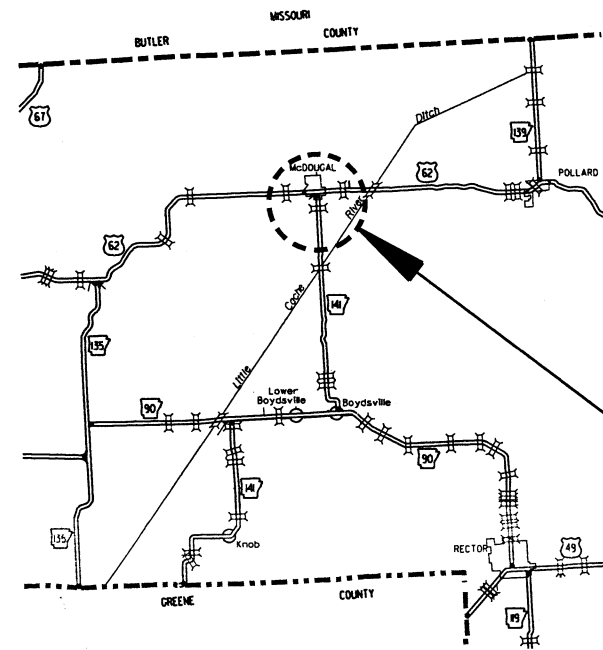


ARKANSAS DEPARTMENT OF TRANSPORTATION
CONSTRUCTION PLANS FOR STATE HIGHWAY

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	100842
								1
								30

② LITTLE CACHE RIVER DITCH STR. & APPRS. (S)



VICINITY MAP

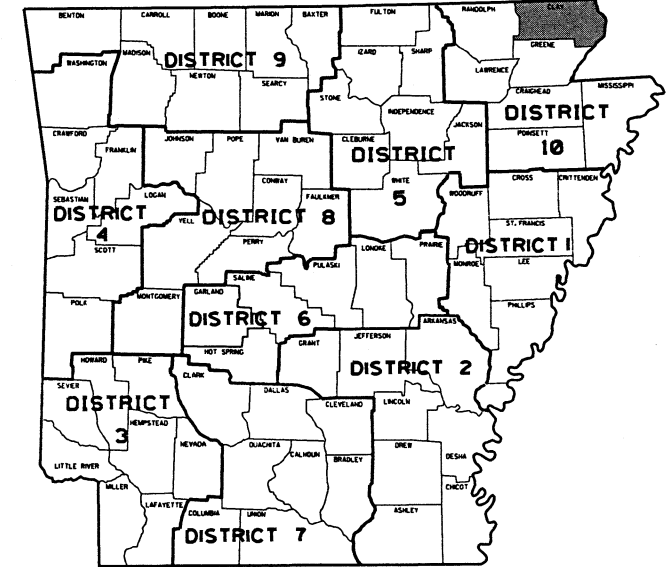
LITTLE CACHE RIVER
DITCH STR. & APPRS. (S)

CLAY COUNTY
ROUTE 141 SECTION 6

JOB 100842

F.A.P. NHPP-0011(44)

NOT TO SCALE



ARKANSAS HWY. DIST. 10

• DESIGN TRAFFIC DATA •

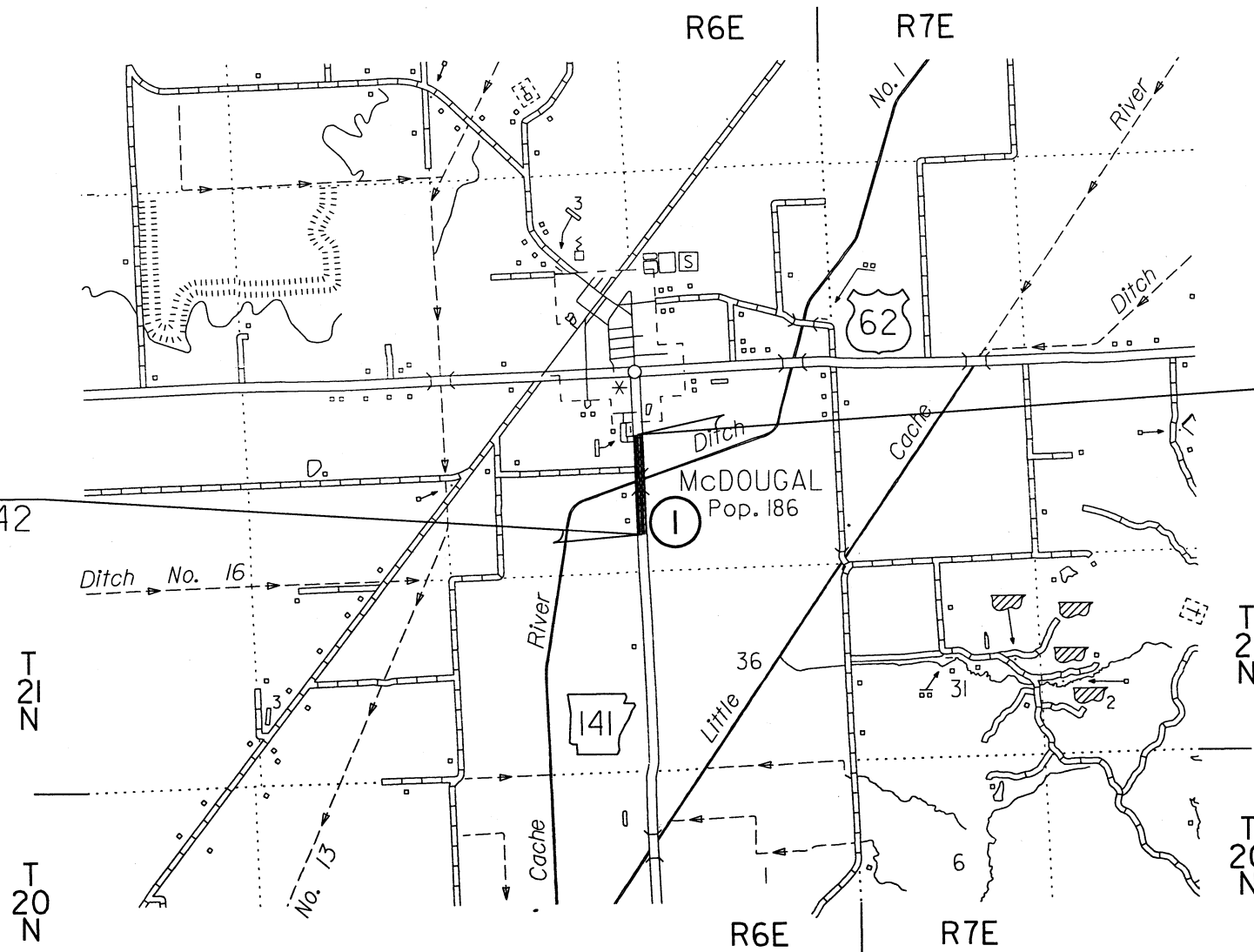
DESIGN YEAR	2039
2019 ADT	340
2039 ADT	440
2039 DHV	48
DIRECTIONAL DISTRIBUTION	0.60
TRUCKS	5%
DESIGN SPEED	55 MPH

BRIDGE DATA

- ① STA. 105+33.00 BRIDGE END
BRIDGE NO. 07439
31'-6" CLEAR ROADWAY
124'-0" BRIDGE LENGTH
124'-0" PRECAST CONCRETE SPANS (31'-31'-31'-31')
STA. 106+57.00 BRIDGE END

STA. 100+00.00
BEGIN JOB 100842
LOG MILE 6.55

STA. 113+00.00
END JOB 100842



APPROVED



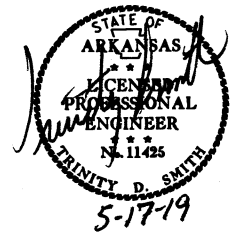
5-17-19
DEPUTY DIRECTOR
AND CHIEF ENGINEER

	BEGIN PROJECT	MID-POINT OF PROJECT	END PROJECT
LATITUDE	N36°25'31"	N36°25'37"	N36°25'44"
LONGITUDE	W90°23'21"	W90°23'21"	W90°23'21"

PROJECT LENGTH CALCULATED ALONG C.L. CONSTRUCTION
GROSS LENGTH OF PROJECT 1300.00 FEET OR 0.246 MILES
NET LENGTH OF ROADWAY 1176.00 FEET OR 0.223 MILES
NET LENGTH OF BRIDGES 124.00 FEET OR 0.023 MILES
NET LENGTH OF PROJECT 1300.00 FEET OR 0.246 MILES

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 100842	2	30

② INDEX OF SHEETS & STANDARD DRAWINGS



INDEX OF SHEETS

SHEET NO.	TITLE	BRIDGE NO.	DRWG. NO.
1	TITLE SHEET		
2	INDEX OF SHEETS AND STANDARD DRAWINGS		
3	GOVERNING SPECIFICATIONS AND GENERAL NOTES		
4	TYPICAL SECTIONS OF IMPROVEMENT		
5	SPECIAL DETAILS		
6 - 7	TEMPORARY EROSION CONTROL DETAILS		
8 - 9	MAINTENANCE OF TRAFFIC DETAILS		
10	PERMANENT PAVEMENT MARKING DETAILS		
11 - 13	QUANTITIES		
14	SCHEDULE OF BRIDGE QUANTITIES	07439	60484
15	SUMMARY OF QUANTITIES AND REVISIONS		
16 - 17	SURVEY CONTROL DETAILS		
18	PLAN AND PROFILE SHEETS		
19	SHEET 1 OF 2 LAYOUT OF BRIDGE HIGHWAY 141 OVER LITTLE CACHE RIVER DITCH	07439	60485
20	SHEET 2 OF 2 LAYOUT OF BRIDGE HIGHWAY 141 OVER LITTLE CACHE RIVER DITCH	07439	60486
21	DETAILS OF END BENTS	07439	60487
22	DETAILS OF INTERMEDIATE BENTS	07439	60488
23	DETAILS FOR 31'-0" PRECAST CONCRETE SPANS 31'-6" CLEAR ROADWAY	07439	60489
24	DETAILS FOR PRECAST PARAPET RAILS 31'-6" PRECAST END SPANS	07439	60490
25 - 30	CROSS SECTIONS		

BRIDGE STANDARD DRAWINGS

DRWG. NO.	TITLE	DATE
55000	STANDARD DETAILS FOR EMBANKMENT CONSTRUCTION AND BACKFILL AT BRIDGE ENDS	02-27-14
55001	STANDARD DETAILS FOR DUMPED RIPRAP AND FILTER BLANKET AND COMPUTING EXCAVATION FOR STRUCTURES	02-27-14
55010	STANDARD DETAILS FOR TYPE D BRIDGE NAME PLATE	01-15-19
55021	STANDARD DETAILS FOR CONCRETE FILLED STEEL SHELL PILES AND PILE ENCASEMENTS	03-24-16
55030D	STANDARD DETAILS FOR TYPE D APPROACH GUTTERS	02-27-14
55040D	STANDARD DETAILS FOR TYPE D APPROACH SLAB	02-27-14

ROADWAY STANDARD DRAWINGS

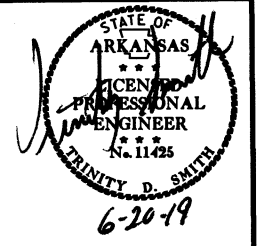
DRWG. NO.	TITLE	DATE
GR-7	GUARD RAIL DETAILS (TYPE C) STREET/ROAD BARRICADE OR TEMPORARY INSTALLATION	11-16-17
GR-8	GUARD RAIL DETAILS	11-16-17
GR-8A	GUARD RAIL DETAILS	11-16-17
GR-9	GUARD RAIL DETAILS	04-17-08
GR-9A	GUARD RAIL DETAILS	04-17-08
GR-10	GUARD RAIL DETAILS	11-16-17
GR-11	GUARD RAIL DETAILS	11-16-17
GR-12	GUARD RAIL DETAILS	11-16-17
MB-1	MAILBOX DETAILS	11-18-04
PCC-1	CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING	02-27-14
PCM-1	METAL PIPE CULVERT FILL HEIGHTS & BEDDING	02-27-14
PCP-1	PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)	02-27-14
PCP-2	PLASTIC PIPE CULVERT (PVC F949)	02-27-14
PM-1	PAVEMENT MARKING DETAILS	06-01-17
PU-1	DETAILS OF PIPE UNDERDRAIN	12-08-16
TC-1	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	04-13-17
TC-2	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	09-02-15
TC-3	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	09-02-15
TEC-1	TEMPORARY EROSION CONTROL DEVICES	11-16-17
TEC-2	TEMPORARY EROSION CONTROL DEVICES	06-02-94
TEC-3	TEMPORARY EROSION CONTROL DEVICES	11-03-94

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				6	ARK.			
						JOB NO. 100842	3	30

2 GOVERNING SPECS. & GENERAL NOTES



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
100-4	DEPARTMENT NAME CHANGE
102-2	ISSUANCE OF PROPOSALS
108-1	LIQUIDATED DAMAGES
108-2	WORK ALLOWED PRIOR TO ISSUANCE OF WORK ORDER
110-1	PROTECTION OF WATER QUALITY AND WETLANDS
303-1	AGGREGATE BASE COURSE
306-1	QUALITY CONTROL AND ACCEPTANCE
400-1	TACK COATS
400-4	DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES
400-5	PERCENT AIR VOIDS FOR ACHM MIX DESIGNS
400-6	LIQUID ANTI-STRIP ADDITIVE
410-1	CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
410-2	DEVICES FOR MEASURING DENSITY FOR ROLLING PATTERNS
600-2	INCIDENTAL CONSTRUCTION
604-1	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
606-1	PIPE CULVERTS FOR SIDE DRAINS
617-1	GUARDRAIL TERMINAL (TYPE 2)
620-1	MULCH COVER
800-1	STRUCTURES
802-3	CONCRETE FOR STRUCTURES
804-2	REINFORCING STEEL FOR STRUCTURES
JOB 100842	BIDDING REQUIREMENTS AND CONDITIONS
JOB 100842	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 100842	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 100842	CARGO PREFERENCE ACT REQUIREMENTS
JOB 100842	DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES
JOB 100842	FLEXIBLE BEGINNING OF WORK - CALENDAR DAY CONTRACT
JOB 100842	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 100842	MANDATORY ELECTRONIC CONTRACT
JOB 100842	MANDATORY ELECTRONIC DOCUMENT SUBMITTAL
JOB 100842	NESTING SITES OF MIGRATORY BIRDS
JOB 100842	OFF-SITE RESTRAINING CONDITIONS FOR INDIANA BATS
JOB 100842	PLASTIC PIPE
JOB 100842	PRICE ADJUSTMENT FOR ASPHALT BINDER
JOB 100842	PROSECUTION AND PROGRESS WITH BID SCHEDULE
JOB 100842	SECTION 404 NATIONWIDE 14 PERMIT REQUIREMENTS
JOB 100842	SITE USE (A+B METHOD) - CALENDAR DAY CONTRACT
JOB 100842	SOIL STABILIZATION
JOB 100842	STORM WATER POLLUTION PREVENTION PLAN
JOB 100842	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 100842	UTILITY ADJUSTMENTS
JOB 100842	WARM MIX ASPHALT
JOB 100842	WELLHEAD PROTECTION

GENERAL NOTES

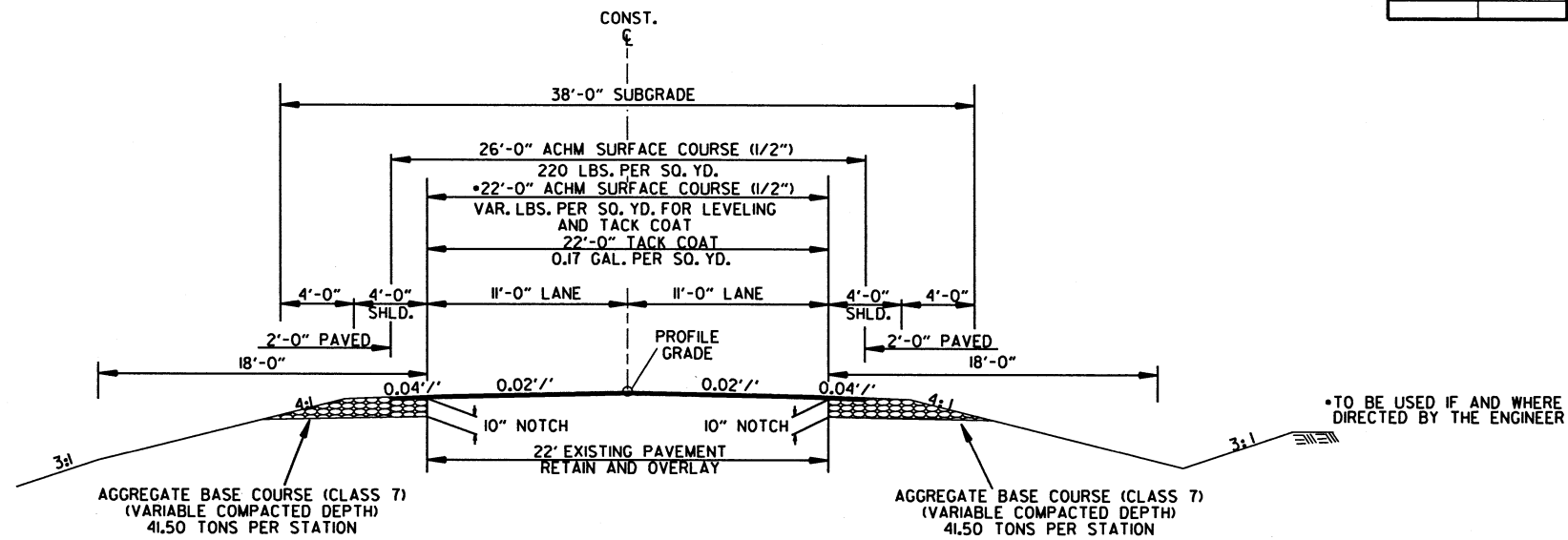
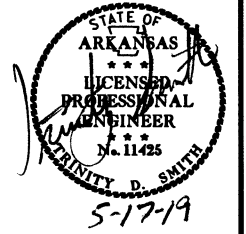
1. GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.
2. ALL PIPE LINES, POWER, TELEPHONE, AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
3. ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY OF UTILITY SERVICE ORGANIZATIONS SHALL BE MOVED BY THE OWNERS UNLESS OTHERWISE PROVIDED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING U. S. MAILBOXES WITHIN THE PROJECT LIMITS IN SUCH A MANNER THAT THE PUBLIC MAY RECEIVE CONTINUED MAIL SERVICE. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS BID ITEMS.
5. ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
6. ALL TREES THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE SPARED AS DIRECTED BY THE ENGINEER. CARE AND DISCRETION SHALL BE USED TO INSURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HARMED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A FENCE TO CONTROL LIVESTOCK IN AREAS WHERE PASTURES ARE SEVERED. WIRE FENCE MAY BE CONSTRUCTED INITIALLY, OR IN LIEU THEREOF, THE CONTRACTOR AT HIS OWN EXPENSE, MAY ELECT TO PROVIDE TEMPORARY FENCING SUITABLE TO CONTAIN LIVESTOCK.
8. THE SEQUENCE AS SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS IS A GENERAL OUTLINE FOR THE CONSTRUCTION OF THIS PROJECT, AND IN NO WAY IS IT INTENDED TO COVER EVERY ITEM IN THE PROJECT. ITEMS NOT CRITICAL TO THE CONSTRUCTION SEQUENCE MAY BE CONSTRUCTED IN ANY STAGE AS APPROVED BY THE RESIDENT ENGINEER.
9. 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.
10. ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 - UNCLASSIFIED EXCAVATION.

