

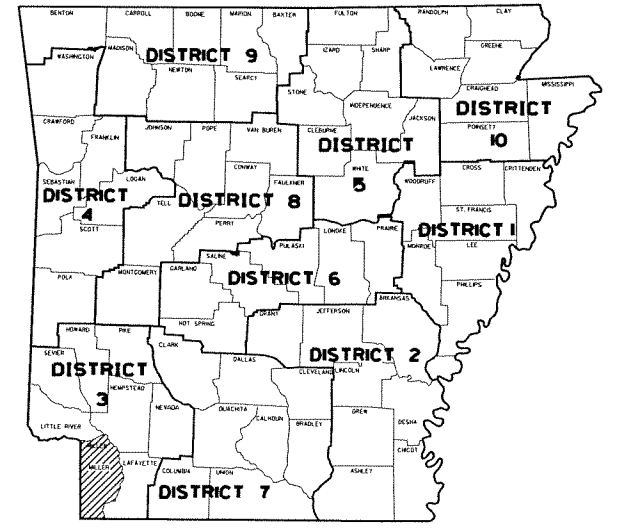
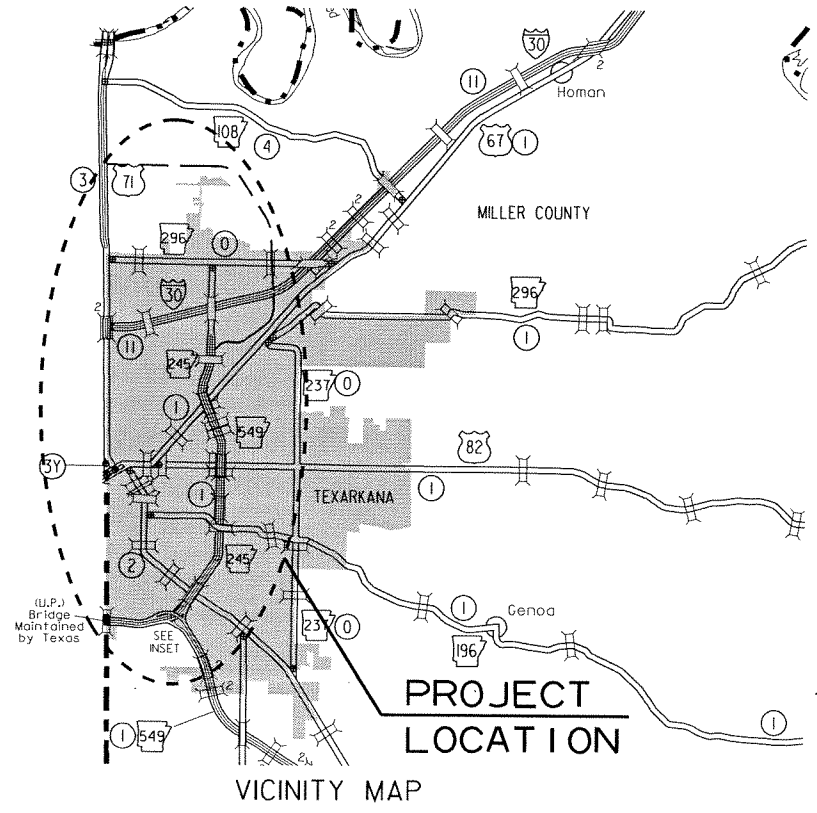
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 030425	I	46
HWYS. 151 & 549 LOOP (TEXARKANA) (CABLE MEDIAN BARRIER) (S)								

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

# HWYS. 151 & 549 LOOP (TEXARKANA) (CABLE MEDIAN BARRIER) (S)

MILLER COUNTY  
 ROUTE 151 SECTION I  
 ROUTE 549 SECTION I  
**JOB 030425**

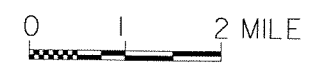
FED. AID PROJ. ACHSIP-9414(28)



ARK. HWY. DIST. NO. 3

EQUATIONS TO JOB 030425  
 STA. 361+39.90(BK.) = STA. 23+25.68(AHD.)

EQUATION STATION  
 STA. 361+39.90(BK.) =  
 STA. 23+25.68(AHD.)



STA. 117+18.00  
 BEGIN JOB 030425  
 BEGIN HWY. 151  
 LOG MILE 0.00

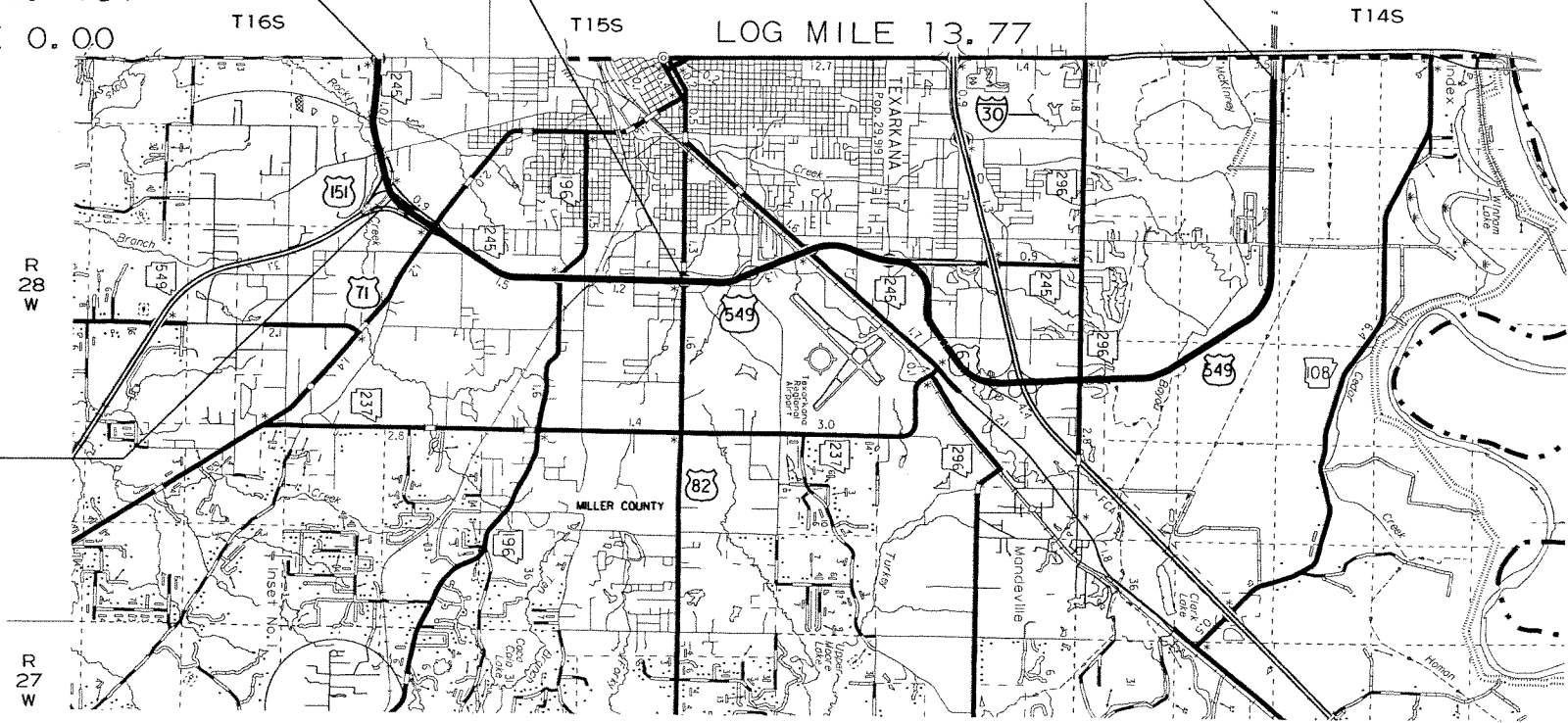
STA. 506+00.00  
 END JOB 030425  
 END HWY. 549  
 LOG MILE 13.77



EXCEPTIONS TO JOB 030425

STA. 167+29 - STA. 169+12	= 183'
STA. 182+33 - STA. 191+54	= 921'
STA. 218+45 - STA. 221+15	= 270'
STA. 307+11 - STA. 320+83	= 1372'
STA. 360+25 - STA. 24+55	= 244.22'
STA. 87+85 - STA. 91+92	= 407'
STA. 243+62 - STA. 246+61	= 299'
STA. 275+44 - STA. 277+10	= 166'
STA. 329+65 - STA. 334+50	= 485'
STA. 417+86 - STA. 419+50	= 164'
TOTAL EXCEPTIONS = 4511.22	

STA. 192+68.40  
 END HWY. 151  
 BEGIN HWY. 549  
 LOG MILE 1.43



· HWY. 151 DESIGN TRAFFIC DATA ·

DESIGN YEAR	-----	2033
2013 ADT	-----	350
2033 ADT	-----	450
2033 DHV	-----	50
TRUCKS	-----	3%
DESIGN SPEED	-----	70 MPH

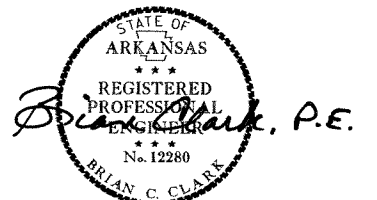
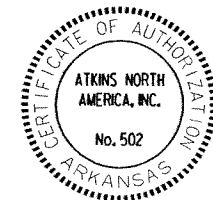
· HWY. 549 DESIGN TRAFFIC DATA ·

DESIGN YEAR	-----	2033
2013 ADT	-----	7,500
2033 ADT	-----	9,000
2033 DHV	-----	990
TRUCKS	-----	28%
DESIGN SPEED	-----	70 MPH

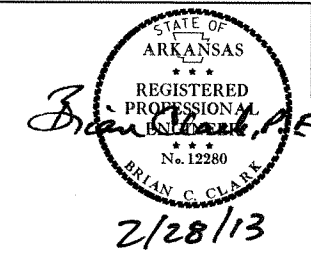
BEGINNING OF PROJECT	MID-POINT OF PROJECT	END OF PROJECT
LAT. = N 33°23'08.9"	LAT. = N 33°27'53.8"	LAT. = N 33°31'10.9"
LONG. = W 94°02'34.8"	LONG. = W 94°00'21.3"	LONG. = W 94°02'36.7"

GROSS LENGTH OF PROJECT	72696.22	FEET	OR	13.768	MILES
NET " " ROADWAY	68185.00	"	"	12.914	"
NET " " BRIDGES	0.00	"	"	0.000	"
NET " " PROJECT	68185.00	"	"	12.914	"

P.E. 030425  
 NON-PART.



3/8/13



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.							030425	2	46

INDEX, GOV. SPECS. AND GENERAL NOTES

SHEET NO.	INDEX OF SHEETS	DRWG. NO.	DATE
1	TITLE SHEET		
2	INDEX OF SHEETS, GOVERNING SPECIFICATIONS AND GENERAL NOTES		
3	TYPICAL SECTIONS OF IMPROVEMENT		
4 - 6	SPECIAL DETAILS		
7 - 19	TEMPORARY EROSION CONTROL DETAILS		
20 - 22	MAINTENANCE OF TRAFFIC		
23 - 24	QUANTITY SHEETS		
25	SUMMARY OF QUANTITIES AND REVISIONS		
26 - 38	PLAN SHEETS		
39	CONCRETE DITCH PAVING	CDP-1	11-17-10
40	GUARD RAIL DETAILS	GR-8	7-14-10
41	GUARD RAIL DETAILS	GR-9A	4-17-08
42	GUARD RAIL DETAILS	GRT-1	7-14-10
43	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-1	12-15-11
44	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-2	3-11-10
45	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-3	10-15-09
46	TEMPORARY EROSION CONTROL DEVICES	TEC-1	12-15-11

GOVERNING SPECIFICATIONS

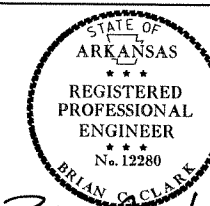
ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2003, AND THE FOLLOWING SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS:

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-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
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
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
JOB 030425	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 030425	CONCRETE DITCH PAVING
JOB 030425	COORDINATION OF WORK
JOB 030425	DOCUMENTATION OF PAYMENTS MADE TO DISADVANTAGED BUSINESS ENTERPRISES
JOB 030425	INTERNET BIDDING
JOB 030425	MAINTENANCE OF TRAFFIC
JOB 030425	REMOVAL AND DISPOSAL OF GUARDRAIL
JOB 030425	REMOVAL AND DISPOSAL OF IMPACT ATTENUATION BARRIERS
JOB 030425	SEQUENCE OF CONSTRUCTION
JOB 030425	SITE USE (A+C METHOD)
JOB 030425	STORM WATER POLLUTION PREVENTION PLAN
JOB 030425	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 030425	TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
JOB 030425	UTILITY ADJUSTMENTS
JOB 030425	WARM MIX ASPHALT
JOB 030425	WIRE ROPE SAFETY FENCE MAINTENANCE MATERIALS
JOB 030425	WIRE ROPE SAFETY FENCE (WRSF) SPECIFICATIONS
JOB 030425	WRSF TRAINING WORKSHOP

GENERAL NOTES

- 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.
- ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
- ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO.210 - UNCLASSIFIED EXCAVATION.
- THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- ANY REQUIRED EROSION CONTROL MEASURES FROM WASTING MATERIAL SHALL BE AT THE CONTRACTOR'S EXPENSE.

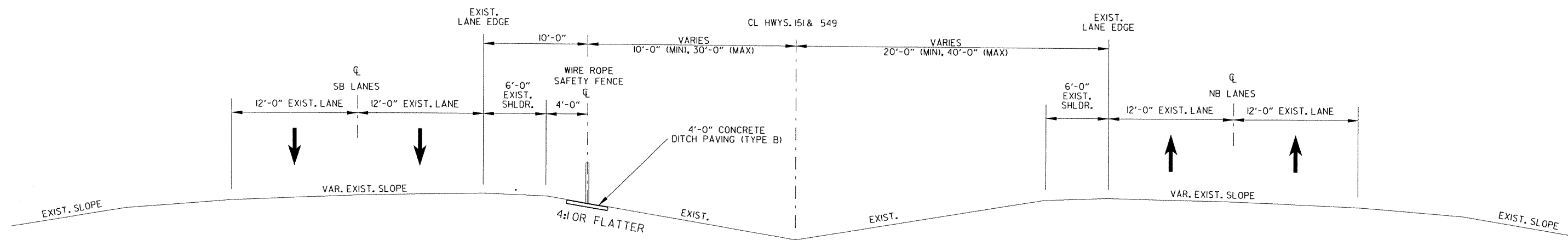
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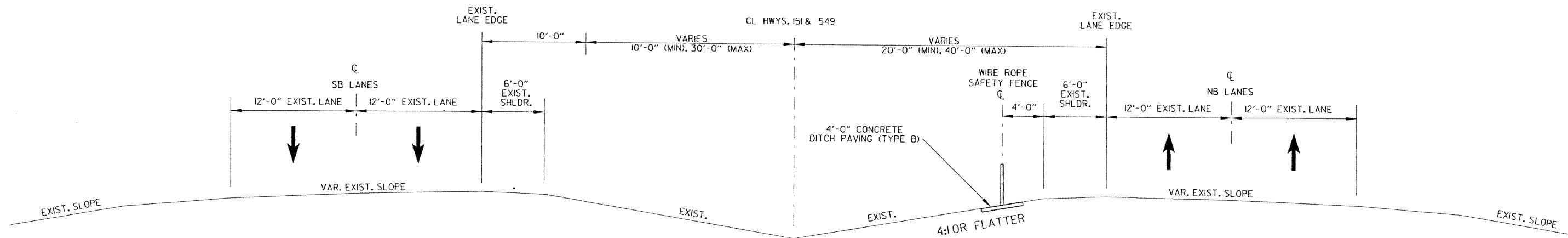
*Brian Clark, P.E.*  
2/22/13

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.	030425		3	46

TYPICAL SECTIONS OF IMPROVEMENT



TYPICAL SECTION OF IMPROVEMENT  
WIRE ROPE SAFETY FENCE ON SOUTHBOUND LANES FORESLOPE



TYPICAL SECTION OF IMPROVEMENT  
WIRE ROPE SAFETY FENCE ON NORTHBOUND LANES FORESLOPE

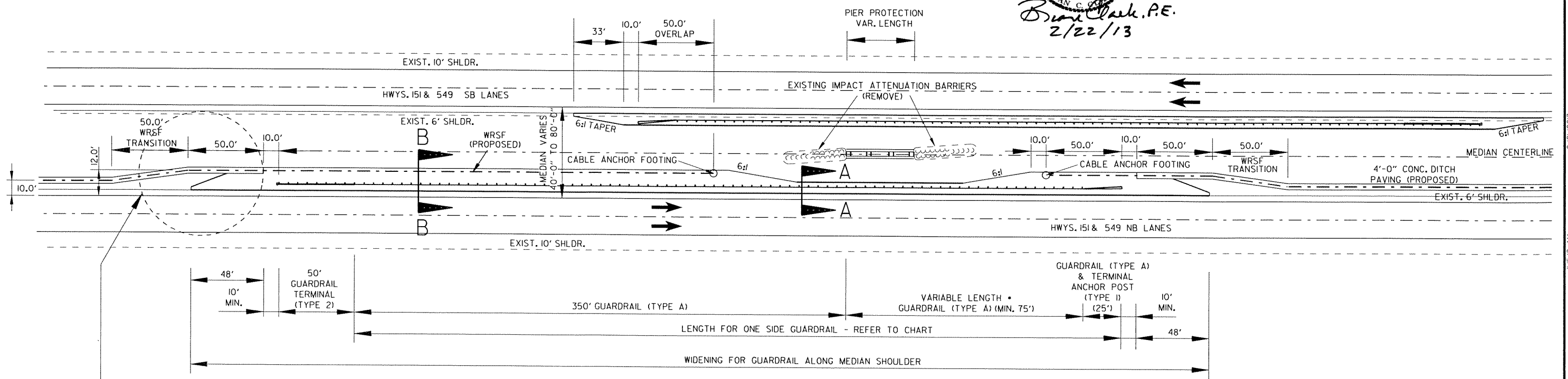
TYPICAL SECTIONS OF IMPROVEMENT

11:51:11 AM 2/21/2013

STATE OF ARKANSAS  
 REGISTERED PROFESSIONAL ENGINEER  
 No. 12280  
 Brian C. Clark, P.E.  
 2/22/13

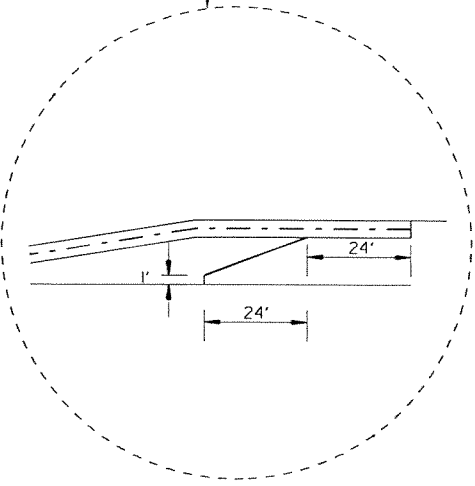
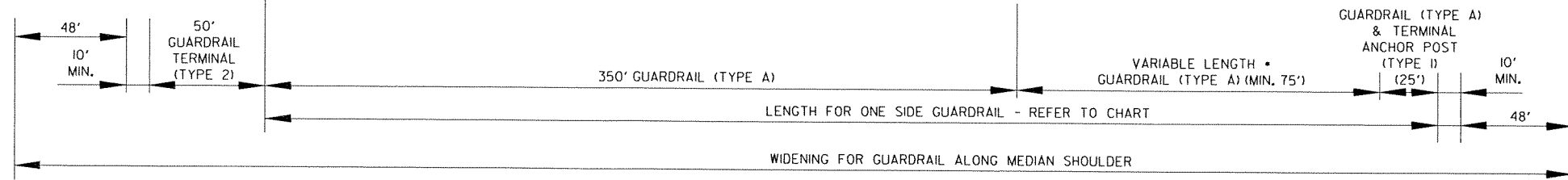
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				6	ARK.			
				JOB NO.	030425		4	46

SPECIAL DETAILS

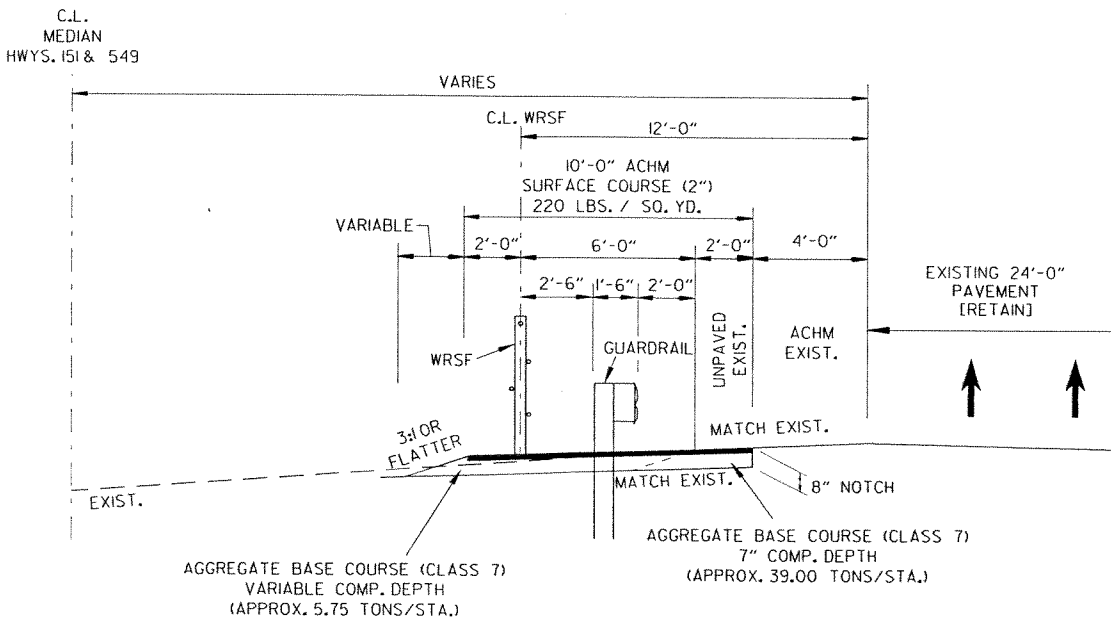


### DETAIL AT OVERPASSES

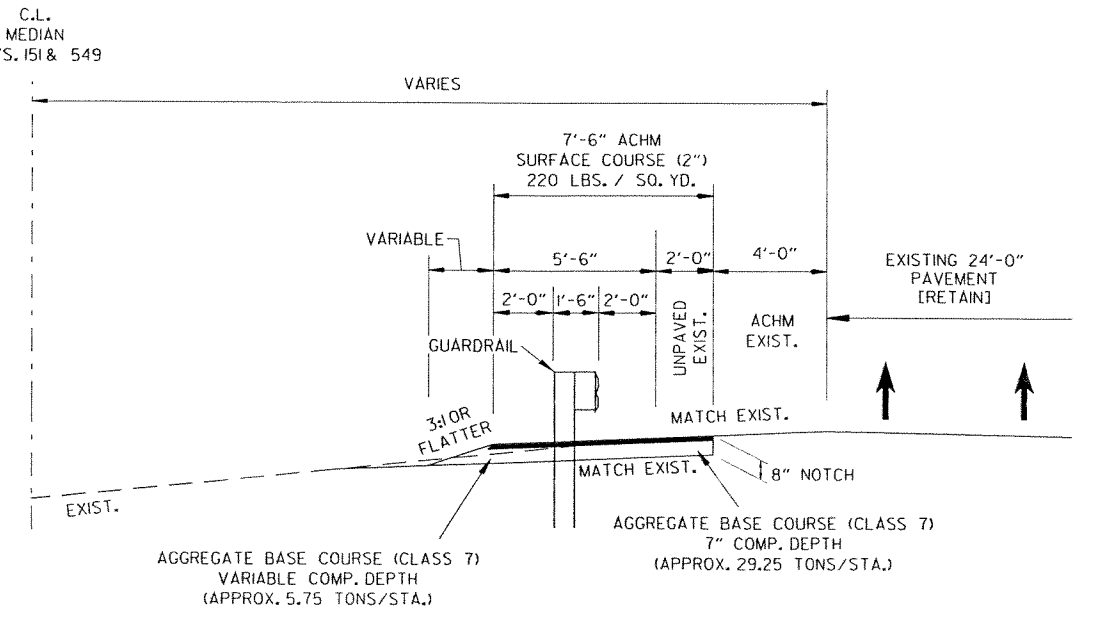
NOTE: REFER TO PLAN SHEETS FOR PLACEMENT OF WIRE ROPE SAFETY FENCE ON EASTBOUND OR WESTBOUND FORESLOPES.



DIMENSIONS ARE TYPICAL BOTH DIRECTIONS

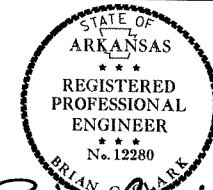


SECTION B-B



SECTION A-A

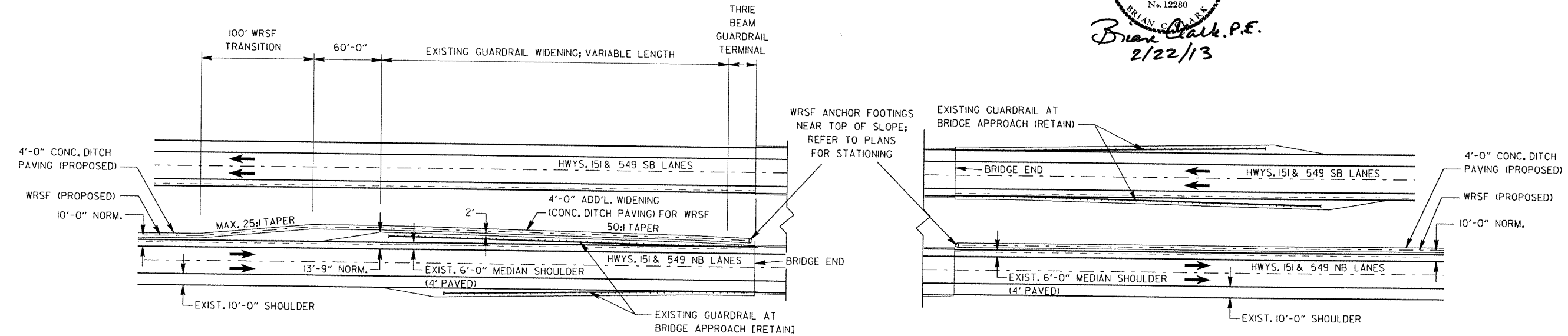
SPECIAL DETAILS



Brian Clark, P.E.  
2/22/13

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. 030425	5	46

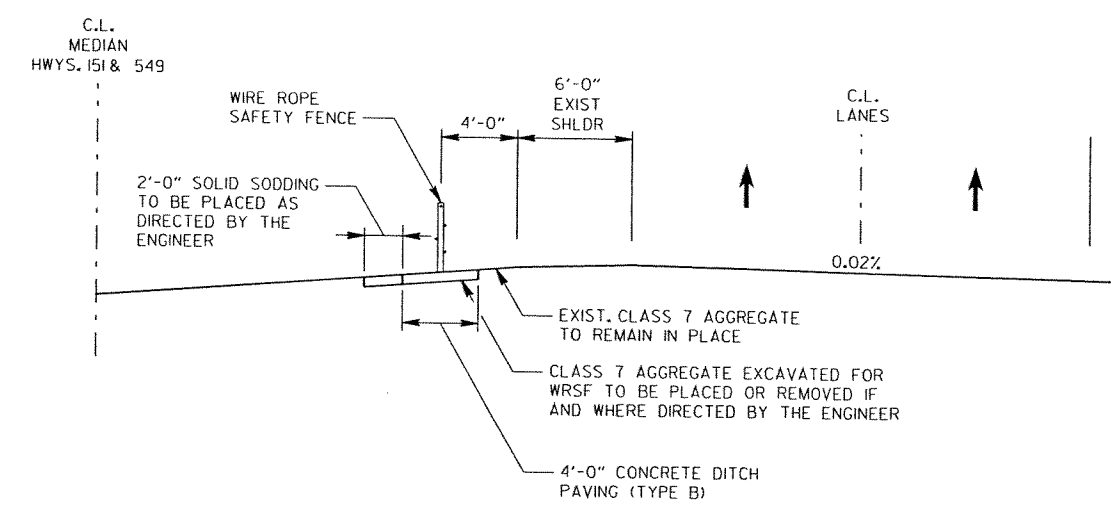
SPECIAL DETAILS



WRSF AND EXIST. GUARDRAIL ON SAME SIDE OF MEDIAN

WRSF AND EXIST. GUARDRAIL ON OPPOSITE SIDES OF MEDIAN

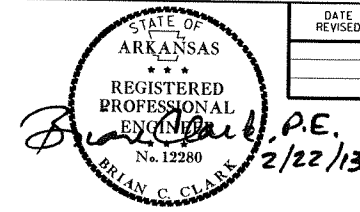
DETAIL OF WIRE ROPE SAFETY FENCE AT EXISTING BRIDGE ENDS



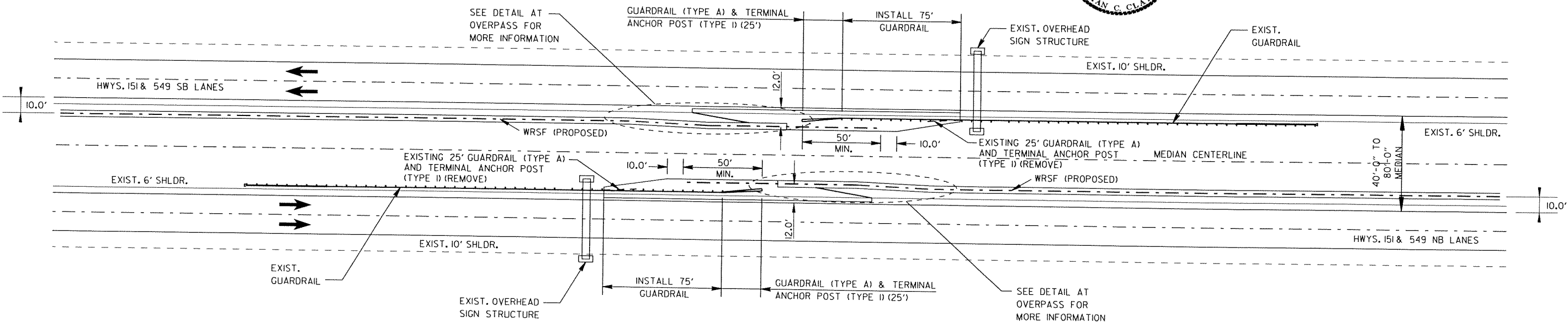
SOLID SODDING DETAIL

SPECIAL DETAILS

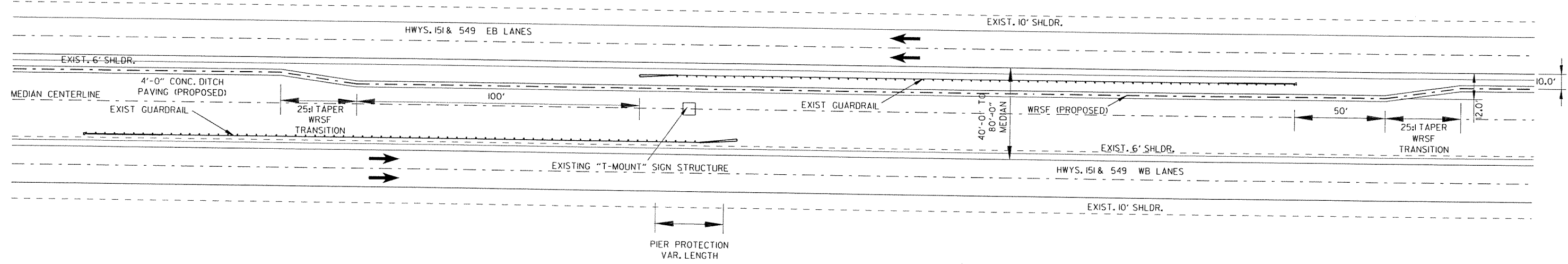
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				6	ARK.		6	46
JOB NO. 030425								



