

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	100
							②	LA LINE - DODDRIDGE (BS. & SURF.) (S)

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

CONSTRUCTION PLANS

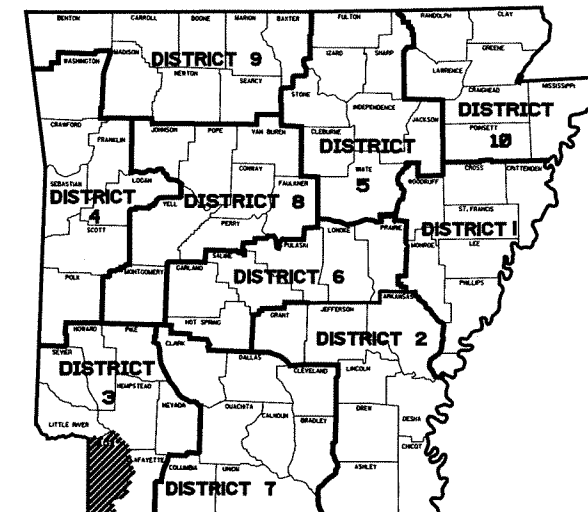
LA LINE - DODDRIDGE (BS. & SURF.) (S)

MILLER COUNTY

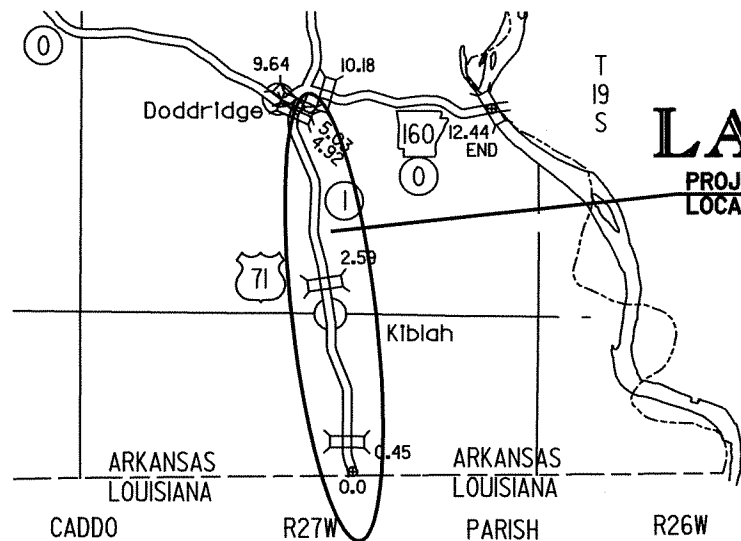
ROUTE 71 SECTION 1

EFCA-STDP-HPP2-0046(41)

JOB 030313



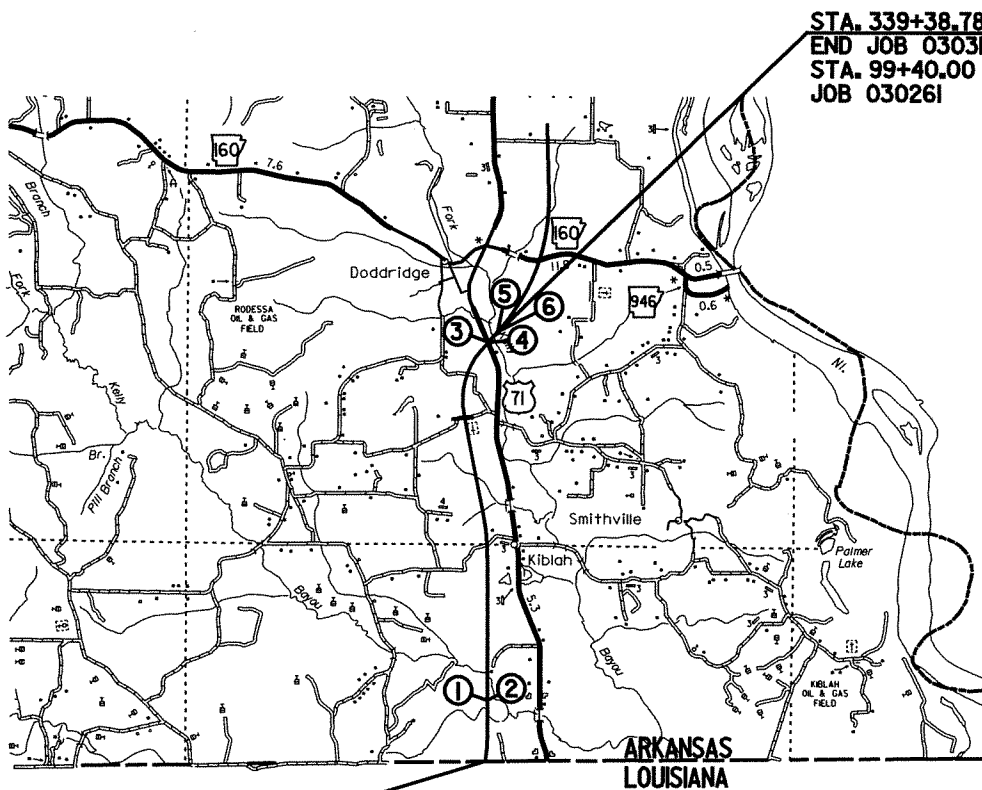
ARK. HWY. DIST. NO. 3



VICINITY MAP

MAIN LANE BRIDGE INFORMATION
 FOR INFORMATION ONLY - BRIDGES ARE IN PLACE
 (EXCEPTIONS TO JOB 030313)

- | | |
|--|--|
| <p>① STA. 134+11.97 BRIDGE END
 BRIDGE NO. 712(A)
 375'-0" CONTINUOUS PRESTRESSED
 TYPE III CONCRETE BEAM
 40' CLEAR ROADWAY WIDTH
 35° LT. FORWARD SKEW
 377'-7 3/4" BRIDGE LENGTH
 STA. 137+89.62 BRIDGE END
 (FOR INFORMATION ONLY)</p> | <p>② STA. 133+55.95 BRIDGE END
 BRIDGE NO. 712(B)
 375'-0" CONTINUOUS PRESTRESSED
 TYPE III CONCRETE BEAM
 40' CLEAR ROADWAY WIDTH
 35° LT. FORWARD SKEW
 377'-7 3/4" BRIDGE LENGTH
 STA. 137+33.59 BRIDGE END
 (FOR INFORMATION ONLY)</p> |
| <p>③ STA. 327+48.41 BRIDGE END
 BRIDGE NO. 712(A)
 283'-0" CONTINUOUS PRESTRESSED
 BT-72 CONCRETE GIRDER
 40' CLEAR ROADWAY WIDTH
 27° LT. FORWARD SKEW
 285' - 5/8" BRIDGE LENGTH
 STA. 330+33.85 BRIDGE END
 (FOR INFORMATION ONLY)</p> | <p>④ STA. 327+08.04 BRIDGE END
 BRIDGE NO. 712(B)
 283'-0" CONTINUOUS PRESTRESSED
 BT-72 CONCRETE GIRDER
 40' CLEAR ROADWAY WIDTH
 27° LT. FORWARD SKEW
 285' - 5/8" BRIDGE LENGTH
 STA. 329+93.48 BRIDGE END
 (FOR INFORMATION ONLY)</p> |
| <p>⑤ STA. 332+95.69 BRIDGE END
 BRIDGE NO. 712(A)
 400'-0" CONTINUOUS PRESTRESSED
 TYPE IV CONCRETE BEAM
 40' CLEAR ROADWAY WIDTH
 22° LT. FORWARD SKEW
 402' - 4" BRIDGE LENGTH
 STA. 336+98.03 BRIDGE END
 (FOR INFORMATION ONLY)</p> | <p>⑥ STA. 332+63.37 BRIDGE END
 BRIDGE NO. 712(B)
 400'-0" CONTINUOUS PRESTRESSED
 TYPE IV CONCRETE BEAM
 40' CLEAR ROADWAY WIDTH
 22° LT. FORWARD SKEW
 402' - 4" BRIDGE LENGTH
 STA. 336+65.71 BRIDGE END
 (FOR INFORMATION ONLY)</p> |



STA. 103+45.38
 BEGIN JOB 030313

STA. 339+38.78
 END JOB 030313=
 STA. 99+40.00
 JOB 030261



LENGTH COMPUTED ALONG C MEDIAN

GROSS LENGTH OF PROJECT	23,593.40 FEET OR 4.468 MILES
NET LENGTH OF ROADWAY	22,527.97 FEET OR 4.267 MILES
NET LENGTH OF BRIDGES	0.00 FEET OR 0.000 MILES
NET LENGTH OF PROJECT	22,527.97 FEET OR 4.267 MILES

DESIGN TRAFFIC DATA

DESIGN YEAR	-----	2030
2010 ADT	-----	5,040
2030 ADT	-----	15,120
2030 DHV	-----	1,663
DIRECTIONAL DISTRIBUTION	-----	60%
TRUCKS	-----	31%
DESIGN SPEED	-----	70 MPH

NO EQUATIONS

BEGIN-POINT OF PROJECT

LAT. = 33°01' 10" N
 LONG. = 93°54' 04" W

MID-POINT OF PROJECT

LAT. = 33°03' 04" N
 LONG. = 93°54' 05" W

END-POINT OF PROJECT

LAT. = 33°03' 51" N
 LONG. = 93°53' 58" W

TOTAL LENGTH OF EXCEPTIONS = 1065.43'
 (COMPUTED ALONG C MEDIAN)

P.E. JOB R30079
 NON-PARTICIPATING



2/6/13

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				6	ARK.			
				JOB NO.		030313	2	100

2 INDEX, GOV. SPECS. & GENERAL NOTES

INDEX OF SHEETS

SHEET NO.	TITLE	BRIDGE NO.	DRWG. NO.	DATE
1	TITLE SHEET			
2	INDEX OF SHEETS, GOVERNING SPECIFICATIONS AND GENERAL NOTES			
3-10	TYPICAL SECTIONS OF IMPROVEMENT			
11-15	SPECIAL DETAILS			
16	TEMPORARY EROSION CONTROL DETAILS			
17-17B	MAINTENANCE OF TRAFFIC			
18	PAVEMENT MARKING DETAILS			
19-25	QUANTITY SHEETS			
26	SUMMARY OF QUANTITIES AND REVISIONS			
27-32	SURVEY CONTROL DETAILS			
33	NOT USED			
34	INTERCHANGE LAYOUT			
35-59	PLAN AND PROFILE SHEETS			
60	DETAILS OF CHANNEL IMPROVEMENTS FOR BRIDGE OVER WEST FORK KELLY BAYOU (FOR INFORMATION ONLY)	A&B7121		49558
61	BRIDGE A - LAYOUT OF BRIDGE OVER WEST FORK KELLY BAYOU (FOR INFORMATION ONLY)	A7121		49559
62	BRIDGE B - LAYOUT OF BRIDGE OVER WEST FORK KELLY BAYOU (FOR INFORMATION ONLY)	B7121		49560
63	DETAILS OF TYPE SPECIAL 1 APPROACH GUTTER - WEST FORK KELLY BAYOU (SHEET 1 OF 2)	A&B7121		51618
64	DETAILS OF TYPE SPECIAL 1 APPROACH GUTTER - WEST FORK KELLY BAYOU (SHEET 2 OF 2)	A&B7121		51619
65	DETAILS OF TYPE SPECIAL 1 APPROACH SLAB - WEST FORK KELLY BAYOU	A&B7121		51620
66	BRIDGE A - LAYOUT OF BRIDGE OVER U.S. ROUTE 71 EXISTING (FOR INFORMATION ONLY)	A7124		49625
67	BRIDGE B - LAYOUT OF BRIDGE OVER U.S. ROUTE 71 EXISTING (FOR INFORMATION ONLY)	B7124		49626
68	DETAILS OF TYPE SPECIAL 4 APPROACH GUTTER - BRIDGE OVER U.S. ROUTE 71 EXISTING (SHEET 1 OF 2)	A&B7124		51621
69	DETAILS OF TYPE SPECIAL 4 APPROACH GUTTER - BRIDGE OVER U.S. ROUTE 71 EXISTING (SHEET 2 OF 2)	A&B7124		51622
70	DETAILS OF TYPE SPECIAL 2 APPROACH SLAB - BRIDGE OVER U.S. ROUTE 71 EXISTING	A&B7124		51623
71	BRIDGE A - LAYOUT OF BRIDGE OVER EAST FORK KELLY BAYOU (FOR INFORMATION ONLY)	A7125		49645
72	BRIDGE B - LAYOUT OF BRIDGE OVER EAST FORK KELLY BAYOU (FOR INFORMATION ONLY)	B7125		49646
73	DETAILS OF TYPE SPECIAL 5 APPROACH GUTTER - EAST FORK KELLY BAYOU (SHEET 1 OF 2)	A&B7125		51624
74	DETAILS OF TYPE SPECIAL 5 APPROACH GUTTER - EAST FORK KELLY BAYOU (SHEET 2 OF 2)	A&B7125		51625
75	DETAILS OF TYPE SPECIAL 3 APPROACH SLAB - EAST FORK KELLY BAYOU	A&B7125		51626
76	CONCRETE DITCH PAVING			
77	CURBING DETAILS	CDP-1		11/17/10
78	TRANSVERSE & LONGITUDINAL JOINTS FOR CONCRETE PAVEMENT (NON-REINFORCED)	CG-1		11/29/07
79	DETAILS OF DRIVEWAYS & ISLANDS	CPTJ-6A		5/25/06
80	DETAILS OF DROP INLETS AND SPILLWAY OUTLET	DR-1		11/29/07
81	GUARD RAIL DETAILS	FPC-9N		07/02/98
82	GUARD RAIL DETAILS	GR-8		07/14/10
83	GUARD RAIL DETAILS	GR-8A		07/14/10
84	GUARD RAIL DETAILS	GR-9		04/17/08
85	GUARD RAIL DETAILS	GR-9A		04/17/08
86	GUARD RAIL DETAILS	GR-10		07/14/10
87	METAL PIPE CULVERT FILL HEIGHTS & BEDDING	GR-10A		07/14/10
88	PAVEMENT MARKING DETAILS	PCM-1		12/15/11
89	PERMANENT PAVEMENT MARKING ON ACCESS CONTROLLED ROADWAYS	PM-1		11/17/10
90	DETAILS OF PIPE UNDERDRAIN	PM-2		7/26/12
91	TABLES AND METHOD OF SUPERELEVATION FOR ONE-WAY TRAFFIC	PU-1		04/10/03
92	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	SE-1		01/09/87
93	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-1		12/15/11
94	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-2		03/11/10
95	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-3		10/15/09
96	TEMPORARY EROSION CONTROL DEVICES	TEC-1		12/15/11
97-100	CROSS SECTIONS	TR-1A		08/22/02

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	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 030313
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
105-3	CONTROL OF WORK
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
404-2	DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES
409-1	MINERAL AGGREGATES
410-3	DENSITY TESTING FOR ACHM LEVELING COURSES AND BOND BREAKERS
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
604-2	INSPECTION OF TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
718-2	REFLECTORIZED PAINT PAVEMENT MARKINGS
719-2	THERMOPLASTIC PAVEMENT MARKING MATERIAL
804-1	INSTALLATION OF DOWEL BARS AND TIE BARS
JOB 030313	APPROACH SLABS AND GUTTERS
JOB 030313	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 030313	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 030313	CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS
JOB 030313	COORDINATION OF WORK
JOB 030313	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 030313	HIGH PERFORMANCE PAVEMENT MARKING
JOB 030313	INTERNET BIDDING
JOB 030313	PARTNERING REQUIREMENTS
JOB 030313	SHAPING DITCH
JOB 030313	SOIL STABILIZATION
JOB 030313	STORM WATER POLLUTION PREVENTION PLAN
JOB 030313	SUBGRADE PREPARATION
JOB 030313	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 030313	UTILITY ADJUSTMENTS
JOB 030313	VALUE ENGINEERING
JOB 030313	WARM MIX ASPHALT

GENERAL NOTES

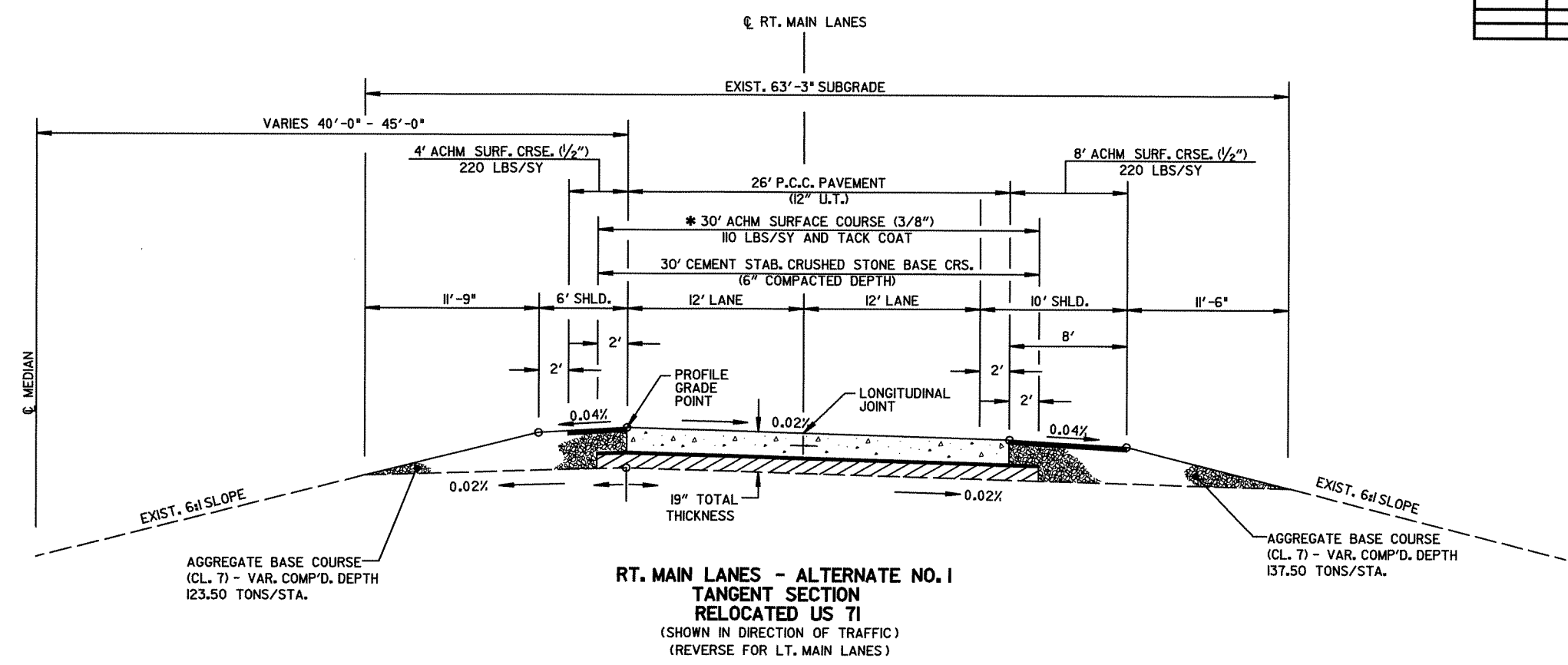
- GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.
- ALL PIPE LINES, POWER, TELEPHONE AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
- ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY 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 FENCES MAY BE CONSTRUCTED INITIALLY, OR IN LIEU THEREOF, THE CONTRACTOR AT HIS OWN EXPENSE, MAY ELECT TO PROVIDE TEMPORARY FENCING SUITABLE TO CONTAIN LIVESTOCK.
- THE CONTRACTOR SHALL CONTACT ALL FIBER OPTIC COMPANIES INVOLVED ON THIS PROJECT AT LEAST FIVE (5) WORKING DAYS BEFORE CONSTRUCTION, INCLUDING REMOVING AND INSTALLING ANY FENCING, AND TAKE EVERY PRECAUTION NECESSARY TO AVOID CONFLICT WITH THE FIBER OPTIC CABLES. THE CONTRACTOR SHALL TELEPHONE ARKANSAS ONE-CALL SYSTEM AT 1-800-482-8998 TO DETERMINE THE LOCATION OF THE BURIED FIBER OPTIC CABLES.
- THIS PROJECT IS COVERED UNDER AN INDIVIDUAL SECTION 404 PERMIT. REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS EDITION OF 2003, FOR PERMIT REQUIREMENTS.



24/13

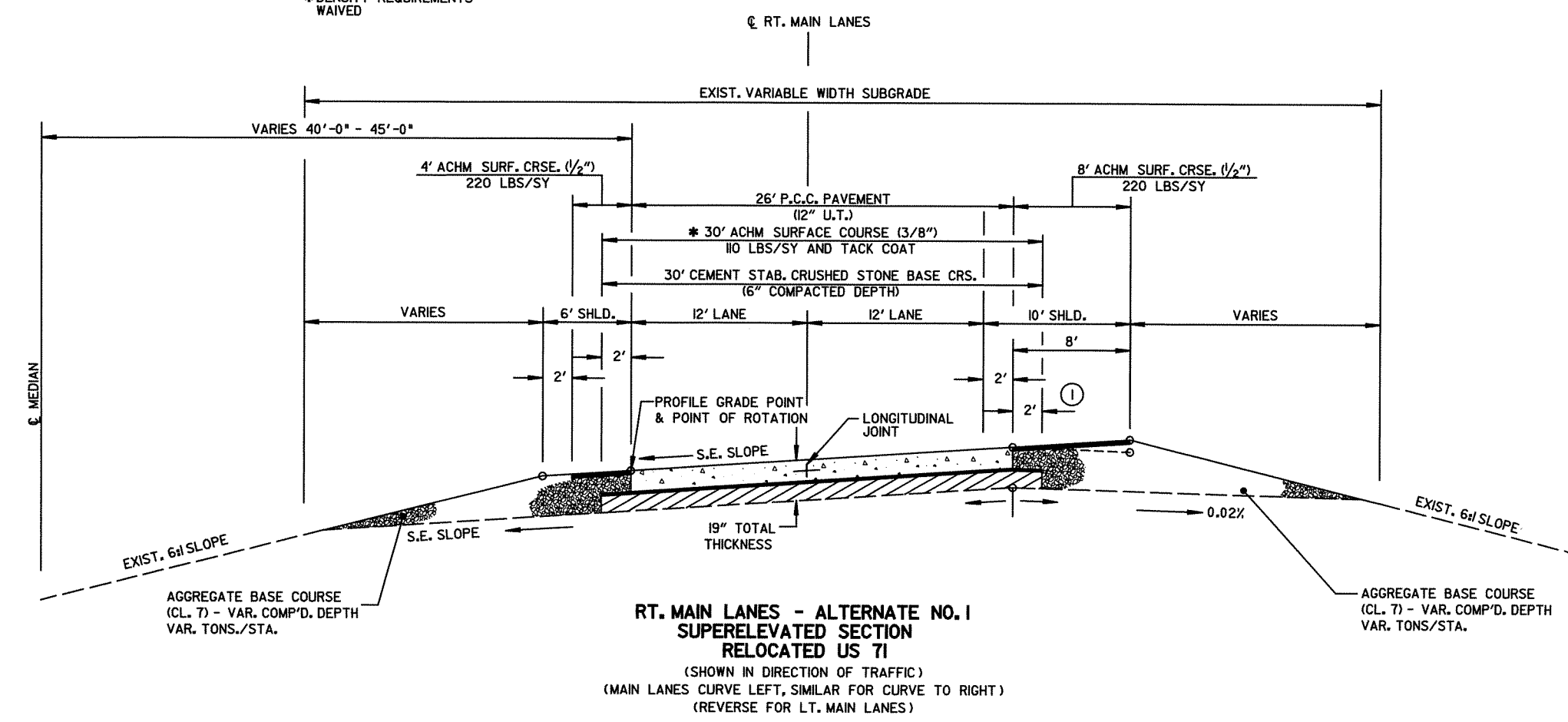
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				6	ARK.			
				JOB NO.	030313	3	100	

② TYPICAL SECTIONS OF IMPROVEMENT



- NOTES:
- ON ALL SUPERELEVATED CURVES AND THROUGH SUPERELEVATED TRANSITIONS (L_s), ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT SLOPE AND SHOULDER SHALL NOT EXCEED 0.08%.
 - AFTER FINAL SHAPING OF BASE COURSE, THE EXISTING FORESLOPE AT THE TOE OF THE BASE COURSE SHALL BE REDRESSED AS DIRECTED BY THE ENGINEER PRIOR TO SEEDING IN ORDER TO MAINTAIN A UNIFORM SLOPE. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.
 - PROFILE GRADE SHOWN ON PLAN AND PROFILE SHEETS IS 22" ABOVE SUBGRADE. USE 1"=100' TRANSITION IN SUBGRADE AT RAMP TERMINALS, AT APPROACH SLABS SHOWN IN PLANS AND AT BEGINNING OF PROJECT. NO DIRECT PAYMENT WILL BE PAID FOR THIS WORK, BUT PAYMENT WILL BE CONSIDERED INCLUDED IN PRICE BID PER STATION FOR "SUBGRADE PREPARATION".

*DENSITY REQUIREMENTS WAIVED



7/20/12

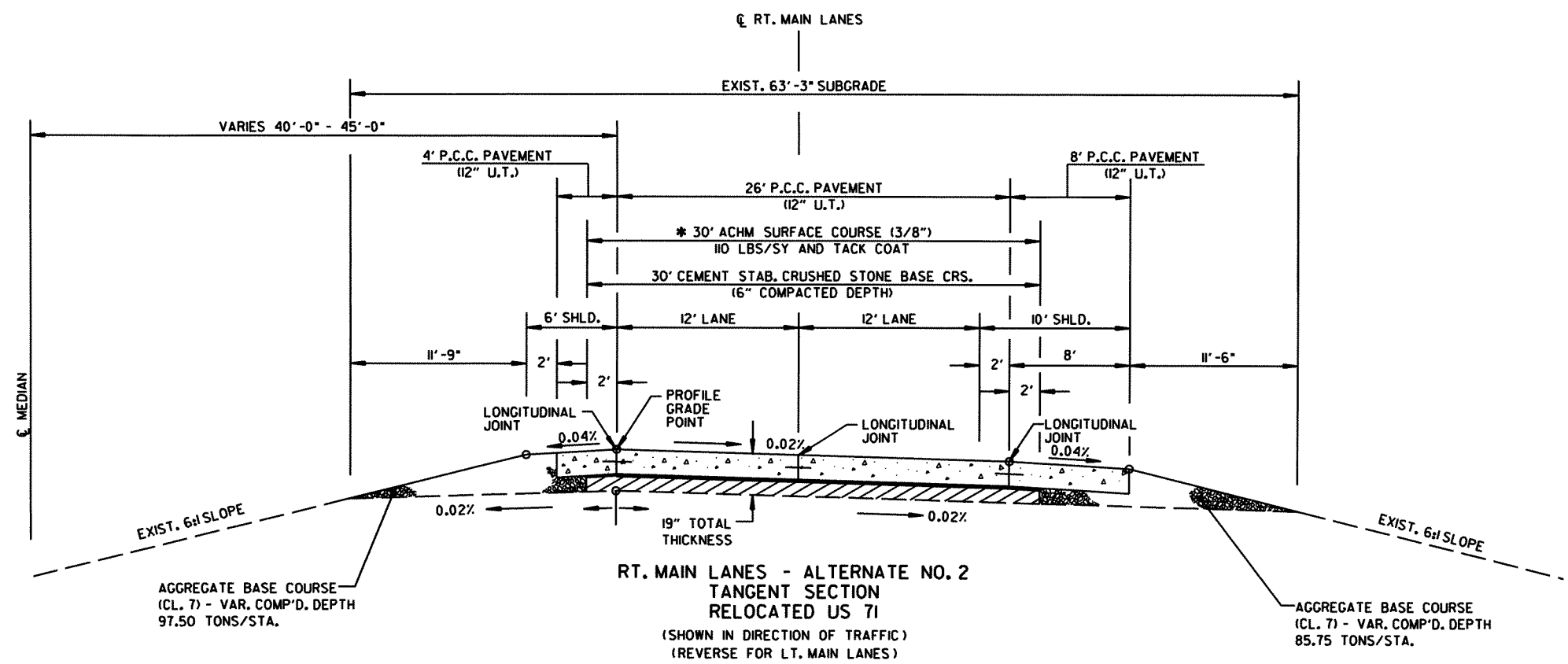
ALTERNATE NO. 1
TYPICAL SECTIONS OF IMPROVEMENT

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						JOB NO. 030313	4	100

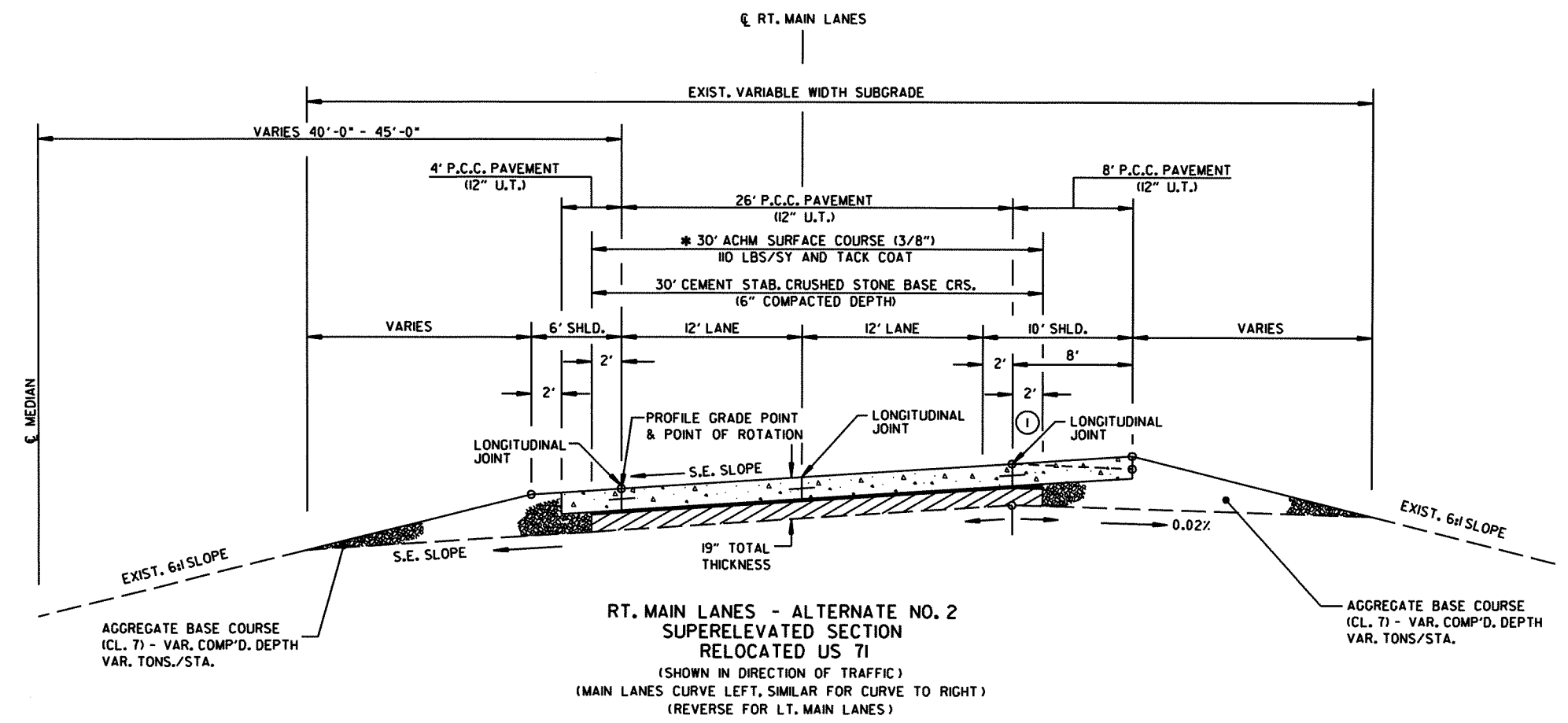
2 TYPICAL SECTIONS OF IMPROVEMENT

NOTES:

- ON ALL SUPERELEVATED CURVES AND THROUGH SUPERELEVATED TRANSITIONS (Ls), ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT SLOPE AND SHOULDER SHALL NOT EXCEED 0.08%.
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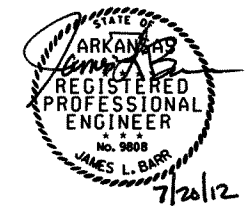
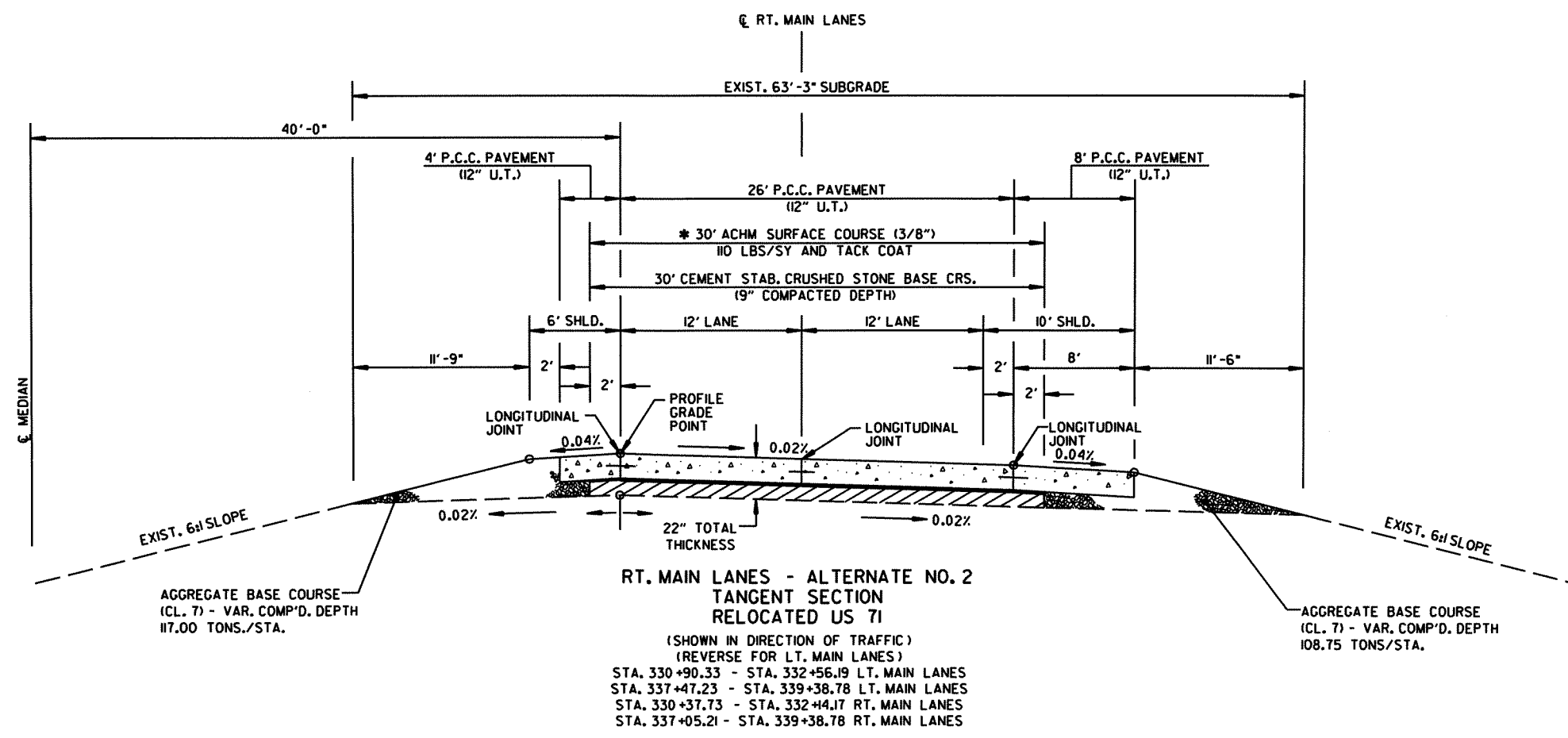
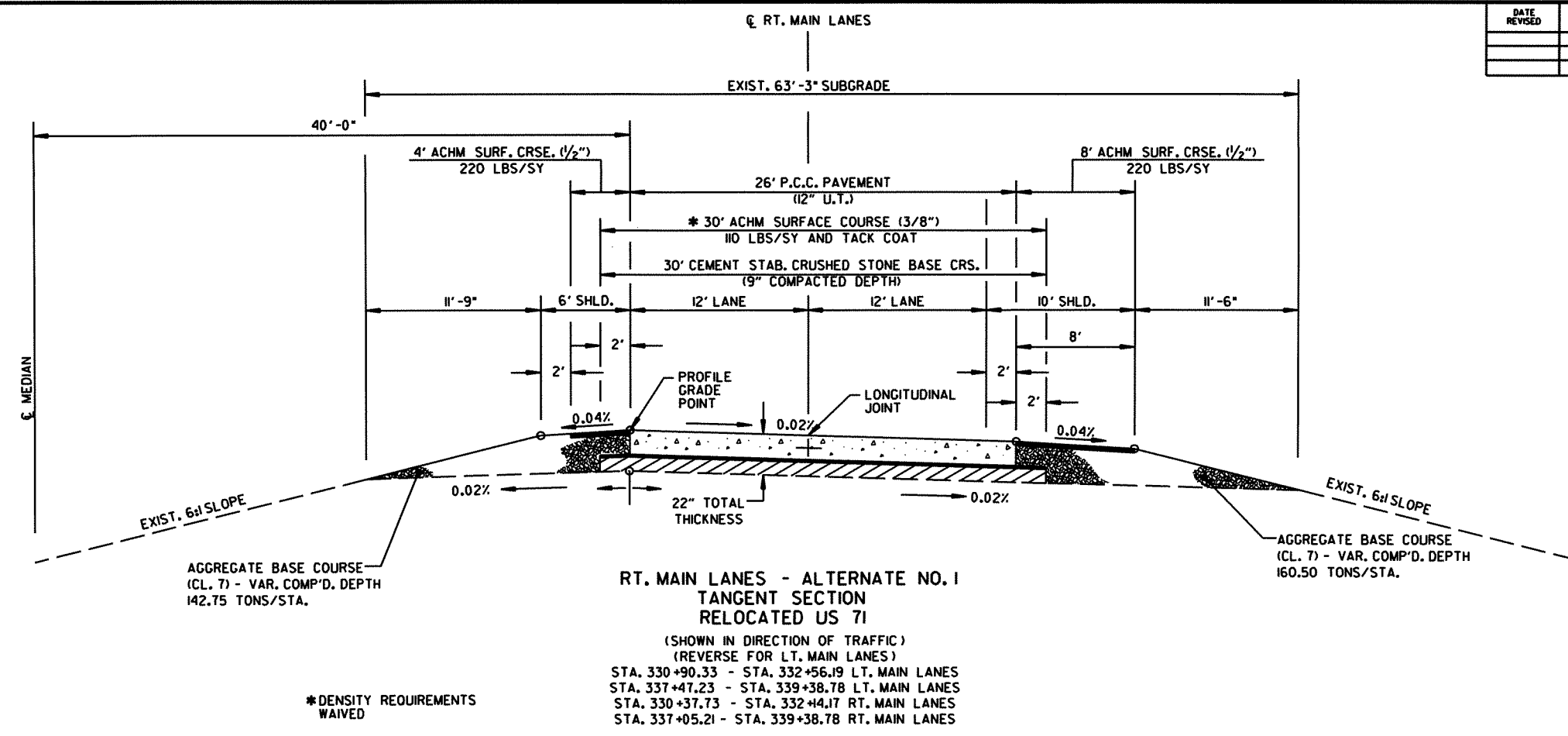


ALTERNATE NO. 2
TYPICAL SECTIONS OF IMPROVEMENT

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				6	ARK.			
				JOB NO.	030313	4A	100	

② TYPICAL SECTIONS OF IMPROVEMENT

NOTES:
 1. AFTER FINAL SHAPING OF BASE COURSE, THE EXISTING FORESLOPE AT THE TOE OF THE BASE COURSE SHALL BE REDRESSED AS DIRECTED BY THE ENGINEER PRIOR TO SEEDING IN ORDER TO MAINTAIN A UNIFORM SLOPE. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.



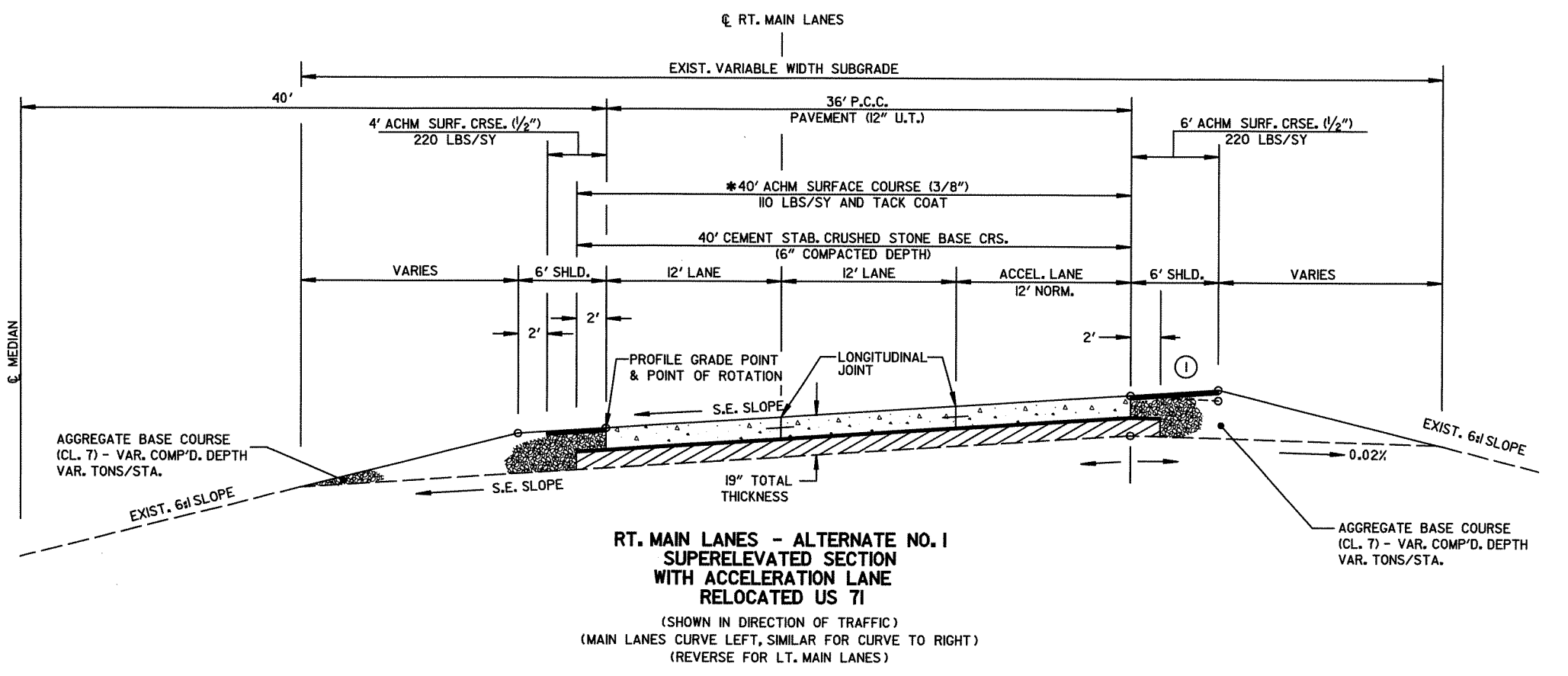
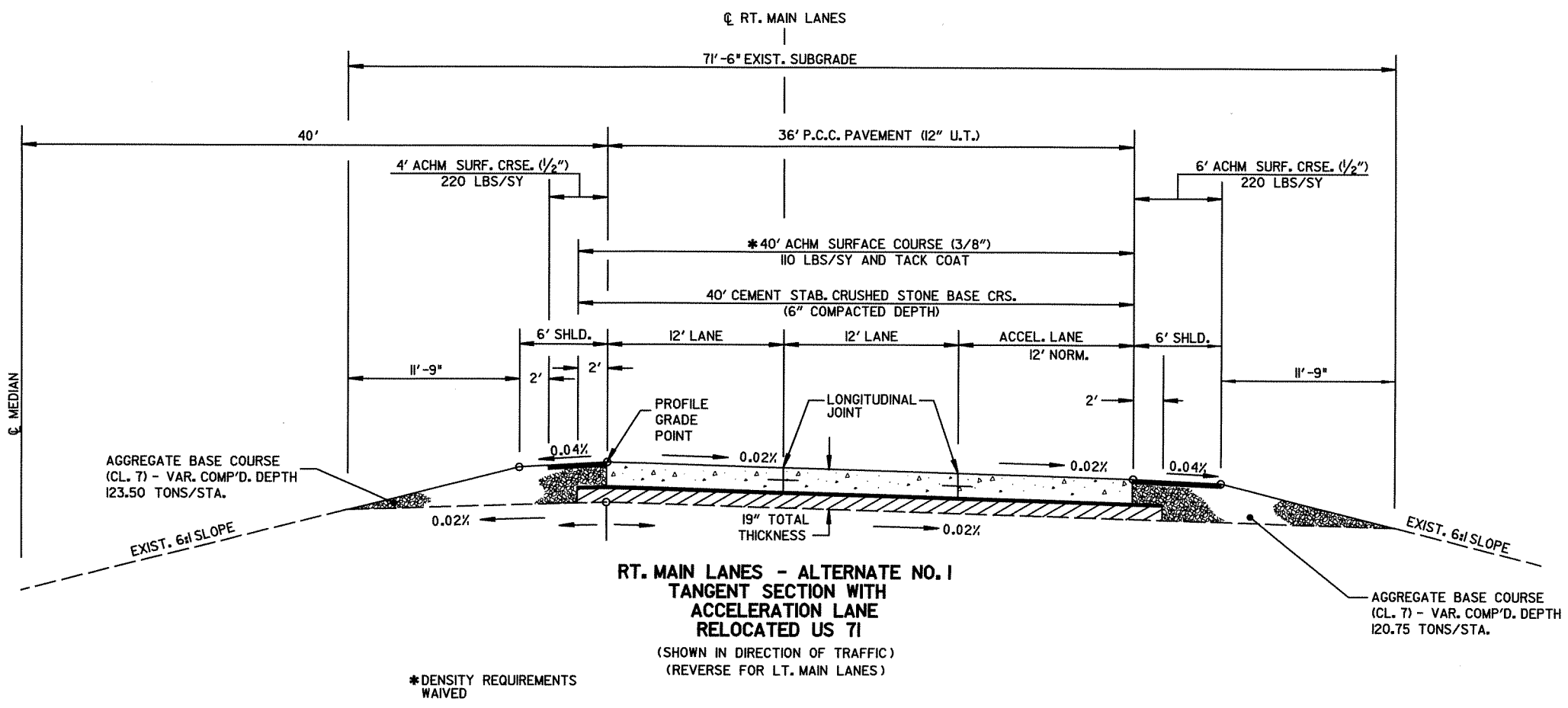
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TYPICAL SECTIONS OF IMPROVEMENT

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				6	ARK.			
						JOB NO. 030313	5	100

2 TYPICAL SECTIONS OF IMPROVEMENT

NOTES:

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2. AFTER FINAL SHAPING OF BASE COURSE, THE EXISTING FORESLOPE AT THE TOE OF THE BASE COURSE SHALL BE REDRESSED AS DIRECTED BY THE ENGINEER PRIOR TO SEEDING IN ORDER TO MAINTAIN A UNIFORM SLOPE. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.
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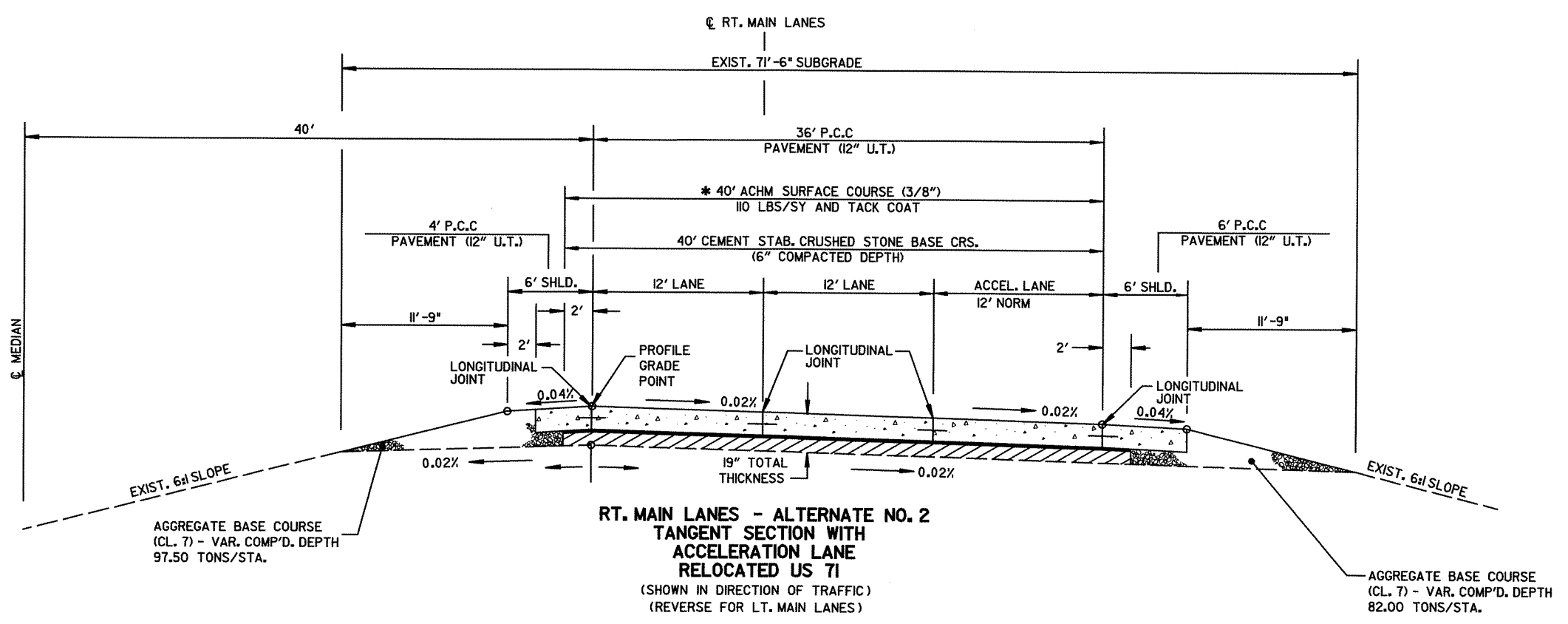
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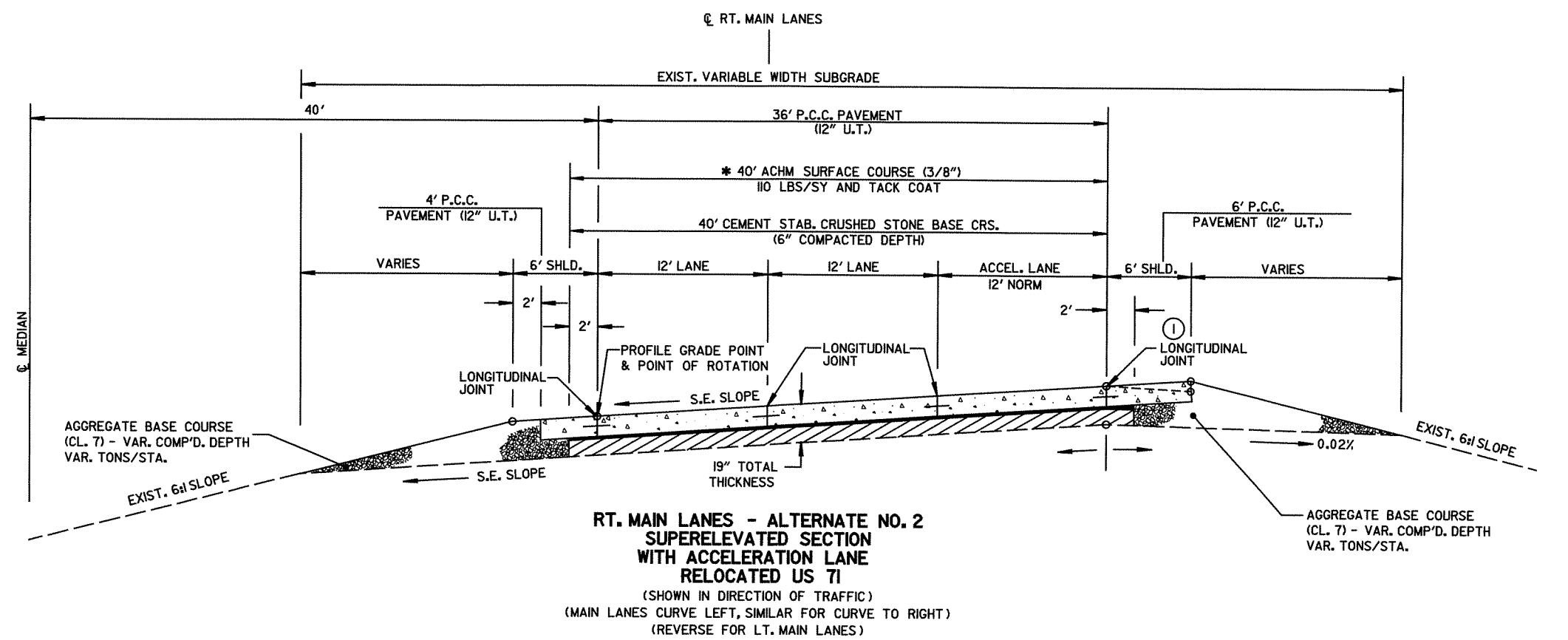
② TYPICAL SECTIONS OF IMPROVEMENT

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WAIVED



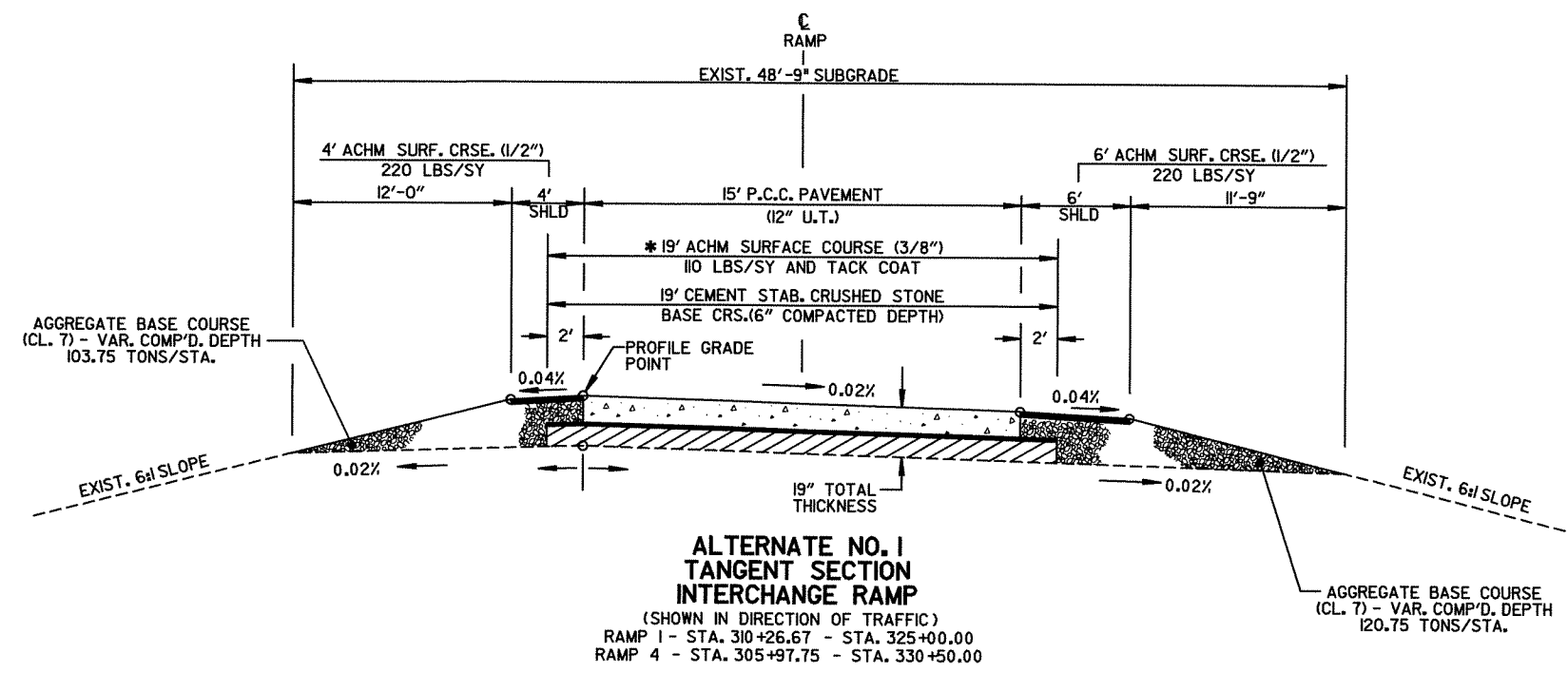
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TYPICAL SECTIONS OF IMPROVEMENT

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				JOB NO.	030313	7	100	

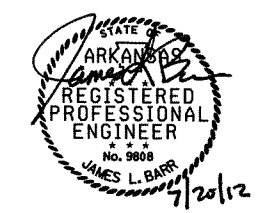
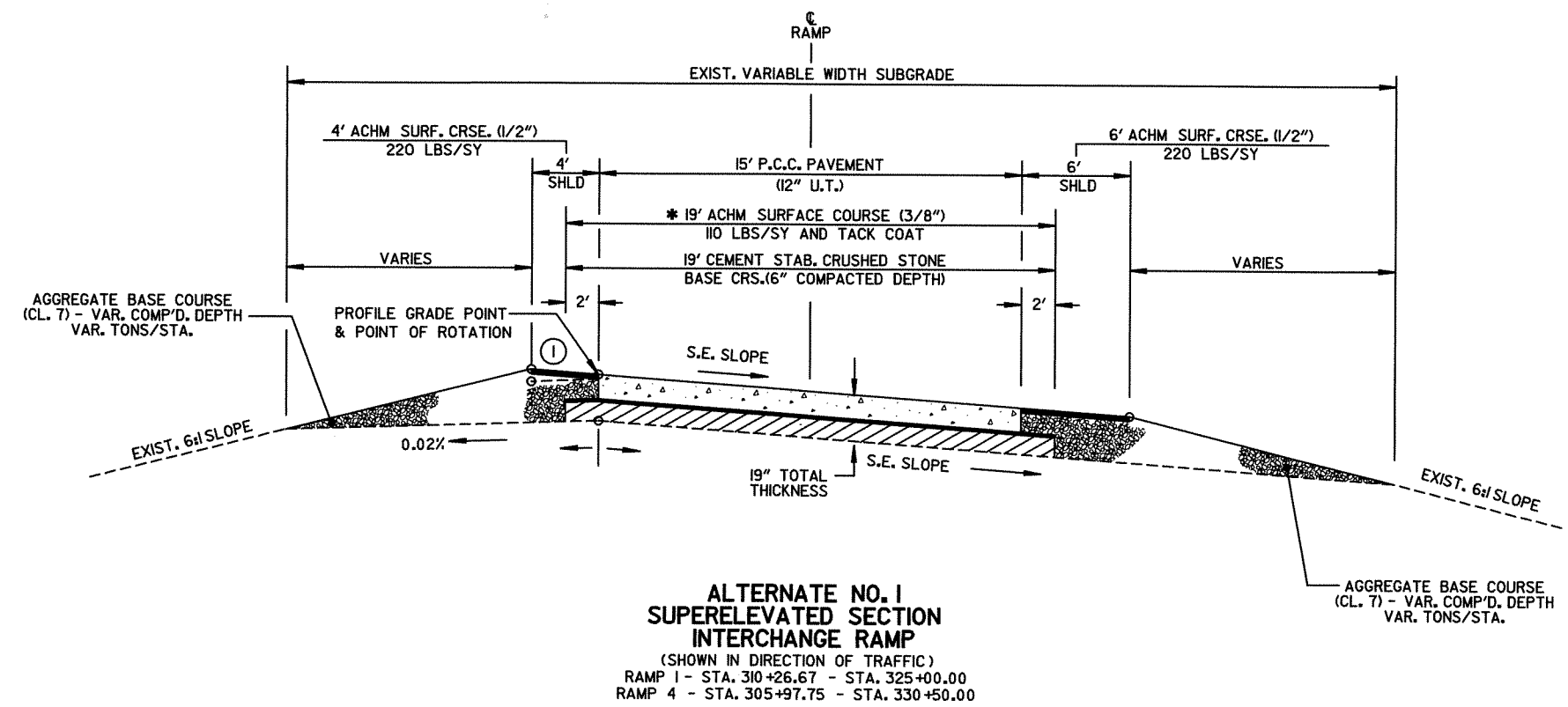
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- ON ALL SUPERELEVATED CURVES AND THROUGH SUPERELEVATED TRANSITIONS (L_s), ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT SLOPE AND SHOULDER SHALL NOT EXCEED 0.08%.
- AFTER FINAL SHAPING OF BASE COURSE, THE EXISTING FORESLOPE AT THE TOE OF THE BASE COURSE SHALL BE REDRESSED AS DIRECTED BY THE ENGINEER PRIOR TO SEEDING IN ORDER TO MAINTAIN A UNIFORM SLOPE. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.
- PROFILE GRADE SHOWN ON PLAN AND PROFILE SHEETS IS 22" ABOVE SUBGRADE. USE 1:100' TRANSITION IN SUBGRADE AT RAMP TERMINALS, AT APPROACH SLABS SHOWN IN PLANS AND AT BEGINNING OF PROJECT. NO DIRECT PAYMENT WILL BE PAID FOR THIS WORK, BUT PAYMENT WILL BE CONSIDERED INCLUDED IN PRICE BID PER STATION FOR "SUBGRADE PREPARATION".



*DENSITY REQUIREMENTS
WAIVED



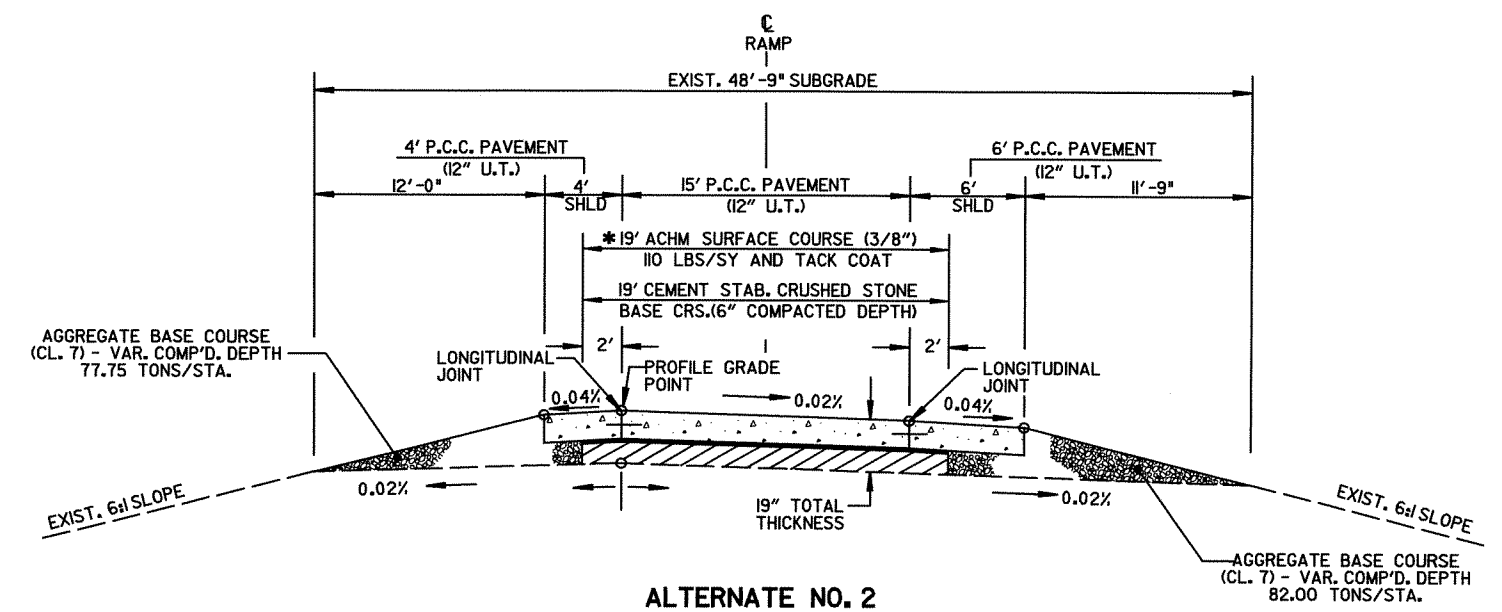
ALTERNATE NO. 1
TYPICAL SECTIONS OF IMPROVEMENT

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. 030313	8	100

2 TYPICAL SECTIONS OF IMPROVEMENT

NOTES:

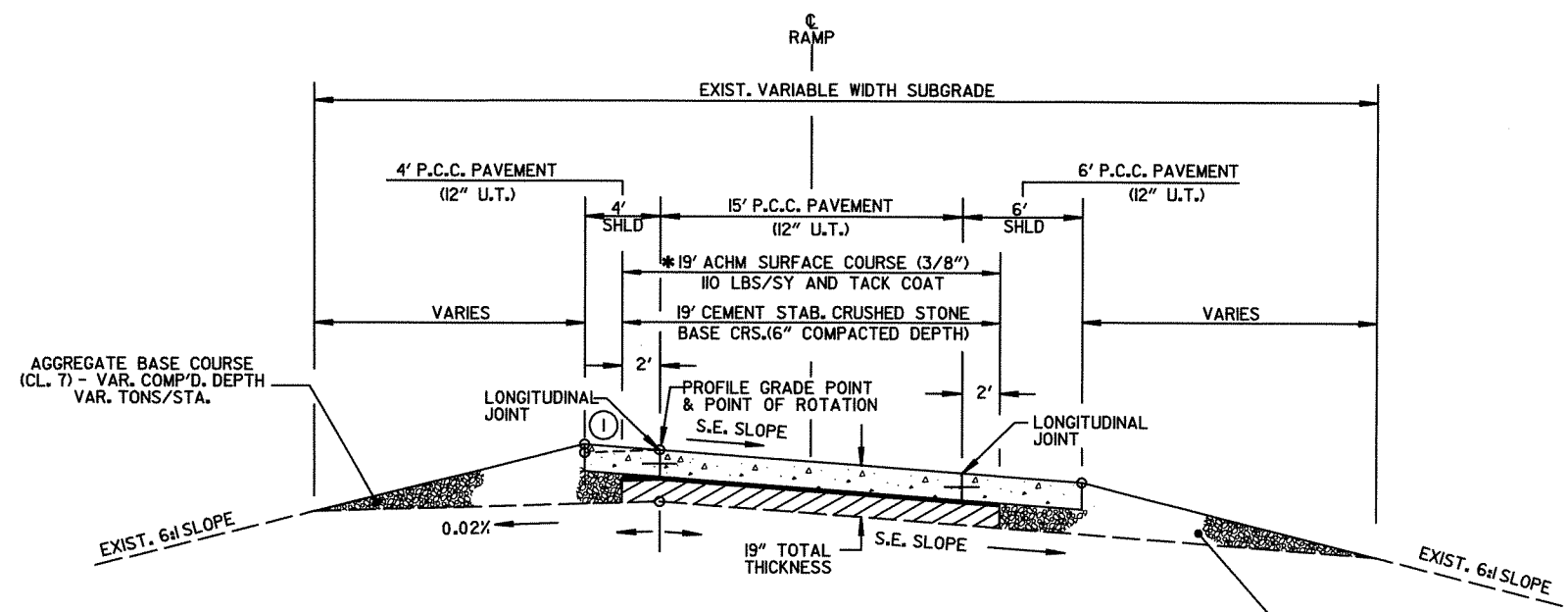
- ON ALL SUPERELEVATED CURVES AND THROUGH SUPERELEVATED TRANSITIONS (L_s), ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT SLOPE AND SHOULDER SHALL NOT EXCEED 0.08%.
- AFTER FINAL SHAPING OF BASE COURSE, THE EXISTING FORESLOPE AT THE TOE OF THE BASE COURSE SHALL BE REDRESSED AS DIRECTED BY THE ENGINEER PRIOR TO SEEDING IN ORDER TO MAINTAIN A UNIFORM SLOPE. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.
- PROFILE GRADE SHOWN ON PLAN AND PROFILE SHEETS IS 22" ABOVE SUBGRADE. USE 1"=100' TRANSITION IN SUBGRADE AT RAMP TERMINALS, AT APPROACH SLABS SHOWN IN PLANS AND AT BEGINNING OF PROJECT. NO DIRECT PAYMENT WILL BE PAID FOR THIS WORK, BUT PAYMENT WILL BE CONSIDERED INCLUDED IN PRICE BID PER STATION FOR "SUBGRADE PREPARATION".



**ALTERNATE NO. 2
TANGENT SECTION
INTERCHANGE RAMP**

(SHOWN IN DIRECTION OF TRAFFIC)
RAMP 1 - STA. 310+26.67 - STA. 325+00.00
RAMP 4 - STA. 305+97.75 - STA. 330+50.00

*DENSITY REQUIREMENTS
WAIVED



**ALTERNATE NO. 2
SUPERELEVATED SECTION
INTERCHANGE RAMP**

(SHOWN IN DIRECTION OF TRAFFIC)
RAMP 1 - STA. 310+26.67 - STA. 325+00.00
RAMP 4 - STA. 305+97.75 - STA. 330+50.00

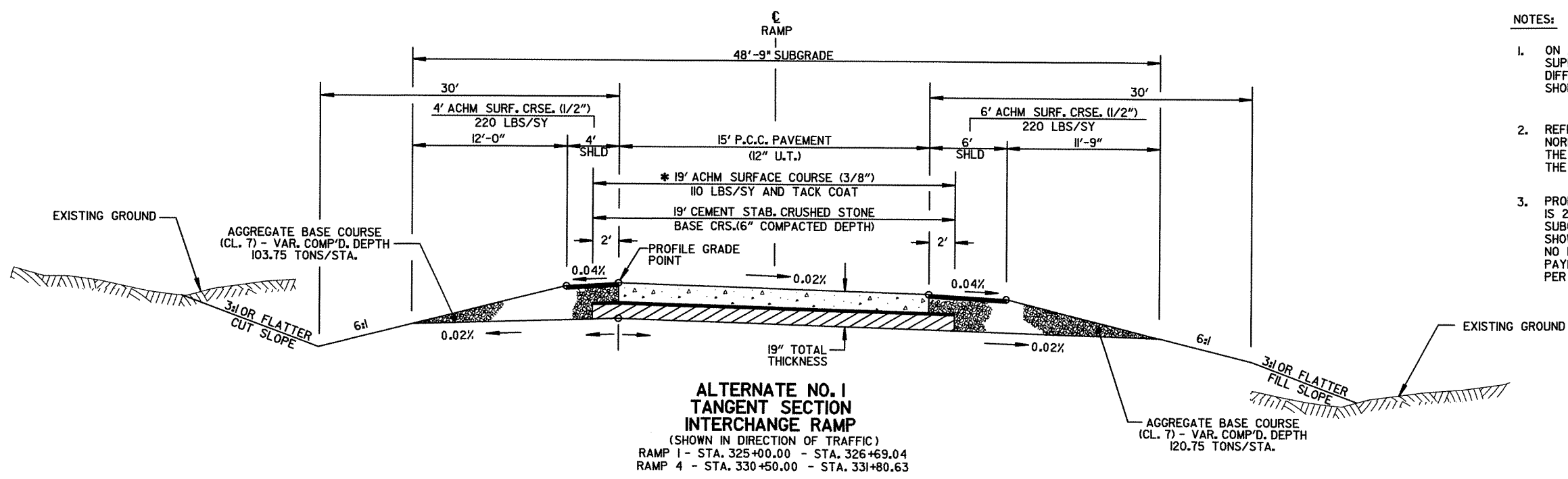


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. NO. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 030313	9	100

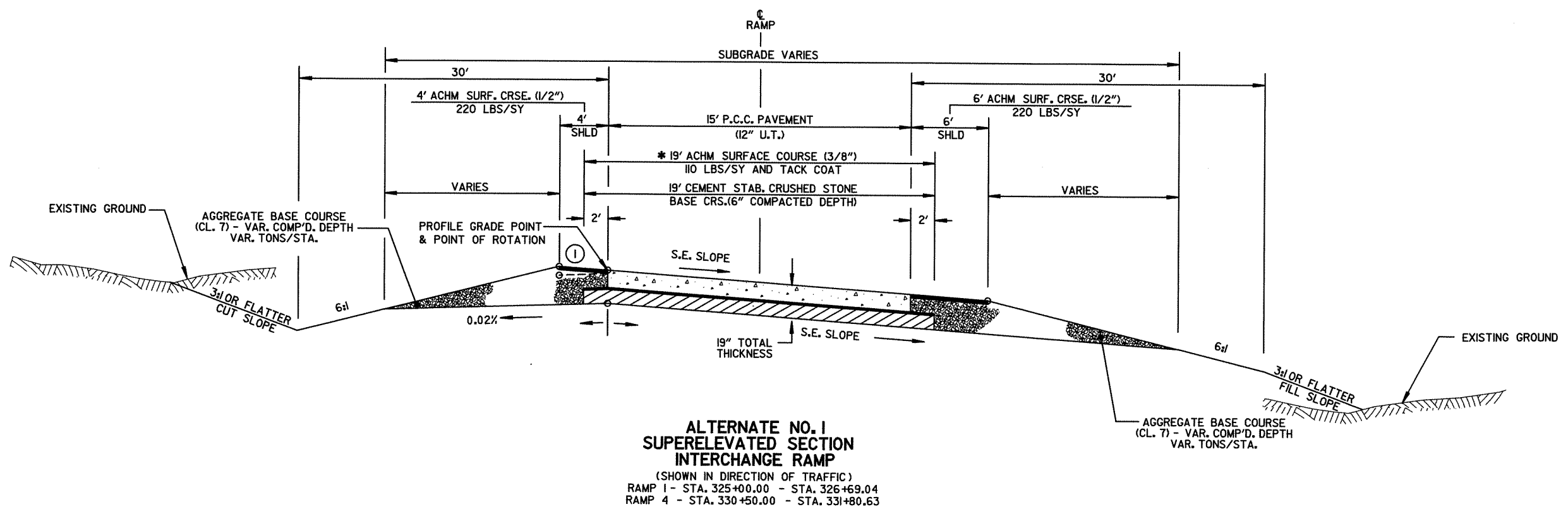
2 TYPICAL SECTIONS OF IMPROVEMENT

NOTES:

- ON ALL SUPERELEVATED CURVES AND THROUGH SUPERELEVATED TRANSITIONS (L.S), ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT SLOPE AND SHOULDER SHALL NOT EXCEED 0.08%.
- 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.
- PROFILE GRADE SHOWN ON PLAN AND PROFILE SHEETS IS 22" ABOVE SUBGRADE. USE 1:100' TRANSITION IN SUBGRADE AT RAMP TERMINALS, AT APPROACH SLABS SHOWN IN PLANS AND AT BEGINNING OF PROJECT. NO DIRECT PAYMENT WILL BE PAID FOR THIS WORK, BUT PAYMENT WILL BE CONSIDERED INCLUDED IN PRICE BID PER STATION FOR "SUBGRADE PREPARATION".



*DENSITY REQUIREMENTS
WAIVED

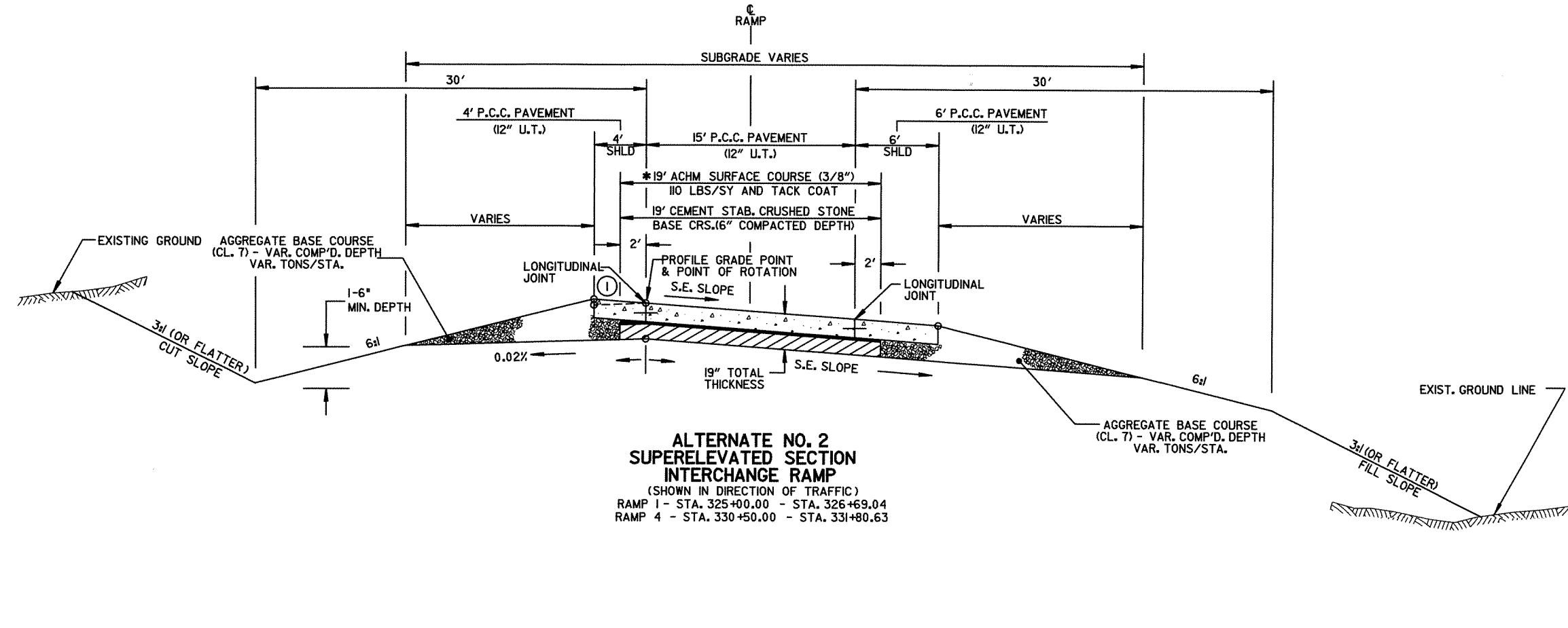
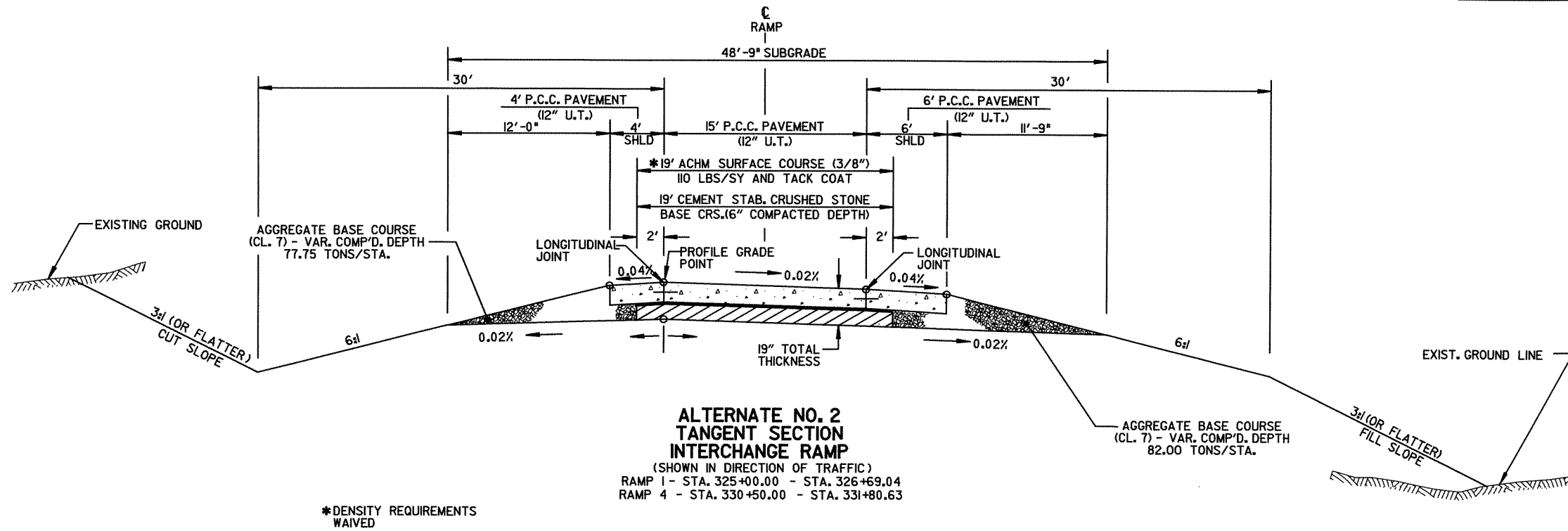


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 030313	10	100

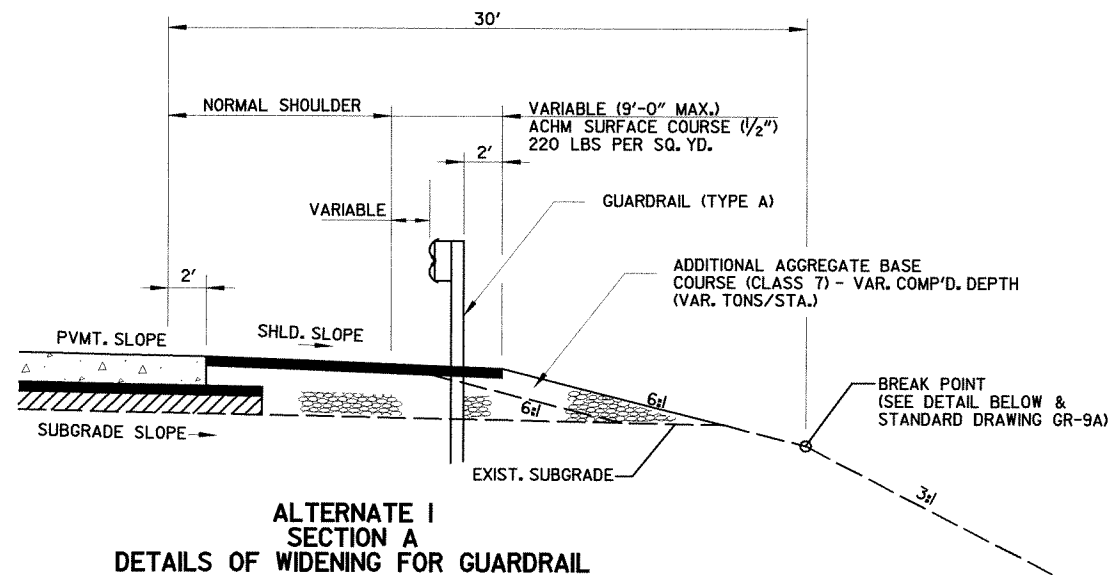
2 TYPICAL SECTIONS OF IMPROVEMENT

NOTES:

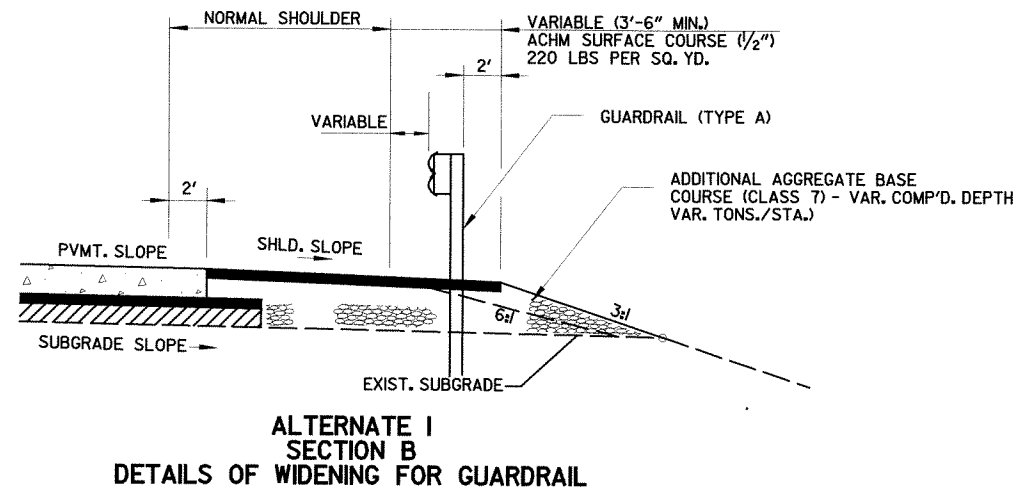
- ON ALL SUPERELEVATED CURVES AND THROUGH SUPERELEVATED TRANSITIONS (L_s), ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT SLOPE AND SHOULDER SHALL NOT EXCEED 0.08%.
- REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.
- PROFILE GRADE SHOWN ON PLAN AND PROFILE SHEETS IS 22" ABOVE SUBGRADE. USE 1/400' TRANSITION IN SUBGRADE AT RAMP TERMINALS, AT APPROACH SLABS SHOWN IN PLANS AND AT BEGINNING OF PROJECT. NO DIRECT PAYMENT WILL BE PAID FOR THIS WORK, BUT PAYMENT WILL BE CONSIDERED INCLUDED IN PRICE BID PER STATION FOR "SUBGRADE PREPARATION".



