

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		1	37
				JOB NO.		100402		

2 HWY. 226 - HWY. 230 (BASE & SURF.) (F)

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

**HWY. 226 - HWY. 230
 (BS. & SURF.)(F)**

CRAIGHEAD & LAWRENCE
 COUNTIES
 ROUTE 67 SECTION 15 & 16
 FEDERAL AID PROJECT NH-1638(2)
 JOB 100402



ARK. HWY. DIST. NO. 10

DESIGN DATA

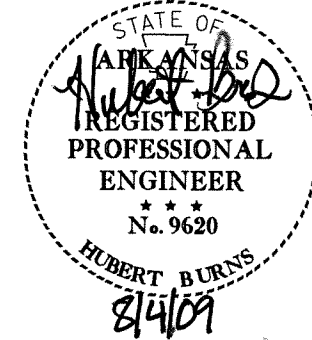
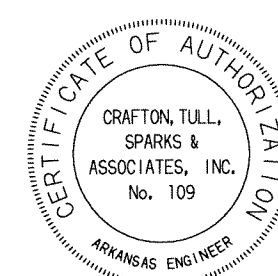
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2017 ADT	= 7200
DHV	= 792
DIRECTIONAL DISTRIBUTION	= 60%
% TRUCKS	= 18
DESIGN SPEED	= 110 Km/h

PROJECT COORDINATES:

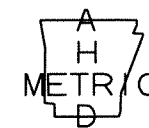
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 STA. 109+00.00 =
 BEGIN CONST. JOB 100404

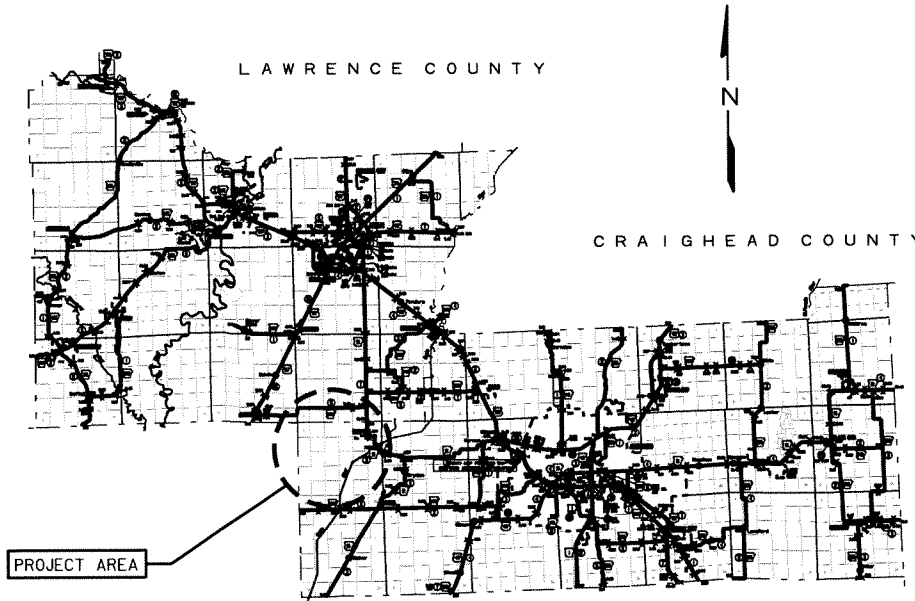
BEGIN CONST. JOB 100402
 STA. 6+99.148 =
 STA. 299+00.000
 END CONST. JOB 001786



COUNTY DISTRIBUTION
 CRAIGHEAD COUNTY 89.7%
 LAWRENCE COUNTY 10.3%

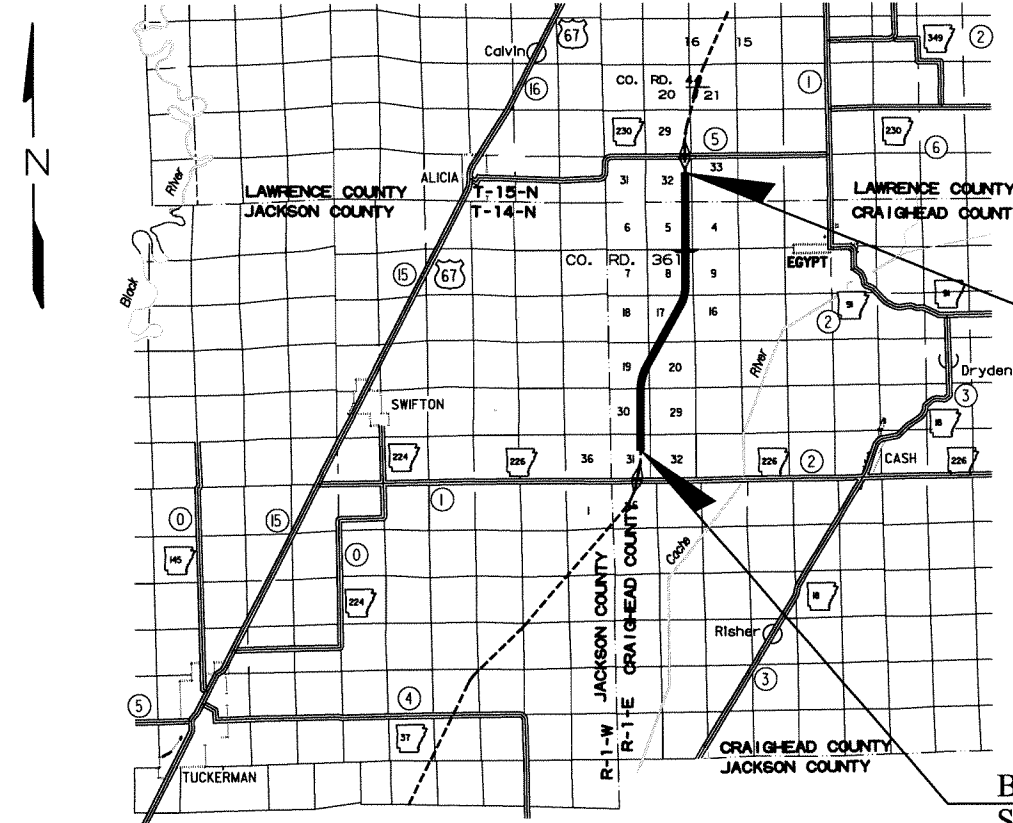


P.E. JOB 001784
 NON. PART.



VICINITY MAP

LAYOUT SCALE: 1:100,000



'THIS IS A METRIC JOB'

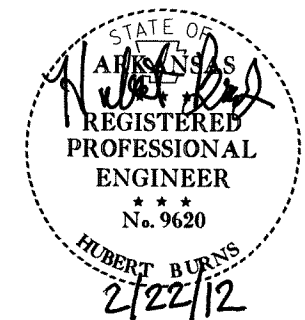
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NET . . . ROADWAY	10,200.852	METERS OR	10.201	KILOMETERS	
NET . . . BRIDGES	0.000	METERS OR	0.000	KILOMETERS	
NET . . . PROJECTS	10,200.852	METERS OR	10.201	KILOMETERS	

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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.		2	37
				JOB NO.		100402		
				2		INDEX OF SHEETS		

INDEX OF SHEETS

SHEET NUMBER	TITLE	DRAWING NUMBER	DATE
1 _ _ _	TITLE SHEET		
2 _ _ _	INDEX OF SHEETS		
3 _ _ _	GENERAL NOTES AND GOVERNING SPECIFICATIONS		
4-5 _ _ _	TYPICAL SECTIONS OF IMPROVEMENTS		
6 _ _ _	SUPERELEVATION RATES, TRANSITION LIMITS AND TYPICALS		
7-8 _ _ _	SPECIAL DETAILS		
9-10 _ _ _	QUANTITY SHEETS		
11 _ _ _	SUMMARY OF QUANTITIES AND REVISIONS		
12-15 _ _ _	SURVEY CONTROL DETAIL SHEETS		
16-29 _ _ _	PLAN AND PROFILE SHEETS		
30 _ _ _	TRANSVERSE & LONGITUDINAL JOINTS FOR CONCRETE PAVEMENT (NON-REINFORCED)	CPTJ-6A(M)	05-25-06
31 _ _ _	CONCRETE BARRIER WALL (PIER PROTECTION TYPE A)	GR-11(M)	07-14-10
32 _ _ _	IMPACT ATTENUATION BARRIER	IB-1(M)	10-15-09
33 _ _ _	PAVEMENT MARKING DETAILS	PM-1(M)	11-17-10
34 _ _ _	DETAILS OF PIPE UNDERDRAIN	PU-1(M)	04-10-03
35 _ _ _	TABLES AND METHOD OF SUPERELEVATION FOR ONE-WAY TRAFFIC	SE-1(M)	04-26-96
36 _ _ _	TEMPORARY EROSION CONTROL DEVICES	TEC-1(M)	12-15-11
37 _ _ _	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	37
				JOB NO.		100402		

2 GENERAL NOTES AND GOVERNING SPECIFICATIONS

GENERAL NOTES AND GOVERNING SPECIFICATIONS

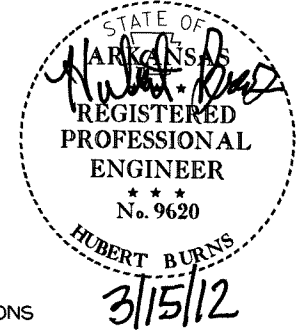
GENERAL NOTES

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

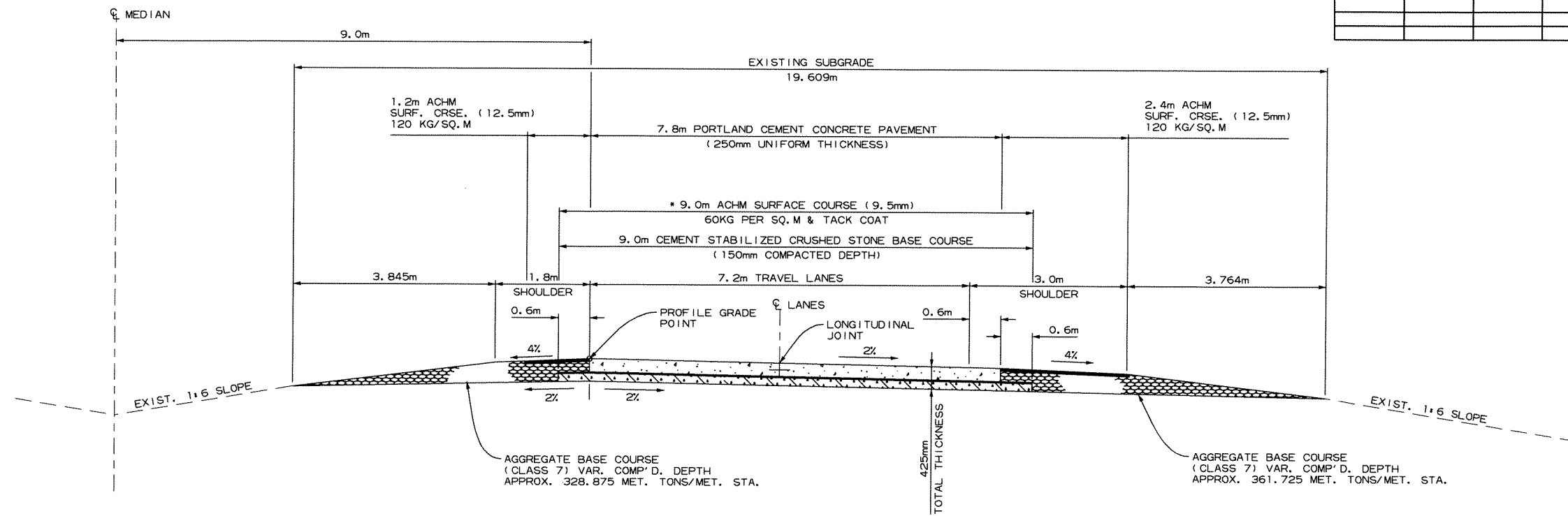
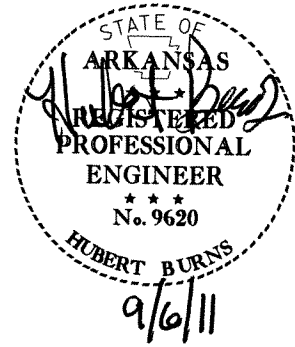
ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2003, AND THE FOLLOWING SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS.

NUMBER	TITLE
ERRATA.....	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273.....	FHWA-1273 REVISIONS
FHWA-1273.....	REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273.....	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273.....	SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273.....	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273.....	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273.....	SUPPLEMENT - TRAINING PROGRAM - JOB 100402
FHWA-1273.....	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273.....	SUPPLEMENT - WAGE RATE DETERMINATION
100-2.....	MANUAL FOR ASSESSING SAFETY HARDWARE (MASH)
102-1.....	BIDDING REQUIREMENTS AND CONDITIONS
103-1.....	DETERMINATION OF DBE PARTICIPATION
105-1.....	CONSTRUCTION CONTROL MARKINGS
105-2.....	EQUIPMENT AND MATERIAL STORAGE ON BRIDGE STRUCTURES
107-1.....	WORKER VISIBILITY
108-1.....	LIQUIDATED DAMAGES
110-1.....	PROTECTION OF WATER QUALITY AND WETLANDS
303-1.....	AGGREGATE BASE COURSE
404-1.....	PRODUCTION VERIFICATION OF ASPHALT CONCRETE HOT MIX
409-1.....	MINERAL AGGREGATES
410-3.....	DENSITY TESTING FOR ACHM LEVELING AND BOND BREAKERS
501-1.....	INSTALLATION OF TIE BARS
600-1.....	WATER FOR VEGETATION
603-1.....	MAINTENANCE OF TRAFFIC
JOB 100402.....	BAR REINFORCEMENT
JOB 100402.....	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 100402.....	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 100402.....	CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS
JOB 100402.....	COORDINATION OF WORK
JOB 100402.....	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 100402.....	HIGH PERFORMANCE PAVEMENT MARKING
JOB 100402.....	INTERNET BIDDING
JOB 100402.....	MOWING OF HIGHWAY RIGHT-OF-WAY
JOB 100402.....	PARTNERING REQUIREMENTS
JOB 100402.....	PORTLAND CEMENT CONCRETE PAVEMENT
JOB 100402.....	SOIL STABILIZATION
JOB 100402.....	STORM WATER POLLUTION PREVENTION PLAN
JOB 100402.....	SUBGRADE PREPARATION
JOB 100402.....	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 100402.....	UTILITY ADJUSTMENTS
JOB 100402.....	VALUE ENGINEERING
JOB 100402.....	WARM MIX ASPHALT



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				6	ARK.		4	37
				JOB NO.		100402		

2 TYPICAL SECTIONS OF IMPROVEMENT - MAIN LANES

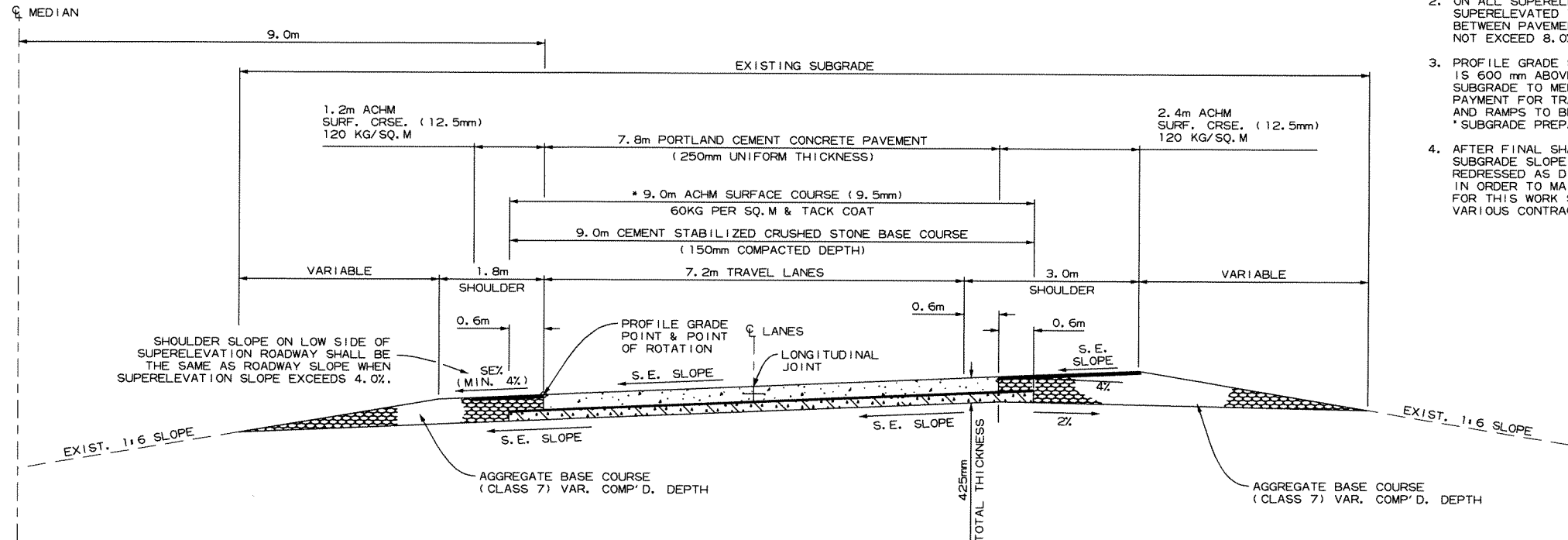


RIGHT MAIN LANES - HWY. 67
(SHOWN IN DIRECTION OF TRAFFIC)
TYPICAL TANGENT SECTION

* DENSITY REQUIREMENTS WAIVED.

NOTES:

1. PROFILE GRADE LINE IS THE POINT OF SUPERELEVATION ROTATION FOR BOTH LANES.
2. ON ALL SUPERELEVATED CURVES AND THROUGH SUPERELEVATED TRANSITIONS (L_s), 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 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.



RIGHT MAIN LANES - HWY. 67
(SHOWN IN DIRECTION OF TRAFFIC)
TYPICAL SUPERELEVATED SECTION

NOTE:
ALL DIMENSIONS ARE
IN METERS UNLESS NOTED
OTHERWISE.

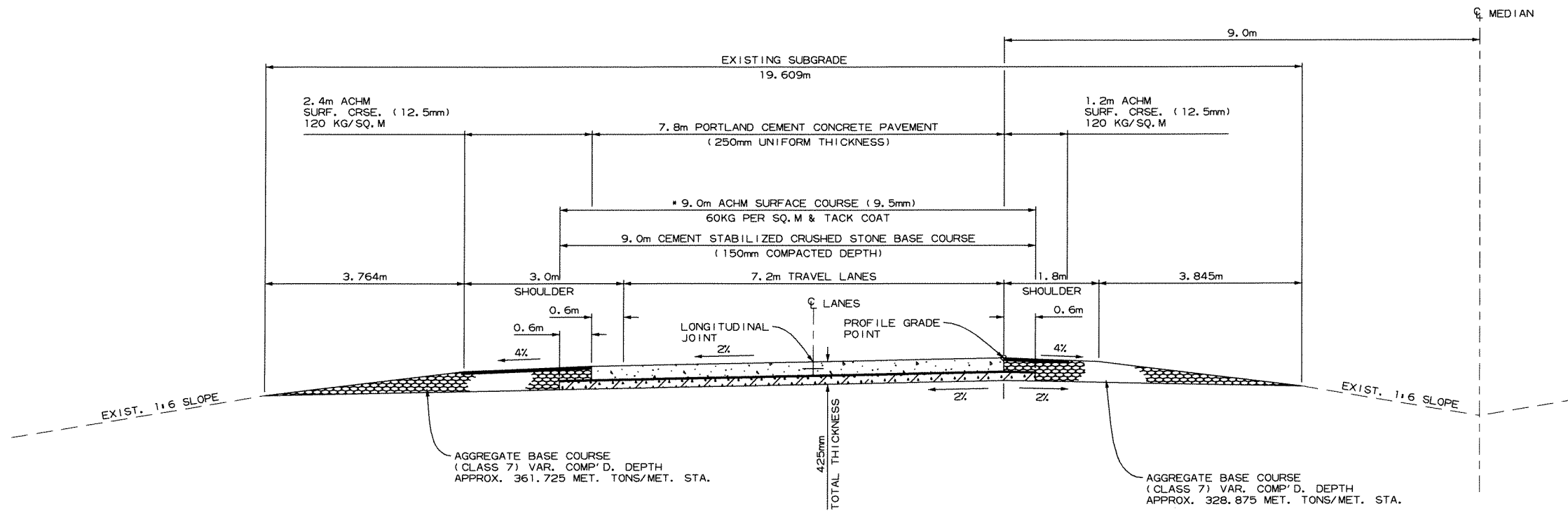
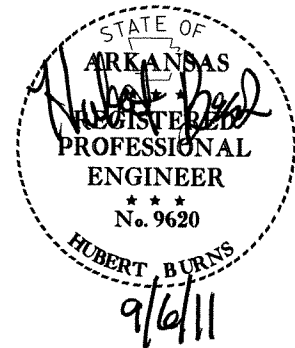


TYPICAL SECTIONS OF IMPROVEMENT

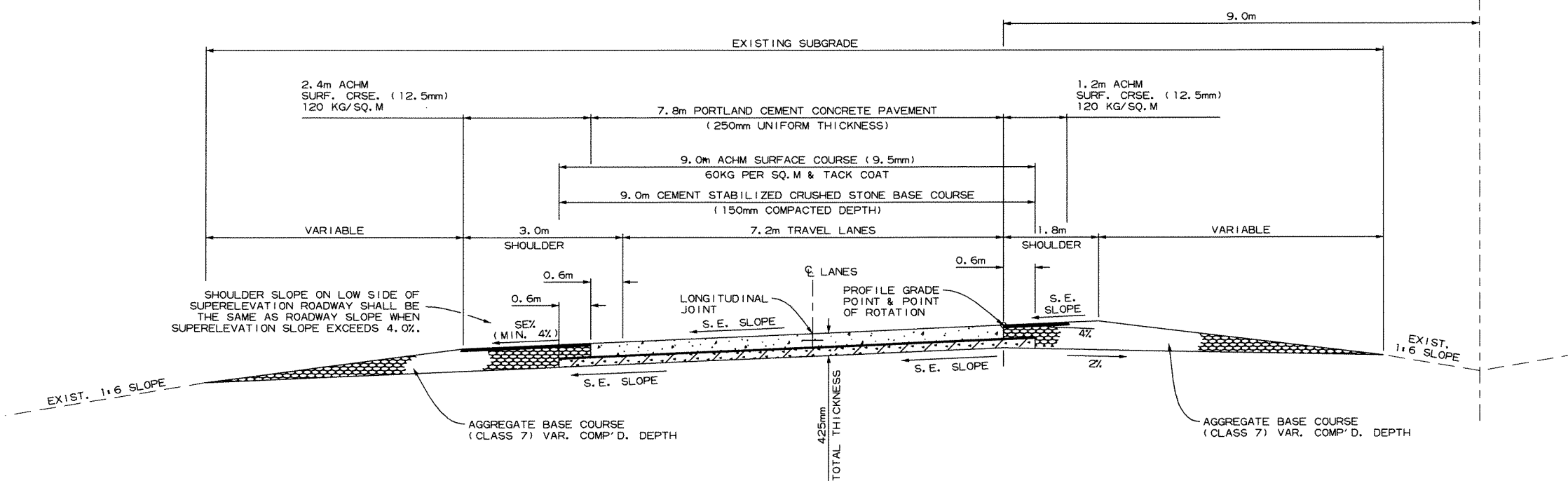
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		5	37
				JOB NO.		100402		

2 TYPICAL SECTIONS OF IMPROVEMENT - MAIN LANES



LEFT MAIN LANES - HWY. 67
(SHOWN IN DIRECTION OF STATIONING)
TYPICAL TANGENT SECTION



LEFT MAIN LANES - HWY. 67
(SHOWN IN DIRECTION OF STATIONING)
TYPICAL SUPERELEVATED SECTION

- * DENSITY REQUIREMENTS WAIVED.
- NOTES:
1. PROFILE GRADE LINE IS THE POINT OF SUPERELEVATION ROTATION FOR BOTH LANES.
 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 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.

NOTE:
ALL DIMENSIONS ARE
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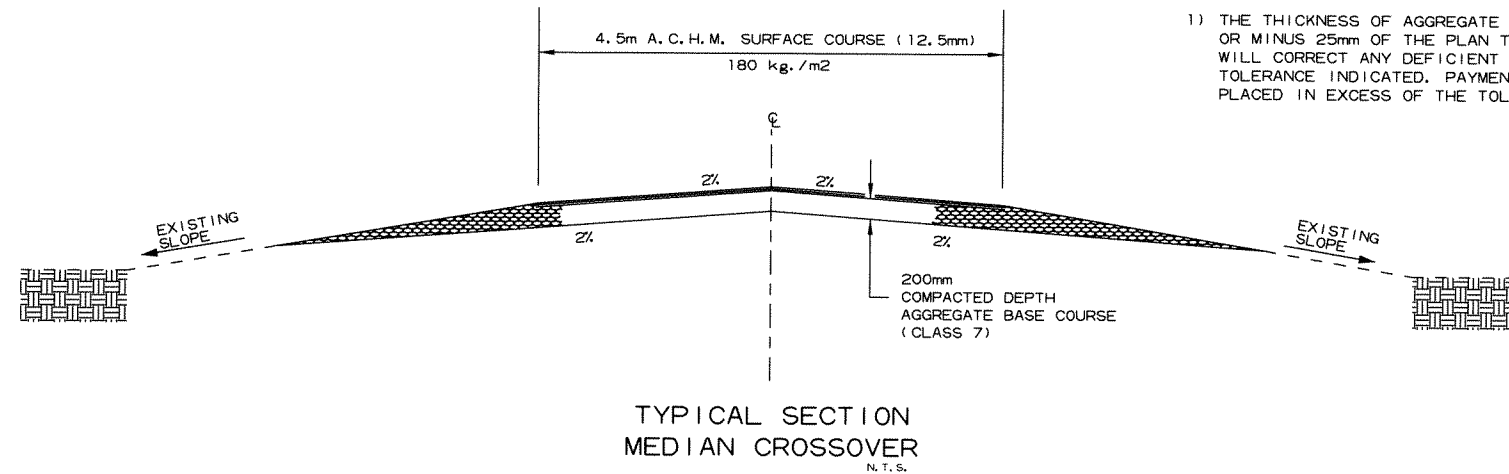
TYPICAL SECTIONS OF IMPROVEMENT

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				6	ARK		6	37
				JOB NO.		100402		
				2 SUPERELEVATION RATES, TRANSITION LIMITS AND TYPICALS				

TYPICAL SECTION NOTES:

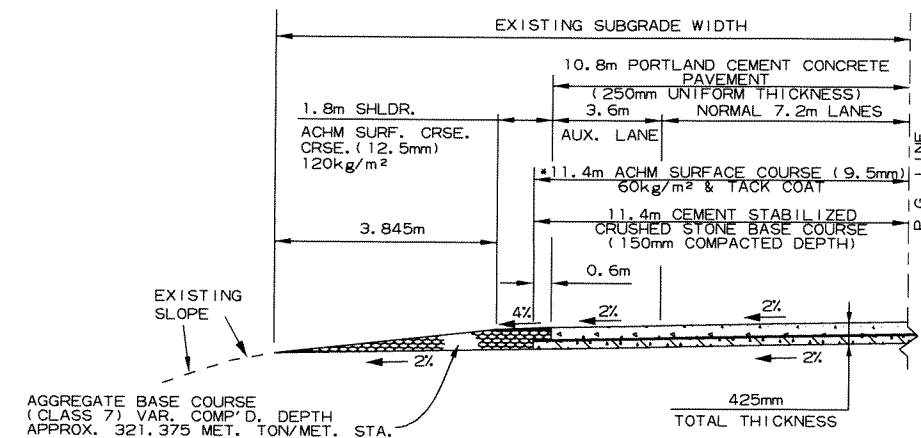
1) THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS 25mm OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.



TYPICAL SECTION
MEDIAN CROSSOVER
N. T. S.

SUPERELEVATION RATES & TRANSITION LIMITS

STATION	STATION	LOCATION	PAV'T TRANSITION SLOPE (%)		TRANSITION LENGTH (M)
			FROM	TO	
U. S. HWY. 67 MAIN LINE					
CURVE 3 (RIGHT)					
31+39.198	32+69.198	LEFT MAIN LANES	-2.0	+3.6	130
32+69.198	40+93.015	" " "	"	"	"
40+93.015	42+23.015	" " "	+3.6	-2.0	130
31+39.198	32+69.198	RIGHT MAIN LANES	-2.0	-3.6	130
32+69.198	40+93.015	" " "	"	"	"
40+93.015	42+23.015	" " "	-3.6	-2.0	130
CURVE 4 (LEFT)					
63+21.082	64+51.082	LEFT MAIN LANES	-2.0	-4.3	130
64+51.082	70+91.788	" " "	"	"	"
70+91.788	72+21.788	" " "	-4.3	-2.0	130
63+21.082	64+51.082	RIGHT MAIN LANES	-2.0	+4.3	130
64+51.082	70+91.788	" " "	"	"	"
70+91.788	72+21.788	" " "	+4.3	-2.0	130



TYPICAL SECTION
AUXILIARY LANE

* DENSITY REQUIREMENTS WAIVED.

