

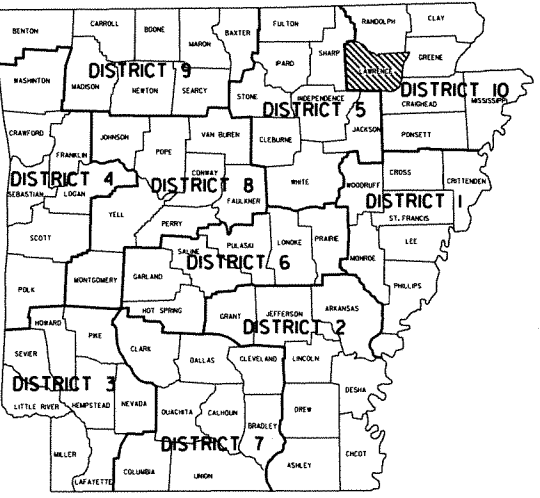
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		1	85
				JOB NO.		100404		
				2	HWY. 230 - HWY. 63 (BS. & SURF.) (S)			

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

**HWY. 230 - HWY. 63
(BS. & SURF.)(S)**

LAWRENCE COUNTY

ROUTE 67 SECTION 16
FEDERAL AID PROJECT NH-0038(38)
JOB 100404



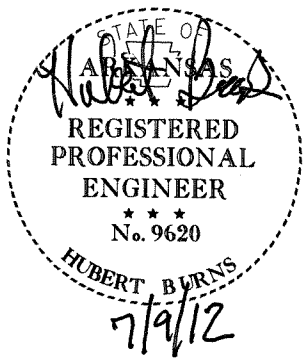
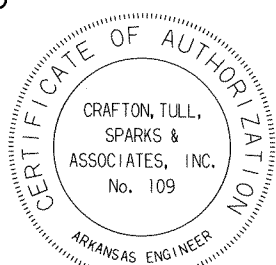
ARK. HWY. DIST. NO. 10

DESIGN DATA	
DESIGN YEAR	2017
1997 ADT	= 3800
2017 ADT	= 7200
DHV	= 792
DIRECTIONAL DISTRIBUTION	= 60%
% TRUCKS	= 18
DESIGN SPEED	= 110 Km/h

PROJECT COORDINATES:		
BEGIN	MID-POINT	END
LAT. 35°53'37"N	35°57'45"N	36°01'50"N
LONG. 91°00'00"W	90°58'44"W	90°57'36"W

END CONST. JOB 100404
STA. 268+35.696=
BEGIN JOB R00104
STA. 55+00.000

BEGIN CONST. JOB 100404
STA. 109+00.000
END JOB 100402

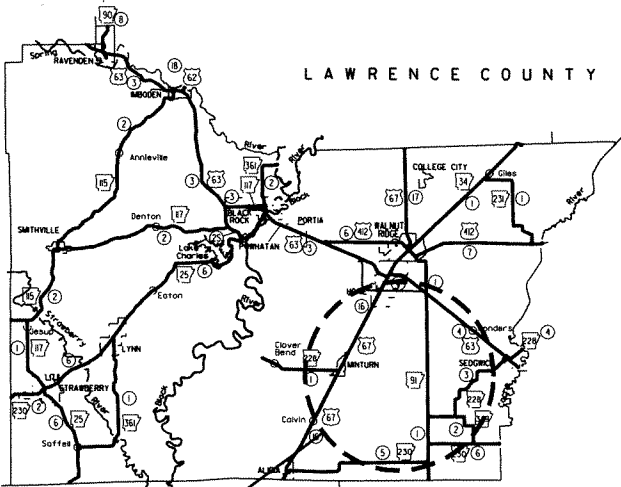


"THIS IS A METRIC JOB"

LENGTH COMPUTED ALONG C.L.	MEDIAN		
GROSS LENGTH OF PROJECT	15935.696 METERS OR	15.936 KILOMETERS	
NET . . . ROADWAY	15745.995 METERS OR	15.746 KILOMETERS	
NET . . . BRIDGES	0.000 METERS OR	0.000 KILOMETERS	
NET . . . PROJECTS	15745.995 METERS OR	15.746 KILOMETERS	



P.E. JOB 100406
NON. PART.



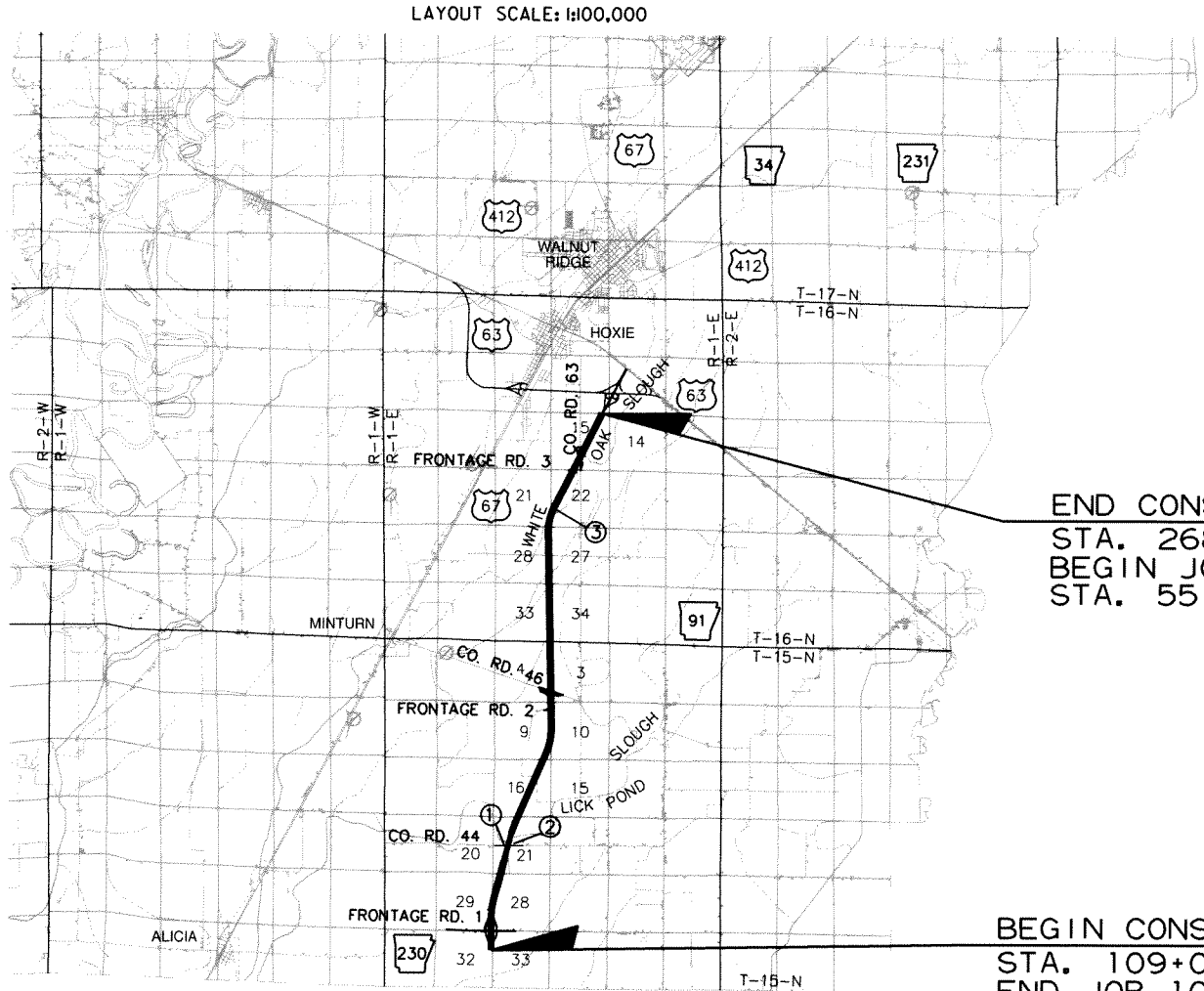
PROJECT AREA

EXCEPTION TO JOB 100404
BRIDGE DATA - MAIN LANES

- ① STA. 139+04.124 BR. END A - MAIN LANES
BRIDGE NO. A6775 & B6775
- ② STA. 139+11.357 BR. END B - MAIN LANES
180.182m CONT. COMPOSITE W-BEAM UNIT
12m CLEAR ROADWAY
STA. 140+84.306 BR. END A - MAIN LANES
STA. 140+91.539 BR. END B - MAIN LANES

IN PLACE STRUCTURES OVER 6.0m SPAN

- ③ STA. 234+80 - MAIN LANES - IN PLACE
Dbl. 3000mm x 1800mm x 92.28m RC
BOX CULVT. (49°27'36" RT. FWD. SKEW)
SPAN = 9.519m
D.A. 3917 ha; Q₅₀ = 22.43cms
USE STD. DRWGS. FOR A DBL. 10' x 6' RC
BOX CULVERT (45° SKEW)
RETAIN

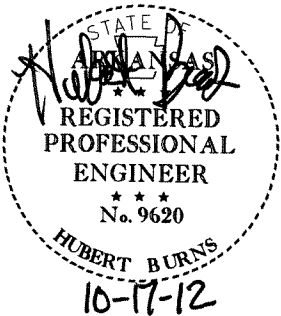


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PLOT DATE: 7/9/2012 14:20
SCALE: 2H

INDEX OF SHEETS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		2	85
				JOB NO.		100404		
				2	INDEX OF SHEETS			

SHEET NUMBER	TITLE	BRIDGE NUMBER	DRAWING NUMBER	DATE
1	TITLE SHEET			
2	INDEX OF SHEETS			
3	GENERAL NOTES AND GOVERNING SPECIFICATIONS			
4-7	TYPICAL SECTIONS OF IMPROVEMENT			
8-14	SPECIAL DETAILS			
15-16	MAINTENANCE OF TRAFFIC			
17	SUPERELEVATION RATES AND TRANSITION LIMITS			
18-26	QUANTITY SHEETS			
27	SUMMARY OF QUANTITIES AND REVISIONS			
28-31	SURVEY CONTROL DETAIL SHEETS			
32-52	PLAN AND PROFILE MAIN LANES			
53-54	PLAN AND PROFILE RAMPS 1 & 4, U.S. 67/U.S. 63 INTERCHANGE			
54A	PLAN U.S. HWY. 63 AUX. LANES			
55	HWY. 230 INTERCHANGE LAYOUT			
56-57	RAMP PROFILES U.S. 67/HWY. 230 INTERCHANGE			
58	GENERAL NOTES	A6775, B6775	39953	(FOR INFORMATION ONLY)
59	BRIDGE A LAYOUT - U.S. HWY. 67 OVER CO. RD. 44 & LICK POND SLOUGH - SHEET 1 OF 2	A6775	39963	(FOR INFORMATION ONLY)
60	BRIDGE A LAYOUT - U.S. HWY. 67 OVER CO. RD. 44 & LICK POND SLOUGH - SHEET 2 OF 2	A6775	39964	(FOR INFORMATION ONLY)
61	BRIDGE B LAYOUT - U.S. HWY. 67 OVER CO. RD. 44 & LICK POND SLOUGH - SHEET 1 OF 2	B6775	39982	(FOR INFORMATION ONLY)
62	BRIDGE B LAYOUT - U.S. HWY. 67 OVER CO. RD. 44 & LICK POND SLOUGH - SHEET 2 OF 2	B6775	39983	(FOR INFORMATION ONLY)
63	TYPE SPECIAL APPROACH SLAB AND CONCRETE INSERT ASSEMBLY	A6775, B6775	40035	
64	TYPE SPECIAL APPROACH GUTTER	A6775, B6775	40036	
65	CURBING DETAILS		CG-1(M)	11-29-07
66	TRANSVERSE & LONGITUDINAL JOINTS FOR CONCRETE PAVEMENT (NON-REINFORCED)		CPTJ-6A(M)	05-25-06
67	DETAILS OF DRIVEWAYS & ISLANDS		DR-1(M)	11-29-07
68	DETAILS OF DROP INLETS AND SPILLWAY OUTLET		FPC-9N(M)	07-02-98
69	GUARD RAIL DETAILS		GR-8(M)	07-14-10
70	GUARD RAIL DETAILS		GR-9(M)	04-17-08
71	GUARD RAIL DETAILS		GR-9A(M)	04-17-08
72	GUARD RAIL DETAILS		GR-10(M)	07-14-10
73	GUARD RAIL DETAILS		GR-10A(M)	07-14-10
74	CONCRETE BARRIER WALL (PIER PROTECTION TYPE A)		GR-11(M)	07-14-10
75	IMPACT ATTENUATION BARRIER		IB-1(M)	10-15-09
76	PAVEMENT MARKING DETAILS		PM-1(M)	11-17-10
77	PERMANENT PAVEMENT MARKING ON ACCESS CONTROLLED ROADWAYS		PM-2(M)	12-15-11
78	DETAILS OF PIPE UNDERDRAIN		PU-1(M)	04-10-03
79	TABLES AND METHOD OF SUPERELEVATION FOR ONE-WAY TRAFFIC		SE-1(M)	04-26-96
80	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION		TC-1(M)	12-15-11
81	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION		TC-2(M)	03-11-10
82	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION		TC-3(M)	10-15-09
83	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER		TC-4(M)	10-15-09
84	TEMPORARY EROSION CONTROL DEVICES		TEC-1(M)	12-15-11
85	TEMPORARY EROSION CONTROL DEVICES		TEC-3(M)	07-20-95



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		3	85
				JOB NO.		100404		
				2 GENERAL NOTES AND GOVERNING SPECIFICATIONS				

GENERAL NOTES AND GOVERNING SPECIFICATIONS

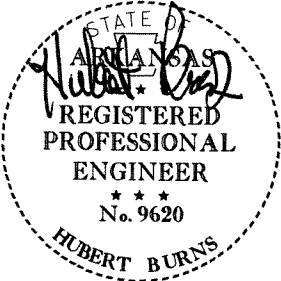
GENERAL NOTES

1. GRADE LINE DENOTES FINISHED PROFILE GRADE WHERE SHOWN ON PLANS.
2. ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
3. ALL TREES THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE SPARED AS DIRECTED BY THE ENGINEER. CARE AND DISCRETION SHALL BE USED TO INSURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HARMED AS LITTLE AS POSSIBLE DURING CONSTRUCTION OPERATIONS.

GOVERNING SPECIFICATIONS

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

NUMBER	TITLE
ERRATA.....	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273.....	REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273.....	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273.....	SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273.....	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273.....	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273.....	SUPPLEMENT - TRAINING PROGRAM - JOB 100404
FHWA-1273.....	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273.....	SUPPLEMENT - WAGE RATE DETERMINATION
100-2.....	MANUAL FOR ASSESSING SAFETY HARDWARE (MASH)
102-1.....	BIDDING REQUIREMENTS AND CONDITIONS
103-1.....	DETERMINATION OF DBE PARTICIPATION
105-1.....	CONSTRUCTION CONTROL MARKINGS
105-2.....	EQUIPMENT AND MATERIAL STORAGE ON BRIDGE STRUCTURES
105-3.....	CONTROL OF WORK
107-1.....	WORKER VISIBILITY
108-1.....	LIQUIDATED DAMAGES
110-1.....	PROTECTION OF WATER QUALITY AND WETLANDS
303-1.....	AGGREGATE BASE COURSE
404-1.....	PRODUCTION VERIFICATION OF ASPHALT CONCRETE HOT MIX
404-2.....	DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES
409-1.....	MINERAL AGGREGATES
410-3.....	DENSITY TESTING FOR ACHM LEVELING AND BOND BREAKERS
501-1.....	INSTALLATION OF TIE BARS
600-1.....	WATER FOR VEGETATION
603-1.....	MAINTENANCE OF TRAFFIC
604-1.....	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
604-2.....	INSPECTION OF TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
719-2.....	THERMOPLASTIC PAVEMENT MARKING MATERIAL
804-1.....	INSTALLATION OF DOWEL BARS AND TIE BARS
JOB 100404.....	BAR REINFORCEMENT
JOB 100404.....	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 100404.....	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 100404.....	CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS
JOB 100404.....	COORDINATION OF WORK
JOB 100404.....	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 100404.....	HIGH PERFORMANCE PAVEMENT MARKING
JOB 100404.....	INTERNET BIDDING
JOB 100404.....	MOWING OF HIGHWAY RIGHT-OF-WAY
JOB 100404.....	PARTNERING REQUIREMENTS
JOB 100404.....	PORTLAND CEMENT CONCRETE PAVEMENT
JOB 100404.....	SOIL STABILIZATION
JOB 100404.....	STORM WATER POLLUTION PREVENTION PLAN
JOB 100404.....	SUBGRADE PREPARATION
JOB 100404.....	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 100404.....	UTILITY ADJUSTMENTS
JOB 100404.....	VALUE ENGINEERING
JOB 100404.....	WARM MIX ASPHALT

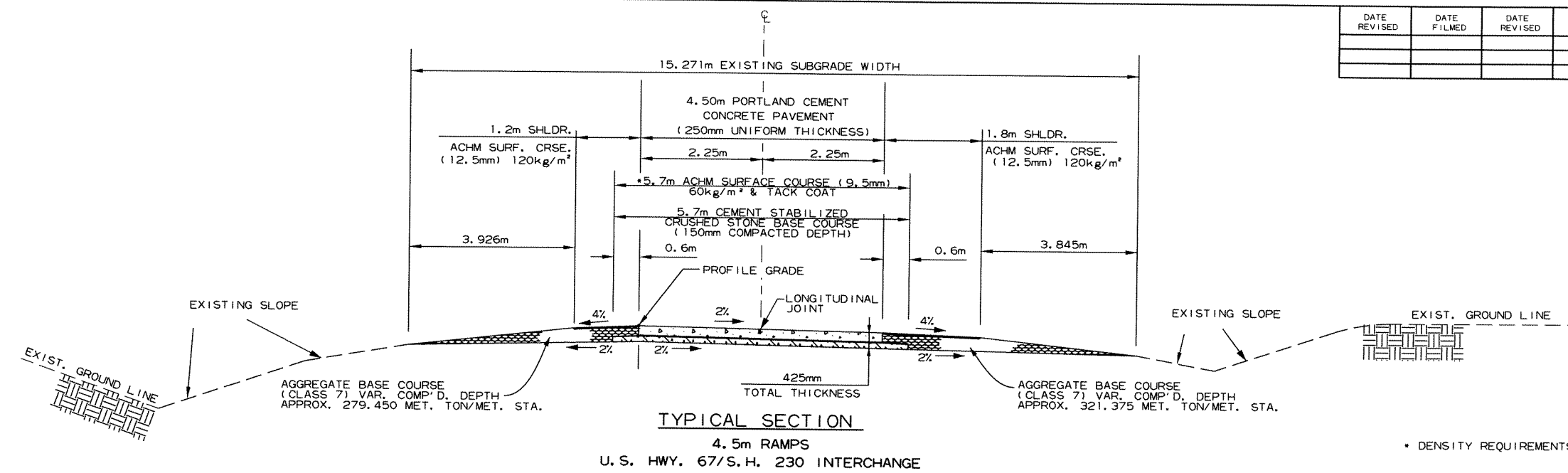
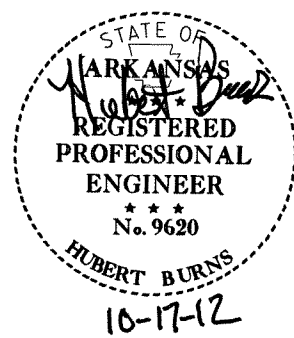


10-19-12



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
					ARK.		6	85
				JOB NO.	100404			

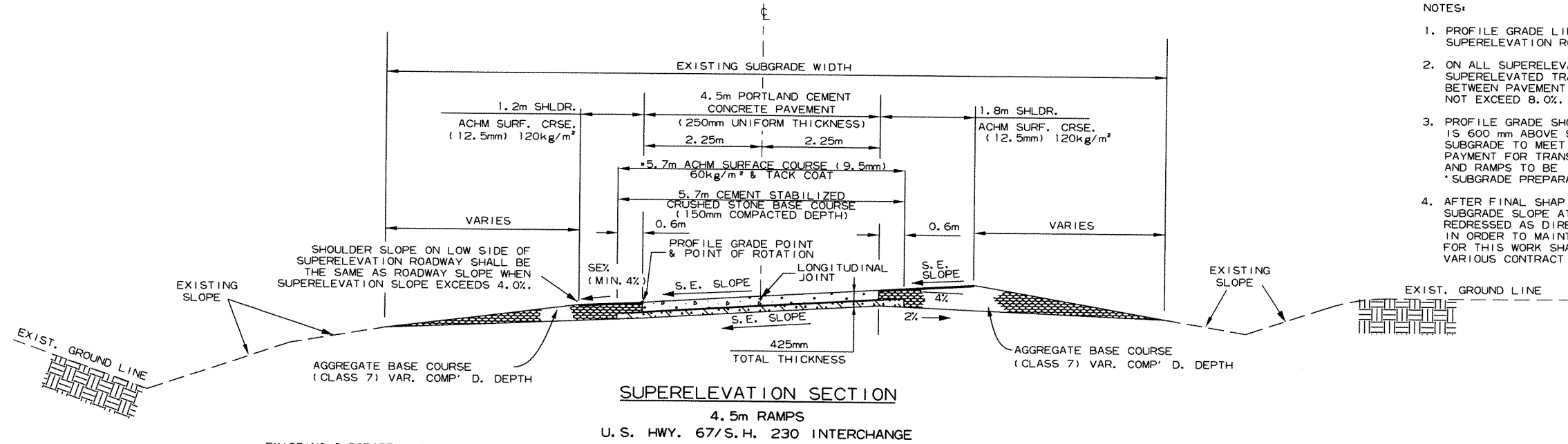
2 TYPICAL SECTIONS OF IMPROVEMENT - AUX. LANE & RAMPS



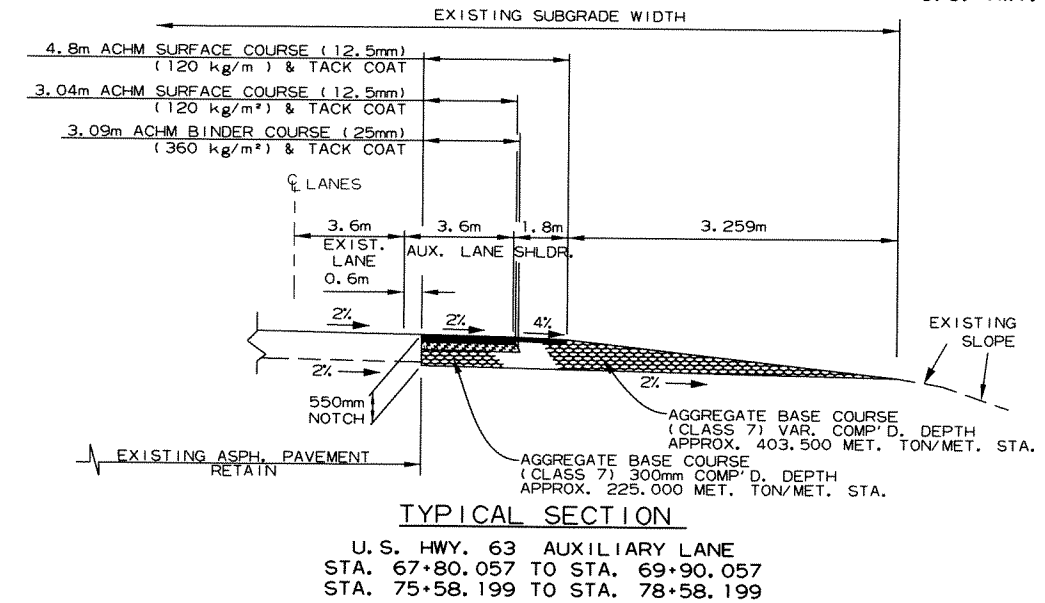
TYPICAL SECTION
4.5m RAMPS
U.S. HWY. 67/S.H. 230 INTERCHANGE

* DENSITY REQUIREMENTS WAIVED.

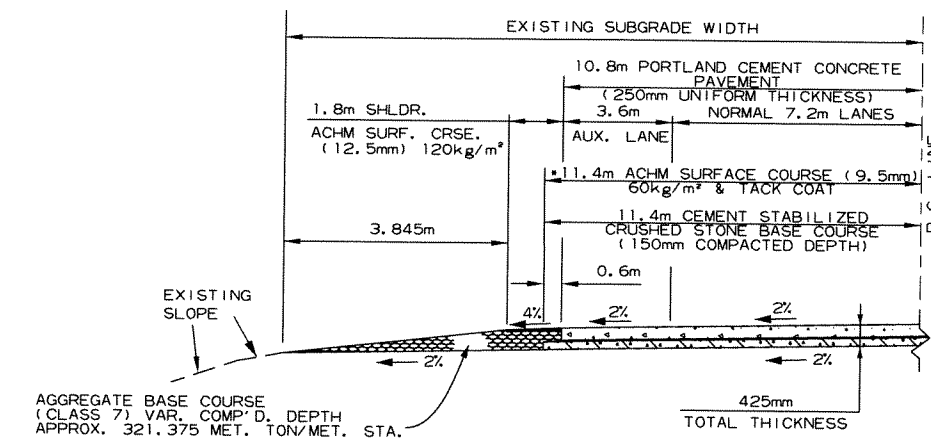
- NOTES:
1. PROFILE GRADE LINE IS THE POINT OF SUPERELEVATION ROTATION FOR RAMPS.
 2. ON ALL SUPERELEVATED CURVES AND THROUGH SUPERELEVATED TRANSITIONS (LS), ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 8.0%.
 3. PROFILE GRADE SHOWN ON PLAN AND PROFILE SHEETS IS 600 mm ABOVE SUBGRADE. USE 1:1200 TRANSITION IN SUBGRADE TO MEET RAMP TERMINALS AND BRIDGE ENDS. PAYMENT FOR TRANSITIONS IN SUBGRADE ON MAIN LANES AND RAMPS TO BE INCLUDED IN PAYMENT MADE FOR 'SUBGRADE PREPARATION'.
 4. AFTER FINAL SHAPING OF BASE COURSE, THE EXISTING SUBGRADE SLOPE AT THE TOE OF THE BASE COURSE SHALL BE REDRESSED AS DIRECTED BY THE ENGINEER PRIOR TO SEEDING IN ORDER TO MAINTAIN A UNIFORM SUBGRADE SLOPE. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN PRICE BID FOR THE VARIOUS CONTRACT ITEMS.



SUPERELEVATION SECTION
4.5m RAMPS
U.S. HWY. 67/S.H. 230 INTERCHANGE



TYPICAL SECTION
U.S. HWY. 63 AUXILIARY LANE
STA. 67+80.057 TO STA. 69+90.057
STA. 75+58.199 TO STA. 78+58.199



TYPICAL SECTION
AUXILIARY LANE

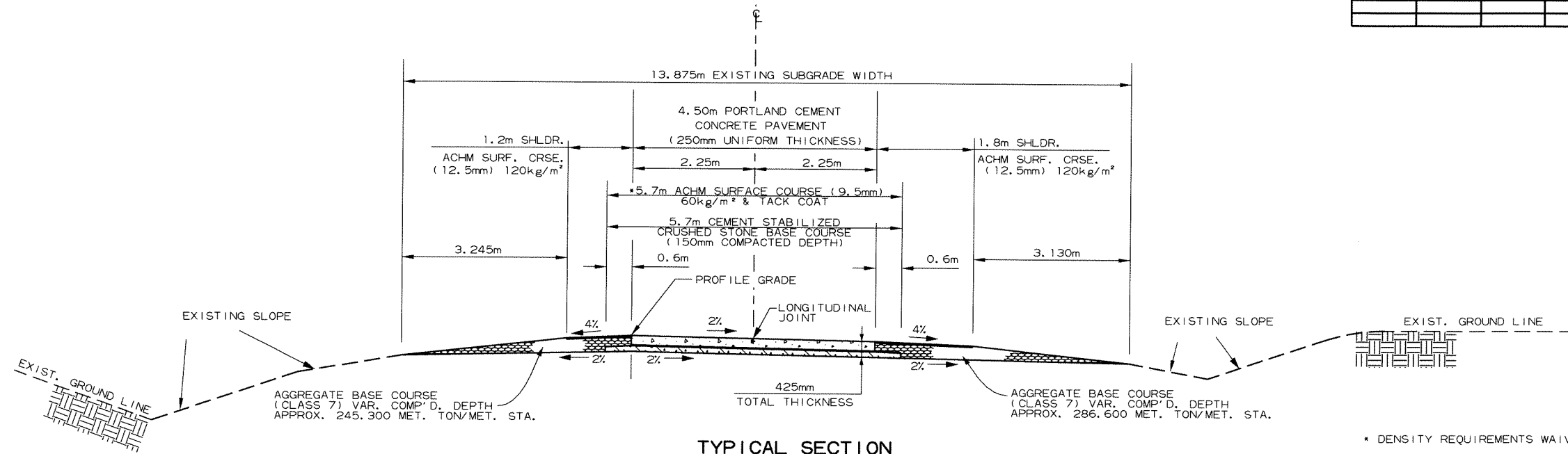
NOTE:
ALL DIMENSIONS ARE
IN METERS UNLESS NOTED
OTHERWISE.



TYPICAL SECTIONS OF IMPROVEMENT

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		7	85
				JOB NO.		100404		
2 TYPICAL SECTIONS OF IMPROVEMENT - RAMPS								

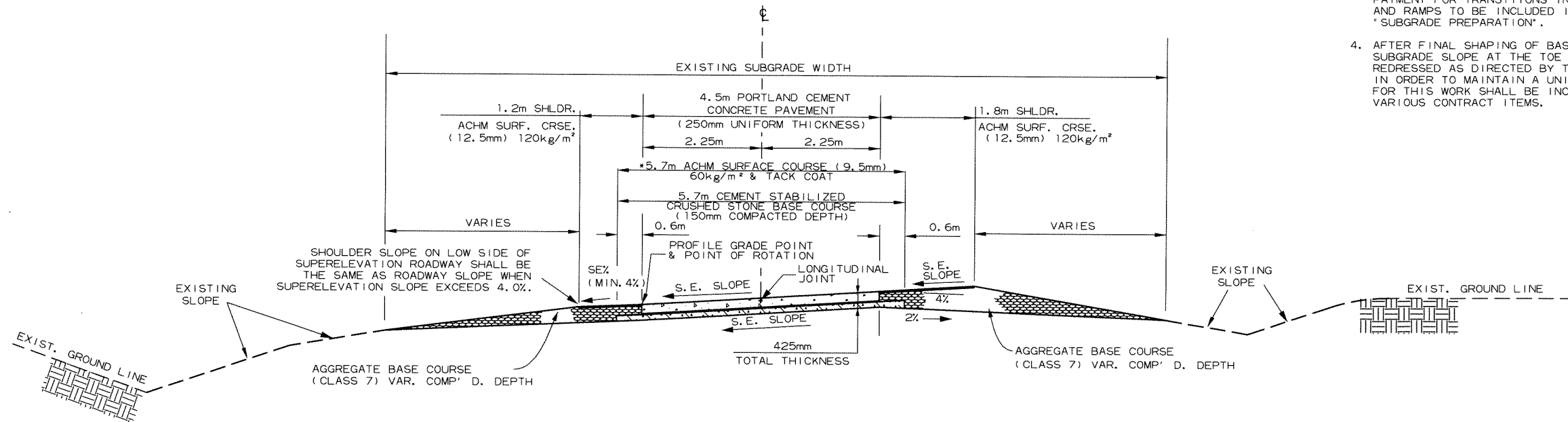


TYPICAL SECTION
RAMP 1 & 4 - NORMAL
U. S. HWY. 67/U. S. HWY. 63 INTERCHANGE

* DENSITY REQUIREMENTS WAIVED.

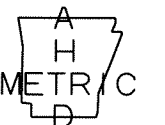
NOTES:

1. PROFILE GRADE LINE IS THE POINT OF SUPERELEVATION ROTATION FOR RAMP.
2. ON ALL SUPERELEVATED CURVES AND THROUGH SUPERELEVATED TRANSITIONS (LS), ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 8.0%.
3. PROFILE GRADE SHOWN ON PLAN AND PROFILE SHEETS IS 500 mm ABOVE SUBGRADE. USE 1:1200 TRANSITION IN SUBGRADE TO MEET RAMP TERMINALS AND BRIDGE ENDS. PAYMENT FOR TRANSITIONS IN SUBGRADE ON MAIN LANES AND RAMP TO BE INCLUDED IN PAYMENT MADE FOR "SUBGRADE PREPARATION".
4. AFTER FINAL SHAPING OF BASE COURSE, THE EXISTING SUBGRADE SLOPE AT THE TOE OF THE BASE COURSE SHALL BE REDRESSED AS DIRECTED BY THE ENGINEER PRIOR TO SEEDING IN ORDER TO MAINTAIN A UNIFORM SUBGRADE SLOPE. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

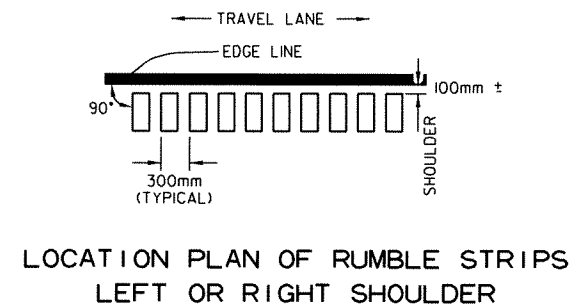
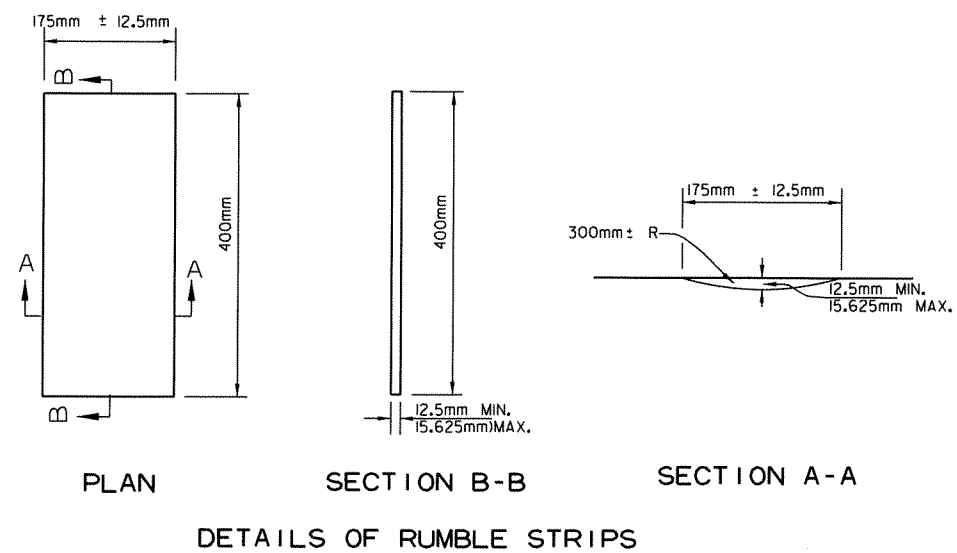


SUPERELEVATION SECTION
RAMP 1 & 4
U. S. HWY. 67/U. S. HWY. 63 INTERCHANGE

NOTE:
ALL DIMENSIONS ARE
IN METERS UNLESS NOTED
OTHERWISE.

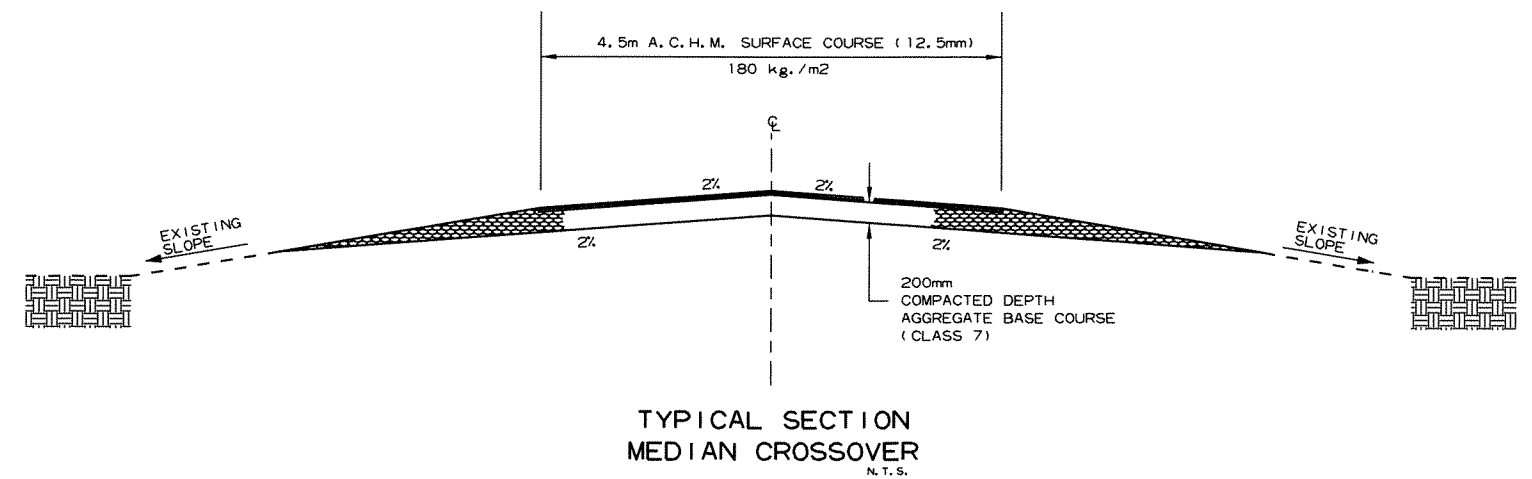
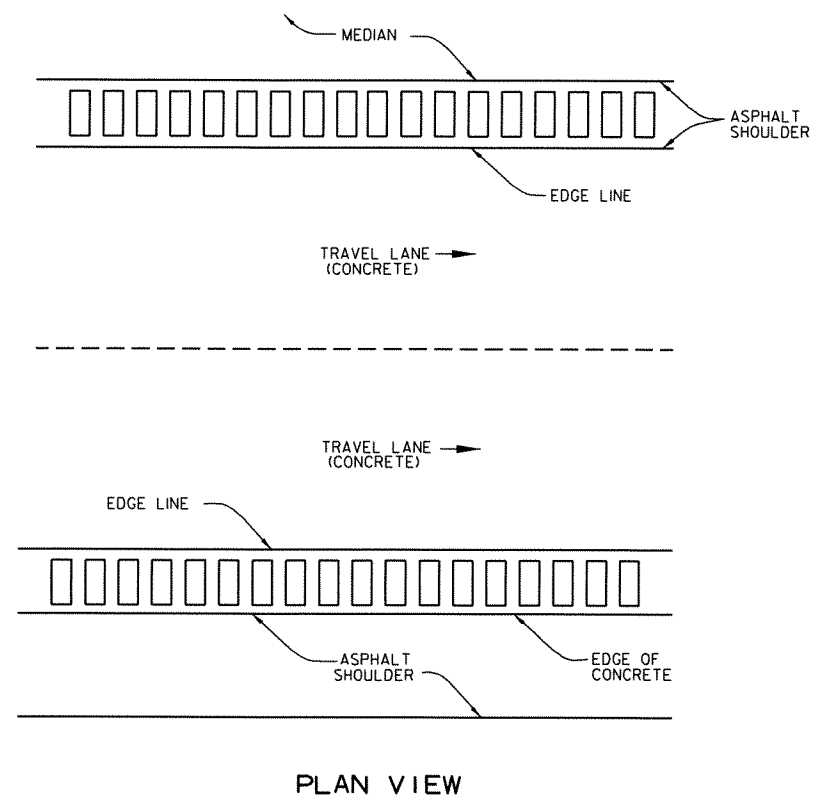


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				6	ARK.		8	85
				JOB NO.		100404		
				2 SPECIAL DETAILS				

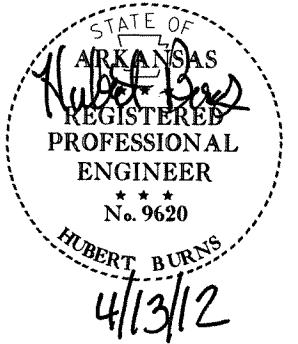


NOTES:

1. ALIGNMENT OF RUMBLE STRIPS SHALL GENERALLY BE STRAIGHT AND OFFSET APPROXIMATELY 100mm FROM THE OUTER EDGE OF THE EDGE LINE. THIS OFFSET MAY BE ADJUSTED TO ACCOMMODATE VARIATIONS IN THE EDGE LINE AS WELL AS TO AVOID EXISTING LONGITUDINAL JOINTS.
2. THE 12.5mm DEPTH SHALL GENERALLY APPLY FOR THE ENTIRE 400mm LENGTH. SOME VARIATION TO SUIT SHOULDER SLOPE BREAKS MAY BE NECESSARY.
3. ON CONCRETE SHOULDERS, RUMBLE STRIPS SHALL BE PLACED NO CLOSER THAN 25mm TO A TRANSVERSE JOINT.



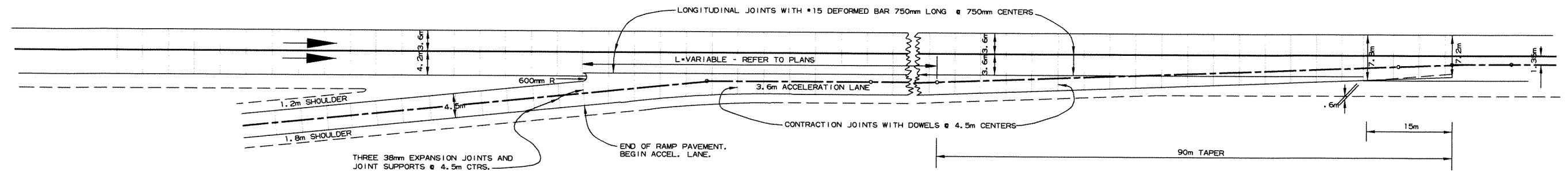
NOTE: THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS 25mm OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR THE MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.



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				JOB NO.		100404		

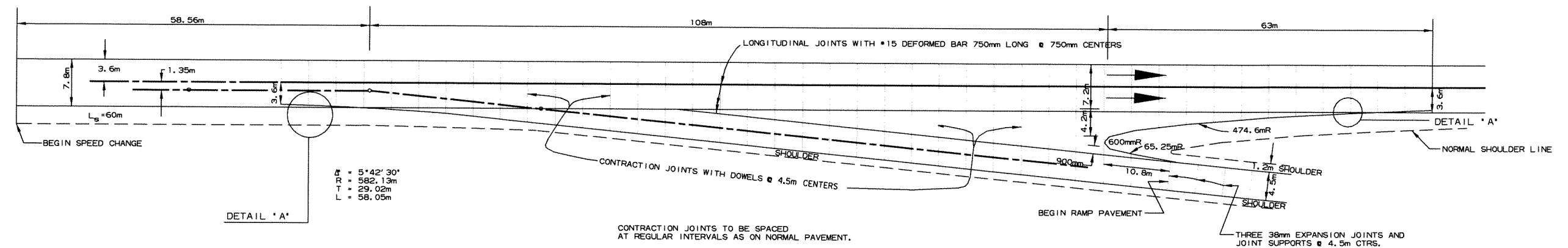
(2)

SPECIAL DETAILS



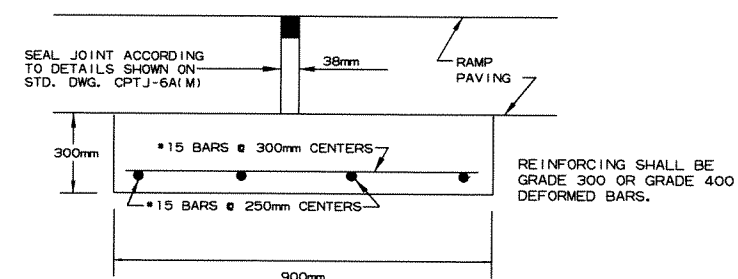
ENTRANCE RAMP

RETURN CURVES
 $\Delta = 2^{\circ}17'30''$
 $R = 582.13m'$
 $T = 11.64m$
 $L = 23.29m$



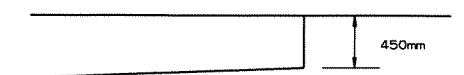
EXIT RAMP

EXIT RAMP					
DESIGN SPEED V	Y	NOSE OFFSET C	LENGTH NOSE TAPER Z	RETURN RADIUS R	ADD'L SURFACING
km/hr.	m	m	m	m	sq. m
110	108	4.2	63.0	474.6	757.91

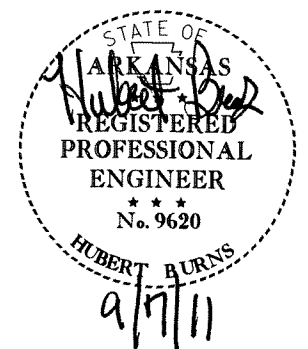


DETAIL OF EXPANSION JOINT & JOINT SUPPORT

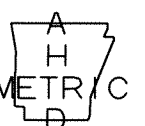
NOTE: THE EXPANSION JOINTS SHALL BE MEASURED AND PAID FOR AS P.C.C. PAVEMENT (RAMP THICKNESS). WHEN RAMP PAVING IS ASPHALT, EXPANSION JOINT IS NOT REQUIRED.
THE JOINT SUPPORT MAY BE CONSTRUCTED WITH CLASS "A", "S", OR PAVING CONCRETE. PAYMENT FOR THE JOINT SUPPORT SHALL BE FOR THE CONTRACT UNIT PRICE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



DETAIL "A"



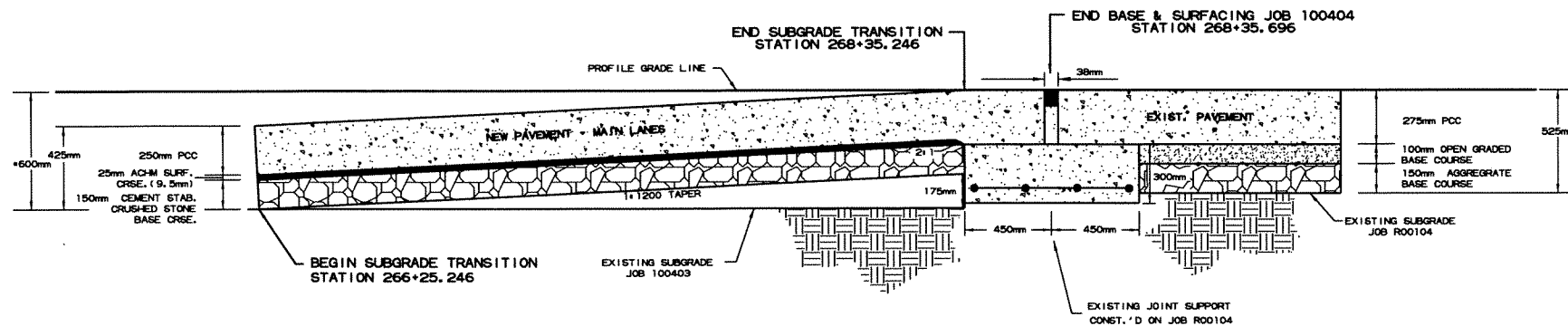
DETAILS OF STANDARD TURNOUT FOR ENTRANCE & EXIT RAMP



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		10	85
				JOB NO.		100404		
				2 SPECIAL DETAILS				

STA 268+35.696 JOB 100404 END BASE AND SURFACING
 +STA 55+00 EXISTING BASE AND SURFACING JOB R00104
 TRANSITION FROM 250mm PCC MAIN LANES TO
 EXISTING 275mm PCC AT STA. 268+35.696
 U.S. 67/U.S. 63 INTERCHANGE

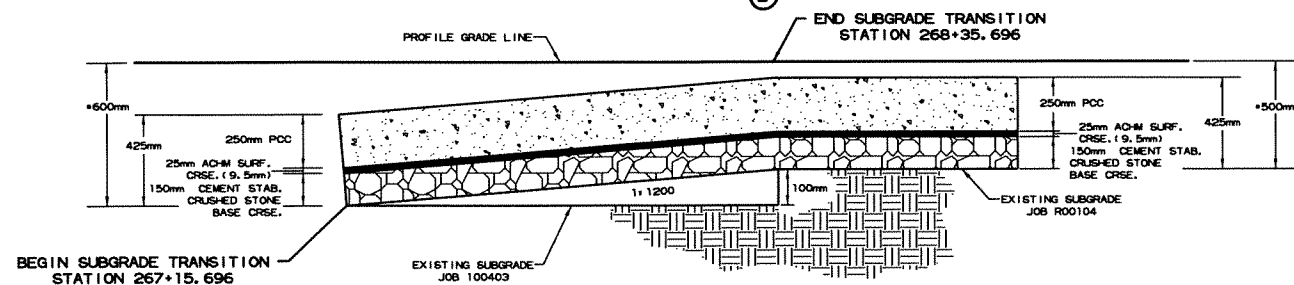
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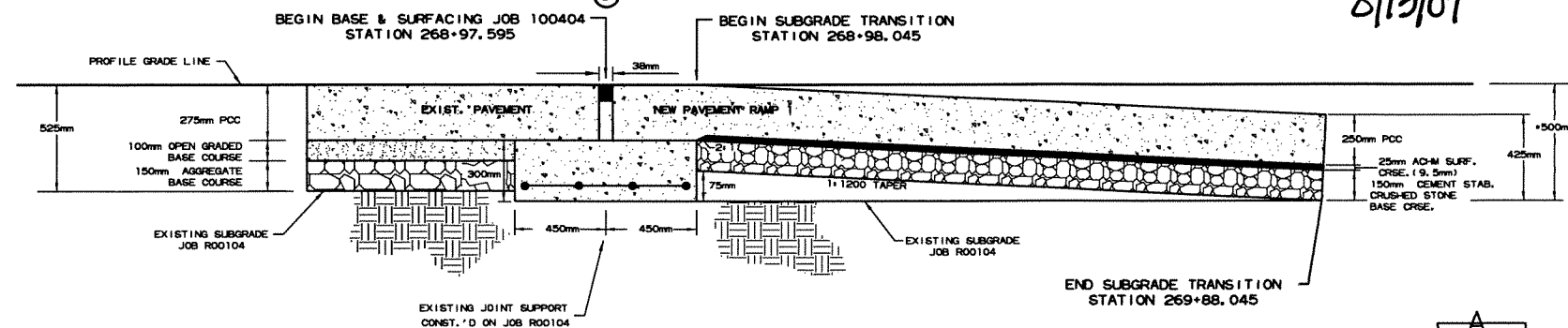
* NOTE: PROFILE GRADE LINE SHOWN ON THE PLAN AND PROFILE SHEETS FOR THE MAIN LANES AND HWY. 230 INTERCHANGE RAMP 1 IS 600mm ABOVE SUBGRADE. HOWEVER, PROFILE GRADE USED FOR JOB R00104 HWY. 63/67 INTERCHANGE WHICH CONNECTS TO THIS PROJECT AT THE NORTHERN TERMINI, IS 525mm ABOVE SUBGRADE ON THE MAIN LANES AND 500mm ABOVE SUBGRADE ON RAMP 1 & 4. USE A 1:1200 TRANSITION IN SUBGRADE AT THE NORTHERN TERMINI TO MEET EXISTING PAVEMENT FOR MAIN LANES AND SUBGRADE FOR RAMP. TRANSITIONS IN SUBGRADE ON MAIN LANES AND RAMP 1 TO BE INCLUDED IN PAYMENT MADE FOR "SUBGRADE PREPARATION."

STA 268+35.696 END RAMP 4 JOB 100403 GRADING
 = STA 55+00 BEGIN RAMP 4 JOB R00104 GRADING
 SUBGRADE TRANSITION FROM 600mm TO
 500mm BELOW P.G.L. STA. 268+35.696
 RAMP 4 U.S. 67/U.S. 63 INTERCHANGE

②



* NOTE: PROFILE GRADE LINE SHOWN ON THE PLAN AND PROFILE SHEETS FOR THE MAIN LANES AND HWY. 230 INTERCHANGE RAMP 1 IS 600mm ABOVE SUBGRADE. HOWEVER, PROFILE GRADE USED FOR JOB R00104 HWY. 63/67 INTERCHANGE WHICH CONNECTS TO THIS PROJECT AT THE NORTHERN TERMINI, IS 525mm ABOVE SUBGRADE ON THE MAIN LANES AND 500mm ABOVE SUBGRADE ON RAMP 1 & 4. USE A 1:1200 TRANSITION IN SUBGRADE AT THE NORTHERN TERMINI TO MEET EXISTING PAVEMENT FOR MAIN LANES AND SUBGRADE FOR RAMP. TRANSITIONS IN SUBGRADE ON MAIN LANES AND RAMP 1 TO BE INCLUDED IN PAYMENT MADE FOR "SUBGRADE PREPARATION."



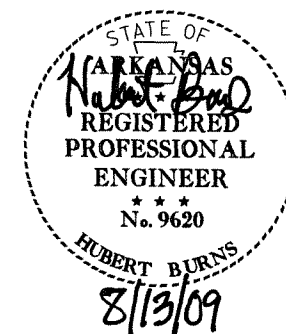
② STA 268+35.696 END RAMP 4
 JOB 100403 GRADING =
 STA 55+00 BEGIN RAMP 4
 JOB R00104 GRADING

HATCHED AREA INDICATES
 EXISTING PAVEMENT
 CONSTRUCTED ON JOB R00104

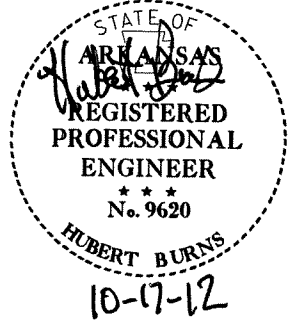
③

STA 57+01 EXISTING PAVEMENT
 JOB R00104 =
 STA 268+97.595 BEGIN
 JOB 100404 BASE AND SURFACING

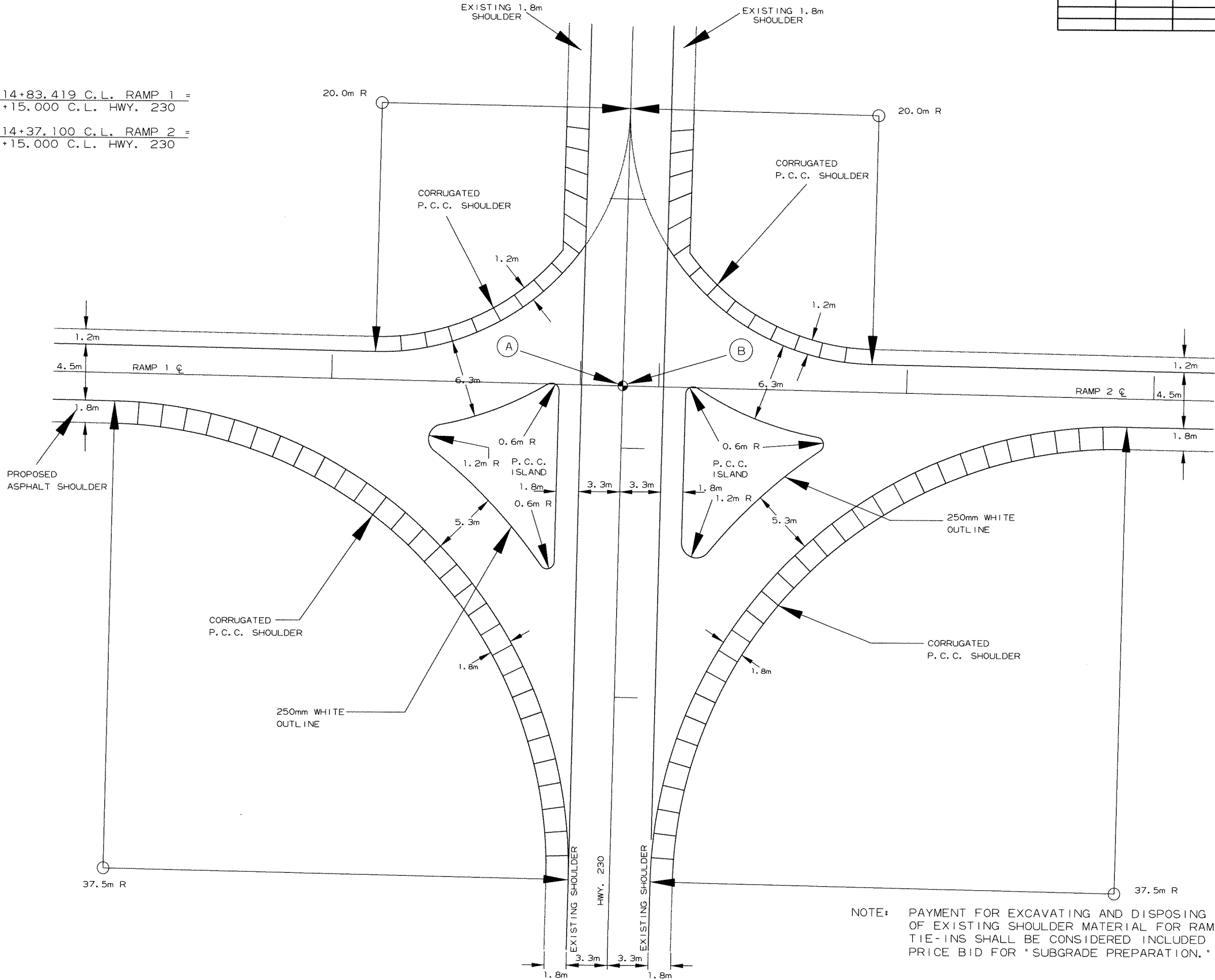
① STA 268+35.696 JOB 100404 END BASE
 AND SURFACING =
 STA 55+00 EXISTING BASE AND
 SURFACING JOB R00104



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		11	85
				JOB NO.		100404		
				2 SPECIAL DETAILS				



- (A) STA. 114+83.419 C.L. RAMP 1 =
STA. 4+15.000 C.L. HWY. 230
- (B) STA. 114+37.100 C.L. RAMP 2 =
STA. 4+15.000 C.L. HWY. 230



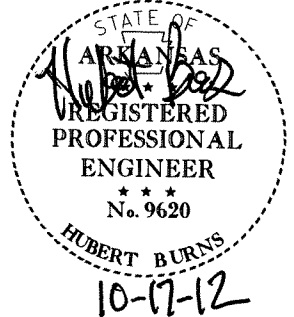
NOTE: PAYMENT FOR EXCAVATING AND DISPOSING OF EXISTING SHOULDER MATERIAL FOR RAMP TIE-INS SHALL BE CONSIDERED INCLUDED IN PRICE BID FOR "SUBGRADE PREPARATION."

INTERSECTION DETAILS
HWY. 230 INTERCHANGE

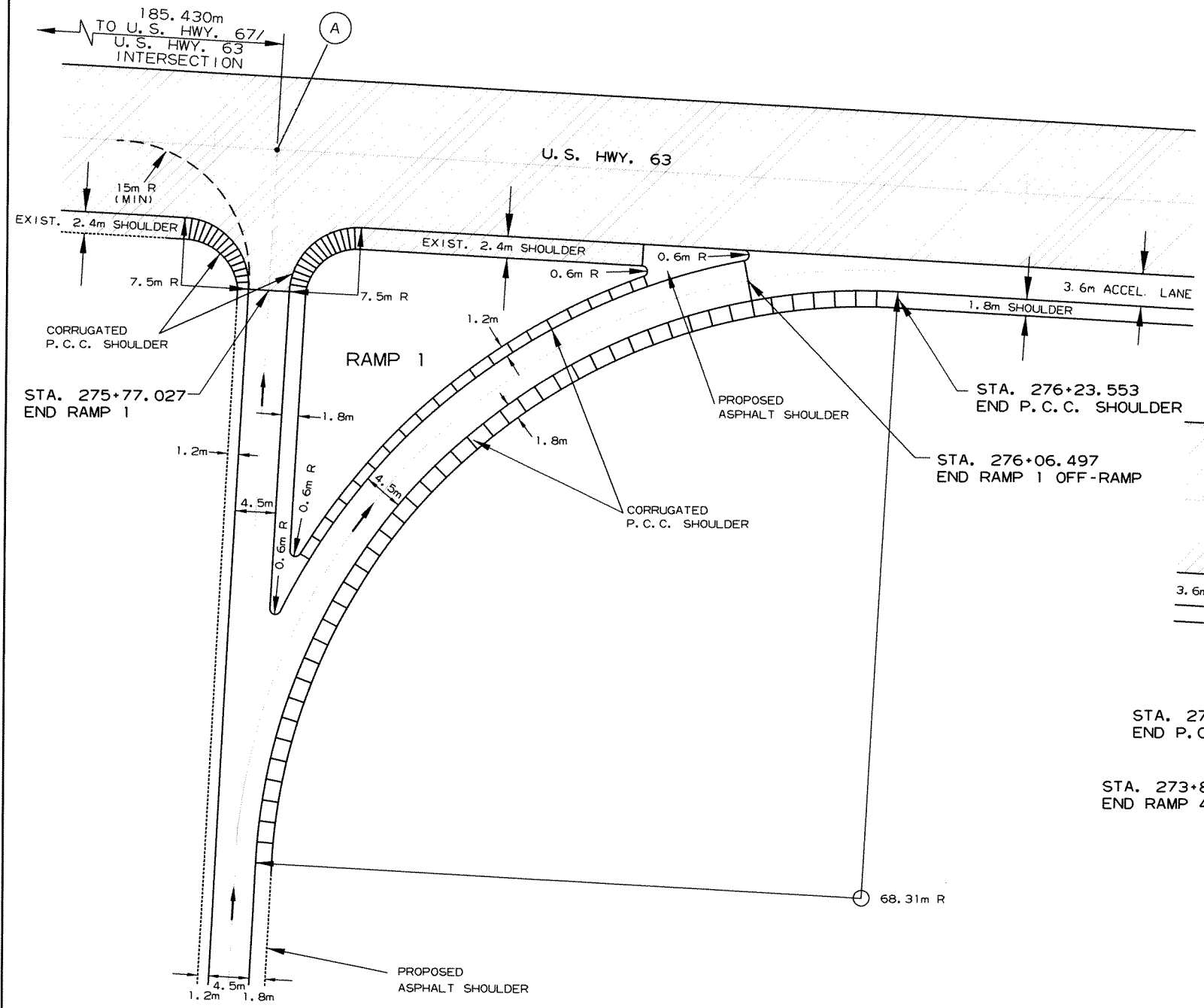


RAMPS 1 & 2
U.S. 67 / HWY. 230 INTERCHANGE

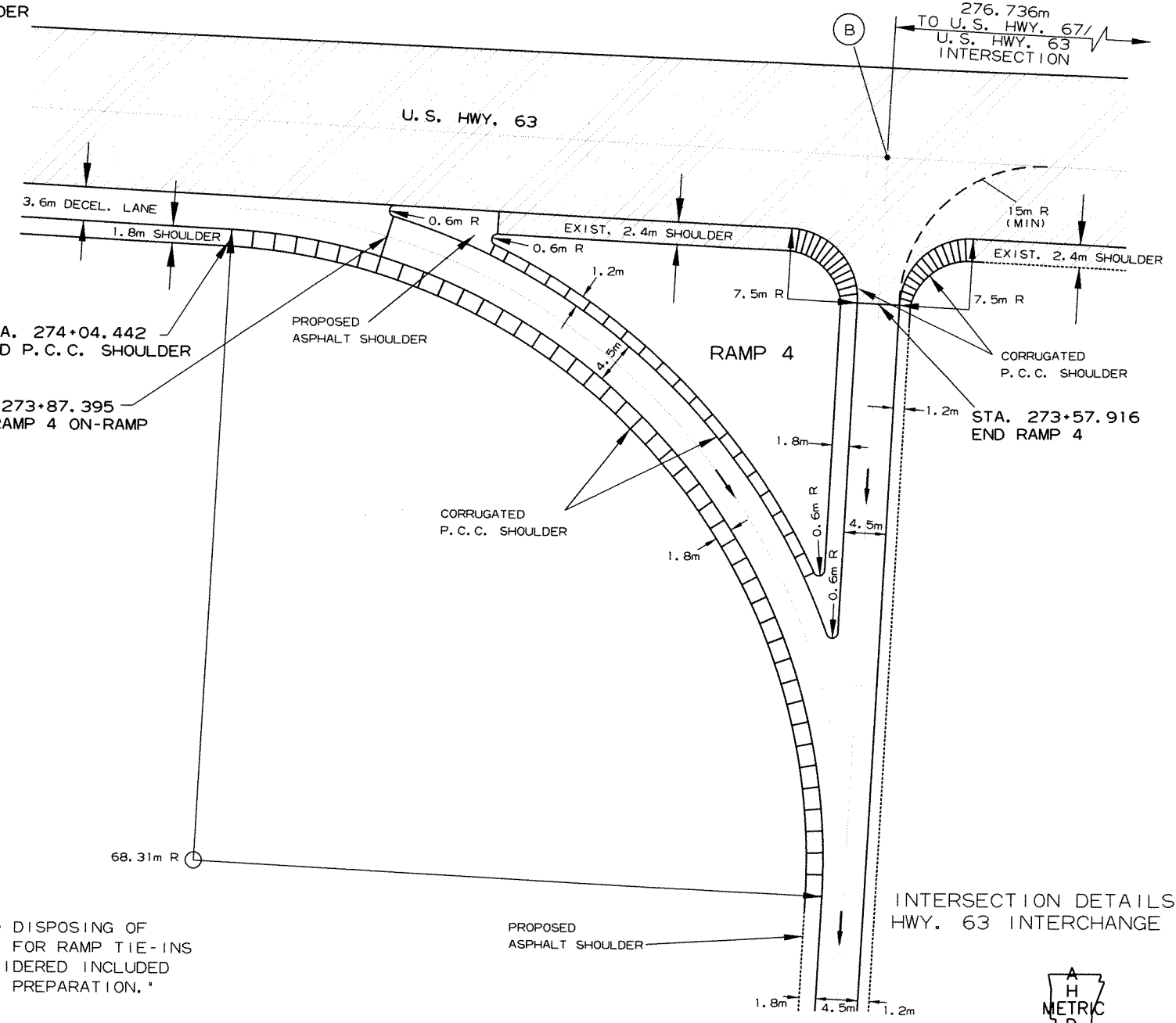
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				6	ARK.		13	85
				JOB NO.		100404		
				2 SPECIAL DETAILS				



- A STA. 275+92.877 C.L. RAMP 1 =
C.L. U.S. HWY. 63
- B STA. 273+73.766 C.L. RAMP 4 =
C.L. U.S. HWY. 63



RAMP 1 - U.S. 67/U.S. 63 INTERCHANGE



RAMP 4 - U.S. 67/U.S. 63 INTERCHANGE

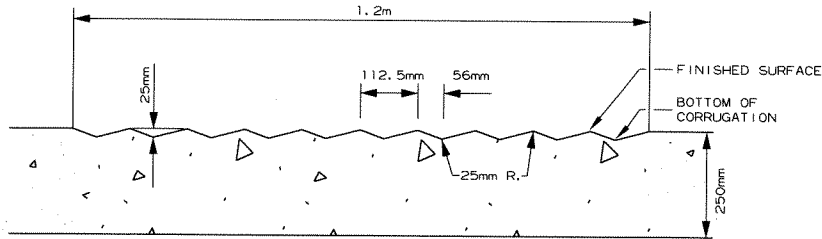
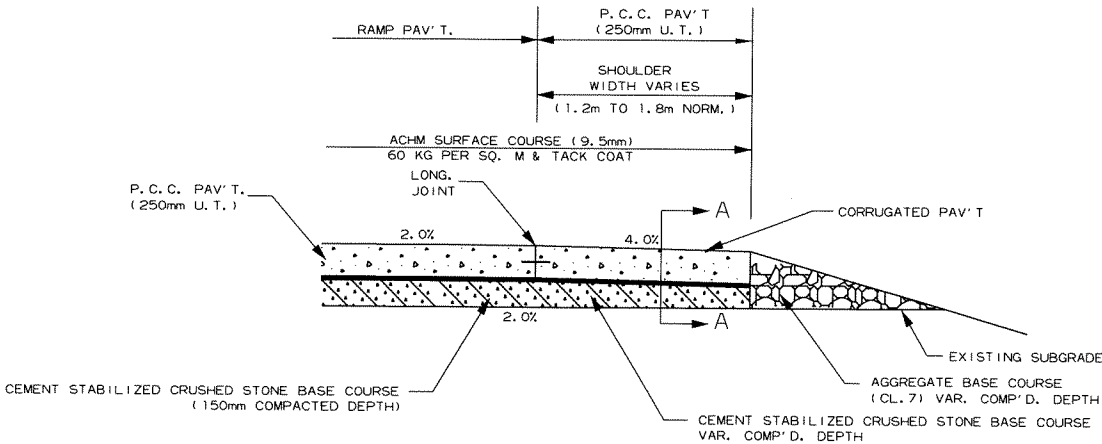
INTERSECTION DETAILS
HWY. 63 INTERCHANGE

NOTE: PAYMENT FOR EXCAVATING AND DISPOSING OF EXISTING SHOULDER MATERIAL FOR RAMP TIE-INS & AUX. LANES SHALL BE CONSIDERED INCLUDED IN PRICE BID FOR "SUBGRADE PREPARATION."



