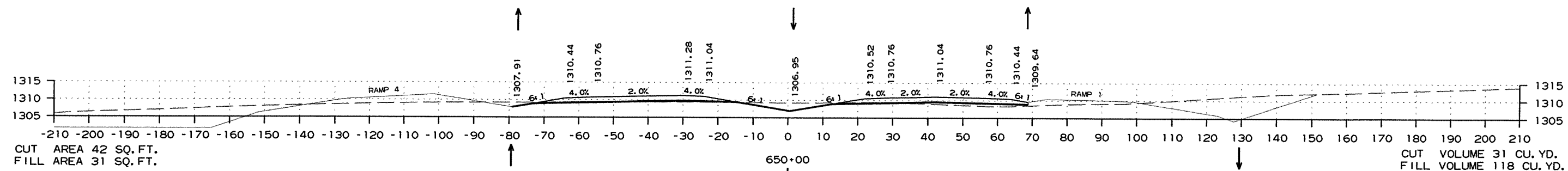
2 CROSS SECTIONS - HWY. 71 (MAIN LANES)



HWY. 71 - CROSS SECTION STA. 646+00 TO STA. 647+08

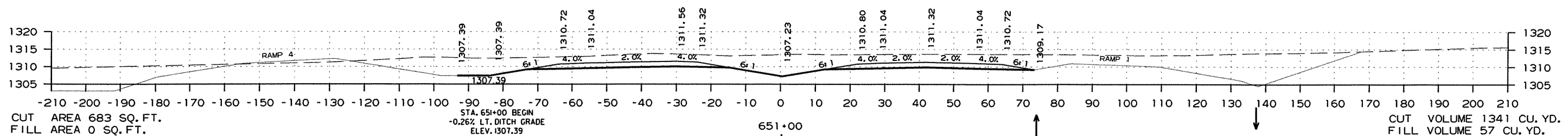
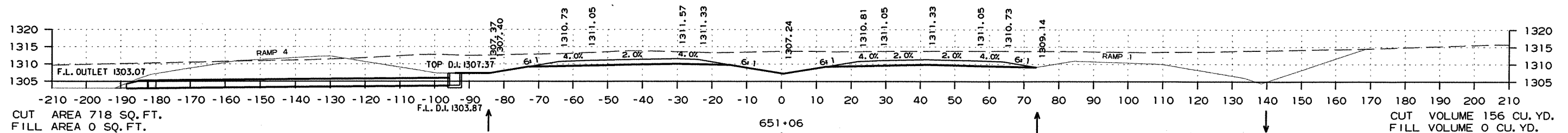
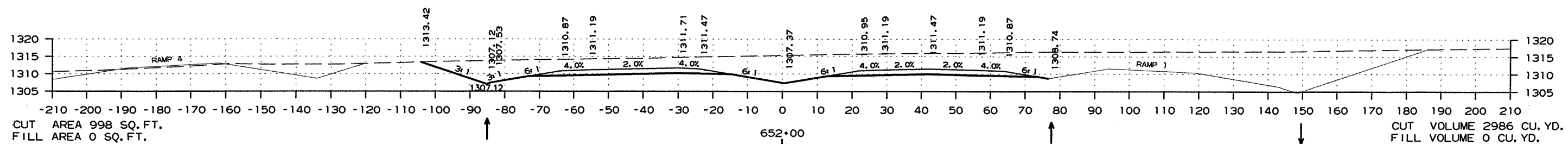
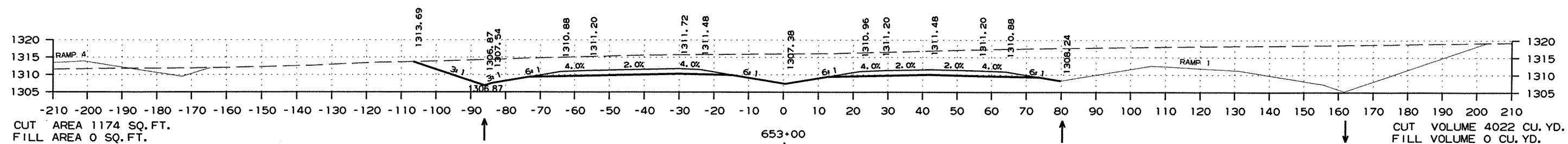
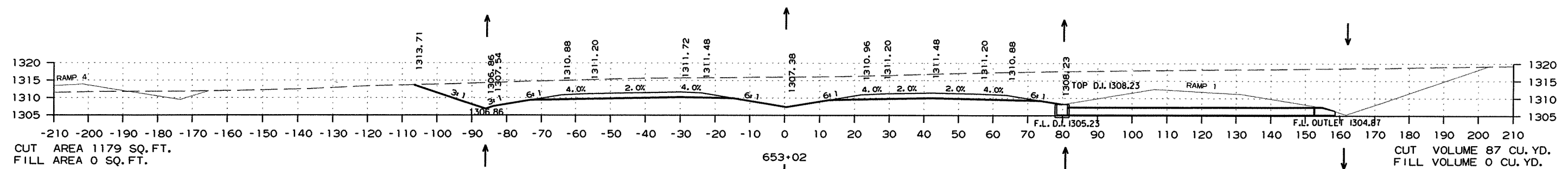
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090293		208	2566

② CROSS SECTIONS - HWY. 71 (MAIN LANES)



HWY. 71 - CROSS SECTION STA. 648+00 TO STA. 650+00

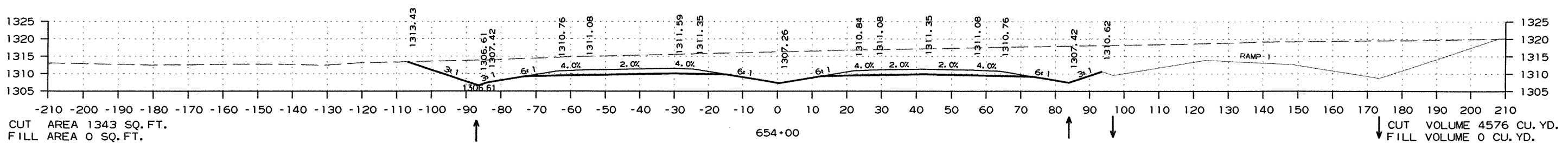
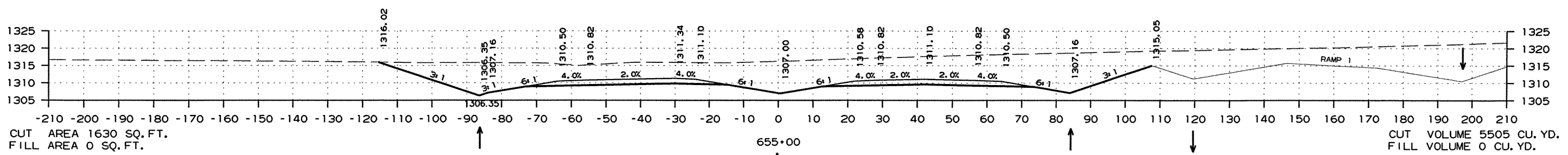
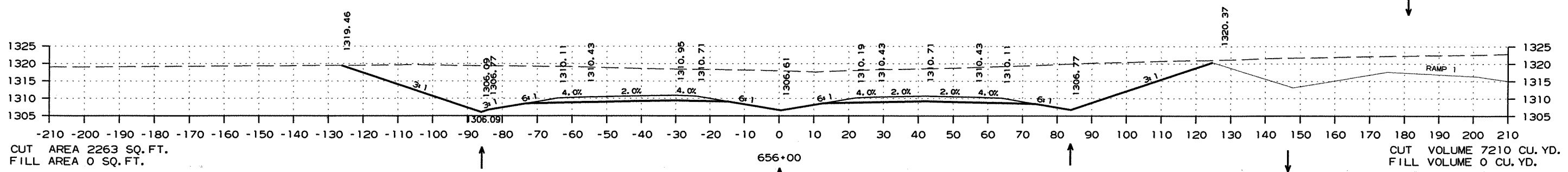
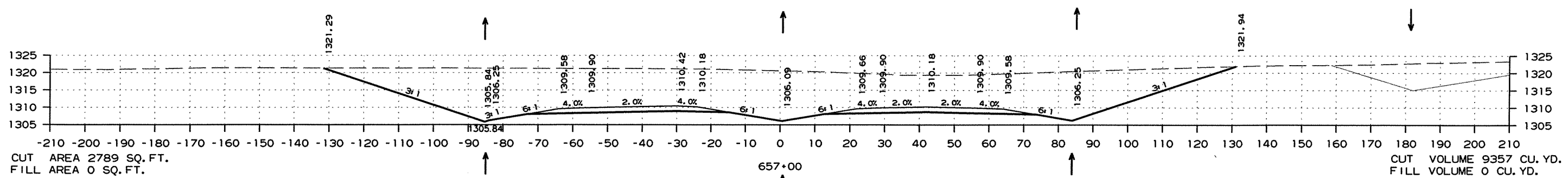
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090293	209	266	



HWY. 71 - CROSS SECTION STA. 651+00 TO STA. 653+02

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. 090293	210	266

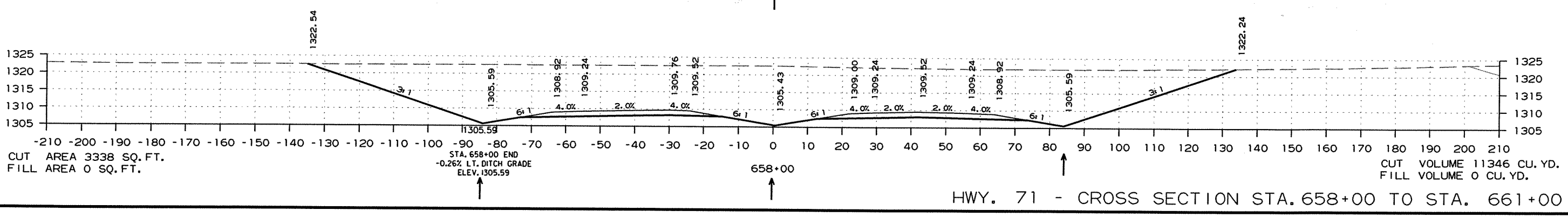
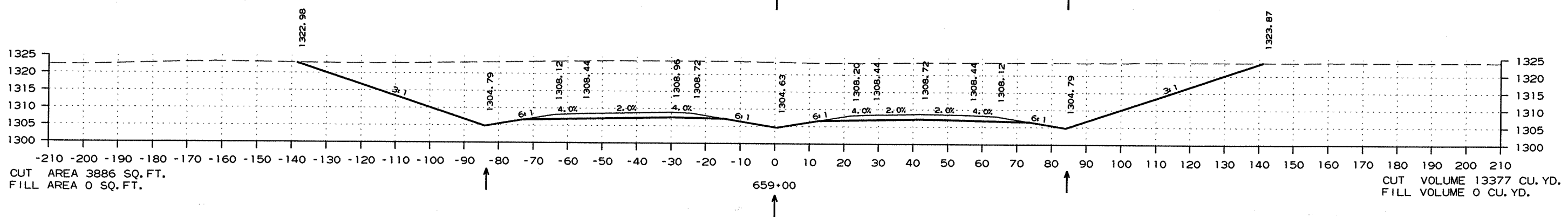
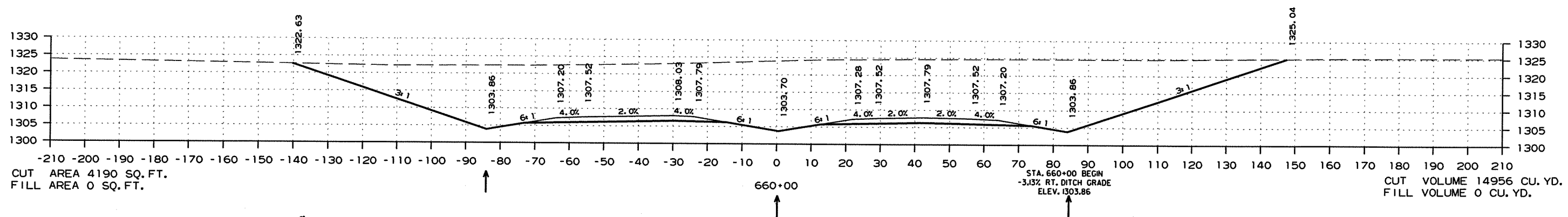
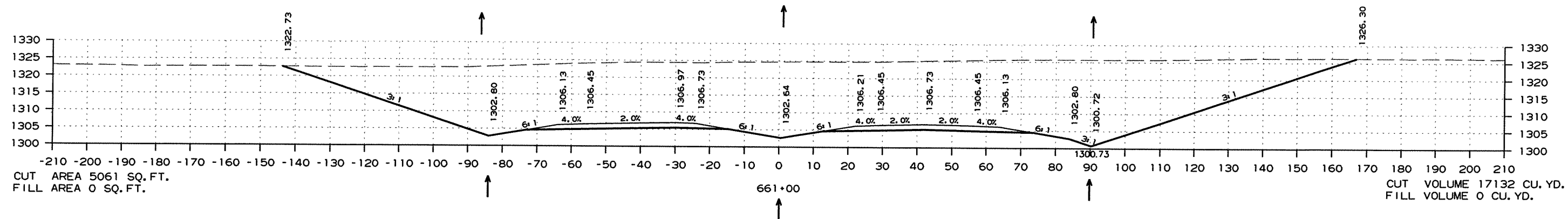
② CROSS SECTIONS - HWY. 71 (MAIN LANES)



HWY. 71 - CROSS SECTION STA. 654+00 TO STA. 657+00

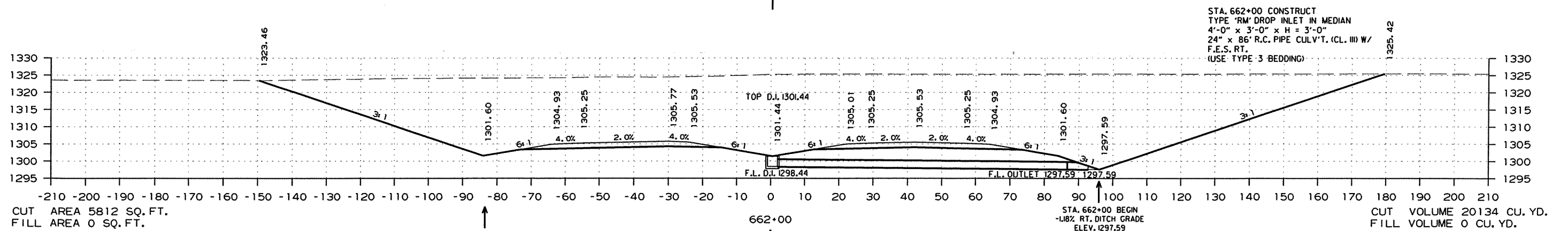
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090293		211	260

② CROSS SECTIONS - HWY. 71 (MAIN LANES)



HWY. 71 - CROSS SECTION STA. 658+00 TO STA. 661+00

② CROSS SECTIONS - HWY. 71 (MAIN LANES)

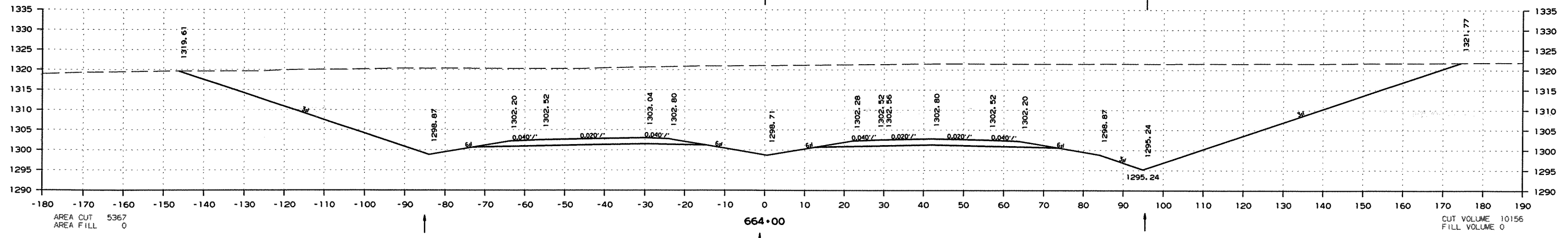
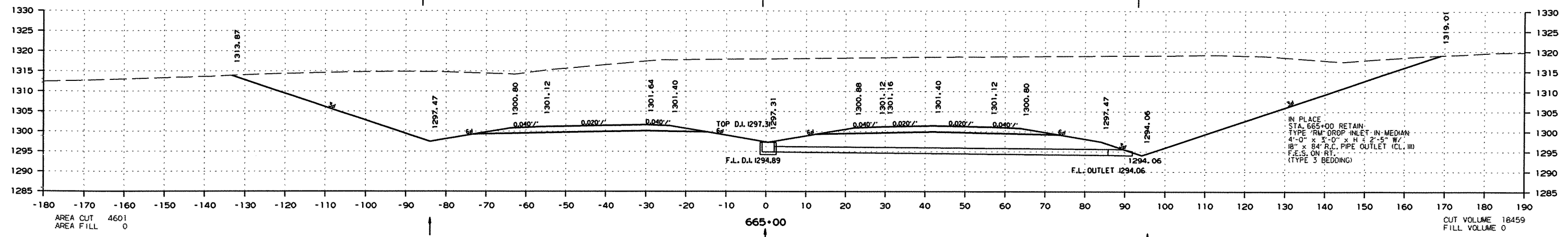
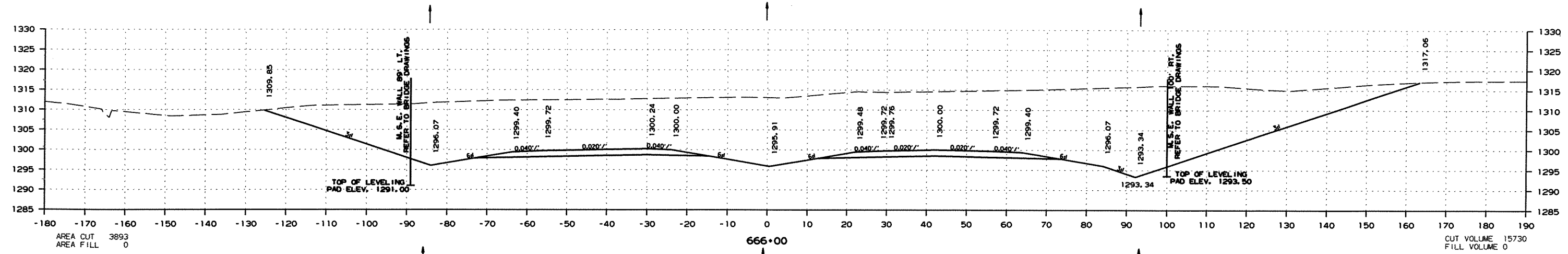


HWY. 71 - CROSS SECTION STA. 662+00 TO STA. 663+50

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. 090293	213	266

② CROSS SECTIONS - HWY. 71

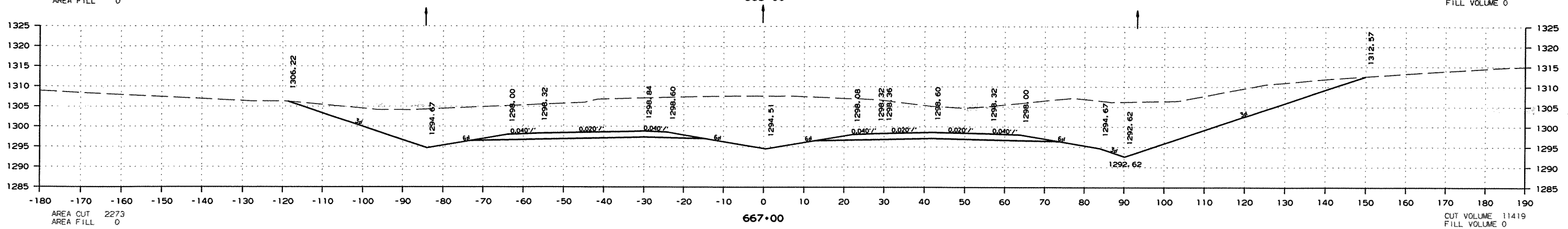
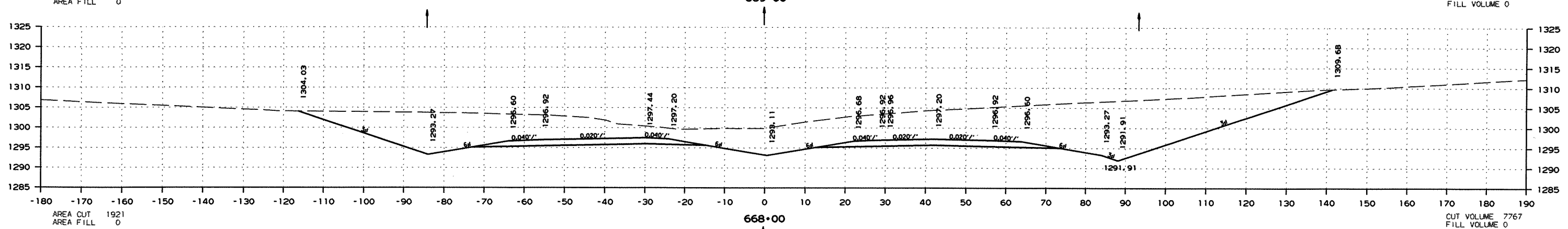
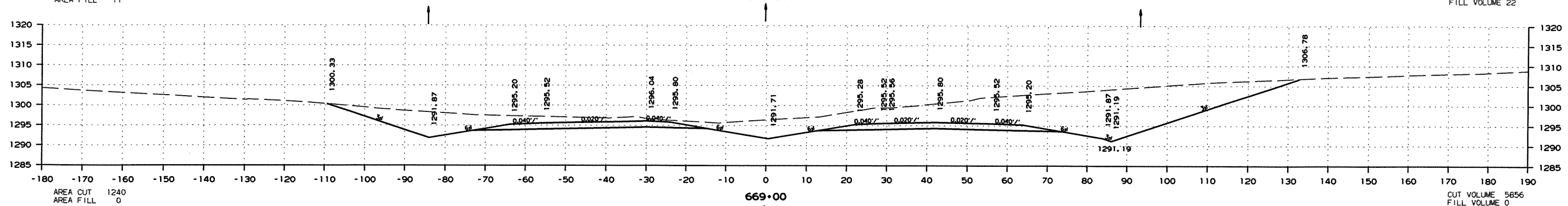
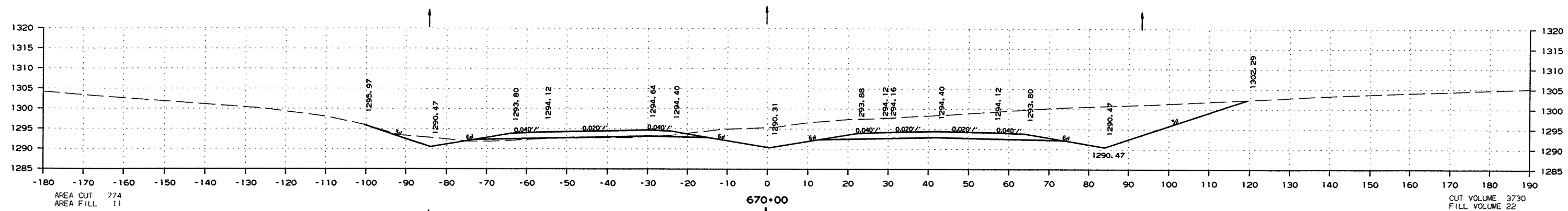
STA. 666+04.09 = HWY. 72 (NORTH) STA. 50+00.00



STA. 663+50 TO STA. 681+40
GRADING AND STRUCTURES COMPLETED UNDER JOB 090292

SCALE: 1" = 25'
HWY. 71 - STA. 664+00 TO STA. 666+00

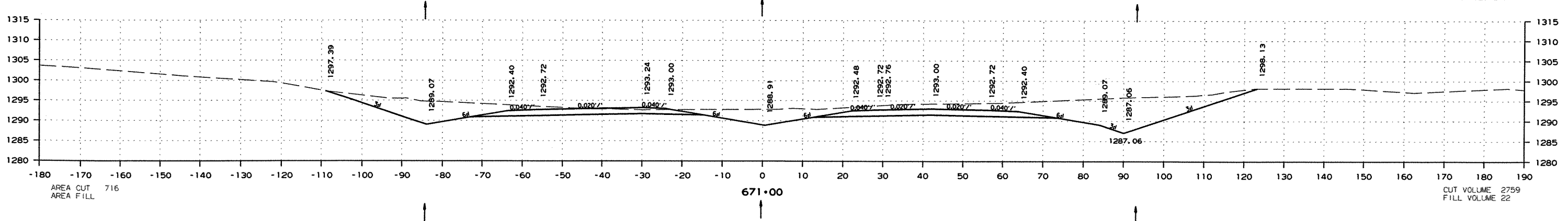
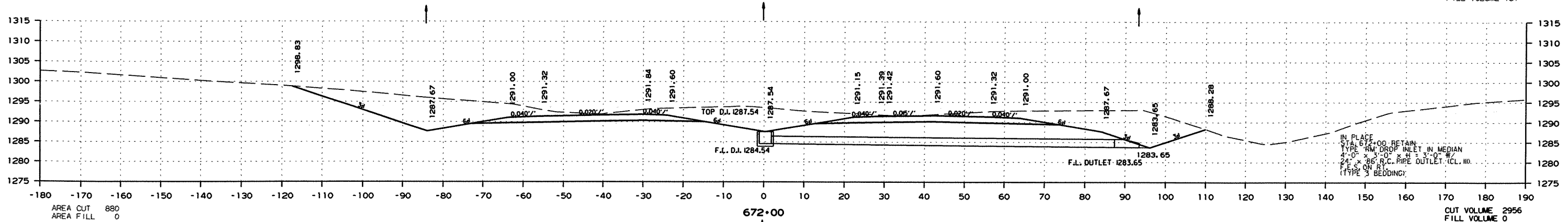
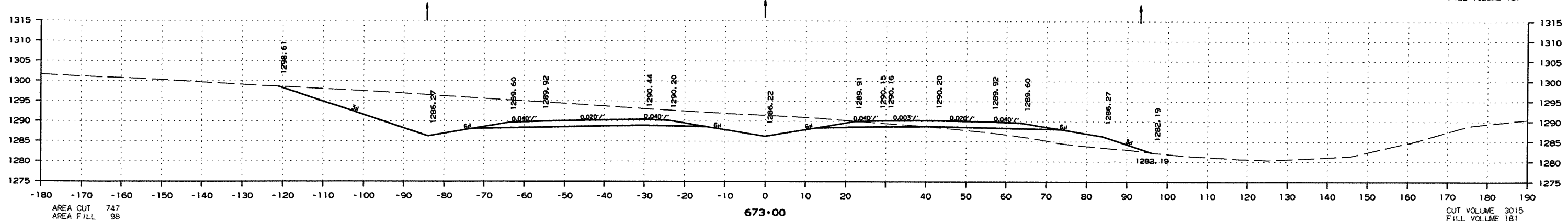
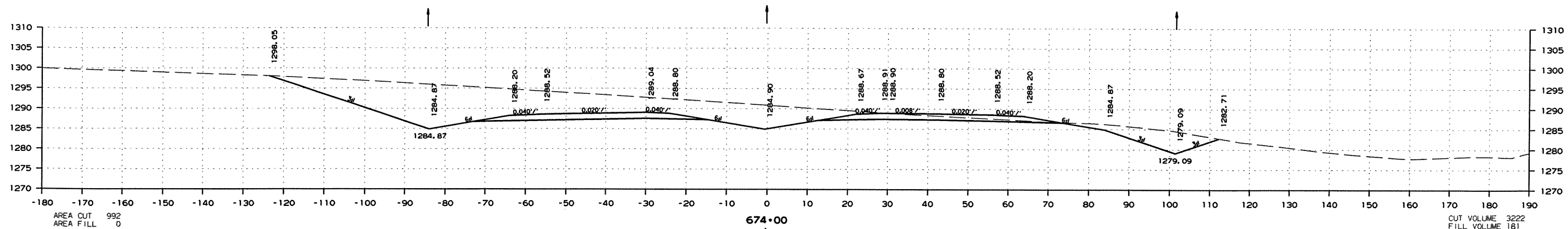
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090293		214	266
CROSS SECTIONS - HWY. 71								



SCALE: 1" = 25'
HWY. 71 - STA. 667+00 TO STA. 670+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		090293	215	216