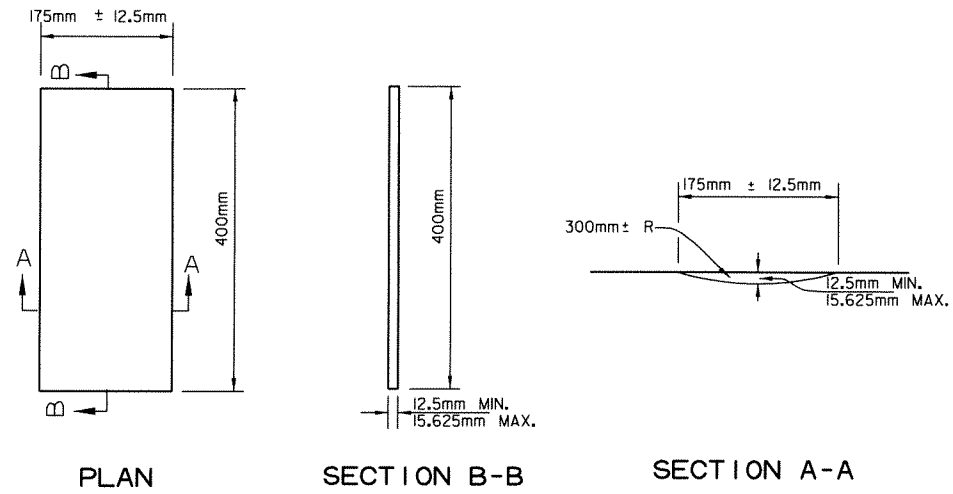
NOTES:

1. PROFILE GRADE LINE IS THE POINT OF SUPERELEVATION ROTATION FOR BOTH LANES.
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 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.

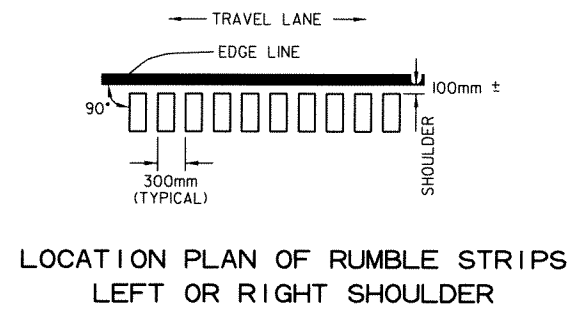
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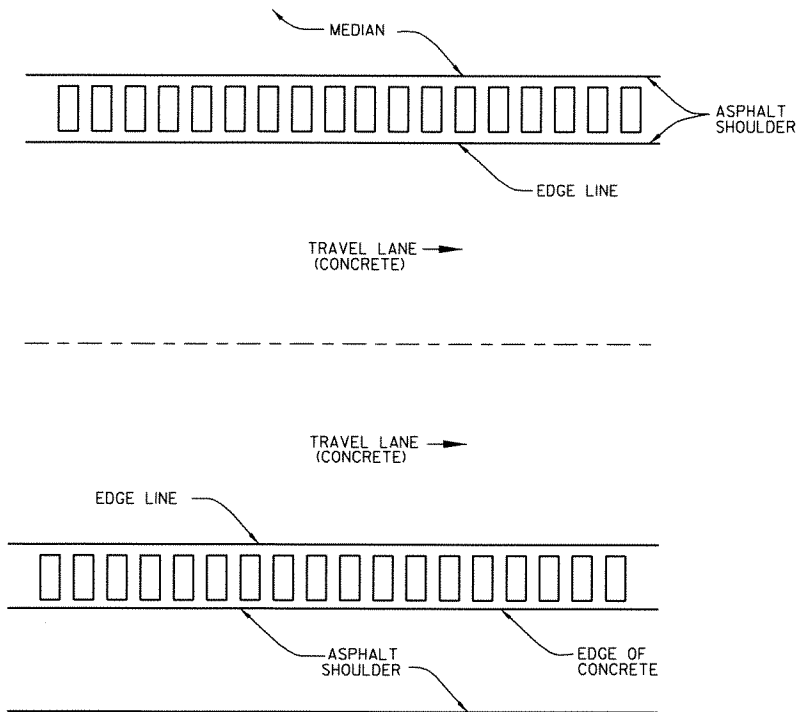
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		7	37
				JOB NO.	100402			
				SPECIAL DETAILS				



DETAILS OF RUMBLE STRIPS



LOCATION PLAN OF RUMBLE STRIPS LEFT OR RIGHT SHOULDER



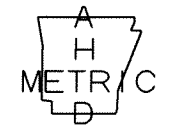
PLAN VIEW

NOTES:

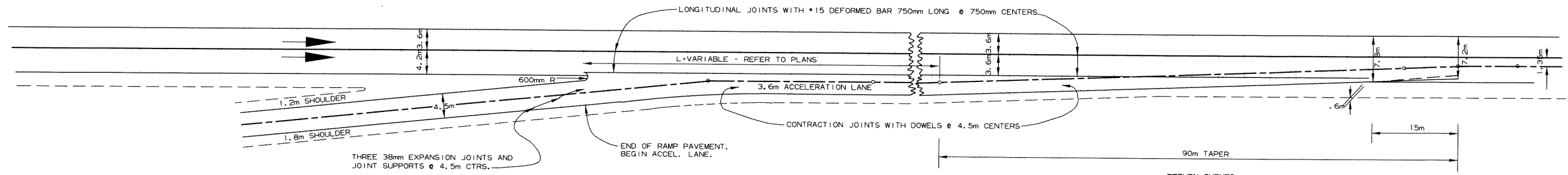
1. ALIGNMENT OF RUMBLE STRIPS SHALL GENERALLY BE STRAIGHT AND OFFSET APPROXIMATELY 100mm FROM THE OUTER EDGE OF THE EDGE LINE. THIS OFFSET MAY BE ADJUSTED TO ACCOMMODATE VARIATIONS IN THE EDGE LINE AS WELL AS TO AVOID EXISTING LONGITUDINAL JOINTS.
2. THE 12.5mm DEPTH SHALL GENERALLY APPLY FOR THE ENTIRE 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.
4. REFER TO SPECIAL PROVISION- "RUMBLE STRIPS" FOR ADDITIONAL INFORMATION.



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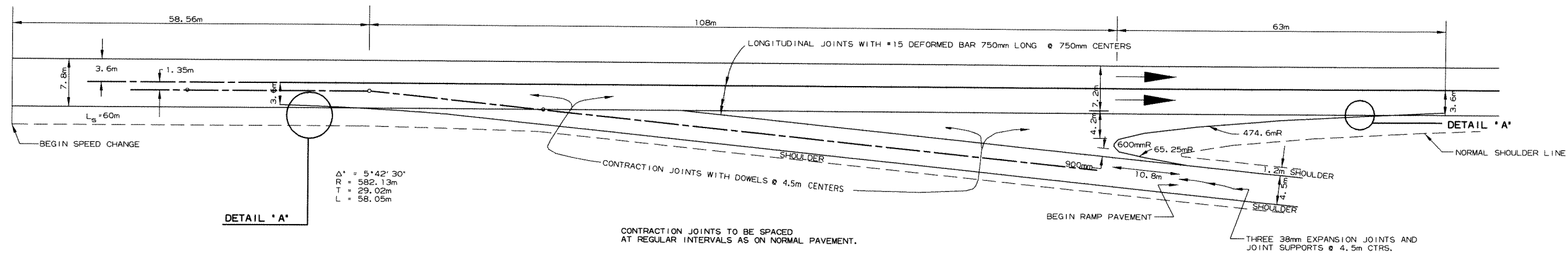


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				6	ARK.		8	37
						JOB NO.	100402	
2 SPECIAL DETAILS								



ENTRANCE RAMP

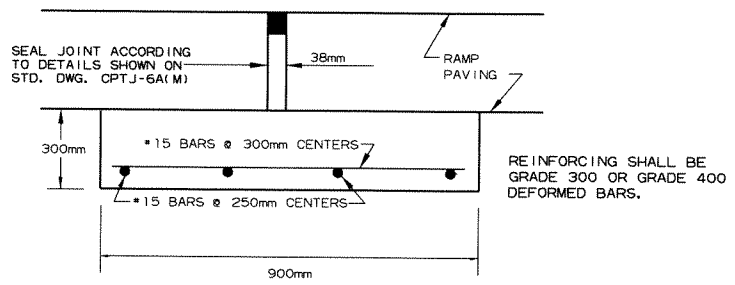
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 $T = 11.64m$
 $L = 23.29m$



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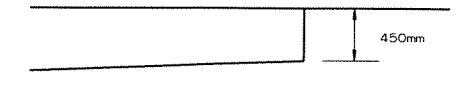
EXIT RAMP

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km/hr.	m	m	m	m	sq. m
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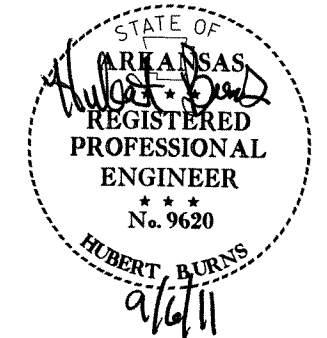


DETAIL OF EXPANSION JOINT & JOINT SUPPORT

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 RAMPS



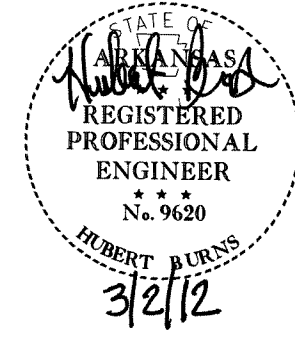
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BASE AND SURFACING - MAIN LANES

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② QUANTITIES

STATION	STATION	LOCATION	LENGTH METERS	CEMENT STABILIZED CRUSHED STONE BASE COURSE (150mm COMP'D. DEPTH)				ACHM SURFACE COURSE (9.5mm) 60 KG PER SQ. METER			TACK COAT 0.14 LITER PER SQ. METER			PORTLAND CEMENT CONCRETE PAVEMENT (250mm UNIFORM THICKNESS)	
				AVG. WIDTH METERS	PROCESSING SQUARE METERS	CEMENT METRIC TONS	AGGREGATE METRIC TONS	AVG. WIDTH METERS	SQUARE METERS	METRIC TONS	AVG. WIDTH METERS	SQUARE METERS	LITERS	AVG. WIDTH METERS	SQUARE METERS
6+99.148	106+98.563	L.M.L. U.S. 67	9999.415	9.00	89994.74	2024.9	31723.1	9.00	89994.74	5399.7	9.00	89994.74	12599.3	7.80	77995.4
106+98.563	107+88.563	L.M.L. U.S. 67	90.000	10.20	918.00	20.7	323.6	10.20	918.00	55.1	10.20	918.00	128.5	9.30	837.0
107+88.563	109+00.000	L.M.L. U.S. 67	111.437	12.00	1337.24	30.1	471.4	12.00	1337.24	80.2	12.00	1337.24	187.2	10.80	1203.5
6+99.148	108+70.501	R.M.L. U.S. 67	10171.353	9.00	91542.18	2059.7	32268.6	9.00	91542.18	5492.5	9.00	91542.18	12815.9	7.80	79336.6
108+70.501	109+00.000	R.M.L. U.S. 67	29.499	9.72	286.73	6.5	101.1	9.72	286.73	17.2	9.72	286.73	40.1	8.52	251.3
TOTALS					184078.89	4141.9	64887.8		184078.89	11044.7		184078.89	25771.0		159623.8



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

BASE AND SURFACING - SHOULDERS & MEDIAN CROSSOVER

STATION	STATION	LOCATION	LENGTH METERS	ACHM SURFACE COURSE (12.5mm)				AGGREGATE BASE COURSE (CLASS 7)		
				AVG. WIDTH METERS	SQUARE METERS	KG PER SQ. M	METRIC TONS	MET. TON PER MET. STA.		METRIC TONS
								INSIDE	OUTSIDE	
6+99.148	106+98.563	L.M.L. U.S. 67 - OUTSIDE SHOULDER	9999.415	2.40	23998.60	120	2879.8		361.725	36170.4
106+98.563	107+88.563	L.M.L. U.S. 67 - OUTSIDE SHOULDER ACC. LANE TAPER	90.000	2.10	189.00	120	22.7		341.550	307.4
107+88.563	109+00.000	L.M.L. U.S. 67 - OUTSIDE SHOULDER ACC. LANE	111.437	1.80	200.59	120	24.1		321.375	358.1
6+99.148	109+00.000	L.M.L. U.S. 67 - INSIDE SHOULDER	10200.852	1.20	12241.02	120	1468.9	328.875		33548.1
6+99.148	108+70.501	R.M.L. U.S. 67 - OUTSIDE SHOULDER	10171.353	2.40	24411.25	120	2929.4		361.725	36792.3
108+70.501	108+89.524	R.M.L. U.S. 67 - OUTSIDE SHOULDER	19.023	2.10	39.95	120	4.8		341.550	65.0
108+89.524	109+00.000	R.M.L. U.S. 67 - OUTSIDE SHOULDER	10.476	1.80	18.86	120	2.3		321.375	33.7
6+99.148	109+00.000	R.M.L. U.S. 67 - INSIDE SHOULDER	10200.852	1.20	12241.02	120	1468.9	328.875		33548.1
31+39.198	32+69.198	L.M.L. U.S. 67 - SUPER TRANS. (ADD.)	130.000						28.213	36.7
32+69.198	40+93.015	L.M.L. U.S. 67 - MAX. SUPER (ADD.)	823.817						56.425	464.8
40+93.015	42+23.015	L.M.L. U.S. 67 - SUPER TRANS. (ADD.)	130.000						28.213	36.7
31+39.198	32+69.198	R.M.L. U.S. 67 - SUPER TRANS. (ADD.)	130.000						34.388	44.7
32+69.198	40+93.015	R.M.L. U.S. 67 - MAX. SUPER (ADD.)	823.817						68.775	566.6
40+93.015	42+23.015	R.M.L. U.S. 67 - SUPER TRANS. (ADD.)	130.000						34.388	44.7
63+21.082	64+51.082	L.M.L. U.S. 67 - SUPER TRANS. (ADD.)	130.000						2.563	47.388
64+51.082	70+91.788	L.M.L. U.S. 67 - MAX. SUPER (ADD.)	640.706						5.125	94.775
70+91.788	72+21.788	L.M.L. U.S. 67 - SUPER TRANS. (ADD.)	130.000						2.563	47.388
63+21.082	64+51.082	R.M.L. U.S. 67 - SUPER TRANS. (ADD.)	130.000						39.438	3.888
64+51.082	70+91.788	R.M.L. U.S. 67 - MAX. SUPER (ADD.)	640.706						78.875	7.775
70+91.788	72+21.788	R.M.L. U.S. 67 - SUPER TRANS. (ADD.)	130.000						39.438	3.888
97+10.000		MEDIAN CROSSOVER	15.600	VAR.	112.26	180	20.2			28.1
TOTALS					73452.55		8821.1			143483.1

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

SUBGRADE PREPARATION

STATION	STATION	LOCATION	METRIC STATION
6+99.148	109+00.000	U.S. 67 - RT. MAIN LANES	102.01
6+99.148	109+00.000	U.S. 67 - LT. MAIN LANES	102.01
TOTALS			204.02

NOTES: 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".

PROFILE GRADE SHOWN ON PLAN AND PROFILE SHEETS IS 600mm 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".

MOWING

STATION	LOCATION	AREA HECTARES
ENTIRE PROJECT	U.S. 67 - MAIN LANES RT. & LT.	167.81
TOTALS		167.81

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

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.



IMPACT ATTENUATION BARRIER (TYPE A)

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		10	37
							JOB NO.	100402
							2	QUANTITIES

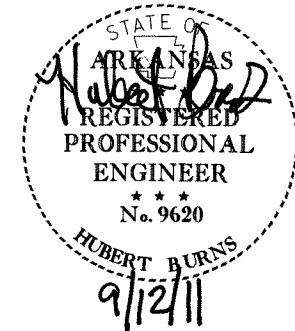
RUMBLE STRIPS

STATION	STATION	LOCATION	RUMBLE STRIPS IN ASPHALT SHOULDERS	RUMBLE STRIPS IN PORTLAND CEMENT CONCRETE SHOULDERS
			METERS	METERS
6+99.148	109+00.000	U.S. 67 MAIN LANE-RT. - LT.	10201	
6+99.148	109+00.000	U.S. 67 MAIN LANE-LT. - RT.	10201	
6+99.148	109+00.000	U.S. 67 MAIN LANE-RT. - RT.		10201
6+99.148	109+00.000	U.S. 67 MAIN LANE-LT. - LT.		10201
TOTALS:			20402	20402

STATION	LOCATION	TYPE	NO.	TOTALS
			EACH	EACH
81+30.877	U.S. 67 MAIN LANES	A	1	1
81+41.576	U.S. 67 MAIN LANES	A	1	1
TOTALS				2

CONCRETE BARRIER WALL (PIER PROTECTION TYPE A)

STATION	LOCATION	LENGTH
		METERS
81+43.776	U.S. HWY. 67	16
TOTALS		16



PERMANENT PAVEMENT MARKINGS

STATION	STATION	LOCATION	HIGH PERFORMANCE PAVEMENT MARKINGS		PAVEMENT MARKER	HIGH PERFORMANCE CONTRAST MARKING
			YELLOW 100mm	WHITE 100mm	RAISED	
			METERS		TY. II (W/R)	WHITE 100mm METER
6+99.15	109+00.00	LEFT M.L. EDGE LINES	10201	10201		
6+99.15	109+00.00	LEFT M.L. SKIP LANE DIVIDER			425	2553
6+99.15	109+00.00	RIGHT M.L. EDGE LINES	10201	10201		
6+99.15	109+00.00	RIGHT M.L. SKIP LANE DIVIDER				2553
6+99.15	109+00.00	RIGHT M.L. SKIP LANE DIVIDER			425	
TOTALS			20402	20402	850	5106

U.S. HWY. 67 IS A HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2003 EDITION.

PIPE UNDERDRAIN

STATION	STATION	LOCATION	100mm UNDERDRAIN	UNDERDRAIN OUTLET PROTECTORS
			METERS	EACH
ENTIRE PROJECT			*TO BE USED IF & WHERE DIRECTED BY THE ENGINEER	300
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
TOTALS			1000

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

TEMPORARY EROSION CONTROL

LOCATION	TEMPORARY SEEDING	MULCH COVER	WATER	ROCK DITCH CHECKS (TYPE E-6)	SEDIMENT REMOVAL AND DISPOSAL
	HECTARE		KILOLITER	CU. METER	CU. METER
IF AND WHERE DIRECTED BY THE ENGINEER	*0.12	*0.12	*22.6	*35	*1000
TOTALS	*0.12	*0.12	*22.6	*35	*1000

BASIS OF ESTIMATE:
WATER - 188 KILOLITERS PER HECTARE TEMPORARY SEEDING

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

EROSION CONTROL

STATION	STATION	LOCATION	LIME	SEEDING	MULCH COVER	SECOND SEEDING APPLICATION	WATER
			MET. TON	HECTARE		KILOLITER	
6+99.148	109+00.000	U.S. 67 MAIN LANES	*83	*18.36	*18.36	*18.36	*17,258.4
TOTALS			*83	*18.36	*18.36	*18.36	*17,258.4

BASIS OF ESTIMATE:
LIME - 4.5 METRIC TONS PER HECTARE SEEDING
WATER - 940 KL PER HECTARE SEEDING

* QUANTITIES ESTIMATED

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



SUMMARY OF QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		11	37
				JOB NO.		100402		

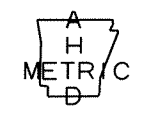
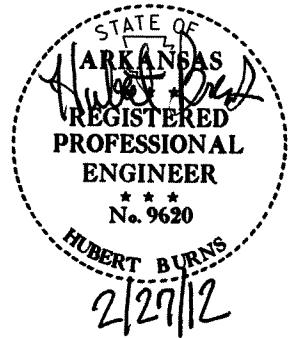
② SUMMARY OF QUANTITIES AND REVISIONS

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP & 210	UNCLASSIFIED EXCAVATION	1000	CU. M
SP & 210	COMPACTED EMBANKMENT	1000	CU. M
SP & 210	SOIL STABILIZATION	1000	METRIC TON
SP	MOWING	167.81	HECTARE
SP & 214	SUBGRADE PREPARATION	204.02	METRIC STATION
SS & 303	AGGREGATE BASE COURSE (CLASS 7)	143483	METRIC TON
308	PROCESSING CEMENT STABILIZED CRUSHED STONE BASE COURSE	184079	SQ. M
308	AGGREGATE IN CEMENT STABILIZED CRUSHED STONE BASE COURSE	64888	METRIC TON
308	CEMENT IN CEMENT STABILIZED CRUSHED STONE BASE COURSE	4142	METRIC TON
401	TACK COAT	25771	LITER
SP,SS & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (9.5mm)	10438	METRIC TON
SP,SS & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (9.5mm)	607	METRIC TON
SP,SS & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (12.5mm)	8336	METRIC TON
SP,SS & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (12.5mm)	485	METRIC TON
SP,SS & 501	PORTLAND CEMENT CONCRETE PAVEMENT (250mm UNIFORM THICKNESS)	159624	SQUARE METER
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
611	UNDERDRAIN OUTLET PROTECTORS	5	EACH
611	100mm PIPE UNDERDRAINS	300	METER
620	LIME	83	METRIC TON
620	SEEDING	18.36	HECTARE
620	MULCH COVER	18.48	HECTARE
SS & 620	WATER	17281.0	KL
621	TEMPORARY SEEDING	0.12	HECTARE
621	ROCK DITCH CHECKS	35	CU. M
621	SEDIMENT REMOVAL AND DISPOSAL	1000	CU. M
623	SECOND SEEDING APPLICATION	18.36	HECTARE
631	CONCRETE BARRIER WALL (PIER PROTECTION TYPE A)	16	METER
635	ROADWAY CONSTRUCTION CONTROL	1.00	LUMP SUM
642	RUMBLE STRIPS IN ASPHALT SHOULDERS	20402	METER
642	RUMBLE STRIPS IN PORTLAND CEMENT CONCRETE SHOULDERS	20402	METER
* SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING WHITE (100mm) - ALT. NO. 1	20402	METER
* SP	HIGH PERFORMANCE MARKING TAPE WHITE (100mm) - ALT. NO. 2	20402	METER
* SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING YELLOW (100mm) - ALT. NO. 1	20402	METER
* SP	HIGH PERFORMANCE MARKING TAPE YELLOW (100mm) - ALT. NO. 2	20402	METER
* SP & 719	INVERTED PROFILE THERMOPLASTIC CONTRAST PAVEMENT MARKING WHITE (100mm) - ALT. NO. 1	5106	METER
* SP	HIGH PERFORMANCE CONTRAST MARKING TAPE WHITE (100mm) - ALT. NO. 2	5106	METER
721	RAISED PAVEMENT MARKERS (TYPE II)	850	EACH
SS & 731	IMPACT ATTENUATION BARRIER (TYPE A)	2	EACH

* DENOTES ALTERNATE BID ITEMS

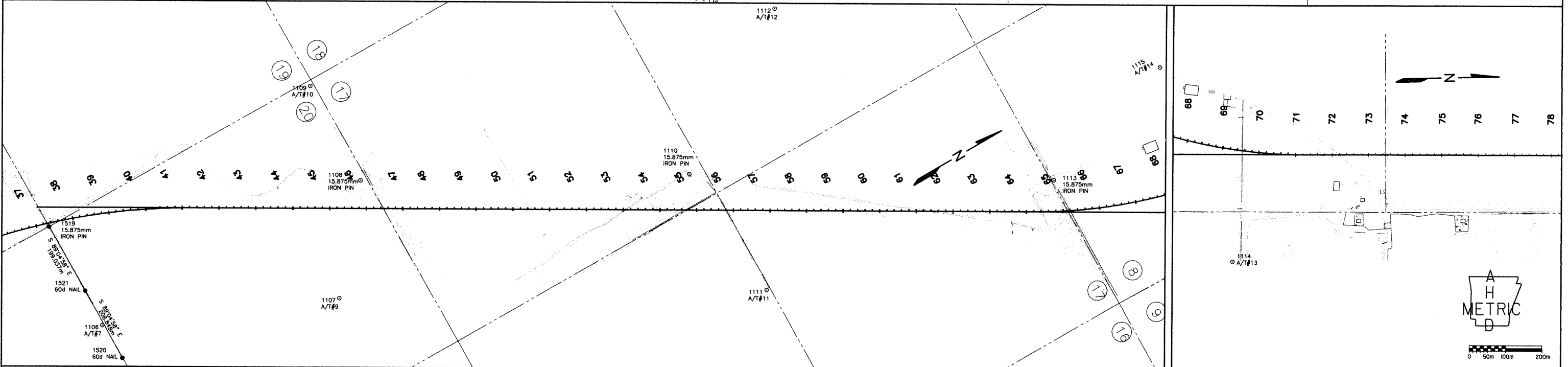
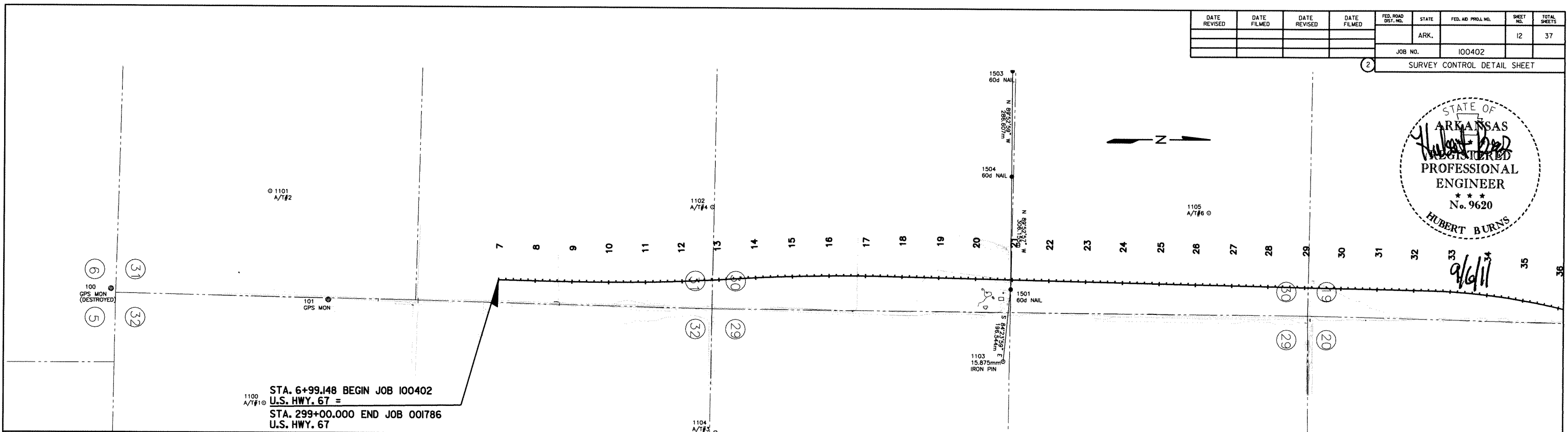
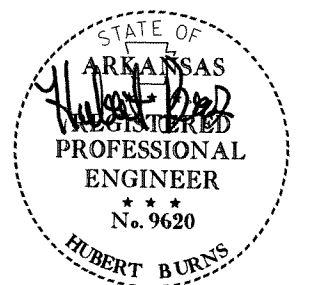
REVISIONS

DATE	REVISION	SHEET NO.



