DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
07-25-2024		6	ARK.	101172	1	325
		CORNING BYPASS (FUTURE I-57) (S)				

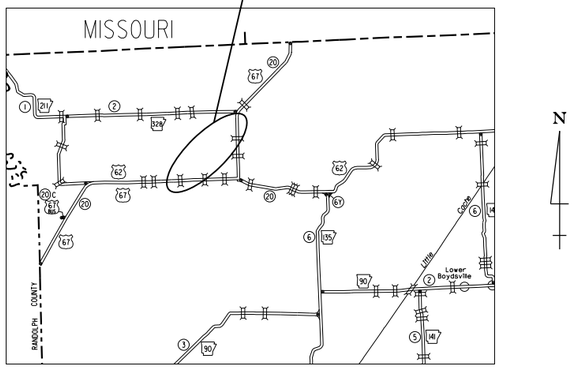
"A FULLY CONTROLLED ACCESS FACILITY"
ARKANSAS DEPARTMENT OF TRANSPORTATION
CONSTRUCTION PLANS FOR STATE HIGHWAY

CORNING BYPASS (FUTURE I-57) (S)

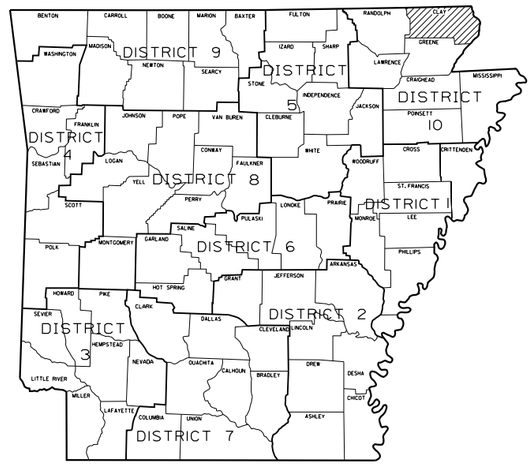
CLAY COUNTY
ROUTE 657 SECTION 3
JOB 101172

FED. AID PROJ. CPFCDS-NHPP-0011(66)

NOT TO SCALE



VICINITY MAP



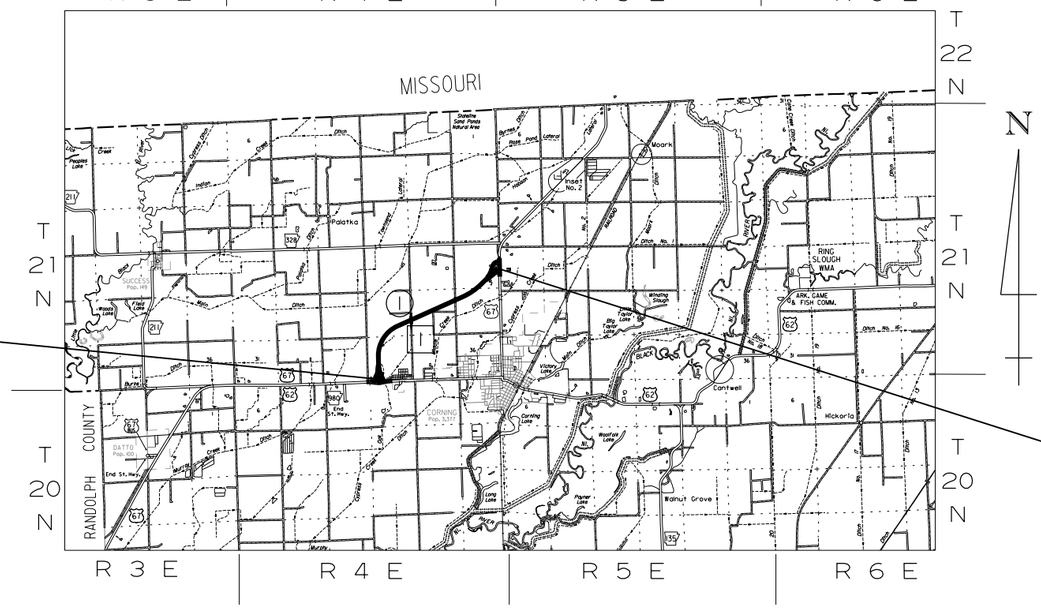
ARKANSAS HIGHWAY DISTRICT 10

BRIDGE CONSTRUCTION DATA

(1) STA. 210+08.80 BRIDGE END
BRIDGE NO. 07688 COUNTY ROAD 139 OVER I-57
411'-0" CONTINUOUS PLATE GIRDER UNIT (84'-106'-118'-103')
28'-0" CLEAR ROADWAY
413'-4¾" BRIDGE LENGTH
STA. 214+22.20 BRIDGE END

STRUCTURES OVER 20'-0" SPAN

[1] STA. 2116+40 CONSTRUCT
QUINT. 5' x 4' x 230' R.C. BOX CULVERT
20° LT. FWD. SKEW
WITH 3:1 WINGS LT. AND RT.
Q50 = 653 CFS DA = 1007.9 ACRES
SPAN = 28.67'


R 3 E
R 4 E
R 5 E
R 6 E
T 22 N
T 21 N
T 20 N
MISSOURI
RANDOLPH COUNTY
Poplar Bluff
Pocahontas
Paragould
Jonesboro
Corning
Piggott
Walnut Ridge
Harrisburg
Marmaduke
Greenway
Success
Datto
Pollard
Knobel
Rector
Clay
Boydsville
Oak Grove
Ring Slough WMA
Ark. Game & Fish Comm.
Black Oak
Cantwell
Hickoria
Walnut Grove
Corning
Pollard
Datto
Success

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	2	325
		INDEX OF SHEETS AND 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 - 15	TYPICAL SECTIONS OF IMPROVEMENT		
16 - 40	SPECIAL DETAILS		
41 - 62	TEMPORARY EROSION CONTROL DETAILS		
63 - 69	MAINTENANCE OF TRAFFIC DETAILS		
70 - 74	PERMANENT PAVEMENT MARKING DETAILS		
75	SOIL BORING LOG		
76 - 83	QUANTITIES		
84	SCHEDULE OF BRIDGE QUANTITIES	07688	64121
85 - 86	SUMMARY OF QUANTITIES AND REVISIONS		
87 - 103	SURVEY CONTROL DETAILS		
104 - 119	PLAN AND PROFILE SHEETS - I-57		
120 - 121	INTERCHANGE LAYOUTS		
122 - 129	PLAN AND PROFILE SHEETS - RAMPS		
130 - 134	PLAN AND PROFILE SHEETS - SIDE ROADS		
135 - 137	PLAN AND PROFILE SHEETS - TEMPORARY RAMPS AND TEMPORARY HWY 62		
138 - 140	SIGNING QUANTITIES		
141 - 157	SIGN PLACEMENT SHEETS		
158 - 160	SIGN DETAIL SHEETS		
161	ITS QUANTITIES		
162	ITS GENERAL NOTES		
163 - 180	ITS PLAN SHEETS		
181	LAYOUT OF BRIDGE COUNTY ROAD 139 OVER I-57 (SHEET 1 OF 3)	07688	64122
182	LAYOUT OF BRIDGE COUNTY ROAD 139 OVER I-57 (SHEET 2 OF 3)	07688	64123
183	LAYOUT OF BRIDGE COUNTY ROAD 139 OVER I-57 (SHEET 3 OF 3)	07688	64124
184	DETAILS OF END BENTS (SHEET 1 OF 4)	07688	64125
185	DETAILS OF END BENTS (SHEET 2 OF 4)	07688	64126
186	DETAILS OF END BENTS (SHEET 3 OF 4)	07688	64127
187	DETAILS OF END BENTS (SHEET 4 OF 4)	07688	64128
188	DETAILS OF INTERMEDIATE BENTS (SHEET 1 OF 3)	07688	64129
189	DETAILS OF INTERMEDIATE BENTS (SHEET 2 OF 3)	07688	64130
190	DETAILS OF INTERMEDIATE BENTS (SHEET 3 OF 3)	07688	64131
191	DETAILS OF ELASTOMERIC BEARINGS	07688	64132
192	DETAILS OF 411'-0" CONTINUCUS PLATE GIRDER UNIT (SHEET 1 OF 10)	07688	64133
193	DETAILS OF 411'-0" CONTINUCUS PLATE GIRDER UNIT (SHEET 2 OF 10)	07688	64134
194	DETAILS OF 411'-0" CONTINUCUS PLATE GIRDER UNIT (SHEET 3 OF 10)	07688	64135
195	DETAILS OF 411'-0" CONTINUCUS PLATE GIRDER UNIT (SHEET 4 OF 10)	07688	64136
196	DETAILS OF 411'-0" CONTINUCUS PLATE GIRDER UNIT (SHEET 5 OF 10)	07688	64137
197	DETAILS OF 411'-0" CONTINUCUS PLATE GIRDER UNIT (SHEET 6 OF 10)	07688	64138
198	DETAILS OF 411'-0" CONTINUCUS PLATE GIRDER UNIT (SHEET 7 OF 10)	07688	64139
199	DETAILS OF 411'-0" CONTINUCUS PLATE GIRDER UNIT (SHEET 8 OF 10)	07688	64140
200	DETAILS OF 411'-0" CONTINUCUS PLATE GIRDER UNIT (SHEET 9 OF 10)	07688	64141
201	DETAILS OF 411'-0" CONTINUCUS PLATE GIRDER UNIT (SHEET 10 OF 10)	07688	64142
202 - 325	CROSS SECTIONS		

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

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13436
SHAUN A. ROBERSON

DIGITALLY SIGNED 6/28/2024

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
55002	STANDARD DETAILS FOR CONCRETE RIPRAP	02-27-14
55005	STANDARD DETAILS FOR PERMANENT STEEL BRIDGE DECK FORMS FOR STEEL & CONCRETE GIRDER SPANS	03-24-16
55006	STANDARD GENERAL NOTES FOR STEEL BRIDGE STRUCTURES	09-02-15
55007	STANDARD DETAILS FOR STEEL BRIDGE STRUCTURES	02-11-16
55008	STANDARD DETAILS FOR POURED SILICONE JOINTS	02-11-16
55010	STANDARD DETAILS FOR TYPE D BRIDGE NAME PLATE	04-14-23
55021	STANDARD DETAILS FOR CONCRETE FILLED STEEL SHELL PILES AND PILE ENCASEMENTS	03-24-16
55030F	STANDARD DETAILS FOR TYPE F APPROACH GUTTERS	04-08-21
55039	STANDARD DETAILS FOR TYPE 'CT' APPROACH GUTTERS (BRIDGES WITH CURB)	11-07-19
55040F1	STANDARD DETAILS FOR TYPE F APPROACH SLAB	09-07-23
55070	STANDARD DETAILS FOR BRIDGE TRAFFIC RAIL TYPE SSTR36	09-27-22

ROADWAY STANDARD DRAWINGS

DRWG.NO.	TITLE	DATE
CPTJ-6A	TRANSVERSE & LONGITUDINAL JOINTS FOR CONCRETE PAVEMENT (NON-REINFORCED)	11-07-19
DR-1	DETAILS OF DRIVEWAYS & ISLANDS	05-19-22
DR-2	DETAILS OF DRIVEWAYS & STREET TURNOUTS	05-19-22
FES-1	FLARED END SECTION	10-18-96
FES-2	FLARED END SECTION	10-18-96
FPC-9	DETAILS OF DROP INLETS & JUNCTION BOXES	11-16-01
FPC-9D	DETAILS OF DROP INLETS	08-22-02
FPC-9N	DETAILS OF DROP INLETS AND SPILLWAY OUTLET	07-02-98
GR-6	GUARDRAIL DETAILS	05-19-22
GR-8	GUARDRAIL DETAILS	11-07-19
GR-9	GUARDRAIL DETAILS	11-07-19
GR-10	GUARDRAIL DETAILS	11-07-19
GR-11	GUARDRAIL DETAILS	11-07-19
GR-12	GUARDRAIL DETAILS	05-14-20
MB-1	MAILBOX DETAILS	11-18-04
PBC-1	PRECAST CONCRETE BOX CULVERTS	01-28-15
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
PCP-3	PLASTIC PIPE CULVERT (POLYPROPYLENE)	02-27-20
PM-1	PAVEMENT MARKING DETAILS	02-27-20
PM-2	PERMANENT PAVEMENT MARKING ON ACCESS CONTROLLED ROADWAYS	05-14-20
PU-1	DETAILS OF PIPE UNDERDRAIN	12-08-16
RCB-1	REINFORCED CONCRETE BOX CULVERT DETAILS	07-26-12
RCB-2	EXCAVATION PAY LIMITS, BACKFILL, & SOLID SODDING FOR BOX CULVERTS	11-20-03
SD-6	HEAVY DUTY PULL BOX	02-13-24
SE-1	TABLES AND METHOD OF SUPERELEVATION FOR ONE-WAY TRAFFIC	11-07-19
SHS-1	STANDARD HIGHWAY SIGNS AND SUPPORTS ASSEMBLIES	09-12-13
SHS-2	U-CHANNEL POST ASSEMBLIES	07-25-19
SHS-3	DETAIL OF BREAKAWAY SIGN SUPPORTS FOR GUIDE SIGNS	05-19-22
SHS-4	DETAIL OF BREAKAWAY SIGN SUPPORTS FOR STANDARD SIGNS	09-12-13
SHS-5	DETAILS OF GUIDE SIGN PANELS	09-12-13
SHS-7	DETAIL OF OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS	09-12-13
SHS-8	TYPICAL DELINEATOR PLACEMENT ALONG THE INTERSTATE SYSTEM	11-16-17
SI-1	DETAILS OF SPECIAL ITEMS	10-25-18
TC-1	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	11-07-19
TC-2	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	05-20-21
TC-3	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	08-12-21
TC-4	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-TEMPORARY PRECAST BARRIER	11-07-19
TC-5	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-TEMPORARY PRECAST BARRIER	11-07-19
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
TEC-4	TEMPORARY EROSION CONTROL DEVICES	07-26-12
TR-1A	DETAILS OF STANDARD TURNOUT FOR ENTRANCE & EXIT RAMPS (NON-REINFORCED)	08-22-02
WF-1	WIRE FENCE TYPE A AND B	08-22-02
WF-2	WIRE FENCE WATER GAPS	04-20-79

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
07-25-2024		6	ARK.	101172	3	325
08-22-2024		GOVERNING SPECIFICATIONS AND 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
FHWA-1273__ SUPPLEMENT - TRAINING PROGRAM - JOB 101172
100-3_____ CONTRACTOR'S LICENSE
100-4_____ DEPARTMENT NAME CHANGE
102-2_____ ISSUANCE OF PROPOSALS
102-3_____ PREQUALIFICATION OF BIDDERS
103-2_____ CONTACT INFORMATION FOR MOTORIST DAMAGE CLAIMS
105-4_____ MAINTENANCE DURING CONSTRUCTION
107-2_____ RESTRAINING CONDITIONS
108-1_____ LIQUIDATED DAMAGES
108-2_____ WORK ALLOWED PRIOR TO ISSUANCE OF WORK ORDER
110-1_____ PROTECTION OF WATER QUALITY AND WETLANDS
210-1_____ UNCLASSIFIED EXCAVATION
303-1_____ AGGREGATE BASE COURSE
306-1_____ QUALITY CONTROL AND ACCEPTANCE
307-2_____ CEMENT TREATED BASE COURSE
308-2_____ CEMENT STABILIZED CRUSHED STONE BASE COURSE
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
400-7_____ TRACKLESS TACK
404-3_____ DESIGN OF ASPHALT MIXTURES
409-2_____ ASPHALT LABORATORY FACILITY
410-1_____ CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
410-2_____ DEVICES FOR MEASURING DENSITY FOR ROLLING PATTERNS
410-4_____ EVALUATION OF ACHM SUBLOT REPLACEMENT MATERIAL
416-1_____ RECYCLED ASPHALT PAVEMENT
501-3_____ PORTLAND CEMENT CONCRETE PAVEMENT
600-2_____ INCIDENTAL CONSTRUCTION
603-1_____ LANE CLOSURE NOTIFICATION
604-1_____ RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
604-3_____ TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES (MASH)
606-1_____ PIPE CULVERTS FOR SIDE DRAINS
617-1_____ GUARDRAIL TERMINAL (TYPE 2)
617-2_____ GUARDRAIL DELINEATORS
619-1_____ FENCES
620-1_____ MULCH COVER
621-1_____ FILTER SOCKS
632-1_____ CONCRETE ISLAND
700-2_____ TRAFFIC CONTROL FACILITIES
723-1_____ GENERAL REQUIREMENTS FOR SIGNS
730-1_____ BREAKAWAY SIGN SUPPORT
800-1_____ STRUCTURES
802-3_____ CONCRETE FOR STRUCTURES
802-5_____ CONCRETE FOR STRUCTURES
804-2_____ REINFORCING STEEL FOR STRUCTURES
807-2_____ STEEL STRUCTURES
808-1_____ INSTALLATION OF ELASTOMERIC BEARINGS
808-2_____ ELASTOMERIC BEARINGS

GOVERNING SPECIFICATIONS (CONTINUED)

JOB 101172__ AIRPORT CLEARANCE REQUIREMENTS
JOB 101172__ ARCHITECTURAL FINISH
JOB 101172__ BIDDING REQUIREMENTS AND CONDITIONS
JOB 101172__ BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 101172__ BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 101172__ BUY AMERICA - CONSTRUCTION MATERIALS
JOB 101172__ CARGO PREFERENCE ACT REQUIREMENTS
JOB 101172__ CEMENT STABILIZED CRUSHED STONE BASE COURSE
JOB 101172__ COLD MILLING – COUNTY PROPERTY
JOB 101172__ COMPACTED EMBANKMENT ZONING
JOB 101172__ CONCRETE BRIDGE DECK CURING AND SURFACE TREATMENT RESTRICTIONS
JOB 101172__ CONCRETE FOR STRUCTURES
JOB 101172__ CONSTRUCTION PROJECT INFORMATION SIGN
JOB 101172__ DELAY IN RIGHT OF WAY OCCUPANCY
JOB 101172__ DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES
JOB 101172__ DIRECT TENSION INDICATORS FOR HIGH STRENGTH BOLT ASSEMBLIES
JOB 101172__ DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES
JOB 101172__ ENHANCED THERMOPLASTIC PAVEMENT MARKING
JOB 101172__ FIBER OPTIC CONCRETE PULL BOX
JOB 101172__ FLEXIBLE BEGINNING OF WORK - CALENDAR DAY CONTRACT
JOB 101172__ GEOTEXTILE FABRIC
JOB 101172__ GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 101172__ LIQUIDATED DAMAGES PROCEDURE FOR BID LETTINGS
JOB 101172__ LONGITUDINAL JOINT DENSITIES FOR ACHM SURFACE COURSES
JOB 101172__ LONGITUDINAL TINING
JOB 101172__ MAINTENANCE OF TRAFFIC
JOB 101172__ MANDATORY ELECTRONIC CONTRACT
JOB 101172__ MANDATORY ELECTRONIC DOCUMENT SUBMITTAL
JOB 101172__ MULTIDUCT CONDUIT
JOB 101172__ NESTING SITES OF MIGRATORY BIRDS
JOB 101172__ OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORT
JOB 101172__ PARTNERING REQUIREMENTS
JOB 101172__ PCC PAVEMENT SURFACE SMOOTHNESS (IRI)
JOB 101172__ PERCENT AIR VOIDS AND NDESIGN FOR ACHM SURFACE MIX DESIGNS
JOB 101172__ PERCENT WITHIN LIMITS/PAVEMENT SMOOTHNESS (IRI)
JOB 101172__ PLASTIC PIPE
JOB 101172__ PORTLAND CEMENT CONCRETE PAVEMENT
JOB 101172__ PRE-BID ON SITE INVESTIGATION OF SOIL CONDITIONS
JOB 101172__ PRICE ADJUSTMENT FOR ASPHALT BINDER
JOB 101172__ PRICE ADJUSTMENT FOR FUEL
JOB 101172__ PROHIBITION OF CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT
JOB 101172__ PROSECUTION AND PROGRESS WITH BID SCHEDULE
JOB 101172__ RESTRICTIONS ON THE USE CF RECYCLED ASPHALT PAVEMENT MATERIAL
JOB 101172__ RUMBLE STRIPS
JOB 101172__ SHORING FOR CULVERTS
JOB 101172__ SITE USE (A+C METHOD) - CALENDAR DAY CONTRACT
JOB 101172__ SOIL STABILIZATION
JOB 101172__ STORM WATER POLLUTION PREVENTION PLAN
JOB 101172__ SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 101172__ TEXTURED COATING FINISH
JOB 101172__ THERMOPLASTIC PAVEMENT MARKING (YIELD LINE)
JOB 101172__ TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES LEFT IN PLACE
JOB 101172__ UTILITY ADJUSTMENTS
JOB 101172__ VALUE ENGINEERING
JOB 101172__ WARM MIX ASPHALT
JOB 101172__ 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 ENSURE 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 CONTRCL 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. ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 - UNCLASSIFIED EXCAVATION.
10. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
11. THIS PROJECT IS COVERED UNDER A SECTION 404 STANDARD INDIVIDUAL PERMIT. REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS, EDITION OF 2014, FOR PERMIT REQUIREMENTS.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON

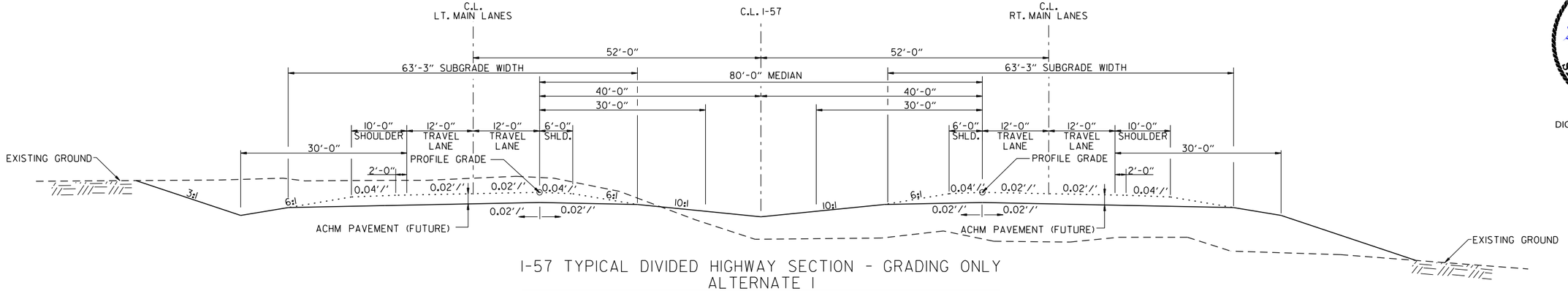
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	4	325
		TYPICAL SECTIONS OF IMPROVEMENT				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
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SHAUN A. ROBERSON

DIGITALLY SIGNED 6/28/2024



I-57 TYPICAL DIVIDED HIGHWAY SECTION - GRADING ONLY ALTERNATE 1

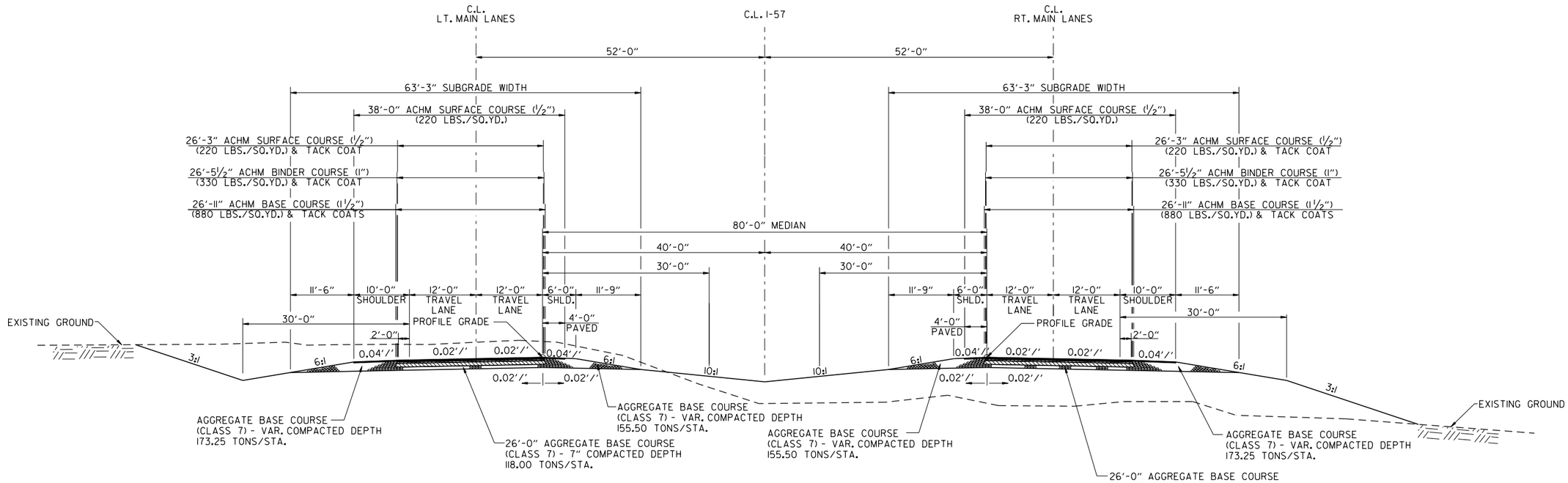
STA. 2023+50.00 TO STA. 2033+00.00
STA. 2225+00.00 TO STA. 2236+00.00

NOTES:

REFER TO CROSS SECTIONS FOR DEVIATION FROM 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 THE TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

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



I-57 TYPICAL DIVIDED HIGHWAY SECTION ALTERNATE 1

STA. 2033+00.00 TO STA. 2035+01.81
STA. 2047+98.67 TO STA. 2049+75.18
STA. 2099+66.85 TO STA. 2179+88.15
STA. 2222+91.87 TO STA. 2225+00.00

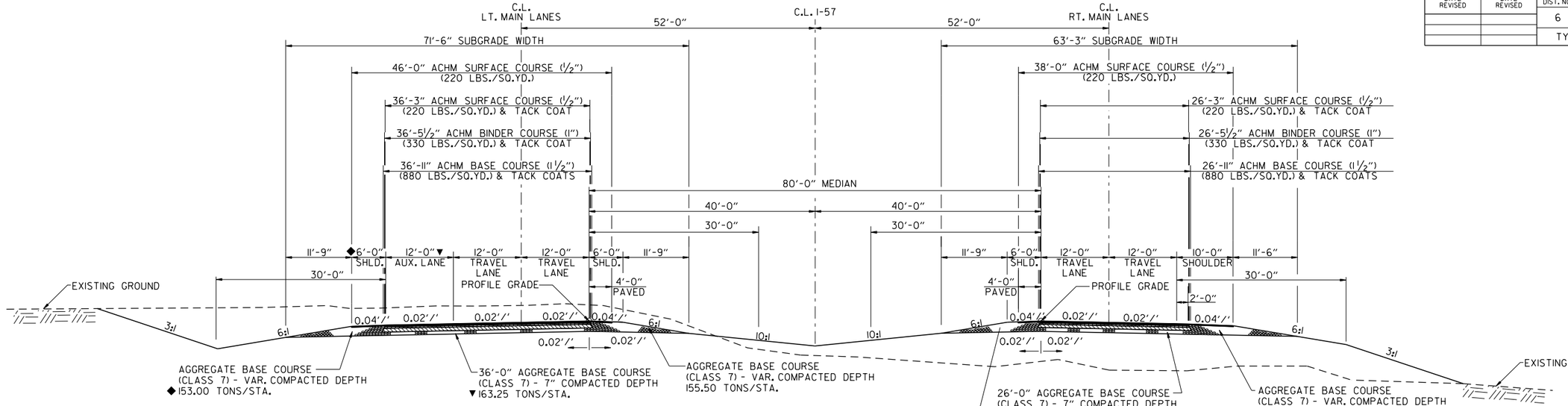
TYPICAL SECTIONS OF IMPROVEMENT

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	5	325
		TYPICAL SECTIONS OF IMPROVEMENT				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13436
SHAUN A. ROBERSON

DIGITALLY SIGNED 6/28/2024



◆10'-0" STA. 2035+01.81 TO 2036+98.67
191.25 TONS/STA.

▼VAR. FROM STA. 2035+01.81 TO STA. 2036+98.67
4'-1" AVG. WIDTH
127.50 TONS/STA.

▼9'-4" AT STA. 2212+13.15 TO
12'-0" AT STA. 2212+80.51
10'-8" AVG. WIDTH
157.25 TONS/STA.

I-57 TYPICAL DIVIDED HIGHWAY SECTION W/ AUXILIARY LANE LT. ALTERNATE 1

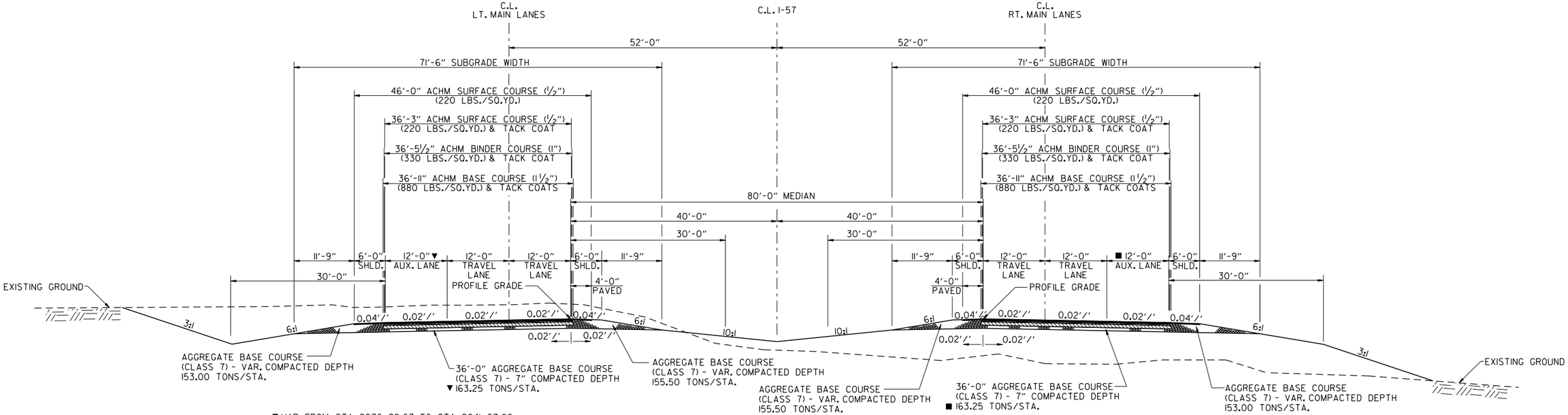
STA. 2035+01.81 TO STA. 2036+98.67
STA. 2212+13.15 TO STA. 2216+26.02

NOTES:

REFER TO CROSS SECTIONS FOR DEVIATION FROM 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 THE TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

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



▼VAR. FROM STA. 2036+98.67 TO STA. 2041+67.66
14'-6" AVG. WIDTH
174.75 TONS/STA.

▼VAR. FROM STA. 2219+18.74 TO STA. 2220+80.51
14'-4" AVG. WIDTH
174.00 TONS/STA.

I-57 TYPICAL DIVIDED HIGHWAY SECTION W/ AUXILIARY LANE LT. & RT. ALTERNATE 1

STA. 2036+98.67 TO STA. 2041+67.66
STA. 2216+26.02 TO STA. 2220+80.51

■VAR. FROM STA. 2036+98.67 TO STA. 2038+60.45
14'-4" AVG. WIDTH
174.00 TONS/STA.
■VAR. FROM STA. 2216+26.02 TO STA. 2220+80.51
14'-6" AVG. WIDTH
174.75 TONS/STA.

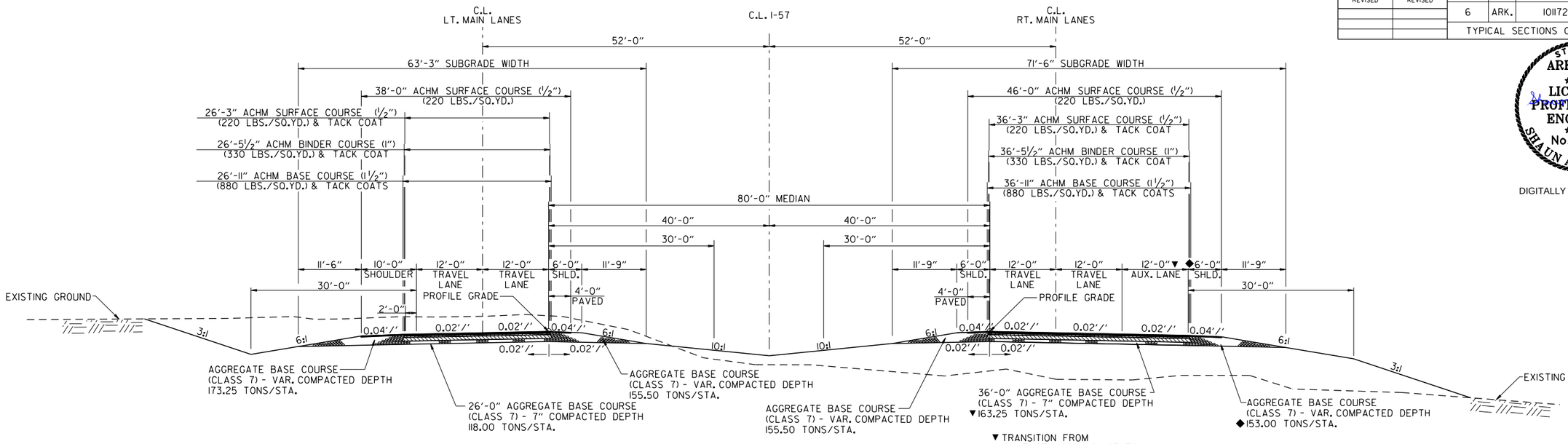
TYPICAL SECTIONS OF IMPROVEMENT

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	6	325
		TYPICAL SECTIONS OF IMPROVEMENT				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13436
SHAUN A. ROBERSON

DIGITALLY SIGNED 6/28/2024



I-57 TYPICAL DIVIDED HIGHWAY SECTION W/ AUXILIARY LANE RT. ALTERNATE 1

STA. 2041+67.66 TO STA. 2047+98.67
STA. 2220+80.51 TO STA. 2222+91.87

▼ TRANSITION FROM 12' AT STA. 2044+98.67 TO 0' AT STA. 2047+98.67 6' AVG. WIDTH 136.00 TONS/STA.

▼ VAR. FROM STA. 2220+80.51 TO STA. 2222+91.87 4'-9" AVG. WIDTH 130.50 TONS/STA.

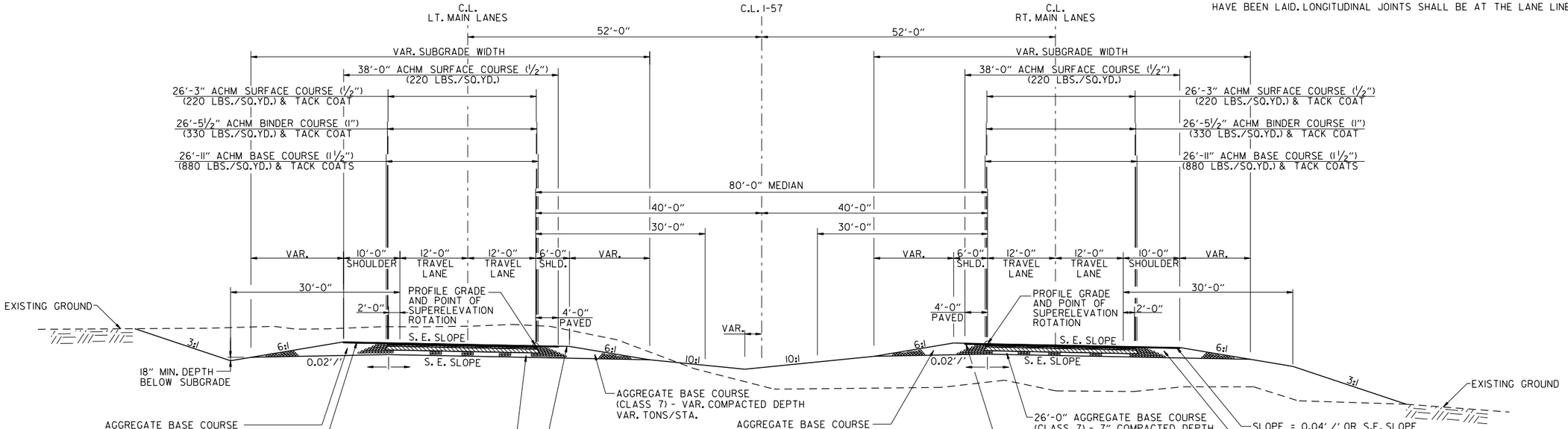
◆ 10'-0" STA. 2220+80.51 TO STA. 2222+91.87 191.25 TONS/STA.