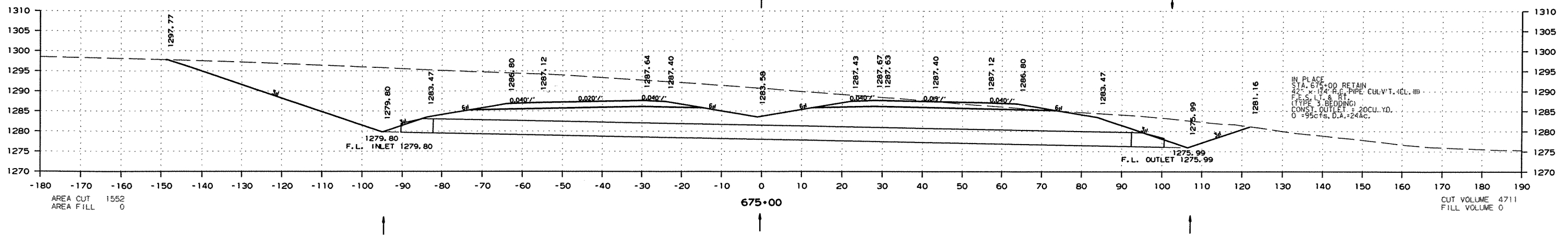
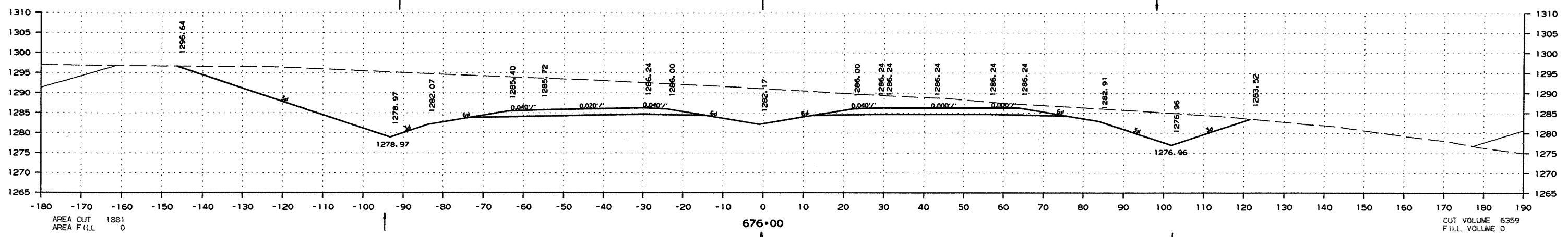
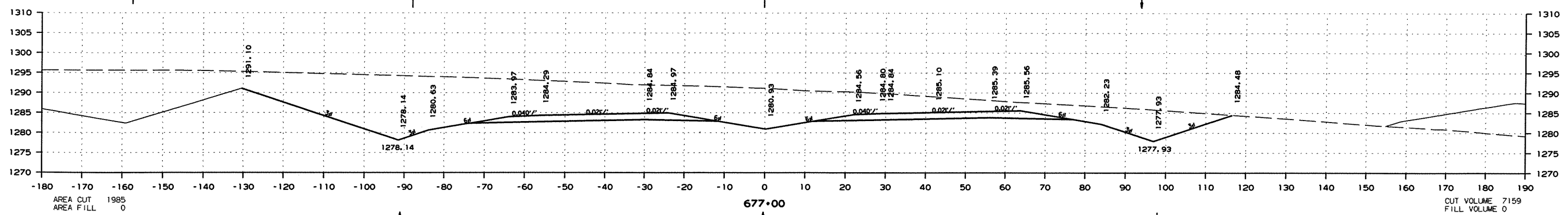
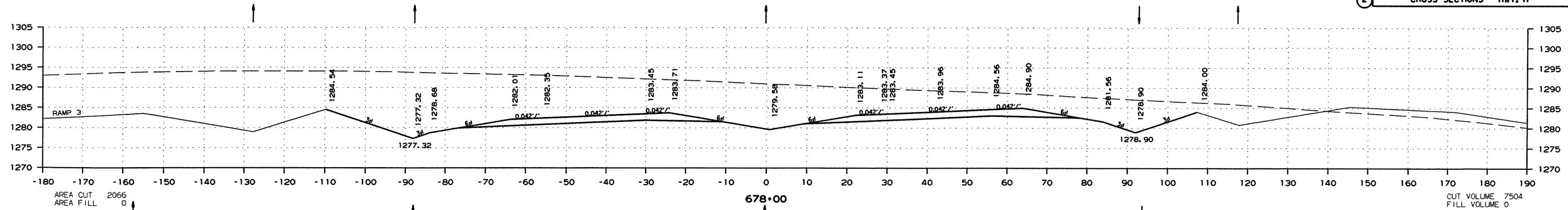
2 CROSS SECTIONS - HWY. 71



SCALE: 1" = 25'
HWY. 71 - STA. 671+00 TO STA. 674+00

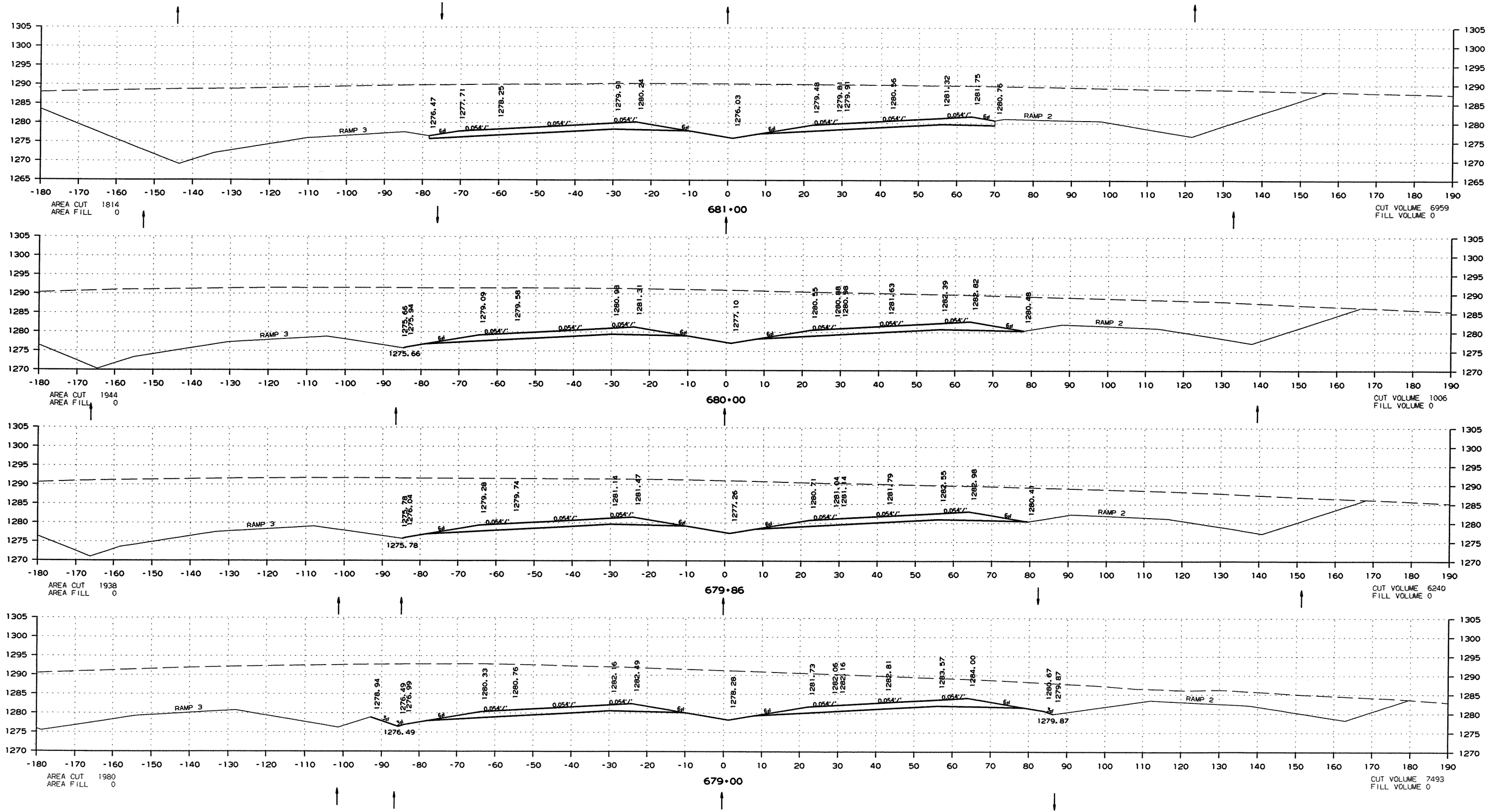
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		090293	216	216

2 CROSS SECTIONS - HWY. 71



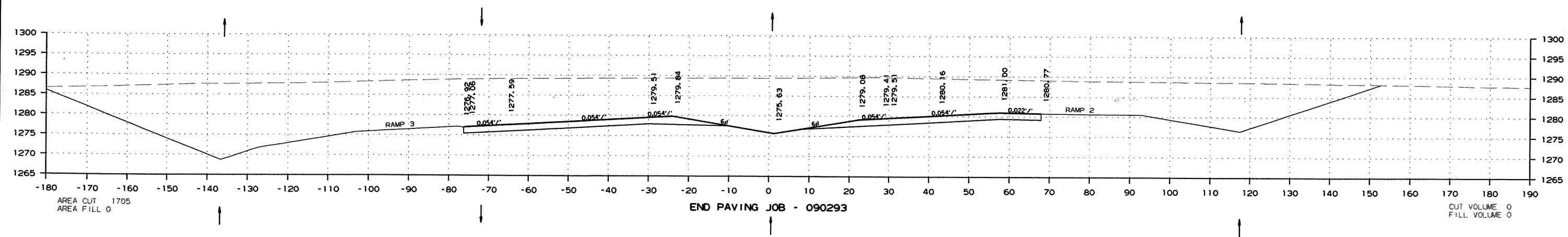
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		090293	217	2166

2 CROSS SECTIONS - HWY. 71



SCALE: 1" = 25'
HWY. 71 - STA. 679+00 TO STA. 681+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		090293	218	266
				②	CROSS SECTIONS - HWY. 71			



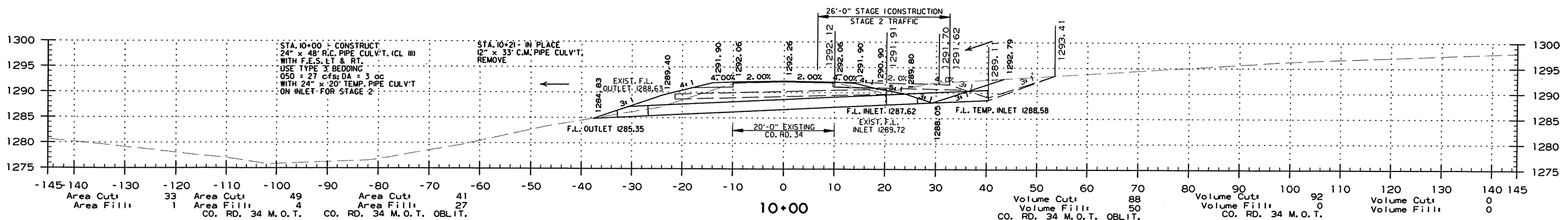
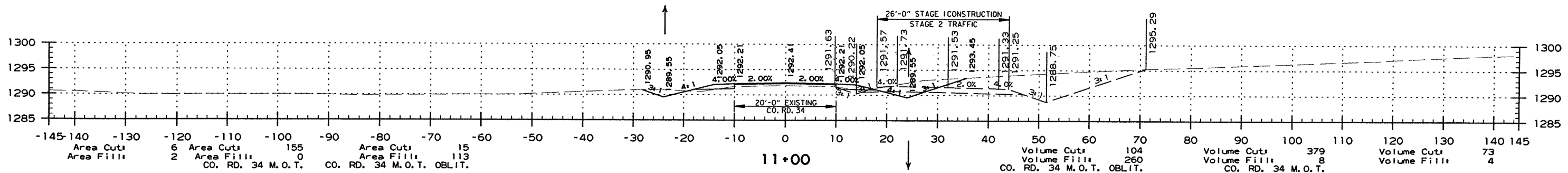
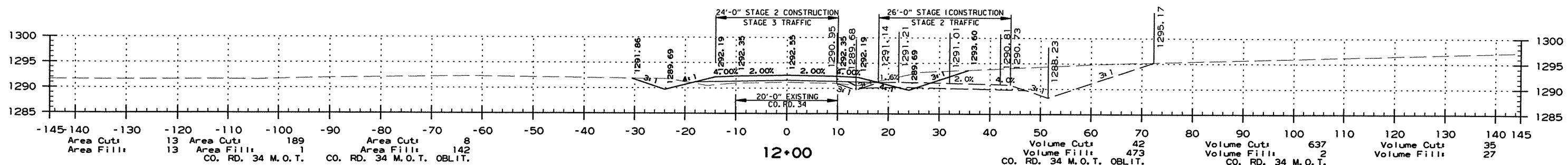
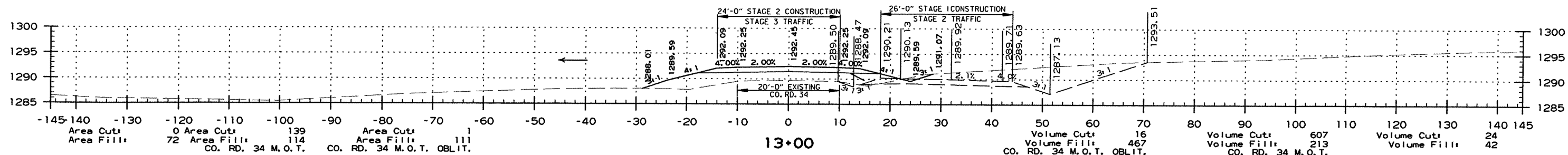
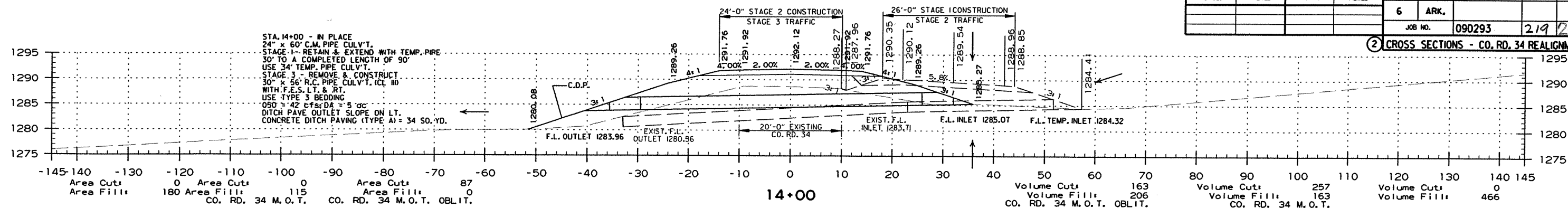
SCALE: 1" = 25'
HWY. 71 - STA. 681+40 TO STA. 682+00

2/28/2012

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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.	090293		219	266

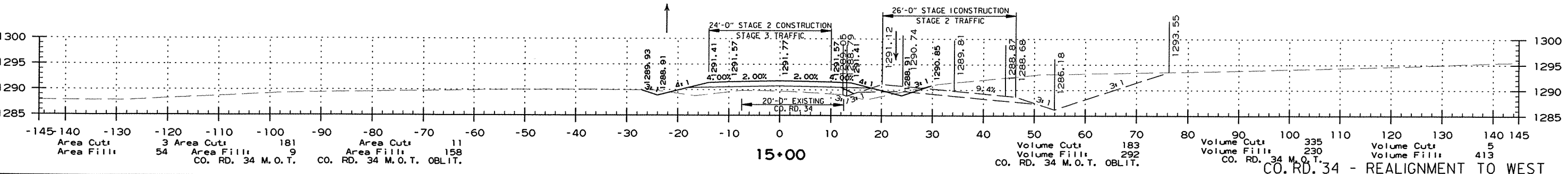
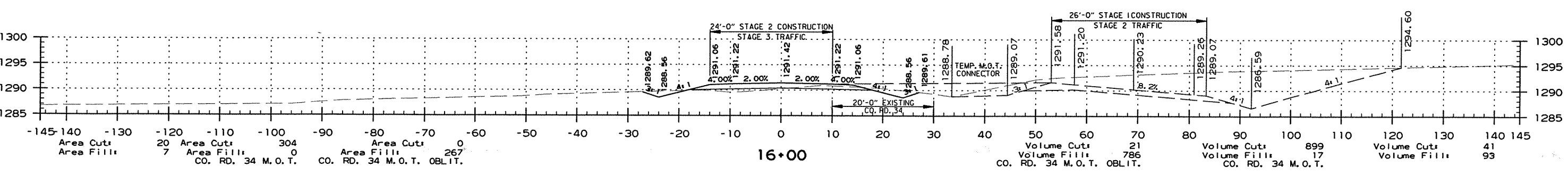
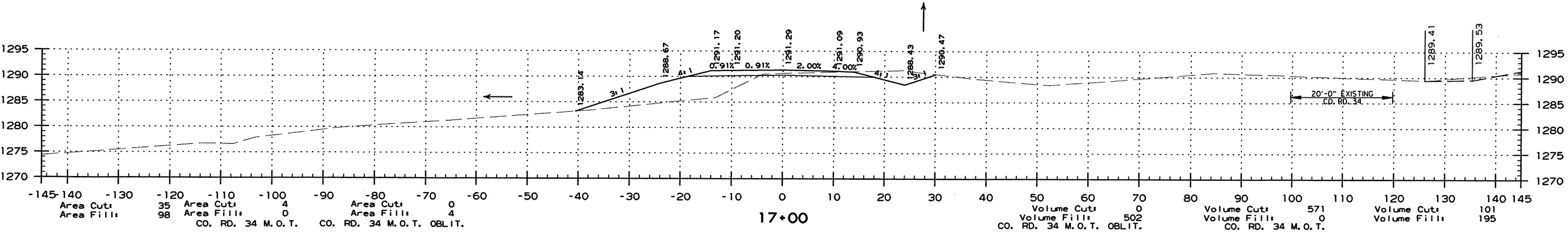
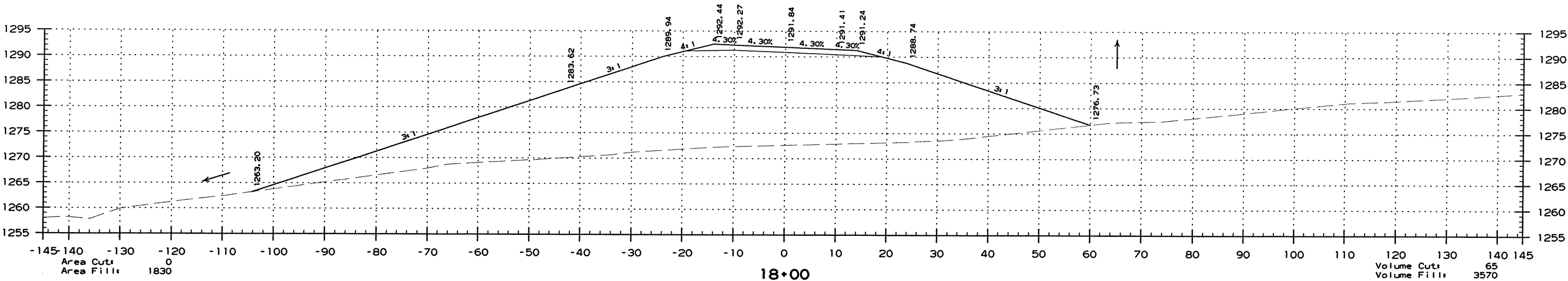
② CROSS SECTIONS - CO. RD. 34 REALIGNMENT



STA. 10+00 (CO. RD. 34 REALIGNMENT TO WEST) - BEGIN JOB 090293

CO. RD. 34 - REALIGNMENT TO WEST

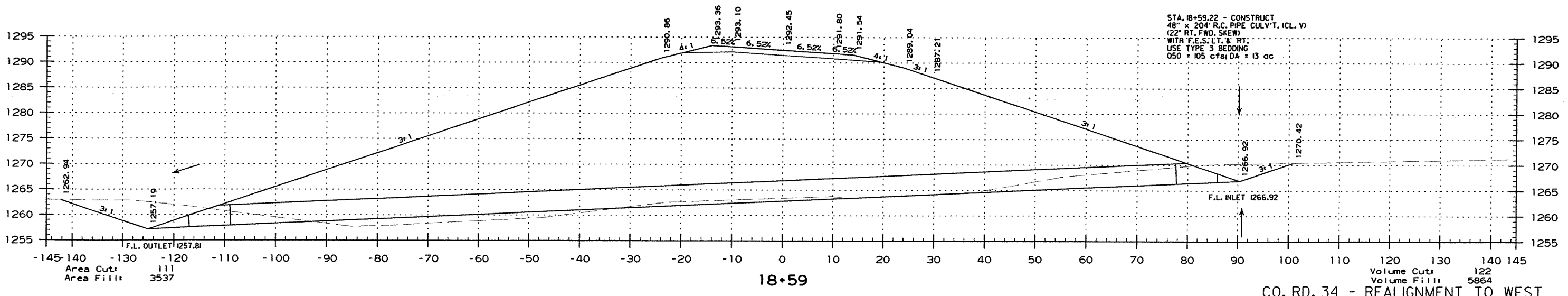
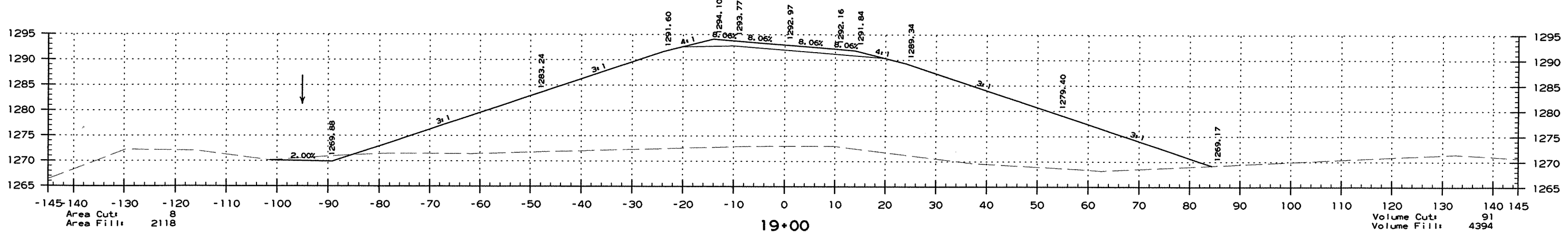
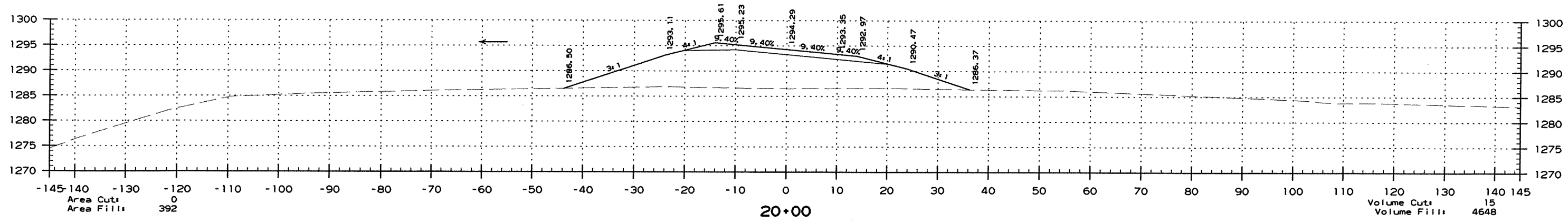
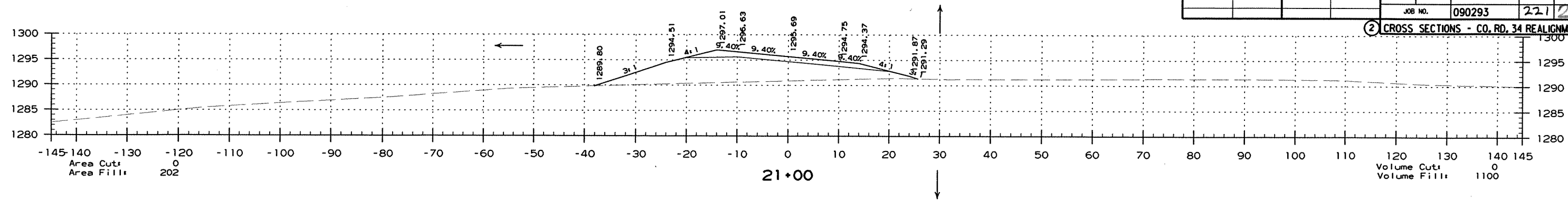
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090293		210	210
2 CROSS SECTIONS - CO. RD. 34 REALIGNMENT								



CO. RD. 34 - REALIGNMENT TO WEST

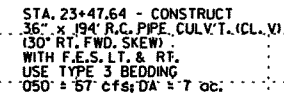
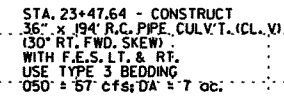
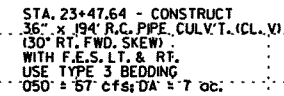
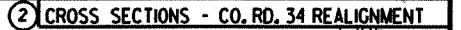
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090293		221	266

2 CROSS SECTIONS - CO. RD. 34 REALIGNMENT



STA. 18+59.22 - CONSTRUCT
48" x 20' R.C. PIPE CULV'T. (CL. V)
(22' RT. FWD. SKEW)
WITH F.E.S. LT. & RT.
USE TYPE 3 BEDDING
050 = 105 cfs; DA = 13 ac

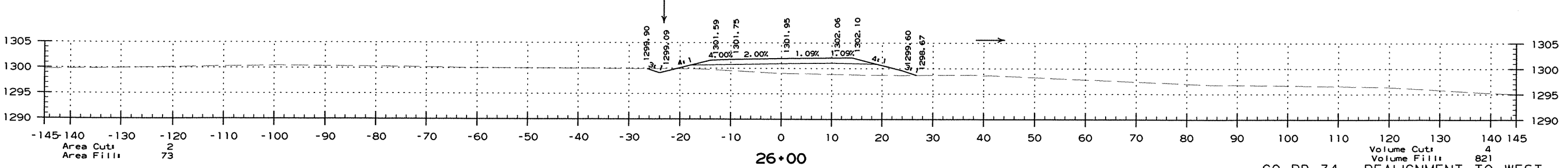
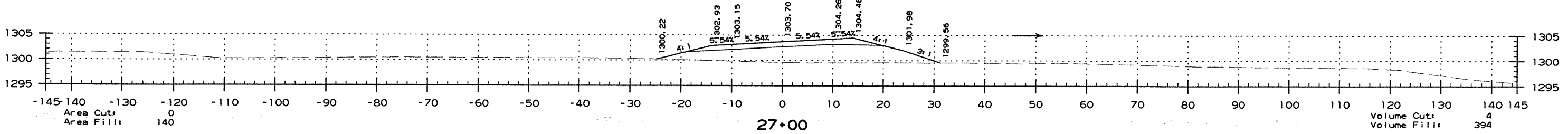
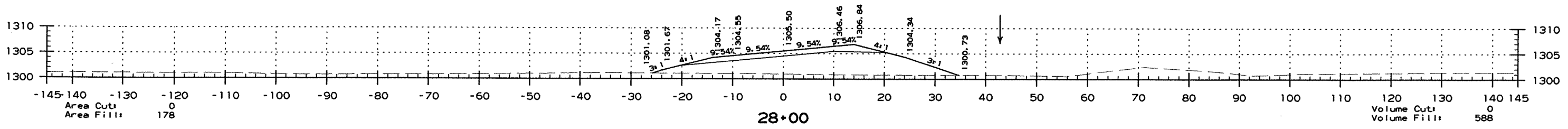
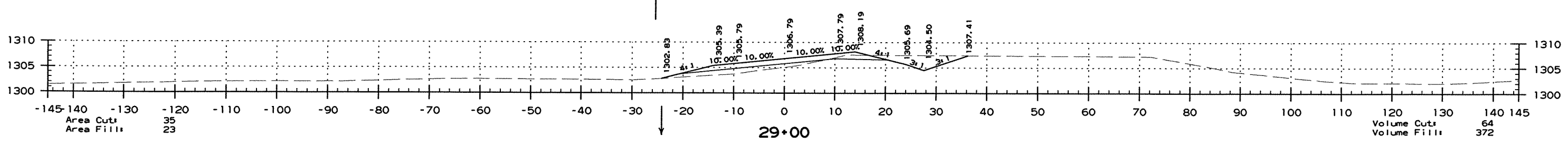
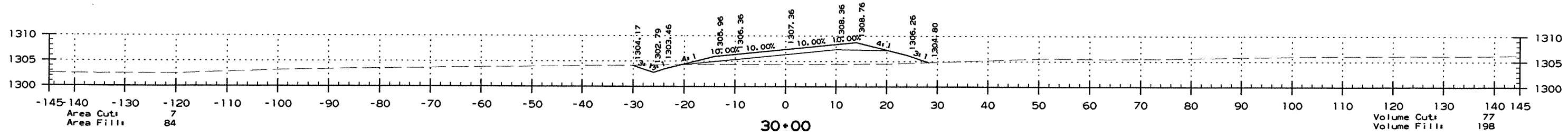
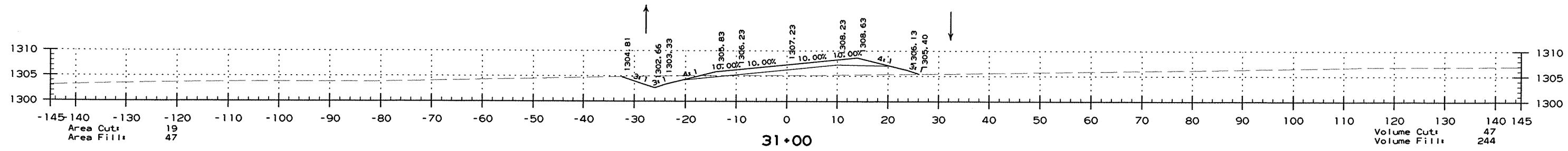
2 CROSS SECTIONS - CO. RD. 34 REALIGNMENT



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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.	090293		223	204

