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

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.		BB0102	1	63

(2) BAYOU DEVIEW - BRINKLEY (S)

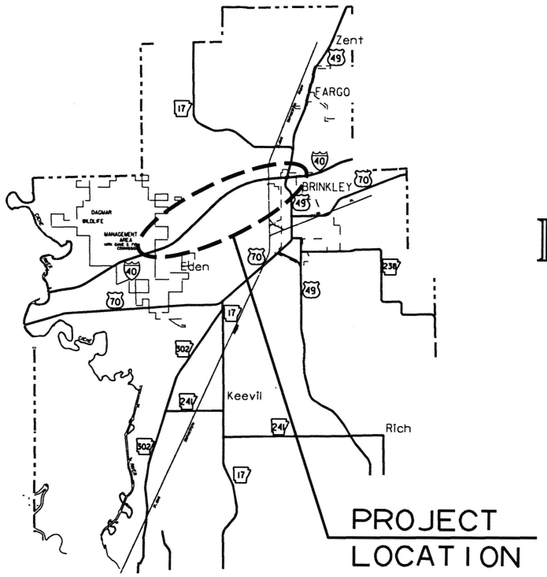
BAYOU DEVIEW - BRINKLEY (S)

MONROE COUNTY

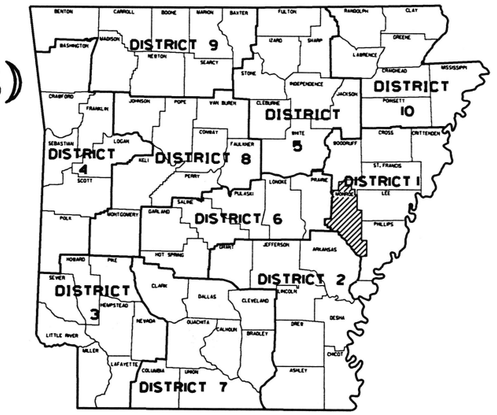
ROUTE 40 SECTION 43

FED. AID PROJ. NHPP-40-4(85)209

JOB BB0102

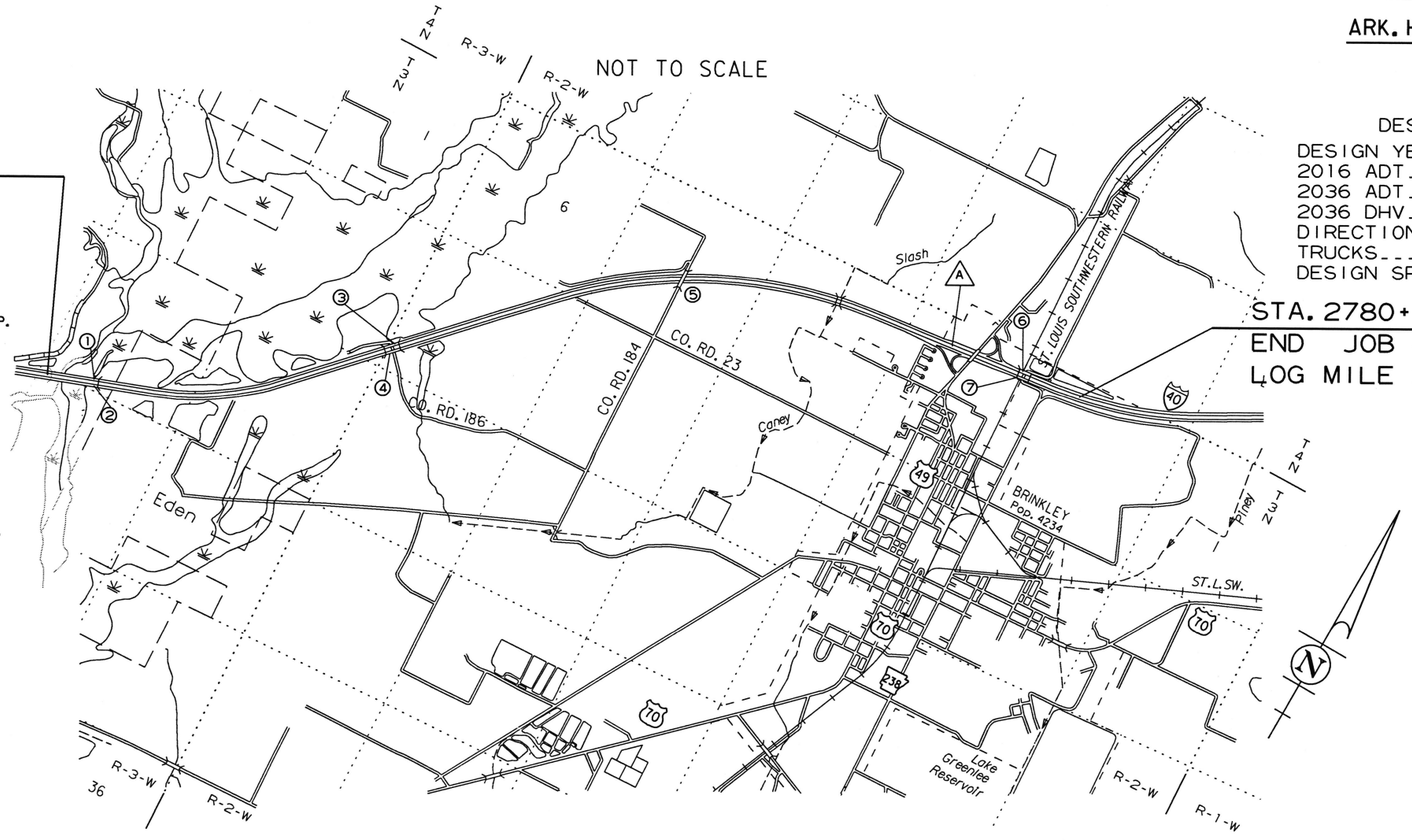


VICINITY MAP



ARK. HWY. DIST. NO. 1

NOT TO SCALE



STA. 2405+03.50
BEGIN JOB BB0102
LOG MILE 209.36

STA. 2780+62.92
END JOB BB0102
LOG MILE 216.18

BRIDGE DATA

(1) STA. 2405+38.90 BR. END A
EXISTING 1322'-2½" COMP.
W-BEAM SPANS BRIDGE 3724A
40'-0" CLEAR ROADWAY
STA. 2418+61.10 BR. END A
PLACE POLYMER OVERLAY

(2) STA. 2405+38.90 BR. END B
EXISTING 1322'-2½" CONT.COMP.
W-BEAM SPANS BRIDGE 3724B
40'-0" CLEAR ROADWAY
STA. 2418+61.10 BR. END B
PLACE POLYMER OVERLAY

(3) STA. 2527+39.92 BR. END A
EXISTING 134'-2" CONT. COMP.
W-BEAM SPANS BRIDGE A3727
40'-0" CLEAR ROADWAY
STA. 2528+74.08 BR. END A
PLACE POLYMER OVERLAY

(4) STA. 2527+39.92 BR. END B
EXISTING 134'-2" CONT.COMP.
W-BEAM SPANS BRIDGE B3727
40'-0" CLEAR ROADWAY
STA. 2528+74.08 BR. END B
PLACE POLYMER OVERLAY

(5) STA. 8+91.73 BR. END
EXISTING 216'-6½" COMP.
I-BEAM SPANS BRIDGE 03729
20'-0" CLEAR ROADWAY
STA. 11+08.27 BR. END
RETAIN

(6) STA. 2774+69.07 BR. END A
EXISTING 260'-2⅜" CONT. COMP
W-BEAM SPANS BRIDGE A3731
40'-0" CLEAR ROADWAY
STA. 2777+29.27 BR. END A
PLACE POLYMER OVERLAY

(7) STA. 2774+64.17 BR. END B
EXISTING 260'-2⅜" CONT. COMP.
W-BEAM SPANS BRIDGE B3731
40'-0" CLEAR ROADWAY
STA. 2777+24.37 BR. END
PLACE POLYMER OVERLAY

C.L. MEDIAN EQUATION

(A) STA. 2732+56.60 BK. =
STA. 2748+39.34 AHD.

DESIGN TRAFFIC DATA

DESIGN YEAR	2036
2016 ADT	31,000
2036 ADT	43,500
2036 DHV	4,785
DIRECTIONAL DISTRIBUTION	0.60
TRUCKS	64%
DESIGN SPEED	70 MPH

APPROVED

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7836
M.E. BANKS

11-3-16

DEPUTY DIRECTOR
AND CHIEF ENGINEER

BEGINNING OF PROJECT	MID POINT OF PROJECT	END OF PROJECT
LATITUDE = N 34°52'08"	LATITUDE = N 34°53'45"	LATITUDE = N 34°54'33"
LONGITUDE = W 91°17'40"	LONGITUDE = W 91°14'43"	LONGITUDE = W 91°11'22"

LENGTH OF PROJECT CALCULATED ALONG C.L.

GROSS LENGTH OF	PROJECT	35976.68	FEET OR	6.814	MILES
NET " "	ROADWAY	34260.12	"	6.489	"
NET " "	BRIDGES	1716.56	"	0.325	"
NET " "	PROJECT	35976.89	"	6.814	"

10/28/16

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
1-9-17				6	ARK.			
2-6-17				JOB NO.		BB0102	2	63

(2) INDEX OF SHEETS, GOV. SPECS., & GEN. NOTES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
2-6-17

INDEX OF SHEETS

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2	INDEX OF SHEETS, GOVERNING SPECIFICATIONS, AND GENERAL NOTES			
3 - 4	TYPICAL SECTIONS OF IMPROVEMENT			
5 - 11	SPECIAL DETAILS			
12	TEMPORARY EROSION CONTROL DETAILS			
13 - 16	MAINTENANCE OF TRAFFIC			
17	PERMANENT PAVEMENT MARKING DETAILS			
18 - 21	QUANTITIES			
22	SUMMARY OF QUANTITIES AND REVISIONS			
23 - 36	PLAN SHEETS			
37	STRUCTURE PLAN & ELEVATION ALT. C BRIDGE OVER BAYOU DEVIEW (SHEET 1 OF 2) (FOR INFORMATION ONLY)	A&B3724	35748	
38	STRUCTURE PLAN & ELEVATION ALT. C BRIDGE OVER BAYOU DEVIEW (SHEET 2 OF 2) (FOR INFORMATION ONLY)	A&B3724	35749	
39	STRUCTURE PLAN AND ELEVATION OVER COUNTY ROAD "T" (FOR INFORMATION ONLY)	A&B3727	37970	
40	LAYOUT OF COUNTY ROAD UNDERPASS AT STA. 2633+90.36 (FOR INFORMATION ONLY)	03729	10594	
41	STRUCTURE PLAN & ELEVATION OVER ST. LOUIS - SOUTHWESTERN RAILROAD (SHEET 1 OF 2) (FOR INFORMATION ONLY)	A3731	37989	
42	STRUCTURE PLAN & ELEVATION OVER ST. LOUIS - SOUTHWESTERN RAILROAD (SHEET 2 OF 2) (FOR INFORMATION ONLY)	B3731	37990	
43	GUARD RAIL DETAILS		GR-8	7-14-10
44	GUARD RAIL DETAILS		GR-8A	7-14-10
45	GUARD RAIL DETAILS		GR-9	4-17-08
46	GUARD RAIL DETAILS		GR-9A	4-17-08
47	GUARD RAIL DETAILS		GR-10	7-14-10
48	GUARD RAIL DETAILS		GR-10A	7-14-10
49	CONCRETE BARRIER WALL (PIER PROTECTION TYPE A)		GR-11	7-14-10
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56	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION		TC-3	9-02-15
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58	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-TEMPORARY PRECAST BARRIER		TC-5	10-15-09
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60	TEMPORARY EROSION CONTROL DEVICES		TEC-2	6-02-94
61	TEMPORARY EROSION CONTROL DEVICES		TEC-3	11-03-94
62	TEMPORARY EROSION CONTROL DEVICES		TEC-4	7-26-12
63	DETAILS OF STANDARD TURNOUT FOR ENTRANCE & EXIT RAMPS (NON-REINFORCED)		TR-1A	8-22-02

GENERAL NOTES

1. ALL PIPE LINES, POWER, TELEPHONE, AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.

2. ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY OF UTILITY SERVICE ORGANIZATIONS SHALL BE MOVED BY THE OWNERS UNLESS OTHERWISE PROVIDED.

3. ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.

4. ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 - UNCLASSIFIED EXCAVATION.

5. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

GOVERNING SPECIFICATIONS

ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014, AND THE FOLLOWING SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS:

NUMBER	TITLE
ERRATA	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273	REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273	SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273	SUPPLEMENT - WAGE RATE DETERMINATION
100-3	CONTRACTOR'S LICENSE
102-2	ISSUANCE OF PROPOSALS
108-1	LIQUIDATED DAMAGES
108-2	WORK ALLOWED PRIOR TO ISSUANCE OF WORK ORDER
303-1	AGGREGATE BASE COURSE
400-1	TACK COATS
410-1	CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
604-1	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
620-1	MULCH COVER
JOB BB0102	ASSESSMENT OF WORKING DAYS - MAINTENANCE OF TRAFFIC
JOB BB0102	BIDDING REQUIREMENTS AND CONDITIONS
JOB BB0102	BRIDGE DECK REPAIR FOR POLYMER OVERLAYS
JOB BB0102	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB BB0102	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB BB0102	CARGO PREFERENCE ACT REQUIREMENTS
JOB BB0102	CONCRETE DITCH PAVING
JOB BB0102	CULVERT REHABILITATION
JOB BB0102	DELAY IN RAILROAD RIGHT OF ENTRY
JOB BB0102	DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES
JOB BB0102	EMPLOYMENT REPORTING
JOB BB0102	ENHANCED THERMOPLASTIC PAVEMENT MARKING
JOB BB0102	FURNISH AND OPERATION OF MOBILE SPEED NOTIFICATION SYSTEM
JOB BB0102	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB BB0102	MAINTENANCE OF TRAFFIC
JOB BB0102	MANDATORY ELECTRONIC CONTRACT
JOB BB0102	MANDATORY ELECTRONIC DOCUMENT SUBMITTAL
JOB BB0102	NESTING SITES OF MIGRATORY BIRDS
JOB BB0102	PARTNERING REQUIREMENTS
JOB BB0102	POLYMER OVERLAY
JOB BB0102	REMOVAL AND DISPOSAL OF WIRE ROPE SAFETY FENCE
JOB BB0102	SEQUENCE OF CONSTRUCTION
JOB BB0102	SITE USE (A+C METHOD) - CALENDAR DAY CONTRACT
JOB BB0102	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB BB0102	TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
JOB BB0102	UNDERDRAIN FLUSHING AND REHABILITATION
JOB BB0102	UTILITY ADJUSTMENTS
JOB BB0102	VALUE ENGINEERING
JOB BB0102	WARM MIX ASPHALT
JOB BB0102	WIRE ROPE SAFETY FENCE END TERMINAL

1/9/17

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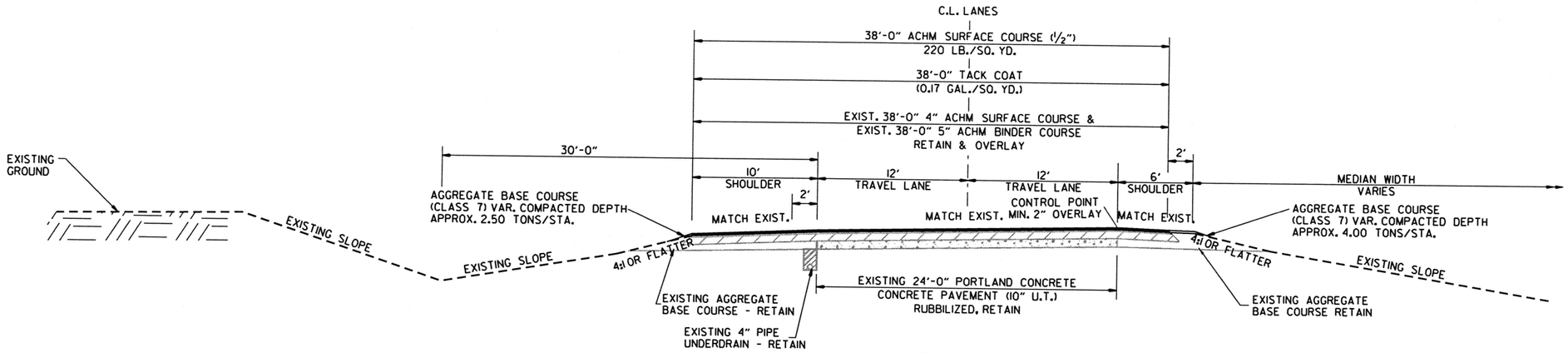
INDEX OF SHEETS, GOVERNING SPECIFICATIONS, & GENERAL NOTES

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.		BB0102	3	63

(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-25-16



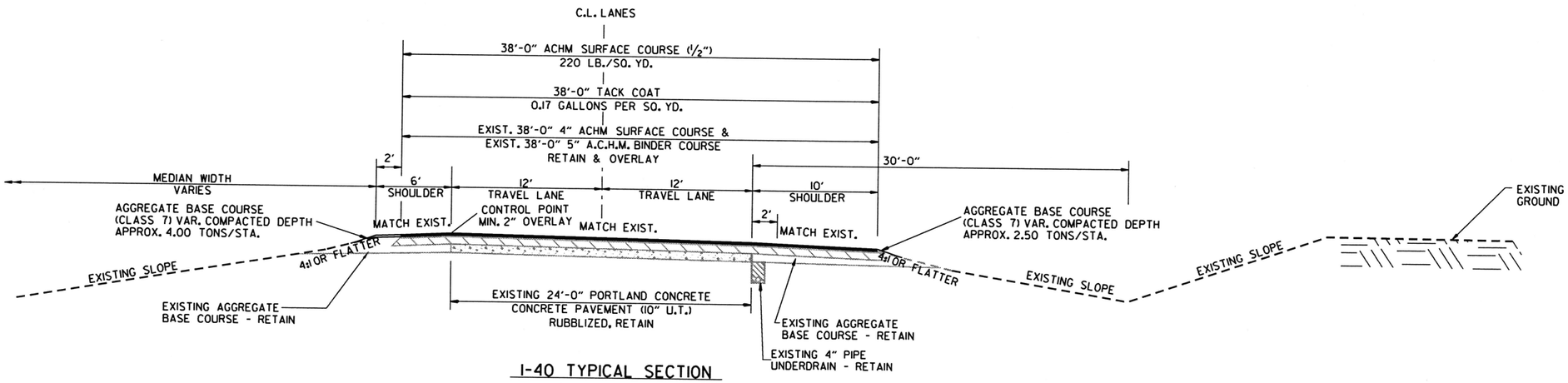
I-40 TYPICAL SECTION

LEFT LANE SHOWN

STA. 2418+96.60 TO STA. 2527+04.42
STA. 2529+09.58 TO STA. 2630+07.57
STA. 2638+07.57 TO STA. 2731+56.60
STA. 2748+39.34 TO STA. 2774+33.57

NOTES:
LONGITUDINAL JOINTS SHALL BE AT LANE LINES.

AGGREGATE BASE COURSE (CLASS 7) SHALL BE UNIFORMLY COMPACTED, STABLE, AND FREE OF SEGREGATED AREAS. THE DENSITY REQUIREMENTS OF SECTION 303 ARE WAVED.



I-40 TYPICAL SECTION

RIGHT LANE SHOWN

STA. 2419+96.60 TO STA. 2527+04.42
STA. 2529+09.58 TO STA. 2732+56.60
STA. 2748+39.34 TO STA. 2774+28.67

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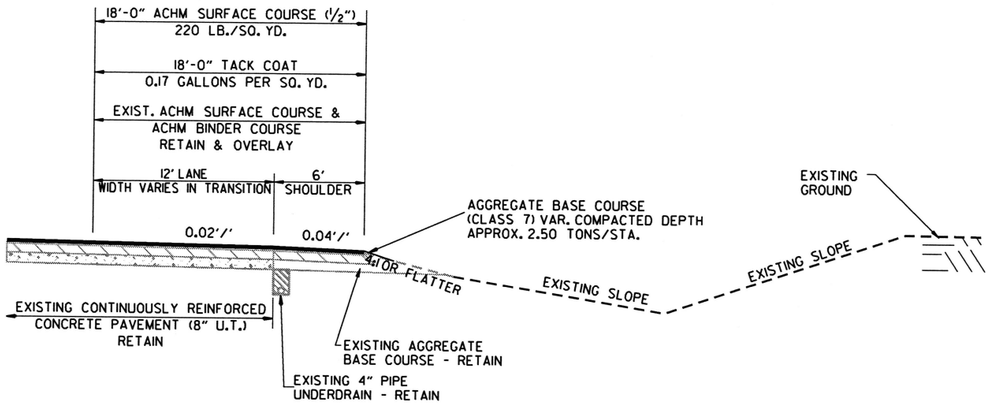
TYPICAL SECTIONS OF IMPROVEMENT

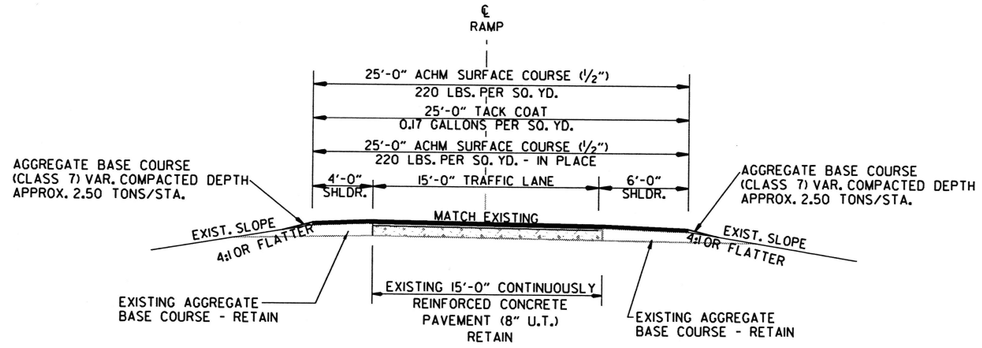
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0102	4	63

(2) TYPICAL SECTIONS OF IMPROVEMENT

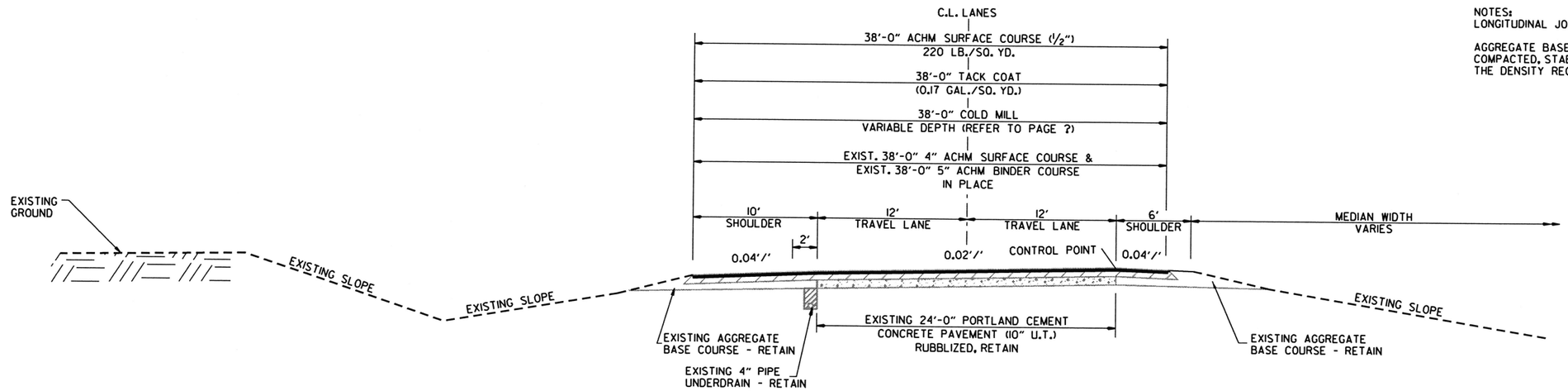
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-25-16



OVERLAY - ACCELERATION/DECELERATION LANES
(SHOWN IN DIRECTION OF TRAFFIC)



TYPICAL RAMP - OVERLAY
(SHOWN IN DIRECTION OF TRAFFIC)



NOTES:
LONGITUDINAL JOINTS SHALL BE AT LANE LINES.

AGGREGATE BASE COURSE (CLASS 7) SHALL BE UNIFORMLY COMPACTED, STABLE, AND FREE OF SEGREGATED AREAS. THE DENSITY REQUIREMENTS OF SECTION 303 ARE WAVED.

I-40 TYPICAL SECTION - MILL & OVERLAY
LEFT LANE SHOWN

STA. 2630+07.57 TO STA. 2638+07.57 LT. LANE

REFER TO PAGE 5 FOR MORE INFORMATION

10/24/16

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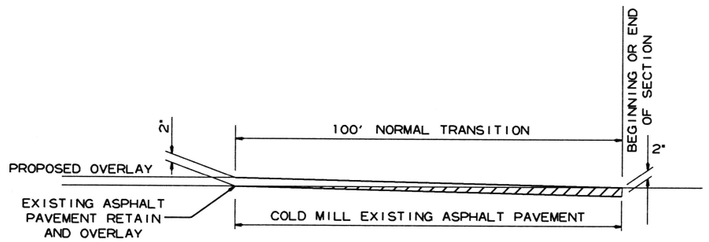
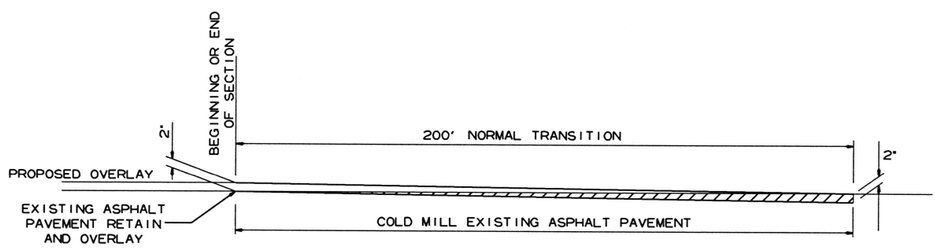
TYPICAL SECTIONS OF IMPROVEMENT

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0102	5	63

(2) SPECIAL DETAILS

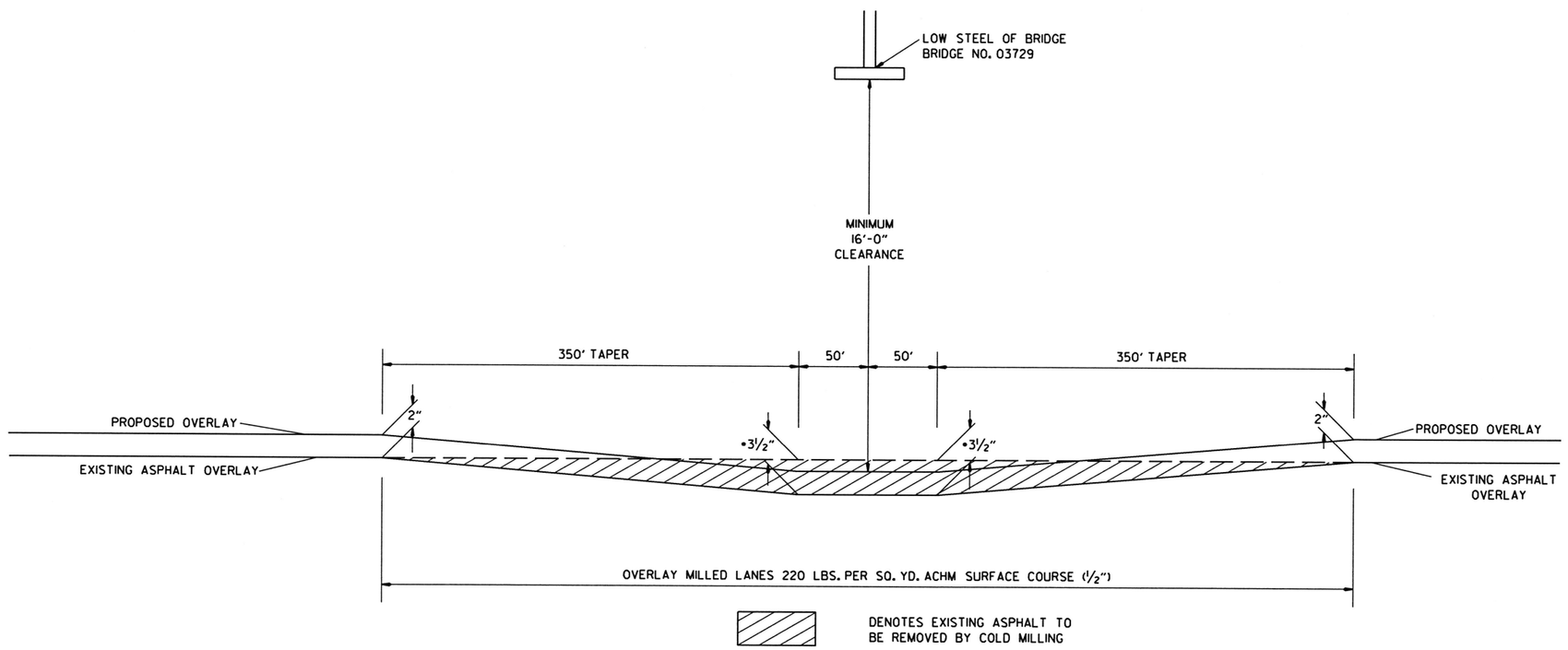


DETAIL FOR TRANSITIONS - RAMPS



DETAIL FOR TRANSITIONS - MAIN LANES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-18-16



• DEPTH SHOWN ESTIMATED. ACTUAL DEPTH TO BE DETERMINED IN THE FIELD. PAYMENT FOR MILLING OF EXISTING CONCRETE PAVEMENT, IF REQUIRED, WILL BE INCLUDED IN THE PRICE BID FOR COLD MILLING ASPHALT PAVEMENT. CONCRETE PAVEMENT SHALL NOT BE MILLED MORE THAN 1" DEEP.

PROFILE
LEFT MAIN LANES AT EDEN RD. (BRIDGE NO. 03729)

10/12/16

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
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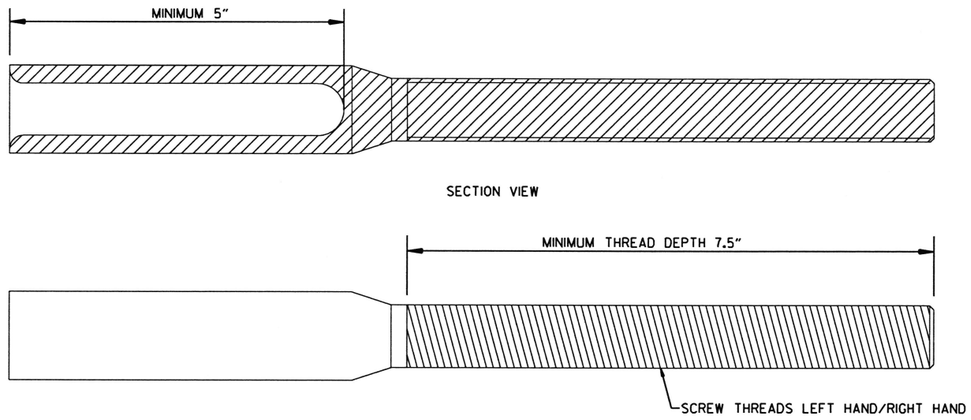
(2) SPECIAL DETAILS

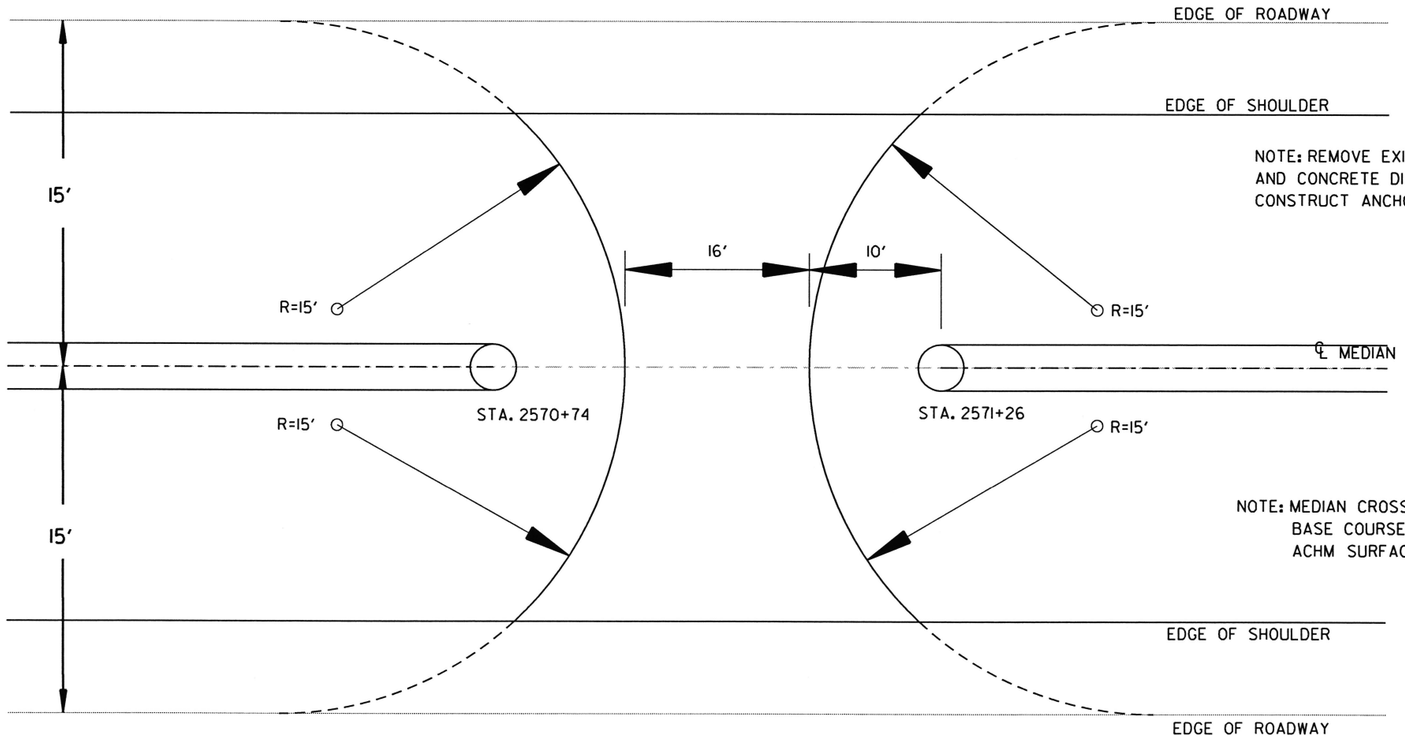
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-18-16



NOTE:

REFER TO "WIRE ROPE SAFETY FENCE (WRSF) SPECIFICATIONS" SPECIAL PROVISION FOR ADDITIONAL REQUIREMENTS.

THREADED TERMINAL DETAIL



NOTE: REMOVE EXISTING WRSF STA. 2570+74 TO STA. 2571+26 AND CONCRETE DITCH PAVING = 62 SQ. YDS.
CONSTRUCT ANCHOR POSTS STA. 2570+74 AND STA. 2571+26.

NOTE: MEDIAN CROSSING TO BE CONSTRUCTED OF AGGREGATE BASE COURSE (CLASS 7)-7" COMPACTED DEPTH & ACHM SURFACE COURSE (1/2") - 220 LBS. PER SQ. YD.

DETAIL OF PROPOSED MEDIAN CROSSING

SPECIAL DETAILS

10/17/16

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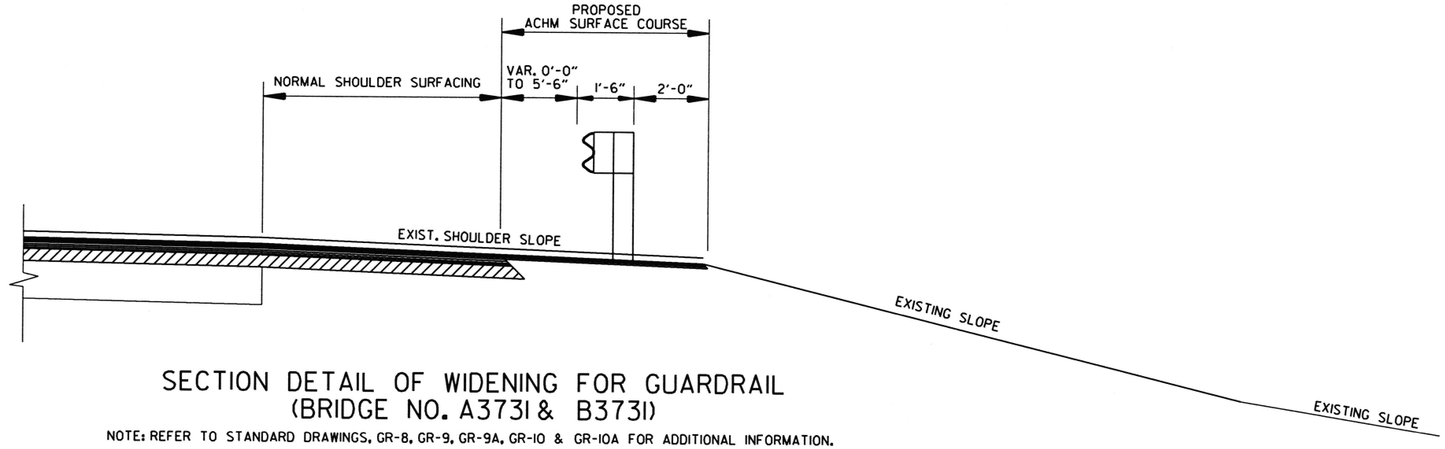
				6	ARK.			
				JOB NO.		BB0102	7	63

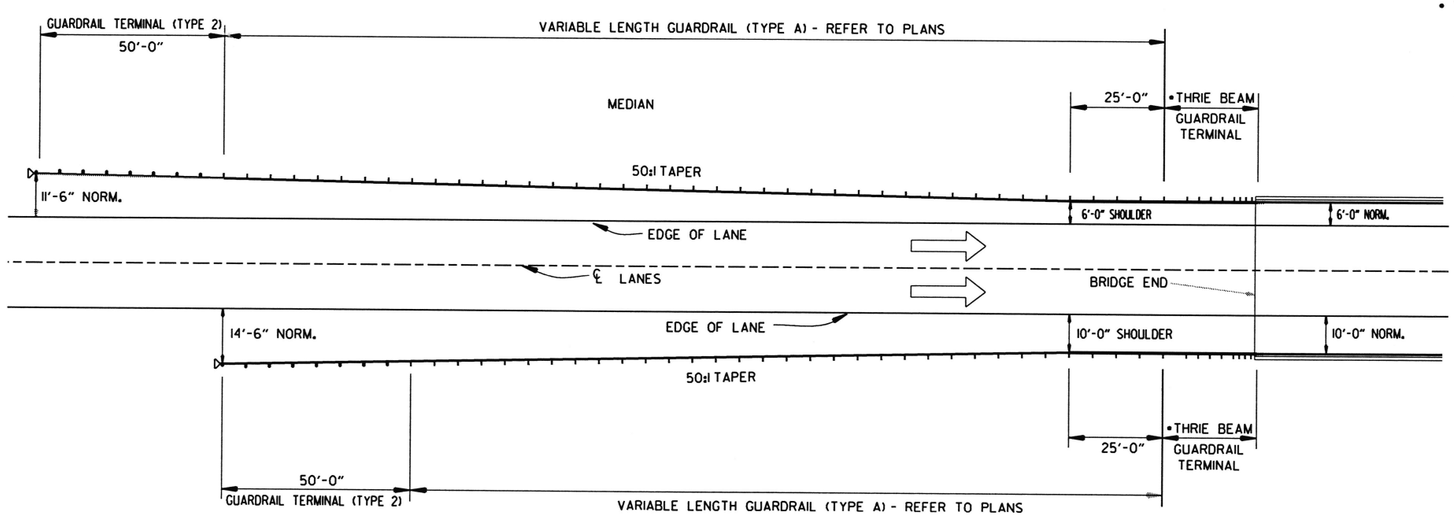
(2) SPECIAL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-18-16



SECTION DETAIL OF WIDENING FOR GUARDRAIL (BRIDGE NO. A3731 & B3731)

NOTE: REFER TO STANDARD DRAWINGS, GR-8, GR-9, GR-9A, GR-10 & GR-10A FOR ADDITIONAL INFORMATION.



- THE CONTRACTOR SHALL DRILL 1" DIA. HOLES FOR THE NEW THRIE BEAM CONNECTION BOLTS IN THE EXISTING TRANSITION RAIL. CARE SHALL BE EXERCISED TO AVOID THE EXISTING REINFORCING STEEL IN THE RAIL. THIS WORK WILL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED INCLUDED IN THE VARIOUS CONTRACT ITEMS. SEE STANDARD DRAWING GR-10 FOR ADDITIONAL DETAILS.