**WIRE ROPE SAFETY FENCE  
AT OVERHEAD SIGN  
VARIOUS LOCATIONS**



**WIRE ROPE SAFETY FENCE  
AT T-MOUNT SIGN STRUCTURE  
STA. 460+50**

SPECIAL DETAILS

2/21/2013 11:51:15 AM b:\10029929\cadd\qen\24556d01.dgn



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		7	46
				JOB NO.		030425		

TEMPORARY EROSION CONTROL DETAILS

BOWIE CO. TEXAS  
MILLER CO. ARKANSAS  
STATE LINE RD.  
POB 116+65.79

STA. 117+18  
BEGIN JOB 030425  
BEGIN HWY. 151  
BEGIN WRSF  
ON WB FORESLOPE  
LOG MILE 0.00

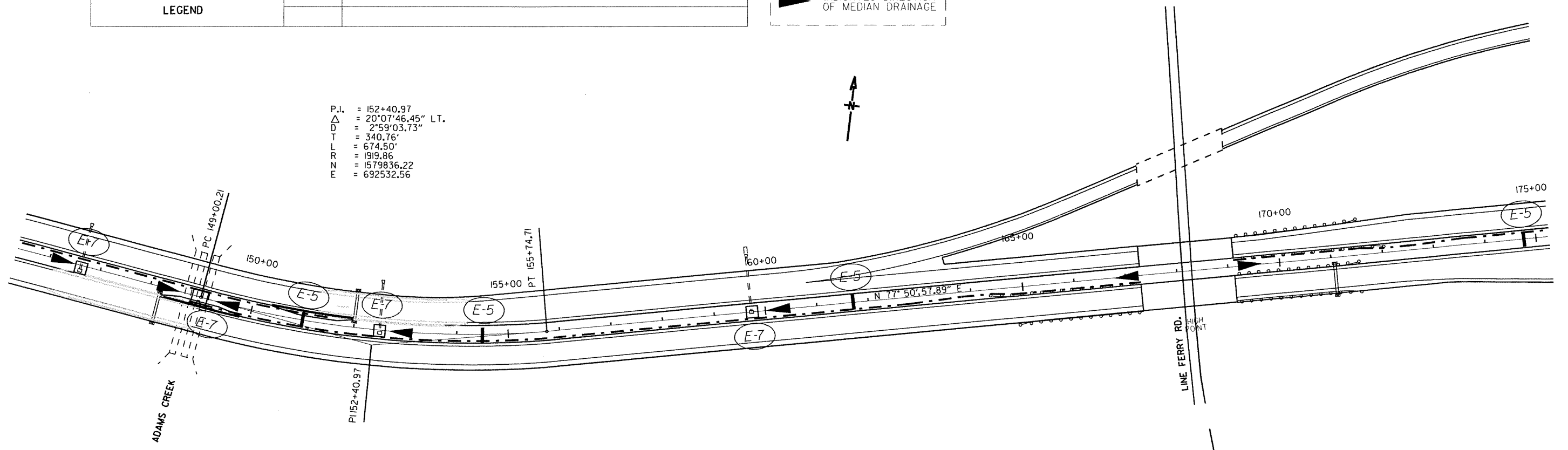
P.I. = 133+31.46  
Δ = 4°42'12.61" RT.  
D = 1°00'09.81"  
T = 234.67'  
L = 469.07'  
R = 5714.00'  
N = 1580109.58  
E = 690642.48

SAND BAG DITCH CHECK	DROP INLET SILT FENCE	DATE OF REVISION	REVISION

LEGEND

INDICATES DIRECTION OF MEDIAN DRAINAGE

P.I. = 152+40.97  
Δ = 20°07'46.45" LT.  
D = 2°59'03.73"  
T = 340.76'  
L = 674.50'  
R = 1919.86'  
N = 1579836.22  
E = 692532.56

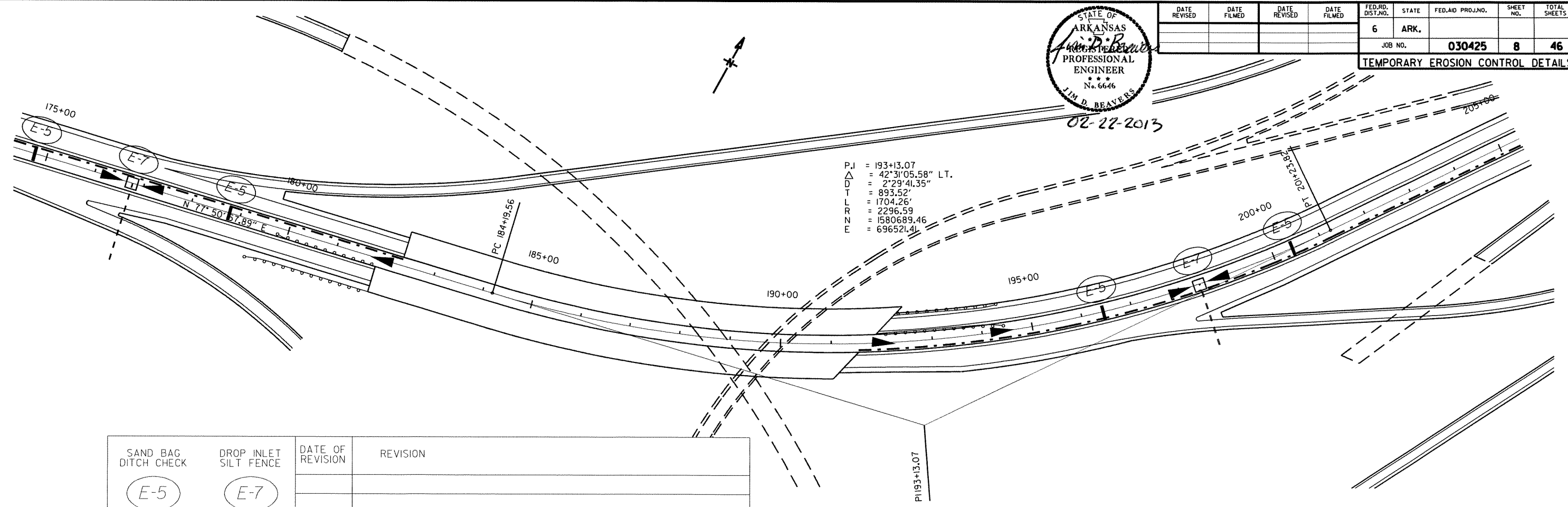


TEMPORARY EROSION CONTROL DETAILS  
STA. 117+00 - STA. 175+00



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.	030425	8	46	

TEMPORARY EROSION CONTROL DETAILS

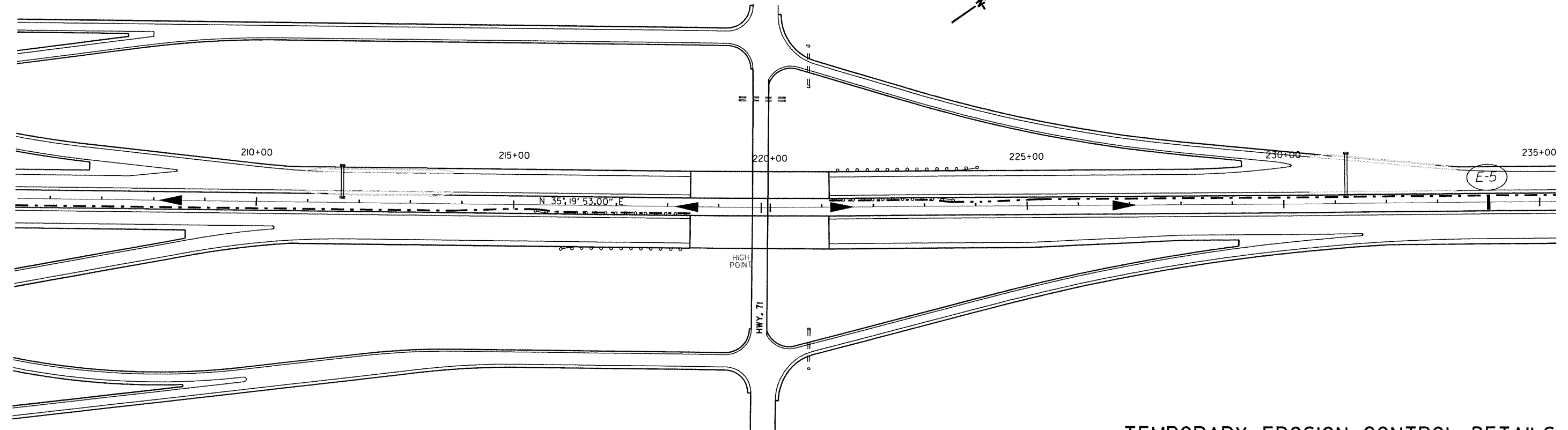


P.I = 193+13.07  
 Δ = 42°31'05.58" LT.  
 D = 2'29'41.35"  
 T = 893.52'  
 L R = 1704.26'  
 N = 2296.59  
 E = 1580689.46  
 E = 696521.41

SAND BAG DITCH CHECK	DROP INLET SILT FENCE	DATE OF REVISION	REVISION

LEGEND

INDICATES DIRECTION OF MEDIAN DRAINAGE

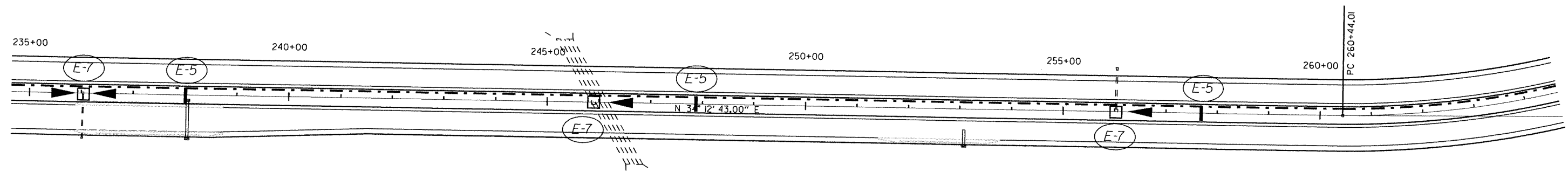


TEMPORARY EROSION CONTROL DETAILS  
 STA. 175+00 - STA. 235+00





DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		9	46
JOB NO. 030425							TEMPORARY EROSION CONTROL DETAILS	

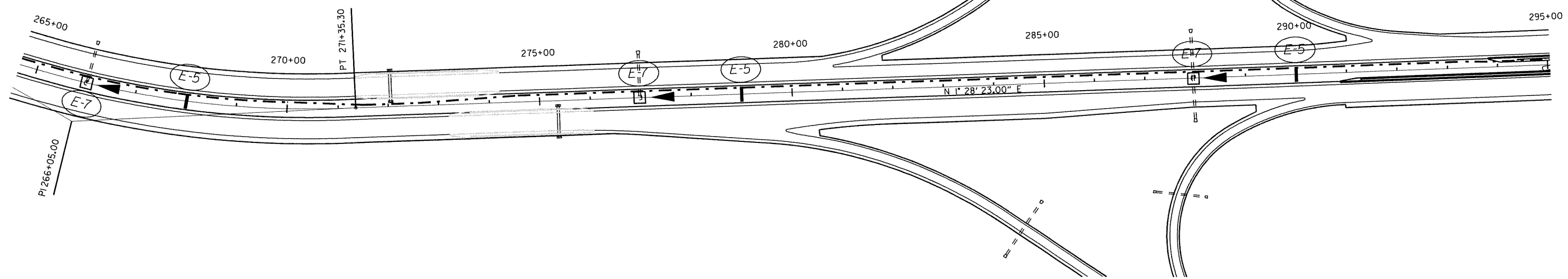


SAND BAG DITCH CHECK	DROP INLET SILT FENCE	DATE OF REVISION	REVISION

**LEGEND**

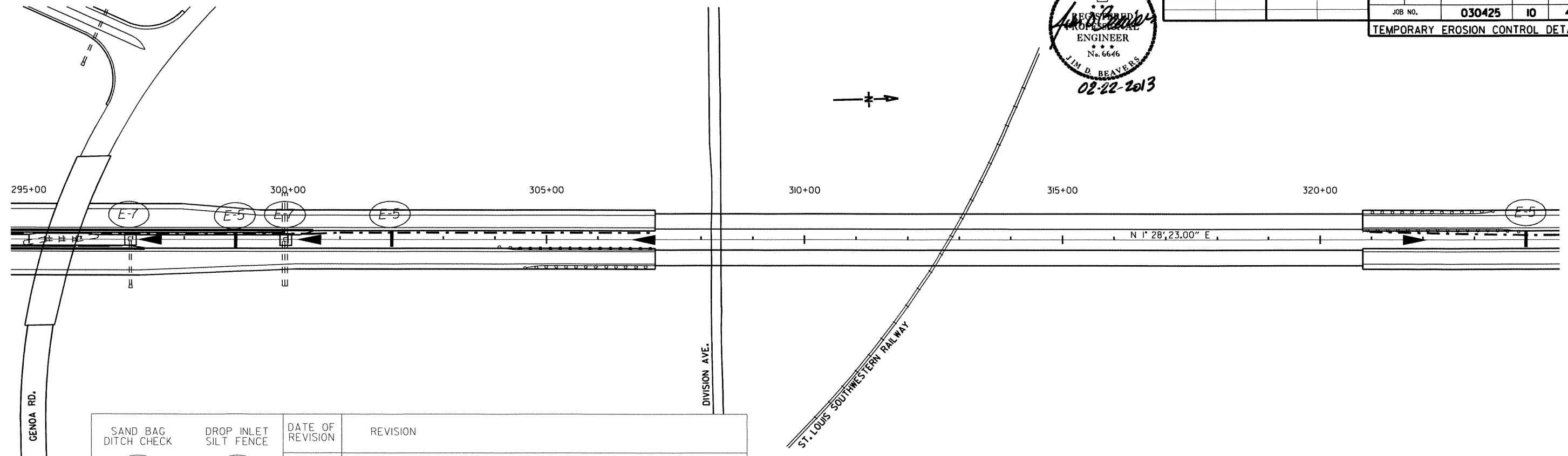
INDICATES DIRECTION OF MEDIAN DRAINAGE

P.I. = 266+05.00  
 $\Delta$  = 32°44'19.28" LT.  
 D = 3°00'00.00"  
 T = 560.99'  
 L = 1091.29'  
 R = 1909.86'  
 N = 1586761.04  
 E = 700706.63

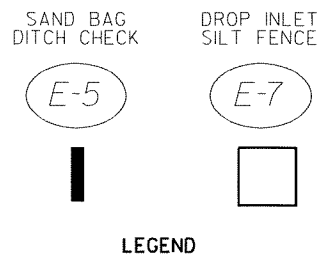


TEMPORARY EROSION CONTROL DETAILS  
 STA. 235+00 - STA. 295+00

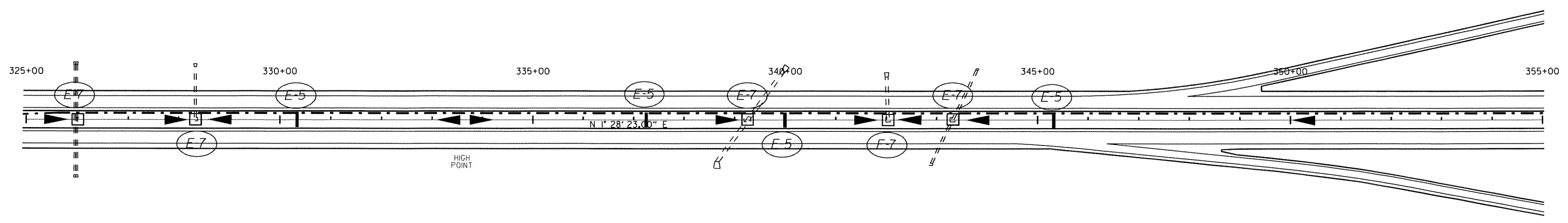
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		10	46
JOB NO. 030425							TEMPORARY EROSION CONTROL DETAILS	



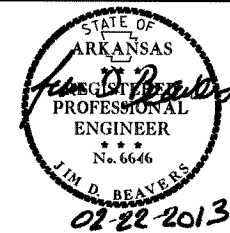
DATE OF REVISION	REVISION



INDICATES DIRECTION OF MEDIAN DRAINAGE

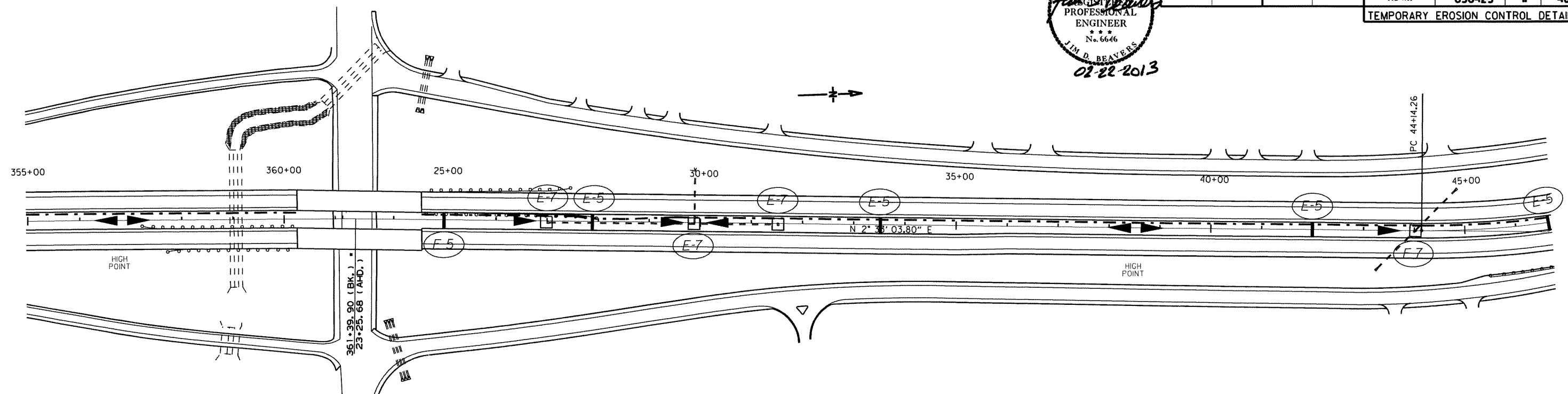


TEMPORARY EROSION CONTROL DETAILS  
STA. 295+00 - STA. 355+00

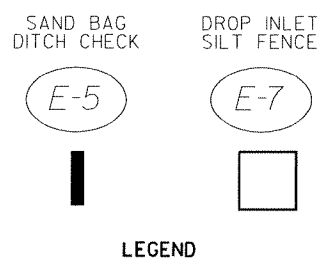


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		030425	II	46

TEMPORARY EROSION CONTROL DETAILS

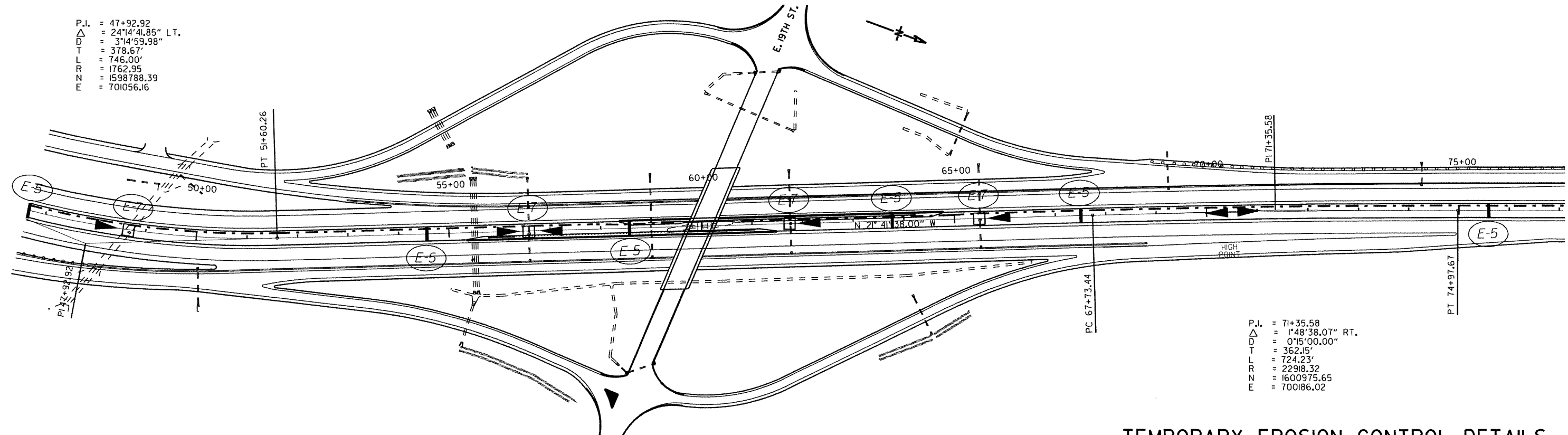


DATE OF REVISION	REVISION



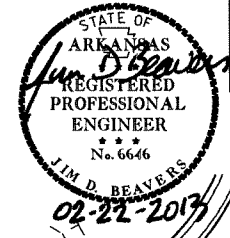
INDICATES DIRECTION OF MEDIAN DRAINAGE

P.I. = 47+92.92  
 $\Delta$  = 24'14\"/>



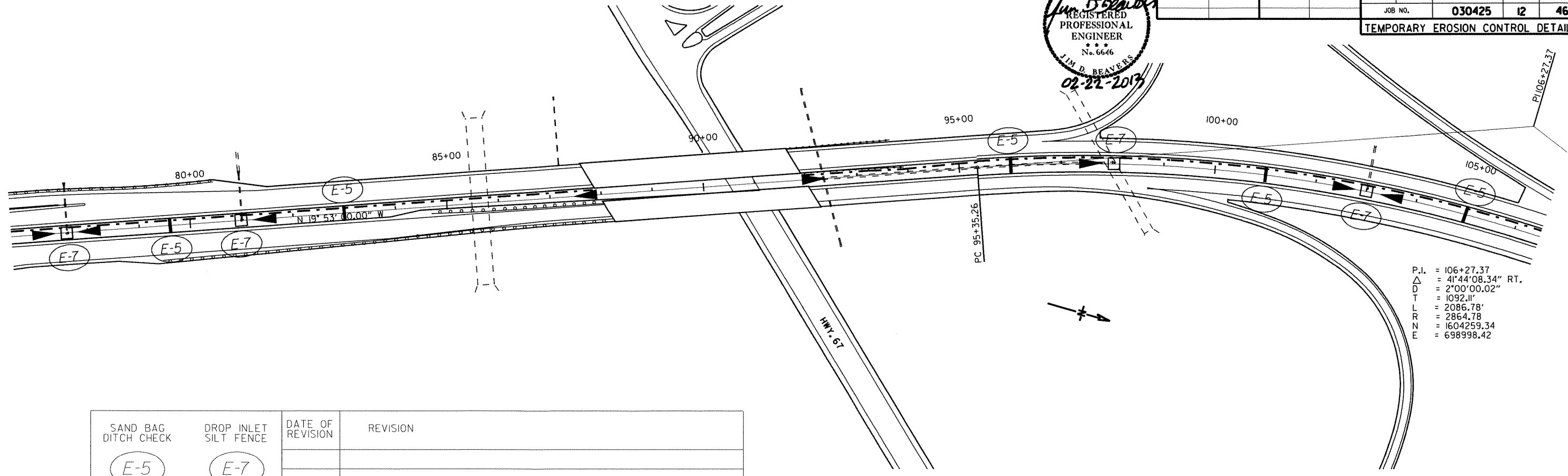
P.I. = 71+35.58  
 $\Delta$  = 1'48\"/>

TEMPORARY EROSION CONTROL DETAILS  
 STA. 355+00 - STA. 77+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.	030425		12	46

TEMPORARY EROSION CONTROL DETAILS



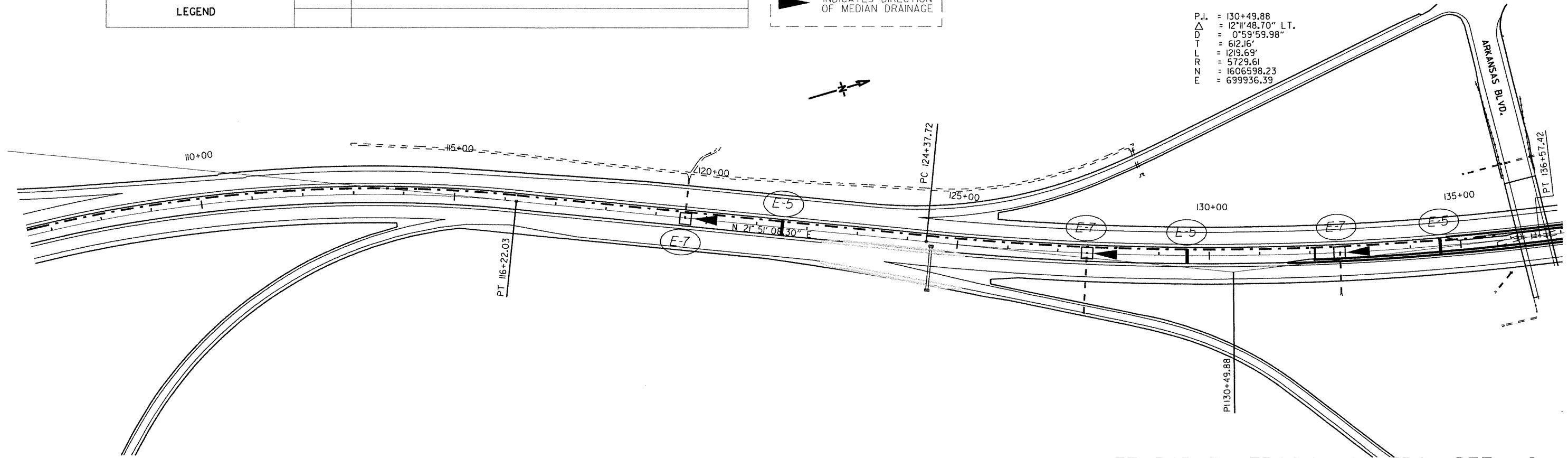
P.I. = 106+27.37  
 Δ = 41°44'08.34" RT.  
 D = 2°00'00.02"  
 T = 1092.11'  
 L = 2086.78'  
 R = 2864.78'  
 N = 1604259.34  
 E = 698998.42

SAND BAG DITCH CHECK	DROP INLET SILT FENCE	DATE OF REVISION	REVISION
(E-5)	(E-7)		
█	□		

LEGEND

INDICATES DIRECTION OF MEDIAN DRAINAGE

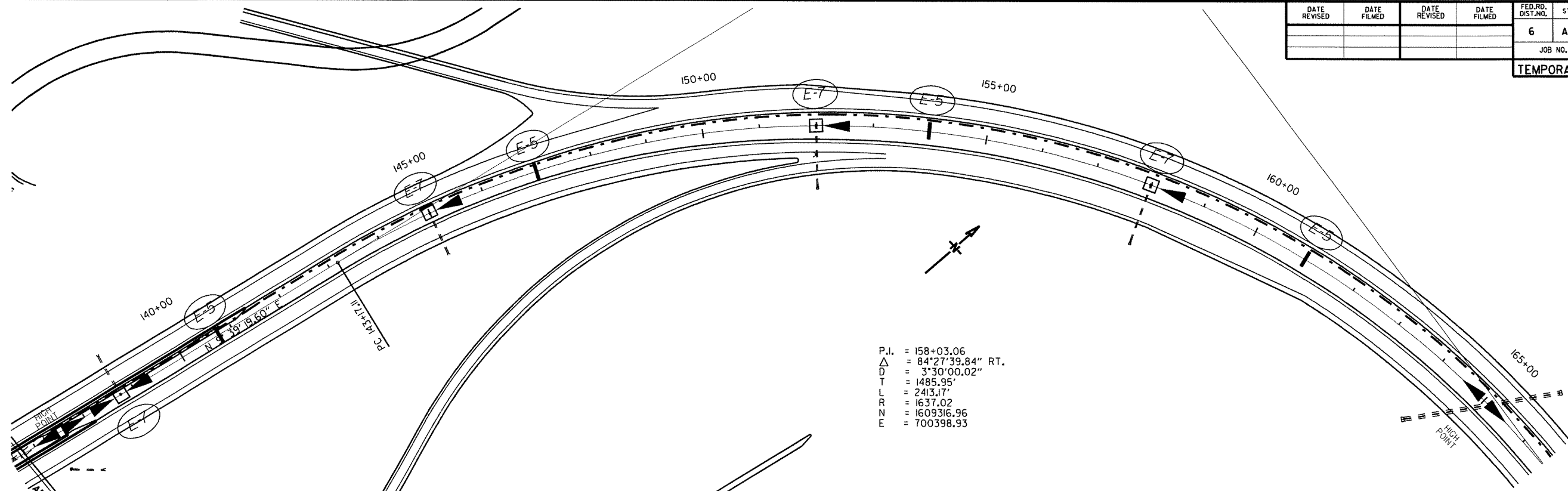
P.I. = 130+49.88  
 Δ = 12°11'48.70" LT.  
 D = 0°59'59.98"  
 T = 612.16'  
 L = 1219.69'  
 R = 5729.61'  
 N = 1606598.23  
 E = 699936.39



TEMPORARY EROSION CONTROL DETAILS  
 STA. 77+00 - STA. 137+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.						030425	13	46

TEMPORARY EROSION CONTROL DETAILS

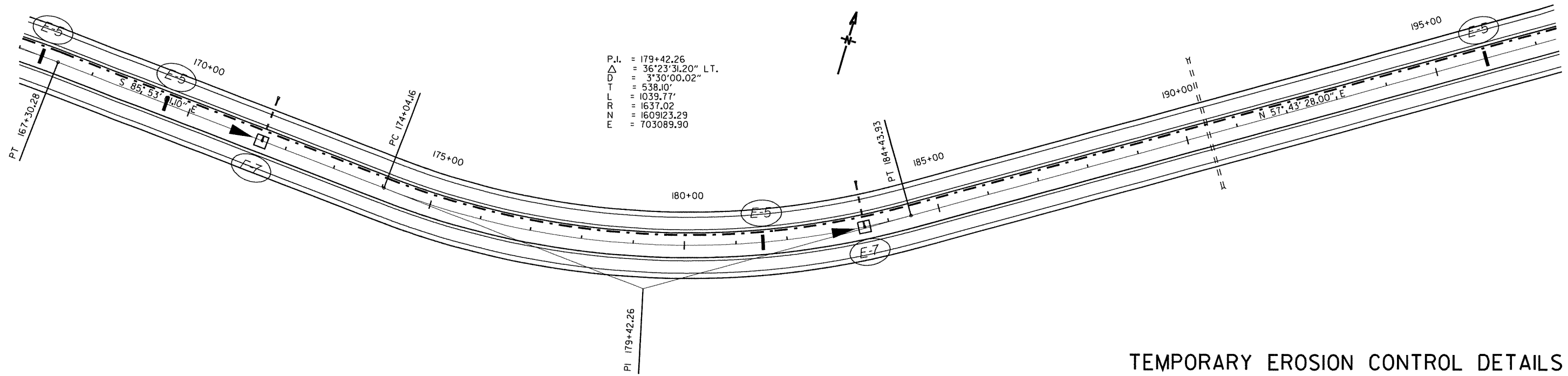


P.I. = 158+03.06  
 $\Delta$  = 84°27'39.84" RT.  
D = 3°30'00.02"  
T = 1485.95'  
L = 2413.17'  
R = 1637.02'  
N = 1609316.96  
E = 700398.93