NOTES:

REFER TO CROSS SECTIONS FOR DEVIATION FROM 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 THE TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

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



I-57 TYPICAL DIVIDED HIGHWAY SECTION W/ SUPERELEVATION RT. ALTERNATE 1

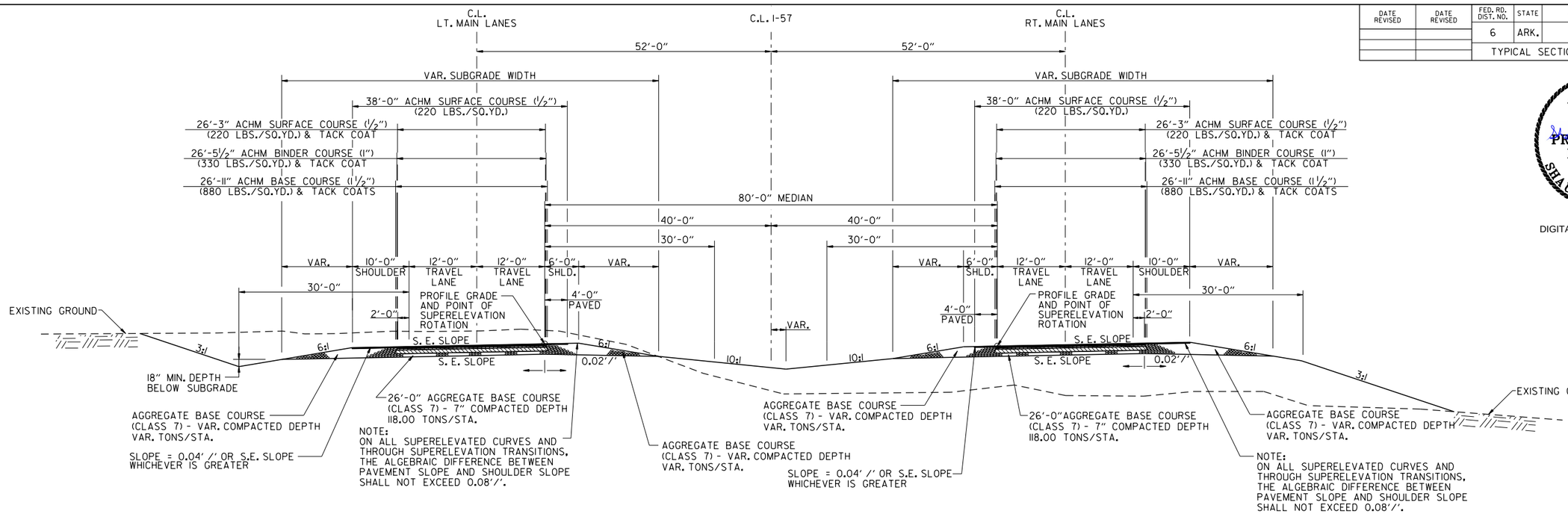
STA. 2049+75.18 TO STA. 2099+66.85

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	7	325
		TYPICAL SECTIONS OF IMPROVEMENT				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13436
SHAUN A. ROBERSON

DIGITALLY SIGNED 6/28/2024



I-57 TYPICAL DIVIDED HIGHWAY SECTION W/ SUPERELEVATION LT. ALTERNATE I

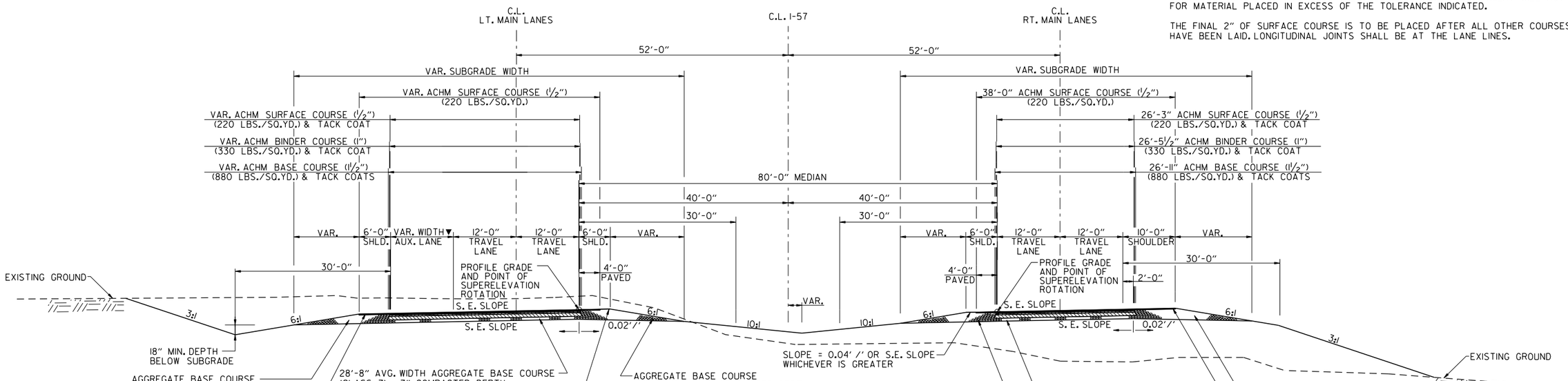
STA. 2179+88.15 TO STA. 2209+80.51

NOTES:

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

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I-57 TYPICAL DIVIDED HIGHWAY SUPERELEVATED SECTION W/ AUXILIARY LANE LT. ALTERNATE I

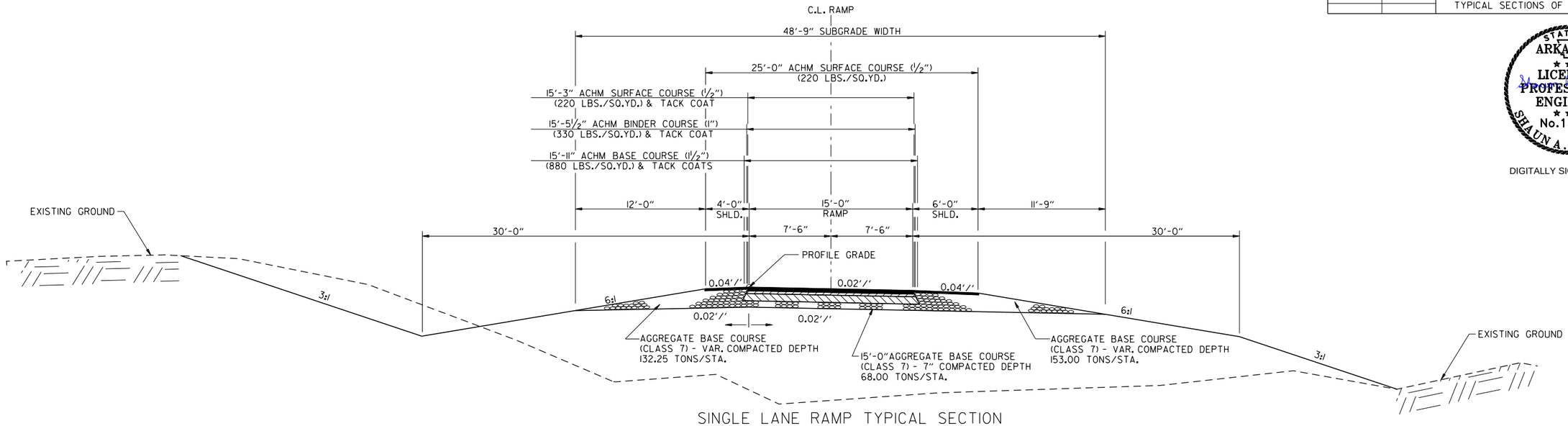
STA. 2209+80.51 TO STA. 2212+13.15

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	8	325
		TYPICAL SECTIONS OF IMPROVEMENT				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13436
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DIGITALLY SIGNED 6/28/2024



SINGLE LANE RAMP TYPICAL SECTION ALTERNATE I

(SHOWN IN THE DIRECTION OF TRAFFIC)

HWY. 62 RAMP 2 STA. 2027+97.04 TO STA. 2028+27.11
HWY. 62 RAMP 3 STA. 2027+74.93 TO STA. 2028+04.73
HWY. 62 RAMP 3 STA. 2036+67.23 TO STA. 2037+12.79

HWY. 67 RAMP 1 STA. 2220+80.88 TO STA. 2227+10.00
HWY. 67 RAMP 1 STA. 2234+62.36 TO STA. 2235+80.43
HWY. 67 RAMP 4 STA. 2230+57.62 TO STA. 2232+87.55
HWY. 67 RAMP 4 STA. 2244+34.63 TO STA. 2245+13.99

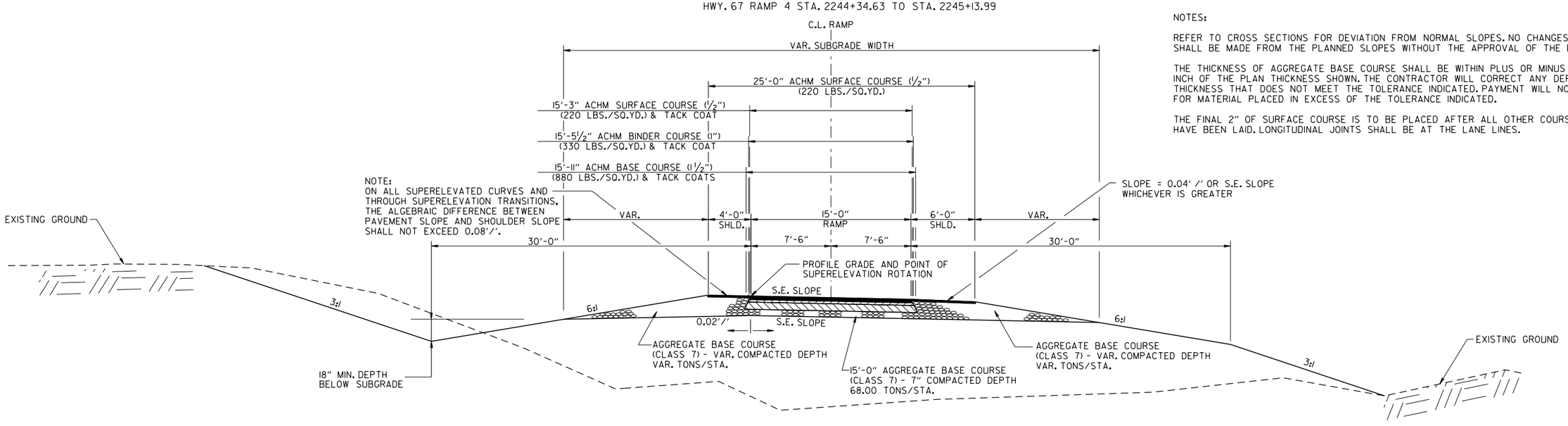
HWY. 62 TEMP. RAMP 2 STA. 270+18.00 TO STA. 271+85.02
HWY. 62 TEMP. RAMP 3 STA. 300+12.00 TO STA. 300+66.36

NOTES:

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



SINGLE LANE RAMP TYPICAL SUPERELEVATED SECTION ALTERNATE I

(SHOWN IN THE DIRECTION OF TRAFFIC)

HWY. 62 RAMP 2 STA. 2028+27.11 TO STA. 2036+99.11
HWY. 62 RAMP 3 STA. 2028+04.73 TO STA. 2036+67.23

HWY. 67 RAMP 1 STA. 2227+10.00 TO STA. 2234+62.36
HWY. 67 RAMP 4 STA. 2220+80.07 TO STA. 2230+57.62
HWY. 67 RAMP 4 STA. 2232+87.55 TO STA. 2244+34.63

HWY. 62 TEMP. RAMP 2 STA. 271+85.02 TO STA. 276+09.66
HWY. 62 TEMP. RAMP 3 STA. 300+66.36 TO STA. 306+11.71

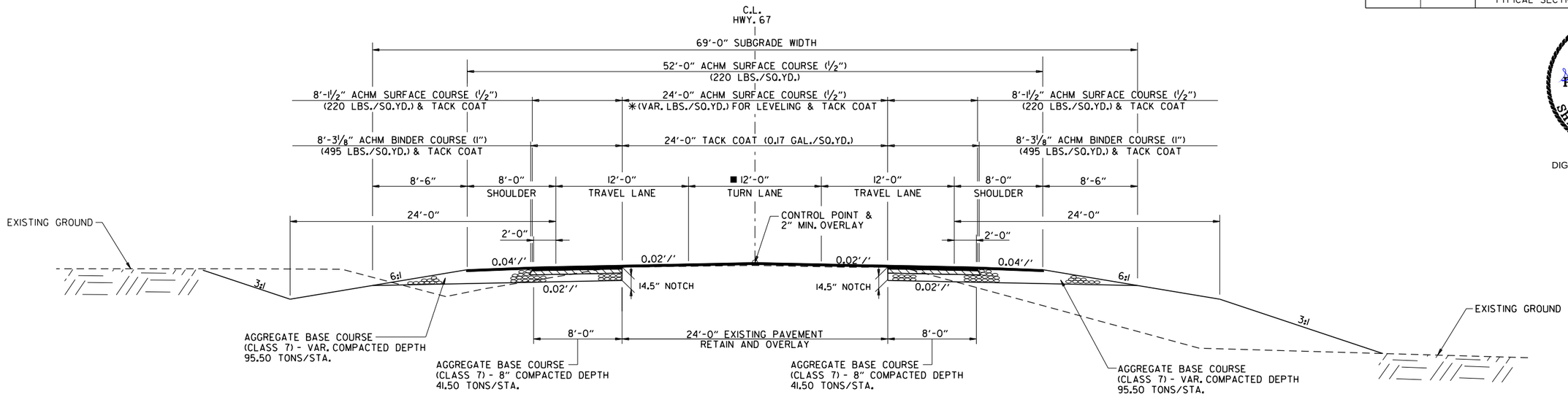
TYPICAL SECTIONS OF IMPROVEMENT

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REVISED DATE:

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		6	ARK.	101172	9	325
		TYPICAL SECTIONS OF IMPROVEMENT				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON

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HWY. 67 TYPICAL NOTCH AND WIDEN SECTION

HWY. 67 STA. 51+40.00 TO STA. 73+60.00

■ TRANSITION FROM 0' AT STA. 51+40.00 TO 12' AT STA. 54+70.00

■ TRANSITION FROM 12' AT STA. 70+30.00 TO 0' AT STA. 73+60.00

✳ TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

NOTES:

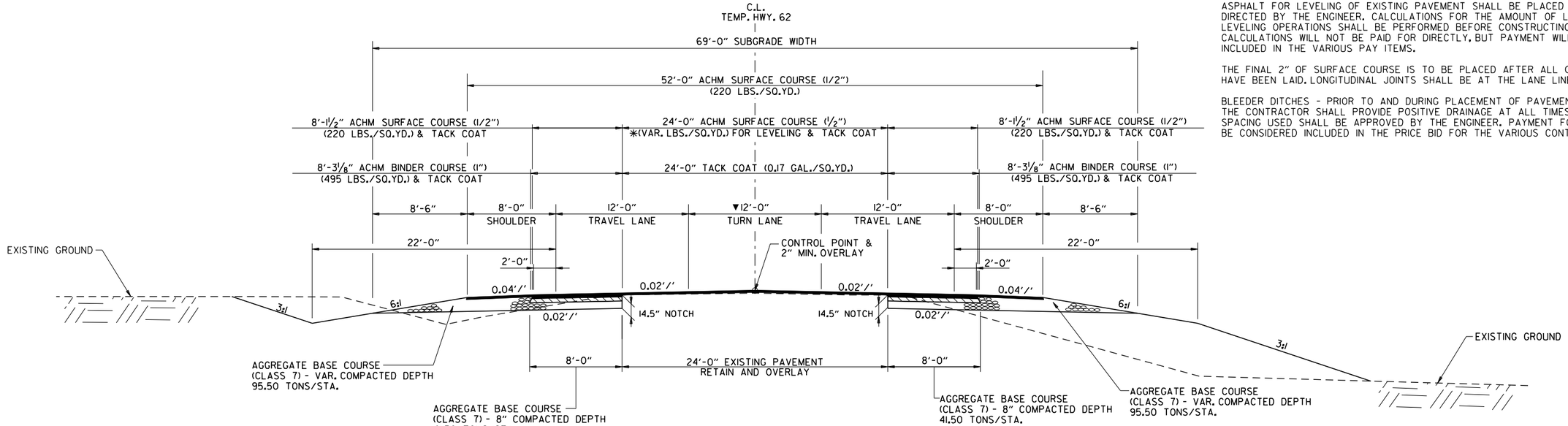
REFER TO CROSS SECTIONS FOR DEVIATION FROM NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.

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 THE 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 THE LANE LINES.

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



TEMPORARY HWY. 62 NOTCH AND WIDEN SECTION

STA. 246+15.00 TO 254+00.00

▼ TRANSITION FROM 0' AT STA. 246+15.00 TO 12' AT STA. 248+85.00

▼ TRANSITION FROM 12' AT STA. 252+00.00 TO 0' AT STA. 254+70.00

✳ TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

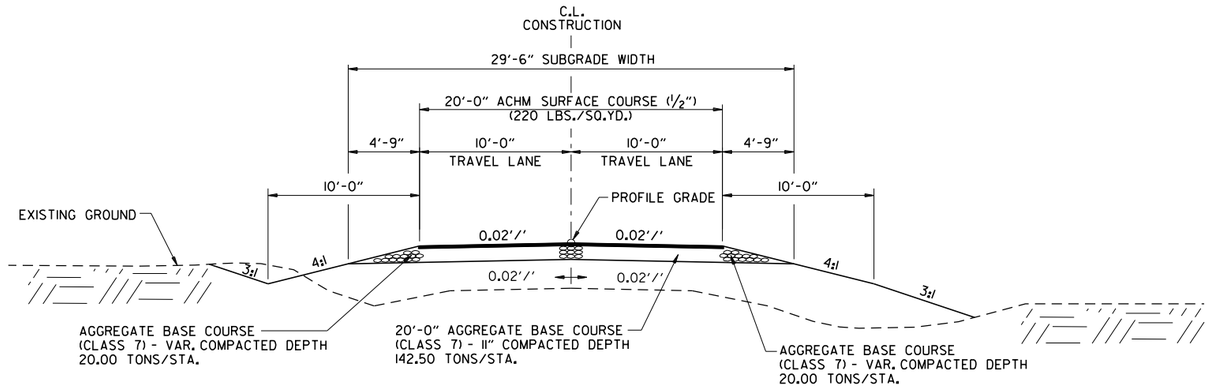
TYPICAL SECTIONS OF IMPROVEMENT

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		6	ARK.	101172	10	325
		TYPICAL SECTIONS OF IMPROVEMENT				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13436
SHAUN A. ROBERSON

DIGITALLY SIGNED 6/28/2024



SIDE ROAD TYPICAL SECTION

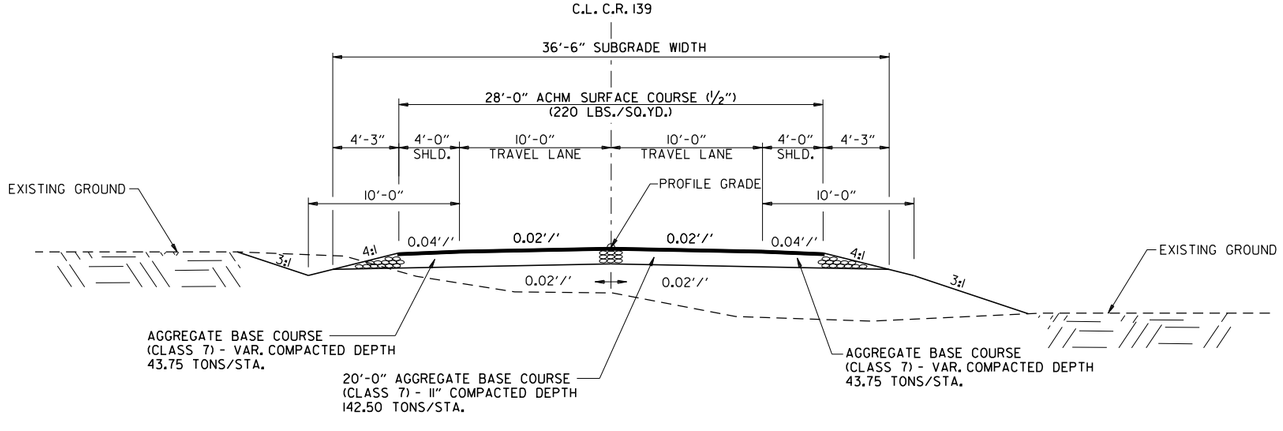
C.R. 143 SOUTH STA. 206+70.00 TO STA. 208+00.00
C.R. 143 NORTH STA. 209+00.00 TO STA. 210+30.00

NOTES:

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C.R. 139 TYPICAL SECTION

STA. 203+00.00 TO STA. 209+73.80
STA. 214+57.20 TO STA. 221+00.00

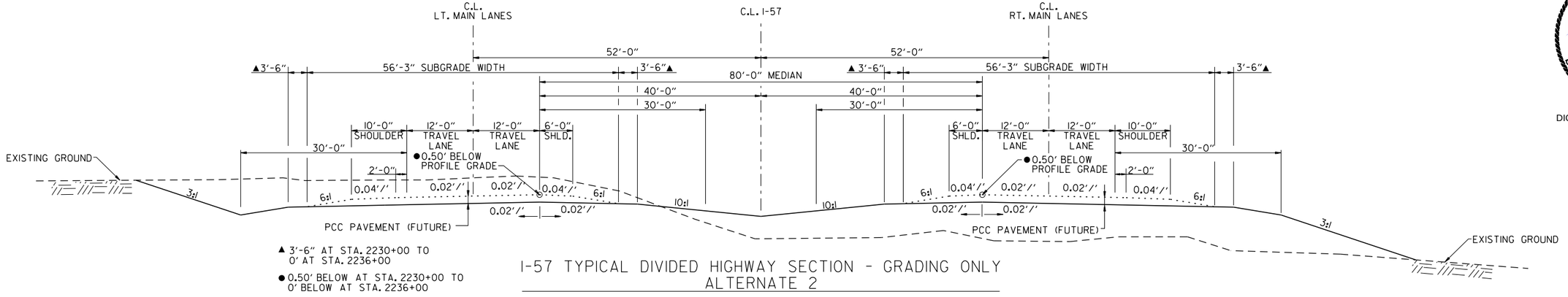
SEE BRIDGE PLANS FOR:
STA. 209+73.80 TO STA. 214+57.20

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REVISED DATE:

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		6	ARK.	101172	11	325
		TYPICAL SECTIONS OF IMPROVEMENT				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13436
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DIGITALLY SIGNED 6/28/2024



▲ 3'-6" AT STA. 2230+00 TO 0' AT STA. 2236+00

● 0.50' BELOW AT STA. 2230+00 TO 0' BELOW AT STA. 2236+00

I-57 TYPICAL DIVIDED HIGHWAY SECTION - GRADING ONLY ALTERNATE 2

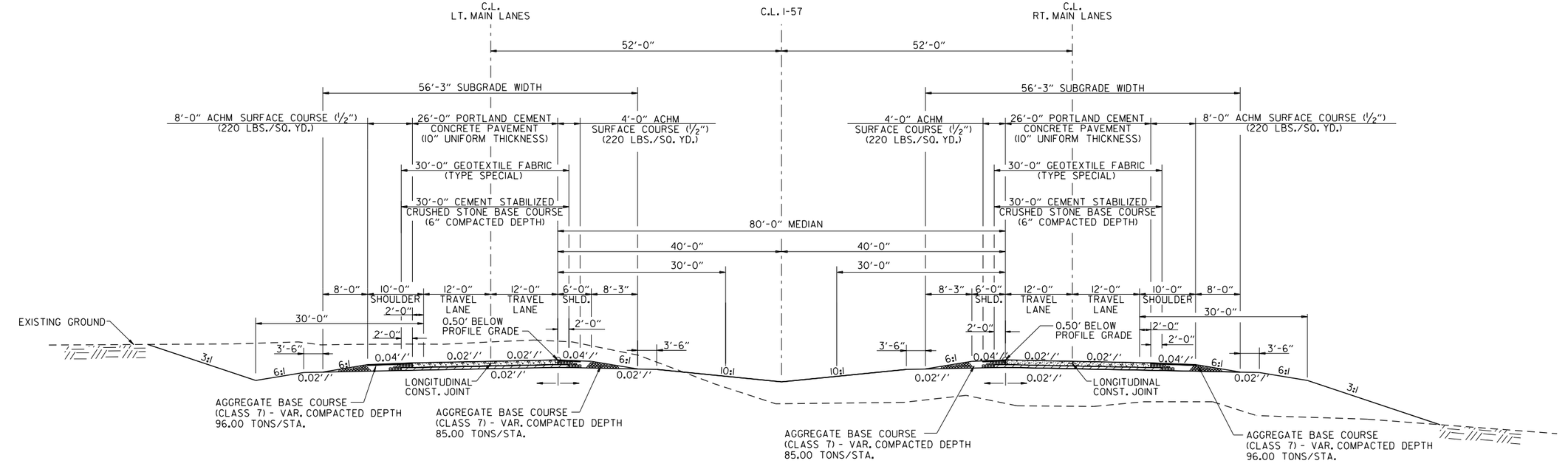
STA. 2023+50.00 TO STA. 2033+00.00
STA. 2225+00.00 TO STA. 2236+00.00

NOTE:

PROFILE GRADE SHOWN ON PLAN AND PROFILE SHEETS IS 22" ABOVE SUBGRADE. USE 1:200 TRANSITION IN SUBGRADE FROM STA. 2230+00 TO STA. 2236+00 TO MEET PAVEMENT GRADES AT THE FUTURE BRIDGE APPROACH SLABS. PAYMENT FOR TRANSITION IN SUBGRADE TO BE INCLUDED IN THE VARIOUS CONTRACT ITEMS.

NOTES:

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NOTE:

PROFILE GRADE SHOWN ON PLAN AND PROFILE SHEETS IS 22" ABOVE SUBGRADE.

I-57 TYPICAL DIVIDED HIGHWAY SECTION ALTERNATE 2

STA. 2033+00.00 TO STA. 2035+01.81
STA. 2047+98.67 TO STA. 2049+75.18
STA. 2099+66.85 TO STA. 2179+88.15
STA. 2222+91.87 TO STA. 2225+00.00

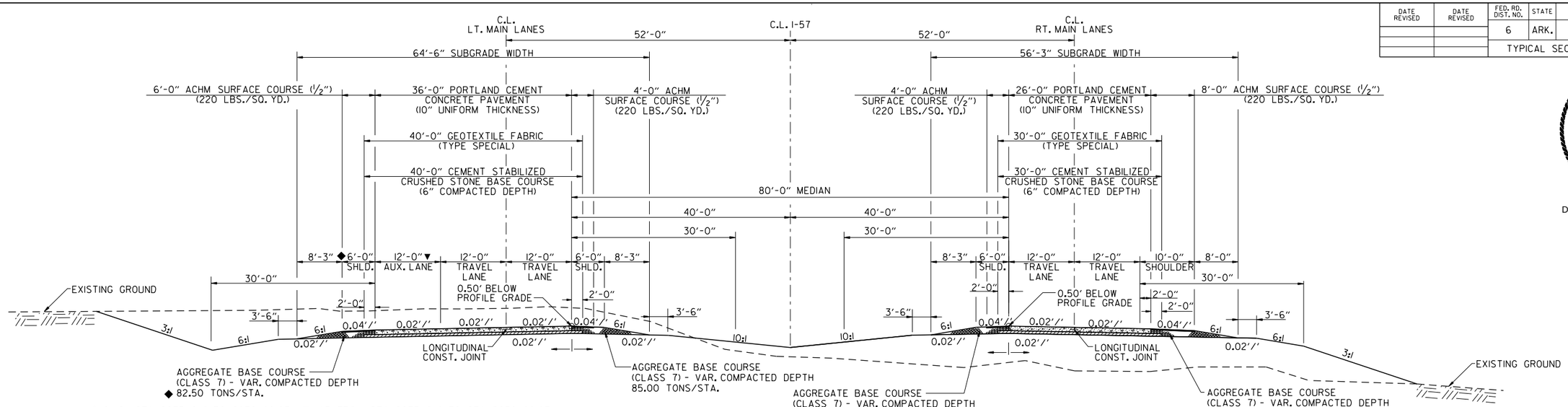
TYPICAL SECTIONS OF IMPROVEMENT

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		6	ARK.	101172	12	325
		TYPICAL SECTIONS OF IMPROVEMENT				

STATE OF ARKANSAS
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◆10'-0" STA. 2035+01.81 TO 2036+98.67
109.00 TONS/STA.

▼VAR. FROM STA. 2035+01.81 TO STA. 2036+98.67
4'-1" AVG. WIDTH

▼9'-4" AT STA. 2212+13.15 TO
12'-0" AT STA. 2212+80.51
10'-8" AVG. WIDTH

NOTE:

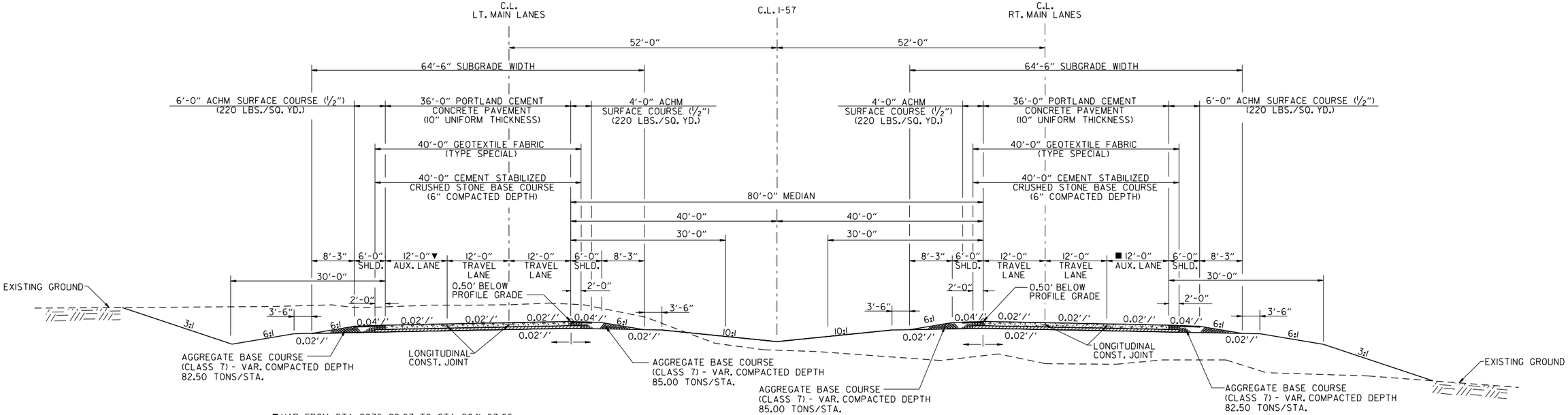
PROFILE GRADE SHOWN ON PLAN AND PROFILE SHEETS IS 22" ABOVE SUBGRADE.

I-57 TYPICAL DIVIDED HIGHWAY SECTION W/ AUXILIARY LANE LT. ALTERNATE 2

STA. 2035+01.81 TO STA. 2036+98.67
STA. 2212+13.15 TO STA. 2216+26.02

NOTES:

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▼VAR. FROM STA. 2036+98.67 TO STA. 2041+67.66
14'-6" AVG. WIDTH

▼VAR. FROM STA. 2219+18.74 TO STA. 2220+80.51
14'-4" AVG. WIDTH

I-57 TYPICAL DIVIDED HIGHWAY SECTION W/ AUXILIARY LANE LT. & RT. ALTERNATE 2

STA. 2036+98.67 TO STA. 2041+67.66
STA. 2216+26.02 TO STA. 2220+80.51

■VAR. FROM STA. 2036+98.67 TO STA. 2038+60.45
14'-4" AVG. WIDTH

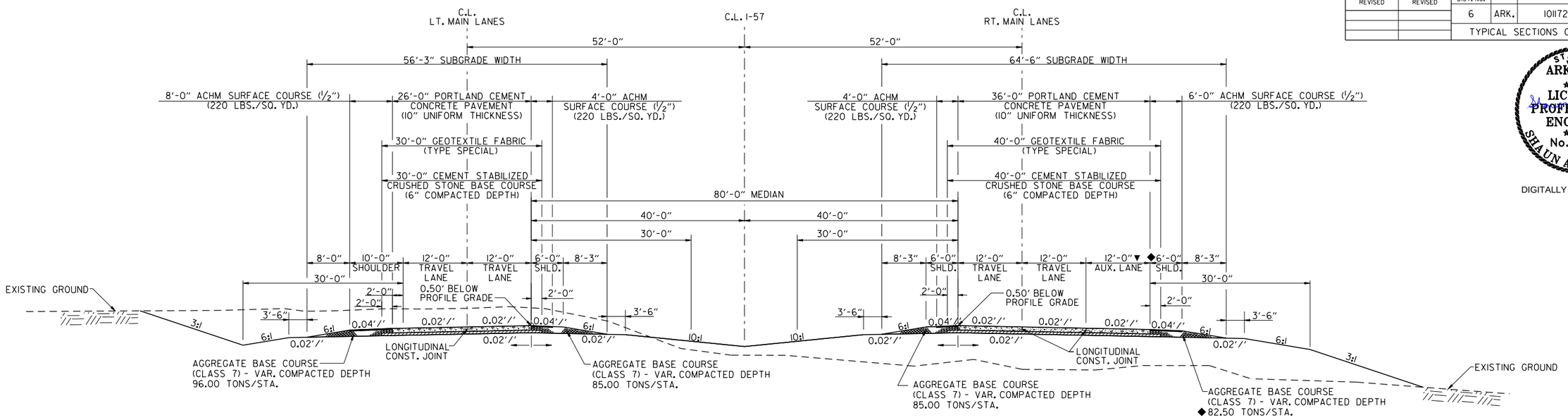
■VAR. FROM STA. 2216+26.02 TO STA. 2220+80.51
14'-6" AVG. WIDTH

TYPICAL SECTIONS OF IMPROVEMENT

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		6	ARK.	101172	13	325
		TYPICAL SECTIONS OF IMPROVEMENT				

STATE OF ARKANSAS
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SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024



I-57 TYPICAL DIVIDED HIGHWAY SECTION W/ AUXILIARY LANE RT. ALTERNATE 2

STA. 2041+67.66 TO STA. 2047+98.67
STA. 2220+80.51 TO STA. 2222+91.87

NOTE:

PROFILE GRADE SHOWN ON PLAN AND PROFILE SHEETS IS 22" ABOVE SUBGRADE.