TYPICAL LAYOUT OF GUARDRAIL AT BRIDGE ENDS (BRIDGE NO. A3731 & B3731)

10/12/16

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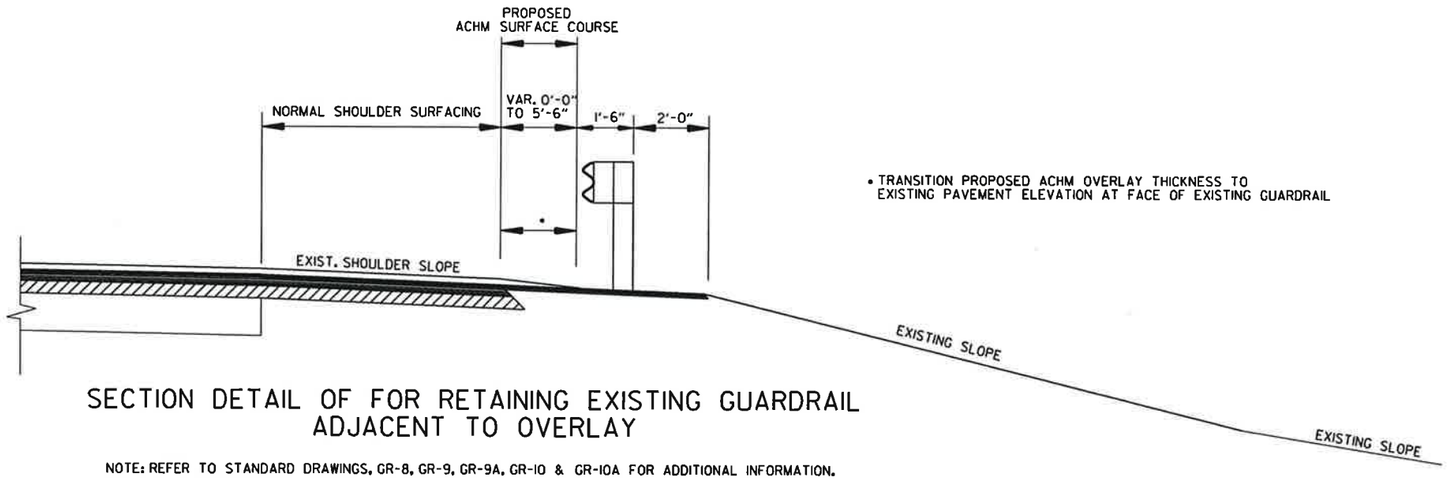
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
2-17-17				6	ARK.			
				JOB NO.		BB0102	7A	63

(2) SPECIAL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
2-17-17



• TRANSITION PROPOSED ACHM OVERLAY THICKNESS TO EXISTING PAVEMENT ELEVATION AT FACE OF EXISTING GUARDRAIL

SECTION DETAIL OF FOR RETAINING EXISTING GUARDRAIL ADJACENT TO OVERLAY

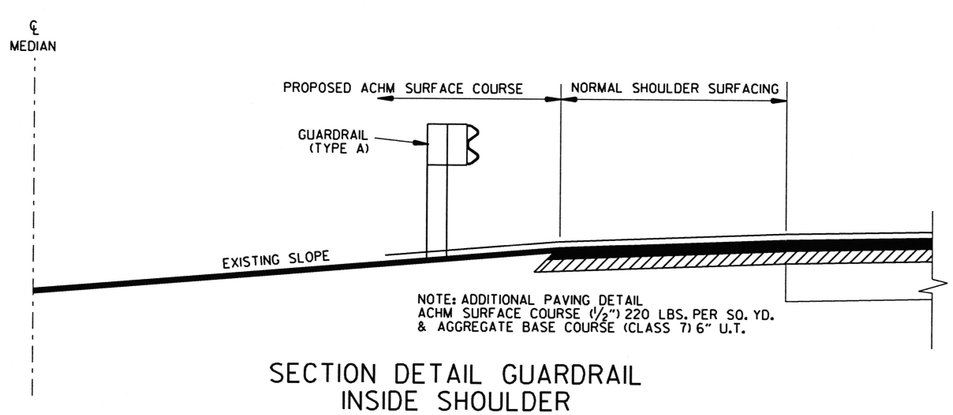
NOTE: REFER TO STANDARD DRAWINGS, GR-8, GR-9, GR-9A, GR-10 & GR-10A FOR ADDITIONAL INFORMATION.

r880102.dgn 10/12/16

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.		BB0102	8	63

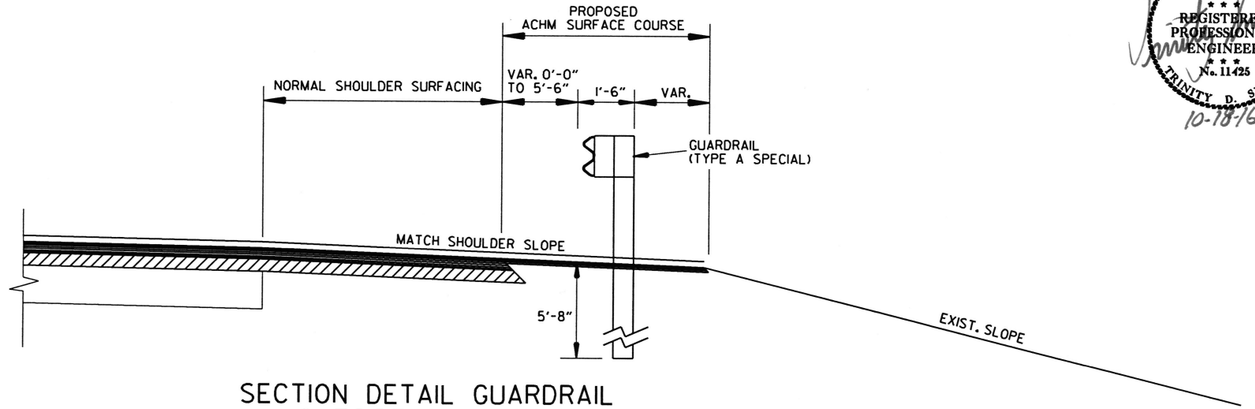
(2) SPECIAL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-18-16



SECTION DETAIL GUARDRAIL INSIDE SHOULDER

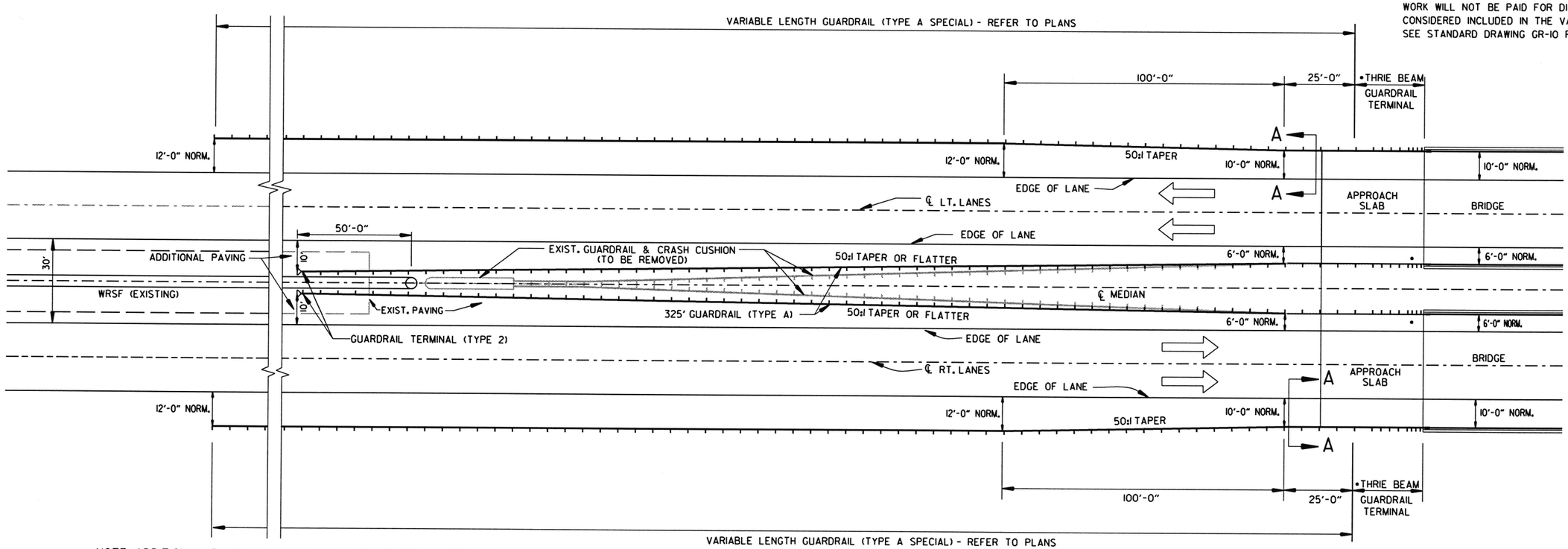
REFER TO STANDARD DRAWINGS GR-8, GR-9, GR-9A, GR-10, GR-10A FOR ADDITIONAL INFORMATION



SECTION DETAIL GUARDRAIL OUTSIDE SHOULDER

REFER TO STANDARD DRAWINGS GR-8, GR-9, GR-9A, GR-10, GR-10A FOR ADDITIONAL INFORMATION

- THE CONTRACTOR SHALL DRILL 1" DIA. HOLES FOR THE NEW THRIE BEAM CONNECTION BOLTS IN THE EXISTING TRANSITION RAIL. CARE SHALL BE EXERCISED TO AVOID THE EXISTING REINFORCING STEEL IN THE RAIL. THIS WORK WILL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED INCLUDED IN THE VARIOUS CONTRACT ITEMS. SEE STANDARD DRAWING GR-10 FOR ADDITIONAL DETAILS.



NOTE: ADDITIONAL PAVING TO BE CONSTRUCTED OF AGGREGATE BASE COURSE (CLASS 7)-7" COMPACTED DEPTH & ACHM SURFACE COURSE (½") - 220 LBS. PER SQ. YD.

TYPICAL LAYOUT OF GUARDRAIL AT BRIDGE ENDS (BRIDGE NOS. 3724A, 3724B, A3727 & B3727)

NOTE: REFER TO STANDARD DRAWINGS GR-8, GR-9, GR-9A, GR-10, & GR-10A FOR ADDITIONAL INFORMATION.

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
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(2) SPECIAL DETAILS

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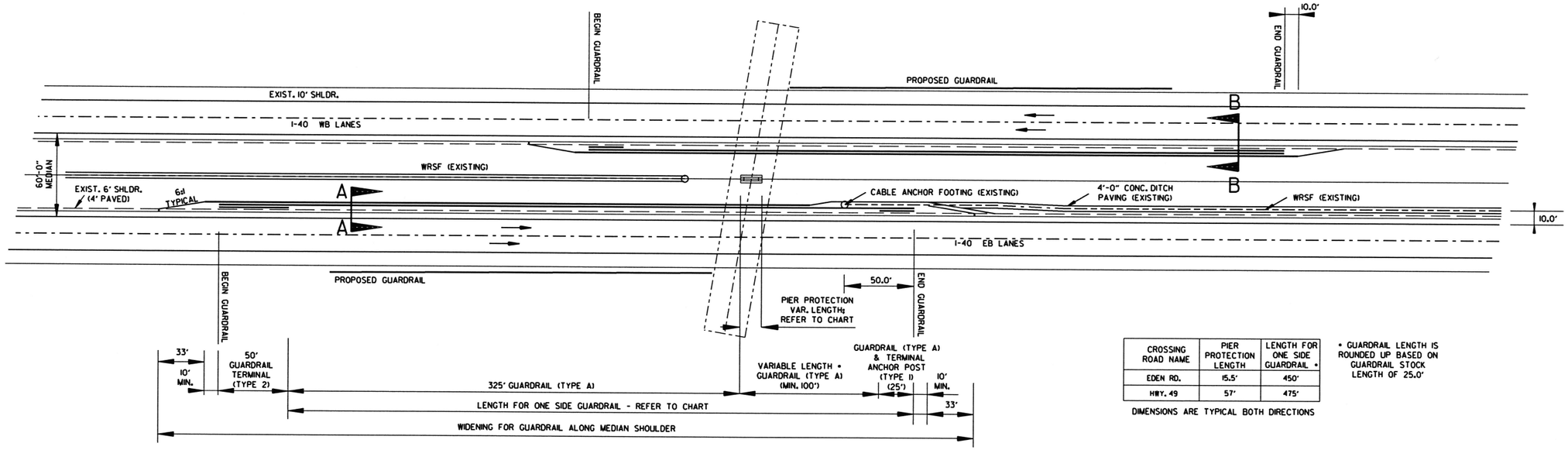
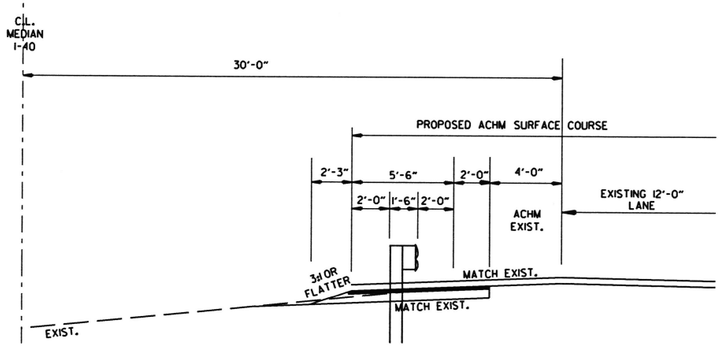


CROSSING ROAD NAME	PIER PROTECTION LENGTH	LENGTH FOR ONE SIDE GUARDRAIL *
EDEN RD.	15.5'	450'
HWY. 49	57'	475'

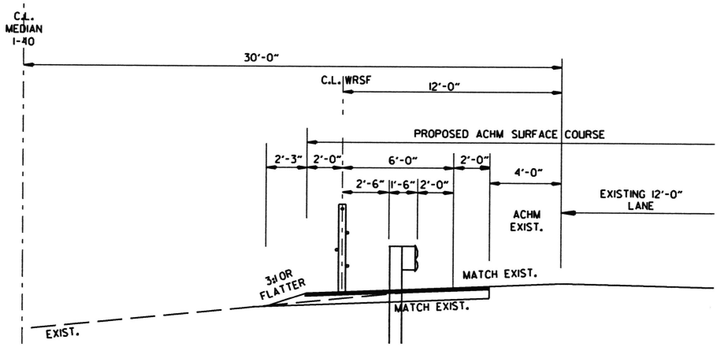
DIMENSIONS ARE TYPICAL BOTH DIRECTIONS

* GUARDRAIL LENGTH IS ROUNDED UP BASED ON GUARDRAIL STOCK LENGTH OF 25.0'

DETAIL AT OVERPASSES



SECTION A-A



SECTION B-B

10/17/16

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SPECIAL DETAILS

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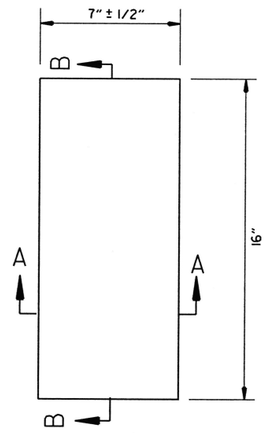
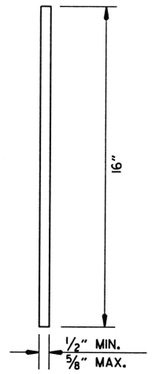
				6	ARK.			
				JOB NO.		BB0102	10	63

(2) SPECIAL DETAILS

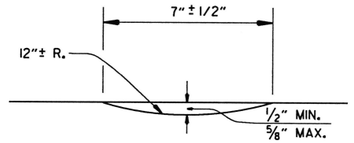




PLAN

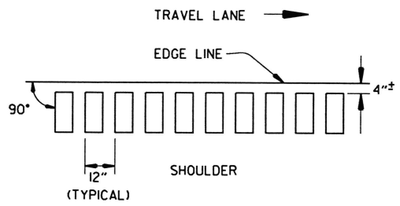


SECTION B-B

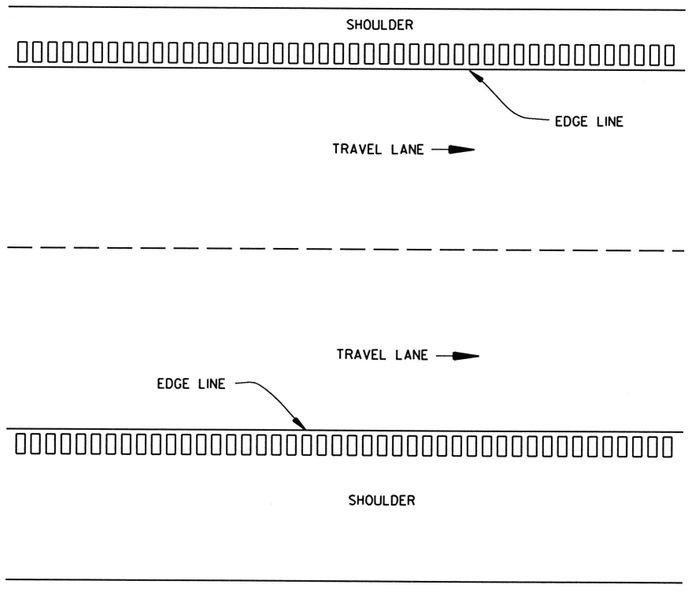


SECTION A-A

DETAILS OF RUMBLE STRIPS



LOCATION PLAN OF RUMBLE STRIPS
LEFT OR RIGHT SHOULDER



PLAN VIEW

NOTES:

1. ALIGNMENT OF RUMBLE STRIPS SHALL GENERALLY BE STRAIGHT AND OFFSET APPROXIMATELY 4" FROM THE OUTER EDGE OF THE EDGE LINE. THIS OFFSET MAY BE ADJUSTED TO ACCOMMODATE VARIATIONS IN THE EDGE LINE.
2. THE 1/2" DEPTH SHALL GENERALLY APPLY FOR THE ENTIRE 16" LENGTH. SOME VARIATION TO SUIT SHOULDER SLOPE BREAKS MAY BE NECESSARY.
3. RUMBLE STRIPS SHALL NOT BE INSTALLED ON BRIDGE DECKS, APPROACH SLABS, OR ACROSS TRANSVERSE JOINTS OF CONCRETE SHOULDERS.

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SPECIAL DETAILS

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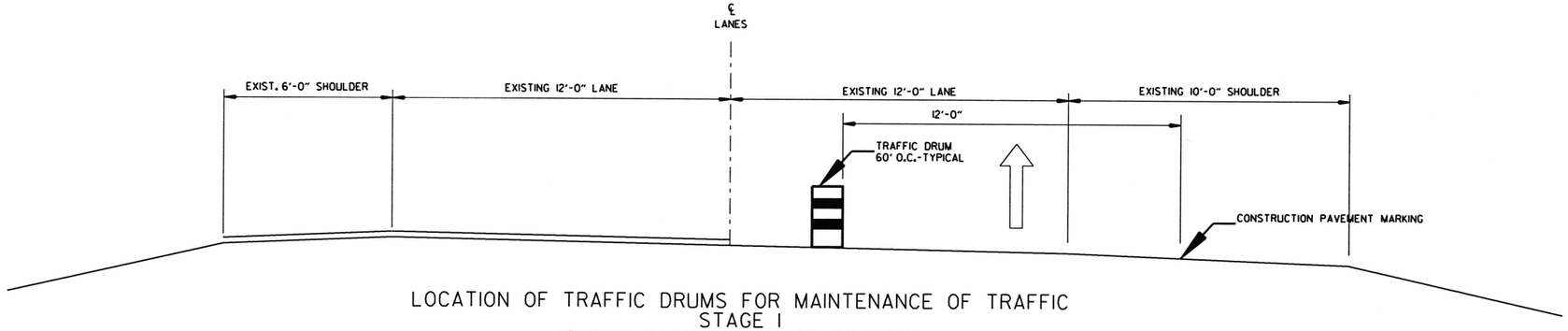
				6	ARK.			
				JOB NO.		BB0102	11	63

(2) SPECIAL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-18-16



LOCATION OF TRAFFIC DRUMS FOR MAINTENANCE OF TRAFFIC
STAGE 1
(SHOWN IN DIRECTION OF TRAFFIC)

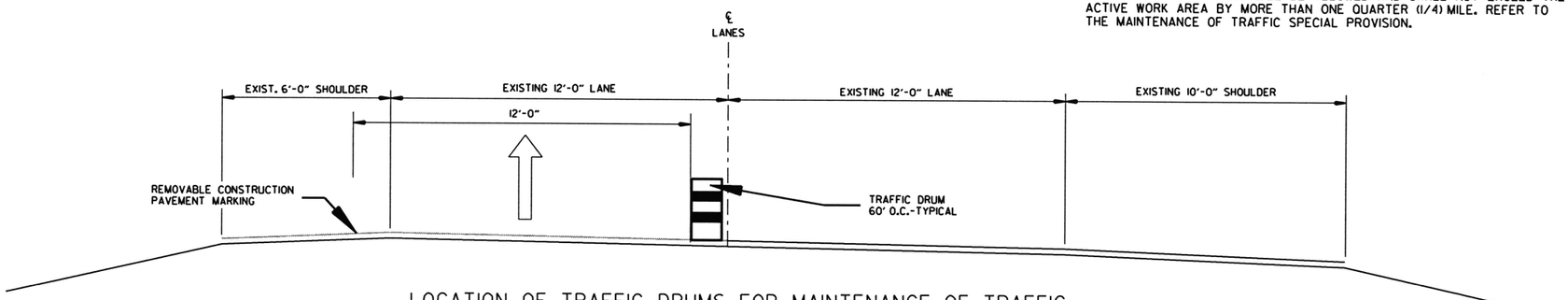
SEQUENCE OF CONSTRUCTION

STAGE 1- OVERLAY OR MILL & ACHM INLAY INSIDE LANE AND SHOULDER AND INSTALL GUARDRAIL.
STAGE 2 - OVERLAY OR MILL & ACHM INLAY OUTSIDE LANE, SHOULDER, AND RAMPS AND INSTALL GUARDRAIL.
STAGE 3 - CONSTRUCT MEDIAN CROSSING AND WRSF AND INSTALL RUMBLE STRIPS.

NOTE: STAGE 3 ITEMS CAN BE CONSTRUCTED IN OTHER STAGES AS DIRECTED BY THE ENGINEER.

OVERLAY OR MILL & ACHM INLAY OPERATIONS SHALL UTILIZE A SINGLE FOUR (4) MILE LANE CLOSURE. NO LANE CLOSURE MAY EXCEED THE ACTIVE WORK AREA BY MORE THAN ONE QUARTER (1/4) MILE.
REFER TO THE MAINTENANCE OF TRAFFIC SPECIAL PROVISION.

FOR BRIDGE DECK REHABILITATION A SINGLE LANE CLOSURE OF NO MORE THAN TWO (2) MILES WILL BE PERMITTED. BRIDGE DECK REHABILITATION OPERATIONS MAY BEGIN WHEN OVERLAY OR MILL & INLAY OPERATIONS FOR A SET OF LANES HAS BEEN COMPLETED. ONLY ONE LANE CLOSURE PER SET OF MAIN LANES WILL BE ALLOWED AND SHALL NOT EXCEED THE ACTIVE WORK AREA BY MORE THAN ONE QUARTER (1/4) MILE. REFER TO THE MAINTENANCE OF TRAFFIC SPECIAL PROVISION.



LOCATION OF TRAFFIC DRUMS FOR MAINTENANCE OF TRAFFIC
STAGE 2
(SHOWN IN DIRECTION OF TRAFFIC)

10/12/16

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

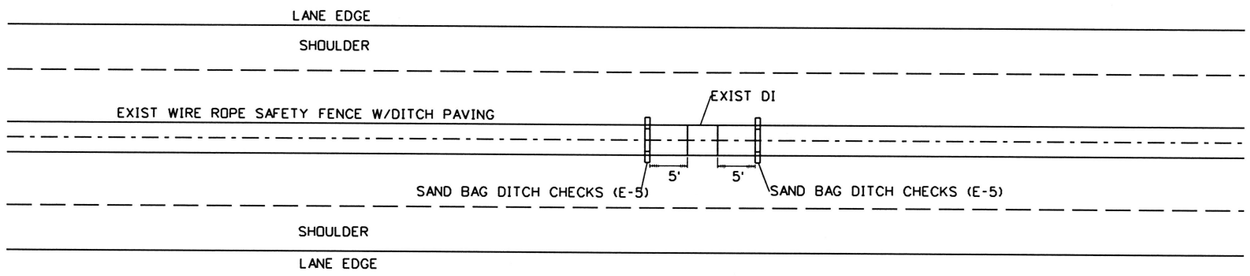
FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0102	12	63

(2) TEMPARARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-18-16

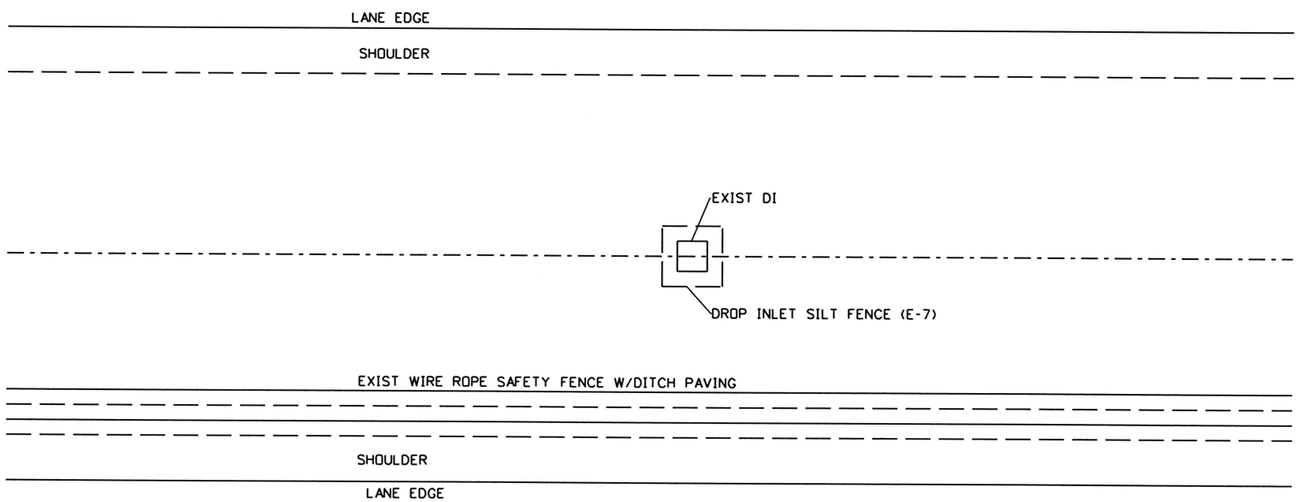
REVISIONS

DATE OF REVISION	REVISION



SAND BAG DITCH CHECKS (E-5)
TOTALS JOB BB0102
35 DROP INLETS
70 LOCATIONS
1540 BAGS TOTAL

CABLE MEDIAN BARRIER IN CENTER OF MEDIAN
WITH SAND BAG DITCH CHECKS



DROP INLET SILT FENCE (E-7)
TOTALS JOB BB0102
19 LOCATIONS
456 LIN. FT.

CABLE MEDIAN BARRIER ON SIDE OF MEDIAN
WITH DROP INLET SILT FENCE

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ALL STAGES
TEMPORARY EROSION CONTROL DETAILS

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				6	ARK.			
				JOB NO.		BB0102	13	63

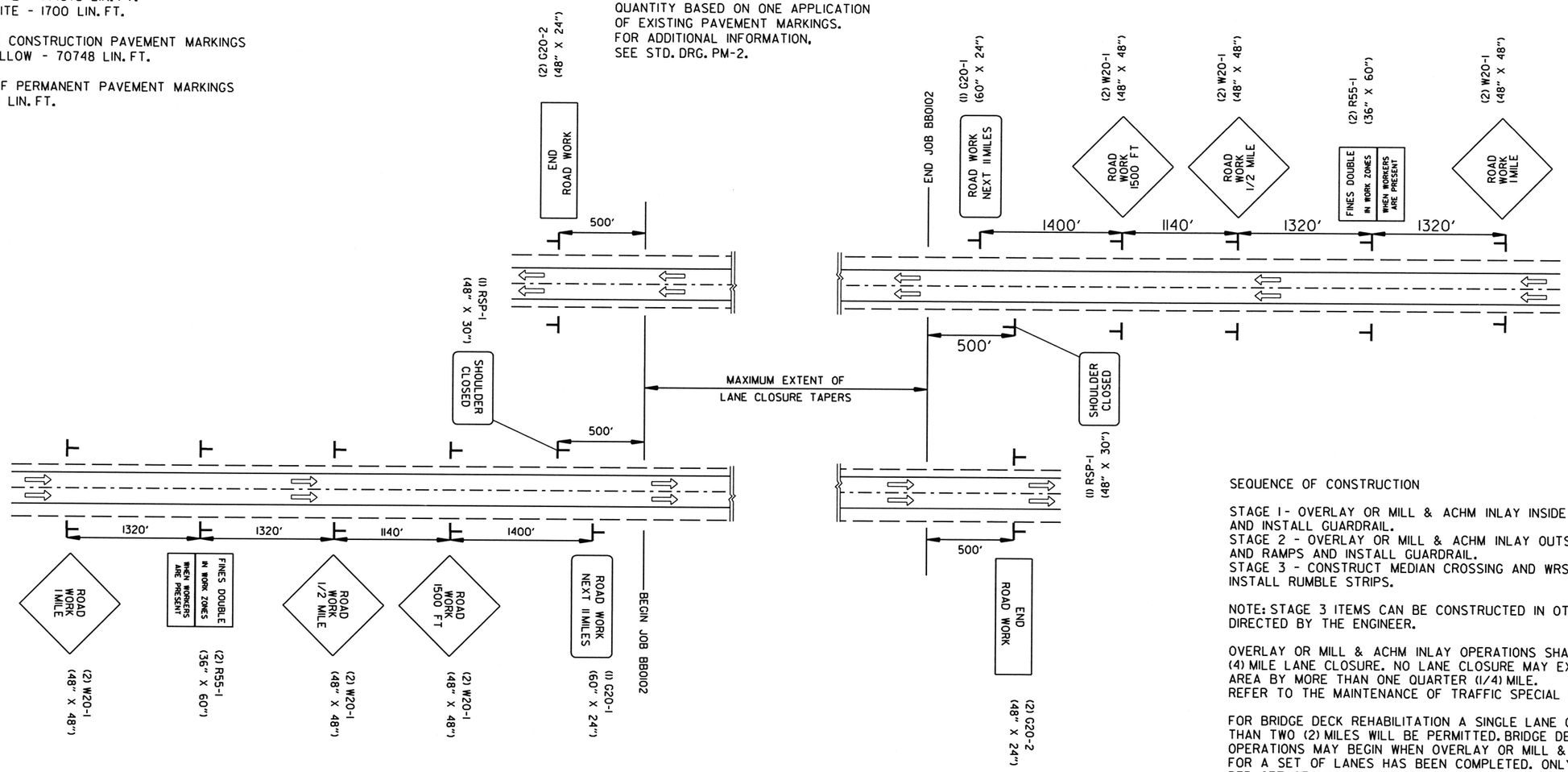
(2) MAINTENANCE OF TRAFFIC

CONSTRUCTION PAVEMENT MARKINGS:
APPLY CONSTRUCTION PAVEMENT MARKINGS
ACCORDING TO STD. DWG. PM-2
- 4" YELLOW - 73545 LIN. FT.
- 4" (SKIP LINE) WHITE - 17700 LIN. FT.
- 4" WHITE - 144973 LIN. FT.
- 8" WHITE - 1700 LIN. FT.

REMOVABLE CONSTRUCTION PAVEMENT MARKINGS
- 4" YELLOW - 70748 LIN. FT.

REMOVAL OF PERMANENT PAVEMENT MARKINGS
- 70748 LIN. FT.

NOTE:
CONSTRUCTION PAVEMENT MARKINGS QUANTITY BASED ON ONE APPLICATION OF EXISTING PAVEMENT MARKINGS.
FOR ADDITIONAL INFORMATION, SEE STD. DRG. PM-2.



SEQUENCE OF CONSTRUCTION

STAGE 1- OVERLAY OR MILL & ACHM INLAY INSIDE LANE AND SHOULDER AND INSTALL GUARDRAIL.
STAGE 2 - OVERLAY OR MILL & ACHM INLAY OUTSIDE LANE, SHOULDER, AND RAMPS AND INSTALL GUARDRAIL.
STAGE 3 - CONSTRUCT MEDIAN CROSSING AND WRSF AND INSTALL RUMBLE STRIPS.

NOTE: STAGE 3 ITEMS CAN BE CONSTRUCTED IN OTHER STAGES AS DIRECTED BY THE ENGINEER.

OVERLAY OR MILL & ACHM INLAY OPERATIONS SHALL UTILIZE A SINGLE FOUR (4) MILE LANE CLOSURE. NO LANE CLOSURE MAY EXCEED THE ACTIVE WORK AREA BY MORE THAN ONE QUARTER (1/4) MILE.
REFER TO THE MAINTENANCE OF TRAFFIC SPECIAL PROVISION.

FOR BRIDGE DECK REHABILITATION A SINGLE LANE CLOSURE OF NO MORE THAN TWO (2) MILES WILL BE PERMITTED. BRIDGE DECK REHABILITATION OPERATIONS MAY BEGIN WHEN OVERLAY OR MILL & INLAY OPERATIONS FOR A SET OF LANES HAS BEEN COMPLETED. ONLY ONE LANE CLOSURE PER SET OF MAIN LANES WILL BE ALLOWED AND SHALL NOT EXCEED THE ACTIVE WORK AREA BY MORE THAN ONE QUARTER (1/4) MILE. REFER TO THE MAINTENANCE OF TRAFFIC SPECIAL PROVISION.

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MAINTENANCE OF TRAFFIC ADVANCE SIGNS AT JOB ENDS

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				6	ARK.			
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(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
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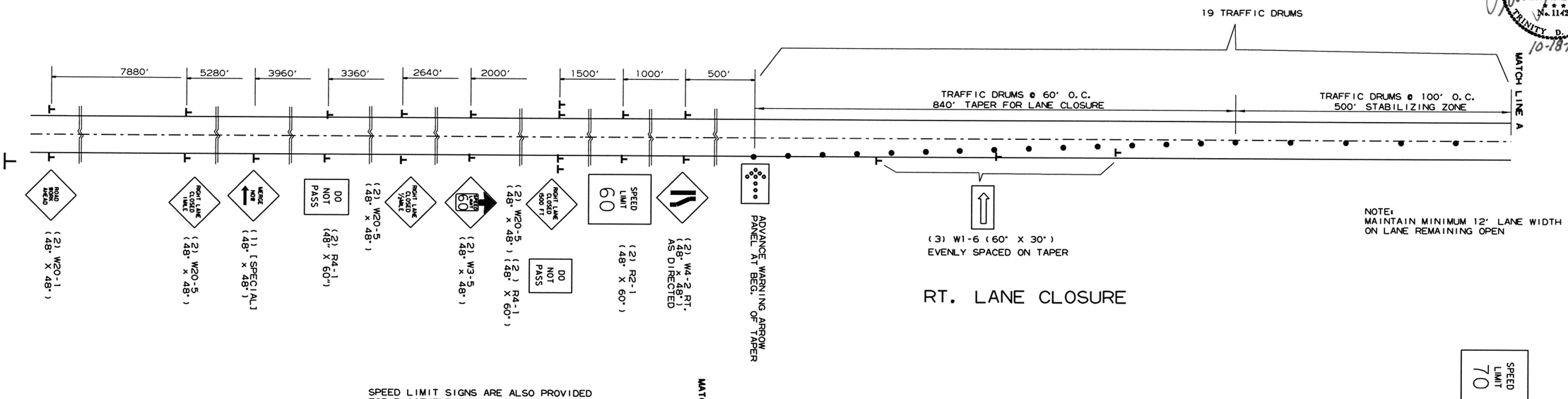
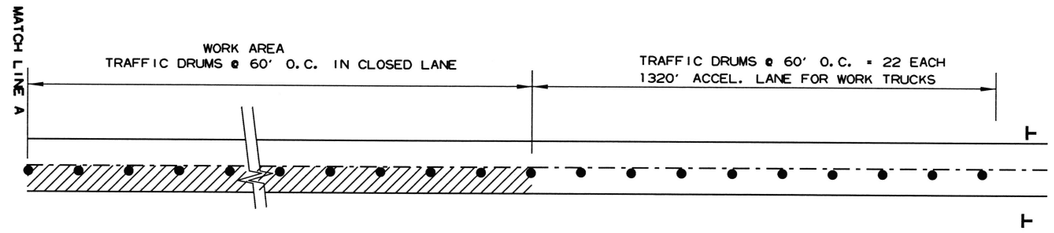
10-18-16

PORTABLE CHANGEABLE MESSAGE SIGN TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

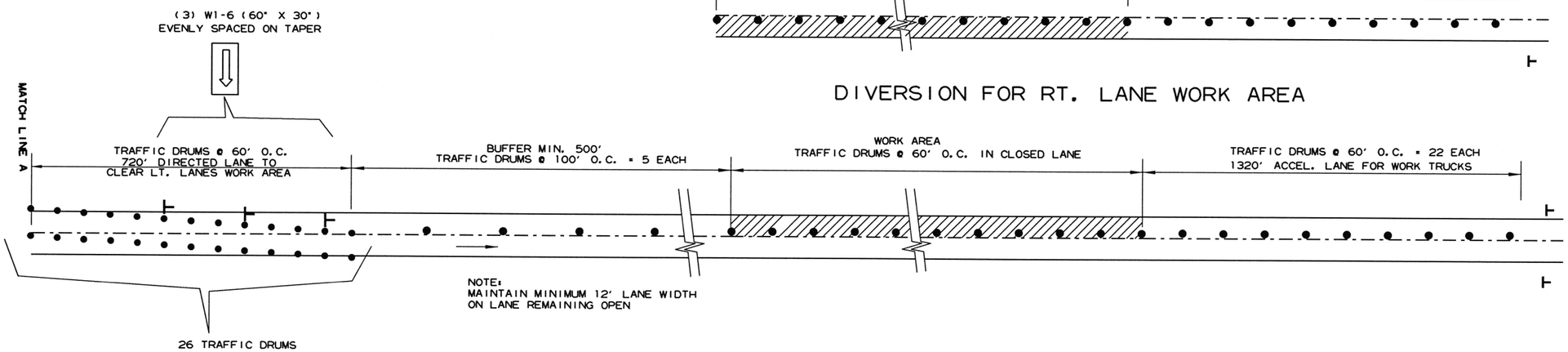


RT. LANE CLOSURE

SPEED LIMIT SIGNS ARE ALSO PROVIDED FOR PLACEMENT PAST ENTRANCE RAMPS WITHIN THE WORK ZONE.



DIVERSION FOR RT. LANE WORK AREA



DIVERSION FOR LT. LANE WORK AREA

8/17/16

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LANE CLOSURE
MAINTENANCE OF TRAFFIC

ADVANCE WARNING SIGNS FOR ENTRANCE AND EXIT RAMPS
ROAD WORK AHEAD (2) = 32 SQ. FT.
END ROAD WORK (2) = 16 SQ. FT.

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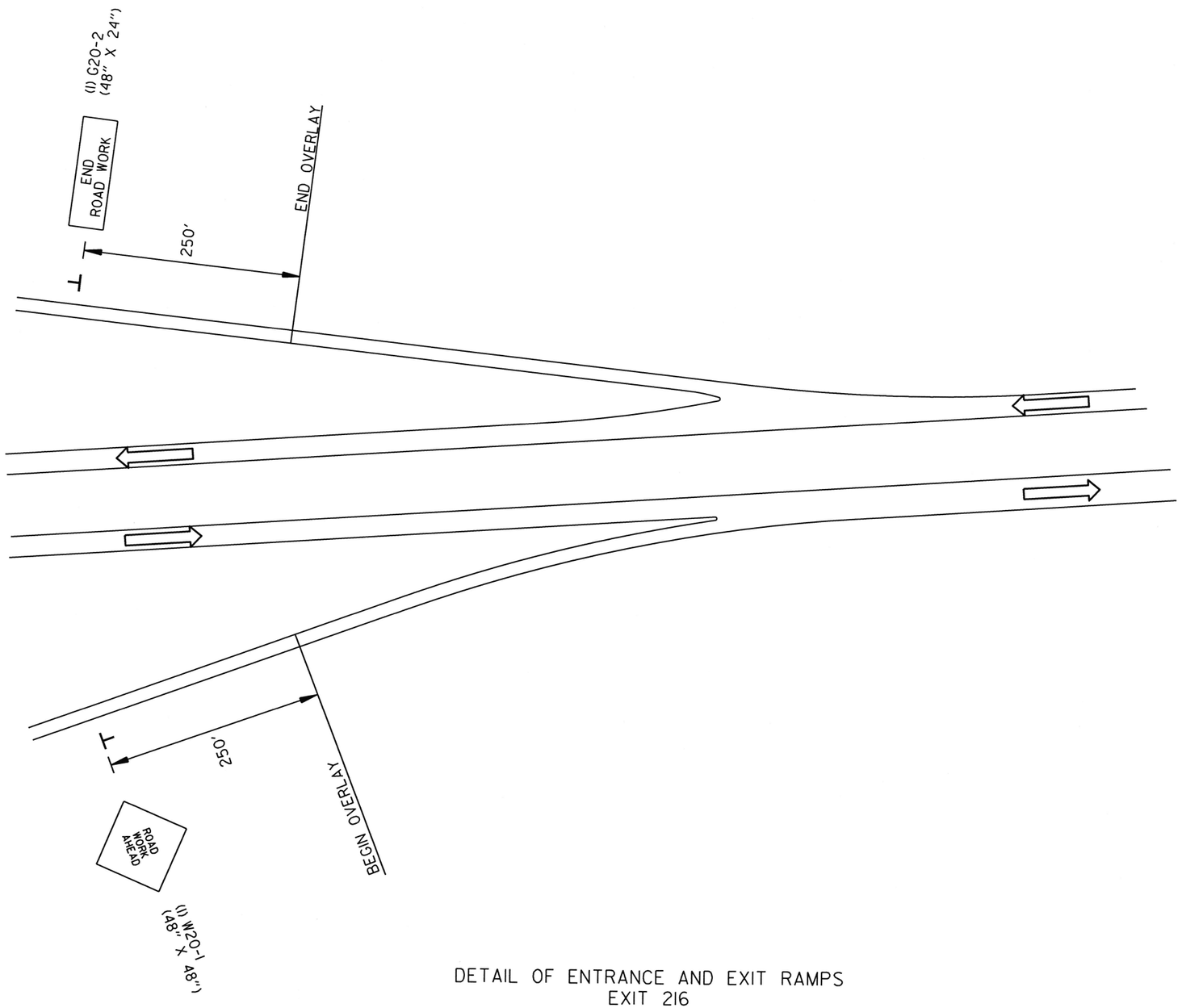
(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-25-16



DETAIL OF ENTRANCE AND EXIT RAMPS
EXIT 216

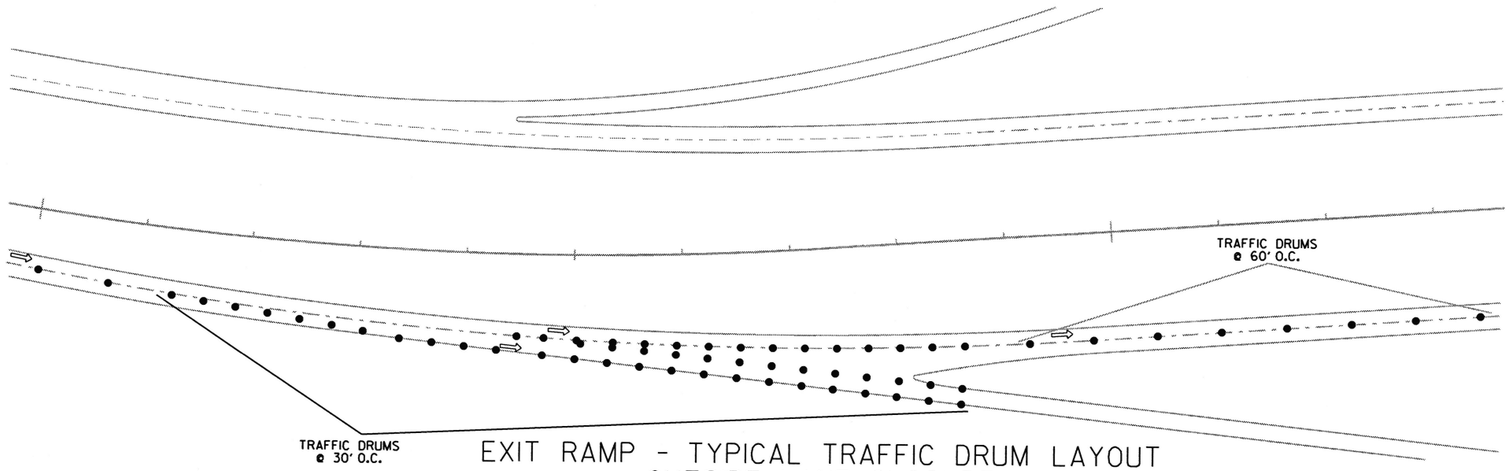
RBB0102.DGN 10/24/2016

MAINTENANCE OF TRAFFIC
DETAIL OF RAMPS

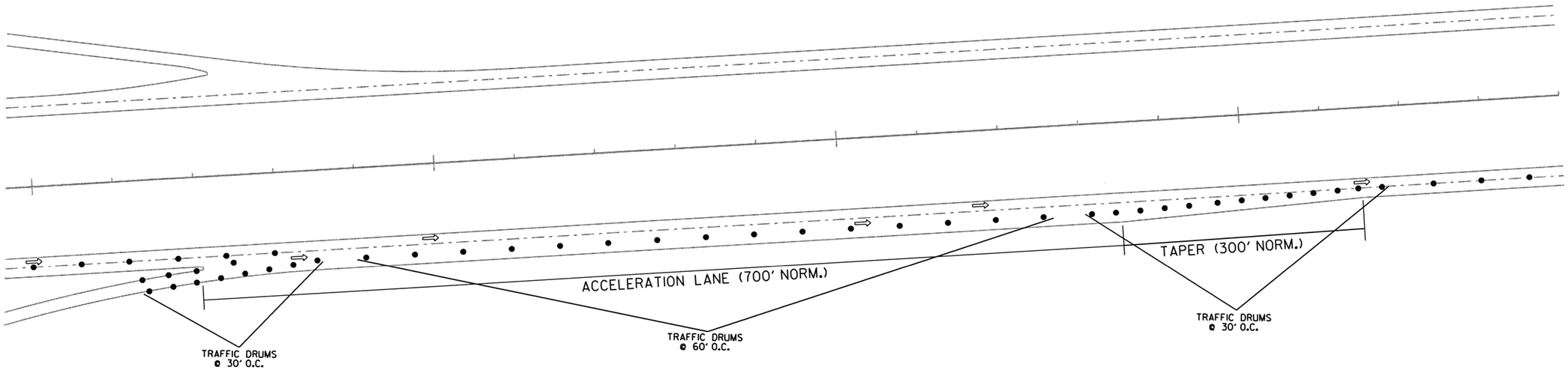
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0102	16	63