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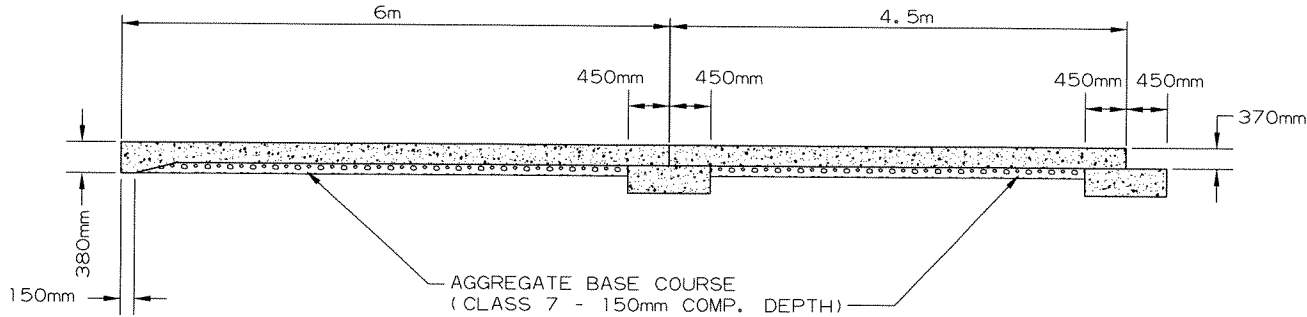
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				JOB NO.		100404		
				2		SPECIAL DETAILS		



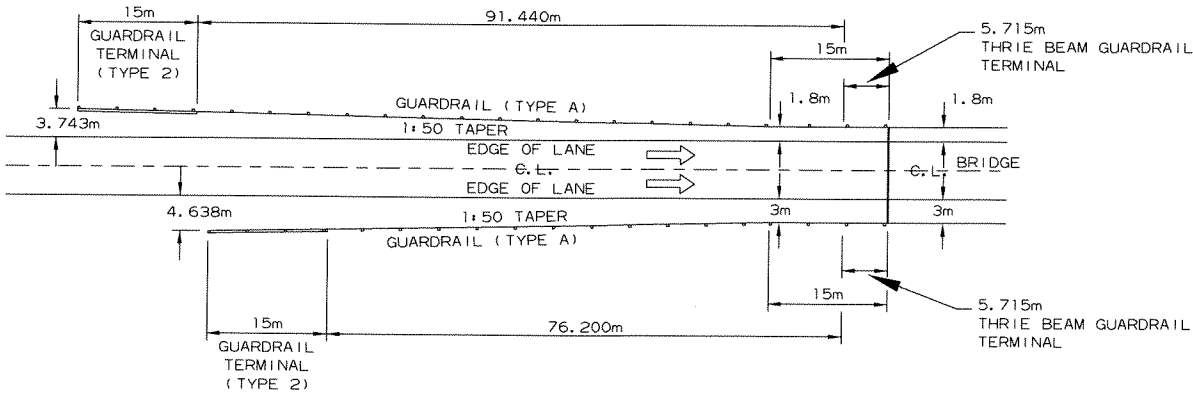
(SECTION A-A)

(PLAN)

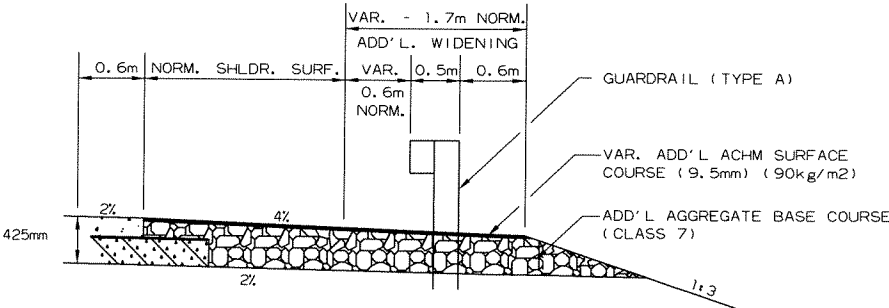
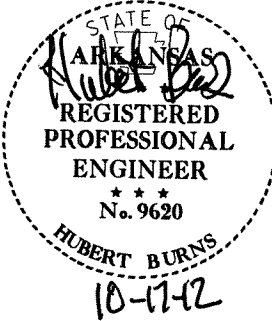
DETAILS OF SHOULDER CORRUGATIONS FOR CONCRETE SHOULDERS
AT RAMP TURNOUTS AT CROSSING ROADS



SECTION OF APPROACH SLAB



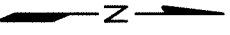
TYPICAL WIDENING FOR GUARDRAIL AT BRIDGE ENDS - 4 LANE DIVIDED



TYPICAL SECTION WIDENING FOR GUARDRAIL
4 LANE DIVIDED

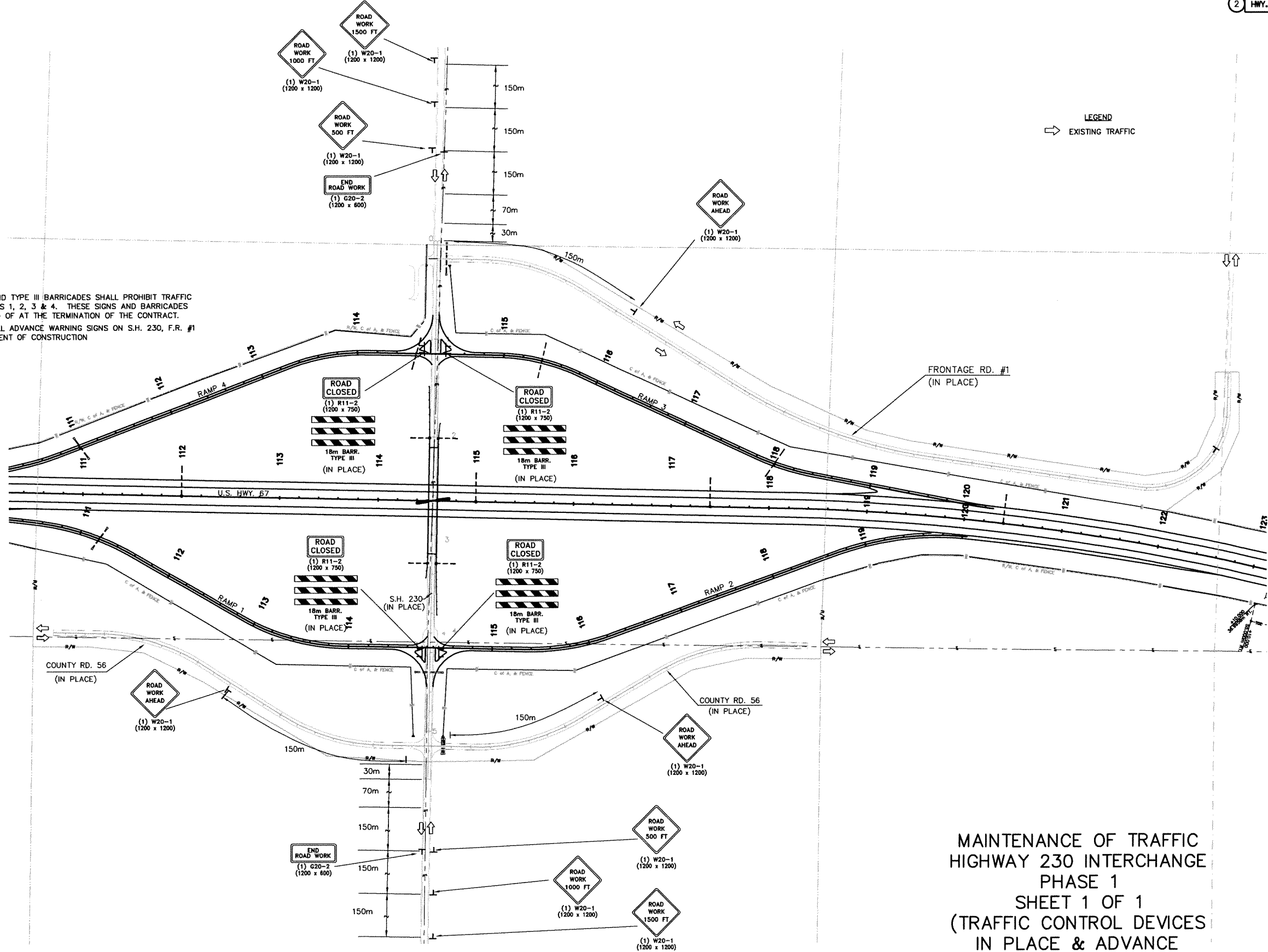


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK		15	85
				JOB NO.		100404		
				2 HWY. 230 INTERCHANGE - MAINTENANCE OF TRAFFIC				



LEGEND
→ EXISTING TRAFFIC

NOTES:
1) IN PLACE - ROAD CLOSED SIGNS AND TYPE III BARRICADES SHALL PROHIBIT TRAFFIC FROM ENTERING U.S. HWY. 67 RAMP 1, 2, 3 & 4. THESE SIGNS AND BARRICADES ARE TO BE REMOVED AND DISPOSED OF AT THE TERMINATION OF THE CONTRACT.
2) THE CONTRACTOR SHALL INSTALL ALL ADVANCE WARNING SIGNS ON S.H. 230, F.R. #1 AND C.R. 56 PRIOR TO COMMENCEMENT OF CONSTRUCTION



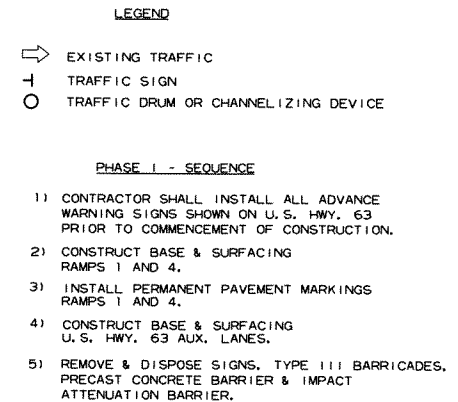
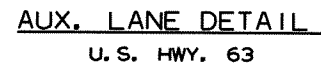
STATE OF
ARKANSAS
REGISTERED
PROFESSIONAL
ENGINEER
No. 9620
HUBERT BURNS
8/13/09

MAINTENANCE OF TRAFFIC
HIGHWAY 230 INTERCHANGE
PHASE 1
SHEET 1 OF 1
(TRAFFIC CONTROL DEVICES
IN PLACE & ADVANCE
WARNING SIGNS)



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2 HWY. 63 INTERCHANGE - MAINTENANCE OF TRAFFIC



STATE OF
ARKANSAS
REGISTERED
PROFESSIONAL
ENGINEER

No. 9620
HUBERT BURNS
10-17-12

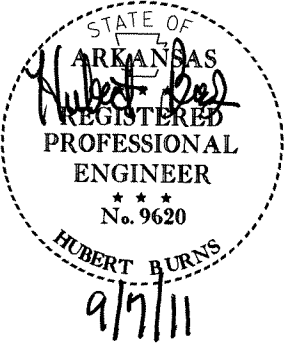
MAINTENANCE OF TRAFFIC
HIGHWAY 63 INTERCHANGE
PHASE I
SHEET 1 OF 1
(TRAFFIC CONTROL DEVICES
IN PLACE & ADVANCE
WARNING SIGNS)



SUPERELEVATION RATES AND TRANSITION LIMITS

STATION	STATION	LOCATION	PAV'T TRANSITION SLOPE (%)			TRANSITION LENGTH (M)
			FROM		TO	
		U.S. HWY. 67 MAIN LINE				
		CURVE 1 (RT)				
117+22.392	118+52.392	LEFT MAIN LANES	-2.0		+3.1	130
118+52.392	123+93.371	" " "		+3.1		
123+93.371	125+23.371	" " "	+3.1		-2.0	130
117+22.392	118+52.392	RIGHT MAIN LANES	-2.0		-3.1	130
118+52.392	123+93.371	" " "		-3.1		
123+93.371	125+23.371	" " "	-3.1		-2.0	130
		CURVE 2 (RT)				
140+56.294	141+86.294	LEFT MAIN LANES	-2.0		+2.1	130
141+86.294	146+53.673	" " "		+2.1		
146+53.673	147+83.673	" " "	+2.1		-2.0	130
140+56.294	141+86.294	RIGHT MAIN LANES	-2.0		-2.1	130
141+86.294	146+53.673	" " "		-2.1		
146+53.673	147+83.673	" " "	-2.1		-2.0	130
		CURVE 3 (LT)				
166+84.196	168+14.196	LEFT MAIN LANES	-2.0		-4.1	130
168+14.196	175+09.370	" " "		-4.1		
175+09.370	176+39.370	" " "	-4.1		-2.0	130
166+84.196	168+14.196	RIGHT MAIN LANES	-2.0		+4.1	130
168+14.196	175+09.370	" " "		+4.1		
175+09.370	176+39.370	" " "	+4.1		-2.0	130
		CURVE 4 (RT)				
230+11.459	231+41.459	LEFT MAIN LANES	-2.0		+4.6	130
231+41.459	237+55.602	" " "		+4.6		
237+55.602	238+85.602	" " "	+4.6		-2.0	130
230+11.459	231+41.459	RIGHT MAIN LANES	-2.0		-4.6	130
231+41.459	237+55.602	" " "		-4.6		
237+55.602	238+85.602	" " "	-4.6		-2.0	130
		CURVE 5 (RT)				
259+00.000	261+66.892	LEFT & RIGHT MAIN LANES	-2.0		-2.0	N/A
		CURVE 6 (LT)				
261+66.892	264+33.784	LEFT & RIGHT MAIN LANES	-2.0		-2.0	N/A
		U.S. HWY. 67 HWY. 230 INTERCHANGE				
		RAMP 1				
109+87.508	110+77.508	CURVE 2 (RT)	-2.0		-9.7	90
110+77.508	111+32.088	CURVE 2		-9.7		
111+32.088	112+22.088	CURVE 2	-9.7		-2.0	90
112+22.088	113+12.088	CURVE 3 (LT)	-2.0		+10.0	90
113+12.088	113+72.016	CURVE 3		+10.0		
113+72.016	114+62.016	CURVE 3	+10.0		-2.0	90
		RAMP 2				
114+67.603	115+57.603	CURVE 1 (LT)	-2.0		+10.0	90
115+57.603	116+03.043	CURVE 1		+10.0		
116+03.043	116+93.043	CURVE 1	+10.0		-2.0	90
118+02.403	118+92.403	CURVE 2 (RT)	-2.0		-9.0	90
118+92.403	119+82.686	CURVE 2		-9.0		
119+82.686	120+72.686	CURVE 2	-9.0		-3.1	90
		RAMP 3				
114+33.830	115+23.830	CURVE 1 (RT)	-2.0		+10.0	90
115+23.830	115+58.059	CURVE 1		+10.0		
115+58.059	116+48.059	CURVE 1	+10.0		-2.0	90
117+11.509	118+01.509	CURVE 2 (LT)	-2.0		-9.7	90
118+01.509	118+18.141	CURVE 2		-9.7		
118+18.141	119+08.141	CURVE 2	-9.7		-2.0	90
		RAMP 4				
108+95.460	109+85.460	CURVE 1 (LT)	-2.0		-9.0	90
109+85.460	110+57.137	CURVE 1		-9.0		
110+57.137	111+47.137	CURVE 1	-9.0		-2.0	90
112+60.558	113+50.558	CURVE 2 (RT)	-2.0		+10.0	90
113+50.558	113+86.230	CURVE 2		+10.0		
113+86.230	114+76.230	CURVE 2	+10.0		-5.4	90
		U.S. HWY. 67 U.S. HWY. 63 INTERCHANGE				
		RAMP 1				
267+06.151	267+97.595	CURVE 1 (RT)	-2.0		-5.7	91.444
267+97.595	271+55.633	CURVE 1		-5.7		
271+55.633	272+16.595	CURVE 1	-5.7		-2.0	60.962
272+16.595	272+98.894	CURVE 2 (LT)	-2.0		+9.2	82.299
272+98.894	274+16.294	CURVE 2		+9.2		
274+16.294	274+98.593	CURVE 2	+9.2		-2.0	82.299
274+98.593	275+65.652	CURVE 3 (RT)	-2.0		-10.0	67.059
275+65.652	276+04.350	CURVE 3		-10.0		
276+04.350	276+95.794	CURVE 3	-10.0		-2.0	91.444
		RAMP 4				
266+29.948	267+21.392	CURVE 1 (LT)	-2.0		-5.7	91.444
267+21.392	269+30.166	CURVE 1		-5.7		
269+30.166	270+21.610	CURVE 1	-5.7		-2.0	91.444
272+28.676	273+20.120	CURVE 2 (LT)	-2.0		-10.0	91.444
273+20.120	273+85.239	CURVE 2		-10.0		
273+85.239	274+76.683	CURVE 2	-10.0		-2.0	91.444

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		17	85
				JOB NO.		100404		
				2 SUPERELEVATION RATES AND TRANSITION LIMITS				



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PERMANENT PAVEMENT MARKINGS

LOCATION	THERMOPLASTIC PAVEMENT MARKING	HIGH PERFORMANCE PAVEMENT MARKINGS			PAVEMENT MARKERS	HIGH PERFORMANCE CONTRAST PAVEMENT MARKING	REMOVAL OF PERMANENT PAVEMENT MARKINGS
					RAISED		
		WHITE 250mm	YELLOW 100mm	WHITE 100mm	WHITE 200mm	TY. II (W/R)	
		METERS			EACH	METER	
U.S. 67 MAIN LANES		33655	32889		1430	8418	1695
RAMPS		3461	3797	1283	876		
HWY. 230 ISLANDS	163						
U.S. 63 AUX. LANES			600				600
TOTALS	163	37116	37286	1283	2306	8418	2295

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

CONCRETE ISLAND

LOCATION	SQUARE METERS
RAMP 1 - U.S. HWY. 230 INTERCHANGE	82
RAMP 2 - U.S. HWY. 230 INTERCHANGE	82
RAMP 3 - U.S. HWY. 230 INTERCHANGE	82
RAMP 4 - U.S. HWY. 230 INTERCHANGE	82
TOTAL	328

APPROACH SLABS (T=370mm)

STATION	STATION	LOCATION	APPROACH SLABS		REINFORCING STEEL-ROADWAY (GRADE 420)	AGGREGATE BASE COURSE (CLASS 7)
			EACH	Cu. M		
139+00.86	139+11.36	U.S. HWY. 67 RT.	1	35.44	2481	25
138+93.62	139+04.12	U.S. HWY. 67 LT.	1	35.44	2481	25
140+91.54	141+02.04	U.S. HWY. 67 RT.	1	35.44	2481	25
140+84.31	140+94.81	U.S. HWY. 67 LT.	1	35.44	2481	25
TOTALS				141.76	9924	100

NOTE: SEE PAGE 63 FOR DETAILS.

APPROACH GUTTERS (T=370mm)

STATION	STATION	LOCATION	DESCRIPTON	APPROACH QUANTITIES					DROP INLETS	300mm ZC(G)CSPC (16 GAUGE)	CONCRETE SPILLWAY TYPE (A)	DESCRIPTION
				APPROACH GUTTERS (TYPE SPECIAL)			REINFORCING STEEL - ROADWAY (GRADE 420)	AGGREGATE BASE COURSE (CLASS 7)	TYPE			
				1.8m	3.0m	Cu. m			N2			
							KG	MET. TON				
139+00.86	139+11.36	RT MAIN LANE LT & RT		1	1	20.30	682	21				
138+93.62	139+04.12	LT MAIN LANE LT & RT		1	1	20.88	698	21				
140+91.54	141+02.04	RT MAIN LANE LT & RT		1	1	20.88	698	21				
140+84.31	140+94.81	LT MAIN LANE LT & RT		1	1	20.30	682	21				
	138+93	U.S. HWY 67 MAIN LANES LT.	CONSTRUCT DROP INLET W/CGSP & SPILLWAY						1	30.2	1	FPC-9N(M)
	139+00	U.S. HWY 67 MAIN LANES RT.	CONSTRUCT DROP INLET W/CGSP & SPILLWAY						1	33.8	1	FPC-9N(M)
	140+94	U.S. HWY 67 MAIN LANES LT.	CONSTRUCT DROP INLET W/CGSP & SPILLWAY						1	25.4	1	FPC-9N(M)
	141+03	U.S. HWY 67 MAIN LANES RT.	CONSTRUCT DROP INLET W/CGSP & SPILLWAY						1	25.3	1	FPC-9N(M)
TOTALS				82.36			2760	84	4	114.7	4	

NOTE: SEE PAGE 64 FOR DETAILS.

PIPE UNDERDRAIN

STATION	STATION	LOCATION	100mm UNDERDRAIN METERS	UNDERDRAIN OUTLET PROTECTORS EACH
ENTIRE PROJECT		*TO BE USED IF & WHERE DIRECTED BY THE ENGINEER	300	5
		TOTALS	300	5

*QUANTITY ESTIMATED. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

SOIL STABILIZATION

STATION	STATION	LOCATION	METRIC TONS
ENTIRE PROJECT		*TO BE USED IF & WHERE DIRECTED BY THE ENGINEER	1000
		TOTALS	1000

*QUANTITY ESTIMATED. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

JOINT SUPPORTS

STATION	LOCATION	LENGTH	CLASS 'S' CONCRETE ROADWAY
		METERS	Cu. m
109+98.74	RAMP 1	4.50	1.22
110+03.24	RAMP 1	4.50	1.22
110+07.74	RAMP 1	4.50	1.22
119+67.27	RAMP 2	4.50	1.22
119+62.77	RAMP 2	4.50	1.22
119+58.27	RAMP 2	4.50	1.22
119+03.16	RAMP 3	4.50	1.22
118+98.66	RAMP 3	4.50	1.22
118+94.16	RAMP 3	4.50	1.22
109+98.31	RAMP 4	4.50	1.22
110+02.81	RAMP 4	4.50	1.22
110+07.31	RAMP 4	4.50	1.22
269+02.10	RAMP 1 HWY. 67/63	4.50	1.22
269+06.60	RAMP 1 HWY. 67/63	4.50	1.22
267+44.45	RAMP 4 HWY. 67/63	4.50	1.22
267+48.95	RAMP 4 HWY. 67/63	4.50	1.22
267+53.45	RAMP 4 HWY. 67/63	4.50	1.22
109+00.00	MAIN LANES - LT	10.80	2.92
109+00.00	MAIN LANES - RT	8.68	2.35
138+89.12	MAIN LANES - LT	7.20	1.95
138+84.62	MAIN LANES - LT	7.20	1.95
138+96.35	MAIN LANES - RT	7.20	1.95
138+91.85	MAIN LANES - RT	7.20	1.95
140+99.31	MAIN LANES - LT	7.20	1.95
141+03.81	MAIN LANES - LT	7.20	1.95
141+06.54	MAIN LANES - RT	7.52	2.04
141+11.04	MAIN LANES - RT	7.46	2.02
TOTAL			41.77

SUBGRADE PREPARATION

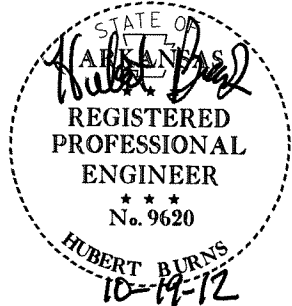
STATION	STATION	LOCATION	METRIC STATION
109+00.000	139+04.124	U.S. 67 MAIN LANES - SOUTHBOUND	30.04
109+00.000	139+11.357	U.S. 67 MAIN LANES - NORTHBOUND	30.11
140+84.306	268+35.696	U.S. 67 MAIN LANES - SOUTHBOUND	127.51
140+91.539	268+35.696	U.S. 67 MAIN LANES - NORTHBOUND	127.44
109+94.240	114+80.120	RAMP 1 HWY. 67/230 INT.	4.86
114+40.400	119+67.270	RAMP 2 HWY. 67/230 INT.	5.27
114+33.830	119+07.660	RAMP 3 HWY. 67/230 INT.	4.74
109+98.310	114+76.230	RAMP 4 HWY. 67/230 INT.	4.78
268+97.595	276+06.497	RAMP 1 HWY. 67/63 INT.	7.09
267+44.448	273+87.395	RAMP 4 HWY. 67/63 INT.	6.43
66+90.057	69+90.057	U.S. 63 R.M.L. AUX. LANE	3.00
75+58.199	78+58.199	U.S. 63 R.M.L. AUX. LANE	3.00
		TOTAL	354.27

NOTE: EXISTING SUBGRADE CONTAINS 100mm OF TOPSOIL. THE REMOVAL AND DISPOSAL OF EXISTING TOPSOIL, GRASS AND/OR OTHER ORGANIC MATERIALS FROM THE SUBGRADE AND SUBSEQUENT REPLACEMENT OF SUBGRADE MATERIAL WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR "SUBGRADE PREPARATION".

NOTE: PROFILE GRADE LINE SHOWN ON THE PLAN AND PROFILE SHEETS FOR THE MAIN LANES AND HWY. 230 INTERCHANGE RAMPS IS 600mm ABOVE SUBGRADE. USE A 1:1200 TRANSITION IN SUBGRADE TO MEET BRIDGE ENDS, RAMP TERMINALS, AND EXISTING PAVEMENT AT NORTH TERMINI OF PROJECT. TRANSITIONS IN SUBGRADE ON MAIN LANES AND RAMPS TO BE INCLUDED IN PAYMENT MADE FOR "SUBGRADE PREPARATION."

NOTE: PROFILE GRADE LINE SHOWN ON THE PLAN AND PROFILE SHEETS FOR THE MAIN LANES AND HWY. 230 INTERCHANGE RAMPS IS 600mm ABOVE SUBGRADE. HOWEVER, PROFILE GRADE USED FOR JOB R00104 MAIN LANES AND HWY. 63/67 INTERCHANGE RAMPS, WHICH CONNECTS TO THIS PROJECT AT THE NORTHERN TERMINI, IS 500mm ABOVE SUBGRADE. USE A 1:1200 TRANSITION IN SUBGRADE AT THE NORTHERN TERMINI TO MEET EXISTING PAVEMENT FOR MAIN LANES AND SUBGRADE FOR RAMPS. TRANSITIONS IN SUBGRADE ON MAIN LANES TO BE INCLUDED IN PAYMENT MADE FOR "SUBGRADE PREPARATION."

NOTE: PAYMENT FOR EXCAVATING AND DISPOSING OF EXISTING SHOULDER MATERIAL FOR RAMP TIE-INS & AUX. LANES SHALL BE CONSIDERED INCLUDED IN PRICE BID FOR "SUBGRADE PREPARATION".



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RUMBLE STRIPS

STATION	STATION	LOCATION	RUMBLE STRIPS IN ASPHALT SHOULDERS	RUMBLE STRIPS IN PORTLAND CEMENT CONCRETE SHOULDERS
			METERS	METERS
109+00.000	139+00.857	U.S. 67 MAIN LANES NORTH - LT.	3001	
141+02.039	268+35.696	U.S. 67 MAIN LANES NORTH - LT.	12734	
109+00.000	138+93.624	U.S. 67 MAIN LANES SOUTH - RT.	2994	
140+94.806	268+35.696	U.S. 67 MAIN LANES SOUTH - RT.	12741	
109+00.000	138+93.624	U.S. 67 MAIN LANES SOUTH - LT.		2994
140+94.806	268+35.696	U.S. 67 MAIN LANES SOUTH - LT.		12741
109+00.000	139+00.857	U.S. 67 MAIN LANES NORTH - RT.		3001
141+02.039	268+35.696	U.S. 67 MAIN LANES NORTH - RT.		12734
66+90.057	69+90.057	U.S. 63 R.M.L. - RT.	300	
75+58.199	78+58.199	U.S. 63 R.M.L. - RT.	300	
TOTALS			32070	31470

TEMPORARY EROSION CONTROL

LOCATION	TEMPORARY SEEDING	MULCH COVER	WATER	ROCK DITCH CHECKS (TYPE E-6)	SEDIMENT REMOVAL AND DISPOSAL
	HA		KL	CU. METER	CU. METER
*IF AND WHERE DIRECTED BY THE ENGINEER	0.31	0.31	58.3	50	2000
TOTALS	0.31	0.31	58.3	50	2000

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.

BASIS OF ESTIMATE:

WATER ————— 188 KL PER HECTARE TEMPORARY SEEDING

*QUANTITIES ESTIMATED - REFER TO SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

MOWING

LOCATION	MOWING
	HECTARE
ENTIRE PROJECT - U.S. HWY. 67 MAIN LANES - LT & RT	260
TOTAL	260

NOTE: BASIS OF ESTIMATE IS TWO COMPLETE MOWINGS OF THE ENTIRE PROJECT AREA.

IMPACT ATTENUATION BARRIER (TYPE A)

STATION	LOCATION	TYPE	NO.	TOTAL
			EACH	EACH
114+52.160	U.S. HWY. 67	A	1	1
114+60.560	U.S. HWY. 67	A	1	1
185+56.627	U.S. HWY. 67	A	1	1
185+64.429	U.S. HWY. 67	A	1	1
254+00.782	U.S. HWY. 67	A	1	1
254+08.584	U.S. HWY. 67	A	1	1
TOTAL				6

TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ZONES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	S.H. 230 INTERCHANGE	U.S. HWY. 67/63 INTERCHANGE	TOTAL SIGNS REQUIRED		TRAFFIC DRUMS
			PHASE I	PHASE I	EACH	SQ. M	EACH
			EACH	EACH			
W20-1	ROAD WORK 1500 FT.	1200mm X 1200mm	2	2	4	5.76	
W20-1	ROAD WORK 1000 FT.	1200mm X 1200mm	2	2	4	5.76	
W20-1	ROAD WORK 500 FT.	1200mm X 1200mm	2	2	4	5.76	
W20-1	ROAD WORK AHEAD	1200mm X 1200mm	3		3	4.32	
G20-2	END ROAD WORK	1200mm X 600mm	2	2	4	2.88	
R2-5A	REDUCED SPEED AHEAD	600mm X 750mm		2	2	0.90	
R2-1	SPEED LIMIT 45	600mm X 750mm		2	2	0.90	
R2-1	SPEED LIMIT 55	600mm X 750mm		2	2	0.90	
RSP-1	SHOULDER CLOSED	1200mm X 750mm		1	1	0.90	
	TRAFFIC DRUMS			48			48
TOTALS						28.08	48

CONCRETE BARRIER WALL (PIER PROTECTION TYPE A)

STATION	LOCATION	LENGTH METERS
114+56.360	U.S. HWY. 67 MAIN LANES LT. & RT.	15.8
185+60.528	U.S. HWY. 67 MAIN LANES LT. & RT.	15.8
254+04.683	U.S. HWY. 67 MAIN LANES LT. & RT.	15.8
TOTAL		47.4

EROSION CONTROL

STATION	STATION	LOCATION	LIME*	SEEDING*	MULCH COVER*	SECOND SEEDING * APPLICATION	WATER*
			MET. TON		HA		KL
109+00.000	139+04.124	U.S. 67 MAIN LANES - SOUTHBOUND	12.2	2.70	2.70	2.70	2538.0
109+00.000	139+11.357	U.S. 67 MAIN LANES - NORTHBOUND	12.2	2.71	2.71	2.71	2547.4
140+84.306	268+35.696	U.S. 67 MAIN LANES - SOUTHBOUND	51.7	11.48	11.48	11.48	10791.2
140+91.539	268+35.696	U.S. 67 MAIN LANES - NORTHBOUND	51.6	11.47	11.47	11.47	10781.8
109+94.240	114+80.119	RAMP 1 U.S. HWY. 67/S.H. 230 INTERCHANGE	2.0	0.44	0.44	0.44	413.6
114+40.400	119+67.270	RAMP 2 U.S. HWY. 67/S.H. 230 INTERCHANGE	2.1	0.47	0.47	0.47	441.8
114+33.828	119+07.660	RAMP 3 U.S. HWY. 67/S.H. 230 INTERCHANGE	1.9	0.43	0.43	0.43	404.2
109+98.310	114+76.227	RAMP 4 U.S. HWY. 67/S.H. 230 INTERCHANGE	1.9	0.43	0.43	0.43	404.2
268+97.595	275+77.027	RAMP 1 U.S. HWY. 67/63 INTERCHANGE	2.7	0.61	0.61	0.61	573.4
267+44.448	273+57.916	RAMP 4 U.S. HWY. 67/63 INTERCHANGE	2.5	0.55	0.55	0.55	517.0
275+40.919	276+06.497	ADD'L FOR RAMP 1 OFF-RAMP U.S. HWY. 67/63 INTERCHANGE	0.3	0.06	0.06	0.06	56.4
273+21.951	273+87.395	ADD'L FOR RAMP 4 ON-RAMP U.S. HWY. 67/63 INTERCHANGE	0.3	0.06	0.06	0.06	56.4
TOTALS			141.4	31.41	31.41	31.41	29525.4

BASIS OF ESTIMATE:

LIME ————— 4.5 METRIC TONS PER HECTARE SEEDING

WATER ————— 940 KL PER HECTARE SEEDING

NOTE: QUANTITIES SHOWN FOR MAIN LANES AND RAMPS ARE FOR A 4.5m STRIP ON EACH SIDE OF ROADWAY. ACTUAL QUANTITIES WILL BE DETERMINED IN THE FIELD.

* QUANTITIES ESTIMATED

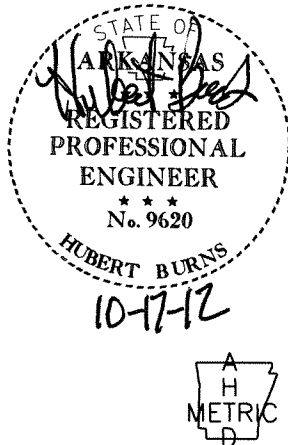
GUARDRAIL

STATION	STATION	LOCATION	GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)	THRIE BEAM GUARDRAIL TERMINAL
			METERS	EACH	EACH
137+95.469	139+07.624	U.S. 67 MAIN LANES LT.	91.44	1	1
138+13.997	139+10.912	U.S. 67 MAIN LANES RT.	76.20	1	1
140+84.751	141+81.666	U.S. 67 MAIN LANES LT.	76.20	1	1
140+88.039	142+00.194	U.S. 67 MAIN LANES RT.	91.44	1	1
TOTALS			335.28	4	4

EARTHWORK

STATION	STATION	LOCATION	UNCLASSIFIED EXCAVATION			COMPACTED EMBANKMENT			
			NORMAL	ADDITIONAL	TOTAL	SM-2	SM-3	UNSPECIFIED MATERIAL	TOTAL
			CUBIC METERS			CUBIC METERS			
* ENTIRE PROJECT	IF AND WHERE DIRECTED BY THE ENGINEER		1000		1000			1000	1000
TOTALS			1000		1000			1000	1000

* QUANTITY ESTIMATED - REFER TO SECTION 104.03 OF THE STANDARD SPECIFICATIONS.



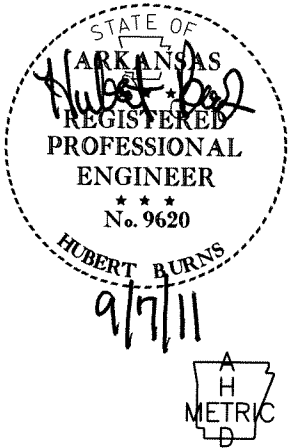
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		20	85
				JOB NO.		100404		
				2 QUANTITIES				

REMOVAL AND DISPOSAL OF TRAFFIC CONTROL DEVICES

SIGN NUMBER	LOCATION	DESCRIPTION	NUMBER	SIGN SIZE	SIGNS	BARRICADES	PRECAST CONCRETE BARRIER	IMPACT ATTENUATION BARRIER
					EACH	METER	METER	EACH
	U.S. HWY. 67	TYPE III BARRICADE	3			22		
	U.S. HWY. 67	PRECAST CONCRETE BARRIER	1				415	
	U.S. HWY. 67	TEMP. IMPACT ATTENUATOR	1					1
W1-6	U.S. HWY. 67	ARROW	3	1200mm X 600mm	3			
W20-5	U.S. HWY. 67	LT. LN. CLOSED 1/2 MI.	1	1200mm X 1200mm	1			
R2-5A	U.S. HWY. 67	REDUCED SPEED AHD.	1	600mm X 750mm	1			
W20-5	U.S. HWY. 67	LT. LN. CLOSED 1500 FT.	1	1200mm X 1200mm	1			
W20-5	U.S. HWY. 67	LT. LN. CLOSED 1000 FT.	1	1200mm X 1200mm	1			
W4-2	U.S. HWY. 67	MERGE RT.	1	1200mm X 1200mm	1			
R2-1	U.S. HWY. 67	SPEED LIMIT 45	1	600mm X 750mm	1			
	RAMP 1 U.S. HWY. 67/63 INTERCHANGE	TYPE III BARRICADE	2			9		
R11-2	RAMP 1 U.S. HWY. 67/63 INTERCHANGE	ROAD CLOSED	2	1200mm X 750mm	2			
	RAMP 2 U.S. HWY. 67/63 INTERCHANGE	TYPE III BARRICADE	1			4.5		
R11-2	RAMP 2 U.S. HWY. 67/63 INTERCHANGE	ROAD CLOSED	1	1200mm X 750mm	1			
	RAMP 3 U.S. HWY. 67/63 INTERCHANGE	TYPE III BARRICADE	1			7.2		
R11-2	RAMP 3 U.S. HWY. 67/63 INTERCHANGE	ROAD CLOSED	1	1200mm X 750mm	1			
	RAMP 4 U.S. HWY. 67/63 INTERCHANGE	TYPE III BARRICADE	2			9		
R11-2	RAMP 4 U.S. HWY. 67/63 INTERCHANGE	ROAD CLOSED	2	1200mm X 750mm	2			
	RAMP 1 S.H. 230 INTERCHANGE	TYPE III BARRICADE	1			18		
R11-2	RAMP 1 S.H. 230 INTERCHANGE	ROAD CLOSED	1	1200mm X 750mm	1			
	RAMP 2 S.H. 230 INTERCHANGE	TYPE III BARRICADE	1			18		
R11-2	RAMP 2 S.H. 230 INTERCHANGE	ROAD CLOSED	1	1200mm X 750mm	1			
	RAMP 3 S.H. 230 INTERCHANGE	TYPE III BARRICADE	1			18		
R11-2	RAMP 3 S.H. 230 INTERCHANGE	ROAD CLOSED	1	1200mm X 750mm	1			
	RAMP 4 S.H. 230 INTERCHANGE	TYPE III BARRICADE	1			18		
R11-2	RAMP 4 S.H. 230 INTERCHANGE	ROAD CLOSED	1	1200mm X 750mm	1			
	TOTALS				19	123.7	415	1

NOTE: QUANTITIES SHOWN ABOVE SHALL BE DISPOSED OF AT A SITE APPROVED BY THE ENGINEER.



2	QUANTITIES
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2	QUANTITIES
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2	QUANTITIES
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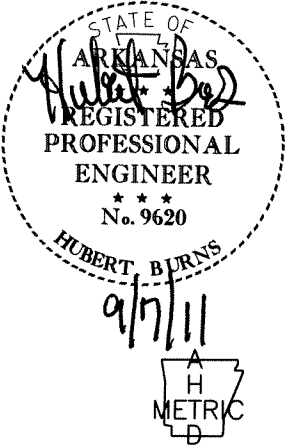
2	QUANTITIES
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BASE AND SURFACING - MAIN LANE SHOULDERS & MEDIAN CROSSOVER

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		22	85
				JOB NO.		100404		
				(2) QUANTITIES				

STATION	STATION	LOCATION	LENGTH METERS	AGGREGATE BASE COURSE (CLASS 7)		ACHM SURFACE COURSE (12.5mm)				
				MET. TON PER MET. STA.		METRIC TONS	AVG. WIDTH METERS	SQUARE METERS	KG PER SQ. M	METRIC TONS
				INSIDE	OUTSIDE					
109+00.000	109+98.563	L.M.L. U.S. 67 - OUTSIDE SHOULDER W/ ACC. LANE	98.563		321.375	316.8	1.800	177.41	120	21.3
109+98.563	110+81.361	L.M.L. U.S. 67 - OUTSIDE SHOULDER RAMP TRANS.	82.798		180.863	149.8	1.200	99.36	120	11.9
110+81.361	119+08.810	L.M.L. U.S. 67 - OUTSIDE SHOULDER	827.449		361.725	2993.1	2.400	1985.88	120	238.3
119+08.810	120+03.766	L.M.L. U.S. 67 - OUTSIDE SHOULDER	94.956		321.375	305.2	1.800	170.92	120	20.5
120+03.766	120+28.943	L.M.L. U.S. 67 - OUTSIDE SHOULDER RAMP TRANS.	25.177		341.550	86.0	2.100	52.87	120	6.3
120+28.943	138+93.624	L.M.L. U.S. 67 - OUTSIDE SHOULDER	1864.681		361.725	6745.0	2.400	4475.23	120	537.0
140+94.806	264+44.625	L.M.L. U.S. 67 - OUTSIDE SHOULDER	12349.819		361.725	44672.4	2.400	29639.57	120	3556.7
264+44.625	265+34.625	L.M.L. U.S. 67 - OUTSIDE SHOULDER W/ ACC. LANE TAPER	90.000		341.550	307.4	2.100	189.00	120	22.7
265+34.625	267+44.625	L.M.L. U.S. 67 - OUTSIDE SHOULDER W/ ACC. LANE	210.000		321.375	674.9	1.800	378.00	120	45.4
267+44.625	267+73.501	L.M.L. U.S. 67 - OUTSIDE SHOULDER RAMP TRANS.	28.876		180.863	52.2	1.200	34.65	120	4.2
267+73.501	268+35.696	L.M.L. U.S. 67 - OUTSIDE SHOULDER	62.195		361.725	225.0	2.400	149.27	120	17.9
109+00.000	138+93.624	L.M.L. U.S. 67 - INSIDE SHOULDER	2993.624	328.875		9845.3	1.200	3592.35	120	431.1
140+94.806	268+35.696	L.M.L. U.S. 67 - INSIDE SHOULDER	12740.890	328.875		41901.6	1.200	15289.07	120	1834.7
109+00.000	139+00.857	R.M.L. U.S. 67 - INSIDE SHOULDER	3000.857	328.875		9869.1	1.200	3601.03	120	432.1
141+02.039	268+35.696	R.M.L. U.S. 67 - INSIDE SHOULDER	12733.657	328.875		41877.8	1.200	15280.39	120	1833.6
109+00.000	109+94.000	R.M.L. HWY. 67 - OUTSIDE SHOULDER	94.000		321.375	302.1	1.800	169.20	120	20.3
109+94.000	110+03.531	R.M.L. HWY. 67 - OUTSIDE SHOULDER RAMP TRANS.	9.531		180.863	17.2	1.200	11.44	120	1.4
110+03.531	119+45.208	R.M.L. HWY. 67 - OUTSIDE SHOULDER	941.677		361.725	3406.3	2.400	2260.02	120	271.2
119+45.208	119+66.620	R.M.L. HWY. 67 - OUTSIDE SHOULDER RAMP TRANS.	21.412		180.863	38.7	1.200	25.69	120	3.1
119+66.620	121+76.620	R.M.L. HWY. 67 - OUTSIDE SHOULDER W/ ACC. LANE	210.000		321.375	674.9	1.800	378.00	120	45.4
121+76.620	122+66.620	R.M.L. HWY. 67 - OUTSIDE SHOULDER W/ ACC. LANE TAPER	90.000		341.550	307.4	2.100	189.00	120	22.7
122+66.620	139+00.857	R.M.L. HWY. 67 - OUTSIDE SHOULDER	1634.237		361.725	5911.4	2.400	3922.17	120	470.7
141+02.039	267+74.734	R.M.L. HWY. 67 - OUTSIDE SHOULDER	12672.695		361.725	45840.3	2.400	30414.47	120	3649.7
267+74.734	268+08.355	R.M.L. HWY. 67 - OUTSIDE SHOULDER RAMP TRANS.	33.621		324.163	109.0	2.100	70.60	120	8.5
268+08.355	268+35.696	R.M.L. HWY. 67 - OUTSIDE SHOULDER	27.341		286.600	78.4	1.800	49.21	120	5.9
137+74.211	137+92.469	R.M.L. U.S. 67 - INSIDE SHOULDER - ADD'L FOR GUARDRAIL	18.258	117.375		21.4	1.822	33.27	120	4.0
137+92.469	137+95.469	R.M.L. U.S. 67 - INSIDE SHOULDER - ADD'L FOR GUARDRAIL	3.000	234.750		7.0	3.643	10.93	120	1.3
137+95.469	138+92.624	R.M.L. U.S. 67 - INSIDE SHOULDER - ADD'L FOR GUARDRAIL	97.155	162.475		157.9	2.672	259.60	120	31.2
138+92.624	138+93.624	R.M.L. U.S. 67 - INSIDE SHOULDER - ADD'L FOR GUARDRAIL	1.000	90.200		0.9	1.700	1.70	120	0.2
137+94.569	138+10.997	R.M.L. U.S. 67 - OUTSIDE SHOULDER - ADD'L FOR GUARDRAIL	16.428		95.713	15.7	1.369	22.49	120	2.7
138+10.997	138+13.997	R.M.L. U.S. 67 - OUTSIDE SHOULDER - ADD'L FOR GUARDRAIL	3.000		191.425	5.7	2.738	8.21	120	1.0
138+13.997	138+93.624	R.M.L. U.S. 67 - OUTSIDE SHOULDER - ADD'L FOR GUARDRAIL	79.627		139.163	110.8	1.919	152.80	120	18.3
140+94.806	140+99.751	L.M.L. U.S. 67 - OUTSIDE SHOULDER - ADD'L FOR GUARDRAIL	4.945		86.900	4.3	1.100	5.44	120	0.7
140+99.751	141+81.666	L.M.L. U.S. 67 - OUTSIDE SHOULDER - ADD'L FOR GUARDRAIL	81.915		139.163	114.0	1.919	157.19	120	18.9
141+81.666	141+84.666	L.M.L. U.S. 67 - OUTSIDE SHOULDER - ADD'L FOR GUARDRAIL	3.000		191.425	5.7	2.738	8.21	120	1.0
141+84.666	142+01.094	L.M.L. U.S. 67 - OUTSIDE SHOULDER - ADD'L FOR GUARDRAIL	16.428		95.713	15.7	1.369	22.49	120	2.7
140+94.806	141+03.039	L.M.L. U.S. 67 - INSIDE SHOULDER - ADD'L FOR GUARDRAIL	8.233	90.200		7.4	1.700	14.00	120	1.7
141+03.039	142+00.194	L.M.L. U.S. 67 - INSIDE SHOULDER - ADD'L FOR GUARDRAIL	97.155	162.475		157.9	2.672	259.60	120	31.2
142+00.194	142+03.194	L.M.L. U.S. 67 - INSIDE SHOULDER - ADD'L FOR GUARDRAIL	3.000	234.750		7.0	3.643	10.93	120	1.3
142+03.194	142+21.452	L.M.L. U.S. 67 - INSIDE SHOULDER - ADD'L FOR GUARDRAIL	18.258	117.375		21.4	1.822	33.27	120	4.0
109+00.000	109+85.460	L.M.L. HWY. 67 - SUPERELEVATION TRANS. (ADD'L)	85.460	96.911		82.8				
109+85.460	109+98.563	L.M.L. HWY. 67 - MAX. SUPERELEVATION (ADD'L)	13.103	193.822		25.4				
117+22.392	118+52.392	L.M.L. & R.M.L. HWY. 67 - SUPERELEVATION TRANS. (ADD'L)	130.000	18.688	22.763	53.9				
118+52.392	119+66.620	L.M.L. & R.M.L. HWY. 67 - MAX. SUPERELEVATION (ADD'L)	114.228	37.375	45.525	94.7				
119+66.620	121+76.620	L.M.L. & R.M.L. HWY. 67 - MAX. SUPERELEVATION (ADD'L)	210.000	37.375	97.800	283.9				
121+76.620	122+66.620	L.M.L. & R.M.L. HWY. 67 - MAX. SUPERELEVATION (ADD'L)	90.000	37.375	71.663	98.1				
122+66.620	123+93.371	L.M.L. & R.M.L. HWY. 67 - MAX. SUPERELEVATION (ADD'L)	126.751	37.375	45.525	105.1				
123+93.371	125+23.371	L.M.L. & R.M.L. HWY. 67 - SUPERELEVATION TRANS. (ADD'L)	130.000	18.688	22.763	53.9				
140+56.294	141+86.294	L.M.L. & R.M.L. HWY. 67 - SUPERELEVATION TRANS. (ADD'L)	130.000	1.588	1.925	4.6				
141+86.294	146+53.673	L.M.L. & R.M.L. HWY. 67 - MAX. SUPERELEVATION (ADD'L)	467.379	3.175	3.850	32.8				
146+53.673	147+83.673	L.M.L. & R.M.L. HWY. 67 - SUPERELEVATION TRANS. (ADD'L)	130.000	1.588	1.925	4.6				
166+84.196	168+14.196	L.M.L. & R.M.L. HWY. 67 - SUPERELEVATION TRANS. (ADD'L)	130.000	38.325	45.938	109.5				
168+14.196	175+09.370	L.M.L. & R.M.L. HWY. 67 - MAX. SUPERELEVATION (ADD'L)	695.174	76.650	91.875	1171.5				
175+09.370	176+39.370	L.M.L. & R.M.L. HWY. 67 - SUPERELEVATION TRANS. (ADD'L)	130.000	38.325	45.938	109.5				
230+11.459	231+41.459	L.M.L. & R.M.L. HWY. 67 - SUPERELEVATION TRANS. (ADD'L)	130.000	48.288	58.538	138.9				
231+41.459	237+55.602	L.M.L. & R.M.L. HWY. 67 - MAX. SUPERELEVATION (ADD'L)	614.143	96.575	117.075	1312.1				
237+55.602	238+85.602	L.M.L. & R.M.L. HWY. 67 - SUPERELEVATION TRANS. (ADD'L)	130.000	48.288	58.538	138.9				
266+29.948	267+21.392	L.M.L. HWY. 67 - SUPERELEVATION TRANS. (ADD'L)	91.444	45.967		42.0				
267+21.392	267+44.625	L.M.L. HWY. 67 - SUPERELEVATION TRANS. (ADD'L)	23.233	91.934		21.4				
267+06.151	267+97.595	R.M.L. HWY. 67 - SUPERELEVATION TRANS. (ADD'L)	91.444	45.967		42.0				
267+97.595	268+35.696	R.M.L. HWY. 67 - MAX. SUPERELEVATION (ADD'L)	38.101	91.934		35.0				
184+40.000		MEDIAN CROSSOVER	15.600			28.1	VAR.	112.26	180	20.2
TOTALS						221348.8		113717.19		13653.0



2	QUANTITIES
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2	QUANTITIES
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BASIS OF ESTIMATE: ACHM SURFACE COURSE (9.5mm): MIN. AGGR. = 94.5%, ASPHALT BINDER = 5.5% (PG64-22)
Nmax = 115

CEMENT STABILIZED CRUSHED STONE BASE COURSE = 94.0% AGGR., 6.0% CEMENT



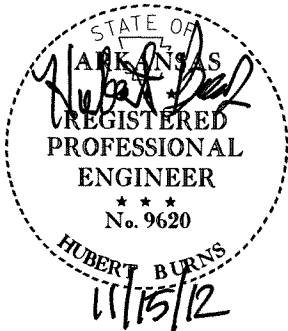
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
11-15-12				6	ARK.		24	85
				JOB NO.		100404		
				2QUANTITIES				

BASE AND SURFACING - RAMP SHOULDERS (CONTINUED)

STATION	STATION	LOCATION	LENGTH	ACHM SURFACE COURSE (12.5mm) 120 KG PER SQ. METER			PORTLAND CEMENT CONCRETE PAVEMENT (250mm UNIFORM THICKNESS)		PORTLAND CEMENT CONCRETE CORRUGATIONS
				AVG. WIDTH	SQUARE METERS	METRIC TONS	AVG. WIDTH	SQUARE METERS	SQUARE METERS
				METERS					
109+94.240	114+63.119	RAMP 1 230 INTRCHG LT. SIDE	468.879	1.200	562.65	67.5			
		RAMP 1 230 INTRCHG LT. SIDE - RAMP TURNOUT	18.030				1.200	21.6	21.6
		RAMP 1 230 INTRCHG LT. SIDE - RAMP TURNOUT	13.200				1.800	23.8	23.8
109+94.240	114+42.619	RAMP 1 230 INTRCHG RT. SIDE	448.379	1.800	807.08	96.8			
		RAMP 1 230 INTRCHG RT. SIDE - RAMP TURNOUT	58.905				1.800	106.0	106.0
		RAMP 2 230 INTRCHG LT. SIDE - RAMP TURNOUT	13.200				1.800	23.8	23.8
		RAMP 2 230 INTRCHG LT. SIDE - RAMP TURNOUT	18.030				1.200	21.6	21.6
114+57.100	119+67.270	RAMP 2 230 INTRCHG LT. SIDE	510.170	1.200	612.20	73.5			
		RAMP 2 230 INTRCHG RT. SIDE - RAMP TURNOUT	58.905				1.800	106.0	106.0
114+77.900	119+67.270	RAMP 2 230 INTRCHG RT. SIDE	489.370	1.800	880.87	105.7			
		RAMP 3 230 INTRCHG LT. SIDE - RAMP TURNOUT	58.905				1.800	106.0	106.0
114+71.330	119+07.660	RAMP 3 230 INTRCHG LT. SIDE	436.330	1.800	785.39	94.2			
		RAMP 3 230 INTRCHG RT. SIDE - RAMP TURNOUT	13.200				1.800	23.8	23.8
		RAMP 3 230 INTRCHG RT. SIDE - RAMP TURNOUT	18.030				1.200	21.6	21.6
114+50.528	119+07.660	RAMP 3 230 INTRCHG RT. SIDE	457.132	1.200	548.56	65.8			
109+98.310	114+42.027	RAMP 4 230 INTRCHG LT. SIDE	443.717	1.800	798.69	95.8			
		RAMP 4 230 INTRCHG LT. SIDE - RAMP TURNOUT	58.905				1.800	106.0	106.0
109+98.310	114+59.527	RAMP 4 230 INTRCHG RT. SIDE	461.217	1.200	553.46	66.4			
		RAMP 4 230 INTRCHG RT. SIDE - RAMP TURNOUT	18.030				1.200	21.6	21.6
		RAMP 4 230 INTRCHG RT. SIDE - RAMP TURNOUT	13.200				1.800	23.8	23.8
268+97.595	275+77.027	RAMP 1 67/63 INTRCHG LT. SIDE	679.432	1.200	815.32	97.8			
		RAMP 1 67/63 INTRCHG LT. SIDE - RAMP TURNOUT	10.385				1.800	18.7	18.7
268+97.595	275+12.712	RAMP 1 67/63 INTRCHG RT. SIDE	615.117	1.800	1107.21	132.9			
275+41.300	275+77.027	RAMP 1 67/63 INTRCHG RT. SIDE	35.727	1.800	64.31	7.7			
		RAMP 1 67/63 INTRCHG RT. SIDE - RAMP TURNOUT	10.136				2.100	21.3	21.3
275+40.919	275+47.128	RAMP 1 67/63 INTRCHG OFF-RAMP LT. SIDE	6.209	1.200	7.45	0.9			
275+47.128	275+95.550	RAMP 1 67/63 INTRCHG OFF-RAMP LT. SIDE	48.422				1.200	58.1	58.1
		RAMP 1 67/63 INTRCHG OFF-RAMP LT. SIDE - RAMP TURNOUT		VAR.	31.57	3.8			
275+12.710	276+06.497	RAMP 1 67/63 INTRCHG OFF-RAMP RT. SIDE	93.787				1.800	168.8	168.8
276+06.497	276+23.553	RAMP 1 67/63 INTRCHG OFF-RAMP RT. SIDE	17.056				1.800	30.7	30.7
267+44.448	272+93.601	RAMP 4 67/63 INTRCHG LT. SIDE	549.153	1.800	988.48	118.6			
272+21.964	273+57.916	RAMP 4 67/63 INTRCHG LT. SIDE	135.952	1.800	244.71	29.4			
		RAMP 4 67/63 INTRCHG LT. SIDE - RAMP TURNOUT	10.136				2.100	21.3	21.3
267+44.448	273+57.916	RAMP 4 67/63 INTRCHG RT. SIDE	613.468	1.200	736.16	88.3			
		RAMP 4 67/63 INTRCHG RT. SIDE - RAMP TURNOUT	10.385				1.800	18.7	18.7
272+93.601	273+87.395	RAMP 4 67/63 INTRCHG ON-RAMP LT. SIDE	93.794				1.800	168.8	168.8
273+87.395	274+04.442	RAMP 4 67/63 INTRCHG ON-RAMP LT. SIDE	17.047				1.800	30.7	30.7
273+21.591	273+28.017	RAMP 4 67/63 INTRCHG ON-RAMP RT. SIDE	6.426	1.200	7.71	0.9			
273+28.017	273+76.439	RAMP 4 67/63 INTRCHG ON-RAMP RT. SIDE	48.422				1.200	58.1	58.1
		RAMP 4 67/63 INTRCHG ON-RAMP RT. SIDE - RAMP TURNOUT		VAR.	31.57	3.8			
TOTALS						1149.8		1200.8	1200.8

BASIS OF ESTIMATE: ACHM SURFACE COURSE (12.5mm): MIN. AGGR. = 94.5%, ASPHALT BINDER = 5.5% (PG64-22)
Nmax = 115



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		25	85
				JOB NO.		100404		
				2 QUANTITIES				

2	QUANTITIES
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A circular professional engineer seal for the State of Arkansas. The seal contains the text: "STATE OF ARKANSAS", "REGISTERED PROFESSIONAL ENGINEER", and "No. 9620". The name "Hubert Burns" is written in cursive across the seal. Below the seal, the date "9/7/11" is handwritten.