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				6	ARK.			
				JOB NO. 100842		4		30

2 TYPICAL SECTION OF IMPROVEMENT



TYPICAL SECTION OF IMPROVEMENT
NOTCH AND WIDEN
STA. 100+00.00-STA. 102+10.00
STA. 110+50.00-STA. 113+00.00

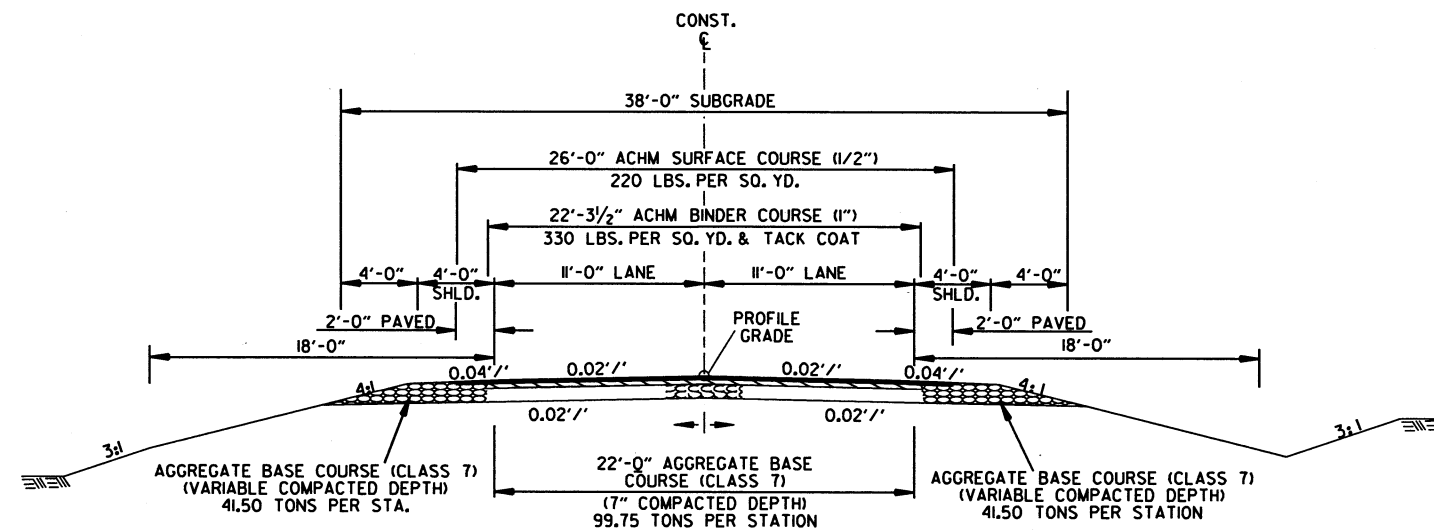
•TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

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

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

ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING. CALCULATIONS WILL NOT BE PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED INCLUDED IN THE VARIOUS PAY ITEMS.

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

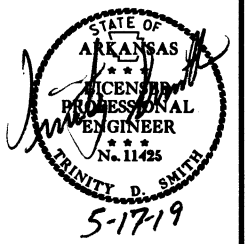


TYPICAL SECTION OF IMPROVEMENT
TWO LANE OPEN SHOULDER
STA. 102+10.00-STA. 105+17.00
STA. 106+73-STA. 110+50.00

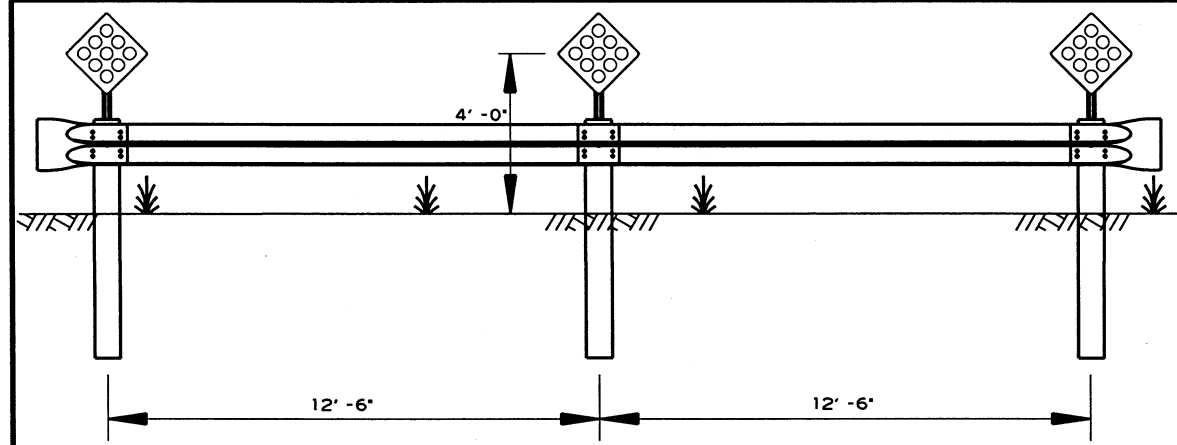
TYPICAL SECTIONS OF IMPROVEMENT

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. 100842							5	30

2 SPECIAL DETAILS

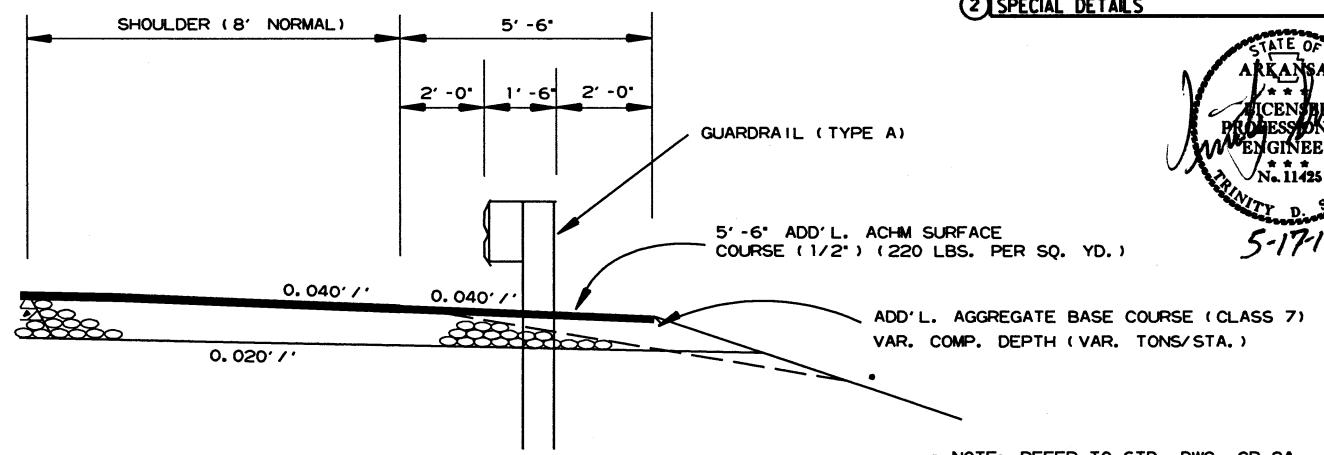


CONSTRUCT 25 LIN. FT. TYPE 'C' GUARDRAIL WITH 3 RED DIAMOND REFLECTORS MOUNTED ON U-CHANNEL POSTS DIRECTLY BEHIND THE GUARDRAIL AT A HEIGHT OF 4'-0".



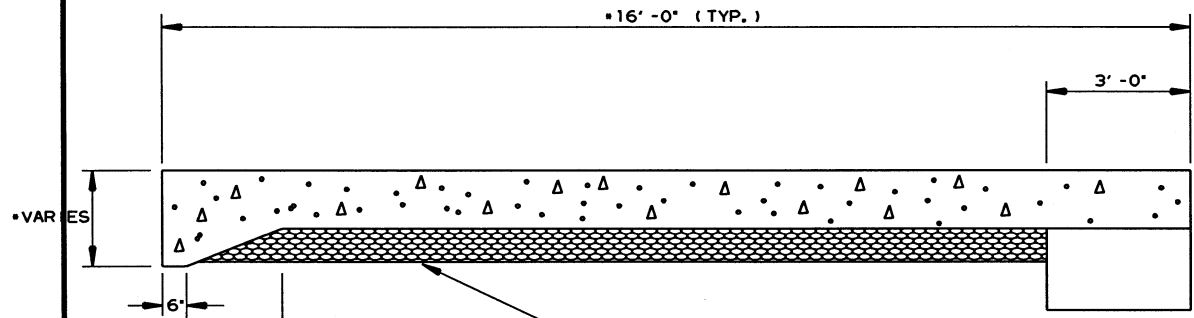
ROAD CLOSED DETAIL

TO BE USED WHERE EXISTING ROADS WILL BE PERMANENTLY CLOSED. SEE PLAN SHEETS FOR LOCATIONS. SEE STD. DWG. GR-7 FOR MORE DETAILS.



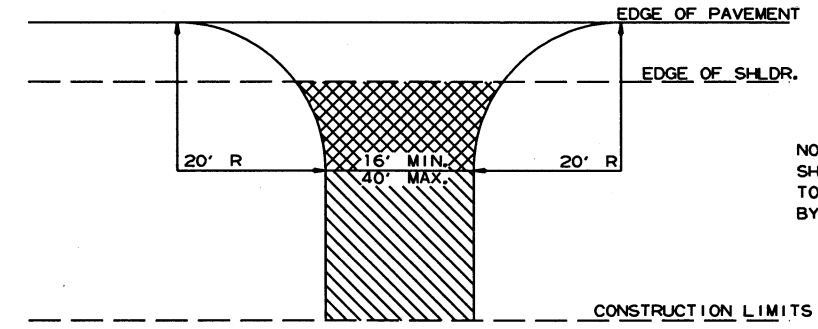
WIDENING FOR GUARDRAIL

NOTE: REFER TO STD. DWG. GR-9A AND CROSS SECTIONS FOR SLOPE REQUIREMENTS BEHIND GUARDRAIL.



SECTION OF APPROACH SLAB

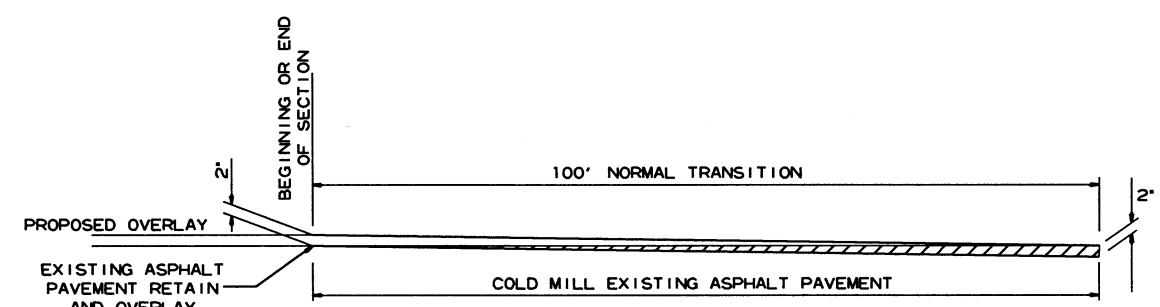
AGGREGATE BASE COURSE (CLASS 7) VARIABLE - 6" MIN. COMPACTED DEPTH. SEE APPROACH SLAB DETAILS IN BRIDGE DRAWINGS.



NOTE: TURNOUTS AND PRIVATE DRIVES SHALL BE MODIFIED WHERE NECESSARY TO MEET LOCAL CONDITIONS AS DIRECTED BY THE ENGINEER.

- ASPHALT CONCRETE HOT MIX SURFACE COURSE (220 LBS. PER SQ. YD.)
- AGGREGATE BASE COURSE (CLASS 7) 7" COMP. DEPTH IF ASPHALT DRIVE EXIST OR 6" CONCRETE IF CONCRETE DRIVE EXIST.
- AGGREGATE BASE COURSE (CLASS 7) 9" COMP. DEPTH OR CONFORM TO EXISTING DRIVEWAY

DETAIL FOR DRIVEWAY TURNOUTS (COLLECTORS)



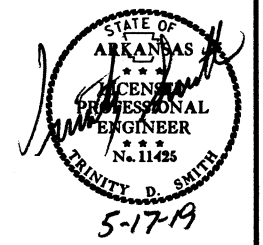
DETAIL FOR TRANSITIONS

4/19/2019

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				6	ARK.			
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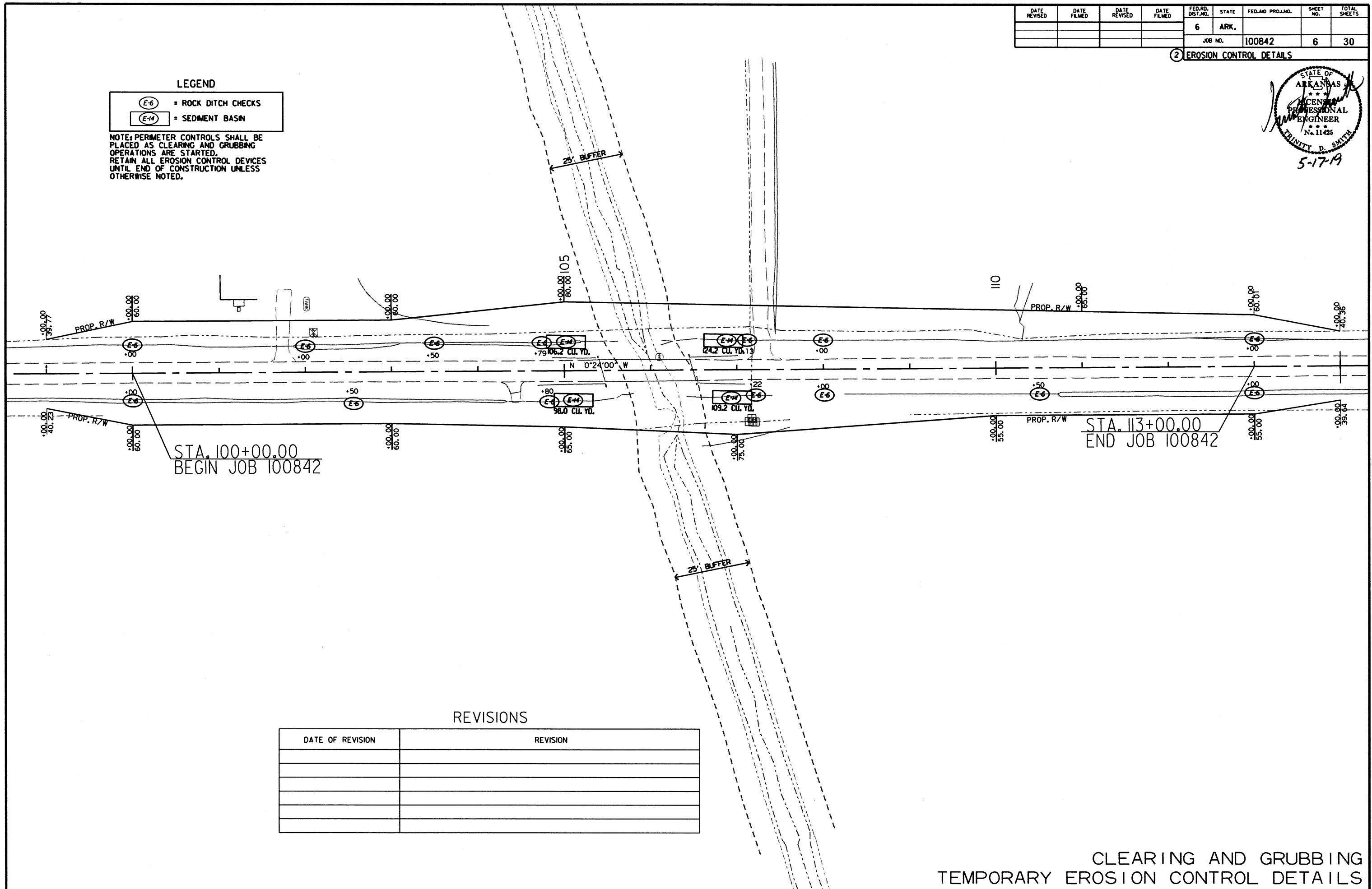
② EROSION CONTROL DETAILS



LEGEND

(E-6)	= ROCK DITCH CHECKS
(E-14)	= SEDIMENT BASIN

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.



REVISIONS

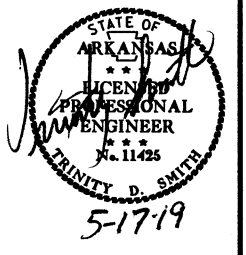
DATE OF REVISION	REVISION

CLEARING AND GRUBBING
TEMPORARY EROSION CONTROL DETAILS

5/7/2019
R100842.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 100842							7	30

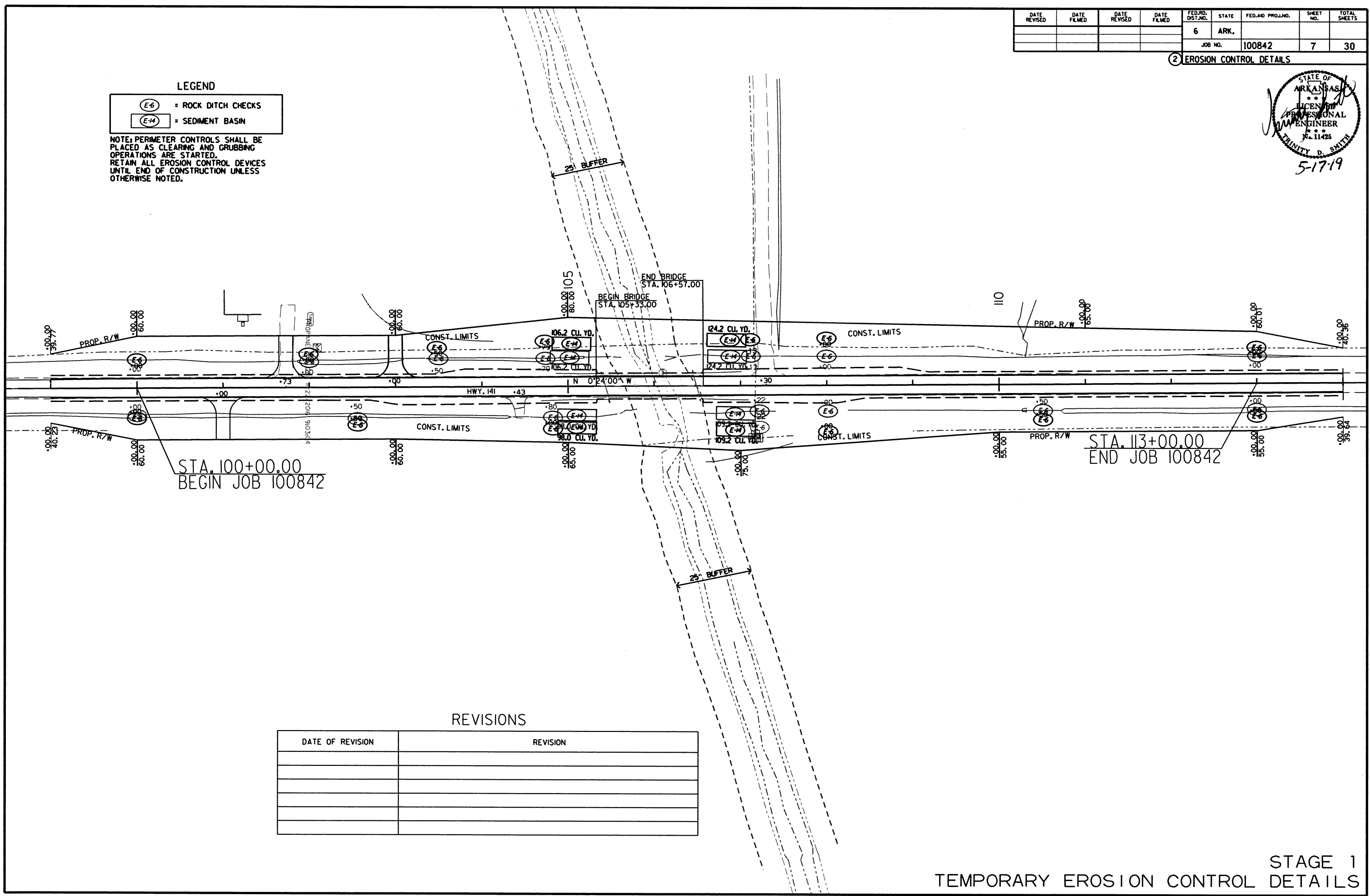
② EROSION CONTROL DETAILS



LEGEND

(E-6) = ROCK DITCH CHECKS
(E-11) = SEDIMENT BASIN

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.