② CROSS SECTIONS - CO. RD. 34 REALIGNMENT

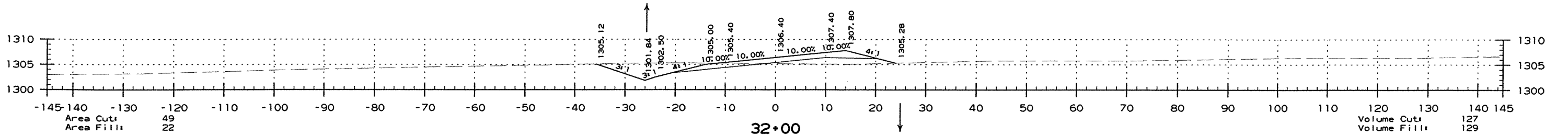
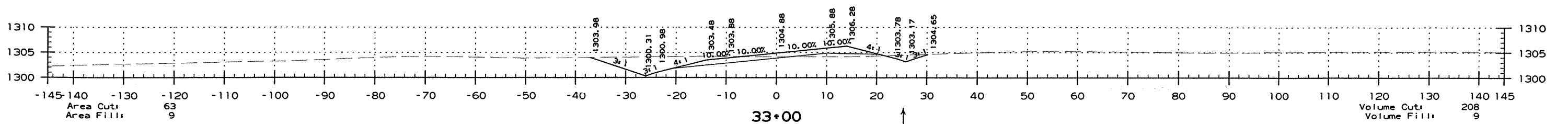
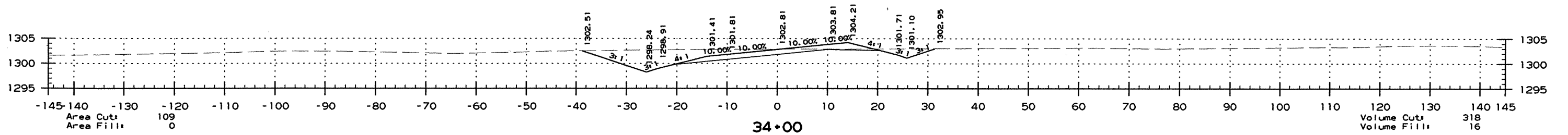
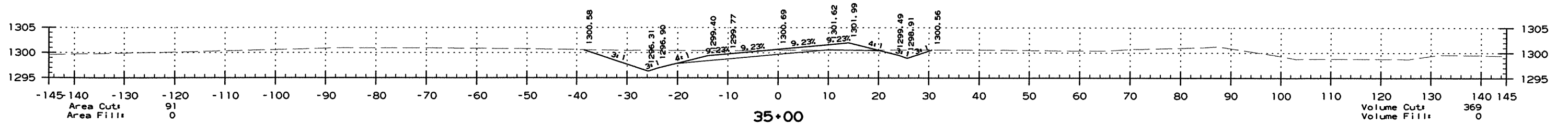
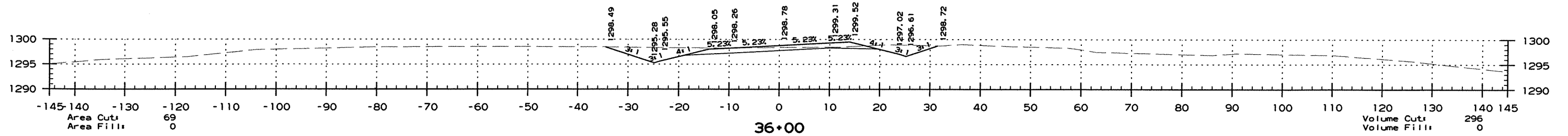
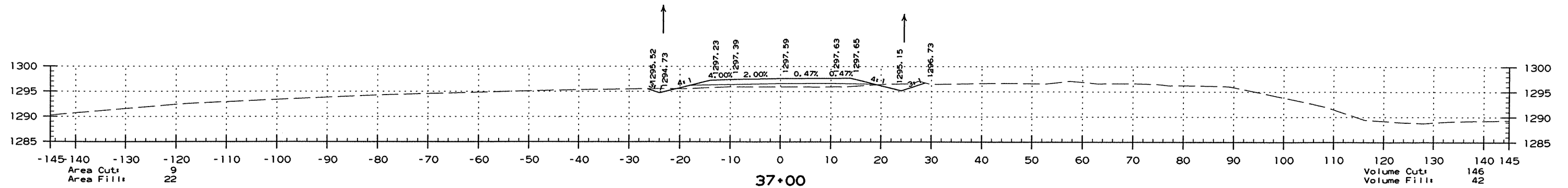


CO. RD. 34 - REALIGNMENT TO WEST

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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. 090293			224	226

2 CROSS SECTIONS - CO. RD. 34 REALIGNMENT



CO. RD. 34 - REALIGNMENT TO WEST

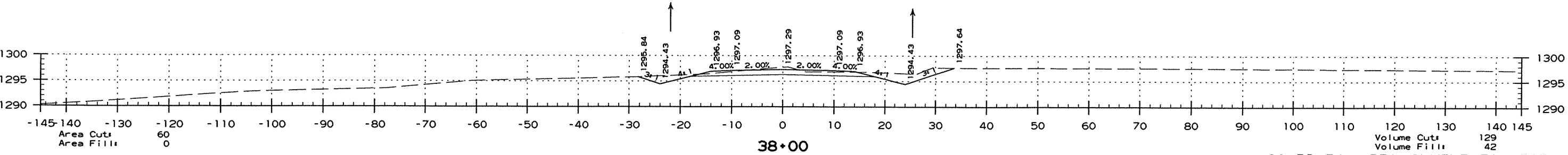
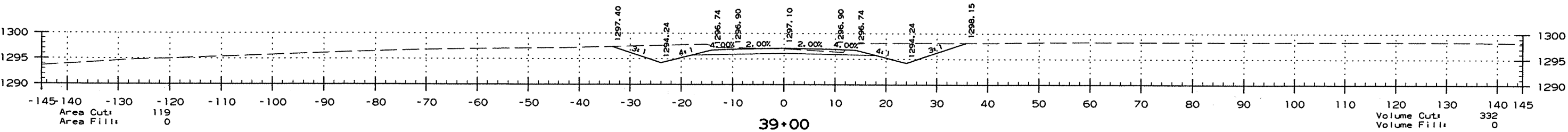
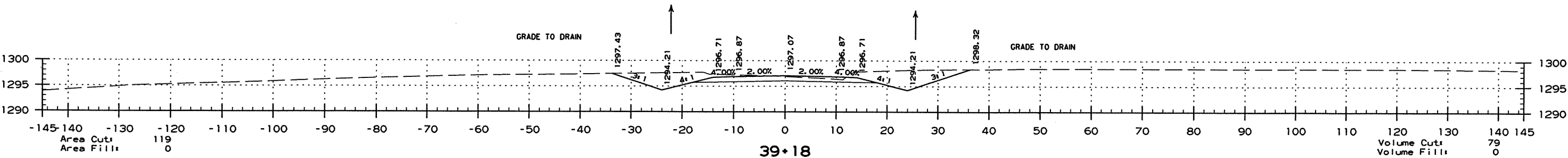
2/28/2012

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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. 090293	225	260

2 CROSS SECTIONS - CO. RD. 34 REALIGNMENT

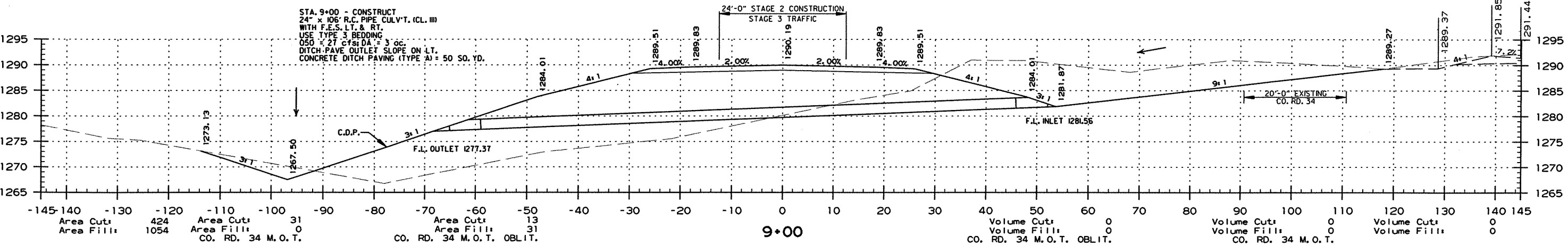
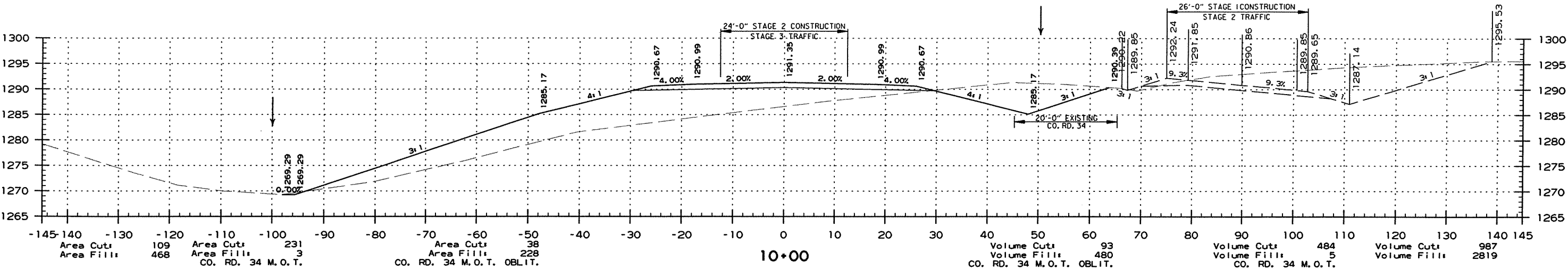
STA. 39+18.35 (CO. RD. 34 REALIGNMENT TO WEST) - END JOB 090293



CO. RD. 34 - REALIGNMENT TO WEST

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. 090293	226	266

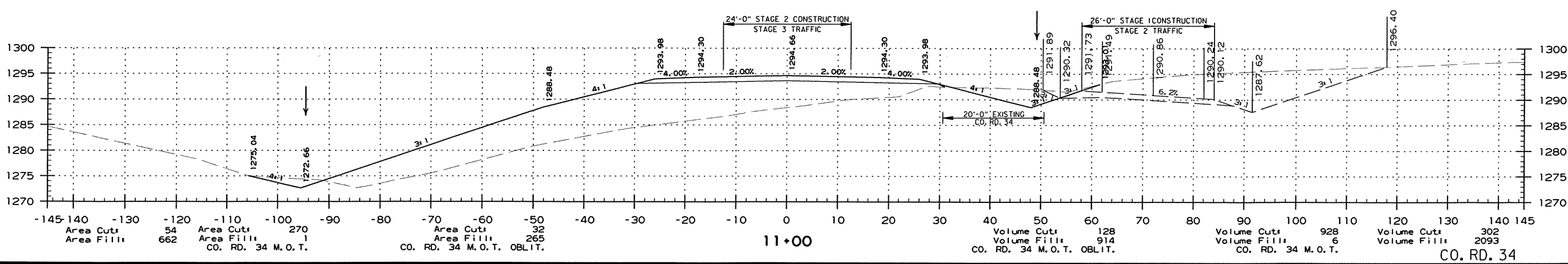
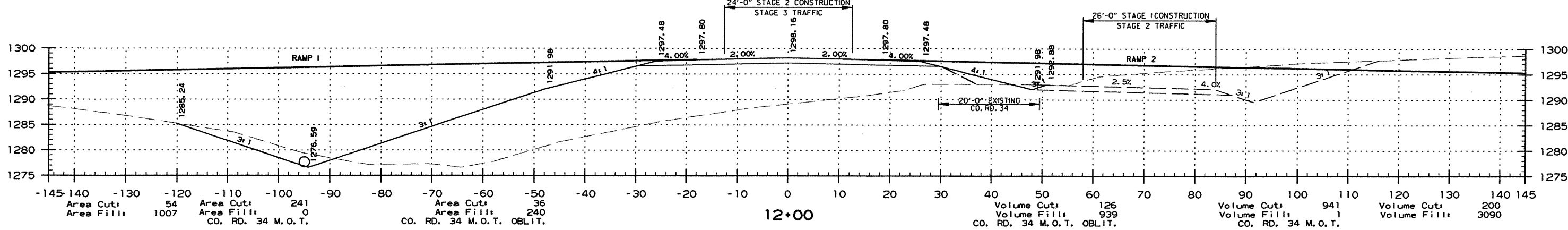
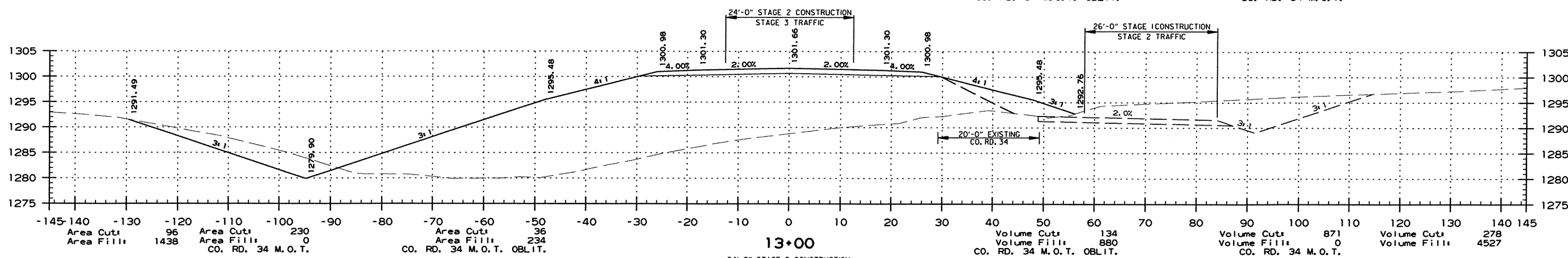
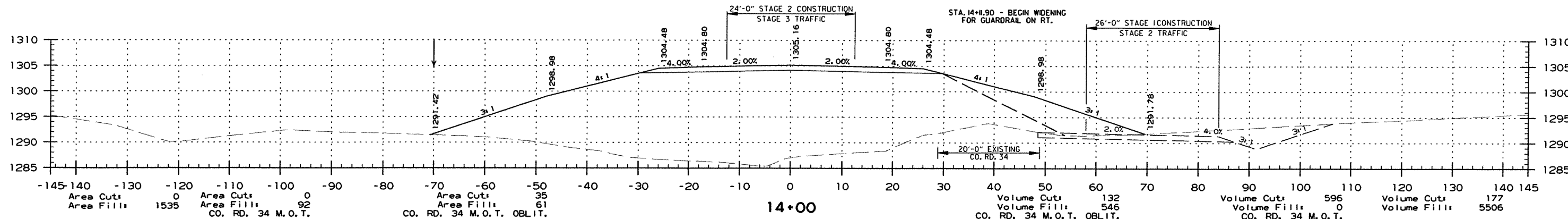
2 CROSS SECTIONS - CO. RD. 34



STA. 8+10.23 - BEGIN CO. RD. 34

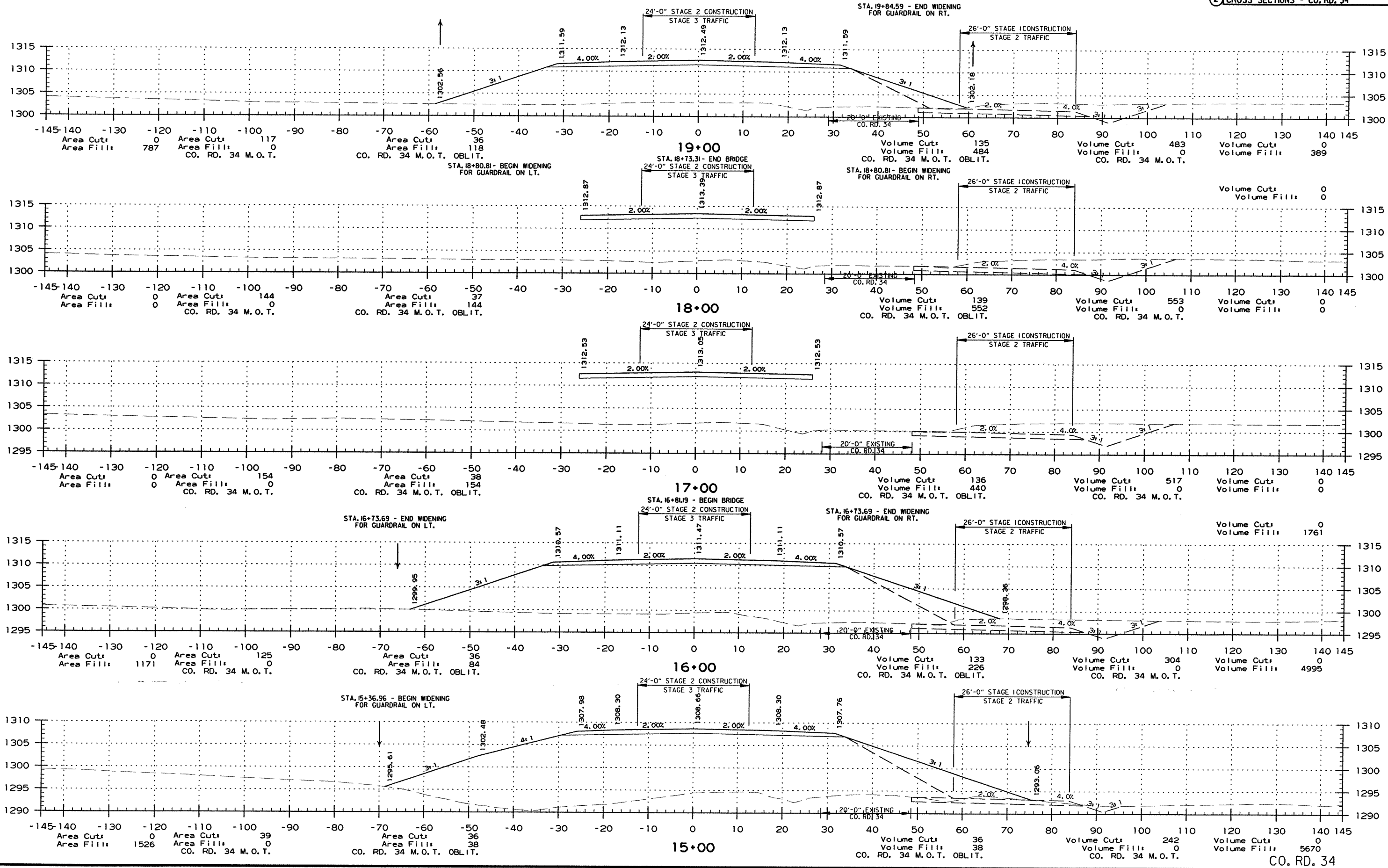
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090293		227	250

② CROSS SECTIONS - CO. RD. 34



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		228	266
				JOB NO.	090293			

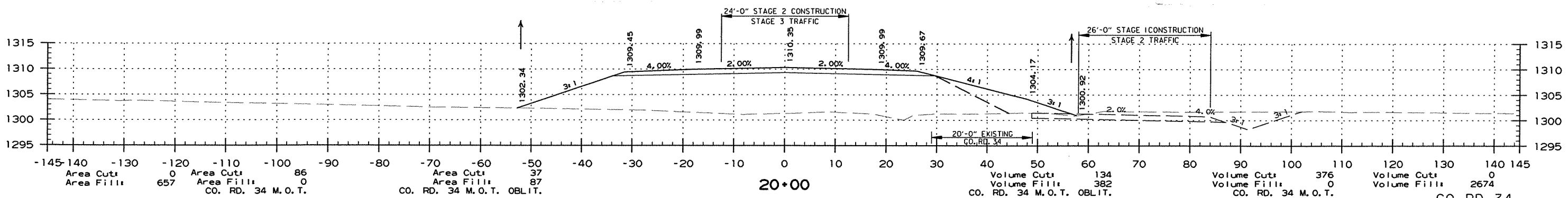
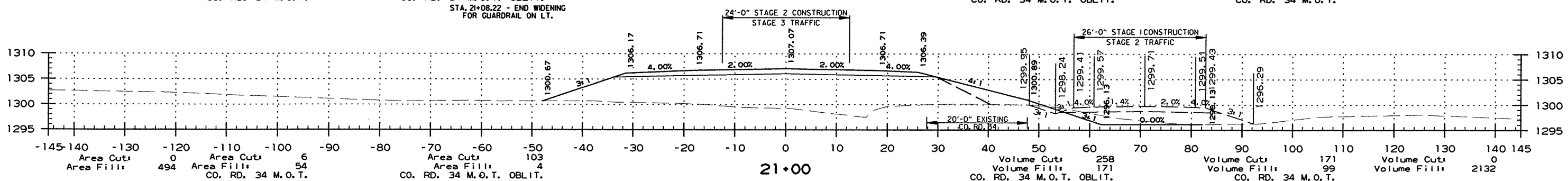
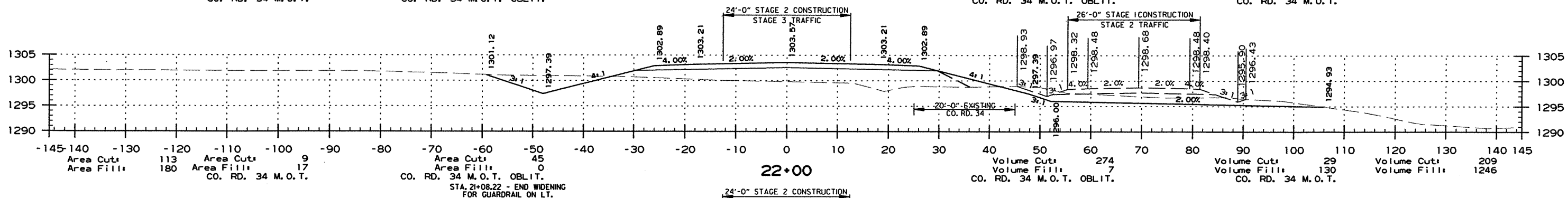
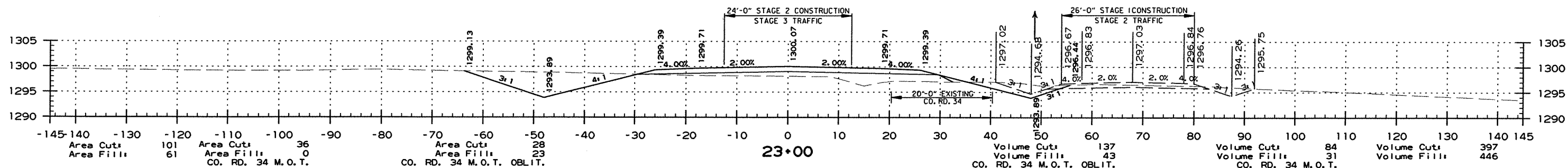
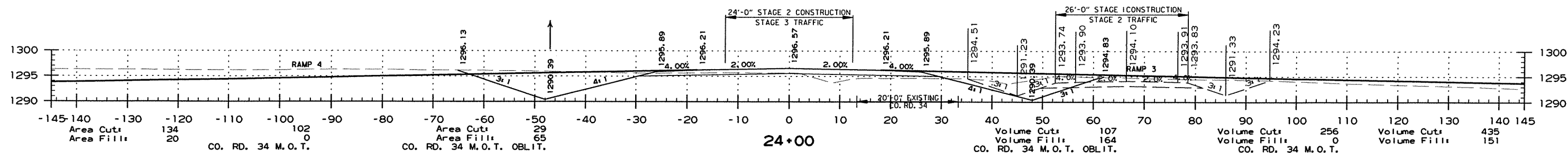
② CROSS SECTIONS - CO. RD. 34



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.	090293		229	246

2 CROSS SECTIONS - CO. RD. 34

STA. 24+75.00 - BEGIN TAPER



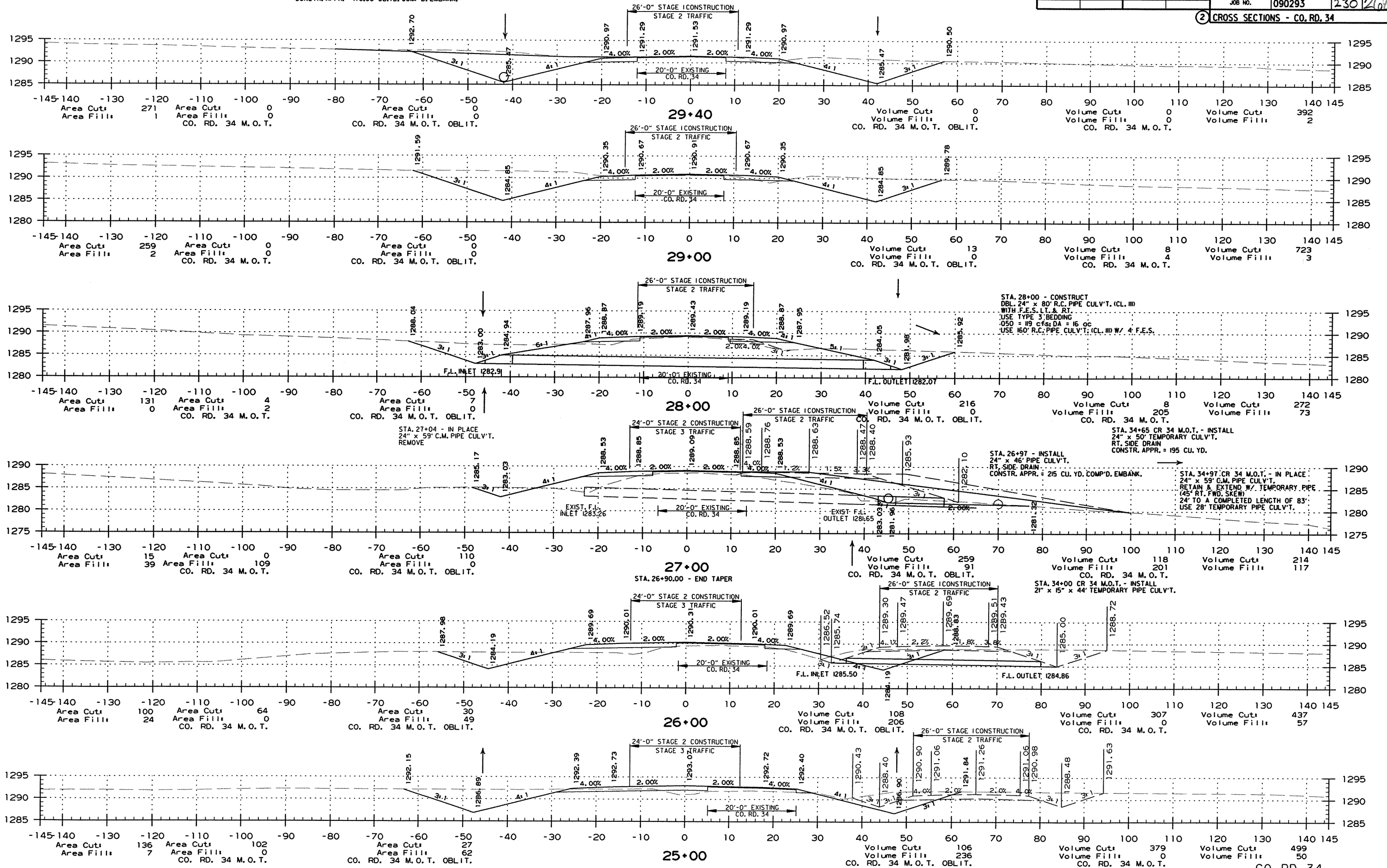
CO. RD. 34

STA. 29+55 - INSTALL
24" x 40" PIPE CULV'T.
LT. SIDE DRAIN
CONSTR. APPR. = 170.00 CU.YD. COMP'D. EMBANK.