(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-18-16



EXIT RAMP - TYPICAL TRAFFIC DRUM LAYOUT
OUTSIDE LANE CLOSURE



ENTRANCE RAMP - TYPICAL TRAFFIC DRUM LAYOUT
ACCELERATION LANE CLOSURE

EXIT 216:
EASTBOUND EXIT = 40 TRAFFIC DRUMS
EASTBOUND ENTRANCE = 17 TRAFFIC DRUMS

WESTBOUND EXIT = 40 TRAFFIC DRUMS
WESTBOUND ENTRANCE = 17 TRAFFIC DRUMS

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MAINTENANCE OF TRAFFIC
DETAIL OF RAMPS WITH LANE CLOSURE

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1-9-17				6	ARK.			
				JOB NO.		BB0102	17	63

(2) PERMANENT PAVEMENT MARKING DETAILS

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REGISTERED PROFESSIONAL ENGINEER
No. 11425
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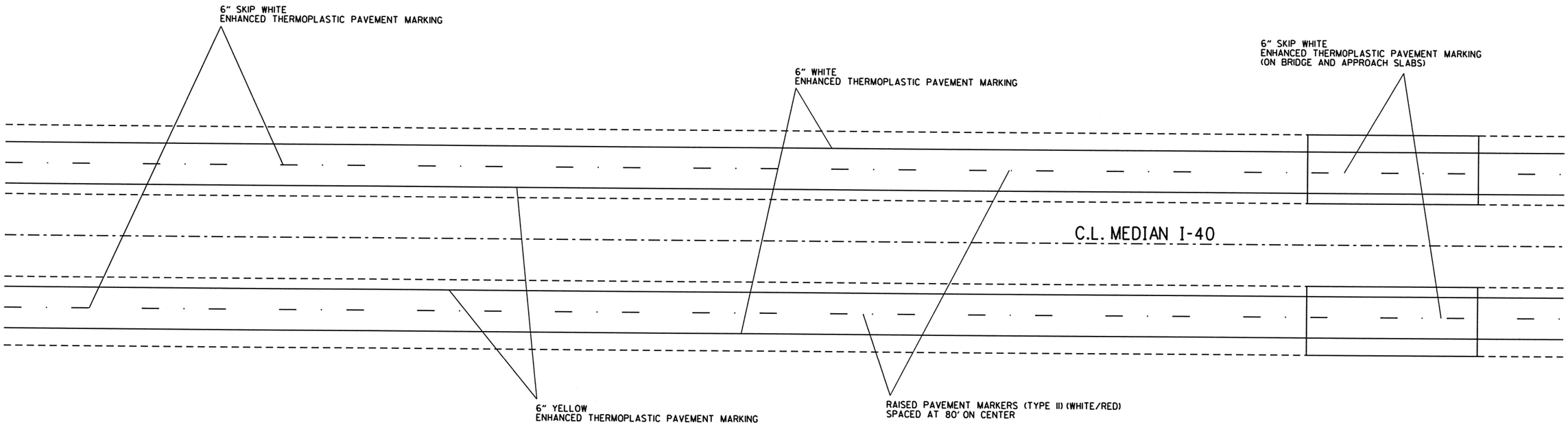
1-11-17



PERMANENT PAVEMENT MARKINGS:
APPLY PERMANENT PAVEMENT MARKINGS
ACCORDING TO STD. DWG. PM-2

RAMP 1
- 6" YELLOW = 865 LIN. FT.
- 6" WHITE = 1145 LIN. FT.
- 8" WHITE = 655 LIN. FT.
- RAISED PAVEMENT MARKERS (TYPE II) = 86 EACH

RAMP 2
- 6" YELLOW = 663 LIN. FT.
- 6" WHITE = 722 LIN. FT.
- 8" WHITE = 195 LIN. FT.
- RAISED PAVEMENT MARKERS (TYPE II) = 30 EACH

RAMP 3
- 6" YELLOW = 635 LIN. FT.
- 6" WHITE = 915 LIN. FT.
- 8" WHITE = 655 LIN. FT.
- RAISED PAVEMENT MARKERS (TYPE II) = 86 EACH

RAMP 4
- 6" YELLOW = 635 LIN. FT.
- 6" WHITE = 695 LIN. FT.
- 8" WHITE = 195 LIN. FT.
- RAISED PAVEMENT MARKERS (TYPE II) = 30 EACH

PERMANENT PAVEMENT MARKINGS:
MAIN LANES
- 6" ENHANCED THERMOPLASTIC PAVEMENT MARKING YELLOW = 71348 LIN. FT.
- 6" ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE = 89248 LIN. FT.
- RAISED PAVEMENT MARKERS (TYPE II) = 892 EACH

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PERMANENT PAVEMENT MARKING DETAILS

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1-9-17				6	ARK.			
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(2) QUANTITIES

STATE OF ARKANSAS
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No. 11425
TRINITY D. SMITH
1-18-17

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	JOB BB0102	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		TRAFFIC DRUMS	ADVANCE WARNING ARROW PANEL	PORTABLE CHANGEABLE MESSAGE SIGN	MOBILE SPEED NOTIFICATION SYSTEM
			LIN. FT. - EACH		NO.	SQ. FT.	EACH	DAY	WEEK	EACH
W20-1	ROAD WORK 1 MILE	48"x48"	4	4	4	64.0				
W20-1	ROAD WORK 1/2 MILE	48"x48"	4	4	4	64.0				
W20-1	ROAD WORK 1500 FT.	48"x48"	4	4	4	64.0				
W20-1	ROAD WORK AHEAD	48"x48"	6	6	6	96.0				
G20-2	END ROAD WORK	48"x24"	6	6	6	48.0				
G20-1	ROAD WORK NEXT xx MILES	60"x24"	2	2	2	20.0				
W4-2 RT.	MERGE RIGHT	48"x48"	4	4	4	64.0				
W20-5	RIGHT LANE CLOSED 1 MILE	48"x48"	4	4	4	64.0				
W20-5	RIGHT LANE CLOSED 1/2 MILE	48"x48"	4	4	4	64.0				
W20-5	RIGHT LANE CLOSED 1500 FT.	48"x48"	4	4	4	64.0				
SPECIAL	MERGE NOW W/ ARROW	48"x48"	2	2	2	32.0				
R2-1	SPEED LIMIT 60 MPH	48"x60"	4	4	4	80.0				
R2-1	SPEED LIMIT 70 MPH	48"x60"	4	4	4	80.0				
W3-5	REDUCE SPEED AHEAD	48"x48"	4	4	4	64.0				
R4-1	DO NOT PASS	48"x60"	8	8	8	160.0				
R55-1	FINES DOUBLE IN WORK ZONES	36"x60"	4	4	4	60.0				
W1-6	LARGE ARROW	48"x24"	12	12	12	96.0				
RSP-1	SHOULDER CLOSED	48"x30"	2	2	2	20.0				
	TRAFFIC DRUMS		786	786			786			
	ADVANCE WARNING ARROW PANEL		2	2				122		
	PORTABLE CHANGEABLE MESSAGE SIGN		4	4					36	
	MOBILE SPEED NOTIFICATION SYSTEM		2	2						2
TOTALS:						**1204.0**	**786**	**122**	**36**	**2**

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

NOTE: THE QUANTITY OF TRAFFIC DRUMS PROVIDED IS FOR A 4 MILE WORK AREA IN ONE DIRECTION AND A 2 MILE WORK AREA IN THE OTHER DIRECTION.
HOWEVER, THE INSTALLATION OF TRAFFIC DRUMS SHALL NOT EXCEED THE ACTUAL WORK AREA BY MORE THAN 1/4 MILE, UNLESS APPROVED BY THE ENGINEER.

CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	JOB BB0102	REMOVAL OF PERMANENT PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS	ENHANCED THERMOPLASTIC PAVEMENT MARKING		
					TYPE II	8"	6"	
					(WHITE/RED)	WHITE	WHITE	YELLOW
	LIN. FT. - EACH	LIN. FT.		LIN. FT.	EACH	LIN. FT.		
REMOVAL OF PERMANENT PAVEMENT MARKINGS	70748	70748						
CONSTRUCTION PAVEMENT MARKINGS	237918		237918					
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	70748			70748				
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)	1124				1124			
ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (6")	92725						92725	
ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (8")	1700					1700		
ENHANCED THERMOPLASTIC PAVEMENT MARKING YELLOW (6")	74145							74145
TOTALS:		**70748**	**237918**	**70748**	**1124**	**1700**	**92725**	**74145**

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

NOTE: NO PERMANENT PAVEMENT MARKINGS SHALL BE PLACED UNTIL A MINIMUM OF 3 DAYS AFTER ALL MAIN LANE PAVING HAS BEEN COMPLETED. IN ADDITION, NO PERMANENT PAVEMENT MARKINGS SHALL BE PLACED DURING THE TIME PERIOD FROM DECEMBER 21 TO MARCH 15, INCLUSIVE.

1/9/17

RBB0102.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
1-9-17				6	ARK.			
				JOB NO.		BB0102	19	63

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
1-11-17

REMOVAL AND DISPOSAL OF ITEMS

STATION	STATION	LOCATION	CONCRETE DITCH PAVING	WIRE ROPE SAFETY FENCE	GUARDRAIL	PIER PROTECTION
			SQ. YD.	LIN. FT.	LIN. FT.	LIN. FT.
2418+71	2418+90	RT. SIDE RIGHT MAIN LANES			25	
2418+71	2422+40	LT. SIDE RIGHT MAIN LANES			318	
2418+71	2422+40	RT. SIDE LEFT MAIN LANES			318	
2418+71	2418+90	LT. SIDE LEFT MAIN LANES			25	
2527+11	2527+30	RT. SIDE RIGHT MAIN LANES			25	
2527+11	2527+30	LT. SIDE LEFT MAIN LANES			318	
2523+61	2527+30	LT. SIDE RIGHT MAIN LANES			318	
2523+61	2527+30	RT. SIDE LEFT MAIN LANES			25	
2528+84	2529+03	RT. SIDE RIGHT MAIN LANES			25	
2528+84	2532+53	LT. SIDE RIGHT MAIN LANES			318	
2528+84	2532+53	RT. SIDE LEFT MAIN LANES			318	
2528+84	2529+03	LT. SIDE LEFT MAIN LANES			25	
2570+31	2571+69	MEDIAN	62			
2570+74	2571+26	MEDIAN		52		
2633+20	2633+39	RT. SIDE RIGHT MAIN LANES			25	
2634+44	2634+63	LT. SIDE LEFT MAIN LANES			25	
2633+39	2633+65	RT. SIDE RIGHT MAIN LANES				26
2634+18	2634+44	LT. SIDE LEFT MAIN LANES				26
2774+35	2774+54	LT. SIDE RIGHT MAIN LANES			25	
2774+35	2774+54	RT. SIDE RIGHT MAIN LANES			25	
2774+35	2774+54	LT. SIDE LEFT MAIN LANES			25	
2777+44	2777+63	RT. SIDE LEFT MAIN LANES			25	
2777+44	2777+63	LT. SIDE LEFT MAIN LANES			25	
TOTALS:			62	52	2233	52

NOTE: THE QUANTITY SHOWN ABOVE FOR THE REMOVAL AND DISPOSAL OF GUARDRAIL SHALL INCLUDE THE REMOVAL AND DISPOSAL OF ALL GUARDRAIL TERMINALS, TERMINAL ANCHOR POSTS, AND CRASH CUSHIONS.

EARTHWORK

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT
			CU. YD.	
2422+00.00	2422+45.00	MEDIAN	22.5	
2523+55.00	2524+00.00	MEDIAN	22.5	
2532+14.00	2532+59.00	MEDIAN	22.5	
2571+00.00		MEDIAN CROSSOVER	9.0	7.5
TOTALS:			76.5	7.5

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

WIRE ROPE SAFETY FENCE

STATION	LOCATION	WIRE ROPE SAFETY FENCE END TERMINAL
		EACH
2570+74.00	MEDIAN	1
2571+26.00	MEDIAN	1
TOTAL:		2

CONCRETE DITCH PAVING

STATION	STATION	LOCATION	LENGTH	"W"	CONC. DITCH PAVING (TYPE B)	SOLID SODDING	WATER
			LIN. FT.	FEET	SQ. YD.	SQ. YD.	M. GAL.
2570+31.00	2570+74.00	MEDIAN	43.00	4.00	19.11	19.11	0.24
2571+26.00	2571+69.00	MEDIAN	43.00	4.00	19.11	19.11	0.24
TOTALS:					38.22	38.22	0.48

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

EROSION CONTROL

STATION	LOCATION	PERMANENT EROSION CONTROL					TEMPORARY EROSION CONTROL					
		SEEDING	LIME	MULCH COVER	WATER	SECOND SEEDING APPLICATION	TEMPORARY SEEDING	MULCH COVER	WATER	SAND BAG DITCH CHECKS (E-5)	DROP INLET SILT FENCE (E-7)	*SEDIMENT REMOVAL & DISPOSAL
		ACRE	TON	ACRE	M.GAL.	ACRE	ACRE	ACRE	M.GAL.	BAG	LIN. FT.	CU. YD.
2422+45	MEDIAN	0.01	0.02	0.01	1.0	0.01				1540	456	87
2523+55	MEDIAN	0.01	0.02	0.01	1.0	0.01						
2532+59	MEDIAN	0.01	0.02	0.01	1.0	0.01						
2571+00	MEDIAN	0.01	0.02	0.01	1.0	0.01						
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.		1.00	2.00	1.00	102.0	1.00	1.00	1.00	20.4	200	100	4
TOTALS:		1.04	2.08	1.04	106.0	1.04	1.00	1.00	20.4	1740	556	91

BASIS OF ESTIMATE:
LIME .....2 TONS / ACRE OF SEEDING
WATER.....102.0 M.G. / ACRE OF SEEDING
WATER.....20.4 M.G. / ACRE OF TEMPORARY SEEDING
SAND BAG DITCH CHECKS.....22 BAGS / LOCATION

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

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.

1/9/17

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
1-9-17				6	ARK.			
2-8-17				JOB NO.		880102	20	63

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
2-13-17

GUARDRAIL AND CONCRETE BARRIER WALL (PIER PROTECTION TYPE A)

STATION	STATION	LOCATION	GUARDRAIL (TYPE A SPECIAL)	GUARDRAIL (TYPE A)	THRIE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)	CONC.BARRIER WALL (PIER PROT. TYPE A)
			LIN. FT.			EACH	LIN. FT.
2418+71.10	2418+96.10	RT. SIDE RIGHT MAIN LANES	7		1		
2418+71.10	2422+39.85	LT. SIDE RIGHT MAIN LANES		300	1	1	
2418+71.10	2422+39.85	RT. SIDE LEFT MAIN LANES		300	1	1	
2418+71.10	2418+96.10	LT. SIDE LEFT MAIN LANES	7		1		
2527+11.17	2527+29.92	RT. SIDE RIGHT MAIN LANES	7		1		
2527+11.17	2527+29.92	LT. SIDE RIGHT MAIN LANES		300	1	1	
2527+11.17	2527+29.92	RT. SIDE LEFT MAIN LANES		300	1	1	
2527+11.17	2527+29.92	LT. SIDE LEFT MAIN LANES	7		1		
2528+84.08	2529+09.08	RT. SIDE RIGHT MAIN LANES	7		1		
2528+84.08	2532+52.08	LT. SIDE RIGHT MAIN LANES		300	1	1	
2528+84.08	2532+52.08	RT. SIDE LEFT MAIN LANES		300	1	1	
2528+84.08	2529+09.08	LT. SIDE LEFT MAIN LANES	7		1		
2633+14.00	2633+39.00	RT. SIDE RIGHT MAIN LANES	7		1		
2634+37.75	2634+62.75	LT. SIDE LEFT MAIN LANES	7		1		
2633+39.00	2633+65.00	RT. SIDE RIGHT MAIN LANES					26
2634+18.00	2634+44.00	LT. SIDE LEFT MAIN LANES					26
2774+29.17	2774+54.17	RT. SIDE RIGHT MAIN LANES	7		1		
2774+29.17	2774+54.17	LT. SIDE RIGHT MAIN LANES		7	1		
2774+29.17	2774+54.17	LT. SIDE LEFT MAIN LANES	7		1		
2777+44.17	2777+69.17	RT. SIDE LEFT MAIN LANES		7	1		
2777+44.17	2777+69.17	LT. SIDE LEFT MAIN LANES	7		1		
TOTALS:			77	1814	19	6	52

BRIDGE QUANTITIES

UNIT OF STRUCTURE	* REINFORCING STEEL - BRIDGE (GRADE 60)	POLYMER OVERLAY	BRIDGE DECK REPAIR FOR POLYMER OVERLAYS
	LB.	SQ. YD.	SQ. FT.
BRIDGE NO. A3724	1145	6193	2640
BRIDGE NO. B3724	1145	6193	2640
BRIDGE NO. A3727	120	913	265
BRIDGE NO. B3727	120	913	265
BRIDGE NO. A3731	225	1474	515
BRIDGE NO. B3731	225	1474	515
TOTALS:	2980	17160	6840

NOTE:
EXISTING BRIDGE DECKS DO NOT HAVE AN ASPHALT OVERLAY.

QUANTITY SHOWN FOR "POLYMER OVERLAY" INCLUDES APPROACH SLABS AND GUTTERS.

QUANTITIES SHOWN FOR "REINFORCING STEEL - BRIDGE (GRADE 60)" & "BRIDGE DECK REPAIR" FOR POLYMER OVERLAYS" ARE FOR ESTIMATING AND BIDDING PURPOSES ONLY. ACTUAL QUANTITY, IF ANY, WILL BE DETERMINED IN THE FIELD.

ACHM PATCHING OF EXISTING ROADWAY

DESCRIPTION	TON
ENTIRE PROJECT - TO BE USED IF AND WHERE	500
DIRECTED BY THE ENGINEER	
TOTAL:	500

NOTE: QUANTITY ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.

ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC

LOCATION	TON	TACK COAT
		GALLON
* ENTIRE PROJECT - TO BE USED IF AND WHERE	165	330
DIRECTED BY THE ENGINEER		
TOTALS:	165	330

BASIS OF ESTIMATE:
ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC...25 TON/MILE
TACK COAT FOR MAINTENANCE OF TRAFFIC.....50 GAL./MILE

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

COLD MILLING ASPHALT PAVEMENT

STATION	STATION	LOCATION	LENGTH	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT
			LIN. FT.	FEET	SQ. YD.
2418+96.60	2420+96.60	RT. MAIN LANES	200.00	38.00	844.44
2525+04.42	2527+04.42	RT. MAIN LANES	200.00	38.00	844.44
2529+09.58	2531+09.58	RT. MAIN LANES	200.00	38.00	844.44
2772+28.67	2774+28.67	RT. MAIN LANES	200.00	38.00	844.44
2418+96.60	2420+96.60	LT. MAIN LANES	200.00	38.00	844.44
2525+04.42	2527+04.42	LT. MAIN LANES	200.00	38.00	844.44
2529+09.58	2531+09.58	LT. MAIN LANES	200.00	38.00	844.44
2630+07.57	2638+07.57	LT. MAIN LANES	800.00	38.00	3377.78
2772+33.57	2774+33.57	LT. MAIN LANES	200.00	38.00	844.44
2733+25.00	2734+25.00	HWY. 49, RAMP 1	100.00	25.00	277.78
2748+80.00	2749+80.00	HWY. 49, RAMP 2	100.00	25.00	277.78
2763+30.00	2764+30.00	HWY. 49, RAMP 3	100.00	25.00	277.78
2764+84.00	2765+84.00	HWY. 49, RAMP 4	100.00	25.00	277.78
TOTAL:					11244.42

NOTE: VARIABLE MILLING DEPTH.

FLUSHING UNDERDRAIN

STATION	STATION	LOCATION	* FLUSHING UNDERDRAIN
			LIN.FT.
2418+94	2527+04	RT. MAIN LANES	10810
2529+10	2729+00	RT. MAIN LANES	19990
2729+00	2732+56.60	RT. MAIN LANES	357
2748+39.34	2753+80	RT. MAIN LANES	541
2754+00	2774+33	RT. MAIN LANES	2033
2418+94	2527+04	LT. MAIN LANES	10810
2529+10	2732+56.60	LT. MAIN LANES	20347
2748+39.34	2761+00	LT. MAIN LANES	1261
2761+00	2769+00	LT. OF LT. MAIN LANES	800
2769+00	2774+33	LT. OF LT. MAIN LANES	533
TOTAL:			67482

* QUANTITY ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.
TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

CULVERT REHABILITATION

STATION	DESCRIPTION	SLIP LINE PIPE ALT. NO. 1		CEMENTITIOUS PIPE LINER ALT. NO. 2	
		24"	42"	24"	42"
		LIN. FT.		LIN. FT.	
2572+00	42" x 180' C.M. PIPE CULVERT		180		180
2601+00	24" x 226' C.M. PIPE CULVERT	226		226	
2707+00	24" x 84' PIPE INLET	84		84	
2707+00	24" x 86' PIPE OUTLET	86		86	
TOTALS:		396	180	396	180

2/6/2017

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QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
2-17-17				6	ARK.			
				JOB NO.		BB0102	21	63

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
2-17-17

BASE AND SURFACING

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT				ACHM SURFACE COURSE (1/2")			
				TON / STATION	TON	AVG. WID.	SQ.YD.	GALLONS / SQ.YD.	GALLON	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22
			FEET			FEET				FEET			TON
MAIN LANES													
2418+96.60	2422+39.85	RT. MAIN LANES	343.25	4.00	13.73	47.00	1792.53	0.17	304.73	43.50	1659.04	220.00	182.49
2422+39.85	2445+14.85	RT. MAIN LANES	2275.00	4.00	91.00	41.50	10490.28	0.17	1783.35	38.00	9605.56	220.00	1056.61
2445+14.85	2511+86.17	RT. MAIN LANES	6671.32	6.50	433.64	38.00	28167.80	0.17	4788.53	38.00	28167.80	220.00	3098.46
2511+86.17	2523+61.17	RT. MAIN LANES	1175.00	4.00	47.00	41.50	5418.06	0.17	921.07	38.00	4961.11	220.00	545.72
2523+61.17	2527+04.42	RT. MAIN LANES	343.25	4.00	13.73	47.00	1792.53	0.17	304.73	43.50	1659.04	220.00	182.49
2529+09.58	2532+52.83	RT. MAIN LANES	343.25	4.00	13.73	47.00	1792.53	0.17	304.73	43.50	1659.04	220.00	182.49
2532+52.83	2573+02.83	RT. MAIN LANES	4050.00	4.00	162.00	41.50	18675.00	0.17	3174.75	38.00	17100.00	220.00	1881.00
2573+02.83	2723+46.03	RT. MAIN LANES	15043.20	6.50	977.81	38.00	63515.73	0.17	10797.67	38.00	63515.73	220.00	6986.73
2723+46.03	2732+56.60	RT. MAIN LANES	910.57	4.00	36.42	38.00	3844.63	0.17	653.59	38.00	3844.63	220.00	422.91
2723+46.03	2727+73.26	ADDITIONAL - RAMP 1	427.23			VAR.	415.95	0.17	70.71	VAR.	415.95	220.00	45.75
2727+73.42	2734+25.00	RAMP 1	651.58	5.00	32.58	25.00	1809.94	0.17	307.69	25.00	1809.94	220.00	199.09
2748+39.34	2755+46.80	RT. MAIN LANES	707.46	6.50	45.98	38.00	2987.05	0.17	507.80	38.00	2987.05	220.00	328.58
2748+80.00	2754+07.23	RAMP 2	527.23	5.00	26.36	25.00	1464.53	0.17	248.97	25.00	1464.53	220.00	161.10
2754+08.56	2755+46.80	ADDITIONAL - RAMP 2	138.24			VAR.	208.99	0.17	35.53	VAR.	208.99	220.00	22.99
2755+46.80	2761+87.43	RT. MAIN LANES	640.63	6.50	41.64	46.00	3274.33	0.17	556.64	46.00	3274.33	220.00	360.18
2761+87.43	2764+87.43	RT. MAIN LANES	300.00	6.50	19.50	42.00	1400.00	0.17	238.00	42.00	1400.00	220.00	154.00
2764+87.43	2768+60.42	RT. MAIN LANES	372.99	6.50	24.24	38.00	1574.85	0.17	267.72	38.00	1574.85	220.00	173.23
2768+60.42	2771+35.42	RT. MAIN LANES	275.00	2.50	6.88	43.50	1329.17	0.17	225.96	38.00	1161.11	220.00	127.72
2771+35.42	2774+28.67	RT. MAIN LANES	293.25			47.00	1531.42	0.17	260.34	38.00	1238.17	220.00	136.20
2418+96.60	2422+39.85	LT. MAIN LANES	343.25	4.00	13.73	47.00	1792.53	0.17	304.73	43.50	1659.04	220.00	182.49
2422+39.85	2445+64.85	LT. MAIN LANES	2325.00	4.00	93.00	41.50	10720.83	0.17	1822.54	38.00	9816.67	220.00	1079.83
2445+64.85	2515+11.17	LT. MAIN LANES	6946.32	6.50	451.51	38.00	29328.91	0.17	4985.91	38.00	29328.91	220.00	3226.18
2515+11.17	2523+61.17	LT. MAIN LANES	850.00	4.00	34.00	41.50	3919.44	0.17	666.30	38.00	3588.89	220.00	394.78
2523+61.17	2527+04.42	LT. MAIN LANES	343.25	4.00	13.73	47.00	1792.53	0.17	304.73	43.50	1659.04	220.00	182.49
2529+09.58	2532+52.83	LT. MAIN LANES	343.25	4.00	13.73	47.00	1792.53	0.17	304.73	43.50	1659.04	220.00	182.49
2532+52.83	2573+52.83	LT. MAIN LANES	4100.00	4.00	164.00	41.50	18905.56	0.17	3213.95	38.00	17311.11	220.00	1904.22
2573+52.83	2630+07.57	LT. MAIN LANES	5654.74	6.50	367.56	38.00	23875.57	0.17	4058.85	38.00	23875.57	220.00	2626.31
2630+07.57	2633+57.57	LT. MAIN LANES	350.00			38.00	1477.78	0.17	251.22	38.00	1477.78	220.00	162.56
2633+57.57	2634+57.57	LT. MAIN LANES	100.00			38.00	422.22	0.17	71.78	38.00	422.22	220.00	46.44
2634+57.57	2638+07.57	LT. MAIN LANES	350.00			38.00	1477.78	0.17	251.22	38.00	1477.78	220.00	162.56
2638+07.57	2732+56.60	LT. MAIN LANES	9449.03	6.50	614.19	38.00	39895.90	0.17	6782.30	38.00	39895.90	220.00	4388.55
2748+39.34	2750+11.34	LT. MAIN LANES	172.00	6.50	11.18	38.00	726.22	0.17	123.46	38.00	726.22	220.00	79.88
2750+11.34	2753+11.34	LT. MAIN LANES	300.00	6.50	19.50	42.00	1400.00	0.17	238.00	42.00	1400.00	220.00	154.00
2753+11.34	2759+50.89	LT. MAIN LANES	639.55	6.50	41.57	46.00	3268.81	0.17	555.70	46.00	3268.81	220.00	359.57
2759+50.89	2760+91.76	ADDITIONAL - RAMP 4	140.87			VAR.	213.02	0.17	36.21	VAR.	213.02	220.00	23.43
2760+93.07	2765+84.00	RAMP 4	490.93	5.00	24.55	25.00	1363.69	0.17	231.83	25.00	1363.69	220.00	150.01
2759+50.89	2769+76.16	LT. MAIN LANES	1025.27	6.50	66.64	38.00	4328.92	0.17	735.92	38.00	4328.92	220.00	476.18
2763+30.00	2769+74.94	RAMP 3	644.94	5.00	32.25	25.00	1791.50	0.17	304.56	25.00	1791.50	220.00	197.07
2769+50.89	2773+75.14	ADDITIONAL - RAMP 3	424.25			VAR.	368.08	0.17	62.57	VAR.	368.08	220.00	40.49
2769+76.16	2773+75.14	LT. MAIN LANES	398.98	6.50	25.93	43.50	1928.40	0.17	327.83	43.50	1928.40	220.00	212.12
2773+75.14	2774+33.57	LT. MAIN LANES	58.43	6.50	3.80	43.50	282.41	0.17	48.01	43.50	282.41	220.00	31.07
2422+00.00	2422+45.00	MEDIAN	45.00	VAR.	36.75					VAR.	90.00	220.00	9.90
2523+55.00	2524+00.00	MEDIAN	45.00	VAR.	36.75					VAR.	90.00	220.00	9.90
2532+14.00	2532+59.00	MEDIAN	45.00	VAR.	36.75					VAR.	90.00	220.00	9.90
2571+00.00		MEDIAN CROSSOVER		VAR.	14.63					VAR.	35.82	220.00	3.94
TOTALS:					**4101.99**		**302557.95**		**51434.86**		**295855.69**		**32544.10**

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.6% MIN. AGGR.....5.4% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 205 FOR PG 76-22
TACK COAT QUANTITIES WERE CALCULATED USING THE EMULSIFIED ASPHALT RATES. REFER TO SS-400-1 FOR THE RESIDUAL ASPHALT APPLICATION RATES.

RUMBLE STRIPS IN ASPHALT SHOULDERS

STATION	STATION	LOCATION	* RUMBLE STRIPS IN ASPHALT SHOULDERS
			LIN.FT.
2418+97	2527+04	RT. OF RT. MAIN LANES	10807
2529+10	2729+00	RT. OF RT. MAIN LANES	19990
2729+00	2732+56.60	RT. OF RT. MAIN LANES	357
2748+39.34	2753+80	RT. OF RT. MAIN LANES	541
2762+00	2774+28	RT. OF RT. MAIN LANES	1228
2418+97	2527+04	LT. OF RT. MAIN LANES	10807
2529+10	2732+56.60	LT. OF RT. MAIN LANES	20347
2748+39.34	2774+28	LT. OF RT. MAIN LANES	2589
2418+97	2527+04	RT. OF LT. MAIN LANES	10807
2529+10	2732+56.56	RT. OF LT. MAIN LANES	20347
2748+39.34	2774+33	RT. OF LT. MAIN LANES	2594
2418+97	2527+04	LT. OF LT. MAIN LANES	10807
2529+10	2732+56.56	LT. OF LT. MAIN LANES	20347
2748+39.34	2753+14	LT. OF LT. MAIN LANES	475
2761+00	2768+50	LT. OF LT. MAIN LANES	750
2768+50	2774+33	LT. OF LT. MAIN LANES	583
TOTAL:			**133376**

* QUANTITY ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.
TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

2/17/2017

RBB0102.DGN

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
11-29-16		2-8-17		6	ARK.			
1-9-17		2-17-17		JOB NO.		BB0102	22	63
2-6-17								

(2) SUMMARY OF QUANTITIES & REVISIONS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
2-17-17

SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM		QUANTITY	UNIT
202	REMOVAL AND DISPOSAL OF PIER PROTECTION		52	LIN. FT.
202	REMOVAL AND DISPOSAL OF CONCRETE DITCH PAVING		62	SQ. YD.
SP & 202	REMOVAL AND DISPOSAL OF WIRE ROPE SAFETY FENCE		52	LIN. FT.
202	REMOVAL AND DISPOSAL OF GUARDRAIL		2233	LIN. FT.
210	UNCLASSIFIED EXCAVATION		77	CU. YD.
210	COMPACTED EMBANKMENT		8	CU. YD.
SS & 303	AGGREGATE BASE COURSE (CLASS 7)		4102	TON
SS & 401	TACK COAT		51765	GAL.
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")		30787	TON
SP, SS, & 407	ASPHALT BINDER (PG 76-22) IN ACHM SURFACE COURSE (1/2")		1757	TON
412	COLD MILLING ASPHALT PAVEMENT		11244	SQ. YD.
SP & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC		165	TON
SP & 415	ACHM PATCHING OF EXISTING ROADWAY		500	TON
601	MOBILIZATION		1.00	LUMP SUM
SP & 602	FURNISHING FIELD OFFICE		1	EACH
SP & 603	MAINTENANCE OF TRAFFIC		1.00	LUMP SUM
SS & 604	SIGNS		1204	SQ. FT.
SS & 604	TRAFFIC DRUMS		786	EACH
SP	MOBILE SPEED NOTIFICATION SYSTEM		2	EACH
604	CONSTRUCTION PAVEMENT MARKINGS		237918	LIN. FT.
604	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS		70748	LIN. FT.
604	REMOVAL OF PERMANENT PAVEMENT MARKINGS		70748	LIN. FT.
604	ADVANCE WARNING ARROW PANEL		80	DAY
SP & 604	PORTABLE CHANGEABLE MESSAGE SIGN		24	WEEK
SP & 605	CONCRETE DITCH PAVING (TYPE B)		38	SQ. YD.
* SP	SLIP LINE PIPE (24")	(ALTERNATE NO. 1)	396	LIN. FT.
* SP	CEMENTITIOUS PIPE LINER (24")	(ALTERNATE NO. 2)	396	LIN. FT.
* SP	SLIP LINE PIPE (42")	(ALTERNATE NO. 1)	180	LIN. FT.
* SP	CEMENTITIOUS PIPE LINER (42")	(ALTERNATE NO. 2)	180	LIN. FT.
SP	FLUSHING UNDERDRAIN		67482	LIN. FT.
617	GUARDRAIL (TYPE A)		1814	LIN. FT.
617	GUARDRAIL (TYPE A SPECIAL)		77	LIN. FT.
617	GUARDRAIL TERMINAL (TYPE 2)		6	EACH
617	THRIE BEAM GUARDRAIL TERMINAL		19	EACH
SP	WIRE ROPE SAFETY FENCE END TERMINAL		2	EACH
620	LIME		2	TON
620	SEEDING		1.04	ACRE
SS & 620	MULCH COVER		2.04	ACRE
620	WATER		126.9	M.GAL.
621	TEMPORARY SEEDING		1.00	ACRE
621	SAND BAG DITCH CHECKS		1740	BAG
621	DROP INLET SILT FENCE		556	LIN. FT.
621	SEDIMENT REMOVAL AND DISPOSAL		91	CU. YD.
623	SECOND SEEDING APPLICATION		1.04	ACRE
624	SOLID SODDING		38	SQ. YD.
631	CONCRETE BARRIER WALL (PIER PROTECTION TYPE A)		52	LIN. FT.
635	ROADWAY CONSTRUCTION CONTROL		1.00	LUMP SUM
642	RUMBLE STRIPS IN ASPHALT SHOULDERS		133376	LIN. FT.
SP	ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (6")		92725	LIN. FT.
SP	ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (8")		1700	LIN. FT.
SP	ENHANCED THERMOPLASTIC PAVEMENT MARKING YELLOW (6")		74145	LIN. FT.
721	RAISED PAVEMENT MARKERS (TYPE II)		1124	EACH
	STRUCTURES OVER 20' SPAN			
804	REINFORCING STEEL-BRIDGE (GRADE 60)		2980	POUND
SP	BRIDGE DECK REPAIR FOR POLYMER OVERLAYS		6840	SQ. FT.
SP	POLYMER OVERLAY		17160	SQ. YD.

* DENOTES ALTERNATE BID ITEMS.

REVISIONS

DATE	REVISION	SHEET NUMBER
11/29/2016	REVISED MAINTENANCE OF TRAFFIC SP	22
1/9/2017	REVISED DATE FOR STANDARD DRAWING "PM-2", REMOVED "HIGH PERFORMANCE PAVEMENT MARKING" SP AND QUANTITIES, ADDED "ENHANCED THERMOPLASTIC PAVEMENT MARKING" SP AND QUANTITIES, ADDED "GUARDRAIL (TYPE A SPECIAL)" QUANTITY, REVISED GUARDRAIL QUANTITIES, ADDED SP "DELAY IN RAILROAD RIGHT OF ENTRY", UPDATED SP "UTILITY ADJUSTMENTS"	2, 17, 18,19, 20, 22, 23,25, 27, 29, 30, 34, 35, 36, 52
2/6/2017	REMOVED SP "PROSECUTION AND PROGRESS - CALENDAR DAY CONTRACT WITH CPM"	2, 22
2/8/2017	REVISED QUANTITY NOTE AND QUANTITIES FOR REINFORCING STEEL-BRIDGE (GRADE 60) AND BRIDGE DECK REPAIR FOR POLYMER OVERLAY	20, 22
2/17/2017	REVISED QUANTITIES FOR "MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")", "AGGREGATE BASE COURSE (CLASS 7)", AND "ASPHALT BINDER (PG 76-22) IN ACHM SURFACE COURSE (1/2")", REVISED SPECIAL PROVISIONS "BRIDGE DECK REPAIR FOR POLYMER OVERLAYS", "CULVERT REHABILITATION", "DELAY IN RAILROAD RIGHT OF ENTRY", "POLYMER OVERLAY", AND "SITE USE (A+C METHOD) -CALENDAR DAY CONTRACT", ADDED SPECIAL DETAIL FOR RETAINING EXISTING GUARDRAIL	7A, 21, 22

1/9/17

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SUMMARY OF QUANTITIES AND REVISIONS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
1-9-17				6	ARK.			
				JOB NO.		BB0102	23	63

(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
1-11-17

EXIST R/W, COfA & FENCE

STA. 2405+03.50
BEGIN JOB BB0102
LOG MILE 209.36

BR. END STA. 2405+38.90

EXIST R/W

2400

2405

2410

EXIST WRFS

BR. END STA. 2405+38.90

EXIST R/W, COfA & FENCE

EXIST R/W

STA. 2400+00 IN PLACE
TYPE R DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H=4'-2")
18" x 98' R.C. PIPE OUTLET
TO RT.
RETAIN

EXIST R/W

STA. 2405+38.90 BR. END A
EXISTING 1322'-2½" COMP.
W-BEAM SPANS BRIDGE 3724A
40'-0" CLEAR ROADWAY
STA. 2418+61.10 BR. END A
PLACE POLYMER OVERLAY

BR. END STA. 2418+61.10

STA. 2418+96.6
BEGIN OVERLAY LT. MAIN LANES

2420

2425

2430

EXIST WRFS

10'
24'
30'
24'
10'

STA. 2418+96.6
BEGIN OVERLAY RT. MAIN LANES

STA. 2405+38.90 BR. END B
EXISTING 1322'-2½" CONT.COMP.
W-BEAM SPANS BRIDGE 3724B
40'-0" CLEAR ROADWAY
STA. 2418+61.10 BR. END B
PLACE POLYMER OVERLAY

BR. END STA. 2418+61.10

EXIST R/W

EXIST R/W, COfA & FENCE

RETAIN EXISITNG GUARDRAIL
STA. 2418+96.10 TO STA. 2445+34.85 RT. SIDE RT. MAIN LANES
STA. 2418+96.10 TO STA. 2445+68.85 LT. SIDE LT. MAIN LANES

INSTALL GUARDRAIL & THRIE BEAM GUARDRAIL TERMINAL

	GUARDRAIL (TYPE A)	GUARDRAIL (TYPE A SPECIAL)	THRIE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)
STA. 2418+71.10 TO STA. 2418+96.10 RT. SIDE RT. MAIN LANES		7 LIN. FT.	1 EACH	
STA. 2418+71.10 TO STA. 2422+39.85 LT. SIDE RT. MAIN LANES	300 LIN. FT.		1 EACH	
STA. 2418+71.10 TO STA. 2422+39.85 RT. SIDE LT. MAIN LANES	300 LIN. FT.		1 EACH	1 EACH
STA. 2418+71.10 TO STA. 2418+96.10 LT. SIDE LT. MAIN LANES		7 LIN. FT.	1 EACH	1 EACH

STA. 2524+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H=2'-10")
18" x 62' R.C. PIPE OUTLET
TO RT. WITH F.E.S.
RETAIN

EXIST R/W, COfA & FENCE

STA. 2528+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H=2'-10")
18" x 62' R.C. PIPE OUTLET
TO RT. WITH F.E.S.
RETAIN

1/9/2017

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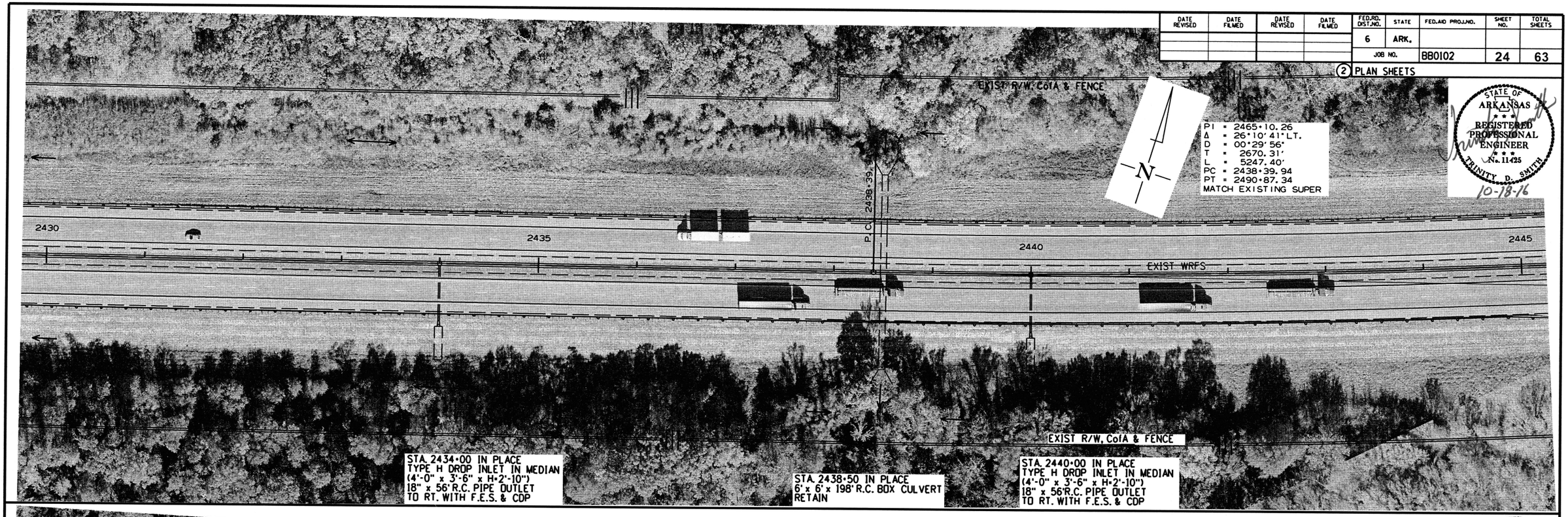
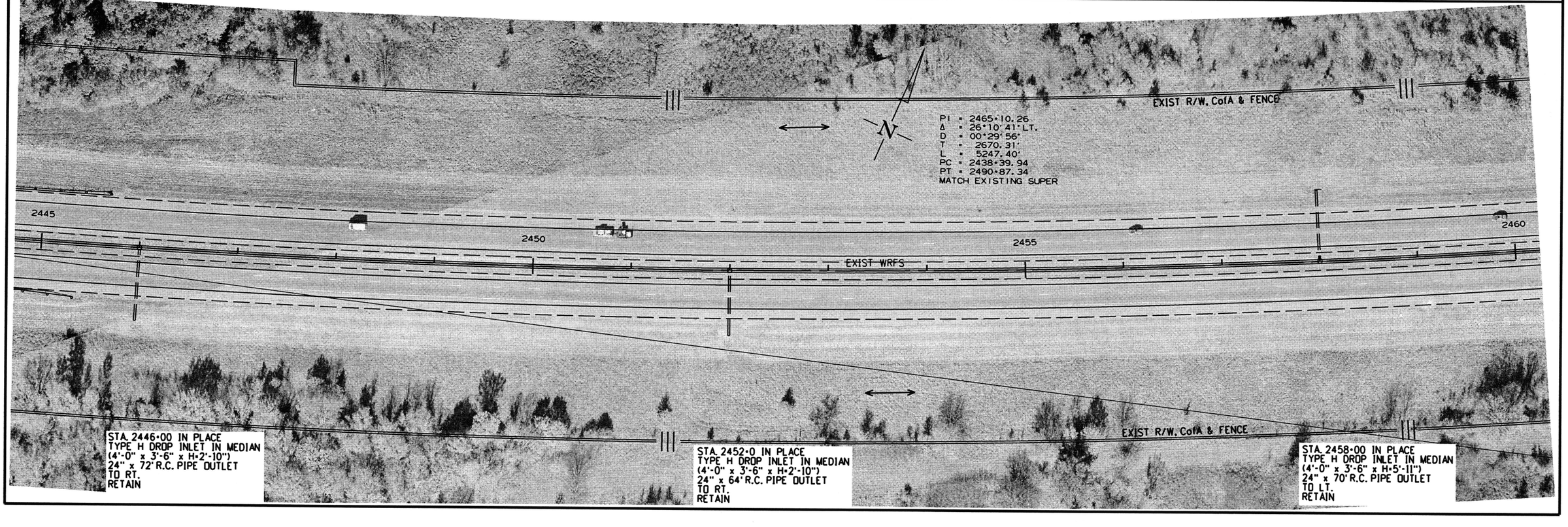
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0102	24	63