SAND BAG DITCH CHECK	DROP INLET SILT FENCE	DATE OF REVISION	REVISION

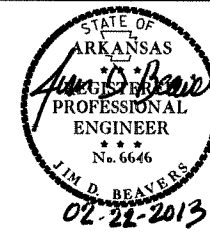
LEGEND

INDICATES DIRECTION OF MEDIAN DRAINAGE



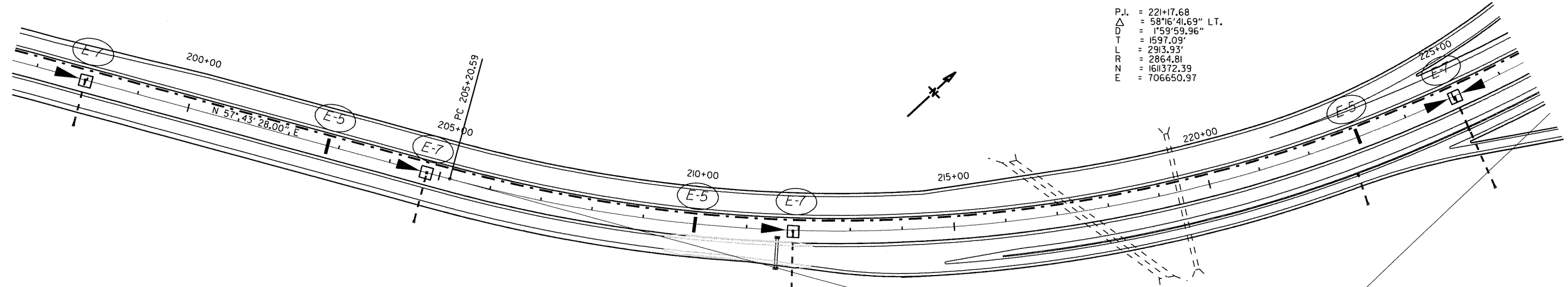
P.I. = 179+42.26  
 $\Delta$  = 36°23'31.20" LT.  
D = 3°30'00.02"  
T = 538.10'  
L = 1039.77'  
R = 1637.02'  
N = 1609123.29  
E = 703089.90

TEMPORARY EROSION CONTROL DETAILS  
STA. 137+00 - STA. 197+00



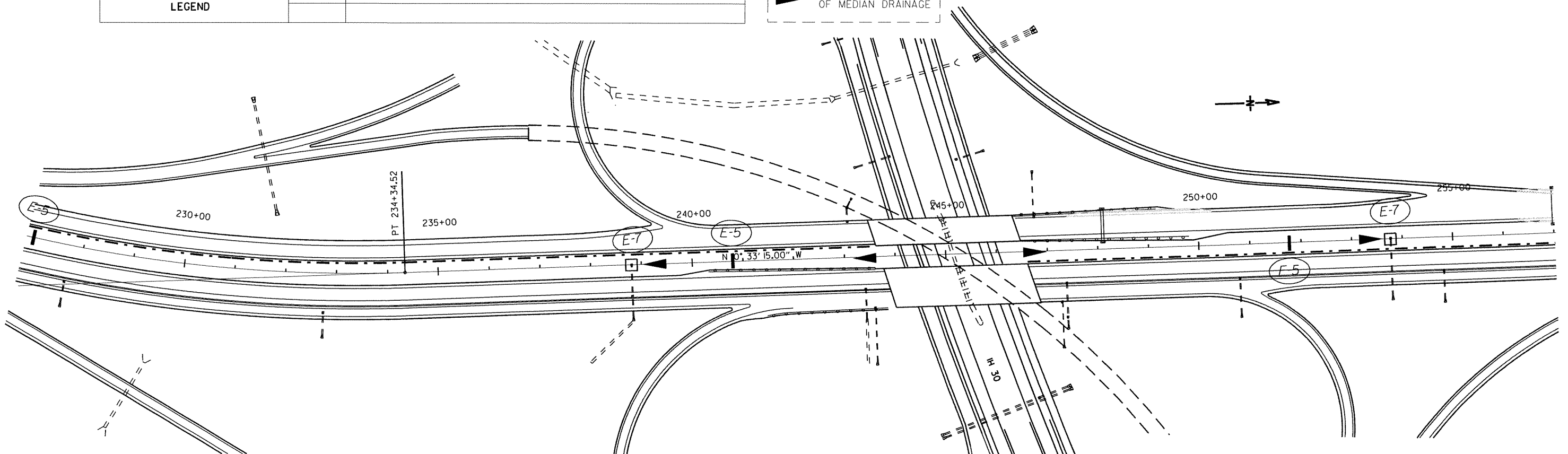
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	030425	14	46
				JOB NO. 030425				
TEMPORARY EROSION CONTROL DETAILS								

P.I. = 221+17.68  
 Δ = 58°16'41.69" LT.  
 D = 1°59'59.96"  
 T = 1597.09'  
 L R = 2913.93'  
 N = 2864.81  
 E = 706650.97

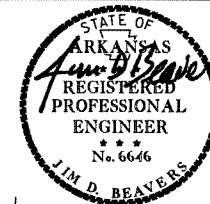


SAND BAG DITCH CHECK	DROP INLET SILT FENCE	DATE OF REVISION	REVISION
LEGEND			

INDICATES DIRECTION OF MEDIAN DRAINAGE



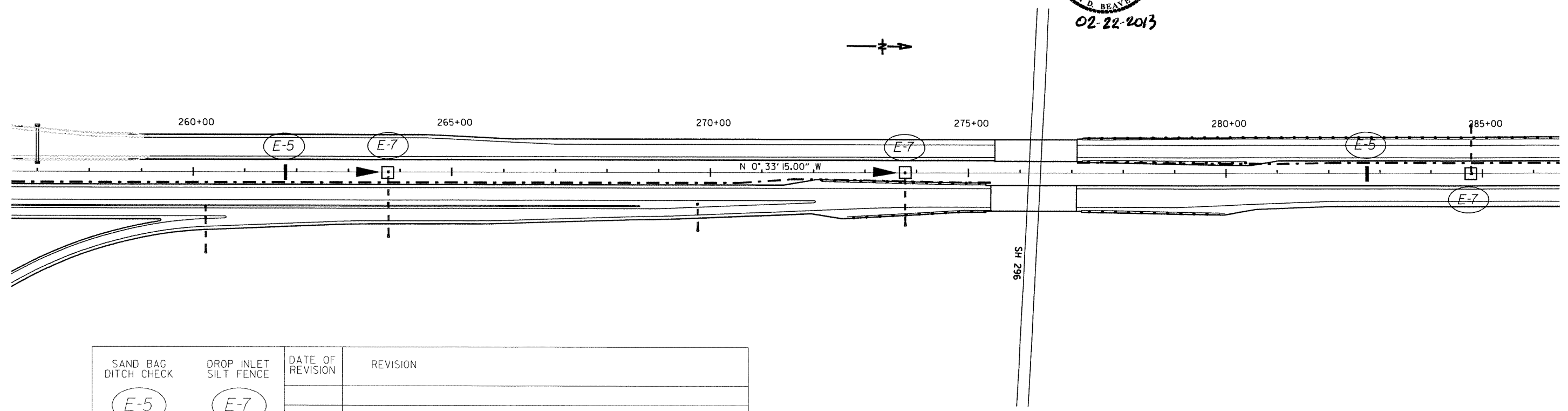
TEMPORARY EROSION CONTROL DETAILS  
 STA. 197+00 - STA. 257+00



02-22-2013

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.						030425	15	46

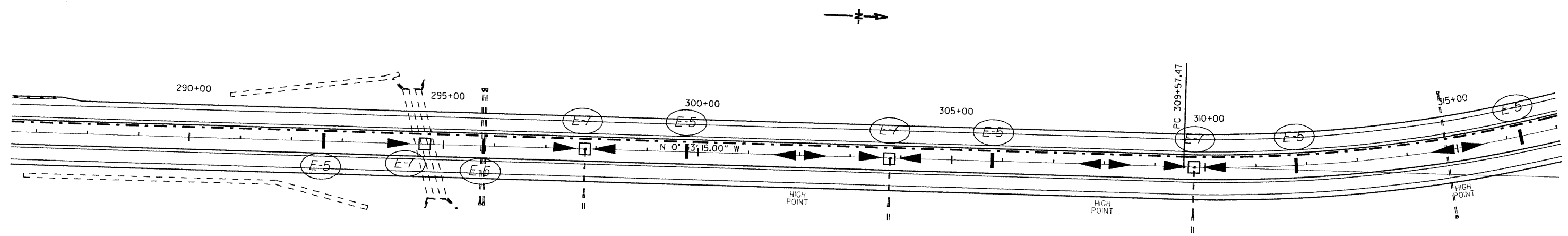
TEMPORARY EROSION CONTROL DETAILS



SAND BAG DITCH CHECK	DROP INLET SILT FENCE	DATE OF REVISION	REVISION

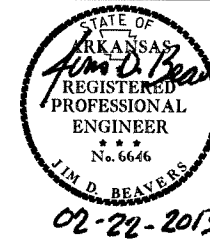
LEGEND

INDICATES DIRECTION OF MEDIAN DRAINAGE



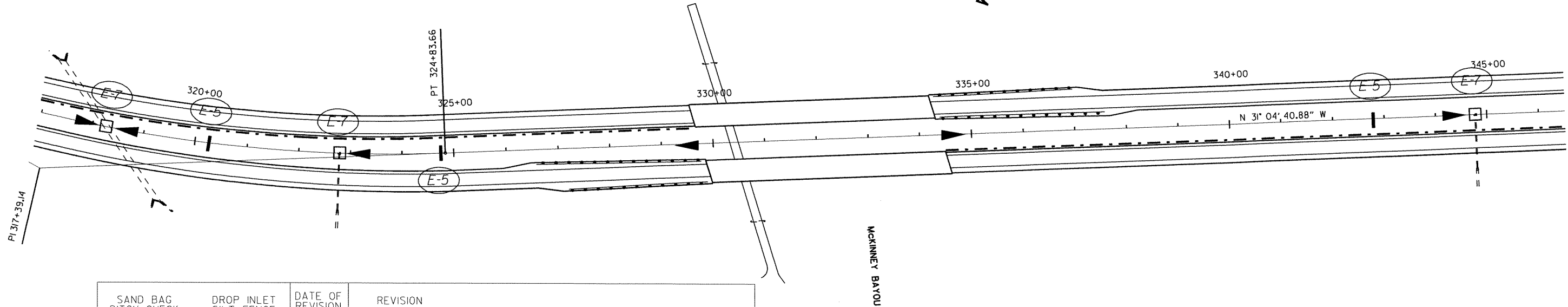
TEMPORARY EROSION CONTROL DETAILS  
STA. 257+00 - STA. 317+00

P.I. = 317+39.14  
 $\Delta$  = 30°31'25.64" LT.  
 D = 2'00'00.00"  
 T = 781.67'  
 L = 1526.19'  
 R = 2864.79'  
 N = 1621273.64  
 E = 706555.21



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.		030425	16	46

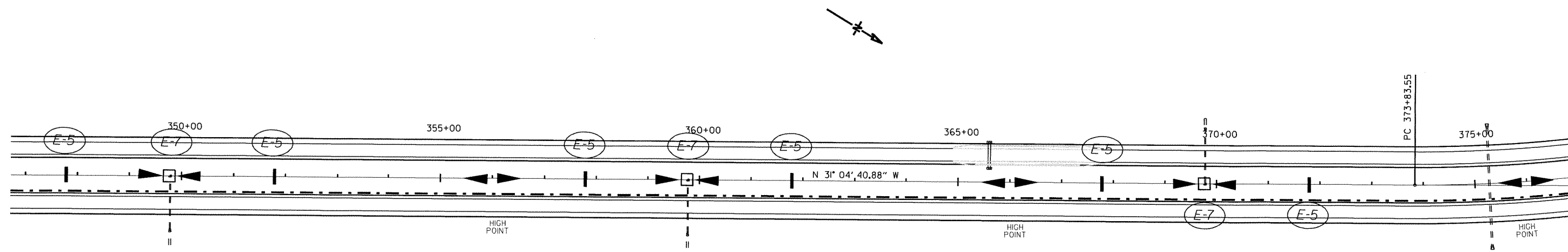
TEMPORARY EROSION CONTROL DETAILS



SAND BAG DITCH CHECK	DROP INLET SILT FENCE	DATE OF REVISION	REVISION

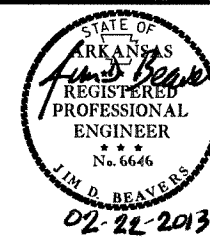
LEGEND

INDICATES DIRECTION OF MEDIAN DRAINAGE



TEMPORARY EROSION CONTROL DETAILS  
 STA. 317+00 - STA. 377+00

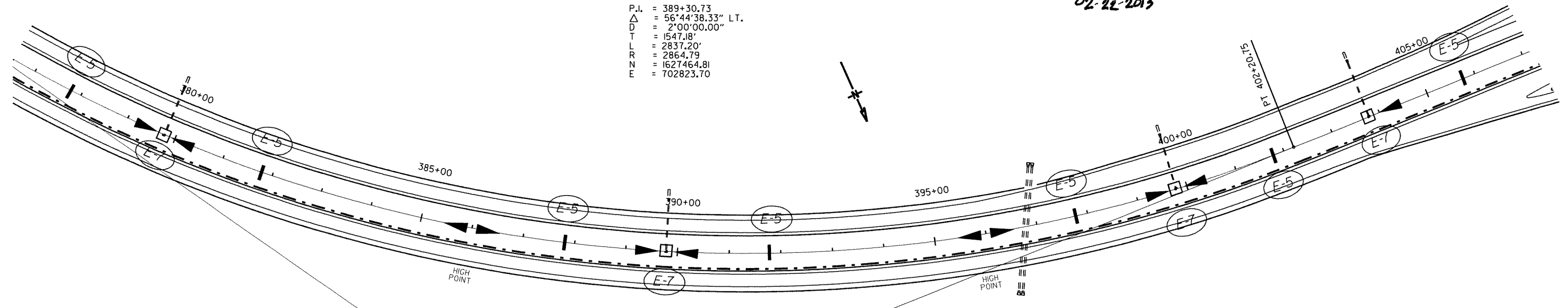




DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	030425	17	46	

TEMPORARY EROSION CONTROL DETAILS

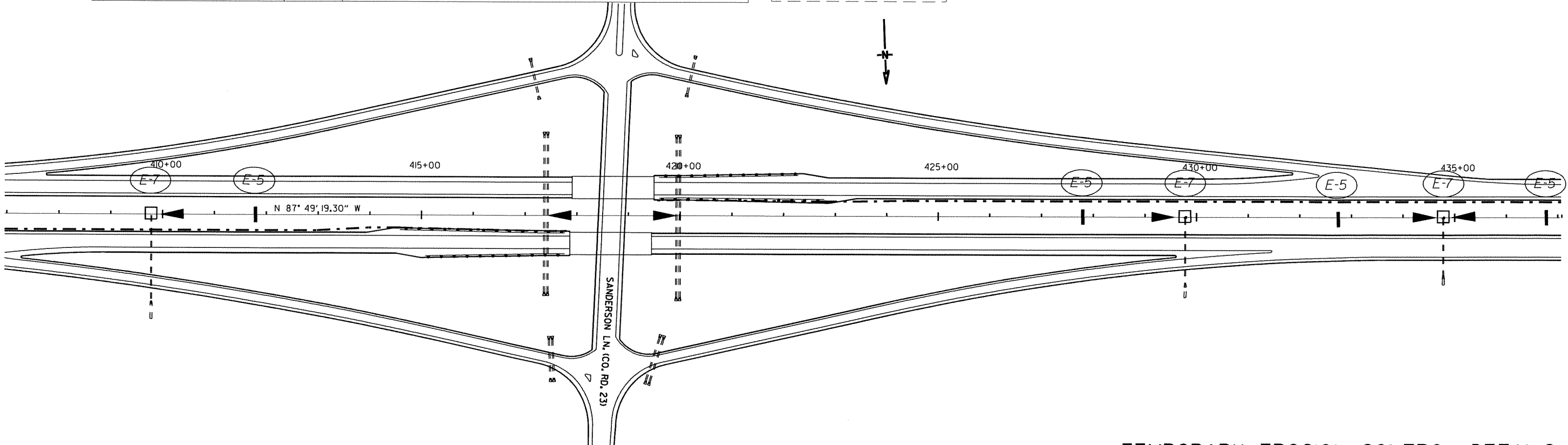
P.I. = 389+30.73  
 $\Delta$  = 56°44'38.33" LT.  
 D T = 2°00'00.00"  
 T = 1547.18'  
 L = 2837.20'  
 R = 2864.79'  
 N = 1627464.81  
 E = 702823.70



SAND BAG DITCH CHECK	DROP INLET SILT FENCE	DATE OF REVISION	REVISION

LEGEND

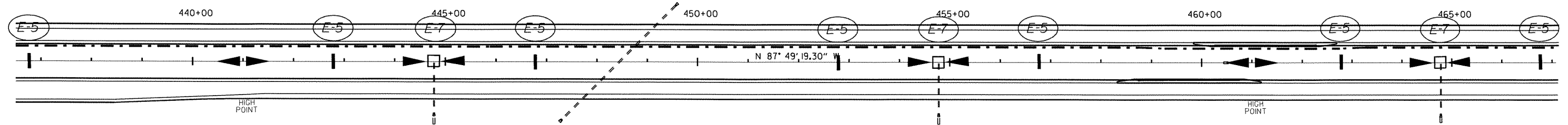
INDICATES DIRECTION OF MEDIAN DRAINAGE



TEMPORARY EROSION CONTROL DETAILS  
 STA. 377+00 - STA. 437+00



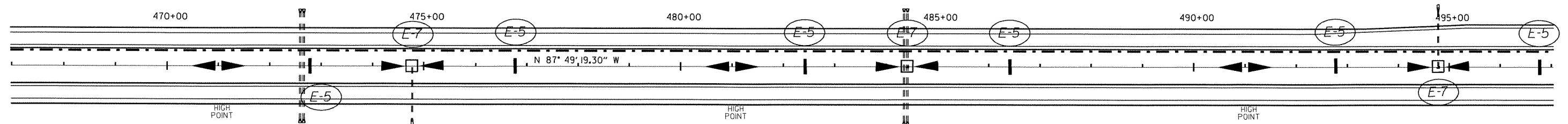
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	030425	18	46
				JOB NO. 030425 18 46				
TEMPORARY EROSION CONTROL DETAILS								



SAND BAG DITCH CHECK	DROP INLET SILT FENCE	DATE OF REVISION	REVISION

LEGEND

INDICATES DIRECTION OF MEDIAN DRAINAGE

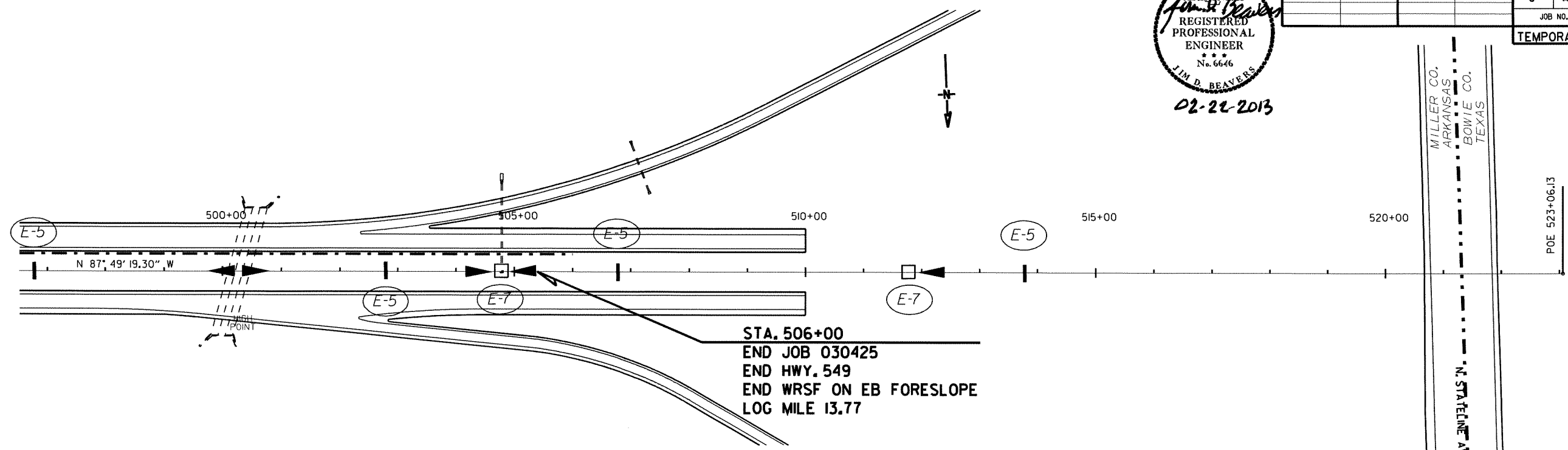


TEMPORARY EROSION CONTROL DETAILS  
STA. 437+00 - STA. 497+00

STATE OF ARKANSAS  
*Jim D. Beavers*  
 REGISTERED PROFESSIONAL ENGINEER  
 No. 6646  
 JIM D. BEAVERS  
 02-22-2013

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.		030425	19	46

TEMPORARY EROSION CONTROL DETAILS



STA. 506+00  
 END JOB 030425  
 END HWY. 549  
 END WRSF ON EB FORESLOPE  
 LOG MILE 13.77

MILLER CO.  
 ARKANSAS  
 BOWIE CO.  
 TEXAS

POE 523+06.13

SAND BAG DITCH CHECK	DROP INLET SILT FENCE	DATE OF REVISION	REVISION

LEGEND

INDICATES DIRECTION OF MEDIAN DRAINAGE

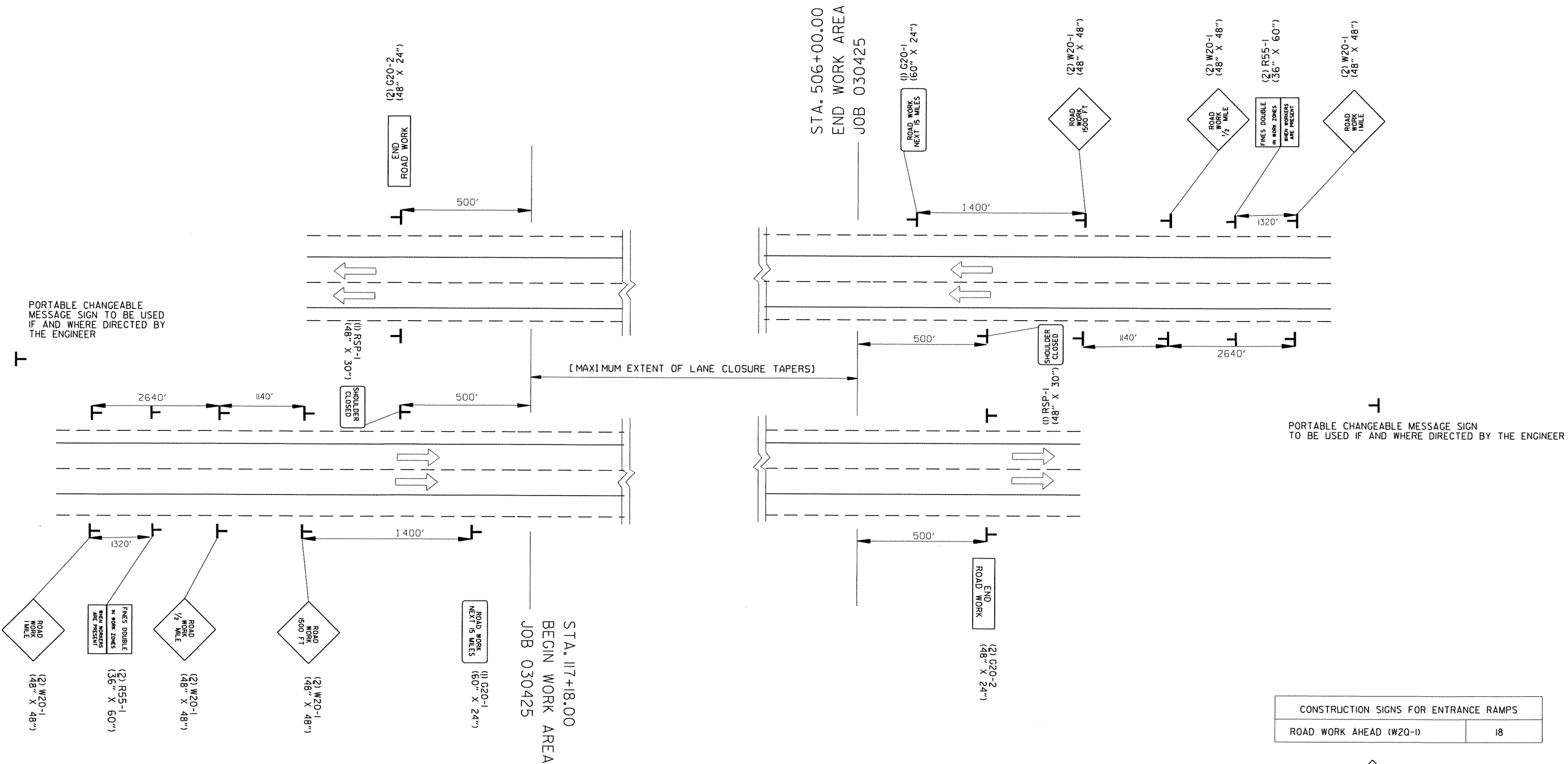


02-22-2013

NOTE :  
W20-1 (VARIOUS DISTANCE) ADVANCE SIGNS  
TO BE REPLACED AS NEEDED BY EQUIVALENT W20-5 SIGNS  
AS WORKING AREA SHIFTS.

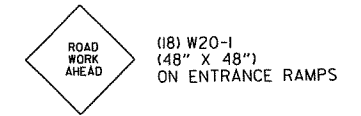
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
						JOB NO.	030425	20	46

MAINTENANCE OF TRAFFIC



NOTE :  
W20-1 (VARIOUS DISTANCE) ADVANCE SIGNS  
TO BE REPLACED AS NEEDED BY EQUIVALENT W20-5 SIGNS  
AS WORKING AREA SHIFTS.

CONSTRUCTION SIGNS FOR ENTRANCE RAMP	
ROAD WORK AHEAD (W20-1)	18



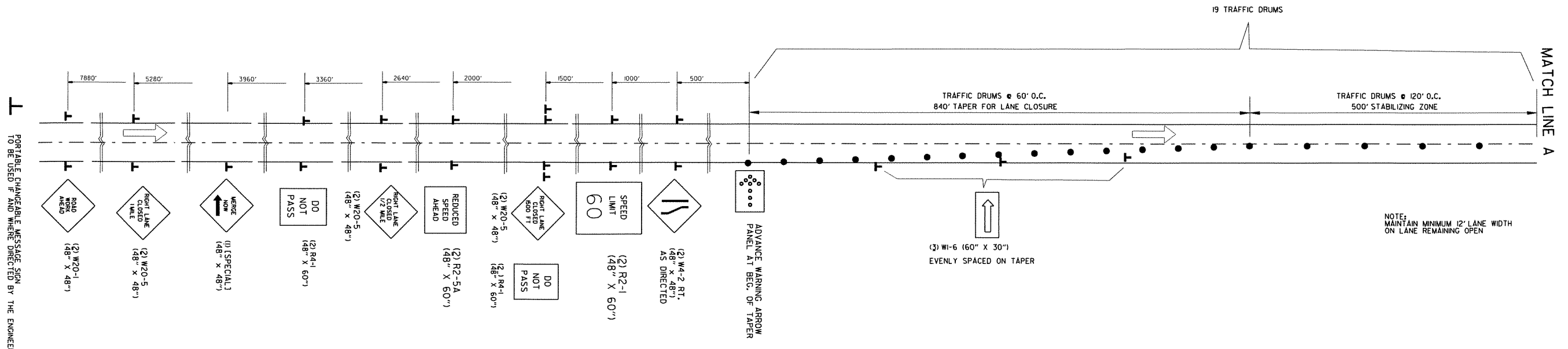
ADVANCE SIGNS AT BEGINNING AND END OF JOB  
ALL STAGES

MAINTENANCE OF TRAFFIC  
ADVANCE SIGNS AT JOB ENDS

STATE OF ARKANSAS  
*Jim D. Beavers*  
 REGISTERED PROFESSIONAL ENGINEER  
 No. 6646  
 JIM D. BEAVERS  
 02-22-2013

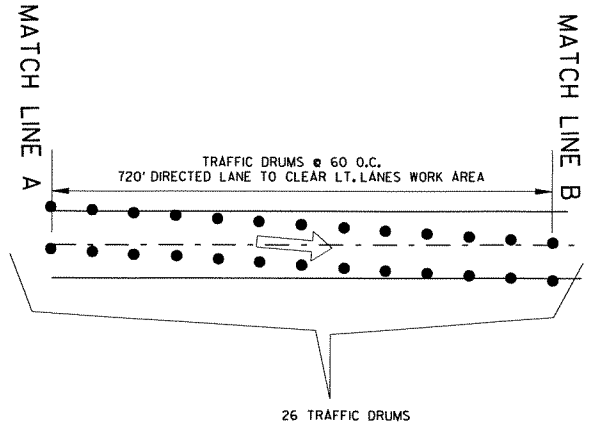
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 030425							21	46

MAINTENANCE OF TRAFFIC



### RT. LANE CLOSURE

NOTE: ANY WORK ZONE OUTSIDE THE LIMITS OF THE LANE CLOSURE AREA MUST HAVE PRIOR WRITTEN APPROVAL OF THE ENGINEER AND ANY ADDITIONAL TRAFFIC CONTROL DEVICES REQUIRED SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE DEPARTMENT.



### DIVERSION FOR LT. LANE WORK ZONE

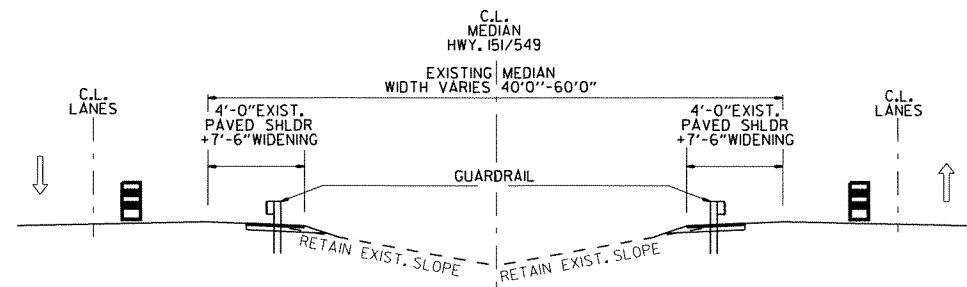
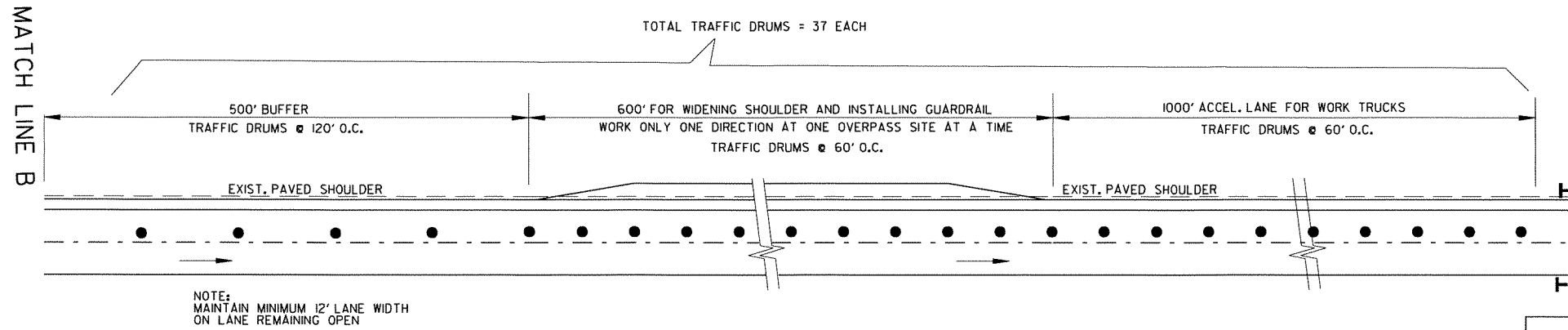
NOTE: REFER TO SP-MAINTENANCE OF TRAFFIC FOR LANE CLOSURE LIMITATIONS AND RESTRICTIONS. QUANTITY OF TRAFFIC DRUMS PROVIDED IN THE CONTRACT IS THE MAXIMUM NUMBER REQUIRED FOR ONE LANE CLOSURE.