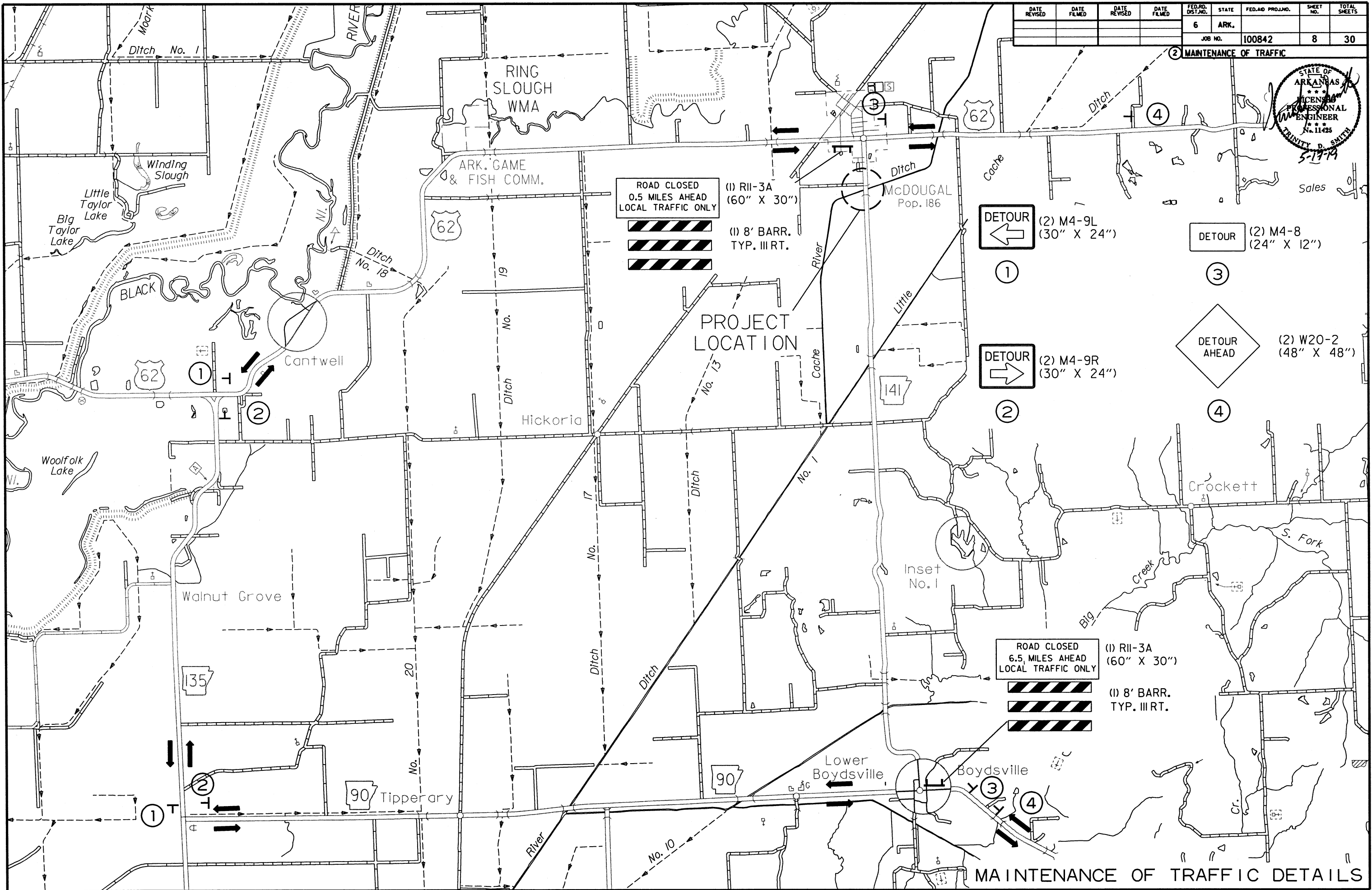
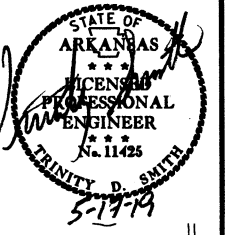
REVISIONS

DATE OF REVISION	REVISION

5/7/2019
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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.	100842		8	30

② MAINTENANCE OF TRAFFIC

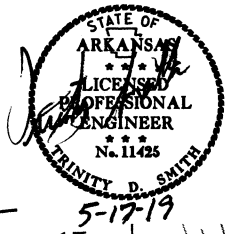


MAINTENANCE OF TRAFFIC DETAILS

5/7/2019
R100842.DGN

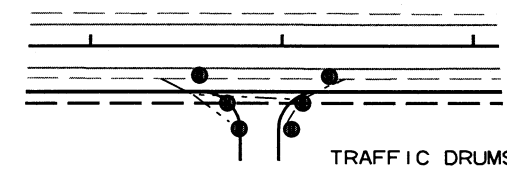
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	100842		9	30

② MAINTENANCE OF TRAFFIC

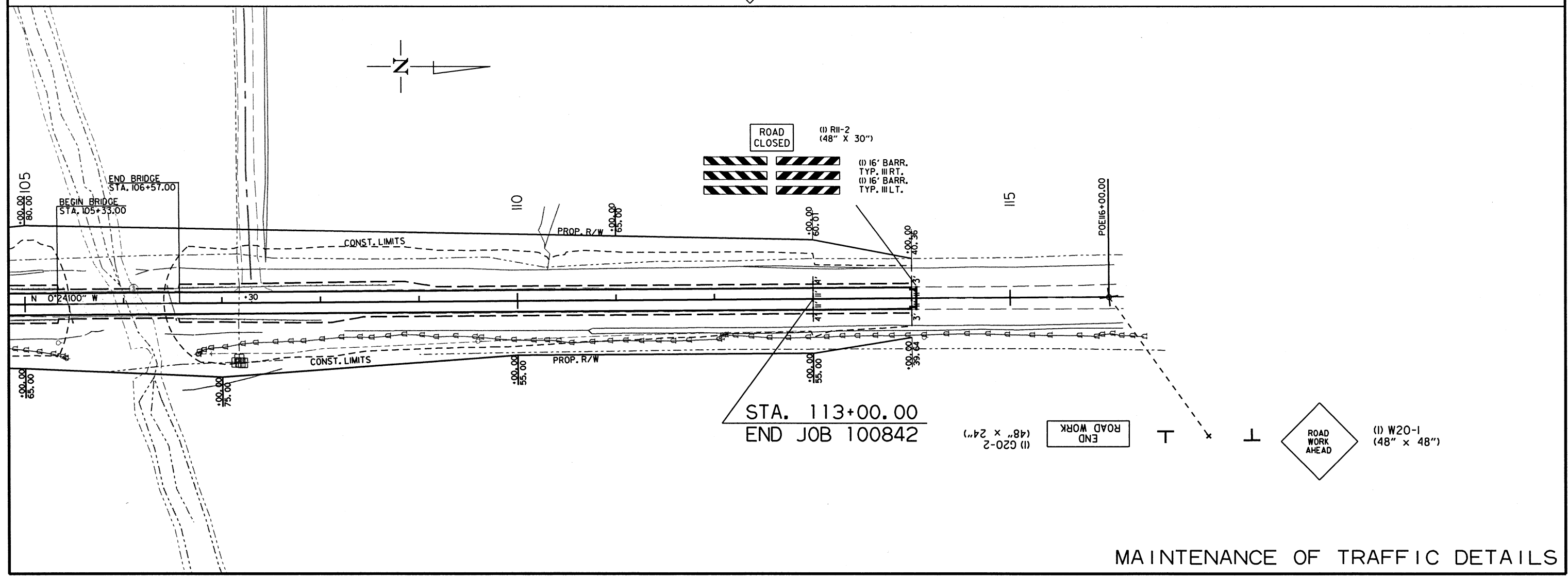
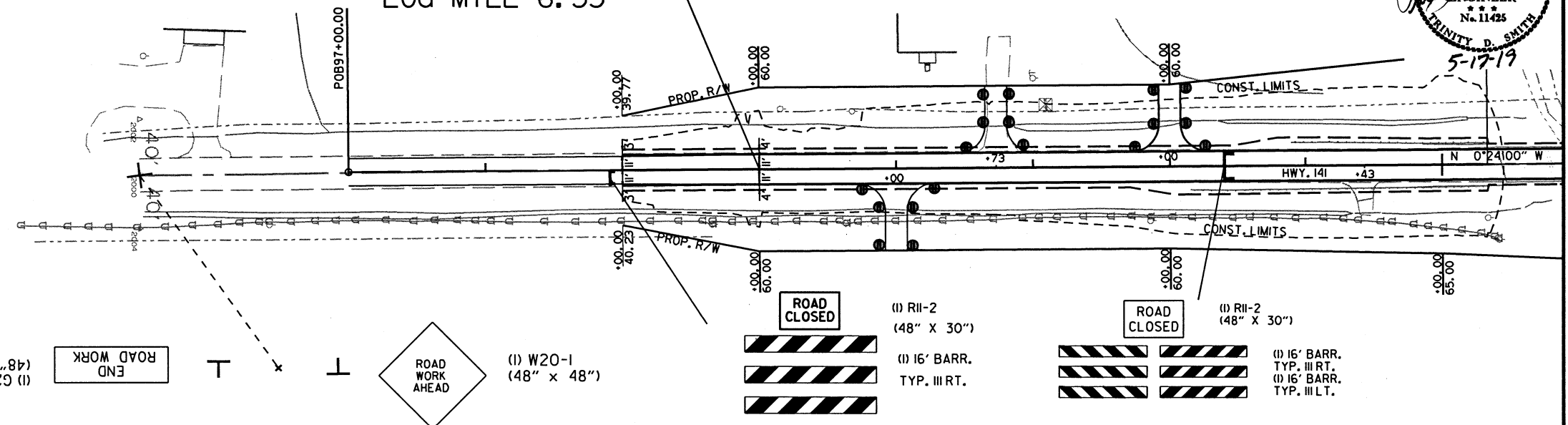


STA. 100+00.00
BEGIN JOB 100842
LOG MILE 6.55

DRIVEWAY/TRAFFIC DRUM DETAIL



TRAFFIC DRUMS = 6 EACH
• 20' O.C.



MAINTENANCE OF TRAFFIC DETAILS

5/7/2019

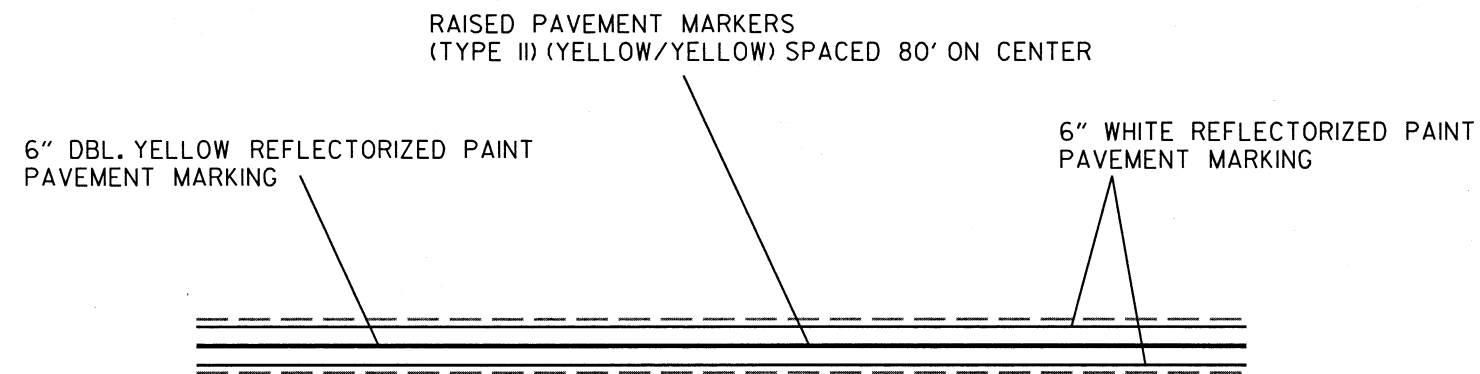
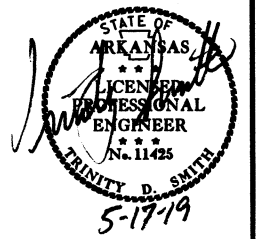
R100842.DGN

PERMANENT PAVEMENT MARKINGS

REFLECTORIZED PAINT PAVEMENT MARKING WHITE (6") = 3000 LIN. FT.
 REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (6") = 3000 LIN. FT.
 RAISED PAVEMENT MARKERS TYPE II (YEL/YEL) = 19 EACH

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② PERMANENT PAVEMENT MARKING DETAILS



TYPICAL STRIPING DETAIL

5/7/2019

R100842.DGN

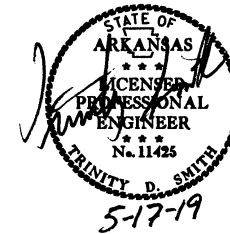
ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		TRAFFIC DRUMS	BARRICADES (TYPE III)	
			LIN. FT. - EACH		NO.	SQ. FT.		RIGHT	LEFT
								LIN. FT.	
W20-1	ROAD WORK AHEAD	48"x48"	2	2	2	32.0			
G20-2	END ROAD WORK	48"x24"	2	2	2	16.0			
R11-2	ROAD CLOSED	48"x30"	2	2	2	20.0			
R11-3A	ROAD CLOSED LOCAL TRAFFIC ONLY	60"x30"	2	2	2	25.0			
M4-8	DETOUR	24"x12"	2	2	2	4.0			
M4-9L	DETOUR LT.	30"x24"	2	2	2	10.0			
M4-9R	DETOUR RT.	30"x24"	2	2	2	10.0			
W20-2	DETOUR AHEAD	48"x48"	2	2	2	32.0			
	TRAFFIC DRUMS		18				18		
	TYPE III BARRICADE-RT. (8')		2	2				16	
	TYPE III BARRICADE-RT. (16')		3	3				48	
	TYPE III BARRICADE-LT. (16')		2	2					32
TOTALS:						149.0	18	64	32

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

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.	100842
							11	30

2 QUANTITIES



EARTHWORK

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT	* SOIL STABILIZATION
			CU. YD.		TON
ENTIRE PROJECT		STAGE 1-MAIN LANES	1877	6064	
ENTIRE PROJECT		APPROACHES	50	270	
105+33	106+57	BRIDGE EXCAVATION	31		
ENTIRE PROJECT		TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER			25
TOTALS:			1958	6334	25

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

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

CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	STAGE 1	RAISED PAVEMENT MARKERS	REFLECTORIZED PAINT PAVEMENT MARKING	
		TYPE II (YELLOW/YELLOW)	6"	
			WHITE	YELLOW
LIN. FT. - EACH		EACH	LIN. FT.	
RAISED PAVEMENT MARKERS TYPE II (YELLOW/YELLOW)	19	19		
REFLECTORIZED PAINT PAVEMENT MARKING WHITE (6")	3000		3000	
REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (6")	3000			3000
TOTALS:		19	3000	3000

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

NOTE: THE 6" YELLOW STRIPING QUANTITY HAS BEEN ESTIMATED BASED ON A DOUBLE YELLOW CENTERLINE STRIPE FOR THE ENTIRE PROJECT. THE PROJECT MUST BE MARKED FOR PASSING/NO PASSING ZONES PRIOR TO THE PLACEMENT OF ANY FINAL STRIPING. CONTACT THE MAINTENANCE DIVISION AFTER THE FINAL LIFT OF SURFACE COURSE HAS BEEN PLACED TO SCHEDULE THE ZONING OF THE PROJECT.

SOIL LOG

STATION	LATITUDE			LONGITUDE			LOCATION	DEPTH FEET	LIQUID LIMIT	PLASTICITY INDEX	AASHTO CLASSIFICATION	COLOR
	DEG	MIN	SEC	DEG	MIN	SEC						
102+00	36	25	33.00	90	23	21.30	6' RT	5	22	9	A-4(2)	BROWN
102+00	36	25	32.60	90	23	21.30	18' RT	5	ND	NP	A-4(0)	BROWN
104+30	36	25	34.90	90	23	21.20	23' RT	5	30	17	A-6(3)	BROWN/GRAY
110+00	36	25	40.50	90	23	21.50	6' LT	5	28	15	A-6(7)	GRAY
110+00	36	25	40.50	90	23	21.50	18' LT	5	24	9	A-4(1)	BROWN/GRAY

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

EROSION CONTROL

STATION	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)	ROCK DITCH CHECKS (E-6)	SILT FENCE (E-11)	SEDIMENT BASIN (E-14)	OBLITERATION OF SEDIMENT BASIN	*SEDIMENT REMOVAL & DISPOSAL
ENTIRE PROJECT		CLEARING AND GRUBBING														
ENTIRE PROJECT		HWY. 141	2.99	5.98	2.99	305.0	2.99	4.32	4.32	88.1		39		438	438	451
		*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.	0.75	1.50	0.75	76.5	0.75	1.08	1.08	22.0	88	10	100	110	110	114
TOTALS:			3.74	7.48	3.74	381.5	3.74	9.72	9.72	198.2	88	88	100	986	986	1016

BASIS OF ESTIMATE:
 LIME2 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
 ROCK DITCH CHECKS.....3 CU.YD./LOCATION

NOTE: THE TEMPORARY EROSION CONTROL DEVICES SHOWN ABOVE AND ON THE PLANS SHALL BE INSTALLED IN SUCH A SEQUENCE AS TO DETER EROSION AND SEDIMENTATION ON U.S. WATERWAYS AS EXPLAINED BY THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT.

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

QUANTITIES

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.	100842		12	30

DRIVEWAYS & TURNOUTS

STATION	SIDE	LOCATION	WIDTH FEET	ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG 64-22)		AGGREGATE BASE COURSE (CLASS 7) TON	SIDE DRAINS 24" LIN. FT.	STANDARD DRAWINGS
				SQ. YD.	TON			
101+00	RT	HWY. 141	16	44.80	4.93	45.36	34	PCC-1, PCM-1, PCP-1, PCP-2
101+73	LT	HWY. 141	16	44.80	4.93	45.36	34	PCC-1, PCM-1, PCP-1, PCP-2
103+00	LT	HWY. 141	16	44.80	4.93	45.36	40	PCC-1, PCM-1, PCP-1, PCP-2
* ENTIRE PROJECT TEMPORARY DRIVES						45.00		
TOTALS:				134.40	14.79	181.08	108	

BASIS OF ESTIMATE:
 ACHM SURFACE COURSE (1/2").....94.8% MIN. AGGR.....5.2% ASPHALT BINDER
 MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22

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

NOTE: FOR R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
 NOTE: FOR C.M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

GUARDRAIL

STATION	STATION	LOCATION	GUARDRAIL (TYPE A)	THRIE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)
			LIN. FT.	EACH	EACH
103+14.85	105+33.60	RT. SIDE	150	1	1
103+39.85	105+33.60	LT. SIDE	75	1	1
106+56.40	107+50.15	RT. SIDE	75	1	1
106+56.40	108+75.15	LT. SIDE	150	1	1
TOTALS:			450	4	4

REMOVAL AND DISPOSAL OF CULVERTS

STATION	DESCRIPTION	PIPE CULVERTS
		EACH
101+73	24" x 28' CM LT. SIDE DRAIN	1
103+00	24" x 28' CM LT. SIDE DRAIN	1
104+43	24" x 20' CM RT. SIDE DRAIN	1
105+35	24" x 30' CM LT. SIDE DRAIN	1
105+45	24" x 30' CM RT. SIDE DRAIN	1
106+42	24" x 30' CM LT. SIDE DRAIN	1
106+56	24" x 30' CM RT. SIDE DRAIN	1
107+30	24" x 30' CM LT. SIDE DRAIN	1
TOTAL:		8

BENCH MARKS

STATION	LOCATION	BENCH MARKS
		EACH
105+32	BRIDGE END	1
TOTAL:		1

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

MAILBOXES

LOCATION	MAILBOXES	MAILBOX SUPPORTS (SINGLE)
	EACH	EACH
ENTIRE PROJECT	1	1
TOTALS:		1

COLD MILLING ASPHALT PAVEMENT

STATION	STATION	LOCATION	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT
			FEET	SQ. YD.
99+00.00	100+00.00	MAIN LANES	22.00	244.44
113+00.00	114+00.00	MAIN LANES	22.00	244.44
TOTAL:				488.88

NOTE: AVERAGE MILLING DEPTH 1".

