DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	1	144
				(2)	HWY. 65B-NORTH (S)			

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
CONSTRUCTION PLANS FOR STATE HIGHWAY

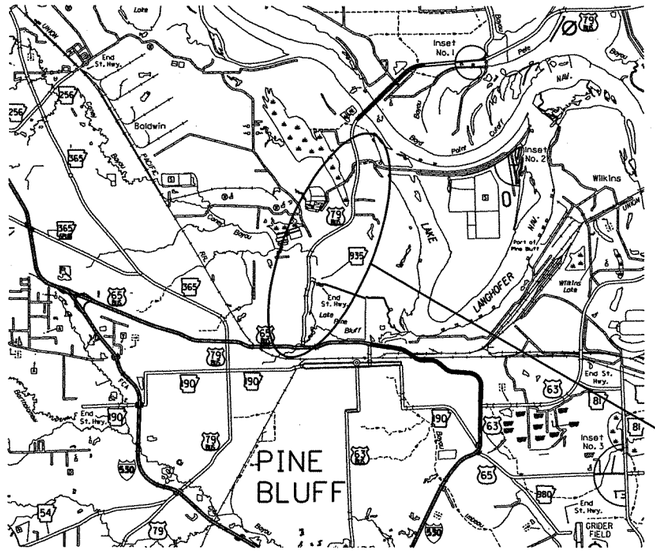
HWY. 65B-NORTH (S)

ROUTE 79B SECTION 9B

JEFFERSON COUNTY

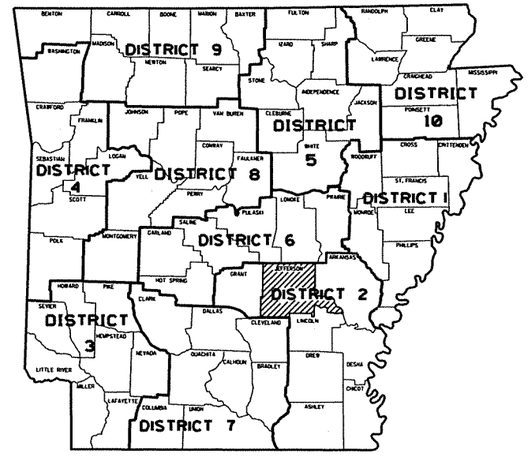
F.A.P. HPP2-EBE-0237(4)

JOB 020070



PROJECT LOCATION

VICINITY MAP



ARKANSAS HIGHWAY DIST. 2

• DESIGN TRAFFIC DATA •

DESIGN YEAR		2032
2012	ADT	12,000
2032	ADT	15,000
2032	DHV	1650
DIRECTIONAL DISTRIBUTION		60%
TRUCKS		7%
DESIGN SPEED		40 MPH

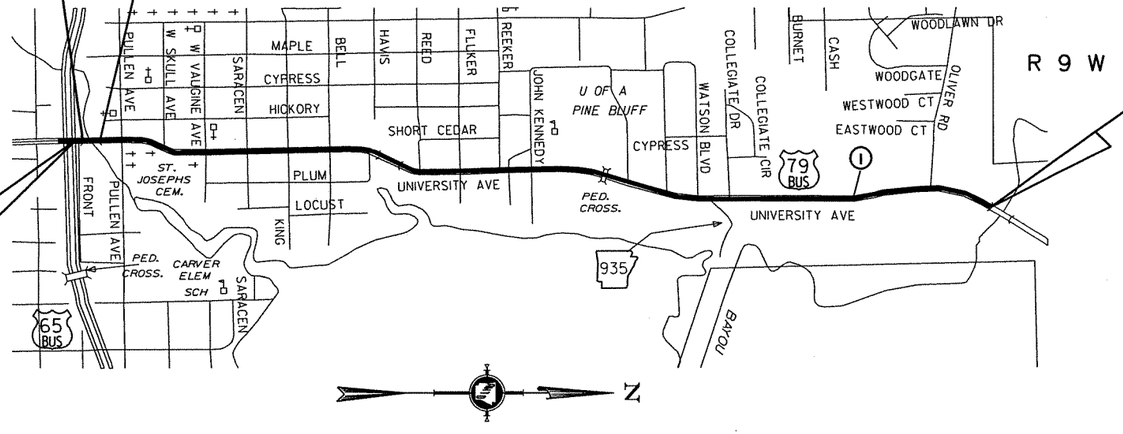
STA. 210+53.14
BEGIN EXCEPTION

STA. 211+14.66
END EXCEPTION

STRUCTURES OVER 20'-0" SPAN

(1) STA. 282+78 - CONSTRUCT
TRP. 8' X 4' X 96' R.C. BOX CULVERT
(10° RT. FWD. SKEW)
WITH 3:1 WINGS
(SPAN 27'-3 1/8")
050=470 CFS. D.A.=353 AC.

NOT TO SCALE



STA. 208+97 BEGIN
JOB 020070
(LOG MILE 4.460)

STA. 295+30 END
JOB 020070

APPROVED

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 3917
FRANK VOZEL

9/10/12

DEPUTY DIRECTOR AND CHIEF ENGINEER

PROJECT COORDINATES:

	BEGIN	MID-POINT	END
LAT.	N 34°13'49"	N 34°14'15"	N 34°15'10"
LONG.	W 92°01'11"	W 92°01'10"	W 92°01'01"

LENGTH COMPUTED ALONG HWY. 79B CENTERLINE

GROSS LENGTH	OF PROJECT	8633.00	FEET OR	1.635	MILES
NET LENGTH	OF ROADWAY	8544.22	FEET OR	1.618	MILES
NET LENGTH	OF BRIDGES	27.26	FEET OR	0.005	MILES
NET LENGTH	OF PROJECT	8571.48	FEET OR	1.623	MILES

P.E. JOB 020070
NON-PART.

020070 JOB 8/30/2012 R020070.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10/11/2012				6	ARK.			
				JOB NO.		020070	2	144

(2) INDEX OF SHEETS AND GOVERNING SPECIFICATIONS

INDEX OF SHEETS

SHEET NO.		TITLE	DRWG. NO.	DATE
1		TITLE SHEET		
2		INDEX OF SHEETS AND GOVERNING SPECIFICATIONS		
3		GENERAL NOTES		
4	- 5	TYPICAL SECTIONS OF IMPROVEMENT		
6		SPECIAL DETAILS		
7		DETAILS OF TRANSITIONAL APPROACH RAILING		
8	- 15	TEMPORARY EROSION CONTROL DETAILS		
16	- 23	MAINTENANCE OF TRAFFIC DETAILS		
24	- 27	PERMANENT PAVEMENT MARKING DETAILS		
28	- 36	QUANTITIES		
37		SUMMARY OF QUANTITIES AND REVISIONS		
38	- 42	SURVEY CONTROL DETAILS		
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59		SYSTEM MAP		
60		SUMMARY OF SIGNAL QUANTITIES & NOTES		
61	- 72	SIGNALIZATION PLAN SHEET		
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78		CURBING DETAILS	CG-1	11-29-07
79		DETAILS OF DRIVEWAYS & ISLANDS	DR-1	11-29-07
80		FLARED END SECTION	FES-1	10-18-96
81		FLARED END SECTION	FES-2	10-18-96
82		DETAILS OF DROP INLETS & JUNCTION BOXES	FPC-9	11-16-01
83		DETAILS OF DROP INLETS (TYPE C)	FPC-9E	8-22-02
84		DETAILS OF DROP INLETS (TYPE MO)	FPC-9M	8-22-02
85		DETAILS OF DROP INLET & JUNCTION BOX (TYPE ST)	FPC-9S	7-26-12
86		MAILBOX DETAILS	MB-1	11-18-04
87		PRECAST CONCRETE BOX CULVERTS	PBC-1	12-15-11
88		CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING	PCC-1	12-15-11
89		METAL PIPE CULVERT FILL HEIGHTS & BEDDING	PCM-1	12-15-11
90		PAVEMENT MARKING DETAILS	PM-1	11-17-10
91		DETAILS OF PIPE UNDERDRAIN	PU-1	4-10-03
92		REINFORCED CONCRETE BOX CULVERT DETAILS	RCB-1	7-26-12
93		EXCAVATION PAY LIMITS, BACKFILL, & SOLID SODDING FOR BOX CULVERTS	RCB-2	11-20-03
94		TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC	SE-2	10-18-96
95		DETAILS OF SPECIAL ITEMS	SI-1	7-26-12
96		STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-1	12-15-11
97		STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-2	3-11-10
98		STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-3	10-15-09
99		STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER	TC-4	10-15-09
100		STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER	TC-5	10-15-09
101		TEMPORARY EROSION CONTROL DEVICES	TEC-1	12-15-11
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103		TEMPORARY EROSION CONTROL DEVICES	TEC-3	11-03-94
104		WHEELCHAIR RAMPS NEW CONSTRUCTION AND ALTERATIONS	WR-1	11-10-05
105		DETAILS OF STANDARD WINGS FOR REINFORCED CONCRETE BOX CULVERTS	W-X153-1	5-10-66
106		DETAILS OF STANDARD BARREL SECTIONS FOR REINFORCED CONCRETE BOX CULVERTS	R-315X-0	8-28-63
107	- 144	CROSS SECTIONS		

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

GOVERNING SPECIFICATIONS

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

NUMBER	TITLE
ERRATA	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273	REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273	SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273	SUPPLEMENT - WAGE RATE DETERMINATION
100-2	MANUAL FOR ASSESSING SAFETY HARDWARE (MASH)
102-1	BIDDING REQUIREMENTS AND CONDITIONS
103-1	DETERMINATION OF DBE PARTICIPATION
105-1	CONSTRUCTION CONTROL MARKINGS
105-2	EQUIPMENT AND MATERIAL STORAGE ON BRIDGE STRUCTURES
105-3	CONTROL OF WORK
107-1	WORKER VISIBILITY
108-1	LIQUIDATED DAMAGES
110-1	PROTECTION OF WATER QUALITY AND WETLANDS
303-1	AGGREGATE BASE COURSE
404-1	PRODUCTION VERIFICATION OF ASPHALT CONCRETE HOT MIX
404-2	DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES
409-1	MINERAL AGGREGATES
410-3	DENSITY TESTING FOR ACHM LEVELING COURSES AND BOND BREAKERS
411-1	ASPHALT CONCRETE COLD PLANT MIX
600-1	WATER FOR VEGETATION
603-1	MAINTENANCE OF TRAFFIC
604-1	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
604-2	INSPECTION OF TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
606-1	PIPE CULVERTS FOR SIDE DRAINS
606-2	PIPE CULVERTS
711-1	CONCRETE PULL BOX
714-1	DESIGN AND MATERIAL REQUIREMENTS FOR TRAFFIC SIGNAL MAST ARMS AND POLES
715-1	DESIGN AND MATERIAL REQUIREMENTS FOR TRAFFIC SIGNAL PEDESTAL POLES
718-2	REFLECTORIZED PAINT PAVEMENT MARKINGS
719-2	THERMOPLASTIC PAVEMENT MARKING MATERIAL
804-1	INSTALLATION OF DOWEL BARS AND TIE BARS

JOB 020070	ASPHALT CONCRETE HOT MIX SURFACE COURSE SURFACE TOLERANCE AND INCENTIVE PAYMENTS
JOB 020070	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 020070	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 020070	CABINET DRAWER ASSEMBLY
JOB 020070	COLD MILLING JOINTS IN EXISTING ASPHALT PAVEMENT
JOB 020070	CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS
JOB 020070	CULVERT CLEAN OUT
JOB 020070	EDGE CARD VIDEO PROCESSOR
JOB 020070	ELECTRICAL CONDUCTORS FOR LUMINAIRES
JOB 020070	ELECTRICAL CONDUCTORS-IN-CONDUIT
JOB 020070	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 020070	HIGH PERFORMANCE PAVEMENT MARKING
JOB 020070	INTERNET BIDDING
JOB 020070	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
JOB 020070	LED TRAFFIC SIGNAL HEAD
JOB 020070	LUMINAIRE ASSEMBLY (CUTOFF TYPE)
JOB 020070	MAINTENANCE OF TRAFFIC
JOB 020070	NESTING SITES OF MIGRATORY BIRDS
JOB 020070	PARTNERING REQUIREMENTS
JOB 020070	REMOVAL AND DISPOSAL OF GUARDRAIL
JOB 020070	REMOVAL AND SALVAGE OF PEDESTRIAN BRIDGE
JOB 020070	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT
JOB 020070	SEQUENCE OF CONSTRUCTION
JOB 020070	SERVICE POINT ASSEMBLY
JOB 020070	SHORING
JOB 020070	SOIL STABILIZATION
JOB 020070	STORM WATER POLLUTION PREVENTION PLAN
JOB 020070	STREET NAME SIGN (MAST ARM MOUNTED)
JOB 020070	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 020070	SYSTEM LOCAL CONTROLLER
JOB 020070	TRANSITIONAL APPROACH RAILING
JOB 020070	UTILITY ADJUSTMENTS
JOB 020070	VALUE ENGINEERING
JOB 020070	VIDEO DETECTOR (COLOR)
JOB 020070	WARM MIX ASPHALT
JOB 020070	WELLHEAD PROTECTION

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-11-12

8/30/2012

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INDEX OF SHEETS AND GOVERNING SPECIFICATIONS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	3	144

(2) GENERAL NOTES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

GENERAL NOTES

1. GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.
2. ALL PIPE LINES, POWER, TELEPHONE AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
3. ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY OF UTILITY SERVICE ORGANIZATIONS SHALL BE MOVED BY THE OWNERS UNLESS OTHERWISE PROVIDED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING U.S. MAILBOXES WITHIN THE PROJECT LIMITS IN SUCH A MANNER THAT THE PUBLIC MAY RECEIVE CONTINUED MAIL SERVICE. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS BID ITEMS.
5. ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
6. ALL TREES THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE SPARED IF AND WHERE DIRECTED BY THE ENGINEER. CARE AND DISCRETION SHALL BE USED TO INSURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HARMED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS.
7. ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO 210-UNCLASSIFIED EXCAVATION.
8. THIS PROJECT IS COVERED UNDER A SECTION 404 NATIONWIDE 14 PERMIT. REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS, EDITION OF 2003, FOR PERMIT REQUIREMENTS.
9. UNLESS OTHERWISE INDICATED, ALL DIMENSIONS SHOWN ARE TO THE FACE OF CURB.
10. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

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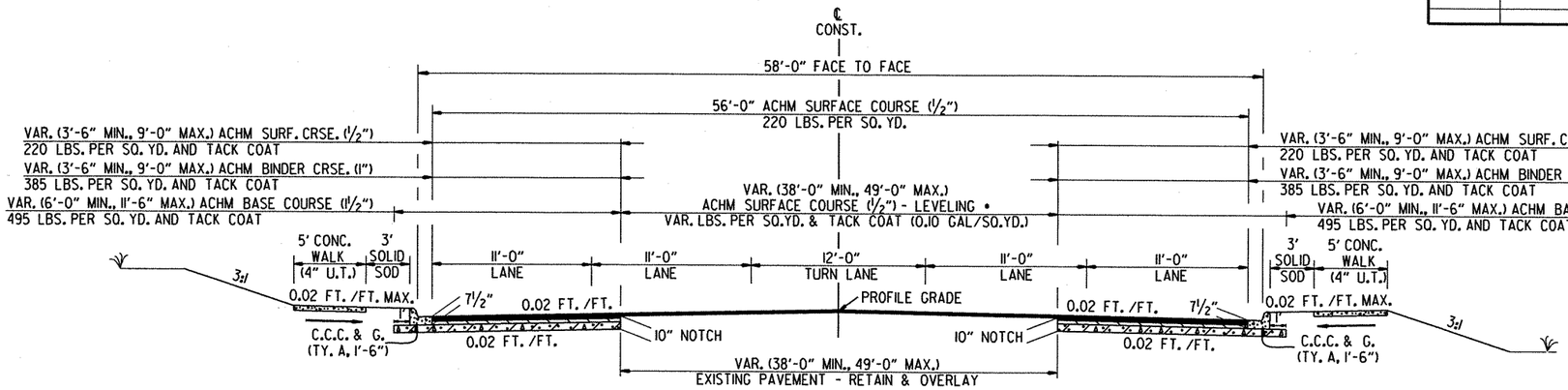
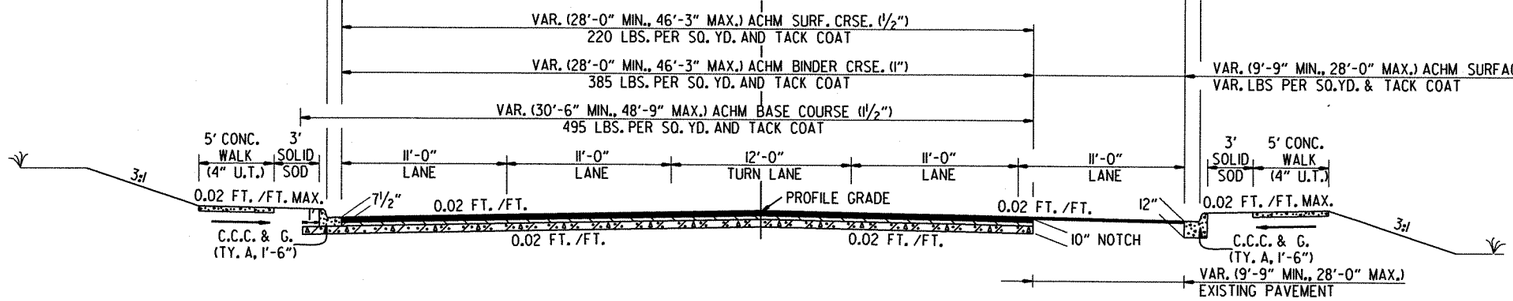
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	4	144

(2) TYPICAL SECTIONS OF IMPROVEMENT

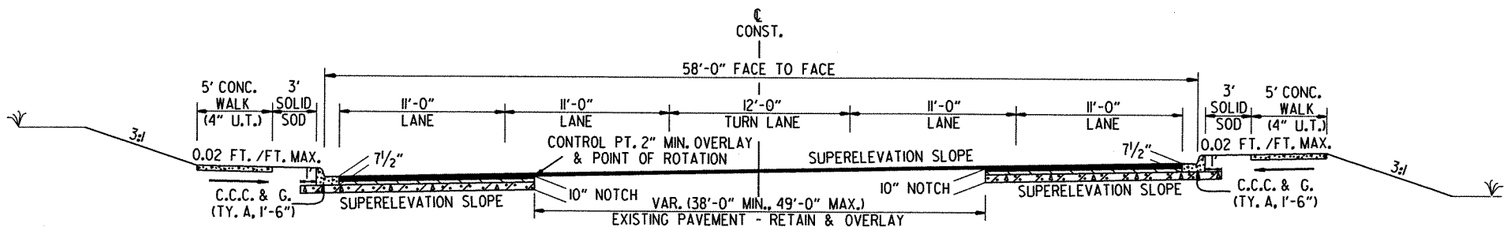


OVERLAY TANGENT SECTION

• LEVELING TO BE USED IF & WHERE DIRECTED BY THE ENGINEER



FULL DEPTH TANGENT SECTION



SUPERELEVATION SECTION

(PAVEMENT SECTION IS SAME AS SHOWN ABOVE)

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

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

ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING.

PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE CURB AND GUTTER, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHOD(S) USED SHALL BE APPROVED BY THE ENGINEER. PAVEMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

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

ANY WIDENING AREAS LESS THAN 8' IN WIDTH WILL BE DONE WITH P.C. CONCRETE BASE (10") INSTEAD OF ACHM SURFACE, BINDER AND BASE.

REFER TO CROSS SECTIONS FOR DITCH LOCATIONS AND DEPTHS.

TYPICAL SECTIONS OF IMPROVEMENT

8/30/2012

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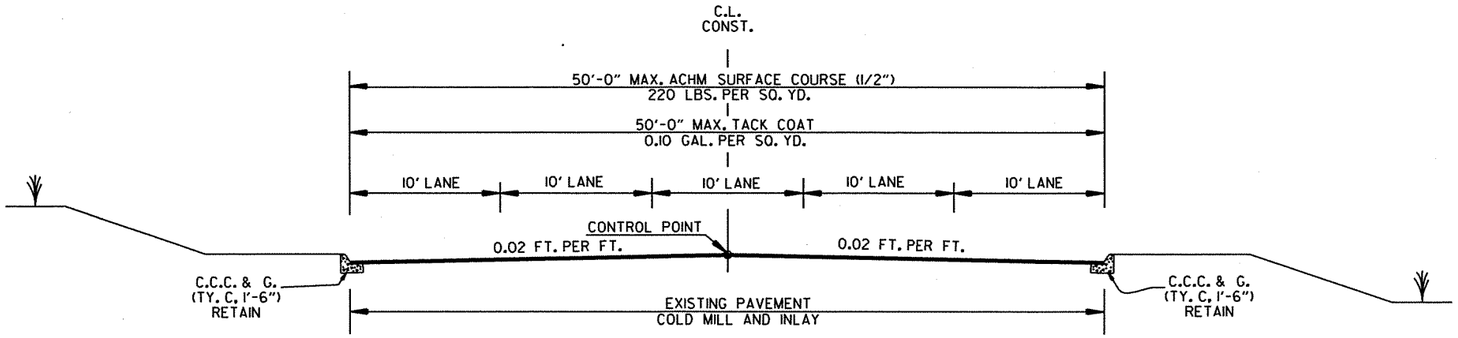
				6	ARK.			
				JOB NO.		020070	5	144

(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12



TYPICAL SECTION OF IMPROVEMENT

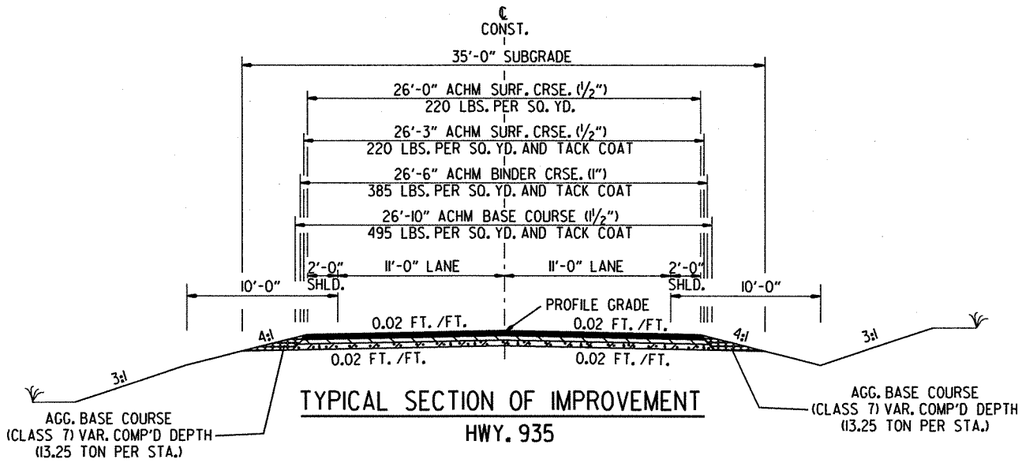
MAIN LANES

STA. 208+97 - 210+53

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

PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE CURB AND GUTTER, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHOD(S) USED SHALL BE APPROVED BY THE ENGINEER. PAVEMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

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



TYPICAL SECTION OF IMPROVEMENT

HWY. 935

8/30/2012

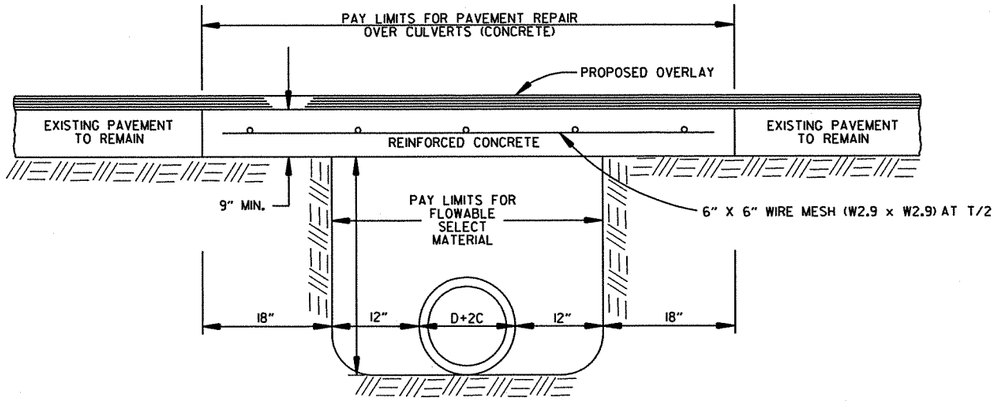
R020070.DGN

TYPICAL SECTIONS OF IMPROVEMENT

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	6	144

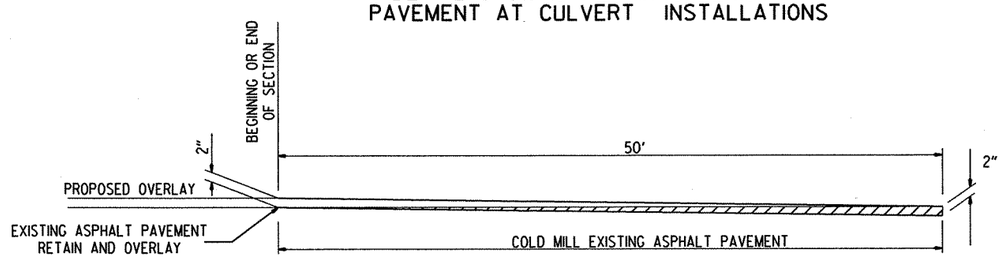
(2) SPECIAL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12



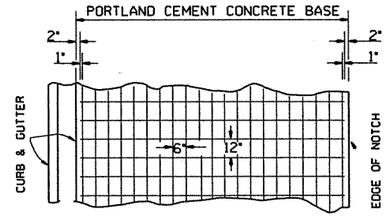
PAVEMENT REPAIR OVER CULVERTS (CONCRETE)

DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS



DETAIL FOR TRANSITIONS

LENGTH OF TRANSITION
STA. 211+30 TO 211+80 = 50 FT.
STA. 295+30 TO 295+80 = 50 FT.

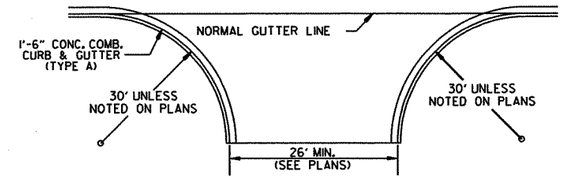


DETAIL OF REINFORCING STEEL FOR PAVEMENT (MESH FABRIC TYPE 3)

6"X 12" MESH FABRIC (TYPE 3) (W5.5 x W2.9) = 4.26 LBS./SQ.YD.

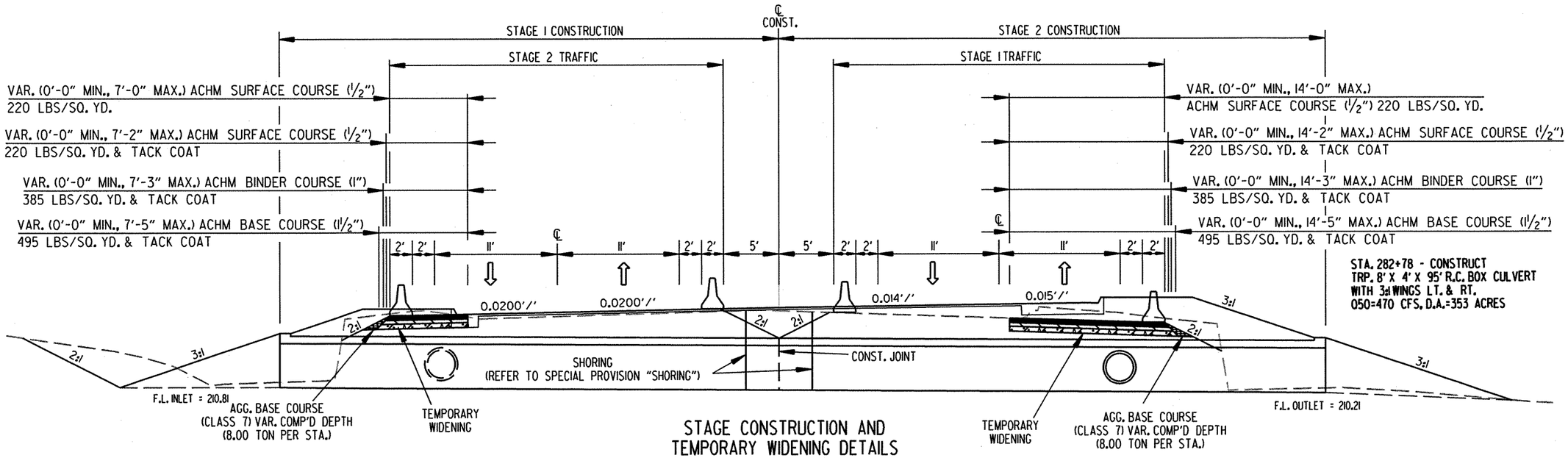
NOTES:

1. LAP MESH FABRIC MIN. 12" LONGITUDINALLY AND MIN. 6" TRANSVERSELY.
2. MESH FABRIC IS NOT REQUIRED WHEN WIDTH OF PORTLAND CEMENT CONCRETE BASE IS LESS THAN 12".
3. MESH FABRIC (TYPE 3) WILL NOT BE PAID FOR DIRECTLY, BUT FULL COMPENSATION THEREFORE WILL BE CONSIDERED INCLUDED IN THE CONTRACT PRICE BID PER SQ. YD. FOR PORTLAND CEMENT CONCRETE BASE (10" U.T.)



DETAIL OF TURNOUTS
ASPHALT STREETS, COUNTY ROADS & STATE HIGHWAYS

NOTE: THE TYPICAL SECTION FOR THE CITY STREET CONNECTIONS IN THE CURB & GUTTER SECTION SHALL MATCH THE PROPOSED WIDENING SECTION SHOWN FOR THE MAIN LANES. UNLESS OTHERWISE NOTED ON THE PLANS, ALL CITY STREET RADII WILL BE 30'.



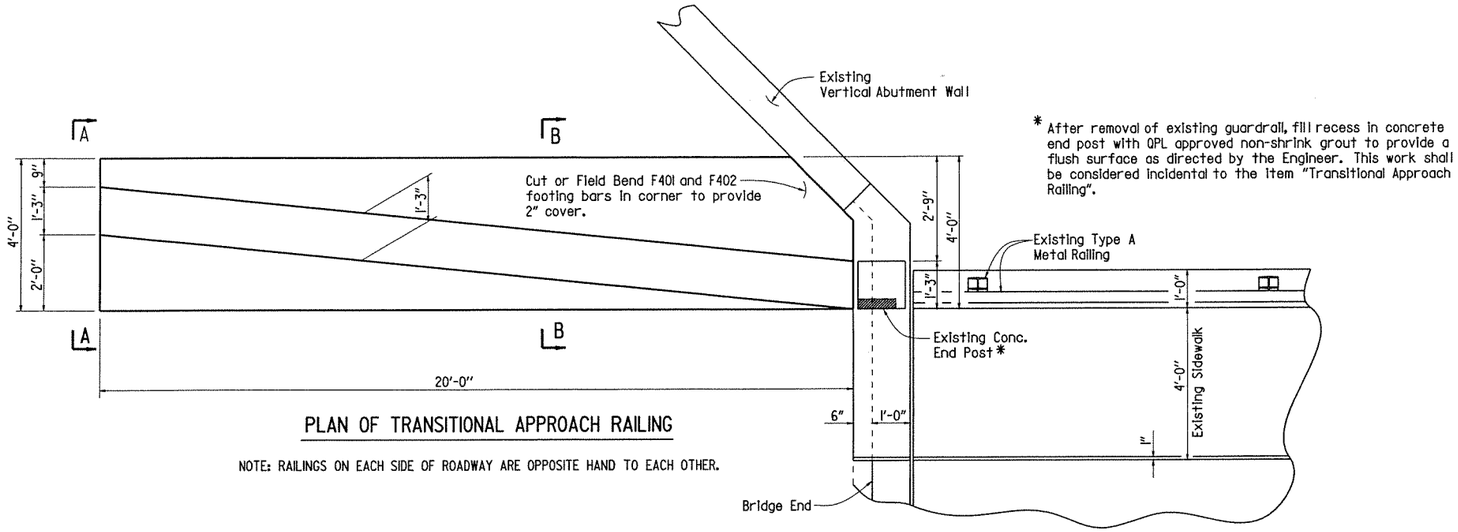
STAGE CONSTRUCTION AND TEMPORARY WIDENING DETAILS
STA. 282+74

8/30/2012

R020070.DGN

SPECIAL DETAILS

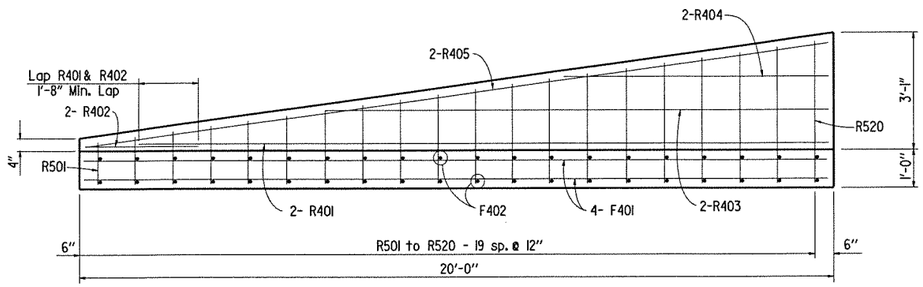
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	7	144
				(1) A1018		TRANS. RAIL		51216



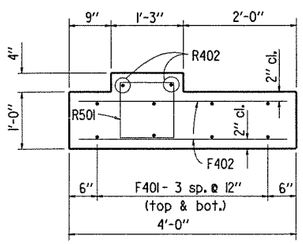
* After removal of existing guardrail, fill recess in concrete end post with QPL approved non-shrink grout to provide a flush surface as directed by the Engineer. This work shall be considered incidental to the item "Transitional Approach Railing".

PLAN OF TRANSITIONAL APPROACH RAILING

NOTE: RAILINGS ON EACH SIDE OF ROADWAY ARE OPPOSITE HAND TO EACH OTHER.

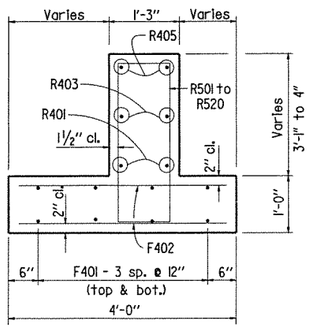


ELEVATION OF TRANSITIONAL APPROACH RAILING



VIEW A - A

3/4" = 1'-0"



SECTION B - B

3/4" = 1'-0"

BAR LIST - ONE TRANSITIONAL RAIL

Mark	No. Req'd.	Length	Pin Dia.	Bending Diagram Dimensions are out to out of bars.
F401	8	19'-8"	Str.	
F402	40	3'-8"	Str.	
R401	2	18'-5"	Str.	
R402	2	3'-0"	Str.	
R403	2	13'-4"	Str.	
R404	2	7'-0"	Str.	
R405	2	19'-10"	Str.	
R501 to R520	1 ea.	4'-8" to 9'-10"	2½"	1'-0" 6" Min. (Typ.) 1½" to 3'-8" R501 - R520

FOR INFORMATION ONLY
SCHEDULE OF QUANTITIES PER RAIL UNIT

CLASS "S" CONCRETE	REINFORCING STEEL (GRADE 60)	CLASS I PROTECTIVE SURFACE TREATMENT
4.49 Cu. Yds.	437 Lbs.	0.2 Gal.

General Notes

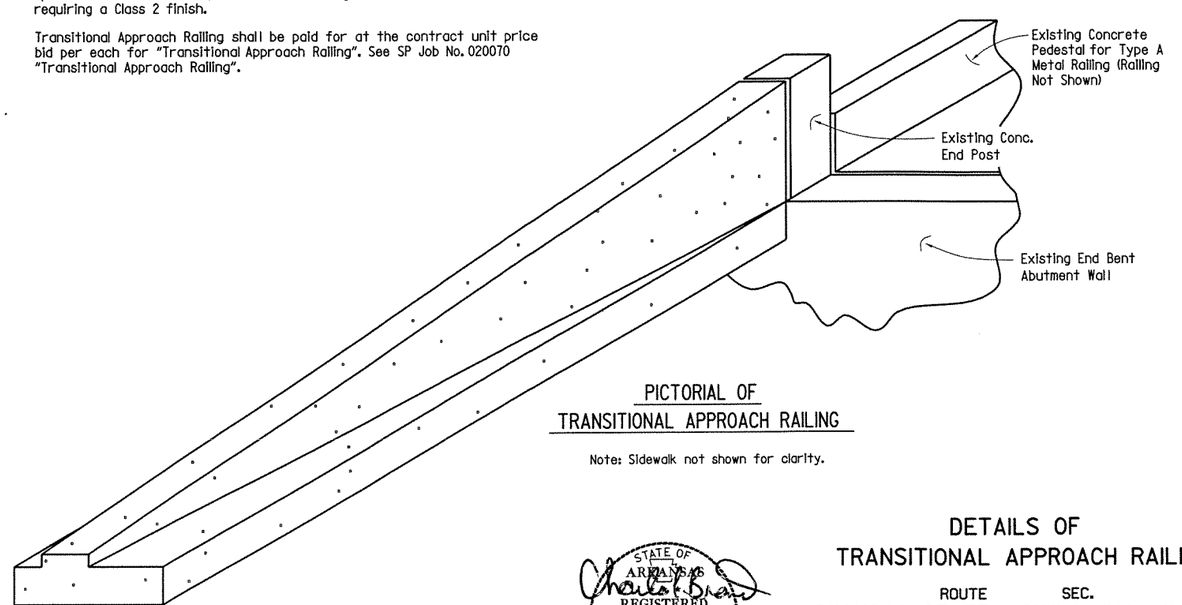
Transitional Approach Railing shall be placed at locations shown in the Roadway Plans.

All Concrete shall be Class "S" and be poured in the dry. All exposed corners to be chamfered 3/4" unless otherwise noted.

All Reinforcing Steel shall conform to AASHTO M31 or M53, Grade 60.

Class I Protective Surface Treatment shall be applied to the roadway surface, front face and top of the Transitional Approach Railing. At the option of the Contractor, a Class 3 finish may be used on all surfaces requiring a Class 2 finish.

Transitional Approach Railing shall be paid for at the contract unit price bid per each for "Transitional Approach Railing". See SP Job No. 020070 "Transitional Approach Railing".



PICTORIAL OF TRANSITIONAL APPROACH RAILING

Note: Sidewalk not shown for clarity.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 12410
CHARLES P. BRAND

BRIDGE ENGINEER

DETAILS OF TRANSITIONAL APPROACH RAILING

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: A.M.S. DATE: 6/15/10 FILENAME: b020070_tr.dgn

CHECKED BY: A.M.S. DATE: 6/22/10 SCALE: 1/2" = 1'-0" or as noted

DESIGNED BY: Std. DATE:

BRIDGE NO. A1018 DRAWING NO. 51216

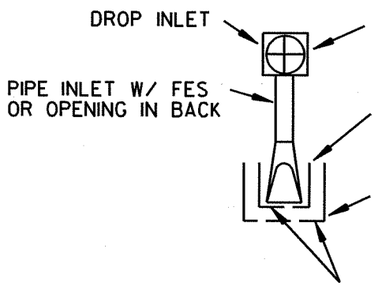
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	8	144

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

TEMPORARY EROSION CONTROL GENERAL NOTES:

THE QUANTITIES AND LOCATIONS OF THE TEMPORARY EROSION CONTROL DEVICES SHOWN IN THE PLANS ARE ESTIMATED, AND MAY BE ALTERED IF AND WHERE DIRECTED BY THE ENGINEER TO MAXIMIZE THEIR EFFECTIVENESS. THE DEVICES ARE TO BE INSTALLED IN AN AREA ONLY WHEN THE SOIL DISTURBING ACTIVITY IN THAT AREA BEGINS.



(E-7) (DROP INLET SILT FENCE)

(E-11) (SILT FENCE) AROUND FES OR OPENING IN BACK OF DROP INLET

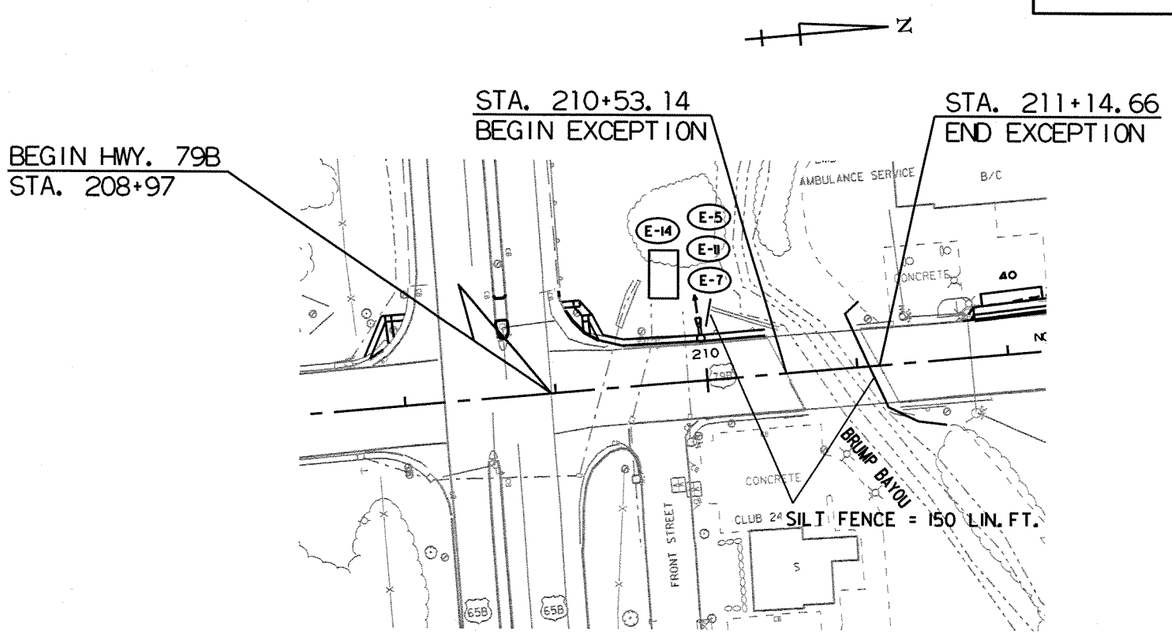
(E-5) (SAND BAG DITCH CHECK) AROUND E-11 SILT FENCE APPROX. 5' CLEAR BETWEEN THE TWO

WHEN THERE IS NO DEFINED CHANNEL FROM OFFSITE, INSTALL DEVICES IN FRONT OF OPENING. IF OFFSITE DRAINAGE CHANNEL IS PRESENT, INSTALL DEVICES ON SIDES ONLY.

(E-14) SEDIMENT BASIN

REVISIONS

DATE	REVISION



STAGE 1
TEMPORARY EROSION CONTROL DETAILS

8/24/2012

R020070.DGN

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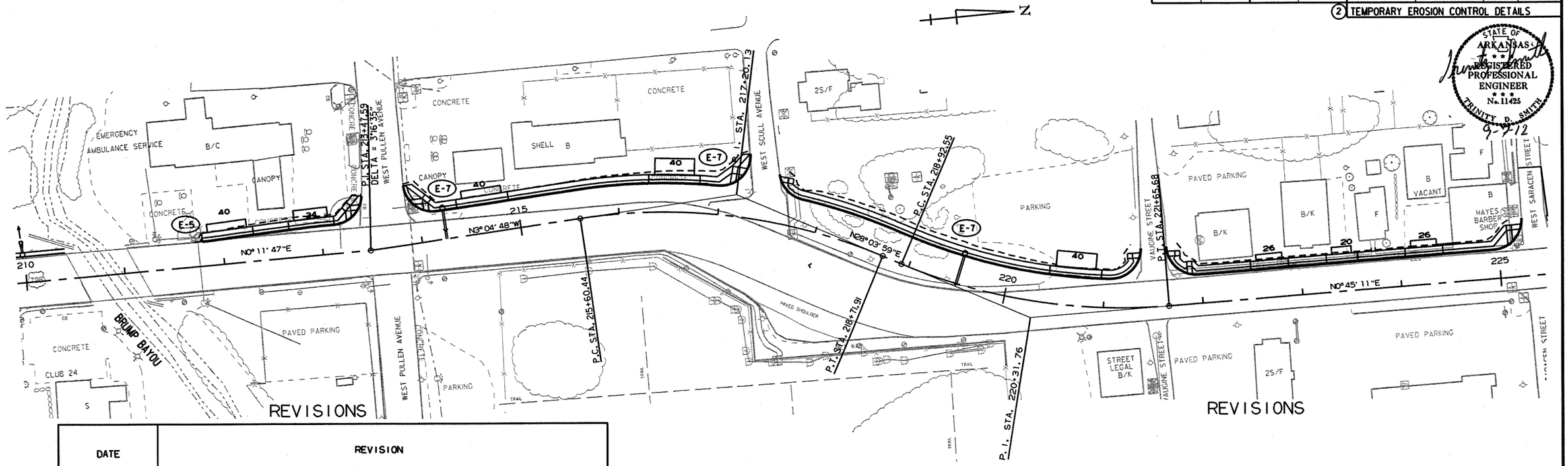
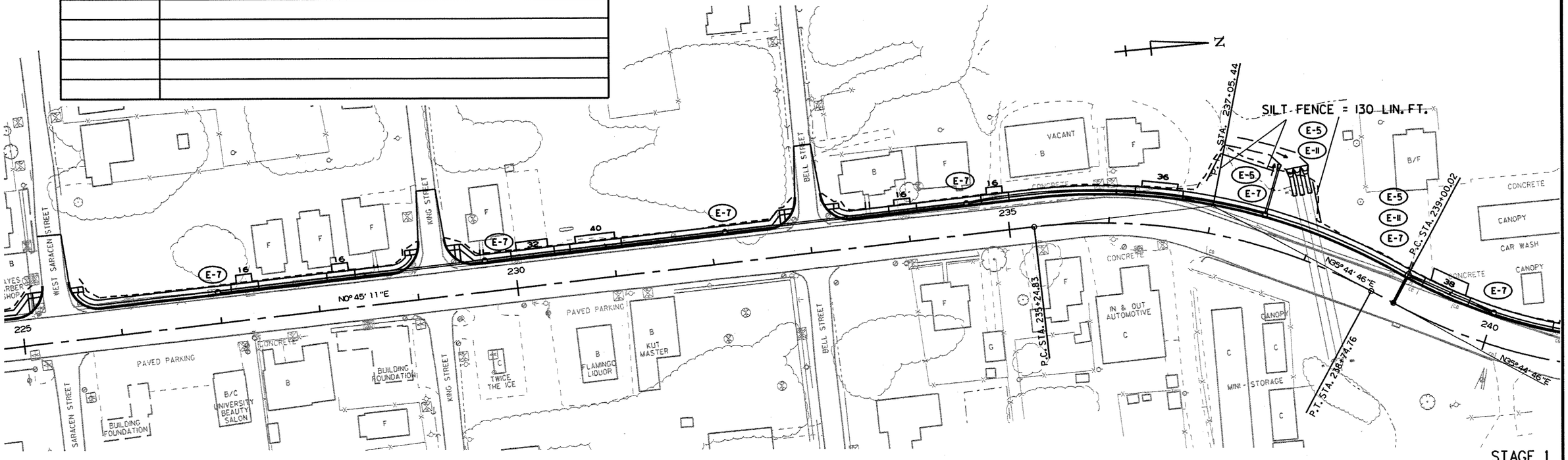
				JOB NO.		020070	9	144

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-2-12



DATE	REVISION



8/24/2012

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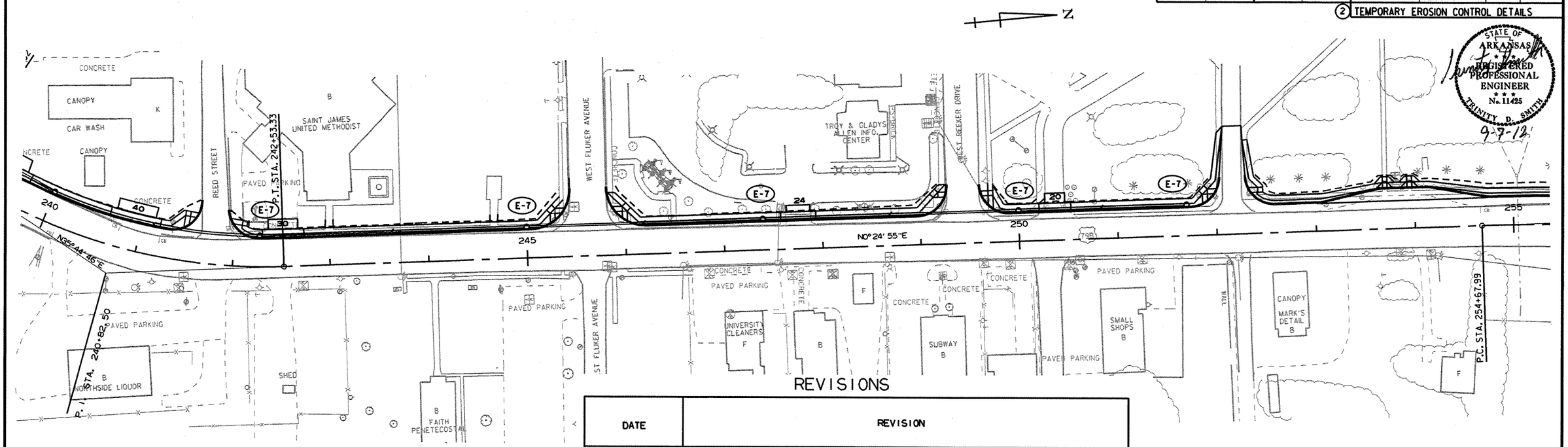
				6	ARK.			
				JOB NO.		020070	10	144

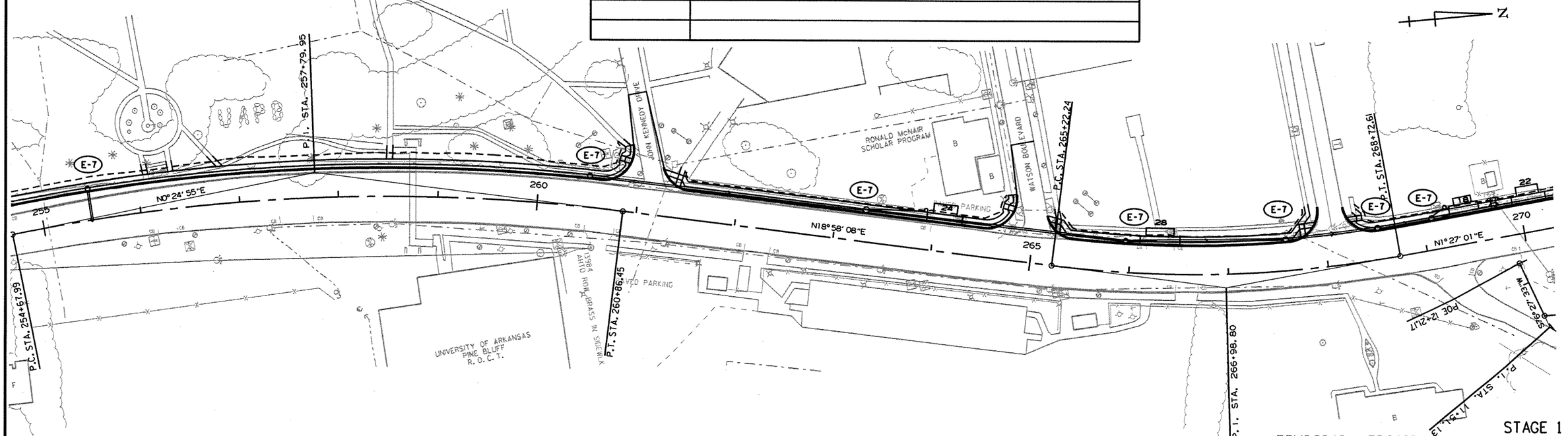
(2) TEMPORARY EROSION CONTROL DETAILS



STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

REVISIONS

DATE	REVISION



8/24/2012

R020070.DGN

STAGE 1
TEMPORARY EROSION CONTROL DETAILS

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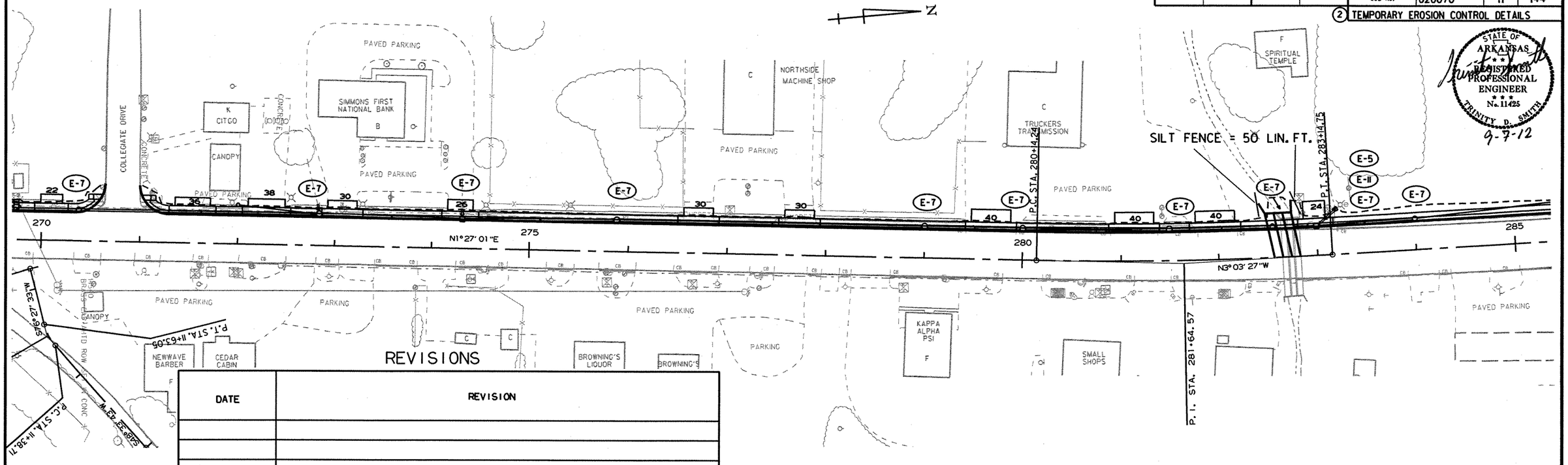
				6	ARK.			
				JOB NO.		020070	11	144

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

REVISIONS

DATE	REVISION



STAGE 1
TEMPORARY EROSION CONTROL DETAILS

8/24/2012

R020070.DGN

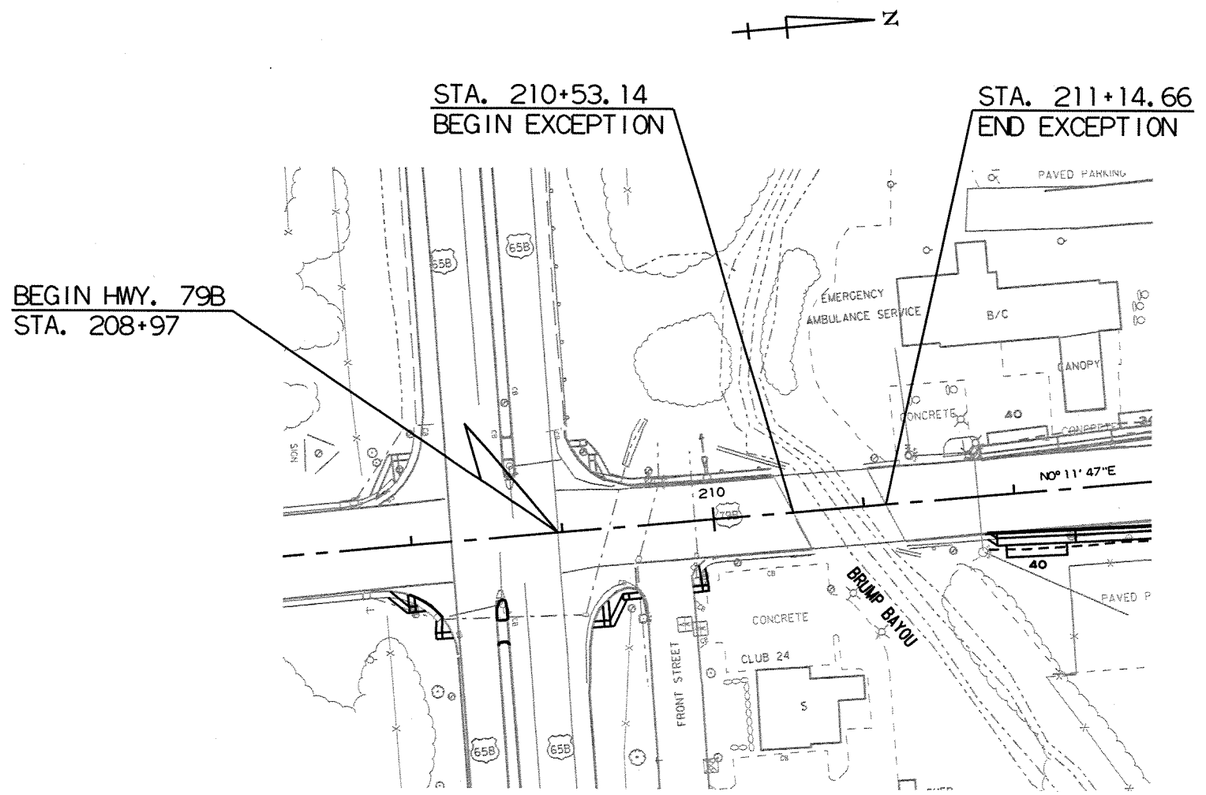
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	12	144

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

REVISIONS

DATE	REVISION



8/24/2012

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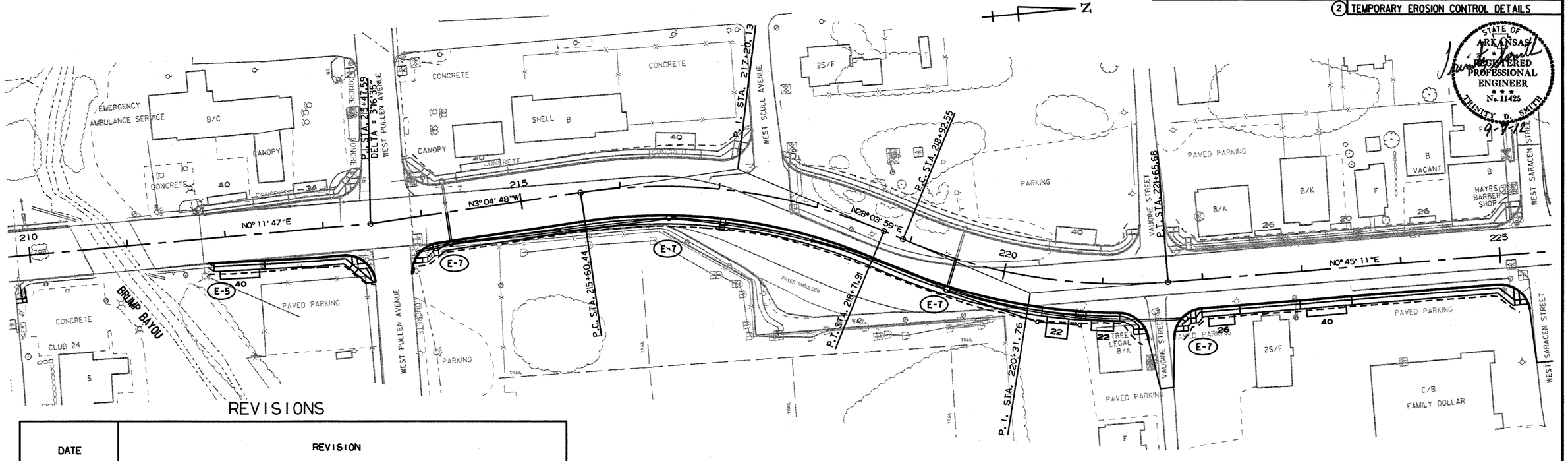
STAGE 2
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	13	144

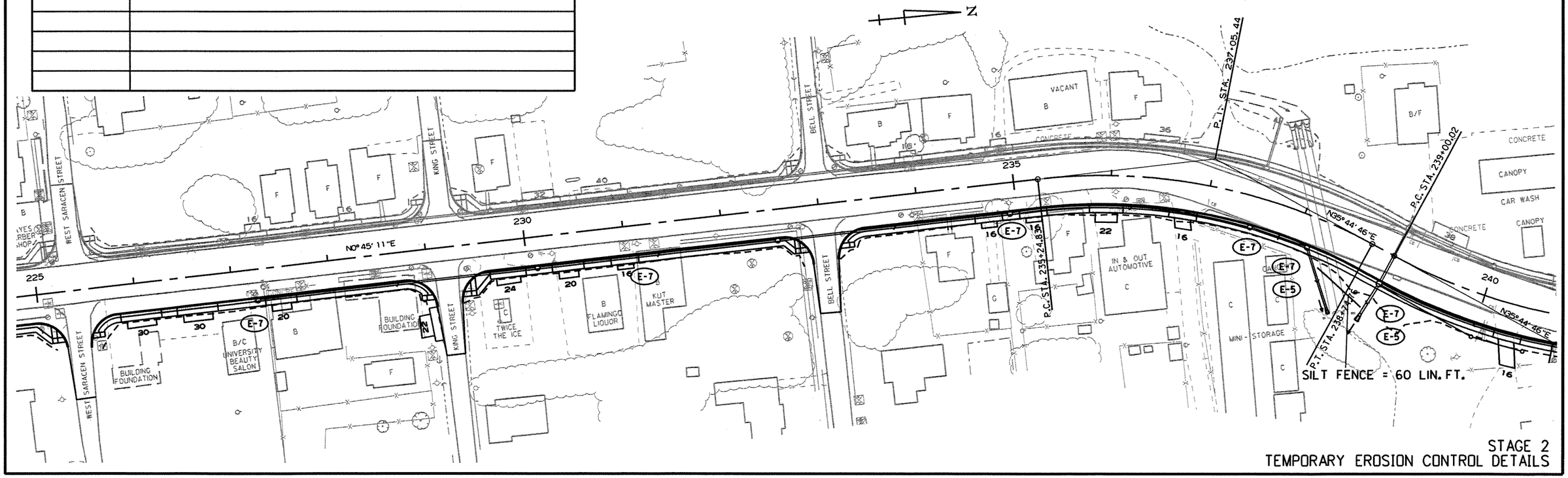
(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-4-12



REVISIONS

DATE	REVISION



STAGE 2
TEMPORARY EROSION CONTROL DETAILS

8/24/2012

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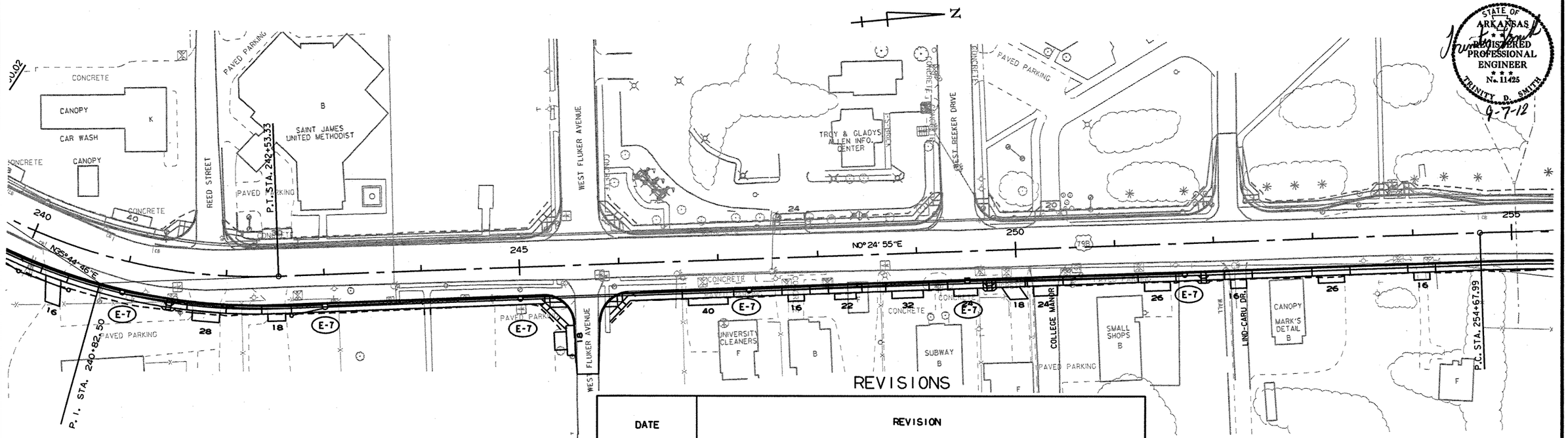
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	14	144

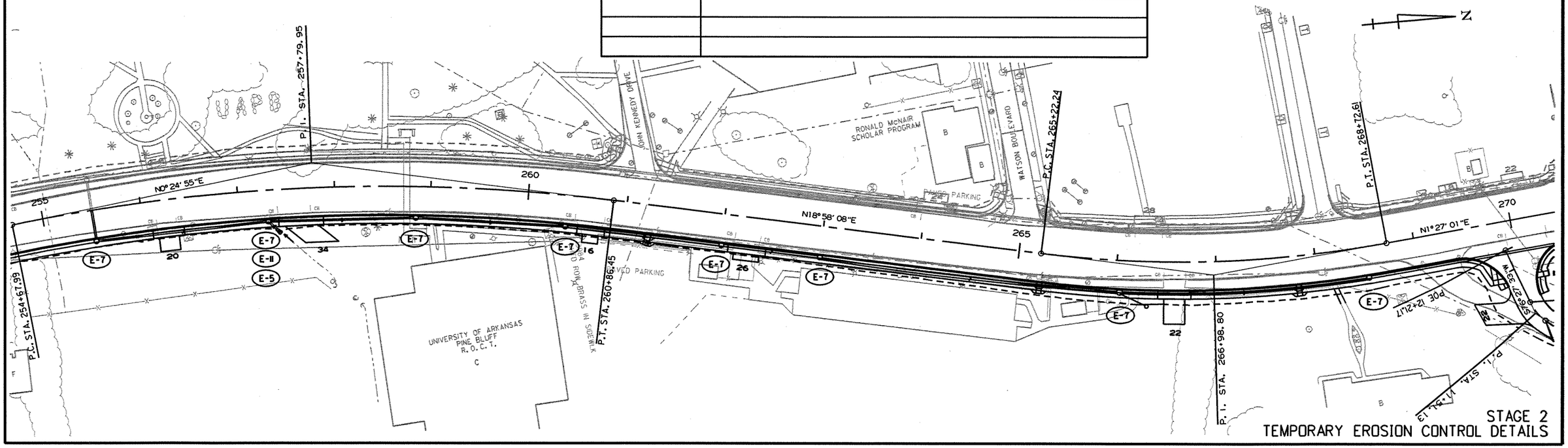
(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
4-7-12



REVISIONS

DATE	REVISION



STAGE 2
TEMPORARY EROSION CONTROL DETAILS

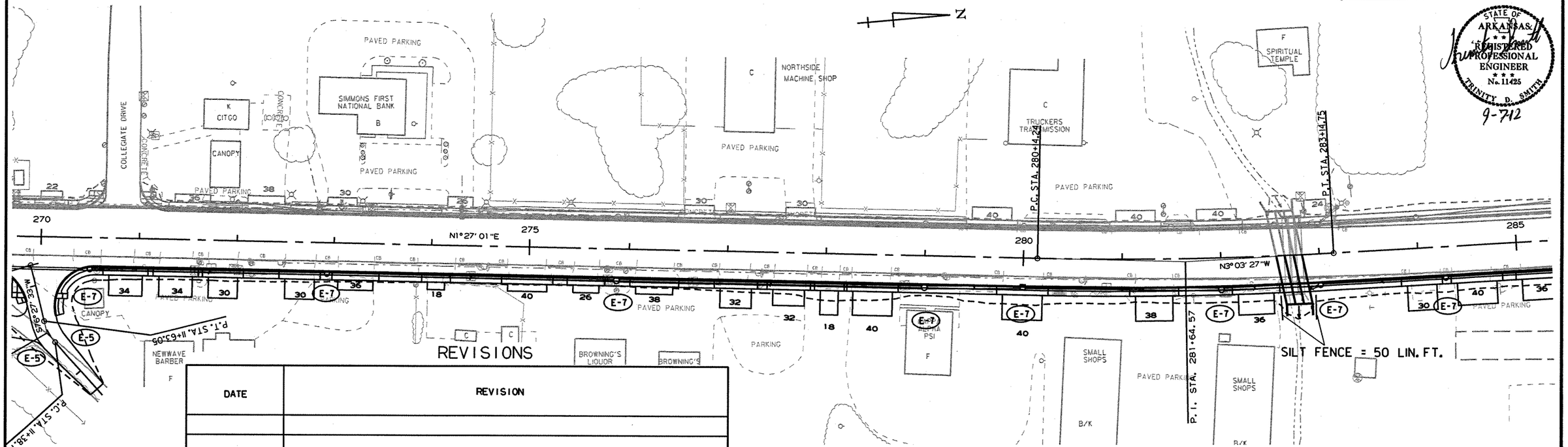
8/24/2012

R020070.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	15	144

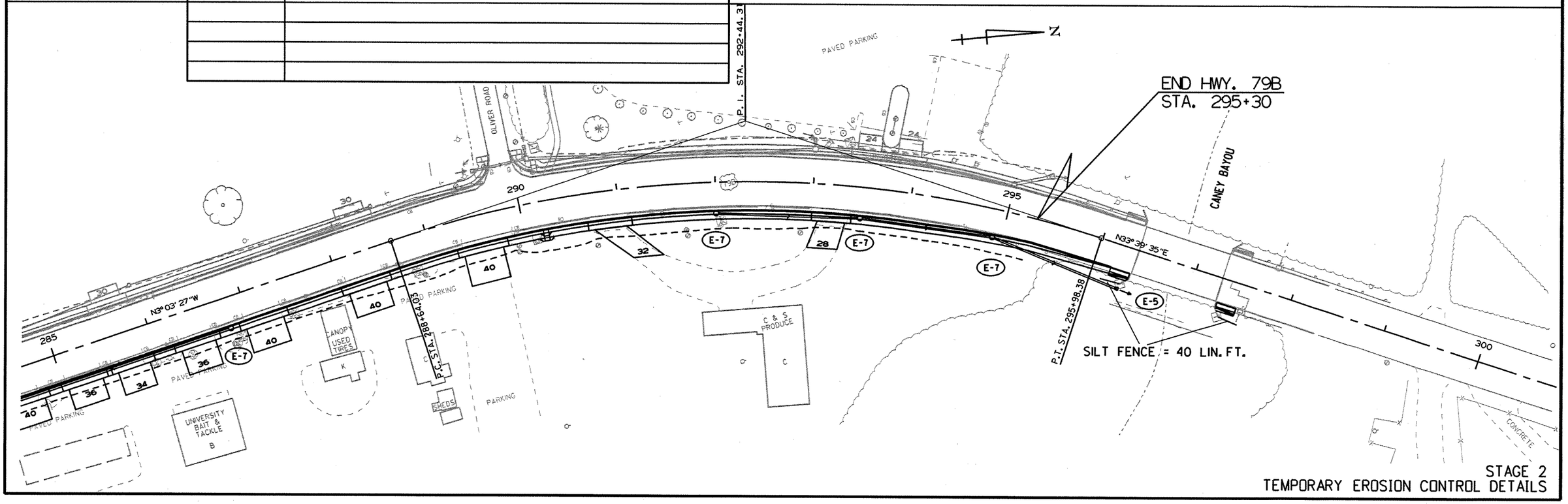
(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12



REVISIONS

DATE	REVISION



STAGE 2
TEMPORARY EROSION CONTROL DETAILS

8/24/2012

R020070.DGN

DETOUR ROUTE:

CLOSE HWY. 79B BETWEEN REEKER AND OLIVER ROAD TO REMOVE THE EXISTING PEDESTRIAN OVERPASS BRIDGE.
USE REEKER, SPRUCE AND OLIVER ROAD TO DETOUR TRAFFIC IN HWY. 79B AS SHOWN BELOW.
REFER TO "MAINTENANCE OF TRAFFIC" AND "SEQUENCE OF CONSTRUCTION" SPECIAL PROVISIONS.

DETOUR QUANTITIES:
SIGNS = 290 SQ. FT.
BARRICADES = 128 LIN. FT.

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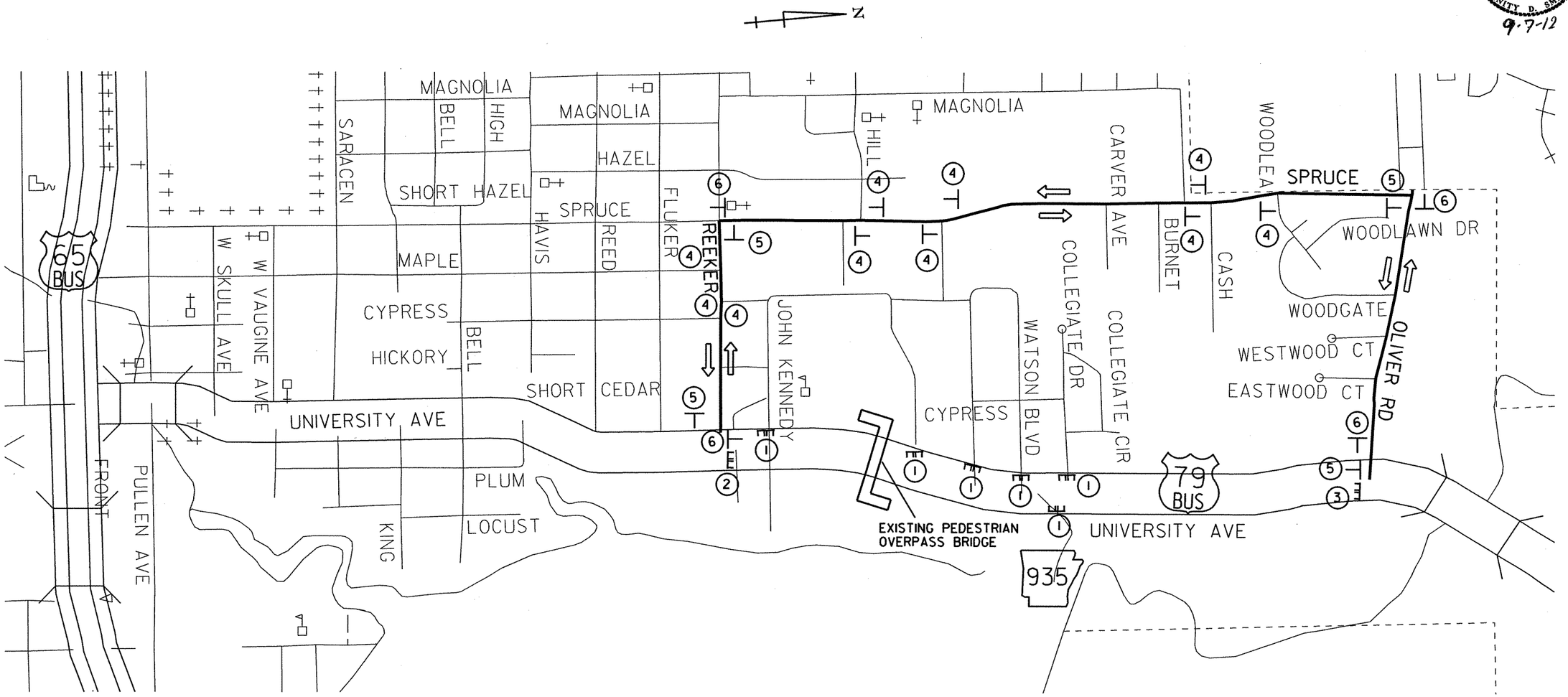
(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12



(1) ROAD CLOSED (I) RII-2 (48" X 30")
8' BARR. TYP. III RT.
8' BARR. TYP. III LT.

(2) ROAD CLOSED (I) RII-2 (48" X 30")
(2) 8' BARR. TYP. III RT.

(3) ROAD CLOSED (I) RII-2 (48" X 30")
(2) 8' BARR. TYP. III LT.

(4) DETOUR (I) M4-8 (24" X 12")
79 BUS (I) MI-4 (24" X 24")
(I) WI-6 (48" X 24")

(5) DETOUR (I) M4-8 (24" X 12")
79 BUS (I) MI-4 (24" X 24")
(I) WI-6 (48" X 24")

(6) DETOUR (I) M4-8 (24" X 12")
79 BUS (I) MI-4 (24" X 24")
(I) WI-6 (48" X 24")

(NOT TO SCALE)
STAGE 1
DETOUR ROUTE
MAINTENANCE OF TRAFFIC DETAILS

8/24/2012
R020070.DGN

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				6	ARK.			
				JOB NO.		020070	16A	144

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

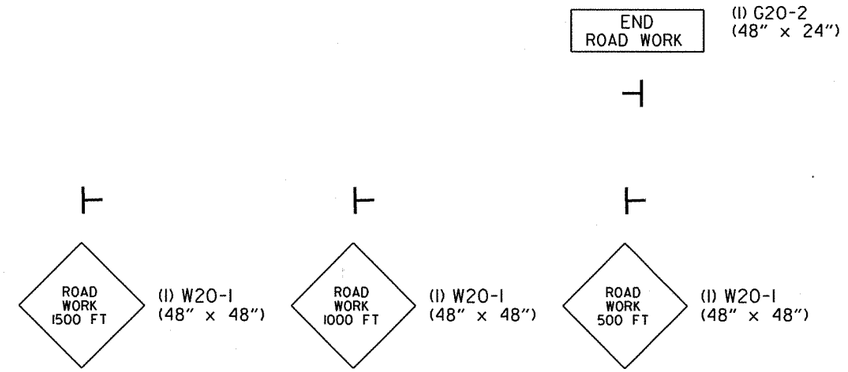
STAGE I:

INSTALL THE ADVANCE WARNING SIGNS AS SHOWN. RESTRIPE THE EXISTING LANES AS SHOWN BELOW TO MAINTAIN TRAFFIC. NOTCH AND WIDEN ON THE WEST SIDE OF HWY. 79B, DELINEATING THE WORK ZONE USING VERTICAL PANELS AT 40' O.C. ON THE SIDE BEING WIDENED. CONSTRUCT TEMPORARY WIDENING ON BOTH SIDES OF HWY. 79B. INSTALL THE TEMP. PRECAST CONCRETE BARRIER AND CONSTRUCT THE PORTION OF THE PROPOSED TRP. 8' X 4' X 96' R.C. BOX CULVERT USING THE STAGE CONSTRUCTION DETAILS AS SHOWN.

DELINEATE CITY STREETS AND DRIVEWAYS THROUGHOUT THE PROJECT USING TRAFFIC DRUMS (6 PER TURNOUT) ON THE SIDE BEING WIDENED.

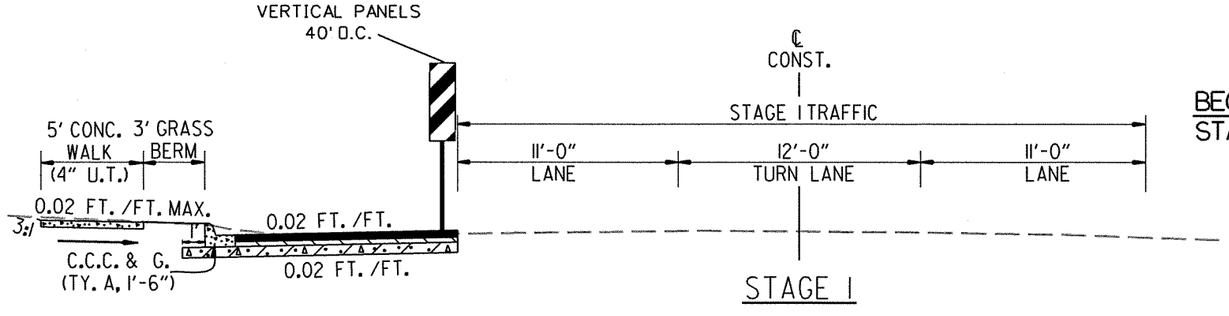
STAGE 2:
NOTCH AND WIDEN ON THE EAST SIDE OF HWY. 79B DELINEATING THE WORK ZONE USING VERTICAL PANELS AT 40' O.C. ON THE SIDE BEING WIDENED AND TRAFFIC DRUMS 40' O.C. ON THE SIDE ALREADY WIDENED.

REMOVE THE CONFLICTING PAVEMENT MARKINGS AND STRIPE THE STAGE I CONSTRUCTION USING A DBL. YELLOW CENTERLINE AND LEFT AND RIGHT EDGE LINES. RELOCATE THE TEMP. PRECAST CONCRETE BARRIER AS SHOWN AND SHIFT TRAFFIC ONTO THE STAGE I CONSTRUCTION. REMOVE THE REMAINING R.C. BOX CULVERT AND CONSTRUCT THE REMAINDER OF NEW R.C. BOX CULVERT AND CURB AND GUTTER ON THE RIGHT. APPLY THE FINAL 2" OF ACHM SURFACE AFTER ALL WIDENING HAS BEEN COMPLETED.

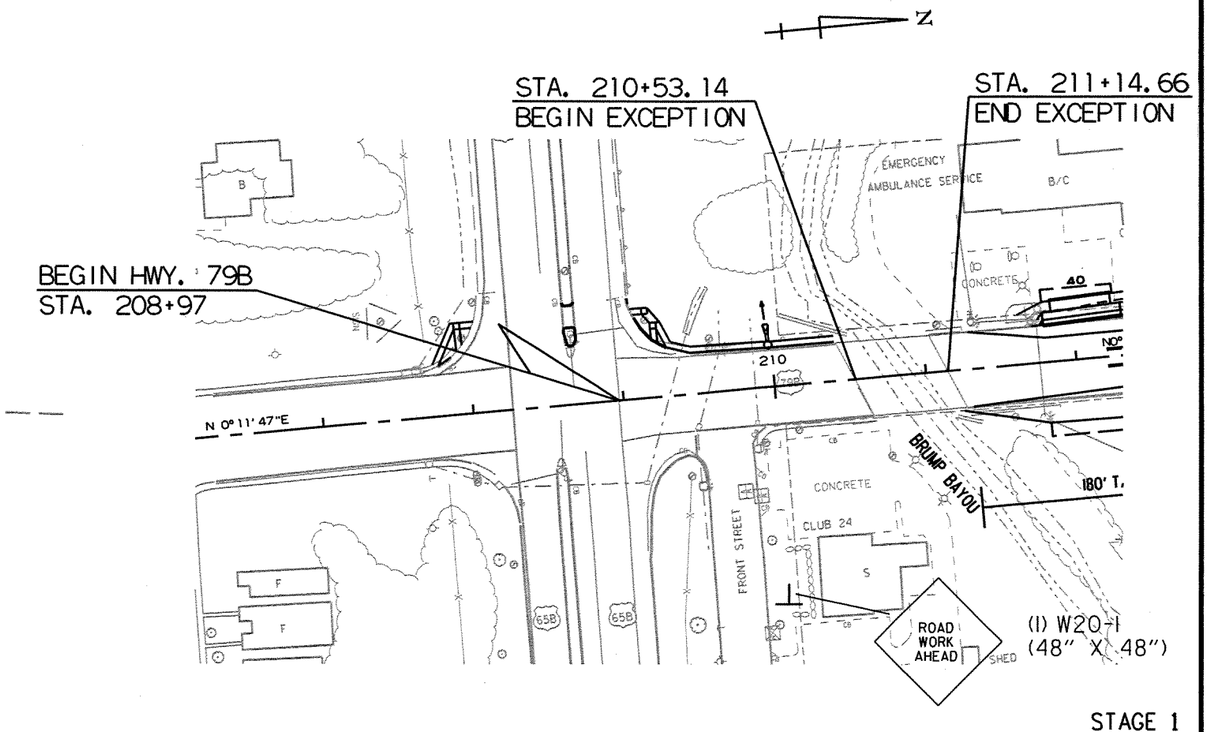


⊢ VERTICAL PANELS
● TRAFFIC DRUMS

SIGN PLACEMENT AT BEGINNING AND END OF JOB



STAGE I



STAGE 1
MAINTENANCE OF TRAFFIC DETAILS

8/24/2012

R020070.DGN

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(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-9-12

ROAD CLOSED
(1) R11-2 (48" X 30")
8' BARR. TYP. III RT.

ROAD WORK AHEAD
(1) W20-1 (48" X 48")

ROAD CLOSED
(1) R11-2 (48" X 30")
(2) 8' BARR. TYP. III RT.

ROAD CLOSED
(1) R11-2 (48" X 30")
(2) 8' BARR. TYP. III LT.

ROAD WORK AHEAD
(1) W20-1 (48" X 48")

DO NOT PASS
(1) R4-1 (24" X 30")

ROAD WORK AHEAD
(1) W20-1 (48" X 48")

ROAD WORK AHEAD
(1) W20-1 (48" X 48")

4" SOLID YELLOW
4" YELLOW SKIP

4" SOLID WHITE

P.I. STA. 213+47.59
DELTA = 3°16'35"
P.C. STA. 214+20.13
P.C. STA. 218+92.55
P.I. STA. 218+7.9
P.C. STA. 215+60.44
P.I. STA. 220+31.76
P.I. STA. 221+65.68
P.I. STA. 237+05.44
P.C. STA. 239+00.02
P.I. STA. 238+74.16
P.C. STA. 235+24.83

N0° 11' 47"E
N3° 04' 48"W
N28° 03' 59"E
N0° 45' 11"E
N65° 44' 46"E

180' TAPER

WEST PULLEN AVENUE
WEST SCULL AVENUE
VAUGINE STREET
WEST SARACEN STREET
KING STREET
BELL STREET

EMERGENCY AMBULANCE SERVICE
CLUB 24
BRUMP BAYOU
HAYES BARBER SHOP
FAMILY DOLLAR
TWICE THE ICE
KUT MASTER
FLAMINGO LIQUOR
UNIVERSITY BEAUTY SALON
IN & OUT AUTOMOTIVE
MINI - STORAGE
CAR WASH

STAGE 1
MAINTENANCE OF TRAFFIC DETAILS

8/24/2012

R020070.DGN

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(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

ROAD WORK AHEAD (I) W20-1 (48" X 48")

ROAD WORK AHEAD (I) W20-1 (48" X 48")

ROAD WORK AHEAD (I) W20-1 (48" X 48")

ROAD WORK AHEAD (I) W20-1 (48" X 48")

4" SOLID WHITE

4" SOLID YELLOW
4" YELLOW SKIP

4" SOLID YELLOW

4" SOLID YELLOW
4" YELLOW SKIP

P.I. STA. 240+82.50

P.T. STA. 242+53.33

P.C. STA. 254+67.99

P.I. STA. 257+79.95

P.T. STA. 260+86.45

P.C. STA. 265+22.24

P.I. STA. 266+98.80

P.T. STA. 268+12.61

N02°24'46"E

N02°24'55"E

N11°58'08"E

N11°27'01"E

REED STREET

WEST FLUKER AVENUE

WEST BEEKER DRIVE

JOHN KENNEDY DRIVE

WATSON BOULEVARD

SAINT JAMES UNITED METHODIST

TROY & GLADYS ALLEN INFO. CENTER

RONALD McNAIR SCHOLAR PROGRAM

UNIVERSITY OF ARKANSAS PINE BLUFF R.O.C.T.

NORTHSIDE LIQUOR

FAITH PENETECOSTAL

UNIVERSITY CLEANERS

SUBWAY

SMALL SHOPS

MARK'S DETAIL

CANOPY

CAR WASH

CONCRETE

PAVED PARKING

SHED

8/24/2012

R020070.DGN

STAGE 1
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	19	144

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

ROAD WORK AHEAD
(1) W20-1 (48" X 48")
PAVED PARKING
COLLEGIATE DRIVE
CONCRETE
K CITGO
CANOPY
SIMMONS FIRST NATIONAL BANK B
CONCRETE
NORTHSIDE MACHINE SHOP C
TRUCKERS TRANSMISSION C
4" SOLID WHITE
4" DBL. SOLID YELLOW WITH R.P.M (TYPE II) ON 80' CENTERS
(3) OM-3L (12"X 36")
(4) OM-3R (12"X 36")
P.C. STA. 280+41.75
P.T. STA. 283+14.75
4" DBL. SOLID YELLOW WITH R.P.M (TYPE II) ON 80' CENTERS
N1° 27' 01"E
N3° 03' 27"W
N3° 03' 27"W
N33° 39' 27"W
P.T. STA. 11+63.05
P.C. STA. 11+38.71
NEWWAVE BARBER F
CEDAR CABIN F
BROWNING'S LIQUOR C
BROWNING'S LAUNDRY C
4" SOLID YELLOW
4" YELLOW SKIP
KAPPA ALPHA PSI F
390' TAPER
SMALL SHOPS B/K
P.I. STA. 281+64.57
TEMP. PRECAST BARRIER
TEMPORARY WIDENING
390' TAPER
(4) OM-3R (12"X 36")
(3) OM-3L (12"X 36")
ROAD WORK AHEAD
(1) W20-1 (48" X 48")

ROAD WORK AHEAD
(1) W20-1 (48" X 48")
ROAD CLOSED
(1) R11-2 (48" X 30") 8' BARR. TYP. III RT.
OLIVER ROAD
PAVED PARKING
P.I. STA. 292+44.31
4" SOLID WHITE
DO NOT PASS
(1) R4-1 (24" X 30")
END HWY. 79B STA. 295+30
CANEY BAYOU
4" SOLID WHITE
4" DBL. SOLID YELLOW WITH R.P.M (TYPE II) ON 80' CENTERS
N3° 03' 27"W
4" SOLID YELLOW
4" YELLOW SKIP
P.C. STA. 288+94.05
CANOPY USED TIRES K
SHEDS C
C & S PRODUCE C
4" DBL. SOLID YELLOW
P.T. STA. 295+98.38
180' TAPER
N33° 39' 35"E
UNIVERSITY BAIT & TACKLE B
390' TAPER
CONCRETE

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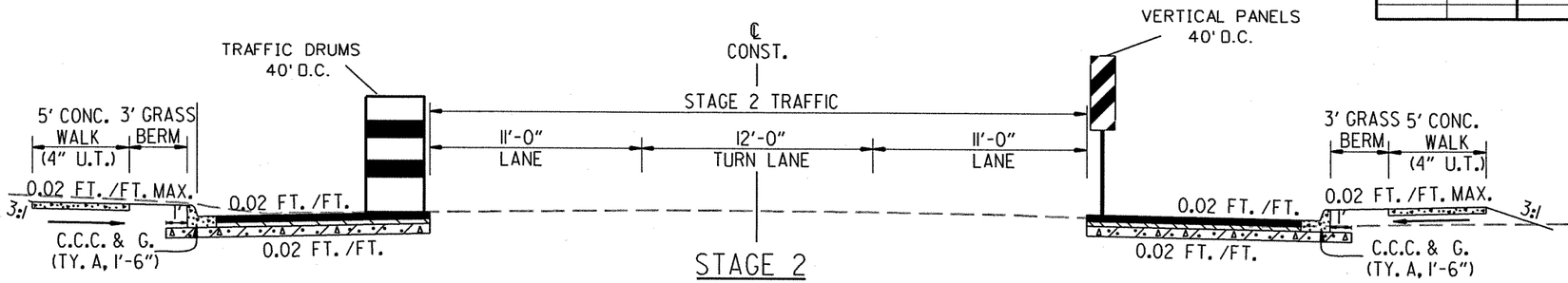
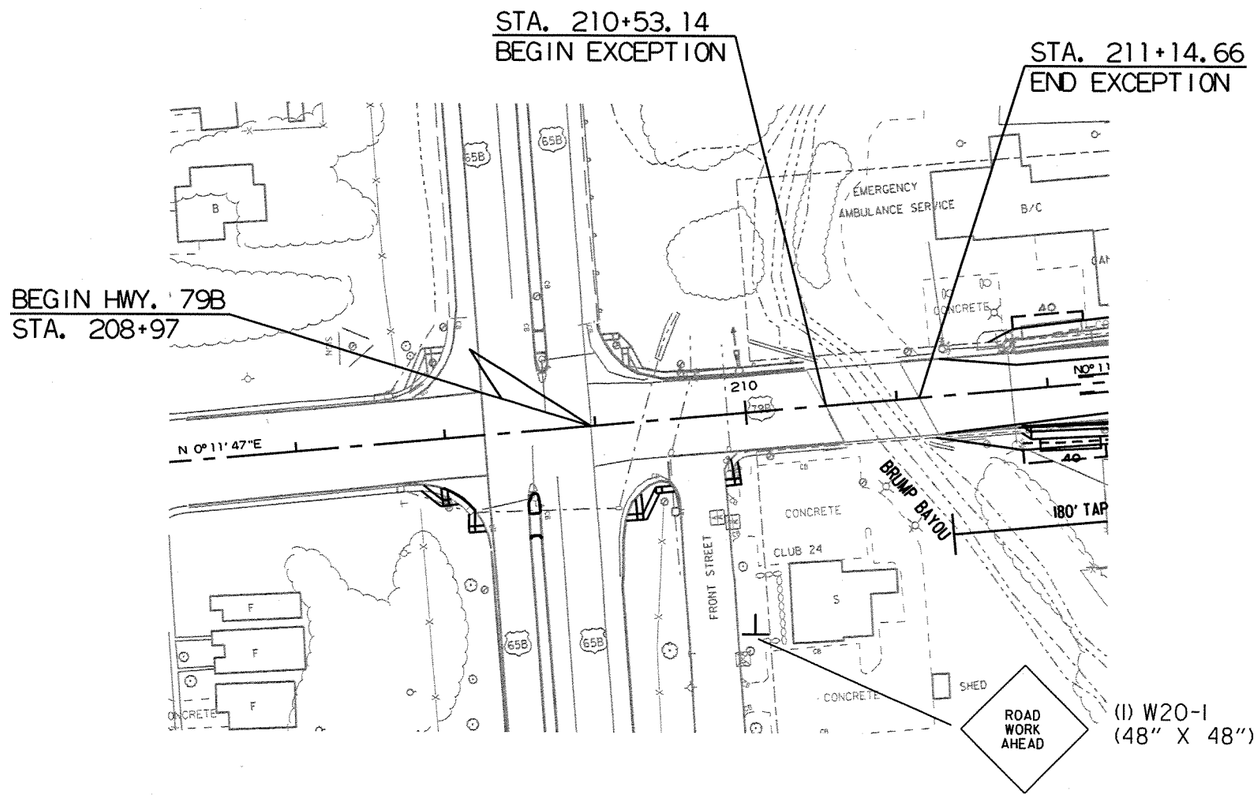
STAGE 1
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	20	144

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12





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STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	21	144

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

ROAD CLOSED
(I) RII-2
(48" X 30")
8' BARR.
TYP. III RT.

ROAD WORK AHEAD
(I) W20-1
(48" X 48")

DO NOT PASS
(I) R4-1
(24" X 30")

P.I. STA. 213+47.59
DELTA = 3°16'35"

P.I. STA. 217+20.13

P.C. STA. 215+60.44

P.C. STA. 218+92.55

P.T. STA. 218+71.91

P.I. STA. 220+31.76

P.T. STA. 221+65.68

N0°11'47"E
N3°04'48"W
N0°03'55"E
N0°45'11"E

EMERGENCY AMBULANCE SERVICE
CLUB 24
SHELL
FAMILY DOLLAR
HAYES BARBER SHOP
VACANT
LEGAL B/K
PAVED PARKING
PARKING
CONCRETE
CANOPY
BRUMP BAYOU
180' TAPER
WEST PULLEN AVENUE
WEST SCOTT AVENUE
VAUGINE STREET
WEST SARACEN STREET

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STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

ROAD CLOSED
(I) RII-2
(48" X 30")
8' BARR.
TYP. III RT.

ROAD WORK AHEAD
(I) W20-1
(48" X 48")

P.I. STA. 235+24.83

P.C. STA. 235+00.02

P.T. STA. 238+74.76

P.I. STA. 237+05.44

N0°45'11"E
N0°44'46"E

BUILDING FOUNDATION
UNIVERSITY BEAUTY SALON
TWICE THE ICE
FLAMINGO LIQUOR
KUT MASTER
IN & OUT AUTOMOTIVE
MINI - STORAGE
CAR WASH
CANOPY
CONCRETE
VACANT
KING STREET
BELL STREET
WEST SARACEN STREET

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	22	144

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

ROAD WORK AHEAD
(1) W20-1
(48" X 48")

ROAD CLOSED
(1) R11-2
(48" X 30")
8' BARR.
TYP. III RT.

P.I. STA. 240+82.50
P.T. STA. 242+53.33
P.C. STA. 254+67.99
P.I. STA. 257+79.95
P.T. STA. 260+86.45
P.C. STA. 265+22.24
P.I. STA. 266+98.80
P.T. STA. 268+72.61
P.C. STA. 254+67.99

REED STREET
WEST FLUKER AVENUE
WEST REEKER DRIVE
LIND-CARU DR.
COLLEGE MANOR
WATSON BOULEVARD
JOHN KENNEDY DRIVE

SAINT JAMES UNITED METHODIST
TROY & GLADYS ALLEN INFO. CENTER
NORTHSIDE LIQUOR
FAITH PENETECOSTAL
UNIVERSITY CLEANERS
SUBWAY
SMALL SHOPS
MARK'S DETAIL
RONALD McNAIR SCHOLAR PROGRAM
UNIVERSITY OF ARKANSAS PINE BLUFF R.O.C.T.

CONCRETE
CANOPY
CAR WASH
PAVED PARKING
SHED

N0° 24' 55" E
N18° 58' 08" E
N1° 27' 01" E

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STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	23	144

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

ROAD WORK AHEAD
(1) W20-1 (48" X 48")
ROAD WORK AHEAD
(1) W20-1 (48" X 48")
COLLEGIATE DRIVE
CONCRETE
CONCRETE
K CITGO
CANOPY
SIMMONS FIRST NATIONAL BANK
B
PAVED PARKING
PAVED PARKING
PAVED PARKING
NORTHSIDE MACHINE SHOP
C
PAVED PARKING
TRUCKERS TRANSMISSION
C
P.C. STA. 280+42.2
4" SOLID WHITE
4" DBL. SOLID YELLOW WITH R.P.M (TYPE II) ON 80' CENTERS
PAVED PARKING
(3) OM-3L (12"X 36")
TEMPORARY WIDENING
P.T. STA. 283+14.75
(4) OM-3R (12"X 36")
4" DBL. SOLID YELLOW WITH R.P.M (TYPE II) ON 80' CENTERS
N 27° 01' E
275
270
285
N 5° 03' 27" W
390' TAPER
390' TAPER
TEMP. PRECAST BARRIER
P.T. STA. 11+65.05
P.C. STA. 11+38.71
N 69° 27' 33" W
CANOPY
NEWWAVE BARBER
F
CEDAR CABIN
F
PARKING
BROWNING'S LIQUOR
C
BROWNING'S LAUNDRY
C
PARKING
KAPPA ALPHA PSI
F
SMALL SHOPS
B/K
PAVED PARKING
P.I. STA. 281+64.57
(4) OM-3R (12"X 36")
(3) OM-3L (12"X 36")
+55
+90
PAVED PARKING

ROAD WORK AHEAD
(1) W20-1 (48" X 48")
ROAD CLOSED
(1) R11-2 (48" X 30") 8' BARR. TYP. III RT.
4" SOLID WHITE
4" DBL. SOLID YELLOW WITH R.P.M (TYPE II) ON 80' CENTERS
N 5° 03' 27" W
285
390' TAPER
+80
UNIVERSITY BAIT & TACKLE
B
CANOPY USED TIRES
K
SHEDS
PARKING
P.C. STA. 288+64.05
PAVED PARKING
PAVED PARKING
P.I. STA. 292+44.31
OLIVER ROAD
PAVED PARKING
C & S PRODUCE
C
180' TAPER
P.T. STA. 295+98.38
DO NOT PASS
(1) R4-1 (24" X 30")
END HWY. 79B
STA. 295+30
CANEY BAYOU
N 33° 39' 35" E
300
CONCRETE

STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

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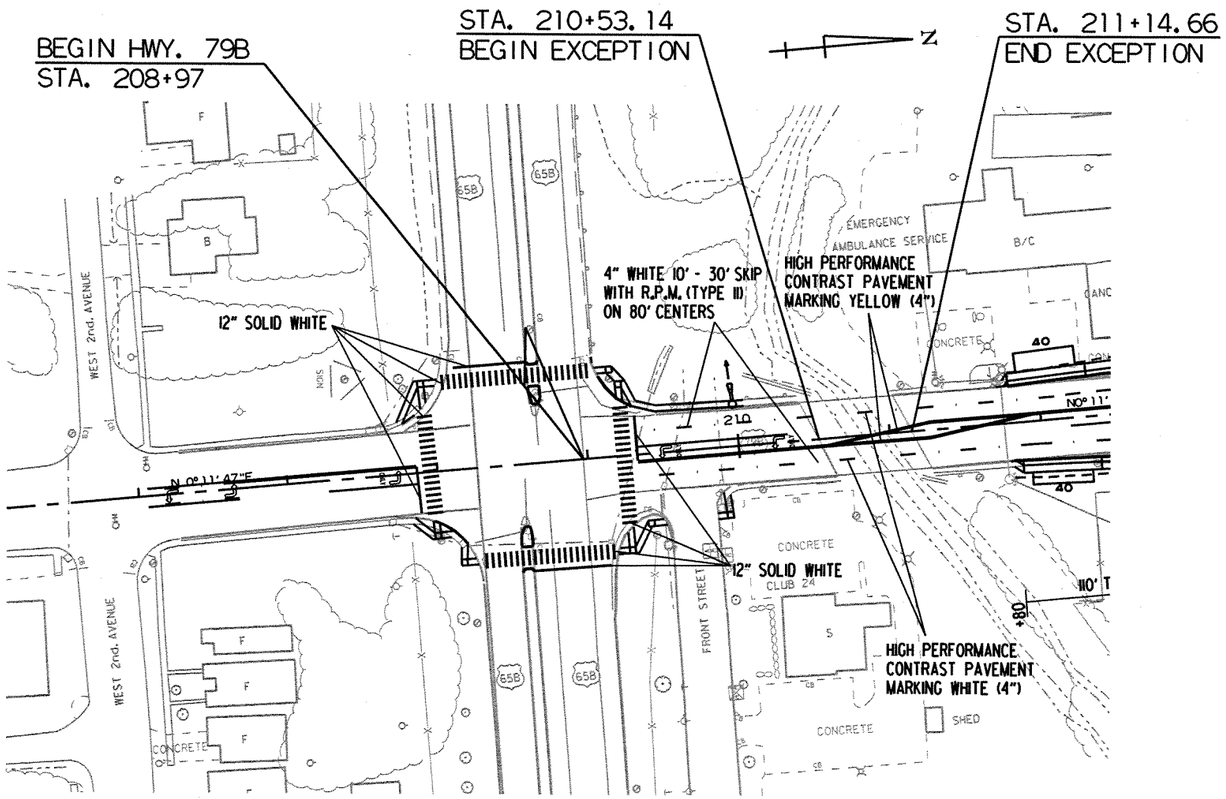
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	24	144

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

PERMANENT PAVEMENT MARKING DETAILS QUANTITIES

THERMOPLASTIC PAVEMENT MARKING WHITE (4") = 4571 LIN. FT.
THERMOPLASTIC PAVEMENT MARKING YELLOW (4") = 19610 LIN. FT.
THERMOPLASTIC PAVEMENT MARKING WHITE (12") = 2180 LIN. FT.
THERMOPLASTIC PAVEMENT MARKING (WORDS) = 13 EACH
THERMOPLASTIC PAVEMENT MARKING (ARROW) = 11 EACH
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING WHITE (4") = 124 LIN. FT.
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING YELLOW (4") = 236 LIN. FT.
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 233 EACH
RAISED PAVEMENT MARKERS TYPE II (YEL/YEL) = 220 EACH



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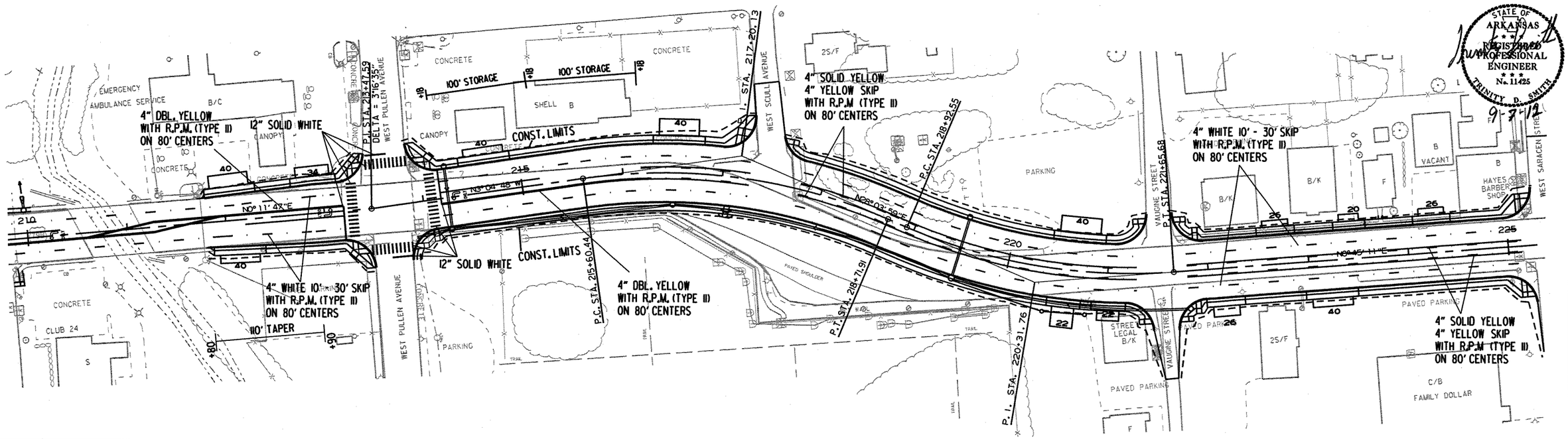
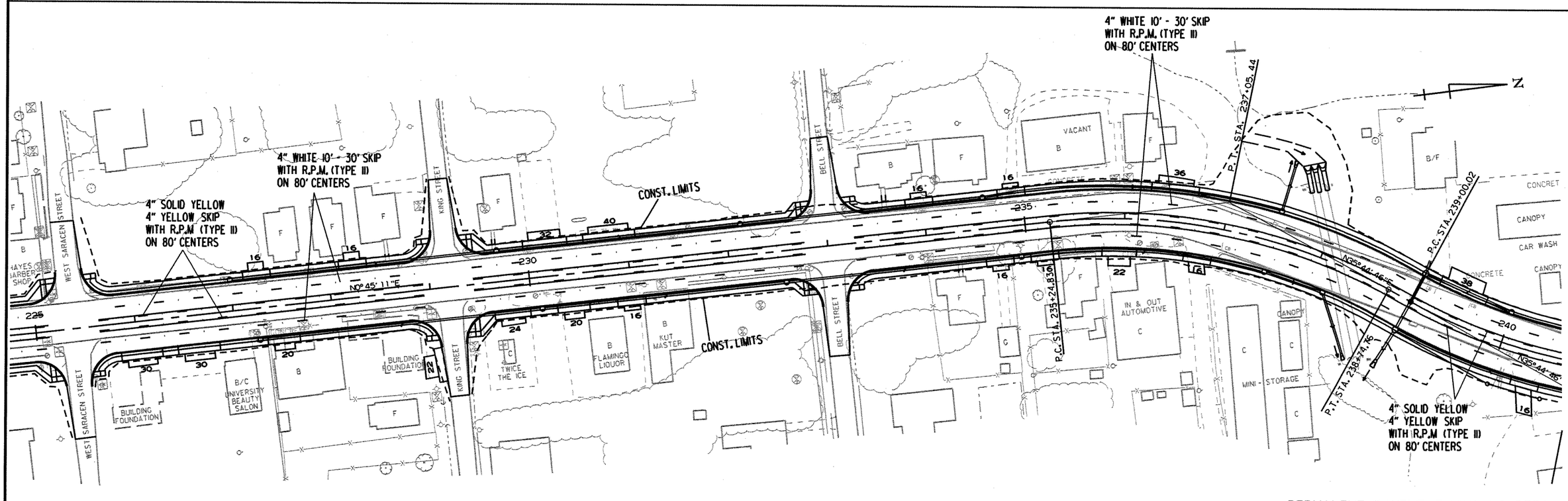
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	25	144

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12





PERMANENT PAVEMENT MARKING DETAILS

8/24/2012

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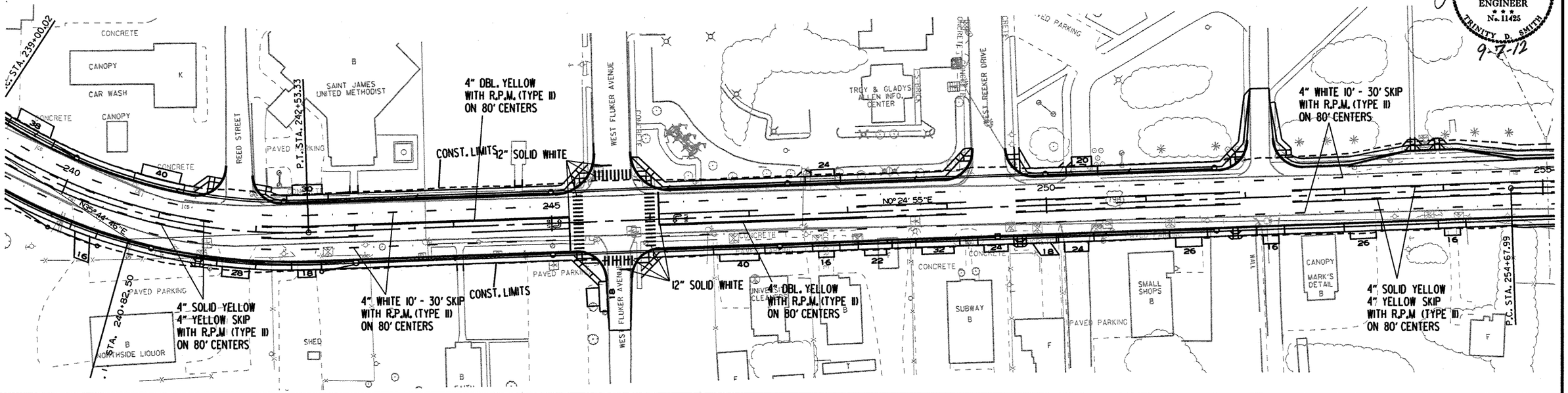
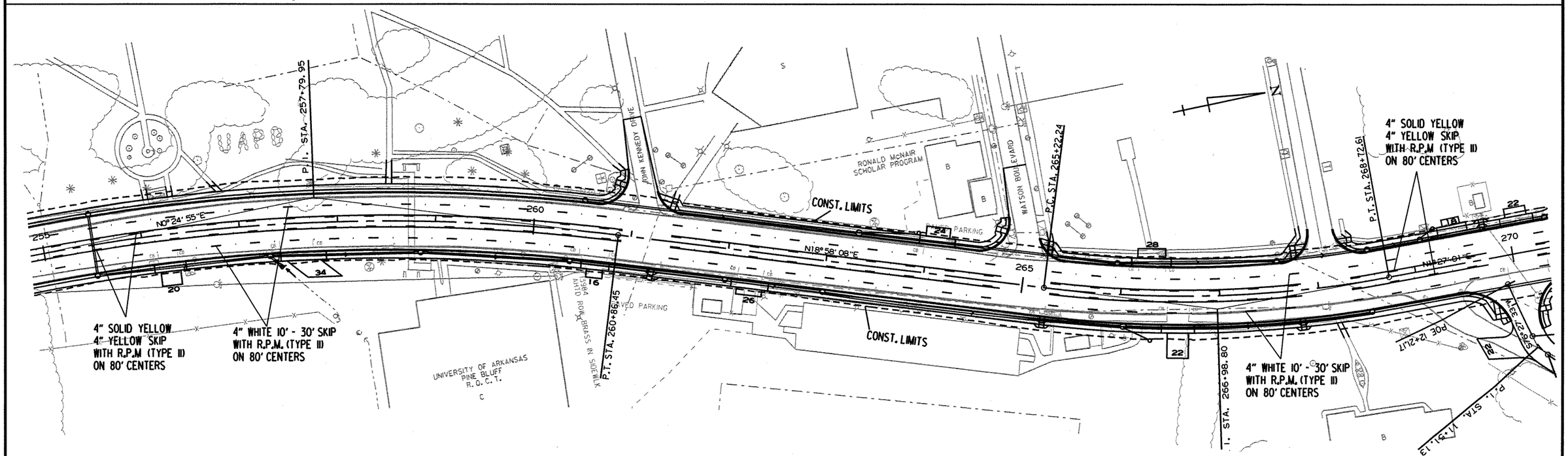
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	26	144

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12





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PERMANENT PAVEMENT MARKING DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	27	144

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

N

COLLEGIATE DRIVE
CONCRETE
K CITGO
CANOPY
SIMMONS FIRST NATIONAL BANK
B
CONCRETE
PAVED PARKING
NORTHSIDE MACHINE SHOP
C
TRUCKERS TRANSMISSION
SPIRITUAL TEMPLE
P.C. STA. 280+14.29
P.I. STA. 283+14.75
CONST. LIMITS
N1°27'01"E
N3°03'27"W
S86°27'33"W
P.I. STA. 11+63.05
P.C. STA. 11+38.71
MATCH EXIST. CONC.
NEWWAVE BARBER
CEDAR CABIN
F
BROWNING'S LIQUOR
C
BROWNING'S LAUNDRY
C
KAPPA ALPHA PSI
F
SMALL SHOPS
B/K
P.I. STA. 281+64.57
4" SOLID YELLOW
4" YELLOW SKIP
WITH R.P.M (TYPE II)
ON 80' CENTERS
4" WHITE 10' - 30' SKIP
WITH R.P.M. (TYPE II)
ON 80' CENTERS

4" SOLID YELLOW
4" YELLOW SKIP
WITH R.P.M (TYPE II)
ON 80' CENTERS
OLIVER ROAD
P.I. STA. 292+44.31
CONST. LIMITS
20' 110' TAPER 30'
N33°39'35"E
4" DBL. YELLOW
WITH R.P.M. (TYPE II)
ON 80' CENTERS
4" WHITE 10' - 30' SKIP
WITH R.P.M. (TYPE II)
ON 80' CENTERS
P.C. STA. 288+64.03
P.I. STA. 295+98.38
CANOPY
USED TIRES
K
UNIVERSITY BAIT & TACKLE
B
C & S PRODUCE
END HWY. 79B
STA. 295+30

PERMANENT PAVEMENT MARKING DETAILS

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	28	144

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	STAGE 1	STAGE 2	END OF JOB	REMOVAL OF PERMANENT PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS		REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS		THERMOPLASTIC PAVEMENT MARKINGS					HIGH PERFORMANCE CONTRAST PAVEMENT MARKING	
						WORDS	ARROWS		TY. II (WHITE/RED)	TYPE II (YEL/YEL)	4" WHITE	4" YELLOW	12" WHITE	WORDS	ARROWS	4" WHITE	4" YELLOW
	LIN.FT. - EACH			LIN.FT.		EACH		LIN.FT.	EACH		LIN.FT.			EACH		LIN.FT.	
REMOVAL OF PERMANENT PAVEMENT MARKINGS	25050			25050													
CONSTRUCTION PAVEMENT MARKINGS	38603	3375			41978												
CONSTRUCTION PAVEMENT MARKINGS (WORDS)	4					4											
CONSTRUCTION PAVEMENT MARKINGS (ARROWS)	4						4										
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS		3375						3375									
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)			233						233								
RAISED PAVEMENT MARKERS TYPE II (YEL/YEL)	23	23	220							266							
THERMOPLASTIC PAVEMENT MARKINGS WHITE (4")			4571								4571						
THERMOPLASTIC PAVEMENT MARKINGS YELLOW (4")			19610									19610					
THERMOPLASTIC PAVEMENT MARKINGS WHITE (12")			2180										2180				
THERMOPLASTIC PAVEMENT MARKINGS WORDS	4		9											13			
THERMOPLASTIC PAVEMENT MARKINGS ARROWS	4		7												11		
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING WHITE (4")			124													124	
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING YELLOW (4")			236														236
TOTALS:				**25050**	**41978**	**4**	**4**	**3375**	**233**	**266**	**4571**	**19610**	**2180**	**13**	**11**	**124**	**236**

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

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	STAGE 2	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		VERTICAL PANELS	TRAFFIC DRUMS	BARRICADES (TYPE III)		FURNISHING & INSTALLING PRECAST CONC. BARRIER	RELOCATING PRECAST CONCRETE BARRIER
										RIGHT	LEFT		
			EACH			NO.	SQ. FT.	EACH				LIN.FT.	
OM-3L	OBJECT MARKER	12"x36"	6	6	6	6	18.0						
OM-3R	OBJECT MARKER	12"x36"	8	8	8	8	24.0						
W20-1	ROAD WORK 1500 FT.	48"x48"	4	4	4	4	64.0						
W20-1	ROAD WORK 1000 FT.	48"x48"	4	4	4	4	64.0						
W20-1	ROAD WORK 500 FT.	48"x48"	4	4	4	4	64.0						
W20-1	ROAD WORK AHEAD	48"x48"	23	23	23	23	368.0						
M1-4	ROUTE MARKER	24"x24"	18		18	18	72.0						
M4-8	DETOUR	24"x12"	18		18	18	36.0						
G20-2	END ROAD WORK	48"x24"	2	2	2	2	16.0						
R11-2	ROAD CLOSED	48"x30"	13	9	13	13	130.0						
W1-6	LARGE ARROW	48"x24"	18		18	18	144.0						
R4-1	DO NOT PASS	24"x30"	2	2	2	2	10.0						
	VERTICAL PANELS		212	212	212	212		212					
	TRAFFIC DRUMS		316	636	636	636			636				
	TYPE III BARRICADE-RT. (8')		14	2	14	14				112			
	TYPE III BARRICADE-LT. (8')		8	9	9	9					72		
	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER		236		236							236	
	RELOCATING PRECAST CONCRETE BARRIER			236	236								236
TOTALS:							**1010.0**	**212**	**636**	**112**	**72**	**236**	**236**

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

* THE QUANTITY OF VERTICAL PANELS PROVIDED IN THE CONTRACT IS FOR ONE SIDE OF THE ROADWAY FOR THE FULL LENGTH OF THE JOB. THIS IS THE MAXIMUM QUANTITY REQUIRED TO ALLOW THE CONTRACTOR TO NOTCH ONE MILE, BACKFILL TO A POINT WHERE THE VERTICAL DIFFERENTIAL IS 4" OR LESS, AND THEN NOTCH ANOTHER ONE-MILE SECTION. THIS IS THE MAXIMUM NUMBER OF VERTICAL PANELS THAT WILL BE PAID FOR. REFER TO SECTION 603.02 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION REQUIREMENTS.