STA. 29+40 - END CO. RD. 34

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.	090293	230	206	

2 CROSS SECTIONS - CO. RD. 34

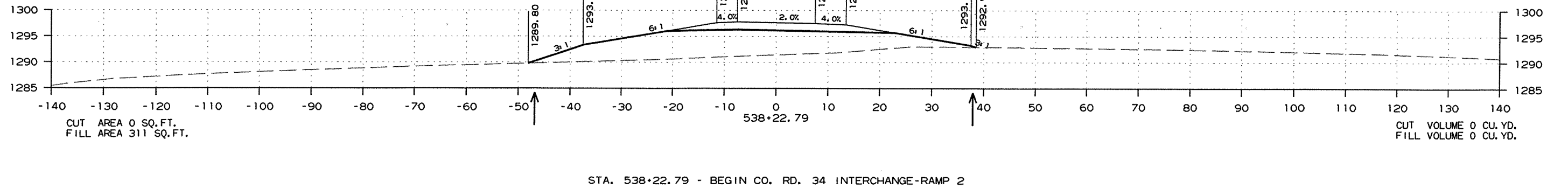


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CO. RD. 34

2 CROSS SECTIONS - CO. RD. 34 - RAMP 2

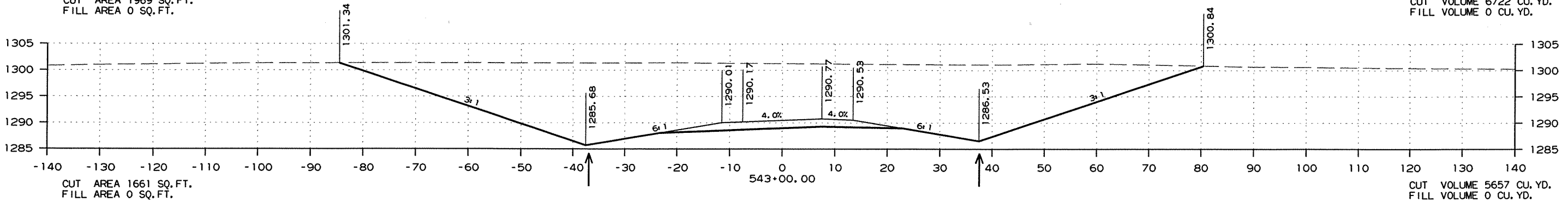
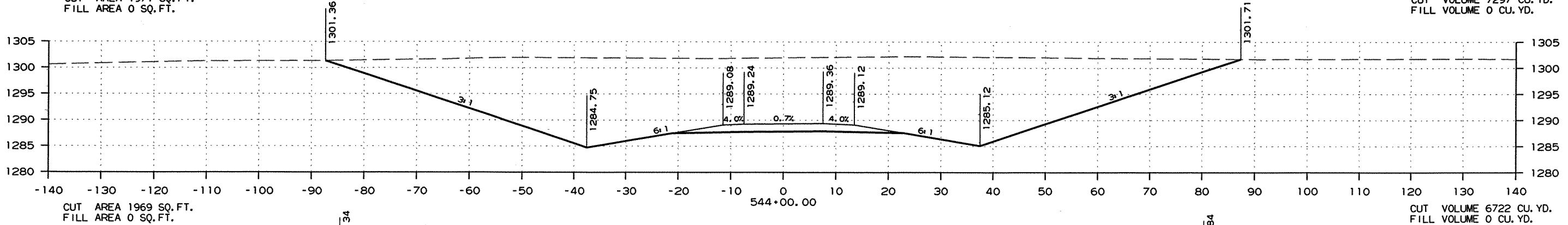
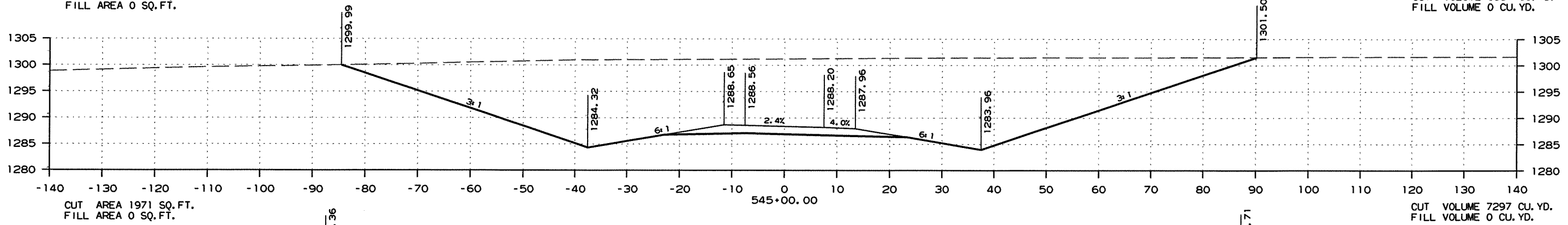
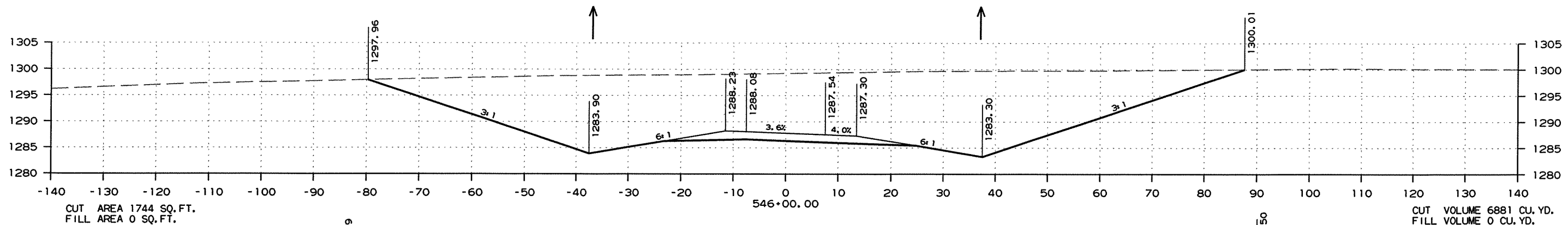


CO. RD. 34 RAMP 2 - CROSS SECTION STA. 538+23 TO STA. 542+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 090293	232	266

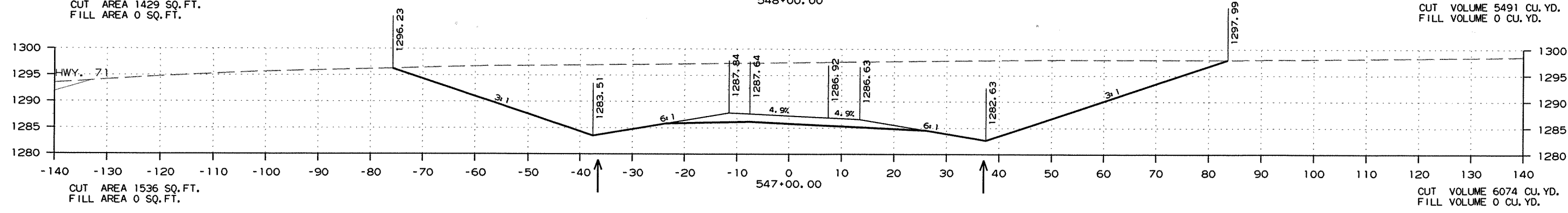
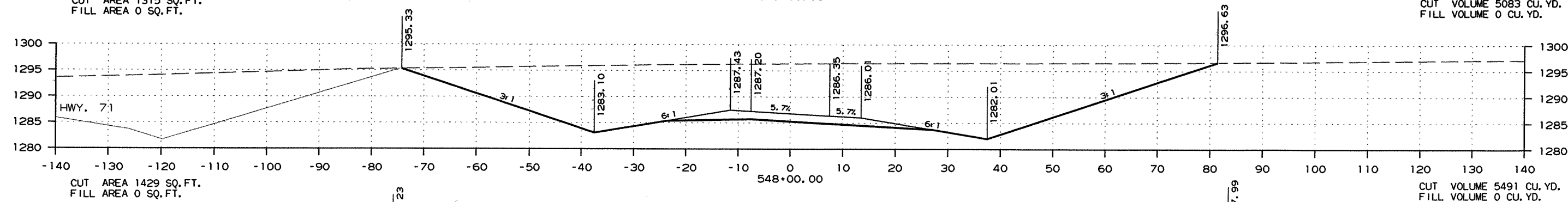
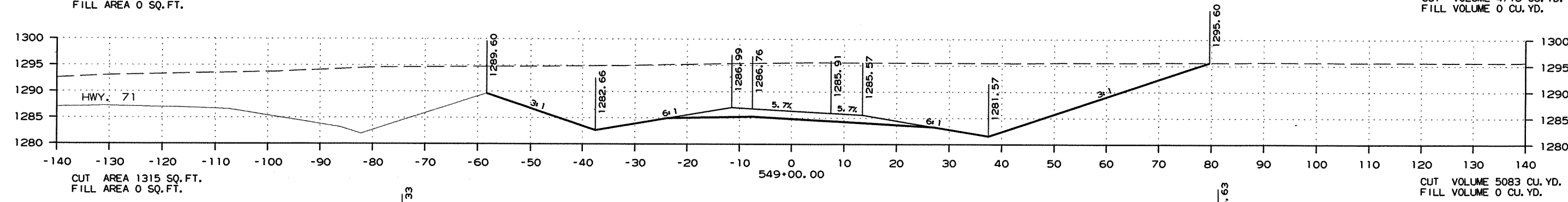
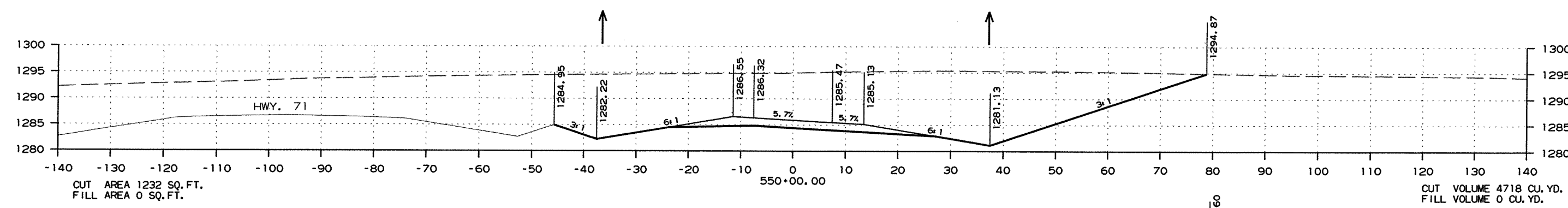
② CROSS SECTIONS - CO. RD. 34 - RAMP 2



CO. RD. 34 RAMP 2 - CROSS SECTION STA. 543+00 TO STA. 546+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 090293	233	266

2 CROSS SECTIONS - CO. RD. 34 - RAMP 2



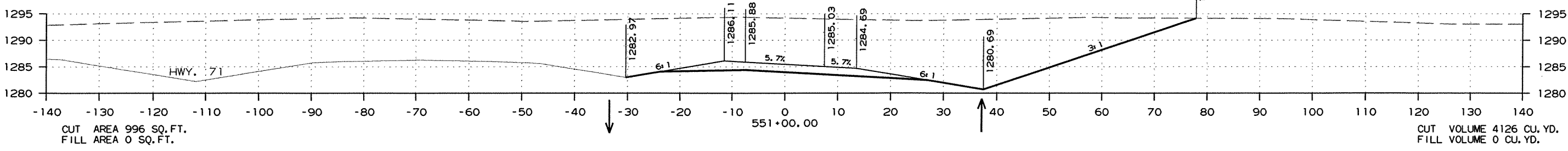
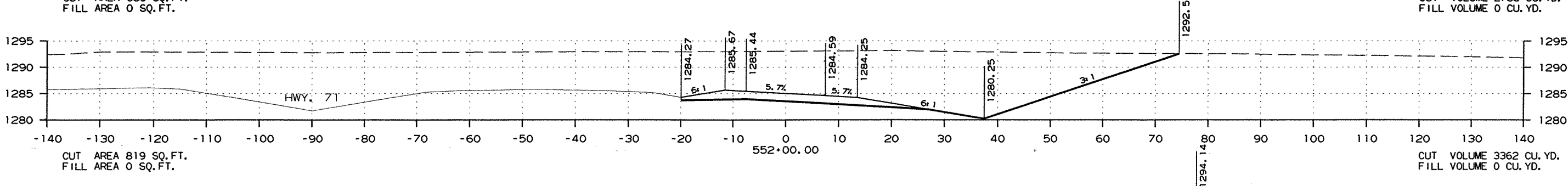
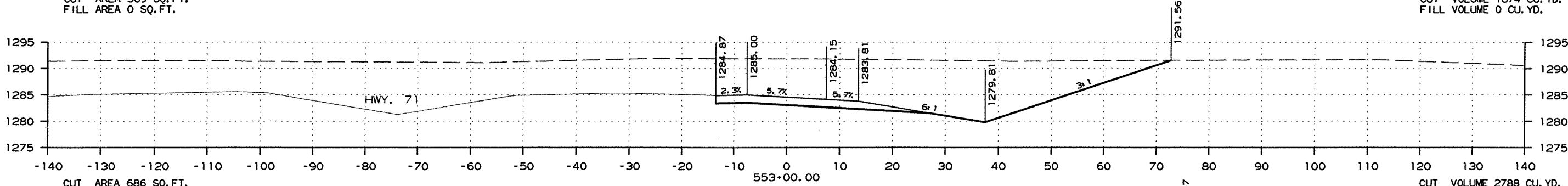
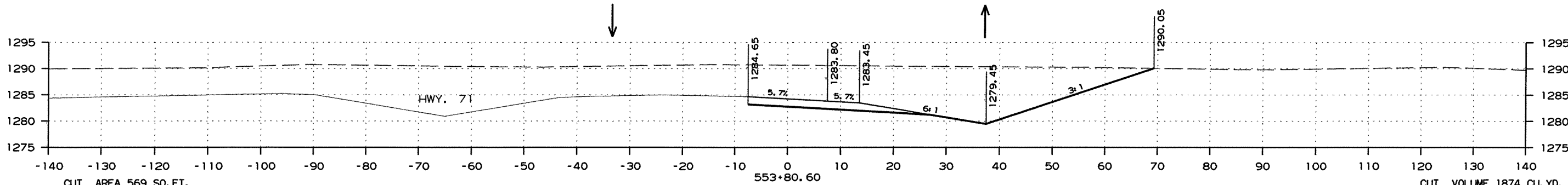
CO. RD. 34 RAMP 2 - CROSS SECTION STA. 547+00 TO STA. 550+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 090293	234	266

② CROSS SECTIONS - CO. RD. 34 - RAMP 2

STA. 553+80.60 - END CO. RD. 34 INTERCHANGE-RAMP 2

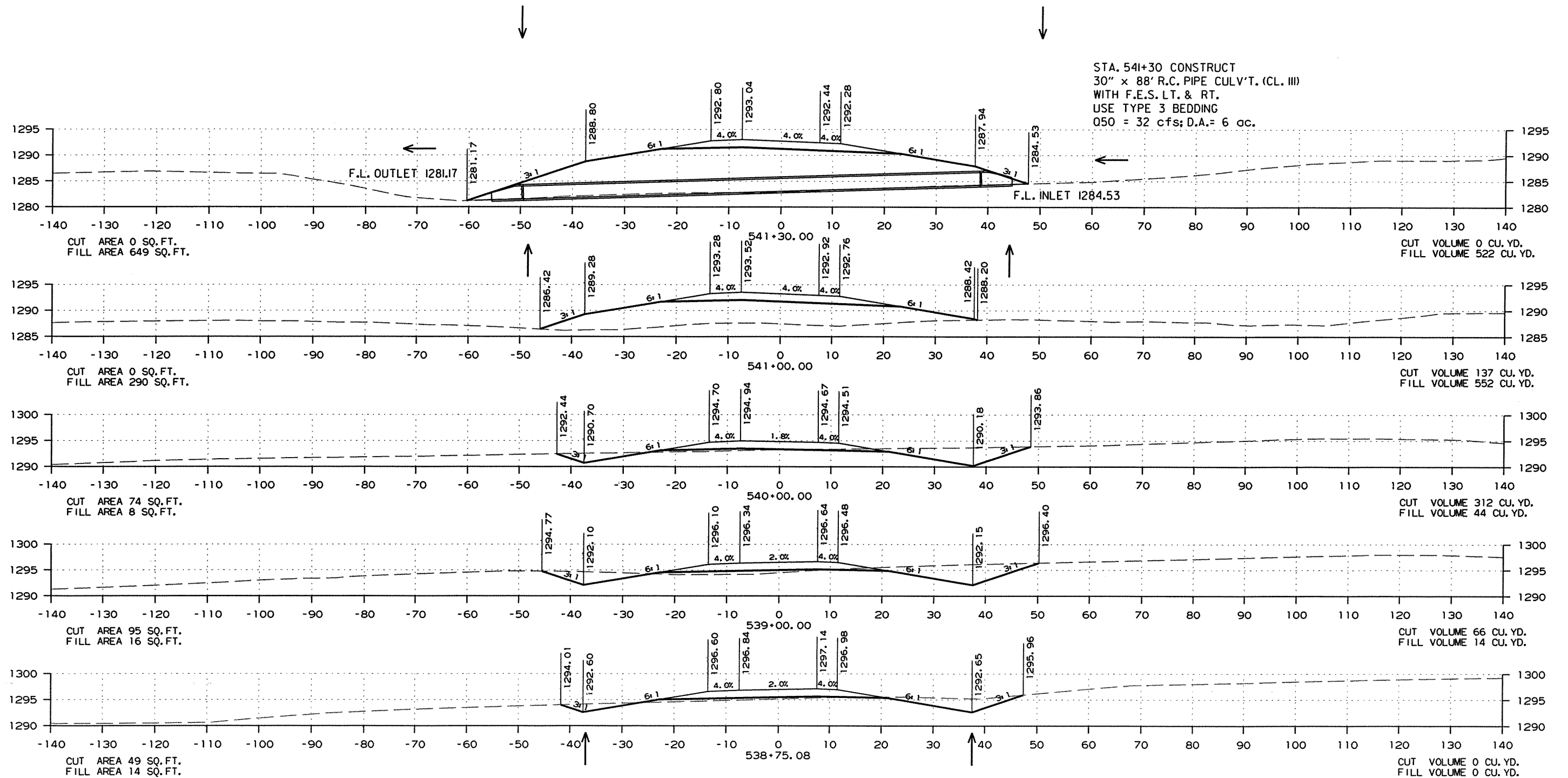


CO. RD. 34 RAMP 2 - CROSS SECTION STA. 551+00 TO STA. 553+81

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.	090293		235	266

② CROSS SECTIONS - CO. RD. 34 - RAMP 3

STA. 541+30 CONSTRUCT
30" x 88' R.C. PIPE CULV'T. (CL. III)
WITH F.E.S. LT. & RT.
USE TYPE 3 BEDDING
Q50 = 32 cfs; D.A. = 6 ac.



STA. 538+75.08 - BEGIN CO. RD. 34 INTERCHANGE-RAMP 3

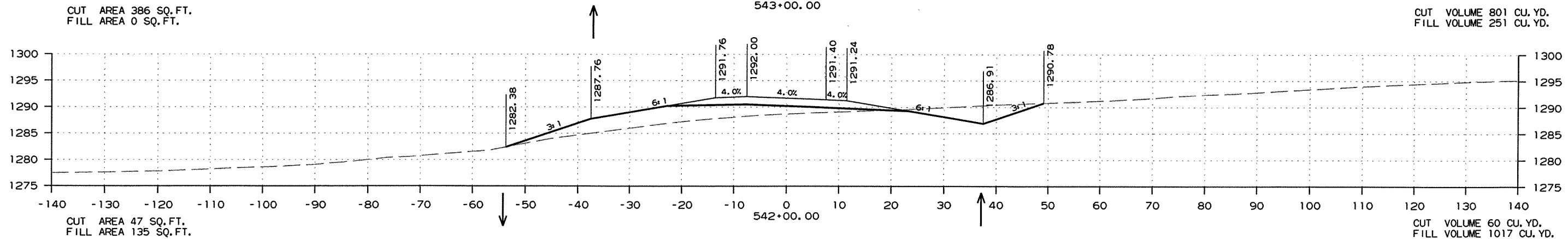
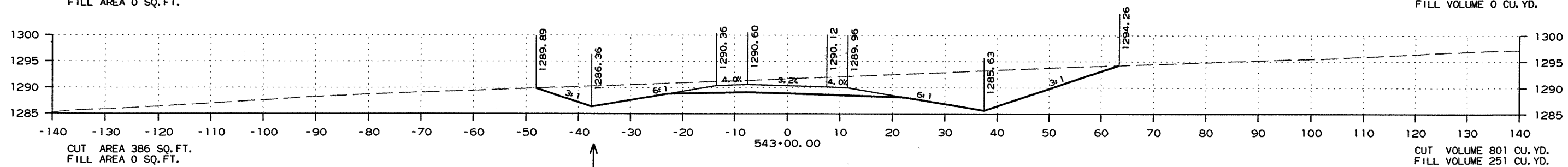
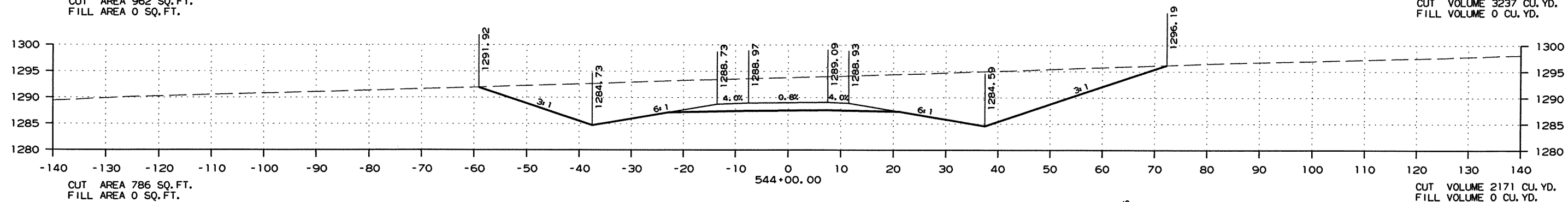
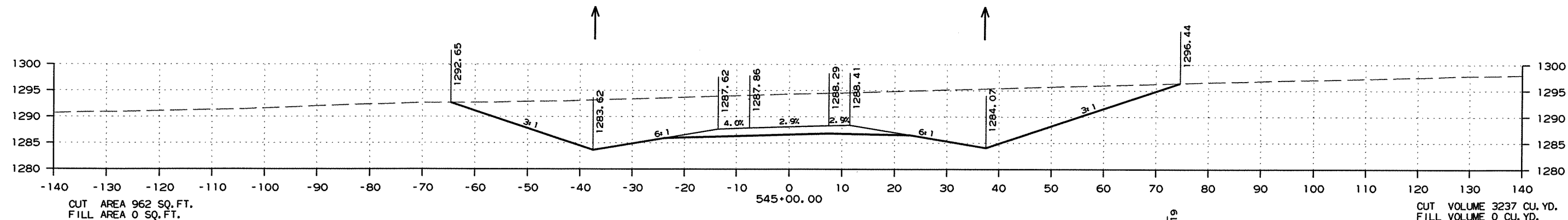
CO. RD. 34 RAMP 3 - CROSS SECTION STA. 538+75 TO STA. 541+30

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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. 090293	236	2160

② CROSS SECTIONS - CO. RD. 34 - RAMP 3



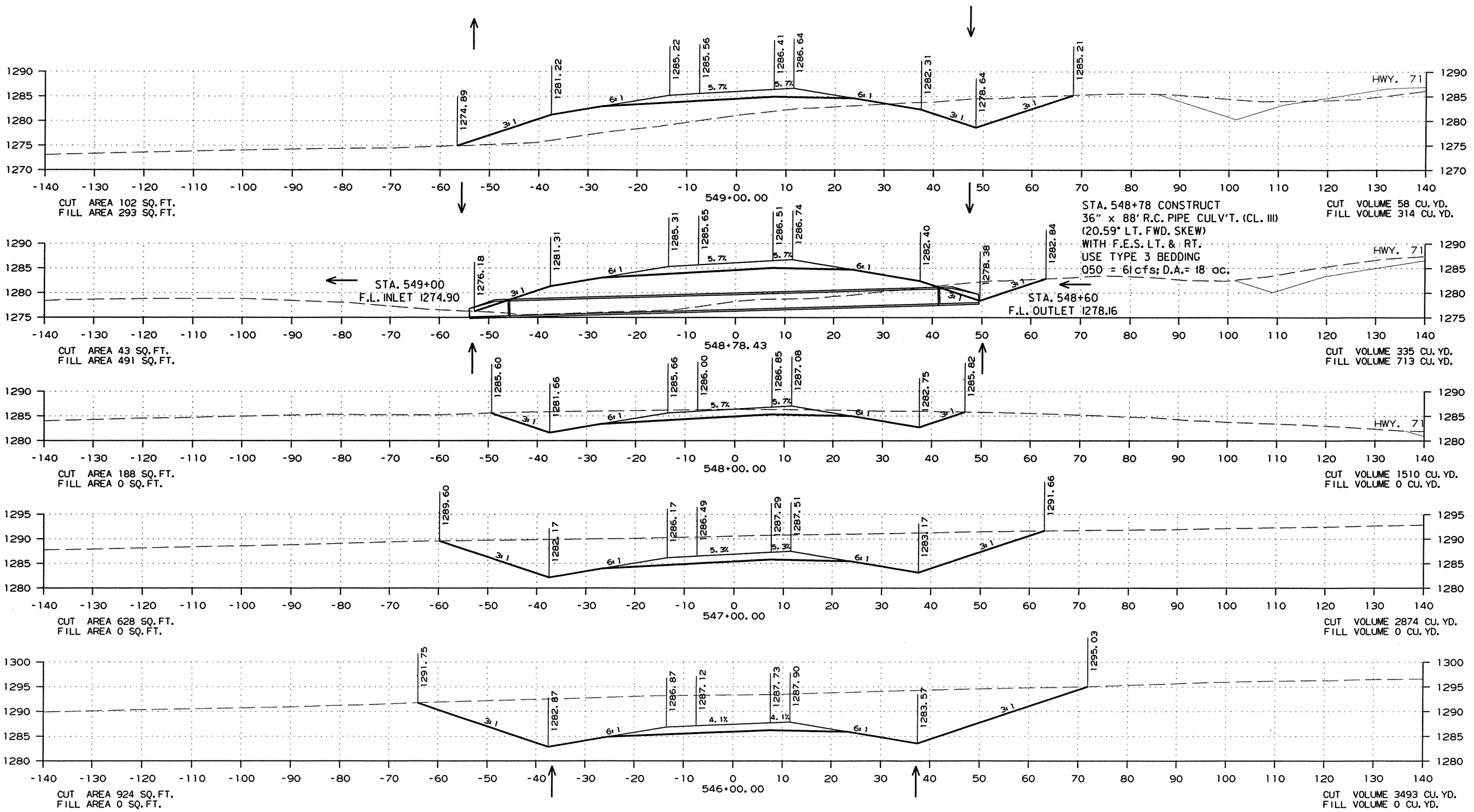
CO. RD. 34 RAMP 3 - CROSS SECTION STA. 542+00 TO STA. 545+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 090293	237	260

② CROSS SECTIONS - CO. RD. 34 - RAMP 3

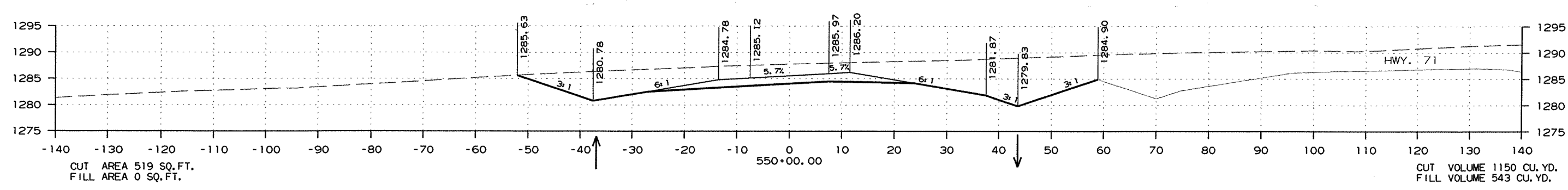
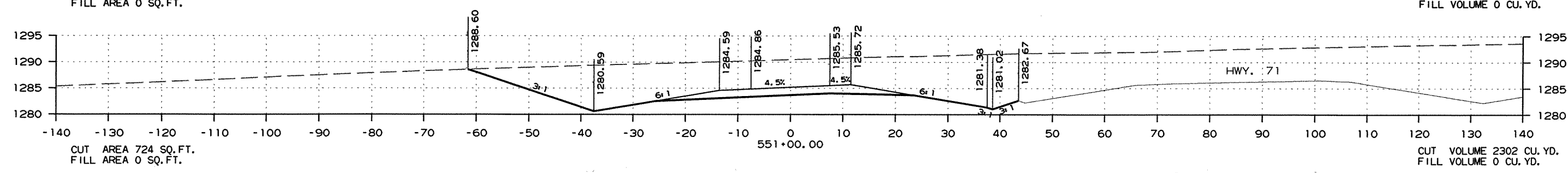
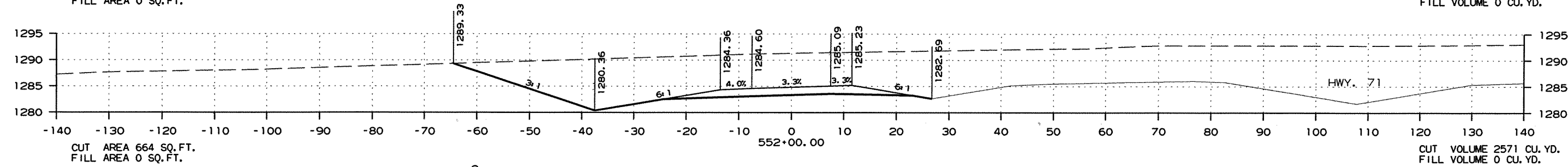
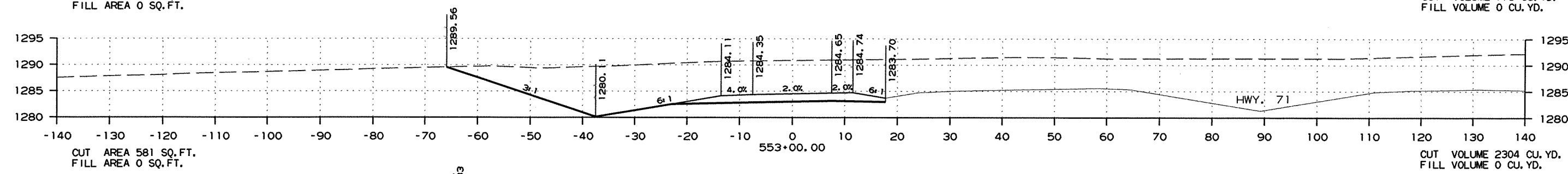
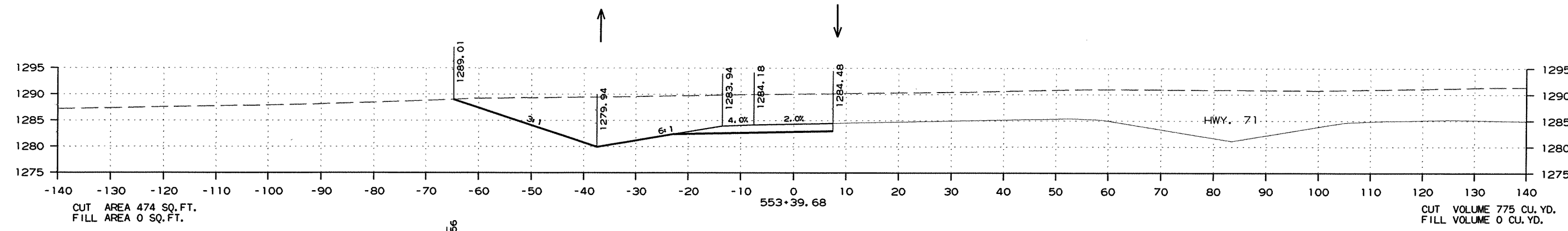


CO. RD. 34 RAMP 3 - CROSS SECTION STA. 546+00 TO STA. 549+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090293		238	246

② CROSS SECTIONS - CO. RD. 34 - RAMP 3

STA. 553+49.68 - END CO. RD. 34 INTERCHANGE-RAMP 3

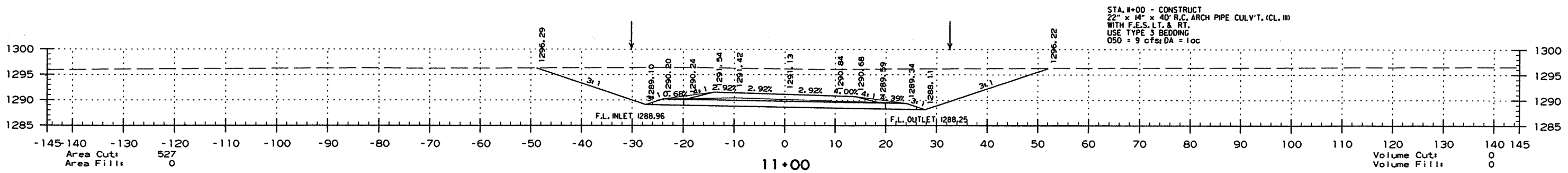
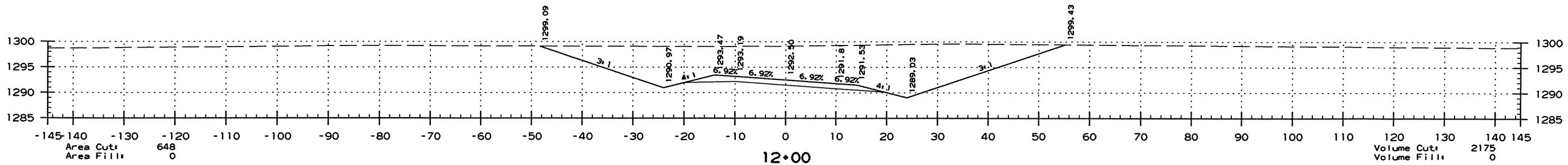
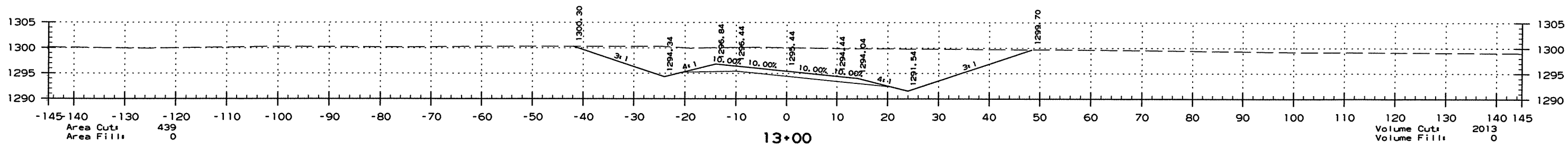
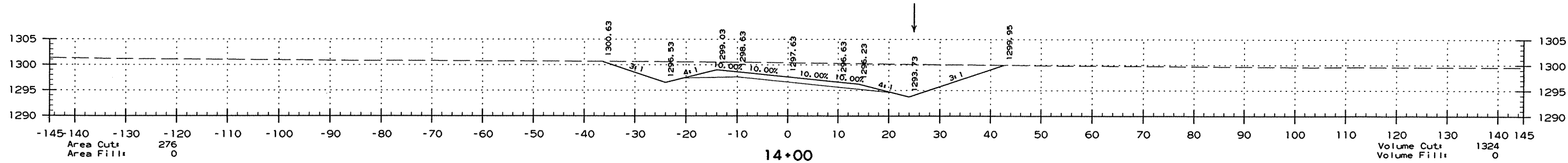


CO. RD. 34 RAMP 3 - CROSS SECTION STA. 550+00 TO STA. 553+40

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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. 090293	239	240

② CROSS SECTIONS - SOUTH FRONTAGE RD.