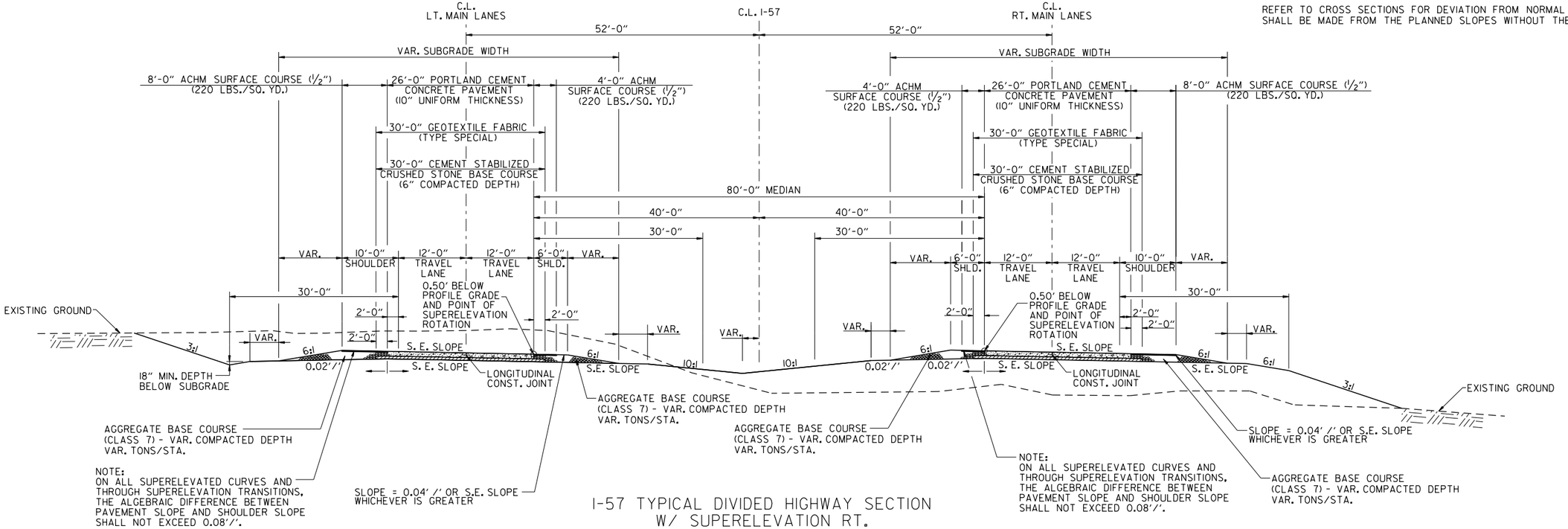
▼ TRANSITION FROM 12' AT STA. 2044+98.67 TO 0' AT STA. 2047+98.67 6' AVG. WIDTH

▼ VAR. FROM STA. 2220+80.51 TO STA. 2222+91.87 4'-9" AVG. WIDTH

◆ 10'-0" STA. 2220+80.51 TO STA. 2222+91.87 109.00 TONS/STA.

NOTES:

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



I-57 TYPICAL DIVIDED HIGHWAY SECTION W/ SUPERELEVATION RT. ALTERNATE 2

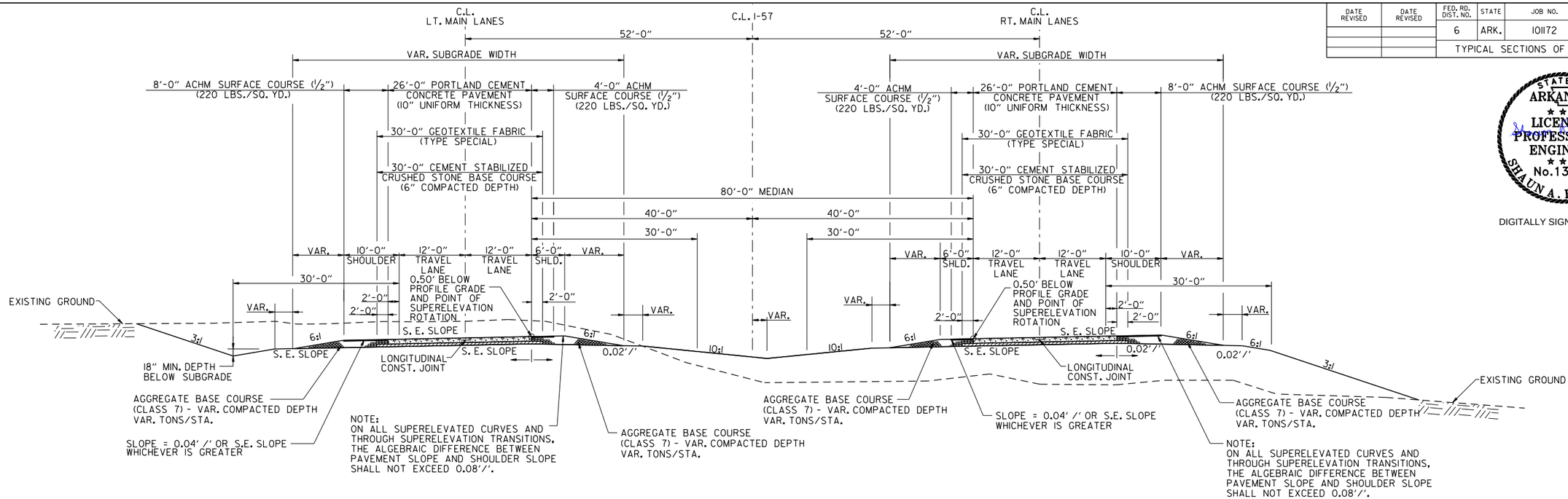
STA. 2049+75.18 TO STA. 2099+66.85

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	14	325
		TYPICAL SECTIONS OF IMPROVEMENT				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13436
SHAUN A. ROBERSON

DIGITALLY SIGNED 6/28/2024



NOTE:

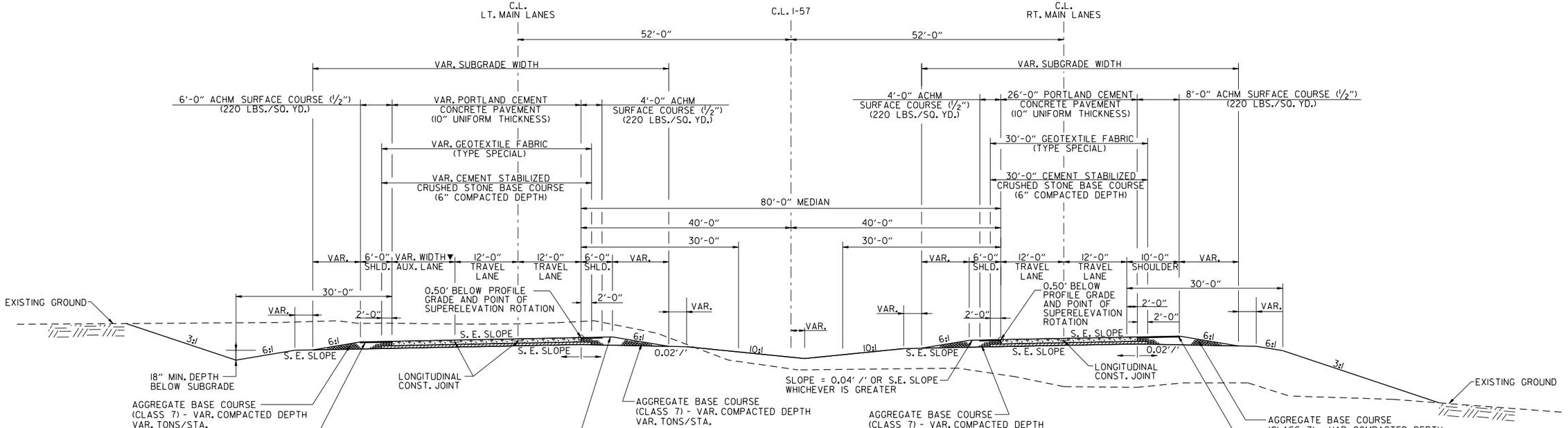
PROFILE GRADE SHOWN ON PLAN AND PROFILE SHEETS IS 22" ABOVE SUBGRADE.

I-57 TYPICAL DIVIDED HIGHWAY SECTION W/ SUPERELEVATION LT. ALTERNATE 2

STA. 2179+88.15 TO STA. 2209+80.51

NOTES:

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



▼ TRANSITION FROM 0' AT STA. 2209+80.51 TO 9'-4" AT STA. 2212+13.15 4'-8" AVG. WIDTH

I-57 TYPICAL DIVIDED HIGHWAY SUPERELEVATED SECTION W/ AUXILIARY LANE LT. ALTERNATE 2

STA. 2209+80.51 TO STA. 2212+13.15

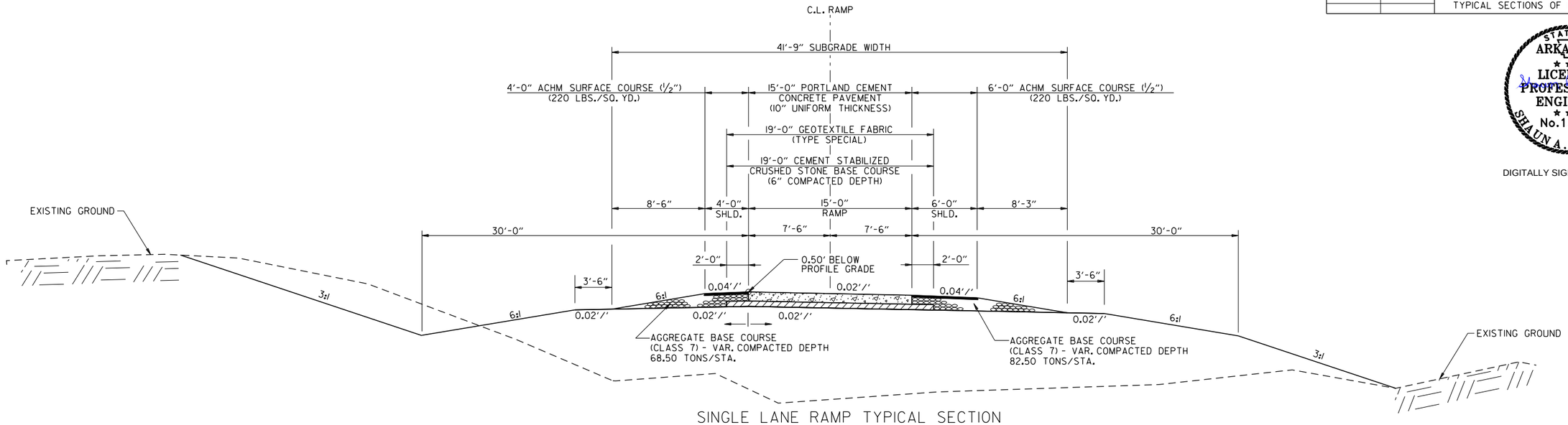
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	15	325
		TYPICAL SECTIONS OF IMPROVEMENT				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13436
SHAUN A. ROBERSON

DIGITALLY SIGNED 6/28/2024



SINGLE LANE RAMP TYPICAL SECTION ALTERNATE 2

(SHOWN IN THE DIRECTION OF TRAFFIC)

HWY. 62 RAMP 2 STA. 2027+97.04 TO STA. 2028+27.11
HWY. 62 RAMP 3 STA. 2027+74.93 TO STA. 2028+04.73
HWY. 62 RAMP 3 STA. 2036+67.23 TO STA. 2037+12.79

HWY. 67 RAMP 1 STA. 2220+80.88 TO STA. 2227+10.00
HWY. 67 RAMP 1 STA. 2234+62.36 TO STA. 2235+80.43
HWY. 67 RAMP 4 STA. 2230+57.62 TO STA. 2232+87.55
HWY. 67 RAMP 4 STA. 2244+34.63 TO STA. 2245+13.99

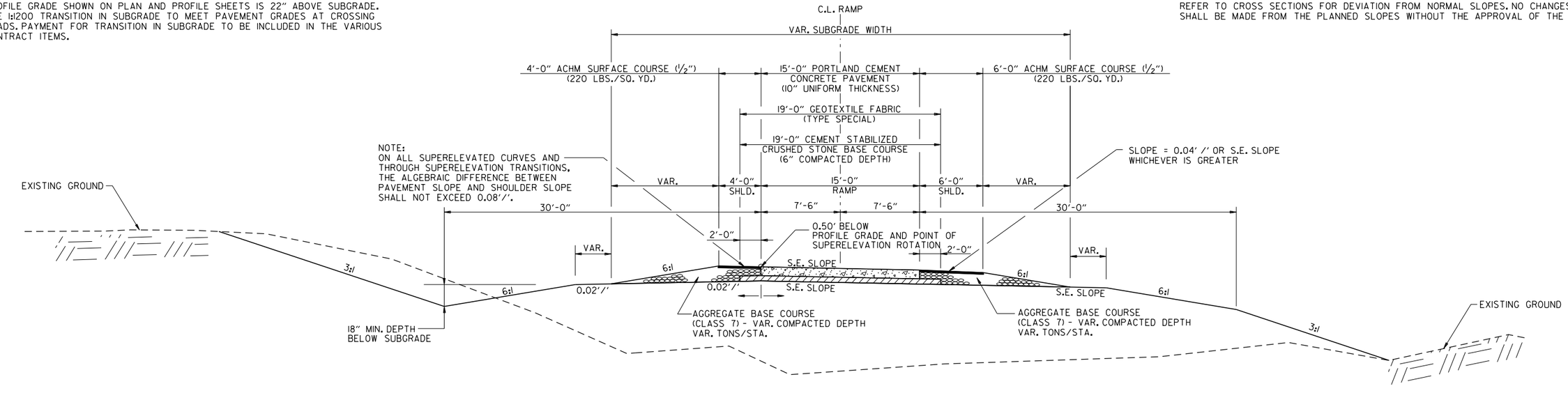
HWY. 62 TEMP. RAMP 2 STA. 270+18.00 TO STA. 271+85.02
HWY. 62 TEMP. RAMP 3 STA. 300+12.00 TO STA. 300+66.36

NOTE:

PROFILE GRADE SHOWN ON PLAN AND PROFILE SHEETS IS 22" ABOVE SUBGRADE. USE 1:200 TRANSITION IN SUBGRADE TO MEET PAVEMENT GRADES AT CROSSING ROADS. PAYMENT FOR TRANSITION IN SUBGRADE TO BE INCLUDED IN THE VARIOUS CONTRACT ITEMS.

NOTES:

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



SINGLE LANE RAMP TYPICAL SUPERELEVATED SECTION ALTERNATE 2

(SHOWN IN THE DIRECTION OF TRAFFIC)

HWY. 62 RAMP 2 STA. 2028+27.11 TO STA. 2036+99.11
HWY. 62 RAMP 3 STA. 2028+04.73 TO STA. 2036+67.23

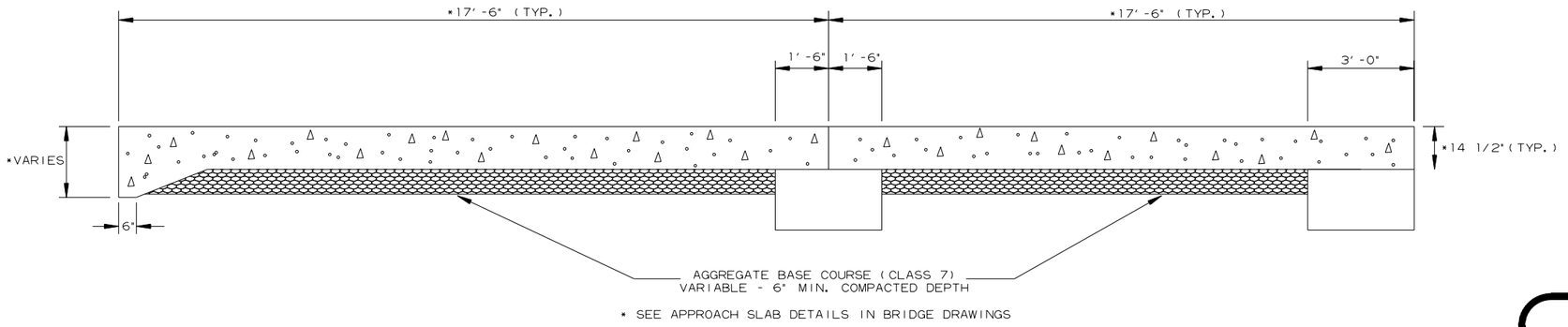
HWY. 67 RAMP 1 STA. 2227+10.00 TO STA. 2234+62.36
HWY. 67 RAMP 4 STA. 2220+80.07 TO STA. 2230+57.62
HWY. 67 RAMP 4 STA. 2232+87.55 TO STA. 2244+34.63

HWY. 62 TEMP. RAMP 2 STA. 271+85.02 TO STA. 276+09.66
HWY. 62 TEMP. RAMP 3 STA. 300+66.36 TO STA. 306+11.71

TYPICAL SECTIONS OF IMPROVEMENT

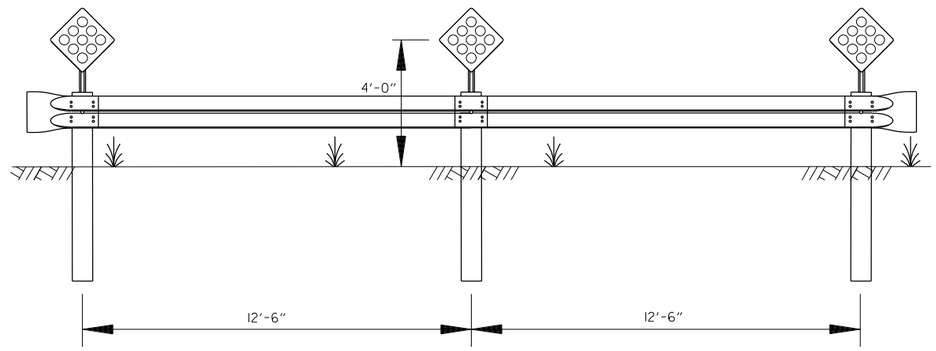
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DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	16	325
		SPECIAL DETAILS				



* SEE APPROACH SLAB DETAILS IN BRIDGE DRAWINGS

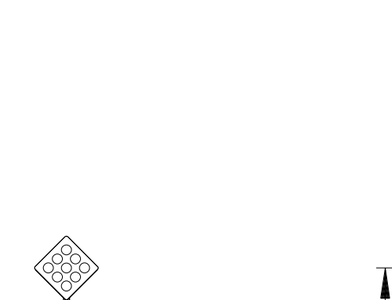
SECTION OF APPROACH SLAB



ROAD CLOSED DETAIL

TO BE USED WHERE EXISTING
ROADS WILL BE PERMANENTLY CLOSED.
SEE PLAN SHEETS FOR LOCATIONS
SEE STD. DWG. GR-5 FOR
MORE 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".

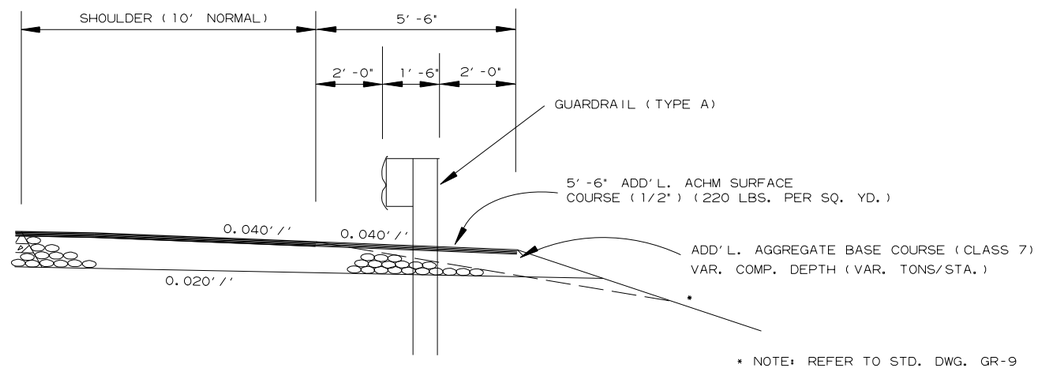


DETAIL FOR SOLID SODDING
AROUND DROP INLETS



6.0" Radius, 1.3" Border, Black on Orange;
"Job XXXXXX" C 2K; "Start Date Mo Year" C 2K;
"Est Completion Mo Year" C 2K; "IDRIVE " Arial;
" ARKANSAS.COM " Arial;

CONSTRUCTION PROJECT INFORMATION SIGN



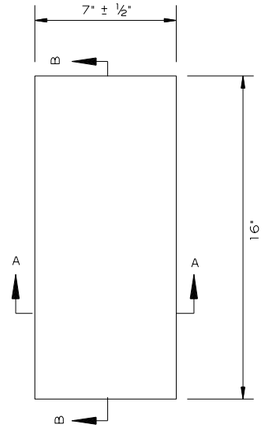
WIDENING FOR GUARDRAIL

STATE OF ARKANSAS
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No.13436
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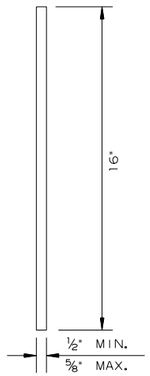
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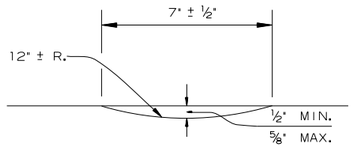
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		6	ARK.	101172	17	325
		SPECIAL DETAILS				



PLAN

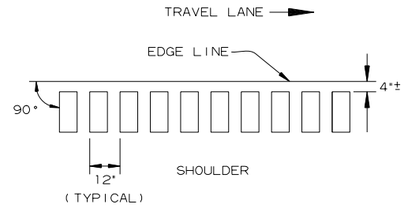


SECTION B-B



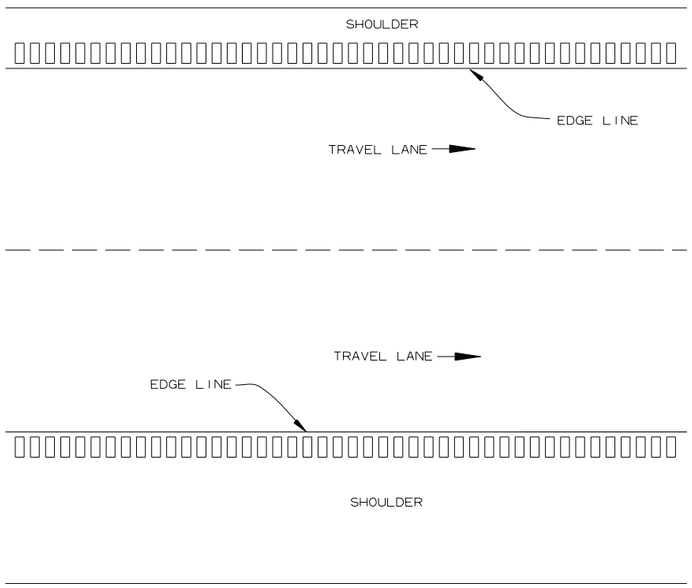
SECTION A-A

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 ½" 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.

STATE OF ARKANSAS
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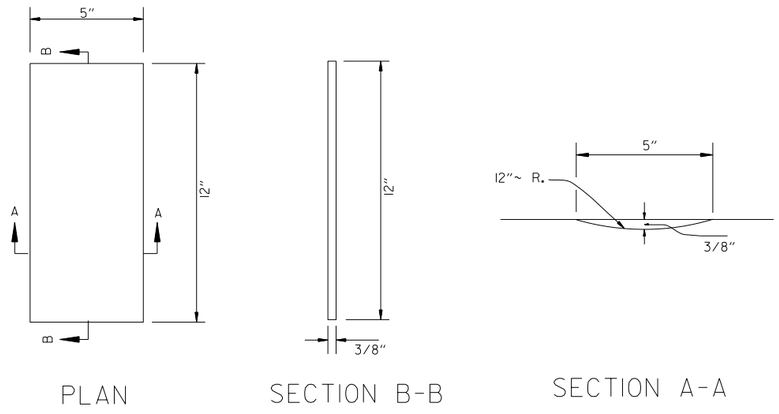
SPECIAL DETAILS

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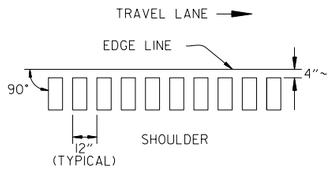
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		SPECIAL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
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SHAUN A. ROBERSON

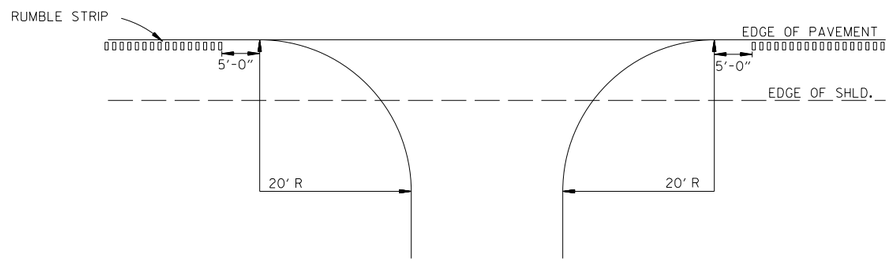
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DETAILS OF RUMBLE STRIPS



LOCATION PLAN OF RUMBLE STRIPS
LEFT OR RIGHT SHOULDER



DETAIL FOR RUMBLE STRIP GAP
AT DRIVEWAY TURNOUTS

GENERAL NOTES:

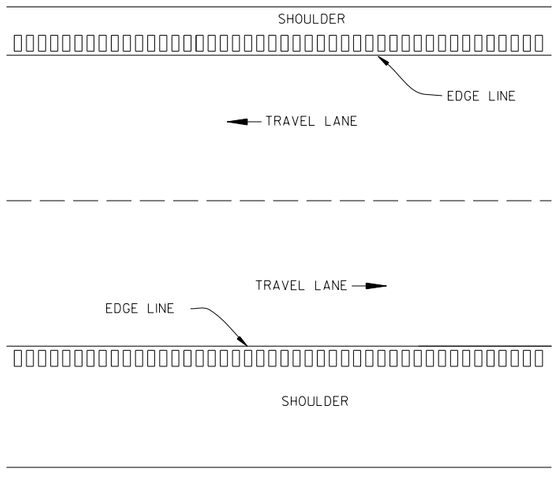
1. RUMBLE STRIPS SHALL NOT BE INSTALLED ON CURB SECTIONS, BRIDGE DECKS, APPROACH SLABS, INTERSECTING STREETS OR ROADWAYS, RESIDENTIAL OR COMMERCIAL DRIVEWAYS OR ACROSS TRANSVERSE JOINTS OF CONCRETE SHOULDERS.

2. RUMBLE STRIPS SHALL NOT BE INSTALLED ON A PAVED SHOULDER THAT IS USED AS A DECELERATION LANE FOR THE LENGTH DEEMED APPROPRIATE BY THE ENGINEER.

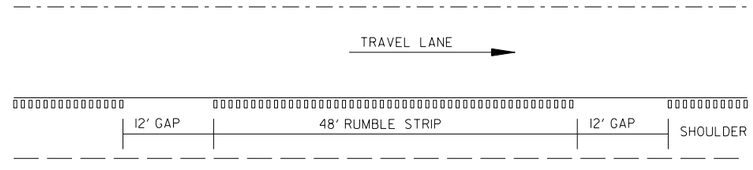
3. THE 4" OFFSET FROM THE EDGE LINE MAY BE INCREASED TO AVOID LONGITUDINAL JOINTS. IN ALL CASES, THE LATERAL DEVIATION FROM THE PLANNED OFFSET SHOULD BE KEPT TO A MINIMUM.

4. RUMBLE STRIPS SHALL BE MEASURED BY THE LINEAR FOOT LONGITUDINALLY ALONG THE SHOULDER. PAYMENT SHALL ONLY INCLUDE THAT PORTION OF THE SHOULDER ON WHICH RUMBLE STRIPS HAVE BEEN CONSTRUCTED. NO MEASUREMENT OR PAYMENT WILL BE MADE FOR GAPS, DRIVEWAYS, TURNOUTS, OR OTHER PUBLIC ROAD INTERSECTIONS WHERE RUMBLE STRIPS HAVE NOT BEEN CONSTRUCTED.

5. THE 3/8" DEPTH SHALL GENERALLY APPLY FOR THE ENTIRE 12" LENGTH. SOME VARIATION TO SUIT SHOULDER SLOPE BREAKS MAY BE NECESSARY.



PLAN VIEW



NOTE: GAP PATTERN SHALL BE ADJUSTED BY THE ENGINEER IN THE FIELD ALLOWING FOR DRIVEWAYS TO SERVE AS THE GAP.

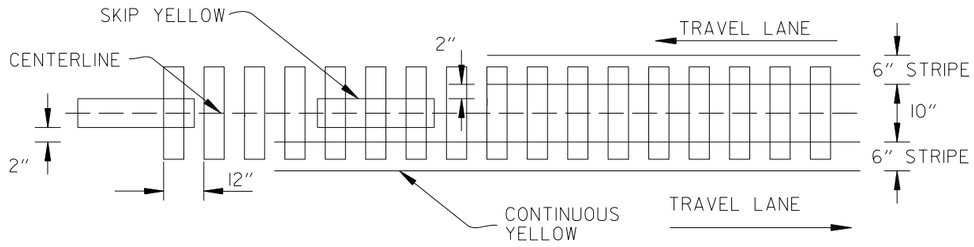
DETAIL FOR GAP PATTERN RUMBLE STRIP

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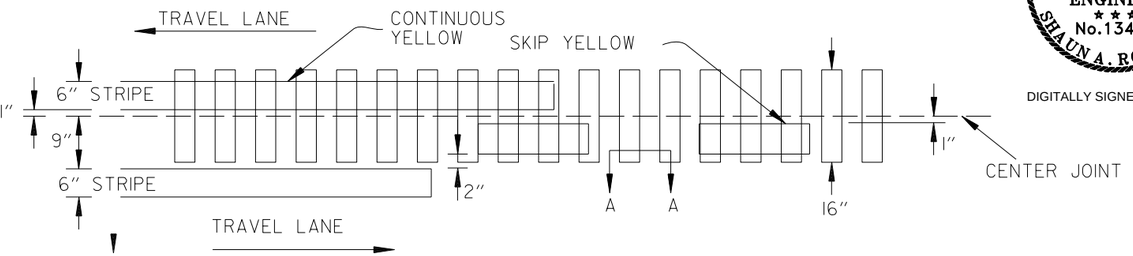
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		SPECIAL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13436
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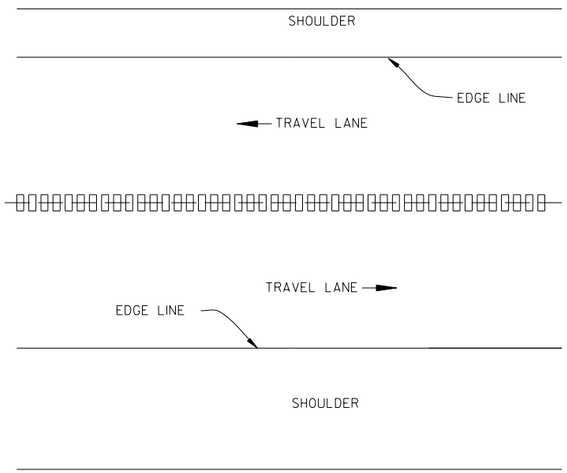


ASPHALT PAVEMENT

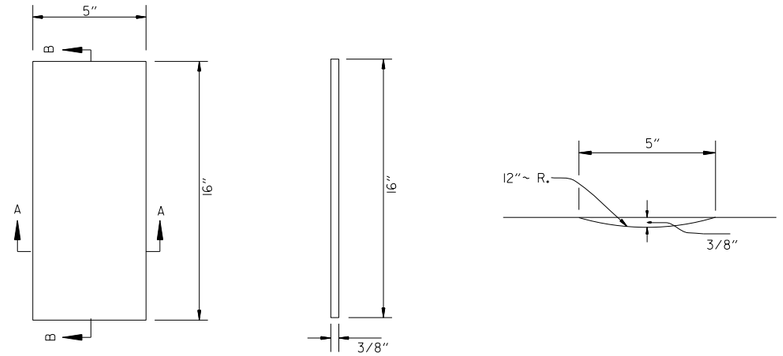


CONCRETE PAVEMENT

LOCATION PLAN OF CENTERLINE RUMBLE STRIPES



PLAN VIEW



PLAN SECTION B-B SECTION A-A

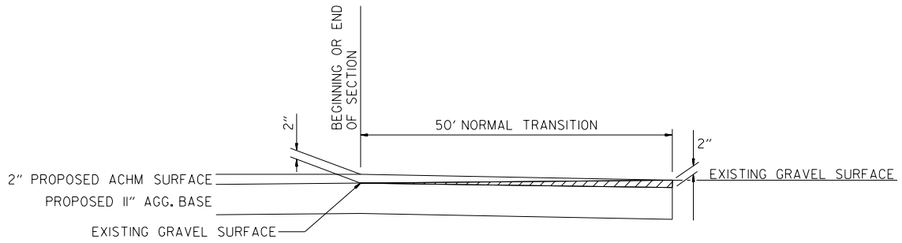
DETAILS OF CENTERLINE RUMBLE STRIPES

GENERAL NOTES:

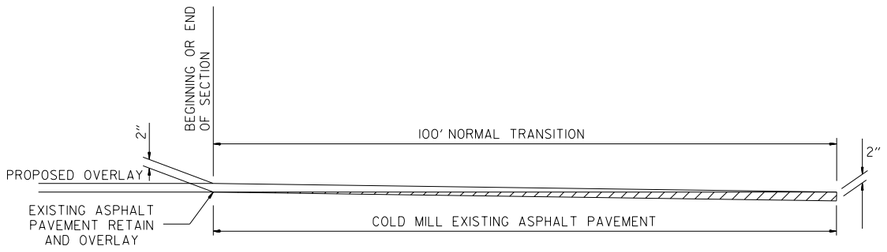
1. RUMBLE STRIPES SHALL NOT BE INSTALLED ON BRIDGE DECKS, APPROACH SLABS, INTERSECTING STREETS OR ROADWAYS, OR ACROSS TRANSVERSE JOINTS OF CONCRETE SHOULDERS.
2. RUMBLE STRIPES SHALL BE MEASURED BY THE LINEAR FOOT LONGITUDINALLY ALONG THE CENTERLINE.
3. THE 3/8" DEPTH SHALL GENERALLY APPLY FOR THE ENTIRE 16" LENGTH. SOME VARIATION TO SUIT SLOPE BREAKS MAY BE NECESSARY.