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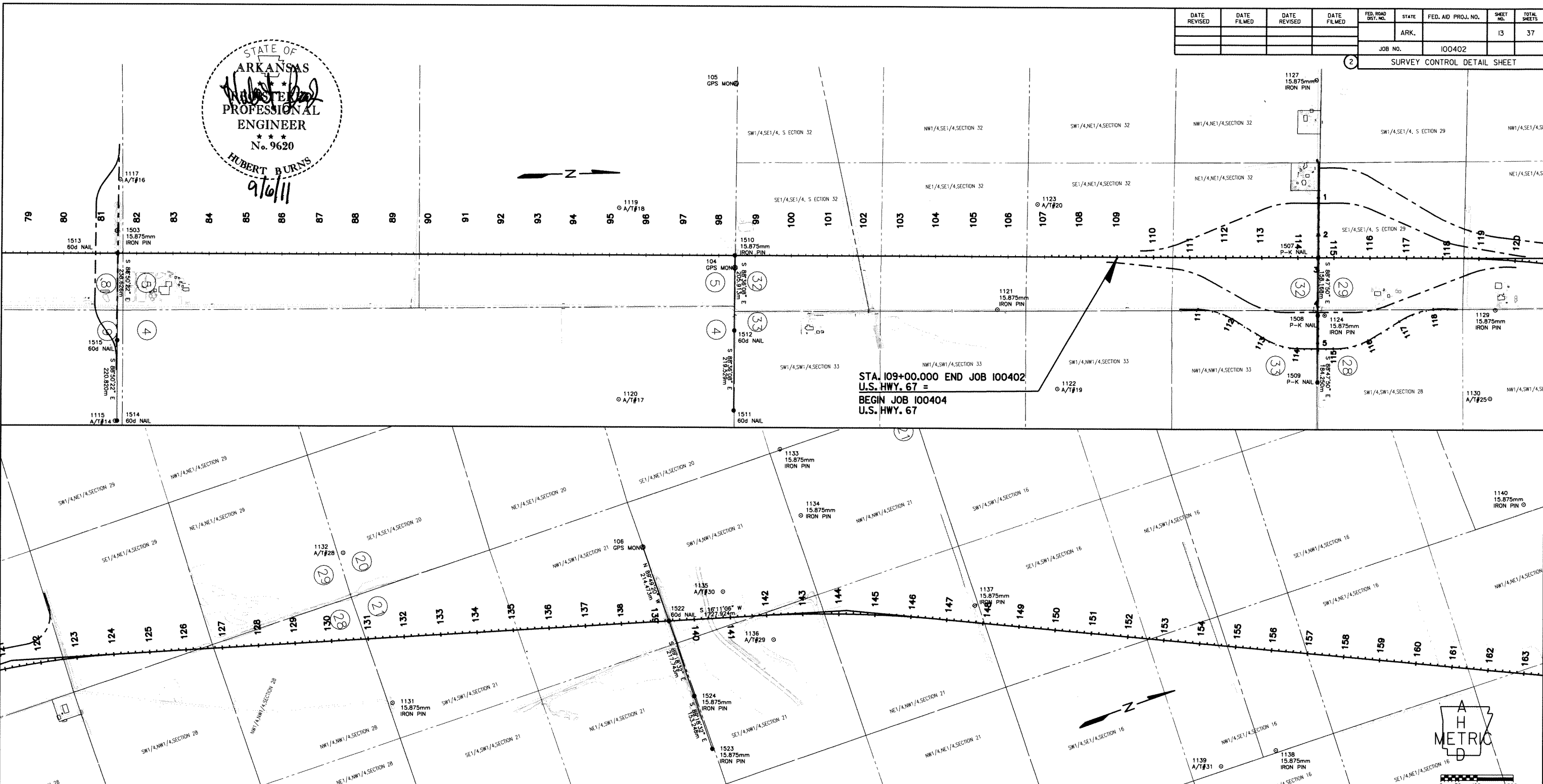
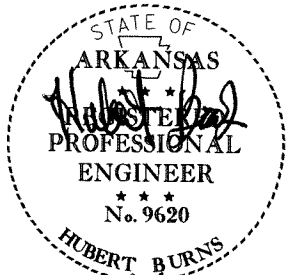
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					ARK.		12	37
				JOB NO.		100402		
(2) SURVEY CONTROL DETAIL SHEET								



GPS CONTROL POINTS		CENTERLINE CONSTRUCTION REFERENCE POINTS	
PT#	DESCRIPTION	PT#	DESCRIPTION
100	162726.5537 488658.1364 76.7171 AHTD MON STATION 160004 (DESTROYED)	149	183942.9470 492478.9239 0.0000 18.875mm IRON PIN AERIAL TARGET #41
101	163317.3959 488685.7657 77.1289 AHTD MON STATION 160004A	150	184767.0806 492241.7379 0.0000 5/8 IRON PIN 15.875mm IRON PIN
102	167586.1459 489903.8142 76.5461 AHTD MON STATION 160005A	151	185197.2302 492005.2259 79.0650 15.875mm IRON PIN AERIAL TARGET #44
103	167589.6230 490426.1284 77.3599 AHTD MON STATION 160005	152	186040.8437 492539.9067 79.4091 15.875mm IRON PIN AERIAL TARGET #45
104	172532.0189 490333.1755 76.8381 AHTD MON STATION 160006	153	186122.6735 492245.7327 0.0000 15.875mm IRON PIN AERIAL TARGET #46
105	172543.4077 489826.9584 76.7409 AHTD MON STATION 160006A	154	187322.7512 492734.1565 80.2894 15.875mm IRON PIN AERIAL TARGET #48
106	176549.0483 490640.1679 78.4500 AHTD MON STATION 380005	155	188706.4641 493800.7670 80.4869 15.875mm IRON PIN AERIAL TARGET #49
107	176566.1275 490121.4869 77.9461 AHTD MON STATION 380005A	156	189512.8052 493910.4752 80.5167 15.875mm IRON PIN AERIAL TARGET #52
108	180912.5741 492192.6256 78.9225 AHTD MON STATION 380006 (DESTROYED)	157	189199.6698 494302.8602 81.0632 15.875mm IRON PIN AERIAL TARGET #51
109	180742.6990 492631.4965 78.7835 AHTD MON STATION 380006A	158	189753.5155 494722.3747 0.0000 HWY 63 GPS #34
110	186957.3390 493061.6634 80.0411 AHTD MON STATION 380007A	159	190059.3963 494356.9179 0.0000 HWY 63 GPS #35
111	187568.0338 493078.2778 80.0211 AHTD MON STATION 380007	160	174038.6725 491278.5545 78.4011 15.875mm IRON PIN AERIAL TARGET #207
112	190808.8315 492908.8068 81.0999 SEDGWICK AZ		
113	170834.5429 490199.0469 0.0000 15.875mm IRON PIN		
114	168805.1967 489217.8808 76.1200 15.875mm IRON PIN		
115	169635.6197 489882.5185 77.3941 15.875mm IRON PIN		
116	170845.6822 490058.3993 76.5680 15.875mm IRON PIN AERIAL TARGET #16		
117	172216.6801 490631.113 76.4864 15.875mm IRON PIN AERIAL TARGET #18		
118	172206.3224 490688.6136 76.6196 15.875mm IRON PIN		
119	173255.7546 490461.0395 77.4026 15.875mm IRON PIN		
120	173417.4378 490682.0440 77.6419 15.875mm IRON PIN AERIAL TARGET #19		
121	173370.3998 490174.2210 78.8318 15.875mm IRON PIN AERIAL TARGET #20		
122	174158.7736 490494.5234 0.0000 15.875mm IRON PIN		
123	173893.7586 49173.6701 0.0000 15.875mm IRON PIN AERIAL TARGET #21		
124	174422.4775 49160.0238 0.0000 15.875mm IRON PIN AERIAL TARGET #23		
125	174147.6110 489847.6643 77.8595 15.875mm IRON PIN		
126	173842.9468 489791.7007 77.0981 15.875mm IRON PIN AERIAL TARGET #22		
127	174629.7316 490488.9645 0.0000 15.875mm IRON PIN		
128	174611.2326 490731.9559 0.0000 15.875mm IRON PIN AERIAL TARGET #25		
129	175756.3365 490811.3909 79.4871 15.875mm IRON PIN		
130	175766.3978 490377.9172 77.8430 15.875mm IRON PIN		
131	176994.5025 490513.8078 78.7443 15.875mm IRON PIN		
132	176988.8067 490704.3578 0.0000 15.875mm IRON PIN		
133	176716.1539 490828.9137 76.6403 15.875mm IRON PIN AERIAL TARGET #30		
134	176803.6419 490999.8265 78.9918 15.875mm IRON PIN AERIAL TARGET #29		
135	177360.0962 491098.2118 0.0000 15.875mm IRON PIN		
136	178009.7040 491751.5651 0.0000 15.875mm IRON PIN		
137	177852.4941 491741.8801 78.6678 15.875mm IRON PIN AERIAL TARGET #31		
138	178879.6748 491346.4241 78.5511 15.875mm IRON PIN		
139	178993.0188 491963.9674 78.9363 15.875mm IRON PIN AERIAL TARGET #33		
140	179321.5606 491668.6259 78.0988 15.875mm IRON PIN AERIAL TARGET #34		
141	180290.4974 491878.4323 78.9921 15.875mm IRON PIN AERIAL TARGET #36		
142	181683.3030 491998.7094 78.4109 15.875mm IRON PIN AERIAL TARGET #38		
143	181591.4984 492424.7778 78.5541 15.875mm IRON PIN AERIAL TARGET #37		
144	183091.3688 491936.2157 79.2850 15.875mm IRON PIN AERIAL TARGET #40		
145	183142.4121 492537.8846 79.0869 15.875mm IRON PIN AERIAL TARGET #39		
146	183961.0971 491930.5685 0.0000 15.875mm IRON PIN AERIAL TARGET #42		
147	183942.9470 492478.9239 0.0000 18.875mm IRON PIN AERIAL TARGET #41		
148	184767.0806 492241.7379 0.0000 5/8 IRON PIN 15.875mm IRON PIN		
149	185197.2302 492005.2259 79.0650 15.875mm IRON PIN AERIAL TARGET #44		
150	186040.8437 492539.9067 79.4091 15.875mm IRON PIN AERIAL TARGET #45		
151	186122.6735 492245.7327 0.0000 15.875mm IRON PIN AERIAL TARGET #46		
152	187322.7512 492734.1565 80.2894 15.875mm IRON PIN AERIAL TARGET #48		
153	188706.4641 493800.7670 80.4869 15.875mm IRON PIN AERIAL TARGET #49		
154	189512.8052 493910.4752 80.5167 15.875mm IRON PIN AERIAL TARGET #52		
155	189199.6698 494302.8602 81.0632 15.875mm IRON PIN AERIAL TARGET #51		
156	189753.5155 494722.3747 0.0000 HWY 63 GPS #34		
157	190059.3963 494356.9179 0.0000 HWY 63 GPS #35		
158	174038.6725 491278.5545 78.4011 15.875mm IRON PIN AERIAL TARGET #207		
159	170835.01013 490261.475329 0.000000 60d NAIL		
160	170825.704807 490720.827069 0.000000 60d NAIL		
161	170830.177577 490500.052373 0.000000 60d NAIL		
162	166790.220725 488738.877310 0.000000 15.875mm IRON PIN		
163	166795.691640 489466.710051 0.000000 60d NAIL		
164	166799.034706 488937.888809 0.000000 60d NAIL		
165	176548.3829 490854.6403 0.000000 60d NAIL 139+29.533		
166	176543.9082 491225.6043 0.000000 15.875mm IRON PIN		
167	176545.7566 491072.3674 0.000000 15.875mm IRON PIN		
168	180917.0309 492149.8046 0.000000 60d NAIL 185+60.158		
169	180779.5760 492548.3087 0.000000 15.875mm IRON PIN		
170	180844.3661 492360.4717 0.000000 15.875mm IRON PIN		
171	180316.1238 49249.5761 0.000000 60d NAIL 179+59.251		
172	180378.9545 49142.3717 0.000000 60d NAIL		
173	180411.761 491836.1106 0.000000 60d NAIL		
174	183953.7983 492151.0819 0.000000 60d NAIL 215+96.926		
175	183949.1933 492290.2082 0.000000 15.875mm IRON PIN		
176	184758.5183 492151.4204 0.000000 60d NAIL 224+01.639		
177	184745.5303 492504.8471 0.000000 15.875mm IRON PIN		
178	184751.4644 493085.8094 0.000000 15.875mm IRON PIN		
179	184751.4644 493085.8094 0.000000 60d NAIL 254+29.769		
180	1847161.0815 493065.7266 0.000000 15.875mm IRON PIN		

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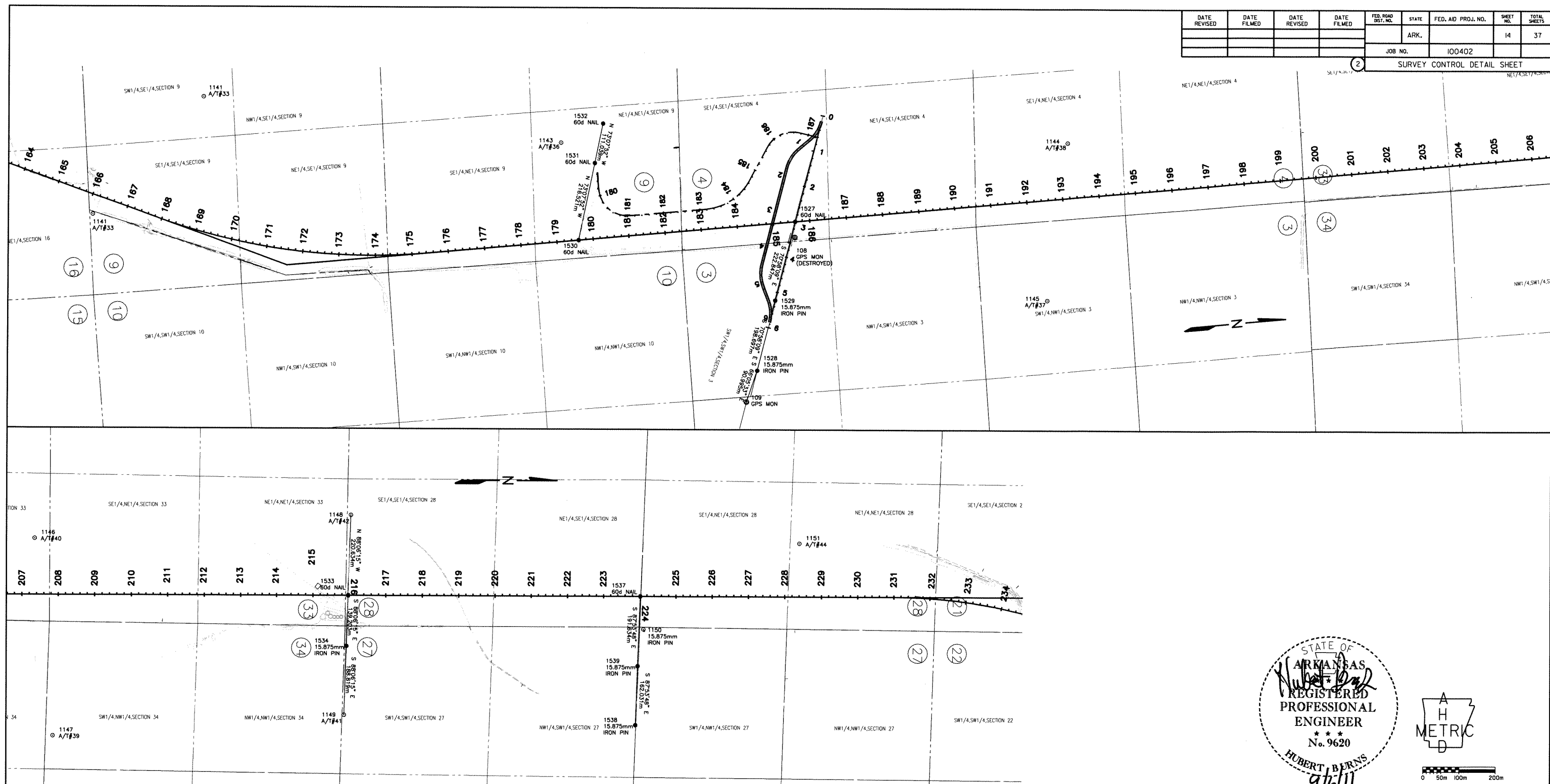
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
					ARK.		13	37
				JOB NO.		100402		
				SURVEY CONTROL DETAIL SHEET				



PT#	NORTH	EAST	ELEV	DESCRIP	C/L STA
101	163157.9609	488391.9923	75.5893	5.875mm IRON PIN AERIAL TARGET #2	
102	164360.8382	488430.3354	76.7345	5.875mm IRON PIN AERIAL TARGET #4	
103	165156.9177	488845.0471	0.0000	5.875mm IRON PIN	
104	164373.8522	489041.7560	75.7942	5.875mm IRON PIN AERIAL TARGET #3	
105	165715.0894	488439.2177	74.7856	5.875mm IRON PIN AERIAL TARGET #5	
106	166792.4891	489042.3171	76.8811	5.875mm IRON PIN AERIAL TARGET #7	
107	167385.5878	489301.8693	75.8292	5.875mm IRON PIN AERIAL TARGET #9	
108	167596.0451	489054.1649	0.0000	5.875mm IRON PIN	
109	167606.4262	488764.8520	75.7128	5.875mm IRON PIN AERIAL TARGET #10	
110	168379.9932	489489.3297	76.4690	5.875mm IRON PIN	
111	168404.5717	489866.4872	76.3431	5.875mm IRON PIN AERIAL TARGET #11	
112	168805.1967	489217.8808	76.1200	5.875mm IRON PIN	
113	169232.0633	490002.0619	0.0000	5.875mm IRON PIN	
114	169610.4652	490525.0437	77.5205	5.875mm IRON PIN AERIAL TARGET #13	
115	169635.6197	489882.5185	77.3941	5.875mm IRON PIN	
116	170834.5429	490099.0469	0.0000	5.875mm IRON PIN	
117	170845.6822	490358.3993	76.5680	5.875mm IRON PIN AERIAL TARGET #16	
118	170820.1745	490728.8654	76.9207	5.875mm IRON PIN AERIAL TARGET #15	
119	172216.6801	490163.1113	76.4864	5.875mm IRON PIN AERIAL TARGET #18	
120	172206.9224	490688.6136	76.6196	5.875mm IRON PIN AERIAL TARGET #17	
121	173255.7546	490461.0395	77.4026	5.875mm IRON PIN	
122	173417.4378	490682.0440	77.6419	5.875mm IRON PIN AERIAL TARGET #19	
123	173370.3998	490714.2210	78.8318	5.875mm IRON PIN AERIAL TARGET #20	
124	174158.7736	490494.5234	0.0000	5.875mm IRON PIN	
125	173893.7586	49173.6701	0.0000	5.875mm IRON PIN AERIAL TARGET #21	
126	174422.4775	49160.0238	0.0000	5.875mm IRON PIN AERIAL TARGET #23	
127	174147.6100	489847.6643	77.8595	5.875mm IRON PIN	
128	173842.9468	489791.7007	77.0391	5.875mm IRON PIN AERIAL TARGET #22	
129	174629.7316	490488.9645	0.0000	5.875mm IRON PIN	
130	174611.2326	490731.9559	0.0000	5.875mm IRON PIN AERIAL TARGET #25	
131	175756.3365	490081.3909	79.4871	5.875mm IRON PIN	
132	175766.3978	490377.9172	77.8430	5.875mm IRON PIN	
133	176994.5025	490513.8078	78.7443	5.875mm IRON PIN	
134	176988.8067	490704.3578	0.0000	5.875mm IRON PIN	
135	176716.1539	490828.9137	76.6403	5.875mm IRON PIN AERIAL TARGET #29	
136	176803.6419	490999.8265	78.3918	5.875mm IRON PIN AERIAL TARGET #30	
137	177360.0962	491098.2118	0.0000	5.875mm IRON PIN	
138	178009.7040	491751.5651	0.0000	5.875mm IRON PIN	
139	177852.4941	491741.8801	78.6678	5.875mm IRON PIN AERIAL TARGET #31	
140	178879.6748	491346.4241	78.5511	5.875mm IRON PIN	
141	178993.0188	491963.9674	78.9363	5.875mm IRON PIN AERIAL TARGET #33	
142	179321.5606	491668.6259	78.0988	5.875mm IRON PIN AERIAL TARGET #36	
143	180290.4974	491878.4323	78.9921	5.875mm IRON PIN AERIAL TARGET #38	
144	181683.3030	491998.7094	78.4109	5.875mm IRON PIN AERIAL TARGET #37	
145	181591.4991	492424.7778	78.5541	5.875mm IRON PIN AERIAL TARGET #37	
146	183091.3368	491996.2157	79.2850	5.875mm IRON PIN AERIAL TARGET #40	
147	183142.4121	492537.8846	79.0869	5.875mm IRON PIN AERIAL TARGET #39	
148	183961.0971	491930.5685	0.0000	5.875mm IRON PIN AERIAL TARGET #42	
149	183942.9470	492478.9239	0.0000	5.875mm IRON PIN AERIAL TARGET #41	
150	184767.0806	492241.7379	0.0000	5/8 IRON PIN	
151	185197.2302	492005.2259	79.0650	5.875mm IRON PIN AERIAL TARGET #44	
152	186040.8437	492539.9067	79.4091	5.875mm IRON PIN AERIAL TARGET #45	
153	186122.6735	492245.7327	0.0000	5.875mm IRON PIN AERIAL TARGET #46	
154	187322.7512	492734.1565	80.2894	5.875mm IRON PIN AERIAL TARGET #48	
155	188706.4641	493800.7670	80.4869	5.875mm IRON PIN AERIAL TARGET #49	
156	189512.8052	493910.4752	80.5187	5.875mm IRON PIN AERIAL TARGET #52	
157	189199.6698	494302.8602	81.0632	5.875mm IRON PIN AERIAL TARGET #51	
158	189753.5155	494722.3747	0.0000	HWY 63 GPS #34	
159	190059.3963	494356.9179	0.0000	HWY 63 GPS #35	
210	174038.6725	491278.5545	78.4011	5.875mm IRON PIN AERIAL TARGET #207	
1513	170835.01013	490261.47529	0.000000	60d NAIL	139+29.533
1514	170825.704807	490720.827069	0.000000	60d NAIL	
1515	170830.177577	490500.052373	0.000000	60d NAIL	
1519	166802.220725	488738.877310	0.000000	5.875mm IRON PIN	
1520	166795.691640	489146.710051	0.000000	60d NAIL	
1521	166799.034706	488937.888809	0.000000	60d NAIL	
1522	176548.3829	490854.6403	0.000000	60d NAIL	
1523	176543.9082	491225.6043	0.000000	5.875mm IRON PIN	
1524	176545.7566	491072.3674	0.000000	5.875mm IRON PIN	
1527	180917.0309	492149.8046	0.000000	60d NAIL	185+60.158
1528	180779.5160	492548.3087	0.000000	5.875mm IRON PIN	
1529	180844.3661	492360.4717	0.000000	5.875mm IRON PIN	
1530	180316.1238	492149.5761	0.000000	60d NAIL	179+59.251
1531	180378.9545	491942.3717	0.000000	60d NAIL	
1532	180411.1761	491836.1106	0.000000	60d NAIL	
1533	183953.7983	492151.0819	0.000000	60d NAIL	215+96.926
1534	183949.9333	492290.2082	0.000000	5.875mm IRON PIN	
1537	184758.5133	492151.4204	0.000000	60d NAIL	224+01.639
1538	184745.5303	492504.8471	0.000000	5.875mm IRON PIN	
1539	184751.4775	492342.9253	0.000000	5.875mm IRON PIN	
1540	187657.4644	493085.8094	0.000000	60d NAIL	254+29.769
1541	187616.0815	493069.7266	0.000000	5.875mm IRON PIN	

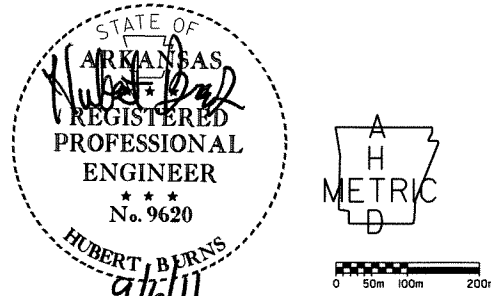
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
					ARK.		14	37
				JOB NO.		100402		
SURVEY CONTROL DETAIL SHEET								



AR KANSAS STATE PLANE (MODIFIED GROUND COORDINATES) AR NORTH ZONE (METRIC) SURFACE ADJUSTMENT FACTOR 0.999922979 ELEVATION DATUM NGVD29			
100163157.9609	488391.9923	75.5893	15.875mm IRON PIN AERIAL TARGET #2
1002164360.8382	488430.3354	76.7345	15.875mm IRON PIN AERIAL TARGET #4
1003165156.9177	488845.0471	0.0000	15.875mm IRON PIN
1004164373.8522	489041.7560	75.7942	15.875mm IRON PIN AERIAL TARGET #3
1005165715.0894	488439.2177	74.7856	15.875mm IRON PIN AERIAL TARGET #6
1006166792.4891	489042.3171	76.8811	15.875mm IRON PIN AERIAL TARGET #7
1007167385.5878	489301.8693	75.8292	15.875mm IRON PIN AERIAL TARGET #9
1008167396.0451	489054.1649	0.0000	15.875mm IRON PIN
1009167606.4262	488764.8520	75.7128	15.875mm IRON PIN AERIAL TARGET #10
1010168379.9932	489489.3297	76.4690	15.875mm IRON PIN
1011168404.5717	489866.4872	76.3431	15.875mm IRON PIN AERIAL TARGET #11
1012168805.1967	489217.8808	76.1200	15.875mm IRON PIN AERIAL TARGET #12
1013169232.0633	490002.0619	0.0000	15.875mm IRON PIN
1014169610.4652	490525.0437	77.5205	15.875mm IRON PIN AERIAL TARGET #13
1015169635.6197	489882.5185	77.3941	15.875mm IRON PIN AERIAL TARGET #14
1016170834.5429	490199.0469	0.0000	15.875mm IRON PIN
1017170845.6822	490058.3993	76.5680	15.875mm IRON PIN AERIAL TARGET #16
1018170820.1745	490720.8654	76.9207	15.875mm IRON PIN AERIAL TARGET #15
1019172216.6801	490163.1113	76.4864	15.875mm IRON PIN AERIAL TARGET #18
1020172206.9224	490688.6136	76.6196	15.875mm IRON PIN AERIAL TARGET #17
1021173255.7546	490461.0395	77.4026	15.875mm IRON PIN
1022173417.4378	490682.0440	77.6419	15.875mm IRON PIN AERIAL TARGET #19
1023173370.3998	490174.2210	78.8318	15.875mm IRON PIN AERIAL TARGET #20
1024174158.7736	490494.5234	0.0000	15.875mm IRON PIN
1025173893.7586	491173.6701	0.0000	15.875mm IRON PIN AERIAL TARGET #21
1026174422.4775	49160.0238	0.0000	15.875mm IRON PIN AERIAL TARGET #23
1027174147.6110	489847.6643	77.8595	15.875mm IRON PIN
1028173842.9468	489791.7007	77.0981	15.875mm IRON PIN AERIAL TARGET #22
1029174629.7316	490488.9645	0.0000	15.875mm IRON PIN
1030174611.2326	490731.9559	0.0000	15.875mm IRON PIN AERIAL TARGET #25
1031175756.3365	490811.3909	79.4871	15.875mm IRON PIN
1032175766.3978	490377.9172	77.8430	15.875mm IRON PIN AERIAL TARGET #28
1033176994.5025	490513.8078	78.7443	15.875mm IRON PIN
1034176988.8067	490704.3578	0.0000	15.875mm IRON PIN
1035176716.1539	490828.9137	76.6403	15.875mm IRON PIN AERIAL TARGET #30
1036176803.6419	490999.8265	78.9918	15.875mm IRON PIN AERIAL TARGET #29
1037177360.0962	491098.2108	0.0000	15.875mm IRON PIN
1038178009.7040	491751.5651	0.0000	15.875mm IRON PIN
1039177852.4941	491741.8801	78.6678	15.875mm IRON PIN AERIAL TARGET #31
1040178879.6748	491346.4241	78.5511	15.875mm IRON PIN
1041178993.0188	491963.9674	78.9363	15.875mm IRON PIN AERIAL TARGET #33
1042179321.5606	491668.6259	78.0988	15.875mm IRON PIN AERIAL TARGET #34
1043180290.4974	491878.4323	78.9921	15.875mm IRON PIN AERIAL TARGET #36
1044181683.3030	491998.7094	78.4109	15.875mm IRON PIN AERIAL TARGET #38
1045181591.4991	492424.7778	78.5541	15.875mm IRON PIN AERIAL TARGET #37
1046183091.3168	491996.2157	79.2850	15.875mm IRON PIN AERIAL TARGET #40
1047183142.4121	492537.8846	79.0869	15.875mm IRON PIN AERIAL TARGET #39
1048183961.0971	491930.5685	0.0000	15.875mm IRON PIN AERIAL TARGET #42
1049183942.9470	492478.9239	0.0000	15.875mm IRON PIN AERIAL TARGET #41
1050184767.0806	492241.7379	0.0000	5/8 IRON PIN 15.875mm IRON PIN
1051185197.2302	492005.2259	79.0650	15.875mm IRON PIN AERIAL TARGET #44
1052186040.8437	492539.9067	79.4091	15.875mm IRON PIN AERIAL TARGET #45
1053186122.6735	492245.7327	0.0000	15.875mm IRON PIN AERIAL TARGET #46
1054187322.7512	492734.1565	80.2894	15.875mm IRON PIN AERIAL TARGET #48
1055188706.4641	493800.7670	80.4869	15.875mm IRON PIN AERIAL TARGET #49
1056189512.8052	493910.4752	80.5167	15.875mm IRON PIN AERIAL TARGET #52
1057189199.6698	494302.8602	81.0632	15.875mm IRON PIN AERIAL TARGET #51
1058189753.5155	494722.3747	0.0000	HWY 63 GPS #34
1059190059.3963	494356.9179	0.0000	HWY 63 GPS #35
2158174038.6725	491278.5545	78.4011	15.875mm IRON PIN AERIAL TARGET #207
1053170835.0113	490261.4753	29.0000	60d NAIL
1054170825.7048	490720.8270	69.0000	60d NAIL
1055170830.1757	490500.0523	373.0000	60d NAIL
1056166802.2207	488738.8773	0.0000	15.875mm IRON PIN
1057166795.6916	48946.7100	51.0000	60d NAIL
1058166799.0347	489937.8880	9.0000	60d NAIL
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1060166799.0347	489937.8880	9.0000	60d NAIL
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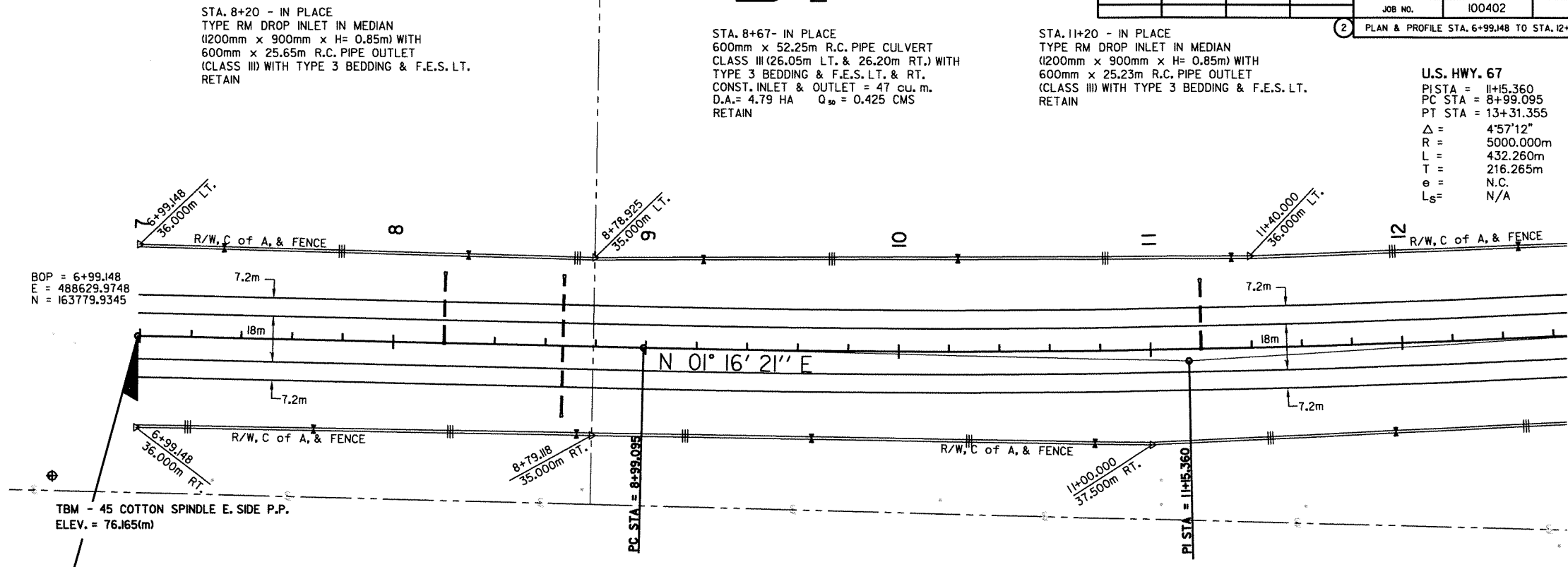
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 SCALE: 1051