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	030313	II	100	
SPECIAL DETAILS								

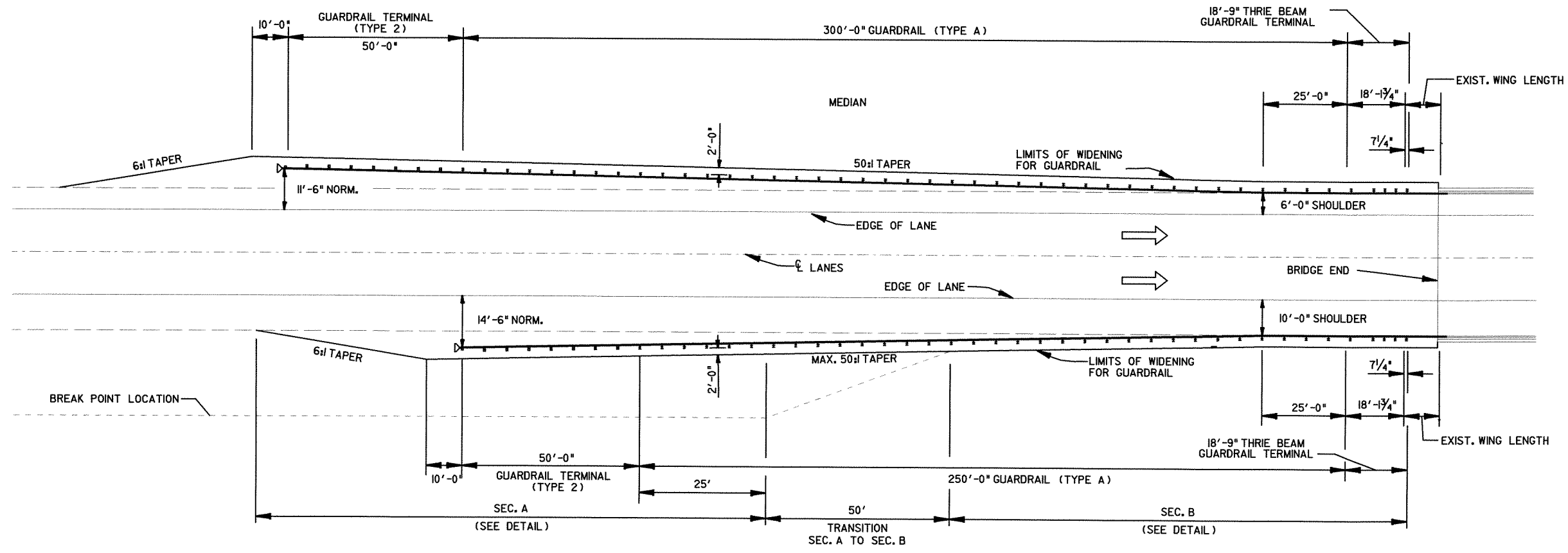


**ALTERNATE I
SECTION A
DETAILS OF WIDENING FOR GUARDRAIL**



**ALTERNATE I
SECTION B
DETAILS OF WIDENING FOR GUARDRAIL**

NOTE:
REFER TO STD. DWG. GR-9, GR-9A, GR-10,
GR-10A FOR ADDITIONAL INFORMATION

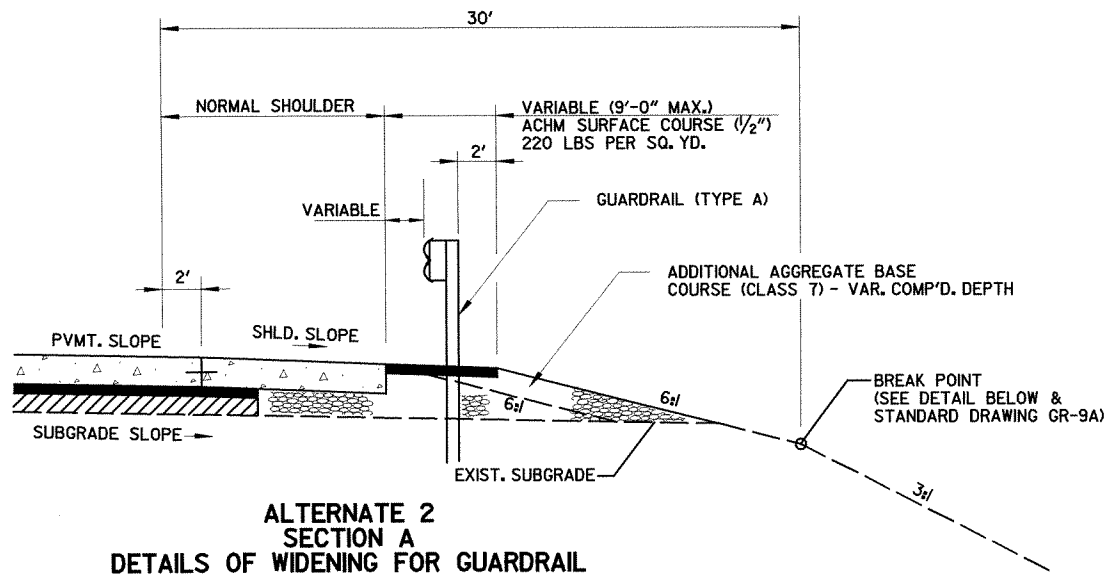


TYPICAL LAYOUT OF GUARDRAIL AT BRIDGE ENDS

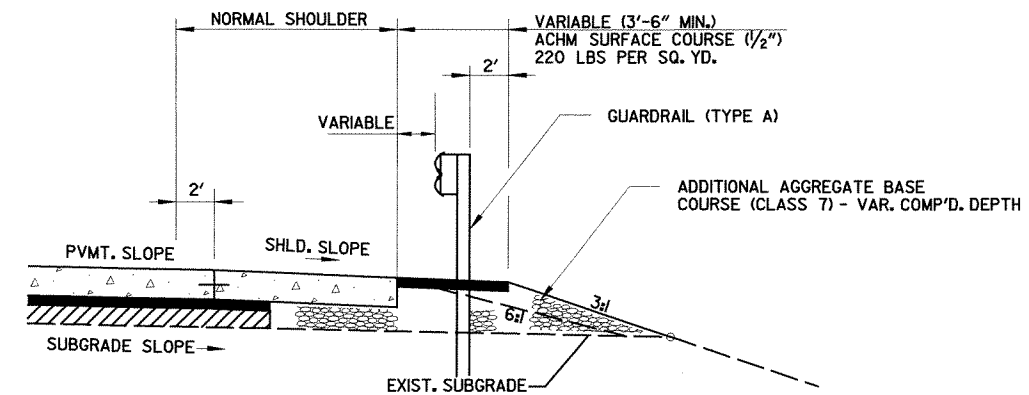


**ALTERNATE NO. I
SPECIAL DETAILS**

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	030313		12	100
2 SPECIAL DETAILS								

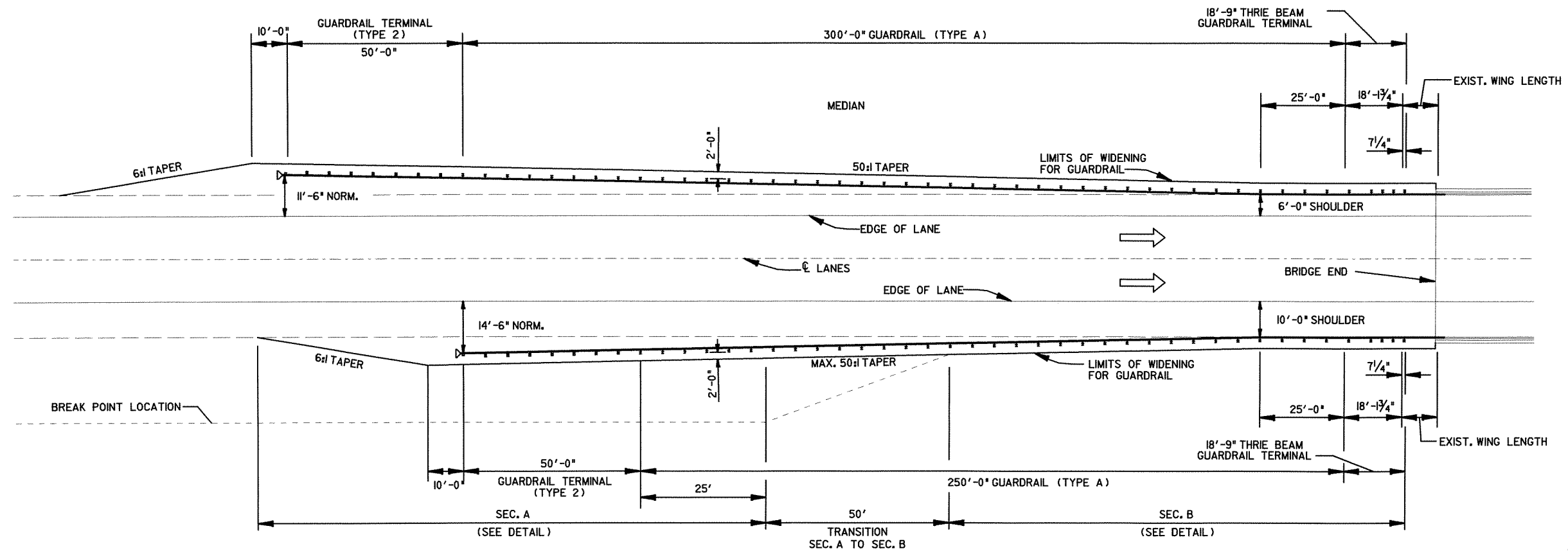


**ALTERNATE 2
SECTION A
DETAILS OF WIDENING FOR GUARDRAIL**



**ALTERNATE 2
SECTION B
DETAILS OF WIDENING FOR GUARDRAIL**

NOTE:
REFER TO STD. DWG. GR-9, GR-9A, GR-10,
GR-10A FOR ADDITIONAL INFORMATION



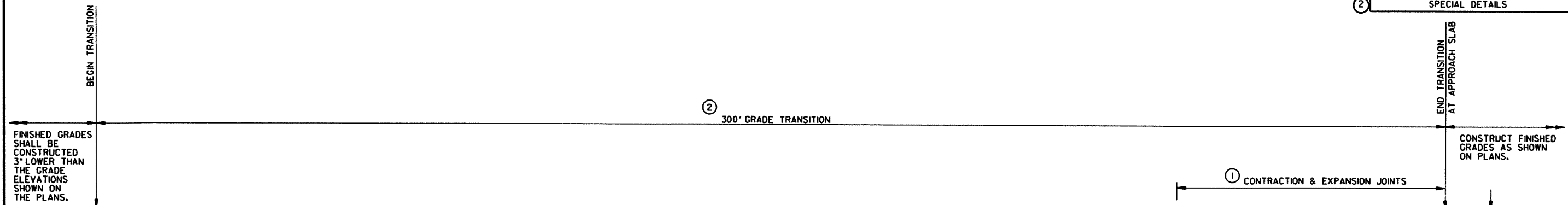
TYPICAL LAYOUT OF GUARDRAIL AT BRIDGE ENDS



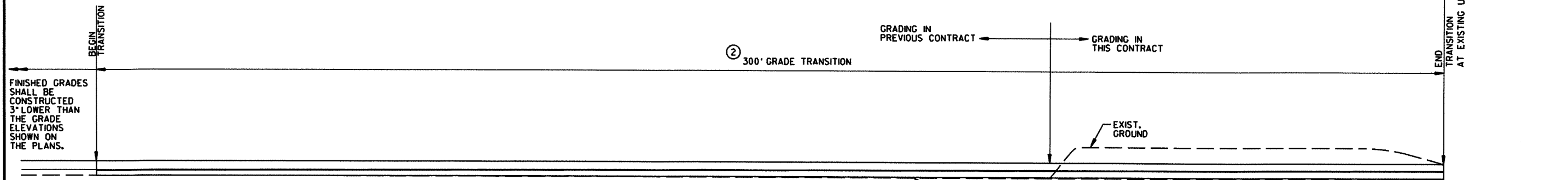
**ALTERNATE NO. 2
SPECIAL DETAILS**

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	030313	13

② SPECIAL DETAILS

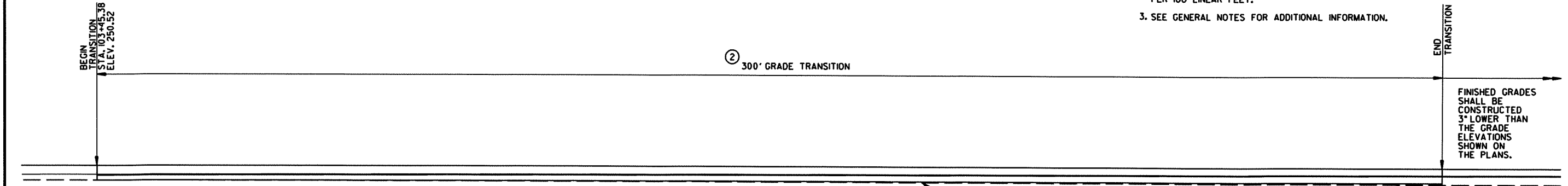


GRADE TRANSITION AT BRIDGE ENDS
 MAIN LANES OVER WEST FORK KELLY BAYOU
 SOUTH END OF MAIN LANES OVER EXISTING U.S. 71



GRADE TRANSITION AT RAMP 1 & RAMP 4

- NOTES:
1. SEE STANDARD DRAWING CPTJ-6A FOR DETAILS REGARDING CONTRACTION AND EXPANSION JOINTS AT BRIDGE APPROACH SLABS.
 2. TRANSITION THE GRADE AT THE RATE OF ONE INCH PER 100 LINEAR FEET.
 3. SEE GENERAL NOTES FOR ADDITIONAL INFORMATION.



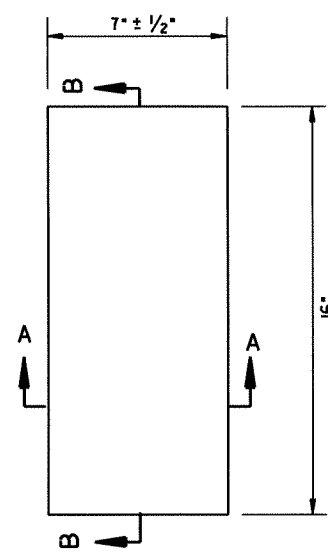
GRADE TRANSITION AT BEGINNING OF JOB
 MAIN LANES



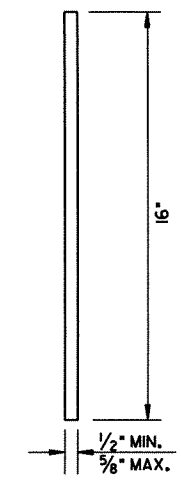
SPECIAL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 030313	14	100

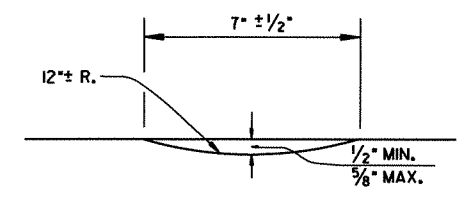
2 SPECIAL DETAILS



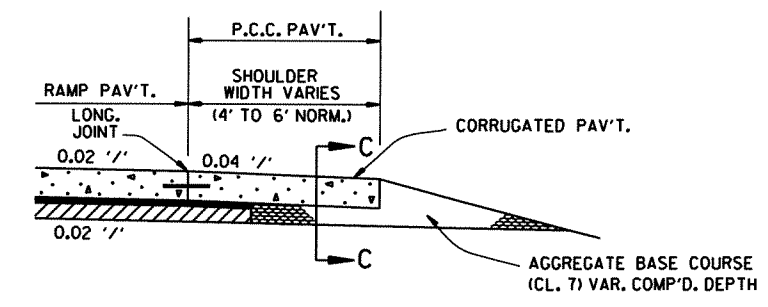
PLAN



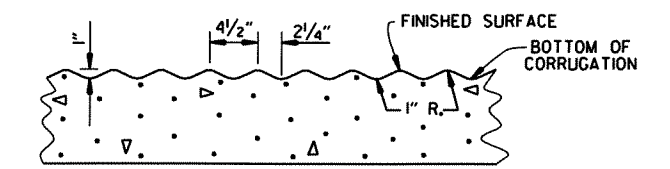
SECTION B-B



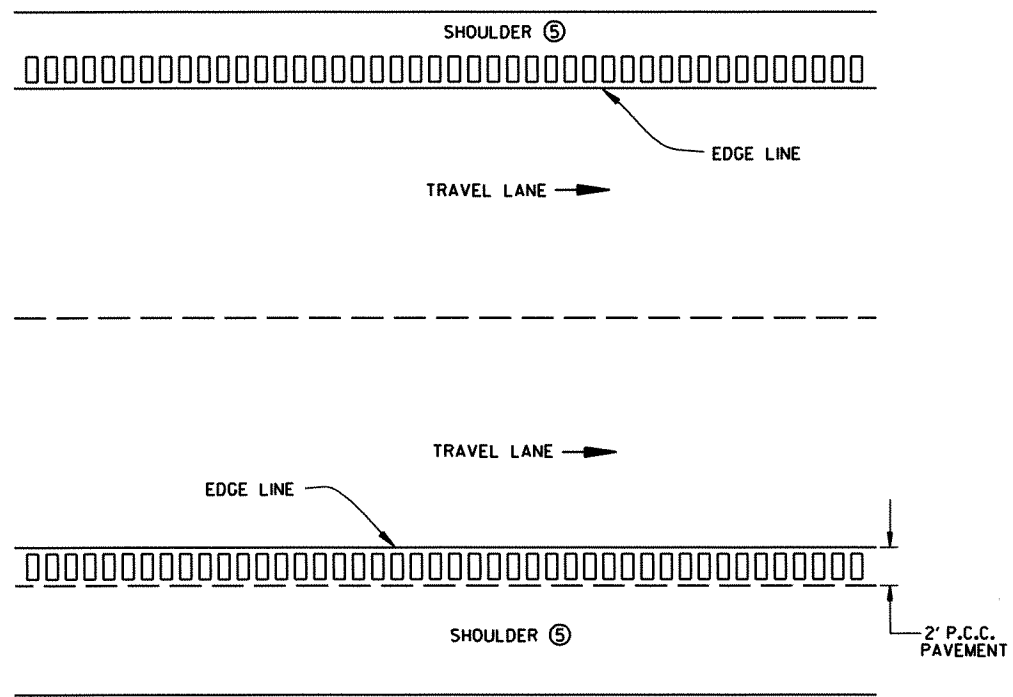
SECTION A-A



CORRUGATED CONCRETE SHOULDER AT RAMP INTERSECTION ALTERNATE 1 & ALTERNATE 2

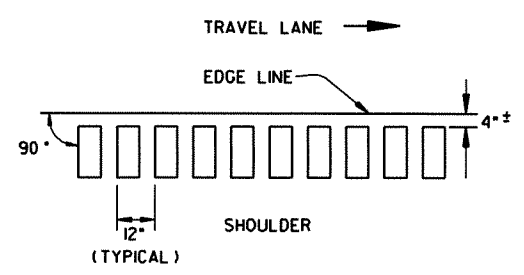


SECTION C-C
CORRUGATED CONCRETE SHOULDERS

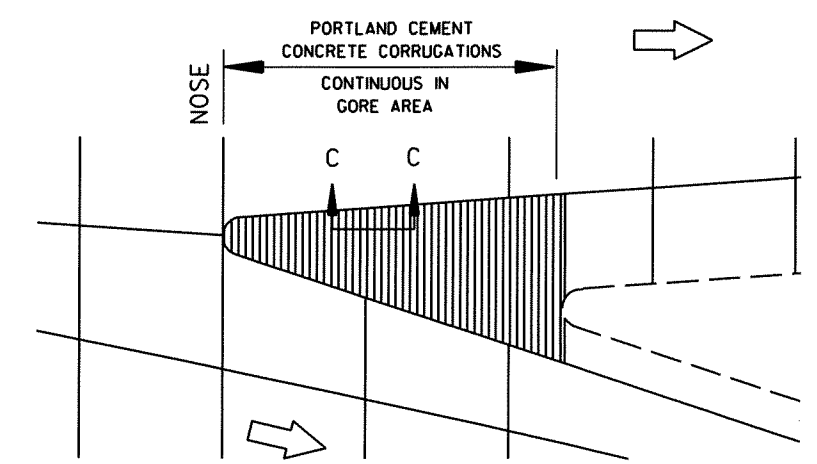


PLAN VIEW
DETAILS OF RUMBLE STRIPS

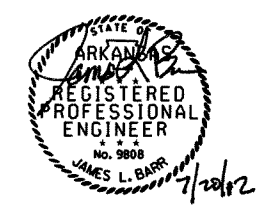
- NOTES:
1. ALIGNMENT OF RUMBLE STRIPS SHALL GENERALLY BE STRAIGHT AND OFFSET APPROXIMATELY 4" FROM THE OUTER EDGE OF THE EDGE LINE. THIS OFFSET MAY BE ADJUSTED TO ACCOMMODATE VARIATIONS IN THE EDGE LINE.
 2. THE 1/2" DEPTH SHALL GENERALLY APPLY FOR THE ENTIRE 16" LENGTH. SOME VARIATION TO SUIT SHOULDER SLOPE BREAKS MAY BE NECESSARY.
 3. ON CONCRETE SHOULDERS, RUMBLE STRIPS SHALL BE PLACED NO CLOSER THAN 1" TO A TRANSVERSE JOINT.
 4. REFER TO SECTION 642 OF THE STANDARD SPECIFICATIONS FOR ADDITIONAL INFORMATION.
 5. ALTERNATE SHOULDER DESIGN:
ALTERNATE NO.1 - ACHM & ALTERNATE NO.2 - P.C.C.
MAIN LANE PAVEMENT EXTENDS 2' INTO THE OUTSIDE SHOULDER.
SEE TYPICAL SECTIONS OF IMPROVEMENT FOR ADDITIONAL INFORMATION.



LOCATION PLAN OF RUMBLE STRIPS
LEFT OR RIGHT SHOULDER



LAYOUT OF SHOULDER CORRUGATIONS
IN EXIT GORE AREAS

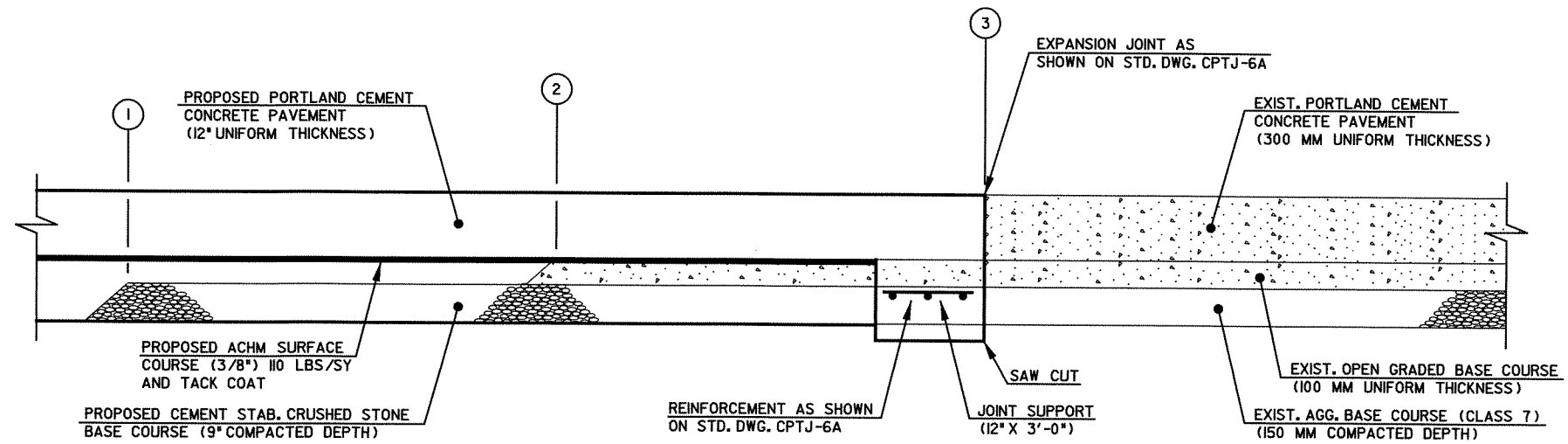


SPECIAL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	030313	15	100	

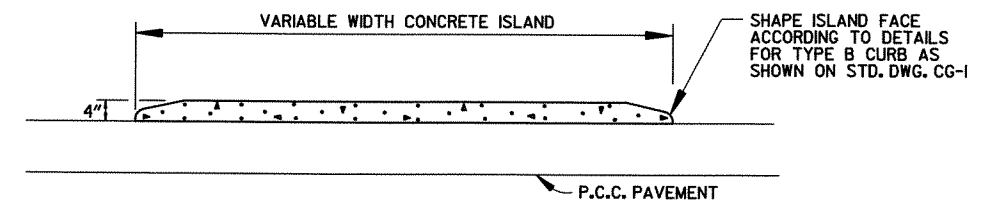
2 SPECIAL DETAILS

1. STA. 99+00.00 JOB 030261=
STA. 338+36.54 JOB 030313
2. STA. 99+20.00 JOB 030261=
STA. 339+02.16 JOB 030313
3. STA. 99+40.00 JOB 030261=
STA. 339+38.78 JOB 030313

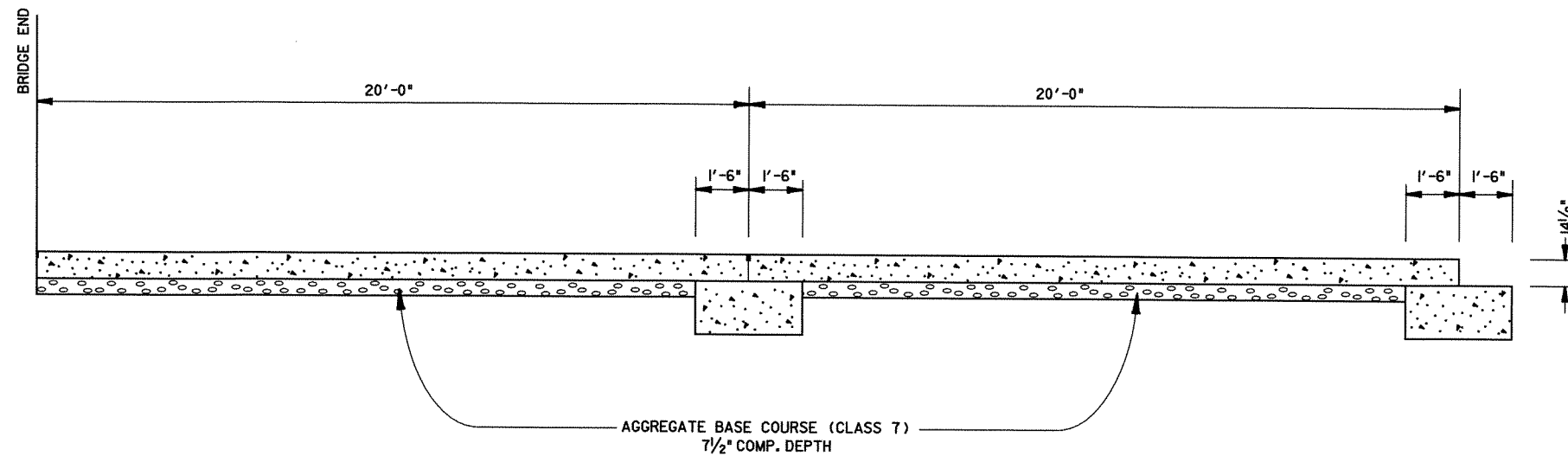


NOTE: THE EXISTING OPEN GRADED BASE COURSE AND AGGREGATE BASE COURSE TO BE REMOVED FROM THE REMAINING PAVEMENT STRUCTURE SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE MATERIAL TO BE REMOVED SHALL BE REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE PAVEMENT STRUCTURE THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. THERE WILL BE NO DIRECT PAYMENT MADE FOR THE REMOVAL AND DISPOSAL OF THIS MATERIAL, BUT COMPENSATION WILL BE CONSIDERED INCLUDED IN THE VARIOUS CONTRACT ITEMS.

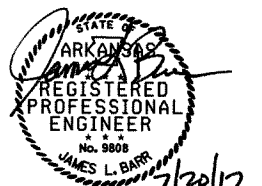
DETAIL OF PAVEMENT TRANSITION FROM NORTH END OF APPROACH SLABS AT EAST FORK KELLY BAYOU TO END OF PROJECT



DETAILS OF ISLAND ON P.C.C. PAVEMENT TO BE USED AT RAMPS 1&4 EXIST. US 71

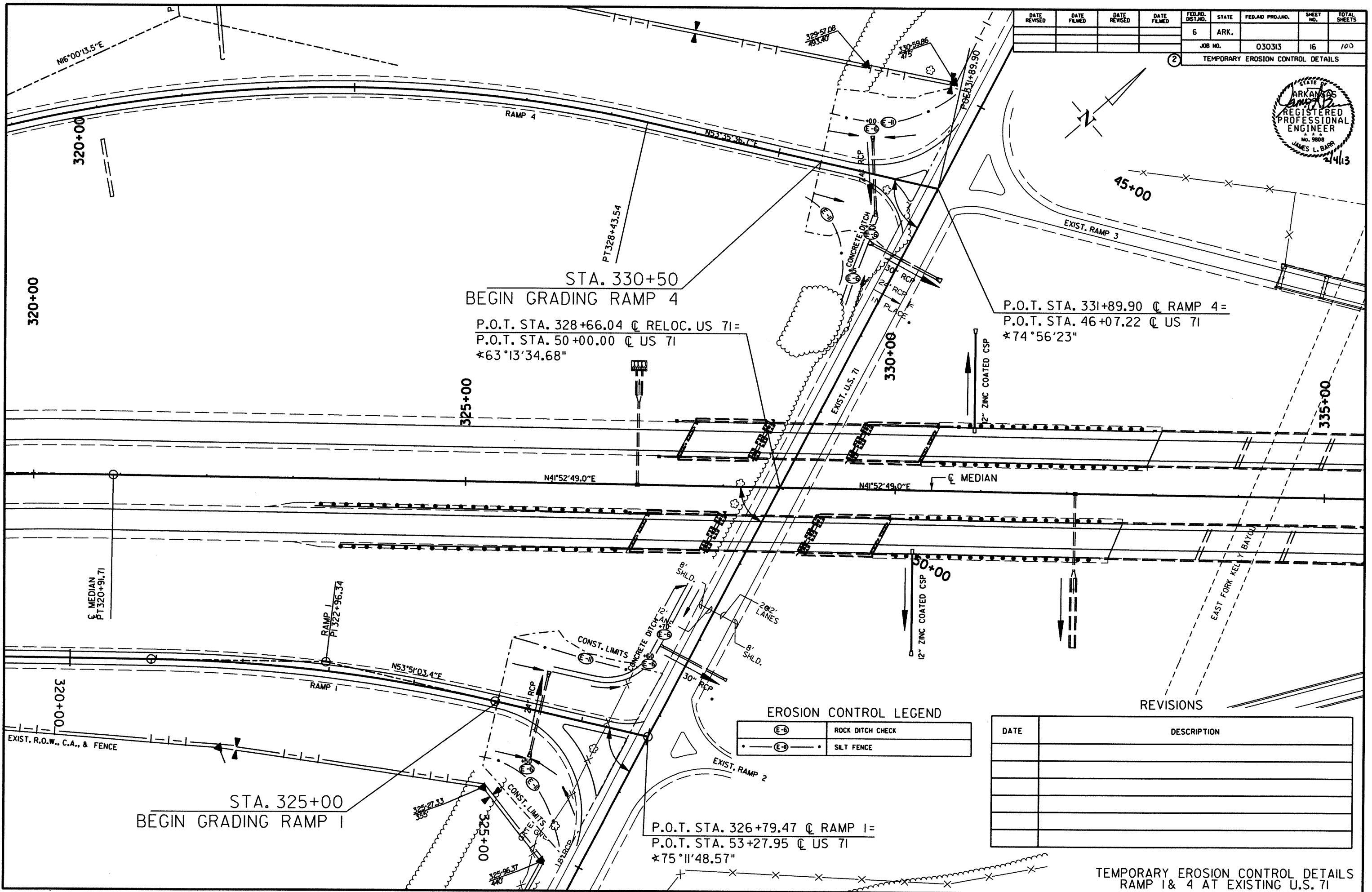


LONGITUDINAL SECTION OF APPROACH SLAB



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.			
							JOB NO. 030313	16
							TEMPORARY EROSION CONTROL DETAILS	



STA. 330+50
 BEGIN GRADING RAMP 4
 P.O.T. STA. 328+66.04 @ RELOC. US 71 =
 P.O.T. STA. 50+00.00 @ US 71
 *63°13'34.68"

P.O.T. STA. 331+89.90 @ RAMP 4 =
 P.O.T. STA. 46+07.22 @ US 71
 *74°56'23"

STA. 325+00
 BEGIN GRADING RAMP 1

P.O.T. STA. 326+79.47 @ RAMP 1 =
 P.O.T. STA. 53+27.95 @ US 71
 *75°11'48.57"

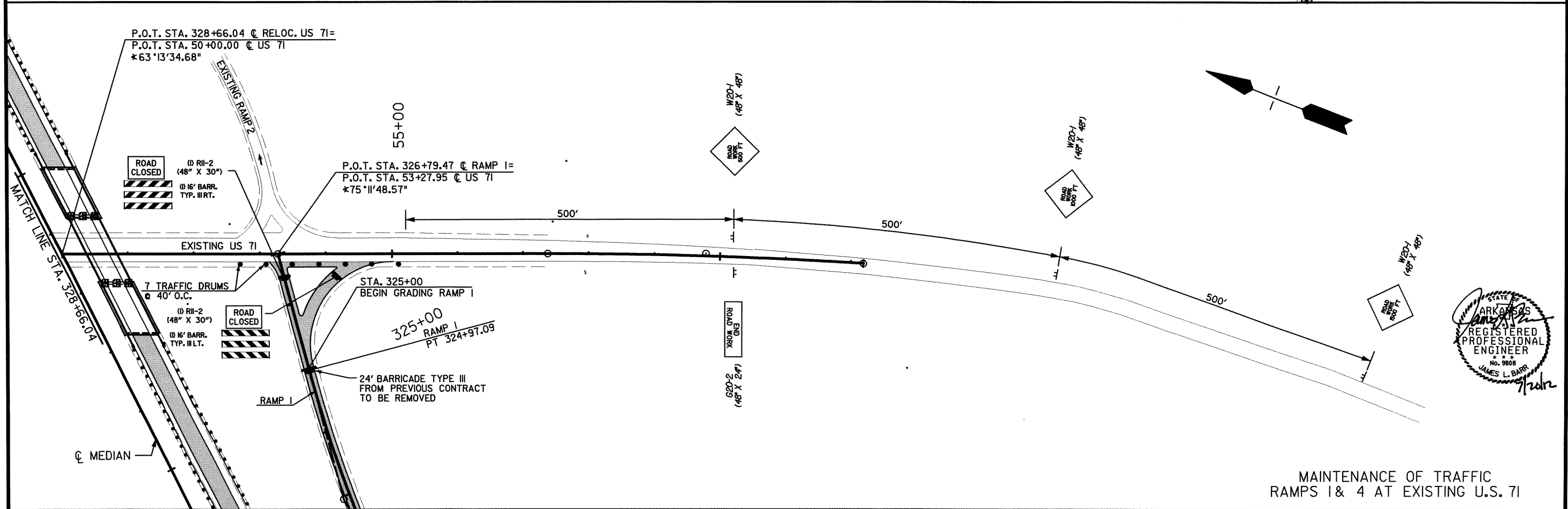
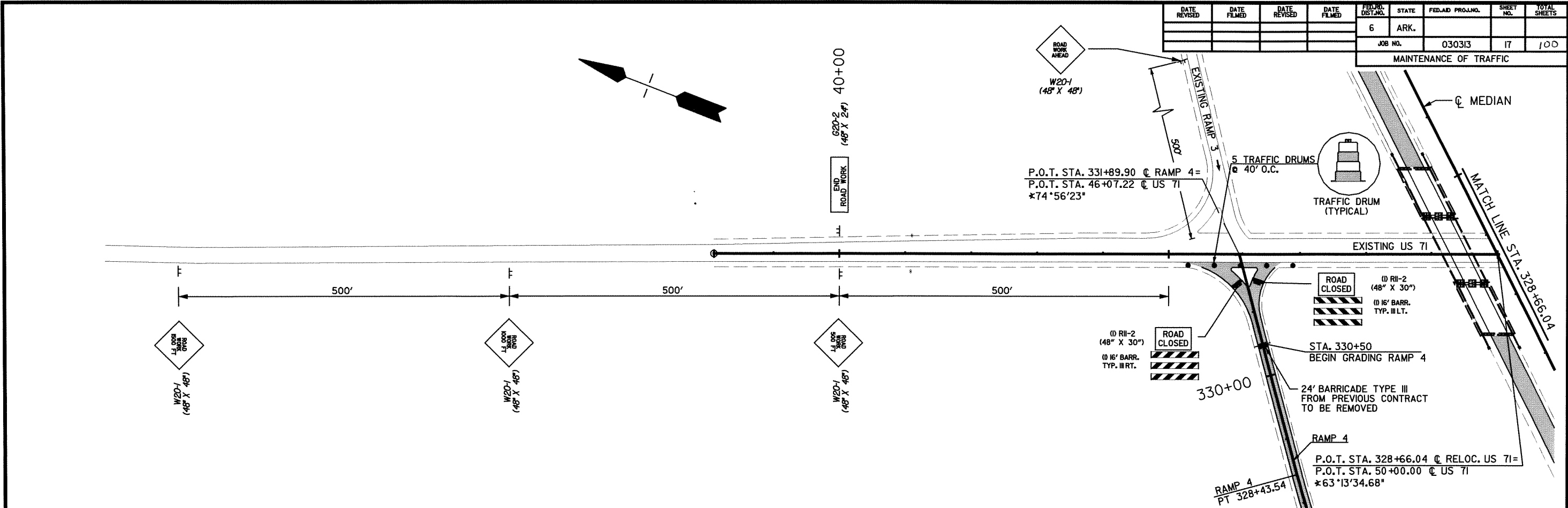
EROSION CONTROL LEGEND

(E-S)	ROCK DITCH CHECK
(E-F)	SILT FENCE

DATE	DESCRIPTION

TEMPORARY EROSION CONTROL DETAILS
 RAMP 1 & 4 AT EXISTING U.S. 71

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	030313	IT	100	
MAINTENANCE OF TRAFFIC								



STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 No. 9808
 JAMES L. BARR

MAINTENANCE OF TRAFFIC
 RAMPS 1 & 4 AT EXISTING U.S. 71

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	030313	17A	100	

② MAINTENANCE OF TRAFFIC

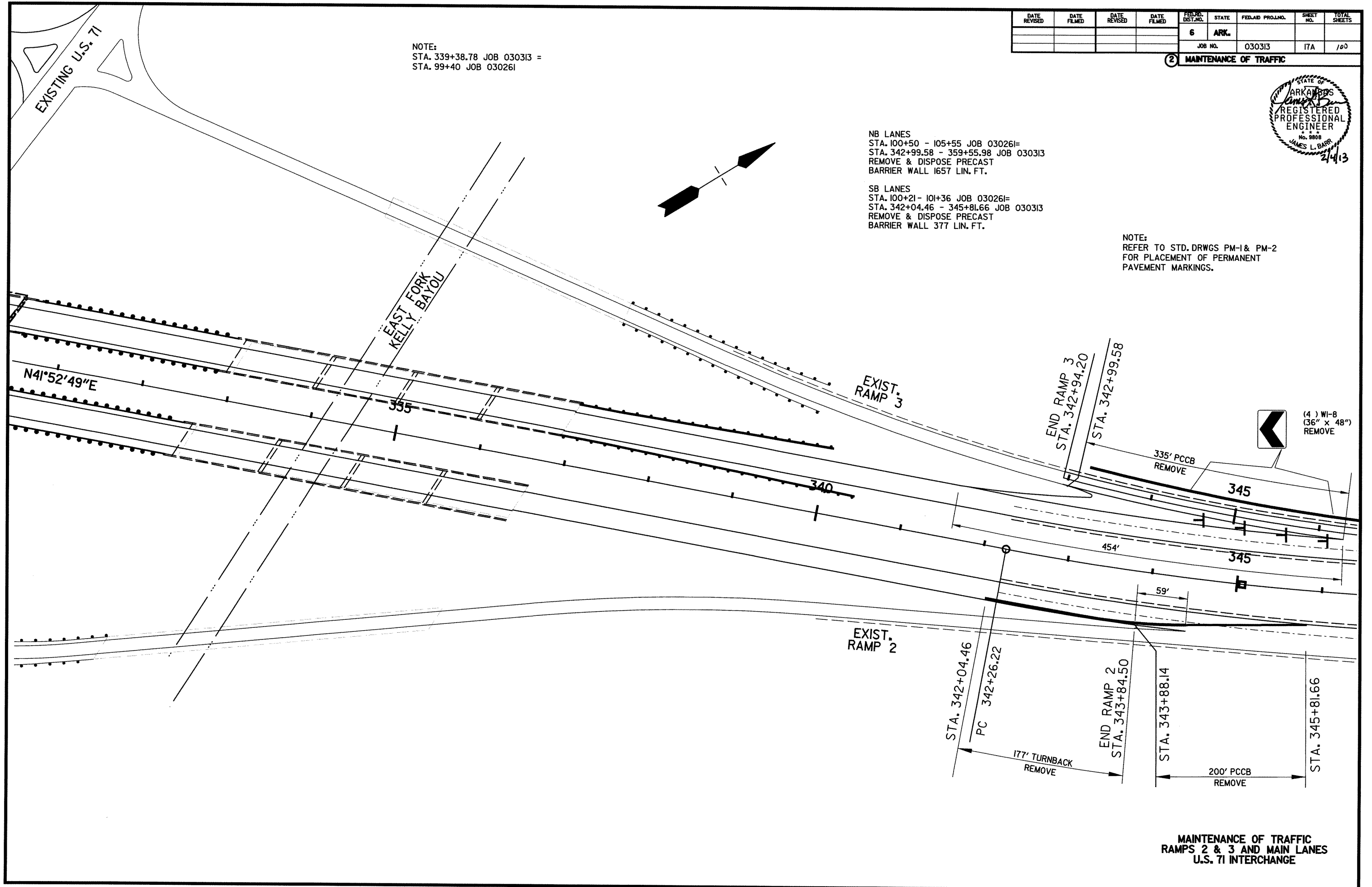


NOTE:
 STA. 339+38.78 JOB 030313 =
 STA. 99+40 JOB 030261

NB LANES
 STA. 100+50 - 105+55 JOB 030261=
 STA. 342+99.58 - 359+55.98 JOB 030313
 REMOVE & DISPOSE PRECAST
 BARRIER WALL 1657 LIN. FT.

SB LANES
 STA. 100+21 - 101+36 JOB 030261=
 STA. 342+04.46 - 345+81.66 JOB 030313
 REMOVE & DISPOSE PRECAST
 BARRIER WALL 377 LIN. FT.

NOTE:
 REFER TO STD. DRWGS PM-1& PM-2
 FOR PLACEMENT OF PERMANENT
 PAVEMENT MARKINGS.



(4) WI-B
 (36" x 48")
 REMOVE

MAINTENANCE OF TRAFFIC
 RAMPS 2 & 3 AND MAIN LANES
 U.S. 71 INTERCHANGE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	030313	ITB	100	

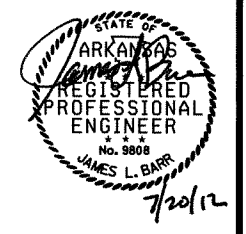
② MAINTENANCE OF TRAFFIC

FINAL STRIPING SB MAIN LANES
 STA. 99+40 - STA. 106+65 JOB 030261=
 STA. 339+38.78 - STA. 363+16.78 JOB 030313

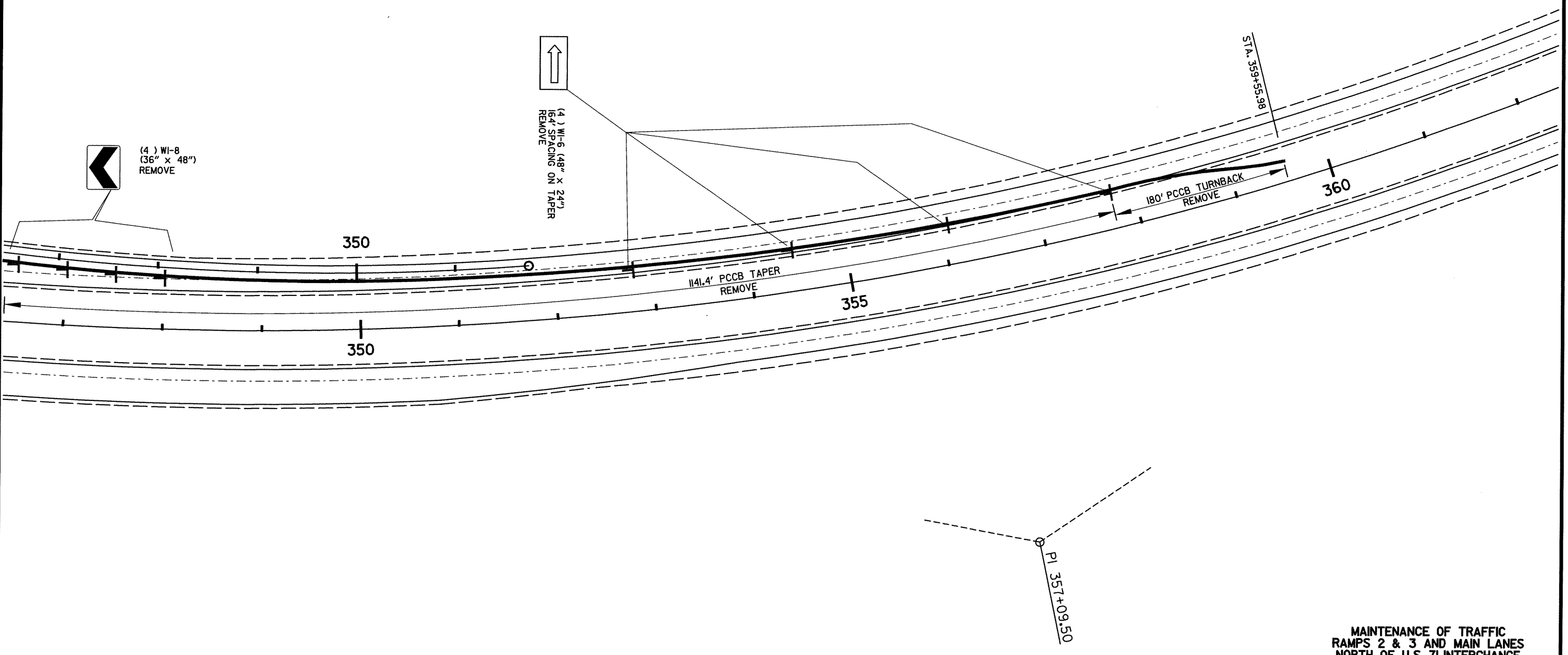
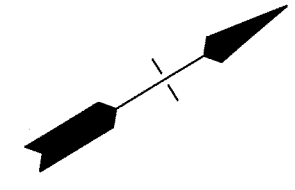
HIGH PERFORMANCE PAVEMENT MARKING
 SOUTHBOUND SKIP LANE DIVIDER BEGINNING
 STA. 339+38.78 = 600 LIN. FT.

RAISED PAVEMENT MARKERS

SB LANES
 TYPE 2 (WHITE/RED) 80' O.C. ON SKIP LANE DIVIDER = 30 EACH



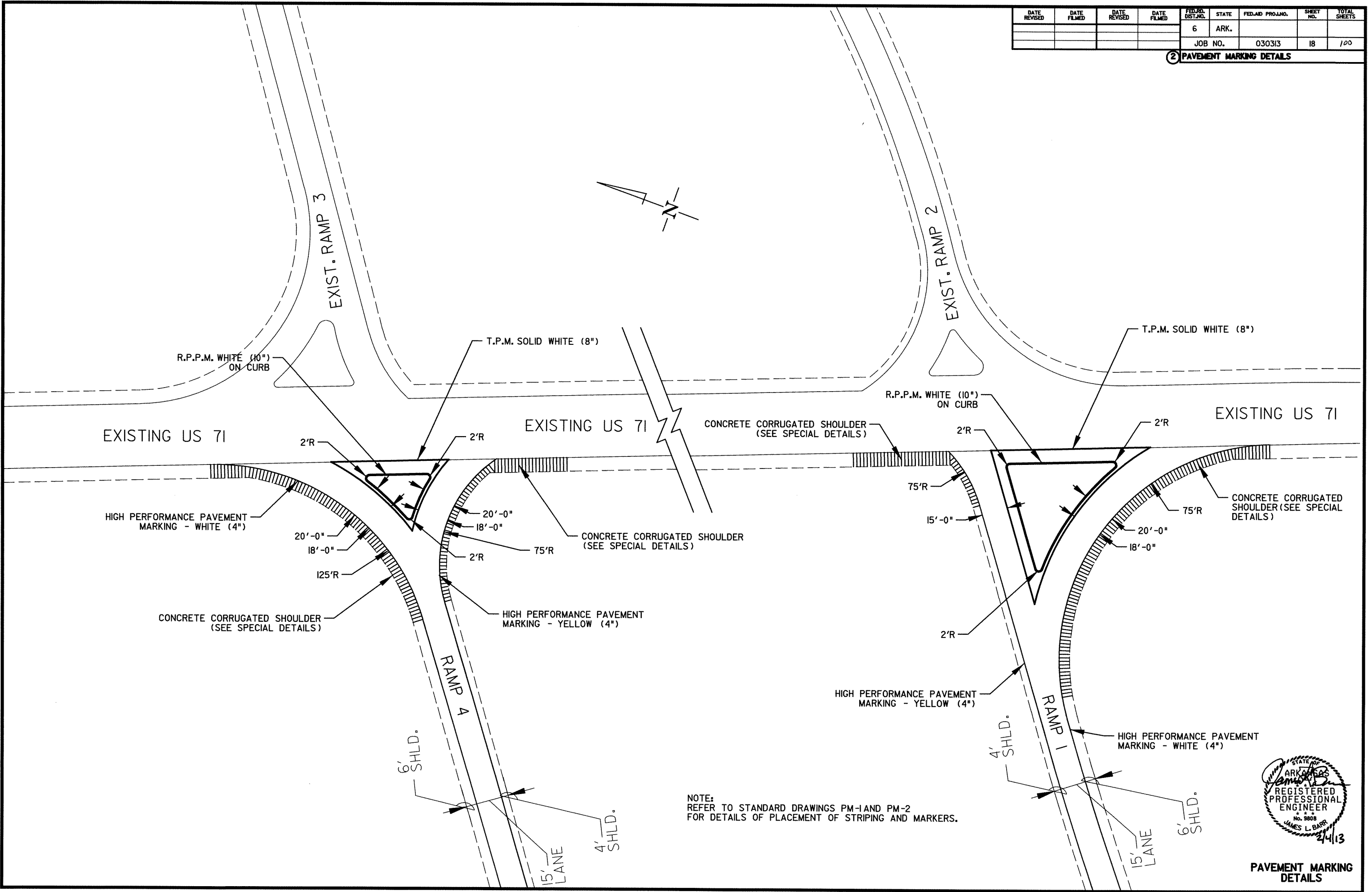
NOTE:
 REFER TO STD. DRWGS PM-1& PM-2
 FOR PLACEMENT OF PERMANENT
 PAVEMENT MARKINGS.



MAINTENANCE OF TRAFFIC
 RAMPS 2 & 3 AND MAIN LANES
 NORTH OF U.S. 71 INTERCHANGE

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.	030313	18	100	

2 PAVEMENT MARKING DETAILS



NOTE:
REFER TO STANDARD DRAWINGS PM-1 AND PM-2
FOR DETAILS OF PLACEMENT OF STRIPING AND MARKERS.



PAVEMENT MARKING
DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 030313	19	100

② QUANTITIES

SOIL LOG

STATION @ CENTERLINE	LOCATION	DEPTH FT.	A.A.S.H.T.O. CLASSIFICATION	LIQUID LIMIT	PLASTICITY INDEX	REMARKS
106+00	94' RT.	0.6-7.0	A-6 (13)	36	14	TAN
106+00	94' RT.	7.0-19.0	A-4 (8)	30	10	BEIGE
121+00	CL	0.6-15.0	A-6 (10)	35	19	DARK TAN
162+00	CL	0.5-6.0	A-6 (6)	30	13	TAN
165+00	94' LT.	5.0-5.7	A-4 (0)	22	2	GRAY/ ORANGE
184+00	141' LT.	5.0-11.5	A-6 (8)	33	18	GRAY/ YELLOWISH ORANGE
186+00	94' RT.	0.6-17.0	A-4 (0)	22	5	DARK TAN
186+00	94' RT.	17.0-22.0	A-6 (6)	32	16	DARK YELLOWISH ORANGE
200+00	158' RT.	5.0-21.5	A-4 (0)	23	3	BROWN/ YELLOWISH ORANGE
225+50	205' LT.	10.0-21.5	A-4 (5)	27	10	LIGHT GRAY/ YELLOWISH ORANGE
228+00	94' LT.	0.6-12.0	A-6 (6)	33	16	TAN
228+00	94' LT.	12.0-33.0	A-6 (4)	29	11	YELLOWISH ORANGE
240+00	CL	0.6-15.0	A-4 (0)	22	6	TAN
240+00	CL	15.0-36.0	A-2-4 (0)	NP	NP	YELLOWISH ORANGE
240+00	235' LT.	45.0-56.3	A-6 (9)	30	13	DARK GRAY/ BROWN/ BEIGE
244+00	220' LT.	5.0-26.5	A-2-4 (0)	NP	NP	REDDISH BROWN SILTY
258+00	94' RT.	0.6-15.0	A-4 (1)	27	5	LIGHT TAN/ GRAY
258+00	94' RT.	15.0-25.0	A-6 (11)	34	20	DARK OLIVE/ GRAY
262+50	245' LT.	40.0-61.0	A-2-4 (0)	NP	NP	DARK GRAY
299+74	60' LT.	7.5-22.0	A-4 (0)	23	2	TAN
303+97	27' LT.	5.0-6.0	A-6 (2)	27	11	DARK RED/ YELLOW/ GRAY
303+98	330' LT.	15.0-20.9	A-4 (0)	26	4	LIGHT GRAY/ BROWN
305+44	261' LT.	13.0-24.0	A-2-4 (0)	NP	NP	DARK BEIGE/ BEIGE
311+03	21' LT.	0.7-9.0	A-6 (4)	33	15	DARK TAN
328+98	CL	1.0-12.0	A-7-6 (66)	41	25	BROWN
328+98	CL	12.0-15.0	A-2-4 (0)	NP	NP	BEIGE
330+98	94' LT.	5.0-11.5	A-4 (0)	17	1	DARK YELLOWISH ORANGE
330+98	94' RT.	10.0-31.5	A-2-4 (0)	NP	NP	BEIGE/ GRAY
318+75 (RAMP 1)	10' LT.	0.7-5.0	A-4 (0)	18	2	DARK TAN
320+48 (RAMP 4)	132' RT.	15.0-41.5	A-2-4 (0)	NP	NP	YELLOWISH ORANGE
329+48 (RAMP 4)	105' RT.	10.0-11.8	A-6 (16)	36	23	GRAY/ DARK ORANGE
46+99 (COUNTY RD. 4)	154' RT.	0.7-10.0	A-4 (1)	24	10	TAN

NOTE: 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.



QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	030313	20
						QUANTITIES		

REMOVAL AND DISPOSAL ITEMS

STATION	STATION	LOCATION	DESCRIPTION	ASPHALT PAVEMENT	PRECAST CONCRETE BARRIER	FENCE	BARRICADES	SIGNS
				SQ. YD.	LIN. FT.	LIN. FT.	EACH	EACH
103+45.38		MAIN LANES LT.	TEMP. PRECAST BARRIER		40			
103+45.38		MAIN LANES RT.	TEMP. PRECAST BARRIER		40			
325+87.18	326+99.42	MAIN LANES RT.	FENCE			239		
324+98.05		RAMP 1	24' BARR. TYP. III LT.				1	
330+47.97		RAMP 4	24' BARR. TYP. III LT.				1	
339+38.78	359+55.98	MAIN LANES LT. & RT.	TEMP. PRECAST BARRIER & SIGNS		2034			12
342+59.86	343+15.53	MAIN LANES LT.	RAMP 3 GORE AREA	15				
TOTALS				15	2114	239	2	12

CLEARING & GRUBBING

STATION	STATION	LOCATION	CLEARING	GRUBBING
			STATION	STATION
325+00.00	326+67.06	RAMP 1	2	2
330+50.00	331+77.47	RAMP 4	2	2
TOTALS			4	4

ADVANCE WARNING SIGNS & DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	TOTAL QUANTITY REQUIRED	TOTAL SIGNS REQUIRED (SQ. FT.)
G20-2	END ROAD WORK	48" X 24"	2	16
R11-2	ROAD CLOSED	48" X 30"	4	40
W20-1	ROAD WORK AHEAD	48" X 48"	1	16
W20-1 (500)	ROAD WORK AHEAD 500 FT	48" X 48"	2	32
W20-1 (1000)	ROAD WORK AHEAD 1000 FT	48" X 48"	2	32
W20-1 (1500)	ROAD WORK AHEAD 1500 FT	48" X 48"	2	32
TOTAL			168	

UNITS

TRAFFIC DRUMS	12	EACH
TYPE III BARRICADE (RIGHT)	32	LIN. FT.
TYPE III BARRICADE (LEFT)	32	LIN. FT.

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

PERMANENT PAVEMENT MARKINGS

DESCRIPTION	UNITS	TOTAL REQUIRED
* INVERTED PROFILE THERMOPLASTIC CONTRAST PAVEMENT MARKING WHITE (4") - ALTERNATE 1	LIN. FT.	12391
* HIGH PERFORMANCE CONTRAST MARKING TAPE WHITE (4") - ALTERNATE 2	LIN. FT.	12391
* INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING WHITE (4") - ALTERNATE 1	LIN. FT.	53785
* HIGH PERFORMANCE MARKING TAPE WHITE (4") - ALTERNATE 2	LIN. FT.	53785
* INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING YELLOW (4") - ALTERNATE 1	LIN. FT.	53785
* HIGH PERFORMANCE MARKING TAPE YELLOW (4") - ALTERNATE 2	LIN. FT.	53785
* INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING WHITE (8") - ALTERNATE 1	LIN. FT.	1538
* HIGH PERFORMANCE MARKING TAPE WHITE (8") - ALTERNATE 2	LIN. FT.	1538
THERMOPLASTIC PAVEMENT MARKING WHITE (8")	LIN. FT.	356
REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")	LIN. FT.	318
RAISED PAVEMENT MARKER (TYPE II)	EACH	906

* DENOTES ALTERNATE BID ITEMS

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

EARTHWORK

LOCATION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT
	CU. YD.	
RAMP 1	5853	57
RAMP 4	5699	9
TOTALS	11552	66

EARTHWORK QUANTITIES SHOWN ABOVE SHALL BE PAID AS PLAN QUANTITY.

CONCRETE ISLANDS

STATION	LOCATION	AREA (SQ. YD.)
325+65	RAMP 1	286
330+10	RAMP 4	75
TOTAL		361

SHAPING DITCH

STATION	STATION	LOCATION	LIN. FT.
* ENTIRE PROJECT - IF AND WHERE DIRECTED BY THE ENGINEER			2000
TOTAL			2000

* QUANTITY ESTIMATED. (SEE SECTION 104.3 OF THE STANDARD SPECIFICATIONS)

SOIL STABILIZATION

STATION	STATION	LOCATION	TONS
* ENTIRE PROJECT - IF AND WHERE DIRECTED BY THE ENGINEER			1000
TOTAL			1000

* QUANTITY ESTIMATED. (SEE SECTION 104.3 OF THE STANDARD SPECIFICATIONS)

4" PIPE UNDERDRAINS

STATION	STATION	LOCATION	4" PIPE UNDERDRAINS	OUTLET PROTECTORS
			LIN. FT.	EACH
* ENTIRE PROJECT - IF AND WHERE DIRECTED BY THE ENGINEER			100	5
TOTALS			100	5

* QUANTITY ESTIMATED. (SEE SECTION 104.3 OF THE STANDARD SPECIFICATIONS)

GUARDRAIL

STATION	STATION	LOCATION	GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)	THRE BEAM GUARDRAIL TERMINAL
			LIN. FT.	EACH	
129+73.61	133+42.36	LT. OF RT. MAIN LANES	300	1	1
129+95.60	133+14.35	RT. OF RT. MAIN LANES	250	1	1
138+03.21	141+71.96	RT. OF LT. MAIN LANES	300	1	1
138+31.22	141+49.97	LT. OF LT. MAIN LANES	250	1	1
323+48.68	326+67.43	RT. OF RT. MAIN LANES	250	1	1
323+19.06	326+87.81	LT. OF RT. MAIN LANES	300	1	1
329+99.45	332+30.09	RT. OF RT. MAIN LANES	193		2
330+19.83	332+46.25	LT. OF RT. MAIN LANES	189		2
330+54.08	332+73.73	RT. OF LT. MAIN LANES	182		2
330+74.46	332+89.89	LT. OF LT. MAIN LANES	178		2
337+15.15	340+83.90	RT. OF LT. MAIN LANES	300	1	1
337+31.31	340+50.06	LT. OF LT. MAIN LANES	250	1	1
TOTALS			2942	8	16



QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	030313	21	100	

② QUANTITIES

TEMPORARY EROSION CONTROL

LOCATION	TEMPORARY SEEDING	MULCH COVER	WATER	ROCK DITCH CHECKS (TYPE E-6)	SILT FENCE (TYPE E-11)	DUMPED RIPRAP
	ACRE	M. GAL.	CU. YD.	LIN. FT.	CU. YD.	
RAMP 1	0.52	0.52	10.6	12	345	
RAMP 4	0.79	0.79	16.1	12	300	
* ENTIRE PROJECT				4		10
TOTALS	1.31	1.31	26.7	28	645	10

BASIS OF ESTIMATE: WATER = 20.4 M.G. PER ACRE TEMPORARY SEEDING

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

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

CONCRETE DITCH PAVING

STATION	STATION	LOCATION	LENGTH	"W"	CONCRETE DITCH PAVING (TYPE B)	SOLID SODDING	WATER
			LIN. FT.		SQ. YD.		M. GAL.
325+50	326+79	RAMP 1 LT.	235	6	157	105	1.4
331+10	331+26	RAMP 4 RT.	110	6	74	49	0.7
ENTIRE PROJECT - IF AND WHERE DIRECTED BY THE ENGINEER					10	5	0.1
TOTALS					241	159	2.2

QUANTITY ESTIMATED (SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS)
BASIS OF ESTIMATE : WATER = 12.6 GAL. PER SQ. YD. OF SOLID SODDING

SUBGRADE PREPARATION

STATION	STATION	LOCATION	SUBGRADE PREPARATION
			STATION
103+45.38	133+83.96	MAIN LANES LT & RT	60.77
137+61.61	327+28.23	MAIN LANES LT & RT	379.33
330+13.67	332+79.53	MAIN LANES LT & RT	5.32
310+26.67	325+00.00	RAMP 1	14.73
305+97.75	330+50.00	RAMP 4	24.52
336+81.87	339+38.78	MAIN LANES LT & RT	5.14
TOTAL			489.81

NOTE: THE REMOVAL AND DISPOSAL OF EXISTING GRASS AND ORGANIC MATERIALS FROM THE SUBGRADE AND THE REPLACEMENT OF SUBGRADE MATERIAL REMOVED BY SCALPING THESE AREAS WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED INCLUDED IN THE PRICE BID PER STATION FOR "SUBGRADE PREPARATION". REFER TO SPECIAL PROVISION "SUBGRADE PREPARATION".

PROFILE GRADE SHOWN ON PLAN AND PROFILE SHEETS IS 22" ABOVE SUBGRADE. USE 1":100' TRANSITION IN SUBGRADE AT RAMP TERMINALS, AT APPROACH SLABS SHOWN IN PLANS, AND JOB AT BEGINNING OF PROJECT. NO DIRECT PAYMENT WILL BE PAID FOR THIS WORK, BUT PAYMENT WILL BE CONSIDERED INCLUDED IN PRICE BID PER STATION FOR "SUBGRADE PREPARATION".

EROSION CONTROL

STATION	STATION	LOCATION	LIME	SEEDING	MULCH COVER	WATER	SECOND SEEDING APPLICATION
			TON	ACRE	M. GAL.	ACRE	
325+00.00	326+67.06	RAMP 1	1	0.52	0.52	53.0	0.52
330+50.00	331+77.47	RAMP 4	2	0.79	0.79	80.6	0.79
* ENTIRE PROJECT			1	0.25	0.25	25.5	0.25
TOTALS			4	1.56	1.56	159.1	1.56

BASIS OF ESTIMATE: WATER - 102 M.G. PER ACRE SEEDING
LIME - 2 TON PER ACRE SEEDING

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

JOINT SUPPORTS

STATION	LOCATION	LENGTH	CLASS "S" CONCRETE - ROADWAY
		FT.	CU. YD.
133+41.97	RELOC. US 71 BRIDGE NO. 7121(A)	26	2.89
133+56.97	RELOC. US 71 BRIDGE NO. 7121(A)	26	2.89
138+61.43	RELOC. US 71 BRIDGE NO. 7121(A)	26	2.89
138+76.43	RELOC. US 71 BRIDGE NO. 7121(A)	26	2.89
132+69.15	RELOC. US 71 BRIDGE NO. 7121(B)	26	2.89
132+84.15	RELOC. US 71 BRIDGE NO. 7121(B)	26	2.89
137+88.59	RELOC. US 71 BRIDGE NO. 7121(B)	26	2.89
138+03.59	RELOC. US 71 BRIDGE NO. 7121(B)	26	2.89
326+74.16	RELOC. US 71 BRIDGE NO. 7124(A)	26	2.89
326+89.16	RELOC. US 71 BRIDGE NO. 7124(A)	26	2.89
331+05.33	RELOC. US 71 BRIDGE NO. 7124(A)	26	2.89
331+20.33	RELOC. US 71 BRIDGE NO. 7124(A)	26	2.89
326+21.56	RELOC. US 71 BRIDGE NO. 7124(B)	26	2.89
326+36.56	RELOC. US 71 BRIDGE NO. 7124(B)	26	2.89
330+52.73	RELOC. US 71 BRIDGE NO. 7124(B)	26	2.89
330+67.73	RELOC. US 71 BRIDGE NO. 7124(B)	26	2.89
332+26.19	RELOC. US 71 BRIDGE NO. 7125(A)	26	2.89
332+41.19	RELOC. US 71 BRIDGE NO. 7125(A)	26	2.89
337+62.23	RELOC. US 71 BRIDGE NO. 7125(A)	26	2.89
337+77.23	RELOC. US 71 BRIDGE NO. 7125(A)	26	2.89
331+84.17	RELOC. US 71 BRIDGE NO. 7125(B)	26	2.89
331+99.17	RELOC. US 71 BRIDGE NO. 7125(B)	26	2.89
337+20.21	RELOC. US 71 BRIDGE NO. 7125(B)	26	2.89
337+35.21	RELOC. US 71 BRIDGE NO. 7125(B)	26	2.89
339+38.78	MAIN LANES LT & RT	52	5.78
310+71.67	RAMP 1	15	1.67
310+86.67	RAMP 1	15	1.67
311+01.67	RAMP 1	15	1.67
305+99.75	RAMP 4	15	1.67
306+14.75	RAMP 4	15	1.67
306+29.75	RAMP 4	15	1.67
TOTAL			85.16



QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	030313	22	100	
				② QUANTITIES				

BASE AND SURFACING - SUMMARY

LOCATION	ACHM SURFACE COURSE (1/2")		ACHM SURFACE COURSE (3/8")		AGGREGATE BASE COURSE (CLASS 7)		CEMENT STAB. CRUSHED STONE BASE CRS.						P.C.C. PAVEMENT (12" U.T.)		PORTLAND CEMENT CONCRETE CORRUGATIONS		RUMBLE STRIPS				TACK COAT	
	TON		TON		TON		PROCESSING	AGGREGATE		CEMENT		SQ. YD.		SQ. YD.		LIN. FT.		LIN. FT.		GALLON		
	ALT. 1	ALT. 2	ALT. 1	ALT. 2	ALT. 1	ALT. 2	ALT. 1	ALT. 2	ALT. 1	ALT. 2	ALT. 1	ALT. 2	ALT. 1	ALT. 2	ALT. 1	ALT. 2	ALT. 1	ALT. 2	ALT. 1	ALT. 2	ALT. 1	ALT. 2
MAIN LANES	0		8281		0		150567		49957		3189		130796		0	0	0		0		4517	
RAMPS	0		537		0		9772		3215		205		7715		0	0	0		0		293	
SUBTOTALS	0		8818		0		160339		53172		3394		138511		0	0	0		0		4810	
MAIN LANES SHOULDERS	6489	0	0	0	127632	93334	0	0	0	0	0	0	58989	0	0	44492	0	44492	88968	0	0	0
RAMPS SHOULDERS	516	0	0	0	11564	8930	0	0	0	0	0	0	4690	610	610	0	0	0	0	0	0	0
GUARDRAIL WIDENING	221	221	0	0	3015	3015	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTALS	7226	221	0	0	142211	105279	0	0	0	0	0	0	63679	610	610	44492	0	44492	88968	0	0	0
TOTALS	7226	221	8818	8818	142211	105279	160339	160339	53172	53172	3394	3394	138511	202190	610	610	44492	0	44492	88968	4810	4810

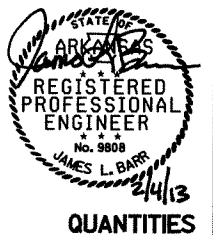
BASIS OF ESTIMATE: ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.7%, ASPHALT BINDER (PG 64-22) = 5.3%
 ACHM SURFACE COURSE (3/8") - MINERAL AGGREGATE = 94.7%, ASPHALT BINDER (PG 64-22) = 5.3%
 CEMENT STABILIZED CRUSHED STONE BASE - AGGREGATE = 94.0%, CEMENT = 6.0%

Nmax = 115

APPROACH SLABS & GUTTERS

STATION	STATION	LOCATION	APPROACH SLAB			APPROACH GUTTERS			REINFORCING STEEL ROADWAY - GRADE 60	AGGREGATE BASE COURSE (CLASS 7)	N-3 DROP INLET	ZINC COATED (GALVANIZED) C.S. PIPE (12") (16 GAUGE)	CONCRETE SPILLWAY (TYPE A)
			TYPE SPECIAL 1	TYPE SPECIAL 2	TYPE SPECIAL 3	TYPE SPECIAL 1	TYPE SPECIAL 4	TYPE SPECIAL 5					
			CUBIC YARDS						POUND	TON	EACH	LIN. FT.	EACH
133+71.97	134+11.97	RELOC. US 71 BRIDGE NO. 7121(A)	66.48				41.19		10157	105.1			
137+89.62	138+46.43	RELOC. US 71 BRIDGE NO. 7121(A)	66.48				35.85		10066	99.5			
132+99.15	133+55.95	RELOC. US 71 BRIDGE NO. 7121(B)	66.48				35.85		10066	105.1			
137+33.59	137+73.59	RELOC. US 71 BRIDGE NO. 7121(B)	66.48				41.19		10157	99.5			
327+04.16	327+48.41	RELOC. US 71 BRIDGE NO. 7124(A)		68.90			41.45		10766	107.6			
330+33.85	330+90.33	RELOC. US 71 BRIDGE NO. 7124(A)		68.90			37.57		10525	103.6	1	112	
326+51.56	327+08.04	RELOC. US 71 BRIDGE NO. 7124(B)		68.90			37.57		10525	107.6			
329+93.48	330+37.73	RELOC. US 71 BRIDGE NO. 7124(B)		68.90			41.45		10766	103.6	1	114	
332+56.19	332+95.69	RELOC. US 71 BRIDGE NO. 7125(A)			61.80			36.50	9529	94.5			
336+98.03	337+47.23	RELOC. US 71 BRIDGE NO. 7125(A)			61.80			33.40	9341	91.2			
332+14.17	332+63.37	RELOC. US 71 BRIDGE NO. 7125(B)			61.80			33.40	9341	94.5			
336+65.71	337+05.21	RELOC. US 71 BRIDGE NO. 7125(B)			61.80			36.50	9529	91.2			
TOTALS			265.92	275.60	247.20	154.08	158.04	139.80	120768	1203.0	2	226	2

BASIS OF ESTIMATE: QUANTITIES FOR AGGREGATE BASE COURSE (CLASS 7) ARE BASED ON 7.5" COMP. DEPTH



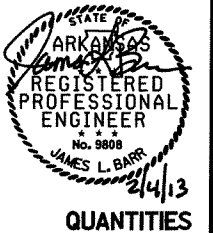
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	030313	25	100
				② QUANTITIES				

BASE AND SURFACING - ALTERNATE NO. 2 MAIN LANES SHOULDER

STATION	STATION	LOCATION	LENGTH	P.C.C. PAVEMENT (12" U.T.)		AGGREGATE BASE COURSE (CLASS 7)		RUMBLE STRIPS
				AVG. WIDTH	SQ. YD.	TONSTA.	TON	PCCP
				LIN. FT.	FEET			LIN. FT.
103+45.38	126+36.71	LT. MAIN LANES- MAX SUPER.	2291.33	12.0	3055.1	249.50	5716.9	4583
126+36.71	129+86.71	LT. MAIN LANES- S.E. TRANS.	350.00	12.0	466.7	216.50	757.8	700
129+86.71	133+71.97	LT. MAIN LANES- TANGENT	385.26	12.0	513.7	183.25	706.0	771
138+46.43	283+79.00	LT. MAIN LANES- TANGENT	14532.57	12.0	19376.8	183.25	26630.9	29065
283+79.00	287+29.00	LT. MAIN LANES- S.E. TRANS.	350.00	12.0	466.7	250.75	877.6	700
287+29.00	295+93.96	LT. MAIN LANES- MAX SUPER.	864.96	12.0	1153.3	318.25	2752.7	1730
295+93.96	298+93.96	LT. MAIN LANES- TAPER/MAX SUPER	300.00	11.0	366.7	318.25	954.8	600
298+93.96	303+66.61	LT. MAIN LANES- AUX LANE/MAX SUPER	472.65	10.0	525.2	318.25	1504.2	945
303+66.61	305+93.96	LT. MAIN LANES- TAPER/MAX SUPER	227.35	10.0	252.6	318.25	723.5	455
305+93.96	307+23.68	LT. MAIN LANES- RAMP 4 GORE	129.72	VAR.	125.6	VAR.	1.7	259
307+23.68	320+04.21	LT. MAIN LANES- MAX SUPER.	1280.53	12.0	1707.4	318.25	4075.3	2561
320+04.21	323+54.21	LT. MAIN LANES- S.E. TRANS.	350.00	12.0	466.7	250.75	877.6	700
323+54.21	327+04.16	LT. MAIN LANES- TANGENT	349.95	12.0	466.6	183.25	641.3	700
330+90.33	332+56.19	LT. MAIN LANES- TANGENT	165.86	12.0	221.1	225.75	374.4	332
337+47.23	339+38.78	LT. MAIN LANES- TANGENT	191.55	12.0	255.4	225.75	432.4	383
103+45.38	126+36.71	RT. MAIN LANES- MAX SUPER.	2291.33	12.0	3055.1	265.00	6072.0	4583
126+36.71	129+86.71	RT. MAIN LANES- S.E. TRANS.	350.00	12.0	466.7	224.25	784.9	700
129+86.71	132+99.14	RT. MAIN LANES- TANGENT	312.43	12.0	416.6	183.25	572.5	625
137+73.60	283+79.00	RT. MAIN LANES- TANGENT	14605.40	12.0	19473.9	183.25	26764.4	29211
283+79.00	287+29.00	RT. MAIN LANES- S.E. TRANS.	350.00	12.0	466.7	238.00	833.0	700
287+29.00	305+00.00	RT. MAIN LANES- MAX SUPER.	1771.00	12.0	2361.3	292.75	5184.6	3542
305+00.00	310+35.67	RT. MAIN LANES- TAPER/MAX SUPER.	535.67	11.0	654.7	292.75	1568.2	1071
310+35.67	312+45.68	RT. MAIN LANES- RAMP 1 GORE	210.01	VAR.	253.3	VAR.	3.4	420
312+45.68	320+04.21	RT. MAIN LANES- MAX SUPER	758.53	12.0	1011.4	292.75	2220.6	1517
320+04.21	323+54.21	RT. MAIN LANES- S.E. TRANS.	350.00	12.0	466.7	238.00	833.0	700
323+54.21	326+51.56	RT. MAIN LANES- TANGENT	297.35	12.0	396.5	183.25	544.9	595
330+37.73	332+14.17	RT. MAIN LANES- TANGENT	176.44	12.0	235.3	225.75	398.3	353
337+05.21	339+38.78	RT. MAIN LANES- TANGENT	233.57	12.0	311.4	225.75	527.3	467
TOTALS					58989.2		93334.2	88968

BASE AND SURFACING - ALTERNATE NO. 2 RAMPS SHOULDER

STATION	STATION	LOCATION	LENGTH	P.C.C. PAVEMENT (12" U.T.)		AGGREGATE BASE COURSE (CLASS 7)		PORTLAND CEMENT CONCRETE CORRUGATIONS
				AVG. WIDTH	SQ. YD.	TONSTA.	TON	SQ. YD.
				LIN. FT.	FEET			
310+26.00	311+00.00	RAMP 1 - MATCH/S.E. TRANS.	74.00	10.0	82.2	262.50	194.3	90
311+00.00	312+16.88	RAMP 1 - MAX S.E.	116.88	10.0	129.9	241.50	282.3	
312+16.88	315+16.88	RAMP 1 - S.E. TRANS.	300.00	10.0	333.3	200.75	602.3	
315+16.88	320+44.09	RAMP 1 - TANGENT	527.21	10.0	585.8	159.75	842.2	
320+44.09	321+44.09	RAMP 1 - S.E. TRANS.	100.00	10.0	111.1	189.50	189.5	
321+44.09	324+47.09	RAMP 1 - MAX S.E.	303.00	10.0	336.7	219.00	663.6	
324+47.09	325+00.00	RAMP 1 - S.E. TRANS.	52.91	10.0	58.8	200.50	106.1	
325+00.00	325+47.09	RAMP 1 - S.E. TRANS./US 71 TIE	47.09	10.0	52.3	178.50	84.1	
325+47.09	326+67.06	RAMP 1 - US 71 TIE	119.97	10.0	133.3	159.75	191.7	208
305+97.75	308+97.75	RAMP 4 - MATCH/S.E. TRANS.	300.00	10.0	333.3	221.75	665.3	125
308+97.75	315+44.55	RAMP 4 - TANGENT	646.80	10.0	718.7	159.75	1033.3	
315+44.55	318+44.55	RAMP 4 - S.E. TRANS.	300.00	10.0	333.3	219.75	659.3	
318+44.55	327+68.54	RAMP 4 - MAX S.E.	923.99	10.0	1026.7	279.50	2582.6	
327+68.54	330+68.54	RAMP 4 - S.E. TRANS.	300.00	10.0	333.3	219.75	659.3	
330+68.54	331+77.47	RAMP 4 - US 71 TIE	108.93	10.0	121.0	159.75	174.0	187
TOTALS					4689.7		8929.9	610



QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						030313	26	100

SUMMARY OF QUANTITIES

② SUMMARY OF QUANTITIES & REVISIONS

ITEM NUMBER	ITEM	QUANTITIES		UNIT
		ALTERNATE 1	ALTERNATE 2	
		ASPHALT SHLDR.	CONCRETE SHLDR.	
201	CLEARING	4	4	STA.
201	GRUBBING	4	4	STA.
202	REMOVAL AND DISPOSAL OF ASPHALT PAVEMENT	15	15	SQ. YD.
202	REMOVAL AND DISPOSAL OF BARRICADES	2	2	EACH
202	REMOVAL AND DISPOSAL OF FENCE	239	239	LIN. FT.
202	REMOVAL AND DISPOSAL OF PRECAST CONCRETE BARRIER	2114	2114	LIN. FT.
202	REMOVAL AND DISPOSAL OF SIGNS	12	12	EACH
210	COMPACTED EMBANKMENT	66	66	CU. YD.
SP & 210	SOIL STABILIZATION	1000	1000	TON
SP	SHAPING DITCH	2000	2000	LIN. FT.
210	UNCLASSIFIED EXCAVATION	11552	11552	CU. YD.
SP & 214	SUBGRADE PREPARATION	489.81	489.81	STA.
SS & 303	AGGREGATE BASE COURSE (CLASS 7)	143414	106482	TON
308	AGGREGATE IN CEMENT STABILIZED CRUSHED STONE BASE COURSE	53172	53172	TON
308	CEMENT IN CEMENT STABILIZED CRUSHED STONE BASE COURSE	3394	3394	TON
308	PROCESSING CEMENT STABILIZED CRUSHED STONE BASE COURSE	160339	160339	SQ. YD.
401	TACK COAT	4810	4810	GAL.
SP, SS & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	6843	209	TON
SP, SS & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	383	12	TON
SP, SS & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (3/8")	8351	8351	TON
SP, SS & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (3/8")	467	467	TON
SS & 501	PORTLAND CEMENT CONCRETE PAVEMENT (12" UNIFORM THICKNESS)	138511	202190	SQ. YD.
SP & 504	APPROACH SLABS	788.72	788.72	CU. YD.
SP & 504	APPROACH GUTTERS	451.92	451.92	CU. YD.
506	PORTLAND CEMENT CONCRETE CORRUGATION	610	610	SQ. YD.
601	MOBILIZATION	1.00	1.00	LUMP SUM
SP & 602	FURNISHING FIELD OFFICE	1	1	EACH
SS & 603	MAINTENANCE OF TRAFFIC	1.00	1.00	LUMP SUM
SS & 604	BARRICADES	64	64	LIN. FT.
SS & 604	SIGNS	168	168	SQ. FT.
SS & 604	TRAFFIC DRUMS	12	12	EACH
605	CONCRETE DITCH PAVING (TYPE B)	241	241	SQ. YD.
606	12" ZINC COATED (GALVANIZED) CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)	226	226	LIN. FT.
609	DROP INLETS (TYPE N3)	2	2	EACH
611	4" PIPE UNDERDRAINS	100	100	LIN. FT.
611	UNDERDRAIN OUTLET PROTECTORS	5	5	EACH
614	CONCRETE SPILLWAY (TYPE A)	2	2	EACH
SS & 617	GUARDRAIL (TYPE A)	2942	2942	LIN. FT.
SS & 617	GUARDRAIL TERMINAL (TYPE 2)	8	8	EACH
SS & 617	THREE BEAM GUARDRAIL TERMINAL	16	16	EACH
620	LIME	4	4	TON
SS & 620	WATER	188.0	188.0	MGAL
620	MULCH COVER	2.87	2.87	ACRE
620	SEEDING	1.56	1.56	ACRE
621	ROCK DITCH CHECKS	28	28	CU. YD.
621	SILT FENCE	645	645	LIN. FT.
621	TEMPORARY SEEDING	1.31	1.31	ACRE
623	SECOND SEEDING APPLICATION	1.56	1.56	ACRE
624	SOLID SODDING	159	159	SQ. YD.
632	CONCRETE ISLAND	361	361	SQ. YD.
635	ROADWAY CONSTRUCTION CONTROL	1.00	1.00	LUMP SUM
642	RUMBLE STRIPS IN ASPHALT SHOULDERS	44492	0	LIN. FT.
642	RUMBLE STRIPS IN PORTLAND CEMENT CONCRETE SHOULDERS	44492	88968	LIN. FT.
SS & 718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")	318	318	LIN. FT.
* SP & 719	INVERTED PROFILE THERMOPLASTIC CONTRAST PAVEMENT MARKING WHITE (4") - ALTERNATE 1	12391	12391	LIN. FT.
* SP	HIGH PERFORMANCE CONTRAST MARKING TAPE WHITE (4") - ALTERNATE 2	12391	12391	LIN. FT.
* SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING WHITE (4") - ALTERNATE 1	53785	53785	LIN. FT.
* SP	HIGH PERFORMANCE MARKING TAPE WHITE (4") - ALTERNATE 2	53785	53785	LIN. FT.
* SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING YELLOW (4") - ALTERNATE 1	53785	53785	LIN. FT.
* SP	HIGH PERFORMANCE MARKING TAPE YELLOW (4") - ALTERNATE 2	53785	53785	LIN. FT.
* SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING WHITE (8") - ALTERNATE 1	1538	1538	LIN. FT.
* SP	HIGH PERFORMANCE MARKING TAPE WHITE (8") - ALTERNATE 2	1538	1538	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING WHITE (8")	356	356	LIN. FT.
721	RAISED PAVEMENT MARKERS (TYPE II)	906	906	EACH
802	CLASS S CONCRETE - ROADWAY	85.16	85.16	CU. YD.
SS & 804	REINFORCING STEEL - ROADWAY (GRADE 60)	120768	120768	LBS.
816	DUMPED RIPRAP	10	10	CU. YD.

