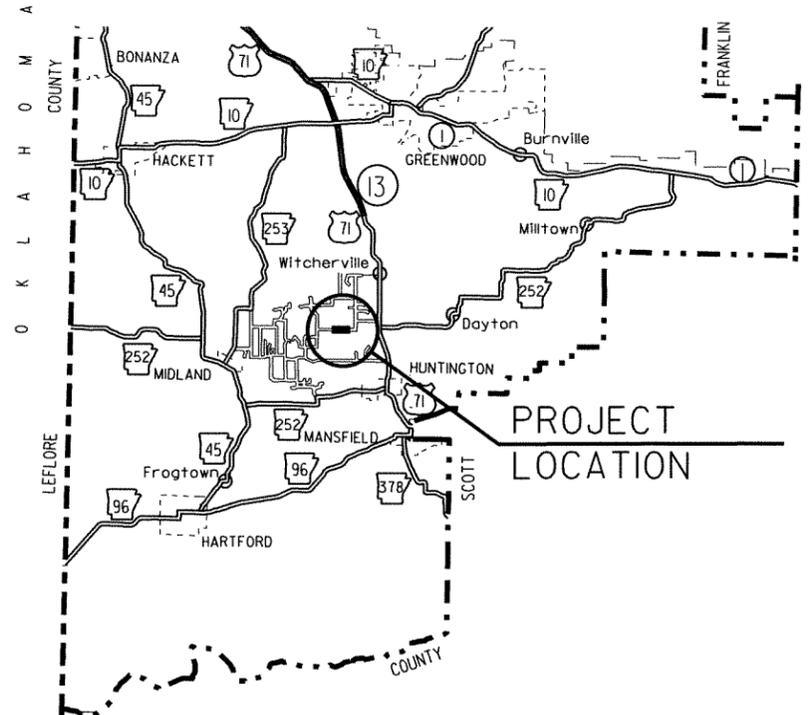


ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
CONSTRUCTION PLANS FOR PROPOSED COUNTY ROAD

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	BRO-0065(46)		
				JOB NO.		BR6506	1	31
④ BRANCH OF PRAIRIE CREEK STR. & APPRS. (S)								



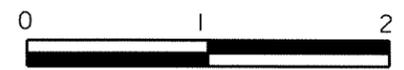
VICINITY MAP

BRANCH OF PRAIRIE CREEK STR. & APPRS. (S)

COUNTY ROAD 35

SEBASTIAN COUNTY

FED. AID PROJ. BRO- 0065(46) JOB BR6506



ARK. HWY. DIST. NO. 4

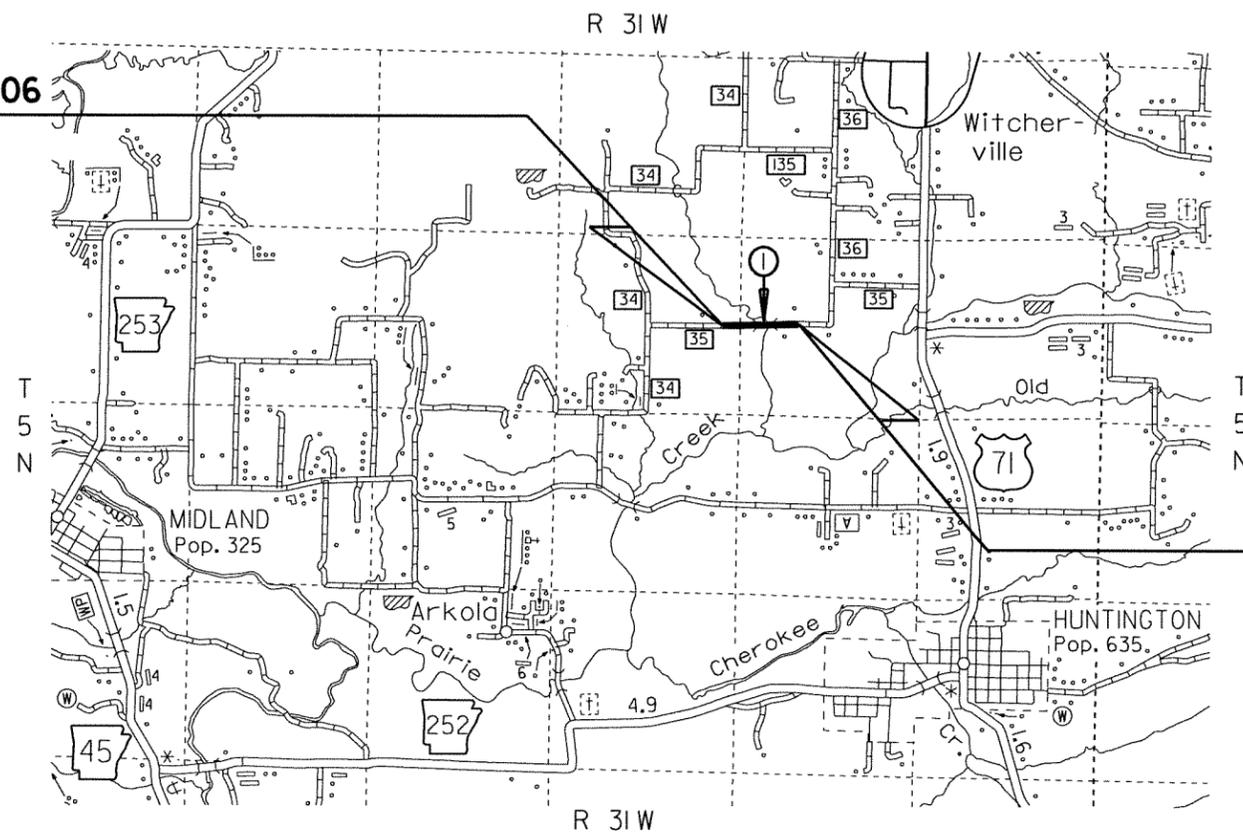
STA. 102+00.00- BEGIN JOB BR6506
FED. AID PROJ. BRO-0065(46)

DESIGN TRAFFIC DATA

DESIGN YEAR	-----	2032
2012 ADT	-----	40
2032 ADT	-----	60
2032 DHV	-----	9
DIRECTIONAL DISTRIBUTION	-----	0.60
TRUCKS	-----	3 %
DESIGN SPEED	-----	40 MPH

STRUCTURES OVER 20'-0" SPAN

- ① STA. 105+85 - CONSTRUCT
QUAD. 11'x 6'x 46' R.C. BOX CULVERT
SPAN = 46'



STA. 108+50.00-END JOB BR6506
FED. AID PROJ. BRO-0065(46)

APPROVED



6/13/12
DEPUTY DIRECTOR
AND CHIEF ENGINEER

MID-POINT OF PROJECT

	BEGIN	MID-POINT	END
LAT.	N 35°06'35.4"	N 35°06'35.6"	N 35°06'35.7"
LONG.	W 94°17'01.6"	W 94°16'57.4"	W 94°16'53.0"

GROSS LENGTH OF PROJECT	650.00	FEET	OR	0.123	MILES
NET " " ROADWAY	604.00	"	"	0.114	"
NET " " BRIDGES	46.00	"	"	0.009	"
NET " " PROJECT	650.00	"	"	0.123	"

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	DISTRICT	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NUMBER	BR6506		2	31

INDEX, GOV. SPECS. & GEN. NOTES

GOVERNING SPECIFICATIONS

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

INDEX OF SHEETS

SHEET NO.	TITLE	DATE
1	TITLE SHEET	
2	INDEX OF SHEETS, GOVERNING SPECIFICATIONS AND GENERAL NOTES	
3	TYPICAL SECTION OF IMPROVEMENT	
4-9	SPECIAL DETAILS	
10	WATER GATE DETAIL (PVC)	
11	SURVEY CONTROL DETAILS	
12	TEMPORARY EROSION CONTROL DETAILS	
13-14	QUANTITY SHEETS	
15	SUMMARY OF QUANTITIES AND REVISIONS	
16	PLAN AND PROFILE SHEET	
17	PRECAST CONCRETE BOX CULVERTS.....	PBC-1..... 12-15-11
18	PAVEMENT MARKING DETAILS.....	PM-1..... 11-17-10
19	DETAILS OF PIPE UNDERDRAIN.....	PU-1..... 4-10-03
20	EXCAVATION PAY LIMITS, BACKFILL, & SOLID SODDING FOR BOX CULVERTS.....	RCB-2..... 11-20-03
21	STANDARD HIGHWAY SIGNS AND SUPPORT ASSEMBLIES.....	SHS-1..... 4-17-08
22	U-CHANNEL POST ASSEMBLIES.....	SHS-2..... 10-09-03
23	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION.....	TC-1..... 12-15-11
24	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION.....	TC-2..... 3-11-10
25	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION.....	TC-3..... 10-15-09
26	TEMPORARY EROSION CONTROL DEVICES.....	TEC-1..... 12-15-11
27	TEMPORARY EROSION CONTROL DEVICES.....	TEC-2..... 6-02-94
28	TEMPORARY EROSION CONTROL DEVICES.....	TEC-3..... 11-03-94
29	WIRE FENCE TYPE C AND D.....	WF-4..... 8-22-02
30-31	CROSS SECTIONS	

NUMBER	TITLE
ERRATA	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273	FHWA-1273 REVISIONS
FHWA-1273	REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273	SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273	SUPPLEMENT - REVISIONS OF FHWA-1273 FOR OFF-SYSTEM PROJECTS
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
403-1	POLYMER/LATAX MODIFIED CATIONIC EMULSIFIED ASPHALT FOR ASPHALT SURFACE TREATMENTS
409-1	MINERAL AGGREGATE
600-1	WATER FOR VEGETATION
603-1	MAINTENANCE OF TRAFFIC
604-1	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
604-2	INSPECTION OF TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
718-2	REFLECTORIZED PAINT PAVEMENT MARKINGS
723-1	GENERAL REQUIREMENTS FOR SIGNS
804-1	INSTALLATION OF DOWEL BARS AND TIE BARS
JOB BR6506	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB BR6506	CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS
JOB BR6506	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB BR6506	INTERNET BIDDING
JOB BR6506	LRFD PRECAST REINFORCING CONCRETE BOX CULVERT
JOB BR6506	NESTING SITES OF MIGRATORY BIRDS
JOB BR6506	OFF-SITE RESTRAINING CONDITIONS FOR AMERICAN BURYING BEETLE
JOB BR6506	ROCK DITCH LINER
JOB BR6506	STORM WATER POLLUTION PREVENTION PLAN
JOB BR6506	UTILITY ADJUSTMENTS
JOB BR6506	WATER GATE

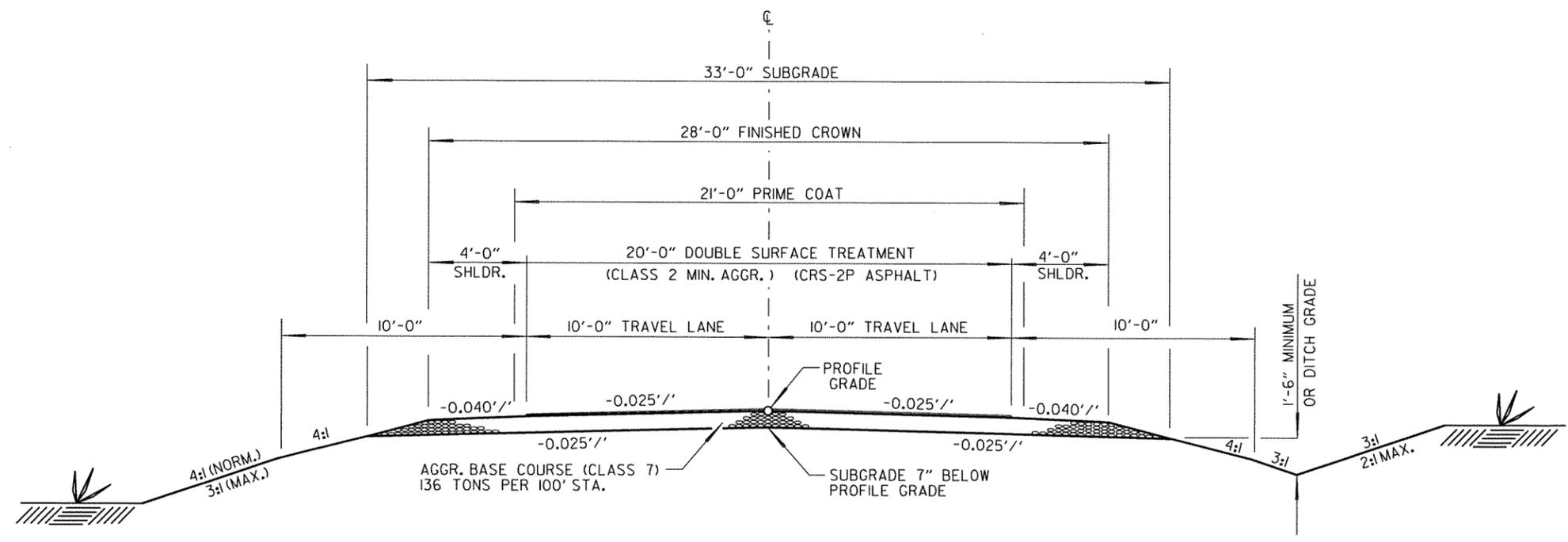
GENERAL NOTES

- GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.
- UTILITIES INTERFERING WITH CONSTRUCTION SHALL BE MOVED BY THE OWNERS.
- ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
- ALL TREES THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE SPARED AS DIRECTED BY THE ENGINEER. CARE AND DISCRETION SHALL BE USED TO INSURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HARMED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A FENCE TO CONTROL LIVESTOCK IN AREAS WHERE PASTURES ARE SEVERED. WIRE FENCE MAY BE CONSTRUCTED INITIALLY, OR IN LIEU THEREOF, THE CONTRACTOR AT HIS OWN EXPENSE, MAY ELECT TO PROVIDE TEMPORARY FENCING SUITABLE TO CONTAIN LIVESTOCK.
- THIS PROJECT IS COVERED UNDER A NATIONWIDE 14 SECTION 404 PERMIT. REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS, EDITION OF 2003, FOR PERMIT REQUIREMENTS.
- THE ROAD WILL BE CLOSED TO THRU-TRAFFIC DURING CONSTRUCTION OF THE NEW R.C.BOX CULVERT.



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				6	ARK.		3	31
				JOB NO. BR6506				

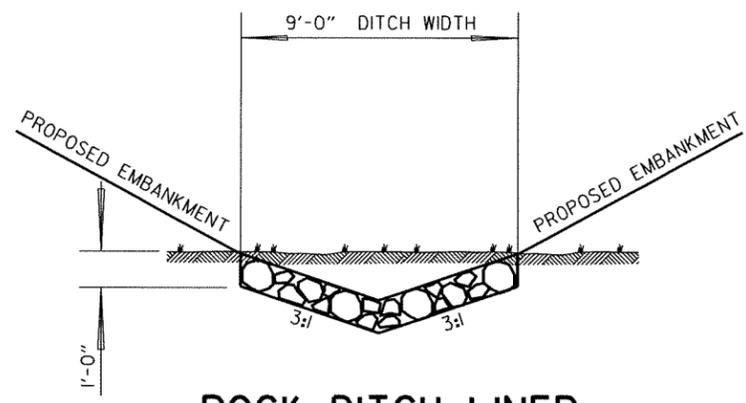
④ TYPICAL SECTION OF IMPROVEMENT



TYPICAL SECTION

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

NOTE: REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPES. NO CHANGE SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.



ROCK DITCH LINER

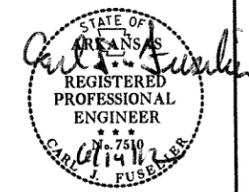
NOTE: STA. 106+30 TO 108+50 LT. & RT. SEE CROSS SECTIONS FOR DITCH GRADES.

TYPICAL SECTION OF IMPROVEMENT

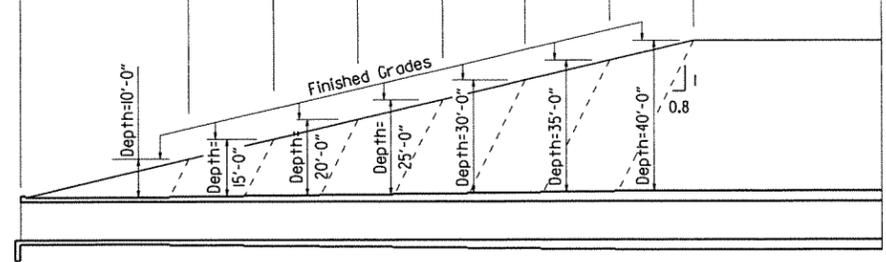
STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 NUMBER 5368
 DAVID R. MAYO, JR.
 6/13/2012

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. BR6506							4	31

① SPECIAL DETAILS



SLOPE	2:1	3:1	4:1
2:1 Slope	20'-0"	10'-0"	10'-0"
3:1 Slope	30'-0"	15'-0"	15'-0"
4:1 Slope	40'-0"	20'-0"	20'-0"



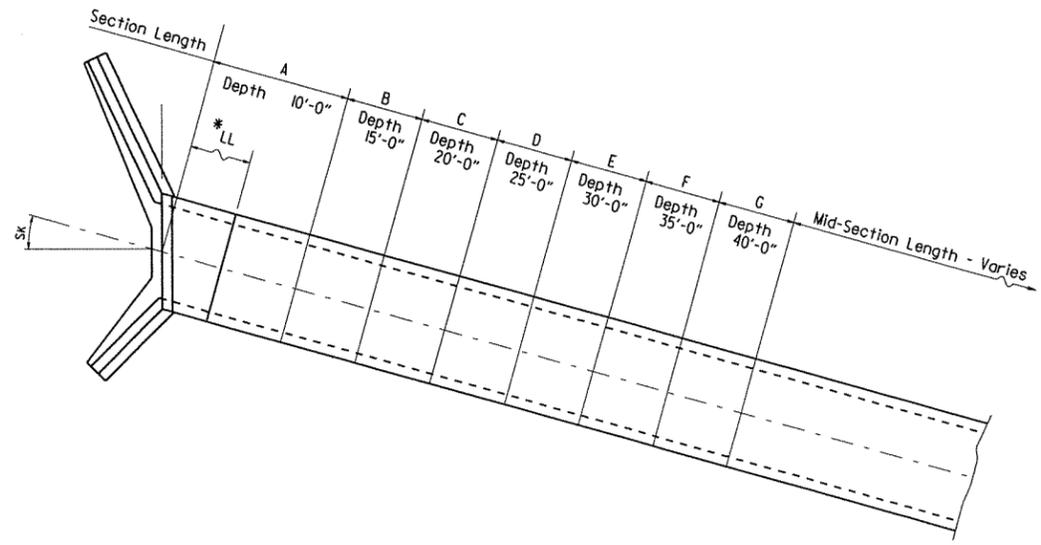
Slope Section Length @ 2:1 Slope	A=12'-0"	B=6'-0"	C=6'-0"	D=6'-0"	E=6'-0"	F=6'-0"	G=6'-0"	Mid-Section Length - Varies
Slope Section Length @ 3:1 Slope	A=22'-0"	B=11'-0"	C=11'-0"	D=11'-0"	E=11'-0"	F=11'-0"	G=11'-0"	Mid-Section Length - Varies
Slope Section Length @ 4:1 Slope	A=32'-0"	B=16'-0"	C=16'-0"	D=16'-0"	E=16'-0"	F=16'-0"	G=16'-0"	Mid-Section Length - Varies

LONGITUDINAL SECTION LENGTH SCHEDULE FOR VARYING FILL DEPTHS OVER 5'

Lengths for Non-Skewed Boxes

Note: For fill depths 5' and under, use Mid-Section full length of box culvert.

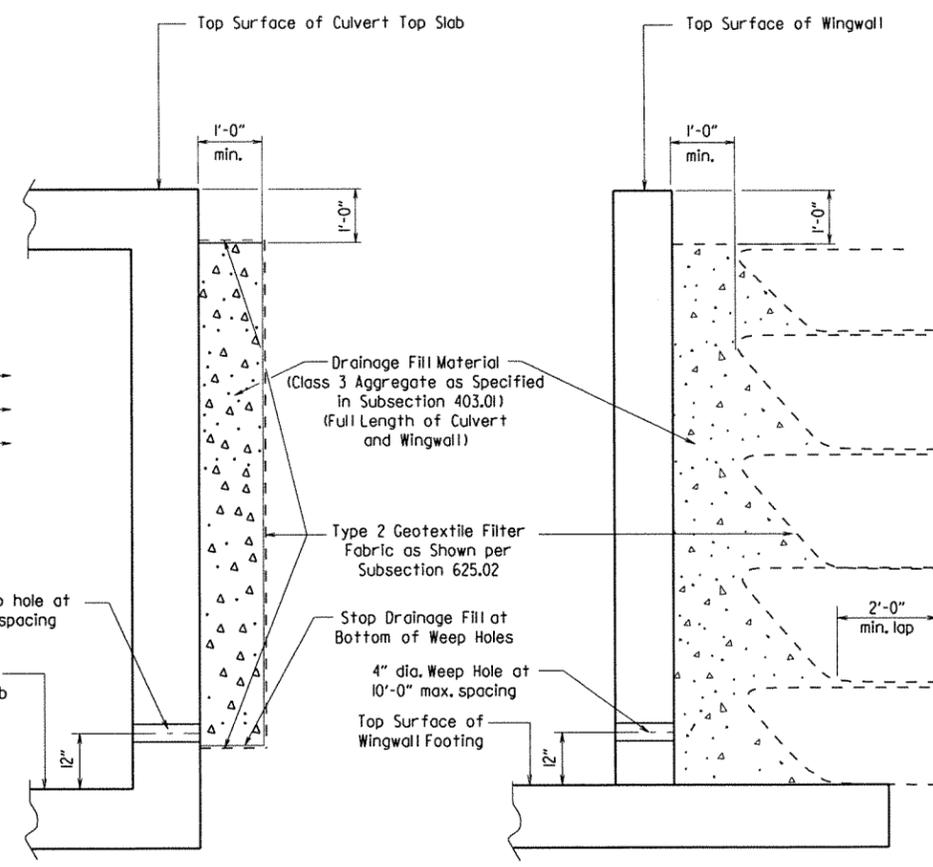
* LL = Skewed End Section Length - See "Skewed End Section Details"



SLOPE	2:1		3:1		4:1	
	A	B, C, D, E, F, G	A	B, C, D, E, F, G	A	B, C, D, E, F, G
15	12'-5 1/8"	6'-2 1/2"	22'-8 3/8"	11'-4 5/8"	33'-1 1/2"	16'-6 3/4"
30	13'-10 1/4"	6'-11 1/8"	25'-4 7/8"	12'-8 3/8"	36'-11 3/8"	18'-5 3/4"
45	16'-11 5/8"	8'-5 7/8"	31'-1 3/8"	15'-6 5/8"	45'-3"	22'-7 1/2"

LONGITUDINAL SECTION LENGTH SCHEDULE FOR VARYING FILL DEPTH OVER 5'

Lengths for Skewed Boxes



VERTICAL FABRIC ALTERNATE

(Shown for Culvert - Similar for Wingwall)

WRAPPED FABRIC ALTERNATE

(Shown for Wingwall - Similar for Culvert)

For Details of Excavation and Pay Limits, see Standard Drawing RCB-2.

WINGWALL & CULVERT DRAINAGE DETAIL

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2003 edition) with applicable supplemental specifications and special provisions. Section and Subsection refer to the Standard Construction Specifications unless otherwise noted in the Plans.

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications, Fifth Edition (2010) with 2010 interim revisions.

LIVE LOADING: HL-93

All concrete shall be Class 5 with a minimum 28-day compressive strength of 3,500 psi and shall be poured in the dry. All exposed corners to have 3/8" chamfers.

Reinforcing Steel shall be AASHTOM 31 or M 53, Grade 60.

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 1/2 inch.

Excavation and backfilling shall be in accordance with the requirements of Section 801.

Membrane Waterproofing shall conform to the requirements of Section 815 of the Standard Specifications. Membrane Waterproofing shall be Type C and as directed by the Engineer applied to all construction joints in the top slab and the sidewalls of R.C. Box culverts and to the construction joint between wingwalls and R.C. Box culvert walls.

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.

Construction Joints between footings and walls shall be made only where shown on the Plans. The maximum length of culvert for which a continuous pour will be permitted is 75 ft. For longer culvert construction, joints shall be provided in slabs and walls at intervals not greater than 50 ft. Joints shall be normal to the centerline of barrel and shall be keyed. Longitudinal reinforcing shall be continuous through joints unless shown otherwise.

Membrane Waterproofing, Weep Holes, Geotextile Filter Fabric, and Drainage Fill Material will not be paid for directly but shall be considered subsidiary to Class 5 Concrete.

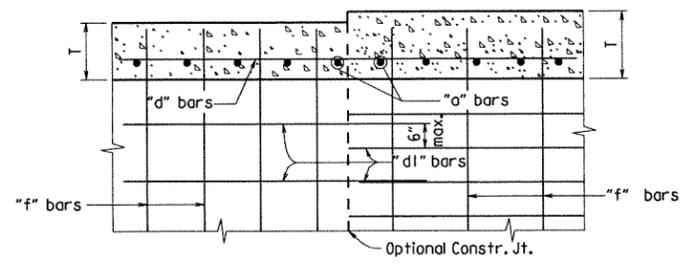
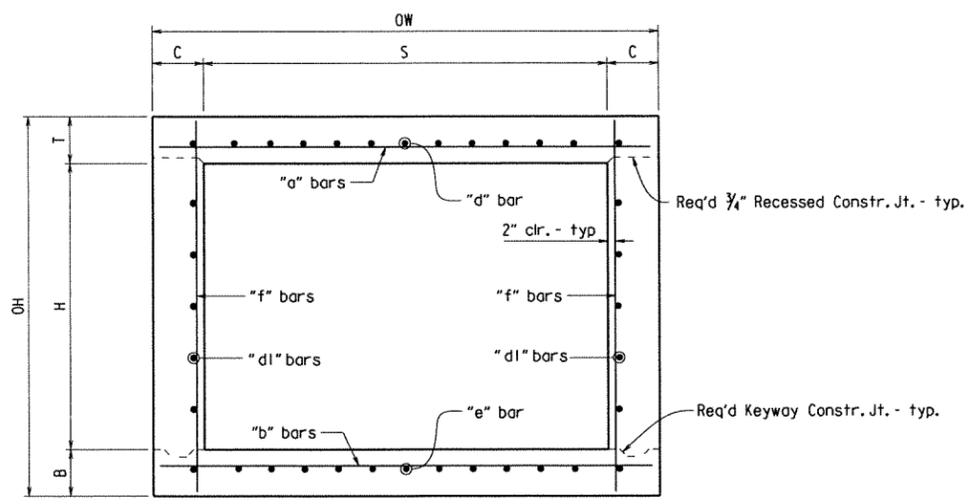
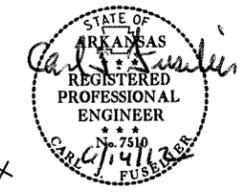
When precast reinforced concrete box culverts are substituted for cast in place box culverts, they shall be manufactured according to ASTM C 1577 and meet the requirements of Special Provision "LRFD Precast Reinforced Concrete Box Culverts".



Culvert-General.dgn

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				6	ARK.			
				JOB NO.		BR6506	5	31

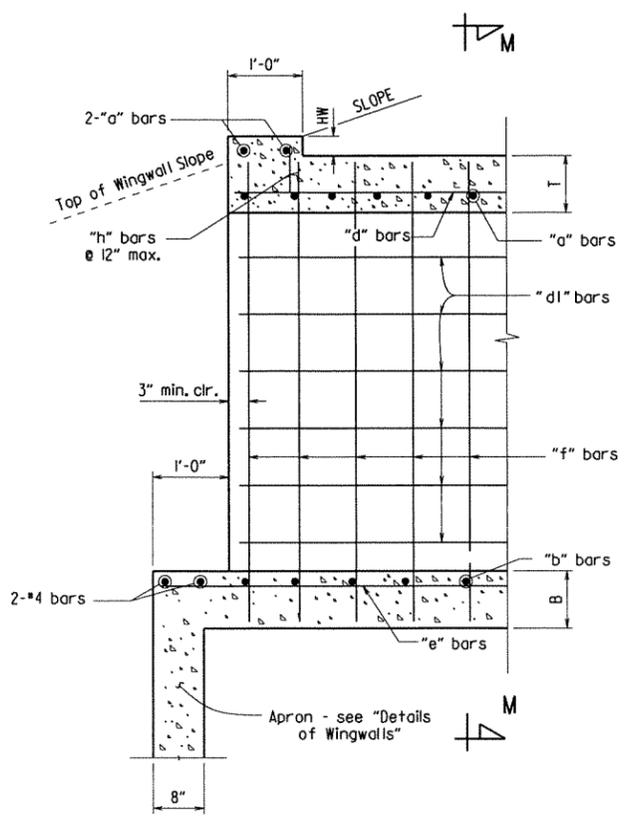
① SPECIAL DETAILS



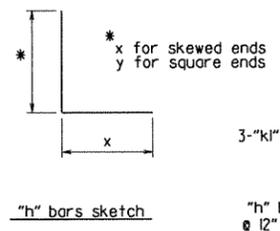
LONGITUDINAL LAP DETAIL AT CHANGE IN SECTIONS

Longitudinal Bar Spacing at individual sections shall be maintained, which may result in noncontact bar laps.