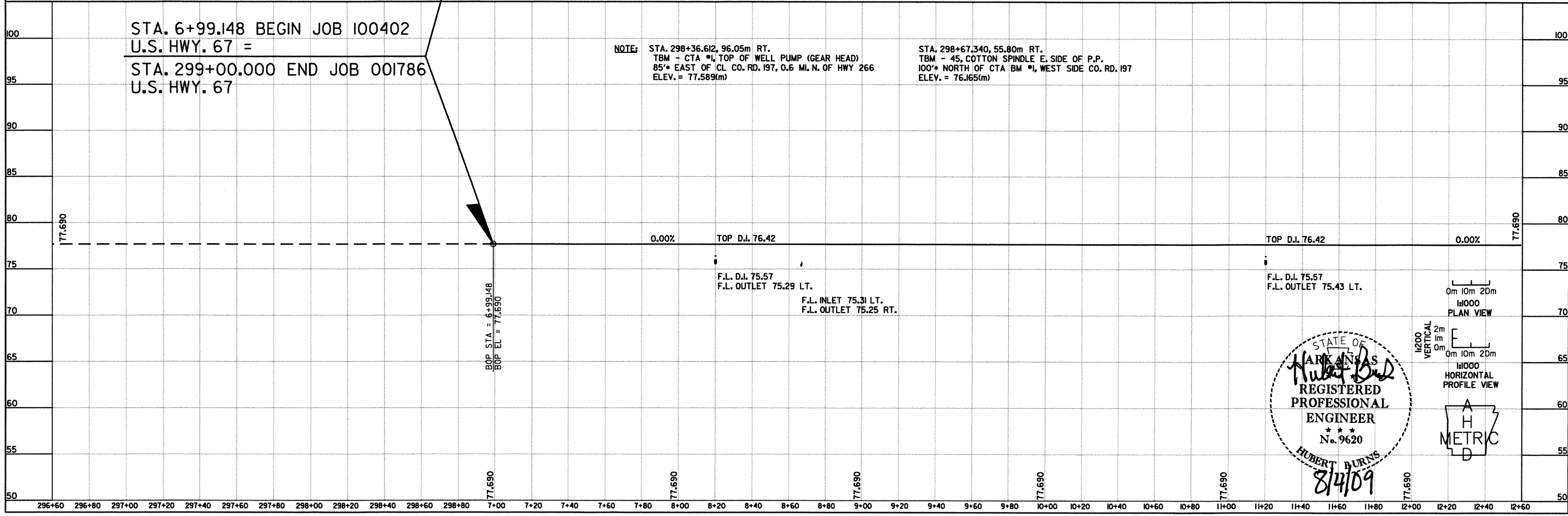
STANDARD RIGHT OF WAY SIGNS AND SYMBOLS

- 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		16	37
JOB NO.						100402		
PLAN & PROFILE STA. 6+99.148 TO STA. 12+60								



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 PC STA = 8+99.095
 PT STA = 13+31.355
 Δ = 4°57'12"
 R = 5000.000m
 L = 432.260m
 T = 216.265m
 e = N.C.
 L_s = N/A



STATE OF
Arkansas
 REGISTERED
 PROFESSIONAL
 ENGINEER
 No. 9620
 HUBERT BURNS
 8/4/09

USER: f653
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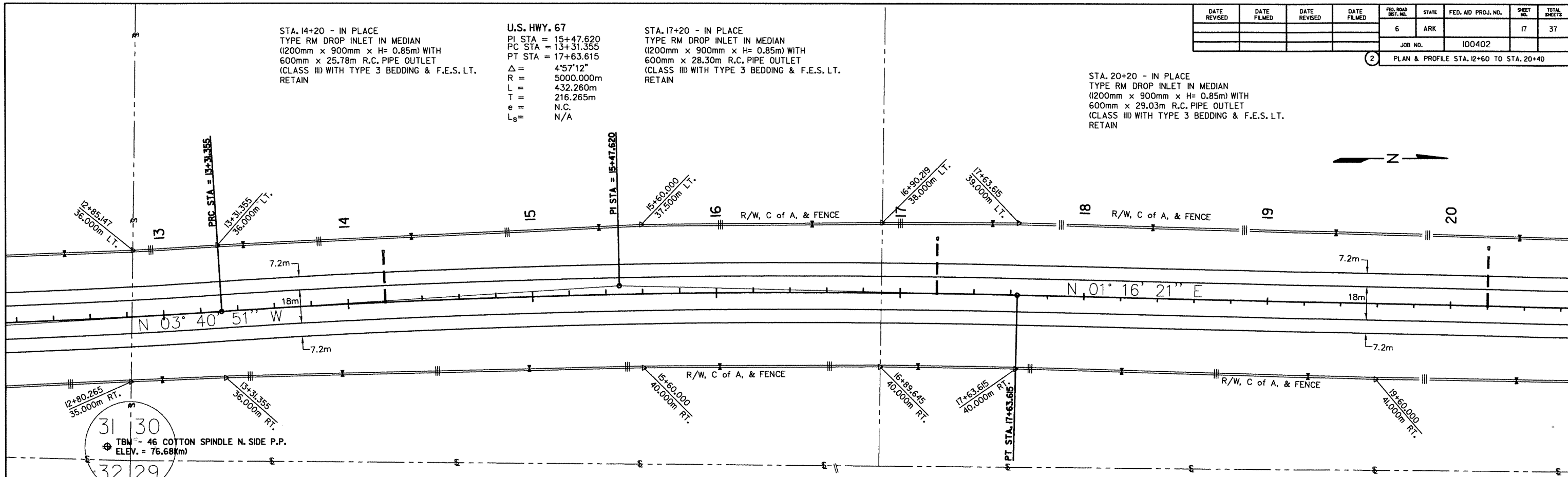
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK		17	37
						JOB NO.	100402	
2 PLAN & PROFILE STA. 12+60 TO STA. 20+40								

STA. 14+20 - IN PLACE
TYPE RM DROP INLET IN MEDIAN
(1200mm x 900mm x H= 0.85m) WITH
600mm x 25.78m R.C. PIPE OUTLET
(CLASS III) WITH TYPE 3 BEDDING & F.E.S. LT.
RETAIN

U.S. HWY. 67
PI STA = 15+47.620
PC STA = 13+31.355
PT STA = 17+63.615
 $\Delta = 4^{\circ}57'12''$
L = 5000.000m
R = 432.260m
T = 216.265m
e = N.C.
L_g = N/A

STA. 17+20 - IN PLACE
TYPE RM DROP INLET IN MEDIAN
(1200mm x 900mm x H= 0.85m) WITH
600mm x 28.30m R.C. PIPE OUTLET
(CLASS III) WITH TYPE 3 BEDDING & F.E.S. LT.
RETAIN

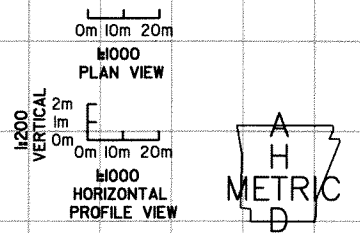
STA. 20+20 - IN PLACE
TYPE RM DROP INLET IN MEDIAN
(1200mm x 900mm x H= 0.85m) WITH
600mm x 29.03m R.C. PIPE OUTLET
(CLASS III) WITH TYPE 3 BEDDING & F.E.S. LT.
RETAIN



NOTE: STA. 12+65.55, 69.48m RT.
TBM - 46, COTTON SPINDLE N. SIDE OF P.P. AT SW COR.
OF CO. RD. 197 "TEE" & INTERSECTION OF FARM RD. WEST
ELEV. = 76.68(m)

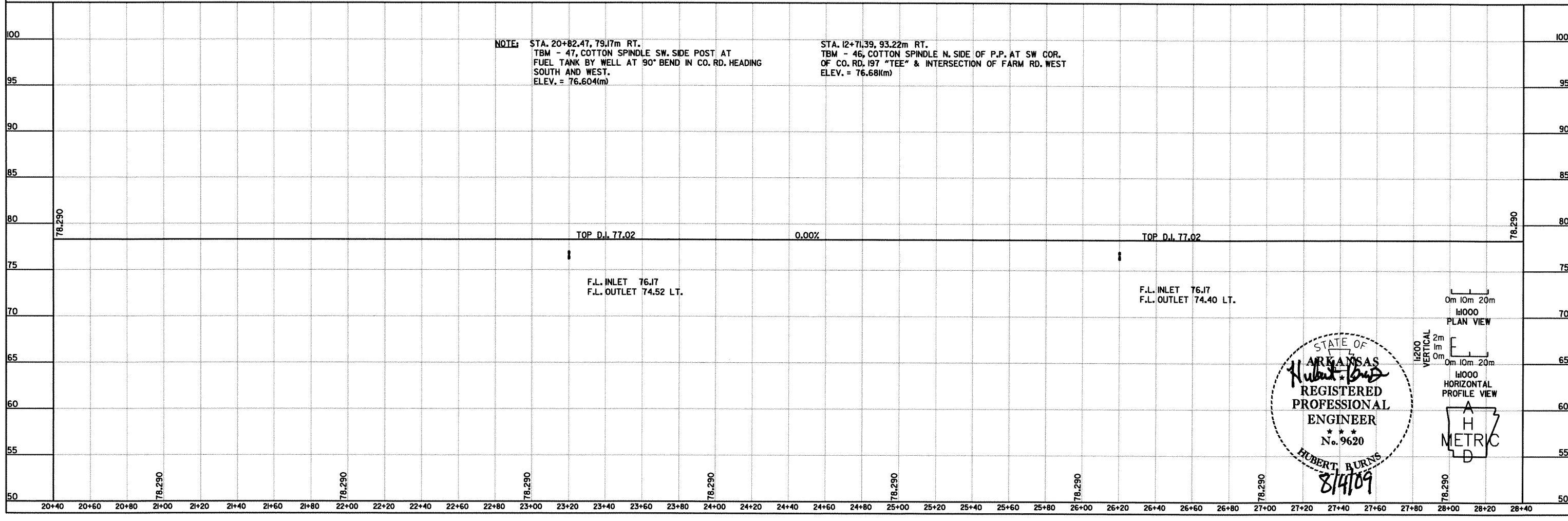
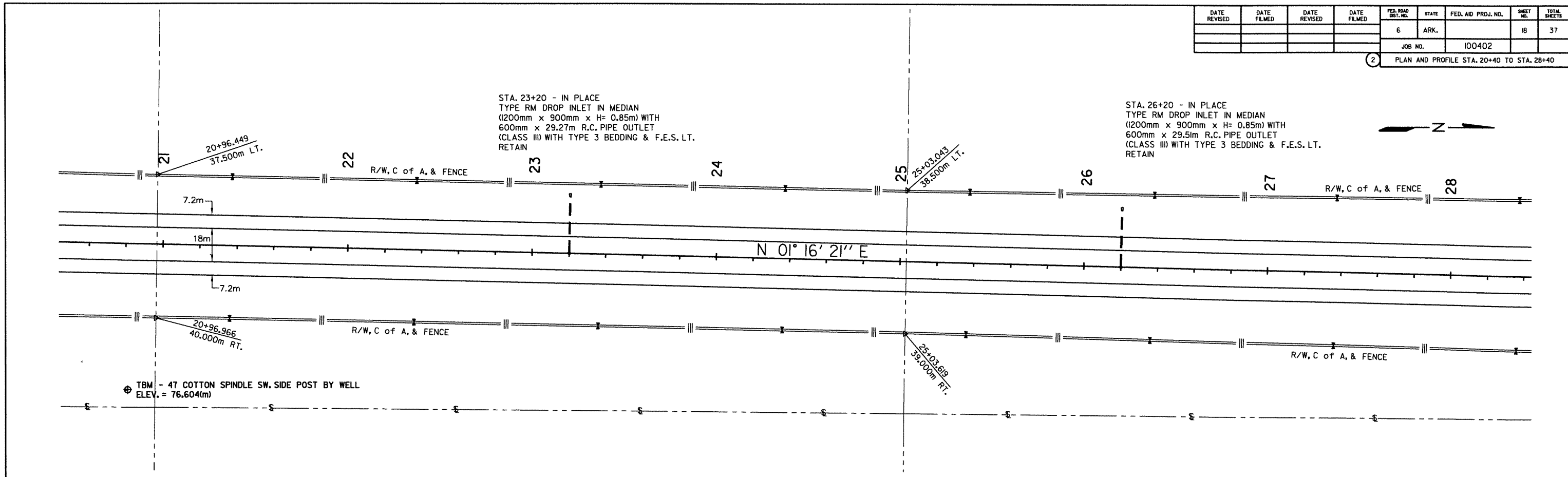
STA. 20+82.47, 79.17m RT.
TBM - 47, COTTON SPINDLE SW. SIDE POST AT
FUEL TANK BY WELL AT 90° BEND IN CO. RD. HEADING
SOUTH AND WEST.
ELEV. = 76.604(m)

STATE OF
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REGISTERED
PROFESSIONAL
ENGINEER
No. 9620
8/14/09

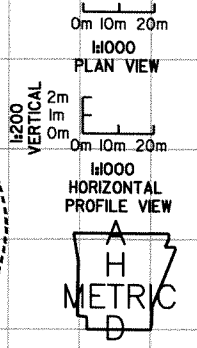


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PLOTTER: 8/3/2009 15:32 SCALE: 2H

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		18	37
						JOB NO.	100402	
						PLAN AND PROFILE STA. 20+40 TO STA. 28+40		



STATE OF
ARKANSAS
Hubert Burns
**REGISTERED
 ENGINEER**
 No. 9620
HUBERT BURNS
 8/14/09



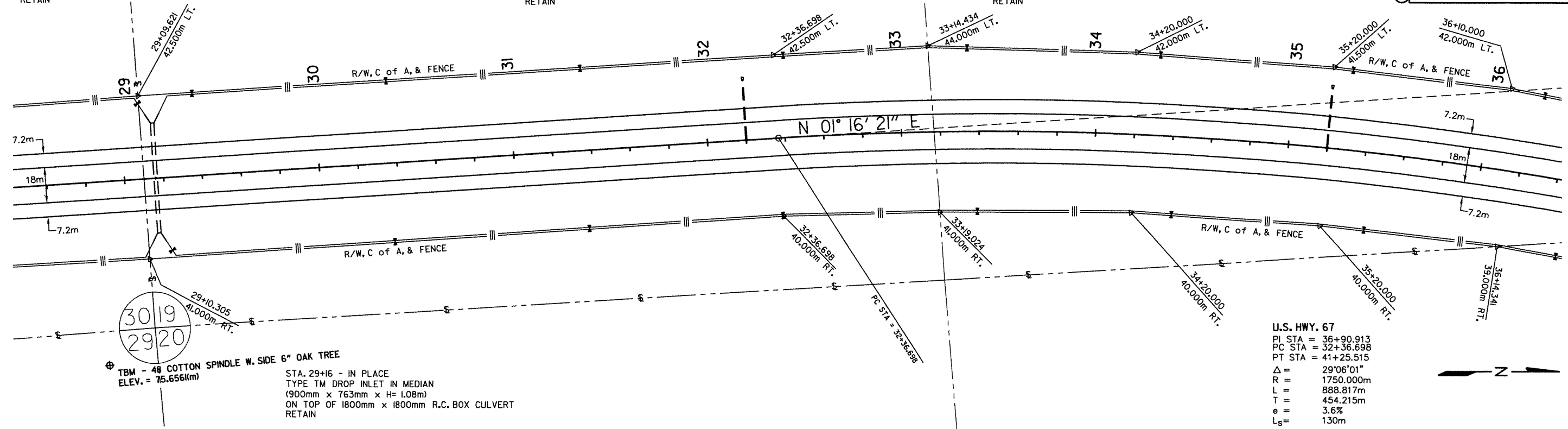
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 SCALE: 2:1

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		19	37
						JOB NO.	100402	
						PLAN AND PROFILE STA. 28+40 TO STA. 36+40		

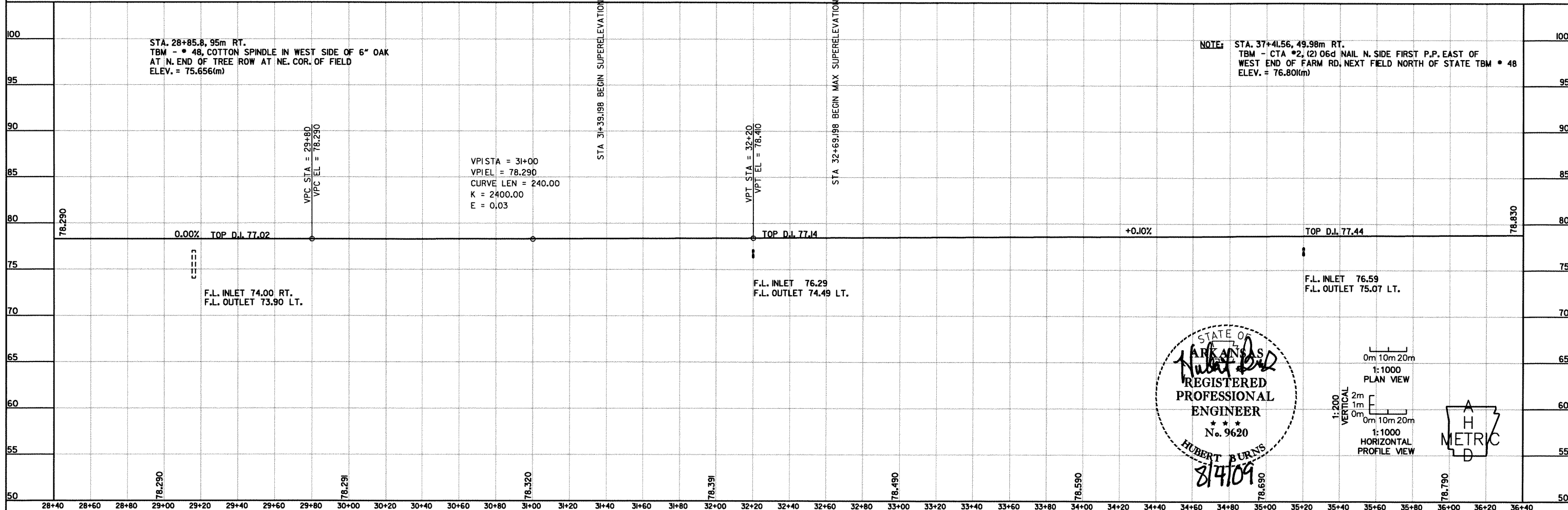
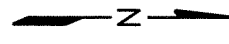
STA. 29+16 - IN PLACE
1800mm x 1800mm x 56.24m R.C. BOX CULVERT
USE STD. DRWGS. FOR A 6' x 6' R.C. BOX CULVT.
D.A. = 148.7 ha, Q₅₀ = 6.8 C.M.S.
CONST. INLET & OUTLET = 162 cu. m.
RETAIN

STA. 32+20 - IN PLACE
TYPE RM DROP INLET IN MEDIAN
(1200mm x 900mm x H= 0.85m) WITH
600mm x 30.66m R.C. PIPE OUTLET
(CLASS III) WITH TYPE 3 BEDDING & F.E.S. LT.
RETAIN

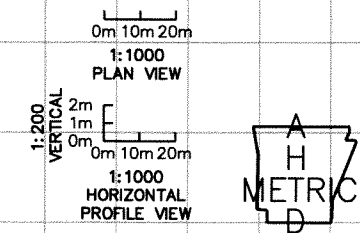
STA. 35+20 - IN PLACE
TYPE RM DROP INLET IN MEDIAN
(1200mm x 900mm x H= 0.85m) WITH
600mm x 30.23m R.C. PIPE OUTLET
(CLASS III) WITH TYPE 3 BEDDING & F.E.S. LT.
RETAIN



U.S. HWY. 67
PI STA = 36+90.913
PC STA = 32+36.698
PT STA = 41+25.515
Δ = 29°06'01"
R = 1750.000m
L = 888.817m
T = 454.215m
e = 3.6%
L_s = 130m

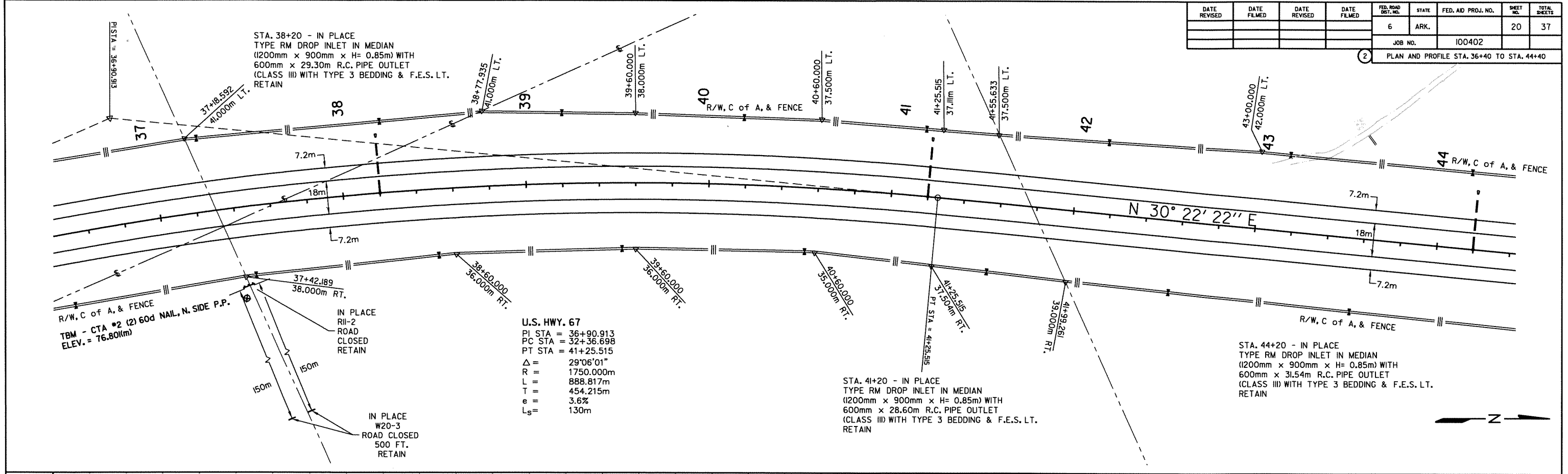


STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9620
HUBERT BURNS
8/4/09



USER: f513
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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	37
						JOB NO.	100402	
						PLAN AND PROFILE STA. 36+40 TO STA. 44+40		



U.S. HWY. 67
 PI STA = 36+90.913
 PC STA = 32+36.698
 PT STA = 41+25.515
 $\Delta = 29^{\circ}06'01''$
 R = 1750.000m
 L = 888.817m
 T = 454.215m
 e = 3.6%
 L_s = 130m

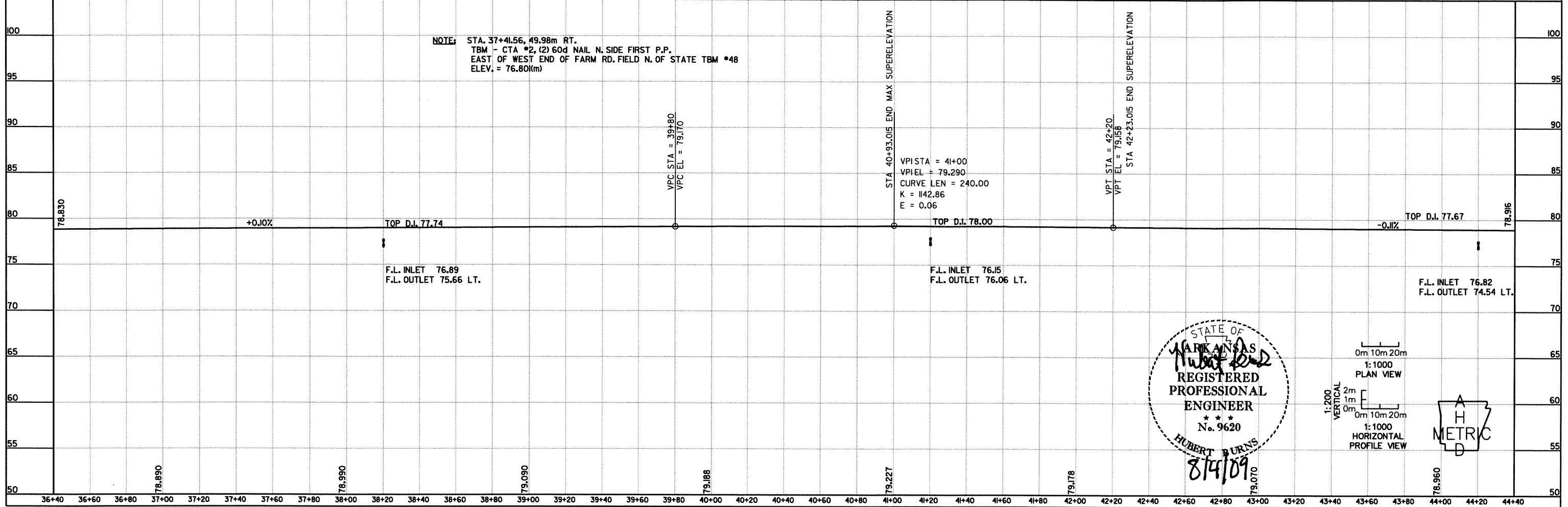
R/W, C of A, & FENCE
 TBM - CTA #2 (2) 60d NAIL, N. SIDE P.P.
 ELEV. = 76.80(m)

IN PLACE
 W20-3
 ROAD CLOSED
 500 FT.
 RETAIN

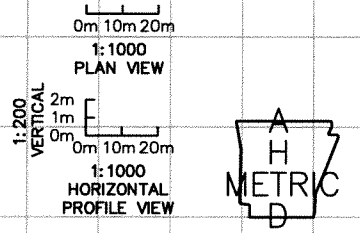
STA. 41+20 - IN PLACE
 TYPE RM DROP INLET IN MEDIAN
 (1200mm x 900mm x H= 0.85m) WITH
 600mm x 28.60m R.C. PIPE OUTLET
 (CLASS III) WITH TYPE 3 BEDDING & F.E.S. LT.
 RETAIN

STA. 44+20 - IN PLACE
 TYPE RM DROP INLET IN MEDIAN
 (1200mm x 900mm x H= 0.85m) WITH
 600mm x 31.54m R.C. PIPE OUTLET
 (CLASS III) WITH TYPE 3 BEDDING & F.E.S. LT.
 RETAIN

NOTE: STA. 37+41.56, 49.98m RT.
 TBM - CTA #2, (2) 60d NAIL, N. SIDE FIRST P.P.
 EAST OF WEST END OF FARM RD. FIELD N. OF STATE TBM #48
 ELEV. = 76.80(m)



STATE OF
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 ENGINEER
 No. 9620
 HUBERT BURNS
 8/14/09