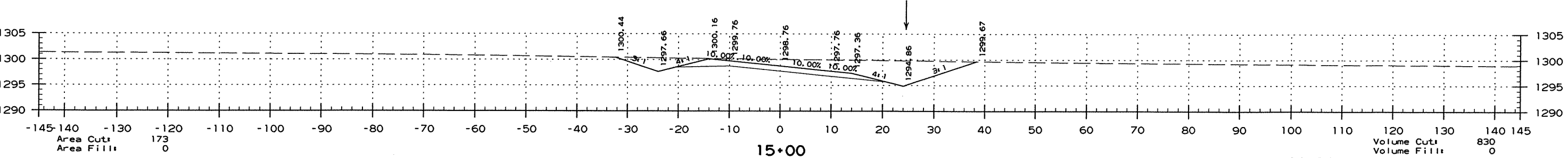
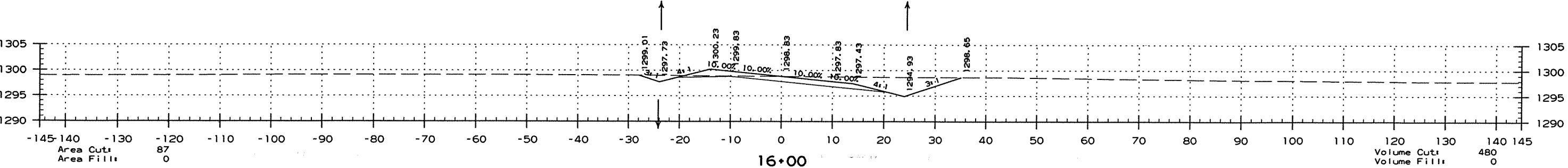
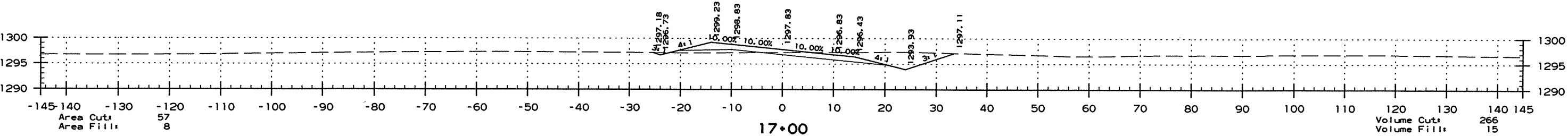
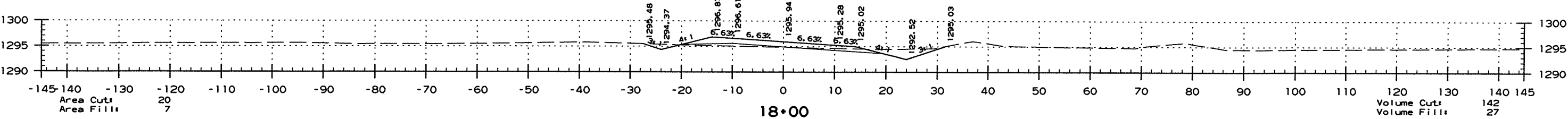
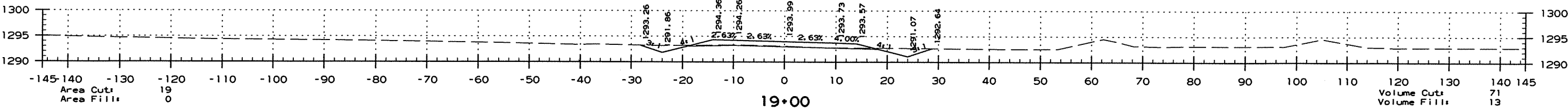
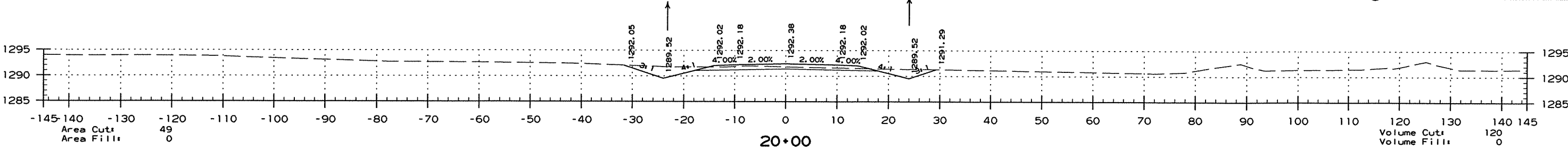


STA. 10+10.00 - BEGIN CO. RD. 34-SOUTH FRONTAGE RD

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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. 090293			240	240

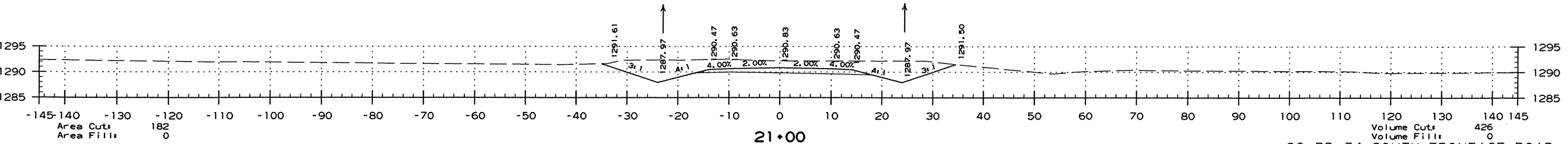
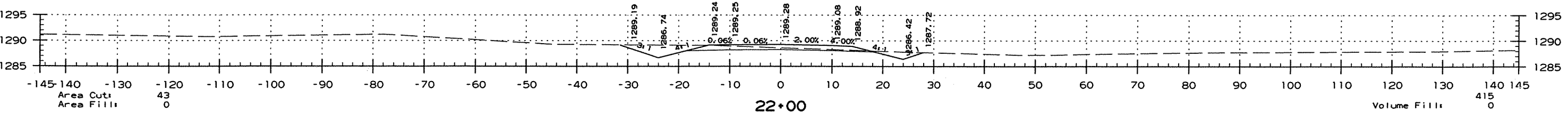
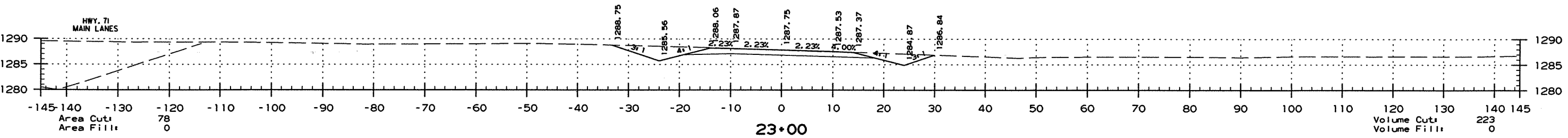
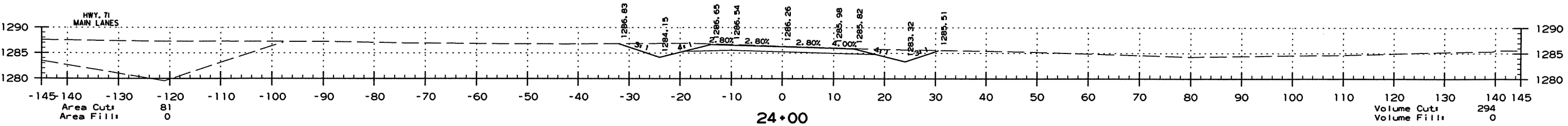
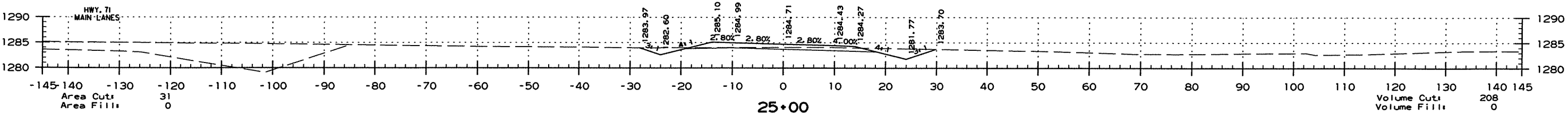
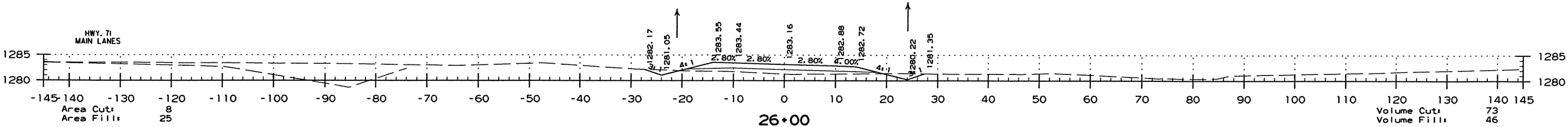
2 CROSS SECTIONS - SOUTH FRONTAGE RD.



CO. RD. 34 SOUTH FRONTAGE ROAD

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.	090293		241	266

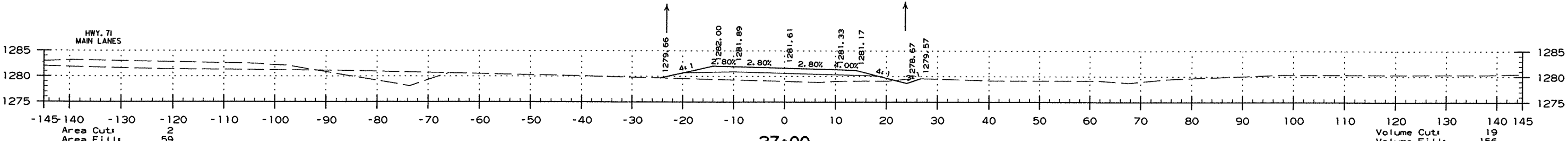
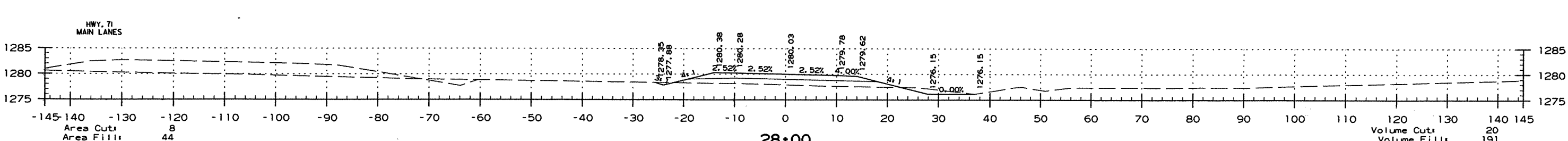
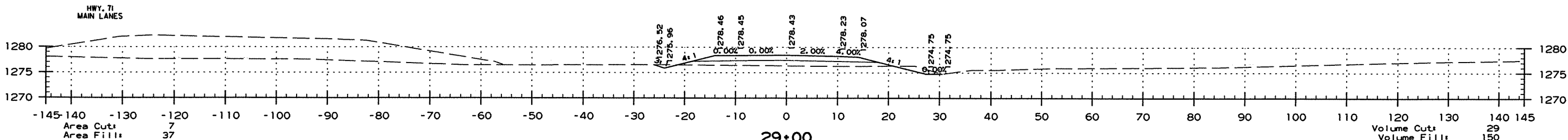
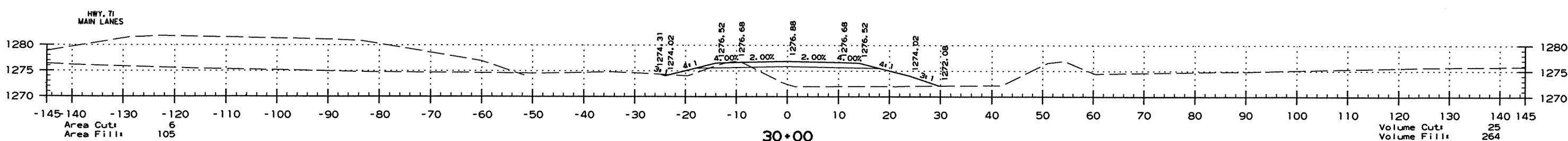
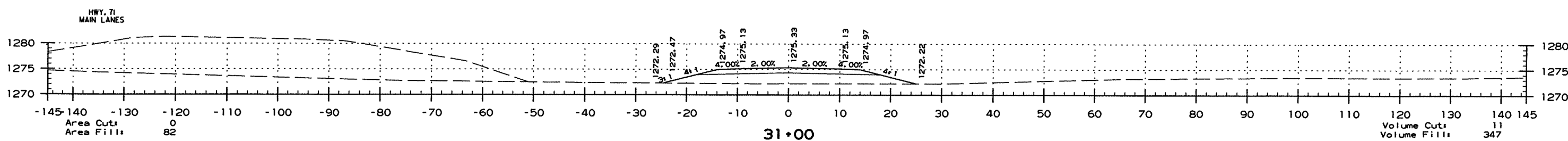
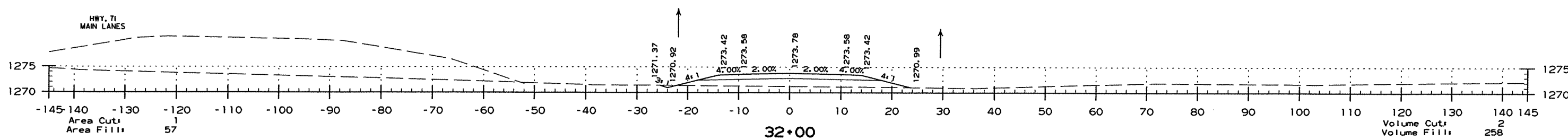
2 CROSS SECTIONS - SOUTH FRONTAGE RD.



CO. RD. 34 SOUTH FRONTAGE ROAD

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. 090293	242	266

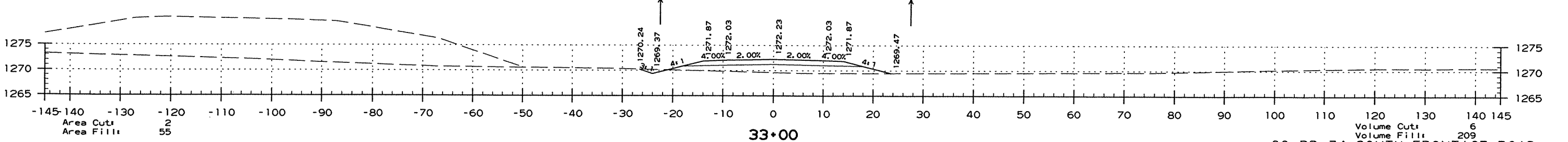
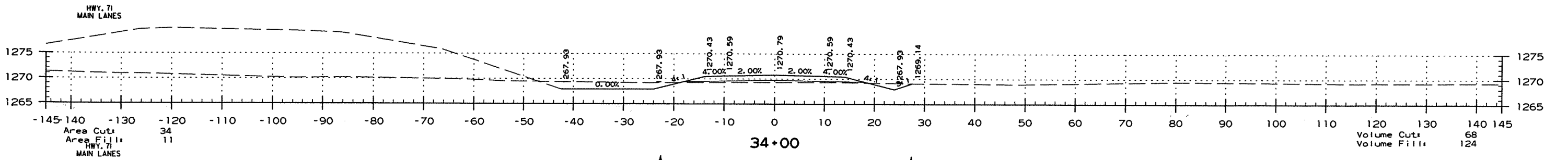
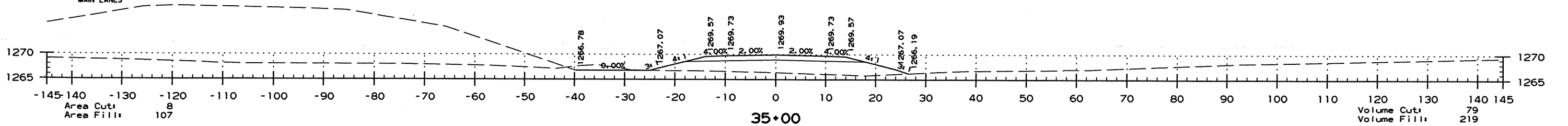
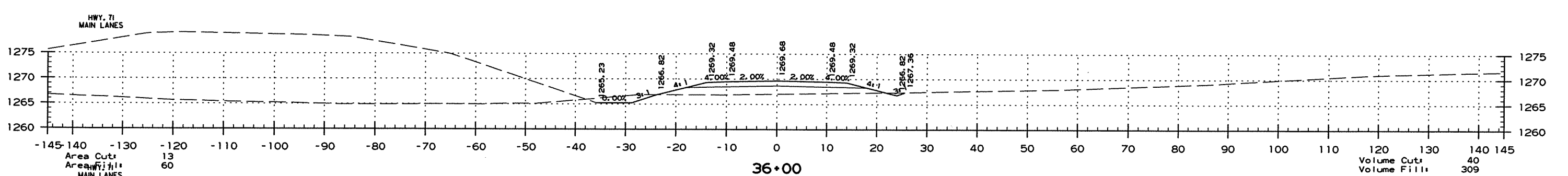
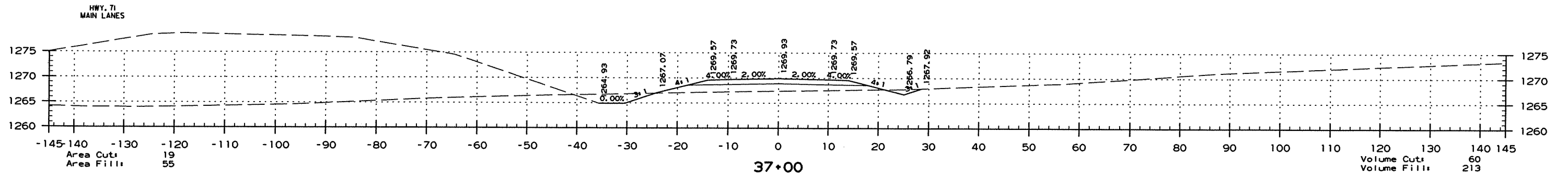
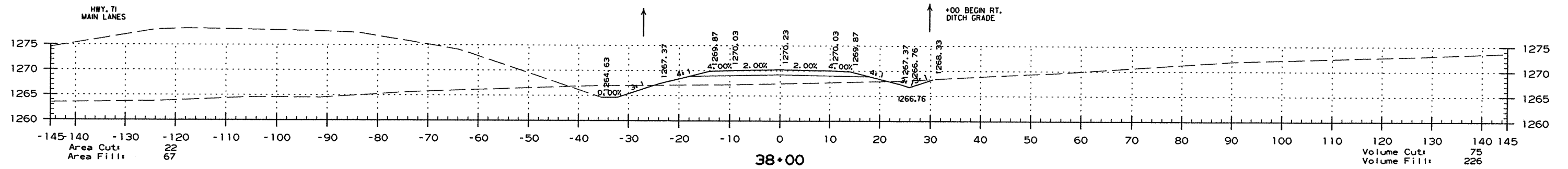
2 CROSS SECTIONS - SOUTH FRONTAGE RD.



CO. RD. 34 SOUTH FRONTAGE ROAD

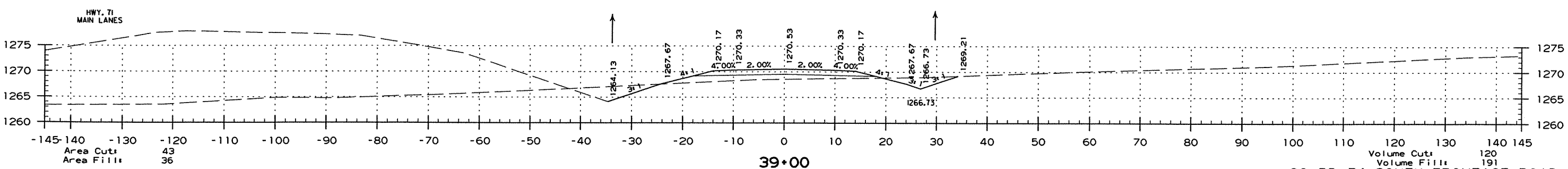
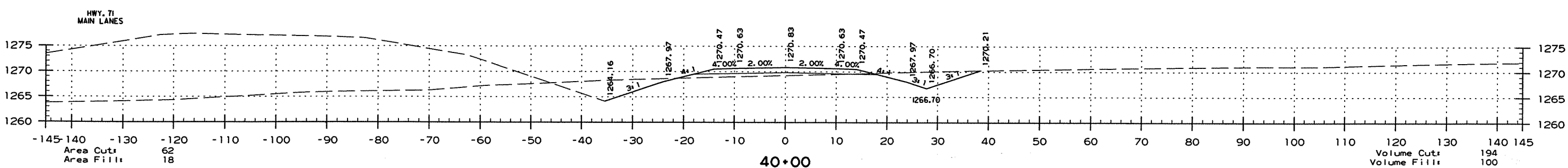
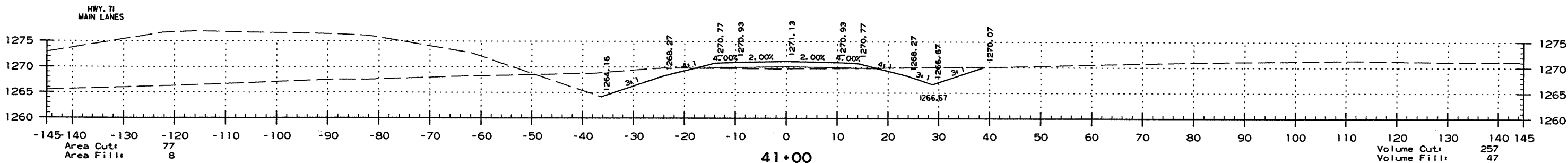
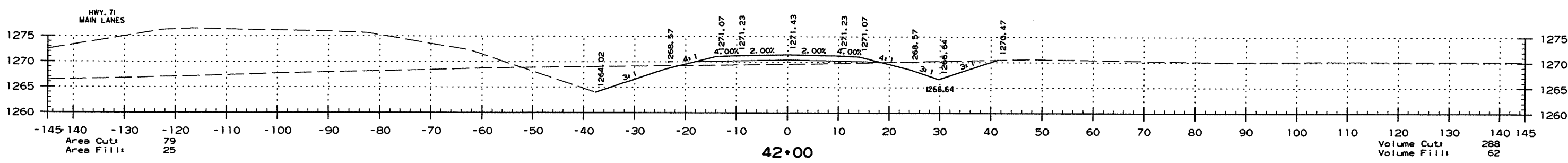
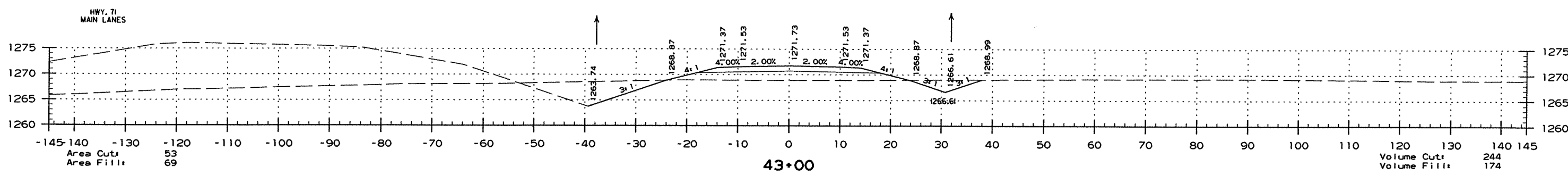
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2 CROSS SECTIONS - SOUTH FRONTAGE RD.



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. 090293			244	266

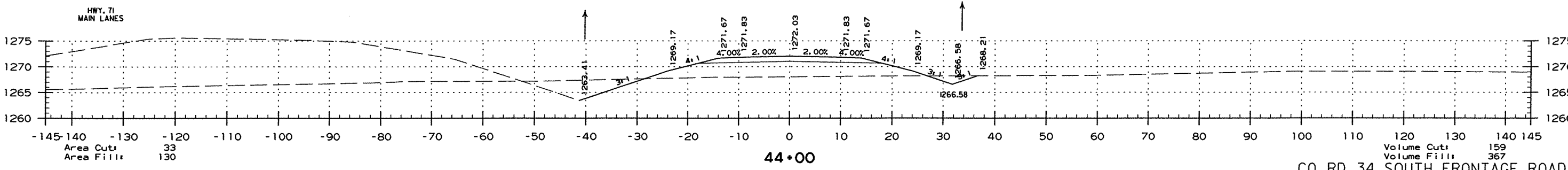
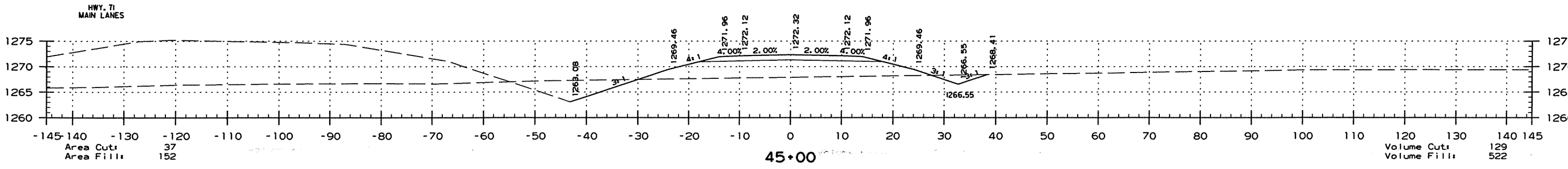
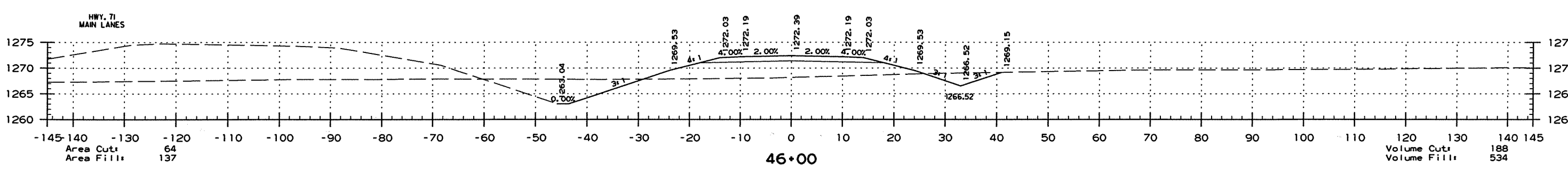
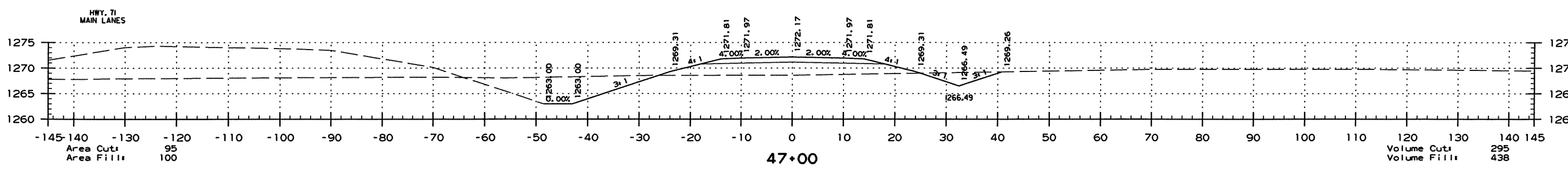
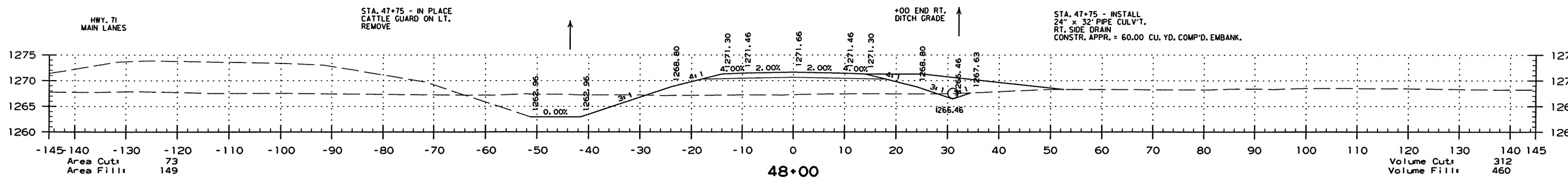
2 CROSS SECTIONS - SOUTH FRONTAGE RD.