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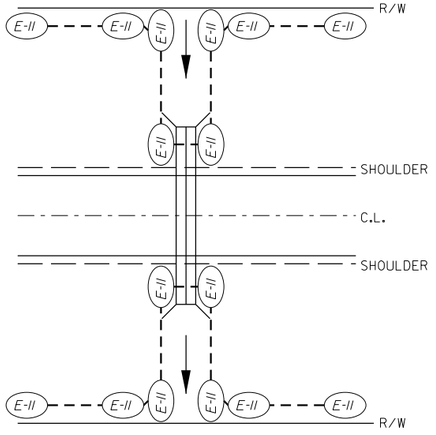
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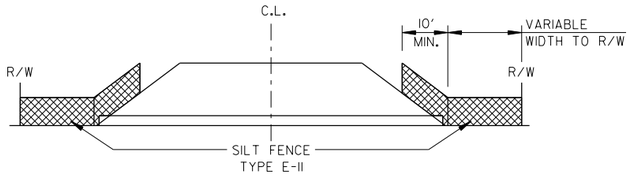


DETAIL FOR 50' TRANSITIONS

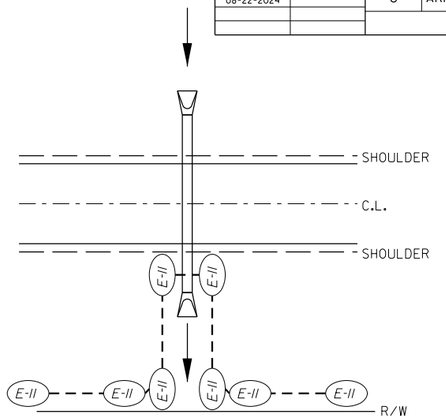


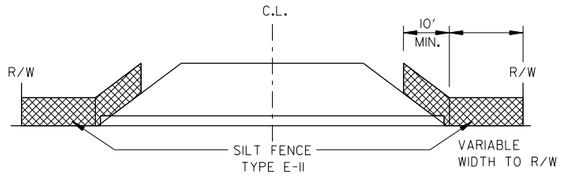
DETAIL FOR 100' TRANSITIONS



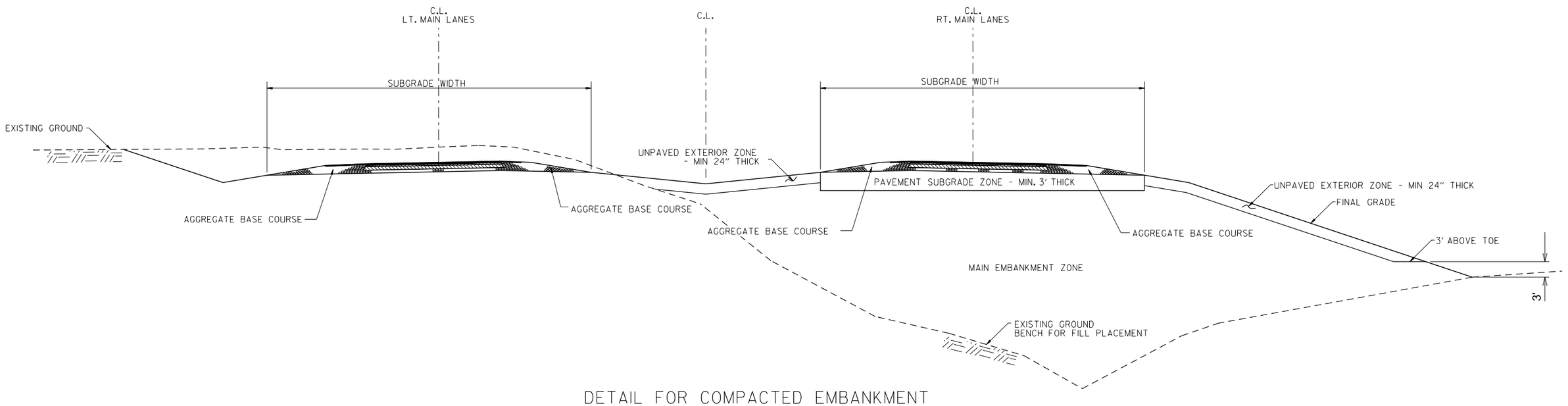


DETAILS OF SILT FENCE AT R.C. BOX





DETAILS OF SILT FENCE AT CROSS DRAINS



DETAIL FOR COMPACTED EMBANKMENT

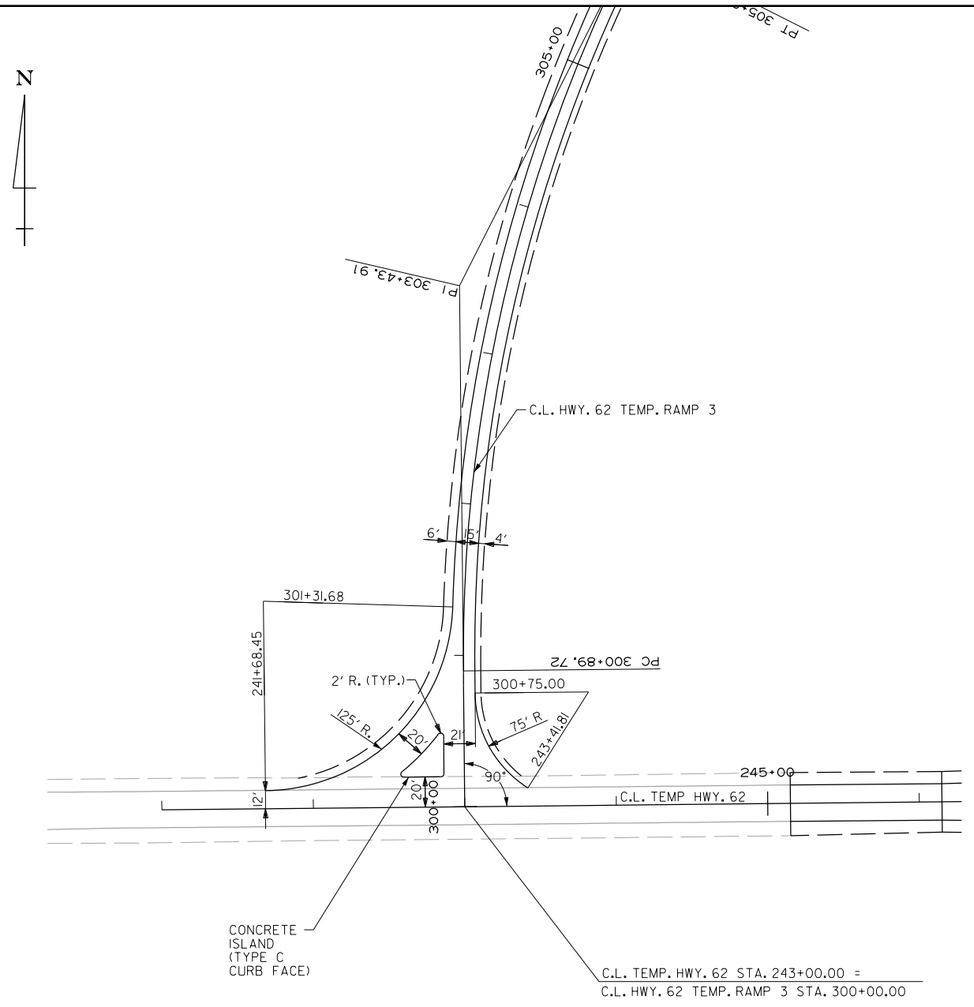
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 8/22/2024

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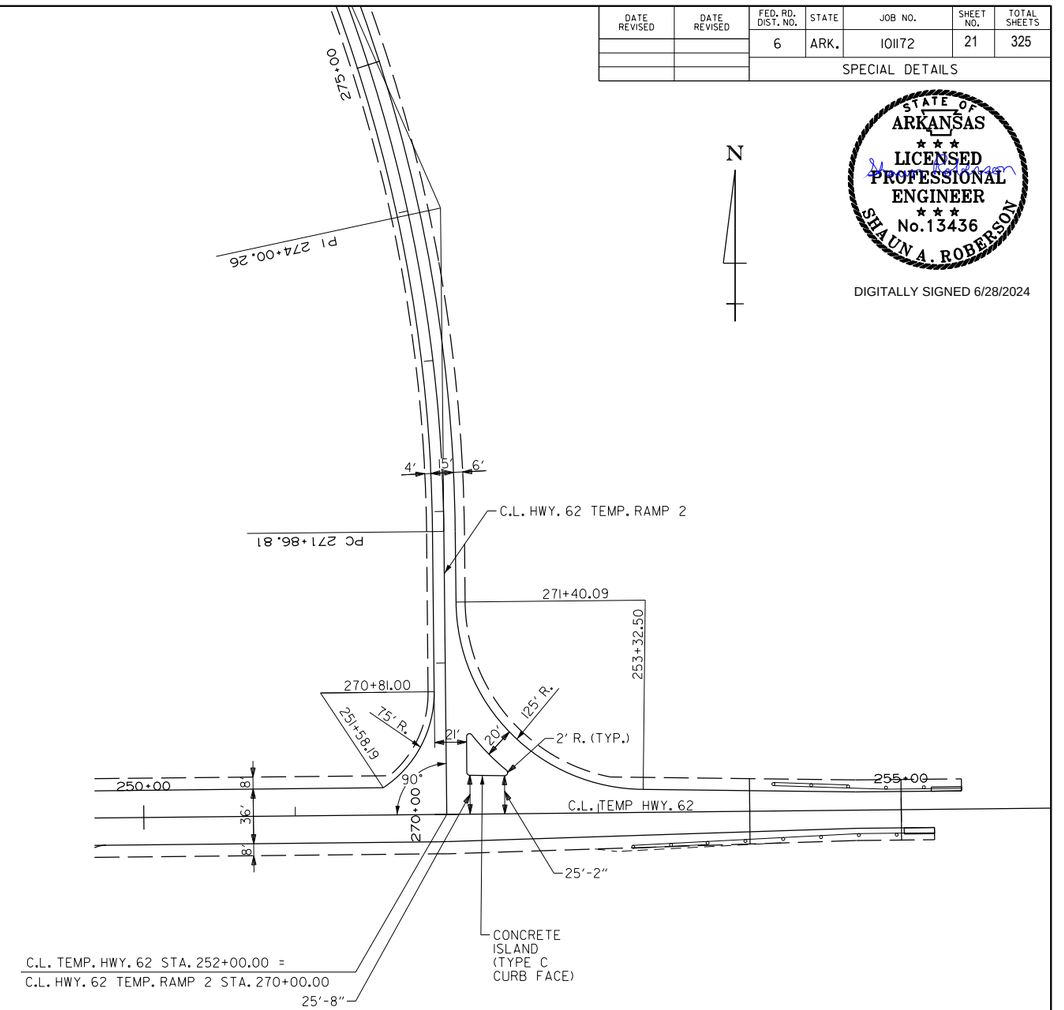
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		6	ARK.	101172	21	325
		SPECIAL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON

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INTERSECTION DETAIL
TEMP. HWY. 62 & HWY. 62 TEMP. RAMP 3

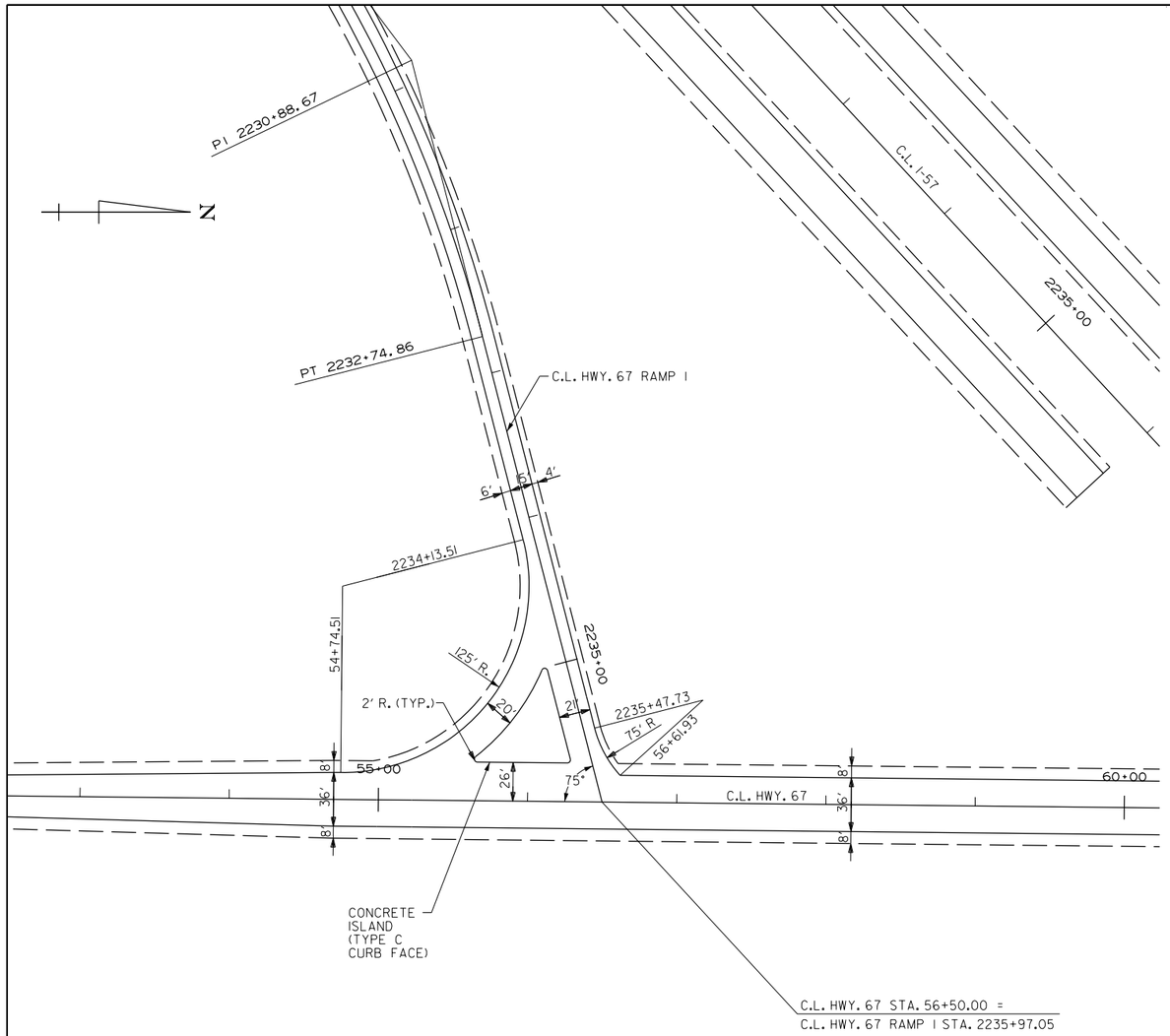


INTERSECTION DETAIL
TEMP. HWY. 62 & HWY. 62 TEMP. RAMP 2

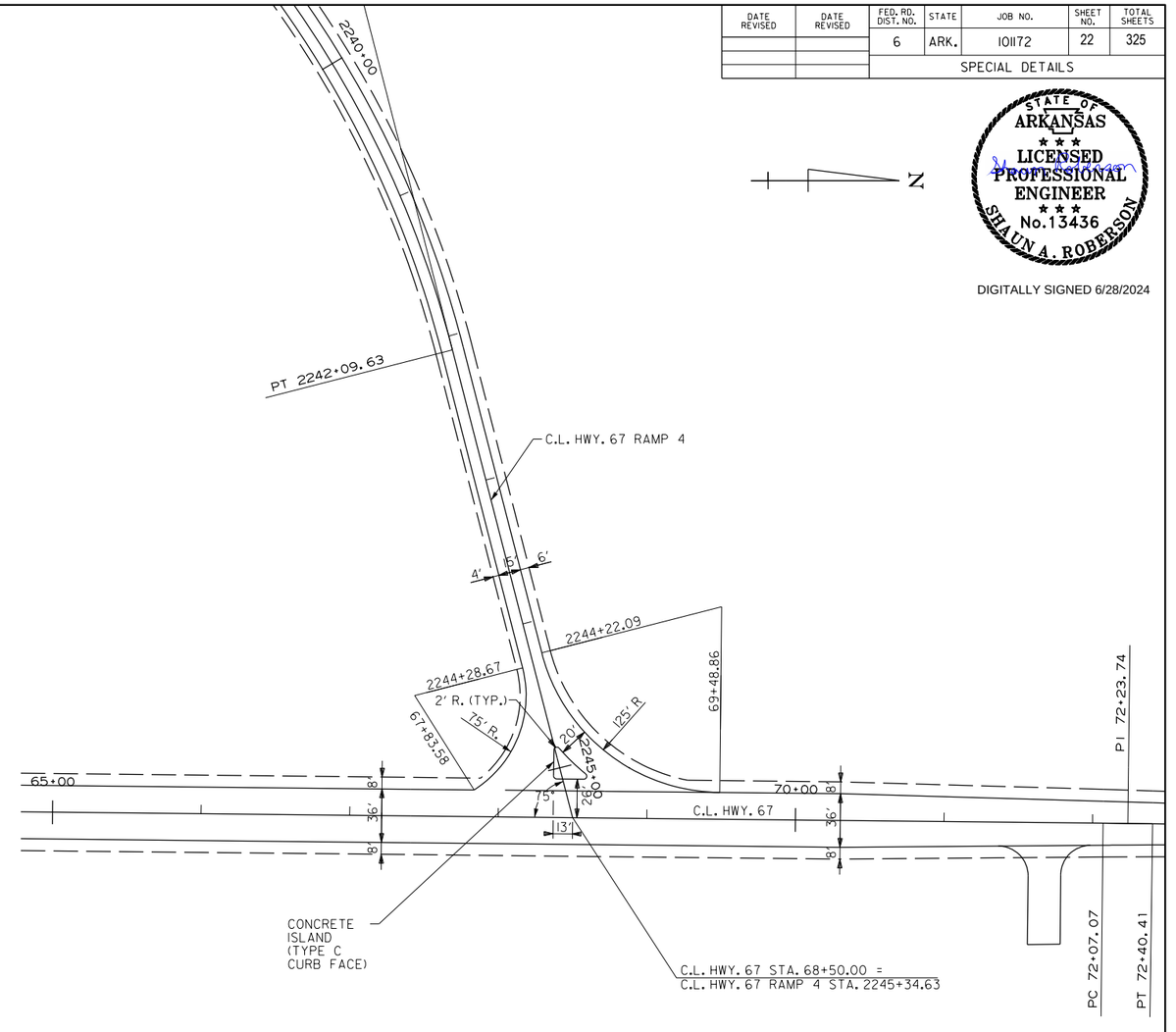
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DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	22	325
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INTERSECTION DETAIL
HWY. 67 & HWY. 67 RAMP I



INTERSECTION DETAIL
HWY. 67 & HWY. 67 RAMP 4

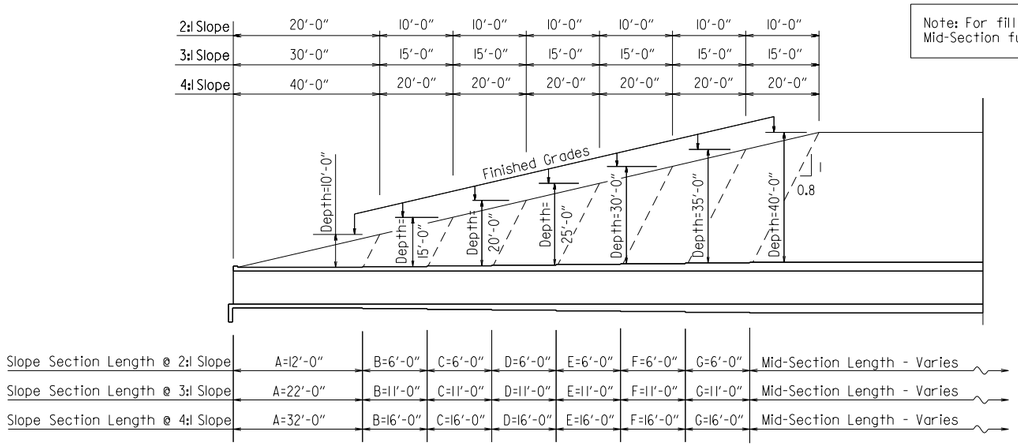
STATE OF ARKANSAS
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SPECIAL DETAILS

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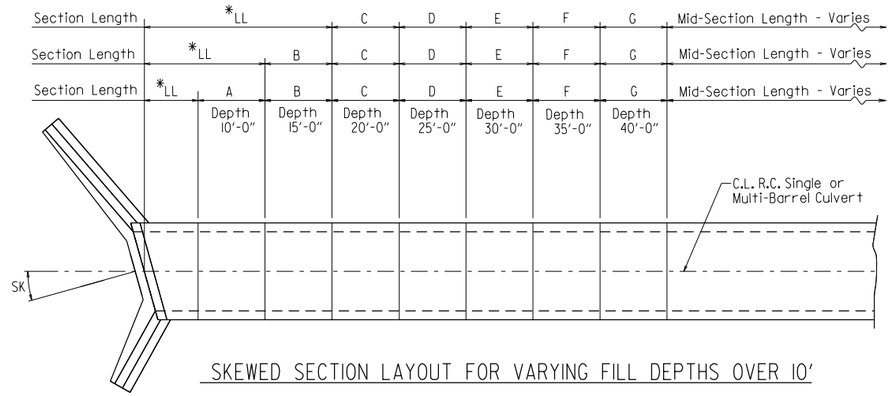


Note: For fill depths 10' and under, use Mid-Section full length of box culvert.

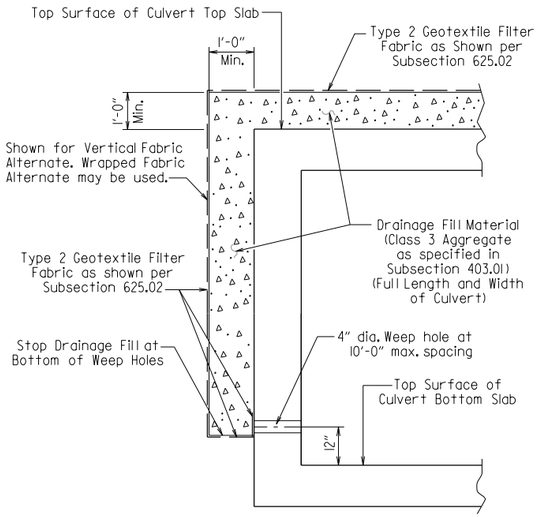
LONGITUDINAL SECTION LENGTH SCHEDULE FOR VARYING FILL DEPTHS OVER 10'

Lengths for Non-Skewed Boxes

* LL = Skewed End Section Length - See "Skewed End Section Details" Length LL varies with skew angle, overall box width and fill depth and may eliminate the need for some slope section lengths as shown.

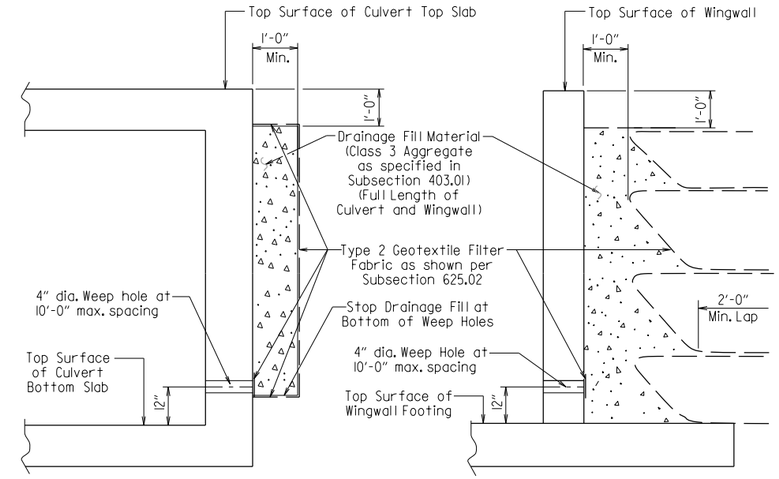


SKEWED SECTION LAYOUT FOR VARYING FILL DEPTHS OVER 10'



CULVERT DRAINAGE DETAIL FOR ROCK FILL

This detail shall be used when rock fill is specified for embankment construction.

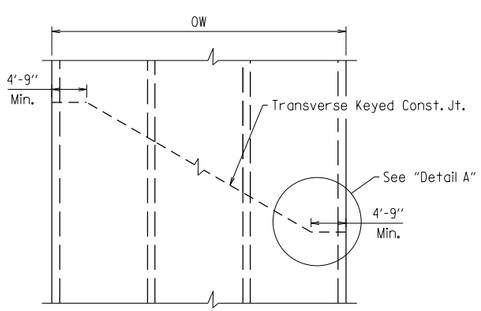


VERTICAL FABRIC ALTERNATE
(Shown for Culvert, Similar for Wingwall)

WRAPPED FABRIC ALTERNATE
(Shown for Wingwall, Similar for Culvert)

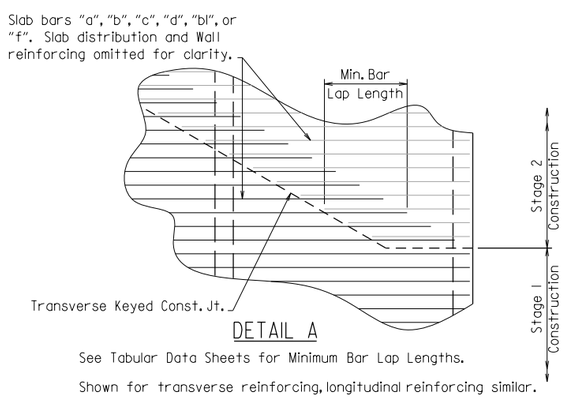
WINGWALL & CULVERT DRAINAGE DETAIL

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



SKEWED TRANSVERSE JOINT DETAIL

This detail shall be used to construct a skewed transverse joint only for Multi-Barrel Culverts and only when required by the Maintenance of Traffic Plans. Otherwise, transverse joints should be made normal to the centerline of the barrel.



DETAIL A

See Tabular Data Sheets for Minimum Bar Lap Lengths.

Shown for transverse reinforcing, longitudinal reinforcing similar.

GENERAL NOTES:

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, Fifth Edition (2010) with 2010 interim revisions.

LIVE LOADING: HL-93

All concrete shall be Class S with a minimum 28-day compressive strength of 3,500 psi and shall be poured in the dry. All exposed corners to have ¾" chamfers.

Reinforcing Steel shall be Grade 60 (yield strength = 60,000 psi) conforming to AASHTO M31 or M322, Type A, with mill test reports.

Reinforcing Steel Tolerances: The tolerances for reinforcing steel shall meet those listed in 'Manual of Standard Practice' published by Concrete Reinforcing Steel Institute (CRSI) except that the tolerance for truss bars such as Figure 3 on page 7-4 of the CRSI Manual shall be minus zero to plus 1/2 inch.

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

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

Weep Holes in box culvert walls shall have a maximum horizontal spacing of 10'-0" and shall be spaced to clear all reinforcing steel. The drain opening shall be 4" diameter and shall be placed 12" above the top of the bottom slab.

Weep Holes in wingwalls shall have a maximum horizontal spacing of 10'-0" and shall be spaced to clear all reinforcing steel. There shall be a minimum of two (2) weep holes in each wingwall. The drain opening shall be 4" diameter and shall be placed 12" above the top of the wingwall footing.

The barrel components of the culvert may be constructed using continuous pours. For longer culvert construction, the Contractor may use multiple pours with transverse construction joints spaced a minimum of 50 feet apart unless superseded by stage construction or site constraints as approved by the Engineer. Construction joints between footings and walls shall be made only where shown in the Plans. Joints shall be keyed and shall be normal to the centerline of barrel except as noted. Reinforcing shall be continuous through joints unless noted otherwise. Reinforcing through stage construction joints shall provide the minimum bar lap length shown on the Tabular Data Sheets. All longitudinal construction joints shall be submitted to the Engineer for approval.

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

When the top slab of the box culvert serves as finished roadway surface, curing and finishing shall be in accordance with subsections 802.17 and 802.20 for bridge roadway surface and a tine finish shall be applied in accordance with subsection 802.19 for Class 5 Tined Bridge Roadway Surface Finish. Curing and finishing shall not be paid for directly, but shall be considered incidental to the item "Class S Concrete-Roadway". Class 1 Protective Surface Treatment shall be applied to the roadway surface and this work shall be paid for under the unit price bid for "Class 1 Protective Surface Treatment".

When precast reinforced concrete box culverts are substituted for cast in place box culverts, they shall be manufactured according to ASTM C 1577 and meet the requirements of Section 607. When the top slab of the box culvert serves as the finished roadway surface, a precast reinforced concrete box culvert substitution is not allowed.

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No.13436
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SHEET 1 OF 4
GENERAL DETAILS OF R.C. BOX CULVERT
GENERAL NOTES &
LONGITUDINAL SECTION LENGTH SCHEDULE

SPECIAL DETAILS

LRFD

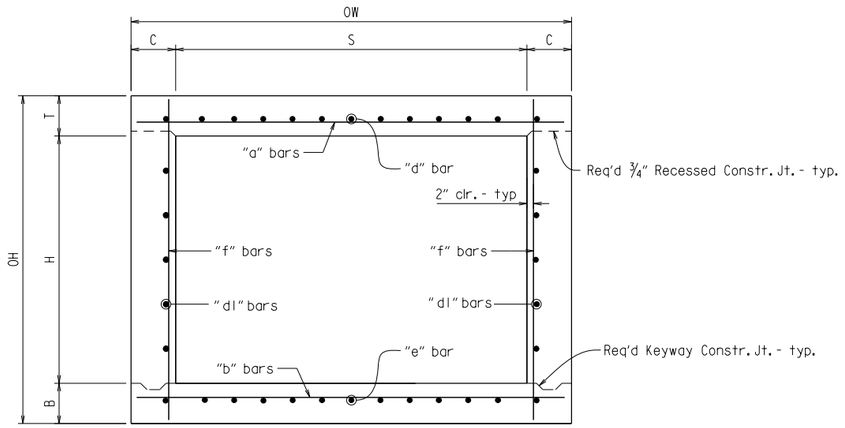
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REVISED DATE:

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		6	ARK.	101172	24	325
		SPECIAL DETAILS				

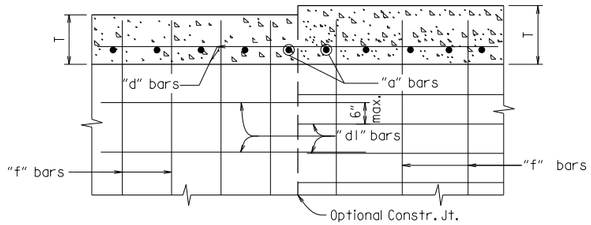
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Note: When top slab of culvert serves as finished roadway surface, see General Notes on Sheet 1 of 4.



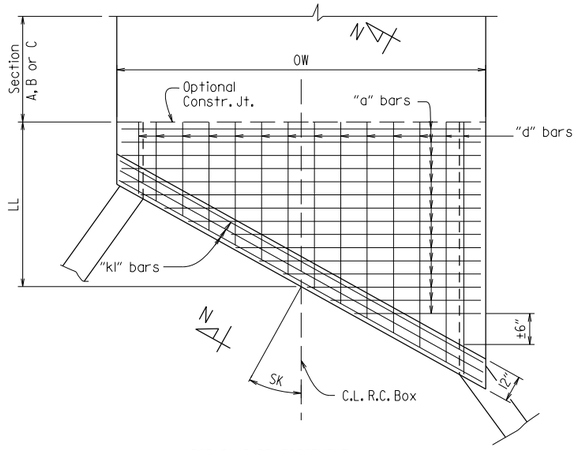
TYPICAL SECTION M-M



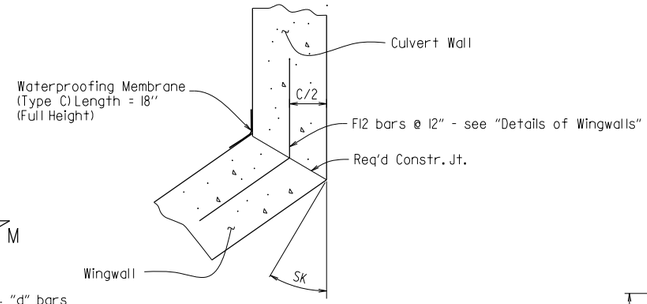
Longitudinal Bar Spacing at individual sections shall be maintained, which may result in noncontact bar laps.

LONGITUDINAL LAP DETAIL AT CHANGE IN SECTIONS

TOP SLAB SHOWN, BOTTOM SLAB SIMILAR

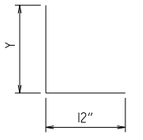


TOP SLAB REINFORCEMENT

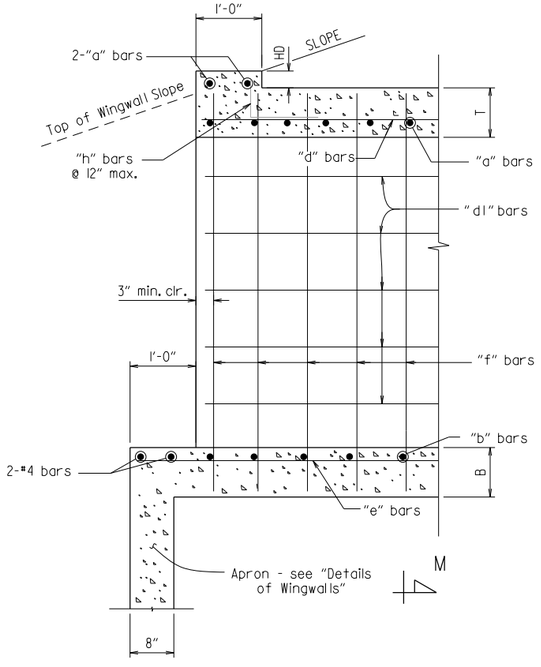


WINGWALL ATTACHMENT

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

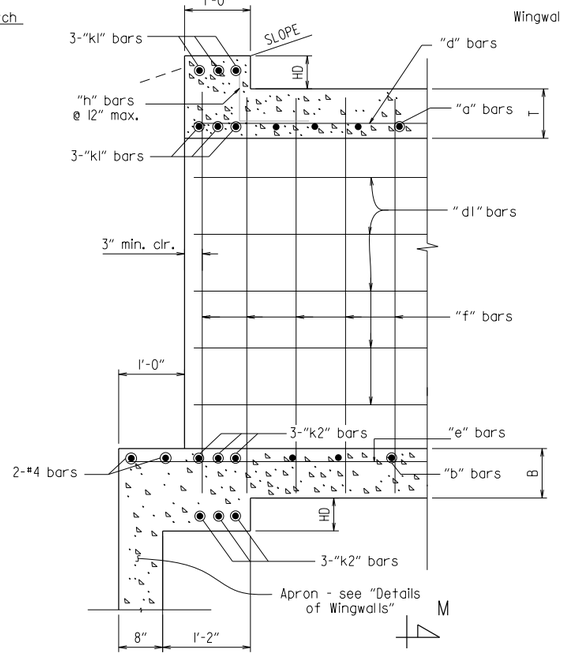


"h" bars sketch



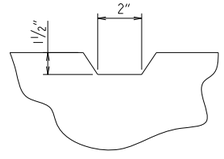
PART LONGITUDINAL SECTION

(Non-Skewed Ends)



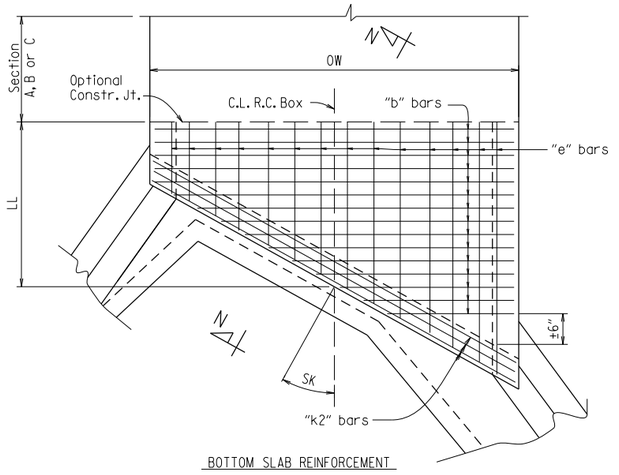
PART LONGITUDINAL SECTION N-N

(Skewed Ends)



TYPICAL KEYWAY DETAIL

(All Construction Joints)



BOTTOM SLAB REINFORCEMENT

SKEWED END SECTION DETAILS

SHEET 2 OF 4
GENERAL DETAILS OF R.C. BOX CULVERT

DETAILS OF SINGLE BARREL R.C. BOX CULVERT

SPECIAL DETAILS

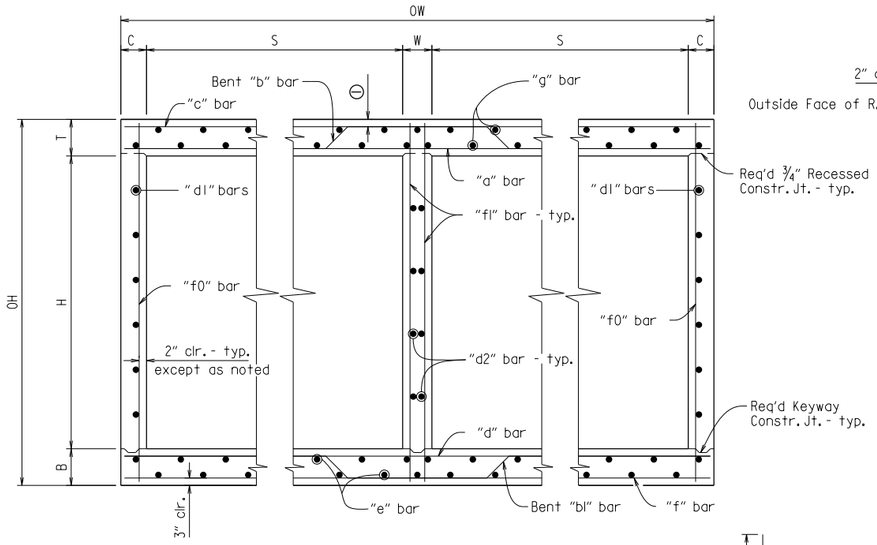
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		6	ARK.	101172	25	325
		SPECIAL DETAILS				

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

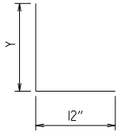
Note: When top slab of culvert serves as finished roadway surface, see General Notes on Sheet 1 of 4.