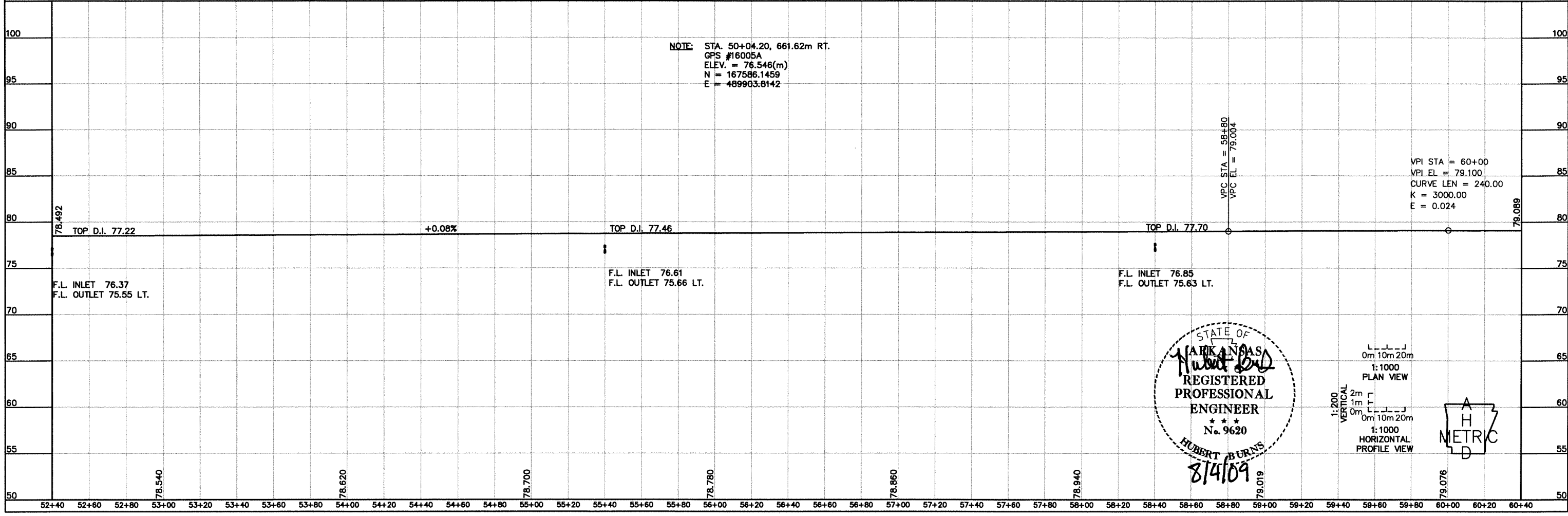
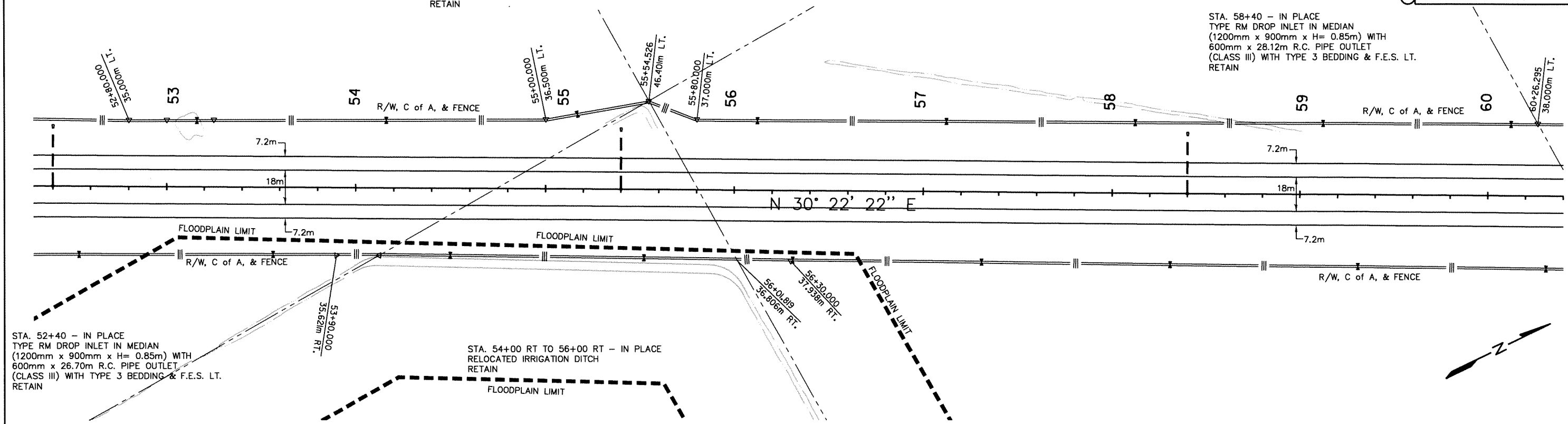


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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		22	37
						JOB NO.	100402	
						2 PLAN AND PROFILE STA. 52+40 TO STA. 60+40		

STA. 55+40 - IN PLACE
TYPE RM DROP INLET IN MEDIAN
(1200mm x 900mm x H= 0.85m) WITH
600mm x 30.40m R.C. PIPE OUTLET
(CLASS III) WITH TYPE 3 BEDDING & F.E.S. LT.
RETAIN

STA. 58+40 - IN PLACE
TYPE RM DROP INLET IN MEDIAN
(1200mm x 900mm x H= 0.85m) WITH
600mm x 28.12m R.C. PIPE OUTLET
(CLASS III) WITH TYPE 3 BEDDING & F.E.S. LT.
RETAIN



STATE OF
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ENGINEER
No. 9620
HUBERT BURNS
814109

1:200 VERTICAL
1:1000 HORIZONTAL
PROFILE VIEW
METRIC

USER: f653
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PLOTTER: 8/3/2009 15:33 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.		23	37
						JOB NO.	100402	

STA. 61+40 - IN PLACE
TYPE RM DROP INLET IN MEDIAN
(1200mm x 900mm x H= 0.85m) WITH
600mm x 28.60m R.C. PIPE OUTLET
(CLASS III) WITH TYPE 3 BEDDING & F.E.S. LT.
RETAIN

STA. 64+40 - IN PLACE
TYPE RM DROP INLET IN MEDIAN
(1200mm x 900mm x H= 0.85m) WITH
600mm x 28.56m R.C. PIPE OUTLET
(CLASS III) WITH TYPE 3 BEDDING & F.E.S. LT.
RETAIN

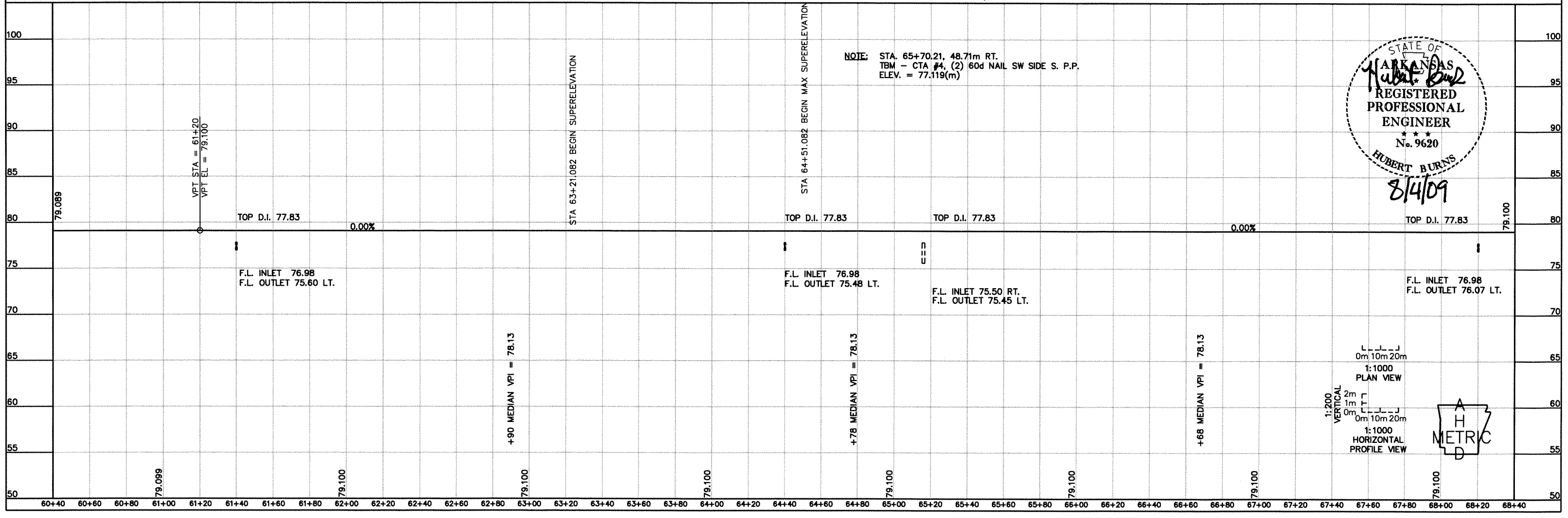
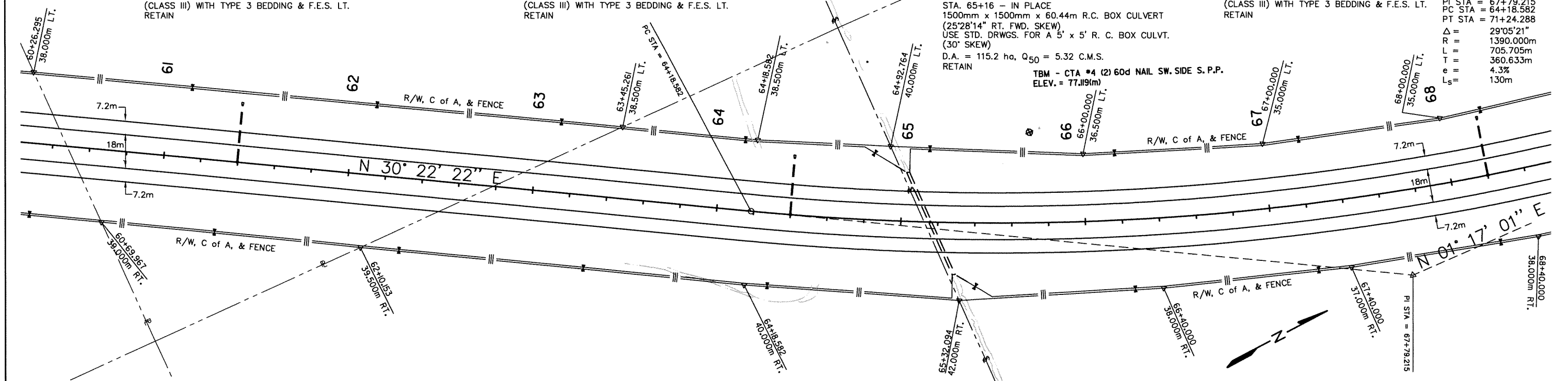
STA. 65+16 - IN PLACE
TYPE TM DROP INLET IN MEDIAN
(900mm x 763mm x H= 0.64m)
ON TOP OF 1500mm x 1500mm R.C. BOX CULVERT
RETAIN

STA. 68+20 - IN PLACE
TYPE RM DROP INLET IN MEDIAN
(1200mm x 900mm x H= 0.85m) WITH
600mm x 26.66m R.C. PIPE OUTLET
(CLASS III) WITH TYPE 3 BEDDING & F.E.S. LT.
RETAIN

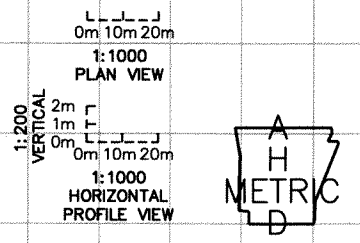
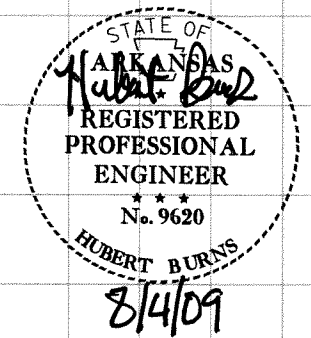
U.S. HWY. 67
PI STA = 67+79.215
PC STA = 64+18.582
PT STA = 71+24.288
Δ = 29°05'21"
R = 1390.000m
L = 705.705m
T = 360.633m
e = 4.3%
Ls = 130m

STA. 65+16 - IN PLACE
1500mm x 1500mm x 60.44m R.C. BOX CULVERT
(25°28'14" RT. FWD. SKEW)
USE STD. DRWGS. FOR A 5' x 5' R. C. BOX CULVT.
(30° SKEW)
D.A. = 115.2 ha, Q₅₀ = 5.32 C.M.S.
RETAIN

TBM - CTA #4 (2) 60d NAIL SW. SIDE S. P.P.
ELEV. = 77.119(m)



NOTE: STA. 65+70.21, 48.71m RT.
TBM - CTA #4, (2) 60d NAIL SW SIDE S. P.P.
ELEV. = 77.119(m)



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SCALE: 2:1
PLOTTER: 8/3/2009 15:33

U.S. HWY. 67
 PI STA = 67+79.215
 PC STA = 64+18.582
 PT STA = 71+24.288
 $\Delta = 29^{\circ}05'21''$
 $R = 1390.000m$
 $L = 705.705m$
 $T = 360.633m$
 $e = 4.3\%$
 $L_s = 130m$

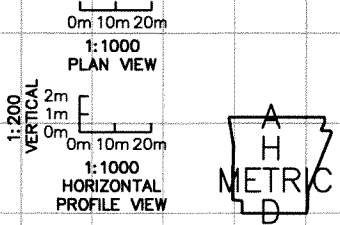
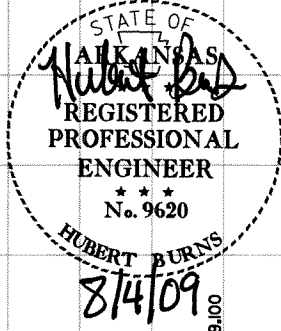
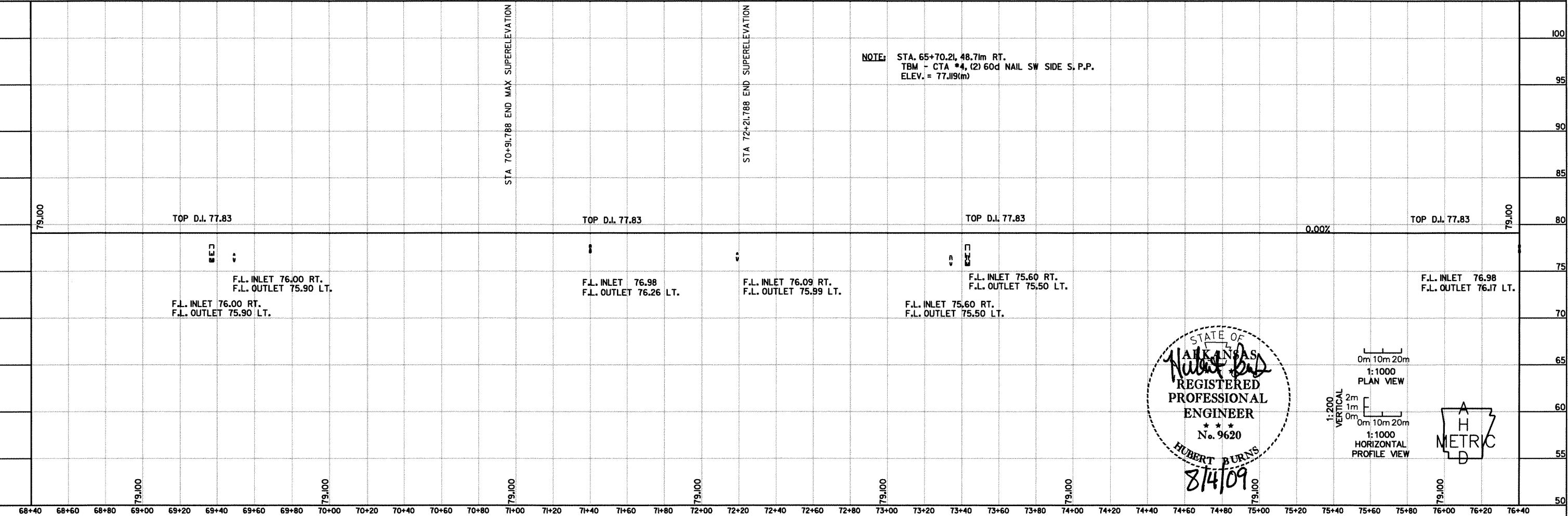
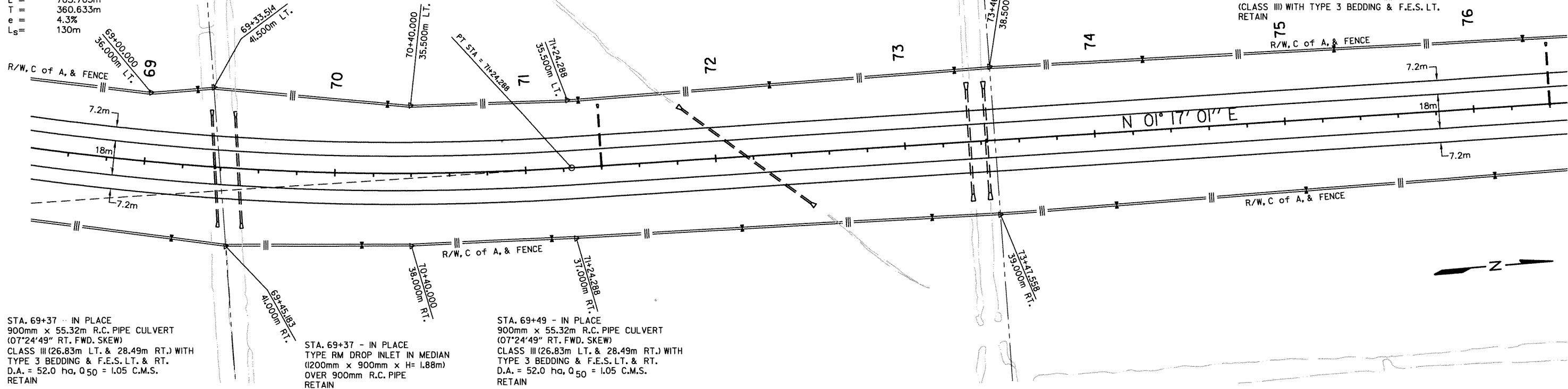
STA. 71+40 - IN PLACE
 TYPE RM DROP INLET IN MEDIAN
 (1200mm x 900mm x H= 0.85m) WITH
 600mm x 26.3m R.C. PIPE OUTLET
 (CLASS III) WITH TYPE 3 BEDDING & F.E.S. LT.
 RETAIN

STA. 72+18 - IN PLACE
 900mm x 84.04m R.C. PIPE CULVERT
 (50'29'27" RT. FWD. SKEW)
 CLASS III (42.2m LT. & 41.83m RT.) WITH
 TYPE 3 BEDDING & F.E.S. LT. & RT.
 RETAIN

STA. 73+34 - IN PLACE
 1200mm x 54.72m R.C. PIPE CULVERT
 CLASS III (27.36m LT. & 27.36m RT.) WITH
 TYPE 3 BEDDING & F.E.S. LT. & RT.
 $D.A. = 107.8 ha, Q_{50} = 1.76 C.M.S.$
 RETAIN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		24	37
						JOB NO.	100402	
(2) PLAN AND PROFILE STA. 68+40 TO STA. 76+40								

STA. 76+40 - IN PLACE
 TYPE RM DROP INLET IN MEDIAN
 (1200mm x 900mm x H= 0.85m) WITH
 600mm x 26.88m R.C. PIPE OUTLET
 (CLASS III) WITH TYPE 3 BEDDING & F.E.S. LT.
 RETAIN



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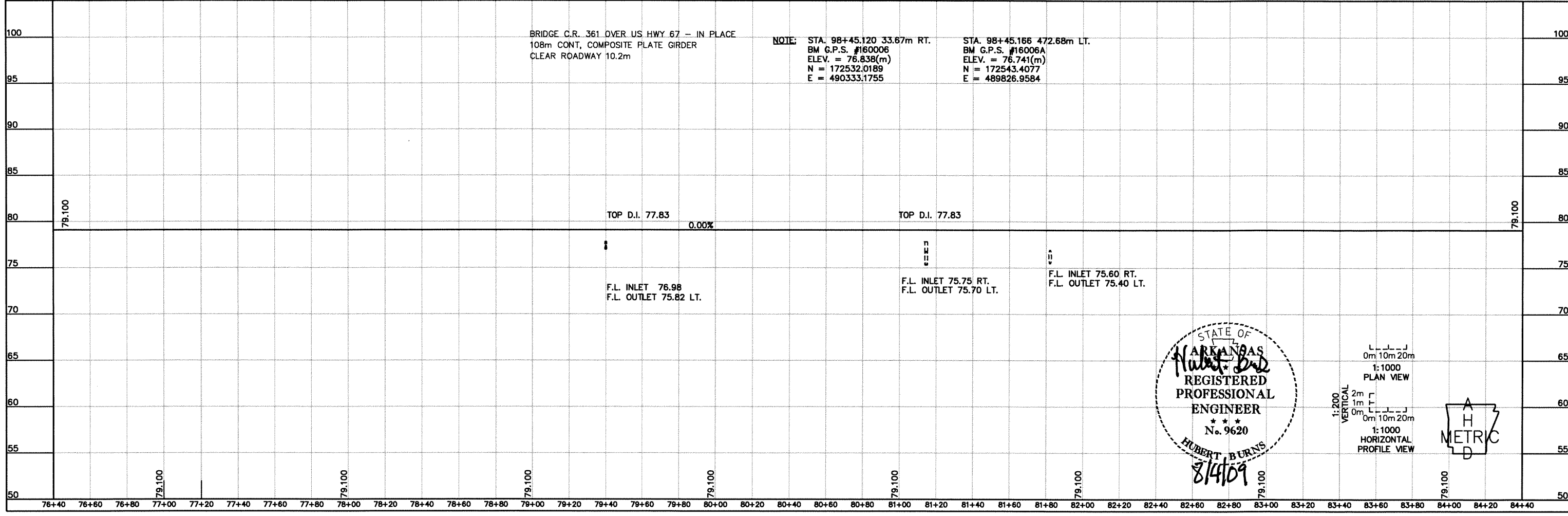
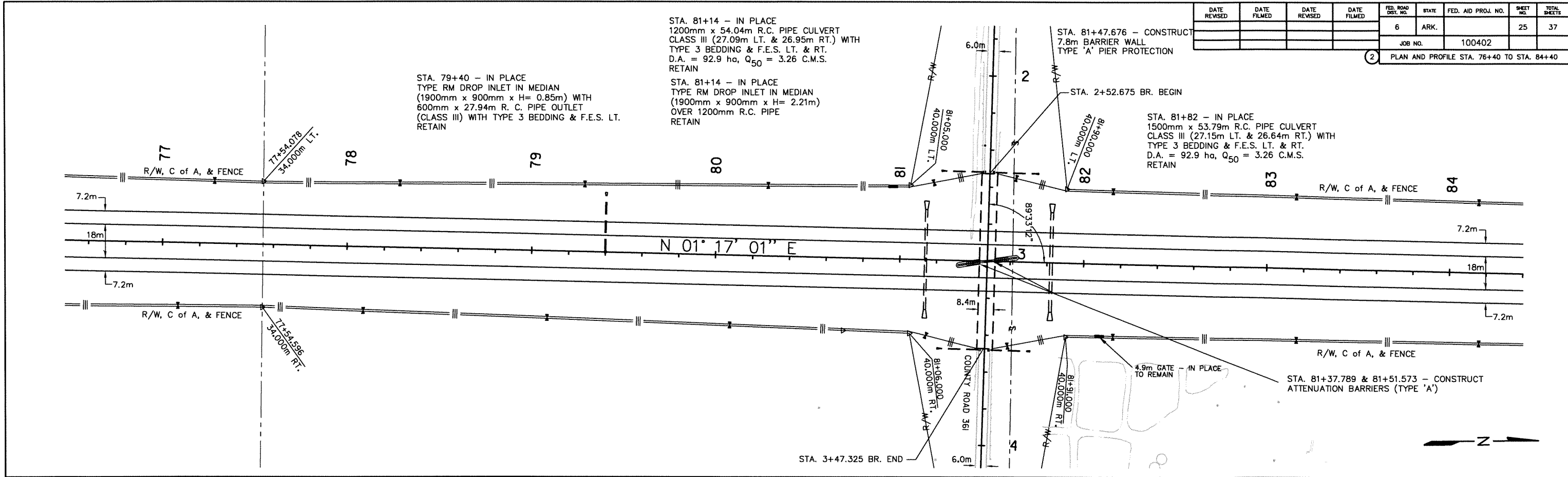
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				6	ARK.		25	37
						JOB NO.	100402	
(2) PLAN AND PROFILE STA. 76+40 TO STA. 84+40								

STA. 81+14 - IN PLACE
 1200mm x 54.04m R.C. PIPE CULVERT
 CLASS III (27.09m LT. & 26.95m RT.) WITH
 TYPE 3 BEDDING & F.E.S. LT. & RT.
 D.A. = 92.9 ha, Q₅₀ = 3.26 C.M.S.
 RETAIN

STA. 81+14 - IN PLACE
 TYPE RM DROP INLET IN MEDIAN
 (1900mm x 900mm x H= 2.21m)
 OVER 1200mm R.C. PIPE
 RETAIN

STA. 79+40 - IN PLACE
 TYPE RM DROP INLET IN MEDIAN
 (1900mm x 900mm x H= 0.85m) WITH
 600mm x 27.94m R. C. PIPE OUTLET
 (CLASS III) WITH TYPE 3 BEDDING & F.E.S. LT.
 RETAIN

STA. 81+82 - IN PLACE
 1500mm x 53.79m R.C. PIPE CULVERT
 CLASS III (27.15m LT. & 26.64m RT.) WITH
 TYPE 3 BEDDING & F.E.S. LT. & RT.
 D.A. = 92.9 ha, Q₅₀ = 3.26 C.M.S.
 RETAIN



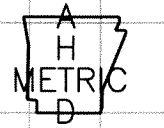
NOTE: STA. 98+45.120 33.67m RT.
 BM G.P.S. #160006
 ELEV. = 76.838(m)
 N = 172532.0189
 E = 490333.1755

STA. 98+45.166 472.68m LT.
 BM G.P.S. #16006A
 ELEV. = 76.741(m)
 N = 172543.4077
 E = 489826.9584

STATE OF
Arkansas
 REGISTERED
 PROFESSIONAL
 ENGINEER
 No. 9620
 HUBERT BURNS
 8/4/09

1:1000
 0m 10m 20m
 PLAN VIEW

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



USER: f453
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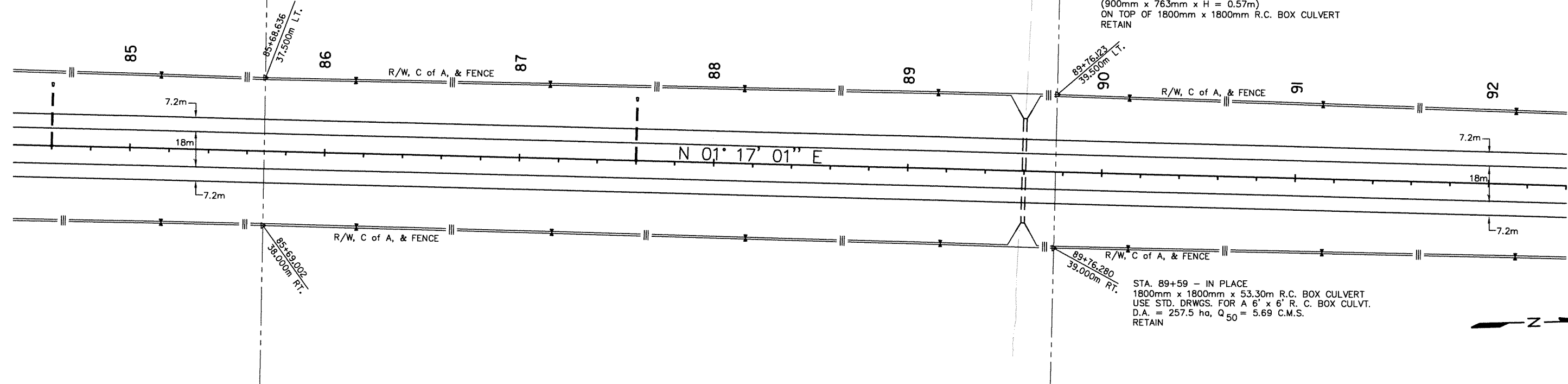
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				6	ARK.		26	37
						JOB NO.	100402	
						2 PLAN AND PROFILE STA. 84+40 TO STA. 92+40		

STA. 84+60 - IN PLACE
TYPE RM DROP INLET IN MEDIAN
(1200mm x 900mm x H= 0.85m) WITH
600mm x 28.60m R.C. PIPE OUTLET
(CLASS III) WITH TYPE 3 BEDDING & F.E.S. LT.
RETAIN