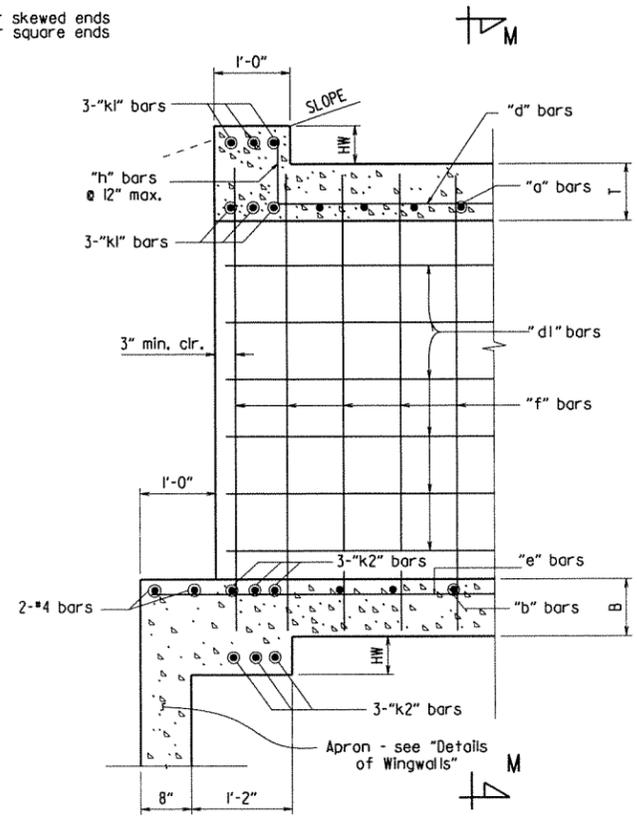
TYPICAL SECTION M-M



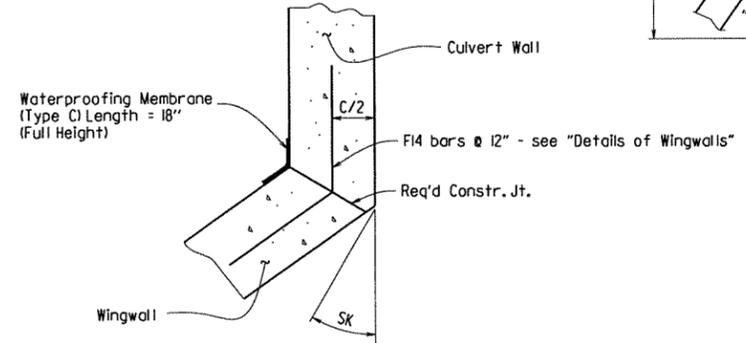
PART LONGITUDINAL SECTION
(Non-Skewed Ends)



"h" bars sketch

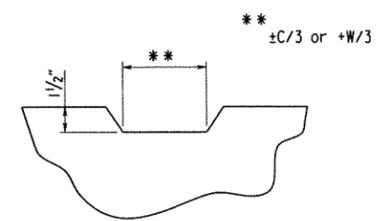


PART LONGITUDINAL SECTION N-N
(Skewed Ends)

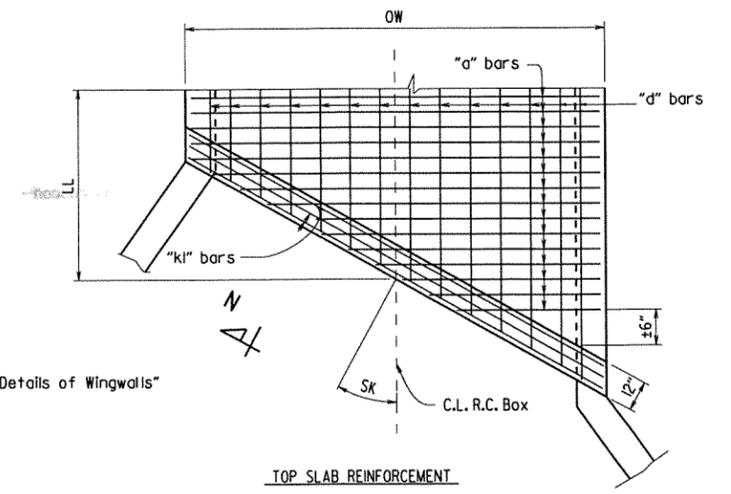


WINGWALL ATTACHMENT

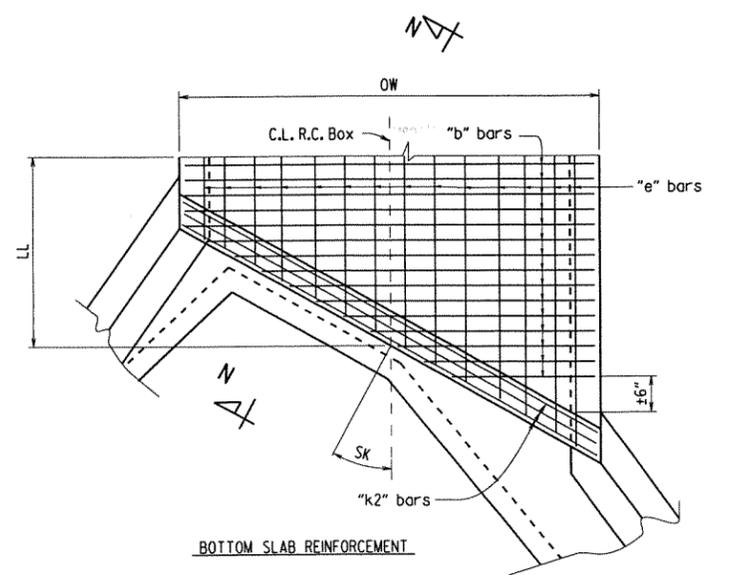
See "Details of Wingwalls" for additional information and wingwall details.



TYPICAL KEYWAY DETAIL



TOP SLAB REINFORCEMENT



BOTTOM SLAB REINFORCEMENT

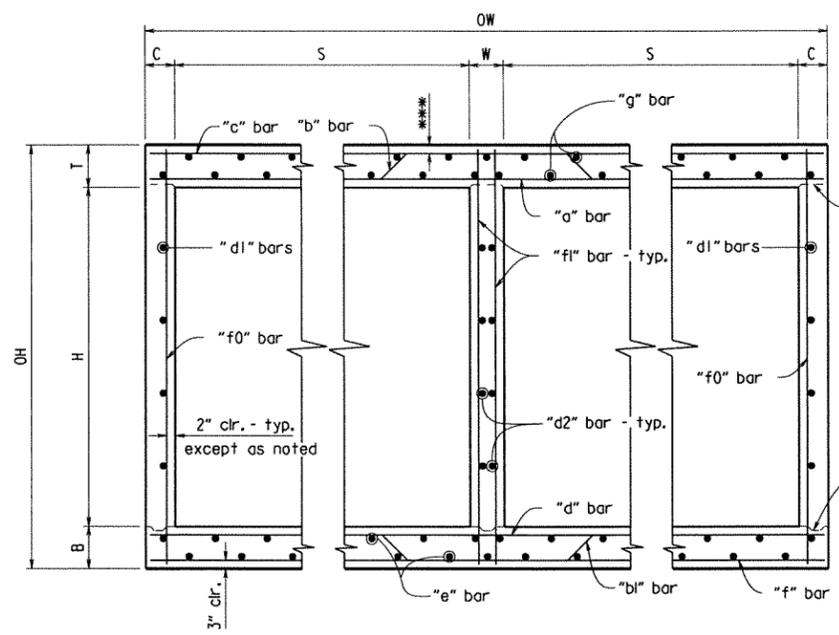
SKewed END SECTION DETAILS

SHEET 2 OF 4
GENERAL DETAILS OF R.C. BOX CULVERT
DETAILS OF SINGLE BARREL
R.C. BOX CULVERT
SPECIAL DETAILS



Culvert-General.dgn

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				6	ARK.		6	31
JOB NO. BR6506							SPECIAL DETAILS	

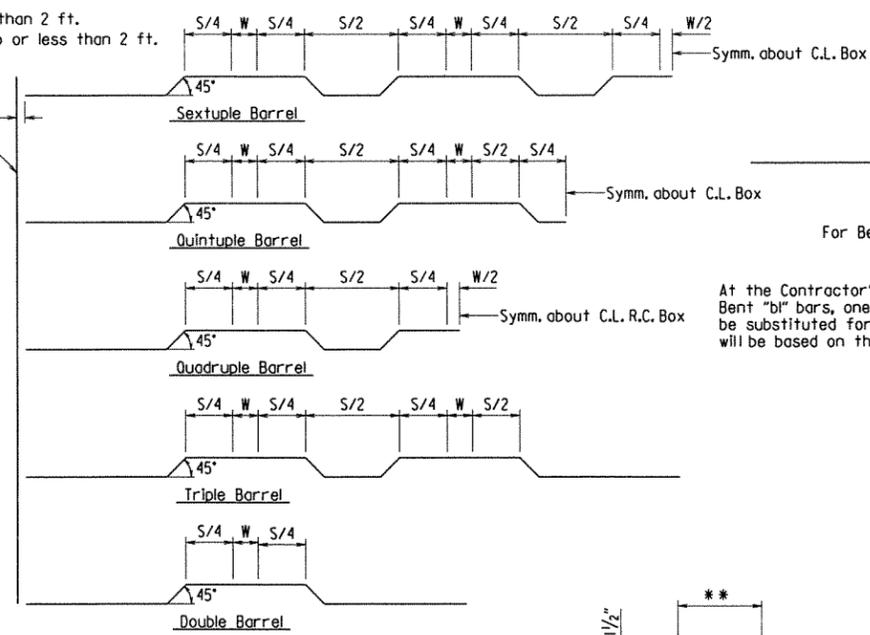


TYPICAL SECTION

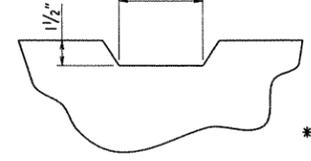
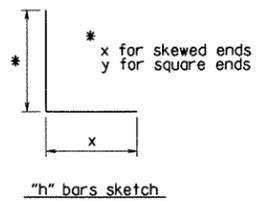
Top Slab
 Straight "c" bars shall alternate with Bent "b" bars in top.
 Straight "a" bars shall alternate with Bent "b" bars in bottom.

Bottom Slab
 Straight "d" bars shall alternate with Bent "bl" bars in top.
 Straight "f" bars shall alternate with Bent "bl" bars in bottom.

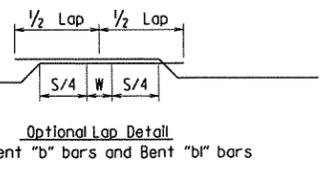
 2" clr. for fill depth (D) greater than 2 ft.
 2 1/2" clr. for fill depth (D) equal to or less than 2 ft.



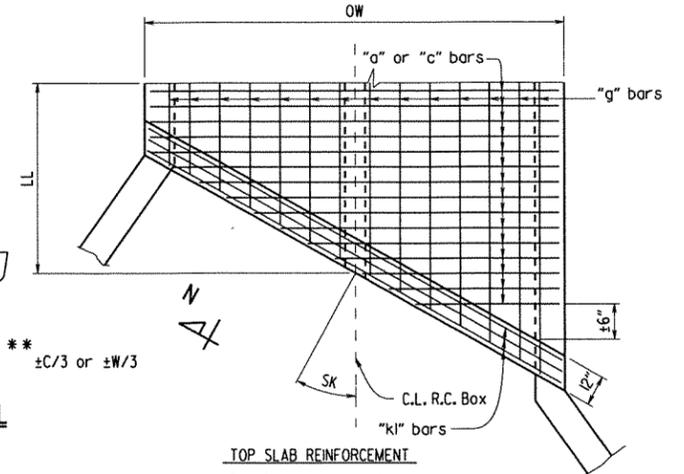
Bent "b" bars or Bent "bl" bars sketch



TYPICAL KEYWAY DETAIL

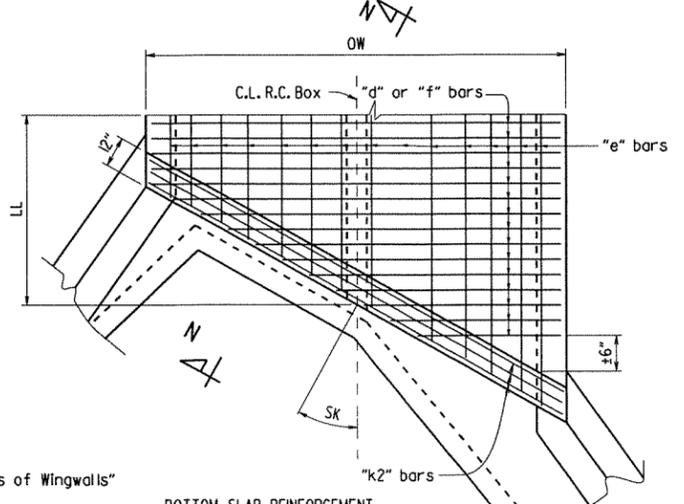


At the Contractor's option in lieu of providing Bent "b" or Bent "bl" bars, one bar top and bottom of equivalent size may be substituted for each bent bar. Payment for the reinforcing will be based on the weight of the "b" or "bl" bar.



TOP SLAB REINFORCEMENT

Straight "c" bars in top.
 Straight "a" bars in bottom.

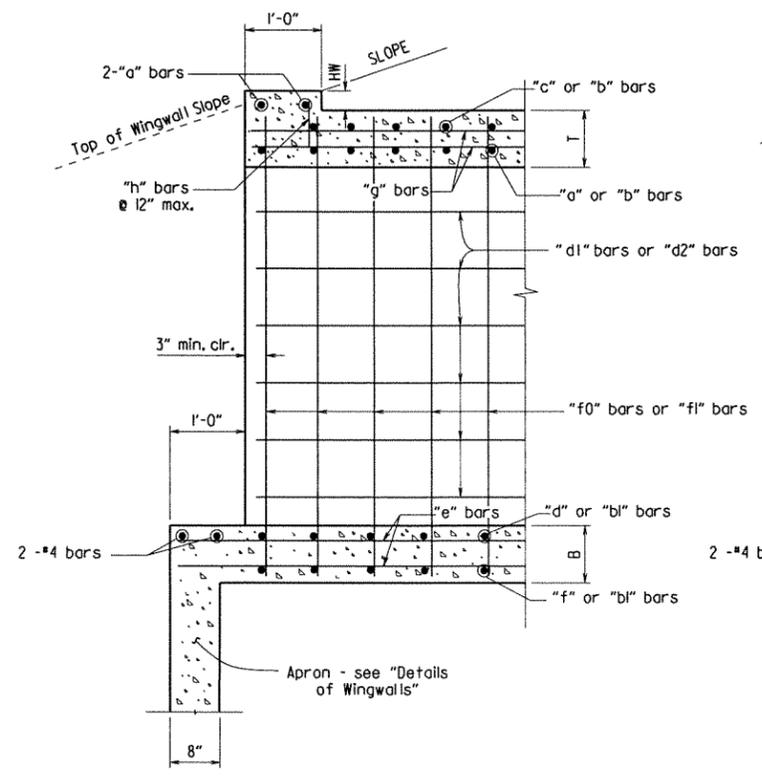


BOTTOM SLAB REINFORCEMENT

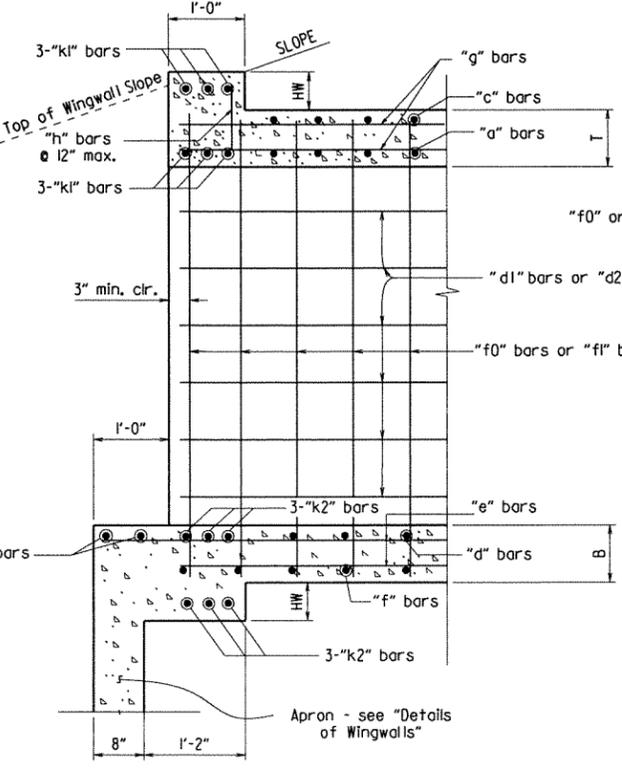
Straight "d" bars in top.
 Straight "f" bars in bottom.

SKewed END SECTION DETAILS

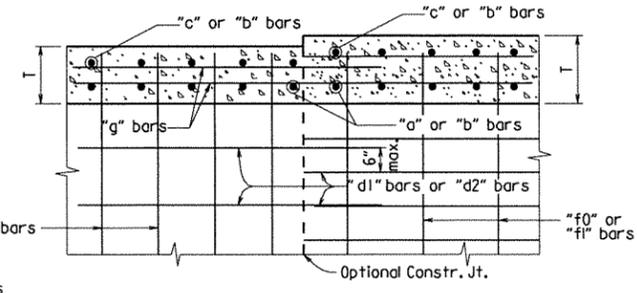
SHEET 3 OF 4
GENERAL DETAILS OF R.C. BOX CULVERT
DETAILS OF MULTI-BARREL R.C. BOX CULVERT
SPECIAL DETAILS



PART LONGITUDINAL SECTION
 (Non-Skewed Ends)

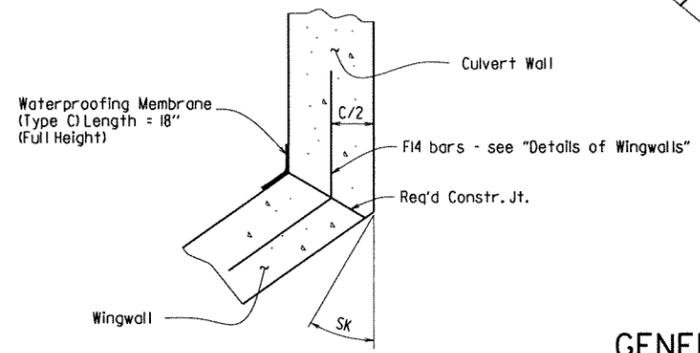


PART LONGITUDINAL SECTION N-N
 (Skewed Ends)



LONGITUDINAL LAP DETAIL AT CHANGE IN SECTIONS

Longitudinal Bar Spacing at individual sections shall be maintained, which may result in noncontact bar laps.



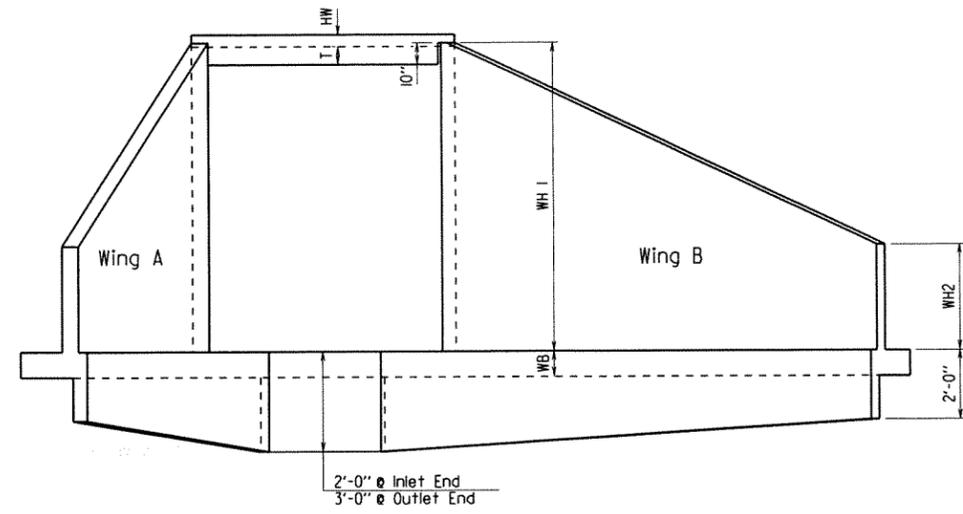
WINGWALL ATTACHMENT

See "Details of Wingwalls" for additional information and wingwall details.

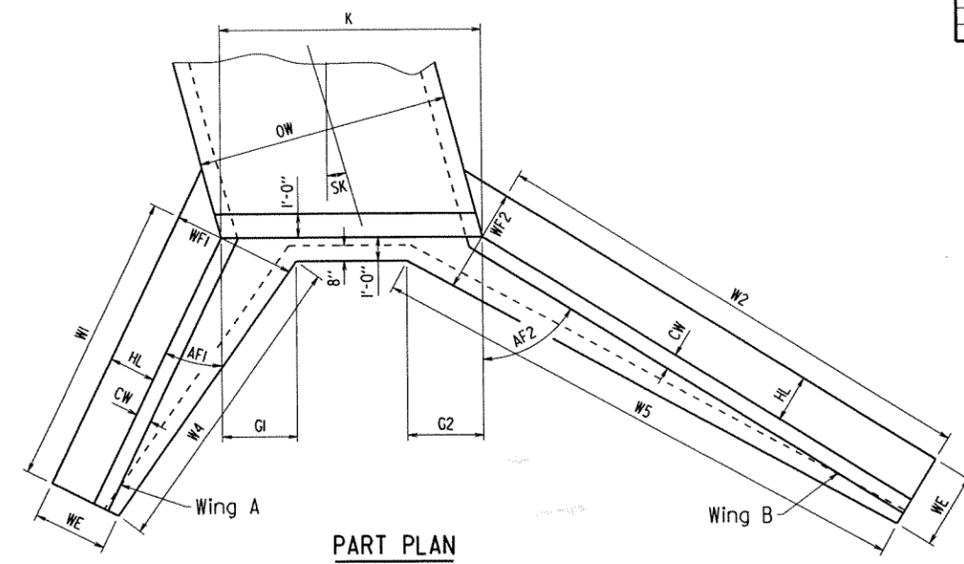
Culvert-General.dgn

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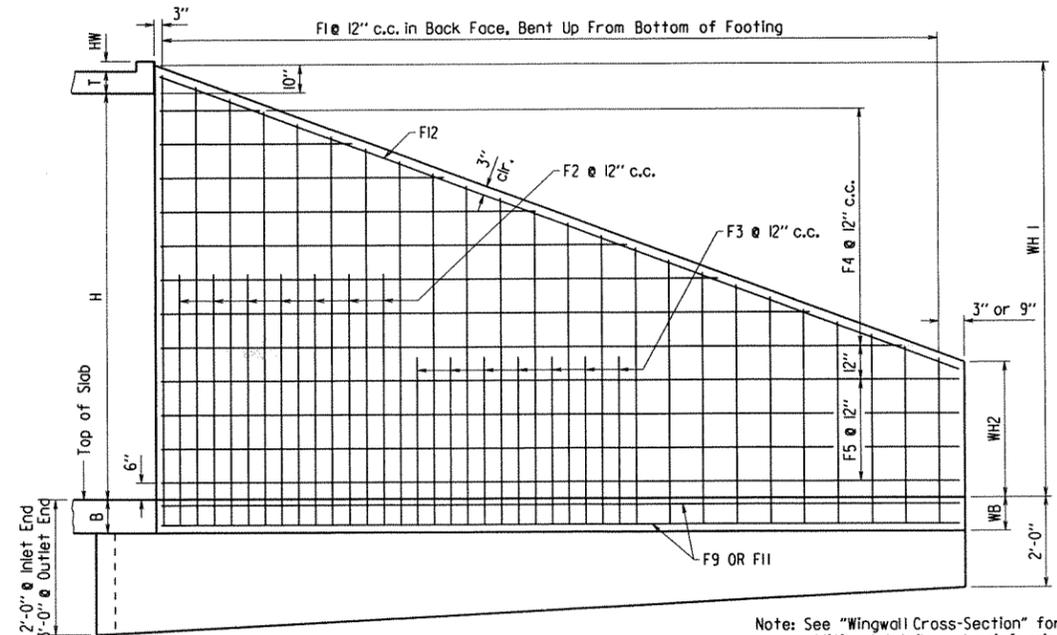
① SPECIAL DETAILS



END ELEVATION

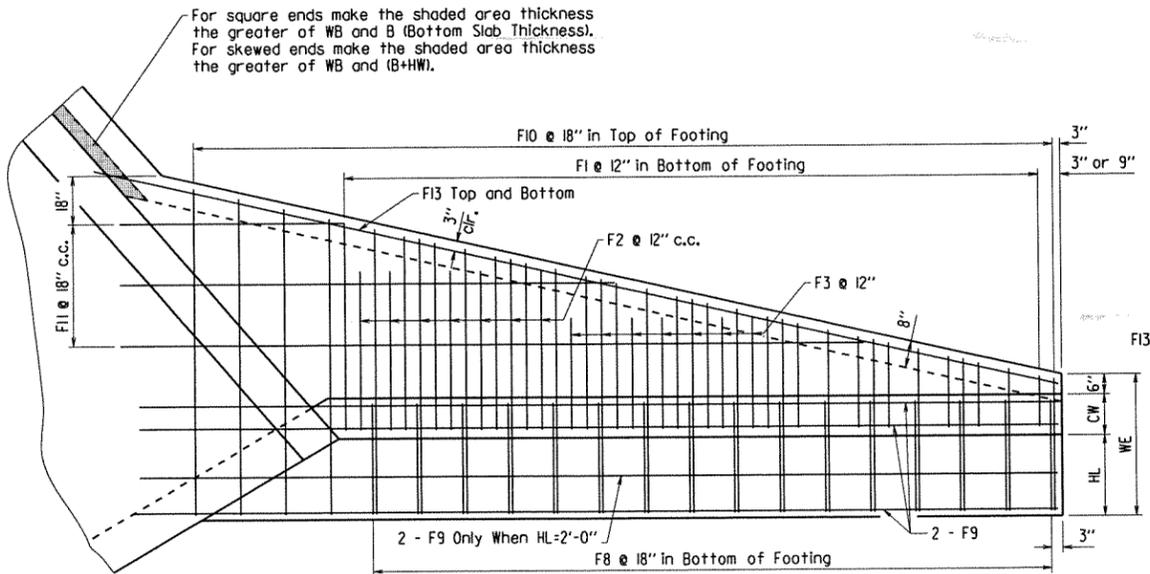


PART PLAN



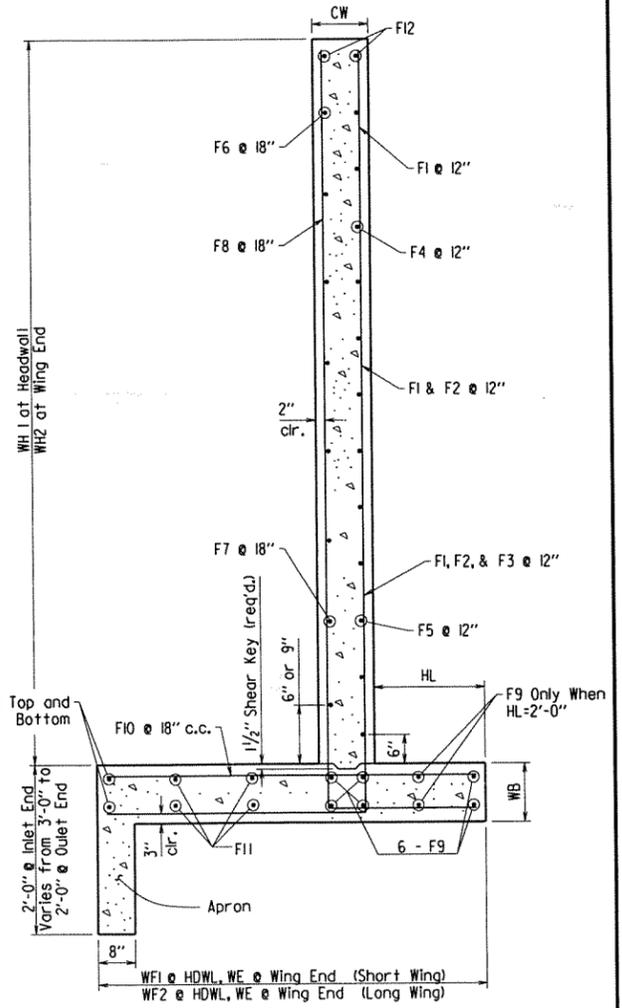
WINGWALL ELEVATION

Showing Back Face Reinforcement

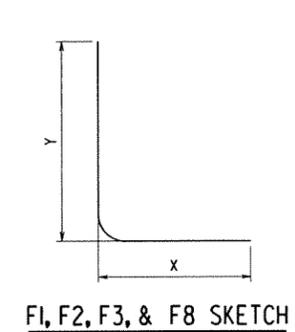


WINGWALL PLAN

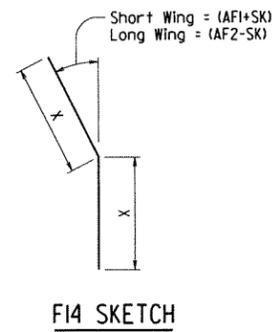
For square ends make the shaded area thickness the greater of WB and B (Bottom Slab Thickness). For skewed ends make the shaded area thickness the greater of WB and (B+HW).