CO. RD. 34 SOUTH FRONTAGE ROAD

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. 090293			245	266

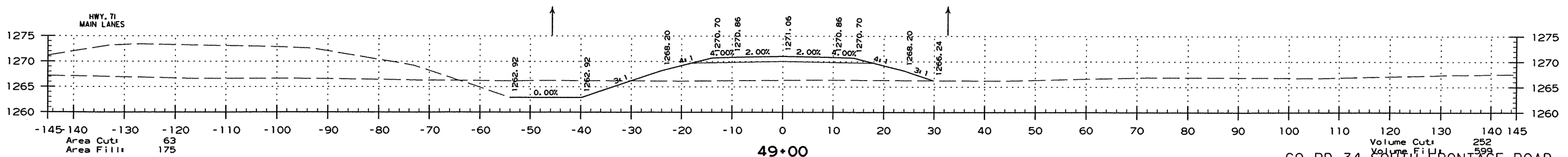
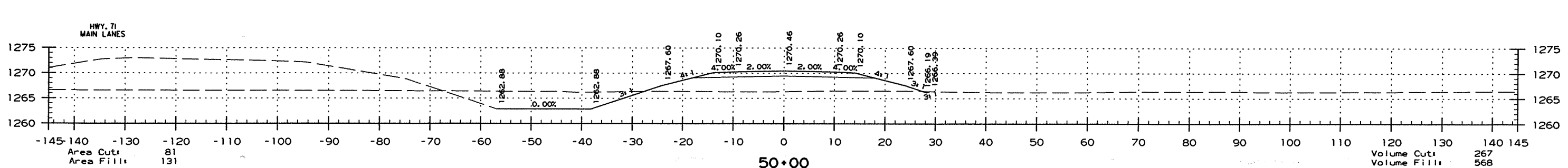
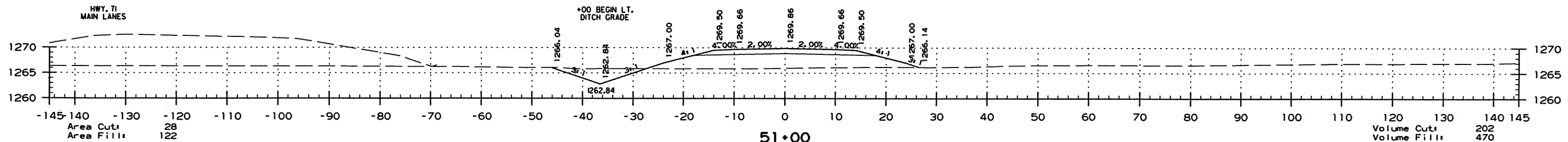
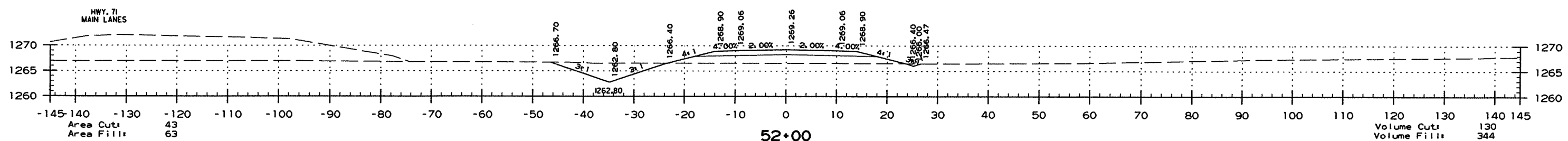
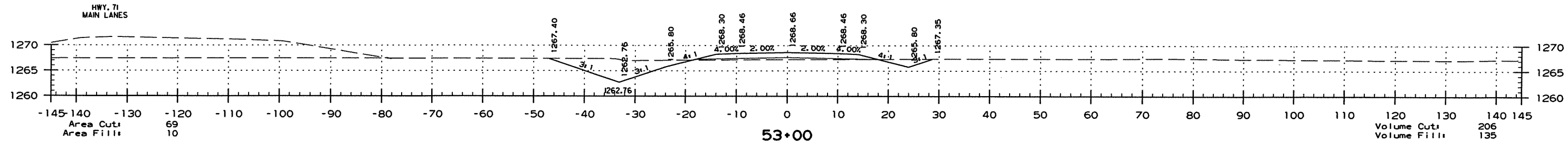
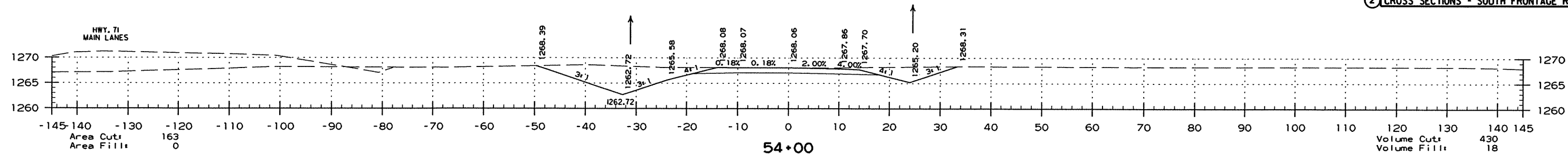
2 CROSS SECTIONS - SOUTH FRONTAGE RD.



CO. RD. 34 SOUTH FRONTAGE ROAD

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.	090293		246	260

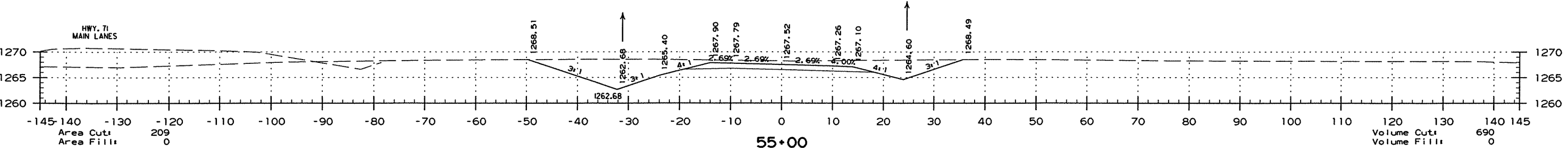
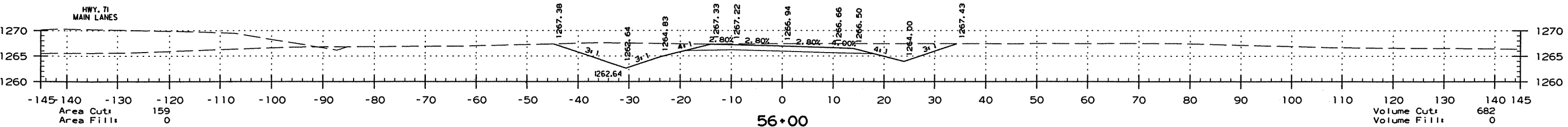
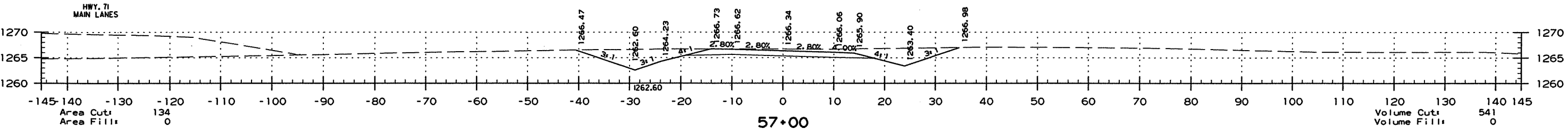
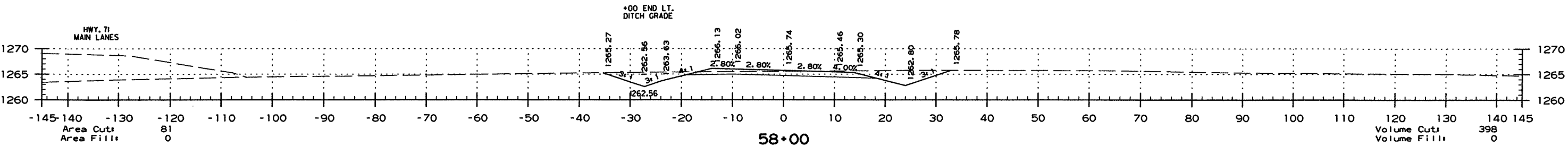
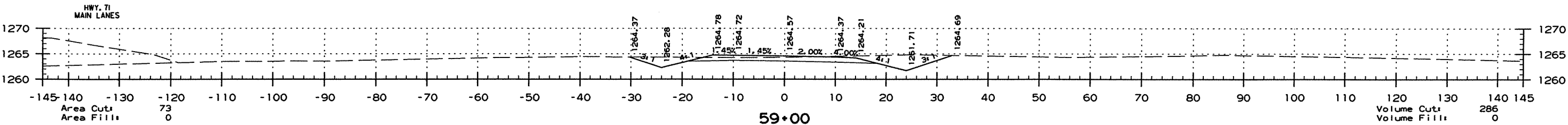
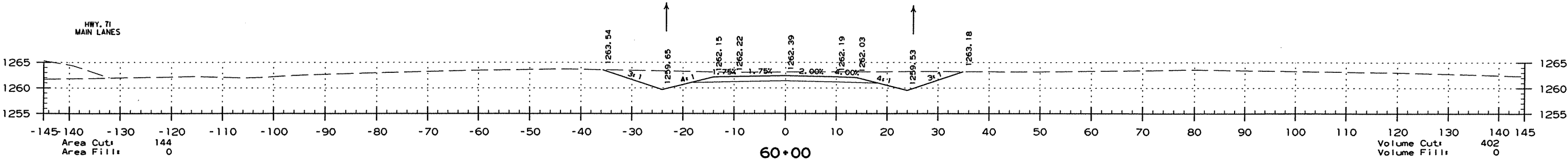
2 CROSS SECTIONS - SOUTH FRONTAGE RD.



CO. RD. 34 SOUTH FRONTAGE ROAD

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.	090293		247	2166

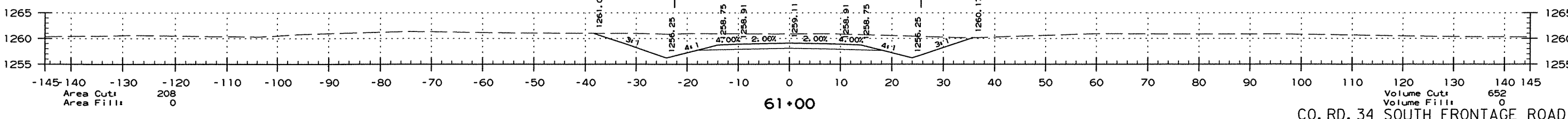
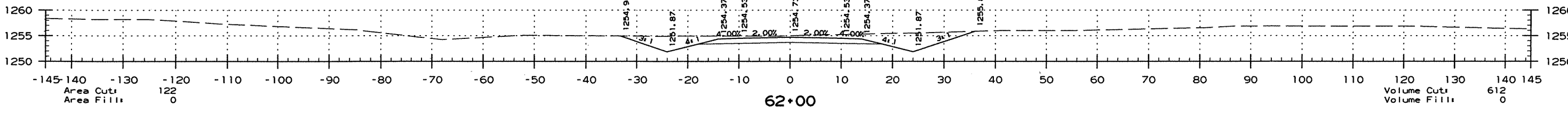
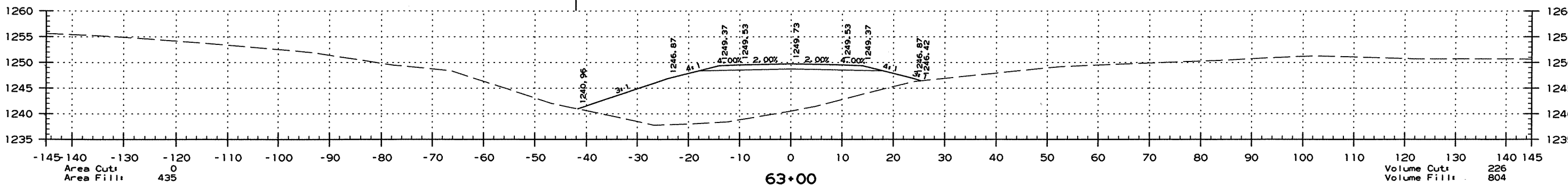
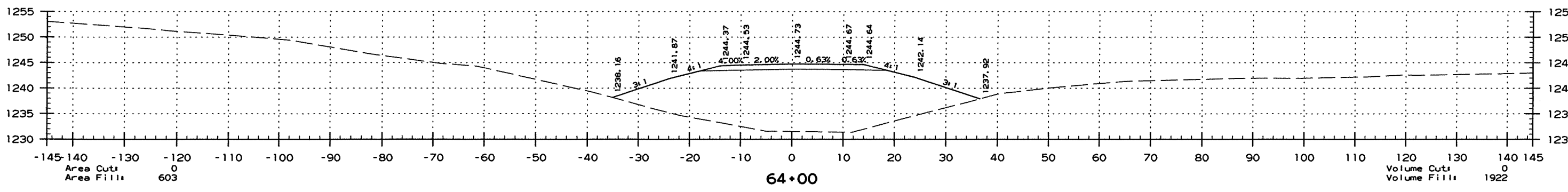
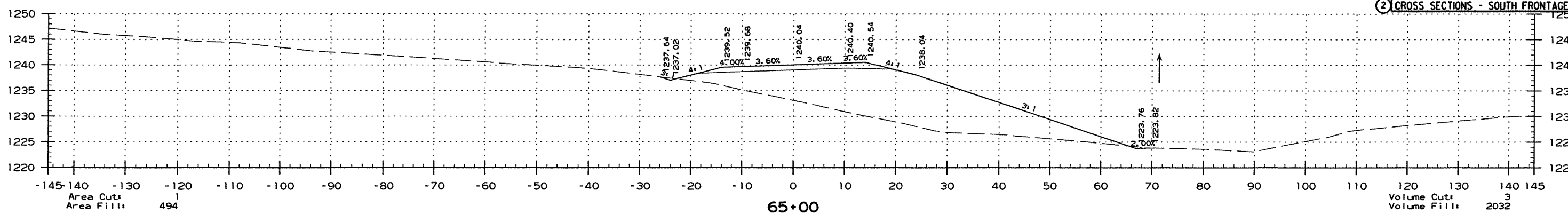
2 CROSS SECTIONS - SOUTH FRONTAGE RD.



CO. RD. 34 SOUTH FRONTAGE ROAD

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. 090293	248	216

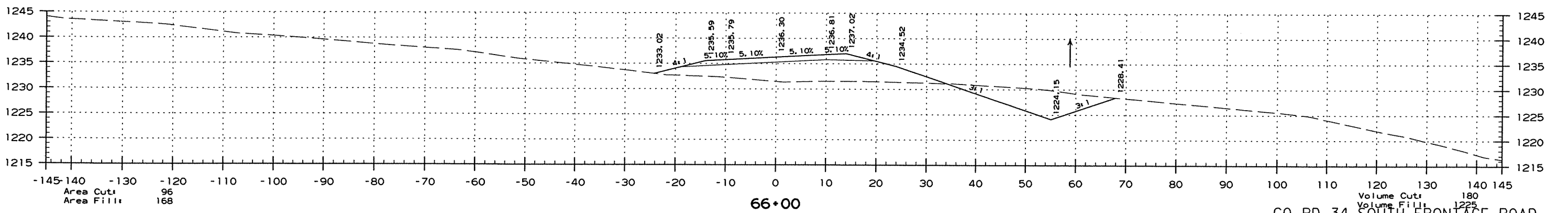
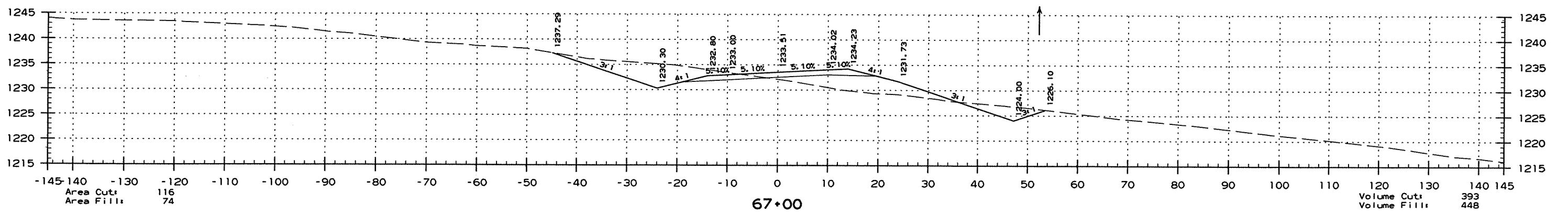
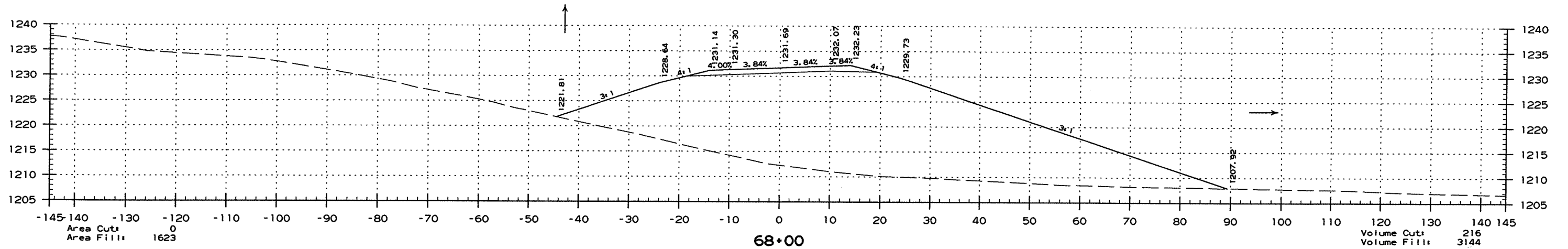
2 CROSS SECTIONS - SOUTH FRONTAGE RD.



CO. RD. 34 SOUTH FRONTAGE ROAD

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. 090293			249	260

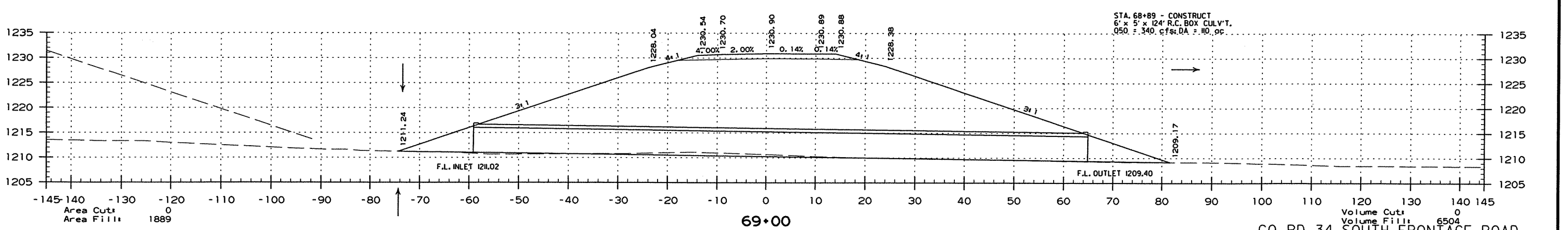
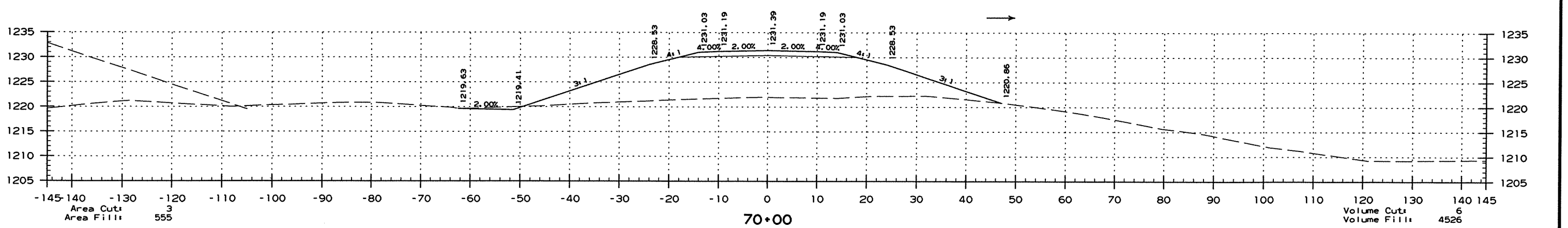
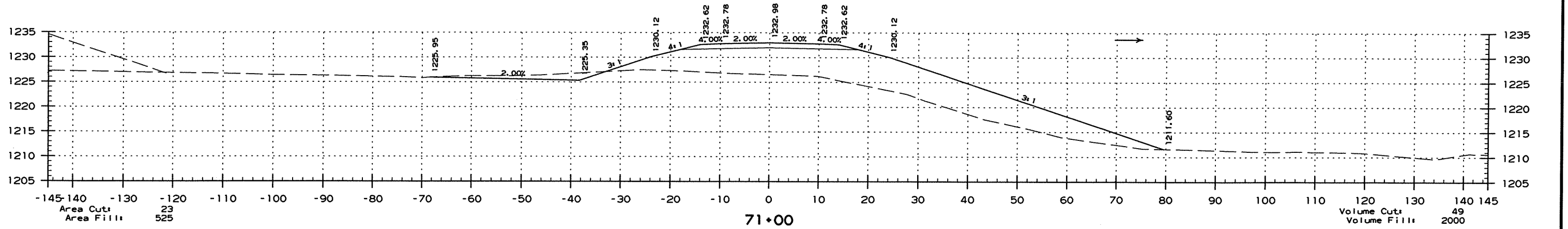
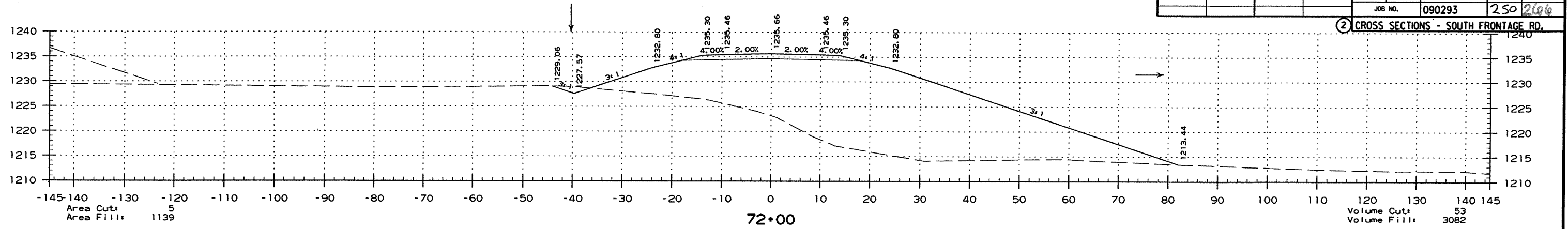
2 CROSS SECTIONS - SOUTH FRONTAGE RD.



CO. RD. 34 SOUTH FRONTAGE ROAD

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. 090293	250	266

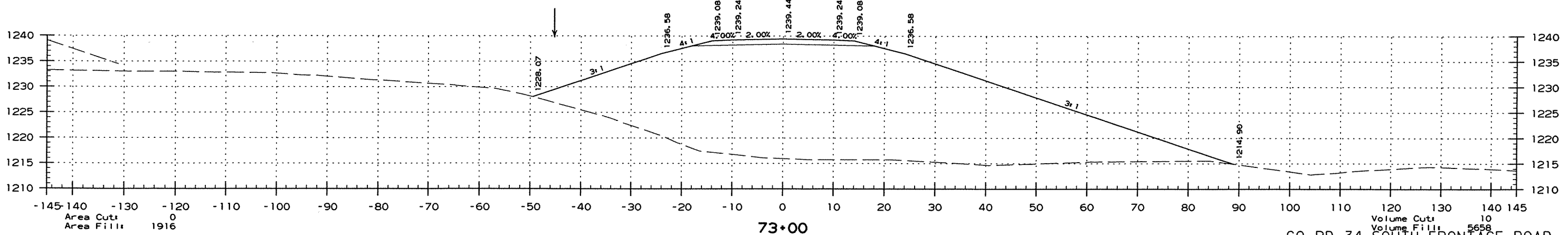
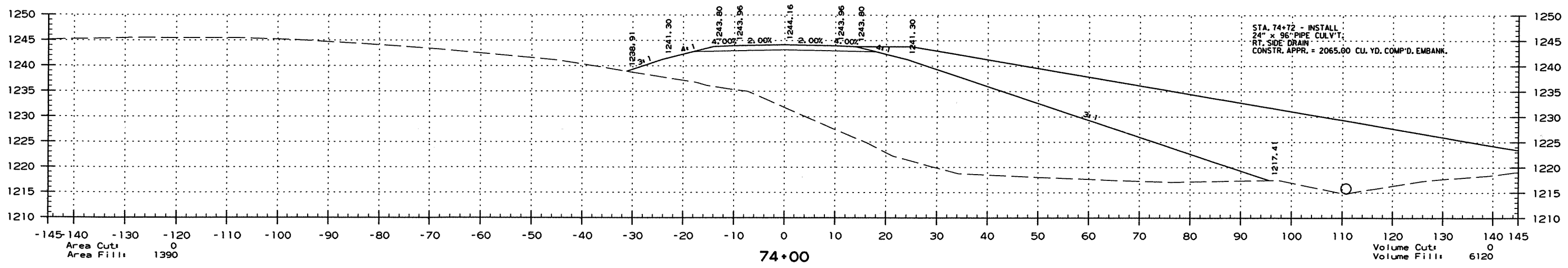
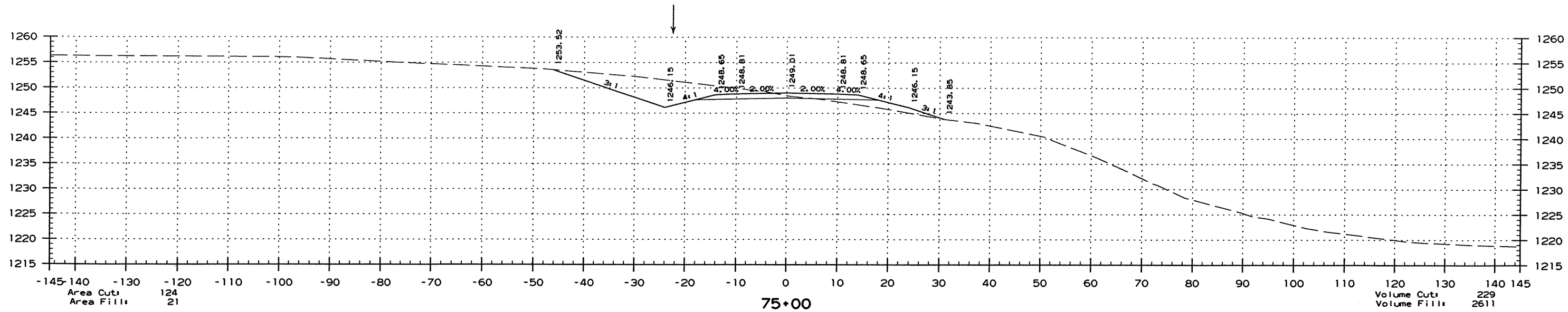
② CROSS SECTIONS - SOUTH FRONTAGE RD.