(2) PLAN SHEETS



STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-13-16



10/13/2016

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
1-9-17				6	ARK.			
				JOB NO.		BB0102	25	63

(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
1-11-17

STA. 2462+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H=2'-11")
18" x 78' R.C. PIPE OUTLET
TO LT.
RETAIN

STA. 2466+00 IN PLACE
48" x 160' R.C. PIPE CULVERT
RETAIN

STA. 2470+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H=6'-2")
24" x 70' R.C. PIPE OUTLET
TO LT.
RETAIN

EXIST R/W, Co\A & FENCE

PI = 2465+10.26
Δ = 26°10'41" LT.
D = 00°29'56"
T = 2670.31'
L = 5247.40'
PC = 2438+39.94
PT = 2490+87.34
MATCH EXISTING SUPER

2460 2465 2470 2475

EXIST WRFS

EXIST R/W, Co\A & FENCE

STA. 2476+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H=6'-0")
24" x 70' R.C. PIPE OUTLET
TO LT.
RETAIN

STA. 2482+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H=2'-10")
18" x 58' R.C. PIPE OUTLET
TO LT. WITH FES & CDP
RETAIN

STA. 2482+50 IN PLACE
6' x 6' x 198' R.C. BOX CULVERT
RETAIN

STA. 2488+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H=2'-10")
18" x 58' R.C. PIPE OUTLET
TO LT. WITH FES & CDP
RETAIN

EXIST R/W, Co\A & FENCE

EXIST R/W, C of A & FENCE

PI = 2465+10.26
Δ = 26°10'41" LT.
D = 00°29'56"
T = 2670.31'
L = 5247.40'
PC = 2438+39.94
PT = 2490+87.34
MATCH EXISTING SUPER

2475 2480 2485 2490

EXIST WRFS

EXIST R/W, Co\A & FENCE

EXIST R/W

RETAIN EXISITNG GUARDRAIL
STA. 2477+00.00 TO STA. 2492+50.00 LT. SIDE LT. MAIN LANES
STA. 2477+36.00 TO STA. 2487+61.00 RT. SIDE RT. MAIN LANES

1/9/2017

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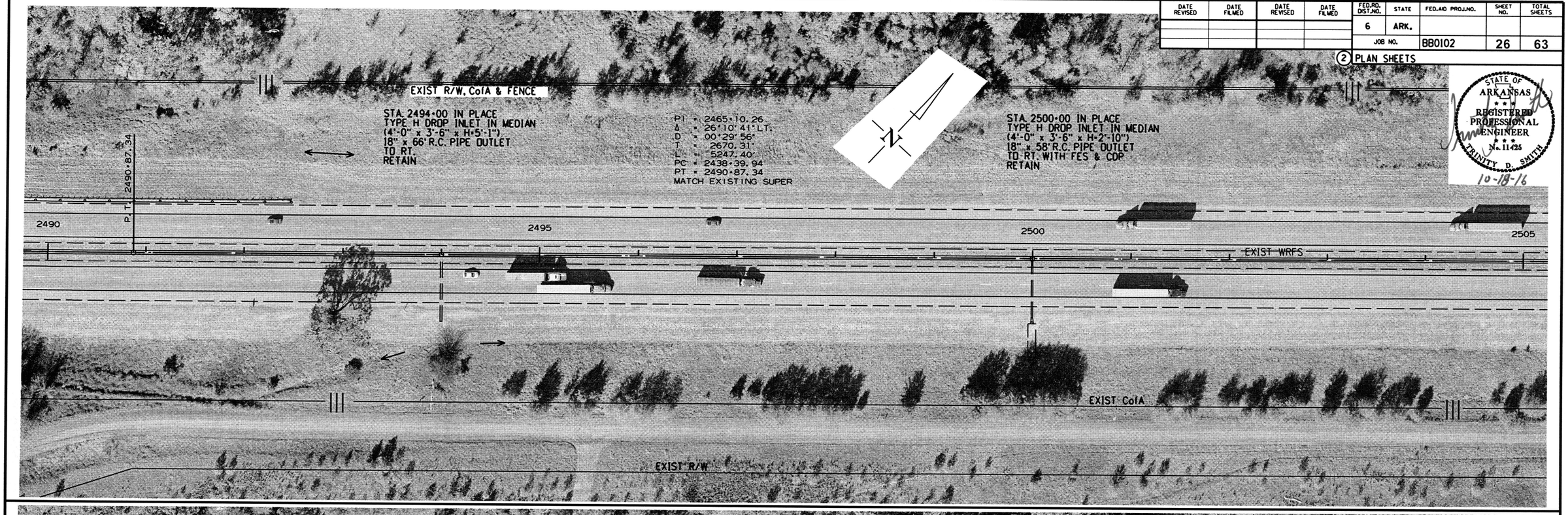
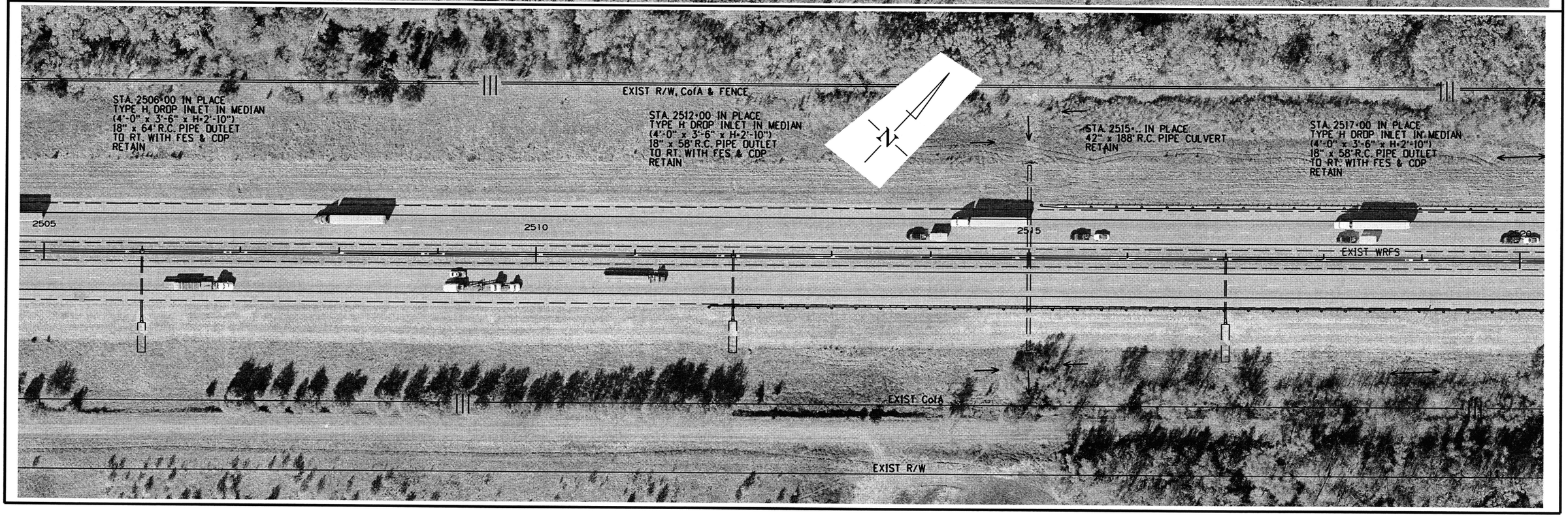
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0102	26	63

(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-18-16





10/13/2016

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
1-9-17				6	ARK.			
				JOB NO.		BB0102	27	63

(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
1-11-17

STA. 2521+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H=2'-10")
18" x 58' R.C. PIPE OUTLET
TO LT. WITH FES & CDP
RETAIN

EXIST R/W

EXIST R/W, CofA & FENCE

EXIST CofA

STA. 2527+39.92 BR. END A
EXISTING 134'-2" CONT. COMP.
W-BEAM SPANS BRIDGE A3727
40'-0" CLEAR ROADWAY
STA. 2528+74.08 BR. END A
PLACE POLYMER OVERLAY

BR. END 2527+39.92

BR. END 2528+74.08

EXIST R/W, CofA & FENCE

STA. 2535+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H=2'-10")
18" x 58' R.C. PIPE OUTLET
TO LT. WITH FES & CDP
RETAIN

2520 2525 2530 2535

EXIST WRFS

RETAIN EXISITNG GUARDRAIL
STA. 2511+86.17 TO STA. 2527+04.92 RT. SIDE RT. MAIN LANES
STA. 2525+11.17 TO STA. 2527+04.92 LT. SIDE LT. MAIN LANES

EXIST CofA

STA. 2527+39.92 BR. END B
EXISTING 134'-2" CONT.COMP.
W-BEAM SPANS BRIDGE B3727
40'-0" CLEAR ROADWAY
STA. 2528+74.08 BR. END B
PLACE POLYMER OVERLAY

RETAIN EXISITNG GUARDRAIL
STA. 2529+09.08 TO STA. 2573+02.83 RT. SIDE RT. MAIN LANES
STA. 2529+09.08 TO STA. 2573+52.83 LT. SIDE LT. MAIN LANES

INSTALL GUARDRAIL & THRIE BEAM GUARDRAIL TERMINAL

	GUARDRAIL (TYPE A)	GUARDRAIL (TYPE A SPECIAL)	THRIE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)
STA. 2527+04.92 TO STA. 2527+29.92 RT. SIDE RT. MAIN LANES		7 LIN. FT.	1 EACH	
STA. 2523+61.17 TO STA. 2527+29.92 LT. SIDE RT. MAIN LANES	300 LIN. FT.		1 EACH	1 EACH
STA. 2523+61.17 TO STA. 2527+29.92 RT. SIDE LT. MAIN LANES	300 LIN. FT.		1 EACH	
STA. 2527+04.92 TO STA. 2527+29.92 LT. SIDE LT. MAIN LANES		7 LIN. FT.	1 EACH	

INSTALL GUARDRAIL & THRIE BEAM GUARDRAIL TERMINAL

	GUARDRAIL (TYPE A)	GUARDRAIL (TYPE A SPECIAL)	THRIE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)
STA. 2528+84.08 TO STA. 2529+09.08 RT. SIDE RT. MAIN LANES		7 LIN. FT.	1 EACH	
STA. 2528+84.08 TO STA. 2532+52.83 LT. SIDE RT. MAIN LANES	300 LIN. FT.		1 EACH	1 EACH
STA. 2528+84.08 TO STA. 2532+52.83 RT. SIDE LT. MAIN LANES	300 LIN. FT.		1 EACH	
STA. 2528+84.08 TO STA. 2529+09.08 LT. SIDE LT. MAIN LANES		7 LIN. FT.	1 EACH	

STA. 2538+00 IN PLACE
6' x 6' x 184' R.C. BOX CULVERT
RETAIN

STA. 2539+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H=2'-10")
18" x 58' R.C. PIPE OUTLET
TO LT. WITH FES & CDP
RETAIN

STA. 2544+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H=2'-10")
18" x 58' R.C. PIPE OUTLET
TO LT. WITH FES & CDP
RETAIN

STA. 2550+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H=2'-10")
18" x 58' R.C. PIPE OUTLET
TO LT. WITH FES & CDP
RETAIN

EXIST R/W, CofA & FENCE

2535 2540 2545 2550

N 47°10'46" E

EXIST WRFS

EXIST R/W, CofA & FENCE

1/9/2017

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0102	28	63

(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-18-16

STA. 2556+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H+2'-10")
18" x 58' R.C. PIPE OUTLET
TO LT. WITH FES & CDP
RETAIN

STA. 2560+00 IN PLACE
6' x 6' x 184' R.C. BOX CULVERT
RETAIN

STA. 2562+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H+2'-10")
18" x 58' R.C. PIPE OUTLET
TO LT. WITH FES & CDP
RETAIN

EXIST R/W, CofA & FENCE

2550 2555 2560 2565

EXIST WRFS

EXIST R/W, CofA & FENCE

STA. 2568+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H+2'-10")
18" x 58' R.C. PIPE OUTLET
TO LT. WITH FES & CDP
RETAIN

STA. 2571+00 CONSTRUCT MEDIAN CROSSING
REMOVE EXISTING WRSF STA. 2570+74 TO STA. 2571+26
AND CONCRETE DITCH PAVING 62 SQ. YDS.
CONSTRUCT ANCHOR POSTS STA. 2570+74 AND STA. 2571+26

STA. 2572+00 IN PLACE
42" x 180' C.M. PIPE CULVERT
RETAIN & CULVERT REHABILITATION

STA. 2574+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H+2'-10")
18" x 58' R.C. PIPE OUTLET
TO LT. WITH FES & CDP
RETAIN

STA. 2577+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H+2'-10")
18" x 56' R.C. PIPE OUTLET
TO LT. WITH FES & CDP
RETAIN

EXIST R/W, CofA & FENCE

2565 2570 2575 2580

EXIST WRFS

EXIST R/W, CofA & FENCE

10/13/2016

rBB0105.dgn

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
1-9-17				6	ARK.			
				JOB NO.		BB0102	29	63

(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
1-11-17

STA. 2583+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H=2'-10")
18" x 58' R.C. PIPE OUTLET
TO LT. WITH FES & CDP
RETAIN

STA. 2588+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H=2'-9")
24" x 58' R.C. PIPE OUTLET
TO LT. WITH FES
RETAIN

EXIST R/W

EXIST R/W, Col'A & FENCE

EXIST Col'A

2580 2585 2590 2595

10' 24' 30' 24' 10'

2586+21.23

EXIST WRFS

EXIST R/W, Col'A & FENCE

PI = 2648+15.24
Δ = 39°37'59" RT.
D = 00°20'00"
T = 6194.00'
L = 11890.06'
PC = 2586+21.23
PT = 2705+11.29
MATCH EXISTING SUPER

STA. 2595+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H=4'-1")
24" x 58' R.C. PIPE OUTLET
TO RT. WITH FES
RETAIN

EXIST R/W

EXIST Col'A

2595 2600 2605 2610

EXIST WRFS

EXIST R/W, Col'A & FENCE

RETAIN EXISITNG GUARDRAIL
STA. 2607+00.00 TO STA. 2611+50.00 LT. SIDE LT. MAIN LANES

STA. 2601+00 IN PLACE
24" x 226' C.M. PIPE CULVERT
(30° RT. FWD. SKEW)
RETAIN & CULVERT REHABILITATION

STA. 2601+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H=2'-10")
18" x 62' R.C. PIPE OUTLET
TO LT. WITH FES & CDP
RETAIN

PI = 2648+15.24
Δ = 39°37'59" RT.
D = 00°20'00"
T = 6194.00'
L = 11890.06'
PC = 2586+21.23
PT = 2705+11.29
MATCH EXISTING SUPER

STA. 2608+00 IN PLACE
DBL. 5'x 4' x 208' R.C. BOX CULVERT
(30° RT. FWD. SKEW) WITH
TYPE K DROP INLET IN MEDIAN
OVER R.C. BOX
RETAIN

1/9/2017

rBB0105.dgn

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
1-9-17				6	ARK.			
				JOB NO.		BB0102	30	63

(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
1-11-17

EXIST R/W

EXIST Col A

2610 2615 2620 2625

EXIST WRFS

PI = 2648+15.24
Δ = 39°37'59" RT.
D = 00°20'00"
T = 6194.00'
L = 11890.06'
PC = 2586+21.23
PT = 2705+11.29
MATCH EXISTING SUPER

EXIST R/W, Col A & FENCE

STA. 2613+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H=2'-9"
24" x 72' R.C. PIPE OUTLET
TO LT. WITH FES
RETAIN

STA. 2619+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H=2'-9"
24" x 72' R.C. PIPE OUTLET
TO LT. WITH FES
RETAIN

STA. 2625+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H=2'-9")
24" x 72' R.C. PIPE OUTLET
TO RT. WITH FES
RETAIN

EXIST R/W

INSTALL GUARDRAIL & THRIE BEAM GUARDRAIL TERMINAL

	GUARDRAIL (TYPE A SPECIAL)	THRIE BEAM GUARDRAIL TERMINAL
STA. 2633+14.00 TO STA. 2633+39.00 RT. SIDE RT. MAIN LANES	7 LIN. FT.	1 EACH
STA. 2634+44.00 TO STA. 2634+69.00 LT. SIDE LT. MAIN LANES	7 LIN. FT.	1 EACH

RETAIN EXISITNG GUARDRAIL
STA. 2630+64.00 TO STA. 2633+14.00 RT. SIDE RT. MAIN LANES
STA. 2630+08.00 TO STA. 2635+08.00 LT. SIDE RT. MAIN LANES
STA. 2632+75.00 TO STA. 2637+75.00 RT. SIDE LT. MAIN LANES
STA. 2634+69.00 TO STA. 2637+19.00 LT. SIDE LT. MAIN LANES

EXIST Col A

LT. MAIN LANES
350' COLD MILL TRANSITION

LT. MAIN LANES
100' COLD MILL

LT. MAIN LANES
350' COLD MILL TRANSITION

2625 2630 2635 2640

EXIST WRFS

STA. 8+91.73 BR. END
EXISTING 216'-6½" COMP.
I-BEAM SPANS BRIDGE 03729
20'-0" CLEAR ROADWAY
STA. 11+08.27 BR. END
RETAIN

BR. END 8+91.73

S 1°03'04" W

N

EXIST R/W

EXIST R/W, Col A & FENCE

EXIST Col A

EXIST Col A

BR. END STA. 11+08.27

EXIST R/W, Col A & FENCE

CONC. BARIER WALL
PIER PROTECTION
(TYPE A)
STA. 2633+39.00 TO STA. 2633+65.00 RT. SIDE RT. MAIN LANES 26 LIN. FT.
STA. 2634+18.00 TO STA. 2634+44.00 LT. SIDE LT. MAIN LANES 26 LIN. FT.

STA. 2631+00 IN PLACE
4' x 3' x 162' R.C. BOX CULVERT
WITH TYPE K DROP INLET IN MEDIAN
OVER R.C. BOX
RETAIN

EXISTING VERTICAL CLEARANCE UNDER BRIDGE NO. 03729 IS 15.89' WESTBOUND AND 16.25' EASTBOUND
MINIMUM 16'-0" VERTICAL CLEARANCE IS REQUIRED FROM FINISHED ROADWAY.
NOTE: THE ABOVE LISTED EXISTING VERTICAL CLEARANCE SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION.

PI = 2648+15.24
Δ = 39°37'59" RT.
D = 00°20'00"
T = 6194.00'
L = 11890.06'
PC = 2586+21.23
PT = 2705+11.29
MATCH EXISTING SUPER

STA. 2638+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H=2'-9")
24" x 68' R.C. PIPE OUTLET
TO RT. WITH FES
RETAIN

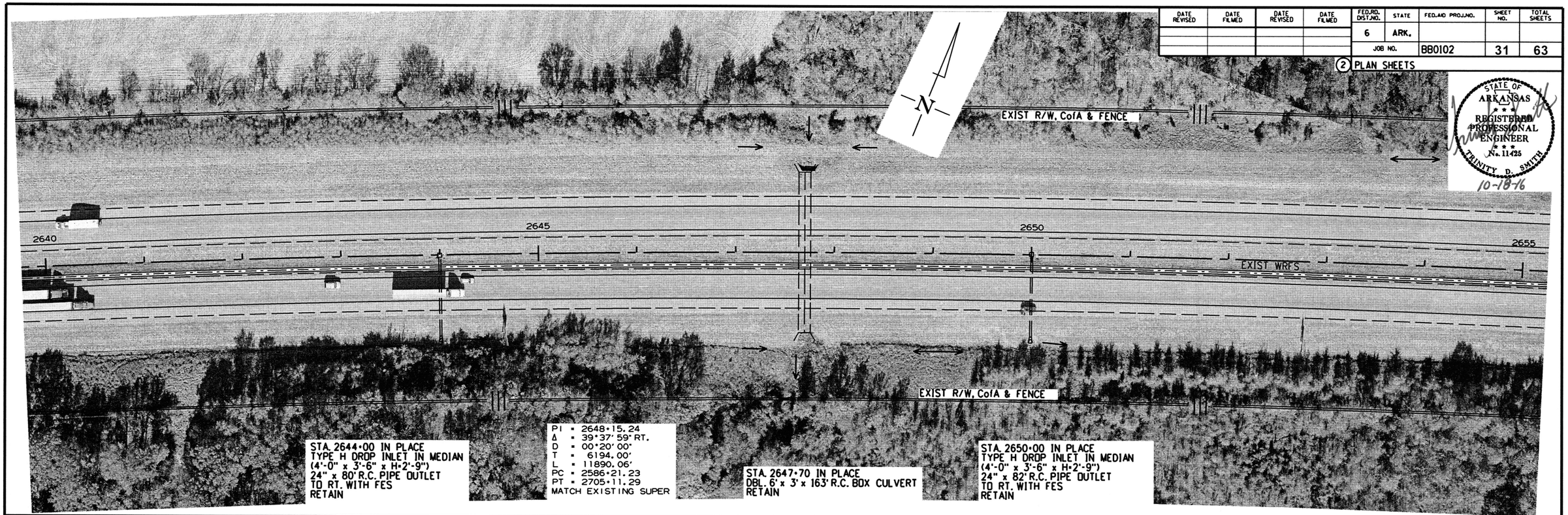
1/9/2017

r880102.dgn

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0102	31	63

(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-18-16

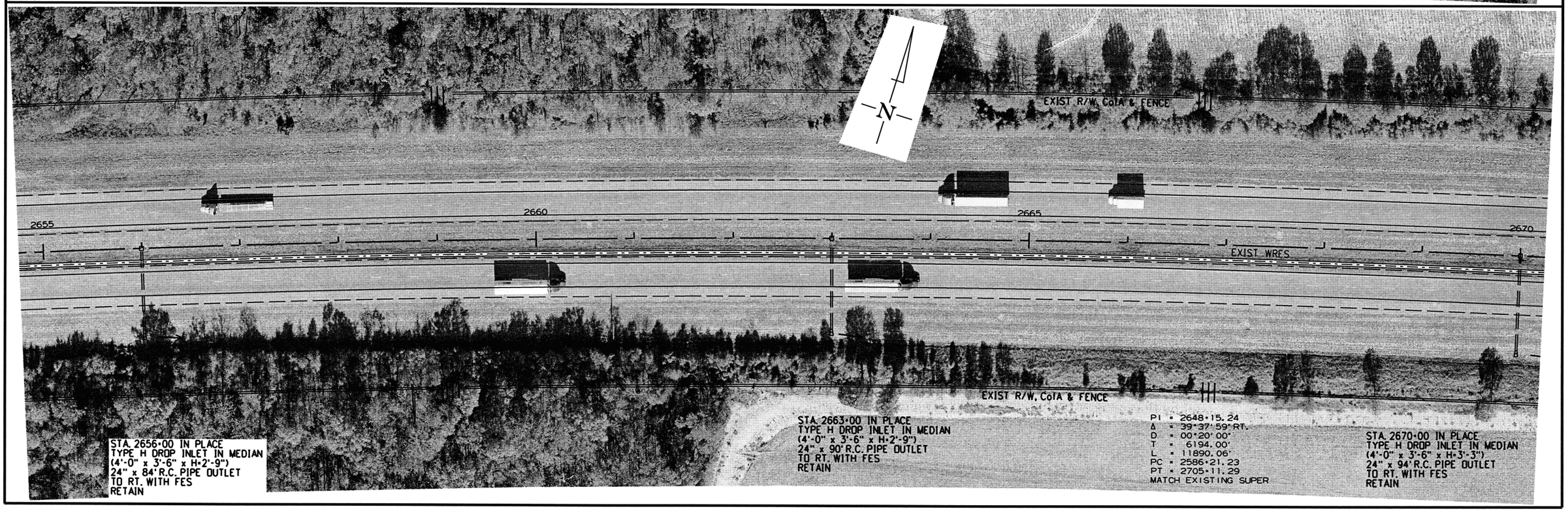


STA. 2644+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H=2'-9")
24" x 80' R.C. PIPE OUTLET
TO RT. WITH FES
RETAIN

PI = 2648+15.24
Δ = 39°37'59" RT.
D = 00°20'00"
T = 6194.00'
L = 11890.06'
PC = 2586+21.23
PT = 2705+11.29
MATCH EXISTING SUPER

STA. 2647+70 IN PLACE
DBL. 6' x 3' x 163' R.C. BOX CULVERT
RETAIN

STA. 2650+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H=2'-9")
24" x 82' R.C. PIPE OUTLET
TO RT. WITH FES
RETAIN



STA. 2656+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H=2'-9")
24" x 84' R.C. PIPE OUTLET
TO RT. WITH FES
RETAIN

STA. 2663+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H=2'-9")
24" x 90' R.C. PIPE OUTLET
TO RT. WITH FES
RETAIN

PI = 2648+15.24
Δ = 39°37'59" RT.
D = 00°20'00"
T = 6194.00'
L = 11890.06'
PC = 2586+21.23
PT = 2705+11.29
MATCH EXISTING SUPER

STA. 2670+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H=3'-3")
24" x 94' R.C. PIPE OUTLET
TO RT. WITH FES
RETAIN

10/13/2016

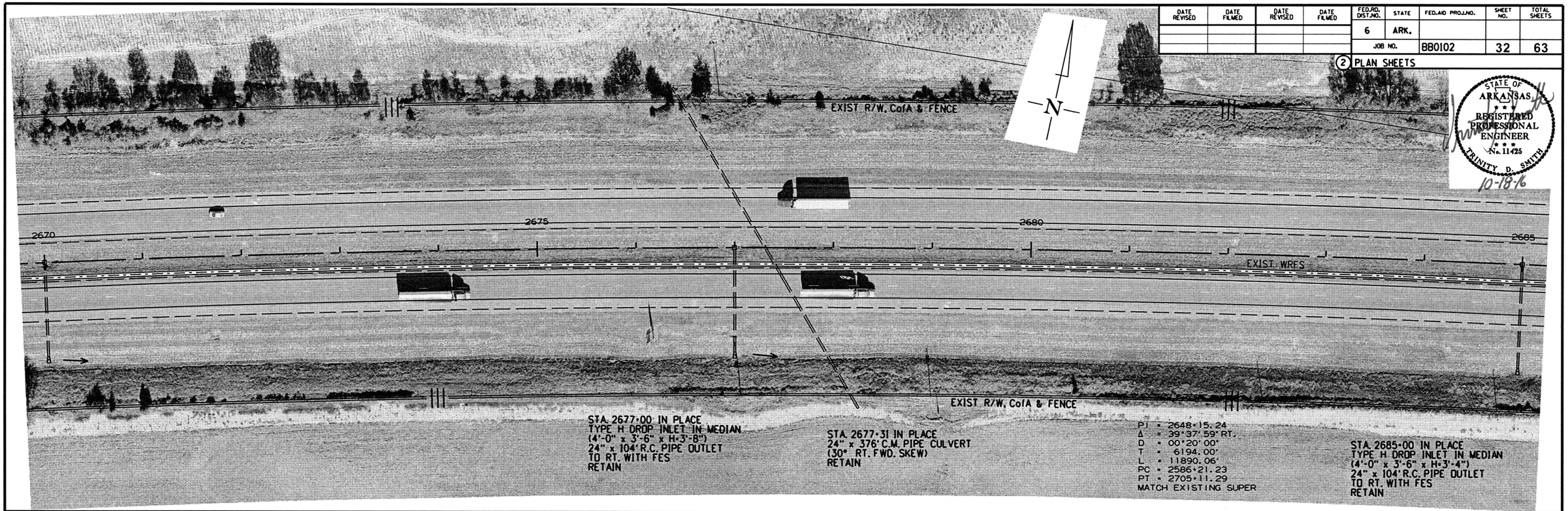
rBB0102.dgn

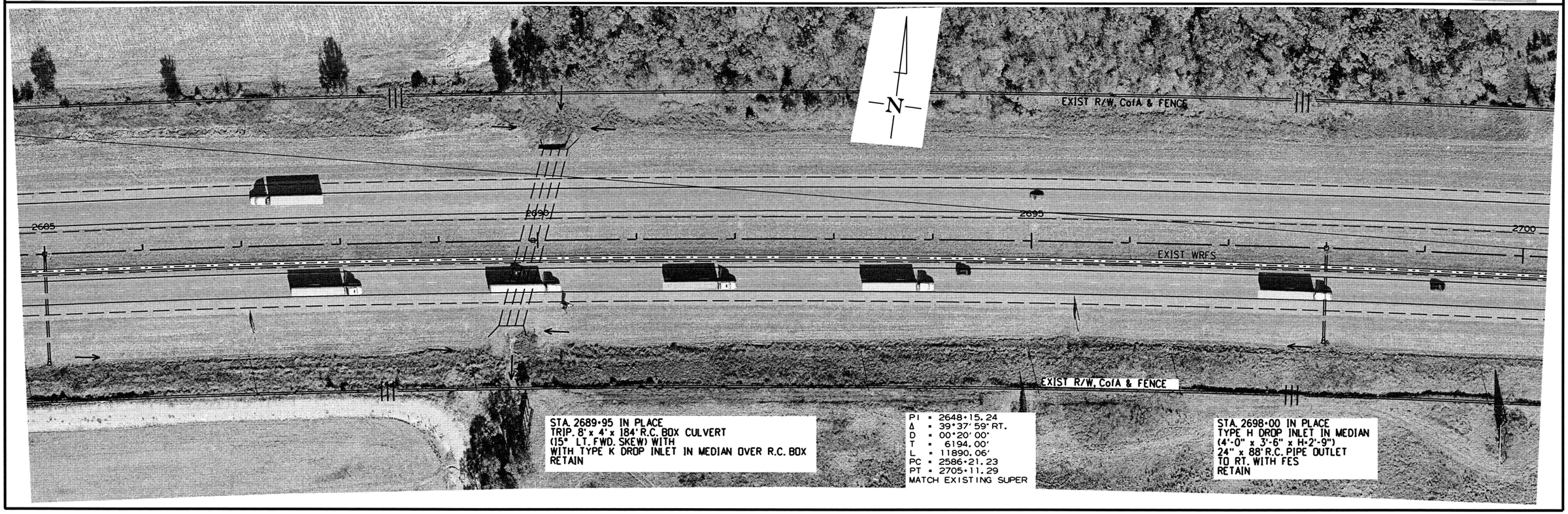
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0102	32	63

(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-18-16





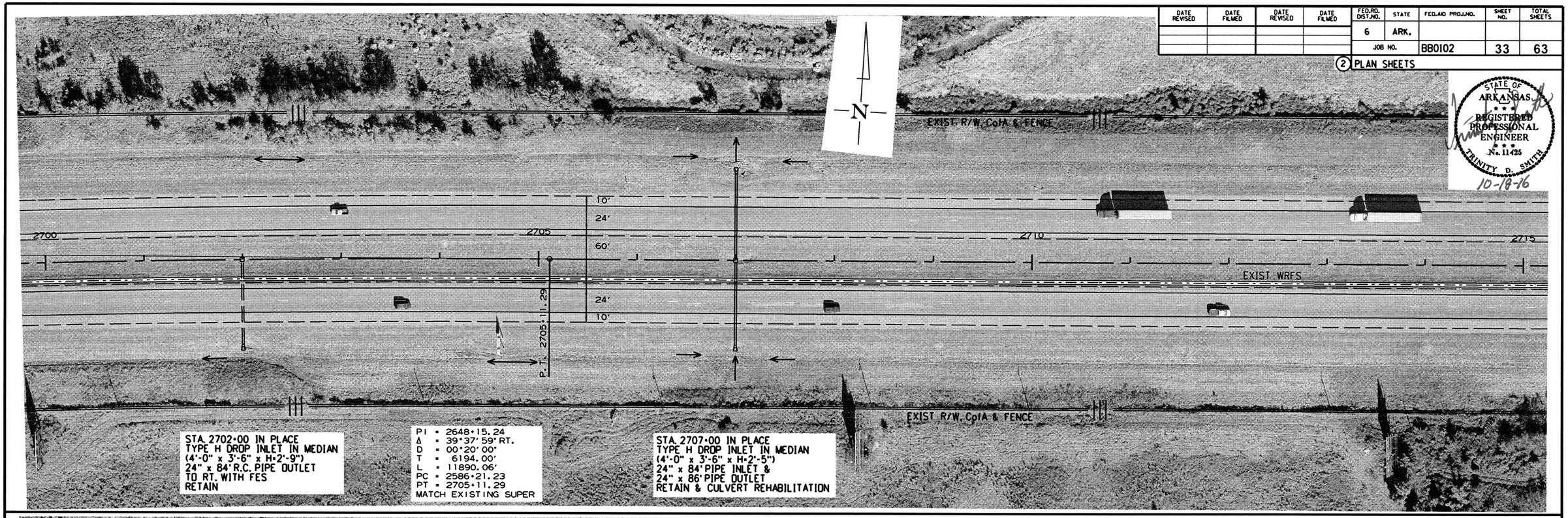
10/13/2016

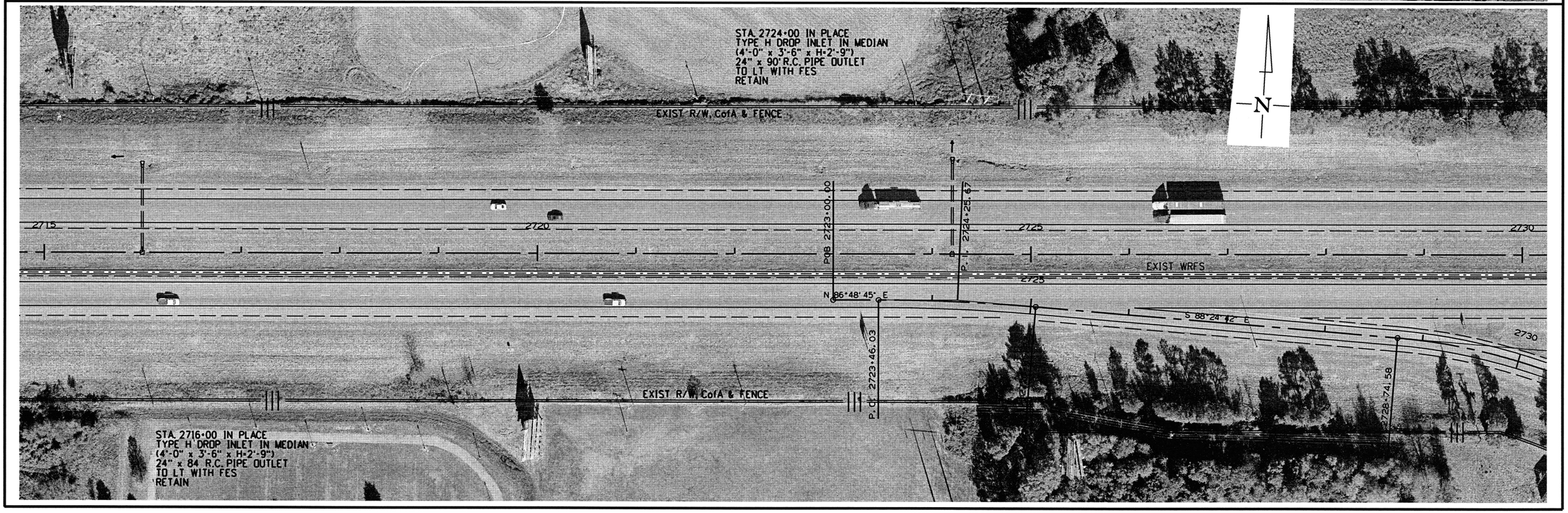
rBB0102.dgn

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0102	33	63

(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-18-16





10/13/2016

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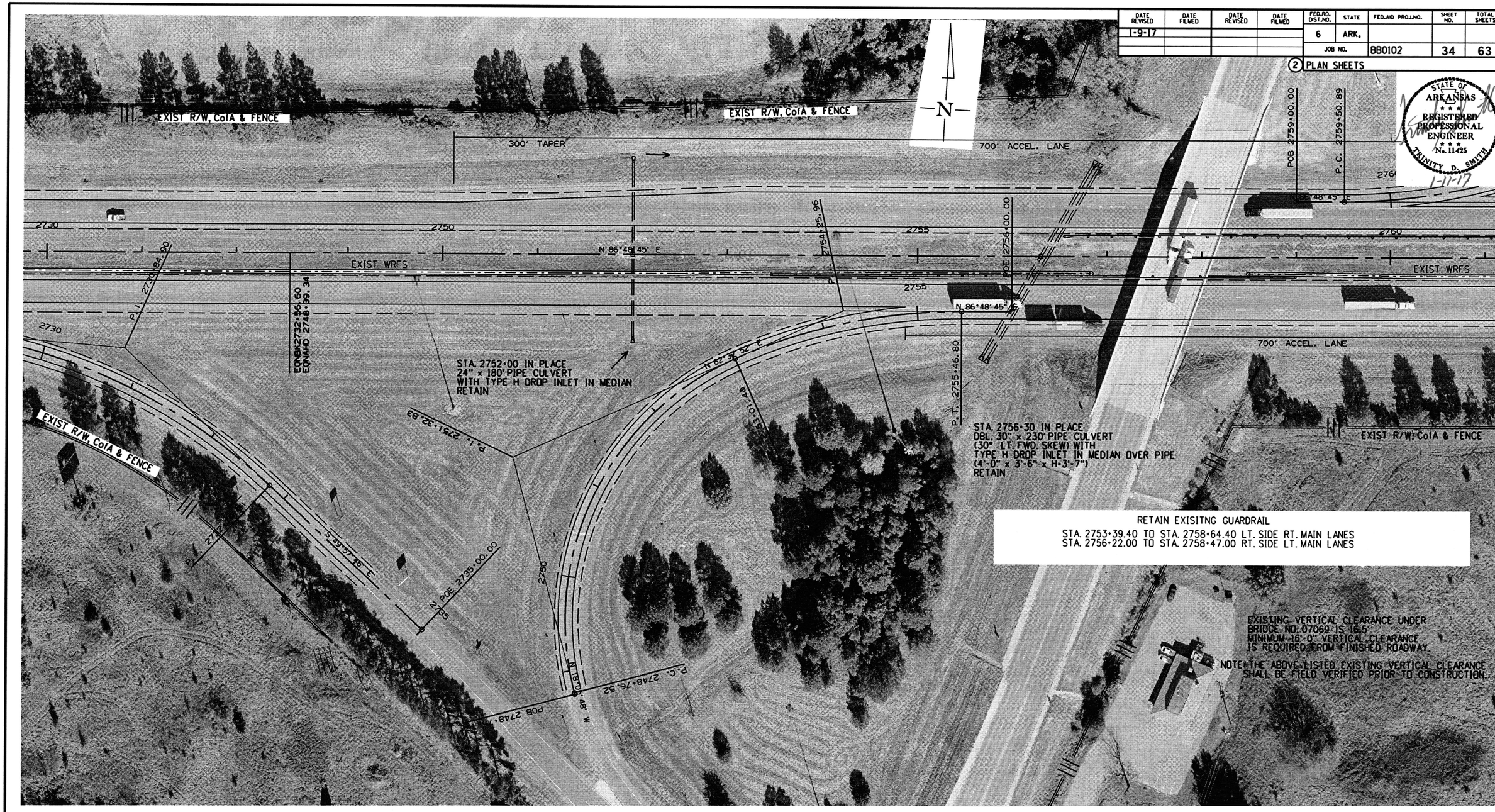
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
1-9-17				6	ARK.			
				JOB NO.		BB0102	34	63

(2) PLAN SHEETS



STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
1-11-17

1/9/2017

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
1-9-17				6	ARK.			
				JOB NO.		BB0102	35	63
				(2) PLAN SHEETS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
1-11-17



RETAIN EXISITNG GUARDRAIL
STA. 2768+54.17 TO STA. 2774+29.17 LT. SIDE RT. MAIN LANES
STA. 2771+41.17 TO STA. 2774+29.17 RT. SIDE RT. MAIN LANES
STA. 2773+08.67 TO STA. 2774+29.17 LT. SIDE LT. MAIN LANES

INSTALL GUARDRAIL & THRIE BEAM GUARDRAIL TERMINAL

	GUARDRAIL (TYPE A)	GUARDRAIL (TYPE A SPECIAL)	THRIE BEAM GUARDRAIL TERMINAL
STA. 2777+29.17 TO STA. 2777+54.17 RT. SIDE RT. MAIN LANES	7 LIN. FT.	7 LIN. FT.	1 EACH
STA. 2777+29.17 TO STA. 2777+54.17 LT. SIDE RT. MAIN LANES			1 EACH
STA. 2777+29.17 TO STA. 2777+54.17 LT. SIDE LT. MAIN LANES		7 LIN. FT.	1 EACH

STA. 2761+70 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H-2'-9")
24" x 86' R.C. PIPE OUTLET
TO RT. WITH FES
RETAIN

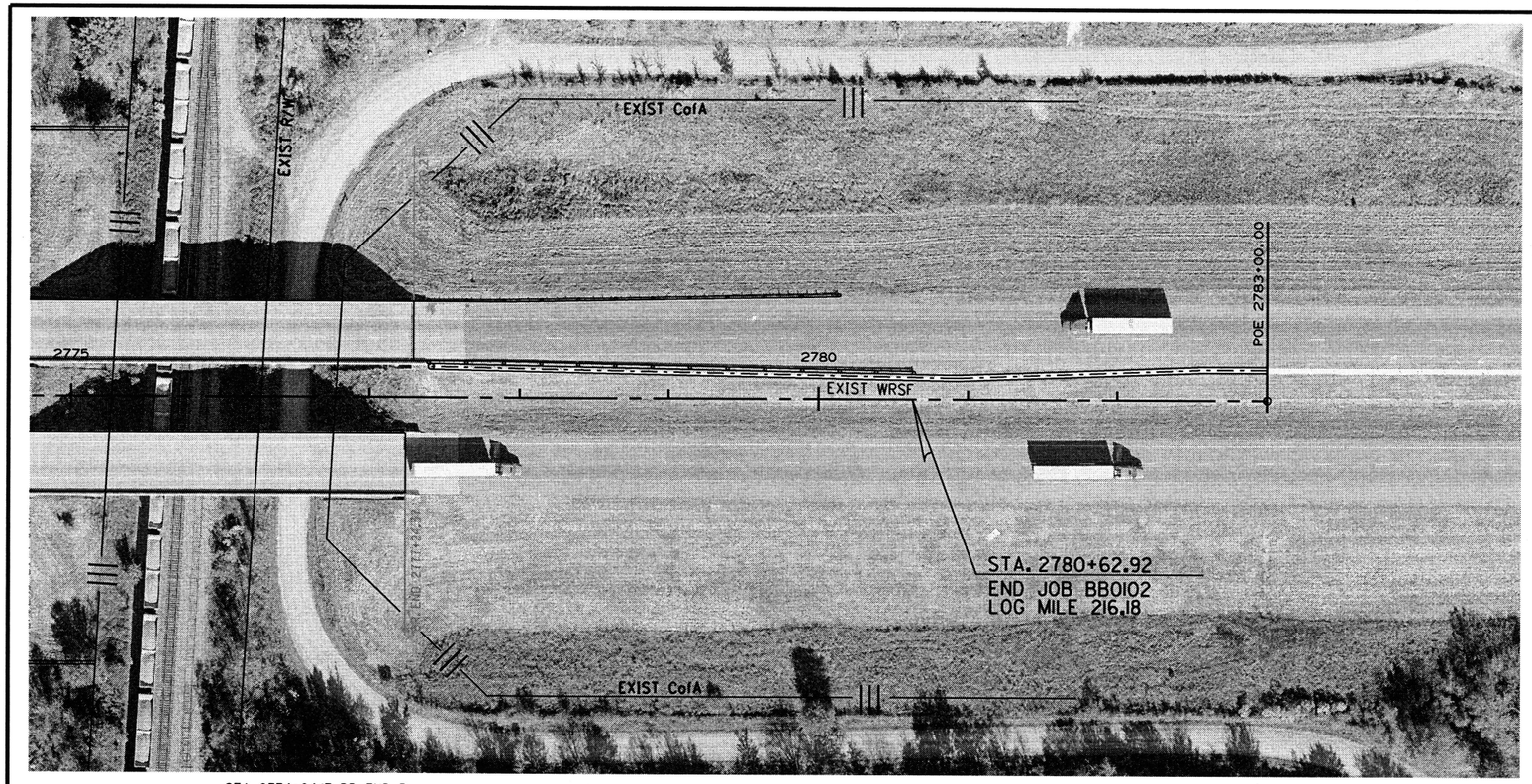
STA. 2765+70 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H-5'-5")
24" x 100' R.C. PIPE OUTLET
TO RT. WITH FES & CDP
RETAIN

STA. 2769+00 IN PLACE
TYPE H DROP INLET IN MEDIAN
(4'-0" x 3'-6" x H-5'-5")
18" x 86' R.C. PIPE OUTLET
WITH FES & CDP
RETAIN

1/9/2017

rBB0102.dgn

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
1-9-17				6	ARK.			
				JOB NO.		BB0102	36	63
				(2) PLAN SHEETS				





STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
1-11-17

STA. 2774+64.17 BR. END B
EXISTING 260'-2⅜" CONT. COMP.
W-BEAM SPANS BRIDGE B3731
40'-0" CLEAR ROADWAY
STA. 2777+24.37 BR. END
PLACE POLYMER OVERLAY

STA. 2774+69.07 BR. END A
EXISTING 260'-2⅜" CONT. COMP
W-BEAM SPANS BRIDGE A3731
40'-0" CLEAR ROADWAY
STA. 2777+29.27 BR. END A
PLACE POLYMER OVERLAY

RETAIN EXISITNG GUARDRAIL

STA. 2777+69.17 TO STA. 2780+62.92 RT. SIDE LT. MAIN LANES
STA. 2777+69.17 TO STA. 2780+12.92 LT. SIDE LT. MAIN LANES

INSTALL GUARDRAIL & THRIE BEAM GUARDRAIL TERMINAL

	GUARDRAIL (TYPE A)	GUARDRAIL (TYPE A SPECIAL)	THRIE BEAM GUARDRAIL TERMINAL
STA. 2777+44.17 TO STA. 2777+69.17 RT. SIDE LT. MAIN LANES	7 LIN. FT.		1 EACH
STA. 2777+44.17 TO STA. 2777+69.17 LT. SIDE LT. MAIN LANES		7 LIN. FT.	1 EACH

1/9/2017

rBB0102.dgn

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				5	ARK.			
				JOB NO.		BB0102	37	63
				(1) A&B3724		LAYOUT		35748

HYDRAULIC DATA

	FREQUENCY	DISCHARGE CFS	WATER SURFACE ELEVATION
Design Flood	Q 50	10,670	175.4
Basic Flood	Q 100	12,040	178.2
Extreme Flood	Q 500	14,850	181.1
Drainage Area = 675 Sq. Mi.			
Historical H.W. Elev.=188.0 (1927)			

7 1/4 Miles To Biscoe Interchange

℄ Req'd Bridge A

Remove Existing Approach Slabs & Gutters. Replace with New Approach Slab & Type Special Gutters. See Drawings Nos. 35743 And 35744.