* DENOTES ALTERNATE BID ITEMS

REVISIONS

DATE	REVISION	SHEET NUMBER



SURVEY CONTROL COORDINATES

Project Name: s030313s01
Date: 8/25/2011
Coordinate System: ARKANSAS STATE PLANE - NORTH ZONE BASED ON GPS CONTROL.
PROJECTED TO GROUND.
Units: U.S. SURVEY FOOT

Table with columns: POINT NAME, NORTHING, EASTING, ELEVATION, FEATURE, POINT DESCRIPTION. Contains detailed survey data for points 17 through 5029.

Note - points labeled 5/8" REBAR W/ 2" ALUM. CAP are stamped Arkansas Hwy. & Transportation Department, Job 030313, PN ##, points labeled 1/2" REBAR W/ 1 1/2" ALUM. CAP are stamped F&H ENGINEERS, AHTD 030313, PN ##; others as indicated in the point description of the individual point.

SURVEY CONTROL NOTES:
USE CAF = 1.0 FOR STAKEOUT FOR THIS PROJECT.
A PROJECT CAF OF 0.999938551 HAS BEEN USED TO COMPUTE THE ABOVE GROUND COORDINATES.
THIS CAF IS INTENDED FOR USE WITHIN THE PROJECT LIMITS.
ALL DISTANCES ARE GROUND.
GRID COORDINATES ARE STORED UNDER FILE NAME: s030313g.ctb
HORIZONTAL DATUM: NAD 83 (1987)
VERTICAL DATUM: NAVD 88 POSITIONAL ACCURACY THIRD ORDER, UNLESS SPECIFIED OTHERWISE AT A SPECIFIC POINT.

BASIS FOR BEARINGS:
ARKANSAS STATE PLANE GRID BEARINGS - 0302 - SOUTH ZONE
DETERMINED FROM GPS CONTROL POINTS: AHTD 460029 & 460029A, NGS 259 & SPRING AZ.MK.
CONVERGENCE ANGLE: 1-03-36.6 LEFT AT PN: 101
MID POINT LAT: 33-02-28, LONG: 093-54-05
GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.

CONSTRUCTION C.L.

Table with columns: DESCRIPTION, POINT, STATION, NORTHING, EASTING. Lists construction control points for 'HORIZ ALG. MAIN LANES'.

HORIZ ALG. COUNTY ROAD 2

Table with columns: POINT, DESCRIPTION, NORTHING, EASTING. Lists construction control points for 'HORIZ ALG. COUNTY ROAD 2'.

HORIZ ALG. COUNTY ROAD 4

Table with columns: POINT, DESCRIPTION, NORTHING, EASTING. Lists construction control points for 'HORIZ ALG. COUNTY ROAD 4'.

HORIZ ALG. RAMP 1

Table with columns: POINT, DESCRIPTION, NORTHING, EASTING. Lists construction control points for 'HORIZ ALG. RAMP 1'.

HORIZ ALG. RAMP 4

Table with columns: POINT, DESCRIPTION, NORTHING, EASTING. Lists construction control points for 'HORIZ ALG. RAMP 4'.

HORIZ ALG. EXIST U.S. HWY. 71

Table with columns: POINT, DESCRIPTION, NORTHING, EASTING. Lists construction control points for 'HORIZ ALG. EXIST U.S. HWY. 71'.

NOTE: STATIONING IS ALONG CENTERLINE MEDIAN FOR U.S. HWY. 71 RELOCATION.

BENCHMARK POINT LIST

Table with columns: POINT NAME, NORTHING, EASTING, ELEVATION, POINT DESCRIPTION. Lists benchmark points 900 through 922.

Table with columns: DATE REVISED, DATE FILMED, DATE REVISED, DATE FILMED.

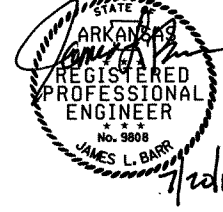


Table with columns: FED. AID DIST. NO., STATE, FED. AID PROJ. NO., SHEET NO., TOTAL SHEETS. Values: 6, ARK., 030313, 27, 100.

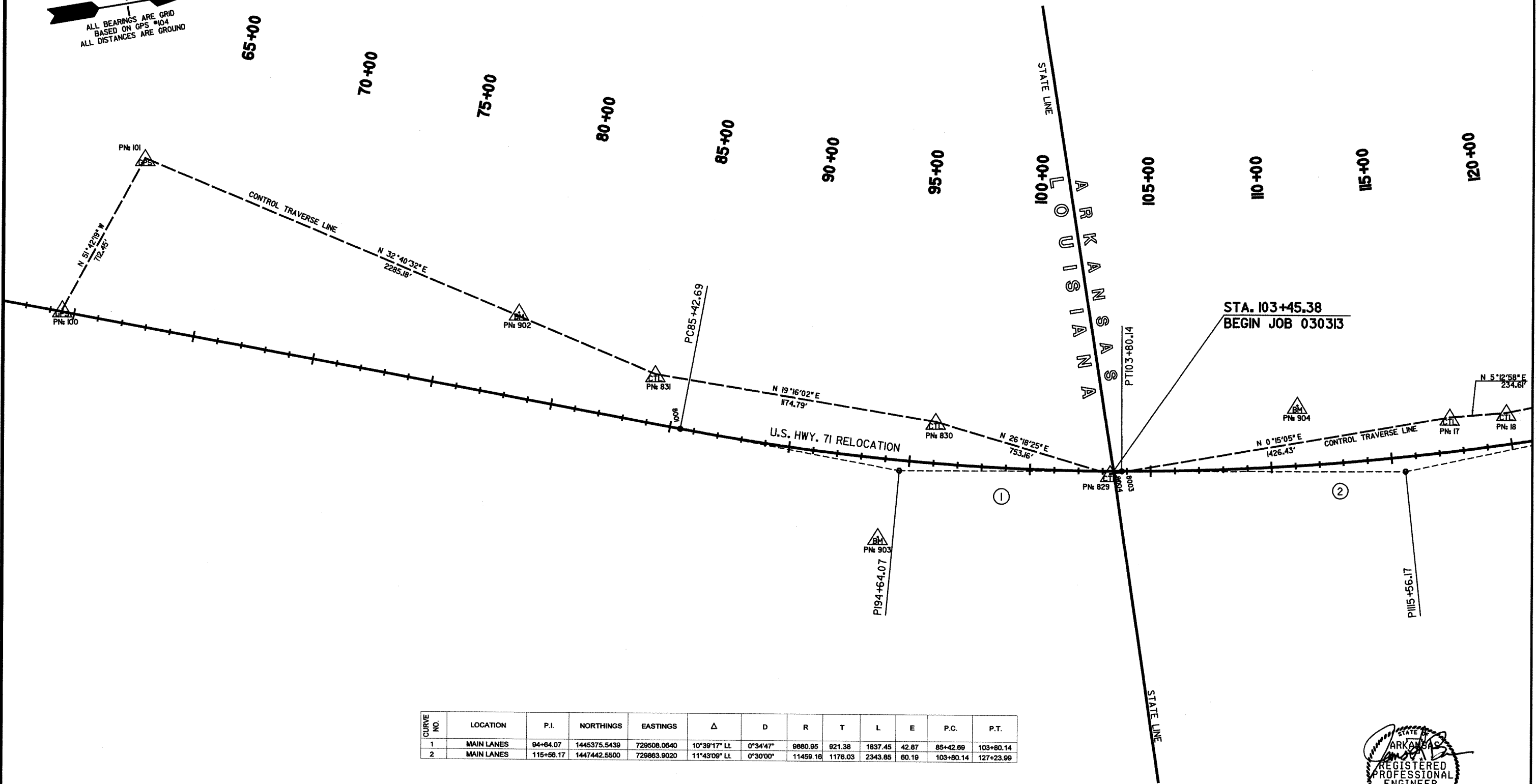
2 SURVEY CONTROL DETAILS

SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
JOB NO.							030313	28	100

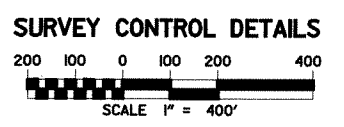
2 SURVEY CONTROL DETAILS

ALL BEARINGS ARE GRID
BASED ON GPS #104
ALL DISTANCES ARE GROUND



CURVE NO.	LOCATION	P.I.	NORTHINGS	EASTINGS	Δ	D	R	T	L	E	P.C.	P.T.
1	MAIN LANES	94+64.07	1445375.5439	729508.0640	10°39'17" LL	0°34'47"	9880.95	921.38	1837.45	42.87	85+42.89	103+80.14
2	MAIN LANES	115+56.17	1447442.5500	729863.9020	11°43'09" LL	0°30'00"	11459.16	1178.03	2343.85	60.19	103+80.14	127+23.99

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
7/20/12

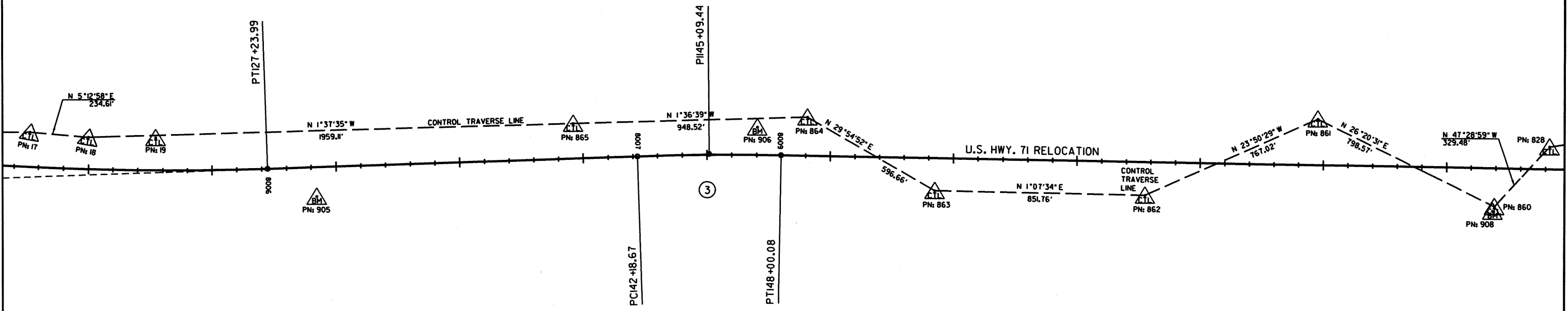


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	030313	29	100	

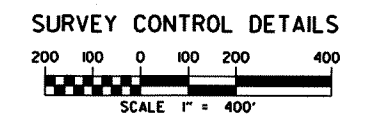
2 SURVEY CONTROL DETAILS

ALL BEARINGS ARE GRID
 BASED ON GPS '104
 ALL DISTANCES ARE GROUND

120 +00 125 +00 130 +00 135 +00 140 +00 145 +00 150 +00 155 +00 160 +00 165 +00 170 +00 175 +00



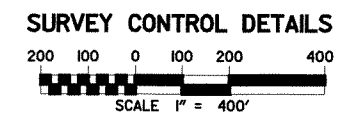
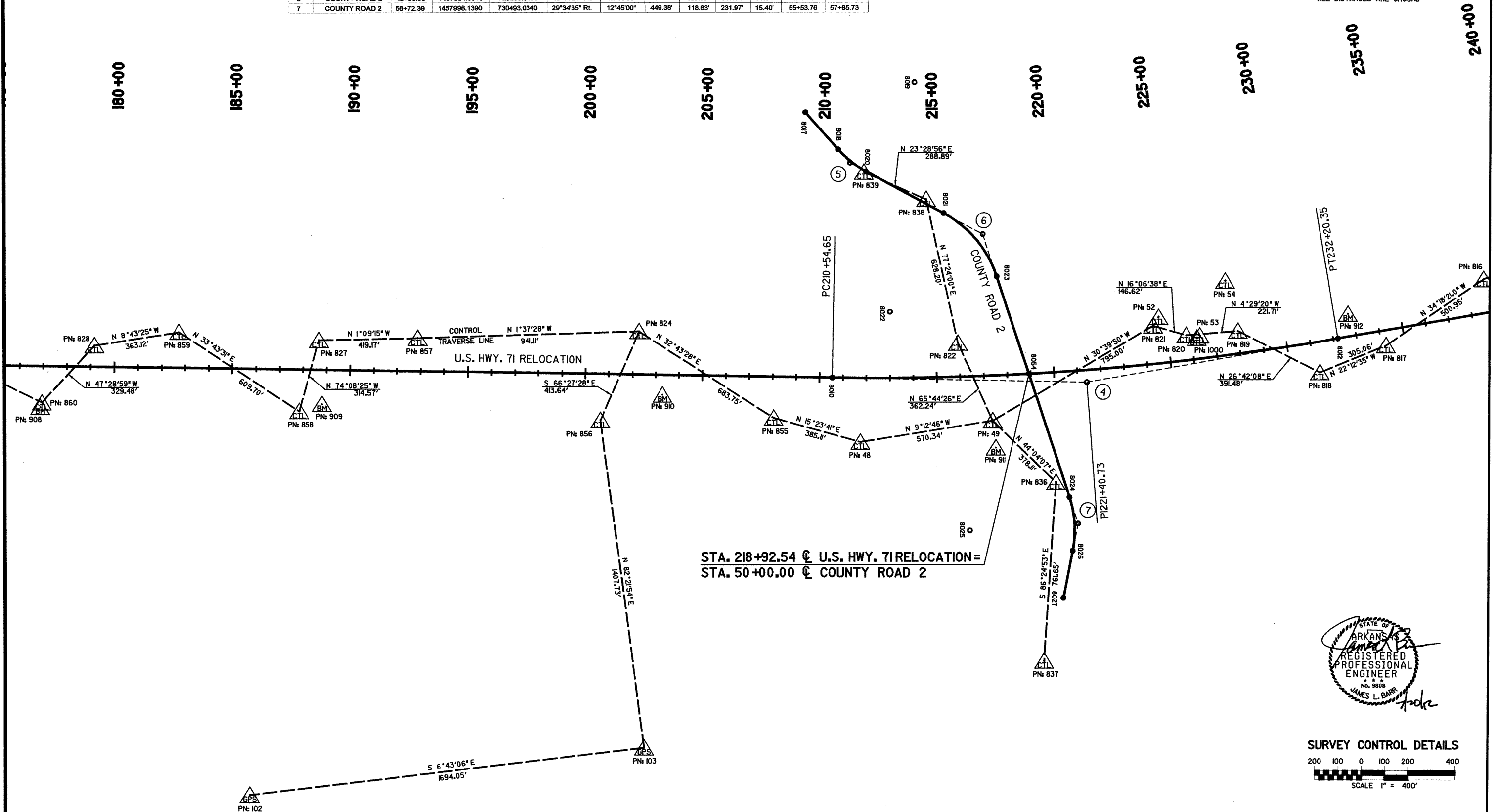
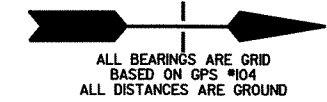
CURVE NO.	LOCATION	P.I.	NORTHINGS	EASTINGS	Δ	D	R	T	L	E	P.C.	P.T.
3	MAIN LANES	145+09.44	1450402.3111	729763.0551	02°54'25" Rt.	0°30'00"	11459.16	290.77	581.41	3.69	142+18.67	148+00.08



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. NO. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 030313							30	100

2 SURVEY CONTROL DETAILS

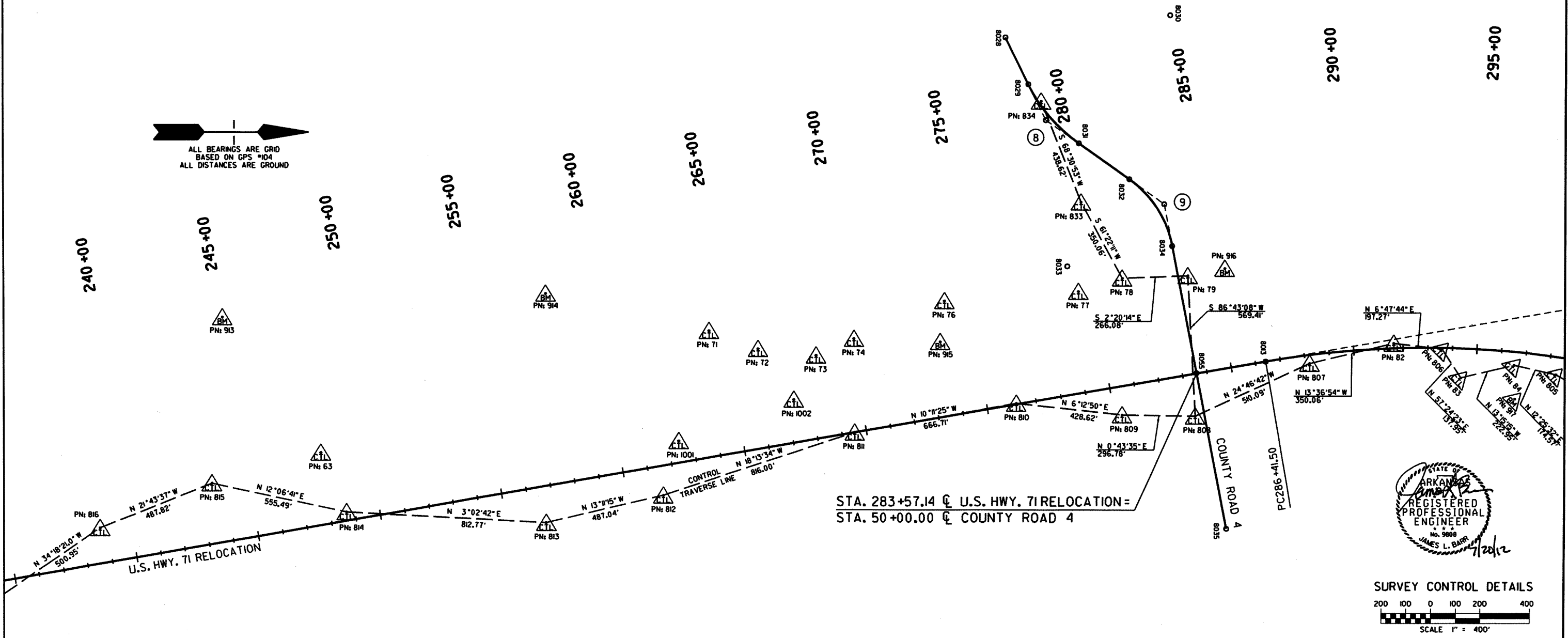
CURVE NO.	LOCATION	P.I.	NORTHINGS	EASTINGS	Δ	D	R	T	L	E	P.C.	P.T.
4	MAIN LANES	221+40.73	1458032.6680	729890.3290	10°49'43" LL	0°30'00"	11459.18'	1086.09'	2165.70'	51.35'	210+54.65	232+20.35
5	COUNTY ROAD 2	37+51.38	1457020.3270	728957.2040	20°08'15" LL	13°15'00"	432.42'	76.78'	151.98'	6.76'	36+74.60	38+26.58
6	COUNTY ROAD 2	43+90.56	1457584.8910	729280.8400	43°11'21" RL	12°00'00"	477.46'	188.99'	359.91'	36.04'	42+01.57	45+61.48
7	COUNTY ROAD 2	58+72.39	1457998.1390	730493.0340	29°34'35" RL	12°45'00"	449.38'	118.63'	231.87'	15.40'	55+53.76	57+85.73



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.		030313	31	100

2 SURVEY CONTROL DETAILS

CURVE NO.	LOCATION	P.I.	NORTHINGS	EASTINGS	Δ	D	R	T	L	E	P.C.	P.T.
8	COUNTY ROAD 4	37+39.12	1463550.4534	727799.5255	28°30'55" LL	9°00'00"	636.62'	161.77'	316.84'	20.23'	35+77.34	38+94.18
9	COUNTY ROAD 4	43+18.40	1464028.8453	728137.9340	43°37'09" RL	13°15'00"	432.42'	173.04'	329.20'	33.34'	41+45.36	44+74.56

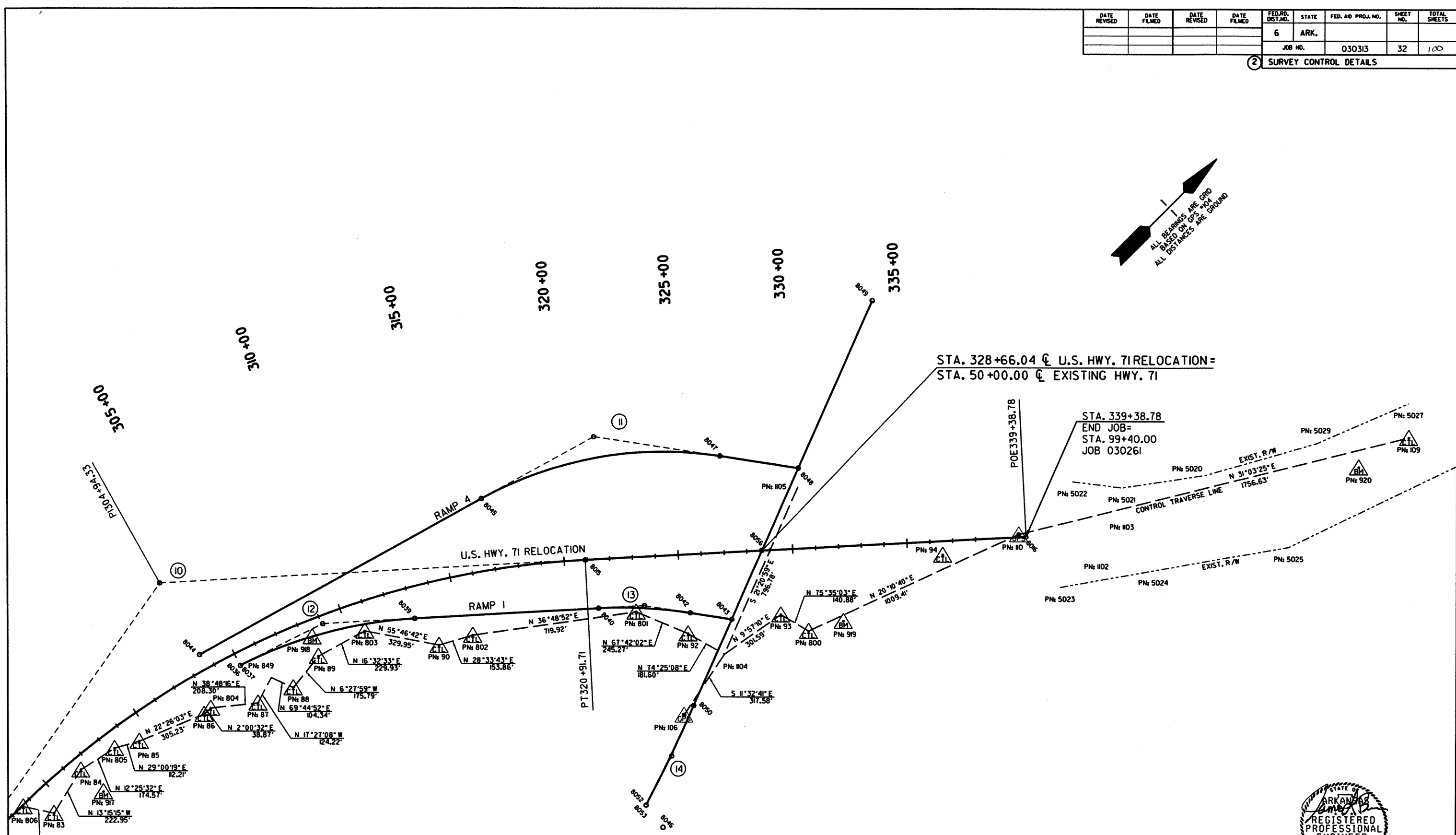
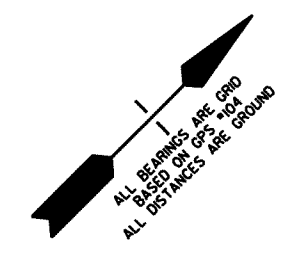


STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 No. 9808
 JAMES L. BARR
 7/20/12

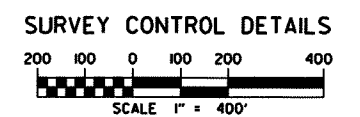
SURVEY CONTROL DETAILS
 200 100 0 100 200 400
 SCALE 1" = 400'

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. 030313	32	100

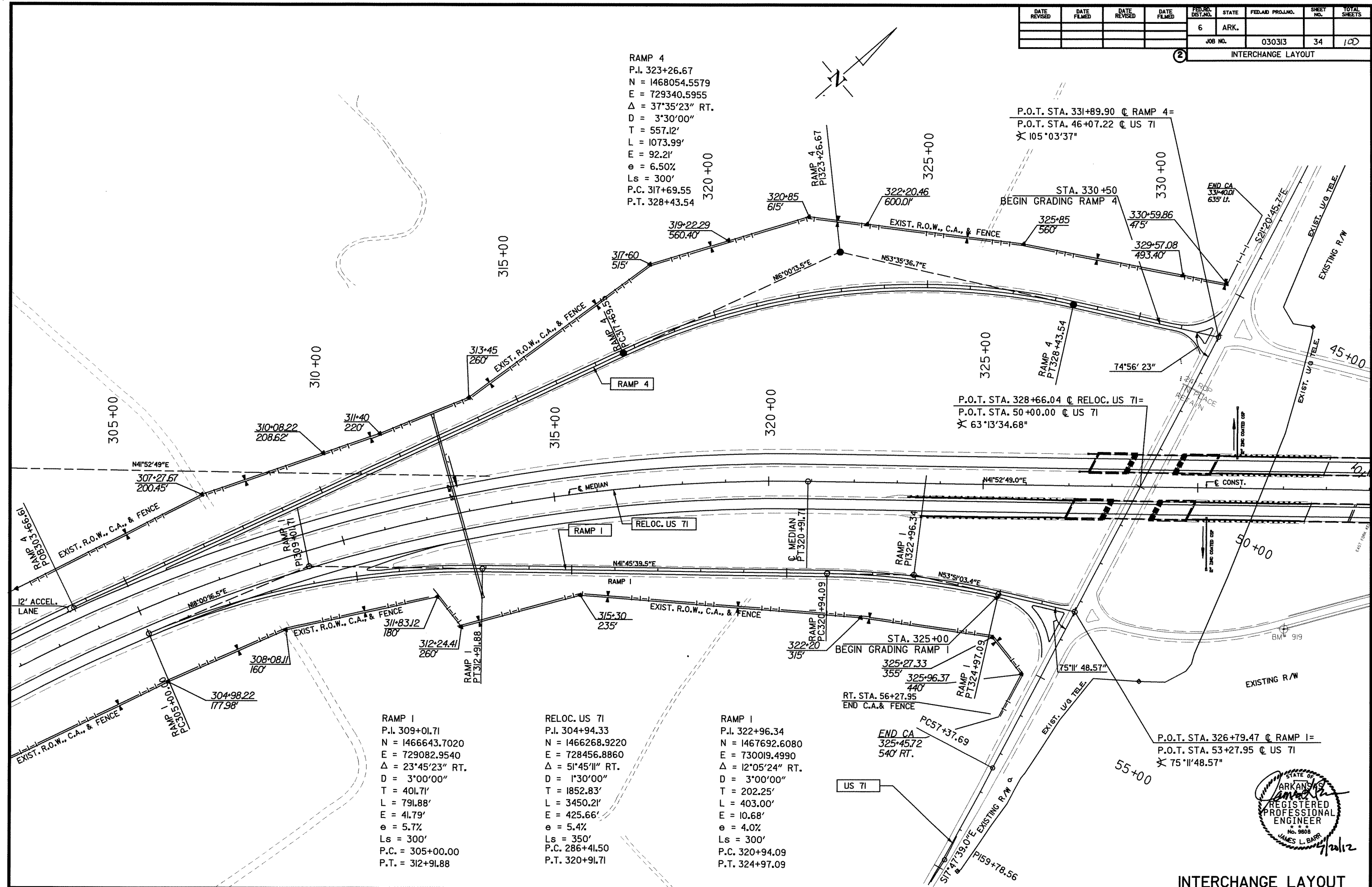
2 SURVEY CONTROL DETAILS



CURVE NO.	LOCATION	P.I.	NORTHINGS	EASTINGS	Δ	D	R	T	L	E	P.C.	P.T.
10	MAIN LANES	304+94.33	1466268.9220	728456.8860	51°45'11" Rt.	1°30'00"	3819.72'	1852.83'	3450.21'	425.66'	286+41.50	320+91.71
11	RAMP 4	323+26.67	1468054.5579	729340.5955	37°35'23" Rt.	3°30'00"	1637.02'	557.12'	1073.99'	92.21'	317+69.55	328+43.54
12	RAMP 1	309+01.71	1468643.7020	729082.9540	23°45'23" Rt.	3°00'00"	1909.86'	401.71'	791.88'	41.79'	305+00.00	312+91.88
13	RAMP 1	322+96.34	1467692.6080	730019.4990	12°05'24" Rt.	3°00'00"	1909.86'	202.25'	403.00'	10.88'	320+94.09	324+97.09
14	HWY. 71	59+78.56	1467313.5170	730566.9070	3°33'07" Rt.	0°44'15"	7768.59'	240.87'	481.59'	3.73'	57+37.89	62+19.28



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		34	100
				JOB NO.		030313	100	
② INTERCHANGE LAYOUT								



RAMP 4
P.I. 323+26.67
N = 1468054.5579
E = 729340.5955
 $\Delta = 37^\circ 35' 23''$ RT.
D = 3'30'00"
T = 557.12'
L = 1073.99'
e = 6.50%
Ls = 300'
P.C. 317+69.55
P.T. 328+43.54

P.O.T. STA. 331+89.90 @ RAMP 4=
P.O.T. STA. 46+07.22 @ US 71
 $\sphericalangle 105^\circ 03' 37''$

P.O.T. STA. 328+66.04 @ RELOC. US 71=
P.O.T. STA. 50+00.00 @ US 71
 $\sphericalangle 63^\circ 13' 34.68''$

RAMP 1
P.I. 309+01.71
N = 1466643.7020
E = 729082.9540
 $\Delta = 23^\circ 45' 23''$ RT.
D = 3'00'00"
T = 401.71'
L = 791.88'
e = 41.79%
Ls = 300'
P.C. = 305+00.00
P.T. = 312+91.88

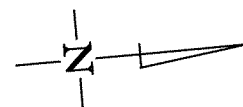
RELOC. US 71
P.I. 304+94.33
N = 1466268.9220
E = 728456.8860
 $\Delta = 51^\circ 45' 11''$ RT.
D = 1'30'00"
T = 1852.83'
L = 3450.21'
e = 425.66%
Ls = 350'
P.C. 286+41.50
P.T. 320+91.71

RAMP 1
P.I. 322+96.34
N = 1467692.6080
E = 730019.4990
 $\Delta = 12^\circ 05' 24''$ RT.
D = 3'00'00"
T = 202.25'
L = 403.00'
e = 10.68%
Ls = 300'
P.C. 320+94.09
P.T. 324+97.09



INTERCHANGE LAYOUT

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	030313		35	100
				PLAN STA. 103+50.00 TO 110+00.00				



WOODS W/UNDER BRUSH

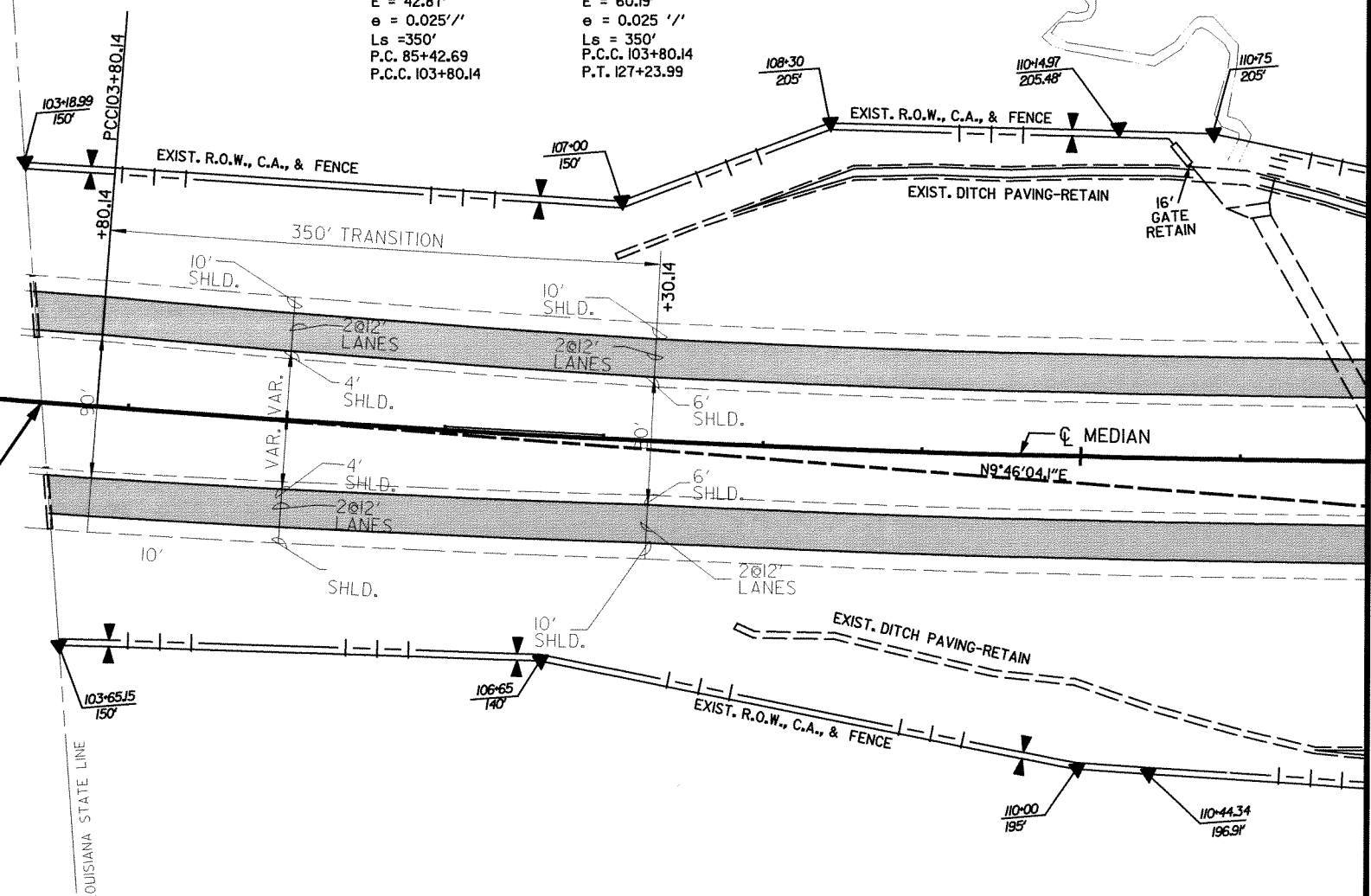
STA. 103+45.38 LT. - IN PLACE
40' TEMP. PRECAST CONCRETE BARRIER
REMOVE

105+00

RELOC. US 71 P.I. 94+64.07 N = 1445375.5439 E = 729508.0640 Δ = 10°39'17" LT. D = 0°34'47" T = 921.38' L = 1837.45' E = 42.87' e = 0.025'' Ls = 350' P.C. 85+42.69 P.C.C. 103+80.14	RELOC. US 71 P.I. 115+56.17 N = 1447442.5500 E = 729863.9020 Δ = 11°43'09" LT. D = 0°30'00" T = 1176.03' L = 2343.85' E = 60.19' e = 0.025'' Ls = 350' P.C. 103+80.14 P.T. 127+23.99
---	--

100+00

110+00



STA. 103+45.38
BEGIN JOB 030313

LOUISIANA STATE LINE

STA. 103+45.38 RT. - IN PLACE
40' TEMP. PRECAST CONCRETE BARRIER
REMOVE

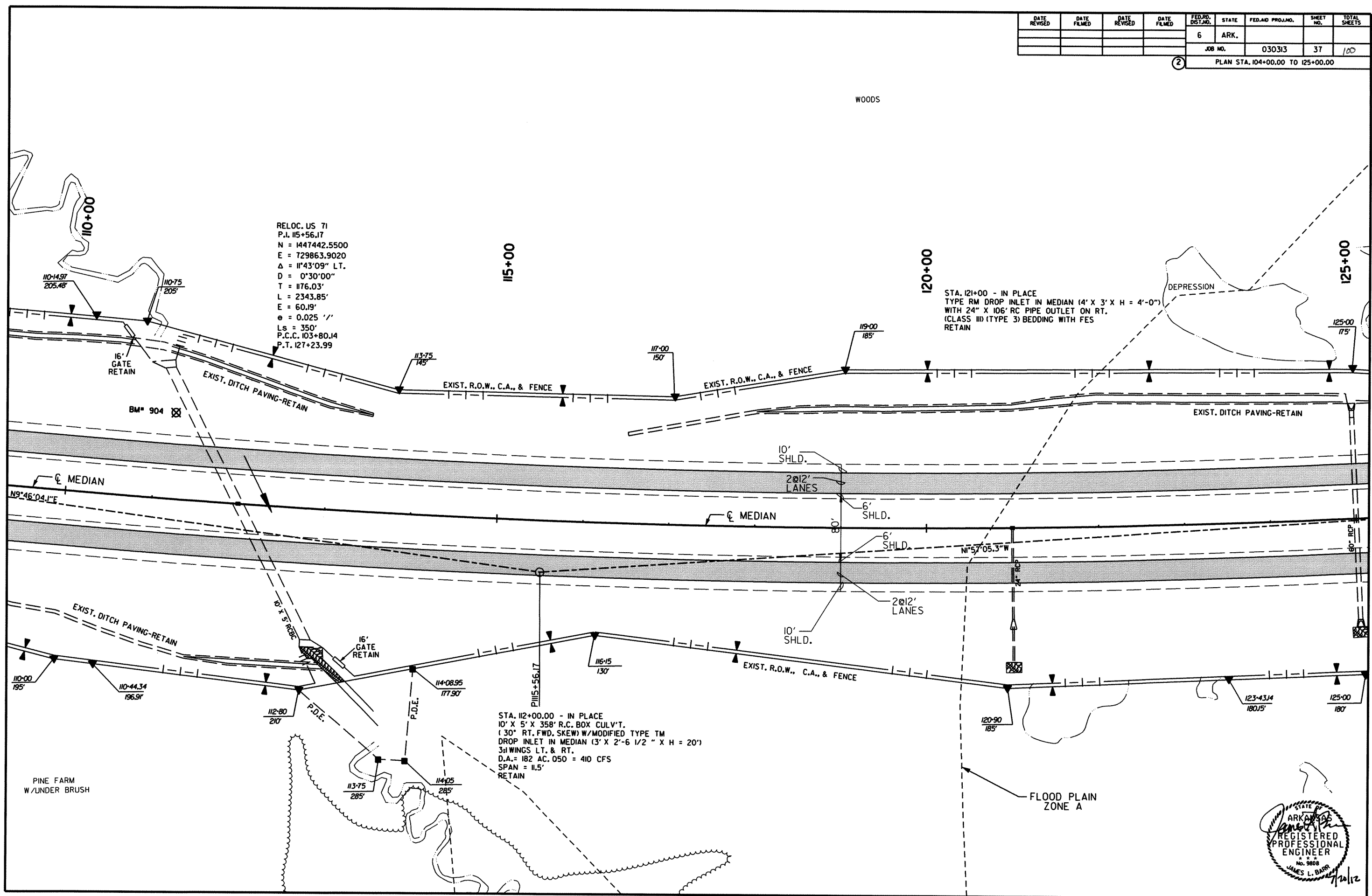
PINE FARM
W/UNDER BRUSH

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
7/20/12

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.		030313	36	100
				② PROFILE STA. 103+50 TO 110+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.		030313	37	100
				PLAN STA. 104+00.00 TO 125+00.00				



RELOC. US 71
 P.I. 115+56.17
 N = 1447442.5500
 E = 729863.9020
 $\Delta = 11^{\circ}43'09''$ LT.
 D = $0^{\circ}30'00''$
 T = 1176.03'
 L = 2343.85'
 E = 60.19'
 $e = 0.025$ ' / '
 Ls = 350'
 P.C.C. 103+80.14
 P.T. 127+23.99

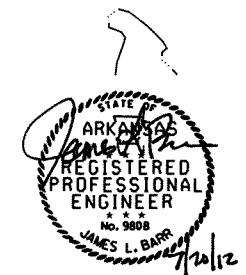
115+00

120+00

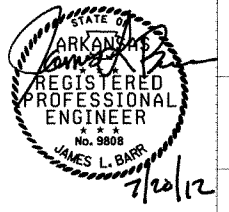
125+00

STA. 121+00 - IN PLACE
 TYPE RM DROP INLET IN MEDIAN (4' X 3' X H = 4'-0")
 WITH 24" X 106' RC PIPE OUTLET ON RT.
 (CLASS III) (TYPE 3) BEDDING WITH FES
 RETAIN

STA. 112+00.00 - IN PLACE
 10' X 5' X 358' R.C. BOX CULV'T.
 (30' RT. FWD. SKEW) W/MODIFIED TYPE TM
 DROP INLET IN MEDIAN (3' X 2'-6 1/2" X H = 20')
 3-WINGS LT. & RT.
 D.A. = 182 AC. 050 = 410 CFS
 SPAN = 11.5'
 RETAIN

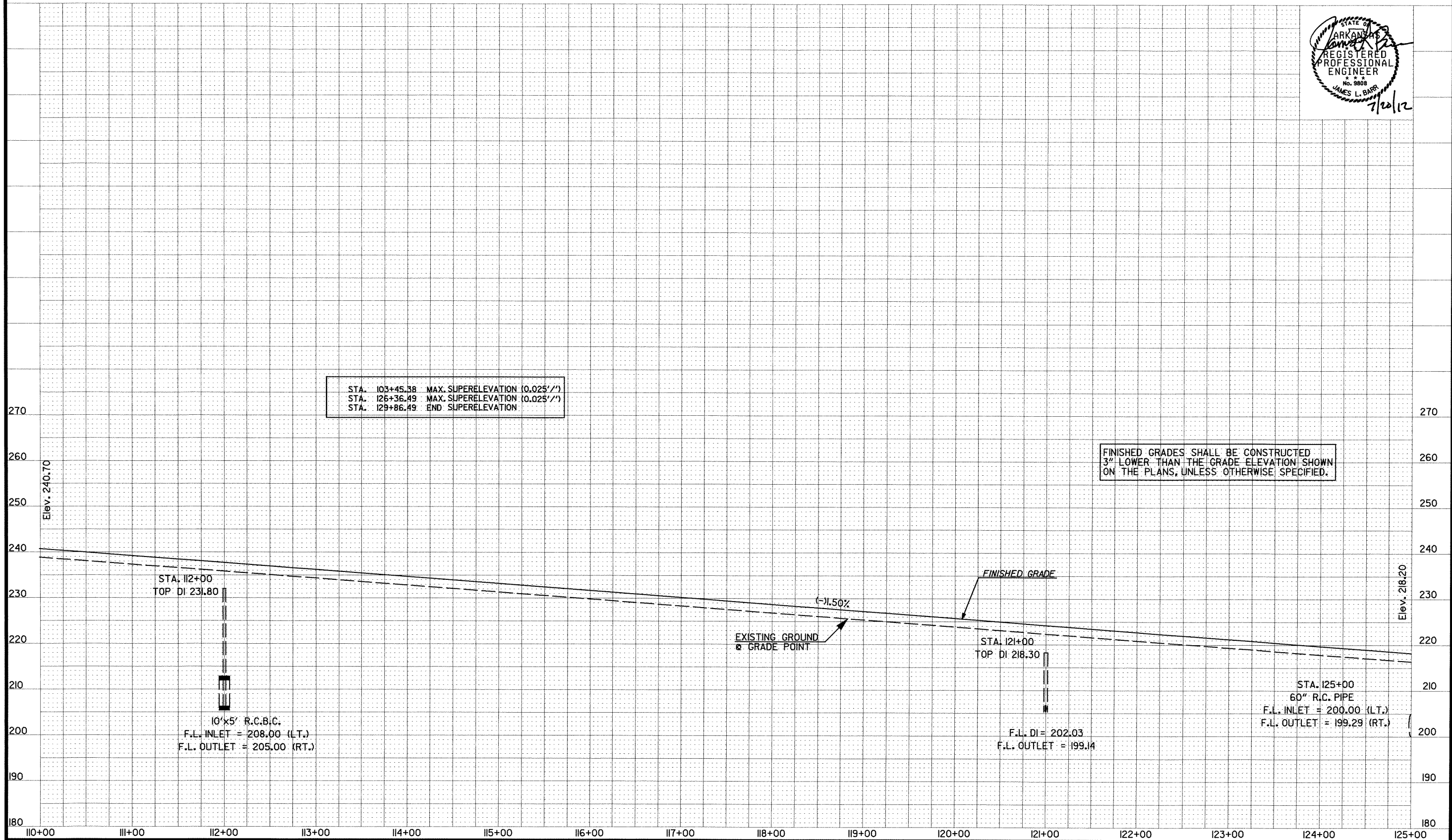


DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		030313	38	100
				PROFILE STA. 110+00 TO 125+00				

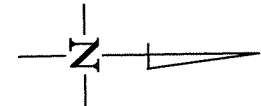


STA. 103+45.38 MAX. SUPERELEVATION (0.025'/'')
 STA. 126+36.49 MAX. SUPERELEVATION (0.025'/'')
 STA. 129+86.49 END SUPERELEVATION

FINISHED GRADES SHALL BE CONSTRUCTED
 3" LOWER THAN THE GRADE ELEVATION SHOWN
 ON THE PLANS, UNLESS OTHERWISE SPECIFIED.



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	030313		39	100
				PLAN STA. 125+00 TO 140+00				

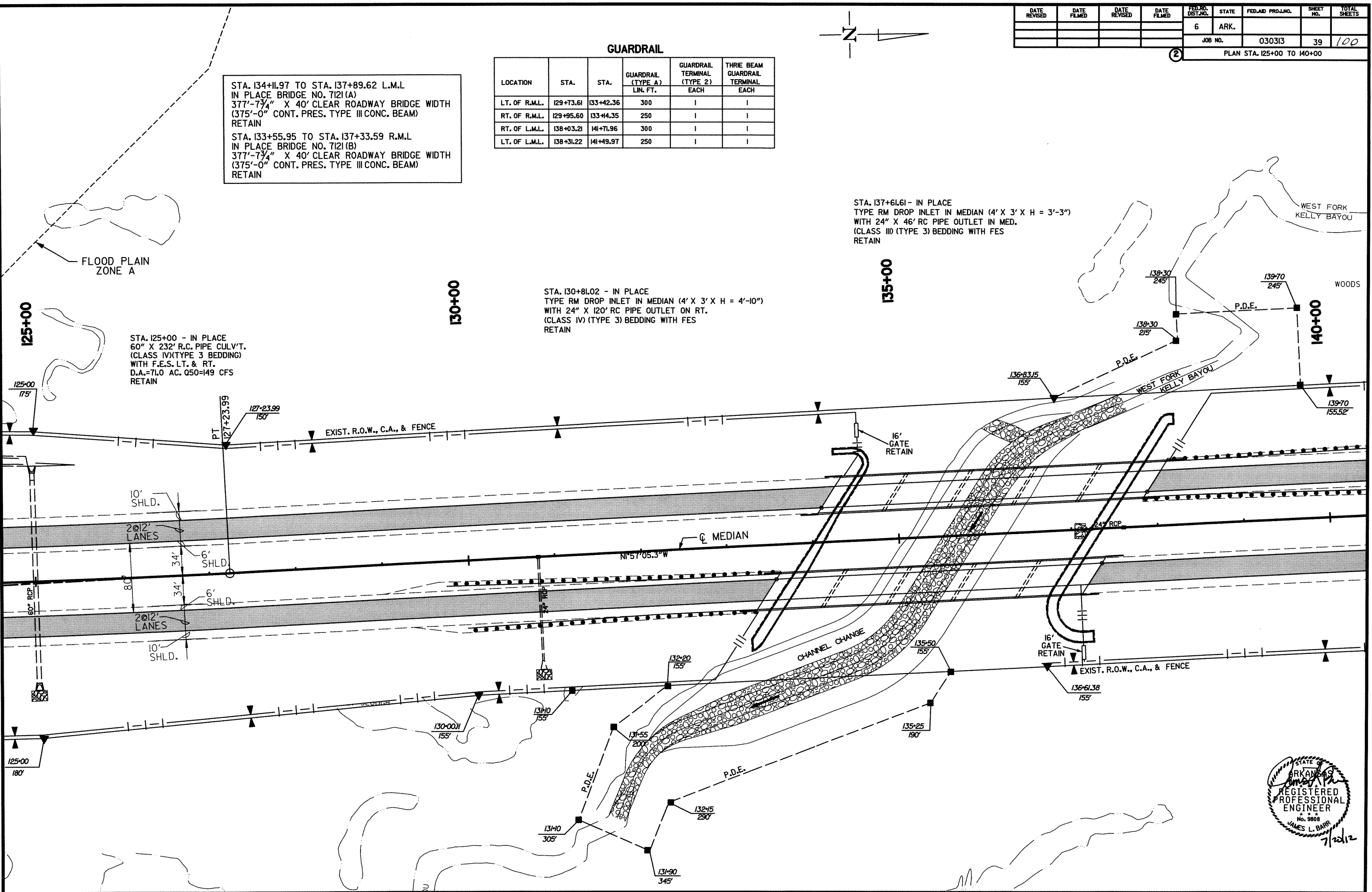


GUARDRAIL

LOCATION	STA.	STA.	GUARDRAIL (TYPE A) LIN. FT.	GUARDRAIL TERMINAL (TYPE 2) EACH	THREE BEAM GUARDRAIL TERMINAL EACH
LT. OF R.M.L.	129+73.61	133+42.36	300		
RT. OF R.M.L.	129+95.60	133+44.35	250		
RT. OF L.M.L.	138+03.21	141+71.96	300		
LT. OF L.M.L.	138+31.22	141+49.97	250		

STA. 134+11.97 TO STA. 137+89.62 L.M.L.
IN PLACE BRIDGE NO. 7121(A)
377'-7 3/4" X 40' CLEAR ROADWAY BRIDGE WIDTH
(375'-0" CONT. PRES. TYPE III CONC. BEAM)
RETAIN

STA. 133+55.95 TO STA. 137+33.59 R.M.L.
IN PLACE BRIDGE NO. 7121(B)
377'-7 3/4" X 40' CLEAR ROADWAY BRIDGE WIDTH
(375'-0" CONT. PRES. TYPE III CONC. BEAM)
RETAIN



STA. 125+00 - IN PLACE
60" X 232' R.C. PIPE CULV'T.
(CLASS IV)(TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
D.A.=71.0 AC. Q50=149 CFS
RETAIN

STA. 130+81.02 - IN PLACE
TYPE RM DROP INLET IN MEDIAN (4' X 3' X H = 4'-10")
WITH 24" X 120' RC PIPE OUTLET ON RT.
(CLASS IV)(TYPE 3) BEDDING WITH FES
RETAIN

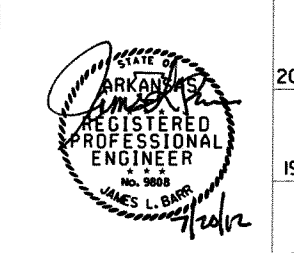
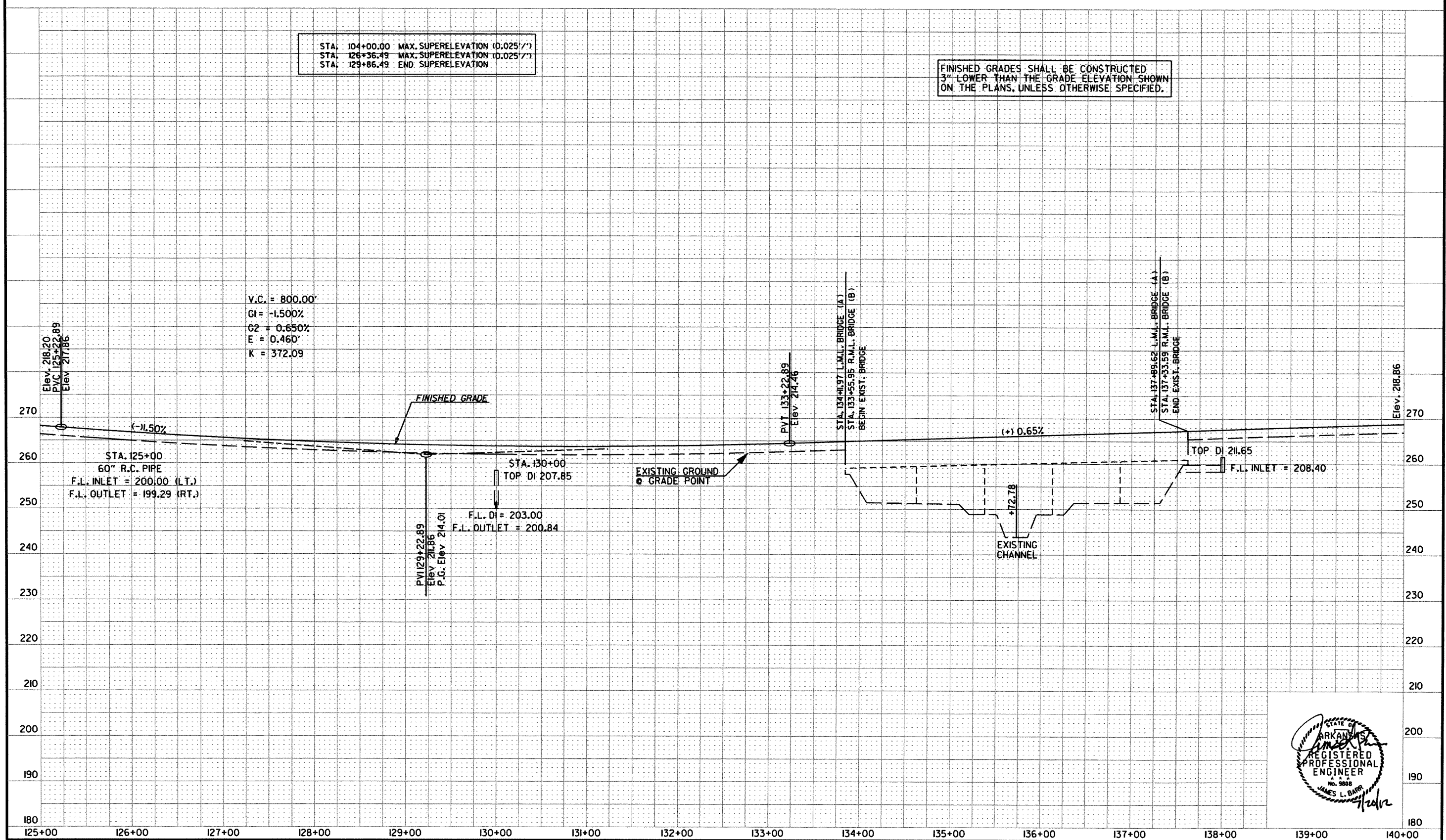
STA. 137+61.61 - IN PLACE
TYPE RM DROP INLET IN MEDIAN (4' X 3' X H = 3'-3")
WITH 24" X 46' RC PIPE OUTLET IN MED.
(CLASS III)(TYPE 3) BEDDING WITH FES
RETAIN



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. 030313	40
							PROFILE STA. 125+00 TO 140+00	

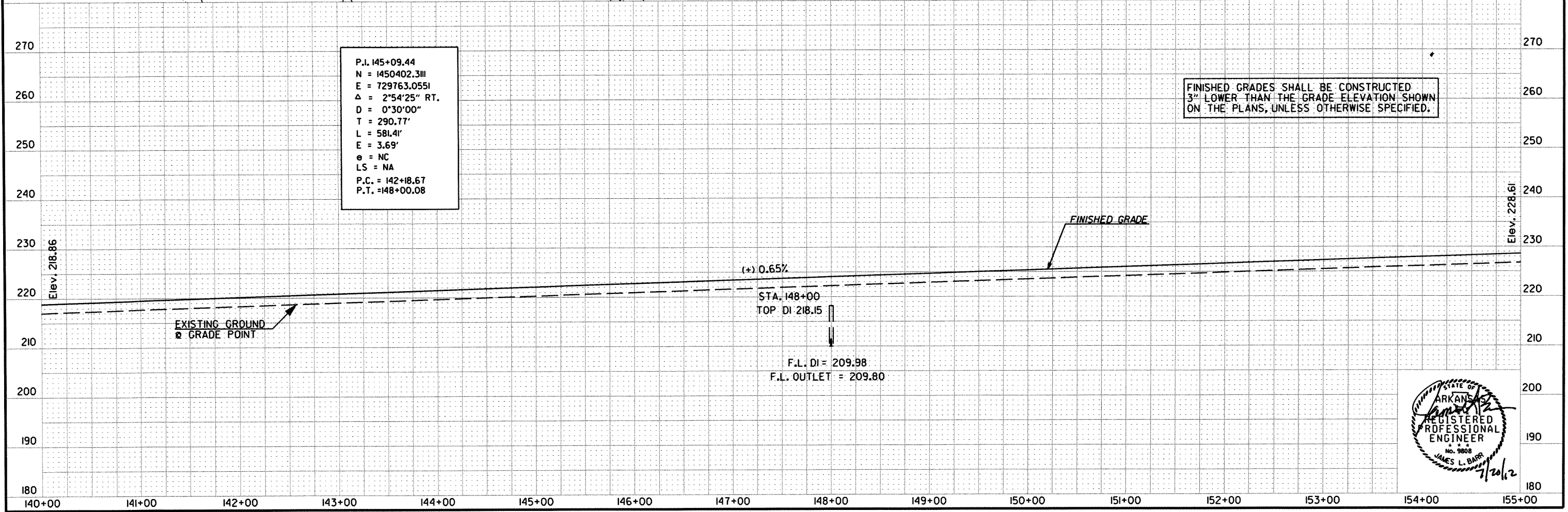
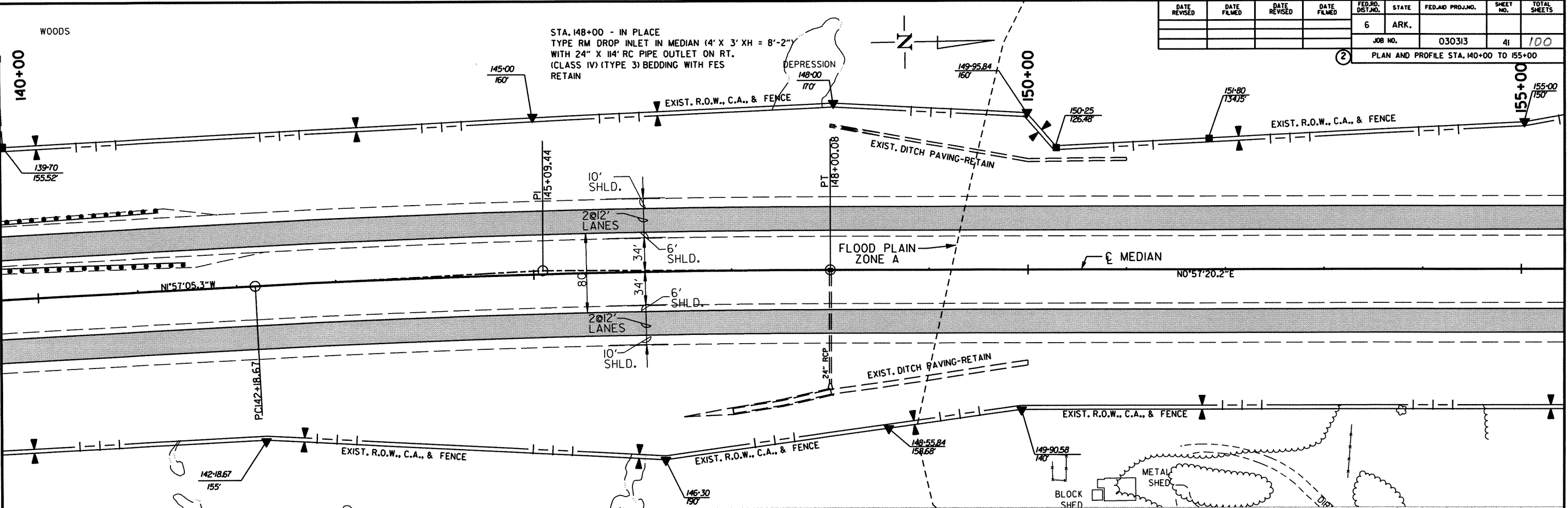
STA. 104+00.00 MAX. SUPERELEVATION (0.025'/'')
 STA. 126+36.49 MAX. SUPERELEVATION (0.025'/'')
 STA. 129+86.49 END SUPERELEVATION

FINISHED GRADES SHALL BE CONSTRUCTED
 3" LOWER THAN THE GRADE ELEVATION SHOWN
 ON THE PLANS, 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. 030313	41

PLAN AND PROFILE STA. 140+00 TO 155+00

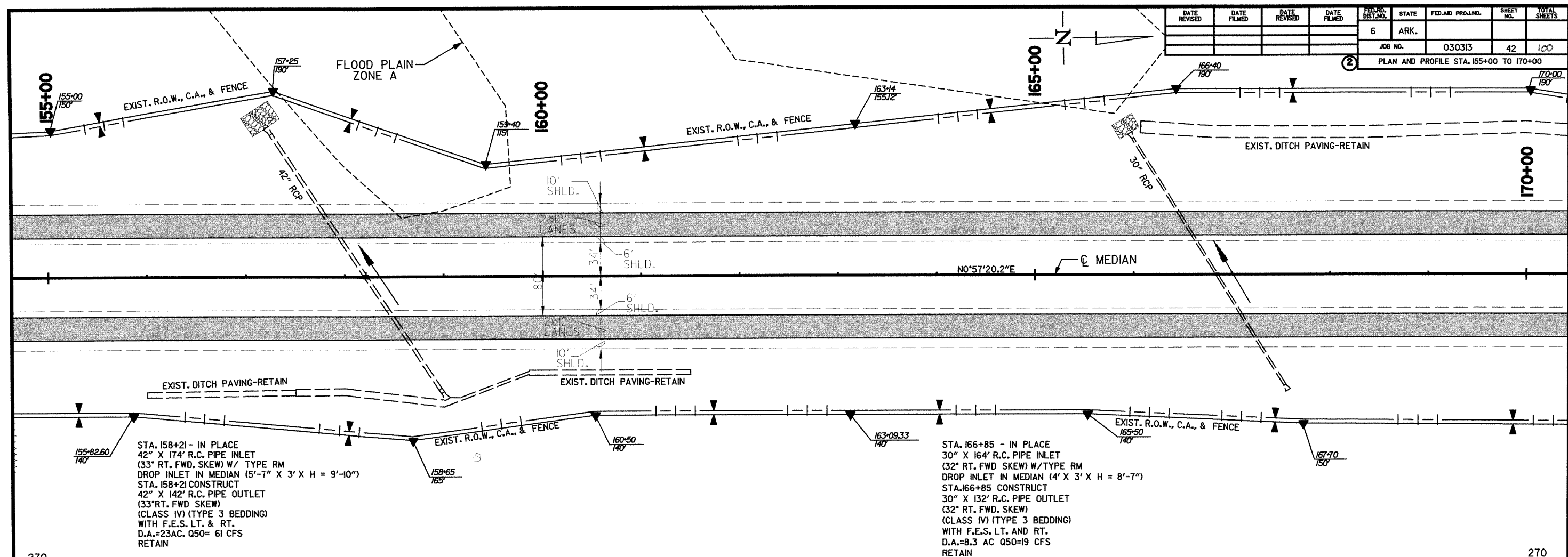


P.I. 145+09.44
 N = 1450402.311
 E = 729763.0551
 $\Delta = 2^{\circ}54'25''$ RT.
 D = $0^{\circ}30'00''$
 T = 290.77'
 L = 581.41'
 E = 3.69'
 e = NC
 LS = NA
 P.C. = 142+18.67
 P.T. = 148+00.08

FINISHED GRADES SHALL BE CONSTRUCTED 3" LOWER THAN THE GRADE ELEVATION SHOWN ON THE PLANS, UNLESS OTHERWISE SPECIFIED.

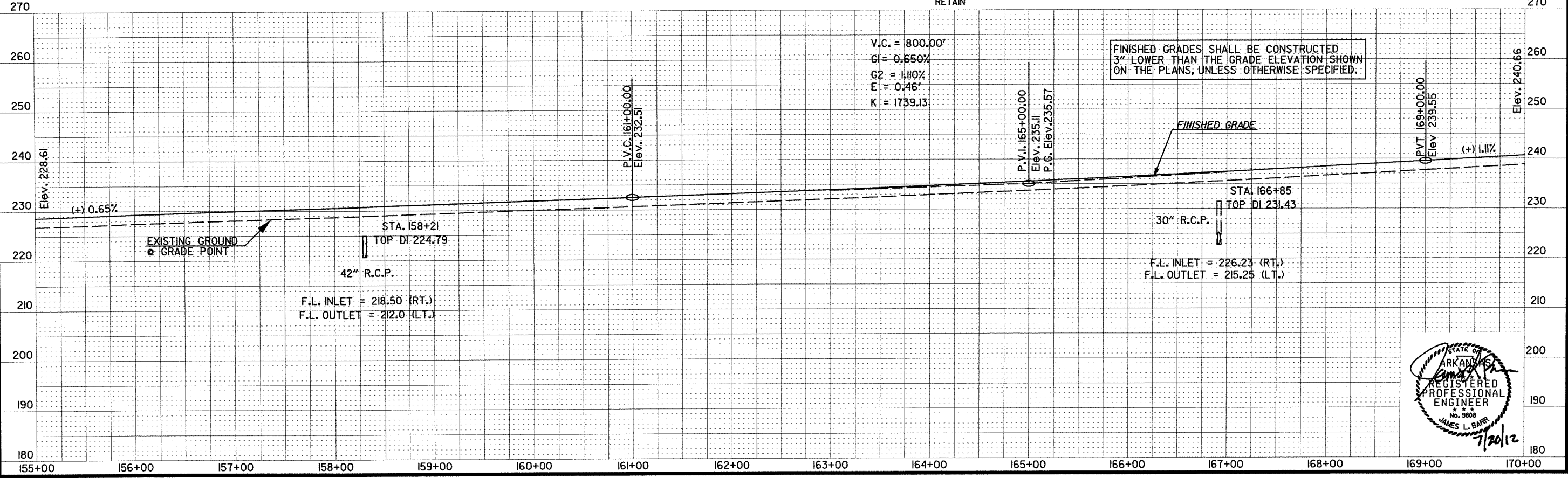


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		42	100
				JOB NO.		030313		
				PLAN AND PROFILE STA. 155+00 TO 170+00				



STA. 158+21 - IN PLACE
 42" X 174' R.C. PIPE INLET
 (33° RT. FWD. SKEW) W/ TYPE RM
 DROP INLET IN MEDIAN (5'-7" X 3' X H = 9'-10")
 STA. 158+21 CONSTRUCT
 42" X 142' R.C. PIPE OUTLET
 (33° RT. FWD SKEW)
 (CLASS IV) (TYPE 3 BEDDING)
 WITH F.E.S. LT. & RT.
 D.A.=23AC. Q50= 6I CFS
 RETAIN

STA. 166+85 - IN PLACE
 30" X 164' R.C. PIPE INLET
 (32° RT. FWD SKEW) W/TYPERM
 DROP INLET IN MEDIAN (4' X 3' X H = 8'-7")
 STA. 166+85 CONSTRUCT
 30" X 132' R.C. PIPE OUTLET
 (32° RT. FWD. SKEW)
 (CLASS IV) (TYPE 3 BEDDING)
 WITH F.E.S. LT. AND RT.
 D.A.=8.3 AC Q50=19 CFS
 RETAIN

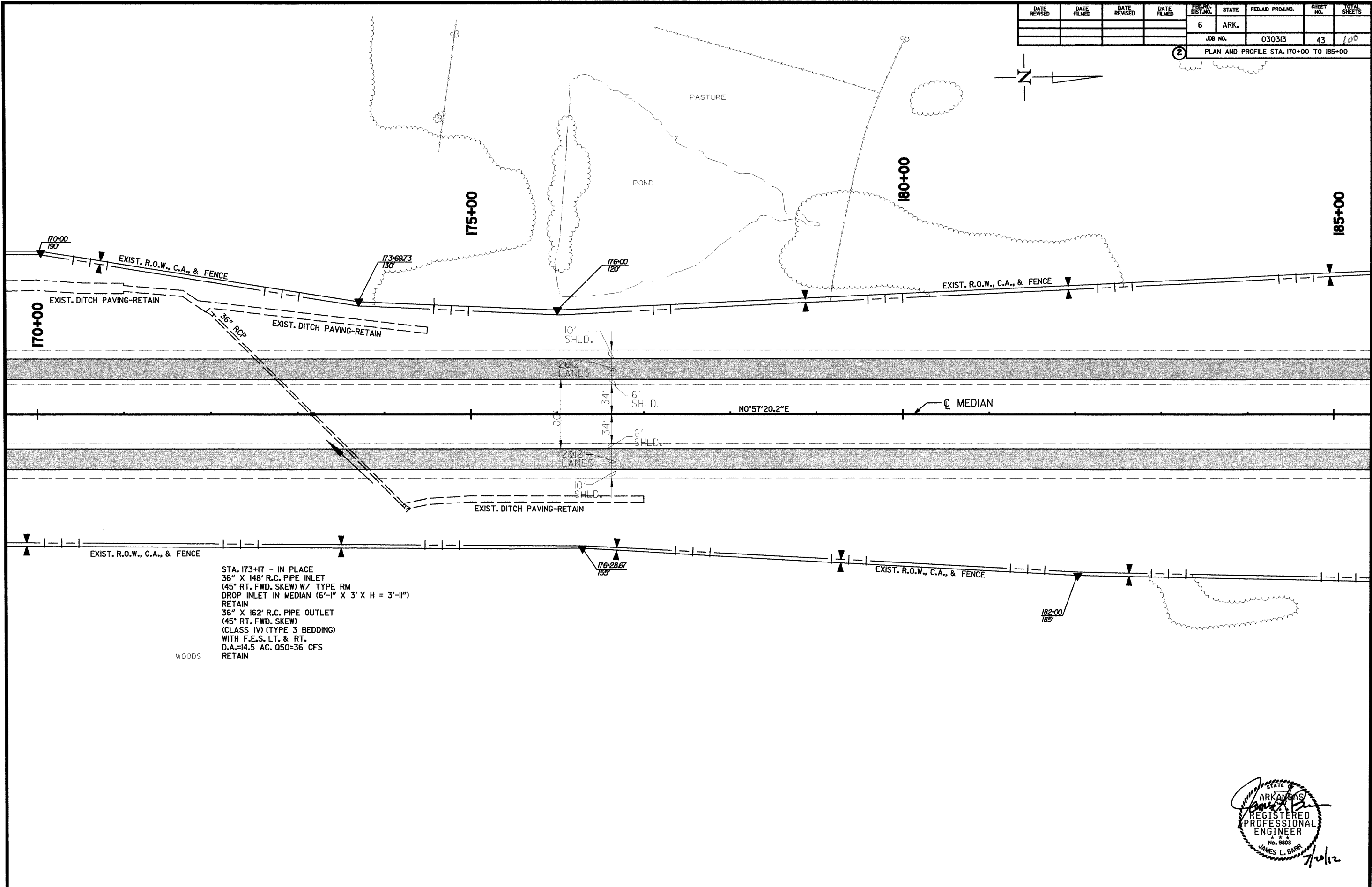
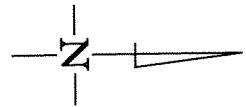


V.C. = 800.00'
 G1 = 0.650%
 G2 = 1.110%
 E = 0.46'
 K = 1739.13

FINISHED GRADES SHALL BE CONSTRUCTED
 3" LOWER THAN THE GRADE ELEVATION SHOWN
 ON THE PLANS, UNLESS OTHERWISE SPECIFIED.