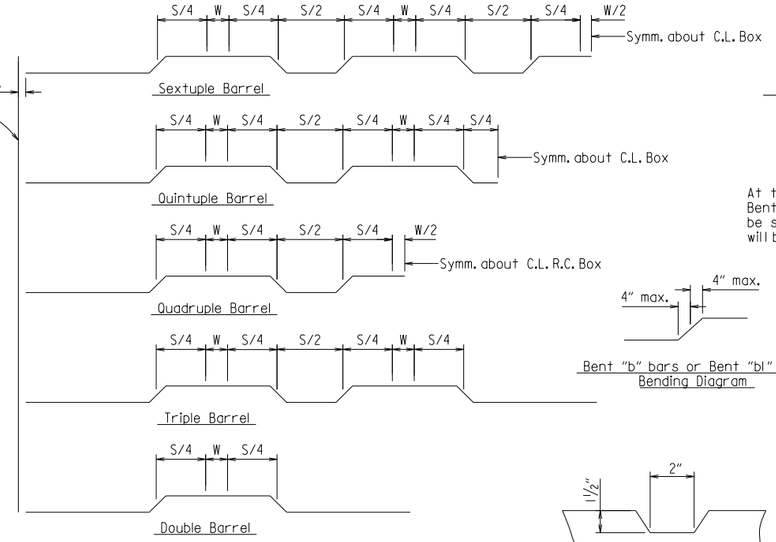
TYPICAL SECTION M-M

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

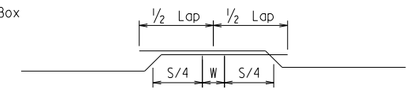
Bottom Slab
Straight "d" bars shall alternate with Bent "bl" bars in top.
Straight "f" bars shall alternate with Bent "bl" bars in bottom.



"h" bars sketch



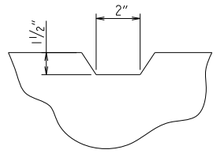
Bent "b" bars or Bent "bl" bars sketch



Lap Detail
For Bent "b" bars and Bent "bl" bars

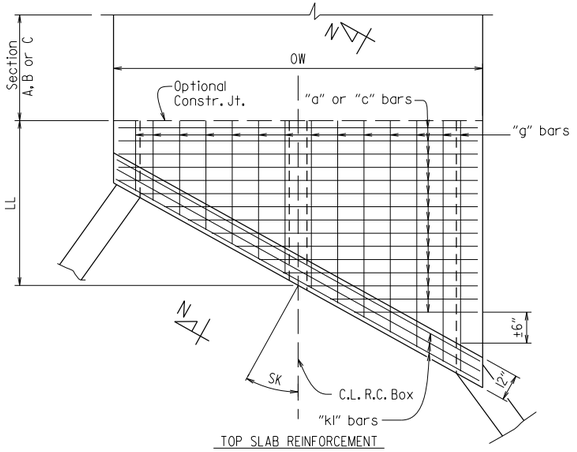
At the Contractor's option in lieu of providing Bent "b" or Bent "bl" bars, one bar top and bottom of equivalent size may be substituted for each bent bar. Payment for the reinforcing will be based on the weight of the "b" or "bl" bar.

Bent "b" bars or Bent "bl" bars
Bending Diagram

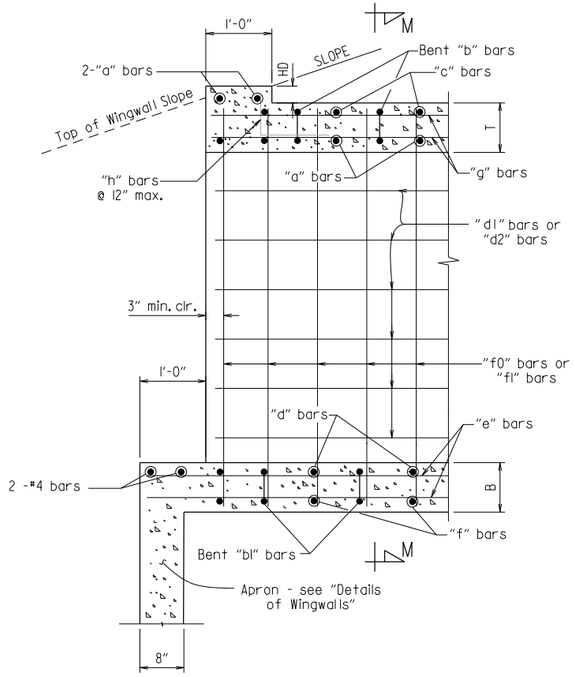


TYPICAL KEYWAY DETAIL

(All Construction Joints)

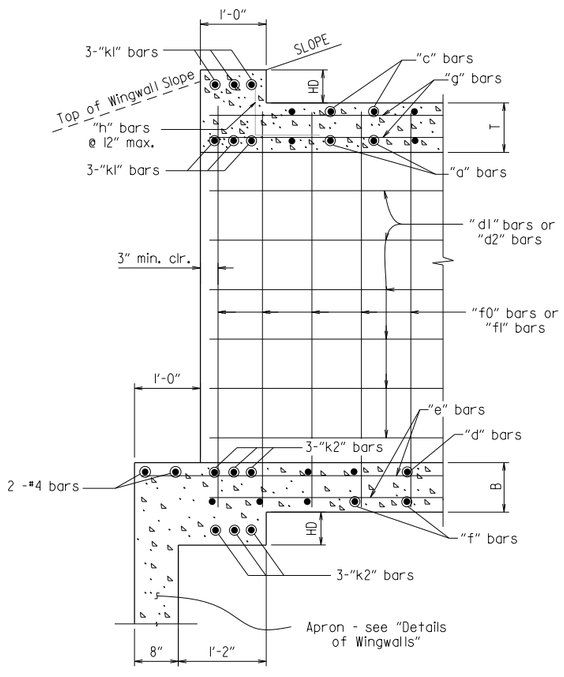


TOP SLAB REINFORCEMENT
Straight "c" bars in top.
Straight "a" bars in bottom.



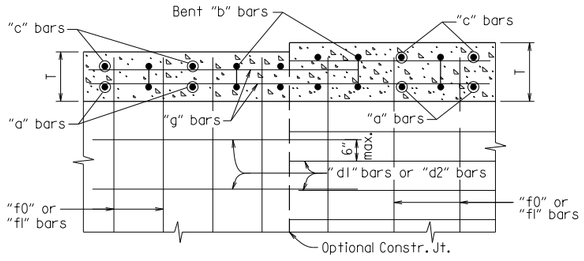
PART LONGITUDINAL SECTION

(Non-Skewed Ends)



PART LONGITUDINAL SECTION N-N

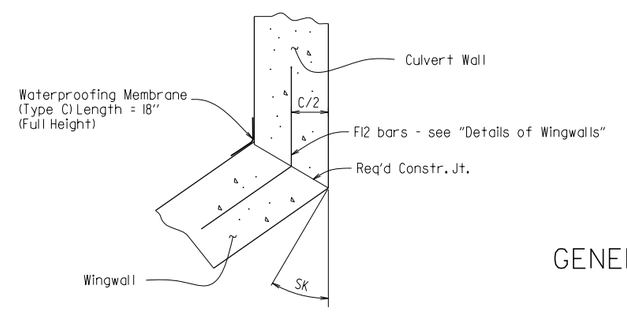
(Skewed Ends)



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

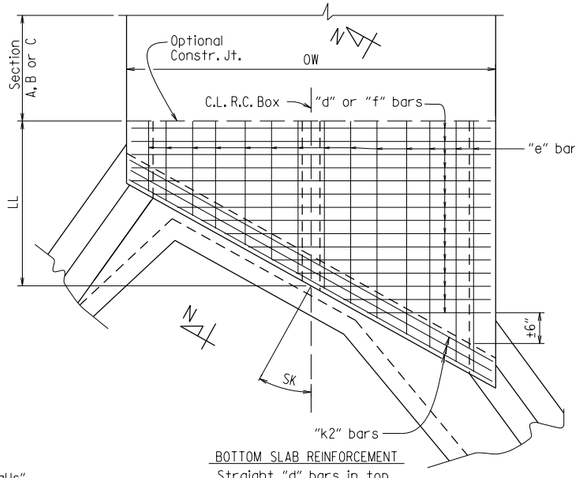
LONGITUDINAL LAP DETAIL AT CHANGE IN SECTIONS

TOP SLAB SHOWN, BOTTOM SLAB SIMILAR



WINGWALL ATTACHMENT

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



BOTTOM SLAB REINFORCEMENT
Straight "d" bars in top.
Straight "f" bars in bottom.

SKEWED END SECTION DETAILS

SHEET 3 OF 4
GENERAL DETAILS OF R.C. BOX CULVERT

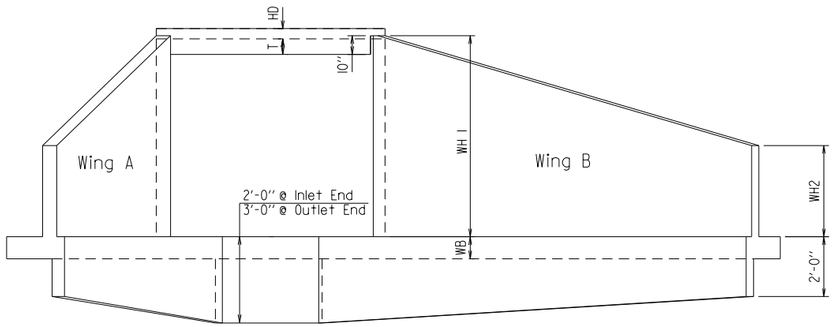
DETAILS OF MULTI-BARREL R.C. BOX CULVERT

SPECIAL DETAILS

STATE OF ARKANSAS
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No. 13436
SHAUN A. ROBERSON
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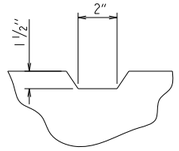
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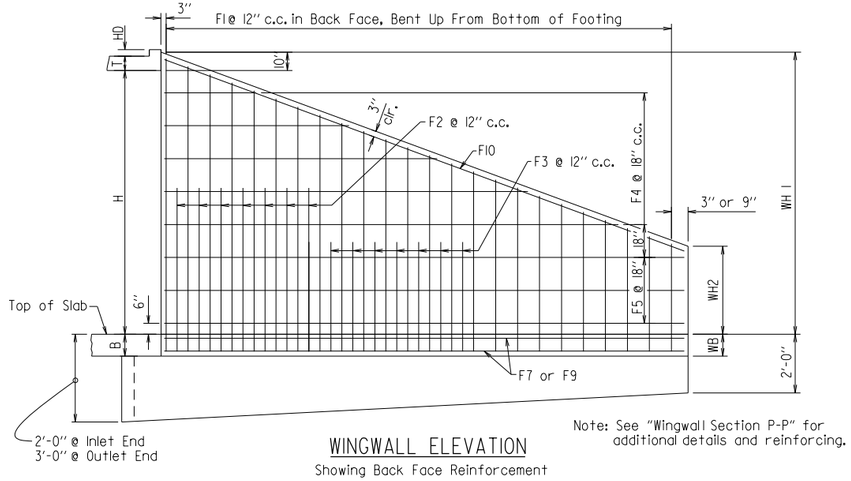
END ELEVATION

Flared Wingwalls Shown



TYPICAL KEYWAY DETAIL

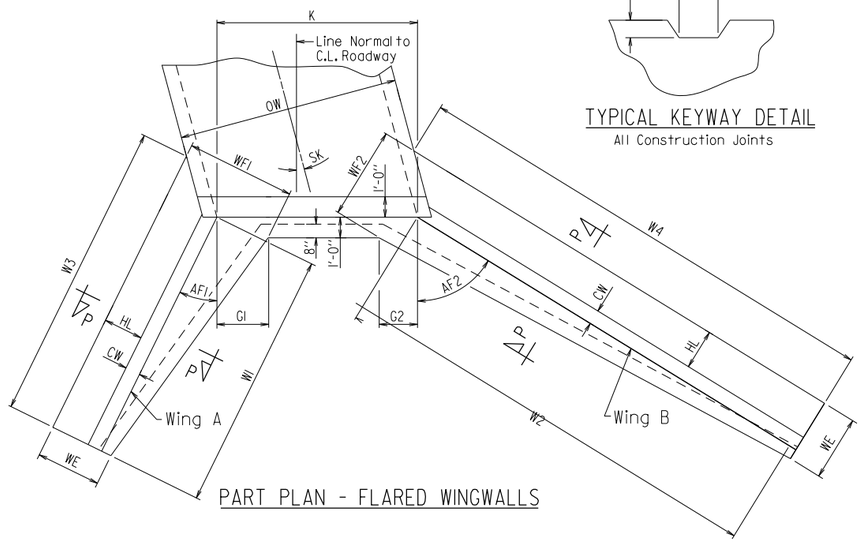
All Construction Joints



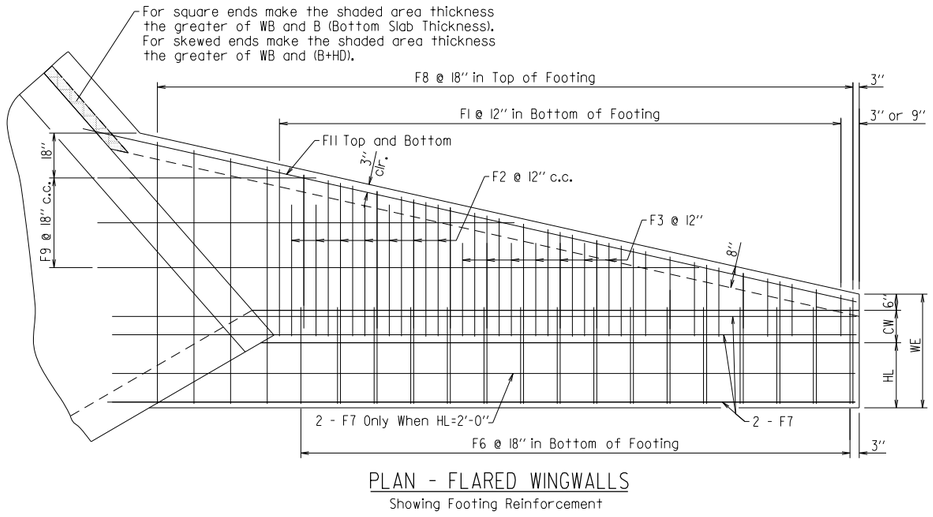
WINGWALL ELEVATION

Showing Back Face Reinforcement

Note: See "Wingwall Section P-P" for additional details and reinforcing.

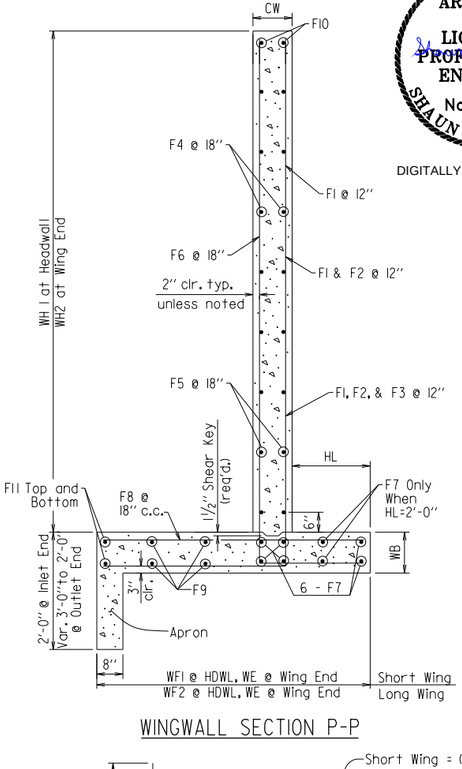


PART PLAN - FLARED WINGWALLS

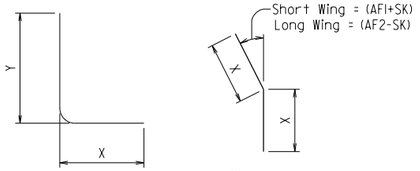


PLAN - FLARED WINGWALLS

Showing Footing Reinforcement



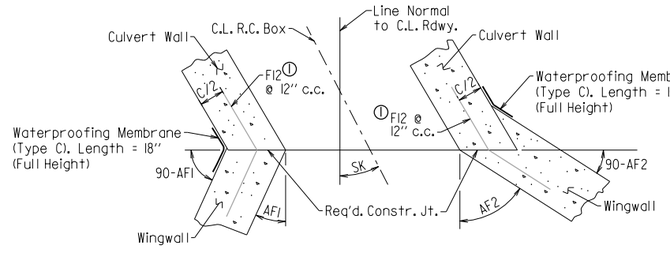
WINGWALL SECTION P-P



F1, F2, F3, & F6 BARS

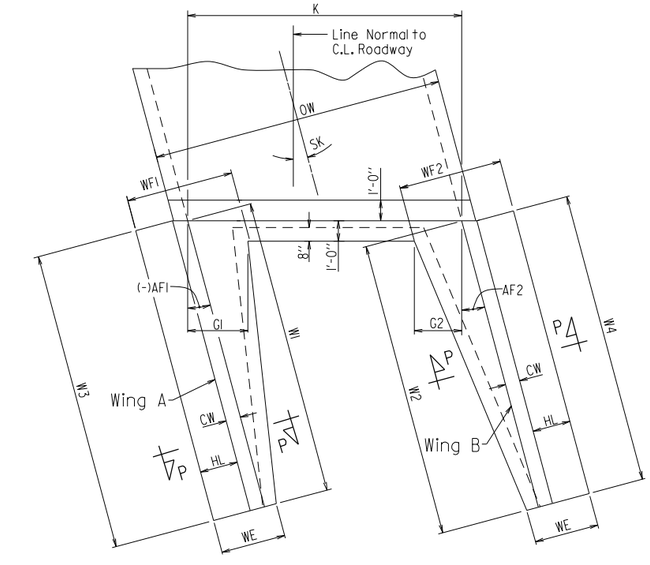
①F12 BAR

①F12 is a straight bar for parallel wingwalls

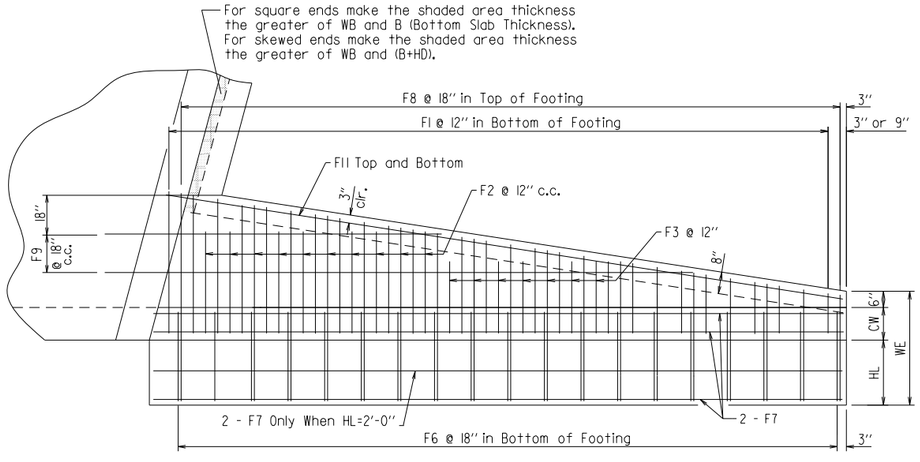


CONSTRUCTION JOINTS

Flared Wingwalls Shown



PART PLAN - PARALLEL WINGWALLS



PLAN - PARALLEL WINGWALLS

Showing Footing Reinforcement

SHEET 4 OF 4

GENERAL DETAILS OF R.C. BOX CULVERT

DETAILS OF WINGWALLS

SPECIAL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

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WORKSPACE: AHTD
L:\2021\2110046 - ARDOT 100502 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_SD_BOX CULVERT GENERAL.dgn
V 1.1.17
REVISED DATE:

INLET WINGWALL TABLE

OVER ALL WIDTH	CLEAR HEIGHT	FOOTING THK.	WING WALL THK.	BOX SKEW (DEG.)	SLOPE	HDWL LENGTH	HEEL	WALL HEIGHT AT HDWL	WALL HEIGHT AT WING END	WINGWALL ANGLE (DEGREE) WING A	WINGWALL ANGLE (DEGREE) WING B	FOOTING WIDTH AT WALL END	WIDTH OF WING FOOTINGS AT HDWL WING A	WIDTH OF WING FOOTINGS AT HDWL WING B	FOOTING DIMENSION PARALLEL WITH HDWL WING A	FOOTING DIMENSION PARALLEL WITH HDWL WING B	LENGTH OF WINGWALLS WING A	LENGTH OF WINGWALLS WING B	LENGTH OF FOOTING HEEL WING A	LENGTH OF FOOTING HEEL WING B
OW	H	WB	CW	SK	SL	K	HL	WH1	WH2	AF1	AF2	WE	WF1	WF2	G1	G2	W1	W2	W3	W4
13'-8"	3'-0"	0'-9"	0'-8"	0	3:1	12'-8"	1'-0"	3'-10"	1'-0"	30	30	2'-2"	2'-2"	2'-2"	0'-0"	0'-0"	9'-6"	9'-6"	11'-4 5/8"	11'-4 5/8"

CLASS "S" CONCRETE (Includes apron)	REINFORCING STEEL (Includes apron and laps if required)
INLET	INLET
CU.YD	LBS.
3.59	350

WING	F1 BAR SIZE	F1 MAX. SPACING	F1 NO. REQ'D	F1 LENGTHS VARY			F2 BAR SIZE	F2 SPACING	F2 NO. REQ'D	F2 LENGTHS			F3 BAR SIZE	F3 SPACING	F3 NO. REQ'D	F3 LENGTHS			F4 BAR SIZE	F4 SPACING	F4 NO. REQ'D	F4 LENGTHS VARY
WING A	4	12	10	L	Min	2'-0"	-	-	-	L	-		-	-	-	L	-		4	18	2	Min
					Max	4'-8"																5'-5"
				X	Min	0'-9"				X	-					X	-					Max
					Max	0'-9"																5'-5"
				Y	Min	1'-4"				Y	-					Y	-					
					Max	4'-0"																
WING B	4	12	10	L	Min	2'-0"	-	-	-	L	-		-	-	-	L	-		4	18	2	Min
					Max	4'-8"																5'-5"
				X	Min	0'-9"				X	-					X	-					Max
					Max	0'-9"																5'-5"
				Y	Min	1'-4"				Y	-					Y	-					
					Max	4'-0"																

WING	F5 BAR SIZE	F5 SPACING	F5 NO. REQ'D	F5 LENGTHS	F6 BAR SIZE	F6 SPACING	F6 NO. REQ'D	F6 LENGTHS VARY			F7 BAR SIZE	F7 NO. REQ'D	F7 LENGTHS	F8 BAR SIZE	F8 SPACING	F8 NO. REQ'D	F8 LENGTHS VARY			F9 BAR SIZE	F9 SPACING	F9 NO. REQ'D	F9 LENGTHS
WING A	4	18	2	9'-2"	4	18	7	L	Min	2'-7"	4	6	12'-3"	6	18	6	Min			-	-	-	Min
									Max	5'-3"													-
								X	Min	1'-4"							Min						Max
									Max	1'-4"													-
								Y	Min	1'-4"													
									Max	4'-0"													
WING B	4	18	2	9'-2"	4	18	7	L	Min	2'-7"	4	6	12'-3"	6	18	6	Min			-	-	-	Min
									Max	5'-3"													-
								X	Min	1'-4"							Min						Max
									Max	1'-4"													-
								Y	Min	1'-4"													
									Max	4'-0"													

WING	F10 BAR SIZE	F10 NO. REQ'D	F10 LENGTHS	F11 BAR SIZE	F11 NO. REQ'D	F11 LENGTHS	F12 BAR SIZE	F12 SPACING	F12 NO. REQ'D	F12 LENGTHS		REINF. STEEL QTY. PER WING (LBS)
WING A	4	2	9'-5"	4	2	10'-7"	6	12	3	L	3'-4"	175
										X	1'-8"	
WING B	4	2	9'-5"	4	2	10'-7"	6	12	3	L	3'-4"	175
										X	1'-8"	

MID-SECTION

BAR LAP TABLE

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

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

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

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

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

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	27	325
		SPECIAL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

TABULAR DATA BY: CGG DATE: 4/2/2024
CHECKED BY: SAR DATE: 5/8/2024

INLET SKEWED END SECTION

| SKEW (DEGREE) | SLOPE | DESIGN FILL DEPTH (FT.) | CLEAR SPAN (FT.) | CLEAR HEIGHT (FT.) | SECTION LENGTH | TOP SLAB THK. | HDWL DEPTH | BOTTOM SLAB THK. | SIDE WALL THK. | INTERIOR WALL THK. | OVER ALL WIDTH | OVER ALL HEIGHT | TOP SLAB REINFORCING STEEL "a" SIZE | "a" SPACING | "a" LENGTHS VARY | "a" NO. REQ'D | TOP SLAB REINFORCING STEEL "c" SIZE | "c" SPACING | "c" LENGTHS VARY | "c" NO. REQ'D | BOTTOM SLAB REINFORCING STEEL "d" SIZE | "d" SPACING | "d" LENGTHS VARY | "d" NO. REQ'D | BOTTOM SLAB REINFORCING STEEL "f" SIZE | "f" SPACING | "f" LENGTHS VARY | "f" NO. REQ'D | SIDE WALL REINFORCING STEEL "f0" SIZE | "f0" SPACING | "f0" NO. REQ'D | "f0" LENGTH | INTERIOR WALL REINFORCING STEEL "f1" SIZE | "f1" SPACING | "f1" NO. REQ'D | "f1" LENGTH | TOP SLAB DISTRIBUTION REINFORCING STEEL "g" SIZE | "g" SPACING | "g" NO. REQ'D | "g" LENGTHS VARY | BOTTOM SLAB DISTRIBUTION REINFORCING STEEL "e" SIZE | "e" SPACING | "e" NO. REQ'D | "e" LENGTHS VARY | SIDE WALL DISTRIBUTION REINFORCING STEEL "d1" SIZE | "d1" SPACING | "d1" NO. REQ'D | "d1" LENGTH | INTERIOR WALL DISTRIBUTION REINFORCING STEEL "d2" SIZE | "d2" SPACING | "d2" NO. REQ'D | "d2" LENGTH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	28	325
		SPECIAL DETAILS				

STATE OF ARKANSAS ★★★ LICENSED PROFESSIONAL ENGINEER ★★★ No.13436 SHAUN A. ROBERSON

DIGITALLY SIGNED 6/28/2024

TABULAR DATA BY: CGG DATE: 4/2/2024
CHECKED BY: SAR DATE: 5/8/2024

OUTLET WINGWALL TABLE

OVER ALL WIDTH	CLEAR HEIGHT	FOOTING THK.	WING WALL THK.	BOX SKEW (DEG.)	SLOPE	HDWL LENGTH	HEEL	WALL HEIGHT AT HDWL	WALL HEIGHT AT WING END	WINGWALL ANGLE (DEGREE) WING A	WINGWALL ANGLE (DEGREE) WING B	FOOTING WIDTH AT WALL END	WIDTH OF WING FOOTINGS AT HDWL WING A	WIDTH OF WING FOOTINGS AT HDWL WING B	FOOTING DIMENSION PARALLEL WITH HDWL WING A	FOOTING DIMENSION PARALLEL WITH HDWL WING B	LENGTH OF WINGWALLS WING A	LENGTH OF WINGWALLS WING B	LENGTH OF FOOTING HEEL WING A	LENGTH OF FOOTING HEEL WING B
OW	H	WB	CW	SK	SL	K	HL	WH1	WH2	AF1	AF2	WE	WF1	WF2	G1	G2	W1	W2	W3	W4
13'-8"	3'-0"	0'-9"	0'-8"	0	3:1	12'-8"	1'-0"	3'-10"	1'-0"	30	30	2'-2"	2'-2"	2'-2"	0'-0"	0'-0"	9'-6"	9'-6"	11'-4 5/8"	11'-4 5/8"

CLASS "S" CONCRETE (Includes apron)	REINFORCING STEEL (Includes apron and laps if required)
OUTLET	OUTLET
CU.YD	LBS.
4.12	350

WING	F1 BAR SIZE	F1 MAX. SPACING	F1 NO. REQ'D	F1 LENGTHS VARY			F2 BAR SIZE	F2 SPACING	F2 NO. REQ'D	F2 LENGTHS			F3 BAR SIZE	F3 SPACING	F3 NO. REQ'D	F3 LENGTHS			F4 BAR SIZE	F4 SPACING	F4 NO. REQ'D	F4 LENGTHS VARY
WING A	4	12	10	L	Min	2'-0"				L	-					L	-		4	18	2	Min
					Max	4'-8"																5'-5"
				X	Min	0'-9"	-	-	-	X	-		-	-	-	X	-					Max
					Max	0'-9"																5'-5"
				Y	Min	1'-4"				Y	-					Y	-					
					Max	4'-0"																
WING B	4	12	10	L	Min	2'-0"				L	-					L	-		4	18	2	Min
					Max	4'-8"																5'-5"
				X	Min	0'-9"	-	-	-	X	-		-	-	-	X	-					Max
					Max	0'-9"																5'-5"
				Y	Min	1'-4"				Y	-					Y	-					
					Max	4'-0"																

WING	F5 BAR SIZE	F5 SPACING	F5 NO. REQ'D	F5 LENGTHS	F6 BAR SIZE	F6 SPACING	F6 NO. REQ'D	F6 LENGTHS VARY			F7 BAR SIZE	F7 NO. REQ'D	F7 LENGTHS	F8 BAR SIZE	F8 SPACING	F8 NO. REQ'D	F8 LENGTHS VARY		F9 BAR SIZE	F9 SPACING	F9 NO. REQ'D	F9 LENGTHS		F10 BAR SIZE	F10 NO. REQ'D	F10 LENGTHS
WING A	4	18	2	9'-2"	4	18	7	L	Min	2'-7"	4	6	12'-3"	6	18	6	Min		-	-	-	Min		4	2	9'-5"
									Max	5'-3"							-					-				
								X	Min	1'-4"							Max					Max				
									Max	1'-4"							1'-8"					-				
								Y	Min	1'-4"																
									Max	4'-0"																
WING B	4	18	2	9'-2"	4	18	7	L	Min	2'-7"	4	6	12'-3"	6	18	6	Min		-	-	-	Min		4	2	9'-5"
									Max	5'-3"							-					-				
								X	Min	1'-4"							Max					Max				
									Max	1'-4"							1'-8"					-				
								Y	Min	1'-4"																
									Max	4'-0"																

WING	F11 BAR SIZE	F11 NO. REQ'D	F11 LENGTHS	F12 BAR SIZE	F12 SPACING	F12 NO. REQ'D	F12 LENGTHS		REINF. STEEL QTY. PER WING (LBS)
WING A	4	2	10'-7"	6	12	3	L	3'-4"	175
							X	1'-8"	
WING B	4	2	10'-7"	6	12	3	L	3'-4"	175
							X	1'-8"	

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

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

① Any Bar Lap Required for the Skewed End Section shall be considered subsidiary to the item "Reinforcing Steel - Roadway (Grade 60)."

OUTLET SKEWED END SECTION

SKEW (DEGREE)	SLOPE	DESIGN FILL DEPTH (FT.)	CLEAR SPAN (FT.)	CLEAR HEIGHT (FT.)	SECTION LENGTH	TOP SLAB THK.	HDWL DEPTH	BOTTOM SLAB THK.	SIDE WALL THK.	INTERIOR WALL THK.	OVER ALL WIDTH	OVER ALL HEIGHT	TOP SLAB REINF. "a" SIZE	"a" SPACING	"a" LENGTHS VARY	"a" NO. REQ'D	TOP SLAB REINF. "c" SIZE	"c" SPACING	"c" LENGTHS VARY	"c" NO. REQ'D	BOTTOM SLAB REINF. "d" SIZE	"d" SPACING	"d" LENGTHS VARY	"d" NO. REQ'D	BOTTOM SLAB REINF. "f" SIZE	"f" SPACING	"f" LENGTHS VARY	"f" NO. REQ'D
SK	SL	D	S	H	LL	T	HD	B	C	W	OW	OH																
															Max				Max				Max				Max	
															Min				Min				Min				Min	

SIDE WALL REINF. "f0" SIZE	"f0" SPACING	"f0" NO. REQ'D	"f0" LENGTH	INTERIOR WALL REINF. "f1" SIZE	"f1" SPACING	"f1" NO. REQ'D	"f1" LENGTH	TOP SLAB DISTRIB. REINF. "g" SIZE	"g" SPACING	"g" NO. REQ'D	"g" LENGTHS VARY	BOTTOM SLAB DISTRIB. REINF. "e" SIZE	"e" SPACING	"e" NO. REQ'D	"e" LENGTHS VARY	SIDE WALL DISTRIB. REINF. "d1" SIZE	"d1" SPACING	"d1" NO. REQ'D	"d1" LENGTH	INTERIOR WALL DISTRIB. REINF. "d2" SIZE	"d2" SPACING	"d2" NO. REQ'D	"d2" LENGTH
											Max				Max				LONG				
											Min				Min				SHORT				

CLASS "S" CONCRETE (Includes HDWL) CU. YDS.	① REINFORCING STEEL (GR 60) (Includes HDWL) LBS.

"k1" HDWL BARS SIZE	"k1" HDWL BARS LENGTH	"k1" HDWL BARS NO. REQ'D

"k2" HDWL BARS SIZE	"k2" HDWL BARS LENGTH	"k2" HDWL BARS NO. REQ'D

"h" HDWL BARS SIZE	"h" HDWL BARS LENGTH	"h" HDWL BARS Y	"h" HDWL BARS NO. REQ'D

OUTLET SLOPE SECTION(S)

R.C. BOX SECTION	DESIGN FILL DEPTH (FT.)	CLEAR SPAN (FT.)	CLEAR HEIGHT (FT.)	TOP SLAB THK.	BOTTOM SLAB THK.	SIDE WALL THK.	INTERIOR WALL THK.	OVER ALL WIDTH	OVER ALL HEIGHT	SECTION LENGTH (FT.)	TOP SLAB REINF. LENGTH = OW - 4" + BENDS "a" SIZE	"a" L	Bent "b" SIZE	Bent "b" L	"c" SIZE	"c" L	"a" SPACING	"a" NO. REQ'D	BOTTOM SLAB REINF. LENGTH = OW - 4" + BENDS "d" SIZE	"d" L	Bent "b1" SIZE	Bent "b1" L	"f" SIZE	"f" L	"d" SPACING	"d" NO. REQ'D
	D	S	H	T	B	C	W	OW	OH	SL																

SIDE WALL REINF. "f0" LENGTH = OH - 4" SIZE	SPACING	NO. REQ'D	LENGTH	INTERIOR WALL REINF. "f1" LENGTH = OH - 4" SIZE	SPACING	NO. REQ'D	LENGTH	TOP SLAB DISTRIB. REINF. STEEL "g" LENGTH = SL SIZE	SPACING	NO. REQ'D	BOTTOM SLAB DISTRIB. REINF. STEEL "e" LENGTH = SL SIZE	SPACING	NO. REQ'D	SIDE WALL DISTRIB. REINF. STEEL "d1" LENGTH = SL SIZE	SPACING	NO. REQ'D	INTERIOR WALL DISTRIB. REINF. STEEL "d2" LENGTH = SL SIZE	SPACING	NO. REQ'D

CLASS "S" CONCRETE CU. YDS.	REINFORCING STEEL (GR 60) LBS.
TOTAL	
0.13	34

HDWL DEPTH HD	ADDITIONAL REINF. FOR HDWL LBS.
3"	18

"h" HDWL BARS SIZE	Y	LENGTH	NO. REQ'D
4	0'-7"	1'-7"	15

The required number of bars and lengths shown are for estimating purpose only. The actual number and length required shall be determined in field.