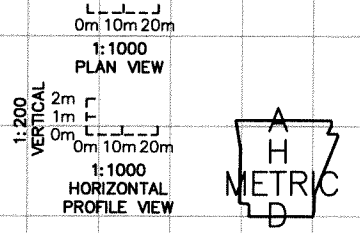
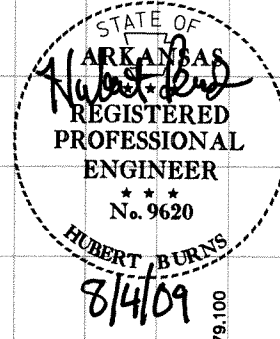
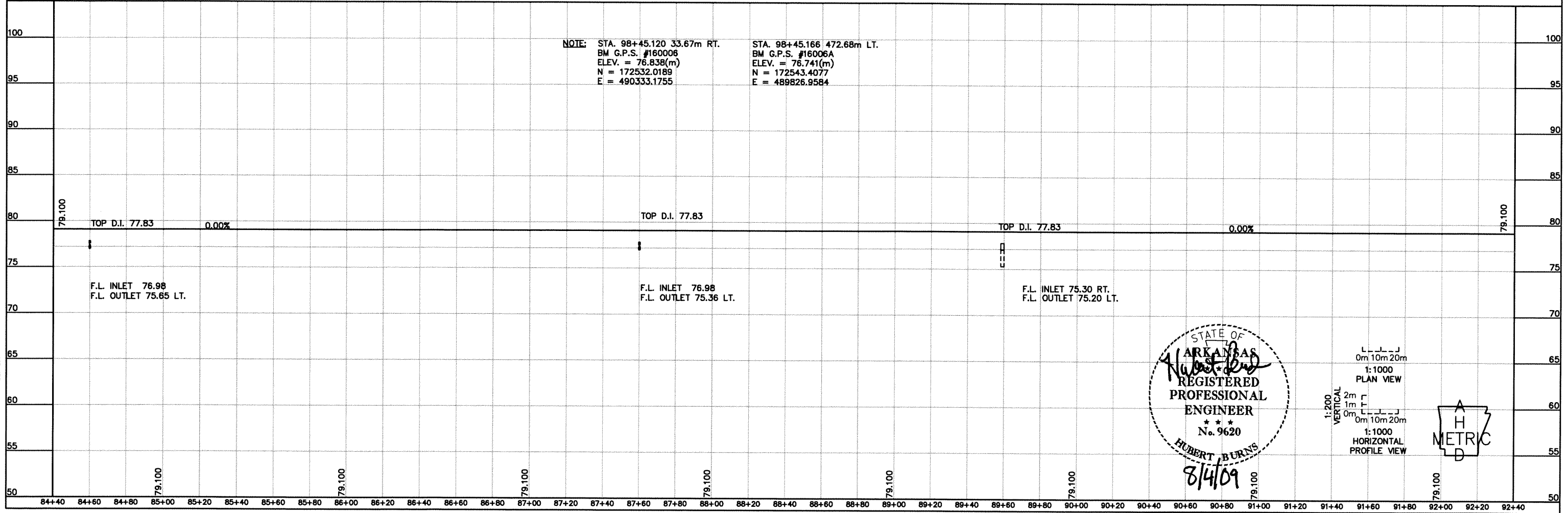
STA. 87+60 - IN PLACE
TYPE RM DROP INLET IN MEDIAN
(1200mm x 900mm x H= 0.85m) WITH
600mm x 29.32m R.C. PIPE OUTLET
(CLASS III) WITH TYPE 3 BEDDING & F.E.S. LT.
RETAIN

STA. 89+59 - IN PLACE
TYPE TM DROP INLET IN MEDIAN
(900mm x 763mm x H = 0.57m)
ON TOP OF 1800mm x 1800mm R.C. BOX CULVERT
RETAIN

STA. 89+59 - IN PLACE
1800mm x 1800mm x 53.30m R.C. BOX CULVERT
USE STD. DRWGS. FOR A 6' x 6' R. C. BOX CULVT.
D.A. = 257.5 ha, Q₅₀ = 5.69 C.M.S.
RETAIN



NOTE: STA. 98+45.120 33.67m RT. STA. 98+45.166 472.68m LT.
BM G.P.S. #160008 BM G.P.S. #16006A
ELEV. = 76.838(m) ELEV. = 76.741(m)
N = 172532.0189 N = 172543.4077
E = 490333.1755 E = 489826.9584



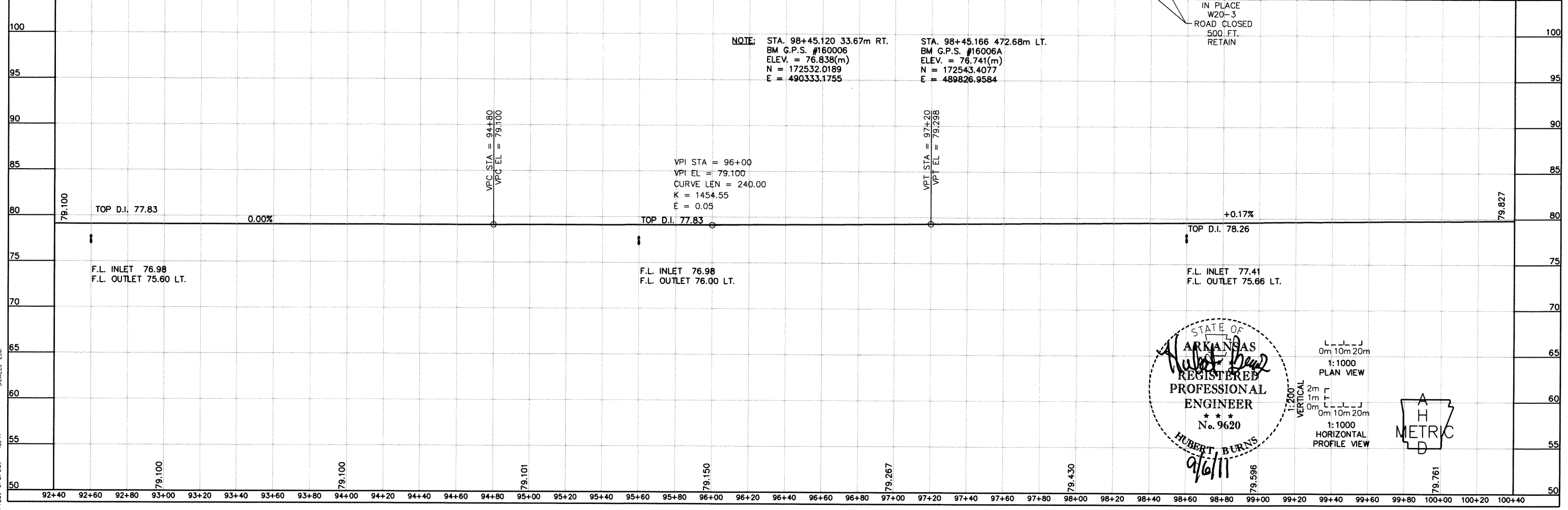
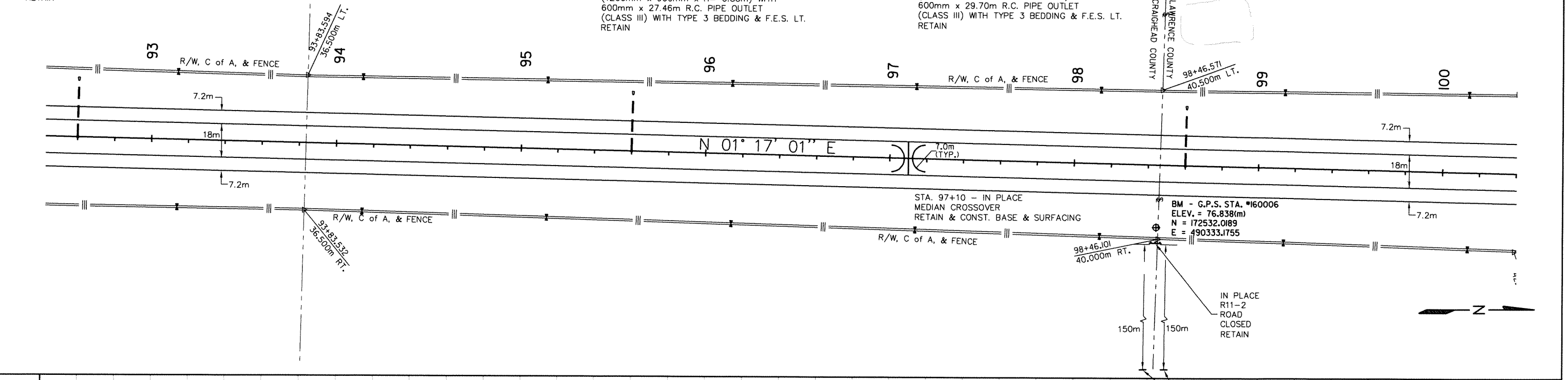
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		27	37
						JOB NO.	100402	
2 PLAN AND PROFILE STA. 92+40 TO STA. 100+40								

STA. 92+60 - IN PLACE
 TYPE RM DROP INLET IN MEDIAN
 (1200mm x 900mm x H= 0.85m) WITH
 600mm x 28.52m R.C. PIPE OUTLET
 (CLASS III) WITH TYPE 3 BEDDING & F.E.S. LT.
 RETAIN

STA. 95+60 - IN PLACE
 TYPE RM DROP INLET IN MEDIAN
 (1200mm x 900mm x H= 0.85m) WITH
 600mm x 27.46m R.C. PIPE OUTLET
 (CLASS III) WITH TYPE 3 BEDDING & F.E.S. LT.
 RETAIN

STA. 98+60 - IN PLACE
 TYPE RM DROP INLET IN MEDIAN
 (1200mm x 900mm x H= 0.85m) WITH
 600mm x 29.70m R.C. PIPE OUTLET
 (CLASS III) WITH TYPE 3 BEDDING & F.E.S. LT.
 RETAIN



STATE OF
 ARKANSAS
 REGISTERED
 PROFESSIONAL
 ENGINEER
 No. 9620
 HUBERT BURNS
 9/6/11

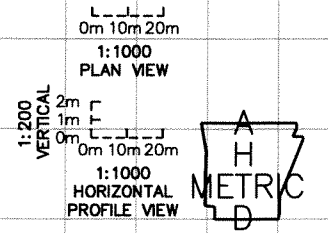
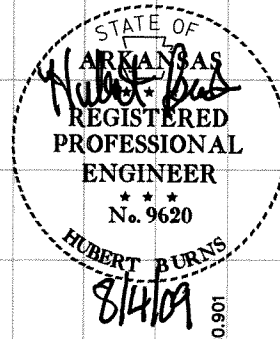
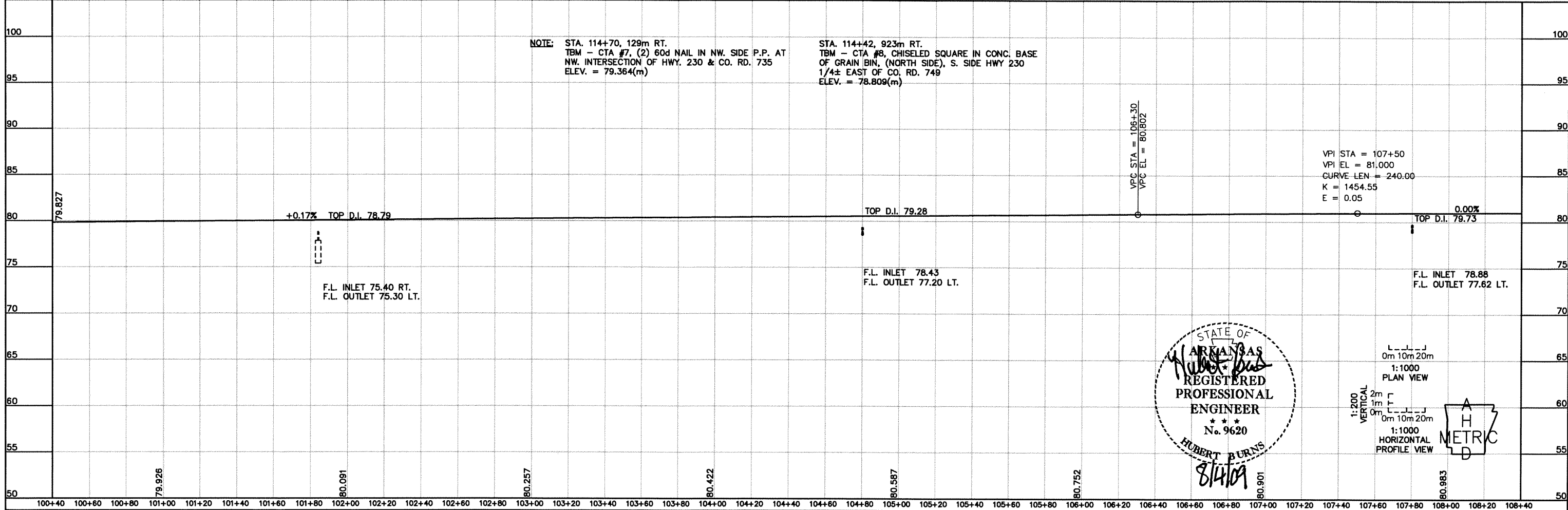
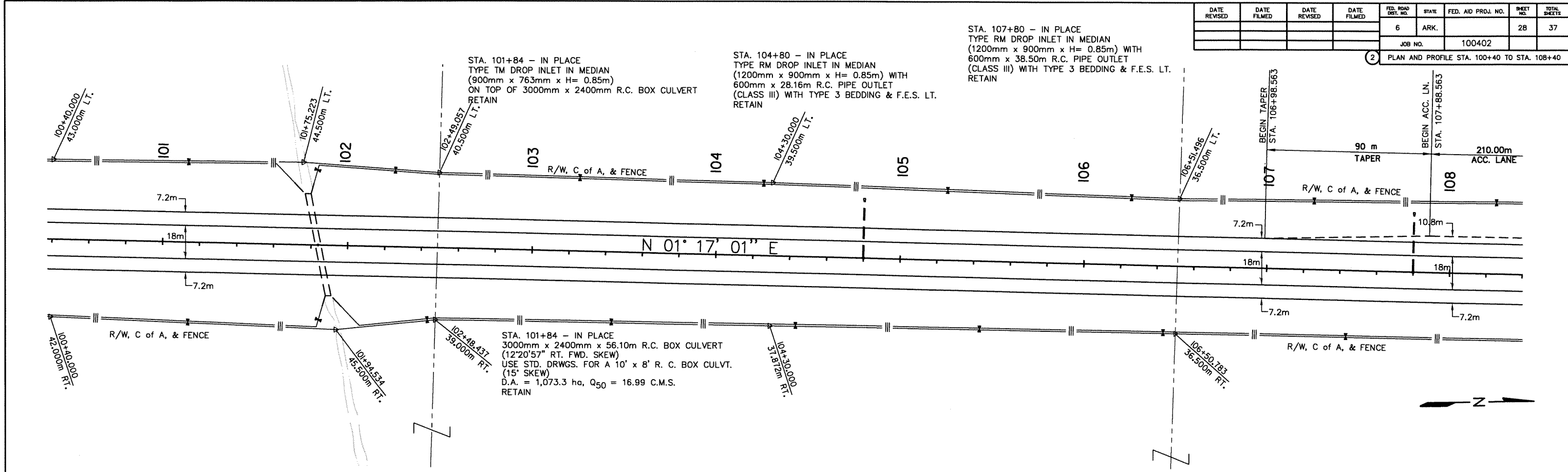
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 PROFILE VIEW



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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.		28	37
						JOB NO.	100402	

2 PLAN AND PROFILE STA. 100+40 TO STA. 108+40



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 PLOTTED: 8/3/2009 15:33 SCALE: 2:H

STA. 109+40 - IN PLACE
 TYPE RM DROP INLET IN MEDIAN
 (1200mm x 900mm x H= 2.27m)
 OVER NORTH STRING OF 1050mm R.C. PIPE
 RETAIN

STA. 109+40 - IN PLACE
 DBL 1050mm x 64.41m R.C. PIPE CULVERT
 CLASS III(31.57m LT. & 32.84m RT.) WITH
 TYPE 3 BEDDING & F.E.S. LT. & RT.
 D.A. = 5.60 ho, $Q_{50} = 3.00$ C.M.S.
 RETAIN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	29	37
				JOB NO.	100402		
2 PLAN AND PROFILE STA. 108+40 TO STA. 109+00							

EOP = 109+00.000
 E = 490323.1464
 N = 173587.3892

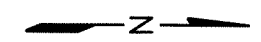
210.00m
 ACC. LANE

BEGIN ACC. LN.
 STA. 109+98.563

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

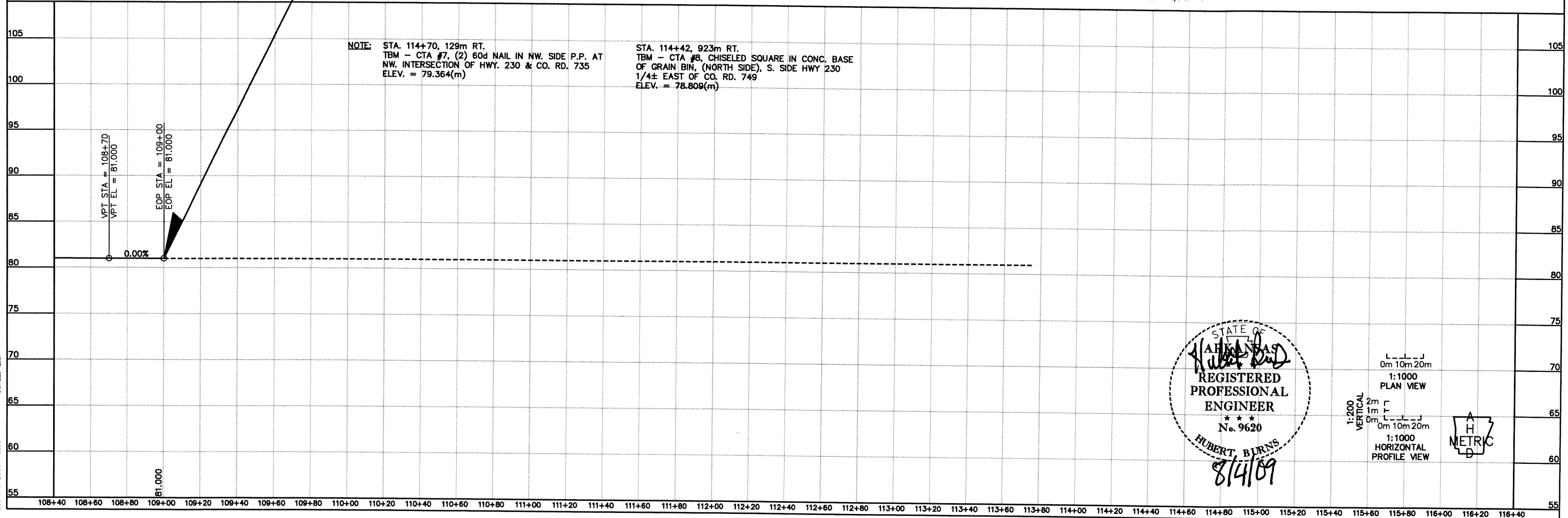
STA. 111+20 RAMP 1 - IN PLACE
 900mm x 29.0m R.C. PIPE CULVERT
 CLASS III(14.87m LT. & 14.08m RT.)
 (14°53' LT. FWD. SKEW) WITH
 TYPE 3 BEDDING & F.E.S. LT. & RT.
 D.A. = 8.05 ho, $Q_{50} = 0.74$ C.M.S.
 RETAIN

RAMP 1
 PISTA = 108+85.753
 PC STA = 108+70.501
 PT STA = 109+00.981
 $\Delta = 05^{\circ}42'30''$
 R = 305.930m
 L = 30.480m
 T = 15.251m
 e = N.C.
 L_s = N/A

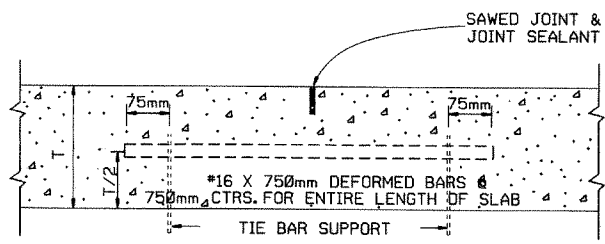


STA. 108+70.501 M.L.
 STA. 108+70.501
 RAMP

STA. 109+00 END JOB 100402
 U.S. HWY. 67 =
 BEGIN JOB 100404
 U.S. HWY. 67

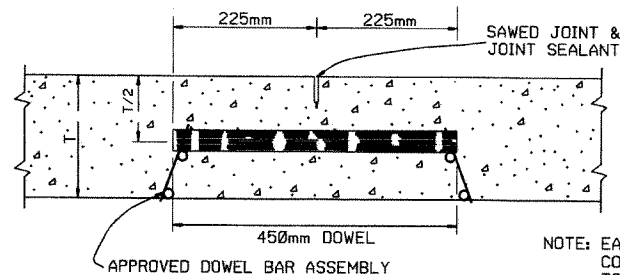


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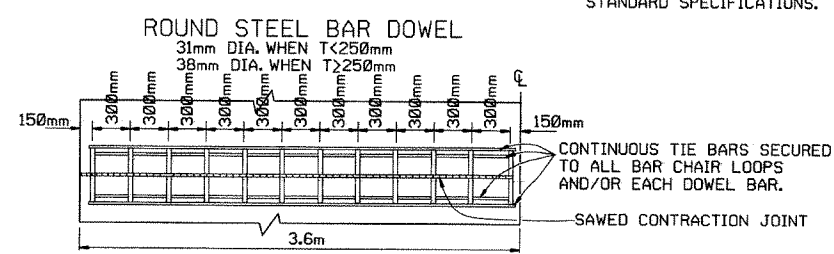


LONGITUDINAL JOINT

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.



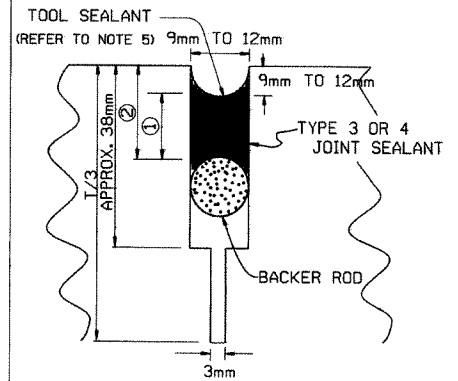
NOTE: EACH DOWEL TO BE COATED ACCORDING TO SECTION 502 OF THE STANDARD SPECIFICATIONS.



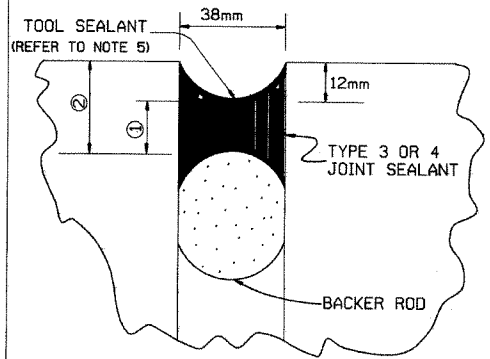
ONE-HALF 7.2m PAVEMENT
12 DOWELS
PLAN

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 SAWED CONTRACTION JOINT



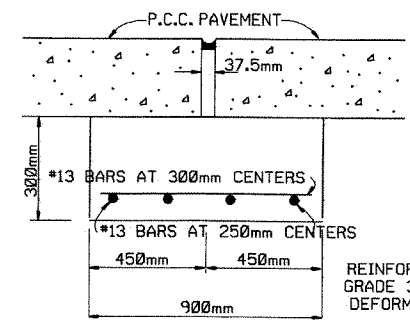
DETAIL OF EXPANSION JOINT

JOINT CONFIGURATION FOR TYPE 3 OR 4 JOINT SEALANT

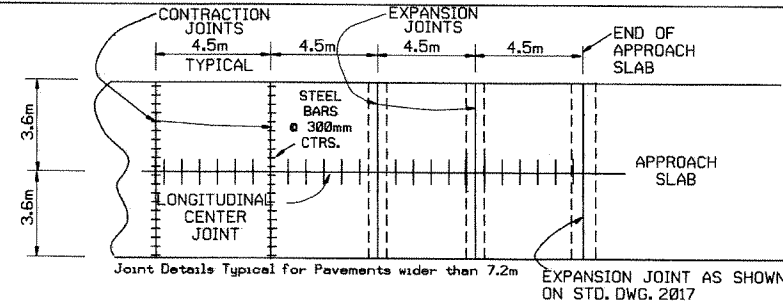
JOINT WIDTH	SEALANT THICKNESS ①	BACKER ROD DIAMETER	BACKER ROD PLACEMENT DEPTH ②
6	6	9	12
9	6	12	12
12	6	15	12
16	8	19	14
18	9	21	21
38	19	50	31

JOINT CONFIGURATION FOR TYPE 5 JOINT SEALANT

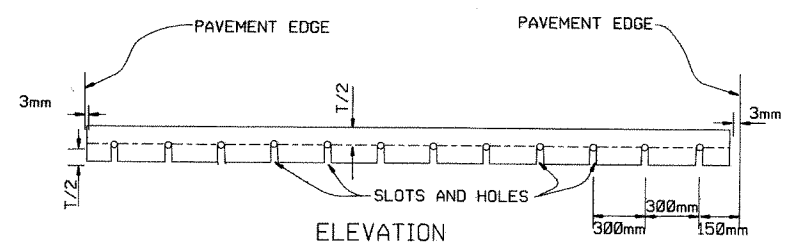
JOINT WIDTH	SEALANT THICKNESS ①	BACKER ROD DIAMETER	BACKER ROD PLACEMENT DEPTH ②
6	12	9	18
9	18	12	24



DETAIL OF JOINT SUPPORT FOR EXPANSION JOINTS

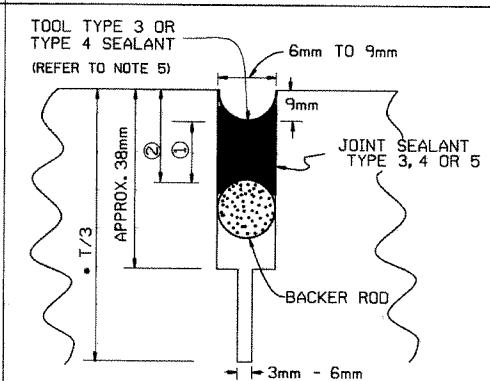


PLAN SHOWING EXPANSION JOINTS AT BRIDGE APPROACH SLABS



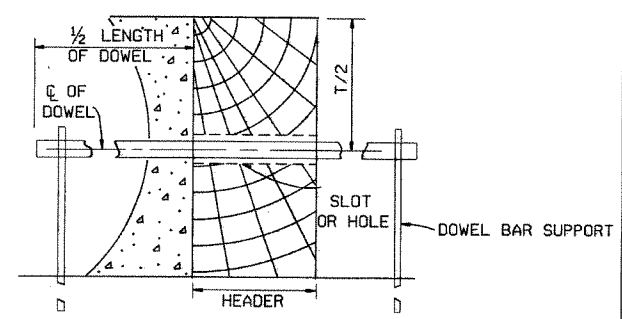
ELEVATION

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

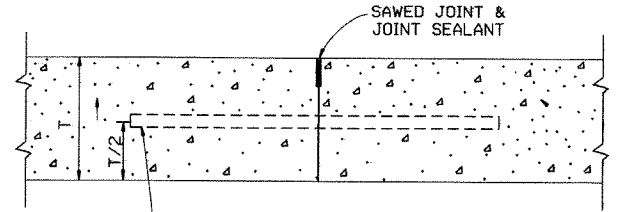
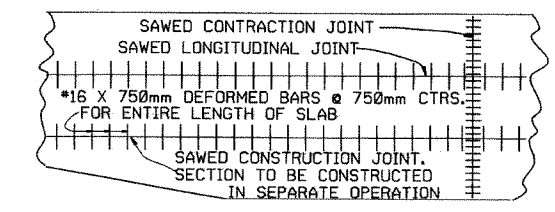


DETAIL OF SAWED LONGITUDINAL JOINT AND LONGITUDINAL CONSTRUCTION JOINT

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



SECTION
TRANSVERSE CONSTRUCTION JOINT



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

GENERAL NOTES

- *T* DENOTES THICKNESS OF SLAB.
- 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.
- THE EXPANSION JOINT SUPPORT MAY BE CONSTRUCTED WITH CLASS 'A', 'S' OR PAVING CONCRETE. PAYMENT FOR THE JOINT SUPPORT SHALL BE FOR THE CONTRACT UNIT PRICE BID FOR THE CLASS OF CONCRETE SPECIFIED IN THE PLANS. PAYMENT FOR ALL OTHER WORK AND MATERIALS REQUIRED FOR THE CONSTRUCTION OF THE JOINT SUPPORT SHALL BE INCLUDED IN THE PRICE BID FOR THE ABOVE ITEMS.
- CONTRACTION JOINTS SHALL BE CONSTRUCTED ON 4.5m CENTERS.
- TOOLING NOT REQUIRED FOR SELF-LEVELING SILICONE.
- UNLESS OTHERWISE SPECIFIED IN THE PLANS, CONCRETE SHOULDERS SHALL BE CONSTRUCTED ACCORDING TO THE DETAILS SHOWN HEREON. CONTRACTION JOINTS SHALL MATCH CONTRACTION JOINTS IN THE LANES.
- TIE WIRES IN DOWEL BAR ASSEMBLIES SHALL NOT BE CUT PRIOR TO PLACEMENT OF PAVING CONCRETE.