02-22-2013

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.		030425	22	46

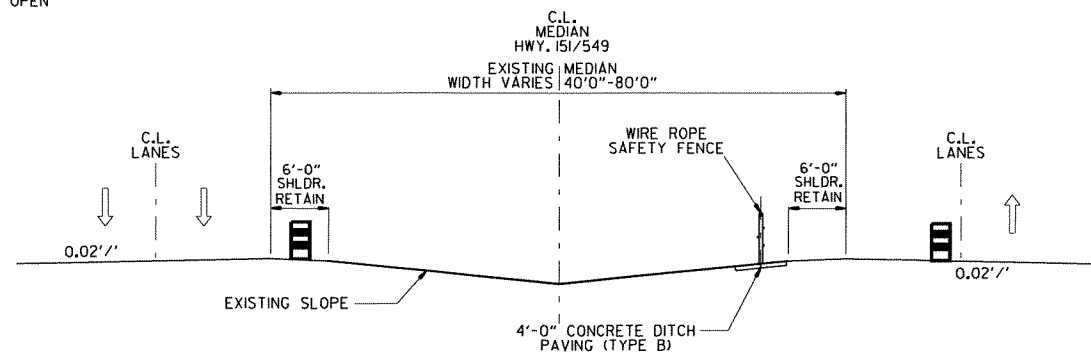
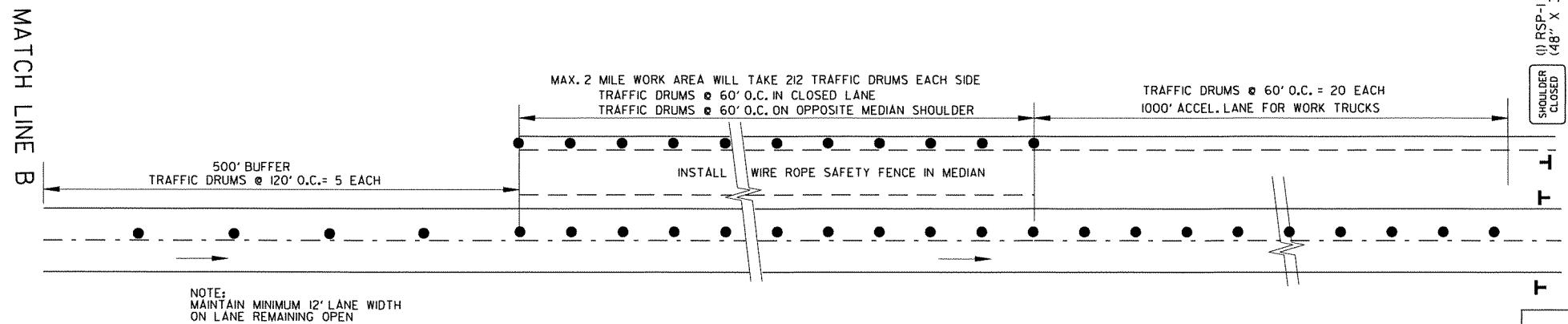
MAINTENANCE OF TRAFFIC



SPEED LIMIT 60

(2) R2-1 (48" X 60")

MOVABLE WORK ZONE FOR GUARDRAIL INSTALLATION



(1) RSP-1 (30" X 30") (48" X 60")

SHOULDER CLOSED

SPEED LIMIT 60

(2) R2-1 (48" X 60")

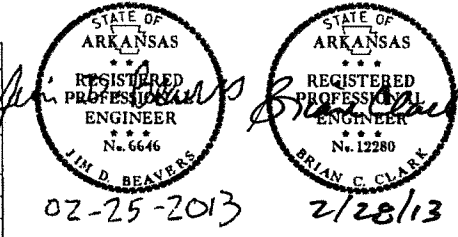
NOTE: REFER TO SP-MAINTENANCE OF TRAFFIC FOR LANE CLOSURE LIMITATIONS AND RESTRICTIONS. QUANTITY OF TRAFFIC DRUMS PROVIDED IN THE CONTRACT IS THE MAXIMUM NUMBER REQUIRED FOR ONE LANE CLOSURE.

MOVABLE WORK ZONE FOR WRSF INSTALLATION

MAINTENANCE OF TRAFFIC WORK AREAS

**EROSION CONTROL**

LOCATION	TEMPORARY EROSION CONTROL						PERMANENT EROSION CONTROL				
	TEMPORARY SEEDING	MULCH COVER	WATER	SAND BAG DITCH CHECKS (E-5)	DROP INLET SILT FENCE (E-7)	SEDIMENT REMOVAL AND DISPOSAL	SEEDING	LIME	MULCH COVER	SECOND SEEDING APPLICATION	WATER
	ACRE	ACRE	M.GAL.	BAG	LIN.FT.	C.Y.	ACRE	TON	ACRE	ACRE	M.GAL.
ENTIRE JOB	0.48	0.48	9.8	1940	2250	248	0.48	1	0.48	0.48	49.2
ENTIRE PROJECT IF AND WHERE DIRECTED BY THE ENGINEER				1000							
TOTALS:	0.48	0.48	9.8	2940	2250	248	0.48	1	0.48	0.48	49.2



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		23	46
				JOB NO.		030425		

**BASIS OF ESTIMATE:**  
 LIME ..... 2 TONS/ACRE OF SEEDING.  
 WATER ..... 102.0 M.G. / ACRE OF SEEDING.  
 WATER ..... 20.4 M.G. / ACRE OF TEMPORARY SEEDING.  
 DROP INLET SILT FENCES ..... 30 LIN. FT./LOCATION.  
 SAND BAG DITCH CHECKS ..... 20 BAGS/LOCATION.

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

RESPONSIBLE FOR QUANTITIES IN EROSION CONTROL AND ADVANCED WARNING SIGNS AND DEVICES TABLES  
 RESPONSIBLE FOR ALL OTHER QUANTITIES

**REMOVAL AND DISPOSAL ITEMS**

STATION	STATION EQUATION	DESCRIPTION	IMPACT ATTENUATION BARRIER	GUARDRAIL
			EACH	LF
138+49	BK	AT EXIST. OVERHEAD SIGN		25
136+55	BK	AT EXIST. OVERHEAD SIGN		25
148+23	BK	AT EXIST. OVERHEAD SIGN		25
151+97	BK	AT EXIST. OVERHEAD SIGN		25
295+60	BK	ON CENTERLINE OF MEDIAN	2	
60+00	AHD.	ON CENTERLINE OF MEDIAN	2	
136+50	AHD.	ON CENTERLINE OF MEDIAN	2	
TOTALS:			6	100

**ADVANCE WARNING SIGNS AND DEVICES**

SIGN NUMBER	DESCRIPTION	SIGN SIZE	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		TRAFFIC DRUMS	ADVANCE WARNING ARROW PANEL	PORTABLE CHANGEABLE MESSAGE SIGN
			SQ.FT.-LIN.FT.-EA	NO.	SQ. FT.			
W20-1	ROAD WORK 1 MILE	48"X48"	4	4	64			
W20-1	ROAD WORK 1/2 MILE	48"X48"	4	4	64			
W20-1	ROAD WORK 1500 FT.	48"X48"	4	4	64			
W20-1	ROAD WORK AHEAD	48"X48"	20	20	320			
G20-1	ROAD WORK NEXT xx MILES	60"X24"	2	2	20			
G20-2	END ROAD WORK	48"X24"	4	4	32			
SPECIAL 1	MERGE NOW + ARROW	48"X48"	1	1	16			
W20-5	RIGHT LANE CLOSED 1 MILE	48"X48"	2	2	32			
W20-5	RIGHT LANE CLOSED 1/2 MILE	48"X48"	2	2	32			
W20-5	RIGHT LANE CLOSED 1500 FT.	48"X48"	2	2	32			
W4-2R	RIGHT LANE CLOSING GRAPHIC	48"X48"	2	2	32			
W1-6	LARGER ARROW	60"X30"	3	3	38			
R4-1	DO NOT PASS	48"X60"	4	4	80			
R55-1	FINES DOUBLE IN WORK ZONES	38"X60"	4	4	60			
R2-5A	REDUCED SPEED AHEAD	48"X60"	2	2	40			
R2-1	SPEED LIMIT 80 MPH	48"X60"	6	6	120			
RSP-1	SHOULDER CLOSED	48"X30"	3	3	30			
	TRAFFIC DRUMS		484			484		
	ADVANCE WARNING ARROW PANEL		1				75	
	PORTABLE CHANGEABLE MESSAGE SIGN		2					34
TOTALS:					1076	494	75	34

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

**GUARDRAIL**

STATION	STATION	STATION EQUATION	LOCATION	GUARDRAIL (TYPE A)	TERMINAL ANCHOR POST (TYPE 1)	GUARDRAIL TERMINAL (TYPE 2)
				LIN.FT.	EACH	
135+78.00	136+51.00	BK	LT. SHLDR. AT EXIST. OH SIGN STRUCTURE	75	1	
138+63.00	137+38.00	BK	RT. SHLDR. AT EXIST. OH SIGN STRUCTURE	75	1	
148+30.00	149+05.00	BK	RT. SHLDR. AT EXIST. OH SIGN STRUCTURE	75	1	
151+22.00	151+97.00	BK	LT. SHLDR. AT EXIST. OH SIGN STRUCTURE	75	1	
291+30.00	296+55.00	BK	RT. SHLDR. AT GENOA RD. OVERPASS	475	1	1
294+65.00	299+90.00	BK	LT. SHLDR. AT GENOA RD. OVERPASS	475	1	1
55+80.00	60+80.00	AHD.	RT. SHLDR. AT E 19TH ST. OVERPASS	450	1	1
59+20.00	64+20.00	AHD.	LT. SHLDR. AT E 19TH ST. OVERPASS	450	1	1
132+10.00	137+35.00	AHD.	RT. SHLDR. AT ARKANSAS BLVD. OVERPASS	475	1	1
135+55.00	140+80.00	AHD.	LT. SHLDR. AT ARKANSAS BLVD. OVERPASS	475	1	1
TOTALS:				3100	10	6

**WIRE ROPE SAFETY FENCE**

STATION	STATION	STATION EQUATION	LOCATION	WIRE ROPE SAFETY FENCE	WRSF ANCHOR *	WRSF MAINTENANCE MATERIALS
				LIN. FT.	EACH	LUMP SUM
117+18.00	136+01.00	BK	LT OF CL HWY. 151	1883	2	
137+13.00	151+47.00	BK	LT OF CL HWY. 151	1434	2	
148+80.00	167+29.00	BK	RT OF CL HWY. 151	1849	2	
189+12.00	182+33.00	BK	LT OF CL HWY. 151	1321	2	
191+54.00	218+45.00	BK	RT OF CL HWY. 151/549	2691	2	
221+15.00	284+80.00	BK	LT OF CL HWY. 549	7375	2	
296+39.00	307+11.00	BK	LT OF CL HWY. 549	1072	2	
320+63.00	380+25.00	BK	LT OF CL HWY. 549	3642	2	
24+55.00	59+45.00	AHD.	LT OF CL HWY. 549	3490	2	
60+79.00	87+85.00	AHD.	LT OF CL HWY. 549	2706	2	
91+82.00	135+80.00	AHD.	LT OF CL HWY. 549	4388	2	
137+37.00	243+62.00	AHD.	LT OF CL HWY. 549	10625	2	
246+61.00	275+44.00	AHD.	RT OF CL HWY. 549	2883	2	
277+10.00	329+65.00	AHD.	LT OF CL HWY. 549	5255	2	
334+50.00	417+88.00	AHD.	RT OF CL HWY. 549	8338	2	
419+50.00	506+00.00	AHD.	LT OF CL HWY. 549	8650	2	
ENTIRE PROJECT						1.00
TOTALS:				67900	32	1.00

\* THIS ITEM SHOWN FOR INFORMATION ONLY

**CONCRETE DITCH PAVING**

STATION	STATION	STATION EQUATION	LOCATION	LENGTH	WIDTH	CONC. DITCH PAVING (TYPE B)	SOLID SODDING	WATER
				FEET	FEET	SQ.YD.		M.GAL.
117+18.00	135+38.00	BK	LT OF CL HWY. 151	1820	4	809	404	5.1
137+13.00	150+85.00	BK	LT OF CL HWY. 151	1372	4	610	305	3.8
149+38.00	167+28.00	BK	RT OF CL HWY. 151	1790	4	796	396	5.0
169+12.00	182+33.00	BK	LT OF CL HWY. 151	1321	4	587	294	3.7
191+54.00	218+45.00	BK	RT OF CL HWY. 151/549	2891	4	1186	598	7.5
221+14.00	294+23.00	BK	LT OF CL HWY. 549	7308	4	3248	1624	20.5
300+07.00	307+11.00	BK	LT OF CL HWY. 549	704	4	313	156	2.0
320+83.00	360+25.00	BK	LT OF CL HWY. 549	3942	4	1752	876	11.0
24+55.00	58+78.00	AHD.	LT OF CL HWY. 549	3423	4	1521	761	9.6
64+37.00	87+85.00	AHD.	LT OF CL HWY. 549	2348	4	1044	522	6.6
91+92.00	135+12.00	AHD.	LT OF CL HWY. 549	4320	4	1920	960	12.1
140+98.00	243+62.00	AHD.	LT OF CL HWY. 549	10283	4	4561	2281	28.7
246+61.00	275+44.00	AHD.	RT OF CL HWY. 549	2883	4	1281	641	8.1
277+10.00	329+65.00	AHD.	LT OF CL HWY. 549	5255	4	2336	1168	14.7
334+50.00	417+88.00	AHD.	RT OF CL HWY. 549	8338	4	3705	1852	23.3
419+50.00	506+00.00	AHD.	LT OF CL HWY. 549	8650	4	3844	1922	24.2
TOTALS:						29523	14762	185.9

BASIS OF ESTIMATE:  
 WATER ..... 12.8 GAL. / SQ. YD. OF SOLID SODDING.

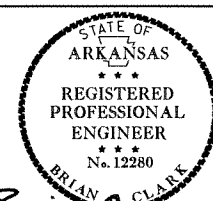
**QUANTITIES**

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**BASE AND SURFACING**

STATION	STATION	STATION EQUATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		ACHM SURFACE COURSE (1/2") (PG 64-22)			
					TON / STATION	TON	AVG. VMD. FEET	SQ. YD.	POUND / SQ. YD.	TON
134+96	136+49	BK.	LT. SHLDR. AT OVERHEAD SIGN	153.0	44.75	68	8.2	139	220.0	15
136+55	138+18	BK.	RT. SHLDR. AT OVERHEAD SIGN	163.0	35.00	57	8.3	151	220.0	17
148+23	149+80	BK.	RT. SHLDR. AT OVERHEAD SIGN	157.0	44.75	70	8.5	148	220.0	16
150+37	151+97	BK.	LT. SHLDR. AT OVERHEAD SIGN	160.0	44.75	72	8.2	146	220.0	16
290+87	297+23	BK.	RT. SHLDR. AT GENOA RD. OVERPASS	636.0	35.00	223	7.3	514	220.0	57
293+82	300+48	BK.	LT. SHLDR. AT GENOA RD. OVERPASS	666.0	44.75	298	9.3	690	220.0	76
55+35	61+48	AHD.	RT. SHLDR. AT E. 19TH ST. OVERPASS	613.0	35.00	215	7.2	493	220.0	54
58+37	64+78	AHD.	LT. SHLDR. AT E. 19TH ST. OVERPASS	641.0	44.75	287	9.4	666	220.0	73
131+55	138+15	AHD.	RT. SHLDR. AT ARKANSAS BLVD. OVERPASS	660.0	35.00	231	7.3	537	220.0	59
134+72	141+38	AHD.	LT. SHLDR. AT ARKANSAS BLVD. OVERPASS	666.0	44.75	298	9.3	687	220.0	76
<b>TOTALS:</b>						<b>1819</b>		<b>4171</b>		<b>459</b>

**TOTALS:**  
 BASIS OF ESTIMATE:  
 110 LBS. PER SQ. YD. PER INCH DEPTH  
 ACHM SURFACE COURSE (1/2").....94.7% MIN. AGGR.....5.3% ASPHALT BINDER  
 MAXIMUM NUMBER OF GYRATIONS = 115



*Brian Clark, P.E.*  
 2/25/18

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.	030425	24
<b>QUANTITIES</b>								

**EARTHWORK**

STATION	STATION	STATION EQUATION	LOCATION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT
				CU. YD.	
134+96	136+49	BK.	LT. SHLDR. AT OVERHEAD SIGN	20	15
136+55	138+18	BK.	RT. SHLDR. AT OVERHEAD SIGN	21	16
148+23	149+80	BK.	RT. SHLDR. AT OVERHEAD SIGN	20	16
150+37	151+97	BK.	LT. SHLDR. AT OVERHEAD SIGN	21	16
290+87	297+23	BK.	RT. SHLDR. AT GENOA RD. OVERPASS	82	63
293+82	300+48	BK.	LT. SHLDR. AT GENOA RD. OVERPASS	86	66
55+35	61+48	AHD.	RT. SHLDR. AT E. 19TH ST. OVERPASS	79	60
58+37	64+78	AHD.	LT. SHLDR. AT E. 19TH ST. OVERPASS	83	63
131+55	138+15	AHD.	RT. SHLDR. AT ARKANSAS BLVD. OVERPASS	86	65
134+72	141+38	AHD.	LT. SHLDR. AT ARKANSAS BLVD. OVERPASS	86	66
<b>TOTALS:</b>				<b>584</b>	<b>446</b>

NOTE: EARTHWORK QUANTITIES SHOWN ABOVE SHALL BE PAID FOR AS PLAN QUANTITY.  
 QUANTITIES ARE ESTIMATED FOR SLOPE MODIFICATION. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

**QUANTITIES**

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Jim D. Beavers  
 REGISTERED PROFESSIONAL ENGINEER  
 No. 6646  
 02-25-2013  
 RESPONSIBLE FOR QUANTITIES IN EROSION CONTROL AND ADVANCED WARNING SIGNS AND DEVICES TABLES

Brian C. Clark, P.E.  
 REGISTERED PROFESSIONAL ENGINEER  
 No. 12280  
 2/28/13  
 RESPONSIBLE FOR ALL OTHER QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	030425	25	46	

**SUMMARY OF QUANTITIES**

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP	REMOVAL AND DISPOSAL OF IMPACT ATTENUATION BARRIER	6	EACH
SP & 202	REMOVAL AND DISPOSAL OF GUARDRAIL	100	LIN.FT.
210	UNCLASSIFIED EXCAVATION	584	CU.YD.
210	COMPACTED EMBANKMENT	446	CU. YD.
SS & 303	AGGREGATE BASE COURSE (CLASS 7)	1819	TON
SP, SS & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	435	TON
SP, SS & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	24	TON
601	MOBILIZATION	1.00	LUMP SUM
SP, SS & 603	MAINTENANCE OF TRAFFIC	1.00	LUMP SUM
SS & 604	SIGNS	1076	SQ.FT.
SS & 604	TRAFFIC DRUMS	494	EACH
SS & 604	ADVANCE WARNING ARROW PANEL	75	DAY
SP, SS & 604	PORTABLE CHANGEABLE MESSAGE SIGN	34	WEEK
SP & 605	CONCRETE DITCH PAVING (TYPE B)	29523	SQ.YD.
SS & 617	GUARDRAIL (TYPE A)	3100	LIN.FT.
SS & 617	TERMINAL ANCHOR POSTS (TYPE 1)	10	EACH
SS & 617	GUARDRAIL TERMINAL (TYPE 2)	6	EACH
620	SEEDING	0.48	ACRE
620	LIME	1	TON
620	MULCH COVER	0.96	ACRE
SS & 620	WATER	244.9	M.GAL.
621	TEMPORARY SEEDING	0.48	ACRE
621	SAND BAG DITCH CHECKS	2940	BAG
621	DROP INLET SILT FENCE	2250	LIN.FT.
621	SEDIMENT REMOVAL AND DISPOSAL	248	CU. YD.
623	SECOND SEEDING APPLICATION	0.48	ACRE
624	SOLID SODDING	14762	SQ.YD.
635	ROADWAY CONSTRUCTION CONTROL	1.00	LUMP SUM
SP	WIRE ROPE SAFETY FENCE	67900	LIN.FT.
SP	WIRE ROPE SAFETY FENCE MAINTENANCE MATERIALS	1.00	LUMP SUM

**REVISIONS**

DATE	REVISION	SHEET NUMBER

0:51:02 AM 2/25/2013  
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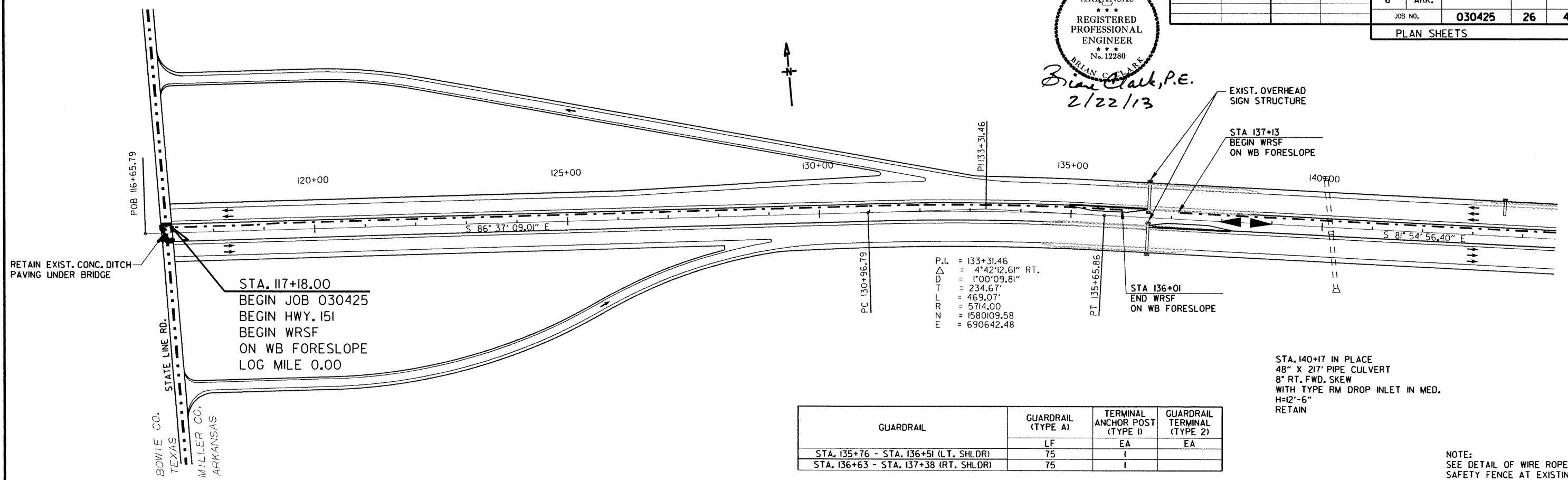


Brian Clark, P.E.  
2/22/13

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	030425	26	46

JOB NO. 030425

PLAN SHEETS

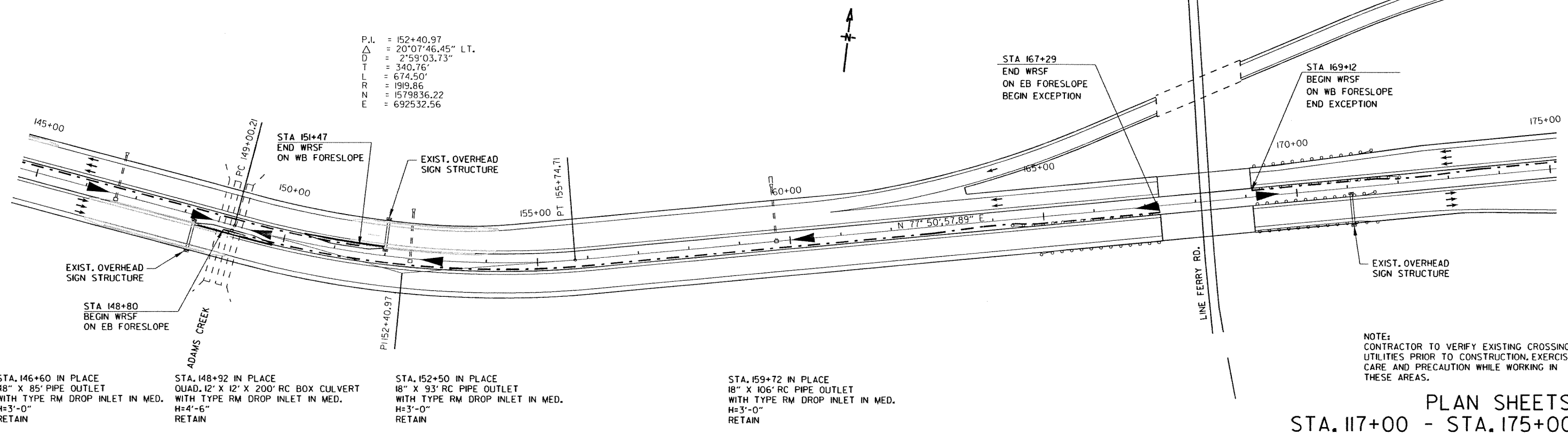


GUARDRAIL	GUARDRAIL (TYPE A)	TERMINAL ANCHOR POST (TYPE 1)	GUARDRAIL TERMINAL (TYPE 2)
STA. 135+76 - STA. 136+51 (LT. SHLDR)	LF	EA	EA
STA. 136+63 - STA. 137+38 (RT. SHLDR)	75	I	
	75	I	

STA. 140+17 IN PLACE  
48" X 217' PIPE CULVERT  
8° RT. FWD. SKEW  
WITH TYPE RM DROP INLET IN MED.  
H=12'-6"  
RETAIN

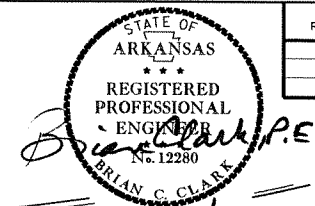
NOTE:  
SEE DETAIL OF WIRE ROPE SAFETY FENCE AT EXISTING BRIDGE ENDS FOR ADDITIONAL INFORMATION.

GUARDRAIL	GUARDRAIL (TYPE A)	TERMINAL ANCHOR POST (TYPE 1)	GUARDRAIL TERMINAL (TYPE 2)
STA. 148+30 - STA. 149+05 (RT. SHLDR)	LF	EA	EA
STA. 151+22 - STA. 151+97 (LT. SHLDR)	75	I	
	75	I	



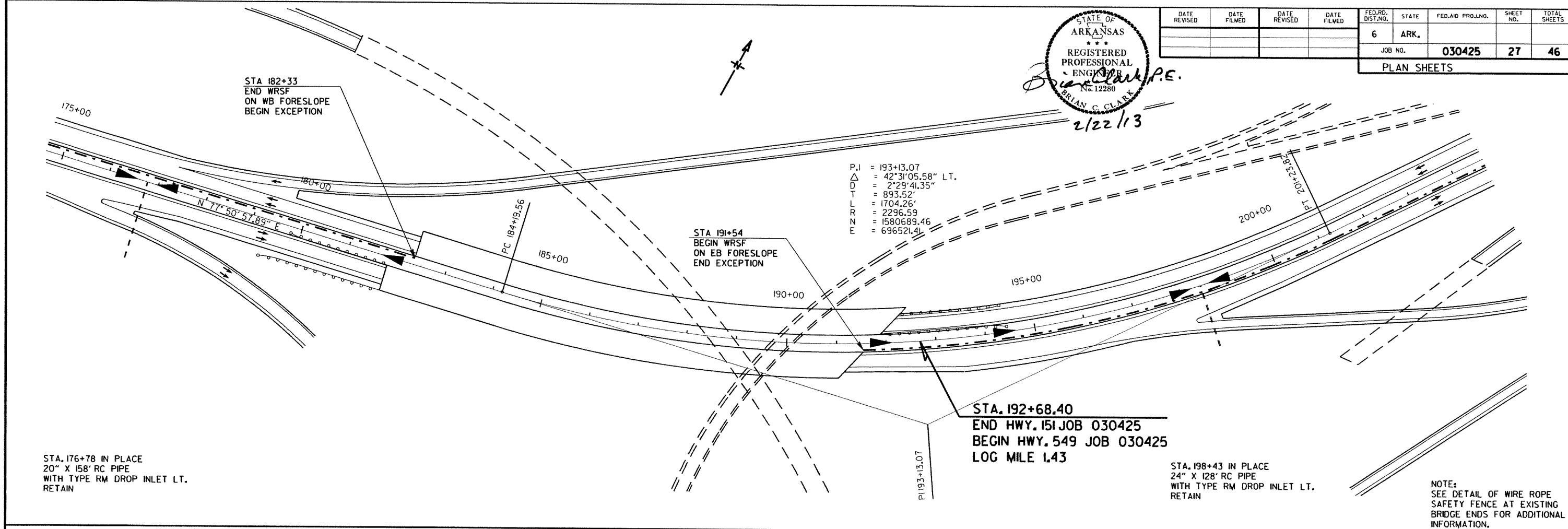
NOTE:  
CONTRACTOR TO VERIFY EXISTING CROSSING UTILITIES PRIOR TO CONSTRUCTION, EXERCISE CARE AND PRECAUTION WHILE WORKING IN THESE AREAS.

PLAN SHEETS  
STA. 117+00 - STA. 175+00



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		27	46

PLAN SHEETS



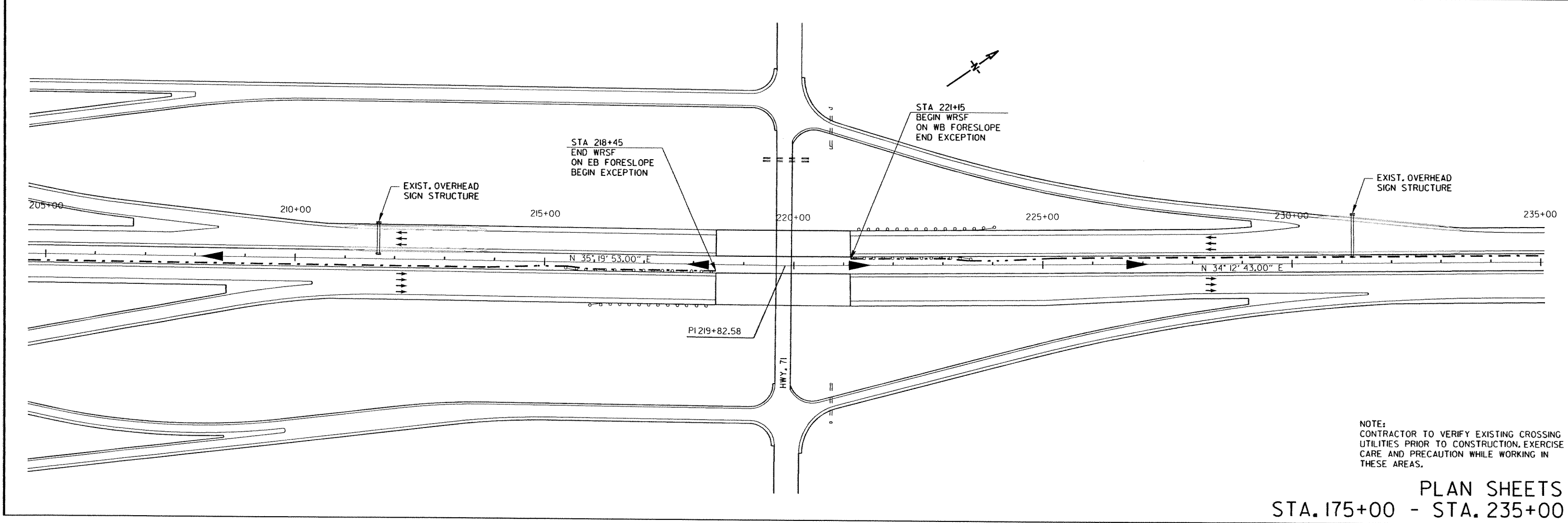
P.I = 193+13.07  
 $\Delta$  = 42°31'05.58" LT.  
 D = 2'29'41.35"  
 T = 893.52'  
 L = 1704.26'  
 R = 2296.59'  
 N = 1580689.46  
 E = 696521.41'

STA. 176+78 IN PLACE  
 20" X 158' RC PIPE  
 WITH TYPE RM DROP INLET LT.  
 RETAIN

STA. 192+68.40  
 END HWY. 151 JOB 030425  
 BEGIN HWY. 549 JOB 030425  
 LOG MILE 1.43

STA. 198+43 IN PLACE  
 24" X 128' RC PIPE  
 WITH TYPE RM DROP INLET LT.  
 RETAIN

NOTE:  
 SEE DETAIL OF WIRE ROPE  
 SAFETY FENCE AT EXISTING  
 BRIDGE ENDS FOR ADDITIONAL  
 INFORMATION.