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				6	ARK.			
				JOB NO.		020070	29	144

(2) QUANTITIES

CLEARING AND GRUBBING

STATION	STATION	LOCATION	CLEARING	GRUBBING
			STATION	
217+00	220+00	HWY. 79B	3	3
227+00	228+00	HWY. 79B	1	1
232+00	236+00	HWY. 79B	4	4
243+00	245+00	HWY. 79B	2	2
250+00	261+00	HWY. 79B	11	11
266+00	267+00	HWY. 79B	1	1
292+00	296+00	HWY. 79B	4	4
TOTALS:			26	26

BENCH MARKS

STATION	LOCATION	BENCH MARKS
		EACH
282+74	HWY. 79B - RT. ON R.C. BOX HDWL.	1
TOTAL:		1

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

EARTHWORK

	STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT	** SELECTED MATERIAL (CLASS SM-2)	SOIL STABILIZATION
				CU. YD.			TON
	ENTIRE	PROJECT	HWY. 79B - MAIN LANES	5203	10202		
	ENTIRE	PROJECT	HWY. 935	58	156		
	ENTIRE	PROJECT	APPROACHES	70	1215		
	ENTIRE	PROJECT	TEMPORARY APPROACHES	100	100		
	236+50	238+00	CHANNEL CHANGE	1600			
	282+63	282+84	CHANNEL CHANGE	30			
*	ENTIRE	PROJECT	TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER				200
*	ENTIRE	PROJECT	UNDERCUT FOR EXISTING UNSUITABLE MATERIAL - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	7200		8300	
TOTALS:				14261	11673	8300	200

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

** QUANTITY ESTIMATED. SEE SECTION 302 OF THE STD. SPECS.

NOTE: ALL EARTHWORK QUANTITIES WITH THE EXCEPTION OF UNDERCUT AND BACKFILL SHALL BE PAID AS PLAN QUANTITY.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH

9-7-12

REMOVAL AND DISPOSAL OF FENCE

STATION	STATION	LOCATION	LIN. FT.
213+27	213+38	HWY. 79B - RT.	20
223+55		HWY. 79B - LT.	5
227+34	227+86	HWY. 79B - RT.	74
233+97	234+83	HWY. 79B - RT.	86
235+70		HWY. 79B - RT.	10
236+89	237+20	HWY. 79B - RT.	31
240+50	241+68	HWY. 79B - RT.	90
241+99	242+40	HWY. 79B - RT.	40
242+62	243+15	HWY. 79B - RT.	53
245+91		HWY. 79B - RT.	25
246+62		HWY. 79B - RT.	20
248+62		HWY. 79B - RT.	18
249+62		HWY. 79B - RT.	8
250+13		HWY. 79B - RT.	5
251+65	252+08	HWY. 79B - RT.	43
254+68		HWY. 79B - RT.	2
257+69	259+62	HWY. 79B - LT.	222
260+50	266+90	HWY. 79B - RT.	600
262+35	268+20	HWY. 79B - RT.	130
273+84	274+75	HWY. 79B - RT.	98
TOTAL:			1580

REMOVAL AND DISPOSAL OF ITEMS

STATION	STATION	LOCATION	CURB AND GUTTER	CONCRETE ISLANDS	CONCRETE DRIVEWAYS	WALKS	CONCRETE PAVEMENT	CONCRETE SLAB	FOUNDATIONS	SIGNS	SIGN FOUNDATIONS	GUARDRAIL	BILLBOARD	POST	PLANTERS	PEDESTRIAN BRIDGE
			LIN. FT.	SQ. YD.	SQ. YD.	SQ. YD.			SQ. YD.	EACH	EACH	LIN.FT.	EACH	EACH	EACH	EACH
208+51	208+58	HWY. 79B - RT.	67	26												
208+64	208+72	HWY. 79B - LT.	65	26												
211+69	282+86	HWY. 79B - LT.								13	4				2	1
211+80	213+27	HWY. 79B - RT.	147											1		
212+15	212+77	HWY. 79B - LT.	62													
212+33	268+24	HWY. 79B - RT.				971	1400							2		
213+93	216+53	HWY. 79B - RT.	260													
213+40	217+28	HWY. 79B - LT.	58		372											
217+63	219+80	HWY. 79B - LT.	249													
217+70	290+50	HWY. 79B - LT.				2606										
222+91	291+70	HWY. 79B - RT.						2	168	22	6		2		3	
223+49	225+08	HWY. 79B - RT.	159													
227+49	235+95	HWY. 79B - RT.			155											
236+98	240+14	HWY. 79B - RT.	316													
237+57	238+99	HWY. 79B - LT.	142													
239+42	242+53	HWY. 79B - LT.			188											
239+64	241+96	HWY. 79B - LT.	171		129											
245+43	245+83	HWY. 79B - LT.	50													
247+77	249+94	HWY. 79B - RT.			411									2		
254+71	263+97	HWY. 79B - LT.	884													
258+61	269+03	HWY. 79B - RT.	958													
265+37	267+69	HWY. 79B - LT.	203													
268+43	270+65	HWY. 79B - LT.	178													
269+59	295+30	HWY. 79B - RT.	1544								1			4		
271+66	289+61	HWY. 79B - LT.	1267		128											
290+02	293+25	HWY. 79B - LT.	323													
293+53	293+93	HWY. 79B - LT.			147											
294+20	295+30	HWY. 79B - LT.	110													
294+31	298+00	HWY. 79B - RT.	126									275				
295+62	298+97	HWY. 79B - LT.	126									250				
TOTALS:			7465	52	1530	3577	1400	2	168	35	11	525	2	9	5	1

REFER TO SPECIAL PROVISION "REMOVAL AND DISPOSAL OF GUARDRAIL"

8/24/2012

R020070.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10/19/2012				6	ARK.			
				JOB NO.		020070	30	144

(2) QUANTITIES

REMOVAL AND DISPOSAL OF CULVERTS AND DROP INLETS

STATION	DESCRIPTION	PIPE CULVERTS EACH	DROP INLETS EACH
HWY. 79B:			
235+77	12" X 236' CMP - LT.	1	
238+96	12" X 20" ARCH CMP - LT.	1	
239+02	DROP INLET - LT.		1
257+30	DROP INLET - RT.		1
257+92	18" X 118' RCP - RT.	1	
258+54	DROP INLET - RT.		1
259+93	18" X 270' RCP - RT.	1	
260+92	DROP INLET - LT.		1
261+31	DROP INLET - RT.		1
262+41	18" X 215' RCP - RT.	1	
262+83	18" X 378' RCP - LT.	1	
263+51	DROP INLET - RT.		1
264+37	18" X 168' RCP - RT.	1	
264+74	DROP INLET - LT.		1
265+04	18" X 55' RCP - LT.	1	
265+20	14" X 13' RCP - LT.	1	
265+22	DROP INLET - LT.		1
265+23	DROP INLET - RT.		1
265+35	DROP INLET - LT.		1
266+53	18" X 226' RCP - LT.	1	
266+64	18" X 282' RCP - RT.	1	
267+71	DROP INLET - LT.		1
268+05	DROP INLET - RT.		1
268+74	24" X 242' RCP - RT.	1	
268+91	18" X 237' RCP - LT.	1	
270+12	DROP INLET - LT.		1
271+48	24" X 270' RCP - LT.	1	
272+45	DROP INLET - RT.		1
272+84	DROP INLET - LT.		1
272+96	24" X 21' RCP - LT.	1	
273+07	DROP INLET - LT.		1
273+50	18" X 206' RCP - RT.	1	
273+69	24" X 122' RCP - LT.	1	
274+31	DROP INLET - LT.		1
274+42	24" X 20' RCP - LT.	1	
274+54	DROP INLET - LT.		1
274+55	DROP INLET - RT.		1
275+93	18" X 274' RCP - RT.	1	
276+02	24" X 293' RCP - LT.	1	
277+31	DROP INLET - RT.		1
277+51	DROP INLET - LT.		1
278+95	24" X 327' RCP - RT.	1	
279+03	24" X 300' RCP - LT.	1	
280+55	DROP INLET - LT.		1
280+59	DROP INLET - RT.		1
281+61	24" X 206' RCP - LT.	1	
281+63	24" X 205' RCP - RT.	1	
283+00	24" X 34' RCP - LT.	1	
283+18	DROP INLET - LT.		1
283+18	24" X 7' RCP - LT.	1	
284+45	24" X 324' RCP - RT.	1	
284+65	18" X 291' RCP - LT.	1	
286+08	DROP INLET - RT.		1
286+12	DROP INLET - LT.		1
289+88	18" X 42' RCP - LT.	1	
290+64	18" X 90' CMP - LT.	1	
292+55	DROP INLET - RT.		1
293+56	18" X 202' RCP - RT.	1	
293+64	18" X 106' PLASTIC PIPE - LT.	1	
294+57	DROP INLET - RT.		1
295+02	18" RCP - RT.	1	
TOTALS:		33	28

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

CONCRETE COMBINATION CURB AND GUTTER (BOX 1 OF 2)

STATION	STATION	LOCATION	TYPE A (1' 6") LIN. FT.
208+51	208+59	HWY. 79B - RT.	48
208+64	208+72	HWY. 79B - LT.	45
211+80	213+14	HWY. 79B - LT.	134
211+80	213+18	HWY. 79B - RT.	138
213+14	213+44	HWY. 79B - LT.	43
213+18	213+48	HWY. 79B - RT.	47
213+81	214+12	HWY. 79B - RT.	45
213+88	214+19	HWY. 79B - LT.	47
214+12	221+19	HWY. 79B - RT.	691
214+19	216+99	HWY. 79B - LT.	252
216+99	217+25	HWY. 79B - LT.	50
217+53	217+79	HWY. 79B - LT.	35
217+79	221+06	HWY. 79B - LT.	319
221+06	221+40	HWY. 79B - LT.	48
221+19	221+45	HWY. 79B - RT.	42
221+66	221+97	HWY. 79B - LT.	43
221+66	221+97	HWY. 79B - RT.	47
221+97	224+96	HWY. 79B - LT.	299
221+97	224+96	HWY. 79B - RT.	299
224+96	225+26	HWY. 79B - LT.	46
224+96	225+26	HWY. 79B - RT.	44
225+49	225+79	HWY. 79B - RT.	47
225+51	225+81	HWY. 79B - LT.	47
225+79	228+76	HWY. 79B - RT.	293
225+81	228+76	HWY. 79B - LT.	291
228+76	229+07	HWY. 79B - LT.	47
228+76	229+07	HWY. 79B - RT.	47
229+31	229+61	HWY. 79B - LT.	46
229+31	229+61	HWY. 79B - RT.	46
229+31	229+61	HWY. 79B - RT.	46
229+61	232+59	HWY. 79B - LT.	294
229+61	232+59	HWY. 79B - RT.	294
232+59	232+90	HWY. 79B - LT.	46
232+59	232+90	HWY. 79B - RT.	48
233+14	233+44	HWY. 79B - LT.	47
233+14	233+44	HWY. 79B - RT.	47
233+44	241+29	HWY. 79B - LT.	769
233+44	245+24	HWY. 79B - RT.	1152
241+29	241+63	HWY. 79B - LT.	52
241+92	242+26	HWY. 79B - LT.	45
242+26	245+05	HWY. 79B - LT.	271
245+05	245+46	HWY. 79B - LT.	63
245+24	245+54	HWY. 79B - RT.	48
245+78	246+08	HWY. 79B - RT.	46
245+81	246+21	HWY. 79B - LT.	63
246+08	269+46	HWY. 79B - RT.	2298
246+21	248+99	HWY. 79B - LT.	278
248+99	249+29	HWY. 79B - LT.	47
249+60	249+90	HWY. 79B - LT.	47
249+90	251+74	HWY. 79B - LT.	180
251+74	252+05	HWY. 79B - LT.	46
252+29	252+59	HWY. 79B - LT.	47
252+59	260+62	HWY. 79B - LT.	795
260+62	260+90	HWY. 79B - LT.	55
261+21	261+50	HWY. 79B - LT.	37
261+50	264+51	HWY. 79B - LT.	297
264+51	264+80	HWY. 79B - LT.	54
SUBTOTAL:			11092

CONCRETE COMBINATION CURB AND GUTTER (BOX 2 OF 2)

STATION	STATION	LOCATION	TYPE A (1' 6") LIN. FT.
265+11	265+41	HWY. 79B - LT.	38
265+41	267+64	HWY. 79B - LT.	215
267+64	267+96	HWY. 79B - LT.	49
268+21	268+54	HWY. 79B - LT.	47
268+54	270+35	HWY. 79B - LT.	173
269+46	269+87	HWY. 79B - RT.	63
270+11	270+53	HWY. 79B - RT.	93
270+35	270+66	HWY. 79B - LT.	46
270+53	295+30	HWY. 79B - RT.	2421
270+99	271+29	HWY. 79B - LT.	46
271+29	289+53	HWY. 79B - LT.	1788
289+53	289+82	HWY. 79B - LT.	45
290+00	290+28	HWY. 79B - LT.	45
290+28	295+30	HWY. 79B - LT.	502
295+30	296+36	HWY. 79B - LT.	106
295+30	296+36	HWY. 79B - RT.	106
297+29	297+49	HWY. 79B - LT.	20
297+29	297+49	HWY. 79B - RT.	20
SUBTOTAL:			5823
TOTAL:			16915

SHORING

STATION	LOCATION	LUMP SUM
282+78	HWY. 79B	1.00
TOTAL:		1.00

REFER TO SPECIAL PROVISION "SHORING".

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

SELECTED PIPE BEDDING

LOCATION	SELECTED PIPE BEDDING CU.YD.
ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	200
TOTAL:	200

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

SOIL LOG

STATION	LATITUDE DEG	LATITUDE MIN	LATITUDE SEC	LONGITUDE DEG	LONGITUDE MIN	LONGITUDE SEC	LOCATION	DEPTH FEET	AASHTO CLASSIFICATION	LIQUID	PLASTICITY INDEX	COLOR
204+00	34	13	41.10	92	1	11.30	HWY. 79B - 5' RT.	0-5	A-6 (10)	25	14	BROWN
204+00	34	13	41.10	92	1	11.10	HWY. 79B - 38' RT.	0-5	A-4 (3)	24	5	BROWN
212+00	34	13	49.00	92	1	11.70	HWY. 79B - 20' LT.	0-5	A-4 (0)	21	6	BROWN
212+00	34	13	48.90	92	1	11.90	HWY. 79B - 38' LT.	0-5	A-4 (3)	25	10	BR/GR
220+00	34	13	56.70	92	1	9.80	HWY. 79B - 16' RT.	0-5	A-4 (6)	26	10	BROWN
220+00	34	13	56.70	92	1	9.70	HWY. 79B - 33' RT.	0-5	A-4 (4)	28	6	BROWN
228+00	34	14	4.50	92	1	10.10	HWY. 79B - 15' LT.	0-5	A-4 (4)	25	7	BROWN
228+00	34	14	4.60	92	1	10.30	HWY. 79B - 36' LT.	0-5	A-4 (1)	22	4	BROWN
236+00	34	14	12.30	92	1	9.40	HWY. 79B - 14' RT.	0-5	A-4 (4)	25	10	GRAY
236+00	34	14	12.30	92	1	9.40	HWY. 79B - 32' RT.	0-5	A-4 (3)	23	7	GRAY
244+00	34	14	19.90	92	1	7.20	HWY. 79B - 16' LT.	0-5	A-4 (3)	23	6	GRAY
244+00	34	14	19.80	92	1	7.40	HWY. 79B - 34' LT.	0-5	A-4 (1)	21	4	BROWN
252+00	34	14	27.90	92	1	6.70	HWY. 79B - 15' RT.	0-5	A-4 (3)	23	6	GRAY
252+00	34	14	27.90	92	1	6.50	HWY. 79B - 35' RT.	0-5	A-4 (0)	ND	NP	GRAY
260+00	34	14	35.80	92	1	6.10	HWY. 79B - 17' LT.	0-5	A-4 (6)	25	8	GRAY
260+00	34	14	35.90	92	1	6.30	HWY. 79B - 41' LT.	0-5	A-4 (2)	22	4	GRAY
268+00	34	14	43.40	92	1	3.10	HWY. 79B - 15' RT.	0-5	A-4 (7)	27	10	GRAY
268+00	34	14	43.40	92	1	2.90	HWY. 79B - 35' RT.	0-5	A-4 (1)	26	3	GRAY
276+00	34	14	51.20	92	1	3.30	HWY. 79B - 17' LT.	0-5	A-4 (2)	23	5	BROWN
276+00	34	14	51.20	92	1	3.50	HWY. 79B - 38' LT.	0-5	A-4 (4)	27	5	BROWN
284+00	34	14	58.80	92	1	2.80	HWY. 79B - 16' RT.	0-5	A-4 (6)	26	9	BROWN
284+00	34	14	58.80	92	1	2.80	HWY. 79B - 38' RT.	0-5	A-4 (4)	24	8	BROWN
292+00	34	15	7.00	92	1	3.10	HWY. 79B - 18' LT.	0-5	A-6 (9)	28	13	BROWN
292+00	34	15	7.00	92	1	3.30	HWY. 79B - 38' LT.	0-5	A-4 (1)	22	6	BROWN
300+00	34	15	13.70	92		58.20	HWY. 79B - 19' RT.	0-5	A-4 (5)	27	9	BROWN
300+00	34	15	13.60	92		58.00	HWY. 79B - 38' RT.	0-5	A-4 (1)	25	7	BROWN

SOIL CHARACTERISTICS TABULATED ABOVE ARE REPRESENTATIVE AT THE LOCATION OF THE SAMPLE, AND FROM SURFACE INDICATIONS ARE TYPICAL FOR THE LIMITS SHOWN. THESE DATA ARE SHOWN FOR INFORMATION ONLY. THE STATE WILL NOT BE RESPONSIBLE FOR VARIATIONS IN THE SOIL CHARACTERISTICS AND/OR EXTENT OF SAME DIFFERING FROM THE ABOVE TABULATIONS.
NP - NON-PLASTIC
ND - NOT DETERMINABLE

8/24/2012
R020070.DGN

QUANTITIES

CONCRETE WALKS AND HAND RAILING (BOX 1 OF 2)

STATION	STATION	LOCATION	LENGTH	CONCRETE WALKS	HAND RAILING
			LIN.FT.	SQ.YD.	LIN.FT.
208+51	208+59	HWY. 79B - RT.	48	27	
208+64	208+72	HWY. 79B - LT.	45	25	
211+80	213+14	HWY. 79B - LT.	36	20	
211+80	213+18	HWY. 79B - RT.	86	48	
213+14	213+44	HWY. 79B - LT.	43	24	
213+18	213+48	HWY. 79B - RT.	47	26	
213+81	214+12	HWY. 79B - RT.	45	25	
213+88	214+19	HWY. 79B - LT.	47	26	
214+12	221+19	HWY. 79B - RT.	639	355	
214+19	216+99	HWY. 79B - LT.	176	98	
216+99	217+25	HWY. 79B - LT.	50	28	
217+53	217+79	HWY. 79B - LT.	35	19	
217+79	221+06	HWY. 79B - LT.	275	153	
221+06	221+40	HWY. 79B - LT.	48	27	
221+19	221+45	HWY. 79B - RT.	42	23	
221+66	221+97	HWY. 79B - LT.	47	26	
221+66	221+97	HWY. 79B - RT.	47	26	
221+97	224+96	HWY. 79B - LT.	195	108	
221+97	224+96	HWY. 79B - RT.	209	116	
224+96	225+26	HWY. 79B - LT.	46	26	
224+96	225+26	HWY. 79B - RT.	44	24	
225+49	225+79	HWY. 79B - RT.	47	26	
225+51	225+81	HWY. 79B - LT.	47	26	
225+79	228+76	HWY. 79B - RT.	181	101	
225+81	228+76	HWY. 79B - LT.	267	148	
228+76	229+07	HWY. 79B - LT.	47	26	
228+76	229+07	HWY. 79B - RT.	47	26	
229+31	229+61	HWY. 79B - LT.	46	26	
229+31	229+61	HWY. 79B - RT.	46	26	
229+61	232+59	HWY. 79B - LT.	202	112	
229+61	232+59	HWY. 79B - RT.	202	112	
232+59	232+90	HWY. 79B - LT.	46	26	
232+59	232+90	HWY. 79B - RT.	48	27	
233+14	233+44	HWY. 79B - LT.	47	26	
233+14	233+44	HWY. 79B - RT.	47	26	
233+44	241+29	HWY. 79B - LT.	579	322	
233+44	245+24	HWY. 79B - RT.	964	536	
241+29	241+63	HWY. 79B - LT.	52	29	
241+92	242+26	HWY. 79B - LT.	45	25	
242+26	245+05	HWY. 79B - LT.	237	132	
245+05	245+46	HWY. 79B - LT.	63	35	
245+24	245+54	HWY. 79B - RT.	48	27	
245+78	246+08	HWY. 79B - RT.	46	26	
245+81	246+21	HWY. 79B - LT.	63	35	
246+08	269+46	HWY. 79B - RT.	1768	982	
246+21	248+99	HWY. 79B - LT.	238	132	
248+99	249+29	HWY. 79B - LT.	47	26	
249+60	249+90	HWY. 79B - LT.	47	26	
249+90	251+74	HWY. 79B - LT.	148	82	
251+74	252+05	HWY. 79B - LT.	96	53	
252+29	252+59	HWY. 79B - LT.	87	48	
252+59	260+62	HWY. 79B - LT.	866	481	
260+62	260+90	HWY. 79B - LT.	55	31	
261+21	261+50	HWY. 79B - LT.	37	21	
261+50	264+51	HWY. 79B - LT.	265	147	
264+51	264+80	HWY. 79B - LT.	54	30	
265+11	265+41	HWY. 79B - LT.	38	21	
265+41	267+64	HWY. 79B - LT.	183	102	
SUBTOTALS:				**5333**	**0**

CONCRETE WALKS AND HAND RAILING (BOX 2 OF 2)

STATION	STATION	LOCATION	LENGTH	CONCRETE WALKS	HAND RAILING
			LIN.FT.	SQ.YD.	LIN.FT.
267+64	267+96	HWY. 79B - LT.	49	27	
268+21	268+54	HWY. 79B - LT.	47	26	
268+54	270+35	HWY. 79B - LT.	117	65	
269+46	269+87	HWY. 79B - RT.	63	35	
270+11	270+53	HWY. 79B - RT.	93	52	
270+35	270+66	HWY. 79B - LT.	46	26	
270+53	295+30	HWY. 79B - RT.	1287	715	28
270+99	271+29	HWY. 79B - LT.	46	26	
271+29	289+53	HWY. 79B - LT.	1338	743	28
289+53	289+82	HWY. 79B - LT.	45	25	
290+00	290+28	HWY. 79B - LT.	45	25	
290+28	295+30	HWY. 79B - LT.	430	239	
* 295+30	296+36	HWY. 79B - LT.	106	52	
* 295+30	296+36	HWY. 79B - RT.	106	52	
* 297+29	297+49	HWY. 79B - LT.	20	11	
* 297+29	297+49	HWY. 79B - RT.	20	11	
SUBTOTALS:				**2130**	**56**
TOTALS:				**7463**	**56**

* REFER TO PLAN NOTES FOR CONCRETE WALK WIDTHS.

WHEELCHAIR RAMPS (BOX 1 OF 2)

STATION	LOCATION	TYPE 1	TYPE 2	TYPE 3
		SQ.YD.		
207+94	HWY. 79B - LT.	24.0		
207+97	HWY. 79B - RT.	16.2		
208+13	HWY. 79B - RT.	8.9		
209+24	HWY. 79B - LT.	22.6		
209+24	HWY. 79B - RT.	23.5		
209+91	HWY. 79B - RT.	10.1		
213+29	HWY. 79B - LT.		26.5	
213+29	HWY. 79B - RT.		29.6	
214+09	HWY. 79B - LT.		30.6	
214+09	HWY. 79B - RT.		21.8	
217+07	HWY. 79B - RT.			12.6
217+12	HWY. 79B - LT.		36.7	
217+66	HWY. 79B - LT.			8.1
221+27	HWY. 79B - LT.			8.7
221+33	HWY. 79B - RT.			8.3
221+78	HWY. 79B - LT.			8.5
221+80	HWY. 79B - RT.			10.4
221+88	HWY. 79B - RT.			12.9
221+88	HWY. 79B - LT.			12.7
225+12	HWY. 79B - LT.		27.6	
225+12	HWY. 79B - RT.		24.8	
225+63	HWY. 79B - RT.			8.0
225+63	HWY. 79B - LT.			8.4
228+94	HWY. 79B - LT.			8.2
228+94	HWY. 79B - RT.			8.2
229+44	HWY. 79B - LT.		23.9	
229+44	HWY. 79B - RT.		27.1	
232+74	HWY. 79B - LT.		20.1	
232+74	HWY. 79B - RT.		20.2	
233+30	HWY. 79B - LT.			7.8
233+30	HWY. 79B - RT.			8.4
241+47	HWY. 79B - LT.		24.4	
241+47	HWY. 79B - RT.			12.5
242+11	HWY. 79B - LT.			9.8
SUBTOTALS:		**105.3**	**313.3**	**153.5**

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	31	144

(2) QUANTITIES

WHEELCHAIR RAMPS (BOX 2 OF 2)

STATION	LOCATION	TYPE 1	TYPE 2	TYPE 3
		SQ.YD.		
245+27	HWY. 79B - LT.		29.6	
245+27	HWY. 79B - RT.		29.1	
246+00	HWY. 79B - LT.		33.6	
246+00	HWY. 79B - RT.		27.8	
249+16	HWY. 79B - LT.		25.2	
249+72	HWY. 79B - LT.		30.3	
249+72	HWY. 79B - RT.			12.4
251+89	HWY. 79B - LT.		27.4	
251+89	HWY. 79B - RT.			12.3
252+45	HWY. 79B - LT.			15.6
253+70	HWY. 79B - LT.			16.7
253+95	HWY. 79B - LT.			17.3
260+80	HWY. 79B - LT.			11.7
261+24	HWY. 79B - RT.			13.8
261+40	HWY. 79B - LT.		22.2	
264+70	HWY. 79B - LT.			11.8
265+24	HWY. 79B - LT.		24.1	
265+24	HWY. 79B - RT.			12.4
267+78	HWY. 79B - LT.		25.8	
267+81	HWY. 79B - RT.			12.6
268+38	HWY. 79B - LT.			12.2
269+74	HWY. 79B - LT.			12.3
269+74	HWY. 79B - RT.		40.2	
270+24	HWY. 79B - RT.			13.9
270+51	HWY. 79B - LT.			7.6
271+14	HWY. 79B - LT.			7.6
289+71	HWY. 79B - LT.			8.6
290+11	HWY. 79B - LT.			8.5
290+22	HWY. 79B - LT.			12.7
290+22	HWY. 79B - RT.			12.3
SUBTOTALS:		**0.0**	**315.3**	**232.3**
TOTALS:		**105.3**	**628.6**	**385.8**

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC

LOCATION	TON	TACK COAT GALLON
ENTIRE PROJECT - TO BE USED IF AND WHERE	40	80
DIRECTED BY THE ENGINEER		
TOTALS:	**40**	**80**

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

CONCRETE ISLAND

STATION	LOCATION	CURB FACE TYPE	CONCRETE ISLAND SQ.YD.
208+55	HWY. 79B - RT.	A	10
208+68	HWY. 79B - LT.	A	10
TOTAL:			**20**

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	32	144

(2) QUANTITIES

DRIVEWAYS & TURNOUTS (BOX 1 OF 2)

STATION	SIDE	LOCATION	WIDTH	**MODIFIED CURB		PORTLAND CEMENT CONCRETE DRIVEWAY	ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG64-22)		AGGREGATE BASE COURSE (CLASS 7)
			FEET	STATION	STATION	SQ. YD.	SQ. YD.	TON	TON
212+05	LT.	HWY. 79B (UNIVERSITY DR.)	40	211+71	212+39	46.20	55.6	6.1	22.7
212+12	RT.	HWY. 79B (UNIVERSITY DR.)	40	211+78	212+46	46.20	62.2	6.8	25.4
212+91	LT.	HWY. 79B (UNIVERSITY DR.)	34	212+60	213+22	40.90	45.9	5.0	18.7
214+65	LT.	HWY. 79B (UNIVERSITY DR.)	40	214+31	214+99	77.90			
216+55	LT.	HWY. 79B (UNIVERSITY DR.)	40	216+21	216+89	116.40			
220+59	RT.	HWY. 79B (UNIVERSITY DR.)	22	220+34	220+84	30.20	45.7	5.0	18.7
220+69	LT.	HWY. 79B (UNIVERSITY DR.)	40	220+35	221+03	46.20	55.6	6.1	22.7
221+01	RT.	HWY. 79B (UNIVERSITY DR.)	22	220+76	221+26	30.20	27.5	3.0	11.2
222+16	RT.	HWY. 79B (UNIVERSITY DR.)	26	221+89	222+43	33.80	31.2	3.4	12.7
222+69	LT.	HWY. 79B (UNIVERSITY DR.)	26	222+42	222+96	33.80	19.6	2.2	8.0
223+21	RT.	HWY. 79B (UNIVERSITY DR.)	40	222+87	223+55	46.20	34.0	3.7	13.9
223+42	LT.	HWY. 79B (UNIVERSITY DR.)	20	223+18	223+66	28.40	13.3	1.5	5.4
224+25	LT.	HWY. 79B (UNIVERSITY DR.)	26	223+98	224+52	33.80	19.7	2.2	8.0
226+04	RT.	HWY. 79B (UNIVERSITY DR.)	30	225+75	226+33	37.30	22.5	2.5	9.2
226+62	RT.	HWY. 79B (UNIVERSITY DR.)	30	226+33	226+91	37.30	25.7	2.8	10.5
227+27	LT.	HWY. 79B (UNIVERSITY DR.)	16	227+05	227+49	24.90	15.3	1.7	6.2
227+49	RT.	HWY. 79B (UNIVERSITY DR.)	20	227+25	227+73	40.20			
228+25	LT.	HWY. 79B (UNIVERSITY DR.)	16	228+03	228+47	24.90	7.2	0.8	2.9
228+99	RT.	HWY. 79B (UNIVERSITY DR.)	22	228+74	229+24	30.20	29.3	3.2	12.0
229+07	RT.	HWY. 79B (UNIVERSITY DR.)	22	228+82	229+32	30.20	31.8	3.5	13.0
229+80	RT.	HWY. 79B (UNIVERSITY DR.)	24	229+54	230+06	32.00	17.3	1.9	7.1
230+19	LT.	HWY. 79B (UNIVERSITY DR.)	32	229+89	230+49	39.10	27.7	3.0	11.3
230+41	RT.	HWY. 79B (UNIVERSITY DR.)	20	230+17	230+65	28.40	11.9	1.3	4.9
230+83	LT.	HWY. 79B (UNIVERSITY DR.)	40	230+49	231+17	46.20	30.7	3.4	12.5
230+99	RT.	HWY. 79B (UNIVERSITY DR.)	16	230+77	231+21	24.90	9.1	1.0	3.7
233+96	LT.	HWY. 79B (UNIVERSITY DR.)	16	233+74	234+18	24.90	10.3	1.1	4.2
234+71	RT.	HWY. 79B (UNIVERSITY DR.)	16	234+49	234+93	24.90	7.5	0.8	3.1
234+89	LT.	HWY. 79B (UNIVERSITY DR.)	16	234+67	235+11	24.90	9.1	1.0	3.7
235+16	RT.	HWY. 79B (UNIVERSITY DR.)	16	234+94	235+38	24.90	8.6	0.9	3.5
235+95	RT.	HWY. 79B (UNIVERSITY DR.)	22	235+70	236+20	54.20			
236+47	LT.	HWY. 79B (UNIVERSITY DR.)	36	236+15	236+79	42.70	23.6	2.6	9.6
236+77	RT.	HWY. 79B (UNIVERSITY DR.)	16	236+55	236+99	24.90	17.8	2.0	7.3
239+44	LT.	HWY. 79B (UNIVERSITY DR.)	38	239+11	239+77	95.10			
240+33	RT.	HWY. 79B (UNIVERSITY DR.)	16	240+11	240+55	24.90	43.8	4.8	17.9
240+92	LT.	HWY. 79B (UNIVERSITY DR.)	40	240+58	241+26	94.20			
241+83	RT.	HWY. 79B (UNIVERSITY DR.)	28	241+55	242+11	35.60	31.1	3.4	12.7
242+50	RT.	HWY. 79B (UNIVERSITY DR.)	18	242+27	242+73	26.70	14.0	1.5	5.7
242+53	LT.	HWY. 79B (UNIVERSITY DR.)	30	242+24	242+82	89.10			
245+53	RT.	HWY. 79B (UNIVERSITY DR.)	18	245+30	245+76	26.70	27.8	3.1	11.4
246+89	RT.	HWY. 79B (UNIVERSITY DR.)	40	246+55	247+23	46.20	30.0	3.3	12.3
247+76	LT.	HWY. 79B (UNIVERSITY DR.)	24	247+50	248+02	32.00	11.3	1.2	4.6
247+77	RT.	HWY. 79B (UNIVERSITY DR.)	16	247+55	247+99	36.30			
248+27	RT.	HWY. 79B (UNIVERSITY DR.)	22	248+02	248+52	30.20	15.6	1.7	6.4
248+90	RT.	HWY. 79B (UNIVERSITY DR.)	32	248+60	249+20	61.90			
249+48	RT.	HWY. 79B (UNIVERSITY DR.)	24	249+22	249+74	50.70			
249+94	RT.	HWY. 79B (UNIVERSITY DR.)	18	249+71	250+17	51.50			
250+29	RT.	HWY. 79B (UNIVERSITY DR.)	24	250+03	250+55	32.00	24.0	2.6	9.8
250+37	LT.	HWY. 79B (UNIVERSITY DR.)	20	250+13	250+61	28.40	20.5	2.3	8.4
251+42	RT.	HWY. 79B (UNIVERSITY DR.)	26	251+15	251+69	33.80	25.7	2.8	10.5
252+24	RT.	HWY. 79B (UNIVERSITY DR.)	16	252+02	252+46	24.90	18.1	2.0	7.4
253+17	RT.	HWY. 79B (UNIVERSITY DR.)	26	252+90	253+44	33.80	17.6	1.9	7.2
254+08	RT.	HWY. 79B (UNIVERSITY DR.)	16	253+86	254+30	24.90	9.4	1.0	3.8
256+26	RT.	HWY. 79B (UNIVERSITY DR.)	20	256+02	256+50	28.40	31.8	3.5	13.0
257+64	RT.	HWY. 79B (UNIVERSITY DR.)	34	257+33	257+95	40.90	31.9	3.5	13.0
260+67	RT.	HWY. 79B (UNIVERSITY DR.)	16	260+45	260+89	24.90	14.5	1.6	5.9
262+26	RT.	HWY. 79B (UNIVERSITY DR.)	26	261+99	262+53	33.80	19.9	2.2	8.1
264+10	LT.	HWY. 79B (UNIVERSITY DR.)	24	263+84	264+36	32.00	27.7	3.0	11.3
266+30	LT.	HWY. 79B (UNIVERSITY DR.)	28	266+02	266+58	35.60	21.0	2.3	8.6
266+58	RT.	HWY. 79B (UNIVERSITY DR.)	22	266+33	266+83	30.20	62.8	6.9	25.6
269+44	LT.	HWY. 79B (UNIVERSITY DR.)	18	269+21	269+67	26.70	20.0	2.2	8.2
269+86	RT.	HWY. 79B (UNIVERSITY DR.)	22	269+61	270+11	30.20	59.9	6.6	24.5
270+10	LT.	HWY. 79B (UNIVERSITY DR.)	22	269+85	270+35	30.20	22.6	2.5	9.2
270+86	RT.	HWY. 79B (UNIVERSITY DR.)	34	270+55	271+17	40.90	79.0	8.7	32.3
271+38	RT.	HWY. 79B (UNIVERSITY DR.)	34	271+07	271+69	40.90	55.9	6.1	22.8
SUBTOTALS:						**2500.80**	1451.60	**159.20**	**592.70**

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.6% MIN. AGGR.....5.4% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22
* QUANTITY ESTIMATED. SEE SECTION 104.03 OF THE STD. SPECS. TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.
** FOR INFORMATION ONLY

THE CONTRACTOR, WITH THE APPROVAL OF THE ENGINEER, WILL BE ALLOWED TO SUBSTITUTE A HIGHER PERFORMANCE GRADE ASPHALT SURFACE COURSE FOR DRIVEWAYS AND MINOR SIDE STREET CONSTRUCTION AT NO ADDITIONAL COST TO THE DEPARTMENT.

DUMPED RIPRAP AND FILTER BLANKET

STATION	LOCATION	DUMPED RIPRAP	FILTER BLANKET
		CU. YDS.	SQ. YDS.
237+60	INLET OF PIPE CULVERT	59	117
238+80	OUTLET OF PIPE CULVERT	13	25
282+78	INLET OF PIPE CULVERT	38	75
282+78	OUTLET OF PIPE CULVERT	28	56
TOTALS:		**138**	**273**

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

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH
9-7-12

DRIVEWAYS & TURNOUTS (BOX 2 OF 2)

STATION	SIDE	LOCATION	WIDTH	**MODIFIED CURB		PORTLAND CEMENT CONCRETE DRIVEWAY	ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG64-22)		AGGREGATE BASE COURSE (CLASS 7)
			FEET	STATION	STATION	SQ. YD.	SQ. YD.	TON	TON
271+54	LT.	HWY. 79B (UNIVERSITY DR.)	36	271+22	271+86	42.70	30.0	3.3	12.3
271+86	RT.	HWY. 79B (UNIVERSITY DR.)	30	271+57	272+15	37.30	70.0	7.7	28.6
272+29	LT.	HWY. 79B (UNIVERSITY DR.)	38	271+96	272+62	44.40	37.2	4.1	15.2
272+65	RT.	HWY. 79B (UNIVERSITY DR.)	30	272+36	272+94	37.30	63.1	6.9	25.8
273+08	LT.	HWY. 79B (UNIVERSITY DR.)	30	272+79	273+37	37.30	16.7	1.8	6.8
273+22	RT.	HWY. 79B (UNIVERSITY DR.)	36	272+90	273+54	42.70	44.0	4.8	18.0
274+05	RT.	HWY. 79B (UNIVERSITY DR.)	18	273+82	274+28	26.70	14.2	1.6	5.8
274+29	LT.	HWY. 79B (UNIVERSITY DR.)	26	274+02	274+56	33.80	33.8	3.7	13.8
274+98	RT.	HWY. 79B (UNIVERSITY DR.)	40	274+64	275+32	46.20	19.1	2.1	7.8
275+58	RT.	HWY. 79B (UNIVERSITY DR.)	26	275+31	275+85	33.80	20.2	2.2	8.2
276+26	RT.	HWY. 79B (UNIVERSITY DR.)	38	275+93	276+59	44.40	29.6	3.3	12.1
276+71	LT.	HWY. 79B (UNIVERSITY DR.)	30	276+42	277+00	60.60			
277+09	RT.	HWY. 79B (UNIVERSITY DR.)	32	276+79	277+39	39.10	65.8	7.2	26.9
277+63	RT.	HWY. 79B (UNIVERSITY DR.)	32	277+33	277+93	39.10	48.9	5.4	20.0
277+73	LT.	HWY. 79B (UNIVERSITY DR.)	30	277+44	278+02	60.60			
278+04	RT.	HWY. 79B (UNIVERSITY DR.)	18	277+81	278+27	26.70	41.2	4.5	16.8
278+48	RT.	HWY. 79B (UNIVERSITY DR.)	40	278+14	278+82	46.20	108.4	11.9	44.3
279+67	LT.	HWY. 79B (UNIVERSITY DR.)	40	279+33	280+01	46.20	58.7	6.5	24.0
280+00	RT.	HWY. 79B (UNIVERSITY DR.)	40	279+66	280+34	46.20	110.7	12.2	45.2
281+14	LT.	HWY. 79B (UNIVERSITY DR.)	40	280+80	281+48	46.20	53.9	5.9	22.0
281+32	RT.	HWY. 79B (UNIVERSITY DR.)	38	280+99	281+65	44.40	97.1	10.7	39.6
281+97	LT.	HWY. 79B (UNIVERSITY DR.)	40	281+63	282+31	46.20	47.1	5.2	19.2
282+35	RT.	HWY. 79B (UNIVERSITY DR.)	36	282+03	282+67	42.70	84.0	9.2	34.3
282+99	LT.	HWY. 79B (UNIVERSITY DR.)	24	282+73	283+25	32.00	36.0	4.0	14.7
284+02	RT.	HWY. 79B (UNIVERSITY DR.)	30	283+73	284+31	37.30	82.0	9.0	33.5
284+58	RT.	HWY. 79B (UNIVERSITY DR.)	40	284+24	284+92	46.20	100.0	11.0	40.8
285+22	RT.	HWY. 79B (UNIVERSITY DR.)	36	284+90	285+54	42.70	87.0	9.6	35.5
285+68	LT.	HWY. 79B (UNIVERSITY DR.)	30	285+39	285+97	37.30	50.7	5.6	20.7
285+74	RT.	HWY. 79B (UNIVERSITY DR.)	34	285+43	286+05	40.90	88.8	9.8	36.3
286+43	RT.	HWY. 79B (UNIVERSITY DR.)	36	286+11	286+75	42.70	107.0	11.8	43.7
287+15	RT.	HWY. 79B (UNIVERSITY DR.)	40	286+81	287+49	46.20	118.0	13.0	48.2
288+27	RT.	HWY. 79B (UNIVERSITY DR.)	40	287+93	288+61	46.20	121.8	13.4	49.7
288+33	LT.	HWY. 79B (UNIVERSITY DR.)	30	288+04	288+62	37.30	29.7	3.3	12.1
289+54	RT.	HWY. 79B (UNIVERSITY DR.)	40	289+20	289+88	46.20	140.0	15.4	57.2
290+89	RT.	HWY. 79B (UNIVERSITY DR.)	32	290+59	291+19	39.10	113.4	12.5	46.3
293+20	RT.	HWY. 79B (UNIVERSITY DR.)	28	292+92	293+48	35.60	81.5	9.0	33.3
293+53	LT.	HWY. 79B (UNIVERSITY DR.)	24	293+27	293+79	74.40			
293+93	LT.	HWY. 79B (UNIVERSITY DR.)	24	293+67	294+19	76.90			
* ENTIRE PROJECT - TEMPORARY DRIVES									1000.0
SUBTOTALS:						**1651.80**	2249.60	**247.60**	**1918.70**
TOTALS:						**4152.60**	3701.20	**406.80**	**2511.40**

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.6% MIN. AGGR.....5.4% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22
* QUANTITY ESTIMATED. SEE SECTION 104.03 OF THE STD. SPECS. TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.
** FOR INFORMATION ONLY

THE CONTRACTOR, WITH THE APPROVAL OF THE ENGINEER, WILL BE ALLOWED TO SUBSTITUTE A HIGHER PERFORMANCE GRADE ASPHALT SURFACE COURSE FOR DRIVEWAYS AND MINOR SIDE STREET CONSTRUCTION AT NO ADDITIONAL COST TO THE DEPARTMENT.

8/24/2012

R020070.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	33	144

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

STRUCTURES (BOX 1 OF 2)

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE CULVERT (CLASS III) 18"	(CLASS III) 24"	(CLASS III) 30"	(CLASS III) 48"	(CLASS IV) 18	(CLASS IV) 24	(CLASS V) 18"	12" SIDE DRAIN	PIPE CULVERT STORM DRAIN ALTERNATES 1 & 2 18"	24"	30"	FLARED END SECTIONS FOR R.C. PIPE CULVERTS 18"	24"	30"	48"	DROP INLETS TYPE C	TYPE MO	TYPE ST	EXT. 4'	EXT. 8'	DROP INLETS ADJUSTED TO GRADE	YARD DRAIN	SOLID SODDING	WATER	STD. DWG. NOS.
		LIN. FT.											EACH				EACH							SQ.YD.	M.GAL	
209+48	DROP INLETS ADJUSTED TO GRADE ON RT.																					1				FPC-9S
209+66	DROP INLETS ADJUSTED TO GRADE ON LT.																					1				FPC-9S
209+87	DROP INLETS ADJUSTED TO GRADE ON RT.																					1				FPC-9S
209+98	CONST. DROP INLET ON LT. W/ OUTLET & FES	3											1					1			1			5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
214+25	CONST. DROP INLET ON LT. W/ INLET & OUTLET							59										1								FPC-9E, FPC-9M, PCC-1
214+25	CONST. DROP INLET ON RT. W/ INLET & OUTLET					18												1								FPC-9E, FPC-9M, PCC-1
216+50	CONST. DROP INLET ON RT. W/ INLET & OUTLET									216								1		1						FPC-9E, FPC-9M, PCC-1, PCM-1
219+50	CONST. DROP INLET ON LT. W/ OUTLET							60										1		1						FPC-9E, FPC-9M, PCC-1
219+50	CONST. DROP INLET ON RT. W/ INLET & OUTLET									286								1								FPC-9E, FPC-9M, PCC-1, PCM-1
220+40	CONST. YARD DRAIN ON RT.								94														1			FPC-9, PCM-1
220+80	CONST. YARD DRAIN ON RT.								40														1			FPC-9, PCM-1
221+80	CONST. DROP INLET ON RT. W/ OUTLET							240										1								FPC-9E, FPC-9M, PCC-1
227+00	CONST. DROP INLET ON LT. W/ OUTLET							266										1								FPC-9E, FPC-9M, PCC-1
227+25	CONST. DROP INLET ON RT. W/ OUTLET							281										1								FPC-9E, FPC-9M, PCC-1
229+70	CONST. DROP INLET ON LT. W/ INLET & OUTLET									241								1								FPC-9E, FPC-9M, PCC-1, PCM-1
230+10	CONST. DROP INLET ON RT. W/ INLET & OUTLET									241								1								FPC-9E, FPC-9M, PCC-1, PCM-1
232+15	CONST. DROP INLET ON LT. W/ INLET & OUTLET					241												1								FPC-9E, FPC-9M, PCC-1
232+55	CONST. DROP INLET ON RT. W/ INLET & OUTLET					234												1								FPC-9E, FPC-9M, PCC-1
234+60	CONST. DROP INLET ON LT. W/ INLET & OUTLET									300								1								FPC-9E, FPC-9M, PCC-1, PCM-1
234+93	CONST. DROP INLET ON RT. W/ INLET & OUTLET									241								1								FPC-9E, FPC-9M, PCC-1, PCM-1
237+50	CONST. DROP INLET ON LT. W/ INLET & OUTLET W/FES	51											1					1						5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
237+50	CONST. DROP INLET ON RT. W/ INLET & OUTLET									57								1		1						FPC-9E, FPC-9M, PCC-1, PCM-1
237+78	EXTEND TRI. R.C. PIPE CULVERT W/FES				60											3								87	1.10	FES-1, FES-2, PCC-1
238+15	CONST. DROP INLET ON RT. W/ INLET & OUTLET W/FES	68											1					1						5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
239+00	CONST. DROP INLET ON LT. W/ INLET & OUTLET						59											1								FPC-9E, FPC-9M, PCC-1
239+00	CONST. DROP INLET ON RT. W/ INLET & OUTLET W/FES		43											1				1						8	0.10	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
240+00	CONST. DROP INLET ON LT. W/ INLET & OUTLET										90							1		1						FPC-9E, FPC-9M, PCC-1, PCM-1
240+00	CONST. YARD DRAIN ON RT.								105														1			FPC-9, PCM-1
240+50	CONST. YARD DRAIN ON RT.								51														1			FPC-9, PCM-1
241+00	CONST. DROP INLET ON RT. W/ INLET & OUTLET									207								1								FPC-9E, FPC-9M, PCC-1, PCM-1
242+28	CONST. DROP INLET ON LT. W/ INLET & OUTLET						212											1								FPC-9E, FPC-9M, PCC-1, PCM-1
243+00	CONST. DROP INLET ON RT. W/ INLET & OUTLET									205								1								FPC-9E, FPC-9M, PCC-1, PCM-1
242+65	CONST. YARD DRAIN ON RT.								33														1			FPC-9, PCM-1
245+00	CONST. DROP INLET ON LT. W/ INLET & OUTLET									267								1								FPC-9E, FPC-9M, PCC-1, PCM-1
245+00	CONST. DROP INLET ON RT. W/ INLET & OUTLET									196								1								FPC-9E, FPC-9M, PCC-1, PCM-1
247+30	CONST. DROP INLET ON RT. W/ INLET & OUTLET	226																1								FPC-9E, FPC-9M, PCC-1
247+40	CONST. DROP INLET ON LT. W/ INLET & OUTLET	236																1								FPC-9E, FPC-9M, PCC-1
249+50	CONST. DROP INLET ON RT. W/ INLET & OUTLET									216									1							FPC-9S, PCC-1, PCM-1
250+00	CONST. DROP INLET ON LT. W/ INLET & OUTLET					256												1								FPC-9E, FPC-9M, PCC-1
251+70	CONST. DROP INLET ON LT. W/ OUTLET									166								1								FPC-9E, FPC-9M, PCC-1, PCM-1
251+70	CONST. DROP INLET ON RT. W/ OUTLET									216								1								FPC-9E, FPC-9M, PCC-1, PCM-1
255+50	CONST. DROP INLET ON LT. W/ OUTLET							60										1								FPC-9E, FPC-9M, PCC-1
255+50	CONST. DROP INLET ON RT. W/ OUTLET									173								1								FPC-9E, FPC-9M, PCC-1, PCM-1
257+30	CONST. DROP INLET ON RT. W/ OUTLET & INLET W/FES	11								148				1				1						5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
258+85	CONST. DROP INLET ON RT. W/ INLET & OUTLET									148								1								FPC-9E, FPC-9M, PCC-1, PCM-1
260+40	CONST. DROP INLET ON RT. W/ INLET & OUTLET										155							1								FPC-9E, FPC-9M, PCC-1, PCM-1
260+50	CONST. DROP INLET ON LT. W/ INLET & OUTLET							276										1								FPC-9E, FPC-9M, PCC-1, PCM-1
262+00	CONST. DROP INLET ON RT. W/ INLET & OUTLET										96							1								FPC-9E, FPC-9M, PCC-1, PCM-1
263+00	CONST. DROP INLET ON RT. W/ INLET & OUTLET										302							1								FPC-9E, FPC-9M, PCC-1, PCM-1
263+30	CONST. DROP INLET ON LT. W/ INLET & OUTLET							258										1								FPC-9E, FPC-9M, PCC-1
263+90	CONST. YARD DRAIN ON LT.								58														1			FPC-9, PCM-1
265+95	CONST. DROP INLET ON LT. W/ INLET & OUTLET									156								1		1						FPC-9E, FPC-9M, PCC-1, PCM-1
266+04	CONST. DROP INLET ON RT. W/ INLET & OUTLET										249							1								FPC-9E, FPC-9M, PCC-1, PCM-1
266+30	CONST. YARD DRAIN ON RT.								29														1			FPC-9, PCM-1
267+60	CONST. DROP INLET ON LT. W/ INLET & OUTLET					88												1								FPC-9E, FPC-9M, PCC-1
268+50	CONST. DROP INLET ON RT. W/ INLET & OUTLET		197															1								FPC-9E, FPC-9M, PCC-1
268+55	CONST. DROP INLET ON LT. W/ INLET & OUTLET									51								1								FPC-9E, FPC-9M, PCC-1, PCM-1
SUBTOTALS:		595	240	0	60	837	271	1500	410	3731	892	0	4	1	0	3	0	45	1	5	1	3	7	115	1.44	

BASIS OF ESTIMATE:
WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING.
NOTE: FOR R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
NOTE: FOR C.M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

8/24/2012
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	34	144

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

STRUCTURES (BOX 2 OF 2)

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE CULVERT (CLASS III) 18"	(CLASS III) 24"	(CLASS III) 30"	(CLASS III) 48"	(CLASS IV) 18"	(CLASS IV) 24"	(CLASS V) 18"	12" SIDE DRAIN	PIPE CULVERT STORM DRAIN ALTERNATES 1 & 2 18"	24"	30"	FLARED END SECTIONS FOR R.C. PIPE CULVERTS 18"	24"	30"	48"	DROP INLETS TYPE C	TYPE MO	TYPE ST	EXT. 4'	EXT. 8'	DROP INLETS ADJUSTED TO GRADE	YARD DRAIN	SOLID SODDING	WATER	STD. DWG. NOS.
		LIN. FT.											EACH				EACH							SQ.YD.	M.GAL	
269+10	CONST. DROP INLET ON LT. W/ INLET & OUTLET										124							1								FPC-9E, FPC-9M, PCC-1, PCM-1
269+25	CONST. YARD DRAIN ON LT.								15														1			FPC-9, PCM-1
270+38	CONST. DROP INLET ON LT. W/ INLET & OUTLET		242															1								FPC-9E, FPC-9M, PCC-1
270+50	CONST. DROP INLET ON RT. W/ INLET & OUTLET										239							1								FPC-9E, FPC-9M, PCC-1, PCM-1
272+00	CONST. YARD DRAIN ON LT.								81														1			FPC-9, PCM-1
272+84	CONST. DROP INLET ON LT. W/ INLET & OUTLET										143							1								FPC-9E, FPC-9M, PCC-1, PCM-1
272+93	CONST. DROP INLET ON RT. W/ INLET & OUTLET										291							1								FPC-9E, FPC-9M, PCC-1, PCM-1
274+31	CONST. DROP INLET ON LT. W/ INLET & OUTLET										153								1							FPC-9S, PCC-1, PCM-1
275+88	CONST. DROP INLET ON LT. W/ INLET & OUTLET											307						1								FPC-9E, FPC-9M, PCC-1, PCM-1
275+88	CONST. DROP INLET ON RT. W/ INLET & OUTLET											307						1								FPC-9E, FPC-9M, PCC-1, PCM-1
279+00	CONST. DROP INLET ON LT. W/ INLET & OUTLET											95						1								FPC-9E, FPC-9M, PCC-1, PCM-1
279+00	CONST. DROP INLET ON RT. W/ INLET & OUTLET											96						1								FPC-9E, FPC-9M, PCC-1, PCM-1
280+00	CONST. DROP INLET ON LT. W/ INLET & OUTLET											144						1								FPC-9E, FPC-9M, PCC-1, PCM-1
280+00	CONST. DROP INLET ON RT. W/ INLET & OUTLET											197							1							FPC-9S, PCC-1, PCM-1
281+50	CONST. DROP INLET ON LT. W/ INLET & OUTLET											99						1								FPC-9E, FPC-9M, PCC-1, PCM-1
282+00	CONST. DROP INLET ON RT. W/ INLET & OUTLET											63						1								FPC-9E, FPC-9M, PCC-1, PCM-1
282+55	CONST. DROP INLET ON LT. W/ INLET & OUTLET																1									FPC-9E, PCC-1, PCM-1
283+00	CONST. DROP INLET ON LT. W/ OUTLET & INLET W/FES	22								22			1						1					5	0.06	FES-1, FES-2, FPC-9S, PCC-1, PCM-1
283+00	CONST. DROP INLET ON RT. W/ INLET & OUTLET									11								1								FPC-9E, FPC-9M, PCC-1, PCM-1
284+00	CONST. DROP INLET ON LT. W/ INLET & OUTLET									96								1			1					FPC-9E, FPC-9M, PCC-1, PCM-1
284+27	CONST. DROP INLET ON RT. W/ INLET & OUTLET									123								1			1					FPC-9E, FPC-9M, PCC-1, PCM-1
285+95	CONST. YARD DRAIN ON LT.								192														1			FPC-9, PCM-1
286+80	CONST. DROP INLET ON RT. W/ OUTLET									249								1			1					FPC-9E, FPC-9M, PCC-1, PCM-1
288+55	CONST. YARD DRAIN ON LT.								257														1			FPC-9, PCM-1
290+15	CONST. DROP INLET ON LT. W/ OUTLET & INLET W/FES	7						53			289		2				1							10	0.13	FES-1, FES-2, FPC-9E, PCC-1, PCM-1
292+00	CONST. DROP INLET ON RT. W/ OUTLET									142								1			1					FPC-9E, FPC-9M, PCC-1, PCM-1
293+00	CONST. DROP INLET ON LT. W/ OUTLET & INLET W/FES	9		202									1		1		1							18	0.23	FES-1, FES-2, FPC-9E, PCC-1
293+50	CONST. DROP INLET ON RT. W/ INLET & OUTLET									133								1			1					FPC-9E, FPC-9M, PCC-1, PCM-1
294+90	CONST. DROP INLET ON RT. W/ INLET & OUTLET W/FES	133											1					1							5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
295+00	CONST. DROP INLET ON LT. W/ INLET & OUTLET			33											1			1								FES-1, FES-2, FPC-9E, PCC-1
SUBTOTALS:		171	242	235	0	0	0	53	545	776	1239	1308	5	0	2	0	3	20	3	0	5	0	4	38	0.48	
TOTALS:		**766**	**482**	**235**	**60**	**837**	**271**	**1553**	**955**	**4507**	**2131**	**1308**	**9**	**1**	**2**	**3**	**3**	**65**	**4**	**5**	**6**	**3**	**11**	**153**	**1.92**	

BASIS OF ESTIMATE:
WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING.
NOTE: FOR R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
NOTE: FOR C.M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

STRUCTURES OVER 20' - 0" SPAN

STATION	DESCRIPTION	SPAN	HEIGHT	LENGTH	CLASS S CONCRETE - ROADWAY	REINF. STEEL - ROADWAY (GRADE 60)	UNCL. EXC. FOR STR. - ROADWAY	SOLID SODDING	WATER	STD. DWG. NOS.
		LIN. FT.			CU.YD.	POUND	CU.YD.	SQ.YD.	M.GAL	
282+78	TRP. 8' X 4' X 96' R.C. BOX CULVERT 10° RT. FWD. SKEW WITH 3:1 WINGS LT. & RT.	8	4	96	179.29	33522	88	23	0.29	RCB-1, RCB-2, R-315X-0, W-X153-1
TOTALS:					**179.29**	**33522**	**88**	**23**	**0.29**	

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

PAVEMENT REPAIR OVER CULVERTS (CONCRETE)

STATION	LOCATION	WIDTH	LENGTH	CU.YD.	FLOWABLE SELECT MATERIAL
		FEET			CU. YD.
214+25	HWY. 79B	6.92	48	12.3	23
239+00	HWY. 79B	7.50	41	11.4	60
TOTAL:				**23.7**	**83**

AVG. DEPTH = 1'-0"

8/24/2012

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	35	144

(2) QUANTITIES

CONCRETE BASE

STATION	STATION	LOCATION	LENGTH	TACK COAT 0.10 GAL. PER SQ. YD.			PORTLAND CEMENT CONCRETE BASE	
				AVG. WIDTH	SQ. YD.	GAL.	AVG. WIDTH	10" U.T.
			FEET	FEET			FEET	SQ. YD.
211+80	213+14	HWY. 79B - LT.	134	4.3	64.0	6.4	6.8	101.2
211+80	213+50	HWY. 79B - RT.	170	2.0	37.8	3.8	4.5	85.0
213+14	214+19	HWY. 79B - LT.	105	6.6	77.0	7.7	9.1	106.2
220+38	220+78	HWY. 79B - RT.	40	4.0	17.8	1.8	6.5	28.9
220+76	221+87	HWY. 79B - LT.	111	6.0	74.0	7.4	8.5	104.8
221+87	233+60	HWY. 79B - LT.	1173	3.0	391.0	39.1	5.5	716.8
233+60	235+70	HWY. 79B - LT.	210	4.5	105.0	10.5	7.0	163.3
235+70	236+94	HWY. 79B - LT.	124	6.0	82.7	8.3	8.5	117.1
236+97	237+27	HWY. 79B - RT.	30	6.0	20.0	2.0	8.5	28.3
237+27	238+56	HWY. 79B - RT.	129	2.0	28.7	2.9	4.5	64.5
238+56	238+87	HWY. 79B - RT.	31	6.0	20.7	2.1	8.5	29.3
238+77	239+68	HWY. 79B - LT.	91	4.0	40.4	4.0	6.5	65.7
239+96	240+65	HWY. 79B - LT.	69	2.0	15.3	1.5	4.5	34.5
240+65	242+25	HWY. 79B - LT.	160	5.5	97.8	9.8	8.0	142.2
242+25	247+55	HWY. 79B - LT.	530	2.0	117.8	11.8	4.5	265.0
247+55	252+60	HWY. 79B - LT.	505	6.0	336.7	33.7	8.5	476.9
254+10	256+40	HWY. 79B - RT.	230	6.0	153.3	15.3	8.5	217.2
255+30	256+90	HWY. 79B - LT.	160	6.0	106.7	10.7	8.5	151.1
256+40	265+62	HWY. 79B - RT.	922	6.0	614.7	61.5	8.5	870.8
256+90	265+00	HWY. 79B - LT.	810	4.0	360.0	36.0	6.5	585.0
281+55	283+35	HWY. 79B - RT.	180	6.0	120.0	12.0	8.5	170.0
282+35	284+10	HWY. 79B - LT.	175	2.0	38.9	3.9	4.5	87.5
283+35	289+90	HWY. 79B - RT.	655	3.0	218.3	21.8	5.5	400.3
284+10	286+20	HWY. 79B - LT.	210	4.5	105.0	10.5	7.0	163.3
286+20	289+50	HWY. 79B - LT.	330	3.5	128.3	12.8	6.0	220.0
289+50	294+15	HWY. 79B - LT.	465	3.2	165.3	16.5	5.7	294.5
289+90	294+55	HWY. 79B - RT.	465	3.5	180.8	18.1	6.0	310.0
294+15	295+30	HWY. 79B - LT.	115	1.7	21.7	2.2	4.2	53.7
294+55	295+30	HWY. 79B - RT.	75	1.5	12.5	1.3	4.0	33.3
TOTALS:					3752.2	375.4		6086.4

COLD MILLING

STATION	STATION	LOCATION	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT
			FEET	SQ. YD.
211+30	211+80	MAIN LANES	50	277.78
295+30	295+80	MAIN LANES	50	277.78
208+97	210+53	MAIN LANES	50	866.67
TOTAL:				1422.23

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

4" PIPE UNDERDRAIN

STATION	STATION	LOCATIONS	4" PIPE UNDERDRAINS	UNDERDRAIN OUTLET PROTECTORS
			LIN.FT.	EACH
215+61	218+72	HWY. 79B	471	3
235+11	238+88	HWY. 79B	577	3
238+88	242+65	HWY. 79B	537	3
252+05	263+04	HWY. 79B	1599	6
263+05	271+35	HWY. 79B	1270	5
277+52	285+77	HWY. 79B	985	5
286+01	295+30	HWY. 79B	1089	5
* ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER			1500	7
TOTALS:			8028	37

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

UNDERDRAINS SHALL BE STUBBED INTO THE PROPOSED DROP INLET IF AND WHERE DIRECTED BY THE ENGINEER. PAYMENT FOR THIS TO BE INCLUDED IN THE UNIT PRICE BID FOR 4" PIPE UNDERDRAIN.

EROSION CONTROL

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL						TEMPORARY EROSION CONTROL									
			SEEDING	LIME	MULCH COVER	WATER	SECOND SEEDING APPLICATION	** SOLID SODDING	TEMPORARY SEEDING	MULCH COVER	WATER	SAND BAG DITCH CHECKS	* ROCK DITCH CHECKS	DROP INLET SILT FENCE	SILT FENCE	SEDIMENT BASIN	OBLITERATION OF SEDIMENT BASIN	* SEDIMENT REMOVAL & DISPOSAL
												(E-5)	(E-6)	(E-7)	(E-11)	(E-14)		
			ACRE	TON	ACRE	M.GAL.	ACRE	SQ.YD.	ACRE	ACRE	M.GAL.	BAG	CU.YD.	LIN.FT.	LIN.FT.	CU.YD.	CU.YD.	CU. YD.
ENTIRE	PROJECT	STAGE 1							4.50	4.50	91.8	220	100	900	570	70	70	134
ENTIRE	PROJECT	STAGE 2										154		900	150			46
ENTIRE	PROJECT	END OF JOB	2.52	5.04	2.52	310.2	2.52	4218										
* ENTIRE PROJECT - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.			0.63	1.26	0.63	77.6	0.63	1055	1.13	1.13	23.0	94	25	450	180	18	18	45
TOTALS:			3.15	6.30	3.15	387.8	3.15	5273	5.63	5.63	114.8	468	125	2250	900	88	88	225

BASIS OF ESTIMATE:
LIME .....2 TONS / ACRE OF SEEDING
WATER.....102.0 M.G. / ACRE OF SEEDING.
WATER.....20.4 M.G. / ACRE OF TEMPORARY SEEDING.
WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING.
BALED STRAW DITCH CHECKS....4 BALES / LOCATION
SAND BAG DITCH CHECKS.....22 BAGS / LOCATION
ROCK DITCH CHECKS.....3 CU.YD./LOCATION

NOTE: THE TEMPORARY EROSION CONTROL DEVICES SHOWN ABOVE AND ON THE PLANS SHALL BE INSTALLED IN SUCH A SEQUENCE AS TO DETER EROSION AND SEDIMENTATION ON U.S. WATERWAYS AS EXPLAINED BY THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT.
* QUANTITIES ARE ESTIMATED. SEE SECTION 104.03 OF THE STD. SPECS.
** SOLID SODDING IS TO BE USED IN THE 3' WIDTH BETWEEN THE SIDEWALK AND CURB.

8/24/2012

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10/19/2012				6	ARK.			
				JOB NO.		020070	36	144

(2) QUANTITIES

BASE AND SURFACING

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT				ACHM BASE COURSE (1 1/2") (495 LBS./SQ. YD)				ACHM BINDER COURSE (1") (385 LBS./SQ. YD)				ACHM SURFACE COURSE (1/2") (220 LBS. / SQ. YD.)			
			FEET	TON / STATION	TON	TOTAL WID. FEET	SQ.YD.	GALLONS / SQ.YD.	GALLON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 70-22 TON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 70-22 TON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 76-22 TON
MAIN LANES																					
208+97	210+53	HWY. 79B	156.0															VAR.	889.4	220.0	97.8
211+80	295+30	HWY. 79B	8350.0															56.0	51955.6	220.0	5715.1
214+19	216+00	HWY. 79B - LT.	181.0			41.4	832.6	0.03	25.0	16.3	327.8	495.0	81.1	13.8	277.5	385.0	53.4	13.8	277.5	220.0	30.5
216+00	218+70	HWY. 79B - LT.	270.0			97.5	2925.0	0.03	87.8	35.0	1050.0	495.0	259.9	32.5	975.0	385.0	187.7	32.5	975.0	220.0	107.3
218+70	220+76	HWY. 79B - LT.	206.0			81.9	1874.6	0.03	56.2	29.8	682.1	495.0	168.8	27.3	624.9	385.0	120.3	27.3	624.9	220.0	68.7
220+78	221+19	HWY. 79B - RT.	41.0			32.1	146.2	0.03	4.4	13.2	60.1	495.0	14.9	10.7	48.7	385.0	9.4	10.7	48.7	220.0	5.4
221+19	225+00	HWY. 79B - RT.	381.0			42.9	1816.1	0.03	54.5	16.8	711.2	495.0	176.0	14.3	605.4	385.0	116.5	14.3	605.4	220.0	66.6
225+00	228+75	HWY. 79B - RT.	375.0			44.4	1850.0	0.03	55.5	17.3	720.8	495.0	178.4	14.8	616.7	385.0	118.7	14.8	616.7	220.0	67.8
228+75	231+90	HWY. 79B - RT.	315.0			41.7	1459.5	0.03	43.8	16.4	574.0	495.0	142.1	13.9	486.5	385.0	93.7	13.9	486.5	220.0	53.5
231+90	235+00	HWY. 79B - RT.	310.0			38.1	1312.3	0.03	39.4	15.2	523.6	495.0	129.6	12.7	437.4	385.0	84.2	12.7	437.4	220.0	48.1
235+00	236+30	HWY. 79B - RT.	130.0			42.0	606.7	0.03	18.2	16.5	238.3	495.0	59.0	14.0	202.2	385.0	38.9	14.0	202.2	220.0	22.2
236+30	236+97	HWY. 79B - RT.	67.0			36.0	268.0	0.03	8.0	14.5	107.9	495.0	26.7	12.0	89.3	385.0	17.2	12.0	89.3	220.0	9.8
236+94	237+90	HWY. 79B - LT.	96.0			34.8	371.2	0.03	11.1	14.1	150.4	495.0	37.2	11.6	123.7	385.0	23.8	11.6	123.7	220.0	13.6
237+90	238+77	HWY. 79B - LT.	87.0			34.8	336.4	0.03	10.1	14.1	136.3	495.0	33.7	11.6	112.1	385.0	21.6	11.6	112.1	220.0	12.3
238+87	240+00	HWY. 79B - RT.	113.0			35.4	444.5	0.03	13.3	14.3	179.5	495.0	44.4	11.8	148.2	385.0	28.5	11.8	148.2	220.0	16.3
240+00	241+50	HWY. 79B - RT.	150.0			39.0	650.0	0.03	19.5	15.5	258.3	495.0	63.9	13.0	216.7	385.0	41.7	13.0	216.7	220.0	23.8
241+50	242+50	HWY. 79B - RT.	100.0			41.4	460.0	0.03	13.8	16.3	181.1	495.0	44.8	13.8	153.3	385.0	29.5	13.8	153.3	220.0	16.9
242+50	245+20	HWY. 79B - RT.	270.0			47.4	1422.0	0.03	42.7	18.3	549.0	495.0	135.9	15.8	474.0	385.0	91.2	15.8	474.0	220.0	52.1
245+20	250+00	HWY. 79B - RT.	480.0			38.1	2032.0	0.03	61.0	15.2	810.7	495.0	200.6	12.7	677.3	385.0	130.4	12.7	677.3	220.0	74.5
250+00	254+10	HWY. 79B - RT.	410.0			28.2	1284.7	0.03	38.5	11.9	542.1	495.0	134.2	9.4	428.2	385.0	82.4	9.4	428.2	220.0	47.1
252+60	253+65	HWY. 79B - LT.	105.0			43.5	507.5	0.03	15.2	17.0	198.3	495.0	49.1	14.5	169.2	385.0	32.6	14.5	169.2	220.0	18.6
253+65	254+15	HWY. 79B - LT.	50.0			61.8	343.3	0.03	10.3	23.1	128.3	495.0	31.8	20.6	114.4	385.0	22.0	20.6	114.4	220.0	12.6
254+15	254+75	HWY. 79B - LT.	60.0			44.4	296.0	0.03	8.9	17.3	115.3	495.0	28.5	14.8	98.7	385.0	19.0	14.8	98.7	220.0	10.9
254+75	255+30	HWY. 79B - LT.	55.0			25.5	155.8	0.03	4.7	11.0	67.2	495.0	16.6	8.5	51.9	385.0	10.0	8.5	51.9	220.0	5.7
265+62	268+00	HWY. 79B - RT.	238.0			28.5	753.7	0.03	22.6	12.0	317.3	495.0	78.5	9.5	251.2	385.0	48.4	9.5	251.2	220.0	27.6
268+00	272+00	HWY. 79B - RT.	400.0			30.3	1346.7	0.03	40.4	12.6	560.0	495.0	138.6	10.1	448.9	385.0	86.4	10.1	448.9	220.0	49.4
272+00	277+00	HWY. 79B - RT.	500.0			28.5	1583.3	0.03	47.5	12.0	666.7	495.0	165.0	9.5	527.8	385.0	101.6	9.5	527.8	220.0	58.1
277+00	281+55	HWY. 79B - RT.	455.0			26.7	1349.8	0.03	40.5	11.4	576.3	495.0	142.6	8.9	449.9	385.0	86.6	8.9	449.9	220.0	49.5
TEMPORARY WIDENING FOR MAINTENENACE OF TRAFFIC																					
280+05	282+55	HWY. 79B - LT.	250.0	8.0	20.0	VAR.	400.0	0.03	12.0	3.7	102.8	495.0	25.4	3.6	100.0	385.0	19.3	7.1	197.2	220.0	21.7
280+40	282+55	HWY. 79B - RT.	215.0	8.0	17.2	VAR.	678.4	0.03	20.4	7.2	172.0	495.0	42.6	7.1	169.6	385.0	32.6	14.1	336.8	221.0	37.2
282+55	282+90	HWY. 79B - LT.	35.0	8.0	2.8	VAR.	112.4	0.03	3.4	7.4	28.8	495.0	7.1	7.3	28.4	385.0	5.5	14.2	55.2	222.0	6.1
282+55	282+90	HWY. 79B - RT.	35.0	8.0	2.8	VAR.	221.3	0.03	6.6	14.4	56.0	495.0	13.9	14.3	55.6	385.0	10.7	28.2	109.7	223.0	12.2
282+55	284+90	HWY. 79B - RT.	235.0	8.0	18.8	VAR.	741.6	0.03	22.2	7.2	188.0	495.0	46.5	7.1	185.4	385.0	35.7	14.1	368.2	224.0	41.2
284+90	285+55	HWY. 79B - LT.	65.0	8.0	5.2	VAR.	104.0	0.03	3.1	3.7	26.7	495.0	6.6	3.6	26.0	385.0	5.0	7.1	51.3	225.0	5.8
SIDE STREETS																					
213+14	214+19	WEST PULLEN AVE.	105.0				186.9	0.10	18.7	VAR.	114.5	495.0	28.3	VAR.	62.3	385.0	12.0	VAR.	124.6	220.0	13.7
216+99	217+79	WEST SKULL AVE.	80.0				134.4	0.10	13.4	VAR.	69.2	495.0	17.1	VAR.	44.8	385.0	8.6	VAR.	89.6	220.0	9.9
221+06	221+97	VAUGINE ST.	91.0				422.7	0.10	42.3	VAR.	193.4	495.0	47.9	VAR.	140.9	385.0	27.1	VAR.	281.8	220.0	31.0
224+96	225+81	WEST SARACHEN ST.	85.0				286.8	0.10	28.7	VAR.	147.8	495.0	36.6	VAR.	95.6	385.0	18.4	VAR.	191.2	220.0	21.0
228+76	229+61	KING ST.	85.0				397.8	0.10	39.8	VAR.	185.9	495.0	46.0	VAR.	132.6	385.0	25.5	VAR.	265.2	220.0	29.2
232+59	233+45	BELL ST.	86.0				439.2	0.10	43.9	VAR.	199.2	495.0	49.3	VAR.	146.4	385.0	28.2	VAR.	292.8	220.0	32.2
241+29	242+26	REED ST.	97.0				108.9	0.10	10.9	VAR.	64.1	495.0	15.9	VAR.	36.3	385.0	7.0	VAR.	72.6	220.0	8.0
245+05	246+22	WEST FLUKER AVE.	117.0				337.8	0.10	33.8	VAR.	175.1	495.0	43.3	VAR.	112.6	385.0	21.7	VAR.	225.2	220.0	24.8
248+99	249+90	WEST REEKER DR.	91.0				91.2	0.10	9.1	VAR.	57.3	495.0	14.2	VAR.	30.4	385.0	5.9	VAR.	60.8	220.0	6.7
251+74	252+59		85.0				240.6	0.10	24.1	VAR.	106.6	495.0	26.4	VAR.	80.2	385.0	15.4	VAR.	160.4	220.0	17.6
260+62	261+50	JOHN KENNEDY DR.	88.0				295.8	0.10	29.6	VAR.	125.0	495.0	30.9	VAR.	98.6	385.0	19.0	VAR.	197.2	220.0	21.7
264+50	265+41	WATSON BOULEVARD	91.0				201.9	0.10	20.2	VAR.	93.7	495.0	23.2	VAR.	67.3	385.0	13.0	VAR.	134.6	220.0	14.8
267+64	268+54		90.0				10.2	0.10	1.0	VAR.	15.9	495.0	3.9	VAR.	3.4	385.0	0.7	VAR.	6.8	220.0	0.7
10+75	12+22	HWY. 935	147.0	26.5	39.0		940.0	0.10	94.0	VAR.	470.0	495.0	116.3	VAR.	470.0	385.0	90.5	VAR.	470.0	220.0	51.7
270+35	271+29	COLLEGIATE DR.	94.0				53.7	0.10	5.4	VAR.	34.6	495.0	8.6	VAR.	17.9	385.0	3.4	VAR.	35.8	220.0	3.9
289+53	290+28	OLIVER RD.	75.0				58.2	0.10	5.8	VAR.	44.4	495.0	11.0	VAR.	19.4	385.0	3.7	VAR.	38.8	220.0	4.3
ADDITIONAL FOR LEVELING																					
211+80	295+30	HWY. 79B	8350.0			VAR.	39933.3	0.10	3993.3												6200.0
213+14	214+19	WEST PULLEN AVE.	105.0															251.3	VAR.		99.5
216+99	217+79	WEST SKULL AVE.	80.0															225.0	VAR.		111.4
221+06	221+97	VAUGINE ST.	91.0															208.9	VAR.		91.9
224+96	225+81	WEST SARACHEN ST.	85.0															426.7	VAR.		169.0
228+76	229+61	KING ST.	85.0															373.3	VAR.		172.5
232+59	233+45	BELL ST.	86.0															359.2	VAR.		98.8
241+29	242+26	REED ST.	97.0															94.8	VAR.		26.1
245+05	246+22	WEST FLUKER AVE.	117.0															395.3	VAR.		43.5
248+99	249+90	WEST REEKER DR.	91.0															125.6	VAR.		13.8
251+74	252+59		85.0															174.7	VAR.		19.2
260+62	261+50	JOHN KENNEDY DR.	88.0															201.1	VAR.		66.4
264+50	265+41	WATSON BOULEVARD	91.0															248.1	VAR.		27.3
267+64	268+54		90.0															121.1	VAR.		13.3
10+75	12+22	HWY. 935	147.0															168.9	VAR.		65.0
270+35	271+29	COLLEGIATE DR.	94.0															155.9	VAR.		51.4
289+53	290+28	OLIVER RD.	75.0															90.6	VAR.		14.9
TOTALS:					105.8		72825.0		5274.6		13103.6		3242.9		10932.8		2104.6		69040.4		14481.2

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.6% MIN. AGGR.....5.4% ASPHALT BINDER
ACHM BINDER COURSE (1").....95.5% MIN. AGGR.....4.5% ASPHALT BINDER
ACHM BASE COURSE (1 1/2").....96.1% MIN. AGGR.....3.9% ASPHALT BINDER

MAXIMUM NUMBER OF GYRATIONS = 160 FOR PG70-22
MAXIMUM NUMBER OF GYRATIONS = 205 FOR PG 76-22

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

CULVERT CLEAN OUT

STATION	LOCATION	EACH
237+78	HWY. 79B - LT.	3
237+78	HWY. 79B - RT.	3
TOTAL:		6

MAILBOXES

LOCATION	MAILBOXES	MAILBOX SUPPORTS (SINGLE)
	EACH	
ENTIRE PROJECT	12	12
TOTALS:	12	12

TRANSITIONAL APPROACH RAILING

STATION	STATION	LOCATION	EACH
296+16	296+36	LT.	1
296+16	296+36	RT.	1
297+29	297+49	LT.	1
297+29	297+49	RT.	1
TOTAL:			4

ACHM PATCHING OF EXISTING ROADWAY

DESCRIPTION	TON
ENTIRE PROJECT - TO BE USED IF AND WHERE	150
DIRECTED BY THE ENGINEER	
TOTAL:	150

NOTE: QUANTITY IS ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.
NOTE: EXCAVATION OF THE EXISTING ROADWAY MAY INCLUDE CONCRETE UTILITY PATCHES, OR OTHER CONCRETE MATERIAL.

COLD MILLING JOINTS IN EXISTING ASPHALT PAVEMENT

DESCRIPTION	LIN. FT.
ENTIRE PROJECT - TO BE USED IF AND WHERE	1500
DIRECTED BY THE ENGINEER	
TOTAL:	1500

NOTE: QUANTITY IS ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.
AVERAGE DEPTH = 12.5"; WIDTH = 12".
MATCH THICKNESS OF EXISTING ASPHALT PAVEMENT, OR AS DIRECTED BY THE ENGINEER.

8/24/2012
R020070.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10/11/2012				6	ARK.			
10/19/2012				JOB NO.		020070	37	144

(2) SUMMARY OF QUANTITIES AND REVISIONS

SUMMARY OF QUANTITIES (BOX 1 OF 2)

ITEM NUMBER	ITEM		QUANTITY	UNIT
201	CLEARING		26	STATION
201	GRUBBING		26	STATION
202	REMOVAL AND DISPOSAL OF CURB AND GUTTER		7465	LIN. FT.
202	REMOVAL AND DISPOSAL OF FENCE		1580	LIN. FT.
202	REMOVAL AND DISPOSAL OF POSTS		9	EACH
202	REMOVAL AND DISPOSAL OF CONCRETE SLABS		2	SQ. YD.
202	REMOVAL AND DISPOSAL OF CONCRETE PAVEMENT		1400	SQ. YD.
202	REMOVAL AND DISPOSAL OF CONCRETE ISLANDS		52	SQ. YD.
202	REMOVAL AND DISPOSAL OF CONCRETE DRIVEWAYS		1530	SQ. YD.
202	REMOVAL AND DISPOSAL OF WALKS		3577	SQ. YD.
SP & 202	REMOVAL AND DISPOSAL OF PEDESTRIAN BRIDGE		1	EACH
202	REMOVAL AND DISPOSAL OF FOUNDATIONS		168	SQ. YD.
202	REMOVAL AND DISPOSAL OF SIGN FOUNDATIONS		11	EACH
202	REMOVAL AND DISPOSAL OF DROP INLETS		28	EACH
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS		33	EACH
SP & 202	REMOVAL AND DISPOSAL OF GUARDRAIL		525	LIN. FT.
202	REMOVAL AND DISPOSAL OF BILLBOARDS		2	EACH
202	REMOVAL AND DISPOSAL OF SIGNS		35	EACH
202	REMOVAL AND DISPOSAL OF PLANTERS		5	EACH
206	FLOWABLE SELECT MATERIAL		83	CU. YD.
210	UNCLASSIFIED EXCAVATION		14261	CU. YD.
210	COMPACTED EMBANKMENT		11673	CU. YD.
SP & 210	SOIL STABILIZATION		200	TON
302	SELECTED MATERIAL (CLASS SM-2)		8300	CU. YD.
SS & 303	AGGREGATE BASE COURSE (CLASS 7)		2617	TON
309	PORTLAND CEMENT CONCRETE BASE (10" UNIFORM THICKNESS)		6086	SQ. YD.
401	TACK COAT		5730	GAL.
SP, SS, & 405	MINERAL AGGREGATE IN ACHM BASE COURSE (1 1/2")		3117	TON
SP, SS, & 405	ASPHALT BINDER (PG 70-22) IN ACHM BASE COURSE (1 1/2")		126	TON
SP, SS, & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")		2010	TON
SP, SS, & 406	ASPHALT BINDER (PG 70-22) IN ACHM BINDER COURSE (1")		95	TON
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")		14084	TON
SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")		22	TON
SP, SS, & 407	ASPHALT BINDER (PG 76-22) IN ACHM SURFACE COURSE (1/2")		782	TON
412	COLD MILLING ASPHALT PAVEMENT		1422	SQ. YD.
SP & 412	COLD MILLING JOINTS IN EXISTING ASPHALT PAVEMENT		1500	LIN. FT.
SP, SS, & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC		40	TON
SP, SS, & 415	ACHM PATCHING OF EXISTING ROADWAY		150	TON
505	PORTLAND CEMENT CONCRETE DRIVEWAY		4152.60	SQ. YD.
601	MOBILIZATION		1.00	LUMP SUM
SP & 602	FURNISHING FIELD OFFICE		1	EACH
SP, SS, & 603	MAINTENANCE OF TRAFFIC		1.00	LUMP SUM
SS & 604	SIGNS		1010	SQ. FT.
SS & 604	BARRICADES		184	LIN. FT.
SS & 604	TRAFFIC DRUMS		636	EACH
SS & 604	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER		236	LIN. FT.
SS & 604	RELOCATING PRECAST CONCRETE BARRIER		236	LIN. FT.
SS & 604	CONSTRUCTION PAVEMENT MARKINGS		41978	LIN. FT.
SS & 604	CONSTRUCTION PAVEMENT MARKINGS (WORDS)		4	EACH
SS & 604	CONSTRUCTION PAVEMENT MARKINGS (ARROWS)		4	EACH
604	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS		3375	LIN. FT.
604	REMOVAL OF PERMANENT PAVEMENT MARKINGS		25050	LIN. FT.
SS & 604	VERTICAL PANELS		212	EACH
SS & 606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		766	LIN. FT.
* SS & 606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)	4507	LIN. FT.
* 606	18" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 2)	4507	LIN. FT.
SS & 606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)		837	LIN. FT.
SS & 606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)		1553	LIN. FT.
SS & 606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		482	LIN. FT.
* SS & 606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)	2131	LIN. FT.
* 606	24" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 2)	2131	LIN. FT.
SS & 606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)		271	LIN. FT.
SS & 606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		235	LIN. FT.
* SS & 606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)	1308	LIN. FT.
* 606	30" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 2)	1308	LIN. FT.
SS & 606	48" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		60	LIN. FT.
SS & 606	12" SIDE DRAIN		955	LIN. FT.
606	18" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		9	EACH
606	24" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		1	EACH
606	30" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		2	EACH
606	48" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		3	EACH
606	SELECTED PIPE BEDDING		200	CU. YD.
609	DROP INLETS (TYPE C)		3	EACH
609	DROP INLETS (TYPE MO)		65	EACH
609	DROP INLETS (TYPE ST)		4	EACH
609	DROP INLET EXTENSIONS (4')		5	EACH
609	DROP INLET EXTENSIONS (8')		6	EACH
609	YARD DRAINS		11	EACH
610	DROP INLETS ADJUSTED TO GRADE		3	EACH
611	UNDERDRAIN OUTLET PROTECTORS		37	EACH
611	4" PIPE UNDERDRAINS		8028	LIN. FT.
615	PAVEMENT REPAIR OVER CULVERTS (CONCRETE)		23.7	CU. YD.
620	LIME		6	TON
620	SEEDING		3.15	ACRE
620	MULCH COVER		8.78	ACRE
SS & 620	WATER		504.8	M.GAL.
621	TEMPORARY SEEDING		5.63	ACRE
621	SILT FENCE		900	LIN. FT.
621	SAND BAG DITCH CHECKS		468	BAG
621	DROP INLET SILT FENCE		2250	LIN. FT.
621	SEDIMENT BASIN		88	CU. YD.
621	OBLITERATION OF SEDIMENT BASIN		88	CU. YD.

*ALTERNATE BID ITEMS

SUMMARY OF QUANTITIES (BOX 2 OF 2)

ITEM NUMBER	ITEM		QUANTITY	UNIT
621	SEDIMENT REMOVAL AND DISPOSAL		225	CU. YD.
621	ROCK DITCH CHECKS		125	CU. YD.
623	SECOND SEEDING APPLICATION		3.15	ACRE
624	SOLID SODDING		5449	SQ. YD.
632	CONCRETE ISLAND		20	SQ. YD.
633	CONCRETE WALKS		7463	SQ. YD.
633	HAND RAILING		56	LIN. FT.
634	CONCRETE COMBINATION CURB AND GUTTER (TYPE A) (1' 6")		16915	LIN. FT.
635	ROADWAY CONSTRUCTION CONTROL		1.00	LUMP SUM
637	MAILBOXES		12	EACH
637	MAILBOX SUPPORTS (SINGLE)		12	EACH
641	WHEELCHAIR RAMPS (TYPE 1)		105	SQ. YD.
641	WHEELCHAIR RAMPS (TYPE 2)		629	SQ. YD.
641	WHEELCHAIR RAMPS (TYPE 3)		386	SQ. YD.
SP & 701	SYSTEM LOCAL CONTROLLER TS 2-TYPE 2 (8 PHASES)		3	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)		29	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)		6	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (5 SECTION, 1 WAY)		1	EACH
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED		28	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)		3954	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)		712	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)		1515	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")		150	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")		150	LIN. FT.
710	NON-METALLIC CONDUIT (2")		60	LIN. FT.
710	NON-METALLIC CONDUIT (3")		1333	LIN. FT.
SS & 711	CONCRETE PULL BOX (TYPE 1 HD)		3	EACH
SS & 711	CONCRETE PULL BOX (TYPE 1)		4	EACH
SS & 711	CONCRETE PULL BOX (TYPE 2 HD)		8	EACH
SS & 711	CONCRETE PULL BOX (TYPE 2)		4	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (38')		3	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (42')		1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (44')		1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (46')		1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (48')		1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (50')		1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (52')		1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (62')		2	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (64')		1	EACH
SS & 715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION		3	EACH
SS & 719	THERMOPLASTIC PAVEMENT MARKING WHITE (4")		4571	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING WHITE (12")		2180	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING YELLOW (4")		19610	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING (WORDS)		13	EACH
SS & 719	THERMOPLASTIC PAVEMENT MARKING (ARROWS)		11	EACH
* SP & 719	INVERTED PROFILE THERMOPLASTIC CONTRAST PAVEMENT MARKING WHITE (4")	(ALTERNATE NO. 1)	124	LIN. FT.
* SP	HIGH PERFORMANCE CONTRAST MARKING TAPE WHITE (4")	(ALTERNATE NO. 2)	124	LIN. FT.
* SP & 719	INVERTED PROFILE THERMOPLASTIC CONTRAST PAVEMENT MARKING YELLOW (4")	(ALTERNATE NO. 1)	236	LIN. FT.
* SP	HIGH PERFORMANCE CONTRAST MARKING TAPE YELLOW (4")	(ALTERNATE NO. 2)	236	LIN. FT.
721	RAISED PAVEMENT MARKERS (TYPE II)		499	EACH
733	VIDEO CABLE		2756	LIN. FT.
SP & 733	VIDEO DETECTOR (CLR)		17	EACH
733	VIDEO MONITOR (CLR)		3	EACH
SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)		14	EACH
SP & 733	VIDEO EDGE CARD EXTENDER		4	EACH
SP & 733	VEHICLE DETECTOR RACK (16 CHANNEL)		1	EACH
SP & 733	VEHICLE DETECTOR RACK (20 CHANNEL)		1	EACH
SP & 733	VEHICLE DETECTOR RACK (24 CHANNEL)		1	EACH
816	FILTER BLANKET		273	SQ. YD.
816	DUMPED RIPRAP		138	CU. YD.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)		1375	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., EGC)		525	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)		300	LIN. FT.
SP	LUMINAIRE ASSEMBLY		10	EACH
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES		1639	LIN. FT.
SP	18" STREET NAME SIGN		12	EACH
SP	LOCAL RADIO WITH ANTENNA		3	EACH
SP	ANTENNA CABLE (TYPE 6)		210	LIN. FT.
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)		3	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT		1.00	LUMP SUM
SP	TRANSITIONAL APPROACH RAILING		4	EACH
SP	CULVERT CLEAN OUT		6	EACH
	STRUCTURES OVER 20' SPAN			
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-ROADWAY		88	CU. YD.
802	CLASS S CONCRETE - ROADWAY		179.29	CU. YD.
SS & 804	REINFORCING STEEL-ROADWAY (GRADE 60)		33522	POUND
SP	SHORING		1.00	LUMP SUM

*ALTERNATE BID ITEMS

REVISIONS

DATE	REVISION	SHEET NUMBER
10/11/2012	ADDED SPECIAL PROVISION FOR "NESTING SITES OF MIGRATORY BIRDS".	2 & 37
10/19/2012	REVISED "REMOVAL AND DISPOSAL OF CULVERTS AND DROP INLETS" AND "COLD MILLING JOINTS IN EXISTING ASPHALT PAVEMENT" QUANTITY BOXES.	30, 36, & 37

STATE OF ARKANSAS
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No. 11425
TRINITY D. SMITH
10-19-12

8/24/2012

R020070.DGN

SUMMARY OF QUANTITIES AND REVISIONS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	38	144

(2) SURVEY CONTROL DETAILS

SURVEY CONTROL COORDINATES

Project Name: s020070
Date: 6/11/2008
Coordinate System: ARKANSAS STATE PLANE - SOUTH ZONE BASED ON GPS CONTROL, PROJECTED TO GROUND.
Units: U.S. SURVEY FOOT

Point Name	Northing	Easting	Elev	Feature	Description
1	1880118.6648	1306454.4395	250.97	CTL	5/8" REBAR W/2" ALUM CAP
2	1881174.3408	1306389.8530	217.28	CTL	5/8" REBAR W/2" ALUM CAP
3	1882028.8441	1306421.3200	221.12	CTL	5/8" REBAR W/2" ALUM CAP
4	1882674.9584	1306590.9225	224.65	CTL	5/8" REBAR W/2" ALUM CAP
5	1883555.3373	1306559.0014	221.45	CTL	5/8" REBAR W/2" ALUM CAP
6	1884653.9271	1306841.3324	222.72	CTL	5/8" REBAR W/2" ALUM CAP
7	1885531.9744	1306795.0047	224.19	CTL	5/8" REBAR W/2" ALUM CAP
8	1886643.9234	1307018.9913	222.53	CTL	5/8" REBAR W/2" ALUM CAP
9	1887570.7542	1307173.9062	221.24	CTL	5/8" REBAR W/2" ALUM CAP
10	1888516.0110	1307188.2196	217.22	CTL	5/8" REBAR W/2" ALUM CAP
11	1889464.2087	1307150.1716	219.17	CTL	5/8" REBAR W/2" ALUM CAP
12	1881841.1882	1299169.6478	233.23	CTL	5/8" REBAR W/2" ALUM CAP RTK ELEV
13	1881666.9833	1299332.6574	233.17	CTL	5/8" REBAR W/2" ALUM CAP RTK ELEV
14	1881848.9389	1299485.8717	231.86	CTL	5/8" REBAR W/2" ALUM CAP RTK ELEV
15	1882134.2092	1299229.5105	230.88	CTL	5/8" REBAR W/2" ALUM CAP RTK ELEV
16	1881404.9122	1308285.7251	224.69	CTL	5/8" REBAR W/2" ALUM CAP RTK ELEV
17	1881243.1897	1308228.6276	224.50	CTL	5/8" REBAR W/2" ALUM CAP RTK ELEV
18	1881518.3510	1308685.6455	224.77	CTL	5/8" REBAR W/2" ALUM CAP RTK ELEV
100	1881985.9144	1306576.1489	222.26	GPS	AHTD GPS 350023
101	1884068.4682	1306603.0539	219.98	GPS	AHTD GPS 350023A
102	1884068.5311	1306602.9947	219.98	CTL	
900	1879047.4314	1302582.5655	228.35	BM	SLEEVED ROD NGS MARK S 288 1984
901	1879109.5373	1305751.4176	229.53	TBM	CHISELED SQUARE NE COR CA W 6TH AT RR
902	1880042.9099	1306478.6950	255.60	TBM	CHISELED SQUARE NE COR RR BR
903	1881296.7951	1306407.1828	218.48	TBM	CHISELED SQUARE
904	1882406.5565	1306538.4507	225.29	BM	CPS IN PP CPS CP-LT STA.
905	1883285.1293	1306530.8692	224.58	TBM	CHISELED SQUARE IN PUMP ISLAND W 79B
906	1884121.0468	1306693.0990	219.27	TBM	CHISELED SQUARE
907	1885099.4311	1306845.0937	224.21	BM	CHISELED SQUARE
908	1886268.5703	1306905.6930	223.46	TBM	CHISELED SQUARE CUT IN TOP OF CA
909	1887380.9315	1307167.2868	221.64	TBM	CHISELED SQUARE CH SQ CA
910	1888402.0092	1307202.0102	216.18	TBM	CHISELED SQUARE S END HW E SIDE 79B
911	1889708.6585	1307360.9861	217.62	TBM	CHISELED SQUARE SE COR BR 1018A
912	1881218.3969	1308343.9374	223.41	TBM	CHISELED SQUARE
913	1881170.0733	1311325.0699	222.38	BM	SLEEVED ROD NGS MARK T 288 AT COURT 3

*Note - Rebar and Cap - Standard - 5/8" Rebar with 2" Aluminum Cap stamped
*(standard markings common to all caps), or as indicated
(other markings indicated in the point description of the individual point).
USE CAF = 1.0 FOR STAKEOUT FOR THIS PROJECT
A PROJECT CAF OF 0.9999185661 HAS BEEN USED TO COMPUTE THE ABOVE GROUND COORDINATES.
THIS CAF IS INTENDED FOR USE WITHIN THE PROJECT LIMITS.
GRID DISTANCE = GROUND DISTANCE X CAF.
GRID COORDINATES ARE STORED UNDER FILE NAME.S020070G1.CTL
HORIZONTAL DATUM: NAD 83 (1997)
VERTICAL DATUM: NAVD 88

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

BASIS OF BEARING:
ARKANSAS STATE PLANE GRID BEARINGS - 0302-SOUTH ZONE
DETERMINED FROM GPS CONTROL POINTS: 350023 - 350023A
CONVERGENCE ANGLE: 00-00-38.91154 LEFT AT LT: 34-14-14.77 LG: 92-01-09.52
GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.

CONST HWY. 79 B

POINT NO.	TYPE	STATION	NORTHING	EASTING
8000	POB	200+00.00	1880254.0517	1306433.8300
8001	P.I. STA.	213+47.59	1881601.6353	1306438.4487
8002	P.C. STA.	215+60.44	1881814.1799	1306427.0117
8004	P.T. STA.	218+71.91	1882114.5401	1306493.5624
8005	P.C. STA.	218+92.55	1882132.7536	1306503.2738
8007	P.T. STA.	221+65.68	1882394.7968	1306570.6027
8008	P.C. STA.	235+24.83	1883753.8255	1306588.4668
8010	P.T. STA.	238+74.76	1884081.0146	1306696.3554
8011	P.C. STA.	239+00.02	1884101.5160	1306711.1123
8013	P.T. STA.	242+53.33	1884432.0837	1306819.0354
8014	P.C. STA.	254+67.99	1885646.7145	1306827.8379
8016	P.T. STA.	260+86.45	1886253.6843	1306931.5027
8017	P.C. STA.	265+22.24	1886665.8032	1307073.1568
8019	P.T. STA.	268+72.61	1887009.2859	1307135.0187
8020	P.C. STA.	280+14.24	1888150.5506	1307163.9137
8022	P.T. STA.	283+14.75	1888450.9586	1307159.7004
8023	P.C. STA.	288+64.03	1888999.4571	1307130.4038
8025	P.T. STA.	295+98.38	1889695.7117	1307320.8931
8026	POE	301+14.65	1890125.4246	1307607.0405

CONST HWY. 935

POINT NO.	TYPE	STATION	NORTHING	EASTING
8200	POB	10+00.00	1887242.2996	1307348.8478
8201	P.C. STA.	11+38.71	1887150.5002	1307244.8610
8202	P.T. STA.	11+63.05	1887139.3737	1307223.4775
8203	POE	12+21.17	1887125.7664	1307166.9771

MOT

POINT NO.	TYPE	STATION	NORTHING	EASTING
8100	POB	10+00.00	1881647.3222	1306439.0940
8101	P.I. STA.	11+20.17	1881767.4932	1306438.2608
8102	P.C. STA.	12+17.58	1881864.7801	1306433.5175
8104	P.T. STA.	14+85.90	1882123.4548	1306491.5161
8105	P.C. STA.	15+13.33	1882147.6589	1306504.4216
8107	P.T. STA.	17+51.08	1882375.7589	1306562.9714
8108	POE	18+02.21	1882426.8875	1306563.6192

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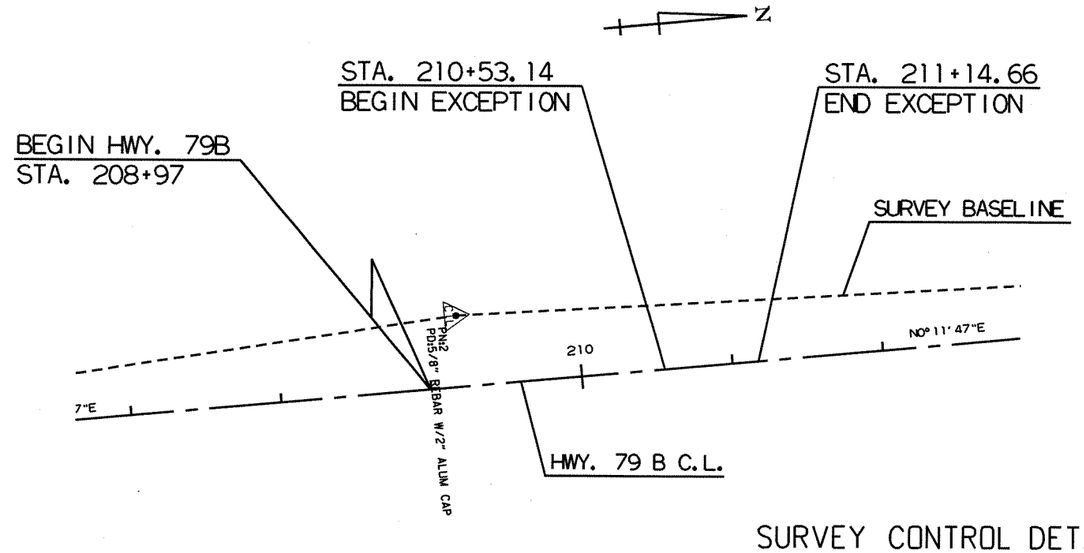

SURVEY CONTROL DETAILS

8/24/2012

R020070.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	39	144

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
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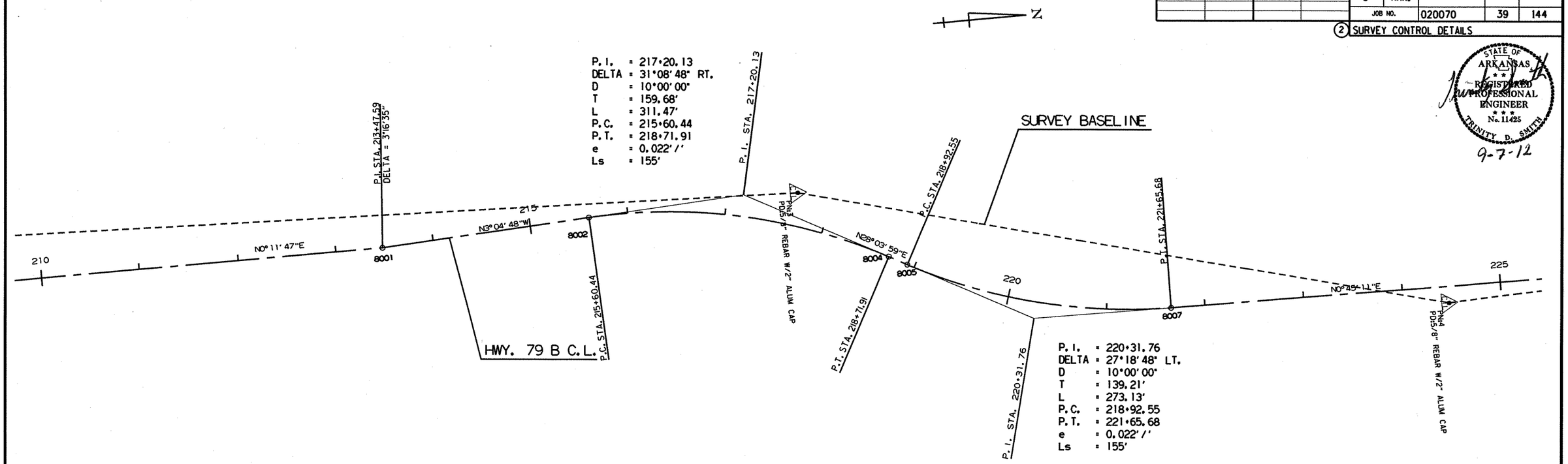
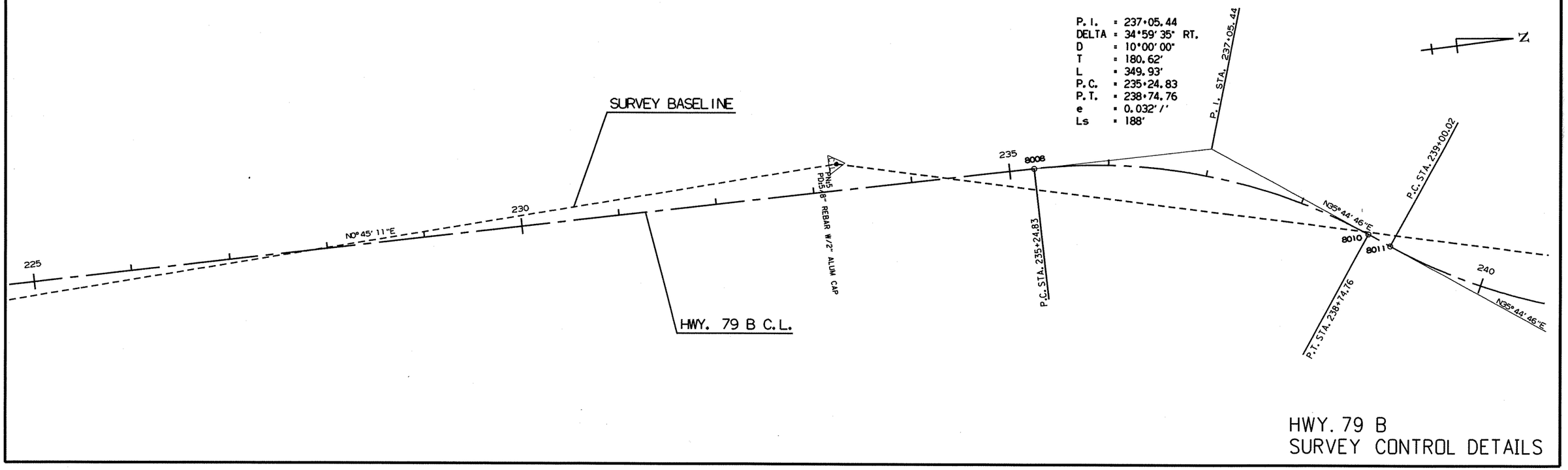
9-7-12





HWY. 79 B
SURVEY CONTROL DETAILS

8/24/2012

R020070.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	40	144

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
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No. 11425
TRINITY D. SMITH
9-7-12

N

HWY. 79 B C.L.