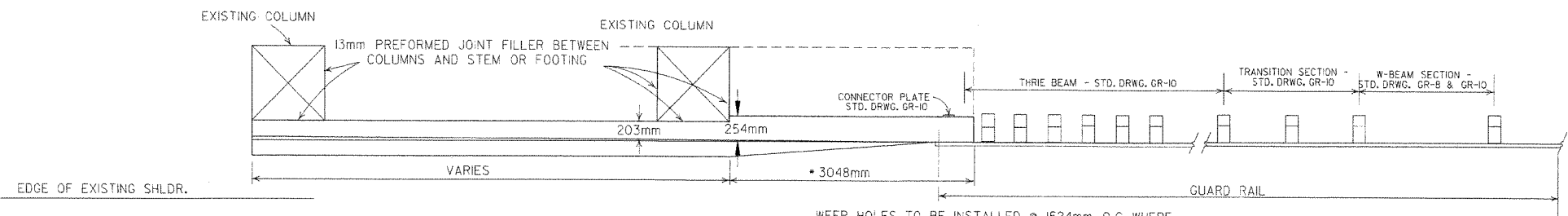
ARKANSAS STATE HIGHWAY COMMISSION

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

STANDARD DRAWING CPTJ-6A(M)

DATE	REVISION	DATE EXAMED
5-25-06	ADDED GENERAL NOTE 7	
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	

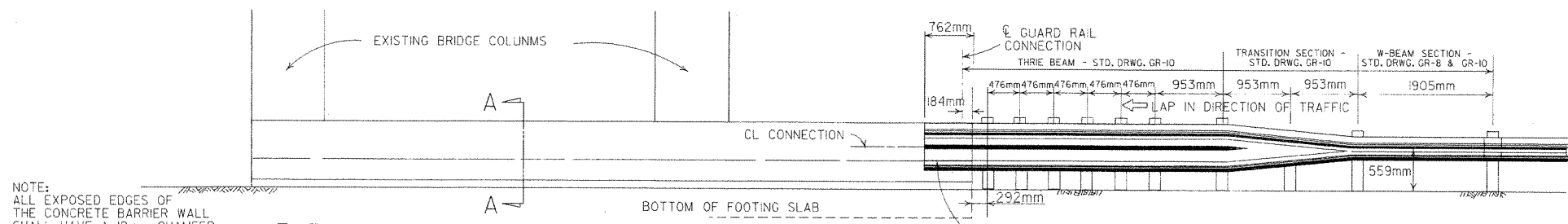




AT LEAST ONE 13mm JOINT SHALL BE CONSTRUCTED IN THE CONCRETE BARRIER WALL. JOINTS SHALL BE EQUALLY SPACED AT A MAXIMUM OF 7620mm O.C. FILL JOINT WITH PREFORMED JOINT FILLER.

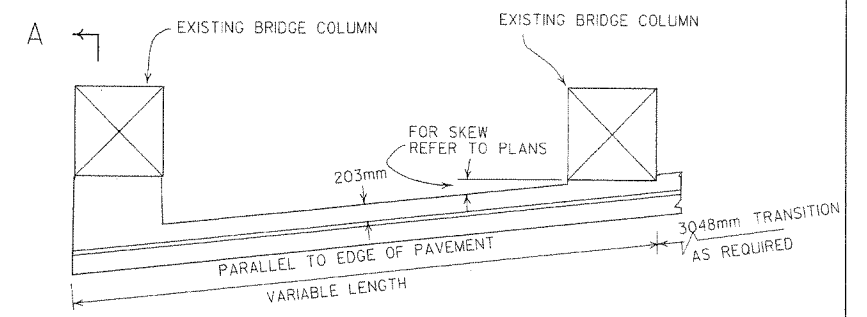
PLAN OF CONCRETE BARRIER WALL

WEEP HOLES TO BE INSTALLED @ 1524mm O.C. WHERE NECESSARY DUE TO EMBANKMENT SPILL-OVER UNDER BRIDGES

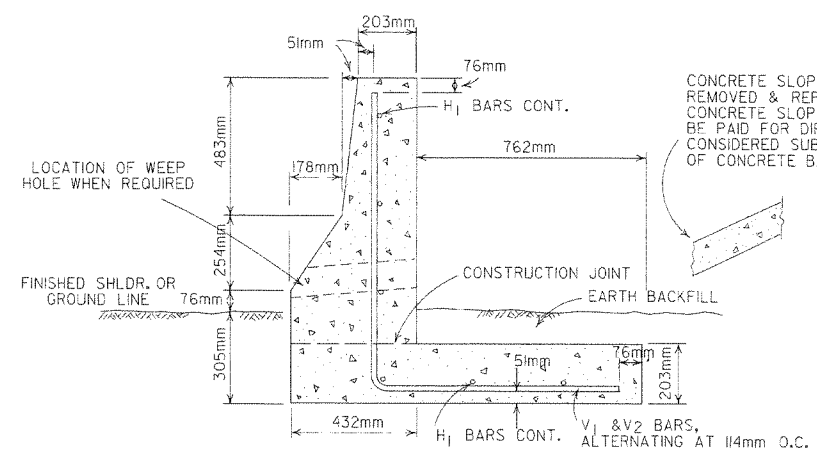


NOTE: ALL EXPOSED EDGES OF THE CONCRETE BARRIER WALL SHALL HAVE A 19mm CHAMFER.

ELEVATION OF CONCRETE BARRIER WALL

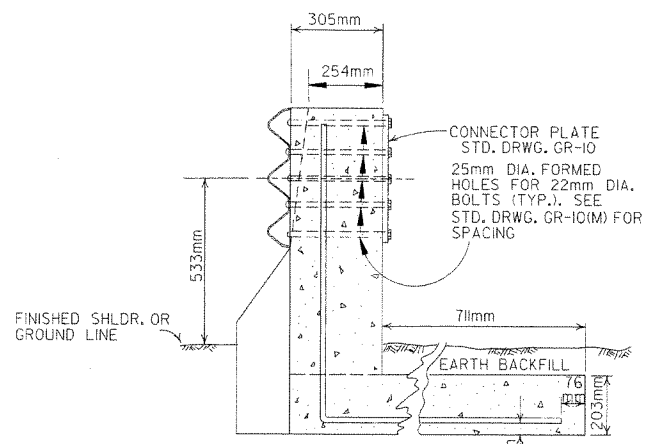


PLAN

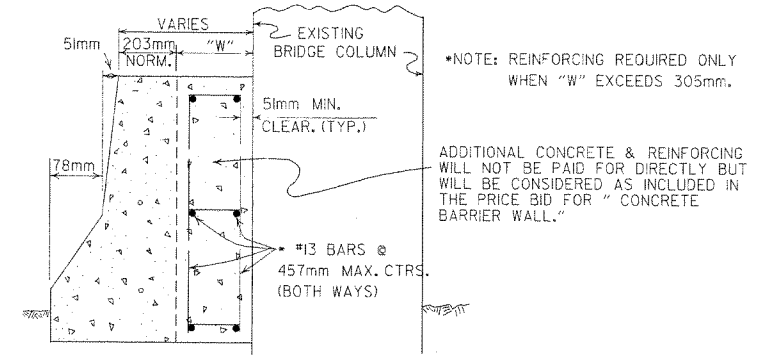


SECTION A-A

CONCRETE SLOPE PAVING TO BE REMOVED & REPLACED WHERE REQ'D. CONCRETE SLOPE PAVING WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED SUBSIDIARY TO THE ITEM OF CONCRETE BARRIER WALL.



SECTION THRU CONNECTION

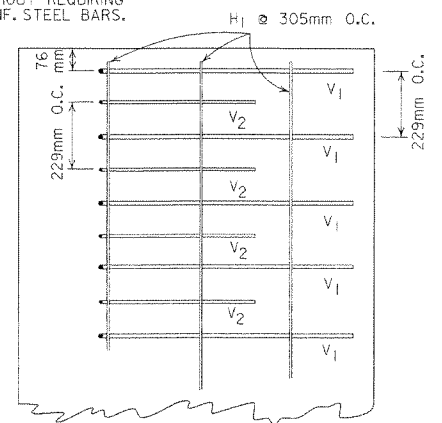


SECTION A-A

*NOTE: REINFORCING REQUIRED ONLY WHEN "W" EXCEEDS 305mm.

ADDITIONAL CONCRETE & REINFORCING WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED AS INCLUDED IN THE PRICE BID FOR "CONCRETE BARRIER WALL."

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.

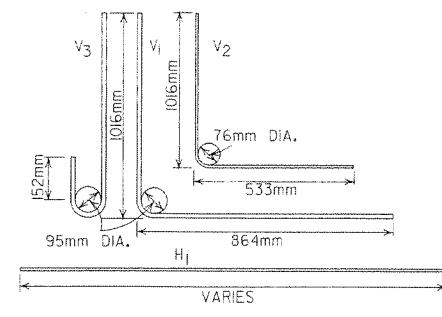


PLAN OF REINFORCING STEEL IN FOOTING

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

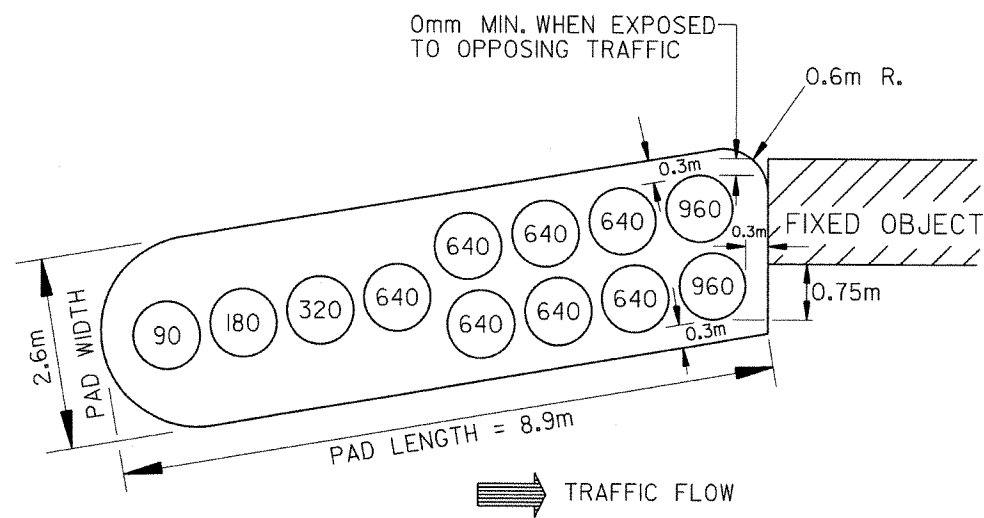
DATE	REVISION	DATE FILMED
7-14-10	RAISED HEIGHT OF W-BEAM 26mm	
8-22-02	REVISED SECTION A-A OF DETAILS OF CONCRETE BARRIER WALL	
11-16-01	REVISED STD DRWG NO. UNDER PLAN OF CONCRETE BARRIER WALL	
6-29-00	MOVED DIMENSION LINE	
5-18-00	ADDED NOTE	
3-30-00	REVISED TO INCLUDE THRIE BEAM	
7-02-98	CORRECTED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

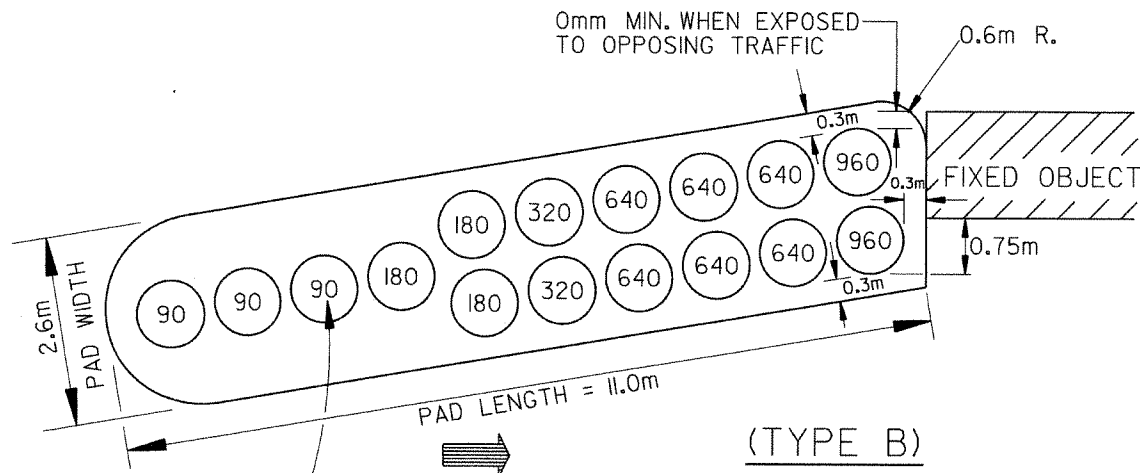
STANDARD DRAWING GR-11(M)





(TYPE C)

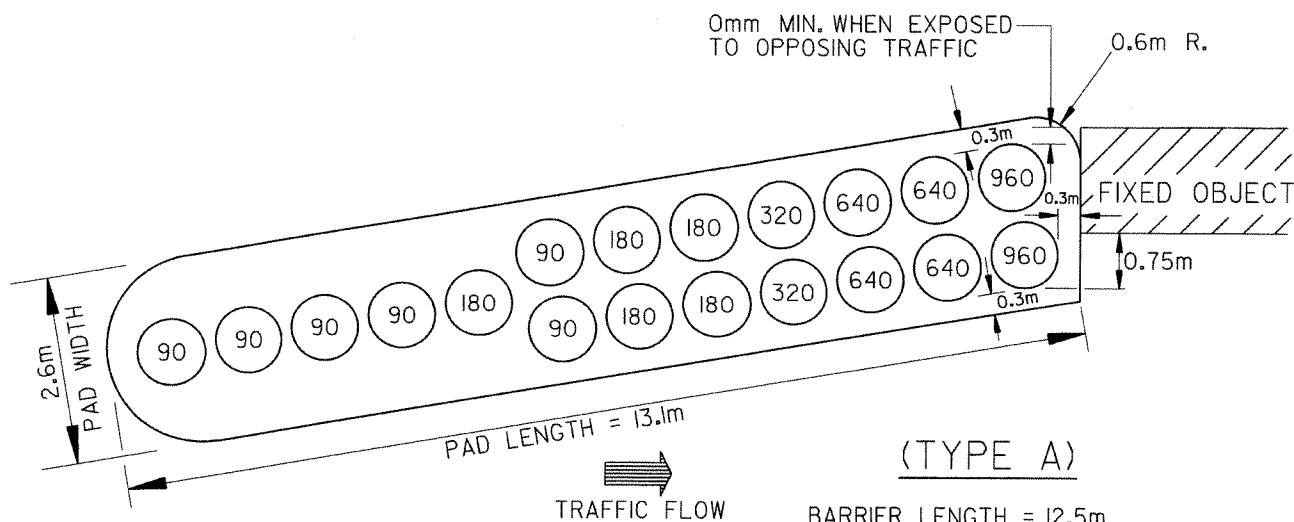
BARRIER LENGTH = 8.3m
 DESIGN IMPACT SPEED = 80 kmph = 21.99 mps



(TYPE B)

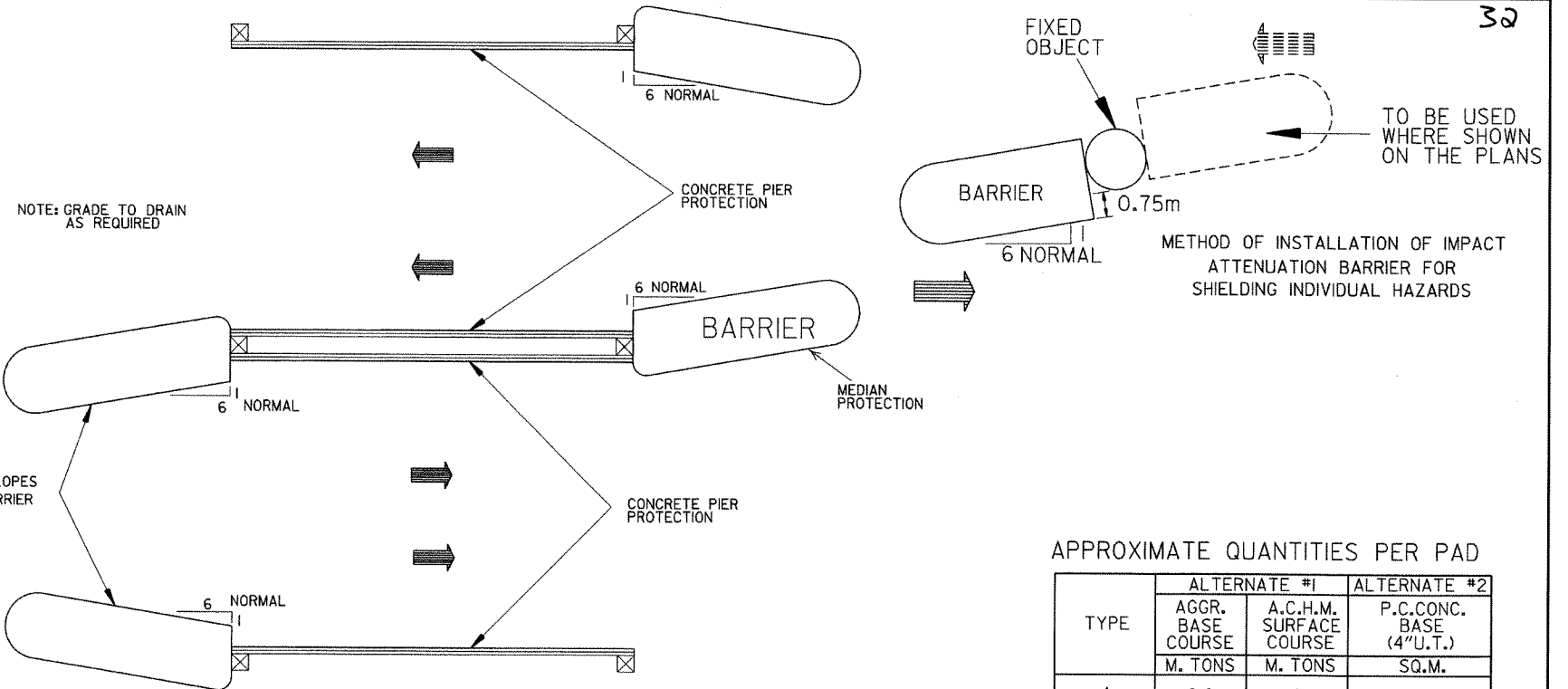
BARRIER LENGTH = 10.4m
 DESIGN IMPACT SPEED = 96 kmph = 26.4 mps

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

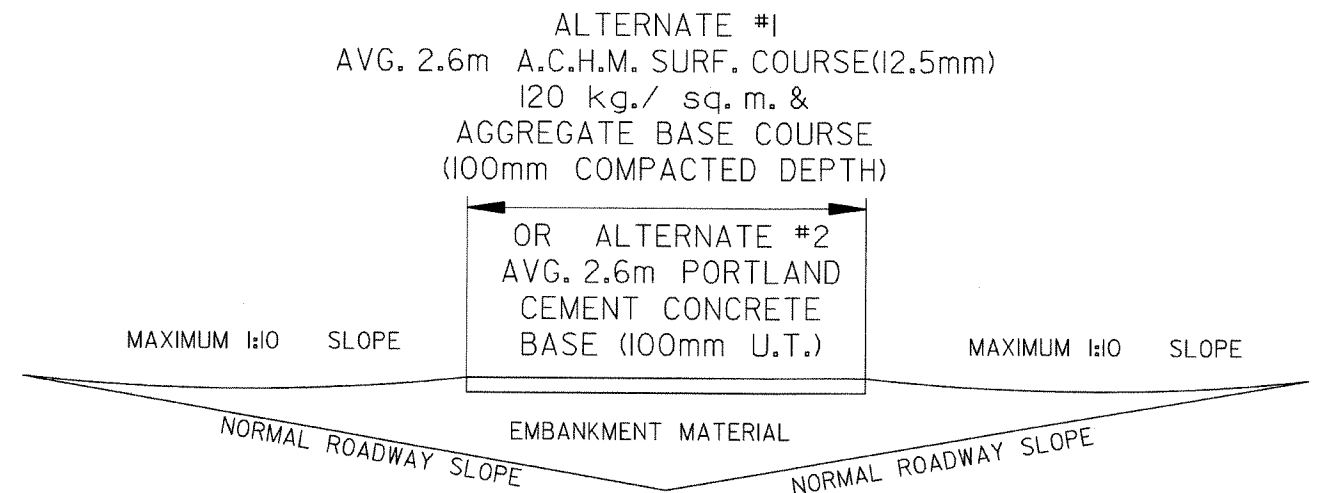
GENERAL NOTES

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.



DETAIL OF BARRIER PAD

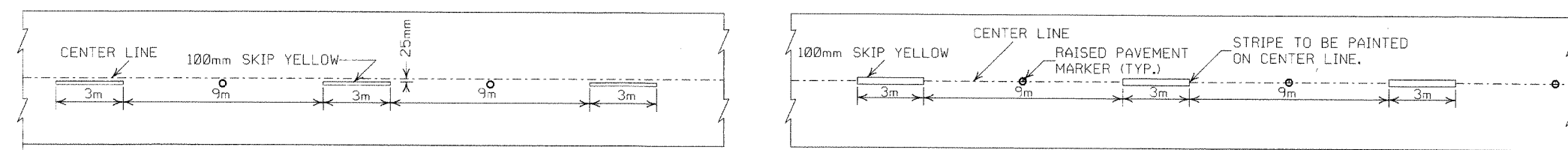
NOTE: BARRIER PAD TO BE SKEWED TOWARD ONCOMING TRAFFIC A MAXIMUM OF 1:6 WITH 1:6 BEING NORMAL

DATE	REVISION	DATE FILMED	
10-15-09	ADDED REFERENCE TO MASH		ARKANSAS STATE HIGHWAY COMMISSION IMPACT ATTENUATION BARRIER STANDARD DRAWING IB-1(K)
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		
7-29-87	REDRAWN		

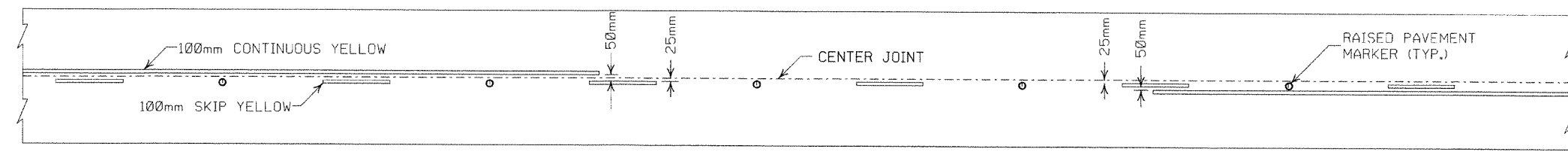


NOTES:

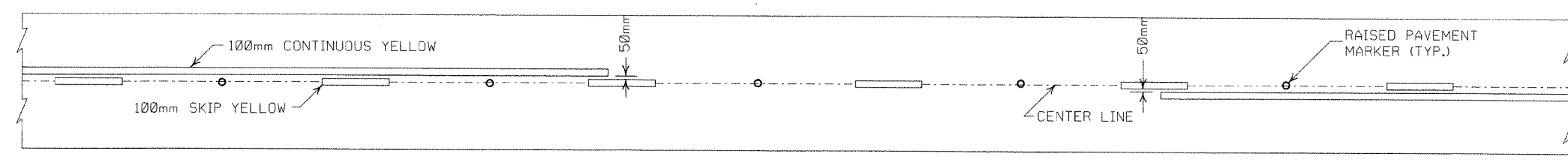
1. ALL LINES SHALL HAVE A WIDTH OF 100mm.
2. THE THICKNESS AND RATE OF PAINT APPLICATION SHALL BE AS SPECIFIED IN SECTION 718 OF THE STANDARD SPECIFICATIONS.
3. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
4. RAISED PAVEMENT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



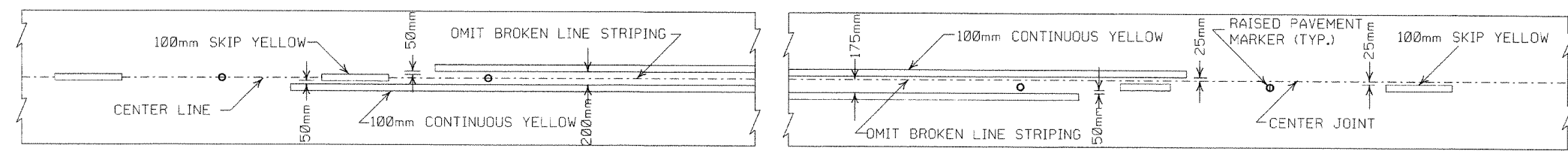
CONCRETE PAVEMENT ASPHALT PAVEMENT
BROKEN LINE STRIPING



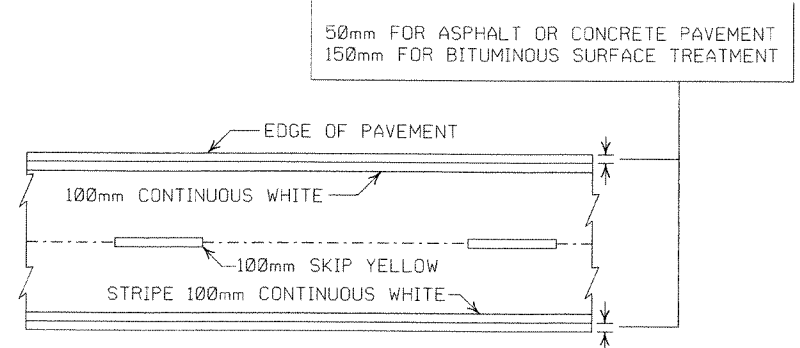
SOLID LINE STRIPING ON CONCRETE PAVEMENT



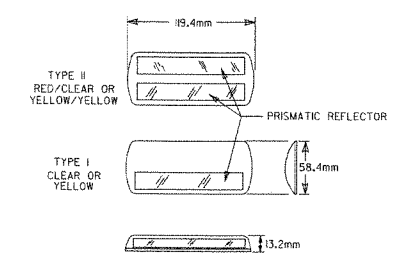
SOLID LINE STRIPING ON ASPHALT PAVEMENT



ASPHALT PAVEMENT CONCRETE PAVEMENT
STRIPING AT ADJACENT NO PASSING LANES



PAVEMENT EDGE LINE MARKING



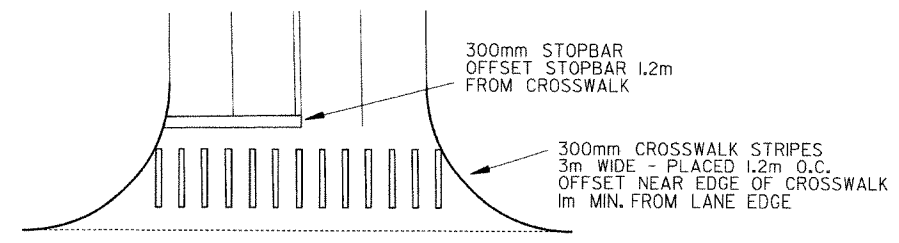
NOTE:
THE RED LENS OF THE TYPE II R.P.M. SHALL FACE THE INCORRECT TRAFFIC MOVEMENT.