STA 218+45  
 END WRSF  
 ON EB FORESLOPE  
 BEGIN EXCEPTION

STA 221+15  
 BEGIN WRSF  
 ON WB FORESLOPE  
 END EXCEPTION

EXIST. OVERHEAD  
 SIGN STRUCTURE

EXIST. OVERHEAD  
 SIGN STRUCTURE

NOTE:  
 CONTRACTOR TO VERIFY EXISTING CROSSING  
 UTILITIES PRIOR TO CONSTRUCTION. EXERCISE  
 CARE AND PRECAUTION WHILE WORKING IN  
 THESE AREAS.

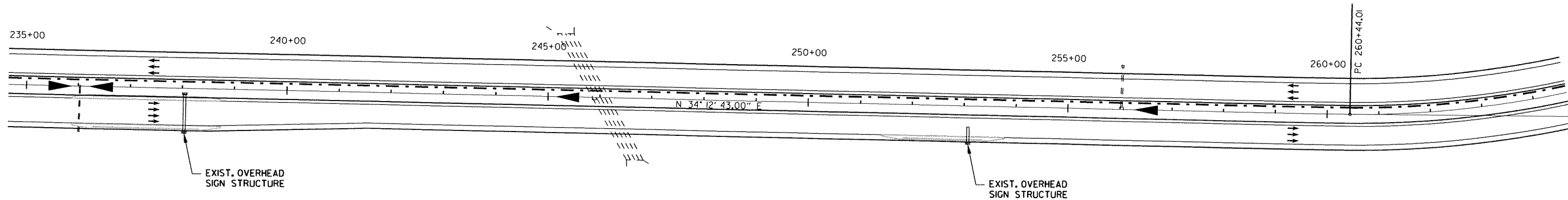
PLAN SHEETS  
 STA. 175+00 - STA. 235+00

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Brian Clark, P.E.  
2/22/13

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.	030425		28	46
PLAN SHEETS								



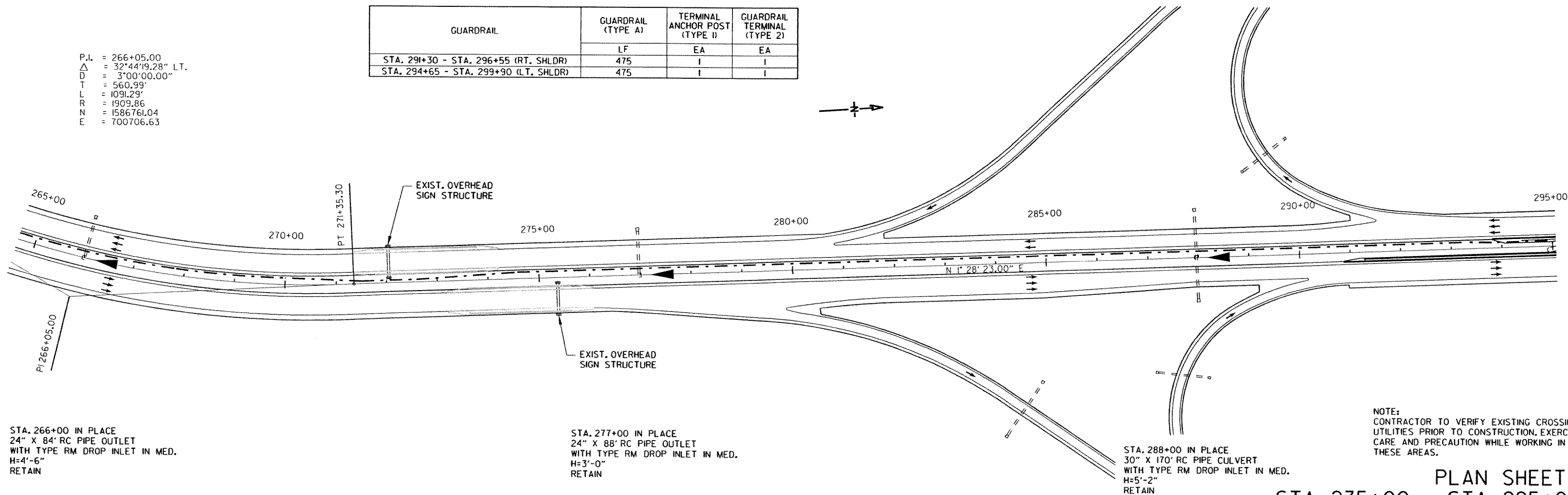
STA. 236+00 IN PLACE  
24" X 92' RC PIPE OUTLET  
WITH TYPE RM DROP INLET IN MED.  
H=3'-0"  
RETAIN

STA. 246+00 IN PLACE  
QUAD. 7' X 5' X 277' RC BOX CULVERT  
30° RT. FWD. SKEW  
WITH TYPE TM DROP INLET IN MED.  
H=11'-6"  
RETAIN

STA. 256+00 IN PLACE  
24" X 84' RC PIPE OUTLET  
WITH TYPE RM DROP INLET IN MED.  
H=3'-0"  
RETAIN

GUARDRAIL	GUARDRAIL (TYPE A)	TERMINAL ANCHOR POST (TYPE 1)	GUARDRAIL TERMINAL (TYPE 2)
	LF	EA	EA
STA. 291+30 - STA. 296+55 (RT. SHLDR)	475	1	1
STA. 294+65 - STA. 299+90 (LT. SHLDR)	475	1	1

P.I. = 266+05.00  
Δ = 32°44'19.28" LT.  
D = 3°00'00.00"  
T = 560.99'  
L = 1091.29'  
R = 1909.86'  
N = 1586761.04  
E = 700706.63



STA. 266+00 IN PLACE  
24" X 84' RC PIPE OUTLET  
WITH TYPE RM DROP INLET IN MED.  
H=4'-6"  
RETAIN

STA. 277+00 IN PLACE  
24" X 88' RC PIPE OUTLET  
WITH TYPE RM DROP INLET IN MED.  
H=3'-0"  
RETAIN

STA. 288+00 IN PLACE  
30" X 170' RC PIPE CULVERT  
WITH TYPE RM DROP INLET IN MED.  
H=5'-2"  
RETAIN

NOTE:  
CONTRACTOR TO VERIFY EXISTING CROSSING UTILITIES PRIOR TO CONSTRUCTION, EXERCISE CARE AND PRECAUTION WHILE WORKING IN THESE AREAS.

PLAN SHEETS  
STA. 235+00 - STA. 295+00

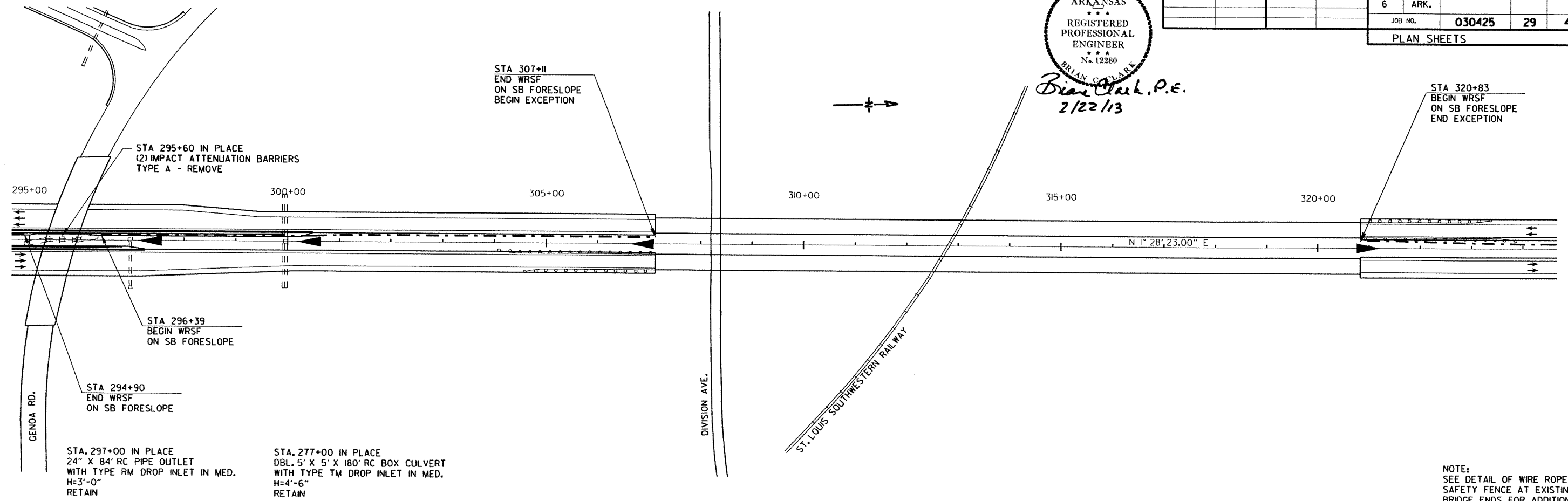
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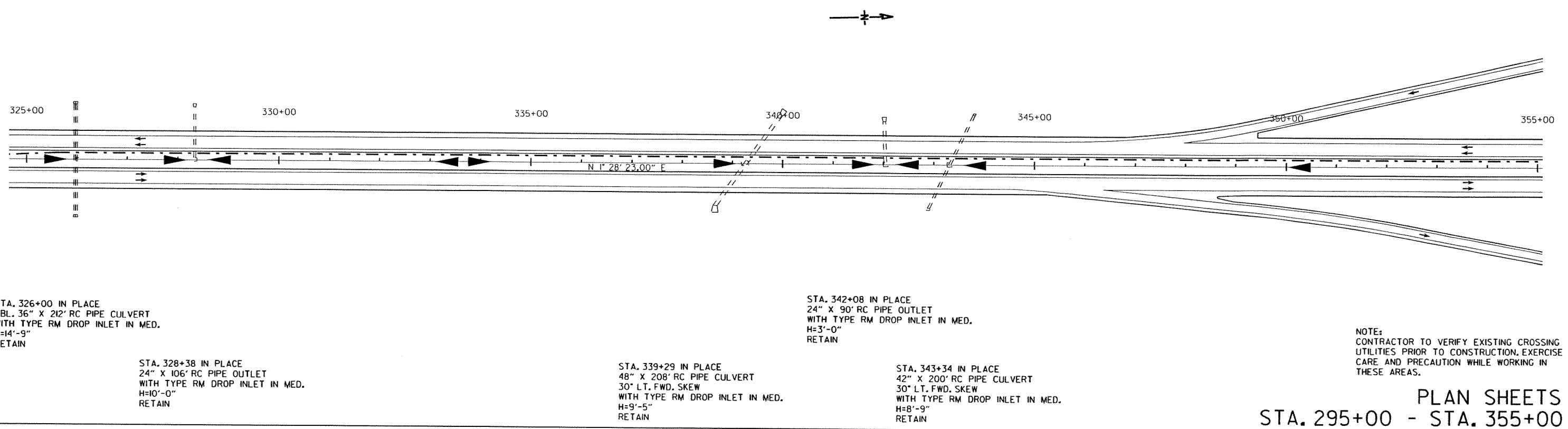
*Brian Clark, P.E.*  
2/22/13

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.		030425	29	46

PLAN SHEETS



NOTE:  
SEE DETAIL OF WIRE ROPE  
SAFETY FENCE AT EXISTING  
BRIDGE ENDS FOR ADDITIONAL  
INFORMATION.



NOTE:  
CONTRACTOR TO VERIFY EXISTING CROSSING  
UTILITIES PRIOR TO CONSTRUCTION. EXERCISE  
CARE AND PRECAUTION WHILE WORKING IN  
THESE AREAS.

PLAN SHEETS  
STA. 295+00 - STA. 355+00

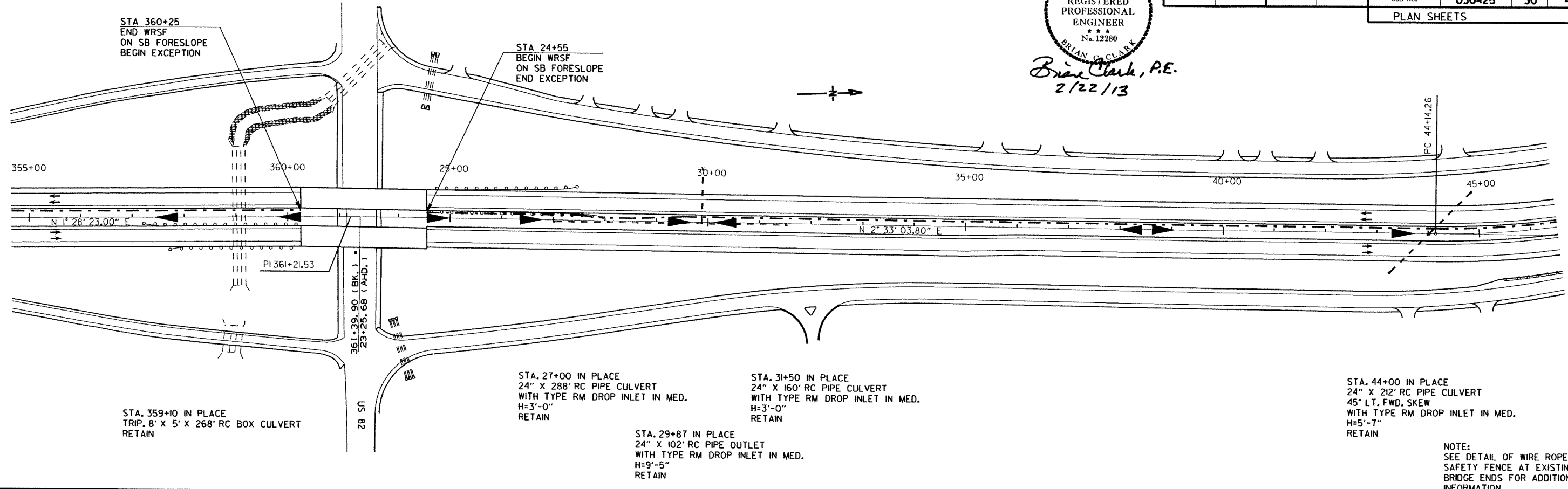
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Brian Clark, P.E.  
2/22/13

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	030425	30	46

PLAN SHEETS

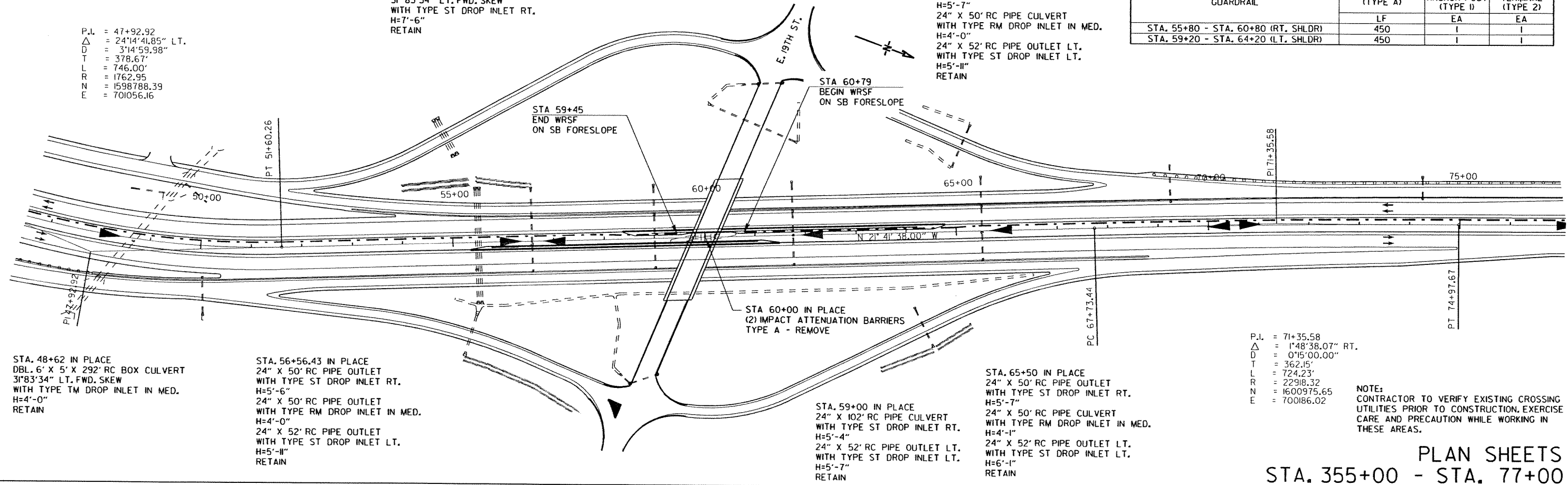


P.L. = 47+92.92  
Δ = 24°14'41.85" LT.  
D = 3°14'59.98"  
T = 378.67'  
L = 746.00'  
R = 1762.95  
N = 1598788.39  
E = 701056.16

STA. 55+50 IN PLACE  
DBL. 44" X 27" X 216' RC ARCH PIPE CULVERT  
31' 83'34" LT. FWD. SKEW  
WITH TYPE ST DROP INLET RT.  
H=7'-6" RETAIN

STA. 61+75 IN PLACE  
24" X 50' RC PIPE OUTLET  
WITH TYPE ST DROP INLET RT.  
H=5'-7"  
24" X 50' RC PIPE CULVERT  
WITH TYPE RM DROP INLET IN MED.  
H=4'-0"  
24" X 52' RC PIPE OUTLET LT.  
WITH TYPE ST DROP INLET LT.  
H=5'-11" RETAIN

GUARDRAIL	GUARDRAIL (TYPE A)	TERMINAL ANCHOR POST (TYPE 1)	GUARDRAIL TERMINAL (TYPE 2)
	LF	EA	EA
STA. 55+80 - STA. 60+80 (RT. SHLDR)	450	I	I
STA. 59+20 - STA. 64+20 (LT. SHLDR)	450	I	I



P.L. = 71+35.58  
Δ = 1°48'38.07" RT.  
D = 0°15'00.00"  
T = 362.15'  
L = 724.23'  
R = 2298.32  
N = 1600975.65  
E = 700186.02

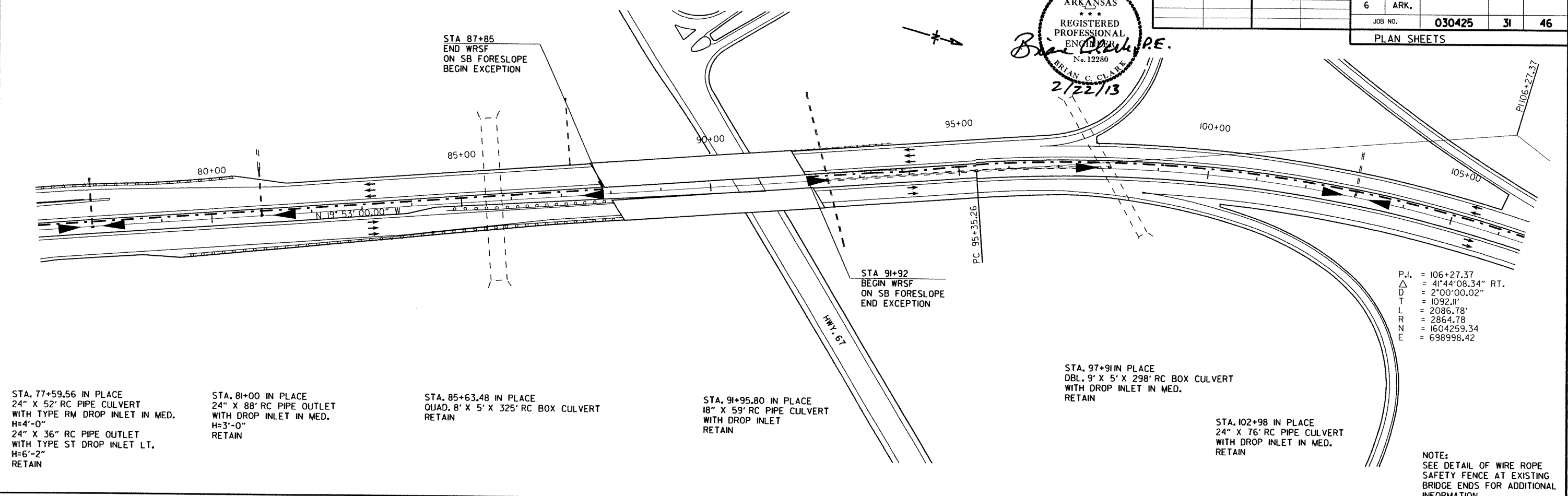
PLAN SHEETS  
STA. 355+00 - STA. 77+00

STATE OF ARKANSAS  
 REGISTERED PROFESSIONAL ENGINEER  
 BRIAN C. CLARK  
 No. 12280  
 2/22/13

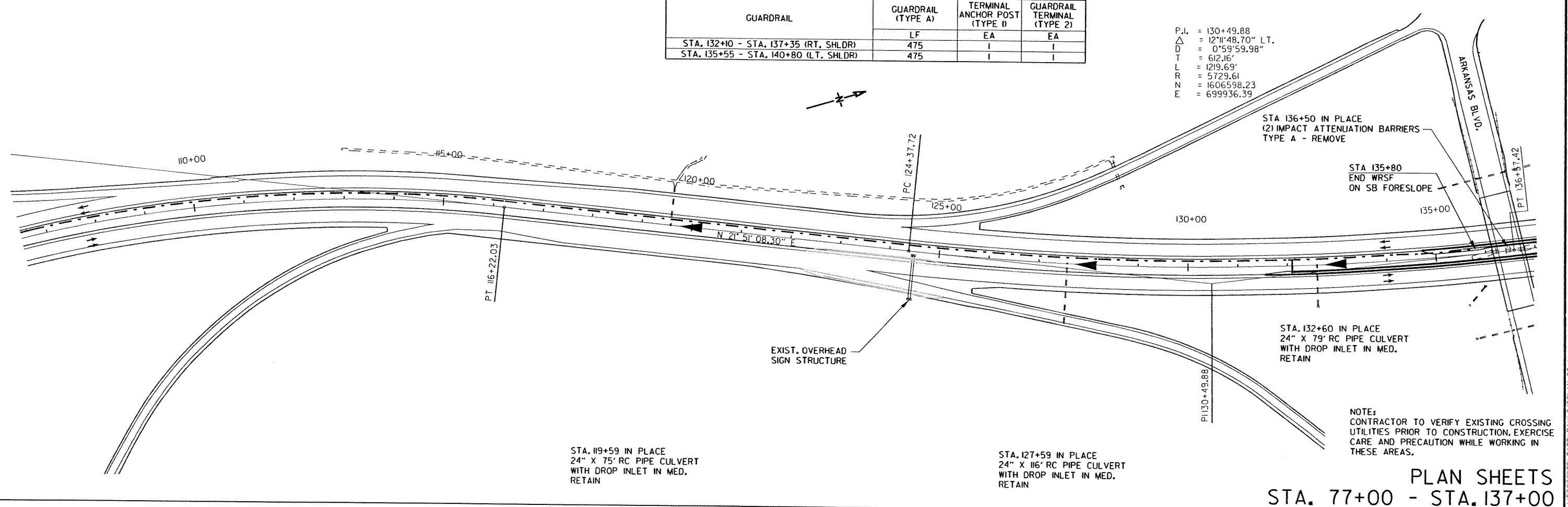
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				6	ARK.	030425	31	46

JOB NO. 030425 SHEET NO. 31 TOTAL SHEETS 46

PLAN SHEETS



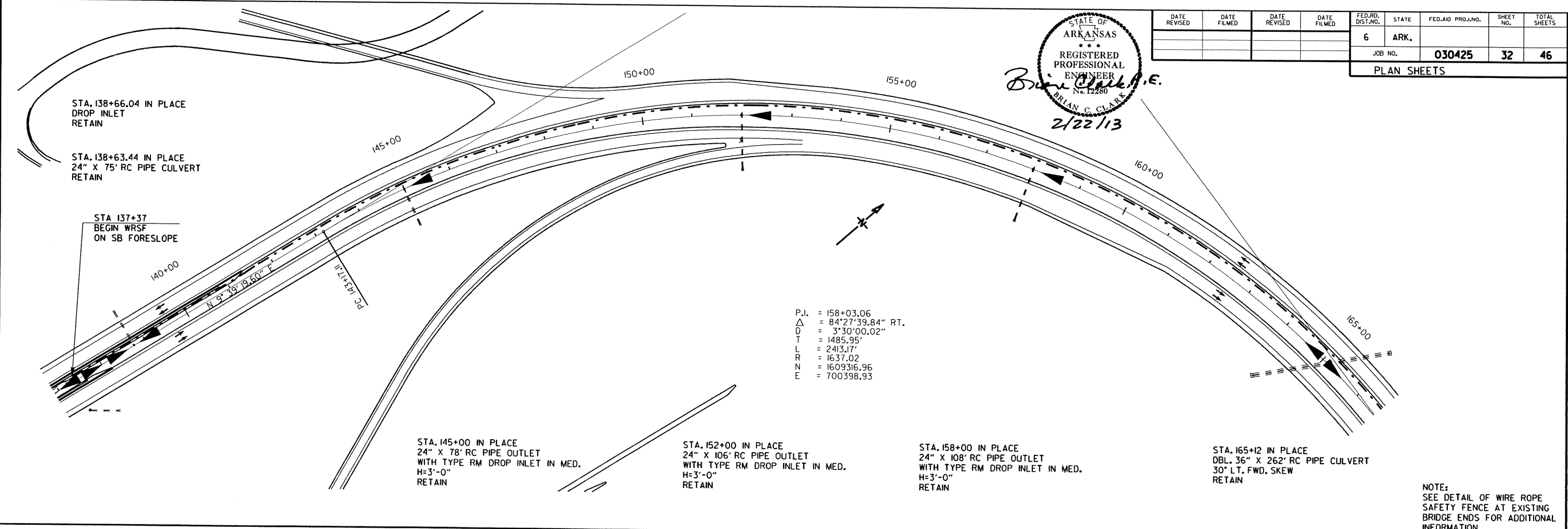
GUARDRAIL	GUARDRAIL (TYPE A)	TERMINAL ANCHOR POST (TYPE D)	GUARDRAIL TERMINAL (TYPE 2)
STA. 132+10 - STA. 137+35 (RT. SHLDR)	LF	EA	EA
STA. 135+55 - STA. 140+80 (LT. SHLDR)	475	I	I
	475	I	I



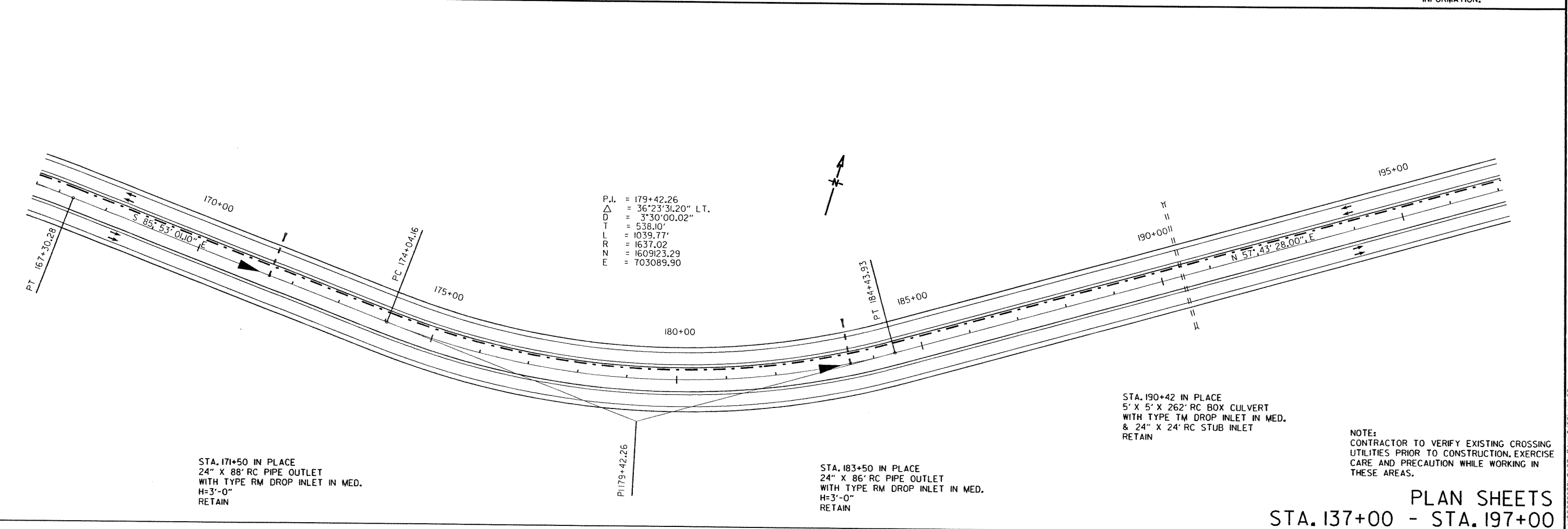
PLAN SHEETS  
 STA. 77+00 - STA. 137+00

STATE OF ARKANSAS  
 REGISTERED PROFESSIONAL ENGINEER  
 BRIAN C. CLARK  
 No. 12280  
 2/22/13

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.	030425	32	46	
JOB NO.							030425	32	46
PLAN SHEETS									



NOTE:  
 SEE DETAIL OF WIRE ROPE  
 SAFETY FENCE AT EXISTING  
 BRIDGE ENDS FOR ADDITIONAL  
 INFORMATION.



NOTE:  
 CONTRACTOR TO VERIFY EXISTING CROSSING  
 UTILITIES PRIOR TO CONSTRUCTION. EXERCISE  
 CARE AND PRECAUTION WHILE WORKING IN  
 THESE AREAS.