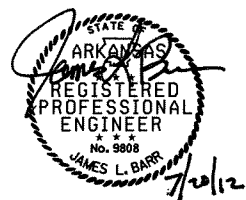


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 030313							43	100
PLAN AND PROFILE STA. 170+00 TO 185+00								



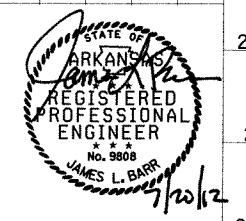
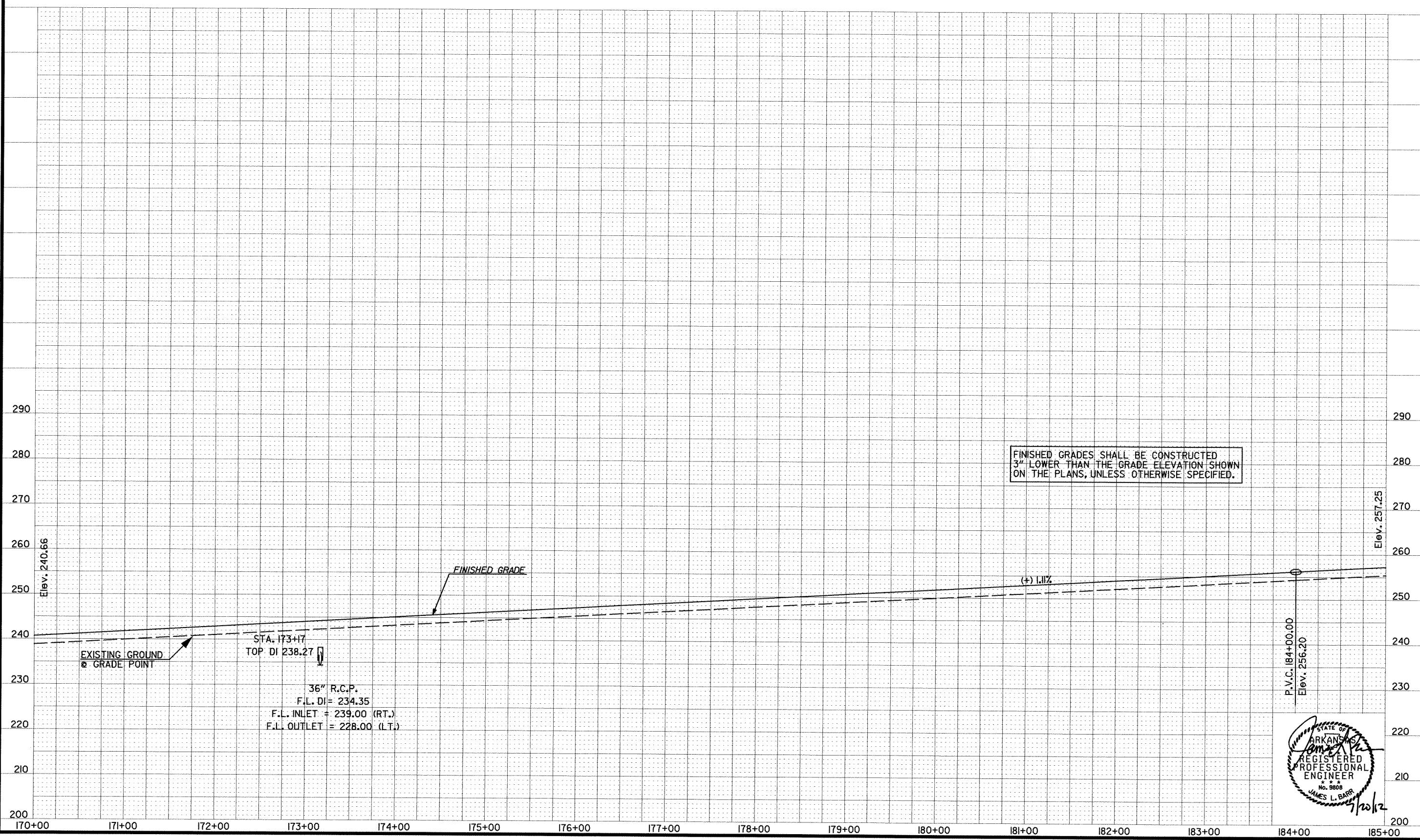
STA. 173+17 - IN PLACE
 36" X 148' R.C. PIPE INLET
 (45° RT. FWD. SKEW) W/ TYPE RM
 DROP INLET IN MEDIAN (6'-1" X 3' X H = 3'-11")
 RETAIN
 36" X 162' R.C. PIPE OUTLET
 (45° RT. FWD. SKEW)
 (CLASS IV) (TYPE 3 BEDDING)
 WITH F.E.S. LT. & RT.
 D.A.=14.5 AC. Q50=36 CFS
 RETAIN

WOODS

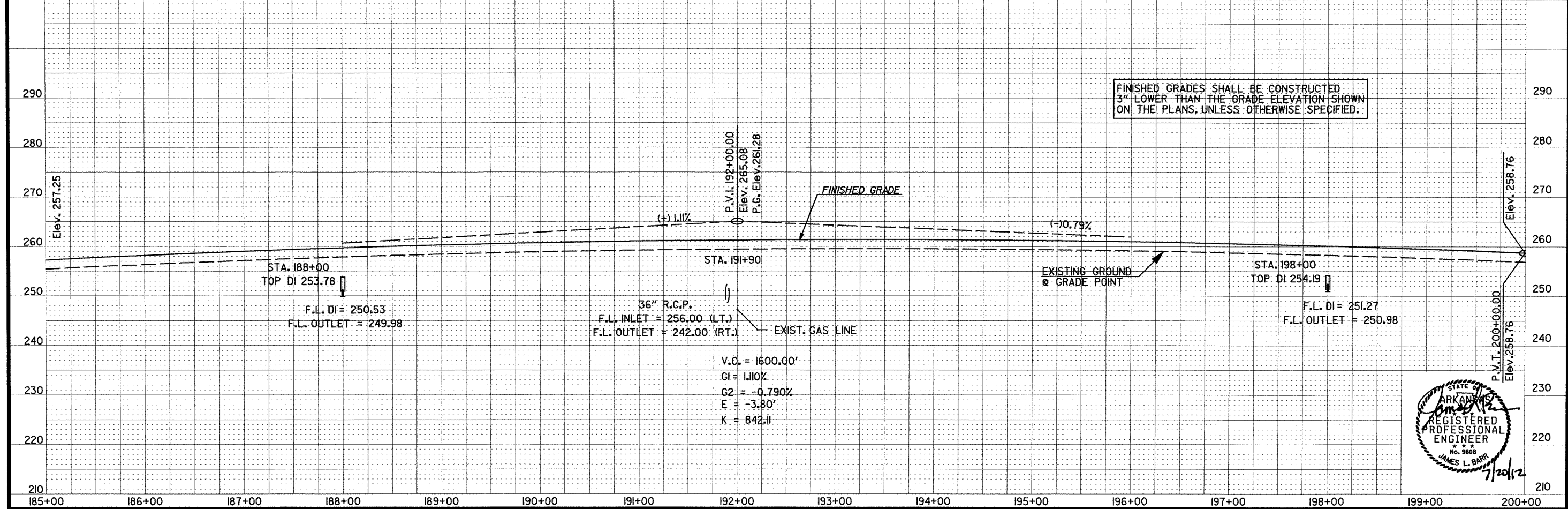
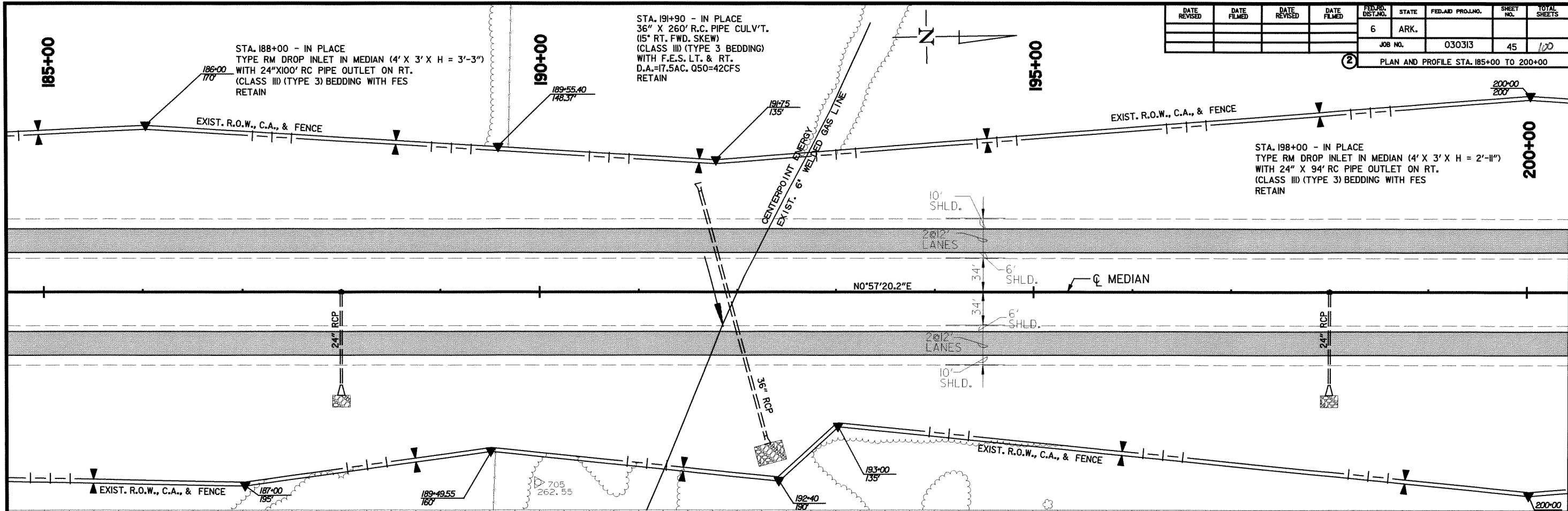


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	030313		44	100

2 PLAN AND PROFILE STA. 170+00 TO 185+00



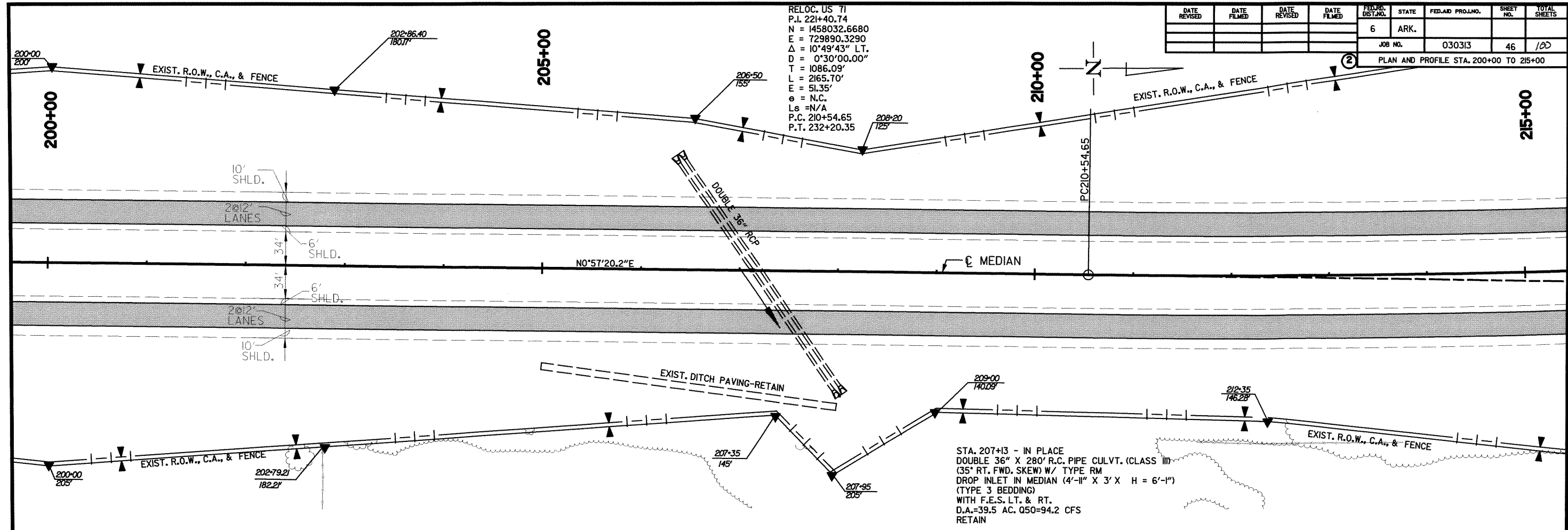
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		45	100
				JOB NO. 030313		PLAN AND PROFILE STA. 185+00 TO 200+00		



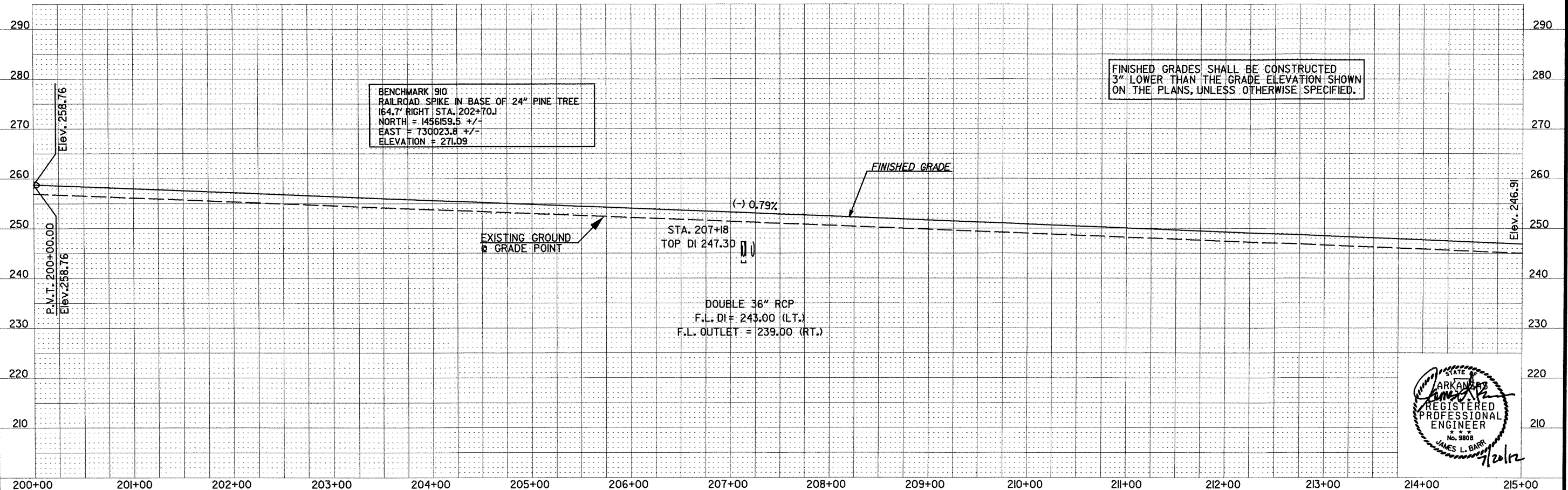
RELOC. US 71
 P.I. 221+40.74
 N = 1458032.6680
 E = 729890.3290
 $\Delta = 10^{\circ}49'43''$ LT.
 $D = 0^{\circ}30'00.00''$
 T = 1086.09'
 L = 2165.70'
 E = 51.35'
 e = N.C.
 Ls = N/A
 P.C. 210+54.65
 P.T. 232+20.35

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		46	100
				JOB NO.		030313		

PLAN AND PROFILE STA. 200+00 TO 215+00

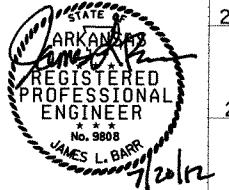


STA. 207+13 - IN PLACE
 DOUBLE 36" X 280' R.C. PIPE CULVT. (CLASS III)
 (35' RT. FWD. SKEW) W/ TYPE RM
 DROP INLET IN MEDIAN (4'-11" X 3' X H = 6'-1")
 (TYPE 3 BEDDING)
 WITH F.E.S. LT. & RT.
 D.A.=39.5 AC. Q50=94.2 CFS
 RETAIN



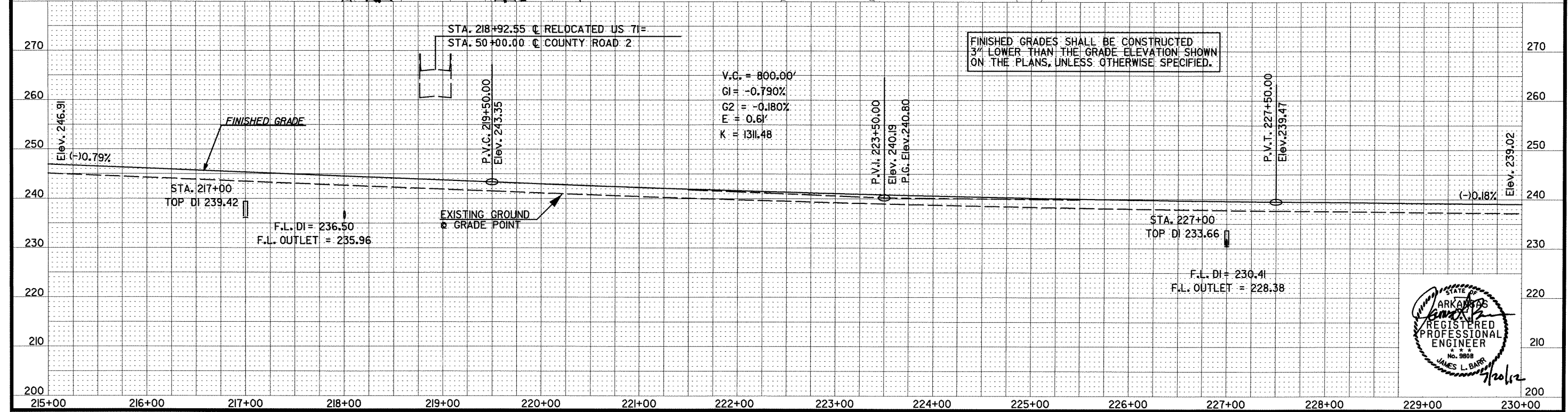
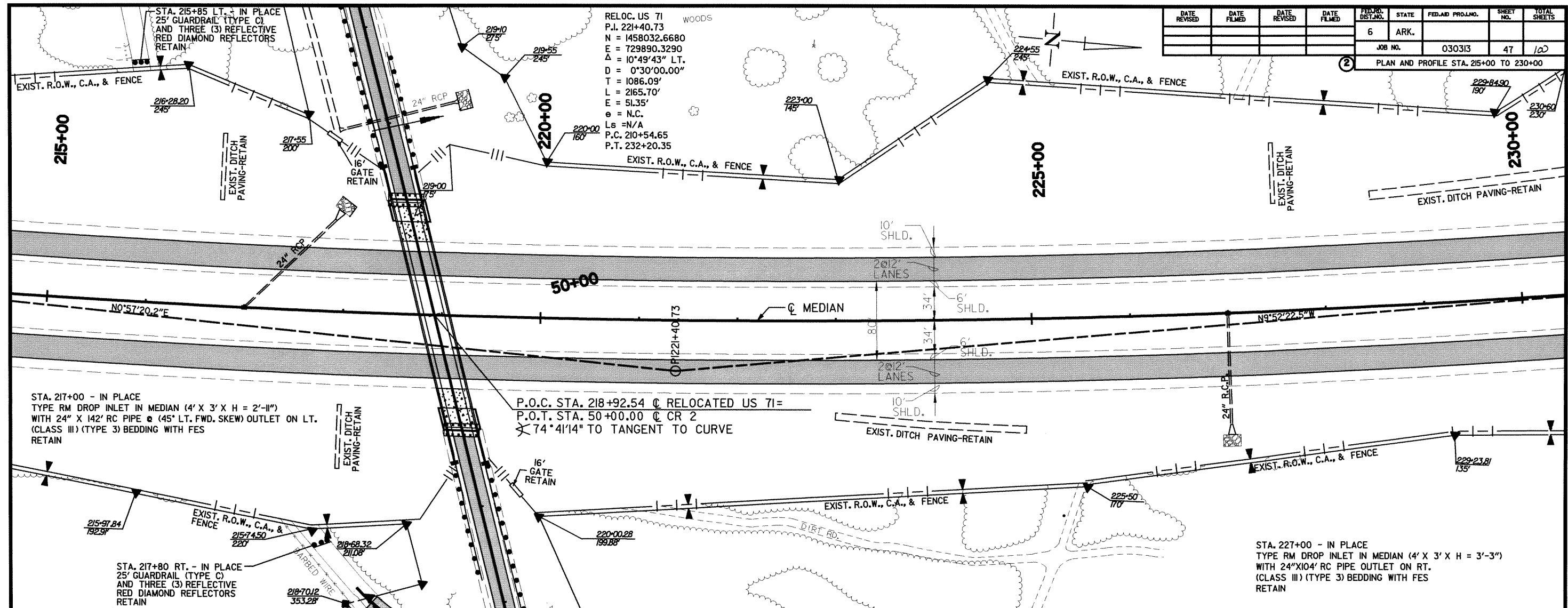
BENCHMARK 910
 RAILROAD SPIKE IN BASE OF 24" PINE TREE
 164.7' RIGHT STA. 202+70.1
 NORTH = 1456159.5 +/-
 EAST = 730023.8 +/-
 ELEVATION = 271.09

FINISHED GRADES SHALL BE CONSTRUCTED
 3" LOWER THAN THE GRADE ELEVATION SHOWN
 ON THE PLANS, UNLESS OTHERWISE SPECIFIED.



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		47	100
				JOB NO. 030313		PLAN AND PROFILE STA. 215+00 TO 230+00		

RELOC. US 71
 P.I. 221+40.73
 N = 1458032.6680
 E = 729890.3290
 $\Delta = 10^{\circ}49'43''$ LT.
 D = $0^{\circ}30'00.00''$
 T = 1086.09'
 L = 2165.70'
 e = N.C.
 Ls = N/A
 P.C. 210+54.65
 P.T. 232+20.35



FINISHED GRADES SHALL BE CONSTRUCTED 3" LOWER THAN THE GRADE ELEVATION SHOWN ON THE PLANS, UNLESS OTHERWISE SPECIFIED.

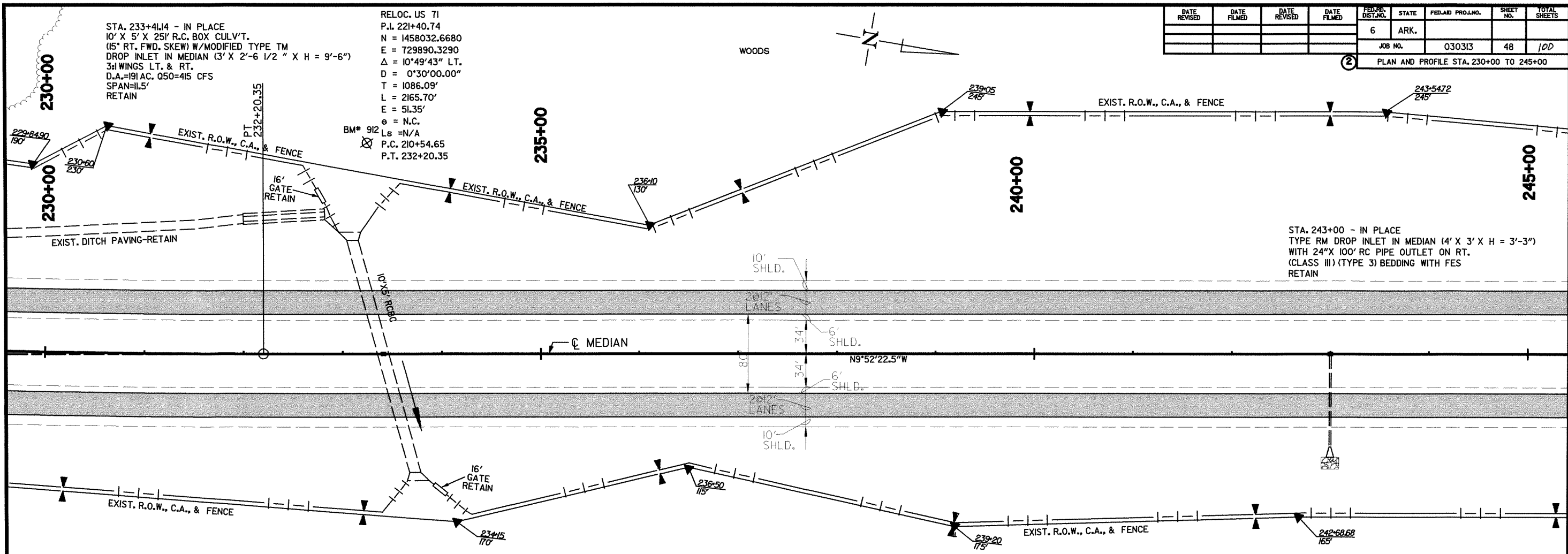


STA. 233+41.14 - IN PLACE
 10' X 5' X 25' R.C. BOX CULV'T.
 (15' RT. FWD. SKEW) W/MODIFIED TYPE TM
 DROP INLET IN MEDIAN (3' X 2'-6 1/2" X H = 9'-6")
 3/4 WINGS LT. & RT.
 D.A.=191 AC. Q50=415 CFS
 SPAN=11.5'
 RETAIN

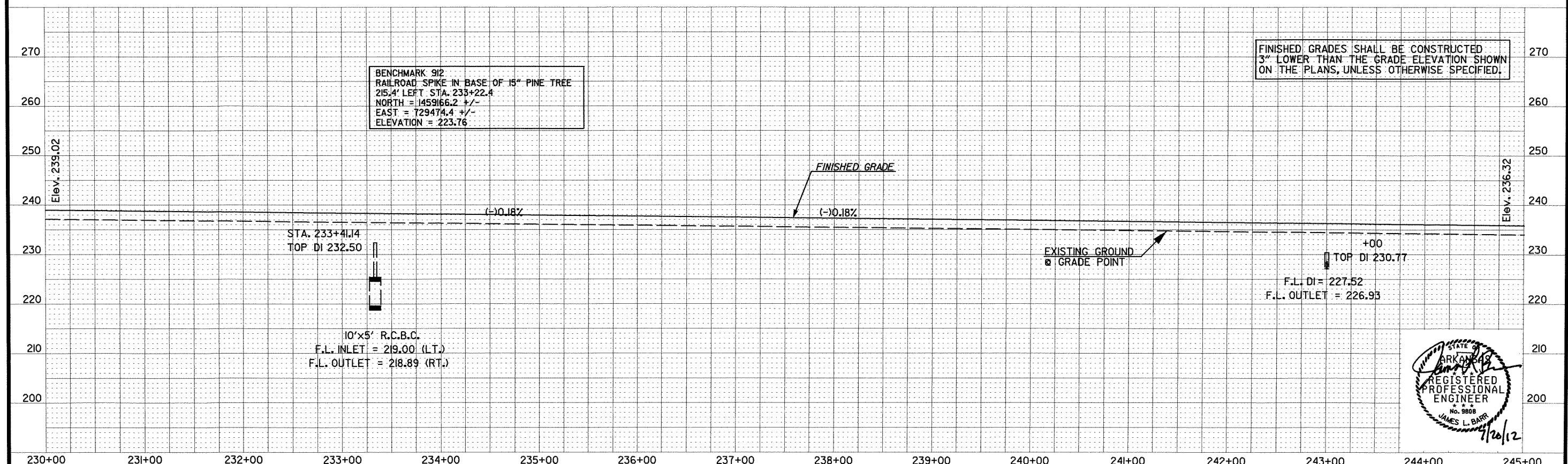
RELOC. US 71
 P.I. 221+40.74
 N = 1458032.6680
 E = 729890.3290
 $\Delta = 10^{\circ}49'43''$ LT.
 D = 0'30'00.00"
 T = 1086.09'
 L = 2165.70'
 E = 51.35'
 $e = N.C.$
 Ls = N/A
 P.C. 210+54.65
 P.T. 232+20.35

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	030313	48	100	

PLAN AND PROFILE STA. 230+00 TO 245+00



STA. 243+00 - IN PLACE
 TYPE RM DROP INLET IN MEDIAN (4' X 3' X H = 3'-3")
 WITH 24" X 100' RC PIPE OUTLET ON RT.
 (CLASS III) (TYPE 3) BEDDING WITH FES
 RETAIN

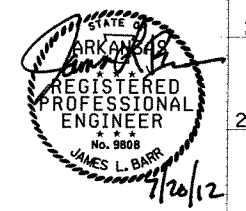


BENCHMARK 912
 RAILROAD SPIKE IN BASE OF 15" PINE TREE
 215.4' LEFT STA. 233+22.4
 NORTH = 1459166.2 +/-
 EAST = 729474.4 +/-
 ELEVATION = 223.76

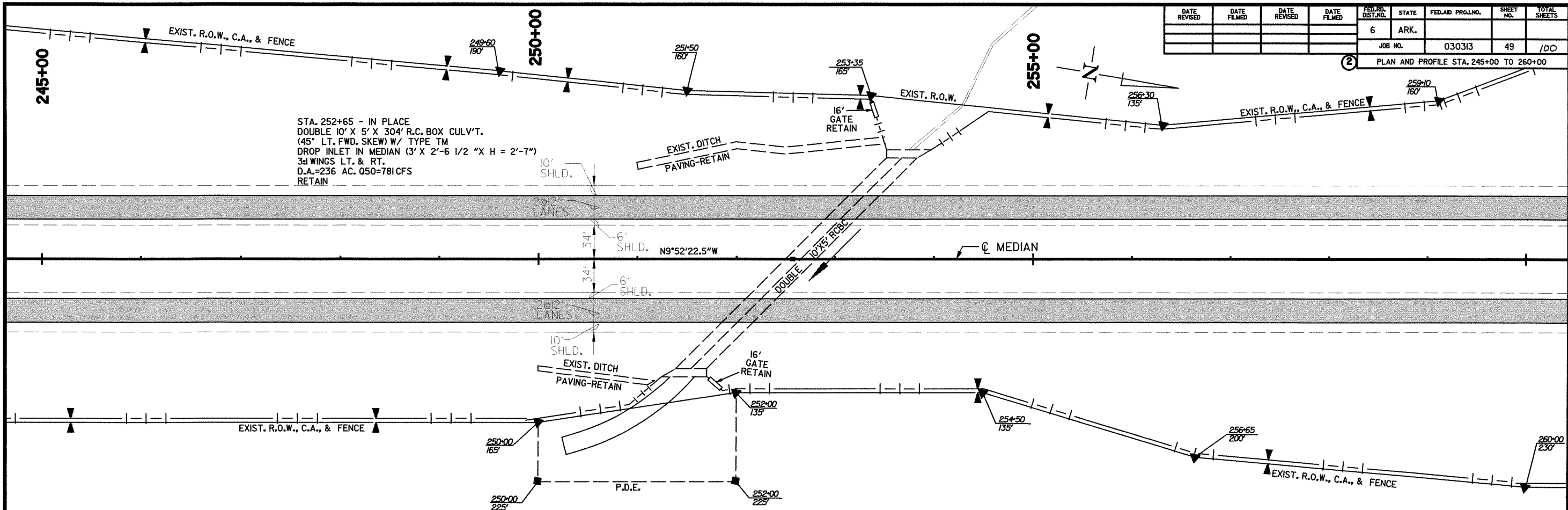
STA. 233+41.14
 TOP DI 232.50

10'x5' R.C.B.C.
 F.L. INLET = 219.00 (LT.)
 F.L. OUTLET = 218.89 (RT.)

FINISHED GRADES SHALL BE CONSTRUCTED
 3" LOWER THAN THE GRADE ELEVATION SHOWN
 ON THE PLANS, UNLESS OTHERWISE SPECIFIED.



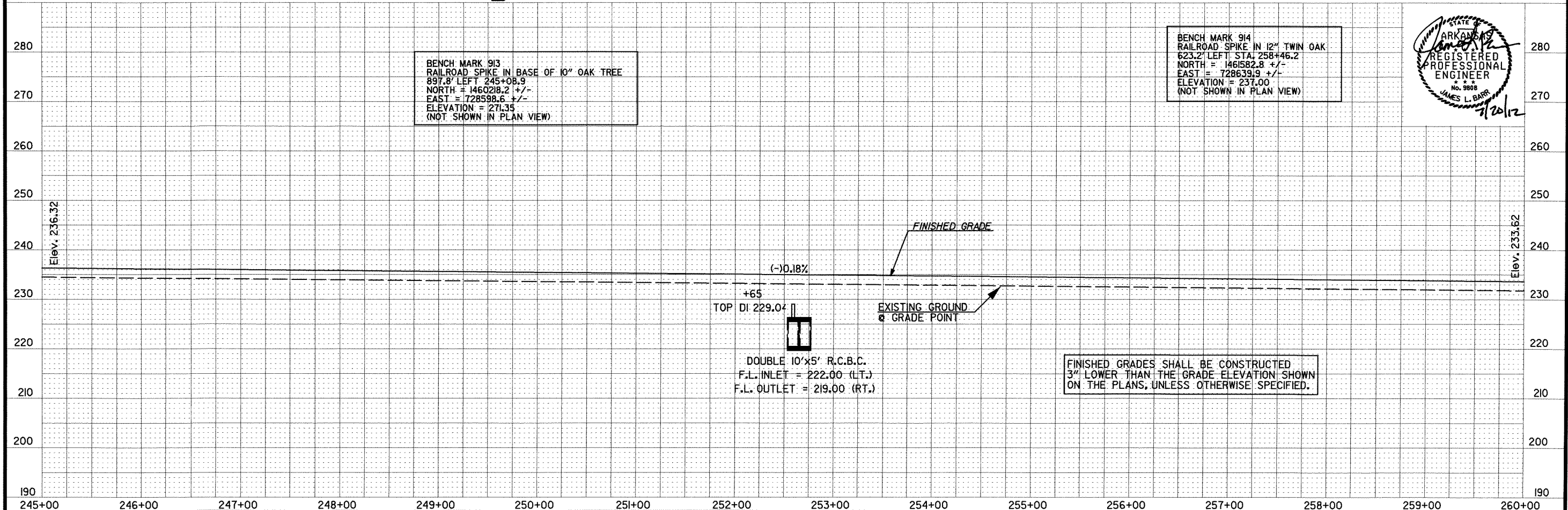
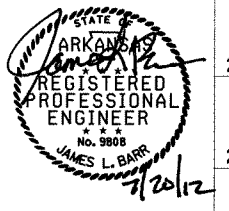
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		030313	49	100
PLAN AND PROFILE STA. 245+00 TO 260+00								



STA. 252+65 - IN PLACE
 DOUBLE 10' X 5' X 304' R.C. BOX CULV'T.
 (45° LT. FWD. SKEW) W/ TYPE TM
 DROP INLET IN MEDIAN (3' X 2'-6 1/2" X H = 2'-7")
 3rd WINGS LT. & RT.
 D.A.=236 AC. Q50=781 CFS
 RETAIN

BENCH MARK 913
 RAILROAD SPIKE IN BASE OF 10" OAK TREE
 897.8' LEFT 245+08.9
 NORTH = 1460218.2 +/-
 EAST = 728598.6 +/-
 ELEVATION = 271.35
 (NOT SHOWN IN PLAN VIEW)

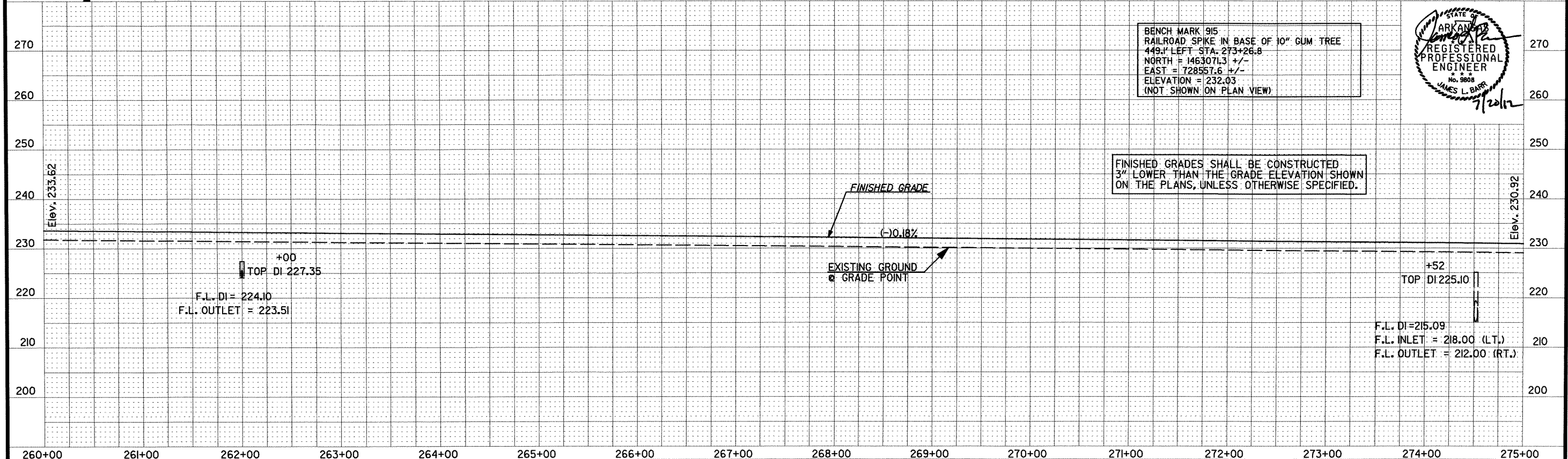
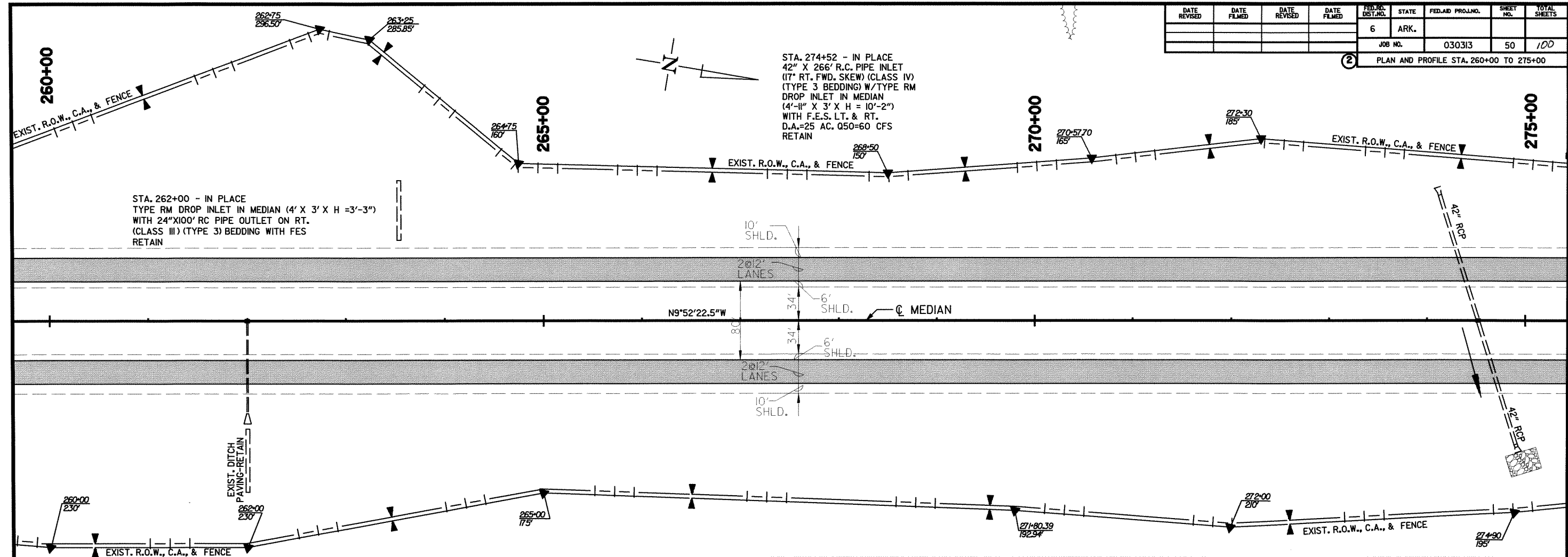
BENCH MARK 914
 RAILROAD SPIKE IN 12" TWIN OAK
 623.2' LEFT STA. 258+46.2
 NORTH = 1461582.8 +/-
 EAST = 728639.9 +/-
 ELEVATION = 237.00
 (NOT SHOWN IN PLAN VIEW)



+65
 TOP DI 229.04
 DOUBLE 10'x5' R.C.B.C.
 F.L. INLET = 222.00 (LT.)
 F.L. OUTLET = 219.00 (RT.)

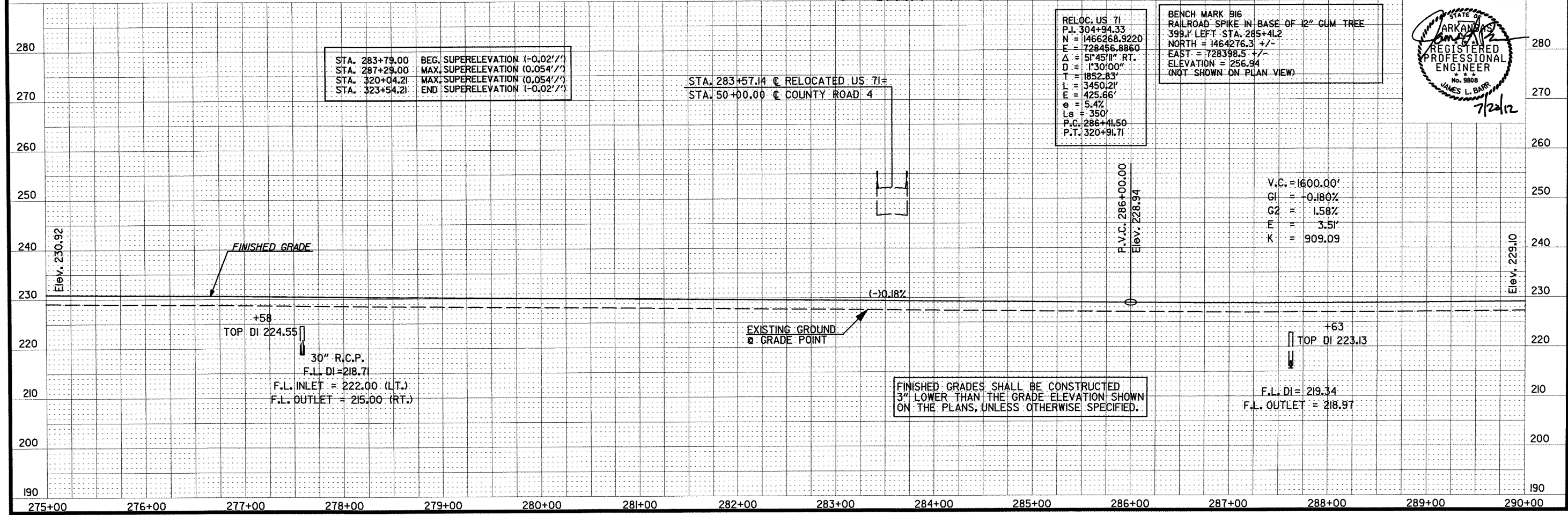
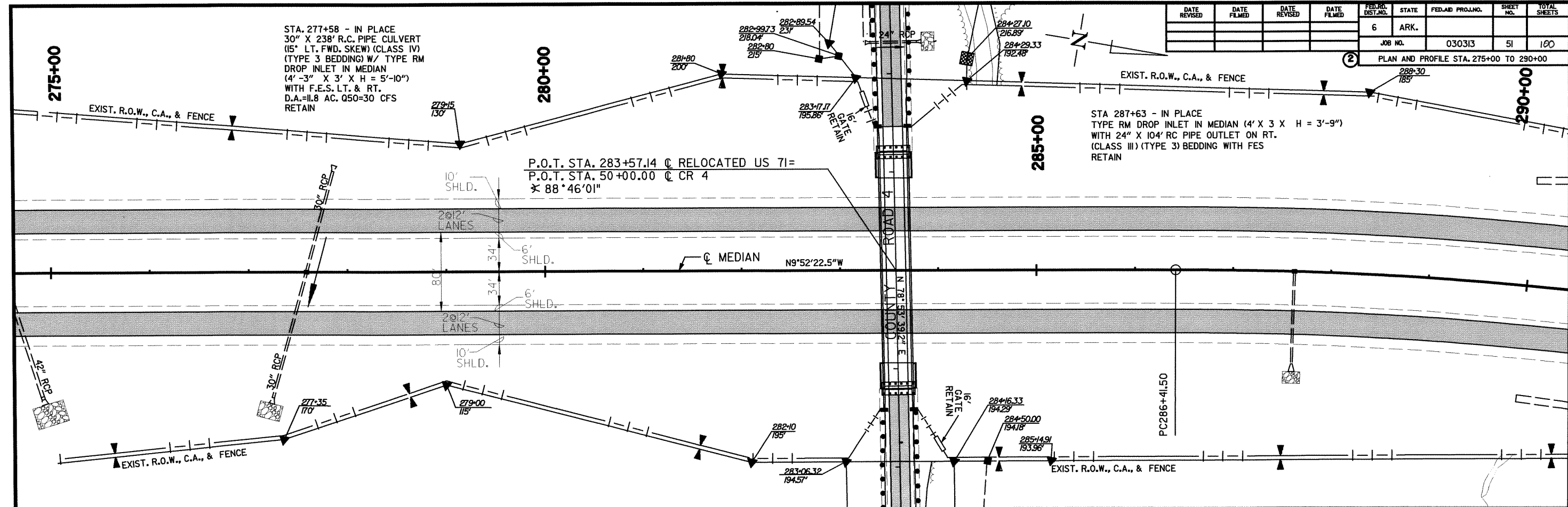
FINISHED GRADES SHALL BE CONSTRUCTED
 3" LOWER THAN THE GRADE ELEVATION SHOWN
 ON THE PLANS, UNLESS OTHERWISE SPECIFIED.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		50	100
				JOB NO. 030313		PLAN AND PROFILE STA. 260+00 TO 275+00		



DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		51	100

PLAN AND PROFILE STA. 275+00 TO 290+00



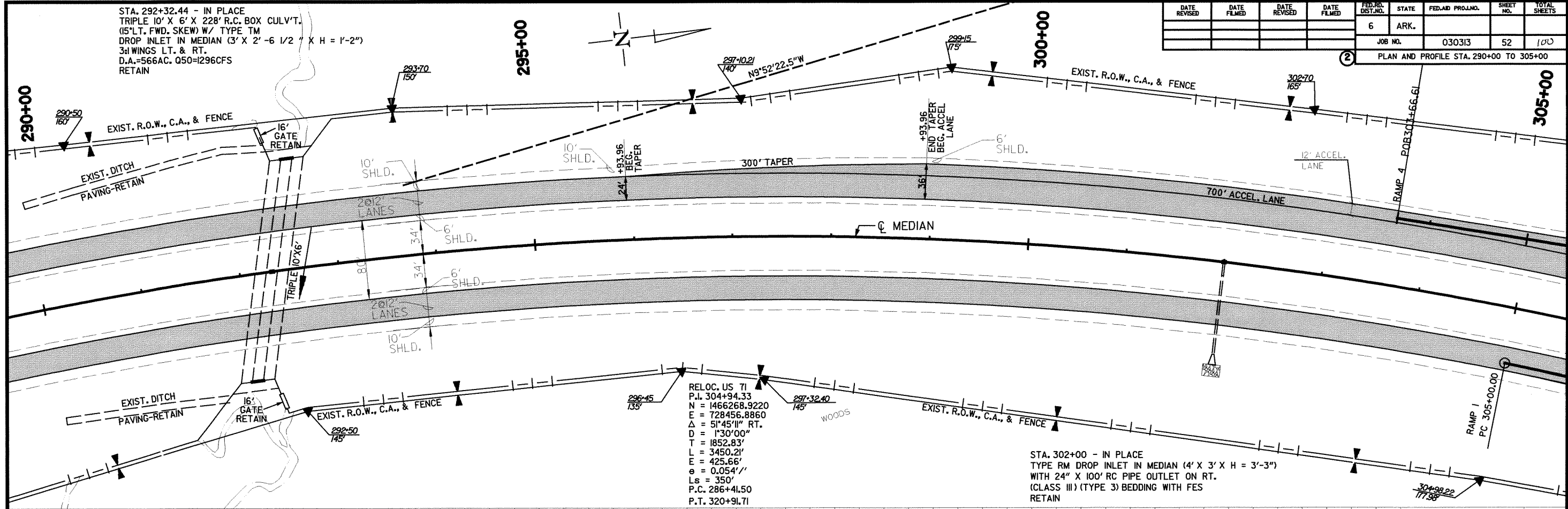
RELOC. US 71
 P.I. = 304+94.33
 N = 1466268.9220
 E = 728456.8860
 Δ = 51°45'11" RT.
 D = 1°30'00"
 T = 1852.83'
 L = 3450.21'
 E = 425.66'
 e = 5.4%
 Ls = 350'
 P.C. = 286+41.50
 P.T. = 320+91.71

BENCH MARK B16
 RAILROAD SPIKE IN BASE OF 12" CUM TREE
 399.1' LEFT STA. 285+41.2
 NORTH = 1464276.3 +/-
 EAST = 728398.5 +/-
 ELEVATION = 256.94
 (NOT SHOWN ON PLAN VIEW)



STA. 292+32.44 - IN PLACE
 TRIPLE 10' X 6' X 228' R.C. BOX CULV'T.
 (15' LT. FWD. SKEW) W/ TYPE TM
 DROP INLET IN MEDIAN (3' X 2' -6 1/2" X H = 1'-2")
 3+1 WINGS LT. & RT.
 D.A.=566AC. Q50=I296CFS
 RETAIN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. NO.	STATE	FED. AD. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		52	100
				JOB NO. 030313		PLAN AND PROFILE STA. 290+00 TO 305+00		



RELOC. US 71
 P.L. 304+94.33
 N = 1466268.9220
 E = 728456.8860
 Δ = 51°45'11" RT.
 D = 1'30'00"
 T = 1852.83'
 L = 3450.21'
 E = 425.66'
 e = 0.054'/'
 Ls = 350'
 P.C. 286+41.50
 P.T. 320+91.71

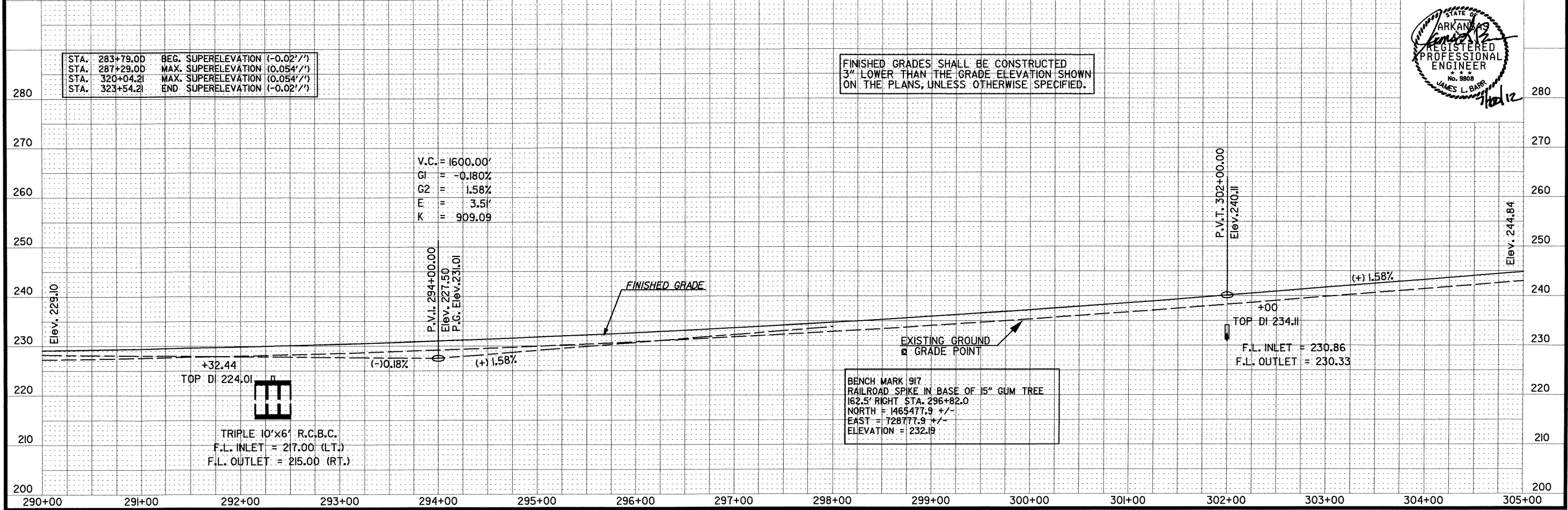
STA. 302+00 - IN PLACE
 TYPE RM DROP INLET IN MEDIAN (4' X 3' X H = 3'-3")
 WITH 24" X 100' RC PIPE OUTLET ON RT.
 (CLASS III) (TYPE 3) BEDDING WITH FES
 RETAIN

STA. 283+78.00	BEG. SUPERELEVATION	(-0.02'/')
STA. 287+28.00	MAX. SUPERELEVATION	(0.054'/')
STA. 320+04.21	MAX. SUPERELEVATION	(0.054'/')
STA. 323+54.21	END SUPERELEVATION	(-0.02'/')

FINISHED GRADES SHALL BE CONSTRUCTED
 3" LOWER THAN THE GRADE ELEVATION SHOWN
 ON THE PLANS, UNLESS OTHERWISE SPECIFIED.



V.C. = 1600.00'
 G1 = -0.180%
 G2 = 1.58%
 F = 3.5'
 K = 909.09



BENCH MARK 917
 RAILROAD SPIKE IN BASE OF 15" GUM TREE
 162.5' RIGHT STA. 296+82.0
 NORTH = 1465477.9 +/-
 EAST = 728777.9 +/-
 ELEVATION = 232.19

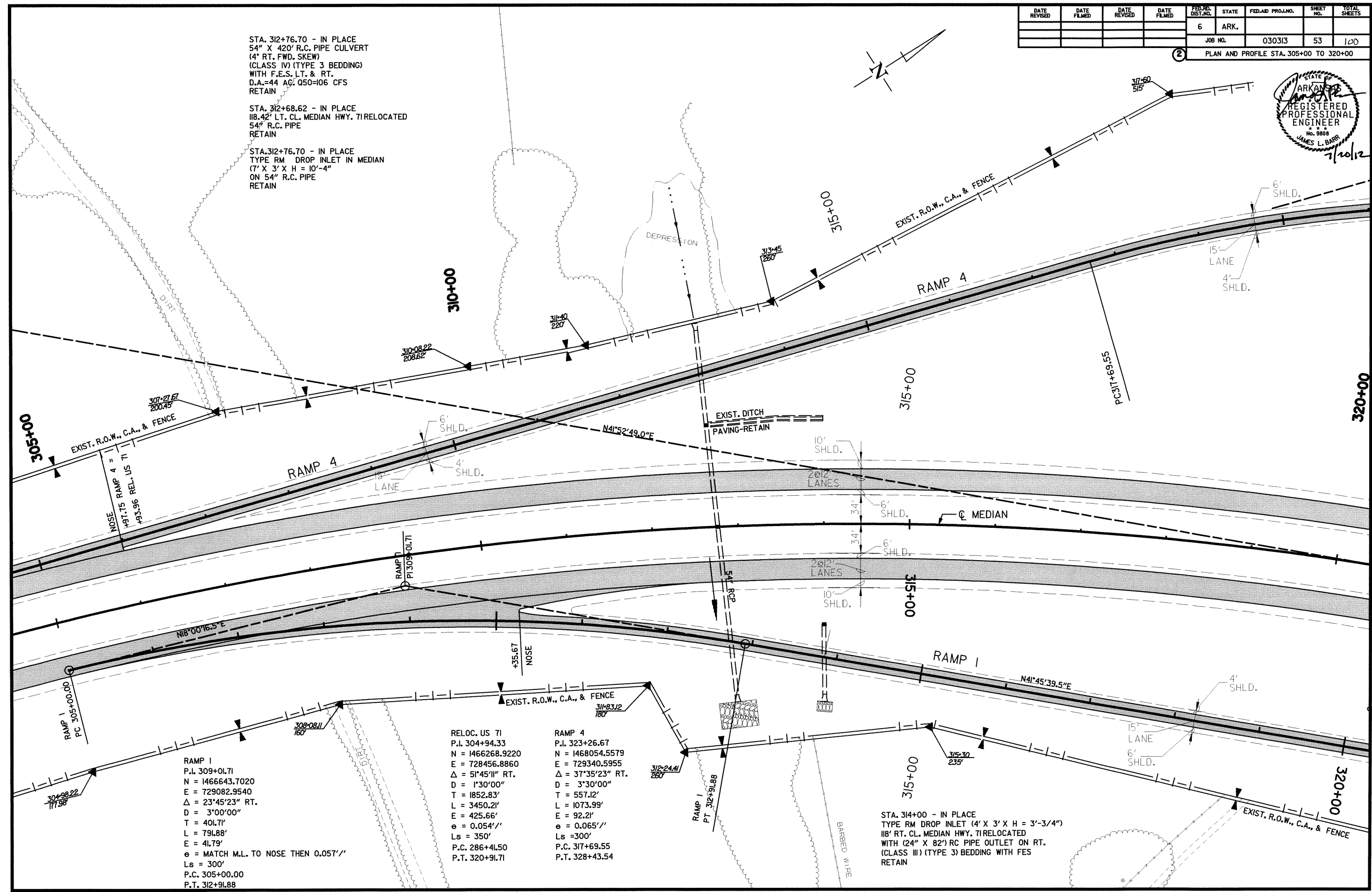
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 030313							53	100
PLAN AND PROFILE STA. 305+00 TO 320+00								



STA. 312+76.70 - IN PLACE
54" X 420' R.C. PIPE CULVERT
(4' RT. FWD. SKEW)
(CLASS IV) (TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
D.A. = 44 AG. Q50=106 CFS
RETAIN

STA. 312+68.62 - IN PLACE
118.42' LT. CL. MEDIAN HWY. 71 RELOCATED
54" R.C. PIPE
RETAIN

STA. 312+76.70 - IN PLACE
TYPE RM DROP INLET IN MEDIAN
(7' X 3' X H = 10'-4")
ON 54" R.C. PIPE
RETAIN



RAMP 1
P.L. 309+01.71
N = 1466643.7020
E = 729082.9540
 $\Delta = 23^\circ 45' 23''$ RT.
D = 3'00'00"
T = 40L71'
L = 79L88'
E = 4L79'
 $e = \text{MATCH M.L. TO NOSE THEN } 0.057''$
Ls = 300'
P.C. 305+00.00
P.T. 312+91.88

RELOC. US 71
P.L. 304+94.33
N = 1466268.9220
E = 728456.8860
 $\Delta = 51^\circ 45' 11''$ RT.
D = 1'30'00"
T = 1852.83'
L = 3450.21'
E = 425.66'
 $e = 0.054''$
Ls = 350'
P.C. 286+41.50
P.T. 320+91.71

RAMP 4
P.L. 323+26.67
N = 1468054.5579
E = 729340.5955
 $\Delta = 37^\circ 35' 23''$ RT.
D = 3'30'00"
T = 557.12'
L = 1073.99'
E = 92.21'
 $e = 0.065''$
Ls = 300'
P.C. 317+69.55
P.T. 328+43.54

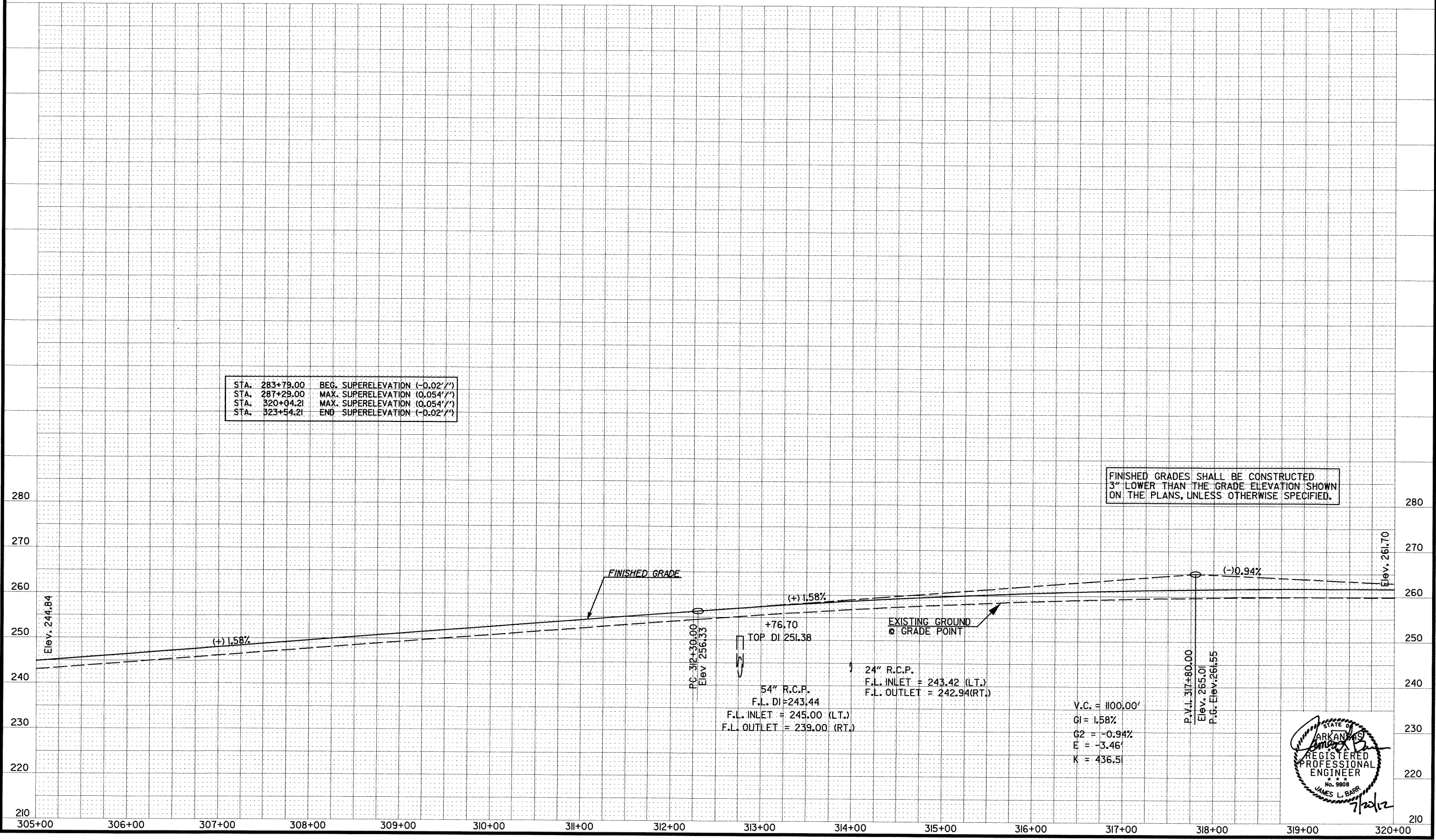
STA. 314+00 - IN PLACE
TYPE RM DROP INLET (4' X 3' X H = 3'-3/4")
118' RT. CL. MEDIAN HWY. 71 RELOCATED
WITH (24" X 82") RC PIPE OUTLET ON RT.
(CLASS III) (TYPE 3) BEDDING WITH FES
RETAIN

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. 030313	54	100

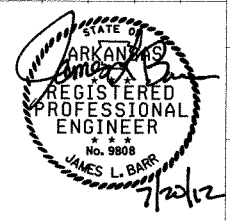
2 PROFILE STA. 305+00 TO 320+00

STA. 283+79.00	BEG. SUPERELEVATION (-0.02'/'')
STA. 287+29.00	MAX. SUPERELEVATION (0.054'/'')
STA. 320+04.21	MAX. SUPERELEVATION (0.054'/'')
STA. 323+54.21	END SUPERELEVATION (-0.02'/'')

FINISHED GRADES SHALL BE CONSTRUCTED 3" LOWER THAN THE GRADE ELEVATION SHOWN ON THE PLANS, UNLESS OTHERWISE SPECIFIED.



V.C. = 1100.00'
 G1 = 1.58%
 G2 = -0.94%
 E = -3.46'
 K = 436.51



320+00

GUARDRAIL

STA.	STA.	LOCATION	GUARDRAIL (TYPE A) LIN. FT.	GUARDRAIL TERMINAL (TYPE 2) EACH	THREE BEAM GUARDRAIL TERMINAL EACH
327+48.68	326+67.43	RT. OF R.M.L.	250		
327+49.06	326+67.81	LT. OF R.M.L.	300		
329+49.45	332+30.09	RT. OF R.M.L.	193		2
330+49.83	332+46.25	LT. OF R.M.L.	189		2
330+54.08	332+73.73	RT. OF L.M.L.	182		2
330+74.46	332+89.89	LT. OF L.M.L.	178		2

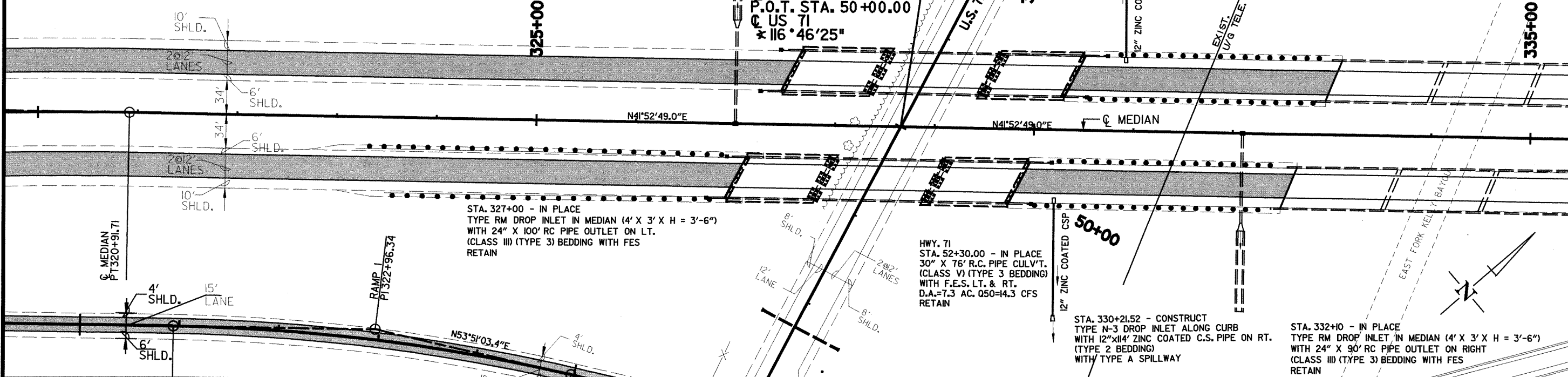
HWY. 71
 STA. 47+41.49 - IN PLACE
 24" X 56" R.C. PIPE CULV'T.
 WITH F.E.S. LT. & RT.
 PLUG AND ABANDON

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	030313	55	100	

PLAN AND PROFILE STA. 320+00 TO 335+00

STA. 330+91.44 - CONSTRUCT
 TYPE N-3 DROP INLET ALONG CURB
 WITH 12"x12" ZINC COATED C.S. PIPE ON LT.
 (TYPE 2 BEDDING)
 WITH TYPE A SPILLWAY

P.O.T. STA. 328+66.04
 @ RELOC. US 71 =
 P.O.T. STA. 50+00.00
 @ US 71
 * 116° 46' 25"

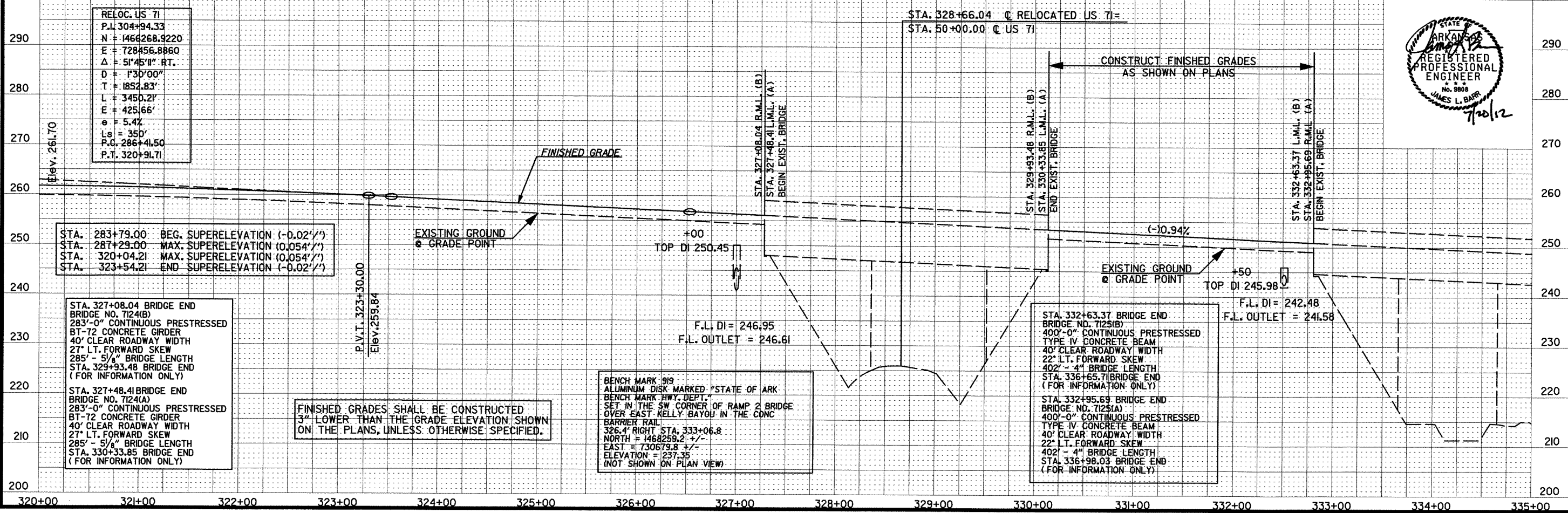


STA. 327+00 - IN PLACE
 TYPE RM DROP INLET IN MEDIAN (4' X 3' X H = 3'-6")
 WITH 24" X 100' RC PIPE OUTLET ON LT.
 (CLASS III) (TYPE 3) BEDDING WITH FES
 RETAIN

HWY. 71
 STA. 52+30.00 - IN PLACE
 30" X 76" R.C. PIPE CULV'T.
 (CLASS V) (TYPE 3 BEDDING)
 WITH F.E.S. LT. & RT.
 D.A.=7.3 AC. Q50=14.3 CFS
 RETAIN

STA. 330+21.52 - CONSTRUCT
 TYPE N-3 DROP INLET ALONG CURB
 WITH 12"x14" ZINC COATED C.S. PIPE ON RT.
 (TYPE 2 BEDDING)
 WITH TYPE A SPILLWAY

STA. 332+10 - IN PLACE
 TYPE RM DROP INLET IN MEDIAN (4' X 3' X H = 3'-6")
 WITH 24" X 90' RC PIPE OUTLET ON RIGHT
 (CLASS III) (TYPE 3) BEDDING WITH FES
 RETAIN



RELOC. US 71
 P.I. 304+94.33
 N = 1466268.9220
 E = 728456.8860
 Δ = 51°45'11" RT.
 D = 1°30'00"
 T = 1852.83'
 L = 3450.21'
 E = 425.66'
 e = 5.4%
 Lg = 350'
 P.C. 286+41.50
 P.T. 320+91.71

STA. 283+79.00 BEG. SUPERELEVATION (-0.02'/'')
 STA. 287+29.00 MAX. SUPERELEVATION (0.054'/'')
 STA. 320+04.21 MAX. SUPERELEVATION (0.054'/'')
 STA. 323+54.21 END SUPERELEVATION (-0.02'/'')

STA. 327+08.04 BRIDGE END
 BRIDGE NO. 7124(B)
 283'-0" CONTINUOUS PRESTRESSED
 BT-72 CONCRETE GIRDER
 40' CLEAR ROADWAY WIDTH
 27' LT. FORWARD SKEW
 285' - 5/8" BRIDGE LENGTH
 STA. 329+93.48 BRIDGE END
 (FOR INFORMATION ONLY)

STA. 327+48.41 BRIDGE END
 BRIDGE NO. 7124(A)
 283'-0" CONTINUOUS PRESTRESSED
 BT-72 CONCRETE GIRDER
 40' CLEAR ROADWAY WIDTH
 27' LT. FORWARD SKEW
 285' - 5/8" BRIDGE LENGTH
 STA. 330+33.85 BRIDGE END
 (FOR INFORMATION ONLY)

FINISHED GRADES SHALL BE CONSTRUCTED
 3" LOWER THAN THE GRADE ELEVATION SHOWN
 ON THE PLANS, UNLESS OTHERWISE SPECIFIED.

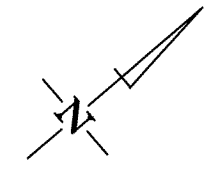
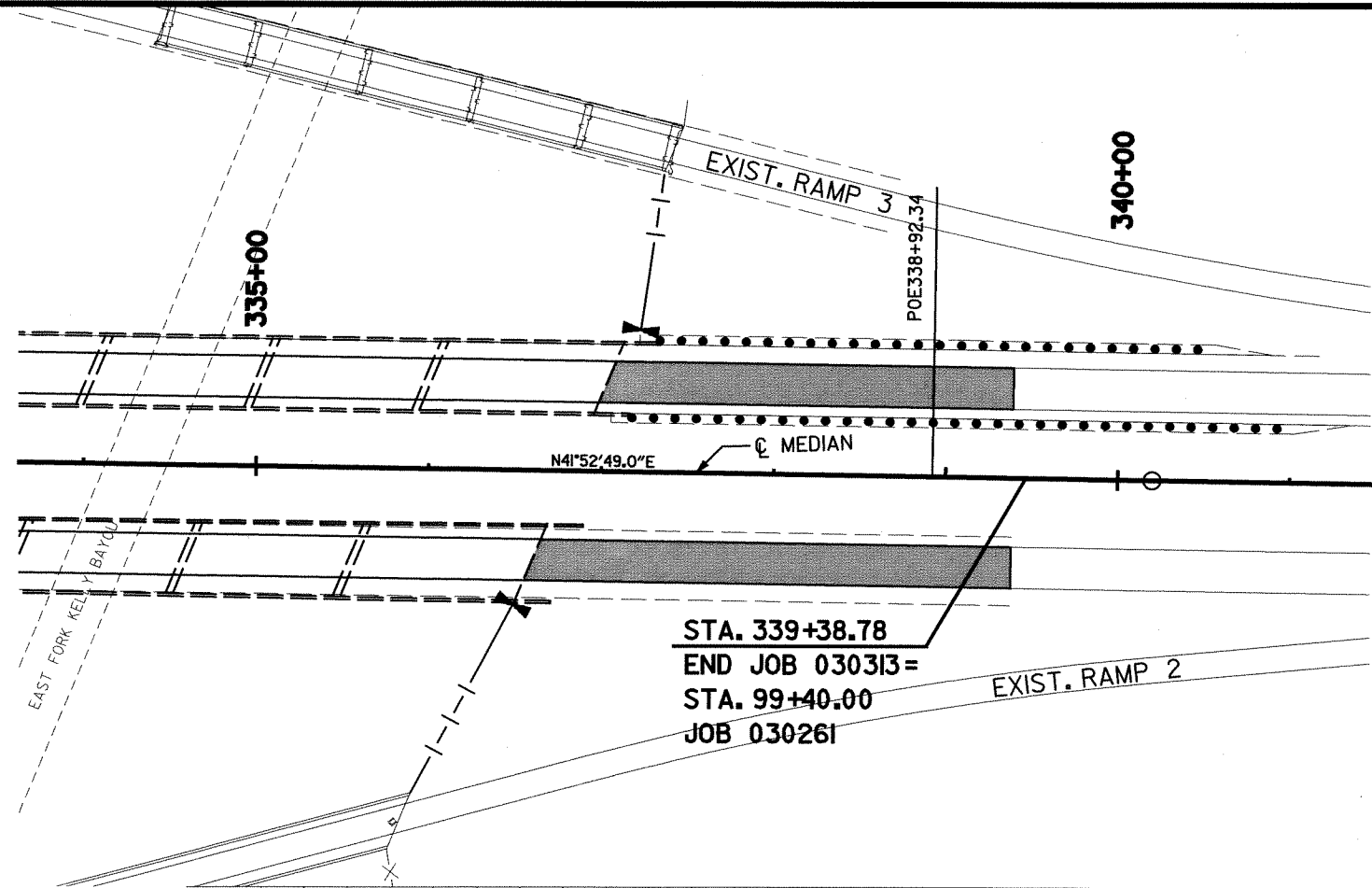
BENCH MARK 919
 ALUMINUM DISK MARKED "STATE OF ARK
 BENCH MARK HWY. DEPT."
 SET IN THE SW CORNER OF RAMP 2 BRIDGE
 OVER EAST KELLY BAYOU IN THE CONC
 BARRIER RAIL
 326.4' RIGHT STA. 333+06.8
 NORTH = 1468259.2 +/-
 EAST = 730679.8 +/-
 ELEVATION = 237.35
 (NOT SHOWN ON PLAN VIEW)

STA. 332+63.37 BRIDGE END
 BRIDGE NO. 7125(B)
 400'-0" CONTINUOUS PRESTRESSED
 TYPE IV CONCRETE BEAM
 40' CLEAR ROADWAY WIDTH
 22' LT. FORWARD SKEW
 402' - 4" BRIDGE LENGTH
 STA. 336+65.71 BRIDGE END
 (FOR INFORMATION ONLY)

STA. 332+95.69 BRIDGE END
 BRIDGE NO. 7125(A)
 400'-0" CONTINUOUS PRESTRESSED
 TYPE IV CONCRETE BEAM
 40' CLEAR ROADWAY WIDTH
 22' LT. FORWARD SKEW
 402' - 4" BRIDGE LENGTH
 STA. 336+98.03 BRIDGE END
 (FOR INFORMATION ONLY)



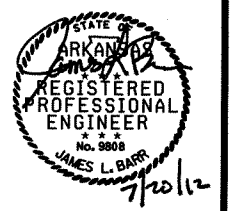
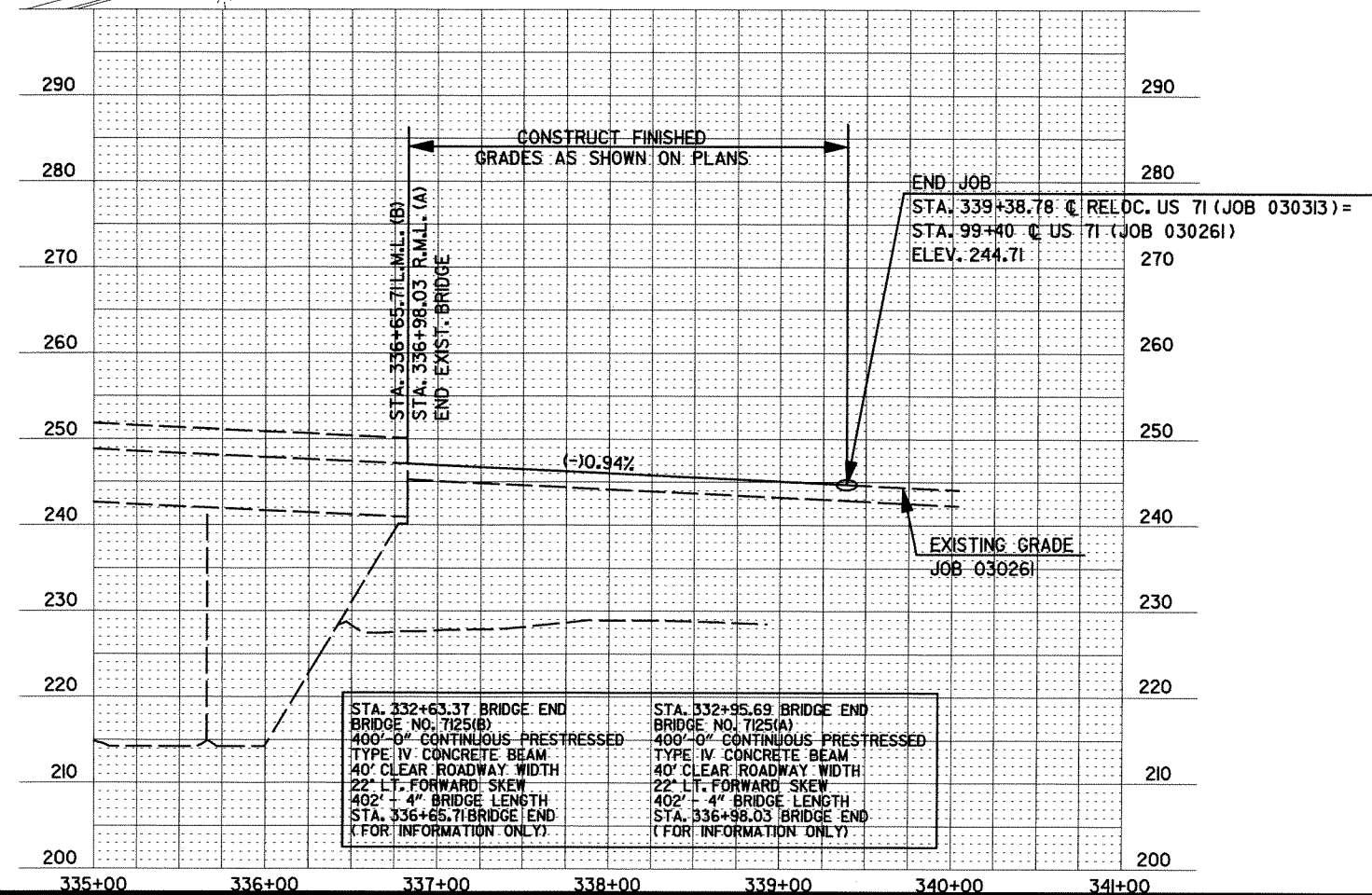
DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	030313	55A	100	
② PLAN AND PROFILE STA. 335+00 TO 339+38.78								



STA. 339+38.78
 END JOB 030313 =
 STA. 99+40.00
 JOB 030261

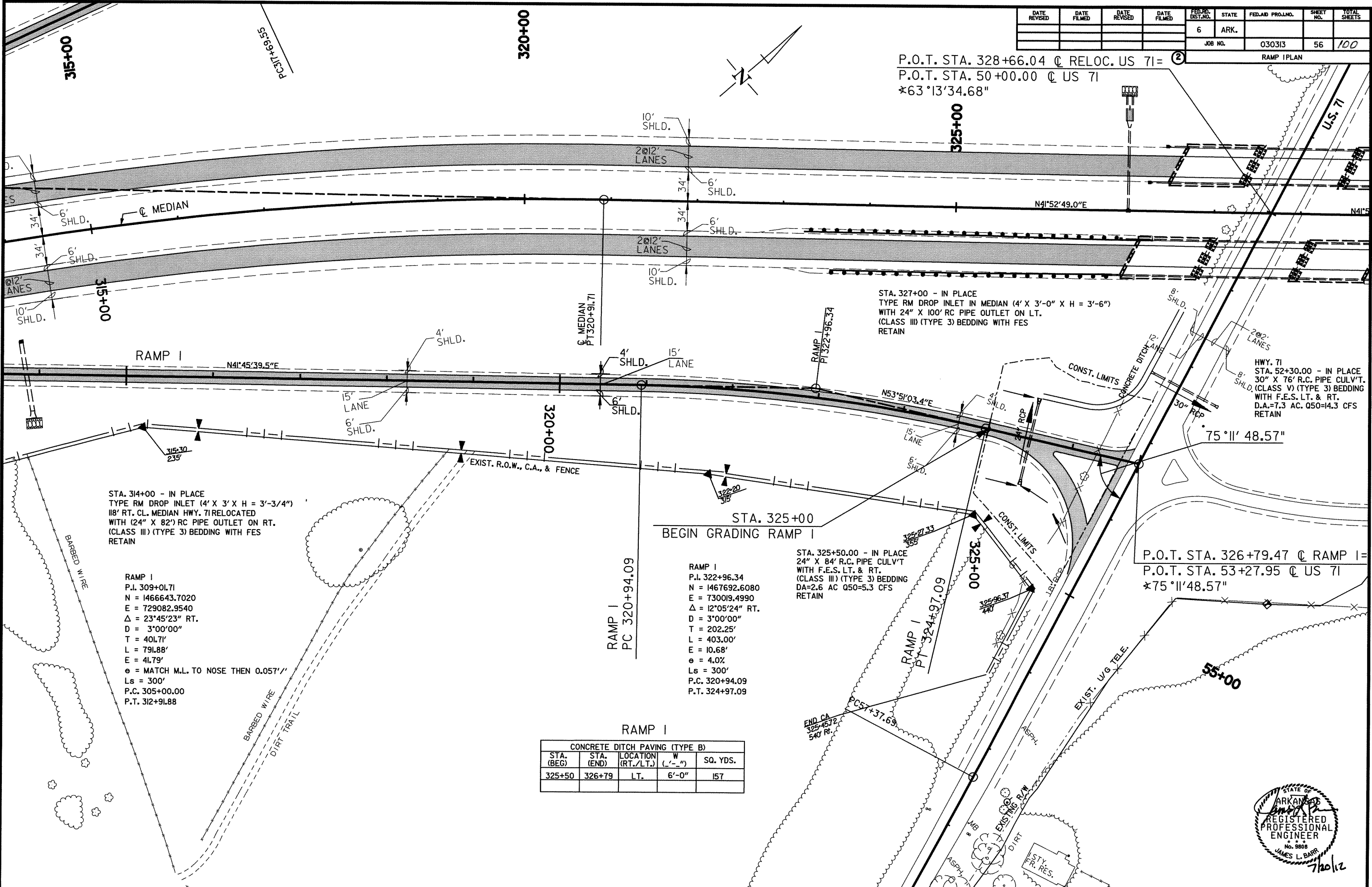
GUARDRAIL

LOCATION	STA.	STA.	GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)	THREE BEAM GUARDRAIL TERMINAL
			LN. FT.	EACH	EACH
RT. OF L.M.L.	337+85.15	340+83.90	300	1	1
LT. OF L.M.L.	337+31.31	340+50.06	250	1	1
TOTAL			550	2	2



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	030313	56	100
				JOB NO.		RAMP I PLAN		

P.O.T. STA. 328+66.04 @ RELOC. US 71 = ②
P.O.T. STA. 50+00.00 @ US 71
*63°13'34.68"



STA. 314+00 - IN PLACE
TYPE RM DROP INLET (4' X 3' X H = 3'-3/4")
118' RT. CL. MEDIAN HWY. 71 RELOCATED
WITH (24" X 82") RC PIPE OUTLET ON RT.
(CLASS III) (TYPE 3) BEDDING WITH FES
RETAIN

RAMP I
P.I. 309+01.71
N = 1466643.7020
E = 729082.9540
Δ = 23°45'23" RT.
D = 3'00'00"
T = 401.71'
L = 791.88'
E = 41.79'
e = MATCH M.L. TO NOSE THEN 0.057'/'
Ls = 300'
P.C. 305+00.00
P.T. 312+91.88

RAMP I
P.I. 322+96.34
N = 1467692.6080
E = 730019.4990
Δ = 12°05'24" RT.
D = 3'00'00"
T = 202.25'
L = 403.00'
E = 10.68'
e = 4.0%
Ls = 300'
P.C. 320+94.09
P.T. 324+97.09

RAMP I

CONCRETE DITCH PAVING (TYPE B)				
STA. (BEG)	STA. (END)	LOCATION (RT./LT.)	W (-'-")	SQ. YDS.
325+50	326+79	LT.	6'-0"	157