BASE AND SURFACING - U.S. HWY. 63 AUX. LANES

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		ACHM BINDER COURSE (25mm) 360 KG PER SQ. METER			ACHM SURFACE COURSE (12.5mm)							TACK COAT 0.14 LITER PER SQ. METER		
				MET. TON PER MET. STA.	METRIC TONS	AVG. WIDTH METERS	SQUARE METERS	METRIC TONS	240 KG PER SQ. METER			120 KG PER SQ. METER			TOTAL METRIC TONS	AVG. WIDTH METERS	SQUARE METERS	LITERS
									AVG. WIDTH METERS	SQUARE METERS	METRIC TONS	AVG. WIDTH METERS	SQUARE METERS	METRIC TONS				
66+90.057	67+80.057	R.M.L. DECEL LANE - TAPER	90.000	112.500	101.3	1.545	139.05	50.1	3.020	271.80	65.2				65.2	4.565	410.85	57.5
67+80.057	69+90.057	R.M.L. DECEL LANE	210.000	225.000	472.5	3.090	648.90	233.6	6.040	1268.40	304.4				304.4	9.130	1917.30	268.4
66+90.057	69+90.057	R.M.L. DECEL LANE - SHOULDER	300.000	403.500	1210.5							1.800	540.00	64.8	64.8	1.800	540.00	75.6
75+58.199	77+68.199	R.M.L. ACCEL LANE	210.000	225.000	472.5	3.090	648.90	233.6	6.040	1268.40	304.4				304.4	9.130	1917.30	268.4
77+68.199	78+58.199	R.M.L. ACCEL LANE - TAPER	90.000	112.500	101.3	1.545	139.05	50.1	3.020	271.80	65.2				65.2	4.565	410.85	57.5
75+58.199	78+58.199	R.M.L. ACCEL LANE - SHOULDER	300.000	403.500	1210.5							1.800	540.00	64.8	64.8	1.800	540.00	75.6
TOTALS						3568.6			567.4						868.8	803.0		

BASIS OF ESTIMATE: ACHM SURFACE COURSE (12.5mm): MIN. AGGR. = 94.5%, ASPHALT BINDER = 5.5% (PG64-22)
ACHM BINDER COURSE (25mm): MIN. AGGR. = 94.5%, ASPHALT BINDER = 5.5% (PG64-22)
Nmax = 115

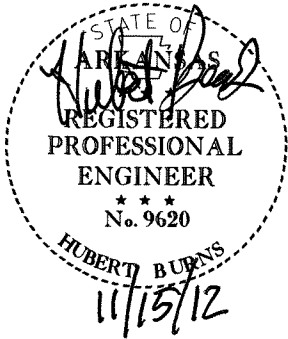
SUMMARY OF BASE AND SURFACING

LOCATION	AGGREGATE BASE COURSE (CLASS 7)	CEMENT STABILIZED CRUSHED STONE BASE COURSE (150mm COMP'D. DEPTH)			ACHM BINDER COURSE (25mm)	ACHM SURFACE COURSE (9.5mm)	TACK COAT	ACHM SURFACE COURSE (12.5mm)	PORTLAND CEMENT CONCRETE PAVEMENT (250mm UNIFORM THICKNESS)	PORTLAND CEMENT CONCRETE CORRUGATIONS
	METRIC TONS	PROCESSING	CEMENT	AGGREGATE	METRIC TONS	METRIC TONS	LITERS	METRIC TONS	SQUARE METERS	SQUARE METERS
		SQUARE METERS	METRIC TONS	METRIC TONS						
MAIN LANES - U.S. 67		286717.92	6451.1	101067.9		17203.0	40140.3		248955.1	
MAIN LANES SHOULDERS	221348.8							13653.0		
RAMPS		20879.83	469.7	7360.0		1253.0	2923.2		16753.1	
RAMP SHOULDERS	19455.3	797.90	15.4	243.8		45.8	107.6	1149.8	1200.8	1200.8
RAMP (ADDITIONAL)	7754.8		2.1	42.7						
AUX. LANES - U.S. 63 R.M.L.	3568.6				567.4		803.0	868.8		
TOTALS	252127.5	308395.65	6938.3	108714.4	567.4	18501.8	43974.1	15671.6	266909.0	1200.8

BASIS OF ESTIMATE: ACHM SURFACE COURSE (9.5mm): MIN. AGGR. = 94.5%, ASPHALT BINDER = 5.5% (PG64-22)
Nmax = 115

CEMENT STABILIZED CRUSHED STONE BASE COURSE = 94.0% AGGR., 6.0% CEMENT

ACHM SURFACE COURSE (12.5mm): MIN. AGGR. = 94.5%, ASPHALT BINDER = 5.5% (PG64-22)
ACHM BINDER COURSE (25mm): MIN. AGGR. = 94.5%, ASPHALT BINDER = 5.5% (PG64-22)
Nmax = 115



SUMMARY OF QUANTITIES

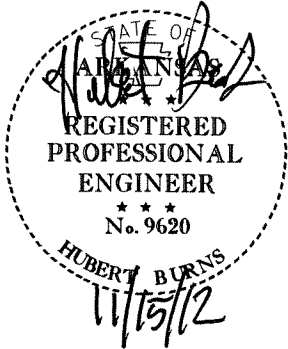
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202	REMOVAL AND DISPOSAL OF SIGNS	19	EACH
202	REMOVAL AND DISPOSAL OF BARRICADES	124	METER
202	REMOVAL AND DISPOSAL OF PRECAST CONCRETE BARRIER	415	METER
202	REMOVAL AND DISPOSAL OF IMPACT ATTENUATION BARRIER	1	EACH
210	UNCLASSIFIED EXCAVATION	1000	CU. M
210	COMPACTED EMBANKMENT	1000	CU. M
SP & 210	SOIL STABILIZATION	1000	METRIC TON
SP & 214	SUBGRADE PREPARATION	354.27	METRIC STATION
SS & 303	AGGREGATE BASE COURSE (CLASS 7)	252312	METRIC TON
308	AGGREGATE IN CEMENT STABILIZED CRUSHED STONE BASE COURSE	108714	METRIC TON
308	CEMENT IN CEMENT STABILIZED CRUSHED STONE BASE COURSE	6938	METRIC TON
308	PROCESSING CEMENT STABILIZED CRUSHED STONE BASE COURSE	308396	SQ. M
401	TACK COAT	43974	LITER
SP, SS & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (25mm)	536	METRIC TON
SP, SS & 406	ASPHALT BINDER (PG 64-22) IN ACHM BINDER COURSE (25mm)	31	METRIC TON
SP, SS & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (9.5mm)	17484	METRIC TON
SP, SS & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (9.5mm)	1018	METRIC TON
SP, SS & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (12.5mm)	14810	METRIC TON
SP, SS & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (12.5mm)	862	METRIC TON
SP, SS & 501	PORTLAND CEMENT CONCRETE PAVEMENT (250mm UNIFORM THICKNESS)	266909	SQ. M
504	APPROACH SLABS	141.76	CU. M
504	APPROACH GUTTERS (TYPE SPECIAL)	82.36	CU. M
506	PORTLAND CEMENT CONCRETE CORRUGATIONS	1201	SQ. M
601	MOBILIZATION	1.00	LUMP SUM
SP & 602	FURNISHING FIELD OFFICE	1	EACH
602	FURNISHING FIELD LABORATORY	1	EACH
SS & 603	MAINTENANCE OF TRAFFIC	1.00	LUMP SUM
SS & 604	SIGNS	28	SQ. M
SS & 604	TRAFFIC DRUMS	48	EACH
604	REMOVAL OF PERMANENT PAVEMENT MARKINGS	2295	METER
606	300mm ZINC COATED (GALVANIZED) CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)	115	METER
609	DROP INLETS (TYPE N2)	4	EACH
611	UNDERDRAIN OUTLET PROTECTORS	5	EACH
611	100mm PIPE UNDERDRAINS	300	METER
614	CONCRETE SPILLWAY (TYPE A)	4	EACH
SS & 617	GUARDRAIL (TYPE A)	335	METER
SS & 617	GUARDRAIL TERMINAL (TYPE 2)	4	EACH
SS & 617	THRIE BEAM GUARDRAIL TERMINAL	4	EACH
620	LIME	141	METRIC TON
620	SEEDING	31.41	HECTARE
620	MULCH COVER	31.72	HECTARE
SS & 620	WATER	29583.7	KL
SP	MOWING	260	HECTARE
621	TEMPORARY SEEDING	0.31	HECTARE
621	ROCK DITCH CHECKS	50	CU. M
621	SEDIMENT REMOVAL AND DISPOSAL	2,000	CU. M
623	SECOND SEEDING APPLICATION	31.41	HECTARE
631	CONCRETE BARRIER WALL (PIER PROTECTION TYPE A)	47	METER
632	CONCRETE ISLAND	328	SQ. M
635	ROADWAY CONSTRUCTION CONTROL	1.00	LUMP SUM
642	RUMBLE STRIPS IN ASPHALT SHOULDERS	32070	METER
642	RUMBLE STRIPS IN PORTLAND CEMENT CONCRETE SHOULDERS	31470	METER
SS & 719	THERMOPLASTIC PAVEMENT MARKING WHITE (250mm)	163	METER
SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING WHITE (100mm) - ALT. NO. 1	37286	METER
SP	HIGH PERFORMANCE MARKING TAPE WHITE (100mm) - ALT. NO. 2	1283	METER
SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING WHITE (200mm) - ALT. NO. 1	37286	METER
SP	HIGH PERFORMANCE MARKING TAPE WHITE (200mm) - ALT. NO. 2	1283	METER
SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING YELLOW (100mm) - ALT. NO. 1	37116	METER
SP	HIGH PERFORMANCE MARKING TAPE YELLOW (100mm) - ALT. NO. 2	37116	METER
SP & 719	INVERTED PROFILE THERMOPLASTIC CONTRAST PAVEMENT MARKING WHITE (100mm) - ALT. NO. 1	8418	METER
SP	HIGH PERFORMANCE CONTRAST MARKING TAPE WHITE (100mm) - ALT. NO. 2	8418	METER
721	RAISED PAVEMENT MARKERS (TYPE II)	2306	EACH
SS & 731	IMPACT ATTENUATION BARRIER (TYPE A)	6	EACH
802	CLASS S CONCRETE - ROADWAY	41.77	CU. M.
SP, SS & 804	REINFORCING STEEL - ROADWAY (GRADE 420)	12684	KG

*DENOTES ALTERNATE BID ITEMS

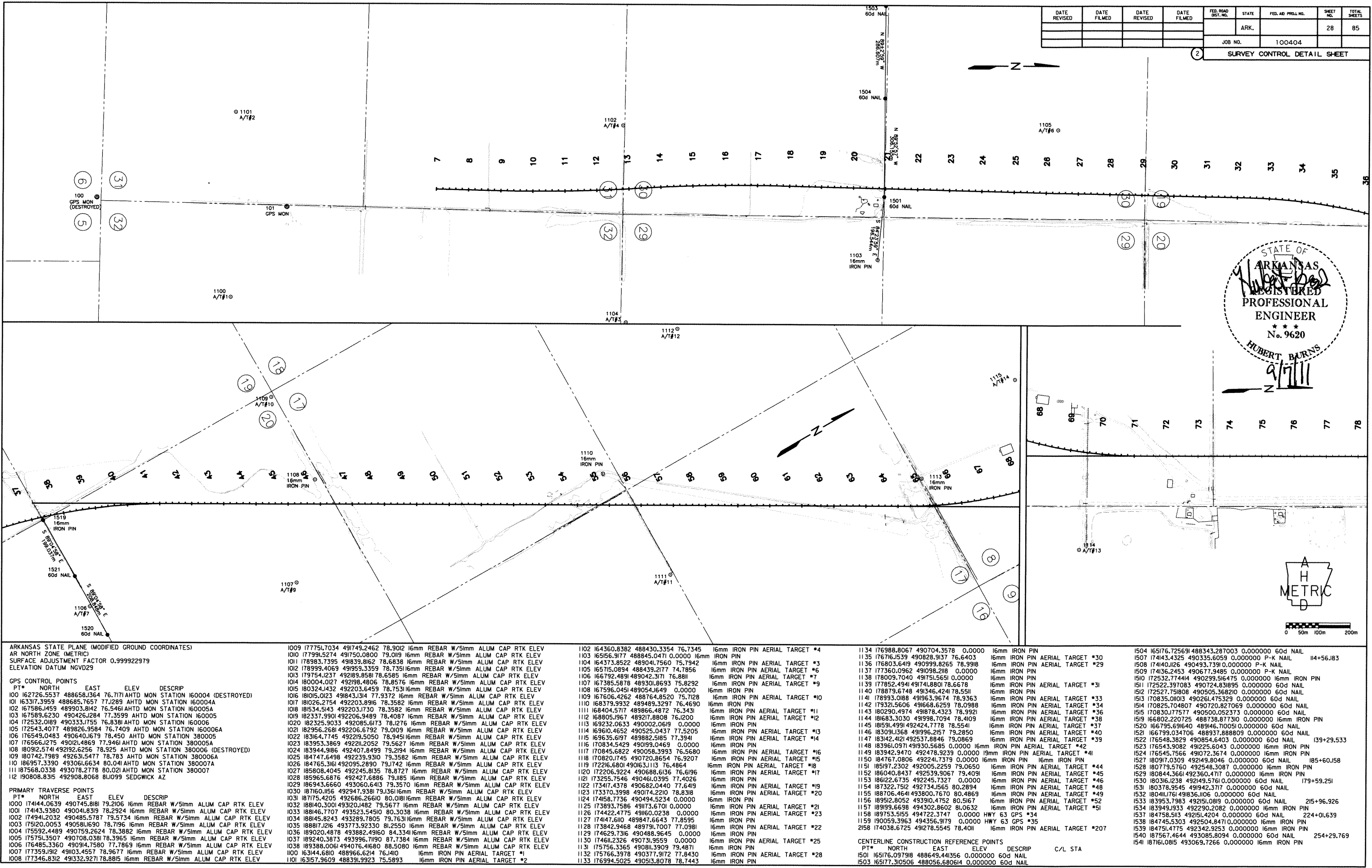
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11-15-12				6	ARK.		27	85
				JOB NO.		100404		
2 SUMMARY OF QUANTITIES AND REVISIONS								

REVISIONS

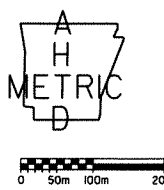
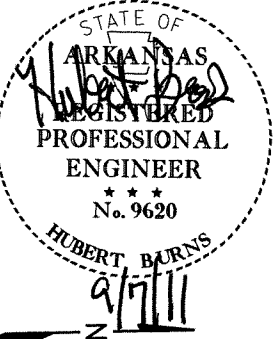
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11-15-12	CHANGED PG76-22 TO PG64-22 & Nmax to 115	24, 26 & 27

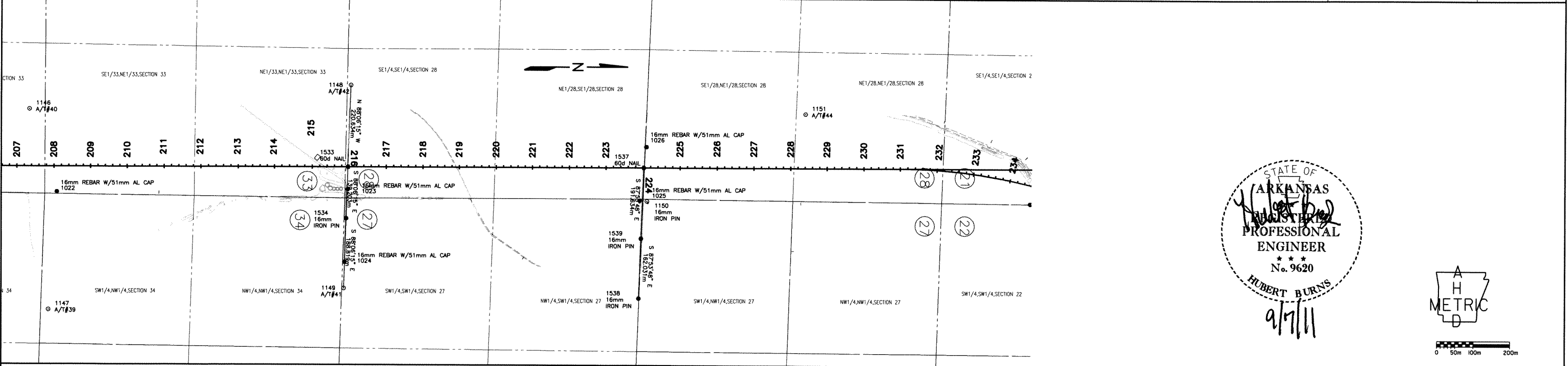
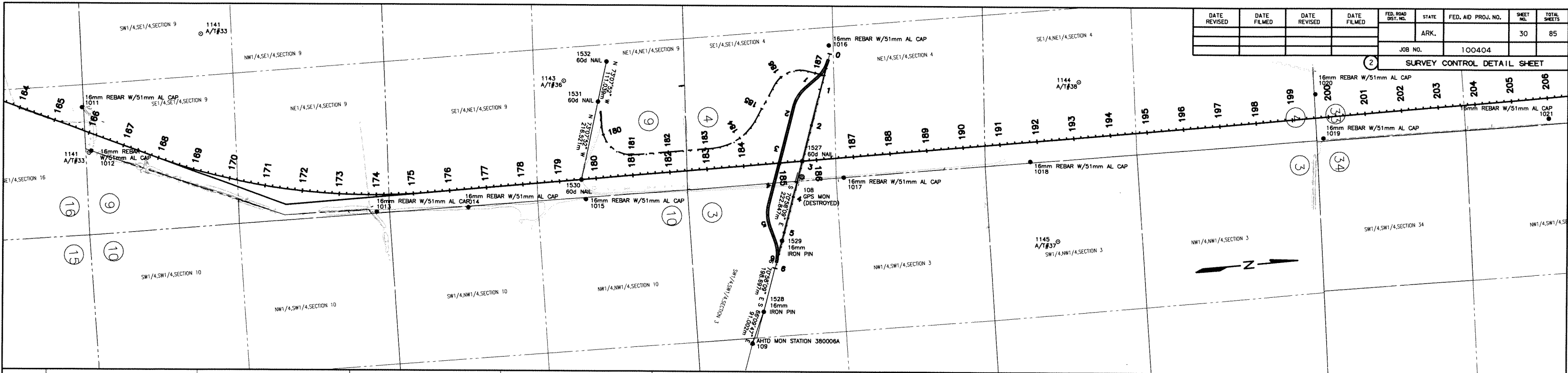


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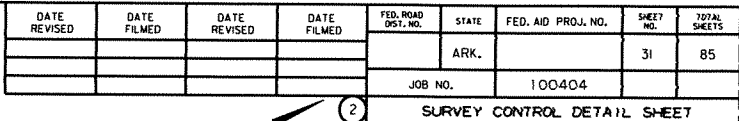


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
					ARK.		28	85
				JOB NO.		100404		
				2 SURVEY CONTROL DETAIL SHEET				





AR KANSAS STATE PLANE (MODIFIED GROUND COORDINATES)										AR KANSAS STATE PLANE (MODIFIED GROUND COORDINATES)										AR KANSAS STATE PLANE (MODIFIED GROUND COORDINATES)										AR KANSAS STATE PLANE (MODIFIED GROUND COORDINATES)									
AR NORTH ZONE (METRIC)										AR NORTH ZONE (METRIC)										AR NORTH ZONE (METRIC)										AR NORTH ZONE (METRIC)									
SURFACE ADJUSTMENT FACTOR 0.999922979										SURFACE ADJUSTMENT FACTOR 0.999922979										SURFACE ADJUSTMENT FACTOR 0.999922979										SURFACE ADJUSTMENT FACTOR 0.999922979									
ELEVATION DATUM NGVD29										ELEVATION DATUM NGVD29										ELEVATION DATUM NGVD29										ELEVATION DATUM NGVD29									
GPS CONTROL POINTS										GPS CONTROL POINTS										GPS CONTROL POINTS										GPS CONTROL POINTS									
PT*	NORTH	EAST	ELEV	DESCRIP	PT*	NORTH	EAST	ELEV	DESCRIP	PT*	NORTH	EAST	ELEV	DESCRIP	PT*	NORTH	EAST	ELEV	DESCRIP	PT*	NORTH	EAST	ELEV	DESCRIP	PT*	NORTH	EAST	ELEV	DESCRIP										
100	162726.5537	488658.1364	76.7171	AHTD MON STATION 160004 (DESTROYED)	1009	177751.7034	491749.2462	78.9012	16mm REBAR W/51mm ALUM CAP RTK ELEV	1102	164360.8382	488430.3354	76.7345	16mm IRON PIN AERIAL TARGET #4	1134	176988.8067	490704.3578	0.0000	16mm IRON PIN	1504	165176.725691	488343.287003	0.000000	60d NAIL	1507	174143.4792	490335.6029	0.000000	P-K NAIL										
101	163317.3959	488685.7657	77.1289	AHTD MON STATION 160004A	1010	177991.5274	491750.0800	79.0191	16mm REBAR W/51mm ALUM CAP RTK ELEV	1103	165156.9177	488845.0471	0.0000	16mm IRON PIN	1135	176716.1539	490828.9137	76.6403	16mm IRON PIN AERIAL TARGET #30	1508	174143.4792	490335.6029	0.000000	P-K NAIL	1509	174143.4792	490335.6029	0.000000	P-K NAIL										
102	167586.1459	489903.8142	76.5461	AHTD MON STATION 160005A	1011	178983.7395	491839.8162	78.6838	16mm REBAR W/51mm ALUM CAP RTK ELEV	1104	164373.8522	489041.7560	75.7942	16mm IRON PIN AERIAL TARGET #3	1136	176803.6419	490999.8265	78.9918	16mm IRON PIN AERIAL TARGET #29	1510	174143.4792	490335.6029	0.000000	P-K NAIL	1511	174143.4792	490335.6029	0.000000	P-K NAIL										
103	167589.6230	490426.1284	77.3599	AHTD MON STATION 160005	1012	178989.4069	491959.3359	78.7351	16mm REBAR W/51mm ALUM CAP RTK ELEV	1105	165715.0894	488439.2177	74.7856	16mm IRON PIN AERIAL TARGET #6	1137	177360.0962	491098.2118	0.0000	16mm IRON PIN	1512	174143.4792	490335.6029	0.000000	P-K NAIL	1513	174143.4792	490335.6029	0.000000	P-K NAIL										
104	172532.0189	490333.1755	76.8381	AHTD MON STATION 160006	1013	179754.1237	492189.9581	78.6585	16mm REBAR W/51mm ALUM CAP RTK ELEV	1106	166792.4891	489042.3171	76.8811	16mm IRON PIN AERIAL TARGET #7	1138	178009.7040	491751.5651	0.0000	16mm IRON PIN	1514	174143.4792	490335.6029	0.000000	P-K NAIL	1515	174143.4792	490335.6029	0.000000	P-K NAIL										
105	172543.4077	489826.9584	76.7409	AHTD MON STATION 160006A	1014	180004.0127	492198.4806	78.8576	16mm REBAR W/51mm ALUM CAP RTK ELEV	1107	167385.5878	489301.8693	75.8292	16mm IRON PIN AERIAL TARGET #9	1139	177852.4941	491741.8801	78.6678	16mm IRON PIN AERIAL TARGET #31	1516	174143.4792	490335.6029	0.000000	P-K NAIL	1517	174143.4792	490335.6029	0.000000	P-K NAIL										
106	176548.0483	490640.1679	78.4501	AHTD MON STATION 380005	1015	180324.4432	492203.6459	78.7531	16mm REBAR W/51mm ALUM CAP RTK ELEV	1108	167596.0491	489054.1649	0.0000	16mm IRON PIN	1140	178879.6748	491364.4241	78.5511	16mm IRON PIN	1518	174143.4792	490335.6029	0.000000	P-K NAIL	1519	174143.4792	490335.6029	0.000000	P-K NAIL										
107	176566.1275	490214.8619	77.9461	AHTD MON STATION 380005A	1016	181015.0123	491843.1314	77.9372	16mm REBAR W/51mm ALUM CAP RTK ELEV	1109	167606.4262	488764.8520	75.7128	16mm IRON PIN AERIAL TARGET #10	1141	178993.0188	491363.9674	78.3363	16mm IRON PIN AERIAL TARGET #33	1520	174143.4792	490335.6029	0.000000	P-K NAIL	1521	174143.4792	490335.6029	0.000000	P-K NAIL										
108	180912.5741	492192.6256	78.9251	AHTD MON STATION 380006 (DESTROYED)	1017	181026.2754	492203.8916	78.3582	16mm REBAR W/51mm ALUM CAP RTK ELEV	1110	168379.9932	489489.3297	76.4690	16mm IRON PIN	1142	179321.5606	491668.6259	78.0988	16mm IRON PIN AERIAL TARGET #34	1522	174143.4792	490335.6029	0.000000	P-K NAIL	1523	174143.4792	490335.6029	0.000000	P-K NAIL										
109	180742.7989	492631.5477	78.7873	AHTD MON STATION 380006A	1018	181534.5143	492203.1730	78.3582	16mm REBAR W/51mm ALUM CAP RTK ELEV	1111	168404.5717	489866.4872	76.3431	16mm IRON PIN AERIAL TARGET #11	1143	180290.4974	491878.4323	78.9921	16mm IRON PIN AERIAL TARGET #36	1524	174143.4792	490335.6029	0.000000	P-K NAIL	1525	174143.4792	490335.6029	0.000000	P-K NAIL										
110	186957.3390	493061.6634	80.0411	AHTD MON STATION 380007A	1019	182337.9901	492206.9489	78.4087	16mm REBAR W/51mm ALUM CAP RTK ELEV	1112	168805.1967	489217.8808	76.1200	16mm IRON PIN AERIAL TARGET #12	1144	181683.3030	491998.7094	78.4109	16mm IRON PIN AERIAL TARGET #37	1526	174143.4792	490335.6029	0.000000	P-K NAIL	1527	174143.4792	490335.6029	0.000000	P-K NAIL										
111	187568.0338	493078.2778	80.0211	AHTD MON STATION 380007	1020	182325.9033	492085.6173	78.1276	16mm REBAR W/51mm ALUM CAP RTK ELEV	1113	169232.0633	490002.0619	0.0000	16mm IRON PIN	1145	181591.4991	492424.7778	78.5541	16mm IRON PIN AERIAL TARGET #38	1528	174143.4792	490335.6029	0.000000	P-K NAIL	1529	174143.4792	490335.6029	0.000000	P-K NAIL										
112	190808.8315	492908.8068	81.0199	SEDCWICK AZ	1021	182956.2681	492206.6792	79.0109	16mm REBAR W/51mm ALUM CAP RTK ELEV	1114	169610.4652	490255.0437	77.5205	16mm IRON PIN AERIAL TARGET #13	1146	183091.1368	491996.2157	79.2850	16mm IRON PIN AERIAL TARGET #40	1530	174143.4792	490335.6029	0.000000	P-K NAIL	1531	174143.4792	490335.6029	0.000000	P-K NAIL										
					1022	183164.7745	492219.5050	78.9451	16mm REBAR W/51mm ALUM CAP RTK ELEV	1115	169635.6197	489882.5185	77.3941	16mm IRON PIN AERIAL TARGET #14	1147	183142.4121	492537.8846	79.0869	16mm IRON PIN AERIAL TARGET #41	1532	174143.4792	490335.6029	0.000000	P-K NAIL	1533	174143.4792	490335.6029	0.000000	P-K NAIL										
					1023	183953.3869	492212.2052	79.5627	16mm REBAR W/51mm ALUM CAP RTK ELEV	1116	170834.5429	490199.0469	0.0000	16mm IRON PIN	1148	183961.0971	491930.5685	0.0000	16mm IRON PIN AERIAL TARGET #42	1534	174143.4792	490335.6029	0.000000	P-K NAIL	1535	174143.4792	490335.6029	0.000000	P-K NAIL										
					1024	183944.9186	492407.8499	79.2194	16mm REBAR W/51mm ALUM CAP RTK ELEV	1117	170845.6822	490058.3993	76.5680	16mm IRON PIN AERIAL TARGET #16	1149	183942.9470	492478.9239	0.0000	16mm IRON PIN AERIAL TARGET #43	1536	174143.4792	490335.6029	0.000000	P-K NAIL	1537	174143.4792	490335.6029	0.000000	P-K NAIL										
					1025	184747.6498	492239.9310	79.3582	16mm REBAR W/51mm ALUM CAP RTK ELEV	1118	170820.1745	490720.8654	76.9207	16mm IRON PIN AERIAL TARGET #15	1150	184767.0806	492241.7379	0.0000	16mm IRON PIN	1538	174143.4792	490335.6029	0.000000	P-K NAIL	1539	174143.4792	490335.6029	0.000000	P-K NAIL										
					1026	184765.3161	492095.2890	79.1742	16mm REBAR W/51mm ALUM CAP RTK ELEV	1119	172216.6801	490163.1113	76.4864	16mm IRON PIN AERIAL TARGET #18	1151	185197.2302	492005.2259	79.0650	16mm IRON PIN AERIAL TARGET #44	1540	174143.4792	490335.6029	0.000000	P-K NAIL	1541	174143.4792	490335.6029	0.000000	P-K NAIL										
					1027	185808.4045	492245.8135	78.8727	16mm REBAR W/51mm ALUM CAP RTK ELEV	1120	172205.9224	490688.6136	76.6196	16mm IRON PIN AERIAL TARGET #17	1152	186040.8437	492539.9067	79.4091	16mm IRON PIN AERIAL TARGET #45	1542	174143.4792	490335.6029	0.000000	P-K NAIL	1543	174143.4792	490335.6029	0.000000	P-K NAIL										
					1028	185965.6876	492427.6886	79.1185	16mm REBAR W/51mm ALUM CAP RTK ELEV	1121	173255.7546	490640.0395	77.4026	16mm IRON PIN	1153	186122.6735	492245.7327	0.0000	16mm IRON PIN AERIAL TARGET #46	1544	174143.4792	490335.6029	0.000000	P-K NAIL	1545	174143.4792	490335.6029	0.000000	P-K NAIL										
					1029	186943.6660	493060.6413	79.3570	16mm REBAR W/51mm ALUM CAP RTK ELEV	1122	173417.4378	490682.0440	77.6419	16mm IRON PIN AERIAL TARGET #19	1154	187322.7512	492134.1565	80.2894	16mm IRON PIN AERIAL TARGET #48	1546	174143.4792	490335.6029	0.000000	P-K NAIL	1547	174143.4792	490335.6029	0.000000	P-K NAIL										
					1030	187160.1156	492947.9381	79.1361	16mm REBAR W/51mm ALUM CAP RTK ELEV	1123	173370.3998	490174.2210	78.8318	16mm IRON PIN AERIAL TARGET #20	1155	188706.4641	493800.7670	80.4869	16mm IRON PIN AERIAL TARGET #49	1548	174143.4792	490335.6029	0.000000	P-K NAIL	1549	174143.4792	490335.6029	0.000000	P-K NAIL										
					1031	187175.4205	492686.2661	80.0181	16mm REBAR W/51mm ALUM CAP RTK ELEV	1124	174158.7736	490494.5234	0.0000	16mm IRON PIN	1156	189512.8052	493910.4752	80.5167	16mm IRON PIN AERIAL TARGET #52	1550	174143.4792	490335.6029	0.000000	P-K NAIL	1551	174143.4792	490335.6029	0.000000	P-K NAIL										
					1032	188140.3001	493120.1482	79.5677	16mm REBAR W/51mm ALUM CAP RTK ELEV	1125	173893.7586	49173.6701	0.0000	16mm IRON PIN AERIAL TARGET #21	1157	189199.6698	494302.8602	81.0632	16mm IRON PIN AERIAL TARGET #51	1552	174143.4792	490335.6029	0.000000	P-K NAIL	1553	174143.4792	490335.6029	0.000000	P-K NAIL										
					1033	188146.7707	493523.5451	80.3038	16mm REBAR W/51mm ALUM CAP RTK ELEV	1126	174222.4775	49160.0238	0.0000	16mm IRON PIN AERIAL TARGET #23	1158	189199.6698	494302.8602	81.0632	16mm IRON PIN AERIAL TARGET #51	1554	174143.4792	490335.6029	0.000000	P-K NAIL	1555	174143.4792	490335.6029	0.000000	P-K NAIL										
					1034	188146.7707	493523.5451	80.3038	16mm REBAR W/51mm ALUM CAP RTK ELEV	1127	174147.6101	489847.6643	77.8595	16mm IRON PIN	1159	189199.6698	494302.8602	81.0632	16mm IRON PIN AERIAL TARGET #51	1556	174143.4792	490335.6029	0.000000	P-K NAIL	1557	174143.4792	490335.6029	0.000000	P-K NAIL										
					1035	188146.7707	493523.5451	80.3038	16mm REBAR W/51mm ALUM CAP RTK ELEV	1128	174147.6101	489847.6643	77.8595	16mm IRON PIN	1160	189199.6698	494302.8602	81.0632	16mm IRON PIN AERIAL TARGET #51	1558	174143.4792	490335.6029	0.000000	P-K NAIL	1559	174143.4792	490335.6029	0.000000	P-K NAIL										
					1036	188146.7707	493523.5451	80.3038	16mm REBAR W/51mm ALUM CAP RTK ELEV	1129	174147.6101	489847.6643	77.8595	16mm IRON PIN	1161	189199.6698	494302.8602	81.0632	16mm IRON PIN AERIAL TARGET #51	1560	174143.4792	490335.6029	0.000000	P-K NAIL	1561	174143.4792	490335.6029	0.000000	P-K NAIL										
					1037	188146.7707	493523.5451	80.3038	16mm REBAR W/51mm ALUM CAP RTK ELEV	1130	174147.6101	489847.6643	77.8595	16mm IRON PIN	1162	189199.6698	494302.8602	81.0632	16mm IRON PIN AERIAL TARGET #51	1562																			



CENTERLINE OF CONSTRUCTION				EAST		DESCRIPTION		STATION	
PT*	NORTH		EAST						
8051	174693.	6332	490340.	3643	CL	R3	PC	120+05.123	
8052	174705.	3079	490342.	6372	CL	R3	P1	120+17.012	
8053	174717.	1215	490343.	5074	CL	R3	EOP	120+28.888	
+ 8112	188741.	2233	493742.	5796	CL	67R1	PC	267+74.734	
+ 8113	188943.	6788	493850.	3102	CL	67R1	P1	270+04.068	
+ 8114	189018.	2607	494067.	1781	CL	67R1	PT	272+11.666	
+ 8115	189021.	4669	494076.	5011	CL	67R1	PC	272+21.524	
+ 8116	189069.	4001	494215.	8802	CL	67R1	P1	273+68.915	
+ 8117	189216.	5930	494223.	5183	CL	67R1	PT	274+80.810	
+ 8118	189328.	5088	494229.	3258	CL	67R1	EOP	275+92.877	
+ 8119	189248.	4525	494225.	1715	CL	67R1	PC	276+12.712	
+ 8120	189318.	9212	494228.	8283	CL	67R1	P1	275+83.276	
+ 8121	189315.	2644	494299.	2970	CL	67R1	PT	276+23.553	
+ 8122	188688.	9660	493678.	3287	CL	67R1	PC	266+98.531	
+ 8123	188803.	1440	493739.	2745	CL	67R1	P1	268+27.845	
+ 8124	189332.	2843	493745.	5759	CL	67R1	PT	269+53.027	
+ 8125	189352.	4595	493767.	7798	CL	67R1	EOP	273+73.766	
+ 8126	189272.	4016	493763.	6254	CL	67R1	PC	272+93.601	
+ 8127	189342.	8703	493767.	2822	CL	67R1	P1	273+64.165	
+ 8128	189346.	5271	493696.	8135	CL	67R1	PT	274+04.442	
+ 8129	189375.	4191	493325.	3303	CL	63		66+00.000	
+ 8130	189302.	8673	494723.	4491	CL	63		80+00.000	

* NOTE:

U.S. 67/63 RAMPS 1 & 4 CENTERLINE DATA CONVERTED
 FROM AHTD JOB R00104 CAF = 0.999962 (U.S. SURVEY FOOT)
 TO AHTD JOB 100404 CAF = 0.999922979 (METRIC)

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009 177751.7034 491749.2462 78.9012 16mm REBAR W/51mm ALUM CAP RTK ELEV
010 17799.527 495180.0800 79.0019 16mm REBAR W/51mm ALUM CAP RTK ELEV
011 17893.7395 495180.0800 78.6838 16mm REBAR W/51mm ALUM CAP RTK ELEV
012 178999.4069 491959.7856 78.16mm REBAR W/51mm ALUM CAP RTK ELEV
013 179754.0127 492189.8581 78.6585 16mm REBAR W/51mm ALUM CAP RTK ELEV
014 180004.0432 491898.4806 78.8576 16mm REBAR W/51mm ALUM CAP RTK ELEV
015 180324.1432 492203.6459 78.7531 16mm REBAR W/51mm ALUM CAP RTK ELEV
016 181005.0023 491843.1314 77.9372 16mm REBAR W/51mm ALUM CAP RTK ELEV
017 181026.2754 492203.8916 78.3582 16mm REBAR W/51mm ALUM CAP RTK ELEV
018 181534.5143 492203.1730 78.3582 16mm REBAR W/51mm ALUM CAP RTK ELEV
019 182337.9901 492206.9489 78.4087 16mm REBAR W/51mm ALUM CAP RTK ELEV
020 182325.9033 492085.6713 78.1276 16mm REBAR W/51mm ALUM CAP RTK ELEV
021 182566.2648 492206.6792 79.0019 16mm REBAR W/51mm ALUM CAP RTK ELEV
022 183164.7745 492206.5050 78.9451 16mm REBAR W/51mm ALUM CAP RTK ELEV
023 183593.3669 492201.2052 79.5627 16mm REBAR W/51mm ALUM CAP RTK ELEV
024 183944.9186 492407.8499 79.2194 16mm REBAR W/51mm ALUM CAP RTK ELEV
025 184747.6498 492329.9310 79.3582 16mm REBAR W/51mm ALUM CAP RTK ELEV
026 184765.3164 492095.2890 79.1742 16mm REBAR W/51mm ALUM CAP RTK ELEV
027 185808.4045 492245.8135 78.8727 16mm REBAR W/51mm ALUM CAP RTK ELEV
028 185965.6876 492427.6886 79.1185 16mm REBAR W/51mm ALUM CAP RTK ELEV
029 186943.6660 493060.6413 79.3570 16mm REBAR W/51mm ALUM CAP RTK ELEV
030 187160.556 492947.9381 79.1361 16mm REBAR W/51mm ALUM CAP RTK ELEV
031 187175.4205 492966.2610 80.0181 16mm REBAR W/51mm ALUM CAP RTK ELEV
032 188143.0000 493140.7956 79.16mm REBAR W/51mm ALUM CAP RTK ELEV
033 188146.7707 493159.5451 79.3038 16mm REBAR W/51mm ALUM CAP RTK ELEV
034 188145.8243 493289.7809 79.7631 16mm REBAR W/51mm ALUM CAP RTK ELEV
035 188817.1216 493773.9233 81.2550 16mm REBAR W/51mm ALUM CAP RTK ELEV
036 189020.4878 493882.4160 84.3341 16mm REBAR W/51mm ALUM CAP RTK ELEV
037 189240.3873 493996.7191 80.7384 16mm REBAR W/51mm ALUM CAP RTK ELEV
038 189388.0066 494076.4160 88.5080 16mm REBAR W/51mm ALUM CAP RTK ELEV
039 16344.6810 488966.6214 76.1410 16mm IRON PIN AERIAL TARGET #1
040 16357.9609 488993.9923 75.5893 16mm IRON PIN AERIAL TARGET #2

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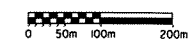
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No.
HUBERT
10

1134	176988.8067	490704.3578	0.0000	16mm	IRON	PIN		
1135	176716.5319	490828.9137	76.6403	16mm	IRON	PIN	AERIAL	TARGET *30
1136	176803.6439	490999.8265	78.9818	16mm	IRON	PIN	AERIAL	TARGET *29
1137	177360.0962	491098.2188	0.0000	16mm	IRON	PIN		
1138	178009.7040	491751.5651	0.0000	16mm	IRON	PIN		
1139	178852.4941	491741.8801	78.6678	16mm	IRON	PIN	AERIAL	TARGET *31
1140	178879.6748	491346.4241	78.5511	16mm	IRON	PIN		
1141	178993.0888	491963.9674	78.9336	16mm	IRON	PIN	AERIAL	TARGET *33
1142	179321.5066	491668.6269	78.0988	16mm	IRON	PIN	AERIAL	TARGET *34
1143	180290.4917	491848.4323	78.9321	16mm	IRON	PIN	AERIAL	TARGET *36
1144	181663.3033	491998.7080	78.4929	16mm	IRON	PIN	AERIAL	TARGET *38
1145	181941.4092	492424.7778	78.8541	16mm	IRON	PIN	AERIAL	TARGET *37
1146	183091.3668	491956.2157	79.2850	16mm	IRON	PIN	AERIAL	TARGET *40
1147	183142.4121	492327.8846	79.0689	16mm	IRON	PIN	AERIAL	TARGET *39
1148	183961.0971	491930.5685	0.0000	16mm	IRON	PIN	AERIAL	TARGET *42
1149	183942.9470	492478.9239	0.0000	19mm	IRON	PIN	AERIAL	TARGET *41
1150	184767.0806	492241.7379	0.0000	16mm	IRON	PIN	16mm	IRON PIN
1151	185197.2302	492005.2259	79.0650	16mm	IRON	PIN	AERIAL	TARGET *44
1152	186040.8437	492539.9607	79.4091	16mm	IRON	PIN	AERIAL	TARGET *45
1153	186222.6735	492245.7327	0.0000	16mm	IRON	PIN	AERIAL	TARGET *46
1154	187132.7512	494141.8665	80.2894	16mm	IRON	PIN	AERIAL	TARGET *48
1155	188706.4641	493800.7610	80.4869	16mm	IRON	PIN	AERIAL	TARGET *49
1156	189512.8052	493910.4572	80.5167	16mm	IRON	PIN	AERIAL	TARGET *52
1157	189199.6698	494302.8602	80.6332	16mm	IRON	PIN	AERIAL	TARGET *51
1158	189753.5155	494722.7347	0.0000	HWY	63	GPS	*34	
1159	190059.3963	494356.9179	0.0000	HWY	63	GPS	*35	
2158	174038.6725	491278.5545	78.4011	16mm	IRON	PIN	AERIAL	TARGET *207

CENTERLINE CONSTRUCTION REFERENCE POINTS

PT# NORTH EAST ELEV DESCRIPTION C/L STA

1501	165176.09798	488649.441356	0.000000	60d	NAIL
1503	165177.30000	488649.441356	0.000000	60d	NAIL

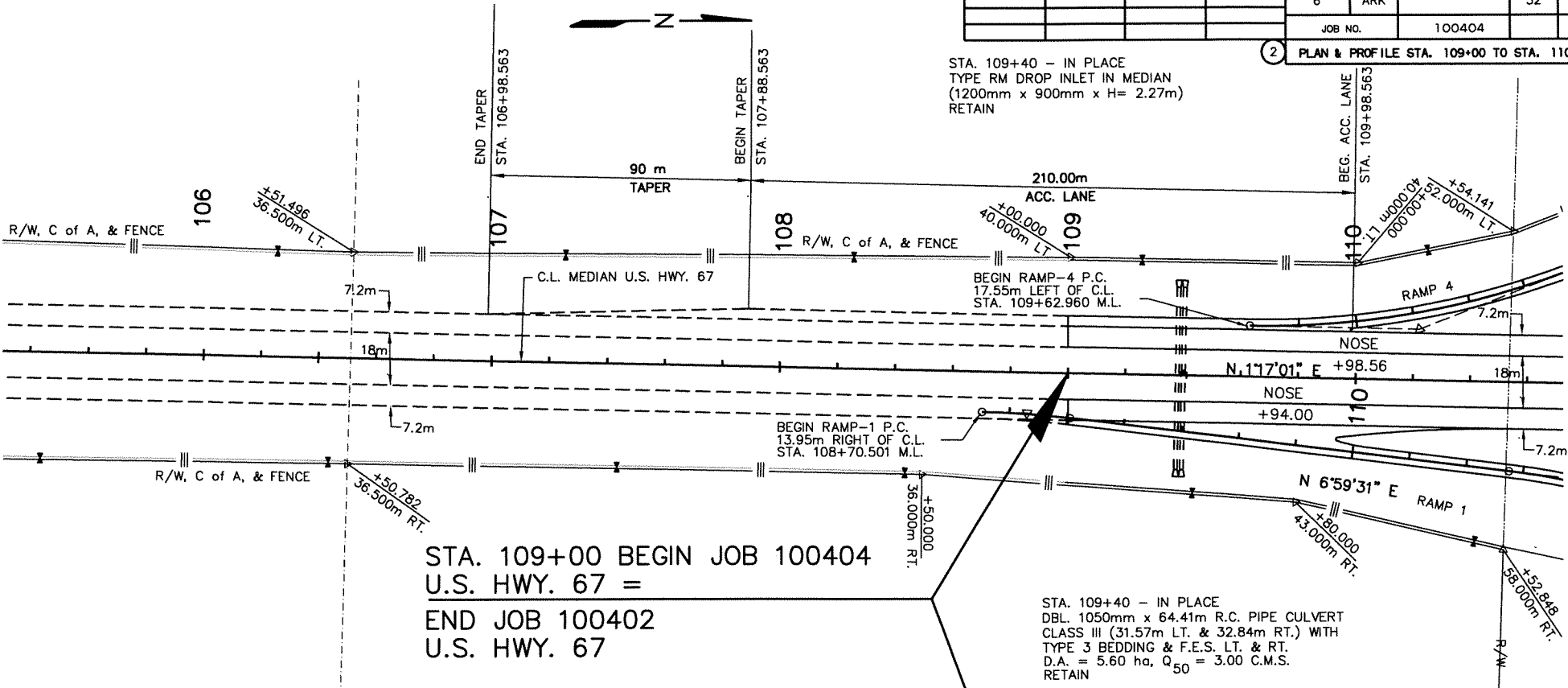
A circular professional engineer seal for the State of Arkansas. The seal contains the text "STATE OF ARKANSAS", "REGISTERED PROFESSIONAL ENGINEER", and "No. 9620". The name "HUBERT BURNS" is written in a semi-circle at the bottom. A handwritten signature "Hubert Burns" is written across the top half of the seal. Below the seal, the date "10-17-12" is handwritten.

STANDARD RIGHT OF WAY SIGNS AND SYMBOLS

- SECTION CORNER
- SECTION LINE
- STATE LINE OR CITY LIMITS
- COUNTY LINE
- TOWNSHIP LINE
- PROPERTY LINE
- EXISTING R/W LINE
- EXISTING CONTROL OF ACCESS
- EXISTING R/W AND CONTROL OF ACCESS
- EXISTING R/W, CONTROL OF ACCESS, & FENCE
- EXISTING BRIDGE OR SEPARATION STRUCTURE
- EXISTING CULVERT W/ F.E.S.
- SMALL STREAM
- LARGE STREAM
- POND OR LAKE
- TELEPHONE/POWER POLES
- TRANSMISSION LINES
- SET AHTD R/W MONUMENT

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK		32	85
				JOB NO.		100404		

PLAN & PROFILE STA. 109+00 TO STA. 110+60



STA. 111+00 RAMP 4 - IN PLACE
1050mm x 28.7m R.C. PIPE CULVERT
CLASS III(14.27m LT.,14.40m RT.)
(15'00" RT. FWD. SKEW) WITH
TYPE 3 BEDDING & F.E.S. LT. & RT.
D.A. = 10.50 ha, Q₅₀ = 0.99 C.M.S.
RETAIN

STA. 112+00 - IN PLACE
TYPE RM DROP INLET IN MEDIAN
(1200mm x 900mm x H= 0.85m)
WITH 600mm x 28.5m R.C. PIPE OUTLET
(CLASS III) WITH TYPE 3 BEDDING & F.E.S. LT.
RETAIN

STA. 111+20 RAMP 1 - IN PLACE
900mm x 29.0m R.C. PIPE CULVERT
CLASS III(14.87m LT. & 14.08m RT.)
(14'53" LT. FWD. SKEW) WITH
TYPE 3 BEDDING & F.E.S. LT. & RT.
D.A. = 8.05 ha, Q₅₀ = 0.74 C.M.S.
RETAIN

STA. 115+00 - IN PLACE
TYPE RM DROP INLET IN MEDIAN
(1200mm x 900mm x H= 0.85m) WITH
600mm x 28.0m R.C. PIPE OUTLET
(CLASS III) WITH TYPE 3 BEDDING & F.E.S. LT.
RETAIN

STA. 118+00 RAMP 3 - IN PLACE
600mm x 29.0m R.C. PIPE CULVERT
CLASS III(13.67m LT. & 15.33m RT.)
(15'00" LT. FWD. SKEW) WITH
TYPE 3 BEDDING & F.E.S. LT. & RT.
D.A. = 0.81 ha, Q₅₀ = 0.11 C.M.S.
RETAIN

STA. 117+40 - IN PLACE
TYPE RM DROP INLET IN MEDIAN
(1200mm x 900mm x H= 0.85m) WITH
600mm x 27.5m R.C. PIPE OUTLET
(CLASS III) WITH TYPE 3 BEDDING & F.E.S. LT.
RETAIN

STA. 114+52.160 & 114+60.560 - CONSTRUCT IMPACT
ATTENUATION BARRIERS (TYPE 'A')

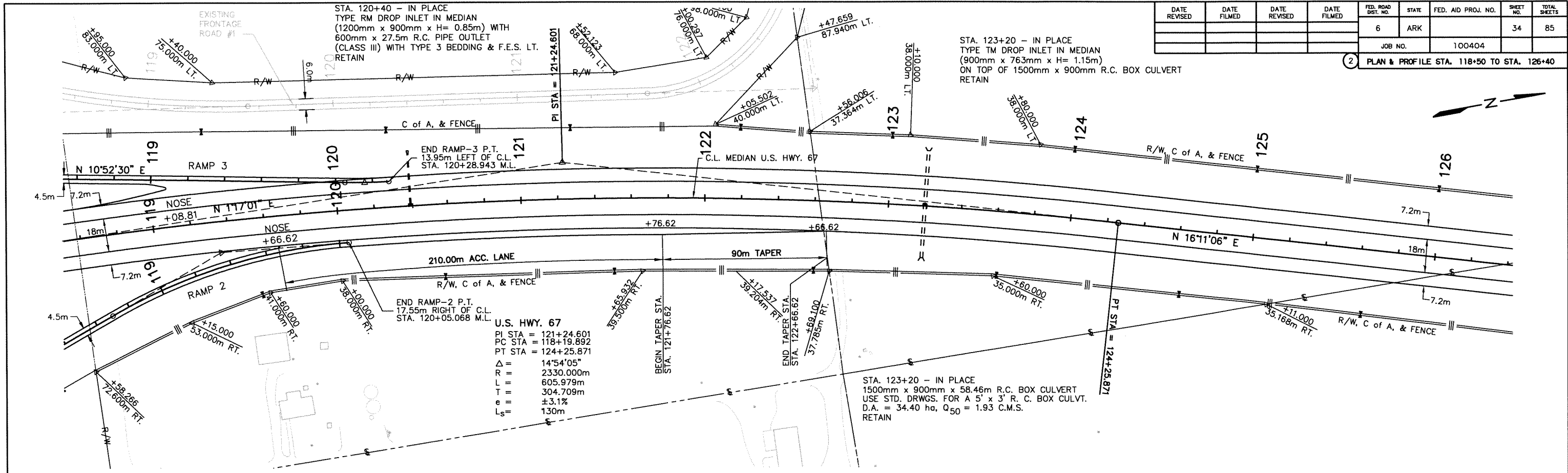
STA. 114+56.360 - CONSTRUCT
7.8m CONCRETE BARRIER WALL
PIER PROTECTION TYPE 'A'

NOTE: STA. 98+45.12 33.67m RT. STA. 98+45.16 472.68m LT.
BM - G.P.S. #160006 TBM
ELEV. = 76.838(m) ELEV. = 76.741(m)
N = 172532.0189 N = 172543.4077
E = 490333.1755 E = 489826.9584

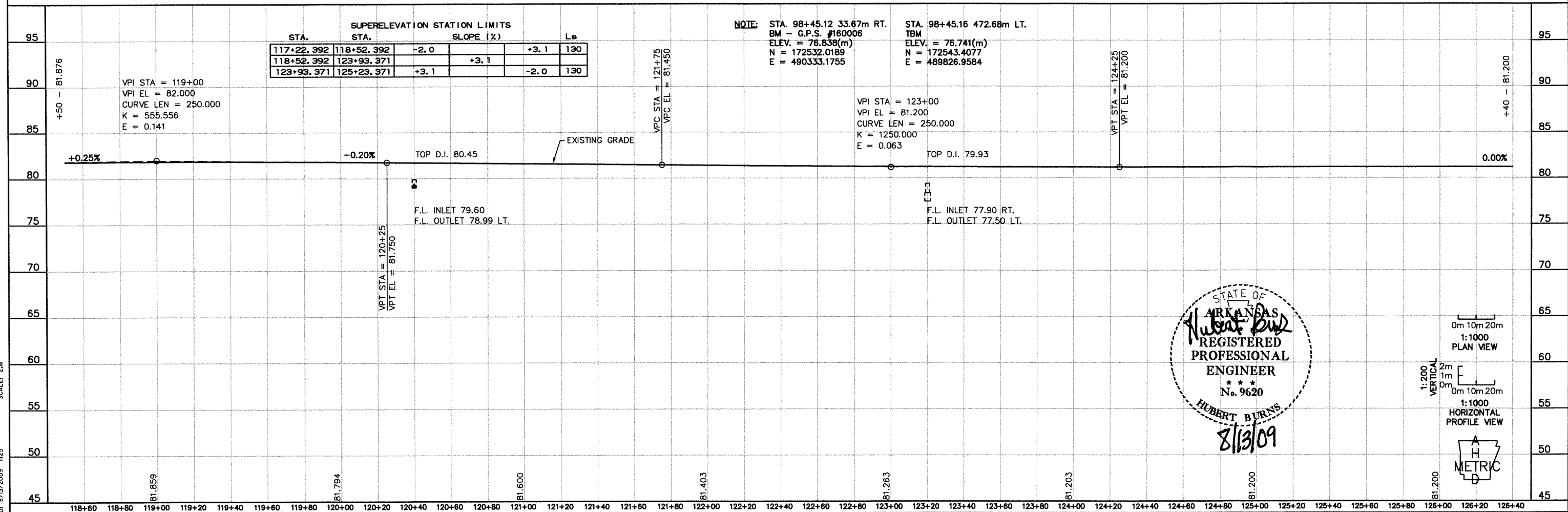
STATE OF
ARKANSAS
REGISTERED
PROFESSIONAL
ENGINEER
No. 9620
8/13/09
HUBERT BURNS

0m 10m 20m
1:1000
PLAN VIEW
1:200
2m
1m
0m
0m 10m 20m
1:1000
HORIZONTAL
PROFILE VIEW
A
H
METRIC
D

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PLOTTER: 8/13/2009 11:25
SCALE: 2:1



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK		34	85
				JOB NO.		100404		
				2	PLAN & PROFILE STA. 118+50 TO STA. 126+40			



SUPERELEVATION STATION LIMITS				
STA.	STA.	SLOPE (%)		Ls
117+22.392	118+52.392	-2.0	+3.1	130
118+52.392	123+93.371	+3.1	-2.0	130
123+93.371	125+23.371	-2.0	+3.1	130

NOTE: STA. 98+45.12 33.67m RT.
BM - G.P.S. #160006
ELEV. = 76.838(m)
N = 172532.0189
E = 490333.1755

STA. 98+45.16 472.68m LT.
TBM
ELEV. = 76.741(m)
N = 172543.4077
E = 489826.9584

STATE OF ARKANSAS
Hubert Burns
REGISTERED PROFESSIONAL ENGINEER
No. 9620
8/13/09

0m 10m 20m
1:1000
PLAN VIEW

1:200
VERTICAL
2m 1m 0m
10m 20m
1:1000
HORIZONTAL
PROFILE VIEW

A H METRIC

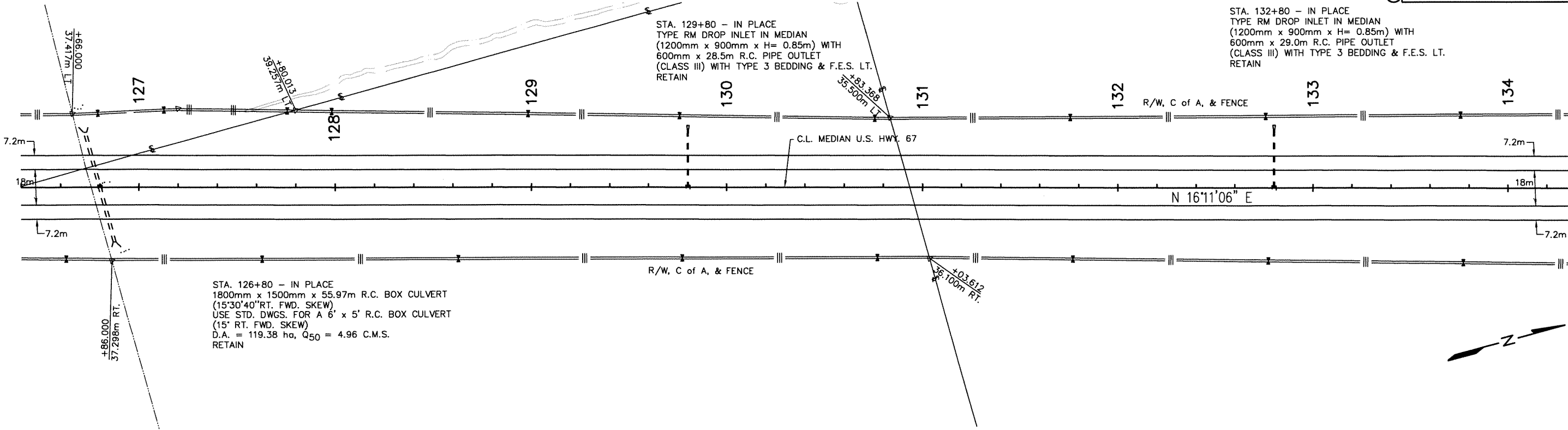
STA. 126+80 - IN PLACE
TYPE TM DROP INLET IN MEDIAN
(900mm x 763mm x H= 0.60m)
ON TOP OF 1800mm x 1500mm R.C. BOX CULVERT
RETAIN

STA. 129+80 - IN PLACE
TYPE RM DROP INLET IN MEDIAN
(1200mm x 900mm x H= 0.85m) WITH
600mm x 28.5m R.C. PIPE OUTLET
(CLASS III) WITH TYPE 3 BEDDING & F.E.S. LT.
RETAIN

STA. 132+80 - IN PLACE
TYPE RM DROP INLET IN MEDIAN
(1200mm x 900mm x H= 0.85m) WITH
600mm x 29.0m R.C. PIPE OUTLET
(CLASS III) WITH TYPE 3 BEDDING & F.E.S. LT.
RETAIN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK		35	85
				JOB NO.		100404		

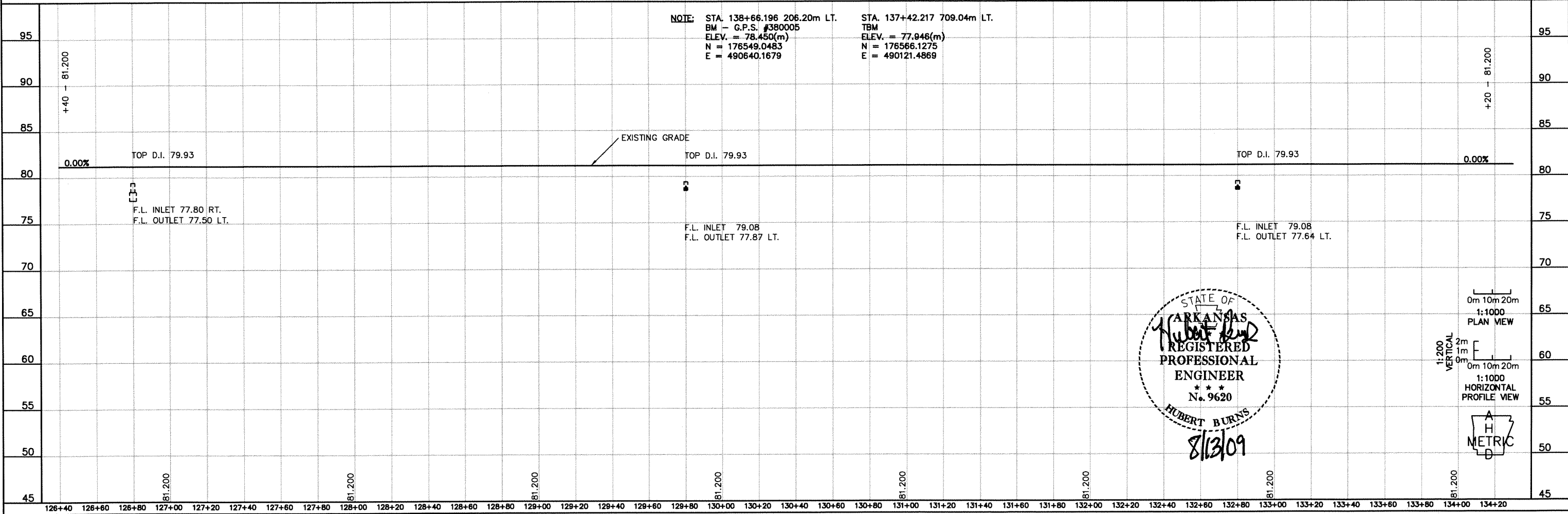
2 PLAN & PROFILE STA. 126+40 TO STA. 134+30



STA. 126+80 - IN PLACE
1800mm x 1500mm x 55.97m R.C. BOX CULVERT
(15'30\"/>

NOTE: STA. 138+66.196 206.20m LT.
BM - G.P.S. #380005
ELEV. = 78.450(m)
N = 176549.0483
E = 490640.1679

STA. 137+42.217 709.04m LT.
TBM
ELEV. = 77.946(m)
N = 176566.1275
E = 490121.4869



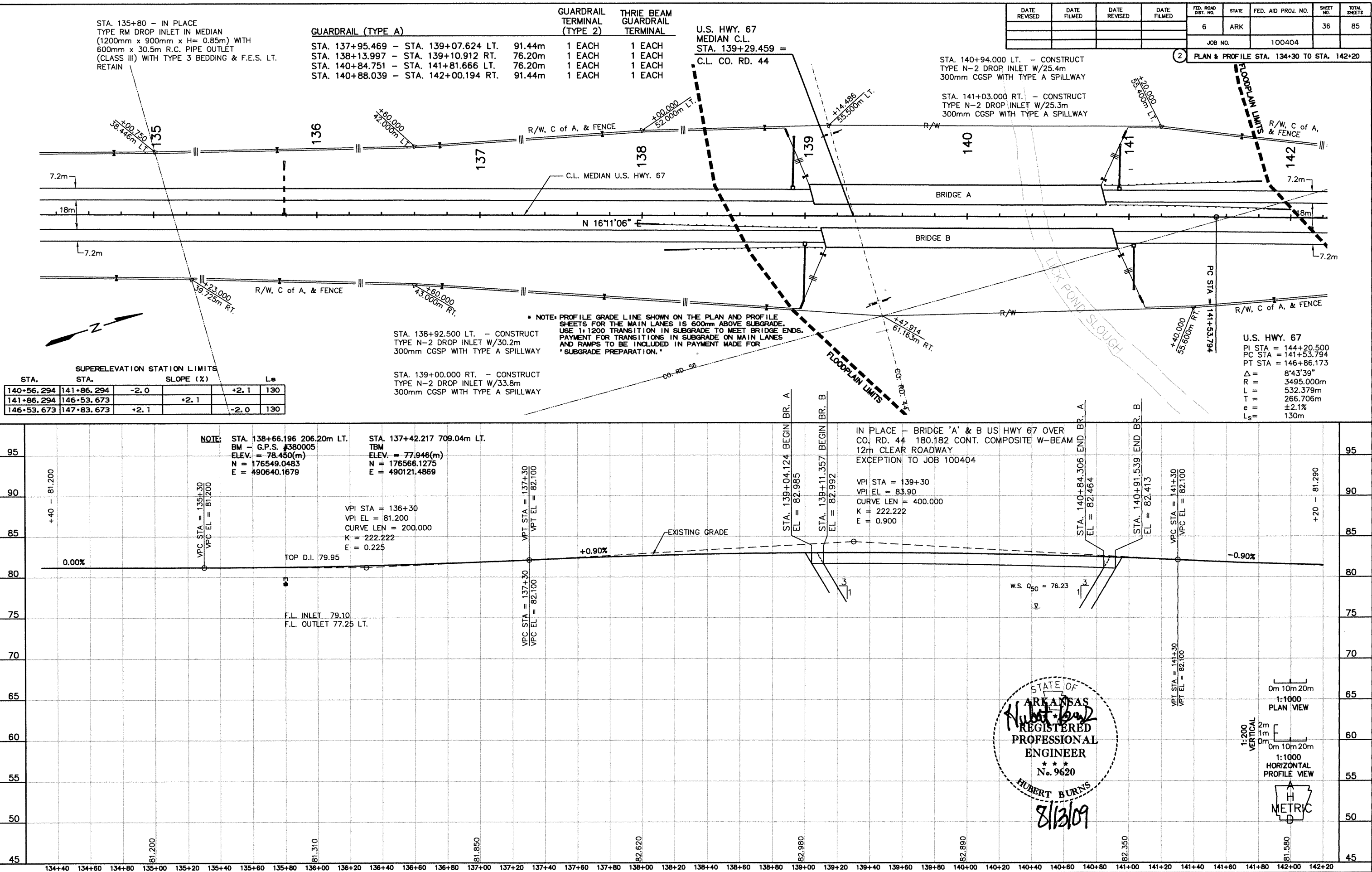
STATE OF
ARKANSAS
REGISTERED
PROFESSIONAL
ENGINEER
No. 9620
8/13/09

0m 10m 20m
1:1000
PLAN VIEW

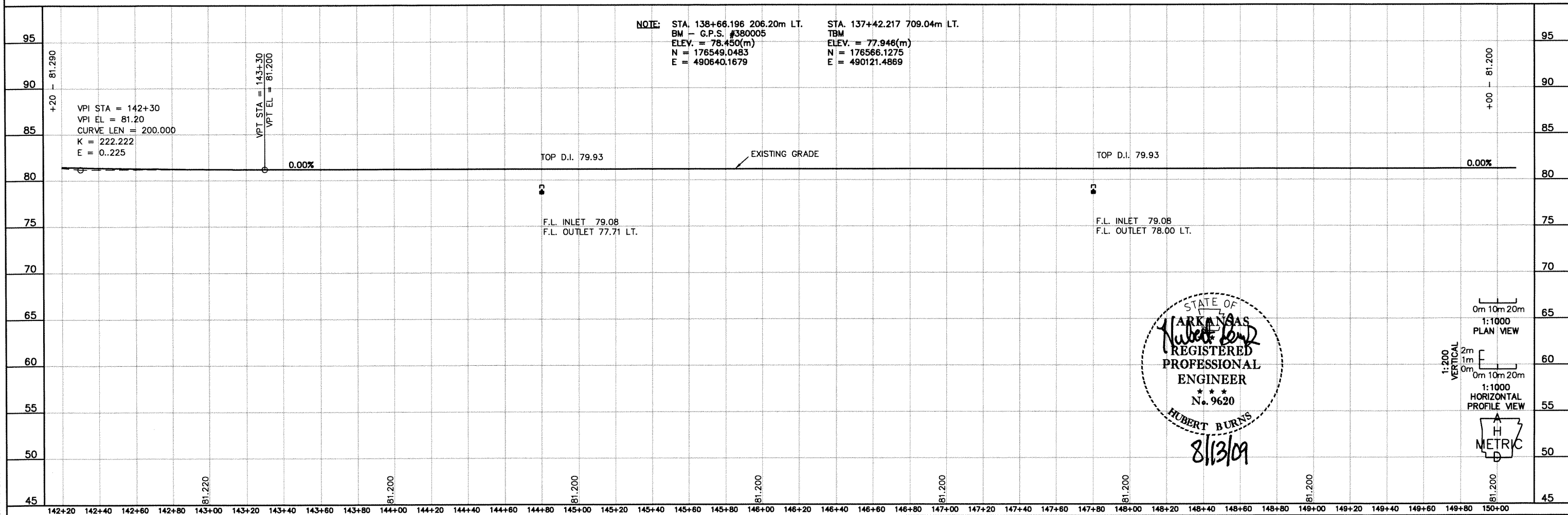
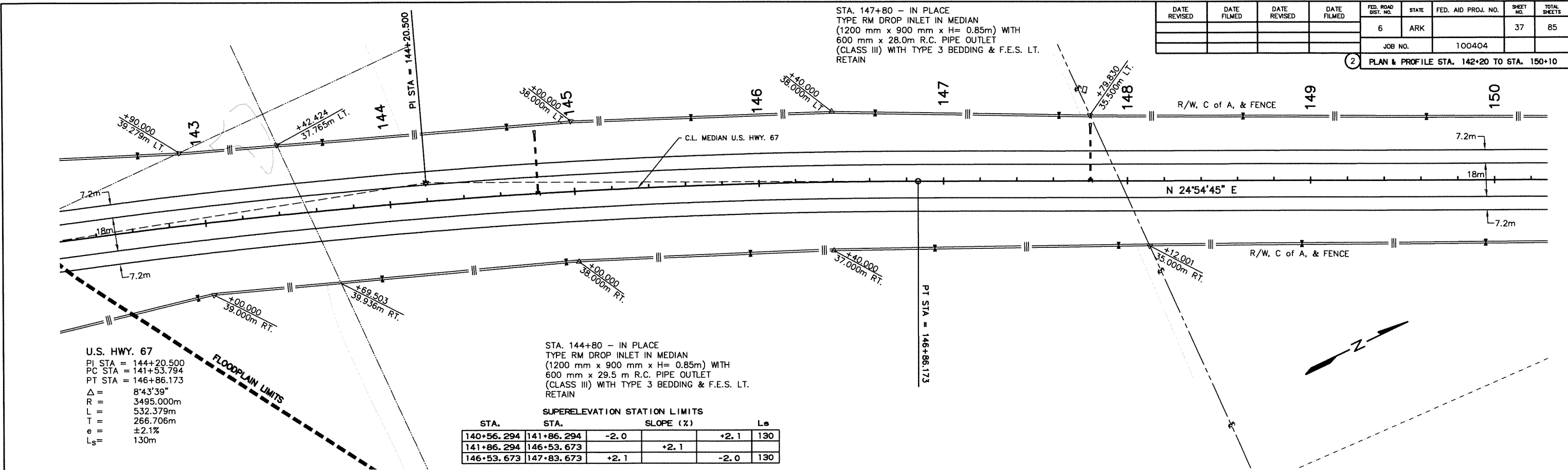
0m 10m 20m
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VERTICAL
1m
0m 10m 20m
1:1000
HORIZONTAL
PROFILE VIEW