Unless otherwise noted, all dimensions are in inches.

SHEET 2 OF 2

DETAILS OF R.C. BOX CULVERT

DOUBLE BARREL BOX CULVERT
STA. 2046+00

SPECIAL DETAILS

CGGervasini 6/28/2024 12:27:47 PM
WORKSPACE: AHTD
\\garverinc.local\gdata\Projects\2021\21T0046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_SD.BOX CULVERT_2046+00.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	10172	29	325
		SPECIAL DETAILS				

INLET WINGWALL TABLE

OVER ALL WIDTH	CLEAR HEIGHT	FOOTING THK.	WING WALL THK.	BOX SKEW (DEG.)	SLOPE	HDWL LENGTH	HEEL	WALL HEIGHT AT HDWL	WALL HEIGHT AT WING END	WINGWALL ANGLE (DEGREE) WING A	WINGWALL ANGLE (DEGREE) WING B	FOOTING WIDTH AT WALL END	WIDTH OF WING FOOTINGS AT HDWL WING A	WIDTH OF WING FOOTINGS AT HDWL WING B	FOOTING DIMENSION PARALLEL WITH HDWL WING A	FOOTING DIMENSION PARALLEL WITH HDWL WING B	LENGTH OF WINGWALLS WING A	LENGTH OF WINGWALLS WING B	LENGTH OF FOOTING HEEL WING A	LENGTH OF FOOTING HEEL WING B
OW	H	WB	CW	SK	SL	K	HL	WH1	WH2	AF1	AF2	WE	WF1	WF2	G1	G2	W1	W2	W3	W4
28'-8"	4'-0"	0'-9"	0'-8"	20	3:1	29'-5 1/4"	1'-0"	4'-10"	1'-4"	10	50	2'-2"	2'-4 3/4"	2'-7 7/8"	0'-6 3/4"	0'-4 1/8"	10'-6"	16'-0"	12'-4 5/8"	17'-10 5/8"

CLASS "S" CONCRETE (Includes apron)	REINFORCING STEEL (Includes apron and laps if required)
INLET	INLET
CU.YD	LBS.
6.26	539

WING	F1 BAR SIZE	F1 MAX. SPACING	F1 NO. REQ'D	F1 LENGTHS VARY			F2 BAR SIZE	F2 SPACING	F2 NO. REQ'D	F2 LENGTHS			F3 BAR SIZE	F3 SPACING	F3 NO. REQ'D	F3 LENGTHS			F4 BAR SIZE	F4 SPACING	F4 NO. REQ'D	F4 LENGTHS VARY
WING A	4	12	11	L	Min	2'-4"					L	-					L	-	4	18	4	Min
					Max	5'-11"																3'-4"
				X	Min	0'-9"	-	-	-	X	-		-	-	-	X	-					Max
					Max	1'-0"																7'-10"
				Y	Min	1'-8"				Y	-					Y	-					
					Max	5'-0"																
WING B	4	12	16	L	Min	2'-5"					L	-					L	-	4	18	4	Min
					Max	6'-2"																5'-2"
				X	Min	0'-9"	-	-	-	X	-		-	-	-	X	-					Max
					Max	1'-3"																12'-0"
				Y	Min	1'-9"				Y	-					Y	-					
					Max	5'-0"																

WING	F5 BAR SIZE	F5 SPACING	F5 NO. REQ'D	F5 LENGTHS	F6 BAR SIZE	F6 SPACING	F6 NO. REQ'D	F6 LENGTHS VARY			F7 BAR SIZE	F7 NO. REQ'D	F7 LENGTHS	F8 BAR SIZE	F8 SPACING	F8 NO. REQ'D	F8 LENGTHS VARY	F9 BAR SIZE	F9 SPACING	F9 NO. REQ'D	F9 LENGTHS	F10 BAR SIZE	F10 NO. REQ'D	F10 LENGTHS	F11 BAR SIZE	F11 NO. REQ'D	F11 LENGTHS	F12 BAR SIZE	F12 SPACING	F12 NO. REQ'D	F12 LENGTHS			REINF. STEEL QTY. PER WING (LBS)
WING A	4	18	2	10'-2"	4	18	7	L	Min	3'-3"	4	6	13'-3"	6	18	7	Min	-	-	-	Min	4	2	10'-7"	4	2	11'-6"	6	12	4	L	3'-4"	223
									Max	6'-3"							1'-8"				-										X	1'-8"	
								X	Min	1'-4"							Max				Max												
									Max	1'-4"							-				-												
								Y	Min	2'-0"																							
									Max	5'-0"																							
WING B	4	18	2	15'-8"	4	18	11	L	Min	3'-0"	4	6	18'-9"	6	18	11	Min	-	-	-	Min	4	2	15'-11"	4	2	18'-1"	6	12	4	L	3'-4"	316
									Max	6'-3"							1'-8"				-										X	1'-8"	
								X	Min	1'-4"							Max				Max												
									Max	1'-4"							-				-												
								Y	Min	1'-9"																							
									Max	5'-0"																							

MID-SECTION

BAR LAP TABLE

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

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

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

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON

DIGITALLY SIGNED 6/28/2024

TABULAR DATA BY: CGG DATE: 1/14/2024
CHECKED BY: SAR DATE: 5/8/2024

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

INLET SKEWED END SECTION

SKEW (DEGREE)	SLOPE	DESIGN FILL DEPTH (FT.)	CLEAR SPAN (FT.)	CLEAR HEIGHT (FT.)	SECTION LENGTH	TOP SLAB THK.	HDWL DEPTH	BOTTOM SLAB THK.	SIDE WALL THK.	INTERIOR WALL THK.	OVERALL WIDTH	OVERALL HEIGHT	TOP SLAB REINF. STEEL "a" SIZE	"a" SPACING	"a" LENGTHS VARY	"a" NO. REQ'D	TOP SLAB REINF. STEEL "c" SIZE	"c" SPACING	"c" LENGTHS VARY	"c" NO. REQ'D	BOTTOM SLAB REINF. STEEL "d" SIZE	"d" SPACING	"d" LENGTHS VARY	"d" NO. REQ'D	BOTTOM SLAB REINF. STEEL "f" SIZE	"f" SPACING	"f" LENGTHS VARY	"f" NO. REQ'D	SIDE WALL REINF. STEEL "f0" SIZE	"f0" SPACING	"f0" NO. REQ'D	"f0" LENGTH	INTERIOR WALL REINF. STEEL "f1" SIZE	"f1" SPACING	"f1" NO. REQ'D	"f1" LENGTH	TOP SLAB DISTRIBUTION REINF. STEEL "g" SIZE	"g" SPACING	"g" NO. REQ'D	"g" LENGTHS VARY	BOTTOM SLAB DISTRIBUTION REINF. STEEL "e" SIZE	"e" SPACING	"e" NO. REQ'D	"e" LENGTHS VARY	SIDE WALL DISTRIBUTION REINF. STEEL "d1" SIZE	"d1" SPACING	"d1" NO. REQ'D	"d1" LENGTH	INTERIOR WALL DISTRIBUTION REINF. STEEL "d2" SIZE	"d2" SPACING	"d2" NO. REQ'D	"d2" LENGTH
SK	SL	D	S	H	LL	T	HD	B	C	W	OW	OH	SIZE	SPACING	Max 28'-4" Min 4'-6"	NO. REQ'D	SIZE	SPACING	Max 28'-4" Min 4'-6"	NO. REQ'D	SIZE	SPACING	Max 28'-4" Min 4'-6"	NO. REQ'D	SIZE	SPACING	Max 28'-4" Min 4'-6"	NO. REQ'D	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	Max 12'-3" Min 1'-10"	SIZE	SPACING	NO. REQ'D	Max 12'-3" Min 1'-10"	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH
20	3:1	10	5	4	7'-3"	8	3	9	6	8	28'-8"	5'-5"	4	11		10	4	11		10	4	9		12	4	11		10	4	9	20	5'-1"	4	12	72	5'-1"	4	12	59		4	12	59		4	12	4	LONG 12'-2"	4	12	8	LONG 10'-2"
																																																SHORT 1'-11"			16	MID 8'-1"
																																																	8	SHORT 3'-11"

"k1" HDWL BARS SIZE	"k1" HDWL BARS LENGTH	"k1" HDWL BARS NO. REQ'D	"k2" HDWL BARS SIZE	"k2" HDWL BARS LENGTH	"k2" HDWL BARS NO. REQ'D	"h" HDWL BARS SIZE	"h" HDWL BARS LENGTH	"h" HDWL BARS Y	"h" HDWL BARS NO. REQ'D
4	30'-2"	6	4	30'-2"	6	4	1'-7"	0'-7"	32

CLASS "S" CONCRETE (Includes HDWL) CU. YDS.	REINFORCING STEEL (GR 60) (Includes HDWL) LBS.
15.53	2030

① Any Bar Lap Required for the Skewed End Section shall be considered subsidiary to the item "Reinforcing Steel - Roadway (Grade 60)."

INLET SLOPE SECTION(S)

R.C. BOX SECTION D	DESIGN FILL DEPTH (FT.) S	CLEAR SPAN (FT.) H	CLEAR HEIGHT (FT.) T	TOP SLAB THK. B	BOTTOM SLAB THK. C	SIDE WALL THK. W	INTERIOR WALL THK. OW	OVER ALL WIDTH OH	OVER ALL HEIGHT SL	SECTION LENGTH (FT.)	TOP SLAB REINF. STEEL LENGTH = OW - 4" + BENDS "a" SIZE	"a" L	Bent "b" SIZE	Bent "b" L	"c" SIZE	"c" L	SPACING	NO. REQ'D	BOTTOM SLAB REINF. STEEL LENGTH = OW - 4" + BENDS "d" SIZE	"d" L	Bent "b1" SIZE	Bent "b1" L	"f" SIZE	"f" L	SPACING	NO. REQ'D	SIDE WALL REINF. STEEL "f0" LENGTH = OH - 4" SIZE	SPACING	NO. REQ'D	LENGTH	INTERIOR WALL REINF. STEEL "f1" LENGTH = OH - 4" SIZE	SPACING	NO. REQ'D	LENGTH	TOP SLAB DISTRIBUTION REINF. STEEL "g" LENGTH = SL SIZE	SPACING	NO. REQ'D	BOTTOM SLAB DISTRIBUTION REINF. STEEL "e" LENGTH = SL SIZE	SPACING	NO. REQ'D	SIDE WALL DISTRIBUTION REINF. STEEL "d1" LENGTH = SL SIZE	SPACING	NO. REQ'D	INTERIOR WALL DISTRIBUTION REINF. STEEL "d2" LENGTH = SL SIZE	SPACING	NO. REQ'D
A	10	5	4	8	9	6	8	28'-8"	5'-5"	215.5	4	28'-4"	4	29'-0"	4	28'-4"	18	143	4	28'-4"	4	29'-0"	4	28'-4"	17	152	4	7.5	688	5'-1"	4	12	1720	5'-1"	4	12	59	4	12	59	4	12	8	4	12	32

CLASS "S" CONCRETE CU. YDS.	REINFORCING STEEL (GR. 60) LBS.
441.20	48790

HDWL DEPTH HD	ADDITIONAL REINF. FOR HDWL LBS.	"h" HDWL BARS SIZE	"h" HDWL BARS Y	"h" HDWL BARS LENGTH	"h" HDWL BARS NO. REQ'D

CLASS "S" CONCRETE CU. YDS.	REINFORCING STEEL (GR. 60) LBS.
TOTAL	

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

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

SHEET 1 OF 2
DETAILS OF R.C. BOX CULVERT
QUINTUPLE BARREL BOX CULVERT
Sta. 2116+40

SPECIAL DETAILS

CGGervasini 6/28/2024 12:58 PM
WORKSPACE: AHTD
\\garverinc.local\gdata\Projects\2021\21T0046 - ARDOT 10052 Walnut Ridge - MO 1-57\Drawings\r10172\r10172_SD_BOX CULVERT_216+40.dgn
REVISED DATE:
V 1.17

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	30	325
		SPECIAL DETAILS				

STATE OF ARKANSAS ★★★ LICENSED PROFESSIONAL ENGINEER ★★★ No.13436 SHAUN A. ROBERSON

DIGITALLY SIGNED 6/28/2024

TABULAR DATA BY: CGG DATE: 1/14/2024
CHECKED BY: SAR DATE: 5/8/2024

OUTLET WINGWALL TABLE

OVER ALL WIDTH	CLEAR HEIGHT	FOOTING THK.	WING WALL THK.	BOX SKEW (DEG.)	SLOPE	HDWL LENGTH	HEEL	WALL HEIGHT		WINGWALL ANGLE (DEGREE)		FOOTING WIDTH AT WALL END	WIDTH OF WING FOOTINGS AT HDWL		FOOTING DIMENSION PARALLEL WITH HDWL		LENGTH OF WINGWALLS		LENGTH OF FOOTING HEEL	
								AT HDWL	AT WING END	WING A	WING B		WING A	WING B	WING A	WING B	WING A	WING B	WING A	WING B
OW	H	WB	CW	SK	SL	K	HL	WH1	WH2	AF1	AF2	WE	WF1	WF2	G1	G2	W1	W2	W3	W4
28'-8"	4'-0"	0'-9"	0'-8"	20	3:1	29'-5 1/4"	1'-0"	4'-10"	1'-4"	10	50	2'-2"	2'-4 3/4"	2'-7 7/8"	0'-6 3/4"	0'-4 1/8"	10'-6"	16'-0"	12'-4 5/8"	17'-10 5/8"

CLASS "S" CONCRETE (Includes apron)	REINFORCING STEEL (Includes apron and laps if required)
OUTLET	OUTLET
CU.YD	LBS.
7.28	539

WING	F1 BAR SIZE	F1 MAX. SPACING	F1 NO. REQ'D	F1 LENGTHS VARY			F2 BAR SIZE	F2 SPACING	F2 NO. REQ'D	F2 LENGTHS		F3 BAR SIZE	F3 SPACING	F3 NO. REQ'D	F3 LENGTHS		F4 BAR SIZE	F4 SPACING	F4 NO. REQ'D	F4 LENGTHS VARY	F5 BAR SIZE	F5 SPACING	F5 NO. REQ'D	F5 LENGTHS	F6 BAR SIZE	F6 SPACING	F6 NO. REQ'D	F6 LENGTHS VARY			F7 BAR SIZE	F7 NO. REQ'D	F7 LENGTHS	F8 BAR SIZE	F8 SPACING	F8 NO. REQ'D	F8 LENGTHS VARY	F9 BAR SIZE	F9 SPACING	F9 NO. REQ'D	F9 LENGTHS	F10 BAR SIZE	F10 NO. REQ'D	F10 LENGTHS	F11 BAR SIZE	F11 NO. REQ'D	F11 LENGTHS	F12 BAR SIZE	F12 SPACING	F12 NO. REQ'D	F12 LENGTHS		REINF. STEEL QTY. PER WING (LBS)
WING A	4	12	11	L	Min	2'-4"	-	-	-	L	-	-	-	-	L	-	4	18	4	Min	4	18	2	10'-2"	4	18	7	L	Min	3'-3"	4	6	13'-3"	6	18	7	Min	-	-	-	Min	4	2	10'-7"	4	2	11'-6"	6	12	4	L	3'-4"	223
					Max	5'-11"														3'-4"								Max	6'-3"									1'-8"											
				X	Min	0'-9"				X	-				X	-				Max								Min	1'-4"									Max									X	1'-8"	
					Max	1'-0"														7'-10"								Max	1'-4"									1'-11"											
				Y	Min	1'-8"				Y	-				Y	-				Min								Min	2'-0"									Min											
					Max	5'-0"														5'-2"								Max	5'-0"									1'-8"											
WING B	4	12	16	L	Min	2'-5"	-	-	-	L	-	-	-	-	L	-	4	18	4	Min	4	18	2	15'-8"	4	18	11	L	Min	3'-0"	4	6	18'-9"	6	18	11	Min	-	-	-	Min	4	2	15'-11"	4	2	18'-1"	6	12	4	L	3'-4"	316
					Max	6'-2"														5'-2"								Max	6'-3"									1'-8"											
				X	Min	0'-9"				X	-				X	-				Max								Min	1'-4"									Max									X	1'-8"	
					Max	1'-3"														12'-0"								Max	1'-4"									2'-2"											
				Y	Min	1'-9"				Y	-				Y	-				Min								Min	1'-9"									Min											
					Max	5'-0"														5'-2"								Max	5'-0"									1'-8"											

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

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

① Any Bar Lap Required for the Skewed End Section shall be considered subsidiary to the item "Reinforcing Steel - Roadway (Grade 60)."

OUTLET SKEWED END SECTION

SKEW (DEGREE)	SLOPE	DESIGN FILL DEPTH (FT.)	CLEAR SPAN (FT.)	CLEAR HEIGHT (FT.)	SECTION LENGTH	TOP SLAB THK.	HDWL DEPTH	BOTTOM SLAB THK.	SIDE WALL THK.	INTERIOR WALL THK.	OVERALL WIDTH	OVERALL HEIGHT	TOP SLAB REINFORCING STEEL "a" SIZE	"a" SPACING	"a" LENGTHS VARY	"a" NO. REQ'D	TOP SLAB REINFORCING STEEL "c" SIZE	"c" SPACING	"c" LENGTHS VARY	"c" NO. REQ'D	BOTTOM SLAB REINFORCING STEEL "d" SIZE	"d" SPACING	"d" LENGTHS VARY	"d" NO. REQ'D	BOTTOM SLAB REINFORCING STEEL "f" SIZE	"f" SPACING	"f" LENGTHS VARY	"f" NO. REQ'D	SIDE WALL REINFORCING STEEL "f0" SIZE	"f0" SPACING	"f0" NO. REQ'D	"f0" LENGTH	INTERIOR WALL REINFORCING STEEL "f1" SIZE	"f1" SPACING	"f1" NO. REQ'D	"f1" LENGTH	TOP SLAB DISTRIBUTION REINFORCING STEEL "g" SIZE	"g" SPACING	"g" NO. REQ'D	"g" LENGTHS VARY	BOTTOM SLAB DISTRIBUTION REINFORCING STEEL "e" SIZE	"e" SPACING	"e" NO. REQ'D	"e" LENGTHS VARY	SIDE WALL DISTRIBUTION REINFORCING STEEL "d1" SIZE	"d1" SPACING	"d1" NO. REQ'D	"d1" LENGTH	INTERIOR WALL DISTRIBUTION REINFORCING STEEL "d2" SIZE	"d2" SPACING	"d2" NO. REQ'D	"d2" LENGTH
SK	SL	D	S	H	LL	T	HD	B	C	W	OW	OH																																									
20	3:1	10	5	4	7'-3"	8	3	9	6	8	28'-8"	5'-5"	4	11	Max 28'-4" Min 4'-6"	10	4	11	Max 28'-4" Min 4'-6"	10	4	9	Max 28'-4" Min 4'-6"	12	4	11	Max 28'-4" Min 4'-6"	10	4	9	20	5'-1"	4	12	72	5'-1"	4	12	59	Max 12'-3" Min 1'-10"	4	12	59	Max 12'-3" Min 1'-10"	4	12	4	LONG 12'-2" SHORT 1'-11"	4	12	8	LONG 10'-2" MID 8'-1" SHORT 3'-11"
															28'-4"	3			28'-4"	3			28'-4"	3			28'-4"	3																												

CLASS "S" CONCRETE (Includes HDWL)	① REINFORCING STEEL (GR 60) (Includes HDWL)
CU. YDS.	LBS.
15.53	2030

"k1" HDWL BARS			"k2" HDWL BARS			"h" HDWL BARS			
SIZE	LENGTH	NO. REQ'D	SIZE	LENGTH	NO. REQ'D	SIZE	LENGTH	Y	NO. REQ'D
4	30'-2"	6	4	30'-2"	6	4	1'-7"	0'-7"	32

OUTLET SLOPE SECTION(S)

R.C. BOX SECTION	DESIGN FILL DEPTH (FT.)	CLEAR SPAN (FT.)	CLEAR HEIGHT (FT.)	TOP SLAB THK.	BOTTOM SLAB THK.	SIDE WALL THK.	INTERIOR WALL THK.	OVER ALL WIDTH	OVER ALL HEIGHT	SECTION LENGTH (FT.)	TOP SLAB REINFORCING STEEL LENGTH = OW - 4" + BENDS "a" SIZE	"a" L	Bent "b" SIZE	Bent "b" L	"c" SIZE	"c" L	SPACING	NO. REQ'D	BOTTOM SLAB REINFORCING STEEL LENGTH = OW - 4" + BENDS "d" SIZE	"d" L	Bent "b1" SIZE	Bent "b1" L	"f" SIZE	"f" L	SPACING	NO. REQ'D	SIDE WALL REINFORCING STEEL "f0" LENGTH = OH - 4" SIZE	SPACING	NO. REQ'D	LENGTH	INTERIOR WALL REINFORCING STEEL "f1" LENGTH = OH - 4' SIZE	SPACING	NO. REQ'D	LENGTH	TOP SLAB DISTRIBUTION REINF. STEEL "g" LENGTH = SL SIZE	SPACING	NO. REQ'D	BOTTOM SLAB DISTRIBUTION REINF. STEEL "e" LENGTH = SL SIZE	SPACING	NO. REQ'D	SIDE WALL DISTRIBUTION REINF. STEEL "d1" LENGTH = SL SIZE	SPACING	NO. REQ'D	INTERIOR WALL DISTRIBUTION REINF. STEEL "d2" LENGTH = SL SIZE	SPACING	NO. REQ'D
	D	S	H	T	B	C	W	OW	OH	SL																																										

HDWL DEPTH	ADDITIONAL REINF. FOR HDWL	"h" BARS			
HD	LBS.	SIZE	Y	LENGTH	NO. REQ'D

CLASS "S" CONCRETE	REINFORCING STEEL (GR 60)
CU. YDS.	LBS.
TOTAL	

The required number of bars and lengths shown are for estimating purpose only. The actual number and length required shall be determined in field.

Unless otherwise noted, all dimensions are in inches.

SHEET 2 OF 2
DETAILS OF R.C. BOX CULVERT

QUINTUPLE BARREL BOX CULVERT
Sta. 2116+40

SPECIAL DETAILS

LRFD

CGGervasini 6/28/2024 12:28:08 PM
WORKSPACE: AHTD
\\garverinc.local\gdata\Projects\2021\21101046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_SD.BOX CULVERT_216+40.dgn
REVISED DATE:
V 1.1.17

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	31	325
		SPECIAL DETAILS				

INLET WINGWALL TABLE

OVER ALL WIDTH	CLEAR HEIGHT	FOOTING THK.	WING WALL THK.	BOX SKEW (DEG.)	SLOPE	HDWL LENGTH	HEEL	WALL HEIGHT AT HDWL	WALL HEIGHT AT WING END	WINGWALL ANGLE (DEGREE) WING A	WINGWALL ANGLE (DEGREE) WING B	FOOTING WIDTH AT WALL END	WIDTH OF WING FOOTINGS AT HDWL WING A	WIDTH OF WING FOOTINGS AT HDWL WING B	FOOTING DIMENSION PARALLEL WITH HDWL WING A	FOOTING DIMENSION PARALLEL WITH HDWL WING B	LENGTH OF WINGWALLS WING A	LENGTH OF WINGWALLS WING B	LENGTH OF FOOTING HEEL WING A	LENGTH OF FOOTING HEEL WING B
OW	H	WB	CW	SK	SL	K	HL	WH1	WH2	AF1	AF2	WE	WF1	WF2	G1	G2	W1	W2	W3	W4
11'-8"	4'-0"	0'-9"	0'-8"	23	3:1	11'-7"	1'-0"	4'-10"	1'-4"	7	53	2'-2"	2'-4 3/4"	2'-7 7/8"	0'-7 3/8"	0'-3 3/4"	10'-6"	17'-0"	12'-4 5/8"	18'-10 5/8"

CLASS "S" CONCRETE (Includes apron)	REINFORCING STEEL (Includes apron and laps if required)
INLET	INLET
CU.YD	LBS.
5.39	534

WING	F1 BAR SIZE	F1 MAX. SPACING	F1 NO. REQ'D	F1 LENGTHS VARY			F2 BAR SIZE	F2 SPACING	F2 NO. REQ'D	F2 LENGTHS			F3 BAR SIZE	F3 SPACING	F3 NO. REQ'D	F3 LENGTHS			F4 BAR SIZE	F4 SPACING	F4 NO. REQ'D	F4 LENGTHS VARY
WING A	4	12	11	L	Min	2'-4"	-	-	-	L	-		-	-	-	L	-		4	18	4	Min
					Max	5'-11"																3'-4"
				X	Min	0'-9"				X	-					X	-					Max
					Max	1'-0"																7'-10"
				Y	Min	1'-8"				Y	-					Y	-					
					Max	5'-0"																
WING B	4	12	17	L	Min	2'-5"	-	-	-	L	-		-	-	-	L	-		4	18	4	Min
					Max	6'-2"																5'-6"
				X	Min	0'-9"				X	-					X	-					Max
					Max	1'-3"																12'-9"
				Y	Min	1'-9"				Y	-					Y	-					
					Max	5'-0"																

WING	F5 BAR SIZE	F5 SPACING	F5 NO. REQ'D	F5 LENGTHS	F6 BAR SIZE	F6 SPACING	F6 NO. REQ'D	F6 LENGTHS VARY			F7 BAR SIZE	F7 NO. REQ'D	F7 LENGTHS	F8 BAR SIZE	F8 SPACING	F8 NO. REQ'D	F8 LENGTHS VARY			F9 BAR SIZE	F9 SPACING	F9 NO. REQ'D	F9 LENGTHS
WING A	4	18	2	10'-2"	4	18	7	L	Min	3'-3"	4	6	13'-3"	6	18	7	Min			-	-	-	Min
									Max	6'-3"													-
								X	Min	1'-4"							Max						Max
									Max	1'-4"													-
								Y	Min	2'-0"							1'-11"						
									Max	5'-0"													
WING B	4	18	2	16'-8"	4	18	12	L	Min	2'-11"	4	6	19'-9"	6	18	12	Min			-	-	-	Min
									Max	6'-3"													-
								X	Min	1'-4"							Max						Max
									Max	1'-4"													-
								Y	Min	1'-8"							2'-2"						
									Max	5'-0"													

WING	F10 BAR SIZE	F10 NO. REQ'D	F10 LENGTHS	F11 BAR SIZE	F11 NO. REQ'D	F11 LENGTHS	F12 BAR SIZE	F12 SPACING	F12 NO. REQ'D	F12 LENGTHS		REINF. STEEL QTY. PER WING (LBS)
WING A	4	2	10'-7"	4	2	11'-5"	6	12	4	L	3'-4"	211
										X	1'-8"	
WING B	4	2	16'-10"	4	2	19'-3"	6	12	4	L	3'-4"	323
										X	1'-8"	

MID-SECTION

BAR LAP TABLE

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

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

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

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

① Any Bar Lap Required for the Skewed End Section shall be considered subsidiary to the item "Reinforcing Steel - Roadway (Grade 60)."

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

TABULAR DATA BY: CGG DATE: 4/2/2024
CHECKED BY: SAR DATE: 5/8/2024

INLET SKEWED END SECTION

SKEW (DEGREE) SK	SLOPE SL	DESIGN FILL DEPTH (FT.) D	CLEAR SPAN (FT.) S	CLEAR HEIGHT (FT.) H	SECTION LENGTH LL	TOP SLAB THK. T	HDWL DEPTH HD	BOTTOM SLAB THK. B	SIDE WALL THK. C	INTERIOR WALL THK. W	OVER ALL WIDTH OW	OVER ALL HEIGHT OH
23	3:1	10	5	4	4'-6"	8	3	9	6	8	11'-8"	5'-5"

TOP SLAB REINFORCING STEEL "a" SIZE	"a" SPACING	"a" LENGTHS VARY	"a" NO. REQ'D	"c" SIZE	"c" SPACING	"c" LENGTHS VARY	"c" NO. REQ'D
4	11	Max 11'-4" / Min 3'-11"	4	4	9	Max 11'-4" / Min 3'-11"	5
		11'-4"	3			11'-4"	3

BOTTOM SLAB REINFORCING STEEL "d" SIZE	"d" SPACING	"d" LENGTHS VARY	"d" NO. REQ'D	"f" SIZE	"f" SPACING	"f" LENGTHS VARY	"f" NO. REQ'D
4	8.5	Max 11'-4" / Min 3'-11"	5	4	11	Max 11'-4" / Min 3'-11"	4
		11'-4"	3			11'-4"	3

SIDE WALL REINFORCING STEEL "f0" SIZE	SPACING	NO. REQ'D	LENGTH
4	8.5	13	5'-1"

INTERIOR WALL REINFORCING STEEL "f1" SIZE	SPACING	NO. REQ'D	LENGTH
4	12	10	5'-1"

TOP SLAB DISTRIBUTION REINFORCING STEEL "g" SIZE	SPACING	NO. REQ'D	LENGTHS VARY
4	12	23	Max 6'-9" / Min 1'-10"

BOTTOM SLAB DISTRIBUTION REINFORCING STEEL "e" SIZE	SPACING	NO. REQ'D	LENGTHS VARY
4	12	23	Max 6'-9" / Min 1'-10"

SIDE WALL DISTRIBUTION REINFORCING STEEL "d1" SIZE	SPACING	NO. REQ'D	LENGTH
4	12	4	LONG 6'-8"
		4	SHORT 2'-0"

INTERIOR WALL DISTRIBUTION REINFORCING STEEL "d2" SIZE	SPACING	NO. REQ'D	LENGTH
4	12	8	4'-4"

"k1" HDWL BARS SIZE	LENGTH	NO. REQ'D
4	12'-0"	6

"k2" HDWL BARS SIZE	LENGTH	NO. REQ'D
4	12'-0"	6

"h" HDWL BARS SIZE	LENGTH	Y	NO. REQ'D
4	1'-7"	0'-7"	14

CLASS "S" CONCRETE (Includes HDWL) CU. YDS.	① REINFORCING STEEL (GR 60) (Includes HDWL) LBS.
4.10	550

INLET SLOPE SECTION(S)

R.C. BOX SECTION	DESIGN FILL DEPTH (FT.) D	CLEAR SPAN (FT.) S	CLEAR HEIGHT (FT.) H	TOP SLAB THK. T	BOTTOM SLAB THK. B	SIDE WALL THK. C	INTERIOR WALL THK. W	OVER ALL WIDTH OW	OVER ALL HEIGHT OH	SECTION LENGTH (FT.) SL

TOP SLAB REINFORCING STEEL — LENGTH = OW - 4" + BENDS

"a" SIZE	"a" L	Bent "b" SIZE	Bent "b" L	"c" SIZE	"c" L	SPACING	NO. REQ'D

BOTTOM SLAB REINFORCING STEEL — LENGTH = OW - 4" + BENDS

"d" SIZE	"d" L	Bent "b1" SIZE	Bent "b1" L	"f" SIZE	"f" L	SPACING	NO. REQ'D

SIDE WALL REINFORCING STEEL "f0" LENGTH = OH - 4" SIZE	SPACING	NO. REQ'D	LENGTH

INTERIOR WALL REINFORCING STEEL "f1" LENGTH = OH - 4" SIZE	SPACING	NO. REQ'D	LENGTH

TOP SLAB DISTRIBUTION REINF. STEEL "g" LENGTH = SL SIZE	SPACING	NO. REQ'D

BOTTOM SLAB DISTRIBUTION REINF. STEEL "e" LENGTH = SL SIZE	SPACING	NO. REQ'D

SIDE WALL DISTRIBUTION REINF. STEEL "d1" LENGTH = SL SIZE	SPACING	NO. REQ'D

INTERIOR WALL DISTRIBUTION REINF. STEEL "d2" LENGTH = SL SIZE	SPACING	NO. REQ'D

HDWL DEPTH HD	ADDITIONAL REINF. FOR HDWL LBS.	"h" HDWL BARS SIZE	Y	LENGTH	NO. REQ'D

CLASS "S" CONCRETE CU. YDS.	REINFORCING STEEL (GR. 60) LBS.
TOTAL	

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

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

MID-SECTION

R.C. BOX SECTION	DESIGN FILL DEPTH (FT.) D	CLEAR SPAN (FT.) S	CLEAR HEIGHT (FT.) H	TOP SLAB THK. T	BOTTOM SLAB THK. B	SIDE WALL THK. C	INTERIOR WALL THK. W	OVER ALL WIDTH OW	OVER ALL HEIGHT OH	SECTION LENGTH (FT.) SL
A	10	5	4	8.0	9	6.0	8	11'-8"	5'-5"	211

TOP SLAB REINFORCING STEEL — LENGTH = OW - 4" + BENDS

"a" SIZE	"a" L	Bent "b" SIZE	Bent "b" L	"c" SIZE	"c" L	SPACING	NO. REQ'D
4	11'-4"	4	11'-6"	4	11'-4"	17	148

BOTTOM SLAB REINFORCING STEEL — LENGTH = OW - 4" + BENDS

"d" SIZE	"d" L	Bent "b1" SIZE	Bent "b1" L	"f" SIZE	"f" L	SPACING	NO. REQ'D
4	11'-4"	4	11'-6"	4	11'-4"	15	168

SIDE WALL REINFORCING STEEL "f0" LENGTH = OH - 4" SIZE	SPACING	NO. REQ'D	LENGTH
4	7	722	5'-1"

INTERIOR WALL REINFORCING STEEL "f1" LENGTH = OH - 4" SIZE	SPACING	NO. REQ'D	LENGTH
4	12	422	5'-1"

TOP SLAB DISTRIBUTION REINF. STEEL "g" LENGTH = SL SIZE	SPACING	NO. REQ'D
4	12	23

BOTTOM SLAB DISTRIBUTION REINF. STEEL "e" LENGTH = SL SIZE	SPACING	NO. REQ'D
4	12	23

SIDE WALL DISTRIBUTION STEEL "d1" LENGTH = SL SIZE	SPACING	NO. REQ'D
4	12	8

INTERIOR WALL DISTRIBUTION STEEL "d2" LENGTH = SL SIZE	SPACING	NO. REQ'D
4	12	8

CLASS "S" CONCRETE CU. YDS.	REINFORCING STEEL (GR. 60) LBS.
181.26	20243

SHEET 1 OF 2
DETAILS OF R.C. BOX CULVERT
DOUBLE BARREL BOX CULVERT
STA. 2172+23

SPECIAL DETAILS

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	32	325
		SPECIAL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

TABULAR DATA BY: CGG DATE: 4/2/2024
CHECKED BY: SAR DATE: 5/8/2024

OUTLET WINGWALL TABLE

OVER ALL WIDTH	CLEAR HEIGHT	FOOTING THK.	WING WALL THK.	BOX SKEW (DEG.)	SLOPE	HDWL LENGTH	HEEL	WALL HEIGHT		WINGWALL ANGLE (DEGREE)		FOOTING WIDTH AT WALL END	WIDTH OF WING FOOTINGS AT HDWL		FOOTING DIMENSION PARALLEL WITH HDWL		LENGTH OF WINGWALLS		LENGTH OF FOOTING HEEL	
								AT HDWL	AT WING END	WING A	WING B		WING A	WING B	WING A	WING B	WING A	WING B	WING A	WING B
OW	H	WB	CW	SK	SL	K	HL	WH1	WH2	AF1	AF2	WE	WF1	WF2	G1	G2	W1	W2	W3	W4
11'-8"	4'-0"	0'-9"	0'-8"	23	3:1	11'-7"	1'-0"	4'-10"	1'-4"	7	53	2'-2"	2'-4 3/4"	2'-7 7/8"	0'-7 3/8"	0'-3 3/4"	10'-6"	17'-0"	12'-4 5/8"	18'-10 5/8"

CLASS "S" CONCRETE (Includes apron)	REINFORCING STEEL (Includes apron and laps if required)
OUTLET	OUTLET
CU.YD	LBS.
5.98	534

WING	F1 BAR SIZE	F1 MAX. SPACING	F1 NO. REQ'D	F1 LENGTHS VARY			F2 BAR SIZE	F2 SPACING	F2 NO. REQ'D	F2 LENGTHS		F3 BAR SIZE	F3 SPACING	F3 NO. REQ'D	F3 LENGTHS		F4 BAR SIZE	F4 SPACING	F4 NO. REQ'D	F4 LENGTHS VARY
WING A	4	12	11	L	Min	2'-4"	-	-	-	-		-	-	-	-		4	18	4	Min
					Max	5'-11"														3'-4"
				X	Min	0'-9"				X	-				X	-				Max
					Max	1'-0"														7'-10"
				Y	Min	1'-8"				Y	-				Y	-				
					Max	5'-0"														
WING B	4	12	17	L	Min	2'-5"	-	-	-	-		-	-	-	-		4	18	4	Min
					Max	6'-2"														5'-6"
				X	Min	0'-9"				X	-				X	-				Max
					Max	1'-3"														12'-9"
				Y	Min	1'-9"				Y	-				Y	-				
					Max	5'-0"														

WING	F5 BAR SIZE	F5 SPACING	F5 NO. REQ'D	F5 LENGTHS	F6 BAR SIZE	F6 SPACING	F6 NO. REQ'D	F6 LENGTHS VARY			F7 BAR SIZE	F7 NO. REQ'D	F7 LENGTHS	F8 BAR SIZE	F8 SPACING	F8 NO. REQ'D	F8 LENGTHS VARY		F9 BAR SIZE	F9 SPACING	F9 NO. REQ'D	F9 LENGTHS
WING A	4	18	2	10'-2"	4	18	7	L	Min	3'-3"	4	6	13'-3"	6	18	7	Min		-	-	-	Min
									Max	6'-3"							1'-8"					-
								X	Min	1'-4"							Max					Max
									Max	1'-4"							1'-11"					-
								Y	Min	2'-0"												
									Max	5'-0"												
WING B	4	18	2	16'-8"	4	18	12	L	Min	2'-11"	4	6	19'-9"	6	18	12	Min		-	-	-	Min
									Max	6'-3"							1'-8"					-
								X	Min	1'-4"							Max					Max
									Max	1'-4"							2'-2"					-
								Y	Min	1'-8"												
									Max	5'-0"												

WING	F10 BAR SIZE	F10 NO. REQ'D	F10 LENGTHS	F11 BAR SIZE	F11 NO. REQ'D	F11 LENGTHS	F12 BAR SIZE	F12 SPACING	F12 NO. REQ'D	F12 LENGTHS		REINF. STEEL QTY. PER WING (LBS)
WING A	4	2	10'-7"	4	2	11'-5"	6	12	4	L	3'-4"	211
										X	1'-8"	
WING B	4	2	16'-10"	4	2	19'-3"	6	12	4	L	3'-4"	323
										X	1'-8"	

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

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

① Any Bar Lap Required for the Skewed End Section shall be considered subsidiary to the item "Reinforcing Steel - Roadway (Grade 60)."