Remove Existing Crash Barriers. See Roadway Plans for Details.

℄ Existing Bridge A and Roadway

Open Parapet Typ. Except Closed Parapet @ Bents. See Slab Plans.

For Continuation See Sheet 35749

MATCH LINE

10'-0" Shld. | 40'-0" | 6'-0" Shld. | 24'-0" Pvmt. | 2'-0" | 12' | 12' | 2'-0" | 27'-0" | PGL | ℄ I-40

2404+00 | 2405+00 | 2406+00 | 2407+00 | 2408+00 | 2409+00 | 2410+00 | 2411+00 | 2412+00

40'-0" New Cl.Rdwy. | 1'-5" New Parapet | 8'-0" | 28'-0" Exist. | 4'-0"

New 3" Strip Seal Joint

0.02 FT./FT. Slope (Typ.)

Closed Parapet (Typ.)

N 73° 35' 29" E ℄ I-40

TRAFFIC | TRAFFIC

℄ Req'd Bridge B

Outline of Existing Rip-Rap

℄ Existing Bridge B and Roadway

℄ Denotes Boring Location

Open Parapet Typ. Except Closed Parapet @ Bents. See Slab Plans, Dwg. Nos. 35733, 35734 & 35735.

PVI @ Sta. 2412+00
Elev. = 197.32 at PGL
V.C. = 1200'
+ 0.68%
- 0.68%

PLAN

Begin Bridge Sta. 2405+38.90

Total Length of Bridge = 1322'-2 1/2"

New 7 Span Continuous Unit and New Concrete Deck

New 8 Span Continuous Unit and New Concrete Deck

1'-1" | 60'-0 1/4" Span | 6 Spans @ 60' = 360' | 8 Spans @ 60' = 480'

℄ 2 1/4" Strip Seal Joint

Guard Rail-see Rdwy.Plans

New Grade Line

220 | 200 | 180 | 160

Elev. = 192.54 (Exist. ℄ Elev. = 191.55)

℄ Bt. 2 Sta. 2406+00 Elev. = 192.96

℄ Bt. 3 Sta. 2406+60 Elev. = 193.35

4'-2 3/8" Typ. Bts. 2 & 3

℄ Bt. 4 Sta. 2407+20 Elev. = 193.69

4'-3 1/4" Typ. Bts. 4 & 5

℄ Bt. 5 Sta. 2407+80 Elev. = 194.00

℄ Bt. 6 Sta. 2408+40 Elev. = 194.27

4'-2 3/8" Typ. Bts. 6 - 11

℄ Bt. 7 Sta. 2409+00 Elev. = 194.49

℄ Bt. 8 Sta. 2409+60 Elev. = 194.67

℄ Bt. 9 Sta. 2410+20 Elev. = 194.82

℄ Bt. 10 Sta. 2410+80 Elev. = 194.92

℄ Bt. 11 Sta. 2411+40 Elev. = 194.98

℄ Bt. 12 Sta. 2412+00 Elev. = 195.00

4'-3 1/4"

MATCH LINE

New Concrete Parapet Rail

New 3" Strip Seal Joint

47' Piles
Drive a 52' Test Pile in Bent 1, Bridge A

New Battered Pile

El. 167±

El. 163±

Water Elev. 12/11/92

New Col. @ Exterior

Existing Footing

Existing Piles (Typ.)

New Drilled Shafts @ Exterior

BENT NO. 1 2 3 4 5 6 7 8 9 10 11 12

Proposed Cache River Relocation By Corp Of Engineers - 200 Ft. Bottom

30 20 10 0 30 60
SCALE IN FEET

Sta. 2406+60 ℄ I-40

14'-15'-N=21
19'-20'-N=34
24'-25'-N=33
29'-30'-N=40
34'-35'-N=27
39'-40'-N=34
44'-45'-N=31
49'-50'-N=72
54'-55'-N=33
59'-60'-N=42 (10" Bounce)

Sta. 2408+40 ℄ I-40

0.5'-1.5'-N=11
4'-5'-N=5
9'-10'-N=9
14'-15'-N=14
19'-20'-N=39
24'-25'-N=48
29'-30'-N=39
34'-35'-N=15
39'-40'-N=24
44'-45'-N=24
49'-50'-N=28
54'-55'-N=44
59'-60'-N=56
64'-65'-N=74
69'-70'-N=43
74'-75'-N=30
79'-80'-N=43
84'-85'-N=43
89'-90'-N=41
94'-95'-N=50/6"

ELEVATION
BRIDGE "A" & "B"

2405+00 | 2406+00 | 2407+00 | 2408+00 | 2409+00

BORING LOG - Sta. 2406+60

A-Loose brown silty sand
B-Firm gray & brown silty clay with sand.
C-Stiff tan & gray silty clay with ferrous stains & nodules.
D-Stiff tan & gray clay with silt pockets & ferrous nodules.
-clayey sand layer, 8.5 to 9 ft.
E-Loose gray silty fine sand.
F-Medium-dense gray fine to medium sand with trace fine to coarse gravel.
G-Dense below 19'.
H-Medium dense, 34 to 38 ft.
I-Dense gray fine to medium sand with trace fine to coarse gravel.
J-With coarse sand below 54'.

BORING LOG - Sta. 2408+40

A-Stiff brown sandy clay with roots & sand seams & pockets.
B-Loose tan to gray clayey fine sand with silty clay seams.
C-Medium dense gray fine sand with occasional clay seams.
D-Dense below 19 ft.
E-Dense grayish brown fine to medium sand with trace fine gravel.
F-Medium-dense, 34 to 54 ft.
G-Dense to medium-dense grayish brown fine to medium sand.
H-Dense below 54 ft.
I-Increasing fine gravel [illegible] ft.
J-Dense gray sandy fine [illegible] coarse gravel.

Note:
1. Stations & Dimensions Based Upon Existing Plans.
2. (E) Indicates Expansion Bearing. (F) Indicates Fixed Bearing.
3. Bridge A & B are the Same Except as Noted.
4. Roadway Elevations Shown are at ℄ New Bridges.
5. Vertical Dimensions are from ℄ Bridge to top of Low Riser.
6. For General Notes See Drawing 35717.
7. For Additional Data and Continuation of Bridge See Drawing 35749.

FOR INFORMATION ONLY

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9153
H. JAMES ENGSTROM
7/19/91

ENGSTROM/MODJESKI AND MASTERS
CONSULTING ENGINEERS

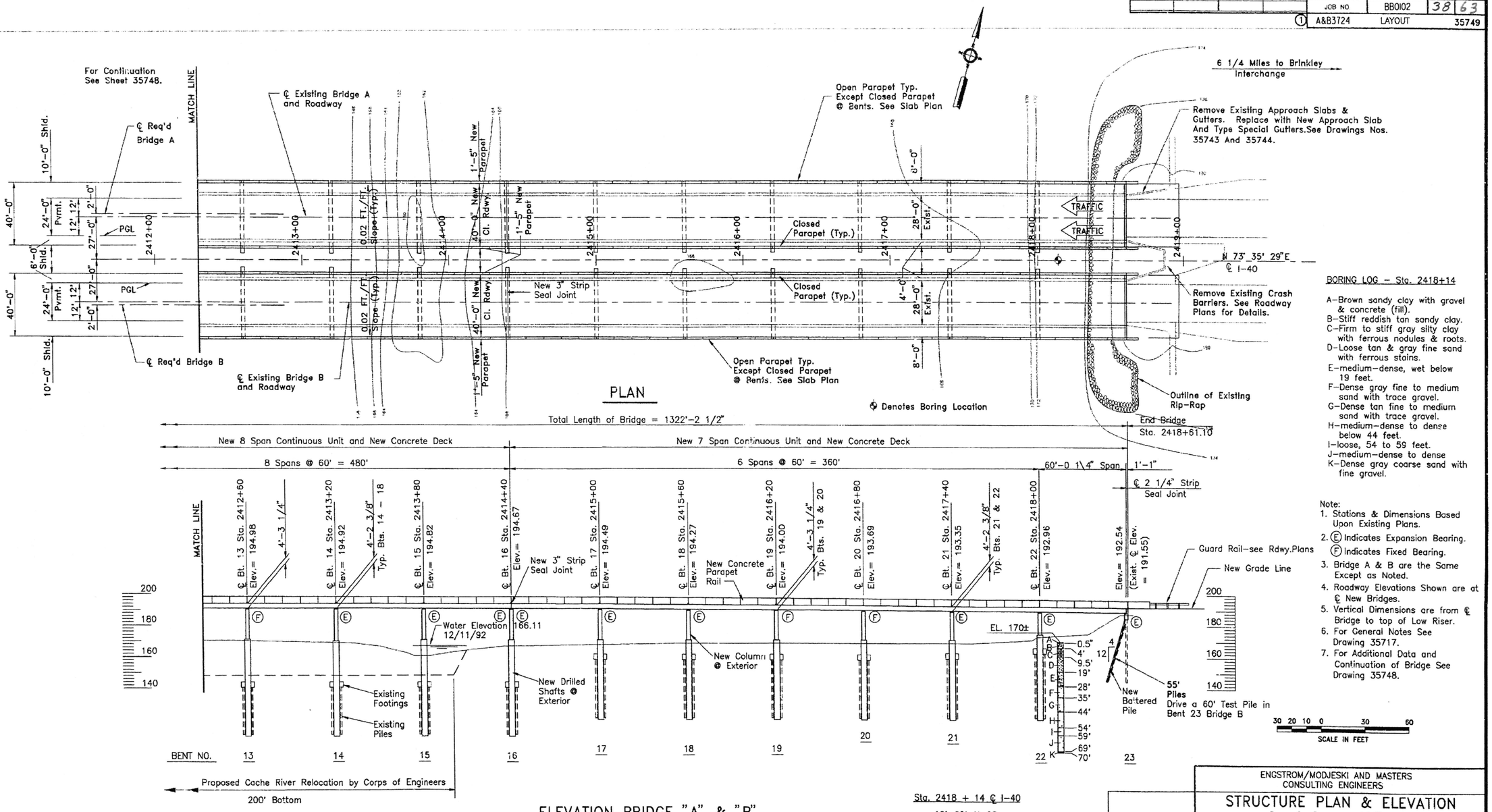
STRUCTURE PLAN & ELEVATION
1 of 2 ALT. C.
BRIDGE 3724 OVER BAYOU DEVIEW

MONROE COUNTY
INTERSTATE ROUTE 40 SEC. 43
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: JHS	DATE: 3/98	SCALE: 1" = 30'-0"	
CHECKED BY: CDE	DATE: 4/97		
DESIGNED BY: CDE	DATE: 8-94		
BRIDGE NO. A&B3724		DRAWING NO. 35748	

C:\PROJ\ARTDVIEW\PNEW3 ACAD SCALE: 1" = 30'-0"

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0102	38	63
				(1) A&B3724		LAYOUT		35749



ELEVATION BRIDGE "A" & "B"

FOR INFORMATION ONLY

BORING LOG - Sta. 2418+14

A-Brown sandy clay with gravel & concrete (fill).
B-Stiff reddish tan sandy clay.
C-Firm to stiff gray silty clay with ferrous nodules & roots.
D-Loose tan & gray fine sand with ferrous stains.
E-medium-dense, wet below 19 feet.
F-Dense gray fine to medium sand with trace gravel.
G-Dense tan fine to medium sand with trace gravel.
H-medium-dense to dense below 44 feet.
I-loose, 54 to 59 feet.
J-medium-dense to dense
K-Dense gray coarse sand with fine gravel.

Note:
1. Stations & Dimensions Based Upon Existing Plans.
2. (E) Indicates Expansion Bearing.
   (F) Indicates Fixed Bearing.
3. Bridge A & B are the Same Except as Noted.
4. Roadway Elevations Shown are at ℄ New Bridges.
5. Vertical Dimensions are from ℄ Bridge to top of Low Riser.
6. For General Notes See Drawing 35717.
7. For Additional Data and Continuation of Bridge See Drawing 35748.

Sta. 2418 + 14 ℄ I-40

19'-20'-N=28
24'-25'-N=28
29'-30'-N=30
34'-35'-N=38
39'-40'-N=48
44'-45'-N=25
49'-50'-N=34
54'-55'-N=8
59'-60'-N=38
64'-65'-N=26
69'-70'-N=46

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 3129 W. JAMES ENGSTROM 4/14/97

ENGSTROM/MODJESKI AND MASTERS
CONSULTING ENGINEERS

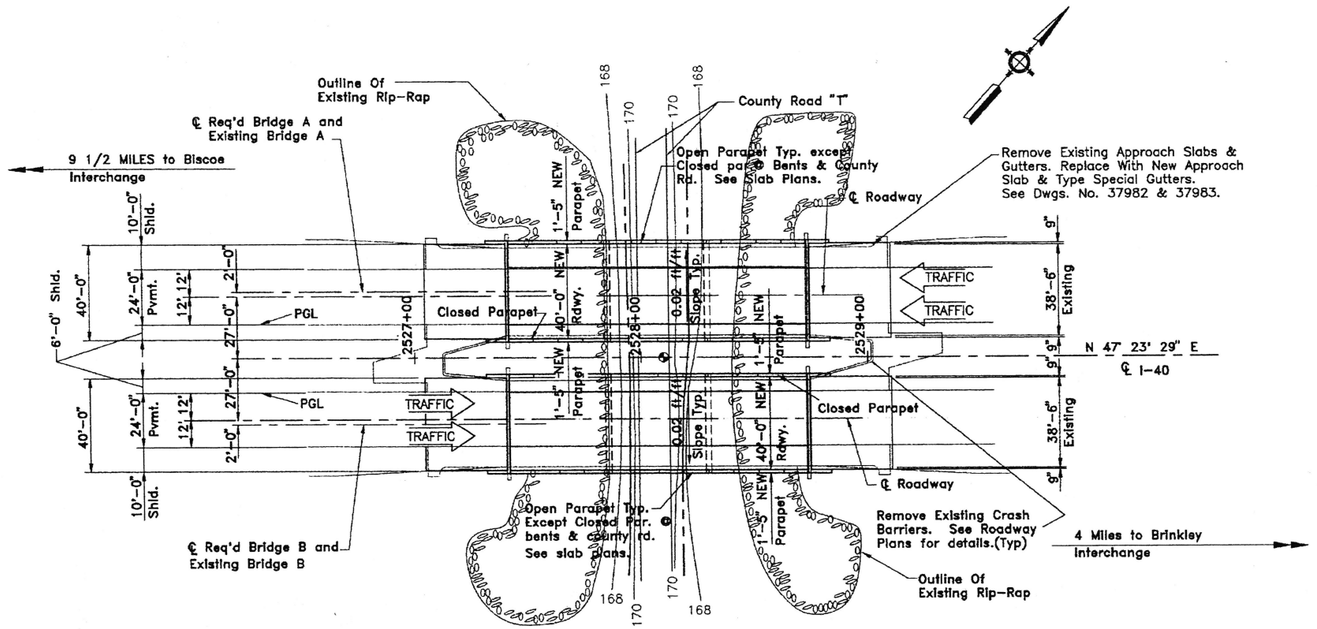
STRUCTURE PLAN & ELEVATION
2 of 2 ALT. C.
BRIDGE 3724 OVER BAYOU DEVIEW

MONROE COUNTY
INTERSTATE ROUTE 40 SEC. 43
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

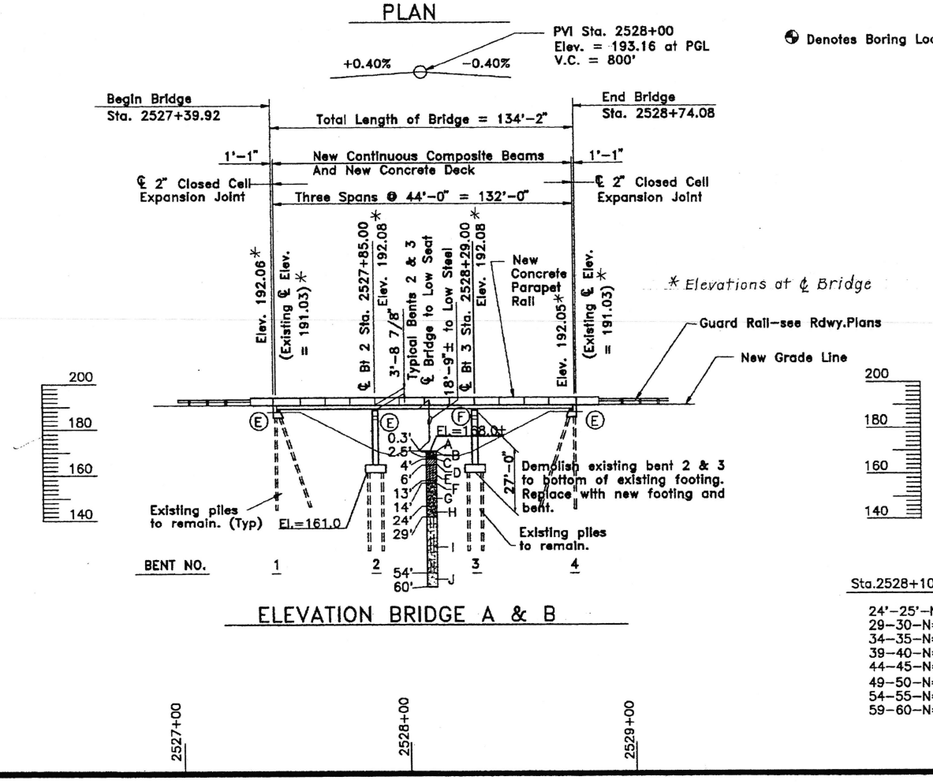
DRAWN BY: JHS DATE: 3/98
CHECKED BY: CDE DATE: 4/97
DESIGNED BY: CDE DATE: 8-94
SCALE: 1" = 30'-0"

BRIDGE NO. A&B3724
DRAWING NO. 35749

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0102	39	63
				(1) A&B3727		LAYOUT		37970



PLAN



ELEVATION BRIDGE A & B

Denotes Boring Locations

NOTES:

1. Station & Dimensions Based Upon Existing Plans.
2. (E) Indicates Expansion Bearing. (F) Indicates Fixed Bearing.
3. Bridge A & B Are The Same Except As Noted.
4. Roadway Elevations Shown Are At ℄ of New Bridge.
5. Vertical Dimensions are from ℄ New Bridge to top of Low Riser.
6. For General Notes See Dwg. No. 37968.

FOR INFORMATION ONLY

30 20 10 0 30 60
SCALE IN FEET

Sta.2528+10 ℄ I-40

24'-25'-N=33
29-30-N=43
34-35-N=28
39-40-N=38
44-45-N=26
49-50-N=52 (10" Bounce)
54-55-N=33
59-60-N=28

BORING LOG

Sta.2528+10 ℄ I-40

A-Asphalt
B-Tan & gray silty clay, sand & gravel (fill)
C-Very stiff brown sandy clay with ferrous stains
D-Firm gray silty clay with ferrous stains & occasional calcareous nodules
E-Stiff, with sand pockets below 6 ft.
F-Soft gray clay with roots
G-Medium-dense gray fine sand
H-Dense below 24 ft.
I-Dense to medium-dense gray fine to medium sand, slightly silty
J-Dense to medium-dense gray coarse sand with fine gravel

ENGSTROM/MODJESKI AND MASTERS
CONSULTING ENGINEERS

STRUCTURE PLAN AND ELEVATION
BRIDGE A & B 3727
OVER COUNTY ROAD "T"

MONROE COUNTY
INTERSTATE ROUTE 40 SEC. 43
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER NO. 3125 H. JAMES ENGSTROM 5/21/97

DRAWN BY: JHS DATE: 3/96
CHECKED BY: CDE DATE: 5/97
DESIGNED BY: CDE DATE: 9-94
SCALE: 1" = 30'-0"

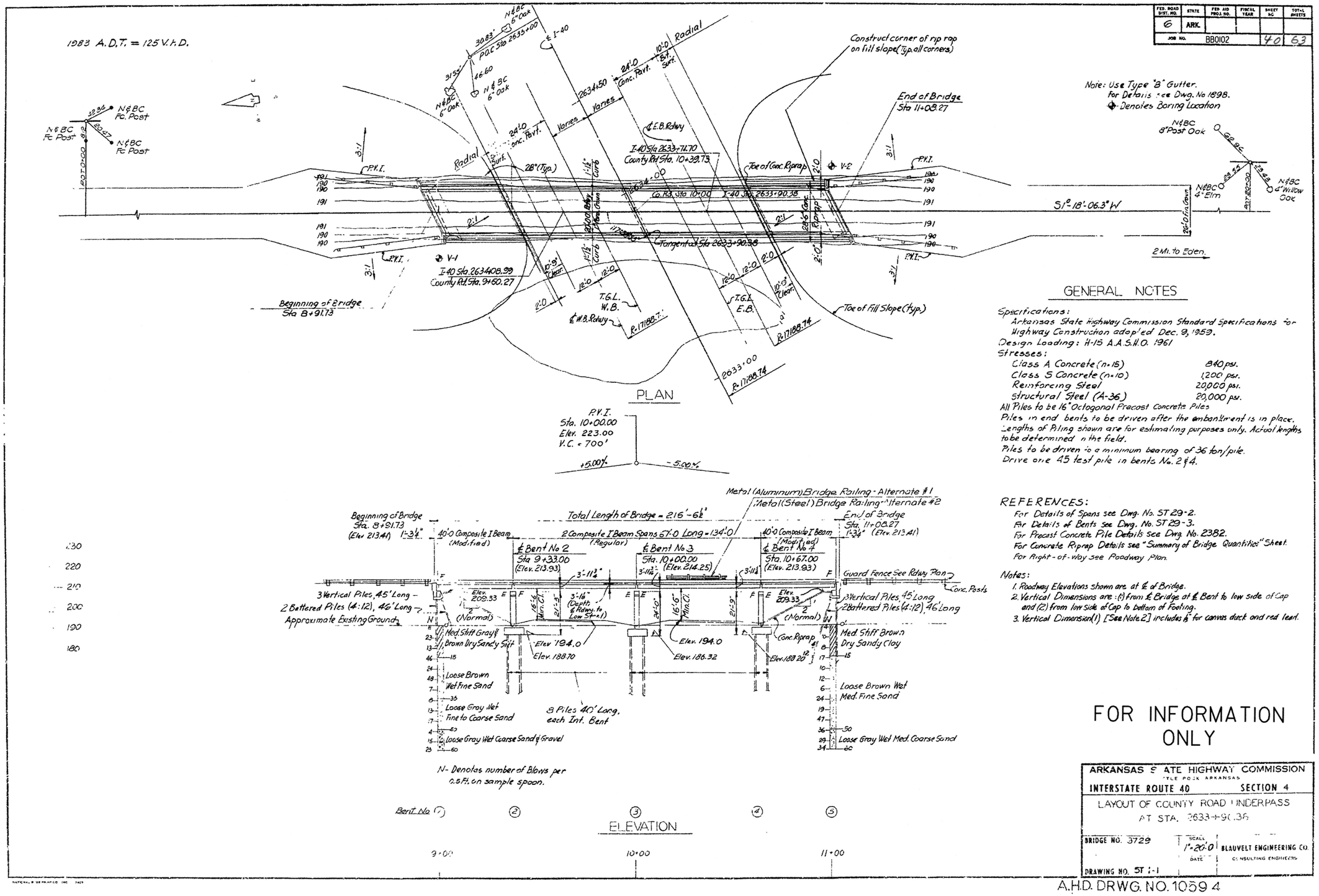
BRIDGE NO. A&B3727 DRAWING NO. 37970

ACAD SCALE:1"=30'

C:\PROJ\AHTD\CORD\PNE

MICROFILMED OCT 1 5 1998

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.				
JOB NO.	BB0102			40	63



GENERAL NOTES

Specifications:
Arkansas State Highway Commission Standard Specifications for Highway Construction adopted Dec. 9, 1959.
Design Loading: H-15 A.A.S.H.O. 1961
Stresses:

Class A Concrete (n=15)	840 psi.
Class S Concrete (n=10)	1,200 psi.
Reinforcing Steel	20,000 psi.
Structural Steel (A-36)	20,000 psi.

All Piles to be 16" Octogonal Precast Concrete Piles
Piles in end bents to be driven after the embankment is in place.
Lengths of Piling shown are for estimating purposes only. Actual lengths to be determined in the field.
Piles to be driven to a minimum bearing of 36 ton/pile.
Drive one 45 test pile in bents No. 2 & 4.

REFERENCES:

For Details of Spans see Dwg. No. ST 29-2.
For Details of Bents see Dwg. No. ST 29-3.
For Precast Concrete Pile Details see Dwg. No. 2382.
For Concrete Riprap Details see "Summary of Bridge Quantities" Sheet.
For Right-of-Way see Roadway Plan.

Notes:
1. Roadway Elevations shown are at ℄ of Bridge.
2. Vertical Dimensions are: (1) from ℄ Bridge at ℄ Bent to low side of Cap and (2) from low side of Cap to bottom of Footing.
3. Vertical Dimension (1) [See Note 2] includes ⅛" for canvas duck and red lead.

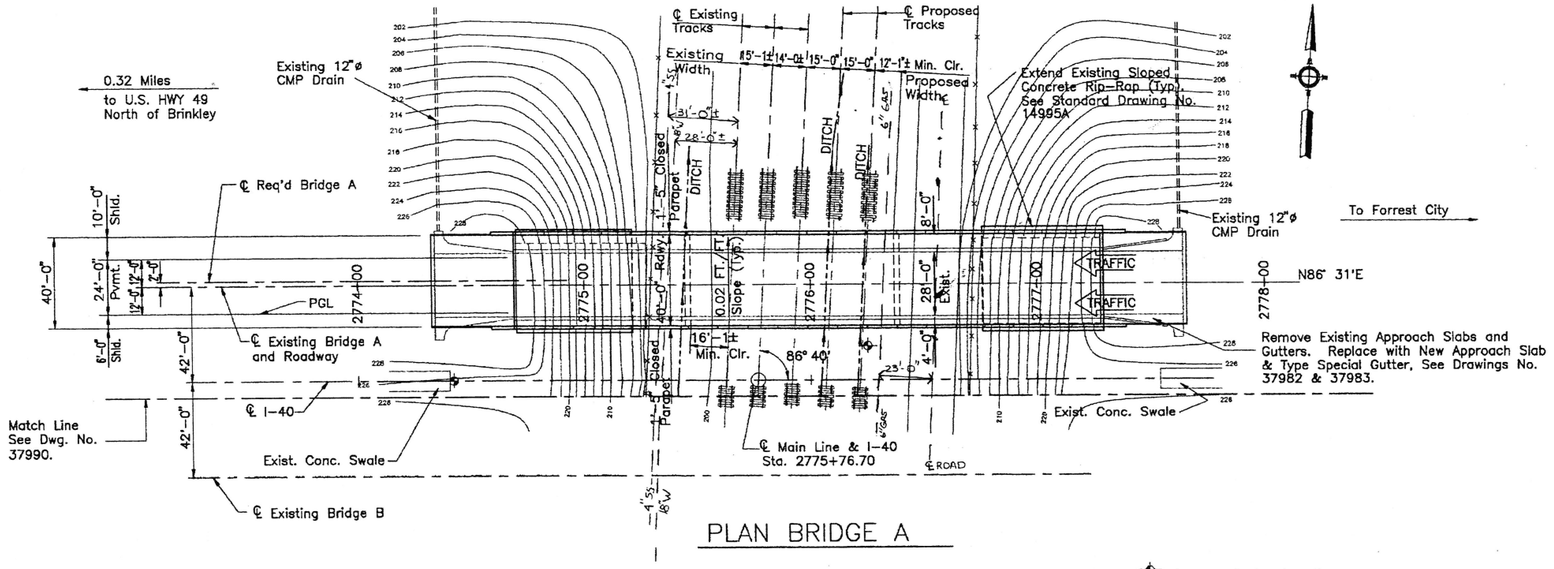
FOR INFORMATION ONLY

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK ARKANSAS
INTERSTATE ROUTE 40 SECTION 4
LAYOUT OF COUNTY ROAD UNDERPASS AT STA. 2633+90.38
BRIDGE NO. 3729 SCALE 1"=20'-0" DATE
BLAUVELT ENGINEERING CO. CONSULTING ENGINEERS
DRAWING NO. ST 1-1

In Charge of
Made By
Traced By
Checked By

A.H.D. DRWG. NO. 1059 4

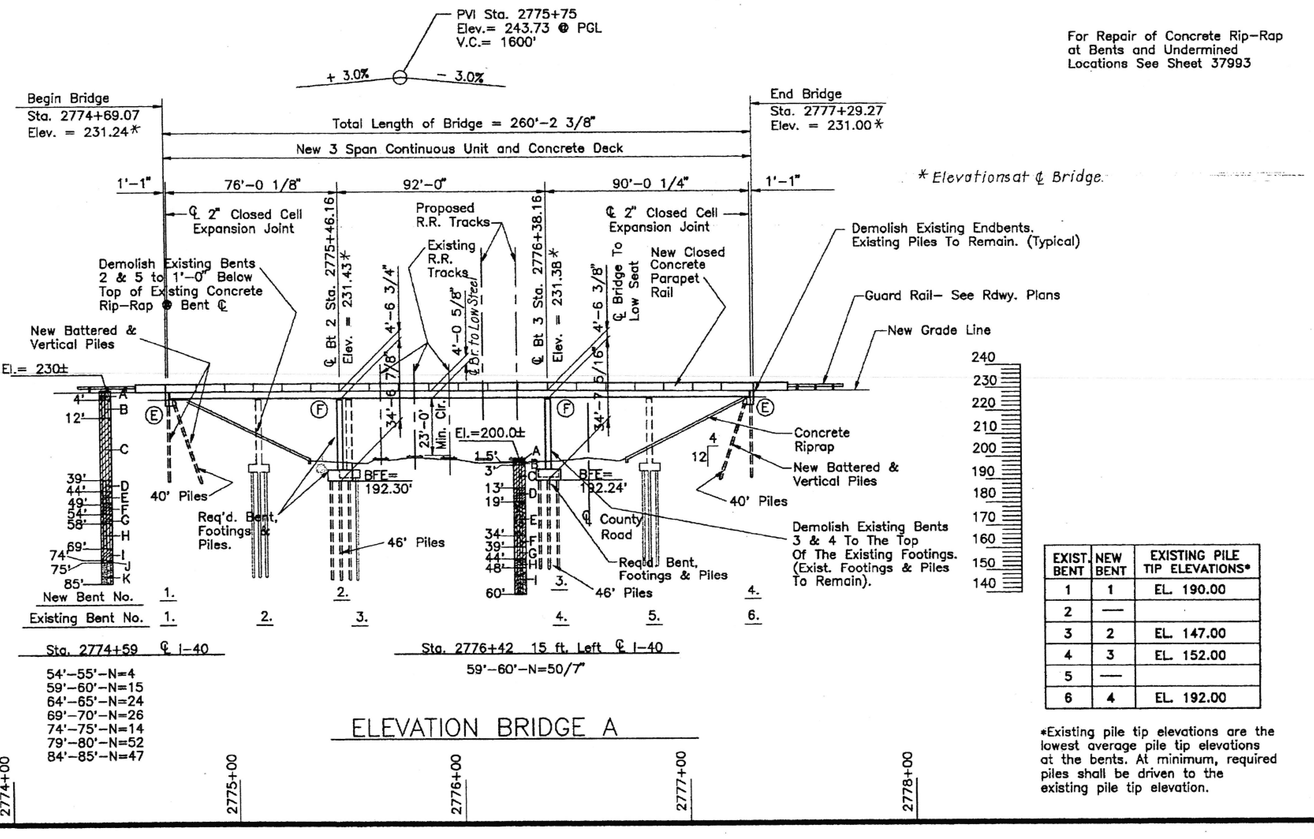
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0102	41	63
				(1) A3731	Layout			37989



PLAN BRIDGE A

℄ Denotes Boring Location

For Repair of Concrete Rip-Rap at Bents and Undermined Locations See Sheet 37993



ELEVATION BRIDGE A

*Elevations at ℄ Bridge.

EXIST. BENT	NEW BENT	EXISTING PILE TIP ELEVATIONS*
1	1	EL. 190.00
2	—	
3	2	EL. 147.00
4	3	EL. 152.00
5	—	
6	4	EL. 192.00

*Existing pile tip elevations are the lowest average pile tip elevations at the bents. At minimum, required piles shall be driven to the existing pile tip elevation.

BORING LOGS

Sta. 2774+59 ℄ I-40

A-Medium-Dense Tan Sandy Silt With Clay Pockets
B-Very Stiff Tan & Gray Clayey Silt With Ferrous Nodules & Clay Pockets
C-Very Stiff Tan & Gray Silty Clay With Ferrous Stains
D-Stiff Tan Clayey Silt
E- firm, slightly sandy below 44 ft.
F- very stiff below 49 ft.
G-Soft Gray & Tan Clayey Silt
H- stiff to very stiff below 58 ft.
I-Very Stiff Gray Silty Clay
J- stiff below 74 ft.
K-Dense Gray Silty Fine Sand

Sta. 2776+42 15 ft. Left ℄ I-40

A-Dense Reddish Tan Sand With Coarse Gravel (Fill)
B-Very Stiff Tan Clayey Silt With Ferrous Stains
C-Very Stiff Tan Silty Clay With Ferrous Stains, Occasional Sand Pockets & Trace Fine Gravel -stiff, 5.5 to 6.5 ft.
D-Firm To Stiff Reddish Tan Clayey Silt
E-Medium-Dense Reddish Tan Silty Fine Sand, Slightly Clayey (Wet)
F-Firm Brown Clayey Silt
G-Firm Gray Silty Clay
H-Medium-Dense Gray Silty Fine Sand
I-Medium-Dense Gray Fine To Medium Sand, Slightly Silty With Occasional Clay Seams

NOTES:

1. Stations & Dimensions Based Upon Existing Plans
2. (E) Indicates Expansion Bearing (F) Indicates Fixed Bearing
3. Roadway Elevations Shown Are At ℄ New Bridges.
4. Vertical Dimenstions Are From ℄ Bridge To Top Of Low Riser.
5. For General Notes See Drawing No. 37968.
6. For Additional Notes And Boring Logs, See Drawing No. 37990.
7. Temporary Shoring To Be Provided By The Contractor As Req'd. To Maintain The Existing Track And Protect Workers. Shoring Shall Conform To The Requirements Of The Southern Pacific Transportation Co. (SPTCO) Supplemental Specification For Shoring. The Minimum Distance From ℄ Of Track To The Nearest Face Of Shoring Shall Be 8'-6". Shoring Plan And Construction Sequence Shall Be Approved By The Engineer And SPTCO Prior To Construction.

FOR INFORMATION ONLY

ENGSTROM/MODJESKI AND MASTERS
CONSULTING ENGINEERS

STRUCTURE PLAN & ELEVATION
1 of 2 BRIDGE A3731 OVER
ST. LOUIS - SOUTHWESTERN RAILWAY

MONROE COUNTY
INTERSTATE ROUTE 40 SEC. 43
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

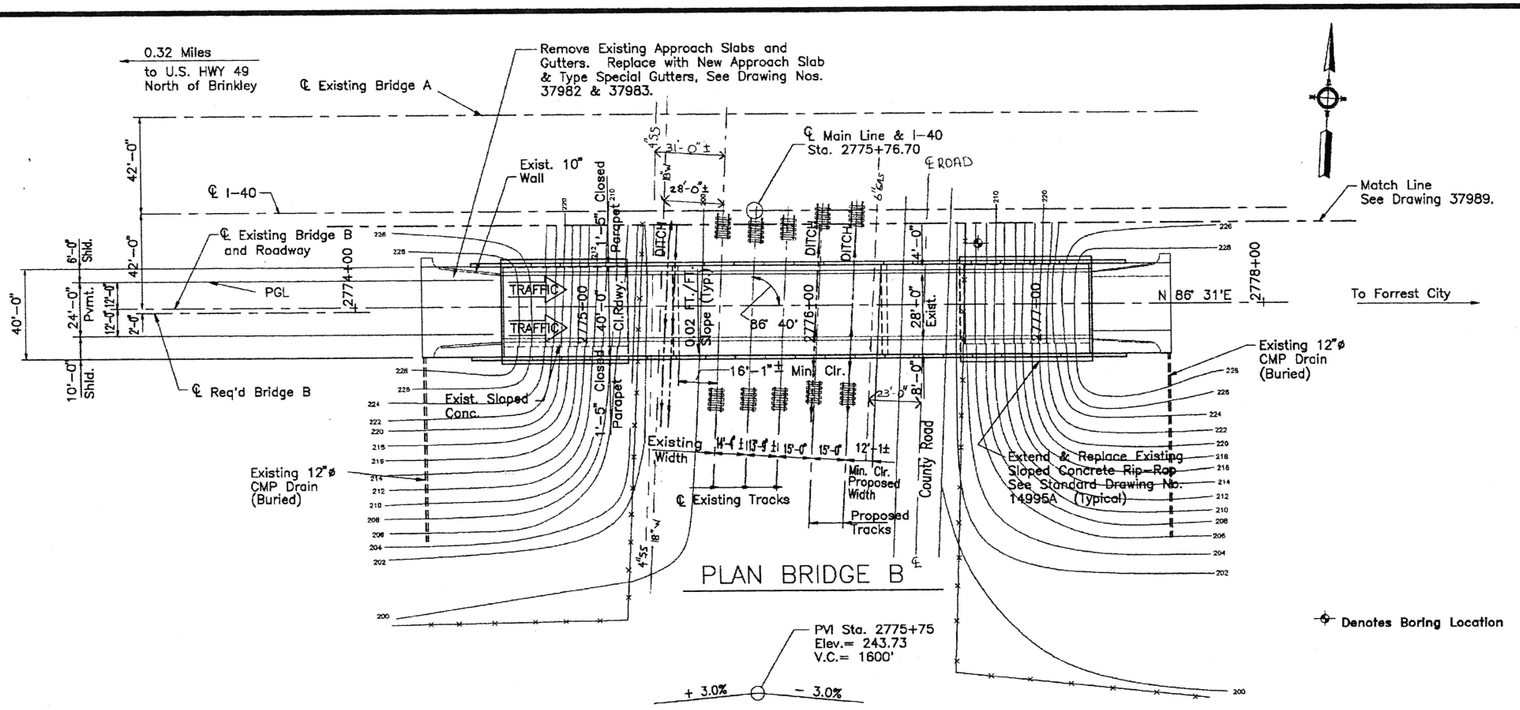
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER JAMES ENGSTROM NO. 3125 5/29/97

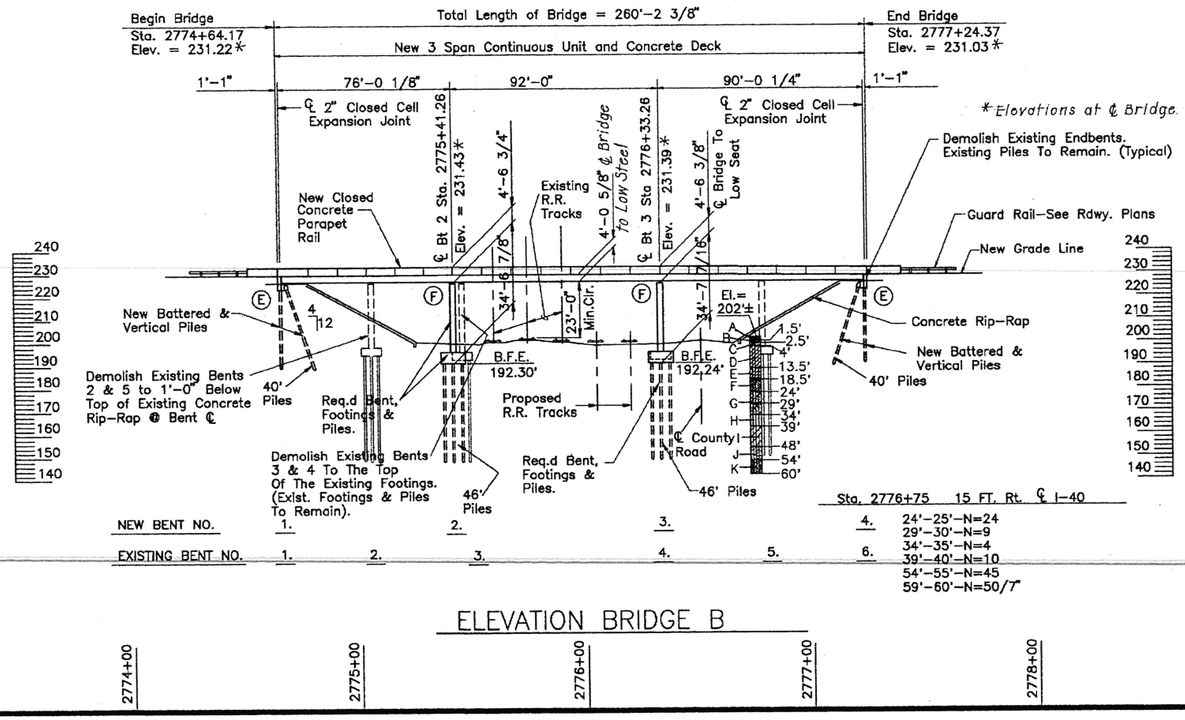
DRAWN BY:	JHS	DATE: 8/94	SCALE: 1"= 30'-0"
CHECKED BY:	CDE	DATE: 5-97	
DESIGNED BY:	CDE	DATE: 8-94	
BRIDGE NO. A3731			DRAWING NO. 37989

MICROFILMED
OCT 16 1998

ACAD SCALE: 1"=30'
C:\PROJ\AHTD\RAIL\PNE01

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0102	42	63
				① B3731 Layout				37990





BORING LOGS

Sta. 2776+75 15 FT. Rt. ℄ I-40

A-Reddish Tan Sand With Coarse Gravel (Fill)
B-Stiff Reddish Tan Clayey Silt
C-Very Stiff Gray Clayey Silt With Clay Pockets and Ferrous Stains
D-Very Stiff Tan And Gray Silty Clay With Ferrous Nodules And Silt Pockets
E-Stiff To Firm Reddish Tan Clayey Silt
F-Loose Tan Silty Fine Sand
G-Medium-Dense Reddish Tan Sandy Silt, Slightly Clayey -loose below 29 ft.
H-Loose Brown Silt
I-Stiff Gray Silty Clay With Silt Partings
J-Loose To Medium-Dense Gray Sandy Silt
K-Dense Gray Fine To Medium Sand, Slightly Silty With Trace Fine Gravel

EXIST. BENT	NEW BENT	EXISTING PILE TIP ELEVATIONS*
1	1	EL. 190.00
2	—	
3	2	EL. 149.00
4	3	EL. 150.00
5	—	
6	4	EL. 192.00

*Existing pile tip elevations are the lowest average pile tip elevations at the bents. At minimum, required piles shall be driven to the existing pile tip elevation.