A
H
METRIC
D

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SCALE: 2:1

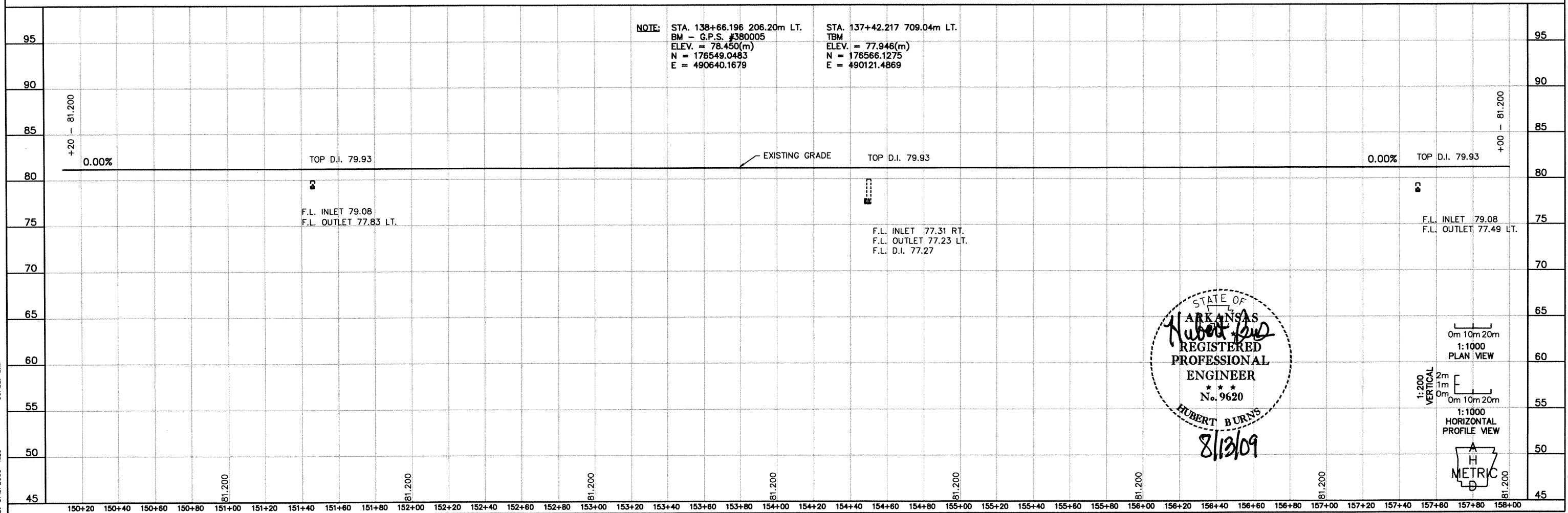
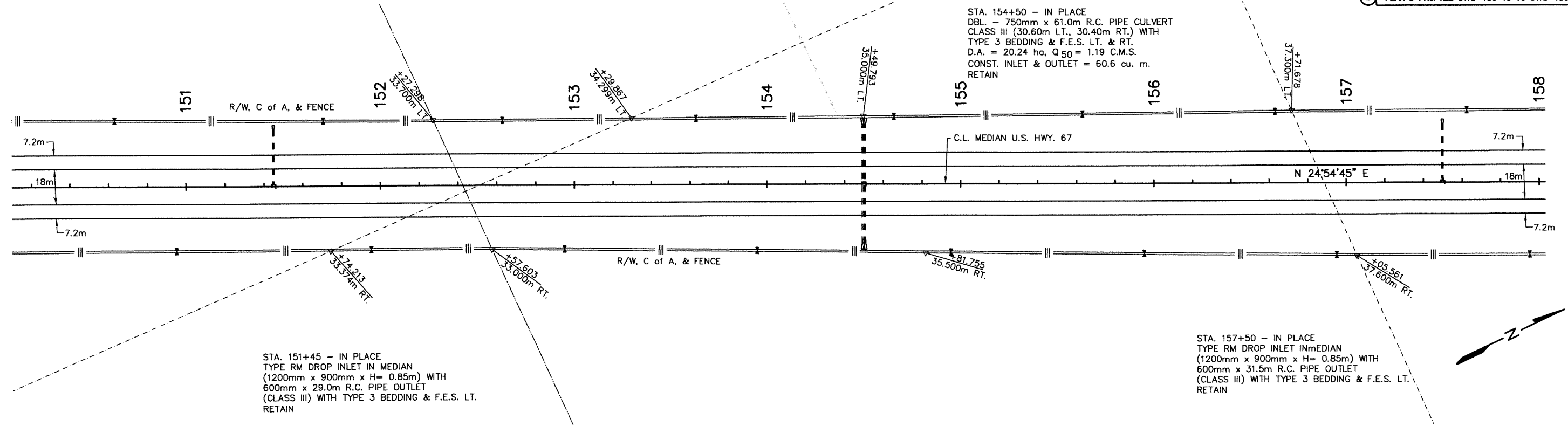


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				6	ARK		37	85
				JOB NO.		100404		
				2 PLAN & PROFILE STA. 142+20 TO STA. 150+10				



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK		38	85
				JOB NO.		100404		

2 PLAN & PROFILE STA. 150+10 TO STA. 158+00



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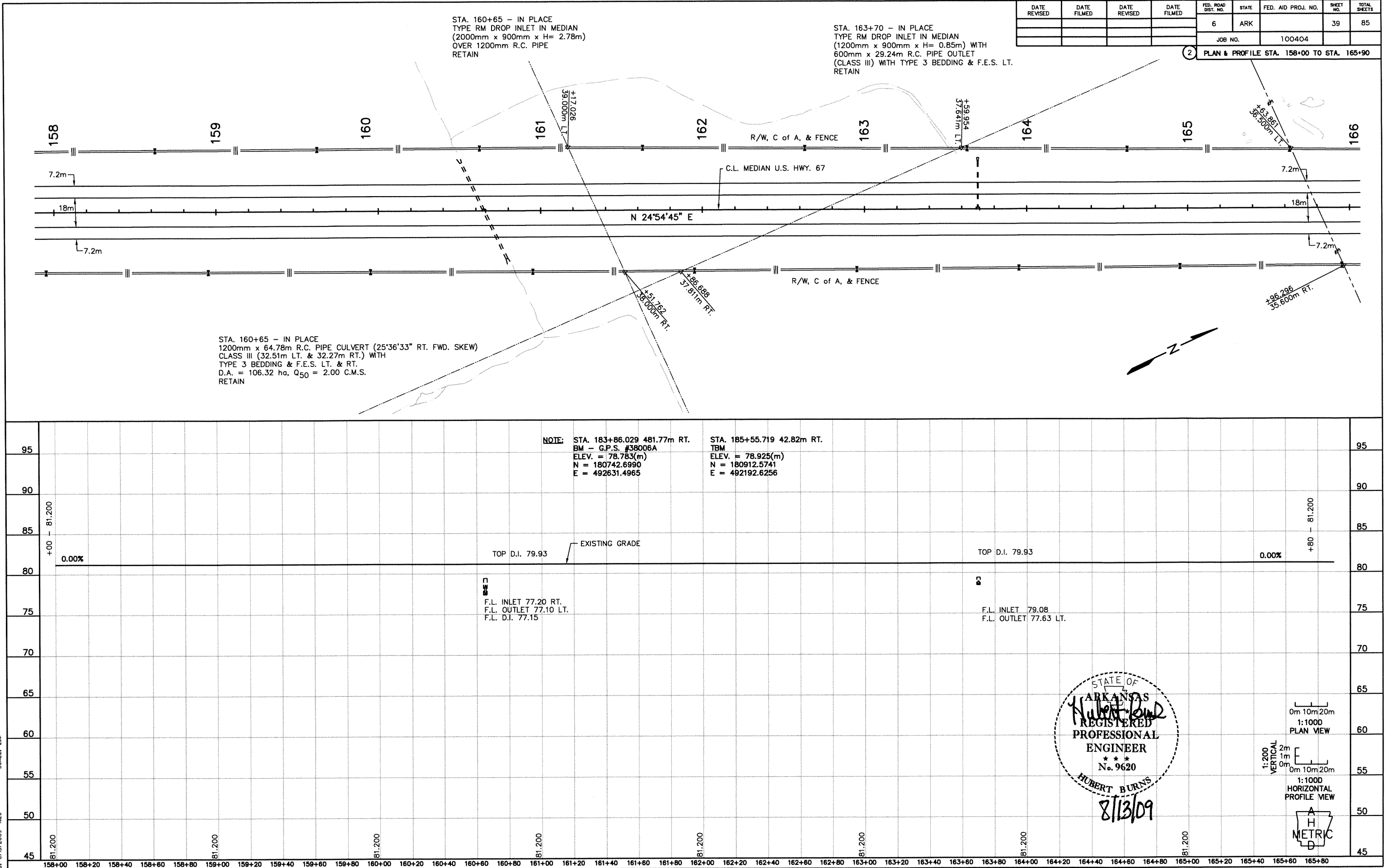
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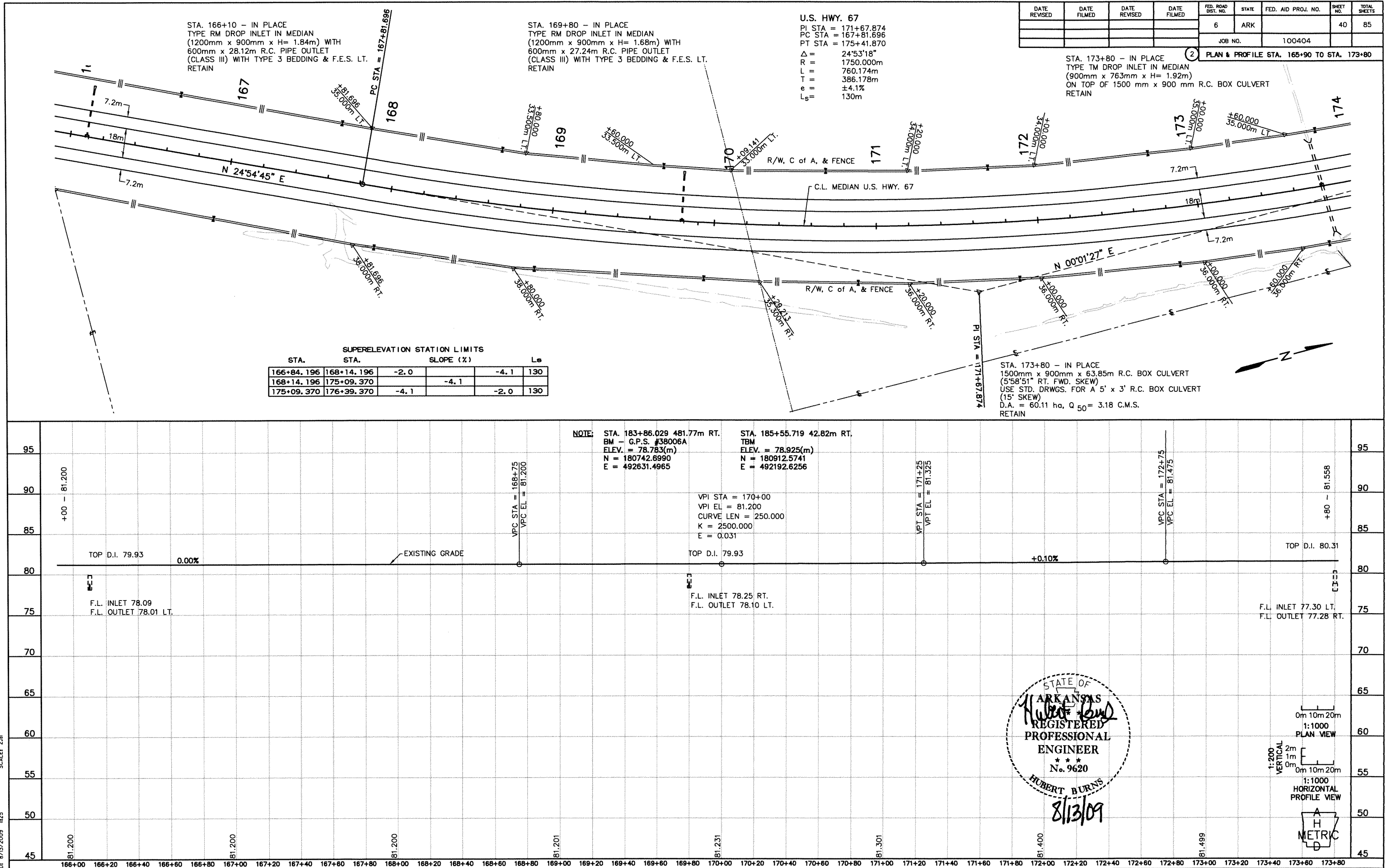
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PLOTTER: B/13/2009 11:25
SCALE: 2:1



STA. 182+53 - IN PLACE
600mm x 56.87m R.C. PIPE CULVERT
CLASS III (28.62m LT. & 28.25m RT.) WITH
TYPE 3 BEDDING & F.E.S. LT. & RT.
RETAIN

STA. 182+53 - IN PLACE
TYPE RM DROP INLET IN MEDIAN
(1200mm x 900mm x H= 1.96m)
RETAIN

STA. 182+53 F.R. #2 - IN PLACE
600mm x 13.81m R.C. PIPE CULVERT
CLASS III (6.91m LT. & 6.90m RT.) WITH
TYPE 3 BEDDING & F.E.S. LT. & RT.
RETAIN

STA. 186+10 - IN PLACE
TYPE RM DROP INLET IN MEDIAN
(1800mm x 900mm x H= 2.03m)
OVER 1200mm R.C. PIPE
RETAIN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK		42	85
				JOB NO.		100404		
				PLAN & PROFILE STA. 181+70 TO STA. 189+60				

STA. 188+80 - IN PLACE
TYPE RM DROP INLET IN MEDIAN
(1200mm x 900mm x H= 0.85m) WITH
600mm x 28.0m R.C. PIPE OUTLET
(CLASS III) WITH TYPE 3 BEDDING & F.E.S. LT.
RETAIN

STA. 185+60.528 - CONSTRUCT
7.9m CONCRETE BARRIER WALL
PIER PROTECTION TYPE 'A'

STA. 185+56.627 & 185+64.429 - CONSTRUCT IMPACT
ATTENUATION BARRIERS (TYPE 'A')

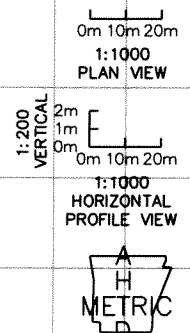
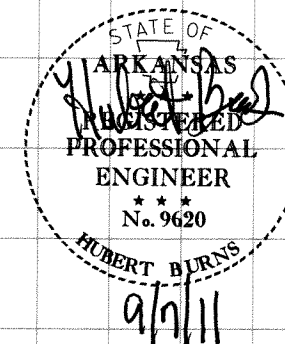
STA. 186+10 - IN PLACE
1200mm x 56.03m R.C. PIPE CULVERT (14'30"13" LT. FWD. SKEW)
CLASS III (28.26m LT. & 27.77m RT.) WITH
TYPE 3 BEDDING & F.E.S. LT. & RT.
D.A. = 42.07 ha, Q₅₀ = 1.81 C.M.S.
RETAIN

STA. 184+40 - IN PLACE
MEDIAN CROSSOVER w/ 4.5m
TRAVEL LANE & 1:6 SIDE SLOPES
NO SHOULDERS TO BE CONSTRUCTED
RETAIN & CONST. BASE & SURFACING

STA. 184+40 - IN PLACE
600mm x 7.0m R.C. PIPE CULVERT
UNDER MEDIAN CROSSOVER
CLASS III (3.50m LT. & 3.50m RT.) WITH
TYPE 3 BEDDING & S.E.S. LT. & RT.
RETAIN

NOTE: STA. 183+86.029 481.77m RT.
BM - G.P.S. #38006A
ELEV. = 78.783(m)
N = 180742.6990
E = 492631.4965

STA. 185+55.719 42.82m RT.
TBM
ELEV. = 78.925(m)
N = 180912.5741
E = 492192.6256



USER: f513
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SCALE: 2:1

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK		43	85
				JOB NO.		100404		
				(2) PLAN & PROFILE STA. 189+60 TO STA. 197+50				

STA. 192+80 - IN PLACE
TYPE RM DROP INLET IN MEDIAN
(1200mm x 900mm x H= 2.03m)
OVER 750mm R.C. PIPE
RETAIN

STA. 195+80 - IN PLACE
TYPE RM DROP INLET IN MEDIAN
(1200mm x 900mm x H= 0.85m) WITH
600mm x 29.5m R.C. PIPE OUTLET
(CLASS III) WITH TYPE 3 BEDDING & F.E.S. LT.
RETAIN

STA. 192+80 - IN PLACE
750mm x 57.24m R.C. PIPE CULVERT
CLASS III (28.64m LT. & 28.60m RT.) WITH
TYPE 3 BEDDING & F.E.S. LT. & RT.
D.A. = 2.29 ha, Q₅₀ = 0.14 C.M.S.
RETAIN

NOTE: STA. 183+86.029 481.77m RT.
BM - G.P.S. #38006A
ELEV. = 78.783(m)
N = 180742.6990
E = 492631.4965

STA. 185+55.719 42.82m RT.
TBM
ELEV. = 78.925(m)
N = 180912.5741
E = 492192.6256

TOP D.I. 80.33

F.L. INLET 78.30 RT.
F.L. OUTLET 78.26 LT.
F.L. D.I. 78.30

EXISTING GRADE

VPC STA = 194+75
VPC EL = 81.600

VPI STA = 196+00
VPI EL = 81.600
CURVE LEN = 250.000
K = 2500.000
E = 0.031

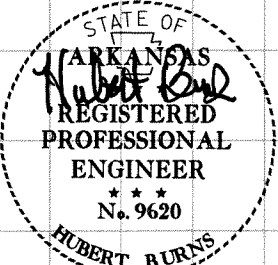
TOP D.I. 80.33

F.L. INLET 79.48
F.L. OUTLET 77.78 LT.

+60 - 81.600
+40 - 81.460

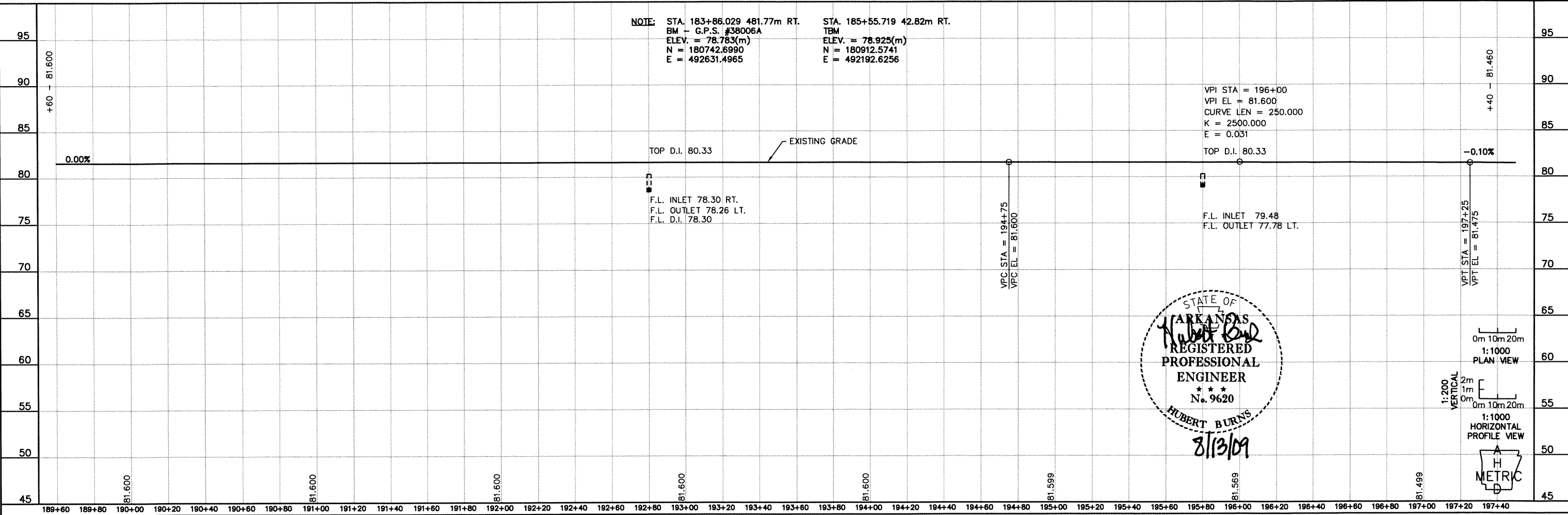
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VPT STA = 197+25
VPT EL = 81.475

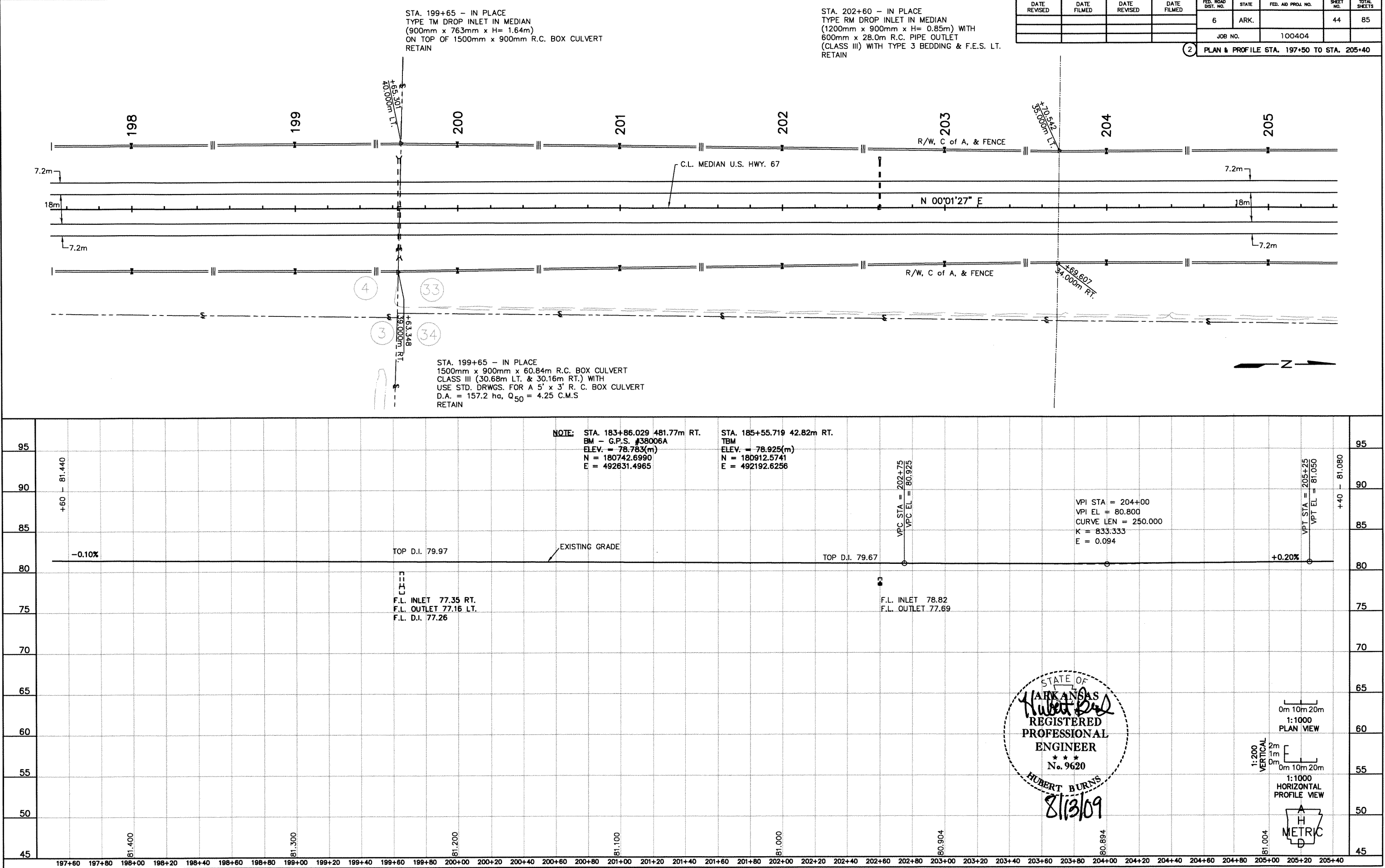


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PLAN VIEW

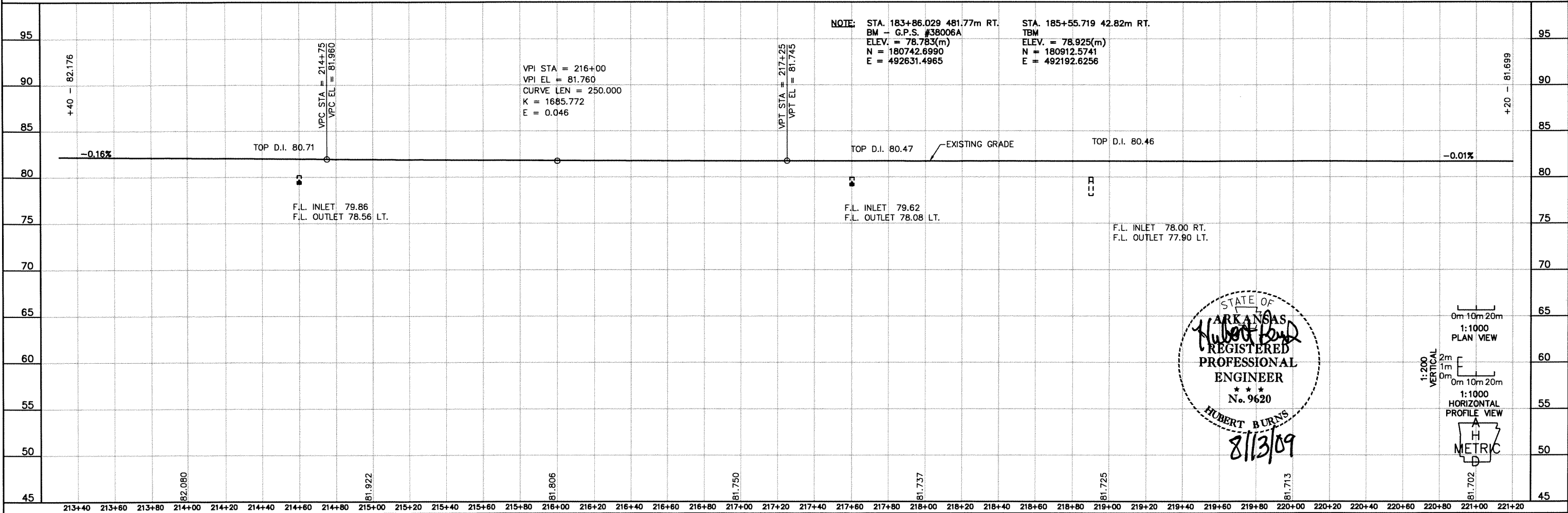
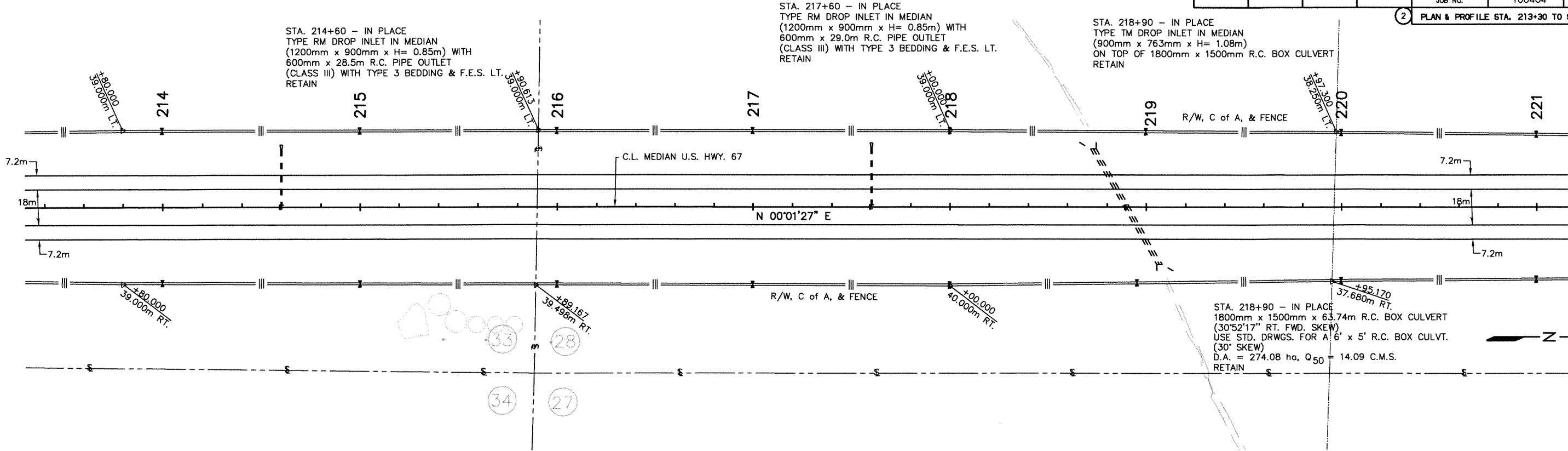
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VERTICAL
1:1000
HORIZONTAL
PROFILE VIEW



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SCALE: 2:1



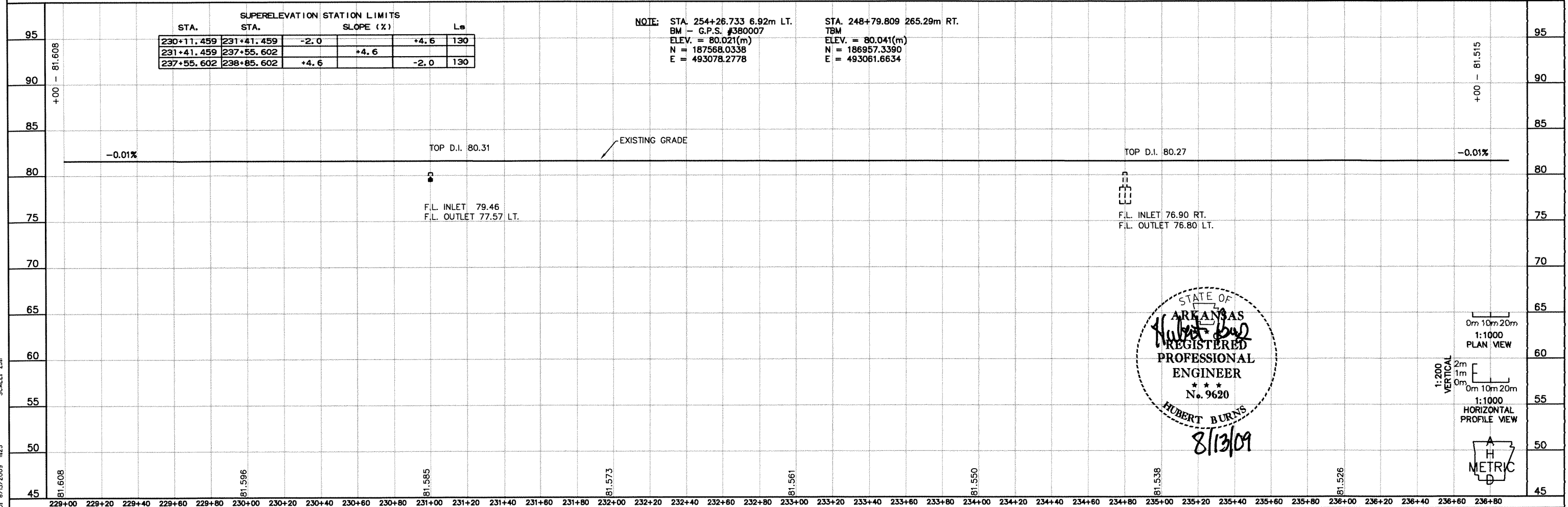
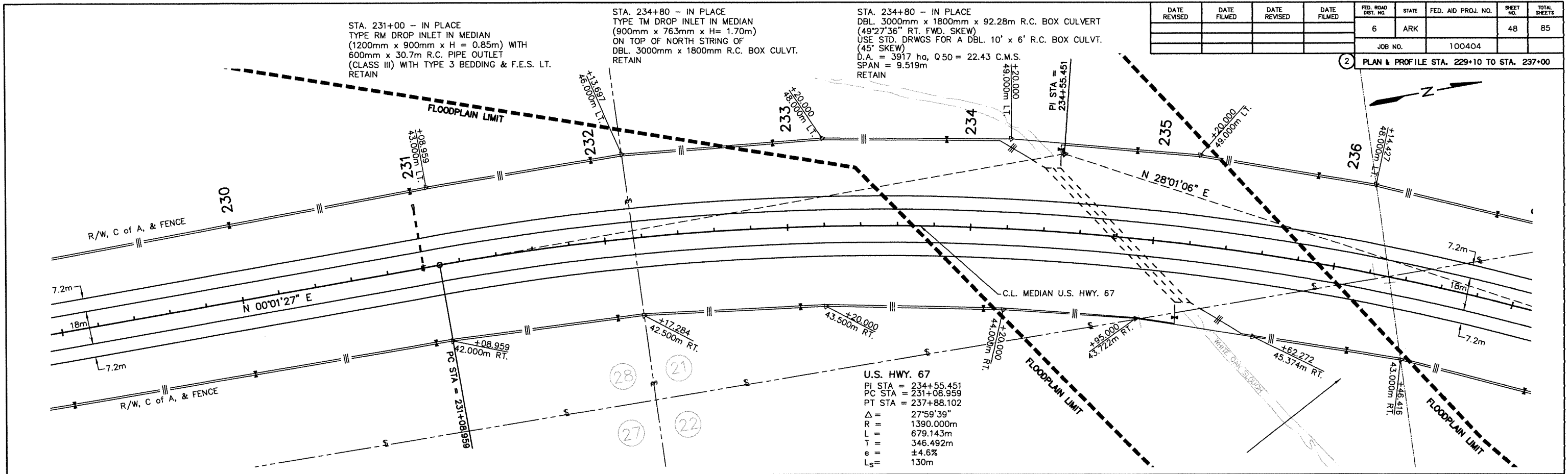
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				6	ARK.		46	85
				JOB NO.		100404		
				2	PLAN & PROFILE STA. 213+30 TO STA. 221+20			



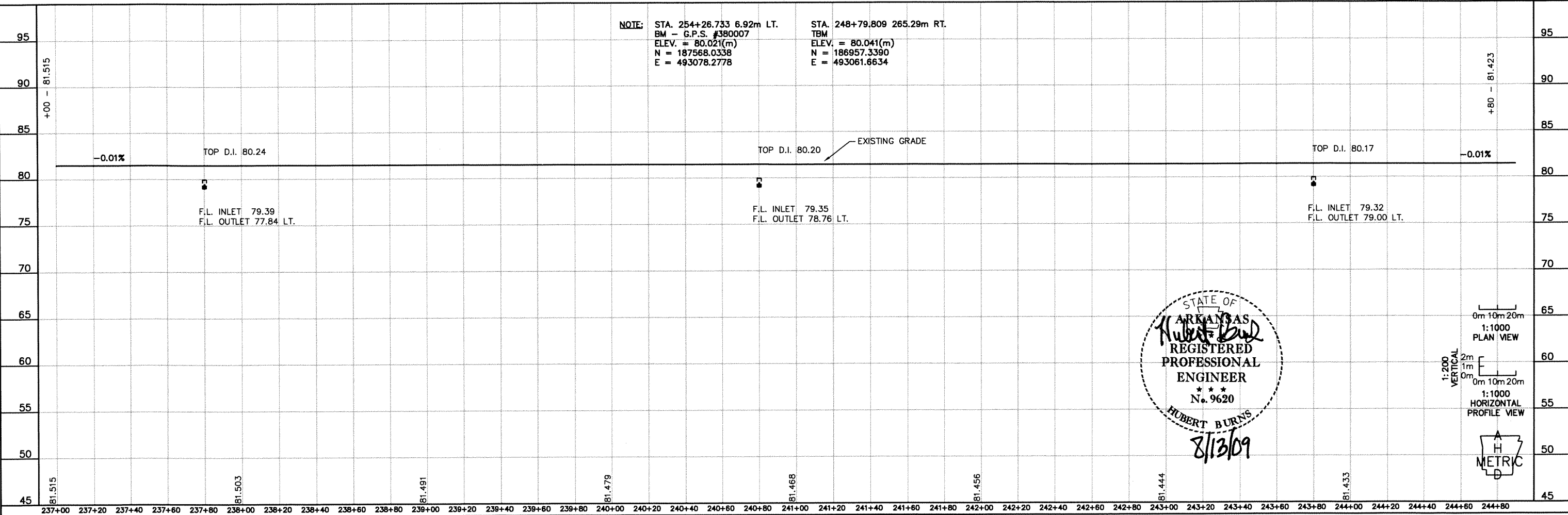
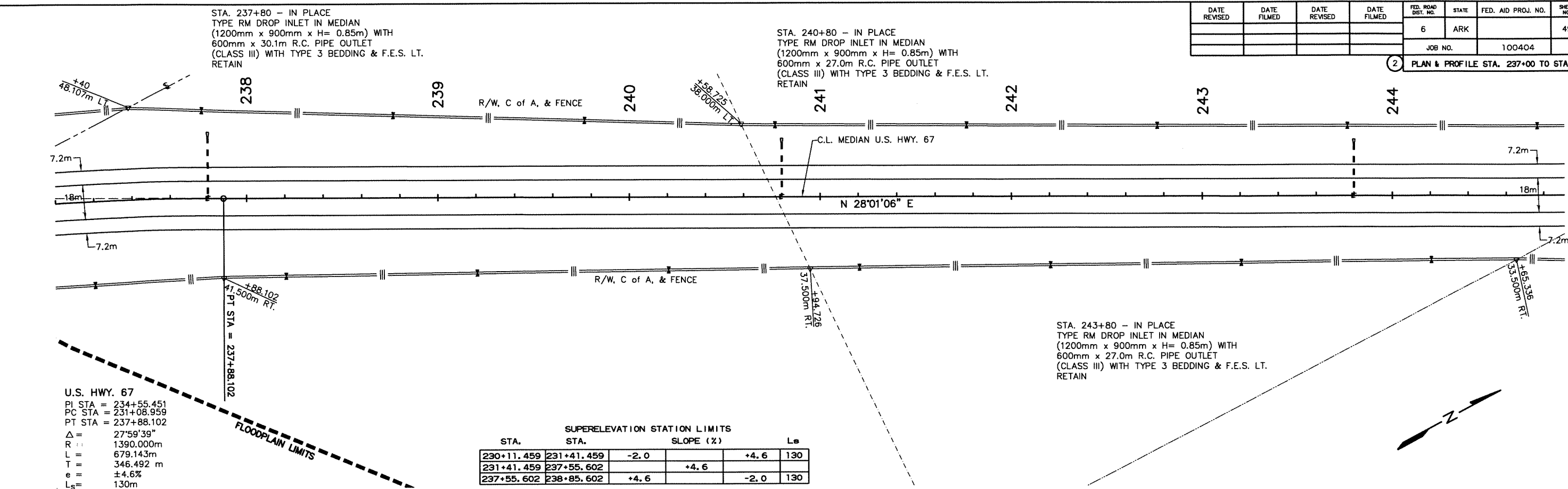
STATE OF
ARKANSAS
REGISTERED
PROFESSIONAL
ENGINEER
No. 9620
HUBERT BURNS
8/13/09

0m 10m 20m
1:1000
PLAN VIEW
0m 1m 2m
0m 10m 20m
1:1000
HORIZONTAL
PROFILE VIEW
METRIC

USER: f5513
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PLOTTER: 8/13/2009 11:25
SCALE: 2x1



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK		49	85
				JOB NO.	100404			
2 PLAN & PROFILE STA. 237+00 TO STA. 244+90								



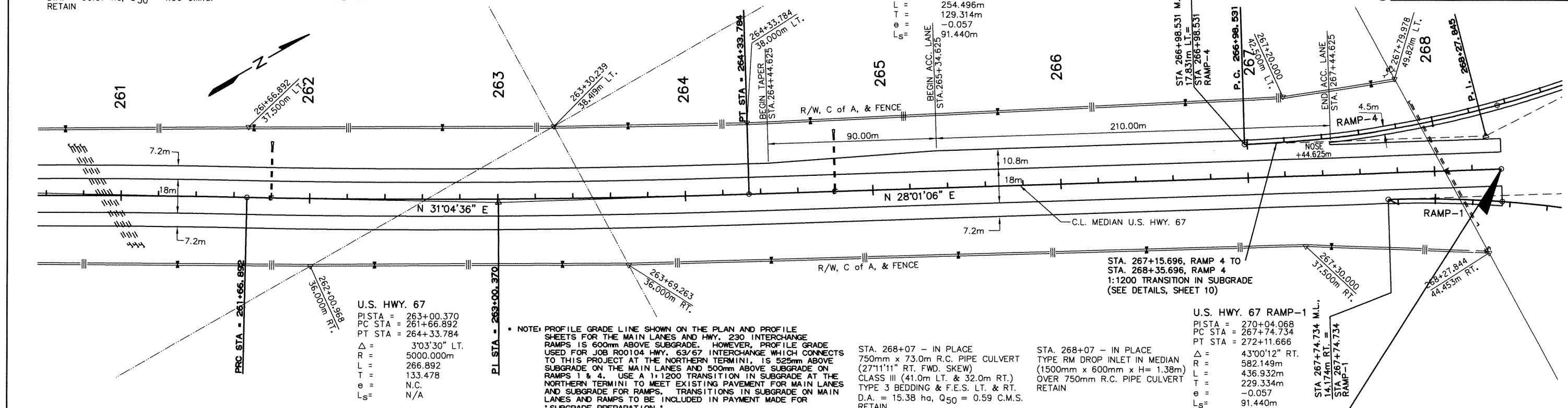
STA. 260+92 - IN PLACE
TRIPLE 1275mm x 775mm x 60.5m R.C. ARCH PIPE CULVERT
(31° RT. FWD. SKEW)
CLASS III (30.0m LT. & 30.5m RT.)
TYPE 3 BEDDING & F.E.S. LT. & RT.
D.A. = 90.37 ha, Q₅₀ = 4.30 C.M.S.
RETAIN

STA. 261+80 - IN PLACE
TYPE RM DROP INLET IN MEDIAN
(1200mm x 900mm x H= 0.85m)
WITH 600mm x 26.5m R.C. PIPE OUTLET
(CLASS III) WITH TYPE 3 BEDDING & F.E.S. LT.
RETAIN

STA. 264+80 - IN PLACE
TYPE RM DROP INLET IN MEDIAN
(1200mm x 900mm x H= 0.85m) WITH
600mm x 28.0m R.C. PIPE OUTLET
(CLASS III) WITH TYPE 3 BEDDING & F.E.S. LT.
RETAIN

U.S. HWY. 67 RAMP-4
P.I. STA = 268+27.845
PC STA = 266+98.531
PT STA = 269+53.027
Δ = 25°02'52" LT.
R = 582.149m
L = 254.496m
T = 129.314m
e = -0.057
L_s = 91.440m

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK		52	85
				JOB NO.		100404		
				2 PLAN & PROFILE STA. 260+60 TO STA. 268+35.696				



U.S. HWY. 67
P.I. STA = 263+00.370
PC STA = 261+66.892
PT STA = 264+33.784
Δ = 3°03'30" LT.
R = 5000.000m
L = 266.892
T = 133.478
e = N.C.
L_s = N/A

NOTE: PROFILE GRADE LINE SHOWN ON THE PLAN AND PROFILE SHEETS FOR THE MAIN LANES AND HWY. 230 INTERCHANGE RAMP IS 600mm ABOVE SUBGRADE. HOWEVER, PROFILE GRADE USED FOR JOB R00104 HWY. 63/67 INTERCHANGE WHICH CONNECTS TO THIS PROJECT AT THE NORTHERN TERMINI, IS 525mm ABOVE SUBGRADE ON THE MAIN LANES AND 500mm ABOVE SUBGRADE ON RAMP 1 & 4. USE A 1:1200 TRANSITION IN SUBGRADE AT THE NORTHERN TERMINI TO MEET EXISTING PAVEMENT FOR MAIN LANES AND SUBGRADE FOR RAMP. TRANSITIONS IN SUBGRADE ON MAIN LANES AND RAMP TO BE INCLUDED IN PAYMENT MADE FOR "SUBGRADE PREPARATION."

STA. 268+07 - IN PLACE
750mm x 73.0m R.C. PIPE CULVERT
(27°11'11" RT. FWD. SKEW)
CLASS III (41.0m LT. & 32.0m RT.)
TYPE 3 BEDDING & F.E.S. LT. & RT.
D.A. = 15.38 ha, Q₅₀ = 0.59 C.M.S.
RETAIN

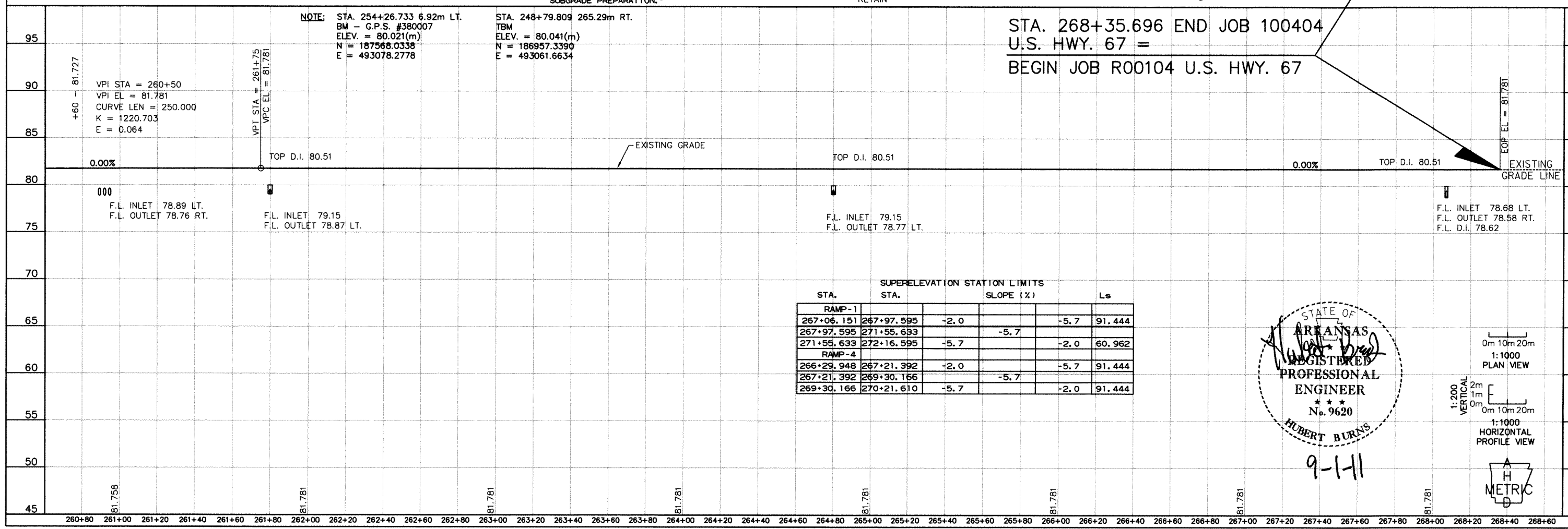
STA. 268+07 - IN PLACE
TYPE RM DROP INLET IN MEDIAN
(1500mm x 600mm x H= 1.38m)
OVER 750mm R.C. PIPE CULVERT
RETAIN

U.S. HWY. 67 RAMP-1
P.I. STA = 270+04.068
PC STA = 267+74.734
PT STA = 272+11.666
Δ = 43°00'12" RT.
R = 582.149m
L = 436.932m
T = 229.334m
e = -0.057
L_s = 91.440m

NOTE: STA. 254+26.733 6.92m LT.
BM - G.P.S. #380007
ELEV. = 80.021(m)
N = 187568.0338
E = 493078.2778

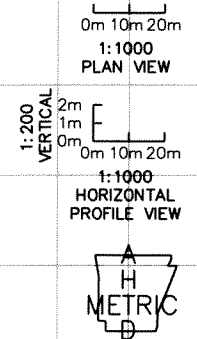
STA. 248+79.809 265.29m RT.
TBM
ELEV. = 80.041(m)
N = 186957.3390
E = 493061.6634

STA. 268+35.696 END JOB 100404
U.S. HWY. 67 =
BEGIN JOB R00104 U.S. HWY. 67



SUPERELEVATION STATION LIMITS						
STA.	STA.	SLOPE (%)			Ls	
RAMP-1						
267+06.151	267+97.595	-2.0			-5.7	91.444
267+97.595	271+55.633		-5.7			
271+55.633	272+16.595	-5.7			-2.0	60.962
RAMP-4						
266+29.948	267+21.392	-2.0			-5.7	91.444
267+21.392	269+30.166		-5.7			
269+30.166	270+21.610	-5.7			-2.0	91.444

STATE OF
ARKANSAS
REGISTERED
PROFESSIONAL
ENGINEER
No. 9620
HUBERT BURNS
9-1-11



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STA. 268+07 - IN PLACE
750mm x 73.0m R.C. PIPE CULVERT
(27°11'11" RT. FWD. SKEW)
CLASS III (41.0m LT. & 32.0m RT.)
TYPE 3 BEDDING & F.E.S. LT. & RT.
D.A. = 15.38 ha, $Q_{50} = 0.59$ C.M.S.
RETAIN

STA. 267+15.696 RAMP 4
STA. 268+35.696 RAMP 4
1:1200 TRANSITION IN SUBGRADE
(SEE DETAILS, SHEET 10)

U.S. HWY. 67 RAMP-4
PISTA = 268+27.845
PC STA = 266+98.531
PT STA = 269+53.027
 Δ = 25°02'52" LT.
R = 582.149m
L = 254.496m
T = 129.314m
e = -5.70%
L_S = 91.44m

U.S. HWY. 67 RAMP-4
STA. 267+44.448 TO STA. 273+57.916

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK		54	85
				JOB NO.		100404		

(2) PLAN & PROFILE STA. 267+44.448 TO STA. 273+57.916

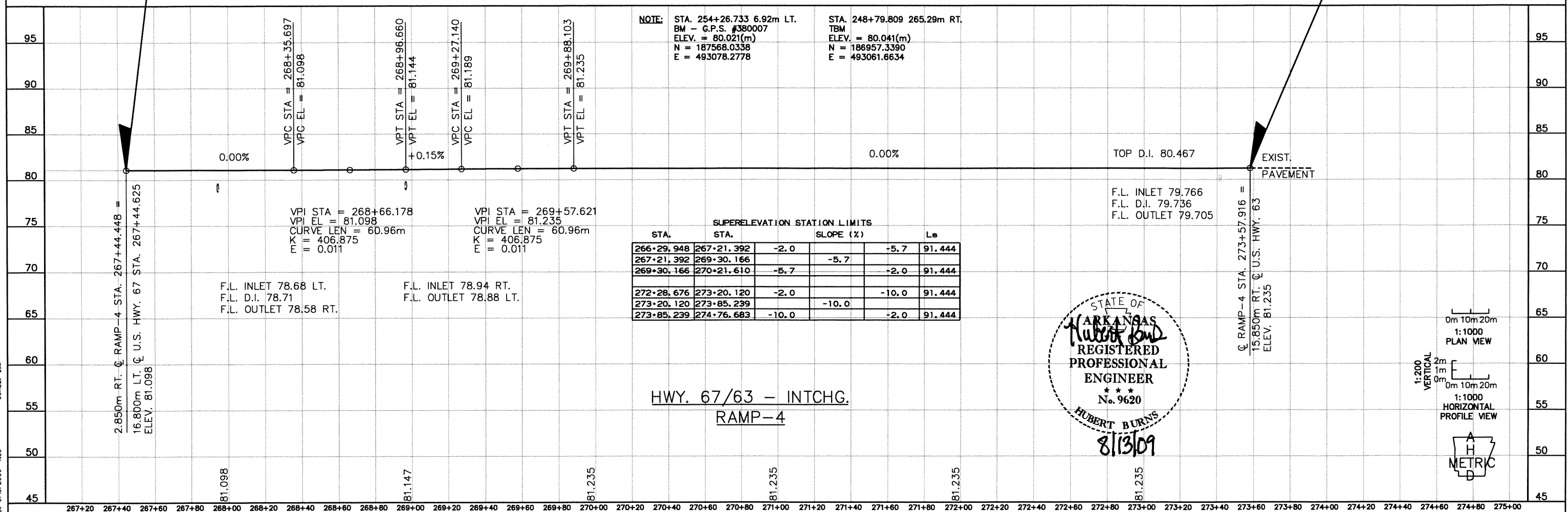
RAMP-4 STA. 273+41.685 - IN PLACE
TYPE RM INLET 8.23m LT.
(1200mm x 900mm x H = 0.73m)
WITH 450mm x 16.46m R.C. PIPE INLET &
450mm x 20.73m R.C. PIPE OUTLET CLASS III
WITH F.E.S. - LT. & RT.
RETAIN

U.S. HWY. 67 RAMP-4
PISTA = 273+64.165
PC STA = 272+93.601
PT STA = 274+04.442
 Δ = 90°00'00" LT.
R = 70.564m
L = 110.841m
T = 70.564m
e = -10.00%
L_S = 91.44m

STA. 268+35.696 RAMP 4
END GRADING JOB 100403 =
BEGIN GRADING JOB R00104
SEE DETAIL, SHEET 10

RAMP-4 STA. 268+96.659 - IN PLACE
450mm x 22.37m R.C. PIPE CULVERT
CLASS III (10.91m LT. & 11.46 RT.)
WITH TYPE 3 BEDDING & F.E.S. - LT. & RT.
D.A. = .81 HA, Q 50 = 0.08 C.M.S.
RETAIN

STA. 273+73.766 RAMP-4
= U.S. HWY. 63
STA. 273+57.916
END JOB 100404
RAMP 4

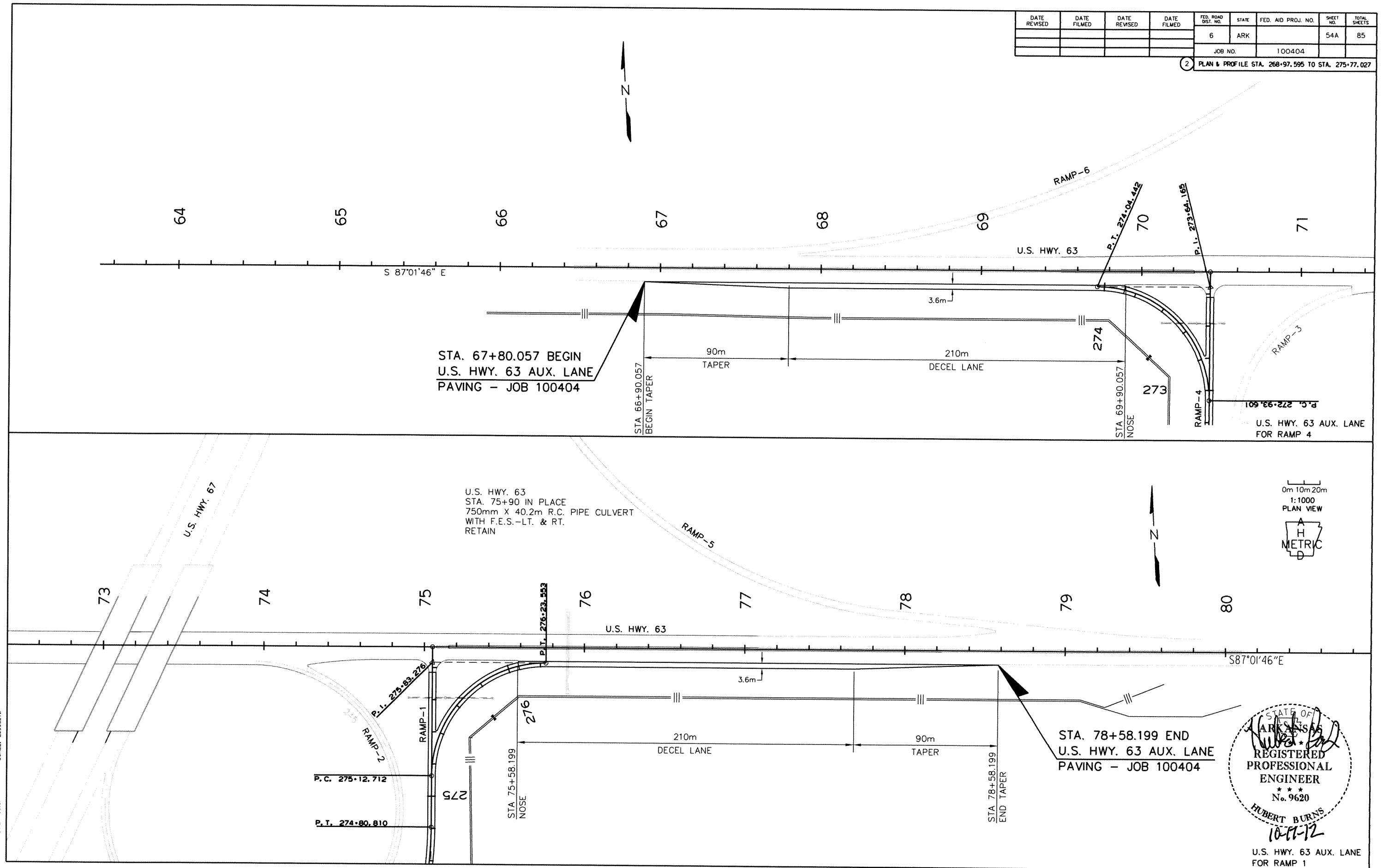


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				6	ARK		54A	85
				JOB NO.		100404		
				2 PLAN & PROFILE STA. 268+97.595 TO STA. 275+77.027				



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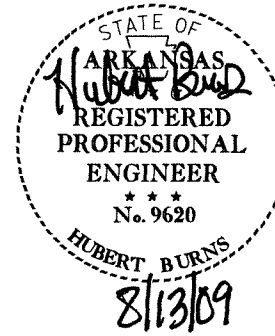
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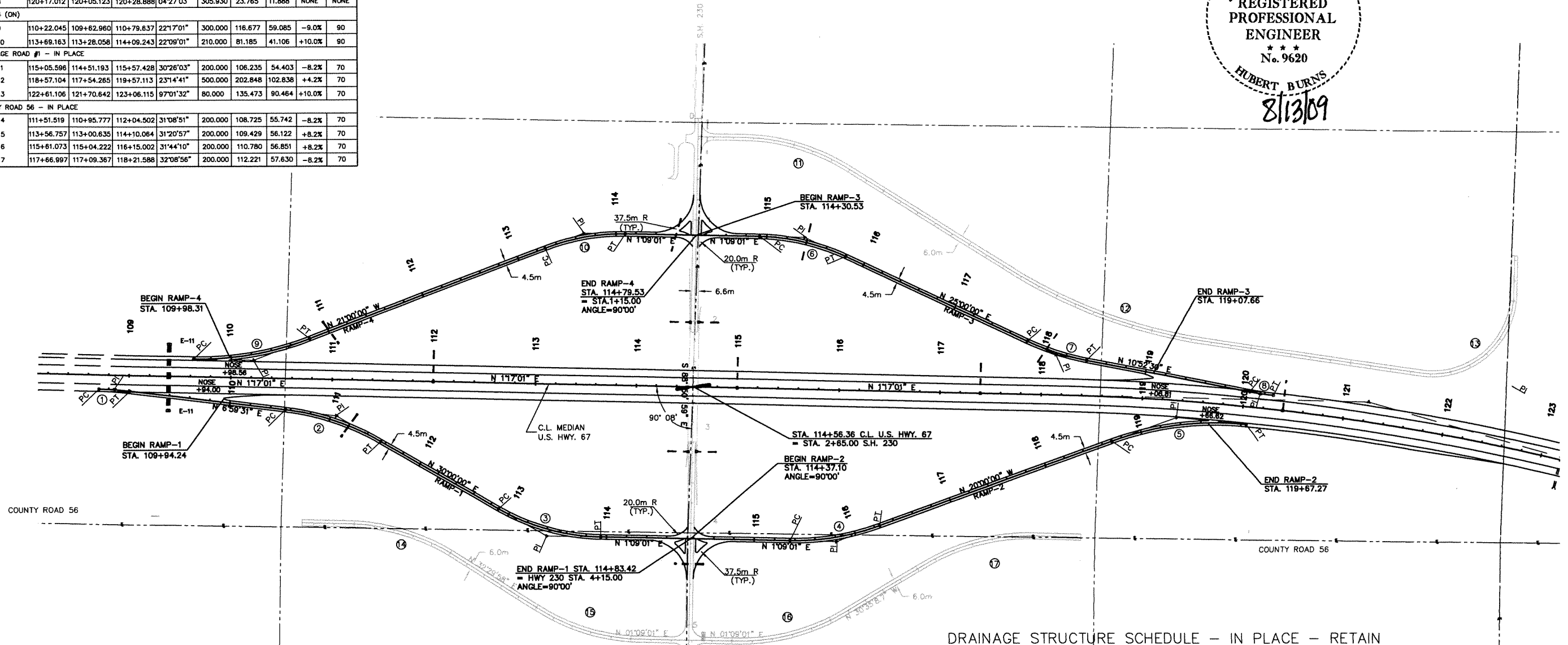
CURVE DATA

LOCATION	P.I. STA.	P.C. STA.	P.T. STA.	DELTA	R (m)	L (m)	T (m)	SUPER	Ls (m)
RAMP 1 (OFF)									
1	108+85.753	108+70.501	109+00.981	05°42'30"	305.930	30.480	15.251	NONE	NONE
2	111+05.890	110+55.008	111+55.400	23°00'29"	250.000	100.392	50.881	-9.7%	90
3	113+42.782	112+88.776	113+94.516	28°50'59"	210.000	105.740	54.016	+10.0%	90
RAMP 2 (ON)									
4	115+80.844	115+35.103	116+25.543	21°09'01"	245.000	90.440	45.741	+10.0%	90
5	119+38.715	118+69.903	120+05.186	25°50'14"	300.000	135.283	68.812	-9.0%	90
RAMP 3 (OFF)									
6	115+37.495	114+93.146	115+80.559	23°50'59"	210.000	87.414	44.349	-10.0%	90
7	118+09.982	117+79.009	118+40.641	14°07'30"	250.000	61.632	30.973	+9.7%	90
8	120+17.012	120+05.123	120+28.888	04°27'03"	305.930	23.765	11.888	NONE	NONE
RAMP 4 (ON)									
9	110+22.045	109+82.960	110+79.637	22°17'01"	300.000	116.677	59.085	-9.0%	90
10	113+69.163	113+28.058	114+09.243	22°09'01"	210.000	81.185	41.106	+10.0%	90
FRONTAGE ROAD #1 - IN PLACE									
11	115+05.596	114+51.193	115+57.428	30°26'03"	200.000	106.235	54.403	-8.2%	70
12	118+57.104	117+54.265	119+57.113	23°14'41"	500.000	202.848	102.838	+4.2%	70
13	122+61.106	121+70.642	123+06.115	97°01'32"	80.000	135.473	90.464	+10.0%	70
COUNTY ROAD 56 - IN PLACE									
14	111+51.519	110+95.777	112+04.502	31°08'51"	200.000	108.725	55.742	-8.2%	70
15	113+56.757	113+00.635	114+10.064	31°20'57"	200.000	109.429	56.122	+8.2%	70
16	115+61.073	115+04.222	116+15.002	31°44'10"	200.000	110.780	56.851	+8.2%	70
17	117+66.997	117+09.387	118+21.588	32°08'56"	200.000	112.221	57.630	-8.2%	70

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK		55	85
				JOB NO.		100404		
				2		HWY. 230 INTERCHANGE LAYOUT		