STA. 327+00 - IN PLACE
TYPE RM DROP INLET IN MEDIAN (4' X 3'-0" X H = 3'-6")
WITH 24" X 100' RC PIPE OUTLET ON LT.
(CLASS III) (TYPE 3) BEDDING WITH FES
RETAIN

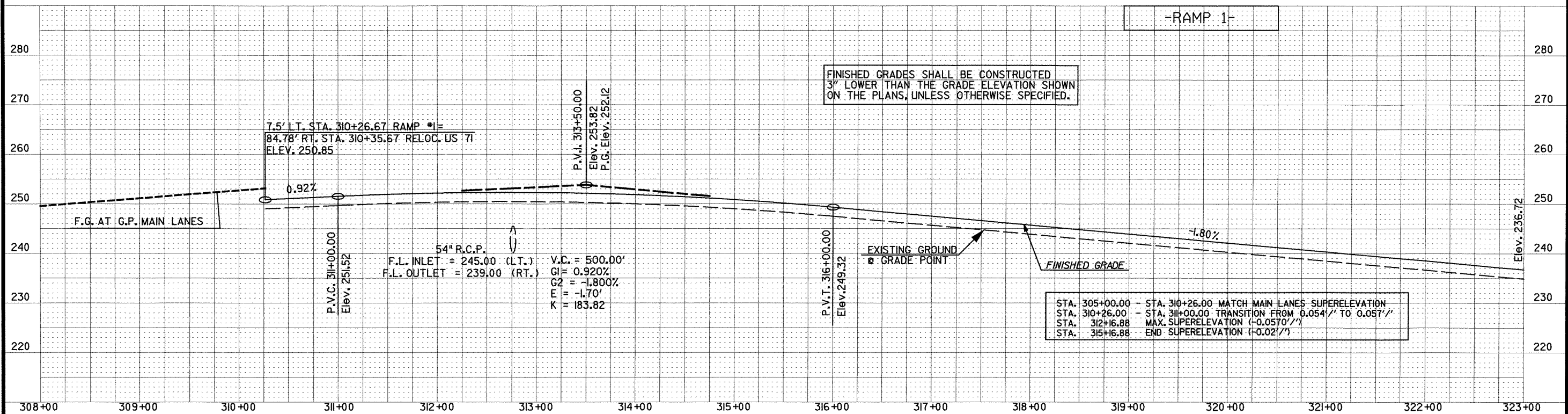
HWY. 71
STA. 52+30.00 - IN PLACE
30" X 76' R.C. PIPE CULV'T.
(CLASS V) (TYPE 3) BEDDING
WITH F.E.S. LT. & RT.
D.A.=7.3 AC. Q50=14.3 CFS
RETAIN

P.O.T. STA. 326+79.47 @ RAMP I =
P.O.T. STA. 53+27.95 @ US 71
*75°11'48.57"

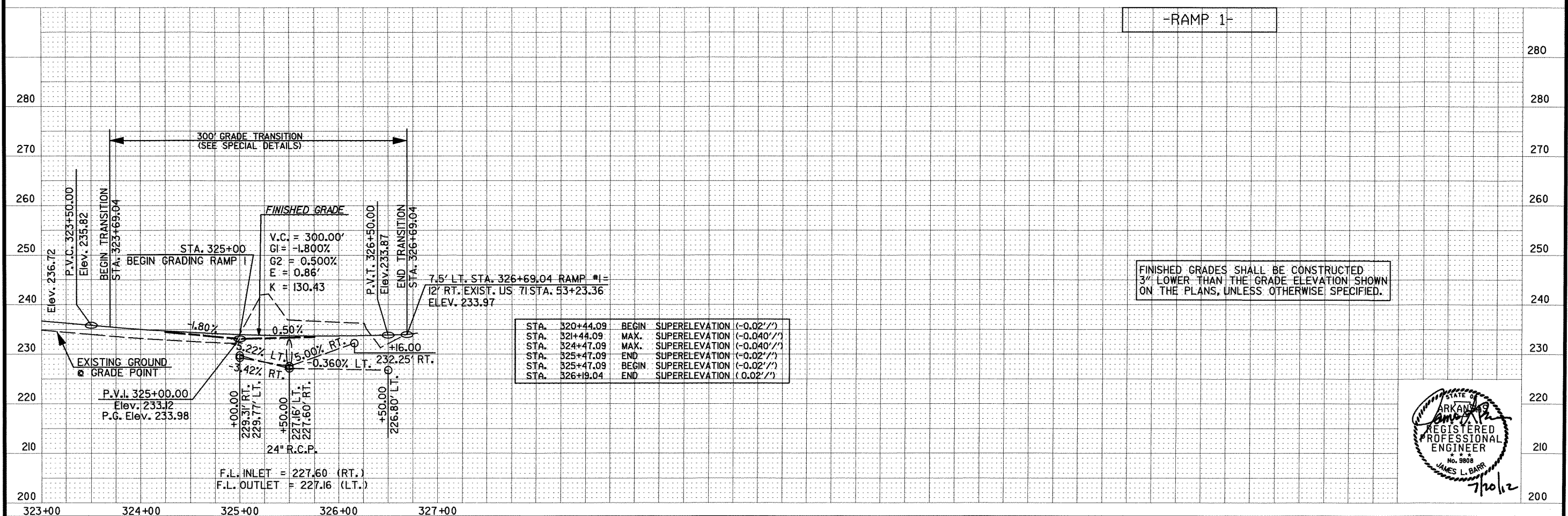


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 030313							57	100

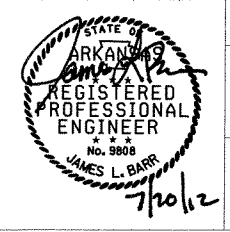
2 RAMP 1 PROFILE STA. 310+26.67 TO 326+69.04



STA. 305+00.00	STA. 310+26.00	MATCH MAIN LANES SUPERELEVATION
STA. 310+26.00	STA. 311+00.00	TRANSITION FROM 0.054'/' TO 0.057'/'
STA. 312+16.88		MAX. SUPERELEVATION (-0.0570'/')
STA. 315+16.88		END SUPERELEVATION (-0.02'/')



STA. 320+44.09	BEGIN SUPERELEVATION	(-0.02'/')
STA. 324+44.09	MAX. SUPERELEVATION	(-0.040'/')
STA. 324+47.09	MAX. SUPERELEVATION	(-0.040'/')
STA. 325+47.09	END SUPERELEVATION	(-0.02'/')
STA. 325+47.09	BEGIN SUPERELEVATION	(-0.02'/')
STA. 326+19.04	END SUPERELEVATION	(0.02'/')



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	030313		58	100

RAMP 4
 P.I. 323+26.67
 N = 1468054.5579
 E = 729340.5955
 $\Delta = 37^{\circ}35'23''$ RT.
 D = 3'30'00"
 T = 557.12'
 L = 1073.99'
 E = 92.21'
 e = 6.50%
 Ls = 300'
 P.C. 317+69.55
 P.T. 328+43.54

RELOC. US 71
 P.I. 304+94.33
 N = 1466268.9220
 E = 728456.8860
 $\Delta = 51^{\circ}45'11''$ RT.
 D = 1'30'00"
 T = 1852.83'
 L = 3450.21'
 E = 425.66'
 e = 0.054'/'
 Ls = 350'
 P.C. 286+41.50
 P.T. 320+91.71

RAMP 4

STA. (BEG.)	STA. (END)	LOCATION (RT./LT.)	W ('-")	SQ. YDS.
331+10	331+26	RT.	6'-0"	74

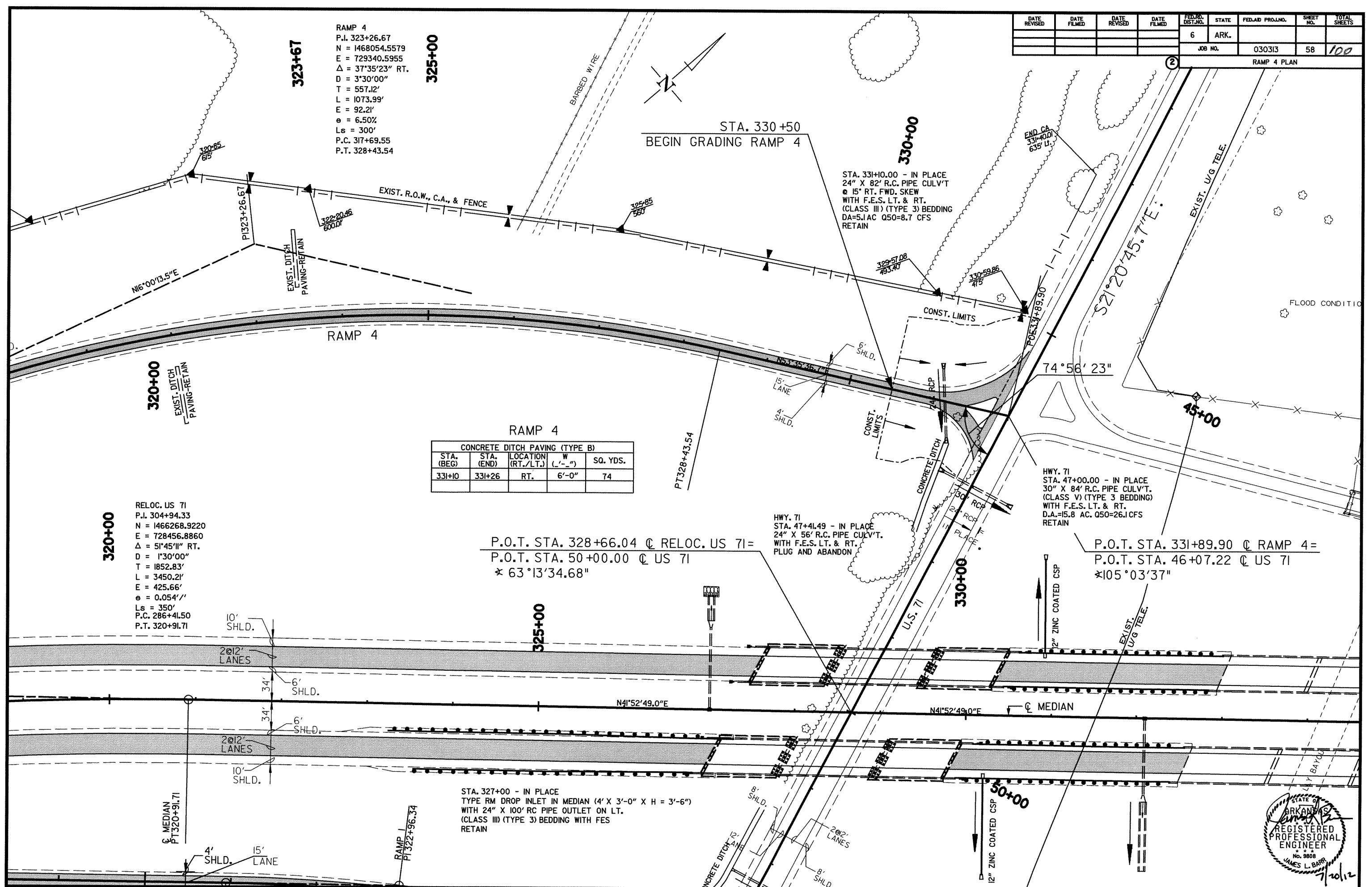
P.O.T. STA. 328+66.04 @ RELOC. US 71 =
 P.O.T. STA. 50+00.00 @ US 71
 $\approx 63^{\circ}13'34.68''$

P.O.T. STA. 331+89.90 @ RAMP 4 =
 P.O.T. STA. 46+07.22 @ US 71
 $\approx 105^{\circ}03'37''$

STA. 327+00 - IN PLACE
 TYPE RM DROP INLET IN MEDIAN (4' X 3'-0" X H = 3'-6")
 WITH 24" X 100' RC PIPE OUTLET ON LT.
 (CLASS III) (TYPE 3) BEDDING WITH FES
 RETAIN

STA. 331+10.00 - IN PLACE
 24" X 82' R.C. PIPE CULV'T
 @ 15' RT. FWD. SKEW
 WITH F.E.S. LT. & RT.
 (CLASS III) (TYPE 3) BEDDING
 DA=5.1 AC Q50=8.7 CFS
 RETAIN

HWY. 71
 STA. 47+00.00 - IN PLACE
 30" X 84' R.C. PIPE CULV'T.
 (CLASS V) (TYPE 3) BEDDING
 WITH F.E.S. LT. & RT.
 D.A.=15.8 AC Q50=26.1 CFS
 RETAIN

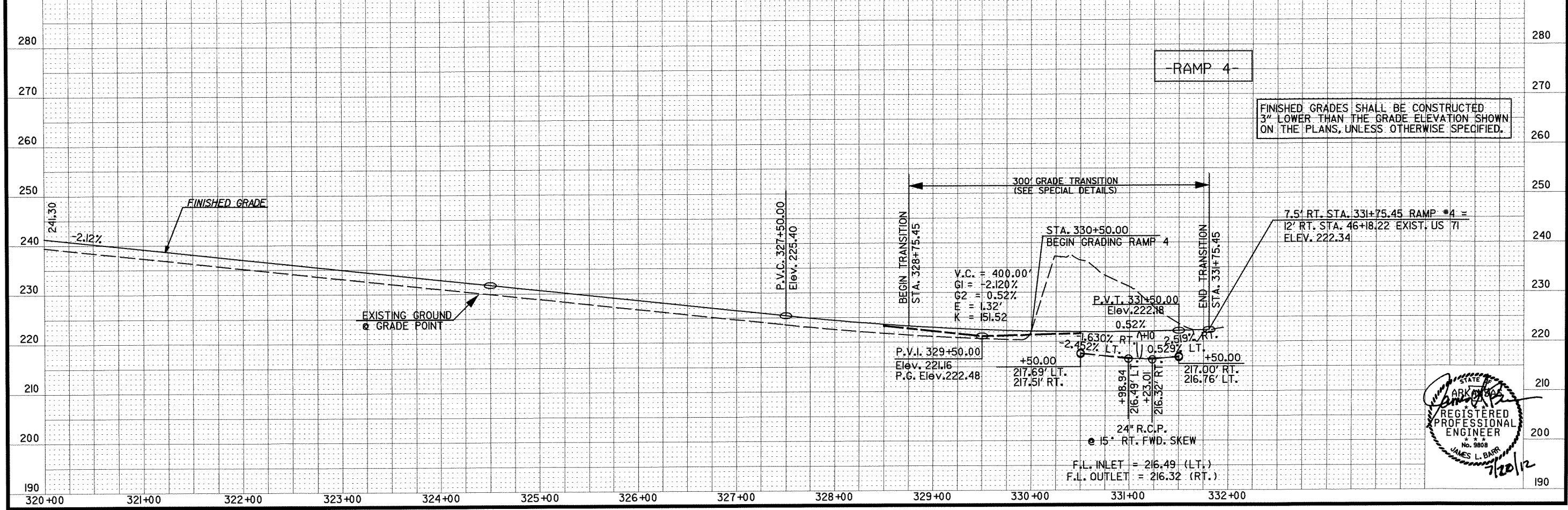
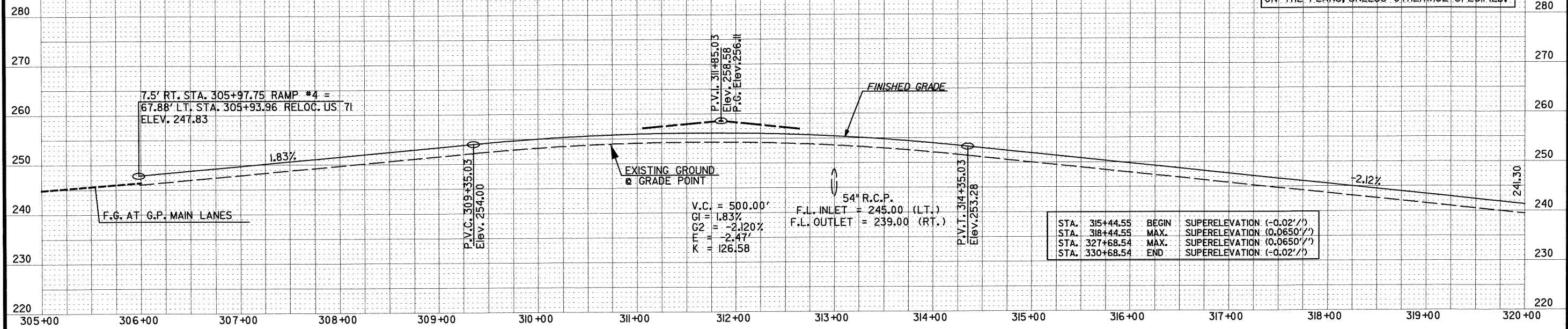


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO. 030313		59		100
RAMP 4 PROFILE STA. 305+00 TO 331+80.63								

-RAMP 4-

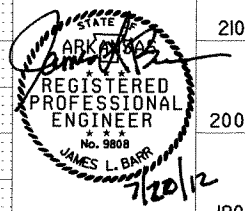
FINISHED GRADES SHALL BE CONSTRUCTED 3" LOWER THAN THE GRADE ELEVATION SHOWN ON THE PLANS, UNLESS OTHERWISE SPECIFIED.

STA. 305+97.75 MATCH M.L. SUPERELEVATION (0.054'/'')
 STA. 308+97.75 END SUPERELEVATION (-0.02'/'')



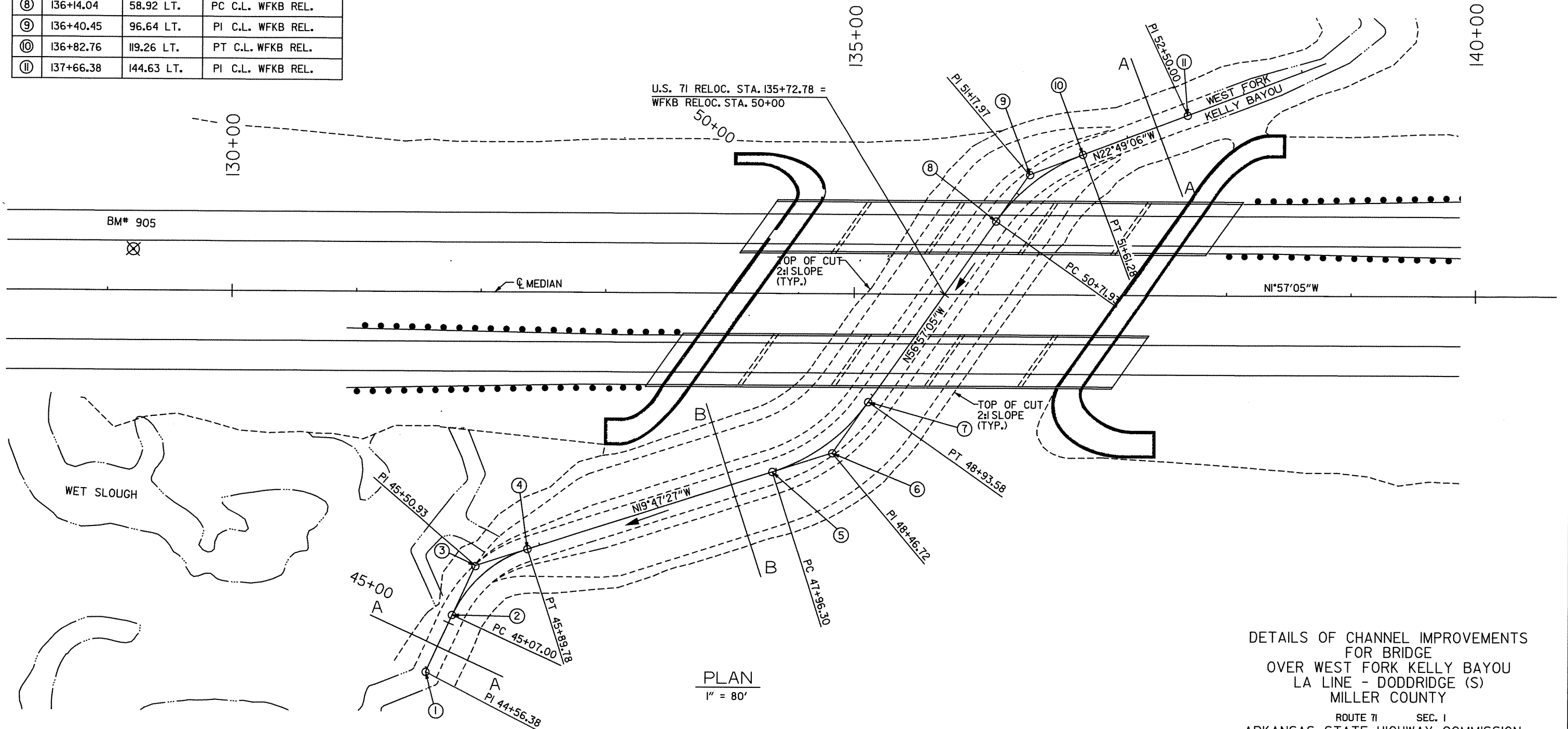
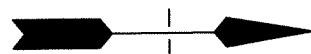
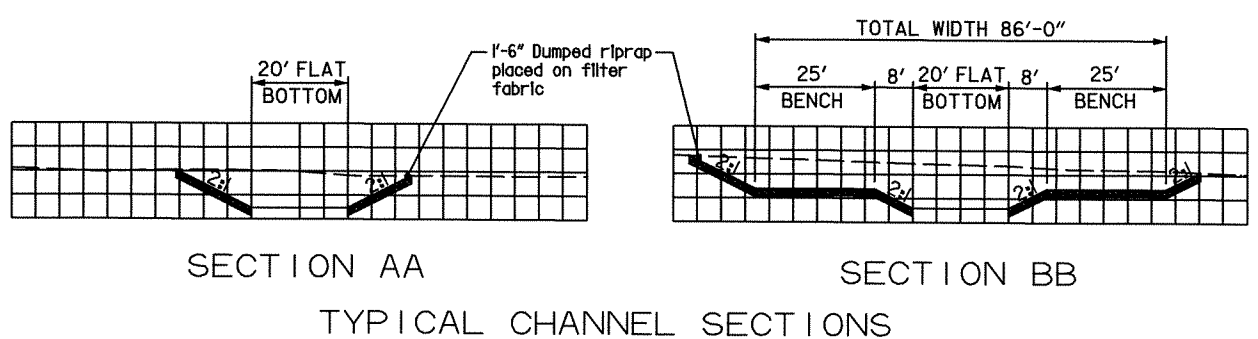
-RAMP 4-

FINISHED GRADES SHALL BE CONSTRUCTED 3" LOWER THAN THE GRADE ELEVATION SHOWN ON THE PLANS, UNLESS OTHERWISE SPECIFIED.



POINT LOCATIONS			
PT.	C.L. MEDIAN STATION	C.L. MEDIAN OFFSET	DESCRIPTION
①	131+56.86	306.52 RT.	PI C.L. WFKB REL.
②	131+78.04	260.54 RT.	PC C.L. WFKB REL.
③	131+96.41	220.64 RT.	PI C.L. WFKB REL.
④	132+38.23	207.18 RT.	PT C.L. WFKB REL.
⑤	134+34.82	143.92 RT.	PC C.L. WFKB REL.
⑥	134+82.82	128.47 RT.	PI C.L. WFKB REL.
⑦	135+11.74	87.17 RT.	PT C.L. WFKB REL.
⑧	136+14.04	58.92 LT.	PC C.L. WFKB REL.
⑨	136+40.45	96.64 LT.	PI C.L. WFKB REL.
⑩	136+82.76	119.26 LT.	PT C.L. WFKB REL.
⑪	137+66.38	144.63 LT.	PI C.L. WFKB REL.

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. 030353	60	100
						A&B7121 CHANNEL IMPROVEMENTS		49558



PLAN
1" = 80'

FOR INFORMATION ONLY
CONSTRUCTED UNDER PREVIOUS ROADWAY CONTRACT 030353

DETAILS OF CHANNEL IMPROVEMENTS
FOR BRIDGE
OVER WEST FORK KELLY BAYOU
LA LINE - DODDRIDGE (S)
MILLER COUNTY
ROUTE 71 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: TAR DATE: 11-05 FILENAME: #FILE#0000#
CHECKED BY: MAD DATE: 6-07 SCALE: AS SHOWN
DESIGNED BY: EMB/MKJ DATE: 11-05
BRIDGE NO. A&B7121 DRAWING NO. 49558

For R/W & T.C.E. Data See Roadway Plans

Note: Use Type Special Approach Gutters (14"W = 6'-0" and 16"W = 10'-0") with Type Special Approach Slabs. Typical at Each End of Bridge. See Dwg. No.'s 49575 - 49577.

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.	030353			61 / 100
				AT121	LAYOUT			49559

VERTICAL CURVE DATA
(ALONG PROFILE GRADE)

V.C. = 800.00'

P.V.I. 129+22.89
Elev. 211.86

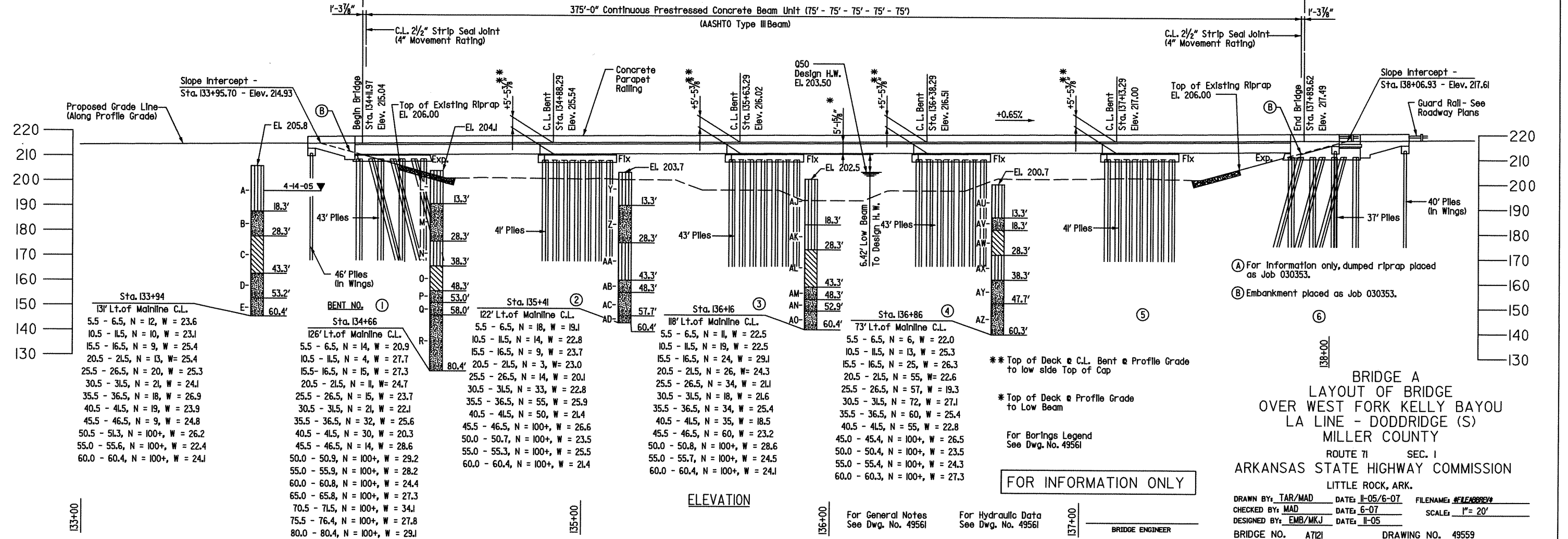
-1.50% 0.65%

Tangent Distance over 500'

40'-0" Finished Crown
24'-0" Pavement
6'-0" Shld.

Approx. 0.57 miles to Begin Constr.

Note: Unless otherwise noted stations and elevations are taken along Profile Grade.



ELEVATION

For General Notes See Dwg. No. 49561

For Hydraulic Data See Dwg. No. 49561

(A) For information only, dumped riprap placed as Job 030353.

(B) Embankment placed as Job 030353.

220
210
200
190
180
170
160
150
140
130

220
210
200
190
180
170
160
150
140
130

133+00

135+00

136+00

137+00

138+00

Tangent Distance over 500'

40'-0" Finished Crown
24'-0" Pavement
6'-0" Shld.

Tangent Distance over 500'

Approx. 3.81 miles to Exist. U.S. 71

Total Length of Bridge = 377'-7 3/4"

PLAN

Flow
West Fork Kelly Bayou

36'-0" Channel Change Centered See Dwg. No. 49558

43'-2" Out To Out

Profile Grade

Toe of Fill Slope

2% Slope

Drop Inlet and R.C. Pipe placed as Job 030353.

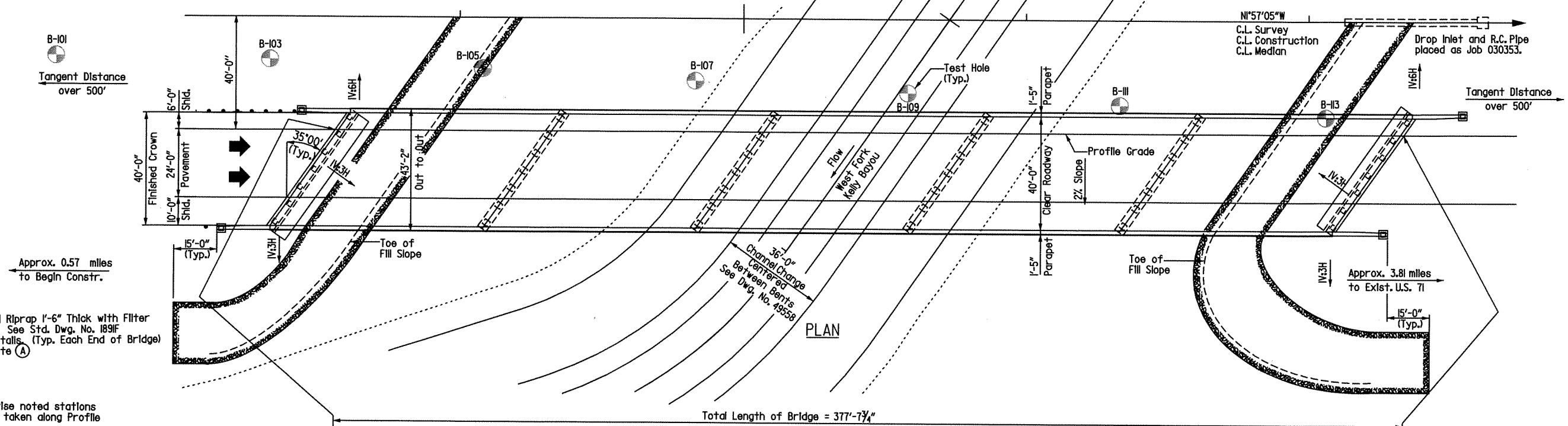
C.L. Survey
C.L. Construction
C.L. Median

Approx. 3.81 miles to Exist. U.S. 71

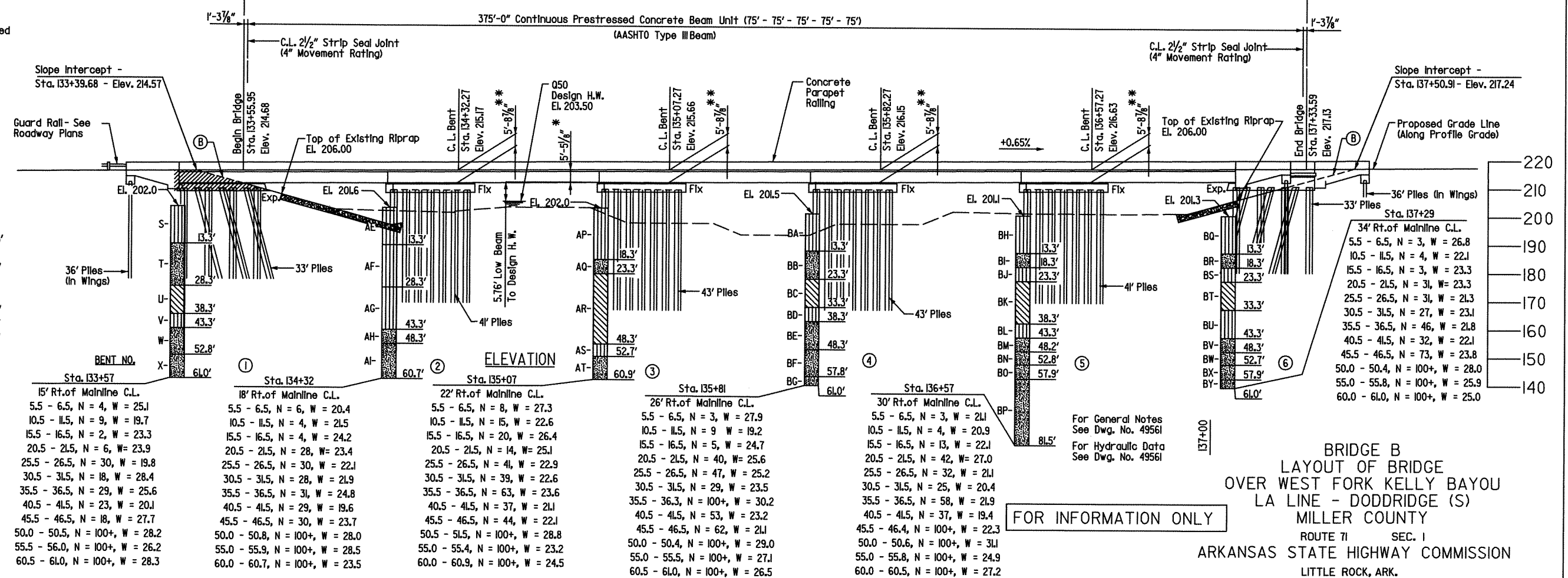
For R/W & T.C.E. Data, See Roadway Plans

Note: Use Type Special Approach Gutters (W = 6'-0") and (W = 10'-0") with Type Special Approach Slabs. Typical at Each End of Bridge. See Dwg. No.'s 49575 - 49577.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		62	100
				JOB NO.	03033		62	100
				B7121	LAYOUT		49560	



- (A) For information only, this item placed as Job 030353.
- (B) Embankment placed as Job 030353.



Sta.	14' Rt. of Mainline C.L.
132+82	5.5 - 6.5, N = 5, W = 18.6
133+57	10.5 - 11.5, N = 5, W = 23.8
134+32	15.5 - 16.5, N = 5, W = 25.1
135+07	20.5 - 21.5, N = 6, W = 23.9
135+81	25.5 - 26.5, N = 3, W = 28.5
136+57	30.5 - 31.5, N = 2, W = 29.8
137+29	35.5 - 36.5, N = 3, W = 29.8
137+59	40.5 - 41.5, N = 4, W = 24.3
138+00	45.5 - 46.5, N = 5, W = 24.5
138+00	50.0 - 50.4, N = 100+, W = 23.1
138+00	55.0 - 55.7, N = 100+, W = 24.5
138+00	60.0 - 60.6, N = 100+, W = 25.5

BRIDGE B
LAYOUT OF BRIDGE
OVER WEST FORK KELLY BAYOU
LA LINE - DODDRIDGE (S)
MILLER COUNTY
ROUTE 71 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

FOR INFORMATION ONLY

BRIDGE ENGINEER

BRIDGE NO. B7121 DRAWING NO. 49560

DRAWN BY: TAR/MAD DATE: 11-05/6-07 FILENAME: #FLABREYV
CHECKED BY: MAD DATE: 6-07 SCALE: 1" = 20'
DESIGNED BY: EMB/MKJ DATE: 11-05
DATE: 11-05/6-07

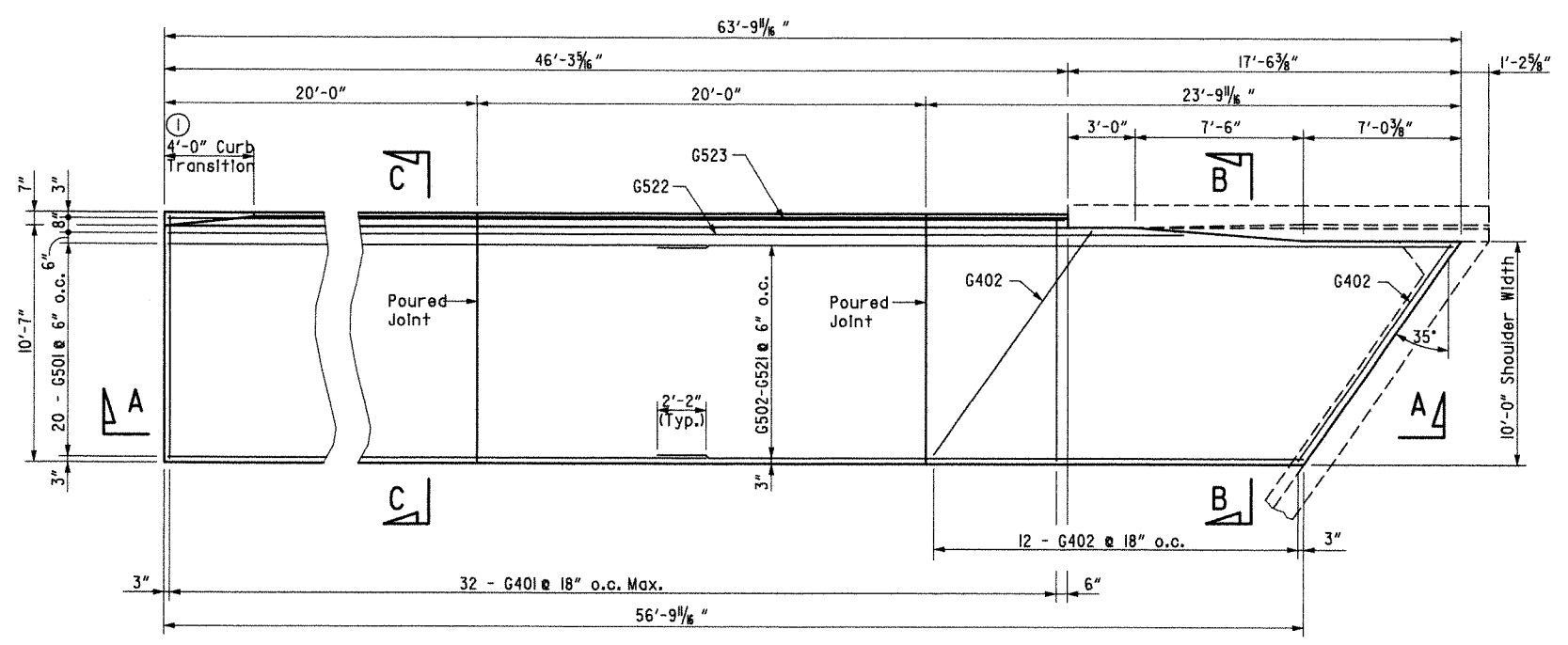
For Borings Legend See Dwg. No. 49561

**Top of Deck @ C.L. Bent @ Profile Grade to low side Top of Cap

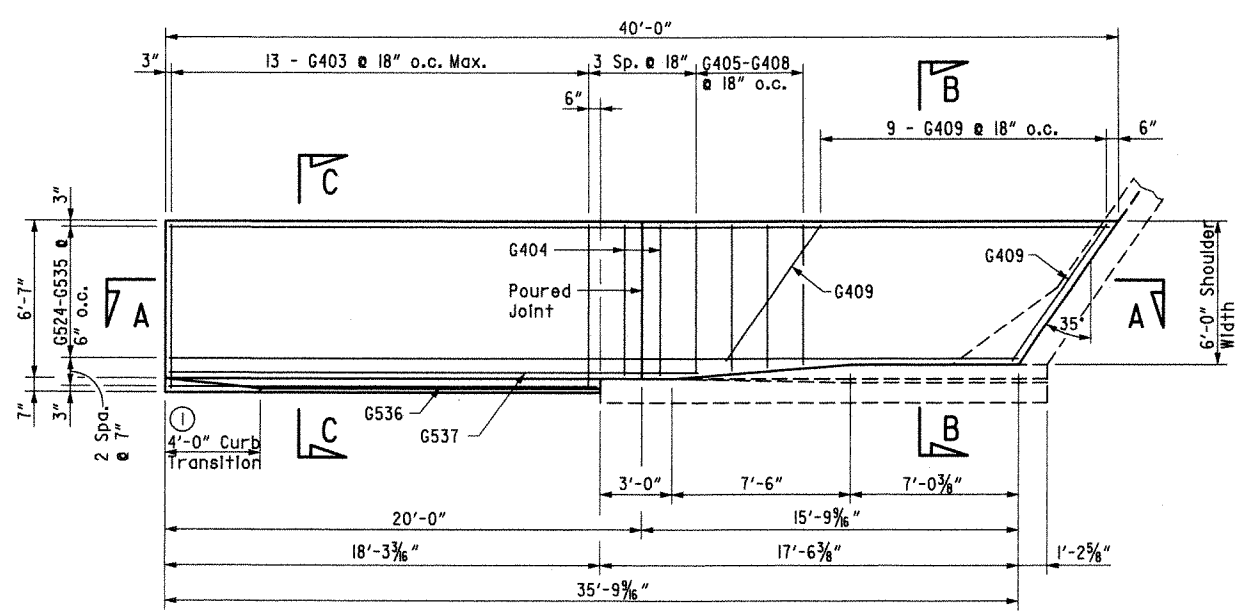
**Top of Deck @ Profile Grade to Low Beam

ELEVATION

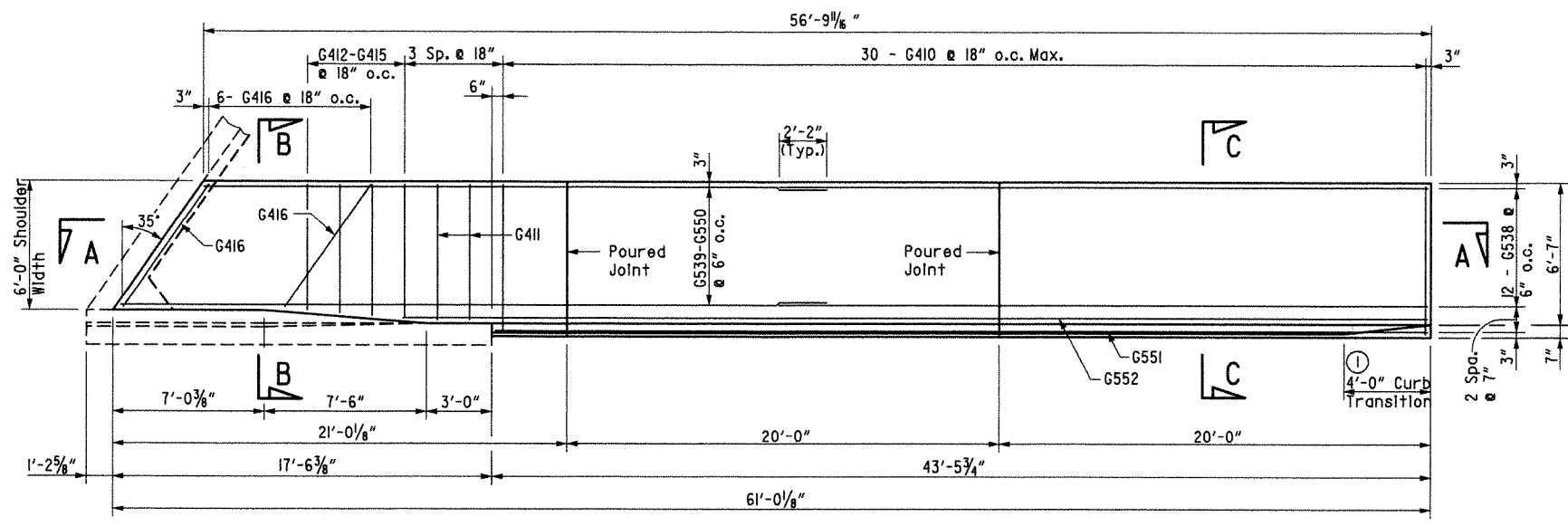
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	030313		63	100
				A&B7121	APPROACH GUTTERS		51618	



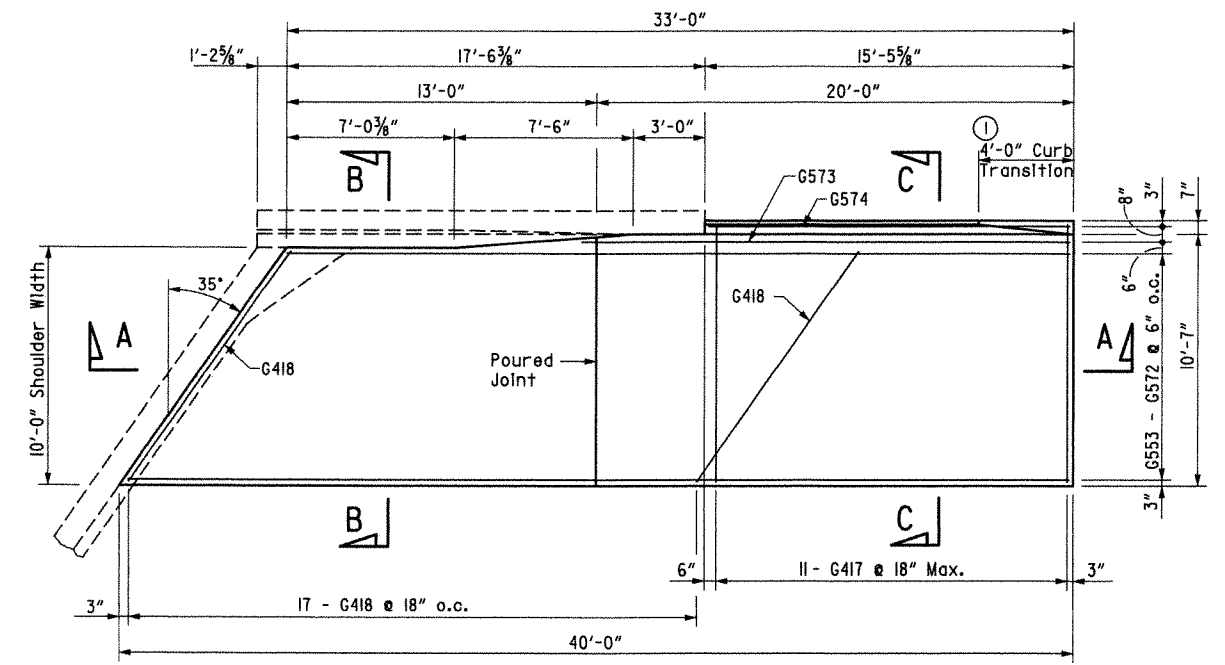
PLAN - 10' GUTTER
(BEGIN BRIDGE)



PLAN - 6' GUTTER
(BEGIN BRIDGE)



PLAN - 6' GUTTER
(END BRIDGE)



PLAN - 10' GUTTER
(END BRIDGE)

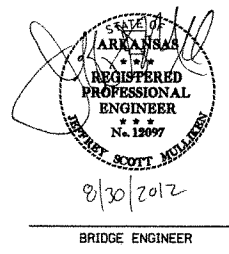
GENERAL NOTES:

Concrete shall be Class S or Class S(AE) or mixture used for Portland Cement Concrete Pavement.

Reinforcement 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.

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.



SHEET 1 OF 2
DETAILS OF TYPE SPECIAL I
APPROACH GUTTER
WEST FORK KELLY BAYOU

ROUTE 71 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: MAD DATE: 3-23-07 FILENAME: 1030313-SH063.dgn
CHECKED BY: MWB DATE: 6-07 SCALE: 1/4" = 1'-0"
DESIGNED BY: STANDARD DATE: _____
BRIDGE NO. A&B7121 DRAWING NO. 51618

PLANS PREPARED BY
 THE LPA GROUP INCORPORATED
 TRANSPORTATION CONSULTANTS
 1101 N. W. 11th St., Ft. Lauderdale, FL 33304
 M:\Struct\Arkansas\1030313\From James Barr 7_19_12\1030313-SH063.dgn
 8/30/2012 2:25:03 PM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						030313	64	100
				A&B7121	APPROACH GUTTERS		51619	

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.

BAR LIST - PER BRIDGE

MARK	NO. REQ'D.	LENGTH
G401	32	10'-10"
G402	12	11'-10"
G403	13	6'-10"
G404	2	6'-3"
G405-G408	1 EACH	5'-10" to 6'-2"
G409	9	6'-11"
G410	30	6'-10"
G411	2	6'-3"
G412-G415	1 EACH	5'-10" to 6'-2"
G416	6	6'-11"
G417	11	10'-10"
G418	17	11'-10"
G501	20	30'-0"
G502-G521	1 EACH	28'-9" to 35'-5"
G522	1	51'-3"
G523	1	45'-11"
G524-G535	1 EACH	35'-7" to 39'-5"
G536	1	17'-11"
G537	1	22'-2"
G538	12	30'-0"
G539-G550	1 EACH	28'-9" to 32'-8"
G551	1	43'-2"
G552	1	47'-5"
G553-G572	1 EACH	32'-10" to 39'-6"
G573	1	20'-5"
G574	1	15'-2"

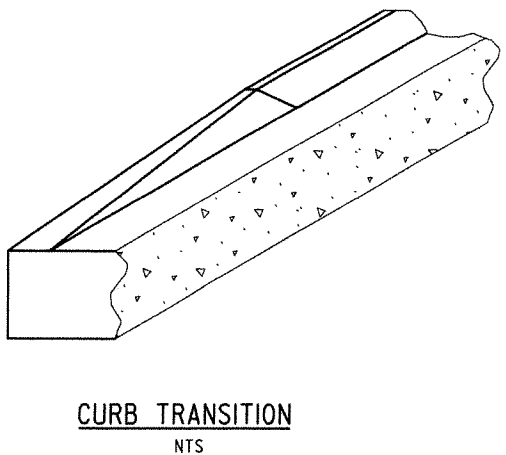
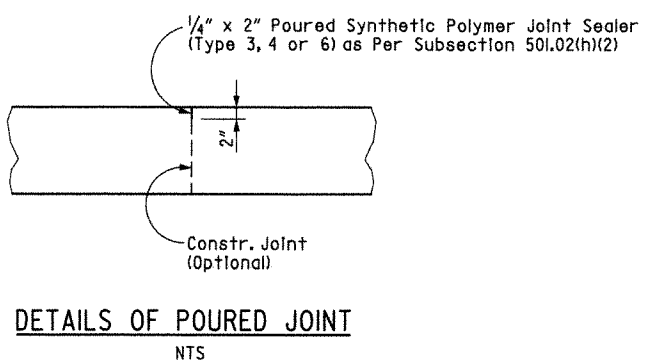
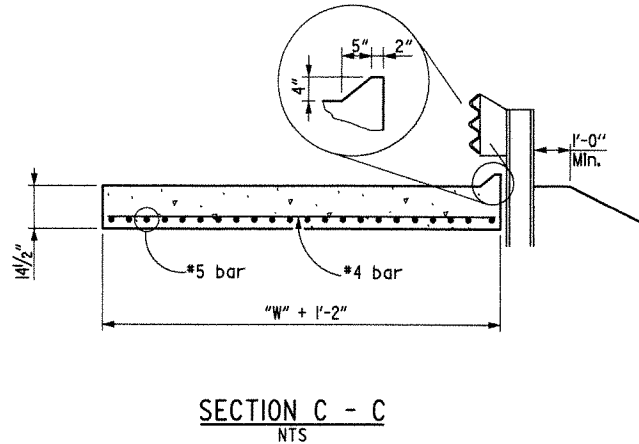
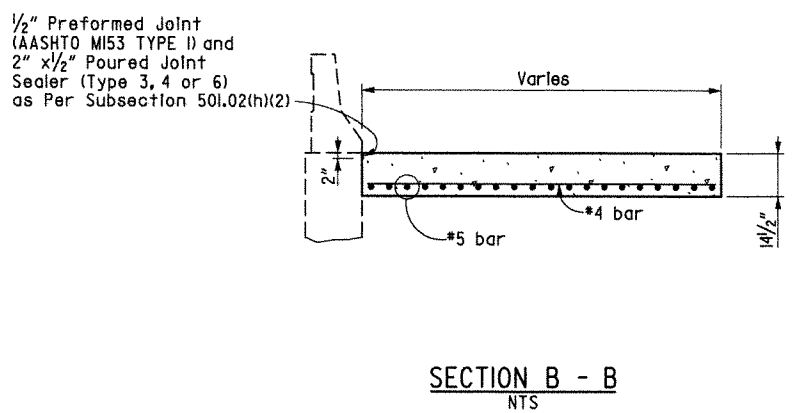
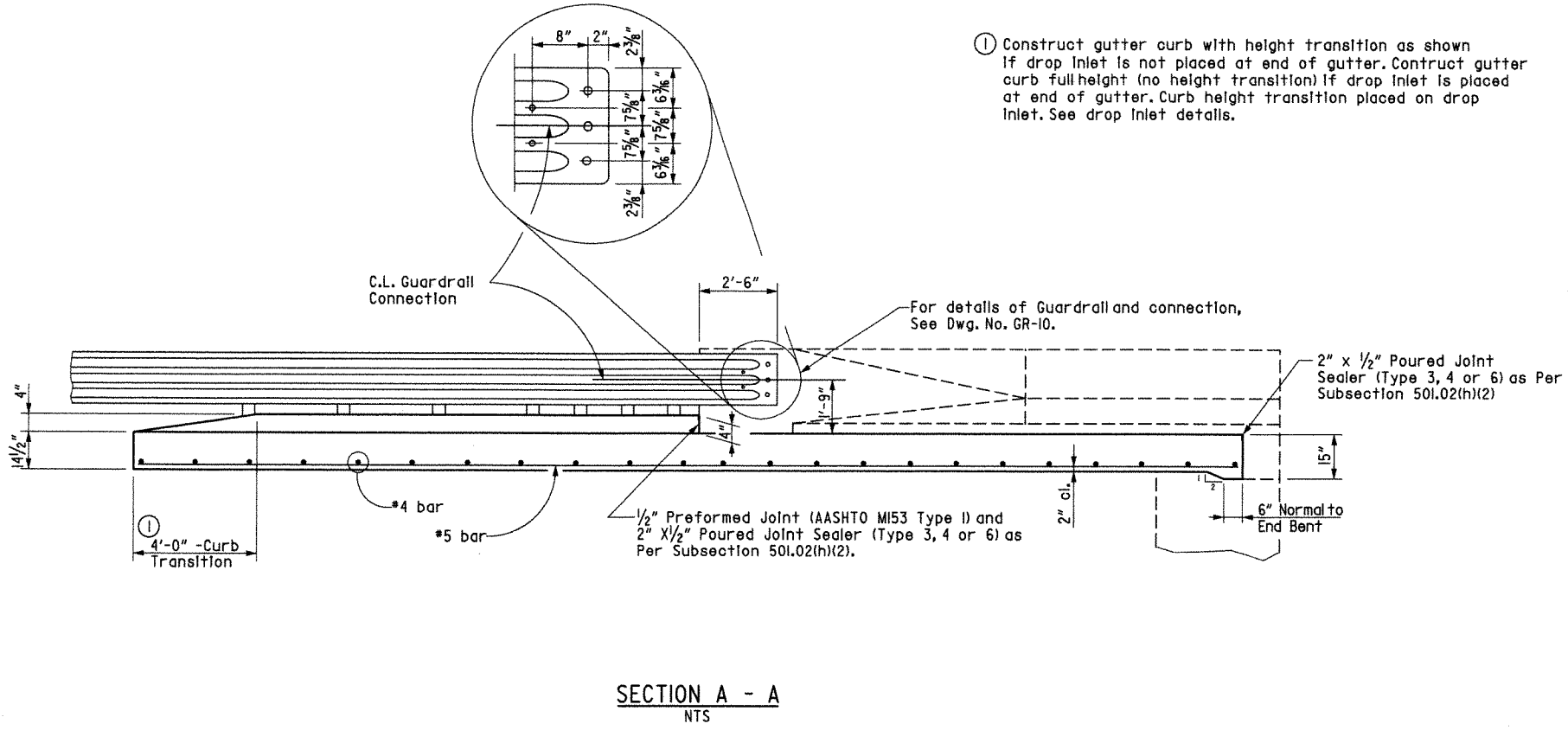


TABLE OF QUANTITIES FOR TYPE SPECIAL I APPROACH GUTTER

AT BEGIN BRIDGE			AT END BRIDGE		
"W" Width	Reinforcing Steel	Concrete (Cu. Yds.)	"W" Width	Reinforcing Steel	Concrete (Cu. Yds.)
6'	636 lbs.	11.39	6'	1,074 lbs.	18.46
10'	1,723 lbs.	29.80	10'	1,194 lbs.	17.39

SHEET 2 OF 2
 DETAILS OF TYPE SPECIAL I
 APPROACH GUTTER
 WEST FORK KELLY BAYOU

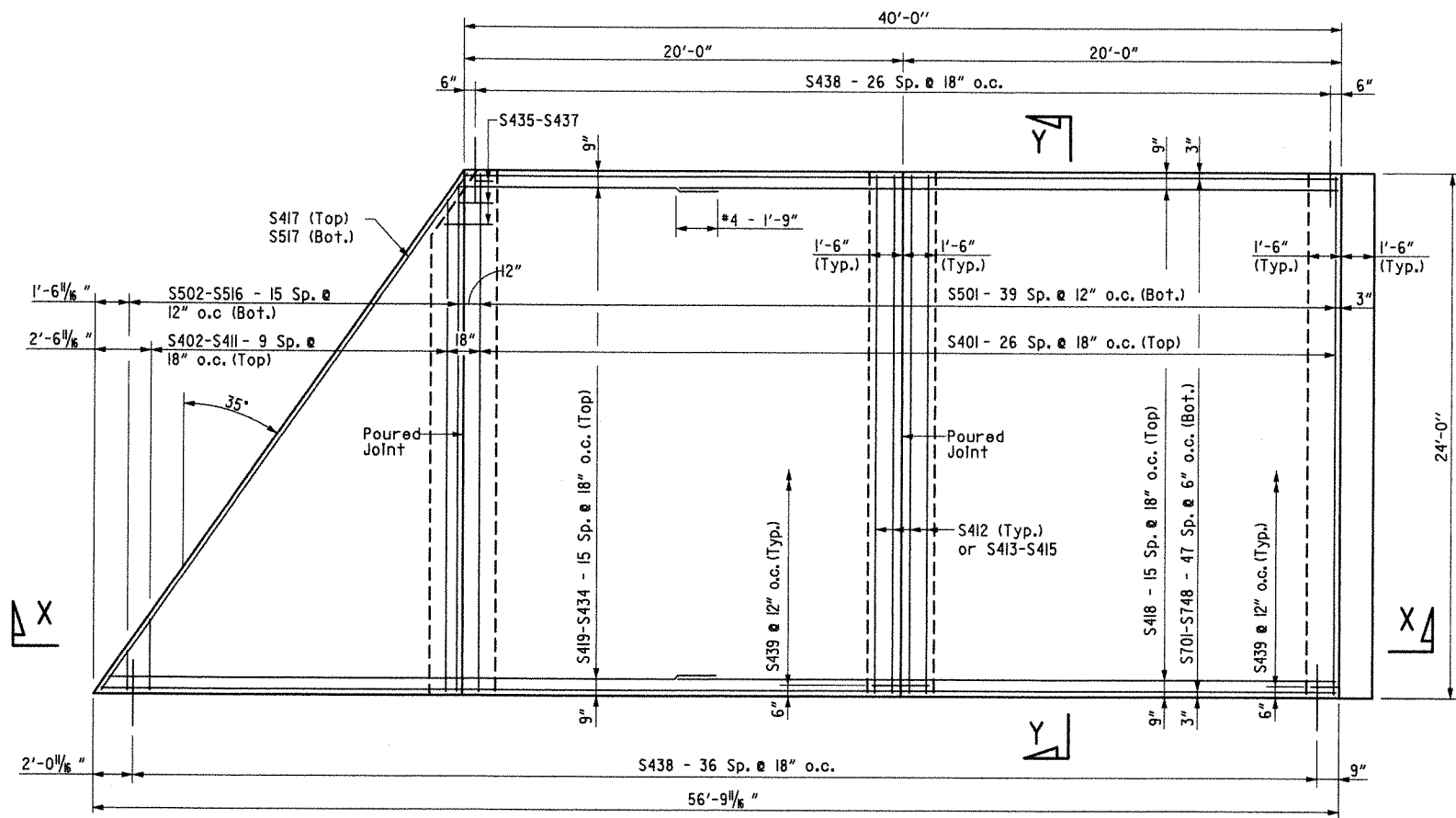
ROUTE 71 SEC. 1
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

DRAWN BY: MAD DATE: 3-28-07 FILENAME: J030313-SH064.dgn
 CHECKED BY: MWB DATE: 6-07 SCALE:
 DESIGNED BY: MD/MB DATE: 3-07
 BRIDGE NO. A&B7121 DRAWING NO. 51619

STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 No. 18097
 SCOTT MULLINEY
 8/30/2012
 BRIDGE ENGINEER

PLANS PREPARED BY
 THE LPA GROUP INCORPORATED
 TRANSPORTATION CONSULTANTS
 14511 W. Arkansas
 Ft. Smith, AR 72538
 8/30/2012

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.		030313	05	100
				A&B7121	APPROACH SLAB			51620



PLAN - APPROACH SLAB
SCALE: 1/4" = 1'-0"

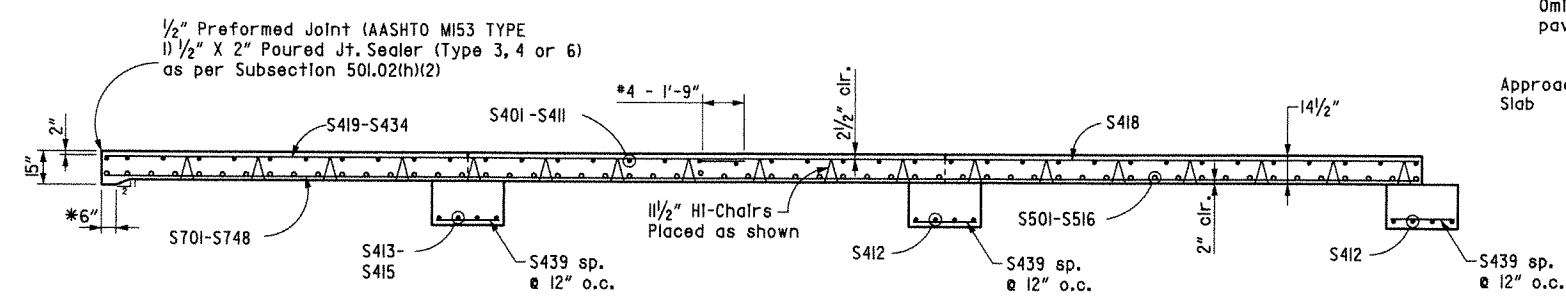
TABLE OF QUANTITIES FOR ONE TYPE SPECIAL I APPROACH SLAB

Slab Width	Reinforcing Steel	Concrete (Cu. Yds.)
24'-0"	7,565 lbs.	66.48

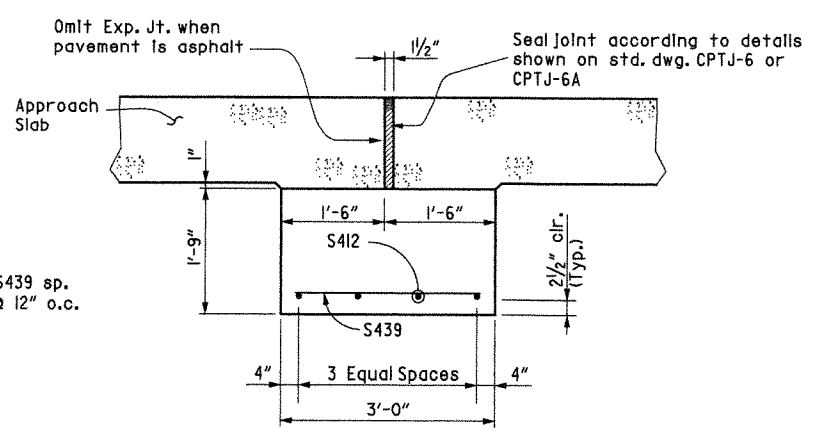
GENERAL NOTES
 Concrete shall be Class S (AE) (f'c = 4,000 psi).
 Reinforcing Steel shall conform to AASHTO M31 or M53, Grade 60 (fy = 60,000 psi).
 Approach Slabs will be measured and paid for in accordance with Section 504.
 Joint sealer Included in the pay Item "Approach Slab".
 Surface finish for approach slabs shall match that used on the bridge deck.

BAR LIST - PER APPROACH SLAB

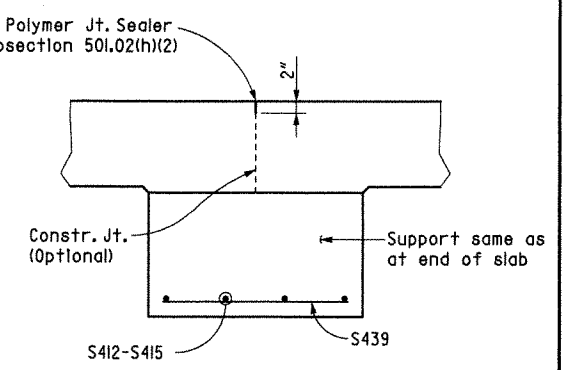
MARK	NO. REQ'D.	LENGTH
S401	27	23'-8"
S402-S411	1 EACH	3'-3" to 22'-6"
S412	8	23'-8"
S413-S414	1 EACH	21'-9" to 23'-0"
S415	2	23'-8"
S416	OMITTED	-----
S417	1	28'-11"
S418	16	30'-0"
S419-S434	1 EACH	11'-11" to 27'-8"
S435-S437	1 EACH	0'-9" to 2'-2"
S438	64	3'-0"
S439	69	2'-7"
S501	40	23'-8"
S502-S516	1 EACH	1'-9" to 23'-2"
S517	1	28'-11"
S701-S748	1 EACH	39'-10" to 56'-3"



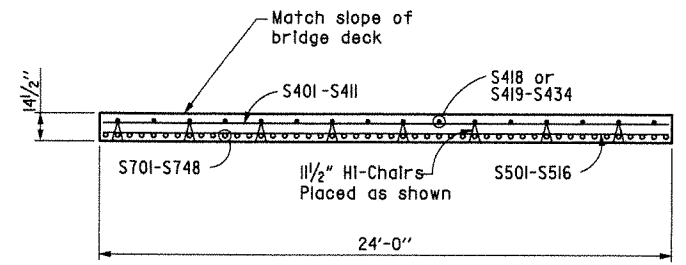
SECTION X - X
SCALE: 1/4" = 1'-0"



DETAILS OF SUPPORT AT END OF SLAB
SCALE: 3/4" = 1'-0"

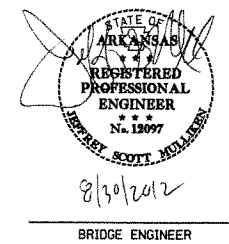


DETAILS OF SUPPORT AT MIDDLE OF SLAB
SCALE: 3/4" = 1'-0"



SECTION Y - Y
SCALE: 1/4" = 1'-0"

DETAILS OF TYPE SPECIAL I APPROACH SLAB WEST FORK KELLY BAYOU
 ROUTE 71 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 DRAWN BY: MAD DATE: 3-21-07 FILENAME: W030313-SH065.dwg
 CHECKED BY: MWB DATE: 6-07 SCALE: As Shown
 DESIGNED BY: MAD DATE: 3-07
 BRIDGE NO. A&B7121 DRAWING NO. 51620



PLANS PREPARED BY THE LPA GROUP INCORPORATED TRANSPORTATION CONSULTANTS
 1101 N. UNIVERSITY AVENUE, SUITE 100, LITTLE ROCK, AR 72202
 PROJECT: Arkansas V-Tol_0303055V From James Barr 7_19_12 030313-SH065.dwg
 8/30/2012 3:23:00 PM

For R/W Data, See Roadway Plans

Note: Use Type Special 4 Approach Gutters with Type Special 2 Approach Slabs at each bridge end. See Dwg. No. 49642, 49643 and 49644.

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.		030313	66	100
				AT24	LAYOUT			49625

GENERAL NOTES

BENCH MARK: Aluminum Disk marked "State of Arkansas Benchmark Hwy. Dept." set in the S.W. corner of Ramp 2 Bridge over East Kelly Bayou in the concrete barrier rail. Sta. 333+06.8, 326.4' right. North 1468259.2 plus/minus, East 730679.8 plus/minus, Elev. = 237.35

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

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges (2002 edition), with current Interim specifications.

LIVE LOAD: HS20 & MILITARY LOADING METHOD OF DESIGN: Load Factor SEISMIC PERFORMANCE CATEGORY: A

MATERIALS AND STRENGTHS:
 Class S(AE) Concrete (Superstructure) $f'_c = 4,000$ psi
 Class S Concrete (Substructure) $f'_c = 3,500$ psi
 Class S Concrete (Prestressed Girders) $f'_c = 6,000$ psi
 Reinforcing Steel (AASHTO M31 or M53, Gr. 60) $f_y = 60,000$ psi
 Structural Steel (AASHTO M270, Gr. 50W) $F_y = 50,000$ psi
 Structural Steel (AASHTO M270, Gr. 36) $F_y = 36,000$ psi

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

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

FOOTINGS: Top of footings for Bents 2 & 3 shall be set a minimum of 2'-0" below finished ground. Foundations for footings shall be prepared in accordance with subsection 801.04. Excavations shall be backfilled and compacted to the level of the proposed ground in accordance with subsection 801.08.

CONCRETE PILING: All piling shall be 16" square prestressed concrete and shall be driven with an approved air, steam, or diesel hammer to a minimum ultimate bearing capacity of 150 tons. All piling shall have the following minimum penetrations: Bent 1 - 20' below the bottom of cap, Bents 2 and 3 - 15' below the bottom of footing, Bent 4 - 40' below the bottom of cap.

DRIVING SYSTEM: The driving system approval and the ultimate bearing capacity determination for piling shall be based on the requirements of Subsection 805.09(b) "Method B - Wave Equation Analysis (WEAP)" of the Standard Specifications. It is estimated that the minimum required rated energy of the hammer to obtain the minimum ultimate bearing capacity will be 40,000 foot pounds per blow.

PILE DESIGN CAPACITY: 16" square prestressed concrete piles = 55 tons.

Drive one test pile in Bent 1A-4A and 1B-4B. Test piles shall be 5 feet longer than the estimated pile lengths shown on the layout. Lengths of piles shown are for estimating quantities only. Actual lengths to be determined in the field.

PREBORING: Preboring or other methods as approved by the Engineer may be required for piling in Bents 2 and 3 to achieve minimum penetration requirements. Any required preboring will be determined and directed by the Engineer after the first pile is driven in a bent and will be paid for under the Item "Concrete Piling (16" Square)".

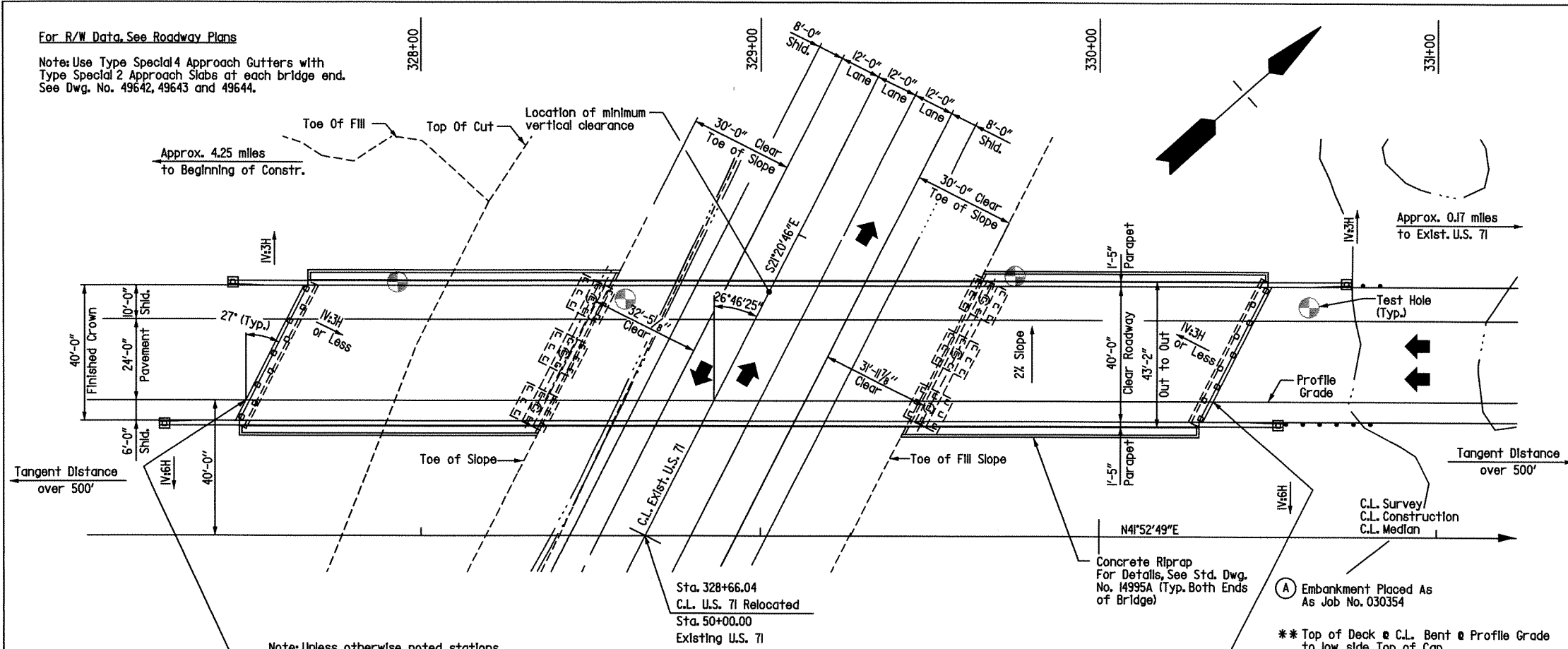
Size and actual depths of preboring to be determined by the Engineer. The Contractor shall be responsible for keeping prebored holes free from debris prior to backfilling which may require the use of temporary casings or other methods. Temporary casings, if necessary, will not be paid for directly but will be considered subsidiary to the Item "Concrete Piling (16" Square)".

DETAIL DRAWINGS:	DRAWING NO.
End Bents	49627 - 49629
Intermediate Bents	49630 - 49632
283'-0" Cont. Prestressed Concrete Girder	49633 - 49638
Girder Protective Assembly	49639
Neoprene Strip Seal	49640
Elastomeric Bearings	49641
Type Special 4 Approach Gutter	49642 and 49643
Type Special 2 Approach Slab	49644
Concrete Piling	2383

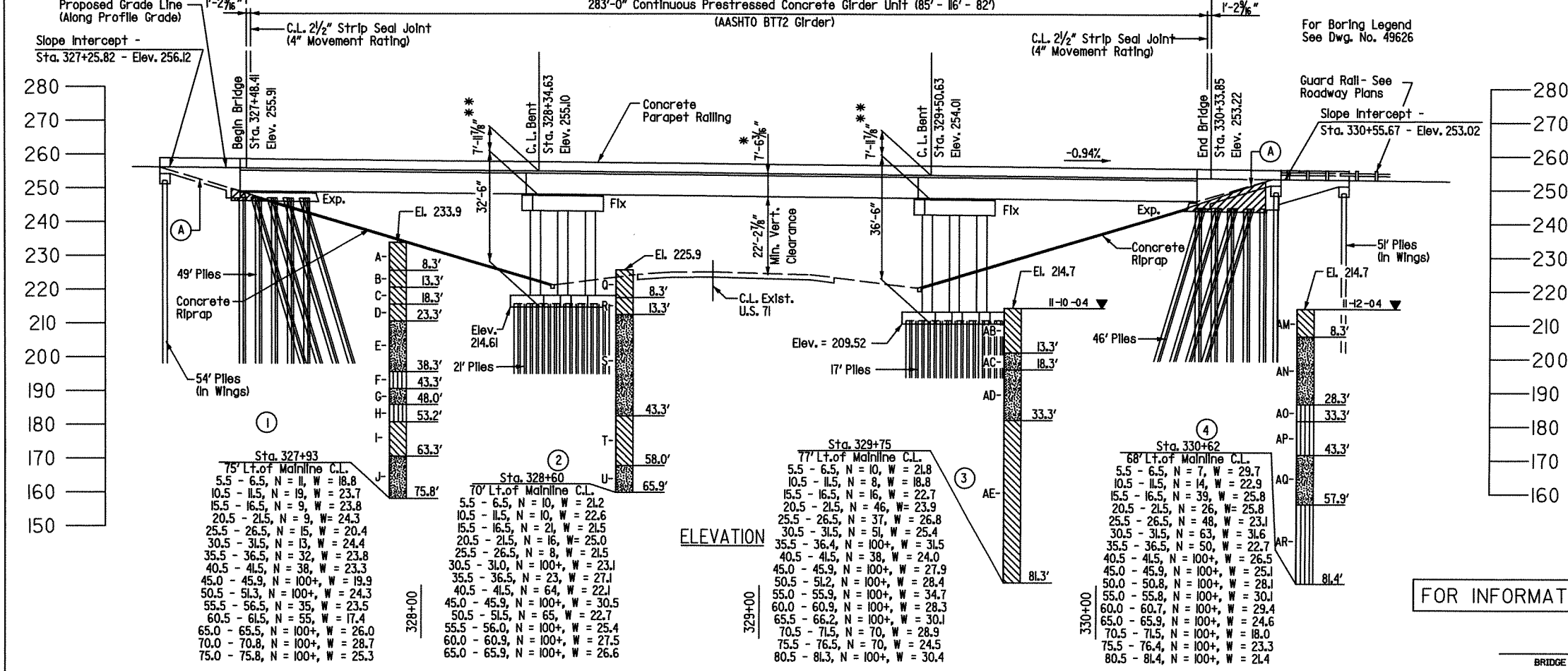
MAINTENANCE OF TRAFFIC: See Roadway Drawings.

BRIDGE A
 LAYOUT OF BRIDGE
 OVER U.S. ROUTE 71 EXISTING
 LA LINE - DODDRIDGE (S)
 MILLER COUNTY
 ROUTE 71 SEC. 1
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

FOR INFORMATION ONLY
 DRAWN BY: TAR DATE: 9-05 FILENAME: #FLEBBRY#
 CHECKED BY: MAD/MWB DATE: 9-07 SCALE: 1" = 20'
 DESIGNED BY: EMB/MKJ DATE: 9-05
 BRIDGE NO. A7124 DRAWING NO. 49625

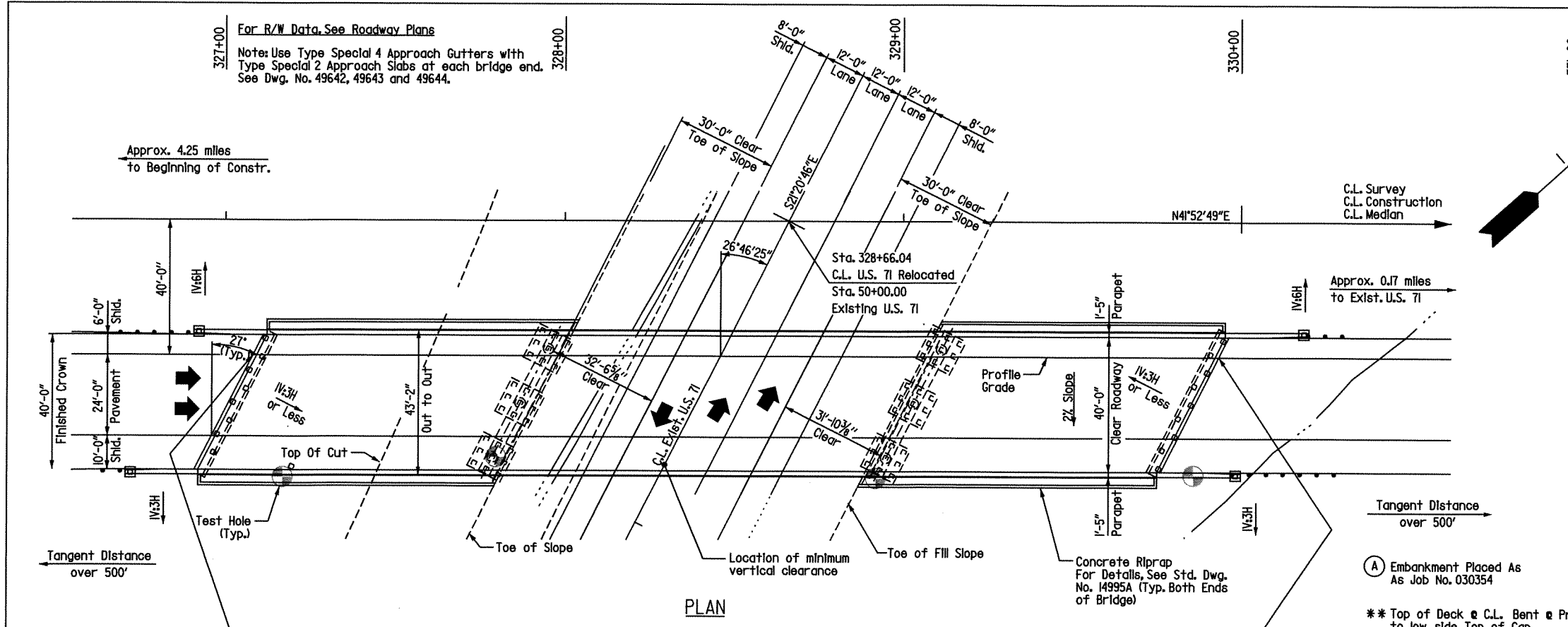


PLAN
 Total Length of Bridge = 285'-5 1/8"
 Note: Unless otherwise noted stations and elevations are taken along Profile Grade.