PLAN SHEETS  
 STA. 137+00 - STA. 197+00

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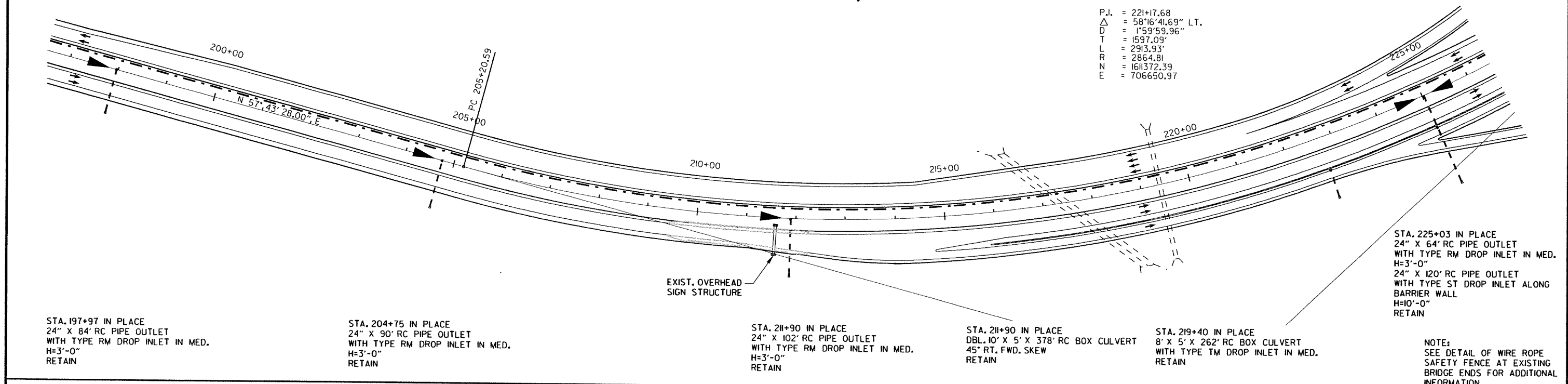




*Brian Clark, P.E.*  
2/22/13

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. 030425							33	46
PLAN SHEETS								

P.I. = 221+17.68  
 $\Delta$  = 58°16'41.69" LT.  
 D = 1°59'59.96"  
 T = 1597.09'  
 L = 2913.93'  
 R = 2864.81'  
 N = 1611372.39  
 E = 706650.97



STA. 197+97 IN PLACE  
 24" X 84' RC PIPE OUTLET  
 WITH TYPE RM DROP INLET IN MED.  
 H=3'-0"  
 RETAIN

STA. 204+75 IN PLACE  
 24" X 90' RC PIPE OUTLET  
 WITH TYPE RM DROP INLET IN MED.  
 H=3'-0"  
 RETAIN

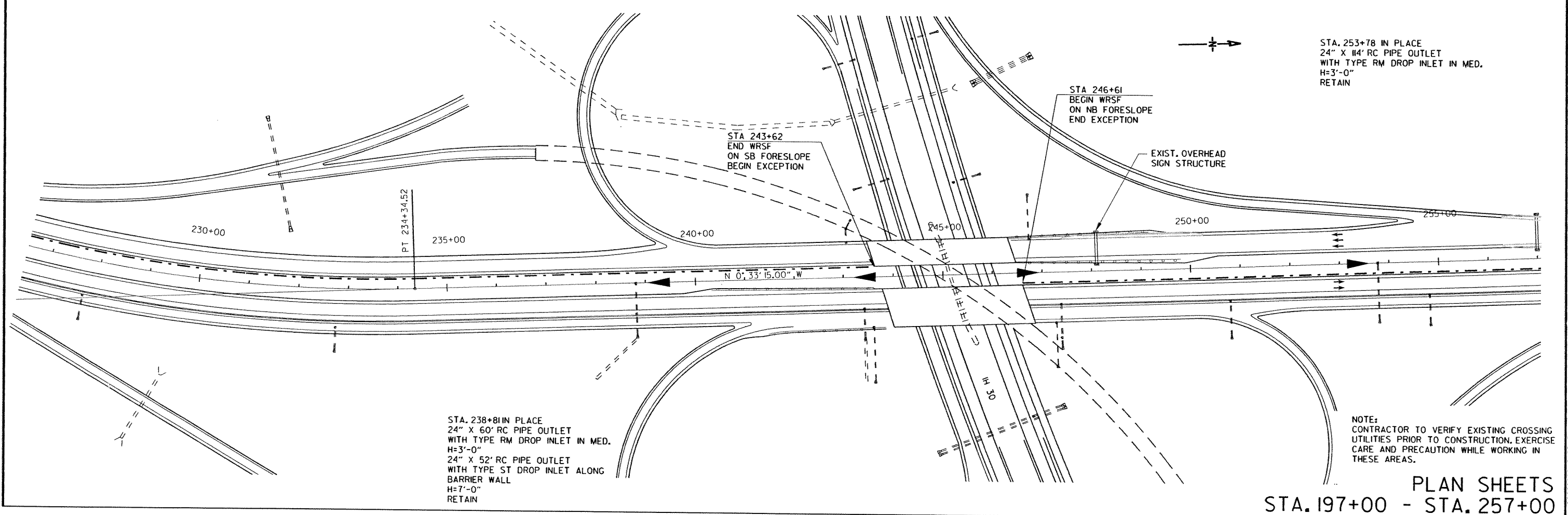
STA. 211+90 IN PLACE  
 24" X 102' RC PIPE OUTLET  
 WITH TYPE RM DROP INLET IN MED.  
 H=3'-0"  
 RETAIN

STA. 211+90 IN PLACE  
 DBL. 10' X 5' X 378' RC BOX CULVERT  
 45° RT. FWD. SKEW  
 RETAIN

STA. 219+40 IN PLACE  
 8' X 5' X 262' RC BOX CULVERT  
 WITH TYPE TM DROP INLET IN MED.  
 RETAIN

STA. 225+03 IN PLACE  
 24" X 64' RC PIPE OUTLET  
 WITH TYPE RM DROP INLET IN MED.  
 H=3'-0"  
 24" X 120' RC PIPE OUTLET  
 WITH TYPE ST DROP INLET ALONG  
 BARRIER WALL  
 H=10'-0"  
 RETAIN

NOTE:  
 SEE DETAIL OF WIRE ROPE  
 SAFETY FENCE AT EXISTING  
 BRIDGE ENDS FOR ADDITIONAL  
 INFORMATION.



STA. 238+81 IN PLACE  
 24" X 60' RC PIPE OUTLET  
 WITH TYPE RM DROP INLET IN MED.  
 H=3'-0"  
 24" X 52' RC PIPE OUTLET  
 WITH TYPE ST DROP INLET ALONG  
 BARRIER WALL  
 H=7'-0"  
 RETAIN

STA. 243+62  
 END WRSF  
 ON SB FORESLOPE  
 BEGIN EXCEPTION

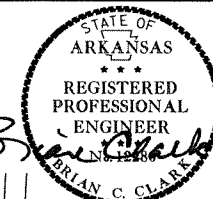
STA. 246+61  
 BEGIN WRSF  
 ON NB FORESLOPE  
 END EXCEPTION

STA. 253+78 IN PLACE  
 24" X 114' RC PIPE OUTLET  
 WITH TYPE RM DROP INLET IN MED.  
 H=3'-0"  
 RETAIN

NOTE:  
 CONTRACTOR TO VERIFY EXISTING CROSSING  
 UTILITIES PRIOR TO CONSTRUCTION. EXERCISE  
 CARE AND PRECAUTION WHILE WORKING IN  
 THESE AREAS.

PLAN SHEETS  
 STA. 197+00 - STA. 257+00

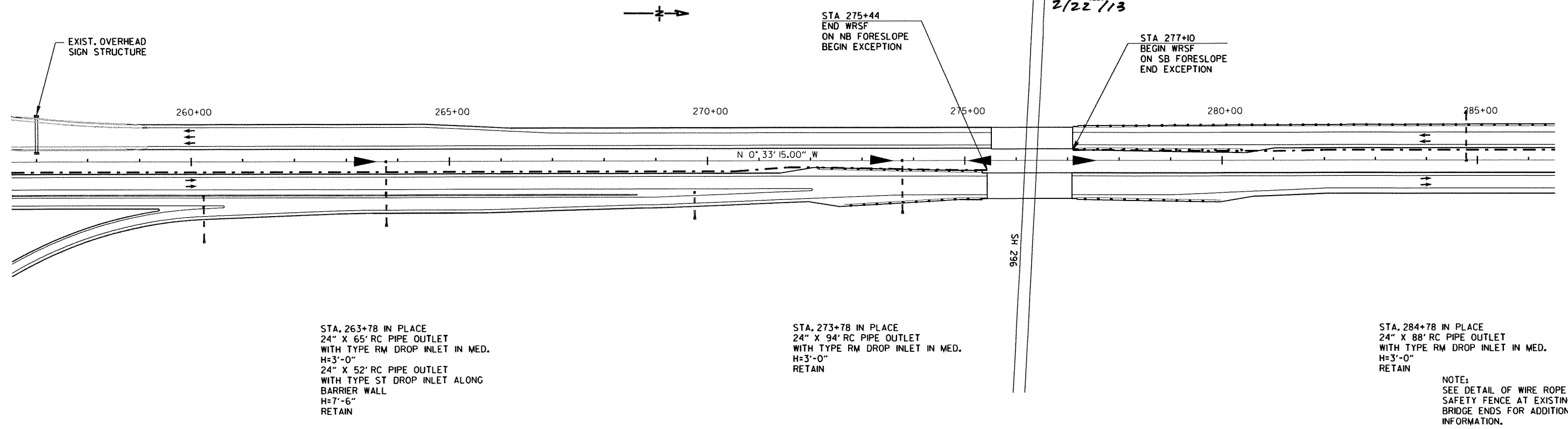
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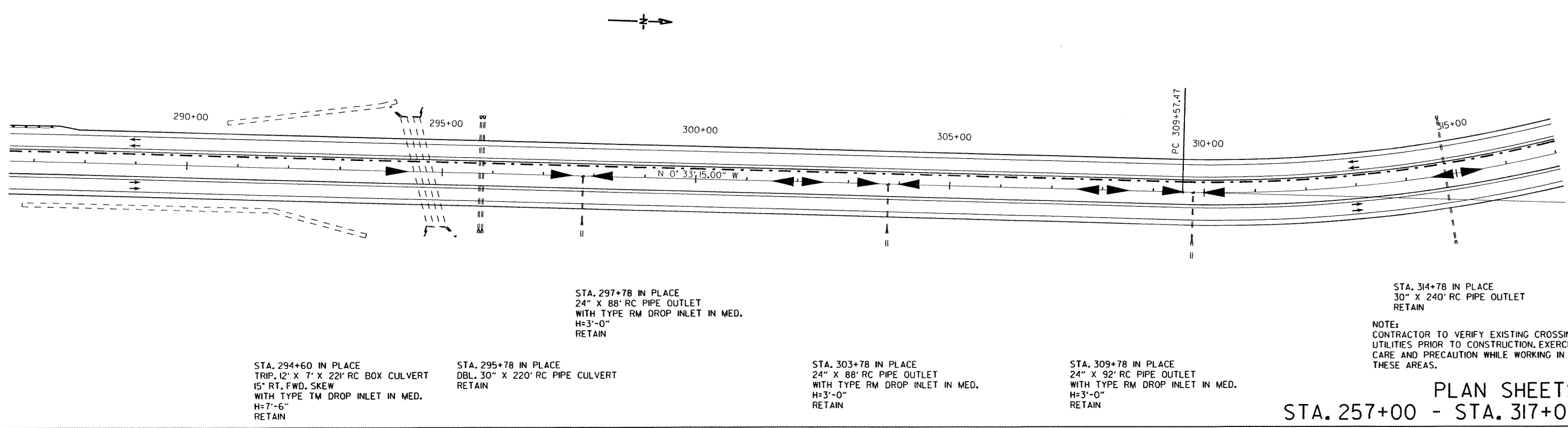
*Brian G. Clark, P.E.*  
2/22/13

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. 030425							34	46

PLAN SHEETS



NOTE:  
SEE DETAIL OF WIRE ROPE SAFETY FENCE AT EXISTING BRIDGE ENDS FOR ADDITIONAL INFORMATION.

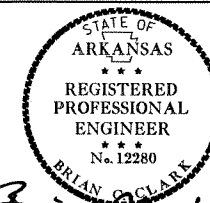


NOTE:  
CONTRACTOR TO VERIFY EXISTING CROSSING UTILITIES PRIOR TO CONSTRUCTION. EXERCISE CARE AND PRECAUTION WHILE WORKING IN THESE AREAS.

PLAN SHEETS  
STA. 257+00 - STA. 317+00

2/21/2013 11:16:26 AM

P:\100009929\CADD\PAV\249PLAN\_09.dgn

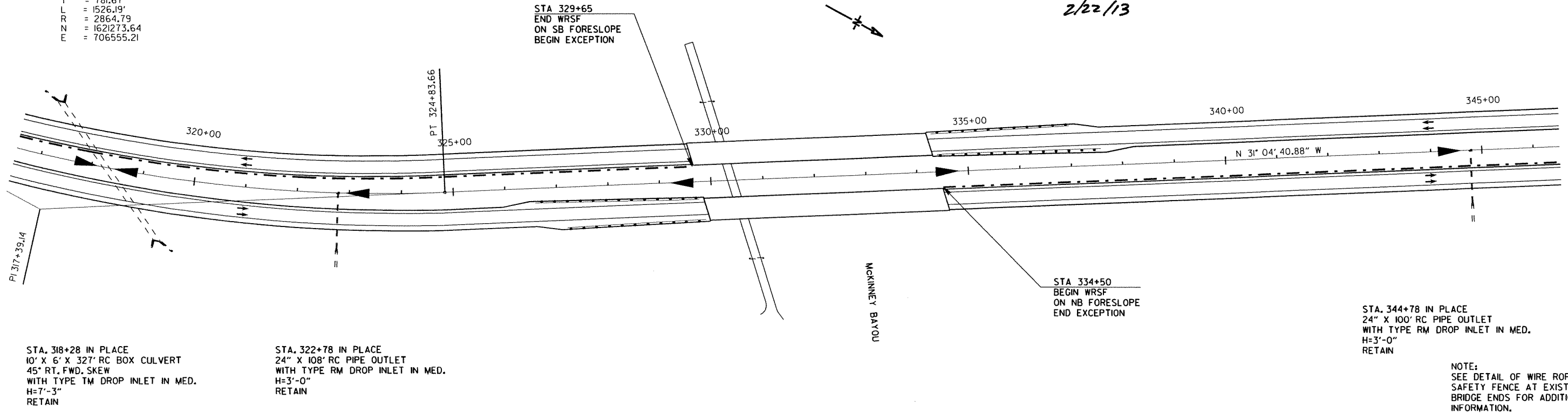


*Brian Clark, P.E.*  
2/22/13

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. 030425	35	46

PLAN SHEETS

P.I. = 317+39.14  
 $\Delta$  = 30°31'25.64" LT.  
 D = 2°00'00.00"  
 T = 781.67'  
 L = 1526.19'  
 R = 2864.79'  
 N = 1621273.64  
 E = 706555.21



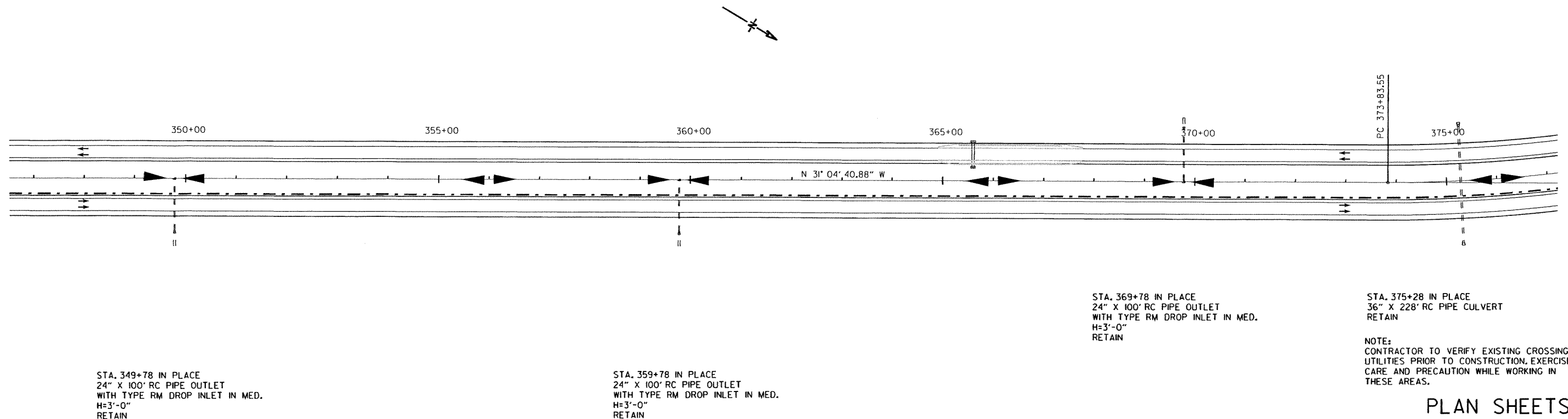
STA. 318+28 IN PLACE  
 10' X 6' X 327' RC BOX CULVERT  
 45° RT. FWD. SKEW  
 WITH TYPE TM DROP INLET IN MED.  
 H=7'-3"  
 RETAIN

STA. 322+78 IN PLACE  
 24" X 108' RC PIPE OUTLET  
 WITH TYPE RM DROP INLET IN MED.  
 H=3'-0"  
 RETAIN

STA. 334+50  
 BEGIN WRSF  
 ON NB FORESLOPE  
 END EXCEPTION

STA. 344+78 IN PLACE  
 24" X 100' RC PIPE OUTLET  
 WITH TYPE RM DROP INLET IN MED.  
 H=3'-0"  
 RETAIN

NOTE:  
 SEE DETAIL OF WIRE ROPE  
 SAFETY FENCE AT EXISTING  
 BRIDGE ENDS FOR ADDITIONAL  
 INFORMATION.



STA. 349+78 IN PLACE  
 24" X 100' RC PIPE OUTLET  
 WITH TYPE RM DROP INLET IN MED.  
 H=3'-0"  
 RETAIN

STA. 359+78 IN PLACE  
 24" X 100' RC PIPE OUTLET  
 WITH TYPE RM DROP INLET IN MED.  
 H=3'-0"  
 RETAIN

STA. 369+78 IN PLACE  
 24" X 100' RC PIPE OUTLET  
 WITH TYPE RM DROP INLET IN MED.  
 H=3'-0"  
 RETAIN

STA. 375+28 IN PLACE  
 36" X 228' RC PIPE CULVERT  
 RETAIN

NOTE:  
 CONTRACTOR TO VERIFY EXISTING CROSSING  
 UTILITIES PRIOR TO CONSTRUCTION. EXERCISE  
 CARE AND PRECAUTION WHILE WORKING IN  
 THESE AREAS.

PLAN SHEETS  
 STA. 317+00 - STA. 377+00

2/21/2013 10:16:28 AM

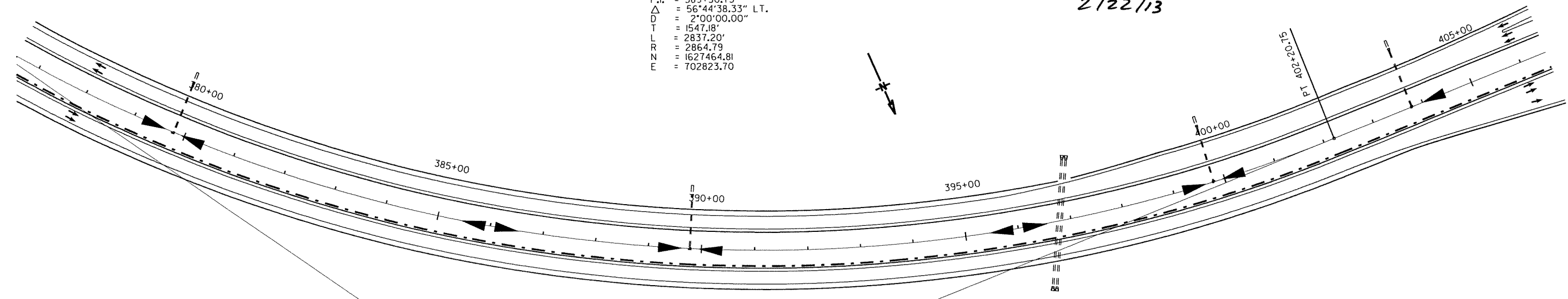
P:\100029929\CADD\PAV\245PLAN\_10.dgn



*Brian Clark, P.E.*  
2/22/13

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. 030425							36	46
PLAN SHEETS								

P.I. = 389+30.73  
 $\Delta$  = 56°44'38.33" LT.  
 D = 2°00'00.00"  
 T = 1547.18'  
 L = 2837.20'  
 R = 2864.79'  
 N = 1627464.81  
 E = 702823.70



STA. 379+78 IN PLACE  
 24" X 100' RC PIPE OUTLET  
 WITH TYPE RM DROP INLET IN MED.  
 H=3'-0"  
 RETAIN

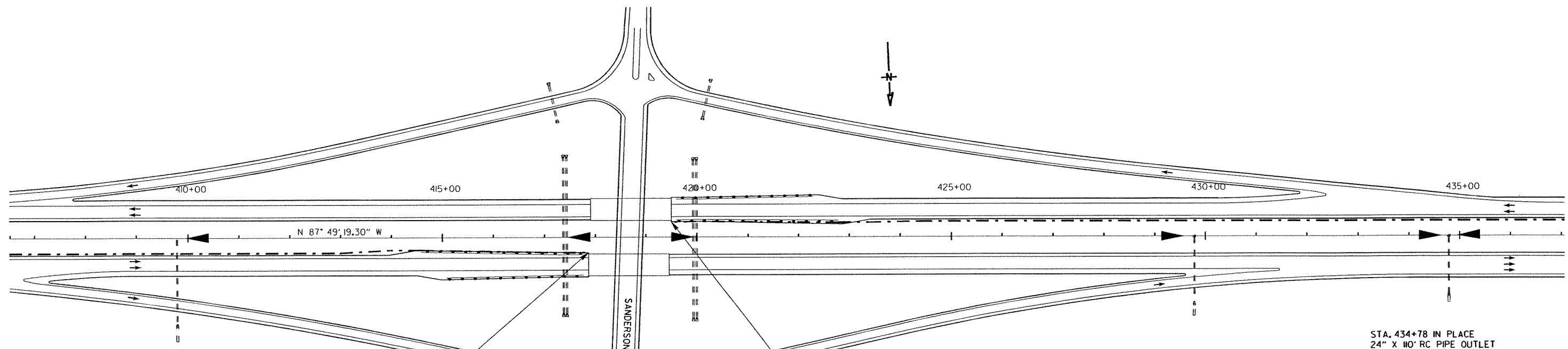
STA. 389+78 IN PLACE  
 24" X 100' RC PIPE OUTLET  
 WITH TYPE RM DROP INLET IN MED.  
 H=3'-0"  
 RETAIN

STA. 396+78 IN PLACE  
 DBL. 36" X 240' RC PIPE CULVERT  
 15° LT. FWD. SKEW  
 RETAIN

STA. 396+78 IN PLACE  
 24" X 108' RC PIPE OUTLET  
 WITH TYPE RM DROP INLET IN MED.  
 H=3'-0"  
 RETAIN

STA. 403+78 IN PLACE  
 24" X 112' RC PIPE OUTLET  
 WITH TYPE RM DROP INLET IN MED.  
 H=3'-0"  
 RETAIN

NOTE:  
 SEE DETAIL OF WIRE ROPE  
 SAFETY FENCE AT EXISTING  
 BRIDGE ENDS FOR ADDITIONAL  
 INFORMATION.



STA. 417+86  
 END WRSF  
 ON WB FORESLOPE  
 BEGIN EXCEPTION

STA. 419+50  
 BEGIN WRSF  
 ON EB FORESLOPE  
 END EXCEPTION

STA. 409+78 IN PLACE  
 24" X 166' RC PIPE OUTLET  
 WITH TYPE RM DROP INLET IN MED.  
 H=3'-0"  
 RETAIN

STA. 417+40 IN PLACE  
 DBL. 30" X 304' RC PIPE CULVERT  
 RETAIN

STA. 419+96 IN PLACE  
 DBL. 30" X 308' RC PIPE CULVERT  
 RETAIN

STA. 429+78 IN PLACE  
 24" X 128' RC PIPE OUTLET  
 WITH TYPE RM DROP INLET IN MED.  
 H=3'-0"  
 RETAIN

STA. 434+78 IN PLACE  
 24" X 110' RC PIPE OUTLET  
 WITH TYPE RM DROP INLET IN MED.  
 H=3'-0"  
 RETAIN

NOTE:  
 CONTRACTOR TO VERIFY EXISTING CROSSING  
 UTILITIES PRIOR TO CONSTRUCTION. EXERCISE  
 CARE AND PRECAUTION WHILE WORKING IN  
 THESE AREAS.

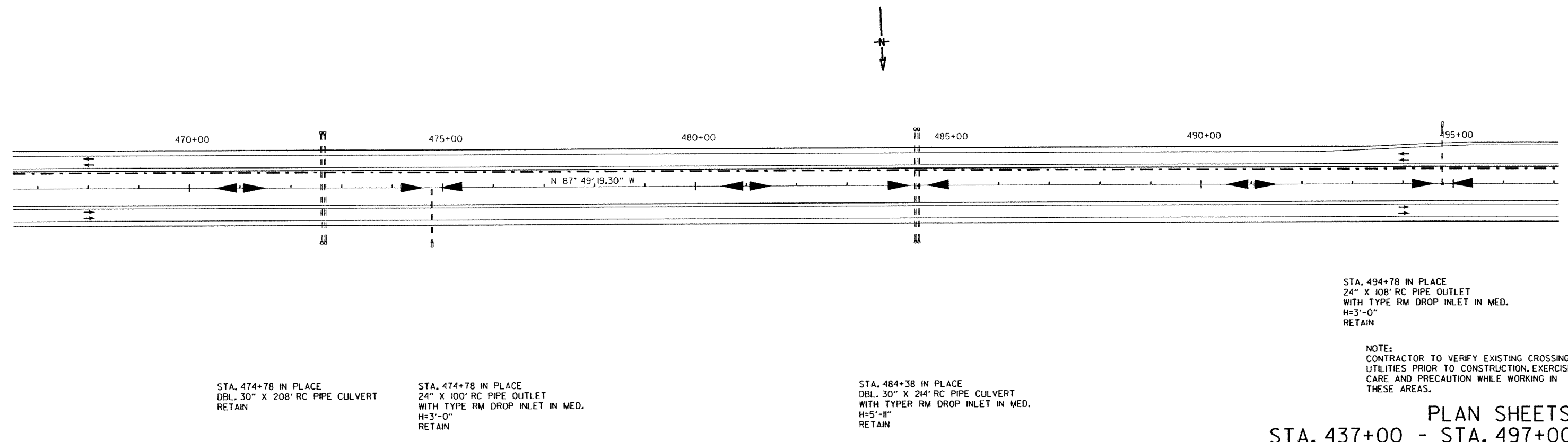
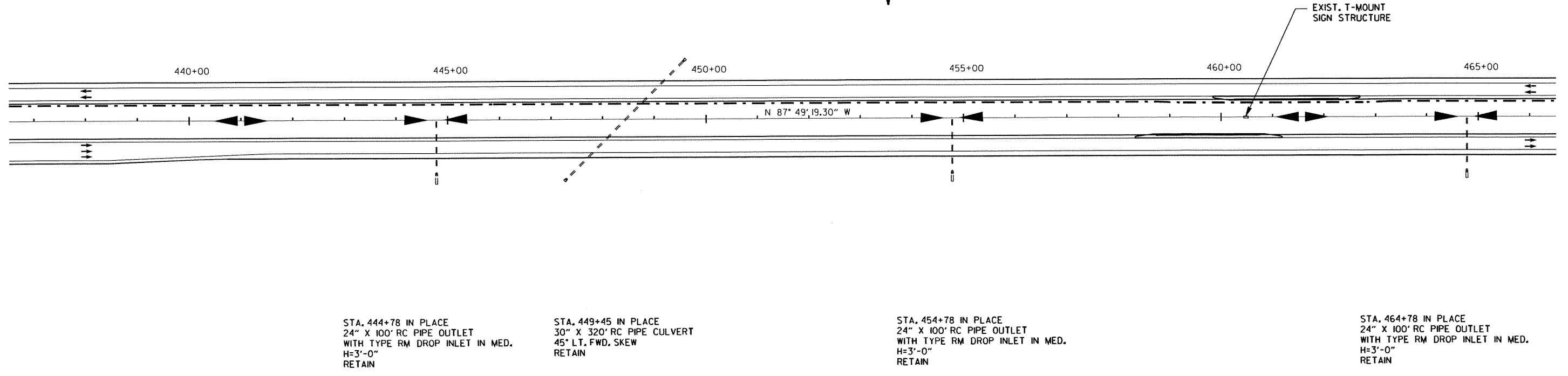
PLAN SHEETS  
 STA. 377+00 - STA. 437+00

2/21/2013 10:16:29 AM P:\100029929\CADD\PAV\2-HSPLAN\_IL.dwg



*Brian Clark, P.E.*  
2/22/13

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. 030425							37	46
PLAN SHEETS								



PLAN SHEETS  
STA. 437+00 - STA. 497+00

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STA. 500+28 IN PLACE  
 3-12" X 7' X 227' RC BOX CULVERT  
 15° LT. FWD. SKEW  
 RETAIN

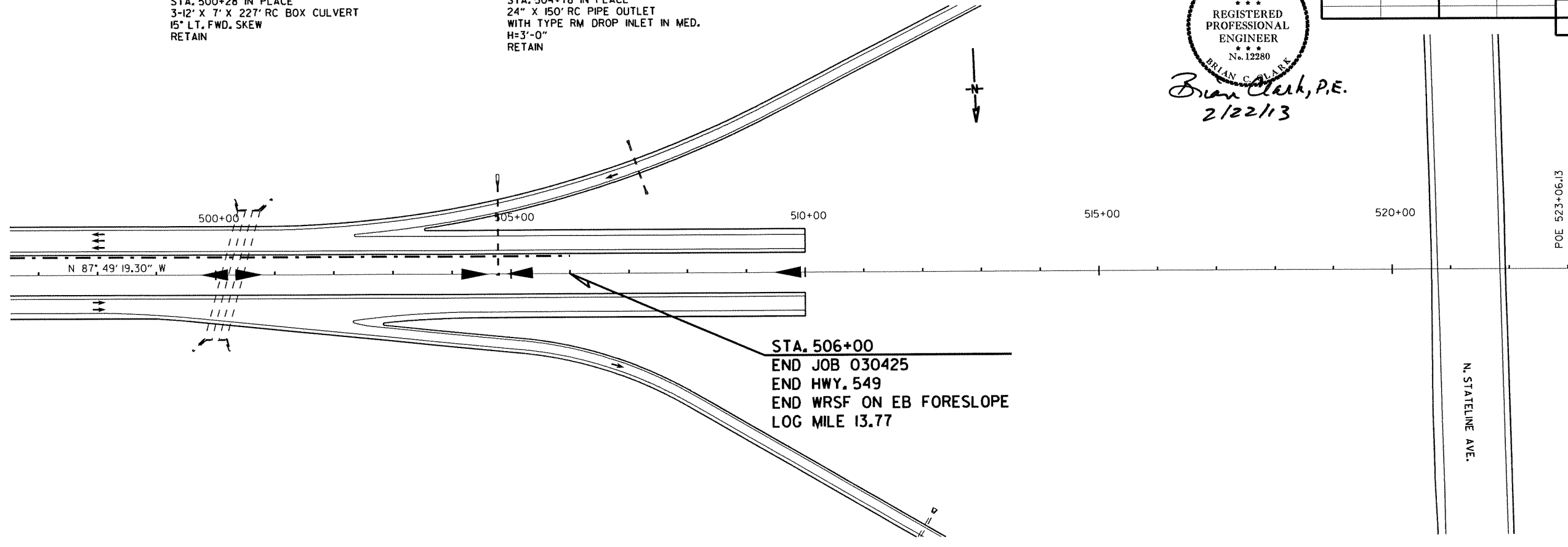
STA. 504+78 IN PLACE  
 24" X 150' RC PIPE OUTLET  
 WITH TYPE RM DROP INLET IN MED.  
 H=3'-0"  
 RETAIN



*Brian Clark, P.E.*  
 2/22/13

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. 030425	38	46

PLAN SHEETS

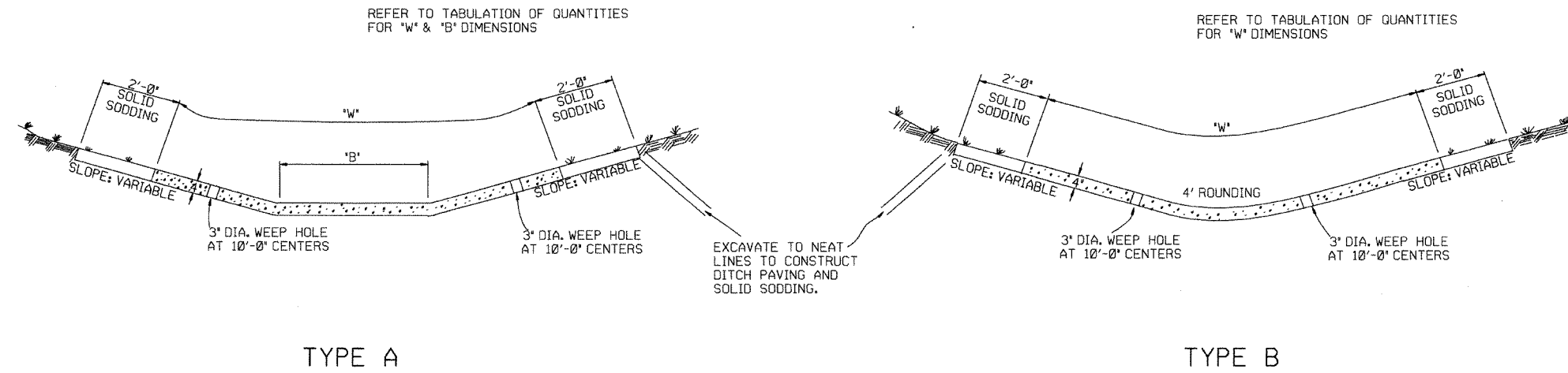


**STA. 506+00**  
 END JOB 030425  
 END HWY. 549  
 END WRSF ON EB FORESLOPE  
 LOG MILE 13.77

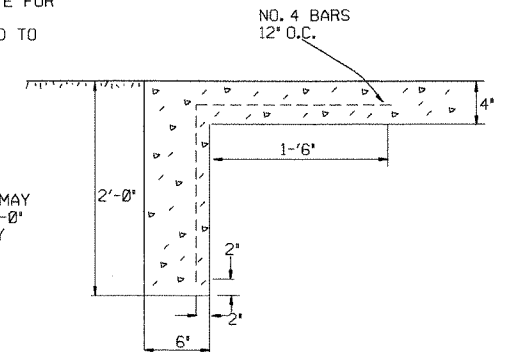
NOTE:  
 CONTRACTOR TO VERIFY EXISTING CROSSING UTILITIES PRIOR TO CONSTRUCTION. EXERCISE CARE AND PRECAUTION WHILE WORKING IN THESE AREAS.