0m 20m 40m
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PLAN VIEW

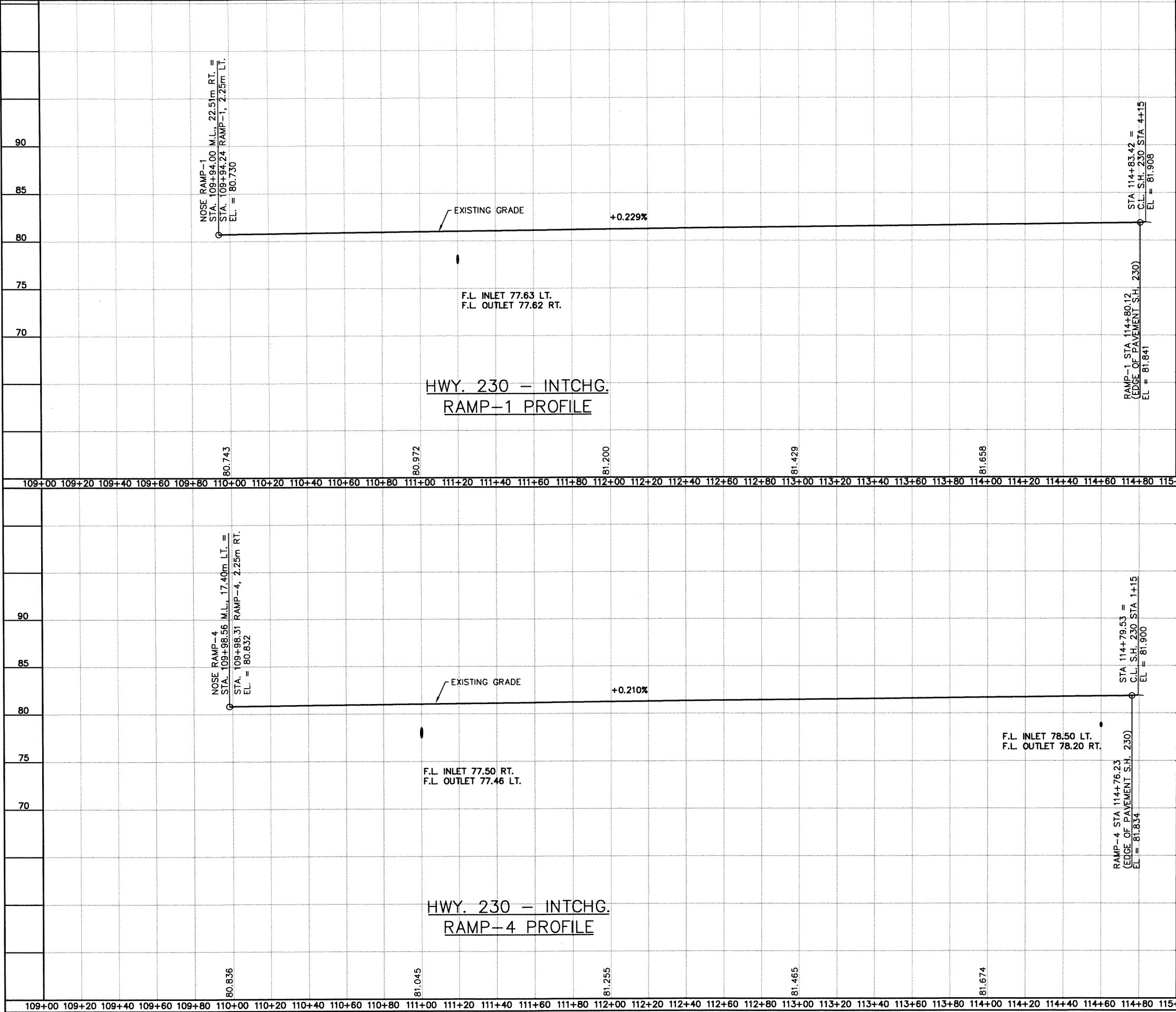


DRAINAGE STRUCTURE SCHEDULE - IN PLACE - RETAIN

LOCATION	DIA. (mm)	LENGTH (m)	LENGTH LT.	LENGTH RT.	BEDDING	F.E.S.	PIPE TYPE	DROP INLET	D. I. HT.	D. I. DIMENSION	D. A.	Q ₅₀	SKEW
U.S. HWY. MAIN LANES													
STA. 109+40	DBL 1050	69.13	35.34	33.79	TYPE 3	LT. & RT. CLASS III	TYPE RM	2.27		1200mm x 900mm	50.17 ha	3.00 cms	
STA. 112+00	600	28.5	28.5		TYPE 3	LT. CLASS III	TYPE RM	0.85m		1200mm x 900mm			
STA. 115+00	600	28.0	28.0		TYPE 3	LT. CLASS III	TYPE RM	0.85m		1200mm x 900mm			
STA. 117+40	600	27.5	27.5		TYPE 3	LT. CLASS III	TYPE RM	0.85m		1200mm x 900mm			
STA. 120+40	600	27.5	27.5		TYPE 3	LT. CLASS III	TYPE RM	0.85m		1200mm x 900mm			
HWY. 230 INT. RAMP-1													
STA. 111+20	900	28.87	14.83	14.04	TYPE 3	LT. & RT. CLASS III					8.05 ha	0.74 cms	14°53' LT FWD
HWY. 230 INT. RAMP-3													
STA. 115+40	600	30.95	16.17	14.78	TYPE 3	LT. & RT. CLASS III					1.89 ha	0.14 cms	
STA. 118+00	600	30.76	14.55	16.21	TYPE 3	LT. & RT. CLASS III					0.81 ha	0.11 cms	15° LT FWD
HWY. 230 INT. RAMP-4													
STA. 111+00	1050	28.85	14.36	14.48	TYPE 3	LT. & RT. CLASS III					10.5 ha	0.94 cms	15° RT FWD
STA. 114+60	600	30.16	14.49	15.66	TYPE 3	LT. & RT. CLASS III					0.36 ha	0.06 cms	15° LT FWD
FRONTAGE RD. 1													
STA. 114+14	725X450	9.56	4.78	4.78	TYPE 3	LT. & RT. CLASS III					0.31 ha	0.05 cms	
COUNTY RD. 56													
114+68	DBL 1100x675	11.88	5.79	6.09	TYPE 3	LT. & RT. CLASS III					33.45 ha	1.67 cms	
STATE HIGHWAY 230													
STA. 4+40	1200	17.84	8.95	8.89	TYPE 3	LT. & RT. CLASS III					36.53 ha	1.95 cms	
RELOCATED DRIVEWAY													
	600	13.0	6.5	6.5	TYPE 3	LT. & RT. CLASS III							



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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK		56	85
				JOB NO.		100404		

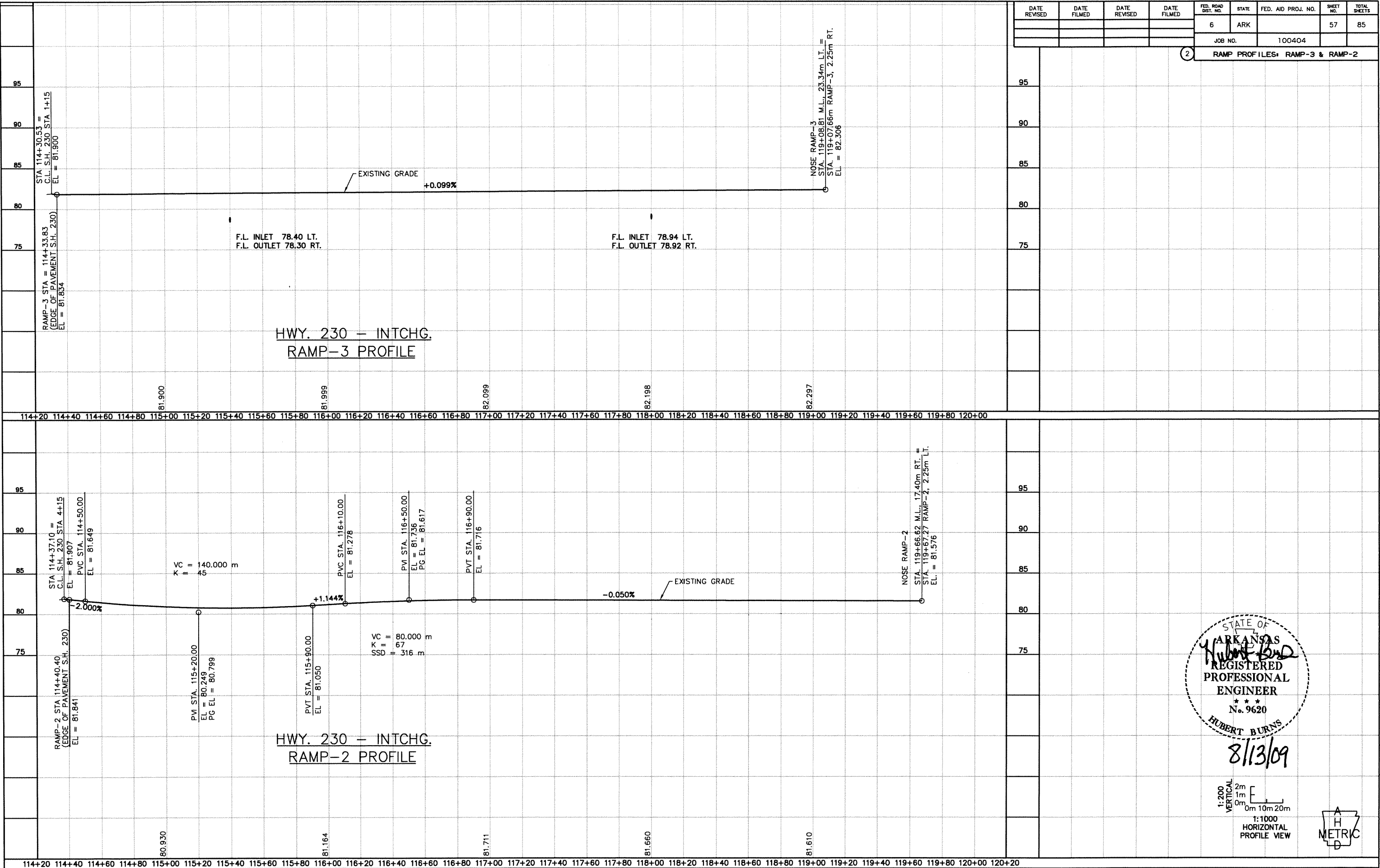
2 RAMP PROFILES: RAMP-1 & RAMP-4

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9620
8/13/09

1:200 VERTICAL
1:1000 HORIZONTAL
PROFILE VIEW

1:1000 HORIZONTAL PROFILE VIEW

1:1000 HORIZONTAL PROFILE VIEW



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		58	85
				JOB NO.		100404		
GENERAL NOTES								

GENERAL NOTES
FOR JOB No. 100403

- ALL STATIONS AND ELEVATIONS ARE IN METERS. ALL OTHER DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
- GOVERNING CRITERIA:
 - SPECIFICATIONS: ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (1996 EDITION) WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.
 - DESIGN SPECIFICATIONS: AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES (1996 EDITION) WITH CURRENT INTERIM SPECIFICATIONS.
 - LIVE LOADING: MS18
 - METHOD OF DESIGN: LOAD FACTOR
 - SEISMIC PERFORMANCE CATEGORY: B
 - MATERIALS & STRENGTHS:

CLASS S(AE) CONCRETE (SUPERSTRUCTURE)	$f'c = 28.0 \text{ MPa}$
CLASS S CONCRETE (SUBSTRUCTURE)	$f'c = 24.0 \text{ MPa}$
REINFORCING STEEL (ASTM A615M-96a, GRADE 420)	$f_y = 420 \text{ MPa}$
STRUCTURAL STEEL (AASHTO M270, GRADE 345)	$F_y = 345 \text{ MPa}$
STRUCTURAL STEEL (AASHTO M270, GRADE 250)	$F_y = 250 \text{ MPa}$
STRUCTURAL STEEL (AASHTO M270, GRADE 345W)	$F_y = 345 \text{ MPa}$
- LEVEL DATUM IS U.S.C. & G.S.
- SOIL BORING LOCATIONS AND BORING LOGS ARE SHOWN ON THE BRIDGE LAYOUT SHEETS. DETAILED BORING LOGS MAY BE OBTAINED FROM THE PROGRAMS AND CONTRACTS DIVISION.
- ALL CONCRETE SHALL BE POURED IN THE DRY. ALL EXPOSED CORNERS SHALL BE CHAMFERED 20 mm UNLESS OTHERWISE NOTED.
- REINFORCING STEEL SHALL BE ASTM A615M-96a GRADE 420 DEFORMED BARS. ON THE DRAWINGS, BAR SIZES ARE DESIGNATED BY NUMBER, THE FIRST DIGIT OR DIGITS INDICATING THE SIZE OF THE BAR. BARS SHALL BE ACCURATELY LOCATED AND HELD FIRMLY IN PLACE DURING CONSTRUCTION BY STEEL SUPPORTS. PAYMENT FOR WIRE SUPPORTS WILL NOT BE MADE DIRECTLY, BUT WILL BE CONSIDERED SUBSIDIARY TO THE ITEM "REINFORCING STEEL". ALL REINFORCING BARS ARE DIMENSIONED OUT-TO-OUT. UNLESS OTHERWISE NOTED IN THE PLANS, ALL REINFORCING STEEL COVER SHALL BE 50 mm.
- ANCHOR BOLTS SHALL BE GALVANIZED TO CONFORM TO AASHTO M232, CLASS C OR AASHTO M298, CLASS 50.
- BRIDGE DECK CROSS-SLOPES AND SUPERELEVATION TRANSITIONS ARE SHOWN ON THE BRIDGE LAYOUT SHEETS.
- PROFILE GRADE LINE (PGL) DENOTES FINISHED GRADE.
- 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 RESPECTIVE OWNERS UNLESS OTHERWISE NOTED.
- STRUCTURES ARE DESIGNED FOR A FUTURE WEARING SURFACE OF 1140 PASCAL.
- ALL DIMENSIONS SHOWN ARE BASED ON NORMAL TEMPERATURE OF 16° C.
- CLASS I PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ROADWAY SURFACE AND INSIDE FACE AND TOP OF THE CONCRETE PARAPET RAILS.
- COUNTY ROADS 44 & 63 SHALL BE KEPT OPEN DURING CONSTRUCTION OF THE NEW BRIDGES. SEE ROADWAY PLANS AND SPECIAL PROVISION "SPECIAL SAFETY REQUIREMENTS FOR BRIDGES".
- BRIDGES ALONG STATE HWY. 230, COUNTY ROAD 46 AND COUNTY ROAD 63 SHALL BE GIVEN A TEXTURED COATING FINISH. SEE SPECIAL PROVISION "TEXTURED COATING CONCRETE FINISH".

GENERAL NOTES
FOR SUPERSTRUCTURE

- CONCRETE FOR DECKS AND PARAPET RAILING SHALL BE CLASS S(AE).
- ALL END STRUTS AND DIAPHRAGMS FOR STEEL SPANS SHALL BE INSTALLED AND COMPLETELY BOLTED PRIOR TO POURING OF FLOOR SLABS.
- SLAB POURING NOTE FOR CONTINUOUS SPAN UNITS:

POURS WITH THE SAME NUMBER MAY BE PLACED SIMULTANEOUSLY OR SEPARATELY. ALL POURS (1) MUST BE PLACED BEFORE POURS (2) CAN BE PLACED. FORTY EIGHT (48) HOURS SHALL ELAPSE BETWEEN THE END OF A POUR AND THE START OF THE NEXT POUR. SEVENTY TWO (72) HOURS SHALL ELAPSE BETWEEN THE END OF A POUR AND THE START OF AN ADJACENT POUR. ANY RAILING POURS MADE BEFORE THE ENTIRE SLAB UNIT HAS BEEN PLACED MUST BE APPROVED BY THE BRIDGE ENGINEER.
- ALL CONCRETE IN BRIDGE SUPERSTRUCTURE SHALL BE PLACED, CONSOLIDATED AND SCREEDDED OFF FOR THE ENTIRE POUR, BEFORE ANY CONCRETE HAS TAKEN ITS INITIAL SET. THIS MAY REQUIRE THE USE OF A RETARDING AGENT. THE CONCRETE DECK SHALL BE FINISHED IN ACCORDANCE WITH SECTION 802.20 OF THE STANDARD SPECIFICATIONS. MOVEMENT OF THE FINISHING MACHINE ACROSS NEW CONCRETE SHALL BE ON PLANKS PLACED ON THE SURFACE AND SHALL BE PROHIBITED FOR 72 HOURS AFTER FINISHING THE POUR.
- THE CONCRETE DECK SHALL BE GIVEN A TINE FINISH AS SPECIFIED FOR FINAL FINISHING IN SUBSECTION 802.19 FOR CLASS 5, TINED BRIDGE ROADWAY SURFACE FINISH.
- ALL STRUCTURAL STEEL SHALL BE EITHER AASHTO M270 GR. 345, AASHTO M270 GR. 345W OR AASHTO M270 GR. 250 AND SHALL BE PAID FOR AT THE CONTRACT PRICE PER POUND BID FOR "STRUCTURAL STEEL IN BEAM SPANS" (AASHTO M270 GR. 345), "STRUCTURAL STEEL IN BEAM SPANS" (AASHTO M270 GR. 345W), "STRUCTURAL STEEL IN BEAM SPANS" (AASHTO M270 GR. 250), "STRUCTURAL STEEL IN PLATE GIRDER SPANS" (AASHTO M270 GR. 345) OR "STRUCTURAL STEEL IN PLATE GIRDER SPANS" (AASHTO M270 GR. 250).
- ALL W-BEAMS, WEBS AND FLANGES OF BUILT UP MEMBERS, ARE CONSIDERED MAIN LOAD CARRYING MEMBERS, AND SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TEST SPECIFIED IN SUBSECTION 807.05.
- STRUCTURAL SHAPES OF EQUAL OR GREATER STRENGTH MAY BE SUBSTITUTED FOR SHAPES SHOWN IF APPROVAL IS OBTAINED FROM THE BRIDGE ENGINEER. PAYMENT WILL BE MADE ON THE BASIS OF SHAPES SHOWN.
- ALL STEEL BEAMS SHALL BE BLOCKED IN THEIR TRUE POSITION, WITH WEBS HORIZONTAL, IN THE SHOP, IN GROUPS OF A MINIMUM OF THREE SECTIONS AS SPECIFIED IN SECTION 807.54 (b)(2). THE CAMBER, LENGTH OF SECTIONS, DISTANCE BETWEEN BEARINGS AND OPENINGS OF JOINTS SHALL BE MEASURED WITH THE BEAMS IN THIS POSITION AND THIS INFORMATION SHALL BECOME A PART OF THE PERMANENT RECORD OF THIS JOB. THE COMPONENT PARTS SHALL BE MATCH MARKED IN THE ASSEMBLY AND THOSE MARKS SHALL BE SHOWN IN THE ERECTION DIAGRAM. ALL BEAM DIMENSIONS ARE BASED ON A NORMAL TEMPERATURE 16° C. A TOLERANCE OF $\pm 6 \text{ mm}$ IS ALLOWED FOR CAMBER.
- ALL WELDING THAT IS TO BE DONE DURING FABRICATION OF STRUCTURAL STEEL, INCLUDING TEMPORARY WELDS, SHALL BE DETAILED ON THE SHOP DRAWINGS AND SUBMITTED FOR APPROVAL. IF THE CONTRACTOR OR ERECTOR SHOULD WANT TO MAKE ADDITIONAL WELDS, WHETHER TEMPORARY OR PERMANENT, HE SHALL SUBMIT DETAILED DRAWINGS WITH A FORMAL REQUEST TO THE BRIDGE DESIGN DIVISION OF THE ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT FOR APPROVAL. ALL WELDING SHALL CONFORM TO SUBSECTION 807.26.
- FIELD CONNECTIONS SHALL BE MADE WITH EITHER 20 mm ϕ OR 22 mm ϕ AASHTO M164 BOLTS AS DESIGNATED ON THE PLANS. MINIMUM BOLT SPACING SHALL BE 64 mm FOR 20 mm ϕ BOLTS AND 76 mm FOR 22 mm ϕ BOLTS. MINIMUM EDGE DISTANCE SHALL BE 34 mm FOR 20 mm ϕ BOLTS AND 38 mm FOR 22 mm ϕ BOLTS, UNLESS NOTED OTHERWISE. BOLTS SHALL BE PLACED WITH HEADS ON THE OUTSIDE FACE OF EXTERIOR BEAMS AND ON THE BOTTOM OF THE BEAM FLANGES.
- OVERSIZED HOLES, 4 mm GREATER THAN THE BOLT DIAMETER MAY BE USED AT ALL BOLTED CONNECTIONS OTHER THAN FIELD SPLICES. WASHERS UNDER BOTH NUT AND HEAD OF THE BOLT SHALL BE USED WITH OVERSIZED BOLT HOLES.
- STRIP SEAL JOINTS SHALL BE PAID FOR IN ACCORDANCE WITH THE SPECIAL PROVISION FOR "ARMORED JOINT WITH NEOPRENE STRIP SEAL". ALL OTHER METAL ROADWAY EXPANSION DEVICES TO BE PAID FOR AS "STRUCTURAL STEEL IN BEAM SPANS" (AASHTO M270 GR. 345W), "STRUCTURAL STEEL IN BEAM SPANS" (AASHTO M270 GR. 345) OR "STRUCTURAL STEEL IN PLATE GIRDER SPANS" (AASHTO M270 GR. 345). BEARINGS SHALL BE FIRMLY SEATED IN ACCORDANCE WITH SECTION 808.08 OF THE STANDARD SPECIFICATIONS. THIS WORK AND MATERIAL ARE TO BE CONSIDERED AS SUBSIDIARY TO THE ITEM "ELASTOMERIC BEARINGS" AND WILL NOT BE PAID FOR DIRECTLY.
- DRAWINGS SHOW GENERAL FEATURES OF DESIGN ONLY. SHOP DRAWINGS SHALL BE MADE IN ACCORDANCE WITH THE SPECIFICATIONS, SUBMITTED AND APPROVAL SECURED BEFORE FABRICATION IS BEGUN.
- STEEL PLATES FOR MAIN MEMBERS AND SPLICE PLATES FOR FLANGES SHALL BE CUT AND FABRICATED SO THAT THE PRIMARY DIRECTION OF ROLLING IS PARALLEL TO THE DIRECTION OF THE MAIN TENSILE AND/OR COMPRESSIVE STRESSES.
- GROOVE WELDS IN MAIN MEMBERS SHALL BE QUALITY CONTROL (Q.C.) TESTED BY NONDESTRUCTIVE TESTING AS REQUIRED BY THE GOVERNING WELDING SPECIFICATIONS. FILLET WELDS AT FLANGE TO WEB PLATE CONNECTIONS SHALL BE Q.C. TESTED BY MAGNETIC PARTICLE METHOD. ALL Q.C. TESTING IS TO BE AT THE CONTRACTORS EXPENSE.
- PAINTING SHALL CONFORM TO SUBSECTION 807.75 UNLESS SPAN DETAILS OR APPLICABLE SPECIAL PROVISIONS NOTE OTHERWISE.

GENERAL NOTES
FOR SUBSTRUCTURE

- ALL CONCRETE SHALL BE CLASS S.
- TOPS OF ALL FOOTINGS SHALL BE A MINIMUM OF 0.6 m BELOW THE GROUND LINE. FOUNDATIONS FOR FOOTINGS SHALL BE PREPARED IN ACCORDANCE WITH SECTION 801.04 OF THE STANDARD SPECIFICATIONS.
- PILING SHALL BE 405 mm ϕ CONCRETE FILLED STEEL SHELLS AND SHALL BE DRIVEN TO THE MINIMUM SAFE BEARING CAPACITY AS INDICATED ON THE BRIDGE LAYOUTS. ALL PILING SHALL BE DRIVEN WITH AN APPROVED AIR, STEAM, OR DIESEL HAMMER. LENGTHS OF PILING SHOWN ARE ASSUMED FOR ESTIMATING QUANTITIES ONLY. ACTUAL PILE LENGTHS WILL BE DETERMINED IN THE FIELD. PILE LENGTHS FOR PAYMENT WILL BE MEASURED BY THE ACTUAL NUMBER OF METERS OF ACCEPTED PILE LEFT IN PLACE AS PART OF THE FINISHED STRUCTURE. THERE WILL BE NO PAYMENT FOR CUT-OFF OR BUILD-UP OF THE PILES. TEST PILES ARE NOT REQUIRED, BUT MAY BE DRIVEN FOR THE CONTRACTOR'S INFORMATION IN ACCORDANCE WITH THE THIRD PARAGRAPH OF SUBSECTION 805.08(g) OF THE STANDARD SPECIFICATIONS. NO PILES WILL BE PAID FOR AS TEST PILES. PILES FOR ALL BENTS SHALL COMPLY WITH ASTM A252, GR. 2. FOR ALL BRIDGES, PILING IN END BENTS SHALL BE DRIVEN AFTER EMBANKMENT TO BOTTOM OF CAP IS IN PLACE.
- PREBORING OR JETTING MAY BE REQUIRED TO REACH THE SPECIFIED PILE PENETRATION. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, USE PREBORING OR JETTING FOR HIS OWN CONVENIENCE AND AT NO COST TO THE DEPARTMENT.
- REQUIRED PILE PENETRATION LENGTHS GIVEN ARE BELOW NATURAL GROUND AT END BENTS AND BELOW BOTTOM OF FOOTING AT INTERMEDIATE BENTS. PILING IN ALL BENTS SHALL HAVE THE FOLLOWING MINIMUM PENETRATION:
 - STATE HIGHWAY 230, (BRIDGE NO. 06774) OVER U.S. HWY. 67 = 4.6 m
 - U.S. HWY. 67 BRIDGE A, (BRIDGE NO. A6775) OVER COUNTY ROAD 44 AND LICK POND SLOUGH = 6.0 m
 - U.S. HWY. 67 BRIDGE B, (BRIDGE NO. B6775) OVER COUNTY ROAD 44 AND LICK POND SLOUGH = 6.0 m
 - COUNTY ROAD 46, (BRIDGE NO. 06776) OVER U.S. HWY. 67 = 3.7 m
 - COUNTY ROAD 63, (BRIDGE NO. 06777) OVER U.S. HWY. 67 = 4.6 m

**FOR INFORMATION
ONLY**

SHEET 1 OF 1
GENERAL NOTES

HWY. 230 - HWY. 63 (GR. & STRS.) (F)

LAWRENCE COUNTY

ROUTE 67 SEC. 16

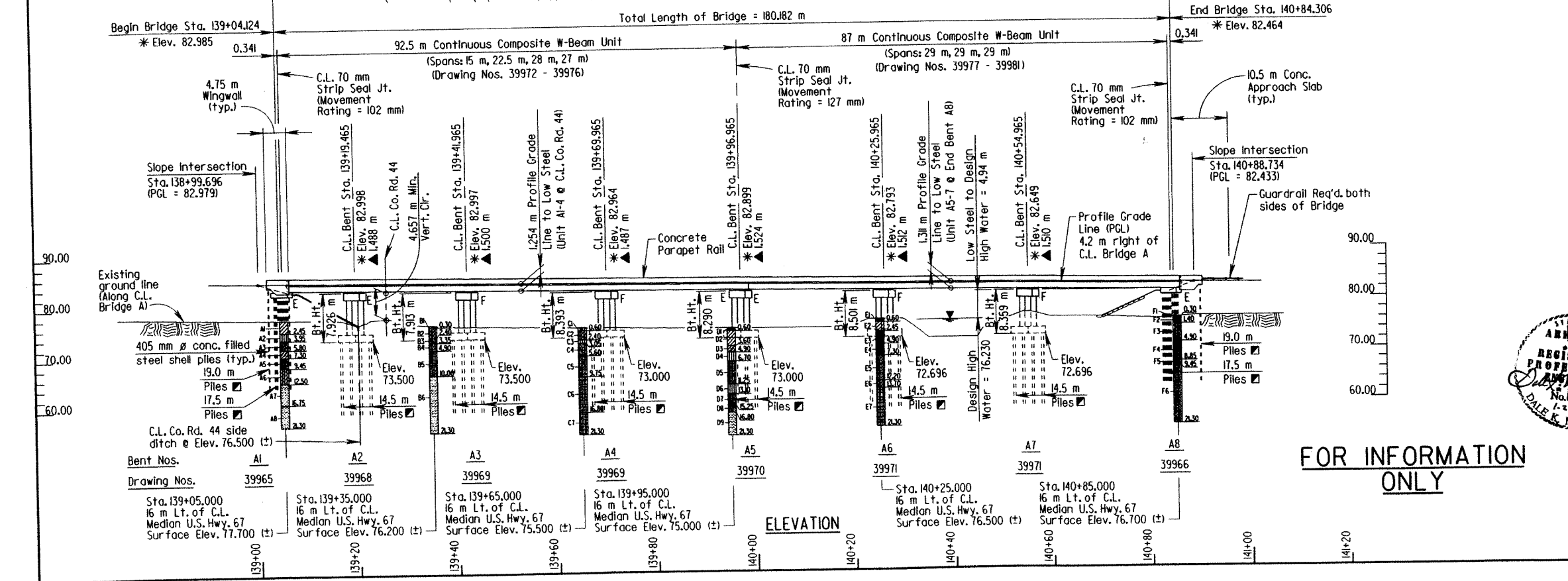
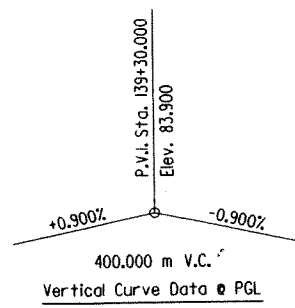
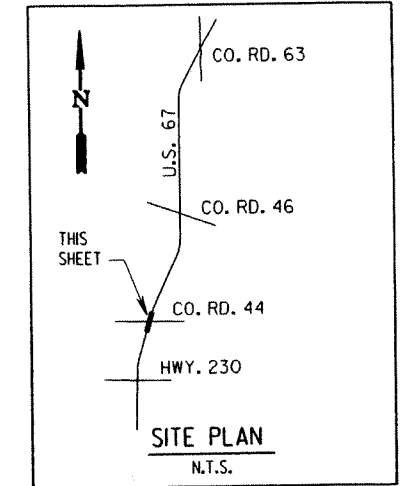
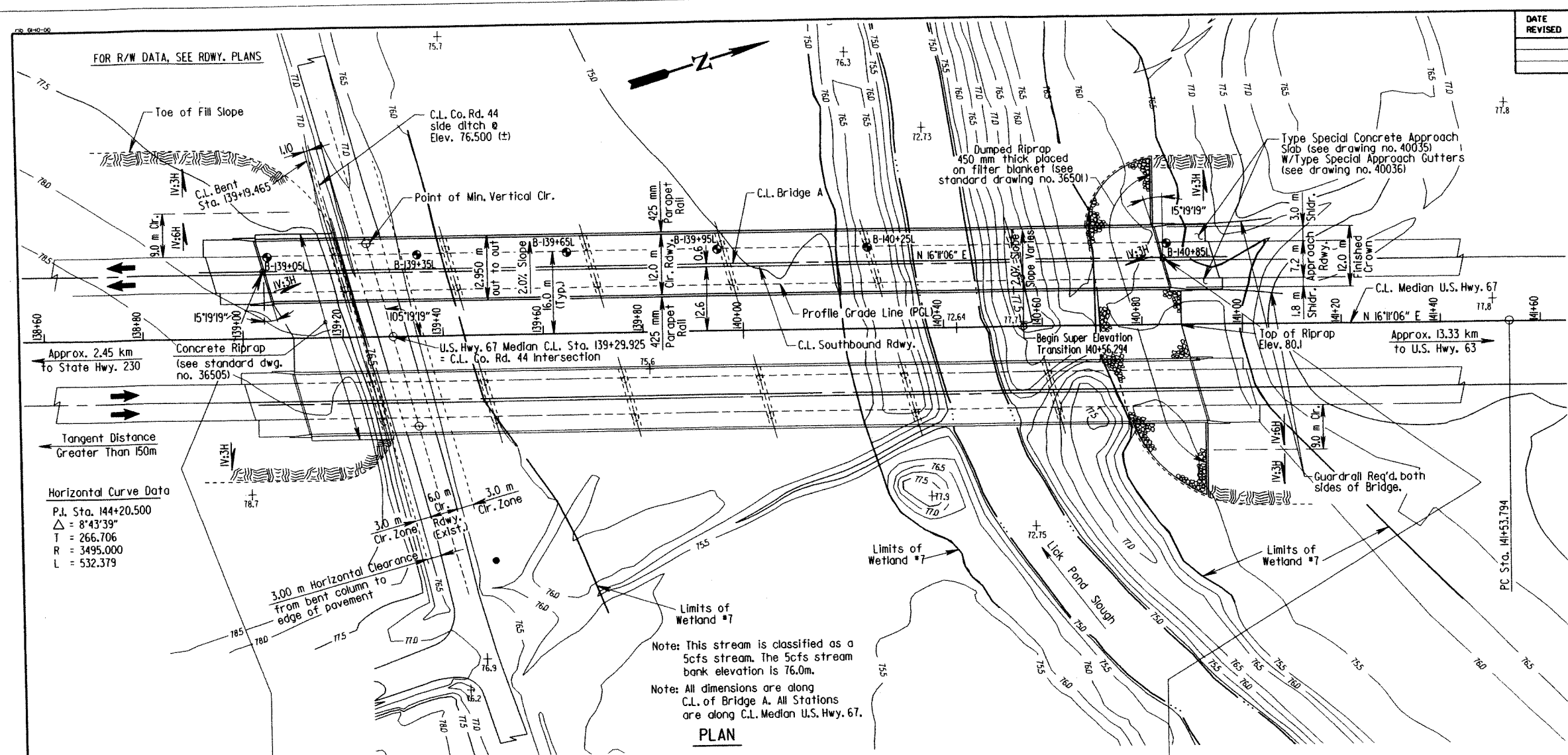
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: R.L.B. DATE: JAN. 2000 FILENAME: RELOGN02
CHECKED BY: D.K.M. DATE: JAN. 2000 SCALE: NONE
DESIGNED BY: K.M.M. DATE: JAN. 2000
BRIDGE NO. A6775, B6775 DRAWING NO. 39953



DATE REVISION	DATE FILMED	DATE REVISION	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		59	85
				JOB NO.		100404		
				A6775		LAYOUT		39963



- Notes:
- All dimensions are in meters unless otherwise noted.
 - Bench Mark: Global Positioning System #380005, 206.20 m left of C.L. Median U.S. Hwy. 67 at Sta. 138+66.196, Elev. 78.450.
 - For General Notes see Dwg. No. 39953.
 - Elevations are along PGL.
 - Length of pile shown is based on 390 kN minimum safe bearing capacity and 405 mm diameter concrete filled steel shell piling.
 - Boring Designation and Location
 - For Soil Boring Legend and "N" values, see Dwg. No. 39964.
 - For Hydraulic Data, see Dwg. No. 39964.
 - Top of deck @ C.L. Bridge to top of cap at low side along C.L. bent.
 - Structural Steel shall be unpainted weathering AASHTO M270 Grade 345W.



FOR INFORMATION ONLY

SHEET 1 OF 2
 BRIDGE A LAYOUT
 U.S. HWY. 67 OVER
 CO. RD. 44 & LICK POND SLOUGH
 HWY. 230 - HWY. 63 (GR. & STRS.) (F)
 LAWRENCE COUNTY
 ROUTE 67 SEC. 16
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

DRAWN BY: RLB DATE: JAN. 2000 FILENAME: RELOPE09
 CHECKED BY: DKM DATE: JAN. 2000 SCALE: 1:500
 DESIGNED BY: KMM DATE: JAN. 2000
 BRIDGE NO. A6775 DRAWING NO. 39963



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		60	85
				JOB NO.		100404		
				A6775	LAYOUT		39964	

Boring B-139+05L

Sta. 139+05.000 16 m Lt. of C.L. Median U.S. Hwy. 67

BORING LEGEND	BORING "N" VALUES
A1 - Very stiff brown fine sandy clay w/ ferrous stains, light gray and brown below 1.2 m	2.00 - 2.30, N=24 2.60 - 2.90, N=14 4.10 - 4.40, N=7 5.80 - 6.10, N=24
A2 - Medium dense light brown and gray fine sandy silt w/ ferrous stains	7.30 - 7.60, N=34 8.90 - 9.20, N=16 10.40 - 10.70, N=12 11.90 - 12.20, N=16
A3 - Firm brown silty clay	13.40 - 13.70, N=38 14.95 - 15.25, N=55
A4 - Medium dense gray clayey fine sand	16.50 - 16.80, N=39 18.00 - 18.30, N=55
A5 - Medium dense brown silty fine sand	19.50 - 19.80, N=42 21.05 - 21.35, N=40
A6 - Stiff dark brown and brown clayey silt w/ sand seams	
A7 - Dense to very dense gray fine sand w/ trace silt and ferrous stains	
A8 - Very dense to dense gray fine sand w/ trace silt	

Boring B-139+35L

Sta. 139+35.000 16 m Lt. of C.L. Median U.S. Hwy. 67

BORING LEGEND	BORING "N" VALUES
B1 - Firm brown fine sandy clay w/ organic staining and rootlets	2.75 - 3.05, N=10 4.30 - 4.60, N=11 5.80 - 6.10, N=14 7.25 - 7.55, N=30
B2 - Firm to stiff gray and brown silty clay w/ ferrous stains and fine sand pockets, more sand below 2.1m	8.85 - 9.15, N=28 10.40 - 10.70, N=50 11.90 - 12.20, N=42 13.45 - 13.75, N=41
B3 - Medium dense gray silty fine sand w/ ferrous stains	14.95 - 15.18, N=50/230 mm 16.50 - 16.71, N=50/205 mm 18.00 - 18.30, N=35 19.50 - 19.80, N=61 21.00 - 21.30, N=40
B4 - Stiff gray silty clay w/ ferrous stains	
B5 - Medium dense to dense brown silty fine sand w/ brown fine sandy silt seams and ferrous nodules, brown silty clay layer at 5.7 m, decreasing silt w/ depth	
B6 - Dense to very dense brown fine sand w/ trace silt, w/ medium sand and brown fine sandy silt seams below 13.4 m. Very dense below 14.8 m, dense w/ some fine gravel seams below 17 m	

Boring B-139+65L

Sta. 139+65.000 16 m Lt. of C.L. Median U.S. Hwy. 67

BORING LEGEND	BORING "N" VALUES
C1 - Stiff brown clayey silt w/ ferrous stains	5.80 - 6.10, N=17 7.30 - 7.60, N=34 8.85 - 9.15, N=42 10.40 - 10.63, N=50/230 mm
C2 - Firm to stiff gray and brown silty clay w/ ferrous stains, calcareous nodules below 1.22 m	11.90 - 12.20, N=38 13.40 - 13.70, N=72 15.25 - 15.48, N=50/230 mm 16.50 - 16.63, N=50/125 mm
C3 - Medium dense gray fine sandy silt w/ some clay & ferrous stains	18.00 - 18.30, N=60 19.40 - 19.70, N=48 21.00 - 21.30, N=40
C4 - Medium dense light brown silty fine sand w/ gray clayey silt pockets	
C5 - Medium dense gray silty fine sand, dense below 7.32 m	
C6 - Dense brown silty fine sand, brown and gray below 14.94 m, some gravel below 16.15 m	
C7 - Dense brown silty fine sand w/ some gravel, trace medium sand from 16.46 to 18.29 m	

HYDRAULIC DATA

FLOOD DESCRIPTION	FREQUENCY	DISCHARGE	NATURAL WATER * SURFACE ELEVATION	WATER SURFACE ELEVATION WITH BACKWATER
	YEARS	CMS	METERS	METERS
DESIGN	50	27.67	76.23	76.23
BASE	100	50.01	76.68	76.69
EXTREME	500	161.41	77.92	77.93
OVERTOPPING	>500			

Drainage Area = 55.3 Square Kilometers.
Historical High Water Elev. = (Not Available)
Low Bridge Member Elev. = 811.5 m

* Unconstricted water surface without structure or roadway approaches.

Boring B-139+95L

Sta. 139+95.000 16 m Lt. of C.L. Median U.S. Hwy. 67

BORING LEGEND	BORING "N" VALUES
D1 - Soft brown fine sandy clay w/ some silt and ferrous stains	2.00 - 2.30, N=24 4.30 - 4.60, N=15 5.80 - 6.10, N=10 7.30 - 7.60, N=16
D2 - Soft to stiff gray clay w/ ferrous stains and rootlets, silty fine sand pockets below 2.74 m	8.80 - 9.10, N=28 10.40 - 10.70, N=48 11.90 - 12.20, N=30 13.40 - 13.70, N=44
D3 - Medium dense dark gray and brown clayey fine sand	14.95 - 15.25, N=41 16.45 - 16.75, N=52 18.00 - 18.30, N=56 19.50 - 19.80, N=55 21.00 - 21.30, N=48
D4 - Loose gray fine sandy silt with gray silty clay pockets	
D5 - Medium dense gray silty fine sand w/ gray fine sandy silt seams, dense below 10.36 m	
D6 - Medium dense gray fine sandy silt	
D7 - Dense brown silty fine sand, some gravel below 14.63 m	
D8 - Dense gray silty fine to medium sand w/ some gravel	
D9 - Dense tan and gray fine to medium sand w/ some gravel	

Boring B-140+25L

Sta. 140+25.000 16 m Lt. of C.L. Median U.S. Hwy. 67

BORING LEGEND	BORING "N" VALUES
E1 - Loose to medium dense brown to gray fine sandy silt w/ ferrous stains	5.80 - 6.10, N=18 7.30 - 7.60, N=25 8.80 - 9.10, N=33 10.40 - 10.70, N=43
E2 - Soft to stiff brown and gray clay w/ ferrous stains and some fine sand	11.90 - 12.20, N=33 13.40 - 13.70, N=16 14.90 - 15.20, N=39 16.40 - 16.70, N=51
E3 - Stiff gray fine sandy clay with ferrous stains	18.00 - 18.23, N=50/230 mm 19.50 - 19.80, N=45 21.00 - 21.30, N=45
E4 - Medium dense gray fine sandy silt	
E5 - Medium dense gray silty fine sand w/ ferrous nodules, dense below 8.8 m	
E6 - Stiff gray silty clay	
E7 - Dense brown silty fine sand w/ ferrous nodules, very dense below 16.41 m, w/ some gravel below 17.68 m, dense below 18.91 m	

Boring B-140+85L

Sta. 140+85.000 16 m Lt. of C.L. Median U.S. Hwy. 67

BORING LEGEND	BORING "N" VALUES
F1 - Soft brown silty clay w/ ferrous stains	1.40 - 1.70, N=23 2.00 - 2.30, N=31 2.70 - 3.00, N=25 4.30 - 4.60, N=37
F2 - Stiff brown fine sandy clay	5.80 - 6.10, N=12 7.30 - 7.60, N=16 8.80 - 9.10, N=27 10.40 - 10.63, N=50/230 mm
F3 - Medium dense to dense light gray and tan silty fine sand w/ some clay and ferrous stains	11.90 - 12.20, N=36 13.40 - 13.70, N=49 14.90 - 15.20, N=55 16.50 - 16.80, N=45
F4 - Stiff gray fine sandy clay	18.00 - 18.30, N=46 19.50 - 19.80, N=59 21.00 - 21.30, N=60
F5 - Medium dense gray silty fine sand	
F6 - Very dense to dense brown silty fine sand w/ ferrous nodules	

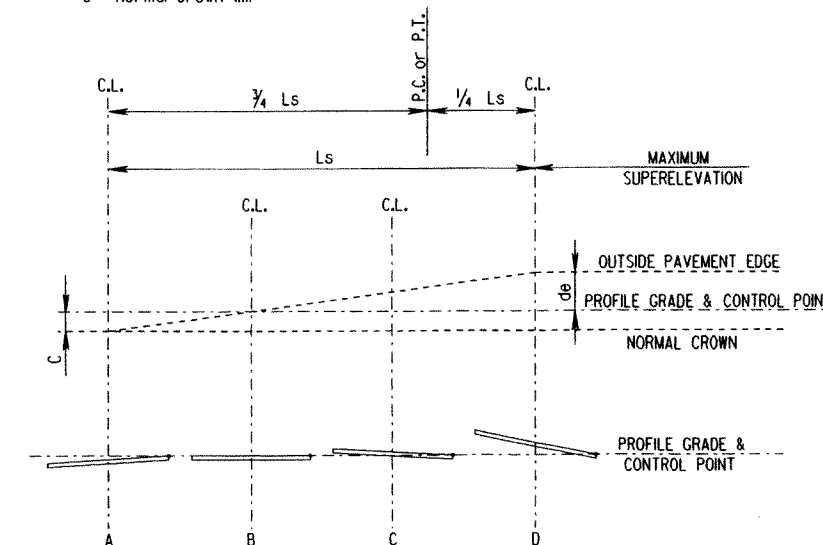
Boring B-141+51L

Sta. 141+51.000 16 m Lt. of C.L. Median U.S. Hwy. 67

BORING LEGEND	BORING "N" VALUES
G1 - Soft brown silty clay w/ ferrous nodules	4.25 - 4.55, N=32 5.80 - 6.10, N=24 7.30 - 7.60, N=14 8.85 - 9.15, N=26
G2 - Very stiff brown clay with fine sand pockets, ferrous stains and calcareous nodules	10.40 - 10.70, N=37 11.90 - 12.20, N=53 13.40 - 13.70, N=42 15.00 - 15.26, N=50/255 mm
G3 - Medium dense light brown silty fine sand with some clay	16.50 - 16.80, N=57 18.00 - 18.26, N=50/255 mm 19.50 - 19.68, N=50/175 mm 21.00 - 21.30, N=60
G4 - Dense light gray and brown fine sandy silt w/ ferrous stains, w/ sandy clay pockets below 5.18 m	
G5 - Stiff to very stiff dark gray clay with light gray sandy silt seams & partings	
G6 - Very dense brown silty fine sand, w/ gray clay layer from 12.50 to 13.11 m, dense from 12.81 to 14.64 m, ferrous nodules below 14.94 m	

ABBREVIATIONS

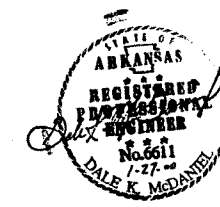
NC - Normal Crown
RC - Reverse Crown, Superelevation at Normal Crown Slope
e - Rate of Superelevation (m PER m)
Ls - Length of Superelevation Transition (m)
L - Distance from Beginning of Superelevation Transition to any Point (m)
d - Width of Pavement (m) or Width of Subgrade (m)
C - Normal Crown (m)



SUPERELEVATION RATES TRANSITION LIMITS

STATION	STATION	LOCATION	PAV'T TRANSITION SLOPE (%)		TRANSITION LENGTH (M)
			FROM	TO	
CURVE 2 (RT)					
140+56.294	141+86.294	LEFT MAIN LANES	-2.0	+2.1	130
141+86.294	146+53.674	LEFT MAIN LANES	+2.1	-2.0	130
146+53.674	147+83.674	LEFT MAIN LANES	-2.0	+2.1	130

Notes:
- All dimensions are in millimeters unless otherwise noted.
- For General Notes see Dwg. No. 39953.



SHEET 2 OF 2

BRIDGE A LAYOUT

U.S. HWY. 67 OVER

CO. RD. 44 & LICK POND SLough

HWY. 230 - HWY. 63 (GR. & STRS.) (F)

LAWRENCE COUNTY

ROUTE 67 SEC. 16

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

FOR INFORMATION ONLY

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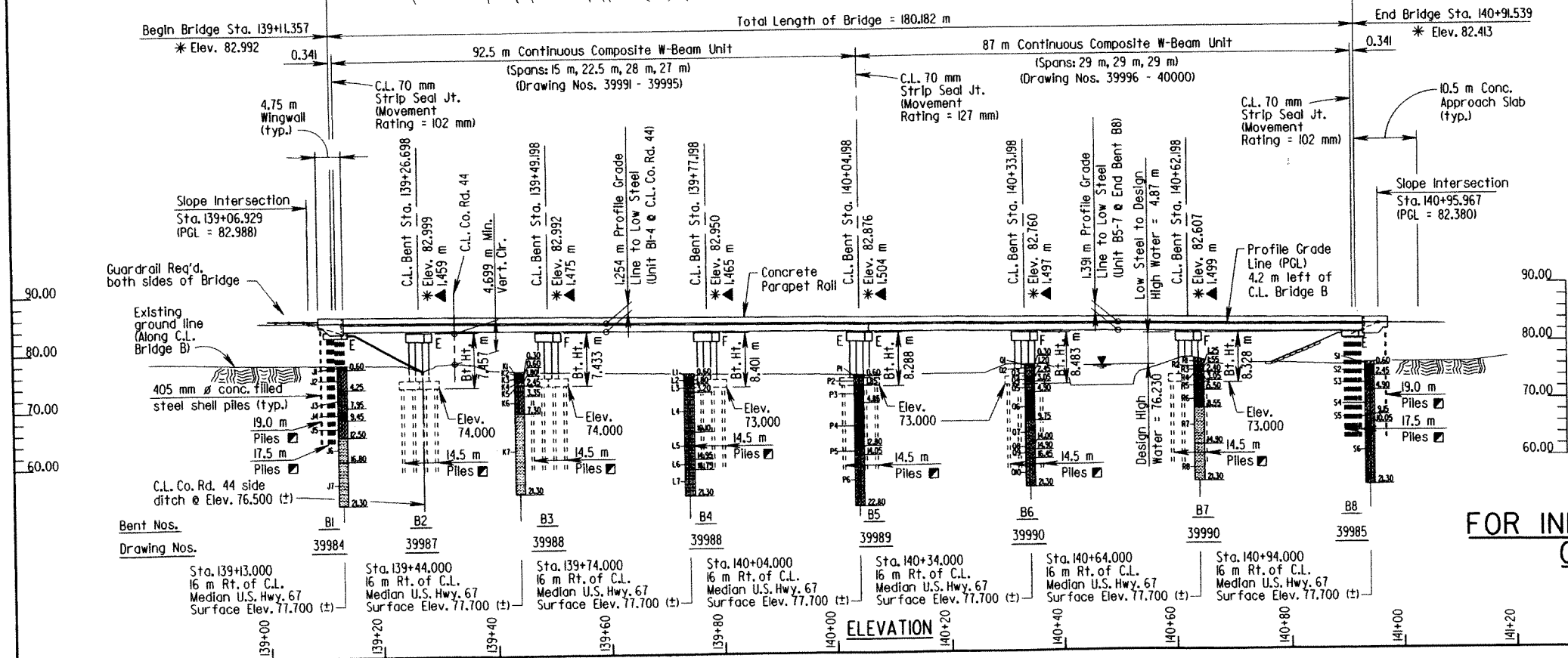
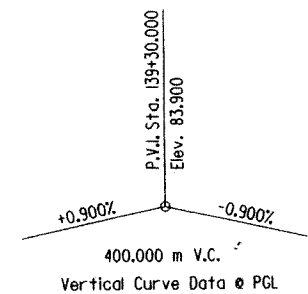
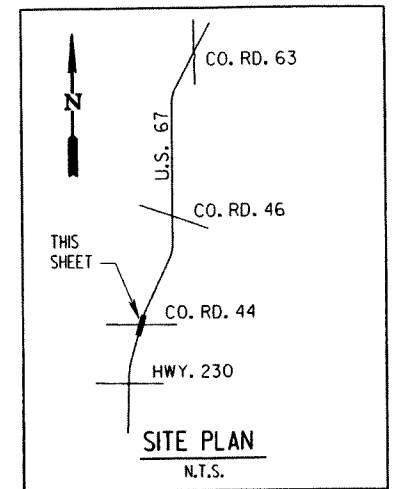
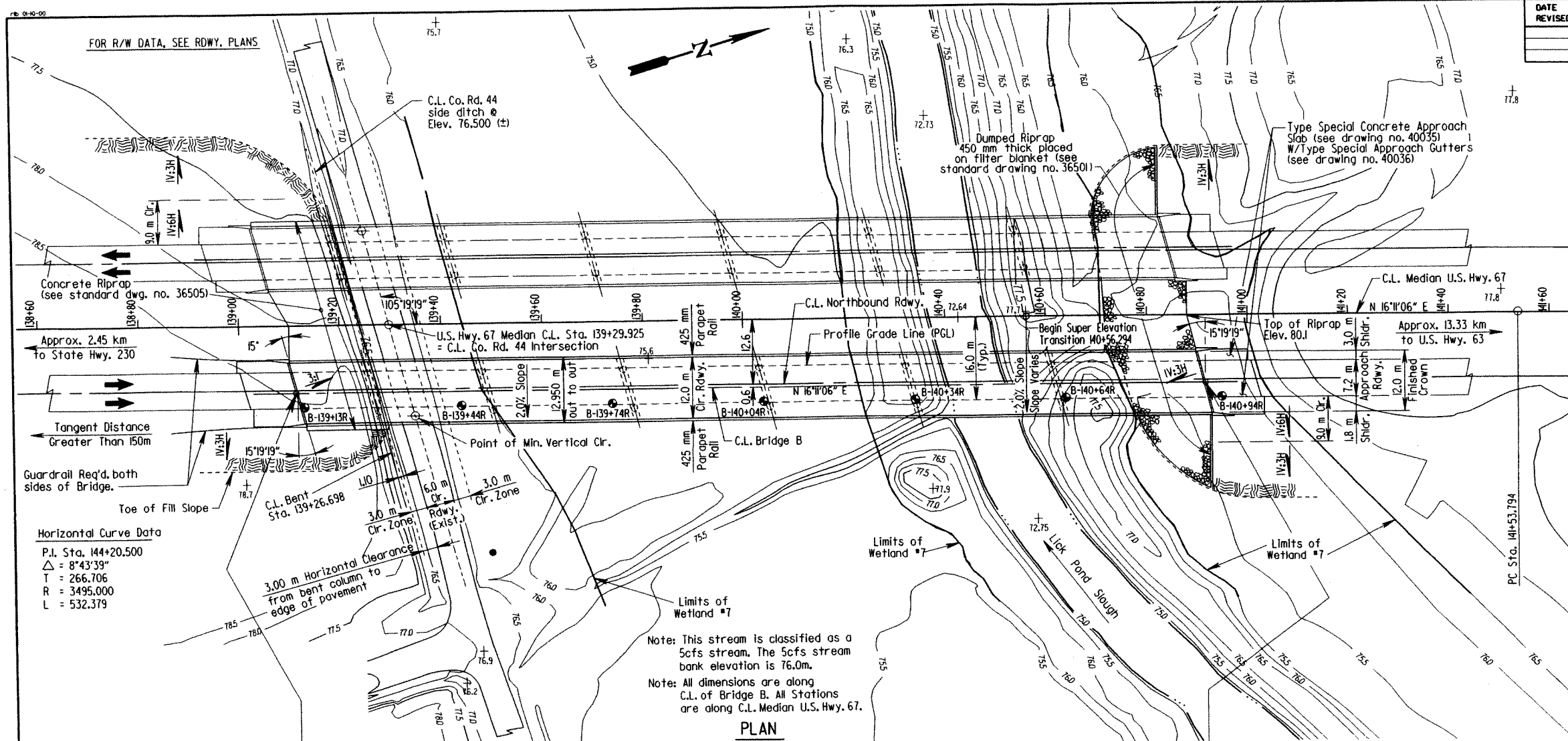
CHECKED BY: DKM DATE: JAN. 2000 SCALE: NONE

DESIGNED BY: KMM DATE: JAN. 2000

BRIDGE NO. A6775 DRAWING NO. 39964



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		61	85
				JOB NO.		100404		
				(1) B6775		LAYOUT		39982



Notes:

- All dimensions are in meters unless otherwise noted.
- Bench Mark: Global Positioning System #380005, 206.20 m left of C.L. Median U.S. Hwy. 67 at Sta. 138+66.196, Elev. 78.450.
- For General Notes see Dwg. No. 39953.
- * - Elevations are along PGL.
- - Length of pile shown is based on 390 kN minimum safe bearing capacity and 405 mm diameter concrete filled steel shell piling.
- ⊕ - Boring Designation and Location
 - For Soil Boring Legend and "N" values, see Dwg. No. 39983.
 - For Hydraulic Data, see Dwg. No. 39983.
- ▲ - Top of deck @ C.L. Bridge to top of cap at low side along C.L. bent.
- Structural Steel shall be unpainted weathering AASHTO M270 Grade 345W.

SHEET 1 OF 2
BRIDGE B LAYOUT
U.S. HWY. 67 OVER
CO. RD. 44 & LICK POND SLOUGH
HWY. 230 - HWY. 63 (GR. & STRS.) (F)
LAWRENCE COUNTY
ROUTE 67 SEC. 16
KANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: RLB DATE: JAN. 2000 FILENAME: RELOPEJO
 CHECKED BY: DKM DATE: JAN. 2000 SCALE: 1:500
 DESIGNED BY: KJM DATE: JAN. 2000
 BRIDGE NO. B6775 DRAWING NO. 39982



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		62	85
				JOB NO.	100404			
				B6775	LAYOUT			39983

Boring B-139+13R

Sta. 139+13.000 16 m Rt. of C.L. Median U.S. Hwy. 67

BORING LEGEND

BORING "N" VALUES

- J1 - Medium dense stiff brown fine sandy silt
2.00 - 2.30, N=27
2.75 - 3.05, N=11
4.25 - 4.55, N=7
J2 - Very stiff to stiff brown silty clay w/ clayey fine sand seams and layers and ferrous stains, clayey fine sand layer from 2 to 2.2 m
5.80 - 6.10, N=27
7.30 - 7.60, N=34
8.80 - 9.10, N=17
10.40 - 10.70, N=13
11.90 - 12.20, N=16
J3 - Loose to dense gray silty fine sand w/ gray clayey silt seams, gray clayey silt layer from 5.8 to 6 m, gray & brown below 7.3 m
13.40 - 13.70, N=38
14.90 - 15.20, N=50
16.50 - 16.80, N=39
18.00 - 18.30, N=56
19.50 - 19.80, N=48
J4 - Medium dense brown fine sandy silt
21.00 - 21.30, N=42
22.60 - 22.90, N=36
J5 - Stiff dark brown silty clay, clayey silt w/ sandy silt seams
24.10 - 24.40, N=35
J6 - Dense gray fine sand w/ trace silt
J7 - Very dense to dense gray fine sand w/ trace silt, w/ some gravel below 23 m

Boring B-139+44R

Sta. 139+44.000 16 m Rt. of C.L. Median U.S. Hwy. 67

BORING LEGEND

BORING "N" VALUES

- K1 - Firm brown & gray clayey silt w/ fine sand
2.70 - 3.00, N=20
4.25 - 4.55, N=11
5.80 - 6.10, N=10
K2 - Soft gray silty clay w/ ferrous stains
7.30 - 7.60, N=23
8.85 - 9.15, N=28
K3 - Stiff to very stiff gray fine sandy clay w/ ferrous stains
10.40 - 10.68, N=50/280 mm
11.90 - 12.20, N=40
13.40 - 13.70, N=38
K4 - Medium dense gray clayey fine sand w/ ferrous stains
14.90 - 15.13, N=50/230 mm
16.45 - 16.63, N=50/175 mm
K5 - Medium dense brown & gray silty fine sand
18.00 - 18.30, N=35
19.50 - 19.80, N=57
21.05 - 21.35, N=44
K6 - Stiff gray silty clay w/ ferrous stains, brown sandy silt seams at 7.3 m
K7 - Medium dense to very dense brown fine sand w/ trace silt, w/ some medium sand below 8.8 m, dense below 10 m, some fine gravel seams below 16.8 m, gravel seam at 19.5 m

Boring B-139+74R

Sta. 139+74.000 16 m Rt. of C.L. Median U.S. Hwy. 67

BORING LEGEND

BORING "N" VALUES

- L1 - Soft brown clayey silt w/ trace fine sand and ferrous nodules
4.30 - 4.60, N=26
5.80 - 6.10, N=20
7.30 - 7.60, N=36
8.85 - 9.15, N=43
10.40 - 10.66, N=50/255 mm
11.90 - 12.20, N=32
L3 - Medium dense gray silty fine sand w/ trace clay and ferrous stains
13.40 - 13.61, N=50/205 mm
14.95 - 15.13, N=50/175 mm
16.50 - 16.63, N=50/125 mm
L4 - Medium dense to dense brown silty fine sand w/ ferrous nodules, gray below 5.79 m, dense below 7.32 m
18.00 - 18.30, N=57
19.50 - 19.80, N=39
21.05 - 21.35, N=37
L5 - Dense brown silty fine sand, very dense below 13.41 m
L6 - Very dense brown silty medium to fine sand w/ some gravel
L7 - Dense brown silty fine sand w/ some gravel

Boring B-140+04R

Sta. 140+04.000 16 m Rt. of C.L. Median U.S. Hwy. 67

BORING LEGEND

BORING "N" VALUES

- P1 - Loose brown and gray fine sandy silt
4.30 - 4.60, N=20
5.80 - 6.10, N=21
7.30 - 7.60, N=27
8.85 - 9.15, N=40
10.40 - 10.70, N=48
11.90 - 12.20, N=38
13.45 - 13.75, N=16
14.90 - 15.20, N=43
16.50 - 16.80, N=50
18.00 - 18.21, N=50/205 mm
19.50 - 19.68, N=50/175 mm
21.05 - 21.35, N=40
22.55 - 22.85, N=56
P2 - Firm to soft gray and brown silty clay w/ ferrous stains
P3 - Stiff gray and brown fine sandy clay w/ fine sandy silt pockets, ferrous stains and calcareous nodules, firm below 2.59 m, stiff below 4 m
P4 - Medium dense to dense gray fine sandy silt w/ ferrous stains
P5 - Stiff gray silty clay
P6 - Dense brown silty fine sand, very dense below 16.47 m, w/ some gravel below 19.29 m, dense below 21.05 m

Boring B-140+34R

Sta. 140+34.000 16 m Rt. of C.L. Median U.S. Hwy. 67

BORING LEGEND

BORING "N" VALUES

- Q1 - Loose brown fine sandy silt
5.80 - 6.10, N=36
7.30 - 7.60, N=15
8.85 - 9.10, N=12
Q2 - Medium dense light gray and brown silty fine sand w/ ferrous stains
10.35 - 10.65, N=35
11.90 - 12.20, N=41
Q3 - Very stiff gray and brown silty clay w/ fine sandy silt pockets
13.40 - 13.70, N=44
14.90 - 15.20, N=49
16.50 - 16.80, N=52
Q4 - Very stiff gray and brown fine sandy clay
18.00 - 18.30, N=60
19.50 - 19.80, N=52
Q5 - Medium dense brown and gray silty fine w/ some clay and ferrous stains
21.00 - 21.30, N=45
Q6 - Dense to medium dense gray fine sandy silt w/ gray silty sand seams
Q7 - Dense gray silty fine sand
Q8 - Stiff gray silty clay
Q9 - Dense gray silty fine to medium sand with some gravel
Q10 - Very dense brown silty fine to medium sand w/ some gravel, dense below 20.13 m

Boring B-140+64R

Sta. 140+64.000 16 m Rt. of C.L. Median U.S. Hwy. 67

BORING LEGEND

BORING "N" VALUES

- R1 - Soft brown silty clay w/ fine sand and ferrous stains, gray silty clay seams below 0.61 m
4.30 - 4.60, N=17
5.80 - 6.10, N=21
7.30 - 7.60, N=21
8.85 - 9.15, N=37
10.40 - 10.70, N=40
11.90 - 12.20, N=51
13.40 - 13.70, N=49
14.95 - 15.25, N=46
16.45 - 16.75, N=40
18.00 - 18.30, N=40
19.50 - 19.80, N=49
21.00 - 21.30, N=36
R2 - Firm light gray clayey silt
R3 - Stiff gray fine sandy clay with ferrous stains
R4 - Medium dense light gray silty fine sand with some clay
R5 - Medium dense light gray and brown fine sandy silt w/ clay and ferrous stains
R6 - Stiff gray fine sandy clay with decayed organic matter
R7 - Dense brown fine sand w/ organics and trace silt, gray silty clay seams from 10.36 m - 12.20 m
R8 - Dense brown medium to fine sand w/ some silt and ferrous nodules

Boring B-140+94R

Sta. 140+94.000 16 m Rt. of C.L. Median U.S. Hwy. 67

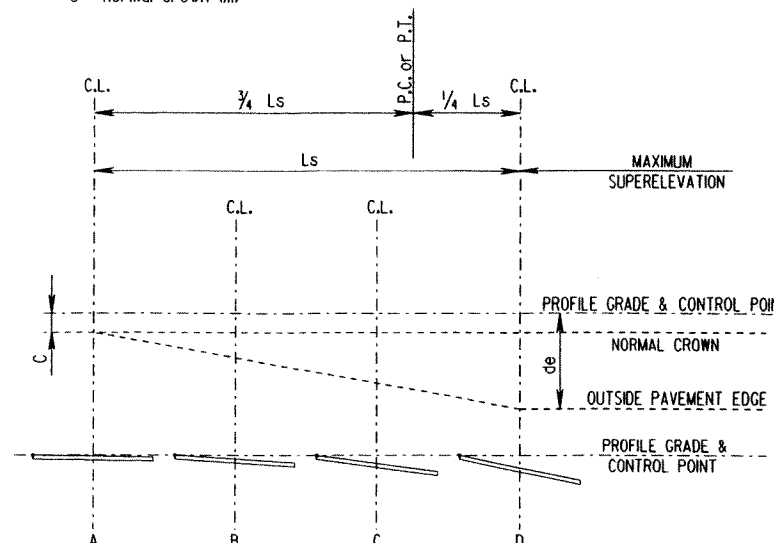
BORING LEGEND

BORING "N" VALUES

- S1 - Loose brown clayey fine sand
0.80 - 1.10, N=29
1.30 - 1.60, N=16
1.85 - 2.15, N=28
2.30 - 2.60, N=36
2.90 - 3.20, N=20
3.45 - 3.75, N=13
3.80 - 4.10, N=16
4.25 - 4.55, N=29
4.80 - 5.10, N=29
5.40 - 5.70, N=52
5.80 - 6.10, N=36
6.40 - 6.70, N=46
6.90 - 7.20, N=48
7.50 - 7.80, N=45
8.00 - 8.30, N=46
8.80 - 9.10, N=48
9.50 - 9.80, N=48
10.00 - 10.30, N=62
S2 - Stiff brown fine sandy clay w/ ferrous stains
S3 - Dense to medium dense light gray silty fine sand
S4 - Stiff gray silty clay w/ gray fine sandy silt seams
S5 - Medium dense gray silty fine sand
S6 - Dense brown silty fine sand

ABBREVIATIONS

- NC - Normal Crown
RC - Reverse Crown, Superelevation at Normal Crown Slope
e - Rate of Superelevation (m PER m)
Ls - Length of Superelevation Transition (m)
L - Distance from Beginning of Superelevation Transition to any Point (m)
d - Width of Pavement (m) or Width of Subgrade (m)
C - Normal Crown (m)

ONE-WAY TRAFFIC
N.T.S.

SUPERELEVATION RATES TRANSITION LIMITS

STATION	STATION	LOCATION	PAV'T TRANSITION SLOPE (%)		TRANSITION LENGTH	
			FROM	TO		(M)
CURVE 2 (RT)						
140+56.294	141+86.294	RIGHT MAIN LANES	-2.0	-2.1	130	
141+86.294	146+53.674	RIGHT MAIN LANES	-----	-2.1	-----	
146+53.674	147+83.674	RIGHT MAIN LANES	-2.1	-----	-2.0	130

- Notes:
- All dimensions are in millimeters unless otherwise noted.
- For General Notes see Dwg. No. 39953.

HYDRAULIC DATA

FLOOD DESCRIPTION	FREQUENCY	DISCHARGE	NATURAL WATER * SURFACE ELEVATION	WATER SURFACE ELEVATION WITH BACKWATER
	YEARS	CMS	METERS	METERS
DESIGN	50	27.67	76.23	76.23
BASE	100	50.01	76.68	76.69
EXTREME	500	161.41	77.92	77.93
OVERTOPPING	>500	—	—	—

Drainage Area = 55.3 Square Kilometers.
Historical High Water Elev. = (Not Available)
Low Bridge Member Elev. = 81.043 m

* Unconstricted water surface without structure or roadway approaches.