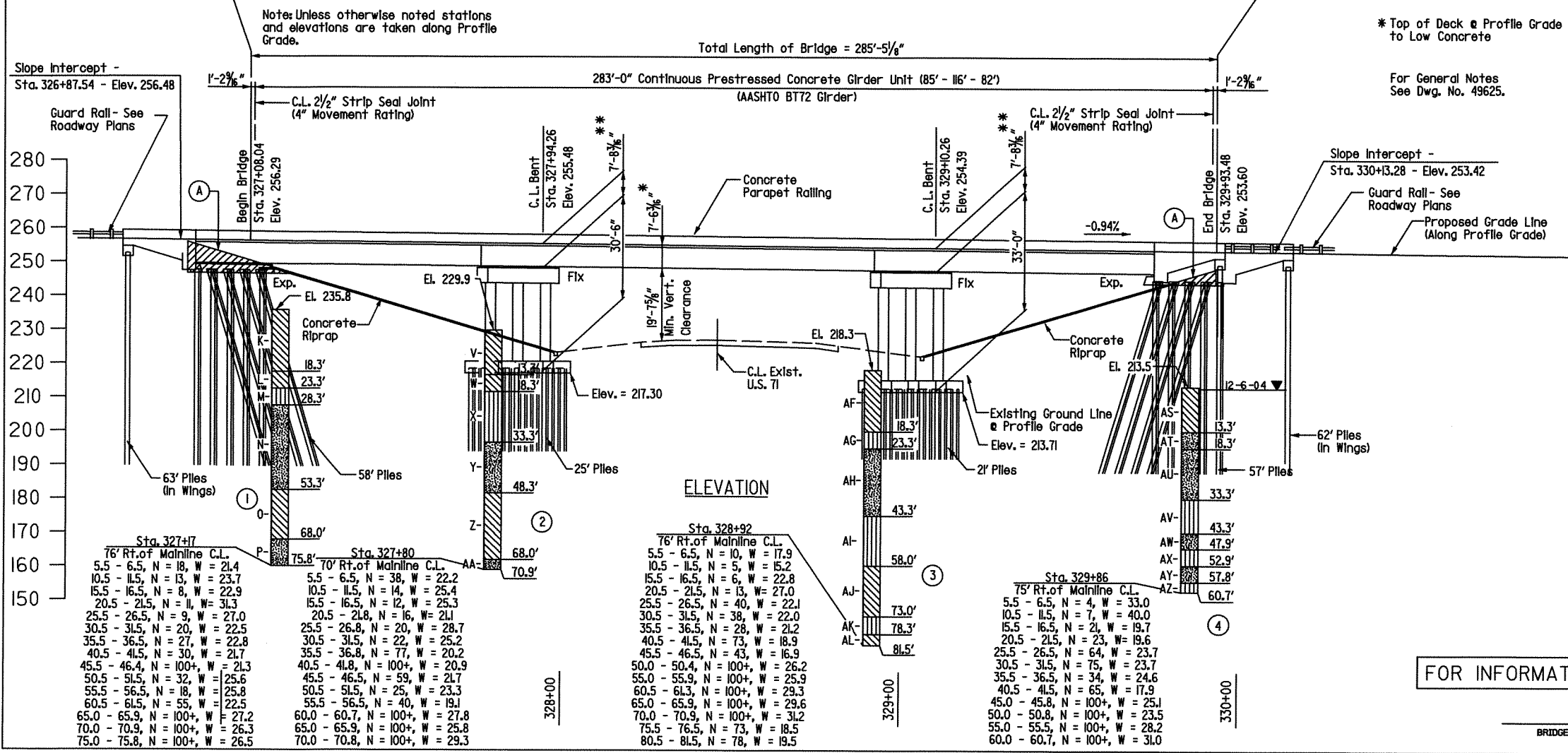


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 030313	67	100
						BT24	LAYOUT	49626

For R/W Data See Roadway Plans
 Notes Use Type Special 4 Approach Gutters with Type Special 2 Approach Slabs at each bridge end. See Dwg. No. 49642, 49643 and 49644.



- Boring Legend**
- A - Gray & Tan, Stiff Lean Clay with Sand
 - B - Yellowish Orange, Reddish Brown & Light Gray, Very Stiff Sandy Lean Clay
 - C - Gray, Brown & Tan, Stiff Lean Clay with Sand
 - D - Gray & Dark Gray, Stiff Lean Clay
 - E - Yellowish Orange & Tan, Medium Dense to Dense Silty Sand
 - F - Gray & Tan, Hard Sandy Silt
 - G - Beige & Yellowish Orange, Very Dense Silty Sand
 - H - Dark Gray & Dark Yellowish Orange, Very Hard Sandy Silt
 - I - Black & Olive Gray, Hard Sandy Silty Clay
 - J - Light Olive Gray, Olive Gray & Dark Gray, Very Dense Silty Sand
 - K - Gray, Yellowish Orange, Tan & Reddish Brown, Medium Stiff to Very Stiff Lean Clay with Sand
 - L - Dark Gray & Brown, Stiff Lean Clay
 - M - Gray, Tan & Dark Gray, Stiff Sandy Silt
 - N - Tan, Light Gray, Yellowish Orange, Dark Tan, Brown & Pinkish, Medium Dense to Very Dense Silty Sand
 - O - Black, Dark Gray & Olive Gray, Very Stiff to Very Hard Sandy Silty Clay
 - P - Olive Gray & Black, Very Dense Silty Sand
 - Q - Tan & Brown, Stiff Sandy Lean Clay
 - R - Gray, Stiff Lean Clay
 - S - Beige, Dark Yellowish Orange, Brown, Copper, Light Gray, Yellowish Orange & Tan, Loose to Very Dense Silty Sand
 - T - Dark Gray & Dark Brown, Very Hard Sandy Silty Clay
 - U - Dark Gray, Very Dense Silty Sand
 - V - Dark Tan, Light Gray, Yellowish Orange & Tan, Stiff to Hard Sandy Lean Clay
 - W - Dark Gray & Tan, Stiff Lean Clay
 - X - Gray & Yellowish Orange, Very Stiff Sandy Silt
 - Y - Yellowish Orange, Brown & Tan, Very Dense Silty Sand
 - Z - Dark Gray, Brown & Olive Gray, Very Stiff to Very Hard Sandy Silty Clay
 - AA - Olive Gray, Very Dense Silty Sand
 - AB - Gray, Tan, Light Gray & Yellowish Orange, Medium Stiff to Stiff Lean Clay with Sand
 - AC - Light Gray & Tan, Medium Dense Poorly Graded Sand with Silt
 - AD - Yellowish Orange & Tan, Dense to Very Dense Poorly Graded Sand with Silt
 - AE - Olive Gray, Black, Dark Gray & Dark Greenish Gray, Hard to Very Hard Silty Clay
 - AF - Light Gray, Tan, Dark Gray & Gray, Medium Stiff to Stiff Sandy Silty Clay
 - AG - Tan, Stiff Sandy Silt
 - AH - Dark Tan, Tan, Light Gray, Dark Yellowish Orange & Beige, Medium Dense to Very Dense Poorly Graded Sand with Silt
 - AI - Olive Gray, Greenish Gray & Dark Gray, Hard to Very Hard Sandy Silt
 - AJ - Dark Gray & Olive Gray, Very Hard Silty Clay
 - AK - Dark Gray, Very Hard Sandy Silt
 - AL - Olive Gray & Light Gray, Very Hard Silty Clay
 - AM - Olive Gray & Beige, Medium Stiff Sandy Silty Clay
 - AN - Tan, Yellowish Orange, Light Yellowish Orange & Beige, Medium Dense to Dense Poorly Graded Sand with Silt
 - AO - Yellowish Orange, Light Gray & Tan, Very Hard Sandy Silt
 - AP - Olive Gray, Greenish Gray & Dark Gray, Hard to Very Hard Silt with Sand
 - AQ - Dark Gray, Olive Gray & Black, Very Dense Silty Sand
 - AR - Gray, Yellowish Orange, Olive Gray & Dark Green, Very Hard Silt with Sand
 - AS - Copper, Dark Brown, Olive Gray & Black, Soft to Medium Stiff Lean Clay
 - AT - Gray & Yellowish Orange, Medium Dense Poorly Graded Sand with Silt
 - AU - Tan, Brown, Light Gray & Yellowish Orange, Medium Dense to Very Dense Poorly Graded Sand with Silt
 - AV - Olive Gray & Dark Gray, Hard to Very Hard Silt with Sand
 - AW - Light Olive Gray, Very Dense Silty Sand
 - AX - Light Olive Gray & Black, Very Hard Silt with Sand
 - AY - Olive Gray, Very Dense Silty Sand
 - AZ - Olive Gray, Very Hard Silt with Sand



BRIDGE B
 LAYOUT OF BRIDGE
 OVER U.S. ROUTE 71 EXISTING
 LA LINE - DODDRIDGE (S)
 MILLER COUNTY

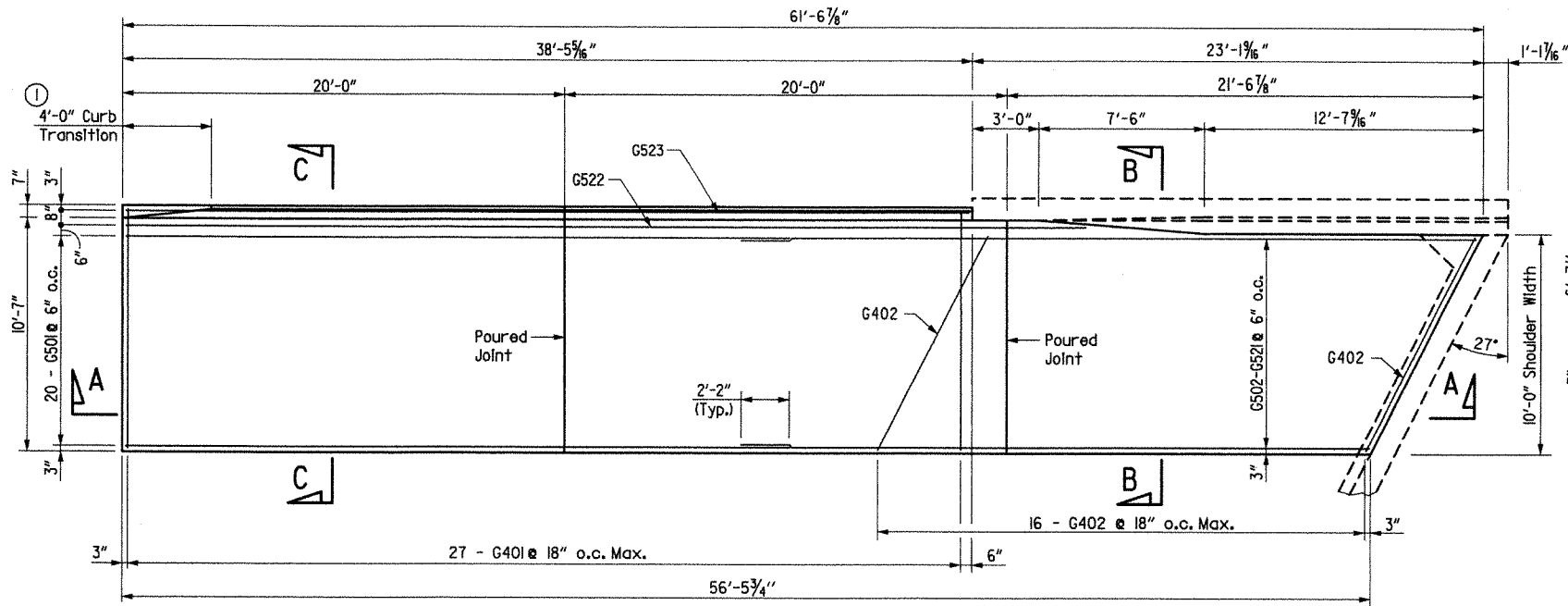
ROUTE 71 SEC. 1
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

FOR INFORMATION ONLY

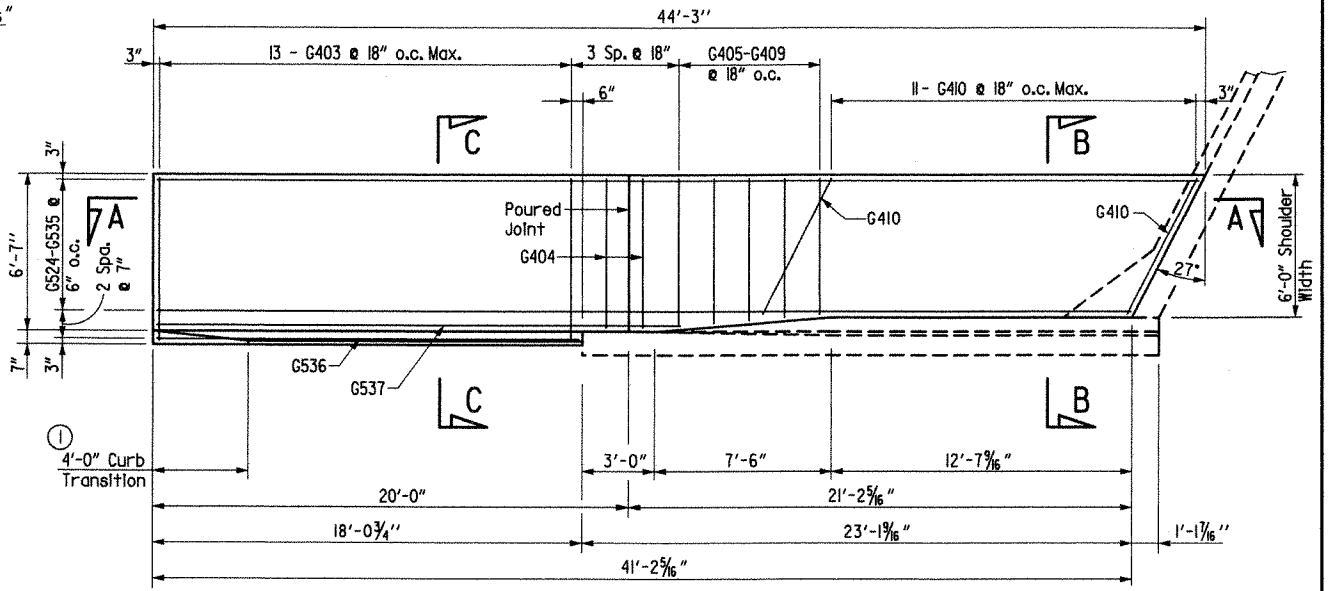
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 CHECKED BY: MAD/MWB DATE: 9-07 SCALE: 1" = 20'
 DESIGNED BY: FMB/MKJ DATE: 9-05
 BRIDGE NO. 87124 DRAWING NO. 49626

BRIDGE ENGINEER

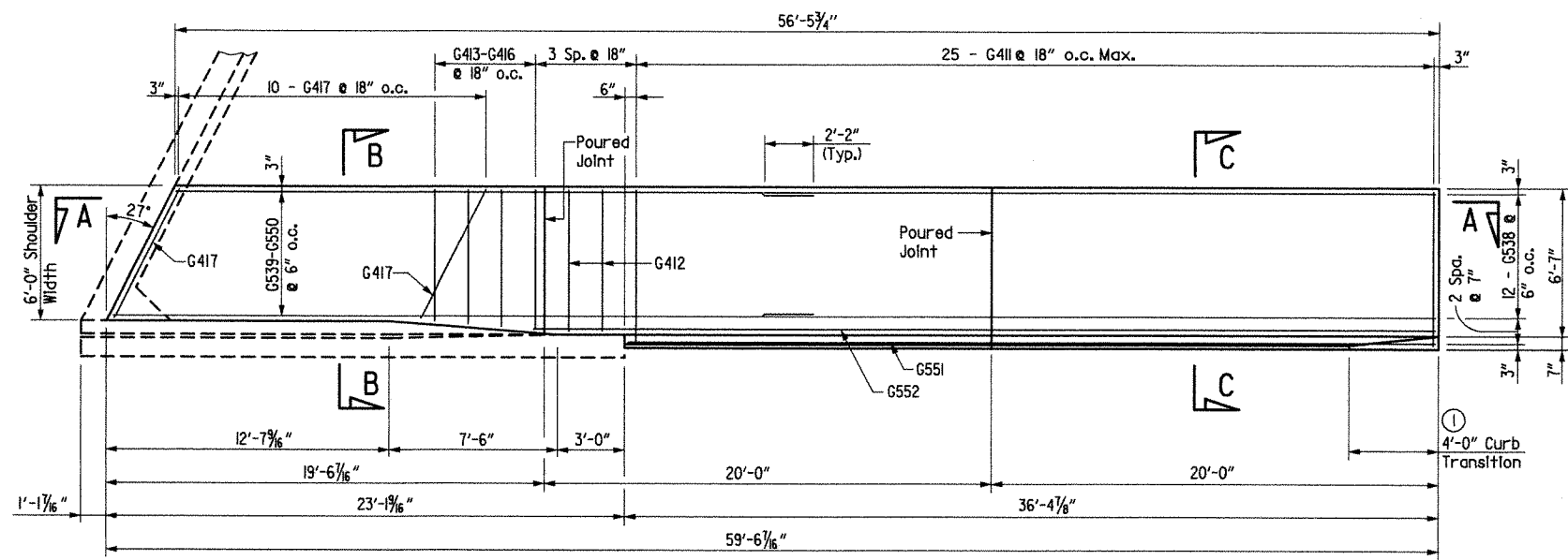
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	030313		08	100
				A&B7124		APPROACH GUTTERS	51621	



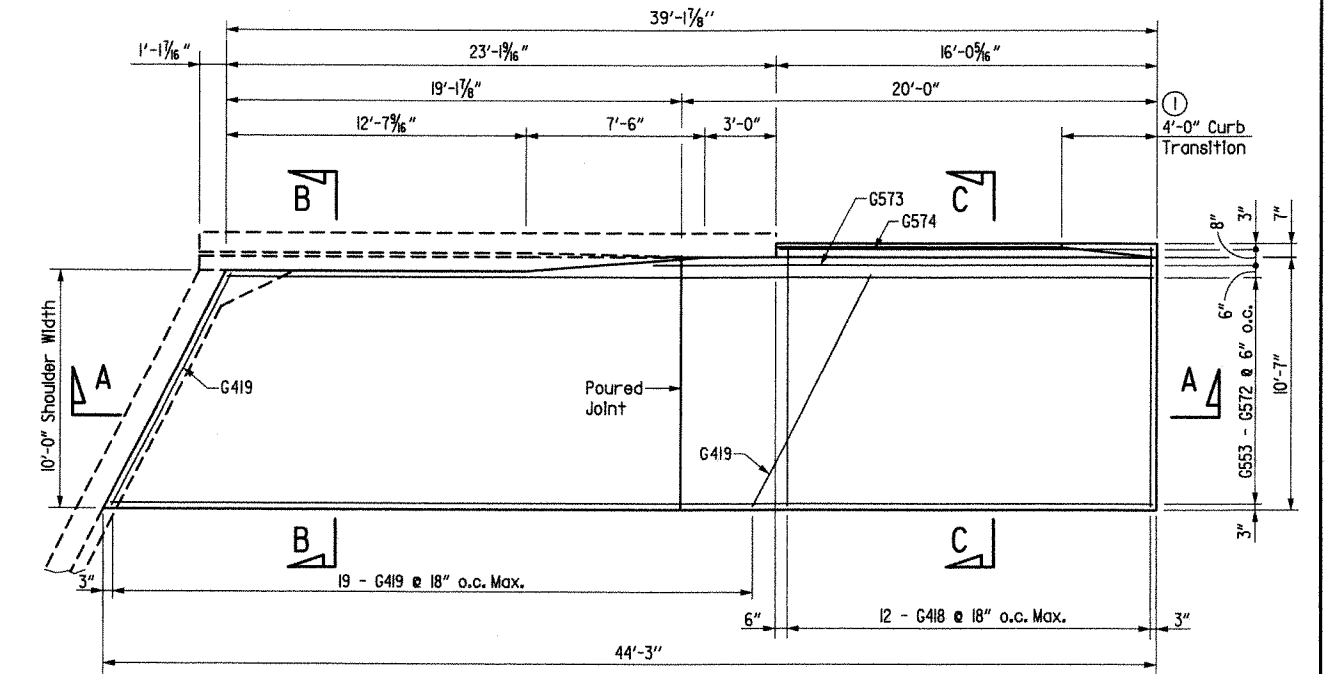
PLAN - 10' GUTTER
(BEGIN BRIDGE)



PLAN - 6' GUTTER
(BEGIN BRIDGE)



PLAN - 6' GUTTER
(END BRIDGE)



PLAN - 10' GUTTER
(END BRIDGE)

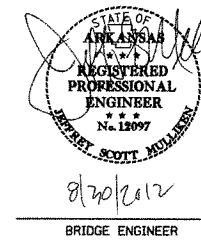
GENERAL NOTES:

Concrete shall be Class S or Class S(AE) or mixture used for Portland Cement Concrete Pavement.

Reinforcement 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.

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.



SHEET 1 OF 2
DETAILS OF
TYPE SPECIAL 4 APPROACH GUTTER
BRIDGE OVER U.S. ROUTE 71 EXISTING

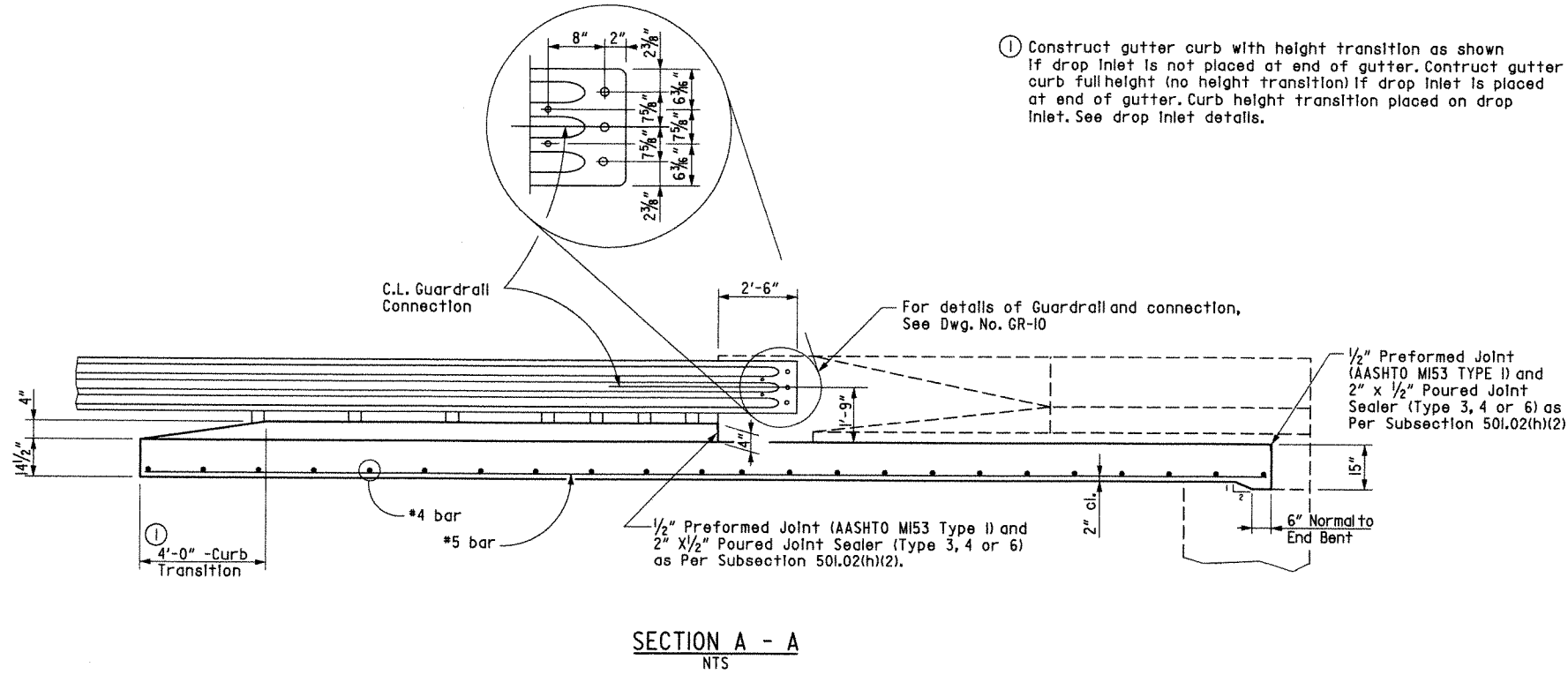
ROUTE 71 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: RPT DATE: 6-07 FILENAME: 030313-SH068.dgn
CHECKED BY: MAD DATE: 8-07 SCALE: 1/4" = 1'-0"
DESIGNED BY: MWB DATE: 6-07
BRIDGE NO. A&B7124 DRAWING NO. 51621

PLANS PREPARED BY
 THE LPA GROUP INCORPORATED
 TRANSPORTATION CONSULTANTS
 11111 Arkansas Blvd., Suite 100
 Little Rock, Arkansas 72207
 501-225-0700
 B/2/30/2012

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.	030313	69	100	
				A&B7124	APPROACH GUTTERS		51622	

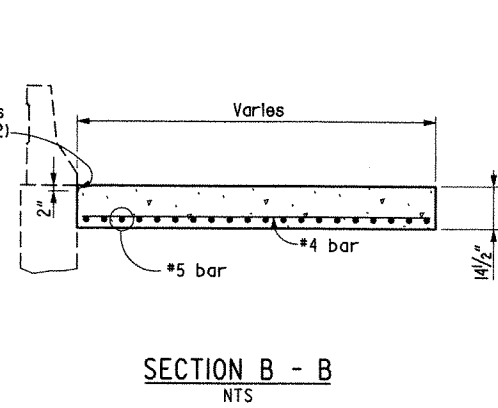
① Construct gutter curb with height transition as shown. If drop Inlet is not placed at end of gutter. Construct gutter curb full height (no height transition) if drop Inlet is placed at end of gutter. Curb height transition placed on drop Inlet. See drop Inlet details.



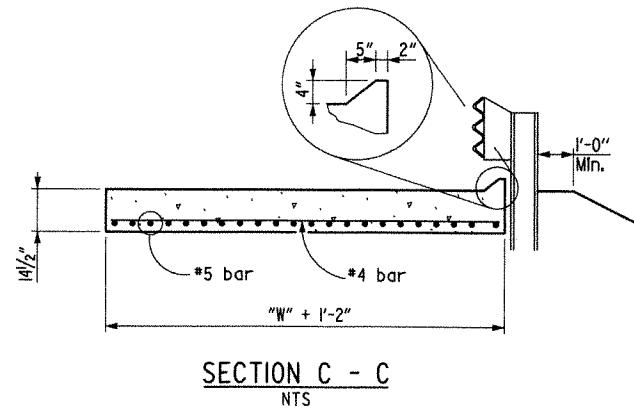
BAR LIST - PER BRIDGE

MARK	NO. REQ'D.	LENGTH
G401	27	10'-10"
G402	16	10'-11"
G403	13	6'-10"
G404	2	6'-3"
G405-G409	1 EACH	5'-9" to 6'-2"
G410	11	6'-5"
G411	25	6'-10"
G412	2	6'-3"
G413-G416	1 EACH	5'-10" to 6'-2"
G417	10	6'-5"
G418	12	10'-10"
G419	19	10'-11"
G501	20	30'-0"
G502-G521	1 EACH	28'-6" to 33'-6"
G522	1	43'-5"
G523	1	38'-1"
G524-G535	1 EACH	41'-0" to 43'-10"
G536	1	17'-9"
G537	1	22'-0"
G538	12	30'-0"
G539-G550	1 EACH	28'-6" to 31'-3"
G551	1	36'-1"
G552	1	40'-4"
G553-G572	1 EACH	38'-11" to 43'-9"
G573	1	21'-0"
G574	1	15'-9"

1/2" Preformed Joint (AASHTO M153 TYPE I) and 2" x 1/2" Poured Joint Sealer (Type 3, 4 or 6) as Per Subsection 501.02(h)(2)



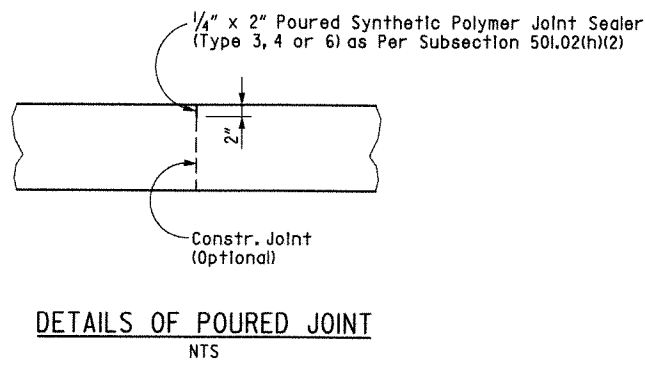
SECTION B - B
NTS



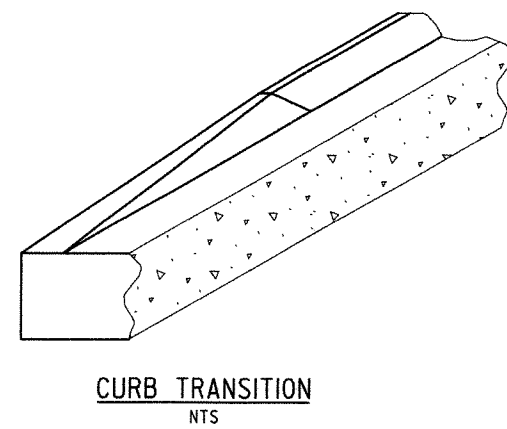
SECTION C - C
NTS

TABLE OF QUANTITIES FOR TYPE SPECIAL 4 APPROACH GUTTER

AT BEGIN BRIDGE			AT END BRIDGE		
"W" Width	Reinforcing Steel	Concrete (Cu. Yds.)	"W" Width	Reinforcing Steel	Concrete (Cu. Yds.)
6'	707 lbs.	12.67	6'	1,010 lbs.	17.82
10'	1,670 lbs.	28.78	10'	1,126 lbs.	19.75



DETAILS OF POURED JOINT
NTS



CURB TRANSITION
NTS

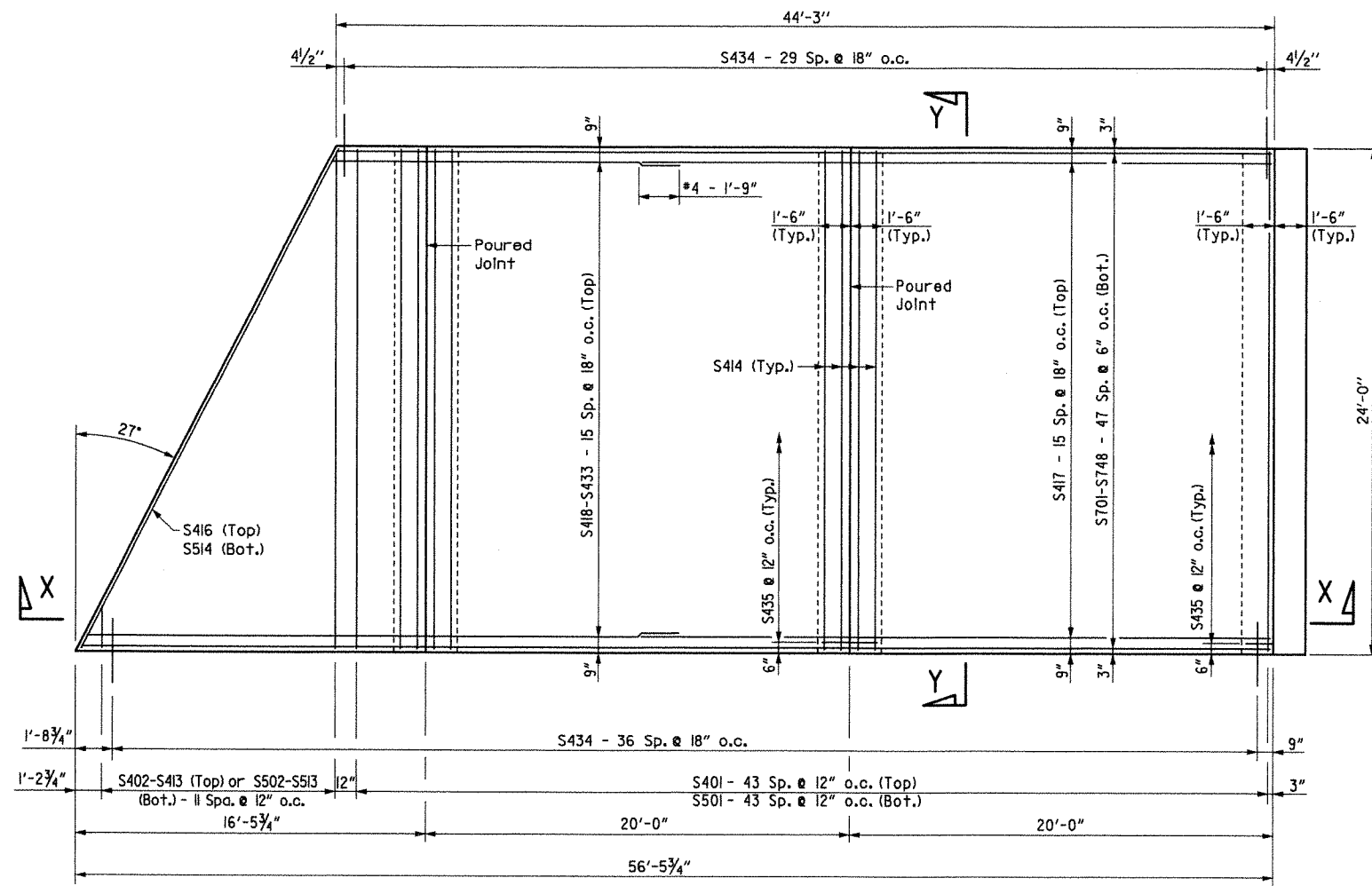
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13097
SCOTT MOLLAY
BRIDGE ENGINEER

**SHEET 2 OF 2
DETAILS OF
TYPE SPECIAL 4 APPROACH GUTTER
BRIDGE OVER U.S. ROUTE 71 EXISTING**

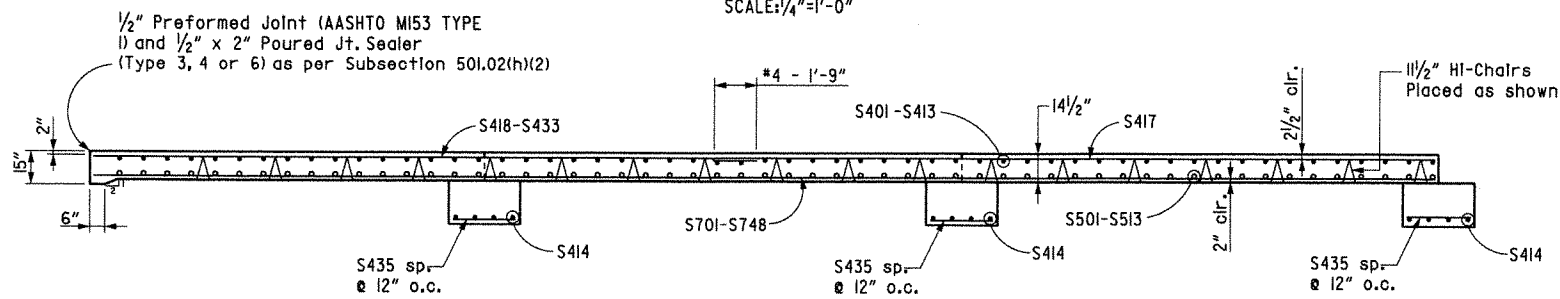
ROUTE 71 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: MAD/RPT DATE: 6-07 FILENAME: V030313-SH069.dgn
CHECKED BY: MWB DATE: 9-07 SCALE: AS SHOWN
DESIGNED BY: STANDARD DATE: 6-07
BRIDGE NO. A&B7124 DRAWING NO. 51622

PLANS PREPARED BY
 THE LPA GROUP INCORPORATED
 TRANSPORTATION CONSULTANTS
 GROUP
 222146 PM
 8/30/2012

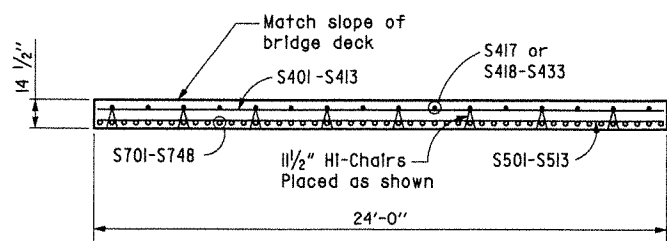
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		030313	170	100
				A&B7124	APPROACH SLAB			51623



PLAN - APPROACH SLAB
SCALE: 1/4"=1'-0"



SECTION X - X
SCALE: 1/4"=1'-0"



SECTION Y - Y
SCALE: 1/4"=1'-0"

TABLE OF QUANTITIES FOR ONE TYPE SPECIAL 2 APPROACH SLAB

Slab Width	Reinforcing Steel	Concrete (Cu. Yds.)
24'-0"	8,389	68.9

GENERAL NOTES

Concrete shall be Class S (AE) (f'c = 4,000 psi).

Reinforcement Steel shall conform to AASHTO M31 or M53, Grade 60 (fy = 60,000 psi).

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

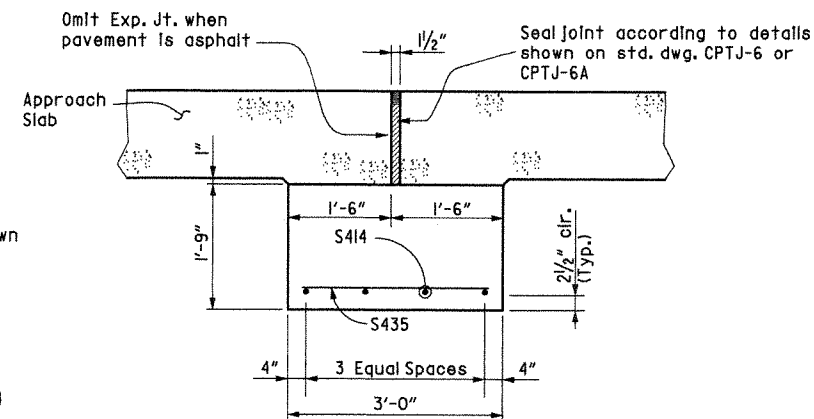
Joint sealer included in the pay item "Approach Slab".

Surface finish for approach slabs shall match that used on the bridge deck.

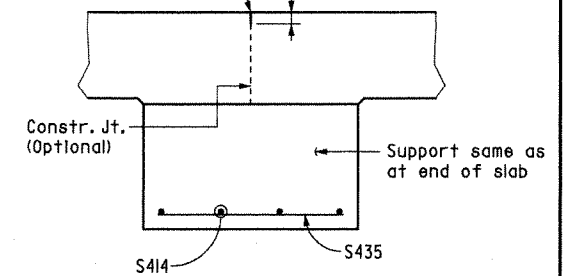
BAR LIST - PER APPROACH SLAB

MARK	NO. REQ'D.	LENGTH
S401	44	23'-8"
S402-S413	1 EACH	1'-11" to 23'-8"
S414	12	23'-8"
S415	OMITTED	-----
S416	1	26'-7"
S417	16	30'-0"
S418-S433	1 EACH	16'-0" to 27'-6"
S434	67	3'-0"
S435	72	2'-7"
S501	44	23'-8"
S502-S513	1 EACH	1'-11" to 23'-6"
S514	1	26'-7"
S701-S748	1 EACH	44'-0" to 56'-0"

1/4" x 2" Poured Synthetic Polymer Jt. Sealer (Type 3, 4 or 6) as per Subsection 501.02(h)(2)



DETAILS OF SUPPORT AT END OF SLAB
SCALE: 3/4"=1'-0"

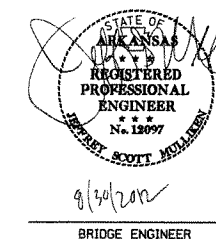


DETAILS OF SUPPORT AT MIDDLE OF SLAB
SCALE: 3/4"=1'-0"

DETAILS OF TYPE SPECIAL 2 APPROACH SLAB BRIDGE OVER U.S. ROUTE 71 EXISTING

ROUTE 71 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: RPT DATE: 6-07 FILENAME: 1030313-SH070.dgn
CHECKED BY: MAD/MWB DATE: 8-07 SCALE: AS SHOWN
DESIGNED BY: MWB DATE: 6-07
BRIDGE NO. A&B7124 DRAWING NO. 51623



BRIDGE ENGINEER

Note: Use Type Special 5 Approach Gutters with Type Special 3 Approach Slabs. Typical at each end of Bridge. See Dwg. No. 49661, 49662 and 49662A.

Place Dumped Riprap 1'-6" Thick with Filter Fabric. See Std. Dwg. No. 1891F for Details.

The Contractor shall exercise care such that his operations result in minimal disturbance of the existing riprap in the channel. If disturbed, the riprap shall be restored to its existing condition to the satisfaction of the Engineer and at the Contractor's expense.

The Contractor shall exercise care such that his operations result in minimal disturbance of the existing riprap at Bent 4. If disturbed, the riprap shall be restored to its existing condition to the satisfaction of the Engineer and at the Contractor's expense.

HYDRAULIC DATA

Drainage Area = 19.0 Square Miles

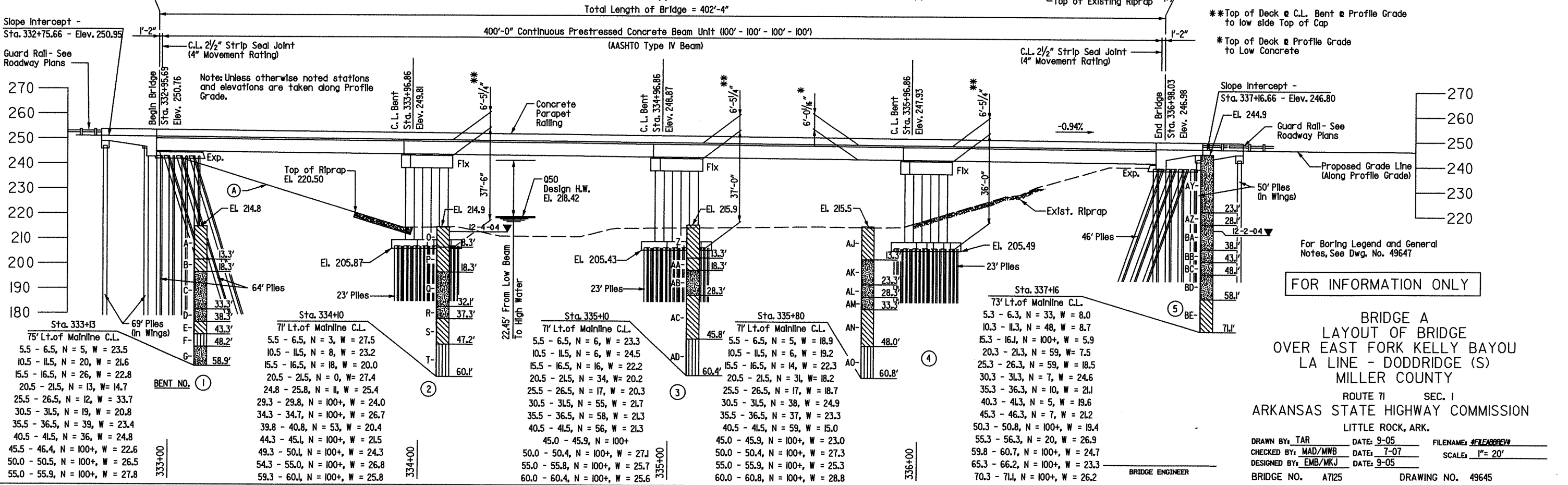
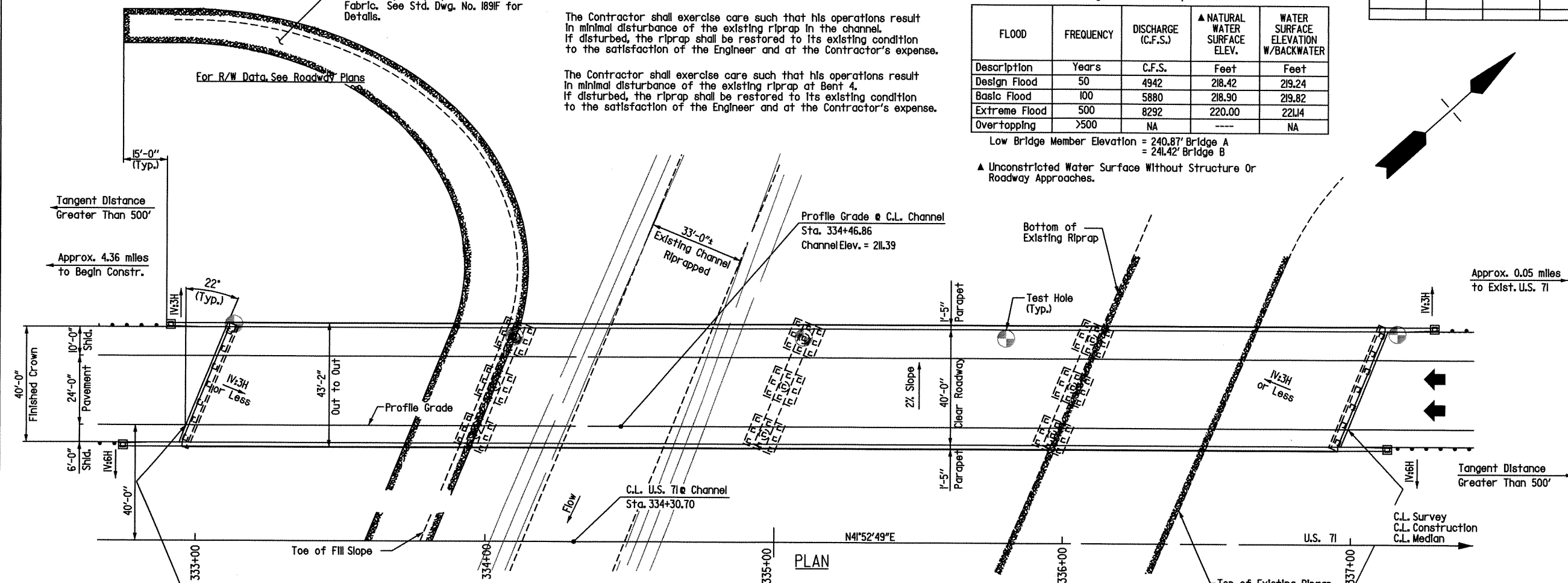
FLOOD	FREQUENCY	DISCHARGE (C.F.S.)	NATURAL WATER SURFACE ELEV. Feet	WATER SURFACE ELEVATION W/BACKWATER Feet
Description	Years	C.F.S.	Feet	Feet
Design Flood	50	4942	218.42	219.24
Basic Flood	100	5880	218.90	219.82
Extreme Flood	500	8292	220.00	221.4
Overtopping	>500	NA	----	NA

Low Bridge Member Elevation = 240.87' Bridge A
= 241.42' Bridge B

▲ Unconstricted Water Surface Without Structure Or Roadway Approaches.

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.		030313	71	100
				AT125	LAYOUT			49645

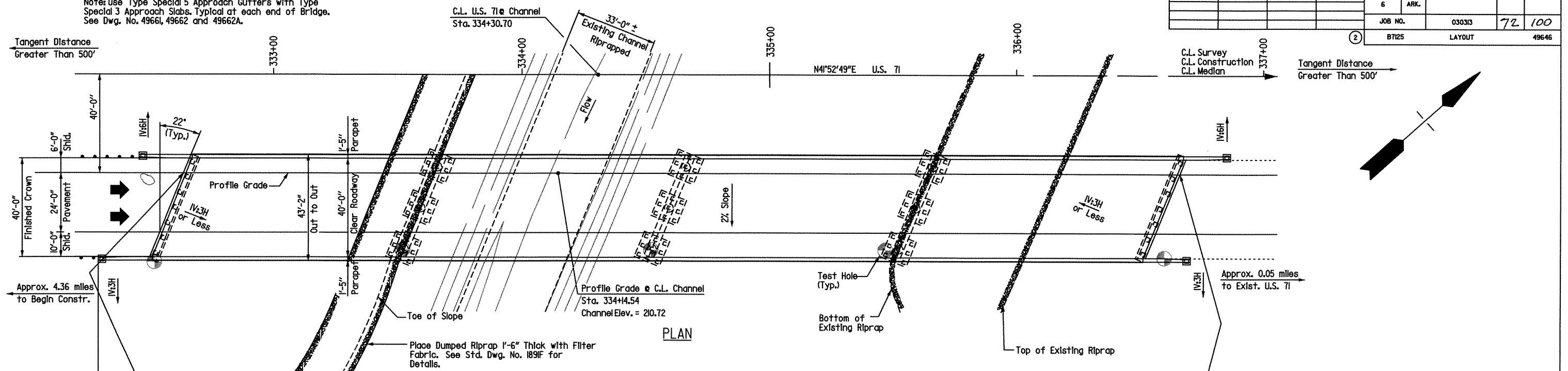
(A) Embankment Placed as Job No. 030354.



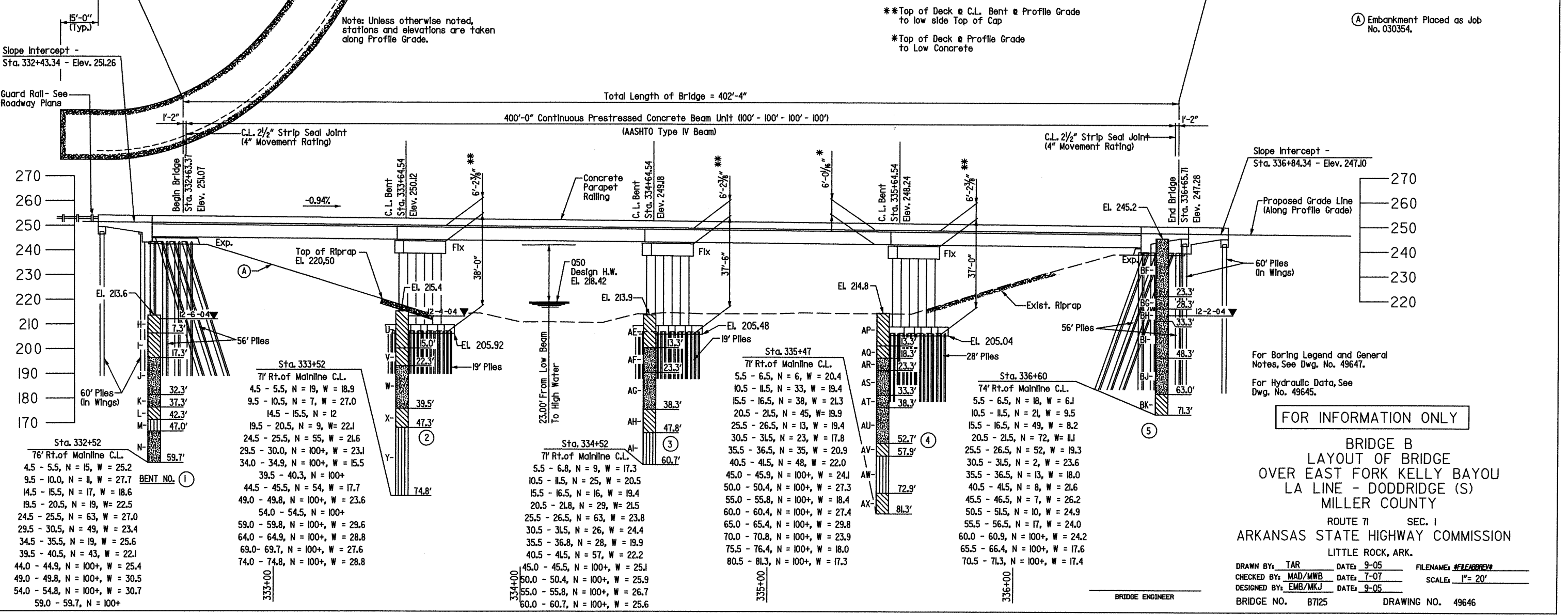
For R/W Data, See Roadway Plans

Note: Use Type Special 5 Approach Gutters with Type Special 3 Approach Slabs, Typical at each end of Bridge. See Dwg. No. 49661, 49662 and 49662A.

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.		030353	72	100
						B725	LAYOUT	49646



PLAN

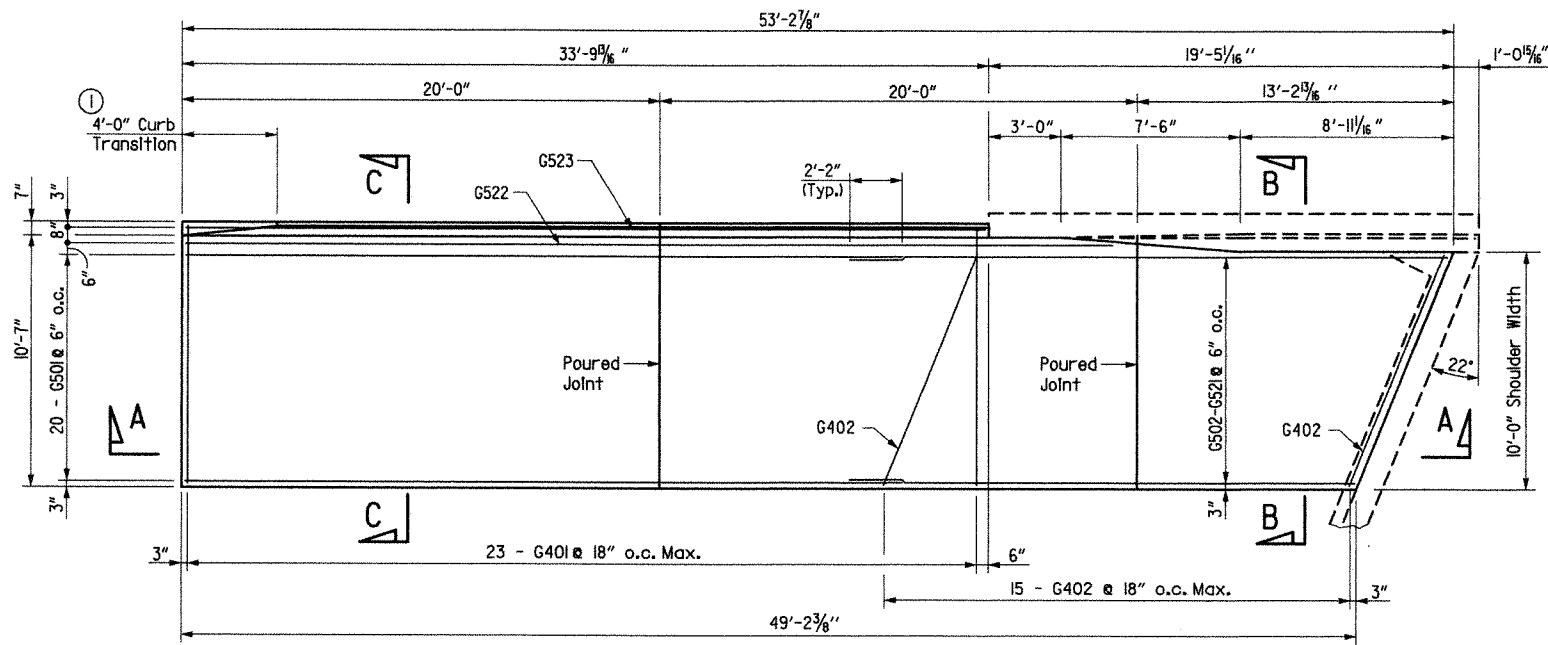


FOR INFORMATION ONLY

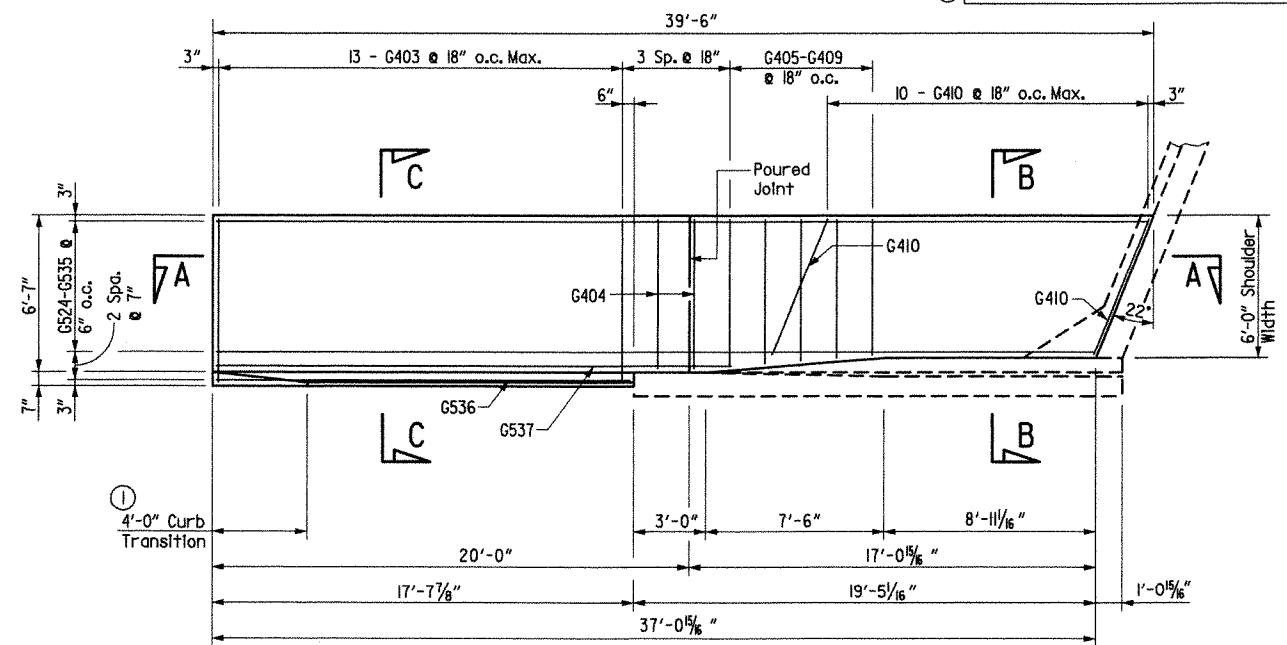
BRIDGE B
LAYOUT OF BRIDGE
OVER EAST FORK KELLY BAYOU
LA LINE - DODDRIDGE (S)
MILLER COUNTY
ROUTE 71 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

BRIDGE ENGINEER
DRAWN BY: TAR DATE: 9-05 FILENAME: #FILEBREV#
CHECKED BY: MAD/MWB DATE: 7-07 SCALE: 1"= 20'
DESIGNED BY: EMB/MKJ DATE: 9-05
BRIDGE NO. B725 DRAWING NO. 49646

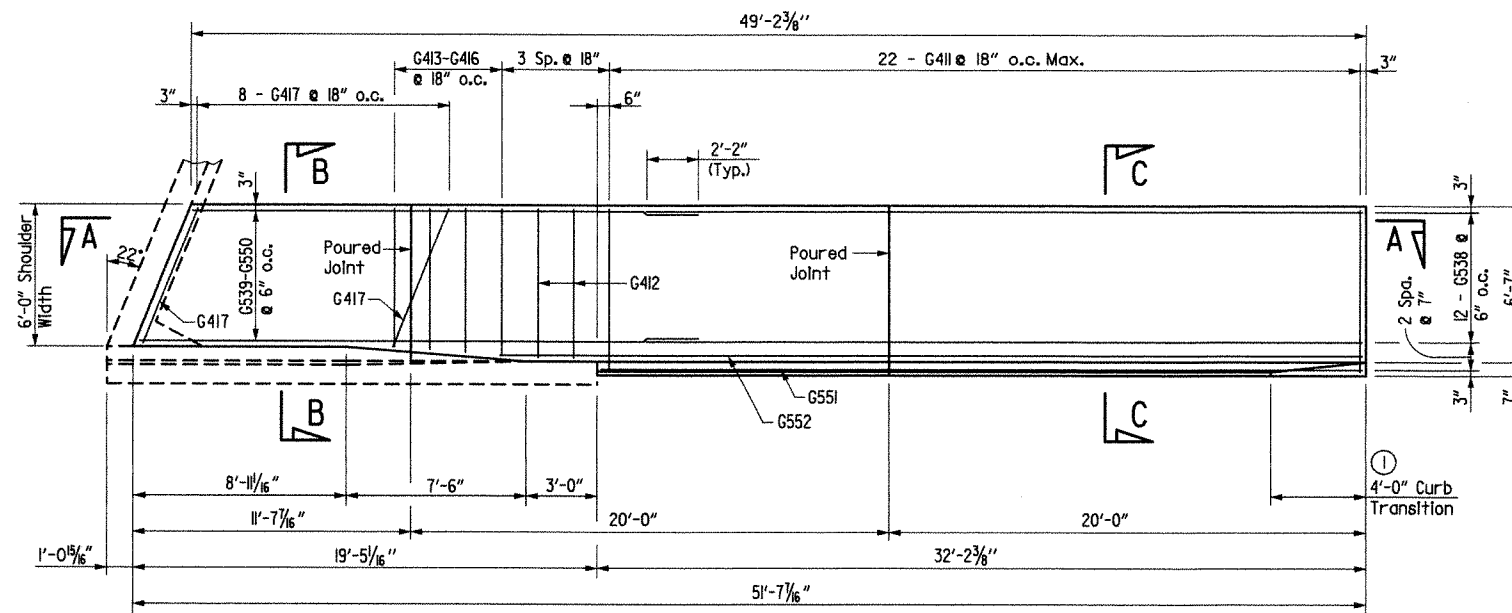
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	030313		73	100
				A&B7125	APPROACH GUTTERS		51624	



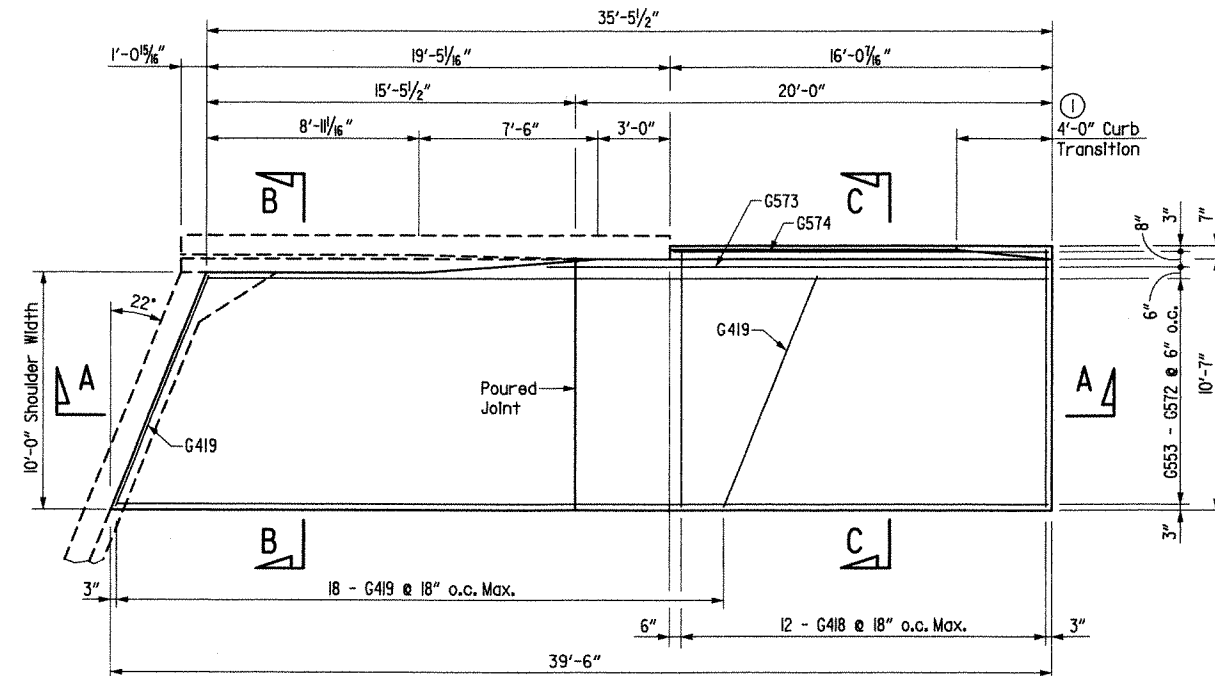
PLAN - 10' GUTTER
(BEGIN BRIDGE)



PLAN - 6' GUTTER
(BEGIN BRIDGE)



PLAN - 6' GUTTER
(END BRIDGE)



PLAN - 10' GUTTER
(END BRIDGE)

GENERAL NOTES:

Concrete shall be Class S or Class S(AE) or mixture used for Portland Cement Concrete Pavement.

Reinforcement 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.

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.

SHEET 1 OF 2
DETAILS OF
TYPE SPECIAL 5 APPROACH GUTTER
EAST FORK KELLY BAYOU

ROUTE 71 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.



8/10/2012

BRIDGE ENGINEER

DRAWN BY: RPT DATE: 6-07 FILENAME: 030313-SH073.dgn

CHECKED BY: MWB DATE: 9-07 SCALE: 1/4" = 1'-0"

DESIGNED BY: STANDARD DATE: BRIDGE NO. A&B7125 DRAWING NO. 51624

PLANS PREPARED BY THE LPA GROUP INCORPORATED TRANSPORTATION CONSULTANTS
 A:\sfr\ark\Arkansas\Final\0303055\Fram James Barr 7 19 12\030313-SH073.dgn
 2/21/13 PM 8/30/2012

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.	030313	75	100	
				A&B7125	APPROACH SLAB			51626

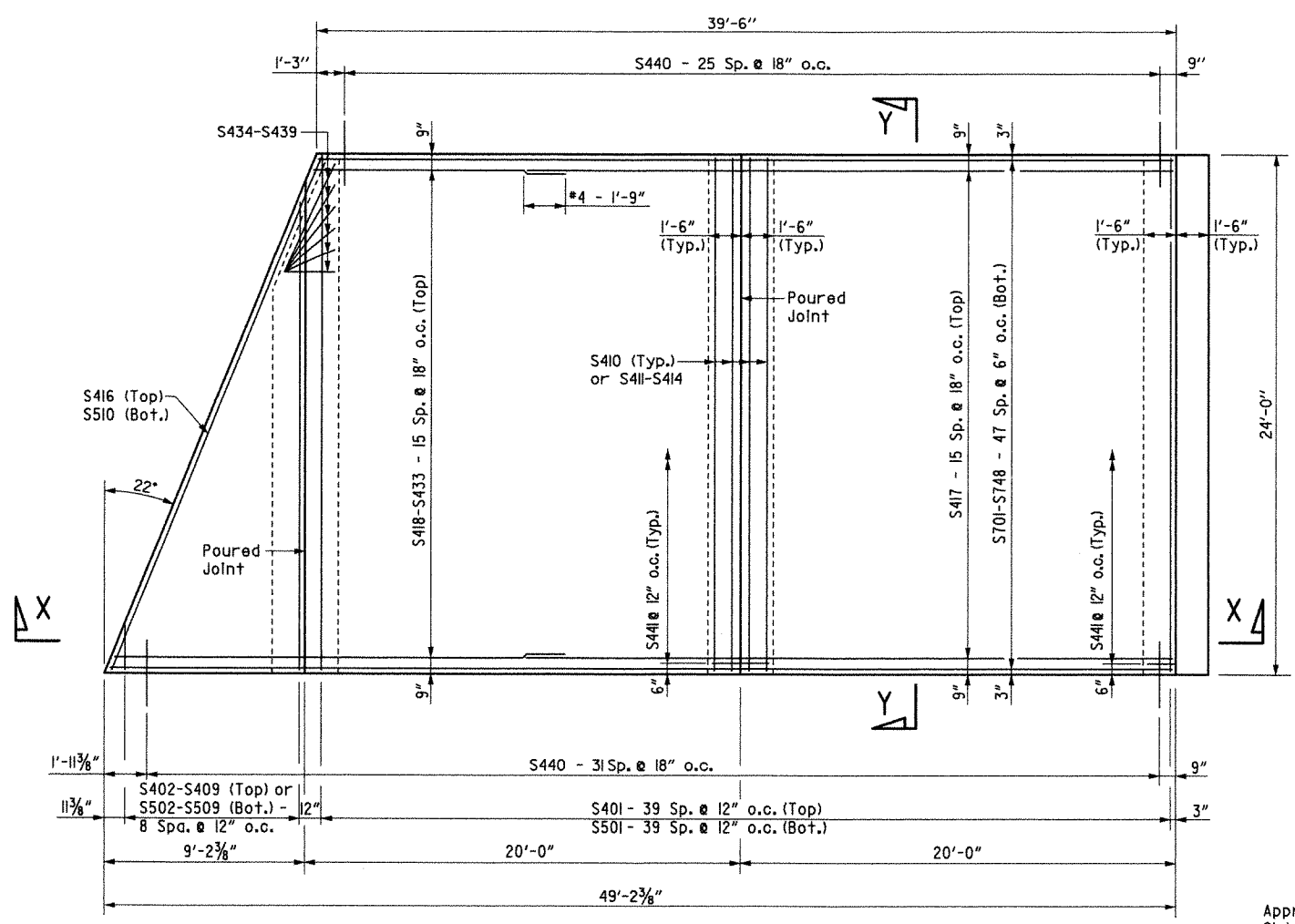
BAR LIST - PER APPROACH SLAB

MARK	NO. REQ'D.	LENGTH
S401	40	23'-8"
S402-S409	1 EACH	1'-9" to 21'-6"
S410	8	23'-8"
S411-S414	1 EACH	18'-2" to 23'-8"
S415	OMITTED	-----
S416	1	25'-6"
S417	16	30'-0"
S418-S433	1 EACH	11'-3" to 20'-4"
S434-S439	1 EACH	2'-3" to 5'-11"
S440	58	3'-0"
S441	66	2'-7"
S501	40	23'-8"
S502-S509	1 EACH	1'-9" to 21'-6"
S510	1	25'-6"
S701-S748	1 EACH	39'-3" to 48'-9"

TABLE OF QUANTITIES FOR ONE TYPE SPECIAL 3 APPROACH SLAB

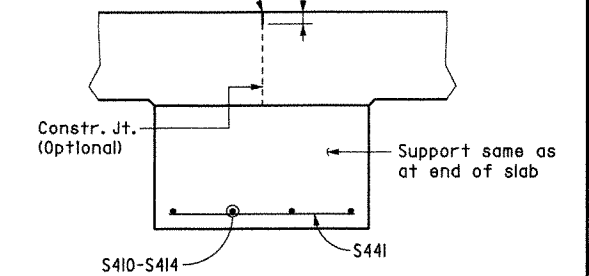
Slab Width	Reinforcing Steel	Concrete (Cu. Yds.)
24'-0"	7,181	61.8

GENERAL NOTES
 Concrete shall be Class S (AE) (f'c = 4,000 psi).
 Reinforcement Steel shall conform to AASHTO M31 or M53, Grade 60 (fy = 60,000 psi).
 Approach Slabs will be measured and paid for in accordance with Section 504.
 Joint sealer included in the pay item "Approach Slab".

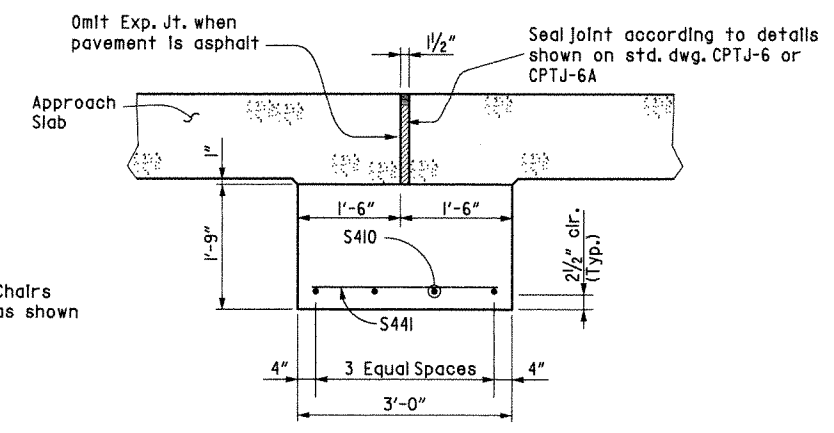


PLAN - APPROACH SLAB
SCALE: 1/4" = 1'-0"

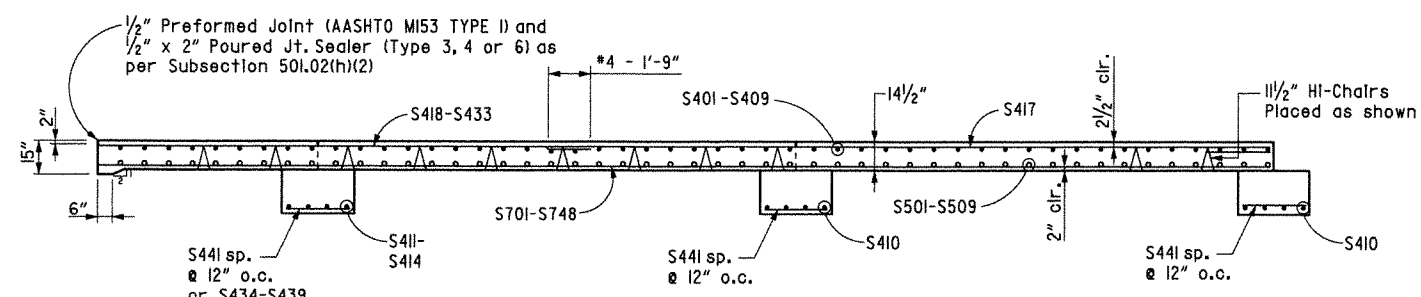
1/4" x 2" Poured Synthetic Polymer Jt. Sealer (Type 3, 4 or 6) as per Subsection 501.02(h)(2)



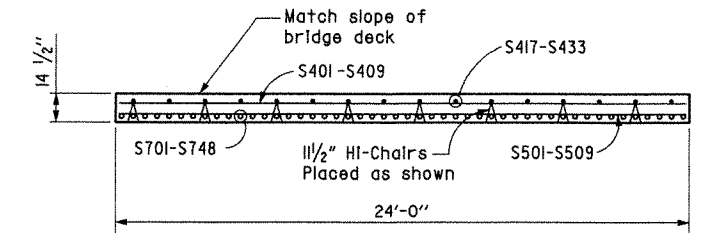
DETAILS OF SUPPORT AT MIDDLE OF SLAB
SCALE: 3/4" = 1'-0"



DETAILS OF SUPPORT AT END OF SLAB
SCALE: 3/4" = 1'-0"



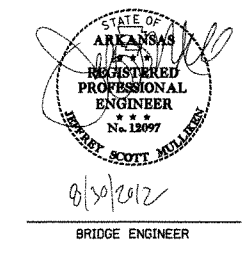
SECTION X - X
SCALE: 1/4" = 1'-0"



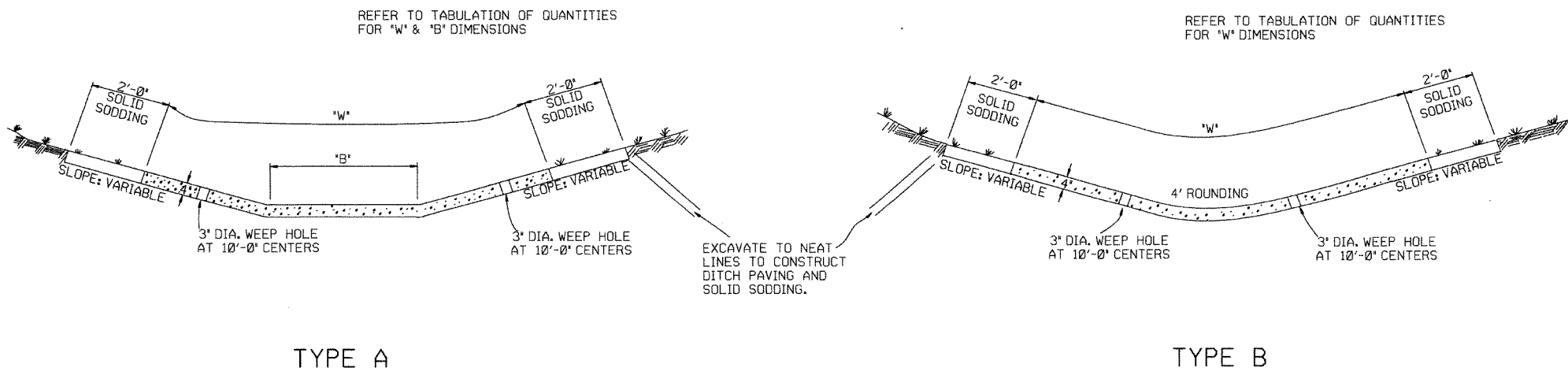
SECTION Y - Y
SCALE: 1/4" = 1'-0"

DETAILS OF TYPE SPECIAL 3 APPROACH SLAB EAST FORK KELLY BAYOU

ROUTE 71 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 DRAWN BY: RPT DATE: 6-07 FILENAME: V030313-SH075.dgn
 CHECKED BY: MWB DATE: 9-07 SCALE: AS SHOWN
 DESIGNED BY: STANDARD DATE: _____
 BRIDGE NO. A&B7125 DRAWING NO. 51626



PLANS PREPARED BY
THE LPA GROUP INCORPORATED
 TRANSPORTATION CONSULTANTS
 3440 PM
 ANS: Attach: Arkansas\Files\0303055\Frm James Barr 7.18.12\030313-SH075.dgn
 8/30/2012

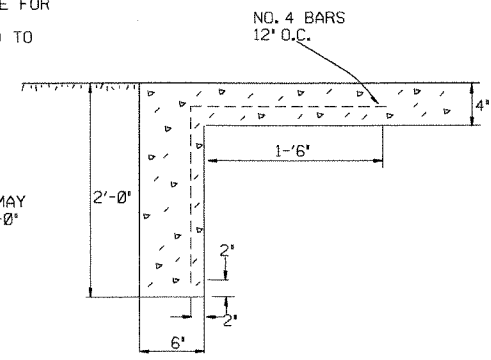


TYPE A

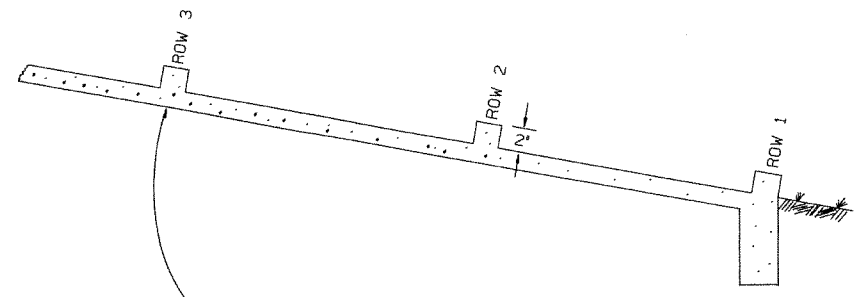
TYPE B

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

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

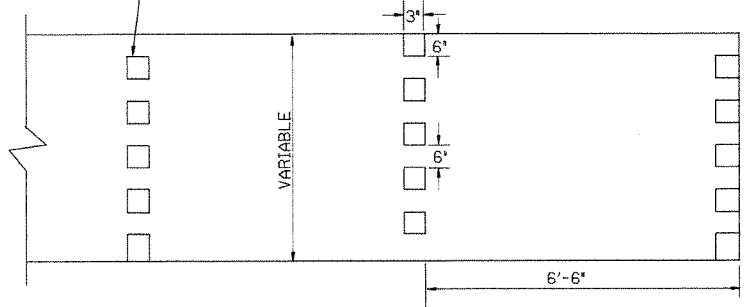


TOE WALL DETAIL FOR CONCRETE DITCH PAVING



NUMBER OF ELEMENTS PER ROW VARIES WITH WIDTH OF PAVING SPECIFIED

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



ENERGY DISSIPATORS
(NO SCALE)

GENERAL NOTES:

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

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

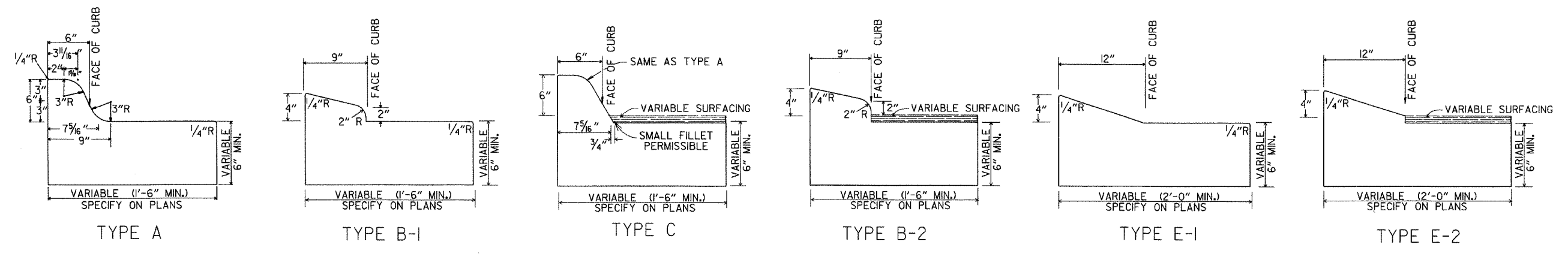
1' WIDE TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE DITCH PAVING AT 45' INTERVALS. THE SPACE SHALL BE FILLED WITH APPROVED JOINT FILLER COMPLYING WITH AASHTO M213.