SURVEY BASELINE

-- STA. 239+00.02

P.T. STA. 242+53.33

240

N35°44'46"E

8013

P.I. STA. 240+82.50

245

PNG PD5/8" REBAR W/2" ALUM CAP

N0°24'55"E

250

PNG7 PD5/8" REBAR W/2" ALUM CAP

255

8014

P.C. STA. 254+67.99

P. I. = 240+82.50
DELTA = 35°19'52" LT.
D = 10°00'00"
T = 182.47'
L = 353.31'
P.C. = 239+00.02
P.T. = 242+53.33
e = 0.032'/'
Ls = 188'

N

P. I. STA. 257+79.95

P. I. = 257+79.95
DELTA = 18°33'13" RT.
D = 3°00'00"
T = 311.96'
L = 618.46'
P.C. = 254+67.99
P.T. = 260+86.45
e = 0.027'/'
Ls = 350'

SURVEY BASELINE

P.C. STA. 265+22.24

P.T. STA. 268+72.61

255

N0°24'55"E

260

8016

P.T. STA. 260+86.45

N18°58'08"E

PNG8 PD5/8" REBAR W/2" ALUM CAP

265

8017

N1°27'01"E

270

8019

P.C. STA. 254+67.99

HWY. 79 B C.L.

P. I. = 266+98.80
DELTA = 17°31'07" LT.
D = 5°00'00"
T = 176.56'
L = 350.37'
P.C. = 265+22.24
P.T. = 268+72.61
e = 0.033'/'
Ls = 350'

P.I. STA. 266+98.80

HWY. 79 B
SURVEY CONTROL DETAILS

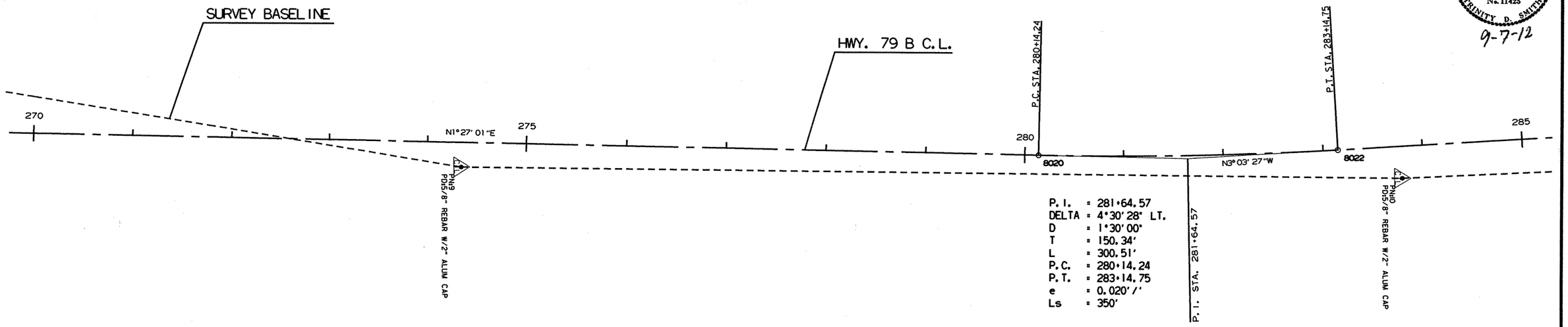
8/24/2012

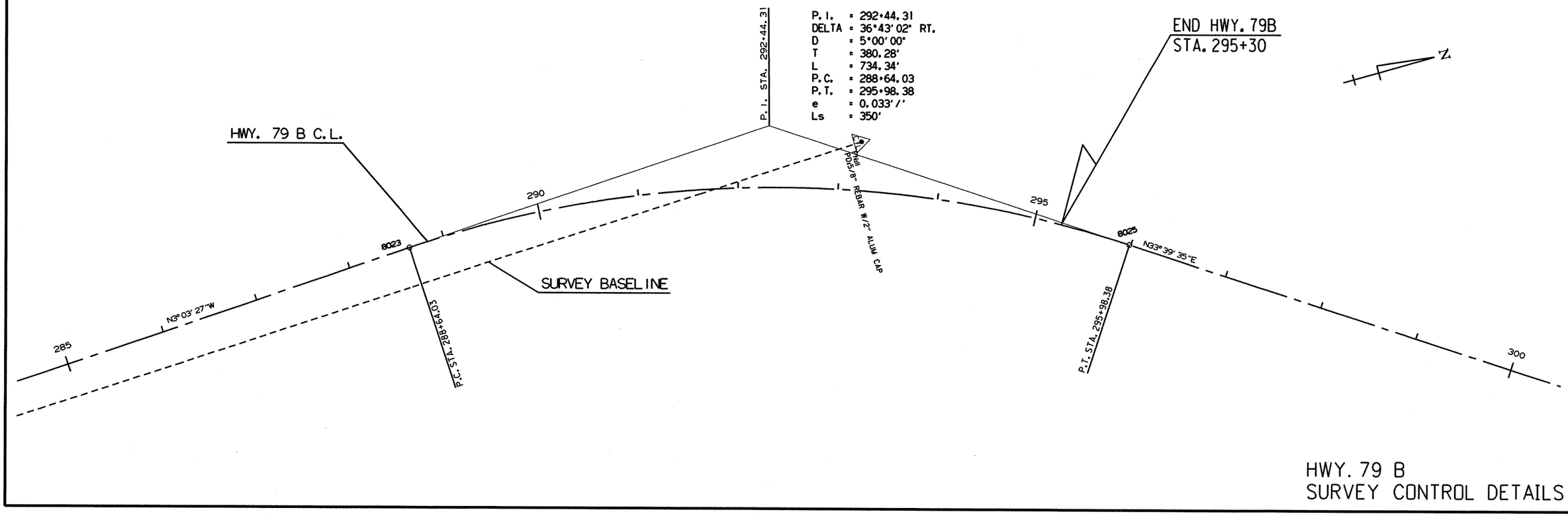
R020070.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	41	144

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12





HWY. 79 B
SURVEY CONTROL DETAILS

8/24/2012

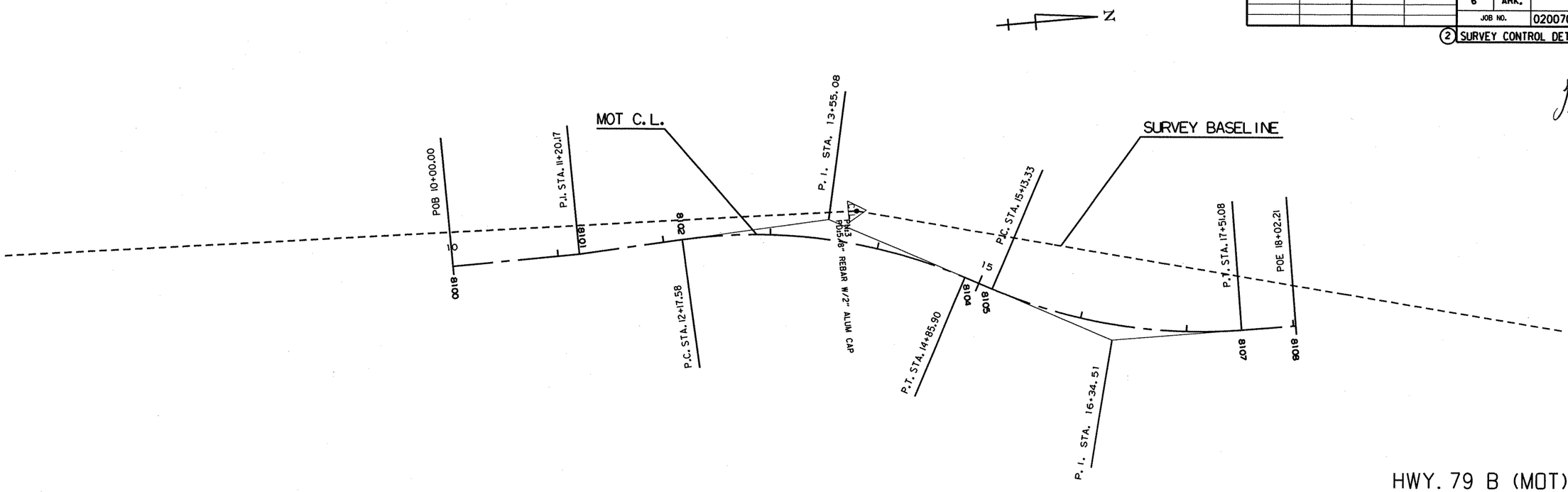
R020070.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	42	144

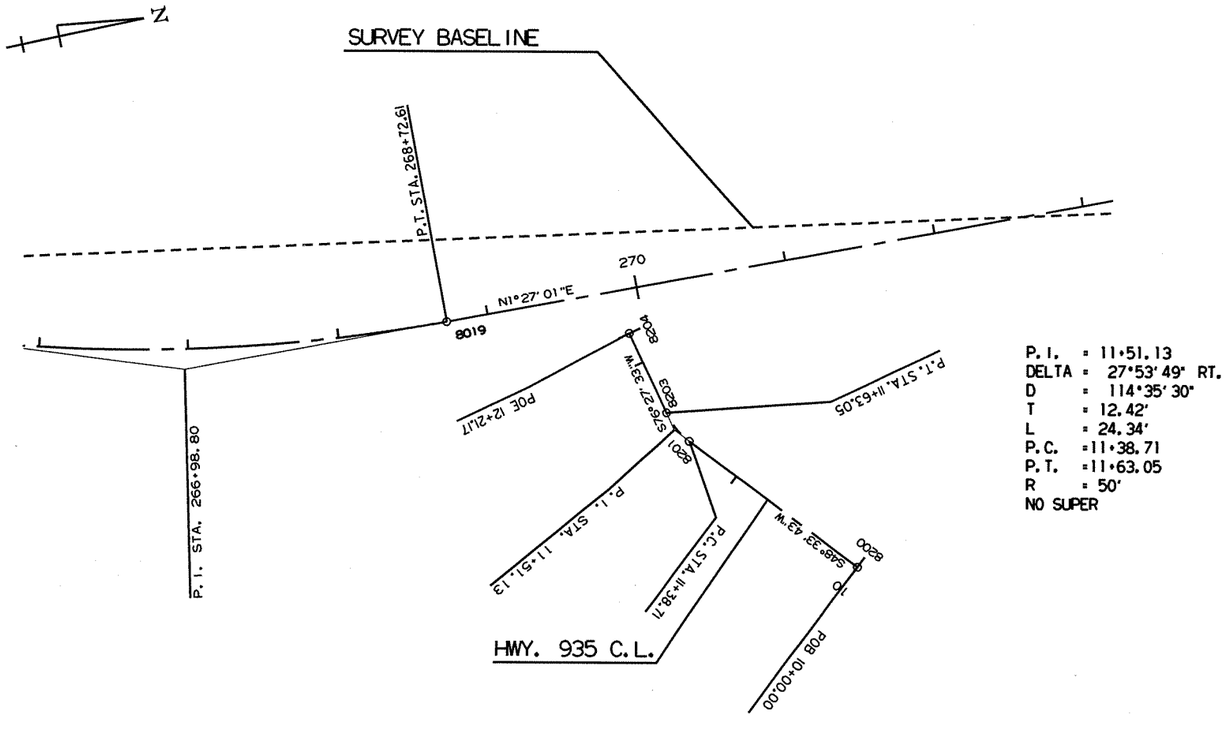
(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

9-7-12



HWY. 79 B (MOT)
SURVEY CONTROL DETAILS



HWY. 935
SURVEY CONTROL DETAILS

8/24/2012

R020070.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	43	144

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
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9-7-12

STA. 209+98 CONSTRUCT
DROP INLET ON LT. H = 3'-8"
WITH 8' EXTENSION AND
18" X 3' R.C. PIPE CULVERT STUB OUTLET
(CLASS III) (TYPE 3 BEDDING) WITH FES
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'

N

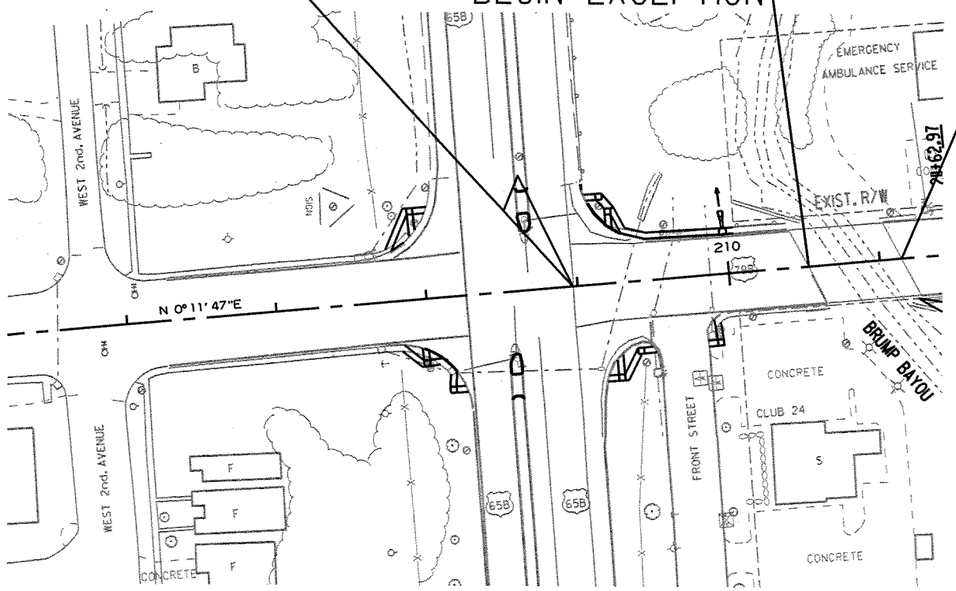
STA. 209+66 - IN PLACE
TYPE MO DROP INLET ON LT.
RETAIN AND ADJUST TO GRADE

STA. 209+97 TO STA. 210+53.14
COLD MILL AND INLAY

BEGIN JOB 020070
STA. 208+97

STA. 210+53.14
BEGIN EXCEPTION

STA. 211+14.66
END EXCEPTION



STA. 210+53.14 - STA. 211+14.66 - IN PLACE
60'-0" X 50' CONCRETE DECK ON STEEL BEAMS
SUPPORTED BY CONCRETE PILES
(BRIDGE NO. 05520) - RETAIN

FLOOD PLAIN LIMITS
STA. 206+50 - 211+40

STA. 209+48 - IN PLACE
TYPE ST DROP INLET ON RT.
RETAIN AND ADJUST TO GRADE

STA. 209+86 - IN PLACE
TYPE MO DROP INLET ON RT.
RETAIN

STA. 209+87 - IN PLACE
TYPE ST DROP INLET ON RT.
RETAIN AND ADJUST TO GRADE

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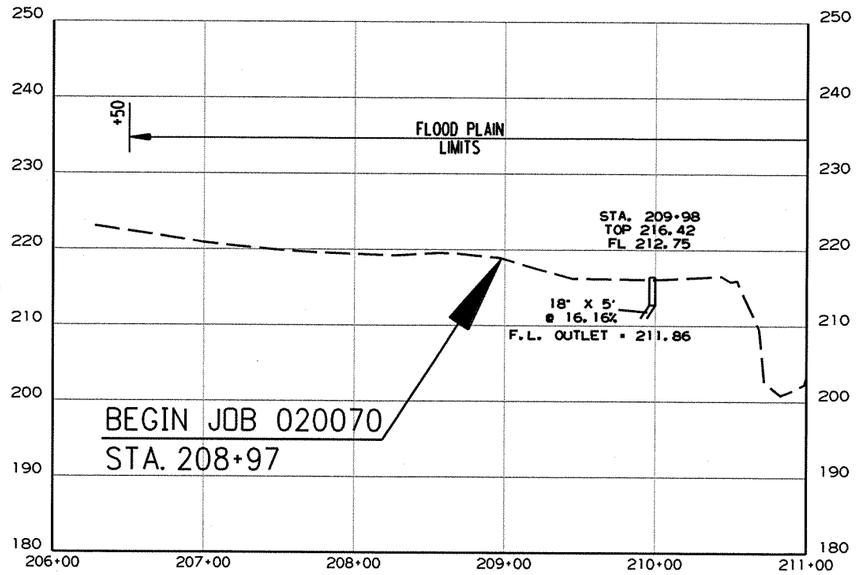
				6	ARK.			
				JOB NO.		020070	44	144

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

LEFT SIDE OF HWY. 79B



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				6	ARK.			
				JOB NO.		020070	45	144

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

STA. 214+25 CONSTRUCT
DROP INLET ON LT. H = 2'-9"
18" X 59' R.C. PIPE CULVERT
(CLASS V) (TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'

STA. 219+50 CONSTRUCT
DROP INLET ON LT. H = 3'- 8"
WITH 4' EXTENSION AND
18" X 60' R.C. PIPE CULVERT
(CLASS V) (TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'

STA. 212+05 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 212+91 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 214+65 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 210+53.14
BEGIN EXCEPTION

STA. 211+14.66
END EXCEPTION

STA. 216+55 CONSTRUCT
APPROACH ON LT. = 10 CU. YDS.

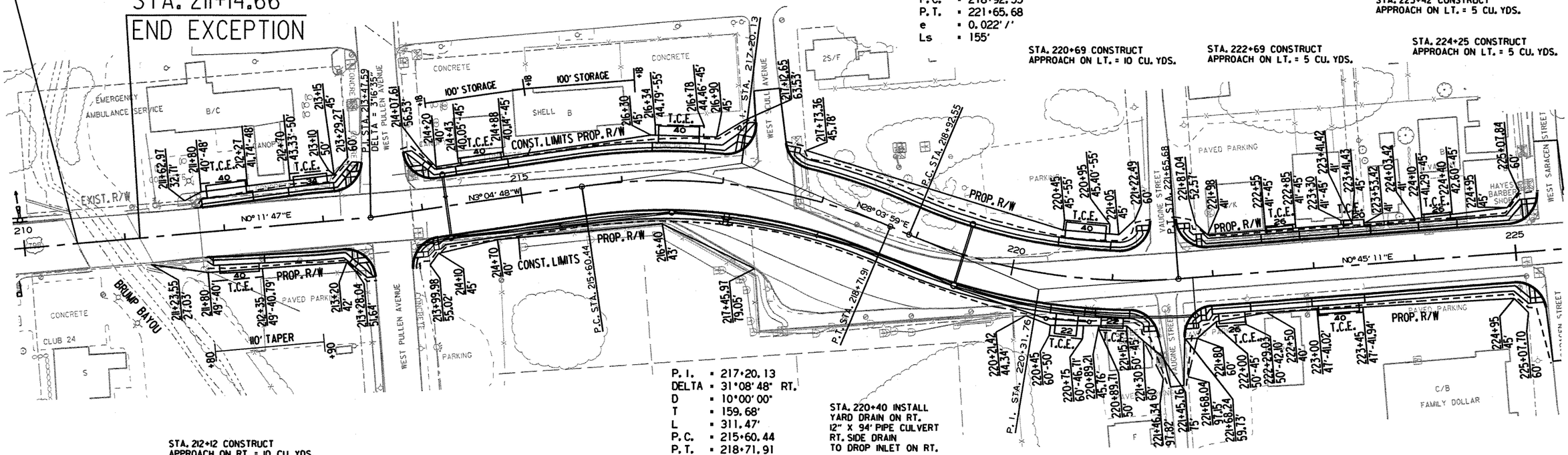
P. I. = 220+31.76
DELTA = 27°18'48" LT.
D = 10°00'00"
T = 139.21'
L = 273.13'
P. C. = 218+92.55
P. T. = 221+65.68
e = 0.022'/'
Ls = 155'

STA. 223+42 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 220+69 CONSTRUCT
APPROACH ON LT. = 10 CU. YDS.

STA. 222+69 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 224+25 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.



STA. 212+12 CONSTRUCT
APPROACH ON RT. = 10 CU. YDS.

P. I. = 217+20.13
DELTA = 31°08'48" RT.
D = 10°00'00"
T = 159.68'
L = 311.47'
P. C. = 215+60.44
P. T. = 218+71.91
e = 0.022'/'
Ls = 155'

STA. 220+40 INSTALL
YARD DRAIN ON RT.
12" X 94' PIPE CULVERT
RT. SIDE DRAIN
TO DROP INLET ON RT.

STA. 220+80 INSTALL
YARD DRAIN ON RT.
12" X 40' PIPE CULVERT
RT. SIDE DRAIN
TO YARD DRAIN ON RT.

STA. 220+59 CONSTRUCT
APPROACH ON RT. = 10 CU. YDS.

STA. 221+01 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 221+01 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 222+16 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 223+21 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 214+25 CONSTRUCT
DROP INLET ON RT. H = 2'-8" AND
18" X 34' R.C. PIPE CULVERT
(CLASS IV) (TYPE 3 BEDDING)
TO EXIST. DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'

STA. 216+50 CONSTRUCT
DROP INLET ON RT. H = 3'- 5"
WITH 4' EXTENSION AND
18" X 216' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 216 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 216 LIN. FT.

STA. 219+50 CONSTRUCT
DROP INLET ON RT. H = 4'- 8"
AND 18" X 286' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' X 5'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 286 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 286 LIN. FT.

STA. 221+80 CONSTRUCT
DROP INLET ON RT. H = 3'- 3"
AND 18" X 240' R.C. PIPE CULVERT
(CLASS V) (TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'

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(2) PLAN AND PROFILE SHEETS

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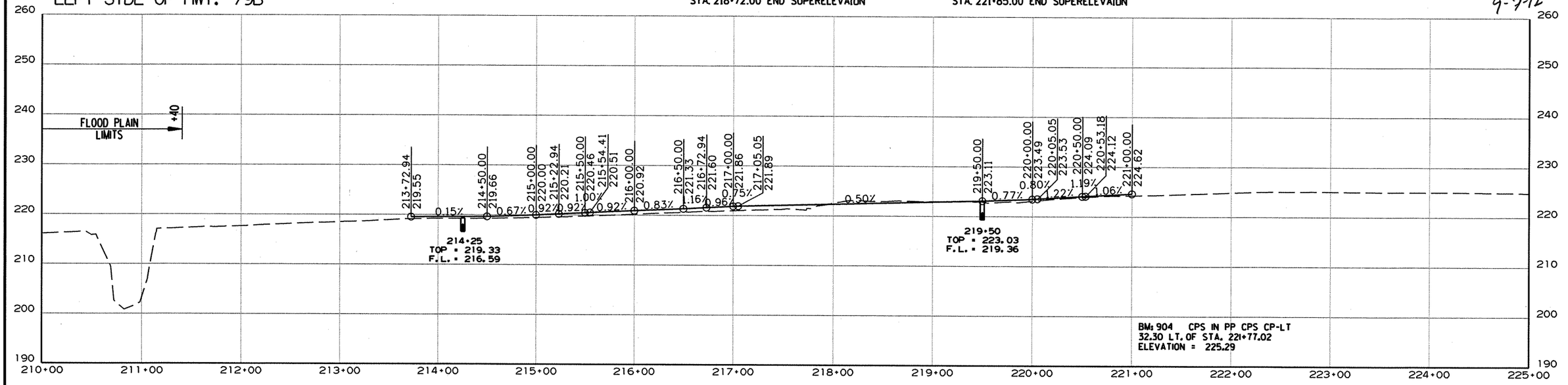
No. 11425
TRINITY D. SMITH
9-7-12

STA. 215+61.00 BEGIN SUPERELEVATION
STA. 217+16.00 MAX. SUPERELEVATION (0.022 '/')
STA. 217+17.00 MAX. SUPERELEVATION (0.022 '/')
STA. 218+72.00 END SUPERELEVAION

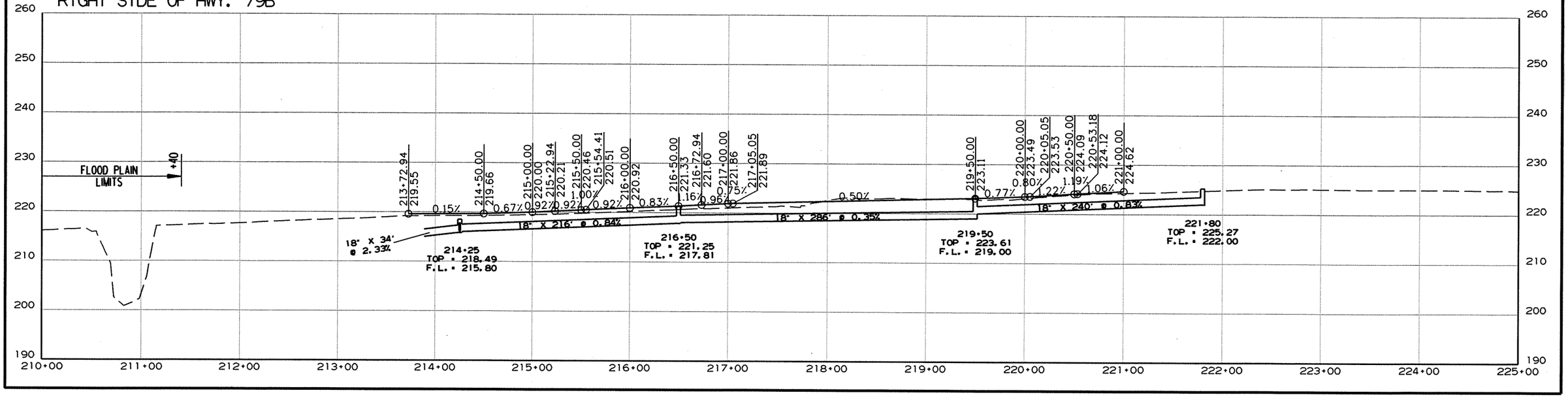
STA. 218+74.00 BEGIN SUPERELEVATION
STA. 220+29.00 MAX. SUPERELEVATION (0.022 '/')
STA. 220+30.00 MAX. SUPERELEVATION (0.022 '/')
STA. 221+85.00 END SUPERELEVAION

LEFT SIDE OF HWY. 79B



BM: 904 CPS IN PP CPS CP-LT
32.30 LT. OF STA. 221+77.02
ELEVATION = 225.29

RIGHT SIDE OF HWY. 79B



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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
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(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

STA. 227+00 CONSTRUCT
DROP INLET ON LT. H = 4'- 2"
AND 18" X 266' R.C. PIPE CULVERT
(CLASS V) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'

STA. 229+70 CONSTRUCT
DROP INLET ON LT. H = 4'- 1"
AND 18" X 241' PIPE CULVERT
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 241 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 241 LIN. FT.

STA. 232+15 CONSTRUCT
DROP INLET ON LT. H = 4'- 1"
AND 18" X 241' R.C. PIPE CULVERT
(CLASS IV) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'

STA. 234+60 CONSTRUCT
DROP INLET ON LT. H = 4'- 2"
AND 18" X 300' PIPE CULVERT
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 300 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 300 LIN. FT.

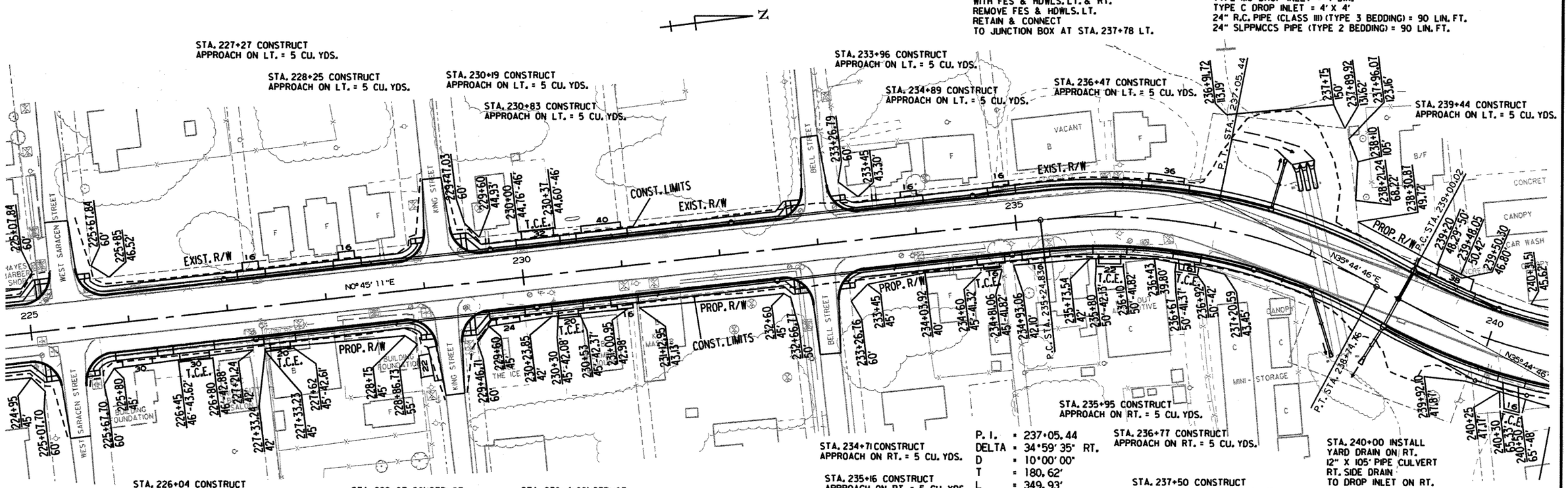
STA. 237+50 CONSTRUCT
DROP INLET ON LT. H = 6'-8"
AND 18" X 51' R.C. PIPE CULVERT STUB OUTLET
(CLASS III) (TYPE 3 BEDDING) WITH FES
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'

STA. 237+78 CONSTRUCT
JUNCTION BOX ON LT. H = 5'-6"
TRIPLE 48" X 180' R.C. PIPE CULVERT STUB INLET
(CLASS III) (TYPE 3 BEDDING) WITH FES
TYPE E = 26' X 5'
Q50=260 CFS, D.A.=146 AC.
48" R.C. PIPE = 180 LIN. FT.
48" FES = 3 EACH

STA. 237+78 - IN PLACE
TRP. 48" X 167' RC PIPE CULVERT
WITH FES & HDWLS. LT. & RT.
REMOVE FES & HDWLS. LT.
RETAIN & CONNECT
TO JUNCTION BOX AT STA. 237+78 LT.

STA. 239+00 CONSTRUCT
DROP INLET ON LT. H = 4'-9"
24" X 59' R.C. PIPE CULVERT
(CLASS IV) (TYPE 3 BEDDING)
CONNECT TO EXIST. 12" X 20"
ARCH CMP PIPE STUB INLET
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'

STA. 240+00 CONSTRUCT
DROP INLET ON LT. H = 4'- 9"
WITH 4' EXTENSION AND
AND 24" X 90' PIPE CULVERT
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
24" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 90 LIN. FT.
24" SLPPMCCS PIPE (TYPE 2 BEDDING) = 90 LIN. FT.



STA. 226+04 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 226+62 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 229+07 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 229+80 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 230+41 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 230+99 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 234+71 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 235+16 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

P. I.	=	237+05.44
DELTA	=	34°59' 35" RT.
D	=	10°00' 00"
T	=	180.62'
L	=	349.93'
P.C.	=	235+24.83
P.T.	=	238+74.76
e	=	0.032'/'
Ls	=	188'

STA. 235+95 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 236+77 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 237+50 CONSTRUCT
DROP INLET ON RT. H = 4'- 8"
WITH 4' EXTENSION AND
AND 18" X 57' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 57 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 57 LIN. FT.

STA. 240+00 INSTALL
YARD DRAIN ON RT.
12" X 105' PIPE CULVERT
RT. SIDE DRAIN
TO DROP INLET ON RT.

STA. 240+50 INSTALL
YARD DRAIN ON RT.
12" X 51' PIPE CULVERT
RT. SIDE DRAIN
TO YARD DRAIN ON RT.

STA. 227+25 CONSTRUCT
DROP INLET ON RT. H = 4'- 0"
AND 18" X 281' R.C. PIPE CULVERT
(CLASS V) (TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'

STA. 230+10 CONSTRUCT
DROP INLET ON RT. H = 4'- 1"
AND 18" X 241' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 241 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 241 LIN. FT.

STA. 232+55 CONSTRUCT
DROP INLET ON RT. H = 4'- 3"
AND 18" X 234' R.C. PIPE CULVERT
(CLASS IV) (TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'

STA. 234+93 CONSTRUCT
DROP INLET ON RT. H = 4'- 4"
AND 18" X 241' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 241 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 241 LIN. FT.

STA. 238+15 CONSTRUCT
DROP INLET ON RT. H = 5'- 2"
AND 18" X 68' R.C. PIPE CULVERT STUB OUTLET
(CLASS III) (TYPE 3 BEDDING) WITH FES
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'

STA. 239+00 CONSTRUCT
DROP INLET ON RT. H = 5'- 8"
AND 24" X 43' R.C. PIPE CULVERT STUB OUTLET
(CLASS III) (TYPE 3 BEDDING) WITH FES
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' X 5'

FLOOD PLAIN LIMITS
STA. 237+40 - 239+65

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(2) PLAN AND PROFILE SHEETS

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REGISTERED PROFESSIONAL ENGINEER
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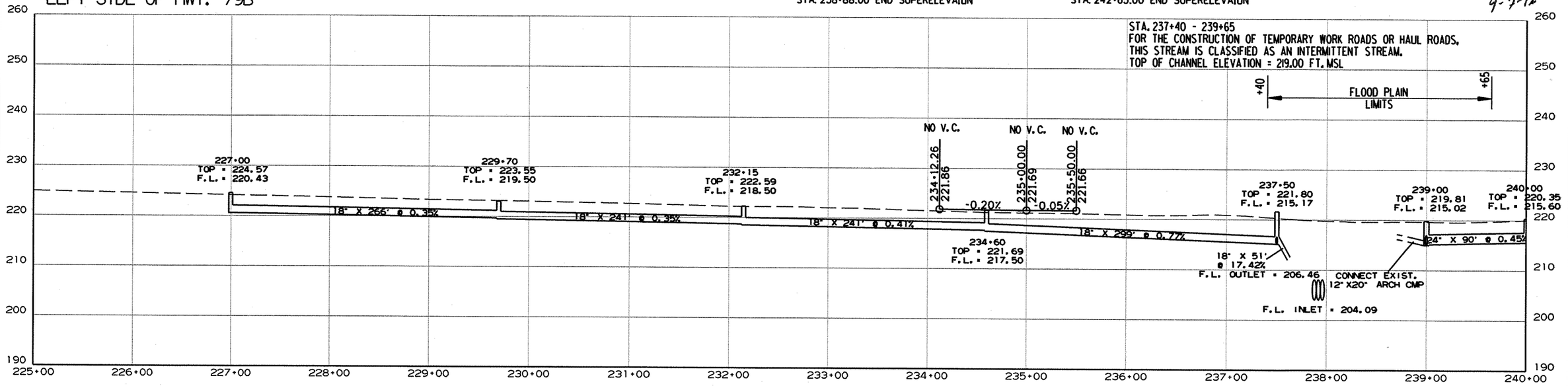
TRINITY D. SMITH
9-7-12

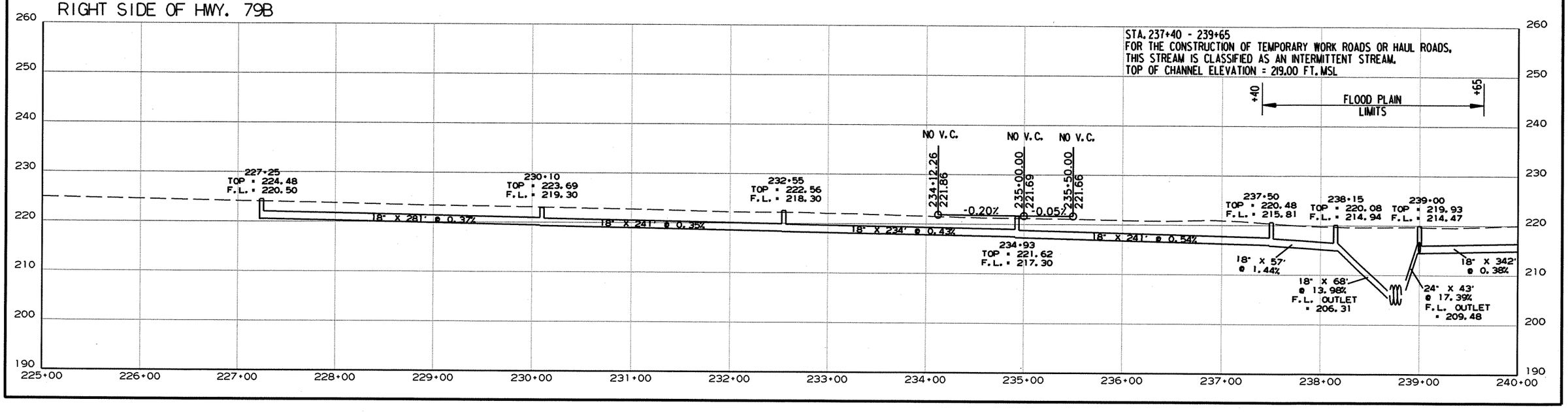
STA. 235+11.00 BEGIN SUPERELEVATION
STA. 236+99.00 MAX. SUPERELEVATION (0.032 '/')
STA. 237+00.00 MAX. SUPERELEVATION (0.032 '/')
STA. 238+88.00 END SUPERELEVAION

STA. 238+88.00 BEGIN SUPERELEVATION
STA. 240+76.00 MAX. SUPERELEVATION (0.032 '/')
STA. 240+77.00 MAX. SUPERELEVATION (0.032 '/')
STA. 242+65.00 END SUPERELEVAION

LEFT SIDE OF HWY. 79B



RIGHT SIDE OF HWY. 79B



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(2) PLAN AND PLOTTED SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

STA. 242+28 CONSTRUCT
DROP INLET ON LT. H = 5'- 3"
AND 24" X 212' R.C. PIPE CULVERT
(CLASS IV) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'

P. I. = 240+82.50
DELTA = 35°19'52" LT.
D = 10°00'00"
T = 182.47'
L = 353.31'
P. C. = 239+00.02
P. T. = 242+53.33
e = 0.032'/'
Ls = 188'

STA. 245+00 CONSTRUCT
DROP INLET ON LT. H = 5'- 11"
AND 18" X 267' PIPE CULVERT
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 267 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 267 LIN. FT.

STA. 247+40 CONSTRUCT
DROP INLET ON LT. H = 5'- 10"
AND 18" X 236' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'

STA. 250+00 CONSTRUCT
DROP INLET ON LT. H = 4'- 9"
AND 18" X 256' R.C. PIPE CULVERT
(CLASS IV) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'

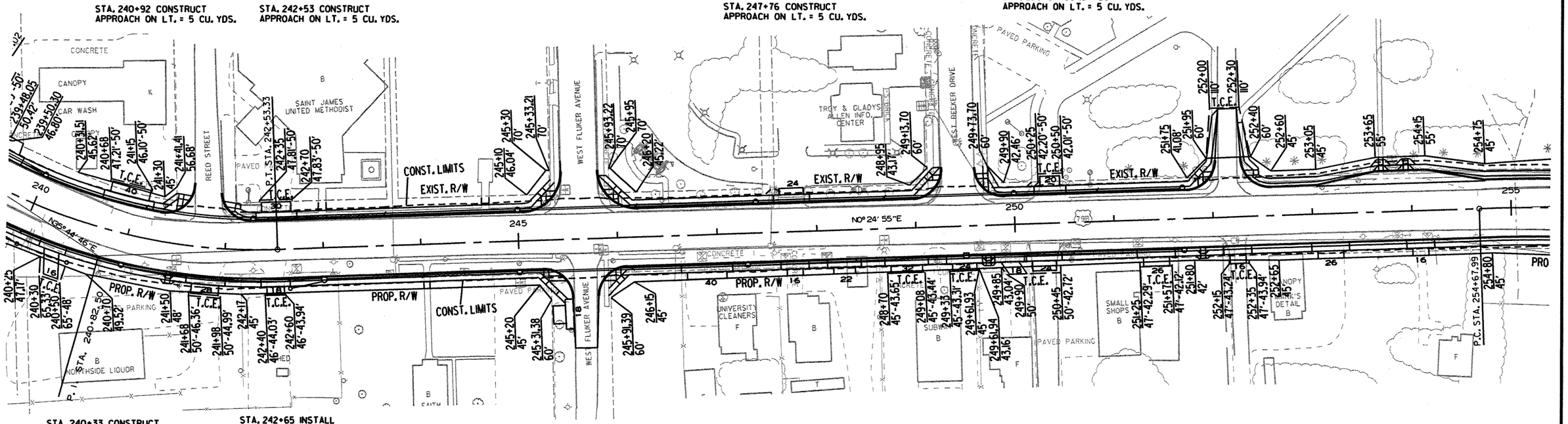
STA. 251+70 CONSTRUCT
DROP INLET ON LT. H = 4'- 2"
AND 18" X 166' PIPE CULVERT
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 166 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 166 LIN. FT.

STA. 240+92 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 242+53 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 247+76 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 250+37 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.



STA. 240+33 CONSTRUCT
APPROACH ON RT. = 15 CU. YDS.

STA. 241+83 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 241+00 CONSTRUCT
DROP INLET ON RT. H = 6'- 11"
AND 18" X 207' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 207 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 207 LIN. FT.

STA. 242+65 INSTALL
YARD DRAIN ON RT.
12" X 33' PIPE CULVERT
RT. SIDE DRAIN
TO DROP INLET ON RT.

STA. 242+50 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 243+00 CONSTRUCT
DROP INLET ON RT. H = 5'- 7"
AND 18" X 205' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' X 5'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 205 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 205 LIN. FT.

STA. 245+00 CONSTRUCT
DROP INLET ON RT. H = 5'- 11"
AND 18" X 196' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 196 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 196 LIN. FT.

STA. 245+53 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 246+89 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 248+27 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 248+90 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 249+48 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 247+30 CONSTRUCT
DROP INLET ON RT. H = 6'- 0"
AND 18" X 226' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'

STA. 249+50 CONSTRUCT
DROP INLET ON RT. H = 5'- 4"
AND 18" X 216' PIPE CULVERT
TO DROP INLET ON RT.
TYPE ST DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 216 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 216 LIN. FT.

STA. 249+94 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 250+29 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 251+42 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 251+70 CONSTRUCT
DROP INLET ON RT. H = 4'- 2"
AND 18" X 216' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 216 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 216 LIN. FT.

STA. 252+24 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 253+17 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 254+08 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

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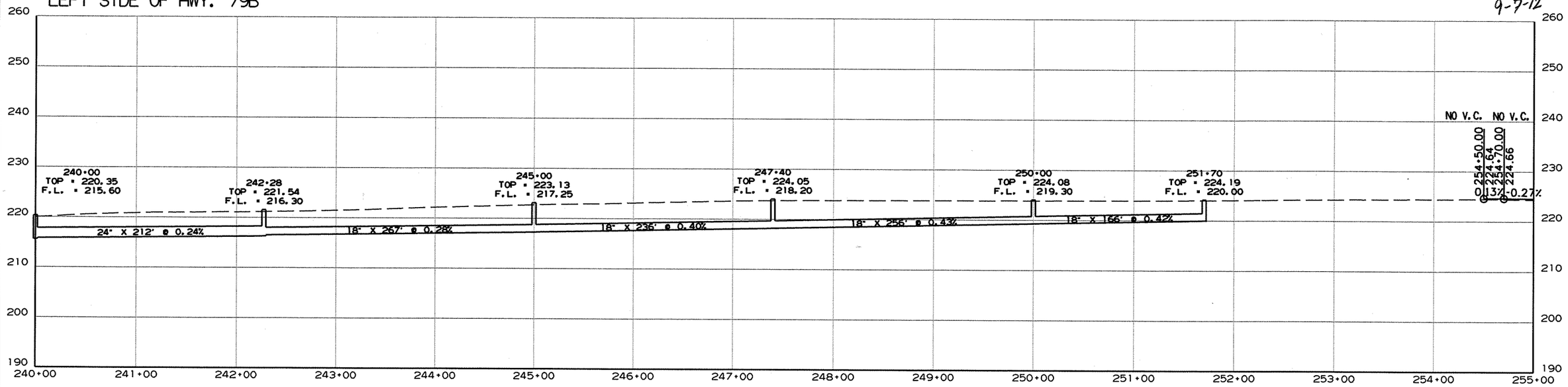
				6	ARK.			
				JOB NO.		020070	50	144

(2) PLAN AND PROFILE SHEETS

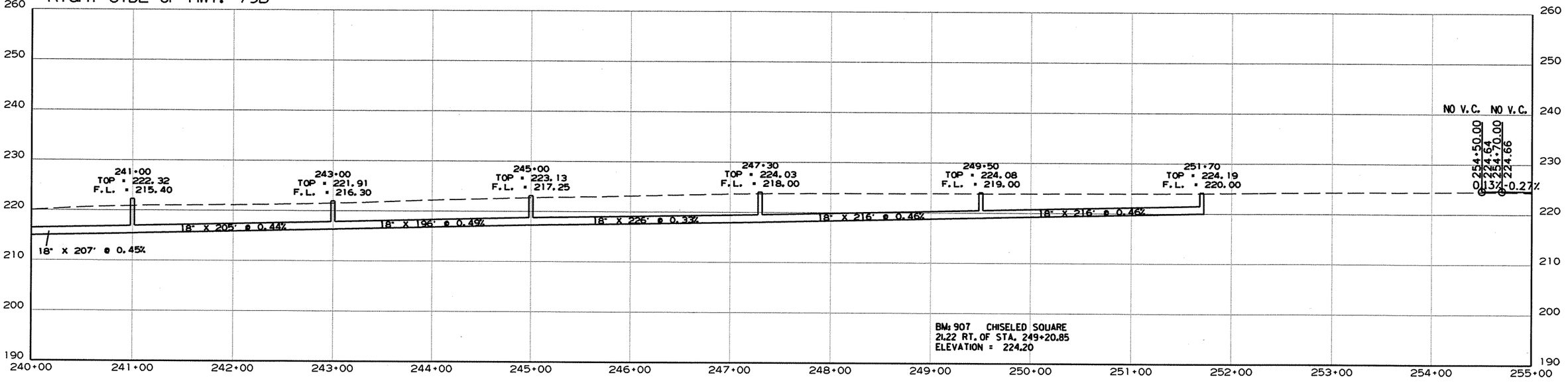
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

STA. 252+05.49 BEGIN SUPERELEVATION
STA. 255+55.49 MAX. SUPERELEVATION (0.027 '/')
STA. 259+53.95 MAX. SUPERELEVATION (0.027 '/')
STA. 263+03.95 END SUPERELEVAION

LEFT SIDE OF HWY. 79B



RIGHT SIDE OF HWY. 79B



8/24/2012

R020070.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	51	144

(2) PLAN AND PLOT SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

N

STA. 255+50 CONSTRUCT
DROP INLET ON LT. H = 3'- 8"
AND 18" X 60' R.C. PIPE CULVERT
(CLASS V) (TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'

P. I. = 257+79.95
DELTA = 18°33' 13" RT.
D = 3°00' 00"
T = 311.96'
L = 618.46'
P. C. = 254+67.99
P. T. = 260+86.45
e = 0.027'/'
Ls = 350'

STA. 260+50 CONSTRUCT
DROP INLET ON LT. H = 3'- 11"
AND 18" X 276' R.C. PIPE CULVERT
(CLASS V) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'

STA. 263+30 CONSTRUCT
DROP INLET ON LT. H = 3'- 4"
AND 18" X 258' R.C. PIPE CULVERT
(CLASS V) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'

STA. 265+95 CONSTRUCT
DROP INLET ON LT. H = 3'- 5"
WITH 4' EXTENSION AND
18" X 156' PIPE CULVERT
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 156 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 156 LIN. FT.

STA. 268+55 CONSTRUCT
DROP INLET ON LT. H = 4'- 8"
AND 18" X 51' PIPE CULVERT
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 51 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 51 LIN. FT.

STA. 263+90 INSTALL
YARD DRAIN ON LT.
12" X 58' PIPE CULVERT
LT. SIDE DRAIN
TO DROP INLET ON LT.

STA. 267+60 CONSTRUCT
DROP INLET ON LT. H = 3'- 11"
AND 18" X 88' R.C. PIPE CULVERT
(CLASS IV) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'

STA. 269+10 CONSTRUCT
DROP INLET ON LT. H = 5'- 7"
AND 24" X 124' PIPE CULVERT
TO DROP INLET ON LT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' X 5'
24" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 124 LIN. FT.
24" SLPPMCCS PIPE (TYPE 2 BEDDING) = 124 LIN. FT.

STA. 264+10 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

P. I. = 266+98.80
DELTA = 17°31' 07" LT.
D = 5°00' 00"
T = 176.56'
L = 350.37'
P. C. = 265+22.24
P. T. = 268+72.61
e = 0.033'/'
Ls = 350'

STA. 269+25 INSTALL
YARD DRAIN ON LT.
12" X 15' PIPE CULVERT
LT. SIDE DRAIN
TO DROP INLET ON LT.

STA. 269+44 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 266+30 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 256+26 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 257+64 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 260+67 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 262+26 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 266+58 CONSTRUCT
APPROACH ON RT. = 25 CU. YDS.

STA. 266+30 INSTALL
YARD DRAIN ON RT.
12" X 29' PIPE CULVERT
RT. SIDE DRAIN
TO DROP INLET ON RT.

STA. 269+86 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 255+50 CONSTRUCT
DROP INLET ON RT. H = 2'- 11"
AND 18" X 173' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 173 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 173 LIN. FT.

STA. 258+85 CONSTRUCT
DROP INLET ON RT. H = 3'- 8"
AND 18" X 148' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 148 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 148 LIN. FT.

STA. 262+00 CONSTRUCT
DROP INLET ON RT. H = 4'- 7"
AND 24" X 96' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
24" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 96 LIN. FT.
24" SLPPMCCS PIPE (TYPE 2 BEDDING) = 96 LIN. FT.

STA. 266+04 CONSTRUCT
DROP INLET ON RT. H = 6'- 11"
AND 24" X 249' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' X 5'
24" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 249 LIN. FT.
24" SLPPMCCS PIPE (TYPE 2 BEDDING) = 249 LIN. FT.

STA. 257+30 CONSTRUCT
DROP INLET ON RT. H = 3'- 5"
AND 18" X 11' R.C. PIPE STUB INLET
(CLASS III) (TYPE 3 BEDDING) WITH FES
AND 18" X 148' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 148 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 148 LIN. FT.

STA. 260+40 CONSTRUCT
DROP INLET ON RT. H = 4'- 3"
AND 24" X 155' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
24" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 155 LIN. FT.
24" SLPPMCCS PIPE (TYPE 2 BEDDING) = 155 LIN. FT.

STA. 263+00 CONSTRUCT
DROP INLET ON RT. H = 5'- 1"
AND 24" X 302' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
24" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 302 LIN. FT.
24" SLPPMCCS PIPE (TYPE 2 BEDDING) = 302 LIN. FT.

STA. 268+50 CONSTRUCT
DROP INLET ON RT. H = 7'- 6"
AND 24" X 197' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'

HWY. 79B (UNIVERSITY DR.)

8/24/2012

R020070.DGN

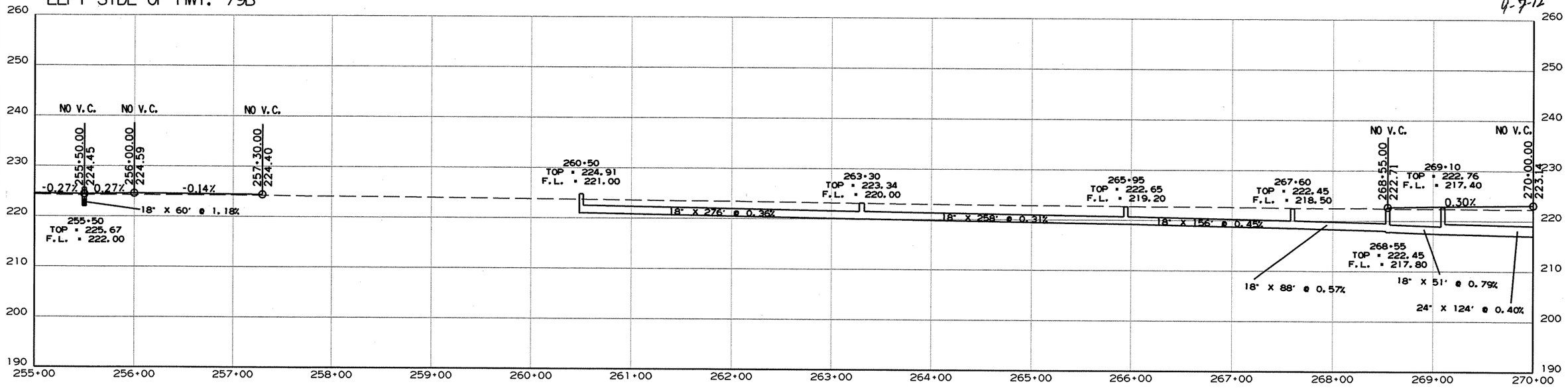
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	52	144

(2) PLAN AND PLOFILE SHEETS

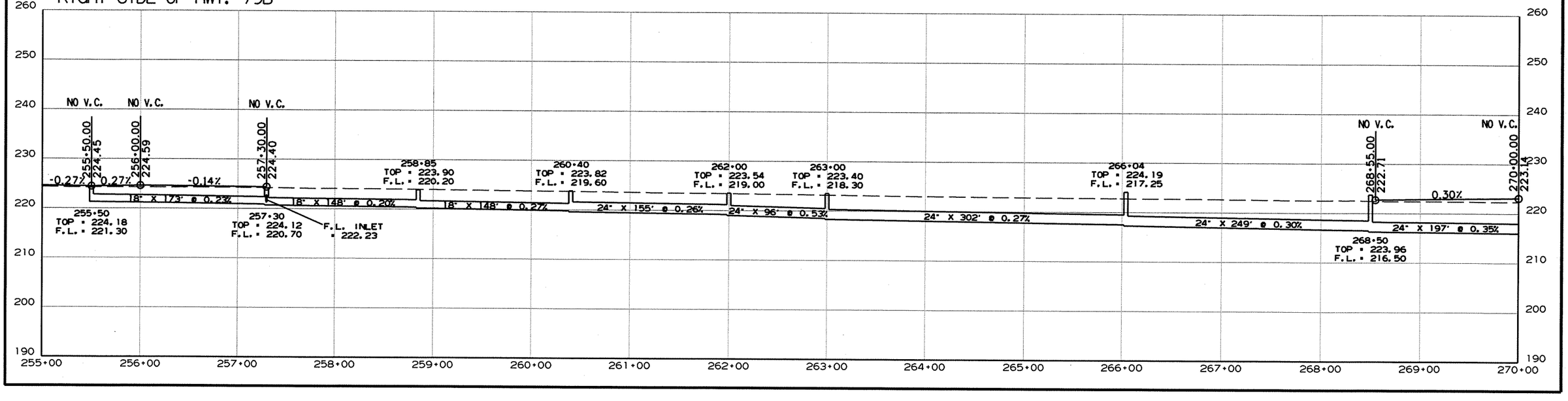
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

STA. 263+04.74 BEGIN SUPERELEVATION
STA. 266+54.74 MAX. SUPERELEVATION (0.033 '/')
STA. 267+85.11 MAX. SUPERELEVATION (0.033 '/')
STA. 271+35.11 END SUPERELEVAION

LEFT SIDE OF HWY. 79B



RIGHT SIDE OF HWY. 79B



8/24/2012

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	53	144

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

STA. 270+38 CONSTRUCT
DROP INLET ON LT. H = 6'- 0"
AND 24" X 242' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'

STA. 272+84 CONSTRUCT
DROP INLET ON LT. H = 5'- 8"
CONNECT TO EXIST. 12" BLACK PLASTIC PIPE INLET
AND 24" X 143' PIPE CULVERT
TO DROP INLET ON LT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' X 5'
24" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 143 LIN. FT.
24" SLPPMCCS PIPE (TYPE 2 BEDDING) = 143 LIN. FT.

STA. 274+31 CONSTRUCT
DROP INLET ON LT. H = 5'- 9"
CONNECT TO EXIST. 14" R.C. PIPE INLET
AND 24" X 153' PIPE CULVERT
TO DROP INLET ON LT.
TYPE ST DROP INLET = 4' X 4'
24" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 153 LIN. FT.
24" SLPPMCCS PIPE (TYPE 2 BEDDING) = 153 LIN. FT.

STA. 275+88 CONSTRUCT
DROP INLET ON LT. H = 5'- 7"
AND 30" X 307' PIPE CULVERT
TO DROP INLET ON LT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' X 5'
30" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 307 LIN. FT.
30" SLPPMCCS PIPE (TYPE 2 BEDDING) = 307 LIN. FT.

STA. 279+00 CONSTRUCT
DROP INLET ON LT. H = 4'- 2"
AND 30" X 95' PIPE CULVERT
TO DROP INLET ON LT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' X 5'
30" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 95 LIN. FT.
30" SLPPMCCS PIPE (TYPE 2 BEDDING) = 95 LIN. FT.

STA. 280+00 CONSTRUCT
DROP INLET ON LT. H = 4'- 4"
AND 30" X 144' PIPE CULVERT
TO DROP INLET ON LT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' X 5'
30" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 144 LIN. FT.
30" SLPPMCCS PIPE (TYPE 2 BEDDING) = 144 LIN. FT.

STA. 281+50 CONSTRUCT
DROP INLET ON LT. H = 4'- 10"
AND 30" X 99' PIPE CULVERT
TO DROP INLET ON LT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' X 5'
30" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 99 LIN. FT.
30" SLPPMCCS PIPE (TYPE 2 BEDDING) = 99 LIN. FT.

STA. 283+00 CONSTRUCT
DROP INLET ON LT. H = 4'- 10"
18" X 22' R.C. PIPE INLET
(CLASS III) (TYPE 3 BEDDING) WITH FES
AND 18" X 22' PIPE CULVERT
CONNECT TO EXIST. R.C. BOX CULV'T.
TYPE ST DROP INLET = 5' X 5'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 16 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 16 LIN. FT.

STA. 284+00 CONSTRUCT
DROP INLET ON LT. H = 4'- 2"
WITH 8' EXTENSION
AND 18" X 96' PIPE CULVERT
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 96 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 96 LIN. FT.

P. I. = 281+64.57
DELTA = 4°30' 28" LT.
D = 1°30' 00"
T = 150.34'
L = 300.51'
P. C. = 280+14.24
P. T. = 283+14.75
e = 0.020'/'
Ls = 350'

STA. 270+10 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 271+54 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 272+29 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 272+00 INSTALL
YARD DRAIN ON LT.
12" X 81' PIPE CULVERT
LT. SIDE DRAIN
TO DROP INLET ON LT.

STA. 273+08 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 274+29 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 276+71 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 277+73 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 279+67 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 282+55 CONSTRUCT
DROP INLET ON LT. H = 2'- 6"
IN TOP OF R.C. BOX CULV'T.
TYPE C DROP INLET = 4' X 4'

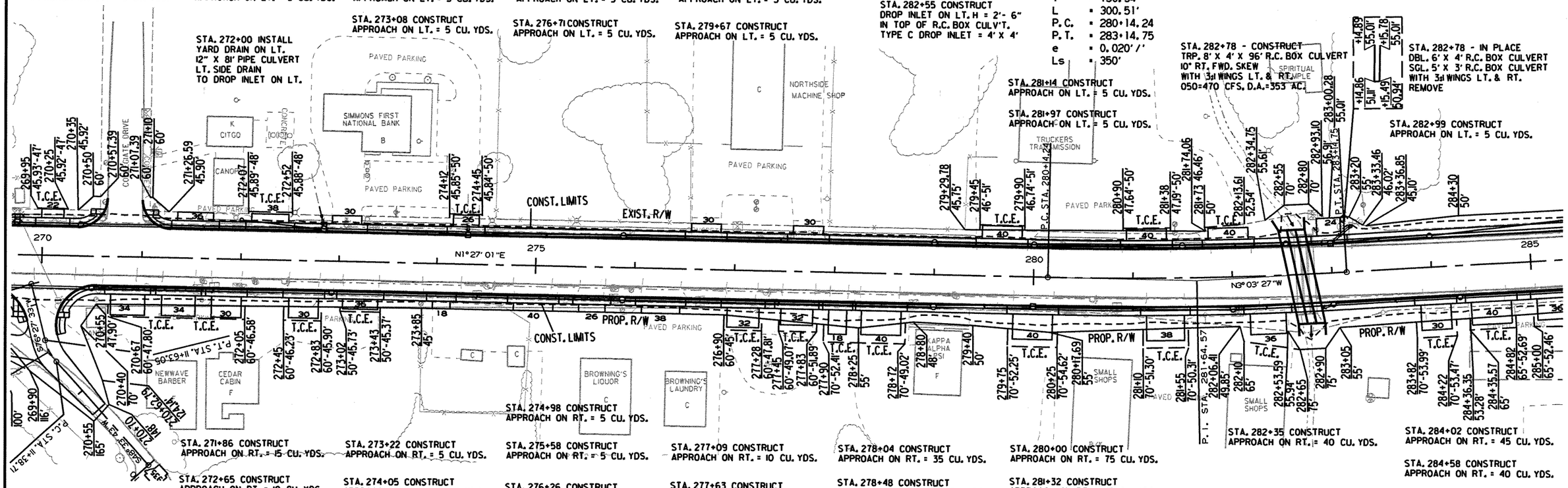
STA. 281+14 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 281+97 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 282+78 - CONSTRUCT
TRP. 8' X 4' X 96' R.C. BOX CULVERT
10° RT. FWD. SKEW
WITH 3:1 WINGS LT. & RT.
Q50=470 CFS, D.A.=353 AC.

STA. 282+78 - IN PLACE
DBL. 6' X 4' R.C. BOX CULVERT
SGL. 5' X 3' R.C. BOX CULVERT
WITH 3:1 WINGS LT. & RT.
REMOVE

STA. 282+99 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.



STA. 271+86 CONSTRUCT
APPROACH ON RT. = 15 CU. YDS.

STA. 273+22 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 274+98 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 275+58 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 277+09 CONSTRUCT
APPROACH ON RT. = 10 CU. YDS.

STA. 278+04 CONSTRUCT
APPROACH ON RT. = 35 CU. YDS.

STA. 280+00 CONSTRUCT
APPROACH ON RT. = 75 CU. YDS.

STA. 282+35 CONSTRUCT
APPROACH ON RT. = 40 CU. YDS.

STA. 284+02 CONSTRUCT
APPROACH ON RT. = 45 CU. YDS.

STA. 284+58 CONSTRUCT
APPROACH ON RT. = 40 CU. YDS.

STA. 272+65 CONSTRUCT
APPROACH ON RT. = 10 CU. YDS.

STA. 274+05 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 276+26 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 277+63 CONSTRUCT
APPROACH ON RT. = 10 CU. YDS.

STA. 278+48 CONSTRUCT
APPROACH ON RT. = 60 CU. YDS.

STA. 281+32 CONSTRUCT
APPROACH ON RT. = 45 CU. YDS.

STA. 270+86 CONSTRUCT
APPROACH ON RT. = 20 CU. YDS.

STA. 271+38 CONSTRUCT
APPROACH ON RT. = 10 CU. YDS.

STA. 270+50 CONSTRUCT
DROP INLET ON RT. H = 7'- 5"
AND 24" X 239' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
24" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 239 LIN. FT.
24" SLPPMCCS PIPE (TYPE 2 BEDDING) = 239 LIN. FT.

STA. 272+93 CONSTRUCT
DROP INLET ON RT. H = 6'- 7"
AND 24" X 291' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
24" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 291 LIN. FT.
24" SLPPMCCS PIPE (TYPE 2 BEDDING) = 291 LIN. FT.

STA. 275+88 CONSTRUCT
DROP INLET ON RT. H = 6'- 2"
AND 30" X 307' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' X 5'
30" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 307 LIN. FT.
30" SLPPMCCS PIPE (TYPE 2 BEDDING) = 307 LIN. FT.

STA. 279+00 CONSTRUCT
DROP INLET ON RT. H = 5'- 3"
AND 30" X 96' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' X 5'
30" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 96 LIN. FT.
30" SLPPMCCS PIPE (TYPE 2 BEDDING) = 96 LIN. FT.

STA. 280+00 CONSTRUCT
DROP INLET ON RT. H = 5'- 9"
AND 30" X 197' PIPE CULVERT
TO DROP INLET ON RT.
TYPE ST DROP INLET = 5' X 5'
30" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 197 LIN. FT.
30" SLPPMCCS PIPE (TYPE 2 BEDDING) = 197 LIN. FT.

STA. 282+00 CONSTRUCT
DROP INLET ON RT. H = 6'- 6"
AND 30" X 63' PIPE CULVERT
CONNECT TO EXIST. R.C. BOX CULV'T.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' X 5'
30" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 63 LIN. FT.
30" SLPPMCCS PIPE (TYPE 2 BEDDING) = 63 LIN. FT.

STA. 283+00 CONSTRUCT
DROP INLET ON RT. H = 5'- 9"
AND 18" X 11' PIPE CULVERT
CONNECT TO EXIST. R.C. BOX CULV'T.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 11 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 11 LIN. FT.

STA. 284+27 CONSTRUCT
DROP INLET ON RT. H = 4'- 8"
WITH 8' EXTENSION
AND 18" X 123' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 123 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 123 LIN. FT.

FLOOD PLAIN LIMITS
STA. 280+50 - 284+50

8/24/2012

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HWY. 79B (UNIVERSITY DR.)

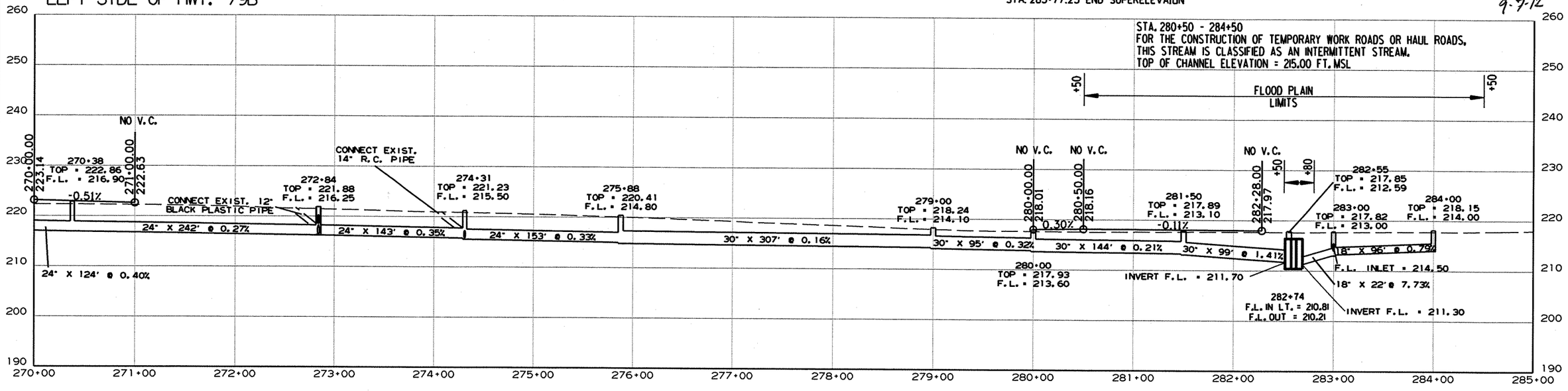
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	54	144

(2) PLAN AND PLOFILE SHEETS

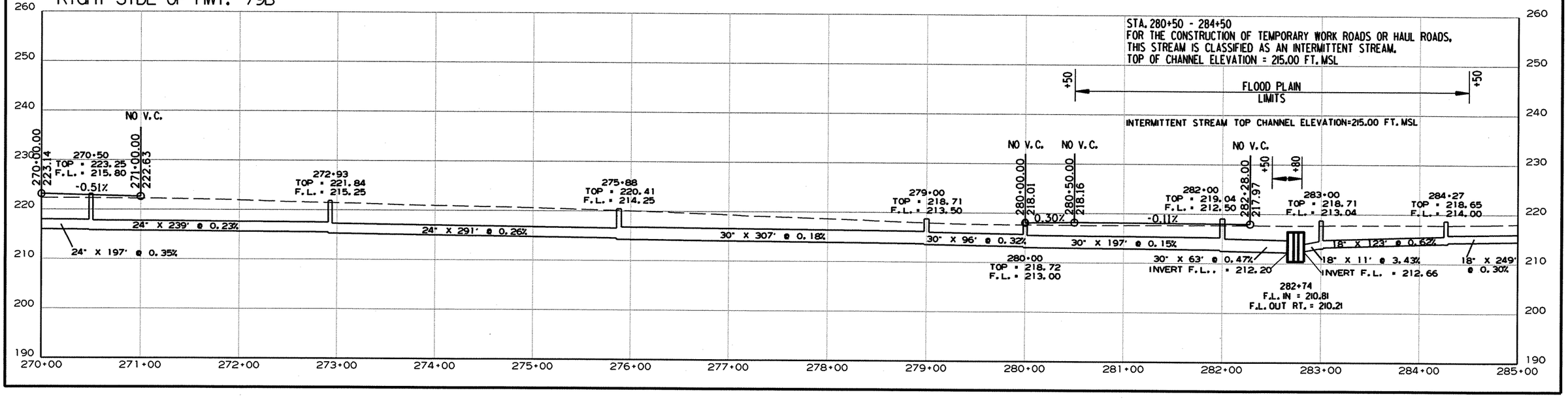
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

STA. 277+51.74 BEGIN SUPERELEVATION
STA. 281+01.74 MAX. SUPERELEVATION (0.020 '/')
STA. 282+27.25 MAX. SUPERELEVATION (0.020 '/')
STA. 285+77.25 END SUPERELEVAION

LEFT SIDE OF HWY. 79B



RIGHT SIDE OF HWY. 79B



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				6	ARK.			
				JOB NO.		020070	55	144

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

STA. 290+15 CONSTRUCT
DROP INLET ON LT. H = 3'- 2"
18" X 53' R.C. PIPE CULVERT STUB INLET
(CLASS V) (TYPE 3 BEDDING) WITH FES
18" X 7' R.C. PIPE CULVERT STUB INLET
(CLASS III) (TYPE 3 BEDDING) WITH FES
AND 24" X 289' PIPE CULVERT
TO DROP INLET ON LT.
TYPE C DROP INLET = 4' X 4'
24" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 289 LIN. FT.
24" SLPPMCCS PIPE (TYPE 2 BEDDING) = 289 LIN. FT.

STA. 293+00 CONSTRUCT
DROP INLET ON LT. H = 3'- 7"
18" X 9' R.C. PIPE CULVERT STUB INLET
(CLASS III) (TYPE 3 BEDDING) WITH FES
AND 30" X 202' PIPE CULVERT
TYPE C DROP INLET = 5' X 5'

STA. 296+38.28 - STA. 297+27.94 - IN PLACE
90'-1" X 50' CONCRETE DECK ON STEEL BEAMS
SUPPORTED BY CONCRETE PILES AND ABUTMENTS
(BRIDGE NO. A10018) - RETAIN

STA. 293+53 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 293+93 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 295+00 CONSTRUCT
DROP INLET ON LT. H = 3'- 8"
AND 30" X 33' R.C. PIPE CULVERT STUB OUTLET
(CLASS III) (TYPE 3 BEDDING) WITH FES
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' X 5'

TRANSITIONAL APPROACH RAILING

STA.	STA.	LOCATION	EACH
296+16	296+36	LT.	1
296+16	296+36	RT.	1
297+29	297+49	LT.	1
297+29	297+49	RT.	1

STA. 295+30 - STA. 296+16
ON LT. AND RT.
TRANSITION 5'-0" CONC. SIDEWALK AND
3'-0" GRASS BERM TO 6'-0" CONC. SIDEWALK

STA. 296+16 - STA. 296+36
ON LT. AND RT.
TRANSITION 6'-0" CONC. SIDEWALK
TO 4'-0" CONC. SIDEWALK

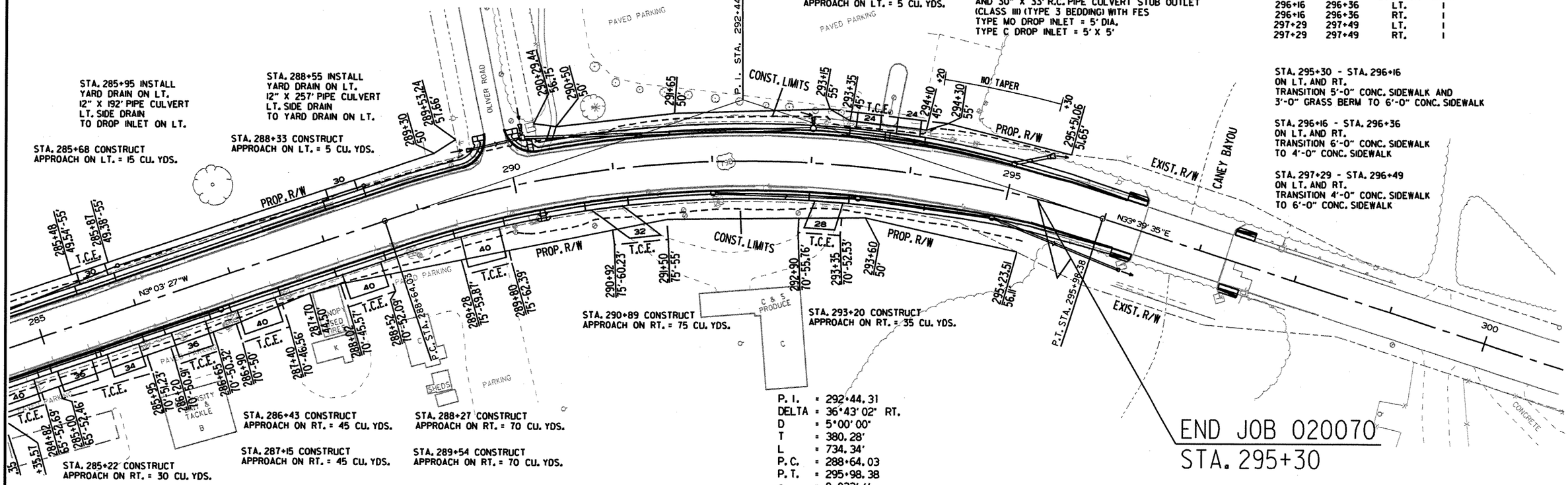
STA. 297+29 - STA. 296+49
ON LT. AND RT.
TRANSITION 4'-0" CONC. SIDEWALK
TO 6'-0" CONC. SIDEWALK

STA. 285+95 INSTALL
YARD DRAIN ON LT.
12" X 192' PIPE CULVERT
LT. SIDE DRAIN
TO DROP INLET ON LT.

STA. 285+68 CONSTRUCT
APPROACH ON LT. = 15 CU. YDS.

STA. 288+55 INSTALL
YARD DRAIN ON LT.
12" X 257' PIPE CULVERT
LT. SIDE DRAIN
TO YARD DRAIN ON LT.

STA. 288+33 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.



STA. 285+74 CONSTRUCT
APPROACH ON RT. = 35 CU. YDS.

STA. 285+22 CONSTRUCT
APPROACH ON RT. = 30 CU. YDS.

STA. 286+43 CONSTRUCT
APPROACH ON RT. = 45 CU. YDS.

STA. 287+15 CONSTRUCT
APPROACH ON RT. = 45 CU. YDS.

STA. 288+27 CONSTRUCT
APPROACH ON RT. = 70 CU. YDS.

STA. 289+54 CONSTRUCT
APPROACH ON RT. = 70 CU. YDS.

STA. 290+89 CONSTRUCT
APPROACH ON RT. = 75 CU. YDS.

STA. 293+20 CONSTRUCT
APPROACH ON RT. = 35 CU. YDS.

P.I. = 292+44.31
DELTA = 36°43' 02" RT.
D = 5°00' 00"
T = 380.28'
L = 734.34'
P.C. = 288+64.03
P.T. = 295+98.38
e = 0.033'/'
Ls = 350'

END JOB 020070
STA. 295+30

STA. 292+00 CONSTRUCT
DROP INLET ON RT. H = 3'- 3"
WITH 8' EXTENSION
AND 18" X 142' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 142 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 142 LIN. FT.

STA. 294+90 CONSTRUCT
DROP INLET ON RT. H = 3'- 8"
18" X 133' R.C. PIPE CULVERT OUTLET
(CLASS III) (TYPE 3 BEDDING) WITH FES
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'

FLOOD PLAIN LIMITS
STA. 295+50 - 297+50

STA. 286+80 CONSTRUCT
DROP INLET ON RT. H = 3'- 11"
WITH 8' EXTENSION
AND 18" X 249' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 249 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 249 LIN. FT.

STA. 293+50 CONSTRUCT
DROP INLET ON RT. H = 3'- 4"
WITH 8' EXTENSION
AND 18" X 133' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 133 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 133 LIN. FT.

8/24/2012

R020070.DGN

HWY. 79B (UNIVERSITY DR.)

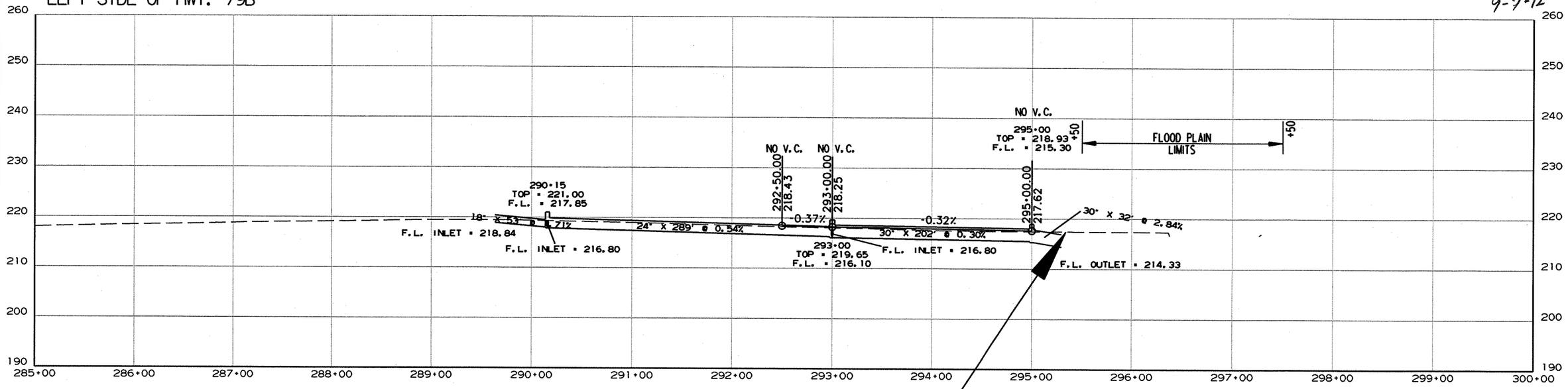
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	56	144

(2) PLAN AND PLOT SHEETS

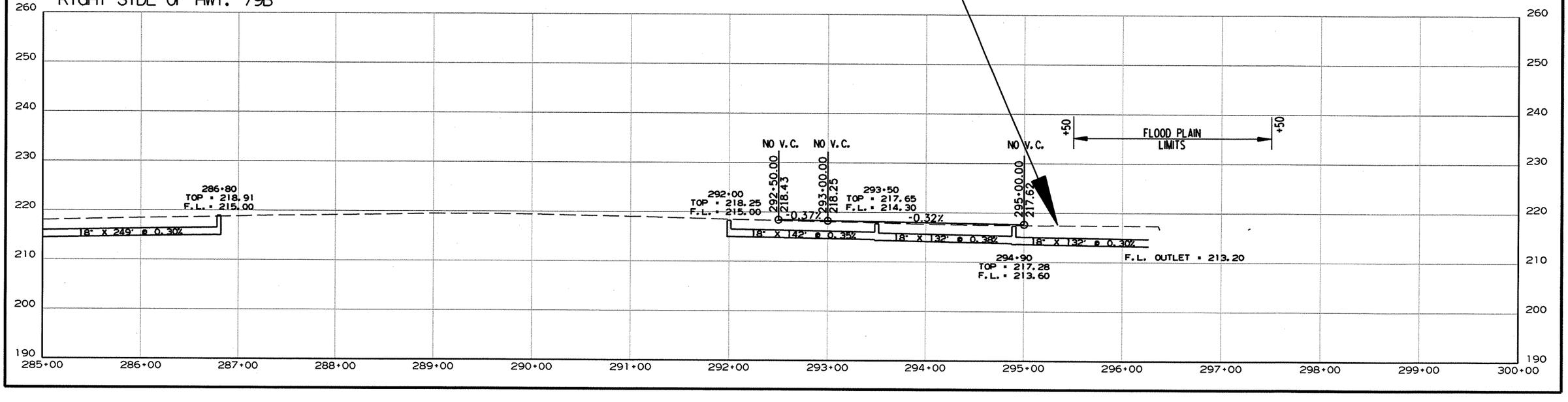
STA. 286+01.53 BEGIN SUPERELEVATION
STA. 289+51.53 MAX. SUPERELEVATION (0.033 '/')
STA. 295+10.88 MAX. SUPERELEVATION (0.033 '/')
STA. 295+30.00 MATCH EXISTING SUPERELEVAION

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

LEFT SIDE OF HWY. 79B



RIGHT SIDE OF HWY. 79B



8/24/2012

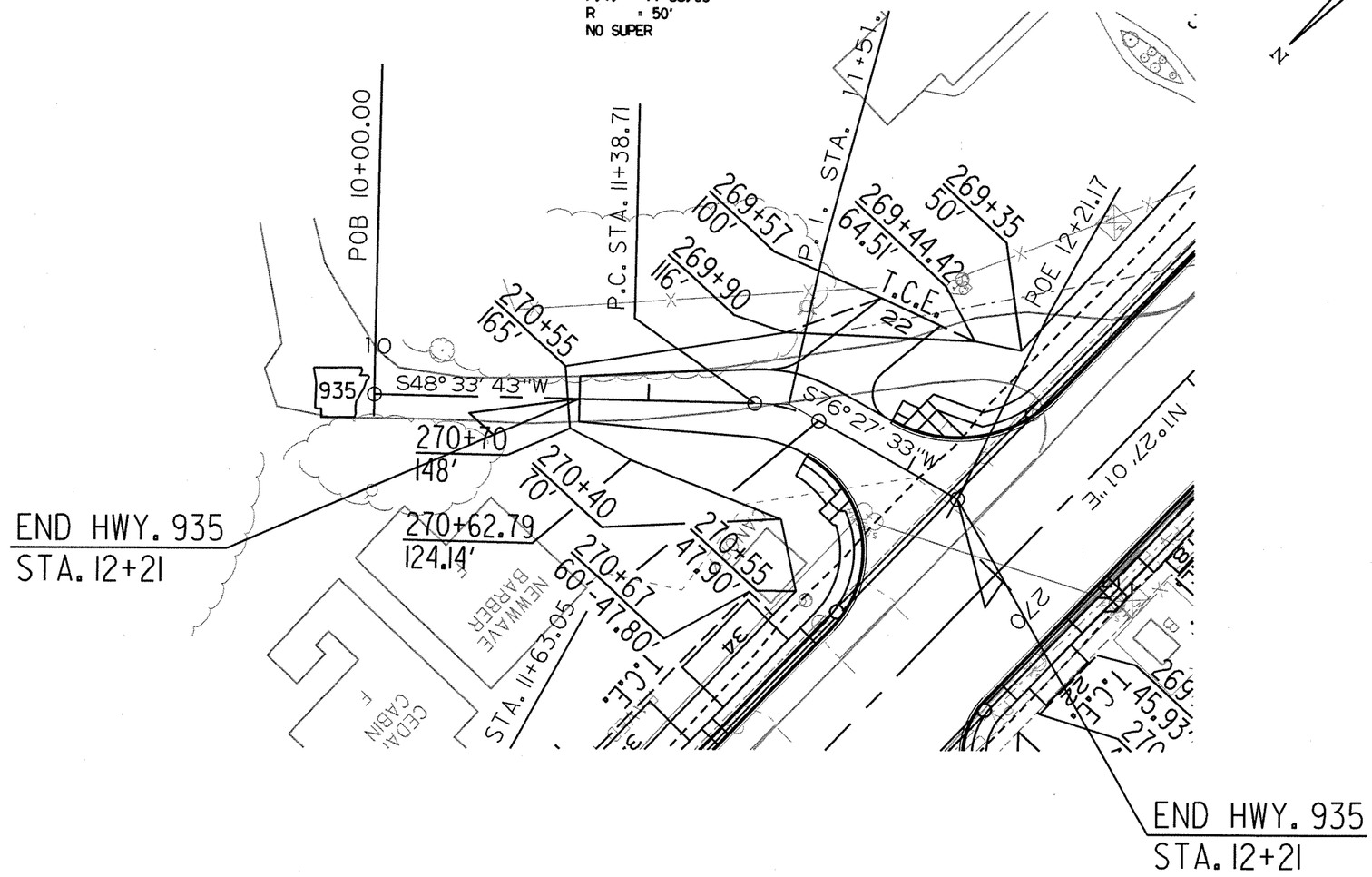
R020070.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	57	144

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

P.I. = 11+51.13
DELTA = 27°53'49" RT.
D = 114°35'30"
T = 12.42'
L = 24.34'
P.C. = 11+38.71
P.T. = 11+63.05
R = 50'
NO SUPER



8/24/2012

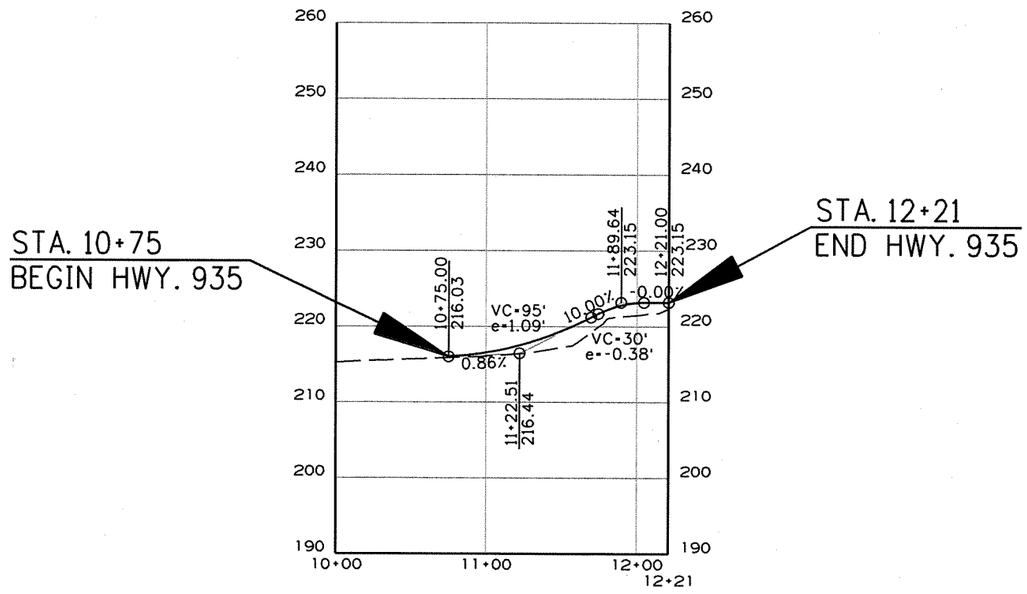
R020070.DGN

HWY. 935

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	58	144

(2) PLAN AND PROFILE SHEETS

HWY. 935



8/24/2012

R020070.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	59	144

(2) SYSTEM MAP

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

PINE BLUFF
ANTENNA ORIENTATION
HWY. 79B (UNIVERSITY DR.) / W. FLUKER AVE.
139° 31' 44"

LAKE
PINE BLUFF
ANTENNA ORIENTATION
HWY. 79B (UNIVERSITY DR.) / W. PULLEN AVE.
119° 52' 50"

ANTENNA ORIENTATION
HWY. 65B/HWY. 79B (UNIVERSITY DR.)
116° 18' 09"

MASTER ANTENNA/TOWER SITE
LOCATED AT THE PINE BLUFF
CITY HALL 200 E. 8TH AVENUE

SCALE IN FEET
0 1000 2000 4000

LOCATION: HWY. 65B - NORTH
CITY: PINE BLUFF
COUNTY: JEFFERSON
DISTRICT: 2 SCALE: 1"=2000' DRAWN BY: GWE

DATE: 09-06-12 FILE NAME: t020070_job.dgn

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	60	144

(2) SUMMARY OF SIGNAL QUANTITIES & NOTES

TRAFFIC SIGNAL NOTES:

1. PERFORM ELECTRICAL WORK IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE NFPA 70 (2002) NATIONAL ELECTRICAL CODE, NFPA 101(2000) LIFE SAFETY CODE, STATE ELECTRICAL CODE AND LOCAL ELECTRICAL CODE.
2. EXTEND GREEN EQUIPMENT GROUNDING CONDUCTOR (EGC) FROM GROUND BAR AT MAIN BREAKER TO CONTROL PANEL AND TO FIRST POLE. SOLIDLY BOND EGC TO GROUND LUG OF CONTROL CABINET AND TO POLE GROUND. ENSURE THAT ONLY ONE NEUTRAL-TO-GROUND BOND EXISTS IN THE SYSTEM AND THAT IT IS AT THE MAIN BREAKER.
3. ELECTRICAL SERVICE SHALL BE PROVIDED BY THE CITY TO A SERVICE POLE WITH EXTERNAL RAINTIGHT BREAKER (MAIN BREAKER), GALVANIZED STEEL SERVICE RISER, METER LOOP (IF REQUIRED), AND WEATHERHEAD AT A MUTUALLY ACCEPTABLE POINT WITHIN THE RIGHT-OF-WAY. IF THE SERVICE POINT IS OVER 10 FEET FROM THE CONTROLLER, THE CONTRACTOR SHALL PROVIDE AND INSTALL A SEPARATE TWO CIRCUIT EXTERNAL BREAKER (SECONDARY BREAKER) ON OR NEAR THE TRAFFIC SIGNAL CONTROLLER CABINET AND SHALL INSTALL CONDUIT, ELECTRICAL SERVICE WIRE (2c/#6 USE RATED, WITH GROUND TYPICAL), AND PERFORM WIRING TO TAP INTO THE CITY'S MAIN BREAKER AS PART OF THIS CONTRACT. CONDUIT IS PAID FOR AS A SEPARATE ITEM OF THIS CONTRACT. TWO CIRCUIT BREAKERS, CONSIDERED SUBSIDIARY TO THE CONTROL EQUIPMENT WHERE STREET LIGHTING IS INCLUDED. AS PART OF THE SIGNAL INSTALLATION, STREET LIGHTING CIRCUIT (2c/#12 AWG UF RATED, TYPICAL) SHALL BE KEPT FROM THE CIRCUIT SERVING THE TRAFFIC SIGNAL CONTROL EQUIPMENT FROM THE POINT OF TIE-IN AT THE SECONDARY BREAKER PROVIDED BY THE CONTRACTOR.
4. CONTRACTOR SHALL CONNECT A SEPARATE NEUTRAL FOR EACH LOAD SWITCH REPRESENTED ON EACH SIGNAL POLE.
5. TRAFFIC CONTROLLER CABINET SHALL HAVE 16 LOAD BAYS AND LAYOUT SHALL BE SUCH THAT IT IS NOT NECESSARY TO SHUT DOWN POWER OR REMOVE LOAD SWITCHES IN ORDER TO EASILY TEST OR MODIFY DETECTOR INPUTS TO THE CONTROLLER.
6. CONTROLLER CABINET SHALL BE WIRED SUCH THAT DURING FLASH OPERATIONS POWER TO THE LOAD SWITCHES CANNOT BACKFEED TO LOAD SWITCH POWER BUSS.
7. ALL PARTS OF THIS INSTALLATION SHALL BE IN ACCORDANCE WITH THE ARKANSAS HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARDS AND DETAILS, AND WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITIONS.
8. CONDUIT INSTALLED UNDER ROADWAY SURFACES SHALL BE INSTALLED BY PUSHING OR BORING METHODS. IF THE ENGINEER DETERMINES THIS IS NOT FEASIBLE, THEN A TRENCHING METHOD MAY BE USED.
9. TRAFFIC SIGNAL POLES SHALL BE GALVANIZED. BACKPLATES SHALL BE SUPPLIED FOR ALL SIGNAL HEADS.
10. PAVEMENT MARKING SHOWN FOR REFERENCE ONLY. SEE PAVEMENT MARKING PLAN SHEETS.
11. FOUNDATION FOR ALL POLES SHALL BE EXTENDED IF NECESSARY TO ACCOMMODATE THE REQUIREMENTS FOR SIGNAL HEAD CLEARANCE ABOVE ROADWAY ONLY AT LOCATIONS WHERE THE GROUND ELEVATION AT THE POLE IS BELOW THE ELEVATION OF THE ROADWAY (SEE NOTES ON SPECIAL DETAILS). PAYMENT WILL BE INCLUDED IN SECTION 714, AHTD STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
12. ALL BOXES SHALL BE (TYPE 2 HD) UNLESS OTHERWISE INDICATED. ALL CONDUIT SHALL BE 3" DIAMETER UNLESS SPECIFIED ON PLANS.
13. CONTRACTOR SHALL NOTIFY ALL EXISTING UTILITY OWNERS BEFORE BEGINNING WORK ON THIS PROJECT.
14. LUMINAIRE ASSEMBLIES SHALL BE OF THE FULL CUTOFF TYPE.
15. HARDWARE INPUTS MAY BE DETERMINED BY SUPPLIER. EACH DETECTOR OUTPUT SHALL INPUT THE CONTROLLER THROUGH A SEPARATE INPUT UNLESS OTHERWISE NOTED AND BE PROGRAMMED TO ACTUATE THE ASSOCIATED PHASE. COMBINATION (COMB.) DETECTORS SHALL ALSO BE PROGRAMMED TO PROVIDE VEHICLE COUNT/OCCUPANCY DATA.
16. THE LOCAL RADIO WITH ANTENNA SHALL BE COMPATIBLE WITH THE EXISTING CLOSED LOOP COORDINATION SYSTEM IN THE CITY.
17. TO DETERMINE UTILITY CLEARANCES ABOVE THE TRAFFIC SIGNAL POLE, REFER TO THE POLE SCHEDULE FOR VERTICAL SHAFT HEIGHT. WHERE THE POLE SCHEDULE INDICATES THAT A LUMINAIRE ARM WILL BE USED, 38 FEET SHOULD BE USED TO DETERMINE UTILITY CLEARANCE ABOVE THE LUMINAIRE ARM. WHERE THE POLE SCHEDULE INDICATES A TRAFFIC SIGNAL POLE WITHOUT A LUMINAIRE ARM, A HEIGHT OF 21' SHOULD BE USED TO DETERMINE UTILITY CLEARANCE ABOVE THE TRAFFIC SIGNAL MAST ARM. AN ADDITIONAL 6 FEET SHOULD BE USED DIRECTLY ABOVE "VIDEO DETECTOR" AT LOCATIONS SHOWN ON THE SIGNAL PLANS.
18. THE DESIRABLE MINIMUM DISTANCE FROM THE FACE OF ROADWAY CURB OR SHOULDER EDGE TO THE FACE OF NON-BREAKAWAY POLE OR OBSTRUCTION IS 6 FEET. REFER TO TRAFFIC SIGNAL PLANS FOR SPECIFIC LOCATION OF POLES, CONTROLLER AND ANY OTHER NON-BREAKAWAY OBSTRUCTIONS. REFER TO "DESIGN PARAMETERS, MINIMUM CLEAR ZONE DISTANCE" FOR MINIMUM DISTANCE FROM THE EDGE OF TRAVELED WAY TO THE FACE OF A NON-BREAKAWAY POLE OR OBSTRUCTION. TRAFFIC SIGNAL POLES OR ANY OTHER NON-BREAKAWAY OBSTRUCTION SHALL NOT BE INSTALLED WITHIN THE CLEAR ZONE.
19. AS DETERMINED BY THE ENGINEER, FOUNDATION EMBEDMENT MAY BE DECREASED BY A MAXIMUM OF TWO FEET IF COMPETENT ROCK IS ENCOUNTERED PRIOR TO ACHIEVING PLAN EMBEDMENT AND AT LEAST HALF OF THE REMAINING PLAN EMBEDMENT LENGTH IS KEYED INTO COMPETENT ROCK.
20. CONNECTION OF TRAFFIC SIGNAL DISPLAY TO FIELD WIRING SHALL UTILIZE AN APPROVED TERMINAL STRIP BEHIND HAND-HOLE COVER AT BASE OF POLE. TERMINAL STRIP SHALL PROVIDE PROTECTION TO PREVENT EXPOSURE TO THE PUBLIC IN THE EVENT THAT POLE COVER IS MISSING. PAYMENT FOR TERMINAL STRIPS SHALL BE INCLUDED IN ITEM 714-TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION.
21. CONTROLLER CABINET LAYOUT AND ORIENTATION SHALL CONFORM TO ISMA STANDARDS.
22. ONE VIDEO PROGRAMMING MODULE SHALL BE PROVIDED FOR AIMING AND SETUP OF DETECTORS IF THE VIDEO SYSTEM CANNOT BE ADJUSTED THROUGH HARDWARE AND SOFTWARE PROVIDED BY ITEMS WITHIN THE JOB.
23. TRAFFIC SIGNAL CONTRACTOR MUST NOTIFY RESIDENT ENGINEER OR ASSIGNED DEPARTMENT PROJECT INSPECTOR EACH DAY PRIOR TO SIGNAL RELATED WORK. NO WORK ON TRAFFIC SIGNALS WILL BE ALLOWED OR APPROVED WITHOUT THIS PRIOR NOTIFICATION.
24. ALL STEEL POLES SHALL BE DESIGNED TO MEET THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 4TH EDITION (2001) WITH 2003 AND 2006 INTERIMS.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-10-12

ITEM NO.	ITEM	HWY.65B AT HWY. 79B	HWY.79B AT W. PULLEN	HWY.79B AT W. FLUKER	TOTAL JOB QUANTITY	UNIT
SP&701	SYSTEM LOCAL CONTROLLER TS 2-TYPE 2 (8 PHASES)	1	1	1	3	EACH
SP&706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1WAY)	13	8	8	29	EACH
SP&706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1WAY)	2	2	2	6	EACH
SP&706	TRAFFIC SIGNAL HEAD, LED, (5 SECTION, 1WAY)	1			1	EACH
SP&707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	12	8	8	28	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	2192	873	889	3954	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	198	256	258	712	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	655	425	435	1515	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	50	50	50	150	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	50	50	50	150	LIN. FT.
710	NON-METALLIC CONDUIT (2")	20	20	20	60	LIN. FT.
710	NON-METALLIC CONDUIT (3")	733	303	297	1333	LIN. FT.
SS&711	CONCRETE PULL BOX (TYPE 1HD)	2		1	3	EACH
SS&711	CONCRETE PULL BOX (TYPE 1)		2	2	4	EACH
SS&711	CONCRETE PULL BOX (TYPE 2 HD)	6	2		8	EACH
SS&711	CONCRETE PULL BOX (TYPE 2)		1	3	4	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (38')		1	2	3	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (42')		1		1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (44')		1		1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (46')			1	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (48')		1		1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (50')	1			1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (52')			1	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (62')	2			2	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (64')	1			1	EACH
SS&715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	3			3	EACH
733	VIDEO CABLE	1383	677	696	2756	LIN. FT.
• SP&733	VIDEO DETECTOR (CLR)	7	5	5	17	EACH
733	VIDEO MONITOR (CLR)	1	1	1	3	EACH
• SP&733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	5	5	4	14	EACH
SP&733	VIDEO EDGE CARD EXTENDER		2	2	4	EACH
SP&733	VEHICLE DETECTOR RACK (16 CHANNEL)	1			1	EACH
SP&733	VEHICLE DETECTOR RACK (20 CHANNEL)			1	1	EACH
SP&733	VEHICLE DETECTOR RACK (24 CHANNEL)		1		1	EACH
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)	646	364	365	1375	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., EGC)	225	200	100	525	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	100	100	100	300	LIN. FT.
SP	LUMINAIRE ASSEMBLY	4	4	2	10	EACH
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	825	627	187	1639	LIN. FT.
SP	18" STREET NAME SIGN	4	4	4	12	EACH
SP	LOCAL RADIO WITH ANTENNA	1	1	1	3	EACH
SP	ANTENNA CABLE (TYPE 6)	70	70	70	210	LIN. FT.
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.34	0.33	0.33	1.00	LUMP SUM
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	1	1	3	EACH

• ONE SPARE VIDEO DETECTOR AND ONE SPARE VIDEO PROCESSOR SHALL BE SUPPLIED.

DATE: 09-10-12 FILE NAME: t020070_job.dgn

LOCATION: HWY. 65B - NORTH
CITY: PINE BLUFF
COUNTY: JEFFERSON
DISTRICT: 2 SCALE: N/A DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	61	144

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

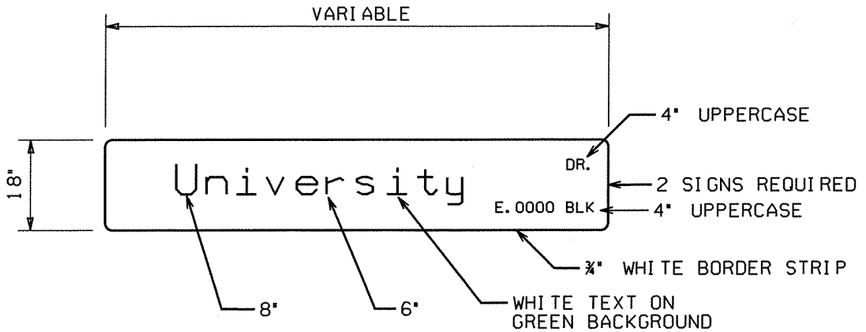
9-10-12

TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	QUANTITY	UNIT
SP&701	SYSTEM LOCAL CONTROLLER TS 2-TYPE 2 (8 PHASES)	1	EACH
SP&706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1WAY)	13	EACH
SP&706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1WAY)	2	EACH
SP&706	TRAFFIC SIGNAL HEAD, LED, (5 SECTION, 1WAY)	1	EACH
SP&707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	12	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	2192	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	198	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	655	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	50	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	50	LIN. FT.
710	NON-METALLIC CONDUIT (2")	20	LIN. FT.
710	NON-METALLIC CONDUIT (3")	733	LIN. FT.
SS&711	CONCRETE PULL BOX (TYPE 1HD)	2	EACH
SS&711	CONCRETE PULL BOX (TYPE 2 HD)	6	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (50')	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (62')	2	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (64')	1	EACH
SS&715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	3	EACH
733	VIDEO CABLE	1383	LIN. FT.
• SP&733	VIDEO DETECTOR (CLR)	7	EACH
733	VIDEO MONITOR (CLR)	1	EACH
• SP&733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	5	EACH
SP&733	VEHICLE DETECTOR RACK (16 CHANNEL)	1	EACH
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)	646	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., EGC)	225	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	100	LIN. FT.
SP	LUMINAIRE ASSEMBLY	4	EACH
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	825	LIN. FT.
SP	18" STREET NAME SIGN	4	EACH
SP	LOCAL RADIO WITH ANTENNA	1	EACH
SP	ANTENNA CABLE (TYPE 6)	70	LIN. FT.
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.34	LUMP SUM
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH

• ONE SPARE VIDEO DETECTOR AND ONE SPARE VIDEO PROCESSOR SHALL BE SUPPLIED.

OVERHEAD STREET NAME MARKER STANDARD MAST ARM MOUNTED



NOTES:
1. REFLECTIVE SHEETING SHALL COMPLY WITH ASTM 4956 TYPE 8 OR 9 REFLECTIVE SHEETING. SHEETING AND LEGEND SHALL BE APPLIED IN SUCH A MANNER TO PROVIDE WRINKLE AND BUBBLE FREE SURFACES. APPLICATION OF SHEETING IS CAUSE FOR REJECTION OF MATERIALS DUE TO WORKMANSHIP.

2. ALUMINUM SIGN BLANK SHALL BE ALLOY 6061-T6 OR 5052-H38. THE ALUMINUM SIGN SHALL ALSO BE ANODIZED. THE ALUMINUM SHEETING SHALL BE 0.100 INCH NOMINAL THICKNESS AND OF THE SIZE SHOWN WITH 1.5" CORNER RADII. PRIOR TO FABRICATION OF THE SIGNS, THE LAYOUT SHALL FIRST BE APPROVED BY AN AGENT OF THE CITY.

3. WHEN CROSSROAD HAS TWO NAMES, THE SIGN FOR THE CROSSROAD TO THE LEFT MAY BE INSTALLED ON THE BACKSIDE OF THE MAST ARM OF THE NEARSIDE LEFT POLE.
SEE STD. DETAIL SHEET FOR MORE INFORMATION FOR MOUNTING ON MAST ARM ASSEMBLY.

4. THE CLEARVIEW 5-W-R FONT SHALL BE USED FOR ALL LETTERS.

DATE: 09-10-12 FILE NAME: t020070_01.dgn

LOCATION: HWY. 65B/HWY. 79B (UNIVERSITY DR.)
CITY: PINE BLUFF
COUNTY: JEFFERSON
DISTRICT: 2 SCALE: N/A DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	62	144

(2) SIGNALIZATION PLAN SHEET

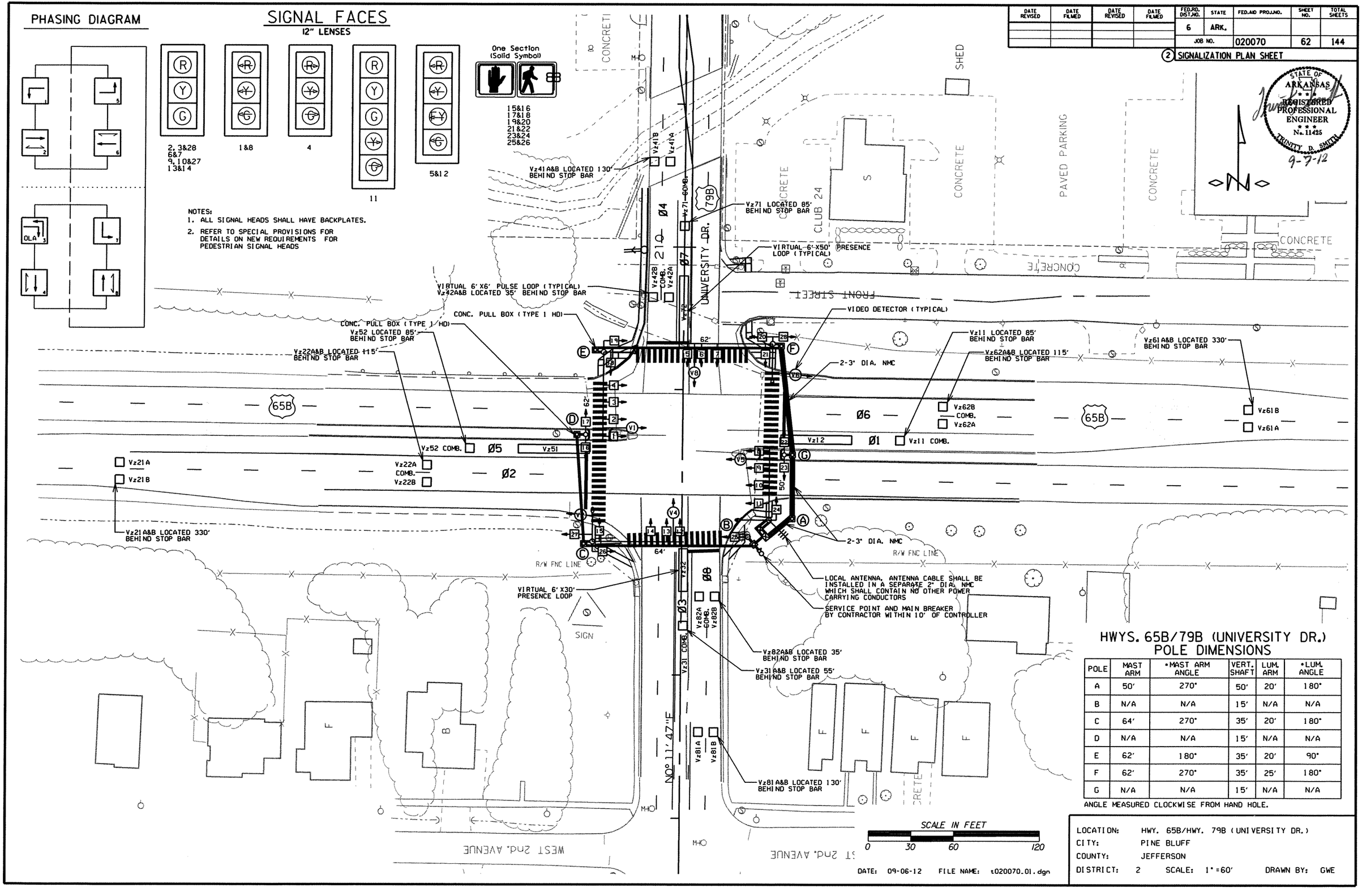
PHASING DIAGRAM

SIGNAL FACES
12" LENSES

One Section (Solid Symbol)

15&16
17&18
19&20
21&22
23&24
25&26

NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISIONS FOR DETAILS ON NEW REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS



SCALE IN FEET
0 30 60 120

DATE: 09-06-12 FILE NAME: t020070_01.dgn

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

HWYS. 65B/79B (UNIVERSITY DR.) POLE DIMENSIONS

POLE	MAST ARM	*MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	*LUM. ANGLE
A	50'	270°	50'	20'	180°
B	N/A	N/A	15'	N/A	N/A
C	64'	270°	35'	20'	180°
D	N/A	N/A	15'	N/A	N/A
E	62'	180°	35'	20'	90°
F	62'	270°	35'	25'	180°
G	N/A	N/A	15'	N/A	N/A

ANGLE MEASURED CLOCKWISE FROM HAND HOLE.