CO. RD. 34 SOUTH FRONTAGE ROAD

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. 090293		251	260	

2 CROSS SECTIONS - SOUTH FRONTAGE RD.



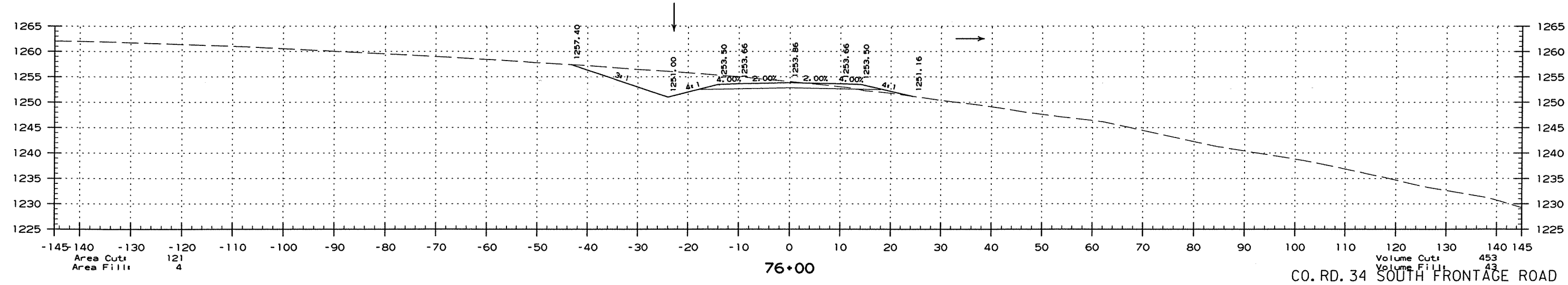
CO. RD. 34 SOUTH FRONTAGE ROAD

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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. 090293	252	2100

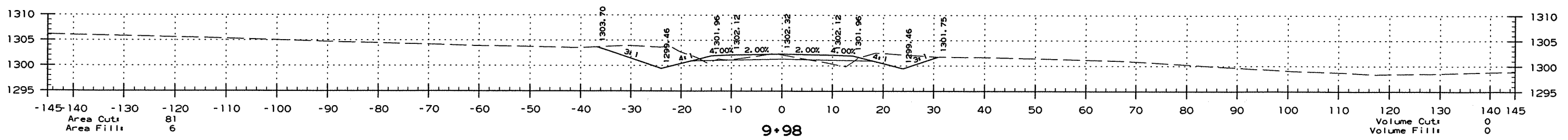
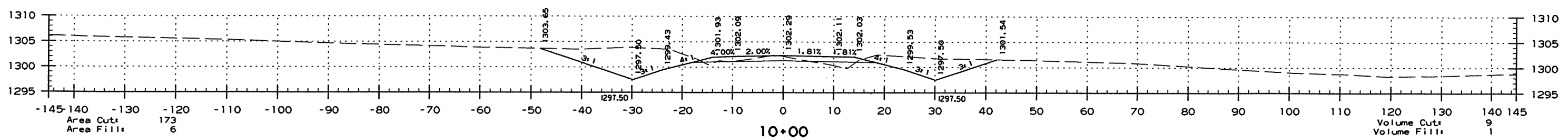
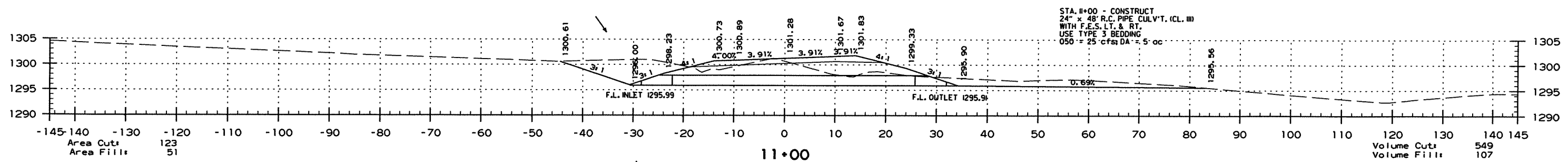
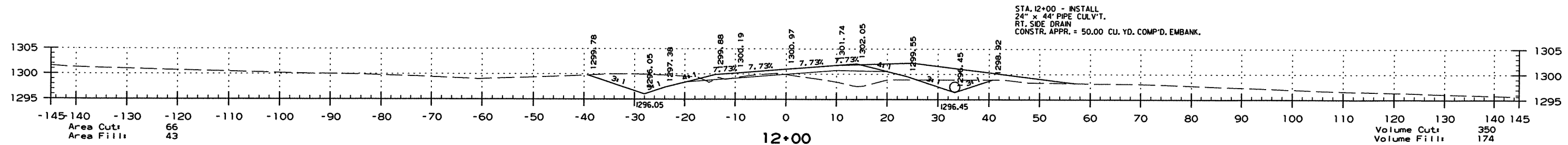
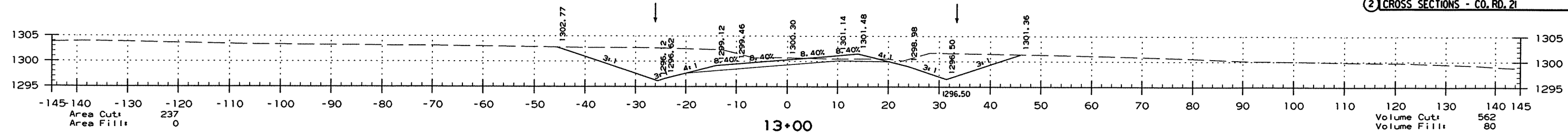
2 CROSS SECTIONS - SOUTH FRONTAGE RD.

STA. 76+61.00 - END CO. RD. 34-SOUTH FRONTAGE RD.



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.	090293		253	260

② CROSS SECTIONS - CO. RD. 21



STA. 9+98 - BEGIN RELOCATED CO. RD. 21

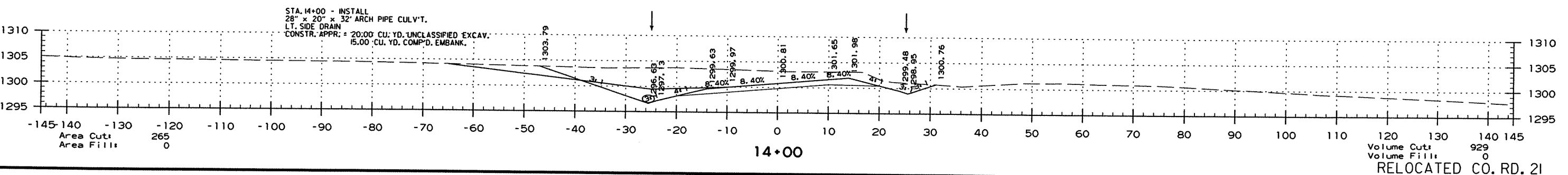
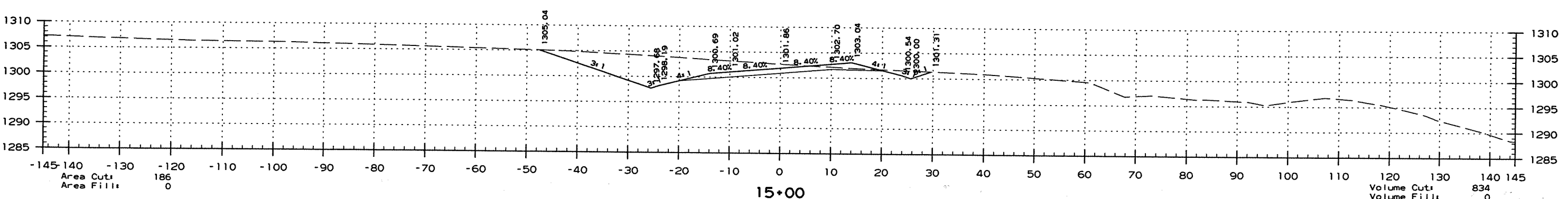
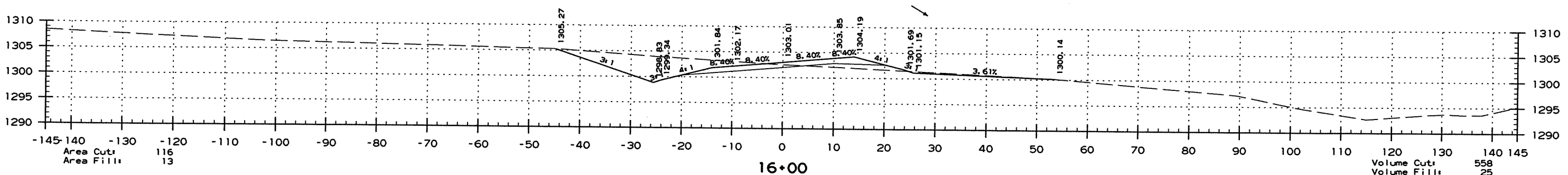
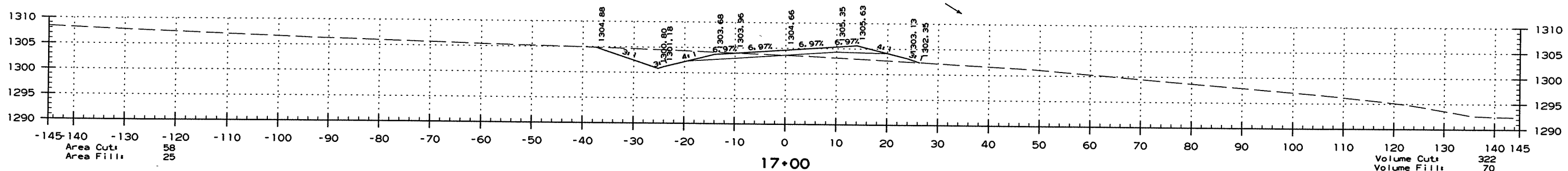
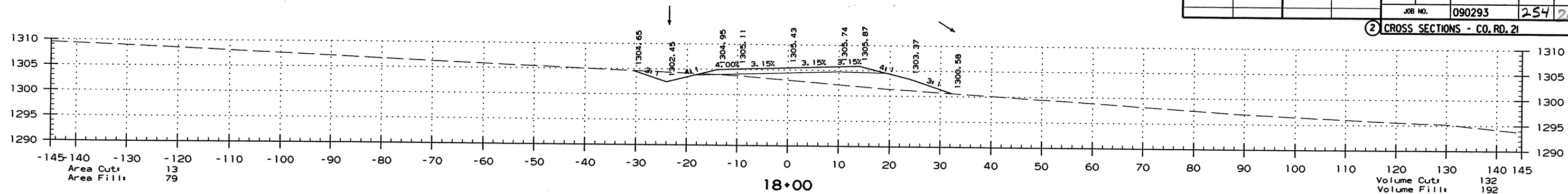
RELOCATED CO. RD. 21

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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. 090293	254	260

② CROSS SECTIONS - CO. RD. 21

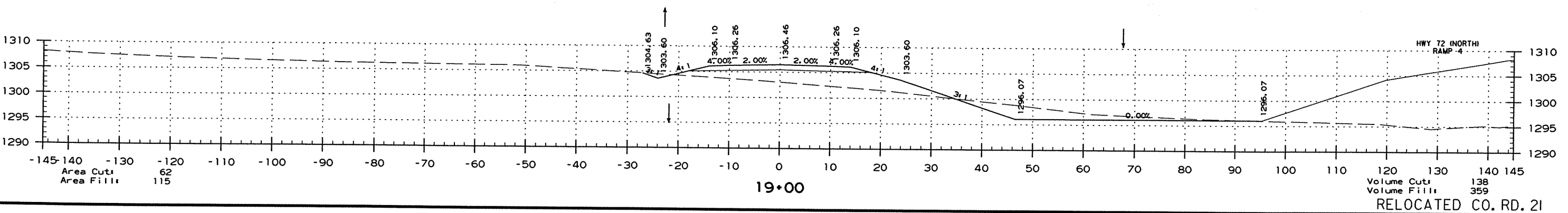
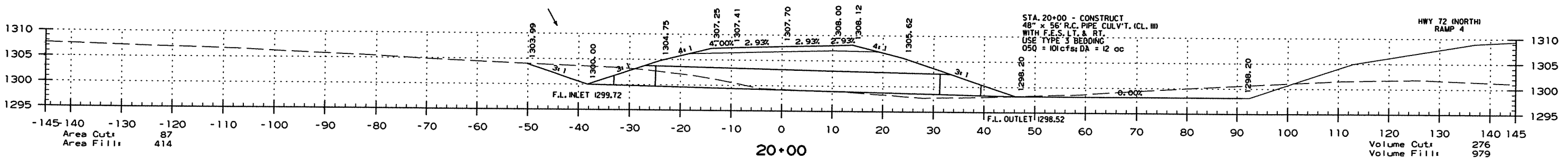
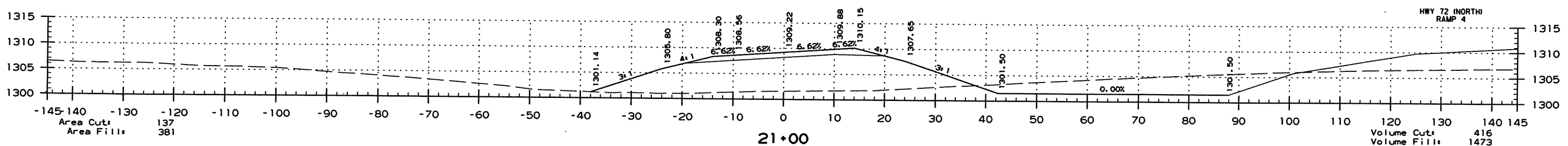
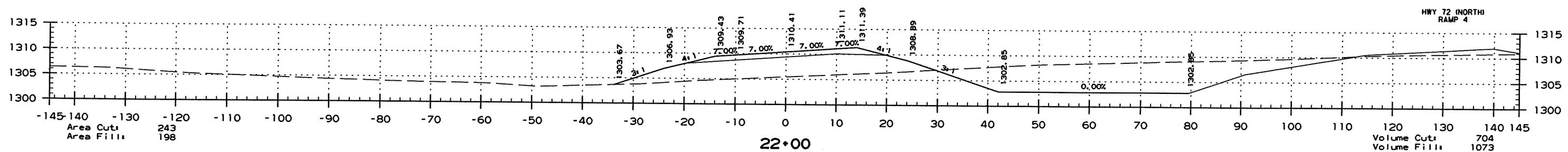
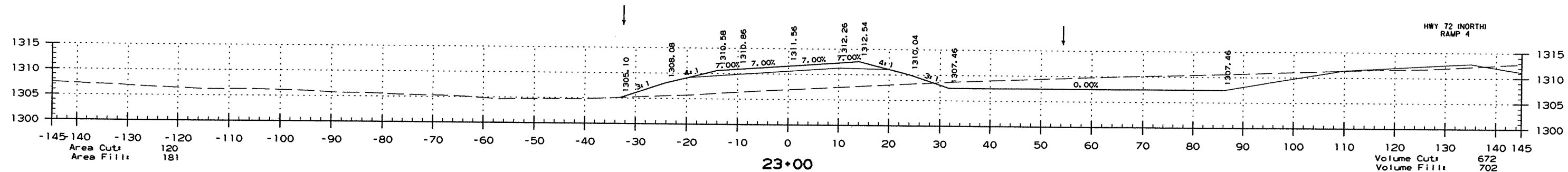


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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090293		255	260

② CROSS SECTIONS - CO. RD. 21

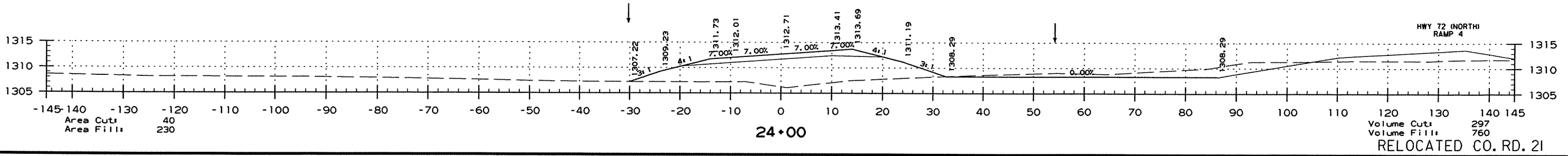
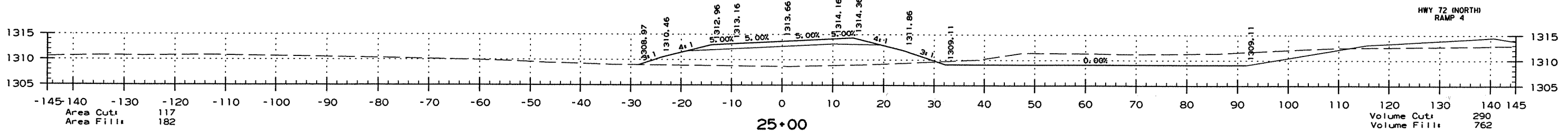
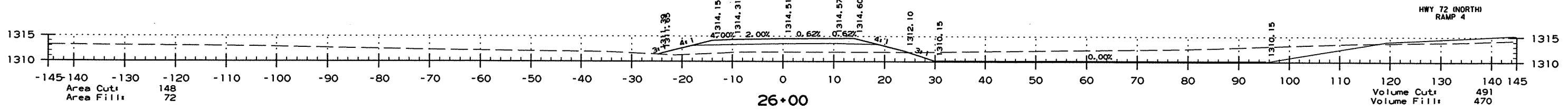
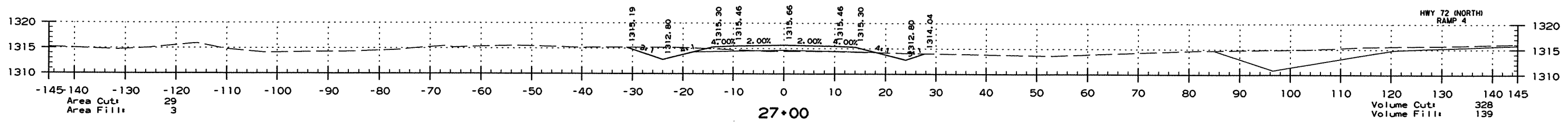
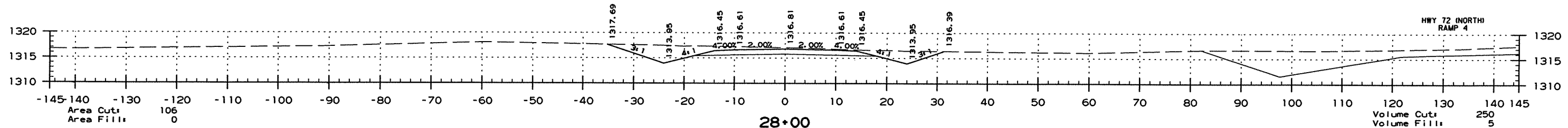
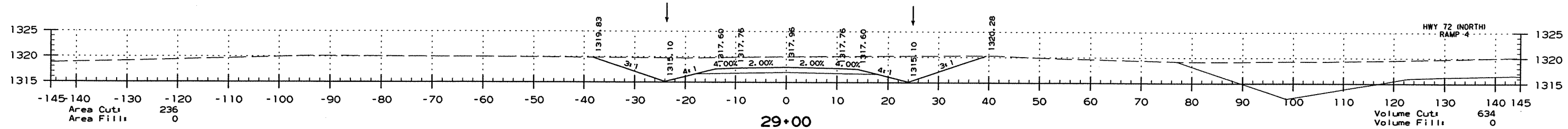


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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090293		256	2100

2 CROSS SECTIONS - CO. RD. 21

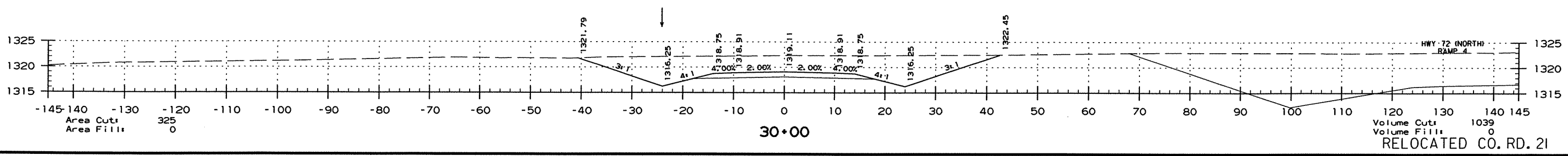
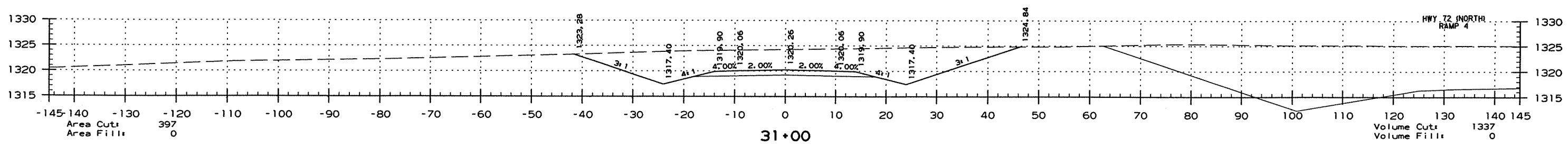
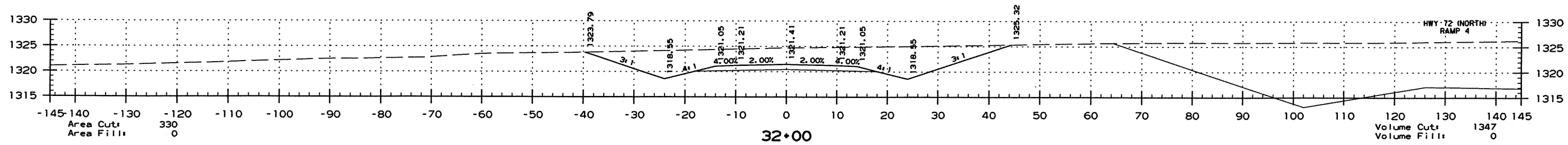
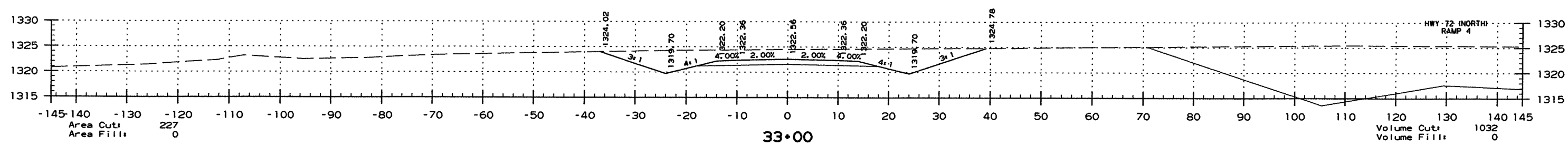
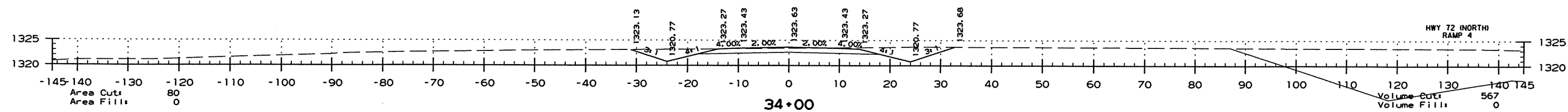
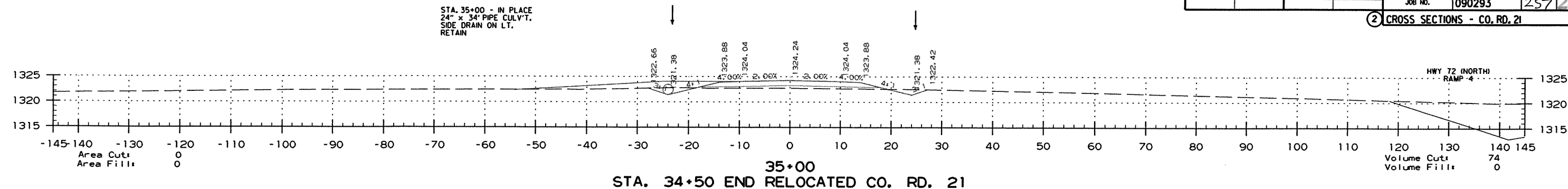


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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 090293	257	266

2 CROSS SECTIONS - CO. RD. 21



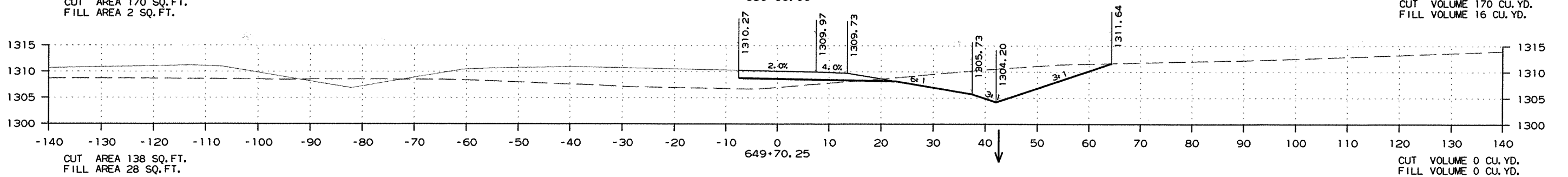
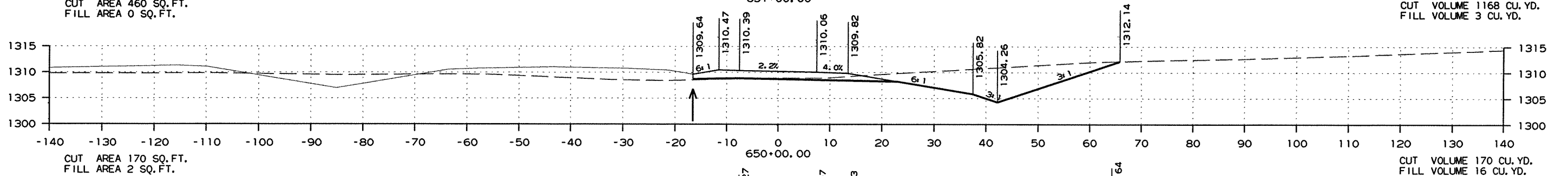
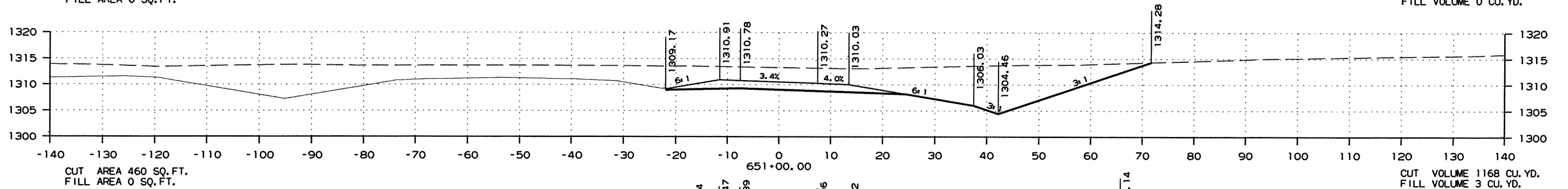
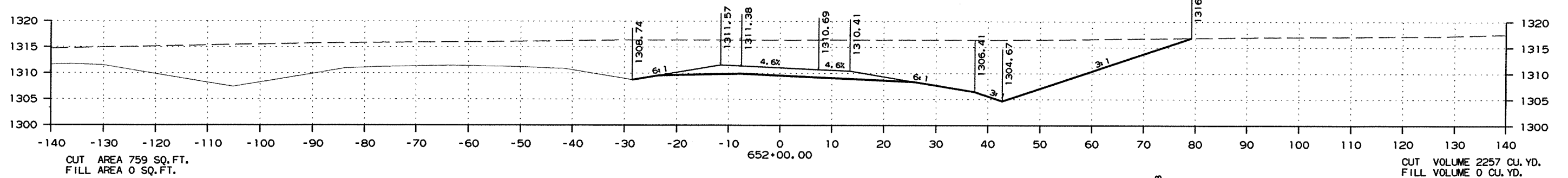
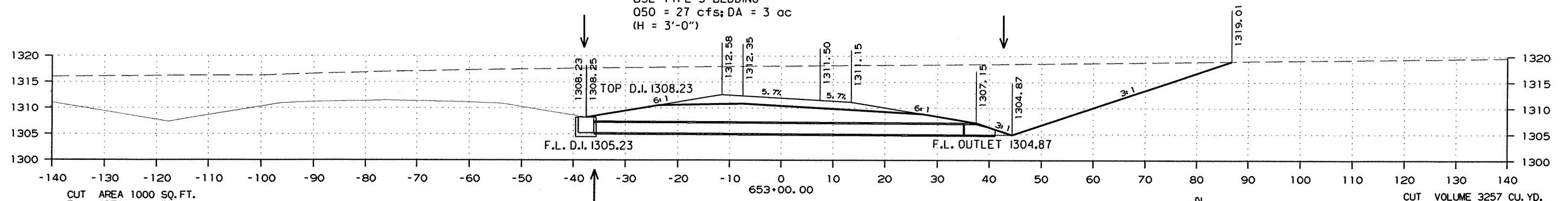
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 090293	258	260

2 CROSS SECTIONS - HWY. 72 (NORTH) RAMP 1

STA. 653+00 - CONSTRUCT
3'-0" x 4'-0" TYPE RM DROP INLET
35.21' LT. OF RAMP 1
WITH 24" x 72" R.C. PIPE OUTLET (CL. III)
WITH F.E.S. RT.
USE TYPE 3 BEDDING
Q50 = 27 cfs; DA = 3 ac
(H = 3'-0")



STA. 649+70.25 - BEGIN HWY. 72 N. INTERSECTION-RAMP 1

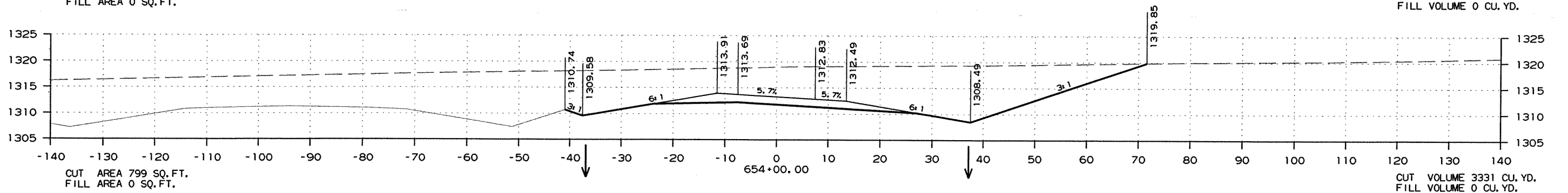
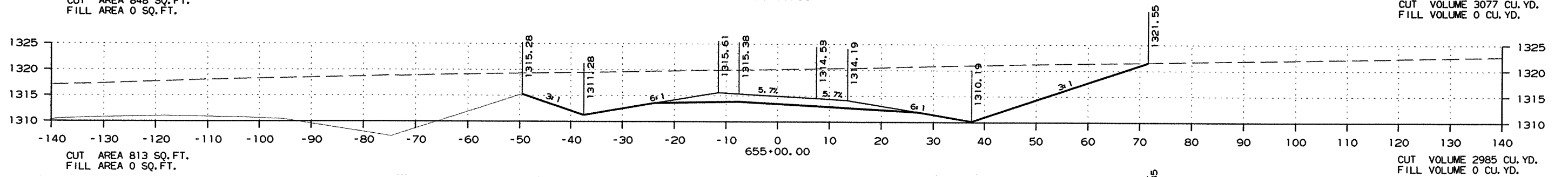
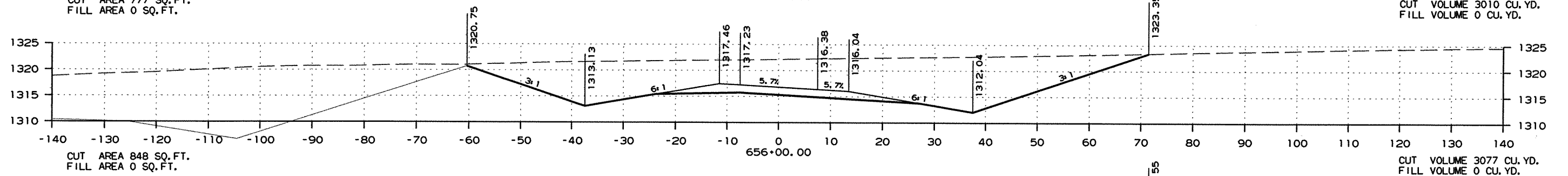
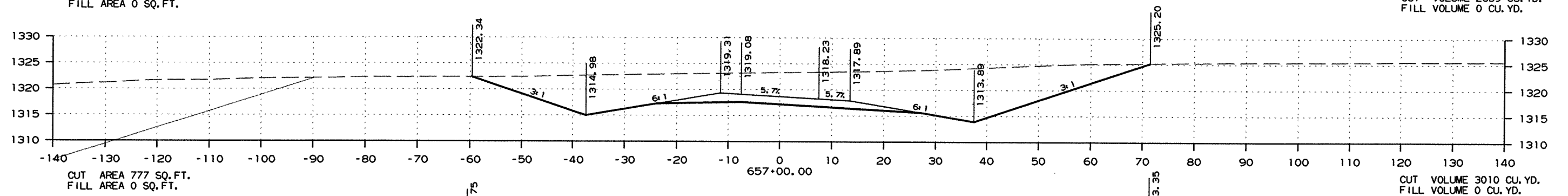
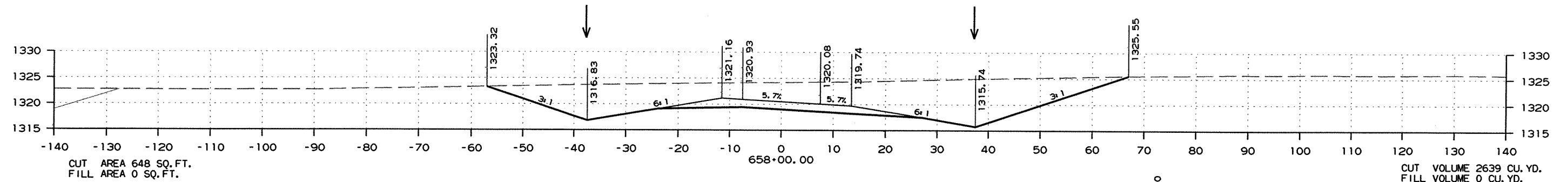
HWY. 72 (NORTH) RAMP 1 - CROSS SECTION STA. 649+70 TO STA. 653+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090293		259	260