NOTES:

1. Stations & Dimensions Based Upon Existing Plans
2. (E) Indicates Expansion Bearing
   (F) Indicates Fixed Bearing
3. Roadway Elevations Shown Are At ℄ New Bridges.
4. Vertical Dimensions Are From ℄ Bridge To Top Of Low Riser.
5. For General Notes See Drawing No. 37968.
6. For Additional Notes And Boring Logs See Dwg. No. 37989.
7. Temporary Shoring To Be Provided By The Contractor As Req'd. To Maintain The Existing Track And Protect Workers. Shoring Shall Conform To The Requirements Of The Southern Pacific Transportation Co. (SPTCO) Supplemental Specification For Shoring. The Minimum Distance From ℄ Of Track To The Nearest Face Of Shoring Shall Be 8'-6". Shoring Plan And Construction Sequence Shall Be Approved By The Engineer And SPTCO Prior To Construction.

FOR INFORMATION ONLY

ENGSTROM/MODJESKI AND MASTERS CONSULTING ENGINEERS

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER NO. 3125 JAMES ENGSTROM 5/27/97

STRUCTURE PLAN & ELEVATION 2 of 2 BRIDGE B3731 OVER ST. LOUIS - SOUTHWESTERN RAILWAY

MONROE COUNTY

INTERSTATE ROUTE 40 SEC. 43

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: JHS DATE: 8/94
CHECKED BY: CDE DATE: 5-97
DESIGNED BY: CDE DATE: 8-94
SCALE: 1" = 30'-0"

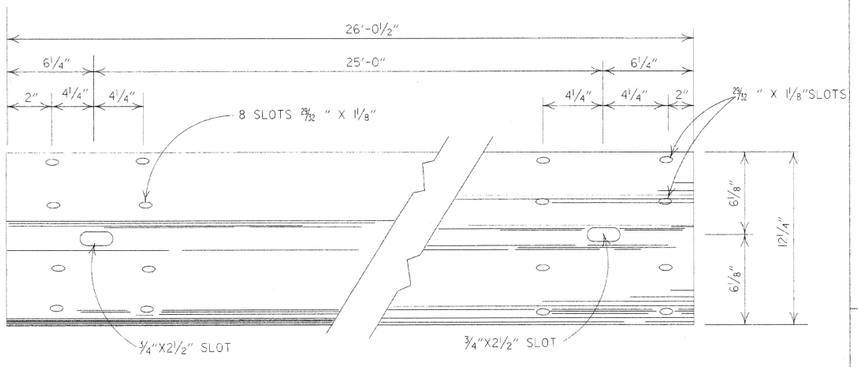
BRIDGE NO. B3731

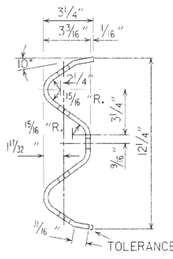
DRAWING NO. 37990

MICROFILMED OCT 16 1998

ACAD SCALE: 1"=30'

C:\PROJ\AHTD\RAIL\PNE02

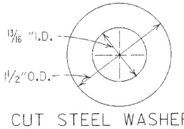




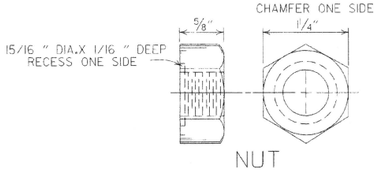
DETAILS OF
W-BEAM GUARD RAIL

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

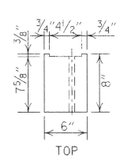
SPLICE BOLT
POST BOLT - SAME EXCEPT LENGTH



CUT STEEL WASHER

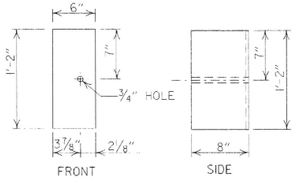


NUT

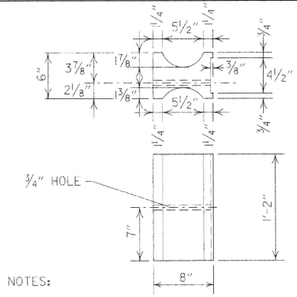


WOOD BLOCKOUT USED WITH WOOD POSTS SHALL BE 6"x8"x1'-2" WITH NO NOTCH REQUIRED.

TOP



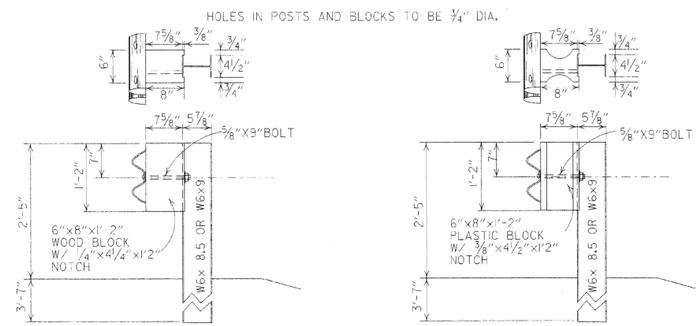
WOOD BLOCKOUT
(W-BEAM)



NOTES:
1. SIMILAR SHAPED PLASTIC BLOCKOUTS MAY BE USED AS LONG AS THEY MEET NCHRP-350 TEST LEVEL 3 SPECIFICATIONS OR REQUIREMENTS FOR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).
2. DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCES.

PLASTIC BLOCKOUT
(W-BEAM)

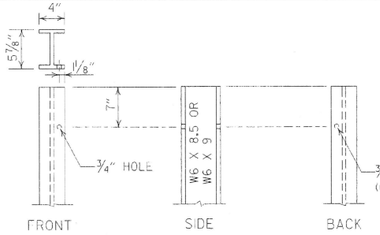
HOLES IN POSTS AND BLOCKS TO BE 3/4" DIA.



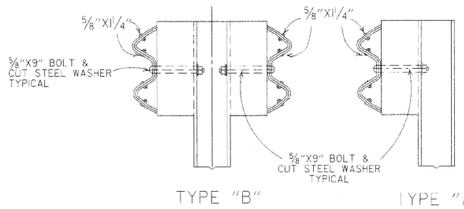
WOOD BLOCKOUT CONNECTIONS

PLASTIC BLOCKOUT CONNECTIONS

DETAILS OF STEEL LINE POST CONNECTIONS
(W-BEAM)



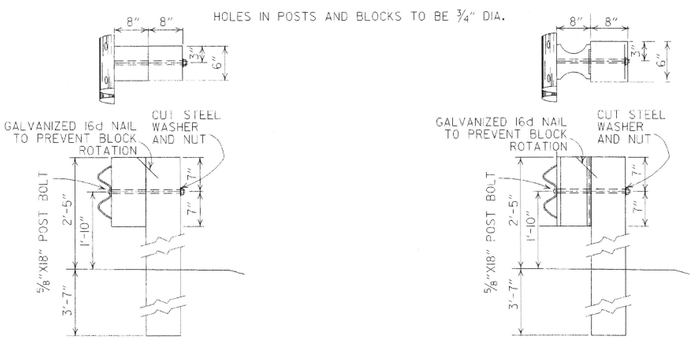
STEEL POST



TYPE "B" TYPE "A"

DETAILS OF STEEL LINE POST CONNECTIONS
(W-BEAM)

HOLES IN POSTS AND BLOCKS TO BE 3/4" DIA.



POSTS AND BLOCKS TO BE ROUGH SAWN 6"X8" WITH A TOLERANCE OF + OR - 1/4".

WOOD BLOCKOUT CONNECTIONS

PLASTIC BLOCKOUT CONNECTIONS

DETAILS OF WOOD LINE POST CONNECTIONS
(W-BEAM)

-GENERAL NOTES-

ALL BOLTS SHALL BE SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN 3/4" BEYOND IT.

WHERE W-BEAM GUARD RAIL CONTINUES, THE INTERMEDIATE SECTIONS SHALL HAVE A POST SPACING OF 6'-3" UNLESS OTHERWISE NOTED.

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

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

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

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

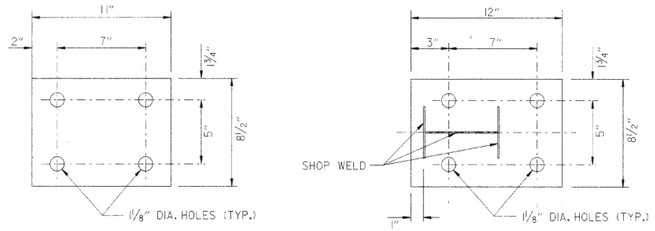
CONTRACTOR SHALL HAVE THE OPTION OF USING WOOD BLOCKOUTS FOR W-BEAM GUARD RAIL OR PLASTIC BLOCKOUTS, AS LONG AS BLOCKOUT USED MEETS NCHRP-350 TEST LEVEL 3 SPECIFICATIONS OR REQUIREMENTS FOR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) FOR W-BEAM GUARD RAIL.

DATE	REVISION	DATE FILM
7-14-10	RAISED HEIGHT OF GUARD RAIL 1"	
10-15-09	ADDED REFERENCE TO MASH	
4-10-03	REVISED GENERAL NOTES	
8-22-02	REVISED DIMENSION ON WOOD & PLASTIC BLOCKOUT CONNECTIONS & ON STEEL POST	
11-16-01	REVISED WOOD BLOCKOUT & DETAILS OF WOOD LINE POST CONNECTIONS	
3-30-00	REMOVED GUARD RAIL AT BRIDGE ENDS	
1-12-00	ADDED PLASTIC BLOCKOUT	
8-12-98	REV. BLOCKOUTS TO WOOD, DELETED CONC. POST & REV. GENERAL NOTE, DELETED DET. OF GUARD RAIL REPLACE. BEHIND CURB & DET. OF POST PLACE. IN SOLID ROCK, & ADDED DETAILS OF STEEL LINE POST CONN. REMOVED BACK-UP PLATE, REVISED HOLES IN STEEL POLES	
4-3-97	REMOVED "LAP IN DIRECTION OF TRAFFIC" NOTE & PLACED ARROWS ON WASHERS	
10-18-96	REVISED WOOD POST NOTE	
6-2-94	ADDED ALT. STEEL POST SIZE	
8-5-93	REVISED STEEL POST SIZE	8-5-93
10-1-92	REDRAWN & REVISED	10-1-92
8-15-91	REVISED WASHER NOTE	8-15-91
8-2-90	REV. GEN. NOTE & DEPHT OF ANC. POST IN ROCK	8-2-90
7-15-88	REVISED SECTION 3 & GENERAL NOTES	
3-4-88	REV. ANCHOR POST, ELEV. NOTES & POST IN ROCK	780-3-4-88
10-30-87	REVISED WOOD LINE POST DETAIL	546-10-30-87
10-9-87	REDRAWN & REVISED	802-10-9-87

ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

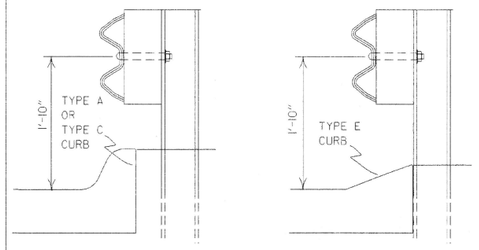
STANDARD DRAWING GR-8



WASHER PLATE

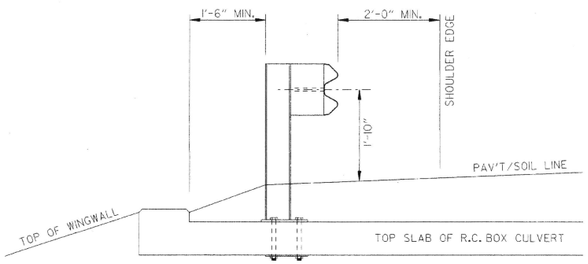
BASE PLATE

Note: Bolts, nuts, washers and plates shall be galvanized in accordance with Section 807 of the Standard Specifications.

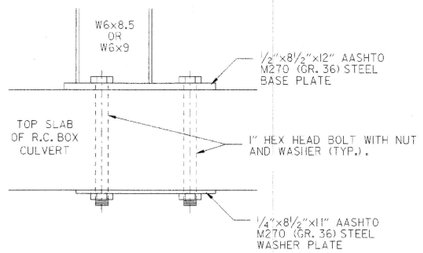


DETAIL OF GUARD RAIL PLACEMENT BEHIND CURB (W-BEAM)

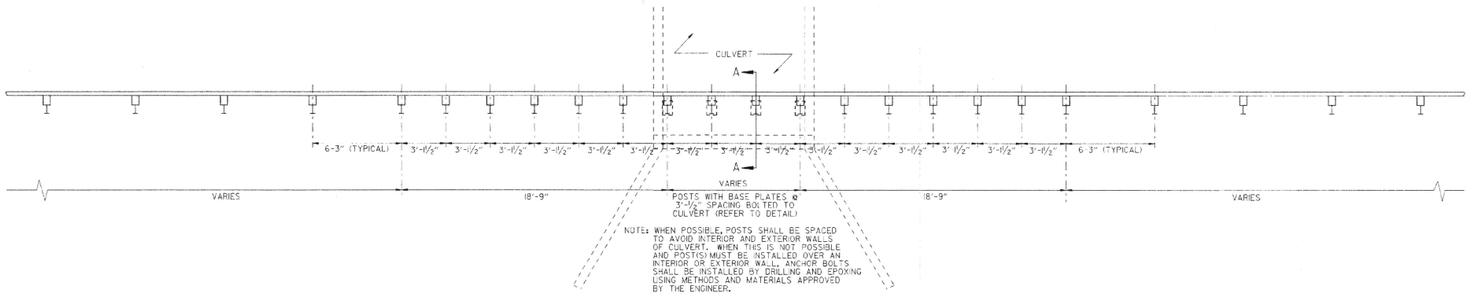
FOR DESIGN SPEEDS OF 50 MPH OR LESS ALL CURB FACES, AS SHOWN ON STD. DRWG. CG-1, MAY BE USED. FOR DESIGN SPEEDS OF 55 MPH OR MORE TYPE "E" CURB FACE SHALL BE USED.



SECTION A-A



DETAIL OF CONNECTION

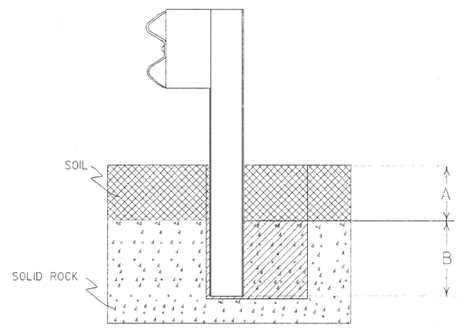


NOTE: WHEN POSSIBLE, POSTS SHALL BE SPACED TO AVOID INTERIOR AND EXTERIOR WALLS OF CULVERT. WHEN THIS IS NOT POSSIBLE AND POST(S) MUST BE INSTALLED OVER AN INTERIOR OR EXTERIOR WALL, ANCHOR BOLTS SHALL BE INSTALLED BY DRILLING AND EPOXING USING METHODS AND MATERIALS APPROVED BY THE ENGINEER.

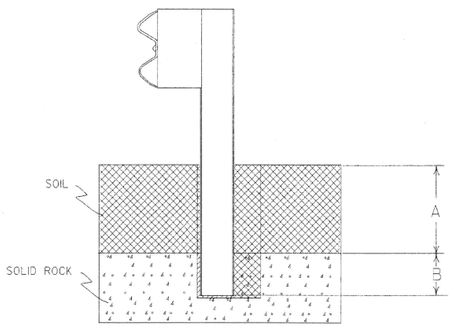
PLAN LAYOUT OF TYPE A GUARD RAIL AT LOW-FILL CULVERTS

NOTE: THIS DETAIL IS TO BE USED ONLY WHEN THE COVER OVER THE CULVERT DOES NOT PERMIT FULL EMBEDMENT OF GUARD RAIL POSTS AS SHOWN ON STD. DWG. GR-8.

Case 1

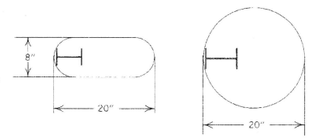


Case 2



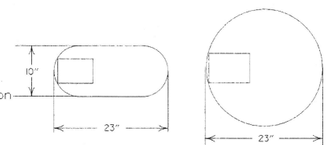
Plan View Steel Posts

Either hole configuration acceptable



Plan View Wood Posts

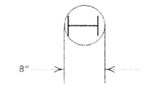
Either hole configuration acceptable

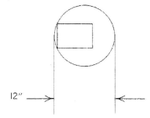


Notes: For overlying soil depths (A) ranging from 0 to 18", the depth of required drilling (B) is equal to 24".

Zone A:
Backfill according to Section 617.03(a).

Zone B:
Backfill hole in 6" lifts with material meeting the requirements of Section 802.02(c) - Alternate gradation. Compact to 95% maximum dry density per ASTM D-698.





Notes: For overlying soil depths (A) ranging from 18" to 44", the depth of required drilling (B) is equal to either 12" or 44" minus the depth of soil whichever is less.

Zone A & B:
Backfill according to Section 617.03(a).

DETAIL OF POST PLACEMENT IN SOLID ROCK (W-BEAM)

DATE	REVISION	DATE FILM
7-14-10	RAISED HEIGHT OF GUARD RAIL 1"	
4-12-07	REVISED DETAIL OF GUARD RAIL PLACEMENT BEHIND CURB	
11-10-05	ADDED GUARD RAIL PLACEMENT BEHIND CURB; REVISED DETAIL OF CONNECTION	
11-18-04	REVISED POST PLACEMENT IN ROCK & CULVERT CONNECTION DETAILS. ADDED DETAIL FOR GUARD RAIL PLACEMENT AT LOW-FILL CULVERTS	
3-30-00	REMOVED CONCRETE INSERT ANCHOR	
8-12-98	CHANGED STEEL SPACER BLOCK TO WOOD BLOCKOUT. ADD. DET. OF GUARD RAIL CONNECTION TO R.C. BOX CULVT. DELETED DET. OF STEEL LINE POST CONN.& ADDED DET. OF GUARD RAIL PLACE. BEHIND CURB & DET. OF POST PLACE. IN SOLID ROCK	
4-3-96	PLACED ARROWS AT CUT STEEL WASHERS	4-3-96
10-18-96	REV. ASTM REF. TO AASHTO	
11-22-95	ADDED OPTIONAL HOLES	
6-2-94	REVISED ALTERNATE POST SIZE	
8-5-93	REVISED STEEL POST SIZE	
10-1-92	REDRAWN & REVISED	10-1-92
8-2-90	DEL. WASHER ON ANCHOR ASSEMBLY	8-2-90
7-15-88	CONFORMED TO 1988 SPECS	
3-4-88	REVISED ANCHOR NOTE	
10-30-87	REVISED ANCHOR ASSEMBLY	712-10-30-87
10-30-87	REVISED PLACEMENT BEHIND CURB	547-10-30-87
10-9-87	REDRAWN & REVISED	803-10-9-87

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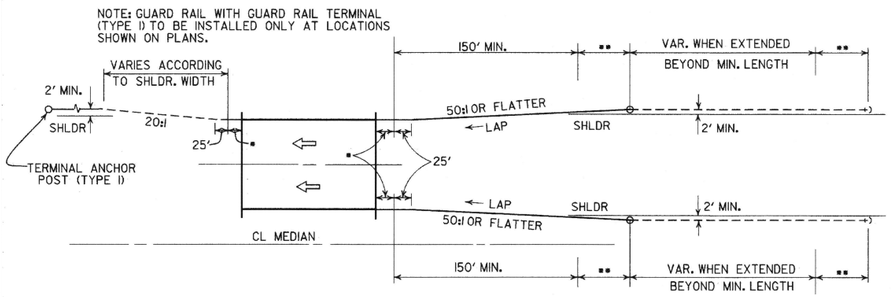
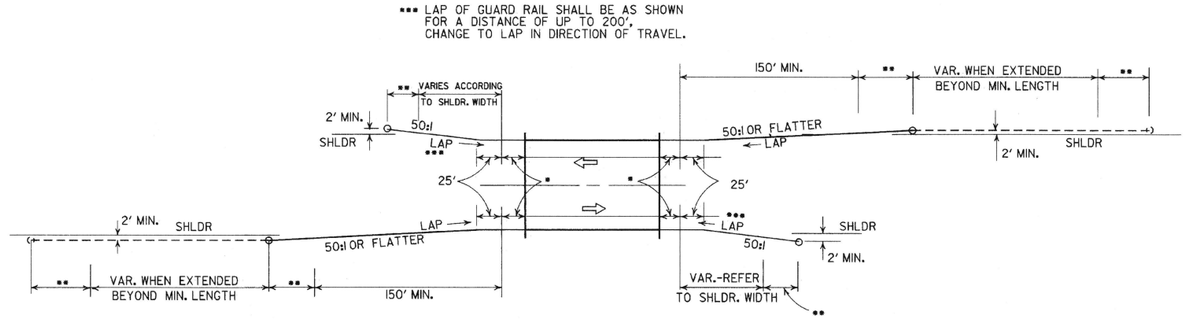
GUARD RAIL DETAILS

STANDARD DRAWING GR-8A



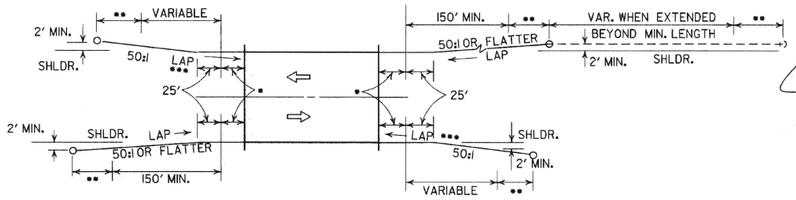
ONE-WAY TRAFFIC



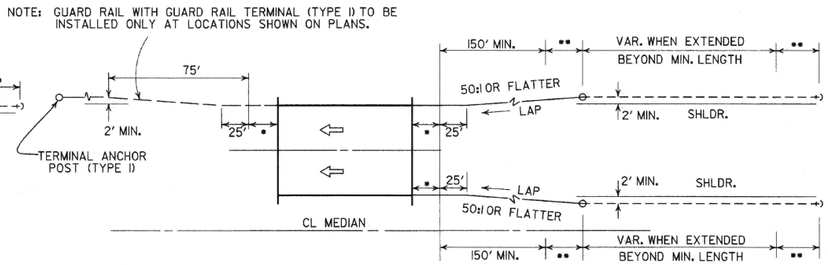
TWO-WAY TRAFFIC

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

••• LAP OF GUARD RAIL SHALL BE AS SHOWN FOR A DISTANCE OF UP TO 200', CHANGE TO LAP IN DIRECTION OF TRAVEL.



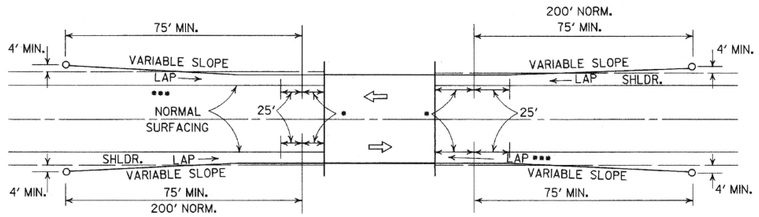
TWO-WAY TRAFFIC



ONE-WAY TRAFFIC

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

••• LAP OF GUARD RAIL SHALL BE AS SHOWN FOR A DISTANCE OF UP TO 200', CHANGE TO LAP IN DIRECTION OF TRAVEL.



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

LEGEND

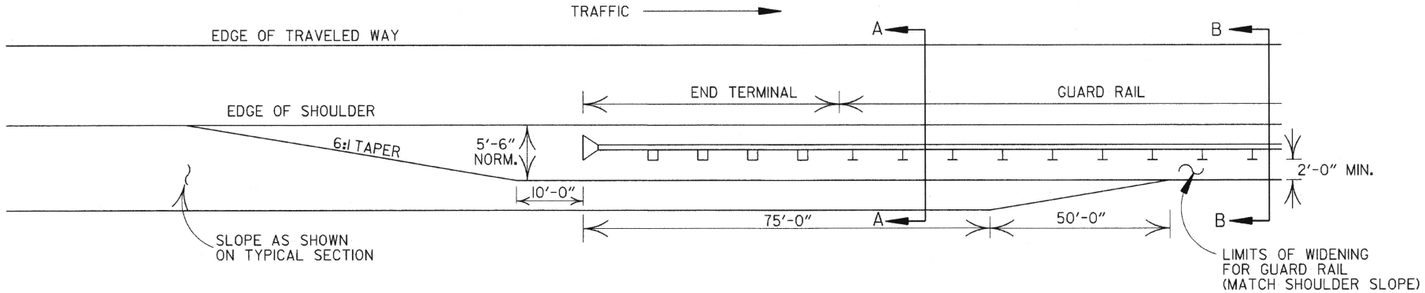
- • THRIE BEAM GUARD RAIL TERMINAL
- •• GUARD RAIL TERMINAL (TYPE 2)

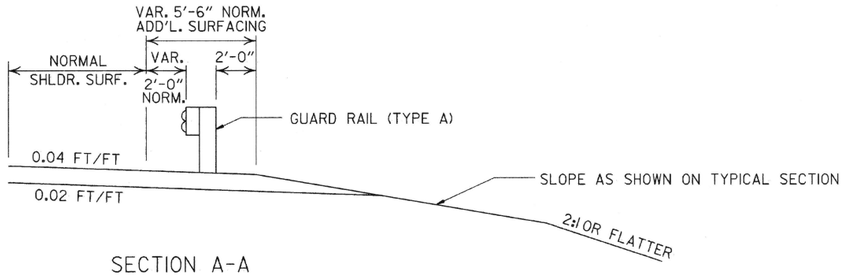
DATE	REVISION	DATE FILM
4-17-08	REVISED LAYOUTS	
11-10-05	REMOVED GUARD RAIL NOTES AND DETAILS	
11-16-01	DELETED NOTE-METHOD OF INSTALLATION OF GUARD RAIL USING GUARD RAIL TERM. (TY. I)	
1-12-00	ADDED CONSTRUCTION NOTE	1-12-00
6-26-97	REVISED LAYOUT	
10-1-92	REDRAWN & REVISED	10-1-92
	ADDED NOTE	
10-9-87	REDRAWN & REVISED	

ARKANSAS STATE HIGHWAY COMMISSION

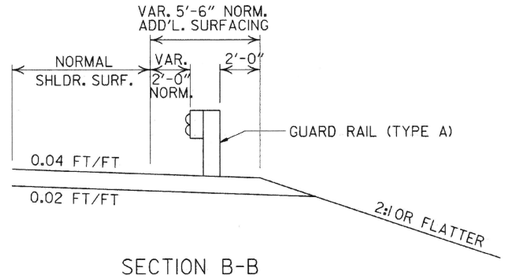
GUARD RAIL DETAILS

STANDARD DRAWING GR-9





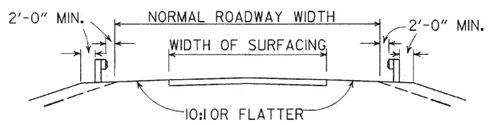
SECTION A-A



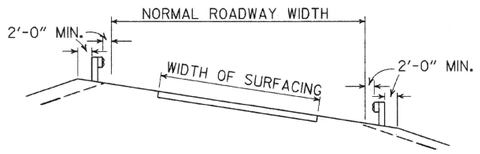
SECTION B-B

DETAILS OF WIDENING FOR GUARD RAIL

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

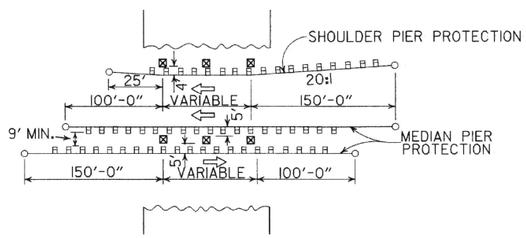


SECTION ON TANGENT



SECTION ON CURVE

DETAILS SHOWING POSITION OF GUARD RAIL ON HIGHWAY



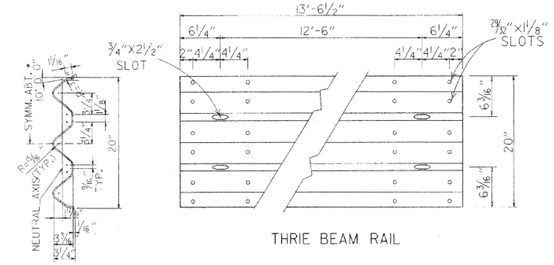
METHOD OF INSTALLATION OF GUARD RAIL AT FIXED OBSTACLE

DATE	REVISION	DATE FILM
4-17-08	MINOR REVISION	
11-10-05	DRAWN	

ARKANSAS STATE HIGHWAY COMMISSION

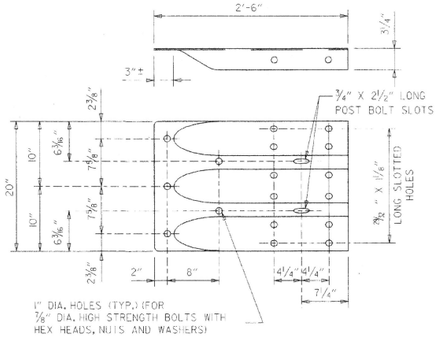
GUARD RAIL DETAILS

STANDARD DRAWING GR-9A



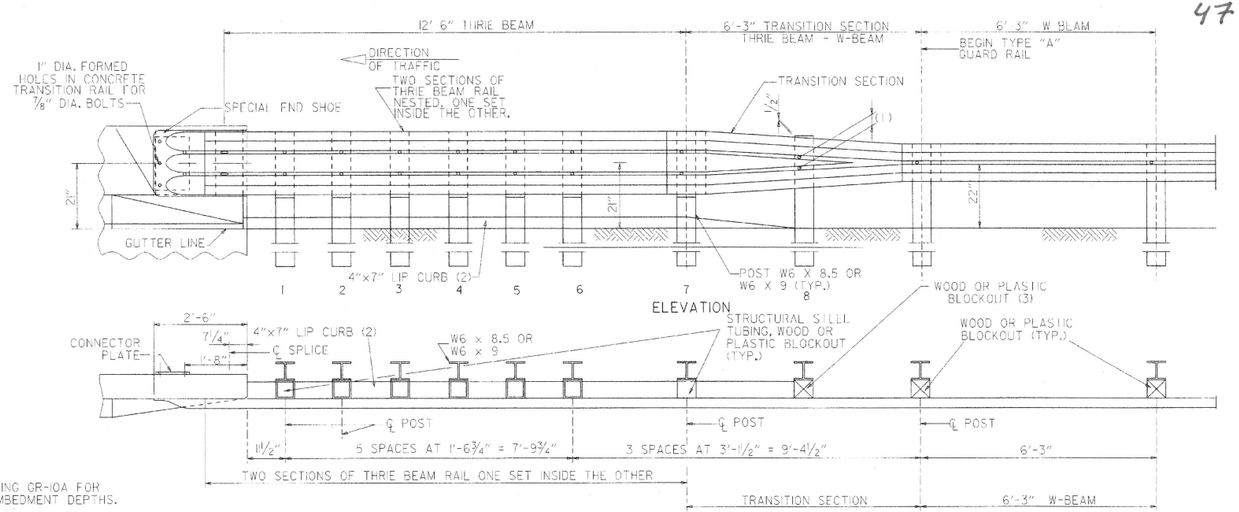
THRIE BEAM RAIL

SECTION THRU
THRIE BEAM RAIL

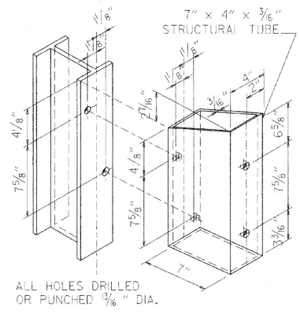


1" DIA. HOLES (TYP.) (FOR ⅞" DIA. HIGH STRENGTH BOLTS WITH HEX HEADS, NUTS AND WASHERS)

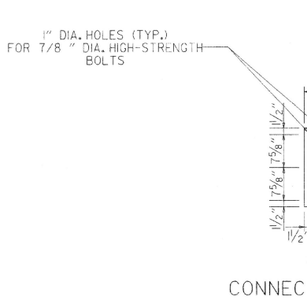
SPECIAL END SHOE



NOTE:
SEE STANDARD DRAWING GR-10A FOR GUARD RAIL POST EMBEDMENT DEPTHS.

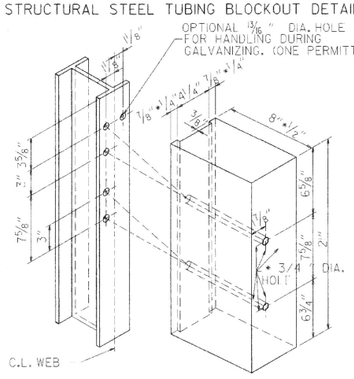


STRUCTURAL STEEL TUBING BLOCKOUT DETAIL



CONNECTOR PLATE

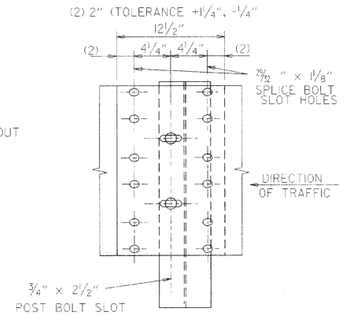
CONNECTOR PLATE SHALL BE AASHTO M270, GR. 36 AND SHALL BE GALVANIZED AFTER FABRICATION. GALVANIZING SHALL CONFORM TO SUBSECTION 807.9 OF THE STANDARD SPECIFICATIONS. CONNECTOR PLATE TO BE BOLTED TO SPECIAL END SHOE USING ⅞" DIA. HIGH STRENGTH BOLTS, WITH THE HEADS PLACED ON THE TRAFFIC FACE. WASHERS SHALL BE USED UNDER THE HEAD AND NUT. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AND SHALL CONFORM TO SUBSECTION 807.06.



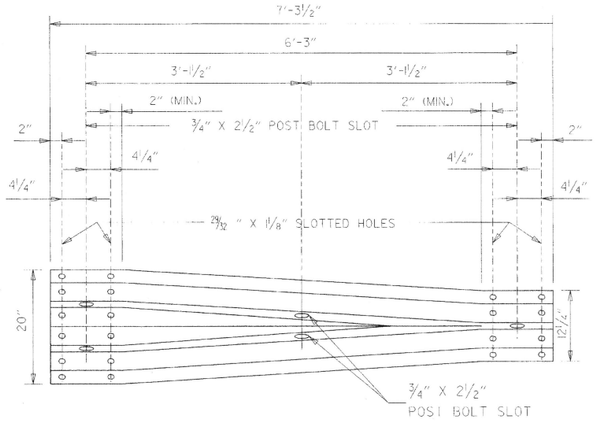
ALL HOLES ⅜" DIAMETER EXCEPT AS NOTED

HOLE PUNCHING DETAIL
FOR STEEL POST & WOOD
OR PLASTIC BLOCKOUTS

NOTE: BLOCKS SHALL BE THE SAME TYPE THROUGHOUT THE PROJECT LIMITS.



THRIE BEAM RAIL
SPLICE AT POST



TRANSITION SECTION

GENERAL NOTES:

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

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

ALL BOLTS SHALL BE SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN ¾" BEYOND IT.

ALL LAP SPLICES, INCLUDING SPECIAL END SHOES, SHALL BE MADE IN THE DIRECTION SHOWN ON STANDARD DRAWINGS GR-9 & GR 11.

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

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

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

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

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

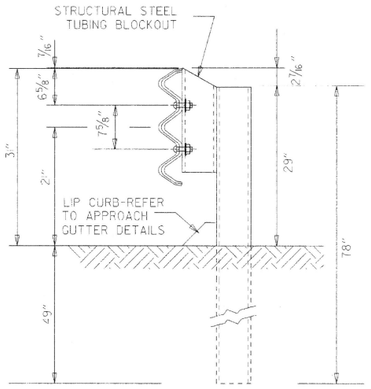
THRIE BEAM GUARD RAIL CONNECTION AT BRIDGE ENDS

DATE	REVISION	DATE FILM
7-14-10	RAISED HEIGHT OF W-BEAM 1"	
11-29-07	ADDED PLASTIC BLOCKOUTS	
11-10-05	ADDED NOTE FOR ATTACHING STEEL BLOCKOUT	
11-18-04	REVISED GENERAL NOTES	
10-9-03	REVISED GENERAL NOTES	
4-10-03	REVISED GENERAL NOTES	
8-22-02	REVISED NOTE (2)	
6-29-00	MOVED DIMENSION LINES	
5-18-00	ADDED NOTE	
3-30-00	DRAWN & ISSUED	

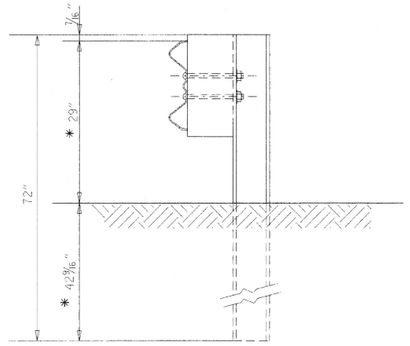
ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

STANDARD DRAWING GR-10

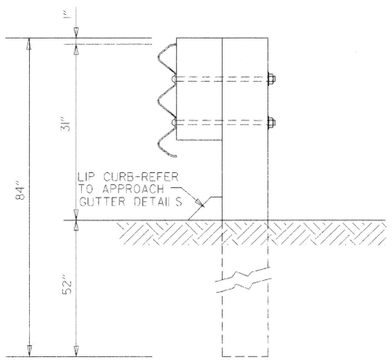


THRIE BEAM RAIL WITH STEEL TUBING BLOCKOUT
AND STEEL POST
POSTS 1-7

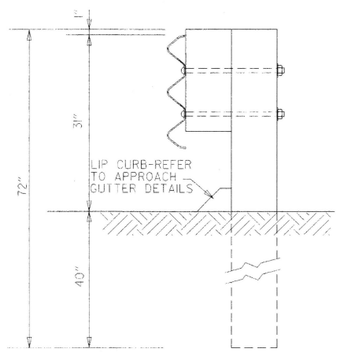


W-BEAM TO THRIE BEAM TRANSITION RAIL
WITH WOOD OR PLASTIC BLOCKOUT AND STEEL POST
POST 8

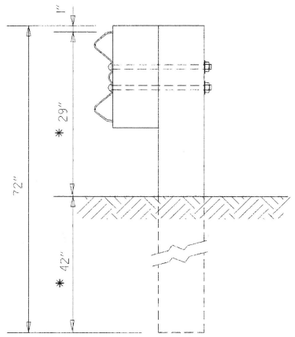
* NOTE:
THESE DIMENSIONS WILL NEED TO BE ADJUSTED IN THE FIELD TO MAKE THE TRANSITION FROM 21" MID POINT OF THRIE BEAM TO 22" MID POINT OF W-BEAM.



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



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



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

GENERAL NOTES:

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

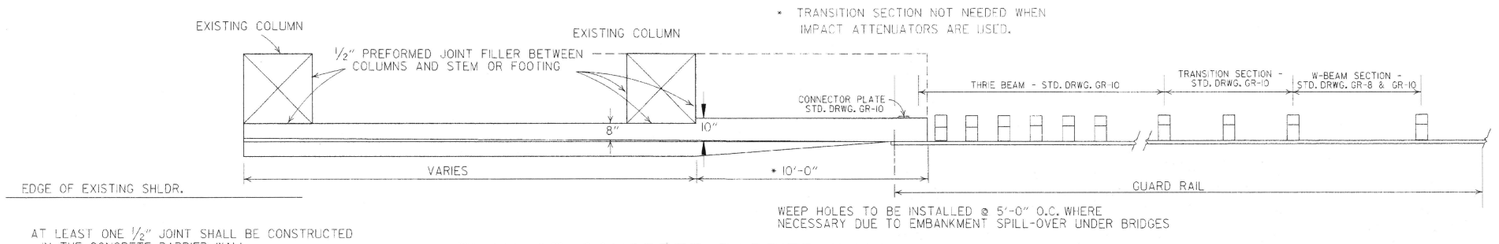
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7 f (1400 f) OR NO. 1 1350 f SOUTHERN PINE.

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

ARKANSAS STATE HIGHWAY COMMISSION

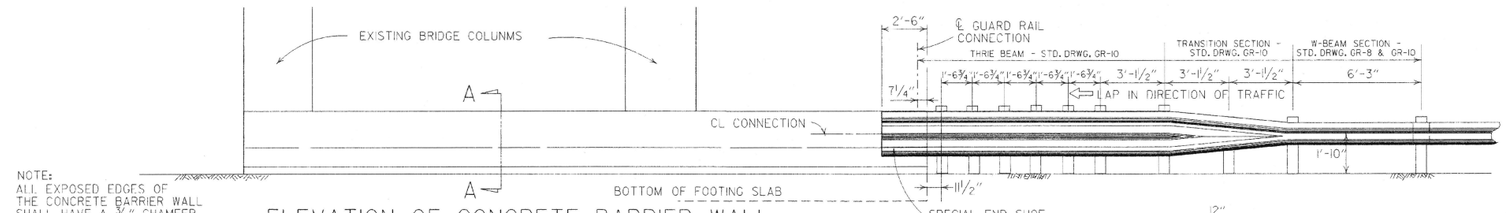
GUARD RAIL DETAILS

STANDARD DRAWING GR-10A



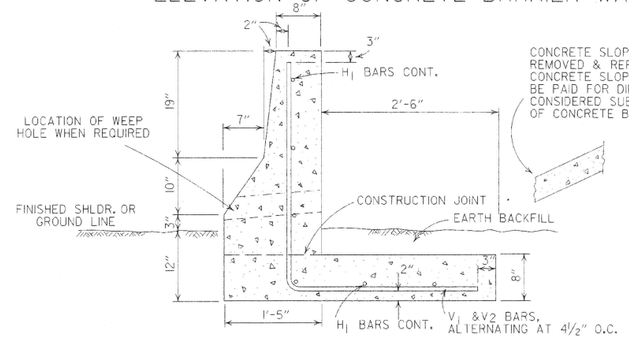
PLAN OF CONCRETE BARRIER WALL

AT LEAST ONE ½" JOINT SHALL BE CONSTRUCTED IN THE CONCRETE BARRIER WALL. JOINTS SHALL BE EQUALLY SPACED AT A MAXIMUM OF 25'-0" O.C. FILL JOINT WITH PREFORMED JOINT FILLER.