CLEARING AND GRUBBING

STATION	STATION	LOCATION	CLEARING	GRUBBING
			STATION	STATION
106+58	113+00	HWY. 141	7	7
TOTALS:			7	7

APPROACH GUTTERS AND SLABS

STATION	STATION	LOCATION	APPROACH GUTTER (TYPE D)	APPROACH SLABS (TYPE D)	REINFORCING STEEL-RDWY. (GR. 60)	AGGREGATE BASE CRS. (CLASS 7)
			CU.YD.	CU.YD.	POUND	TON
104+91.92	105+21.92	LT. SIDE	2.83		245	
104+91.92	105+21.92	RT. SIDE	2.83		245	
105+21.92	105+21.92	MAINLANES		14.65	1140	44.8
106+68.08	106+98.08	LT. SIDE	2.83		245	
106+68.08	106+98.08	RT. SIDE	2.83		245	
106+58.08	106+58.08	MAINLANES		14.65	1140	44.8
TOTALS:			11.32	29.30	3260	89.6

NOTE: USE T=12" FOR 4' SHOULDER.

ACHM PATCHING OF EXISTING ROADWAY

DESCRIPTION	TON
ENTIRE PROJECT - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	25
TOTAL:	25

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

4" PIPE UNDERDRAIN

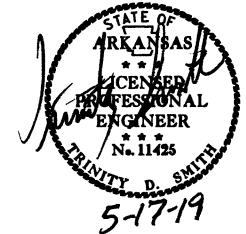
STATION	STATION	LOCATIONS	4" PIPE UNDERDRAINS	UNDERDRAIN OUTLET PROTECTORS
			LIN. FT.	EACH
* ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER			500	2
TOTALS:			500	2

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

SELECTED PIPE BEDDING

LOCATION	SELECTED PIPE BEDDING CU.YD.
ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	10
TOTAL:	10

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



QUANTITIES

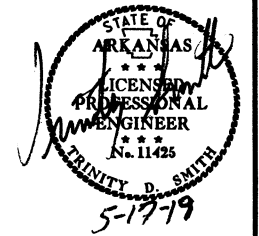
QUANTITIES

5/7/2019

R100842.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.							100842	13	30

② QUANTITIES



BASE AND SURFACING

STATION	STATION	LOCATION	LENGTH FEET	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT						ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")					
				TON / STATION	TON	(0.05 GAL. PER SQ. YD.)			(0.17 GAL. PER SQ. YD.)			TOTAL GALLONS	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 64-22 TON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 64-22 TON	
						TOTAL WID. FEET	SQ.YD.	GALLON	TOTAL WID. FEET	SQ.YD.	GALLON										
MAIN LANES																					
99+00.00	100+00.00	TRANSITION	100.00			22.00	244.44	12.22				12.22						24.00	266.67	220.00	29.33
100+00.00	102+10.00	NOTCH AND WIDEN	210.00	83.00	174.30	22.00	513.33	25.67				25.67						26.00	606.67	220.00	66.73
102+10.00	105+17.00	MAINLANES	307.00	182.75	561.04	22.29	760.34	38.02				38.02	22.29	760.34	330.00	125.46		26.00	886.89	220.00	97.56
106+73.00	110+50.00	MAINLANES	377.00	182.75	688.97	22.29	933.70	46.69				46.69	22.29	933.70	330.00	154.06		26.00	1089.11	220.00	119.80
110+50.00	113+00.00	NOTCH AND WIDEN	250.00	83.00	207.50	22.00	611.11	30.56				30.56						26.00	722.22	220.00	79.44
113+00.00	114+00.00	TRANSITION	100.00			22.00	244.44	12.22				12.22						24.00	266.67	220.00	29.33
ADDITIONAL FOR LEVELING																					
100+00.00	102+10.00	NOTCH AND WIDEN	210.00						22.00	513.33	87.27	87.27						22.00	513.33	VAR.	307.61
110+50.00	113+00.00	NOTCH AND WIDEN	250.00						22.00	611.11	103.89	103.89						22.00	611.11	VAR.	144.83
ADDITIONAL FOR GUARDRAIL WIDENING																					
102+59.85	102+71.85	GUARDRAIL WIDENING RT.	12.00															1.00	1.33	220.00	0.15
102+71.85	103+04.85	GUARDRAIL WIDENING RT.	33.00	15.58	5.14													4.75	17.42	220.00	1.92
103+04.85	105+33.60	GUARDRAIL WIDENING RT.	228.75	29.87	68.33													7.50	190.63	220.00	20.97
103+34.85	103+46.85	GUARDRAIL WIDENING LT.	12.00															1.00	1.33	220.00	0.15
103+46.85	103+79.85	GUARDRAIL WIDENING LT.	33.00	15.58	5.14													4.75	17.42	220.00	1.92
103+79.85	105+33.60	GUARDRAIL WIDENING LT.	153.75	29.87	45.93													7.50	128.13	220.00	14.09
106+56.40	108+10.25	GUARDRAIL WIDENING RT.	153.85	19.55	30.08													7.50	128.21	220.00	14.10
106+56.40	108+85.15	GUARDRAIL WIDENING LT.	228.75	19.55	44.72													7.50	190.63	220.00	20.97
108+10.25	108+43.25	GUARDRAIL WIDENING RT.	33.00	15.58	5.14													4.75	17.42	220.00	1.92
108+43.25	108+55.25	GUARDRAIL WIDENING RT.	12.00															1.00	1.33	220.00	0.15
108+85.15	109+18.15	GUARDRAIL WIDENING LT.	33.00	15.58	5.14													4.75	17.42	220.00	1.92
109+18.15	109+30.15	GUARDRAIL WIDENING LT.	12.00															1.00	1.33	220.00	0.15
TOTALS:				1841.43			3307.36	165.38				1124.44	191.16	356.54		1694.04		279.52		5675.27	953.04

BASIS OF ESTIMATE:
 ACHM SURFACE COURSE (1/2").....94.8% MIN. AGGR.....5.2% ASPHALT BINDER
 ACHM BINDER COURSE (1").....95.9% MIN. AGGR.....4.1% ASPHALT BINDER
 MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22
 TACK COAT QUANTITIES WERE CALCULATED USING THE EMULSIFIED ASPHALT RATES. REFER TO SS-400-1 FOR THE RESIDUAL ASPHALT APPLICATION RATES.

5/7/2019

R100842.DGN

QUANTITIES

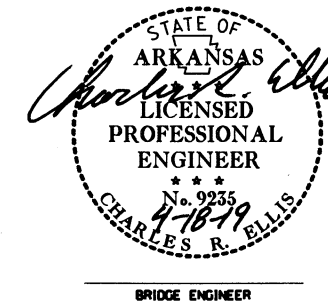
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	100842		14	30
① 07439 - QUANTITIES - 60484								

SCHEDULE OF BRIDGE QUANTITIES - JOB NO. 100842

BRIDGE NO.	NAME PLATE TITLE	UNIT OF STRUCTURE	ITEM NO.	205	801	SS & 802	SS & 802	SS & 802	SS & 802	803	SS & 804	SS & 805	SS & 805	SS & 805	812	816	816	
			ITEM	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO.)	UNCLASSIFIED EXCAVATION FOR STRUCTURES - BRIDGE	① 31' PRECAST CONCRETE CURB UNITS	① 31' PRECAST CONCRETE INTERIOR UNITS	31' PRECAST PARAPET RAIL UNITS	CLASS 5 CONCRETE-BRIDGE	CLASS 1 PROTECTIVE SURFACE TREATMENT	REINFORCING STEEL-BRIDGE (GRADE 60)	STEEL SHELL PILING (18" DIAMETER)	STEEL SHELL PILING (24" DIAMETER)	PILE ENCASEMENT	BRIDGE NAME PLATE (TYPE D)	FILTER BLANKET	DUMPED RIPRAP	
			UNIT	LUMP SUM	CU. YD.	EACH	EACH	EACH	CU. YD.	GAL.	LB.	LIN. FT.	LIN. FT.	LIN. FT.	EACH	SQ. YD.	CU. YD.	
07439	HIGHWAY 141 OVER LITTLE CACHE RIVER	BENT 1			36				17.00		1609	280			1	152	86	
		BENT 2							14.20		1214		450	53				
		BENT 3							14.20		1214		450	96				
		BENT 4							14.20		1214		450	84				
		BENT 5			36				17.00		1609	280					173	97
		4 - 31'-0" PRECAST SPANS					8	28	8		10.4							
		SITE NO. 1 (BRIDGE NO. M3177)			1													
TOTALS FOR JOB NO. 100842					72	8	28	8	76.60	10.4	6860	560	1350	233	1	325	183	

① Due to seismicity, four (4) additional Dowels and Dowel Holes, eight (8) total, were added to each unit. See Dwg. Nos. 60487-60489 for spacing and details.

STEVEN PEYTON
DESIGN SECTION SUPERVISOR



SCHEDULE OF BRIDGE QUANTITIES
LITTLE CACHE RIVER DITCH
STR. & APPRS. (S)
CLAY COUNTY
ROUTE 141 SEC. 6
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: JWP DATE: 4/1/2019 FILENAME: b100842.q.dgn
 CHECKED BY: RCS DATE: 4/18/19 SCALE: No Scale
 DESIGNED BY: — DATE: —
 BRIDGE NO. 07439 DRAWING NO. 60484

SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
201	CLEARING	7	STATION
201	GRUBBING	7	STATION
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS	8	EACH
210	UNCLASSIFIED EXCAVATION	1958	CU. YD.
210	COMPACTED EMBANKMENT	6334	CU. YD.
SP & 210	SOIL STABILIZATION	25	TON
SS & 303	AGGREGATE BASE COURSE (CLASS 7)	2112	TON
SS & 401	TACK COAT	357	GAL.
SP, SS, & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")	269	TON
SP, SS, & 406	ASPHALT BINDER (PG 64-22) IN ACHM BINDER COURSE (1")	11	TON
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	918	TON
SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	50	TON
412	COLD MILLING ASPHALT PAVEMENT	489	SQ. YD.
SP, SS, & 415	ACHM PATCHING OF EXISTING ROADWAY	25	TON
504	APPROACH SLABS	29.30	CU. YD.
504	APPROACH GUTTERS	11.32	CU. YD.
601	MOBLIZATION	1.00	LUMP SUM
SP & 602	FURNISHING FIELD OFFICE	1	EACH
603	MAINTENANCE OF TRAFFIC	1.00	LUMP SUM
SS & 604	SIGNS	149	SQ. FT.
SS & 604	BARRICADES	96	LIN. FT.
SS & 604	TRAFFIC DRUMS	18	EACH
SP, SS, & 606	24" SIDE DRAIN	108	LIN. FT.
606	SELECTED PIPE BEDDING	10	CU. YD.
SS & 611	4" PIPE UNDERDRAINS	500	LIN. FT.
SS & 611	UNDERDRAIN OUTLET PROTECTORS	2	EACH
SS & 617	GUARDRAIL (TYPE A)	450	LIN. FT.
SS & 617	GUARDRAIL TERMINAL (TYPE 2)	4	EACH
SS & 617	THRIE BEAM GUARDRAIL TERMINAL	4	EACH
620	LIME	7	TON
620	SEEDING	3.74	ACRE
SS & 620	MULCH COVER	13.46	ACRE
620	WATER	579.7	M. GAL.
621	TEMPORARY SEEDING	9.72	ACRE
621	SILT FENCE	100	LIN. FT.
621	SAND BAG DITCH CHECKS	88	BAG
621	SEDIMENT BASIN	986	CU. YD.
621	OBLITERATION OF SEDIMENT BASIN	986	CU. YD.
621	SEDIMENT REMOVAL AND DISPOSAL	1016	CU. YD.
621	ROCK DITCH CHECKS	88	CU. YD.
623	SECOND SEEDING APPLICATION	3.74	ACRE
635	ROADWAY CONSTRUCTION CONTROL	1.00	LUMP SUM
637	MALBOXES	1	EACH
637	MALBOX SUPPORTS (SINGLE)	1	EACH
718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (6")	3000	LIN. FT.
718	REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (6")	3000	LIN. FT.
721	RAISED PAVEMENT MARKERS (TYPE II)	19	EACH
SS & 804	REINFORCING STEEL-ROADWAY (GRADE 60)	3260	POUND
STRUCTURES OVER 20' SPAN			
205	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. 1)	1.00	LUMP SUM
636	BRIDGE CONSTRUCTION CONTROL	1.00	LUMP SUM
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-BRIDGE	72	CU. YD.
SS & 802	CLASS S CONCRETE-BRIDGE	76.60	CU. YD.
SS & 802	31' PRECAST CONCRETE CURB UNITS	8	EACH
SS & 802	31' PRECAST CONCRETE INTERIOR UNITS	28	EACH
SS & 802	31' PRECAST PARAPET RAIL UNITS	8	EACH
803	CLASS 1 PROTECTIVE SURFACE TREATMENT	10.4	GAL.
SS & 804	REINFORCING STEEL-BRIDGE (GRADE 60)	6860	POUND
SS & 805	STEEL SHELL PILING (18" DIAMETER)	560	LIN. FT.
SS & 805	STEEL SHELL PILING (24" DIAMETER)	1350	LIN. FT.
SS & 805	PILE ENCASEMENT	233	LIN. FT.
812	BRIDGE NAME PLATE (TYPE D)	1	EACH
816	FILTER BLANKET	325	SQ. YD.
816	DUMPED RIPRAP	183	CU. YD.

REVISIONS

DATE	REVISION	SHEET NUMBER

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. NO.	STATE	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						100842	15	30

② QUANTITIES



5/16/2019

R100842.DGN

SURVEY CONTROL COORDINATES

Project Name: s100842
 Date: 11/22/2016
 Coordinate System: ARKANSAS STATE PLANE - NORTH ZONE BASED ON GPS CONTROL,
 PROJECTED TO GROUND.
 Units: U.S. SURVEY FOOT

HWY 141

POINT NO.	TYPE	STATION	NORTHING	EASTING
8000	POB	97+00.00	764982.9271	1786176.1402
8001	POE	116+00.00	766882.8808	1786162.8758

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.	100842		16	30

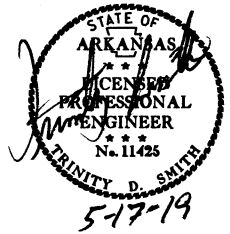
2 SURVEY CONTROL DETAILS

Point Name	Northing	Easting	Elev	Feature	Description
1	763991.2175	1786203.5422	298.105	CTL	STD. AHTD MON. STAMPED PN: 1
2	764857.5461	1786163.3464	297.455	CTL	STD. AHTD MON. STAMPED PN: 2
3	765924.8329	1786148.3869	294.770	CTL	STD. AHTD MON. STAMPED PN: 3
4	766913.6080	1786177.2970	296.417	CTL	STD. AHTD MON. STAMPED PN: 4
5	767706.4990	1786172.2162	298.304	CTL	STD. AHTD MON. STAMPED PN: 5
100	768715.4275	1785715.7737	299.274	GPS	AHTD GPS MON 110001
900	765958.5921	1786220.6127	295.903	TBM	
990	768600.7297	1784914.0816	297.240	BM	NGS BM A190
991	768758.0761	1790293.1705	299.860	BM	NGS BM Z189 USC AND GS BRASS CA 62
999	768675.1992	1787241.9003	297.270	TBM	SQUARE CUT CENTER HW 62 MCDUGAL

*Note - Rebar and Cap - Standard - 5/8" Rebar with 2" Aluminum Cap stamped
 *(standard markings common to all caps), or as indicated
 (other markings indicated in the point description of the individual point).
 USE CAF = 1.0 FOR STAKEOUT FOR THIS PROJECT
 A PROJECT CAF OF 1.0000297714 HAS BEEN USED TO COMPUTE THE ABOVE GROUND COORDINATES.
 THIS CAF IS INTENDED FOR USE WITHIN THE PROJECT LIMITS.
 GRID DISTANCE = GROUND DISTANCE X CAF.
 GRID COORDINATES ARE STORED UNDER FILE NAME s100842gi.ctl
 HORIZONTAL DATUM: NAD 83 (1997)
 VERTICAL DATUM: NAVD 88 POSITIONAL ACCURACY THIRD ORDER, UNLESS SPECIFIED OTHERWISE
 AT A SPECIFIC POINT.