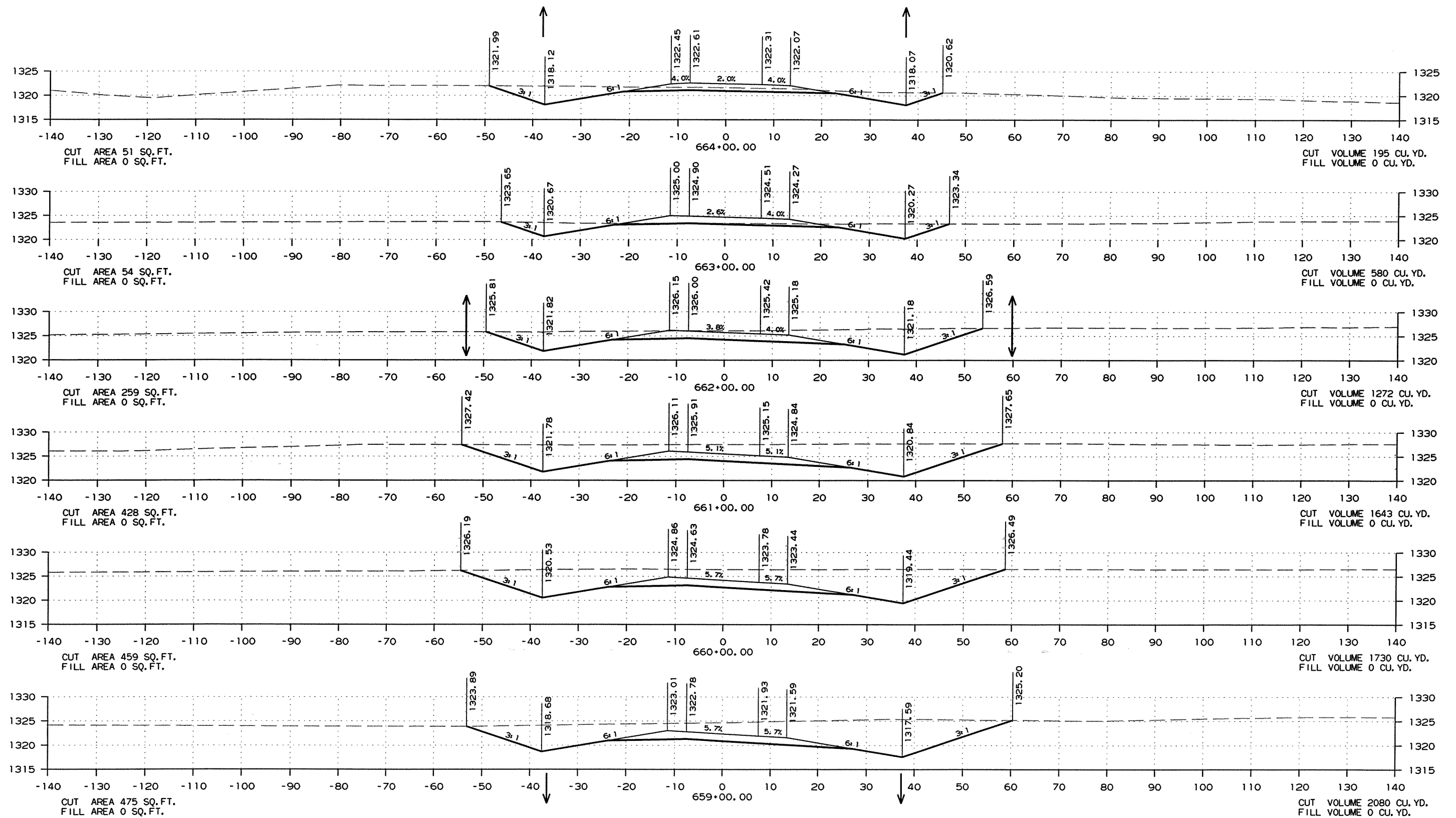
② CROSS SECTIONS - HWY. 72 (NORTH) RAMP 1



HWY. 72 (NORTH) RAMP 1 - CROSS SECTION STA. 654+00 TO STA. 658+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090293		260	260

② CROSS SECTIONS - HWY. 72 (NORTH) RAMP 1



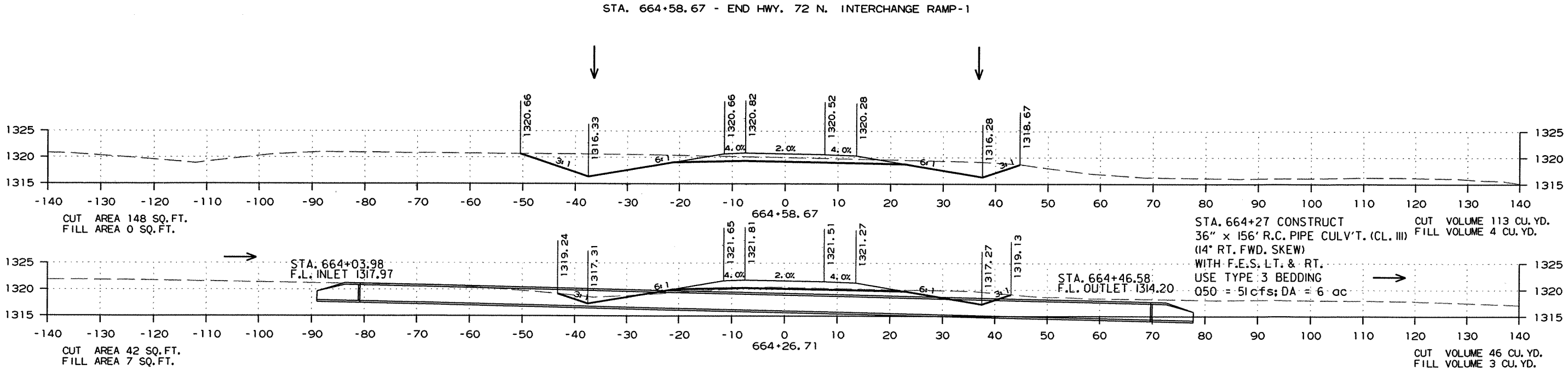
HWY. 72 (NORTH) RAMP 1 - CROSS SECTION STA. 659+00 TO STA. 664+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090293		261	266

2 CROSS SECTIONS - HWY. 72 (NORTH) RAMP 1

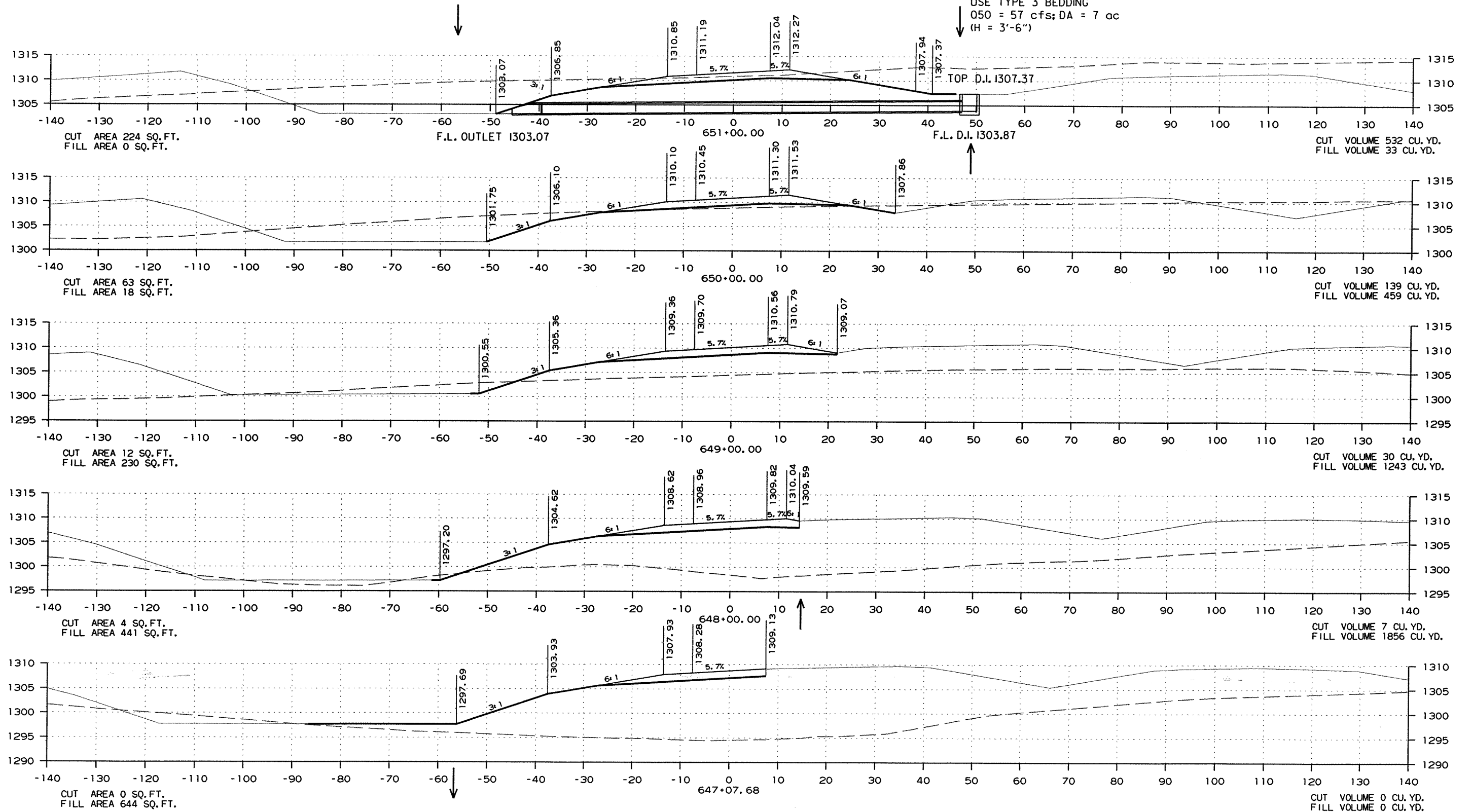


HWY. 72 (NORTH) RAMP 1 - CROSS SECTION STA. 664+27 TO STA. 664+59

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.	090293		262	266

2 CROSS SECTIONS - HWY. 72 (NORTH) RAMP 4

STA. 651+00 - CONSTRUCT
3'-0" x 4'-0" TYPE RM DROP INLET
48.66' RT. OF RAMP 4
WITH 36" x 23" x 88' R.C. ARCH PIPE OUTLET (CL. III)
WITH F.E.S. LT.
USE TYPE 3 BEDDING
Q50 = 57 cfs; DA = 7 ac
(H = 3'-6")



STA. 647+07.68 - BEGIN HWY. 72 INTERCHANGE N. -RAMP 4

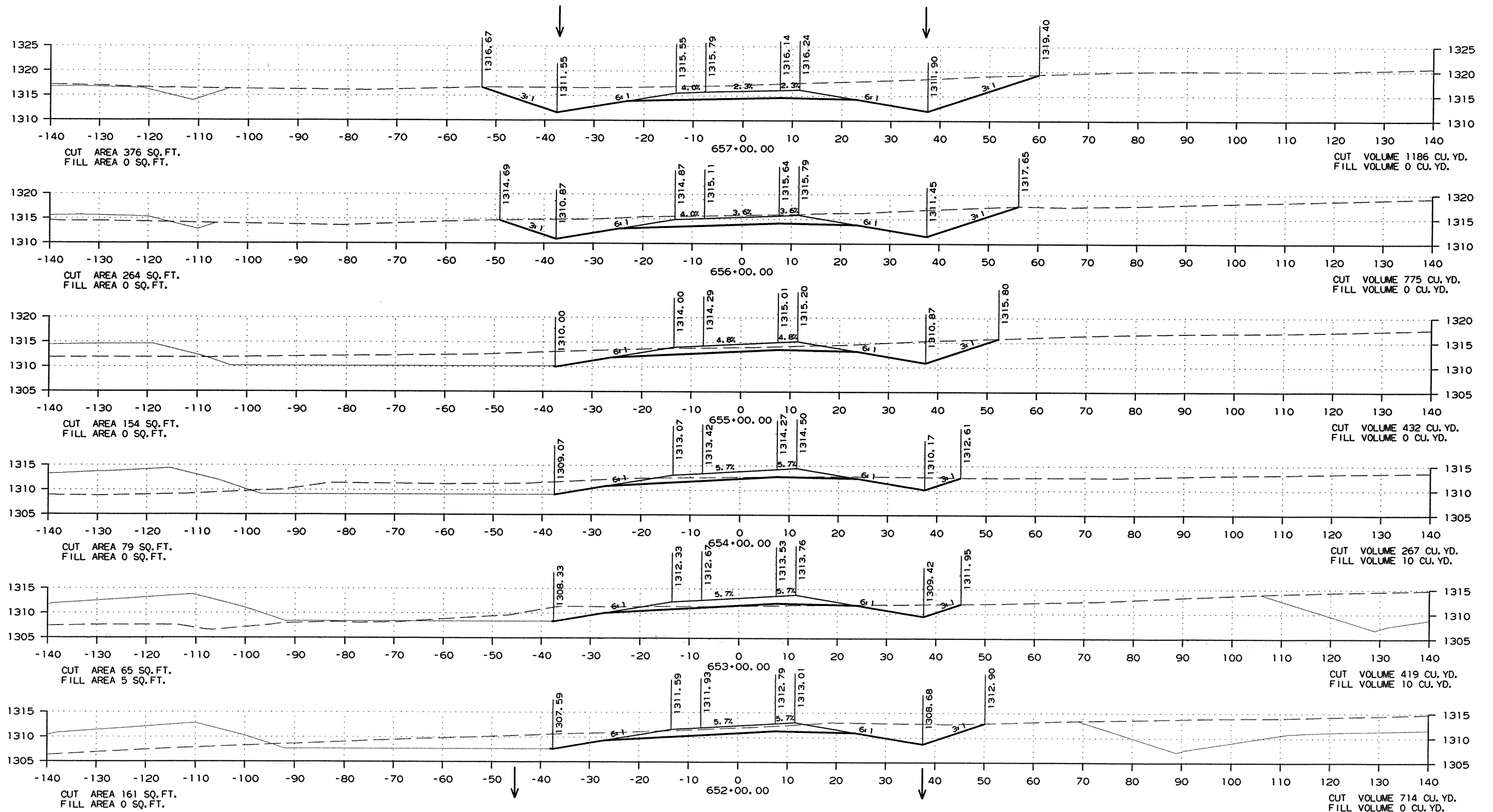
HWY. 72 (NORTH) RAMP 4 - CROSS SECTION STA. 647+08 TO STA. 651+00

2/28/2012

R090293_REV.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.	090293		263	266

② CROSS SECTIONS - HWY. 72 (NORTH) RAMP 4



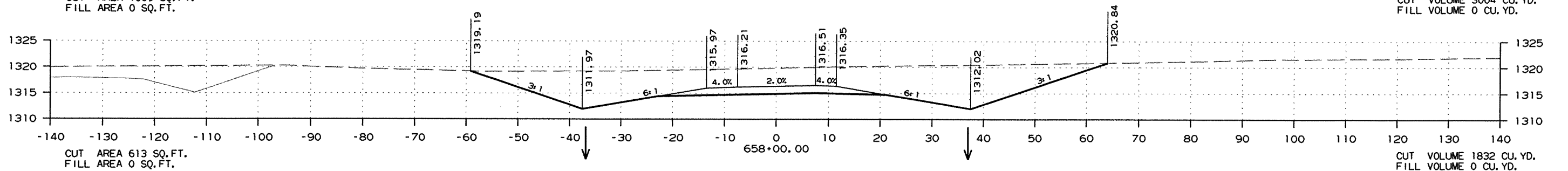
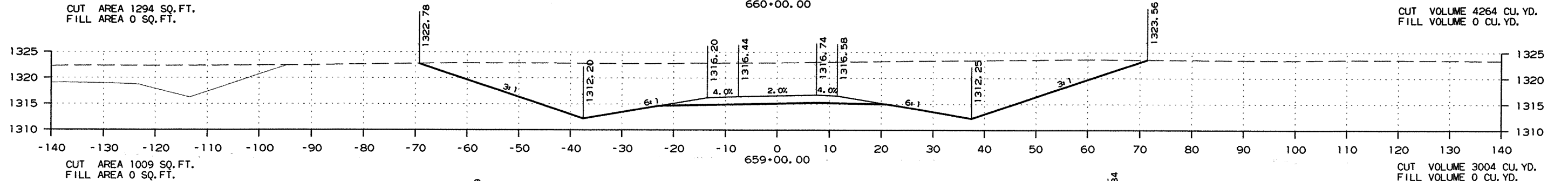
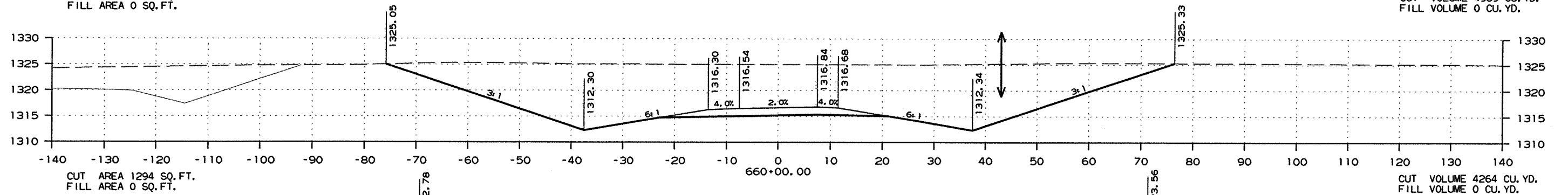
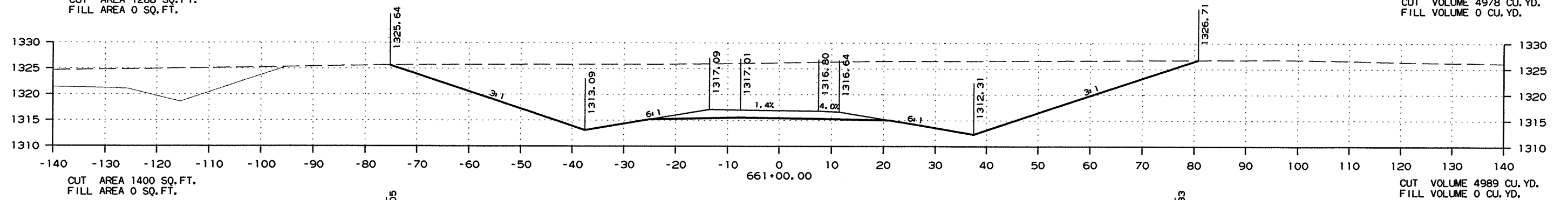
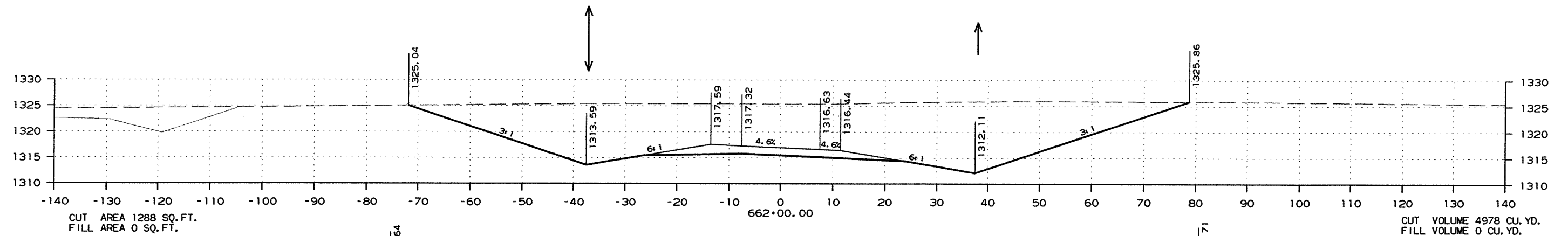
HWY. 72 (NORTH) RAMP 4 - CROSS SECTION STA. 652+00 TO STA. 657+00

2/28/2012

R090293_REV.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.	090293		264	260

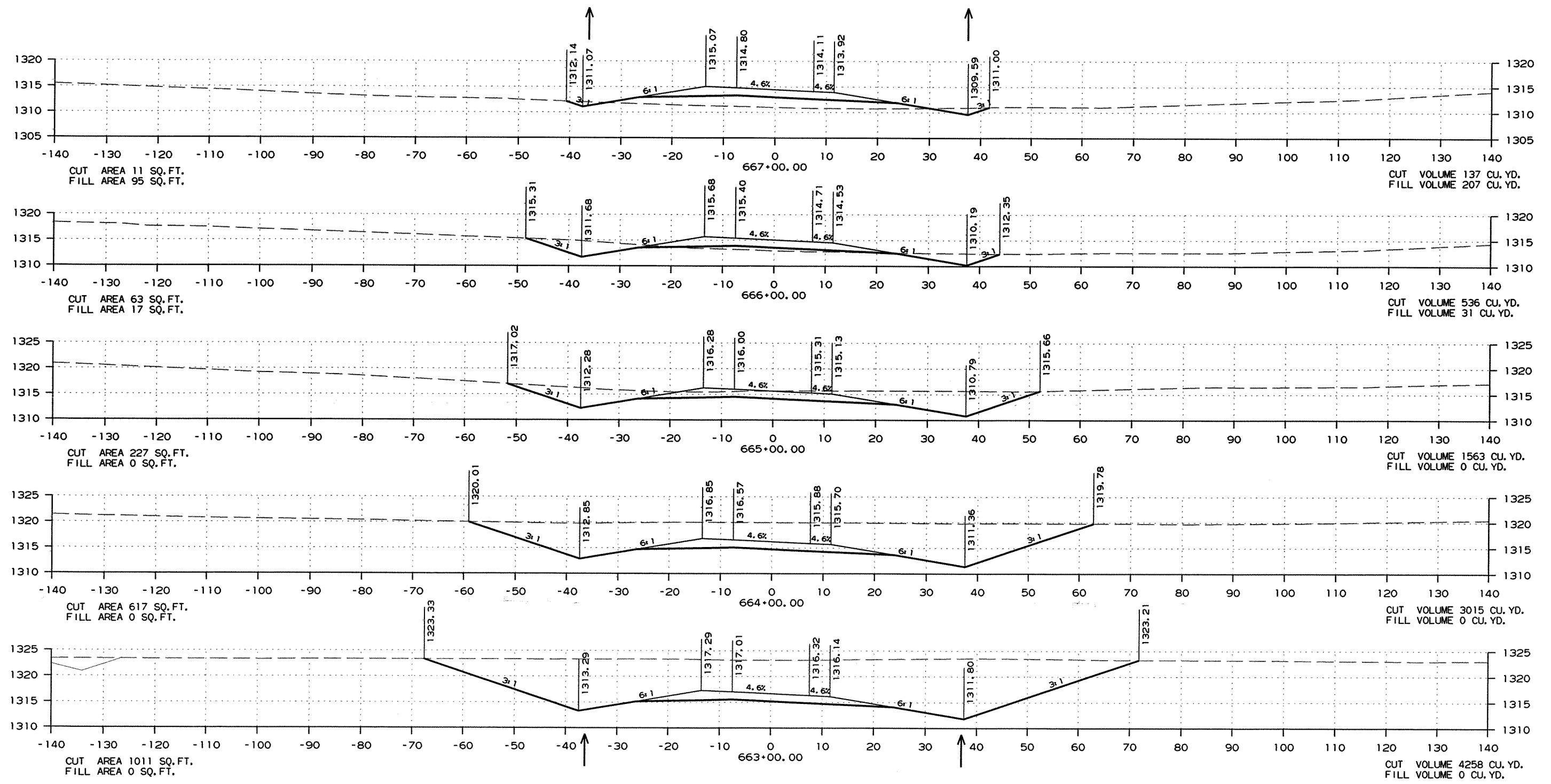
2 CROSS SECTIONS - HWY. 72 (NORTH) RAMP 4



HWY. 72 (NORTH) RAMP 4 - CROSS SECTION STA. 658+00 TO STA. 662+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 090293	265	266

2 CROSS SECTIONS - HWY. 72 (NORTH) RAMP 4

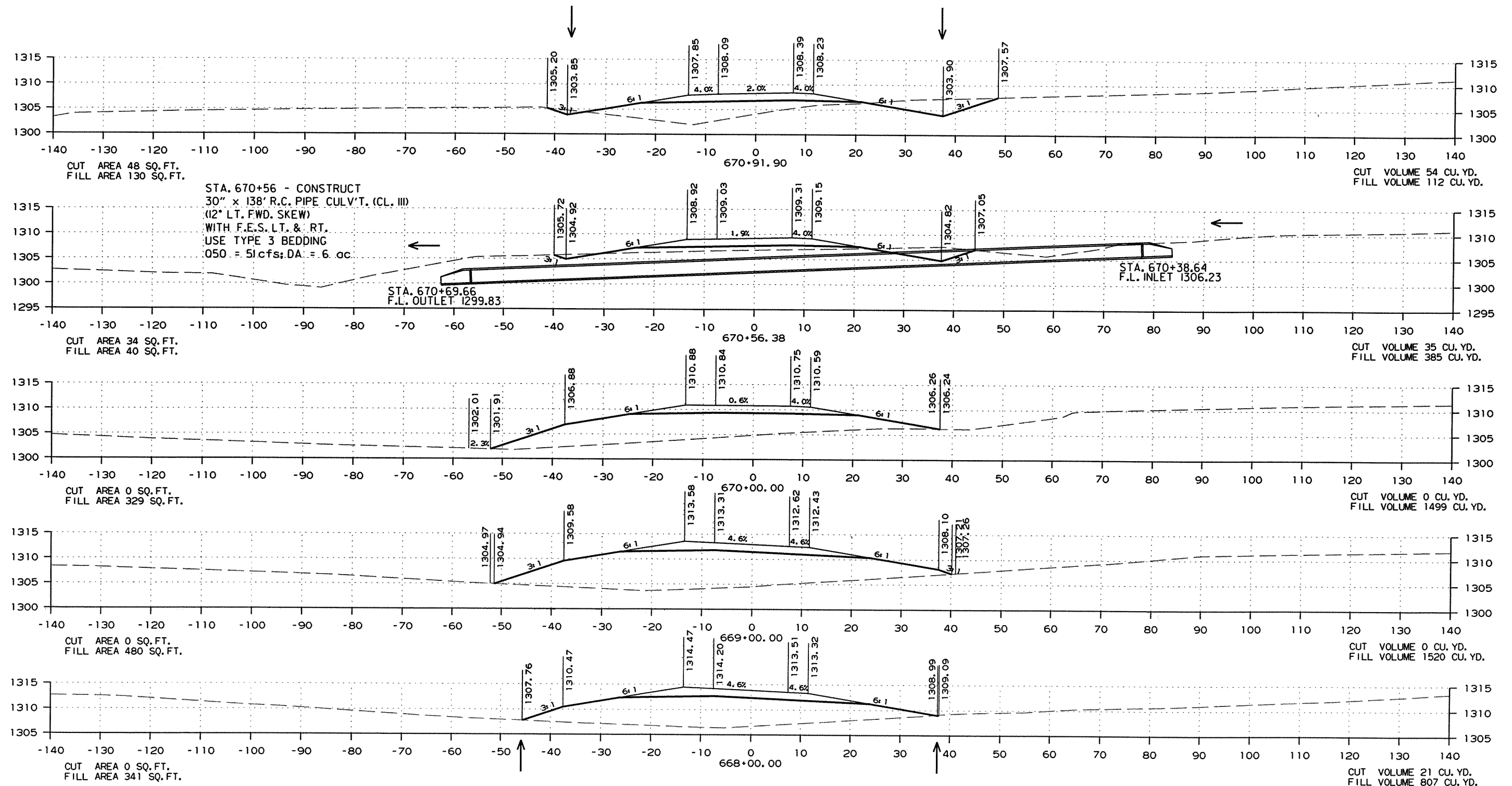


HWY. 72 (NORTH) RAMP 4 - CROSS SECTION STA. 663+00 TO STA. 667+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		090293	266	266

② CROSS SECTIONS - HWY. 72 (NORTH) RAMP 4

STA. 670+91.90 - HWY. 72 N. INTERCHANGE-END RAMP 4



HWY. 72 (NORTH) RAMP 4 - CROSS SECTION STA. 668+00 TO STA. 670+92

2/28/2012

R090293-REV.DCN