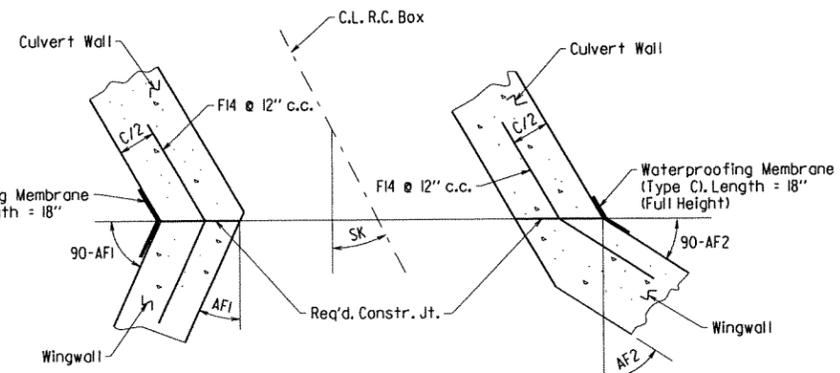
WINGWALL CROSS SECTION



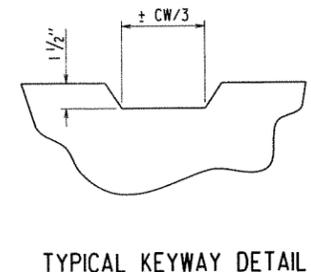
F1, F2, F3, & F8 SKETCH



F14 SKETCH



CONSTRUCTION JOINTS



TYPICAL KEYWAY DETAIL

SHEET 4 OF 4
GENERAL DETAILS OF R.C. BOX CULVERT
DETAILS OF WINGWALLS
SPECIAL DETAILS

Culvert-General.dgn

MID-SECTION

R.C. BOX SECTION		DESIGN FILL DEPTH (feet)		CLEAR SPAN (feet)		CLEAR HEIGHT (feet)		TOP SLAB THK.		BOTTOM SLAB THK.		SIDE WALL THK.		INTERIOR WALL THK.		OVER ALL WIDTH		OVER ALL HEIGHT		SECTION LENGTH (feet)		TOP SLAB REINFORCING STEEL				BOTTOM SLAB REINFORCING STEEL				SIDE WALL REINFORCING STEEL		INTERIOR WALL REINFORCING STEEL		TOP SLAB DISTRIBUTION REINFORCING STEEL		BOTTOM SLAB DISTRIBUTION REINFORCING STEEL		SIDE WALL DISTRIBUTION REINFORCING STEEL		INTERIOR WALL DISTRIBUTION REINFORCING STEEL						
D	S	H	T	B	C	W	OW	OH	g	a	Bent b	c	SPACING	NO. REQ'D	d	Bent b1	f	SPACING	NO. REQ'D	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH			
A	2	11	6	14.5	14.5	6	8	47'-0"	8'-5"	46	4	46'-8"	8	48'-1"	6	46'-8"	17	32	4	46'-8"	4	48'-0"	4	46'-8"	16	34	4	6.5	168	8'-1"	4	12	276	8'-1"	4	7.5	151	4	7.5	151	4	12	12	4	12	36

INLET SLOPE SECTION(S)

R.C. BOX SECTION		DESIGN FILL DEPTH (feet)		CLEAR SPAN (feet)		CLEAR HEIGHT (feet)		TOP SLAB THK.		BOTTOM SLAB THK.		SIDE WALL THK.		INTERIOR WALL THK.		OVER ALL WIDTH		OVER ALL HEIGHT		SECTION LENGTH (feet)		TOP SLAB REINFORCING STEEL				BOTTOM SLAB REINFORCING STEEL				SIDE WALL REINFORCING STEEL		INTERIOR WALL REINFORCING STEEL		TOP SLAB DISTRIBUTION REINFORCING STEEL		BOTTOM SLAB DISTRIBUTION REINFORCING STEEL		SIDE WALL DISTRIBUTION REINFORCING STEEL		INTERIOR WALL DISTRIBUTION REINFORCING STEEL				
D	S	H	T	B	C	W	OW	OH	g	a	Bent b	c	SPACING	NO. REQ'D	d	Bent b1	f	SPACING	NO. REQ'D	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	
	2	11	6																																									

INLET SKEWED END SECTION

SK	SLOPE	DESIGN FILL DEPTH (feet)	CLEAR SPAN (feet)	CLEAR HEIGHT (feet)	SECTION LENGTH	TOP SLAB THK.	HDWL THK.	BOTTOM SLAB THK.	SIDE WALL THK.	INTERIOR WALL THK.	OVER ALL WIDTH	OVER ALL HEIGHT	TOP SLAB REINFORCING STEEL				BOTTOM SLAB REINFORCING STEEL				SIDE WALL REINFORCING STEEL		INTERIOR WALL REINFORCING STEEL		TOP SLAB DISTRIBUTION REINFORCING STEEL		BOTTOM SLAB DISTRIBUTION REINFORCING STEEL		SIDE WALL DISTRIBUTION REINFORCING STEEL		INTERIOR WALL DISTRIBUTION REINFORCING STEEL												
													SIZE	SPACING	LENGTHS VARY	NO. REQ'D	SIZE	SPACING	LENGTHS VARY	NO. REQ'D	SIZE	SPACING	LENGTH	NO. REQ'D	SIZE	SPACING	LENGTH	NO. REQ'D	SIZE	SPACING	LENGTH	NO. REQ'D	SIZE	SPACING	LENGTH	NO. REQ'D	SIZE	SPACING	LENGTH	NO. REQ'D	SIZE	SPACING	LENGTH
					0'-0"																																						

INLET WINGWALL TABLE

OVER ALL WIDTH	CLEAR HEIGHT	FOOTING THK.	WING WALL THK.	BOX SKEW (deg.)	SLOPE	HDWL LENGTH	HEEL	WALL HEIGHT		WINGWALL ANGLE (deg.)		FOOTING WIDTH AT WALL END	WIDTH OF WING FOOTINGS AT HDWL		FOOTING DIMENSION PARALLEL WITH HDWL		LENGTH OF WINGWALLS		INSIDE FOOTING DIMENSIONS		CLASS "S" CONCRETE (Includes apron)	REINFORCING STEEL (Includes apron and laps if required)
								AT HDWL	AT WING END	WING A	WING B		WING A	WING B	WING A	WING B	WING A	WING B	WING A	WING B		
OW	H	WB	CW	SK	SL	K	HL	WH1	WH2	AF1	AF2	WE	WF1	WF2	G1	G2	W1	W2	W4	W5	CU.YD	LBS.
47'-0"	6'-0"	0'-9"	0'-8"	0	3:1	47'-0"	2'-0"	6'-10"	2'-0"	30	30	3'-2"	3'-5"	3'-5"	1'-0 5/8"	1'-0 5/8"	16'-6"	16'-6"	16'-2"	16'-2"	10.45	910

MID-SECTION BAR LAP TABLE

# of Long Laps Req'd.	SL = Section Length
0	<40.0 ft
1	>40.0 ft - 78.0 ft
2	>78.0 ft - 116.0 ft
3	>116.0 ft - 154.0 ft
4	>154.0 ft - 192.0 ft
5	>192.0 ft - 230.0 ft
6	>230.0 ft - 268.0 ft
7	>268.0 ft - 306.0 ft
8	>306.0 ft - 344.0 ft

Min. Bar Lap Length	
#4	1'-9"
#5	2'-2"
#6	2'-7"
#7	3'-6"
#8	4'-7"

Bar Pin Dia. Table	
#4	3"
#5	3 3/4"
#6	4 1/2"
#7	5 1/4"
#8	6"



TABULAR DATA BY: CSL DATE: 06/13/2012
 CHECKED BY: C.M.W. DATE: 6/14/2012

This drawing to be used in conjunction with SHEET 1 OF 4, "GENERAL DETAILS OF R.C. BOX CULVERT", "GENERAL NOTES & LONGITUDINAL SECTION LENGTH SCHEDULE", SHEET 3 OF 4, "GENERAL DETAILS OF R.C. BOX CULVERT", "DETAILS OF MULTI-BARREL R.C. BOX CULVERT", SHEET 4 OF 4, "GENERAL DETAILS OF R.C. BOX CULVERT", "DETAILS OF WINGWALLS", and STANDARD DRAWING RCB-2.
 For additional information and outlet sections, see Sheet 2 of 2.

Any Bar Lap Required for the Skewed End Section shall be considered subsidiary to the item "Reinforcing Steel - Roadway (Gr. 60)."

Bar Lap - Add one long lap for each Slope Section, and one additional long lap for Slope Sections greater than 40'-0" in length.

Design Fill Depth	Range of Actual Fill Depth
2	0.0 ft - 2.0 ft
5	>2.0 ft - 5.0 ft
10	>5.0 ft - 10.0 ft
15	>10.0 ft - 15.0 ft
20	>15.0 ft - 20.0 ft
25	>20.0 ft - 25.0 ft
30	>25.0 ft - 30.0 ft
35	>30.0 ft - 35.0 ft
40	>35.0 ft - 40.0 ft

Data shown for Mid-Section, Slope Section(s), and Skewed End Section is based on the design fill depth shown in the table, see PLAN AND PROFILE SHEETS for actual fill depth.

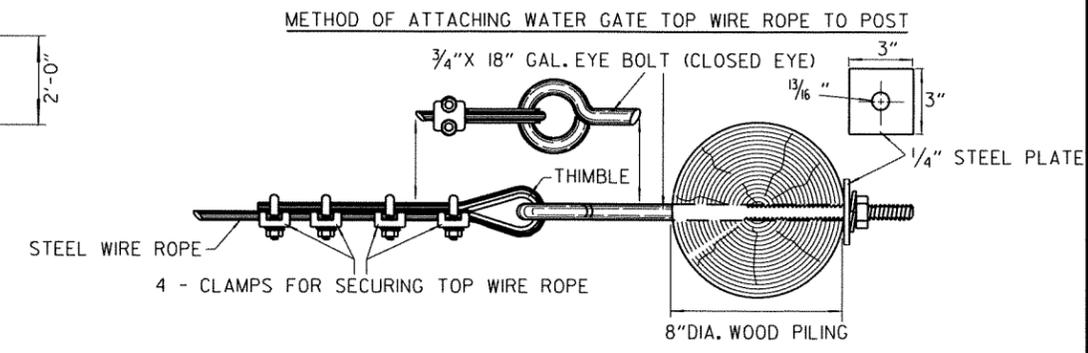
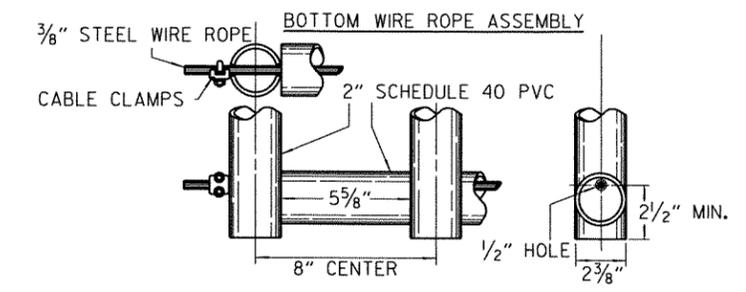
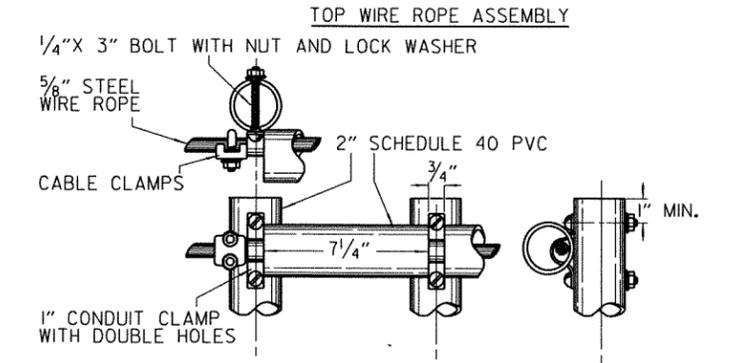
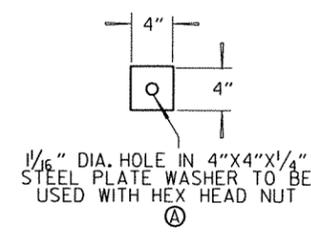
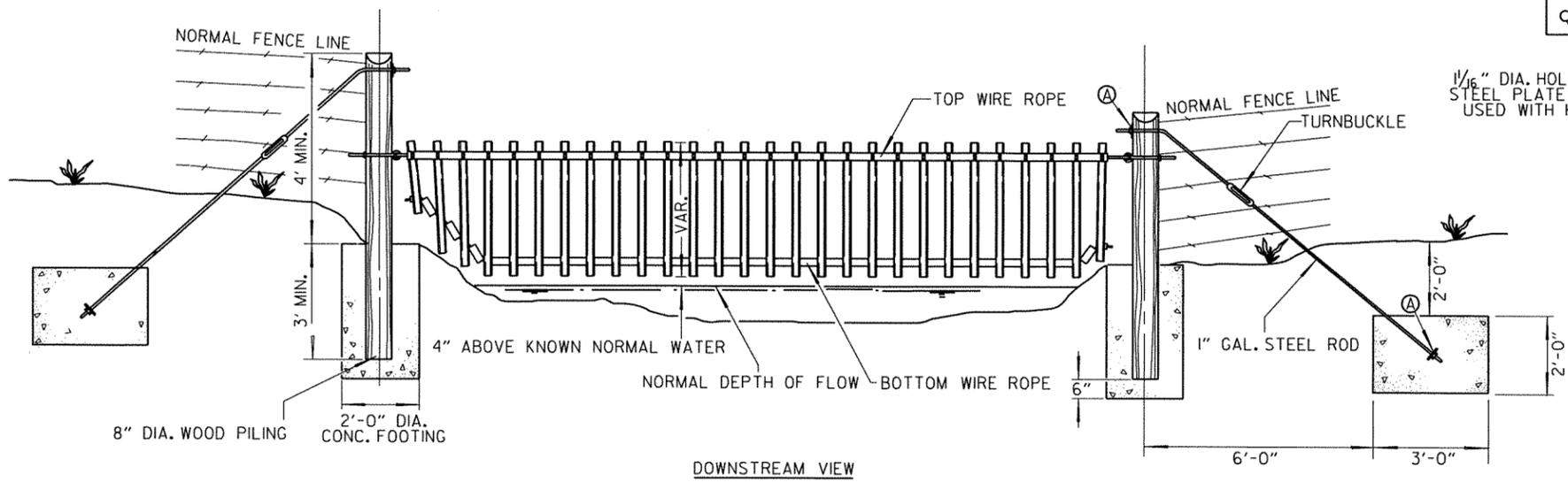
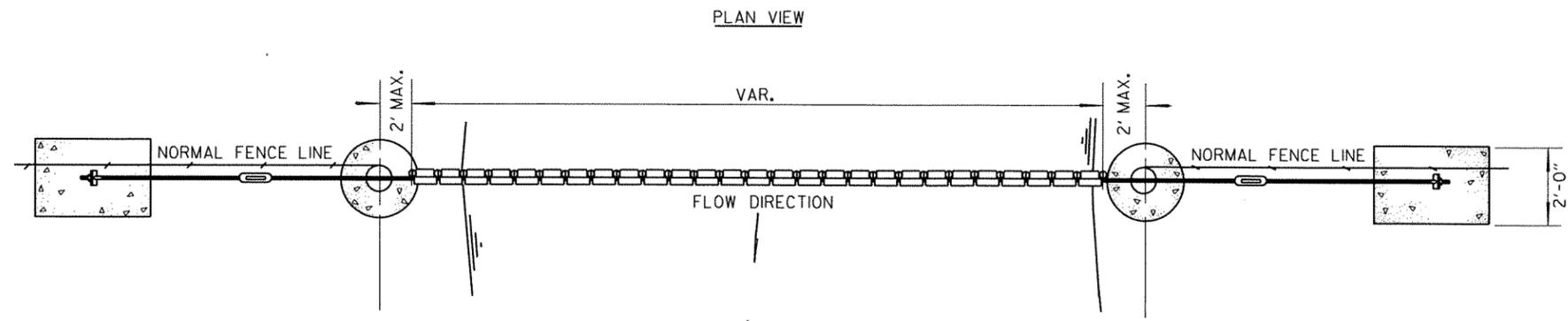
CLASS "S" CONCRETE	REINFORCING STEEL (GR. 60)	ADTL. REINF. PER LONG LAP LOCATION (S)	ADTL. REINF. FOR TRANS. LAP	ADDITIONAL CONCRETE FOR HDWL	TOTAL ADTL. REINF. FOR HDWL
CU. YDS. PER LIN. FT.	LBS. PER LIN. FT.	LBS.	LBS. PER LIN. FT.	CU. YDS.	LBS.
				0.43	132

CLASS "S" CONCRETE	REINFORCING STEEL (GR. 60)	ADTL. REINF. PER LONG LAP LOCATION (S)	ADTL. REINF. FOR TRANS. LAP
CU. YDS. PER LIN. FT.	LBS. PER LIN. FT.	LBS.	LBS. PER LIN. FT.
4.87	519	409	15

SHEET 1 OF 2
 DETAILS OF R.C. BOX CULVERT
 QUADRUPLE BARREL BOX CULVERT
 Sta. 105+85
 SPECIAL DETAILS



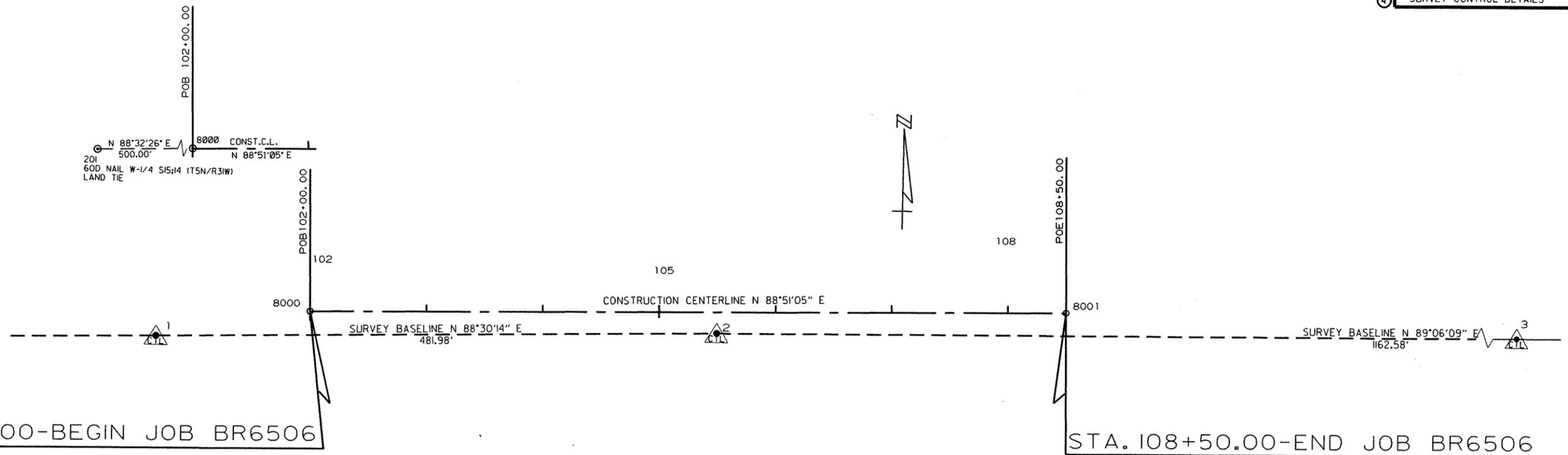
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
							JOB NO. BR6506	10	31
4 WATER GATE DETAIL (PVC)									



6/13/2012
WATER GATE DETAIL (PVC)

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.	BR6506	II	31	

④ SURVEY CONTROL DETAILS



STA. 102+00.00-BEGIN JOB BR6506

STA. 108+50.00-END JOB BR6506

COORDINATES

ARKANSAS STATE PLANE - NORTH ZONE BASED ON GPS CONTROL, PROJECTED TO GROUND.

Point Name	Northing	Easting	Elev	Feature	Description
1	290547.3954	629198.5073	567.783	CTL	*5/8" Rebar with 2" Aluminum Cap
2	290559.9806	629680.3273	561.046	CTL	*5/8" Rebar with 2" Aluminum Cap
3	290578.1911	630842.7628	584.536	CTL	*5/8" Rebar with 2" Aluminum Cap
100	290534.0637	628683.3593	599.565	GPS	*AHTD GPS 650019 RTK ELEV
101	290604.1726	630367.7611	576.280	GPS	*AHTD GPS 650019A RTK ELEV
901	291223.1549	634340.6554	577.272	TBM	*CHIS. SQR CUT IN NW CNR HW W. SIDE HWY 71
902	291671.5439	632439.5784	593.498	TBM	*CHIS SQUARE CUT IN CENTER HW E. SIDE HWY
903	290623.0692	629672.8064	564.437	TBM	*CHIS SQUARE CUT IN NE CNR BR
990	294259.4626	634244.3879	597.640	BM	*NGS MARK A 299
991	287875.9503	634762.2588	574.342	BM	*NGS MARK M 20 RESET

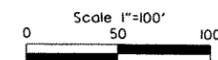
CONSTRUCTION CENTERLINE

STATION	NORTHING	EASTING	
8000	102+00.00	290570.8842	629330.6464
8001	108+50.00	290583.9135	629980.5258

*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 0.9999421408 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 BR6506G1.CTL
 HORIZONTAL DATUM: NAD 83 (1997)
 VERTICAL DATUM: NAVD 88 POSITIONAL ACCURACY THIRD ORDER, UNLESS SPECIFIED OTHERWISE AT A SPECIFIC POINT.

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 - 0301-NORTH ZONE
 DETERMINED FROM GPS CONTROL POINTS: 650019 - 650019A
 CONVERGENCE ANGLE: 1-19-42 LEFT AT LT: 35-06-35.4 LG: 094-16-57.9
 GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.



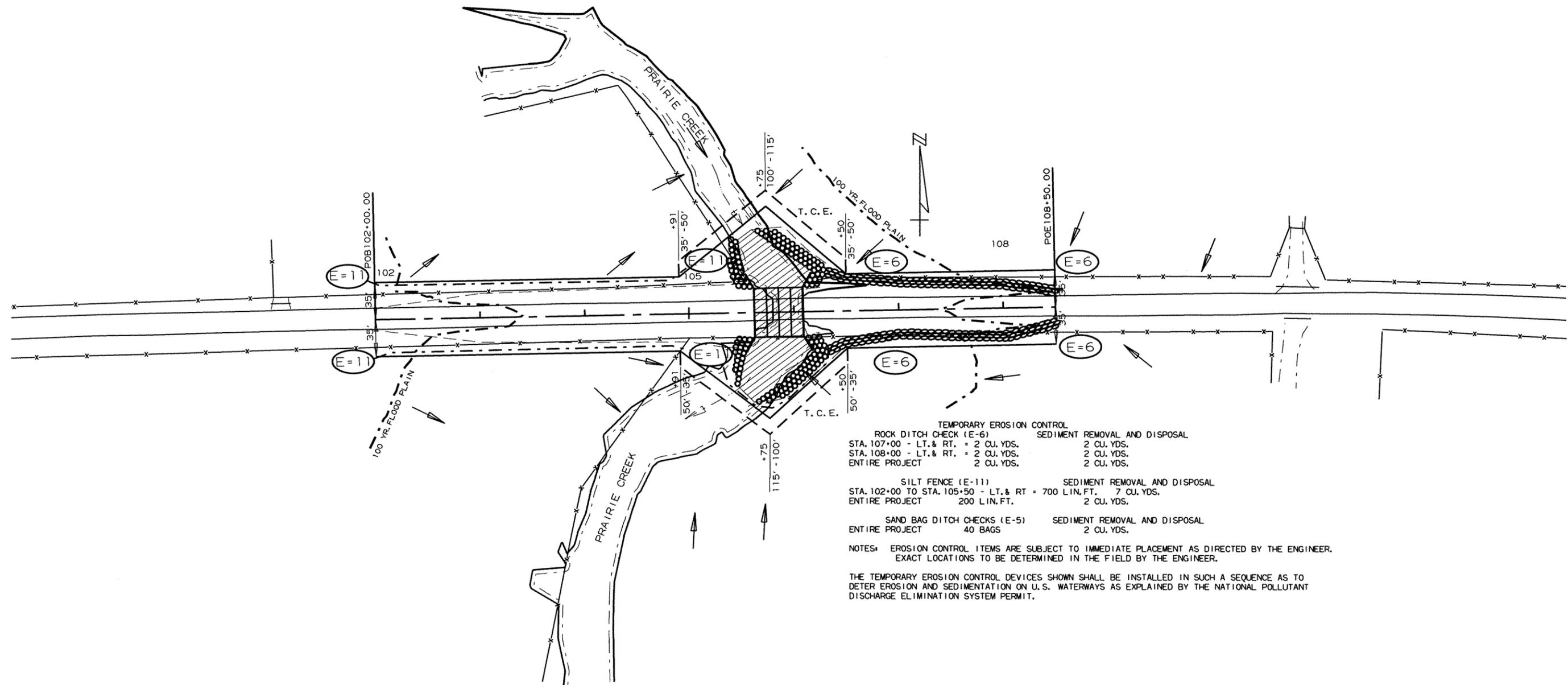
SURVEY CONTROL DETAILS



6/13/2012

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.	BR6506		12	31

④ TEMPORARY EROSION CONTROL DETAILS



TEMPORARY EROSION CONTROL

ROCK DITCH CHECK (E-6)	SEDIMENT REMOVAL AND DISPOSAL
STA. 107+00 - LT. & RT. = 2 CU. YDS.	2 CU. YDS.
STA. 108+00 - LT. & RT. = 2 CU. YDS.	2 CU. YDS.
ENTIRE PROJECT	2 CU. YDS.
SILT FENCE (E-11)	SEDIMENT REMOVAL AND DISPOSAL
STA. 102+00 TO STA. 105+50 - LT. & RT. = 700 LIN. FT.	7 CU. YDS.
ENTIRE PROJECT	2 CU. YDS.
SAND BAG DITCH CHECKS (E-5)	SEDIMENT REMOVAL AND DISPOSAL
ENTIRE PROJECT	40 BAGS
	2 CU. YDS.

NOTES: EROSION CONTROL ITEMS ARE SUBJECT TO IMMEDIATE PLACEMENT AS DIRECTED BY THE ENGINEER. EXACT LOCATIONS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

THE TEMPORARY EROSION CONTROL DEVICES SHOWN 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.

TEMPORARY EROSION CONTROL REVISIONS

date of revision	revisions

TEMPORARY EROSION CONTROL DETAILS



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	DISTRICT	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NUMBER	BR6506	13
								31

MAIN LANE BASE AND SURFACING

STATION	STATION	LOCATION / DESCRIPTION	LENGTH	AGG. BASE COURSE (CLASS 7)	PRIME COAT			ASPHALT SURFACE TREATMENT			
					TOTAL WIDTH	SQUARE YARDS	GALLONS	TOTAL WIDTH	SQUARE YARDS	MINERAL AGG. (CLASS 2)	ASPHALT CEMENT (CRS-2P)
102+00	108+50	MAIN LANES	650	884.0	21	1516.7	606.7	20	1444.4	54.2	1227.7
TOTALS:				884.0			606.7			54.2	1227.7
USE:				884			607			54	1228

BASIS OF ESTIMATE:

AGGREGATE BASE COURSE 136 TONS / STA.
 PRIME COAT 0.40 GAL. / SQ. YD.

MINERAL AGGREGATE IN ASPHALT SURFACE TREATMENT (CLASS 2) (1ST APPLICATION)..... 40 LBS. / SQ. YD.
 POLYMER MODIFIED CATIONIC EMULSIFIED ASPHALT (CRS-2P) (1ST APPLICATION)..... 0.45 GAL. / SQ. YD.

MINERAL AGGREGATE IN ASPHALT SURFACE TREATMENT (CLASS 2) (2ND APPLICATION)..... 35 LBS. / SQ. YD.
 POLYMER MODIFIED CATIONIC EMULSIFIED ASPHALT (CRS-2P) (2ND APPLICATION)..... 0.40 GAL. / SQ. YD.

NOTE: RATES OF APPLICATION FOR MINERAL AGGREGATE AND ASPHALT SURFACE TREATMENT ARE FOR ESTIMATION PURPOSES ONLY.
 EXACT RATES OF APPLICATION TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

EROSION CONTROL

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL			
			SEEDING	LIME	MULCH COVER	WATER
			ACRES	TONS	ACRES	M.GALS.
102+00	108+50		1.30	2.74	1.30	132.6
TOTALS:			1.30	2.74	1.30	132.6

BASIS OF ESTIMATE:

LIME 2 TONS / ACRE OF SEEDING
 WATER 102.0 M.G. / ACRE OF SEEDING, PERMANENT SEEDING

CLEARING AND GRUBBING

STATION	STATION	SIDE	CLEARING	GRUBBING
105+00	106+00	LT. & RT.	1	1
TOTALS:			1	1

QUANTITIES

TEMPORARY EROSION CONTROL

STATION	STATION	LOCATION	TEMPORARY SEEDING	MULCH COVER	WATER	ROCK DITCH CHECKS (E-6)	SAND BAG DITCH CHKS. (E-5)	SILT FENCE (E-11)	*SEDIMENT REMOVAL & DISPOSAL
			ACRES	ACRES	M. GALS	CU. YDS	BAGS	LIN. FT.	CU. YDS.
102+00	108+50	MAIN LANES	1.30	1.30	26.5	4		700	11
ENTIRE PROJECT AS DIRECTED BY THE ENGINEER.						2	40	200	6
TOTALS:			1.30	1.30	26.5	6	40	900	17

WATER 20.4 M.G. / ACRE OF SEEDING, TEMPORARY SEEDING.
 ROCK DITCH CHECKS 1 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 AND SHALL BE PLACED IF AND WHERE BY THE ENGINEER. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

EARTHWORK

STATION	STATION	LOCATION	UNCLASSIFIED EXCAVATION			COMPACTED EMBANKMENT		
			NORMAL	CHANNEL EXCAV.	TOTAL	NORMAL	R.C.BOX	TOTAL
			CUBIC YARDS					
102+00	108+50	CONSTRUCT MAIN LANES	419		419	1671		1671
		R.C. BOX & CHANNEL EXCAVATION		755	755			
		R.C. BOX BACKFILL					170	170
TOTALS:					1174			1841

NOTE: EARTHWORK QUANTITIES SHOWN ABOVE SHALL BE PAID FOR AS PLAN QUANTITY.

NOTE: UNCLASSIFIED EXCAVATION FROM THE R.C. BOX AND CHANNEL CHANGE, IF DEEMED SUITABLE BY THE ENGINEER, MAY BE USED IN THE ROADWAY EMBANKMENT. MATERIAL DEEMED UNSUITABLE IS TO BE DISPOSED OF AS DIRECTED BY THE ENGINEER.