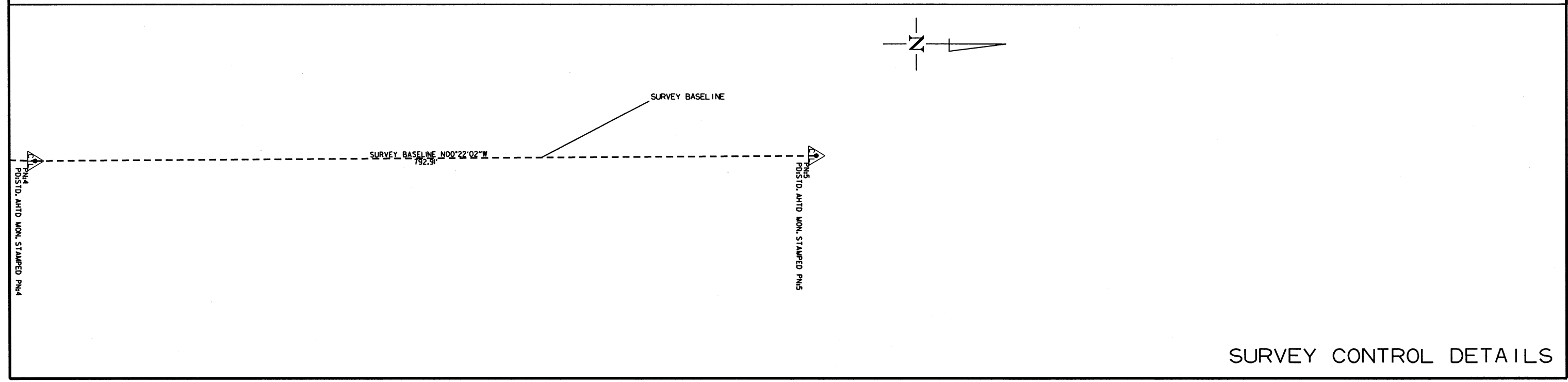
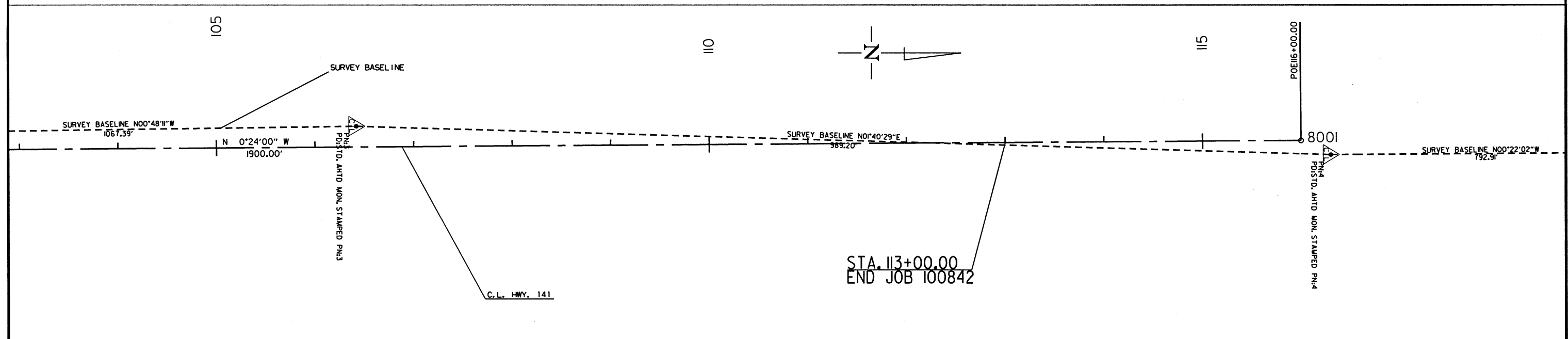
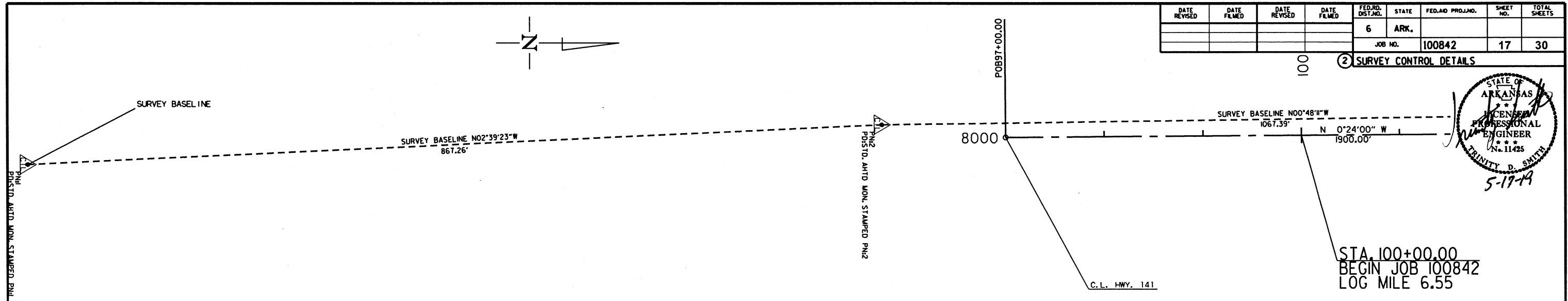
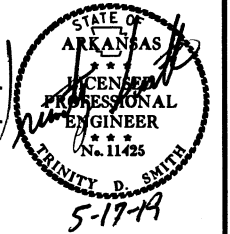
REFERENCE POINTS (1500 SERIES) ARE TO BE USED TO ESTABLISH CONTROL
 IF THE PRIMARY CONTROL POINTS LISTED ABOVE HAVE BEEN DESTROYED.
 REFERENCE POINTS ARE NOT TO BE USED FOR VERTICAL CONTROL

BASIS OF BEARING:
 ARKANSAS STATE PLANE GRID BEARINGS - 0301-NORTH ZONE
 DETERMINED FROM GPS CONTROL POINTS: 110001 - NGS BM A 190
 CONVERGENCE ANGLE: 0-56-14 RIGHT AT LT: 36-25-37 LG: 090-23-22
 GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE



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.		100842	17	30

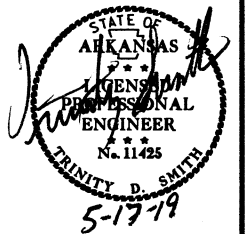
② SURVEY CONTROL DETAILS



5/7/2019 R100842.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		18	30

2 PLAN AND PROFILE SHEETS



ENTIRE PROJECT
SPECIAL FLOOD HAZARD AREA

STA. 105+43.74 - STA. 106+49.12 IN PLACE
29.7' X 108' BRIDGE NO. M3177
STEEL BEAM WITH TIMBER BENTS
REMOVE AS EXISTING BRIDGE STRUCTURE
(SITE NO. 1) = 1.00 LUMP SUM

BR. END STA. 105+33.00
BRIDGE NO. 07439
31'-6" CLEAR ROADWAY
124'-0" TOTAL LENGTH
124'-0" PRECAST CONCRETE SPANS (31'-31'-31'-31')
BR. END STA. 106+57.00



STA. 101+73 IN PLACE
24" X 24' CMP CULVERT
LT. SIDE DRAIN
REMOVE & INSTALL
24" X 34' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 85 CU. YD.

STA. 103+00 IN PLACE
24" X 24' CMP CULVERT
LT. SIDE DRAIN
REMOVE & INSTALL
24" X 40' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 105 CU. YD.

STA. 105+35 - IN PLACE
24" X 30' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 106+42 - IN PLACE
24" X 24' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 107+30 - IN PLACE
24" X 30' C.M. PIPE CULVERT
REMOVE SIDE DRAIN AND CLOSE ROAD
SEE SPECIAL DETAIL

STA. 101+00 - INSTALL
24" X 34' C.M. PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 80 CU. YD.

STA. 104+43 - IN PLACE
24" X 20' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 105+45 - IN PLACE
24" X 30' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 106+56 - IN PLACE
24" X 30' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

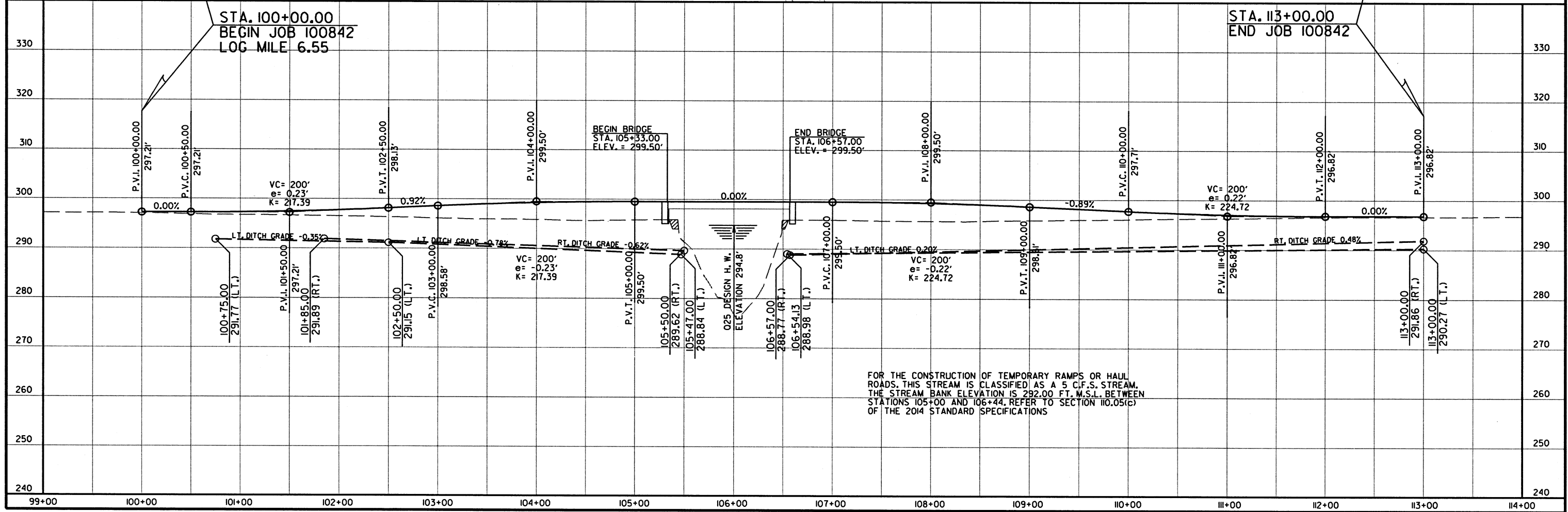
STA.	STA.	SIDE	GUARDRAIL (TYPE A) LIN. FT.	GUARDRAIL TERMINAL (TYPE 2) EACH	THREE BEAM GUARDRAIL TERMINAL EACH
103+14.85	105+33.60	RT.	150		
103+39.85	105+33.60	LT.	75		
106+56.40	107+50.15	RT.	150		
106+56.40	108+75.15	LT.	150		

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

HWY. 141

STA. 100+00.00
BEGIN JOB 100842
LOG MILE 6.55

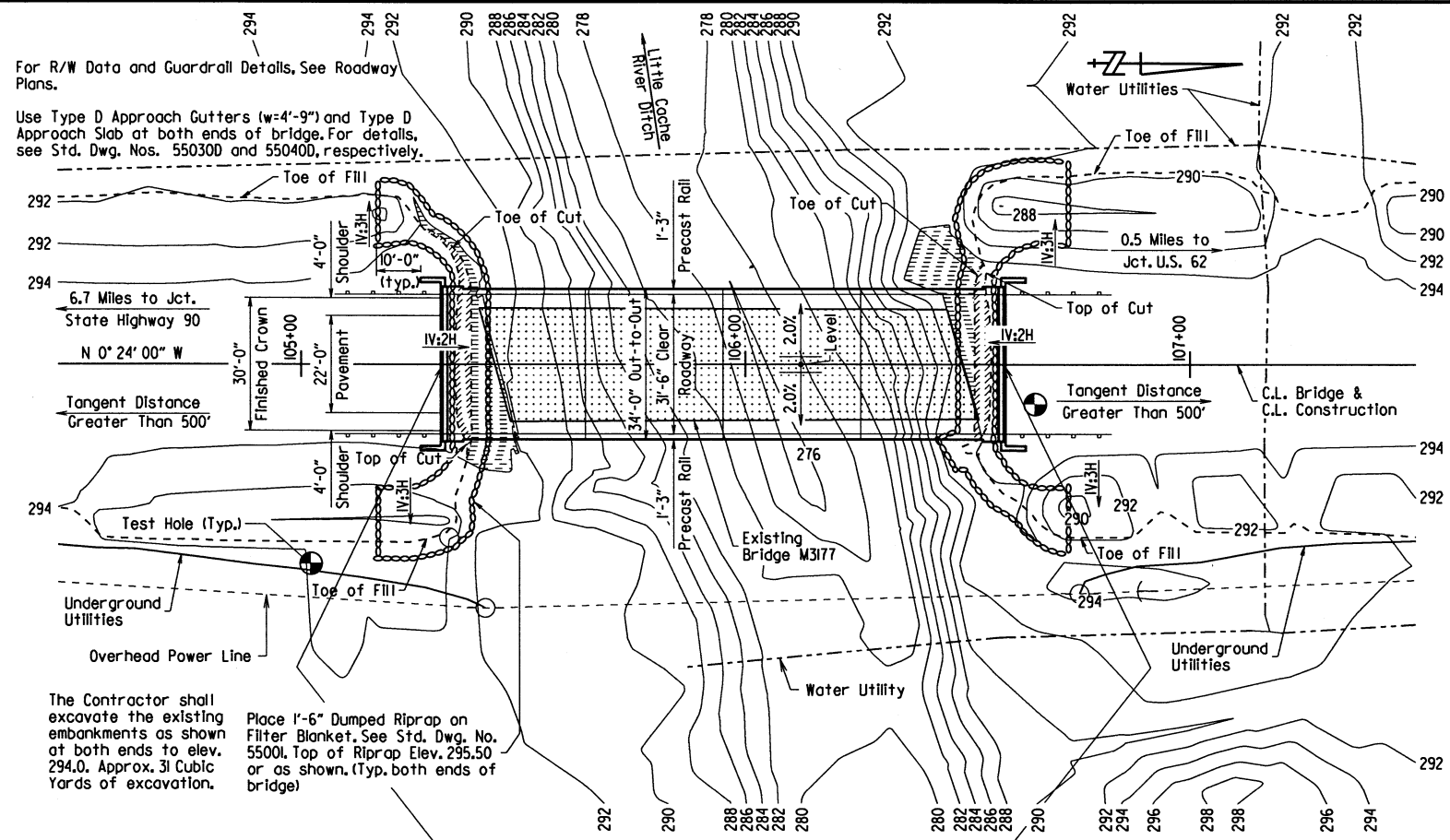
STA. 113+00.00
END JOB 100842



FOR THE CONSTRUCTION OF TEMPORARY RAMPS OR HAUL ROADS, THIS STREAM IS CLASSIFIED AS A 5 C.F.S. STREAM. THE STREAM BANK ELEVATION IS 292.00 FT. M.S.L. BETWEEN STATIONS 105+00 AND 106+44. REFER TO SECTION 110.05(C) OF THE 2014 STANDARD SPECIFICATIONS

5/7/2019 R100842.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	100842	19	30
				JOB NO.		07439 - LAYOUT		60485



GENERAL NOTES:

BENCHMARK: Vertical Control Data are shown on the Survey Control Data Sheets.

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2014 edition) with applicable Supplemental Specifications and Special Provisions. Section and Subsection refer to the Standard Construction Specifications unless otherwise noted in the Plans.

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications, Seventh Edition (2014), with 2016 Interim Revisions.

LIVE LOADING: HL-93

SEISMIC ZONE: 4 (S_{D1} : 0.576) Site Class: E

MATERIALS AND STRENGTHS:
 Class 5(AE) Concrete (superstructure) f'_c = 4,000 psi
 Class 5 Concrete (substructure) f'_c = 3,500 psi
 Reinforcing Steel (Grade 60, AASHTO M 31 or M 322, Type A) f_y = 60,000 psi

BORING LOGS: Boring logs may be obtained from the Construction Contract Procurement Section of the Program Management Division.

STEEL SHELL PILING: Piling at Bents 1 and 5 shall be 18" diameter concrete filled steel shell piles and shall be driven to a minimum ultimate bearing capacity of 185 tons per pile. Piling in Bents 2 thru 4 shall be 24" diameter concrete filled steel shell piles and shall be driven to a minimum ultimate bearing capacity of 185 tons per pile. All piling shall be driven with an approved air, steam, or diesel hammer to a tip elevation of 230.00 or lower at Bents 1 and 5 and to a tip elevation of 205.00 or lower at Bents 2 thru 4. Piling at end bents shall be driven after embankment to bottom of cap is in place. Lengths of piling shown are assumed for estimating quantities only. Actual lengths are to be determined in the field. No additional payment will be made for cut-off or build-up. Test piles are not required, but may be driven for the Contractor's information in accordance with Subsection 805.08(g).

Water Jetting or other methods approved by the Engineer may be required to achieve minimum penetration. This work shall not be paid for directly, but shall be considered incidental to the item "Steel Shell Piling."

PILE ENCASEMENT: Pile encasement for Bents 2 thru 4 shall extend from bottom of cap to 3 feet below natural ground. See Standard Drawing Number 55021 for additional details.

DRIVING SYSTEM: The driving system approval and the ultimate bearing capacity determination for piling shall be based on the requirements of Subsection 805.09(b), "Method B - Wave Equation Analysis (WEAP)." It is estimated that the minimum rated hammer energy required to obtain the ultimate bearing capacity at all Bents will be 45,000 foot pounds per blow.

BRIDGE DECK: The concrete bridge deck shall be given a fine finish as specified for final finishing in Subsection 802.19 for Class 5 Tined Bridge Roadway Surface Finish.

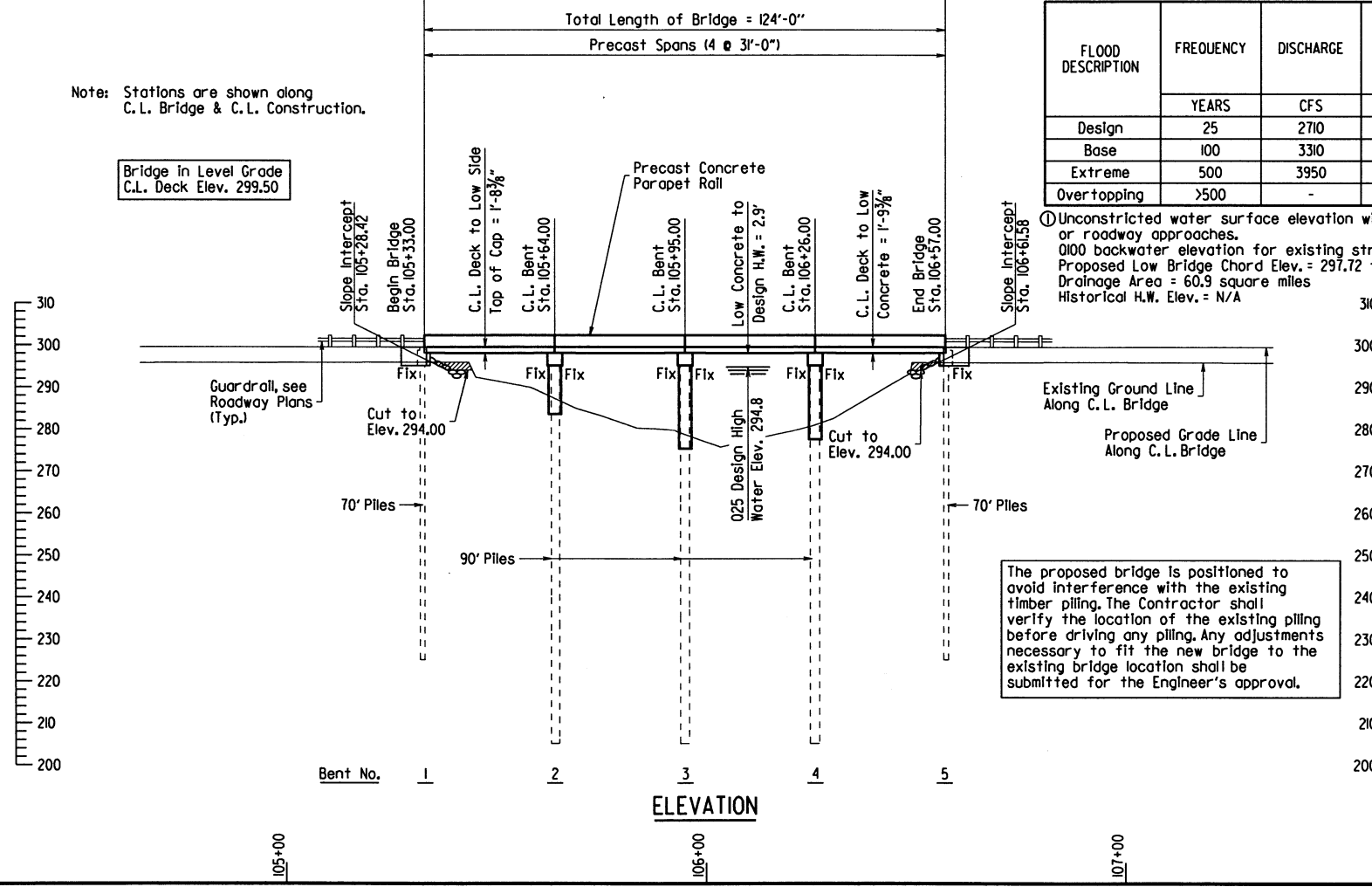
PROTECTIVE SURFACE TREATMENT: Class I Protective Surface Treatment shall be applied to the roadway surface, roadway face, and top of the concrete parapet walls in accordance with Section 803.