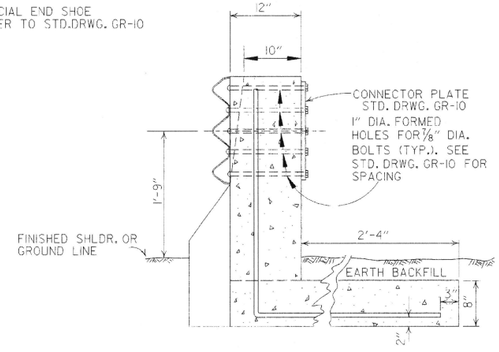


NOTE:
ALL EXPOSED EDGES OF THE CONCRETE BARRIER WALL SHALL HAVE A ¾" CHAMFER.

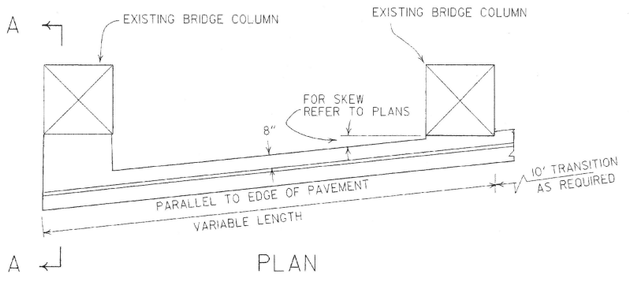
ELEVATION OF CONCRETE BARRIER WALL



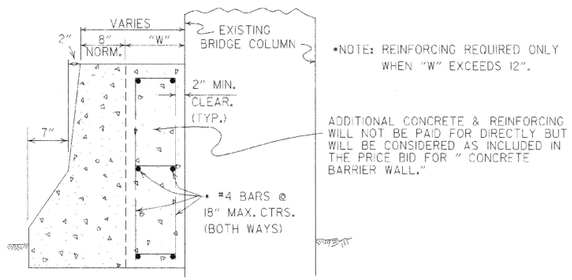
SECTION A-A



SECTION THRU CONNECTION



PLAN



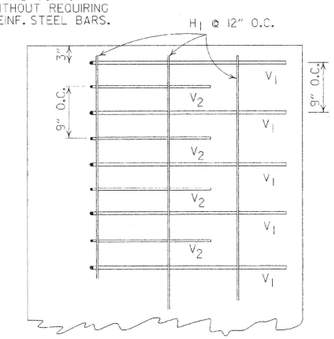
*NOTE: REINFORCING REQUIRED ONLY WHEN "W" EXCEEDS 12".

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

SECTION A-A

DETAILS OF CONCRETE BARRIER WALL WHEN PIERS ARE SKEWED TO ROADWAY

IF FOR ANY REASON IT IS NECESSARY TO CONSTRUCT THE FOOTING AT A LOWER ELEVATION THAN IS SHOWN, THE STEM MAY BE LENGTHENED 1'-0" BETWEEN FIN. SHLDR. AND TOP OF FOOTING WITHOUT REQUIRING HEAVIER REINF. STEEL BARS.

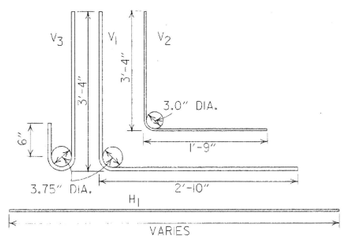


PLAN OF REINFORCING STEEL IN FOOTING

BAR LIST

MARK	NO.	SIZE	LENGTH
V1		#5	6'-2¼"
V2		#4	5'-1"
V3		#5	4'-1⅛"
H1	6	4	VAR.

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



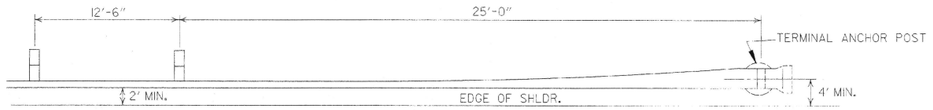
BEND DIAGRAMS

DATE	REVISION	DATE FILM
7-14-10	RAISED HEIGHT OF W-BEAM 1"	
8-22-02	REV. SECTION A-A OF DETAILS OF CONCRETE BARRIER WALL	
6-29-00	MOVED DIMENSION LINE	
5-18-00	ADDED NOTE	
3-30-00	REVISED TO INCLUDE THRIE BEAM	
6-2-94	ADDED TRANSITION SECTION NOTE	
10-1-92	REDRAWN & REVISED	10-1-92
8-15-91	REVISED DRAWING PLAN CONC. BARR.	8-15-91
2-16-89	ADDED SKEWED DETAILS	594-2-16-89
7-14-88	CHANGED TITLE	
10-9-87	REDRAWN & REVISED	

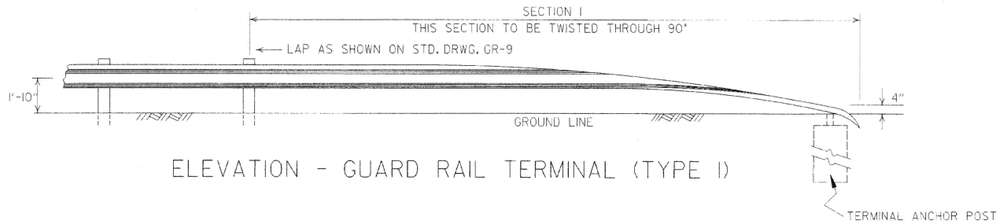
ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE BARRIER WALL (PIER PROTECTION TYPE A)

STANDARD DRAWING GR-11

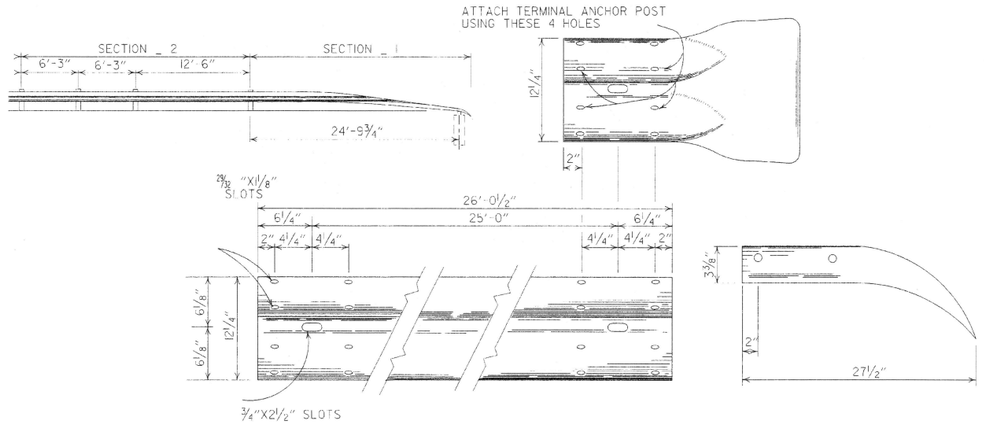


PLAN - GUARD RAIL TERMINAL (TYPE I)



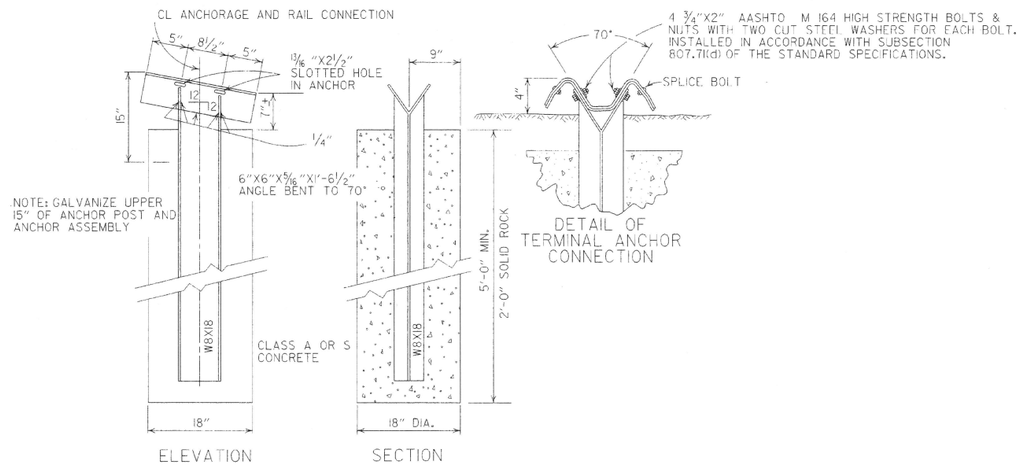
ELEVATION - GUARD RAIL TERMINAL (TYPE I)

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



SECTION 1

TERMINAL SECTION



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

DETAIL OF TERMINAL ANCHOR POST (TYPE I)

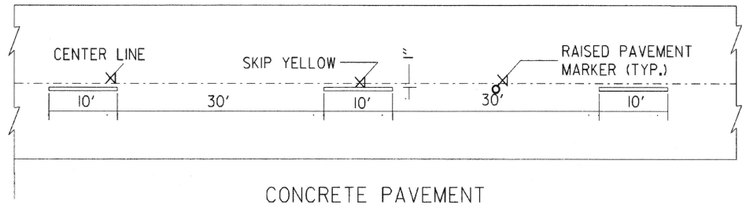
DATE	REVISION	DATE FILM
7-14-10	RAISED HEIGHT OF GUARD RAIL 1"	
6-26-97	REVISED 1 AP NOTE	
10 18 96	REVISED ASTM REF. TO AASHTO	
11-3-94	DIMENSION TERMINAL DETAIL	
11-11-92	ADDED NOTE FOR PAYMENT	11-11-92
10-1-92	DRAWN & ISSUED	10-1-92

ARKANSAS STATE HIGHWAY COMMISSION

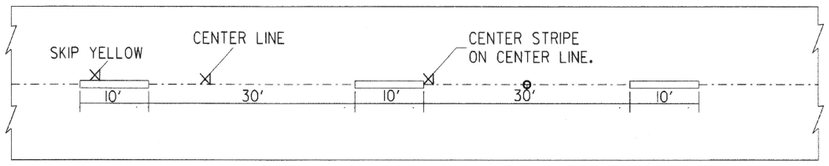
GUARD RAIL DETAILS

STANDARD DRAWING GRT-1

NOTES:
1. REFER TO THE STRIPING DETAILS FOR PAVEMENT MARKING LINE WIDTHS.
2. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
3. RAISED PAVEMENT MARKERS SHALL BE PLACED ON AN 80 FEET SPACING UNLESS OTHERWISE SHOWN IN THE PLANS.

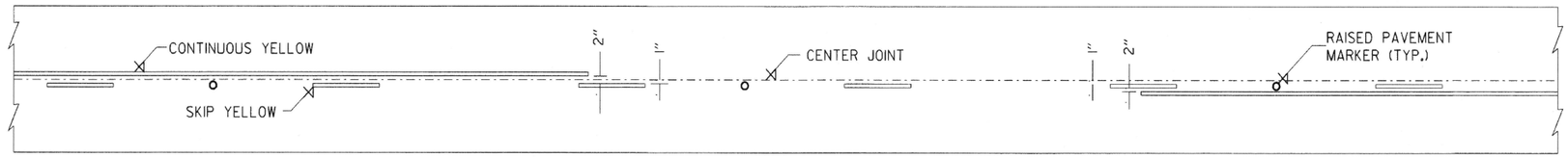


CONCRETE PAVEMENT

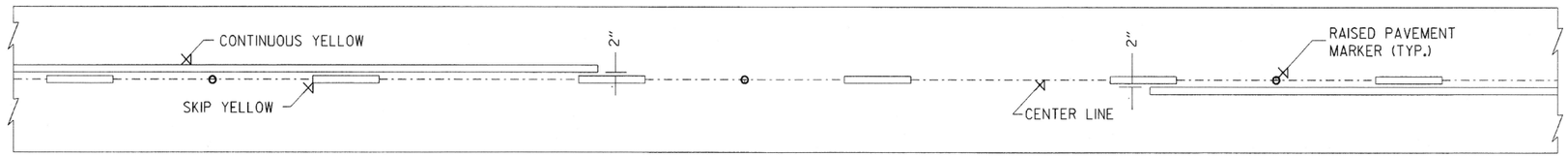


ASPHALT PAVEMENT

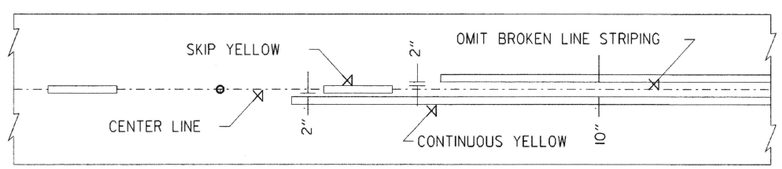
BROKEN LINE STRIPING



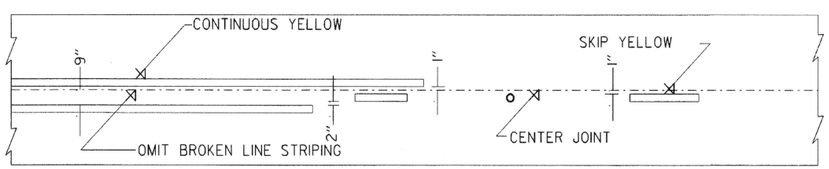
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

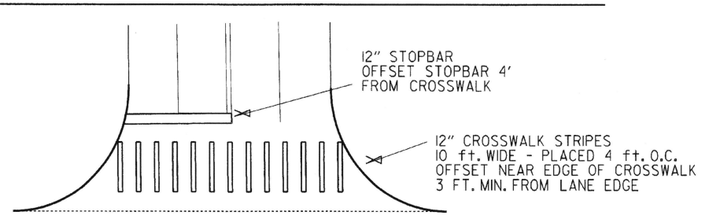


ASPHALT PAVEMENT



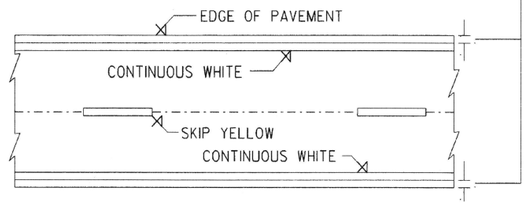
CONCRETE PAVEMENT

STRIPING AT ADJACENT NO PASSING LANES

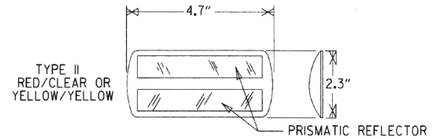


CROSSWALK AND STOPBAR DETAILS

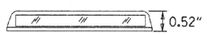
2" FOR ASPHALT OR CONCRETE PAVEMENT
6" FOR BITUMINOUS SURFACE TREATMENT



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

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
5-12-16	REVISED LINE WIDTHS, SPACING, & NOTES	
9-12-13	REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS	
11-17-10	REVISED GENERAL NOTES & REMOVED PLOWABLE PVMT MRKRS	
11-18-04	REVISED NOTE 2 & GENERAL NOTES	
8-22-02	ADDED CROSSWALK & STOPBAR DTLS.	
7-02-98	ADDED DETAILS OF STD. RAISED PAV'T. MARKERS	
4-26-96	REV. NOTES 3&4; ADDED R.P.M.	
9-30-80	DRAWN	1-9-30-80

ARKANSAS STATE HIGHWAY COMMISSION

PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1

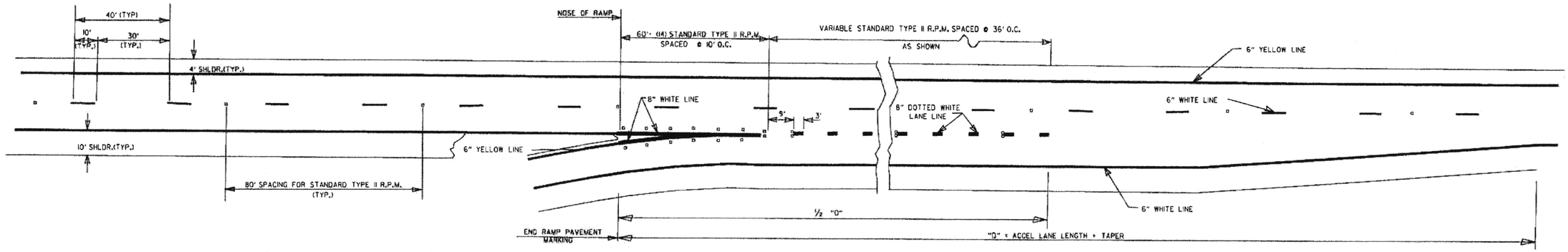
PAVEMENT MARKING QUANTITIES
(BASED ON 700' ACCEL. LANE + 300' TAPER)

ENTRANCE RAMP

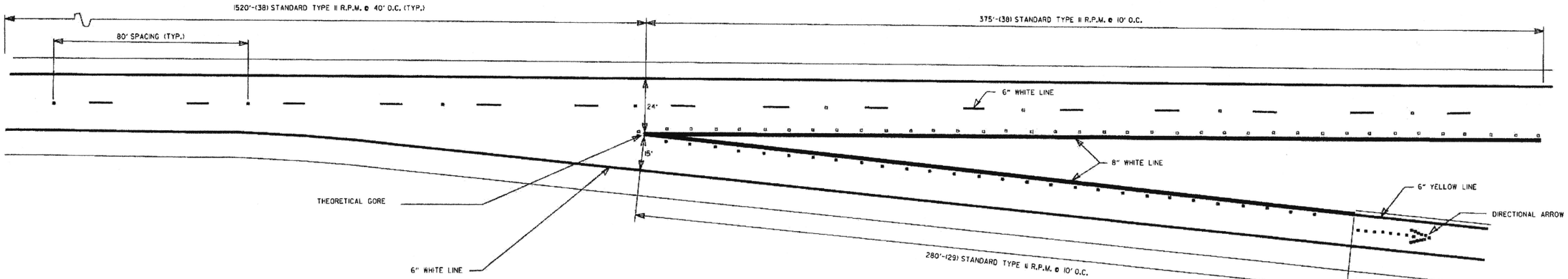
8" WHITE = 228 LIN. FT.
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH

EXIT RAMP

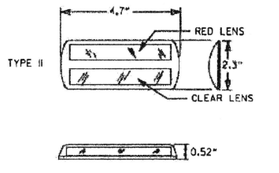
6" WHITE = 280 LIN. FT.
8" WHITE = 655 LIN. FT.
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 48 EACH
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH



ENTRANCE RAMPS

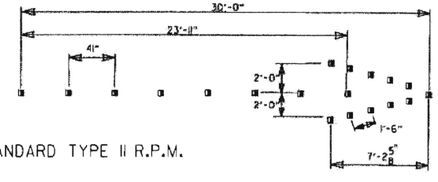


EXIT RAMPS



DETAIL OF
STANDARD
RAISED PAVEMENT MARKERS

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



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

DIRECTIONAL ARROWS

GENERAL NOTES:

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

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

NOTE:
DIMENSIONS SHOWN FOR 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
12-8-16	REVISED RAISED PAV'T MARKERS FOR 80' SPACING; REVISED WIDTH OF STRIPING	
9-12-13	REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS	
7-26-12	REVISED RPM NOTATION	
12-15-11	REVISED RPMs ACCORDING TO LATEST POLICY	
11-17-10	REMOVED PLOWABLE PAVEMENT MARKERS	
6-3-10	REVISED PER 2009 MUTCD	
11-18-04	REVISED NOTES	
8-22-02	ADDED & REVISED NOTES; REV. ENTRANCE & EXIT RAMPS	
5-18-00	REMOVED HASHMARKS	
7-02-98	CHANGED TYPES TO ROMAN NUMERALS	
4-26-96	ADDED DIMENSIONS & QUANTITIES; REVISED LANE WIDTH ON EXIT RAMP	
2-2-95	PLACED IN USE	2-2-95

ARKANSAS STATE HIGHWAY COMMISSION

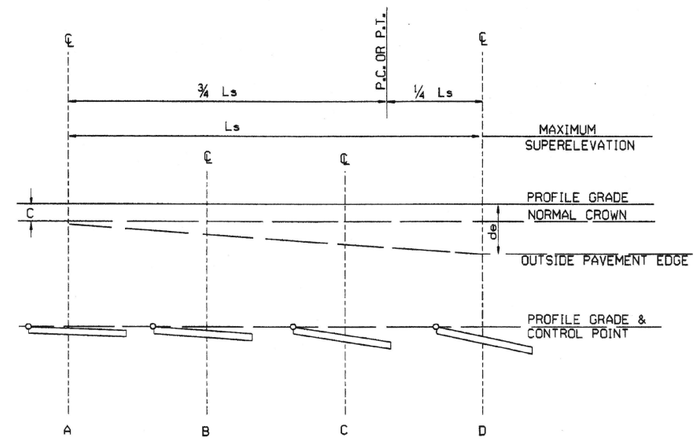
PERMANENT PAVEMENT MARKING ON ACCESS CONTROLLED ROADWAYS

STANDARD DRAWING PM-2

SUPERELEVATION TABLE FOR ONE - WAY TRAFFIC

DEGREE OF CURVE	30 MPH e	30 MPH Ls (FT) MINIMUM	30 MPH Ls (FT) DESIRABLE	40 MPH e	40 MPH Ls (FT) MINIMUM	40 MPH Ls (FT) DESIRABLE	50 MPH e	50 MPH Ls (FT) MINIMUM	50 MPH Ls (FT) DESIRABLE	55 MPH e	55 MPH Ls (FT) MINIMUM	55 MPH Ls (FT) DESIRABLE	60 MPH e	60 MPH Ls (FT) MINIMUM	60 MPH Ls (FT) DESIRABLE	65 MPH e	65 MPH Ls (FT) MINIMUM	65 MPH Ls (FT) DESIRABLE	70 MPH e	70 MPH Ls (FT) MINIMUM	70 MPH Ls (FT) DESIRABLE
0° 15′	N.C.			N.C.			N.C.			N.C.			N.C.			N.C.			N.C.		
0° 30′	N.C.			N.C.			N.C.			N.C.			N.C.			N.C.			N.C.		
0° 45′	N.C.			N.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
1° 00′	N.C.			R.C.			R.C.			N.C.			N.C.			N.C.			N.C.		
1° 15′	N.C.			R.C.			R.C.			0.022			0.023			0.025			0.028		
1° 30′	N.C.			0.021			0.021			0.026			0.030			0.033			0.037		
1° 45′	N.C.			0.025			0.026			0.032			0.037			0.041			0.046		
2° 00′	R.C.			0.028	175		0.031	200		0.037	225		0.043	250		0.048	250		0.054	275	
2° 15′	R.C.			0.031			0.036			0.043			0.049			0.055			0.062		
2° 30′	0.021			0.034			0.040			0.048			0.055			0.061			0.070		
2° 45′	0.023			0.037			0.045		300	0.053			0.061			0.067			0.078	300	
3° 00′	0.025			0.040			0.049			0.058			0.067			0.072			0.085	315	400
3° 15′	0.027	150		0.043		250	0.053			0.063			0.072			0.077	265		0.091	335	
3° 30′	0.029			0.046			0.057			0.067	230		0.077	260		0.082	280		0.098	350	
3° 45′	0.031			0.049			0.061	205		0.072	245		0.082	275		0.087	300		0.104	370	
4° 00′	0.033			0.051			0.065	215		0.076	255		0.086	285		0.090	325		0.111	395	
4° 30′	0.037			0.056			0.069	215		0.080	265		0.090	295		0.095	340	400	0.118	420	
5° 00′	0.040			0.061			0.072	225		0.083	270		0.093	305	400	0.097	345		0.124	440	
5° 30′	0.043			0.066	185		0.078	240		0.087	280		0.096	315		0.099	350		0.130	460	
6° 00′	0.046			0.070	190		0.083	250		0.091	295		0.098	320							
6° 30′	0.050			0.074	200		0.088	260		0.094	300	400									
7° 00′	0.053			0.078	210		0.092	270		0.096	305										
7° 30′	0.056			0.081	215		0.095	280	350	0.100	315										
8° 00′	0.058			0.084	220		0.098	285													
8° 30′	0.061			0.087	225	300	0.099	290													
9° 00′	0.063			0.089	230		0.100	290													
10° 00′	0.068	160		0.094	235																
11° 00′	0.072	170		0.097	250																
12° 00′	0.076	175		0.099	250																
13° 00′	0.080	180		0.100	250																
14° 00′	0.083	190																			
15° 00′	0.086	195																			
16° 00′	0.089	200																			
17° 00′	0.091	200																			
18° 00′	0.093	205																			
19° 00′	0.095	210																			
20° 00′	0.097	215	300																		
21° 00′	0.098	215																			
22° 00′	0.099	215																			
23° 00′	0.099	215																			
24° 00′	0.100	220																			

D MAX = 24° 45′ | D MAX = 13° 15′ | D MAX = 8° 15′ | D MAX = 6° 30′ | D MAX = 5° 15′ | D MAX = 4° 15′ | D MAX = 3° 30′



ONE-WAY TRAFFIC
INSIDE LANE

SUPERELEVATION FORMULA = $S = -\frac{L(de-C)}{Ls} - C$

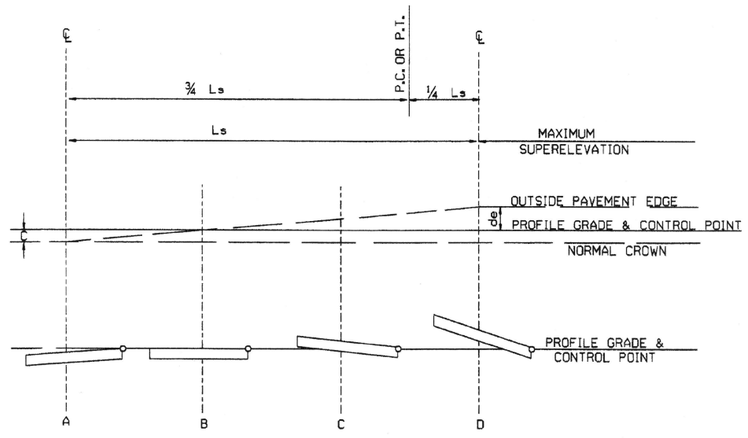
ABBREVIATIONS

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

GENERAL NOTES

1. ON PAVEMENT WITH ONE-WAY TRAFFIC, THE SUPERELEVATION SHALL BE REVOLVED ON THE PROFILE GRADE POINT.
2. SUPERELEVATION VALUES SHOWN ON THE CROSS SECTIONS ARE VALUES (+) OR (-) TO BE ADDED OR SUBTRACTED FROM THE POINT OF CONTROL.
3. LENGTHS FOR Ls MAY BE ROUNDED IN MULTIPLES OF 25 FT. OR 50 FT. TO PERMIT SIMPLER CALCULATIONS.
4. MINIMUM Ls VALUES MAY BE USED FOR RAMPS; DESIRABLE VALUES SHALL APPLY TO MAIN LANES.
5. DIVIDED PAVEMENTS WIDER THAN 4 LANES SHALL HAVE ADDITIONAL TRANSITION LENGTHS AS FOLOWS:

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



ONE-WAY TRAFFIC
OUTSIDE LANE

SUPERELEVATION FORMULA = $S = +\frac{L(de+C)}{Ls} - C$

DATE	REVISION	DATE FILMED
01-09-87	ISSUED	578-1-15-87

ARKANSAS STATE HIGHWAY COMMISSION

TABLES AND METHOD OF SUPERELEVATION FOR ONE-WAY TRAFFIC

STANDARD DRAWING SE-1

RI-1



STANDARD 30"X30"
EXPRESSWAY 36"X36"
SPECIAL 48"X48"

RI-2



STD. 36"X36"X36"
EXPWY. 48"X48"X48"
FWY. 60"X60"X60"

R2-1



STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

W3-5



STD. 36"X36"
EXPWY. 48"X48"
FWY. 48"X48"

W3-5a



STD. 36"X36"
EXPWY. 48"X48"
FWY. 48"X48"

R4-1



STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

R4-2



STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

R5-1



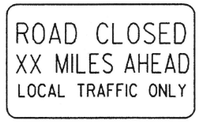
STD. 30"X30"
EXPWY. 36"X36"
SPECIAL 48"X48"

RII-2



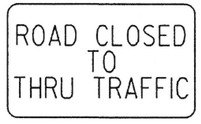
48"X30"

RII-3A



60"X30"

RII-4



60"X30"

RSP-1



48"X30"

WI-1



STD. 36"X36"
FWY. 48"X48"

WI-2



STD. 36"X36"
FWY. 48"X48"

WI-3



STD. 48"X48"

WI-4



STD. 48"X48"

WI-6



STD. 48"X24"
SPECIAL 60"X30"

WI-8



STD. 18"X24"
SPECIAL 24"X30"
EXPWY. 30"X36"
FWY. 36"X48"

W3-1



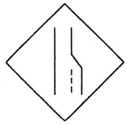
STD. 36"X36"
SPECIAL 48"X48"

W3-2



STD. 36"X36"
SPECIAL 48"X48"

W4-2



STD. 36"X36"
FWY. 48"X48"

W5-1



STD. 36"X36"
SPECIAL 48"X48"

W6-3



EXPWY. 36"X36"
SPECIAL 48"X48"

W8-7



EXPWY. 36"X36"
FWY. 48"X48"

W9-2



STD. 36"X36"
FWY. 48"X48"

W13-1



STD. 24"X24"

W20-1



STD. 48"X48"

W20-2



STD. 48"X48"

W20-3



STD. 48"X48"

W20-4



STD. 48"X48"

W20-5



STD. 48"X48"

W20-7a



STD. 36"X36"
FWY. 48"X48"

W21-2



STD. 30"X30"
SPECIAL 36"X36"

W21-5



STD. 30"X30"
SPECIAL 36"X36"

W24-1



STD. 36"X36"

WI-4b



STD. 48"X48"

R56-1



STD. 18"X18"

W8-11



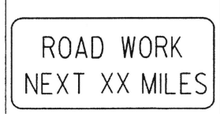
STD. 36"X36"
FWY. 48"X48"

W8-9



STD. 36"X36"
FWY. 48"X48"

G20-1



60"X24"

G20-2

48"X24"

OM-3L OM-3R

12"X36"

M4-9

STD. 30"X24"
SPECIAL 48"X36"
SPECIAL 60"X48"

M4-10

48"X18"

R55-1

36"X60"
• USE 6" C LETTERS
•• USE 4" D LETTERS

ADVANCE DISTANCES
(XXXX)

500 FT	½ MILE
1000 FT	¾ MILE
1500 FT	1 MILE
	AHEAD

GENERAL NOTES:

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

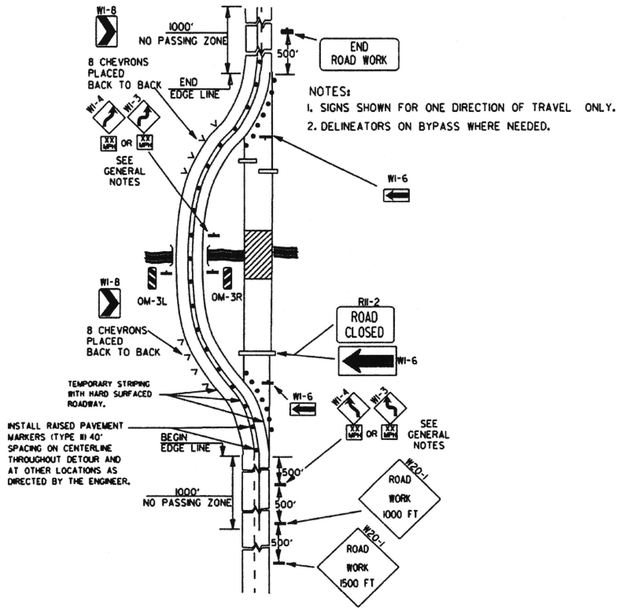
• NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY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

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

ARKANSAS STATE HIGHWAY COMMISSION

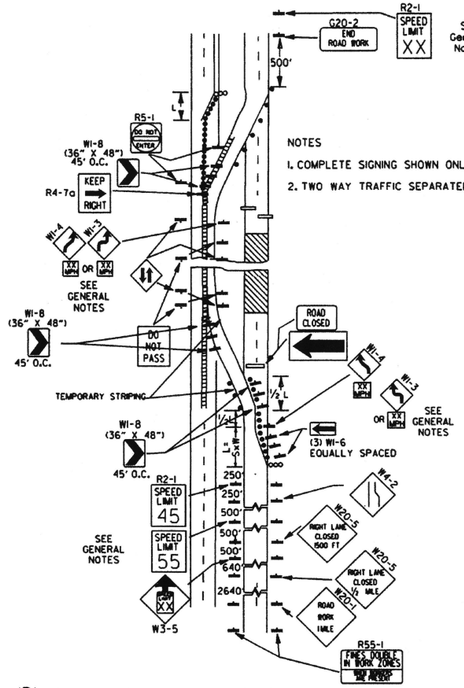
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

STANDARD DRAWING TC-1



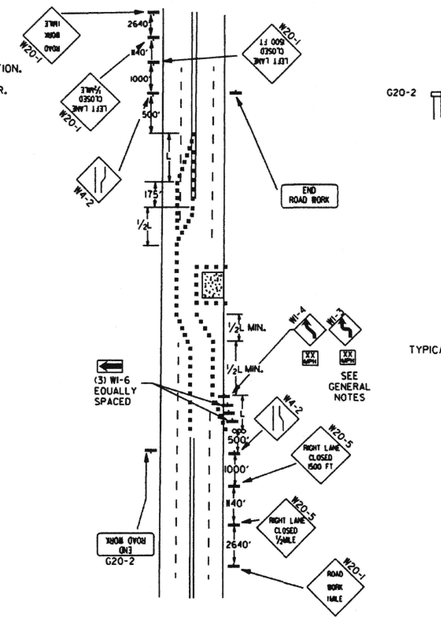
NOTES:
1. SIGNS SHOWN FOR ONE DIRECTION OF TRAVEL ONLY.
2. DELINEATORS ON BYPASS WHERE NEEDED.

(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.

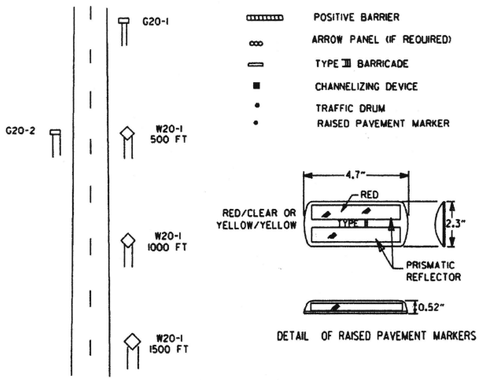


NOTES
1. COMPLETE SIGNING SHOWN ONLY IN CROSSOVER DIRECTION.
2. TWO WAY TRAFFIC SEPARATED WITH POSITIVE BARRIER.

(B) TYPICAL APPLICATION - 4-LANE DIVIDED ROADWAY WHERE ONE ROADWAY IS CLOSED.



(C) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



DETAIL OF RAISED PAVEMENT MARKERS

TYPICAL ADVANCE WARNING SIGN PLACEMENT

TAPER FORMULAE:

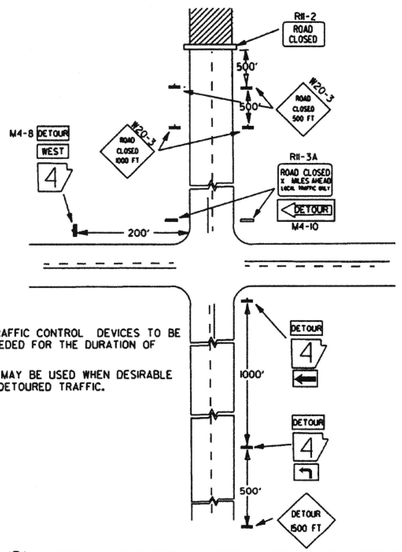
L=SXW FOR SPEEDS OF 45MPH OR MORE.

$L = \frac{WS^2}{60}$ FOR SPEEDS OF 40MPH OR LESS.

WHERE:
L= MINIMUM LENGTH OF TAPER.
S= NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85TH PERCENTILE SPEED.
W= WIDTH OF OFFSET.

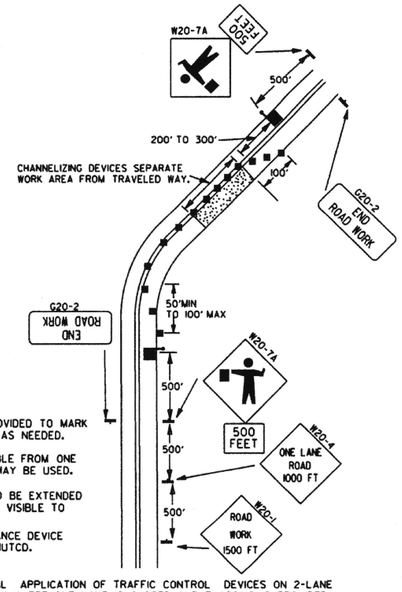
GENERAL NOTES:

1. ADVISORY SPEED POSTED ON 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.
2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-1(55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-1 45MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
3. WHEN THE EXISTING SPEED LIMIT IS 65MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 55MPH, THE R2-1(45) SHALL BE OMITTED. ADDITIONAL R2-1 55MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
4. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT. BEYOND THE TAPER, MAXIMUM SPACING SHALL BE TWO TIMES THE SPEED LIMIT, OR AS DIRECTED BY THE ENGINEER.
5. WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
6. PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICABLE.
7. TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE DELINEATED BY AFFIXING CONSPICUITY MATERIAL IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER. WHEN PLACED ON OR ADJACENT TO THE SHOULDER AND NOT BEHIND A POSITIVE BARRIER, THESE DEVICES SHALL BE DELINEATED BY PLACING FIVE (5) TRAFFIC DRUMS, EQUALLY SPACED ALONG THE TRAFFIC SIDE OF THE DEVICE.
8. 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.



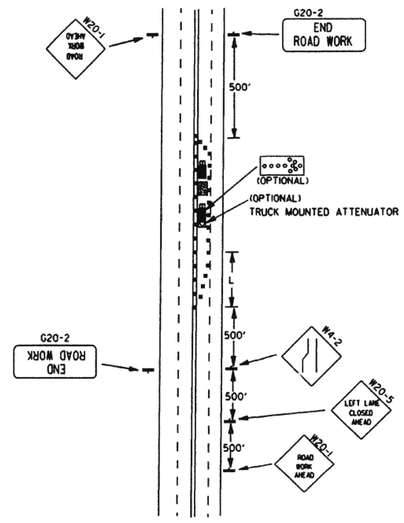
NOTES:
1. REGULATORY TRAFFIC CONTROL DEVICES TO BE MODIFIED AS NEEDED FOR THE DURATION OF THE DETOUR.
2. STREET NAMES MAY BE USED WHEN DESIRABLE FOR DIRECTING DETOURED TRAFFIC.

(D) TYPICAL APPLICATION - ROADWAY CLOSED BEYOND DETOUR POINT.



NOTES:
1. FLOOD LIGHTS SHOULD BE PROVIDED TO MARK FLAGGER STATIONS AT NIGHT AS NEEDED.
2. IF ENTIRE WORK AREA IS VISIBLE FROM ONE STATION, A SINGLE FLAGGER MAY BE USED.
3. CHANNELIZING DEVICES ARE TO BE EXTENDED TO A POINT WHERE THEY ARE VISIBLE TO APPROACHING TRAFFIC.
4. AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD) OPTIONAL. REFER TO MUTCD.

(E) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON 2-LANE HIGHWAY WHERE ONE LANE IS CLOSED AND FLAGGING IS PROVIDED.



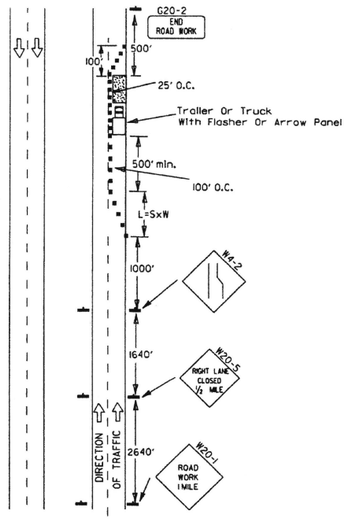
(F) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WITH INSIDE LANE CLOSED.

DATE	REVISION	FILMED
9-2-15	REVISED NOTE 2, ADDED NOTE 8, REVISED DRAWING (A) & REPLACED R2-5A WITH W3-5	
9-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKERS	
3-8-10	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	

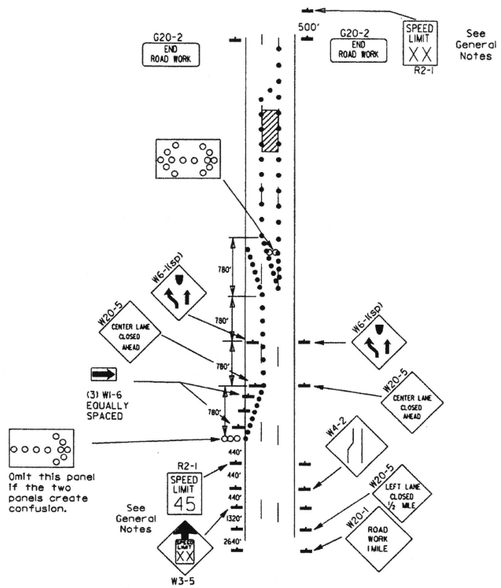
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

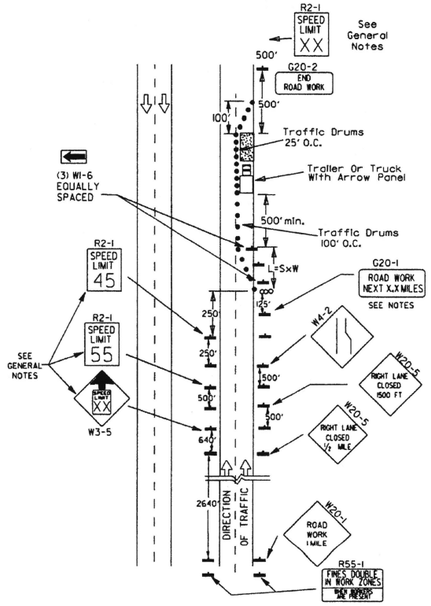
STANDARD DRAWING TC-2



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



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



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

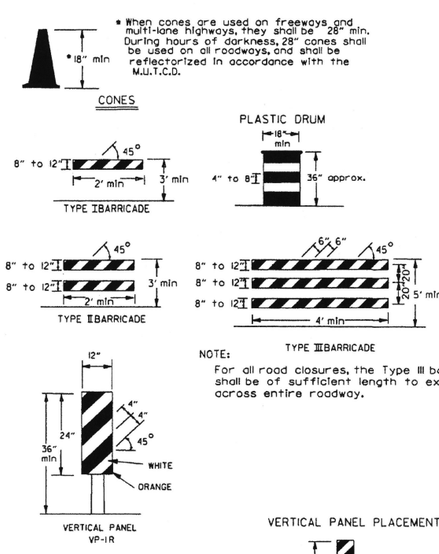
KEY:

- ooo Arrow Panel (If Required)
- ■ Channelizing Device
- ● Traffic drum

GENERAL NOTES:

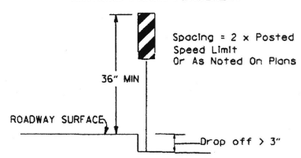
1. A speed limit reduction may be implemented ONLY when designated in the plan or when recommended by the Roadway Design Division.
2. When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(55) shall be omitted and the W3-5 shall be installed at that location. Additional R2-1 45mph speed limit signs shall be installed at a maximum of 1 mile intervals. At the end of the work area a R2-1(XX) shall be installed to match original speed limit.
3. When the existing speed limit is 65mph and the plans require a speed limit of 55mph, the R2-1(45) shall be omitted. Additional R2-1 55mph speed limit signs shall be installed at a maximum of 1 mile intervals. At the end of the work area a R2-1(XX) shall be installed to match original speed limit.
4. The maximum spacing between channelizing devices in a taper should be approximately equal in feet to the speed limit. Beyond the taper, maximum spacing shall be two times the speed limit or as directed by the Engineer.
5. Warning lights and/or flags may be mounted to signs or channelizing devices at night as needed.
6. Pavement markings no longer applicable which might create confusion in the minds of vehicle operators shall be removed or obliterated as soon as practicable.
7. The G20-1 sign will be required on jobs of over two miles in length. When the lane closure is not at the beginning of the project, the G20-1 sign shall be erected 1/2 mile in advance of the job limit. Additional W20-1 (1 MILE) signs are not required in advance of lane closures that begin inside the project limits.
8. Flaggers shall use STOP/SLOW paddles for controlling traffic through work zones. Flags may be used only for emergency situations.
9. All plastic drums and cones shall meet the requirements of NCHRP-350 or Manual For Assessing Safety Hardware (MASH).
10. Trailer mounted devices such as arrow panels and portable changeable message signs shall be delineated by affixing conspicuity material in a continuous line on the face of the trailer. When placed on or adjacent to the shoulder and not behind a positive barrier, these devices shall be delineated by placing five (5) traffic drums, equally spaced along the traffic side of the device.