OUTLET SKEWED END SECTION

SKEW (DEGREE)	SLOPE	DESIGN FILL DEPTH (FT.)	CLEAR SPAN (FT.)	CLEAR HEIGHT (FT.)	SECTION LENGTH	TOP SLAB THK.	HDWL DEPTH	BOTTOM SLAB THK.	SIDE WALL THK.	INTERIOR WALL THK.	OVER ALL WIDTH	OVER ALL HEIGHT	TOP SLAB REINFORCING STEEL "a" SIZE	"a" SPACING	"a" LENGTHS VARY	"a" NO. REQ'D	TOP SLAB REINFORCING STEEL "c" SIZE	"c" SPACING	"c" LENGTHS VARY	"c" NO. REQ'D
SK	SL	D	S	H	LL	T	HD	B	C	W	OW	OH								
23	3:1	10	5	4	4'-6"	8	3	9	6	8	11'-8"	5'-5"	4	11	Max	4	4	9	Max	5
															11'-4"				11'-4"	
															Min				Min	
															3'-11"				3'-11"	
															11'-4"	3			11'-4"	3

BOTTOM SLAB REINFORCING STEEL "d" SIZE	"d" SPACING	"d" LENGTHS VARY	"d" NO. REQ'D	BOTTOM SLAB REINFORCING STEEL "f" SIZE	"f" SPACING	"f" LENGTHS VARY	"f" NO. REQ'D	SIDE WALL REINFORCING STEEL "f0" SIZE	"f0" SPACING	"f0" NO. REQ'D	"f0" LENGTH	INTERIOR WALL REINFORCING STEEL "f1" SIZE	"f1" SPACING	"f1" NO. REQ'D	"f1" LENGTH	TOP SLAB DISTRIBUTION REINFORCING STEEL "g" SIZE	"g" SPACING	"g" NO. REQ'D	"g" LENGTHS VARY
4	8.5	Max	5	4	11	Max	4	4	8.5	13	5'-1"	4	12	10	5'-1"	4	12	23	Max
		11'-4"				11'-4"													6'-9"
		Min				Min													Min
		3'-11"				3'-11"													1'-10"
4	8.5	11'-4"	3	4	11	11'-4"	3	4	8.5	13	5'-1"	4	12	10	5'-1"	4	12	23	

BOTTOM SLAB DISTRIBUTION REINFORCING STEEL "e" SIZE	"e" SPACING	"e" NO. REQ'D	"e" LENGTHS VARY	SIDE WALL DISTRIBUTION REINFORCING STEEL "d1" SIZE	"d1" SPACING	"d1" NO. REQ'D	"d1" LENGTH	INTERIOR WALL DISTRIBUTION REINFORCING STEEL "d2" SIZE	"d2" SPACING	"d2" NO. REQ'D	"d2" LENGTH	CLASS "S" CONCRETE (Includes HDWL) CU. YDS.	REINFORCING STEEL (GR 60) (Includes HDWL) LBS.
4	12	23	Max	4	12	4	LONG	4	12	8	4'-4"	4.10	550
			6'-9"				6'-8"						
			Min			4	SHORT						
			1'-10"				2'-0"						

"k1" HDWL BARS			"k2" HDWL BARS			"h" HDWL BARS			
SIZE	LENGTH	NO. REQ'D	SIZE	LENGTH	NO. REQ'D	SIZE	LENGTH	Y	NO. REQ'D
4	12'-0"	6	4	12'-0"	6	4	1'-7"	0'-7"	14

OUTLET SLOPE SECTION(S)

R.C. BOX SECTION	DESIGN FILL DEPTH (FT.)	CLEAR SPAN (FT.)	CLEAR HEIGHT (FT.)	TOP SLAB THK.	BOTTOM SLAB THK.	SIDE WALL THK.	INTERIOR WALL THK.	OVER ALL WIDTH	OVER ALL HEIGHT	SECTION LENGTH (FT.)	TOP SLAB REINFORCING STEEL LENGTH = OW - 4" + BENDS "a" SIZE	"a" L	Bent "b" SIZE	Bent "b" L	"c" SIZE	"c" L	"c" SPACING	"c" NO. REQ'D
D	S	H	T	B	C	W	OW	OH	SL									

BOTTOM SLAB REINFORCING STEEL LENGTH = OW - 4" + BENDS "d" SIZE	"d" L	Bent "b1" SIZE	Bent "b1" L	"f" SIZE	"f" L	"f" SPACING	"f" NO. REQ'D	SIDE WALL REINFORCING STEEL "f0" LENGTH = OH - 4" SIZE	"f0" SPACING	"f0" NO. REQ'D	"f0" LENGTH	INTERIOR WALL REINFORCING STEEL "f1" LENGTH = OH - 4" SIZE	"f1" SPACING	"f1" NO. REQ'D	"f1" LENGTH	TOP SLAB DISTRIBUTION REINF. STEEL "g" LENGTH = SL SIZE	"g" SPACING	"g" NO. REQ'D

BOTTOM SLAB DISTRIBUTION REINF. STEEL "e" LENGTH = SL SIZE	"e" SPACING	"e" NO. REQ'D	SIDE WALL DISTRIBUTION REINF. STEEL "d1" LENGTH = SL SIZE	"d1" SPACING	"d1" NO. REQ'D	INTERIOR WALL DISTRIBUTION REINF. STEEL "d2" LENGTH = SL SIZE	"d2" SPACING	"d2" NO. REQ'D	CLASS "S" CONCRETE CU. YDS.	REINFORCING STEEL (GR 60) LBS.
									TOTAL	

HDWL DEPTH	ADDITIONAL REINF. FOR HDWL	"h" HDWL BARS			
HD	LBS.	SIZE	Y	LENGTH	NO. REQ'D

The required number of bars and lengths shown are for estimating purpose only. The actual number and length required shall be determined in field.

Unless otherwise noted, all dimensions are in inches.

SHEET 2 OF 2
DETAILS OF R.C. BOX CULVERT
DOUBLE BARREL BOX CULVERT
STA. 2172+23

SPECIAL DETAILS

LRFD

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	33	325
		SPECIAL DETAILS				

INLET WINGWALL TABLE

OVER ALL WIDTH	CLEAR HEIGHT	FOOTING THK.	WING WALL THK.	BOX SKEW (DEG.)	SLOPE	HDWL LENGTH	HEEL	WALL HEIGHT AT HDWL	WALL HEIGHT AT WING END	WINGWALL ANGLE (DEGREE) WING A	WINGWALL ANGLE (DEGREE) WING B	FOOTING WIDTH AT WALL END	WIDTH OF WING FOOTINGS AT HDWL WING A	WIDTH OF WING FOOTINGS AT HDWL WING B	FOOTING DIMENSION PARALLEL WITH HDWL WING A	FOOTING DIMENSION PARALLEL WITH HDWL WING B	LENGTH OF WINGWALLS WING A	LENGTH OF WINGWALLS WING B	LENGTH OF FOOTING HEEL WING A	LENGTH OF FOOTING HEEL WING B	CLASS "S" CONCRETE (Includes apron) INLET	REINFORCING STEEL (Includes apron and laps if required) INLET
OW	H	WB	CW	SK	SL	K	HL	WH1	WH2	AF1	AF2	WE	WF1	WF2	G1	G2	W1	W2	W3	W4	CU.YD	LBS.
11'-8"	4'-0"	0'-9"	0'-8"	0	3:1	10'-8"	1'-0"	4'-10"	1'-4"	30	30	2'-2"	2'-5 3/4"	2'-5 3/4"	0'-4 3/8"	0'-4 3/8"	12'-0"	12'-0"	13'-10 5/8"	13'-10 5/8"	4.71	470

WING	F1 BAR SIZE	F1 MAX. SPACING	F1 NO. REQ'D	F1 LENGTHS VARY			F2 BAR SIZE	F2 SPACING	F2 NO. REQ'D	F2 LENGTHS			F3 BAR SIZE	F3 SPACING	F3 NO. REQ'D	F3 LENGTHS			F4 BAR SIZE	F4 SPACING	F4 NO. REQ'D	F4 LENGTHS VARY
WING A	4	12	12	L	Min	2'-6"	-	-	-	L	-		-	-	-	L	-		4	18	4	Min
					Max	6'-0"																3'-10"
				X	Min	0'-9"				X	-					X	-					Max
					Max	1'-1"																9'-0"
				Y	Min	1'-10"				Y	-					Y	-					
					Max	5'-0"																
WING B	4	12	12	L	Min	2'-6"	-	-	-	L	-		-	-	-	L	-		4	18	4	Min
					Max	6'-0"																3'-10"
				X	Min	0'-9"				X	-					X	-					Max
					Max	1'-1"																9'-0"
				Y	Min	1'-10"				Y	-					Y	-					
					Max	5'-0"																

WING	F5 BAR SIZE	F5 SPACING	F5 NO. REQ'D	F5 LENGTHS	F6 BAR SIZE	F6 SPACING	F6 NO. REQ'D	F6 LENGTHS VARY			F7 BAR SIZE	F7 NO. REQ'D	F7 LENGTHS	F8 BAR SIZE	F8 SPACING	F8 NO. REQ'D	F8 LENGTHS VARY			F9 BAR SIZE	F9 SPACING	F9 NO. REQ'D	F9 LENGTHS
WING A	4	18	2	11'-8"	4	18	8	L	Min	3'-2"	4	6	14'-9"	6	18	8	Min		1'-8"	-	-	-	Min
									Max	6'-3"													-
								X	Min	1'-4"									Max				Max
									Max	1'-4"									2'-0"				-
								Y	Min	1'-11"													
									Max	5'-0"													
WING B	4	18	2	11'-8"	4	18	8	L	Min	3'-2"	4	6	14'-9"	6	18	8	Min		1'-8"	-	-	-	Min
									Max	6'-3"													-
								X	Min	1'-4"									Max				Max
									Max	1'-4"									2'-0"				-
								Y	Min	1'-11"													
									Max	5'-0"													

WING	F10 BAR SIZE	F10 NO. REQ'D	F10 LENGTHS	F11 BAR SIZE	F11 NO. REQ'D	F11 LENGTHS	F12 BAR SIZE	F12 SPACING	F12 NO. REQ'D	F12 LENGTHS		REINF. STEEL QTY. PER WING (LBS)
WING A	4	2	12'-0"	4	2	13'-4"	6	12	4	L	3'-4"	235
										X	1'-8"	
WING B	4	2	12'-0"	4	2	13'-4"	6	12	4	L	3'-4"	235
										X	1'-8"	

MID-SECTION

BAR LAP TABLE

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

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

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

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBBERSON

DIGITALLY SIGNED 6/28/2024

TABULAR DATA BY: CGG DATE: 4/2/2024
CHECKED BY: SAR DATE: 5/8/2024

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

① Any Bar Lap Required for the Skewed End Section shall be considered subsidiary to the item "Reinforcing Steel - Roadway (Grade 60)."

INLET SKEWED END SECTION

SKEW (DEGREE)	SLOPE	DESIGN FILL DEPTH (FT.)	CLEAR SPAN (FT.)	CLEAR HEIGHT (FT.)	SECTION LENGTH	TOP SLAB THK.	HDWL DEPTH	BOTTOM SLAB THK.	SIDE WALL THK.	INTERIOR WALL THK.	OVER ALL WIDTH	OVER ALL HEIGHT
SK	SL	D	S	H	LL	T	HD	B	C	W	OW	OH

TOP SLAB REINFORCING STEEL "a" SIZE	"a" SPACING	"a" LENGTHS VARY	"a" NO. REQ'D	"c" SIZE	"c" SPACING	"c" LENGTHS VARY	"c" NO. REQ'D
		Max				Max	
		Min				Min	

BOTTOM SLAB REINFORCING STEEL "d" SIZE	"d" SPACING	"d" LENGTHS VARY	"d" NO. REQ'D	"f" SIZE	"f" SPACING	"f" LENGTHS VARY	"f" NO. REQ'D
		Max				Max	
		Min				Min	

SIDE WALL REINFORCING STEEL "f0" SIZE	"f0" SPACING	"f0" NO. REQ'D	"f0" LENGTH

INTERIOR WALL REINFORCING STEEL "f1" SIZE	"f1" SPACING	"f1" NO. REQ'D	"f1" LENGTH

TOP SLAB DISTRIBUTION REINFORCING STEEL "g" SIZE	"g" SPACING	"g" NO. REQ'D	"g" LENGTHS VARY
			Max
			Min

BOTTOM SLAB DISTRIBUTION REINFORCING STEEL "e" SIZE	"e" SPACING	"e" NO. REQ'D	"e" LENGTHS VARY
			Max
			Min

SIDE WALL DISTRIBUTION REINFORCING STEEL "d1" SIZE	"d1" SPACING	"d1" NO. REQ'D	"d1" LENGTH
			LONG
			SHORT

INTERIOR WALL DISTRIBUTION REINFORCING STEEL "d2" SIZE	"d2" SPACING	"d2" NO. REQ'D	"d2" LENGTH

CLASS "S" CONCRETE (Includes HDWL) CU. YDS.	① REINFORCING STEEL (CR 60) (Includes HDWL) LBS.

"k1" HDWL BARS SIZE	"k1" HDWL BARS LENGTH	"k1" HDWL BARS NO. REQ'D	"k2" HDWL BARS SIZE	"k2" HDWL BARS LENGTH	"k2" HDWL BARS NO. REQ'D	"h" HDWL BARS SIZE	"h" HDWL BARS LENGTH	"h" HDWL BARS Y	"h" HDWL BARS NO. REQ'D

INLET SLOPE SECTION(S)

R.C. BOX SECTION	DESIGN FILL DEPTH (FT.)	CLEAR SPAN (FT.)	CLEAR HEIGHT (FT.)	TOP SLAB THK.	BOTTOM SLAB THK.	SIDE WALL THK.	INTERIOR WALL THK.	OVER ALL WIDTH	OVER ALL HEIGHT	SECTION LENGTH (FT.)
D	S	H	T	B	C	W	OW	OH	SL	

TOP SLAB REINFORCING STEEL LENGTH = OW - 4" + BENDS "a" SIZE	"a" L	Bent "b" SIZE	Bent "b" L	"c" SIZE	"c" L	SPACING	NO. REQ'D

BOTTOM SLAB REINFORCING STEEL LENGTH = OW - 4" + BENDS "d" SIZE	"d" L	Bent "b1" SIZE	Bent "b1" L	"f" SIZE	"f" L	SPACING	NO. REQ'D

SIDE WALL REINFORCING STEEL "f0" LENGTH = OH - 4" SIZE	SPACING	NO. REQ'D	LENGTH

INTERIOR WALL REINFORCING STEEL "f1" LENGTH = OH - 4" SIZE	SPACING	NO. REQ'D	LENGTH

TOP SLAB DISTRIBUTION REINF. STEEL "g" LENGTH = SL SIZE	SPACING	NO. REQ'D

BOTTOM SLAB DISTRIBUTION REINF. STEEL "e" LENGTH = SL SIZE	SPACING	NO. REQ'D

SIDE WALL DISTRIBUTION REINF. STEEL "d1" LENGTH = SL SIZE	SPACING	NO. REQ'D

INTERIOR WALL DISTRIBUTION REINF. STEEL "d2" LENGTH = SL SIZE	SPACING	NO. REQ'D

HDWL DEPTH	ADDITIONAL REINF. FOR HDWL	"h" HDWL BARS SIZE	Y	LENGTH	NO. REQ'D
HD	LBS.				
3"	15	4	0'-7"	1'-7"	13

CLASS "S" CONCRETE CU. YDS.	REINFORCING STEEL (GR. 60) LBS.
TOTAL	
0.11	29

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

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

MID-SECTION

R.C. BOX SECTION	DESIGN FILL DEPTH (FT.)	CLEAR SPAN (FT.)	CLEAR HEIGHT (FT.)	TOP SLAB THK.	BOTTOM SLAB THK.	SIDE WALL THK.	INTERIOR WALL THK.	OVER ALL WIDTH	OVER ALL HEIGHT	SECTION LENGTH (FT.)
D	S	H	T	B	C	W	OW	OH	SL	
A	10	5	4	8.0	9	6.0	8	11'-8"	5'-5"	204

TOP SLAB REINFORCING STEEL LENGTH = OW - 4" + BENDS "a" SIZE	"a" L	Bent "b" SIZE	Bent "b" L	"c" SIZE	"c" L	SPACING	NO. REQ'D
4	11'-4"	4	11'-6"	4	11'-4"	17	144

BOTTOM SLAB REINFORCING STEEL LENGTH = OW - 4" + BENDS "d" SIZE	"d" L	Bent "b1" SIZE	Bent "b1" L	"f" SIZE	"f" L	SPACING	NO. REQ'D
4	11'-4"	4	11'-6"	4	11'-4"	15	163

SIDE WALL REINFORCING STEEL "f0" LENGTH = OH - 4" SIZE	SPACING	NO. REQ'D	LENGTH
4	7	698	5'-1"

INTERIOR WALL REINFORCING STEEL "f1" LENGTH = OH - 4" SIZE	SPACING	NO. REQ'D	LENGTH
4	12	408	5'-1"

TOP SLAB DISTRIBUTION REINF. STEEL "g" LENGTH = SL SIZE	SPACING	NO. REQ'D
4	12	23

BOTTOM SLAB DISTRIBUTION REINF. STEEL "e" LENGTH = SL SIZE	SPACING	NO. REQ'D
4	12	23

SIDE WALL DISTRIBUTION STEEL "d1" LENGTH = SL SIZE	SPACING	NO. REQ'D
4	12	8

INTERIOR WALL DISTRIBUTION STEEL "d2" LENGTH = SL SIZE	SPACING	NO. REQ'D
4	12	8

CLASS "S" CONCRETE CU. YDS.	REINFORCING STEEL (GR. 60) LBS.
175.25	19583

SHEET 1 OF 2
DETAILS OF R.C. BOX CULVERT
DOUBLE BARREL BOX CULVERT
STA. 2202+00

SPECIAL DETAILS

CGGervasini 6/28/2024 12:28:41 PM
WORKSPACE: AHTD
\\garverinc.local\gdata\Projects\2021\101046 - ARDOT 100512 Walnut Ridge - M0 I-57\Drawings\r101172\r101172_SD_BOX CULVERT_2202+00.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	34	325
		SPECIAL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13436
SHAUN A. ROBBERSON

DIGITALLY SIGNED 6/28/2024

TABULAR DATA BY: CGG DATE: 4/2/2024
CHECKED BY: SAR DATE: 5/8/2024

OUTLET WINGWALL TABLE

OVER ALL WIDTH	CLEAR HEIGHT	FOOTING THK.	WING WALL THK.	BOX SKEW (DEG.)	SLOPE	HDWL LENGTH	HEEL	WALL HEIGHT AT HDWL	WALL HEIGHT AT WING END	WINGWALL ANGLE (DEGREE) WING A	WINGWALL ANGLE (DEGREE) WING B	FOOTING WIDTH AT WALL END	WIDTH OF WING FOOTINGS AT HDWL WING A	WIDTH OF WING FOOTINGS AT HDWL WING B	FOOTING DIMENSION PARALLEL WITH HDWL WING A	FOOTING DIMENSION PARALLEL WITH HDWL WING B	LENGTH OF WINGWALLS WING A	LENGTH OF WINGWALLS WING B	LENGTH OF FOOTING HEEL WING A	LENGTH OF FOOTING HEEL WING B
OW	H	WB	CW	SK	SL	K	HL	WH1	WH2	AF1	AF2	WE	WF1	WF2	G1	G2	W1	W2	W3	W4
11'-8"	4'-0"	0'-9"	0'-8"	0	3:1	10'-8"	1'-0"	4'-10"	1'-4"	30	30	2'-2"	2'-5 3/4"	2'-5 3/4"	0'-4 3/8"	0'-4 3/8"	12'-0"	12'-0"	13'-10 5/8"	13'-10 5/8"

CLASS "S" CONCRETE (Includes apron)	REINFORCING STEEL (Includes apron and laps if required)
OUTLET	OUTLET
CU.YD	LBS.
5.24	470

WING	F1 BAR SIZE	F1 MAX. SPACING	F1 NO. REQ'D	F1 LENGTHS VARY			F2 BAR SIZE	F2 SPACING	F2 NO. REQ'D	F2 LENGTHS			F3 BAR SIZE	F3 SPACING	F3 NO. REQ'D	F3 LENGTHS			F4 BAR SIZE	F4 SPACING	F4 NO. REQ'D	F4 LENGTHS VARY
WING A	4	12	12	L	Min	2'-6"	-	-	-	-	L	-	-	-	-	-	L	-	4	18	4	Min
					Max	6'-0"																3'-10"
				X	Min	0'-9"					X	-					X	-				Max
					Max	1'-1"																9'-0"
				Y	Min	1'-10"					Y	-					Y	-				
					Max	5'-0"																
WING B	4	12	12	L	Min	2'-6"	-	-	-	-	L	-	-	-	-	-	L	-	4	18	4	Min
					Max	6'-0"																3'-10"
				X	Min	0'-9"					X	-					X	-				Max
					Max	1'-1"																9'-0"
				Y	Min	1'-10"					Y	-					Y	-				
					Max	5'-0"																

WING	F5 BAR SIZE	F5 SPACING	F5 NO. REQ'D	F5 LENGTHS	F6 BAR SIZE	F6 SPACING	F6 NO. REQ'D	F6 LENGTHS VARY			F7 BAR SIZE	F7 NO. REQ'D	F7 LENGTHS	F8 BAR SIZE	F8 SPACING	F8 NO. REQ'D	F8 LENGTHS VARY			F9 BAR SIZE	F9 SPACING	F9 NO. REQ'D	F9 LENGTHS
WING A	4	18	2	11'-8"	4	18	8	L	Min	3'-2"	4	6	14'-9"	6	18	8	Min			-	-	-	Min
									Max	6'-3"							1'-8"						-
								X	Min	1'-4"							Max						Max
									Max	1'-4"							2'-0"						-
								Y	Min	1'-11"							-						
									Max	5'-0"													
WING B	4	18	2	11'-8"	4	18	8	L	Min	3'-2"	4	6	14'-9"	6	18	8	Min			-	-	-	Min
									Max	6'-3"							1'-8"						-
								X	Min	1'-4"							Max						Max
									Max	1'-4"							2'-0"						-
								Y	Min	1'-11"							-						
									Max	5'-0"													

WING	F10 BAR SIZE	F10 NO. REQ'D	F10 LENGTHS	F11 BAR SIZE	F11 NO. REQ'D	F11 LENGTHS	F12 BAR SIZE	F12 SPACING	F12 NO. REQ'D	F12 LENGTHS		REINF. STEEL QTY. PER WING (LBS)
WING A	4	2	12'-0"	4	2	13'-4"	6	12	4	L	3'-4"	235
										X	1'-8"	
WING B	4	2	12'-0"	4	2	13'-4"	6	12	4	L	3'-4"	235
										X	1'-8"	

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

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

① Any Bar Lap Required for the Skewed End Section shall be considered subsidiary to the item "Reinforcing Steel - Roadway (Grade 60)."

OUTLET SKEWED END SECTION

SKEW (DEGREE)	SLOPE	DESIGN FILL DEPTH (FT.)	CLEAR SPAN (FT.)	CLEAR HEIGHT (FT.)	SECTION LENGTH	TOP SLAB THK.	HDWL DEPTH	BOTTOM SLAB THK.	SIDE WALL THK.	INTERIOR WALL THK.	OVER ALL WIDTH	OVER ALL HEIGHT	TOP SLAB REINFORCING STEEL "a" SIZE	"a" SPACING	"a" LENGTHS VARY	"a" NO. REQ'D	TOP SLAB REINFORCING STEEL "c" SIZE	"c" SPACING	"c" LENGTHS VARY	"c" NO. REQ'D	BOTTOM SLAB REINFORCING STEEL "d" SIZE	"d" SPACING	"d" LENGTHS VARY	"d" NO. REQ'D	BOTTOM SLAB REINFORCING STEEL "f" SIZE	"f" SPACING	"f" LENGTHS VARY	"f" NO. REQ'D
SK	SL	D	S	H	LL	T	HD	B	C	W	OW	OH																
															Max				Max				Max				Max	
															Min				Min				Min				Min	

SIDE WALL REINFORCING STEEL "f0" SIZE	SPACING	NO. REQ'D	LENGTH	INTERIOR WALL REINFORCING STEEL "f1" SIZE	SPACING	NO. REQ'D	LENGTH	TOP SLAB DISTRIBUTION REINFORCING STEEL "g" SIZE	SPACING	NO. REQ'D	LENGTHS VARY	BOTTOM SLAB DISTRIBUTION REINFORCING STEEL "e" SIZE	SPACING	NO. REQ'D	LENGTHS VARY	SIDE WALL DISTRIBUTION REINFORCING STEEL "d1" SIZE	SPACING	NO. REQ'D	LENGTH	INTERIOR WALL DISTRIBUTION REINFORCING STEEL "d2" SIZE	SPACING	NO. REQ'D	LENGTH
											Max				Max				LONG				
											Min				Min				SHORT				

CLASS "S" CONCRETE (Includes HDWL) CU. YDS.	① REINFORCING STEEL (GR 60) (Includes HDWL) LBS.

"k1" HDWL BARS SIZE	LENGTH	NO. REQ'D

"k2" HDWL BARS SIZE	LENGTH	NO. REQ'D

"h" HDWL BARS SIZE	LENGTH	Y	NO. REQ'D

OUTLET SLOPE SECTION(S)

R.C. BOX SECTION	DESIGN FILL DEPTH (FT.)	CLEAR SPAN (FT.)	CLEAR HEIGHT (FT.)	TOP SLAB THK.	BOTTOM SLAB THK.	SIDE WALL THK.	INTERIOR WALL THK.	OVER ALL WIDTH	OVER ALL HEIGHT	SECTION LENGTH (FT.)	TOP SLAB REINFORCING STEEL LENGTH = OW - 4" + BENDS "a" SIZE	"a" L	Bent "b" SIZE	Bent "b" L	"c" SIZE	"c" L	"c" SPACING	"c" NO. REQ'D	BOTTOM SLAB REINFORCING STEEL LENGTH = OW - 4" + BENDS "d" SIZE	"d" L	Bent "b1" SIZE	Bent "b1" L	"f" SIZE	"f" L	"f" SPACING	"f" NO. REQ'D
	D	S	H	T	B	C	W	OW	OH	SL																

SIDE WALL REINFORCING STEEL LENGTH = OH - 4" "f0" SIZE	SPACING	NO. REQ'D	LENGTH	INTERIOR WALL REINFORCING STEEL LENGTH = OH - 4" "f1" SIZE	SPACING	NO. REQ'D	LENGTH	TOP SLAB DISTRIBUTION REINF. STEEL LENGTH = SL "g" SIZE	SPACING	NO. REQ'D	BOTTOM SLAB DISTRIBUTION REINF. STEEL LENGTH = SL "e" SIZE	SPACING	NO. REQ'D	SIDE WALL DISTRIBUTION REINF. STEEL LENGTH = SL "d1" SIZE	SPACING	NO. REQ'D	INTERIOR WALL DISTRIBUTION REINF. STEEL LENGTH = SL "d2" SIZE	SPACING	NO. REQ'D

CLASS "S" CONCRETE CU. YDS.	REINFORCING STEEL (GR 60) LBS.
TOTAL	
0.11	29

HDWL DEPTH HD	ADDITIONAL REINF. FOR HDWL LBS.
3"	15

"h" HDWL BARS SIZE	Y	LENGTH	NO. REQ'D
4	0'-7"	1'-7"	13

The required number of bars and lengths shown are for estimating purpose only. The actual number and length required shall be determined in field.

Unless otherwise noted, all dimensions are in inches.

SHEET 2 OF 2
DETAILS OF R.C. BOX CULVERT

DOUBLE BARREL BOX CULVERT
STA. 2202+00

SPECIAL DETAILS

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WORKSPACE: AHTD
\\garverinc.local\gdata\Projects\2021\21T0046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_SD_BOX CULVERT_2202+00.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	35	325
		SPECIAL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON

DIGITALLY SIGNED 6/28/2024

TABULAR DATA BY: CGG DATE: 4/2/2024
CHECKED BY: SAR DATE: 5/8/2024

INLET WINGWALL TABLE

OVER ALL WIDTH	CLEAR HEIGHT	FOOTING THK.	WING WALL THK.	BOX SKEW (DEG.)	SLOPE	HDWL LENGTH	HEEL	WALL HEIGHT AT HDWL	WALL HEIGHT AT WING END	WINGWALL ANGLE (DEGREE) WING A	WINGWALL ANGLE (DEGREE) WING B	FOOTING WIDTH AT WALL END	WIDTH OF WING FOOTINGS AT HDWL WING A	WIDTH OF WING FOOTINGS AT HDWL WING B	FOOTING DIMENSION PARALLEL WITH HDWL WING A	FOOTING DIMENSION PARALLEL WITH HDWL WING B	LENGTH OF WINGWALLS WING A	LENGTH OF WINGWALLS WING B	LENGTH OF FOOTING HEEL WING A	LENGTH OF FOOTING HEEL WING B
OW	H	WB	CW	SK	SL	K	HL	WH1	WH2	AF1	AF2	WE	WF1	WF2	G1	G2	W1	W2	W3	W4
5'-0"	3'-0"	0'-9"	0'-8"	11	3:1	4'-0 7/8"	1'-0"	3'-10"	1'-0"	19	41	2'-2"	2'-2"	2'-2"	0'-2 1/4"	-0'--2 -1/2"	8'-6"	11'-0"	10'-4 5/8"	12'-10 5/8"

CLASS "S" CONCRETE (Includes apron)	REINFORCING STEEL (Includes apron and laps if required)
INLET	INLET
CU.YD	LBS.
3.16	346

WING	F1 BAR SIZE	F1 MAX. SPACING	F1 NO. REQ'D	F1 LENGTHS VARY	F1 LENGTHS	F2 BAR SIZE	F2 SPACING	F2 NO. REQ'D	F2 LENGTHS	F3 BAR SIZE	F3 SPACING	F3 NO. REQ'D	F3 LENGTHS	F4 BAR SIZE	F4 SPACING	F4 NO. REQ'D	F4 LENGTHS VARY	F5 BAR SIZE	F5 SPACING	F5 NO. REQ'D	F5 LENGTHS	F6 BAR SIZE	F6 SPACING	F6 NO. REQ'D	F6 LENGTHS VARY	F6 LENGTHS	F7 BAR SIZE	F7 NO. REQ'D	F7 LENGTHS	F8 BAR SIZE	F8 SPACING	F8 NO. REQ'D	F8 LENGTHS VARY	F9 BAR SIZE	F9 SPACING	F9 NO. REQ'D	F9 LENGTHS	F10 BAR SIZE	F10 NO. REQ'D	F10 LENGTHS	F11 BAR SIZE	F11 NO. REQ'D	F11 LENGTHS	F12 BAR SIZE	F12 SPACING	F12 NO. REQ'D	F12 LENGTHS	REINF. STEEL QTY. PER WING (LBS)
WING A	4	12	9	L	Min 2'-0"				L -				L -	4	18	2	Min	4	18	2	8'-2"	4	18	6	L Min 2'-9"		4	6	11'-3"	6	18	6	Min				Min	4	2	8'-6"	4	2	9'-6"	6	12	3	L 3'-4"	156
					Max 4'-8"												4'-10"								X Min 1'-4"								1'-8"				-								
				X	Min 0'-9"	-	-	-	X -	-	-	-	X -												X Max 1'-4"											Max									X 1'-8"	
					Max 0'-9"												Max																		-										
				Y	Min 1'-4"				Y -				Y -												Y Min 1'-6"																						
					Max 4'-0"												4'-10"																														
WING B	4	12	11	L	Min 2'-1"				L -				L -	4	18	2	Min	4	18	2	10'-8"	4	18	8	L Min 2'-7"		4	6	13'-9"	6	18	7	Min				Min	4	2	10'-11"	4	2	12'-3"	6	12	3	L 3'-4"	190
					Max 4'-8"												6'-4"								X Min 1'-4"								1'-8"				-								
				X	Min 0'-9"	-	-	-	X -	-	-	-	X -												X Max 1'-4"											Max									X 1'-8"	
					Max 0'-9"												Max																		-										
				Y	Min 1'-5"				Y -				Y -												Y Min 1'-8"																						
					Max 4'-0"												6'-4"																														

INLET SKEWED END SECTION

SKEW (DEGREE)	SLOPE	DESIGN FILL DEPTH (FT.)	CLEAR SPAN (FT.)	CLEAR HEIGHT (FT.)	SECTION LENGTH	TOP SLAB THICKNESS	BOTTOM SLAB THK.	SIDE WALL THICKNESS	HEADWALL DEPTH	OVER ALL WIDTH	OVER ALL HEIGHT	TOP SLAB REINFORCING STEEL "a" SIZE	"a" SPACING	"a" LENGTHS VARY	"a" NO. REQ'D	BOTTOM SLAB REINFORCING STEEL "b" SIZE	"b" SPACEING	"b" LENGTHS VARY	"b" NO. REQ'D	SIDE WALL REINFORCING STEEL "f" SIZE	"f" SPACING	"f" NO. REQ'D	"f" LENGTH	TOP SLAB DISTRIBUTION REINFORCING STEEL "d" SIZE	"d" SPACING	"d" NO. REQ'D	"d" LENGTHS VARY	BOTTOM SLAB DISTRIBUTION REINFORCING STEEL "e" SIZE	"e" SPACING	"e" NO. REQ'D	"e" LENGTHS VARY	SIDE WALL DISTRIBUTION REINFORCING STEEL "d1" SIZE	"d1" SPACING	"d1" NO. REQ'D	"d1" LENGTH	HEADWALL REINFORCING STEEL "k1", "k2" & "h"				CLASS "S" CONCRETE (Includes HDWL) CU. YDS.	REINFORCING STEEL (GR 60) (Includes HDWL) LBS.
SK	SL	D	S	H	LL	T	B	C	HD	OW	OH																											BAR	SIZE	NO. REQ'D	LENGTH		
11	3:1	10	4	3	2'-6"	7	7	6	3	5'-0"	4'-2"	4	8.5	Max 4'-8" Min	0	4	8	Max 4'-8" Min	0	4	9	7	3'-10"	4	12	5	Max 2'-10" Min 1'-10"	4	12	5	Max 2'-10" Min 1'-10"	4	12	3	LONG 2'-10" SHORT 1'-10"	"k1"	4	6	4'-9"	0.92	107
														4'-8"	3			4'-8"	3																	"k2"	4	6	4'-9"		
																																3				"h"	4	7	1'-6" Y 0'-6"		

① Any Bar Lap Required for the Skewed End Section shall be considered subsidiary to the item "Reinforcing Steel - Roadway (Grade 60)."