* QUANTITIES ARE ESTIMATED AND SHALL BE PLACED IF AND WHERE DIRECTED BY THE ENGINEER. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

REMOVAL OF BRIDGE STRUCTURE

STATION	STATION	DESCRIPTION	EXISTING BRIDGE
			LUMP SUM
105+80	106+09	EXISTING BRIDGE (SITE NO.1)	1.00
		28.9' x19.9' BRIDGE ON STEEL BEAMS E/ CONCRETE DECK	
TOTAL:			1.00

WATER GATE

STATION	STATION	SIDE	WATER GATE
			EACH
105+32	105+75	LT.	1
105+06	105+75	RT.	1
TOTAL:			2

REMOVAL AND DISPOSAL OF FENCE

STATION	STATION	DESCRIPTION	FENCE
			LIN.FT.
102+00	105+55	FENCE ON LT.	411
102+00	108+50	FENCE ON RT.	685
106+23	108+50	FENCE ON LT.	227
TOTAL:			1323

4" PIPE UNDERDRAIN

LOCATIONS	4"PIPE UNDERDRAINS LIN.FT.
ENTIRE PROJECT	200
TOTAL:	200

NOTE: QUANTITIES ARE ESTIMATED AND SHALL BE PLACED IF AND WHERE DIRECTED BY THE ENGINEER. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	DISTRICT	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NUMBER	BR6506	14	31	

④ QUANTITIES

FENCING

STATION	STATION	SIDE	WIRE FENCE
			(TYPE D-1)
			LIN. FT.
102+00	105+32	LT.	354
102+00	105+06	RT.	319
105+75	108+50	LT.	306
105+07	108+50	RT.	310
TOTAL:			1289

PAVEMENT MARKING

STATION	STATION	YELLOW MARKING	WHITE MARKING
		4" CONT.	4" EDGE LINE
		LIN. FT.	
102+00	108+50	1300	1300
TOTALS:		1300	1300

NOTE: LOW VOLUME ROAD. REFER TO SECTION 604.03 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2003.

NOTE: QUANTITIES ARE ESTIMATED AND SHALL BE PLACED IF AND WHERE DIRECTED BY THE ENGINEER. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

DUMPED RIPRAP

STATION	STATION	SIDE	DUMPED RIPRAP	* FILTER BLANKET
			CU. YDS.	SQ. YDS.
105+38	105+61	LT.	36	71
105+38	105+61	RT.	29	57
105+60	106+31	LT.	62	124
105+60	106+31	RT.	68	136
TOTALS:			195	388

NOTE: QUANTITIES ARE ESTIMATED.

STANDARD HIGHWAY SIGNS AND SUPPORT ASSEMBLIES

STATION	SIDE	STANDARD SIGN NUMBER		SUPPORT ASSEMBLIES	STD. DWG. NO.
		OM-3L	OM-3R	TYPE C	
		SQ. FT.		EACH	
105+63	LT.	3.00		1	SHS - 1 & 2
105+63	RT.		3.00	1	SHS - 1 & 2
106+09	LT.		3.00	1	SHS - 1 & 2
106+09	RT.	3.00		1	SHS - 1 & 2
TOTALS:		6.00	6.00	4	

NOTE: ALL STANDARD SIGN BLANKS TO BE 0.080" THICK. REFER TO STANDARD DRAWING SHS-2 FOR CHANNEL POST SPLICING DETAILS.

STRUCTURES OVER 20'-0" SPAN

STATION	DESCRIPTION	SPAN	HEIGHT	LENGTH	CLASS S CONCRETE RDWY.	REINF. STEEL-RDWY. (GR 60)	UNCL. EXC. FOR STR.-RDWY.	STD. DWG. NOS.
					CU. YDS.	POUNDS	CU. YDS.	
				LINEAR FEET				
105+85	QUAD. R.C. BOX CULVERT ON C.L.	11	6	46	247.29	27057	128	PBC-1, RCB-2 & SPECIAL DETAILS
TOTALS:					247.29	27057	128	

BASIS OF ESTIMATE:

NOTE: QUANTITIES ARE ESTIMATED.

TRAFFIC CONTROL DEVICES

STATION	DESCRIPTION	W20-3						M4-9	R11-2	R11-3A	BARRICADES	STD. DWG. NO.		
		1500		1000		500								
		NO.	SQ. FT.	NO.	SQ. FT.	NO.	SQ. FT.							
	JUNCT. CO. RD. 34 & CO. RD. 35 (LT)							1	5.00			TC-1,2&3		
87+00	CO. RD. 35 ON RT.	1	16.00									TC-1,2&3		
92+00	CO. RD. 35 ON RT.			1	16.00							TC-1,2&3		
97+00	CO. RD. 35 ON RT.					1	16.00					TC-1,2&3		
102+00	CO. RD. 35 ON C.L.							1	10.00		20	TC-1,2&3		
108+50	CO. RD. 35 ON C.L.							1	10.00		20	TC-1,2&3		
113+50	CO. RD. 35 ON LT.					1	16.00					TC-1,2&3		
118+50	CO. RD. 35 ON LT.			1	16.00							TC-1,2&3		
123+50	CO. RD. 35 ON LT.	1	16.00									TC-1,2&3		
	JUNCT. CO. RD. 35 & CO. RD. 36 (LT) & (RT)							2	10.00		1	12.50	TC-1,2&3	
	JUNCT. CO. RD. 36 & CO. RD. 135 (LT) & (RT)							2	10.00				TC-1,2&3	
TOTALS:		2	32.00	2	32.00	2	32.00	5	25.00	2	20.00	2	25.00	40

ROCK DITCH LINER

STATION	STATION	SIDE	WIDTH	ROCK DITCH LINER
			FEET	TONS
106+30	108+50	LT.	9	110
106+30	108+50	RT.	9	110
TOTAL:				220

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 5368
DAVID R. MAYO, JR.
6/20/2012

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	DISTRICT	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NUMBER	BR6506	15	31	

4 SUMM. OF QUANTS. & REV.

SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM	QUANTITY TOTALS	UNIT
201	CLEARING	1	STATION
201	GRUBBING	1	STATION
202	REMOVAL AND DISPOSAL OF FENCE	1323	LIN. FT.
210	UNCLASSIFIED EXCAVATION	1174	CU. YD.
210	COMPACTED EMBANKMENT	1841	CU. YD.
SS& 303	AGGREGATE BASE COURSE (CLASS 7)	884	TON
401	PRIME COAT	607	GALLON
402	MINERAL AGGREGATE IN ASPHALT SURFACE TREATMENT (CLASS 2)	54	TON
SS& 402	POLYMER MODIFIED CATIONIC EMULSIFIED ASPHALT (CRS-2P)	1228	GALLON
601	MOBILIZATION	1.00	LUMP SUM
SP& 602	FURNISHING FIELD OFFICE	1	EACH
SS& 603	MAINTENANCE OF TRAFFIC	1.00	LUMP SUM
SS& 604	SIGNS	166	SQ. FT.
SS& 604	BARRICADES	40	LIN. FT.
611	4" PIPE UNDERDRAINS	200	LIN. FT.
619	WIRE FENCE (TYPE D-1)	1289	LIN. FT.
620	LIME	3	TON
620	SEEDING	1.30	ACRE
620	MULCH COVER	2.60	ACRE
SS& 620	WATER	159.1	M. G.
621	TEMPORARY SEEDING	1.30	ACRE
621	SILT FENCE	900	LIN. FT.
621	SAND BAG DITCH CHECKS	40	BAG
621	SEDIMENT REMOVAL AND DISPOSAL	17	CU. YD.
621	ROCK DITCH CHECKS	6	CU. YD.
635	ROADWAY CONSTRUCTION CONTROL	1.00	LUMP SUM
SS& 718	REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (4")	1300	LIN. FT.
SS& 718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (4")	1300	LIN. FT.
SS& 726	STANDARD SIGN	12.00	SQ. FT.
729	CHANNEL POST SIGN SUPPORT (TYPE C)	4	EACH
816	FILTER BLANKET	388	SQ. YD.
816	DUMPED RIPRAP	195	CU. YD.
SP	WATER GATE	2	EACH
SP	ROCK DITCH LINER	220	TON
STRUCTURES OVER 20' SPANS			
205	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO.1)	1.00	LUMP SUM
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES - ROADWAY	128	CU. YD.
802	CLASS S CONCRETE - ROADWAY	247.29	CU. YD.
SS& 804	REINFORCING STEEL - ROADWAY (GRADE 60)	27057	POUND

REVISIONS

DATE	RRVISIONS	SHEET NUMBER

STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 No. 5368
 DAVID R. MAYO, JR.
 6/20/2012

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	BR0-0065(46)	16	31
				JOB NO.		BR6506		

PLAN AND PROFILE

- LEGEND**
- — POWER POLE
 - ◇ — COMBINATION POLE
 - ⊕ — POLE W/GUY
 - ⊞ — TELEPHONE RISER
 - ◇ — TELEPHONE POLE
 - ⊙ — FIRE HYDRANT
 - ▲ — UNDERGROUND CABLE MKR.
 - — GAS METER
 - — GAS VALVE
 - — WATER METER
 - — WATER VALVE
 - — WELL

STA. 105+80 - STA. 106+09 - IN PLACE
28.9' x 19.9' BRIDGE ON STEEL BEAMS W/
CONCRETE DECK.
REMOVE AS EXISTING BRIDGE STRUCTURE
(SITE NO. 1) = 1.00 LUMP SUM
ALL SALVAGEABLE MATERIAL SHALL BECOME
THE PROPERTY OF THE CONTRACTOR.

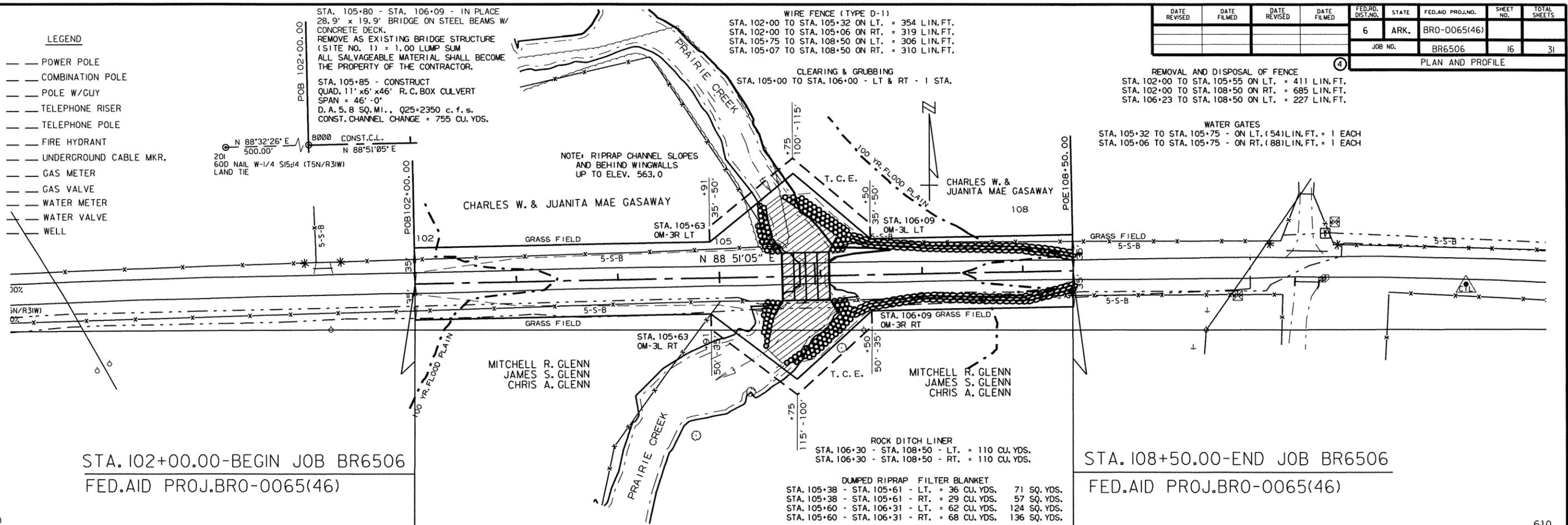
STA. 105+85 - CONSTRUCT
QUAD, 11' x 6' x 46' R. C. BOX CULVERT
SPAN = 46'-0"
D. A. 5.8 SQ. MI., Q25+2350 c. f. s.
CONST. CHANNEL CHANGE = 755 CU. YDS.

WIRE FENCE (TYPE D-1)
STA. 102+00 TO STA. 105+32 ON LT. = 354 LIN. FT.
STA. 102+00 TO STA. 105+06 ON RT. = 319 LIN. FT.
STA. 105+75 TO STA. 108+50 ON LT. = 306 LIN. FT.
STA. 105+07 TO STA. 108+50 ON RT. = 310 LIN. FT.

CLEARING & GRUBBING
STA. 105+00 TO STA. 106+00 - LT & RT - 1 STA.

REMOVAL AND DISPOSAL OF FENCE
STA. 102+00 TO STA. 105+55 ON LT. = 411 LIN. FT.
STA. 102+00 TO STA. 108+50 ON RT. = 685 LIN. FT.
STA. 106+23 TO STA. 108+50 ON LT. = 227 LIN. FT.

WATER GATES
STA. 105+32 TO STA. 105+75 - ON LT. (54) LIN. FT. = 1 EACH
STA. 105+06 TO STA. 105+75 - ON RT. (88) LIN. FT. = 1 EACH



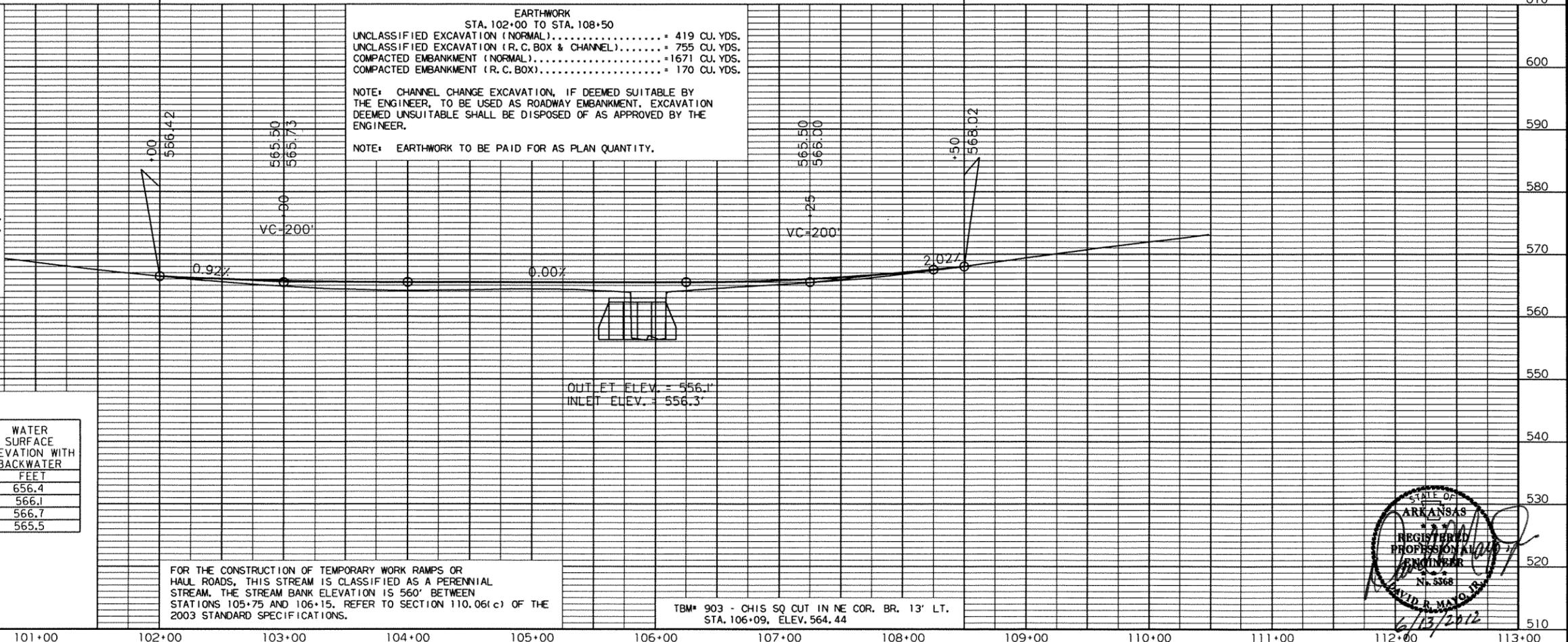
STA. 102+00.00-BEGIN JOB BR6506
FED.AID PROJ.BRO-0065(46)

STA. 108+50.00-END JOB BR6506
FED.AID PROJ.BRO-0065(46)

ROCK DITCH LINER
STA. 106+30 - STA. 108+50 - LT. = 110 CU. YDS.
STA. 106+30 - STA. 108+50 - RT. = 110 CU. YDS.

DUMPED RIPRAP FILTER BLANKET
STA. 105+38 - STA. 105+61 - LT. = 36 CU. YDS. 71 SQ. YDS.
STA. 105+38 - STA. 105+61 - RT. = 29 CU. YDS. 57 SQ. YDS.
STA. 105+60 - STA. 106+31 - LT. = 62 CU. YDS. 124 SQ. YDS.
STA. 105+60 - STA. 106+31 - RT. = 68 CU. YDS. 136 SQ. YDS.

- TRAFFIC CONTROL DEVICES**
- W20-3
STA. 87+00 (1500) - RT. - 1 SIGN = 16.00 SQ. FT.
STA. 92+00 (1000) - RT. - 1 SIGN = 16.00 SQ. FT.
STA. 97+00 (500) - RT. - 1 SIGN = 16.00 SQ. FT.
STA. 113+50 (500) - LT. - 1 SIGN = 16.00 SQ. FT.
STA. 118+50 (1000) - LT. - 1 SIGN = 16.00 SQ. FT.
STA. 123+50 (1500) - LT. - 1 SIGN = 16.00 SQ. FT.
- R11-2
STA. 105+62 - C.L. - 1 SIGN = 12.5 SQ. FT.
STA. 106+08 - C.L. - 1 SIGN = 12.5 SQ. FT.
- BARRICADES
STA. 105+62 - C.L. = 20.0 LIN. FT.
STA. 106+08 - C.L. = 20.0 LIN. FT.
- R11-3A
JUNCT. CO. RD. 34 & CO. RD. 35 - RT. - 1 SIGN = 12.5 SQ. FT.
JUNCT. CO. RD. 35 & CO. RD. 36 - LT. - 1 SIGN = 12.5 SQ. FT.
- M4-9
JUNCT. CO. RD. 34 & CO. RD. 35 - 1 SIGN = 5.0 SQ. FT.
JUNCT. CO. RD. 35 & CO. RD. 36 - 2 SIGN = 10.0 SQ. FT.
JUNCT. CO. RD. 36 & CO. RD. 135 - 2 SIGN = 10.0 SQ. FT.



EARTHWORK
STA. 102+00 TO STA. 108+50

UNCLASSIFIED EXCAVATION (NORMAL)..... = 419 CU. YDS.
UNCLASSIFIED EXCAVATION (R. C. BOX & CHANNEL)..... = 755 CU. YDS.
COMPACTED EMBANKMENT (NORMAL)..... = 1671 CU. YDS.
COMPACTED EMBANKMENT (R. C. BOX)..... = 170 CU. YDS.

NOTE: CHANNEL CHANGE EXCAVATION, IF DEEMED SUITABLE BY THE ENGINEER, TO BE USED AS ROADWAY EMBANKMENT. EXCAVATION DEEMED UNSUITABLE SHALL BE DISPOSED OF AS APPROVED BY THE ENGINEER.

NOTE: EARTHWORK TO BE PAID FOR AS PLAN QUANTITY.

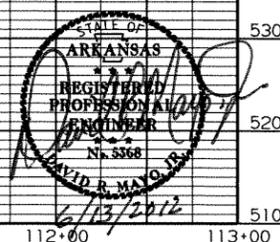
HYDRAULIC DATA

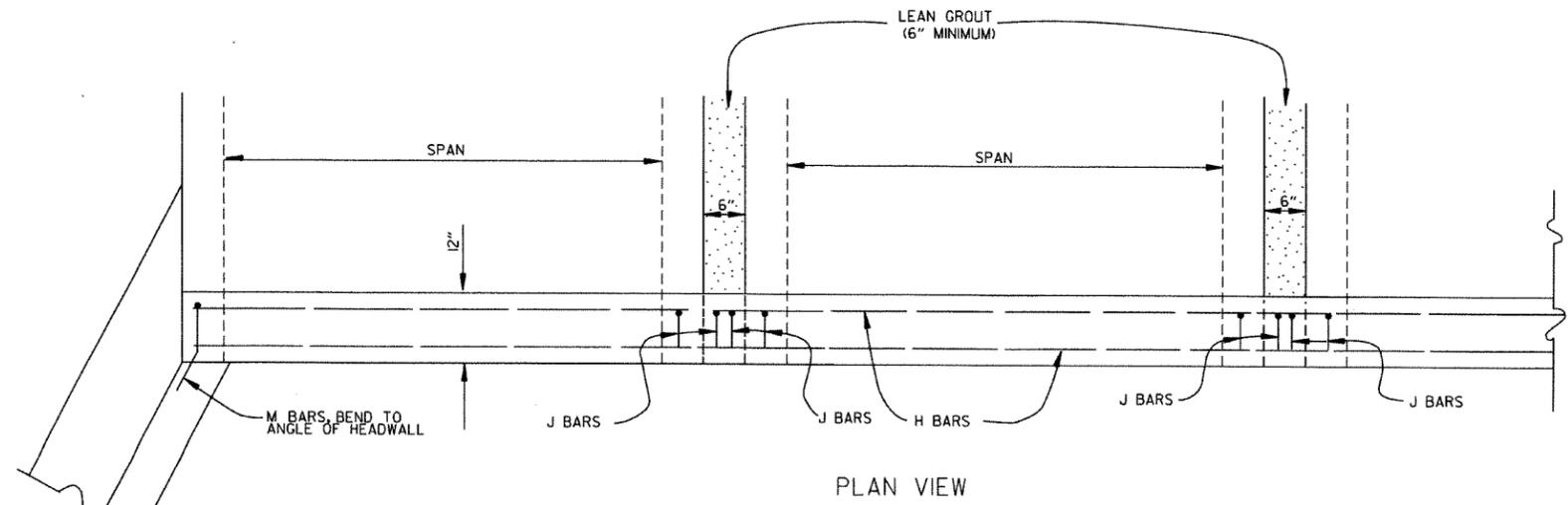
FLOOD DESCRIPTION	FREQUENCY YEARS	DISCHARGE CFS	NATURAL WATER SURFACE ELEVATION	WATER SURFACE ELEVATION WITH BACKWATER
			FEET	FEET
DESIGN	25	2350	562.8	656.4
BASE	100	3340	563.5	566.1
EXTREME	500	4730	564.2	566.7
OVERTOPPING	26	2390	562.8	565.5

* UNCONSTRICTED WATER SURFACE WITHOUT STRUCTURE OR ROADWAY APPROACHES.
DRAINAGE AREA = 5.8 SQ. MILES
HISTORICAL H.W. ELEV. = 564.5 FT.
ROADWAY OVERTOPPING ELEVATION = 565.5 FT.
EXIST. 100-YEAR BACKWATER ELEV. = 565.7 FT.

FOR THE CONSTRUCTION OF TEMPORARY WORK RAMPS OR HALL ROADS, THIS STREAM IS CLASSIFIED AS A PERENNIAL STREAM. THE STREAM BANK ELEVATION IS 560' BETWEEN STATIONS 105+75 AND 106+15. REFER TO SECTION 110.06(c) OF THE 2003 STANDARD SPECIFICATIONS.

TBM# 903 - CHIS SQ CUT IN NE COR. BR. 13' LT. STA. 106+09, ELEV. 564.44





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 3/4" 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.

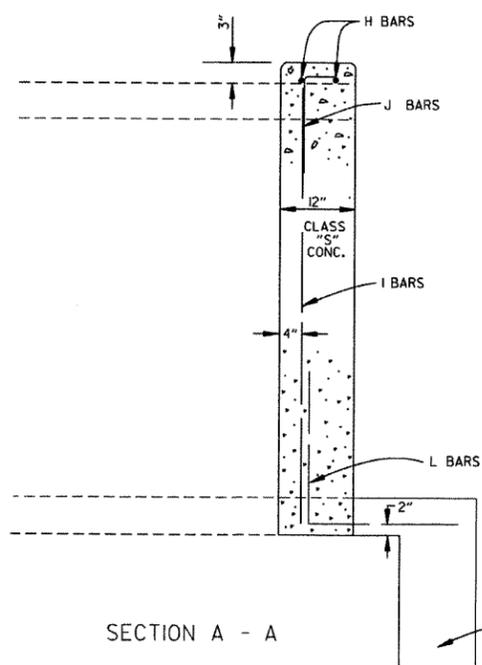
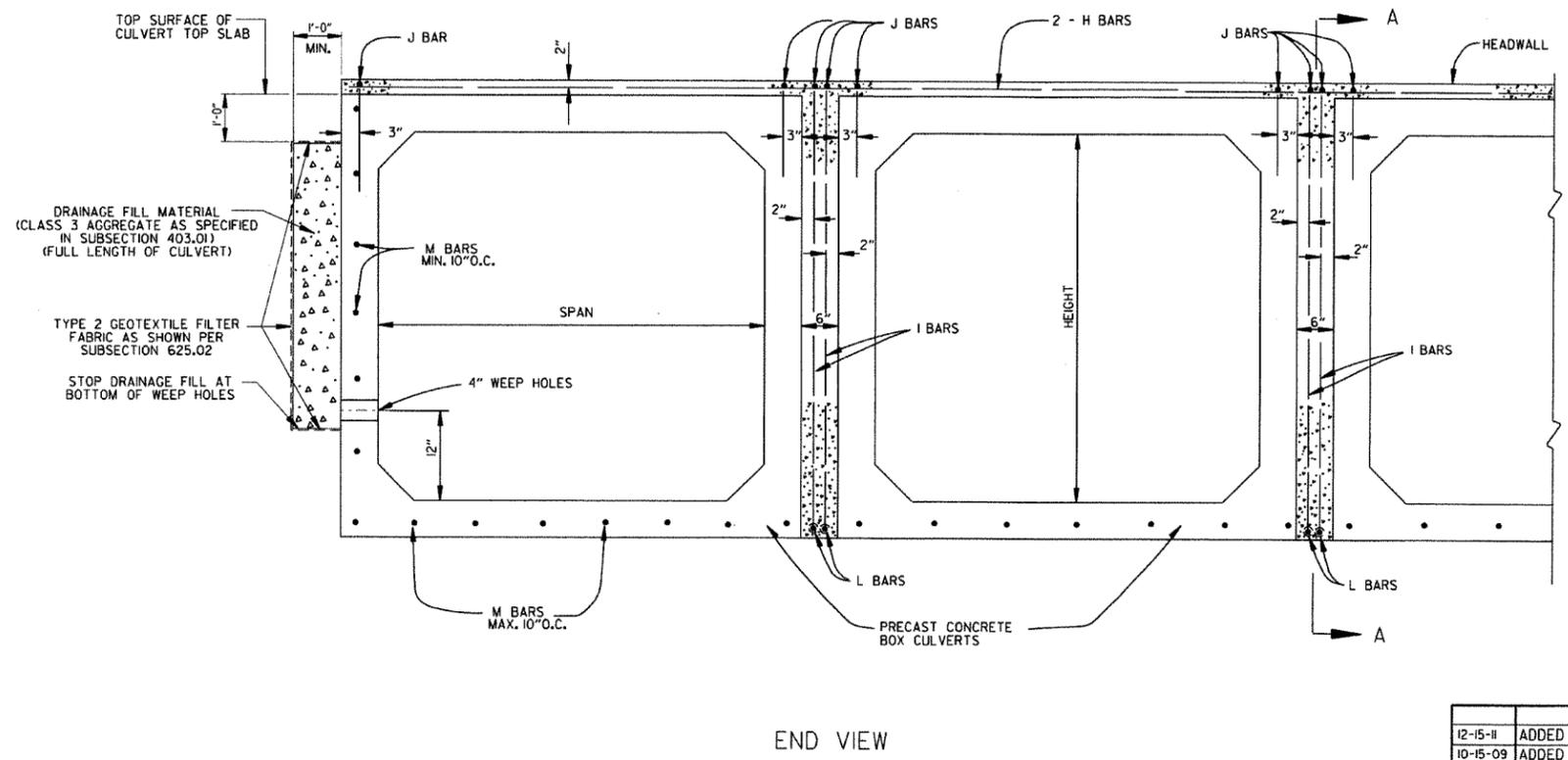
THE MEMBRANE WATERPROOFING WILL BE REQUIRED ON THE TOP EXTERNAL JOINT AND SHALL EXTEND 1 FOOT DOWN THE SIDES OF THE CULVERT.

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.