PLAN SHEETS  
 STA. 497+00 - STA. 523+00

186:31 AM 2/27/2013  
 F:\00029929\CADD\PAV\245PLAN.13.dgn



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.'



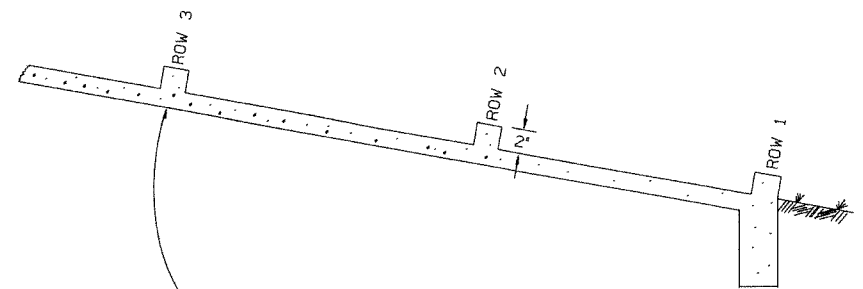
TOE WALL DETAIL FOR CONCRETE DITCH PAVING

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.

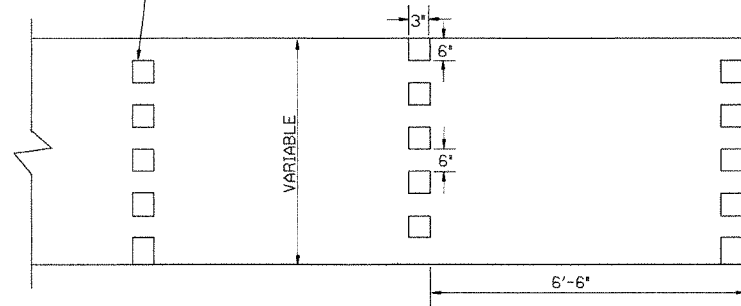
SOLID SOD ALONG DITCH PAVING TO BE PLACED WITHIN 14 DAYS OF DITCH PAVING CONSTRUCTION.

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.



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.



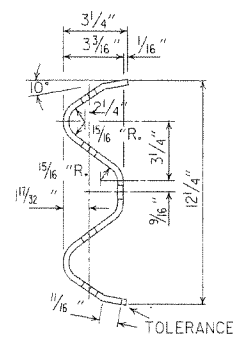
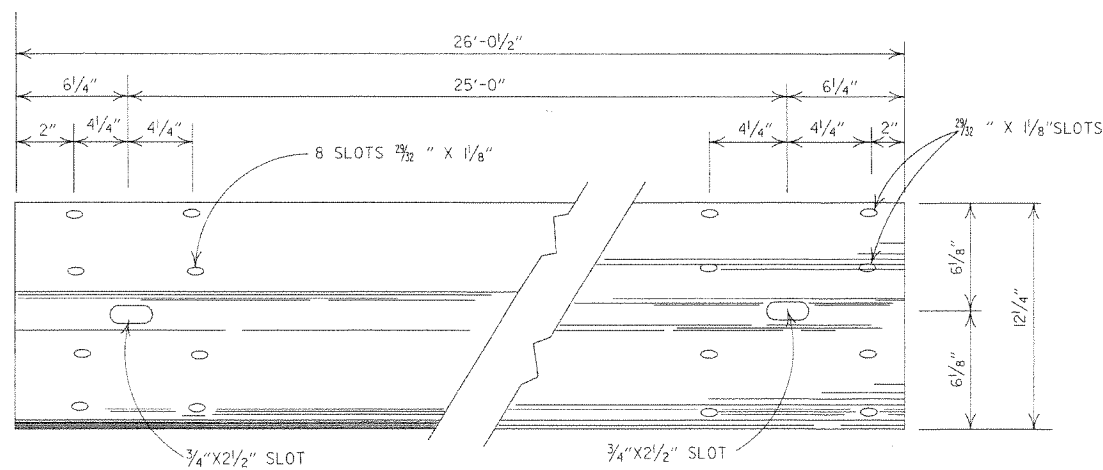
ENERGY DISSIPATORS  
(NO SCALE)

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	
	TYPED A & B	
10-2-72	REVISED AND REDRAWN	508-10-2-72

ARKANSAS STATE HIGHWAY COMMISSION

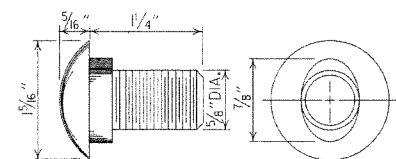
CONCRETE DITCH PAVING

STANDARD DRAWING CDP-1

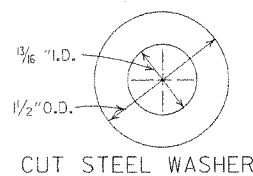


DETAILS OF W-BEAM GUARD RAIL

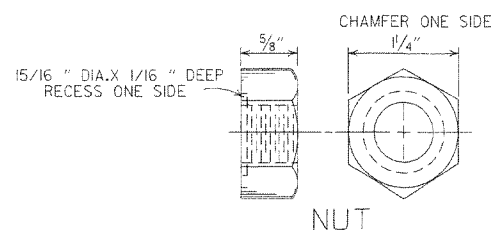
RAIL SECTION OF CLOSELY SIMILAR DIMENSIONS AND COMPARABLE STRENGTH MAY BE SUBSTITUTED IF APPROVED BY THE ENGINEER.



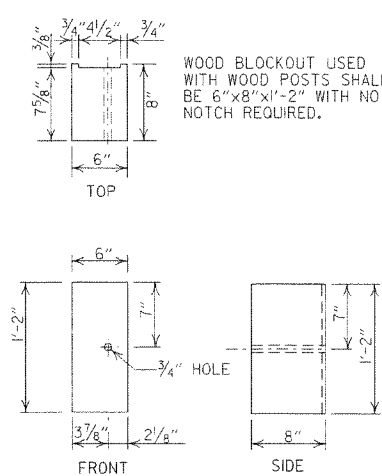
SPLICE BOLT  
POST BOLT - SAME EXCEPT LENGTH



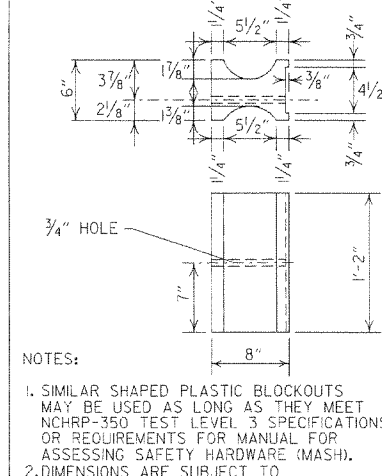
CUT STEEL WASHER



NUT

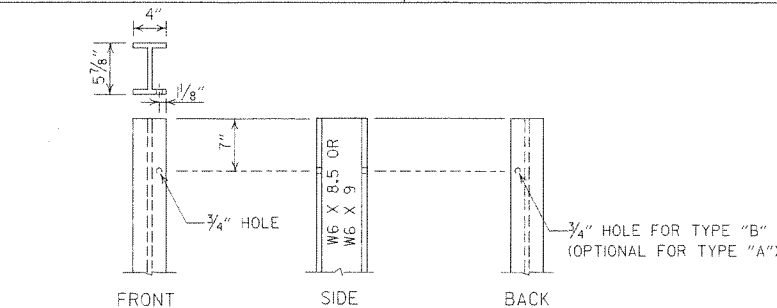


WOOD BLOCKOUT (W-BEAM)

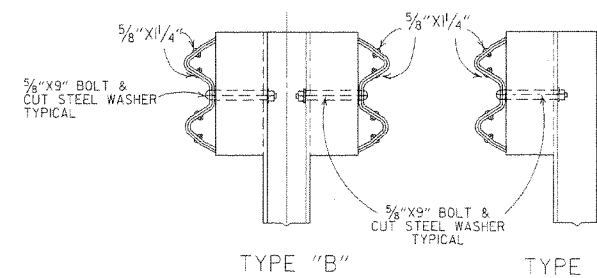


PLASTIC BLOCKOUT (W-BEAM)

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\"/>

WHERE W-BEAM GUARD RAIL CONTINUES, THE INTERMEDIATE SECTIONS SHALL HAVE A POST SPACING OF 6'-3\"/>

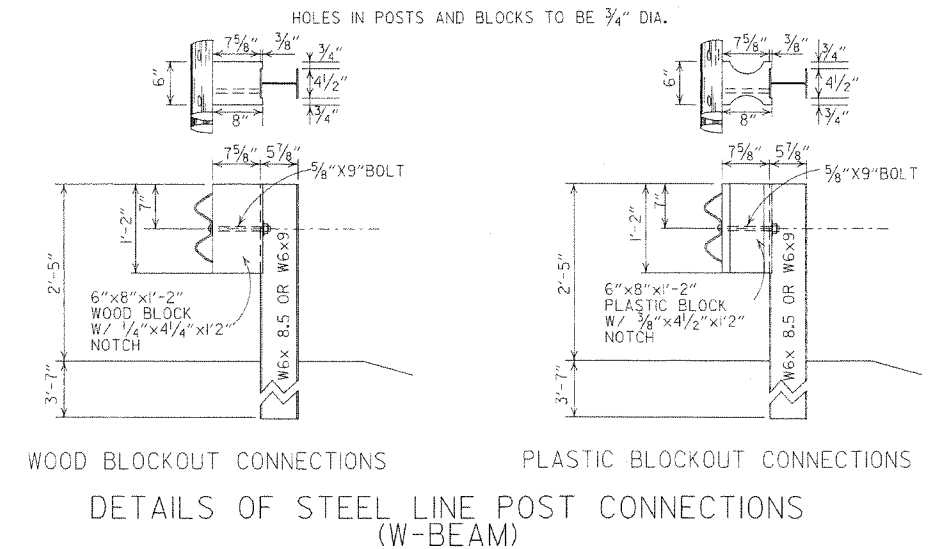
W-BEAM GUARD RAIL REPRESENTING INTERMEDIATE SECTIONS WILL BE MEASURED ALONG THE ROADWAY FACE FROM CENTERLINE OF POST TO CENTERLINE OF POST.

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.

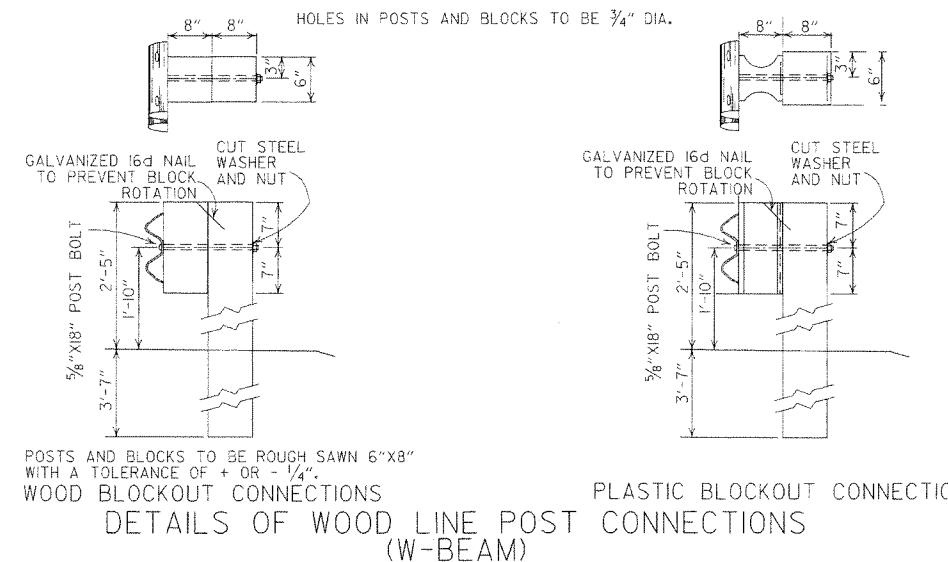
ANY BACKFILLING UNDER OR AROUND POST SHALL BE DAMP SAND THOROUGHLY TAMPED IN PLACE.

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)

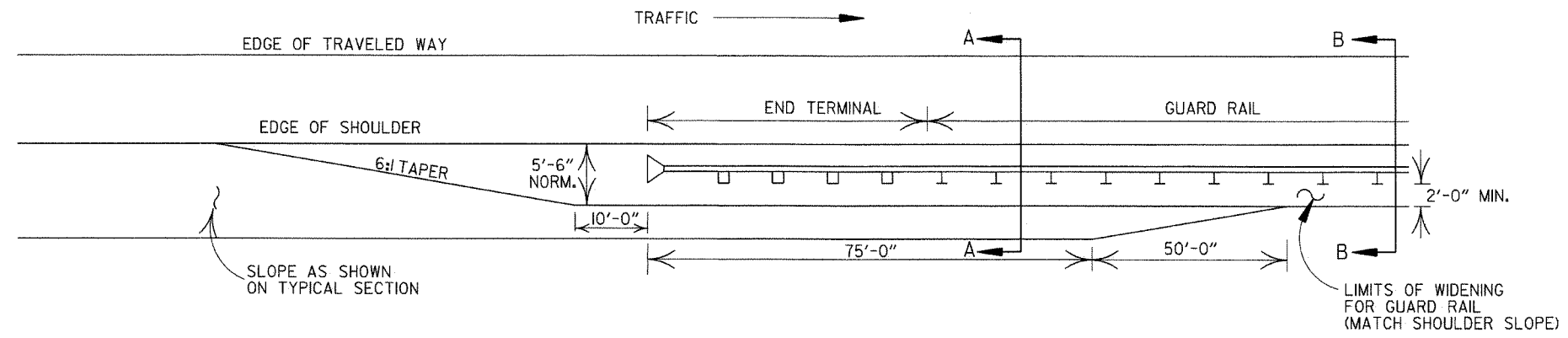
7-4-10	RAISED HEIGHT OF GUARD RAIL 1"	
10-15-09	ADDED REFERENCE TO MASH	
4-10-03	REVISED GENERAL NOTES	
8-22-07	REVISED DIMENSION ON WOOD & PLASTIC BLOCKOUT CONNECTIONS & ON STEEL POST	
11-16-01	REVISED WOOD BLOCKOUT & DETAILS OF WOOD LINE POST CONNECTIONS	
3-30-00	REMOVED GUARD RAIL AT BRIDGE ENDS	
11-2-00	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	ADDFD AT T. 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

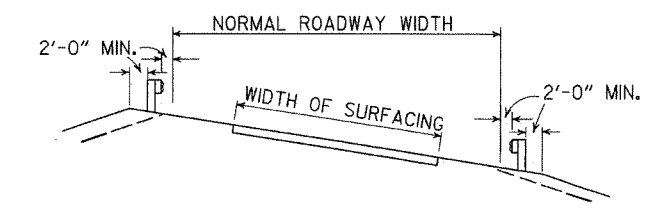
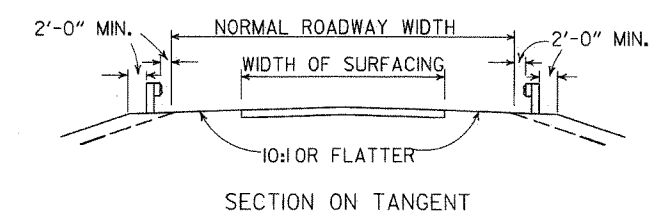
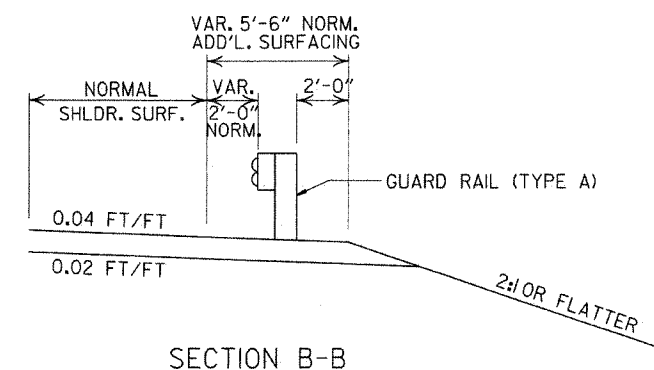
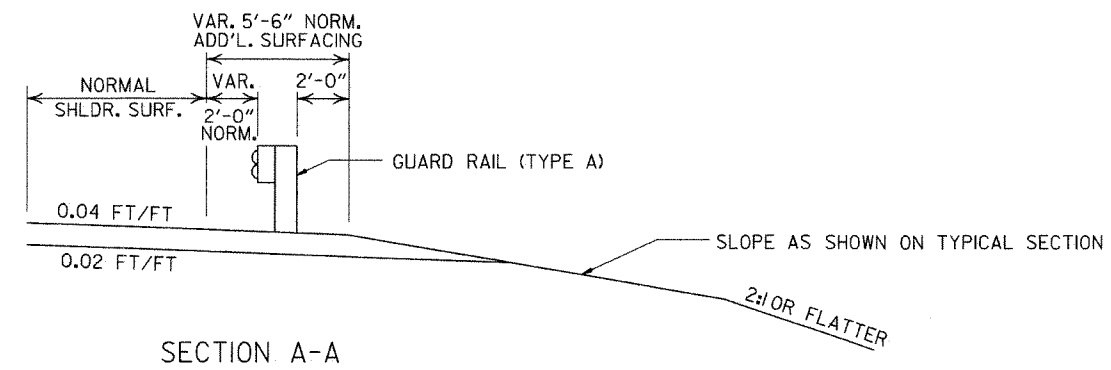
GUARD RAIL DETAILS

STANDARD DRAWING GR-8



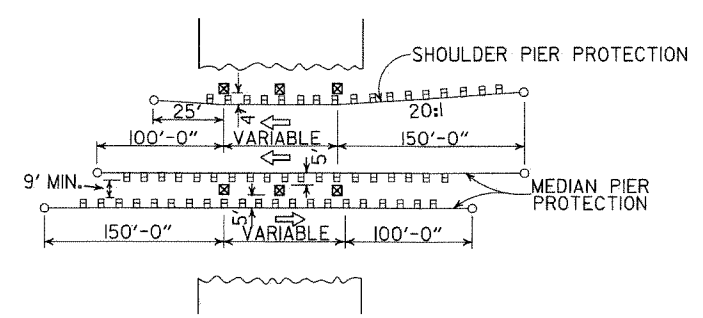


NOTE: NORMAL SECTION TO BE WIDENED APPROX. 5'-6" EACH SIDE TO SUPPORT GUARD RAIL.



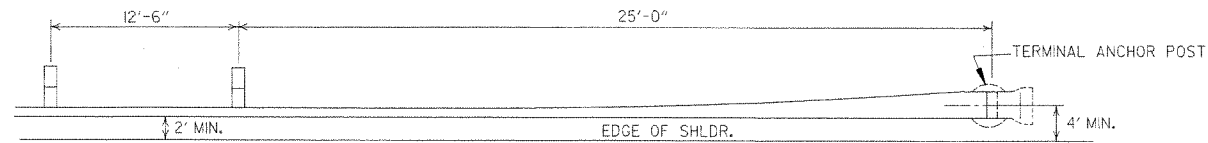
DETAILS OF WIDENING FOR GUARD RAIL

DETAILS SHOWING POSITION OF GUARD RAIL ON HIGHWAY

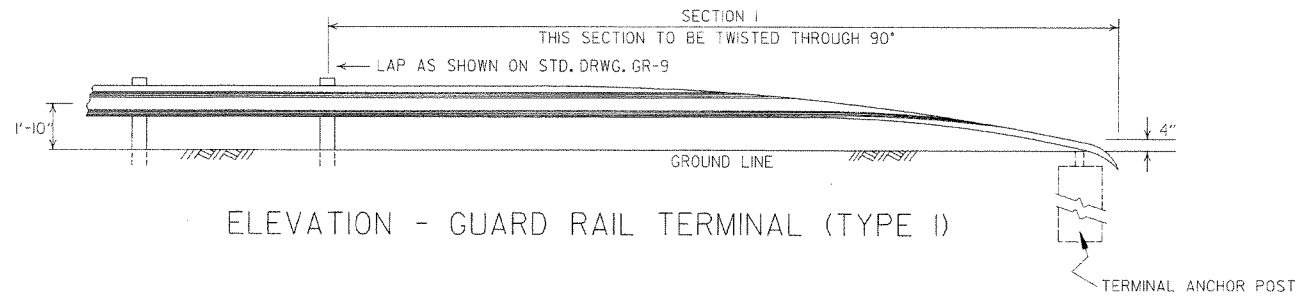


METHOD OF INSTALLATION OF GUARD RAIL AT FIXED OBSTACLE

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

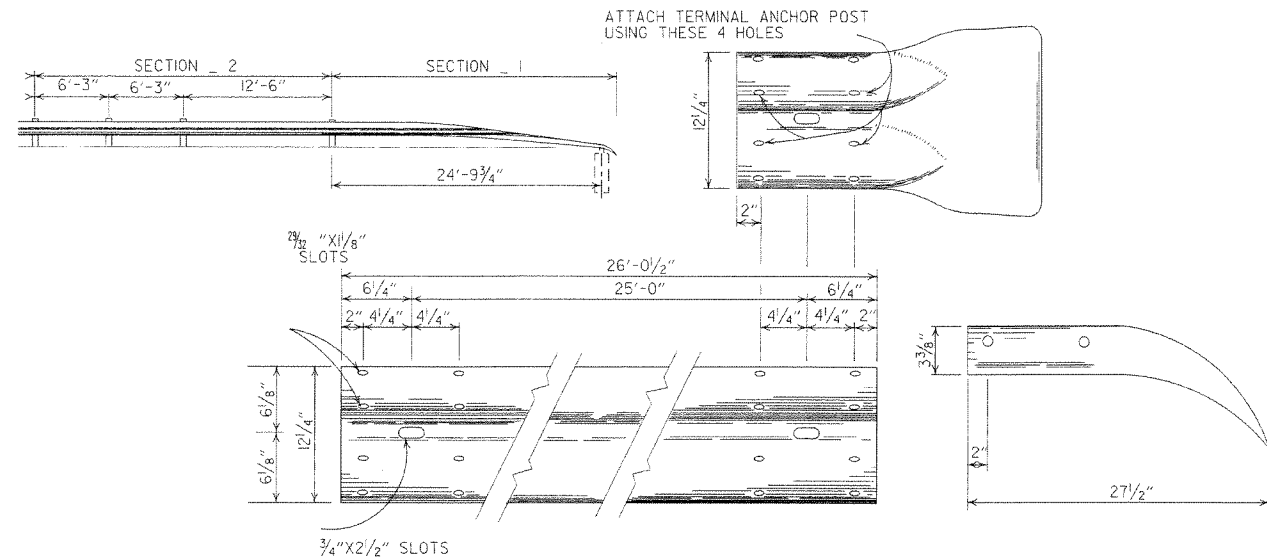


PLAN - GUARD RAIL TERMINAL (TYPE I)



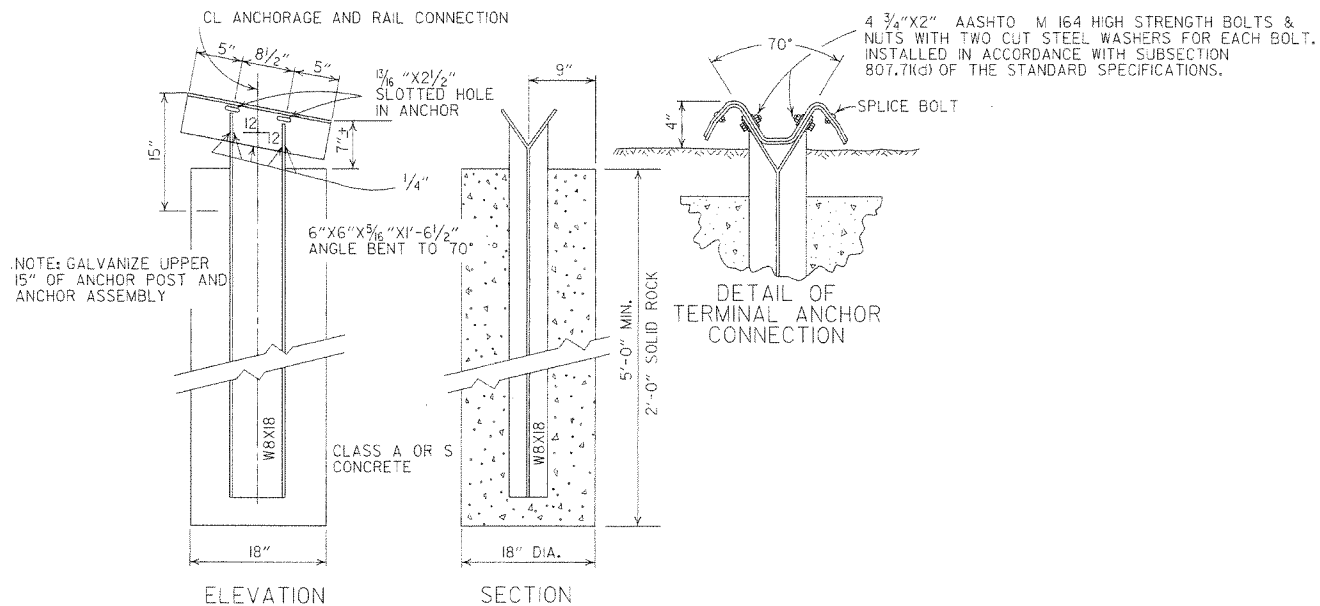
ELEVATION - GUARD RAIL TERMINAL (TYPE I)

NOTE:  
SECTIONS 1 AND 2 OF GUARD RAIL TERMINAL SHALL BE PAID FOR AT THE PRICE BID PER LINEAR FOOT OF THE TYPE OF GUARD RAIL SPECIFIED.



SECTION 1

TERMINAL SECTION



DETAIL OF TERMINAL ANCHOR POST (TYPE I)

NOTE: RAIL MEMBERS MAY BE BOLTED TO ANGLE AT TERMINAL ANCHOR AND THE TWO ASSEMBLIES POSITIONED TO PROPER ALIGNMENT PRIOR TO PLACING CONCRETE AROUND 8 W/ 17 POST IF CONTRACTOR SO DESIRES.

			ARKANSAS STATE HIGHWAY COMMISSION
			GUARD RAIL DETAILS
7-14-10	RAISED HEIGHT OF GUARD RAIL 1"		STANDARD DRAWING GRT-1
6-26-97	REVISED LAP NOTE		
10-18-96	REVISED ASTM REF. TO AASHTO		
11-3-94	DIMENSION TERMINAL DETAIL		
11-11-92	ADDED NOTE FOR PAYMENT	11-11-92	
10-1-92	DRAWN & ISSUED	10-1-92	
DATE	REVISION	DATE	FILM

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


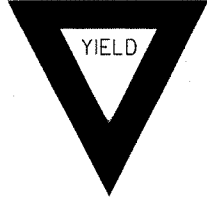
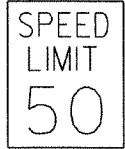






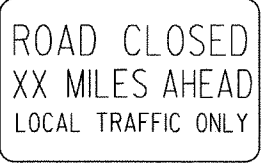
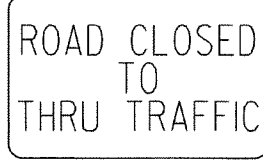
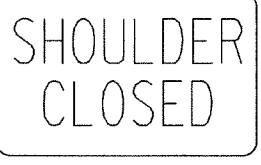
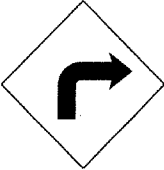




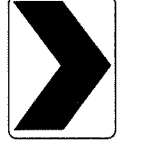
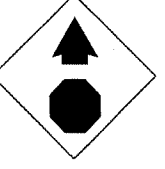
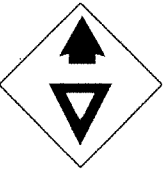
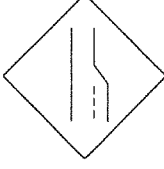



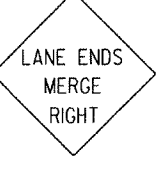


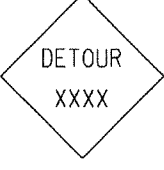



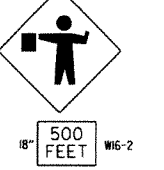


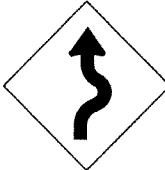



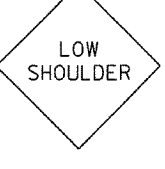
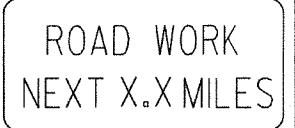
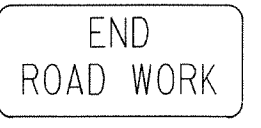
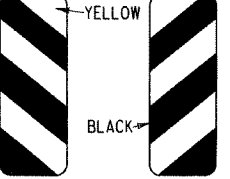


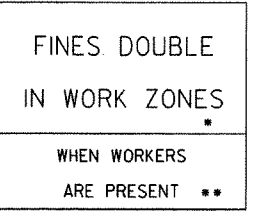
GENERAL NOTES:

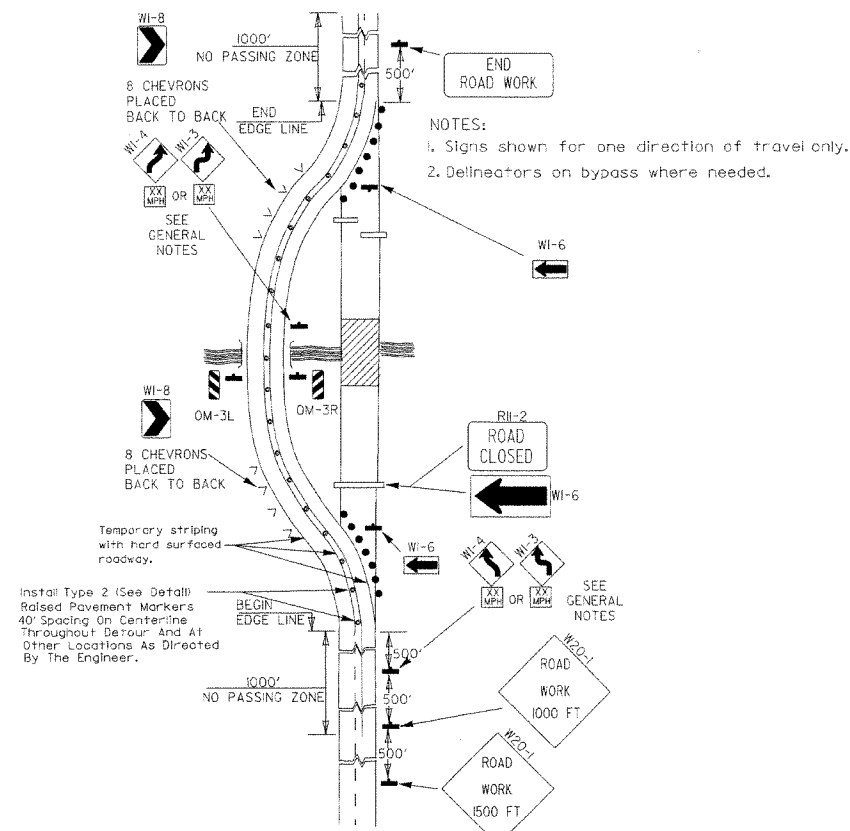
- ALL TRAFFIC CONTROL DEVICES USED ON ROAD CONSTRUCTION SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND TO THE STANDARD HIGHWAY SIGNS, LATEST EDITION, OR AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION.
- TRAFFIC CONTROL DEVICES SHALL BE SET UP JUST BEFORE THE START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

- FLAGGERS SHALL USE REFLECTORIZED STOP-SLOW PADDLES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.
- MOST OF THE SIGNS SHOWN ARE ORIENTED TO THE RIGHT. HOWEVER, THIS DOES NOT PRECLUDE THE USE OF MIRROR IMAGES OF THESE SIGNS WHERE THE REVERSE ORIENTATION MIGHT BETTER CONVEY TO MOTORISTS THE PROPER DIRECTION OF MOVEMENT.
- R55-1 SIGNS SHALL BE PLACED AT LEAST 1500' BUT NOT MORE THAN 1 MILE IN ADVANCE OF THE WORK ZONE. IF A SPEED LIMIT REDUCTION IS IN EFFECT, THE SIGN SHALL BE PLACED A MINIMUM OF 500' IN ADVANCE OF THE "REDUCED SPEED AHEAD" SIGN.