LOCATION: HWY. 65B/HWY. 79B (UNIVERSITY DR.)
CITY: PINE BLUFF
COUNTY: JEFFERSON
DISTRICT: 2 SCALE: 1"=60' DRAWN BY: GWE

DESIGN PARAMETERS

POSTED SPEED LIMIT:
45 MPH EAST AND WEST APPROACH
30 MPH NORTH AND SOUTH APPROACH
NO BUS STOPS
NO RAILROAD TRACKS
NO EXISTING INTERCONNECTIONS
NO FIRE STATION
NO PARKING
NO SIGHT DISTANCE RESTRICTIONS

LOCATION OF STOP BARS
SHOWN ON PAVEMENT MARKING PLAN.
SEE SEPARATE SHEET.

MINIMUM CLEAR ZONE DISTANCE
1.5 FEET FROM HWYS. 65B AND 79B

HWYS. 65B/79B (UNIVERSITY DR.)
POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 79B - STA. 208+09.14	61' RT.	1306497.87, 1881062.84
B	HWY. 79B - STA. 207+97.34	46' RT.	1306482.93, 1881051.08
C	HWY. 79B - STA. 207+93.40	63' LT.	1306374.01, 1881047.73
D	HWY. 79B - STA. 208+68.05	68' LT.	1306369.03, 1881122.49
E	HWY. 79B - STA. 209+26.04	56' LT.	1306381.31, 1881180.26
F	HWY. 79B - STA. 209+32.17	63' RT.	1306499.66, 1881186.17
G	HWY. 79B - STA. 208+54.86	72' RT.	1306508.14, 1881108.51

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	63	144

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

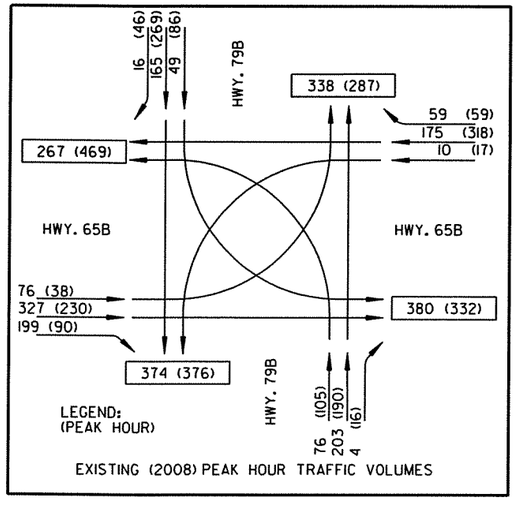
NOTE TO CONTRACTOR:
TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT ALL CONSTRUCTION PHASES.

VIRTUAL 6' X50' PRESENCE LOOP (TYPICAL)
Vz71 LOCATED 85' BEHIND STOP BAR
VIRTUAL 6' X6' PULSE LOOP (TYPICAL)
Vz42A&B LOCATED 35' BEHIND STOP BAR
CONC. PULL BOX (TYPE 1 HD)
CONC. PULL BOX (TYPE 1 HD)
Vz52 LOCATED 85' BEHIND STOP BAR
Vz22A&B LOCATED 115' BEHIND STOP BAR
VIDEO DETECTOR (TYPICAL)
Vz11 LOCATED 85' BEHIND STOP BAR
Vz62A&B LOCATED 115' BEHIND STOP BAR
2-3" DIA. NMC
Vz52 COMB.
Vz22A COMB.
Vz22B
Vz51
Vz12
Vz11 COMB.
Vz62B COMB.
Vz62A
Vz42B COMB. Vz42A
Vz71 COMB.
Vz72
Vz32
Vz82A COMB. Vz82B
Vz31 COMB.
Vz31A&B LOCATED 55' BEHIND STOP BAR
Vz82A&B LOCATED 35' BEHIND STOP BAR
VIRTUAL 6' X30' PRESENCE LOOP
SIGN
2-3" DIA. NMC
LOCAL ANTENNA, ANTENNA CABLE SHALL BE INSTALLED IN A SEPARATE 2" DIA. NMC WHICH SHALL CONTAIN NO OTHER POWER CARRYING CONDUCTORS
SERVICE POINT AND MAIN BREAKER BY CONTRACTOR WITHIN 10' OF CONTROLLER
62'
64'
50'
R/W FNC LINE
R/W FNC LINE
CONCRETE
CLUB 24
FRONT STREET
UNIVERSITY DR.
79B
65B
65B
Ø1 Ø2 Ø3 Ø4 Ø5 Ø6 Ø7 Ø8

116° 18' 09"

ANTENNA ORIENTED TO THE MASTER ANTENNA LOCATED AT PINE BLUFF CITY HALL 200 E. 8TH AVENUE

TRAFFIC FLOW DIAGRAM



EXISTING (2008) PEAK HOUR TRAFFIC VOLUMES

SCALE IN FEET
0 20 40 80

DATE: 09-06-12 FILE NAME: t020070_01.dgn

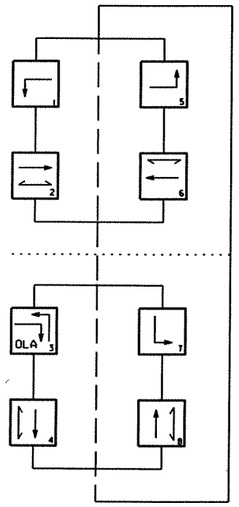
LOCATION: HWY. 65B/HWY. 79B (UNIVERSITY DR.)
CITY: PINE BLUFF
COUNTY: JEFFERSON
DISTRICT: 2 SCALE: 1"=40' DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	64	144

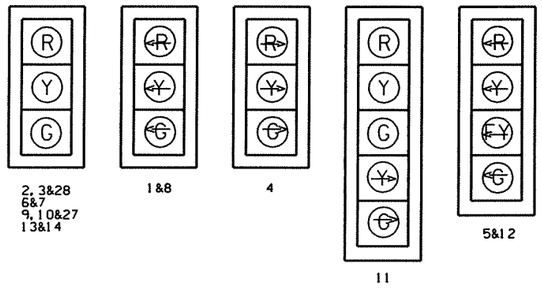
(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

PHASING DIAGRAM

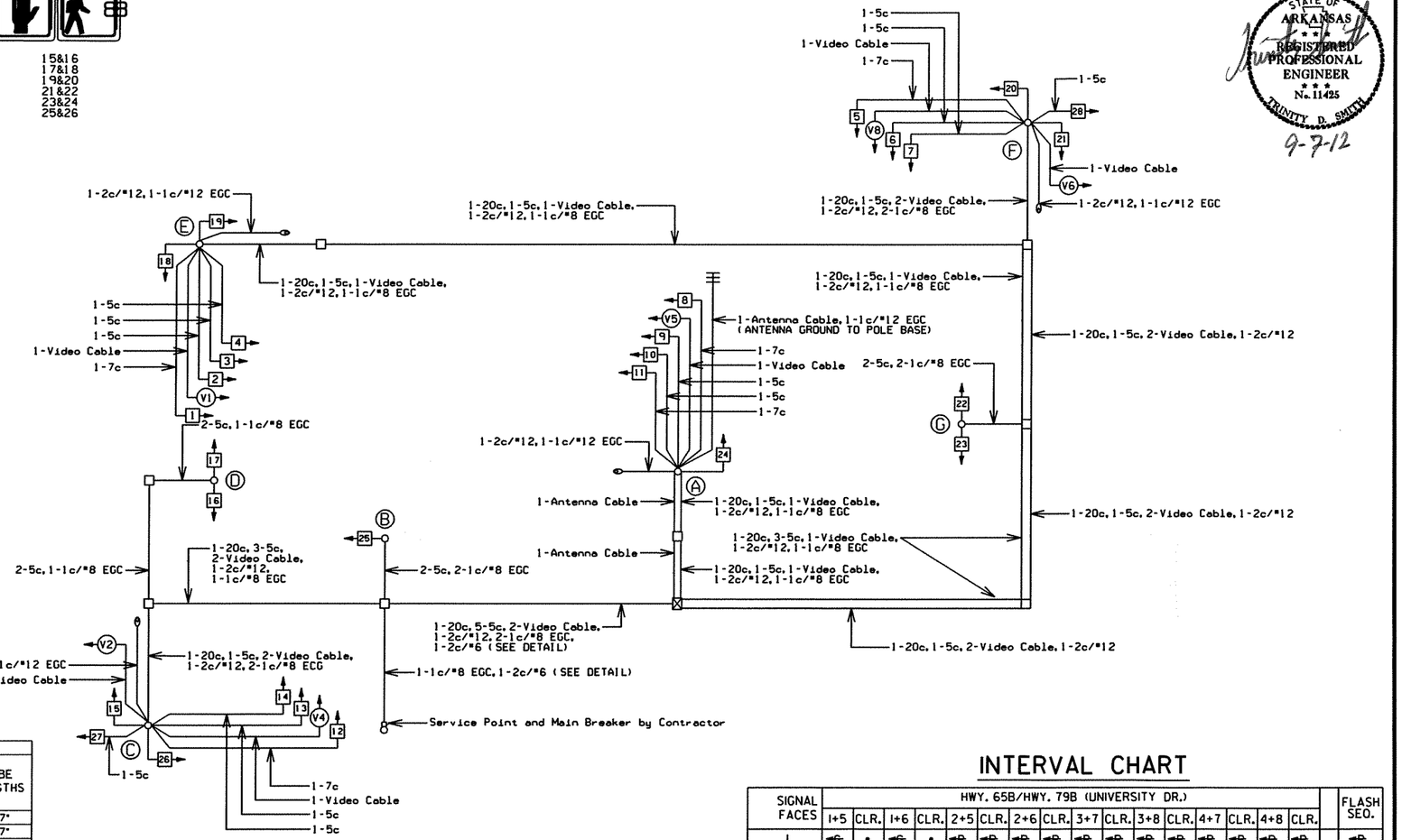


SIGNAL FACES
12" LENSES



15&16
17&18
19&20
21&22
23&24
25&26

NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISIONS FOR DETAILS ON NEW REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS



WIRING DIAGRAM

NOTES TO CONTRACTOR:

1. ONE SEPARATE 1-5c IS RUN TO EACH POLE FOR THE PEDESTRIAN PUSH BUTTON.
2. ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA OF CABINET.
3. THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.

DETECTOR SYSTEM DESCRIPTION: JOB 020070

PINE BLUFF - HWYS. 65B/79B (UNIVERSITY DR.) DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS LOCAL		MASTER SYSTEM DETECTOR NUMBERS	COMMENTS	TUBE LENGTHS
DET. ID*	LOCATION DIRECTION	TYPE	DET. *	CAB. TRM *	AMP CHN. *	CON. INP.*	PHS	SYSTEM DET. *			
Vz11	WB LEFT TURN FAR	COMB.			1	D1	1	1		CAMERA V1	37'
Vz12	WB LEFT TURN	LOCAL			2	V1	1			CAMERA V1	37'
Vz21A&B	EB ADVANCE	LOCAL			7	V2	2			CAMERA V2	23'
Vz22A&B	EB NEAR	COMB.			8	D2	2	2		CAMERA V5	
Vz31	NB LEFT TURN FAR	COMB.			9	D3	3	3		CAMERA V8	74'
Vz32	NB LEFT TURN	LOCAL			10	V3	3			CAMERA V8	74'
Vz41A&B	SB ADVANCE	LOCAL			15	V4	4			CAMERA V4	74'
Vz42A&B	SB NEAR	COMB.			16	D4	4	4		CAMERA V4	74'
Vz51	EB LEFT TURN FAR	COMB.			5	D5	5	5		CAMERA V5	37'
Vz52	EB LEFT TURN	LOCAL			6	V5	5			CAMERA V5	37'
Vz61A&B	WB ADVANCE	LOCAL			3	V6	6			CAMERA V6	23'
Vz62A&B	WB NEAR	COMB.			4	D6	6	6		CAMERA V1	37'
Vz71	SB LEFT TURN FAR	COMB.			13	D7	7	7		CAMERA V4	74'
Vz72	SB LEFT TURN	LOCAL			14	V7	7			CAMERA V4	74'
Vz81A&B	NB ADVANCE	LOCAL			11	V8	8			CAMERA V8	74'
Vz82A&B	NB NEAR	COMB.			12	D8	8	8		CAMERA V8	74'
PB2A&B	UNIV. DR. S. LEG	PED.				P2	2				
PB4A&B	HWY. 65B W. LEG	PED.				P4	4				
PB6A&B	UNIV. DR. N. LEG	PED.				P6	6				
PB8A&B	HWY. 65B E. LEG	PED.				P8	8				
					SPARE						

CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT

INTERVAL CHART

SIGNAL FACES	HWY. 65B/HWY. 79B (UNIVERSITY DR.)																FLASH SEQ.
	1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	3+7	CLR.	3+8	CLR.	4+7	CLR.	4+8	CLR.	
I	~~G~~	•	~~G~~	•	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
2,3&28	R	R	G	••	R	R	G	••	R	R	R	R	R	R	R	R	R
4	~~R►~~	~~R►~~	~~G►~~	~~Y►~~	~~R►~~	~~R►~~	~~G►~~	~~Y►~~	~~R►~~	~~R►~~	~~R►~~	~~R►~~	~~R►~~	~~R►~~	~~R►~~	~~R►~~	~~R►~~
5	~~◄R~~	~~◄R~~	~~◄R~~	~~◄R~~	~~◄R~~	~~◄R~~	~~◄R~~	~~◄R~~	~~◄G~~	•	~~◄G~~	•	~~◄FY~~	•••	~~◄FY~~	•••	~~◄R~~
6&7	R	R	R	R	R	R	R	R	R	R	G	••	R	R	G	••	R
8	~~G~~	•	~~R~~	~~R~~	~~G~~	•	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
9,10&27	R	R	R	R	G	••	G	••	R	R	R	R	R	R	R	R	R
II	R	R	R	R	G	••	G	••	~~G►~~	~~Y►~~	~~G►~~	~~Y►~~	R	R	R	R	R
12	~~◄R~~	~~◄R~~	~~◄R~~	~~◄R~~	~~◄R~~	~~◄R~~	~~◄R~~	~~◄R~~	~~◄G~~	•	~~◄FY~~	•••	~~◄G~~	•	~~◄FY~~	•••	~~◄R~~
13&14	R	R	R	R	R	R	R	R	R	R	R	R	G	••	G	••	R
15,16,17&18	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	W	FDW	BLK
19&20	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLK
21,22,23&24	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	W	FDW	BLK
25&26	DW	DW	DW	DW	W	FDW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLK

• DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE
•• DENOTES GREEN OR YELLOW BALL DEPENDING ON NEXT PHASE
••• DENOTES FLASHING YELLOW ARROW OR YELLOW ARROW DEPENDING ON NEXT PHASE

DATE: 09-06-12 FILE NAME: t020070_01.dgn

LOCATION: HWY. 65B/HWY. 79B (UNIVERSITY DR.)
CITY: PINE BLUFF
COUNTY: JEFFERSON
DISTRICT: 2 SCALE: N/A DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	65	144

(2) SIGNALIZATION PLAN SHEET

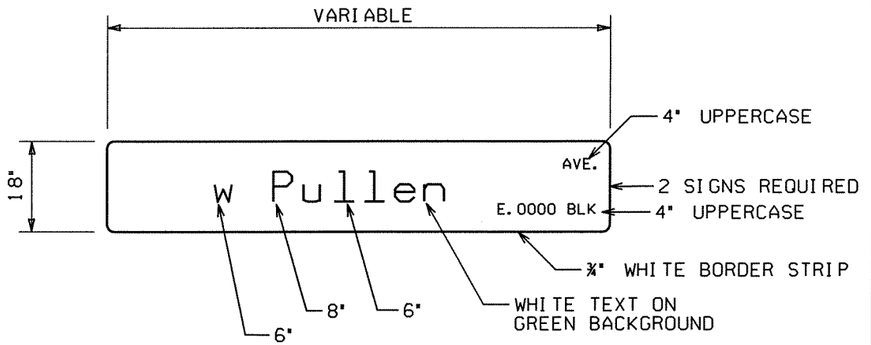
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-10-12

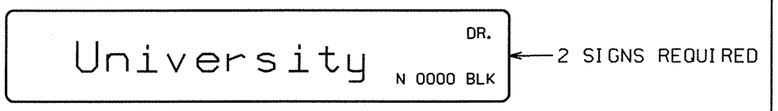
TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	QUANTITY	UNIT
SP&701	SYSTEM LOCAL CONTROLLER TS 2-TYPE 2 (8 PHASES)	1	EACH
SP&706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	8	EACH
SP&706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	2	EACH
SP&707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	8	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	873	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	256	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	425	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	50	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	50	LIN. FT.
710	NON-METALLIC CONDUIT (2")	20	LIN. FT.
710	NON-METALLIC CONDUIT (3")	303	LIN. FT.
SS&711	CONCRETE PULL BOX (TYPE 1)	2	EACH
SS&711	CONCRETE PULL BOX (TYPE 2 HD)	2	EACH
SS&711	CONCRETE PULL BOX (TYPE 2)	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (38')	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (42')	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (44')	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (48')	1	EACH
733	VIDEO CABLE	677	LIN. FT.
• SP&733	VIDEO DETECTOR (CLR)	5	EACH
733	VIDEO MONITOR (CLR)	1	EACH
• SP&733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	5	EACH
SP&733	VIDEO EDGE CARD EXTENDER	2	EACH
SP&733	VEHICLE DETECTOR RACK (24 CHANNEL)	1	EACH
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (IC/8 A.W.G., EGC)	364	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (IC/12 A.W.G., EGC)	200	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	100	LIN. FT.
SP	LUMINAIRE ASSEMBLY	4	EACH
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	627	LIN. FT.
SP	18" STREET NAME SIGN	4	EACH
SP	LOCAL RADIO WITH ANTENNA	1	EACH
SP	ANTENNA CABLE (TYPE 6)	70	LIN. FT.
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.33	LUMP SUM
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH

• ONE SPARE VIDEO DETECTOR AND ONE SPARE VIDEO PROCESSOR SHALL BE SUPPLIED.

OVERHEAD STREET NAME MARKER STANDARD MAST ARM MOUNTED





NOTES:
1. REFLECTIVE SHEETING SHALL COMPLY WITH ASTM 4956 TYPE 8 OR 9 REFLECTIVE SHEETING. SHEETING AND LEGEND SHALL BE APPLIED IN SUCH A MANNER TO PROVIDE WRINKLE AND BUBBLE FREE SURFACES. APPLICATION OF SHEETING IS CAUSE FOR REJECTION OF MATERIALS DUE TO WORKMANSHIP.

2. ALUMINUM SIGN BLANK SHALL BE ALLOY 6061-T6 OR 5052-H38. THE ALUMINUM SIGN SHALL ALSO BE ANODIZED. THE ALUMINUM SHEETING SHALL BE 0.100 INCH NOMINAL THICKNESS AND OF THE SIZE SHOWN WITH 1.5" CORNER RADII. PRIOR TO FABRICATION OF THE SIGNS, THE LAYOUT SHALL FIRST BE APPROVED BY AN AGENT OF THE CITY.

3. WHEN CROSSROAD HAS TWO NAMES, THE SIGN FOR THE CROSSROAD TO THE LEFT MAY BE INSTALLED ON THE BACKSIDE OF THE MAST ARM OF THE NEARSIDE LEFT POLE.
SEE STD. DETAIL SHEET FOR MORE INFORMATION FOR MOUNTING ON MAST ARM ASSEMBLY.

4. THE CLEARVIEW 5-W-R FONT SHALL BE USED FOR ALL LETTERS.

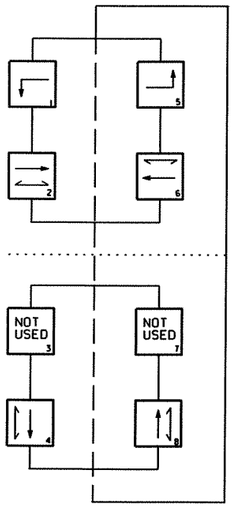
DATE: 09-10-12 FILE NAME: t020070_02.dgn

LOCATION: HWY. 79B (UNIVERSITY DR.)/W. PULLEN AVE.
CITY: PINE BLUFF
COUNTY: JEFFERSON
DISTRICT: 2 SCALE: N/A DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	66	144

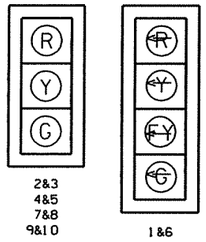
(2) SIGNALIZATION PLAN SHEET

PHASING DIAGRAM



SIGNAL FACES

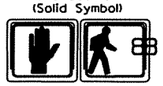
12" LENSES



2&3
4&5
7&8
9&10

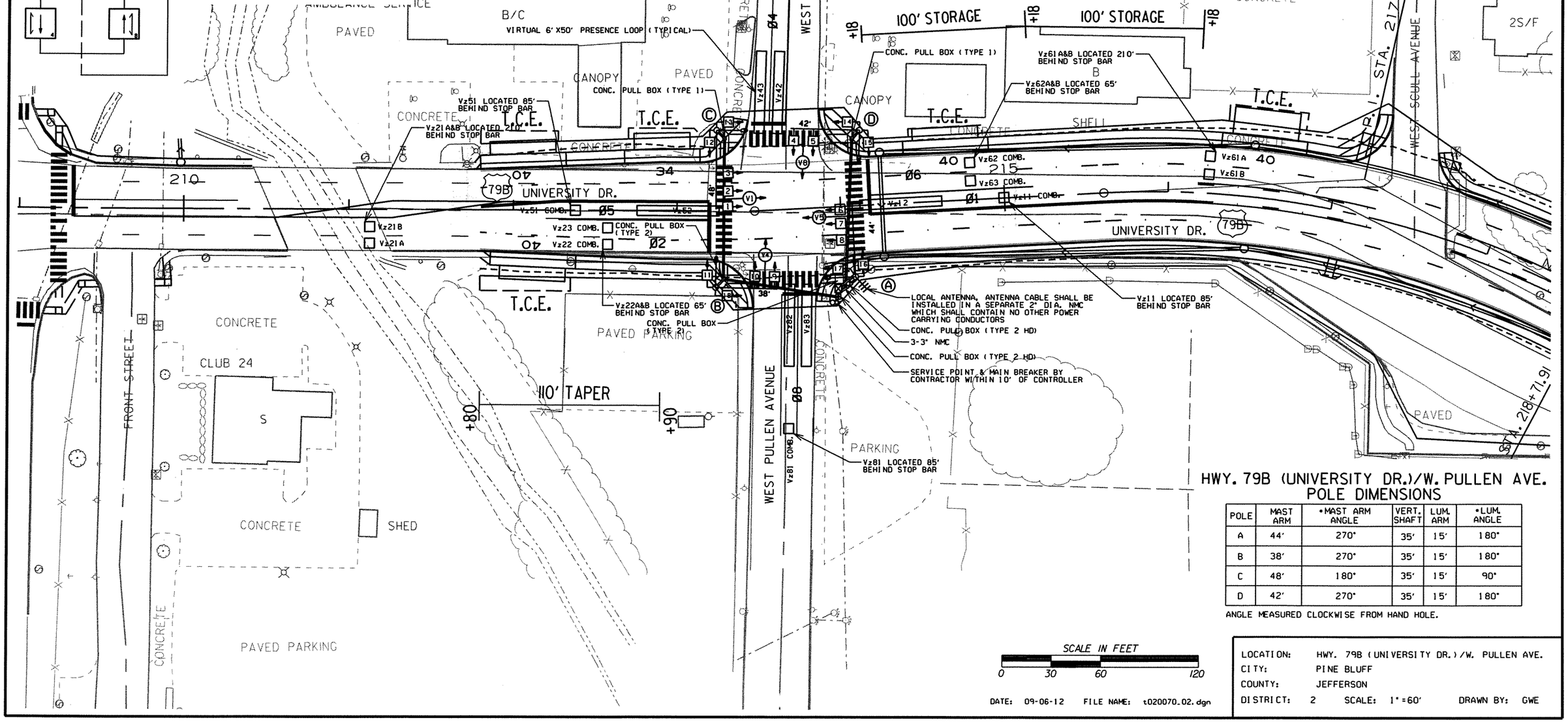
1&6

One Section (Solid Symbol)



11&12
13&14
15&16
17&18

NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISIONS FOR DETAILS ON NEW REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS



STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

HWY. 79B (UNIVERSITY DR.)/W. PULLEN AVE. POLE DIMENSIONS

POLE	MAST ARM	•MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	•LUM. ANGLE
A	44'	270°	35'	15'	180°
B	38'	270°	35'	15'	180°
C	48'	180°	35'	15'	90°
D	42'	270°	35'	15'	180°

ANGLE MEASURED CLOCKWISE FROM HAND HOLE.

SCALE IN FEET
0 30 60 120

DATE: 09-06-12 FILE NAME: t020070_02.dgn

LOCATION: HWY. 79B (UNIVERSITY DR.)/W. PULLEN AVE.
CITY: PINE BLUFF
COUNTY: JEFFERSON
DISTRICT: 2 SCALE: 1"=60' DRAWN BY: GWE

DESIGN PARAMETERS

POSTED SPEED LIMIT:
30 MPH EAST AND WEST APPROACH
30 MPH NORTH AND SOUTH APPROACH
NO BUS STOPS
NO RAILROAD TRACKS
NO EXISTING INTERCONNECTIONS
NO FIRE STATION
NO PARKING
NO SIGHT DISTANCE RESTRICTIONS

LOCATION OF STOP BARS
SHOWN ON PAVEMENT MARKING PLAN.
SEE SEPARATE SHEET.

MINIMUM CLEAR ZONE DISTANCE
1.5 FEET FROM HWY. 79B

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	67	144

(2) SIGNALIZATION PLAN SHEET

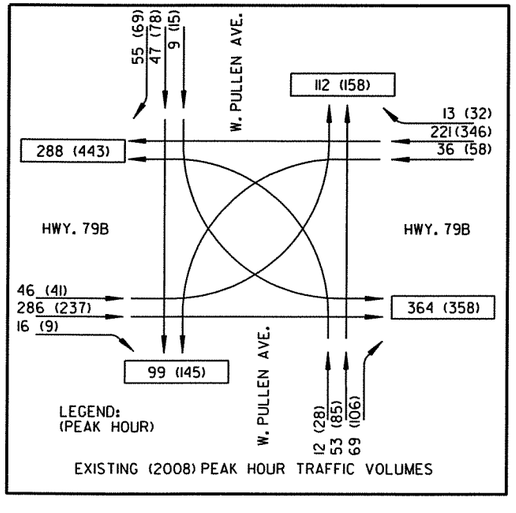
HWY. 79B (UNIVERSITY DR.)/W. PULLEN AVE. POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 79B - STA. 214+08.11	43' RT.	1306484.81, 1881577.68
B	HWY. 79B - STA. 213+32.29	47' RT.	1306484.38, 1881582.70
C	HWY. 79B - STA. 213+69.02	49' LT.	1306389.46, 1881577.97
D	HWY. 79B - STA. 214+13.51	46' LT.	1306389.21, 1881665.13

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

VIRTUAL 6'X6' PULSE LOOP (TYPICAL)
Vz41 LOCATED 85' BEHIND STOP BAR
Vz41 COMB.
Ø4
WEST PULLEN AVENUE
B/C
VIRTUAL 6'X50' PRESENCE LOOP (TYPICAL)
CANOPY
CONC. PULL BOX (TYPE 1)
PAVED
Vz43
Vz42
Vz51 LOCATED 85' BEHIND STOP BAR
CONCRETE
T.C.E.
Vz21A&B LOCATED 210' BEHIND STOP BAR
42'
Vz62A&B LOCATED 65' BEHIND STOP BAR
Vz61A&B LOCATED 210' BEHIND STOP BAR
B
CANOPY
CONC. PULL BOX (TYPE 1)
SHELL
CONCRETE
Vz61A
Vz61B
40
Vz62 COMB.
215
Vz63 COMB.
Ø6
Ø1
Vz11 COMB.
Vz12
79B
UNIVERSITY DR.
Vz51 COMB.
Ø5
Vz52
Vz23 COMB.
CONC. PULL BOX (TYPE 2)
Vz22 COMB.
Ø2
Vz21B
Vz21A
44'
38'
Vz22A&B LOCATED 65' BEHIND STOP BAR
CONC. PULL BOX (TYPE 2)
Vz11 LOCATED 85' BEHIND STOP BAR
LOCAL ANTENNA, ANTENNA CABLE SHALL BE INSTALLED IN A SEPARATE 2" DIA. NMC WHICH SHALL CONTAIN NO OTHER POWER CARRYING CONDUCTORS
CONC. PULL BOX (TYPE 2 HD)
3-3" NMC
CONC. PULL BOX (TYPE 2 HD)
SERVICE POINT & MAIN BREAKER BY CONTRACTOR WITHIN 10' OF CONTROLLER
Vz82
Vz83
Ø8
Vz81 COMB.
Vz81 LOCATED 85' BEHIND STOP BAR
PAVED PARKING
110' TAPER
+90
+18
PARKING

TRAFFIC FLOW DIAGRAM



EXISTING (2008) PEAK HOUR TRAFFIC VOLUMES

NOTE TO CONTRACTOR:
TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT ALL CONSTRUCTION PHASES.

119° 52' 50"

ANTENNA ORIENTED TO THE MASTER ANTENNA LOCATED AT PINE BLUFF CITY HALL 200 E. 8TH AVENUE

SCALE IN FEET
0 20 40 80

DATE: 09-06-12 FILE NAME: t020070_02.dgn

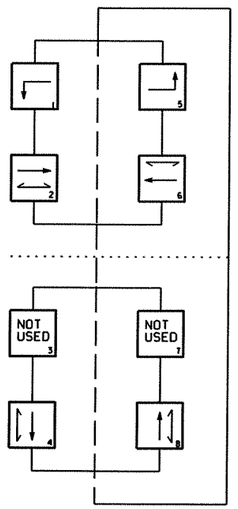
LOCATION: HWY. 79B (UNIVERSITY DR.)/W. PULLEN AVE.
CITY: PINE BLUFF
COUNTY: JEFFERSON
DISTRICT: 2 SCALE: 1"=40' DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	68	144

(2) SIGNALIZATION PLAN SHEET

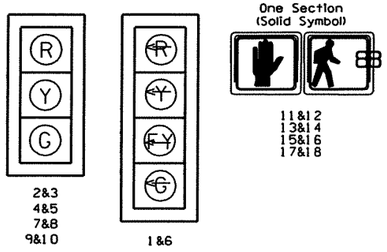
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

PHASING DIAGRAM

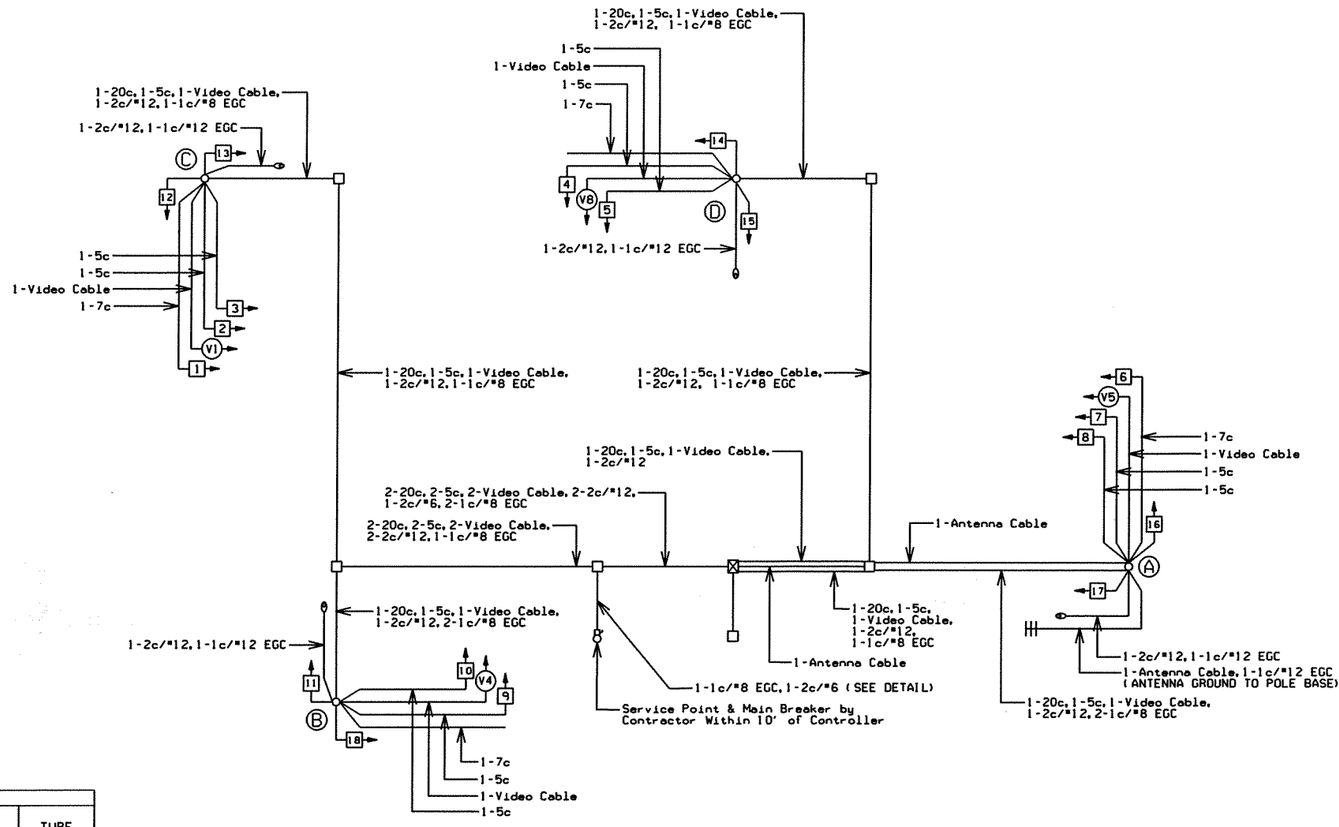


SIGNAL FACES

12" LENSES



NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISIONS FOR DETAILS ON NEW REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS



DETECTOR SYSTEM DESCRIPTION: JOB 020070											
PINE BLUFF - HWY. 79B/W.PULLEN AVE. DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS			COMMENTS	TUBE LENGTHS
							LOCAL		MASTER SYSTEM DETECTOR NUMBERS		
DET. ID*	LOCATION DIRECTION	TYPE	DET. *	CAB. TRM *	AMP CHN. *	CON. INP.*	PHS	SYSTEM DET. *			
Vz11	SB LEFT TURN FAR	COMB.			1	D1	1	1		CAMERA V1	74'
Vz12	SB LEFT TURN	LOCAL			2	V1	1			CAMERA V1	74'
Vz21A&B	NB FAR ADVANCE	LOCAL			9	V2	2			CAMERA V5	74'
Vz22	NB OUTSIDE NEAR	COMB.			10	D2	2	2		CAMERA V5	74'
Vz23	NB INSIDE NEAR	COMB.			11	P3	2	3		CAMERA V5	74'
Vz41	EB LEFT TURN FAR	COMB.			17	D4	4	4		CAMERA V4	23'
Vz42	EB LEFT TURN	LOCAL			18	V4	4			CAMERA V4	23'
Vz43	EB THRU AND RIGHT	LOCAL			19	P1	4			CAMERA V4	23'
Vz51	NB LEFT TURN FAR	COMB.			13	D5	5	5		CAMERA V5	74'
Vz52	NB LEFT TURN	LOCAL			14	V5	5			CAMERA V5	74'
Vz61A&B	SB FAR ADVANCE	LOCAL			5	V6	6			CAMERA V1	74'
Vz62	SB OUTSIDE NEAR	COMB.			6	D6	6	6		CAMERA V1	74'
Vz63	SB INSIDE NEAR	COMB.			7	D7	6	7		CAMERA V1	74'
Vz81	WB LEFT TURN FAR	COMB.			21	D8	8	8		CAMERA V8	23'
Vz82	WB LEFT TURN	LOCAL			22	V8	8			CAMERA V8	23'
Vz83	WB THRU AND RIGHT	LOCAL			23	P7	8			CAMERA V8	23'
PB2A&B	W. PULLEN E. LEG	PED.				P2	2				
PB4A&B	HWY. 79B S. LEG	PED.				P4	4				
PB6A&B	W. PULLEN W. LEG	PED.				P6	6				
PB8A&B	HWY. 79B N. LEG	PED.				P8	8				
					SPARE 3, 4, 8, 12, 15, 16, 20&24						

CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT

WIRING DIAGRAM

NOTES TO CONTRACTOR:

1. ONE SEPARATE 1-5c IS RUN TO EACH POLE FOR THE PEDESTRIAN PUSH BUTTON.
2. ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA OF CABINET.
3. THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.

INTERVAL CHART

SIGNAL FACES	HWY. 79B (UNIVERSITY DR.)/W.PULLEN AVE.										FLASH SEQ.
	1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	4+8	CLR.	
1	~~G~~	•	~~G~~	•	~~FY~~	•••	~~FY~~	•••	~~R~~	~~R~~	~~R~~
2&3	R	R	G	••	R	R	G	••	R	R	R
4&5	R	R	R	R	R	R	R	G	••		R
6	~~G~~	•	~~FY~~	•••	~~G~~	•	~~FY~~	•••	~~R~~	~~R~~	~~R~~
7&8	R	R	R	R	G	••	G	••	R	R	R
9&10	R	R	R	R	R	R	R	R	G	••	R
11&12	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	BLK
13&14	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	BLK
15&16	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	BLK
17&18	DW	DW	DW	DW	W	FDW	W	FDW	DW	DW	BLK

• DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE
•• DENOTES GREEN OR YELLOW BALL DEPENDING ON NEXT PHASE
••• DENOTES FLASHING YELLOW ARROW OR YELLOW ARROW DEPENDING ON NEXT PHASE

DATE: 09-06-12 FILE NAME: t020070_02.dgn

LOCATION: HWY. 79B (UNIVERSITY DR.)/W. PULLEN AVE.
CITY: PINE BLUFF
COUNTY: JEFFERSON
DISTRICT: 2 SCALE: N/A DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	69	144

(2) SIGNALIZATION PLAN SHEET

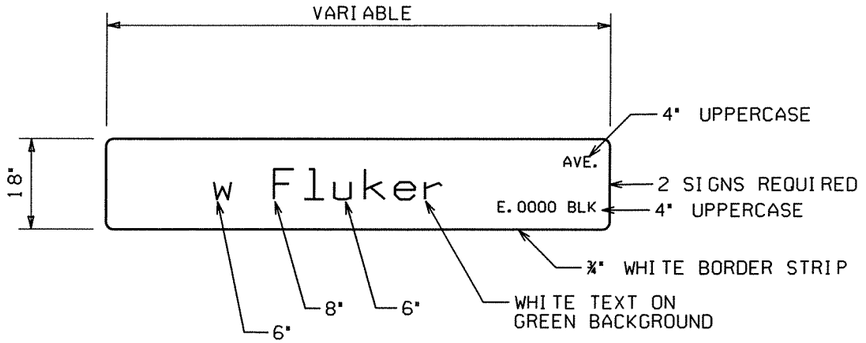
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-10-12

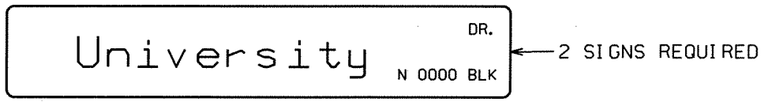
TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	QUANTITY	UNIT
SP&701	SYSTEM LOCAL CONTROLLER TS 2-TYPE 2 (8 PHASES)	1	EACH
SP&706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	8	EACH
SP&706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	2	EACH
SP&707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	8	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	889	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	258	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	435	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	50	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	50	LIN. FT.
710	NON-METALLIC CONDUIT (2")	20	LIN. FT.
710	NON-METALLIC CONDUIT (3")	297	LIN. FT.
SS&711	CONCRETE PULL BOX (TYPE 1HD)	1	EACH
SS&711	CONCRETE PULL BOX (TYPE 1)	2	EACH
SS&711	CONCRETE PULL BOX (TYPE 2)	3	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (38')	2	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (46')	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (52')	1	EACH
733	VIDEO CABLE	696	LIN. FT.
• SP&733	VIDEO DETECTOR (CLR)	5	EACH
733	VIDEO MONITOR (CLR)	1	EACH
• SP&733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	4	EACH
SP&733	VIDEO EDGE CARD EXTENDER	2	EACH
SP&733	VEHICLE DETECTOR RACK (20 CHANNEL)	1	EACH
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)	365	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., EGC)	100	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	100	LIN. FT.
SP	LUMINAIRE ASSEMBLY	2	EACH
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	187	LIN. FT.
SP	18" STREET NAME SIGN	4	EACH
SP	LOCAL RADIO WITH ANTENNA	1	EACH
SP	ANTENNA CABLE (TYPE 6)	70	LIN. FT.
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.33	LUMP SUM
SP	SERVICE POINT ASSEMBLEY (2 CIRCUITS)	1	EACH

• ONE SPARE VIDEO DETECTOR AND ONE SPARE VIDEO PROCESSOR SHALL BE SUPPLIED.

OVERHEAD STREET NAME MARKER STANDARD MAST ARM MOUNTED





NOTES:
1. REFLECTIVE SHEETING SHALL COMPLY WITH ASTM 4956 TYPE 8 OR 9 REFLECTIVE SHEETING. SHEETING AND LEGEND SHALL BE APPLIED IN SUCH A MANNER TO PROVIDE WRINKLE AND BUBBLE FREE SURFACES. APPLICATION OF SHEETING IS CAUSE FOR REJECTION OF MATERIALS DUE TO WORKMANSHIP.

2. ALUMINUM SIGN BLANK SHALL BE ALLOY 6061-T6 OR 5052-H38. THE ALUMINUM SIGN SHALL ALSO BE ANODIZED. THE ALUMINUM SHEETING SHALL BE 0.100 INCH NOMINAL THICKNESS AND OF THE SIZE SHOWN WITH 1.5" CORNER RADII. PRIOR TO FABRICATION OF THE SIGNS, THE LAYOUT SHALL FIRST BE APPROVED BY AN AGENT OF THE CITY.

3. WHEN CROSSROAD HAS TWO NAMES, THE SIGN FOR THE CROSSROAD TO THE LEFT MAY BE INSTALLED ON THE BACKSIDE OF THE MAST ARM OF THE NEARSIDE LEFT POLE.
SEE STD. DETAIL SHEET FOR MORE INFORMATION FOR MOUNTING ON MAST ARM ASSEMBLY.

4. THE CLEARVIEW 5-W-R FONT SHALL BE USED FOR ALL LETTERS.

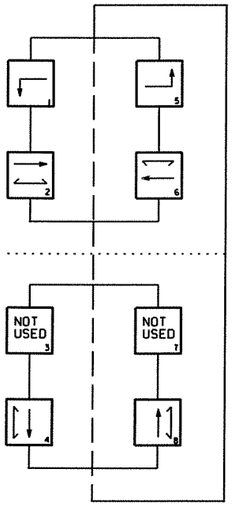
DATE: 09-10-12 FILE NAME: t020070_03.dgn

LOCATION: HWY. 79B (UNIVERSITY DR.)/W. FLUKER AVE.
CITY: PINE BLUFF
COUNTY: JEFFERSON
DISTRICT: 2 SCALE: N/A DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	70	144

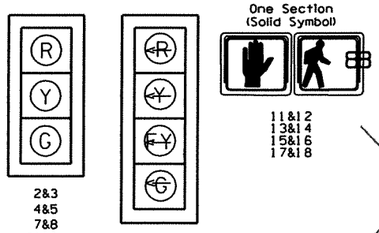
(2) SIGNALIZATION PLAN SHEET

PHASING DIAGRAM



SIGNAL FACES

12" LENSES



One Section (Solid Symbol)

11&12
13&14
15&16
17&18

NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISIONS FOR DETAILS ON NEW REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

VIRTUAL 6'X6' PULSE LOOP (TYPICAL)
Vz41 LOCATED 85' BEHIND STOP BAR
VIRTUAL 6'X50' PRESENCE LOOP (TYPICAL)
CONC. PULL BOX (TYPE 2)
CONC. PULL BOX (TYPE 1 HD)
SERVICE POINT & MAIN BREAKER BY CONTRACTOR WITHIN 10' OF CONTROLLER
LOCAL ANTENNA, ANTENNA CABLE SHALL BE INSTALLED IN A SEPARATE 2" DIA. NMC WHICH SHALL CONTAIN NO OTHER POWER CARRYING CONDUCTORS
Vz51 LOCATED 85' BEHIND STOP BAR
Vz2A&B LOCATED 210' BEHIND STOP BAR
Vz22A&B LOCATED 65' BEHIND STOP BAR
CONC. PULL BOX (TYPE 2)
CONC. PULL BOX (TYPE 1)
Vz81 LOCATED 85' BEHIND STOP BAR
Vz61A&B LOCATED 210' BEHIND STOP BAR
Vz62A&B LOCATED 65' BEHIND STOP BAR
Vz11 LOCATED 85' BEHIND STOP BAR

SAINT JAMES UNITED METHODIST
PAVED PARKING
P.T. STA. 242
T.C.E.
CONCRETE
79B
UNIVERSITY DR.
WEST FLUKER AVENUE
WEST REEKER DRIVE
FAITH PENETECOSTAL
SHED
UNIVERSITY CLEANERS
SUBWAY
BRICK
HWY. & GLADYS ALLEN INFO. CENTER
PAVED PARKING
CONCRETE
PARKING
PAVED
N0° 24' 55"E
SCALE IN FEET
0 30 60 120

HWY. 79B (UNIVERSITY DR.)/W. FLUKER AVE. POLE DIMENSIONS

POLE	MAST ARM	•MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	•LUM. ANGLE
A	52'	270°	35'	15'	180°
B	38'	270°	35'	15'	180°
C	46'	180°	21'	N/A	N/A
D	38'	270°	21'	N/A	N/A

ANGLE MEASURED CLOCKWISE FROM HAND HOLE.

DATE: 09-06-12 FILE NAME: t020070_03.dgn

LOCATION: HWY. 79B (UNIVERSITY DR.)/W. FLUKER AVE.
CITY: PINE BLUFF
COUNTY: JEFFERSON
DISTRICT: 2 SCALE: 1"=60' DRAWN BY: GWE

DESIGN PARAMETERS

POSTED SPEED LIMIT:
30 MPH EAST AND WEST APPROACH
30 MPH NORTH AND SOUTH APPROACH
NO BUS STOPS
NO RAILROAD TRACKS
NO EXISTING INTERCONNECTIONS
NO FIRE STATION
NO PARKING
NO SIGHT DISTANCE RESTRICTIONS

LOCATION OF STOP BARS SHOWN ON PAVEMENT MARKING PLAN. SEE SEPARATE SHEET.

MINIMUM CLEAR ZONE DISTANCE 1.5 FEET FROM HWY. 79B

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	71	144

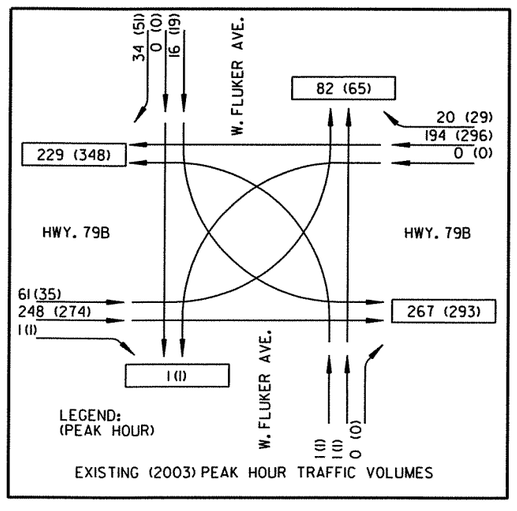
(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

VIRTUAL 6'X6' PULSE LOOP (TYPICAL) Vz41 LOCATED 85' BEHIND STOP BAR
VIRTUAL 6'X50' PRESENCE LOOP (TYPICAL)
CONC. PULL BOX (TYPE 2)
SERVICE POINT & MAIN BREAKER BY CONTRACTOR WITHIN 10' OF CONTROLLER
CONC. PULL BOX (TYPE 1 HD)
LOCAL ANTENNA, ANTENNA CABLE SHALL BE INSTALLED IN A SEPARATE 2" DIA. NMC WHICH SHALL CONTAIN NO OTHER POWER CARRYING CONDUCTORS
Vz51 LOCATED 85' BEHIND STOP BAR
Vz2A&B LOCATED 210' BEHIND STOP BAR
Vz22A&B LOCATED 65' BEHIND STOP BAR
Vz41 COMB.
Vz42
Ø4
WEST FLUKER AVENUE
CONC. PULL BOX (TYPE 2)
CONC. PULL BOX (TYPE 1)
Vz61A&B LOCATED 210' BEHIND STOP BAR
Vz62A&B LOCATED 65' BEHIND STOP BAR
Vz62 COMB.
Vz63 COMB.
Vz61A
Vz61B
Vz51 COMB.
Vz23 COMB.
Vz22 COMB.
Vz51
Vz12
Vz11 COMB.
Vz21B
Vz21A
Ø5
Ø2
Ø6
Ø1
Vz82
Vz81 COMB.
Vz81 LOCATED 85' BEHIND STOP BAR
Vz11 LOCATED 85' BEHIND STOP BAR
CONC. PULL BOX (TYPE 2)
CONC. PULL BOX (TYPE 1)
38'
52'
46'
245
24
N0° 24' 55
139° 31' 44"
ANTENNA ORIENTED TO MASTER ANTENNA LOCATED AT PINE BLUFF CITY HALL 200 E. 8TH AVENUE
SAINT JAMES
JITED METHODIST
RKING
C.E.
RETE
79B
UNIVERSITY DR.
INFO. CENTER
CONCRETE
PAVED PARKING
PAVED
UNIVERSITY CLEANERS
H PENETECOSTAL
F
B
CO

NOTE TO CONTRACTOR:
TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT ALL CONSTRUCTION PHASES.

TRAFFIC FLOW DIAGRAM



EXISTING (2003) PEAK HOUR TRAFFIC VOLUMES

HWY. 79B (UNIVERSITY DR.)/W. FLUKER AVE. POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 79B - STA. 245+21.85	52' LT.	1306769.34, 1884701.02
B	HWY. 79B - STA. 246+04.82	51' LT.	1306770.25, 1884783.88
C	HWY. 79B - STA. 246+04.74	46' RT.	1306867.16, 1884783.09
D	HWY. 79B - STA. 245+21.62	44' RT.	1306864.45, 1884700.26

SCALE IN FEET
0 20 40 80

DATE: 09-06-12 FILE NAME: t020070_03.dgn

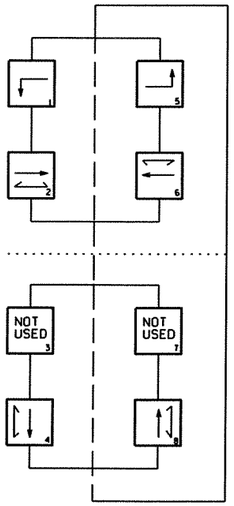
LOCATION: HWY. 79B (UNIVERSITY DR.)/W. FLUKER AVE.
CITY: PINE BLUFF
COUNTY: JEFFERSON
DISTRICT: 2 SCALE: 1"=40' DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	72	144

(2) SIGNALIZATION PLAN SHEET

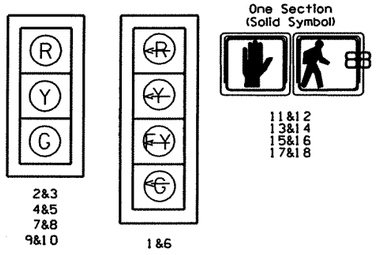
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

PHASING DIAGRAM

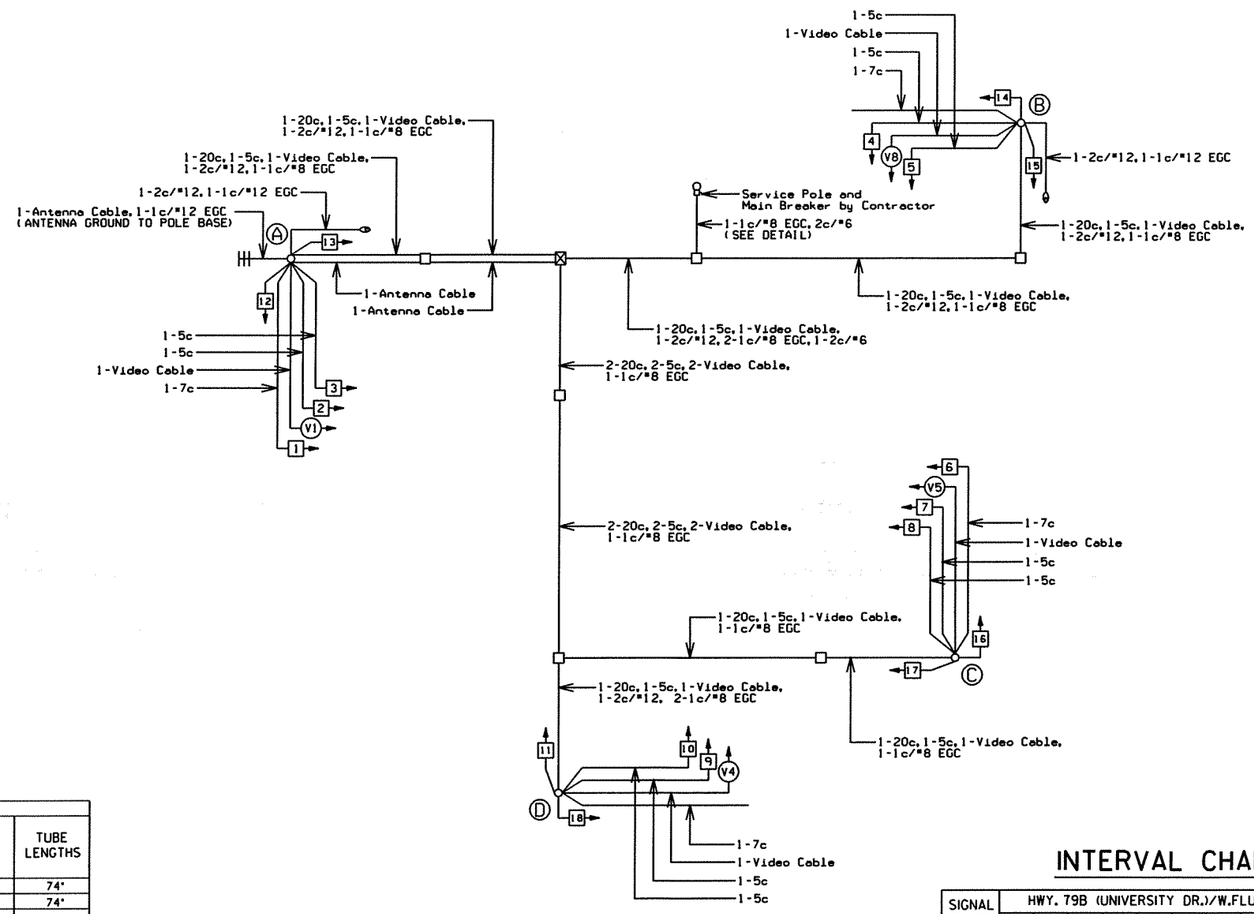


SIGNAL FACES

12" LENSES



NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISIONS FOR DETAILS ON NEW REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS



WIRING DIAGRAM

NOTES TO CONTRACTOR:

1. ONE SEPARATE 1-5c IS RUN TO EACH POLE FOR THE PEDESTRIAN PUSH BUTTON.
2. ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA OF CABINET.
3. THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.

DETECTOR SYSTEM DESCRIPTION: JOB 020070

PINE BLUFF - HWY. 79B/W.FLUKER AVE. DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS LOCAL		MASTER SYSTEM DETECTOR NUMBERS	COMMENTS	TUBE LENGTHS
DET. ID#	LOCATION DIRECTION	TYPE	DET. #	CAB. TRM #	AMP CHN. #	CON. INP.#	PHS	SYSTEM DET. #			
Vz11	SB LEFT TURN FAR	COMB.			1	D1	1	1		CAMERA V1	74'
Vz12	SB LEFT TURN	LOCAL			2	V1	1			CAMERA V1	74'
Vz21A&B	NB FAR ADVANCE	LOCAL			9	V2	2			CAMERA V5	74'
Vz22	NB OUTSIDE NEAR	COMB.			10	D2	2	2		CAMERA V5	74'
Vz23	NB INSIDE NEAR	COMB.			11	D3	2	3		CAMERA V5	74'
Vz41	EB LEFT TURN FAR	COMB.			17	D4	4	4		CAMERA V4	23'
Vz42	EB LEFT TURN	LOCAL			18	V4	4			CAMERA V4	23'
Vz51	NB LEFT TURN FAR	COMB.			13	D5	5	5		CAMERA V5	74'
Vz52	NB LEFT TURN	LOCAL			14	V5	5			CAMERA V5	74'
Vz61A&B	SB FAR ADVANCE	LOCAL			5	V6	6			CAMERA V1	74'
Vz62	SB OUTSIDE NEAR	COMB.			6	D6	6	6		CAMERA V1	74'
Vz63	SB INSIDE NEAR	COMB.			7	D7	6	7		CAMERA V1	74'
Vz81	WB LEFT TURN FAR	COMB.			19	D8	8	8		CAMERA V8	23'
Vz82	WB LEFT TURN	LOCAL			20	V8	8			CAMERA V8	23'
PB2A&B	W.FLUKER E.LEG	PED.				P2	2				
PB4A&B	HWY. 79B S.LEG	PED.				P4	4				
PB6A&B	W.FLUKER W.LEG	PED.				P6	6				
PB8A&B	HWY. 79B N.LEG	PED.				P8	8				
				SPARE 3,4,8,12,15&16							

CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT

INTERVAL CHART

SIGNAL FACES	HWY. 79B (UNIVERSITY DR.)/W.FLUKER AVE. 1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	4+8	CLR.		FLASH SEQ.
1	~~G~~	•	~~G~~	•	~~FY~~	•••	~~FY~~	•••	~~R~~	~~R~~		~~R~~
2&3	R	R	G	••	R	R	G	••	R	R		R
4&5	R	R	R	R	R	R	R	R	G	••		R
6	~~G~~	•	~~FY~~	•••	~~G~~	•	~~FY~~	•••	~~R~~	~~R~~		~~R~~
7&8	R	R	R	R	G	••	G	••	R	R		R
9&10	R	R	R	R	R	R	R	R	G	••		R
11&12	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW		BLK
13&14	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW		BLK
15&16	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW		BLK
17&18	DW	DW	DW	DW	W	FDW	W	FDW	DW	DW		BLK

• DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE
•• DENOTES GREEN OR YELLOW BALL DEPENDING ON NEXT PHASE
••• DENOTES FLASHING YELLOW ARROW OR YELLOW ARROW DEPENDING ON NEXT PHASE

DATE: 09-06-12 FILE NAME: t020070_03.dgn

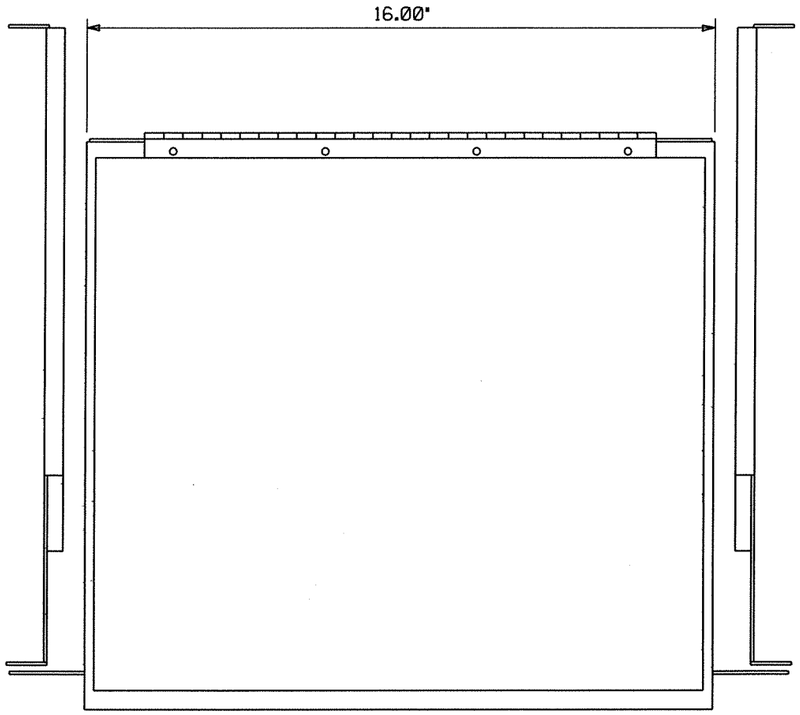
LOCATION: HWY. 79B (UNIVERSITY DR.)/W. FLUKER AVE.
CITY: PINE BLUFF
COUNTY: JEFFERSON
DISTRICT: 2 SCALE: N/A DRAWN BY: GWE

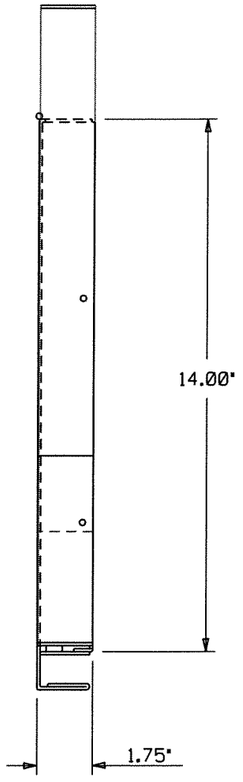
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	73	144

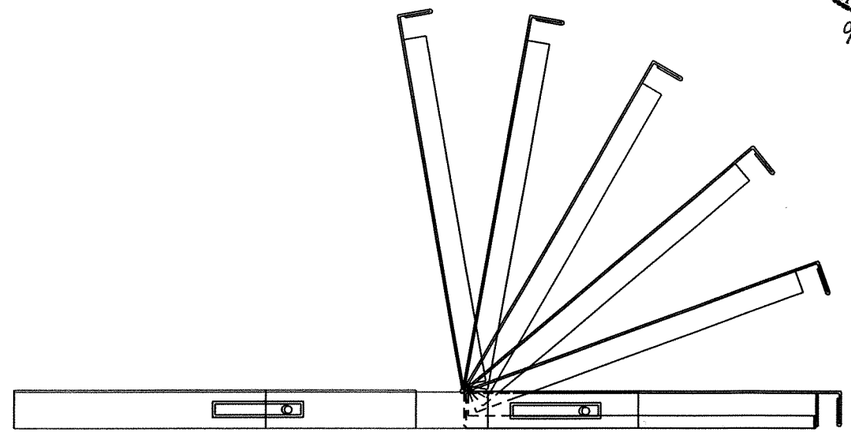
(2) SIGNALIZATION DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

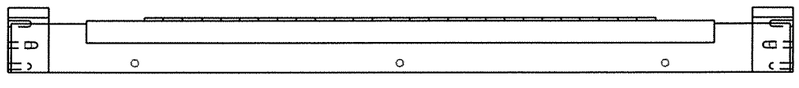
DRAWER PLAN VIEW



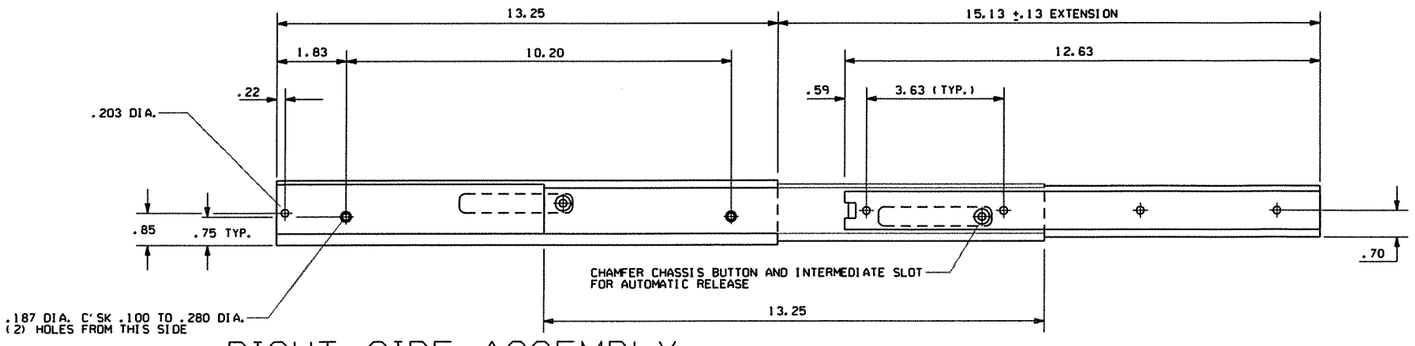




NOTES:
1. RIGHT HAND SLIDE SHOWN, LEFT SLIDE OPPOSITE.
2. GENERAL DEVICES (CC3002-99-0102) OR EQUAL AND CONTAINS (1) RIGHT HAND SLIDE ASSEMBLY, (1) LEFT HAND SLIDE ASSEMBLY.
3. ALL HARDWARE NECESSARY TO FASTEN SLIDE ASSEMBLY TO UNDERSIDE OF CONTROLLER SHELF SHALL BE INCLUDED.



FRONT VIEW



RIGHT SIDE ASSEMBLY

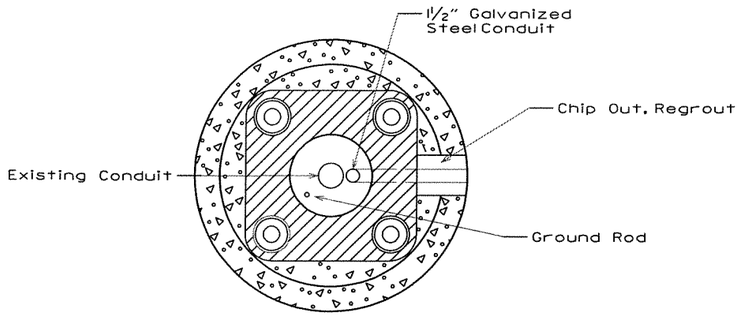
			ARKANSAS STATE HIGHWAY COMMISSION
			SIGNALIZATION DETAIL (Controller Cabinet Utility Drawer)
6-15-05	ISSUED		
DATE	REVISION	DATE FILM	

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	74	144

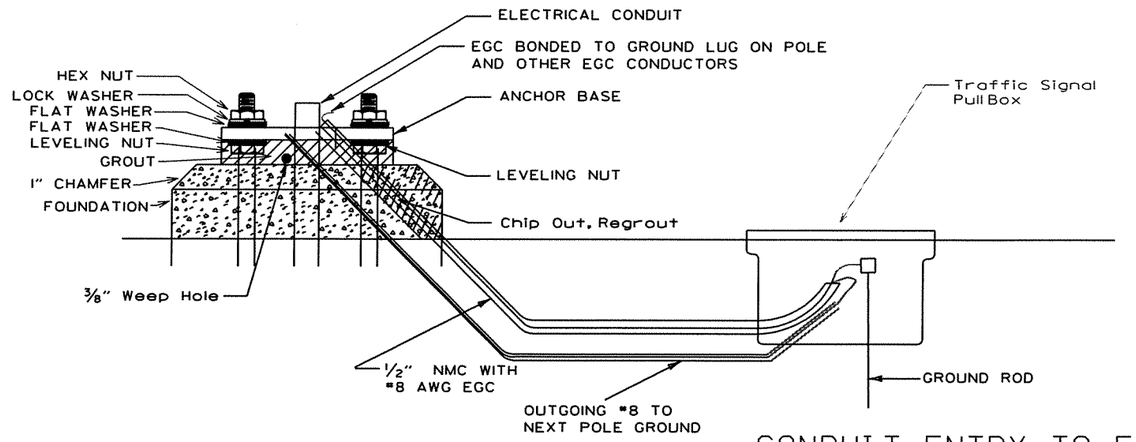
(2) SIGNALIZATION DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

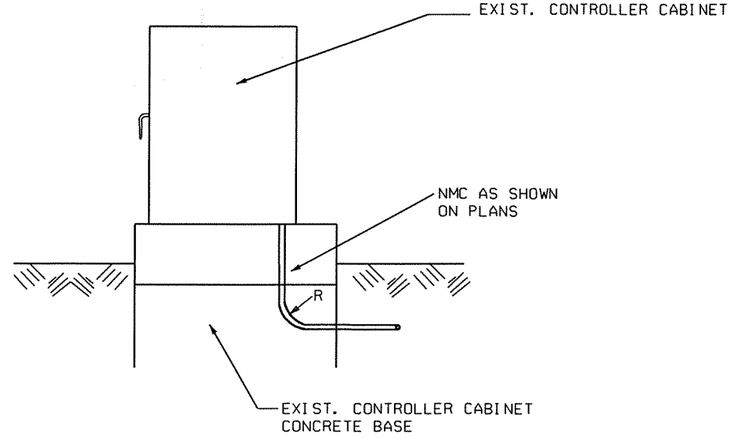
CONDUIT ENTRY TO EXISTING POLE BASE



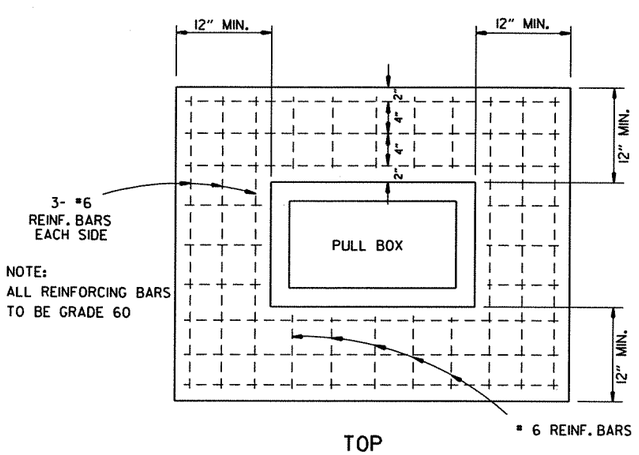
ANCHOR BASE



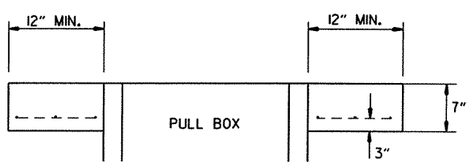
CONDUIT ENTRY TO EXISTING CONTROLLER CABINET



NOTE: ENTRY TO CABINET SHALL BE THROUGH A CUT IN THE BASE SUFFICIENT TO PROVIDE ADEQUATE CONDUIT RADIUS FOR ITEM.

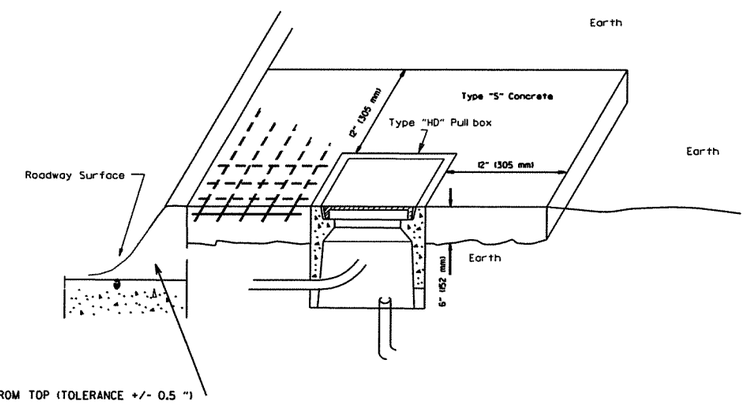


TOP



ELEVATION

Type "HD" Concrete Pull Box Detail



Note: All Type 1 and Type 2 HD pullboxes are installed with an apron of concrete 12" (305 mm) wide and 6" (152 mm) in depth. All payment shall be included in the price of the Type HD pullbox. Pullbox shall be installed flush to surrounding grade unless otherwise instructed by the engineer. The concrete shall be Class "S." Three #6 reinforcing bars in the apron on all sides of the pullbox is required in concrete.

DATE	REVISION	DATE FILM
5-21-09	REVISED GROUNDING	
7-31-08	ADDED & REVISED CONDUIT ENTRY	
6-23-04	REVISED CLEARANCE AT CURB ENTRY	
1-4-02	ADDED REINFORCING TO BOX APRON	
7-2-01	REVISED	
12-27-99	REVISED NOTES	
11-18-98	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

SIGNALIZATION DETAIL
(Heavy Duty Pull Box)

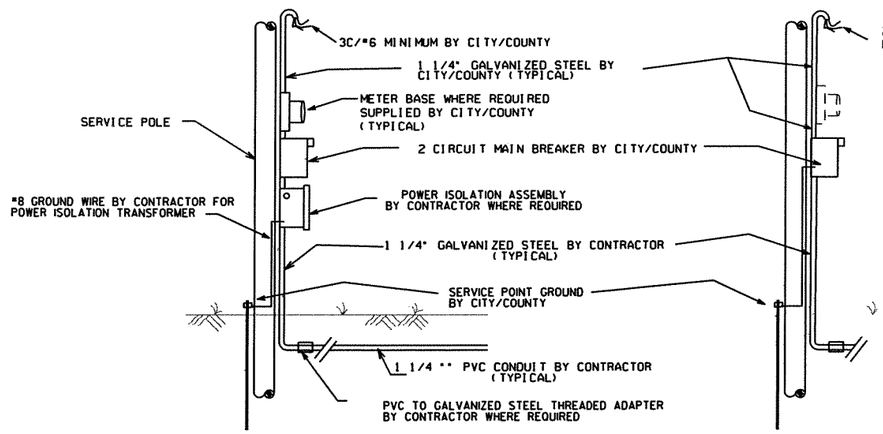
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	75	144

(2) SIGNALIZATION DETAILS

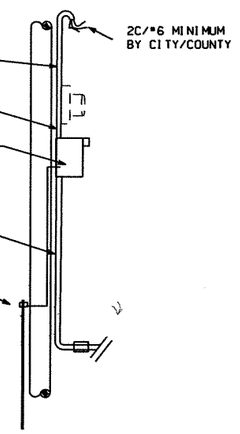
MAIN BREAKER NOT NEAR CONTROLLER CABINET SECONDARY REQUIRED

Ground Rod-A 10' x ⅝" ground rod shall be installed in the pull box for each pole and the controller. Payment for the ground rod and ½" NMC shall be included in Item 701. The pull box and conductor box shall be paid for separately.

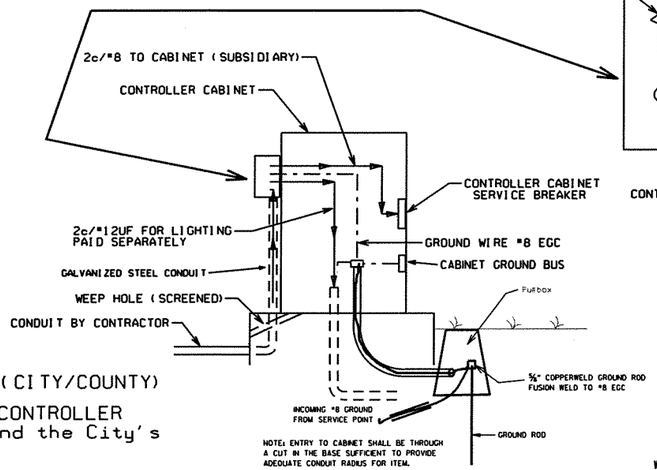
WITH POWER ISOLATION ASSEMBLY

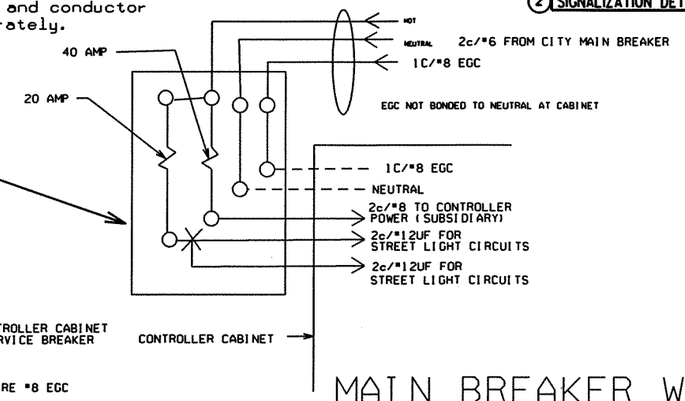


WITHOUT POWER ISOLATION ASSEMBLY



SECONDARY BREAKER BY CONTRACTOR (SUBSIDIARY)





MAIN BREAKER WIRING (TYPICAL)

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH 9-7-12

Service Ground is typically tied to neutral at the Main Breaker. As such, controller ground IS NOT tied to Neutral at secondary Breaker or in controller cabinet.

NOTES TO CONTRACTOR AND AGENCY RESPONSIBLE FOR MAINTENANCE OF THE INTERSECTION (CITY/COUNTY)

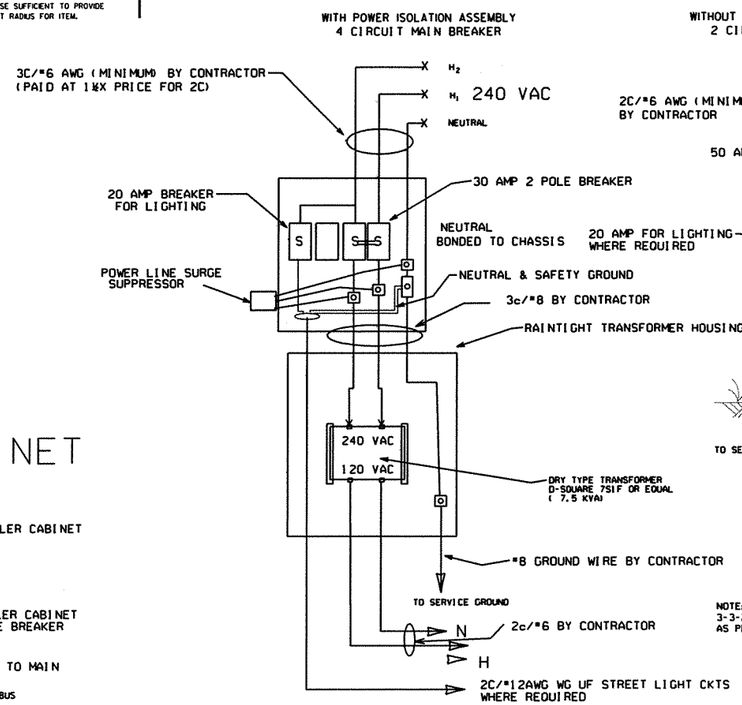
Electrical service typically falls into two categories: MAIN BREAKER NEAR CONTROLLER CABINET; and MAIN BREAKER NOT NEAR CONTROLLER CABINET. The Contractor's and the City's or County's responsibility varies accordingly as indicated on these details.

1. ALL SITUATIONS: Electrical service shall be provided by the City/County to a service pole with external raintight breaker (MAIN BREAKER) at a mutually acceptable point within the right-of-way. Service point includes galvanized steel conduit to a point 18" below ground line, two circuit main breaker, power isolation assembly where required, meter loop if required by local utility, electrical conductors and weatherhead. Where street lighting is included as part of signal installation, street lighting circuit (2c/#12 awg UF rated, typical) shall be kept separate from the circuit serving traffic signal. Service wire and wiring from the controller to main breaker is provided by the Contractor as a part of this contract. Wire and wiring from main breaker, and connection to the utility is the responsibility of the City/County.

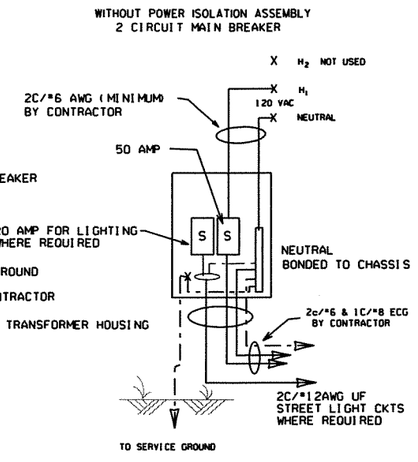
2. MAIN BREAKER NOT NEAR CONTROLLER CABINET: The Main Breaker assembly, galvanized steel conduit, weatherhead and wire above Main Breaker and connection to the utility shall be provided by City/County. Contractor shall provide as part of contract Secondary Breaker, conduit, wire and wiring to the Main Breaker.

3. MAIN BREAKER NEAR CONTROLLER CABINET: All components of the service point with the exception of the wire and wiring above the Main Breaker is furnished and installed by the Contractor. Wiring from Main Breaker including connection to the utility, is the responsibility of the City/County. If meter loop is required, meter base and hardware is provided by the City/County and installed by the contractor.

WITH POWER ISOLATION ASSEMBLY
4 CIRCUIT MAIN BREAKER

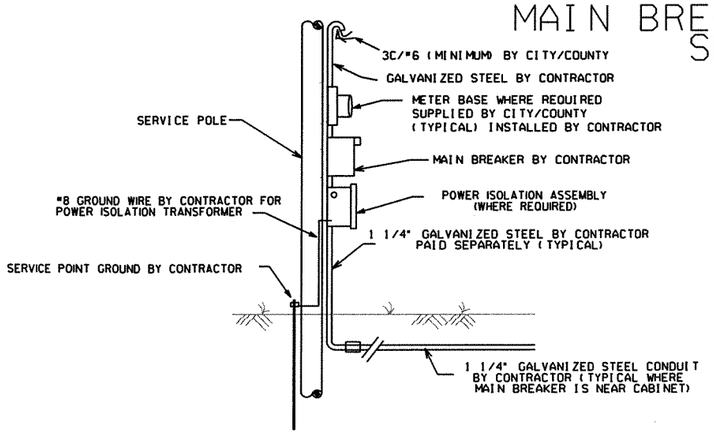


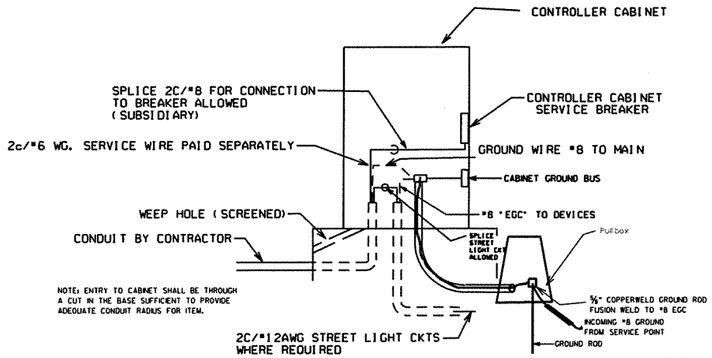
WITHOUT POWER ISOLATION ASSEMBLY
2 CIRCUIT MAIN BREAKER



NOTE: ELECTRICAL GROUND CONDUCTOR (ECG) ADDED 3-3-2003, CONSISTING OF A 1C/#8AWG CU GREEN WIRE AS PER NATIONAL ELECT. CODES.

MAIN BREAKER NEAR CONTROLLER CABINET SECONDARY NOT REQUIRED





DATE	REVISION	DATE FILM
5-21-09	REVISED GROUNDING	
7-31-08	REVISED GROUNDING	
3-3-03	ADDED EGC NOTE	
9-26-01	REVISED	
12-27-99	REVISED	
7-28-99	REVISED	
2-5-99	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

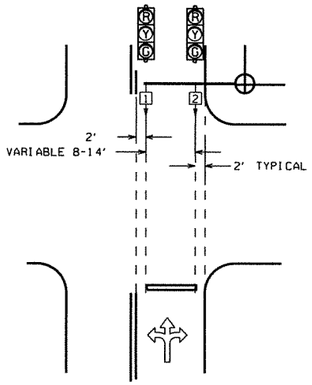
SIGNALIZATION DETAIL (Service Point)

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	76	144

(2) SIGNALIZATION DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-10-12

(A)



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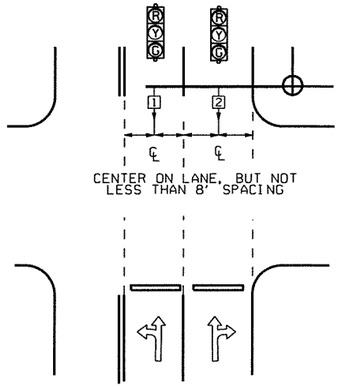
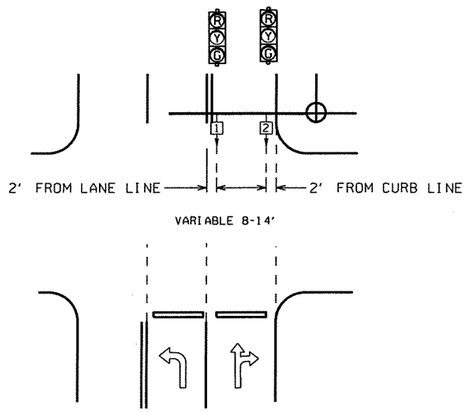


(C)



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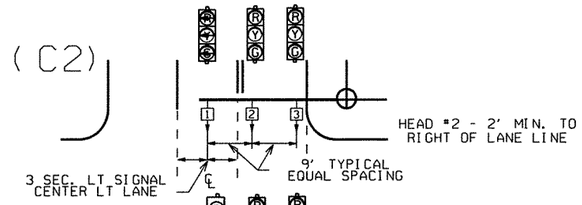
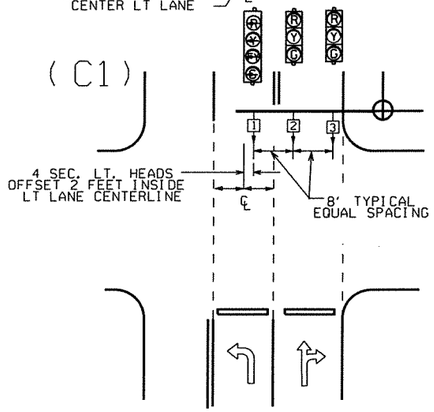


(C1)



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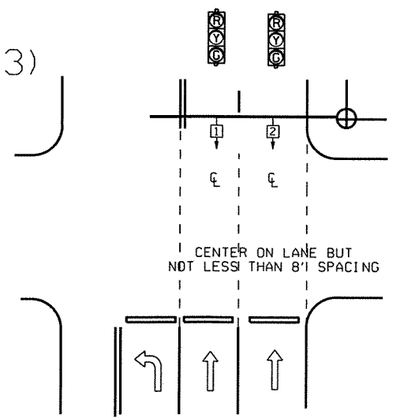

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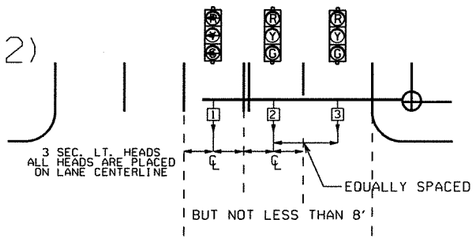

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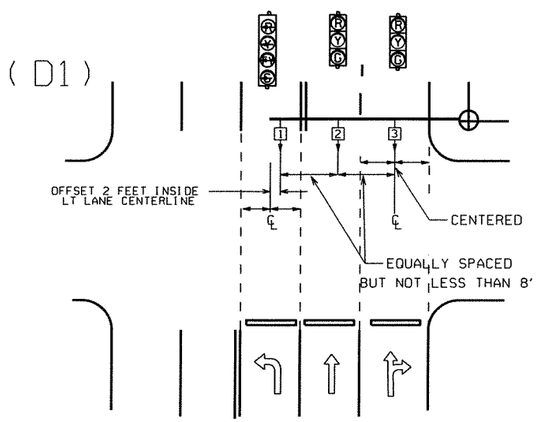
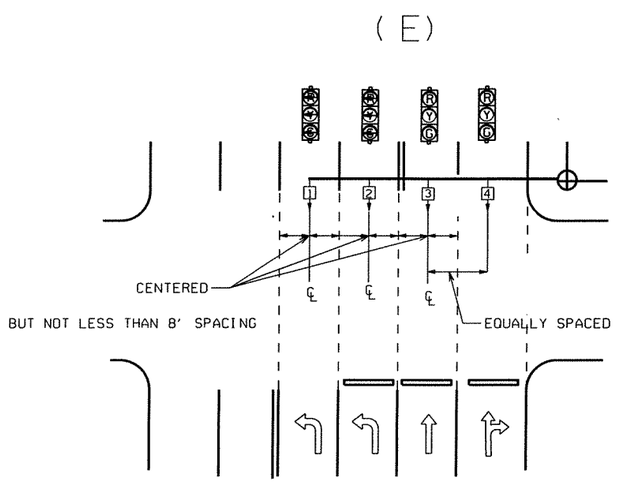


NOTE: WHERE LEFT TURN HEAD (HEAD 1 ON D1 AND D2) IS NOT CALLED FOR ON PLANS, MAST ARM LENGTH MAY STILL BE ALLOWED FOR FUTURE INSTALLATION. HEADS FOR THROUGH MOVEMENTS SHALL STILL BE ALIGNED WITH THROUGH LANES AS SHOWN ON DETAILS

(E)



℄ = CENTER OF LANE FROM APPROACH SIDE

GENERAL NOTES:

1. FOUR SECTION "PROTECTED/PERMISSIVE" LEFT TURN HEADS SHOULD BE PLACED A MINIMUM OF TWO (2') FEET TO THE RIGHT OF THE CENTERLINE OF THE APPROACHING LEFT TURN LANE.

2. THREE SECTION "PROTECTED" LEFT TURN HEADS SHOULD BE PLACED ON THE CENTERLINE OF THE APPROACHING LEFT TURN LANE.

3. WHEN IT IS NECESSARY TO PLACE POLES OTHER THAN AS SHOWN ON PLAN SHEET(S) RESULTING IN MAST ARM EXTENDING MORE THAN TWO FEET PAST (TO THE LEFT OF) THE CENTERLINE OF THE APPROACHING LEFT TURN LANE, MAST ARM SHALL BE CUT TO APPROPRIATE LENGTH AS DETERMINED BY THE ENGINEER, AND A NEW END CAP PROVIDED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THIS PRIOR TO INSTALLING THE MAST ARM IF ADDITIONAL COMPENSATION IS REQUIRED.

4. SIGNAL HEAD SPACING SHALL, IN NO CASE, BE LESS THAN EIGHT (8') FEET BETWEEN HEADS ON CENTER, MEASURED HORIZONTALLY PERPENDICULAR TO THE APPROACH.

5. ALL SIGNAL HEADS SHOWN ON THIS DETAIL SHEET SHALL BE LOCATED ACCORDING TO THE DIMENSIONS SHOWN IN RELATION TO THE APPROACH SIDE OF THE INTERSECTION.

6. MAXIMUM MOUNTING HEIGHT OF SIGNAL FACES LOCATED BETWEEN 40 FEET AND 53 FEET FROM STOP BAR SHALL BE IN ACCORDANCE WITH FIGURE 4D-1 OF 2009 MUTCD.

			ARKANSAS STATE HIGHWAY COMMISSION
			SIGNALIZATION DETAIL (Signal Head Placement)
3-11-10	2009 MUTCD		
12-9-99	ISSUED		
DATE	REVISION	DATE FILM	

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	77	144

(2) SIGNALIZATION DETAILS

NOTES, PED AND TRAFFIC SIGNAL HEAD SIGNS:
EACH ITEM "TRAFFIC SIGNAL HEAD (4 SEC., 1-WAY)" SHALL INCLUDE A SPECIAL SIGN AS SHOWN, ATTACHED TO THE MAST ARM OR SPAN ASSEMBLY 12" TO THE RIGHT OF THE SIGNAL HEAD UNLESS REMOVED WITHIN THE SIGNAL PLAN NOTES.

EACH ITEM "TRAFFIC SIGNAL HEAD (3 SEC., 1-WAY)" TO BE USED AS A LEFT TURN INDICATION ONLY SHALL INCLUDE A SIGN (R10-10) AS SHOWN, ATTACHED TO THE MAST ARM OR SPAN ASSEMBLY 12" TO THE RIGHT OF THE SIGNAL HEAD.

EACH PEDESTRIAN PUSHBUTTON SHALL HAVE ONE R10-3E SIGN ATTACHED TO THE POLE ABOVE THE BUTTON. ALL SIGN FACES SHALL BE CONSTRUCTED OF HIGH INTENSITY SHEETING (TYPE III) WITH SILKSCREEN LEGEND AND BORDER.

ALL SIGN BLANKS SHALL BE CONSTRUCTED OF ALUMINUM ALLOY (ASTM DESIGNATION B-209. ALLOY 5052-H38) WITH THICKNESS OF 0.100 INCH.

GENERAL NOTES:
1. MAST ARM POLES SHALL BE MOUNTED A MINIMUM OF 4 FT. BEHIND CURB OR SHOULDER.

2. OCTAGONAL POLES AND ARMS MEETING THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS CAN BE INSTALLED IN LIEU OF ROUND. ALL POLES AND ARMS IN A JOB MUST BE THE SAME SHAPE.

3. MINIMUM STRUCTURAL REQUIREMENTS:
DESIGN SPECIFICATIONS: AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 4TH EDITION (2001) WITH 2003 AND 2006 INTERIMS.

USE FATIGUE CATEGORY I FOR ALL STRUCTURES ON ROUTES WHERE THE SPEED LIMIT IS 65 MPH AND GREATER AT THE STRUCTURE LOCATION AND ON ROUTES WHERE SPEED LIMIT IS GREATER THAN 45 MPH WITH AN ARM 60' OR LONGER.

USE FATIGUE CATEGORY II FOR STRUCTURES ON ROUTES WITH A SPEED LIMIT LESS THAN 65 MPH AND GREATER THAN 45 MPH WITH ARMS LESS THAN 60' AND ROUTES WITH SPEED LIMITS OF 45 MPH AND LESS WITH AN ARM 60' OR LONGER.

USE FATIGUE CATEGORY III FOR ALL STRUCTURES WHERE SPEED LIMIT IS 45 MPH AND LESS AND ARMS LESS THAN 60'.

CONSTRUCTION SPECIFICATIONS: ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2003 EDITION) WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

BASE WIND SPEED: 90 MPH.

STEEL MEMBERS CONSIDERED MAIN LOAD CARRYING MEMBERS WITH A THICKNESS GREATER THAN 1/2" SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TEST SPECIFIED IN SUBSECTION 807.05 OF THE STANDARD SPECIFICATIONS.

DEAD LOAD: AS A MINIMUM, DESIGN SHALL BE BASED ON THE FIXED ATTACHMENTS SHOWN BELOW OR AS MODIFIED IN THE PLANS.

ALL SIGNAL HEADS TO BE ONE WAY, 12 INCH, AND HAVE 5 IN. BACK PLATES:

HEADS AT END OF ARM - ONE 4 SEC., 85 LB., 16.0 SQ. FT. ONE SIGN MOUNTED 3 FT. FROM SIGNAL • 2' X 0" X 2' • 6", 20 LB. REMAINING HEADS SPACED A 8 FT. • 3 SEC., 56 LB., TWO 5 SEC):
14.4 SQ. FT. DESIGN TO ACCOMMODATE (INCLUDING
2 HEADS FOR ARMS 10 TO 16 FT.
2 HEADS FOR ARMS 10 TO 16 FT., INCLUDING LB.
3 HEADS FOR 18 TO 24 FT. ARMS;
4 HEADS FOR OVER 26 FT. ARMS.

STREET NAME SIGN -- 72" X 18", 36 LB., MOUNTED SUCH THAT OUTSIDE EDGE IS NOT GREATER THAN 12 FT. FROM POLE. DEPENDING UPON POSITION OF SIGNAL HEAD ADJACENT TO POLE, SIGN MAY OVERLAP POLE SHAFT ROADWAY LUMINAIRES (WHERE REQUIRED ON PLAN SHEET) • VARIABLE ARM LENGTH (MAX.), 3.3 SQ. FT., 75 LB. PED SIGNALS -- TWO 2 SEC. 12 INCH MOUNTED 8 FT. FROM BASE OF POLE.
POST MOUNTED 3 SEC. SIGNAL HEAD AT 10 FT. ON SIDE OF POLE.

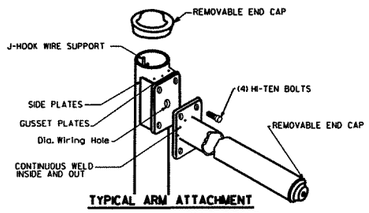
4. POLE/MAST ARM CAP -- POLE AND MAST ARMS CAPS SHALL BE PROVIDED, FABRICATED OF EITHER STEEL OR CAST ALUMINUM.

5. HAND HOLE -- HAND HOLES SHALL BE 4 X 6 INCHES FOR STANDARD, AND 3 X 5 INCHES FOR PED POLES, MINIMUM PLACED APPROXIMATELY 12 INCHES FROM BASE, AND SHALL BE FIXED WITH A BOLT DOWN COVER. A VACUUM FORMED ABS COVER IS AN ACCEPTABLE ALTERNATE TO STEEL. POLES GREATER THAN 21 FT. IN HEIGHT (FOR ROADWAY LUMINAIRE ATTACHMENT) SHALL INCLUDE A HAND HOLD WITHIN 12 INCHES OF MAST ARM(S) ATTACHMENT(S).

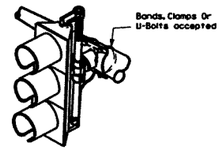
6. POLE/MAST ARM TAPER AND SLOPE - AVERAGE TAPER OF SIGNAL ARMS AND POLE SHALL BE 0.125 TO 0.15 INCHES PER FT.

MAST ARM CENTERLINE ANGLE AT ATTACHMENT POINT WITH POLE SHALL MAINTAIN NOT LESS THAN 0.5 DEGREES OR MORE THAN 4 DEGREES POSITIVE SLOPE WITH A LINE PERPENDICULAR TO THE POLE CENTERLINE. THE ARM SHALL MAINTAIN A POSITIVE AFTER IT IS PLACED UNDER LOAD.

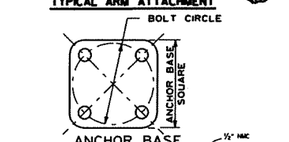
7. NUT COVERS - EACH POLE SHALL INCLUDE A BOLT DOWN NUT COVER FOR EACH ANCHOR BOLT.



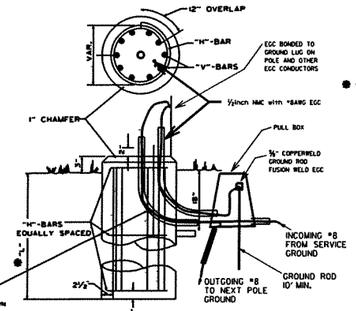
TYPICAL ARM ATTACHMENT



NOTE: THE SIGNAL SHALL BE CONNECTED TO THE MAST ARM BY BRACKETING AS DIRECTED BY THE ENGINEER.



ANCHOR BASE

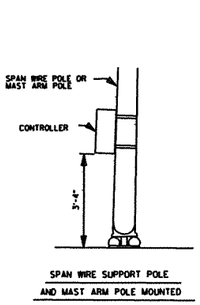


THE GROUND ROD SHALL BE FUSION WELDED TO A IC/#8 A.W.G. SOLID COPPER GROUND WIRE. ATTACHMENT TO THE PRIMARY GROUND MAY BE BY AN APPROVED CLAMP. THE ROD IS TO BE LOCATED IN THE CONCRETE PULL BOX.

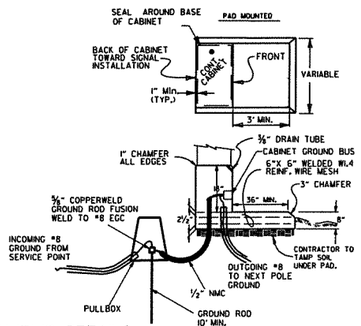
TYPICAL FOUNDATION DETAILS

POLE FOUNDATION MINIMUM DIMENSIONS AND STEEL REINFORCING. ALL REINFORCING STEEL SHALL BE GRADE 40 MIN.

ARM LENGTH	FDN. DIAMETER	DEPTH "L" *	STEEL VERT.	STEEL HORZ.	STEEL O/C.
PED	30"	7'-0"	12-#7 (6'-6")	10-#4	8.44"
2' to 12'	30"	10'-6"	12-#7 (10'-0")	15-#4	8.42"
over 12' to 20'	30"	11'-6"	12-#7 (11'-0")	16-#4	8.66"
over 20' to 35'	36"	12'-6"	13-#8 (12'-0")	17-#4	8.88"
over 35' to 50'	36"	13'-6"	13-#8 (13'-0")	19-#4	8.56"
over 50' to 72'	42"	14'-6"	18-#8 (14'-0")	20-#4	8.74"
Twins to 20'	30"	16'-0"	12-#6 (15'-6")	22-#4	8.76"
Twins over 20' to 44'	36"	16'-0"	13-#8 (15'-6")	22-#4	8.76"
Twins over 44' to 50'	42"	16'-0"	18-#8 (15'-6")	22-#4	8.76"
Twins over 50' to 72'	42"	16'-6"	18-#8 (16'-0")	23-#4	8.64"



SPAN WIRE SUPPORT POLE AND MAST ARM POLE MOUNTED



CONTROLLER CABINET MOUNTING DETAILS

UNLESS OTHERWISE DIRECTED BY THE ENGINEER, CABINET ORIENTATION SHALL BE SUCH THAT THE BACK OF THE CABINET IS PARALLEL TO THE STREET AND POSITIONED TO ALLOW VISIBILITY OF THE SIGNAL DISPLAY WHILE OBSERVING THE CONTROLLER FRONT PANEL.

8. GROUND ROD - A 10' X 5/8" GROUND ROD SHALL BE INSTALLED IN THE PULL BOX FOR EACH POLE AND THE CONTROLLER. PAYMENT FOR THE GROUND ROD AND 1/2" NMC SHALL BE INCLUDED IN ITEM 714 FOR SIGNAL POLES AND ITEM 701 FOR THE CONTROLLER. THE PULL BOX AND CONDUCTOR BOX SHALL BE PAID FOR SEPARATELY.

9. POLE BASE/FOUNDATION - ANCHOR BOLTS SHALL INCLUDE AS A MINIMUM, ONE LEVELING NUT, TWO FLAT WASHERS, ONE LOCK WASHER, AND ONE HEX. NUT. PERIMETER OF ANCHOR BASE SHALL BE GROUTED WITH A 1/4" WEEP HOLE. ALL CONCRETE SHALL BE CLASS "S" OR GREATER.

10. CONCRETE - ALL CONCRETE FOR CONTROLLER CABINET AND POLE FOUNDATIONS SHALL BE CLASS "S" OR GREATER.

11. PEDESTRIAN PHASES - PEDESTRIAN MOVEMENTS SHALL BE PUSH BUTTON ACTUATED AND CONCURRENTLY TIMED, UNLESS OTHERWISE INDICATED ON THE PLAN SHEET(S). FURNISHING AND INSTALLING PED PUSH SWITCH SHALL BE CONSIDERED SUBSIDIARY TO THE ITEM PEDESTRIAN SIGNAL HEAD.

SIGNAL OPERATION NOTES:

FLASHING OPERATION - PRIOR TO NORMAL OPERATION, SIGNAL SHALL BE FLASHED FOR A PERIOD OF 3 TO 5 WORK DAYS OR AS DIRECTED BY THE ENGINEER. SIGNAL SHALL BE PLACED IN OPERATION ONLY ON A REGULAR WORK DAY, EXCEPT FRIDAY.

THE CONTRACTOR MAY BE REQUIRED TO ALTER THE FLASHING DISPLAY DURING THE TEMPORARY FLASH PERIOD. AT THE TIME INTERSECTION IS PLACED IN PERMANENT OPERATION, THE FLASH SEQUENCE SHALL THEN BE RETURNED TO THAT INDICATED ON THE PLAN SHEETS. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR THESE ALTERATIONS IN FLASH SEQUENCE.

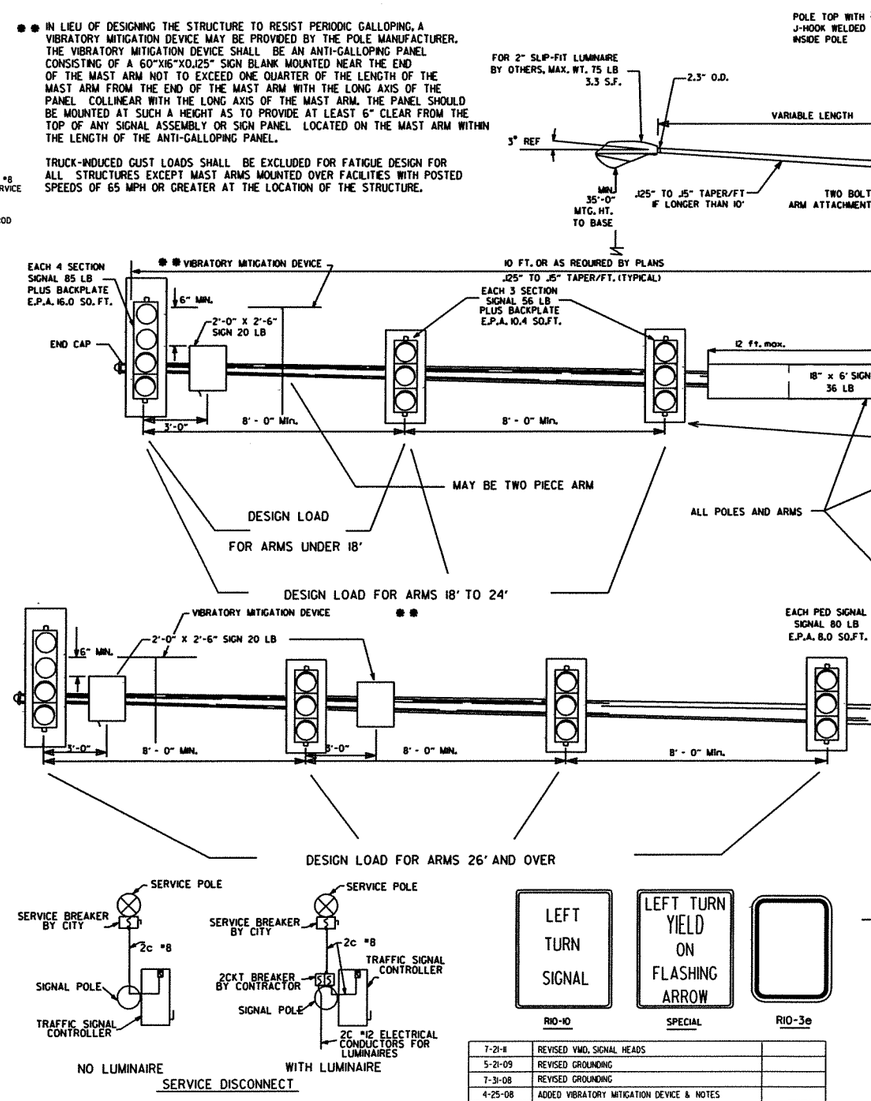
SPECIAL NOTE: 90 MPH WIND ZONE DESIGN, SEE NOTE 3. MINIMUM STRUCTURAL REQUIREMENTS.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-12

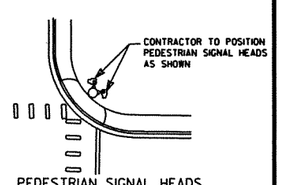
* WHEN THE GROUND ELEVATION AT THE POLE IS LOWER THAN THE ROADWAY ELEVATION, THE LENGTH OF FOUNDATION ABOVE THE GROUND MAY BE INCREASED TO PROVIDE THE REQUIRED SIGNAL HEAD CLEARANCE ABOVE THE ROADWAY. WHEN THE REQUIRED LENGTH OF FOUNDATION ABOVE THE GROUND IS 18" OR LESS, NO INCREASE IN DEPTH "L" WILL BE REQUIRED. WHEN THE REQUIRED LENGTH OF FOUNDATION ABOVE THE GROUND IS 5'-6" OR LESS, INCREASE DEPTH "L" BY 1'-0". FOR LENGTHS GREATER THAN 5'-6", DEPTH "L" SHALL BE ADJUSTED AS DIRECTED BY THE ENGINEER. LONGITUDINAL REINFORCING, AS SHOWN IN THE TABLE, SHALL BE PROVIDED FOR THE LENGTH OF THE EXTENDED SHAFT AND #4 TIES SHALL BE PROVIDED AT A SPACING NOT TO EXCEED 9" ON CENTERS. PAYMENT WILL BE IN ACCORDANCE WITH SECTION 714 OF THE STANDARD SPECIFICATIONS.

** IN LIEU OF DESIGNING THE STRUCTURE TO RESIST PERIODIC GALLOPING, A VIBRATORY MITIGATION DEVICE MAY BE PROVIDED BY THE POLE MANUFACTURER. THE VIBRATORY MITIGATION DEVICE SHALL BE AN ANTI-GALLOPING PANEL CONSISTING OF A 60"X16"X0.125" SIGN BLANK MOUNTED NEAR THE END OF THE MAST ARM NOT TO EXCEED ONE QUARTER OF THE LENGTH OF THE MAST ARM FROM THE END OF THE MAST ARM WITH THE LONG AXIS OF THE PANEL COLLINEAR WITH THE LONG AXIS OF THE MAST ARM. THE PANEL SHOULD BE MOUNTED AT SUCH A HEIGHT AS TO PROVIDE AT LEAST 6" CLEAR FROM THE TOP OF ANY SIGNAL ASSEMBLY OR SIGN PANEL LOCATED ON THE MAST ARM WITHIN THE LENGTH OF THE ANTI-GALLOPING PANEL.

TRUCK-INDUCED GUST LOADS SHALL BE EXCLUDED FOR FATIGUE DESIGN FOR ALL STRUCTURES EXCEPT MAST ARMS MOUNTED OVER FACILITIES WITH POSTED SPEEDS OF 65 MPH OR GREATER AT THE LOCATION OF THE STRUCTURE.