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	

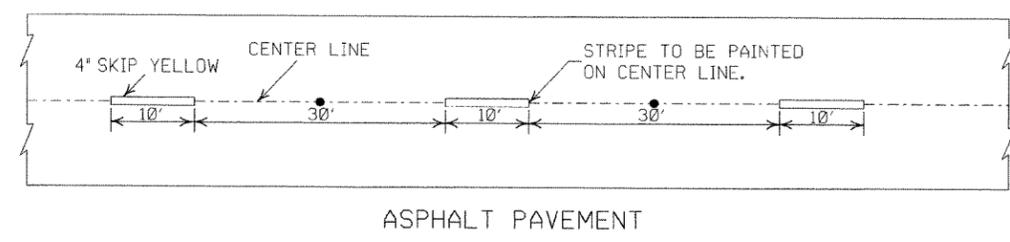
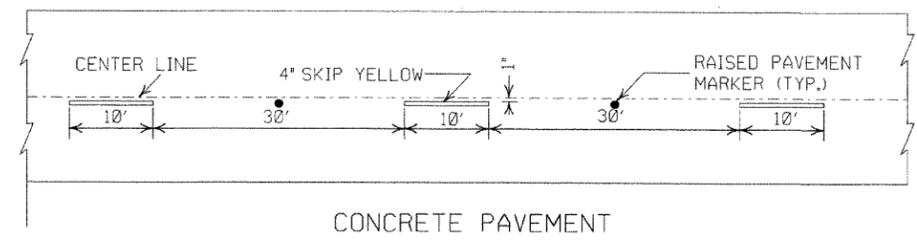
ARKANSAS STATE HIGHWAY COMMISSION

PRECAST CONCRETE BOX CULVERTS

STANDARD DRAWING PBC-1

NOTES:

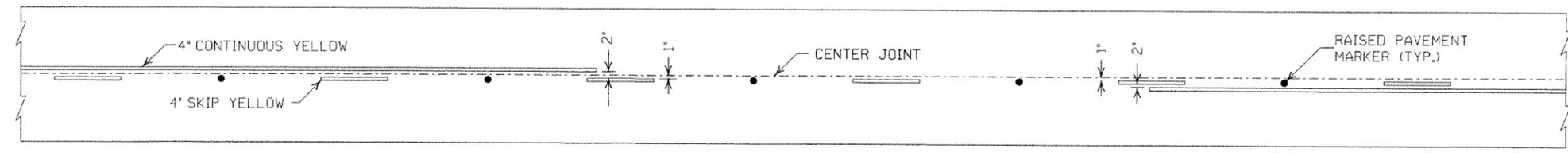
1. ALL LINES SHALL HAVE A WIDTH OF 4 INCHES.
2. THE THICKNESS AND RATE OF PAINT APPLICATION SHALL BE AS SPECIFIED IN SECTION 718 OF THE STANDARD SPECIFICATIONS.
3. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
4. RAISED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



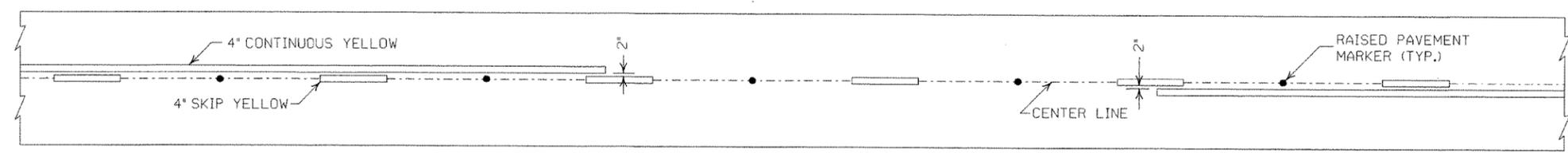
CONCRETE PAVEMENT

ASPHALT PAVEMENT

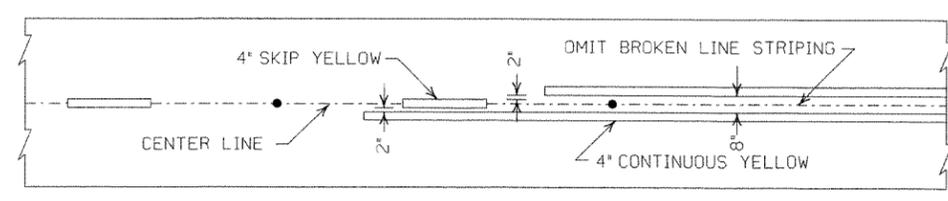
BROKEN LINE STRIPING



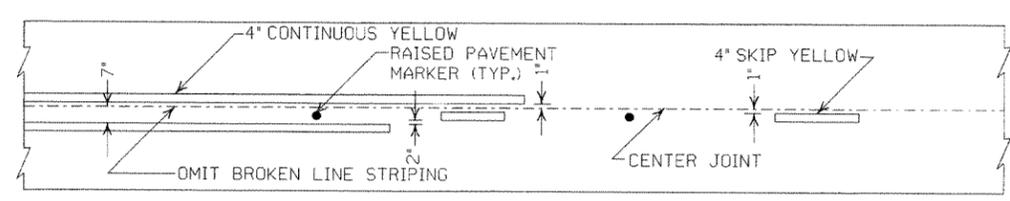
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

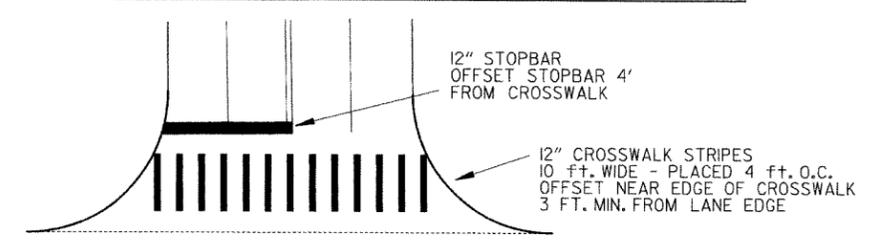


ASPHALT PAVEMENT



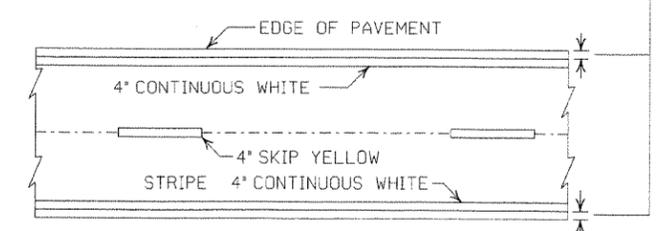
CONCRETE PAVEMENT

STRIPING AT ADJACENT NO PASSING LANES

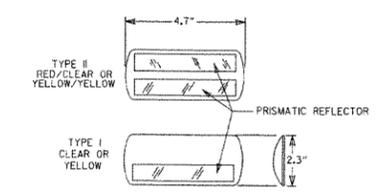


CROSSWALK AND STOPBAR DETAILS

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



PAVEMENT EDGE LINE MARKING



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

DETAIL OF STANDARD RAISED PAVEMENT MARKERS

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.

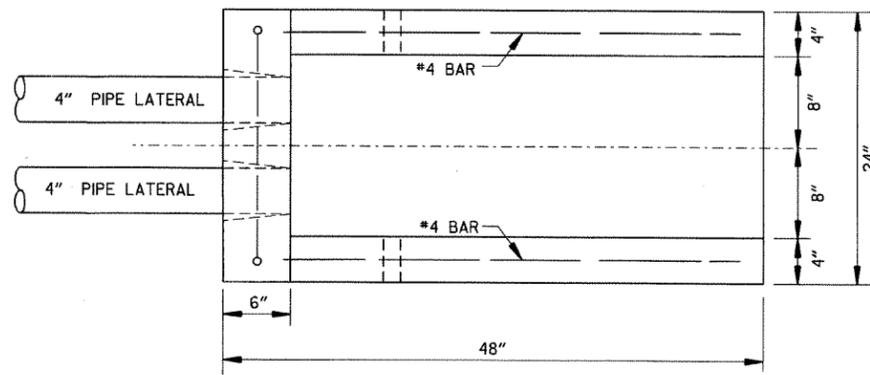
DATE	REVISION	FILMED
11-17-10	REVISED GENERAL NOTES & REMOVED FLOWABLE PVMT MRKRS	
11-18-04	REVISED NOTE 2 & GENERAL NOTES	
8-22-02	ADDED CROSSWALK & STOPBAR DTLS.	
7-02-98	ADDED DETAILS OF STD. RAISED PAV'T. MARKERS	
4-26-96	REV. NOTES 3&4; ADDED R.P.M.	
9-30-80	DRAWN	1-9-30-80

ARKANSAS STATE HIGHWAY COMMISSION

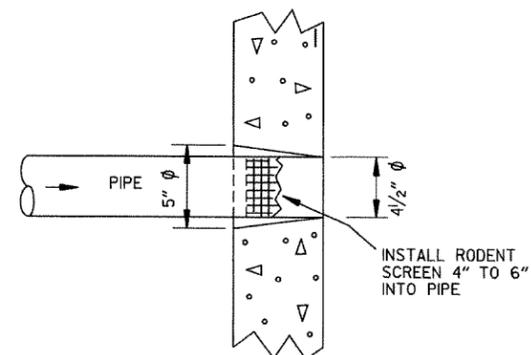
PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1

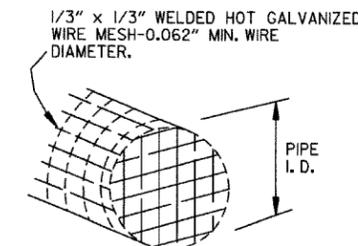
NOTE:
 1. GRANULAR BACKFILL TO BE SUBSIDIARY TO PIPE UNDERDRAIN.
 2. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THOROUGHLY COMPACTED EARTH AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.
 3. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC, LAP FABRIC 12" OR THE WIDTH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



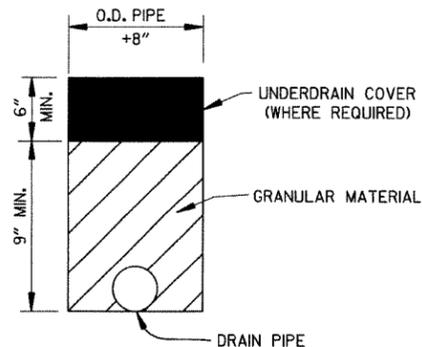
PLAN VIEW



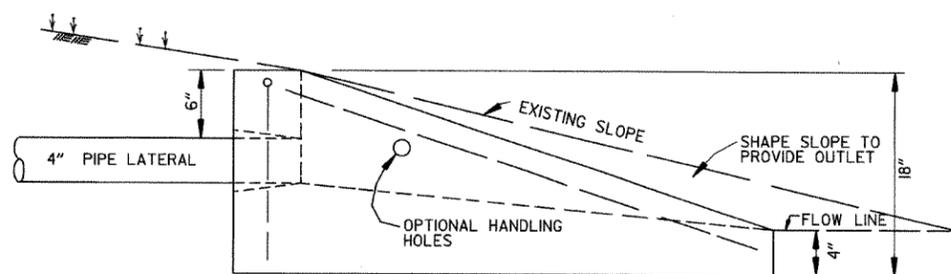
DETAIL OF HOLE FOR 4" PIPE



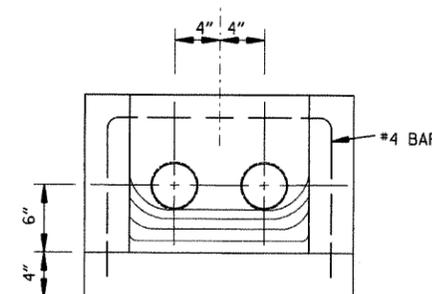
DETAIL OF RODENT SCREEN



DETAILS OF PIPE UNDERDRAIN



SIDE VIEW

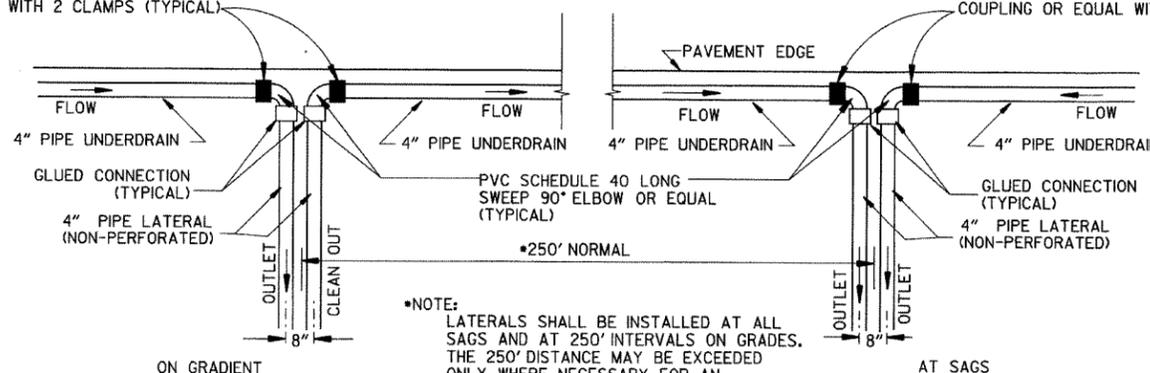


FRONT VIEW

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

UNDERDRAIN OUTLET PROTECTORS

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



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

DETAIL OF PIPE UNDERDRAIN LATERALS WHEN PLACED ALONG PAVEMENT EDGE

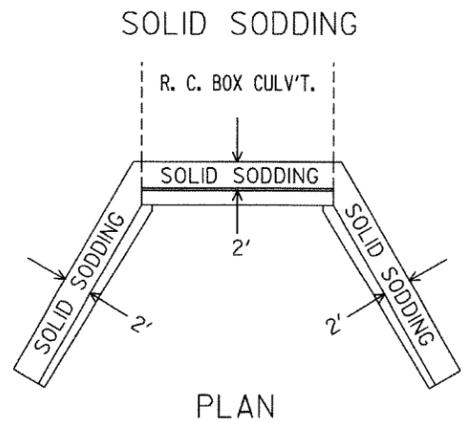
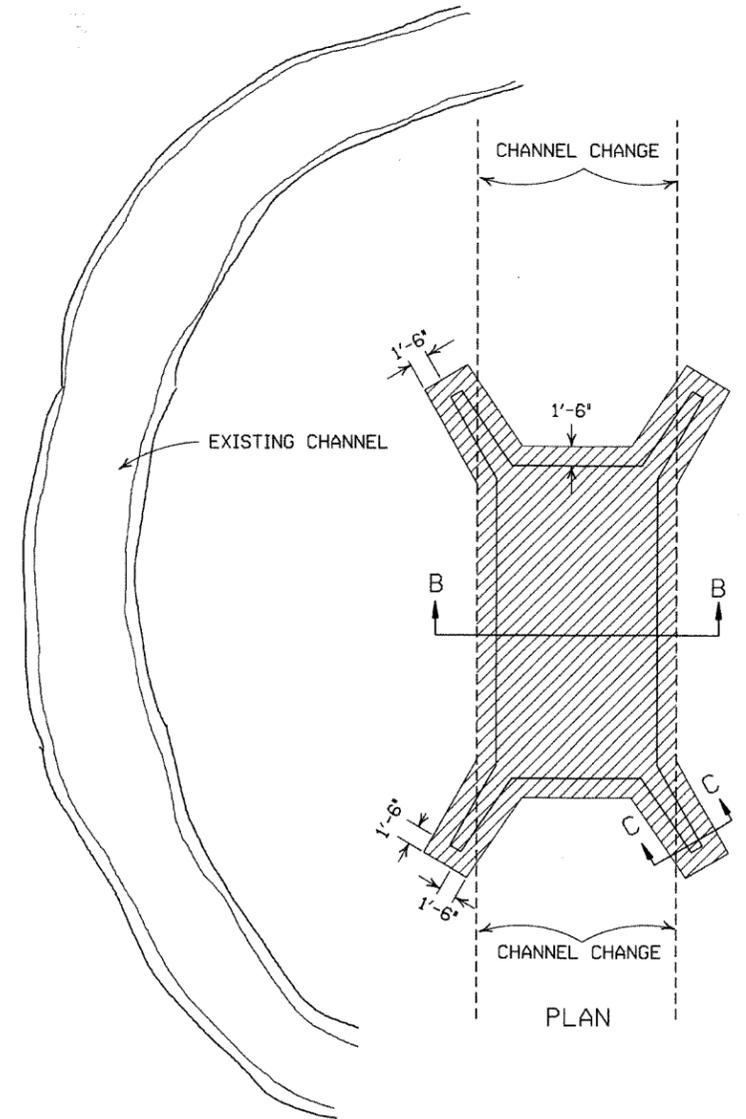
NOTE: PVC PIPE FOR LATERALS SHALL MEET THE REQUIREMENTS OF ASTM D 1785 (LATEST REVISION) FOR SCHEDULE 40 PIPE.

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

ARKANSAS STATE HIGHWAY COMMISSION

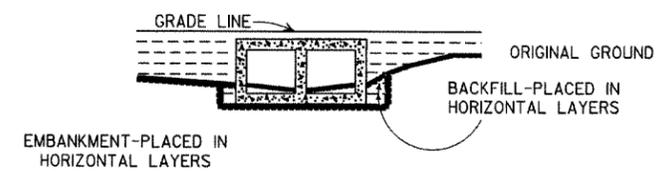
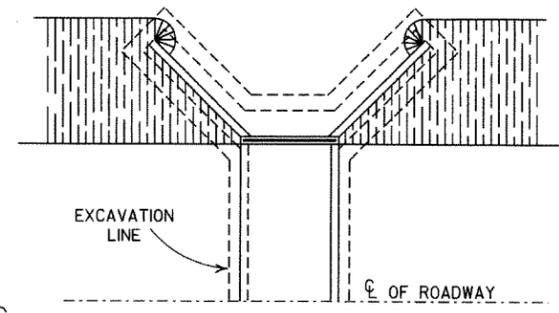
DETAILS OF PIPE UNDERDRAIN

STANDARD DRAWING PU-1

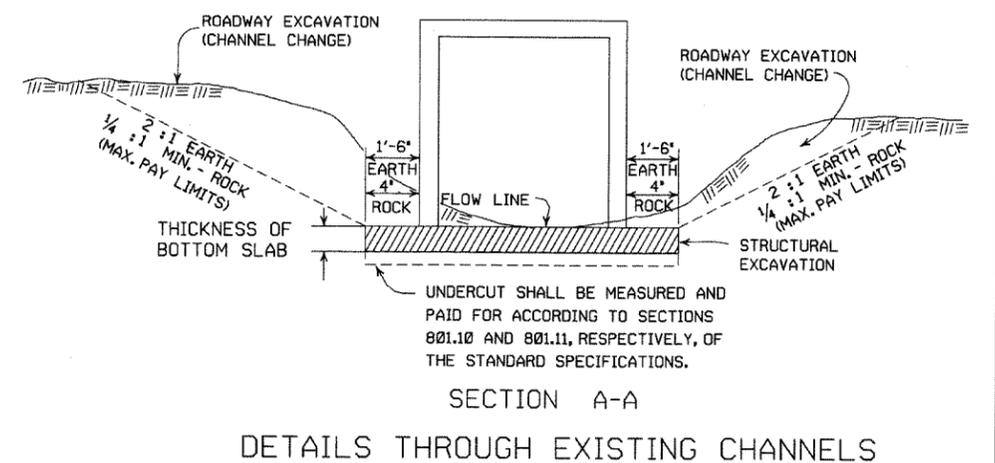
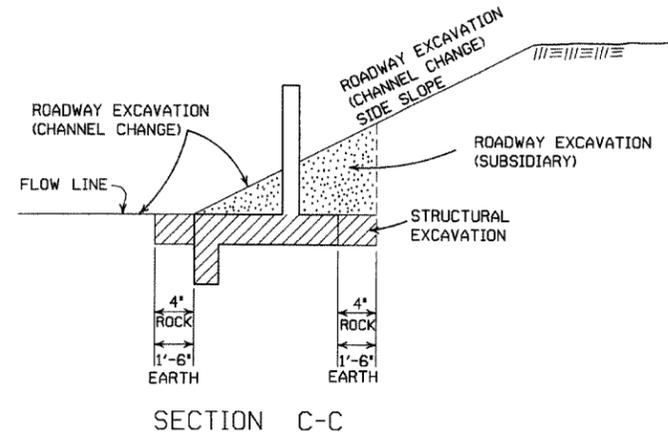
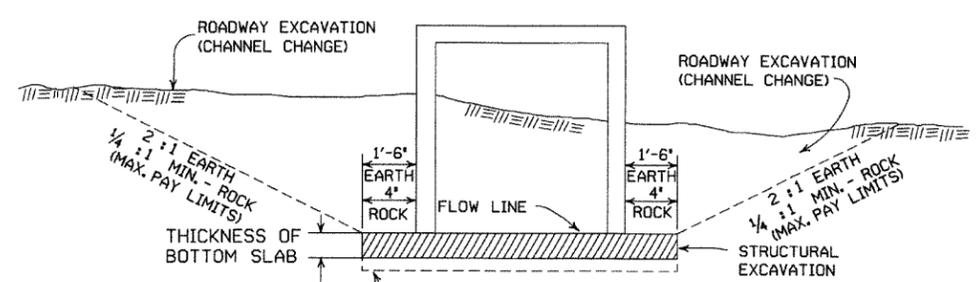
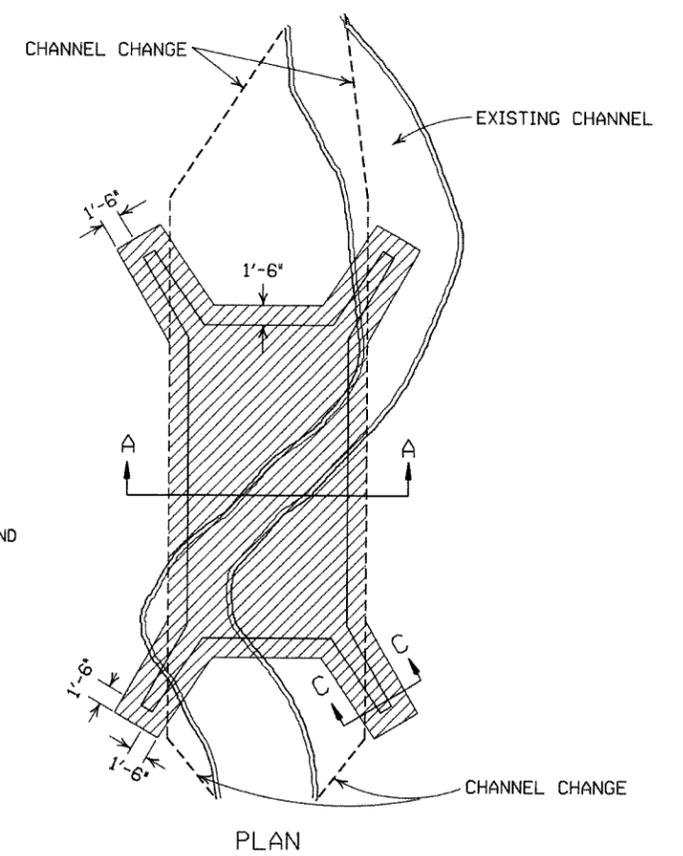


PARTIAL SECTION SHOWING SOLID SODDING AT HEADWALLS AND WING WALLS

NOTE: LENGTH MEASURED ALONG THE CENTER OF 2' STRIP OF SOLID SODDING.



BACKFILL DETAILS FOR BOX CULVERT



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.

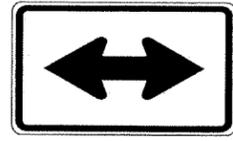
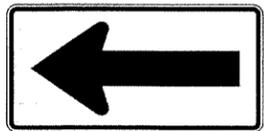
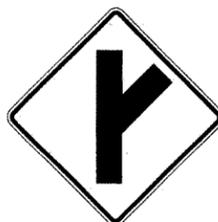
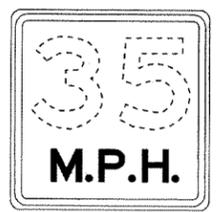
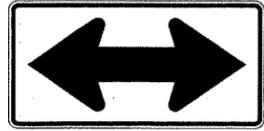
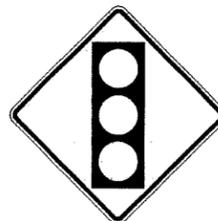
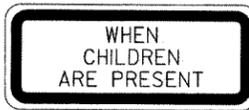
ROADWAY EXCAVATION SHOWN IN SECTION C-C ABOVE AS SUBSIDIARY WILL NOT BE MEASURED OR PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION.

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 AND ADDED MAXIMUM PAY LIMIT NOTES.	674-1-4-83
2-2-76	EXCAV. PAY LIMITS	917-2-2-76
10-2-72	REVISED AND REDRAWN	564-10-16-72
DATE	REVISION	FILMED

ARKANSAS STATE HIGHWAY COMMISSION

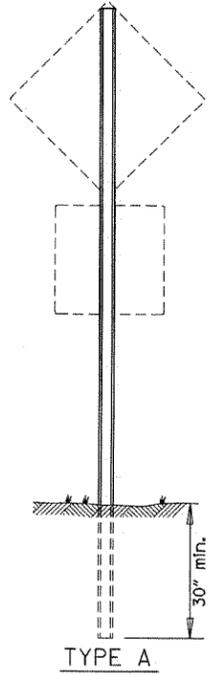
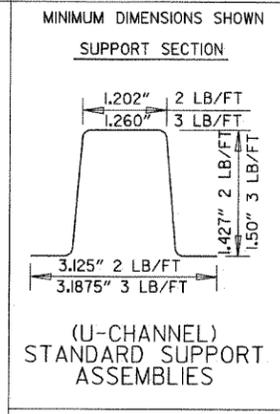
EXCAVATION PAY LIMITS, BACKFILL, & SOLID SODDING FOR BOX CULVERTS

STANDARD DRAWING RCB-2

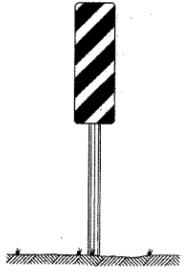
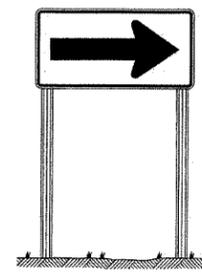
 RI-1 30"X30"	 WI-3 30"X30" (LT. OR RT.)	 WI-8 18"X24"	 W2-5 30"X30"	 W3-1 36"X36"	 W5-1 36"X36"	 M6-3 21"X15"
 RI-2 36"X36"X36"	 WI-4 30"X30" (LT. OR RT.)	 W2-1 30"X30"	 SI-1 36"X36"	 W3-2 36"X36"	 LASSEN 16 COUNTY County Route Marker MI-5 24"X24"	 M6-4 21"X15"
 R2-1 24"X30"	 WI-5 30"X30" (LT. OR RT.)	 W2-2 30"X30"	 W5-2 36"X36"	 W8-3 36"X36"	 RI-3 12"X6"	 M6-5 21"X15"
 WI-1 30"X30" (LT. OR RT.)	 WI-6 48"X24"	 W2-3 30"X30" (LT. OR RT.)	 W5-3 36"X36"	 W13-1 18"X18"	 M6-1 21"X15"	 M6-6 21"X15"
 WI-2 30"X30" (LT. OR RT.)	 WI-7 48"X24"	 W2-4 30"X30"	 W10-1 36" DIAMETER	 W3-3 36"X36"	 M6-2 21"X15"	 S4-3 24"X8"  S4-2 24"X10"

NOTE: REFLECTORIZED YELLOW LEGEND (COUNTY NAME, ROUTE LETTER & NUMBER) & BORDER ON A BLUE BACKGROUND.

NOTE: ALL M6 SIGNS TO BE MADE WITH REFLECTORIZED YELLOW ARROW & BORDER WITH BLUE BACKGROUND.



NOTE: LENGTH OF SIGN POSTS SHALL BE DETERMINED SO AS TO PROVIDE FOR MINIMUM VERTICAL CLEARANCES AS CALLED FOR IN THE SPECIFICATIONS PLUS A MINIMUM VERTICAL PENETRATION OF 30" IN THE SOIL.