DATE	REVISION	DATE FILM'D
11-17-10	ADDED GENERAL NOTE	
6-2-94	ADDED GENERAL NOTE ABOUT SOLID SODDING	
11-30-8	ELIMINATED MIN. ROWS OF ELEMENTS	11-30-89
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 EXCAVATION DETAILS	
10-2-72	TYPED A & B	
10-2-72	REVISED AND REDRAWN	508-10-2-72

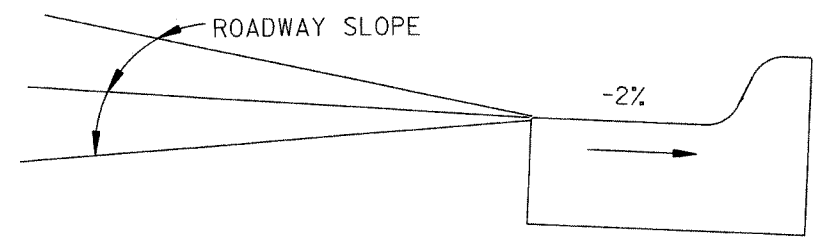
ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE DITCH PAVING

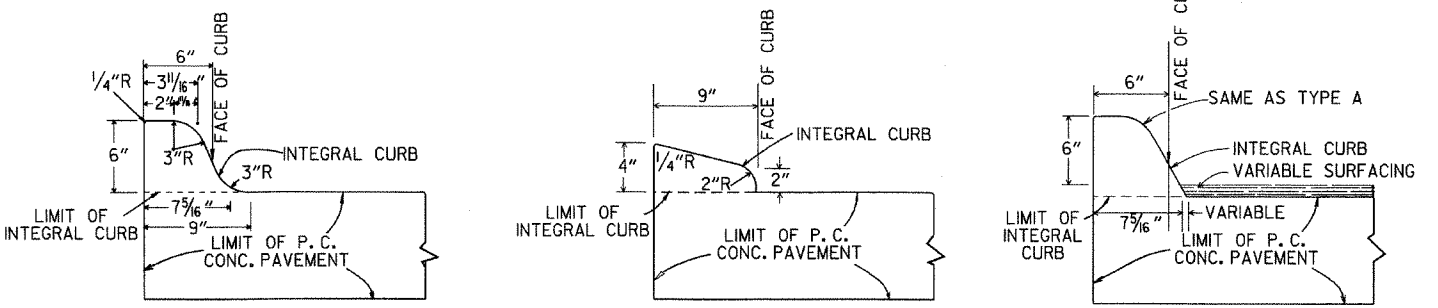
STANDARD DRAWING CDP-1



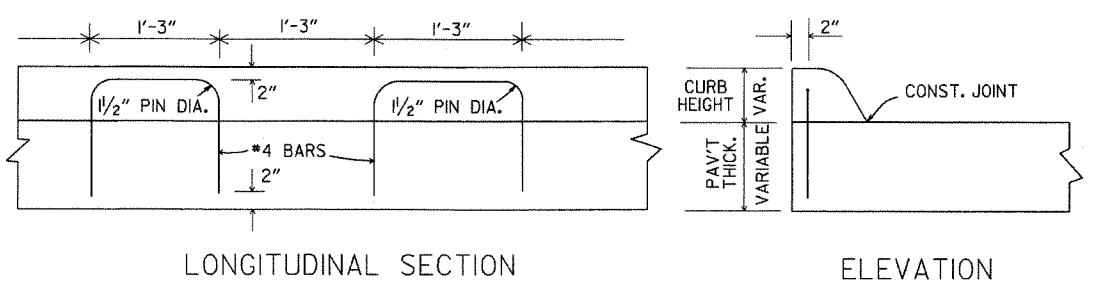
CONCRETE COMBINATION CURB AND GUTTER



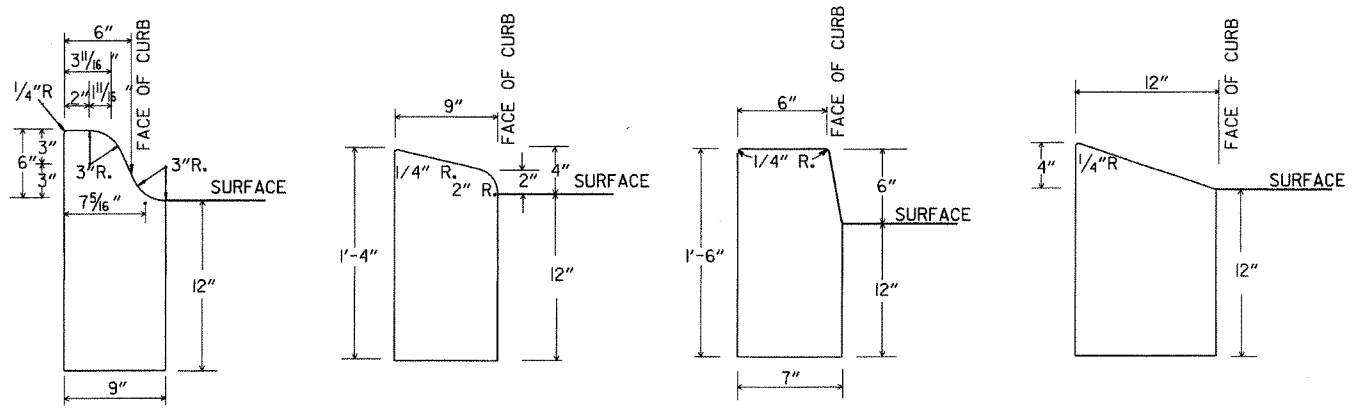
DETAIL OF GUTTER SLOPE
GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.



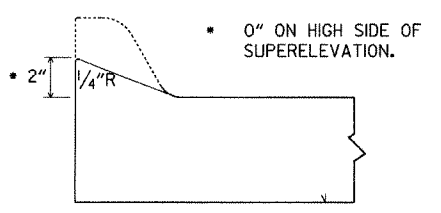
INTEGRAL CURB



ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



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.

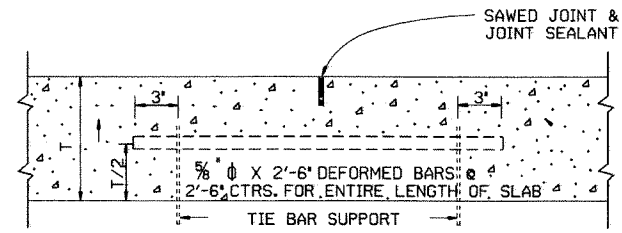
DETAILS OF MODIFIED CURB

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
1-1-73	REVISED MODIFIED CURB	500-1-1-73
10-2-72	REVISED AND REDRAWN	512-10-2-72

ARKANSAS STATE HIGHWAY COMMISSION

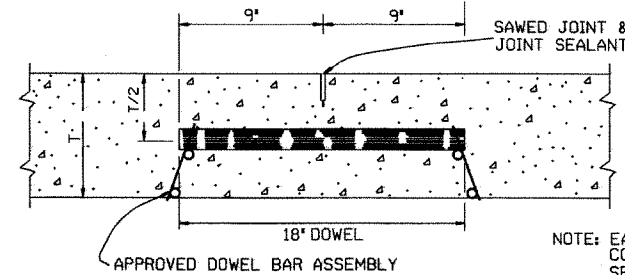
CURBING DETAILS

STANDARD DRAWING CG-1



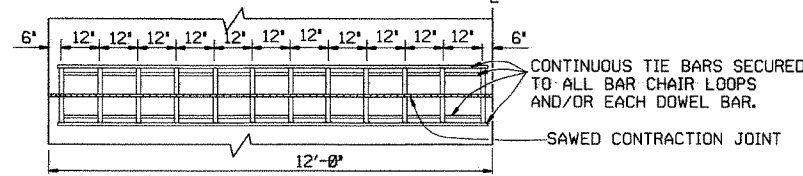
LONGITUDINAL JOINT

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.

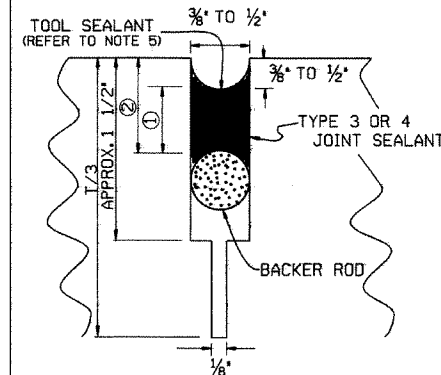
ROUND STEEL BAR DOWEL
1 1/4" DIA. WHEN T < 10"
1 1/2" DIA. WHEN T > 10"



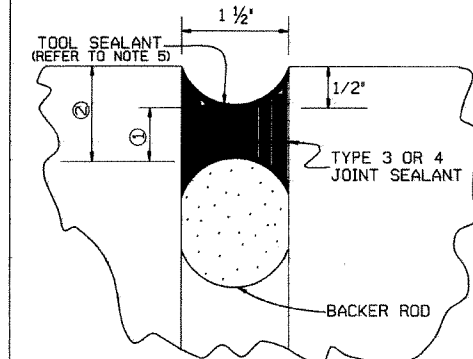
ONE-HALF 24' PAVEMENT
12 DOWELS
PLAN

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



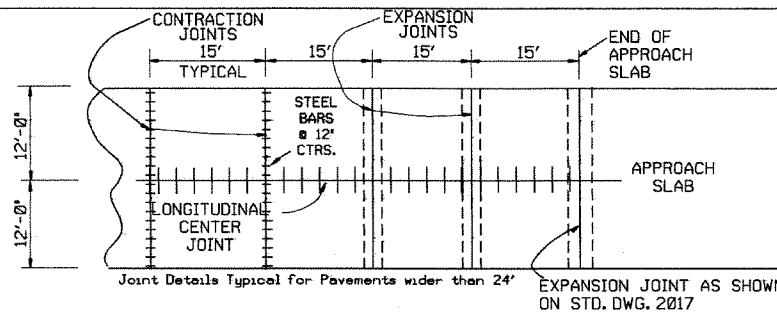
DETAIL OF EXPANSION JOINT

JOINT CONFIGURATION FOR TYPE 3 OR 4 JOINT SEALANT

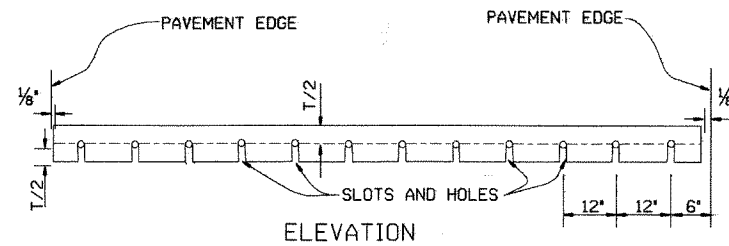
JOINT WIDTH	SEALANT THICKNESS ①	BACKER ROD DIAMETER	BACKER ROD PLACEMENT DEPTH ②
INCHES			
1/4	1/4	3/8	1/2
3/8	1/4	1/2	1/2
1/2	1/4	3/4	1/2
3/4	3/8	1/2	3/4
1	3/8	3/4	3/4
1 1/2	3/4	2	1 1/4

JOINT CONFIGURATION FOR TYPE 5 JOINT SEALANT

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

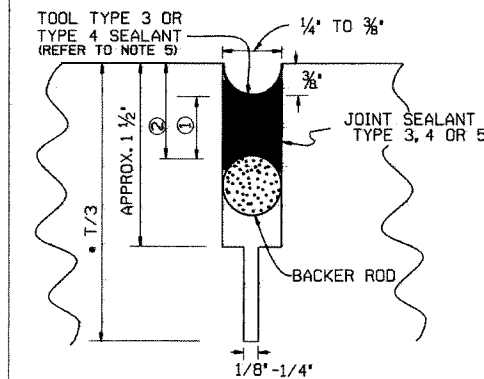


PLAN SHOWING EXPANSION JOINTS AT BRIDGE APPROACH SLABS



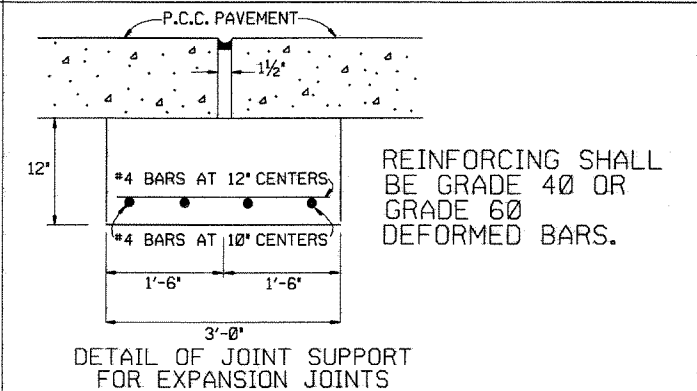
ELEVATION

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



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

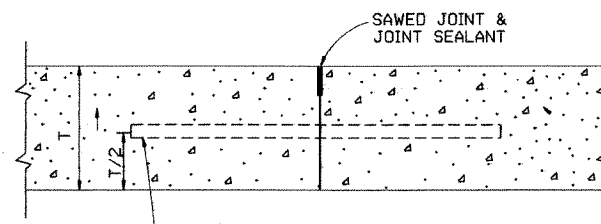
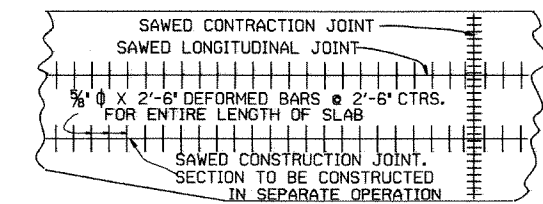
DETAIL OF SAWED LONGITUDINAL JOINT AND LONGITUDINAL CONSTRUCTION JOINT



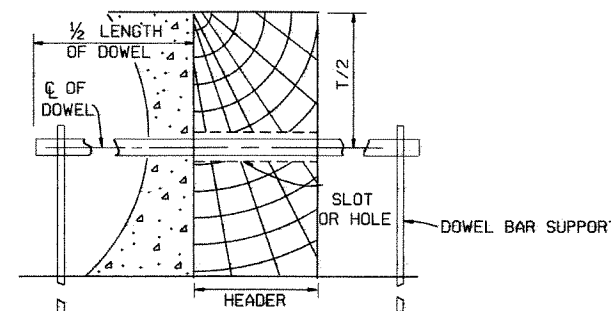
DETAIL OF JOINT SUPPORT FOR EXPANSION JOINTS

GENERAL NOTES

- *T* DENOTES THICKNESS OF SLAB.
- 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.
- 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.
- CONTRACTION JOINTS SHALL BE CONSTRUCTED ON 15' CENTERS.
- TOOLING NOT REQUIRED FOR SELF-LEVELING SILICONE.
- 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.
- TIE WIRES IN DOWEL BAR ASSEMBLIES SHALL NOT BE CUT PRIOR TO PLACEMENT OF PAVING CONCRETE.



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



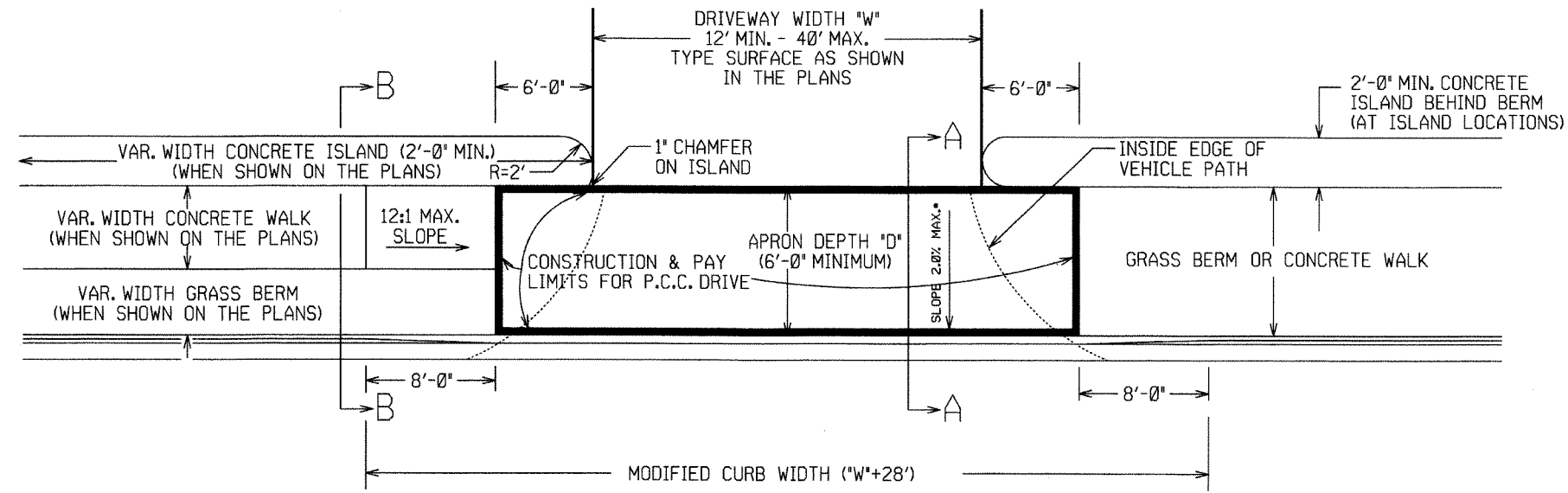
SECTION

TRANSVERSE CONSTRUCTION JOINT

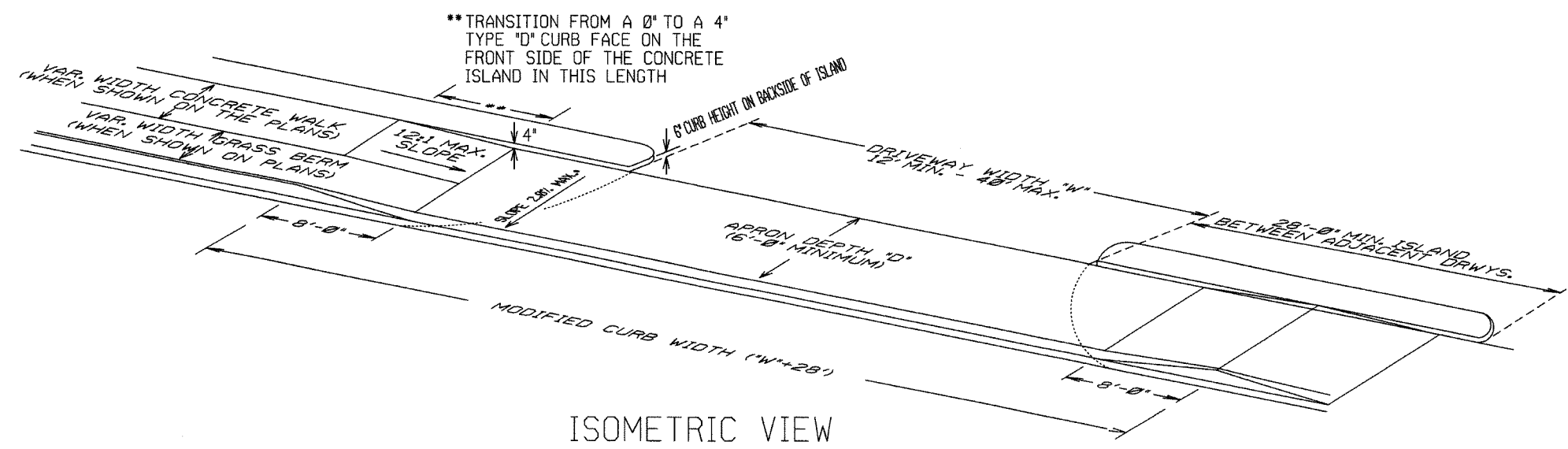
DATE	REVISION	DATE FILMED
5-25-06	ADDED GENERAL NOTE 7	
10-9-03	REMOVED TIE BAR COATING & REVISED GENERAL NOTES	
11-16-01	ADDED TOOL SEALANT AND NOTE 5; REVISED NOTE 3	
4-26-96	REVISED CONTRACTION JOINT NOTE	
11-3-94	ADDED NOTE RE: REINF. BARS	
4-1-93	REVISED DOWEL BARS & GEN. NOTES	4-1-93
10-1-92	REVISED 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

ARKANSAS STATE HIGHWAY COMMISSION
TRANSVERSE & LONGITUDINAL JOINTS FOR CONCRETE PAVEMENT (NON-REINFORCED)

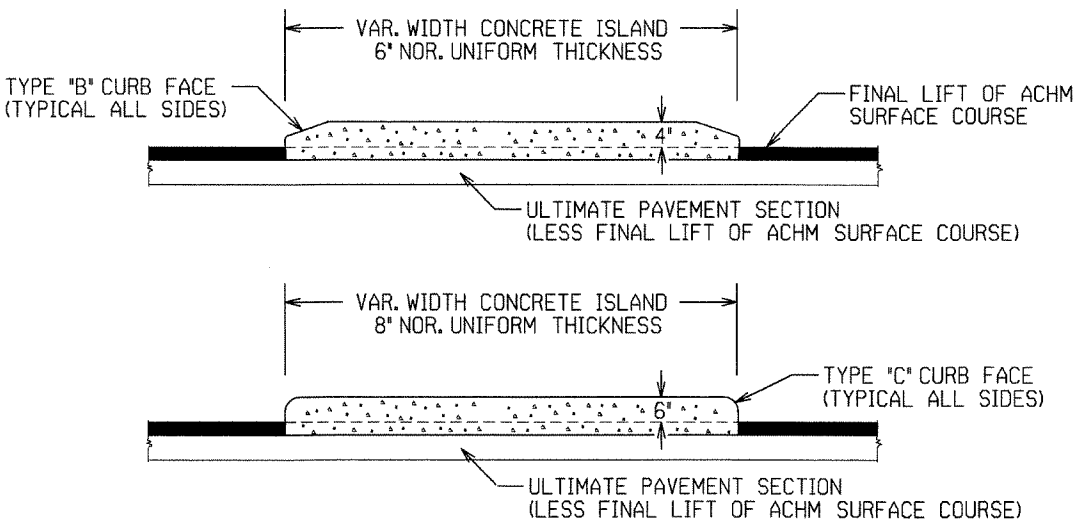
STANDARD DRAWING CPTJ - 6A



PLAN VIEW

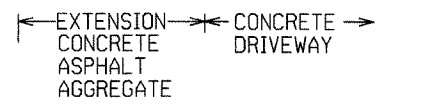


ISOMETRIC VIEW



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".

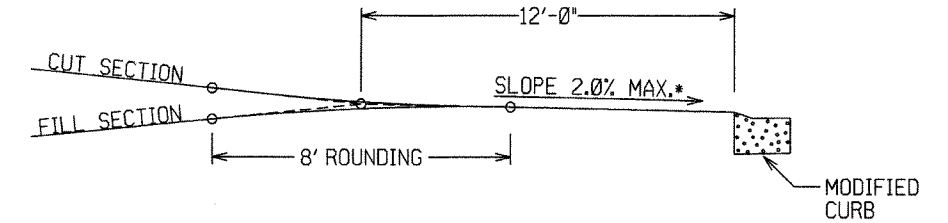


EXTENSION TYPICAL SECTIONS

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

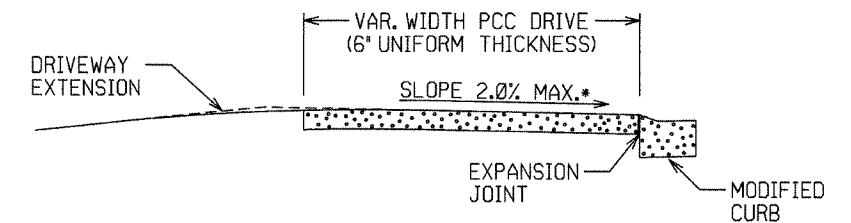
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

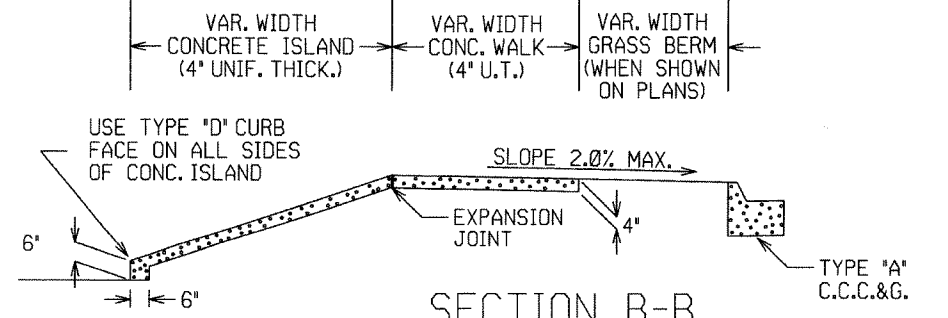


DRIVEWAY VERTICAL ALIGNMENT DETAILS

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



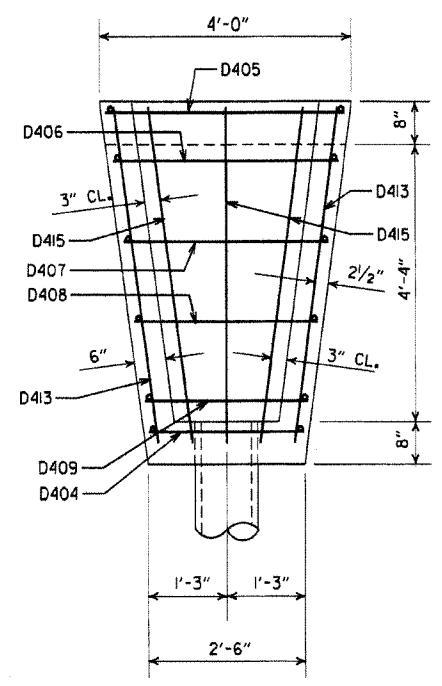
SECTION A-A



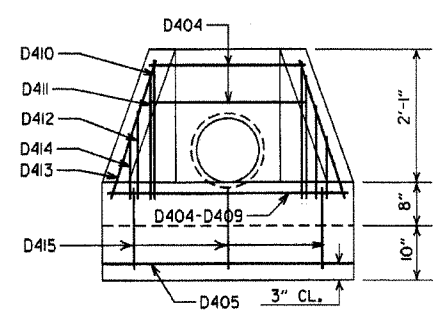
SECTION B-B CURBED ISLAND BEHIND WALK

DATE	REV	DESCRIPTION
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
		DATE REV DATE FILMED DESCRIPTION

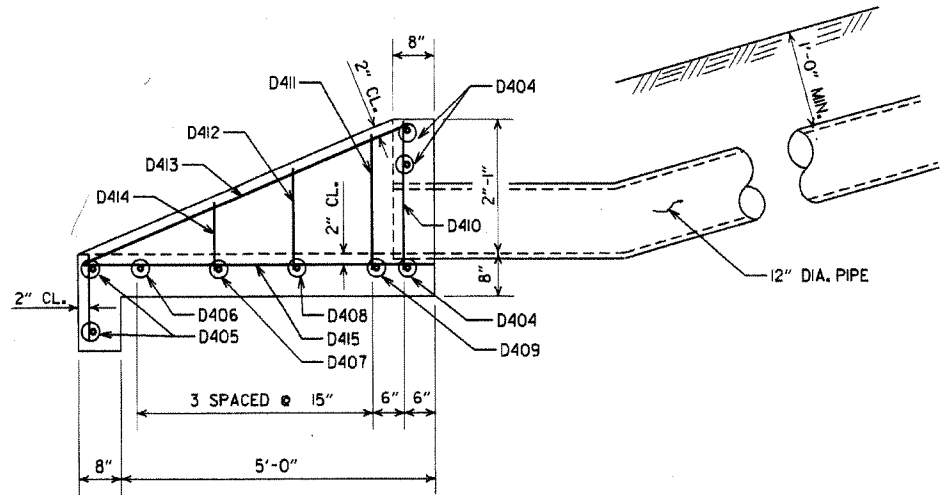
ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF DRIVEWAYS & ISLANDS
STANDARD DRAWING DR-1



PLAN



FRONT ELEVATION



SIDE ELEVATION
CONCRETE SPILLWAY

DETAILS OF CONCRETE SPILLWAY (TYPE A)

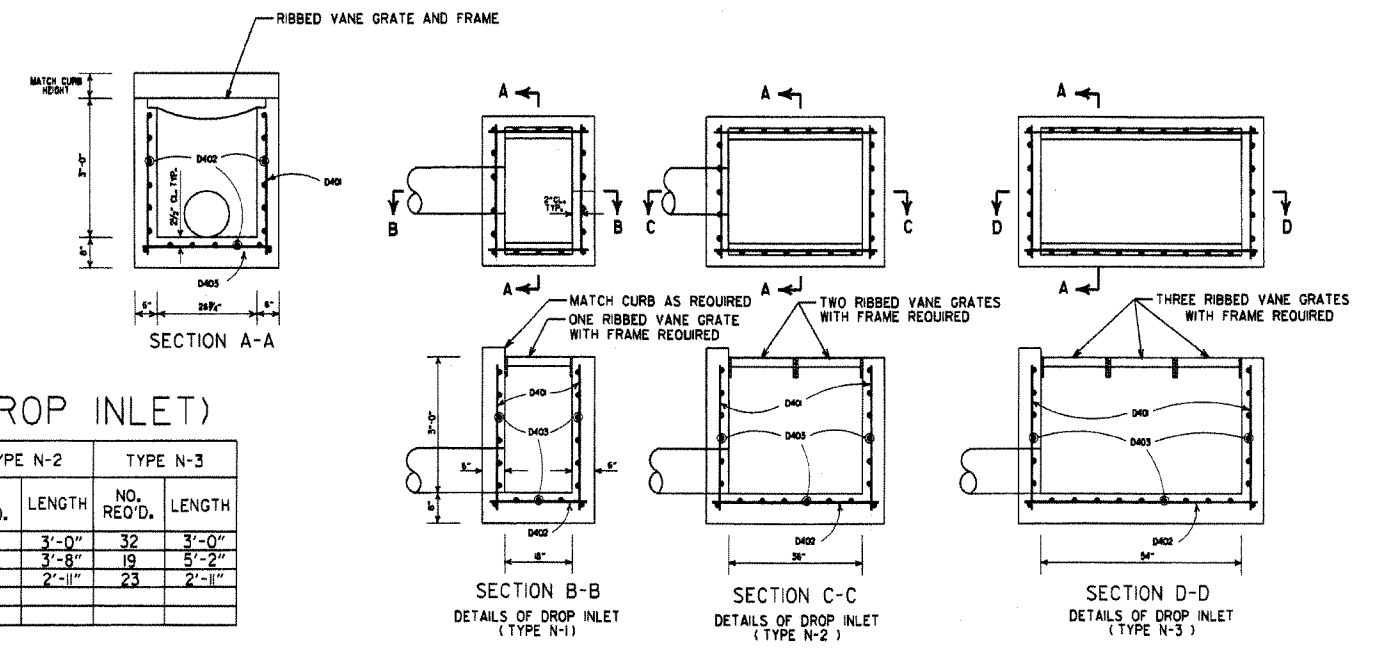
BAR LIST
(CONCRETE SPILLWAY)

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"

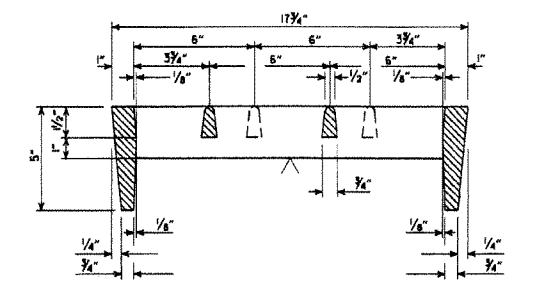
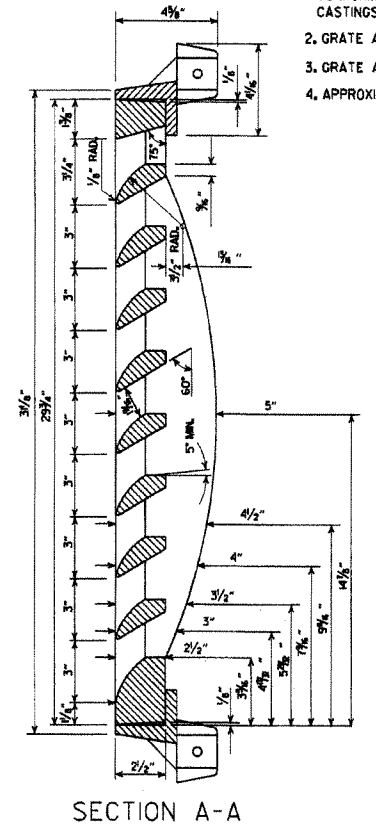
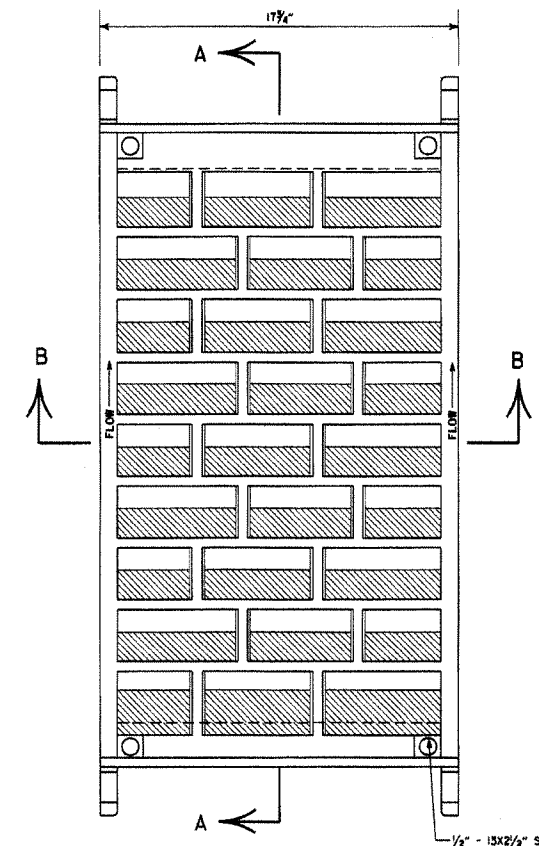
ALL BARS #4 @ 6" SPACING



DETAILS OF DROP INLET

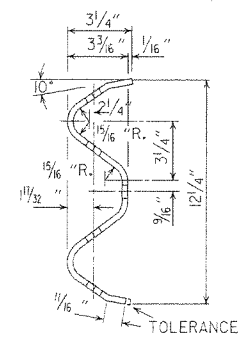
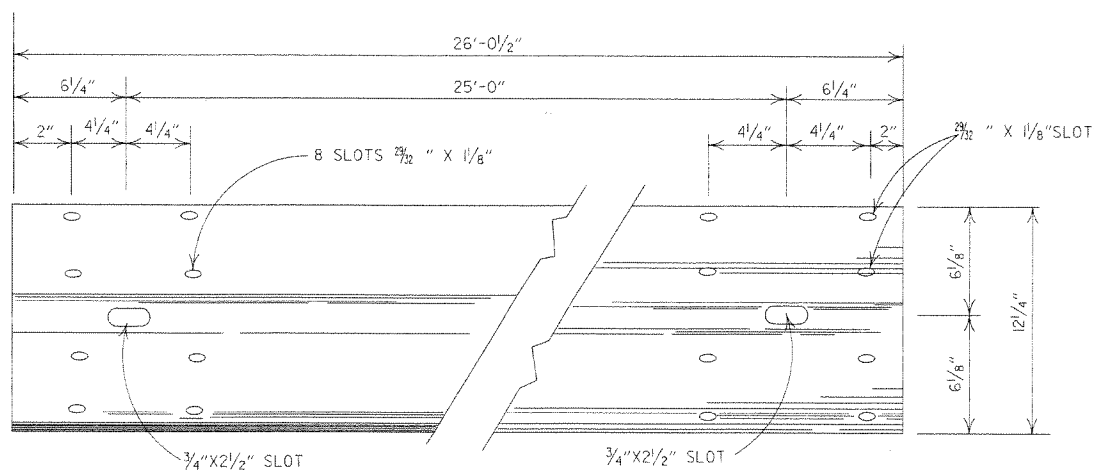
GENERAL NOTES (GRATE & FRAME)

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.

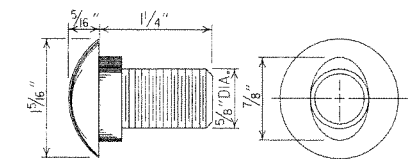


DETAILS OF RIBBED VANE GRATE AND FRAME

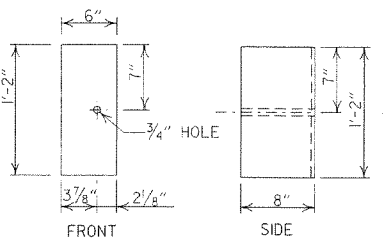
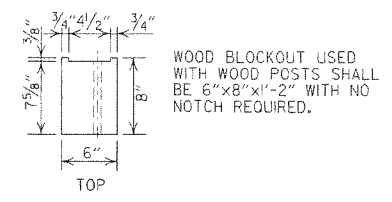
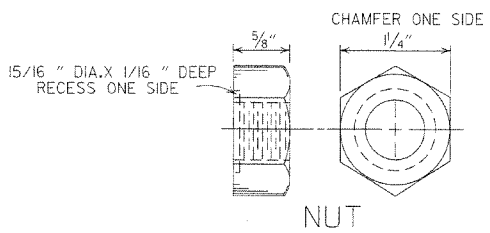
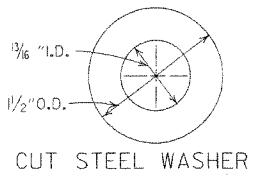
DATE REVISED	DATE FILMED	DESCRIPTION	ARKANSAS STATE HIGHWAY COMMISSION DETAILS OF DROP INLETS AND SPILLWAY OUTLET STANDARD DRAWING FPC-9N
7-02-98	7-2-98	REVISED SECT. A-A DETAIL OF DROP INLET & ADDED AASHTO REF. TO NOTE 1, REVISED GRATE	
10-18-96		REVISED ASTM REF. TO AASHTO	
8-15-91		ISSUED	



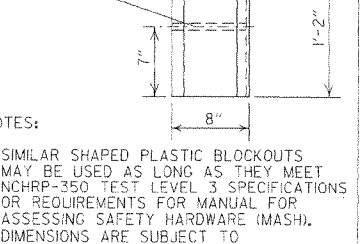
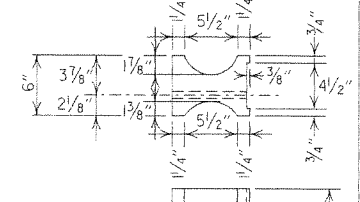
DETAILS OF W-BEAM GUARD RAIL
RAIL SECTION OF CLOSELY SIMILAR DIMENSIONS AND COMPARABLE STRENGTH MAY BE SUBSTITUTED IF APPROVED BY THE ENGINEER.



SPLICE BOLT
POST BOLT - SAME EXCEPT LENGTH

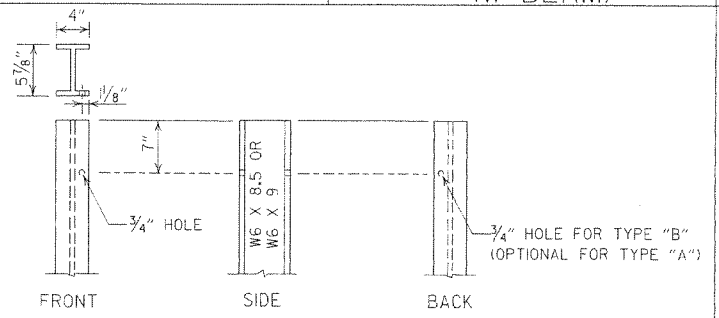


WOOD BLOCKOUT (W-BEAM)

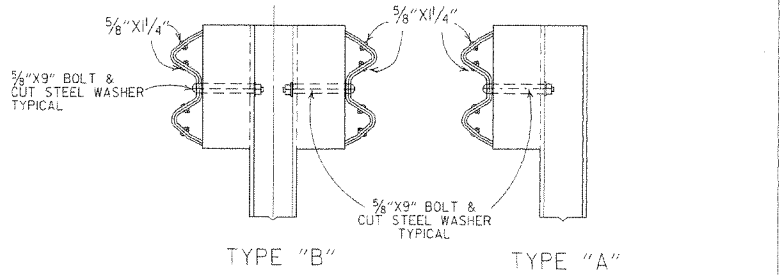


PLASTIC BLOCKOUT (W-BEAM)

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.



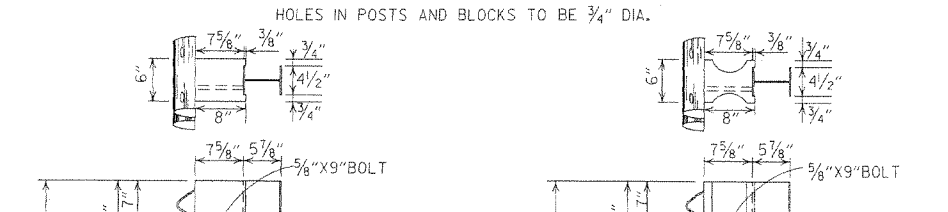
STEEL POST



DETAILS OF STEEL LINE POST CONNECTIONS (W-BEAM)

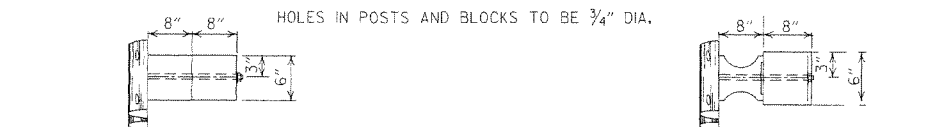
-GENERAL NOTES-

ALL BOLTS SHALL BE SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN 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 9.7f (1400 f) OR NO. 1 350 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.



WOOD BLOCKOUT CONNECTIONS PLASTIC BLOCKOUT CONNECTIONS

DETAILS OF STEEL LINE POST CONNECTIONS (W-BEAM)



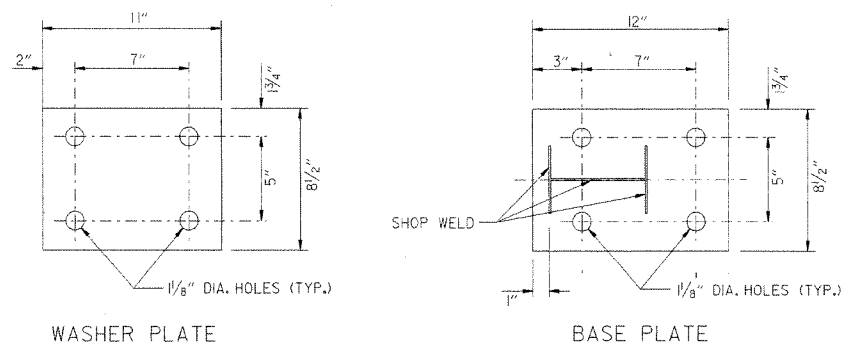
WOOD BLOCKOUT CONNECTIONS PLASTIC BLOCKOUT CONNECTIONS
DETAILS OF WOOD LINE POST CONNECTIONS (W-BEAM)

7-4-10	RAISED HEIGHT OF GUARD RAIL 1"	
10-15-09	ADDED REFERENCE TO MASH	
4-10-03	REVISED GENERAL NOTES	
8-22-02	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	
H-2-00	ADDED PLASTIC BLOCKOUT	
8-12-98	REV. BLOCKOUTS TO WOOD, DELETED CONC. POST & REV. GENERAL NOTE, DELETED DET. OF GUARD RAIL REPLACE. BEHIND CURB & DET. OF POST PLACE IN SOLID ROCK, & ADDED DETAILS OF STEEL LINE POST CONN. REMOVED BACK-UP PLATE, REVISED HOLES IN STEEL POLES	
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	8-5-91
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 FILM

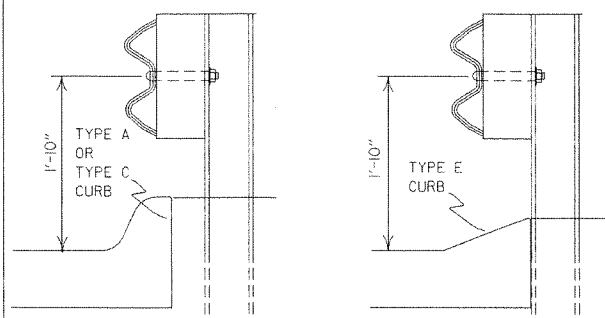
ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

STANDARD DRAWING GR-8



Note: Bolts, nuts, washers and plates shall be galvanized in accordance with Section 807 of the Standard Specifications.

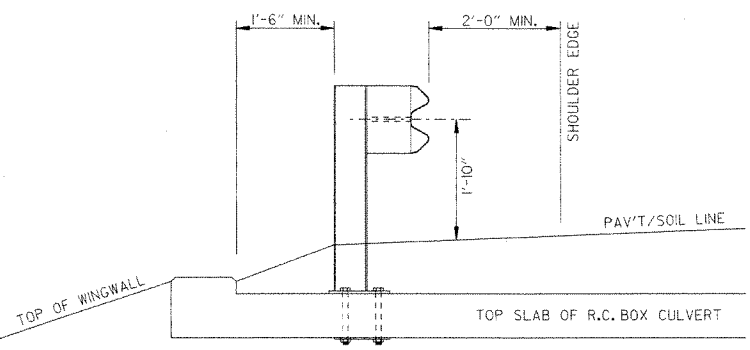


FOR DESIGN SPEEDS OF 50 MPH OR LESS
ALIGN FACE OF GUARD RAIL WITH FACE OF CURB.

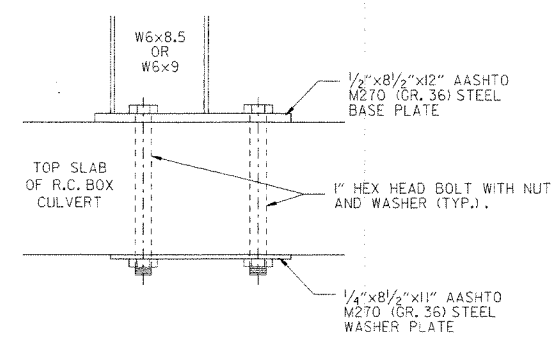
FOR DESIGN SPEEDS OF 55 MPH OR MORE
PLACE GUARD RAIL POSTS AGAINST BACK OF CURB.

DETAIL OF GUARD RAIL PLACEMENT BEHIND CURB (W-BEAM)

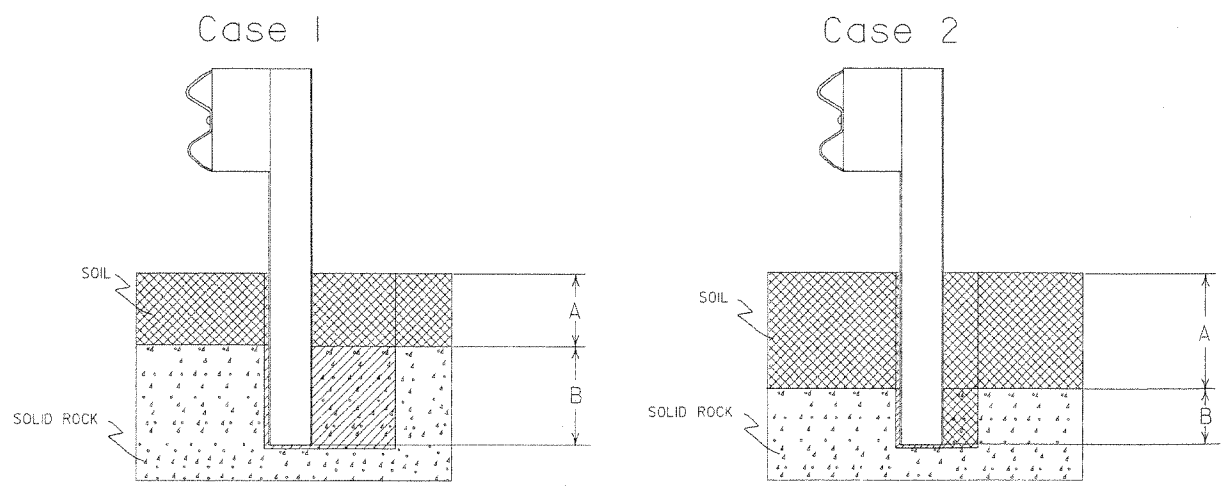
FOR DESIGN SPEEDS OF 50 MPH OR LESS ALL CURB FACES, AS SHOWN ON STD. DRWG. CG-1, MAY BE USED. FOR DESIGN SPEEDS OF 55 MPH OR MORE TYPE "E" CURB FACE SHALL BE USED.



SECTION A-A

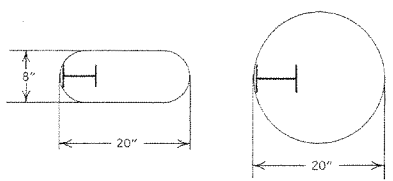


DETAIL OF CONNECTION



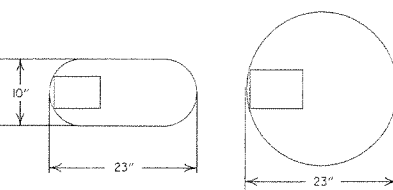
Plan View Steel Posts

Either hole configuration acceptable



Plan View Wood Posts

Either hole configuration acceptable



Notes: For overlying soil depths (A) ranging from 0 to 18", the depth of required drilling (B) is equal to 24".

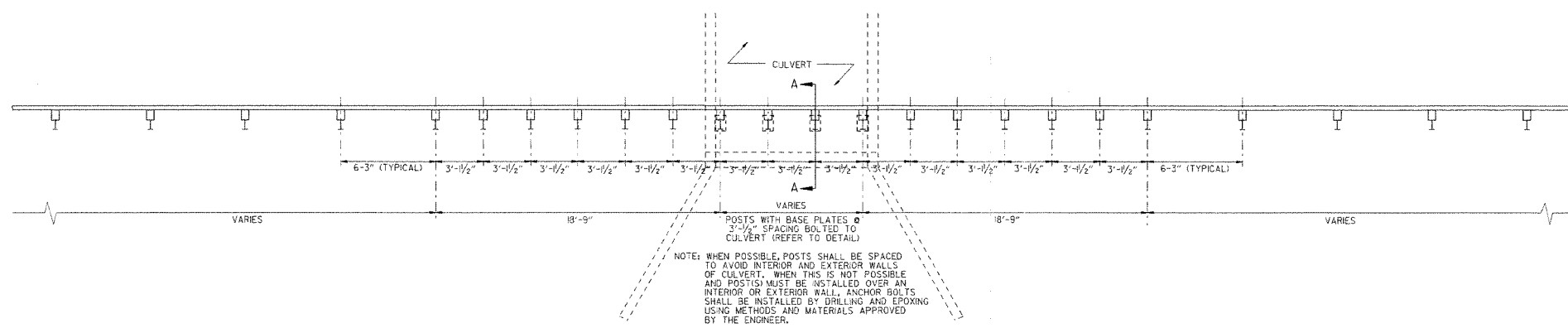
Zone A: Backfill according to Section 617.03(a).

Zone B: Backfill hole in 6" lifts with material meeting the requirements of Section 802.02(c) - Alternate gradation. Compact to 95% maximum dry density per ASTM D-698.

Notes: For overlying soil depths (A) ranging from 18" to 44", the depth of required drilling (B) is equal to either 12" or 44" minus the depth of soil whichever is less.

Zone A & B: Backfill according to Section 617.03(a).

DETAIL OF POST PLACEMENT IN SOLID ROCK (W-BEAM)



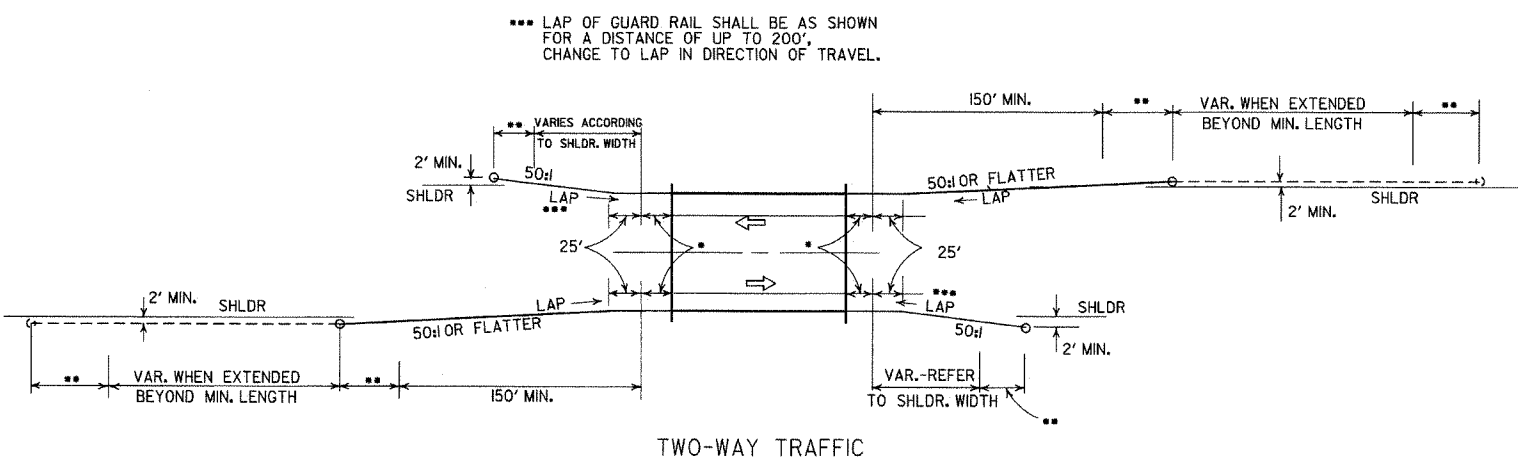
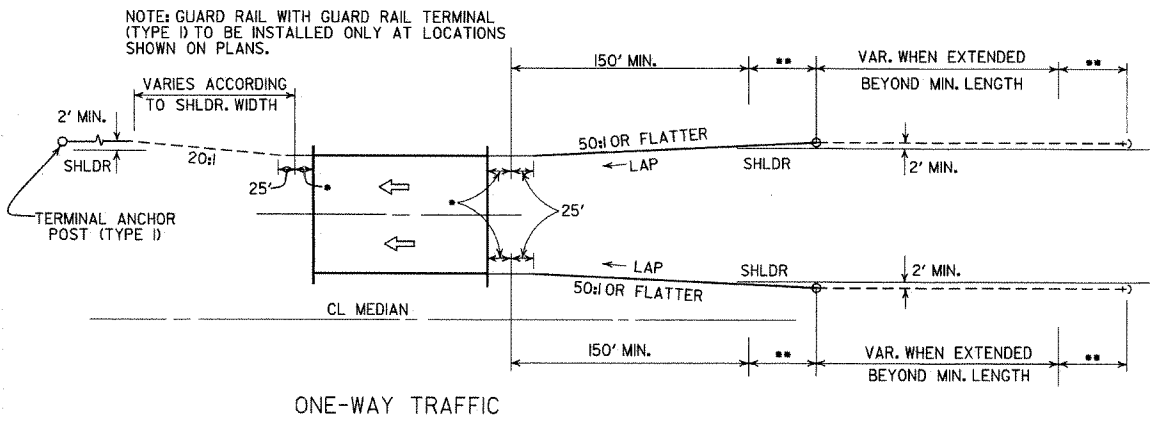
PLAN LAYOUT OF TYPE A GUARD RAIL AT LOW-FILL CULVERTS
NOTE: THIS DETAIL IS TO BE USED ONLY WHEN THE COVER OVER THE CULVERT DOES NOT PERMIT FULL EMBEDMENT OF GUARD RAIL POSTS AS SHOWN ON STD. DRWG. GR-8.

7-14-10	RAISED HEIGHT OF GUARD RAIL 1"	
4-12-07	REVISED DETAIL OF GUARD RAIL PLACEMENT BEHIND CURB	
11-10-05	ADDED GUARD RAIL PLACEMENT BEHIND CURB; REVISED DETAIL OF CONNECTION	
11-18-04	REVISED POST PLACEMENT IN ROCK & CULVERT CONNECTION DETAILS. ADDED DETAIL FOR GUARD RAIL PLACEMENT AT LOW-FILL CULVERTS	
3-30-00	REMOVED CONCRETE INSERT ANCHOR	
8-12-98	CHANGED STEEL SPACER BLOCK TO WOOD BLOCKOUT, ADD. DET. OF GUARD RAIL CONNECTION TO R.C. BOX CULVERT. DELETED DET. OF STEEL LINE POST CONN. & ADDED DET. OF GUARD RAIL PLACE. BEHIND CURB & DET. OF POST PLACE. IN SOLID ROCK	
4-3-96	PLACED ARROWS AT CUT STEEL WASHERS	4-3-96
10-18-96	REV. ASTM REF. TO AASHTO	
1-22-95	ADDED OPTIONAL HOLES	
6-2-94	REVISED ALTERNATE POST SIZE	
8-5-93	REVISED STEEL POST SIZE	
10-1-92	REDRAWN & REVISED	10-1-92
8-2-90	DEL. WASHER ON ANCHOR ASSEMBLY	8-2-90
7-15-88	CONFORMED TO 1988 SPECS	
3-4-88	REVISED ANCHOR NOTE	
10-30-87	REVISED ANCHOR ASSEMBLY	10-30-87
10-30-87	REVISED PLACEMENT BEHIND CURB	547-10-30-87
10-9-87	REDRAWN & REVISED	803-10-9-87
DATE	REVISION	DATE FILM

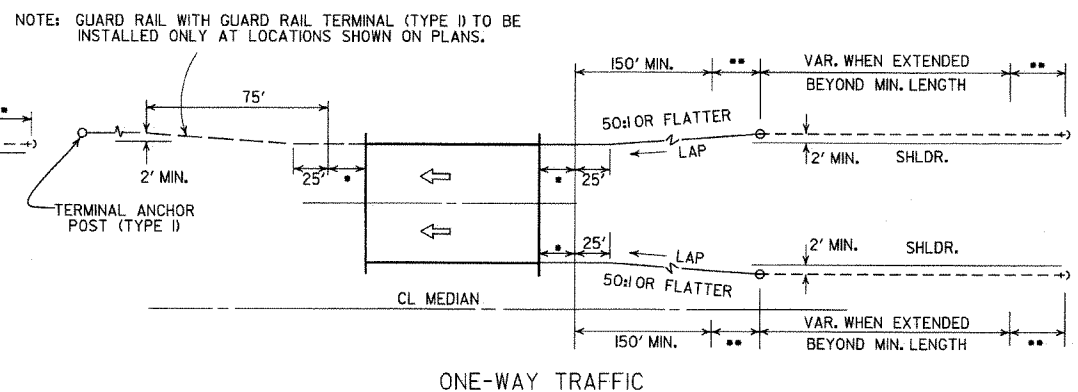
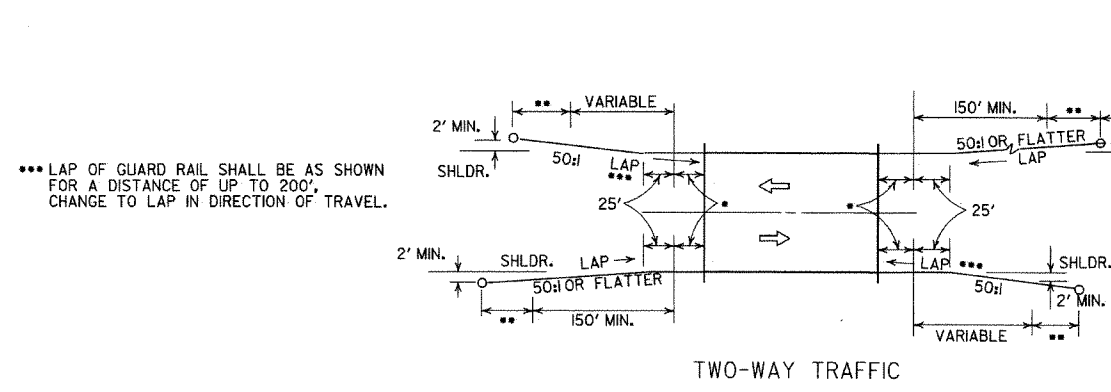
ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

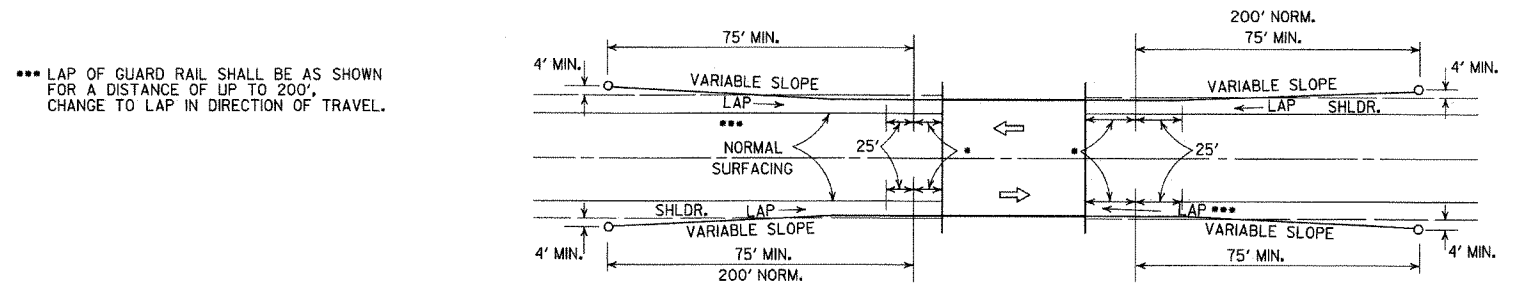
STANDARD DRAWING GR-8A



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)

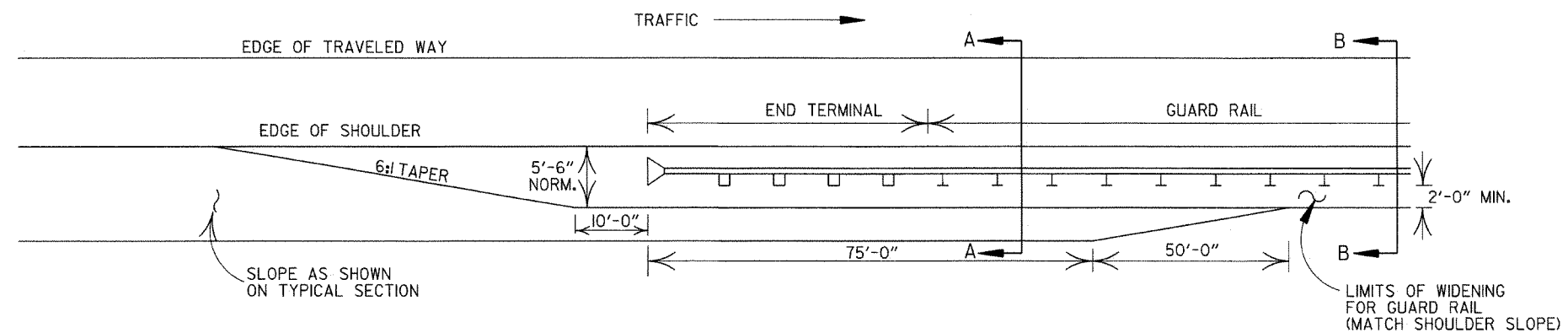


LEGEND

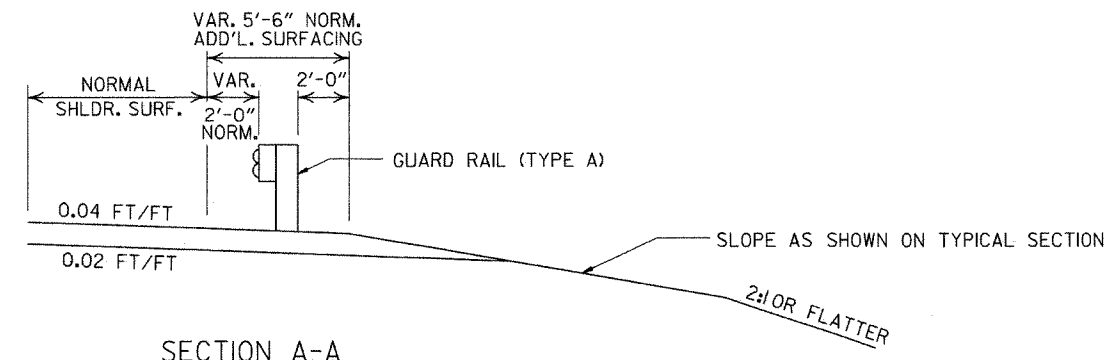
- THRIE BEAM GUARD RAIL TERMINAL
- GUARD RAIL TERMINAL (TYPE 2)

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

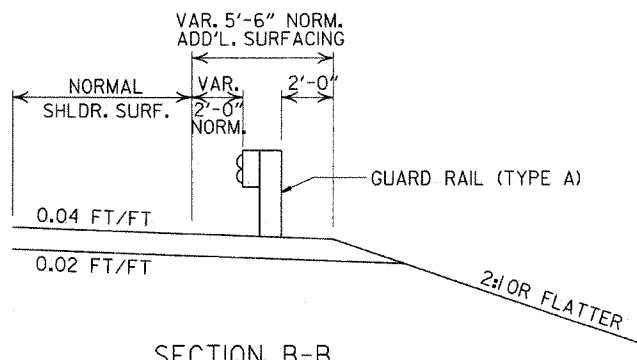
ARKANSAS STATE HIGHWAY COMMISSION		
GUARD RAIL DETAILS		
STANDARD DRAWING GR-9		
4-17-08	REVISED LAYOUTS	
11-10-05	REMOVED GUARD RAIL NOTES AND DETAILS	
11-16-01	DELETED NOTE-METHOD OF INSTALLATION OF GUARD RAIL USING GUARD RAIL TERM. (TY. I)	
1-12-00	ADDED CONSTRUCTION NOTE	1-12-00
6-26-97	REVISED LAYOUT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



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

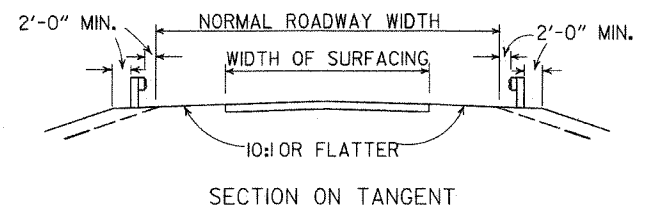


SECTION A-A

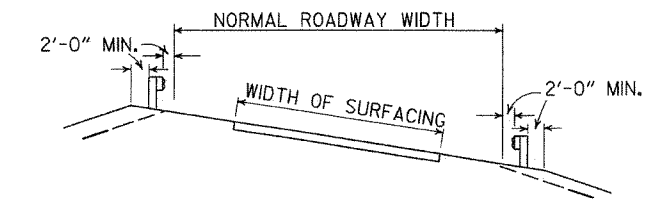


SECTION B-B

DETAILS OF WIDENING FOR GUARD RAIL

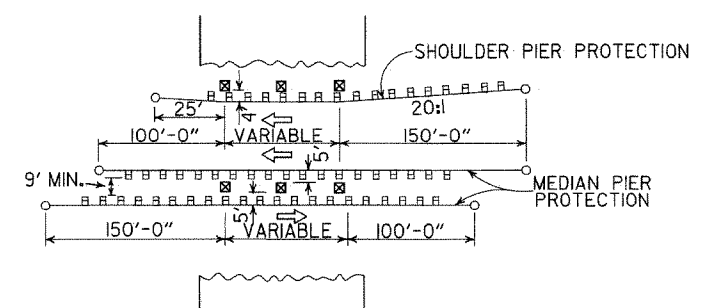


SECTION ON TANGENT



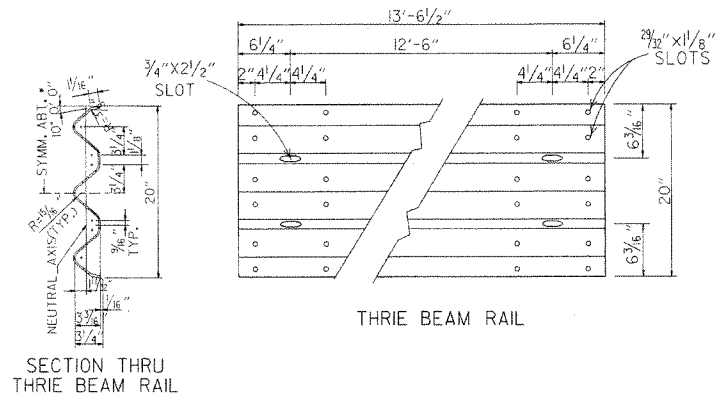
SECTION ON CURVE

DETAILS SHOWING POSITION OF GUARD RAIL ON HIGHWAY

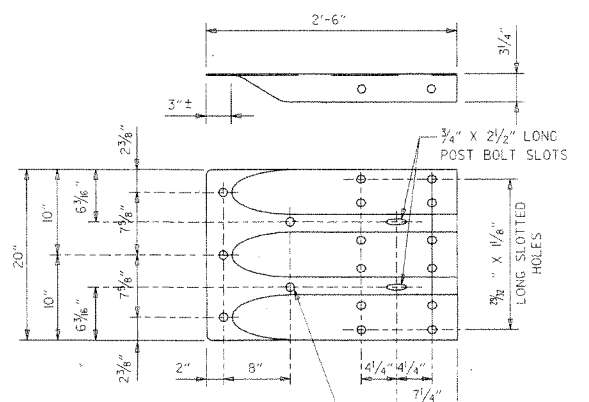


METHOD OF INSTALLATION OF GUARD RAIL AT FIXED OBSTACLE

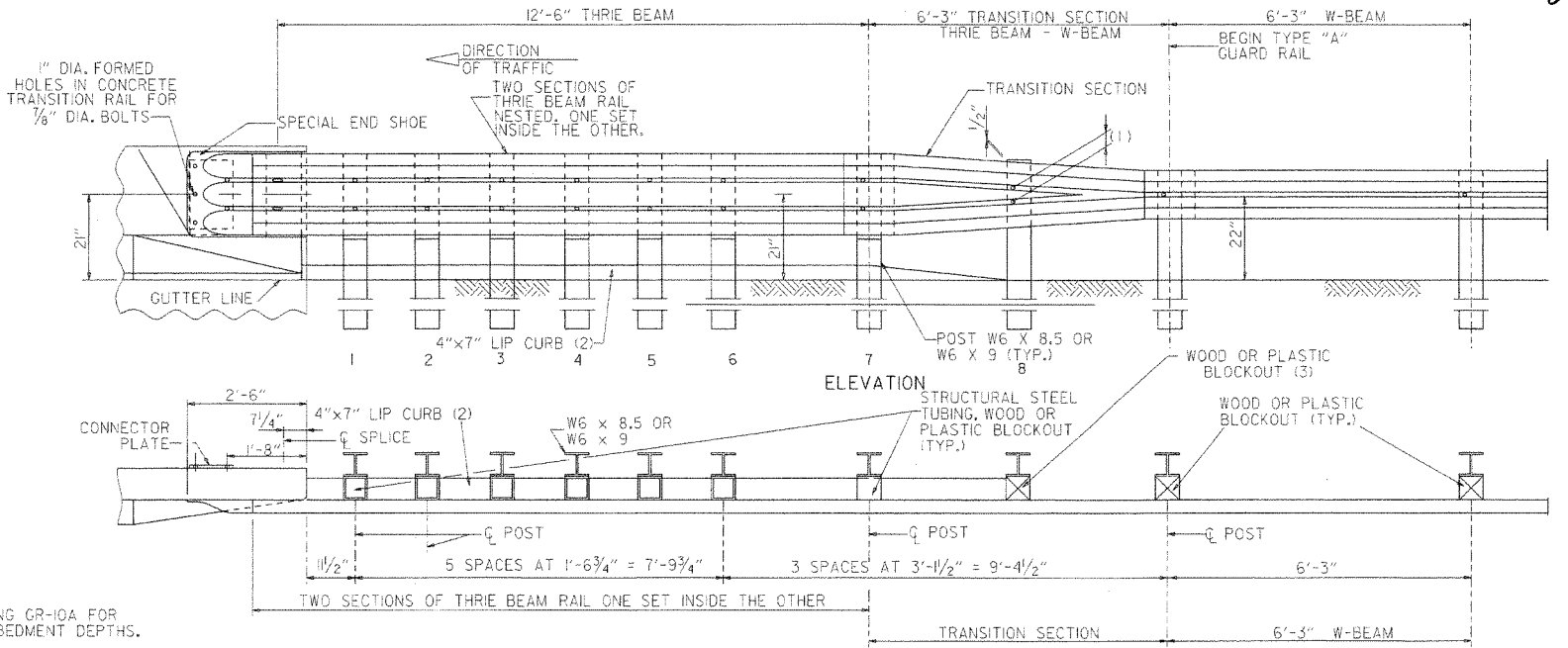
ARKANSAS STATE HIGHWAY COMMISSION			
GUARD RAIL DETAILS			
4-17-08	MINOR REVISION		
11-10-05	DRAWN		
DATE	REVISION	DATE	FILM
STANDARD DRAWING GR-9A			



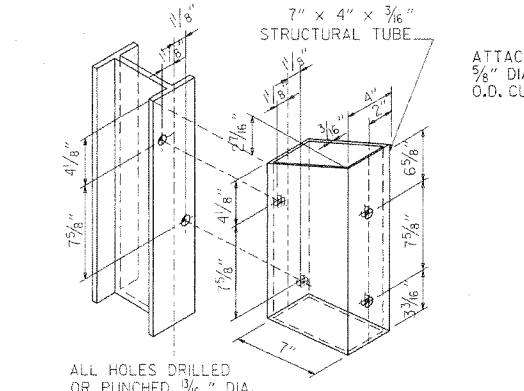
THRIE BEAM RAIL



SPECIAL END SHOE

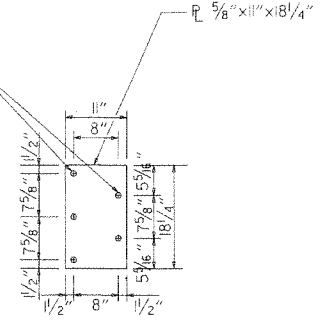


ELEVATION



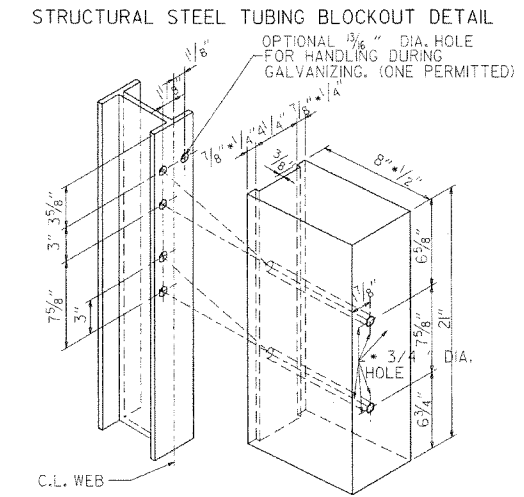
ATTACH BLOCKOUT TO POST USING 5/8" DIA. HEX HEAD BOLTS WITH 1 1/2" O.D. CUT STEEL WASHERS AND NUT.

1" DIA. HOLES (TYP.) FOR 7/8" DIA. HIGH-STRENGTH BOLTS



CONNECTOR PLATE

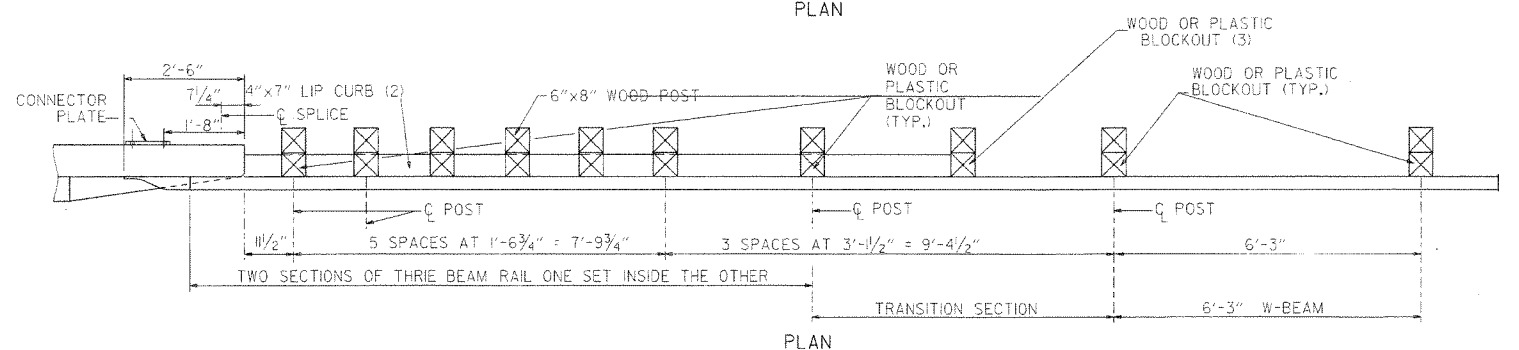
CONNECTOR PLATE SHALL BE AASHTO M270, GR. 36 AND SHALL BE GALVANIZED AFTER FABRICATION. GALVANIZING SHALL CONFORM TO SUBSECTION 807.19 OF THE STANDARD SPECIFICATIONS. CONNECTOR PLATE TO BE BOLTED TO SPECIAL END SHOE USING 7/8" DIA. HIGH STRENGTH BOLTS, WITH THE HEADS PLACED ON THE TRAFFIC FACE. WASHERS SHALL BE USED UNDER THE HEAD AND NUT. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AND SHALL CONFORM TO SUBSECTION 807.06.



ALL HOLES 3/4" DIAMETER EXCEPT AS NOTED

HOLE PUNCHING DETAIL FOR STEEL POST & WOOD OR PLASTIC BLOCKOUTS

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

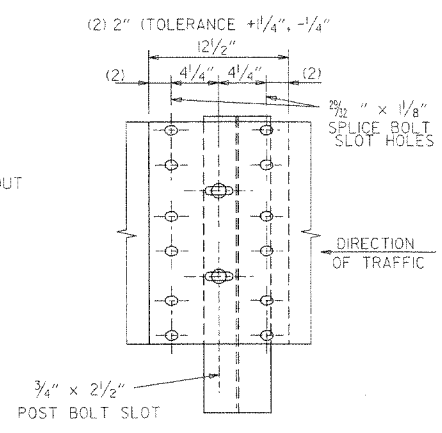


PLAN

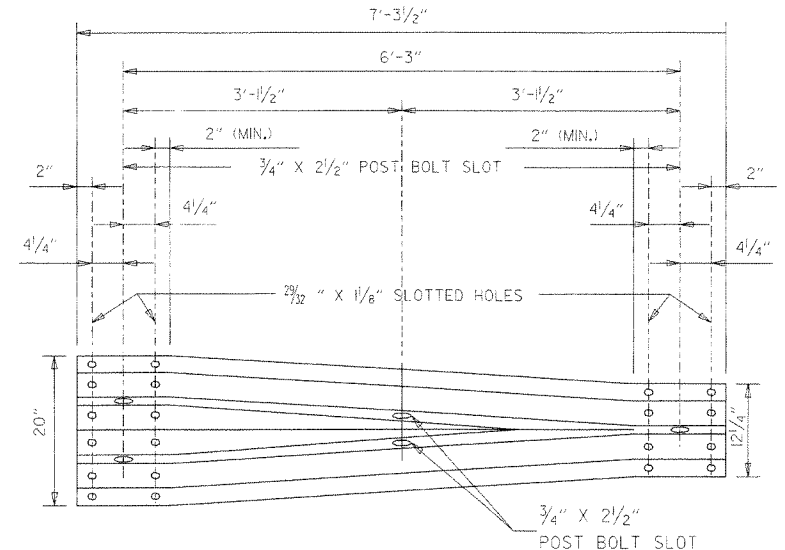
PLAN

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

THRIE BEAM GUARD RAIL CONNECTION AT BRIDGE ENDS



THRIE BEAM RAIL SPLICE AT POST



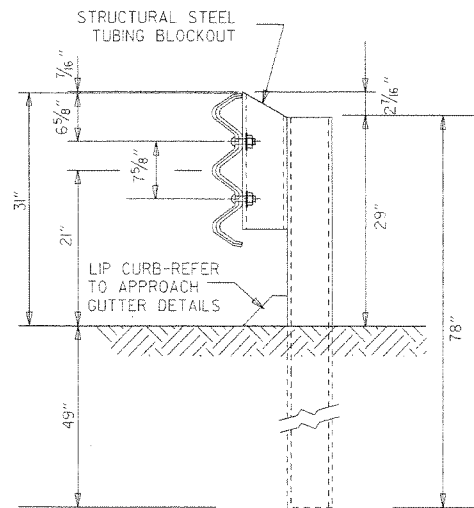
TRANSITION SECTION

GENERAL NOTES:

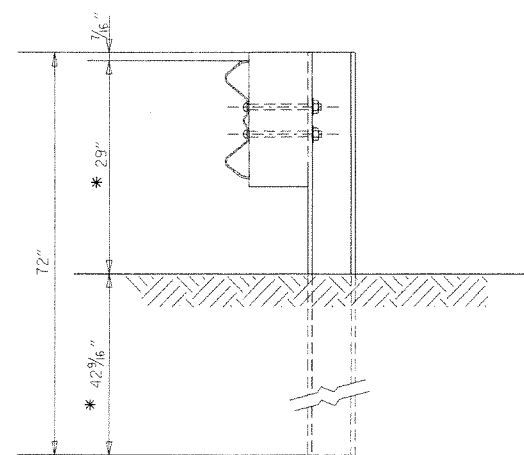
- THE THRIE BEAM RAIL, SPECIAL END SHOE, AND THE TRANSITION SECTION SHALL BE MADE OF STEEL AND SHALL BE 12 GAGE. ZINC COATING SHALL BE TYPE I.
- RAIL POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION.
- ALL BOLTS SHALL BE SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN 3/4" BEYOND IT.
- ALL LAP SPLICES, INCLUDING SPECIAL END SHOES, SHALL BE MADE IN THE DIRECTION SHOWN ON STANDARD DRAWINGS GR-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.

DATE	REVISION	DATE FILM
7-14-10	RAISED HEIGHT OF W-BEAM 1"	
11-29-07	ADDED PLASTIC BLOCKOUTS	
11-10-05	ADDED NOTE FOR ATTACHING STEEL BLOCKOUT	
11-18-04	REVISED GENERAL NOTES	
10-9-03	REVISED GENERAL NOTES	
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	

ARKANSAS STATE HIGHWAY COMMISSION		
GUARD RAIL DETAILS		
STANDARD DRAWING GR-10		

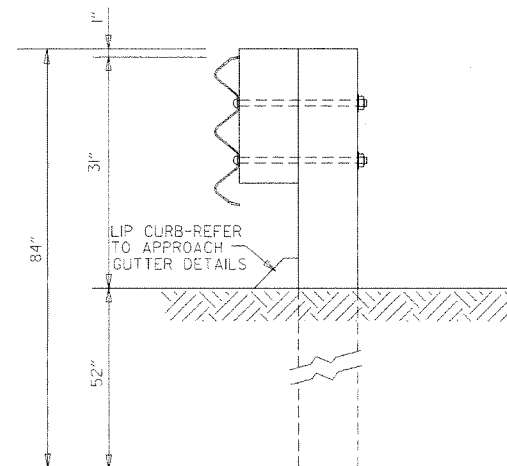


THRIE BEAM RAIL WITH STEEL TUBING BLOCKOUT AND STEEL POST POSTS 1-7

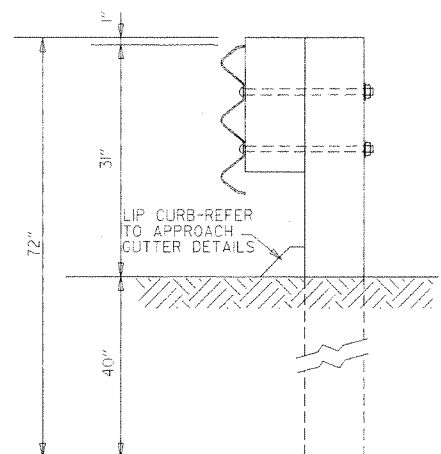


W-BEAM TO THRIE BEAM TRANSITION RAIL WITH WOOD OR PLASTIC BLOCKOUT AND STEEL POST POST 8

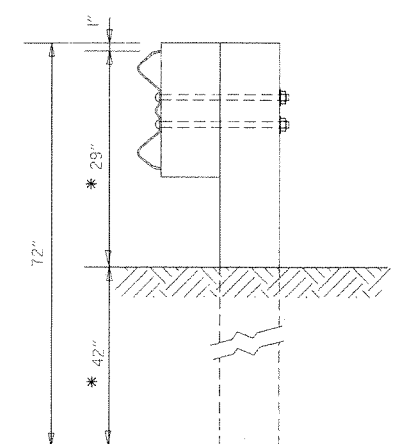
* NOTE:
THESE DIMENSIONS WILL NEED TO BE ADJUSTED IN THE FIELD TO MAKE THE TRANSITION FROM 21" MID POINT OF THRIE BEAM TO 22" MID POINT OF W-BEAM.