DETAIL OF STANDARD RAISED PAVEMENT MARKERS

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

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

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



CROSSWALK AND STOPBAR DETAILS

DATE	REVISION	DATE FILMED
8-17-10	REVISED NOTE & REMOVED FLOWABLE PAVEMENT MARKERS	
8-18-04	REVISED NOTE 2 & GENERAL NOTES	
5-22-02	ADDED CROSSWALK & STOPBAR DETAILS	
7-02-98	ADDED DETAIL OF STD. RAISED PAVT. MARKERS	
4-26-95	REV. NOTES 3&4; ADDED R.P.M.	
7-20-95	CONVERTED TO METRIC	

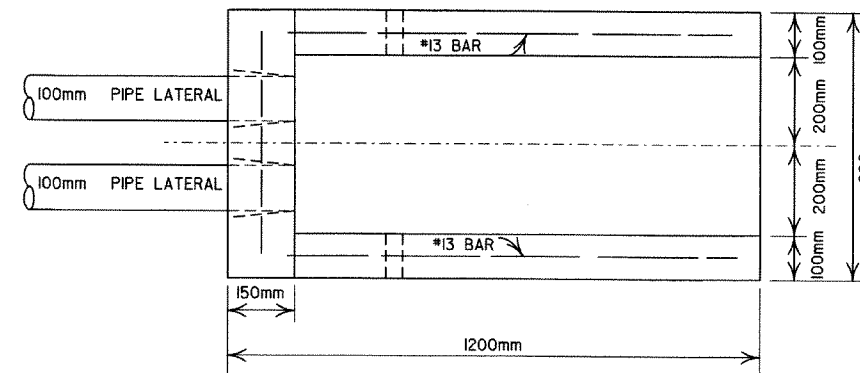
ARKANSAS STATE HIGHWAY COMMISSION

PAVEMENT MARKING DETAILS

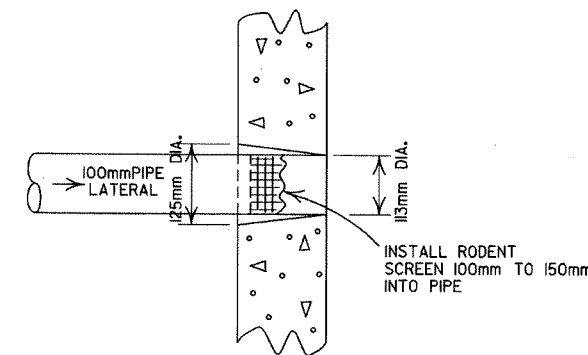
STANDARD DRAWING PM-1 (M)



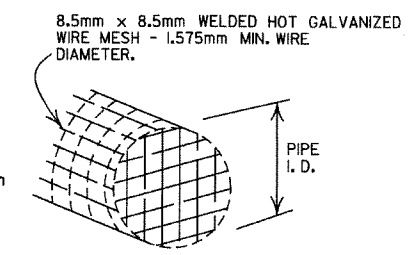
- NOTE:
1. GRANULAR BACKFILL TO BE SUBSIDIARY TO PIPE UNDERDRAIN.
 2. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THOROUGHLY COMPACTED EARTH AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.
 3. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC, LAP FABRIC 300mm OR THE WIDTH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



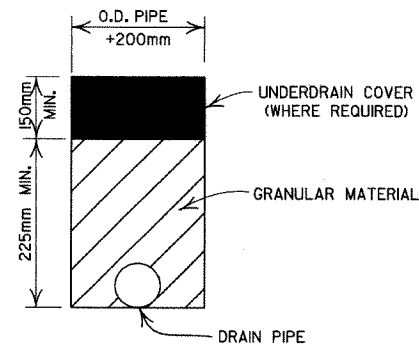
PLAN VIEW



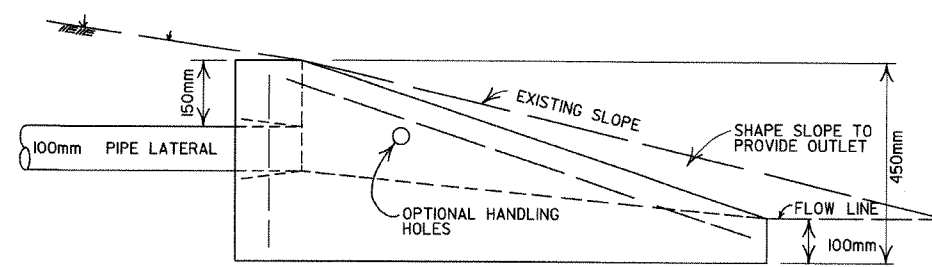
DETAIL OF HOLE FOR 100mm PIPE



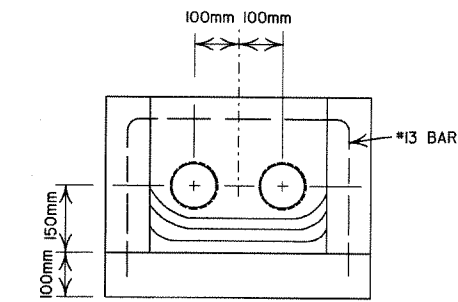
DETAIL OF RODENT SCREEN



DETAILS OF PIPE UNDERDRAIN

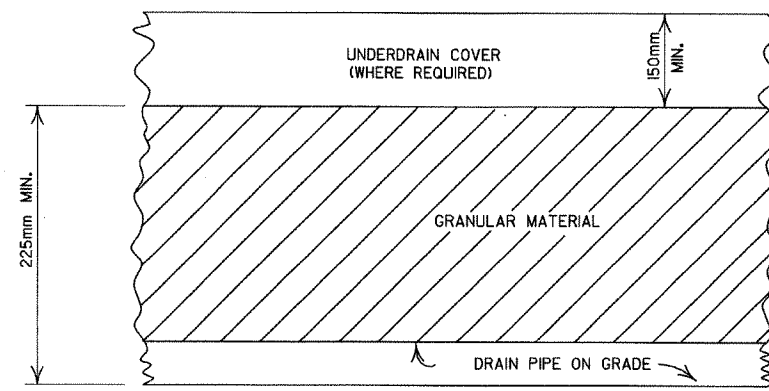


SIDE VIEW



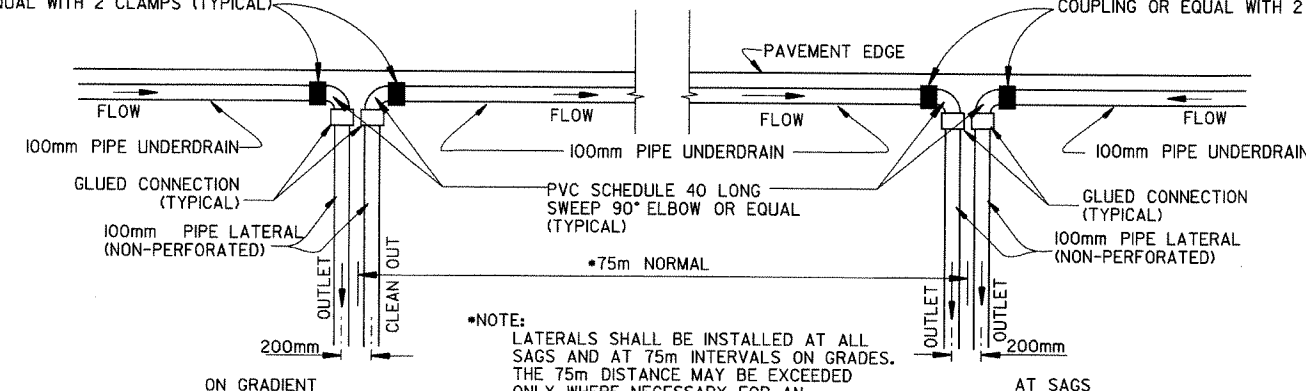
FRONT VIEW

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)

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.

DATE	REVISION	DATE FILED
4-10-03	REVISED NOTE 3	
1-2-00	REVISED DETAIL OF UNDERDRAIN LATERALS	
9-18-98	REVISED NOTE	
7-02-98	CORRECTED SPELLINGS	
4-3-97	REVISED STEEL PIPES TO SOFT METRIC	
10-28-96	REVISED MINIMUM DEPTH & GEOTEXTILE FABRIC	
4-26-96	ADDED LATERAL NOTE; 137mm TO 125mm	
5-22-95	REVISED LATERALS	
7-20-95	CONVERTED TO METRIC	

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF PIPE UNDERDRAINS

STANDARD DRAWING PU-1 (M)



SUPERELEVATION TABLE FOR ONE - WAY TRAFFIC

R (meters)	V _d = 30 km/h		V _d = 40 km/h		V _d = 50 km/h		V _d = 60 km/h		V _d = 70 km/h		V _d = 80 km/h		V _d = 90 km/h		V _d = 100 km/h		V _d = 110 km/h		V _d = 120 km/h	
	L _s (meters)		L _s (meters)		L _s (meters)		L _s (meters)		L _s (meters)		L _s (meters)		L _s (meters)		L _s (meters)		L _s (meters)		L _s (meters)	
	e (%)	MINIMUM DESIRABLE	e (%)	MINIMUM DESIRABLE	e (%)	MINIMUM DESIRABLE	e (%)	MINIMUM DESIRABLE	e (%)	MINIMUM DESIRABLE	e (%)	MINIMUM DESIRABLE	e (%)	MINIMUM DESIRABLE	e (%)	MINIMUM DESIRABLE	e (%)	MINIMUM DESIRABLE	e (%)	MINIMUM DESIRABLE
7000																				
5000																				
3000																				
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500																				
400																				
300																				
250																				
200																				
175																				
150																				
140																				
130	4.5																			
120	4.8																			
110	5.1																			
100	5.5	36																		
90	5.9	38																		
80	6.4	41																		
70	6.9	43																		
60	7.5	46																		
50	8.2	49																		
40	9.1	54																		
30	9.9	57																		

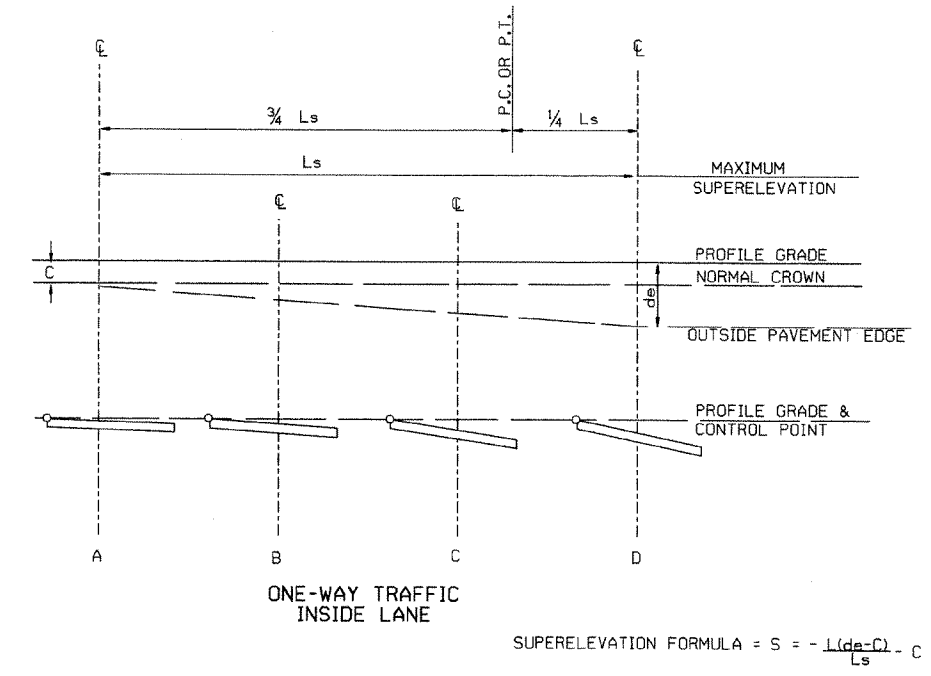
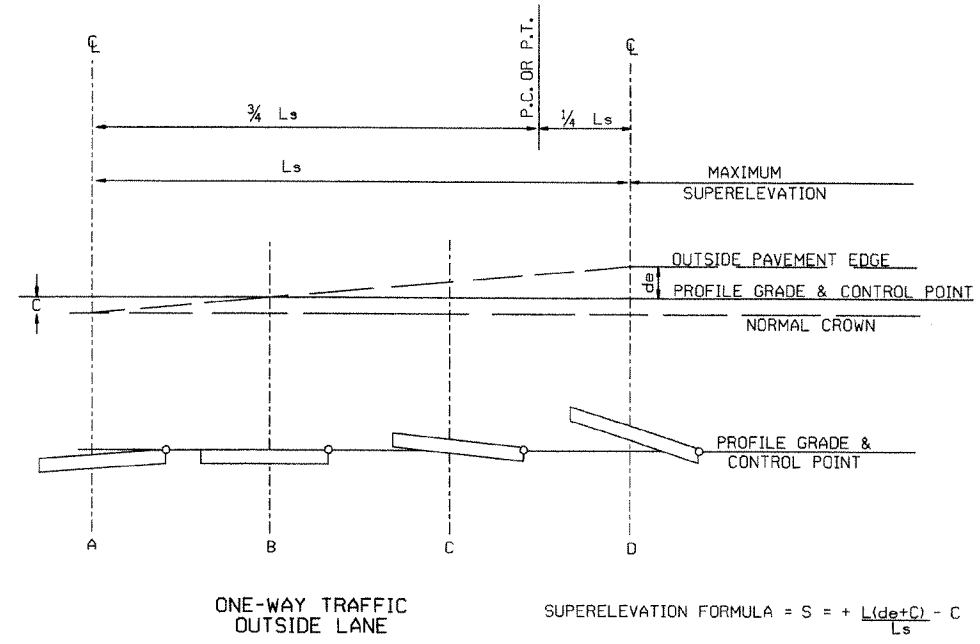
GENERAL NOTES

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

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

ABBREVIATIONS

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



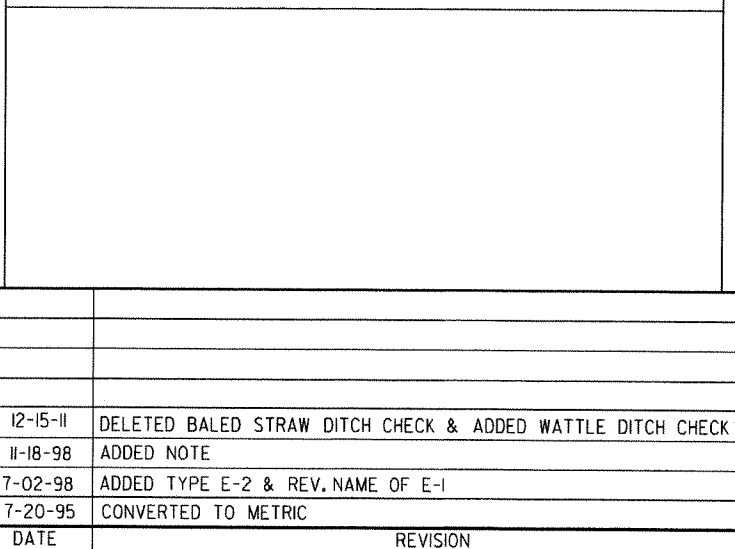
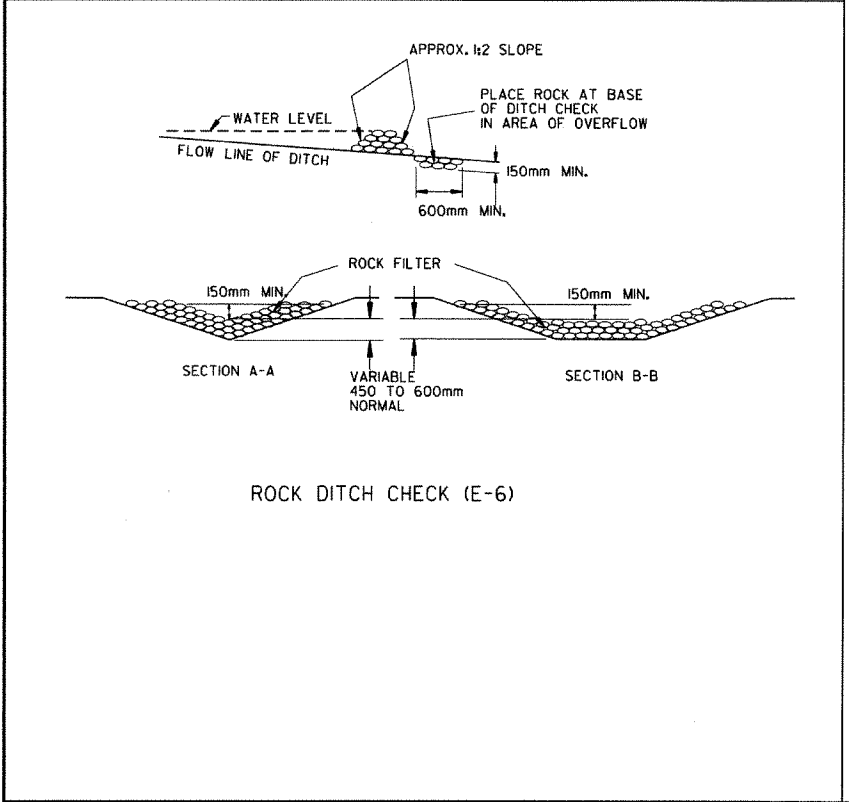
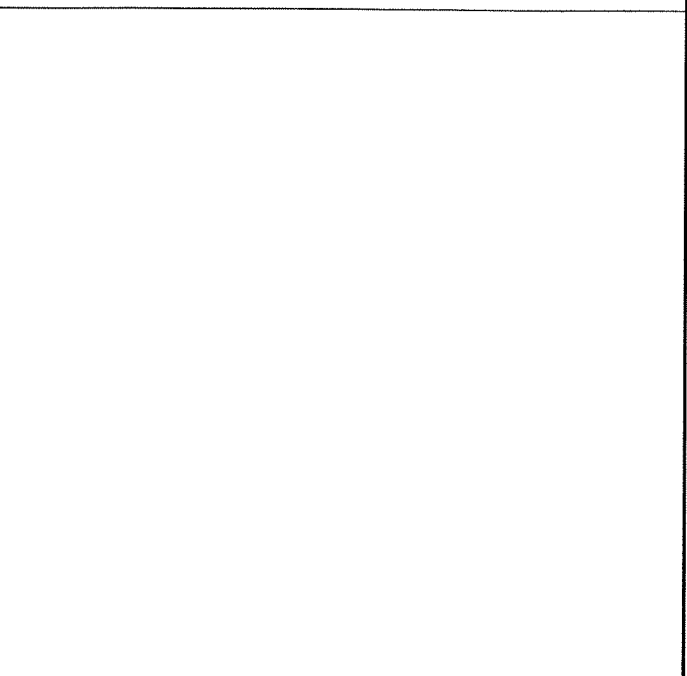
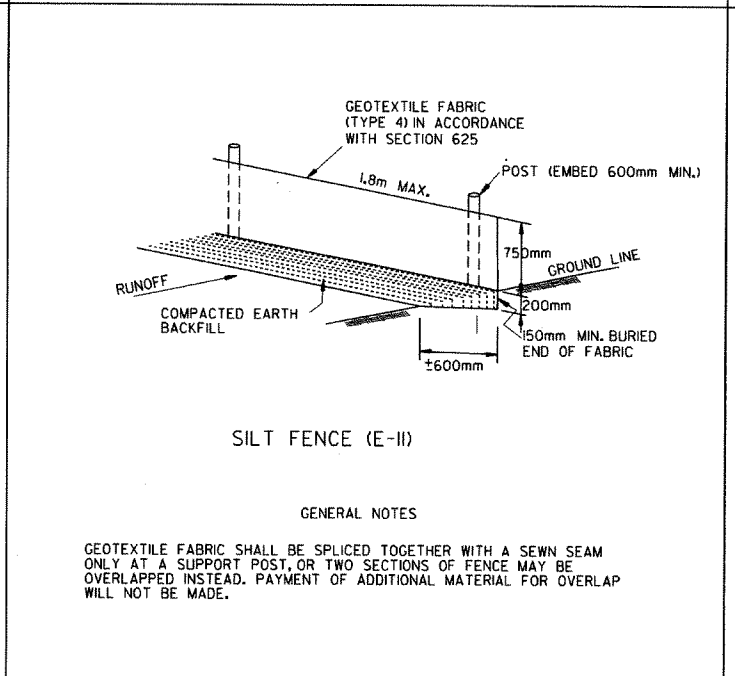
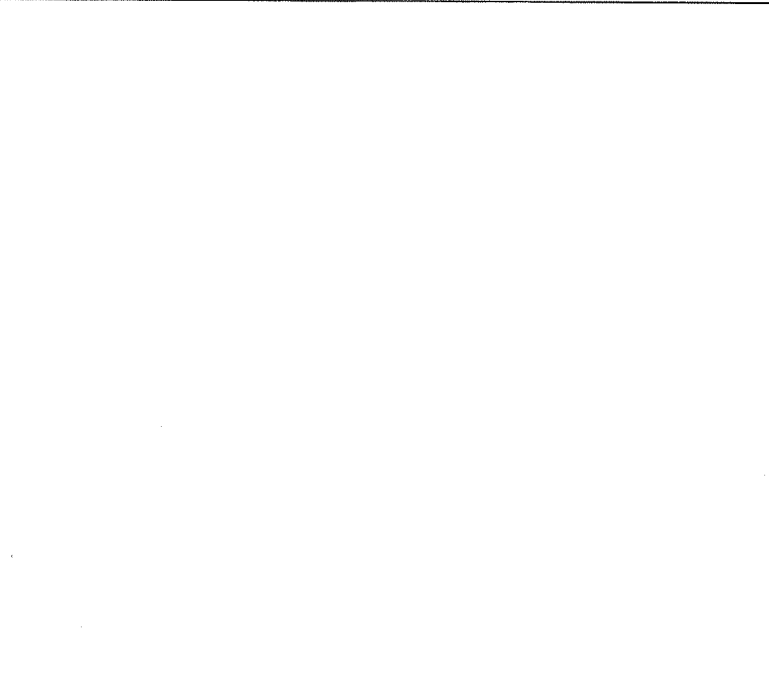
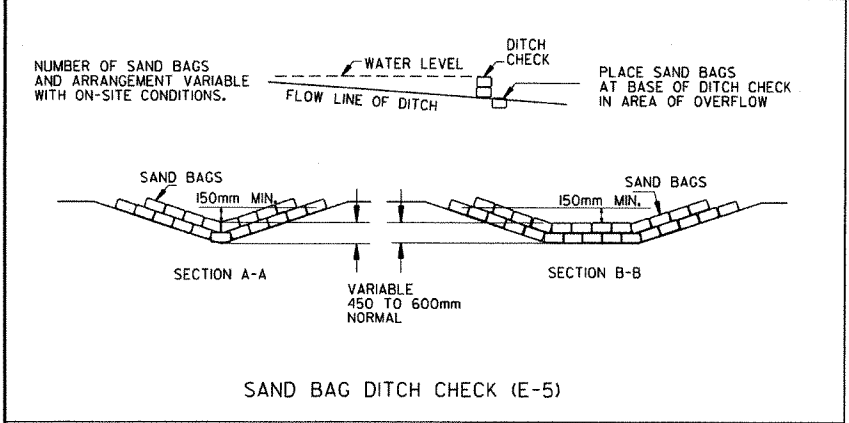
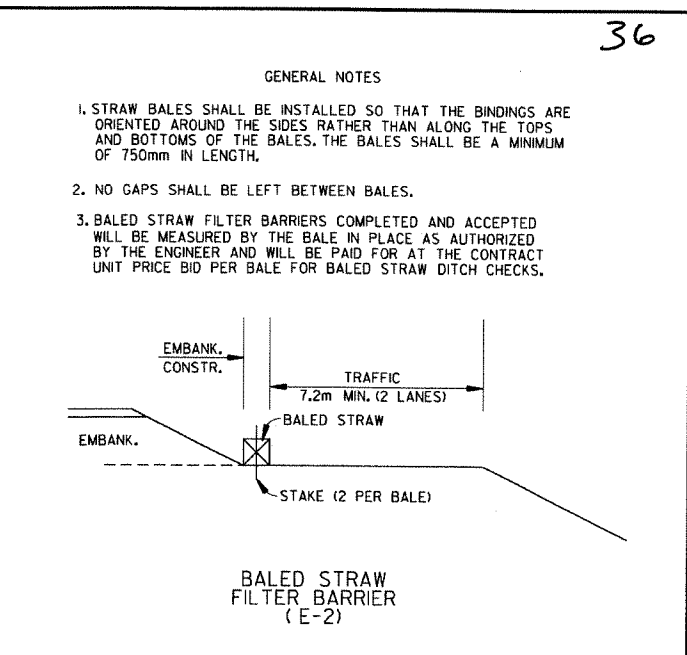
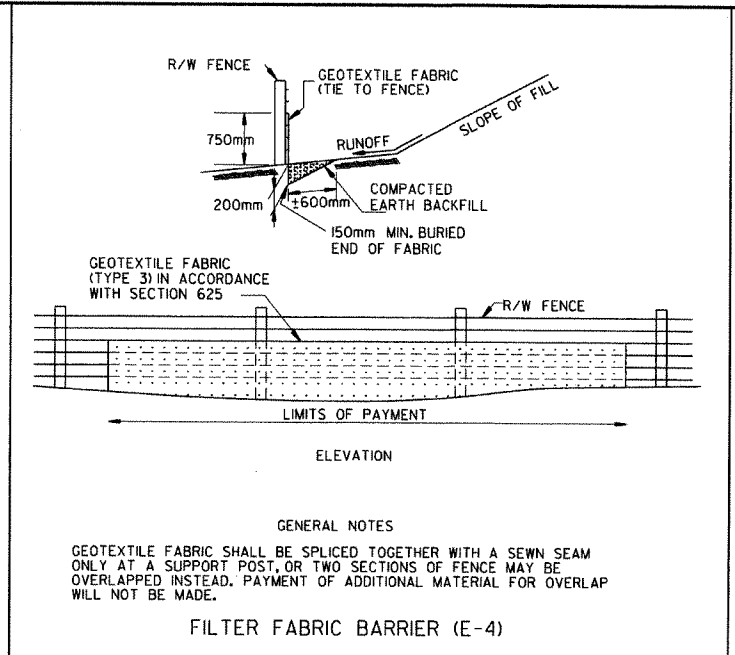
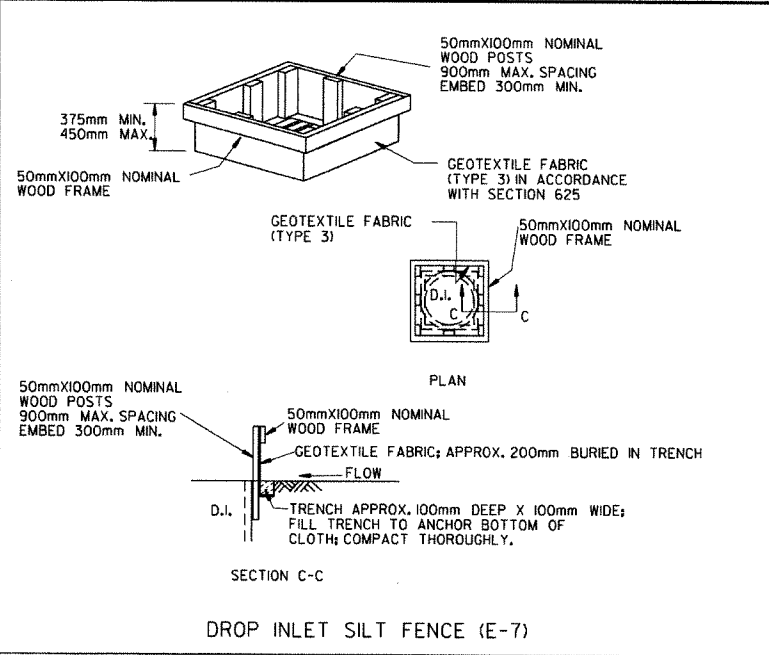
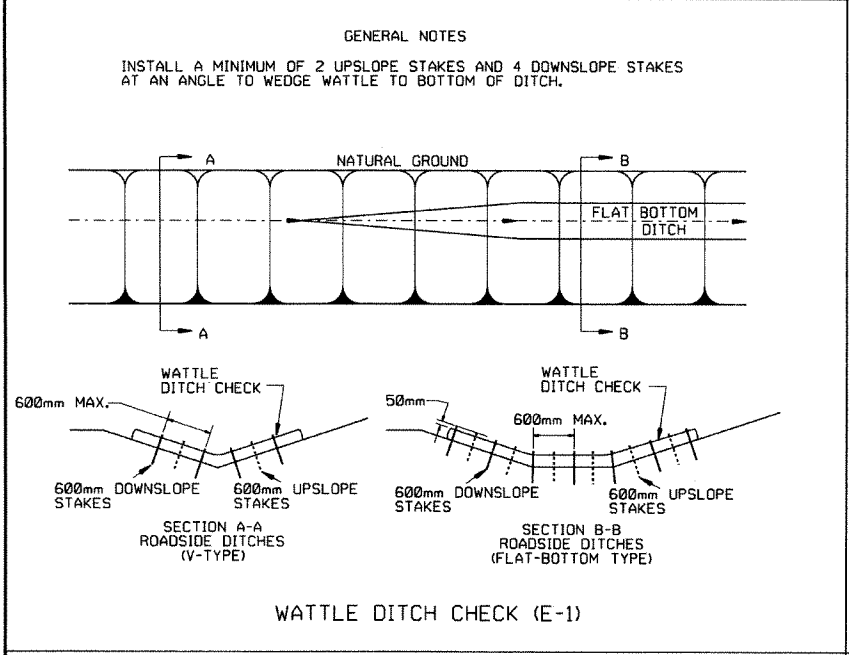
ARKANSAS STATE HIGHWAY COMMISSION

TABLES AND METHOD OF SUPERELEVATION FOR ONE-WAY TRAFFIC

STANDARD DRAWING SE-1(M)

4-26-56	CORRECTED L TO L _s	4-26-96
7-20-95	CONVERTED TO METRIC	
DATE	REVISION	DATE FILED





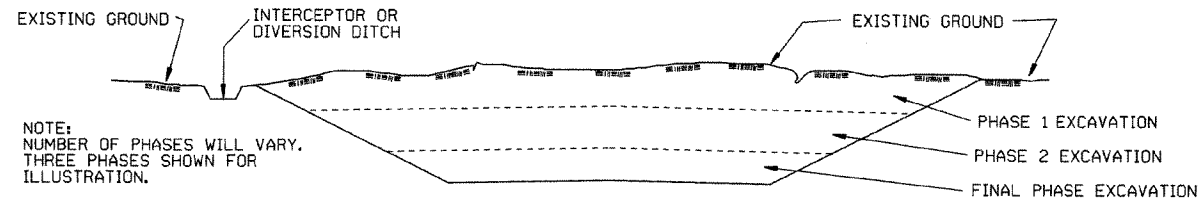
ARKANSAS STATE HIGHWAY COMMISSION		
TEMPORARY EROSION CONTROL DEVICES		
12-15-11	DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK	
11-18-98	ADDED NOTE	
7-02-98	ADDED TYPE E-2 & REV. NAME OF E-1	
7-20-95	CONVERTED TO METRIC	
DATE	REVISION	DATE FILMED

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.

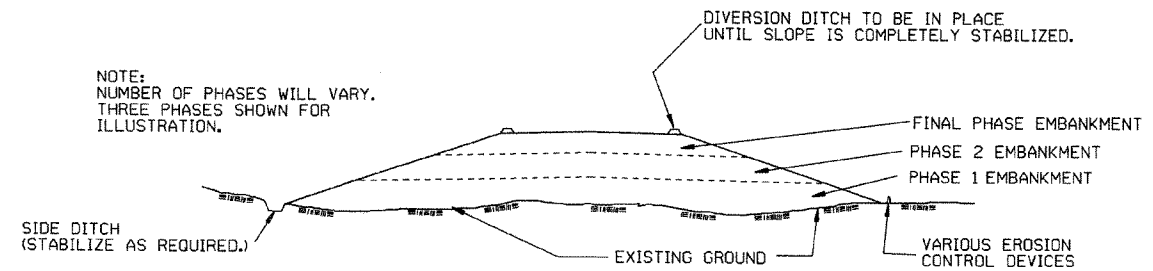
GENERAL NOTE

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	7-20-95
DATE	REVISION	DATE FILED