SERVICE DISCONNECT

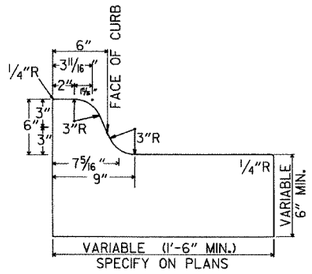


PEDESTRIAN SIGNAL HEADS

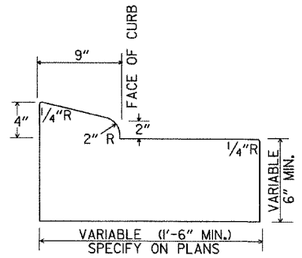
DATE	REVISION	DATE FILM
7-21-11	REVISED VWD, SIGNAL HEADS	
5-21-09	REVISED GROUNDING	
7-31-08	REVISED GROUNDING	
4-25-08	ADDED VIBRATORY MITIGATION DEVICE & NOTES	
4-18-08	REVISED AASHTO NOTES	
4-17-08	REVISED TO 2001 AASHTO STANDARDS	
10-12-04	REVISED CABINET ORIENTATION	
6-23-04	REVISED	
5-18-04	REV. NOTE 3/AASHTO REQUIREMENTS	
6-18-01	REV. NOTES & POLE MAST ARM SLOPE	
4-18-01	REVISED POLE TAPERS	
4-25-00	REV. NOTES & SIGNAL HEAD PLACEMENT	
8-22-99	REVISED FOUNDATION DETAILS	
8-17-98	REVISED DETAILS AND NOTES	
8-21-95	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

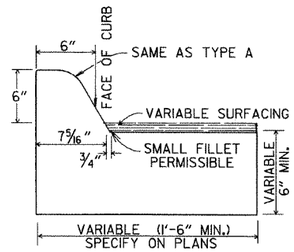
SIGNALIZATION DETAILS
(Steel Pole With Mast Arm)



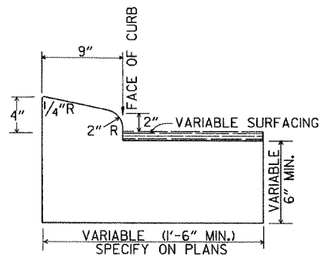
TYPE A



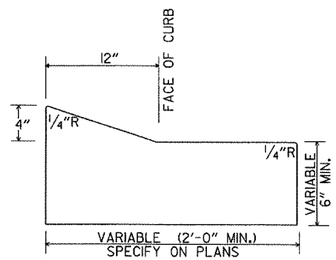
TYPE B-1



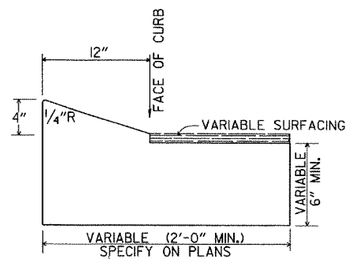
TYPE C



TYPE B-2

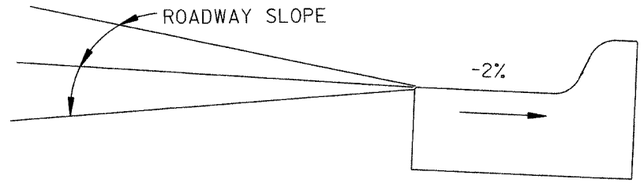


TYPE E-1



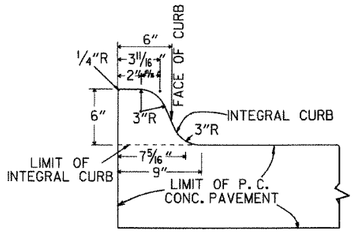
TYPE E-2

CONCRETE COMBINATION CURB AND GUTTER

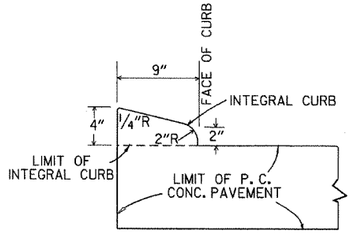


DETAIL OF GUTTER SLOPE

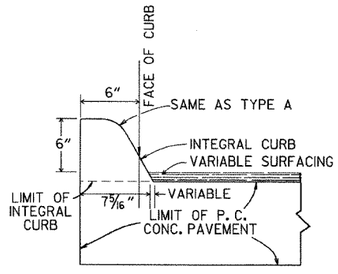
GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.



TYPE A

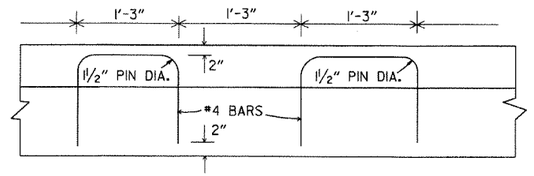


TYPE B

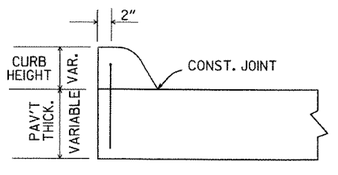


TYPE C

INTEGRAL CURB

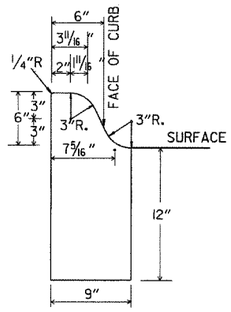


LONGITUDINAL SECTION

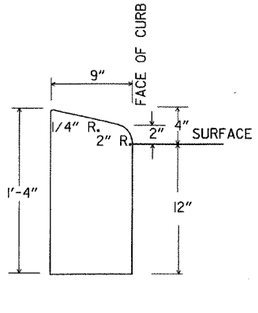


ELEVATION

ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



TYPE A



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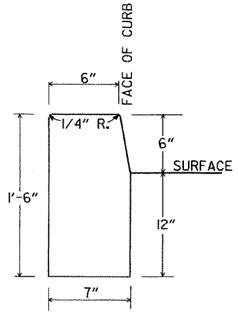
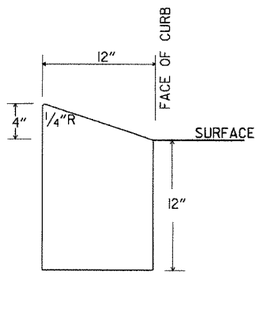
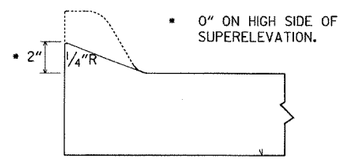


TYPE D



TYPE E

CONCRETE CURB



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

DETAILS OF MODIFIED CURB

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

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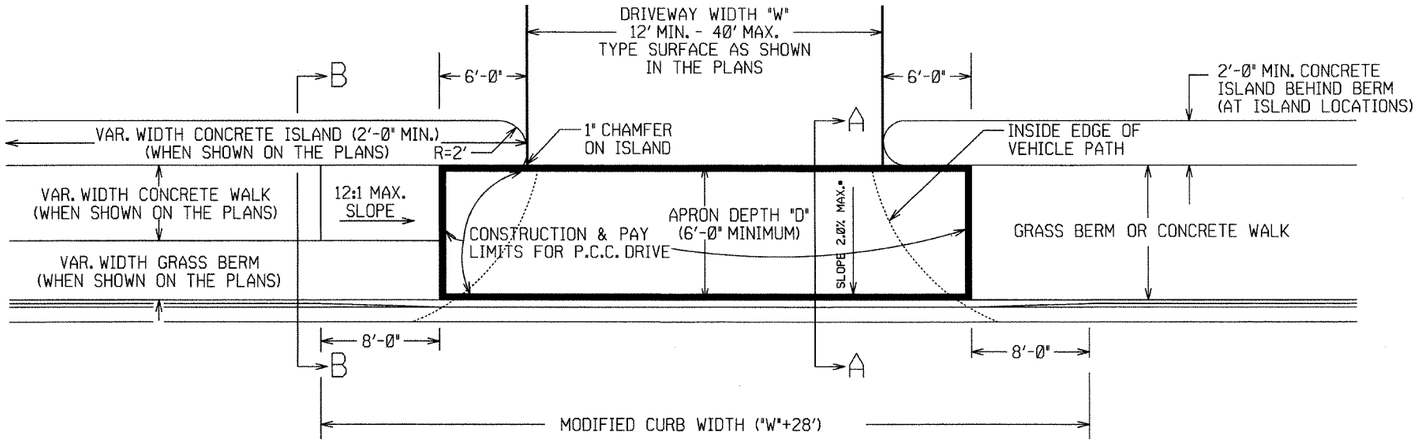
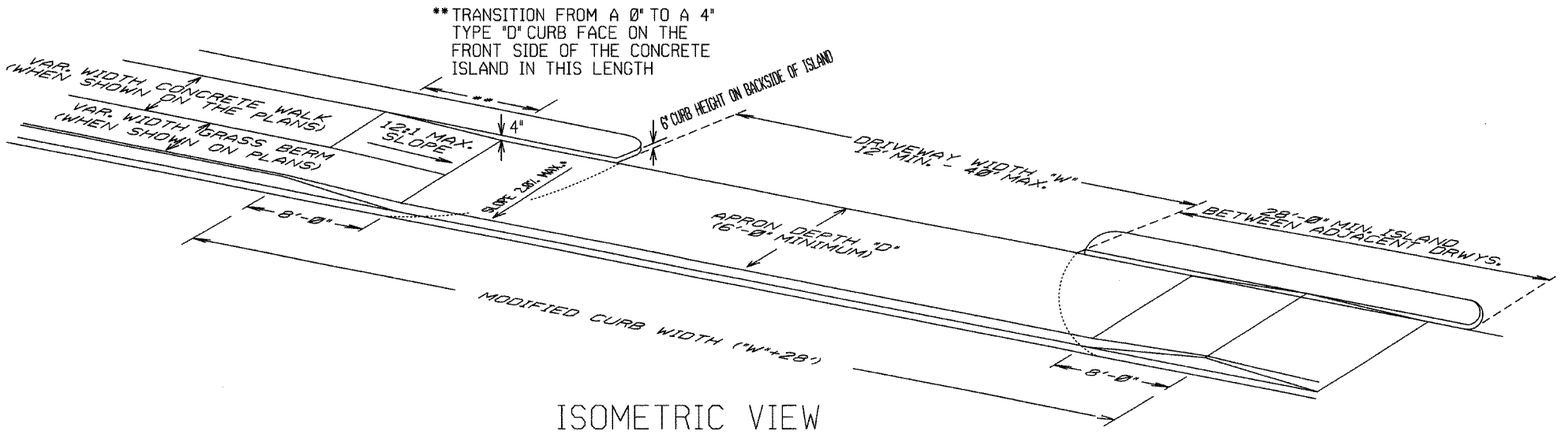
CURBING DETAILS

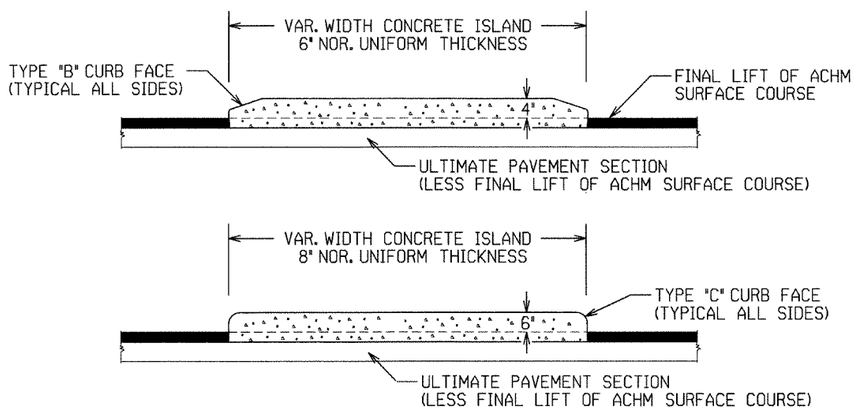
STANDARD DRAWING CG-1



PLAN VIEW

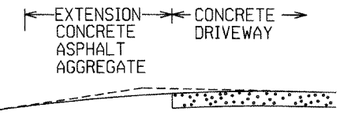


ISOMETRIC VIEW



CURBED ISLANDS FOR CHANNELIZATION

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



EXTENSION TYPICAL SECTIONS

1: CONCRETE - 6" P.C. CONCRETE DRIVEWAY

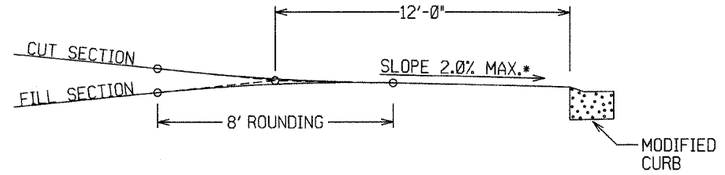
2: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
4" ACHM BINDER COURSE.(1") OR
4" ACHM BASE COURSE (1-1/2")

3: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
7" AGGREGATE BASE COURSE

4: AGGREGATE - 6" AGGREGATE BASE COURSE

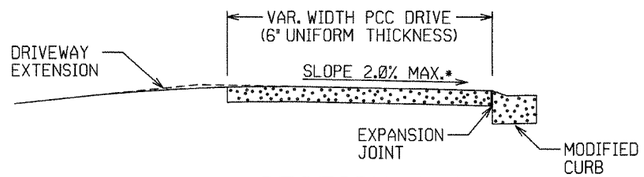
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

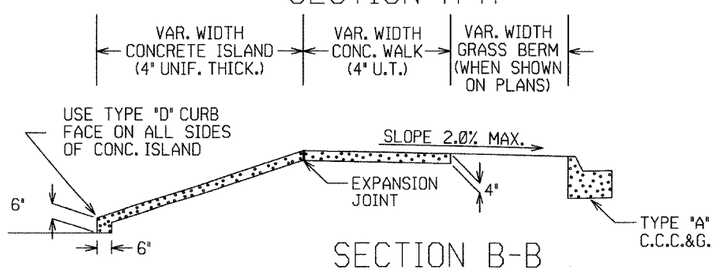


DRIVEWAY VERTICAL ALIGNMENT DETAILS

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



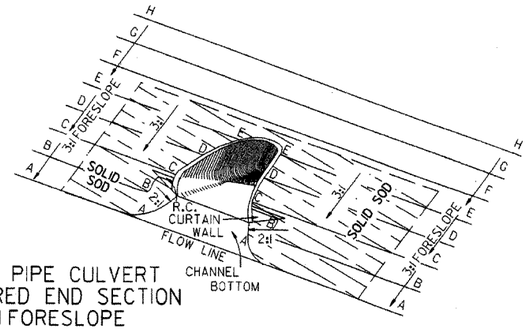
SECTION A-A



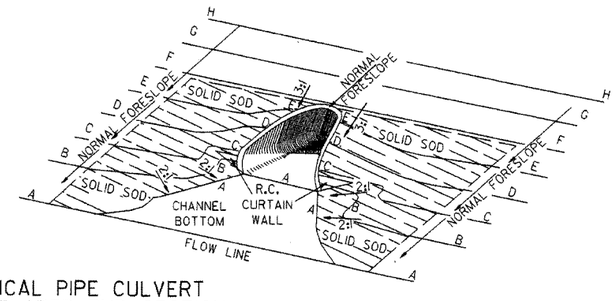
SECTION B-B
CURBED ISLAND BEHIND WALK

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

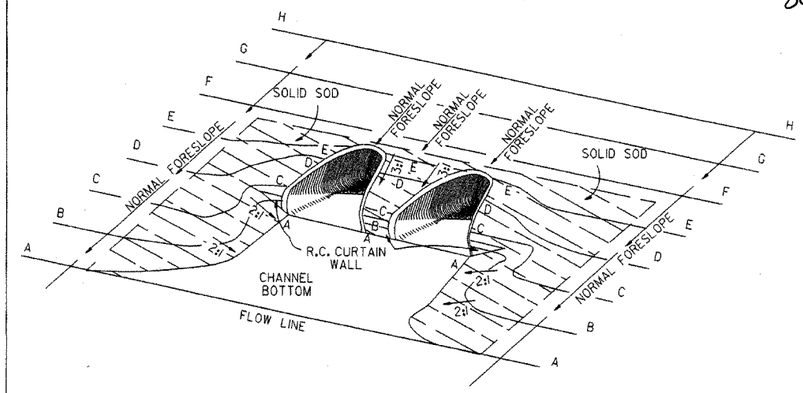
ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF DRIVEWAYS & ISLANDS
STANDARD DRAWING DR-1



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



TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& FLATTENED ADJACENT SLOPES



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

R.C. CURTAIN WALL
DIMENSIONS & QUANTITIES

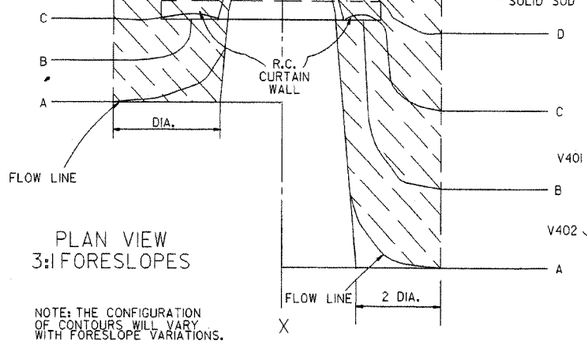
PIPE DIA.	H_1	L_1	L	L (DBL.)/2	SINGLE R.C.P.C. CONC.	SINGLE R.C.P.C. REINF. STEEL	DOUBLE R.C.P.C. CONC.	DOUBLE R.C.P.C. REINF. STEEL
					CU. YDS.	LBS.	CU. YDS.	LBS.
18"	1'-11½"	3'-5"	8'-0"	6'-3"	0.31	27.7	0.45	39.5
24"	1'-0½"	4'-6"	9'-6"	7'-6"	0.37	33.4	0.53	48.0
30"	1'-3½"	5'-7"	11'-0"	9'-0"	0.45	39.0	0.67	59.0
36"	1'-7"	6'-8"	13'-0"	10'-6"	0.58	52.6	0.83	73.9
42"	2'-1½"	7'-3"	15'-6"	12'-0"	0.82	77.1	1.10	100.7
48"	2'-5"	7'-10"	17'-0"	13'-0"	0.98	94.9	1.27	120.4
54"	2'-9½"	8'-5"	18'-6"	14'-0"	1.16	115.8	1.47	143.7
60"	3'-4"	9'-0"	20'-6"	15'-6"	1.47	149.7	1.84	180.3
72"	4'-5"	10'-2"	25'-6"	18'-6"	2.31	232.6	2.73	271.0

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

REINFORCING STEEL SCHEDULE

PIPE DIA.	SINGLE R.C. PIPE CULVERT H401 L	H401 NO.	H402 L	H402 NO.	V401 L	V401 NO.	V402 L	V402 NO.	DOUBLE R.C. PIPE CULVERT H401 L	H401 NO.	H402 L	H402 NO.	H403 L	H403 NO.	V401 L	V401 NO.	V402 L	V402 NO.
18"	7'-8"	2	1'-11½"	4	1'-7½"	8	8"	8	12'-2"	2	1'-11½"	4	8"	2	1'-7½"	10	8"	14
24"	9'-2"	2	2'-2"	4	1'-8½"	10	8"	9	14'-8"	2	2'-2"	4	8"	2	1'-8½"	12	8"	18
30"	10'-8"	2	2'-4½"	4	1'-11½"	10	8"	12	17'-8"	2	2'-4½"	4	8"	2	1'-11½"	14	8"	22
36"	12'-8"	2	2'-10"	6	2'-3"	12	8"	14	20'-8"	2	2'-10"	6	8"	3	2'-3"	14	8"	28
42"	15'-2"	2	3'-9½"	8	2'-9½"	16	8"	15	23'-8"	2	3'-9½"	8	8"	4	2'-9½"	18	8"	30
48"	16'-8"	2	4'-3"	10	3'-1"	18	8"	16	25'-8"	2	4'-3"	10	8"	5	3'-1"	20	8"	32
54"	18'-2"	2	4'-8½"	12	3'-5½"	20	8"	17	27'-8"	2	4'-9"	12	8"	6	3'-5½"	22	8"	34
60"	20'-2"	2	5'-5"	14	4'-0"	24	8"	18	30'-8"	2	5'-5"	14	8"	7	4'-0"	26	8"	36
72"	25'-2"	2	7'-4"	18	5'-1"	30	8"	20	36'-8"	2	7'-4"	18	8"	9	5'-1"	33	8"	40

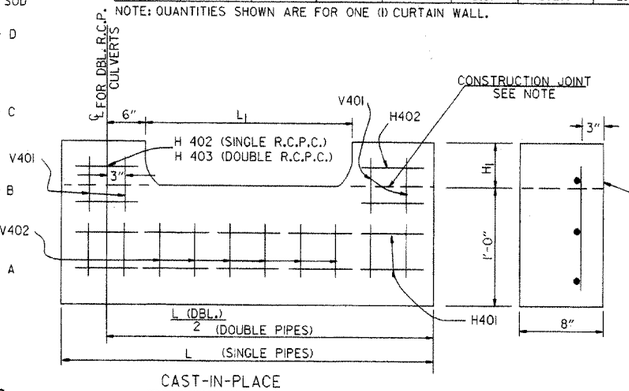
ALL REINFORCING STEEL #4 BARS @ 6" O.C.



PLAN VIEW
3:1 FORESLOPES

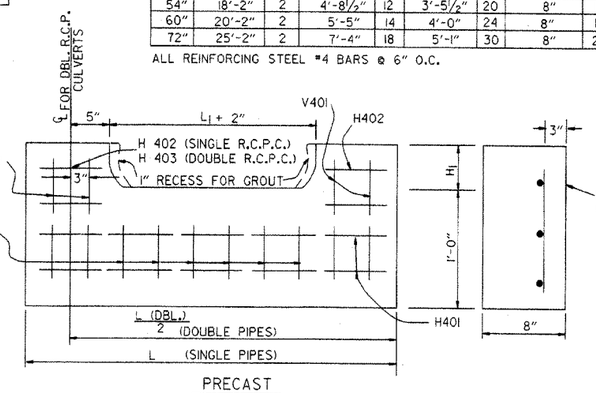
NOTE: THE CONFIGURATION OF CONTOURS WILL VARY WITH FORESLOPE VARIATIONS.

PLAN VIEW
FLATTENED FORESLOPES



CAST-IN-PLACE

NOTE: THE PORTION OF THE R.C. CURTAIN WALL BENEATH THE FLARED END SECTION (LOWER 1'-0") SHALL BE PLACED MONOLITHICALLY. THE FLARED END SECTION SHALL THEN BE SET IN PLACE & THE REMAINING PORTIONS OF THE R.C. CURTAIN WALL PLACED.



PRECAST

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

R.C. CURTAIN WALL DETAILS

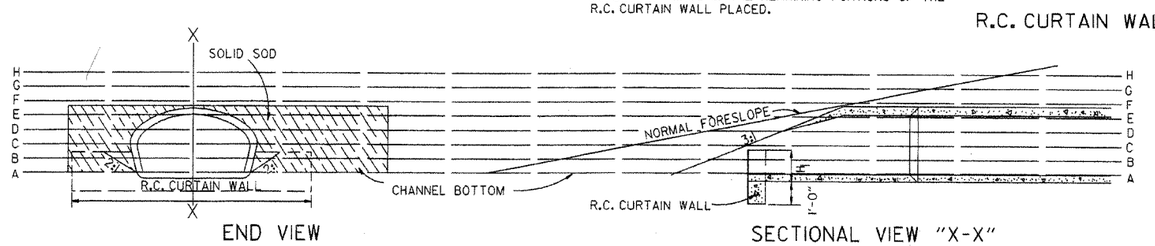
SOLID SODDING

PIPE DIA.	SINGLE R.C.P.C. 3:1	SINGLE R.C.P.C. 4:1	SINGLE R.C.P.C. 6:1	DOUBLE R.C.P.C. 3:1	DOUBLE R.C.P.C. 4:1	DOUBLE R.C.P.C. 6:1
	SQ. YDS.			SQ. YDS.		
18"	5	7	12	6	8	13
24"	8	12	19	9	13	20
30"	13	18	29	14	19	30
36"	17	26	41	18	28	43
42"	23	35	55	25	37	57
48"	29	46	68	31	48	70
54"	36	57	85	37	59	87
60"	45	62	104	48	65	107
72"	64	92	156	67	95	159

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

GENERAL NOTES

1. A CAST-IN-PLACE OR PRECAST CURTAIN WALL MAY BE USED. PAYMENT FOR THE CURTAIN WALL SHALL BE CONSIDERED TO BE INCLUDED IN THE UNIT PRICE BID EACH FOR FLARED END SECTIONS OF THE SEVERAL SIZES, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS INCLUDING REINFORCING STEEL AND CONCRETE: FOR FORMS, MIXING AND PLACING; FOR EXCAVATION AND BACKFILL, AND FOR ALL LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.
2. ALL EXPOSED EDGES SHALL BE CHAMFERED ¾".
3. CONCRETE FOR CURTAIN WALL SHALL MEET THE REQUIREMENTS FOR CLASS A OR S CONCRETE AS PROVIDED IN SECTION 802 OF THE STANDARD SPECIFICATIONS OR FOR PAVING CONCRETE AS PROVIDED IN SECTION 501 OF THE STANDARD SPECIFICATIONS.
4. WELDED WIRE MESH 3 x 3 W10 x W10 MAY BE USED IN LIEU OF REINFORCING BARS.



END VIEW

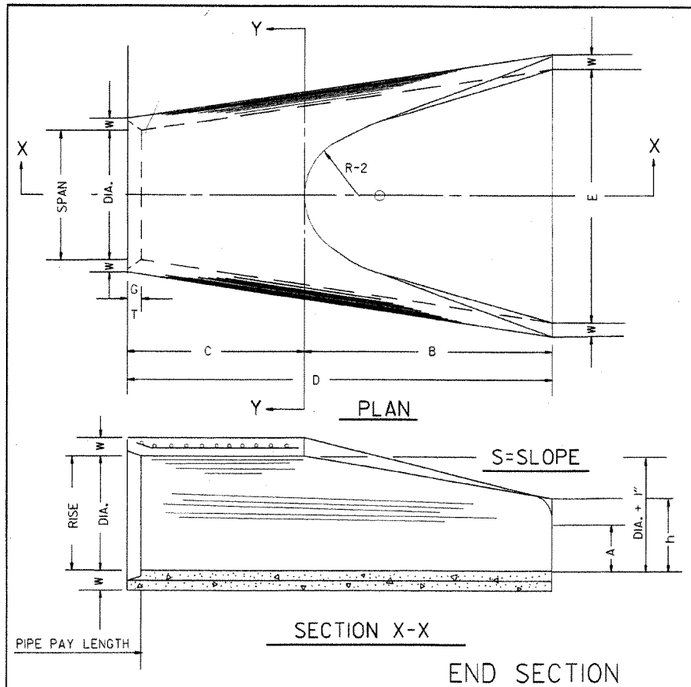
SECTIONAL VIEW "X-X"

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

ARKANSAS STATE HIGHWAY COMMISSION

FLARED END SECTION

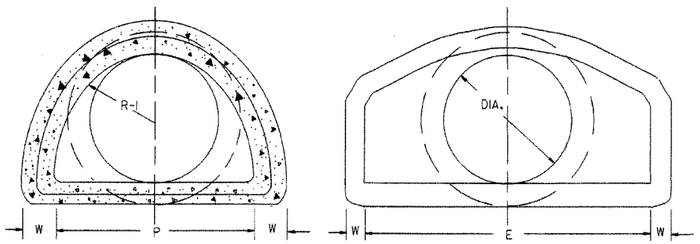
STANDARD DRAWING FES-1



END SECTION FOR REINFORCED CONCRETE PIPE CULVERTS

TABLE OF DIMENSIONS

DIA.	WALL	A	B	C	D	E	S	DIA. + 1"	P	R-1	R-2	G-T	WT.	h
18"	2½"	9"	2'-3"	3'-10"	6'-1"	3'-0"	3:1	19"	29"	15½"	12"	2"	1000	1'-0½"
24"	3"	9½"	3'-7½"	2'-6"	6'-11½"	4'-0"	3:1	25"	33 3/16"	16 13/16"	14"	2½"	1600	1'-1½"
30"	3½"	1'-0"	4'-6"	1'-7 3/4"	6'-1¾"	5'-0"	3:1	31"	37"	18½"	15"	3¼"	1940	1'-4 5/8"
36"	4"	1'-3"	5'-3"	2'-10 3/4"	8'-1¾"	6'-0"	3:1	37"	47 1/8"	24 5/8"	20"	3½"	4100	1'-8"
42"	4½"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	3:1	43"	53⅛"	27½"	22"	3½"	5380	2'-2½"
48"	5"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	3:1	49"	56½"	28½"	22"	3½"	6550	2'-6"
54"	5½"	2'-4"	6'-6"	1'-10"	8'-4"	7'-6"	3:1	55"	65½"	33⅛"	24"	4"	8750	2'-10½"
60"	6"	2'-10"	6'-6"	1'-10"	8'-4"	8'-0"	3:1	61"	72½"	36 11/16"	24"	4"	9270	3'-5"
72"	7"	3'-10"	6'-6"	1'-10"	8'-4"	9'-0"	3:1	73"	77 13/16"	38 5/16"	24"	5"	13250	4'-6"

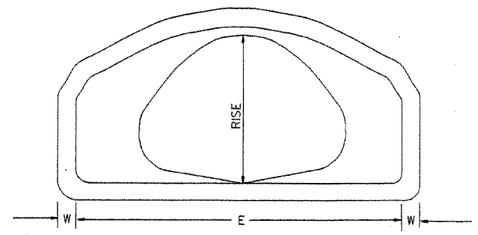


NOTE: TONGUE END ON UPSTREAM SECTION
GROOVE END ON DOWNSTREAM SECTION

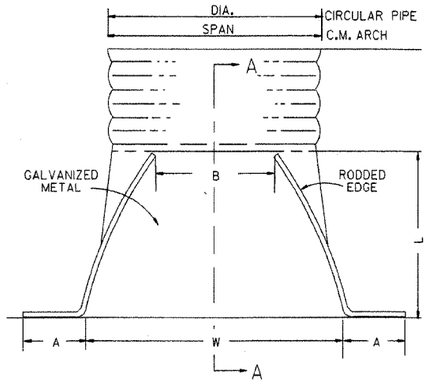
ARCH PIPE

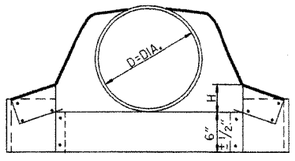
EQUIV. DIA.	• SPAN AASHTO M 206	• SPAN AHD NOMINAL	• RISE AASHTO M 206	• RISE AHD NOMINAL	W	A	B	C	D	E	P	R2	G-T	S
	INCHES													
15	18	18	11	11	2"	4"	2'-0"	4'-0"	6'-0"	3'-0"	29"	12"	1½"	2½:1
18	22	22	13½	14	2½"	5"	2'-0"	4'-1"	6'-1"	3'-6"	32⅛"	13"	2½"	2½:1
21	26	26	15½	16	2¾"	7"	2'-3"	3'-10"	6'-1"	4'-0"	34⅛"	14"	2½"	2½:1
24	28½	29	18	18	3"	9"	2'-3"	3'-10"	6'-1"	5'-0"	36 1/16"	15"	2½"	2½:1
30	36¼	36	22½	23	3½"	10"	3'-1"	3'-0½"	6'-1½"	6'-0"	47 13/16"	20"	3"	2½:1
36	43¾	44	26⅝	27	4"	10½"	4'-0"	2'-1½"	6'-1½"	6'-6"	54⅜"	22"	3½"	2½:1
42	51⅛	51	31 1/16	31	4½"	11½"	4'-7"	1-10¼"	6'-5¼"	7'-2"	59½"	23"	3¾"	2½:1
48	58½	59	36	36	5"	1'-3"	5'-3"	2'-10¾"	8'-1¾"	7'-10"	70⅝"	24"	4¼"	2½:1
54	65	65	40	40	5½"	1'-7"	5'-3"	2'-11"	8'-2"	8'-6"	72 1/16"	24"	4¾"	2¼:1
60	73	73	45	45	6"	1'-10"	5'-6"	2'-8"	8'-2"	9'-0"	77 13/16"	24"	5"	2¼:1

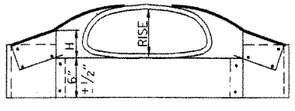
• THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PER CENT FROM THE VALUES SPECIFIED BY AASHTO M 206.



END VIEW
CONCRETE ARCH PIPE







CIRCULAR PIPE

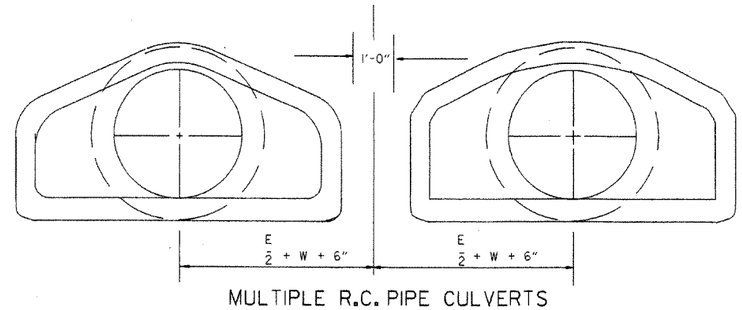
D. DIA.	GAUGE	A 1" ±	B. MAX.	H 1" ±	L 1½" ±	W 2" ±	S
		INCHES					
12	16	6	6	6	21	24	2½:1
15	16	7	8	6	26	30	2½:1
18	16	8	10	6	31	36	2½:1
21	16	9	12	6	36	42	2½:1
24	16	10	13	6	41	48	2½:1
30	14	12	16	8	51	60	2½:1
36	14	14	19	9	60	72	2½:1
42	12	16	22	11	69	84	2½:1
48	12	18	27	12	78	90	2½:1
54	12	18	30	12	84	102	2:1
60	12	18	33	12	87	114	1¾:1
66	2	18	36	12	87	120	1½:1
72	12	18	39	12	87	126	1 1/3:1

C.M. ARCH PIPE

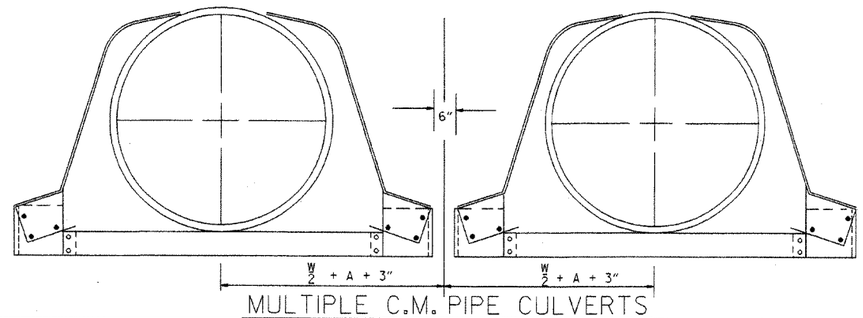
EQUIV. DIA.	SPAN	RISE	A 1" ±	B MAX.	H 1" ±	L 1½" ±	W 2" ±	S	GAUGE
	INCHES								
15"	17	13	7	9	6	19	30	2½:1	16
18"	21	15	7	10	6	23	36	2½:1	16
21"	24	18	8	12	6	28	42	2½:1	16
24"	28	20	9	14	6	32	48	2½:1	16
30"	35	24	10	16	6	39	60	2½:1	14
36"	42	29	12	18	8	46	75	2½:1	14
42"	49	33	13	21	9	53	85	2½:1	12
48"	57	38	18	26	12	63	90	2½:1	12
54"	64	43	18	30	12	70	102	2¼:1	12
60"	71	47	18	33	12	77	114	2¼:1	12

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

END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS



MULTIPLE R.C. PIPE CULVERTS



MULTIPLE C.M. PIPE CULVERTS

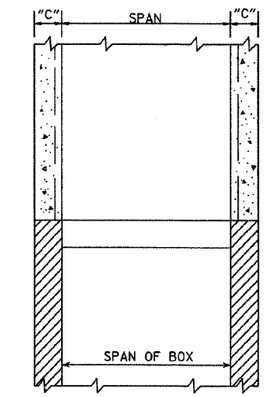
DATE	REVISION	FILMED
10-18-96	REVISED ASTM REF. TO AASHTO	10-18-96
5-15-80	REVISED DISTANCE BETWEEN MULTIPLE R.C.P. F.E.S.	664-5-15-80
7-14-78	C.M. ARCH SIZES TO CONFORM WITH AASHTO SIZES	752-7-14-78
8-22-75	ADDED MULTIPLE PIPE CULVERTS	517-8-22-75
12-5-74	REMOVED NOTE RE REINF. FOR R.C. F.E.S.	500-12-5-74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

ARKANSAS STATE HIGHWAY COMMISION

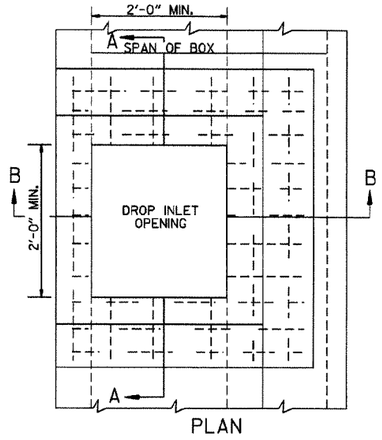
FLARED END SECTION

STANDARD DRAWING FES-2

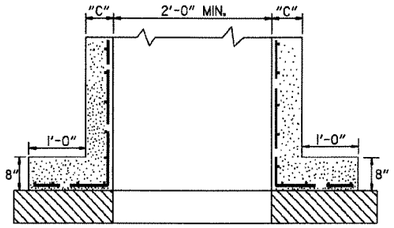
stdfes2.dgn



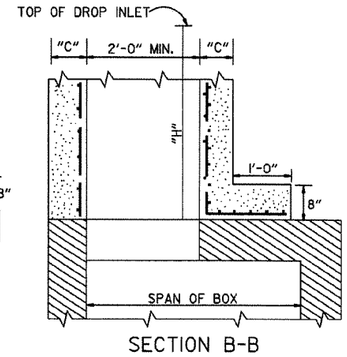
SECTION B-B



PLAN

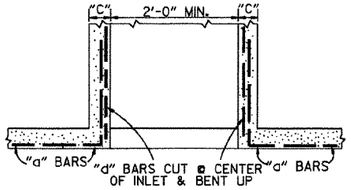


SECTION A-A

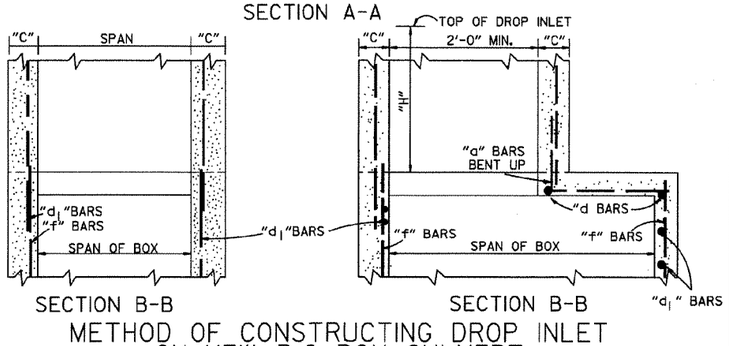


SECTION B-B

METHOD OF CONSTRUCTING DROP INLET ON EXISTING R.C. BOX CULVERT



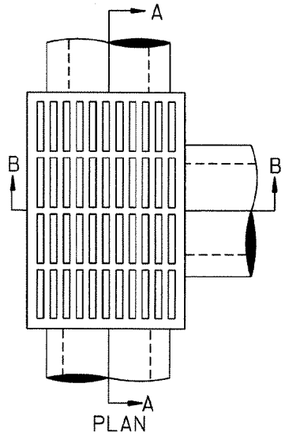
SECTION A-A



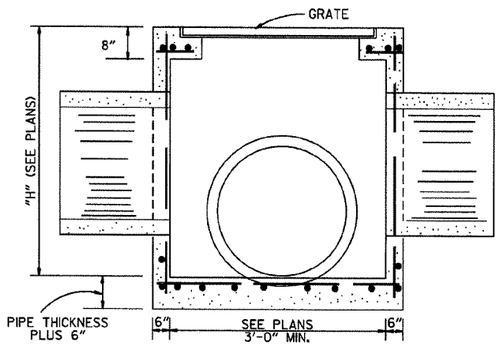
SECTION B-B SECTION B-B

METHOD OF CONSTRUCTING DROP INLET ON NEW R.C. BOX CULVERT

NOTE: "C" DIMENSIONS AND REINFORCING BAR SIZES, SHALL CONFORM TO THOSE SHOWN ON STANDARD DRAWING FOR DROP INLET.

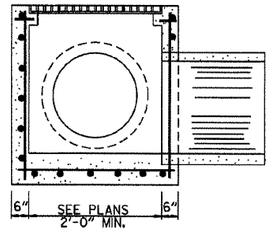


PLAN



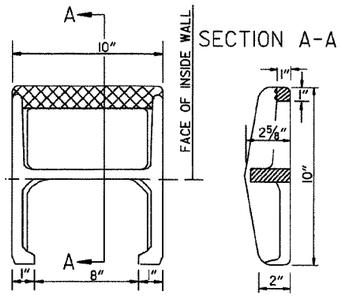
SECTION A-A

NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1½" MIN. COVER. THIS TYPE DROP INLET TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.



SECTION B-B

DROP INLET (TYPE E)

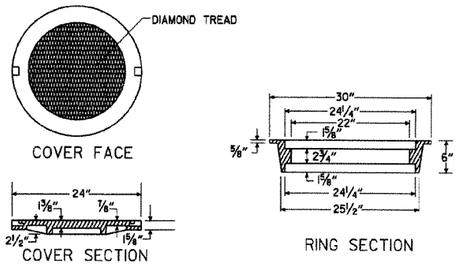


APPROX. WEIGHT = 11 LBS. (CAST IRON)

PLAN

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

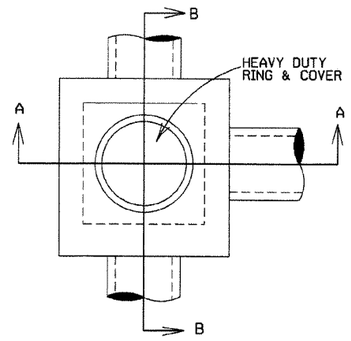
DETAIL OF STEP FOR DROP INLET



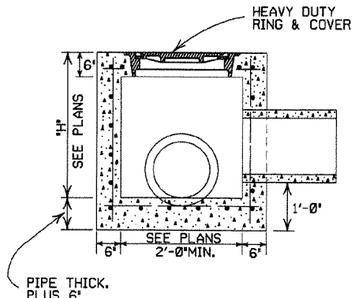
COVER SECTION RING SECTION

APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER

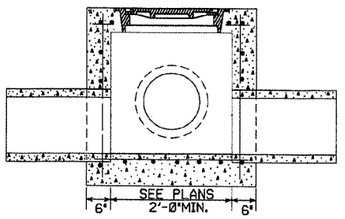


PLAN



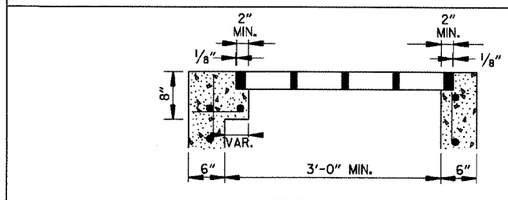
SECTION A-A

NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1½" MIN. COVER. THIS TYPE JUNCTION BOX TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.

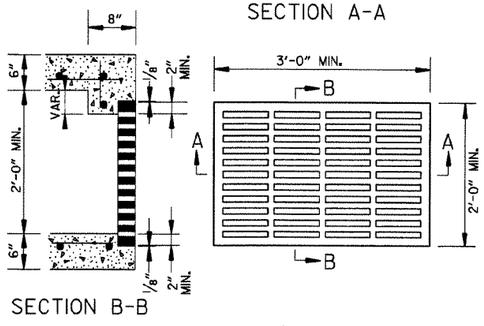


SECTION B-B

JUNCTION BOX (TYPE E)



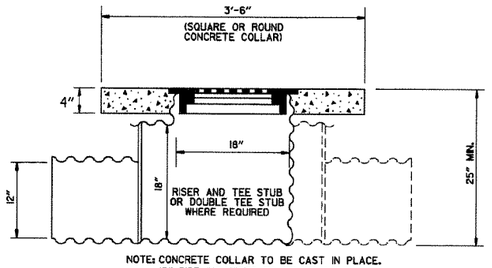
SECTION A-A



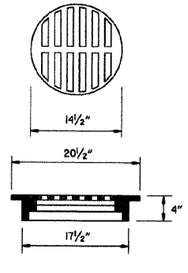
SECTION B-B

APPROXIMATE MINIMUM WATERWAY OPENING = 260 SQ. IN.

GRATE FOR TYPE E DROP INLET



NOTE: CONCRETE COLLAR TO BE CAST IN PLACE. 12" PIPE CULVERTS TO BE MEASURED AND PAID FOR AS " 12" SIDE DRAIN ".



USE NEENAH R-5901-C OR EQUIVALENT BICYCLE SAFE FRAME AND GRATE

DETAIL OF YARD DRAIN

GENERAL NOTES:

1. ALL EXPOSED CORNERS SHALL BE ¾" CHAMFERED.
2. STEPS SHALL BE INSTALLED ON 16" CENTERS ON ALL INLETS 4'-0" HIGH OR OVER, OR AS APPROVED BY THE ENGINEER.
3. EXPANSION JOINT MATERIAL SHALL BE ¾" PREFORMED FIBER.
4. GRATE OR GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105 CLASS 35B. GRATE MAY BE USED WITHOUT FRAME.
5. GRATE AND FRAME SHALL NOT BE PAINTED.
6. GRATE SHALL BE BICYCLE SAFE.
7. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
8. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
9. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
10. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

DATE REV.	REVISION	DATE FILMED
11-16-01	ADDED NOTE 10	
1-12-00	REVISED HEAVY DUTY RING & COVER	
7-02-98	CHANGED GRATE DETAIL, DELETED DI(TYPE D), REPLACED RING & COVER W/HEAVY DUTY RING & COVER, ADDED JUNCTION BOX (TYPE E)	
6-26-97	ADDED DIMENSION TO TYPE IV-A	
10-18-96	ADDED DETAIL OF YARD DRAIN	
8-15-91	DELETE TYPE IV GRATE	
7-15-88	REVISED STEP DETAIL	
5-20-83	REVISED DETAILS OF GRATES (TYPE IV & IV-A)	
2-4-83	ADDED GENERAL NOTE NO. 4	
3-2-81	ADDED TYPE IV-A GRATE	
5-22-74	DELETED INLET (TYPE F) & GRATE (TYPE III)	
10-2-72	REVISED AND REDRAWN	

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS & JUNCTION BOXES

STANDARD DRAWING FPC-9

4'-0" LENGTH DROP INLET

PIPE SIZE	MIN. WIDTH	HEIGHT 5'-0" CLASS A CONC.	HEIGHT 5'-0" REINF. STEEL	PLUS OR MINUS PER LIN. FT. OF HEIGHT CLASS A CONC.	PLUS OR MINUS PER LIN. FT. OF HEIGHT REINF. STEEL
		CU. YDS.	POUNDS	CU. YDS.	POUNDS
18"	2'-6"	1.77	156	0.28	22
24"	2'-6"	1.79	156	0.28	22
30"	3'-2"	2.39	205	0.30	26
36"	3'-8"	2.63	236	0.32	28
42"	4'-4"	2.95	250	0.34	30
48"	4'-10"	3.21	265	0.36	32

NOTE: QUANTITIES ARE APPROXIMATE AND ARE SHOWN FOR BIDDER INFORMATION ONLY.

DROP INLET EXTENSION

4'-0" CLASS A CONC.	4'-0" REINF. STEEL	8'-0" CLASS A CONC.	8'-0" REINF. STEEL
CU. YDS.	POUNDS	CU. YDS.	POUNDS
0.58	38	0.87	72

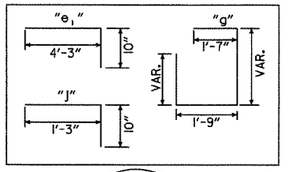
DEDUCT FROM QUANTITY COMPUTED FOR EACH EXTENSION ADDED.

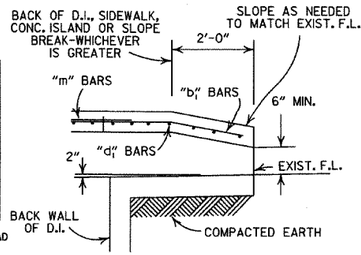
0.04	3		

DEDUCT FROM QUANTITY COMPUTED FOR EACH PIPE ENTERING INLET

INSIDE DIA. PIPE	CLASS A CONC.	REINF. STEEL
INCHES	CU. YDS.	POUNDS
18	0.05	2
24	0.09	3
30	0.13	4
42	0.24	8

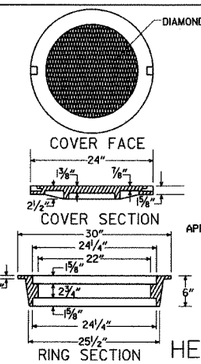
BAR DIAGRAM





BACK OPENING

WHEN OPENING IN BACK IS CALLED FOR ON PLANS EXTEND OPENING AS SHOWN IN DETAIL. PAYMENT TO BE INCLUDED IN PRICE BID FOR DROP INLET (TYPE C).

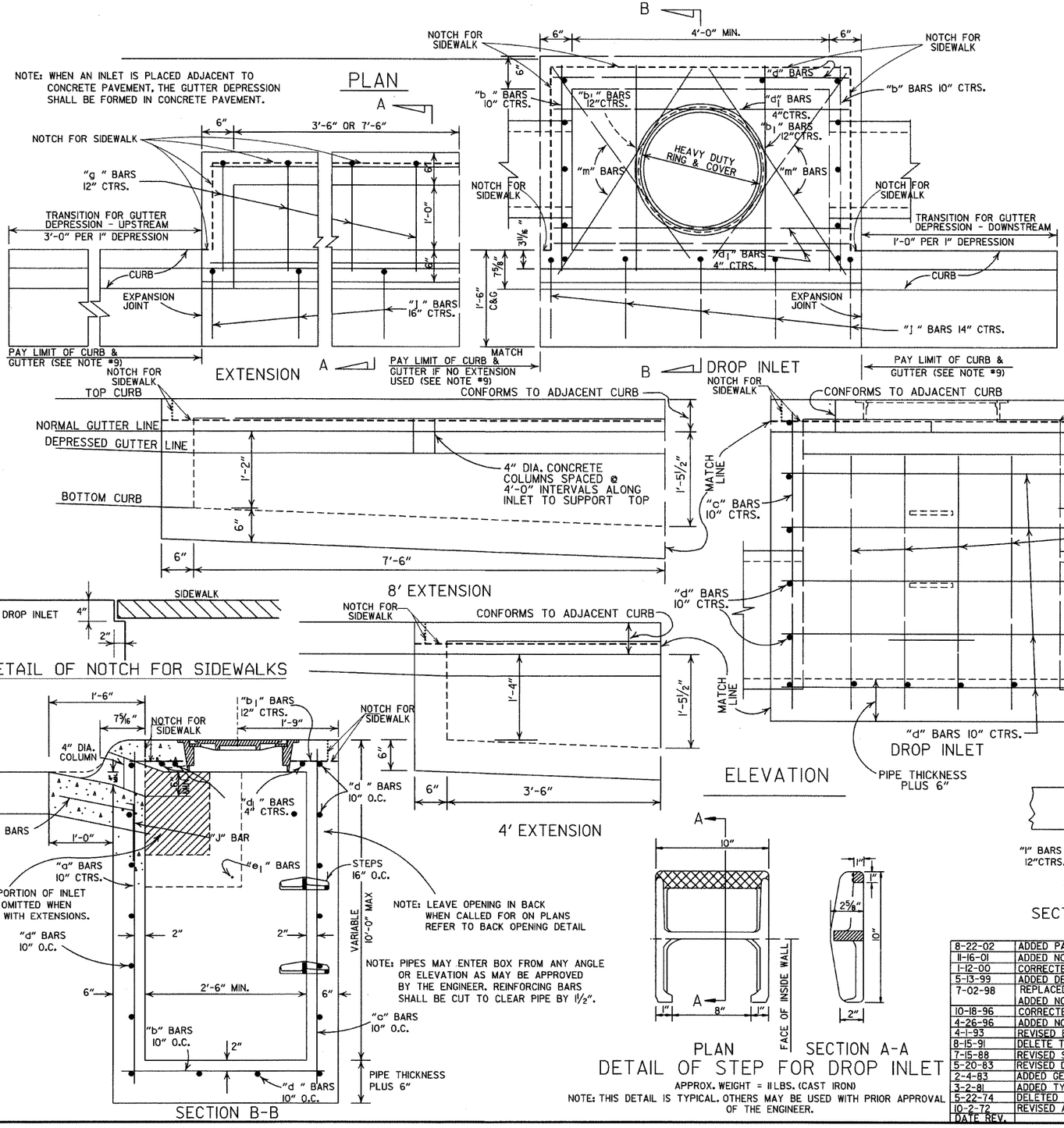


APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER

GENERAL NOTES:

1. ALL EXPOSED CORNERS TO HAVE ¾" CHAMFER.
2. STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER OF AS APPROVED BY THE ENGINEER.
3. ALL REINF. BARS SHALL BE #4 AND HAVE 1½" COVER.
4. DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
5. THIS DROP INLET MAY BE CONSTRUCTED ON NEW OR EXISTING R.C. BOX CULVERT AS SHOWN ON F.P.C.-9.
6. WHEN PLANS CALL FOR DROP INLET OVER 10'-0" HIGH, FLOOR AND WALLS SHALL BE CONSTRUCTED AS SHOWN FOR TYPE "RM" DROP INLET (F.P.C.-9D).
7. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
8. DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
9. PAYMENT FOR CURB AND/OR CURB AND GUTTER WITHIN THE LIMITS OF DROP INLETS AND DROP INLET EXTENSIONS SHALL BE CONSIDERED INCLUDED IN PAYMENT MADE FOR DROP INLETS AND/OR DROP INLET EXTENSIONS.
10. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
11. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
12. 4"x2" NOTCH SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
13. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.



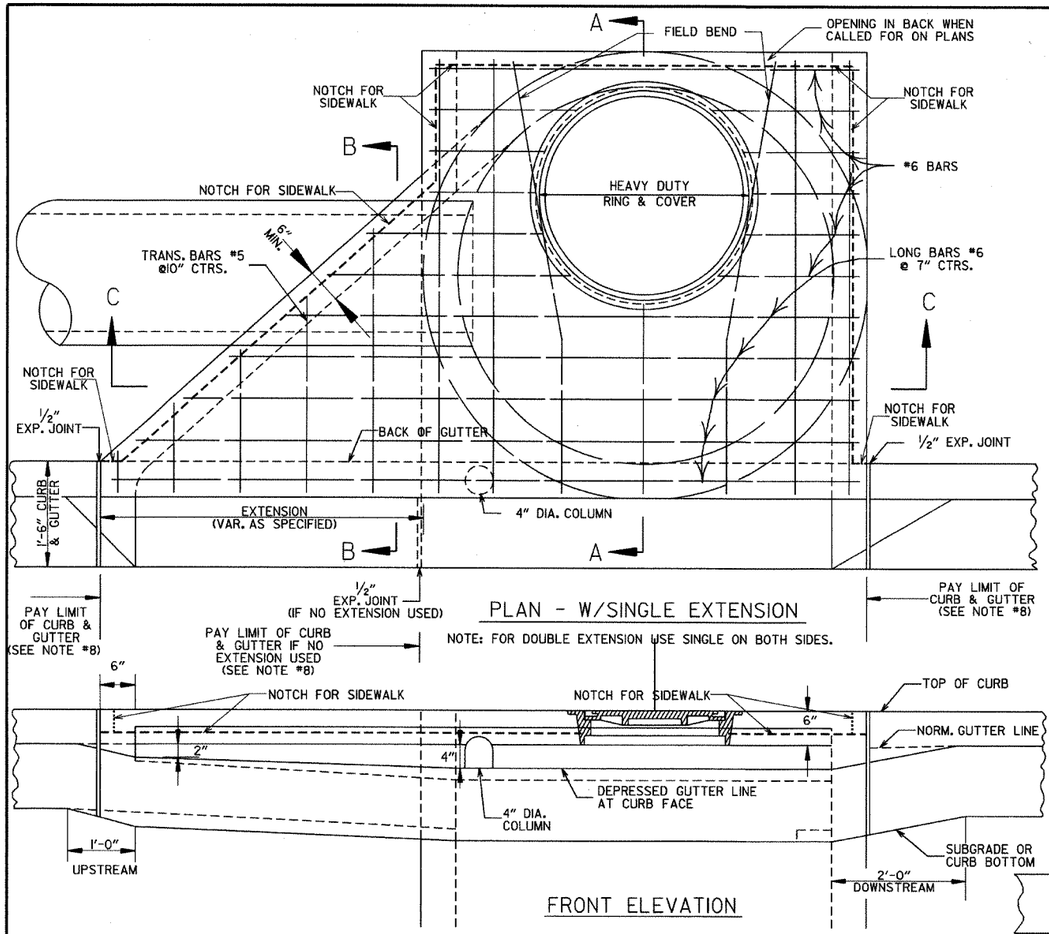
DATE REV.	REVISION	DATE FILMED
8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01	ADDED NOTE 13; REVISED SECTION B-B	
1-12-00	CORRECTED DIMENSION ON SECTION B-B & REVISED RING & COVER	
5-13-99	ADDED DETAIL OF NOTCH FOR SIDEWALKS	
7-02-98	REPLACED RING & COVER W/HEAVY DUTY RING & COVER ADDED NOTES 9,10,&11	
10-18-96	CORRECTED SPELLING	
4-26-96	ADDED NOTE 8 & REVISED (4'X8') EXTENSION TITLES	10-18-96
4-1-93	REVISED BACK OPENING & NOTE	
8-15-91	DELETE TYPE IV GRATE	
7-15-88	REVISED STEP DETAIL	
5-20-83	REVISED DETAILS OF GRATES (TYPE IV & IV-A)	
2-4-83	ADDED GENERAL NOTE NO. 4	
3-2-81	ADDED TYPE IV-A GRATE	
5-22-74	DELETED INLET (TYPE F) & GRATE (TYPE III)	
10-2-72	REVISED AND REDRAWN	

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS

(TYPE C)

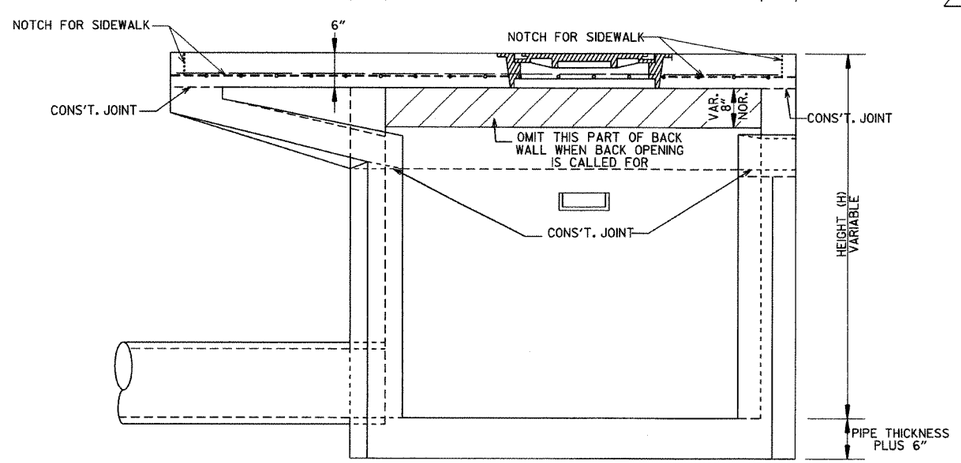
STANDARD DRAWING FPC-9E



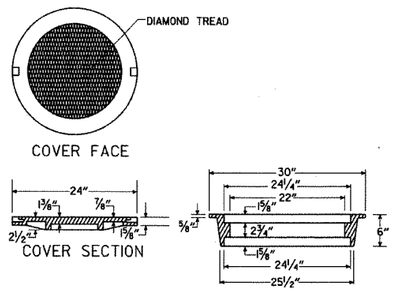
PLAN - W/SINGLE EXTENSION

NOTE: FOR DOUBLE EXTENSION USE SINGLE ON BOTH SIDES.

FRONT ELEVATION



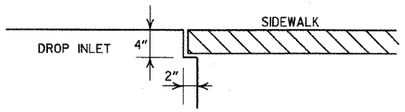
SECTION C-C



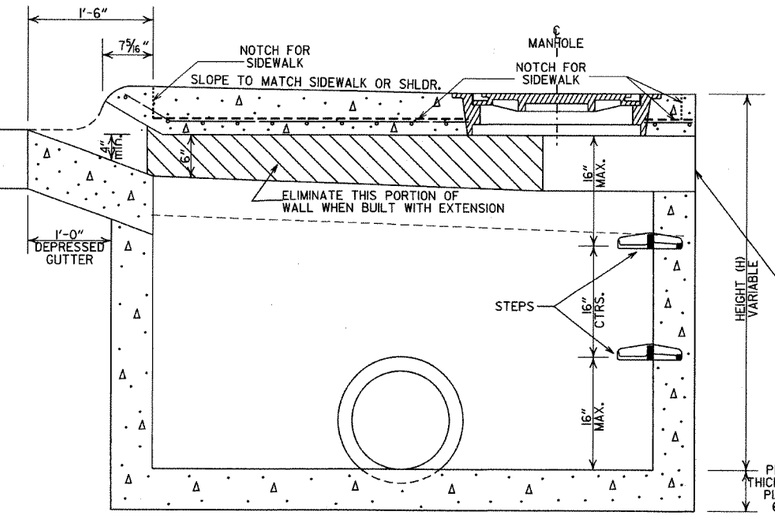
APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER

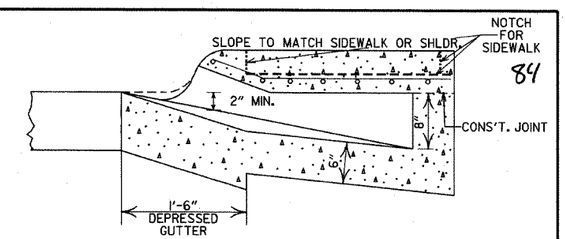
1. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
2. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
3. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.



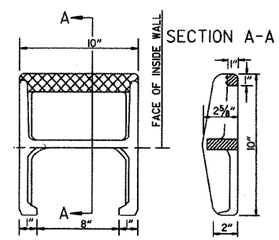
DETAIL OF NOTCH FOR SIDEWALKS



SECTION A-A



SECTION B-B

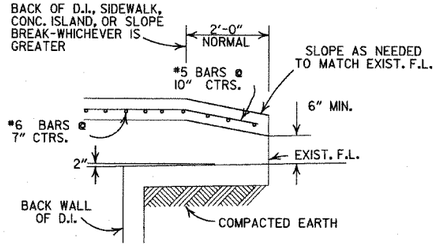


APPROX. WEIGHT = 11 LBS. (CAST IRON)

PLAN

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

DETAIL OF STEP FOR DROP INLET



BACK OPENING

WHEN OPENING IN BACK IS CALLED FOR ON PLANS EXTEND OPENING AS SHOWN IN DETAIL. PAYMENT TO BE INCLUDED IN PRICE BID FOR DROP INLET (TYPE MO).

GENERAL NOTES:

1. ALL EXPOSED CORNERS TO HAVE ¾" CHAMFER.
2. STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER OR AS DIRECTED BY THE ENGINEER.
3. ALL REINFORCING BARS SHALL BE GRADE 60 AND HAVE MIN. 1½" COVER.
4. DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
5. 4" DIA. COLUMNS SPACED AT MAX. 4'-0" INTERVALS SHALL BE INSTALLED ALONG INLET AND EXTENSION TO SUPPORT TOP.
6. BASE AND INLET WALLS SHALL BE CAST MONOLITHICALLY.
7. THE THROAT SHALL BE CAST INTEGRALLY WITH THE GUTTER.
8. PAYMENT FOR CURB AND/OR CURB AND GUTTER WITHIN THE LIMITS OF DROP INLETS AND DROP INLET EXTENSIONS SHALL BE CONSIDERED INCLUDED IN PAYMENT MADE FOR DROP INLETS AND/OR DROP INLET EXTENSIONS.
9. PIPES MAY ENTER DROP INLET FROM ANY ANGLE OR ELEVATION AS MAY BE APPROVED BY THE ENGINEER.
10. APPROPRIATE SIZE TYPE C DROP INLETS MAY BE SUBSTITUTED FOR TYPE MO DROP INLETS AS APPROVED BY THE ENGINEER. PAYMENT TO BE AS DROP INLET (TYPE MO).
11. DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
12. 4"x2" NOTCH SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
13. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

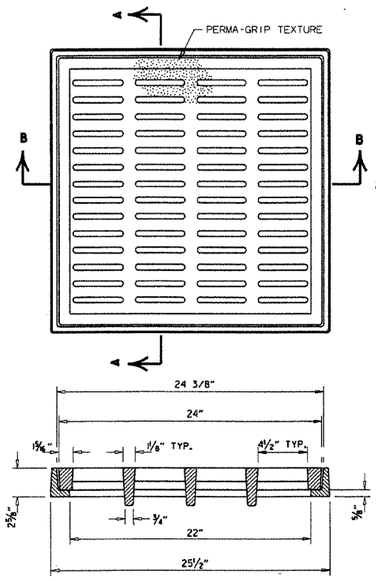
DIA. OF D.I.	DIA. OF OUTLET PIPE	MINIMUM WALL THICKNESS CAST IN PLACE	MINIMUM WALL THICKNESS PRECAST
4' I.D.	12" THRU 27"	6"	5"
5' I.D.	30" THRU 42"	8"	6"
6' I.D.	48" THRU 54"	8"	7"

DATE	REVISIONS	DATE FILMED
8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01	ADDED NOTE 13	
1-12-00	REVISED HEAVY DUTY RING & COVER	
5-13-99	ADDED NOTCH DETAIL FOR SIDEWALKS	
7-02-98	REP. NOTE 8, REM. PLAN DET., REV. PICTURE FOR NEW RING & COVER, ADDED HEAVY DUTY RING & COVER AND DETAIL OF STEP FOR DROP INLET	
4-26-96	ADDED NOTE 11 ADJ. OPENING DIMENSION	
10-12-95	CORRECTED *6 BAR SPACING	
7-20-95	CORRECTED DIAMETER OF D.I. IN BOX	
4-7-95	TYPE C TO MO (OPEN BACK DETAIL)	
11-3-94	REVISED GENERAL NOTES	11-3-94
4-1-93	REV. BACK OPEN DETAIL & NOTE	4-1-93
8-15-91	REVISED NOTES 11,12 & ADDED BK.OPEN DETAIL	8-15-91
11-30-89	ADDED NOTE NO. 12	11-30-89
5-23-89	ADDED NOTE 8 & MINIMUM WALL THICKNESS	5-23-89
7-15-88	ADDED EXTEND NOTE TO SECTION A-A	7-15-88
1-14-87	MODIFIED WALL THICKNESS	1-14-87
6-12-87	ISSUED	6-12-87

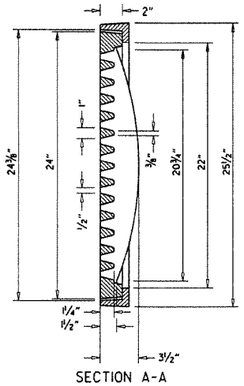
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLET (TYPE MO)

STANDARD DRAWING FPC-9M



SECTION B-B

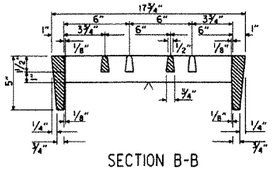


SECTION A-A

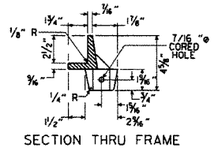
DETAILS OF PEDESTRIAN GRATE AND FRAME

GENERAL NOTES (PEDESTRIAN GRATE & FRAME)

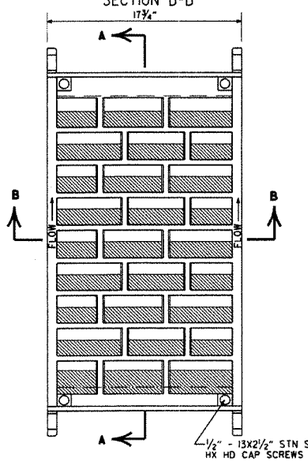
1. THE PEDESTRIAN GRATE SHALL BE ORIENTED IN THE TOP OF THE DROP INLET SO THAT THE ½" OPENINGS ARE PERPENDICULAR TO THE PATH OF PEDESTRIAN TRAVEL.
2. THE PEDESTRIAN GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105, CLASS 35B, & AASHTO M 306.
3. THE GRATE AND FRAME SHALL NOT BE PAINTED.
4. THE GRATE AND FRAME SHALL BE INSTALLED IN THE DROP INLET IN THE ASSEMBLED POSITION.
5. THE APPROXIMATE WEIGHT OF THE GRATE AND FRAME SHALL BE 211 LBS.
6. THE MINIMUM WATERWAY OPENING SHALL BE 122 SQ. IN.

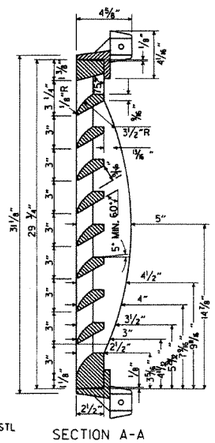


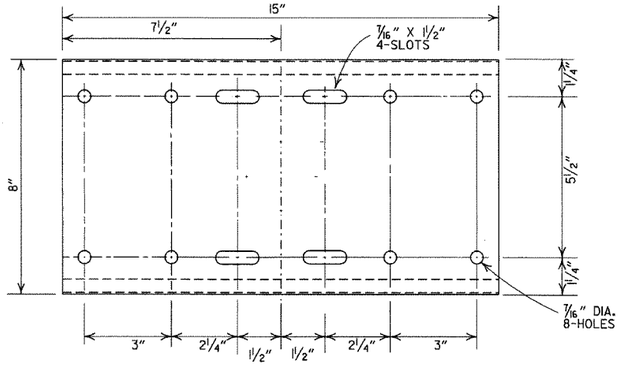
SECTION B-B



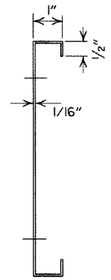
SECTION THRU FRAME

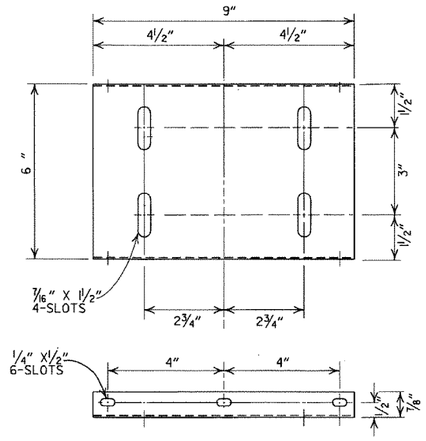



4 5/8"
1/8"
4 1/4"
3 1/4"
1/8" R
3/8"
3 1/2" R
1/16"
3"
3"
3

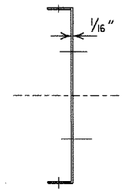


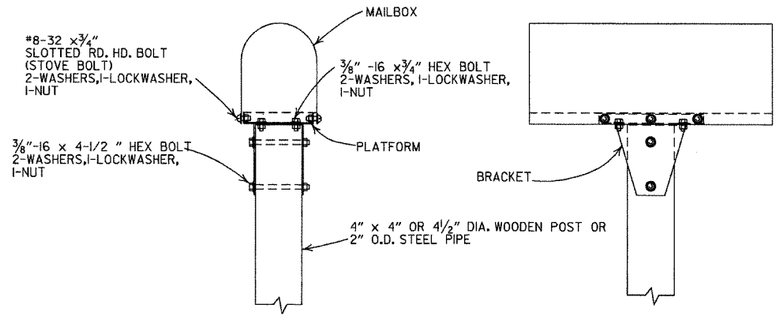
SHELF



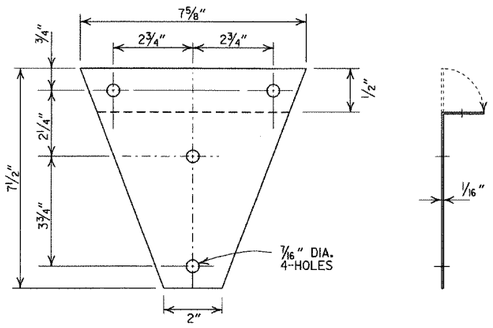


PLATFORM





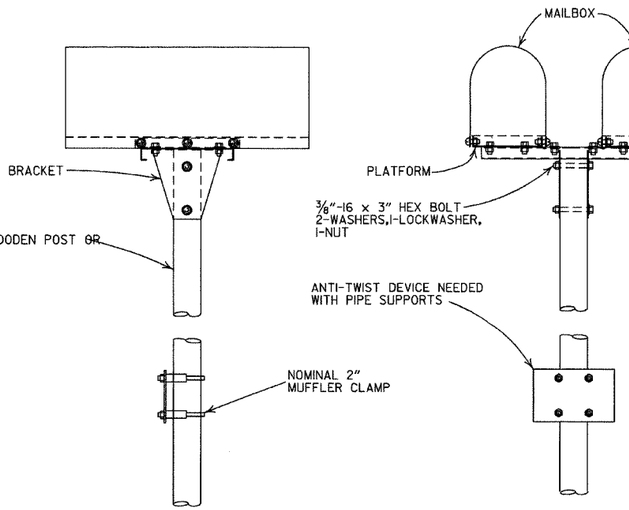
SINGLE INSTALLATION



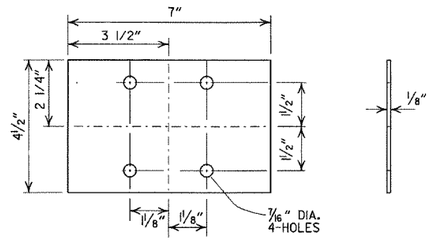
BRACKET

GENERAL NOTES

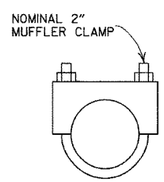
1. MAILBOX POSTS MAY BE WOOD OR METAL. WOOD POSTS SHALL BE PRESSURE TREATED FOR GROUND CONTACT IN ACCORDANCE WITH SECTION 637.02 OF THE STANDARD SPECIFICATIONS.
2. ANTI-TWIST PLATES SHALL BE USED ONLY ON METAL POSTS.
3. MAILBOX SHELF, BRACKET & PLATFORM SHALL BE GALVANIZED OR PAINTED STEEL, HOWEVER TREATED WOOD MAY BE USED WITH WOODEN POSTS. THE WOODEN SHELF, BRACKET & PLATFORM SHALL BE A MINIMUM OF ¾" THICK AND SHALL BE ASSEMBLED WITH BOLTS OF THE APPROPRIATE LENGTH WITH SIX 8 X¾" FLATHEAD WOOD SCREWS USED TO ATTACH THE MAILBOX TO THE PLATFORM.
4. THE MAILBOX SHELF AND PLATFORM THAT IS SHOWN IS FOR STANDARD SIZE MAILBOXES. THE SHELF AND PLATFORM SIZE SHALL BE MODIFIED TO FIT MAILBOXES OF A DIFFERENT SIZE.
5. METAL PIPE FOR MAILBOX SUPPORT SHALL BE 2" OUTSIDE DIAMETER STEEL WITH A WALL THICKNESS OF 0.145" AND A WEIGHT OF 2.72 LBS PER FT. OUTSIDE DIAMETER AND WEIGHT SHALL HAVE A TOLERANCE OF +/- 5% ACCORDING TO AASHTO M 181.
6. MAILBOX SUPPORT SYSTEM DIFFERING FROM THOSE SHOWN MAY BE USED, PROVIDED THEY ARE ON THE AHTD QUALIFIED PRODUCTS LIST FOR MAILBOX SUPPORTS.



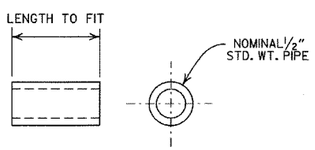
DOUBLE INSTALLATION



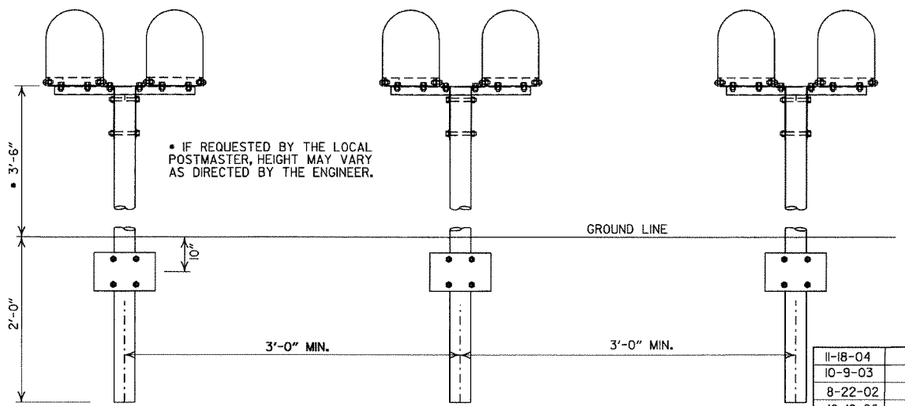
ANTI-TWIST PLATE



CLAMP



SPACER



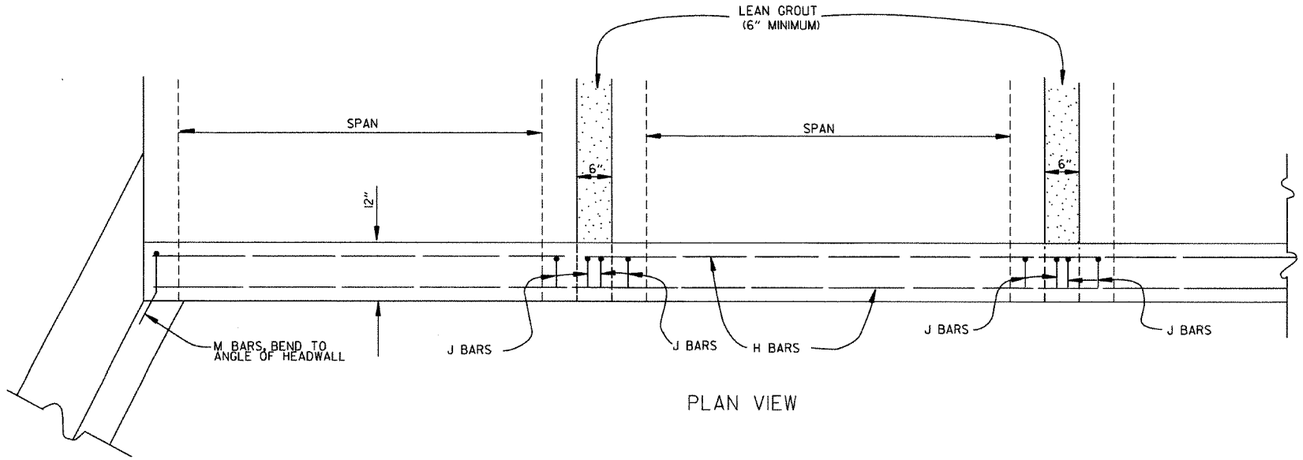
SPACING FOR MULTIPLE POST INSTALLATION

DATE	FILMED	REVISION
11-18-04		REVISED NOTES
10-9-03		REVISED NOTE 6
8-22-02		REVISED NOTE 6
10-18-96		CORRECTED AASHTO
10-1-92		CORRECTED SPELLING
9-26-91		NEW PHONE NUMBER
8-15-91		ADDED NOTE
11-30-89		ADJUSTED HEIGHT & ADDED NOTE
2-16-89		DELETED SLOTS FROM SHELF & PLTF
11-17-88	10-1-92	ADJUSTED DIMENSIONS OF STEEL POSTS
7-15-88	20-7-15-88	ISSUED

ARKANSAS STATE HIGHWAY COMMISSION

MAILBOX DETAILS

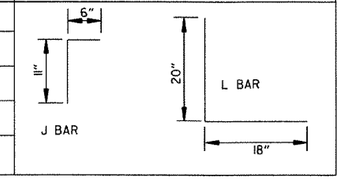
STANDARD DRAWING MB-1



PLAN VIEW

BAR LIST

BAR	NO.	SIZE	LENGTH	BAR BENDING DIAGRAM
H	2	#4	•	
I	•	#4	•	
J	•	#4	1'-5"	
L	•	#4	3'-2"	
M	•	#4	1'-8"	



• NOTE: LENGTH AND NUMBER OF BARS VARIES WITH SIZE OF CULVERT

GENERAL NOTES

WINGS, CURTAIN WALLS AND APRONS SHALL BE TIED TO THE PRECAST CULVERT SECTION BY CASTING BARS IN CULVERT END SECTIONS AS SHOWN OR BY DOWELING AND GROUTING. J BARS AND M BARS SHALL BE EMBEDDED A MINIMUM OF 10" IN PRECAST BOX.

WINGS, FOOTINGS, APRONS AND CURTAIN WALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE WING DRAWING. STEEL AND CONCRETE QUANTITIES WILL BE ADJUSTED TO FIT THE IN-PLACE WIDTH & HEIGHT OF THE PRECAST CONCRETE BOX CULVERTS.

ALL EXPOSED CORNERS TO HAVE ¾" CHAMFERS.

WINGWALLS AND FOOTINGS MAY BE ADJUSTED IN THE FIELD AS DIRECTED BY THE ENGINEER.

ALL CONCRETE, REINFORCING STEEL, LEAN GROUT, MEMBRANE WATERPROOFING, DRAINAGE FILL MATERIAL, GEOTEXTILE FILTER FABRIC, LABOR, MATERIALS AND EQUIPMENT REQUIRED FOR INSTALLING PRECAST BOX CULVERTS WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID FOR THE ITEMS AS SPECIFIED IN SECTION 607 OF THE STANDARD SPECIFICATIONS.

LEAN GROUT SHALL CONSIST OF A SAND CEMENT MIXTURE MEETING THE FOLLOWING REQUIREMENTS:
PORTLAND CEMENT SHALL BE TYPE I AND SHALL MEET THE REQUIREMENTS OF AASHTO M 85.
SAND SHALL MEET THE REQUIREMENTS OF FINE AGGREGATE AS SPECIFIED IN SECTION 802.02 OF THE STANDARD SPECIFICATIONS.
THE SAND CEMENT MIXTURE SHALL CONSIST OF NOT LESS THAN 1.5 SACKS OF PORTLAND CEMENT PER TON OF MATERIAL MIXTURE.
THE MIXTURE SHALL CONTAIN SUFFICIENT WATER TO HYDRATE THE CEMENTS. THE SAND CEMENT MIXTURE SHALL BE PLACED IN MAXIMUM 8 INCH THICK LIFTS, LOOSE MEASURE, AND THOROUGHLY RODDED AND TAMPED AROUND BOX TO THOROUGHLY FILL ALL VOIDS.

MEMBRANE WATERPROOFING CONFORMING TO THE REQUIREMENTS OF SECTION 815 OF THE STANDARD SPECIFICATIONS SHALL BE APPLIED TO ALL BOX CULVERT JOINTS.

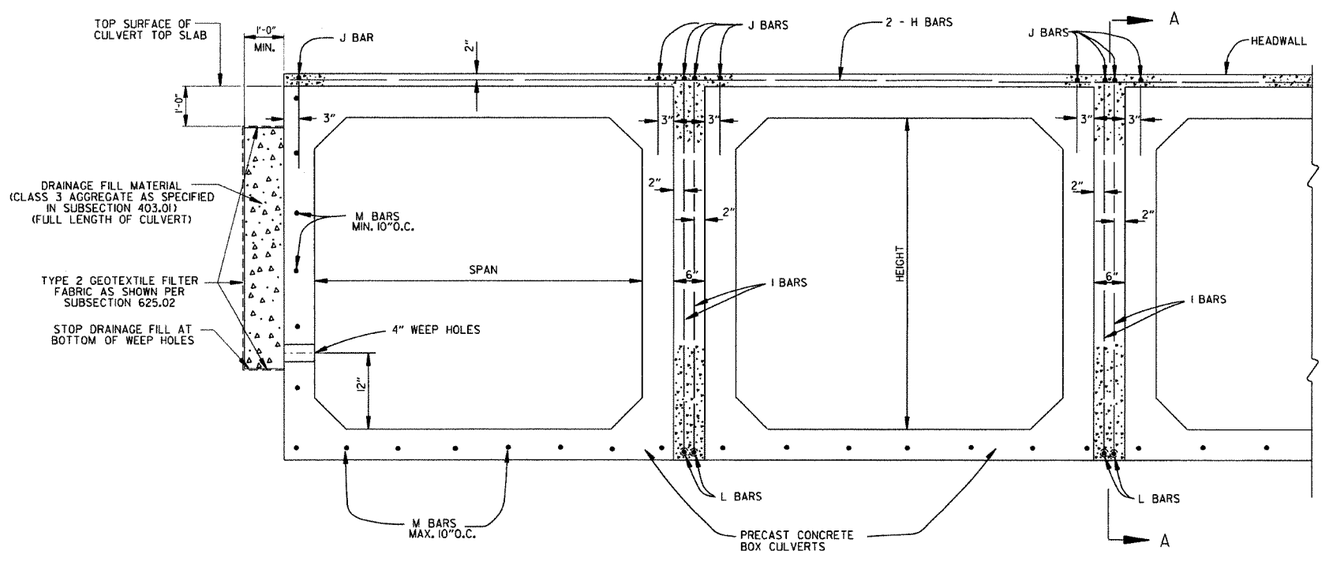
THE MEMBRANE WATERPROOFING WILL BE REQUIRED ON THE TOP EXTERNAL JOINT AND SHALL EXTEND 1 FOOT DOWN THE SIDES OF THE CULVERT.

IN OUTER BARRELS, ONE WEEP HOLE IS REQUIRED IN EXTERIOR WALLS OF EACH PRECAST CULVERT SECTION. WEEP HOLES SHALL HAVE A MAXIMUM HORIZONTAL SPACING OF 10'-0" IN THE ASSEMBLED CULVERT AND SHALL BE SPACED TO CLEAR ALL REINFORCING STEEL. THE DRAIN OPENING SHALL BE 4" DIAMETER AND SHALL BE PLACED 12" ABOVE THE TOP OF THE BOTTOM SLAB.

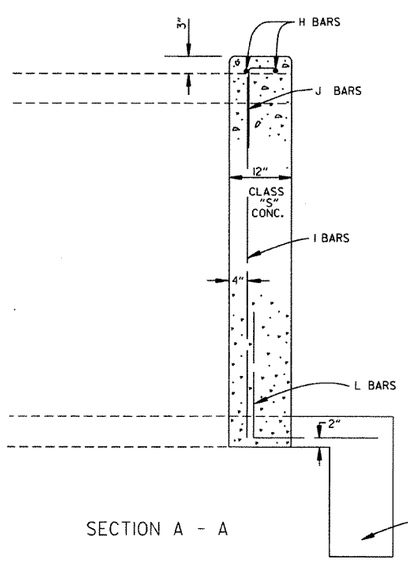
DRAINAGE FILL MATERIAL WITH GEOTEXTILE FABRIC IS REQUIRED AT THE EXTERIOR WALLS OF THE ASSEMBLED CULVERT. SEE DETAILS ON THIS DRAWING.

MINIMUM WIDTH SHALL BE 12" (6" ON EACH SIDE OF JOINT). ON MULTIPLE BARREL CULVERTS, MEMBRANE WATERPROOFING SHALL BE APPLIED TO EACH BARREL AS DESCRIBED ABOVE.

WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE, AT NO ADDITIONAL COST TO THE DEPARTMENT, FLOWABLE SELECT MATERIAL CONFORMING TO SECTION 206 OF THE STANDARD SPECIFICATIONS IN LIEU OF LEAN GROUT.



END VIEW



SECTION A - A

DATE	REVISION	DATE FILMED
12-15-11	ADDED NOTE & DTLS FOR WEEP HOLE AND DRAINAGE FILL	
10-15-09	ADDED GENERAL NOTE	
11-10-05	REVISED SPACING OF "M" BARS	
4-10-03	REVISED GENERAL NOTES	
10-18-96	CORRECTED AASHTO REF.	
10-1-92	ADDED NOTE FOR MEMBRANE WATERPROOFING	
8-15-91	ADDED NOTE FOR LEAN GROUT	
11- 8-90	REVISED FOR 1991 SPECS	
11-30-89	ISSUED; JABE	

ARKANSAS STATE HIGHWAY COMMISSION

PRECAST CONCRETE BOX CULVERTS

STANDARD DRAWING PBC-1

REINFORCED CONCRETE ARCH PIPE DIMENSIONS

EQUIV. DIA.	SPAN		RISE	
	AASHTO M 206	AHTD NOMINAL	AASHTO M 206	AHTD NOMINAL
INCHES	INCHES			
15	18	18	11	11
18	22	22	13½	14
21	26	26	15½	16
24	28½	29	18	18
30	36¼	36	22½	23
36	43⅜	44	26⅝	27
42	51⅛	51	31⅝	31
48	58½	59	36	36
54	65	65	40	40
60	73	73	45	45
72	88	88	54	54
84	102	102	62	62
90	115	115	72	72
96	122	122	77½	77
108	138	138	87⅛	87
120	154	154	96⅞	97
132	168¾	169	106½	107

THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PERCENT FROM THE VALUES SPECIFIED BY AASHTO M206.

REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE DIMENSIONS

EQUIV. DIA.	AASHTO M 207	
	SPAN	RISE
INCHES	INCHES	
18	23	14
24	30	19
27	34	22
30	38	24
33	42	27
36	45	29
39	49	32
42	53	34
48	60	38
54	68	43
60	76	48
66	83	53
72	91	58
78	98	63
84	106	68

THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PERCENT FROM THE VALUES SPECIFIED BY AASHTO M207.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. PLACE AND COMPACT THE HAUNCH AREA UP TO THE MIDDLE OF THE PIPE.
5. COMPLETE BACKFILL ACCORDING TO SUBSECTION 606.03.(f)(1).

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

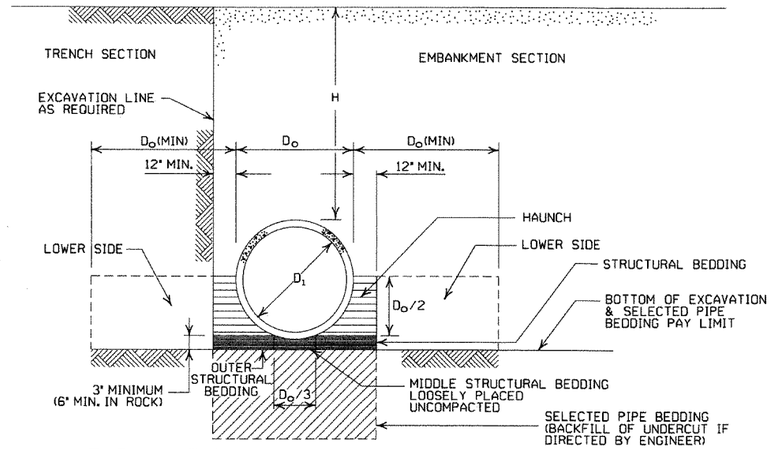
- LEGEND -

D_i = NORMAL INSIDE DIAMETER OF PIPE
D_o = OUTSIDE DIAMETER OF PIPE
H = FILL COVER HEIGHT OVER PIPE (FEET)
MIN. = MINIMUM
▨ = UNDISTURBED SOIL

INSTALLATION TYPE	MATERIAL REQUIREMENTS FOR HAUNCH AND STRUCTURAL BEDDING
TYPE 1	AGGREGATE BASE COURSE (CLASS 5 OR CLASS 7)
TYPE 2	SELECTED MATERIALS (CLASS SM-1, SM-2, OR SM-4) OR TYPE 1 INSTALLATION MATERIAL*
TYPE 3**	AASHTO CLASSIFICATION A-1 THRU A-6 SOIL OR TYPE 1 OR 2 INSTALLATION MATERIAL

*SM-3 WILL NOT BE ALLOWED.

**MATERIALS SHALL NOT INCLUDE ORGANIC MATERIALS OR STONES LARGER THAN 3 INCHES.



EMBANKMENT AND TRENCH INSTALLATIONS

1. MATERIAL IN THE HAUNCH AND OUTER STRUCTURAL BEDDING SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.
2. FOR TRENCHES WITH WALLS OF NATURAL SOIL, THE DENSITY OF THE SOIL IN THE LOWER SIDE ZONE SHALL BE AS FIRM AS THE 95% DENSITY REQUIRED FOR THE HAUNCH. IF THE EXISTING SOIL DOES NOT MEET THIS CRITERIA, IT SHALL BE REMOVED AND RECOMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OF MATERIAL USED.
3. FOR EMBANKMENTS, THE MATERIAL IN THE LOWER SIDE ZONE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

GENERAL NOTES

1. CONCRETE PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2003 EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS. UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER TO THE STANDARD CONSTRUCTION SPECIFICATIONS.
2. CONCRETE PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. ALL PIPE SHALL CONFORM TO SECTION 606. CIRCULAR R.C. PIPE CULVERTS SHALL CONFORM TO AASHTO M170. R.C. ARCH PIPE CULVERTS SHALL CONFORM TO AASHTO M206 AND HORIZONTAL ELLIPTICAL PIPE CULVERTS SHALL CONFORM TO AASHTO M207.
4. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
5. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PRACTICABLE FOR WORKING CONDITIONS.
6. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE. REFER TO STD. DWG. FES-2 FOR MINIMUM CLEARANCE WHERE FLARED END SECTIONS ARE USED.
7. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
8. NOT MORE THAN ONE LIFTING HOLE MAY BE PROVIDED IN CONCRETE PIPE TO FACILITATE HANDLING. HOLE MAY BE CAST IN PLACE, CUT INTO THE FRESH CONCRETE AFTER FORMS ARE REMOVED, OR DRILLED. THE HOLE SHALL NOT BE MORE THAN TWO INCHES IN DIAMETER OR TWO INCHES SQUARE. CUTTING OR DISPLACEMENT OF REINFORCEMENT WILL NOT BE PERMITTED. SPALLED AREAS AROUND THE HOLE SHALL BE REPAIRED IN A WORKMANLIKE MANNER. LIFTING HOLE SHALL BE FILLED WITH MORTAR, CONCRETE, OR OTHER METHOD AS APPROVED BY THE ENGINEER.
9. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
10. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS THE HAUNCH), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."

MINIMUM HEIGHT OF FILL "H" OVER CIRCULAR R.C. PIPE CULVERTS

	CLASS OF PIPE			
	CLASS III		CLASS IV	CLASS V
INSTALLATION TYPE	TYPE 1 OR 2	TYPE 3	ALL	ALL
PIPE ID (IN.)	FEET			
12-15	2	2.5	2	1
18-24	2.5	3	2	1
27-33	3	4	2	1
36-42	3.5	5	2	1
48	4.5	5.5	2	1
54-60	5	7	2	1
66-78	6	8	2	1
84-108	7.5	8	2	1

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

MAXIMUM HEIGHT OF FILL "H" OVER CIRCULAR R.C. PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE		
	CLASS III	CLASS IV	CLASS V
	FEET		
TYPE 1	21	32	50
TYPE 2	16	25	39
TYPE 3	12	20	30

NOTE: IF FILL HEIGHT EXCEEDS 50 FEET, A SPECIAL DESIGN CONCRETE PIPE WILL BE REQUIRED USING TYPE 1 INSTALLATION.

MINIMUM HEIGHT OF FILL "H" OVER R.C. ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE	
	CLASS III	CLASS IV
	FEET	
TYPE 2 OR TYPE 3	2.5	1.5

NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

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

MAXIMUM HEIGHT OF FILL "H" OVER R.C. ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE	
	CLASS III	CLASS IV
	FEET	
TYPE 2	13	21
TYPE 3	10	16

NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

DATE	REVISION	DATE FILMED
12-15-11	REVISED FOR LRFD DESIGN SPECIFICATIONS	
5-18-00	REVISED TYPE 3 BEDDING & ADDED NOTE	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCC-1

CORRUGATED STEEL PIPE (ROUND)

PIPE DIAMETER (INCHES)	① MINUMUM COVER TOP OF PIPE TO TOP OF GROUND "H" (FEET)	MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET)				
		METAL THICKNESS (INCHES)				
		0.064	0.079	0.109	0.138	0.168
2⅔ INCH BY ½ INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM						
12	1	84	91			
15	1	67	73			
18	1	56	61			
24	1	42	46	59		
30	2	34	36	47		
36	2		30	39	41	
42	2		43	67	70	73
48	2		37	58	61	64
② 3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION RIVETED, WELDED, BOLTED, OR HELICAL LOCK-SEAM						
36	1	48	60	88	111	118
42	1	41	51	72	90	102
48	1	36	45	64	77	85
54	2	32	40	59	71	79
60	2	29	36	53	64	71
66	2	26	33	47	58	64
72	2	24	30	44	53	59
78	2		28	41	49	54
84	2		26	38	45	51
90	2		24	35	43	45
96	2		22	33	40	44
102	2			31	38	42
108	2			30	35	39
114	2			28	34	37
120	2			27	32	35

CORRUGATED ALUMINUM PIPE (ROUND)

PIPE DIAMETER (INCHES)	① MINUMUM COVER TOP OF PIPE TO TOP OF GROUND "H" (FEET)	MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET)				
		METAL THICKNESS IN INCHES				
		0.060	0.075	0.105	0.135	0.164
		2 ⅔ INCH BY ½ INCH CORRUGATION RIVETED OR HELICAL LOCK-SEAM				
12	1	45	45			
18	2	30	30	52		
24	2	22	22	39	41	
30	2		18	31	32	34
36	2.5		15	26	27	28
42	2			43	43	44
48	2			40	41	43
54	2			35	37	38
60	2				33	34
66	2					31
72	2					29

CORRUGATED METAL PIPE ARCHES

EQUIV. DIA. (INCHES)	PIPE DIMENSION SPAN X RISE (INCHES)	MINUMUM CORNER RADIUS (INCHES)	STEEL				ALUMINUM			
			MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)		MAX. HEIGHT OF FILL, "H" (FT.)	MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)		MAX. HEIGHT OF FILL, "H" (FT.)
				INSTALLATION		INSTALLATION		INSTALLATION		INSTALLATION
				TYPE 1		TYPE 1		TYPE 1		TYPE 1
			2 ⅔ INCH BY ½ INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM				2 ⅔ INCH BY ½ INCH CORRUGATION RIVETED OR HELICAL LOCK-SEAM			
15	17x13	3	0.064	2		15	0.060	2		15
18	21x15	3	0.064	2		15	0.060	2		15
21	24x18	3	0.064	2.25		15	0.060	2.25		15
24	28x20	3	0.064	2.5		15	0.075	2.5		15
30	35x24	3	0.079	3		12	0.075	3		12
36	42x29	3½	0.079	3		12	0.105	3		12
42	49x33	4	0.079	3		12	0.105	3		12
48	57x38	5	0.109	3		13	0.135	3		13
54	64x43	6	0.109	3		14	0.135	3		14
60	71x47	7	0.138	3		15	0.164	3		15
66	77x52	8	0.168	3		15				
72	83x57	9	0.168	3		15				
			② 3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM							
				INSTALLATION		INSTALLATION				
				TYPE 2	TYPE 1	TYPE 2	TYPE 1			
36	40x31	5	0.079	3	2	12	15			
42	46x36	6	0.079	3	2	13	15			
48	53x41	7	0.079	3	2	13	15			
54	60x46	8	0.079	3	2	13	15			
60	66x51	9	0.079	3	2	13	15			
66	73x55	12	0.079	3	2	15	15			
72	81x59	14	0.079	3	2	15	15			
78	87x63	14	0.079	3	2	15	15			
84	95x67	16	0.109	3	2	15	15			
90	103x71	16	0.109	3	2	15	15			
96	112x75	18	0.109	3	2	15	15			
102	117x79	18	0.109	3	2	15	15			
108	128x83	18	0.138	3	2	15	15			

CONSTRUCTION SEQUENCE

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

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

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

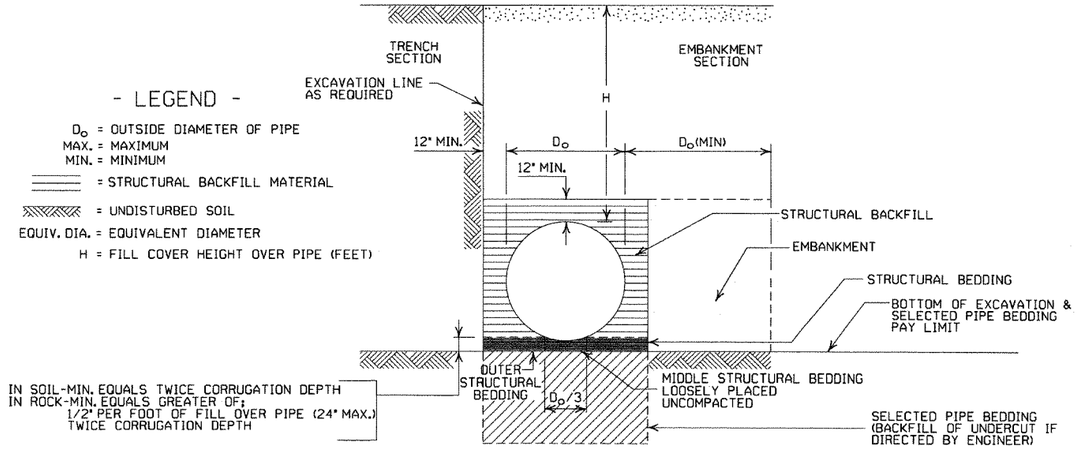
③ SM-3 WILL NOT BE ALLOWED.

EQUIVALENT METAL THICKNESSES AND GAUGES

METAL THICKNESS IN INCHES			GAUGE NUMBER
STEEL			
ZINC COATED	UNCOATED	ALUMINUM	
0.064	0.0598	0.060	16
0.079	0.0747	0.075	14
0.109	0.1046	0.105	12
0.138	0.1345	0.135	10
0.168	0.1644	0.164	8

- LEGEND -

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



EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.
2. INSTALLATION TYPE 1 OR 2 MAY BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE (ROUND).
3. INSTALAALTION TYPE 1 SHALL BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE ARCHES WITH 2⅔" X ½" CORRUGATION.
4. INSTALLATION TYPE 1 OR 2 MAY BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE ARCHES WITH 3" X 1" OR 5" X 1" CORRUGATION.

GENERAL NOTES

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

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

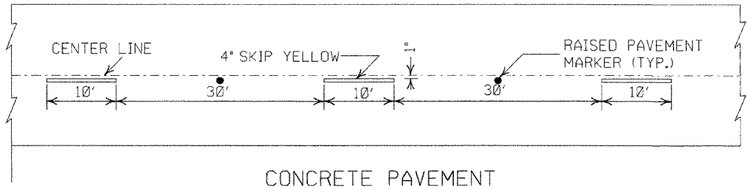
② WHERE THE STANDARD 2 2/3"x ½" CORRUGATION AND GAUGE IS SPECIFIED FOR A GIVEN DIAMETER, A PIPE OF THE SAME DIAMETER WITH A 3" x 1" OR 5" x 1" CORRUGATION MAY BE SUBSTITUTED, PROVIDING IT IS GAUGED FOR A FILL HEIGHT CONDITION EQUAL TO OR GREATER THAN THE MAXIMUM FILL HEIGHT CONDITION FOR THE SPECIFIED GAUGE AND CORRUGATION.

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

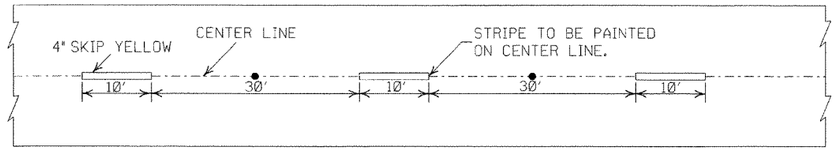
ARKANSAS STATE HIGHWAY COMMISSION

METAL PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCM-1

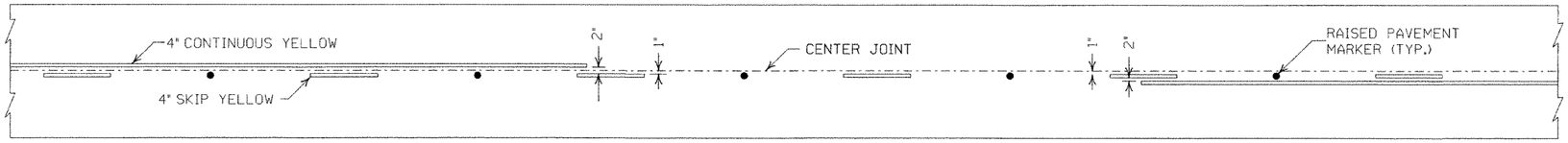


CONCRETE PAVEMENT

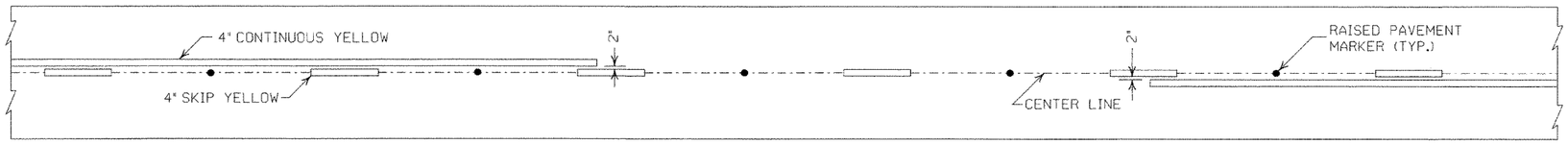


ASPHALT PAVEMENT

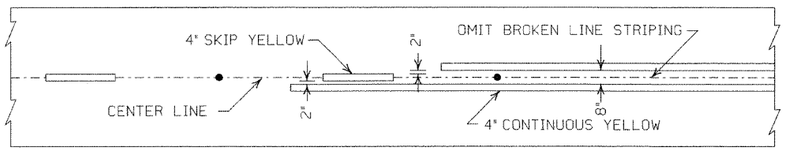
BROKEN LINE STRIPING



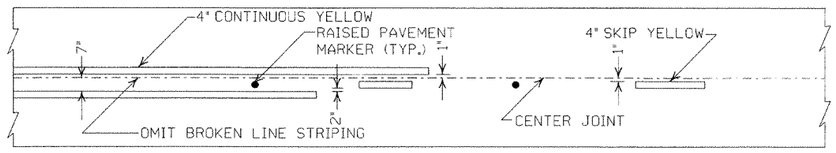
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

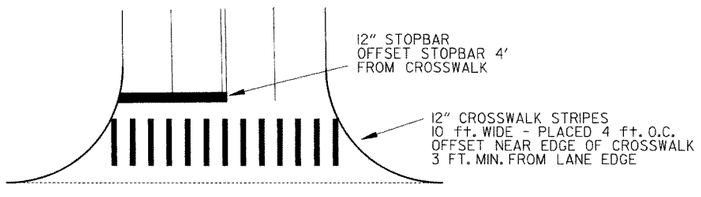


ASPHALT PAVEMENT



CONCRETE PAVEMENT

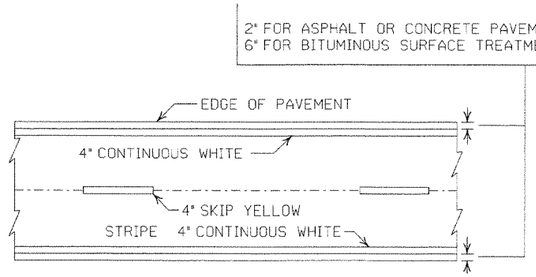
STRIPING AT ADJACENT NO PASSING LANES



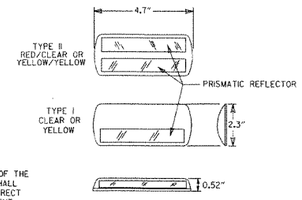
CROSSWALK AND STOPBAR DETAILS

NOTES:

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



PAVEMENT EDGE LINE MARKING



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

DETAIL OF STANDARD RAISED PAVEMENT MARKERS

GENERAL NOTES:

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

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

NOTE:

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

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

ARKANSAS STATE HIGHWAY COMMISSION

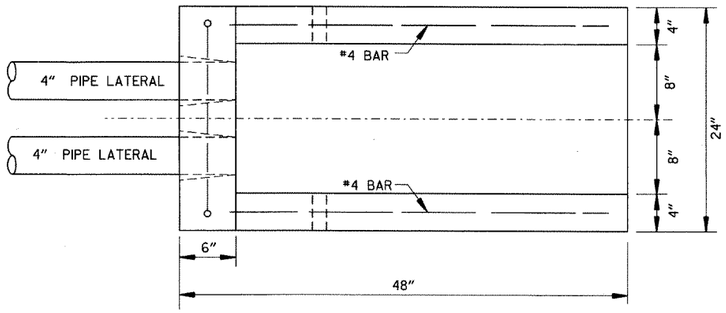
PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1

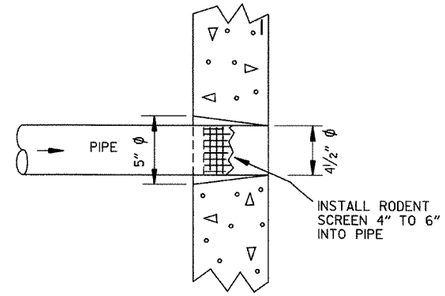
NOTE:
1. GRANULAR BACKFILL TO BE SUBSIDIARY TO PIPE UNDERDRAIN.

2. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THOROUGHLY COMPACTED EARTH AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.

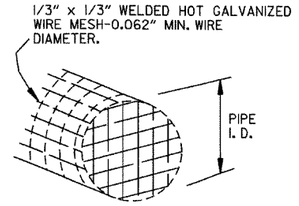
3. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC. LAP FABRIC 12" OR THE WIDTH OF THE TRENCH AT THE TOP.