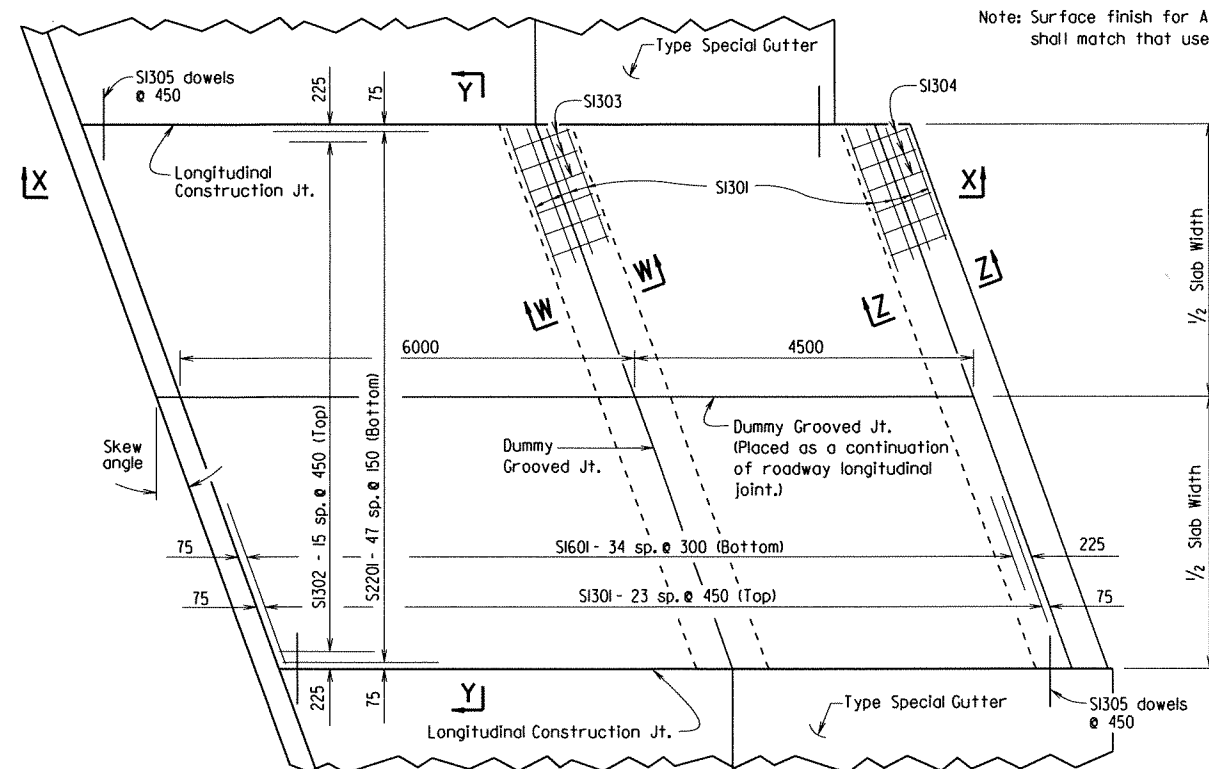
FOR INFORMATION
ONLY

SHEET 2 OF 2
BRIDGE B LAYOUT
U.S. HWY. 67 OVER
CO. RD. 44 & LICK POND SLOUGH
HWY. 230 - HWY. 63 (GR. & STRS.) (F)
LAWRENCE COUNTY
ROUTE 67 SEC. 16
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

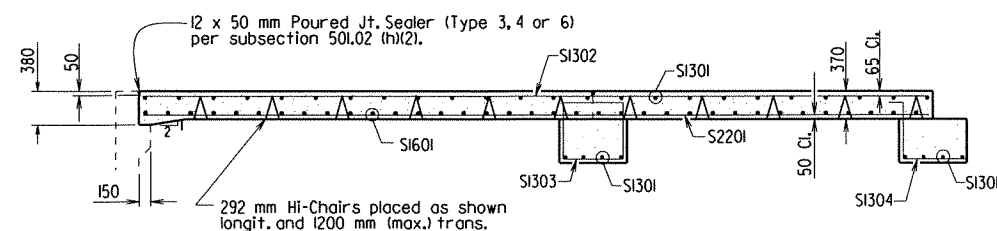
DRAWN BY: R.L.B. DATE: JAN. 2000 FILENAME: RELOPEIO
CHECKED BY: D.K.M. DATE: JAN. 2000 SCALE: NONE
DESIGNED BY: K.M.M. DATE: JAN. 2000
BRIDGE NO. B6775 DRAWING NO. 39983



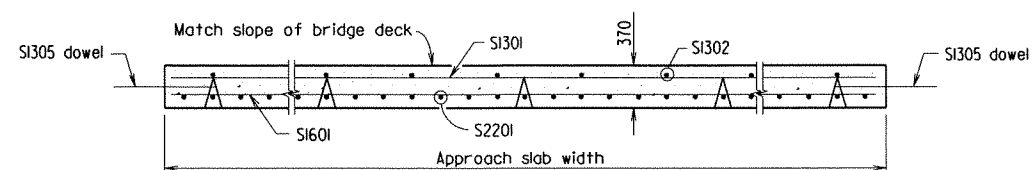
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		63	85
				JOB NO.		100404		
				① A&B6775	APPROACH SLAB		40035	



PLAN - TYPE SPECIAL APPROACH SLAB
Scale = 1 : 50

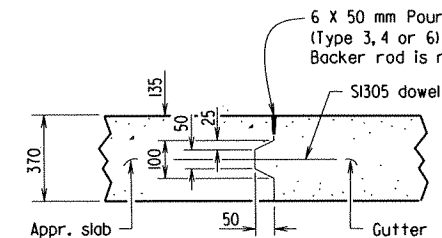


SECTION X-X
Scale = 1 : 50

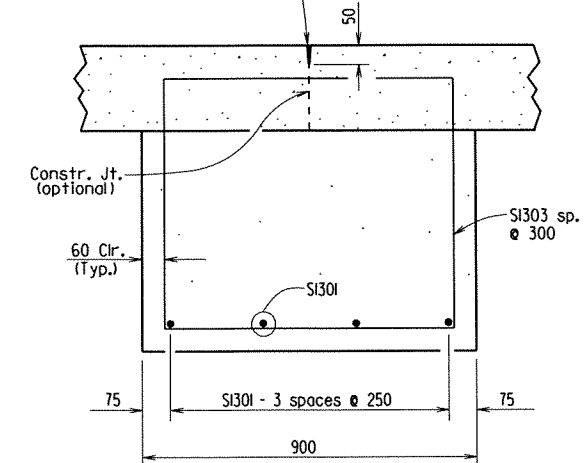


SECTION Y-Y
N.T.S.

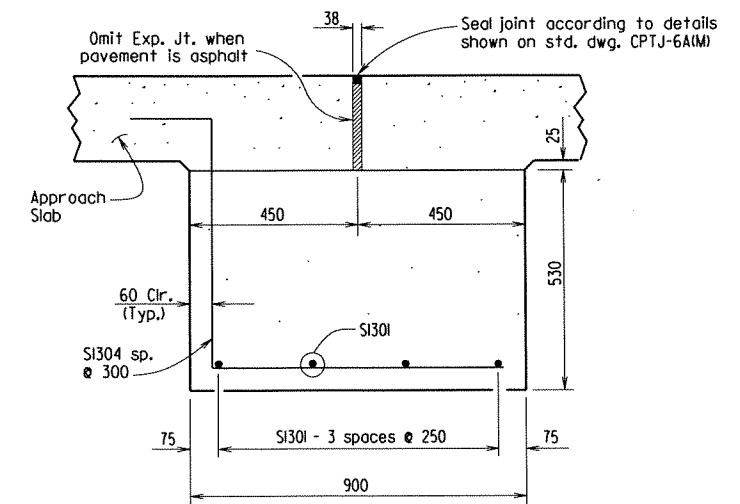
Note: Surface finish for Approach Slabs shall match that used on the bridge deck.



DETAILS OF LONGITUDINAL
CONSTRUCTION JOINT
N.T.S.



SECTION W-W
N.T.S.



SECTION Z-Z
N.T.S.

BAR LIST
ONE TYPE SPECIAL APPROACH SLAB

[illegible]

TABLE OF QUANTITIES FOR ONE
TYPE SPECIAL APPROACH SLAB

Slab Width, m	Reinforcing Steel, kg	Concrete (m ³)
7.2	2481	35.44

GENERAL NOTES

All dimensions are in millimeters unless otherwise noted.

Concrete shall be Class S (AE) ($f'c = 28.0 \text{ MPa}$)

Reinforcement Steel shall conform to AASHTO M31 or M53, Grade 420. Fabricate bar lengths to provide 50 mm cover at each end.

Approach Slabs will be measured and paid for in accordance with Section 504 of the Standard Specifications.

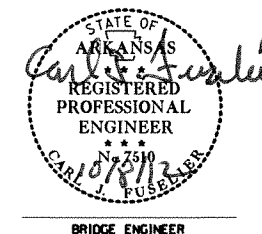
DETAILS OF
TYPE SPECIAL APPROACH SLAB

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION

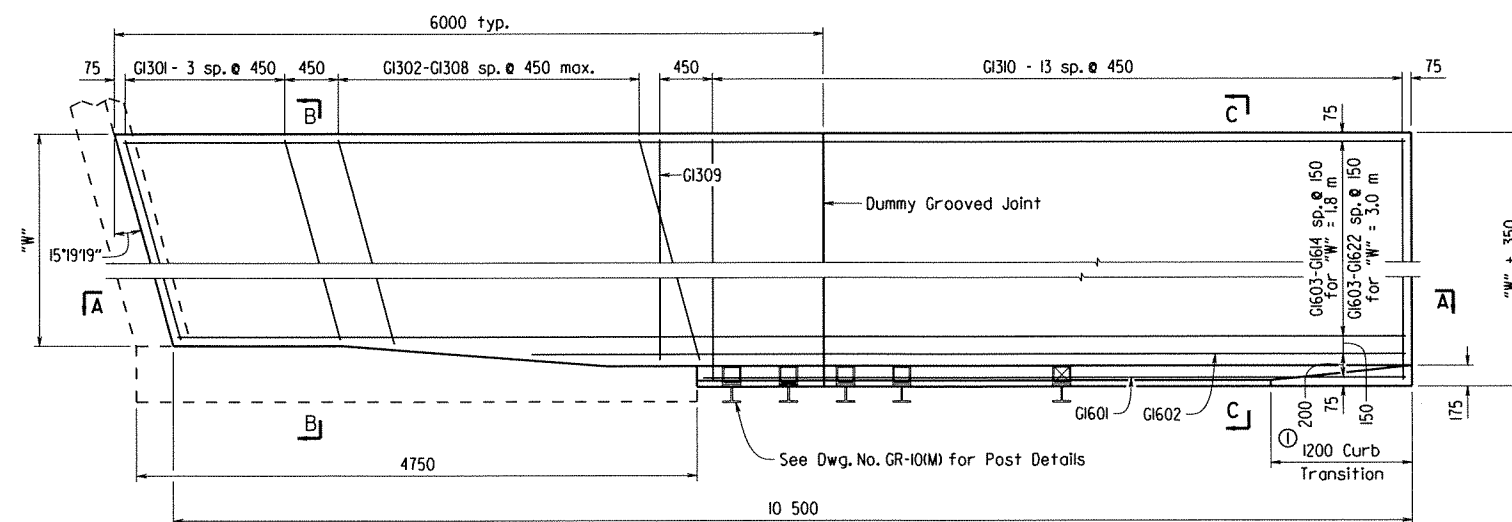
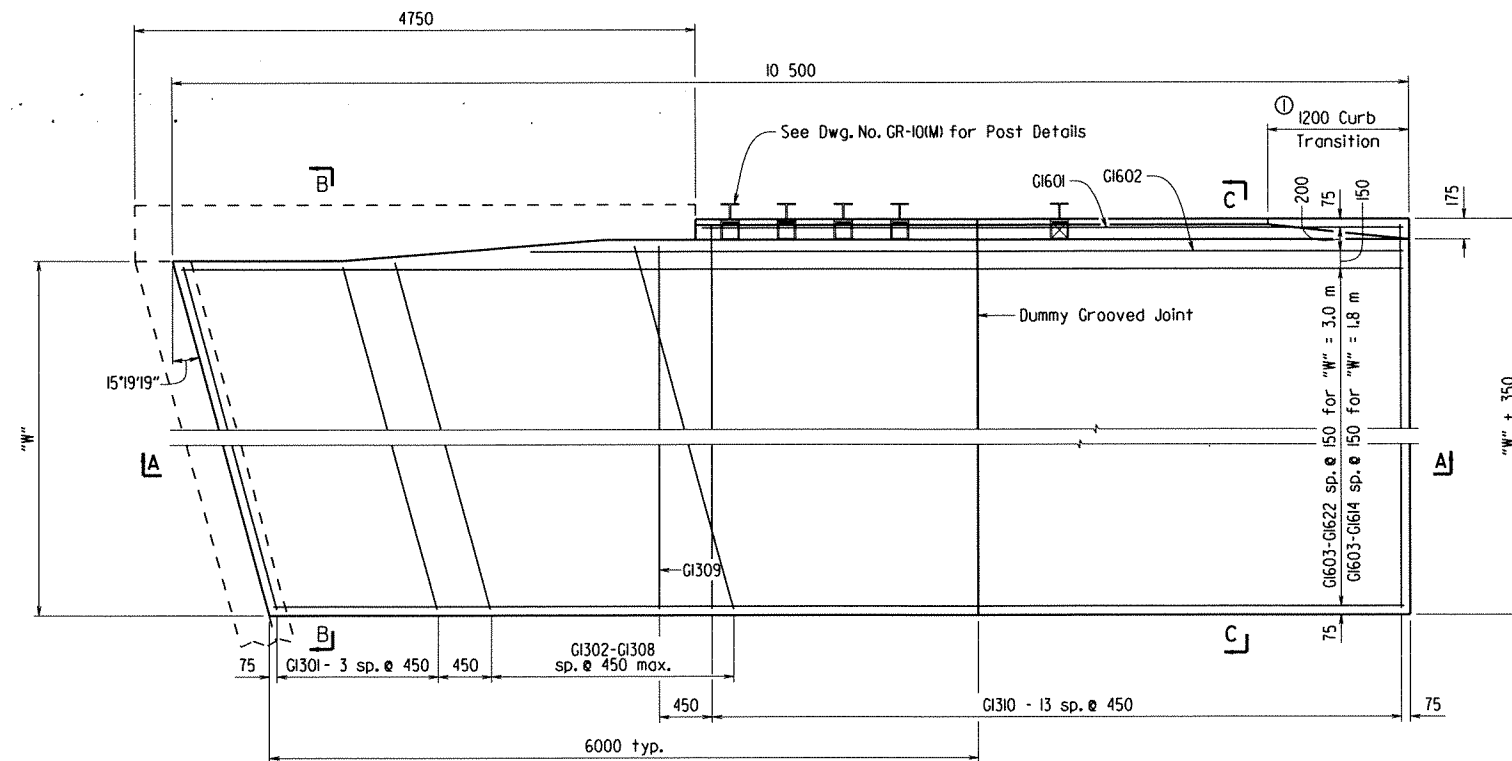
LITTLE ROCK, ARK.

DRAWN BY: A.M.S. DATE: 10/4/12 FILENAME: b100404_as.dgn
CHECKED BY: JTP DATE: 10-5-12 SCALE: As Shown
DESIGNED BY: Std. DATE: _____

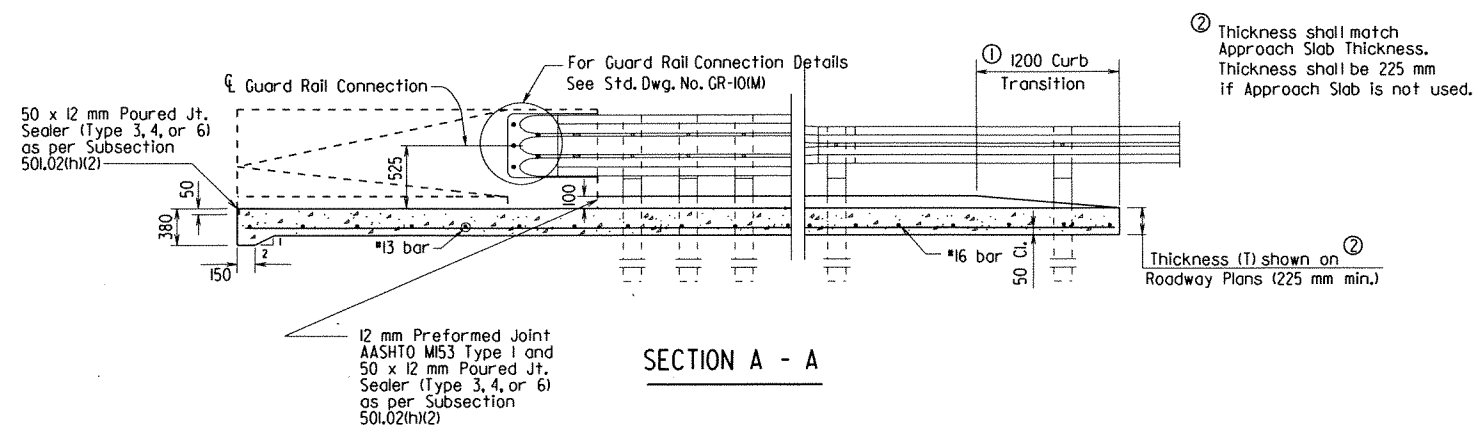
BRIDGE NO. A&B6775 DRAWING NO. 40035



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		64	85
				JOB NO.		100404		
				(1) A&B6775		APPR. GUTTERS		40036



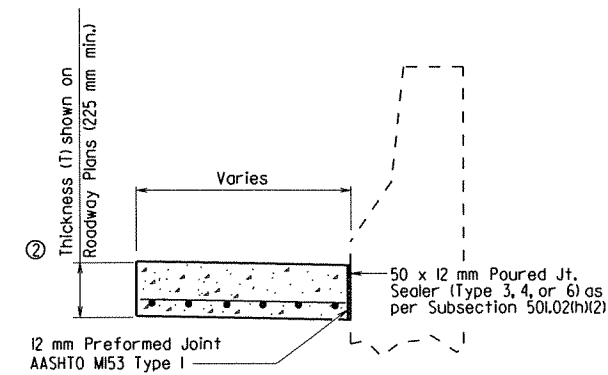
PLAN OF TYPE SPECIAL APPROACH GUTTERS



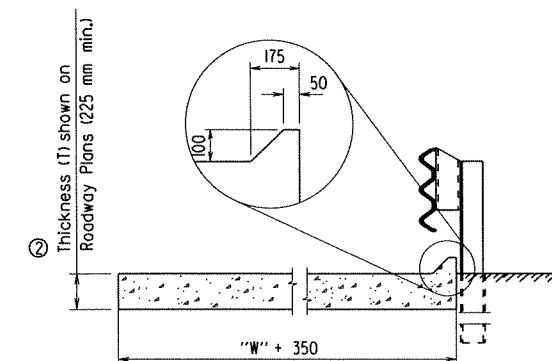
SECTION A - A

① Construct gutter curb with height-transition as shown if drop inlet is not placed at end of gutter.

Construct gutter curb full height (no height-transition) if drop inlet is placed at end of gutter. Curb height transition placed on drop inlet. See drop inlet details.



SECTION B - B



SECTION C - C

BAR LIST FOR
TYPE SPECIAL GUTTERS

	BRIDGE	Right Main Lanes Beg. of Bridge & Left Main Lanes End of Bridge		Right Main Lanes End of Bridge & Left Main Lanes Beg. of Bridge	
"W"	Mark	No. Req'd.	Length	No. Req'd.	Length
1.8 meters	G1301	4	1760	4	1760
	G1302-G1308	1 ea.	1800 to 1940	1 ea.	1800 to 1940
	G1309	1	1875	1	1875
	G1310	14	2050	14	2050
	G1601	1	5960	1	5960
	G1602	1	7420	1	7420
	G1603-G1614	1 ea.	10 420 to 10 870	1 ea.	9920 to 10 380
3.0 meters	G1301	4	3000	4	3000
	G1302-G1308	1 ea.	3040 to 3190	1 ea.	3040 to 3190
	G1309	1	3075	1	3075
	G1310	14	3250	14	3250
	G1601	1	5960	1	5960
	G1602	1	7420	1	7420
	G1603-G1622	1 ea.	9600 to 10 380	1 ea.	10 420 to 11 200

TABLE OF QUANTITIES FOR
TYPE SPECIAL APPROACH GUTTERS

	Right Main Lanes Beg. of Bridge & Left Main Lanes End of Bridge		Right Main Lanes End of Bridge & Left Main Lanes Beg. of Bridge	
Gutter Width (m)	Reinforcing Steel (kg)	Concrete (m ³)	Reinforcing Steel (kg)	Concrete (m ³)
1.8	269	8.13	260	7.80
3.0	413	12.17	438	13.08

DETAILS OF TYPE SPECIAL APPROACH GUTTERS

ROUTE 100 SEC. 10
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: JYP DATE: 10-5-12 FILENAME: b100404_ag.dgn
CHECKED BY: KMY DATE: 10/19/12 SCALE: No Scale
DESIGNED BY: Std. DATE: _____
BRIDGE NO. A&B6775 DRAWING NO. 40036

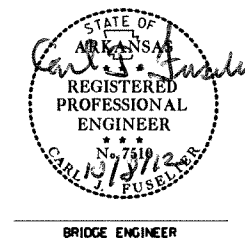
GENERAL NOTES

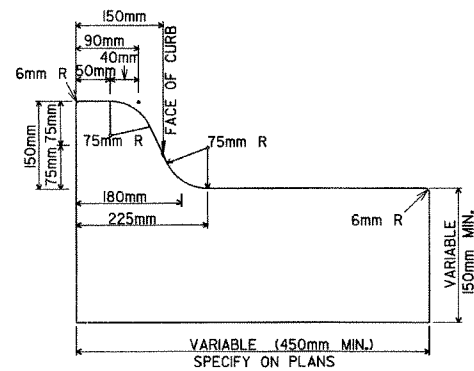
All dimensions are in millimeters (mm) unless otherwise noted.

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

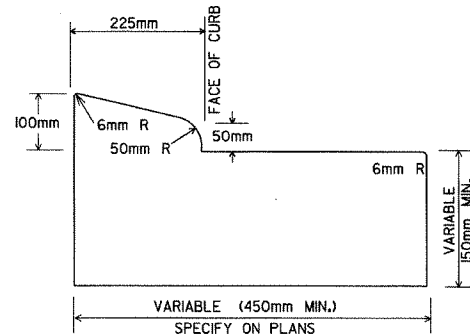
Reinforcement Steel shall conform to AASHTO M31 or M53, Grade 420 ($f_y = 420$ MPa).

Approach Gutters will be measured and paid for in accordance with Section 504 of the Standard Specifications.

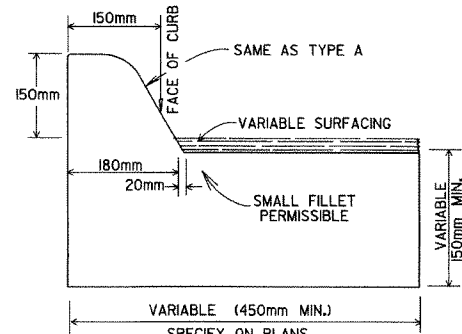




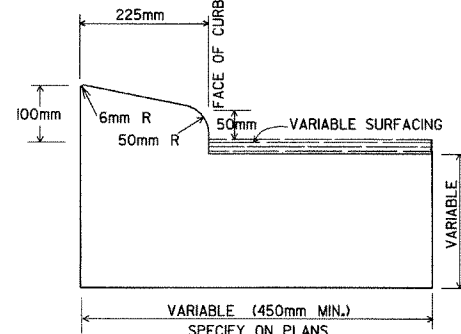
TYPE A



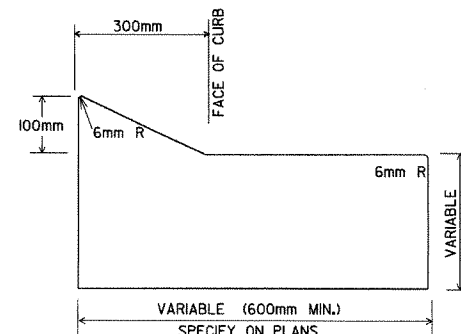
TYPE B-1



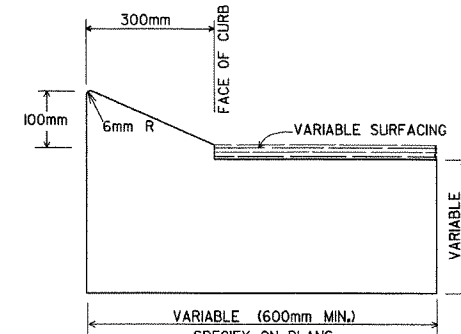
TYPE C



TYPE B-2

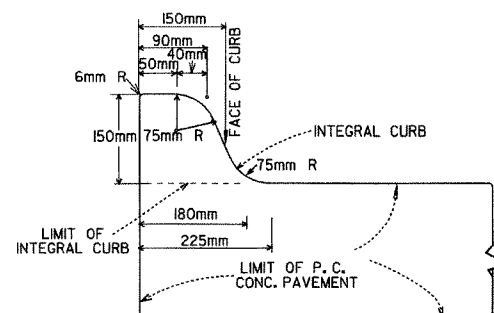


TYPE E-1

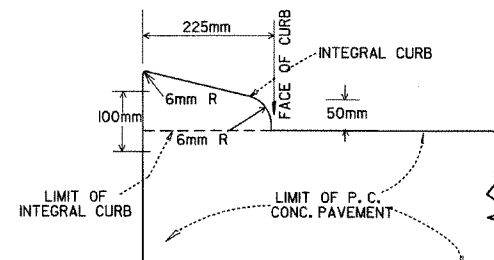


TYPE E-2

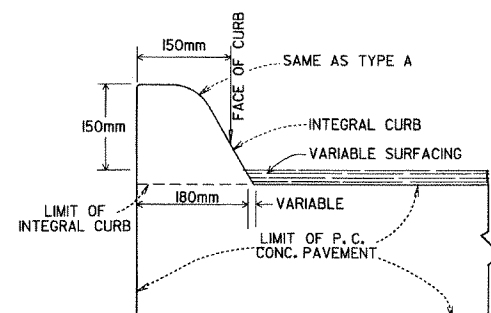
CONCRETE COMBINATION CURB AND GUTTER



TYPE A

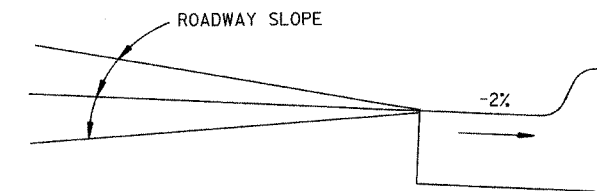


TYPE B

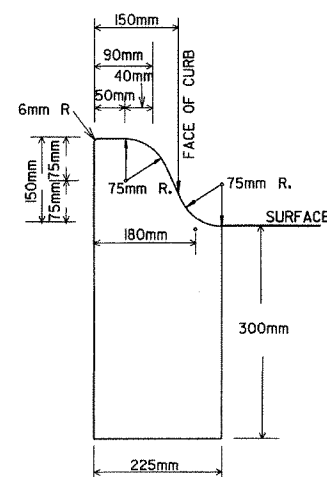


TYPE C

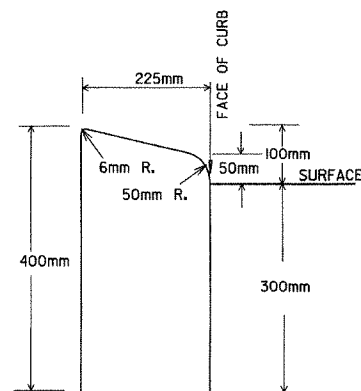
INTEGRAL CURB



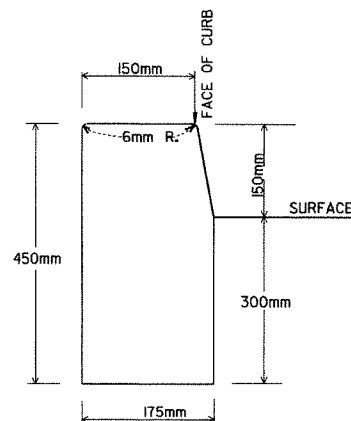
DETAIL OF GUTTER SLOPE
GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.



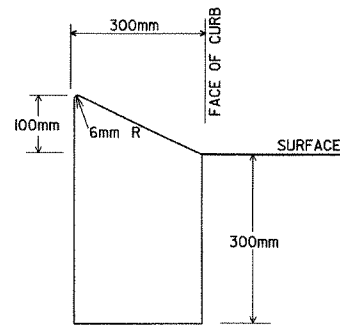
TYPE A



TYPE B

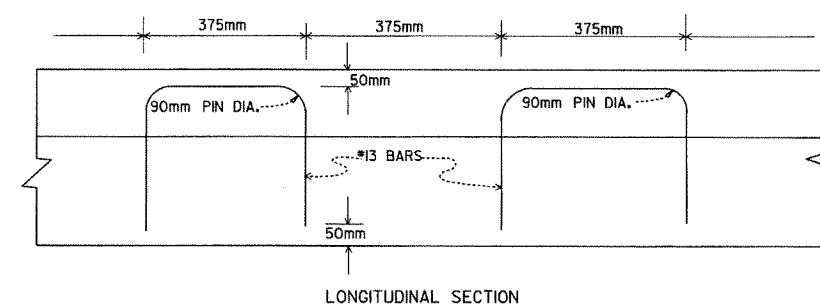


TYPE D

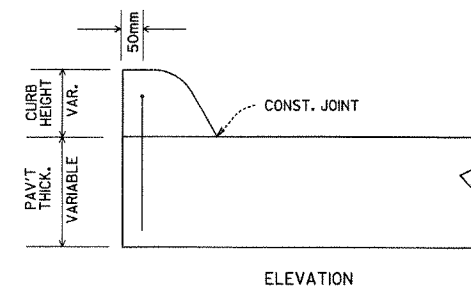


TYPE E

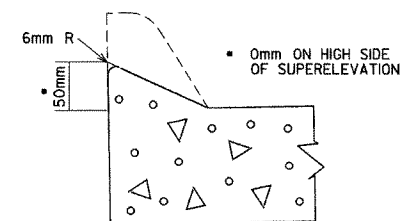
CONCRETE CURB



LONGITUDINAL SECTION



ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



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

DETAILS OF MODIFIED CURB

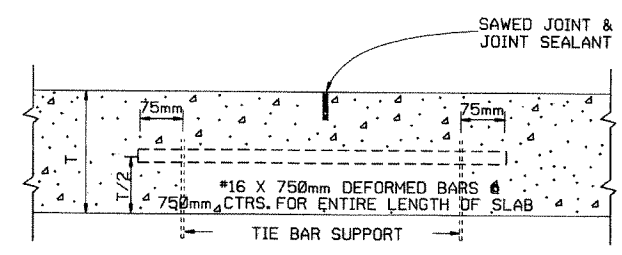
8-25-07	REVISED GUTTER SLOPE & MODIFIED CURB DETAIL	
8-10-05	ADDED DETAILS OF TYPE E CURBS	
8-18-99	REVISED MODIFIED CURB	
4-3-97	REVISED STEEL BARS TO SOFT METRIC	
7-20-95	CONVERTED TO METRIC	
DATE	REVISION	DATE FILED

ARKANSAS STATE HIGHWAY COMMISSION

CURBING DETAILS

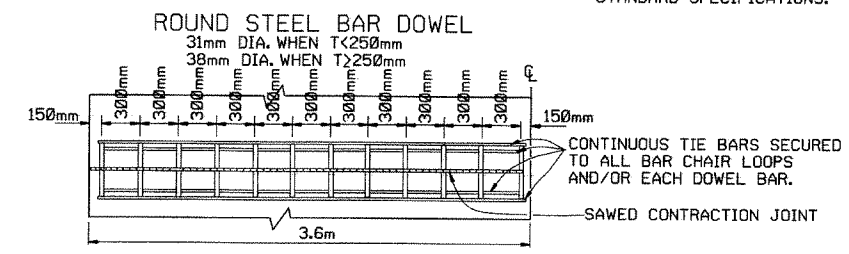
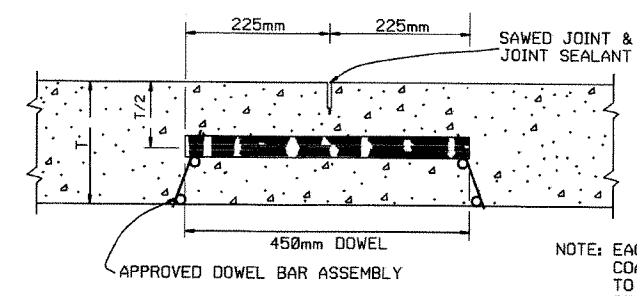
STANDARD DRAWING CG-1 (M)





LONGITUDINAL JOINT

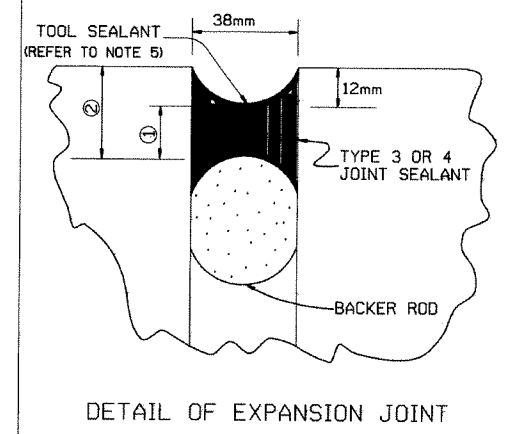
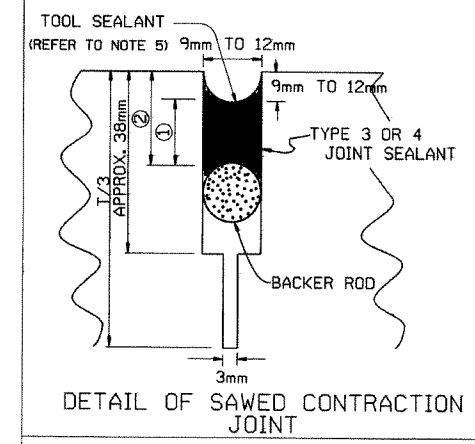
NOTE: THE TIE BAR SUPPORT SHOWN ABOVE MAY BE ELIMINATED IF OTHER APPROVED METHODS FOR PLACING AND SUPPORTING THE TIE BARS ARE PROVIDED.
TIE BARS SHALL BE 375mm FROM TRANSVERSE JOINTS.



ONE-HALF 7.2m PAVEMENT
12 DOWELS
PLAN

NOTE: FOR 6m PAVEMENT USE 20 DOWELS @ 300mm CTRS. WITH 150mm SPACING FROM C.L. AND EDGE OF SLAB TO FIRST BAR. FOR 4.5m PAVEMENT USE 15 DOWELS @ 300mm CTRS. WITH 150mm SPACING FROM C.L. AND EDGE OF SLAB TO FIRST BAR. FOR 7.8m PAVEMENT USE 26 DOWELS @ 300mm CTRS. WITH 150mm SPACING FROM C.L. AND EDGE OF SLAB TO FIRST BAR. FOR PAVEMENT WIDTHS OTHER THAN THOSE SHOWN ABOVE, USE DOWELS AT 300mm CTRS. WITH 150mm MAX. SPACING FROM C.L. TO FIRST BAR. DISTANCE FROM EDGE OF SLAB TO FIRST BAR SHALL BE ADJUSTED TO MAINTAIN 300mm DOWEL BAR SPACING

CONTRACTION JOINT DETAILS



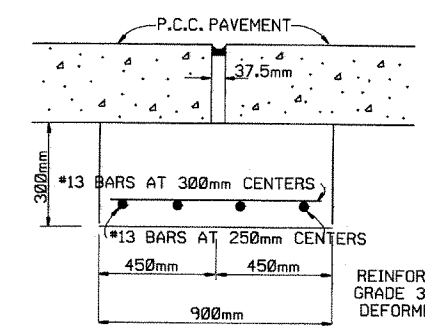
DETAIL OF EXPANSION JOINT

JOINT CONFIGURATION FOR
TYPE 3 OR 4 JOINT SEALANT

JOINT WIDTH	SEALANT THICKNESS ①	BACKER ROD DIAMETER	BACKER ROD PLACEMENT DEPTH ②
mm			
6	6	9	12
9	6	12	12
12	6	15	12
16	8	19	14
18	9	21	21
38	19	50	31

JOINT CONFIGURATION FOR
TYPE 5 JOINT SEALANT

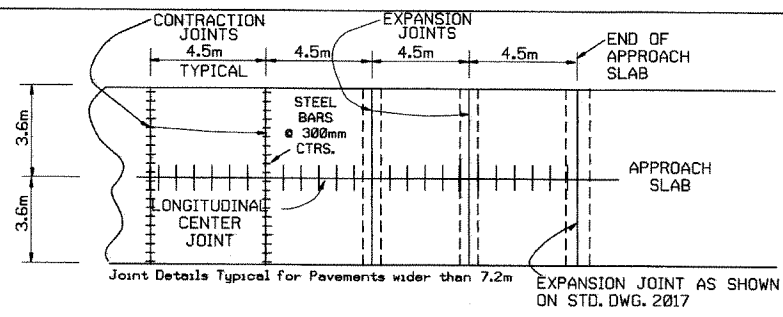
JOINT WIDTH	SEALANT THICKNESS ①	BACKER ROD DIAMETER	BACKER ROD PLACEMENT DEPTH ②
mm			
6	12	9	18
9	18	12	24



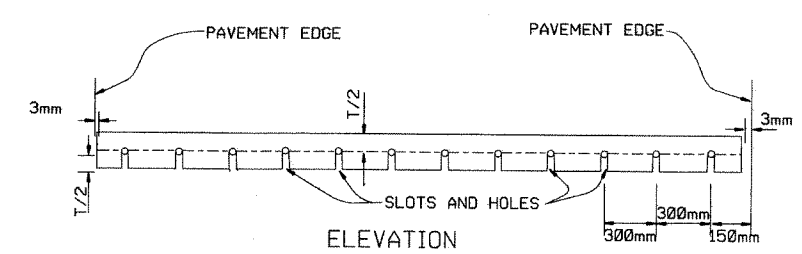
DETAIL OF JOINT SUPPORT
FOR EXPANSION JOINTS

GENERAL NOTES

1. "T" DENOTES THICKNESS OF SLAB.
2. DOWEL BARS SHALL BE PLACED IN ACCORDANCE WITH THE DIMENSIONS SHOWN. A TOLERANCE OF PLUS OR MINUS 25mm WILL BE ALLOWED FOR THE VERTICAL AND LATERAL PLACEMENT AND A TOLERANCE OF PLUS OR MINUS 6.25mm WILL BE ALLOWED FOR THE TILT AND SKEW. DOWEL BARS SHALL BE FIELD COATED FOR A MINIMUM DISTANCE OF 50mm GREATER THAN HALF THE LENGTH OF THE BAR WITH AN APPROVED GREASE AS A BOND BREAKER JUST PRIOR TO PLACEMENT OF CONCRETE.
3. THE EXPANSION JOINT SUPPORT MAY BE CONSTRUCTED WITH CLASS "A", "S" OR PAVING CONCRETE. PAYMENT FOR THE JOINT SUPPORT SHALL BE FOR THE CONTRACT UNIT PRICE BID FOR THE CLASS OF CONCRETE SPECIFIED IN THE PLANS. PAYMENT FOR ALL OTHER WORK AND MATERIALS REQUIRED FOR THE CONSTRUCTION OF THE JOINT SUPPORT SHALL BE INCLUDED IN THE PRICE BID FOR THE ABOVE ITEMS.
4. CONTRACTION JOINTS SHALL BE CONSTRUCTED ON 4.5m CENTERS.
5. TOOLING NOT REQUIRED FOR SELF-LEVELING SILICONE.
6. UNLESS OTHERWISE SPECIFIED IN THE PLANS, CONCRETE SHOULDERS SHALL BE CONSTRUCTED ACCORDING TO THE DETAILS SHOWN HEREON. CONTRACTION JOINTS SHALL MATCH CONTRACTION JOINTS IN THE LANES.
7. TIE WIRES IN DOWEL BAR ASSEMBLIES SHALL NOT BE CUT PRIOR TO PLACEMENT OF PAVING CONCRETE.

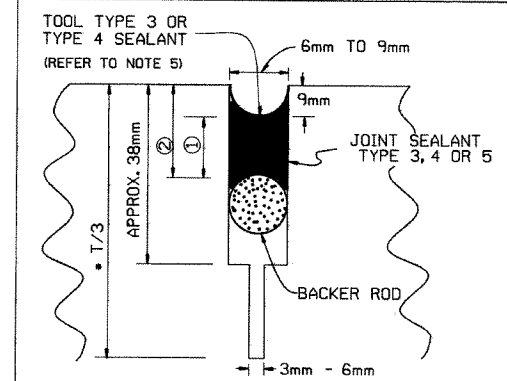


PLAN SHOWING EXPANSION JOINTS AT
BRIDGE APPROACH SLABS

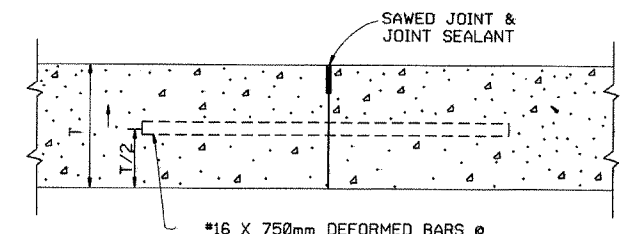
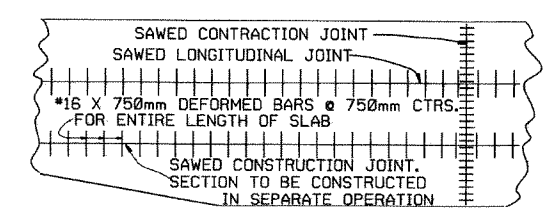


ELEVATION

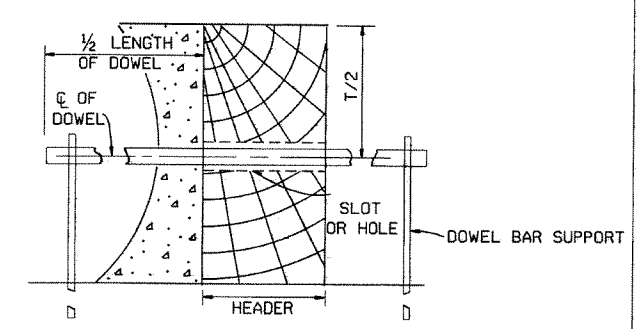
NOTE: ALL DOWEL BARS SHALL CONFORM TO THE DETAILS FOR CONTRACTION JOINTS.



DETAIL OF SAWED
LONGITUDINAL JOINT
AND LONGITUDINAL CONSTRUCTION JOINT



NOTE: TIE BARS SHALL BE 375mm FROM TRANSVERSE JOINTS.
LONGITUDINAL CONSTRUCTION JOINT



SECTION

TRANSVERSE
CONSTRUCTION JOINT

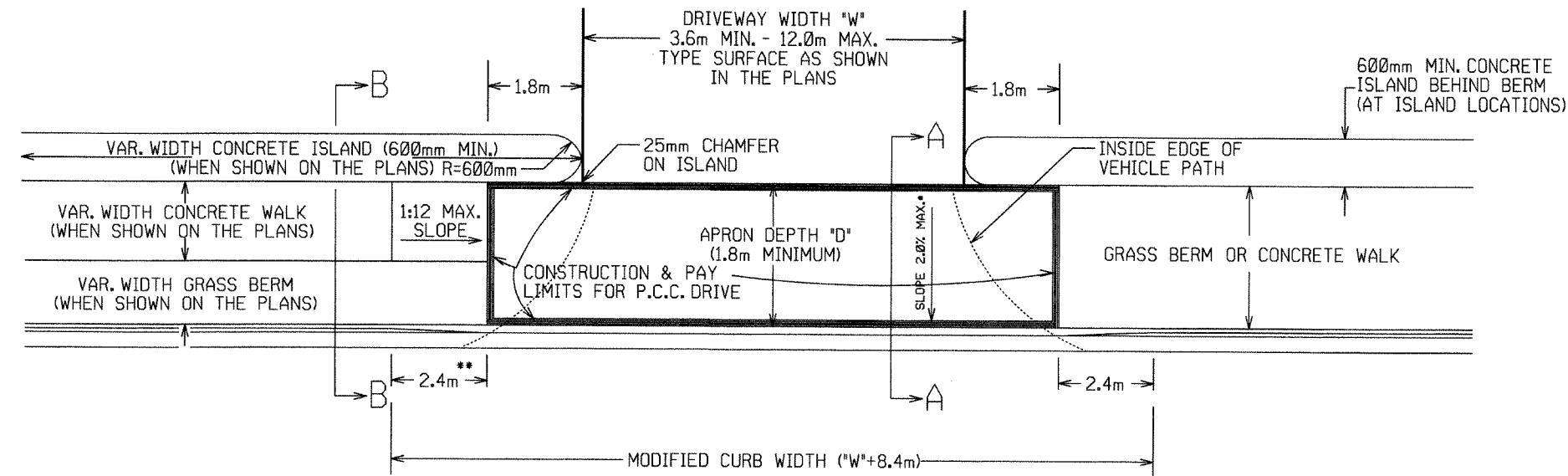
5-25-06	ADDED GENERAL NOTE Y	
10-9-03	REMOVED TIE BAR COATING & REVISED GENERAL NOTES	
8-16-01	ADDED TOOL SEALANT & NOTE 5; REV NOTE 3	
4-3-97	REVISED STEEL BARS TO SOFT METRIC	
10-18-96	CORRECTED SPELLING	
4-26-96	REVISED CONTRACTION JOINT NOTE	
7-20-95	CONVERTED TO METRIC	
DATE	REVISION	DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION

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

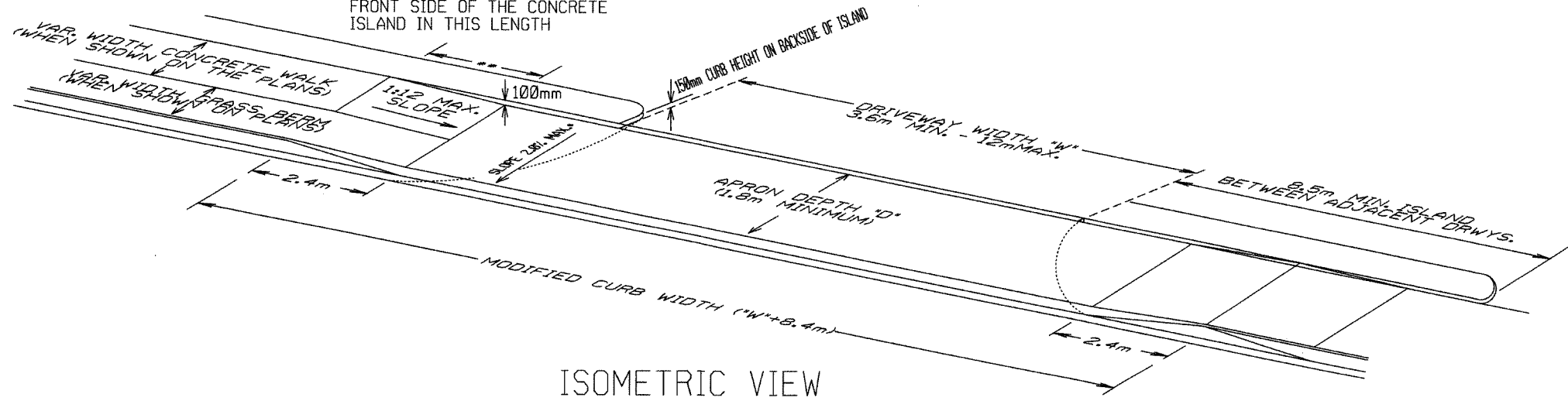
STANDARD DRAWING CPTJ-6A(M)



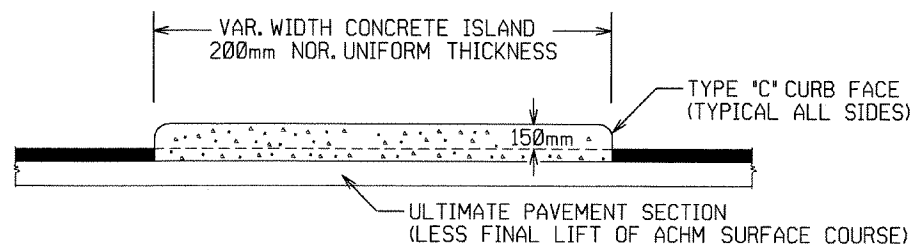
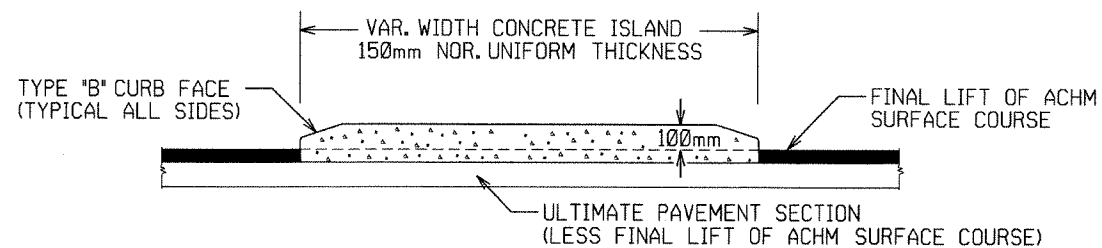


PLAN VIEW

** TRANSITION FROM A 0mm TO A 100mm
TYPE "D" CURB FACE ON THE
FRONT SIDE OF THE CONCRETE
ISLAND IN THIS LENGTH



ISOMETRIC VIEW



CURBED ISLANDS FOR CHANNELIZATION

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

EXTENSION
CONCRETE
ASPHALT
AGGREGATE

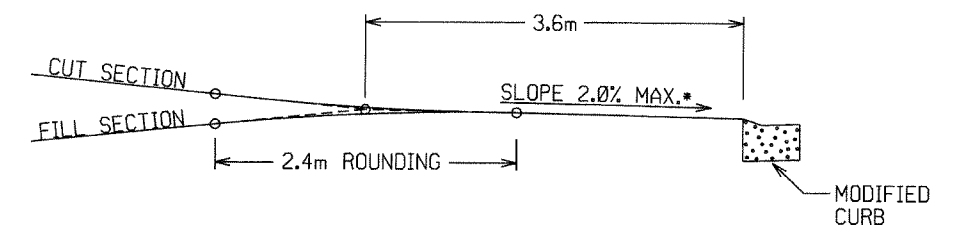
CONCRETE
DRIVEWAY

EXTENSION TYPICAL SECTIONS

- 1: CONCRETE - 150mm P.C. CONCRETE DRIVEWAY
- 2: ASPHALT - 50mm ACHM SURFACE COURSE (12.5mm)
100mm ACHM BINDER COURSE (25mm) OR
100mm ACHM BASE COURSE (37.5mm)
- 3: ASPHALT - 50mm ACHM SURFACE COURSE (12.5mm)
175mm AGGREGATE BASE COURSE
- 4: AGGREGATE - 150mm AGGREGATE BASE COURSE

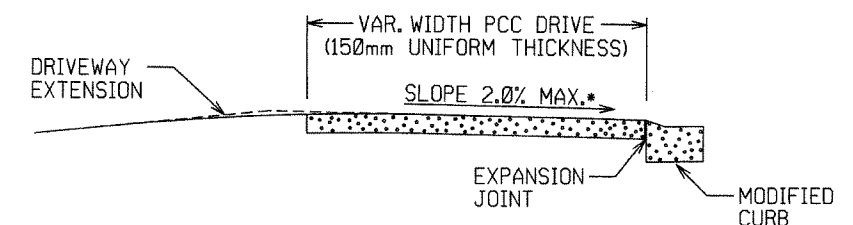
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS.
THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER,
SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU
OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL
COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

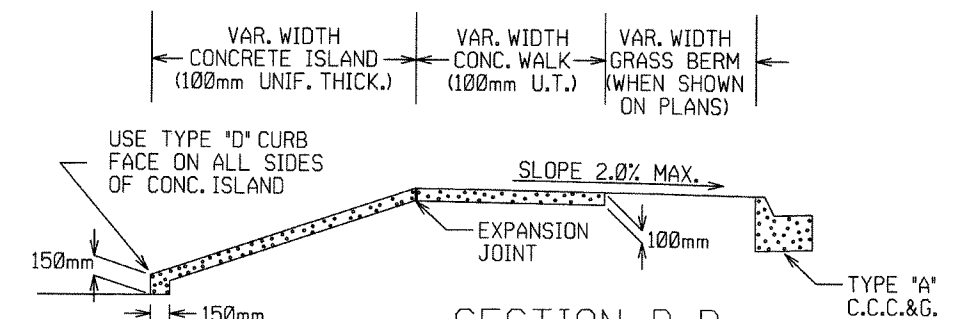


DRIVEWAY VERTICAL ALIGNMENT DETAILS

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



SECTION A-A

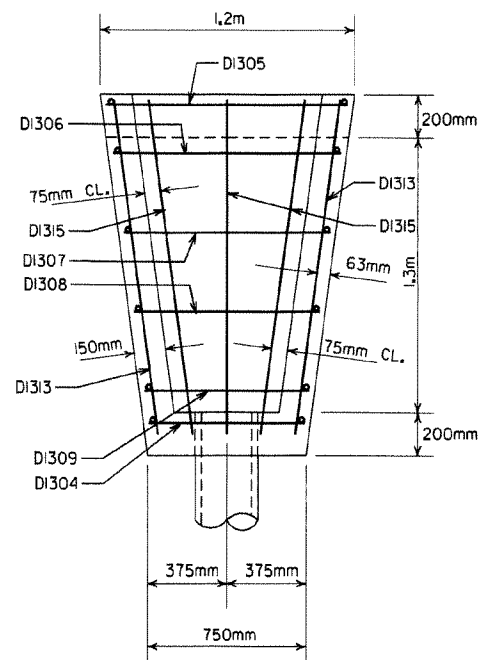


SECTION B-B
CURBED ISLAND BEHIND WALK

11-29-07		ADDED CHANNELIZATION ISLAND W/TY. C CURB FACE & REVISED DRIVEWAY SLOPE NOTE & VERTICAL ALIGNMENT DETAIL	
11-10-05		REV. APRON SLOPE & DEPTH OF AGG. BA	
8-22-02		REVISED ISLAND AND NOTES	
3-30-00		REV. MOD. CURB & TRANS. NOTES	
1-12-00		CORRECTED DIMENSION ON PLAN VIEW	
11-19-98		REVISED NOTES	
11-18-98		REDRAWN AND RETISSUED	
DATE	REV	DATE FILMED	DESCRIPTION

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

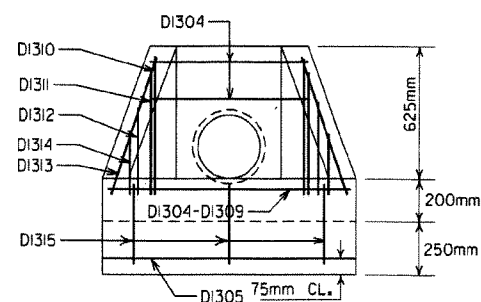




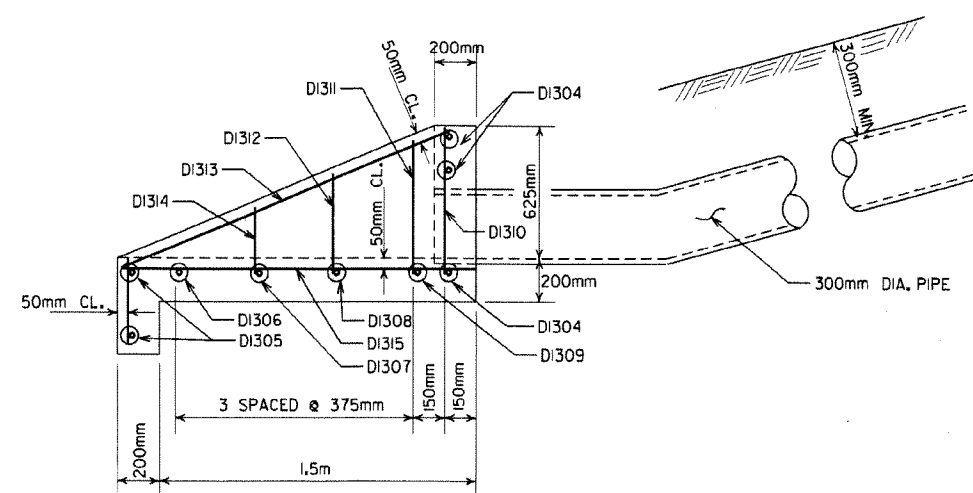
BAR LIST (CONCRETE SPILLWAY)

MARK	NO. REQ'D.	LENGTH mm	BENDING DIAGRAM
D1304	3	650	
D1305	2	1100	
D1306	1	1025	
D1307	1	925	
D1308	1	825	
D1309	1	725	
D1310	2	725	
D1311	2	650	
D1312	2	525	
D1313	2	1650	
D1314	2	350	
D1315	3	1925	

PLAN



FRONT ELEVATION



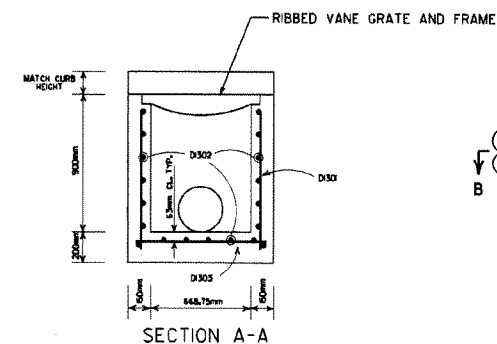
SIDE ELEVATION
CONCRETE SPILLWAY

DETAILS OF CONCRETE SPILLWAY (TYPE A)

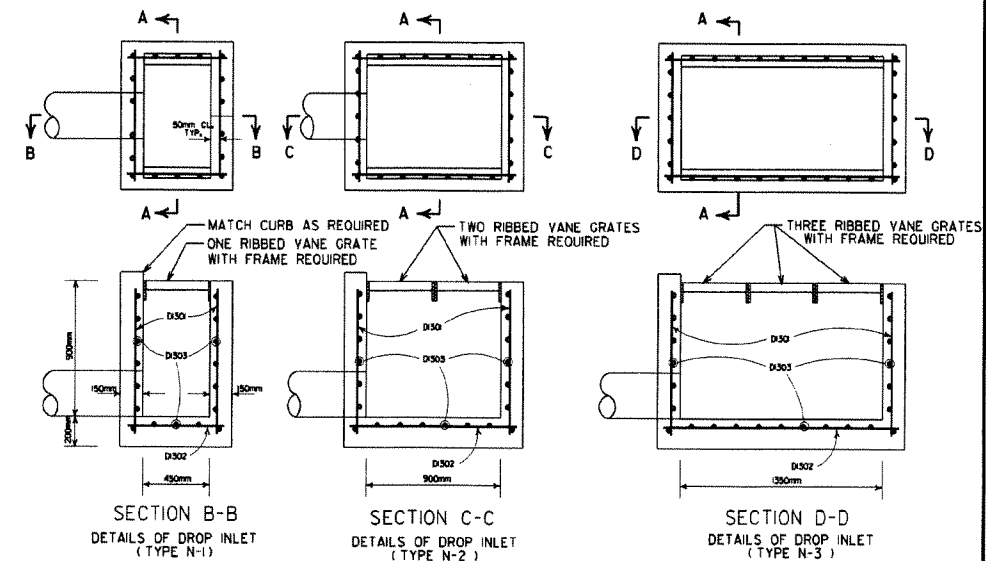
BAR LIST (DROP INLET)

MARK	TYPE N-1		TYPE N-2		TYPE N-3	
	NO. REQ'D.	LENGTH mm	NO. REQ'D.	LENGTH mm	NO. REQ'D.	LENGTH mm
D1301	20	900	26	900	32	900
D1302	19	650	19	1100	19	1550
D1303	17	875	20	875	23	875

ALL BARS #13 @ 150mm SPACING



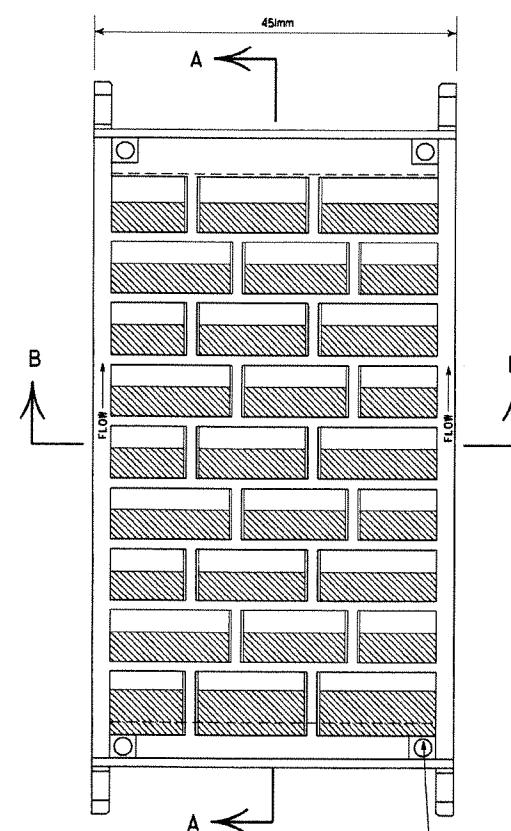
SECTION A-A



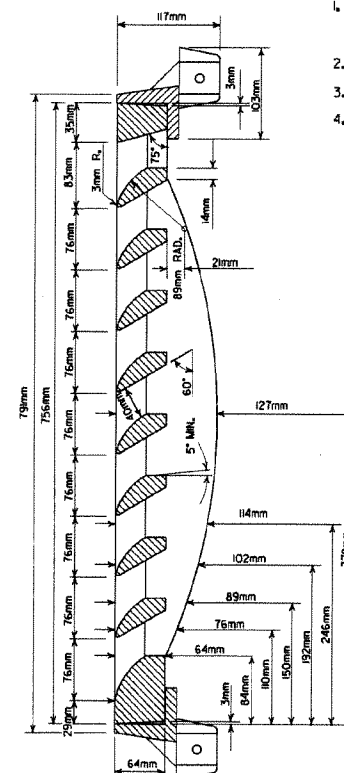
DETAILS OF DROP INLET

GENERAL NOTES (GRATE & FRAME)

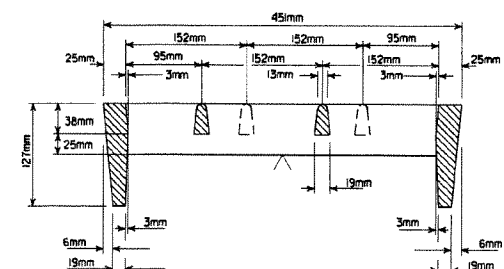
1. RIBBED VANE GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105 CLASS 35B & AASHTO M 306.
2. GRATE AND FRAME SHALL NOT BE PAINTED.
3. GRATE AND FRAME SHALL BE INSTALLED IN DROP INLET IN ASSEMBLED POSITION.
4. APPROXIMATE WEIGHT OF GRATE SHALL BE 77kg.



DETAILS OF RIBBED VANE GRATE AND FRAME



SECTION A-A



SECTION B-B

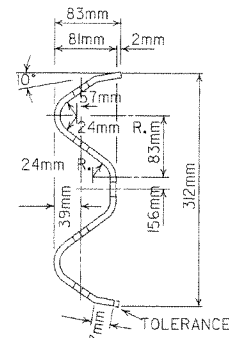
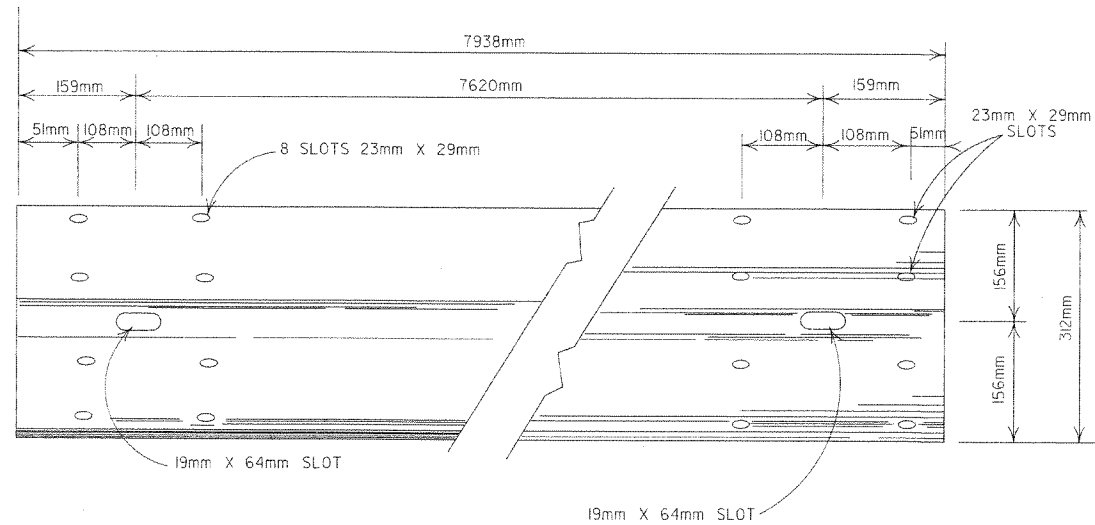
SECTION THRU FRAME

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS AND
SPILLWAY OUTLET

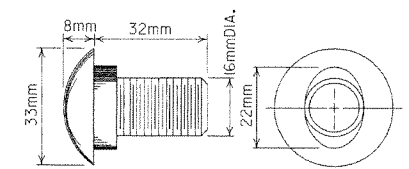
STANDARD DRAWING FPC-9N(M)

7-02-98	REVISED SECT. A-A DETAIL OF D.L. ADDED AASHTO REF. TO NOTE 1. REVISED GRATE	7-2-98
4-03-97	REVISED STEEL BARS TO SOFT METRIC	
10-8-96	REVISED ASTM REF. TO AASHTO	
7-20-95	CONVERTED TO METRIC	
DATE	REVISION	DATE FILLED

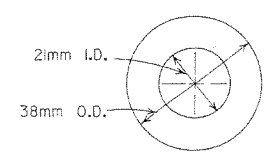


DETAIL OF W-BEAM GUARD RAIL

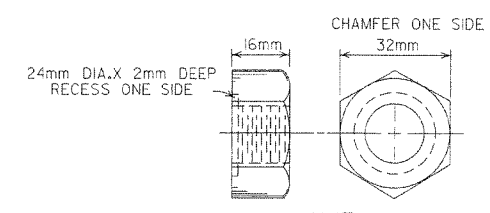
RAIL SECTION OF CLOSELY SIMILAR DIMENSIONS AND COMPARABLE STRENGTH MAY BE SUBSTITUTED IF APPROVED BY THE ENGINEER.