PLAN

HYDRAULIC DATA

FLOOD DESCRIPTION	FREQUENCY	DISCHARGE	NATURAL WATER SURFACE ELEVATION	WATER SURFACE ELEVATION WITH BACKWATER
	YEARS	CFS	FEET	FEET
Design	25	2710	294.7	294.8
Base	100	3310	294.9	294.9
Extreme	500	3950	295.0	295.0
Overtopping	>500	-	-	-

① Unconstricted water surface elevation without structure or roadway approaches.
 0100 backwater elevation for existing structure = 294.9 feet
 Proposed Low Bridge Chord Elev. = 297.72 feet
 Drainage Area = 60.9 square miles
 Historical H.W. Elev. = N/A

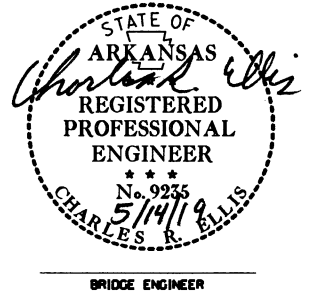


The proposed bridge is positioned to avoid interference with the existing timber piling. The Contractor shall verify the location of the existing piling before driving any piling. Any adjustments necessary to fit the new bridge to the existing bridge location shall be submitted for the Engineer's approval.

EXISTING BRIDGE: Existing Bridge No. M3177 (Log Mile 6.65) is 29.7' wide (28.2' Roadway) and 108.0' long and consists of a concrete deck on timber girder approach and steel beam main spans supported by timber trestle pile bents. The existing bridge is located at approximately the same location as the proposed new bridge.

REMOVAL AND SALVAGE: The Contractor shall remove Existing Bridge No. M3177 in accordance with Section 205. Remnant timber piling from previous structures shall also be removed to a depth of 2' below finished ground. This material and all material from the existing bridge shall become the property of the Contractor, except the bridge guardrail system (including rails, posts, bolts, and related accessories), which shall remain the property of the State. The Contractor shall notify the Department prior to removal to determine the specific pieces deemed salvageable. The Contractor shall provide temporary storage and on site loading onto ARDOT equipment for removal of salvage items from this site. This work and removal of remnant timber piling will be considered subsidiary to the item "Removal of Existing Bridge Structures (Site No.)."

MAINTENANCE OF TRAFFIC: The road will be closed during the construction of this project in accordance with Special Provision Job 100842 "Site Use (A+B Method) - Calendar Day Contract."



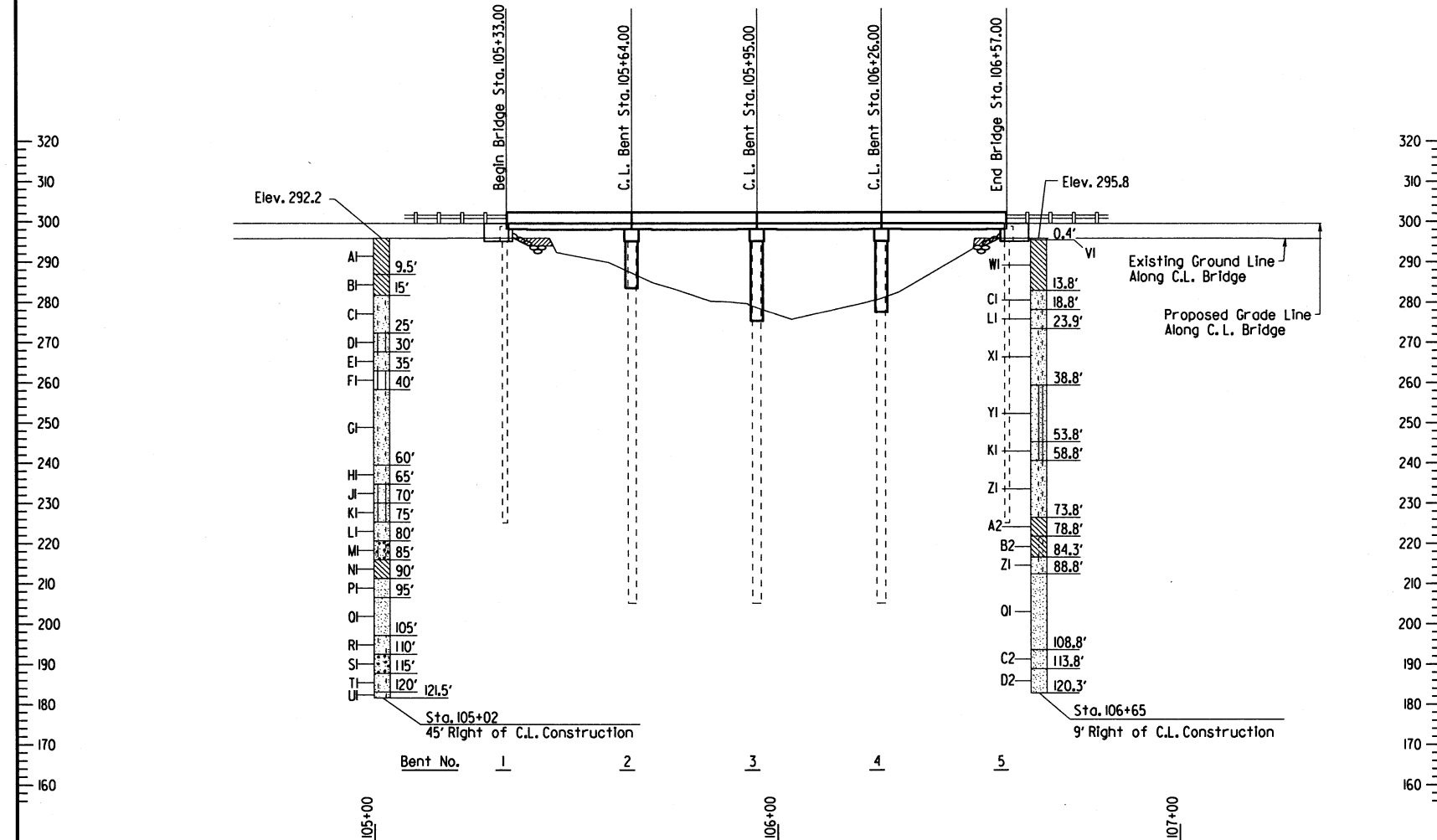
SHEET 1 OF 2
LAYOUT OF BRIDGE
HIGHWAY 141 OVER
LITTLE CACHE RIVER DITCH

LITTLE CACHE RIVER DITCH
STR. & APPRS. (S)
CLAY COUNTY

ROUTE 141 SEC. 6
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TMG DATE: 9/19/2017 FILENAME: b00842x1.dgn
 CHECKED BY: SWP DATE: 5/14/19 SCALE: 1" = 20'
 DESIGNED BY: TMG DATE: 5/2017
 BRIDGE NO. 07439 DRAWING NO. 60485

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100842	2030	
				07439 -	LAYOUT			60486



ELEVATION OF SOIL BORINGS

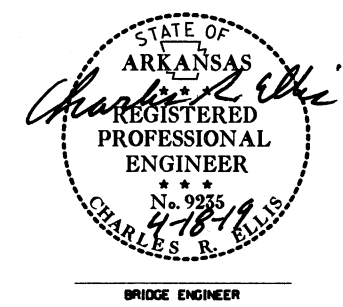
BORING LEGEND

- A1-Moist, Medium Stiff, Gray Fat Clay
- B1-Moist, Stiff, Gray Fat Clay
- C1-Wet, Loose, Gray Sand with Silt
- D1-Wet, Very Loose, Gray Sandy Silt
- E1-Wet, Loose, Gray Silty Sand
- F1-Wet, Very Loose, Gray Silt
- G1-Wet, Very Loose to Loose, Gray Silty Sand
- H1-Wet, Very Loose, Gray Silt with Sand
- J1-Wet, Loose, Gray Sandy Silt with Some Organic Matter (Wood)
- K1-Wet, Medium Dense, Gray Sandy Silt
- L1-Wet, Medium Dense, Gray Sand with Silt
- M1-Wet, Medium Dense, Brown Silty Sand with Gravel
- N1-Wet, Stiff, Brown Lean Clay
- P1-Wet, Medium Dense, Brown Sand and Some Gravel
- O1-Wet, Medium Dense, Brown Sand with Trace Gravel
- R1-Wet, Dense, Brown Sand with Silt and Trace Gravel
- S1-Wet, Medium Dense to Dense, Brown Sand with Gravel
- T1-Wet, Medium Dense to Dense, Brown Sand with Silt and Some Gravel
- U1-Wet, Very Dense, Brown Sand with Silt and Trace Gravel
- V1-Asphalt
- W1-Moist, Medium Stiff to Stiff, Gray Clay
- X1-Wet, Very Loose to Loose, Gray Sand with Silt
- Y1-Wet, Very Soft to Soft, Gray Silty Clay
- Z1-Wet, Medium Dense, Gray Silty Sand
- A2-Wet, Soft, Gray Clay
- B2-Wet, Medium Stiff to Stiff, Gray Silty Clay
- C2-Wet, Loose, Brown Sand with Trace Gravel and Some Organic Matter (Wood)
- D2-Wet, Dense, Sand with Trace Gravel

"N" VALUES

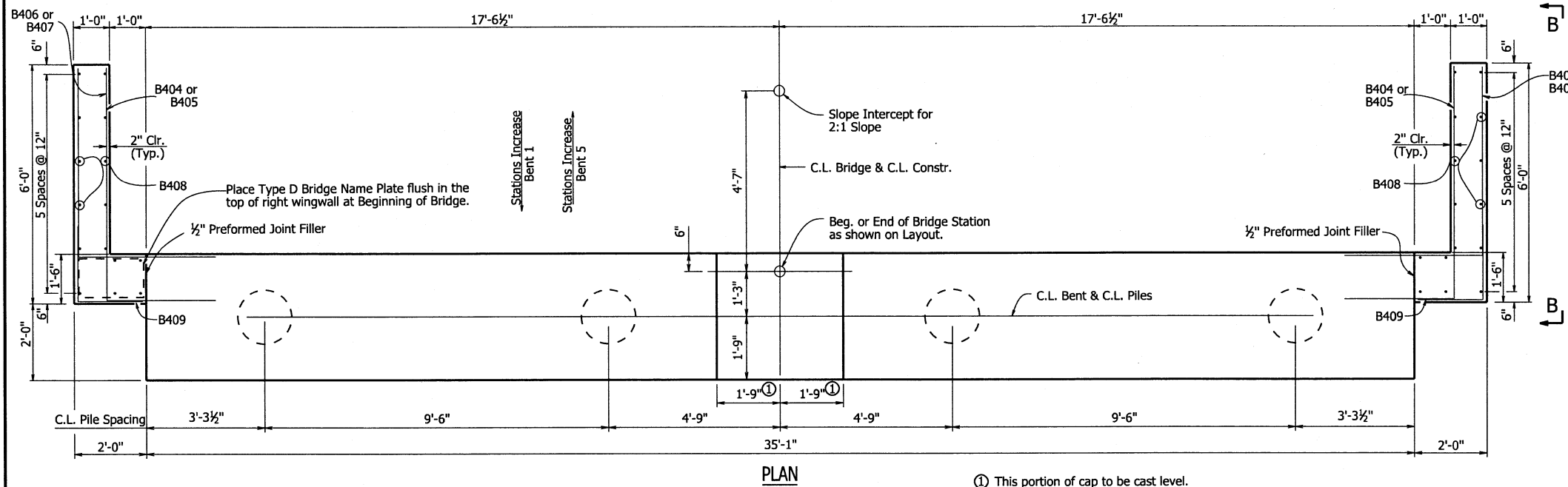
Sta. 105+02 - 45' Right of C.L. Construction		Sta. 106+65 - 9' Right of C.L. Construction	
5.0- 6.0,N=8		4.3- 5.3,N=6	
10.0- 11.0,N=9		9.3- 10.3,N=15	
15.5- 16.5,N=7		14.3- 15.3,N=7	
20.5- 21.5,N=6		19.3- 20.3,N=17	
25.5- 26.5,N=3		24.3- 25.3,N=4	
30.5- 31.5,N=7		29.3- 30.3,N=8	
35.5- 36.5,N=2		34.3- 35.3,N=8	
40.5- 41.5,N=5		39.3- 40.3,N=1	
45.5- 46.5,N=5		44.3- 45.3,N=0	
50.5- 51.5,N=4		49.3- 50.3,N=2	
55.5- 56.5,N=9		54.3- 55.3,N=13	
60.5- 61.5,N=3		59.3- 60.3,N=11	
65.5- 66.5,N=8		64.3- 65.3,N=11	
70.5- 71.5,N=13		69.3- 70.3,N=15	
75.5- 76.5,N=16		74.3- 75.3,N=3	
80.5- 81.5,N=25		79.3- 80.3,N=6	
85.5- 86.5,N=12		84.3- 85.3,N=11	
90.5- 91.5,N=18		89.3- 90.3,N=18	
95.5- 96.5,N=25		94.3- 95.3,N=17	
100.5-101.5,N=28		99.3-100.3,N=21	
105.5-106.5,N=33		104.3-105.3,N=16	
110.5-111.5,N=21		109.3-110.3,N=8	
115.5-116.5,N=40		114.3-115.3,N=40	
120.5-121.5,N=60		119.3-120.3,N=68	

PRINT DATE: 4/18/2019



SHEET 2 OF 2
 LAYOUT OF BRIDGE
 HIGHWAY 141 OVER
 LITTLE CACHE RIVER DITCH
 LITTLE CACHE RIVER DITCH
 STR. & APPRS. (S)
 CLAY COUNTY
 ROUTE 141 SEC. 6
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 DRAWN BY: TMG DATE: 9/19/2017 FILENAME: b100842xl.dgn
 CHECKED BY: SWP DATE: 4/18/19 SCALE: 1" = 20'
 DESIGNED BY: TMG DATE: 5/20/17
 BRIDGE NO. 07439 DRAWING NO. 60486

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	100842	21	30	
				07439 - BENT DETAILS - 60487				



BAR LIST-PER BENT

Mark	No. Req'd.	Length	"X"	"Y"	Pin Dia.	Bending Diagram
B401	58	12'-0"	3'-2"	2'-8"	2"	
B402	12	8'-4"	3'-2"	2'-8"	2"	
B403	4	34'-9"			Str.	
B404	4	6'-7"	5'-8"	1'-0"	2"	
B405	6	7'-9"	5'-8"	2'-2"	2"	
B406	4	6'-1"	4'-6"	1'-8"	2"	
B407	6	7'-3"	4'-6"	2'-10"	2"	
B408	30	4'-2"			Str.	
B409	10	3'-3"	1'-8"	1'-8"	2"	
B501	36	3'-11"	2'-0"	2'-0"	2 1/2"	
B601	6	36'-1"			4 1/2"	
B602	6	34'-9"			Str.	

Dimensions are out to out of bars.
All bars designated with an "E" suffix are to be Epoxy Coated.

② S701E (See Dwg. No. 60489)

GENERAL NOTES:

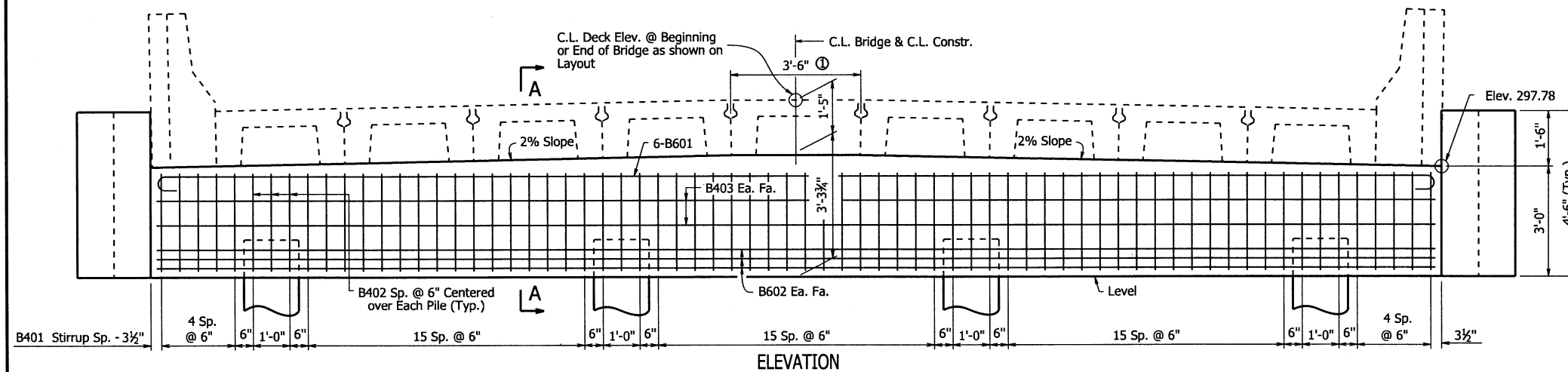
All Reinforcing steel shall be Grade 60, AASHTO M 31 or M 322, Type A with mill test reports. Reinforcing steel shall be accurately located in the forms and securely held in place by steel wire supports sufficient in size and number to prevent displacement during the course of construction.

All concrete filled steel shell piling shall be grade 45, and shall conform to Std. Dwg. No. 55021.

All concrete shall be Class "S" with a minimum 28 day compressive strength $f_c=3500$ psi. All exposed corners shall be chamfered 3/4" unless noted otherwise.

Preformed Joint Filler shall conform to AASHTO M153, Type 1 and shall not be paid for directly but shall be considered subsidiary to the pay items for Precast Concrete Units.

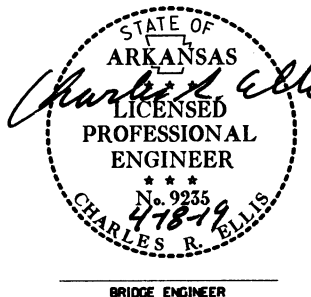
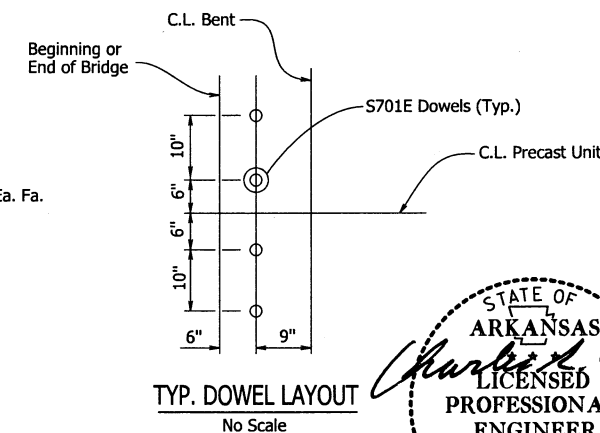
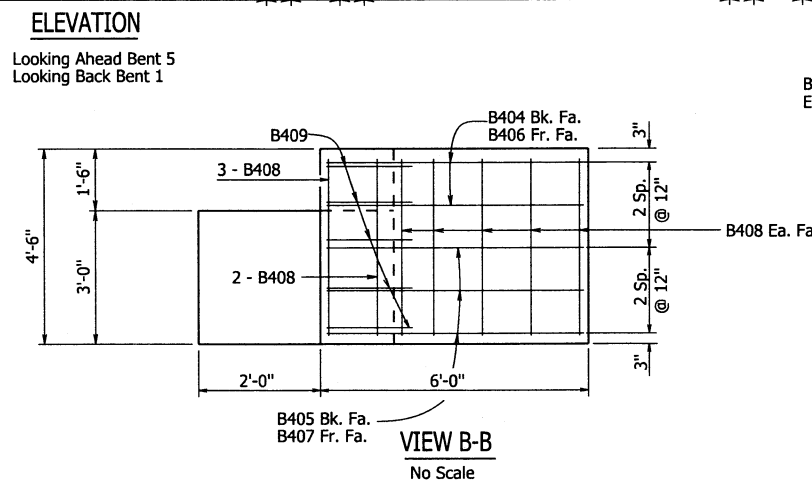
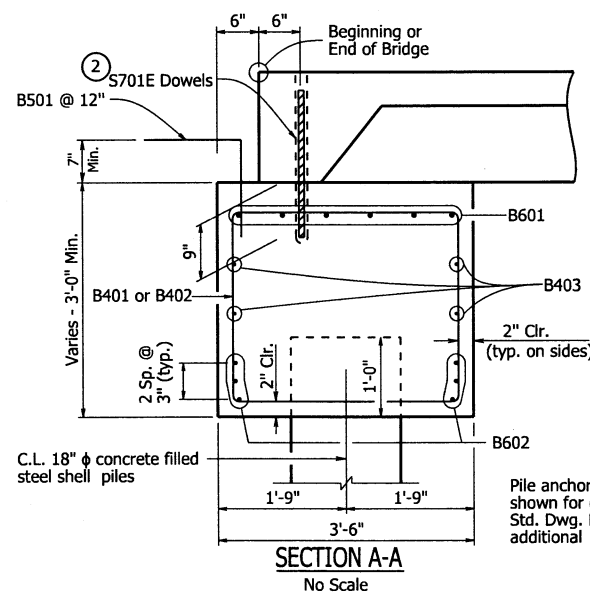
For additional information, see Layout.