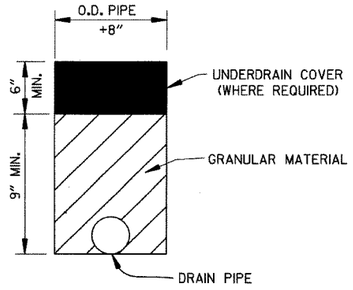
PLAN VIEW

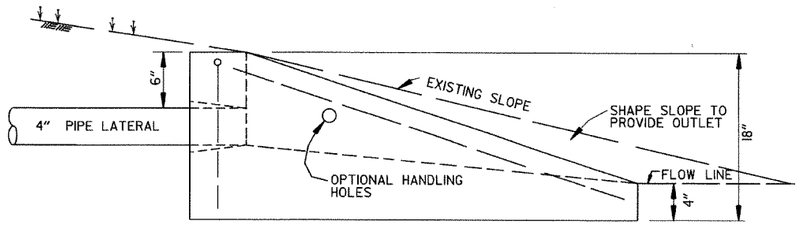


DETAIL OF HOLE FOR 4" PIPE

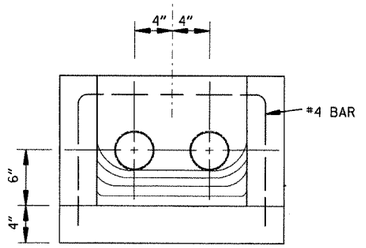


DETAIL OF RODENT SCREEN

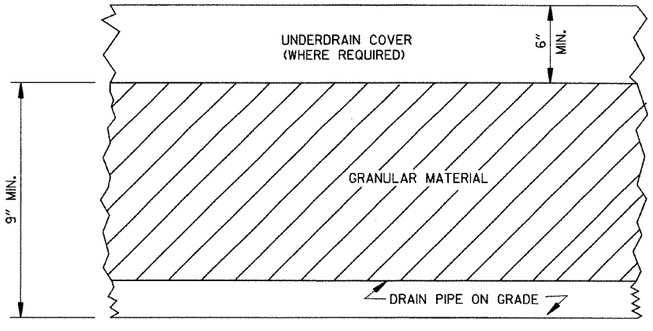




SIDE VIEW

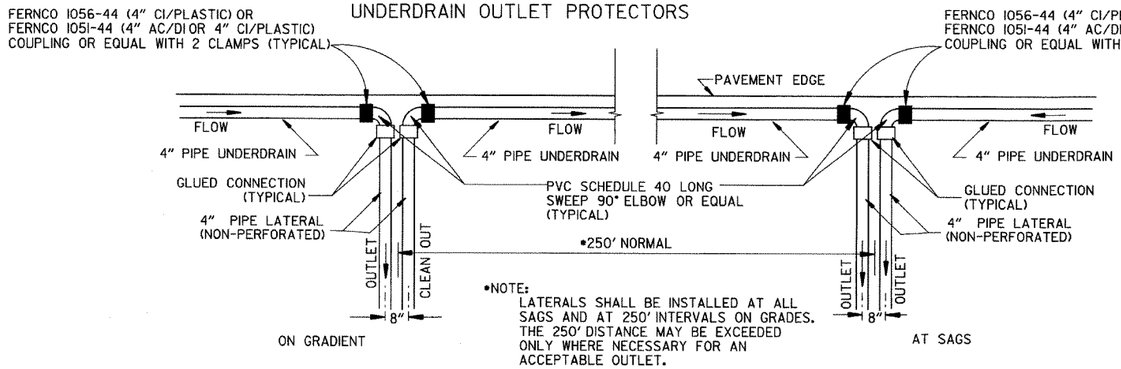


FRONT VIEW



DETAILS OF PIPE UNDERDRAIN

UNDERDRAIN OUTLET PROTECTORS



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 FILMED
4-10-03	REVISED NOTE 3	
1-12-00	REVISED DETAIL OF UNDERDRAIN LATERALS	
11-18-98	REVISED NOTE	
10-18-96	REVISED MIN. DEPTH & GEOTEXTILE FABRIC	
4-26-96	ADDED LATERAL NOTE; 5½" TO 5"	
11-22-95	REVISED LATERALS	
7-20-95	REVISED LATERALS & ADDED NOTE	
11- 3-94	REVISED FOR DUAL LATERALS	11- 3-94
10- 1-92	SUBSTITUTED GEOTEXTILE	10- 1-92
8-15-91	ADDED POLYEDTHYLENE PIPE	8-15-91
11- 8-90	DELETED ALTERNATE NOTE	11- 8-90
1-25-90	ADDED 4" SNAP ADAPTER	1-25-90
11-30-89	DEL. (SUBGRADE); ADDED (WHERE REQUIRED)	11-30-89
7-15-88	ISSUED P.L.M.	647-7-15-88

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF PIPE UNDERDRAIN

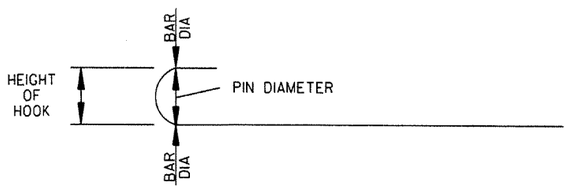
STANDARD DRAWING PU-1

7-20-95 INSTD.PUI

STEEL FABRICATION: REINFORCING STEEL FABRICATION SHALL CONFORM TO THE DIMENSIONS LISTED IN THE TABLE BELOW:

BAR SIZE	PIN DIAMETER	HOOK EXTENSION "K"
3	2¼"	4"
4	3 "	4½"
5	3¾"	5"
6	4½"	6"
7	5¼"	7"
8	6"	8"

IF THE OVERALL HEIGHT OF THE HOOK (SEE DIAGRAM BELOW) FOR A "b", "b1", "b2" or "b3" BENT BAR IS GREATER THAN THE CORRESPONDING TOP OR BOTTOM SLAB THICKNESS, LESS 2¾ INCHES, EACH BENT BAR SHALL BE REPLACED WITH ONE HOOKED BAR AND ONE STRAIGHT BAR, USING LENGTHS AS SHOWN IN THE TABLE BELOW. THE TWO BARS SHALL BE THE SAME DIAMETER AS, AND PLACED AT THE SAME SPACING AS, THE "b", "b1", "b2" OR "b3" BENT BARS THEY REPLACE.



NOTE: DIMENSIONS OF BARS ARE MEASURED OUT TO OUT OF BARS.

OVERALL HEIGHT OF HOOKED BAR DIAGRAM

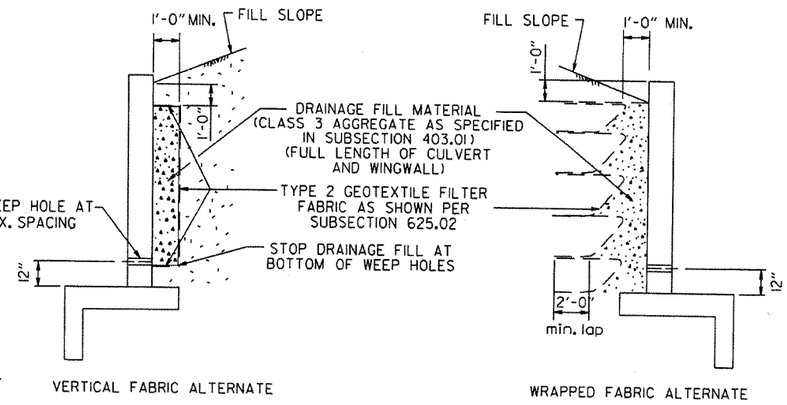
THE HOOKED BARS SHALL BE PLACED IN THE BOTTOM OF THE TOP SLAB AND THE TOP OF THE BOTTOM SLAB. THE STRAIGHT BARS SHALL BE PLACED IN THE TOP OF THE TOP SLAB AND THE BOTTOM OF THE BOTTOM SLAB. SEE TABLE BELOW FOR LENGTHS OF REPLACEMENT HOOKED AND STRAIGHT BARS.

FOR SKEWED CULVERTS, THE REPLACEMENT STRAIGHT BAR MAY HAVE TO BE CUT IN FIELD TO FIT.

REPLACEMENT BAR LENGTHS TABLE

BAR SIZE: "b", "b1", "b2" OR "b3"	LENGTH OF HOOKED BAR	LENGTH OF STRAIGHT BAR
#4	L + 1' - 0"	SEE "c" BAR LENGTH
#5	L + 1' - 2"	SEE "c" BAR LENGTH
#6	L + 1' - 4"	SEE "c" BAR LENGTH
#7	L + 1' - 8"	SEE "c" BAR LENGTH
#8	L + 1' - 10"	SEE "c" BAR LENGTH
#9	L + 2' - 6"	SEE "c" BAR LENGTH

L = "OW" - 3 INCHES



WINGWALL & CULVERT DRAINAGE DETAIL

REINFORCED CONCRETE BOX CULVERT GENERAL NOTES

CONCRETE SHALL BE CLASS S WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3500 PSI.

REINFORCING STEEL SHALL BE AASHTO M 31 OR M 53, GRADE 60.

CONSTRUCTION AND MATERIALS FOR WINGWALL & CULVERT DRAINAGE, INCLUDING WEEP HOLES AND GRANULAR MATERIAL, SHALL BE SUBSIDIARY TO THE BID ITEM, "CLASS S CONCRETE".

MEMBRANE WATERPROOFING SHALL CONFORM TO THE REQUIREMENTS OF SECTION 815 OF THE STANDARD SPECIFICATIONS.

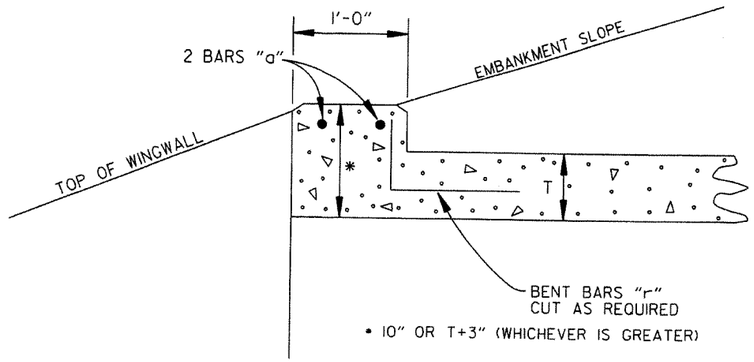
MEMBRANE WATERPROOFING SHALL BE APPLIED TO ALL CONSTRUCTION JOINTS IN THE TOP SLAB AND THE SIDEWALLS OF R.C. BOX CULVERTS AS DIRECTED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FOR THIS ITEM, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS BID FOR THE R.C. BOX CULVERT.

REINFORCING STEEL TOLERANCES: THE TOLERANCES FOR REINFORCING STEEL SHALL MEET THOSE LISTED IN "MANUAL OF STANDARD PRACTICE" PUBLISHED BY CONCRETE REINFORCING STEEL INSTITUTE (CRSI) EXCEPT THAT THE TOLERANCE FOR TRUSS BARS SUCH AS FIGURE 3 ON PAGE 7-4 OF THE CRSI MANUAL SHALL BE MINUS ZERO TO PLUS ½ INCH.

WEEP HOLES IN BOX CULVERT WALLS SHALL HAVE A MAXIMUM HORIZONTAL SPACING OF 10'-0" AND SHALL BE SPACED TO CLEAR ALL REINFORCING STEEL. THE DRAIN OPENING SHALL BE 4" DIAMETER AND SHALL BE PLACED 12" ABOVE THE TOP OF THE BOTTOM SLAB.

WEEP HOLES IN WINGWALLS SHALL HAVE A MAXIMUM HORIZONTAL SPACING OF 10'-0" AND SHALL BE SPACED TO CLEAR ALL REINFORCING STEEL. THERE SHALL BE A MINIMUM OF TWO (2) WEEP HOLES IN EACH WINGWALL. THE DRAIN OPENING SHALL BE 4" DIAMETER AND SHALL BE PLACED 12" ABOVE THE TOP OF THE WINGWALL FOOTING.

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



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

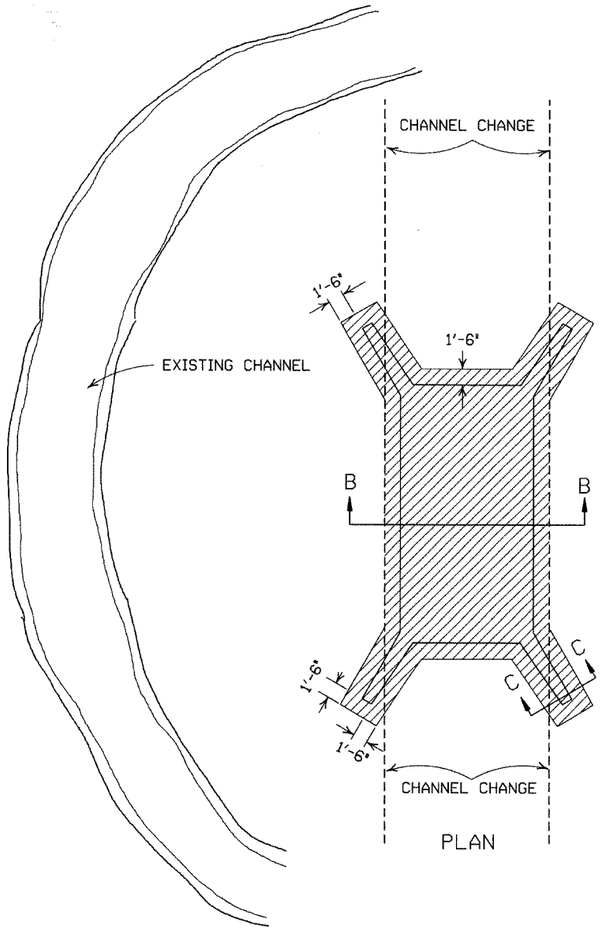
R.C. BOX CULVERT HEADWALL MODIFICATIONS

DATE	REVISION	DATE FILMED
7/26/12	REV. DRAINAGE FILL MATERIAL & DETAIL	
12/15/11	REQUIRE WEEP HOLES IN BOX CULVERT WALLS	
5-25-06	REV. GEN. NOTES AND DETAILS FOR WEEP HOLES; BAR DIAGRAM	
11-16-01	ADDED WINGWALL DRAINAGE DETAIL/EDITED GEN. NOTES	
10-18-96	REV. ASTM REF. TO AASHTO & ADDED BAR DIAGRAM	
10-12-95	MOVED SOLID SODDING DETAIL TO RCB-2	
6-2-94	ADDED SOLID SODDING PLAN DETAIL	
8-5-93	REVISED PIN DIAMETER TO SPECS.	
8-15-91	DRAWN AND ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

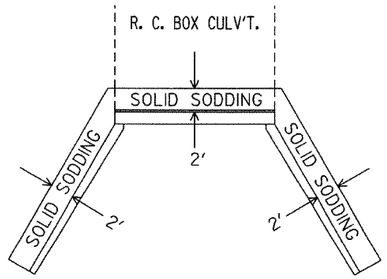
REINFORCED CONCRETE BOX CULVERT DETAILS

STANDARD DRAWING RCB-1



PLAN

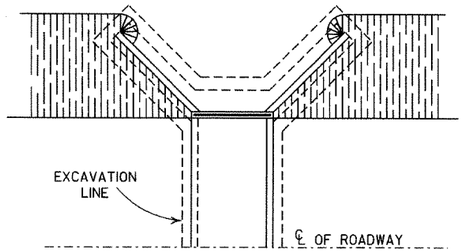
SOLID SODDING



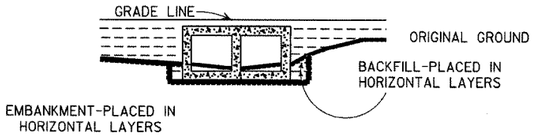
PLAN

PARTIAL SECTION SHOWING SOLID SODDING AT HEADWALLS AND WING WALLS

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

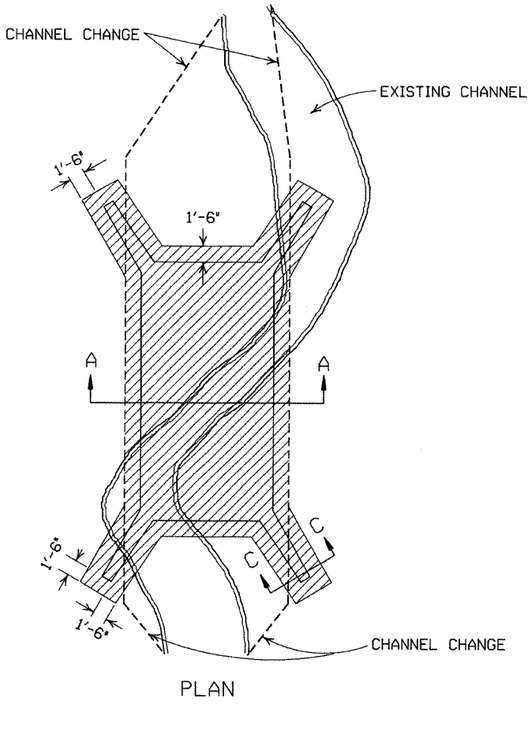


PLAN

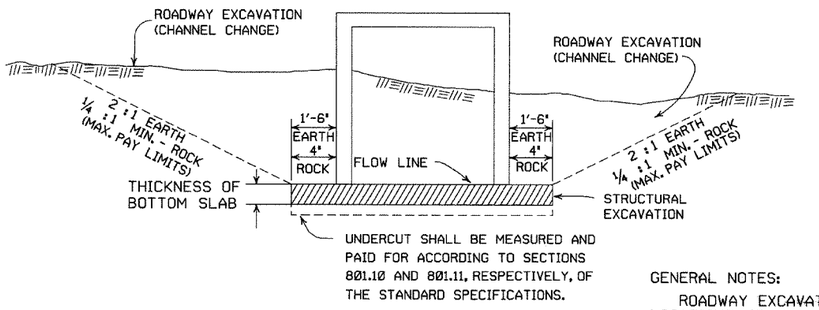


LONGITUDINAL SECTION

BACKFILL DETAILS FOR BOX CULVERT

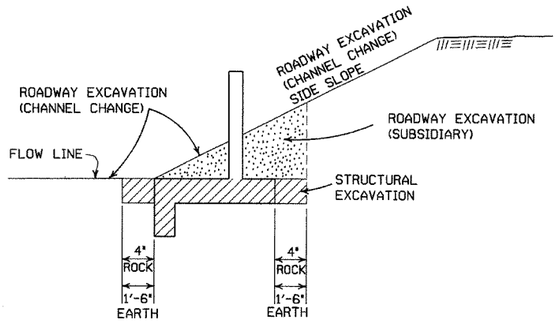


PLAN

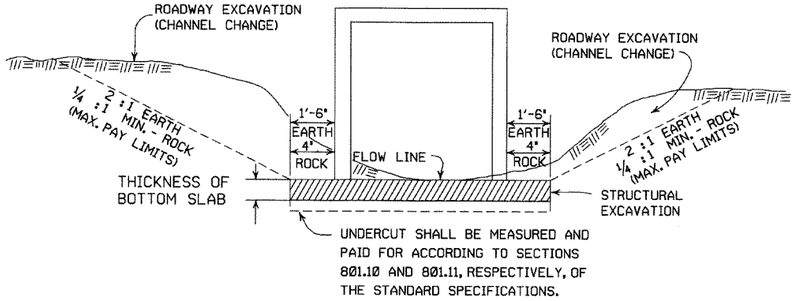


SECTION B-B

DETAILS FOR NEW CHANNELS



SECTION C-C



SECTION A-A

DETAILS THROUGH EXISTING CHANNELS

GENERAL NOTES:

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

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

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

DATE	REVISION	FILMED
11-20-03	REVISED SECTION A-A NOTE	
8-22-02	REVISED SECTION B-B NOTE	
10-12-95	COMBINED 1891B AND 1888A	
1-4-83	REVISED GENERAL NOTES	674-1-4-83
	AND ADDED MAXIMUM PAY	
	LIMIT NOTES.	
2-2-76	EXCAV. PAY LIMITS	917-2-2-76
10-2-72	REVISED AND REDRAWN	564-10-16-72

ARKANSAS STATE HIGHWAY COMMISSION

EXCAVATION PAY LIMITS, BACKFILL, & SOLID SODDING FOR BOX CULVERTS

STANDARD DRAWING RCB-2

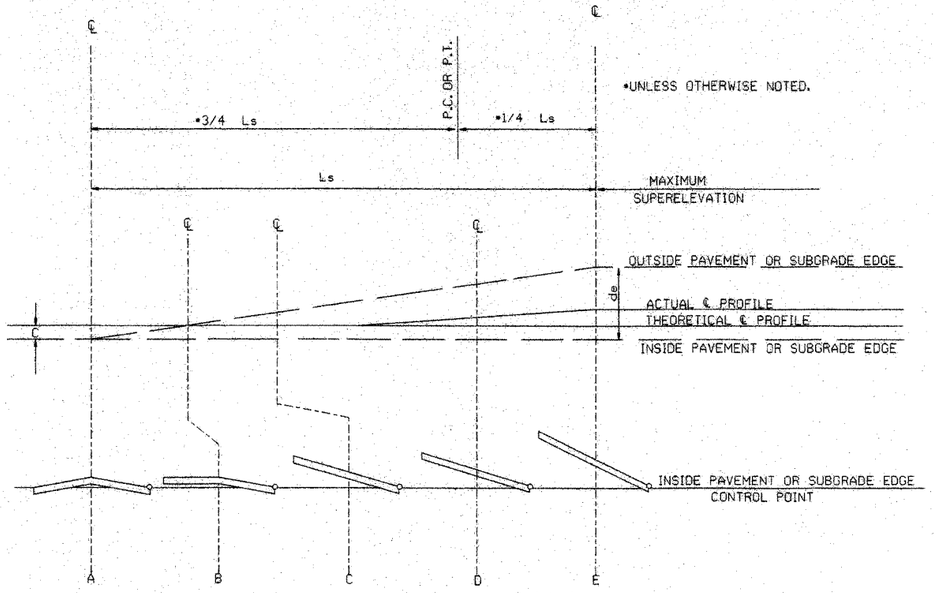
SUPERELEVATION TABLE FOR TWO - WAY TRAFFIC

DEGREE OF CURVE	30 MPH e	30 MPH Ls (FT) MINIMUM	30 MPH Ls (FT) DESIRABLE	40 MPH e	40 MPH Ls (FT) MINIMUM	40 MPH Ls (FT) DESIRABLE	50 MPH e	50 MPH Ls (FT) MINIMUM	50 MPH Ls (FT) DESIRABLE	55 MPH e	55 MPH Ls (FT) MINIMUM	55 MPH Ls (FT) DESIRABLE	60 MPH e	60 MPH Ls (FT) MINIMUM	60 MPH Ls (FT) DESIRABLE	70 MPH e	70 MPH Ls (FT) MINIMUM	70 MPH Ls (FT) DESIRABLE
0° 15′	N. C.			N. C.			N. C.			N. C.			N. C.			N. C.		
0° 30′	N. C.			N. C.			N. C.			N. C.			N. C.			N. C.		
0° 45′	N. C.			N. C.			R. C.			0.022			0.023			0.028		
1° 00′	N. C.			N. C.			0.021			0.026			0.030			0.037	275	300
1° 15′	N. C.			R. C.			0.026			0.032			0.037			0.046		
1° 30′	N. C.			0.021			0.031	200		0.037	225		0.043	250		0.054		
1° 45′	N. C.			0.025			0.036			0.043		300	0.049		300	0.062		
2° 00′	R. C.			0.028	175		0.040			0.048			0.055			0.070		
2° 15′	R. C.			0.031			0.045		250	0.053			0.061			0.078	300	350
2° 30′	0.021			0.034			0.049			0.058			0.067			0.085	315	
2° 45′	0.023			0.037			0.053			0.063			0.072			0.091	335	
3° 00′	0.025	150		0.040		200	0.057			0.067	230		0.077	260		0.096	350	400
3° 15′	0.027			0.043			0.061			0.072	245		0.082	275		0.098	360	
3° 30′	0.029			0.046			0.065	205		0.076	255		0.086	285		0.100	360	
3° 45′	0.031			0.049			0.069	215		0.080	265		0.090	295				
4° 00′	0.033			0.051			0.072	225		0.083	270		0.093	305	350			
4° 30′	0.037			0.056			0.078	240		0.087	280		0.096	315				
5° 00′	0.040			0.061			0.083	250		0.091	295		0.098	320				
5° 30′	0.043			0.066	185		0.088	260		0.094	300	350						
6° 00′	0.046			0.070	190		0.092	270		0.096	305							
6° 30′	0.050			0.074	200		0.095	280	300	0.100	315							
7° 00′	0.053			0.078	210		0.098	285										
7° 30′	0.056			0.081	215		0.099	290										
8° 00′	0.058			0.084	220		0.100	290										
8° 30′	0.061			0.087	225	250												
9° 00′	0.063			0.089	230													
10° 00′	0.068	160		0.094	235													
11° 00′	0.072	170		0.097	250													
12° 00′	0.076	175		0.099	250													
13° 00′	0.080	180		0.100	250													
14° 00′	0.083	190																
15° 00′	0.086	195																
16° 00′	0.089	200																
17° 00′	0.091	200																
18° 00′	0.093	205																
19° 00′	0.095	210																
20° 00′	0.097	215	250															
21° 00′	0.098	215																
22° 00′	0.099	215																
23° 00′	0.099	215																
24° 00′	0.100	220																

D MAX = 24° 45′ | D MAX = 13° 15′ | D MAX = 8° 15′ | D MAX = 6° 30′ | D MAX = 5° 15′ | D MAX = 3° 30′

ABBREVIATIONS

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



STANDARD METHOD WHEN SUPERELEVATION REVOLVES AROUND INNER SUBGRADE POINT OR INNER PAVEMENT EDGE

NOTE: MAINTAIN NORMAL CROWN ON INSIDE UNTIL SUPERELEVATION EXCEEDS 2C.

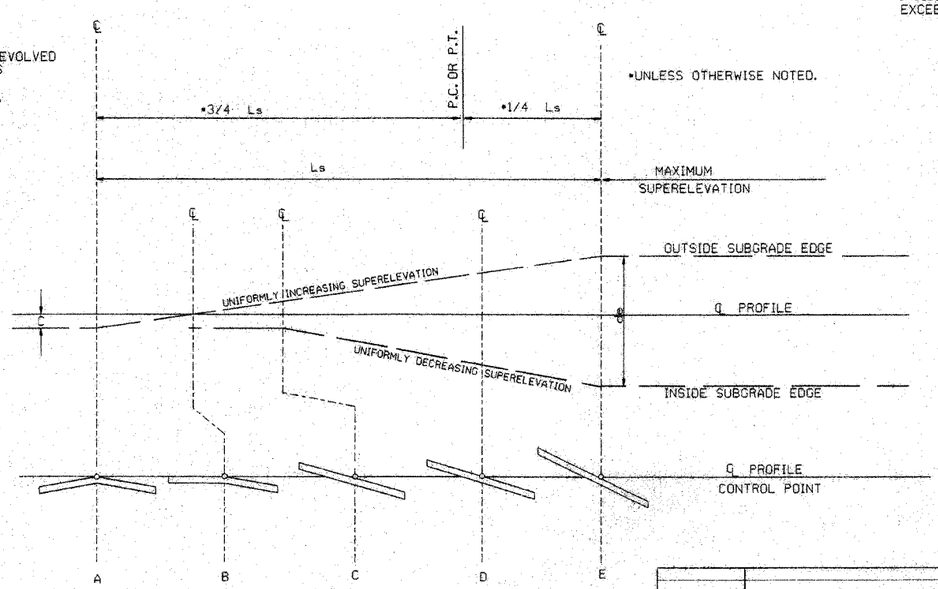
GENERAL NOTES

1. ON PAVEMENT WITH TWO-WAY TRAFFIC, THE SUPERELEVATION SHALL BE REVOLVED ON THE INSIDE PAVEMENT EDGE UNLESS OTHERWISE NOTED ON THE PLANS
2. SUPERELEVATION VALUES SHOWN ON THE CROSS SECTIONS ARE VALUES (+) OR (-) TO BE ADDED TO OR SUBTRACTED FROM THE POINT OF CONTROL.
3. LENGTHS FOR L MAY BE ROUNDED IN MULTIPLES OF 25 FT. OR 50 FT. TO PERMIT SIMPLER CALCULATIONS.
4. PAVEMENTS WIDER THAN 2 LANES SHALL HAVE ADDITIONAL TRANSITION LENGTHS AS FOLLOWS:

3 LANE UNDIVIDED - - - - - +20%
4 LANE UNDIVIDED - - - - - +50%
5 LANE UNDIVIDED - - - - - +80%
6 LANE UNDIVIDED - - - - - +100%

NOTE: MAINTAIN NORMAL CROWN ON INSIDE UNTIL SUPERELEVATION EXCEEDS 2C.

RATE OF SUPERELEVATION SHALL BE COMPUTED ON STRAIGHT LINE METHOD USING APPLICABLE Ls.



STANDARD METHOD WHEN SUPERELEVATION REVOLVES AROUND CENTER LINE

SUPERELEVATION FORMULA = $\frac{Lde}{Ls}$

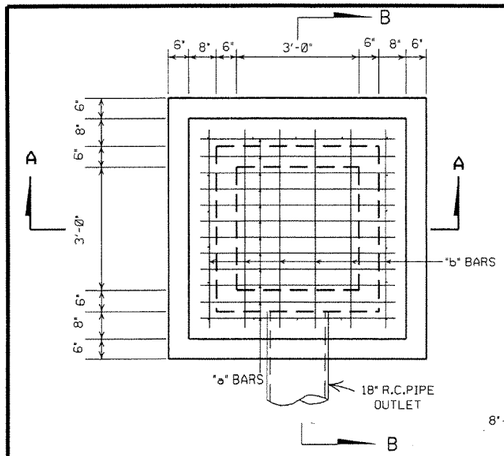
DATE	REVISION	DATE FILMED
10-18-96	ADDED FORMULA	10-18-96
01-09-87	ISSUED	534-1-9-87

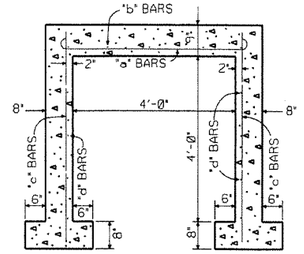
ARKANSAS STATE HIGHWAY COMMISSION

TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC

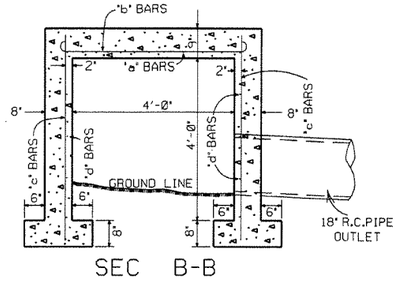
STANDARD DRAWING SE-2

FILE STDSE2.DGN





SEC A-A

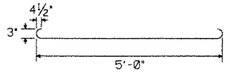


SEC B-B

STEEL SCHEDULE

BARS	NUMBER	LENGTH	SPACING
"a"	11	6'-0"	5"
"b"	6	6'-0"	10"
"c"	16	5'-1"	12"
"d"	16	5'-0"	12"

ALL STEEL TO BE #4 BARS



"a" & "b" BARS

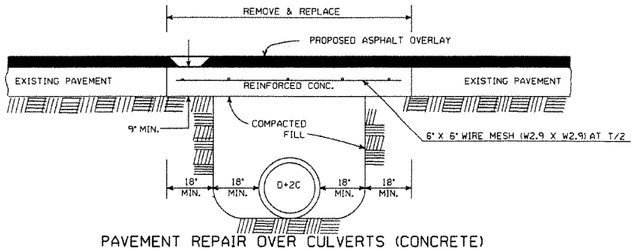
QUANTITIES

CONCRETE 3.40 CU. YDS.
REINFORCING STEEL 176 LB.

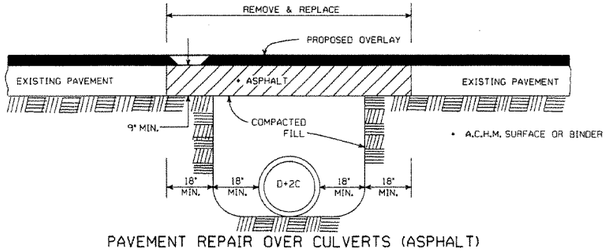
GENERAL NOTE:

THE PAY ITEMS FOR REINFORCED CONCRETE SPRING BOXES SHALL BE FOR THE QUANTITTIES OF CONCRETE OF THE CLASS SPECIFIED, REINFORCING STEEL, EXCAVATION FOR STRUCTURES AND 18" R.C. PIPE CULVERT.

REINFORCED CONCRETE SPRING BOX



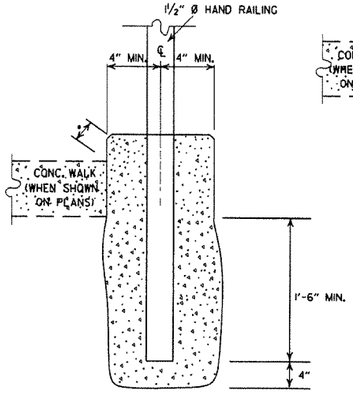
PAVEMENT REPAIR OVER CULVERTS (CONCRETE)



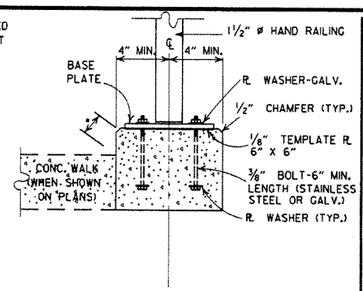
PAVEMENT REPAIR OVER CULVERTS (ASPHALT)

DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS

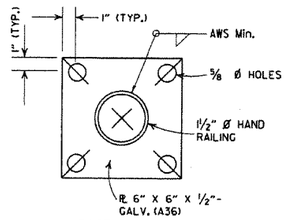
* A 2" MIN. HIGH CURB IS REQUIRED WHEN CONCRETE WALK IS ADJACENT TO THE HAND RAILING. PAYMENT FOR CURB SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR CONCRETE WALKS.



DETAIL OF HAND RAILING SET IN CONCRETE

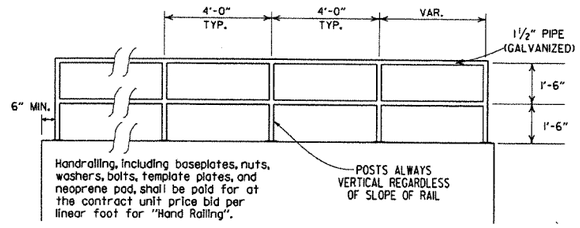


POST CONNECTION TO WALL

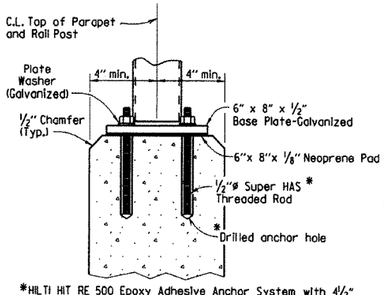


BASE PLATE

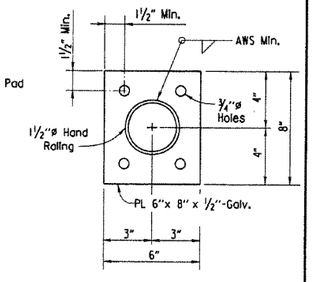
POST CONNECTION DETAILS



Hand railing shall conform to Section 633.



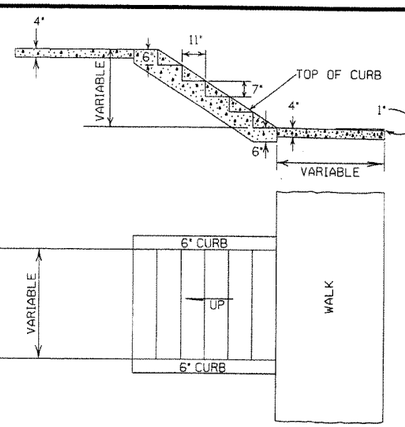
POST CONNECTION TO WALL



BASE PLATE

DETAILS OF ALTERNATE POST ANCHOR SYSTEM
(EPOXY ADHESIVE ANCHORS)

HAND RAILING DETAILS



GENERAL NOTES

1. RISE AND TREAD DIMENSIONS OF STEPS MAY BE VARIED AS DIRECTED BY THE ENGINEER, HOWEVER, TREAD WIDTHS SHALL BE 11" MIN. ALL STEPS IN A FLIGHT SHALL HAVE CONSISTENT TREAD & RISER DIMENSIONS.
2. 1" TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE WALKS AT 45' INTERVALS.

DETAILS OF CONCRETE STEPS & WALKS

DATE	REVISION	DATE FILMED
7-26-12	REMOVED RETAINING WALL DETAILS & REVISED HAND RAILING DETAILS	
4-17-08	REV. JOINT & FOOTING STEP DETAILS	
11-29-07	REVISED RETAINING WALL DRAINAGE	
5-25-06	REVISED PVMT REPAIR OVER CULVERTS (CONC); REVISED REINFORCED CONC SPRING BOX	
10-9-03	REVISED PIPE RAILING DETAILS TO HAND RAILING DETAILS	
4-10-03	REVISED RETAINING WALL DRAWING	
8-22-02	ADDED HAND RAILING DETAIL	
11-16-01	REVISED PVMT REPAIR OVER CULVERTS (CONC); CORRECTED SPELLING IN GENERAL NOTES	
11-18-98	ADDED GENERAL NOTES TO CONCRETE STEPS & WALKS	
7-02-98	ENLARGED PIPE	
4-03-97	ADDED NOTE TO STEEL BAR SCHED.	
10-18-96	CORRECTED SPELLING	
4-26-96	ADD WEEP HOLE;REV. JOINT SPACING IN RET. WALL	
6-2-94	CHANGED CONST. TO CONTRACTION JOINT	
10-1-92	CHANGED MESH FABRIC TO WIRE MESH	10-1-92
8-15-91	DELETED HDWL MODIFICATION DETAIL	8-15-91
11-8-90	DELETED COLD MIX FROM CULV'T. REPAIR	11-8-90
11-30-89	REV. RETAINING WALL STEEL SCHEDULE	11-30-89
11-17-88	V. BARS BEHIND ARROW	665-11-17-88
7-15-88	REV. PAVEMENT REPAIR	649-7-15-88
	ADDED HDWL. MODS, DEL. PIPE UNDERDRAINS	
11-1-84	REV. TRENCH FOR PIPE UNDERDRAIN	510-11-1-84
1-4-83	ELIMINATED CONC. CLASS & ADDED CHAMFER NOTE	682-1-4-83
3-2-81	SPELLING OF "UNDERDRAIN"	721-3-2-81
4-20-79	REV. UNDERDRAIN DET.& PAVEMENT REPAIR	674-4-20-79
2-2-76	12"MIN. GRAN. MAT'L. OVER PIPE	519-2-2-76
4-10-75	REM. SPECS. FOR GRAN. MAT'L.	568-4-10-75-853
5-22-74	GRANULAR MAT'L. TO BE SB-3	567-5-22-74-740
10-2-72	REVISED AND REDRAWN	564-10-16-72

ARKANSAS STATE HIGHWAY COMMISSION

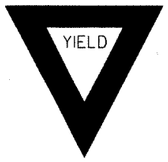
DETAILS OF SPECIAL ITEMS

STANDARD DRAWING SI - 1

R1-1

STANDARD 30"X30"
EXPRESSWAY 36"X36"
SPECIAL 48"X48"

R1-2



STD. 36"X36"X36"
EXPWY. 48"X48"X48"
FWY. 60"X60"X60"

R2-1

STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

R2-5A

STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

R2-5C

STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

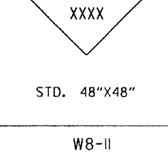
R4-1

STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

R4-2

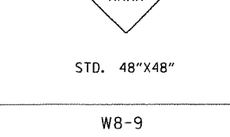
STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

R5-1



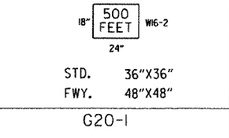
STD. 30"X30"
EXPWY. 36"X36"
SPECIAL 48"X48"

R11-2



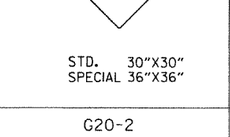
48"X30"

R11-3A



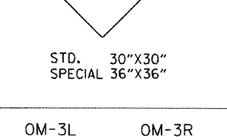
60"X30"

R11-4



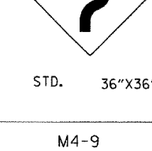
60"X30"

RSP-1



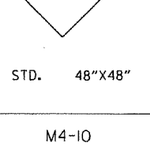
48"X30"

W1-1



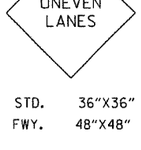
STD. 36"X36"
FWY. 48"X48"

W1-2



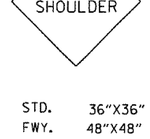
STD. 36"X36"
FWY. 48"X48"

W1-3



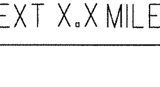
STD. 48"X48"

W1-4



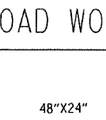
STD. 48"X48"

W1-6



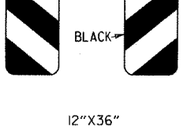
STD. 48"X24"
SPECIAL 60"X30"

W1-8



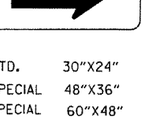
STD. 18"X24"
SPECIAL 24"X30"
EXPWY. 30"X36"
FWY. 36"X48"

W3-1



STD. 36"X36"
SPECIAL 48"X48"

W3-2



STD. 36"X36"
SPECIAL 48"X48"

W4-2

STD. 36"X36"
FWY. 48"X48"

W5-1

STD. 36"X36"
SPECIAL 48"X48"

W6-3

EXPWY. 36"X36"
SPECIAL 48"X48"

W8-7

EXPWY. 36"X36"
FWY. 48"X48"

W9-2

STD. 36"X36"
FWY. 48"X48"

W13-1

STD. 24"X24"

W20-1

STD. 48"X48"

W20-2

STD. 48"X48"

W20-3

STD. 48"X48"

W20-4

STD. 48"X48"

W20-5

STD. 48"X48"

W20-7a

STD. 36"X36"
FWY. 48"X48"

W21-2

STD. 30"X30"
SPECIAL 36"X36"

W21-5

STD. 30"X30"
SPECIAL 36"X36"

W24-1

STD. 36"X36"

W1-4b

STD. 48"X48"

R56-1

STD. 18"X18"

W8-11

STD. 36"X36"
FWY. 48"X48"

W8-9

STD. 36"X36"
FWY. 48"X48"

G20-1

60"X24"

G20-2

48"X24"

OM-3L OM-3R

12"X36"

M4-9

STD. 30"X24"
SPECIAL 48"X36"
SPECIAL 60"X48"

M4-10

48"X18"

R55-1

FINES DOUBLE
IN WORK ZONES *
WHEN WORKERS ARE PRESENT **

36"X60"

* USE 6" C LETTERS
** USE 4" D LETTERS

ADVANCE DISTANCES
(XXXX)

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

GENERAL NOTES:

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

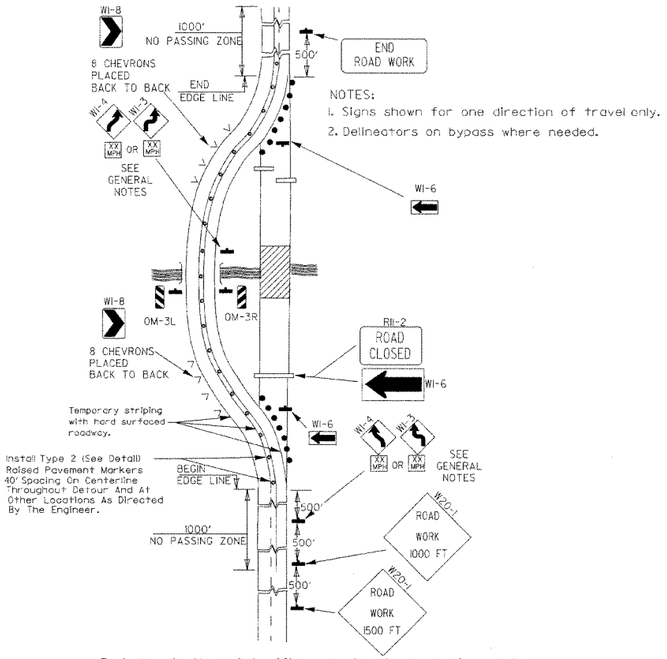
- NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY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

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

ARKANSAS STATE HIGHWAY COMMISSION

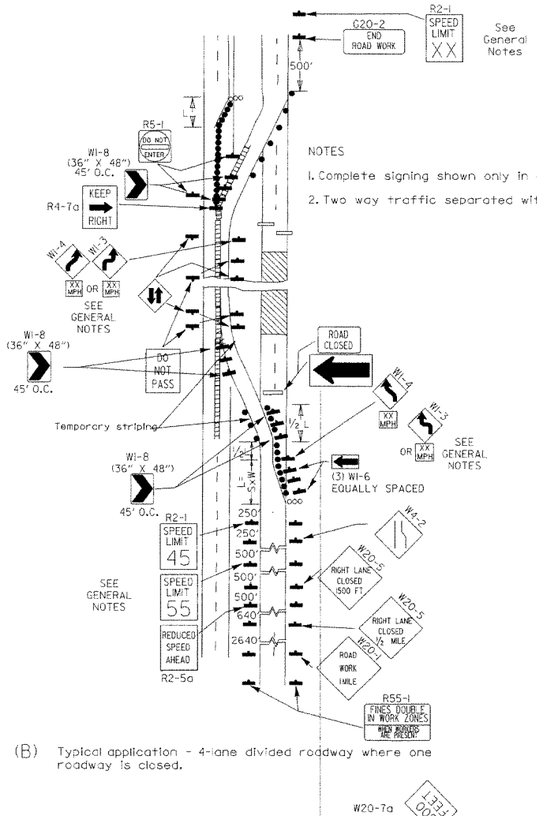
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

STANDARD DRAWING TC-1



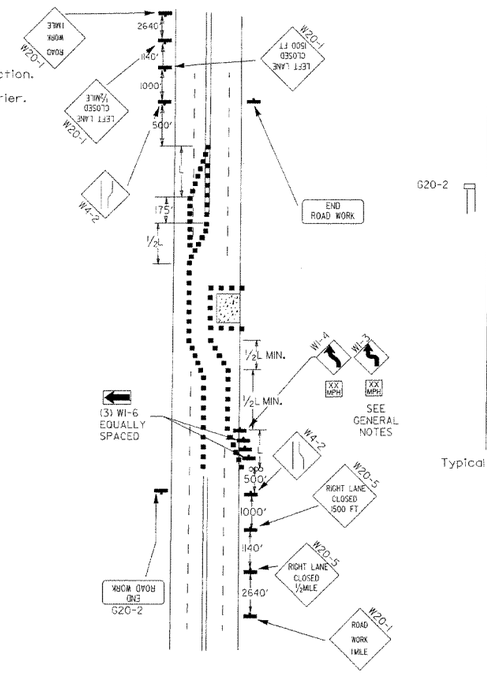
NOTES:
1. Signs shown for one direction of travel only.
2. Delineators on bypass where needed.

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

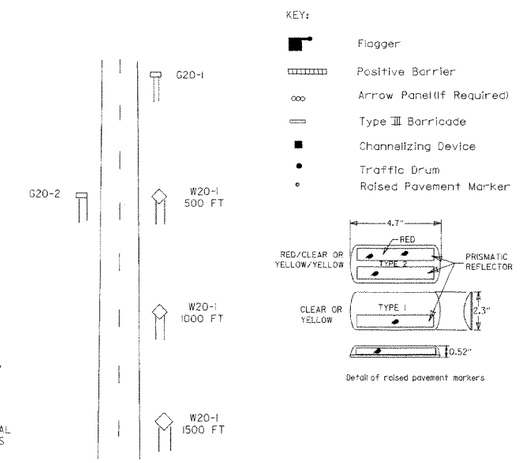


NOTES
1. Complete signing shown only in crossover direction.
2. Two way traffic separated with positive barrier.

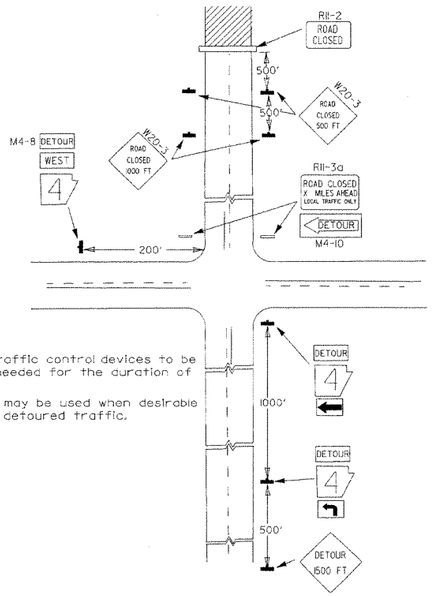
(B) Typical application - 4-lane divided roadway where one roadway is closed.



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

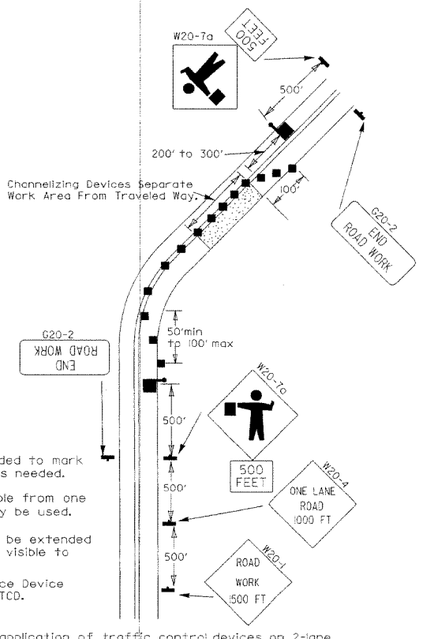


Typical advance warning sign placement



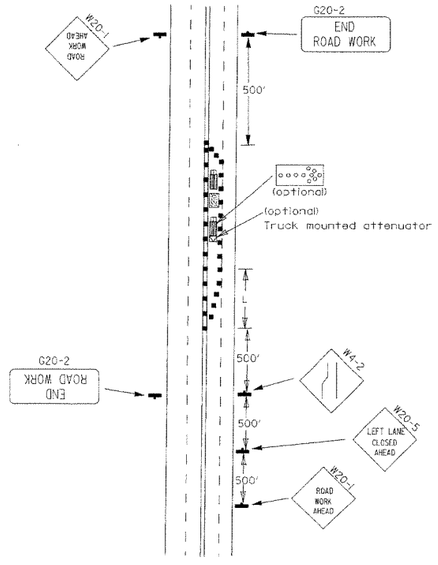
NOTES:
1. Regulatory traffic control devices to be modified as needed for the duration of the detour.
2. Street names may be used when desirable for directing detoured traffic.

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



NOTES:
1. Flood lights should be provided to mark flagger stations at night as needed.
2. If entire work area is visible from one station, a single flagger may be used.
3. Channelizing devices are to be extended to a point where they are visible to approaching traffic.
4. Automated Flagger Assistance Device (AFAD) optional. Refer to MUTCD.

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



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

Taper formulae:

L=SxW for speeds of 45mph or more.

$L = \frac{WS^2}{60}$ for speeds of 40mph or less.

Where:
L= Minimum length of taper.
S= Numerical value of posted speed limit prior to work or 85th percentile speed.
W= Width of offset.

GENERAL NOTES:

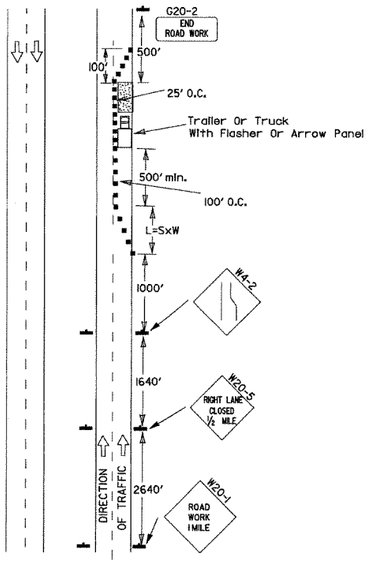
1. Advisory speed posted on WI-3 or WI-4 curve warning signs to be determined at site. Use WI-4 when speed is greater than 30mph and WI-3 when 30mph or less.
2. When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(55) shall be omitted and the R2-5A shall be installed at that location. Additional R2-1 45mph speed limit signs shall be installed at a maximum of 1mile intervals. At the end of the work area a R2-1(xx) shall be installed to match original speed limit.
3. When the existing speed limit is 65mph and the plans require a speed limit of 55mph, the R2-1(45) shall be omitted. Additional R2-1 55mph speed limit signs shall be installed at a maximum of 1mile intervals. At the end of the work area a R2-1(xx) shall be installed to match original speed limit.
4. The maximum spacing between channelizing devices in a taper should be approximately equal in feet to the speed limit. Beyond the taper, maximum spacing shall be two times the speed limit, or as directed by the Engineer.
5. Warning lights and/or flags may be mounted to signs or channelizing devices at night as needed.
6. Pavement markings no longer applicable which might create confusion in the minds of vehicle operators shall be removed or obliterated as soon as practicable.
7. Trailer mounted devices such as arrow panels and portable changeable message signs shall be delineated by affixing conspicuity material in a continuous line on the face of the trailer. When placed on or adjacent to the shoulder and not behind a positive barrier, these devices shall be delineated by placing five (5) traffic drums, equally spaced along the traffic side of the device.

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

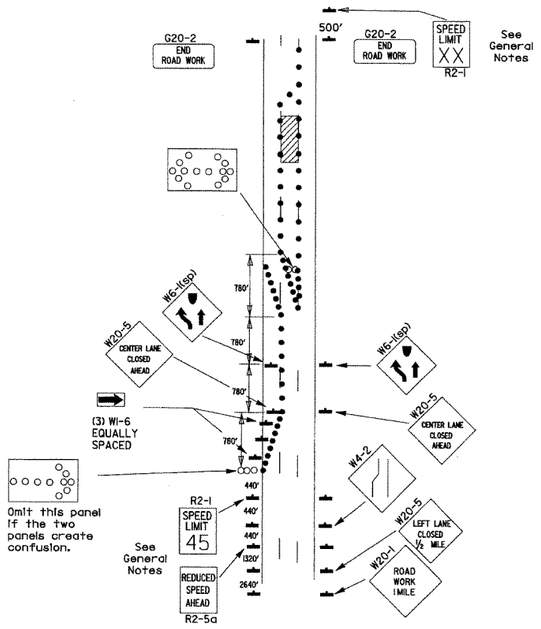
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

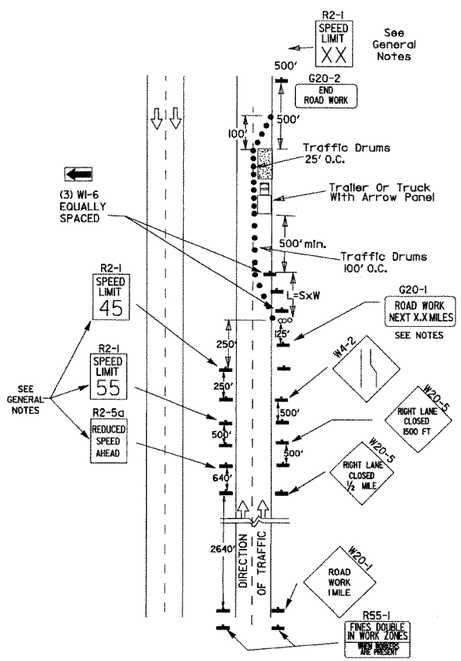
STANDARD DRAWING TC-2



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



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



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

KEY:

○○○ Arrow Panel (If Required)

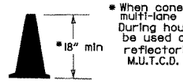
■ Channelizing Device

● Traffic drum

GENERAL NOTES:

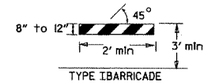
1. A speed limit reduction may be implemented ONLY when designated in the plan or when recommended by the Roadway Design Division.
2. When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(55) shall be omitted and the R2-5A shall be installed at that location. Additional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

Channelizing devices



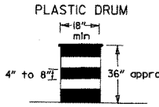
* When cones are used on freeways and multi-lane highways, they shall be 28" min. During hours of darkness, 28" cones shall be used on all roadways, and shall be reflectorized in accordance with the M.U.T.C.D.

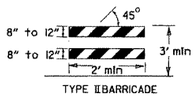
CONES



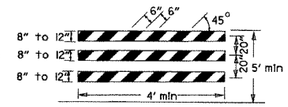
TYPE I BARRICADE

PLASTIC DRUM



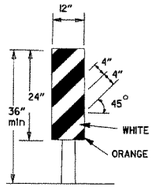


TYPE II BARRICADE



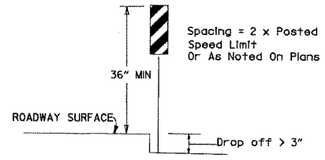
TYPE III BARRICADE

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



VERTICAL PANEL
VP-1R

VERTICAL PANEL PLACEMENT



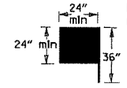
TRAFFIC CONTROL DEVICES
FOR
VERTICAL PAVEMENT DIFFERENTIALS

VERTICAL DIFFERENTIAL	LOCATIONS	TRAFFIC CONTROL
1" to 3"	Centerline, lane lines	W8-11
1" to 3"	Edge of shoulder	W8-9
Greater than 3"	Lane lines	Standard lane closure required
Greater than 3"	Edge of traveled lane	*RSP-1 and vertical panels, drums or concrete barrier
Greater than 3"	Edge of shoulder	*Vertical panels, drums or concrete barrier

* When shown on the plans concrete barrier will be used.

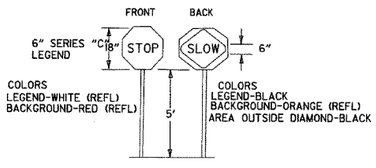
When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.

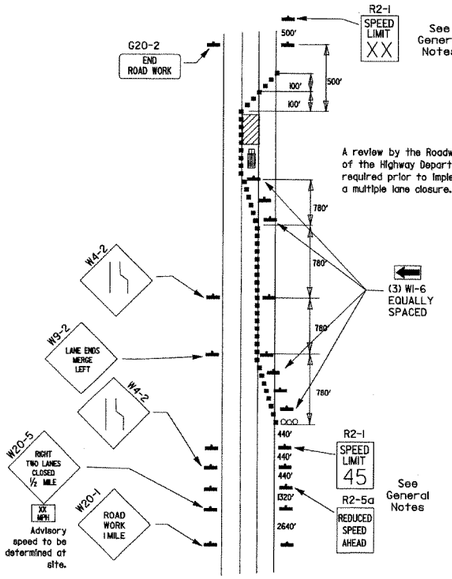
FLAG



Flag shall be of good grade red material

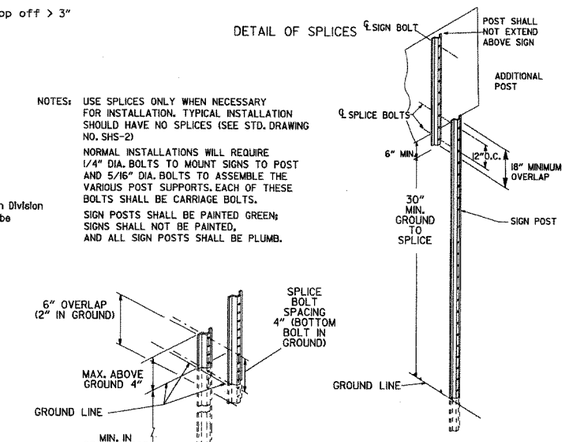
STOP SLOW PADDLE





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

DETAIL OF SPLICES



NOTES: USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-2)

NORMAL INSTALLATIONS WILL REQUIRE 1/4" DIA. BOLTS TO MOUNT SIGNS TO POST AND 5/16" DIA. BOLTS TO ASSEMBLE THE VARIOUS POST SUPPORTS. EACH OF THESE BOLTS SHALL BE CARRIAGE BOLTS.

SIGN POSTS SHALL BE PAINTED GREEN; SIGNS SHALL NOT BE PAINTED, AND ALL SIGN POSTS SHALL BE PLUMB.

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

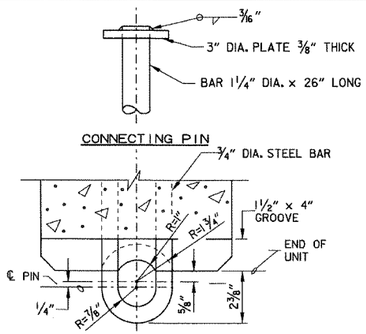
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

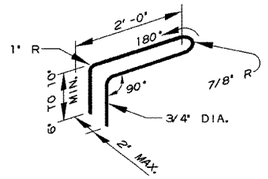
STANDARD DRAWING TC-3

REINFORCING BAR TABLE PER BARRIER UNIT

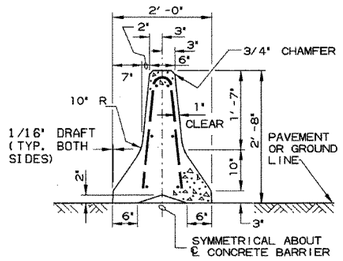
MARK	LOCATION	BAR SIZE	(NO. BARS)	SKETCH
H-1	HORIZONTAL IN BARRIER TIED INSIDE V-1 BARS	#5	(6)	19'-3"
H-2	CENTERED ABOVE DRAIN SLOTS LONG. & TRANSVERSELY	#5	(6)	6'-6"
H-3	TIED ABOVE H-1 BARS TO SUPPORT H-2, TIED TO V-1	#4	(2)	1'-6"
S-1	OVER LIFT HOLES	#4	(2)	2 5/8" LIFTING HOLE 90° 3 3/8" R
S-2	HORIZ. AROUND SLOTS BETWEEN V-1'S @ DRAIN SLOTS	#4	(2)	1 1/2" R SLOTS 7" 1'-6" 1" MIN. CLEAR TO BAR 5'-1" BAR W/(4) 1 1/2" R BENDS & MIN. 1'-0" OVERLAP
V-1	VERTICAL IN BARRIER(3) EACH END & (2) AT EACH DRAIN SLOTS	#5	(16)	TOTAL LENGTH 4'-9" 2 3/16" R 12° 2'-1 3/8" 4 3/8" ±9 1/2"



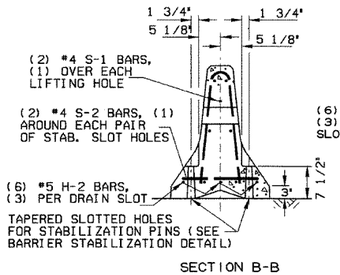
CONNECTION DETAILS



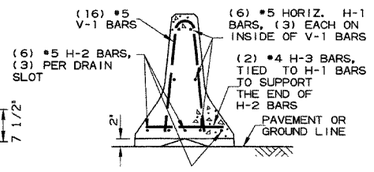
CONNECTION LOOP



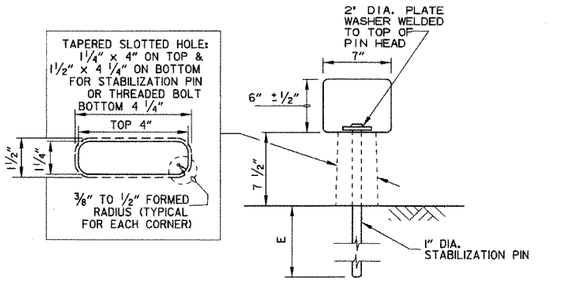
SECTION A-A



SECTION B-B



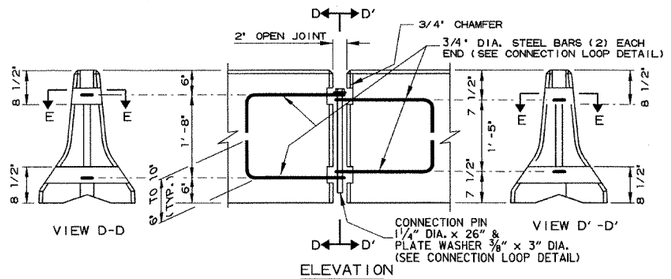
SECTION C-C

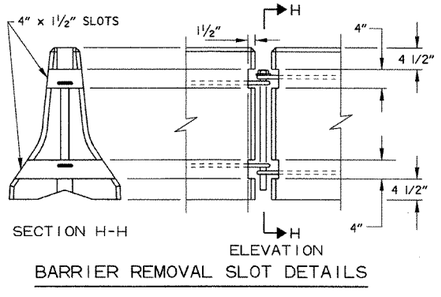


BARRIER STABILIZATION DETAIL

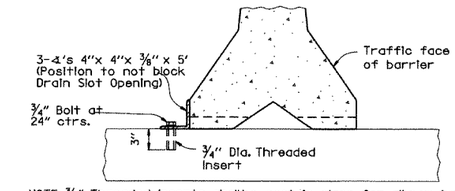
ROADWAY SECTION

(E) 4" - Concrete Pavement
8" - Asphalt Pavement
12" - Shoulder Areas





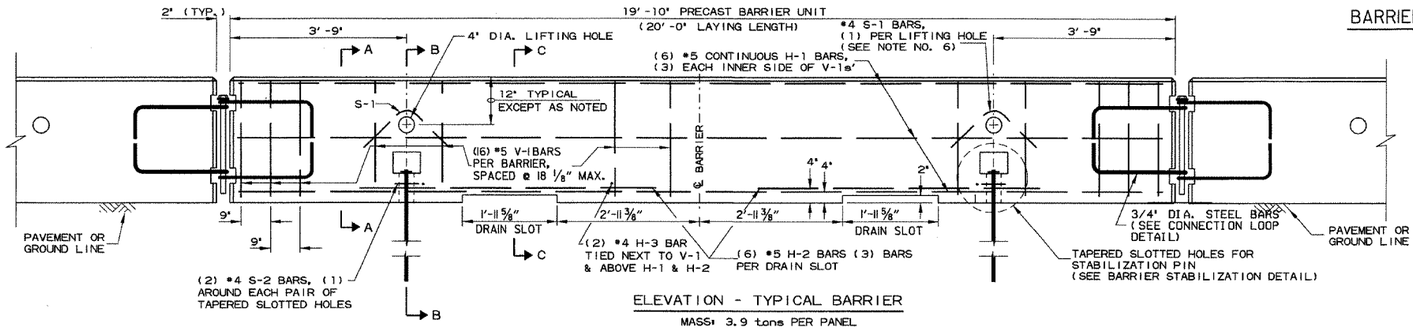
BARRIER REMOVAL SLOT DETAILS



NOTE: 3/4" Threaded Inserts shall be cast in place for all new bridge decks and drilled and grouted for existing bridge decks to be retained. Inserts shall have a minimum ultimate load capacity of 8000 lbs. in tension. After removal of barrier, bolts, and angles, the inserts shall be filled with approved non-shrink epoxy.

BARRIER STABILIZATION DETAIL

BRIDGE DECKS



ELEVATION - TYPICAL BARRIER

MASS: 3.9 tons PER PANEL

General Notes

(1) The contractor shall furnish the Precast Concrete Barrier Units and shall be responsible for the manufacture, shipment, storage, placement and removal. At the completion of the project, the precast units will remain the property of the contractor.

(2) Materials shall meet the following minimum requirements:
Concrete: 2500 psi compressive strength at 28 days.
Reinforcing Steel: AASHTO M 31 or M 53, Grade 60
Structural Steel: AASHTO-M270 Grade 36 shall be used for the Connection Pin, Connection Loops, and Stabilization Pins. A One Piece Pin with a 3" rounded top may be used in place of the detailed Connection Pin.
Delineators: Delineators shall be mounted at 10' spacing on top of precast barrier.

In applications where barrier wall is within 6 feet of a traffic lane, additional delineators shall be placed on the barrier at 10' spacing approximately one (1) foot from the top of the barrier. Delineators shall be on the AHTD Qualified Products List for Construction Concrete Barrier Markers.
Delineator color shall be in accordance with the Manual on Uniform Traffic Control Devices.
Payment for delineators shall be considered included in the price bid per Lin. Ft. for "Furnishing and Installing Precast Concrete Barrier". The contractor shall certify to the Engineer that the material and the design used in the precast barrier units meets the requirements as shown on this standard drawing.

(3) Other Precast Concrete Barriers that have been crash tested and approved by the Federal Highway Administration to meet the requirements of NCHRP-350 test level 3 or Manual For Assessing Safety Hardware (MASH) will be accepted in lieu of the barrier shown. Drain slots shall be provided as needed or as directed by the Engineer. The Contractor shall furnish a certification of NCHRP Report 350 or Manual For Assessing Safety Hardware (MASH) compliance for any other types of precast barrier to be used. The certification shall state that the precast concrete barrier meets the requirements of NCHRP Report 350 or Manual For Assessing Safety Hardware (MASH) and include a copy of the Federal Highway Administration's (FHWA) approval letter with all attachments. Precast concrete barrier units shall be fabricated and installed in accordance with crash testing and documentation provided in the FHWA approval letter. Mixing of shapes will not be allowed in a continuous line of units.

(4) Dowel holes in pavement or bridge slabs that are to remain in place shall be filled. Holes in concrete pavement and bridge slabs shall be filled with an approved non-shrink epoxy grout. Holes in asphalt pavement shall be filled with an approved asphalt joint filler. Payment for drilling and filling holes to be included in the price for various barrier items.

(5) Attach Units To Roadway Surface with Stabilization Pins and to Deck Slabs using bolts when required.

(6) A 4" White PVC Sleeve may be used to form the Lifting Hole and if used the Sleeve is to be left in place.

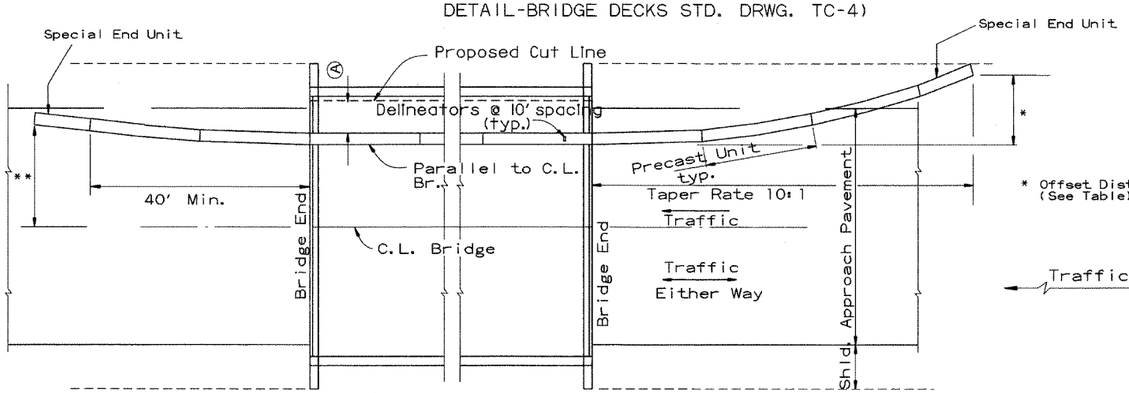
DATE	REVISION	FILMED
10-15-09	ADDED REFERENCE TO MASH	
8-5-09	REV. NOTE 3 CONCERNING DRAIN SLOTS	
11-29-07	REVISED NOTE 3	
5-25-06	DELETED GENERAL NOTE 7	
11-18-04	REVISED BARRIER STABILIZATION DETAIL BRIDGE DECKS	
4-10-03	REVISED GENERAL NOTE 2	
8-22-02	ISSUED NEW DRAWING	

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

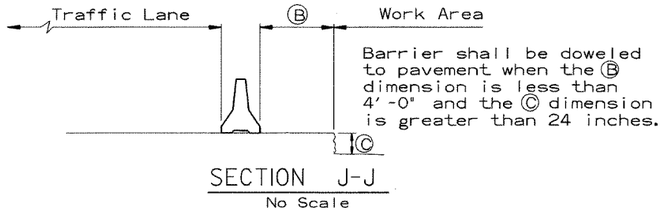
STANDARD DRAWING TC-4

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



BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET

No Scale

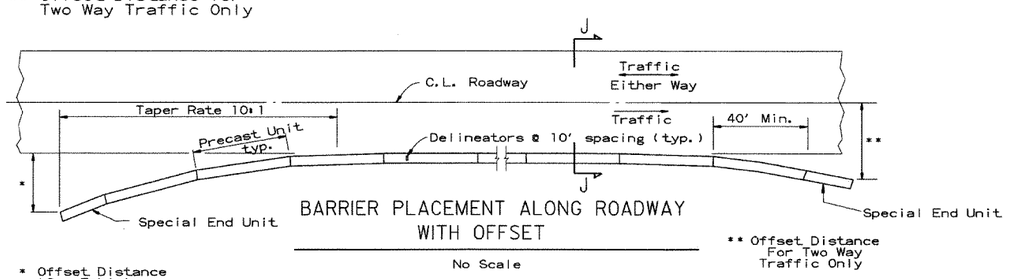


Barrier shall be doweled to pavement when the Ⓑ dimension is less than 4'-0" and the Ⓒ dimension is greater than 24 inches.

SECTION J-J

No Scale

** Offset Distance for Two Way Traffic Only



BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET

No Scale

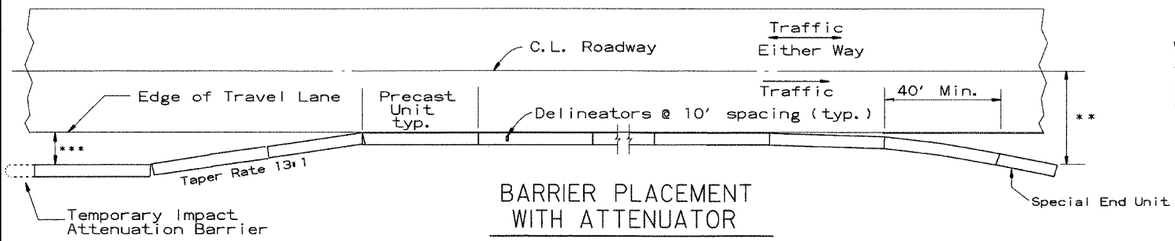
** Offset Distance For Two Way Traffic Only

* Offset Distance (See Table)

Offset Distance Table

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

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

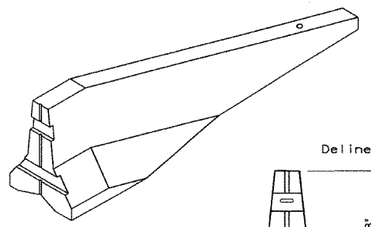


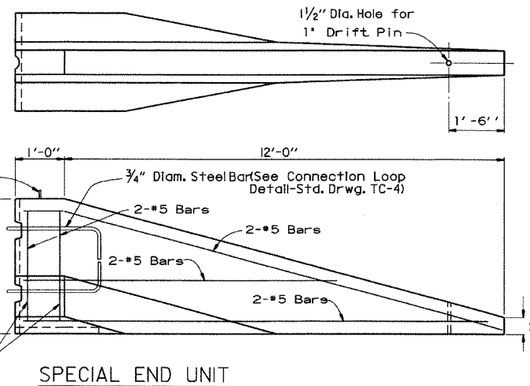
BARRIER PLACEMENT WITH ATTENUATOR

No Scale

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

** Offset Distance For Two Way Traffic Only





SPECIAL END UNIT

No Scale

General Notes

When shown on the Plans, the ends of the Temporary Precast Concrete Barrier shall be protected with an NCHRP-350 or Manual For Assessing Safety Hardware (MASH) approved Crash Cushion. Payment for Crash Cushions shall be made under the item of "Temporary Impact Attenuation Barrier."

DATE	REVISION	FILMED
10-15-09	ADDED REFERENCE TO MASH	
5-25-06	REVISED BARRIER PLACEMENT	
8-22-02	ISSUED NEW DRAWING	

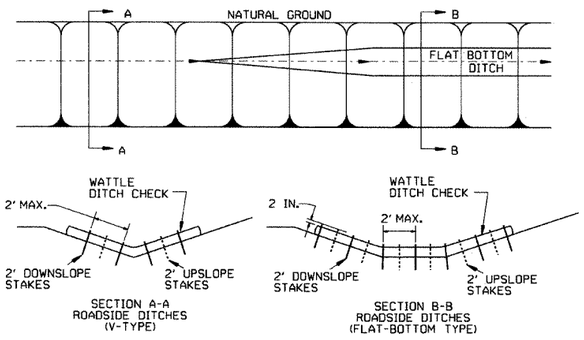
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

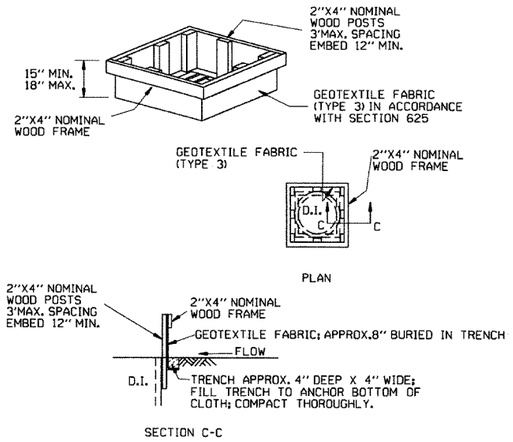
STANDARD DRAWING TC-5

GENERAL NOTES

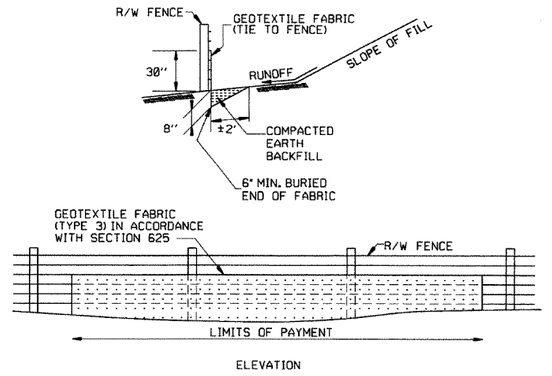
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



DROP INLET SILT FENCE (E-7)



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

GENERAL NOTES

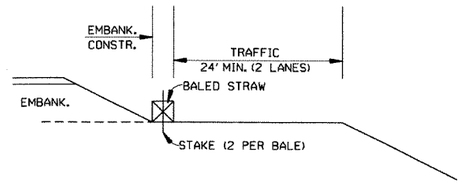
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST, OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.

GENERAL NOTES

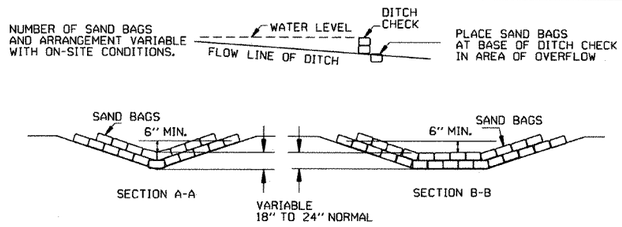
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.

2. NO GAPS SHALL BE LEFT BETWEEN BALES.

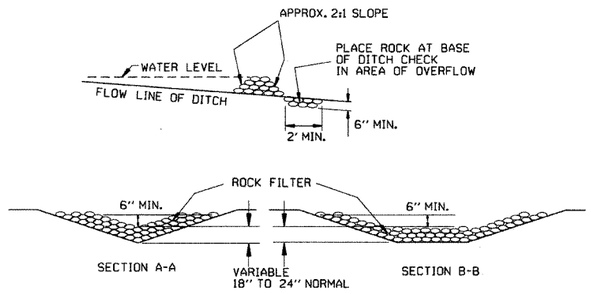
3. BALED STRAW FILTER BARRIERS COMPLETED AND ACCEPTED WILL BE MEASURED BY THE BALE IN PLACE AS AUTHORIZED BY THE ENGINEER AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER BALE FOR BALED STRAW DITCH CHECKS.



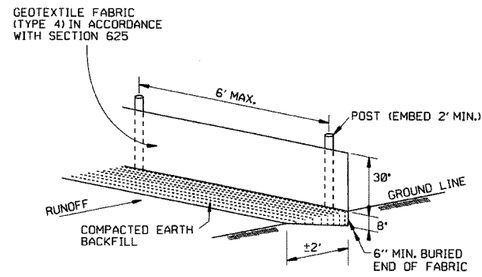
BALED STRAW FILTER BARRIER (E-2)



SAND BAG DITCH CHECK (E-5)



ROCK DITCH CHECK (E-6)



SILT FENCE (E-11)

GENERAL NOTES

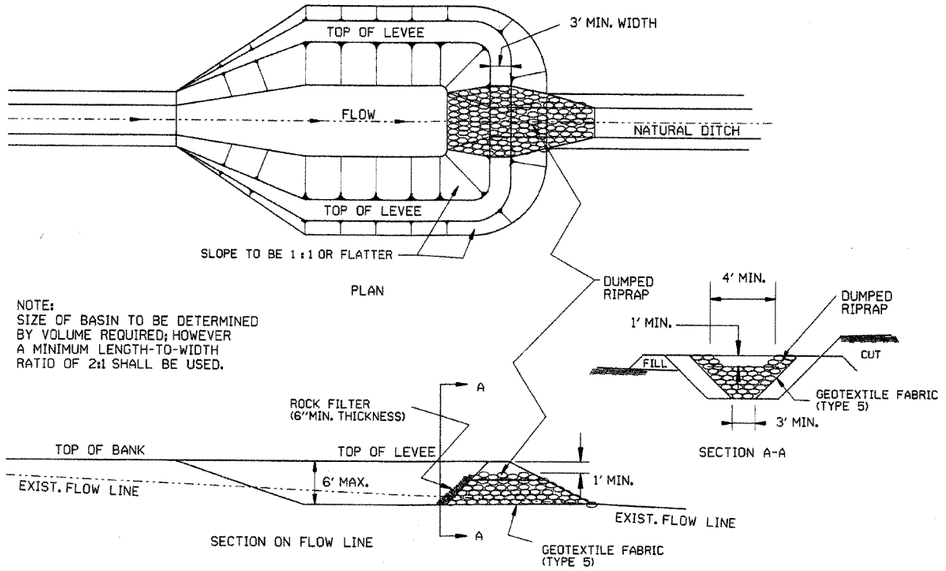
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.

DATE	REVISION	FILMED
12-15-11	DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK	
11-18-98	ADDED NOTES	
7-02-98	ADDED BALED STRAW FILTER BARRIER (E-2)	
7-20-95	REVISED SILT FENCE E-4 AND E-11	7-20-95
7-15-94	REV. E-4 & E-11 MIN. 13" BURIED END OF FABRIC	
6-2-94	REVISED E-1,4.7 & 11; DELETED E-2 & 3	6-2-94
4-1-93	REDRAWN	
10-1-92	REDRAWN	
8-2-76	ISSUED R.D.M.	298-7-28-76

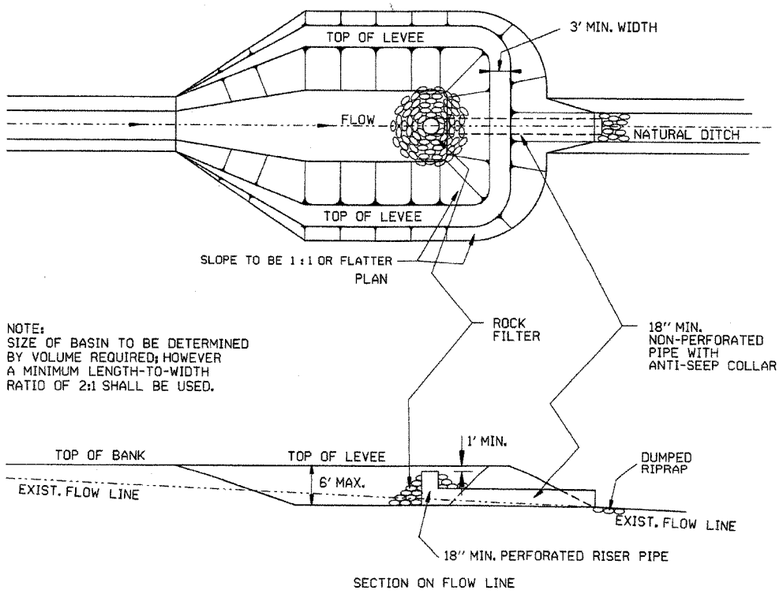
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

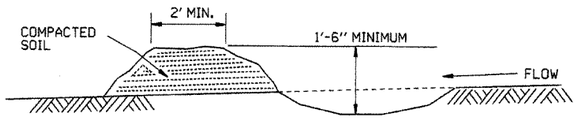
STANDARD DRAWING TEC-1



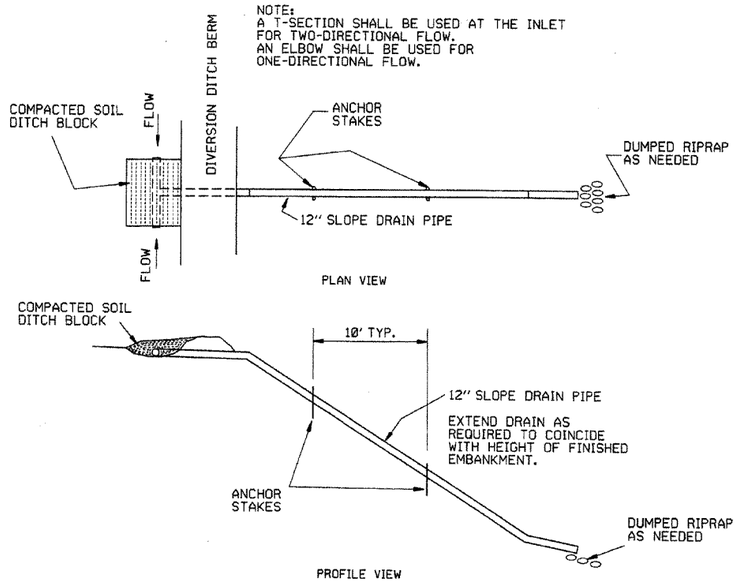
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



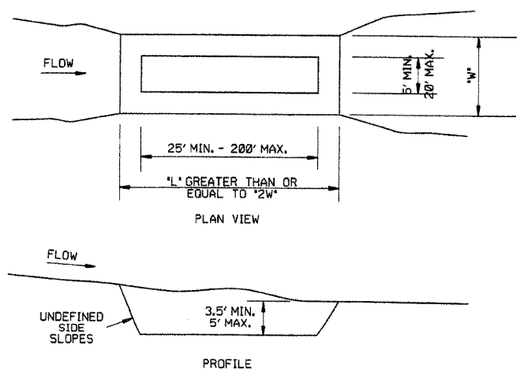
SEDIMENT BASIN WITH PIPE OUTLET (E-10)



DIVERSION DITCH (E-8)



SLOPE DRAIN (E-12)



SEDIMENT BASIN (E-14)

DATE	REVISION	FILMED
6-2-94	Revised E-8 & E-12; Added E-14 & Deleted E-13	
4-1-93	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

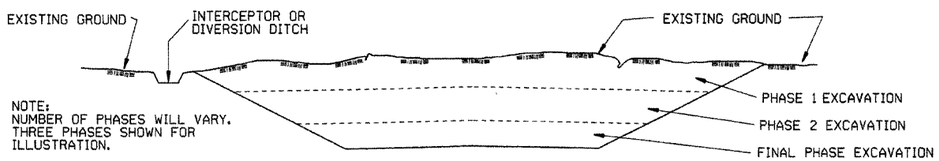
STANDARD DRAWING TEC-2

CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE

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

EXCAVATION



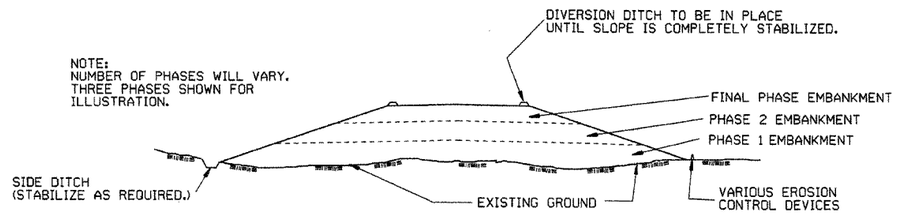
GENERAL NOTE

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

CONSTRUCTION SEQUENCE

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

EMBANKMENT



GENERAL NOTE

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

CONSTRUCTION SEQUENCE

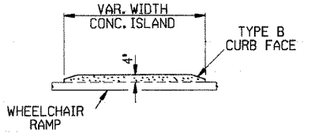
1. CONSTRUCT DIVERSION DITCHES, DITCH CHECKS, SEDIMENT BASINS, SILT FENCES, OR OTHER EROSION CONTROL DEVICES AS SPECIFIED.
2. PLACE PHASE 1 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD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

DATE	REVISION	FILMED
11-03-94	CORRECTED SPELLING	
6-2-94	Drawn & Issued	6-2-94

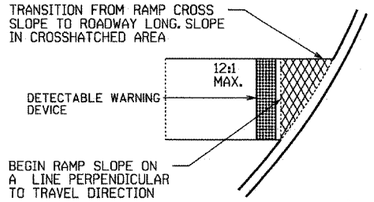
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

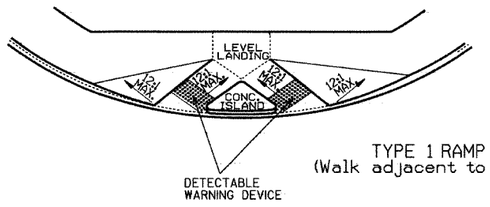
STANDARD DRAWING TEC-3



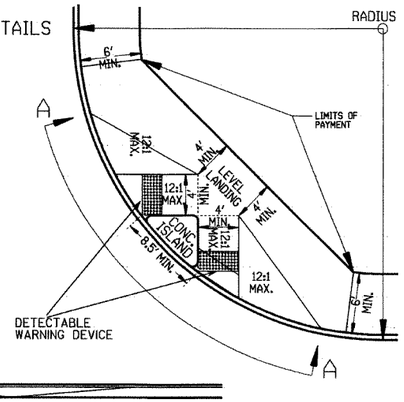
CONCRETE ISLAND DETAIL

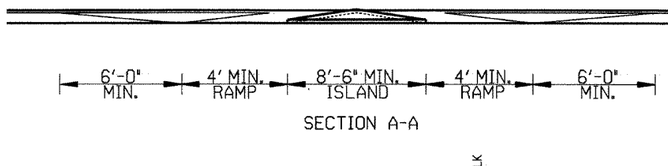


SLOPE TRANSITION DETAILS



TYPE 1 RAMP
(Walk adjacent to curb)

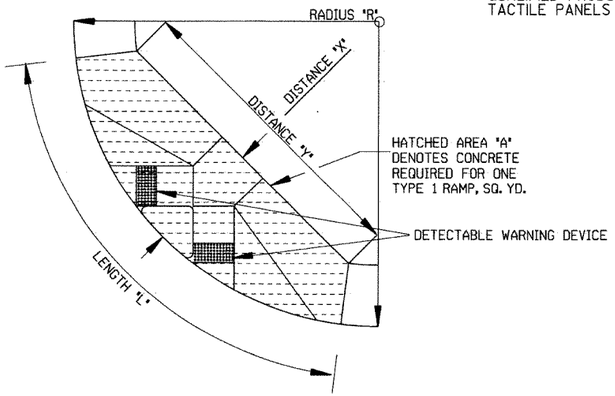




SECTION A-A

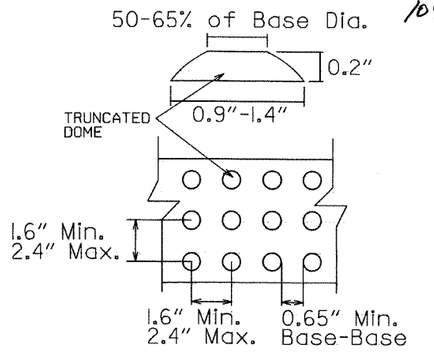
TYPE 1 RAMP DIMENSIONS AND QUANTITIES

RADIUS "R" FEET	DISTANCE "X" FEET	DISTANCE "Y" FEET	LENGTH "L" FEET	RAMP AREA "A" SQ. YD.
15	11.67	18.82	32.18	26.21
20	11.52	22.28	35.46	30.07
25	11.43	26.60	38.77	33.80
30	11.37	30.26	40.93	36.90
35	11.33	33.51	43.11	39.77
40	11.30	36.45	45.26	42.45
45	11.27	39.16	47.34	44.97
50	11.25	41.69	49.36	47.35
55	11.24	44.07	51.31	49.63
60	11.22	46.33	53.21	51.80



GENERAL NOTES FOR DETECTABLE WARNING DEVICES

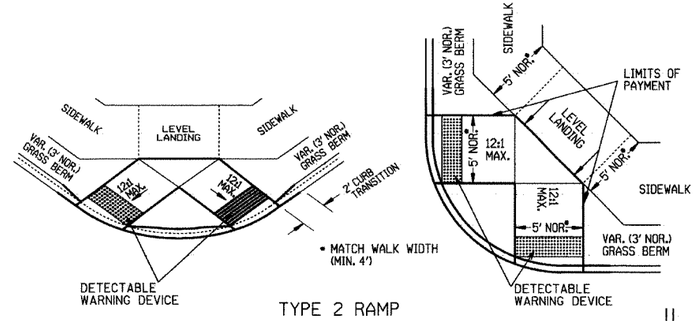
THE DETECTABLE WARNING DEVICE SHALL BE LOCATED SO THAT THE NEAREST EDGE OF THE DEVICE IS 6 TO 8 INCHES FROM THE FACE OF THE CURB.
TRUNCATED DOMES IN THE DETECTABLE WARNING SURFACE SHALL MEET THE REQUIREMENTS OF THE GEOMETRIC CONFIGURATION SHOWN.
DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.
DETECTABLE WARNING DEVICE SHALL BE 24 INCHES IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE.
DETECTABLE WARNING DEVICE SHALL BE ON THE AHTD QUALIFIED PRODUCTS LIST FOR CAST-IN-PLACE TACTILE PANELS (ADA DETECTABLE WARNING).



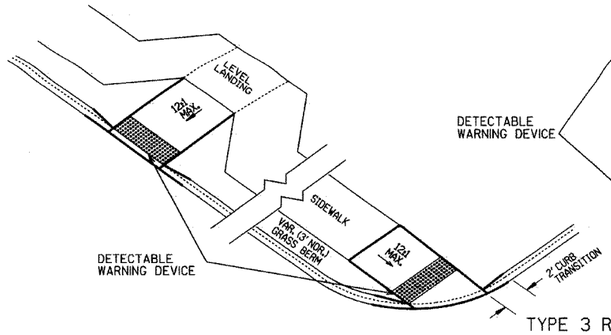
DETECTABLE WARNING DEVICE DETAIL

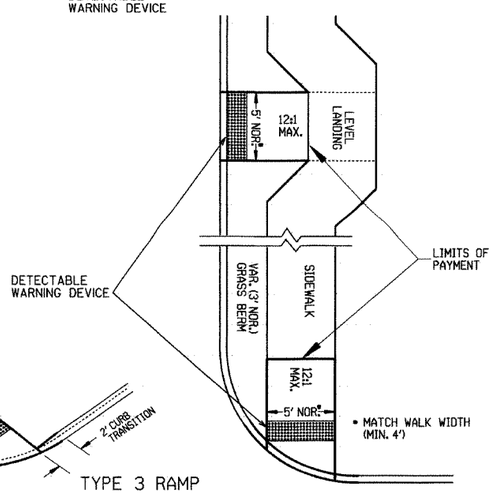
GENERAL NOTES:

IN NEW CONSTRUCTION, UNLESS OTHERWISE INDICATED ON THE PLANS, WHEELCHAIR RAMPS ARE TO BE PROVIDED AT ALL CORNERS OF CURBED STREET INTERSECTIONS AND MID-BLOCK CROSSWALK LOCATIONS.
IN ALTERATIONS WHEELCHAIR RAMPS ARE TO BE PROVIDED AT CURBED STREET INTERSECTIONS WITH PEDESTRIAN TRAFFIC AND MID-BLOCK CROSSWALK LOCATIONS.
THE LENGTH OF THE RAMP SHALL BE SUCH THAT THE SLOPE DOES NOT EXCEED 12:1. THE SURFACE TEXTURE OF THE RAMP SHALL CONFORM TO A CLASS 6 FINISH ACCORDING TO SECTION 802.19.
THE NORMAL GUTTER GRADE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP.
ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION.
THE MINIMUM THICKNESS OF THE RAMP, WALK, & LANDING SHALL BE 4".
THE MINIMUM WIDTH OF THE RAMPS SHALL BE THE WALK WIDTH OR 36", WHICHEVER IS GREATER.
RAMPS SHALL BE MODIFIED AS NECESSARY TO INSURE THAT THEY ARE PARALLEL TO A LINE DRAWN FROM THE CENTER OF ONE RAMP TO THE CENTER OF THE RAMP ON THE OPPOSITE SIDE OF THE INTERSECTION.
THE DIMENSIONS AND QUANTITIES SHOWN ON THIS DRAWING ARE FOR A 90° INTERSECTION ONLY. DIMENSIONS AND QUANTITIES FOR SKEWED INTERSECTIONS WILL VARY, AND ARE TO BE DETERMINED BY THE ENGINEER.



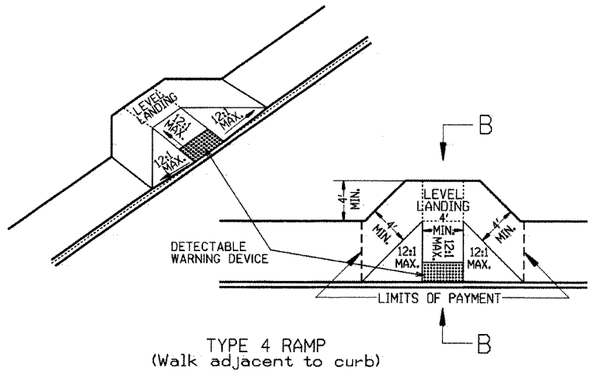
TYPE 2 RAMP



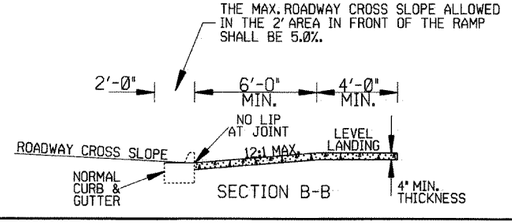


TYPE 3 RAMP

NOTE:
THE CROSS SLOPE OF THE RAMPS, LEVEL LANDINGS, AND SIDEWALKS SHALL NOT EXCEED 2.0% UNLESS REQUIRED TO MATCH STREET LONGTITUDINAL GRADE.



TYPE 4 RAMP
(Walk adjacent to curb)



SECTION B-B

RAMP SELECTION CRITERIA

FIRST CHOICE	TYPE 1	CORNER LOCATIONS WITH THE WALK ADJACENT TO THE CURB (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 2	CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE INSUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 3	CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE SUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 4	TANGENT LOCATIONS (BOTH NEW CONSTRUCTION AND ALTERATIONS).
SECOND CHOICE	TYPE 5	TANGENT LOCATIONS (ALTERATIONS ONLY).
THIRD CHOICE	TYPE 6	CORNER LOCATIONS (ALTERATIONS ONLY). THIS RAMP MAY BE USED ONLY IF THE TYPE 5 RAMPS CANNOT BE PLACED AT THE ENDS OF THE RADIUS.
FOURTH CHOICE		IF SITE CONSTRAINTS PREVENT THE CONSTRUCTION OF ANY OF THE TYPES LISTED, THEN AND ONLY THEN CAN THE 12:1 MAX. SLOPE ON THE RAMP BE EXCEEDED TO PROVIDE ACCESS TO THE STREET LEVEL (ALTERATIONS ONLY). THE SLOPE CAN BE STEEPENED TO A 10:1 MAX. FOR A MAX. LENGTH OF 5' OR A 8:1 MAX. FOR A MAX. LENGTH OF 2'. SLOPES STEEPER THAN 8:1 ARE NOT ALLOWED UNDER ANY CIRCUMSTANCES.

NOTE: IN ALTERATIONS, THE SELECTION OF THE TYPE OF WHEELCHAIR RAMP TO BE CONSTRUCTED SHALL BE BASED ON THE AMOUNT OF RIGHT-OF-WAY AVAILABLE, AND ON THE PRESENCE OF OTHER SITE CONSTRAINTS (UTILITIES, BUILDINGS, ETC.). THE TABLE ABOVE LISTS THE ORDER IN WHICH THE RAMPS ARE TO BE CONSIDERED.

AN ALTERATION IS DEFINED AS A PROJECT THAT CHANGES OR AFFECTS THE USE OF A PEDESTRIAN PATHWAY (OVERLAYS, SIGNALIZATION PROJECTS, ETC.) BUT DOES NOT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY. ALL PROJECTS THAT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY WILL USUALLY BE CONSIDERED NEW CONSTRUCTION FOR THE PURPOSES OF THE CHART ABOVE.

11-10-05	REVISED TO NEW SIDEWALK POLICY	
10-9-03	REVISED GEN. NOTES & ADDED NOTE	
4-10-03	REV. DETECTABLE WARNING DEVICES	
8-22-02	ADD DETECTABLE WARNING DEVICES	
3-30-00	ADD.SLOPE TRANS. & REV. ISL. DIMS.	
11-18-98	REVISED NOTES	
8-12-98	REVISED TEXTURE	
7-02-98	REDRAWN & REISSUED	
10-18-96	CORRECTED DIMENSIONS	10-18-96
5-24-90	FROM8:1TO12:1MAX.SLOPES	5-24-90
7-15-88	ADJUSTED MAX. SLOPE	652-7-15-88
7-14-88	INCLUD."CONC. ISLD."IN PAY ITEM	------
6-02-76	ISSUED-P.H.D.	299-7-28-76
DATE	REVISION	DATE FILM

ARKANSAS STATE HIGHWAY COMMISSION

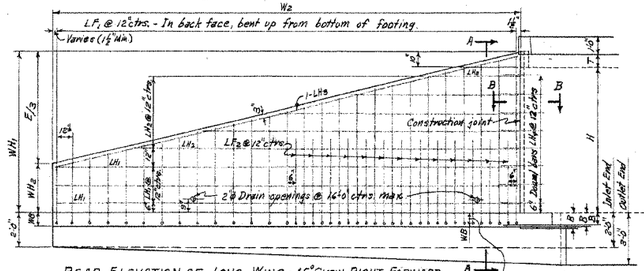
WHEELCHAIR RAMPS
NEW CONSTRUCTION
AND ALTERATIONS

STANDARD DRAWING WR-1

RESHOT 3-8-93

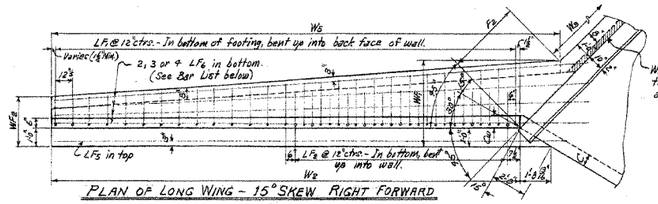
175 3

FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			105	
JOB No.					



REAR ELEVATION OF LONG WING - 15° SKEW RIGHT FORWARD
SHOWING BACK FACE REINFORCING

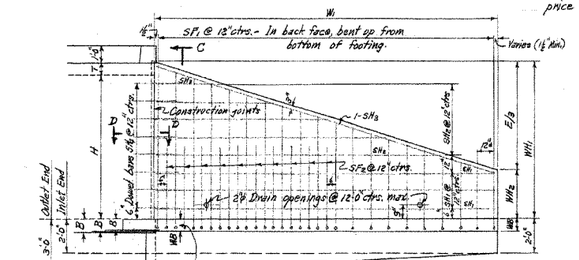
WB may be more, equal to, or less than the bottom slab thickness B.



PLAN OF LONG WING - 15° SKEW RIGHT FORWARD
SHOWING FOOTING REINFORCING.

When B is more than WB, the shaded portion of the apron shall be made the same thickness as the bottom slab B.

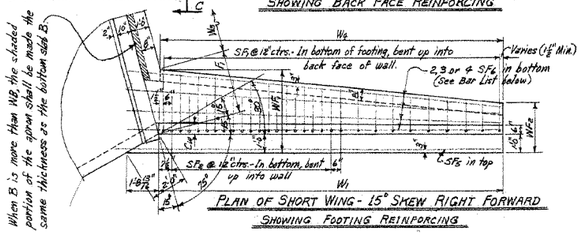
Note:- Payment for membrane waterproofing and roofing felt to be included in the price bid for Class S Concrete.



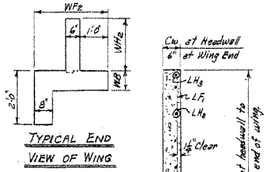
WB may be more, equal to or less than the bottom slab B.

REAR ELEVATION OF SHORT WING - 15° SKEW RIGHT FORWARD
SHOWING BACK FACE REINFORCING

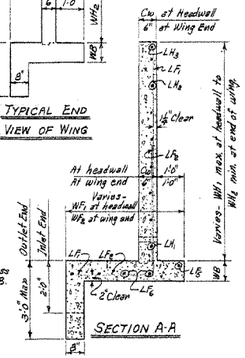
When B is more than WB, the shaded portion of the apron shall be made the same thickness as the bottom slab B.



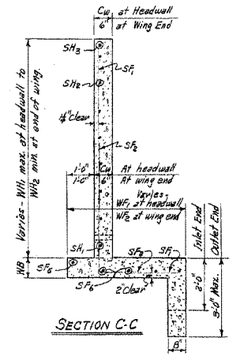
PLAN OF SHORT WING - 15° SKEW RIGHT FORWARD
SHOWING FOOTING REINFORCING



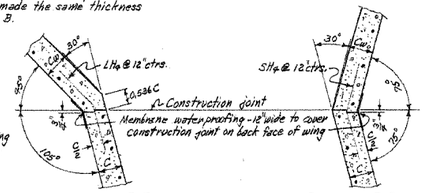
TYPICAL END VIEW OF WING



SECTION A-A

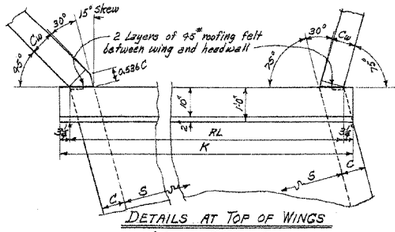


SECTION C-C

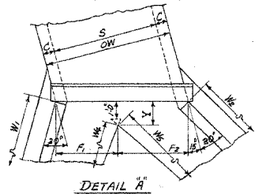


SECTION B-B SECTION D-D

SECTIONS THRU CONSTRUCTION JOINTS



DETAILS AT TOP OF WINGS
15° SKEW RIGHT FORWARD



DETAIL "A"

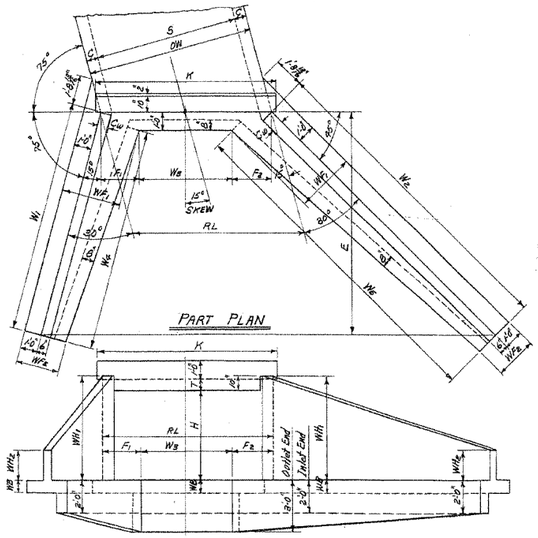
TABLE "A" - DIMENSIONS FOR DETAIL "A"

S	H	F_1	F_2	W_4	W_5	W_3	Y
5'	7'	3'-0	3'-5⅝	16'-10⅝	25'-0⅜	0"	1'-0⅛
6'	8'	3'-6	4'-1⅜	19'-0⅛	28'-3½	0"	1'-1

REGULAR WING DIMENSIONS - 3:1 SLOPES

CLEAR HEIGHT OF BOX	THICKNESS OF WING FOOTING	THICKNESS OF WING AT HEAD	WINGWALL HEIGHTS AT HEADWALL	WINGWALL HEIGHTS AT END OF WING	WIDTHS OF WING FOOTINGS AT HEADWALL	WIDTHS OF WING FOOTINGS AT END OF WING	FOOTING DIMENSION PARALLEL WITH HEADWALL SHORT WING	FOOTING DIMENSION PARALLEL WITH HEADWALL LONG WING	PERPENDICULAR DIST. FROM HEAD TO END OF WING	LENGTHS OF WINGWALLS SHORT WING	LENGTHS OF WINGWALLS LONG WING	INSIDE FOOTING DIMENSIONS SHORT WING	INSIDE FOOTING DIMENSIONS LONG WING	* QUANTITY PER WING CLASS S CONCRETE INLET END SHORT WING	INLET END LONG WING	OUTLET END SHORT WING	OUTLET END LONG WING
H	WB	C_W	WH_1	WH_2	WF_1	WF_2	F_1	F_2	E	W_1	W_2	W_4	W_5	Cu.Yd.	Cu.Yd.	Cu.Yd.	Cu.Yd.
2'	7"	6"	2'-10"	0'-8"	2'-0"	2'-0"	1'-1⅜	0'-10⅝	6'-6"	6'-8⅝"	9'-2⅛"	6'-0½"	9'-1⅝"	0.789	1.094	0.876	1.212
3'	7"	6"	3'-10"	1'-0"	2'-8"	2'-4"	1'-5⅜	1'-4⅝	8'-6"	8'-9½"	12'-0⅝"	8'-2½"	12'-3⅛"	1.186	1.650	1.300	1.808
4'	7"	6"	4'-10"	1'-8"	3'-0"	2'-8"	1'-9⅜	1'-10	10'-6"	10'-10⅝"	14'-10⅝"	10'-4½"	15'-5⅝"	1.656	2.305	1.797	2.502
5'	7"	6"	5'-10"	1'-8"	3'-4"	2'-8½"	2'-1⅜"	2'-3⅝"	12'-6"	12'-11⅝"	17'-8½"	12'-6½"	18'-7⅛"	2.196	3.059	2.363	3.295
		7"	5'-10"	1'-8"	3'-4"	2'-8½"	2'-1⅜"	2'-3⅝"	12'-6"	12'-11⅝"	17'-8½"	12'-6½"	18'-7⅛"	2.287	3.188	2.955	3.424
6'	8"	7"	6'-10"	2'-0"	3'-8"	2'-6"	2'-5⅜"	2'-3⅝"	14'-6"	15'-0⅝"	20'-6"	14'-8⅛"	21'-9"	3.052	4.242	3.296	4.517
		7½"	6'-10"	2'-0"	3'-8"	2'-6"	2'-5⅜"	2'-3⅝"	14'-6"	15'-0⅝"	20'-6"	14'-8⅛"	21'-9"	3.114	4.329	3.309	4.605
		8"	6'-10"	2'-0"	3'-8"	2'-6"	2'-5⅜"	2'-3⅝"	14'-6"	15'-0⅝"	20'-6"	14'-8⅛"	21'-9"	3.177	4.417	3.371	4.693
* 7'	8½"	7½"	7'-10"	2'-4"	4'-2"	3'-0½"	3'-0⅜"	3'-5⅛"	16'-6"	17'-1"	23'-4"	16'-10⅝"	25'-1"	3.998	5.560	4.220	5.877
		8"	7'-10"	2'-4"	4'-2"	3'-0½"	3'-0⅜"	3'-5⅛"	16'-6"	17'-1"	23'-4"	16'-10⅝"	25'-1"	4.079	5.675	4.301	5.991
* 8'	9"	8"	8'-10"	2'-8"	4'-8"	3'-9"	3'-6⅜"	4'-2⅛"	18'-6"	19'-1⅝"	26'-2"	19'-1⅛"	28'-5"	5.111	7.111	5.360	7.470

* Quantity per wing does not include headwall or that portion of apron or toewall for the length W_5.
@ See Table "A" for special values of F_1 & F_2 and W_4 & W_5 for Single 5'x7' and 6'x8' Box Culverts.



PART PLAN

END ELEVATION

SINGLE BARREL CULVERT - 15° SKEW RIGHT FORWARD
Details of Culvert with 15° Skew Left Forward is reversed, see Drwg. No. W-X15

TYPICAL WING DETAILS

Note:- For remainder of General Plans and Elevations of Single, Double, Triple, Quadruple and Quintuple Span Culverts, see Std. Drawing No. W-X15. For values of RL, K, and W_5 for each box, see the above Std. also.