Channelizing devices



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

VERTICAL PANEL PLACEMENT



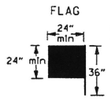
TRAFFIC CONTROL DEVICES
FOR
VERTICAL PAVEMENT DIFFERENTIALS

VERTICAL DIFFERENTIAL	LOCATIONS	TRAFFIC CONTROL
1" to 3"	Centerline, lane lines	W8-11
1" to 3"	Edge of shoulder	W8-9
Greater than 3"	Lane lines	Standard lane closure required
Greater than 3"	Edge of traveled lane	*RSP-1 and vertical panels, drums or concrete barrier
Greater than 3"	Edge of shoulder	*Vertical panels, drums or concrete barrier

* When shown on the plans concrete barrier will be used.

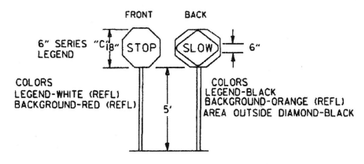
When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.

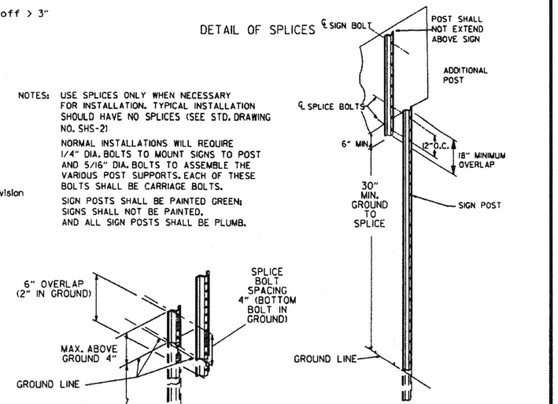
FLAG



Flag shall be of good grade red material

STOP SLOW PADDLE

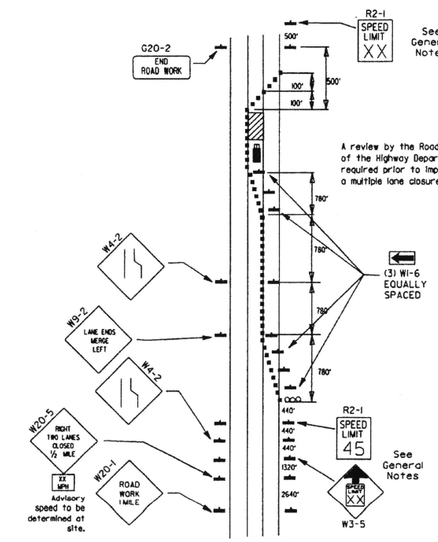




NOTES: USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-2)

NORMAL INSTALLATIONS WILL REQUIRE 1/4" DIA. BOLTS TO MOUNT SIGNS TO POST AND 5/16" DIA. BOLTS TO ASSEMBLE THE VARIOUS POST SUPPORTS. EACH OF THESE BOLTS SHALL BE CARRIAGE BOLTS.

SIGN POSTS SHALL BE PAINTED GREEN; SIGNS SHALL NOT BE PAINTED, AND ALL SIGN POSTS SHALL BE PLUMB.



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

DATE	REVISION	FILMED
9-2-15	REVISED NOTE 2 & REPLACED R2-5A WITH W3-5	
10-15-09	ADDED REFERENCE TO MASH	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED NOTE	
10-1-98	ADDED NOTE	
4-03-97	ADDED (SP) TO W6-1 & REVISED TRAFFIC CONTROL DEVICES NOTE	
10-18-96	ADDED R55-1	
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL, TEXT	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

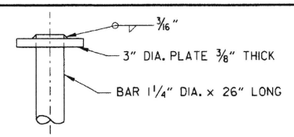
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

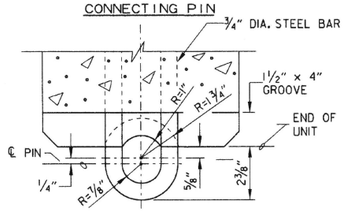
STANDARD DRAWING TC-3

REINFORCING BAR TABLE PER BARRIER UNIT

MARK	LOCATION	BAR SIZE	(NO. BARS)	SKETCH
H-1	HORIZONTAL IN BARRIER TIED INSIDE V-1 BARS	#5	(6)	19'-3"
H-2	CENTERED ABOVE DRAIN SLOTS LONG. & TRANSVERSELY	#5	(6)	6'-6"
H-3	TIED ABOVE H-1 BARS TO SUPPORT H-2, TIED TO V-1	#4	(2)	1'-6"
S-1	OVER LIFT HOLES	#4	(2)	2'-5", LIFTING HOLE, 90°, 3 3/8" R
S-2	HORIZ. AROUND SLOTS BETWEEN V-1'S @ DRAIN SLOTS	#4	(2)	1 1/2" R, SLOTS, 7", 1'-6", 1" MIN. CLEAR TO BAR; 5'-1" BAR W/(4) 1 1/2" R BENDS & MIN. 1'-0" OVERLAP
V-1	VERTICAL IN BARRIER(3) EACH END & (2) AT EACH DRAIN SLOTS	#5	(16)	TOTAL LENGTH 4'-9", 2 3/16" R, 12°, 19 1/2", 4 3/8", 2'-1 3/8"

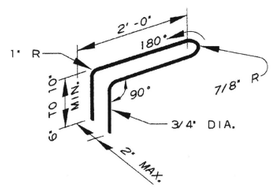


CONNECTING PIN

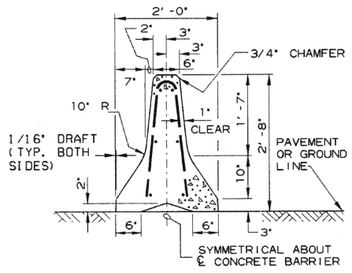


SECTION E-E

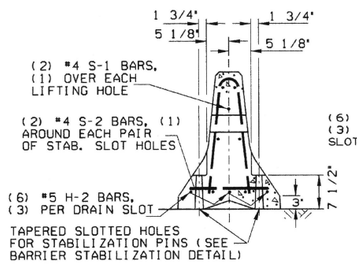
CONNECTION DETAILS



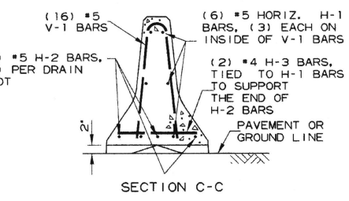
CONNECTION LOOP



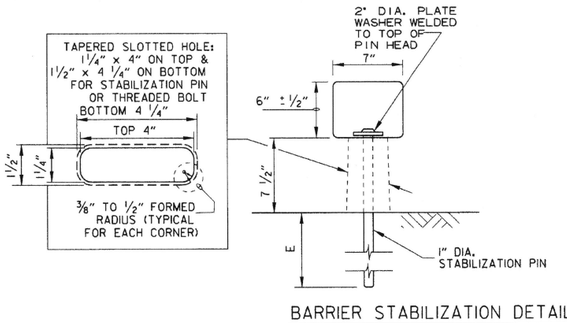
SECTION A-A



SECTION B-B



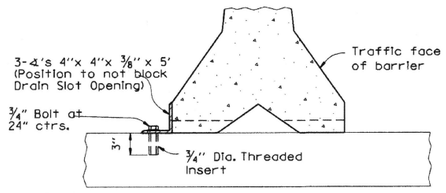
SECTION C-C



BARRIER STABILIZATION DETAIL

ROADWAY SECTION

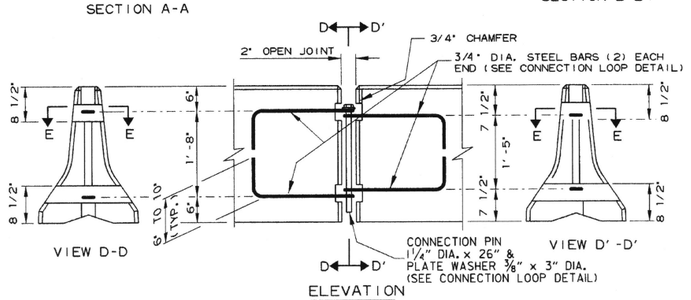
(E) 4" - Concrete Pavement
8" - Asphalt Pavement
12" - Shoulder Areas



NOTE: 3/4" Threaded Inserts shall be cast in place for all new bridge decks and drilled and grouted for existing bridge decks. Inserts shall have a minimum ultimate load capacity of 8000 lbs. in tension. After removal of barrier, bolts, and angles, the inserts shall be filled with approved non-shrink epoxy.

BARRIER STABILIZATION DETAIL

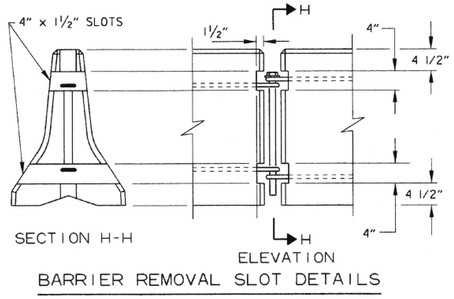
BRIDGE DECKS



VIEW D-D

VIEW D'-D'

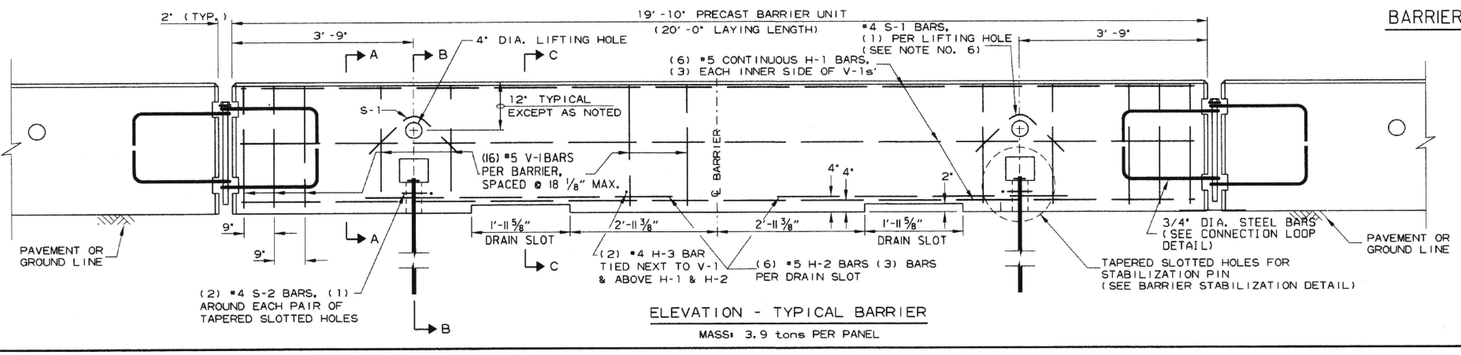
ELEVATION



SECTION H-H

ELEVATION

BARRIER REMOVAL SLOT DETAILS



ELEVATION - TYPICAL BARRIER

MASS: 3.9 tons PER PANEL

General Notes

1. The contractor shall furnish the Precast Concrete Barrier Units and shall be responsible for the manufacture, shipment, storage, placement and removal. At the completion of the project, the precast units will remain the property of the contractor.

2. Materials shall meet the following minimum requirements:
   Concrete: 2500 psi compressive strength at 28 days.
   Reinforcing Steel: AASHTO M 31 or M 53, Grade 60
   Structural Steel: AASHTO-M270 Grade 36 shall be used for the Connection Pin, Connection Loops, and Stabilization Pins. A One Piece Pin with a 3" rounded top may be used in place of the detailed Connection Pin.
   Delineators: Delineators shall be mounted at 10' spacing on top of precast barrier.

   In applications where barrier wall is within 6 feet of a traffic lane, additional delineators shall be placed on the barrier at 10' spacing approximately one (1) foot from the top of the barrier. Delineators shall be on the AHTD Qualified Products List for Construction Concrete Barrier Markers.
   Delineator color shall be in accordance with the Manual on Uniform Traffic Control Devices.
   Payment for delineators shall be considered included in the price bid per Lin. Ft. for "Furnishing and Installing Precast Concrete Barrier". The contractor shall certify to the Engineer that the material and the design used in the precast barrier units meets the requirements as shown on this standard drawing.

3. Other Precast Concrete Barriers that have been crash tested and approved by the Federal Highway Administration to meet the requirements of NCHRP-350 test level 3 or Manual For Assessing Safety Hardware (MASH) will be accepted in lieu of the barrier shown. Drain slots shall be provided as needed or as directed by the Engineer. The Contractor shall furnish a certification of NCHRP Report 350 or Manual For Assessing Safety Hardware (MASH) compliance for any other types of precast barrier to be used. The certification shall state that the precast concrete barrier meets the requirements of NCHRP Report 350 or Manual For Assessing Safety Hardware (MASH) and include a copy of the Federal Highway Administration's (FHWA) approval letter with all attachments. Precast concrete barrier units shall be fabricated and installed in accordance with crash testing and documentation provided in the FHWA approval letter. Mixing of shapes will not be allowed in a continuous line of units.

4. Dowel holes in pavement or bridge slabs that are to remain in place shall be filled. Holes in concrete pavement and bridge slabs shall be filled with an approved non-shrink epoxy grout. Holes in asphalt pavement shall be filled with an approved asphalt joint filler. Payment for drilling and filling holes to be included in the price for various barrier items.

5. Attach Units To Roadway Surface with Stabilization Pins and to Deck Slabs using bolts when required.

6. A 4" White PVC Sleeve may be used to form the Lifting Hole and if used the Sleeve is to be left in place.

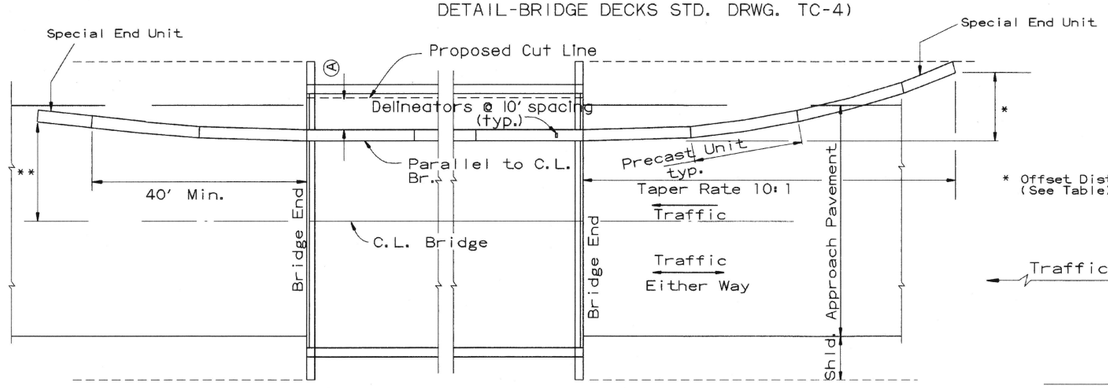
DATE	REVISION	FILMED
2-27-14	REVISED BARRIER STABILIZATION DETAIL	
10-15-09	ADDED REFERENCE TO MASH	
8-5-09	REV. NOTE 3 CONCERNING DRAIN SLOTS	
11-29-07	REVISED NOTE 3	
5-25-06	DELETED GENERAL NOTE 7	
11-18-04	REVISED BARRIER STABILIZATION DETAIL BRIDGE DECKS	
4-10-03	REVISED GENERAL NOTE 2	
8-22-02	ISSUED NEW DRAWING	

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

STANDARD DRAWING TC-4

Ⓐ 4 feet or greater preferred. If less than 4 feet, Precast Units shall be connected to slab (SEE BARRIER STABILIZATION DETAIL-BRIDGE DECKS STD. DRWG. TC-4)

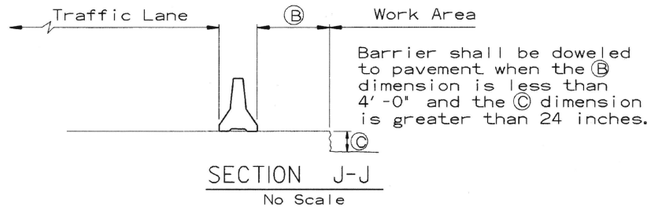


BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET

No Scale

** Offset Distance for Two Way Traffic Only

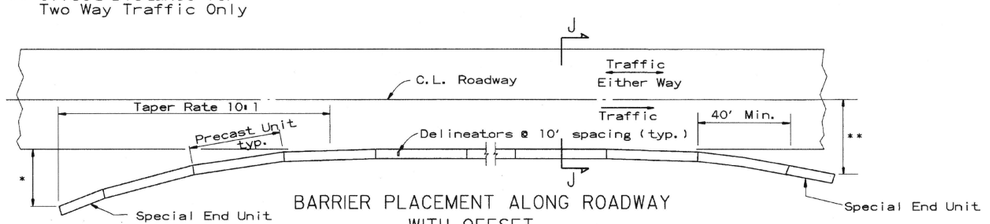
* Offset Distance (See Table)



Barrier shall be doweled to pavement when the Ⓑ dimension is less than 4'-0" and the Ⓒ dimension is greater than 24 inches.

SECTION J-J

No Scale



BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET

No Scale

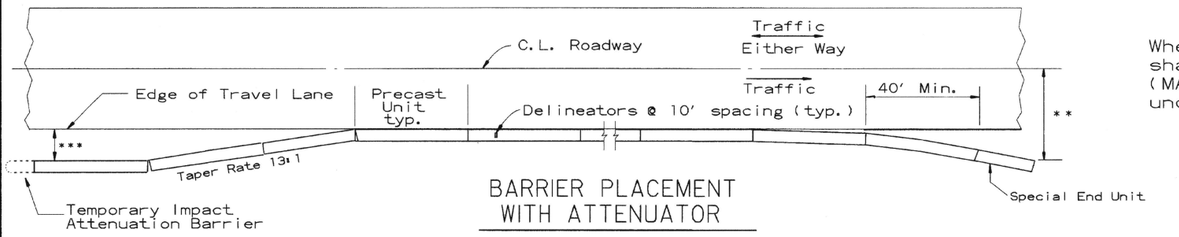
* Offset Distance (See Table)

** Offset Distance For Two Way Traffic Only

Offset Distance Table

Speed (MPH)	Offset Distance (FT.)
≤ 45	12
> 45	18

If offset distance is not attainable, then see 'Barrier Placement With Attenuator' Detail shown below.

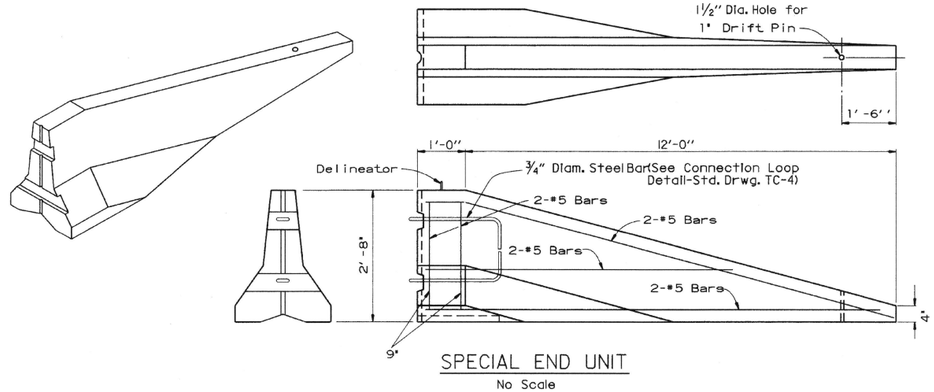


BARRIER PLACEMENT WITH ATTENUATOR

No Scale

** Offset Distance For Two Way Traffic Only

*** Min. 3'-0" From Edge of Travel Lane to Nearest Edge of Attenuator



SPECIAL END UNIT

No Scale

General Notes

When shown on the Plans, the ends of the Temporary Precast Concrete Barrier shall be protected with an NCHRP-350 or Manual For Assessing Safety Hardware (MASH) approved Crash Cushion. Payment for Crash Cushions shall be made under the item of "Temporary Impact Attenuation Barrier."

DATE	REVISION	FILMED
10-15-09	ADDED REFERENCE TO MASH	
5-25-06	REVISED BARRIER PLACEMENT	
8-22-02	ISSUED NEW DRAWING	

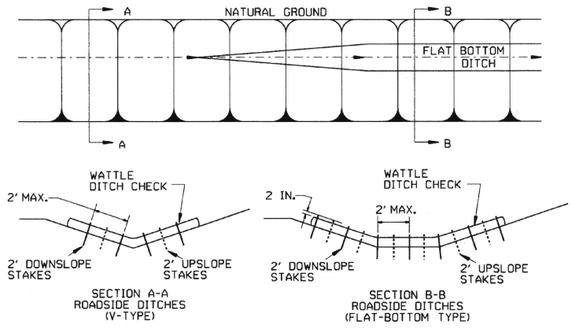
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

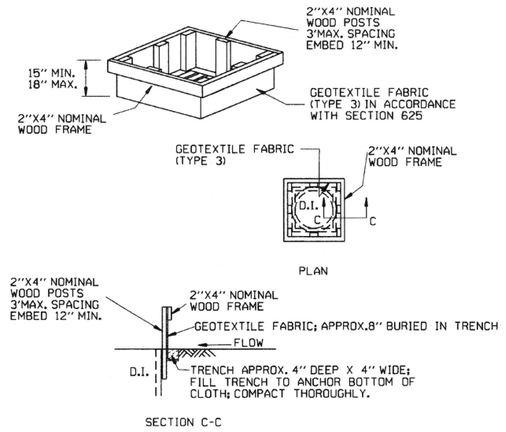
STANDARD DRAWING TC-5

GENERAL NOTES

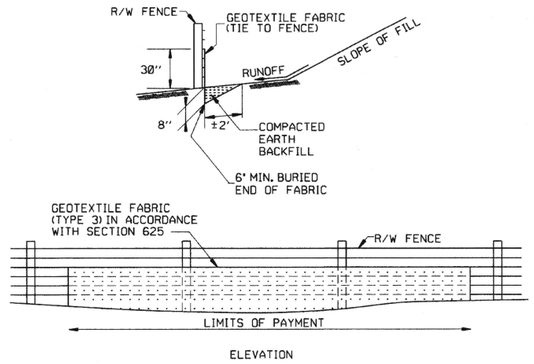
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



DROP INLET SILT FENCE (E-7)



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

GENERAL NOTES

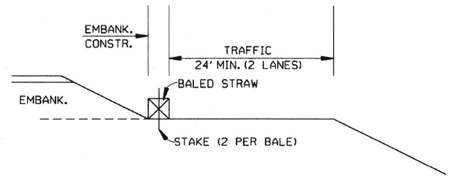
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST, OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.

GENERAL NOTES

1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.

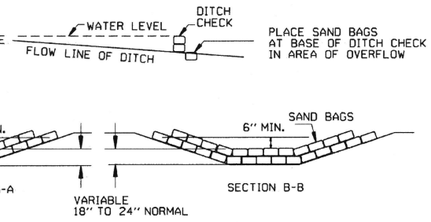
2. NO GAPS SHALL BE LEFT BETWEEN BALES.

3. BALED STRAW FILTER BARRIERS COMPLETED AND ACCEPTED WILL BE MEASURED BY THE BALE IN PLACE AS AUTHORIZED BY THE ENGINEER AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER BALE FOR BALED STRAW DITCH CHECKS.



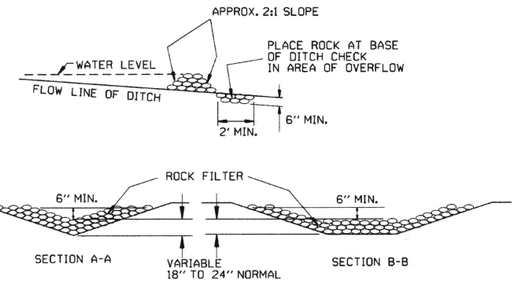
BALED STRAW FILTER BARRIER (E-2)

NUMBER OF SAND BAGS AND ARRANGEMENT VARIABLE WITH ON-SITE CONDITIONS.

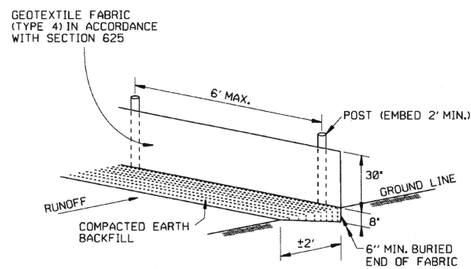


PLACE SAND BAGS AT BASE OF DITCH CHECK IN AREA OF OVERFLOW

SAND BAG DITCH CHECK (E-5)



ROCK DITCH CHECK (E-6)



SILT FENCE (E-11)

GENERAL NOTES

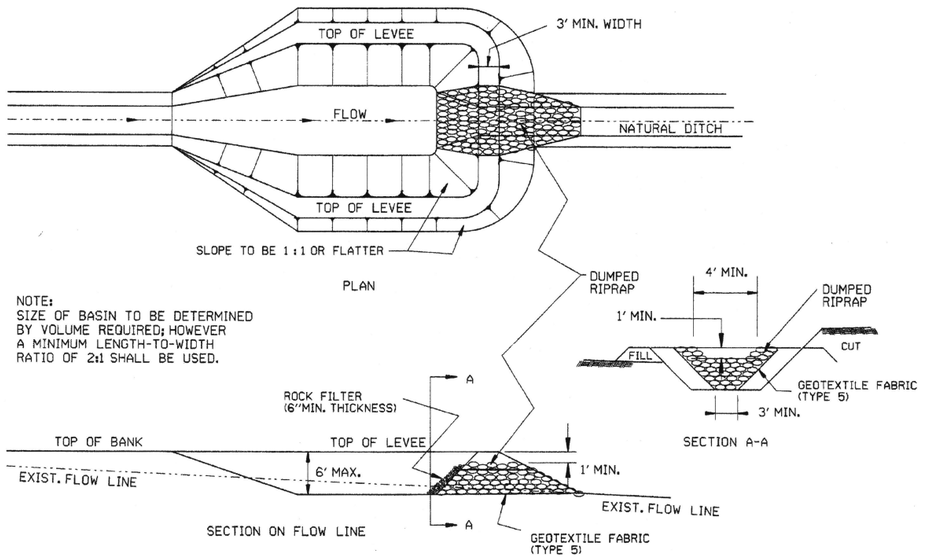
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.

DATE	REVISION	FILMED
12-15-11	DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK	
11-18-98	ADDED NOTES	
7-02-98	ADDED BALED STRAW FILTER BARRIER (E-2)	
7-20-95	REVISED SILT FENCE E-4 AND E-11	7-20-95
7-15-94	REV. E-4 & E-11 MIN. 13" BURIED END OF FABRIC	
6-2-94	REVISED E-1,4,7 & 11; DELETED E-2 & 3	6-2-94
4-1-93	REDRAWN	
10-1-92	REDRAWN	
8-2-76	ISSUED R.D.M.	298-7-28-76

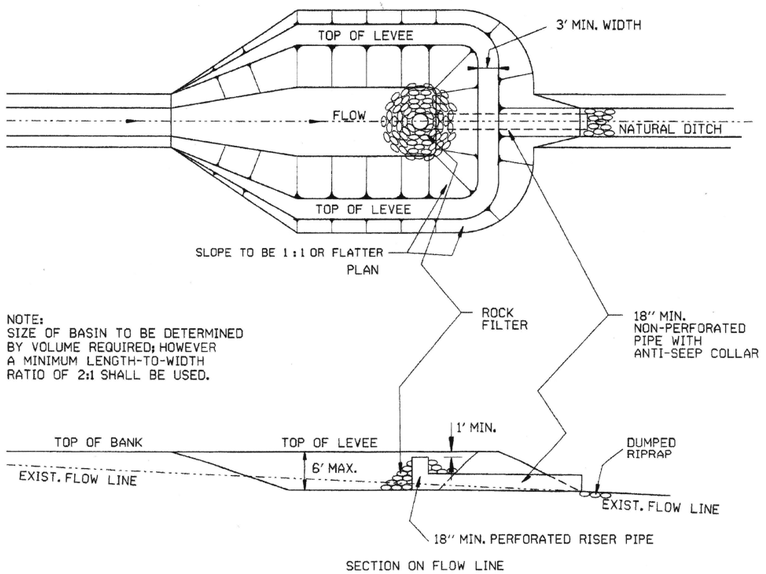
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

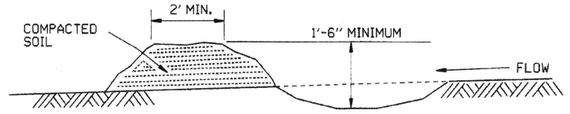
STANDARD DRAWING TEC-1



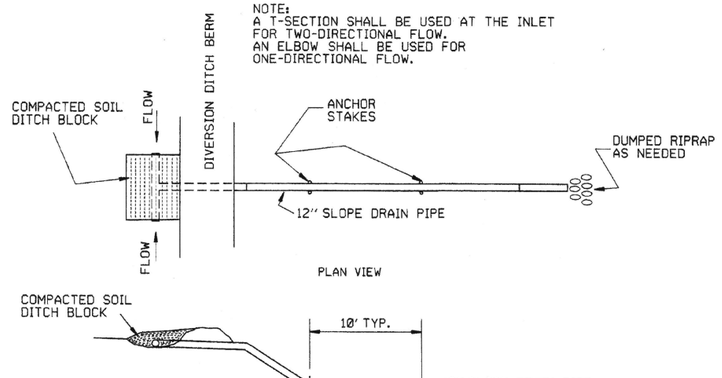
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



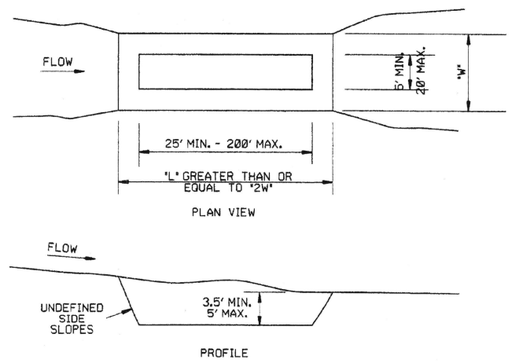
SEDIMENT BASIN WITH PIPE OUTLET (E-10)



DIVERSION DITCH (E-8)



SLOPE DRAIN (E-12)



SEDIMENT BASIN (E-14)

DATE	REVISION	FILMED
6-2-94	Revised E-8 & E-12; Added E-14 & Deleted E-13	
4-1-93	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

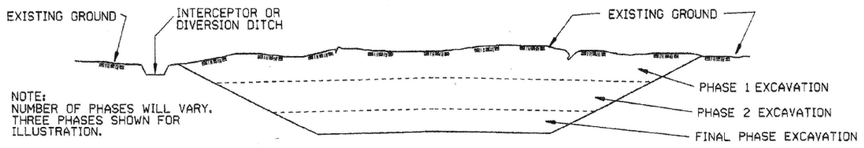
STANDARD DRAWING TEC-2

CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE

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

EXCAVATION



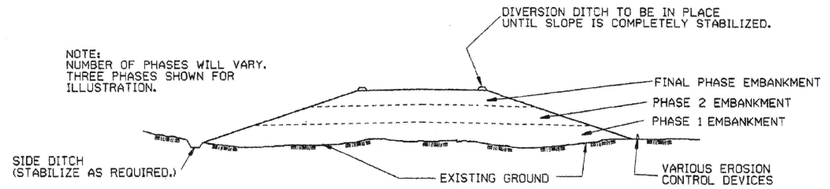
GENERAL NOTE

ALL CUT SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE EXCAVATED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 25 FEET, MEASURED VERTICALLY.

CONSTRUCTION SEQUENCE

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

EMBANKMENT



GENERAL NOTE

ALL EMBANKMENT SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE CONSTRUCTED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 25 FEET, MEASURED VERTICALLY.

CONSTRUCTION SEQUENCE

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

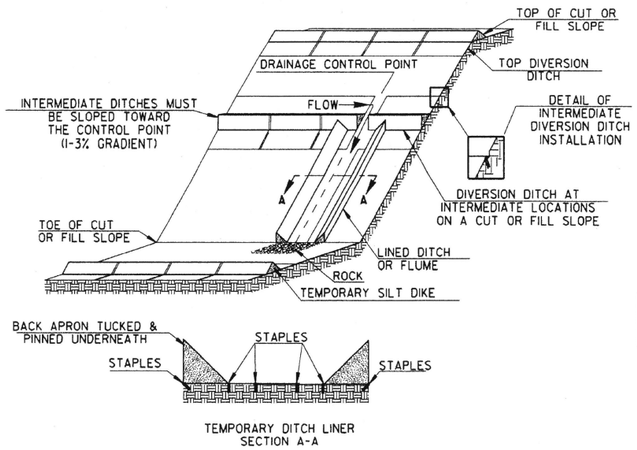
DATE	REVISION	FILMED
11-03-94	CORRECTED SPELLING	
6-2-94	Drawn & Issued	6-2-94

ARKANSAS STATE HIGHWAY COMMISSION

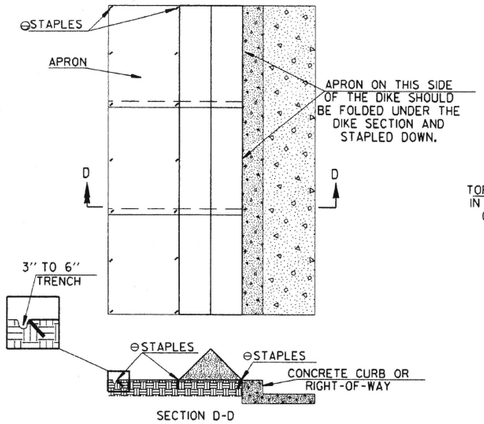
TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-3

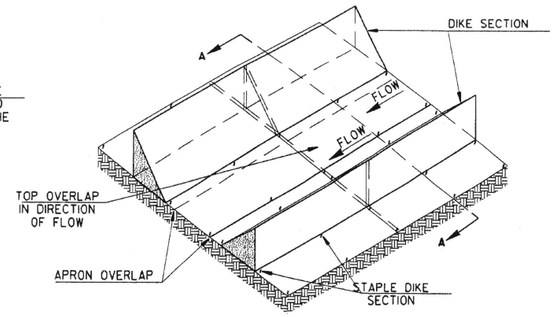
stdtec3.dgn



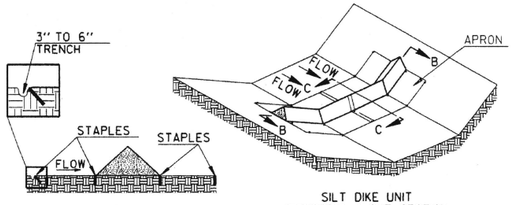
TRIANGULAR SILT DIKE INSTALLATION
FOR
DIVERSION DITCH AND/OR DITCH LINER

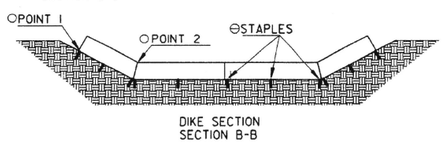


TRIANGULAR SILT DIKE INSTALLATION
FOR
CONTINUOUS BARRIER



TRIANGULAR SILT DIKE INSTALLATION
FOR
TEMPORARY DITCH LINER

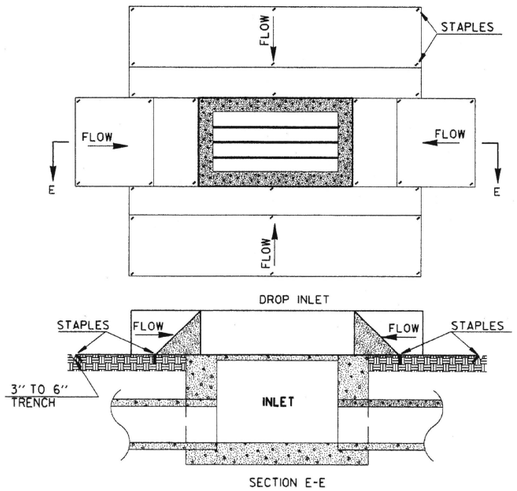




TRIANGULAR SILT DIKE INSTALLATION
FOR
ROADWAY DITCH OR DRAINAGE DITCH

○ POINT "1" MUST BE HIGHER THAN POINT "2" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

⊖ STAPLES SHALL BE PLACED WHERE THE UNITS OVERLAP AND IN THE CENTER OF THE UNIT AS SHOWN ON THE DIAGRAM.



TRIANGULAR SILT DIKE INSTALLATION
FOR
DROP INLETS

SYMBOLOGY
SYMBOL TO BE USED TO DENOTE DEVICE ON PLANS

NOTE: SILT DIKE SHOULD ONLY BE USED FOR DROP INLETS IN SUMP LOCATIONS.

GENERAL NOTES

1. THIS WORK SHALL CONSIST OF FURNISHING, INSTALLING, AND MAINTAINING THE TRIANGULAR SILT DIKE. THE DIKES SHALL BE USED AS A CONTINUOUS LINE BARRIER AT THE TOE OF SLOPE OR ACROSS THE ROADWAY DITCH TO CONTAIN SEDIMENT AND MINIMIZE EROSION, OR AS DIRECTED BY THE ENGINEER. THESE DIKES SHALL BE INSTALLED AND LOCATED AS SOON AS CONSTRUCTION WILL ALLOW OR AS DIRECTED BY THE ENGINEER.

2. TRIANGULAR SILT DIKE SHALL BE TRIANGULAR SHAPED HAVING A HEIGHT OF AT LEAST 8" TO 10" IN THE CENTER WITH EQUAL SIDES AND A 16" TO 20" BASE. THE TRIANGULAR SHAPED INNER MATERIAL SHALL BE URETHANE FOAM. THE OUTER COVER SHALL BE A WOVEN GEOTEXTILE FABRIC PLACED AROUND THE INNER MATERIAL & ALLOWED TO EXTEND BEYOND BOTH SIDES OF THE TRIANGLE 24" TO 36". THIS FABRIC SHOULD BE MILDEW RESISTANT, ROT-PROOF AND RESISTANT TO HEAT AND ULTRAVIOLET RADIATION MEETING REQUIREMENTS FOR SEDIMENT CONTROL IN AASHTO M288. THE DIKES SHALL BE ATTACHED TO THE GROUND WITH WIRE STAPLES. THE STAPLES SHALL BE NO. 11 GAUGE WIRE AND BE AT LEAST 6" TO 8" LONG. STAPLES SHALL BE PLACED AS SHOWN ON THESE DETAILS.

   THE CONTRACTOR SHALL INSPECT ALL DIKES AFTER EACH RAINFALL EVENT OF AT LEAST 0.5" OR GREATER. ANY DEFICIENCIES OR DAMAGE SHALL BE REPAIRED BY THE CONTRACTOR. ACCUMULATED SILT OR DEBRIS SHALL BE REMOVED AND RELOCATED AS DIRECTED BY THE ENGINEER. IF THE DIKES ARE DAMAGED OR INADVERTENTLY MOVED DURING THE SILT REMOVAL PROCESS, THE CONTRACTOR SHALL IMMEDIATELY REPLACE AFTER DAMAGE OCCURS.

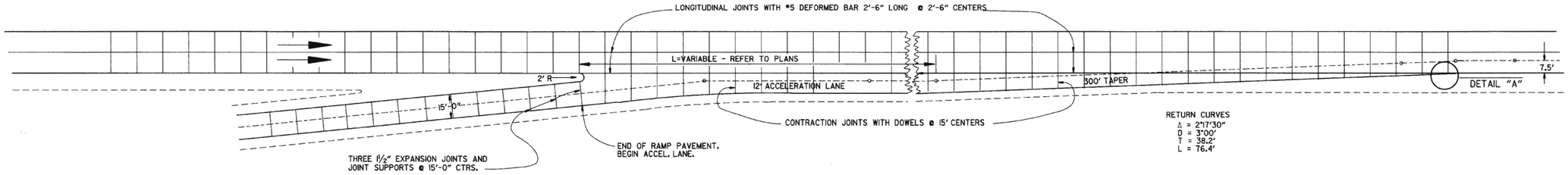
3. ACCEPTED TRIANGULAR SILT DIKE, MEASURED AS PROVIDED ABOVE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID FOR TRIANGULAR SILT DIKE. PRICE BID WILL INCLUDE THE COST OF FURNISHING THE DIKES, INSTALLING, MAINTAINING AND REMOVAL WHEN DIRECTED BY THE ENGINEER.

DATE	REVISION	FILMED
7-26-12	REVISED GENERAL NOTE 2.	
12-15-11	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

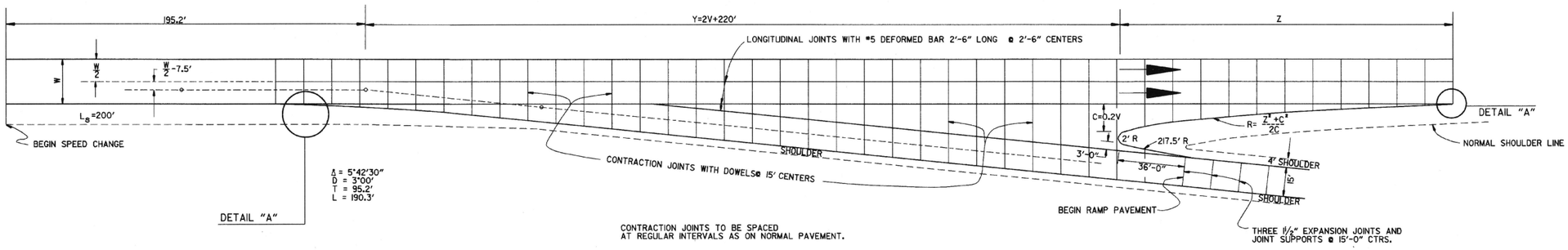
TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-4



ENTRANCE RAMP

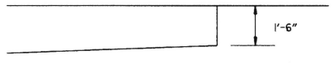
NOTE: JOINT SPACING ON THE MAIN LANES SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO THESE JOINT LAYOUTS. THE MAIN LANE JOINT SPACING MAY BE REDUCED TO A 12' MINIMUM.



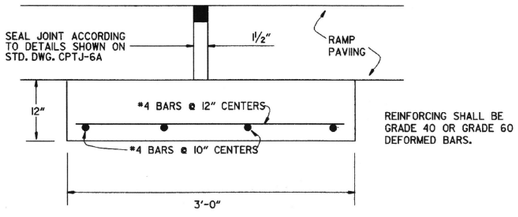
EXIT RAMP

EXIT RAMP

DESIGN SPEED V	Y	NOSE OFFSET C	LENGTH NOSE TAPER Z	RETURN RADIUS R	ADDITIONAL SURFACING SQ. YDS.
40	300.0	8.0	96.0	580.0	602.43
50	320.0	10.0	120.0	725.0	687.29
60	340.0	12.0	168.0	1182.0	790.55
70	360.0	14.0	210.0	1582.0	902.27



DETAIL "A"



DETAIL OF EXPANSION JOINT & JOINT SUPPORT

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

DATE	REVISION	DATE FILM'D
8-22-02	DELETED NOTE	
11-16-01	CORRECTED SPELLING ON ENTRANCE RAMP NOTE	
5-13-99	ADDED, EDITED AND DELETED NOTES	
11-03-94	ADDED NOTE RE: REINF. BARS	
10-1-92	ADDED DETAIL A & OTHER MINOR CHANGES	10-1-92
1-25-90	REVISED EXPANSION JOINT	1-25-90
7-15-88	CONFORM'D TO 1988 SPECIFICATIONS	65C-7-15-88
3-2-81	ISSUED	511-10-2-72

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF STANDARD TURNOUT FOR ENTRANCE & EXIT RAMPS (NON-REINFORCED)

STANDARD DRAWING TR-1A