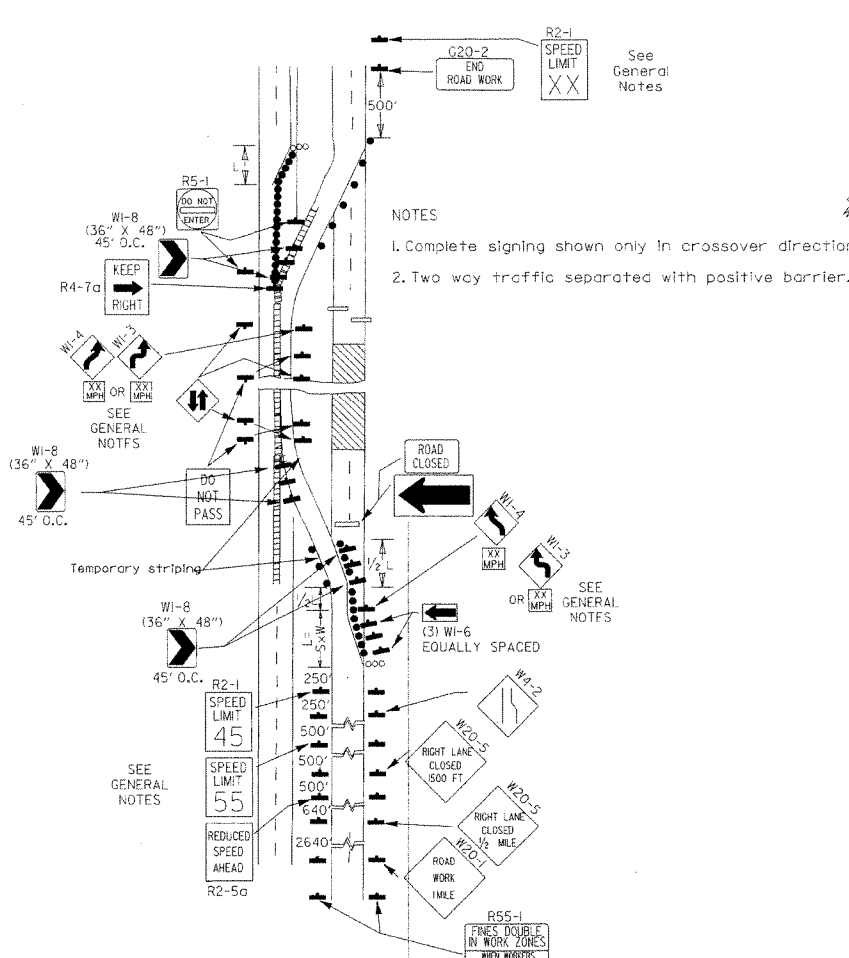
NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY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

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

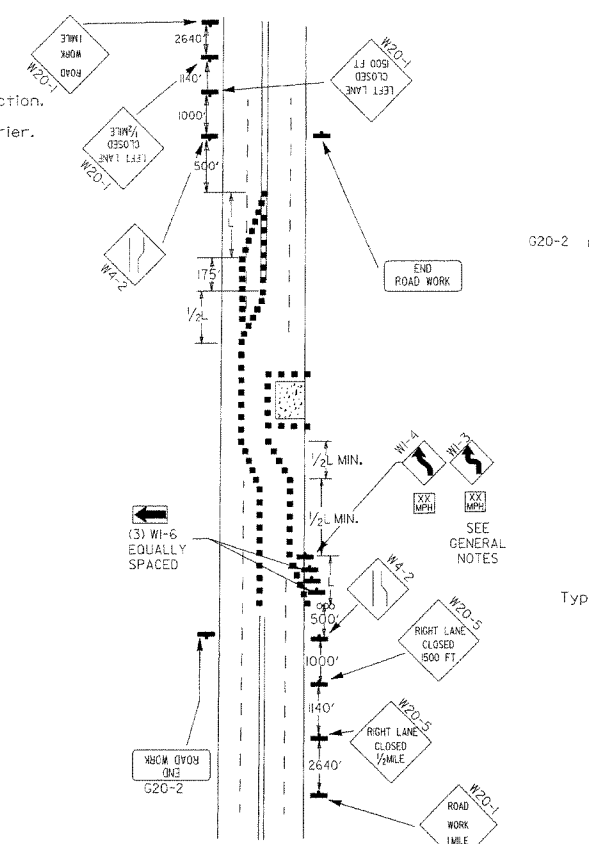
<p>RI-1</p>  <p>STANDARD 30"x30" EXPRESSWAY 36"x36" SPECIAL 48"x48"</p>	<p>RI-2</p>  <p>STD. 36"x36"x36" EXPWY. 48"x48"x48" FWY. 60"x60"x60"</p>	<p>R2-1</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>R2-5A</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>R2-5C</p>  <p>STD. 24"x30" EXPWY. 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>W1-1</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W1-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>
<p>W1-3</p>  <p>STD. 48"x48"</p>	<p>W1-4</p>  <p>STD. 48"x48"</p>	<p>W1-6</p>  <p>STD. 48"x24" SPECIAL 60"x30"</p>	<p>W1-8</p>  <p>STD. 18"x24" SPECIAL 24"x30" EXPWY. 30"x36" FWY. 36"x48"</p>	<p>W3-1</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W3-2</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W4-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>
<p>W5-1</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W6-3</p>  <p>EXPWY. 36"x36" SPECIAL 48"x48"</p>	<p>W8-7</p>  <p>EXPWY. 36"x36" FWY. 48"x48"</p>	<p>W9-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W13-1</p>  <p>STD. 24"x24"</p>	<p>W20-1</p>  <p>STD. 48"x48"</p>	<p>W20-2</p>  <p>STD. 48"x48"</p>
<p>W20-3</p>  <p>STD. 48"x48"</p>	<p>W20-4</p>  <p>STD. 48"x48"</p>	<p>W20-5</p>  <p>STD. 48"x48"</p>	<p>W20-7a</p>  <p>18" 500 FEET W16-2 24" STD. 36"x36" FWY. 48"x48"</p>	<p>W21-2</p>  <p>STD. 30"x30" SPECIAL 36"x36"</p>	<p>W21-5</p>  <p>STD. 30"x30" SPECIAL 36"x36"</p>	<p>W24-1</p>  <p>STD. 36"x36"</p>
<p>W1-4b</p>  <p>STD. 48"x48"</p>	<p>R56-1</p>  <p>STD. 18"x18"</p>	<p>W8-11</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W8-9</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>G20-1</p>  <p>60"x24"</p>	<p>G20-2</p>  <p>48"x24"</p>	<p>OM-3L OM-3R</p>  <p>12"x36"</p>
<p>M4-9</p>  <p>STD. 30"x24" SPECIAL 48"x36" SPECIAL 60"x48"</p>	<p>M4-10</p>  <p>48"x18"</p>	<p>R55-1</p>  <p>36"x60" * USE 6" C LETTERS ** USE 4" D LETTERS</p>				



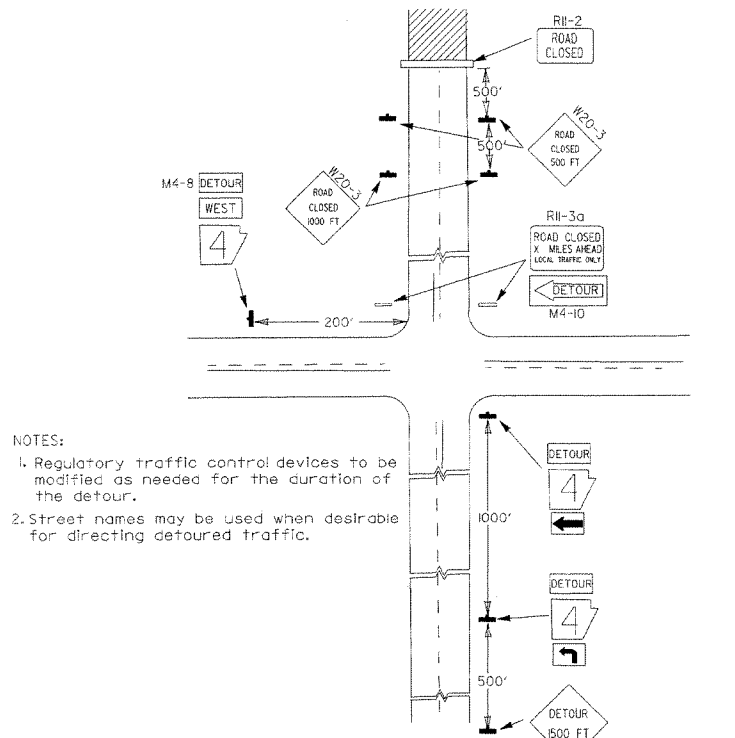
(A) Typical application of traffic control devices on a 2-lane highway where the entire roadway is closed and a bypass detour is provided.



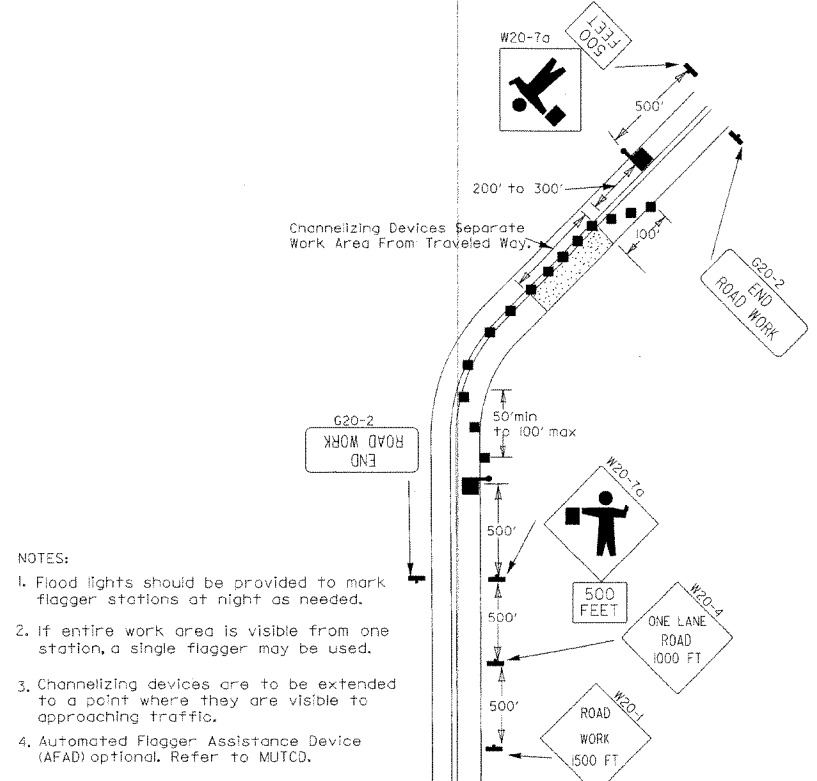
(B) Typical application - 4-lane divided roadway where one roadway is closed.



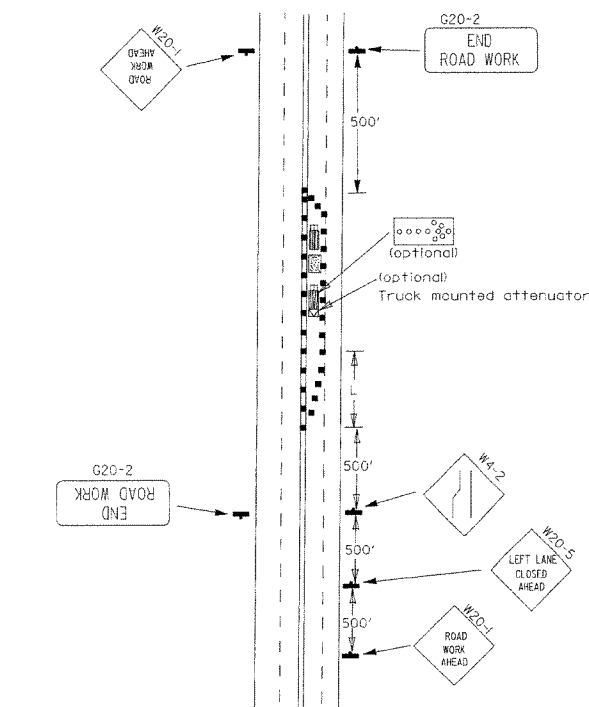
(C) Typical application - 4-lane undivided roadway where half of the roadway is closed.



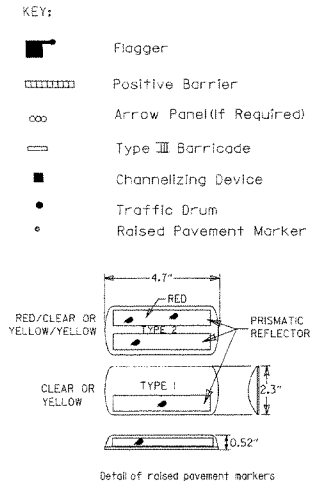
(D) Typical application - roadway closed beyond detour point.



(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.

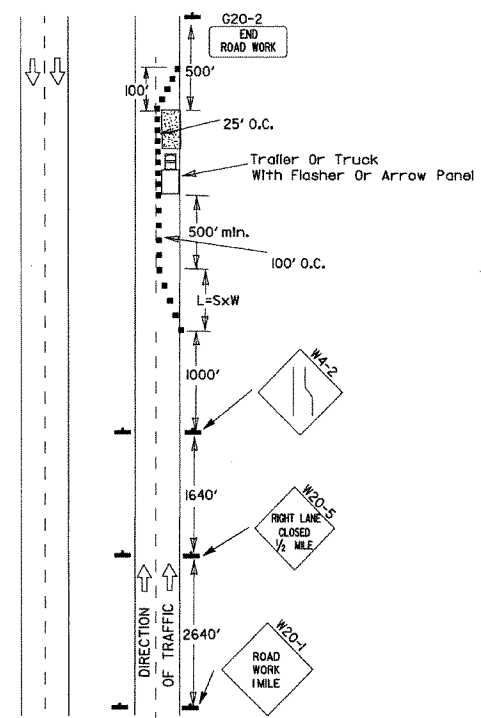


Typical advance warning sign placement

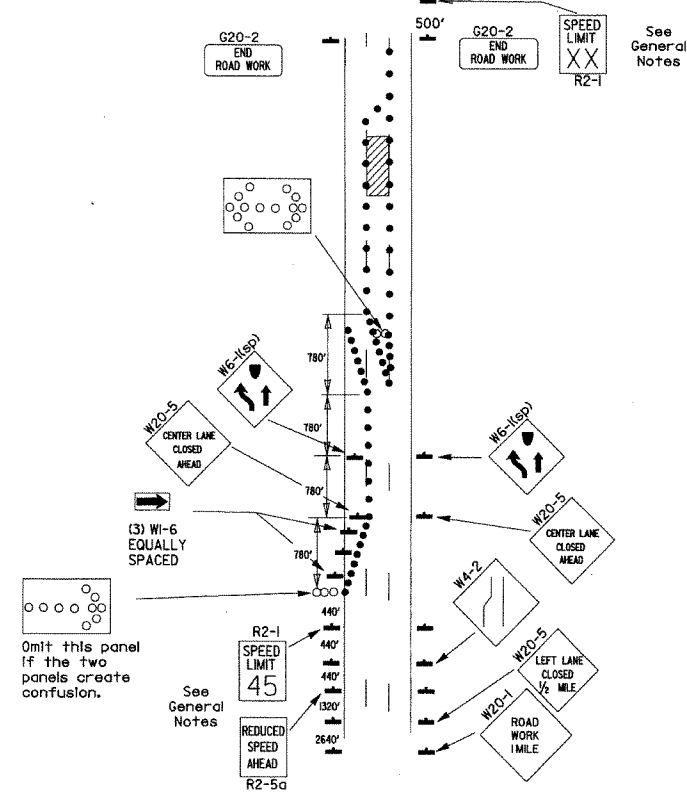
Taper formulae:  
 $L = S \times W$  for speeds of 45mph or more.  
 $L = \frac{WS^2}{60}$  for speeds of 40mph or less.  
 Where:  
 L = Minimum length of taper.  
 S = Numerical value of posted speed limit prior to work or 85th percentile speed.  
 W = Width of offset.

- 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 R2-1(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 1/2 mile intervals. At the end of the work area a R2-1(45) shall be installed to match original speed limit.
  - When the existing speed limit is 65mph and the plans require a speed limit of 55mph, the R2-1(65) shall be omitted. Additional R2-155mph speed limit signs shall be installed at a maximum of 1/2 mile intervals. At the end of the work area a R2-1(55) 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 delineated by affixing conspicuity material in a continuous line on the face of the trailer. When placed on or adjacent to the shoulder and not behind a positive barrier, these devices shall be delineated by placing five (5) traffic drums, equally spaced along the traffic side of the device.

DATE	REVISION	FILED
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	

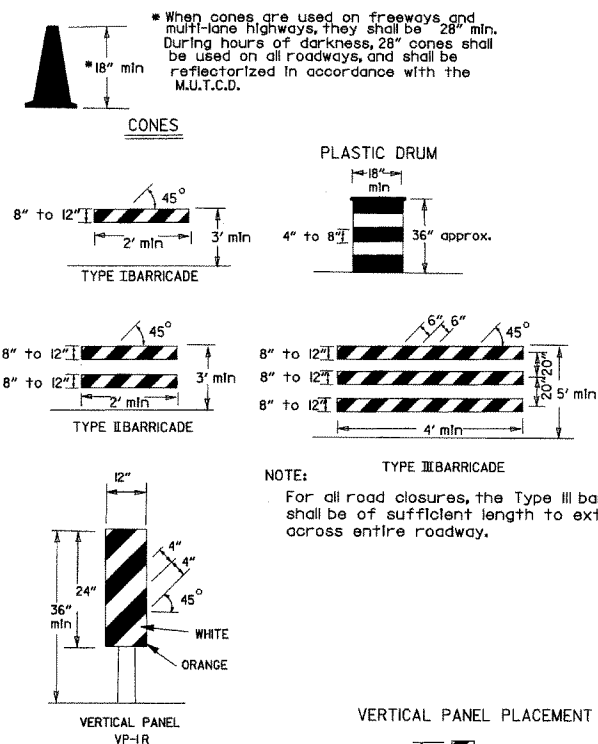


(A) Typical application - daytime maintenance operations of short duration on a 4-lane divided roadway where half of the roadway is closed.



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

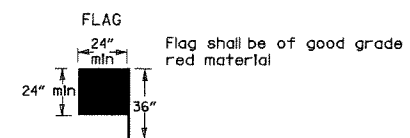
Channelizing devices



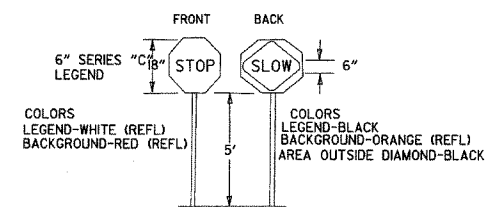
TRAFFIC CONTROL DEVICES FOR VERTICAL PAVEMENT DIFFERENTIALS

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

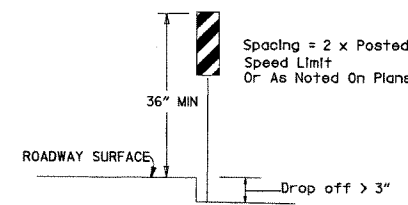
When shown on the plans concrete barrier will be used. When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.



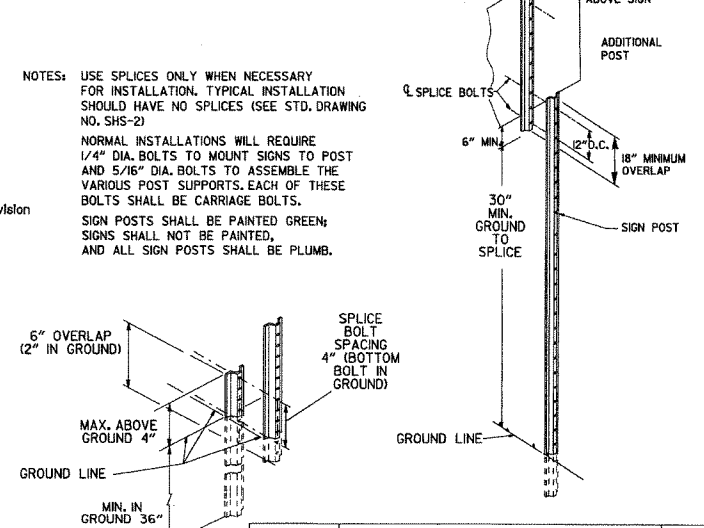
STOP SLOW PADDLE



VERTICAL PANEL PLACEMENT



DETAIL OF SPLICES

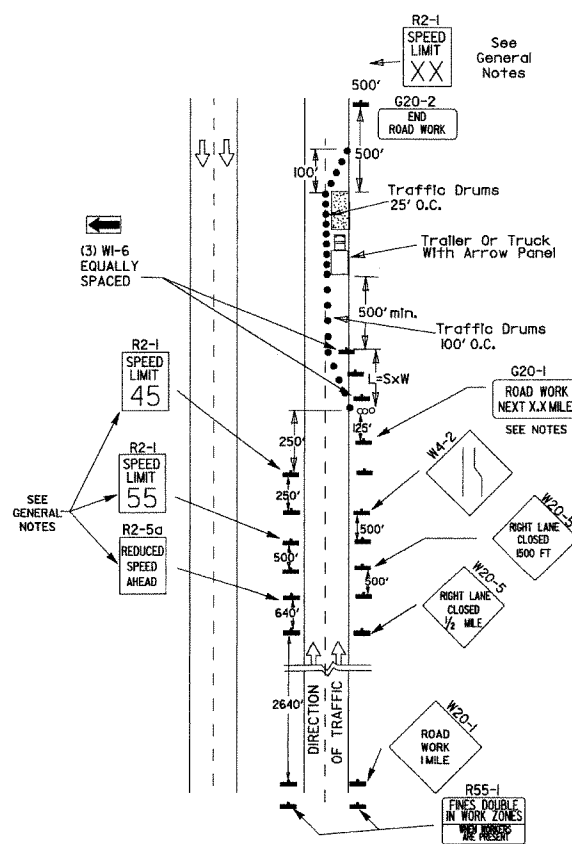


NOTES: USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-2) NORMAL INSTALLATIONS WILL REQUIRE 1/4" DIA. BOLTS TO MOUNT SIGNS TO POST AND 5/16" DIA. BOLTS TO ASSEMBLE THE VARIOUS POST SUPPORTS. EACH OF THESE BOLTS SHALL BE CARRIAGE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

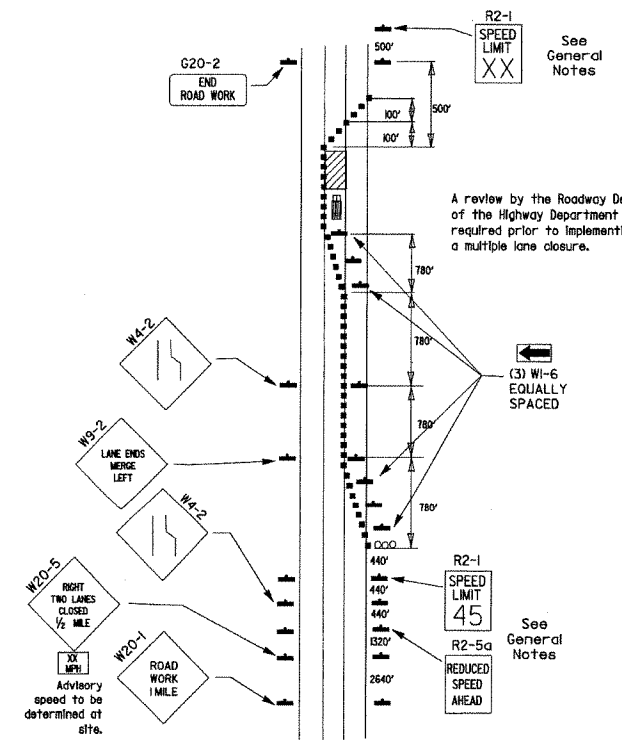
- KEY:
- Arrow Panel (if Required)
  - Channelizing Device
  - Traffic drum

GENERAL NOTES:

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



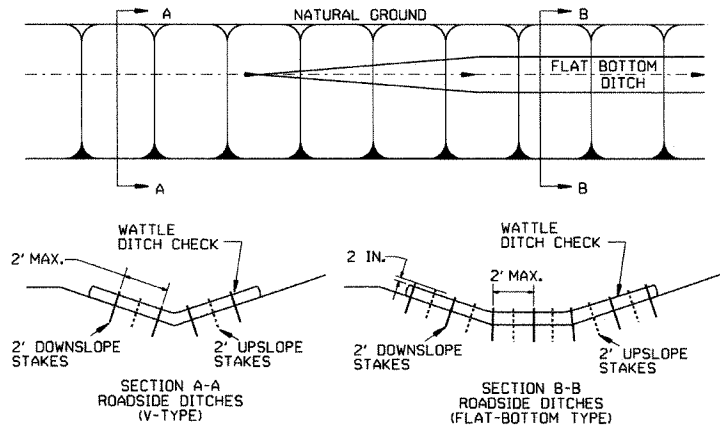
(C) Typical application - construction operations of intermediate to long term duration on a 4-lane divided roadway where half of the roadway is closed.



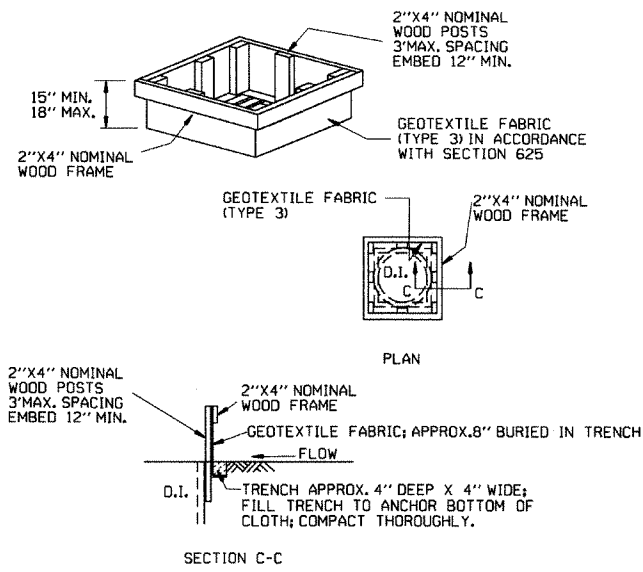
(D) Typical application - closing multiple lanes of a multilane highway.

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	

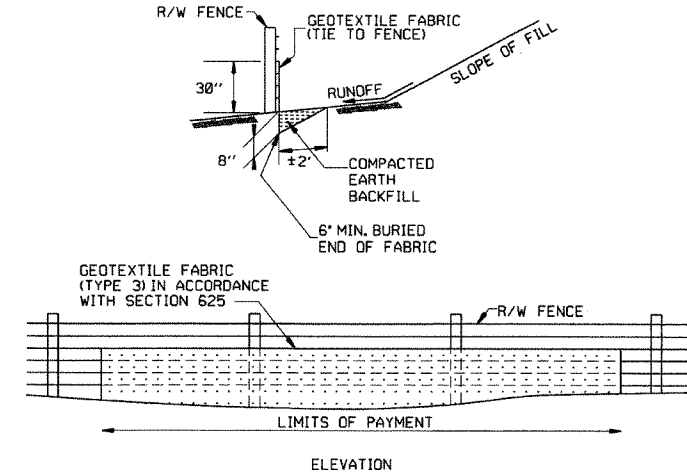
GENERAL NOTES  
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



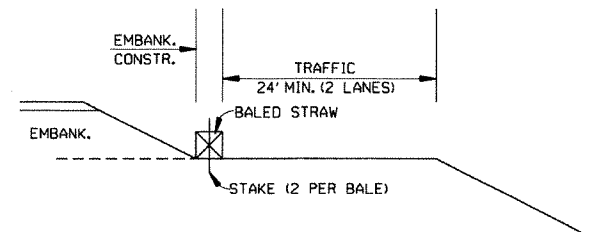
DROP INLET SILT FENCE (E-7)



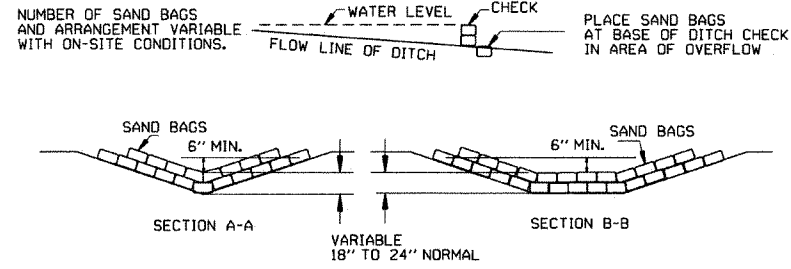
SILT FENCE ON R/W FENCE (E-4)

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.

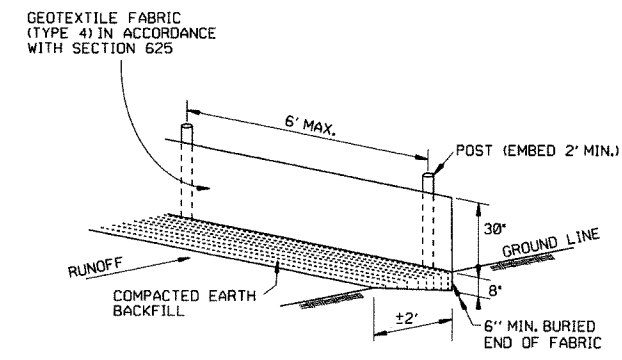
GENERAL NOTES  
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.  
2. NO GAPS SHALL BE LEFT BETWEEN BALES.  
3. BALED STRAW FILTER BARRIERS COMPLETED AND ACCEPTED 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)

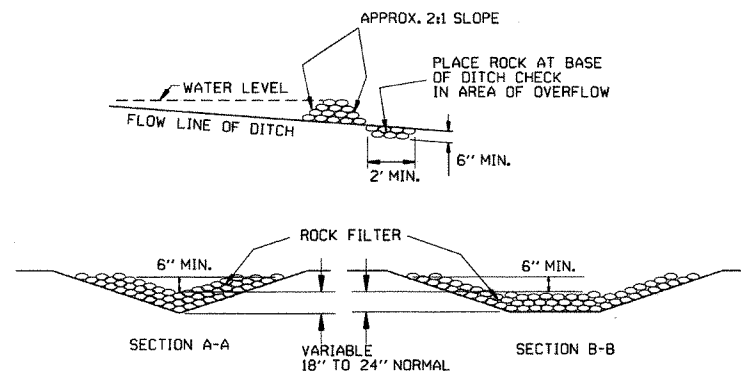


SAND BAG DITCH CHECK (E-5)



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