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

QUANTITIES

CLEAR SPAN	CLEAR HEIGHT	THICKNESS OF WING AT HEADWALL	THICKNESS OF WING FOOTING	@ REINFORCING STEEL - FOR 4 WINGS	CLASS S CONCRETE - 4 WINGS HEADWALLS, WINGWALLS, FOOTINGS, TOEWALLS AND APRONS					
					SINGLE BARREL CULVERT	DOUBLE BARREL CULVERT	TRIPLE BARREL CULVERT	QUADRUPLE BARREL CULVERT	QUINTUPLE BARREL CULVERT	
S	H	C_W	WB	LB.	Cu.Yd.	Cu.Yd.	Cu.Yd.	Cu.Yd.	Cu.Yd.	
4'	2'	6"	7"	117	4.79	5.78	6.77	7.77	8.76	
	3'	6"	7"	176	6.65	7.69	8.63	9.63	10.62	
	4'	6"	7"	267	8.85	9.84	10.84	11.83	12.82	
	5'	6"	7"	379	11.90	12.38	13.38	14.37	15.36	
	6'	7"	8"	626	15.95	16.96	17.98	18.51	19.53	
5'	3'	6"	7"	176	6.87	8.07	9.28	10.48	11.69	
	4'	6"	7"	267	9.08	10.28	11.49	12.69	13.90	
	5'	6"	7"	379	11.61	12.81	14.02	15.23	16.44	
	6'	7"	8"	626	15.67	16.90	18.14	19.38	20.61	
	7'	7⅞	8½"	1210	20.11	21.36	22.62	23.88	25.14	
6'	3'	6"	7"	176	7.09	8.52	9.92	11.34	12.78	
	4'	6"	7"	267	9.29	10.73	12.13	13.56	14.98	
	5'	6"	7"	379	11.83	13.26	14.67	16.10	17.53	
	6'	7"	8"	626	15.89	17.35	18.79	20.25	21.70	
	7'	7⅞	8½"	1210	20.33	21.81	23.28	24.76	26.24	
	8'	8"	9"	1533	25.56	27.05	28.53	30.02	31.50	
7'	4'	6"	7"	267	9.52	11.18	12.81	14.47	16.09	
	5'	6"	7"	379	12.05	13.72	15.35	17.01	18.63	
	6'	7"	8"	626	16.12	17.80	19.45	21.13	22.78	
	7'	7⅞	8½"	1210	20.56	22.26	23.94	25.49	27.33	
	8'	8"	9"	1533	25.80	27.50	29.20	30.90	32.60	
8'	4'	6"	7"	267	9.75	11.65	13.51	15.41	17.23	
	5'	7"	7"	379	12.74	14.68	16.55	18.47	20.31	
	6'	7"	8"	626	16.39	18.26	20.14	22.06	23.90	
	7'	7⅞	8½"	1210	20.78	22.73	24.62	26.55	28.42	
	8'	8"	9"	1533	26.03	27.96	29.86	31.80	33.71	
9'	5'	7"	7"	379	12.99	15.15	17.25	19.40	21.45	
	6'	7⅞	8"	626	16.83	19.07	21.19	23.36	25.42	
	7'	7⅞	8½"	1210	21.01	23.19	25.31	27.48	29.54	
	8'	8"	9"	1533	26.25	28.42	30.55	32.72	34.78	
10'	5'	7"	7"	379	13.23	16.42	17.95	20.24	22.59	
	6'	7⅞	8"	626	17.19	19.54	21.89	24.20	26.56	
	7'	7⅞	8½"	1210	21.44	23.66	26.01	28.32	30.68	
	8'	8"	9"	1533	26.48	28.89	31.25	33.56	35.92	
11'	6'	8"	8"	626	17.67	20.39	22.92	25.48	—	
	7'	8"	8½"	1210	21.88	24.55	27.13	29.69	—	
	8'	8"	9"	1533	26.70	29.37	31.96	34.52	—	
12'	6'	8"	8"	626	17.91	20.84	23.69	26.46	—	
	7'	8"	8½"	1210	22.11	25.04	27.85	30.67	—	
	8'	8"	9"	1533	26.93	29.86	32.67	35.49	—	

@ For reinforcing steel in Headwalls and Aprons, see Drawings listed below.

GENERAL NOTES:-
CONCRETE:- All concrete to be Class S, and shall be poured in the dry. All exposed corners to have ¾ chamfers.
REINFORCING STEEL:- Reinforcing steel to be deformed bars of intermediate or hard grade.
CONSTRUCTION JOINTS:- Construction joints between wingwall, footings and sidewalls shall be only where shown on plans.
SPECIFICATIONS:- Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.
UNIT STRESSES:-
Class S Concrete (n=10) 1200#/sq.in.
Reinforcing Steel 20,000#/sq.in.

NOTE:-
This drawing to be used in conjunction with Std. Barrel Sections, Drawing Nos.

SINGLES	DOUBLES	TRIPLES	QUADRUPLES	QUINTUPLES
R-115X-0	R-215X-0	R-315X-0	R-415X-0	R-515X-0
R-115X-1	R-215X-1	R-315X-1	R-415X-1	R-515X-1
	R-215X-2	R-315X-2		

BAR LIST FOR ONE SHORT AND ONE LONG WING - 2 EACH REQUIRED

CLEAR HEIGHT	WING LOCATION	SF1 & LF1 BENT: In bottom of footing, bent up into back face of wing. One bar of each length. SIZE	SPACING	NO.REQD	LENGTHS VARY MIN.	LENGTHS VARY MAX.	X MIN.	X MAX.	Y MIN.	Y MAX.
H	SHORT or LONG									
2'	Short	#3	12"	7	1'-7"	3'-11"	0'-8"	1'-0"	1'-0"	3'-0"
	Long	#3	12"	10	1'-7"	3'-11"	0'-8"	1'-0"	0'-10"	3'-0"
3'	Short	#3	12"	9	2'-2"	5'-8"	0'-10"	1'-4"	1'-5"	4'-0"
	Long	#3	12"	13	1'-11"	6'-2"	0'-10"	1'-3"	1'-2"	4'-0"
4'	Short	#3	12"	11	2'-7"	6'-7"	0'-10"	1'-8"	1'-9"	5'-0"
	Long	#3	12"	15	2'-6"	6'-6"	0'-10"	1'-7"	1'-8"	5'-0"
5'	Short	#3	12"	13	3'-1"	7'-1"	1'-1"	1'-8"	2'-1"	6'-0"
	Long	#3	12"	18	3'-0"	7'-10"	1'-1"	1'-11"	2'-0"	6'-0"
6'	Short	#4	12"	16	3'-6"	9'-6"	1'-6"	2'-4"	2'-8"	7'-1"
	Long	#4	12"	21	3'-5"	9'-8"	1'-6"	2'-3"	2'-7"	7'-1"
7'	Short	#4	12"	18	3'-9"	10'-10"	1'-8"	2'-10"	2'-7"	8'-1"
	Long	#4	12"	24	3'-10"	10'-8"	1'-8"	2'-8"	2'-8"	8'-1"
8'	Short	#4	12"	20	4'-6"	12'-5"	1'-5"	3'-4"	3'-0"	9'-2"
	Long	#4	12"	27	4'-6"	12'-8"	1'-5"	3'-3"	3'-0"	9'-2"

CLEAR HEIGHT	WING LOCATION	SF2 & LF2 BENT: In bottom of footing, bent up into back face of wing. Alt. with F1 bars. SIZE	SPACING	NO.REQD	LENGTH	X	Y
H	SHORT or LONG						
2'	Short	—	—	—	—	—	—
	Long	—	—	—	—	—	—
3'	Short	—	—	—	—	—	—
	Long	—	—	—	—	—	—
4'	Short	—	—	—	—	—	—
	Long	—	—	—	—	—	—
5'	Short	#3	12"	4	3'-6"	1'-1"	2'-4"
	Long	#3	12"	5	3'-6"	1'-1"	2'-4"
6'	Short	#3	12"	4	4'-6"	1'-9"	3'-3"
	Long	#3	12"	5	4'-6"	1'-9"	3'-3"
7'	Short	#3	12"	5	5'-6"	2'-1"	3'-11"
	Long	#3	12"	6	5'-6"	2'-1"	3'-11"
8'	Short	#3	12"	6	6'-6"	2'-5"	4'-7"
	Long	#3	12"	7	6'-6"	2'-5"	4'-7"

CLEAR HEIGHT	WING LOCATION	SF3 & LF3 STRAIGHT: Longitudinal in top of wing footing heel. SIZE	NO.REQD	LENGTH	SF4 & LF4 STRAIGHT: Longitudinal in bottom of wing footing toe. SIZE	NO.REQD	LENGTH
H	SHORT or LONG						
2'	Short	#3	1	9'-2"	#3	2	7'-10"
	Long	#3	1	11'-8"	#3	2	10'-10"
3'	Short	#3	1	11'-8"	#3	2	10'-0"
	Long	#3	1	14'-8"	#3	2	14'-0"
4'	Short	#3	1	13'-4"	#3	3	12'-2"
	Long	#3	1	17'-4"	#3	3	17'-2"
5'	Short	#3	1	15'-5"	#3	3	14'-6"
	Long	#3	1	20'-8"	#3	3	20'-4"
6'	Short	#4	1	17'-6"	#3	3	16'-6"
	Long	#4	1	23'-0"	#3	3	22'-6"
7'	Short	#4	1	19'-7"	#4	4	18'-9"
	Long	#4	1	25'-10"	#4	4	26'-0"
8'	Short	#4	1	21'-8"	#4	4	21'-0"
	Long	#4	1	28'-3"	#4	4	30'-3"

CLEAR HEIGHT	WING LOCATION	SH1 & LH1 Horizontal in back face of wing. SIZE	SPACING	NO.REQD	LENGTH
H	SHORT or LONG				
2'	Short	#3	12"	1	6'-5"
	Long	#3	12"	1	8'-11"
3'	Short	#3	12"	1	8'-11"
	Long	#3	12"	1	11'-9"
4'	Short	#3	12"	1	10'-7"
	Long	#3	12"	1	14'-1"
5'	Short	#3	12"	1	13'-2"
	Long	#3	12"	1	17'-5"
6'	Short	#3	12"	2	12'-8"
	Long	#3	12"	2	16'-8"
7'	Short	#3	12"	2	15'-5"
	Long	#3	12"	2	20'-2"
8'	Short	#3	12"	2	18'-2"
	Long	#3	12"	2	23'-11"

CLEAR HEIGHT	WING LOCATION	SH2 & LH2 Horizontal in back face of wing. One bar of each length. SIZE	SPACING	NO.REQD	LENGTHS VARY MAX.	LENGTHS VARY MIN.
H	SHORT or LONG					
2'	Short	#3	12"	—	3'-6"	
	Long	#3	12"	—	4'-8"	
3'	Short	#3	12"	1	5'-6"	3'-6"
	Long	#3	12"	1	7'-4"	4'-8"
4'	Short	#3	12"	2	7'-6"	3'-6"
	Long	#3	12"	2	9'-10"	4'-8"
5'	Short	#3	12"	3	9'-8"	3'-6"
	Long	#3	12"	3	12'-8"	4'-8"
6'	Short	#3	12"	3	11'-8"	3'-6"
	Long	#3	12"	3	15'-4"	4'-8"
7'	Short	#3	12"	4	13'-6"	3'-6"
	Long	#3	12"	4	17'-10"	4'-8"
8'	Short	#3	12"	4	15'-6"	3'-6"
	Long	#3	12"	4	20'-4"	4'-8"

CLEAR HEIGHT	WING LOCATION	SH3 & LH3 In back face of wing at top - on slope. SIZE	NO.REQD	LENGTH
H	SHORT or LONG			
2'	Short	#3	1	6'-10"
	Long	#3	1	9'-1"
3'	Short	#3	1	9'-5"
	Long	#3	1	12'-0"
4'	Short	#3	1	11'-8"
	Long	#3	1	14'-11"
5'	Short	#3	1	13'-8"
	Long	#3	1	17'-10"
6'	Short	#3	1	15'-6"
	Long	#3	1	20'-9"
7'	Short	#3	1	17'-5"
	Long	#3	1	23'-8"
8'	Short	#3	1	20'-3"
	Long	#3	1	26'-8"

CLEAR HEIGHT	WING LOCATION	SH4 & LH4 Dowels thru construction joint at headwall. SIZE	SPACING	NO.REQD	LENGTH	X
H	SHORT or LONG					
2'	Short	#3	12"	1	6'-10"	2'-8"
	Long	#3	12"	2	9'-1"	2'-8"
3'	Short	#3	12"	2	9'-5"	3"
	Long	#3	12"	3	12'-0"	"
4'	Short	#3	12"	3	11'-8"	4"
	Long	#3	12"	4	14'-11"	"
5'	Short	#3	12"	4	13'-8"	5"
	Long	#3	12"	5	17'-10"	"
6'	Short	#3	12"	5	15'-6"	6"
	Long	#3	12"	6	20'-9"	2'-8"
7'	Short	#4	12"	5	17'-8"	3'-6"
	Long	#4	12"	7	23'-8"	"
8'	Short	#4	12"	6	20'-3"	3'-6"
	Long	#4	12"	8	26'-8"	"

BAR BENDING DIAGRAM: SF1 & SF2 LF1 & LF2 @ 3"Pn; SH4 & LH4 7/12; Note:- Dimensions are to bar centers.

QUANTITY: REINFORCING STEEL PER WING - LBS. SHORT WING	LONG WING
24.9	33.4
37.7	50.3
57.3	76.4
81.1	108.4
134.8	178.1
253.5	345.2
328.0	438.3

Note:- Bars for short wing shall be marked with prefix letter 'S', while those for long wing shall be marked with letter 'L'.

Designed By:- W.C.H. 5-13-63
Drawn By:- W.C.H. 6-20-63
Quantities By:- W.C.H. 9-23-63
Checked By:- RJHS - 8-7-63
Checked By:-
Checked By:-

REVISIONS:- Membrane Added. 5-10-66 W.C.H.

CLASS S CONCRETE

ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF STANDARD WINGS
FOR
REINFORCED CONCRETE BOX CULVERTS
15° SKEW

4', 5', 6', 7', 8', 9', 10', 11' & 12' SPANS
SINGLES, DOUBLES, TRIPLES, QUADRUPLES & QUINTUPLES

3:1 SLOPES
ALL DEPTHS OF COVER FOR H = 8'-0" OR LESS

STANDARD DRAWING NO. W-X153-1

FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			106	
JOB No.					

BAR LIST FOR BARREL SECTION 60'0" IN LENGTH

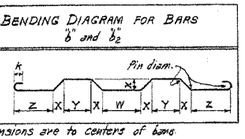
DEPTH OF COVER	CLEAR SPAN	CLEAR HEIGHT	"a" bars STRAIGHT In Top and Bottom Slab of Barrel: SIZE	SPACING	No. REQ'D	LENGTH	"b" bars BENT - See Diagram below. In Bottom of Top Slab bent up over Division Walls - hooked. Alternate with "a" and "c" bars. W	X	Y	Z	"b2" bars BENT - See Diagram below. In Top of Bottom Slab bent down under Division Walls - hooked. Alternate with "a" and "c" bars. SIZE	SPACING	No. REQ'D	LENGTH	W	X	Y	Z	"c" bars STRAIGHT In Top and Bottom Slab of Barrel. Alt. with "b" and "b2" bars. SIZE	SPACING	No. REQ'D	LENGTH	"d" bars Longitudinal in Top Slab of Barrel. SIZE	SPACING	No. REQ'D	LENGTH	"d1" bars Longitudinal in Sidewalls and Division Walls SIZE	SPACING	No. REQ'D	LENGTH	"e" bars Longitudinal in Bottom Slab of Barrel. SIZE	SPACING	No. REQ'D	LENGTH	"f" bars STRAIGHT Verticals in Sidewalls and Division Walls SIZE	SPACING	No. REQ'D	LENGTH	"k" bars STRAIGHT 2 in Top of Headwalls and Aprons - Each. SIZE	No. REQ'D	LENGTH
D	S	H																																												
0'-0" TO 5'-0" MAXIMUM	3 @ 4'-0"	2'			120	16'-7"									59	15'-9"	2'-1"	0'-3"	2'-8"	3'-5½"			120	9'-8"							12			22														
		3'			120	16'-7"									59	15'-9"	2'-1"	"	2'-8"	3'-5½"			120	9'-8"							18			22														
		4'			120	16'-7"									59	15'-9"	2'-1"	"	2'-8"	3'-5½"			120	9'-8"							24			22														
		5'	#5	12"	120	16'-7"	#5	12"	59	15'-10"	2'-1"	"	2'-8"	3'-5½"	#5	12"	59	15'-9"	2'-1"	"	2'-8"	3'-5½"	#5	12"	120	9'-8"	#5	12"	22	#4	12"	30	#4	12"	22	#4	12"	22									
		6'			120	16'-11"			59	16'-2"	2'-1"	0'-5"	2'-8"	3'-6½"			59	16'-1"	2'-1"	0'-2½"	2'-8"	3'-6½"			120	9'-10"			22			36			22													
	3 @ 5'-0"	3'			120	17'-8"			59	18'-8"	2'-7"	0'-3½"	2'-8"	4'-3"			59	18'-11"	2'-7"	0'-3"	2'-9"	4'-3"			120	11'-9"			26			18			25													
		4'			120	17'-8"			59	18'-8"	2'-7"	"	2'-8"	4'-3"			59	18'-11"	2'-7"	"	2'-9"	4'-3"			120	11'-9"			26			24			25													
		5'	#6	12"	120	17'-8"	#5	12"	59	18'-8"	2'-7"	"	2'-8"	4'-3"	#5	12"	59	18'-11"	2'-7"	"	2'-9"	4'-3"	#6	12"	120	11'-9"	#6	12"	26	#4	12"	30	#4	12"	25	#4	12"	25									
		6'			120	18'-0"			59	18'-8"	2'-7"	"	2'-8"	4'-4"			59	19'-0"	2'-7"	"	2'-10"	4'-4"			120	11'-10"			26			36			25													
		7'			120	18'-3"			59	18'-7"	2'-7"	0'-3½"	2'-8"	4'-4½"			59	19'-6"	2'-7"	0'-3"	2'-11"	4'-4½"			120	12'-1"			26			42			25													
	3 @ 6'-0"	3'			132	20'-9"			65	22'-2"	3'-1½"	0'-4"	3'-1½"	5'-0"			65	22'-1"	3'-1½"	0'-2½"	3'-2½"	5'-0"			132	13'-8"			30			18			28													
		4'			132	20'-9"			65	22'-2"	3'-1½"	"	3'-1½"	5'-0"			65	22'-1"	3'-1½"	"	3'-2½"	5'-0"			132	13'-10"			30			24			28													
		5'	#6	11"	132	20'-9"	#5	11"	65	22'-2"	3'-1½"	"	3'-1½"	5'-0"	#5	11"	65	22'-1"	3'-1½"	"	3'-2½"	5'-0"	#6	11"	132	13'-10"	#6	11"	30	#4	12"	30	#4	12"	28	#4	12"	28									
		6'			132	21'-1"			65	22'-6"	3'-1½"	"	3'-2½"	5'-1"			65	22'-5"	3'-1½"	"	3'-3⅝"	5'-1"			132	14'-0"			30			36			28													
		7'			132	21'-6"			65	22'-9"	3'-1½"	"	3'-3½"	5'-1½"			65	22'-8"	3'-1½"	"	3'-4⅜"	5'-1½"			132	14'-2"			30			42			28													
		8'			132	21'-5"			65	22'-10"	3'-1½"	0'-5"	3'-3⅜"	5'-2"			65	22'-9"	3'-1½"	0'-3½"	3'-4⅝"	5'-2"			132	14'-5"			30			48			28													
	3 @ 7'-0"	4'			120	23'-11"			59	25'-6"	3'-7½"	0'-6½"	3'-7"	5'-9"			59	25'-6"	3'-7½"	0'-3½"	3'-7⅞"	5'-9"			120	15'-10"			32			24			31													
		5'			120	23'-11"			59	25'-6"	3'-7½"	"	3'-7"	5'-9"			59	25'-6"	3'-7½"	"	3'-7⅞"	5'-9"			120	15'-10"			32			30			31													
		6'	#6	12"	120	24'-3"	#5	12"	59	25'-10"	3'-7½"	"	3'-8"	5'-10"	#6	12"	59	25'-10"	3'-7½"	"	3'-8⅜"	5'-10"	#5	11½"	120	16'-0"	#5	12"	32	#4	12"	36	#4	12"	31	#4	12"	31									
		7'			120	24'-6"			59	26'-1"	3'-7½"	"	3'-9"	5'-10½"			59	26'-0"	3'-7½"	"	3'-8⅞"	5'-10½"			120	16'-2"			32			42			31													
		8'			120	24'-7"			59	26'-2"	3'-7½"	"	3'-9"	5'-11"			59	26'-1"	3'-7½"	"	3'-8⅞"	5'-11"			120	16'-4"			32			48			31													
		9'			120	24'-11"			59	26'-6"	3'-7½"	0'-6"	3'-10"	6'-0"			59	26'-6"	3'-7½"	0'-4"	3'-10⅝"	6'-0"			120	16'-6"			32			54			31													
	3 @ 8'-0"	4'			132	27'-0"			65	28'-9"	4'-1½"	0'-5"	4'-0"	6'-7"			65	28'-9"	4'-1½"	0'-5"	4'-0"	6'-7"			132	17'-4"			36			24			35													
		5'			132	27'-4"			65	29'-1"	4'-1½"	"	4'-1"	6'-8"			65	29'-1"	4'-1½"	"	4'-1"	6'-8"			132	18'-1"			36			30			35													
		6'			132	27'-8"			65	29'-4"	4'-1½"	"	4'-2"	6'-8"			65	29'-4"	4'-1½"	"	4'-2"	6'-8"			132	18'-3"			36			36			35													
		7'	#6	11"	132	27'-11"	#5	11"	65	29'-6"	4'-1½"	"	4'-2"	6'-9"	#6	11"	65	29'-5"	4'-1½"	"	4'-2"	6'-9"	#5	11½"	132	18'-3"	#6	11"	36	#4	12"	42	#4	12"	35	#4	12"	35									
		8'			132	28'-2"			65	29'-9"	4'-1½"	"	4'-3"	6'-10"			65	29'-9"	4'-1½"	"	4'-3"	6'-10"			132	18'-5"			36			48			35													
		9'			132	28'-5"			65	30'-1"	4'-1½"	0'-5"	4'-3"	6'-11"			65	30'-1"	4'-1½"	0'-5"	4'-4"	6'-11"			132	18'-7"			36			60			35													
		10'			132	28'-8"			65	30'-4"	4'-1½"	0'-5"	4'-4"	6'-11"			65	30'-4"	4'-1½"	0'-5"	4'-4"	6'-11"			132	18'-9"			36			72			35													
	3 @ 9'-0"	5'			132	30'-5"			65	32'-2"	4'-8"	0'-5½"	4'-6"	7'-5"			65	32'-2"	4'-8"	0'-5"	4'-6"	7'-5"			132	20'-2"			41			30			40													
		6'			132	30'-8"			65	32'-5"	4'-8"	"	4'-7"	7'-5½"			65	32'-5"	4'-8"	"	4'-7"	7'-5½"			132	20'-4"			41			36			40													
		7'			132	30'-8"			65	32'-5"	4'-8"	"	4'-7"	7'-5½"			65	32'-5"	4'-8"	"	4'-7"	7'-5½"			132	20'-4"			41			42			40													
		8'	#6	11"	132	30'-9"	#6	11"	65	32'-8"	4'-8"	"	4'-7"	7'-6"	#6	11"	65	32'-6"	4'-8"	"	4'-7"	7'-6"	#6	11"	132	20'-6"	#6	11"	41	#4	12"	48	#4	12"	40	#4	12"	40									
		9'			132	31'-1"			65	32'-10"	4'-8"	"	4'-8"	7'-7"			65	32'-10"	4'-8"	"	4'-8"	7'-7"			132	20'-6"			41			54			40													
		10'			132	31'-6"			65	33'-2"	4'-8"	"	4'-9"	7'-8"			65	33'-2"	4'-8"	"	4'-9"	7'-8"			132	20'-8"			41			60			40													
		11'			132	31'-8"			65	33'-6"	4'-8"	0'-5½"	4'-9"	7'-9"			65	33'-6"	4'-8"	0'-5"	4'-9"	7'-9"			132	20'-8"			41			66			40													
	3 @ 10'-0"	5'			120	33'-7"			59	35'-5"	5'-2"	0'-6"	4'-11"	8'-3"			59	35'-5"	5'-2"	0'-4"	4'-11"	8'-3"			120	22'-3"			44			30			43													
		6'			120	33'-10"			59	35'-8"	5'-2"	"	5'-0"	8'-3½"			59	35'-8"	5'-2"	"	5'-0"	8'-3½"			120	22'-5"			44			36			43													
		7'			120	34'-1"			59	35'-11"	5'-2"	"	5'-0"	8'-3½"			59	35'-11"	5'-2"	"	5'-0"	8'-3½"			120	22'-7"			44			42			43													
		8'	#6	12"	120	34'-4"	#6	12"	59	36'-2"	5'-2"	"	5'-1"	8'-4"	#6	12"	59	36'-1"	5'-2"	"	5'-1"	8'-4"	#7	12"	120	22'-9"	#5	11½"	44	#4	12"	48	#4	12"	43	#4	12"	43									
		9'			120	34'-7"			59	36'-5"	5'-2"	"	5'-2"	8'-6"			59	36'-5"	5'-2"	"	5'-2"	8'-6"			120	22'-11"			44			54			43													
		10'			120	34'-9"			59	36'-8"	5'-2"	"	5'-2"	8'-7"			59	36'-7"	5'-2"	"	5'-2"	8'-7"			120	23'-1"			44			60			43													
		11'			120	34'-11"			59	36'-10"	5'-2"	"	5'-2"	8'-7"			59	36'-9"	5'-2"	"	5'-2"	8'-7"			120	23'-3"			44			66			43													
		12'			120	34'-11"			59	36'-9"	5'-2"	0'-6"	5'-2"	8'-8"			59	36'-9"	5'-2"	0'-4"	5'-2"	8'-8"			120	23'-5"			44			72			43													
	3 @ 11'-0"	6'			132	37'-0"			65	38'-11"	5'-8"	0'-6½"	5'-5½"	9'-1"			65	38'-11"	5'-8"	0'-6"	5'-5½"	9'-1"			132	24'-6"			48			36			46													
		7'			132	37'-0"			65	38'-11"	5'-8"	"	5'-5½"	9'-1"			65	38'-11"	5'-8"	"	5'-5½"	9'-1"			132	24'-6"			48			42			46													
		8'			132	37'-0"			65	38'-11"	5'-8"	"	5'-5½"	9'-1"			65	38'-11"	5'-8"	"	5'-5½"	9'-1"			132	24'-6"			48			48			46													
		9'	#7	11"	132	37'-4"	#6	11"	65	39'-3"	5'-8"	"	5'-6½"	9'-2"	#6	11"	65	39'-3"	5'-8"	"	5'-7"	9'-2"	#7	11"	132	24'-8"	#5	11½"	48	#4	12"	54	#4	12"	46	#4	12"	46									
		10'			132	37'-8"			65	39'-7"	5'-8"	"	5'-7½"	9'-3"			65	39'-7"	5'-8"	"	5'-7½"	9'-3"			132	24'-10"			48			60			46													
		11'			132	37'-10"			65	39'-9"	5'-8"	"	5'-7½"	9'-4"			65	39'-9"	5'-8"	"	5'-7½"	9'-4"			132	24'-10"			48			66			46													
		12'			132	38'-0"			65	39'-11"	5'-8"	0'-6½"	5'-7½"	9'-5"			65	39'-11"	5'-8"	0'-6"	5'-7½"	9'-5"			132	24'-10"			48			72			46													
	3 @ 12'-0"	6'	⊕		132	40'-1"	⊕		65	42'-1"	6'-3"	0'-7"	6'-0½"	9'-10"	⊕		65	42'-1"	6'-3"	0'-7"	6'-0½"	9'-10"	⊕		132	24'-7"	⊕		51			36			49													
		7'			132	40'-1"			65	42'-1"	6'-3"	"	6'-0½"	9'-10"			65	42'-1"	6'-3"	"	6'-0½"	9'-10"			132	24'-7"			51			42			49													
		8'			132	40'-1"			65	42'-1"	6'-3"	"	6'-0½"	9'-10"			65	42'-1"	6'-3"	"	6'-0½"	9'-10"			132	24'-7"			51			48			49													
		9'	#7	11"	132	40'-5"	#6	11"	65	42'-5"	6'-3"	"	5'-11½"	9'-11"	#6	11"	65	42'-5"	6'-3"	"	5'-11½"	9'-11"	#7	11"	132	24'-9"	#5	11½"	51	#4	12"	54	#4	12"	49	#4	12"	49									
		10'			132	40'-9"			65	42'-9"	6'-3"	"	6'-0⅛"	10'-0"			65	42'-9"	6'-3"	"	6'-0⅛"	10'-0"			132	26'-10"			51			60			49													
		11'			132	40'-11"			65	42'-11"	6'-3"	"	6'-0⅛"	10'-1"			65	42'-11"	6'-3"	"	6'-0⅛"	10'-1"			132	26'-10"			51			66			49													
		12'			132	41'-1"			65	43'-1"	6'-3"	0'-7"	6'-0⅛"	10'-2"			65	43'-1"	6'-3"	0'-7"	6'-0⅛"	10'-2"			132	26'-11"			51			72			49													

NOTE:- The "a", "b", "b2", and "c" bars are to be placed parallel with the headwalls, ⊕ These bars may be spliced at ℄ of one division wall. (2'-4" and 2'-8" laps.)

NOTE:- The "a", "b", "b2", and "c" bars are to be placed parallel with barrel spacing to be parallel with barrel.

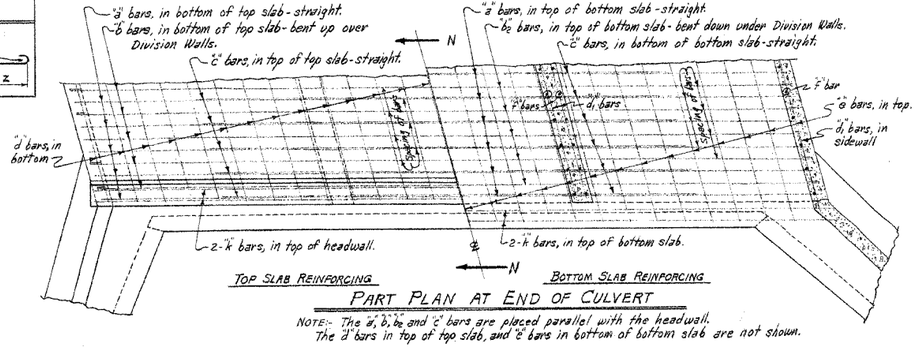
BAR SIZE	PIN DIAM.	K	ADD FOR 2 HOOKS
#5	2½"	4⅝"	0'-11½"
#6	3"	5"	1'-2"

BENDING DIAGRAM FOR BARS "b" and "b2"



NOTE:- Dimensions are to centers of bars.

SPANS @	SIZE	SPACING	No. REQ'D	LENGTH	X	Bars "n" Dowel bars in headwalls.
4'	#4	12"c	30	2'-5"	1'-2⅝"	
5'	#5	12"c	36	2'-6"	1'-3"	
6'	#4	12"c	42	2'-7"	1'-3⅜"	
7'	#4	12"c	48	2'-8"	1'-4"	
8'	#5	12"c	56	2'-9"	1'-4½"	
9'	#4	12"c	62	2'-10"	1'-5"	
10'	#5	12"c	68	2'-11"	1'-5½"	
11'	#4	12"c	74	3'-0"	1'-6"	
12'	#4	12"c	80	3'-1"	1'-6½"	



PART PLAN AT END OF CULVERT

NOTE:- The "a", "b", "b2" and "c" bars are placed parallel with the headwall. The "d" bars in top of top slab, and "e" bars in bottom of bottom slab are not shown.

DIMENSIONS — QUANTITIES

MAX. DESIGN DEPTH OF COVER	BARREL DIMENSIONS: CLEAR SPAN	CLEAR HEIGHT	SQ. FT. OPENING	OVERALL WIDTH	THICKNESS OF TOP SLAB	THICKNESS OF SIDEWALLS	THICKNESS OF DIVISION WALLS	THICKNESS OF BOTTOM SLAB	OVERALL HEIGHT	ROADWAY LENGTH	LENGTH OF HEADWALL	UNIT QUANTITIES: CLASS 'S' CONC. PER LIN. FT. OF BARREL	REINFORCING STEEL PER LIN. FT. OF BARREL	REINFORCING STEEL ADDITIONAL: PER Lap	REINFORCING STEEL ADDITIONAL: TWO HEADWALLS & APRONS
D	S	H	A	OW	T	C	M	B	OH	RL	K	CU/FT.	LB.	LB.	LB.
5'-0"	3 @ 4'-0"	2'	24	14'-4"	6½"	6"	8"	6"	3'-3⅝"	14'-10"	15'-4⅝"	0.726	190.54	66.63	203.46
		3'	36	15'-4"		6"	8"		4'-0⅛"	"	"	0.812	148.64	71.64	203.69
		4'	48	16'-4"		6"	8"		5'-0⅛"	"	"	0.899	156.57	76.65	208.68
		5'	60	17'-4"		6"	8"		6'-0⅛"	"	"	0.985	164.59	81.64	208.68
		6'	72	18'-4"		7"	9"		7'-0⅛"	15'-2⅝"	15'-8⅝"	1.158	178.34	86.67	206.96
	3 @ 5'-0"	3'	45	17'-4"	7"	6"	8"	6½"	4'-1½"	17'-1⅝"	18'-5⅝"	0.981	199.46	81.10	311.81
		4'	60	17'-4"		6"	8"		5'-1½"	"	"	1.068	207.97	86.11	311.81
		5'	75	17'-4"		6"	8"		6'-1½"	"	"	1.154	215.49	91.12	311.81
		6'	90	17'-8"		7"	9"		7'-1½"	18'-3"	18'-10"	1.329	225.70	96.13	316.82
		7'	105	17'-11"		7½"	10"		8'-1½"	18'-6⅝"	19'-1"	1.503	235.99	101.14	319.82
	3 @ 6'-0"	3'	54	20'-4"	8"	6"	8"	7"	4'-2½"	21'-0⅜"	21'-7"	1.169	241.73	90.56	366.25
		4'	72	20'-4"		6"	8"		5'-2½"	"	"	1.256	249.25	95.57	366.23
		5'	90	20'-4"		6"	8"		6'-2½"	"	"	1.392	253.76	100.58	366.23
		6'	108	20'-8"		7"	9"		7'-2½"	21'-3⅝"	21'-11⅛"	1.517	268.18	105.59	370.23
		7'	126	20'-11"		7½"	10"		8'-2½"	21'-7⅝"	22'-3⅛"	1.692	278.18	110.60	373.24
		8'	144	21'-0"		8"	10"		9'-2½"	21'-8⅝"	22'-3⅛"	1.829	293.82	115.61	374.24
	3 @ 7'-0"	4'	84	23'-4"	8"	6"	8"	7½"	5'-3⅛"	24'-1⅝"	24'-8⅛"	1.480	286.50	101.55	420.31
		5'	105	23'-4"		6"	8"		6'-3⅛"	"	"	1.566	294.52	106.56	420.31
		6'	126	23'-8"		7"	9"		7'-3⅛"	24'-6"	25'-0⅛"	1.743	305.04	111.57	422.32
		7'	147	23'-11"		7½"	10"		8'-3⅛"	24'-9⅝"	25'-3⅛"	1.919	315.04	116.58	422.32
		8'	168	24'-0"		8"	10"		9'-3⅛"	24'-10⅝"	25'-4⅛"	2.056	330.86	121.59	422.32
		9'	189	24'-4"		9"	11"		10'-3⅛"	25'-2⅝"	25'-8⅛"	2.294	356.28	126.60	432.33
	3 @ 8'-0"	4'	96	26'-4"	8½"	6"	8"	8"	5'-5"	27'-3⅝"	27'-9⅝"	1.727	339.08	111.85	480.07
		5'	120	26'-8"		7"	9"		6'-5"	27'-7⅝"	28'-1⅝"	1.893	349.88	116.86	484.08
		6'	144	26'-8"		7"	9"		7'-5"	27'-7⅝"	"	1.992	357.84	121.87	484.08
		7'	168	26'-11"		7½"	10"		8'-5"	27'-10⅝"	28'-4⅝"	2.168	368.04	126.88	487.08
		8'	192	27'-0"		8"	10"		9'-5"	27'-11⅝"	28'-5⅝"	2.306	383.95	131.89	488.08
		9'	216	27'-4"		9"	11"		10'-5"	28'-3⅝"	28'-10"	2.595	410.28	136.90	493.09
		10'	240	27'-8"		10"	12"		11'-5"	28'-7⅝"	29'-2⅝"	2.810	429.58	141.91	497.09
	3 @ 9'-0"	5'	135	29'-8"	9"	7"	9"	9"	6'-6"	30'-8½"	31'-5"	2.142	385.75	129.72	593.28
		6'	162	29'-11"		7½"	10"		7'-6"	30'-11⅝"	31'-6"	2.310	395.95	134.73	596.29
		7'	189	29'-11"		7½"	10"		8'-6"	"	"	2.418	403.97	139.74	596.29
		8'	216	30'-0"		8"	10"		9'-6"	31'-0⅝"	31'-7⅝"	2.556	419.95	144.75	597.29
		9'	243	30'-4"		9"	11"		10'-6"	31'-0⅝"	31'-11⅝"	2.796	446.84	149.76	551.29
		10'	270	30'-8"		10"	12"		11'-6"	31'-1"	32'-3⅝"	3.062	464.01	154.77	555.30
		11'	297	30'-10"		11"	12"		12'-6"	31'-1"	32'-5⅝"	3.275	486.30	159.78	557.30
		5'	150	32'-8"	9½"	7"	9"	9½"	6'-7"	33'-5⅝"	34'-2⅝"	2.409	459.68	137.99	797.27
		6'	180	32'-11"		7½"	10"		7'-7"	34'-1"	34'-7⅝"	2.578	465.15	142.95	751.35
	3 @ 10'-0"	7'	210	32'-11"		7½"	10"		8'-7"	"	"	2.686	478.17	147.96	751.35
		8'	240	33'-0"		8"	10"		9'-7"	34'-2"	34'-8½"	2.824	489.25	152.97	752.72
		9'	270	33'-4"		9"	11"		10'-7"	34'-6⅝"	35'-0⅛"	3.066	516.08	157.98	758.17
		10'	300	33'-8"		10"	12"		11'-7"	34'-10⅝"	35'-4⅝"	3.332	535.84	162.99	763.62
		11'	330	33'-10"		11"	12"		12'-7"	35'-0⅜"	35'-6⅝"	3.546	556.28	167.50	766.84
		12'	360	34'-0"		12"	12"		13'-7"	35'-2⅜"	35'-8⅝"	3.772	583.01	172.51	769.07
	3 @ 11'-0"	6'	198	36'-0"	10"	8"	10"	10"	7'-8"	37'-3⅝"	37'-9⅝"	2.889	536.37	151.31	822.95
		7'	231	36'-0"		8"	10"		8'-8"	"	"	3.000	544.38	156.32	822.95
		8'	264	36'-0"		8"	10"		9'-8"	"	"	3.111	553.95	161.33	822.95
		9'	297	36'-4"		9"	11"		10'-8"	37'-7⅝"	38'-1⅝"	3.354	587.18	166.34	828.90
		10'	330	36'-8"		10"	12"		11'-8"	37'-11⅝"	38'-6"	3.621	602.26	171.35	833.22
		11'	363	36'-10"		11"	12"		12'-8"	38'-2⅝"	38'-8"	3.835	627.86	176.36	837.94
		12'	396	37'-0"		12"	12"		13'-8"	38'-3⅝"	38'-10"	4.062	660.82	181.37	840.67
	3 @ 12'-0"	6'	216	39'-0"	10½"	8"	10"	10½"	7'-9"	40'-0⅝"	40'-11"	3.194	575.25	159.48	895.22
		7'	252	39'-0"		8"	10"		8'-9"	"	"	3.306	583.29	164.49	895.22
		8'	288	39'-0"		8"	10"		9'-9"	"	"	3.417	598.90	169.65	895.22
		9'	324	39'-4"		9"	11"		10'-9"	40'-3⅝"	41'-3"	3.660	626.25	179.66	900.67
		10'	360	39'-8"		10"	12"		11'-9"	41'-0⅛"	41'-7⅛"	3.929	644.38	179.67	906.12
		11'	396	39'-10"		11"	12"		12'-9"	41'-2⅜"	41'-9⅝"	4.144	667.04	184.68	908.95
		12'	432	40'-0"		12"	12"		13'-9"	41'-4⅜"	41'-11⅝"	4.370	700.13	189.69	911.57

GENERAL NOTES:-

CONCRETE:- All concrete to be Class S, and shall be poured in the dry. All exposed corners to have ¾" chamfers.

REINFORCING STEEL:- Reinforcing to be deformed bars of intermediate or hard grade.

BAR LAP:- In computing the quantities of steel from the tables add one lap for each additional 38'-8" length of barrel over 32'-0". Lap longitudinal bars 30 diameters.

CONSTRUCTION JOINTS:- Construction joints between wingwalls, sidewalls, division walls and slabs shall be only where shown on plans.

SPECIFICATIONS:- Arkansas State

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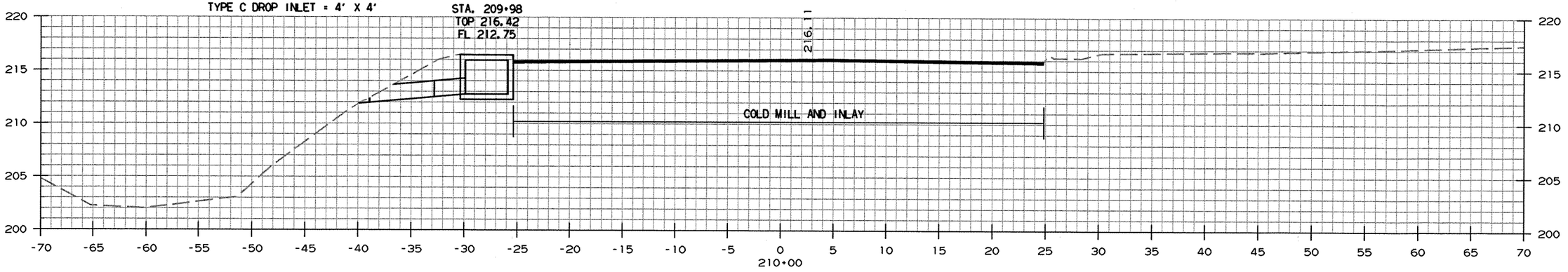
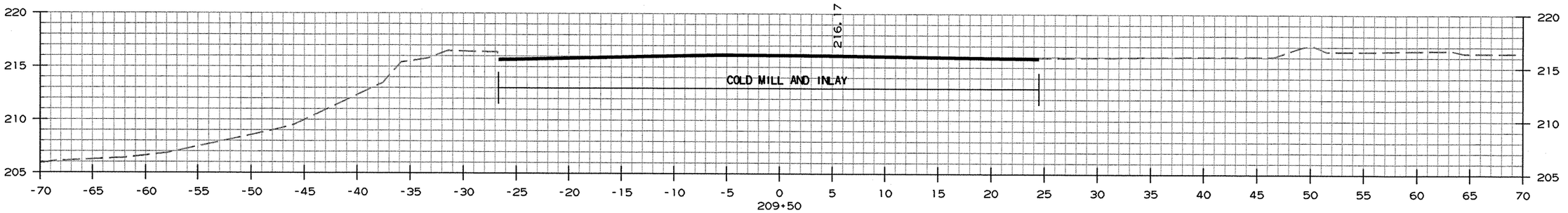
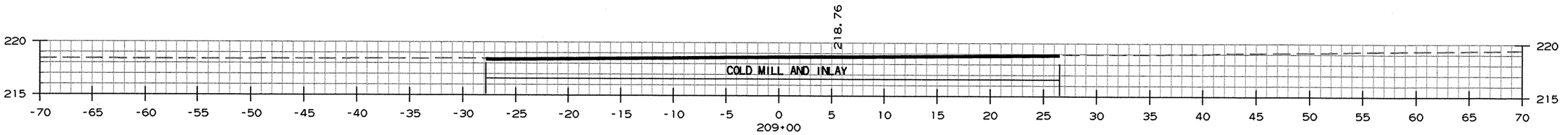
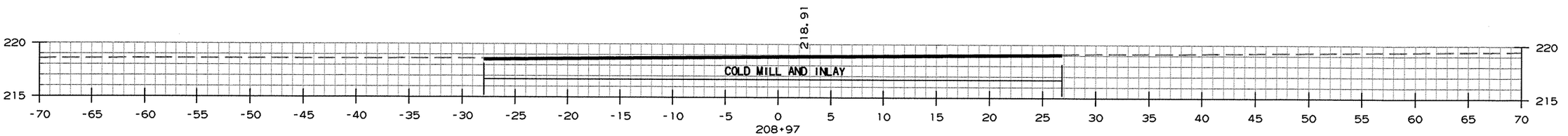
(2) CROSS SECTIONS

STA. 209+98 CONSTRUCT
DROP INLET ON LT. H = 3'-8"
WITH 8' EXTENSION AND
18" X 3' R.C. PIPE CULVERT OUTLET
(CLASS III) (TYPE 3 BEDDING) WITH FES
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'









STA. 208+97 - BEGIN COLD MILL AND INLAY
BEGIN JOB 020070

CROSS SECTION STA. 208+97 TO STA. 210+00

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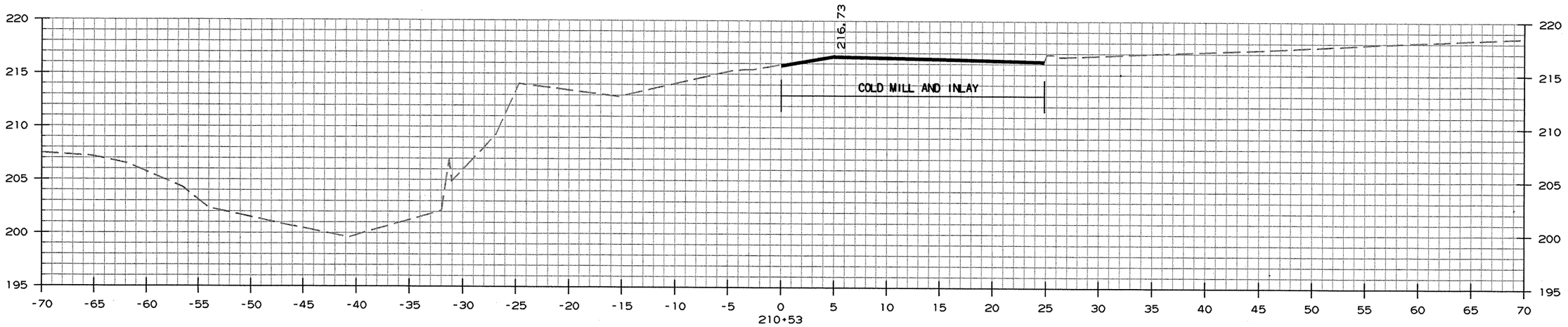
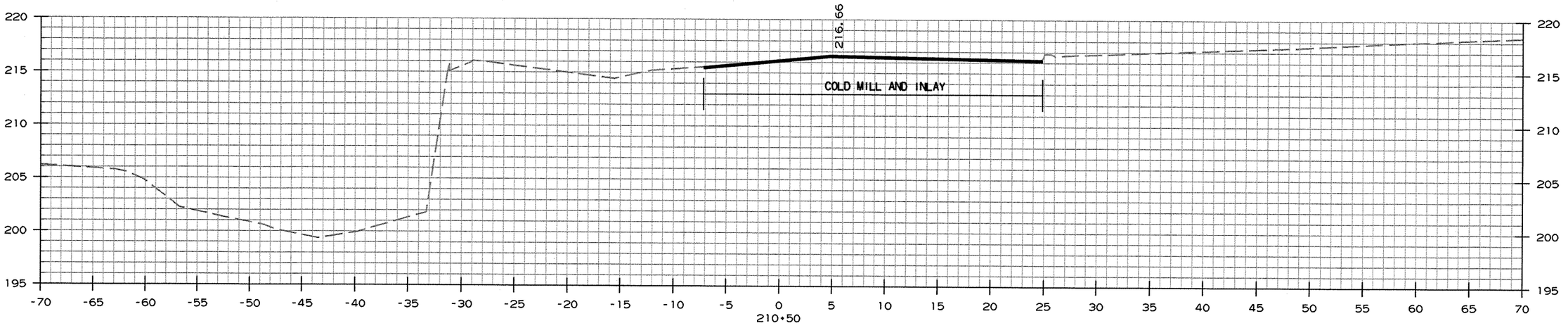
				6	ARK.			
				JOB NO.		020070	108	144

(2) CROSS SECTIONS

STA. 210+53 - END COLD MILL AND INLAY





CROSS SECTION STA. 210+50 TO STA. 210+53

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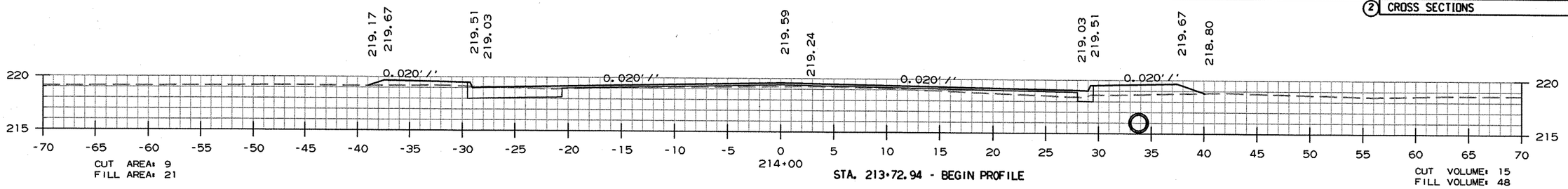
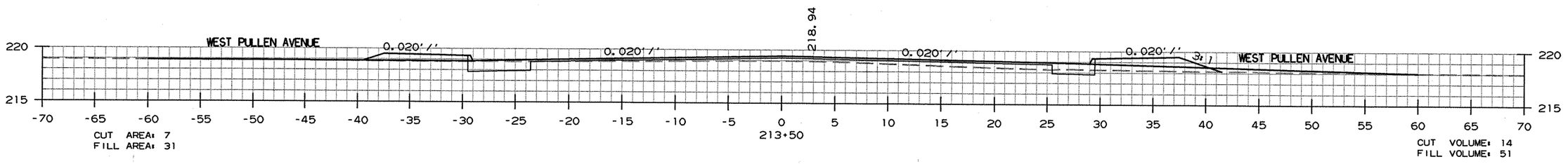
				6	ARK.			
				JOB NO.		020070	109	144

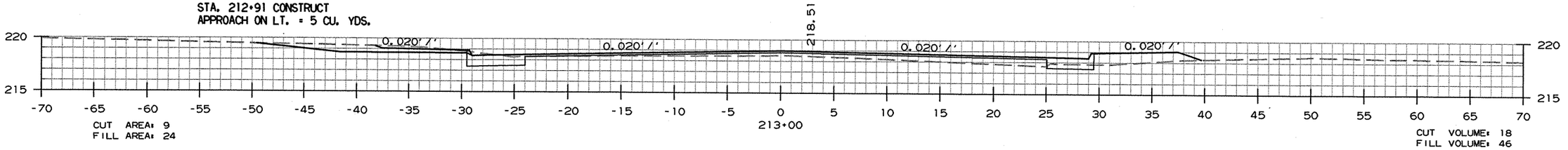
(2) CROSS SECTIONS

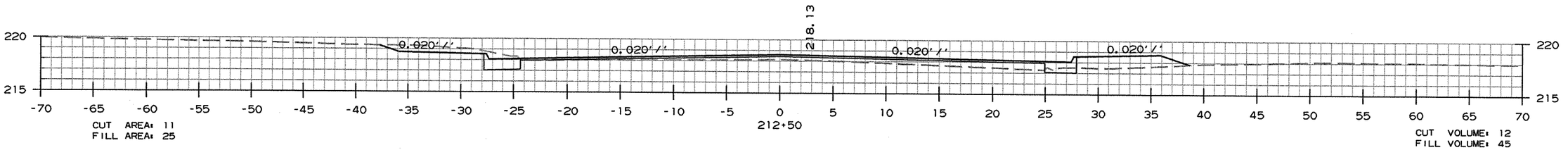


STA. 213+72.94 - BEGIN PROFILE



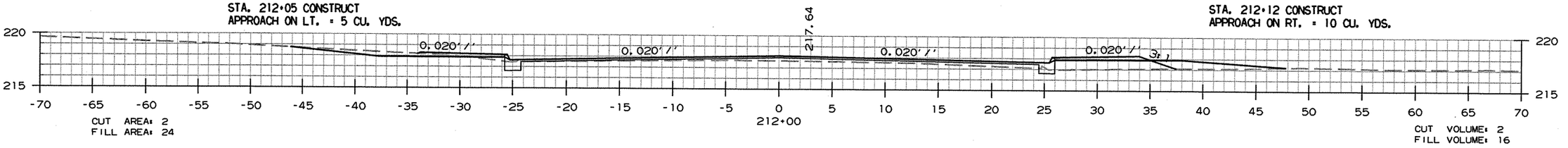
STA. 212+91 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

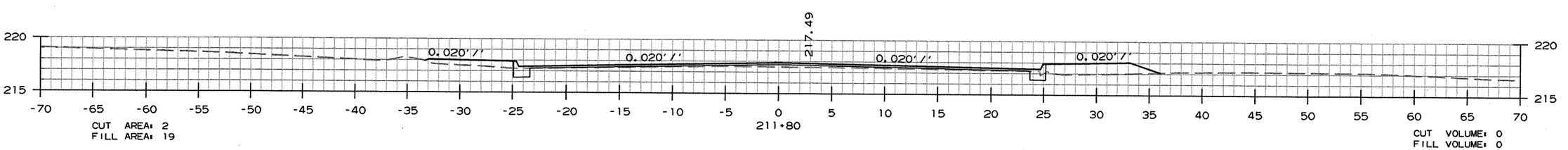




STA. 212+05 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 212+12 CONSTRUCT
APPROACH ON RT. = 10 CU. YDS.





CROSS SECTION STA. 211+80 TO STA. 214+00

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				6	ARK.			
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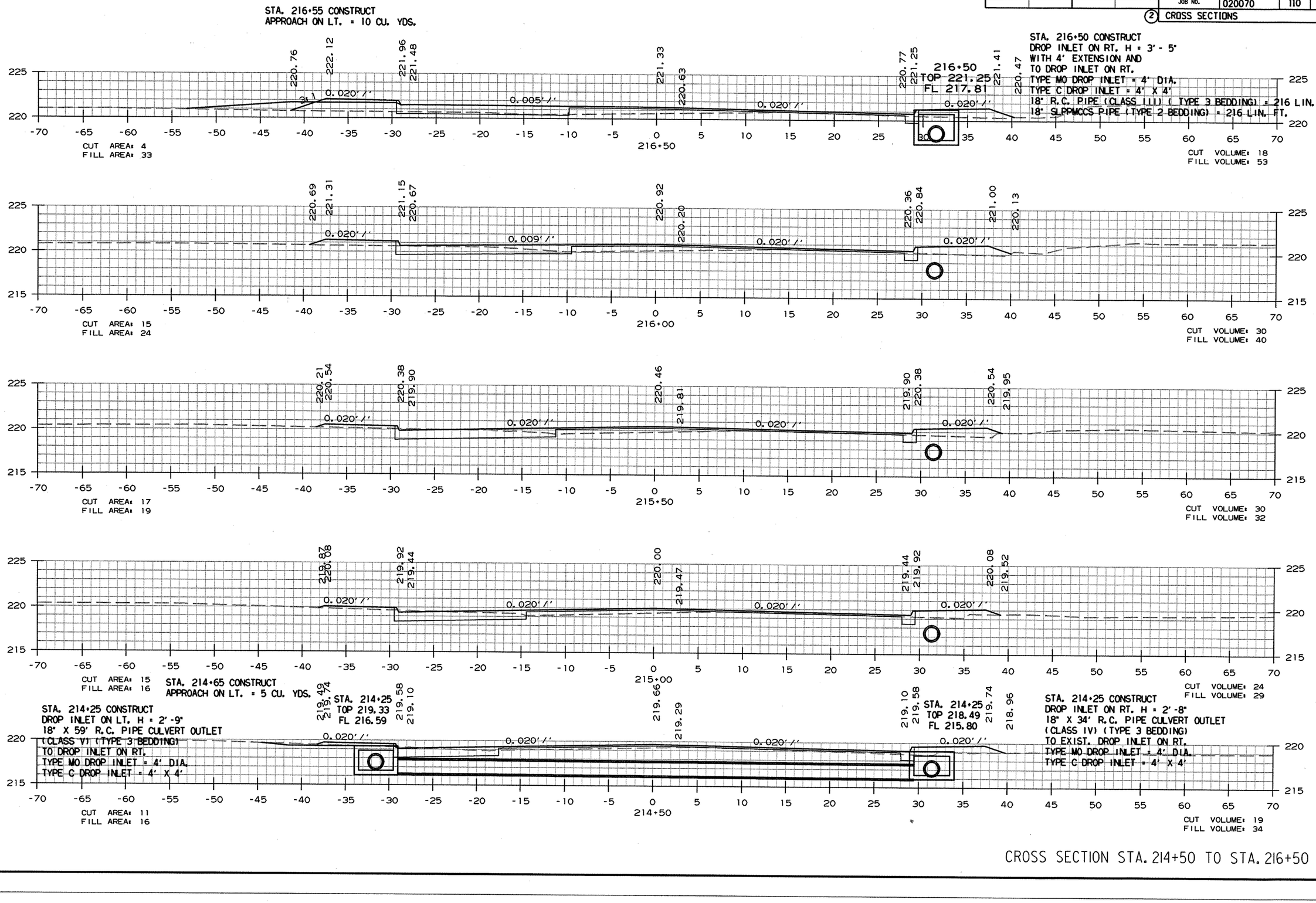
(2) CROSS SECTIONS



CROSS SECTION STA. 214+50 TO STA. 216+50

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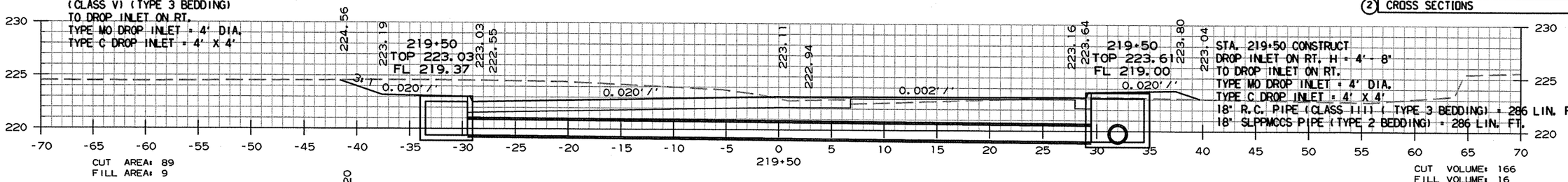
				6	ARK.			
				JOB NO.		020070	111	144

(2) CROSS SECTIONS

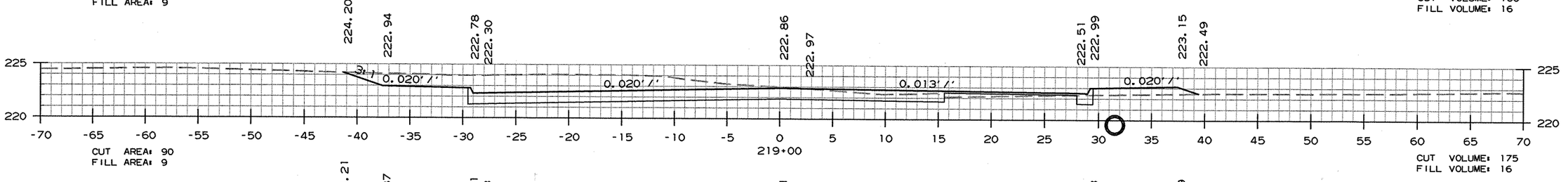
STA. 219+50 CONSTRUCT
DROP INLET ON LT. H = 3' - 8"
WITH 4' EXTENSION AND
18" X 60' R.C. PIPE CULVERT OUTLET
(CLASS V) (TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'



STA. 219+50 CONSTRUCT
DROP INLET ON RT. H = 4' - 8"
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 286 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 286 LIN. FT.

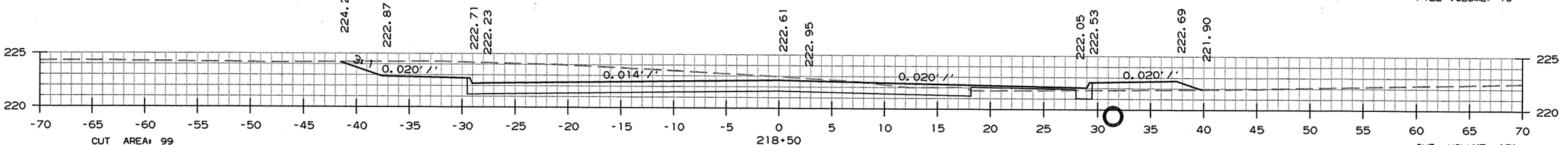
CUT AREA: 89
FILL AREA: 9

CUT VOLUME: 166
FILL VOLUME: 16



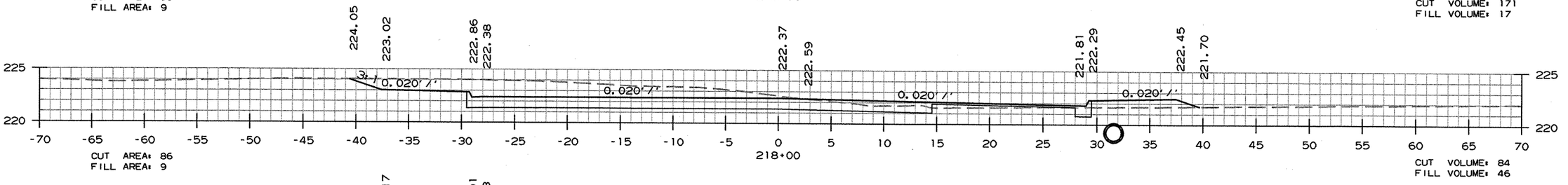
CUT AREA: 90
FILL AREA: 9

CUT VOLUME: 175
FILL VOLUME: 16



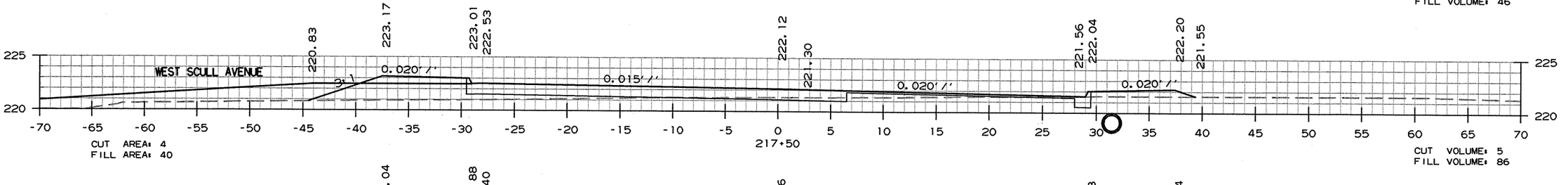
CUT AREA: 99
FILL AREA: 9

CUT VOLUME: 171
FILL VOLUME: 17



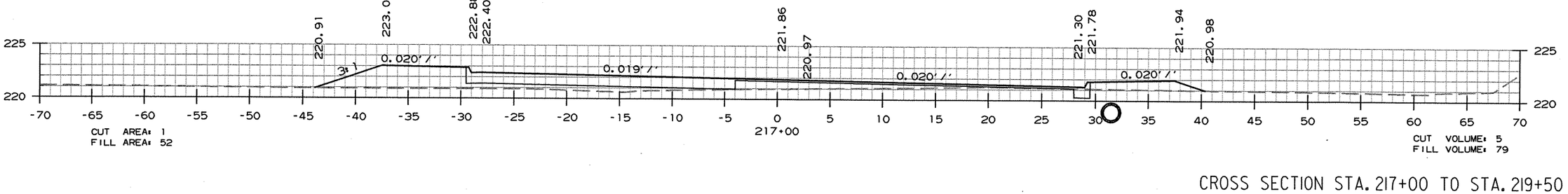
CUT AREA: 86
FILL AREA: 9

CUT VOLUME: 84
FILL VOLUME: 46



CUT AREA: 4
FILL AREA: 40

CUT VOLUME: 5
FILL VOLUME: 86



CUT AREA: 1
FILL AREA: 52

CUT VOLUME: 5
FILL VOLUME: 79

CROSS SECTION STA. 217+00 TO STA. 219+50

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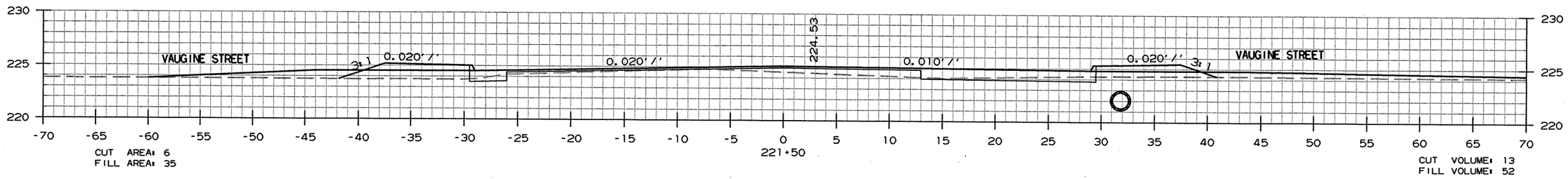
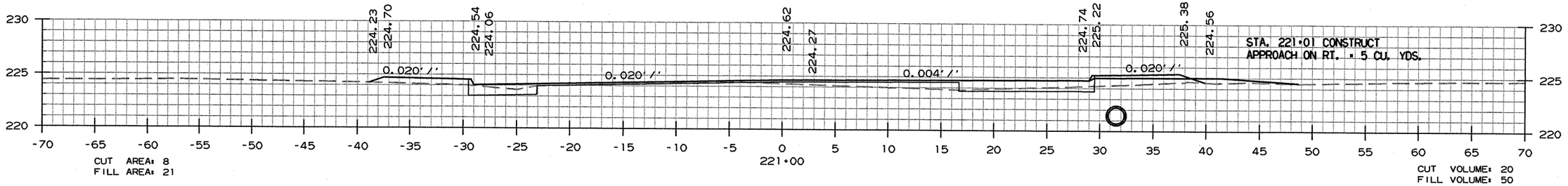
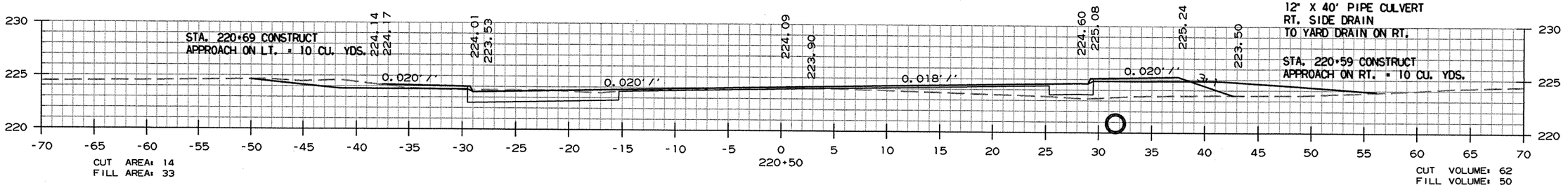
				6	ARK.			
				JOB NO.		020070	112	144

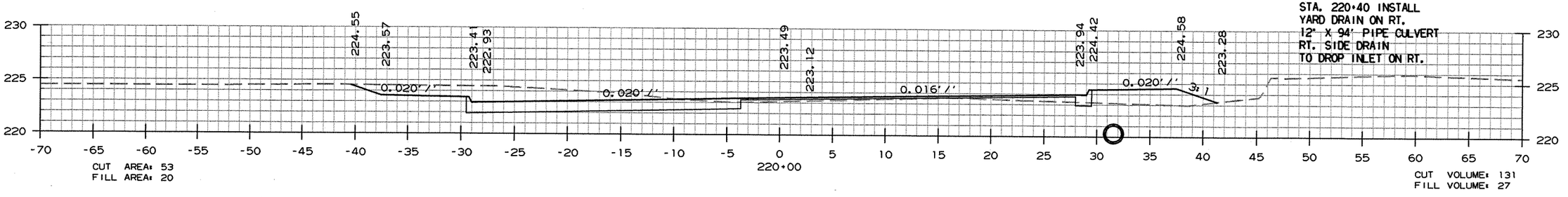
(2) CROSS SECTIONS



STA. 221+00 - END PROFILE







CROSS SECTION STA. 220+00 TO STA. 221+50

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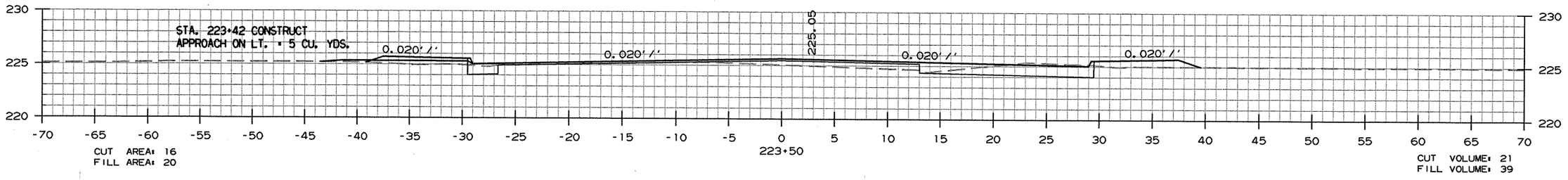
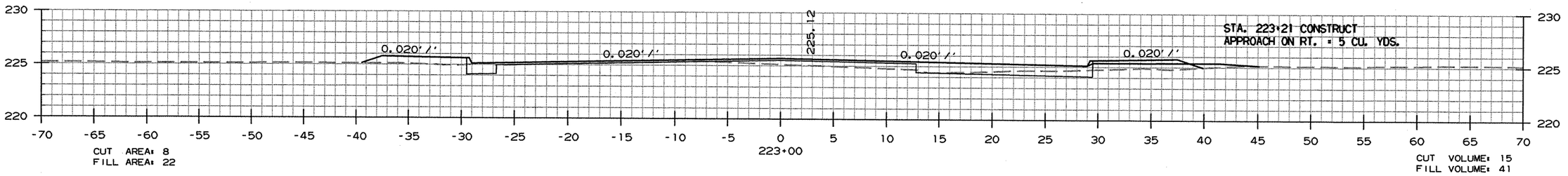
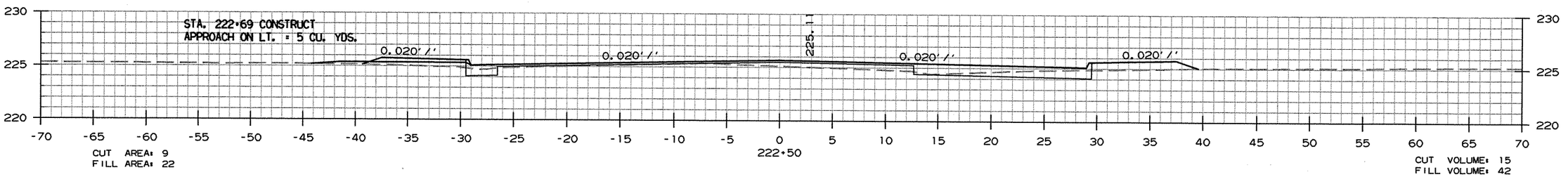
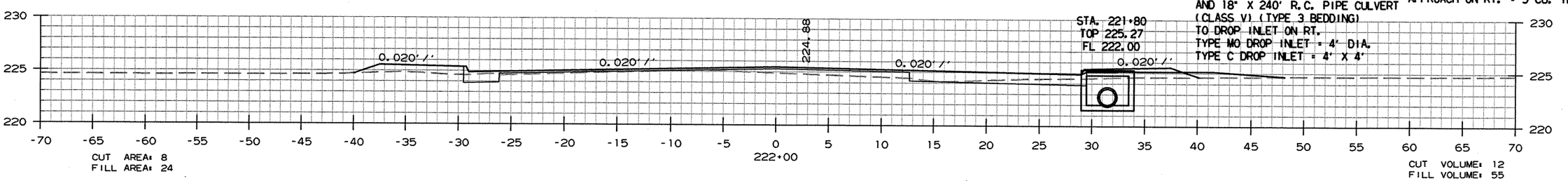
				6	ARK.			
				JOB NO.		020070	113	144

(2) CROSS SECTIONS









CROSS SECTION STA. 222+00 TO STA. 223+50

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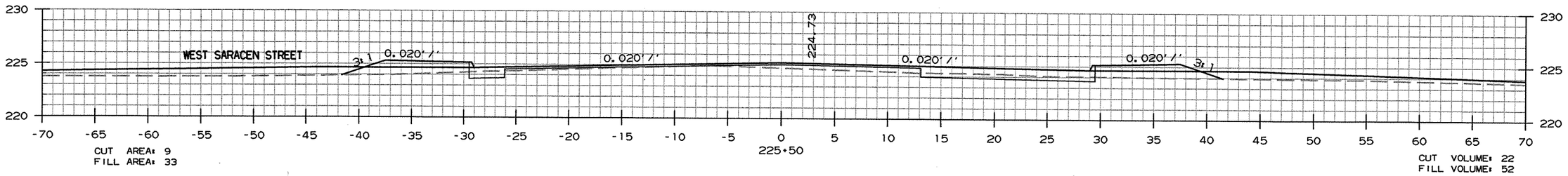
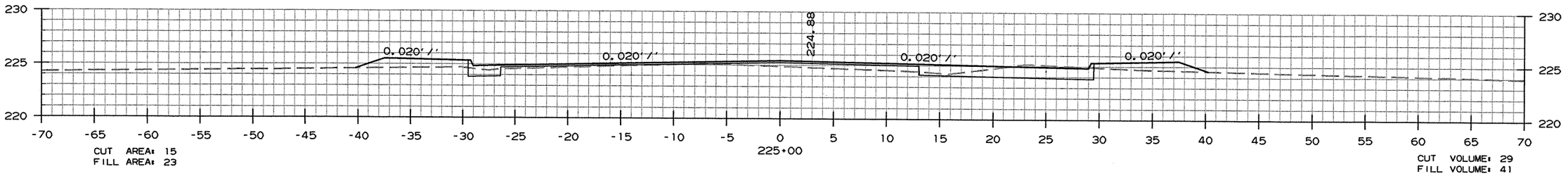
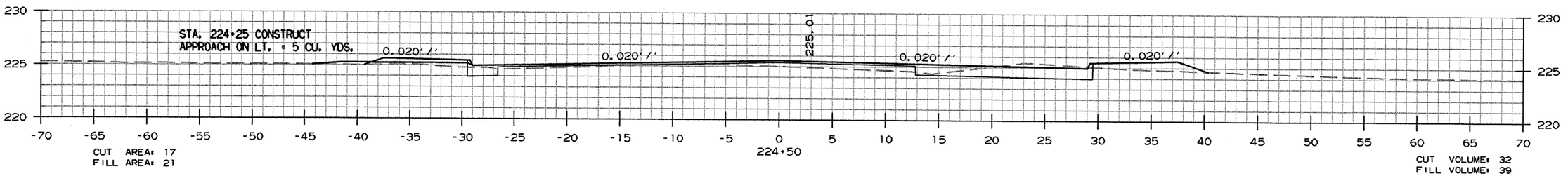
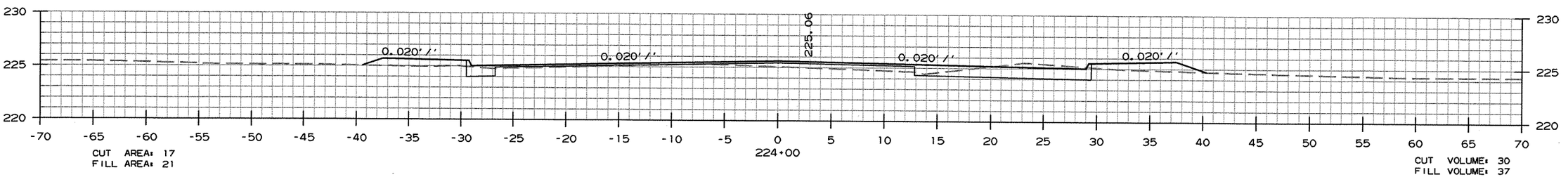
				6	ARK.			
				JOB NO.		020070	114	144

(2) CROSS SECTIONS









CROSS SECTION STA. 224+00 TO STA. 225+50

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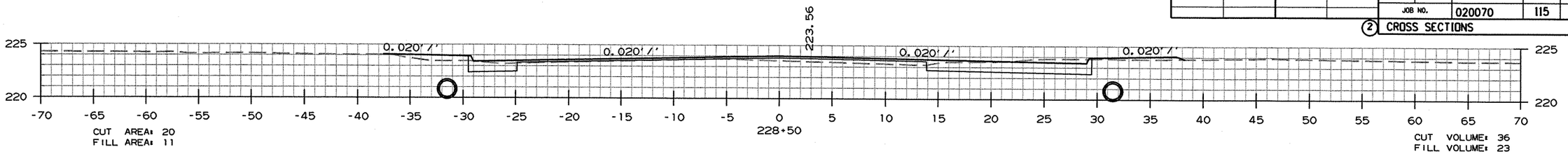
				6	ARK.			
				JOB NO.		020070	115	144

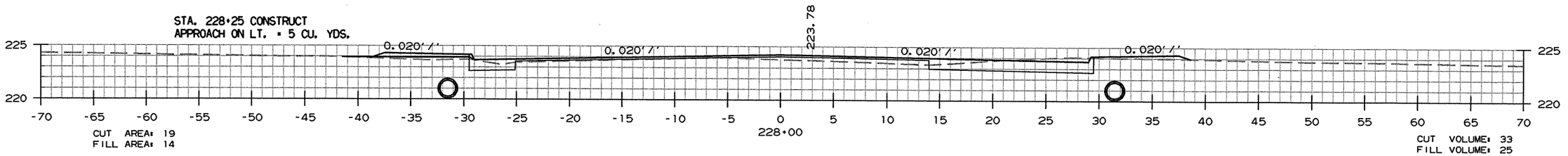
(2) CROSS SECTIONS



CUT AREA: 20
FILL AREA: 11

CUT VOLUME: 36
FILL VOLUME: 23

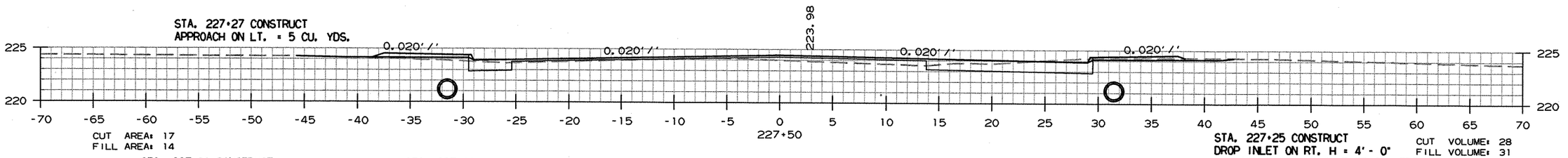
STA. 228+25 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.



CUT AREA: 19
FILL AREA: 14

CUT VOLUME: 33
FILL VOLUME: 25

STA. 227+27 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.



CUT AREA: 17
FILL AREA: 14

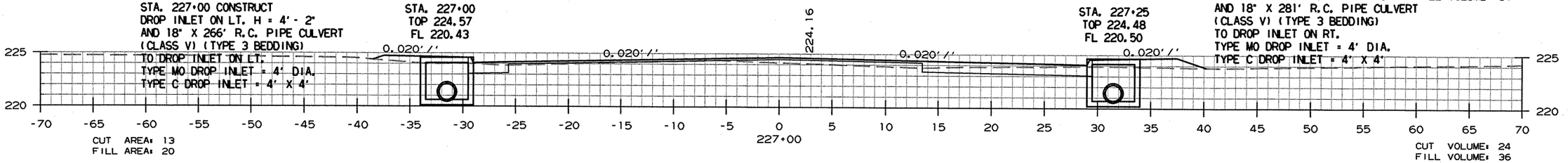
STA. 227+00 CONSTRUCT
DROP INLET ON LT. H = 4' - 2"
AND 18" X 266' R.C. PIPE CULVERT
(CLASS V) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'

STA. 227+00
TOP 224.57
FL 220.43

STA. 227+25
TOP 224.48
FL 220.50

STA. 227+25 CONSTRUCT
DROP INLET ON RT. H = 4' - 0"
AND 18" X 281' R.C. PIPE CULVERT
(CLASS V) (TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'

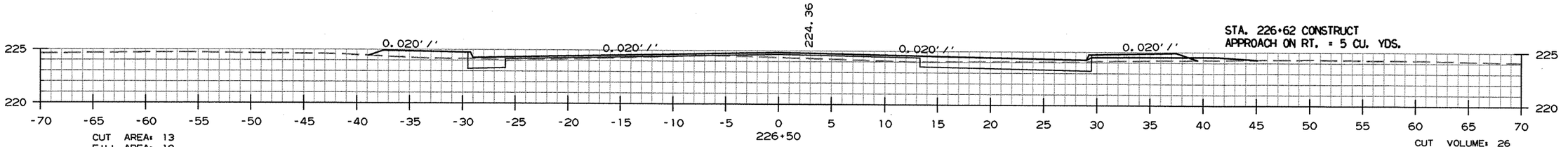
CUT VOLUME: 28
FILL VOLUME: 31



CUT AREA: 13
FILL AREA: 20

CUT VOLUME: 24
FILL VOLUME: 36

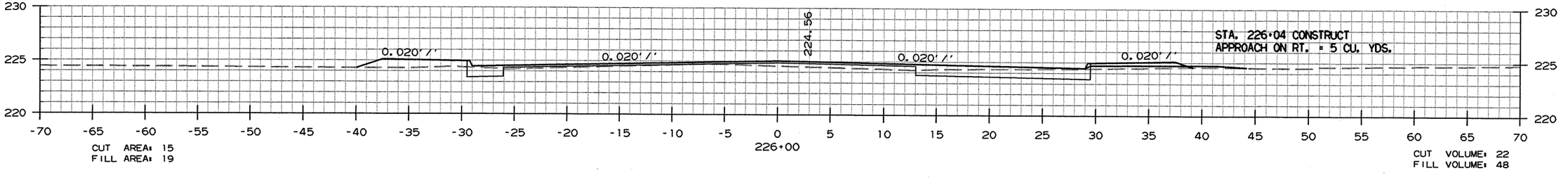
STA. 226+62 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.



CUT AREA: 13
FILL AREA: 19

CUT VOLUME: 26
FILL VOLUME: 35

STA. 226+04 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.



CUT AREA: 15
FILL AREA: 19

CUT VOLUME: 22
FILL VOLUME: 48

CROSS SECTION STA. 226+00 TO STA. 228+50

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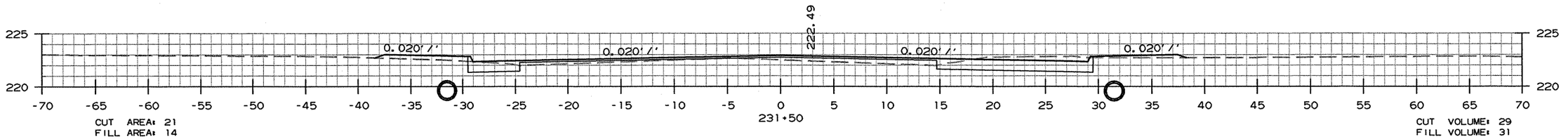
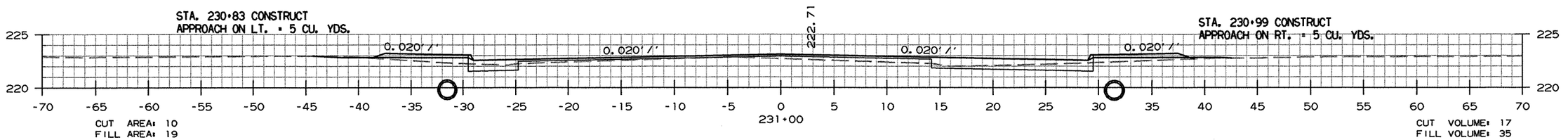
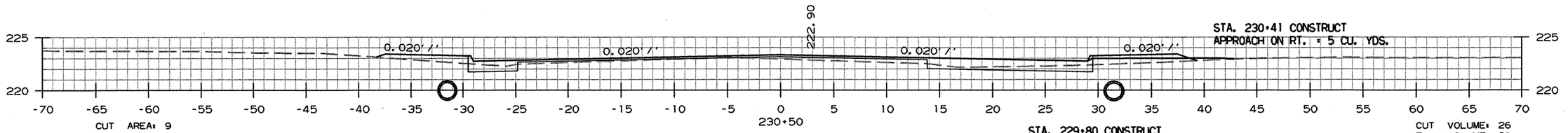
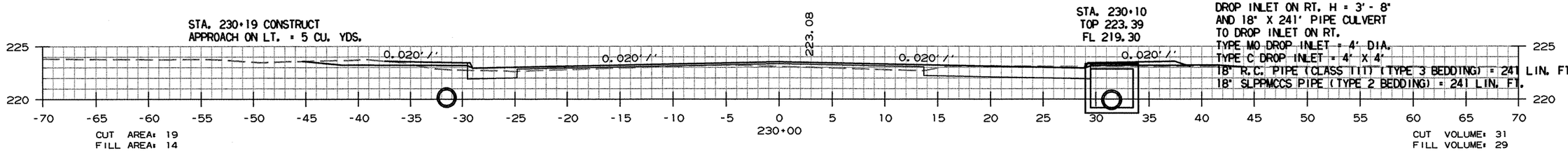
				6	ARK.			
				JOB NO.		020070	116	144

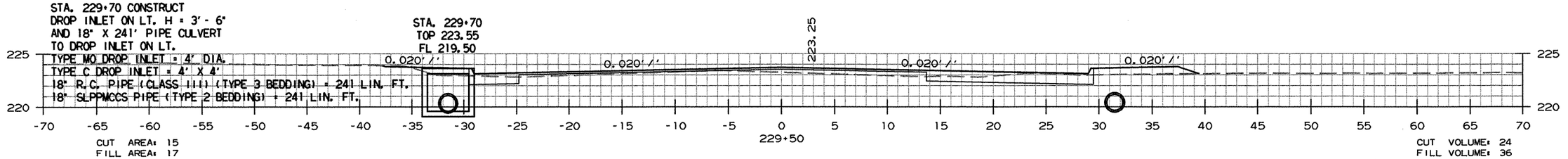
(2) CROSS SECTIONS

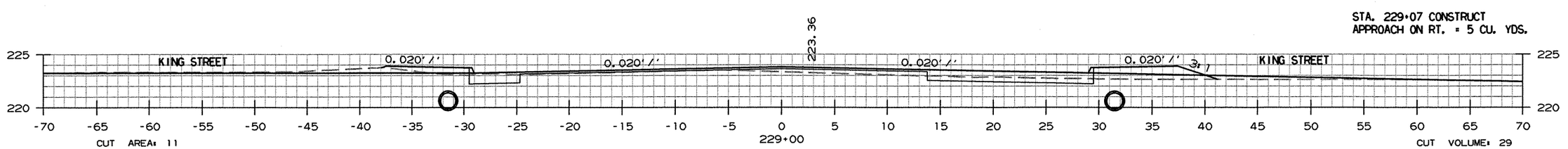










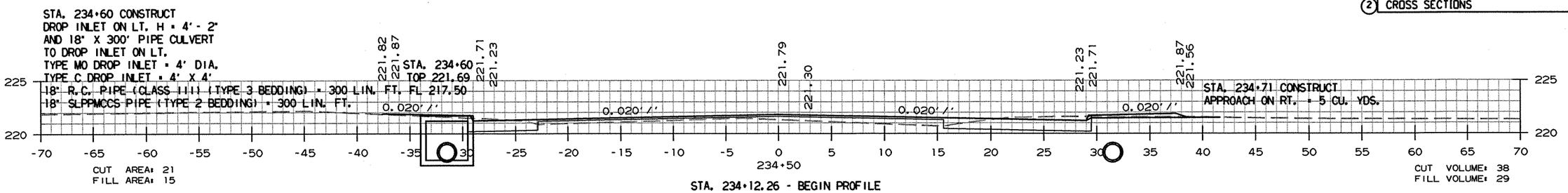


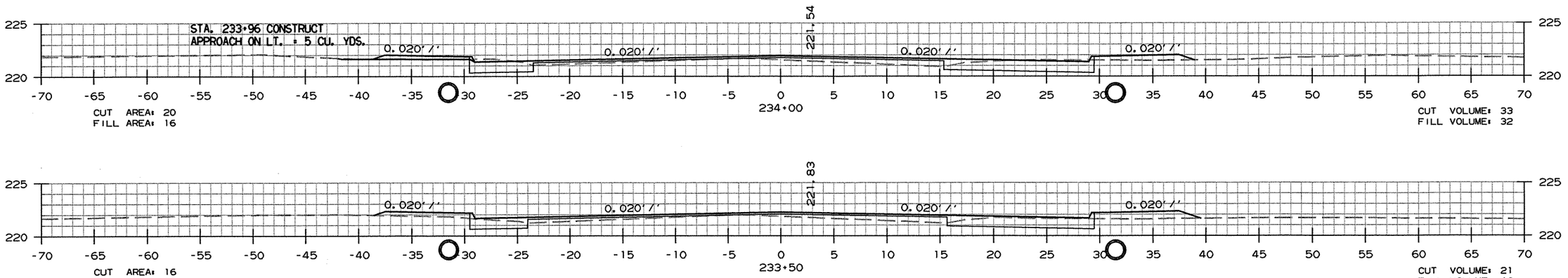
CROSS SECTION STA. 229+00 TO STA. 231+50

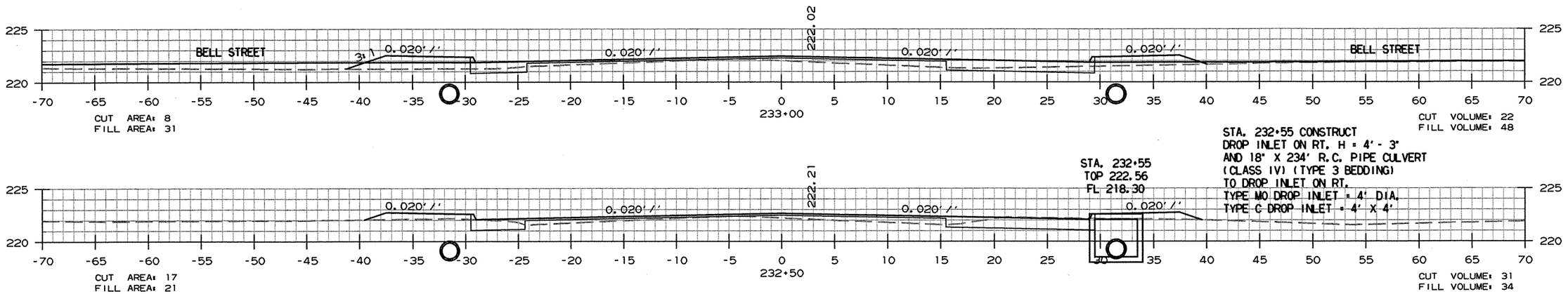
r020070.dgn 6/18/2010

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	117	144

(2) CROSS SECTIONS





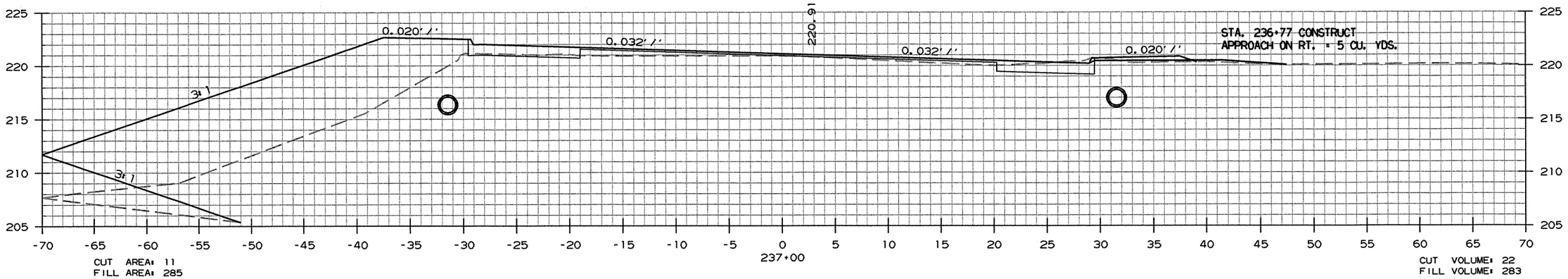


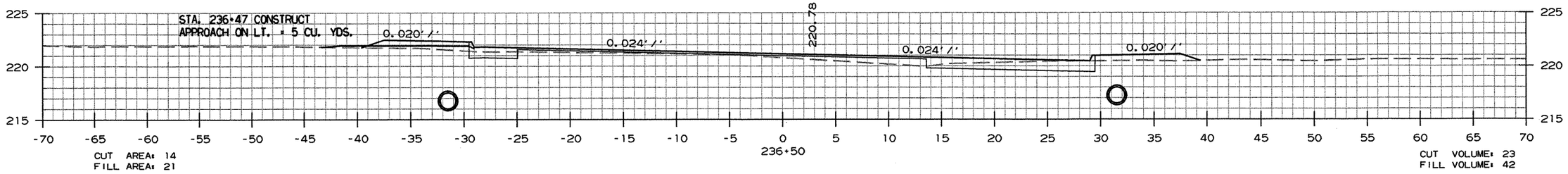
CROSS SECTION STA. 232+00 TO STA. 234+50

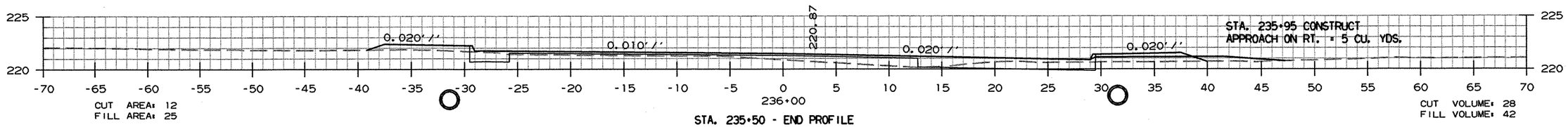
r020070.dgn 6/18/2010

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	118	144

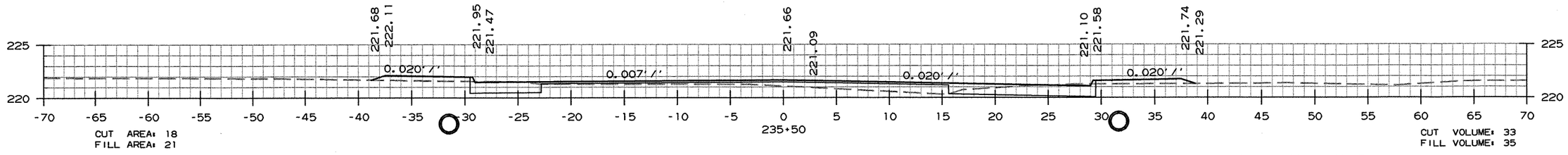
(2) CROSS SECTIONS

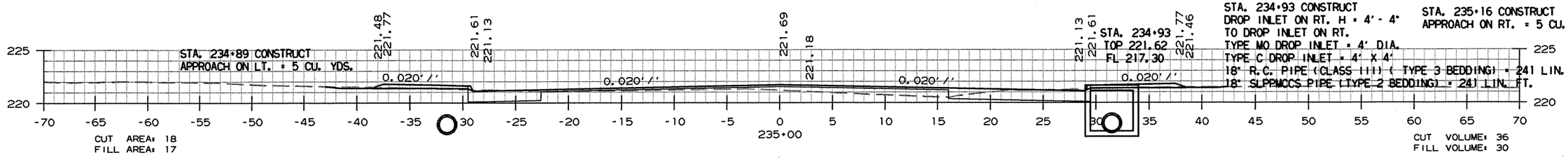






STA. 235+50 - END PROFILE



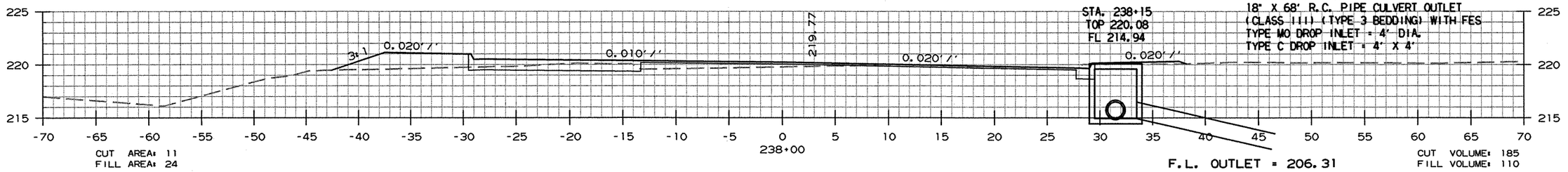


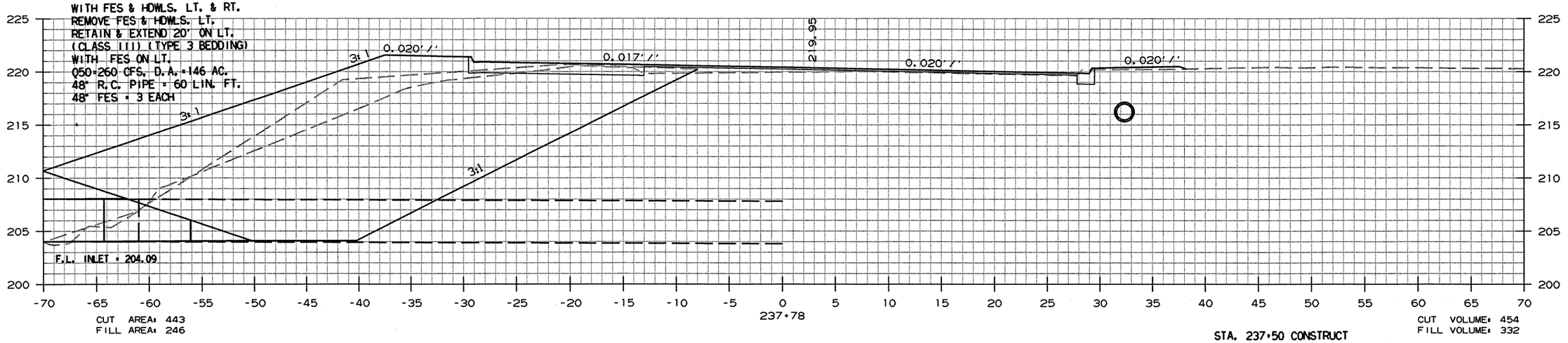
CROSS SECTION STA. 235+00 TO STA. 237+00

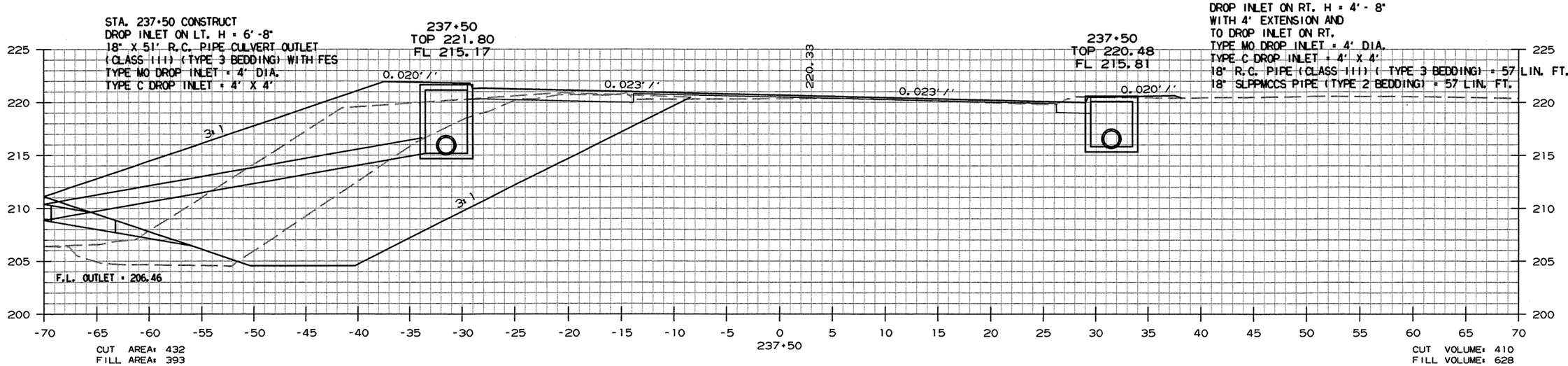
r020070.dgn 6/18/2010

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	119	144

(2) CROSS SECTIONS







CROSS SECTION STA. 237+50 TO STA. 238+00

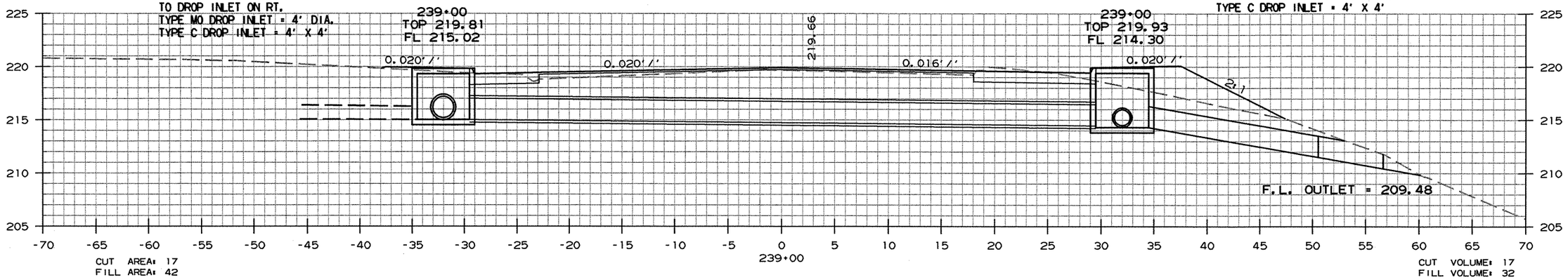
r020070.dgn 6/18/2010

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	120	144

(2) CROSS SECTIONS

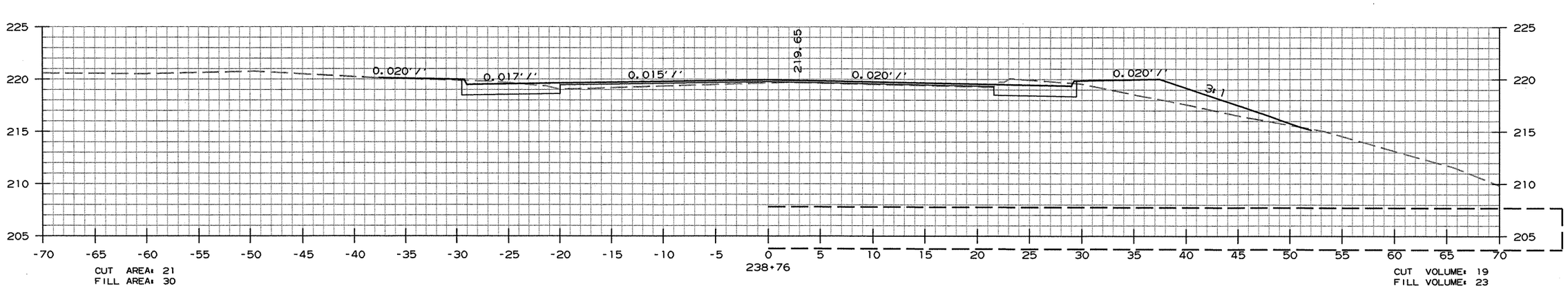
STA. 239+00 CONSTRUCT
DROP INLET ON LT. H = 4'-9"
24" X 59' R.C. PIPE CULVERT OUTLET
(CLASS IV) (TYPE 3 BEDDING)
CONNECT TO EXIST. 12" X 20"
ARCH CMP PIPE INLET
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'

STA. 239+00 CONSTRUCT
DROP INLET ON RT. H = 5'-8"
24" X 43' R.C. PIPE CULVERT OUTLET
(CLASS III) (TYPE 3 BEDDING) WITH FES
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'



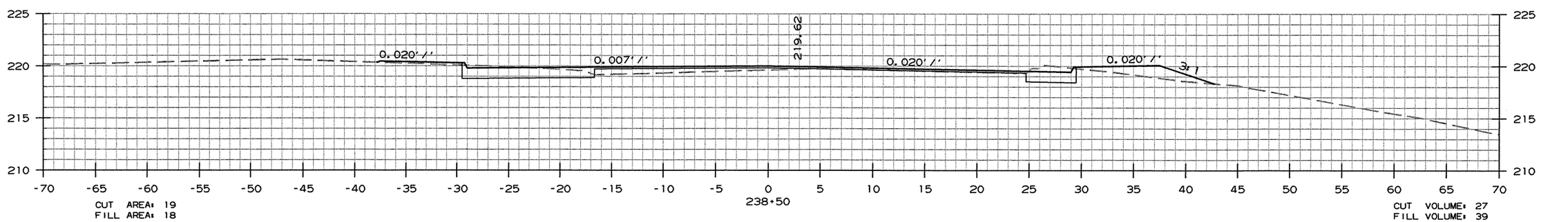
CUT AREA: 17
FILL AREA: 42

CUT VOLUME: 17
FILL VOLUME: 32



CUT AREA: 21
FILL AREA: 30

CUT VOLUME: 19
FILL VOLUME: 23



CUT AREA: 19
FILL AREA: 18

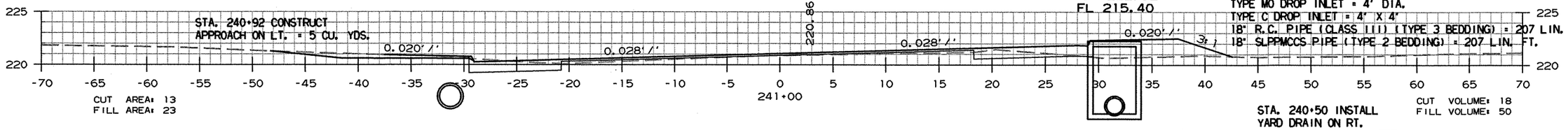
CUT VOLUME: 27
FILL VOLUME: 39

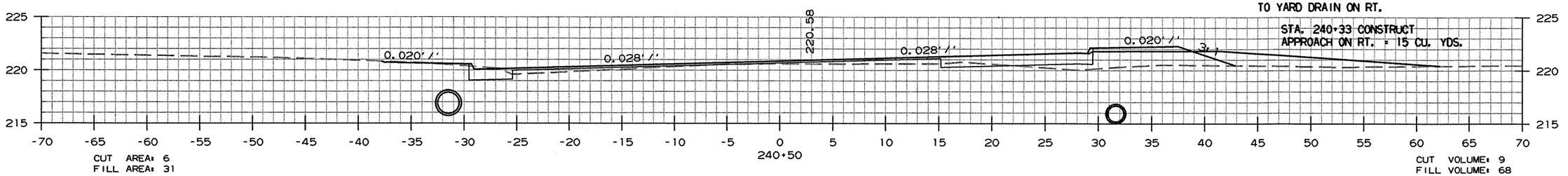
CROSS SECTION STA. 238+50 TO STA. 239+00

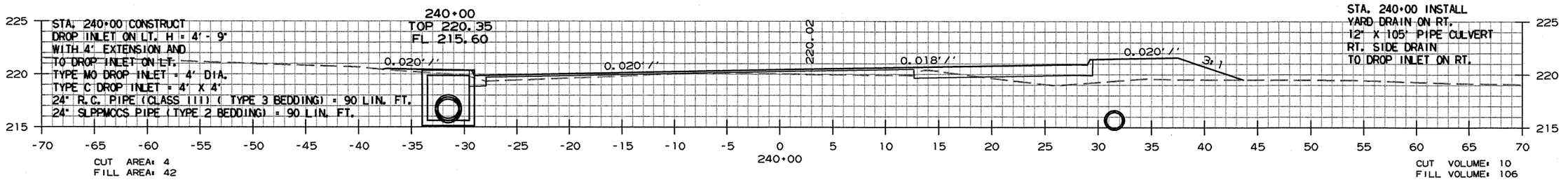
r020070.dgn 6/18/2010

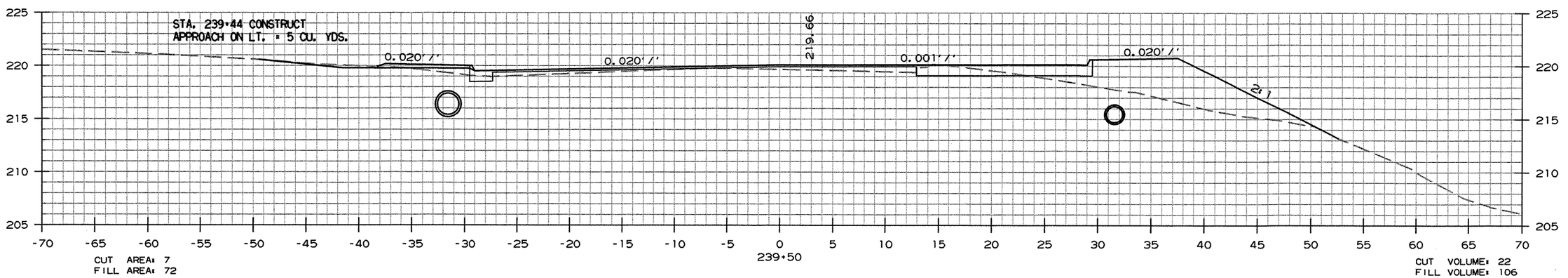
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	121	144

(2) CROSS SECTIONS







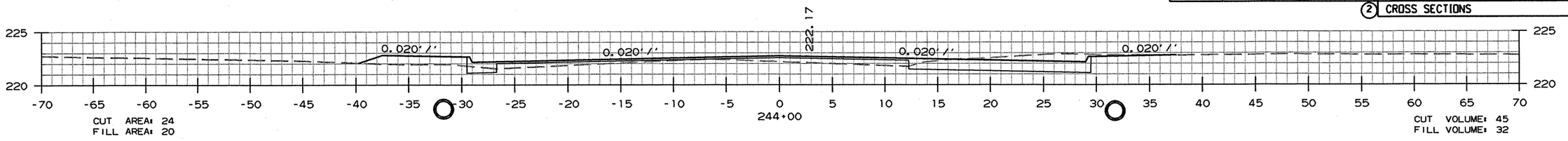


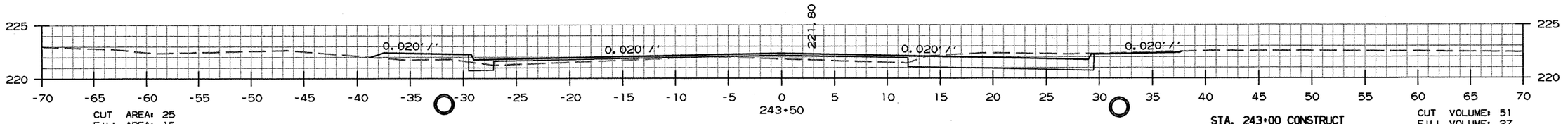
CROSS SECTION STA. 239+50 TO STA. 241+00

r020070.dgn 6/18/2010

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	122	144

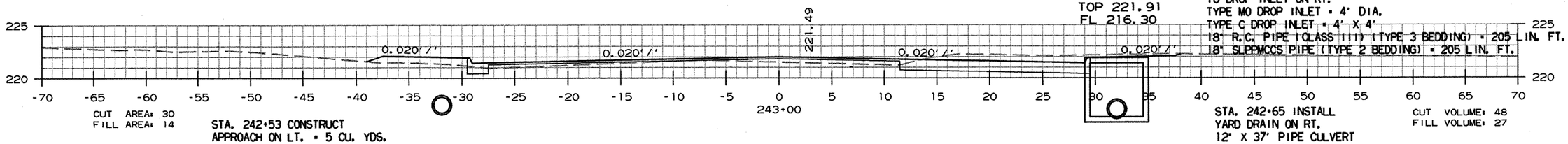
(2) CROSS SECTIONS





243+00
TOP 221.91
FL 216.30

STA. 243+00 CONSTRUCT
DROP INLET ON RT. H = 5' - 7"
AND 18" X 205' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 205 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 205 LIN. FT.