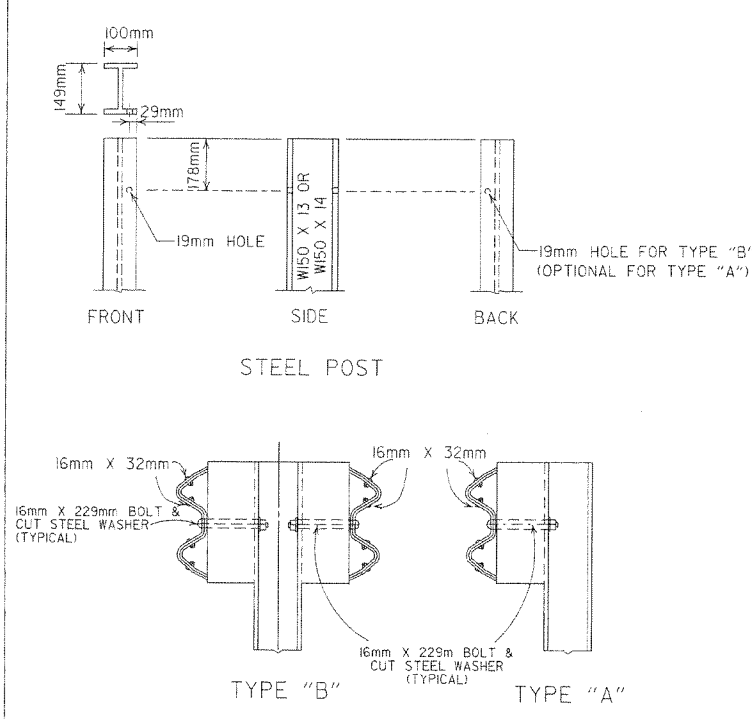
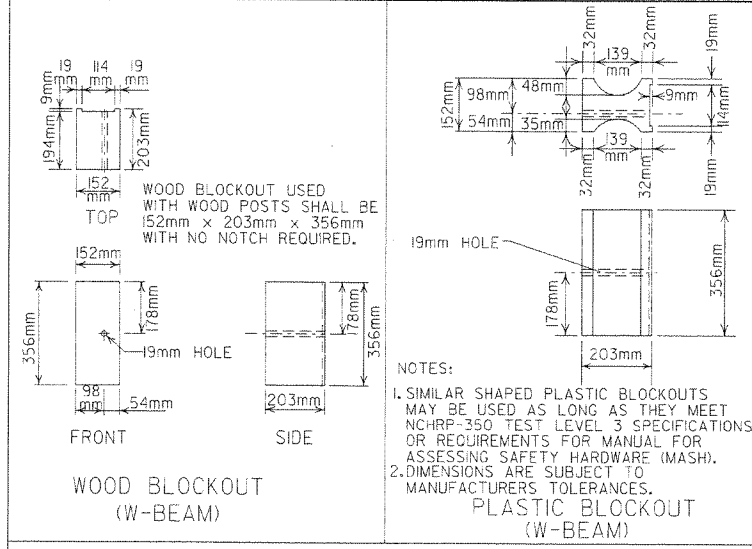
SPLICE BOLT
POST BOLT - SAME EXCEPT LENGTH



CUT STEEL WASHER



NUT



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 19mm BEYOND IT.

WHERE GUARD RAIL CONTINUES, THE INTERMEDIATE SECTIONS SHALL HAVE A POST SPACING OF 1905mm UNLESS OTHERWISE NOTED.

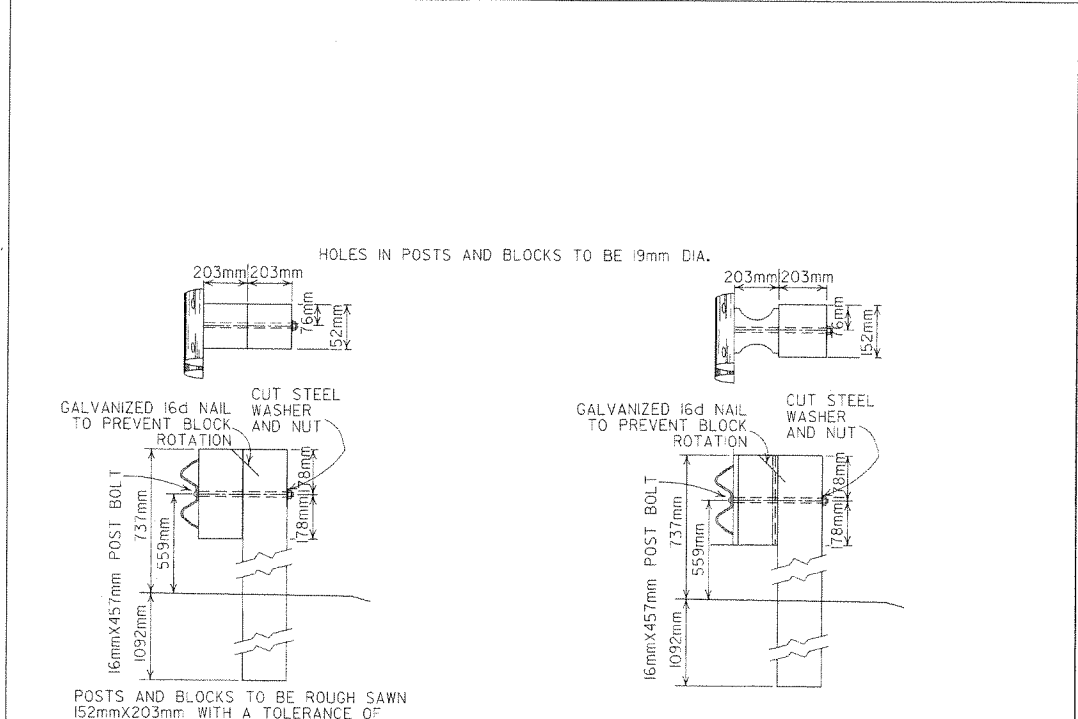
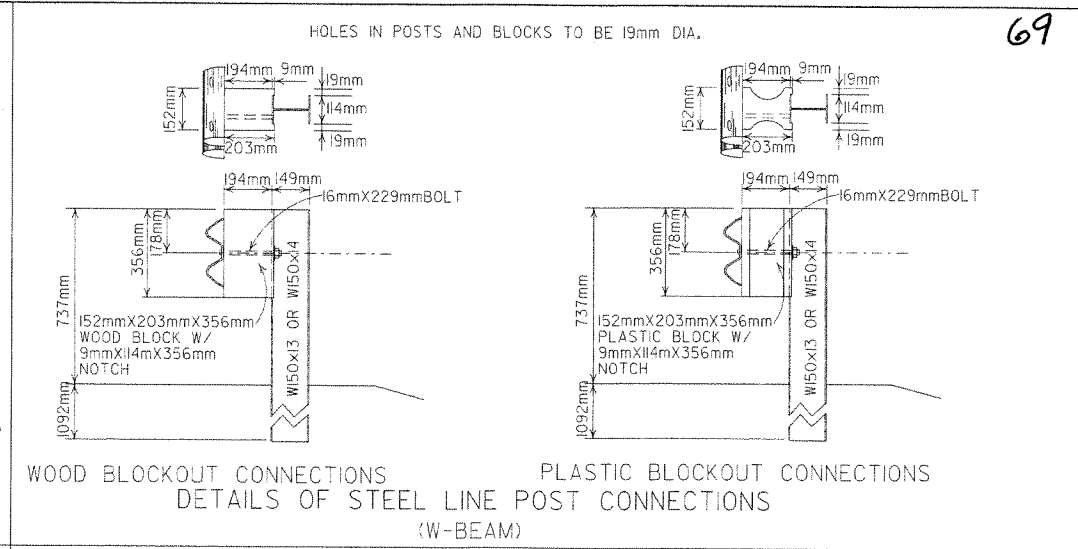
W-BEAM GUARD RAIL REPRESENTING INTERMEDIATE SECTIONS WILL BE MEASURED ALONG THE ROADWAY FACE FROM CENTERLINE OF POST TO CENTERLINE OF POST.

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

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

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

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



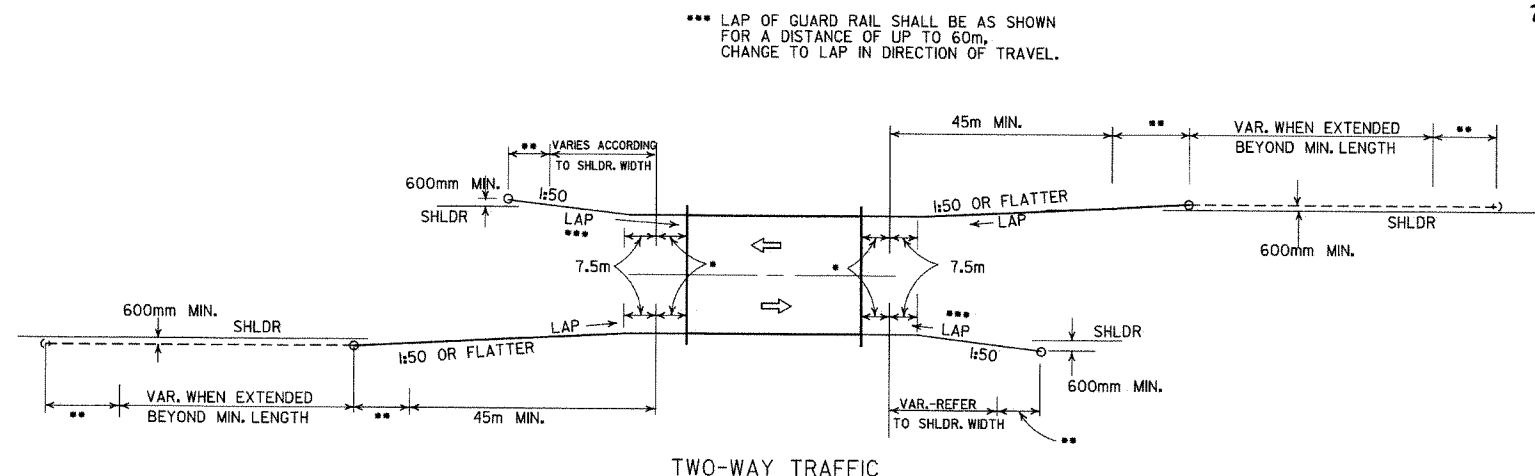
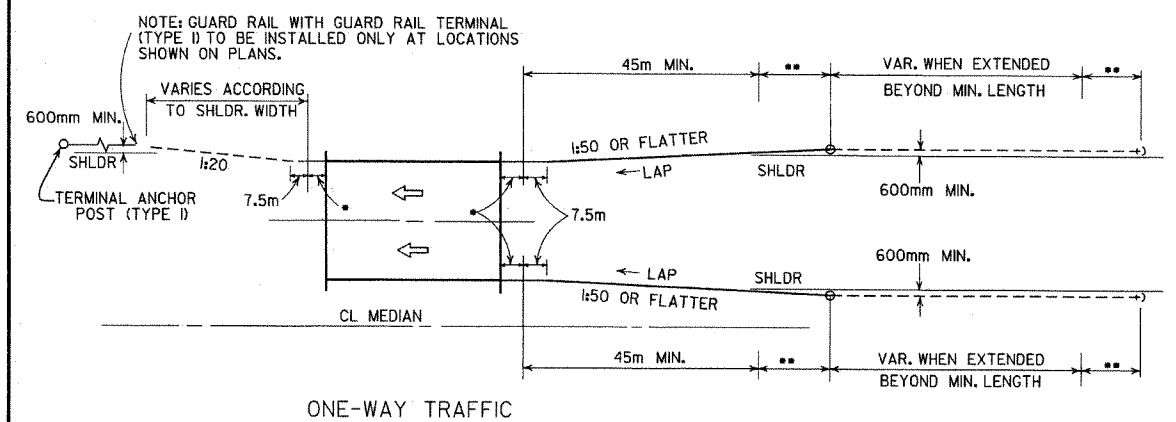
DETAILS OF WOOD LINE POST CONNECTIONS
(W-BEAM)

7-14-10	RAISED HEIGHT OF GUARD RAIL 26mm	
10-15-09	ADDED REFERENCE TO MASH	
4-10-03	REVISED GENERAL NOTES	
8-22-02	REVISED DIMENSION ON WOOD & PLASTIC BLOCKOUT CONNECTIONS & ON STEEL POST	
11-16-01	REVISED WOOD BLOCKOUT AND DETAILS OF WOOD LINE POST CONNECTIONS	
3-30-00	REMOVED GUARD RAIL AT BRIDGE ENDS	
1-12-00	ADDED PLASTIC BLOCKOUT	
8-2-98	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 DET. OF STEEL LINE POST CONNECTIONS, REMOVED BACK-UP PLATE & REVISED HOLES IN STEEL POST	
11-06-97	CHANGED DEPTH DIMENSION FOR STEEL POST	
4-3-97	REMOVED "LAP IN DIRECTION OF TRAFFIC" NOTE & PLACED ARROWS ON WASHERS	
10-18-96	REVISED WOOD POST NOTE	
7-20-95	CONVERTED TO METRIC	
DATE	REVISION	DATE FILMED

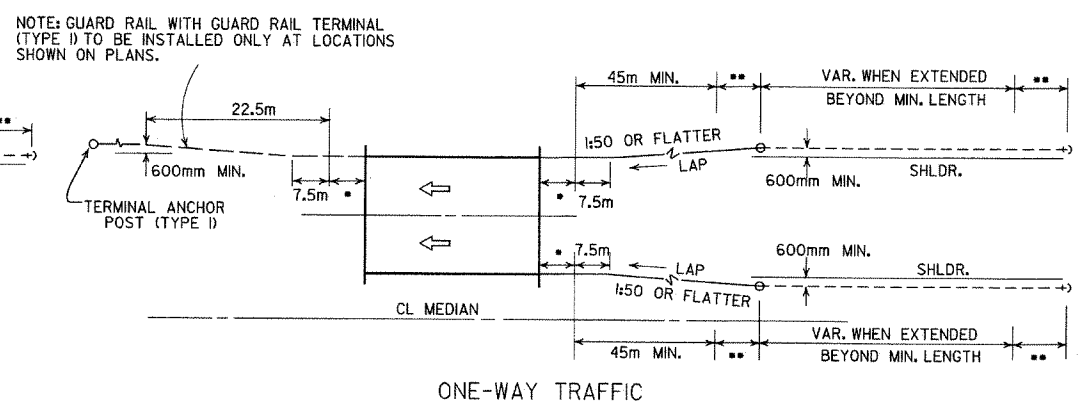
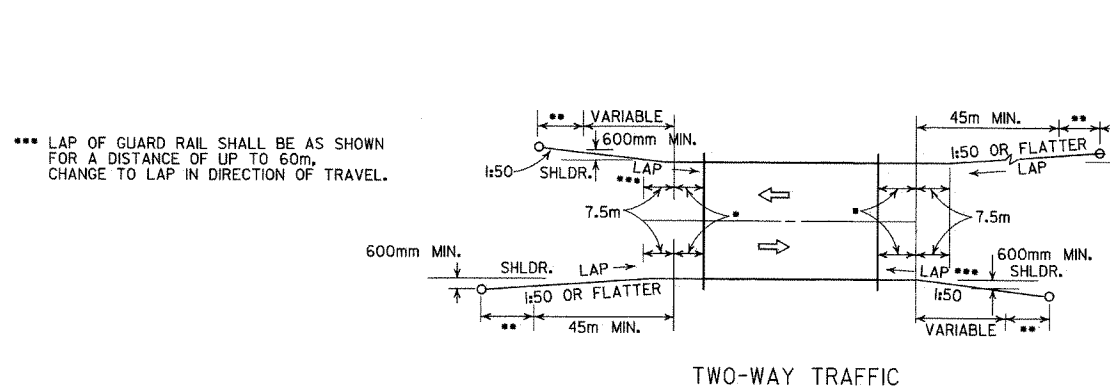
ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

STANDARD DRAWING GR-8(M)

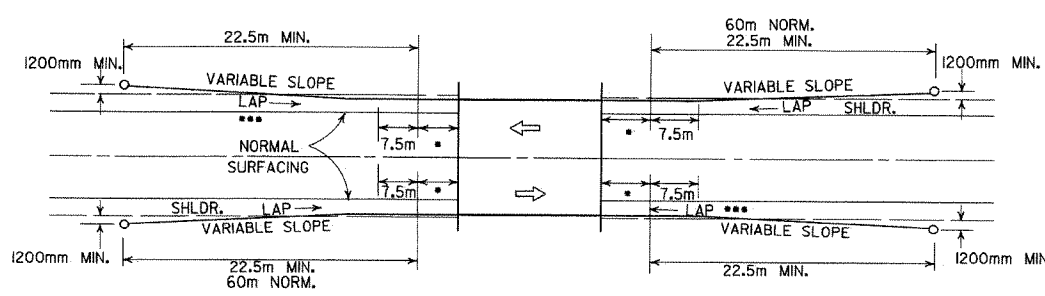


METHODS OF INSTALLATION OF GUARD RAIL AT LESS THAN FULL SHOULDER WIDTH BRIDGES USING GUARD RAIL TERMINAL (TYPE 2)



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

*** LAP OF GUARD RAIL SHALL BE AS SHOWN FOR A DISTANCE OF UP TO 60m, CHANGE TO LAP IN DIRECTION OF TRAVEL.



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

LEGEND

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

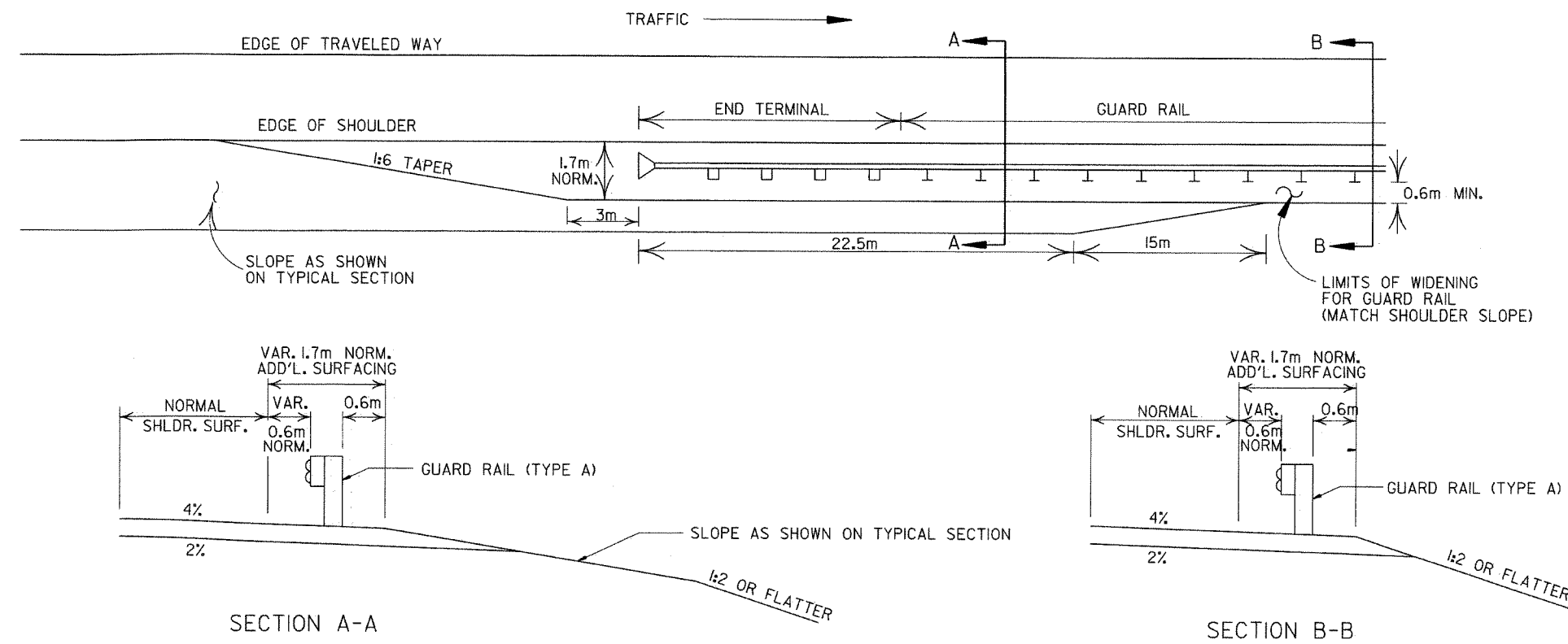
ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

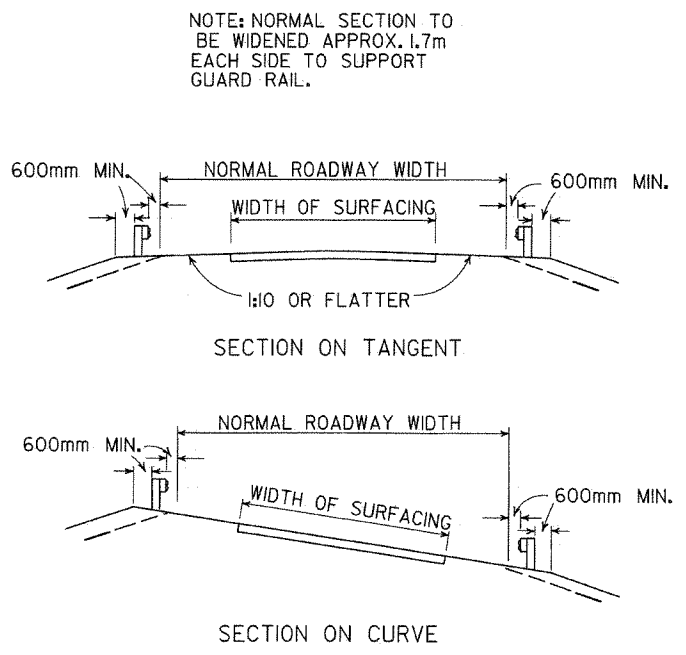
STANDARD DRAWING GR-9(M)

DATE	REVISION	DATE FILMED
4-17-08	REVISED LAYOUTS	
8-10-05	REMOVED GUARD RAIL NOTES AND DETAILS	
11-16-01	DELETED NOTE-METHOD OF INSTALLATION OF GUARD RAIL USING GUARD RAIL TERMINAL (TYPE 1)	
1-12-00	ADDED CONSTRUCTION NOTE	
8-26-97	REVISED LAYOUT	
7-20-95	CONVERTED TO METRIC	

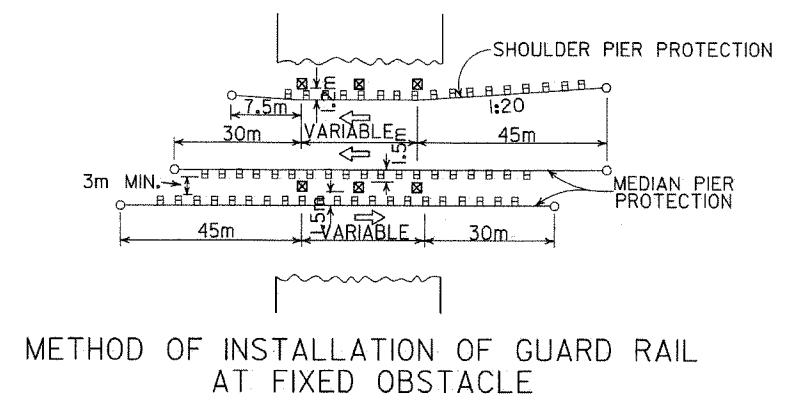




DETAILS OF WIDENING FOR GUARD RAIL

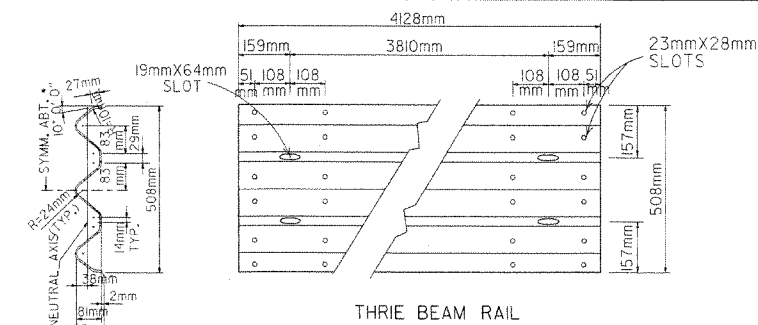


DETAILS SHOWING POSITION OF GUARD RAIL ON HIGHWAY

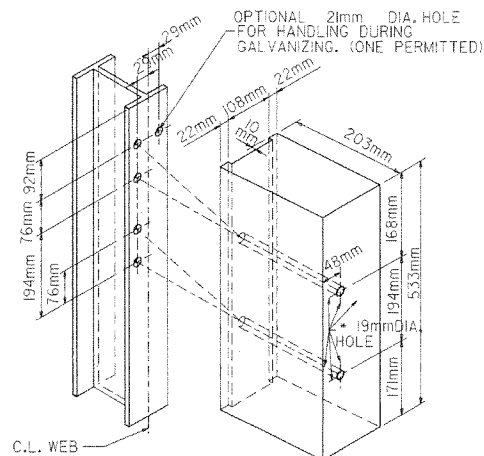
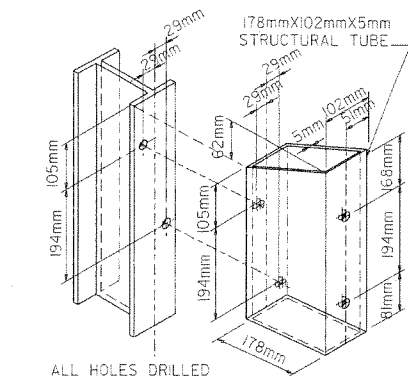


METHOD OF INSTALLATION OF GUARD RAIL AT FIXED OBSTACLE

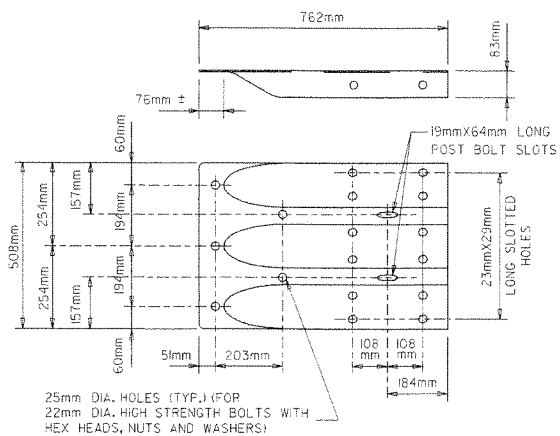
ARKANSAS STATE HIGHWAY COMMISSION		
GUARD RAIL DETAILS		
4-17-08	MINOR REVISION	
11-10-05	DRAWN	
DATE	REVISION	DATE FILM
STANDARD DRAWING GR-9A(M)		



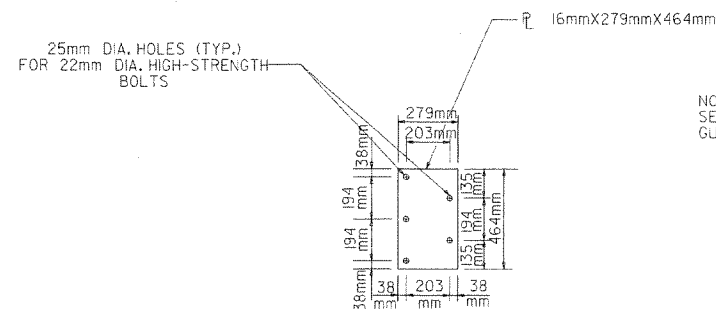
SECTION THRU
THREE BEAM RAIL



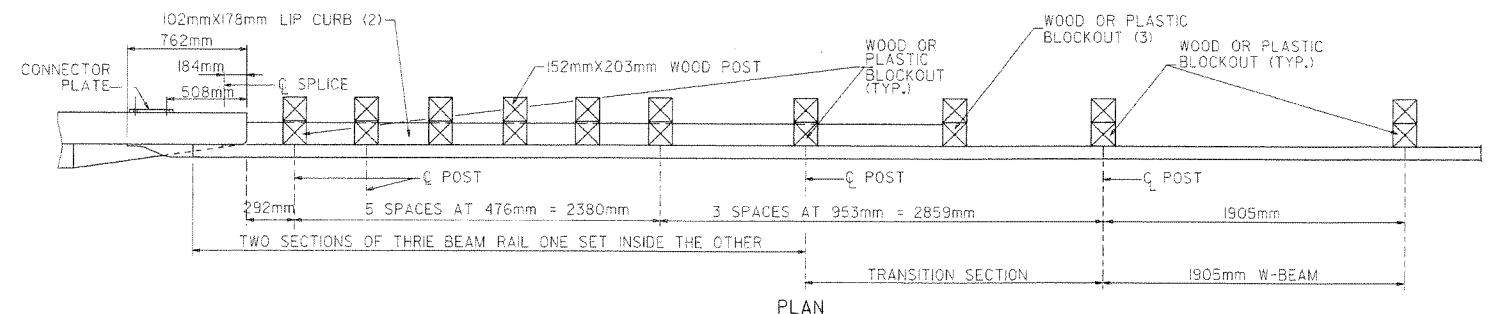
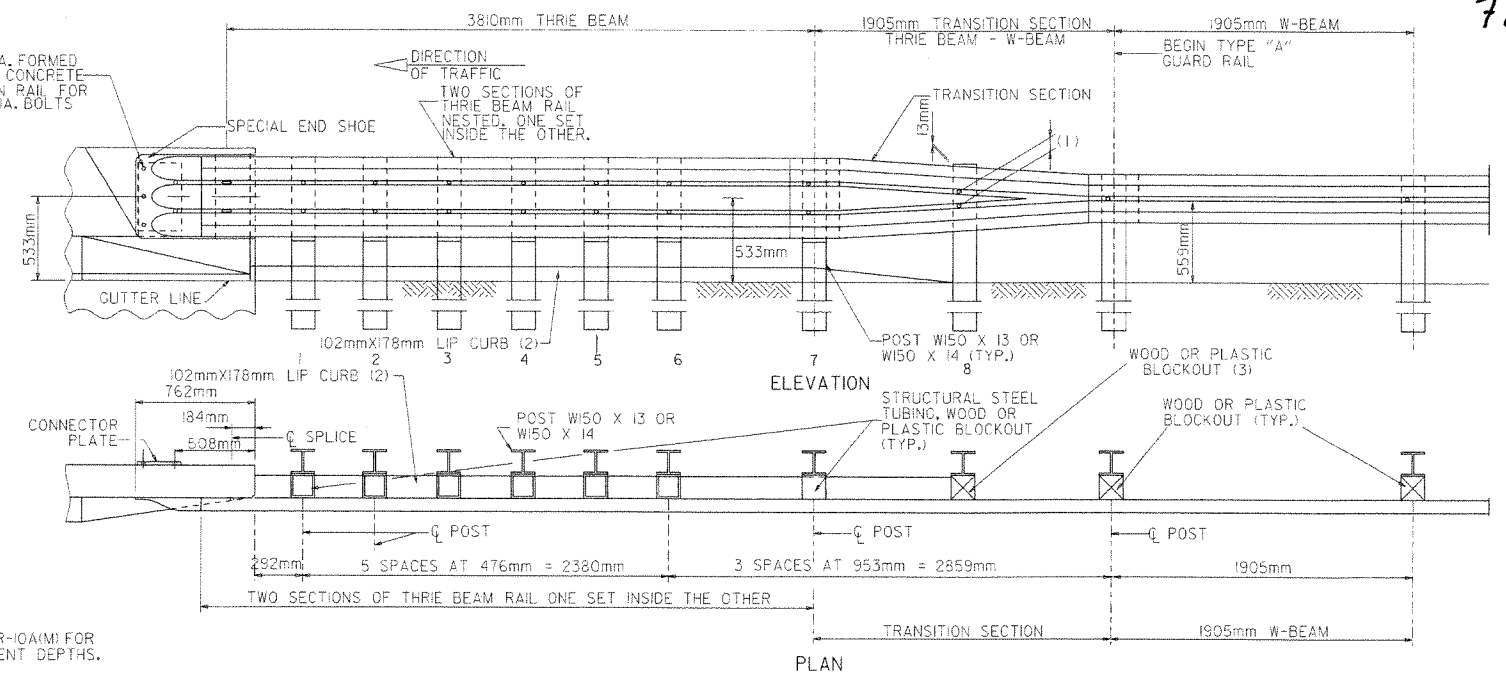
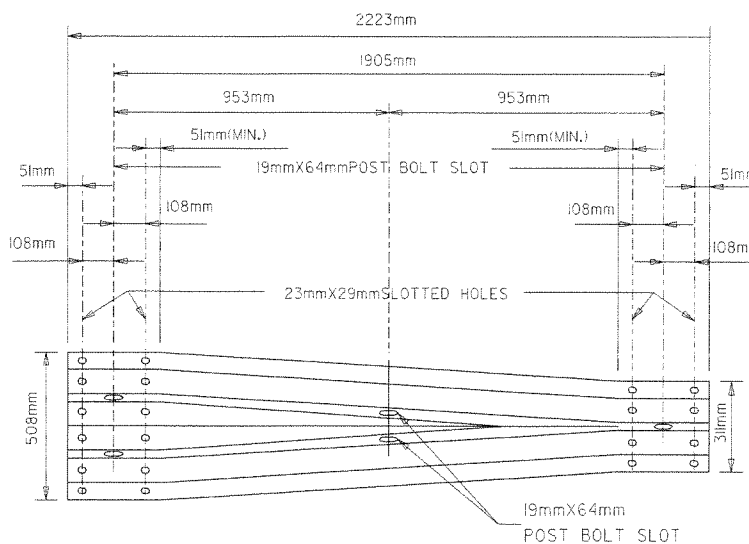
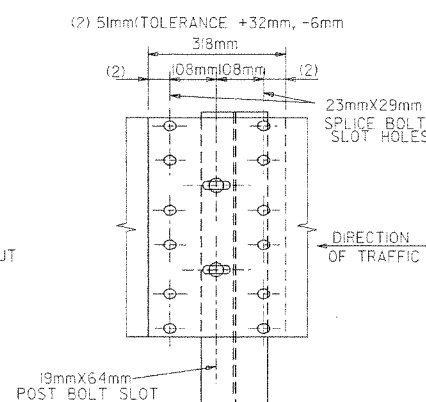
ALL HOLES 21mm DIAMETER EXCEPT AS NOTED
HOLE PUNCHING DETAIL
FOR STEEL POST & WOOD
OR PLASTIC BLOCKOUTS
NOTE: BLOCKS SHALL BE THE SAME TYPE THROUGHOUT
THE PROJECT LIMITS.



ATTACH BLOCKOUT TO POST USING
16mm DIA. HEX HEAD BOLTS WITH
38mm CUT STEEL WASHERS AND NUT.



CONNECTOR PLATE SHALL BE AASHTO M270, GR. 36 AND SHALL BE GALVANIZED AFTER FABRICATION. GALVANIZING SHALL CONFORM TO SUBSECTION 807.19 OF THE STANDARD SPECIFICATIONS. CONNECTOR PLATE TO BE BOLTED TO SPECIAL END SHOE USING 22mm DIA. HIGH STRENGTH BOLTS, WITH THE HEADS PLACED ON THE TRAFFIC FACE. WASHERS SHALL BE USED UNDER THE HEAD AND NUT. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AND SHALL CONFORM TO SUBSECTION 807.06.



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

THREE BEAM GUARD RAIL CONNECTION AT BRIDGE ENDS

GENERAL NOTES:

THE THRIE BEAM RAIL, SPECIAL END SHOE, AND THE TRANSITION SECTION SHALL BE MADE OF STEEL AND SHALL BE 12 GAGE. ZINC COATING SHALL BE TYPE 1.

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

ALL BOLTS SHALL BE SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN 19mm BEYOND IT.

ALL LAP SPLICES, INCLUDING SPECIAL END SHOES, SHALL BE MADE IN THE DIRECTION SHOWN ON STANDARD DRAWING GR-9(M) & GR-10(M).

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

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

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

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

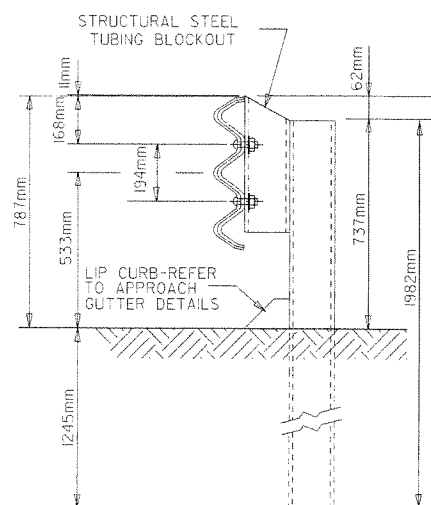
7-14-10	RAISED HEIGHT OF W-BEAM 26mm	
11-29-07	ADDED PLASTIC BLOCKOUTS	
11-10-05	ADDED NOTE FOR ATTACHING STEEL BLOCKOUT	
11-18-04	REVISED GENERAL NOTES	
10-9-03	REVISED GENERAL NOTES	
4-10-03	REVISED GENERAL NOTES	
8-22-02	REVISED NOTE (2)	
6-29-00	MOVED DIMENSION LINES	
5-18-00	ADDED NOTE	
3-30-00	DRAWN & ISSUED	
DATE	REVISION	DATE FILED

ARKANSAS STATE HIGHWAY COMMISSION

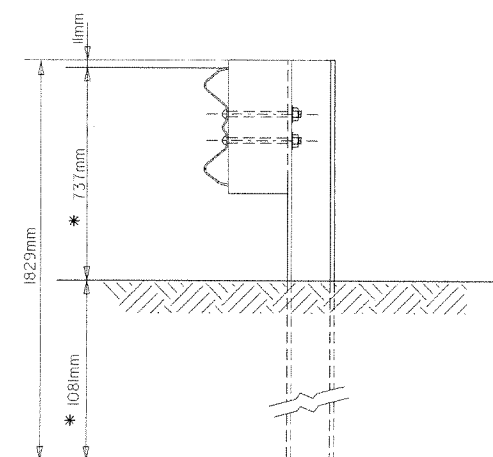
GUARD RAIL DETAILS



STANDARD DRAWING GR-10(M)

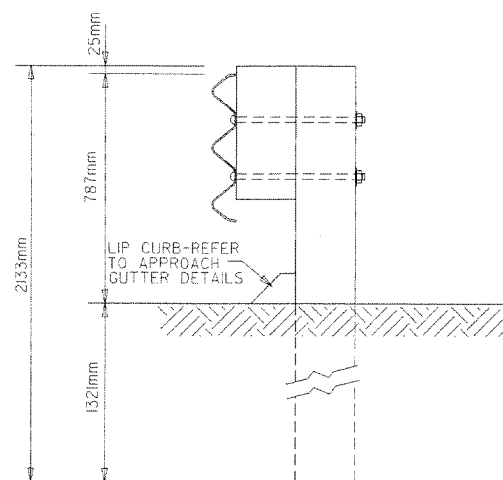


THRIE BEAM RAIL WITH STEEL TUBING BLOCKOUT
AND STEEL POST
POSTS 1-7

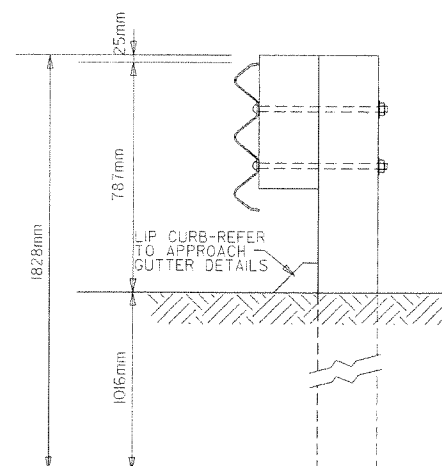


W-BEAM TO THRIE BEAM TRANSITION RAIL
WITH WOOD OR PLASTIC BLOCKOUT AND STEEL POST
POST 8

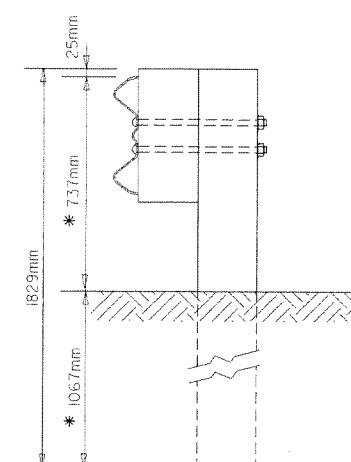
* NOTE:
THESE DIMENSIONS WILL NEED TO BE ADJUSTED
IN THE FIELD TO MAKE THE TRANSITION FROM
533mm MID POINT OF THRIE BEAM TO 559mm
MID POINT OF W-BEAM.



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



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



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

GENERAL NOTES:
RAIL POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND
VERTICALLY IN CROSS SECTION.
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR
BETTER 9.7f (1400 f) OR NO. 1 1350 f SOUTHERN PINE.

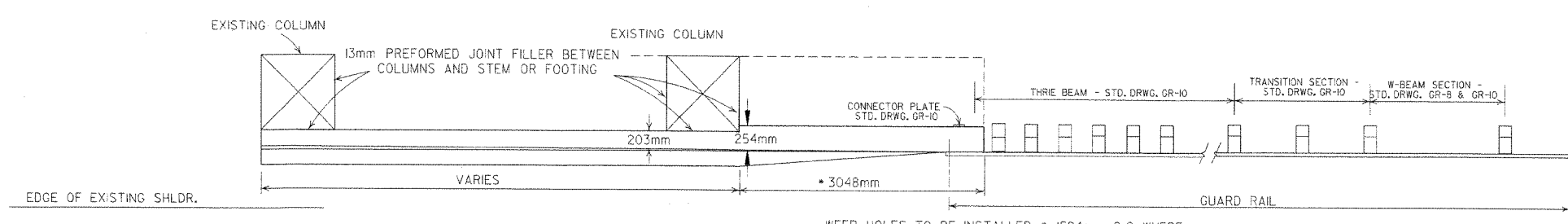
ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

STANDARD DRAWING GR-10A(M)

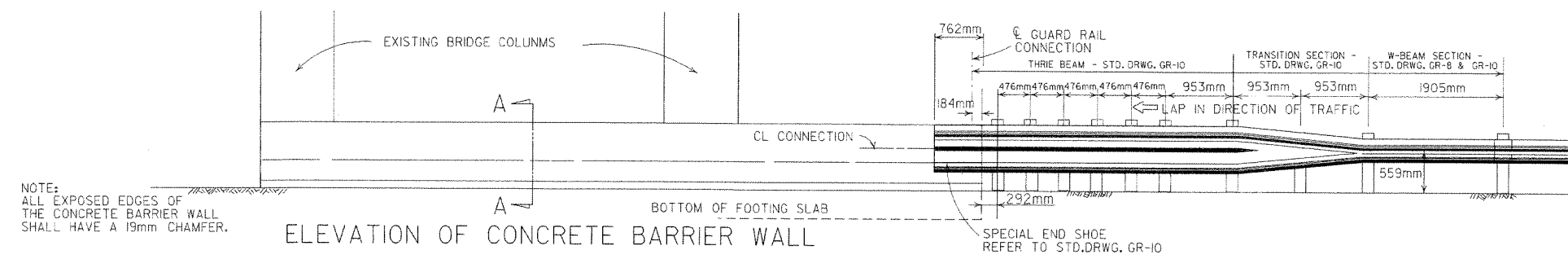
DATE	REVISION	DATE FILM
7-14-10	REVISED POST 8 DIMENSIONS	
11-29-07	ADDED PLASTIC BLOCKOUTS	
8-22-02	REVISED LIP CURB NOTE	
3-30-00	DRAWN & ISSUED	

METRIC

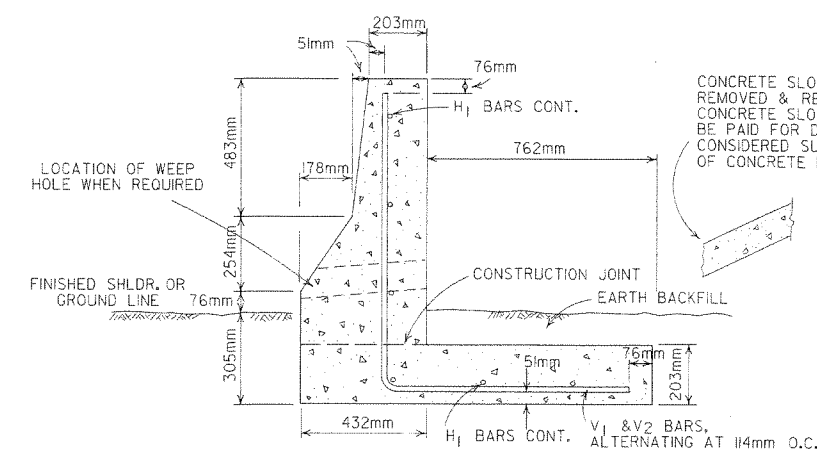


AT LEAST ONE 13mm JOINT SHALL BE CONSTRUCTED IN THE CONCRETE BARRIER WALL. JOINTS SHALL BE EQUALLY SPACED AT A MAXIMUM OF 7620mm O.C. FILL JOINT WITH PREFORMED JOINT FILLER.

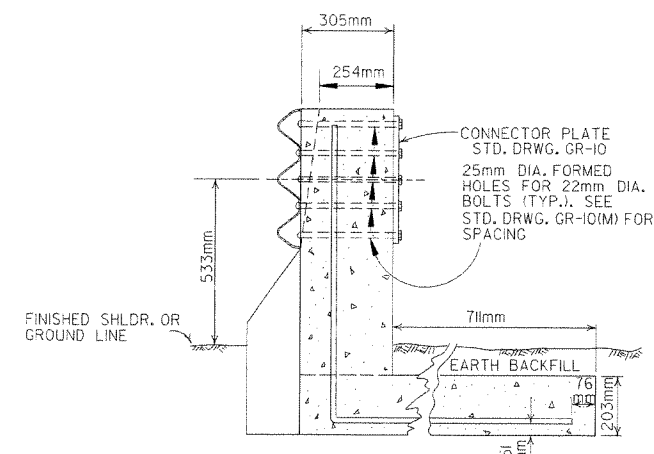
PLAN OF CONCRETE BARRIER WALL



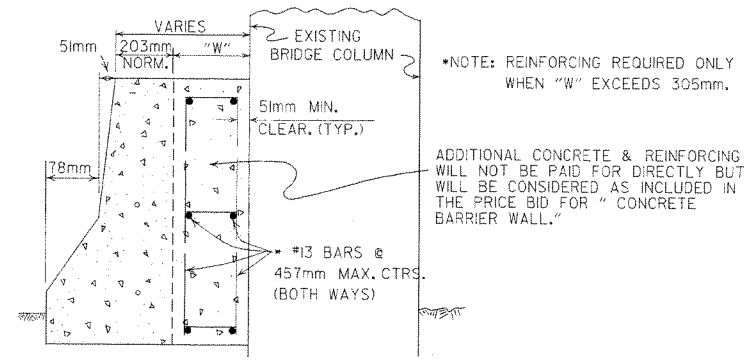
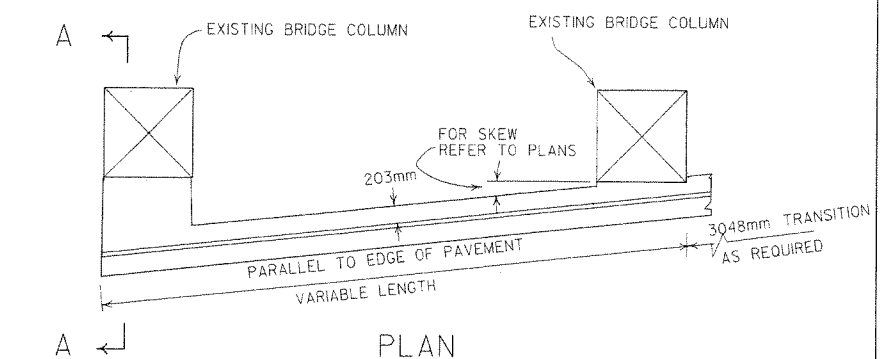
ELEVATION OF CONCRETE BARRIER WALL



SECTION A-A



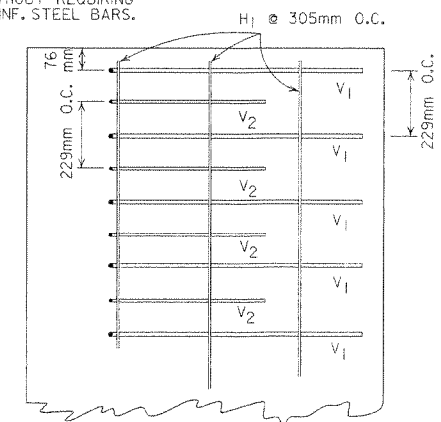
SECTION THRU CONNECTION



SECTION A-A

DETAILS OF CONCRETE BARRIER WALL WHEN PIERS ARE SKEWED TO ROADWAY

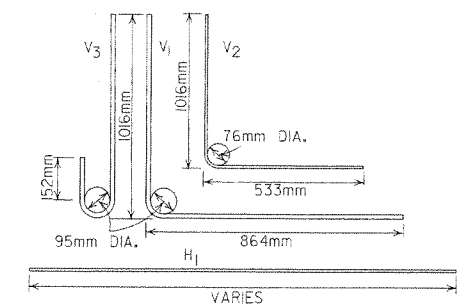
IF FOR ANY REASON IT IS NECESSARY TO CONSTRUCT THE FOOTING AT A LOWER ELEVATION THAN IS SHOWN, THE STEM MAY BE LENGTHENED 305mm BETWEEN FIN. SHLDR. AND TOP OF FOOTING WITHOUT REQUIRING HEAVIER REINF. STEEL BARS.



PLAN OF REINFORCING STEEL IN FOOTING

BAR LIST			
MARK	NO.	SIZE	LENGTH mm
V1		16	1886
V2		13	1549
V3		16	1248
H1	6	13	VAR.

THE V3 BARS SHALL BE USED IN PLACE OF THE V1 & V2 BARS IN FRONT OF PIERS.



BEND DIAGRAMS

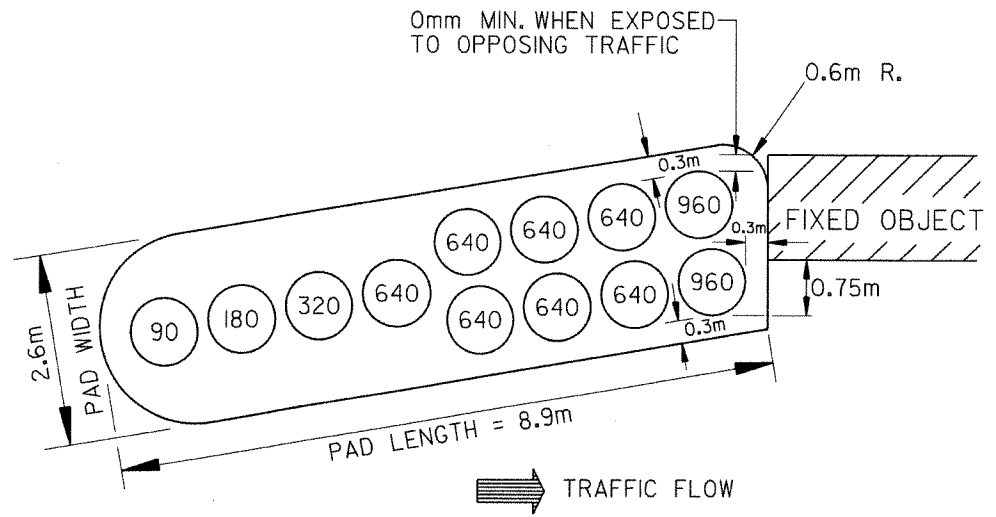
DATE	REVISION	DATE FILMED
7-14-10	RAISED HEIGHT OF W-BEAM 26mm	
8-22-02	REVISED SECTION A-A OF DETAILS OF CONCRETE BARRIER WALL	
11-16-01	REVISED STD DRWG NO. UNDER PLAN OF CONCRETE BARRIER WALL	
6-29-00	MOVED DIMENSION LINE	
5-18-00	ADDED NOTE	
3-30-00	REVISED TO INCLUDE THRIE BEAM	
7-02-98	CORRECTED SPELLING	
4-3-97	REVISED STEEL BARS TO SOFT METRIC	
7-20-95	CONVERTED TO METRIC	

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE BARRIER WALL
(PIER PROTECTION TYPE A)

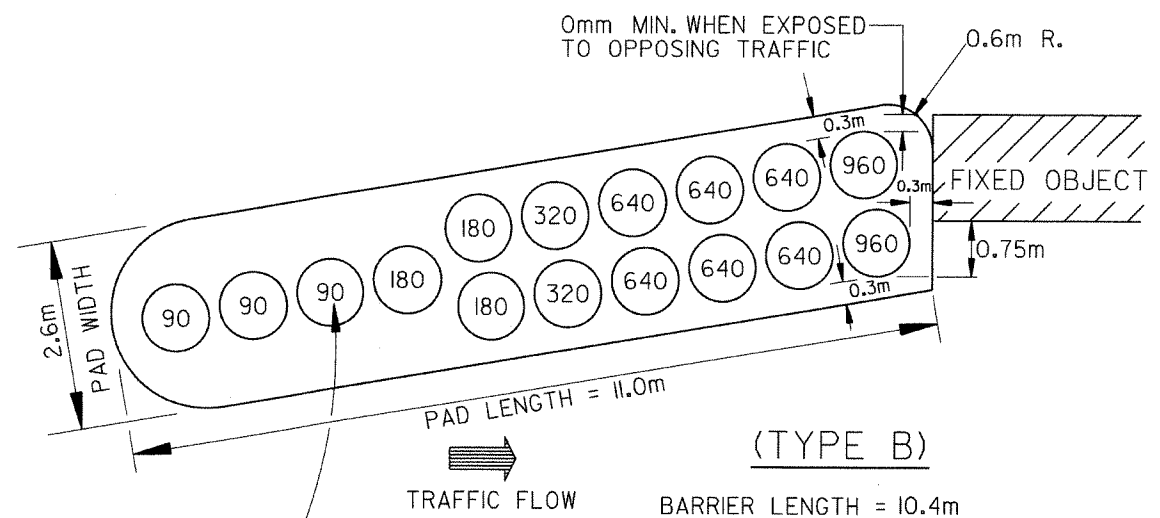
STANDARD DRAWING GR-11(M)

METRIC



(TYPE C)

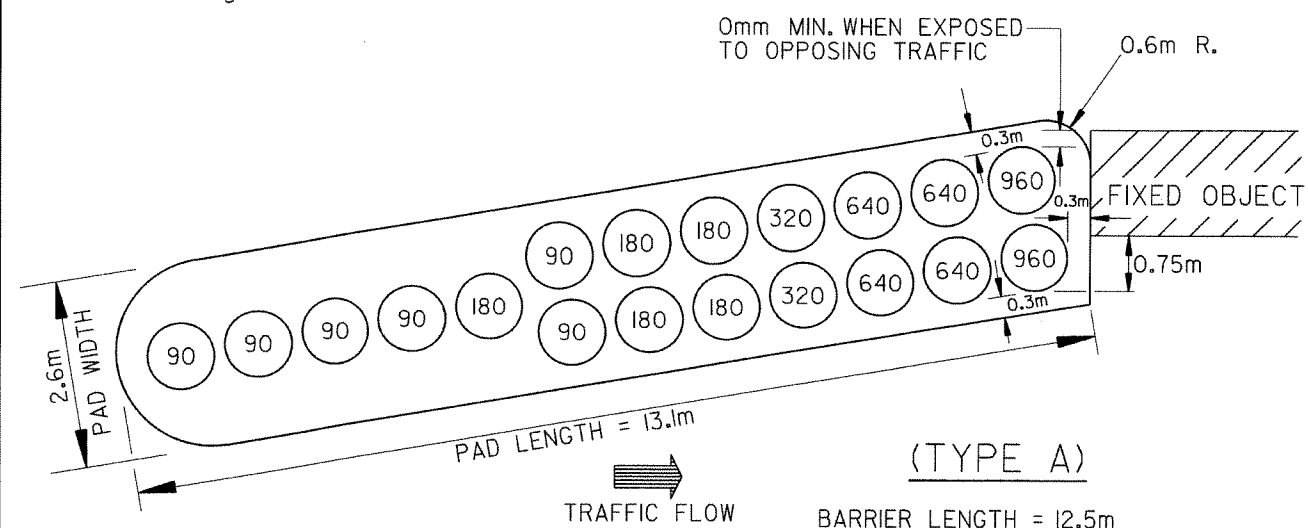
BARRIER LENGTH = 8.3m
DESIGN IMPACT SPEED = 80 kmph = 21.99 mps



(TYPE B)

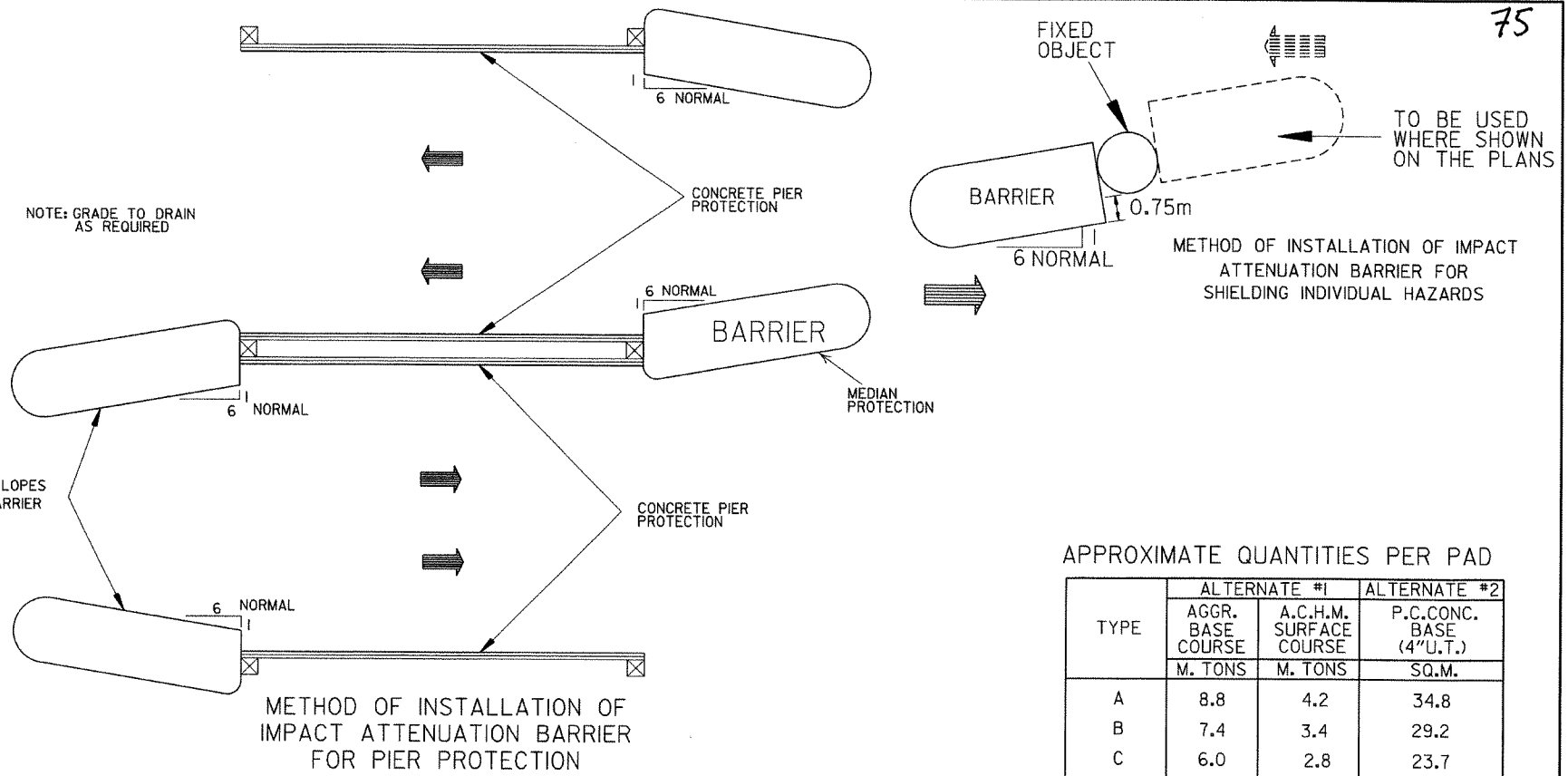
BARRIER LENGTH = 10.4m
DESIGN IMPACT SPEED = 96 kmph = 26.4 mps

NUMBERS INDICATE WEIGHT OF MODULE IN kg (TYPICAL)



(TYPE A)

BARRIER LENGTH = 12.5m
DESIGN IMPACT SPEED = 112 kmph = 30.9 mps



METHOD OF INSTALLATION OF IMPACT ATTENUATION BARRIER FOR PIER PROTECTION

- GENERAL NOTES
1. DIMENSIONS SHOWN ARE TO TOP OF PLASTIC MODULES.
 2. SPACING BETWEEN PLASTIC MODULES SHALL NOT EXCEED 150mm AT THE TOP.
 3. PLASTIC MODULES SHALL MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).

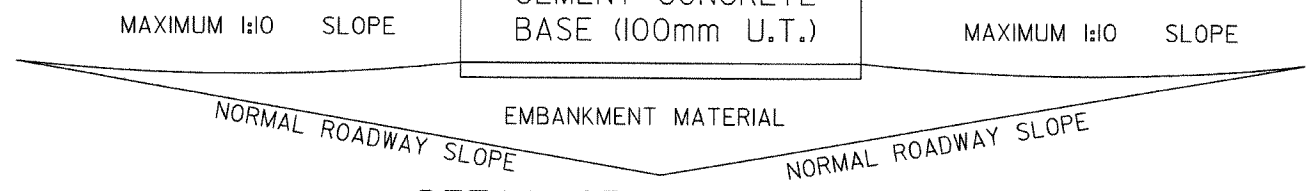
APPROXIMATE QUANTITIES PER PAD

TYPE	ALTERNATE #1		ALTERNATE #2
	AGGR. BASE COURSE M. TONS	A.C.H.M. SURFACE COURSE M. TONS	P.C.CONC. BASE (4"U.T.) SQ.M.
A	8.8	4.2	34.8
B	7.4	3.4	29.2
C	6.0	2.8	23.7

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

ALTERNATE #1
AVG. 2.6m A.C.H.M. SURF. COURSE(12.5mm)
120 kg./ sq. m. &
AGGREGATE BASE COURSE
(100mm COMPACTED DEPTH)

OR ALTERNATE #2
AVG. 2.6m PORTLAND CEMENT CONCRETE BASE (100mm U.T.)



DETAIL OF BARRIER PAD

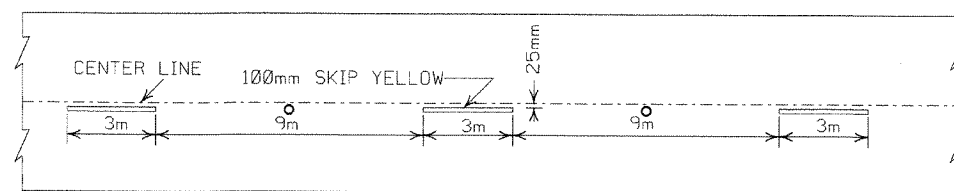
NOTE: BARRIER PAD TO BE SKEWED TOWARD ONCOMING TRAFFIC
A MAXIMUM OF 1:6 WITH 1:6 BEING NORMAL

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

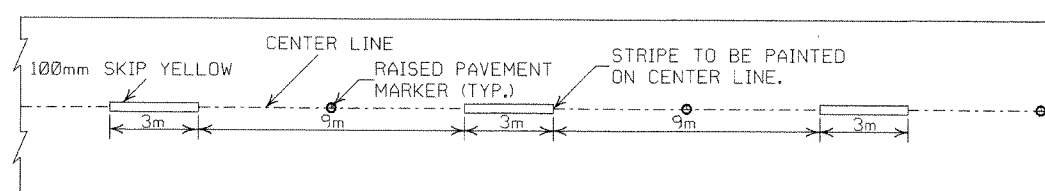


NOTES:

1. ALL LINES SHALL HAVE A WIDTH OF 100mm.
2. THE THICKNESS AND RATE OF PAINT APPLICATION SHALL BE AS SPECIFIED IN SECTION 718 OF THE STANDARD SPECIFICATIONS.
3. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
4. RAISED PAVEMENT MARKERS SHALL BE CENTERED BETWEEN SKIP LINES ON 12m SPACING UNLESS OTHERWISE SHOWN ON THE PLANS.