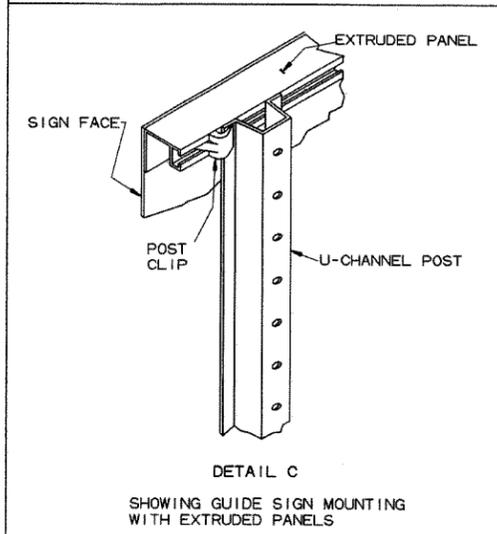
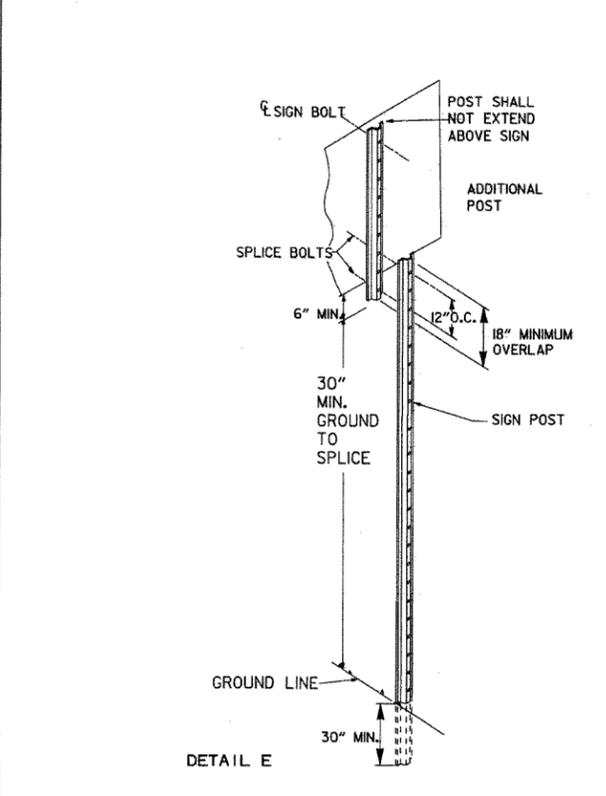
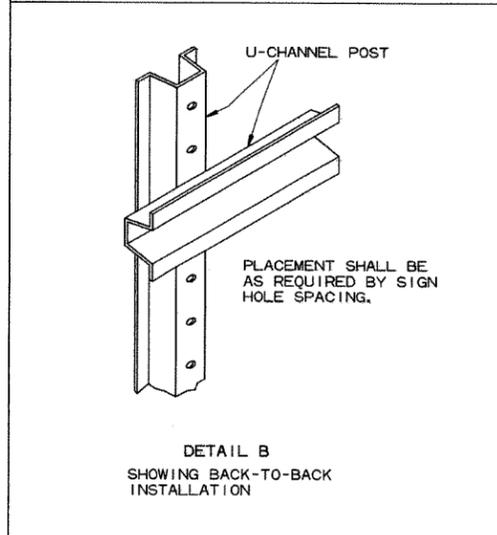
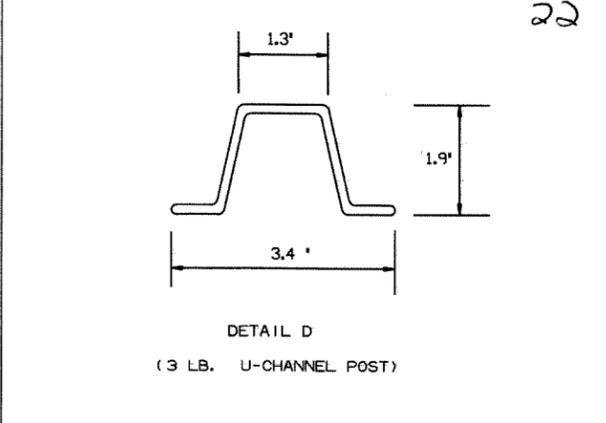
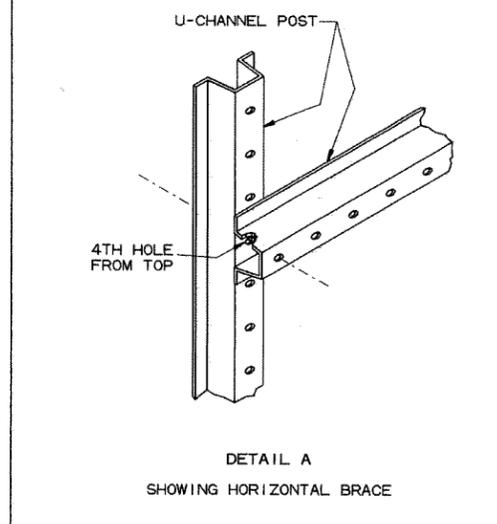
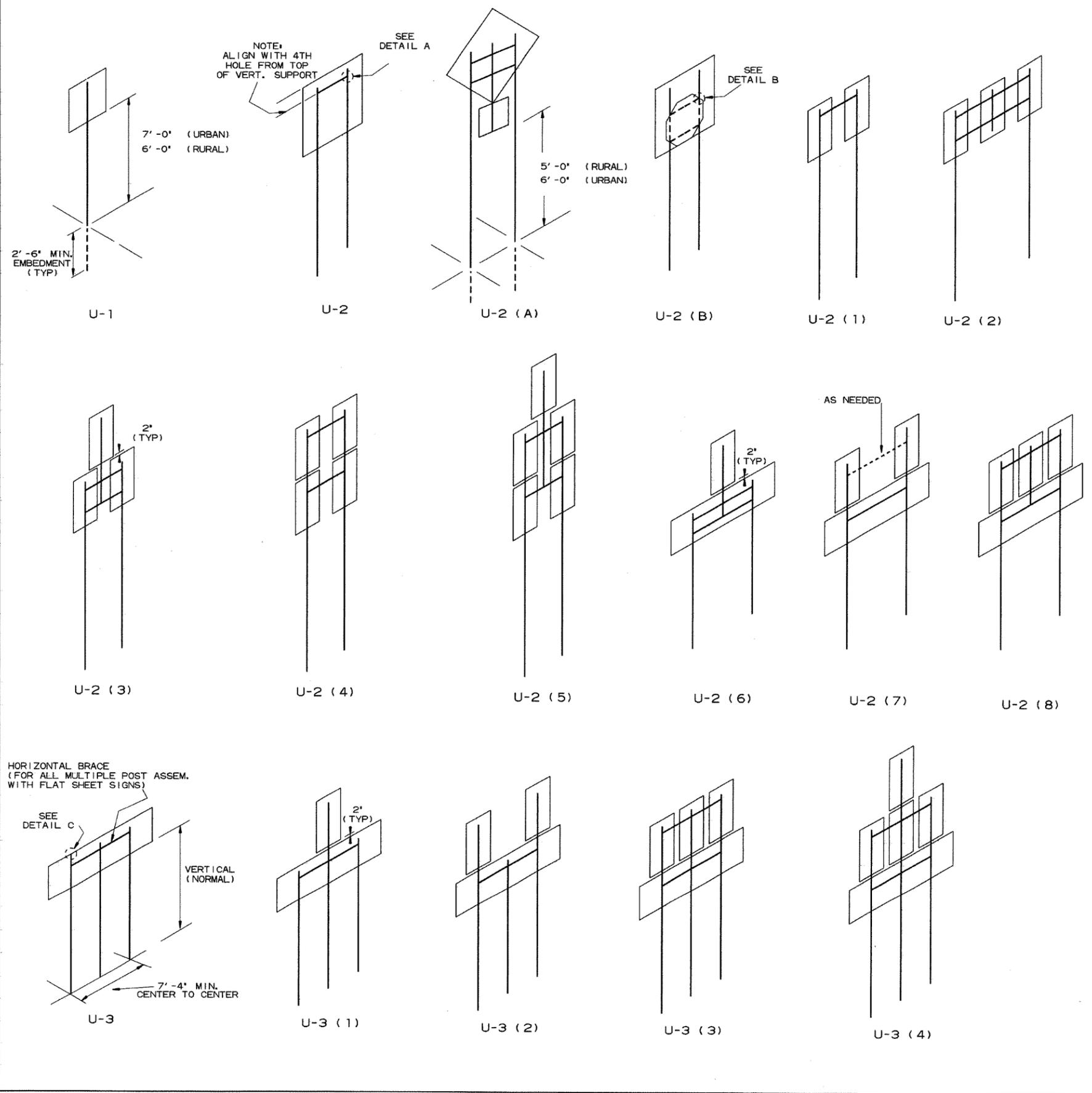


MINIMUM WEIGHT
TYPE A & B = 3 LBS./FT.
TYPE C = 2 LBS./FT.

STANDARD HIGHWAY SIGNS

DATE	REVISION	DATE FILMED
4-17-08	REVISED SIGN DESIGNATION - W3-1 & W3-2	
4-10-03	REVISED W5-2, W8-3, OM-3; ADDED WI-8	
1-5-81	REDRAWN	960-1-5-81
9-15-78	ADDED WI-3	877-9-15-78
9-2-76	POST WT.	623-9-3-76
5-3-76	STEEL POST WT. FROM 2" - 3"	
8-12-74	ADDED S4-2 & S4-3	504-8-12-74
12-21-72	REV. HT. TYPE "C" ASSEMBLY	500-12-21-72
12-1-72	ADDED M6-2,3,4,5,6	500-12-1-72
	ISSUED	562-12-1-72

SUPPORT ASSEMBLIES
ARKANSAS STATE HIGHWAY COMMISSION
STANDARD HIGHWAY SIGNS
AND SUPPORT ASSEMBLIES
STANDARD DRAWING SHS-1



NOTES:

SIGNS AT LEAST 8' IN LENGTH MAY BE INSTALLED ON THREE 3 LB. POST. IN NO CASE SHALL THERE BE MORE THAN TWO 3 LB. POSTS WITHIN A 7' PATH.

SPLICES NECESSARY TO ATTAIN PROPER MOUNTING HEIGHT SHALL BE AS SHOWN IN DETAIL (E).

NORMAL INSTALLATIONS WILL REQUIRE 1/4" DIA. CARRIAGE BOLTS TO MOUNT SIGNS TO POST AND 3/8" DIA. CARRIAGE BOLTS TO ASSEMBLE THE VARIOUS POST SUPPORTS.

ALL SIGN POSTS SHALL BE PLUMB.

10-9-03	REMOVED ROUND POST & REVISED SPACING	10-9-03
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL	6-8-95
2-2-95	REDRAWN	2-2-95
DATE	REVISION	FILMED

ARKANSAS STATE HIGHWAY COMMISSION

U-CHANNEL POST ASSEMBLIES

STANDARD DRAWING SHS-2

ADVANCE DISTANCES
(XXX)

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

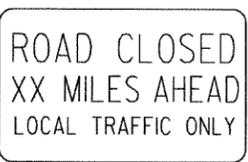
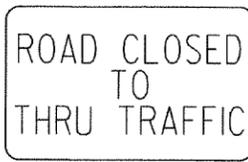
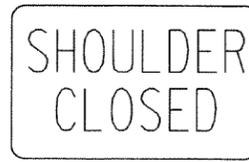
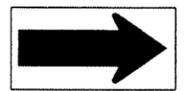
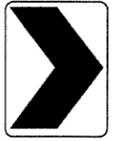
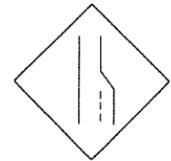
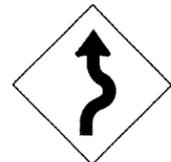
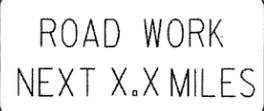
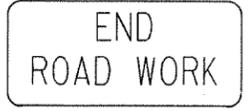
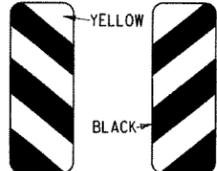
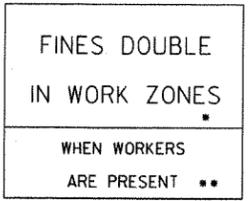
GENERAL NOTES:

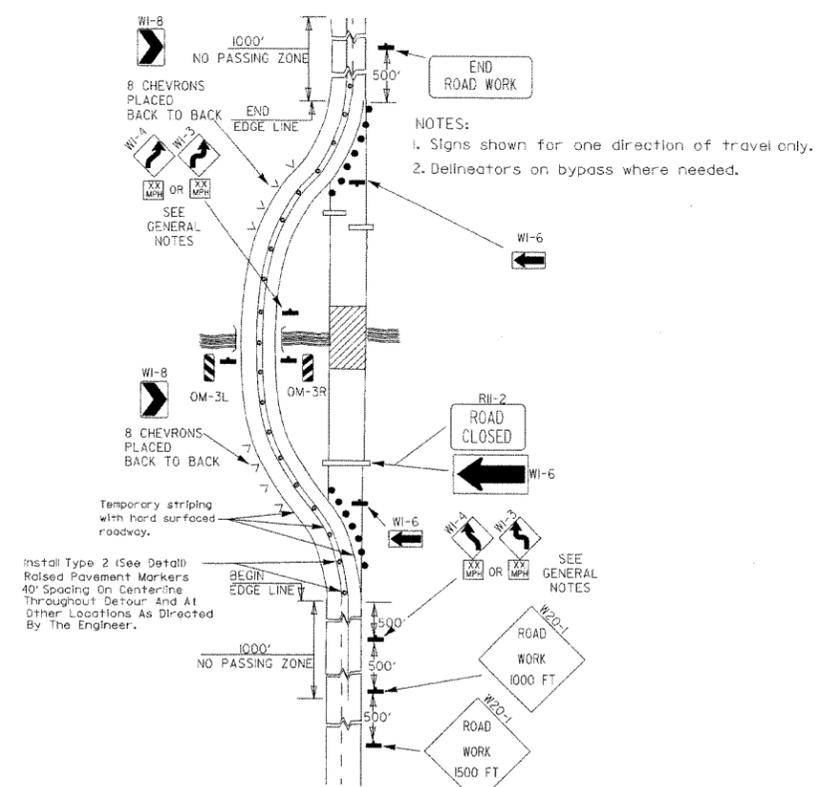
- ALL TRAFFIC CONTROL DEVICES USED ON ROAD CONSTRUCTION SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND TO THE STANDARD HIGHWAY SIGNS, LATEST EDITION, OR AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION.
- TRAFFIC CONTROL DEVICES SHALL BE SET UP JUST BEFORE THE START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

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

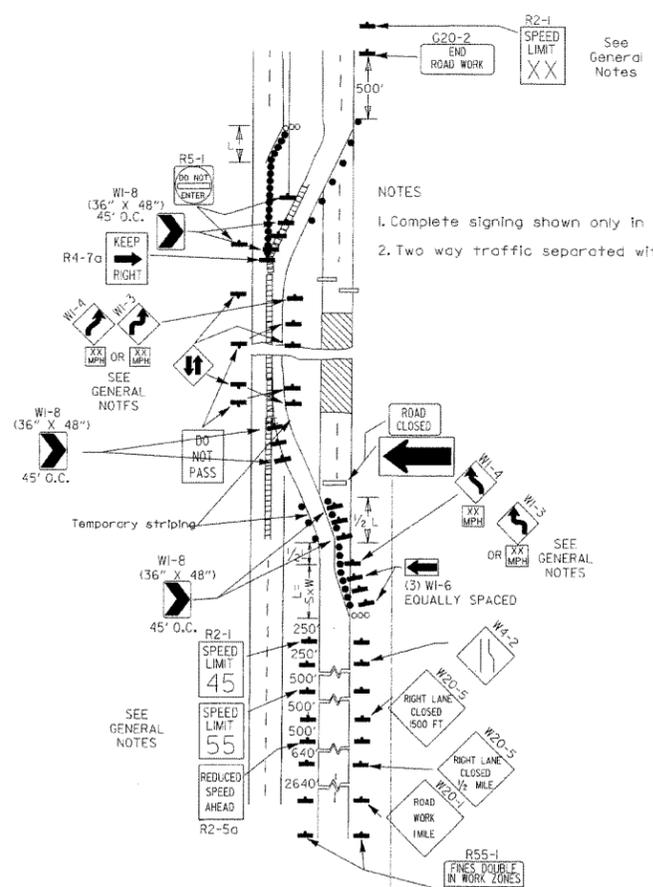
12-15-11	REVISED W24-1	
11-17-10	DELETED W8-9a & ADDED W8-9	
10-15-09	ADDED REFERENCE TO MASH & ADDED SIGN W24-1	
4-17-08	REVISED SIGN DESIGNATIONS	
11-18-04	REVISED NOTES	
10-9-03	REVISED NOTE 1	
11-16-01	REVISED NOTE 7	
9-28-00	REVISED NOTE	
1-18-98	ADDED NOTE	
6-26-97	REVISED NOTE 5	
4-03-97	REVISED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

ARKANSAS STATE HIGHWAY COMMISSION
STANDARD TRAFFIC CONTROLS
FOR HIGHWAY CONSTRUCTION
STANDARD DRAWING TC-1

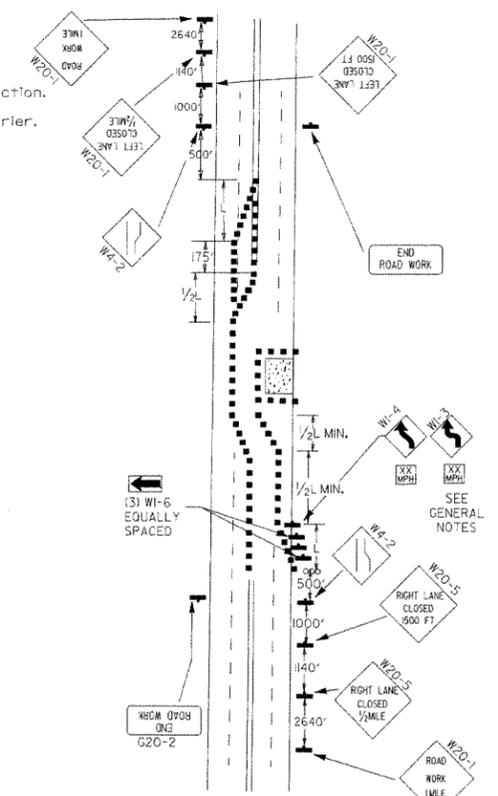
<p>RI-1</p>  <p>STANDARD 30"x30" EXPRESSWAY 36"x36" SPECIAL 48"x48"</p>	<p>RI-2</p>  <p>STD. 36"x36"x36" EXPWY. 48"x48"x48" FWY. 60"x60"x60"</p>	<p>R2-1</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>R2-5A</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>R2-5C</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>R4-1</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>R4-2</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>
<p>R5-1</p>  <p>STD. 30"x30" EXPWY. 36"x36" SPECIAL 48"x48"</p>	<p>R11-2</p>  <p>48"x30"</p>	<p>R11-3A</p>  <p>60"x30"</p>	<p>R11-4</p>  <p>60"x30"</p>	<p>RSP-1</p>  <p>48"x30"</p>	<p>WI-1</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>WI-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>
<p>WI-3</p>  <p>STD. 48"x48"</p>	<p>WI-4</p>  <p>STD. 48"x48"</p>	<p>WI-6</p>  <p>STD. 48"x24" SPECIAL 60"x30"</p>	<p>WI-8</p>  <p>STD. 18"x24" SPECIAL 24"x30" EXPWY. 30"x36" FWY. 36"x48"</p>	<p>W3-1</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W3-2</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W4-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>
<p>W5-1</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W6-3</p>  <p>EXPWY. 36"x36" SPECIAL 48"x48"</p>	<p>W8-7</p>  <p>EXPWY. 36"x36" FWY. 48"x48"</p>	<p>W9-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W13-1</p>  <p>STD. 24"x24"</p>	<p>W20-1</p>  <p>STD. 48"x48"</p>	<p>W20-2</p>  <p>STD. 48"x48"</p>
<p>W20-3</p>  <p>STD. 48"x48"</p>	<p>W20-4</p>  <p>STD. 48"x48"</p>	<p>W20-5</p>  <p>STD. 48"x48"</p>	<p>W20-7a</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W21-2</p>  <p>STD. 30"x30" SPECIAL 36"x36"</p>	<p>W21-5</p>  <p>STD. 30"x30" SPECIAL 36"x36"</p>	<p>W24-1</p>  <p>STD. 36"x36"</p>
<p>WI-4b</p>  <p>STD. 48"x48"</p>	<p>R56-1</p>  <p>STD. 18"x18"</p>	<p>W8-11</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W8-9</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>G20-1</p>  <p>60"x24"</p>	<p>G20-2</p>  <p>48"x24"</p>	<p>OM-3L OM-3R</p>  <p>12"x36"</p>
<p>M4-9</p>  <p>STD. 30"x24" SPECIAL 48"x36" SPECIAL 60"x48"</p>	<p>M4-10</p>  <p>48"x18"</p>	<p>R55-1</p>  <p>36"x60"</p> <p>WHEN WORKERS ARE PRESENT **</p> <p>* USE 6" C LETTERS ** USE 4" D LETTERS</p>				



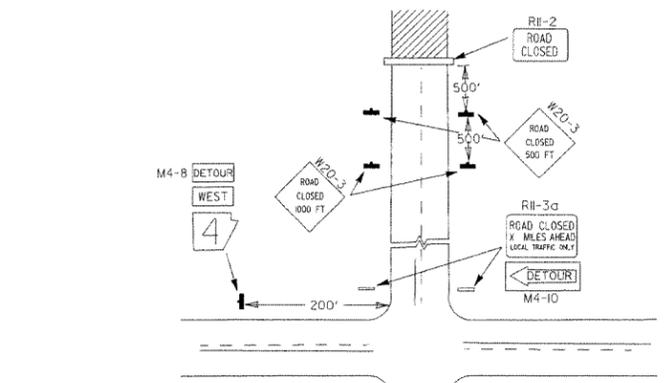
(A) Typical application of traffic control devices on a 2-lane highway where the entire roadway is closed and a bypass detour is provided.



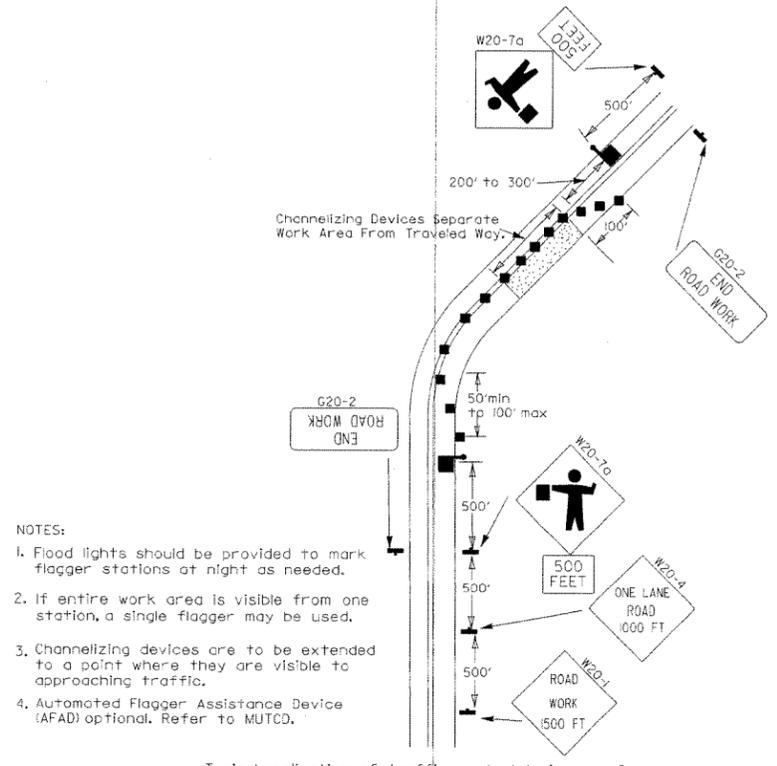
(B) Typical application - 4-lane divided roadway where one roadway is closed.



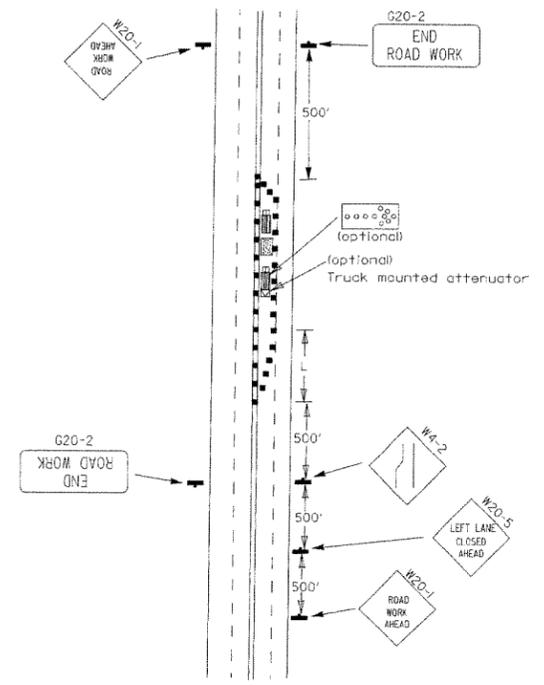
(C) Typical application - 4-lane undivided roadway where half of the roadway is closed.



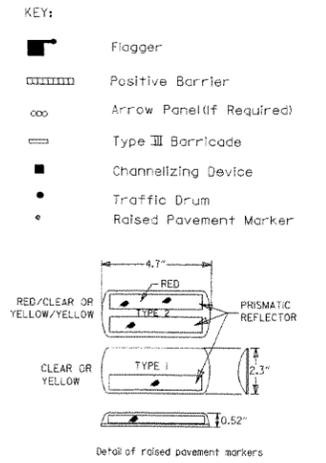
(D) Typical application - roadway closed beyond detour point.



(E) Typical application of traffic control devices on 2-lane highway where one lane is closed and flagging is provided.



(F) Typical application - 4-lane undivided roadway with inside lane closed.



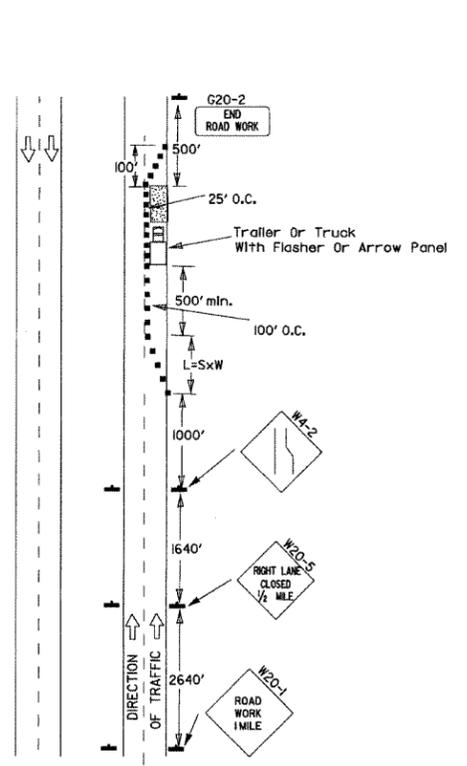
Typical advance warning sign placement

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

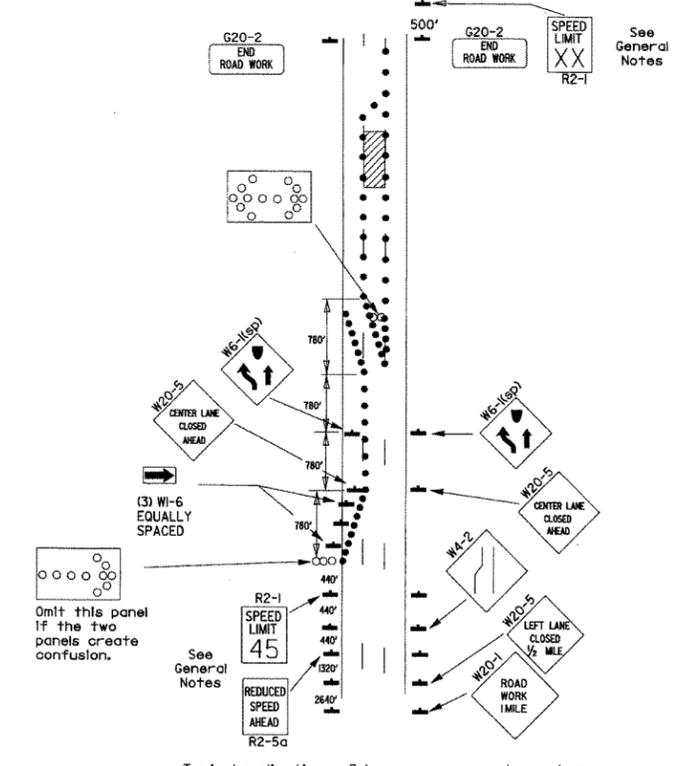
- GENERAL NOTES:
- Advisory speed posted on W1-3 or W1-4 curve warning signs to be determined at site. Use W1-4 when speed is greater than 30mph and W1-3 when 30mph or less.
 - When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(55) shall be omitted and the R2-5A 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(45) shall be installed to match original speed limit.
 - When the existing speed limit is 65mph and the plans require a speed limit of 55mph, the R2-1(65) shall be omitted. Additional R2-1 55mph speed limit signs shall be installed at a maximum of 1 mile intervals. At the end of the work area a R2-1(55) shall be installed to match original speed limit.
 - The maximum spacing between channelizing devices in a taper should be approximately equal in feet to the speed limit. Beyond the taper, maximum spacing shall be two times the speed limit, or as directed by the Engineer.
 - Warning lights and/or flags may be mounted to signs or channelizing devices at night as needed.
 - Pavement markings no longer applicable which might create confusion in the minds of vehicle operators shall be removed or obliterated as soon as practicable.
 - Trailer mounted devices such as arrow panels and portable changeable message signs shall be delineated by affixing conspicuity material in a continuous line on the face of the trailer. When placed on or adjacent to the shoulder and not behind a positive barrier, these devices shall be delineated by placing five (5) traffic drums, equally spaced along the traffic side of the device.

DATE	REVISION	FILMED
3-11-10	ADDED (AFAD)	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED GENERAL NOTE	
10-18-96	ADDED R55-1	
4-26-96	CORRECTED (a) BEHIND G20-2	
6-8-95	CORRECTED SIGN IDENT. ON W1-4A	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

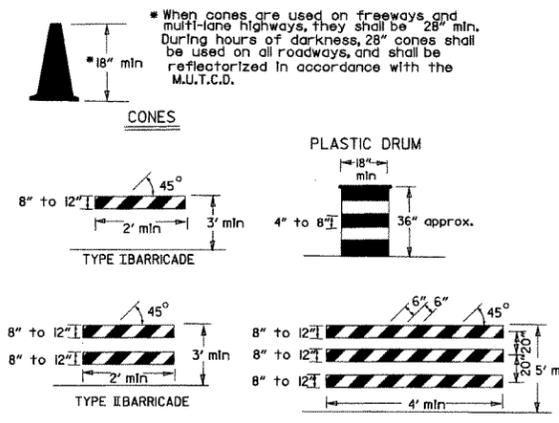
Channellizing devices



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



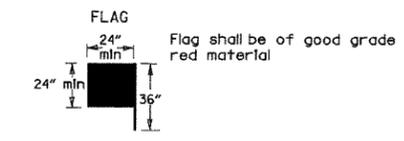
(B) Typical application - 3-lane one-way roadway where center lane is closed.