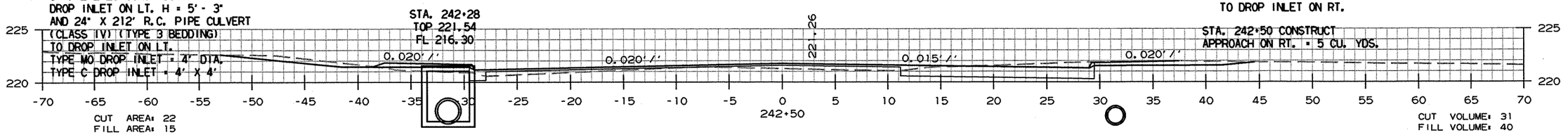


STA. 242+53 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

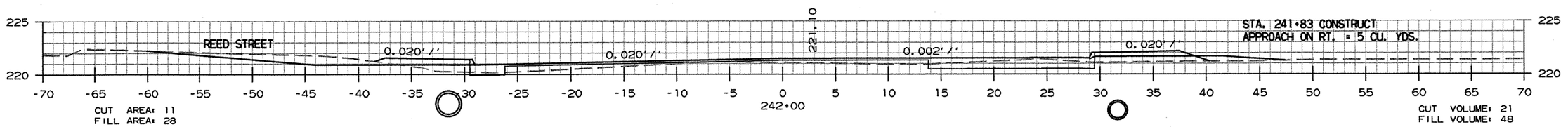
STA. 242+65 INSTALL
YARD DRAIN ON RT.
12" X 37' PIPE CULVERT
RT. SIDE DRAIN
TO DROP INLET ON RT.

STA. 242+28 CONSTRUCT
DROP INLET ON LT. H = 5' - 3"
AND 24" X 212' R.C. PIPE CULVERT
(CLASS IV) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'

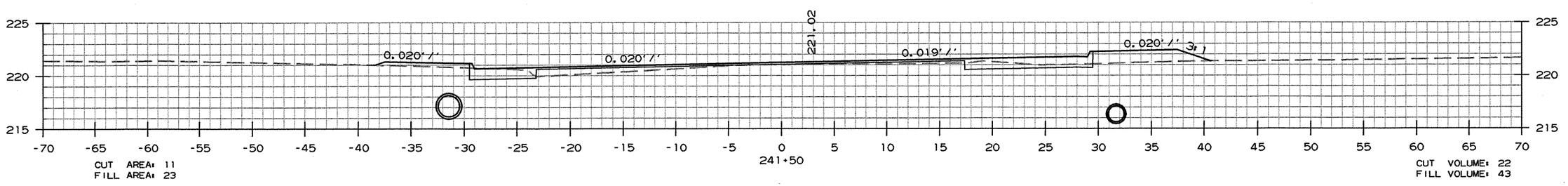
STA. 242+28
TOP 221.54
FL 216.30



STA. 242+50 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.



STA. 241+83 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

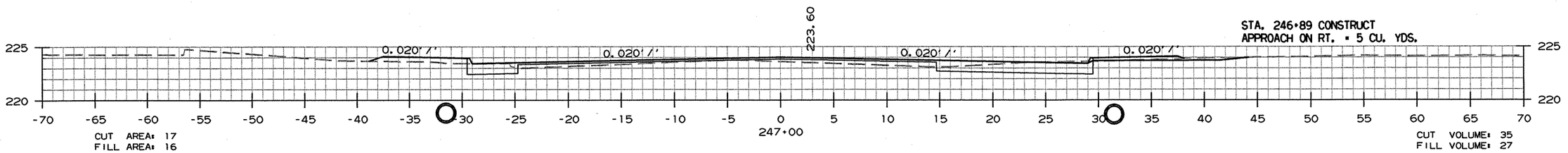


CROSS SECTION STA. 241+50 TO STA. 244+00

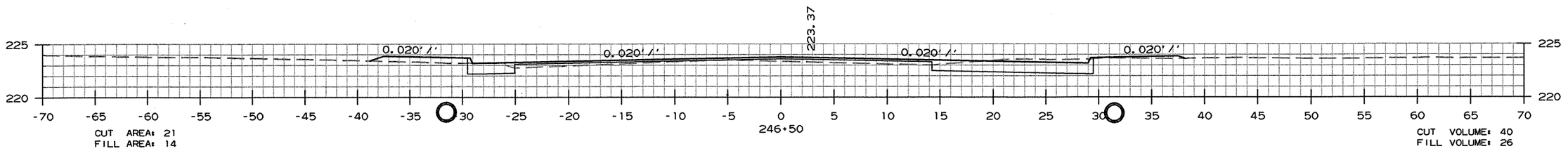
r020070.dgn 6/18/2010

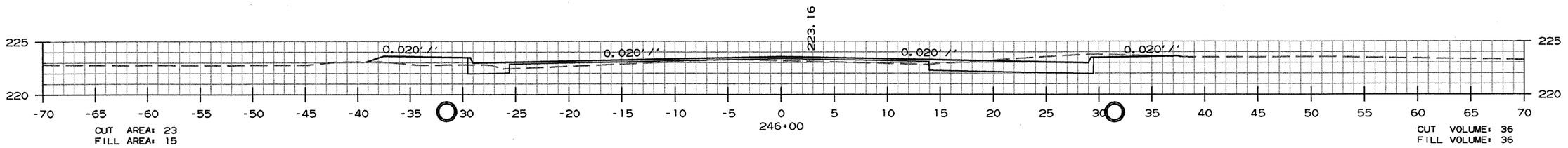
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	123	144

(2) CROSS SECTIONS

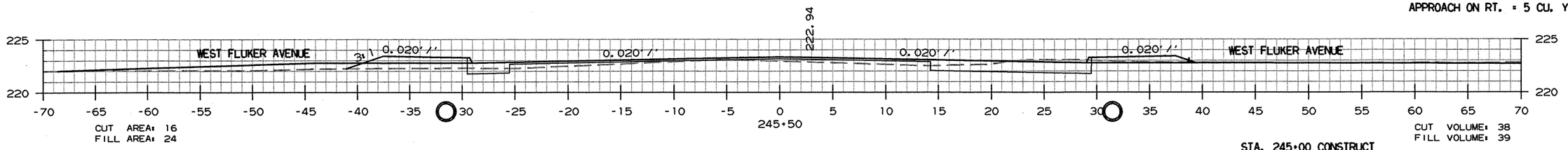


STA. 246+89 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.





STA. 245+53 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

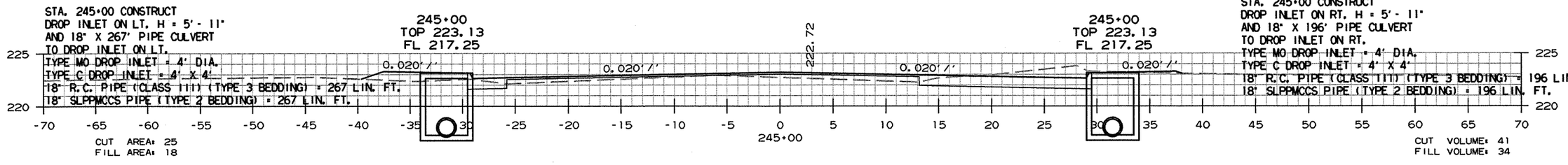


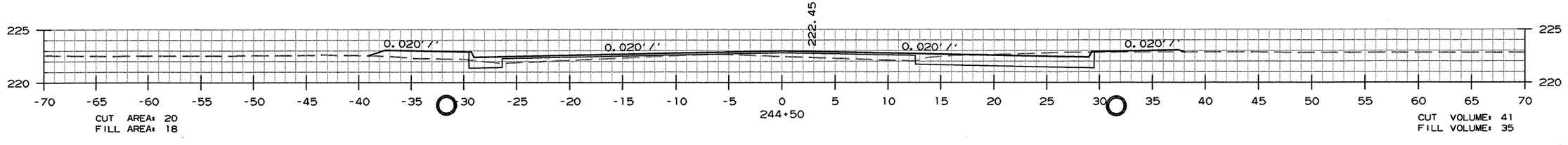
STA. 245+00 CONSTRUCT
DROP INLET ON LT. H = 5' - 11"
AND 18" X 267' PIPE CULVERT
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 267 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 267 LIN. FT.

245+00
TOP 223.13
FL 217.25

245+00
TOP 223.13
FL 217.25

STA. 245+00 CONSTRUCT
DROP INLET ON RT. H = 5' - 11"
AND 18" X 196' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 196 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 196 LIN. FT.



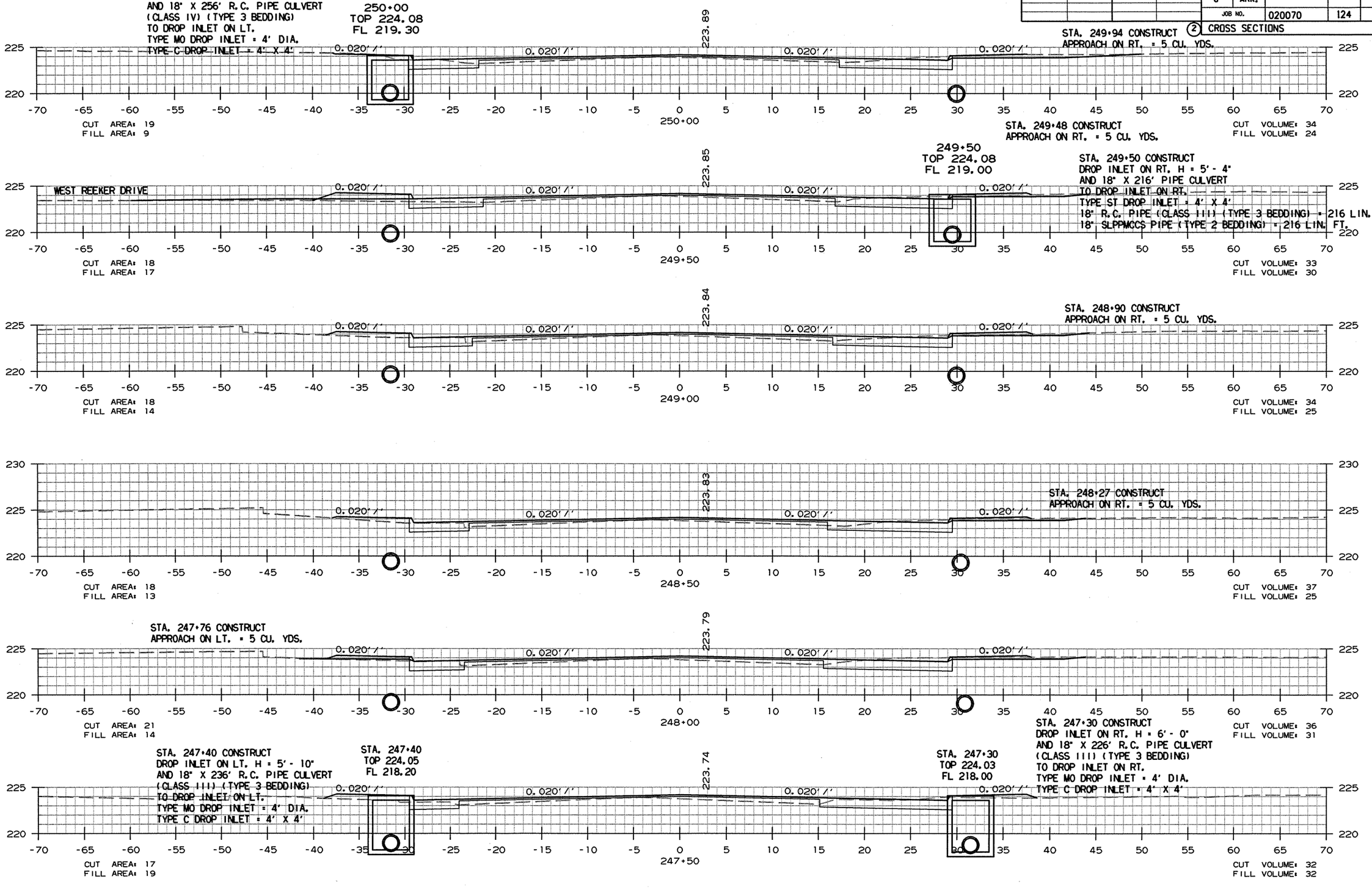


CROSS SECTION STA. 244+50 TO STA. 247+00

r020070.dgn 6/18/2010

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	124	144

(2) CROSS SECTIONS

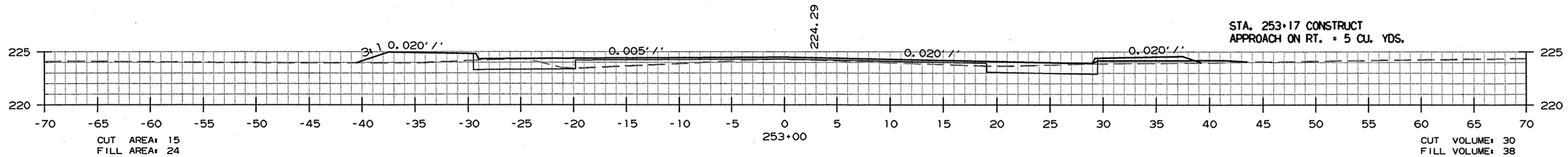


CROSS SECTION STA. 247+50 TO STA. 250+00

r020070.dgn 6/18/2010

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	125	144

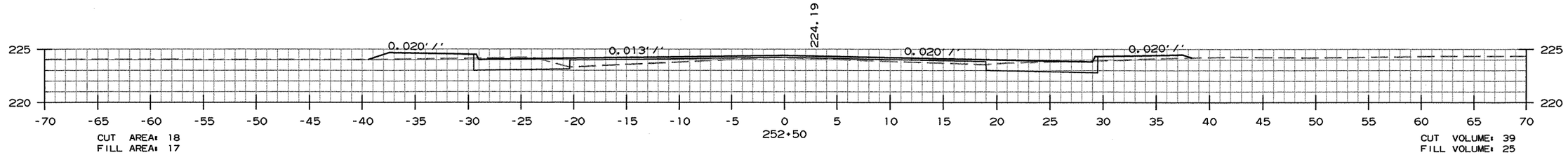
(2) CROSS SECTIONS



STA. 253+17 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

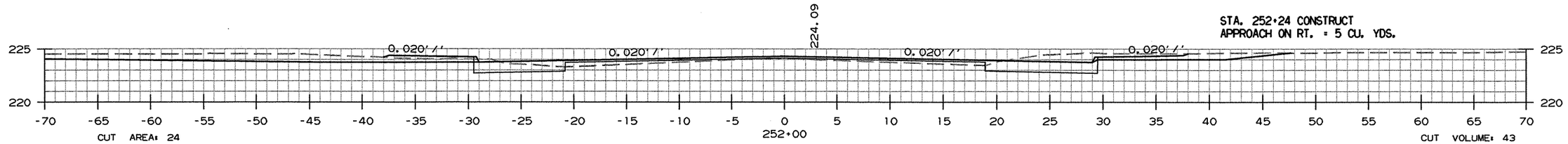
CUT AREA: 15
FILL AREA: 24

CUT VOLUME: 30
FILL VOLUME: 38



CUT AREA: 18
FILL AREA: 17

CUT VOLUME: 39
FILL VOLUME: 25



STA. 252+24 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

CUT AREA: 24
FILL AREA: 10

CUT VOLUME: 43
FILL VOLUME: 16

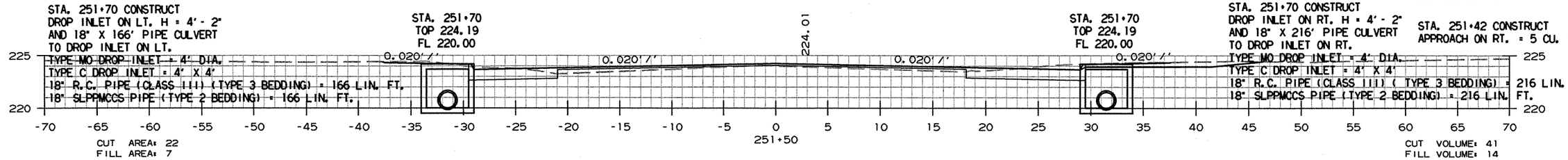
STA. 251+70 CONSTRUCT
DROP INLET ON LT. H = 4'- 2"
AND 18" X 166' PIPE CULVERT
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 166 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 166 LIN. FT.

STA. 251+70
TOP 224.19
FL 220.00

STA. 251+70
TOP 224.19
FL 220.00

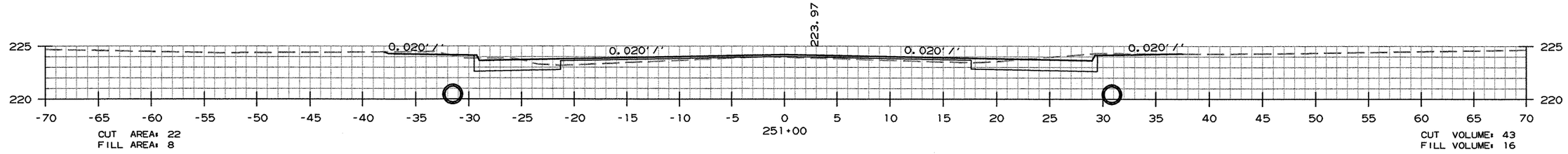
STA. 251+70 CONSTRUCT
DROP INLET ON RT. H = 4'- 2"
AND 18" X 216' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 216 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 216 LIN. FT.

STA. 251+42 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.



CUT AREA: 22
FILL AREA: 7

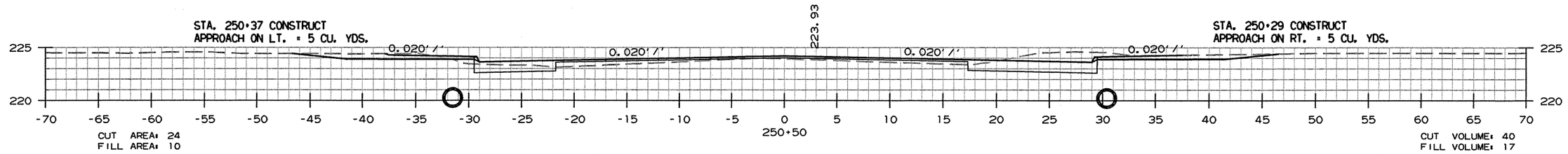
CUT VOLUME: 41
FILL VOLUME: 14



CUT AREA: 22
FILL AREA: 8

CUT VOLUME: 43
FILL VOLUME: 16

STA. 250+37 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.



STA. 250+29 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

CUT AREA: 24
FILL AREA: 10

CUT VOLUME: 40
FILL VOLUME: 17

CROSS SECTION STA. 250+50 TO STA. 253+00

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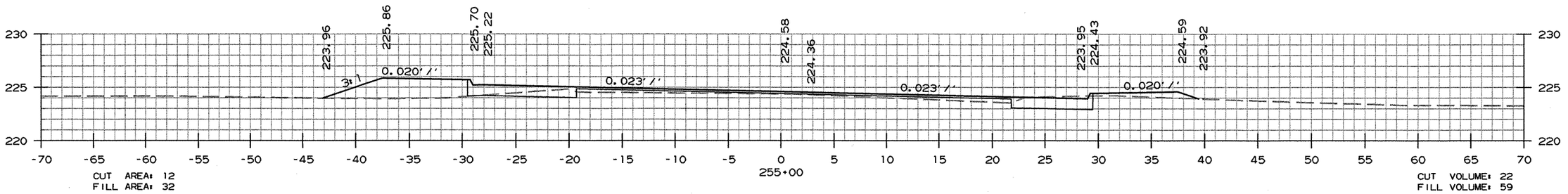
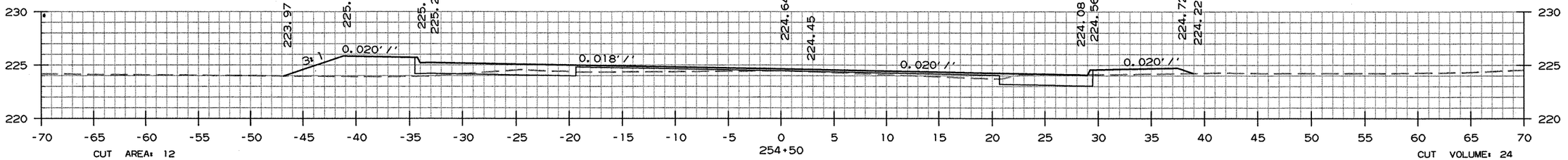
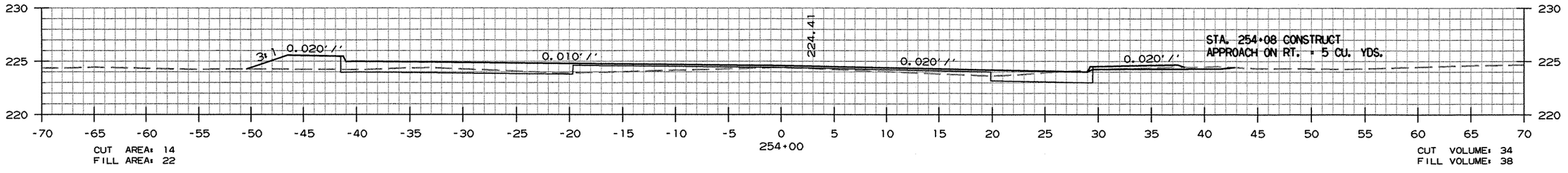
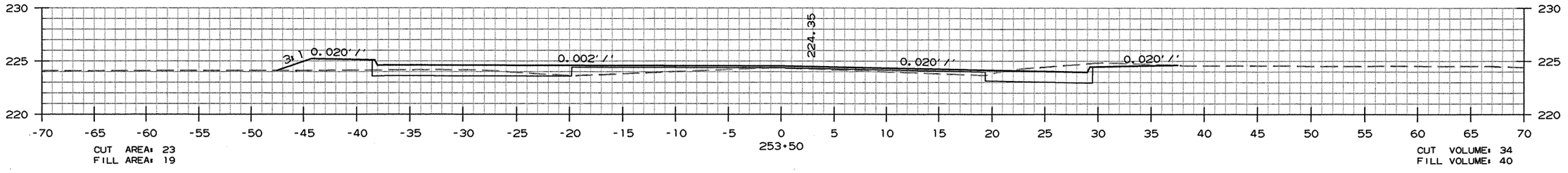
(2) CROSS SECTIONS





STA. 254+50 - BEGIN PROFILE





CROSS SECTION STA. 253+50 TO STA. 255+00

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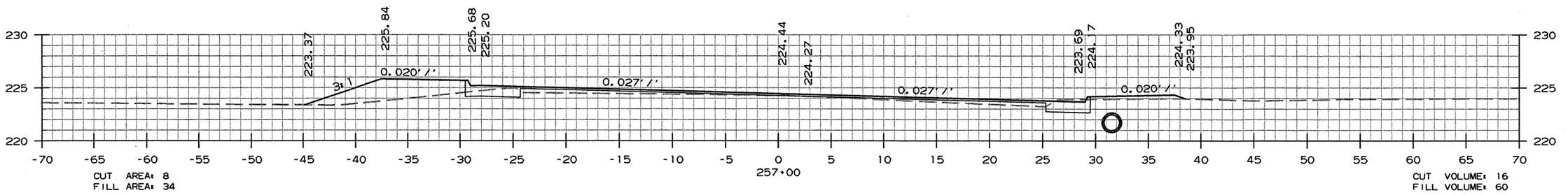
(2) CROSS SECTIONS

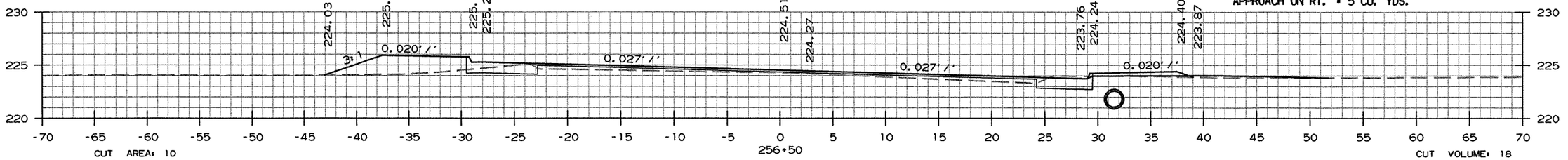
STA. 257+30 - END PROFILE



CUT AREA: 8
FILL AREA: 34

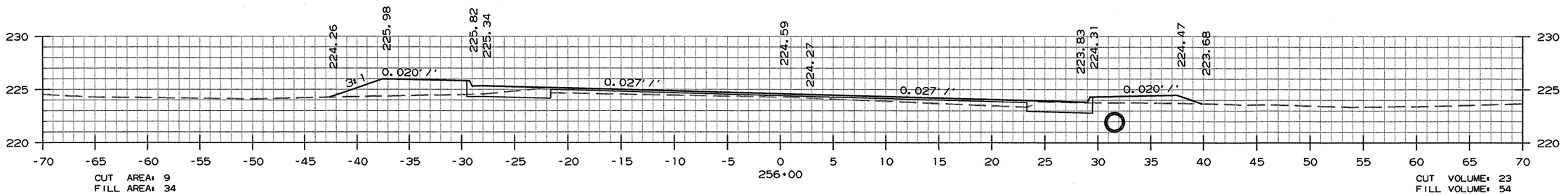
CUT VOLUME: 16
FILL VOLUME: 60

STA. 256+26 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.



CUT AREA: 10
FILL AREA: 31

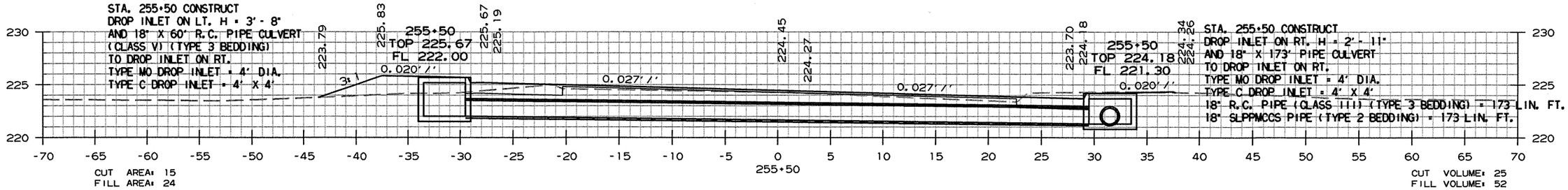
CUT VOLUME: 18
FILL VOLUME: 60



CUT AREA: 9
FILL AREA: 34

CUT VOLUME: 23
FILL VOLUME: 54

STA. 255+50 CONSTRUCT
DROP INLET ON LT. H = 3'-8"
AND 18" X 60' R.C. PIPE CULVERT
(CLASS V) (TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'



CUT AREA: 15
FILL AREA: 24

CUT VOLUME: 25
FILL VOLUME: 52

STA. 255+50 CONSTRUCT
DROP INLET ON RT. H = 2'-11"
AND 18" X 173' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 173 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 173 LIN. FT.

CROSS SECTION STA. 255+50 TO STA. 257+00

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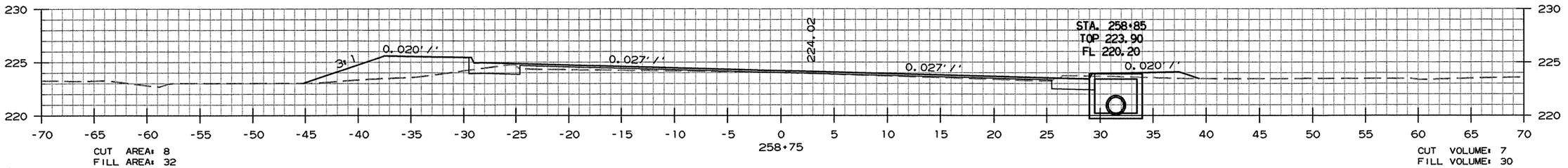
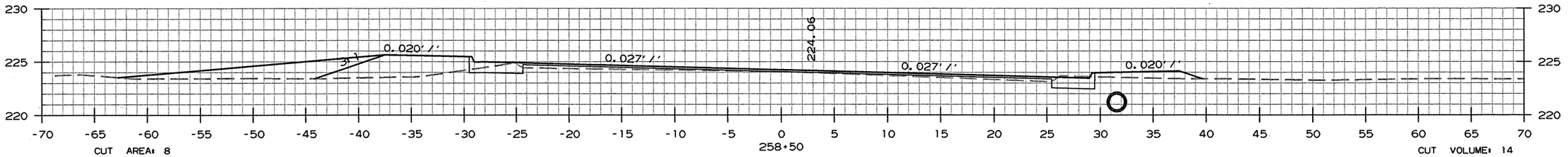
(2) CROSS SECTIONS

STA. 258+85 CONSTRUCT
DROP INLET ON RT. H = 3' - 8"
AND 18" X 148' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 148 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 148 LIN. FT.



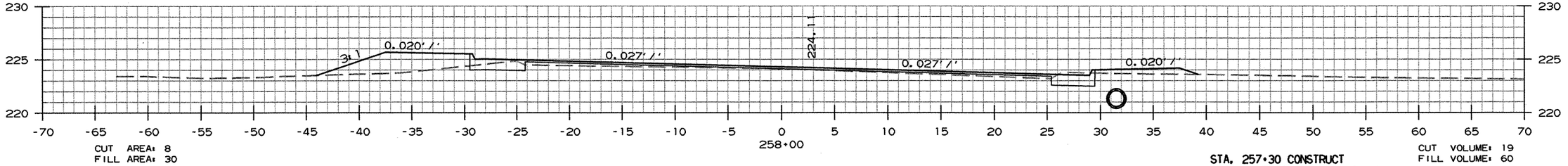
CUT AREA: 8
FILL AREA: 32

CUT VOLUME: 7
FILL VOLUME: 30



CUT AREA: 8
FILL AREA: 33

CUT VOLUME: 14
FILL VOLUME: 59

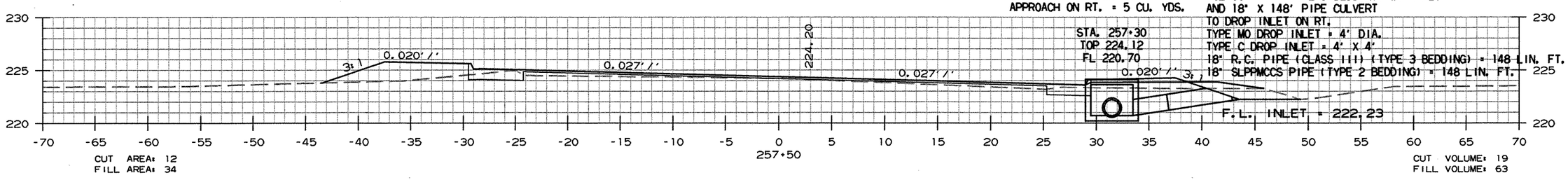


CUT AREA: 8
FILL AREA: 30

CUT VOLUME: 19
FILL VOLUME: 60

STA. 257+64 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 257+30 CONSTRUCT
DROP INLET ON RT. H = 3' - 5"
AND 18" X 11' R.C. PIPE STUB INLET
(CLASS III) (TYPE 3 BEDDING) WITH FES
AND 18" X 148' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 148 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 148 LIN. FT.



CUT AREA: 12
FILL AREA: 34

CUT VOLUME: 19
FILL VOLUME: 63

CROSS SECTION STA. 257+50 TO STA. 258+75

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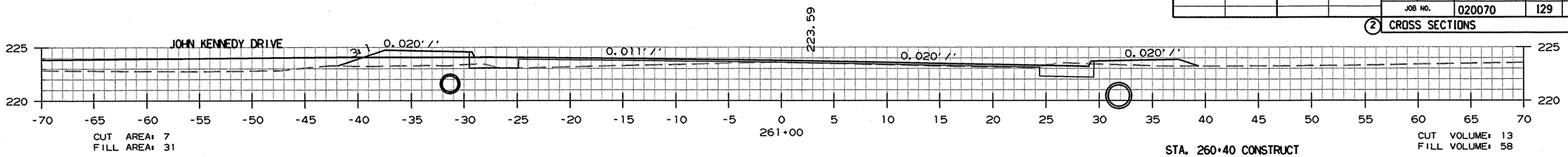
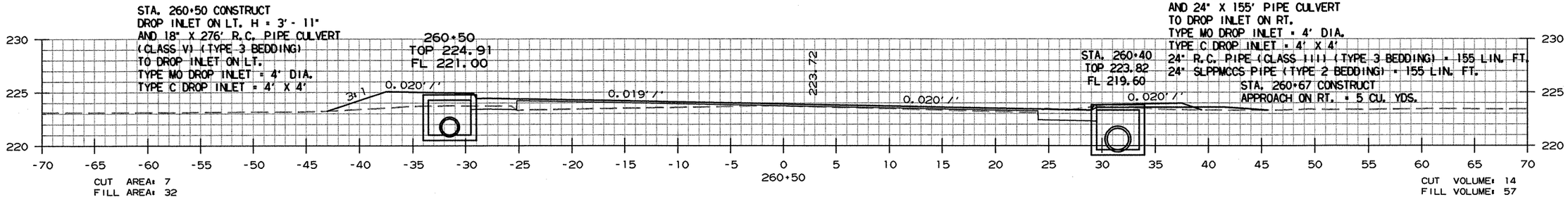
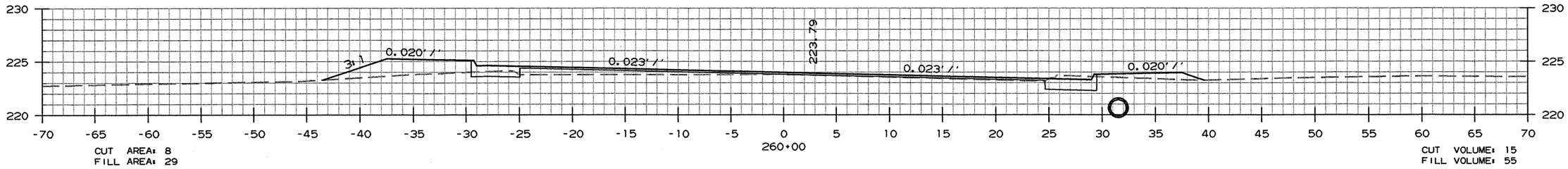
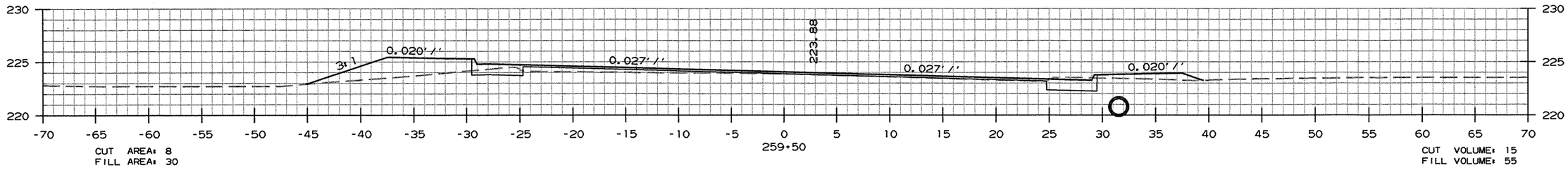
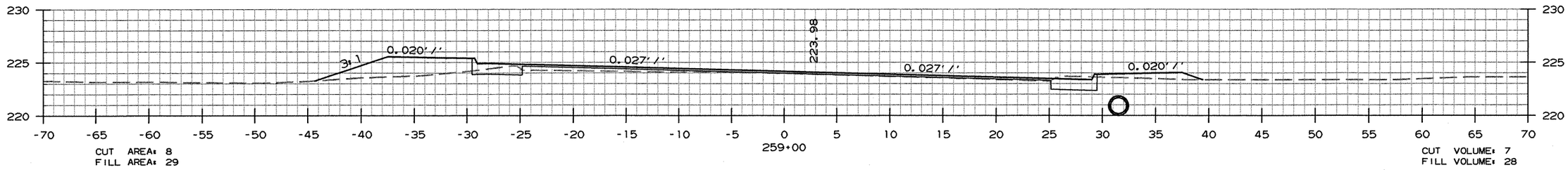
(2) CROSS SECTIONS











CROSS SECTION STA. 259+00 TO STA. 261+00

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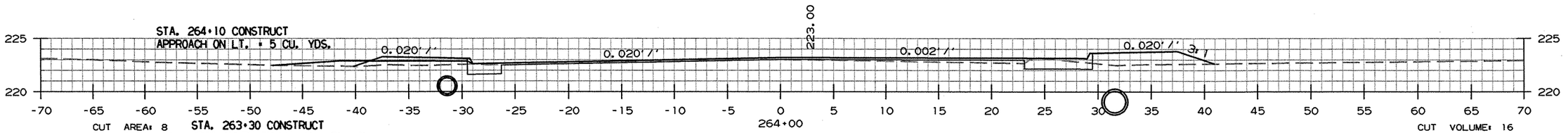
				6	ARK.			
				JOB NO.		020070	130	144

(2) CROSS SECTIONS

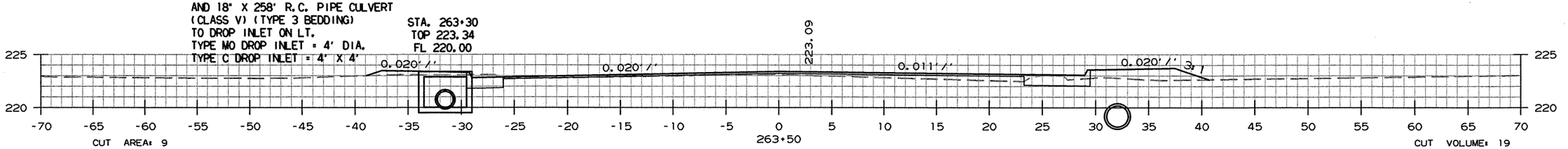
STA. 263+90 INSTALL
YARD DRAIN ON LT.
12" X 6' PIPE CULVERT
LT. SIDE DRAIN
TO DROP INLET ON LT.



CUT AREA: 8
FILL AREA: 22

CUT VOLUME: 16
FILL VOLUME: 39

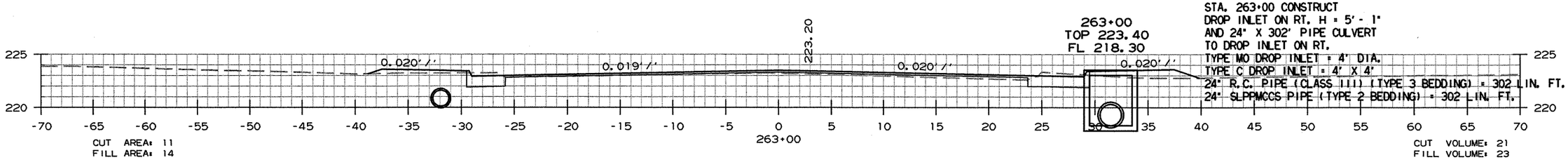
STA. 263+30 CONSTRUCT
DROP INLET ON LT. H = 3'- 4"
AND 18" X 258' R.C. PIPE CULVERT
(CLASS V) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'



CUT AREA: 9
FILL AREA: 21

CUT VOLUME: 19
FILL VOLUME: 32

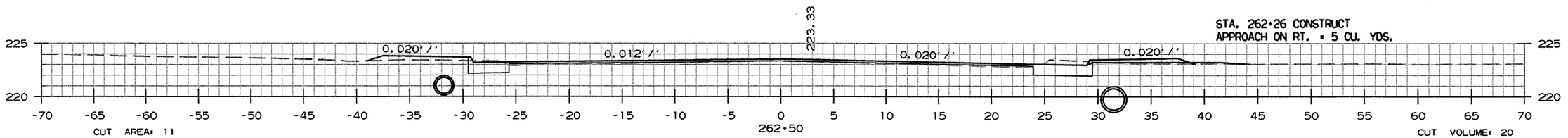
STA. 263+00 CONSTRUCT
DROP INLET ON RT. H = 5'- 1"
AND 24" X 302' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
24" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 302 LIN. FT.
24" SLPPMCCS PIPE (TYPE 2 BEDDING) = 302 LIN. FT.



CUT AREA: 11
FILL AREA: 14

CUT VOLUME: 21
FILL VOLUME: 23

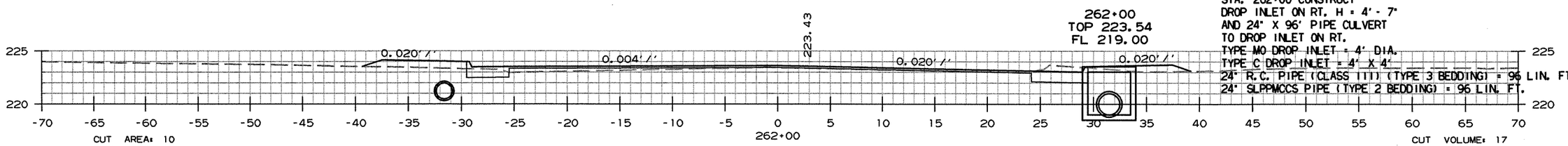
STA. 262+26 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.



CUT AREA: 11
FILL AREA: 11

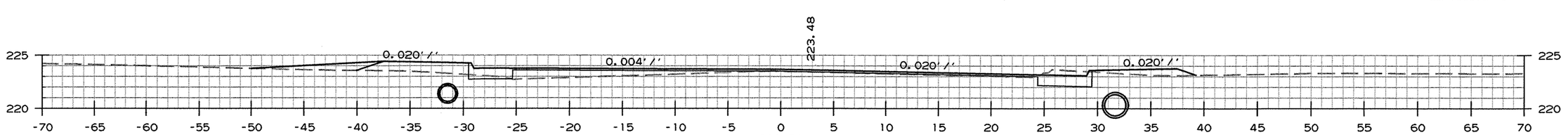
CUT VOLUME: 20
FILL VOLUME: 24

STA. 262+00 CONSTRUCT
DROP INLET ON RT. H = 4'- 7"
AND 24" X 96' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
24" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 96 LIN. FT.
24" SLPPMCCS PIPE (TYPE 2 BEDDING) = 96 LIN. FT.



CUT AREA: 10
FILL AREA: 15

CUT VOLUME: 17
FILL VOLUME: 37



CUT AREA: 8
FILL AREA: 25

CUT VOLUME: 14
FILL VOLUME: 52

CROSS SECTION STA. 261+50 TO STA. 264+00

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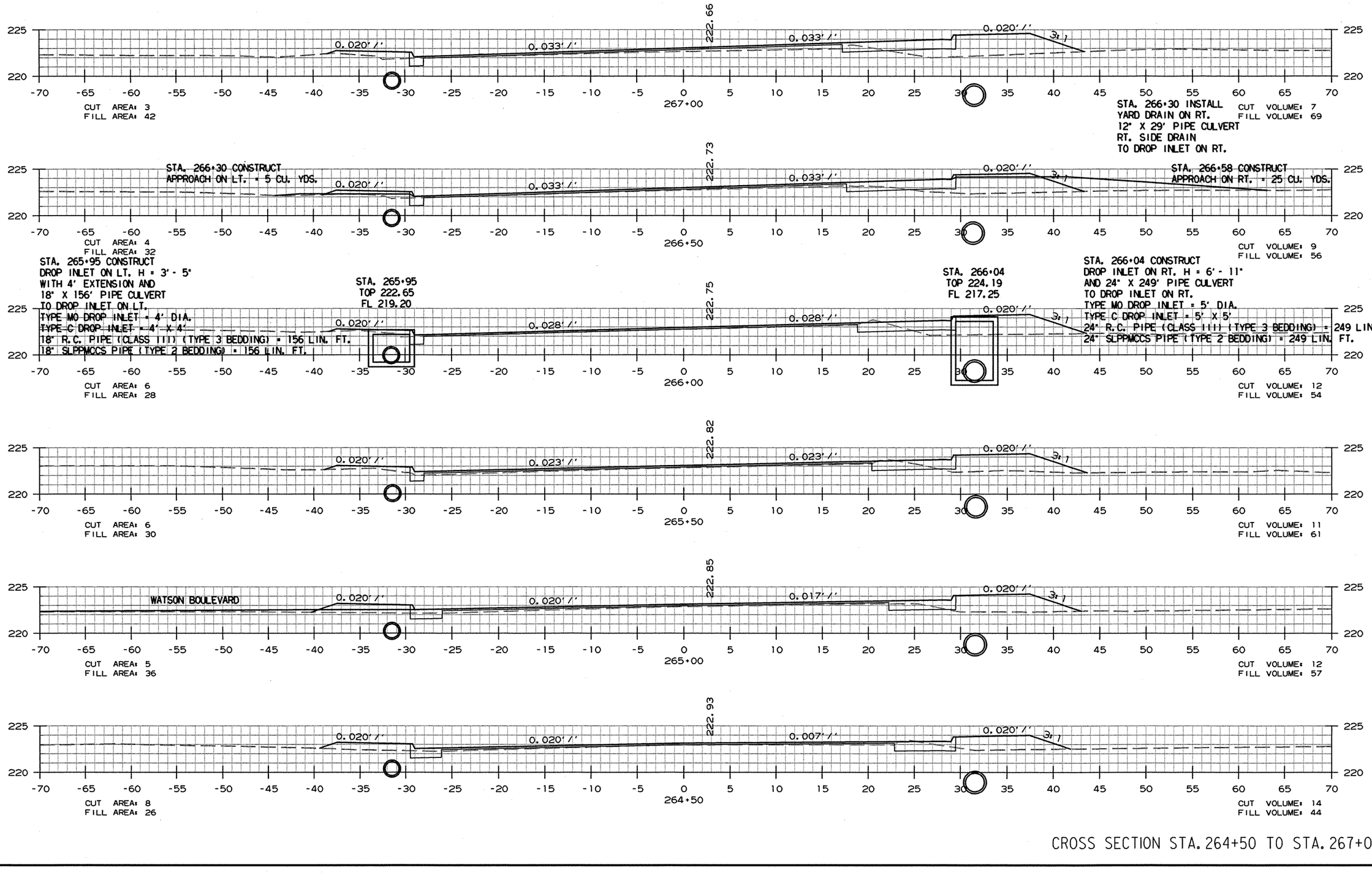
(2) CROSS SECTIONS



CROSS SECTION STA. 264+50 TO STA. 267+00

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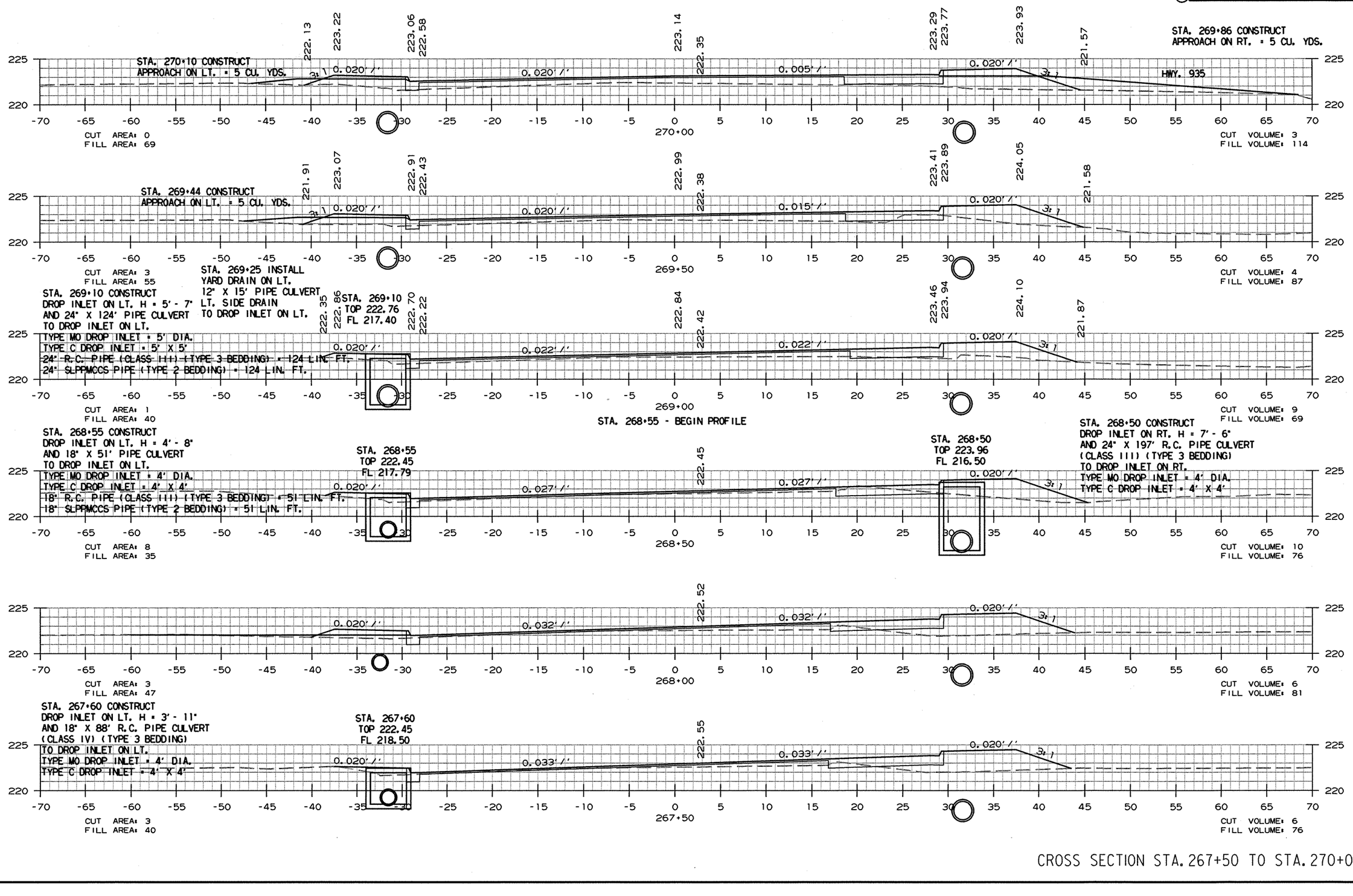
				JOB NO.		020070	132	144

(2) CROSS SECTIONS



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(2) CROSS SECTIONS

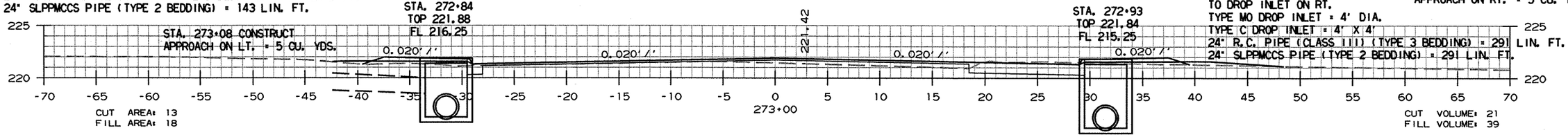
STA. 272+84 CONSTRUCT
DROP INLET ON LT. H = 5' - 8"
CONNECT TO EXIST. 12" BLACK PLASTIC PIPE INLET
AND 24" X 143' PIPE CULVERT
TO DROP INLET ON LT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' X 5'
24" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 143 LIN. FT.
24" SLPPMCCS PIPE (TYPE 2 BEDDING) = 143 LIN. FT.

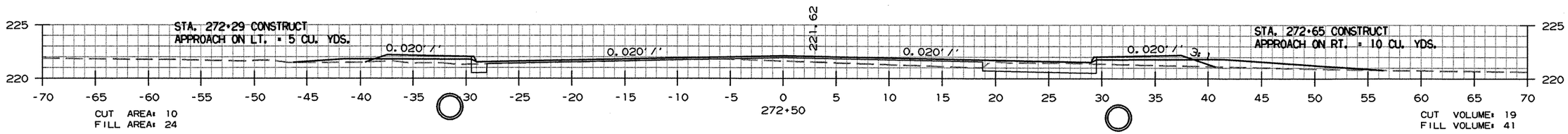
STA. 272+84
TOP 221.88
FL 216.25

STA. 272+93
TOP 221.84
FL 215.25

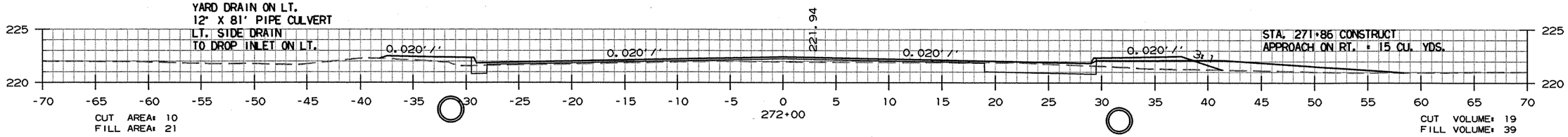
STA. 272+93 CONSTRUCT
DROP INLET ON RT. H = 6' - 7"
AND 24" X 291' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
24" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 291 LIN. FT.
24" SLPPMCCS PIPE (TYPE 2 BEDDING) = 291 LIN. FT.

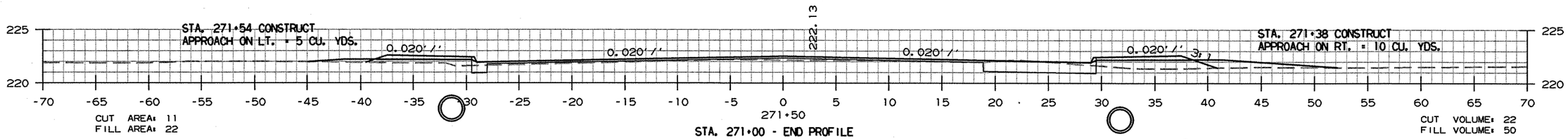
STA. 273+22 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.



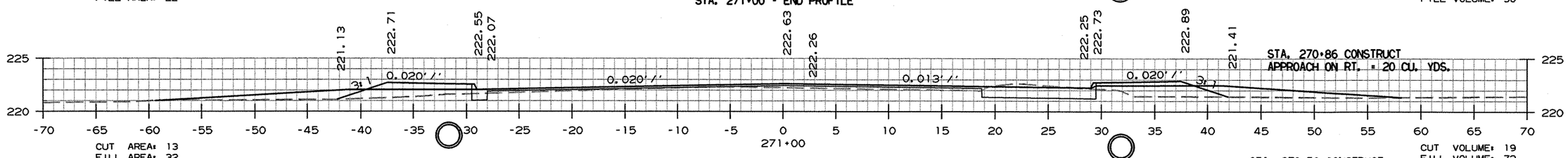


STA. 272+00 INSTALL
YARD DRAIN ON LT.
12" X 81' PIPE CULVERT
LT. SIDE DRAIN
TO DROP INLET ON LT.





STA. 271+00 - END PROFILE

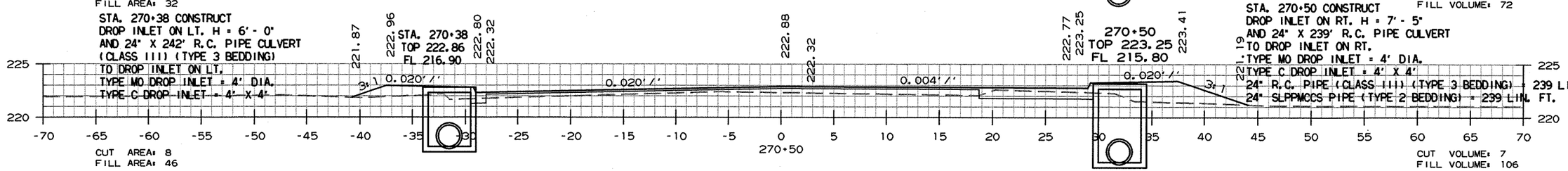


STA. 270+38 CONSTRUCT
DROP INLET ON LT. H = 6' - 0"
AND 24" X 242' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'

STA. 270+38
TOP 222.86
FL 216.90

270+50
TOP 223.25
FL 215.80

STA. 270+50 CONSTRUCT
DROP INLET ON RT. H = 7' - 5"
AND 24" X 239' R.C. PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
24" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 239 LIN. FT.
24" SLPPMCCS PIPE (TYPE 2 BEDDING) = 239 LIN. FT.



CROSS SECTION STA. 270+50 TO STA. 273+00

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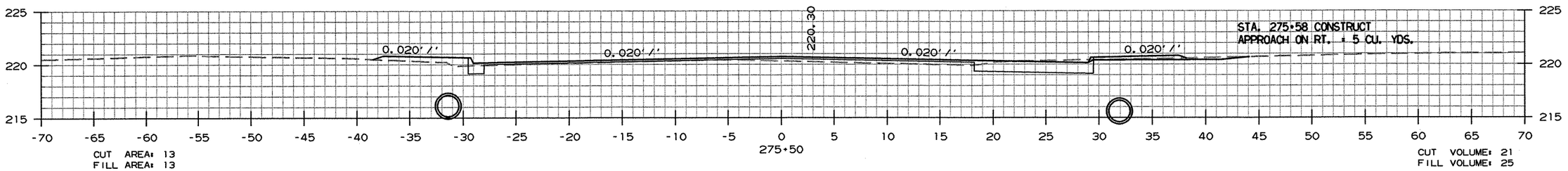
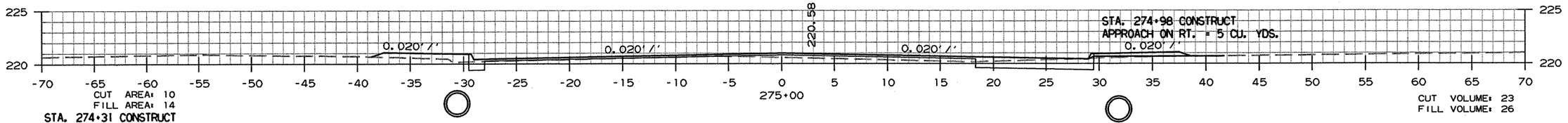
				JOB NO.		020070	134	144

(2) CROSS SECTIONS

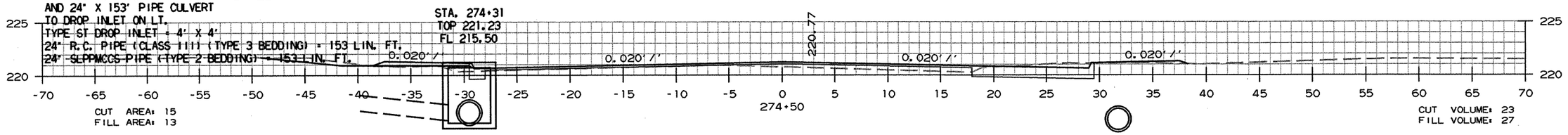


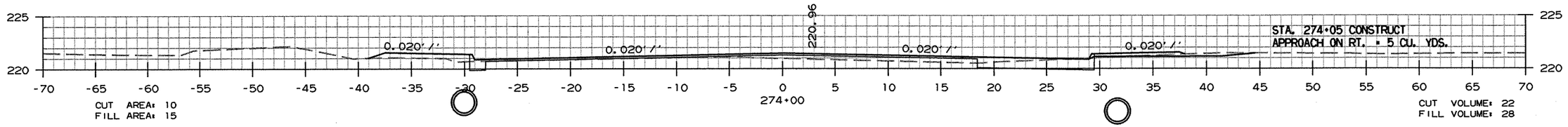


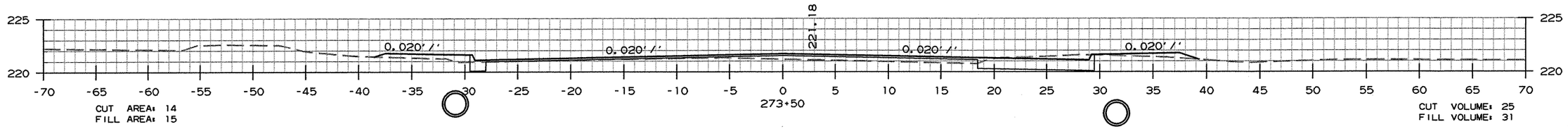
STA. 274+31 CONSTRUCT
DROP INLET ON LT. H = 5' - 9"
CONNECT TO EXIST. 14" R.C. PIPE INLET
AND 24" X 153' PIPE CULVERT
TO DROP INLET ON LT.
TYPE ST DROP INLET = 4' X 4'
24" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 153 LIN. FT.
24" SLPPMCCS PIPE (TYPE 2 BEDDING) = 153 LIN. FT.

STA. 274+29 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 274+31
TOP 221.23
FL 215.50







CROSS SECTION STA. 273+50 TO STA. 275+50

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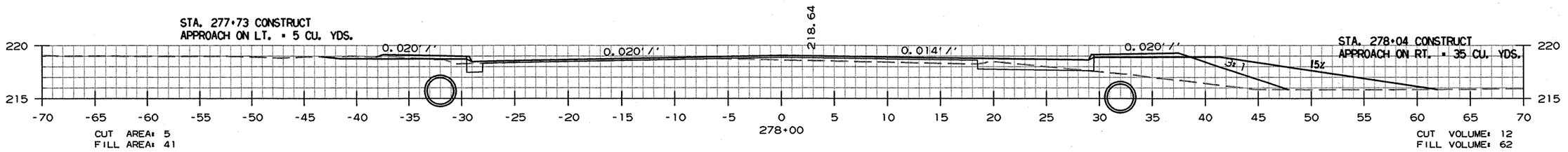
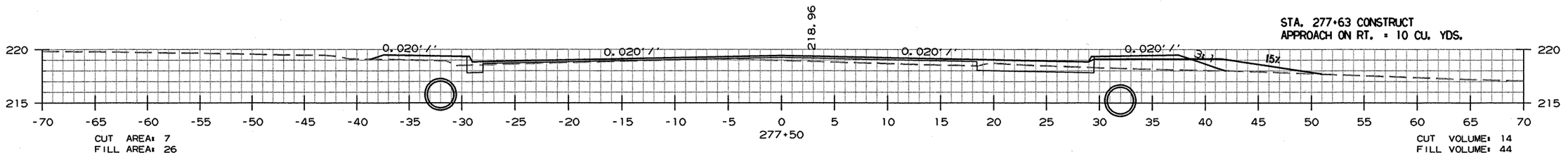
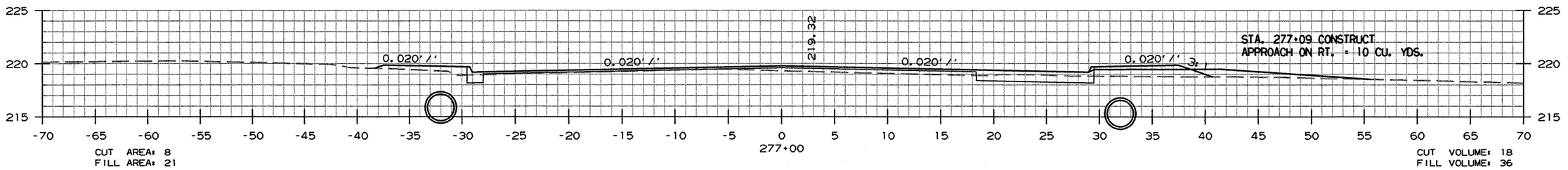
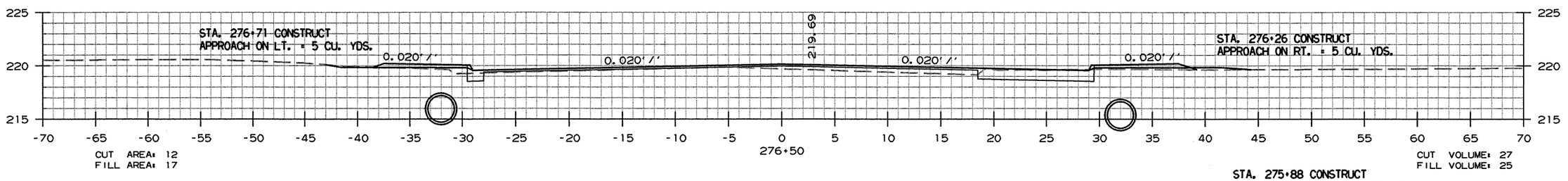
				6	ARK.			
				JOB NO.		020070	135	144

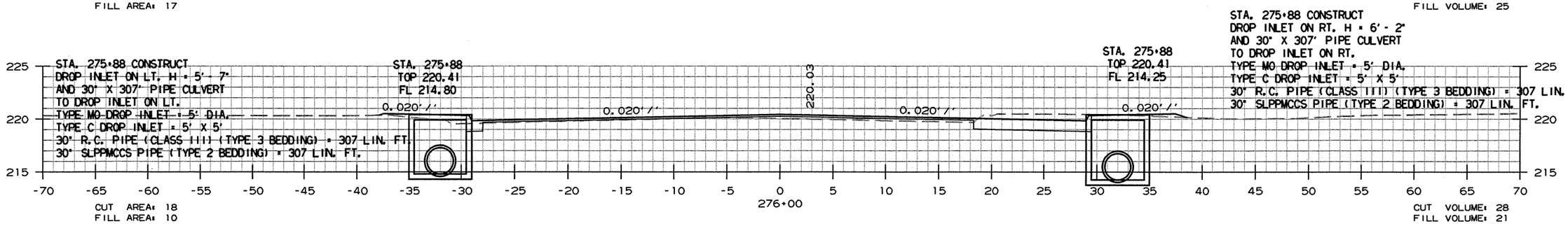
(2) CROSS SECTIONS











CROSS SECTION STA. 276+00 TO STA. 278+00

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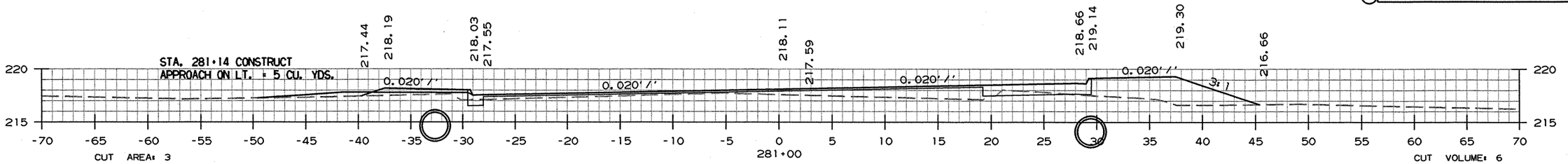
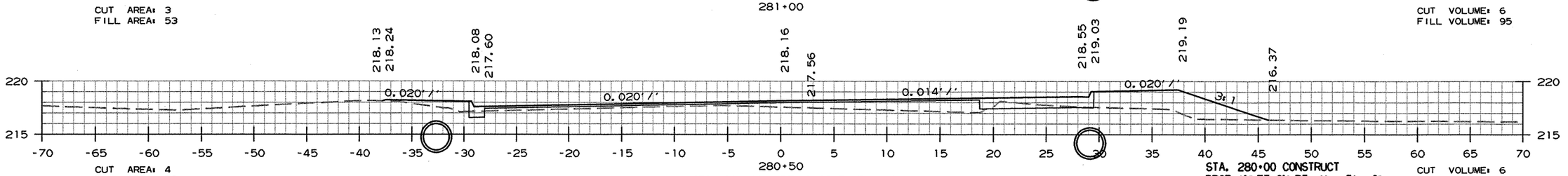
				6	ARK.			
				JOB NO.		020070	136	144

(2) CROSS SECTIONS





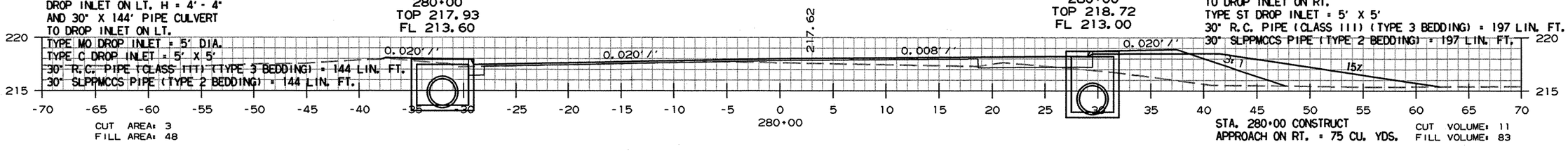
STA. 280+00 - BEGIN PROFILE

STA. 280+00 CONSTRUCT
DROP INLET ON LT. H = 4'- 4"
AND 30" X 144' PIPE CULVERT
TO DROP INLET ON LT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' X 5'
30" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 144 LIN. FT.
30" SLPPMCCS PIPE (TYPE 2 BEDDING) = 144 LIN. FT.

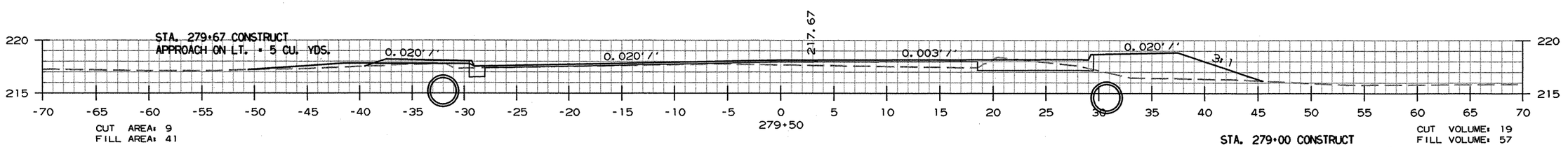
280+00
TOP 217.93
FL 213.60

280+00
TOP 218.72
FL 213.00

STA. 280+00 CONSTRUCT
DROP INLET ON RT. H = 5'- 9"
AND 30" X 197' PIPE CULVERT
TO DROP INLET ON RT.
TYPE ST DROP INLET = 5' X 5'
30" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 197 LIN. FT.
30" SLPPMCCS PIPE (TYPE 2 BEDDING) = 197 LIN. FT.



STA. 280+00 CONSTRUCT
APPROACH ON RT. = 75 CU. YDS.

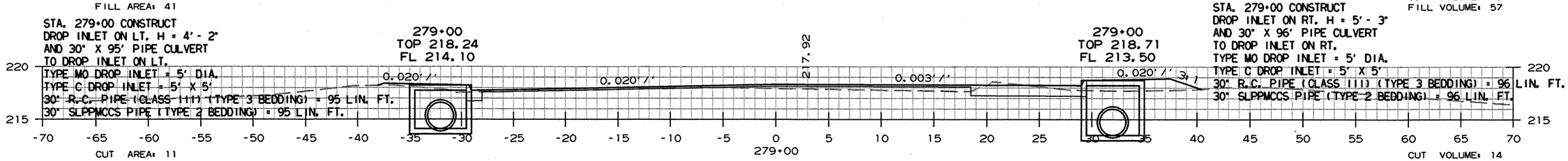


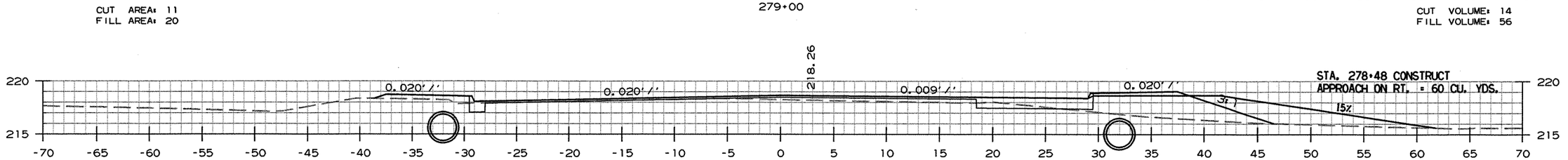
STA. 279+00 CONSTRUCT
DROP INLET ON LT. H = 4'- 2"
AND 30" X 95' PIPE CULVERT
TO DROP INLET ON LT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' X 5'
30" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 95 LIN. FT.
30" SLPPMCCS PIPE (TYPE 2 BEDDING) = 95 LIN. FT.

279+00
TOP 218.24
FL 214.10

279+00
TOP 218.71
FL 213.50

STA. 279+00 CONSTRUCT
DROP INLET ON RT. H = 5'- 3"
AND 30" X 96' PIPE CULVERT
TO DROP INLET ON RT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' X 5'
30" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 96 LIN. FT.
30" SLPPMCCS PIPE (TYPE 2 BEDDING) = 96 LIN. FT.





STA. 278+48 CONSTRUCT
APPROACH ON RT. = 60 CU. YDS.

CROSS SECTION STA. 278+50 TO STA. 281+00

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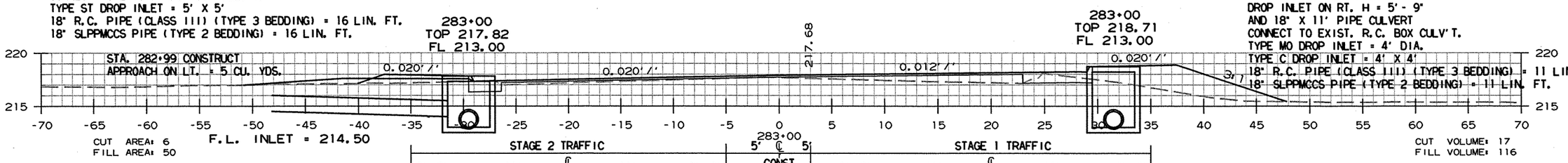
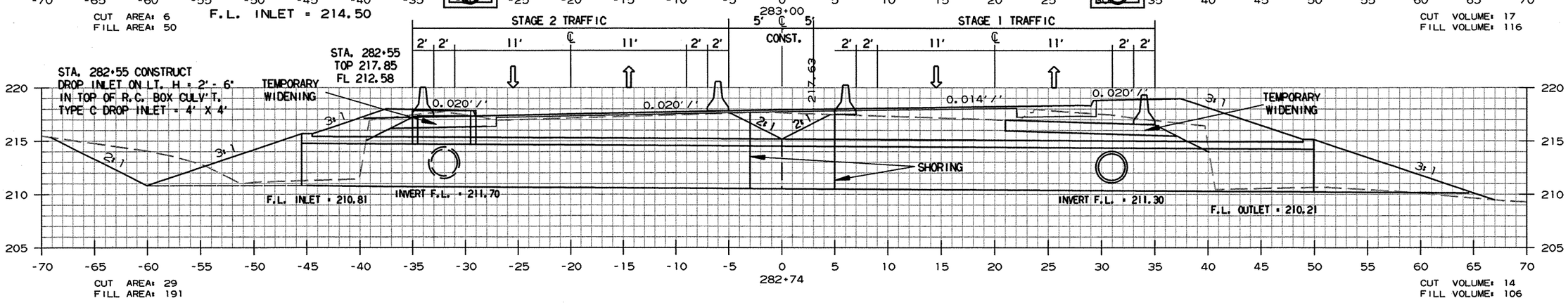
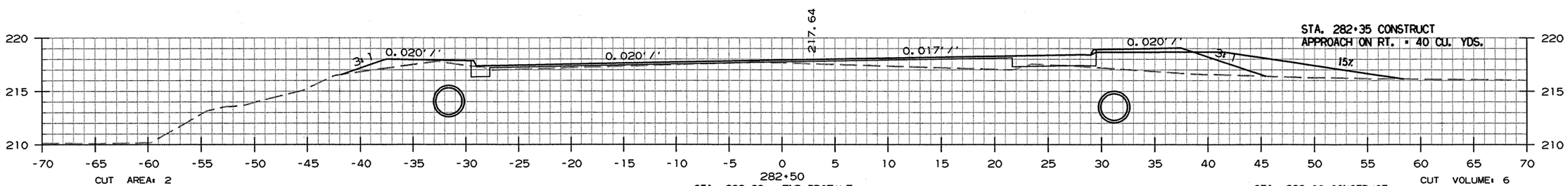
(2) CROSS SECTIONS

STA. 283+00 CONSTRUCT
DROP INLET ON LT. H = 4' - 10"
18" X 22' R.C. PIPE INLET
(CLASS III) (TYPE 3 BEDDING) WITH FES
AND 18" X 22' PIPE CULVERT
CONNECT TO EXIST. R.C. BOX CULV'T.
TYPE ST DROP INLET = 5' X 5'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 16 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 16 LIN. FT.



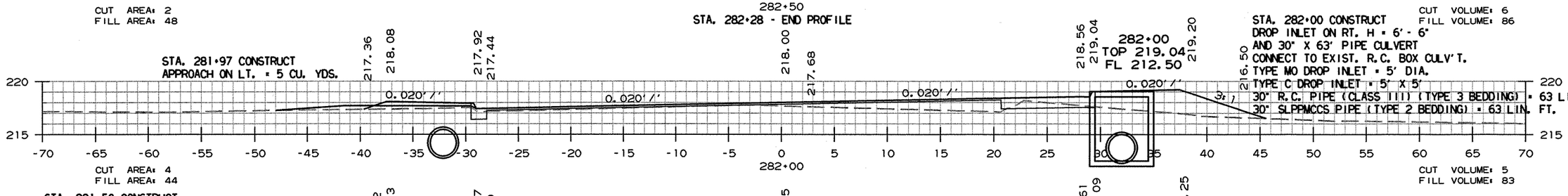
STA. 283+00 CONSTRUCT
DROP INLET ON RT. H = 5' - 9"
AND 18" X 11' PIPE CULVERT
CONNECT TO EXIST. R.C. BOX CULV'T.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 11 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 11 LIN. FT.



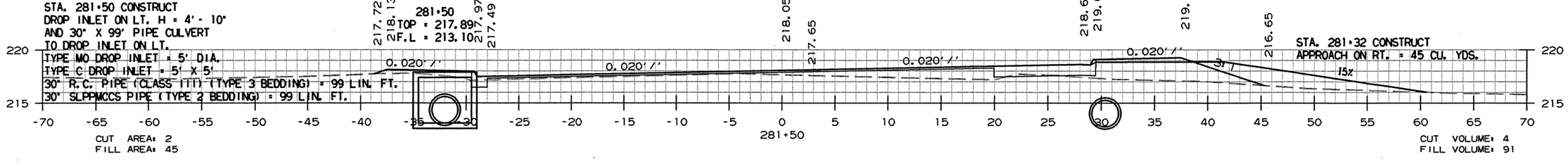


STA. 282+28 - END PROFILE

STA. 282+00 CONSTRUCT
DROP INLET ON RT. H = 6' - 6"
AND 30" X 63' PIPE CULVERT
CONNECT TO EXIST. R.C. BOX CULV'T.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' X 5'
30" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 63 LIN. FT.
30" SLPPMCCS PIPE (TYPE 2 BEDDING) = 63 LIN. FT.



STA. 281+50 CONSTRUCT
DROP INLET ON LT. H = 4' - 10"
AND 30" X 99' PIPE CULVERT
TO DROP INLET ON LT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' X 5'
30" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 99 LIN. FT.
30" SLPPMCCS PIPE (TYPE 2 BEDDING) = 99 LIN. FT.



CROSS SECTION STA. 281+50 TO STA. 283+00

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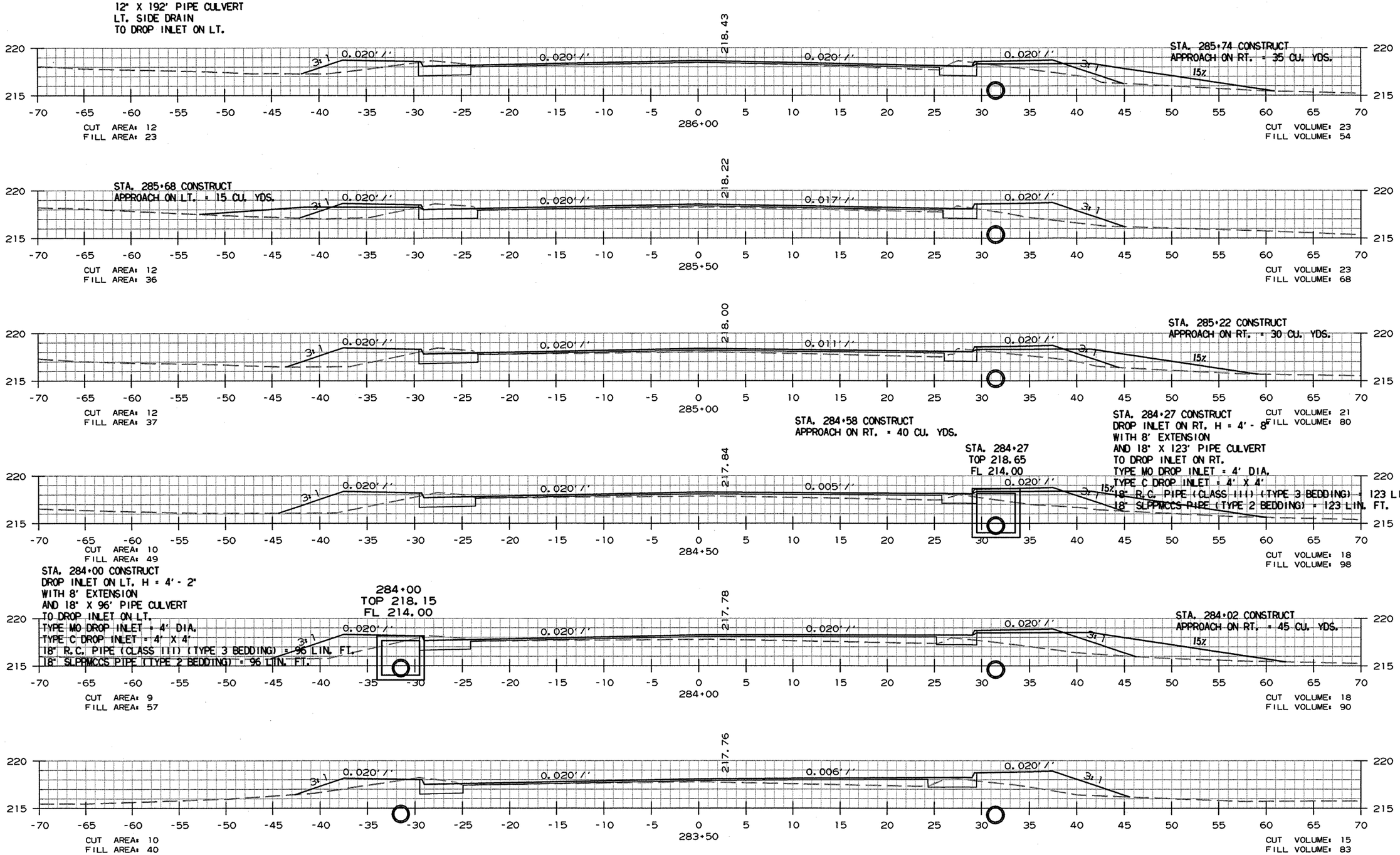
				6	ARK.			
				JOB NO.		020070	138	144

(2) CROSS SECTIONS



CROSS SECTION STA. 283+50 TO STA. 286+00

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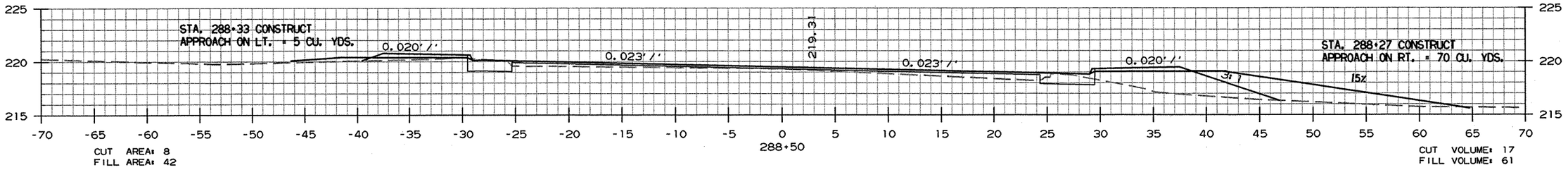
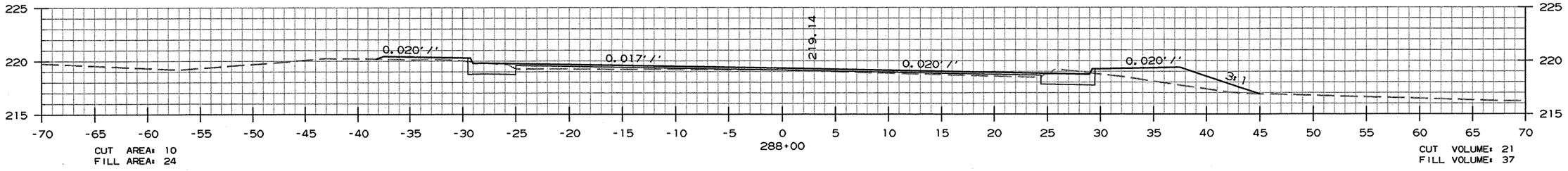
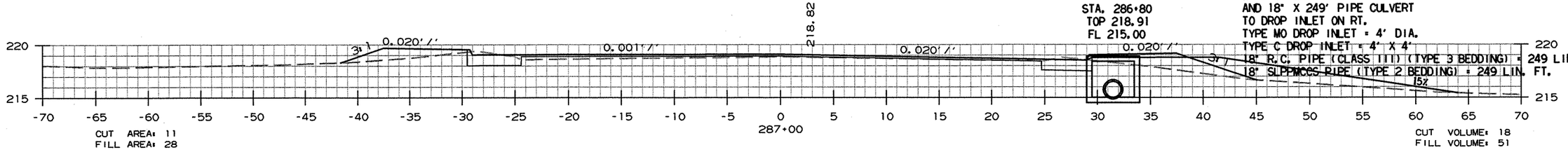
				6	ARK.			
				JOB NO.		020070	139	144

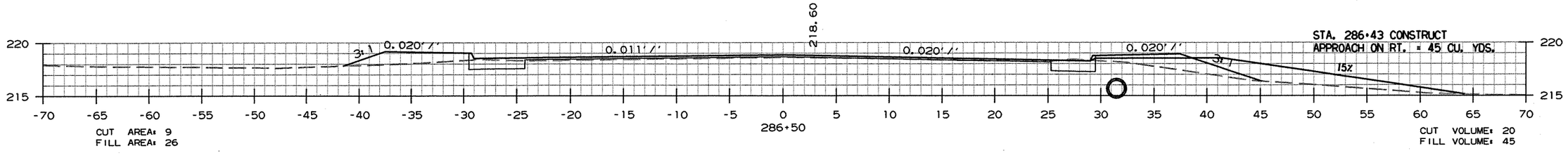
(2) CROSS SECTIONS

STA. 288+55 INSTALL
YARD DRAIN ON LT.
12" X 257' PIPE CULVERT
LT. SIDE DRAIN
TO YARD DRAIN ON LT.









CROSS SECTION STA. 286+50 TO STA. 288+50

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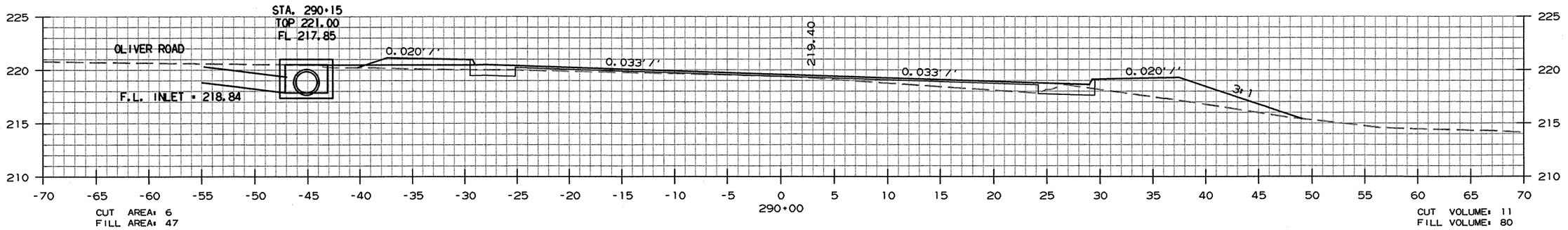
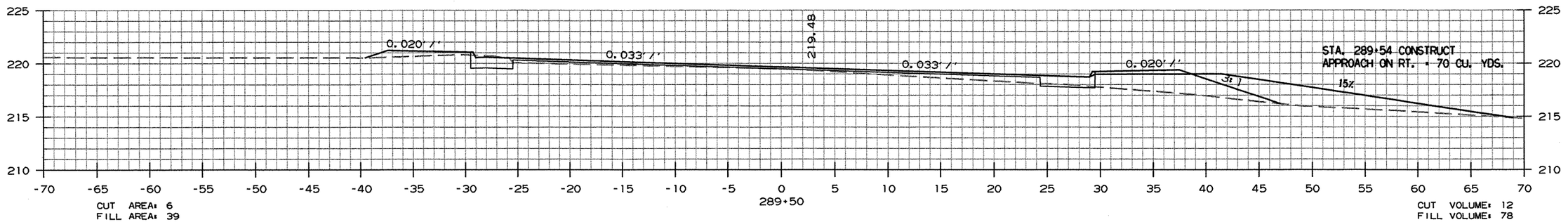
(2) CROSS SECTIONS

STA. 290+15 CONSTRUCT
DROP INLET ON LT. H = 3' - 2"
18" X 53' R.C. PIPE CULVERT STUB INLET
(CLASS V) (TYPE 3 BEDDING) WITH FES
18" X 7' R.C. PIPE CULVERT STUB INLET
(CLASS III) (TYPE 3 BEDDING) WITH FES
AND 24" X 289' PIPE CULVERT
TO DROP INLET ON LT.
TYPE C DROP INLET = 4' X 4'
24" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 289 LIN. FT.
24" SLPPMCCS PIPE (TYPE 2 BEDDING) = 289 LIN. FT.



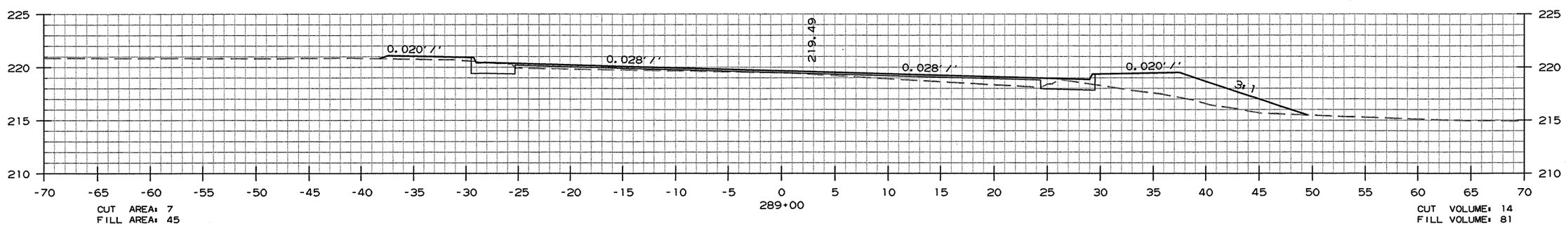
CUT AREA: 6
FILL AREA: 47

CUT VOLUME: 11
FILL VOLUME: 80



CUT AREA: 6
FILL AREA: 39

CUT VOLUME: 12
FILL VOLUME: 78



CUT AREA: 7
FILL AREA: 45

CUT VOLUME: 14
FILL VOLUME: 81

CROSS SECTION STA. 289+00 TO STA. 290+00

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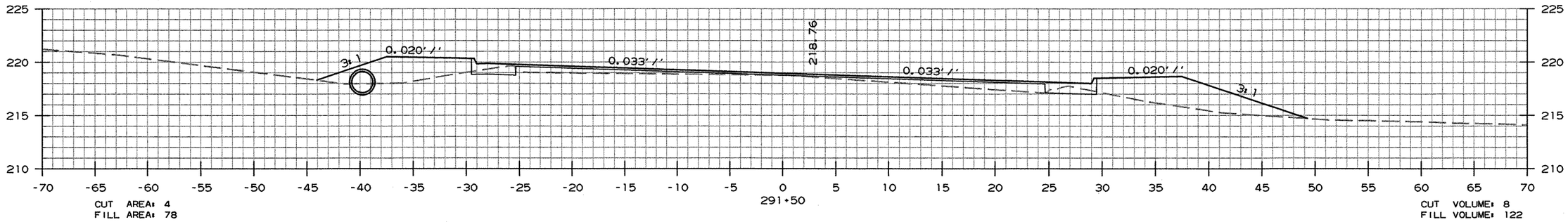
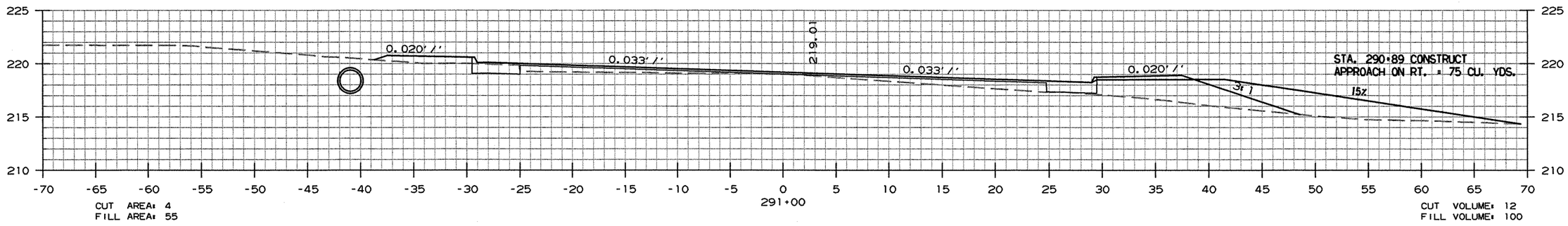
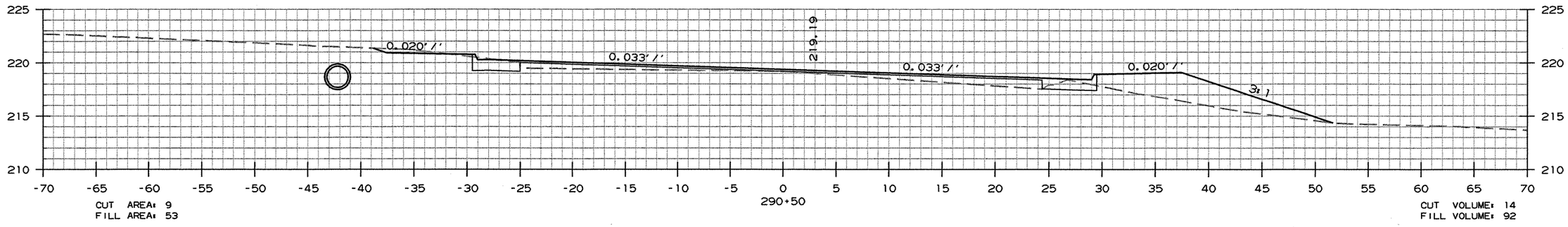
				6	ARK.			
				JOB NO.		020070	141	144

(2) CROSS SECTIONS







CROSS SECTION STA. 290+50 TO STA. 291+50

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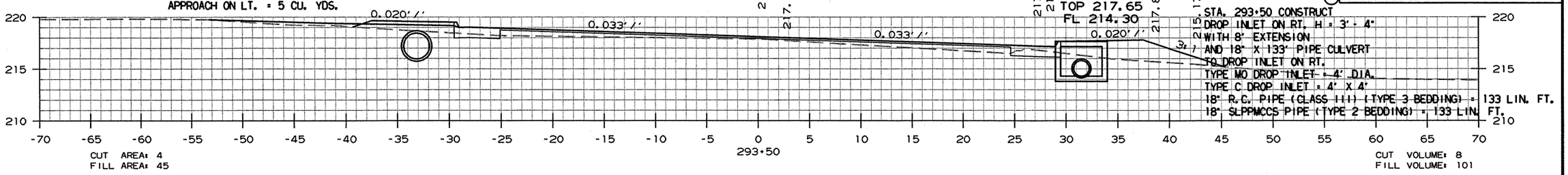
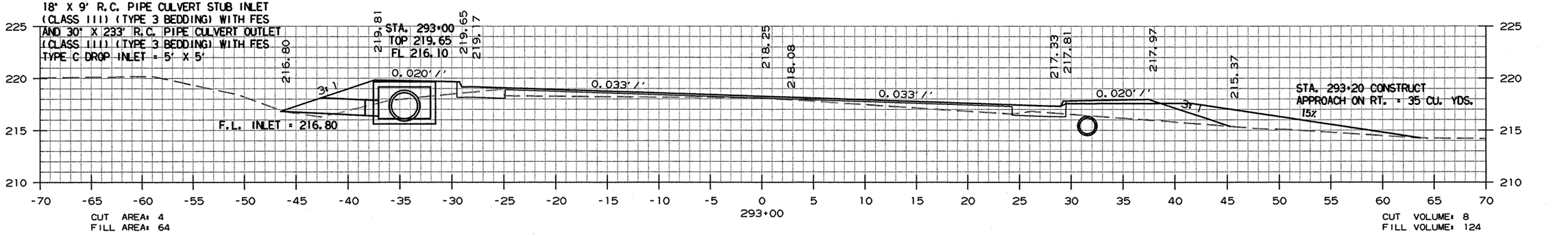
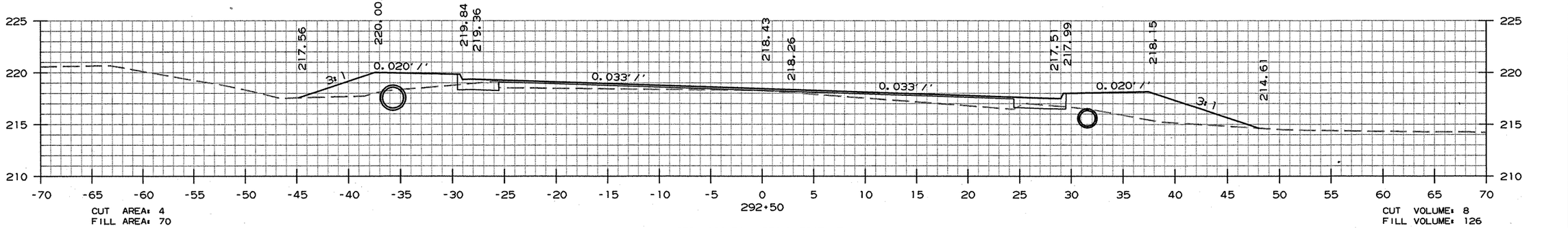
				6	ARK.			
				JOB NO.		020070	142	144

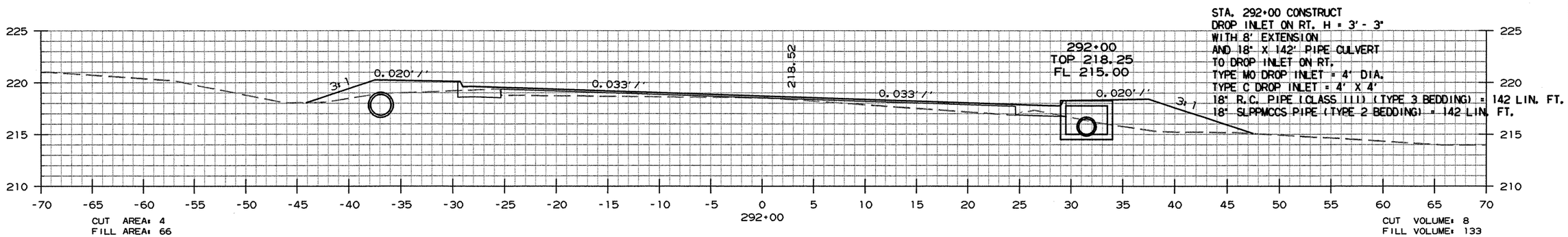
(2) CROSS SECTIONS







STA. 292+50 - BEGIN PROFILE



CROSS SECTION STA. 292+00 TO STA. 293+50

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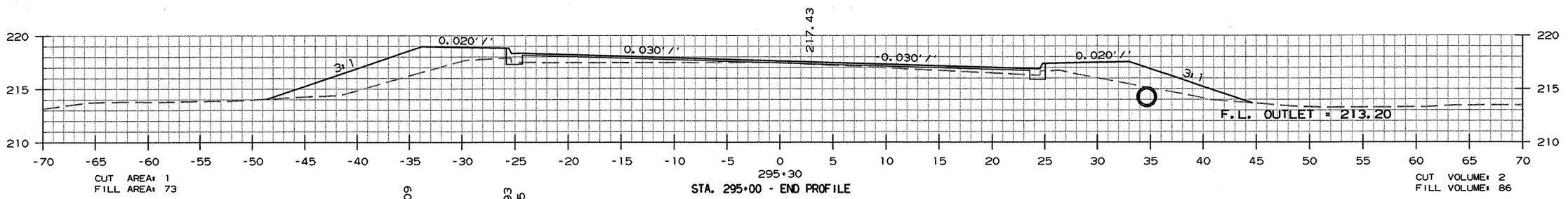
				6	ARK.			
				JOB NO.		020070	143	144

(2) CROSS SECTIONS

END JOB 020070 - STA. 295+30
HWY. 79B

STA. 295+30 - MATCH EXIST. SUPERELEVATION

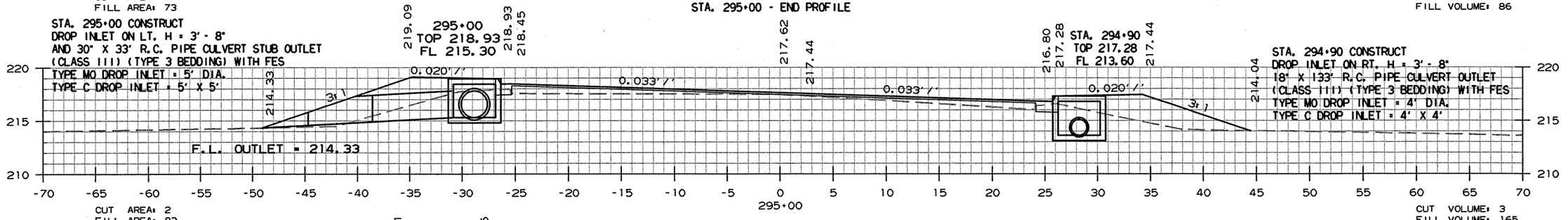


CUT AREA: 1
FILL AREA: 73

STA. 295+00 - END PROFILE

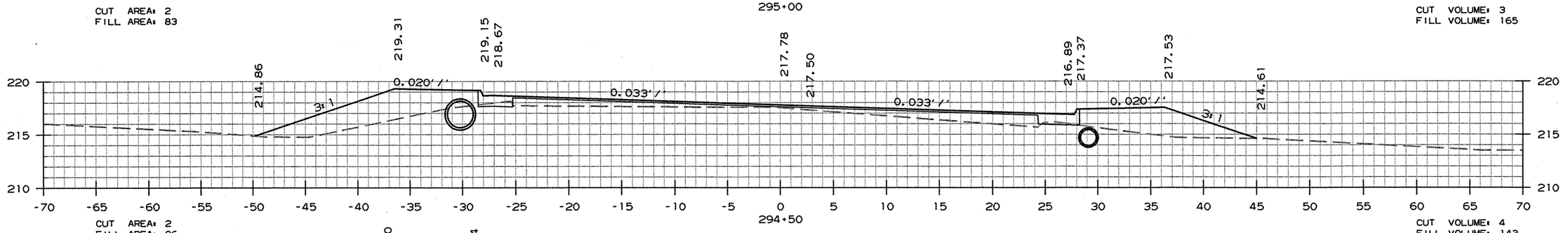
CUT VOLUME: 2
FILL VOLUME: 86

STA. 295+00 CONSTRUCT
DROP INLET ON LT. H = 3' - 8"
AND 30" X 33' R.C. PIPE CULVERT STUB OUTLET
(CLASS III) (TYPE 3 BEDDING) WITH FES
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' X 5'



CUT AREA: 2
FILL AREA: 83

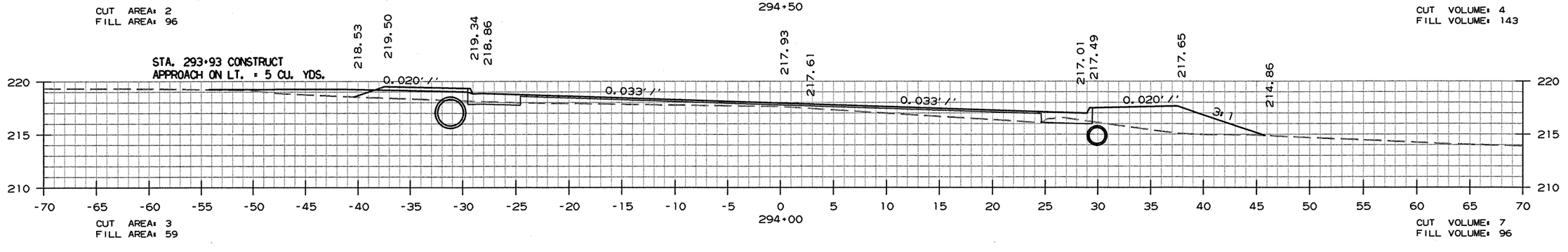
CUT VOLUME: 3
FILL VOLUME: 165



CUT AREA: 2
FILL AREA: 96

CUT VOLUME: 4
FILL VOLUME: 143

STA. 293+93 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.



CUT AREA: 3
FILL AREA: 59

CUT VOLUME: 7
FILL VOLUME: 96

CROSS SECTION STA. 294+00 TO STA. 295+30

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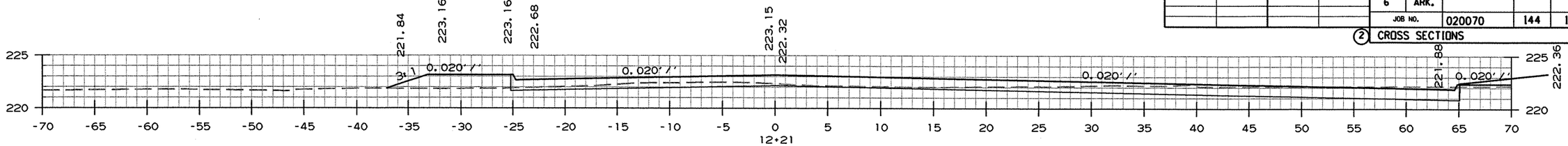
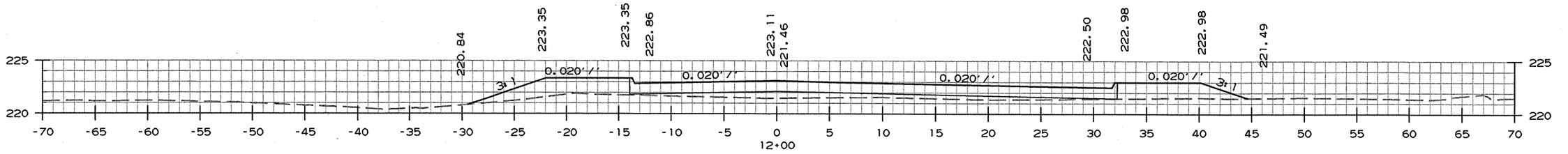
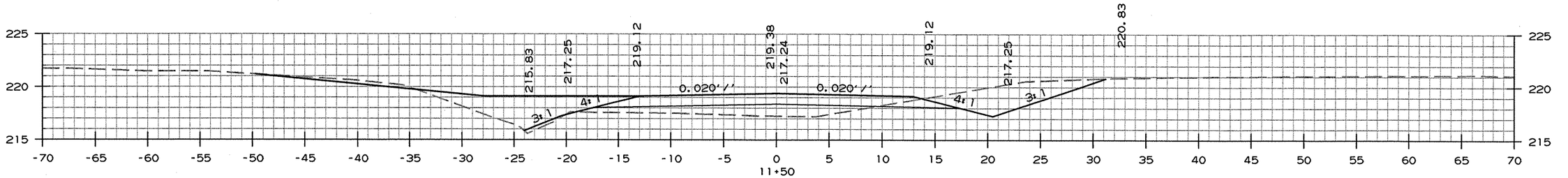
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AND PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020070	144	144

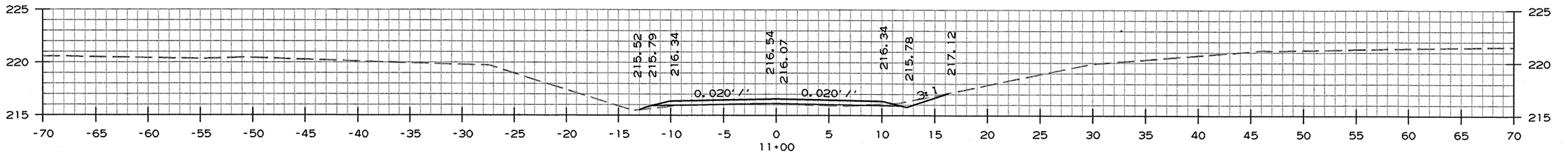
(2) CROSS SECTIONS

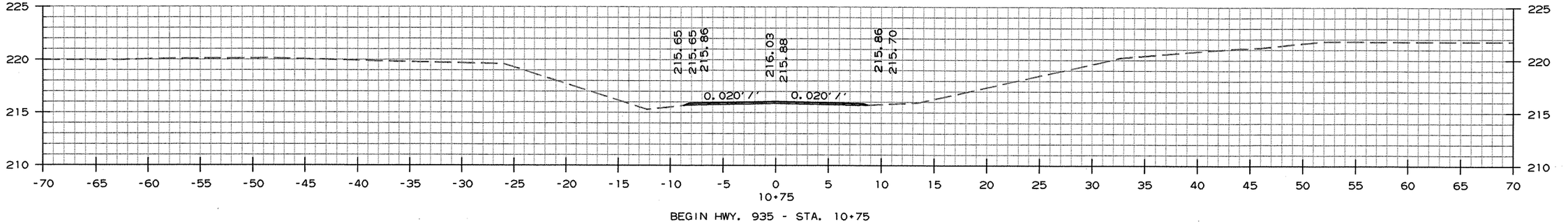
END HWY. 935 - STA. 12+21











BEGIN HWY. 935 - STA. 10+75

CROSS SECTION STA. 10+75 TO STA. 12+21

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