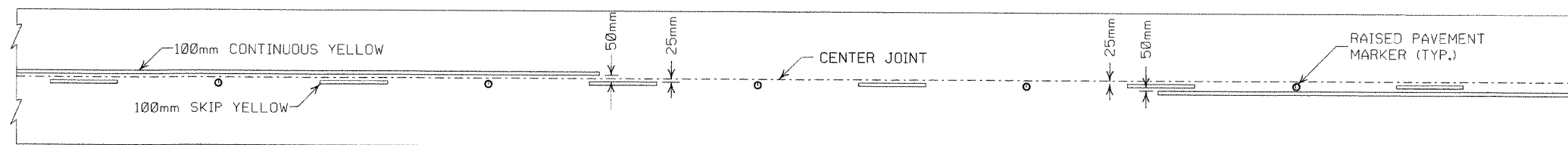


CONCRETE PAVEMENT

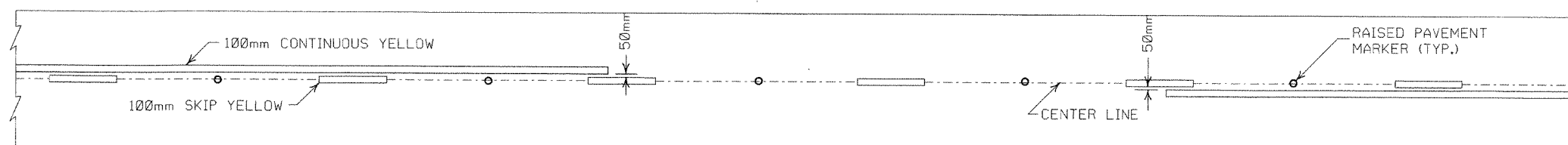


ASPHALT PAVEMENT

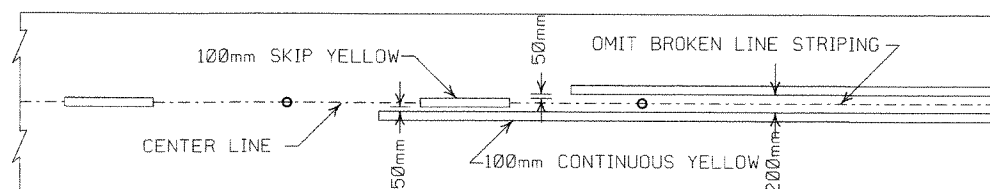
BROKEN LINE STRIPING



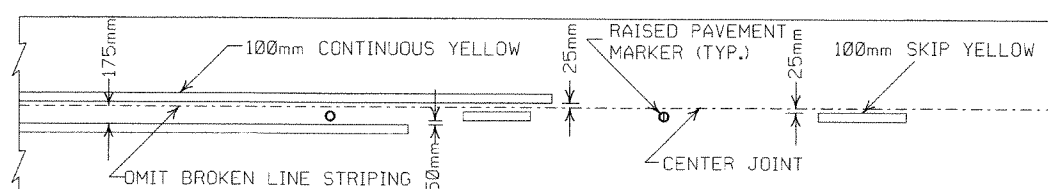
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT



ASPHALT PAVEMENT



CONCRETE PAVEMENT

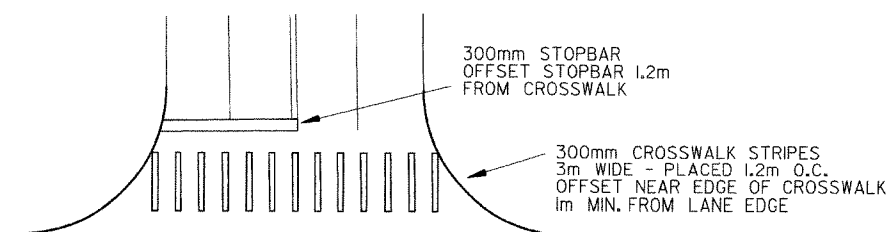
STRIPING AT ADJACENT NO PASSING LANES

GENERAL NOTES:

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

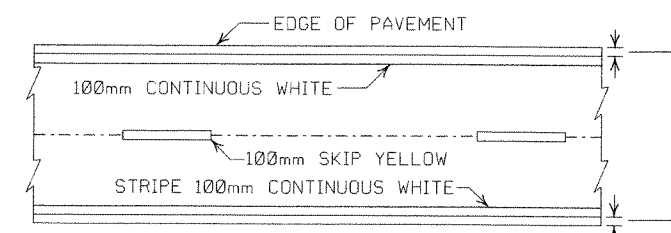
THIS DRAWING SHOULD BE USED IN CONJUNCTION WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST REVISION.

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

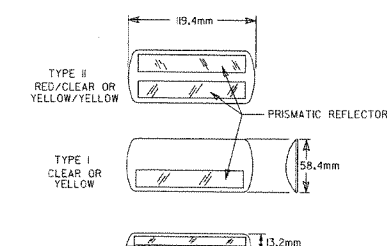


CROSSWALK AND STOPBAR DETAILS

50mm FOR ASPHALT OR CONCRETE PAVEMENT
150mm FOR BITUMINOUS SURFACE TREATMENT



PAVEMENT EDGE LINE MARKING



DETAIL OF
STANDARD
RAISED PAVEMENT MARKERS

8-17-00	REVISED NOTE & REMOVED FLOWABLE PAVEMENT MARKERS	
8-18-04	REVISED NOTE 2 & GENERAL NOTES	
8-22-02	ADDED CROSSWALK & STOPBAR DETAILS	
7-02-98	ADDED DETAIL OF STD. RAISED PAVT. MARKERS	
4-26-96	REV. NOTES 3&4; ADDED R.P.M.	
7-20-95	CONVERTED TO METRIC	
DATE	REVISION	DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION

PAVEMENT MARKING DETAILS

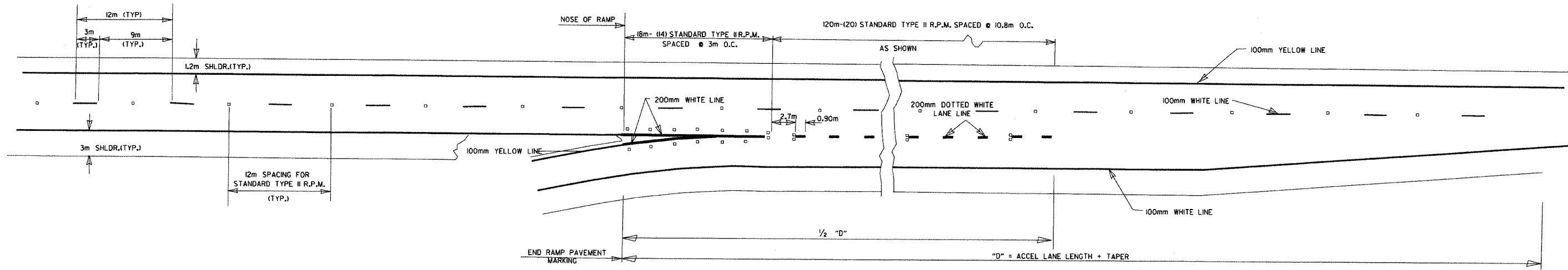
STANDARD DRAWING PM-1 (M)



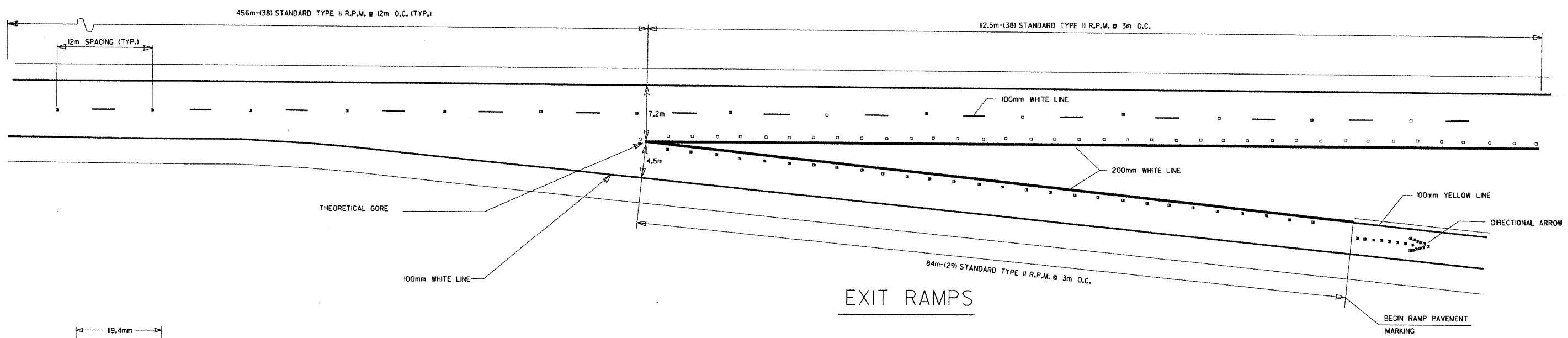
PAVEMENT MARKING QUANTITIES
(BASED ON 210m ACCEL LANE + 90m TAPER)

ENTRANCE RAMP
200mm WHITE = 68m
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH

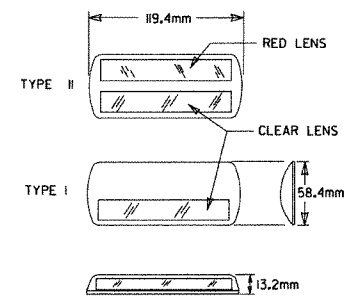
EXIT RAMP
100mm WHITE = 84m
200mm WHITE = 196.5m
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 48 EACH
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH



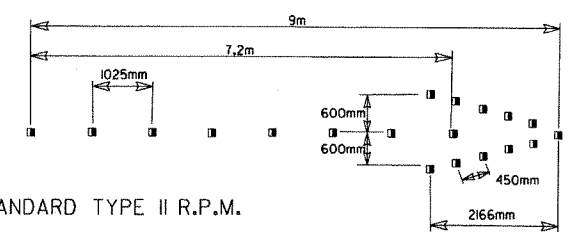
ENTRANCE RAMP



EXIT RAMP



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



DIRECTIONAL ARROWS

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

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

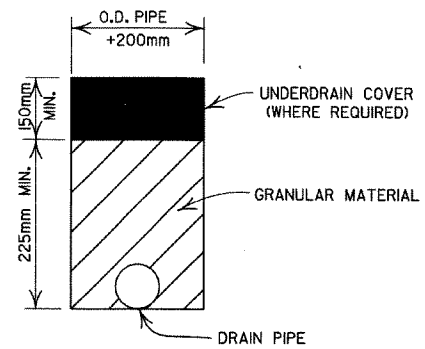
NOTE:
DIMENSIONS SHOWN FOR PLOWABLE PAVEMENT MARKERS AND RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING TO THE AHTD QUALIFIED PRODUCTS LIST.

12-15-11	REVISED RPMs ACCORDING TO LATEST POLICY	
11-17-10	REMOVED PLOWABLE PVMT MRKRS	
6-3-10	REVISED PER 2009 MUTCD	
11-18-04	REVISED NOTES	
8-22-02	ADDED & REVISED NOTES; REV. ENTRANCE & EXIT RAMP	
5-18-00	REMOVED HASHMARKS	
7-02-98	CHANGED TYPES TO ROMAN NUMERALS	
4-26-96	ADDED DIMENSIONS & QUANTITIES; REV. LANE WIDTH ON EXIT RAMP	
7-20-95	CONVERTED TO METRIC	
DATE	REVISION	FILMED

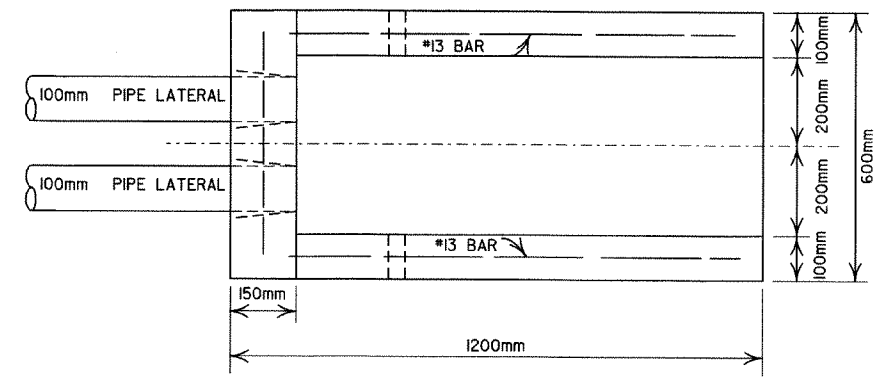
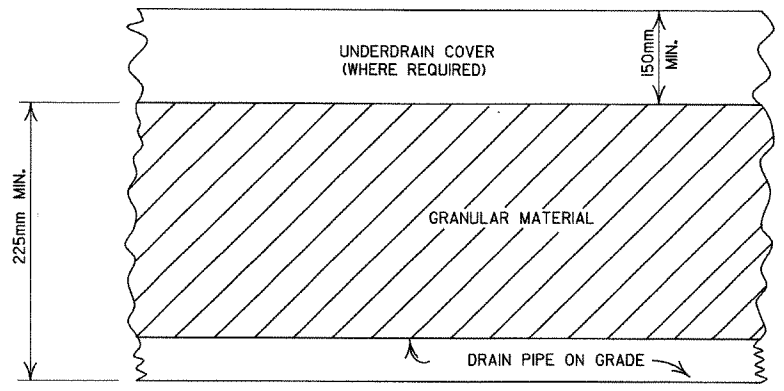
ARKANSAS STATE HIGHWAY COMMISSION
PERMANENT PAVEMENT MARKING
ON ACCESS CONTROLLED ROADWAYS
STANDARD DRAWING PM-2(M)



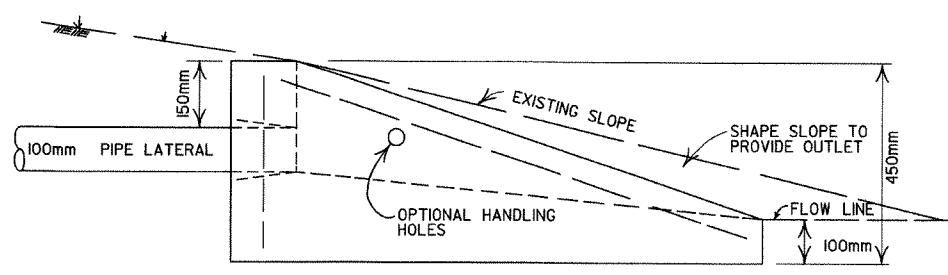
NOTE:
1. GRANULAR BACKFILL TO BE SUBSIDIARY TO PIPE UNDERDRAIN.
2. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THOROUGHLY COMPACTED EARTH AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.
3. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC, LAP FABRIC 300mm OR THE WIDTH OF THE TRENCH AT THE TOP.



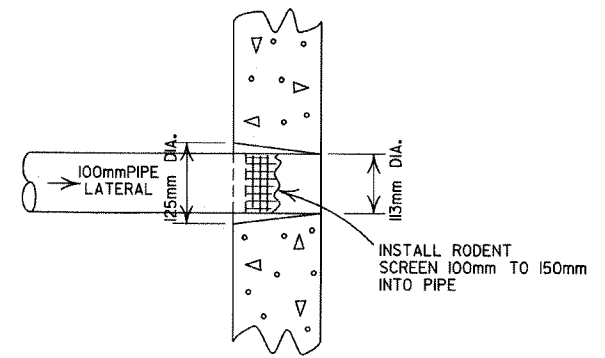
DETAILS OF PIPE UNDERDRAIN



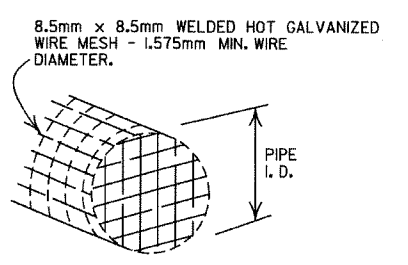
PLAN VIEW



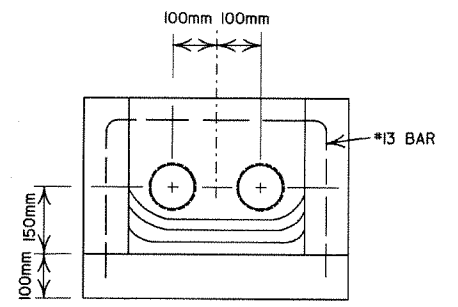
SIDE VIEW



DETAIL OF HOLE FOR 100mm PIPE



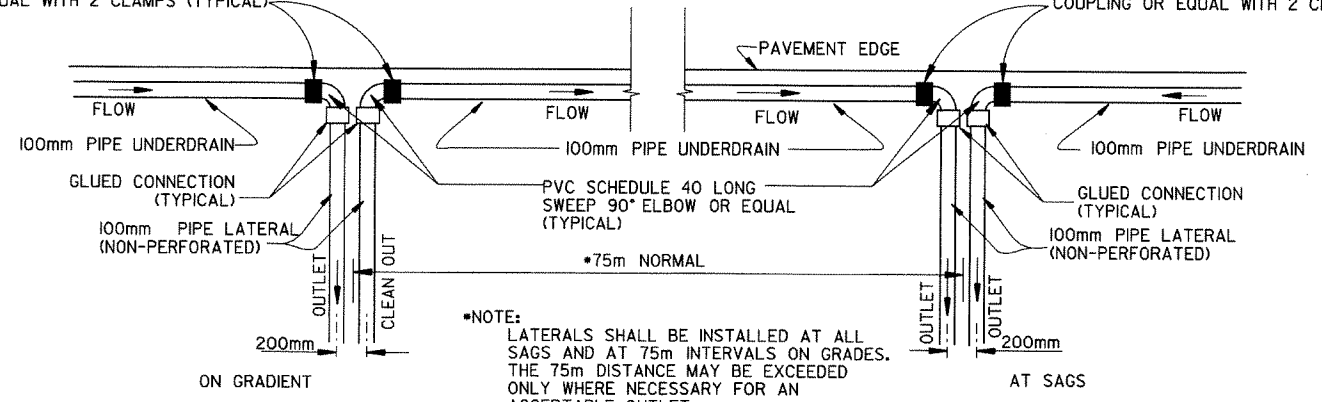
DETAIL OF RODENT SCREEN



FRONT VIEW

UNDERDRAIN OUTLET PROTECTORS

FERNCO 1056-44 (100mm CI/PLASTIC) OR
FERNCO 1051-44 (100mm AC/DI OR 100mm CI/PLASTIC)
COUPLING OR EQUAL WITH 2 CLAMPS (TYPICAL)



*NOTE:
LATERALS SHALL BE INSTALLED AT ALL SAGS AND AT 75m INTERVALS ON GRADES. THE 75m DISTANCE MAY BE EXCEEDED ONLY WHERE NECESSARY FOR AN ACCEPTABLE OUTLET.

DETAIL OF PIPE UNDERDRAIN LATERALS WHEN PLACED ALONG PAVEMENT EDGE

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

4-10-03	REVISED NOTE 3	
1-2-00	REVISED DETAIL OF UNDERDRAIN LATERALS	
1-10-98	REVISED NOTE	
7-02-98	CORRECTED SPELLINGS	
4-3-97	REVISED STEEL PIPES TO SOFT METRIC	
10-8-96	REVISED MINIMUM DEPTH & GEOTEXTILE FABRIC	
4-26-96	ADDED LATERAL NOTE 137mm TO 125mm	
11-22-95	REVISED LATERALS	
7-20-95	CONVERTED TO METRIC	
DATE	REVISION	DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF PIPE UNDERDRAINS

STANDARD DRAWING PU-1 (M)



SUPERELEVATION TABLE FOR ONE - WAY TRAFFIC

[illegible]

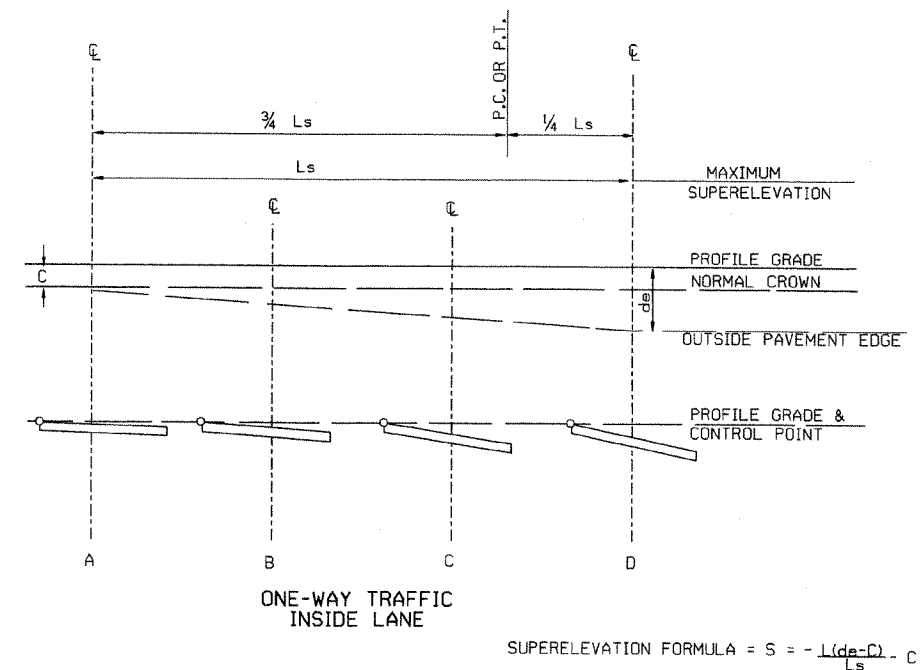
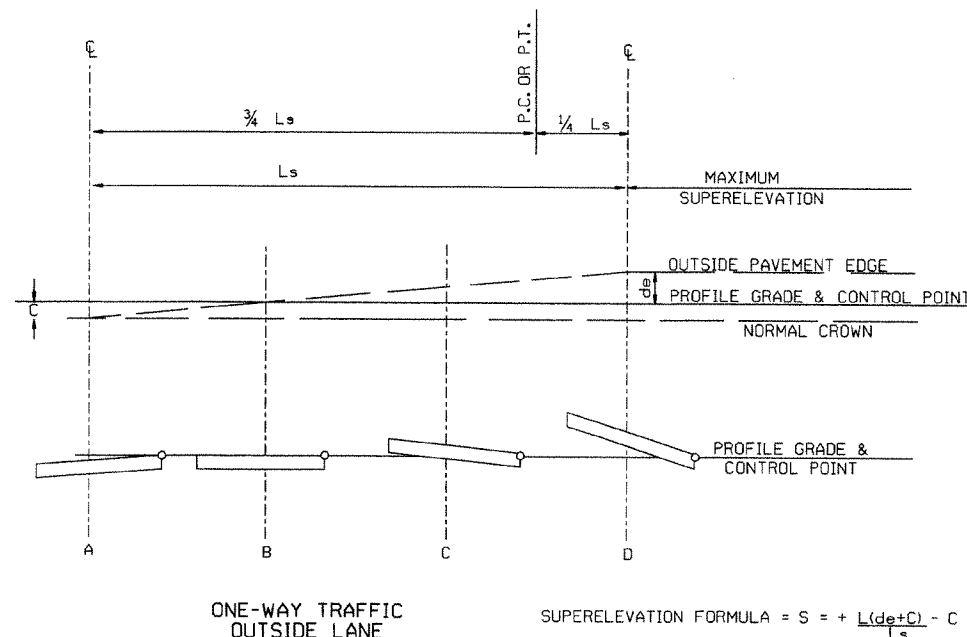
GENERAL NOTES

1. ON PAVEMENT WITH ONE-WAY TRAFFIC, THE SUPERELEVATION SHALL BE REVOLVED ON THE PRILE GRADE POINT.
2. SUPERELEVATION VALUES SHOWN ON THE CROSS SECTIONS ARE VALUES (+) OR (-) TO BE ADDED OR SUBTRACTED FROM THE POINT OF CONTROL.
3. LENGTHS FOR L_s MAY BE ROUNDED IN MULTIPLES OF 5m TO PERMIT SIMPLER CALCULATIONS.
4. MINIMUM L_s VALUES MAY BE USED FOR RAMPS; DESIRABLE VALUES SHALL APPLY TO MAIN LANES.
5. DIVIDED PAVEMENTS WIDER THAN 4 LANES SHALL HAVE ADDITIONAL TRANSITION LENGTHS AS FOLLOWS:

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

ABBREVIATIONS

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

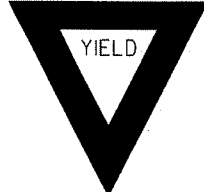
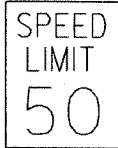
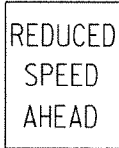
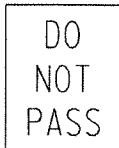
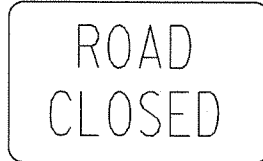
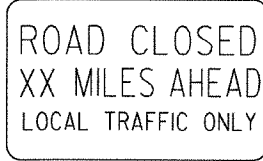
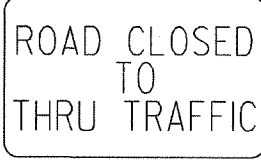
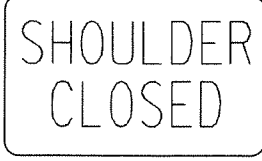
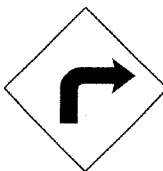
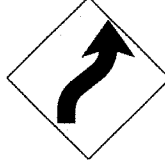
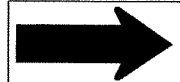
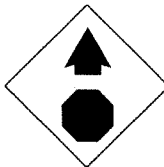
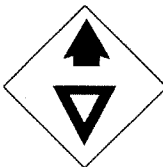
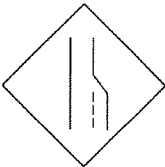
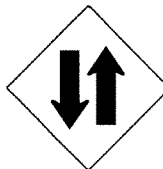
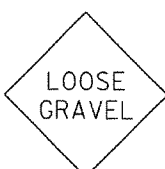
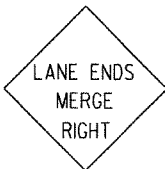
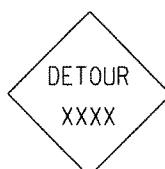
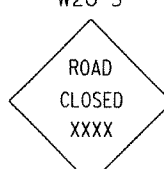
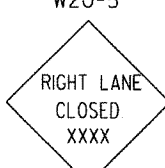
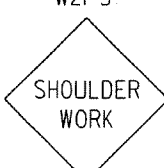
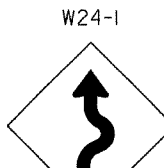
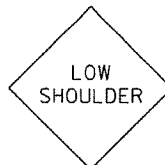
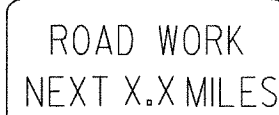
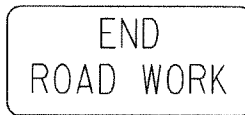
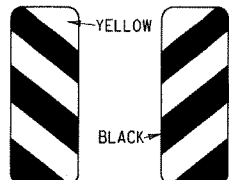
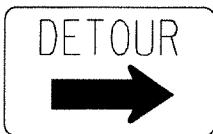
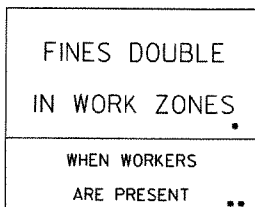


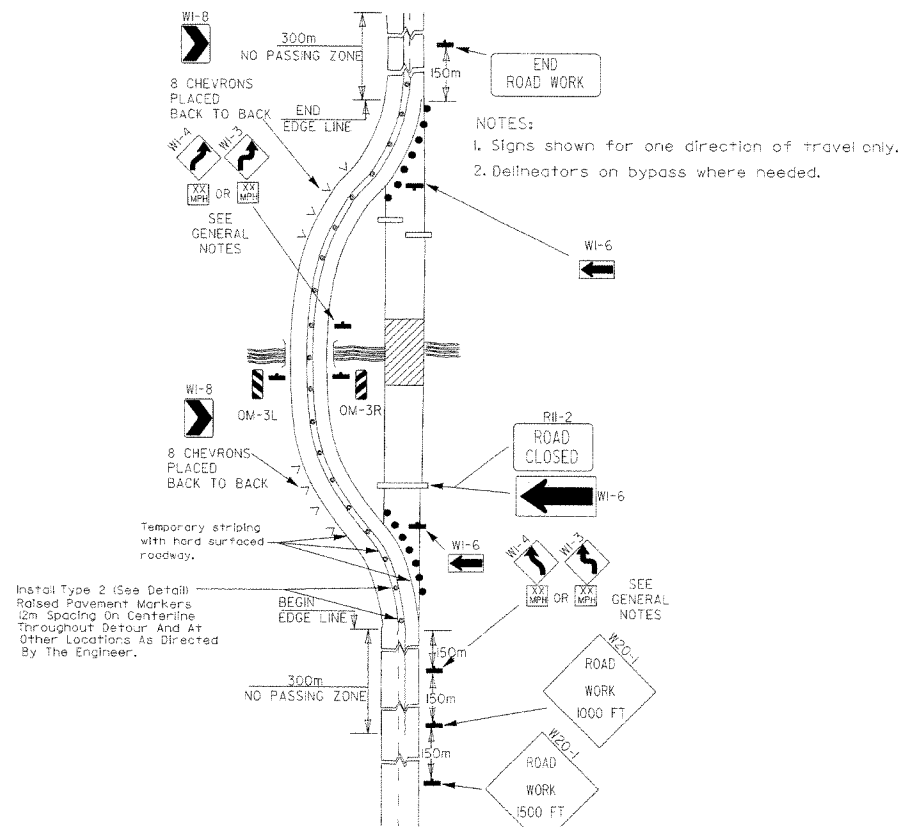
ARKANSAS STATE HIGHWAY COMMISSION

TABLES AND METHOD OF SUPERELEVATION FOR ONE-WAY TRAFFIC

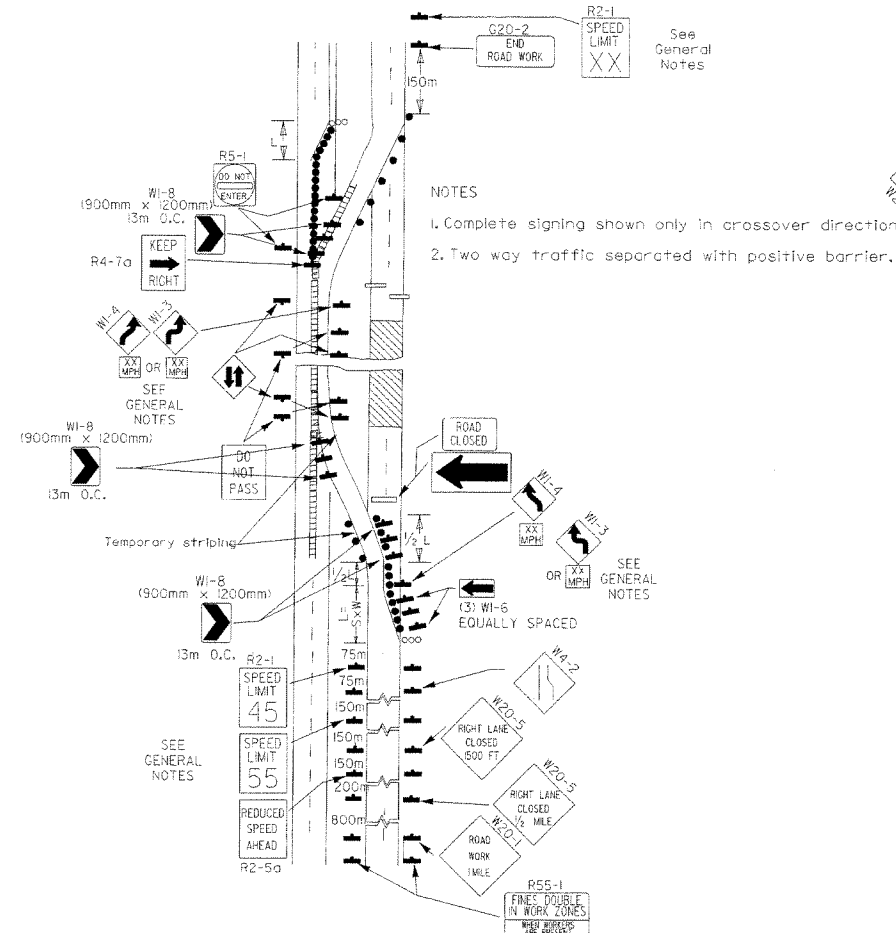
STANDARD DRAWING SE-1(M) **METRIC**

4-26-96	CORRECTED L TO Lg	4-26-96
7-20-95	CONVERTED TO METRIC	
DATE	REVISION	DATE

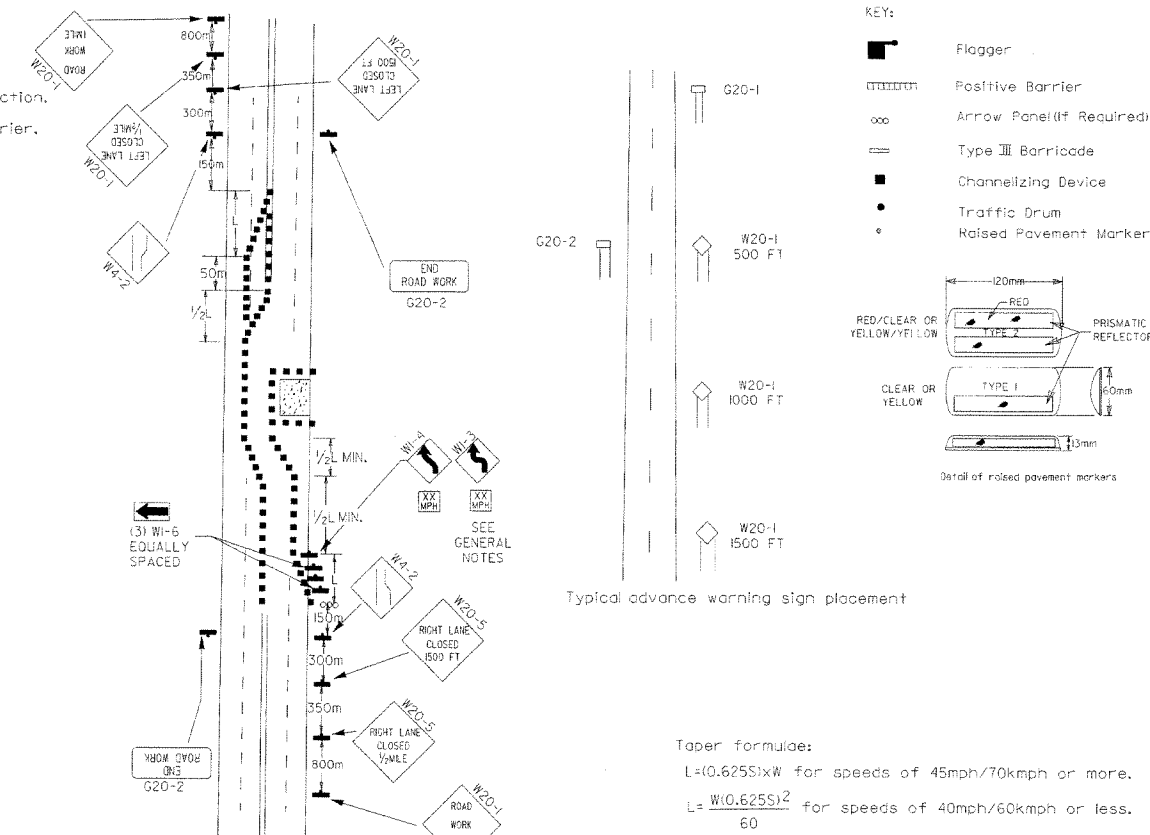
RI-1  750mm x 750mm 900mm x 900mm 1200mm x 1200mm		RI-2  900mm x 900mm x 900mm 1200mm x 1200mm x 1200mm 1500mm x 1500mm x 1500mm		R2-1  600mm x 750mm 900mm x 1200mm 1200mm x 1500mm		R2-5A  600mm x 750mm 900mm x 1200mm 1200mm x 1500mm		R2-5C  600mm x 750mm 900mm x 1200mm 1200mm x 1500mm		R4-1  600mm x 750mm 900mm x 1200mm 1200mm x 1500mm		R4-2  600mm x 750mm 900mm x 1200mm 1200mm x 1500mm		ADVANCE DISTANCES (XXXX) 500 FT 1/2 MILE 1000 FT 3/4 MILE 1500 FT 1 MILE AHEAD 80 GENERAL NOTES: 1. ALL TRAFFIC CONTROL DEVICES USED ON ROAD CONSTRUCTION SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND TO THE STANDARD HIGHWAY SIGNS, LATEST EDITION, OR AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION. 2. TRAFFIC CONTROL DEVICES SHALL BE SET UP JUST BEFORE THE START OF CONSTRUCTION OPERATIONS AND SHALL BE PROPERLY MAINTAINED DURING THE TIME SUCH CONDITIONS EXIST. THEY SHALL REMAIN IN PLACE ONLY AS LONG AS NEEDED AND REMOVED THEREAFTER. 3. EXISTING SIGNS AND CONSTRUCTION SIGNS SHALL BE KEPT IN PROPER POSITION, AND BE CLEAN AND LEGIBLE AT ALL TIMES. SIGNS THAT DO NOT APPLY TO EXISTING CONDITIONS SHALL BE REMOVED. SIGNS THAT ARE DAMAGED, DEFACED, OR THAT ACCUMULATE DIRT DURING CONSTRUCTION SHALL BE CLEANED, REPAIRED, OR REPLACED. 4. SIGNS ARE USUALLY MOUNTED ON A SINGLE POST, ALTHOUGH THOSE WIDER THAN 900mm OR LARGER THAN 1sq.m. SHALL BE MOUNTED ON TWO POSTS OR ABOVE A TYPE III BARRICADE. 5. SIGN POSTS DIRECT BURIED IN SOIL SHALL BE 1.0 kg MINIMUM CHANNEL POST OR 100 mm x 100 mm 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 2m PATH FOR WOOD OR CHANNEL POSTS. ANY CHANNEL POST SPLICE SHALL BE IN ACCORDANCE WITH STANDARD DRAWING TC-3. 6. POST MOUNTED SIGNS IN RURAL AREAS SHALL BE CONSTRUCTED WITH THE NEAR EDGE OF THE SIGN FROM 2 TO 4 METERS FROM THE PAVEMENT EDGE. SIGNS IN URBAN AREAS AND BARRICADE MOUNTED SIGNS SHALL BE MOUNTED A MINIMUM OF 0.6m FROM THE PAVEMENT EDGE. 7. ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN URBAN AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 2m 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 2m FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE, EXCEPT A MINIMUM OF 1.5m 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 1.5 METERS. 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 0.3 METER ABOVE THE TRAVELED WAY. LONG-TERM STATIONARY SIGNS SHALL BE DIRECT BURIED IN SOIL, UNLESS CONDITIONS NECESSITATE THE USE OF PORTABLE SIGNS, OR AS APPROVED BY THE ENGINEER. CONCRETE PADS, CONCRETE OR ROCK BALLAST, OR OTHER SOLID MATERIALS SHALL NOT BE UTILIZED WITH PORTABLE SIGN SUPPORTS. 8. FLAGGERS SHALL USE REFLECTORIZED STOP-SLOW PADDLES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS. 9. MOST OF THE SIGNS SHOWN ARE ORIENTED TO THE RIGHT. HOWEVER, THIS DOES NOT PRECLUDE THE USE OF MIRROR IMAGES OF THESE SIGNS WHERE THE REVERSE ORIENTATION MIGHT BETTER CONVEY TO MOTORISTS THE PROPER DIRECTION OF MOVEMENT. 10. R55-1 SIGNS SHALL BE PLACED AT LEAST 450m BUT NOT MORE THAN 1.6km IN ADVANCE OF THE WORK ZONE. IF A SPEED LIMIT REDUCTION IS IN EFFECT, THE SIGN SHALL BE PLACED A MINIMUM OF 150m IN ADVANCE OF THE "REDUCED SPEED AHEAD" SIGN. *NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) IS REQUIRED FOR ALL PROJECTS.																																																
R5-1  750mm x 750mm 950mm x 950mm 1200mm x 1200mm		R11-2  1200mm x 750mm		R11-3A  1500mm x 750mm		R11-4  1500mm x 750mm		RSP-1  1200mm x 750mm		W1-1  900mm x 900mm 1200mm x 1200mm		W1-2  900mm x 900mm 1200mm x 1200mm																																																		
W1-3  1200mm x 1200mm		W1-4a  1200mm x 1200mm		W1-6  1200mm x 600mm 1500mm x 750mm		W1-8  450mm x 600mm 600mm x 750mm 750mm x 900mm 900mm x 1200mm		W3-1  900mm x 900mm 1200mm x 1200mm		W3-2  900mm x 900mm 1200mm x 1200mm		W4-2  900mm x 900mm 1200mm x 1200mm																																																		
W5-1  900mm x 900mm 1200mm x 1200mm		W6-3  900mm x 900mm 1200mm x 1200mm		W8-7  900mm x 900mm 1200mm x 1200mm		W9-2  900mm x 900mm 1200mm x 1200mm		W13-1  600mm x 600mm		W20-1  1200mm x 1200mm		W20-2  1200mm x 1200mm		W20-3  1200mm x 1200mm																																																
W20-4  1200mm x 1200mm		W20-5  1200mm x 1200mm		W20-7a  450 500 FEET W16-2 600 900mm x 900mm 1200mm x 1200mm		W21-2  750mm x 750mm 900mm x 900mm		W21-5  750mm x 750mm 900mm x 900mm		W24-1  900mm x 900mm		W1-4b  1200mm x 1200mm		R56-1  450mm x 450mm																																																
W8-11  900mm x 900mm 1200mm x 1200mm		W8-9  900 x 900mm 1200mm x 1200mm		G20-1  1500mm x 600mm		G20-2  1200mm x 600mm		OM-3L OM-3R  YELLOW BLACK 300mm x 900mm		M4-9  750mm x 600mm 1200mm x 900mm 1500mm x 1200mm		M4-10  1200mm x 450mm		R55-1  WHEN WORKERS ARE PRESENT .. 900mm x 1500mm * USE 150mm C LETTERS ** USE 100mm D LETTERS																																																
							<table><tr><td>12-15-11</td><td>REVISED W24-1</td><td></td></tr><tr><td>11-17-10</td><td>DELETED W8-9a & ADDED W8-9</td><td></td></tr><tr><td>10-15-09</td><td>ADDED REFERENCE TO MASH & ADDED SIGN W24-1</td><td></td></tr><tr><td>4-17-08</td><td>REVISED SIGN DESIGNATIONS</td><td></td></tr><tr><td>1-18-04</td><td>REVISED NOTES</td><td></td></tr><tr><td>10-9-03</td><td>REVISED NOTE 1</td><td></td></tr><tr><td>11-16-01</td><td>REVISED NOTE 7</td><td></td></tr><tr><td>9-28-00</td><td>REVISED NOTE</td><td></td></tr><tr><td>11-18-98</td><td>ADDED NOTE</td><td></td></tr><tr><td>6-26-97</td><td>REVISED NOTE 5</td><td></td></tr><tr><td>4-03-97</td><td>REVISED NOTE 5</td><td></td></tr><tr><td>10-18-96</td><td>ADDED CONTROLLED ACCESS HWY. SIGN & TO NOTE 7</td><td></td></tr><tr><td>1-22-95</td><td>ADDED NOTE *10</td><td></td></tr><tr><td>10-12-95</td><td>ADDED R55-1 AND mm TO ALL DIMENSIONS</td><td></td></tr><tr><td>7-20-95</td><td>ADDED METRIC LOGO, DELETED PAGE NUMBER</td><td></td></tr><tr><td>6-8-95</td><td>REVISED PER PART VI, MUTCD SEPT. 3, 1993</td><td></td></tr><tr><td>6-18-93</td><td>CONVERTED TO METRIC</td><td></td></tr><tr><td>DATE</td><td>REVISION</td><td>FILMED</td></tr></table> ARKANSAS STATE HIGHWAY COMMISSION STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION STANDARD DRAWING TC-1(M) 		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		1-18-04	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		1-22-95	ADDED NOTE *10		10-12-95	ADDED R55-1 AND mm TO ALL DIMENSIONS		7-20-95	ADDED METRIC LOGO, DELETED PAGE NUMBER		6-8-95	REVISED PER PART VI, MUTCD SEPT. 3, 1993		6-18-93	CONVERTED TO METRIC		DATE	REVISION	FILMED
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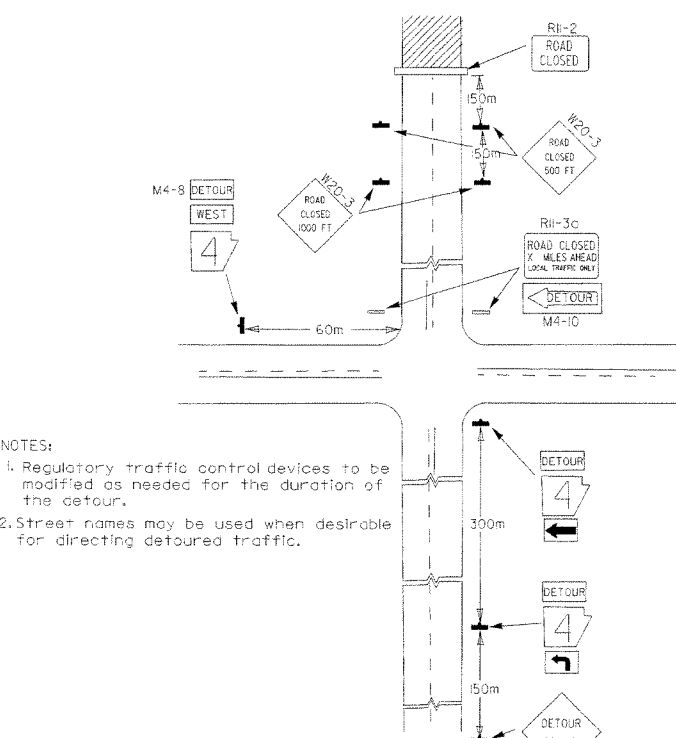
(A) Typical application of traffic control devices on a 2-lane highway where the entire roadway is closed and a bypass detour is provided.



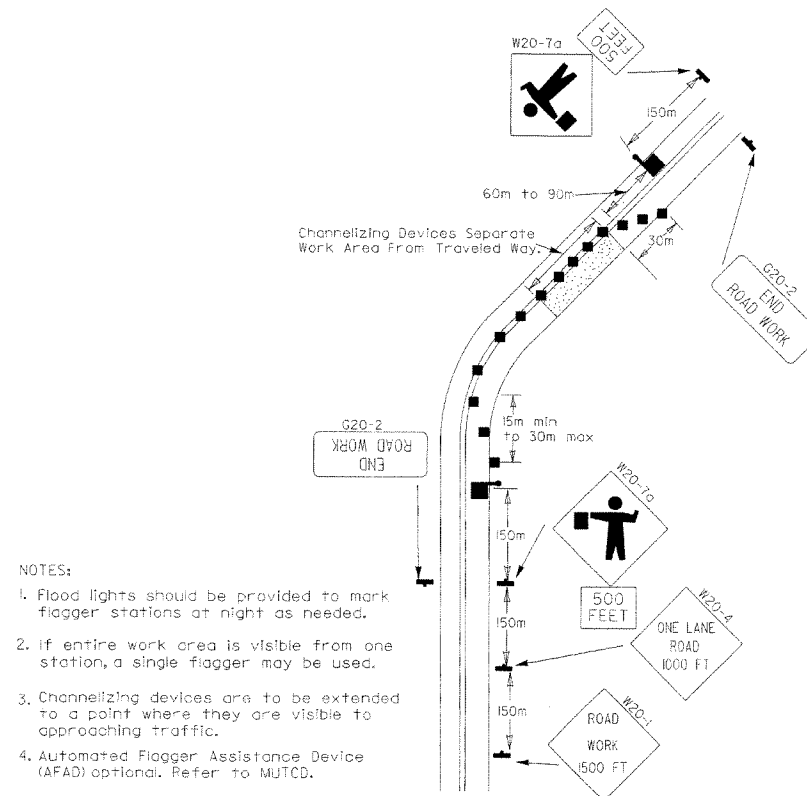
(B) Typical application - 4-lane divided roadway where one roadway is closed.



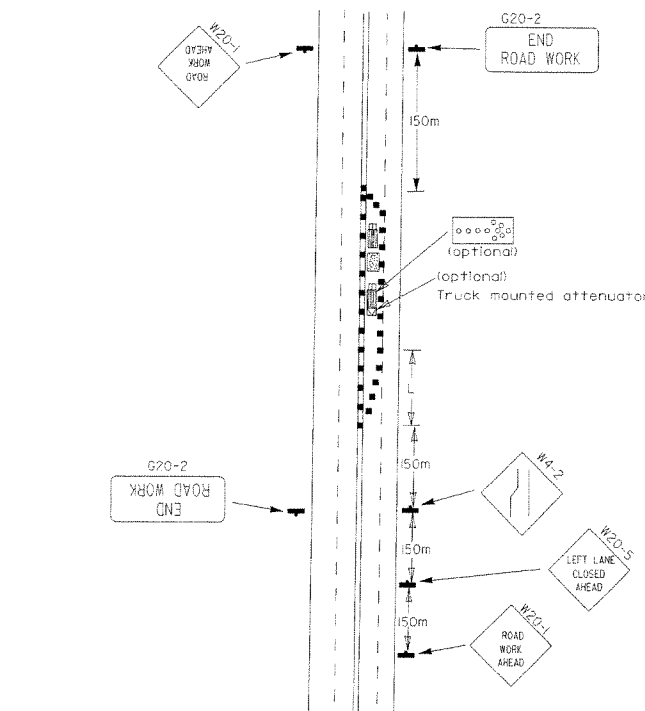
(C) Typical application - 4-lane undivided roadway where half of the roadway is closed.



(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.

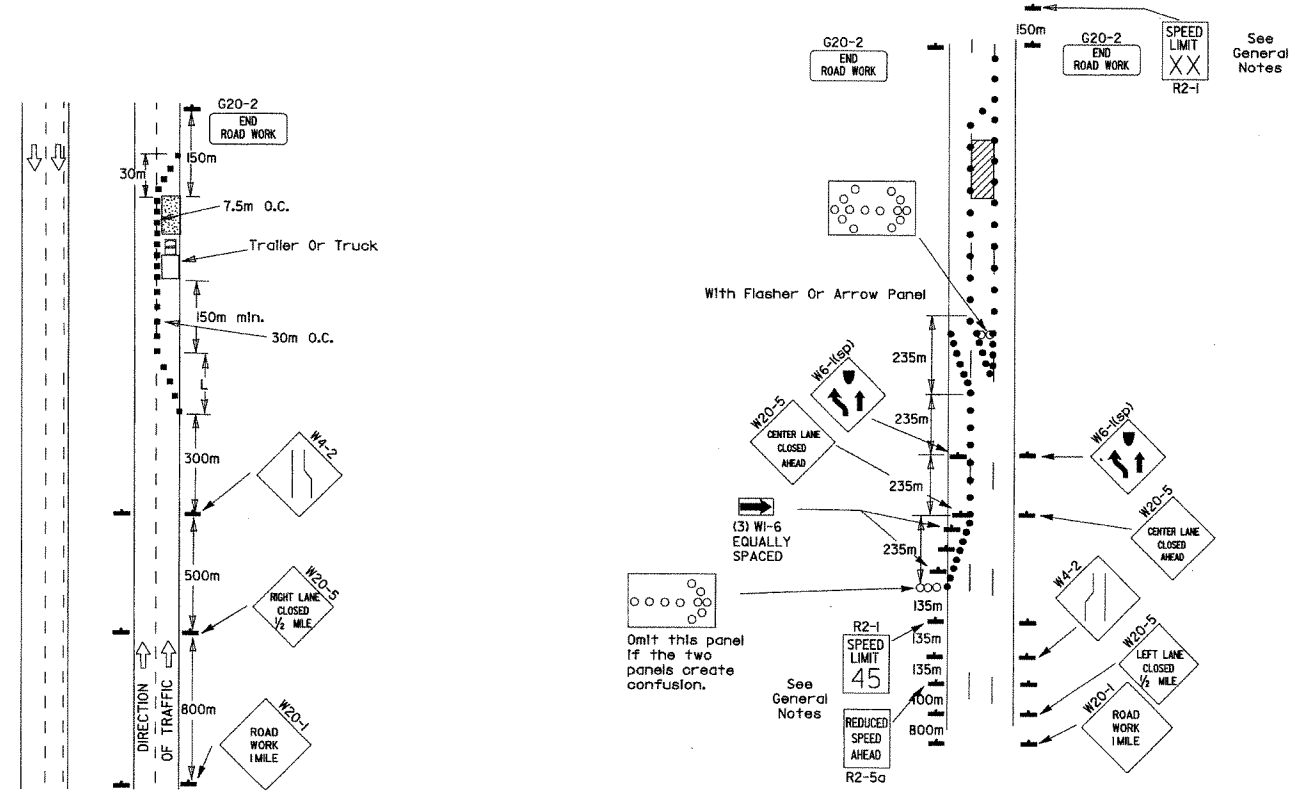
Taper formulae:
 $L = (0.625S)W$ for speeds of 45mph/70kmph or more.
 $L = \frac{W(0.625S)^2}{60}$ for speeds of 40mph/60kmph or less.
 Where:
 L = Minimum length of taper (meters).
 S = Numerical value of posted speed limit prior to work or 85th percentile speed (kmph).
 W = Width of offset (meters).

- 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 45mph and the plans require a speed limit of 45mph, the R2-1(45) shall be omitted and the R2-5A shall be installed at that location. Additional R2-1(45mph) speed limit signs shall be installed at a maximum of 1.6km 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 45mph, the R2-1(45) shall be omitted. Additional R2-1(55mph) speed limit signs shall be installed at a maximum of 1.6km intervals. At the end of the work area a R2-1(XX) shall be installed to match original speed limit.
 - 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.

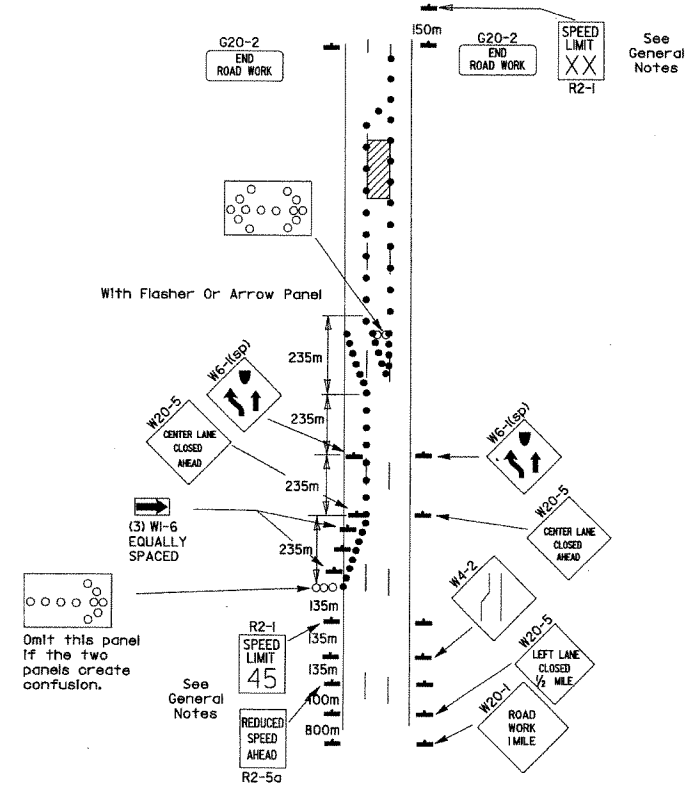
3-11-10	ADDED (AFAD)	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED GENERAL NOTE	
10-18-96	ADDED R55-1	
7-20-95	ADDED METRIC LOGO, DELETED PAGE NUMBER	7-20-95
6-8-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
6-18-93	CONVERTED TO METRIC	
DATE	REVISION	FILMED

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





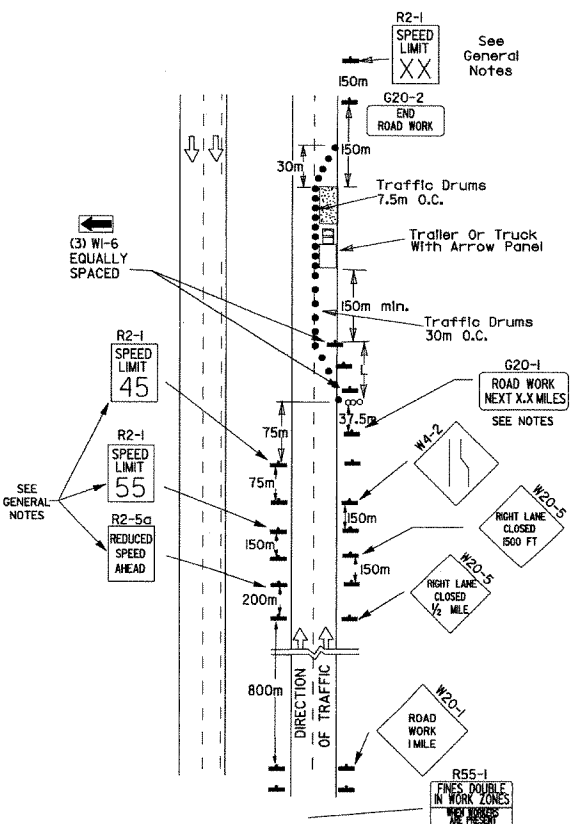
(A) Typical application - daytime maintenance operations of short duration on a 4-lane divided roadway where half of the roadway is closed.



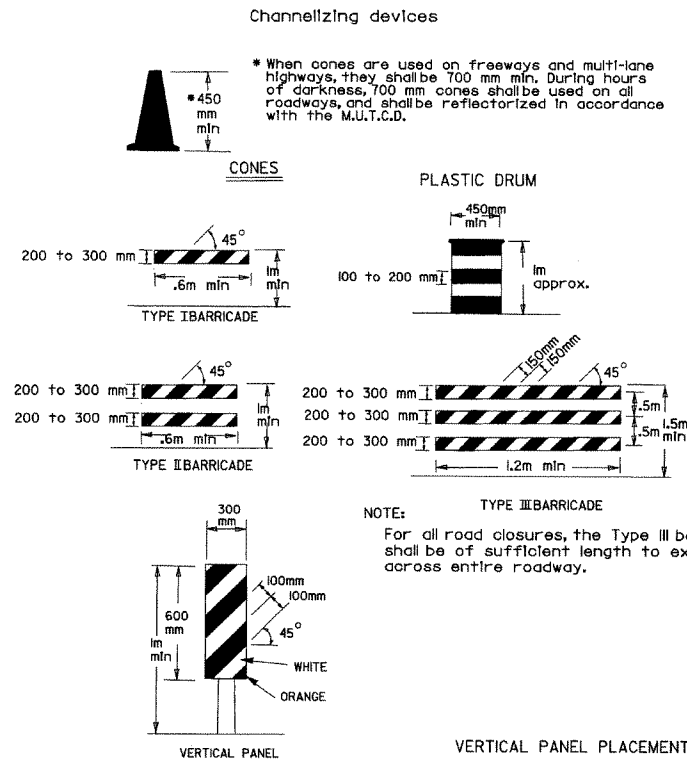
(B) Typical application - 3-lane oneway roadway where center lane is closed.

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

- GENERAL NOTES:
- A speed limit reduction may be implemented ONLY when designated in the plan or when recommended by the Roadway Design Division.
 - When the existing speed limit is 55 mph and the plans require a speed limit of 45 mph, the R2-1(45) shall be installed at that location. Additional R2-1(45 mph) speed limit signs shall be installed at a maximum of 1.6 km 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 65 mph and the plans require a speed limit of 55 mph, the R2-1(45) shall be omitted. Additional R2-1(55 mph) speed limit signs shall be installed at a maximum of 1.6 km intervals. At the end of the work area, a R2-1(XX) shall be installed to match original speed limit.
 - 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 3 km in length. When the lane closure is not at the beginning of the project, the G20-1 sign shall be erected 37.5m in advance of the job limit. Additional W20-1(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 conspicuously material in a continuous line on the face of the trailer. When placed on or adjacent to the shoulder and not behind a positive barrier, these devices shall be delineated by placing five (5) traffic drums, equally spaced along the traffic side of the device.

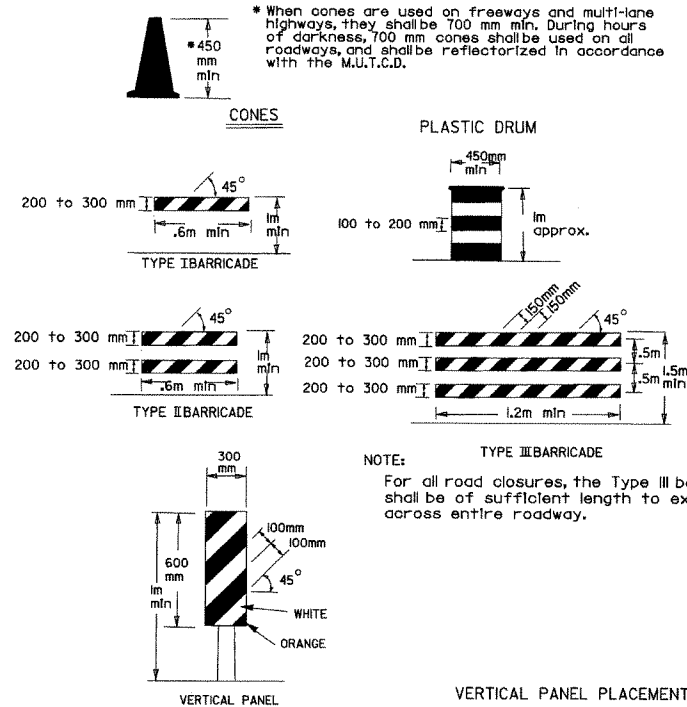


(C) Typical application - construction operations of intermediate to long term duration on a 4-lane divided roadway where half of the roadway is closed.



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

Channelizing devices



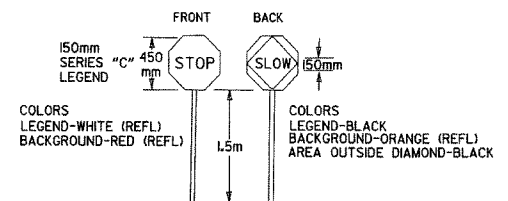
TRAFFIC CONTROL DEVICES FOR VERTICAL PAVEMENT DIFFERENTIALS

VERTICAL DIFFERENTIAL	LOCATIONS	TRAFFIC CONTROL
25 to 75mm	Centerline, lane lines	W8-II
25 to 75mm	Edge of shoulder	W8-9
Greater than 75mm	Lane lines	Standard lane closure required
Greater than 75mm	Edge of traveled lane	*RSP-1 and vertical panels, drums or concrete barrier
Greater than 75mm	Edge of shoulder	*Vertical panels, drums or concrete barrier

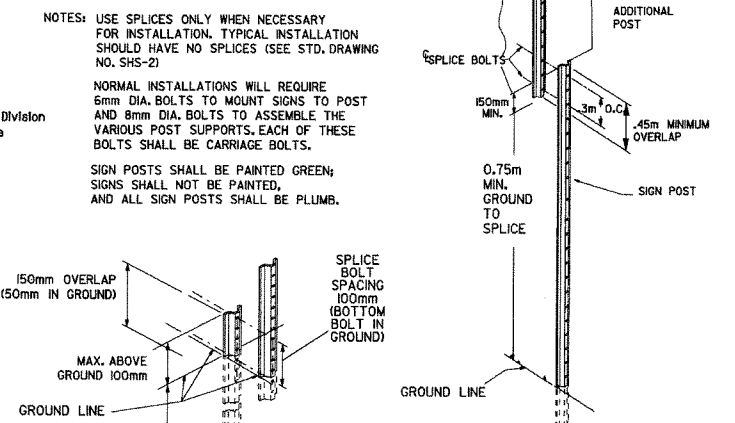
* When shown on the plans concrete barrier will be used.
When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.



STOP/SLOW PADDLE



DETAIL OF SPLICES



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	
7-20-95	ADDED METRIC LOGO, DELETED PAGE NUMBER	
6-8-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
6-18-93	CONVERTED TO METRIC	
DATE	REVISION	FILMED

GENERAL NOTES

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

WATTLE DITCH CHECK (E-1)

SAND BAG DITCH CHECK (E-5)

ROCK DITCH CHECK (E-6)

DROP INLET SILT FENCE (E-7)

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.

FILTER FABRIC BARRIER (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.

SILT FENCE (E-11)

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 750mm 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)

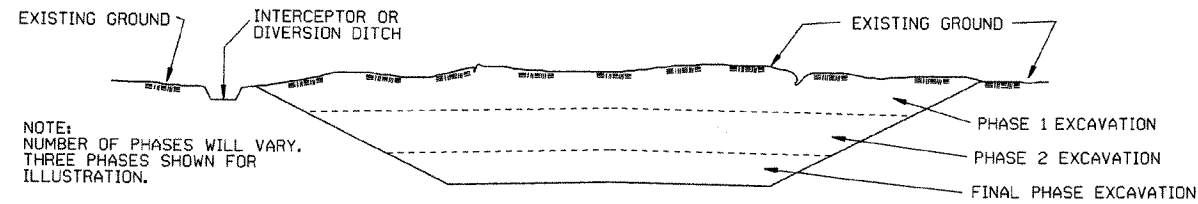
			ARKANSAS STATE HIGHWAY COMMISSION
			TEMPORARY EROSION CONTROL DEVICES
			STANDARD DRAWING TEC-1 (M)
12-15-11	DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK		
11-18-98	ADDED NOTE		
7-02-98	ADDED TYPE E-2 & REV. NAME OF E-1		
7-20-95	CONVERTED TO METRIC		
DATE	REVISION	DATE FILMED	

CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE

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

EXCAVATION



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

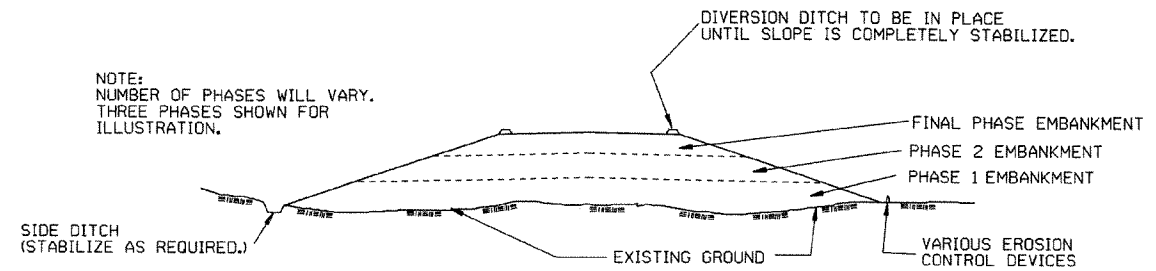
GENERAL NOTE

ALL CUT SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE EXCAVATED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 7.5 meters, MEASURED VERTICALLY.

CONSTRUCTION SEQUENCE

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

EMBANKMENT



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

GENERAL NOTE

ALL EMBANKMENT SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE CONSTRUCTED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 7.5 meters, MEASURED VERTICALLY.

CONSTRUCTION SEQUENCE

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

ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION
CONTROL DEVICES

STANDARD DRAWING TEC-3 (M)

7-20-95	CONVERTED TO METRIC	1-20-96
DATE	REVISION	DATE FILMED