② S701E Dowels may be cast in place or drilled and grouted using a QPL approved non-shrink grout or epoxy resin anchoring system prior to placing the precast concrete spans.

If holes are to be drilled into the Bent, top reinforcing steel shall be properly spaced to avoid damage.

S701E bars shall not be paid for separately, but shall be considered subsidiary to Precast Concrete Units.



DETAILS OF END BENTS

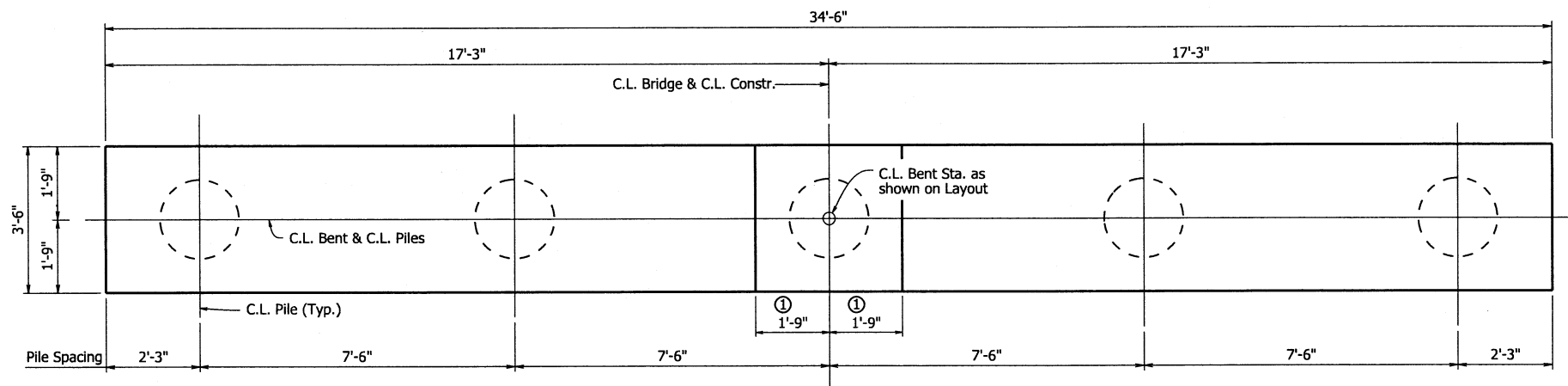
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: JWP DATE: 3/12/2019 FILENAME: B00842.dwg
CHECKED BY: mcb DATE: 4/13/19 SCALE: 1/2" = 1'-0" or
DESIGNED BY: JWP DATE: 2/19 As Shown
BRIDGE NO. 07439 DRAWING NO. 60487

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	100842	22	34	
				① 07439 - BENT DETAILS - 60488				

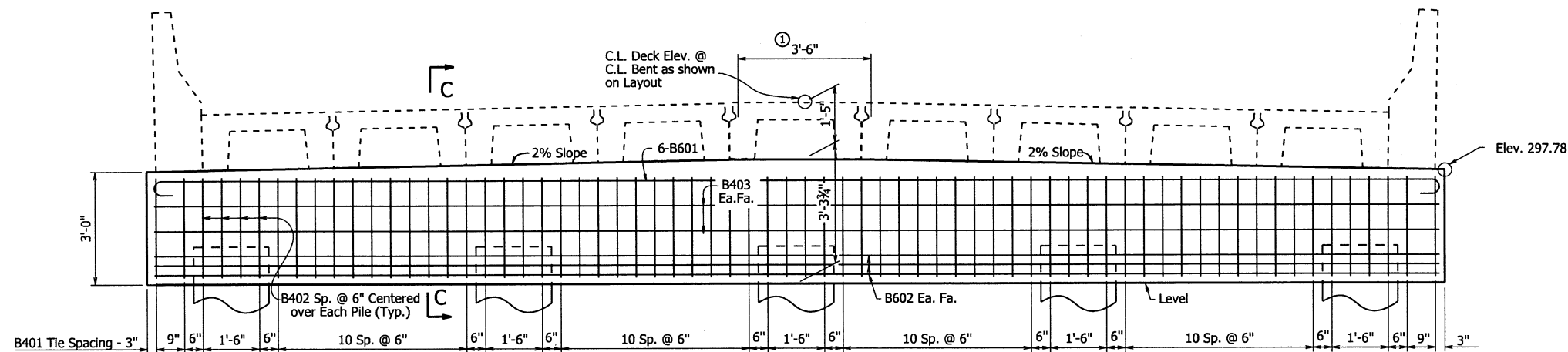
BAR LIST-PER BENT

Mark	No. Req'd.	Length	Pin Dia.	Bending Diagram
B401	48	12'-0"	2"	
B402	20	8'-4"	2"	
B403	4	34'-2"	Str.	
B601	6	35'-6"	4 1/2"	
B602	6	34'-2"	Str.	
② S701E (See Dwg. No. 60489)				
Dimensions are out to out of bars. All bars designated with an "E" suffix are to be Epoxy Coated.				



PLAN

① This portion of cap to be cast level.



ELEVATION

GENERAL NOTES:

All Reinforcing steel shall be Grade 60, AASHTO M 31 or M 322, Type A with mill test reports. Reinforcing steel shall be accurately located in the forms and securely held in place by steel wire supports sufficient in size and number to prevent displacement during the course of construction and to avoid interference with dowel bars.

All concrete shall be Class S with a minimum 28 day compressive strength $f'c=3500$ psi. All exposed corners shall be chamfered 3/4" unless noted otherwise.

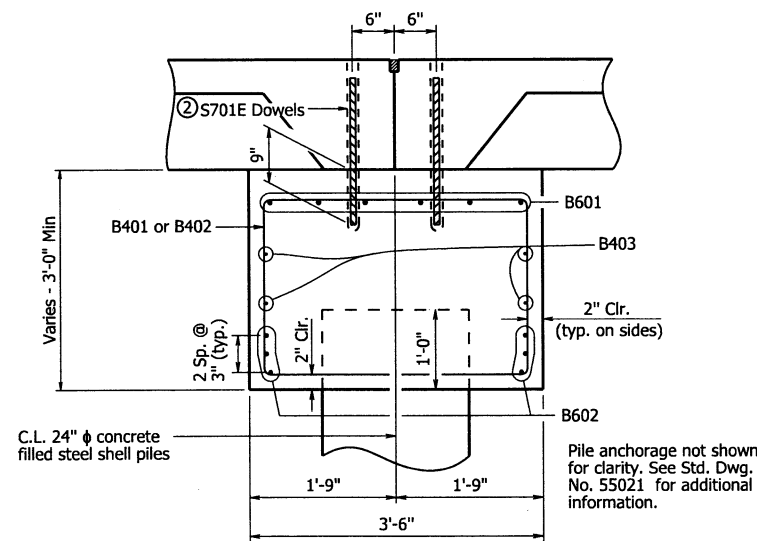
All steel shell piling shall be grade 45, and shall conform to Std. Dwg. No. 55021.

For additional information, See Layout.

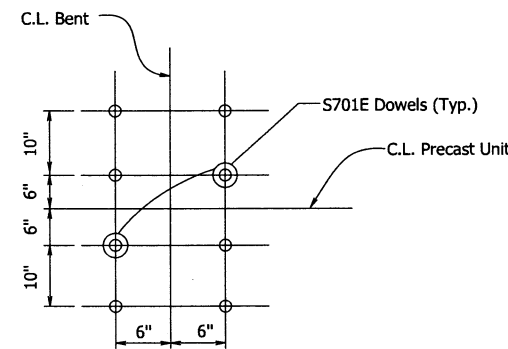
② S701E Dowels may be cast in place or drilled and grouted using a QPL approved non-shrink grout or epoxy resin anchoring system prior to placing the superstructure units.

If holes are to be drilled into the Bent, top reinforcing steel shall be properly spaced to avoid damage.

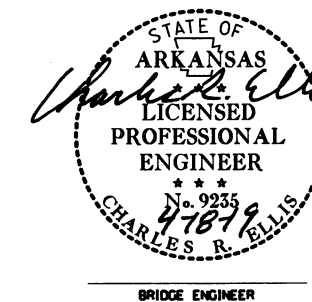
S701E bars shall not be paid for separately, but shall be considered subsidiary to Precast Concrete Units.



SECTION C-C
No Scale



TYP. DOWEL LAYOUT
No Scale



DETAILS OF INTERMEDIATE BENTS
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: JWP DATE: 3/12/2019 FILENAME: B00842.bl.dgn
 CHECKED BY: MCB DATE: 4/19/14 SCALE: 1/2" = 1'-0" or
 DESIGNED BY: JWP DATE: 2/19 As Shown
 BRIDGE NO. 07439 DRAWING NO. 60488

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET	TOTAL SHEETS
				6	ARK.			
				JOB NO.	100842	23	30	

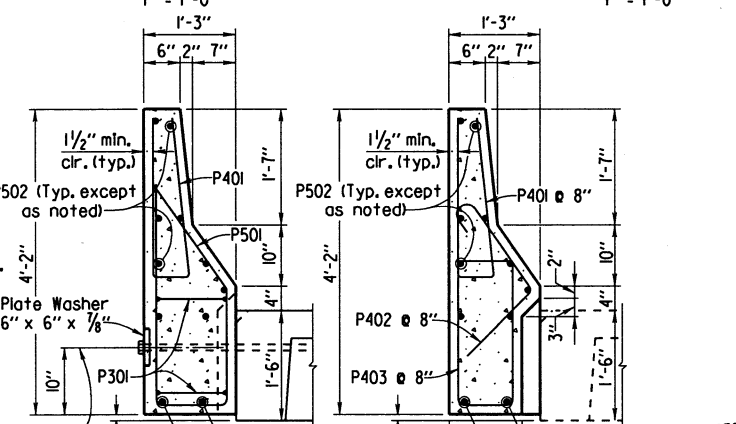
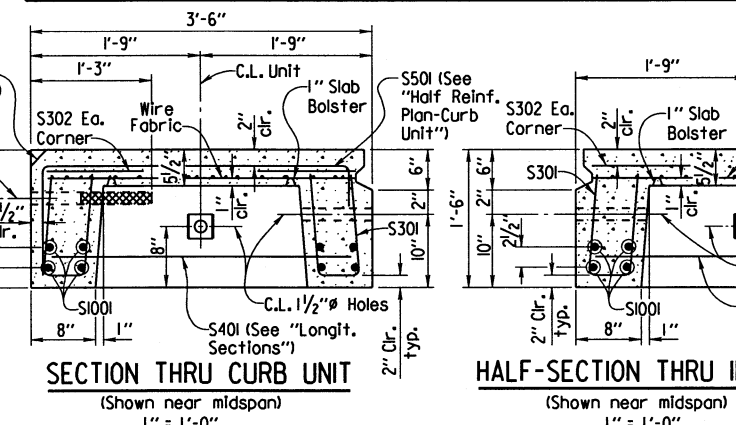
07439 - 3' PRECAST SPAN - 60489

BAR LIST FOR PRECAST BRIDGE COMPONENTS PER PRECAST UNIT

MARK	NUMBER REQUIRED		LENGTH	P.D.	BENDING DIAGRAMS (Dimensions are out to out of bars)
	CURB UNIT	INT. UNIT			
S301	130	130	3'-5 1/2"	1 1/2"	
S302	4	4	2'-9"	1 1/2"	
S401	10	8	3'-2"	Str.	
S501	26	-	4'-8"	2 1/2"	
S1001	8	8	30'-8"	Str.	
S701E	8	8	1'-11"	Str.	

PER PRECAST PARAPET RAIL

MARK	NUMBER REQUIRED		LENGTH	P.D.
	END SPAN	INT. SPAN		
P301	8	8	5'-4"	1 1/2"
P401	54	4'-8"	2"	
P402	36	3'-1 1/2"	2"	
P403	36	5'-8"	2"	
P501	18	7'-2"	2 1/2"	
P502	9	30'-8"	Str.	
PI001	2	30'-8"	Str.	



GENERAL NOTES
 Design Specifications: AASHTO LRFD Bridge Design Specifications, Seventh Edition (2014).
 Unless otherwise noted, Section and Subsection refer to the Standard Construction Specifications.
 Live Loading: HL-93
 Materials: 28 Day compressive strength of Concrete = 4,000 psi
 Yield strength of Grade 60 Steel = 60,000 psi
 Yield strength of Wire Fabric = 65,000 psi

All reinforcing steel shall be Grade 60, AASHTO M 31 or M 322, Type A with mill test reports. Wire fabric shall be AASHTO M 55 or M 221. Reinforcing steel and wire fabric shall be accurately located in the forms and securely held in place by steel wire supports.
 Concrete for precast units shall be Class (S) except that the coarse aggregate size shall meet AASHTO M 43, Size 67 (3/4" Max.).
 The deck shall be given a fine finish as specified for Class 5 Tined Bridge Roadway Surface Finish in Subsection 802.19.
 Standard washers shall be provided under head and nut of all bolts in connection with concrete. Bolts shall be A307. All bolts, washers and nuts shall be galvanized to meet AASHTO M 232, Class C or ASTM B695, Class 50.
 Screw Anchor and Bolt Assembly (SCAB) shall be 1/2" Richmond Screw Anchor or equal, and have a minimum ultimate strength of 65,000 psi in tension. Assembly shall be galvanized to meet AASHTO M 232, Class C or ASTM B695, Class 50. Plate Washers for SCAB shall be ASTM A709, Grade 36 and shall be galvanized to meet AASHTO M 111.
 Camber required for dead load deflection is 3/8". Deviation of more than 1/4" in dimension of grade or line will be cause for rejection.
 Ends of adjacent units shall be coated (1/8" +/-) with asphaltic paint. The coating shall adhere and set firm and its softening point shall not be less than 140°F.
 Concrete, reinforcing, wire mesh, bar supports, bolts, nuts, washers, threaded anchors, grout, roofing felt bearing pad, asphaltic paint and expansion joint fillers are considered subsidiary to the pay items for Precast Concrete Units.
 Roofing felt shall meet or exceed the requirements of ASTM D6380 Class 5 Type IV. The roofing felt shall be in one piece for the full length of the cap and three layers shall be used.
 Pay items shall be as follows:
 "3' Precast Concrete Curb Units"
 "3' Precast Concrete Interior Units"
 "3' Precast Parapet Rail Units"

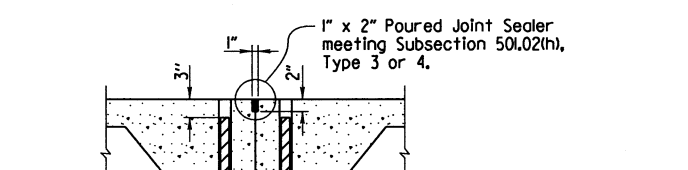
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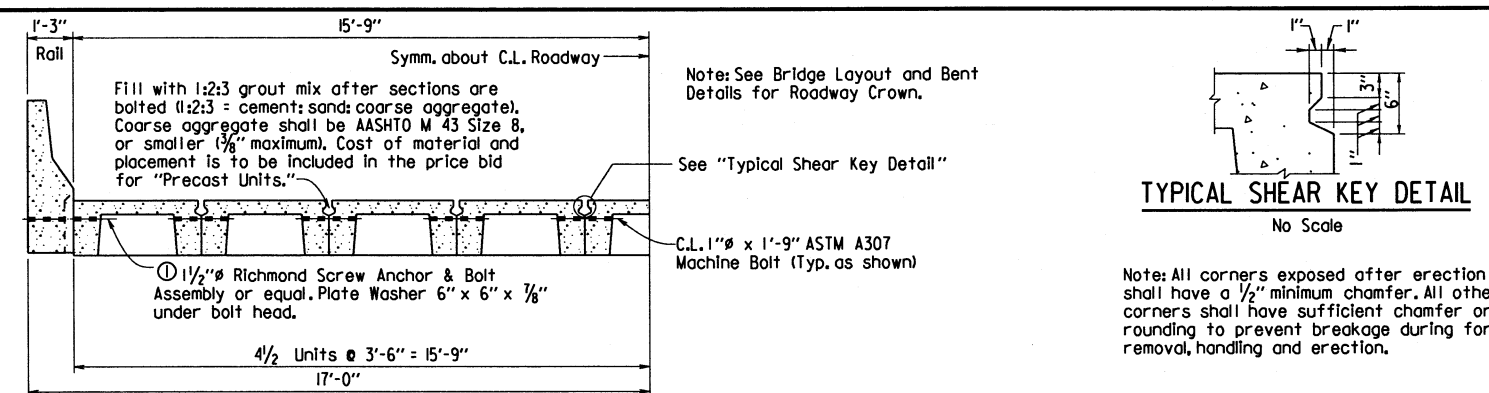
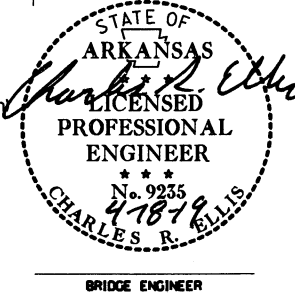


Note: After each unit is in its final position, dowels shall be grouted in place using a OPL approved non-shrink grout that completely fills the holes. See bent drawings for more information.