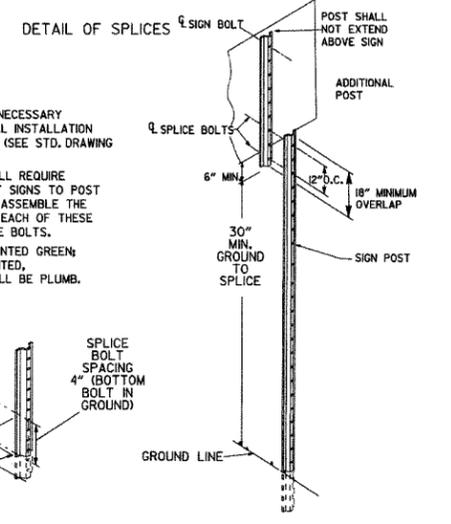
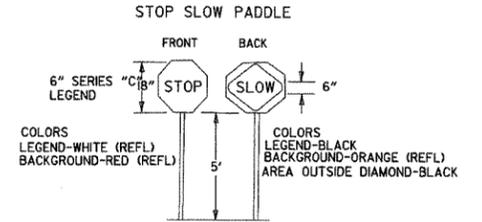
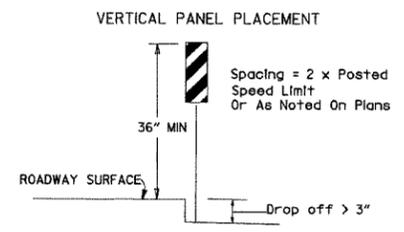
TRAFFIC CONTROL DEVICES FOR VERTICAL PAVEMENT DIFFERENTIALS

VERTICAL DIFFERENTIAL	LOCATIONS	TRAFFIC CONTROL
1" to 3"	Centerline, lane lines	W8-II
1" to 3"	Edge of shoulder	W8-9
Greater than 3"	Lane lines	Standard lane closure required
Greater than 3"	Edge of traveled lane	*RSP-I and vertical panels, drums or concrete barrier
Greater than 3"	Edge of shoulder	*Vertical panels, drums or concrete barrier

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



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

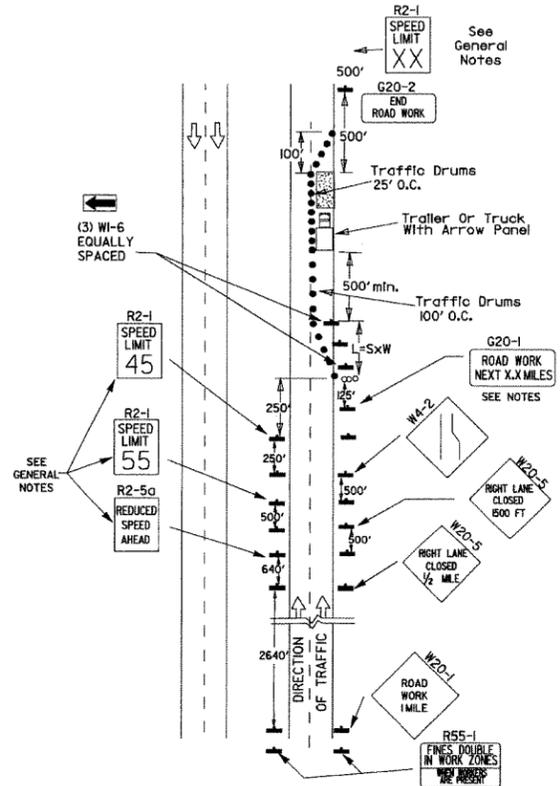


NOTES: USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-21). NORMAL INSTALLATIONS WILL REQUIRE 1/4" DIA. BOLTS TO MOUNT SIGNS TO POST AND 5/16" DIA. BOLTS TO ASSEMBLE THE VARIOUS POST SUPPORTS. EACH OF THESE BOLTS SHALL BE CARRIAGE BOLTS. SIGN POSTS SHALL BE PAINTED GREEN; SIGNS SHALL NOT BE PAINTED, AND ALL SIGN POSTS SHALL BE PLUMB.

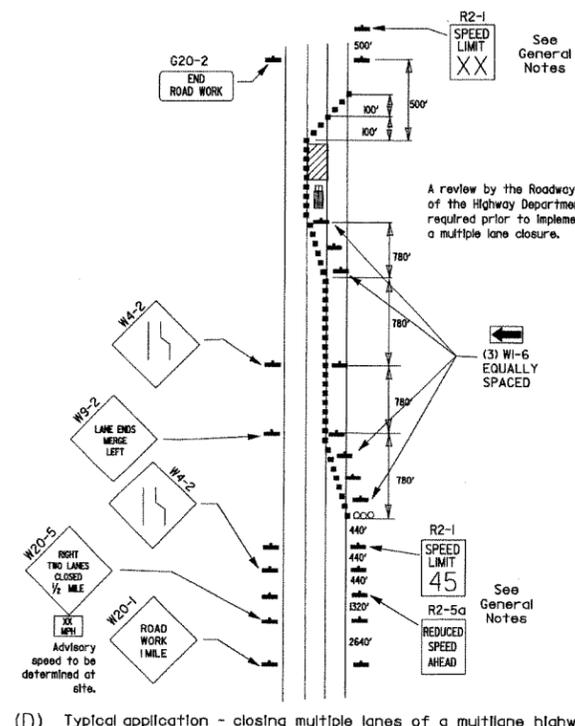
- KEY:
- Arrow Panel (if Required)
 - Channellizing Device
 - Traffic drum

GENERAL NOTES:

- A speed limit reduction may be implemented ONLY when designated in the plan or when recommended by the Roadway Design Division.
- When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(55) shall be omitted and the R2-5A shall be installed at that location. Additional R2-145mph speed limit signs shall be installed at a maximum of 1/2 mile intervals. At the end of the work area a R2-1(XX) shall be installed to match original speed limit.
- When the existing speed limit is 65mph and the plans require a speed limit of 55mph, the R2-1(65) shall be omitted. Additional R2-155mph speed limit signs shall be installed at a maximum of 1/2 mile intervals. At the end of the work area a R2-1(XX) shall be installed to match original speed limit.
- The maximum spacing between channellizing devices in a taper should be approximately equal in feet to the speed limit. Beyond the taper, maximum spacing shall be two times the speed limit or as directed by the Engineer.
- Warning lights and/or flags may be mounted to signs or channellizing devices as soon as needed.
- Pavement markings no longer applicable which might create confusion in the minds of vehicle operators shall be removed or obliterated as soon as practicable.
- The G20-1 sign will be required on jobs of over two miles in length. When the lane closure is not at the beginning of the project, the G20-1 sign shall be erected 125' in advance of the job limit. Additional W20-1 (1/2 MILE) signs are not required in advance of lane closures that begin inside the project limits.
- Flaggers shall use STOP/SLOW paddles for controlling traffic through work zones. Flags may be used only for emergency situations.
- All plastic drums and cones shall meet the requirements of NCHRP-350 or Manual For Assessing Safety Hardware (MASH).
- Trailer mounted devices such as arrow panels and portable changeable message signs shall be delineated by affixing conspicuity material in a continuous line on the face of the trailer. When placed on or adjacent to the shoulder and not behind a positive barrier, these devices shall be delineated by placing five (5) traffic drums, equally spaced along the traffic side of the device.



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



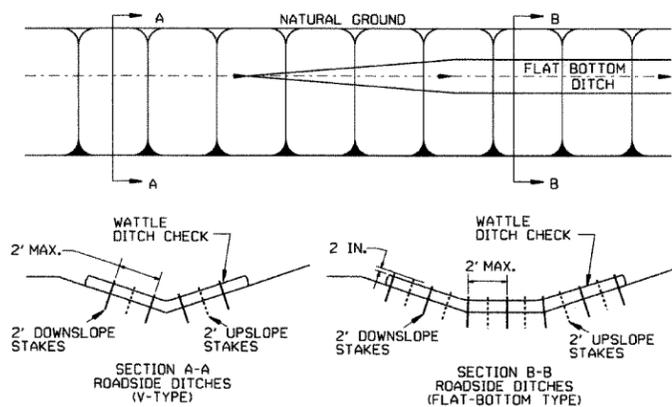
(D) Typical application - closing multiple lanes of a multilane highway.

DATE	REVISION	FILED
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	

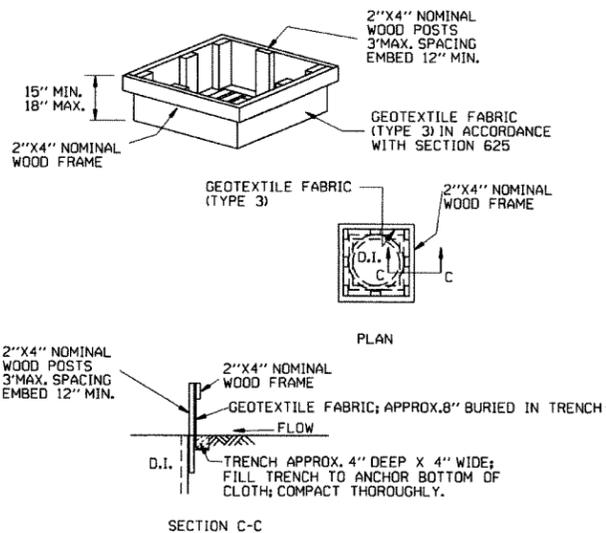
ARKANSAS STATE HIGHWAY COMMISSION
STANDARD TRAFFIC CONTROLS
FOR HIGHWAY CONSTRUCTION
STANDARD DRAWING TC-3

GENERAL NOTES

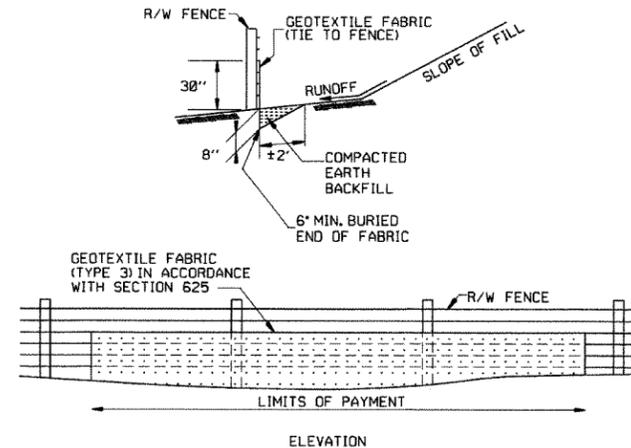
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)

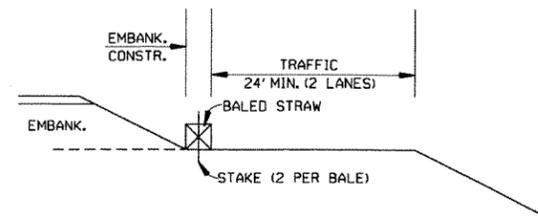


DROP INLET SILT FENCE (E-7)



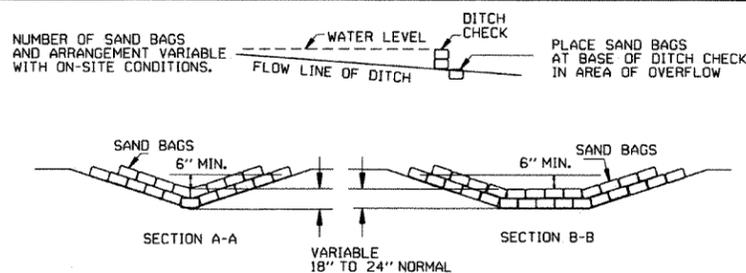
SILT FENCE ON R/W FENCE (E-4)

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.

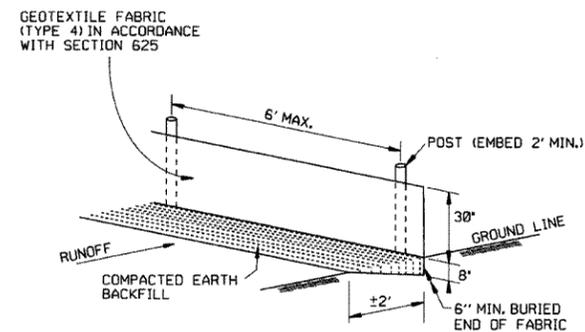


BALED STRAW FILTER BARRIER (E-2)

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.

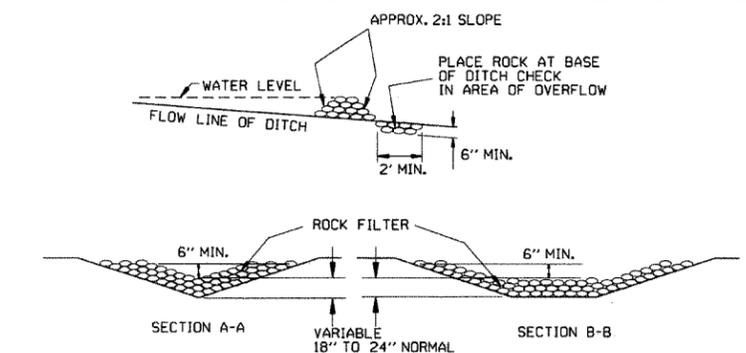


SAND BAG DITCH CHECK (E-5)



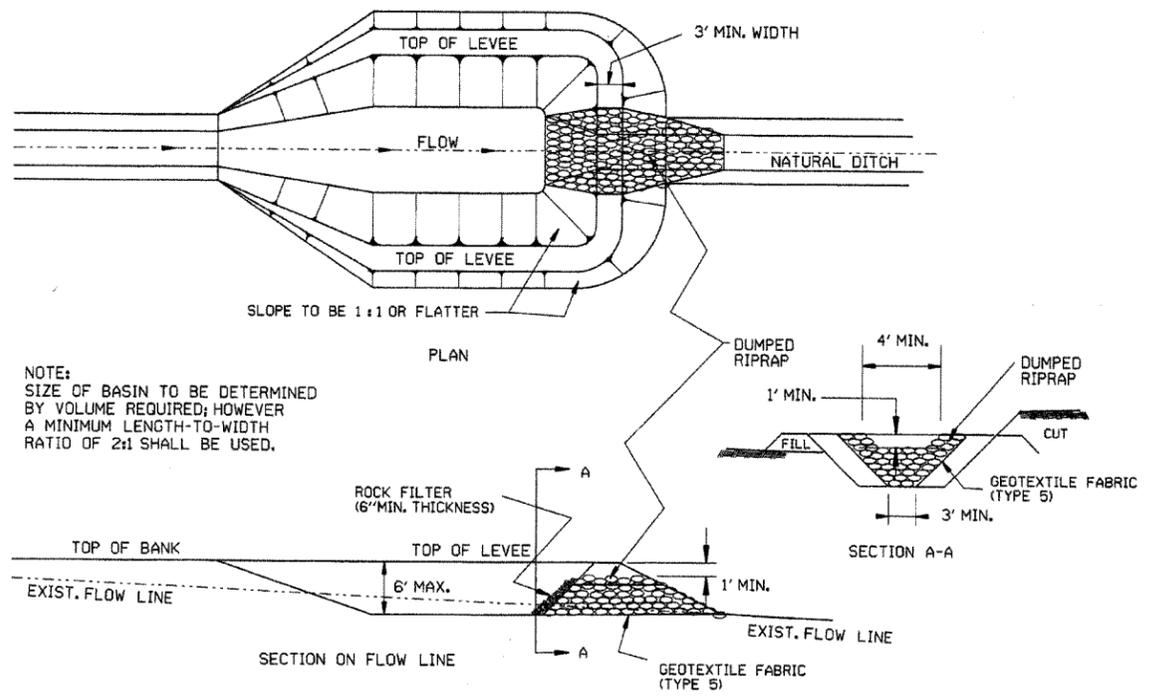
SILT FENCE (E-11)

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



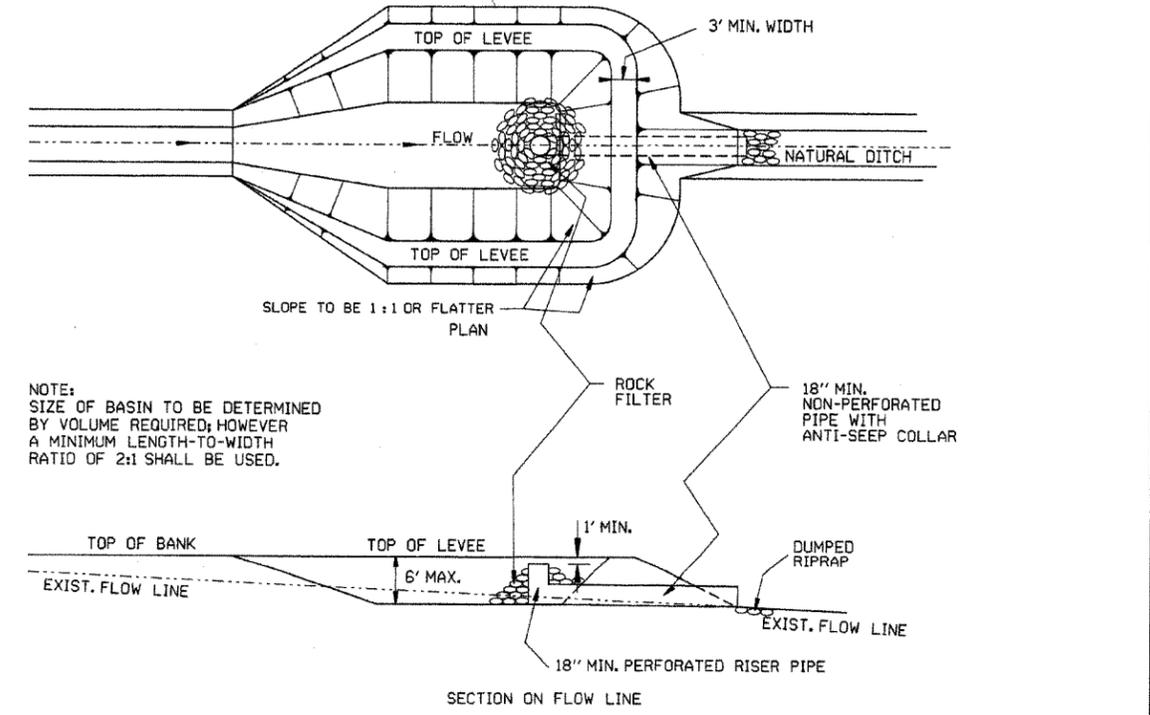
ROCK DITCH CHECK (E-6)

12-15-11	DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK		ARKANSAS STATE HIGHWAY COMMISSION
11-18-98	ADDED NOTES		
7-02-98	ADDED BALED STRAW FILTER BARRIER (E-2)		
7-20-95	REVISED SILT FENCE E-4 AND E-11	7-20-95	TEMPORARY EROSION CONTROL DEVICES
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	STANDARD DRAWING TEC-1
DATE	REVISION	FILMED	



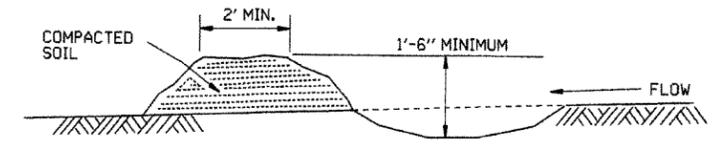
NOTE:
SIZE OF BASIN TO BE DETERMINED
BY VOLUME REQUIRED; HOWEVER
A MINIMUM LENGTH-TO-WIDTH
RATIO OF 2:1 SHALL BE USED.

SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)

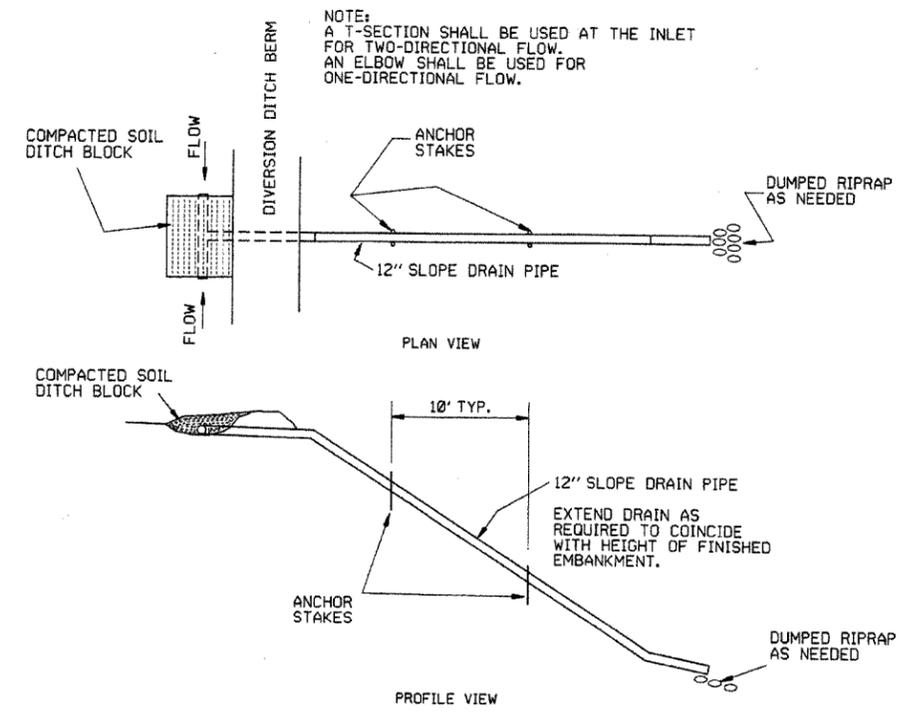


NOTE:
SIZE OF BASIN TO BE DETERMINED
BY VOLUME REQUIRED; HOWEVER
A MINIMUM LENGTH-TO-WIDTH
RATIO OF 2:1 SHALL BE USED.

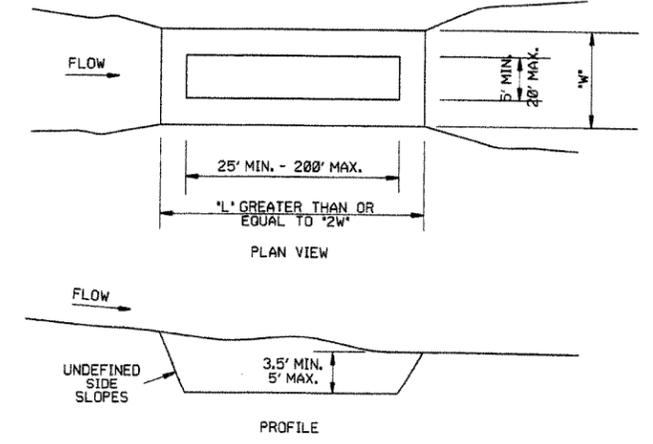
SEDIMENT BASIN WITH PIPE OUTLET (E-10)



DIVERSION DITCH (E-8)



SLOPE DRAIN (E-12)



SEDIMENT BASIN (E-14)

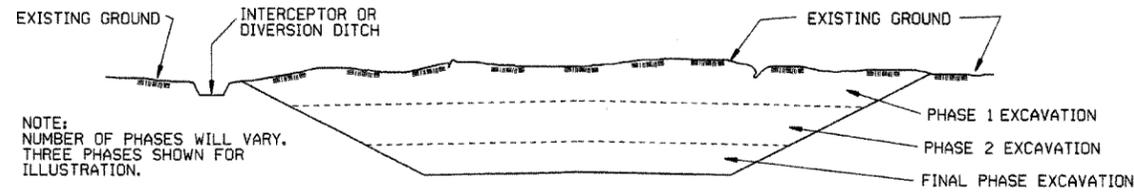
		ARKANSAS STATE HIGHWAY COMMISSION	
		TEMPORARY EROSION CONTROL DEVICES	
		STANDARD DRAWING TEC-2	
6-2-94	Revised E-8 & E-12; Added E-14 & Deleted E-13		
4-1-93	ISSUED		
DATE	REVISION		FILMED

CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE

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

EXCAVATION



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

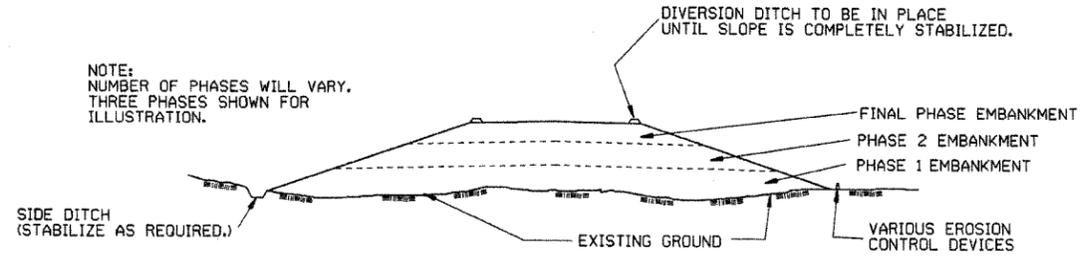
GENERAL NOTE

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



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

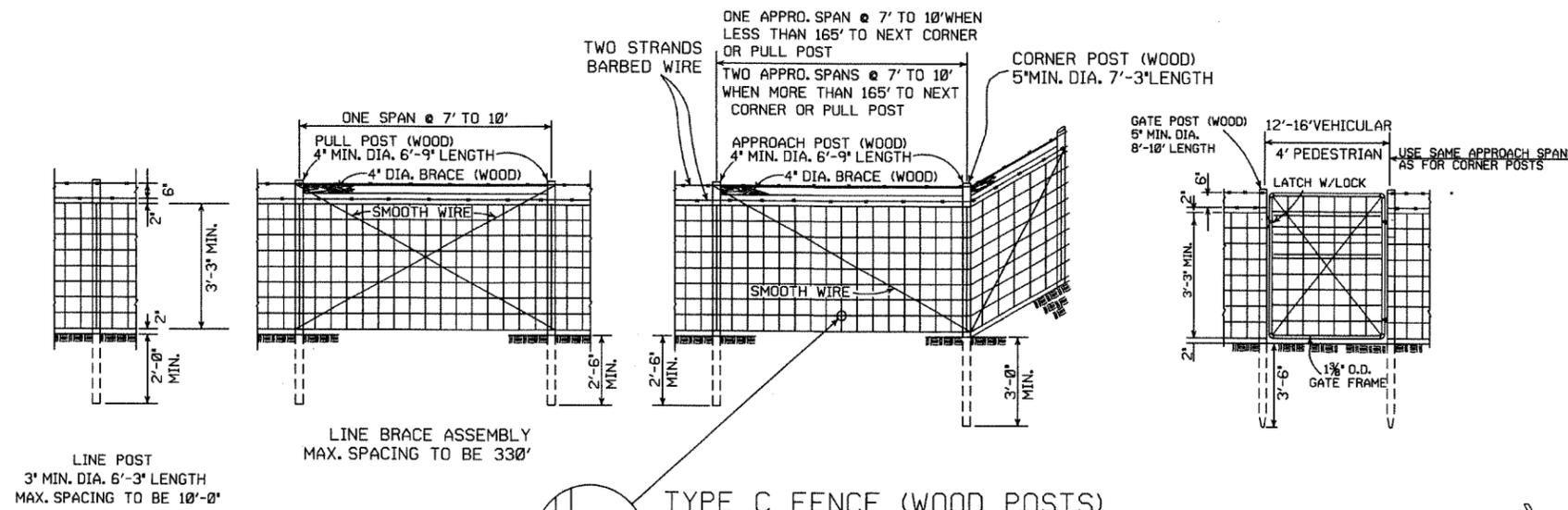
GENERAL NOTE

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

			ARKANSAS STATE HIGHWAY COMMISSION
			TEMPORARY EROSION CONTROL DEVICES
11-03-94	CORRECTED SPELLING		
6-2-94	Drawn & Issued		6-2-94
DATE	REVISION		FILMED
			STANDARD DRAWING TEC-3

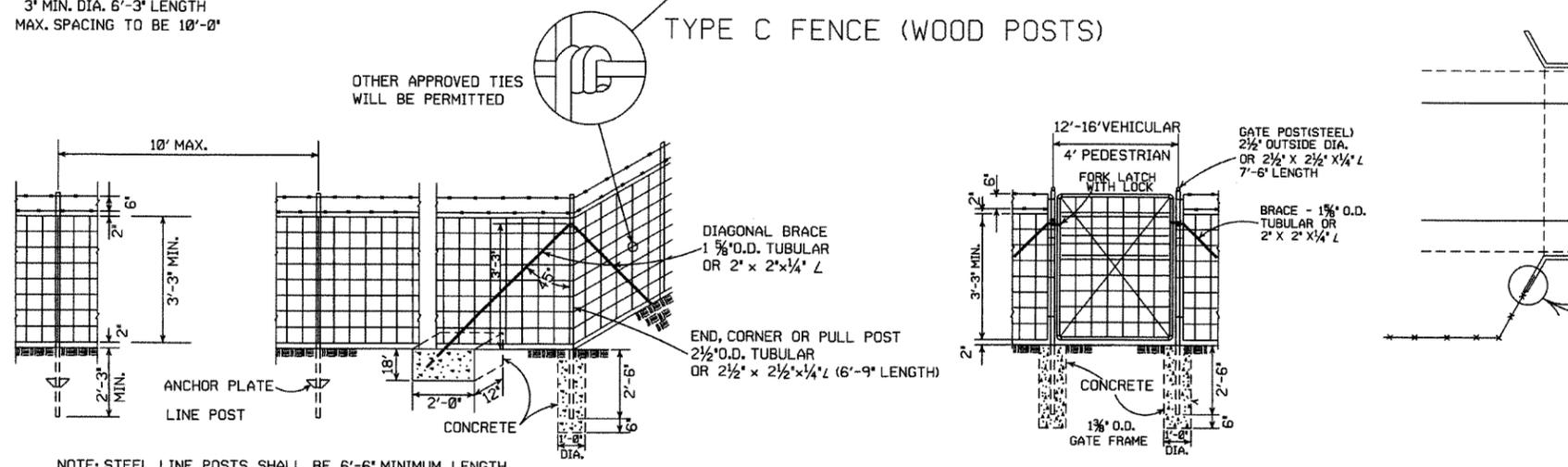


GENERAL NOTES:
 STEEL LINE POSTS SHALL BE PAINTED OR GALVANIZED. TUBULAR END, CORNER, PULL, OR DIAGONAL BRACES MUST CONFORM TO THE DIMENSIONS AND WEIGHTS SPECIFIED ON STANDARD DRAWING WF-3 (CHAIN LINK). APPROVED ALTERNATES ARE ACCEPTABLE.
 AN ACCEPTABLE TOLERANCE IN LENGTH OF TUBULAR OR WOODEN POSTS SHALL BE -1" TO +2". TUBULAR POSTS MUST BE PAINTED OR GALVANIZED.

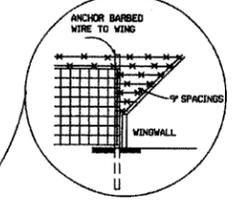
THE CONTRACTOR SHALL FURNISH AT LEAST 25% OF TIMBER LINE POSTS OF 7 FOOT LENGTHS IN ORDER TO PROVIDE SUFFICIENT SET IN SOFT GROUND OR SMALL DEPRESSIONS.