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



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



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

GENERAL NOTES:
RAIL POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION.
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7 f (1400 f) OR NO. 1 350 f SOUTHERN PINE.

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

ARKANSAS STATE HIGHWAY COMMISSION
GUARD RAIL DETAILS
STANDARD DRAWING GR-10A

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				
ZINC COATED	UNCOATED	ALUMINUM		
0.064	0.0598	0.060		16
0.079	0.0747	0.075		14
0.109	0.1046	0.105		12
0.138	0.1345	0.135		10
0.168	0.1644	0.164	8	

CORRUGATED ALUMINUM PIPE (ROUND)

PIPE DIAMETER (INCHES)	① MINIMUM COVER TOP OF PIPE TO TOP OF GROUND "H" (FEET)	MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET)				
		METAL THICKNESS IN INCHES				
		0.060	0.075	0.105	0.135	0.164
2 3/8 INCH BY 1/2 INCH CORRUGATION RIVETED OR HELICAL LOCK-SEAM						
12	1	45	45	52		
18	2	30	30	39		
24	2	22	22	31	41	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	34
60	2				31	31
66	2				29	29
72	2					

CORRUGATED METAL PIPE ARCHES

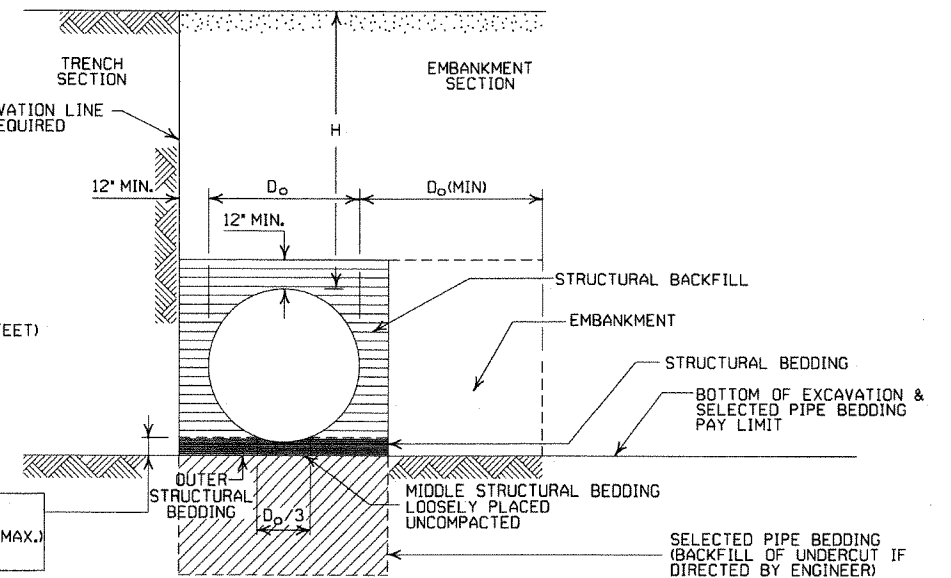
EQUIV. DIA. (INCHES)	PIPE DIMENSION SPAN X RISE (INCHES)	MINIMUM CORNER RADIUS (INCHES)	STEEL				ALUMINUM			
			MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)		MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)			
				INSTALLATION	INSTALLATION		INSTALLATION	INSTALLATION		
				TYPE 1	TYPE 1		TYPE 1	TYPE 1		
2 3/8 INCH BY 1/2 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM										
15	17x13	3	0.064	2	15	0.060	2	15		
18	21x15	3	0.064	2	15	0.060	2	15		
21	24x18	3	0.064	2.25	15	0.060	2.25	15		
24	28x20	3	0.064	2.5	15	0.075	2.5	15		
30	35x24	3	0.079	3	12	0.075	3	12		
36	42x29	3/2	0.079	3	12	0.105	3	12		
42	49x33	4	0.079	3	12	0.105	3	12		
48	57x38	5	0.109	3	13	0.135	3	13		
54	64x43	6	0.109	3	14	0.135	3	14		
60	71x47	7	0.138	3	15	0.164	3	15		
66	77x52	8	0.168	3	15					
72	83x57	9	0.168	3	15					
② 3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM										
			INSTALLATION				INSTALLATION			
			TYPE 2		TYPE 1		TYPE 2		TYPE 1	
36	40x31	5	0.079	3	2	12	15			
42	46x36	6	0.079	3	2	13	15			
48	53x41	7	0.079	3	2	13	15			
54	60x46	8	0.079	3	2	13	15			
60	66x51	9	0.079	3	2	13	15			
66	73x55	12	0.079	3	2	15	15			
72	81x59	14	0.079	3	2	15	15			
78	87x63	14	0.079	3	2	15	15			
84	95x67	16	0.109	3	2	15	15			
90	103x71	16	0.109	3	2	15	15			
96	112x75	18	0.109	3	2	15	15			
102	117x79	18	0.109	3	2	15	15			
108	128x83	18	0.138	3	2	15	15			

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

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

- LEGEND -

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



EMBANKMENT AND TRENCH INSTALLATIONS

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

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

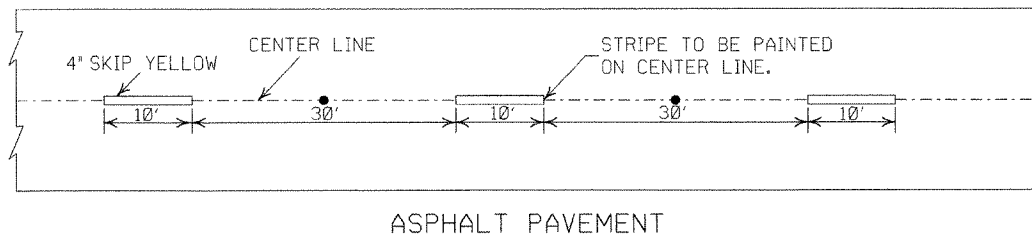
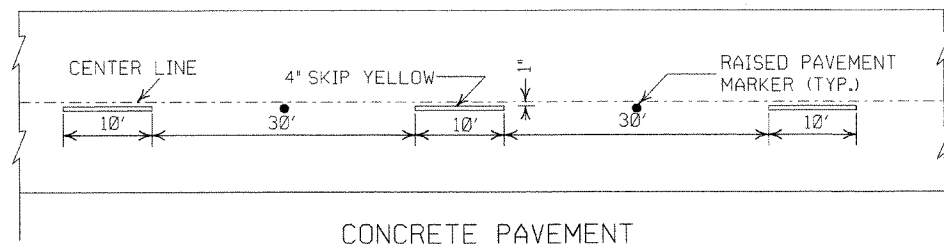
ARKANSAS STATE HIGHWAY COMMISSION

METAL PIPE CULVERT
FILL HEIGHTS & BEDDING

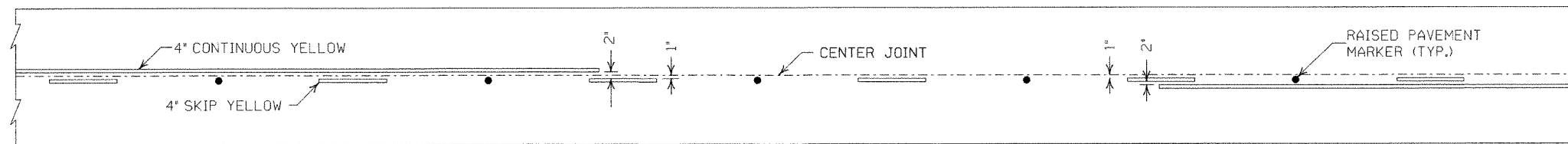
STANDARD DRAWING PCM-1

NOTES:

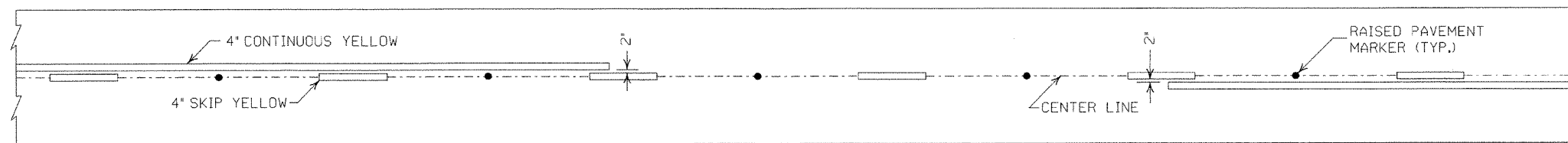
1. ALL LINES SHALL HAVE A WIDTH OF 4 INCHES.
2. THE THICKNESS AND RATE OF PAINT APPLICATION SHALL BE AS SPECIFIED IN SECTION 718 OF THE STANDARD SPECIFICATIONS.
3. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
4. RAISED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



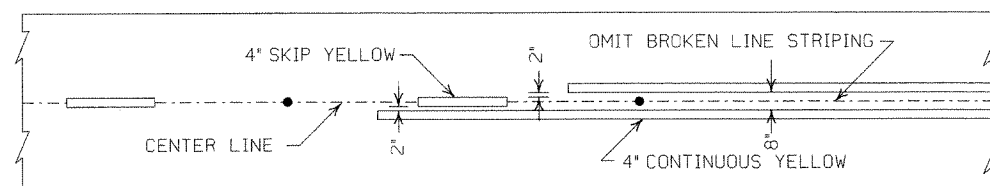
BROKEN LINE STRIPING



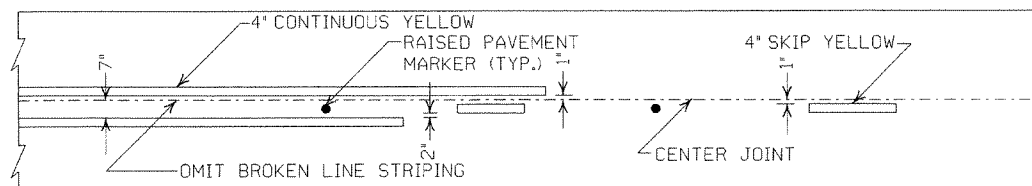
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

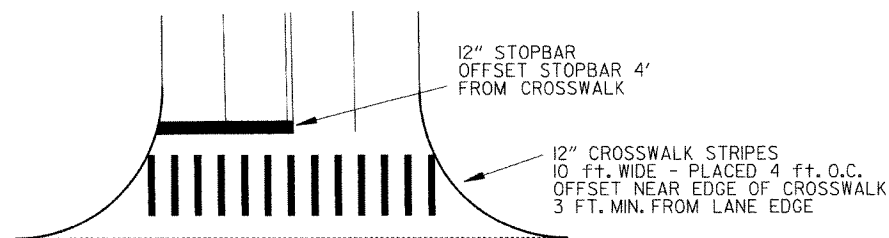


ASPHALT PAVEMENT



CONCRETE PAVEMENT

STRIPING AT ADJACENT NO PASSING LANES



CROSSWALK AND STOPBAR DETAILS

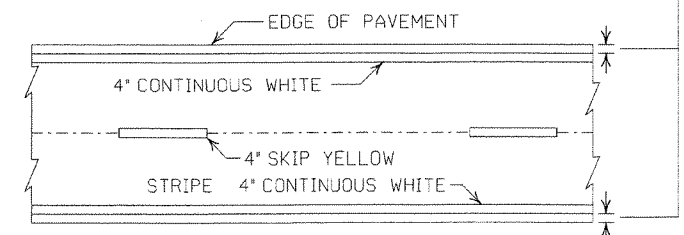
GENERAL NOTES:

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.

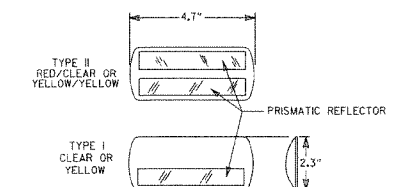
THIS DRAWING SHOULD BE USED IN CONJUNCTION WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST REVISION.

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.

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



PAVEMENT EDGE LINE MARKING



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

DETAIL OF STANDARD RAISED PAVEMENT MARKERS

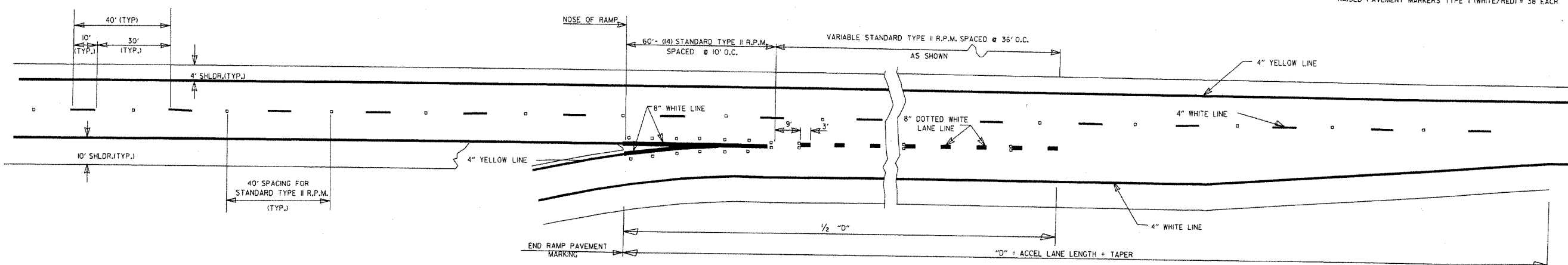
DATE	REVISION	FILMED
11-17-10	REVISED GENERAL NOTES & REMOVED PLOWABLE PVMT MRKRS	
11-18-04	REVISED NOTE 2 & GENERAL NOTES	
8-22-02	ADDED CROSSWALK & STOPBAR DTLS.	
7-02-98	ADDED DETAILS OF STD. RAISED PAV'T. MARKERS	
4-26-96	REV. NOTES 3&4; ADDED R.P.M.	
9-30-80	DRAWN	1-9-30-80

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

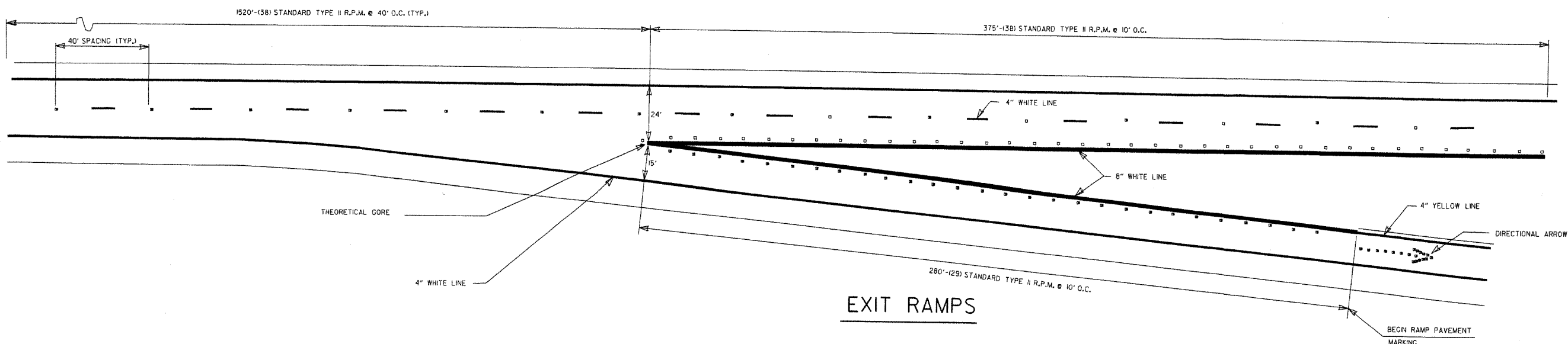
PAVEMENT MARKING QUANTITIES
 (BASED ON 700' ACCEL. LANE + 300' TAPER)

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

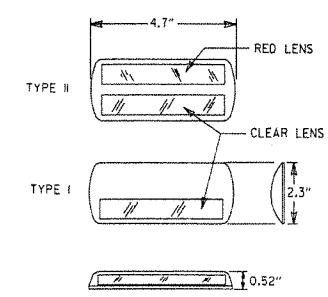
EXIT RAMP
 4" WHITE = 280 LIN. FT.
 8" WHITE = 655 LIN. FT.
 RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH
 RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 48 EACH
 RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH



ENTRANCE RAMPS

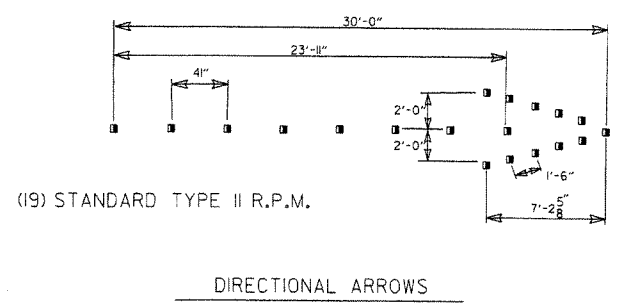


EXIT RAMPS



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.

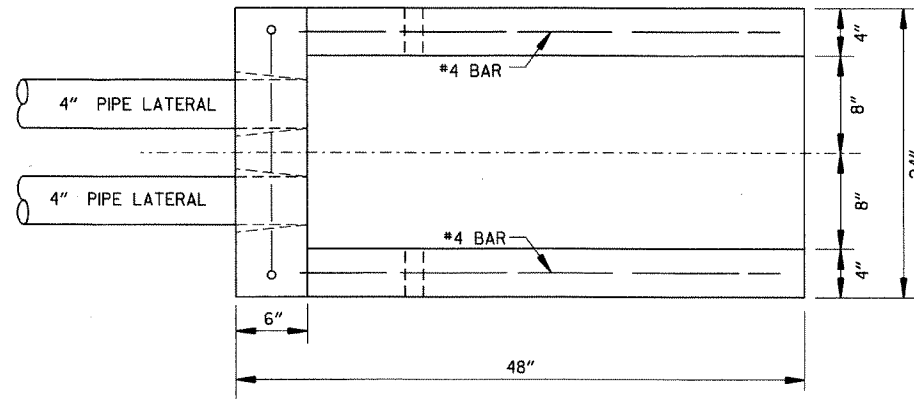
THIS DRAWING SHOULD BE USED IN CONJUNCTION WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST REVISION.

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.

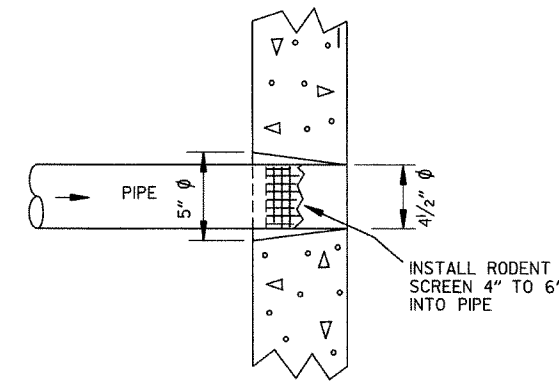
DATE	REVISION	FILMED
7/26/12	REVISED RPM NOTATION	
12-15-11	REVISED RPMs ACCORDING TO LATEST POLICY	
11-17-10	REMOVED PLOWABLE PAVEMENT MARKERS	
6-3-10	REVISED PER 2009 MUTCD	
11-18-04	REVISED NOTES	
8-22-02	ADDED & REVISED NOTES; REV. ENTRANCE & EXIT RAMPS	
5-18-00	REMOVED HASHMARKS	
7-02-98	CHANGED 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

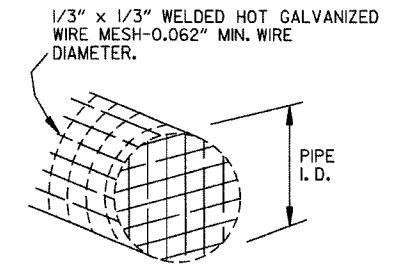
NOTE:
 1. GRANULAR BACKFILL TO BE SUBSIDIARY TO PIPE UNDERDRAIN.
 2. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THOROUGHLY COMPACTED EARTH AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.
 3. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC, LAP FABRIC 12" OR THE WIDTH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



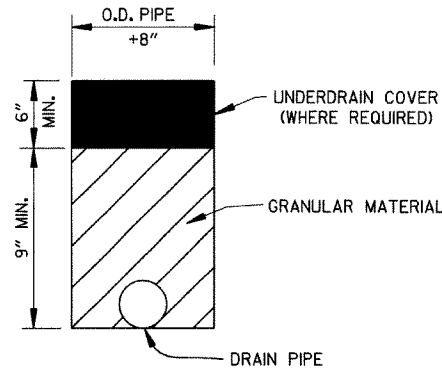
PLAN VIEW



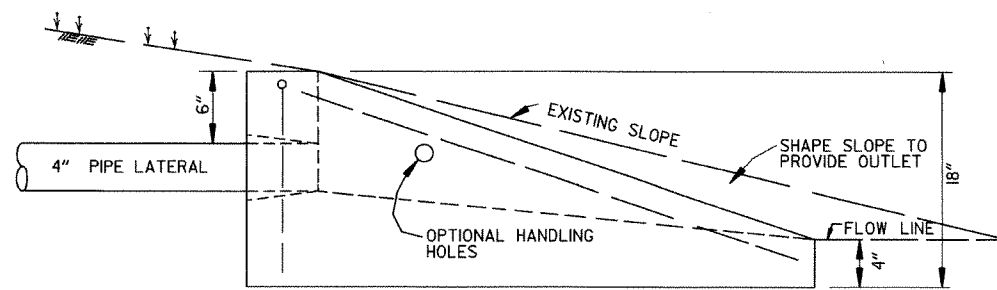
DETAIL OF HOLE FOR 4" PIPE



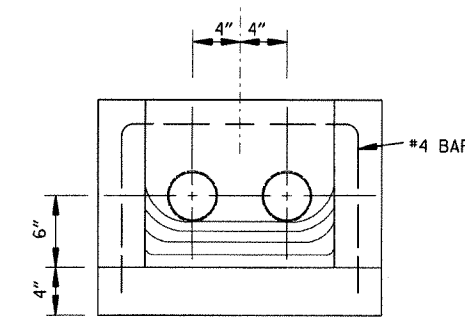
DETAIL OF RODENT SCREEN



DETAILS OF PIPE UNDERDRAIN



SIDE VIEW

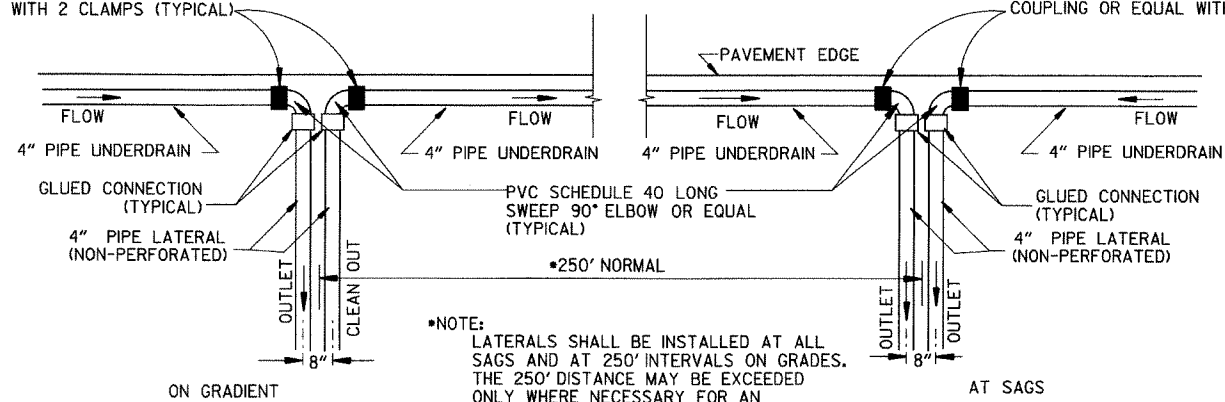


FRONT VIEW

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

UNDERDRAIN OUTLET PROTECTORS

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



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

DETAIL OF PIPE UNDERDRAIN LATERALS WHEN PLACED ALONG PAVEMENT EDGE

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

4-10-03	REVISED NOTE 3	
1-12-00	REVISED DETAIL OF UNDERDRAIN LATERALS	
11-18-98	REVISED NOTE	
10-18-96	REVISED MIN. DEPTH & GEOTEXTILE FABRIC	
4-26-96	ADDED LATERAL NOTE; 5 1/2" TO 5"	
11-22-95	REVISED LATERALS	
7-20-95	REVISED LATERALS & ADDED NOTE	
11-3-94	REVISED FOR DUAL LATERALS	11-3-94
10-1-92	SUBSTITUTED GEOTEXTILE	10-1-92
8-15-91	ADDED POLYETHYLENE PIPE	8-15-91
11-8-90	DELETED ALTERNATE NOTE	11-8-90
1-25-90	ADDED 4" SNAP ADAPTER	1-25-90
11-30-89	DEL. (SUBGRADE); ADDED (WHERE REQUIRED)	11-30-89
7-15-88	ISSUED P.L.M.	647-7-15-88
DATE	REVISION	DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF PIPE UNDERDRAIN

STANDARD DRAWING PU-1

SUPERELEVATION TABLE FOR 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
0.00°	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.
0.05°	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.
0.10°	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.
0.15°	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.
0.20°	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.
0.25°	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	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.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.
0.35°	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.
0.40°	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	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.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.
0.50°	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.
0.55°	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.
0.60°	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.
0.65°	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.
0.70°	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.
0.75°	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.
0.80°	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.
0.85°	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.
0.90°	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.
0.95°	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	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.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.
1.10°	150	250	175	250	200	300	225	350	250	350	275	350	275	350
1.20°	150	250	175	250	205	300	230	350	260	350	280	400	300	400
1.30°	150	250	175	250	215	300	245	350	275	350	295	400	315	400
1.40°	150	250	175	250	225	300	255	350	285	350	305	400	325	400
1.50°	150	250	175	250	235	300	265	350	295	350	315	400	335	400
1.60°	150	250	175	250	245	300	275	350	305	350	325	400	345	400
1.70°	150	250	175	250	255	300	285	350	315	350	335	400	355	400
1.80°	150	250	175	250	265	300	295	350	325	350	345	400	365	400
1.90°	150	250	175	250	275	300	305	350	335	350	355	400	375	400
2.00°	150	250	175	250	285	300	315	350	345	350	365	400	385	400
2.10°	150	250	175	250	295	300	325	350	355	350	375	400	395	400
2.20°	150	250	175	250	305	300	335	350	365	350	385	400	405	400
2.30°	150	250	175	250	315	300	345	350	375	350	395	400	415	400
2.40°	150	250	175	250	325	300	355	350	385	350	405	400	425	400
2.50°	150	250	175	250	335	300	365	350	395	350	415	400	435	400
2.60°	150	250	175	250	345	300	375	350	405	350	425	400	445	400
2.70°	150	250	175	250	355	300	385	350	415	350	435	400	455	400
2.80°	150	250	175	250	365	300	395	350	425	350	445	400	465	400
2.90°	150	250	175	250	375	300	405	350	435	350	455	400	475	400
3.00°	150	250	175	250	385	300	415	350	445	350	465	400	485	400
3.10°	150	250	175	250	395	300	425	350	455	350	475	400	495	400
3.20°	150	250	175	250	405	300	435	350	465	350	485	400	505	400
3.30°	150	250	175	250	415	300	445	350	475	350	495	400	515	400
3.40°	150	250	175	250	425	300	455	350	485	350	505	400	525	400
3.50°	150	250	175	250	435	300	465	350	495	350	515	400	535	400
3.60°	150	250	175	250	445	300	475	350	505	350	525	400	545	400
3.70°	150	250	175	250	455	300	485	350	515	350	535	400	555	400
3.80°	150	250	175	250	465	300	495	350	525	350	545	400	565	400
3.90°	150	250	175	250	475	300	505	350	535	350	555	400	575	400
4.00°	150	250	175	250	485	300	515	350	545	350	565	400	585	400
4.10°	150	250	175	250	495	300	525	350	555	350	575	400	595	400
4.20°	150	250	175	250	505	300	535	350	565	350	585	400	605	400
4.30°	150	250	175	250	515	300	545	350	575	350	595	400	615	400
4.40°	150	250	175	250	525	300	555	350	585	350	605	400	625	400
4.50°	150	250	175	250	535	300	565	350	595	350	615	400	635	400
4.60°	150	250	175	250	545	300	575	350	605	350	625	400	645	400
4.70°	150	250	175	250	555	300	585	350	615	350	635	400	655	400
4.80°	150	250	175	250	565	300	595	350	625	350	645	400	665	400
4.90°	150	250	175	250	575	300	605	350	635	350	655	400	675	400
5.00°	150	250	175	250	585	300	615	350	645	350	665	400	685	400
5.10°	150	250	175	250	595	300	625	350	655	350	675	400	695	400
5.20°	150	250	175	250	605	300	635	350	665	350	685	400	705	400
5.30°	150	250	175	250	615	300	645	350	675	350	695	400	715	400
5.40°	150	250	175	250	625	300	655	350	685	350	705	400	725	400
5.50°	150	250	175	250	635	300	665	350	695	350	715	400	735	400
5.60°	150	250	175	250	645	300	675	350	705	350	725	400	745	400
5.70°	150	250	175	250	655	300	685	350	715	350	735	400	755	400
5.80°	150	250	175	250	665	300	695	350	725	350	745	400	765	400
5.90°	150	250	175	250	675	300	705	350	735	350	755	400	775	400
6.00°	150	250	175	250	685	300	715	350	745	350	765	400	785	400
6.10°	150	250	175	250	695	300	725	350	755	350	775	400	795	400
6.20°	150	250	175	250	705	300	735	350	765	350	785	400	805	400
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6.40°	150	250	175	250	725	300	755	350	785	350	805	400	825	400
6.50°	150	250	175	250	735	300	765	350	795	350	815	400	835	400
6.60°	150	250	175	250	745	300	775	350	805	350	825	400	845	400
6.70°	150	250	175	250	755	300	785	350	815	350	835	400	855	400
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7.10°	150	250	175	250	795	300	825	350	855	350	875	400	895	400
7.20°	150	250	175	250	805	300	835	350	865	350	885	400	905	400
7.30°	150	250	175	250	815	300	845	350	875	350	895	400	915	400
7.40°	150	250	175	250	825	300	855	350	885	350	905	400	925	400
7.50°	150	250	175	250	835	300	865	350	895	350	915	400	935	400
7.60°	150	250	175	250	845	300	875	350	905	350	925	400	94	

ADVANCE DISTANCES (XXXX)


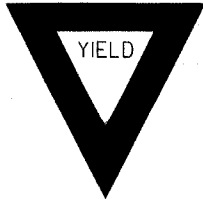

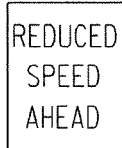



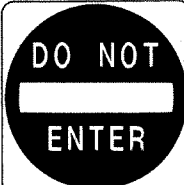

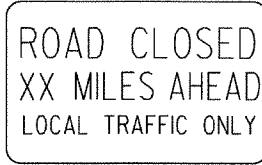
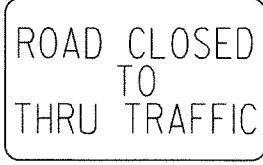
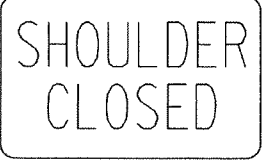
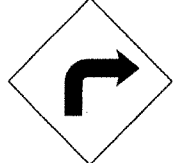
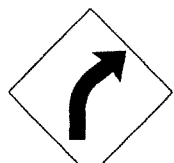
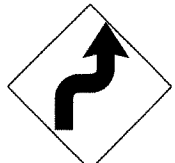

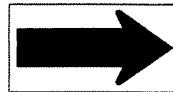


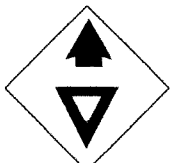
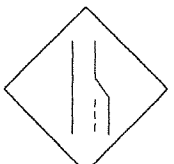



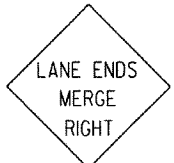






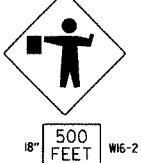


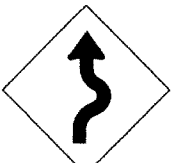


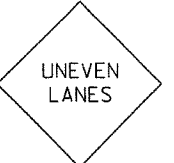

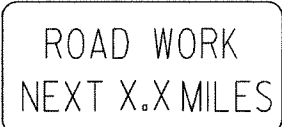
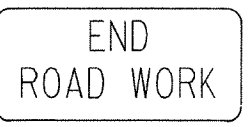
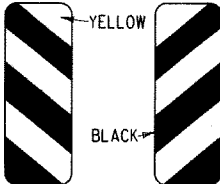


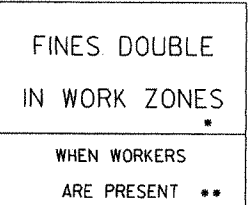
500 FT	1/2 MILE
1000 FT	3/4 MILE
1500 FT	1 MILE AHEAD

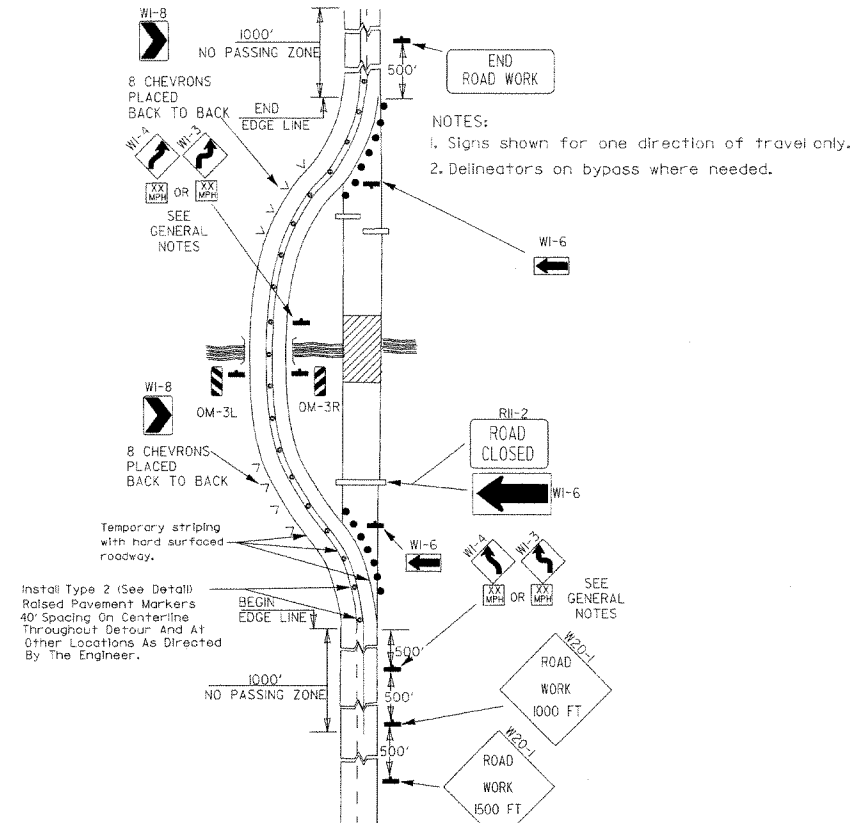
GENERAL NOTES:

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

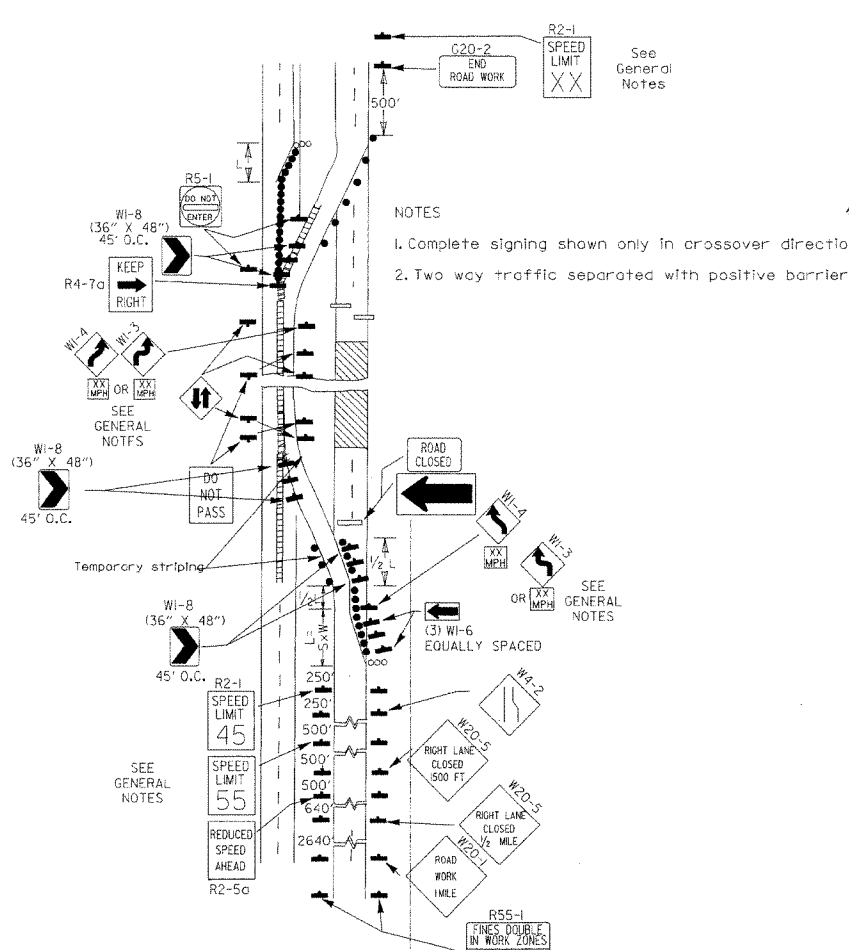
NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY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

12-15-11	REVISED W24-1	
11-17-10	DELETED W8-9c & 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	
1-16-01	REVISED NOTE 7	
9-28-00	REVISED NOTE	
1-18-98	ADDED NOTE	
6-26-97	REVISED NOTE 5	
4-03-97	REVISED NOTE 5	
10-18-96	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

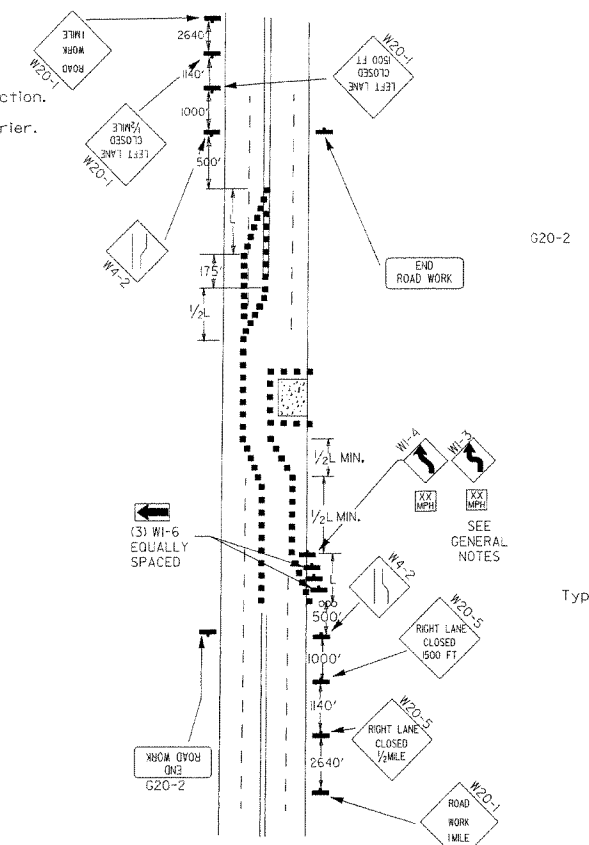
<p>RI-1</p>  <p>STANDARD 30"x30" EXPRESSWAY 36"x36" SPECIAL 48"x48"</p>	<p>RI-2</p>  <p>STD. 36"x36"x36" EXPWY. 48"x48"x48" FWY. 60"x60"x60"</p>	<p>R2-1</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>R2-5A</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>R2-5C</p>  <p>STD. 24"x30" EXPWY.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



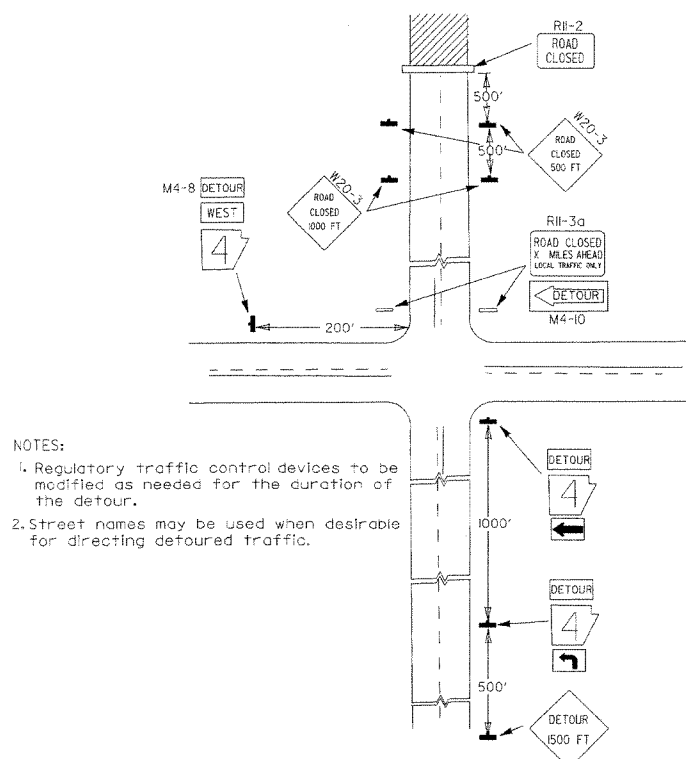
(A) Typical application of traffic control devices on a 2-lane highway where the entire roadway is closed and a bypass detour is provided.



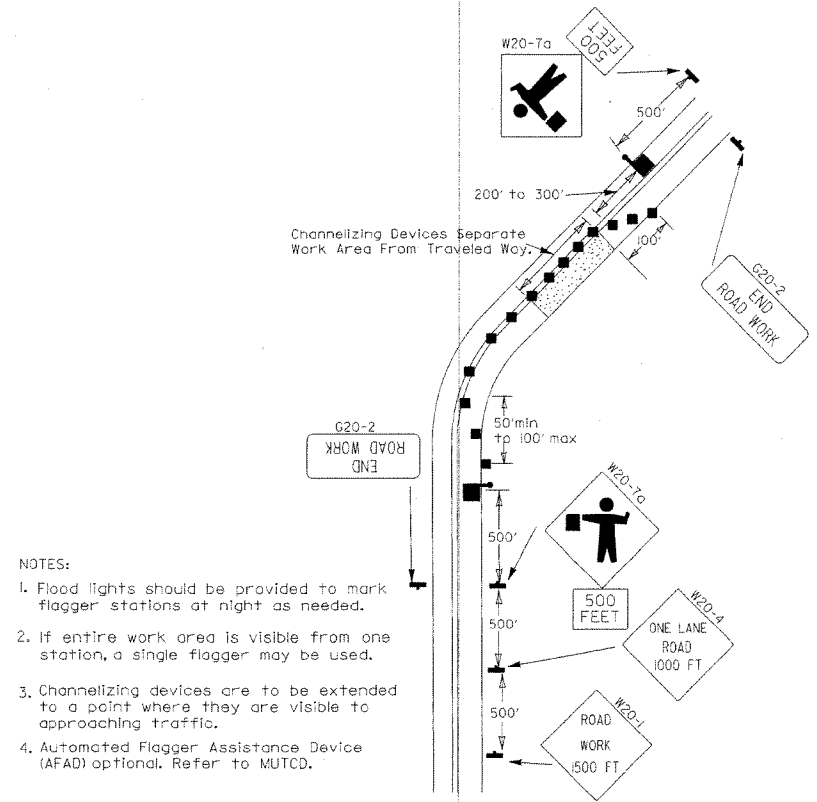
(B) Typical application - 4-lane divided roadway where one roadway is closed.



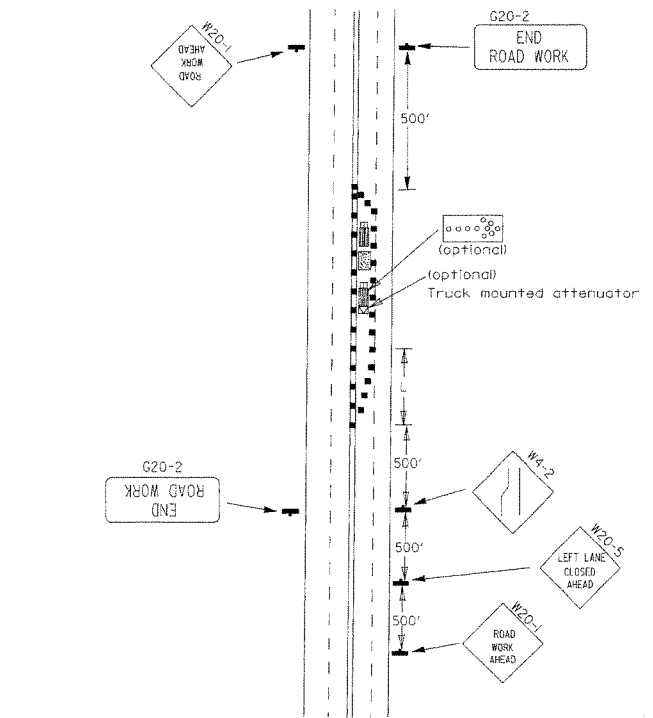
(C) Typical application - 4-lane undivided roadway where half of the roadway is closed.



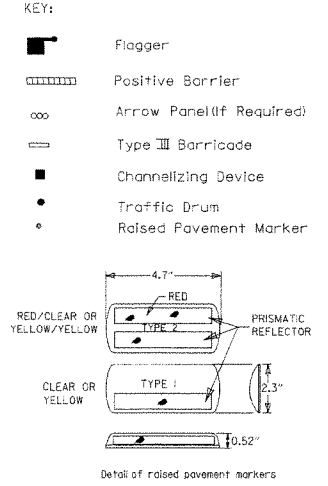
(D) Typical application - roadway closed beyond detour point.



(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.



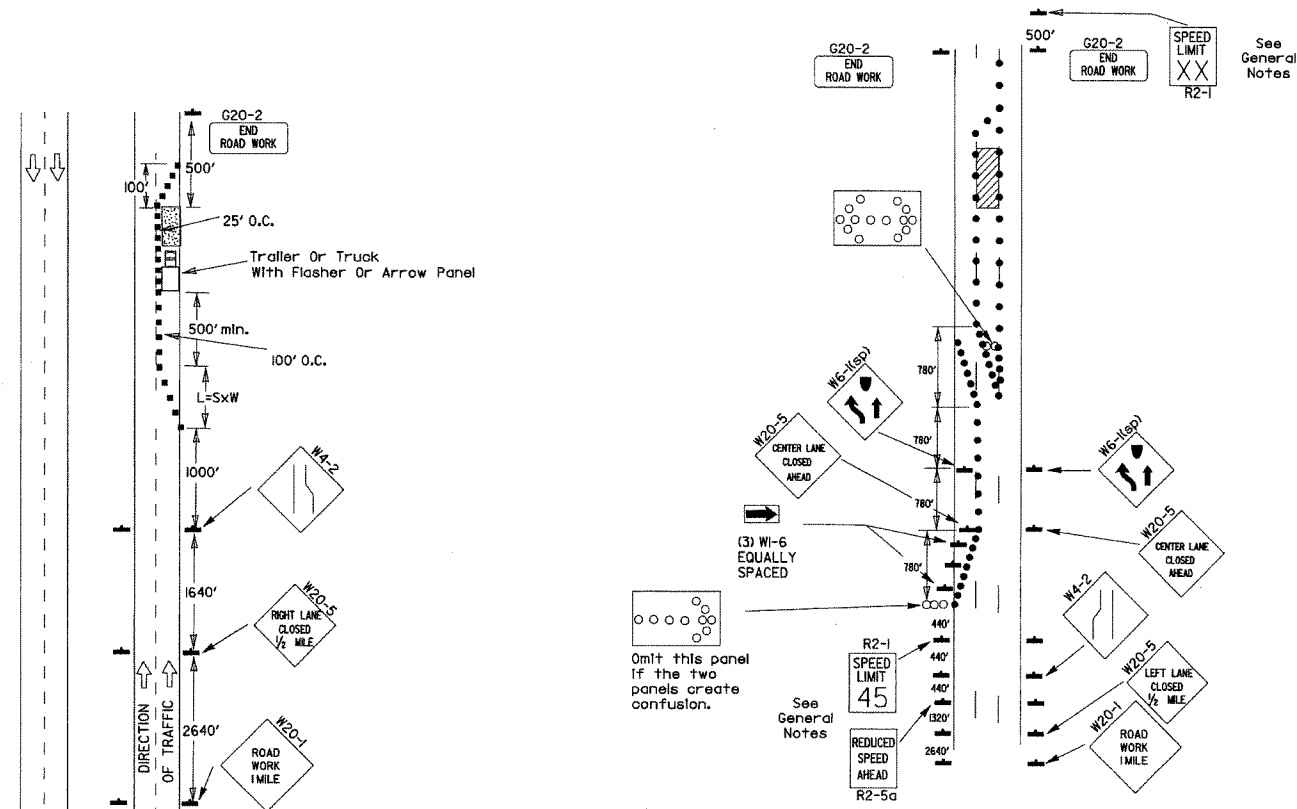
Typical advance warning sign placement

Taper formulae:
 $L = S \times W$ for speeds of 45mph or more.
 $L = \frac{WS^2}{60}$ for speeds of 40mph or less.
 Where:
 L = Minimum length of taper.
 S = Numerical value of posted speed limit prior to work or 85th percentile speed.
 W = Width of offset.

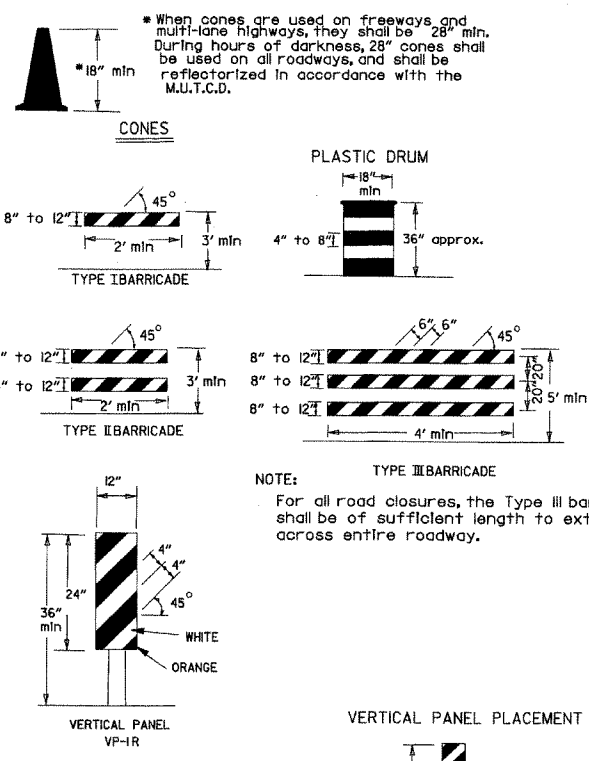
- GENERAL NOTES:
- Advisory speed posted on W1-3 or W1-4 curve warning signs to be determined at site. Use W1-4 when speed is greater than 30mph and W1-3 when 30mph or less.
 - When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-(R55) shall be omitted and the R2-(R45) shall be installed at that location. Additional R2-145mph speed limit signs shall be installed at a maximum of 1/2 mile intervals. At the end of the work area a R2-(Rxx) 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-(R65) shall be omitted. Additional R2-155mph speed limit signs shall be installed at a maximum of 1/2 mile intervals. At the end of the work area a R2-(Rxx) 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.
 - Trailer mounted devices such as arrow panels and portable changeable message signs shall be calibrated 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.

DATE	REVISION	FILMED
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	

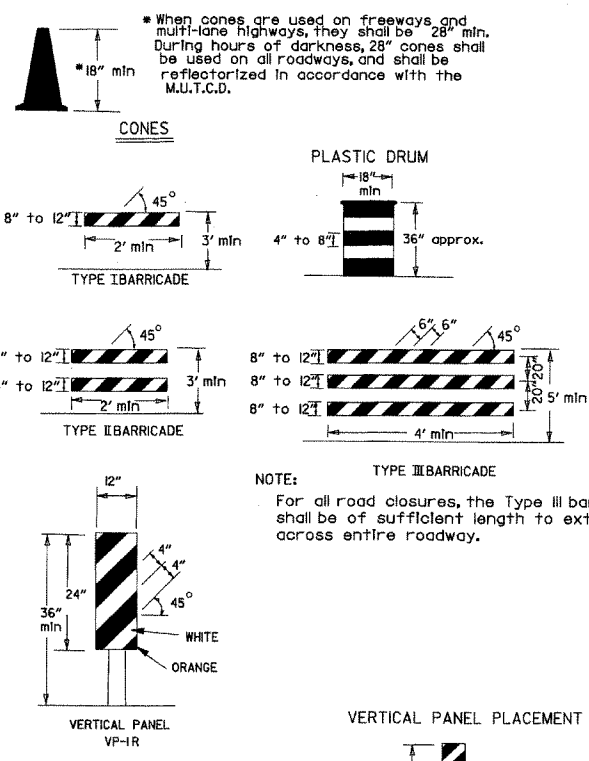
Channellizing devices



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

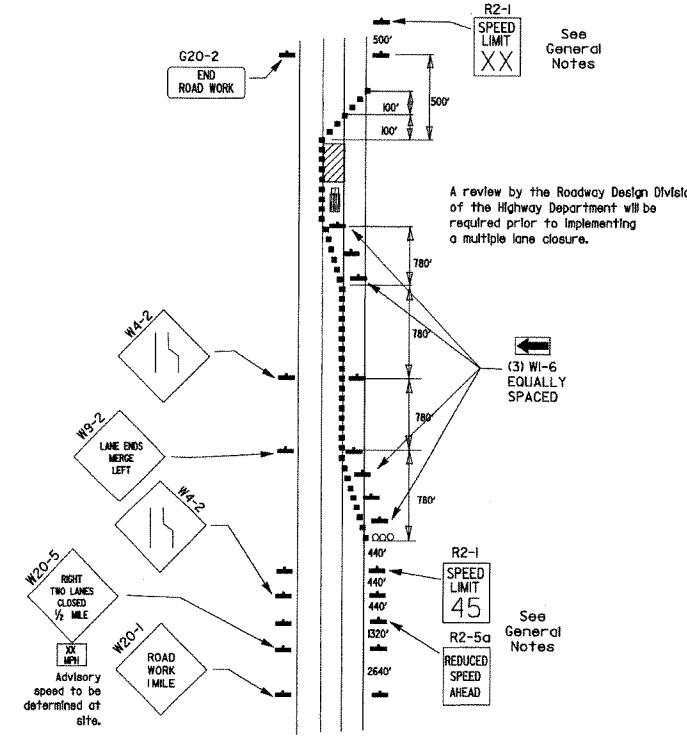


(B) Typical application - 3-lane oneway roadway where center lane is closed.



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

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

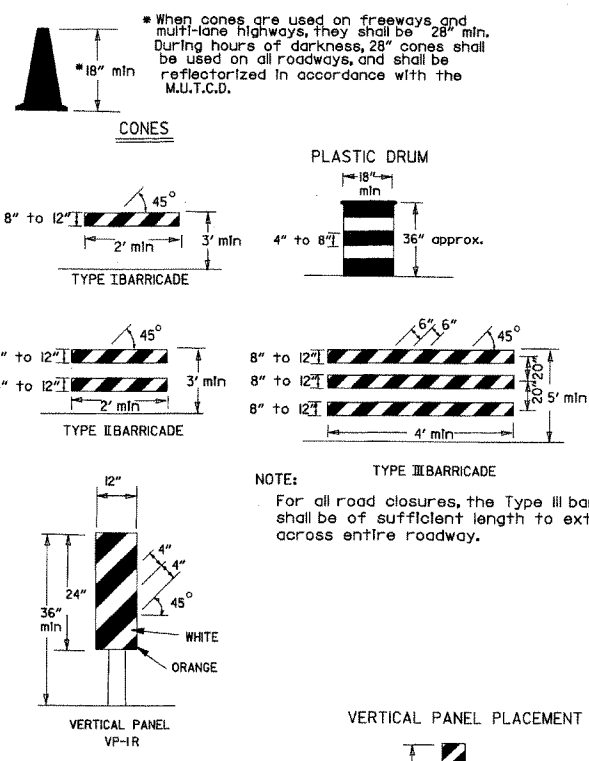


(D) Typical application - closing multiple lanes of a multilane highway.

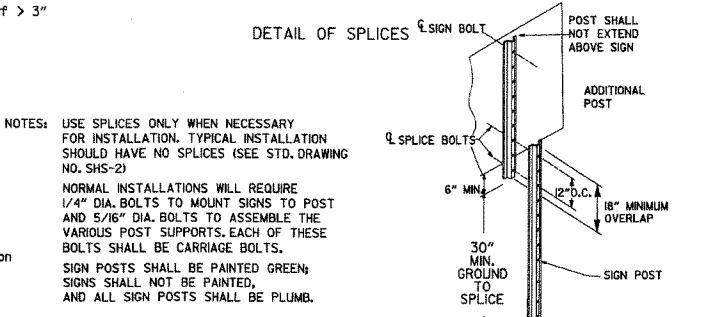
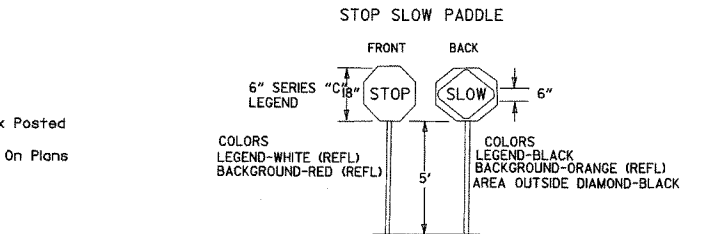
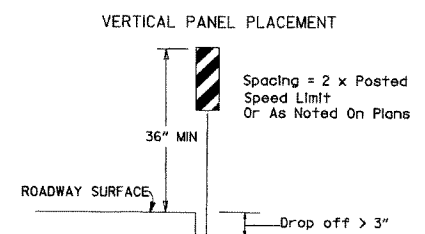
TRAFFIC CONTROL DEVICES FOR VERTICAL PAVEMENT DIFFERENTIALS

VERTICAL DIFFERENTIAL	LOCATIONS	TRAFFIC CONTROL
1" to 3"	Centerline, lane lines	W8-II
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-and vertical panels, drums or concrete barrier
Greater than 3"	Edge of shoulder	*Vertical panels, drums or concrete barrier

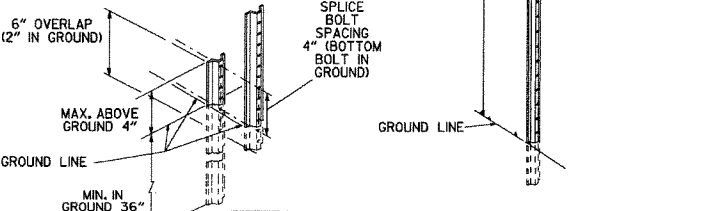
When shown on the plans concrete barrier will be used. When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.



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

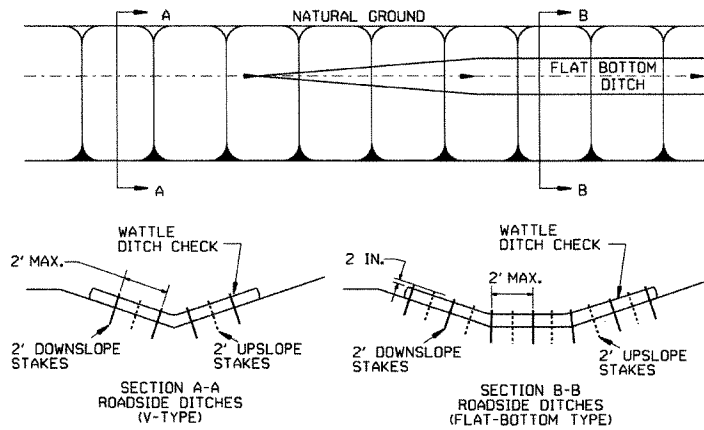


NOTES: USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-2). NORMAL INSTALLATIONS WILL REQUIRE 1/4" DIA. BOLTS TO MOUNT SIGNS TO POST AND 5/16" DIA. BOLTS TO ASSEMBLE THE VARIOUS POST SUPPORTS. EACH OF THESE BOLTS SHALL BE CARRIAGE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

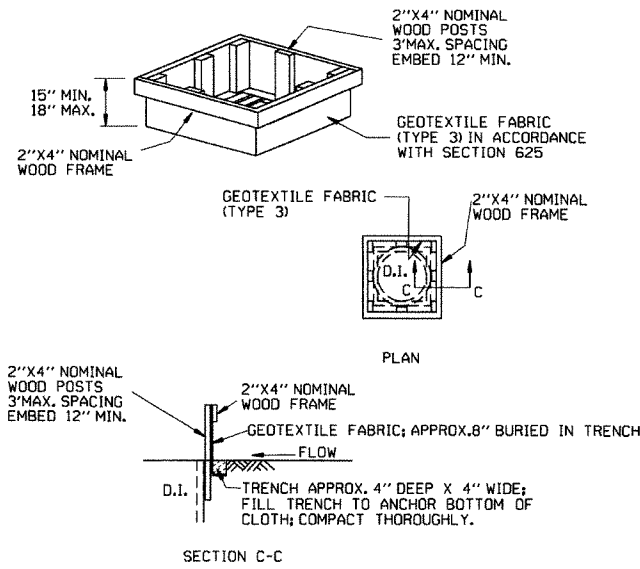


DATE	REVISION	FILMED
10-15-09	ADDED REFERENCE TO MASH	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED NOTE	
10-1-98	ADDED NOTE	
4-03-97	ADDED (SP) TO W6-1 & REVISED TRAFFIC CONTROL DEVICES NOTE	
10-18-96	ADDED R55-1	
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL, TEXT	6-8-95
2-2-95	REVISED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

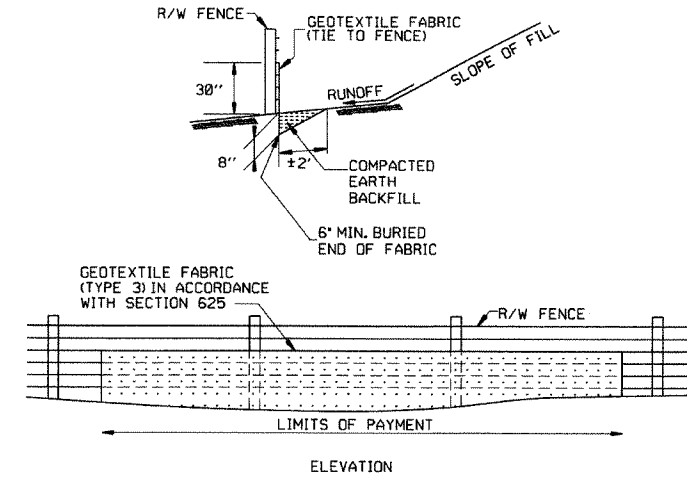
GENERAL NOTES
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



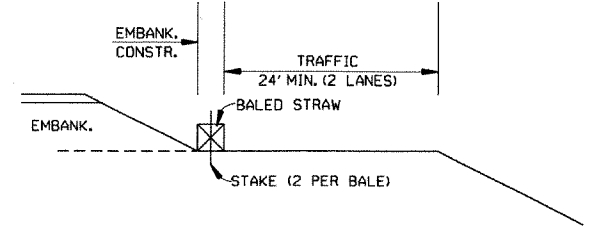
DROP INLET SILT FENCE (E-7)



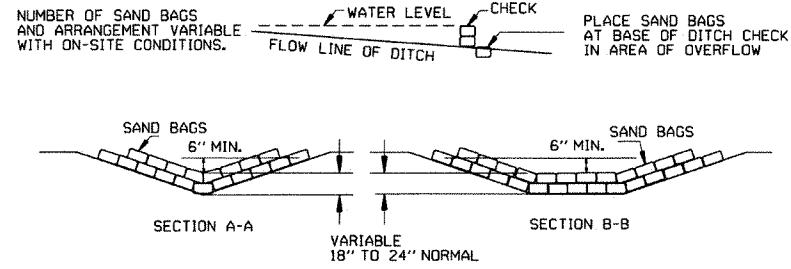
SILT FENCE ON R/W FENCE (E-4)

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

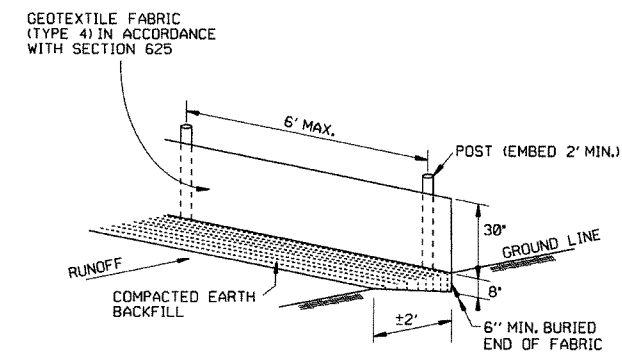
GENERAL NOTES
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.
2. NO GAPS SHALL BE LEFT BETWEEN BALES.
3. BALED STRAW FILTER BARRIERS COMPLETED AND ACCEPTED WILL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



BALED STRAW FILTER BARRIER (E-2)

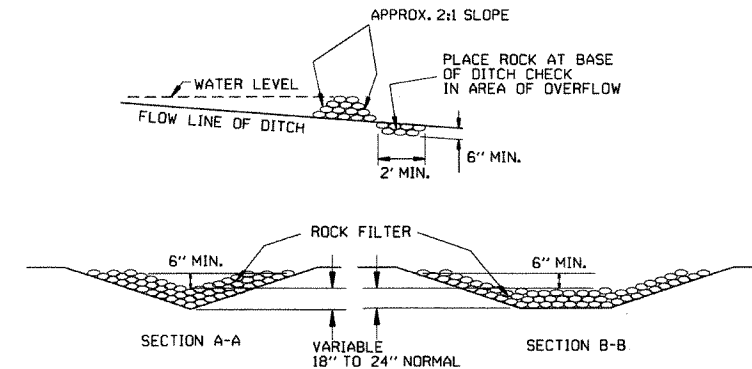


SAND BAG DITCH CHECK (E-5)



SILT FENCE (E-11)

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

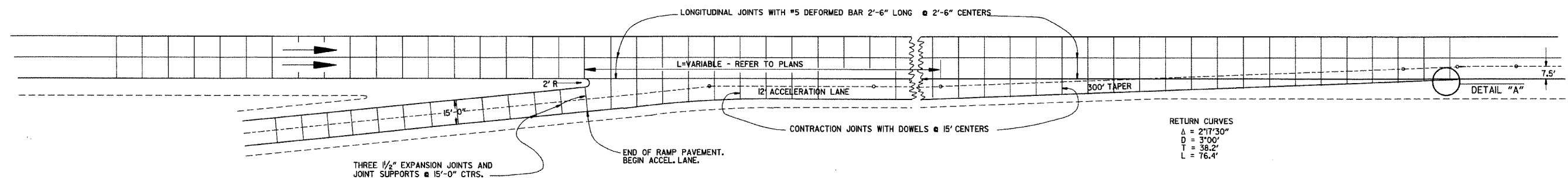


ROCK DITCH CHECK (E-6)

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

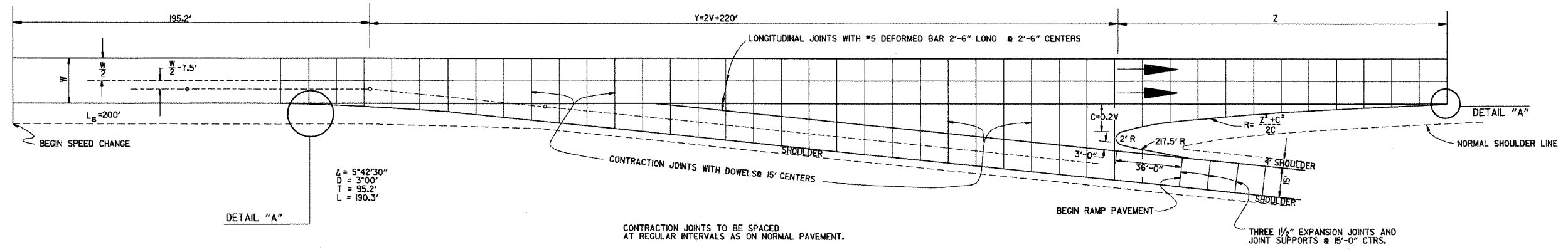
TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-1



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.

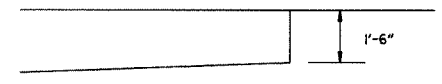


EXIT RAMP

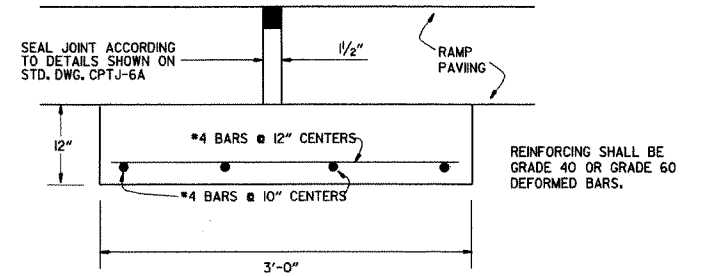
CONTRACTION JOINTS TO BE SPACED AT REGULAR INTERVALS AS ON NORMAL PAVEMENT.

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	511-12-2-72

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF STANDARD TURNOUT

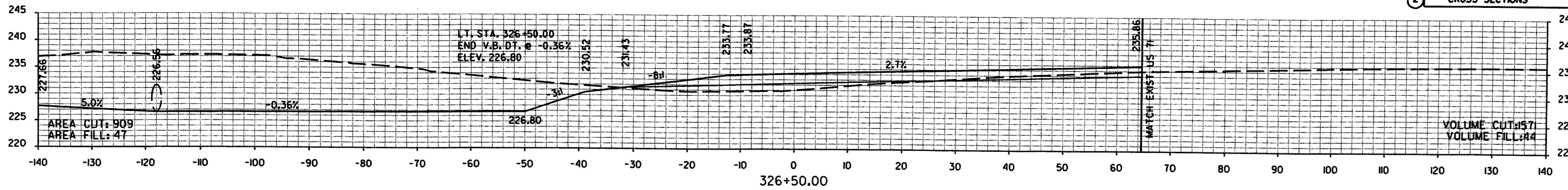
FOR

ENTRANCE & EXIT RAMP (NON-REINFORCED)

STANDARD DRAWING TR-1A

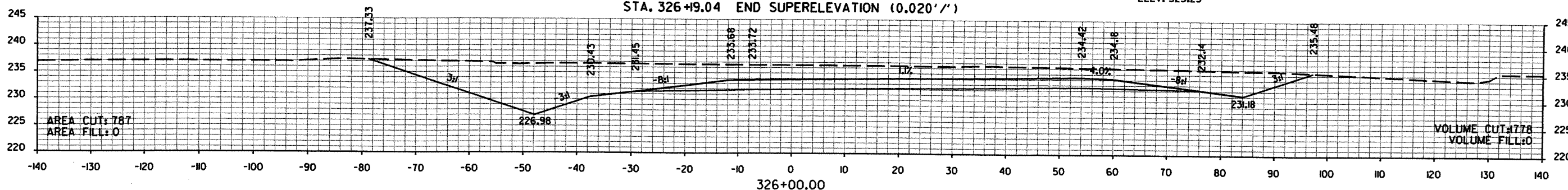
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	030313		97	100

2 CROSS SECTIONS



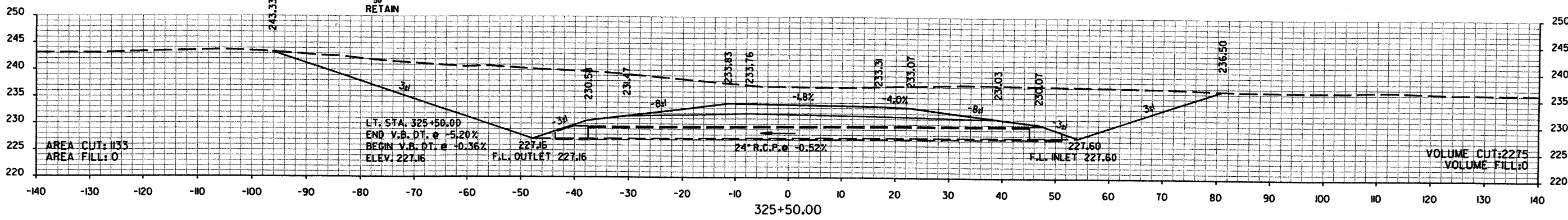
326+50.00
STA. 326+9.04
BEGIN CROSS SLOPE TRANSITION
TO MATCH US 71

RT. STA. 326+6.00
END V.B. DT. @ 5.00%
ELEV. 323.25

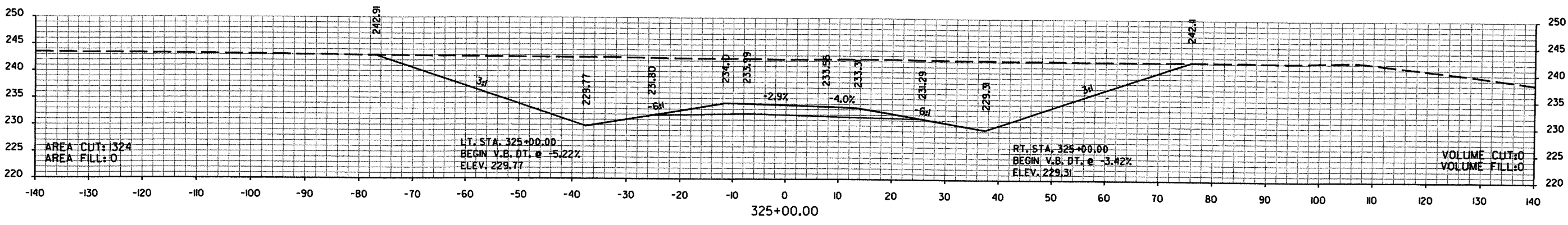


STA. 326+9.04 END SUPERELEVATION (0.020'/'')

STA. 325+50.00 - IN PLACE
24"x84" R.C. PIPE CULVERT
CLASS III TYPE 3 BEDDING
WITH FES LT. & RT.
Q₅₀ = 5.3 CFS, D.A. = 2.6 AC.
RETAIN



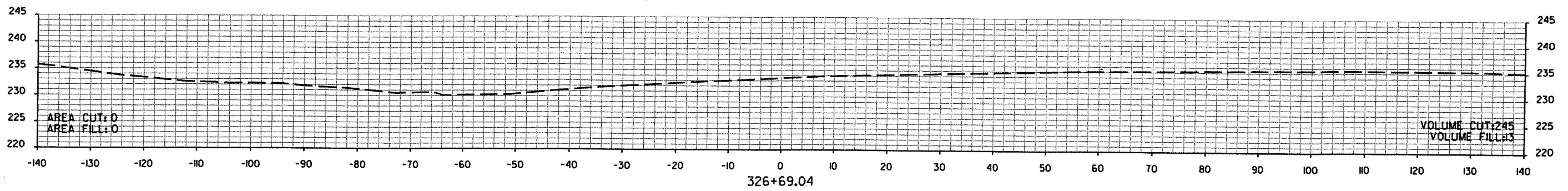
STA. 325+47.09 END SUPERELEVATION
STA. 325+47.09 BEGIN SUPERELEVATION (-0.020'/'')



MATCH SUPERELEVATION
BEGIN CONSTRUCTION STA. 325+00.00

RAMP I
STA. 325+00.00 TO STA. 326+50.00

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.	030313		98	100
② CROSS SECTIONS								

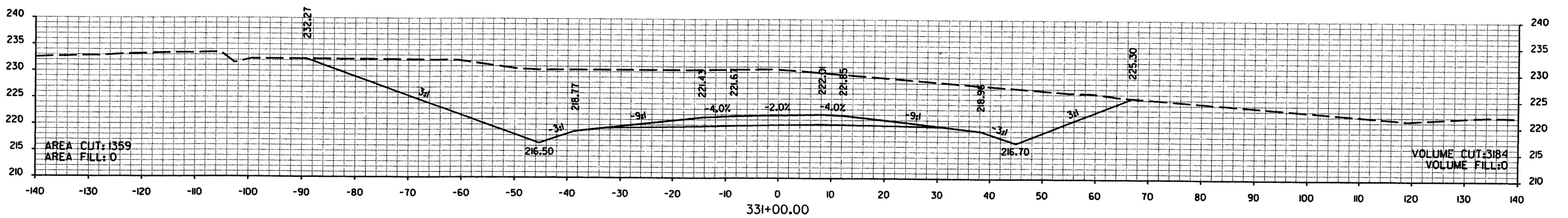
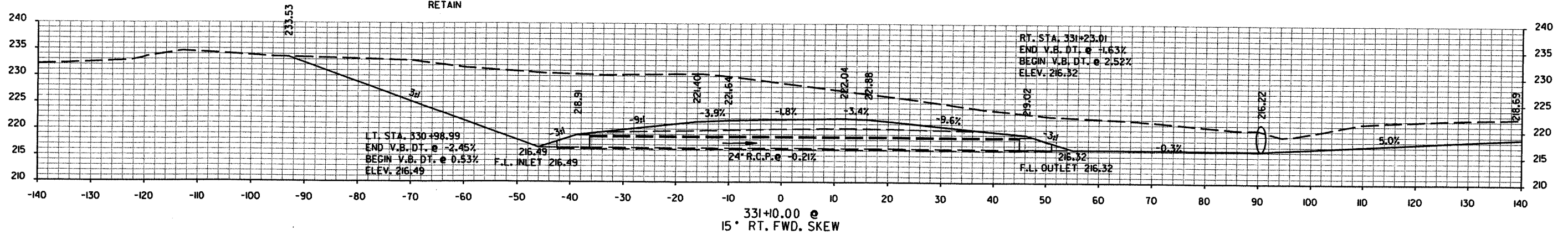


STA. 326+69.04
MATCH US TO CROSS SLOPE

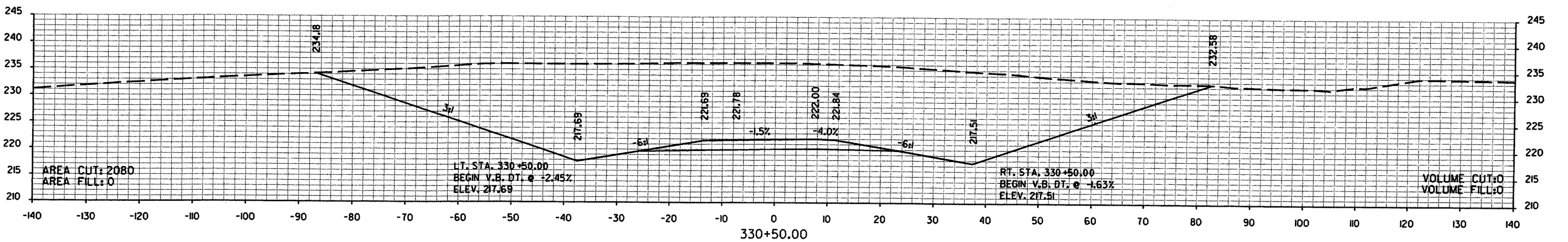
RAMP 1
STA. 326+69.04 TO STA. 326+69.04

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. 030313	99
							2 CROSS SECTIONS	100

STA. 331+00.00 - IN PLACE
 24"x82" R.C. PIPE CULVERT
 15° RT. FWD. SKEW
 CLASS III TYPE 3 BEDDING
 WITH FES LT. & RT.
 $O_{50} = 8.7$ CFS, D.A. = 5.1 AC.
 RETAIN



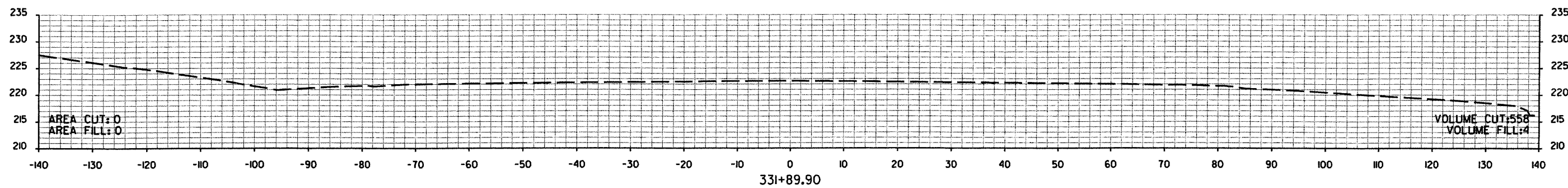
STA. 330+68.54 END SUPERELEVATION



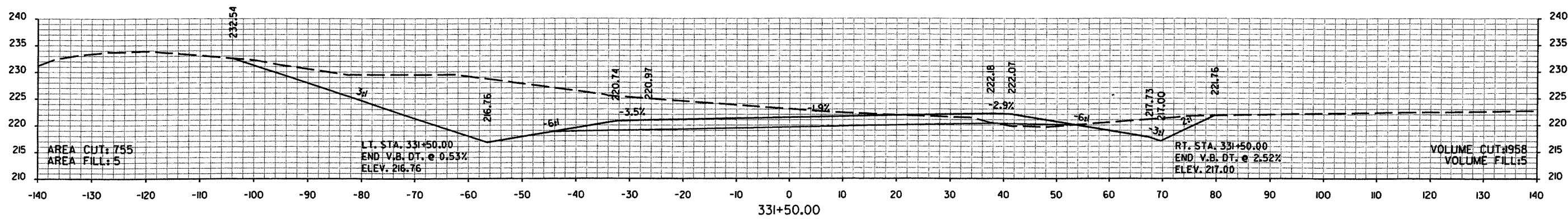
MATCH SUPERELEVATION
 BEGIN CONSTRUCTION STA. 330+50.00

RAMP 4
 STA. 330+50.00 TO STA. 331+10.00

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.	030313	100
② CROSS SECTIONS								



STA. 331+89.90
MATCH US 71 CROSS SLOPE



STA. 331+39.90
BEGIN CROSS SLOPE TRANSITION
TO MATCH US 71

RAMP 4
STA. 331+50.00 TO STA. 331+89.90