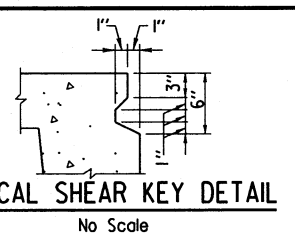
SECTION AT FIXED BENT
 No Scale

DETAILS FOR 31'-0" PRECAST CONCRETE SPANS 31'-6" CLEAR ROADWAY
 ROUTE SEC.
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

DRAWN BY: JWP DATE: 4/10/2019 FILENAME: D00842.sldgn
 CHECKED BY: MCB DATE: 4/10/19 SCALE: AS NOTED
 DESIGNED BY: STD. DATE: BRIDGE NO. 07439 DRAWING NO. 60489

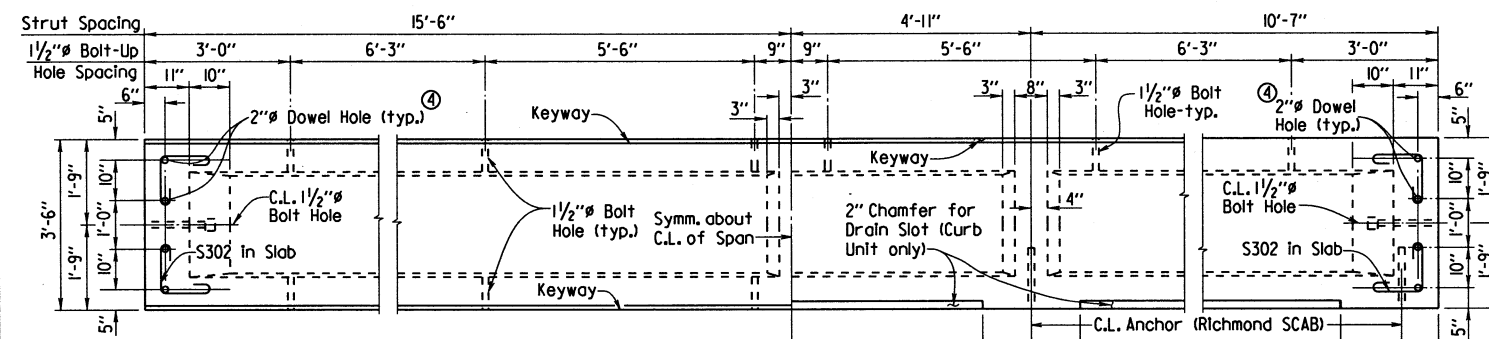


Fill with 1:2:3 grout mix after sections are bolted (1:2:3 = cement:sand:coarse aggregate). Coarse aggregate shall be AASHTO M 43 Size 8, or smaller (3/8" maximum). Cost of material and placement is to be included in the price bid for "Precast Units."
 Note: See Bridge Layout and Bent Details for Roadway Crown.
 See "Typical Shear Key Detail"
 C.L. 1 1/2" x 1'-9" ASTM A307 Machine Bolt (Typ. as shown)
 1 1/2" Richmond Screw Anchor & Bolt Assembly or equal. Plate Washer 6" x 6" x 7/8" under bolt head.
 4 1/2 Units @ 3'-6" = 15'-9"
 17'-0"

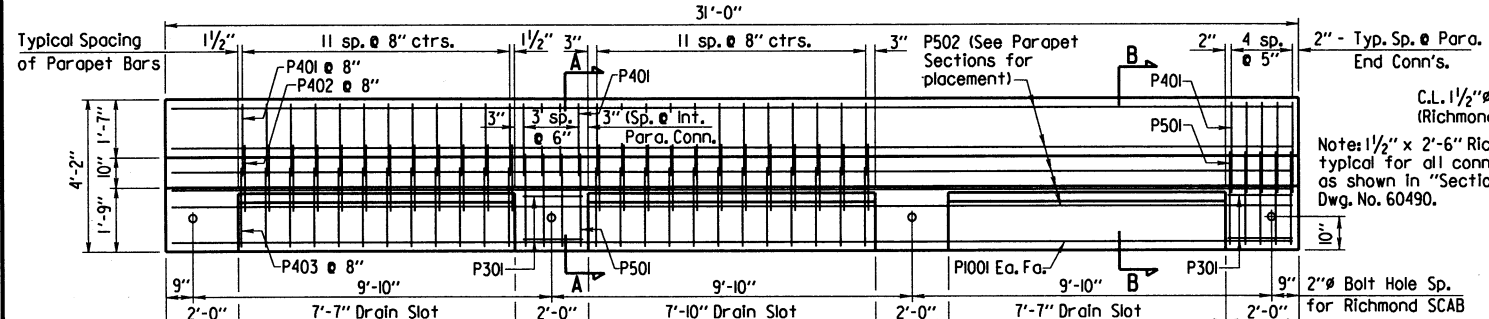
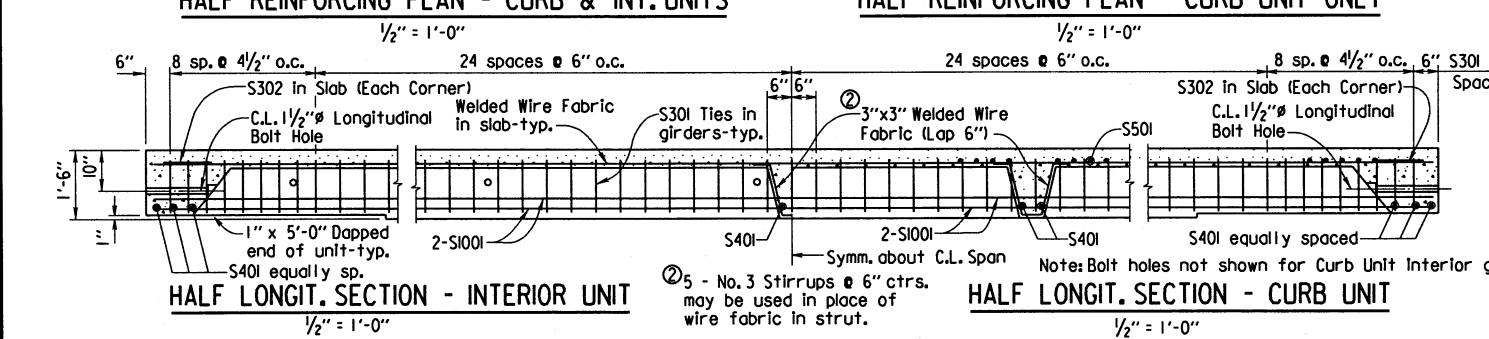
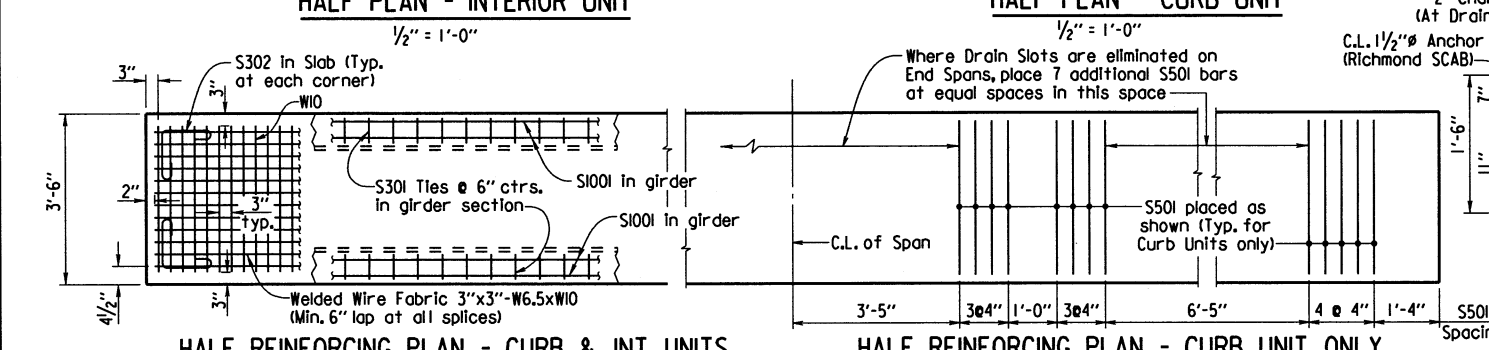


TYPICAL SHEAR KEY DETAIL
 No Scale

Note: All corners exposed after erection shall have a 1/2" minimum chamfer. All other corners shall have sufficient chamfer or rounding to prevent breakage during form removal, handling and erection.



Note: Use 1" x 3" ASTM A307 Machine Bolts with self-locking or double nuts longitudinally between all spans at interior bents. Bolts shall be installed to snug tight.
 Anchor Spacing: 4'-11", 9'-10", 9"
 Drain Slot Spacing (Int. Spans only): 3'-11", 2'-0", 7'-7", 2'-0"

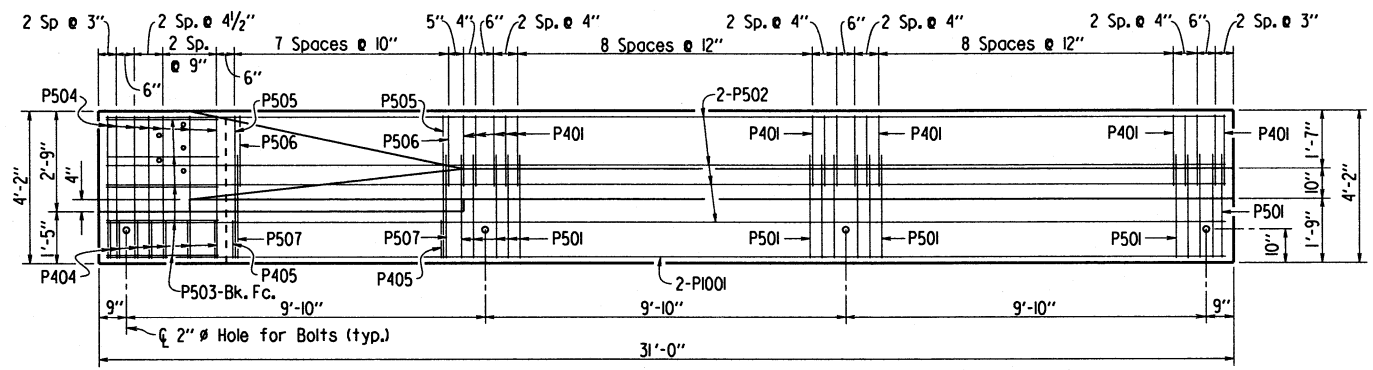


Note: For details and bar list for Precast Parapet Rail at End Span, see Dwg. No. 60490.
 2" Bolt Hole Sp. for Richmond SCAB

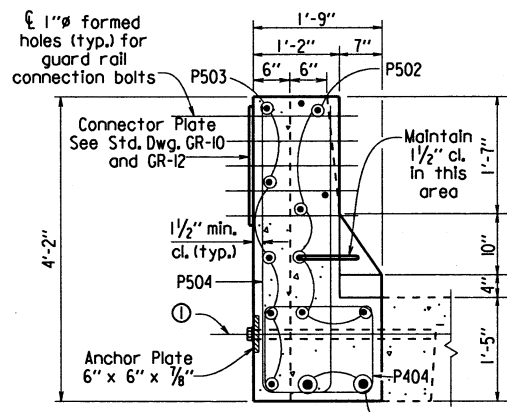
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				6	ARK.			
				JOB NO.	100842	24	30	

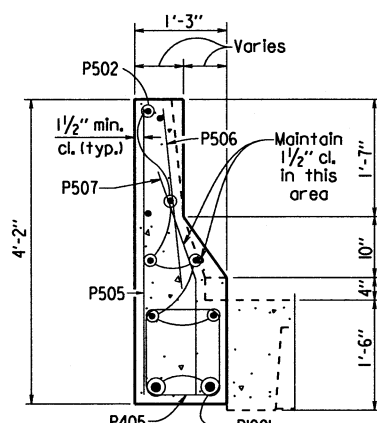
07439 - PRECAST RAIL DETAILS - 60490



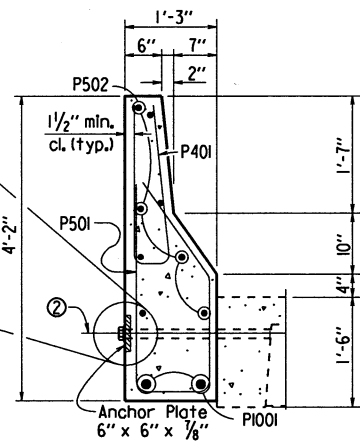
FRONT ELEVATION - PRECAST PARAPET RAIL FOR 31'-0" END SPAN
3/8" = 1'-0"



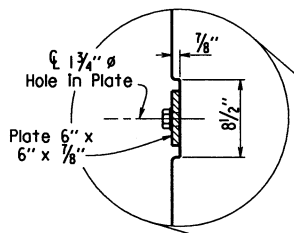
SECTION A-A
3/4" = 1'-0"



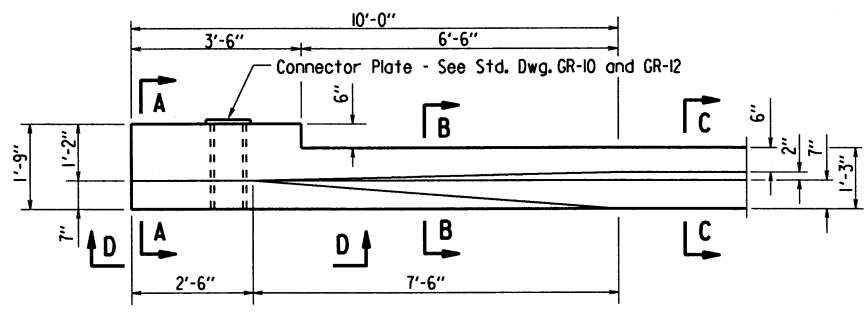
SECTION B-B
(Shown near midspan)
3/4" = 1'-0"



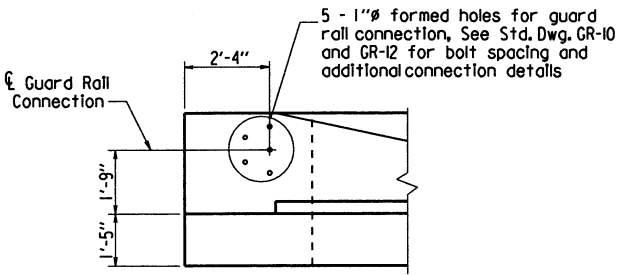
SECTION C-C
(Shown near midspan)
3/4" = 1'-0"



2" Hole for Bolt.
1 1/2" x 2'-6" Richmond SCAB or equal is typical for all connections except as shown in "SECTION A-A".



TYPICAL PLAN OF PRECAST PARAPET RAIL FOR END SPAN
1/2" = 1'-0"

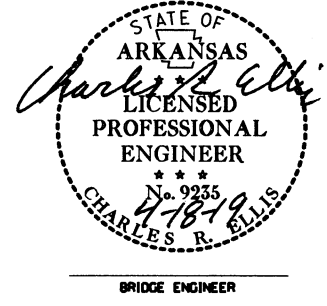


VIEW D-D
3/8" = 1'-0"

BAR LIST - PER END SPAN PARAPET RAIL

MARK	NUMBER REQUIRED	LENGTH	PIN DIA.	BENDING DIAGRAMS
P401	30	4'-8"	2"	
P404	7	5'-8"	2"	
P405	8	4'-8"	2"	
P501	30	7'-3"	2 1/2"	
P502	8	30'-8"	Str.	
P503	5	3'-3"	Str.	
P504	7	8'-6"	2 1/2"	
P505	8	3'-11"	Str.	
P506	8	2'-2"	Str.	
P507	8	2'-10"	2 1/2"	
P1001	2	30'-8"	Str.	

NOTE: This drawing is to be used with Dwg. No. 60489 which contains details and general notes pertaining to this drawing.



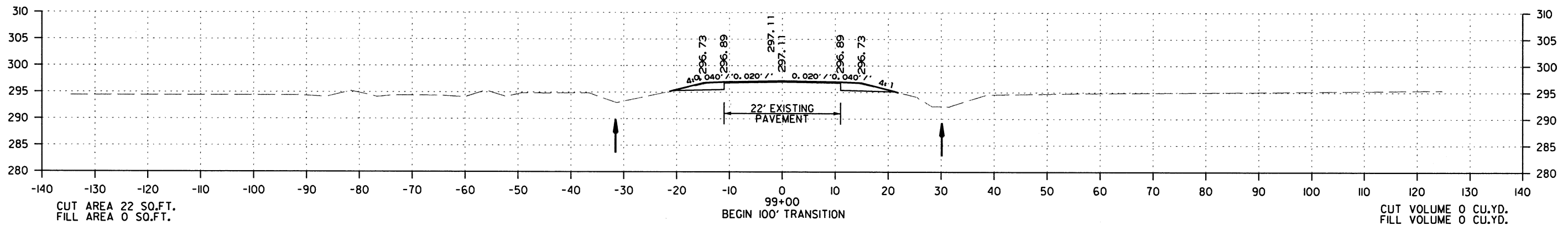
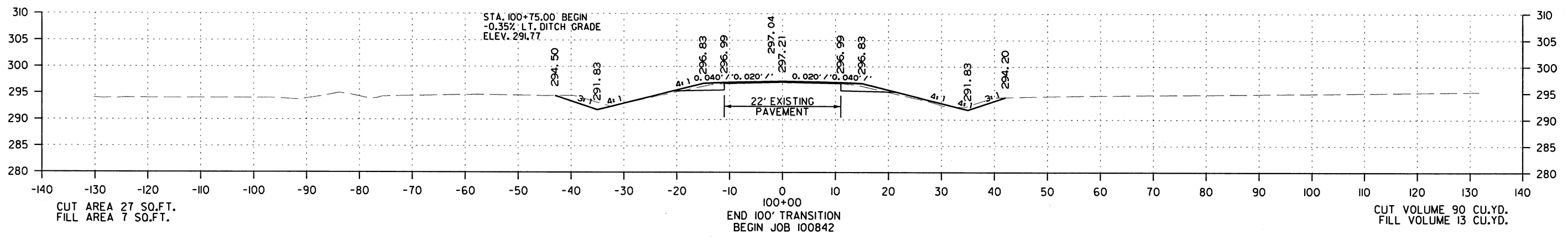
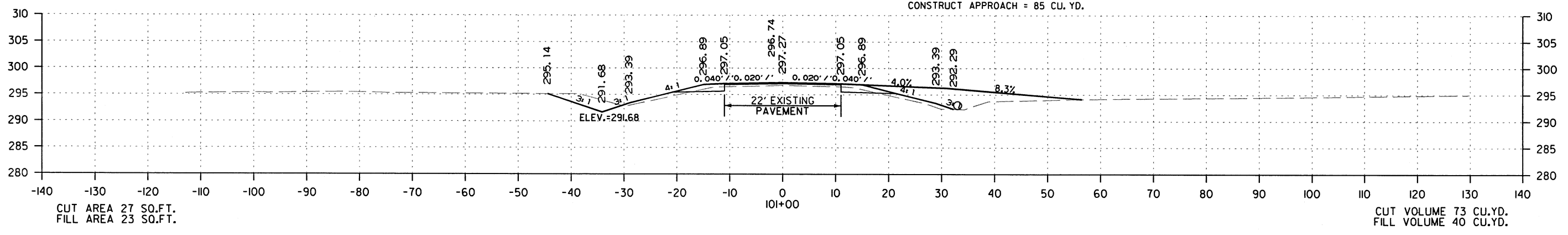
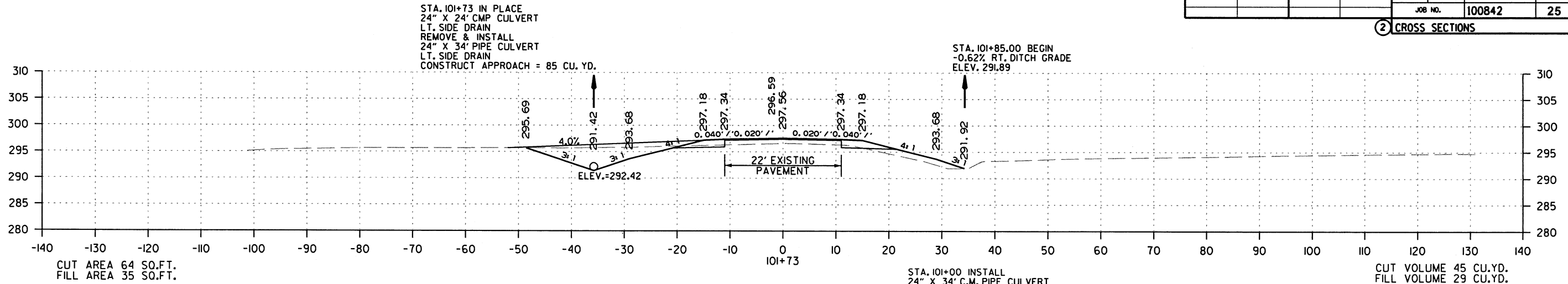
DETAILS FOR PRECAST PARAPET RAILS
31'-0" PRECAST END SPANS
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: JWP DATE: 4/10/2019 FILENAME: b00842.s2.dgn
CHECKED BY: PCB DATE: 4/18/19 SCALE: AS NOTED
DESIGNED BY: STD. DATE: -
BRIDGE NO. 07439 DRAWING NO. 60490

PRINT DATE: 4/18/2019

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. 100842							25	30

2 CROSS SECTIONS



CROSS SECTION STA. 99+00 TO STA. 101+73

5/7/2019
R100842.DGN