DRIVEWAY GATES, EITHER SINGLE 12' TO 16' OR DOUBLE 6' TO 8' OPENING OF THE SAME TYPE AS THE PEDESTRIAN GATE, SHALL BE INSTALLED ON THE RIGHT SIDE OF EACH THROUGH LANE ROAD AT LARGE CULVERTS OR BRIDGE CROSS FENCE, FOR USE OF MAINTENANCE EQUIPMENT. LOCATION OF GATES TO BE SHOWN ON PLANS OR AS DESIGNATED BY THE ENGINEER.

AT STREAM CROSSINGS, THE FENCE SHALL NOT BE CONSTRUCTED ACROSS LARGE STREAMS. WHERE CLEARANCE IS SUFFICIENT FROM THE TOP OF THE BANK TO THE BRIDGE STRUCTURE A CROSS CONNECTION SHALL BE CONSTRUCTED BETWEEN THE FENCE ON EACH SIDE OF THE ROAD, WHERE THE CLEARANCE IS NOT SUFFICIENT, THE FENCE SHALL BE TERMINATED WITH CROSS CONNECTIONS AND END POSTS ADJACENT TO BRIDGE ABUTMENTS OR CULVERT WINGWALLS.



NOTE: USE 3/8" x 1 1/2" LAG BOLT & SHIELD OR AS APPROVED BY THE ENGINEER.



DETAIL OF FENCE CONSTRUCTION AT LARGE CULVERTS (5' IN HEIGHT AND OVER)

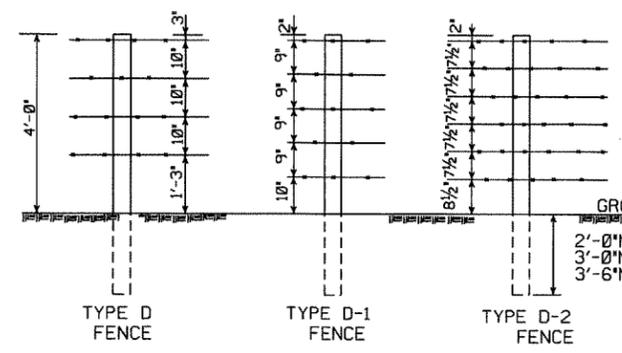
SPLICE FOR BARBED WIRE BETWEEN PULL POST ASSEMBLY SHALL BE BY THE 'EYE METHOD' AS DESCRIBED AS FOLLOWS: THE ENDS OF THE BARBED WIRE SHALL BE BENT TO FORM A LOOP. THE LOOPS SHALL BE CONNECTED. AFTER THE LOOPS ARE CONNECTED THE ENDS OF THE WIRE SHALL BE WRAPPED AROUND THE PROJECTING WIRES A MINIMUM OF 4 TIMES FOR EACH WIRE LOOP.

SPLICE FOR WOVEN WIRE BETWEEN PULL POST SHALL BE BY THE 'WESTERN UNION METHOD' AS DESCRIBED AS FOLLOWS: THE VERTICAL WIRES FOR EACH END OF THE FENCE FABRIC SHALL BE PLACED SIDE BY SIDE AND THE PROJECTING HORIZONTAL WIRES SHALL BE WRAPPED A MINIMUM OF 4 TIMES AROUND THE HORIZONTAL WIRES OF THE FIRST WEB.

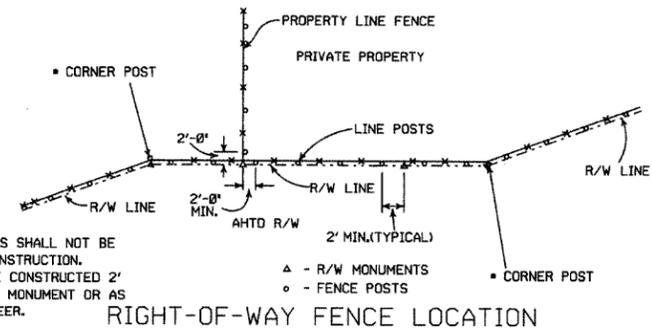
STAPLE AT LEAST TOP, BOTTOM AND ALTERNATE WIRES OF WOVEN FABRIC FOR WOOD LINE POSTS.

TYPE C FENCE (STEEL POSTS)

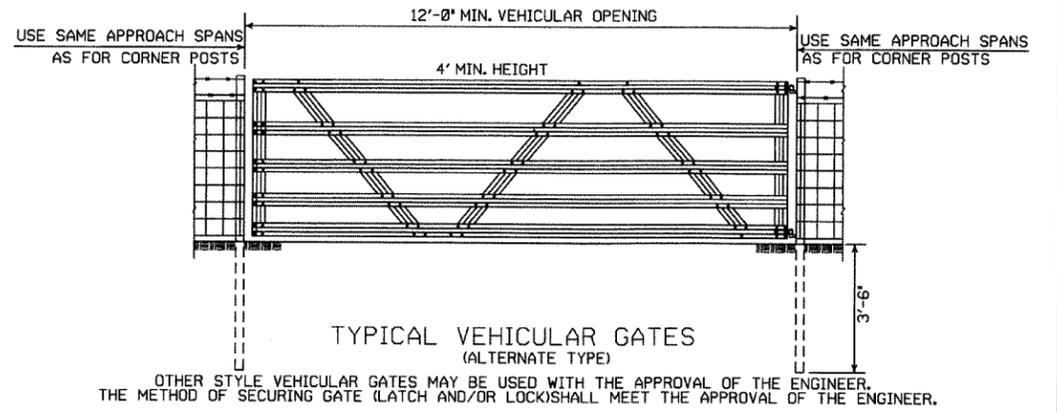
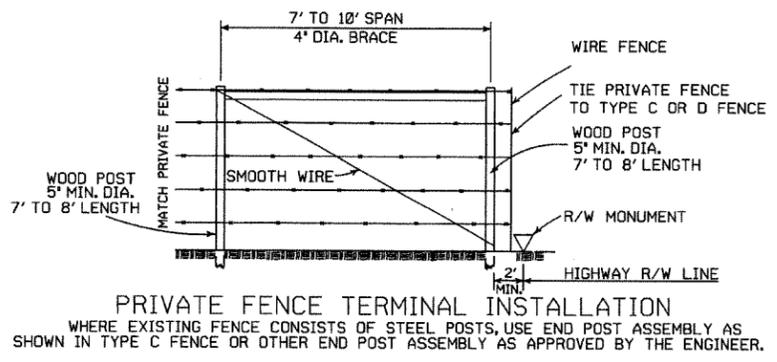
- 4 STRANDS BARBED WIRE (D)
- 5 STRANDS BARBED WIRE (D-1)
- 6 STRANDS BARBED WIRE (D-2)



NOTE: SPACING AND SIZE (EXCEPT LENGTH) OF POSTS, APPROACH SPANS, PULL POST ASSEMBLIES, AND CORNER BRACING FOR TYPE D FENCE SHALL CONFORM TO TYPE C FENCE. USE GALVANIZED STAPLES ON WOOD POSTS AND APPROVED FASTENERS ON STEEL POSTS.



RIGHT-OF-WAY FENCE LOCATION



DATE	REVISION	FILMED
8-22-02	REVISED GENERAL NOTES	
10-18-96	REVISED AASHTO	
11-22-95	REVISED R-O-W LOCATION DETAIL	
6-2-94	REVISED BARB WIRE AND ADDED CORNER POST NOTES	6-2-94
8-5-93	REVISED R/W INSTALLATION FENCE	8-5-93
10-1-92	ADDED STAPLE NOTE	10-1-92
8-15-91	ADDED TYPE D-2 FENCE	8-15-91
11-30-89	DELETED CLASS CONCRETE	11-30-89
7-15-88	ADDED SPLICE NOTE	700-7-15-88
10-30-87	GENERAL REVISIONS	549-10-30-87
11-1-84	MAX. POST SPACING MIN. WIRE GAUGE	507-11-1-84
1-4-83	MIN. DIA. LINE POST	648-1-4-83
3-2-81	TOLERANCE FOR POST LENGTH	722-3-2-81
12-1-72	ADDED D-1 & FENCE INSTALLATION	564-12-1-72
10-2-72	REVISED AND REDRAWN	540-10-2-72

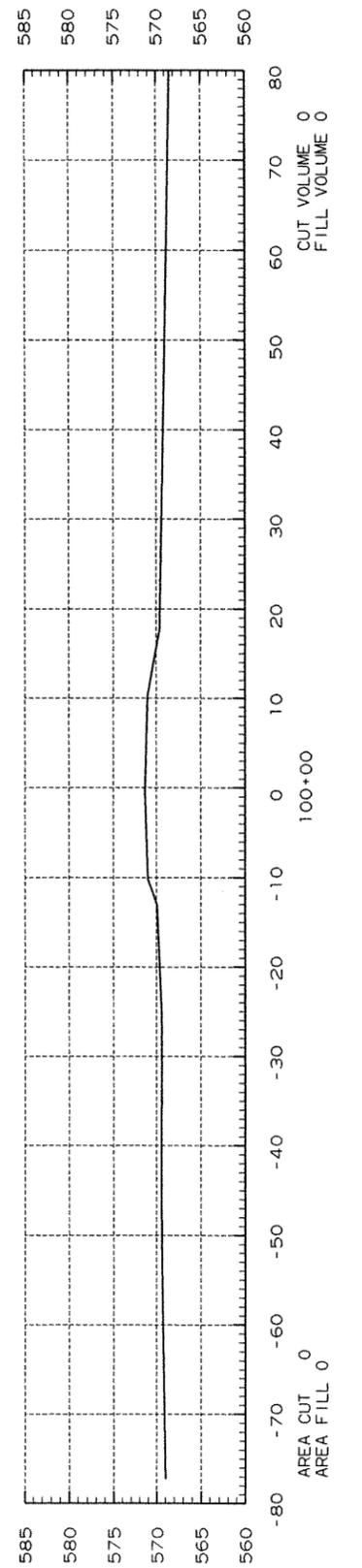
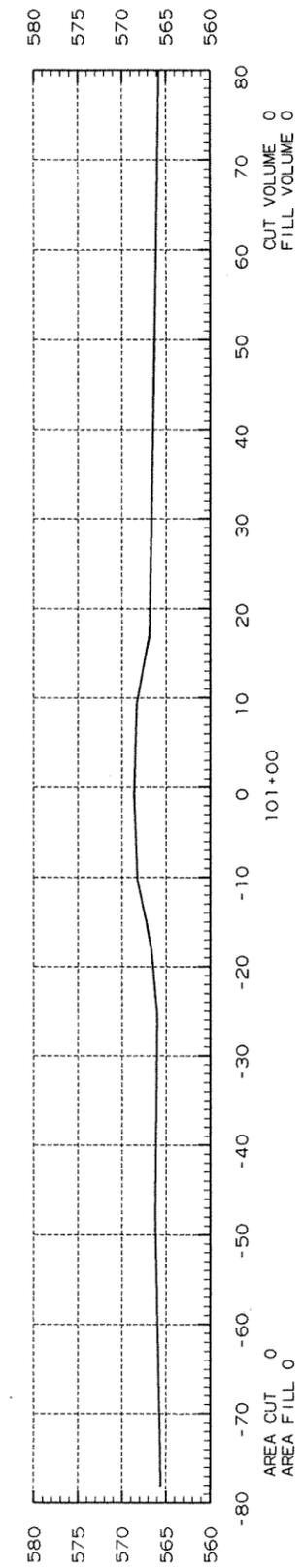
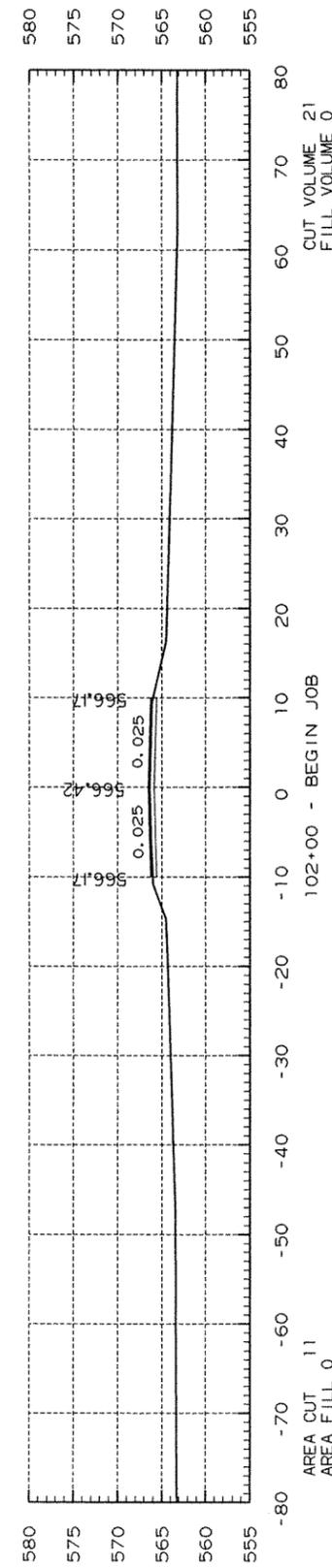
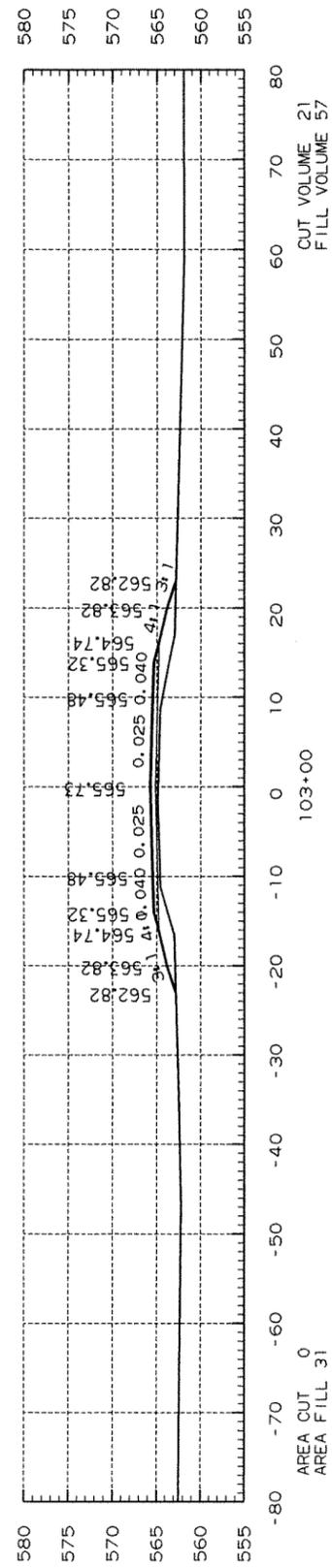
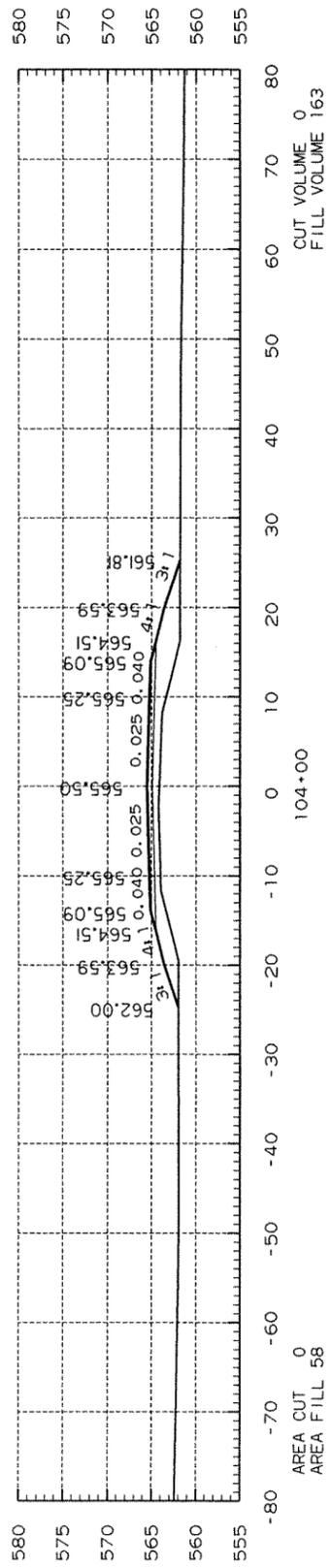
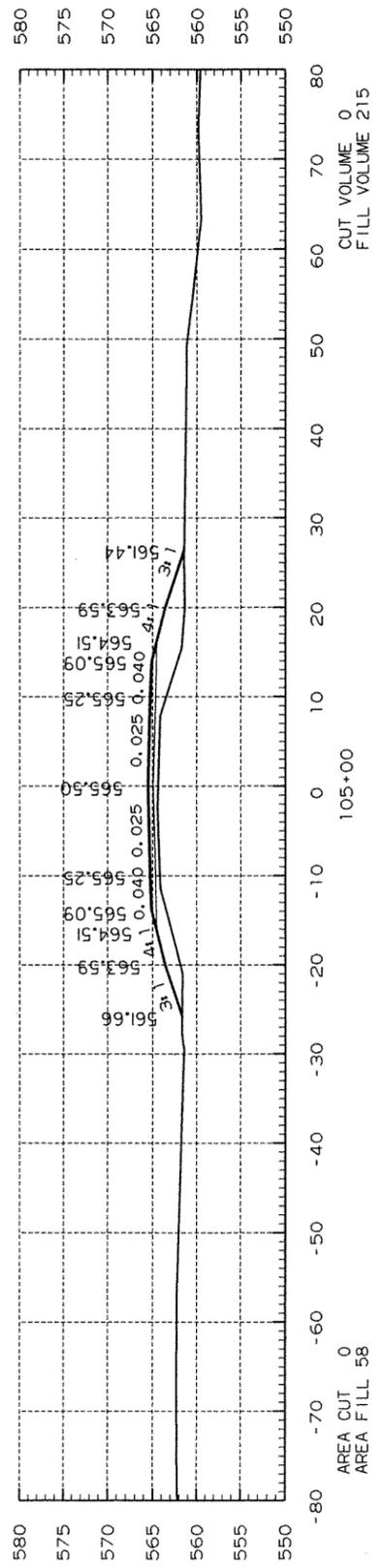
ARKANSAS STATE HIGHWAY COMMISSION

WIRE FENCE
 TYPE C AND D

STANDARD DRAWING WF-4

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.	BR6506		30	31

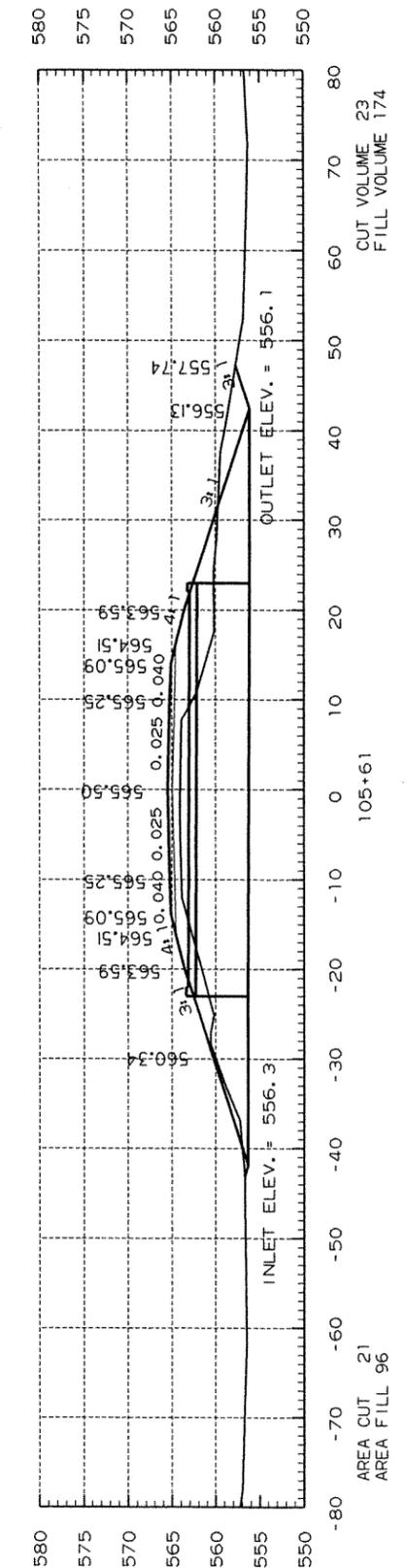
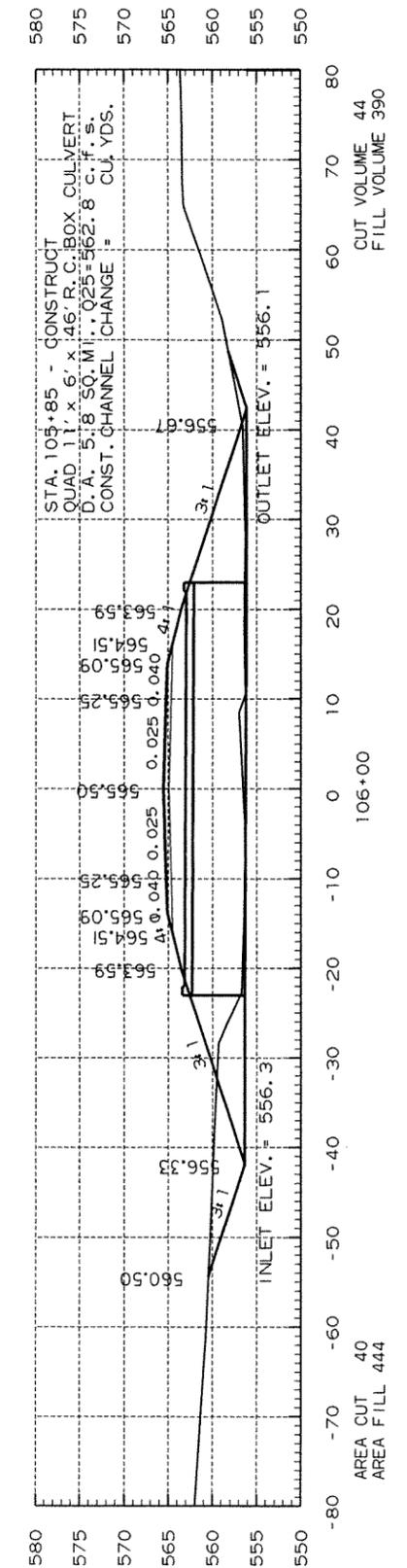
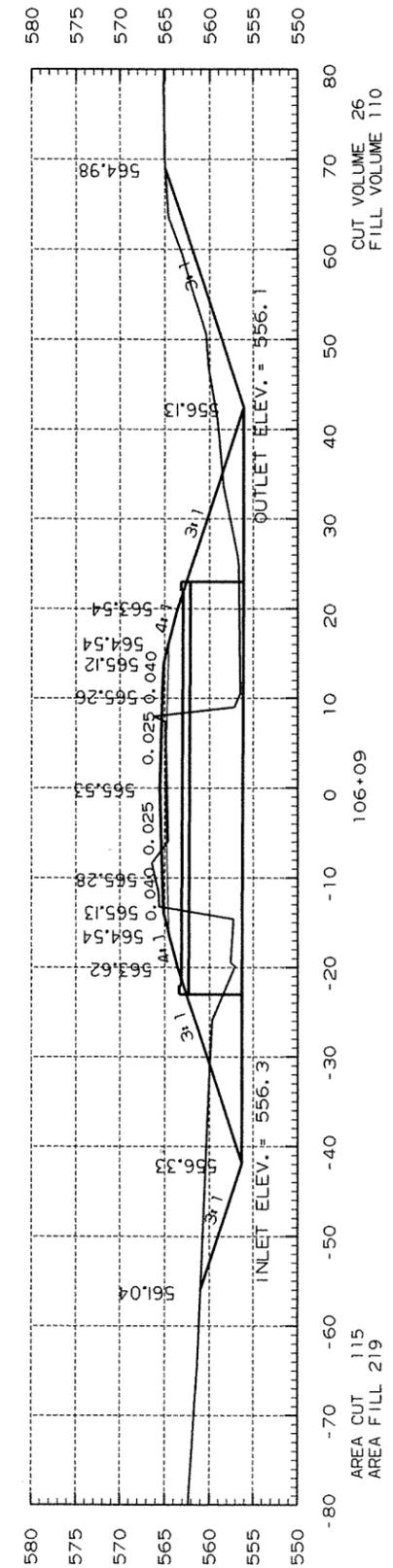
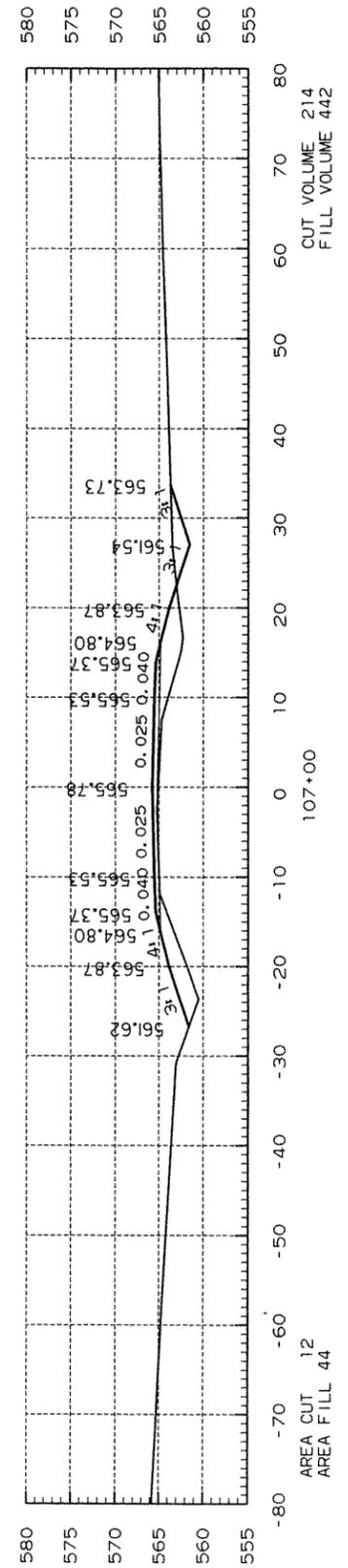
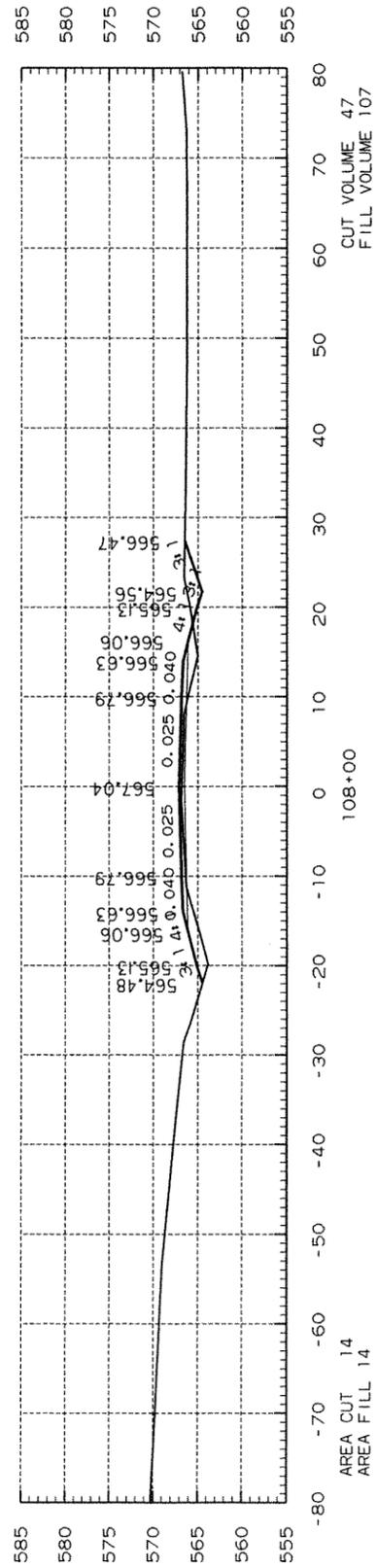
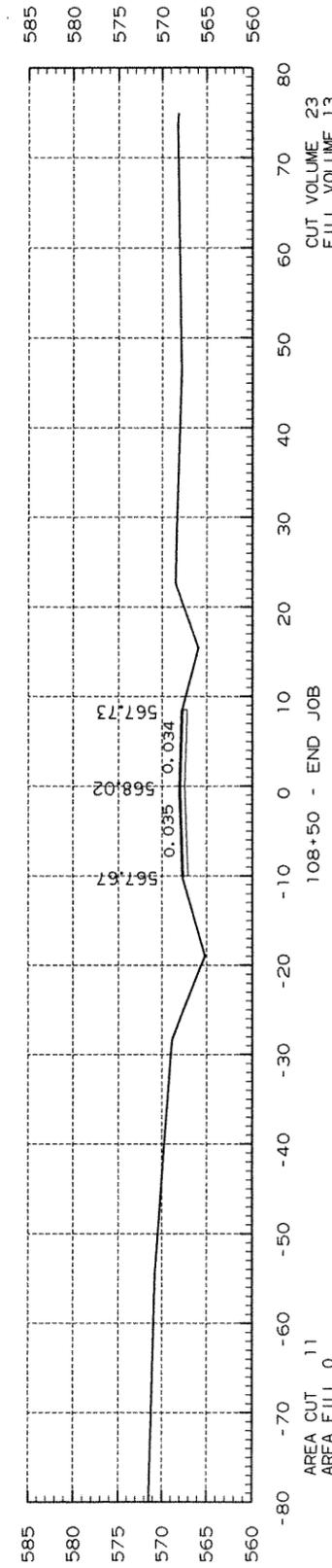
4 STA. 100+00 - STA. 105+00



STA. 100+00 - STA. 105+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	BR6506		31	31

④ STA. 105+61 - STA. 108+50



STA. 105+61 - STA. 108+50