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

INLET SLOPE SECTION(S)

R.C. BOX SECTION	DESIGN FILL DEPTH (FT.)	CLEAR SPAN (FT.)	CLEAR HEIGHT (FT.)	TOP SLAB THICKNESS	BOTTOM SLAB THK.	SIDE WALL THICKNESS	OVER ALL WIDTH	OVER ALL HEIGHT	SECTION LENGTH (FT.)	TOP SLAB REINFORCING STEEL "a" LENGTH = OW - 4" SIZE	SPACING	NO. REQ'D	LENGTH	BOTTOM SLAB REINFORCING STEEL "b" LENGTH = OW - 4" SIZE	SPACING	NO. REQ'D	LENGTH	SIDE WALL REINFORCING STEEL "f" LENGTH = OH - 4" SIZE	SPACING	NO. REQ'D	LENGTH	TOP SLAB DISTRIBUTION REINF. STEEL "d" LENGTH = SL SIZE	SPACING	NO. REQ'D	BOTTOM SLAB DISTRIBUTION REINF. STEEL "e" LENGTH = SL SIZE	SPACING	NO. REQ'D	SIDE WALL DISTRIBUTION REINF.STEEL "d1" LENGTH = SL SIZE	SPACING	NO. REQ'D	CLASS "S" CONCRETE CU. YDS.	REINFORCING STEEL (GR. 50) LBS.
D	S	H	T	B	C	OW	OH	SL																									
HDWL DEPTH	ADDITIONAL REINF. FOR HDWL									"h" HDWL BARS																						TOTAL	
HD	LBS									SIZE		Y		LENGTH		NO. REQ'D																	

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

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

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

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

MID-SECTION

R.C. BOX SECTION	DESIGN FILL DEPTH (FT.)	CLEAR SPAN (FT.)	CLEAR HEIGHT (FT.)	TOP SLAB THK.	BOTTOM SLAB THK.	SIDE WALL THK	OVER ALL WIDTH	OVER ALL HEIGHT	SECTION LENGTH (FT.)	TOP SLAB REINFORCING STEEL "a" LENGTH = OW - 4" SIZE	SPACING	NO. REQ'D	LENGTH	BOTTOM SLAB REINFORCING STEEL "b" LENGTH = OW - 4" SIZE	SPACING	NO. REQ'D	LENGTH	SIDE WALL REINFORCING STEEL "f" LENGTH = OH - 4" SIZE	SPACING	NO. REQ'D	LENGTH	TOP SLAB DISTRIBUTION REINF. STEEL "d" LENGTH = SL SIZE	SPACING	NO. REQ'D	BOTTOM SLAB DISTRIBUTION REINF. STEEL "e" LENGTH = SL SIZE	SPACING	NO. REQ'D	SIDE WALL DISTRIBUTION REINF. STEEL "d1" LENGTH = SL SIZE	SPACING	NO. REQ'D	CLASS "S" CONCRETE CU. YDS.	REINFORCING STEEL (Gr. 60) LBS.
	D	S	H	T	B	C	OW	OH	SL																								
A	10	4	3	7	7	6	5'-0"	4'-2"	249.00	4	8.5	351	4'-8"	4	8	373	4'-8"	4	9	664	3'-10"	4	12	5	4	12	5	4	12	6	81.46	6734

MID-SECTION BAR LAP TABLE

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

SHEET 1 OF 2
DETAILS OF R.C. BOX CULVERT
SINGLE BARREL BOX CULVERT
STA. 2219+35

SPECIAL DETAILS

CGervasini 6/28/2024 12:29:00 PM
WORKSPACE: AHTD
\\garverinc.local\gdata\Projects\2021\21T0046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_SD_BOX CULVERT_2219+35.dgn
REVISED DATE:
V 1.1.17

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	36	325
		SPECIAL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBBERSON

DIGITALLY SIGNED 6/28/2024

TABULAR DATA BY: CGG DATE: 4/2/2024
CHECKED BY: SAR DATE: 5/8/2024

OUTLET WINGWALL TABLE

OVER ALL WIDTH	CLEAR HEIGHT	FOOTING THK.	WING WALL THK.	BOX SKEW (DEG.)	SLOPE	HDWL LENGTH	HEEL	WALL HEIGHT AT HDWL	WALL HEIGHT AT WING END	WINGWALL ANGLE (DEGREE) WING A	WINGWALL ANGLE (DEGREE) WING B	FOOTING WIDTH AT WALL END	WIDTH OF WING FOOTINGS AT HDWL WING A	WIDTH OF WING FOOTINGS AT HDWL WING B	FOOTING DIMENSION PARALLEL WITH HDWL WING A	FOOTING DIMENSION PARALLEL WITH HDWL WING B	LENGTH OF WINGWALLS WING A	LENGTH OF WINGWALLS WING B	LENGTH OF FOOTING HEEL WING A	LENGTH OF FOOTING HEEL WING B
OW	H	WB	CW	SK	SL	K	HL	WH1	WH2	AF1	AF2	WE	WF1	WF2	G1	G2	W1	W2	W3	W4
5'-0"	3'-0"	0'-9"	0'-8"	11	3:1	4'-0 7/8"	1'-0"	3'-10"	1'-0"	19	41	2'-2"	2'-2"	2'-2"	0'-2 1/4"	-0'--2 -1/2"	8'-6"	11'-0"	10'-4 5/8"	12'-10 5/8"

CLASS "S" CONCRETE (Includes apron)	REINFORCING STEEL (Includes apron and laps if required)
OUTLET	OUTLET
CU.YD	LBS.
3.48	346

WING	F1 BAR SIZE	F1 MAX. SPACING	F1 NO. REQ'D	F1 LENGTHS VARY	F1 LENGTHS	F2 BAR SIZE	F2 SPACING	F2 NO. REQ'D	F2 LENGTHS	F3 BAR SIZE	F3 SPACING	F3 NO. REQ'D	F3 LENGTHS	F4 BAR SIZE	F4 SPACING	F4 NO. REQ'D	F4 LENGTHS VARY	F5 BAR SIZE	F5 SPACING	F5 NO. REQ'D	F5 LENGTHS
WING A	4	12	9	L	Min 2'-0"	-	-	-	L -	-	-	-	L -	4	18	2	Min	4	18	2	8'-2"
					Max 4'-8"												4'-10"				
				X	Min 0'-9"				X -				X -				Max				
					Max 0'-9"												4'-10"				
				Y	Min 1'-4"				Y -				Y -								
					Max 4'-0"																
WING B	4	12	11	L	Min 2'-1"	-	-	-	L -	-	-	-	L -	4	18	2	Min	4	18	2	10'-8"
					Max 4'-8"												6'-4"				
				X	Min 0'-9"				X -				X -				Max				
					Max 0'-9"												6'-4"				
				Y	Min 1'-5"				Y -				Y -								
					Max 4'-0"																

WING	F6 BAR SIZE	F6 SPACING	F6 NO. REQ'D	F6 LENGTHS VARY	F6 LENGTHS	F7 BAR SIZE	F7 NO. REQ'D	F7 LENGTHS	F8 BAR SIZE	F8 SPACING	F8 NO. REQ'D	F8 LENGTHS VARY	F9 BAR SIZE	F9 SPACING	F9 NO. REQ'D	F9 LENGTHS	F10 BAR SIZE	F10 NO. REQ'D	F10 LENGTHS	F11 BAR SIZE	F11 NO. REQ'D	F11 LENGTHS	F12 BAR SIZE	F12 SPACING	F12 NO. REQ'D	F12 LENGTHS	REINF. STEEL QTY. PER WING (LBS)
WING A	4	18	6	L	Min 2'-9"	4	6	11'-3"	6	18	6	Min	-	-	-	Min	4	2	8'-6"	4	2	9'-6"	6	12	3	L 3'-4"	156
					Max 5'-3"							1'-8"				-										X 1'-8"	
				X	Min 1'-4"											Max											
					Max 1'-4"							1'-8"				-											
				Y	Min 1'-6"																						
					Max 4'-0"																						
WING B	4	18	8	L	Min 2'-7"	4	6	13'-9"	6	18	7	Min	-	-	-	Min	4	2	10'-11"	4	2	12'-3"	6	12	3	L 3'-4"	190
					Max 5'-3"							1'-8"				-										X 1'-8"	
				X	Min 1'-4"											Max											
					Max 1'-4"							1'-8"				-											
				Y	Min 1'-4"																						
					Max 4'-0"																						

OUTLET SKEWED END SECTION

SKEW (DEGREE)	SLOPE	DESIGN FILL DEPTH (FT.)	CLEAR SPAN (FT.)	CLEAR HEIGHT (FT.)	SECTION LENGTH	TOP SLAB THICKNESS	BOTTOM SLAB THK.	SIDE WALL THICKNESS	HEADWALL DEPTH	OVER ALL WIDTH	OVER ALL HEIGHT
SK	SL	D	S	H	LL	T	B	C	HD	OW	OH
11	3:1	10	4	3	2'-6"	7	7	6	3	5'-0"	4'-2"

TOP SLAB REINFORCING STEEL "a" SIZE	SPACING	LENGTHS VARY	NO. REQ'D
4	8.5	Max 4'-8"	0
		Mn 4'-8"	3

BOTTOM SLAB REINFORCING STEEL "b" SIZE	SPACEING	LENGTHS VARY	NO. REQ'D
4	8	Max 4'-8"	0
		Min 4'-8"	3

SIDE WALL REINFORCING STEEL "f" SIZE	SPACING	NO. REQ'D	LENGTH
4	9	7	3'-10"

TOP SLAB DISTRIBUTION REINFORCING STEEL "d" SIZE	SPACING	NO. REQ'D	LENGTHS VARY
4	12	5	Max 2'-10"
			Min 1'-10"

BOTTOM SLAB DISTRIBUTION REINFORCING STEEL "e" SIZE	SPACING	NO. REQ'D	LENGTHS VARY
4	12	5	Max 2'-10"
			Min 1'-10"

SIDE WALL DISTRIBUTION REINFORCING STEEL "d1" SIZE	SPACING	NO. REQ'D	LENGTH
4	12	3	LONG 2'-10"
		3	SHORT 1'-10"

HEADWALL REINFORCING STEEL "k1", "k2" & "h" BAR	SIZE	NO. REQ'D	LENGTH
"k1"	4	6	4'-9"
"k2"	4	6	4'-9"
			1'-6"
"h"	4	7	Y 0'-6"

CLASS "S" CONCRETE (Includes HDWL) CU. YDS.	① REINFORCING STEEL (GR. 60) (Includes HDWL) LBS.
0.92	107

① Any Bar Lap Required for the Skewed End Section shall be considered subsidiary to the item "Reinforcing Steel - Roadway (Grade 60)."

OUTLET SLOPE SECTION(S)

R.C. BOX SECTION	DESIGN FILL DEPTH (FT.)	CLEAR SPAN (FT.)	CLEAR HEIGHT (FT.)	TOP SLAB THICKNESS	BOTTOM SLAB THK.	SIDE WALL THICKNESS	OVER ALL WIDTH	OVER ALL HEIGHT	SECTION LENGTH (FT.)
	D	S	H	T	B	C	OW	OH	SL

TOP SLAB REINFORCING STEEL "a" LENGTH = OW - 4" SIZE	SPACING	NO. REQ'D	LENGTH

BOTTOM SLAB REINFORCING STEEL "b" LENGTH = OW - 4" SIZE	SPACING	NO. REQ'D	LENGTH

SIDE WALL REINFORCING STEEL "f" LENGTH = OH - 4" SIZE	SPACING	NO. REQ'D	LENGTH

TOP SLAB DISTRIBUTION REINF. STEEL "d" LENGTH = SL SIZE	SPACING	NO. REQ'D

BOTTOM SLAB DISTRIBUTION REINF. STEEL "e" LENGTH = SL SIZE	SPACING	NO. REQ'D

SIDE WALL DISTRIBUTION REINF.STEEL "d1" LENGTH = SL SIZE	SPACING	NO. REQ'D

CLASS "S" CONCRETE CU. YDS.	REINFORCING STEEL (GR. 50) LBS.
TOTAL	

HDWL DEPTH HD	ADDITIONAL REINF. FOR HDWL LBS

"h" HDWL BARS SIZE	Y	LENGTH	NO. REQ'D

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

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

The required number of bars and lengths shown are for estimating purpose only. The actual number and length required shall be determined in field.

Unless otherwise noted, all dimensions are in inches.

SHEET 2 OF 2
DETAILS OF R.C. BOX CULVERT
SINGLE BARREL BOX CULVERT
STA. 2219+35
SPECIAL DETAILS

CGervasini 6/28/2024 1:29:08 PM
WORKSPACE: AHTD
\\garver-inc.local\data\Projects\2021\21T0046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_SD_BOX CULVERT_2219+35.dgn
REVISED DATE:
V 1.1.17

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	37	325
		SPECIAL DETAILS				

INLET WINGWALL TABLE

OVER ALL WIDTH	CLEAR HEIGHT	FOOTING THK.	WING WALL THK.	BOX SKEW (DEG.)	SLOPE	HDWL LENGTH	HEEL	WALL HEIGHT AT HDWL	WALL HEIGHT AT WING END	WINGWALL ANGLE (DEGREE) WING A	WINGWALL ANGLE (DEGREE) WING B	FOOTING WIDTH AT WALL END	WIDTH OF WING FOOTINGS AT HDWL WING A	WIDTH OF WING FOOTINGS AT HDWL WING B	FOOTING DIMENSION PARALLEL WITH HDWL WING A	FOOTING DIMENSION PARALLEL WITH HDWL WING B	LENGTH OF WINGWALLS WING A	LENGTH OF WINGWALLS WING B	LENGTH OF FOOTING HEEL WING A	LENGTH OF FOOTING HEEL WING B
OW	H	WB	CW	SK	SL	K	HL	WH1	WH2	AF1	AF2	WE	WF1	WF2	G1	G2	W1	W2	W3	W4
15'-8"	4'-0"	0'-9"	0'-8"	0	3:1	14'-8"	1'-0"	4'-10"	1'-4"	30	30	2'-2"	2'-5 3/4"	2'-5 3/4"	0'-4 3/8"	0'-4 3/8"	12'-0"	12'-0"	13'-10 5/8"	13'-10 5/8"

CLASS "S" CONCRETE (Includes apron)	REINFORCING STEEL (Includes apron and laps if required)
INLET	INLET
CU.YD	LBS.
4.95	474

WING	F1 BAR SIZE	F1 MAX. SPACING	F1 NO. REQ'D	F1 LENGTHS VARY			F2 BAR SIZE	F2 SPACING	F2 NO. REQ'D	F2 LENGTHS			F3 BAR SIZE	F3 SPACING	F3 NO. REQ'D	F3 LENGTHS			F4 BAR SIZE	F4 SPACING	F4 NO. REQ'D	F4 LENGTHS VARY
WING A	4	12	12	L	Min	2'-6"	-	-	-	L	-		-	-	-	L	-		4	18	4	Min
					Max	6'-0"																3'-10"
				X	Min	0'-9"				X	-					X	-					Max
					Max	1'-1"																9'-0"
				Y	Min	1'-10"				Y	-					Y	-					
					Max	5'-0"																
WING B	4	12	12	L	Min	2'-6"	-	-	-	L	-		-	-	-	L	-		4	18	4	Min
					Max	6'-0"																3'-10"
				X	Min	0'-9"				X	-					X	-					Max
					Max	1'-1"																9'-0"
				Y	Min	1'-10"				Y	-					Y	-					
					Max	5'-0"																

WING	F5 BAR SIZE	F5 SPACING	F5 NO. REQ'D	F5 LENGTHS	F6 BAR SIZE	F6 SPACING	F6 NO. REQ'D	F6 LENGTHS VARY			F7 BAR SIZE	F7 NO. REQ'D	F7 LENGTHS	F8 BAR SIZE	F8 SPACING	F8 NO. REQ'D	F8 LENGTHS VARY			F9 BAR SIZE	F9 SPACING	F9 NO. REQ'D	F9 LENGTHS			F10 BAR SIZE	F10 NO. REQ'D	F10 LENGTHS	F11 BAR SIZE	F11 NO. REQ'D	F11 LENGTHS	F12 BAR SIZE	F12 SPACING	F12 NO. REQ'D	F12 LENGTHS			REINF. STEEL QTY. PER WING (LBS)
WING A	4	18	2	11'-8"	4	18	8	L	Min	3'-2"	4	6	14'-9"	6	18	8	L	Min	3'-2"	-	-	-	Min			4	2	12'-0"	4	2	13'-4"	6	12	4	L	3'-4"		237
									Max	6'-3"								Max	6'-3"				-														
								X	Min	1'-4"							X	Min	1'-4"				Max												X	1'-8"		
									Max	1'-4"								Max	1'-4"				-														
								Y	Min	1'-11"							Y	Min	1'-11"																		
									Max	5'-0"								Max	5'-0"																		
WING B	4	18	2	11'-8"	4	18	8	L	Min	3'-2"	4	6	14'-9"	6	18	8	L	Min	3'-2"	-	-	-	Min			4	2	12'-0"	4	2	13'-4"	6	12	4	L	3'-4"		237
									Max	6'-3"								Max	6'-3"				-														
								X	Min	1'-4"							X	Min	1'-4"				Max												X	1'-8"		
									Max	1'-4"								Max	1'-4"				-														
								Y	Min	1'-11"							Y	Min	1'-11"																		
									Max	5'-0"								Max	5'-0"																		

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

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

MID-SECTION

BAR LAP TABLE

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

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON

DIGITALLY SIGNED 6/28/2024

TABULAR DATA BY: CGG DATE: 4/3/2024
CHECKED BY: SAR DATE: 5/8/2024

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

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

INLET SKEWED END SECTION

SKEW (DEGREE)	SLOPE	DESIGN FILL DEPTH (FT.)	CLEAR SPAN (FT.)	CLEAR HEIGHT (FT.)	SECTION LENGTH	TOP SLAB THK.	HDWL DEPTH	BOTTOM SLAB THK.	SIDE WALL THK.	INTERIOR WALL THK.	OVER ALL WIDTH	OVER ALL HEIGHT	TOP SLAB REINFORCING STEEL "a" SIZE	"a" SPACING	"a" LENGTHS VARY	"a" NO. REQ'D	TOP SLAB REINFORCING STEEL "c" SIZE	"c" SPACING	"c" LENGTHS VARY	"c" NO. REQ'D	BOTTOM SLAB REINFORCING STEEL "d" SIZE	"d" SPACING	"d" LENGTHS VARY	"d" NO. REQ'D	BOTTOM SLAB REINFORCING STEEL "f" SIZE	"f" SPACING	"f" LENGTHS VARY	"f" NO. REQ'D	SIDE WALL REINFORCING STEEL "f0" SIZE	"f0" SPACING	"f0" NO. REQ'D	"f0" LENGTH	INTERIOR WALL REINFORCING STEEL "f1" SIZE	"f1" SPACING	"f1" NO. REQ'D	"f1" LENGTH	TOP SLAB DISTRIBUTION REINFORCING STEEL "g" SIZE	"g" SPACING	"g" NO. REQ'D	"g" LENGTHS VARY	BOTTOM SLAB DISTRIBUTION REINFORCING STEEL "e" SIZE	"e" SPACING	"e" NO. REQ'D	"e" LENGTHS VARY	SIDE WALL DISTRIBUTION REINFORCING STEEL "d1" SIZE	"d1" SPACING	"d1" NO. REQ'D	"d1" LENGTH	INTERIOR WALL DISTRIBUTION REINFORCING STEEL "d2" SIZE	"d2" SPACING	"d2" NO. REQ'D	"d2" LENGTH
SK	SL	D	S	H	LL	T	HD	B	C	W	OW	OH			Max				Max						Max												Max				Max			LONG							
																																												SHORT							
															Min				Min						Min												Min				Min							

"k1" HDWL BARS			"k2" HDWL BARS			"h" HDWL BARS			
SIZE	LENGTH	NO. REQ'D	SIZE	LENGTH	NO. REQ'D	SIZE	LENGTH	Y	NO. REQ'D

CLASS "S" CONCRETE (Includes HDWL)	(1) REINFORCING STEEL (CR 60) (Includes HDWL)
CU. YDS.	LBS.

INLET SLOPE SECTION(S)

R.C. BOX SECTION D	DESIGN FILL DEPTH (FT.)	CLEAR SPAN (FT.) S	CLEAR HEIGHT (FT.) H	TOP SLAB THK. T	BOTTOM SLAB THK. B	SIDE WALL THK. C	INTERIOR WALL THK. W	OVER ALL WIDTH OW	OVER ALL HEIGHT OH	SECTION LENGTH (FT.) SL	TOP SLAB REINFORCING STEEL LENGTH = OW - 4" + BENDS "a" SIZE	"a" L	Bent "b" SIZE	Bent "b" L	"c" SIZE	"c" L	SPACING	NO. REQ'D	BOTTOM SLAB REINFORCING STEEL LENGTH = OW - 4" + BENDS "d" SIZE	"d" L	Bent "b1" SIZE	Bent "b1" L	"f" SIZE	"f" L	SPACING	NO. REQ'D	SIDE WALL REINFORCING STEEL "f0" LENGTH = OH - 4" SIZE	SPACING	NO. REQ'D	LENGTH	INTERIOR WALL REINFORCING STEEL "f1" LENGTH = OH - 4" SIZE	SPACING	NO. REQ'D	LENGTH	TOP SLAB DISTRIBUTION REINF. STEEL "g" LENGTH = SL SIZE	SPACING	NO. REQ'D	BOTTOM SLAB DISTRIBUTION REINF. STEEL "e" LENGTH = SL SIZE	SPACING	NO. REQ'D	SIDE WALL DISTRIBUTION REINF. STEEL "d1" LENGTH = SL SIZE	SPACING	NO. REQ'D	INTERIOR WALL DISTRIBUTION REINF. STEEL "d2" LENGTH = SL SIZE	SPACING	NO. REQ'D

HDWL DEPTH	ADDITIONAL REINF. FOR HDWL	"h" HDWL BARS			
HD	LBS.	SIZE	Y	LENGTH	NO. REQ'D
3"	20	4	0'-7"	1'-7"	17

CLASS "S" CONCRETE	REINFORCING STEEL (GR. 60)
CU. YDS.	LBS.
TOTAL	
0.15	38

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

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

MID-SECTION

R.C. BOX SECTION D	DESIGN FILL DEPTH (FT.)	CLEAR SPAN (FT.) S	CLEAR HEIGHT (FT.) H	TOP SLAB THK. T	BOTTOM SLAB THK. B	SIDE WALL THK. C	INTERIOR WALL THK. W	OVER ALL WIDTH OW	OVER ALL HEIGHT OH	SECTION LENGTH (FT.) SL	TOP SLAB REINFORCING STEEL LENGTH = OW - 4" + BENDS "a" SIZE	"a" L	Bent "b" SIZE	Bent "b" L	"c" SIZE	"c" L	SPACING	NO. REQ'D	BOTTOM SLAB REINFORCING STEEL LENGTH = OW - 4" + BENDS "d" SIZE	"d" L	Bent "b1" SIZE	Bent "b1" L	"f" SIZE	"f" L	SPACING	NO. REQ'D	SIDE WALL REINFORCING STEEL "f0" LENGTH = OH - 4" SIZE	SPACING	NO. REQ'D	LENGTH	INTERIOR WALL REINFORCING STEEL "f1" LENGTH = OH - 4" SIZE	SPACING	NO. REQ'D	LENGTH	TOP SLAB DISTRIBUTION REINF. STEEL "g" LENGTH = SL SIZE	SPACING	NO. REQ'D	BOTTOM SLAB DISTRIBUTION REINF. STEEL "e" LENGTH = SL SIZE	SPACING	NO. REQ'D	SIDE WALL DISTRIBUTION STEEL "d1" LENGTH = SL SIZE	SPACING	NO. REQ'D	INTERIOR WALL DISTRIBUTION STEEL "d2" LENGTH = SL SIZE	SPACING	NO. REQ'D
A	5	7	4	8.5	9	6.0	8	15'-8"	5'-5 1/2"	43	4	15'-4"	7	15'-6"	5	15'-4"	15	34	4	15'-4"	4	15'-6"	4	15'-4"	13	39	4	8.5	120	5'-2"	4	'2	86	5'-2"	4	12	31	4	12	31	4	12	8	4	12	8

CLASS "S" CONCRETE	REINFORCING STEEL (GR. 60)
CU. YDS.	LBS.
47.00	6264

SHEET 1 OF 2
DETAILS OF R.C. BOX CULVERT
DOUBLE BARREL BOX CULVERT
C.R. 139 STA. 220+26 RT.

SPECIAL DETAILS

CGGervasini 6/28/2024 12:39:18 PM
WORKSPACE: AHTD
\\garverinc.local\gdata\Projects\2021\101046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_SD_BOX CULVERT_CR 139_220+26.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	38	325
		SPECIAL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBBERSON
DIGITALLY SIGNED 6/28/2024

TABULAR DATA BY: CGG DATE: 4/3/2024
CHECKED BY: SAR DATE: 5/8/2024

OUTLET WINGWALL TABLE

OVER ALL WIDTH	CLEAR HEIGHT	FOOTING THK.	WING WALL THK.	BOX SKEW (DEG.)	SLOPE	HDWL LENGTH	HEEL	WALL HEIGHT AT HDWL	WALL HEIGHT AT WING END	WINGWALL ANGLE (DEGREE) WING A	WINGWALL ANGLE (DEGREE) WING B	FOOTING WIDTH AT WALL END	WIDTH OF WING FOOTINGS AT HDWL WING A	WIDTH OF WING FOOTINGS AT HDWL WING B	FOOTING DIMENSION PARALLEL WITH HDWL WING A	FOOTING DIMENSION PARALLEL WITH HDWL WING B	LENGTH OF WINGWALLS WING A	LENGTH OF WINGWALLS WING B	LENGTH OF FOOTING HEEL WING A	LENGTH OF FOOTING HEEL WING B
OW	H	WB	CW	SK	SL	K	HL	WH1	WH2	AF1	AF2	WE	WF1	WF2	G1	G2	W1	W2	W3	W4
15'-8"	4'-0"	0'-9"	0'-8"	0	3:1	14'-8"	1'-0"	4'-10"	1'-4"	30	30	2'-2"	2'-5 3/4"	2'-5 3/4"	0'-4 3/8"	0'-4 3/8"	12'-0"	12'-0"	13'-10 5/8"	13'-10 5/8"

CLASS "S" CONCRETE (Includes apron)	REINFORCING STEEL (Includes apron and laps if required)
OUTLET	OUTLET
CU.YD	LBS.
5.57	474

WING	F1 BAR SIZE	F1 MAX. SPACING	F1 NO. REQ'D	F1 LENGTHS VARY			F2 BAR SIZE	F2 SPACING	F2 NO. REQ'D	F2 LENGTHS			F3 BAR SIZE	F3 SPACING	F3 NO. REQ'D	F3 LENGTHS			F4 BAR SIZE	F4 SPACING	F4 NO. REQ'D	F4 LENGTHS VARY
WING A	4	12	12	L	Min	2'-6"	-	-	-	L	-		-	-	-	L	-		4	18	4	Min
					Max	6'-0"																3'-10"
				X	Min	0'-9"				X	-					X	-					Max
					Max	1'-1"																9'-0"
				Y	Min	1'-10"				Y	-					Y	-					
					Max	5'-0"																
WING B	4	12	12	L	Min	2'-6"	-	-	-	L	-		-	-	-	L	-		4	18	4	Min
					Max	6'-0"																3'-10"
				X	Min	0'-9"				X	-					X	-					Max
					Max	1'-1"																9'-0"
				Y	Min	1'-10"				Y	-					Y	-					
					Max	5'-0"																

WING	F5 BAR SIZE	F5 SPACING	F5 NO. REQ'D	F5 LENGTHS	F6 BAR SIZE	F6 SPACING	F6 NO. REQ'D	F6 LENGTHS VARY			F7 BAR SIZE	F7 NO. REQ'D	F7 LENGTHS	F8 BAR SIZE	F8 SPACING	F8 NO. REQ'D	F8 LENGTHS VARY		F9 BAR SIZE	F9 SPACING	F9 NO. REQ'D	F9 LENGTHS		F10 BAR SIZE	F10 NO. REQ'D	F10 LENGTHS	F11 BAR SIZE	F11 NO. REQ'D	F11 LENGTHS	F12 BAR SIZE	F12 SPACING	F12 NO. REQ'D	F12 LENGTHS		REINF. STEEL QTY. PER WING (LBS)
WING A	4	18	2	11'-8"	4	18	8	L	Min	3'-2"	4	6	14'-9"	6	18	8	Min		-	-	-	-		4	2	12'-0"	4	2	13'-4"	6	12	4	L	3'-4"	237
									Max	6'-3"							1'-8"					-												
								X	Min	1'-4"							Max					Max											X	1'-8"	
									Max	1'-4"							2'-0"					-											
								Y	Min	1'-11"																								
									Max	5'-0"																								
WING B	4	18	2	11'-8"	4	18	8	L	Min	3'-2"	4	6	14'-9"	6	18	8	Min		-	-	-	-		4	2	12'-0"	4	2	13'-4"	6	12	4	L	3'-4"	237
									Max	6'-3"							1'-8"					-											
								X	Min	1'-4"							Max					Max											X	1'-8"	
									Max	1'-4"							2'-0"					-											
								Y	Min	1'-11"																								
									Max	5'-0"																								

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

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

① Any Bar Lap Required for the Skewed End Section shall be considered subsidiary to the item "Reinforcing Steel - Roadway (Grade 60)."

OUTLET SKEWED END SECTION

| SKEW (DEGREE) | SLOPE | DESIGN FILL DEPTH (FT.) | CLEAR SPAN (FT.) | CLEAR HEIGHT (FT.) | SECTION LENGTH | TOP SLAB THK. | HDWL DEPTH | BOTTOM SLAB THK. | SIDE WALL THK. | INTERIOR WALL THK. | OVER ALL WIDTH | OVER ALL HEIGHT | TOP SLAB REINFORCING STEEL "a" SIZE | "a" SPACING | "a" LENGTHS VARY | "a" NO. REQ'D | TOP SLAB REINFORCING STEEL "c" SIZE | "c" SPACING | "c" LENGTHS VARY | "c" NO. REQ'D | BOTTOM SLAB REINFORCING STEEL "d" SIZE | "d" SPACING | "d" LENGTHS VARY | "d" NO. REQ'D | BOTTOM SLAB REINFORCING STEEL "f" SIZE | "f" SPACING | "f" LENGTHS VARY | "f" NO. REQ'D | SIDE WALL REINFORCING STEEL "f0" SIZE | "f0" SPACING | "f0" NO. REQ'D | "f0" LENGTH | INTERIOR WALL REINFORCING STEEL "f1" SIZE | "f1" SPACING | "f1" NO. REQ'D | "f1" LENGTH | TOP SLAB DISTRIBUTION REINFORCING STEEL "g" SIZE | "g" SPACING | "g" NO. REQ'D | "g" LENGTHS VARY | BOTTOM SLAB DISTRIBUTION REINFORCING STEEL "e" SIZE | "e" SPACING | "e" NO. REQ'D | "e" LENGTHS VARY | SIDE WALL DISTRIBUTION REINFORCING STEEL "d1" SIZE | "d1" SPACING | "d1" NO. REQ'D | "d1" LENGTH | INTERIOR WALL DISTRIBUTION REINFORCING STEEL "d2" SIZE | "d2" SPACING | "d2" NO. REQ'D | "d2" LENGTH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	39	325
		SPECIAL DETAILS				

INLET WINGWALL TABLE

OVER ALL WIDTH	CLEAR HEIGHT	FOOTING THK.	WING WALL THK.	BOX SKEW (DEG.)	SLOPE	HDWL LENGTH	HFEL	WALL HEIGHT AT HDWL	WALL HEIGHT AT WING END	WINGWALL ANGLE (DEGREE) WING A	WINGWALL ANGLE (DEGREE) WING B	FOOTING WIDTH AT WALL END	WIDTH OF WING FOOTINGS AT HDWL WING A	WIDTH OF WING FOOTINGS AT HDWL WING B	FOOTING DIMENSION PARALLEL WITH HDWL WING A	FOOTING DIMENSION PARALLEL WITH HDWL WING B	LENGTH OF WINGWALLS WING A	LENGTH OF WINGWALLS WING B	LENGTH OF FOOTING HEEL WING A	LENGTH OF FOOTING HEEL WING B	CLASS "S" CONCRETE (Includes apron) INLET	REINFORCING STEEL (Includes apron and laps if required) INLET
OW	H	WB	CW	SK	SL	K	HL	WH1	WH2	AF1	AF2	WE	WF1	WF2	G1	G2	W1	W2	W3	W4	CU.YD	LBS.
17'-4"	3'-0"	0'-9"	0'-8"	0	3:1	16'-4"	1'-0"	3'-10"	1'-0"	30	30	2'-2"	2'-2"	2'-2"	0'-0"	0'-0"	9'-6"	9'-6"	11'-4 5/8"	11'-4 5/8"	3.81	356

WING	F1 BAR SIZE	F1 MAX. SPACING	F1 NO. REQ'D	F1 LENGTHS VARY			F2 BAR SIZE	F2 SPACING	F2 NO. REQ'D	F2 LENGTHS			F3 BAR SIZE	F3 SPACING	F3 NO. REQ'D	F3 LENGTHS			F4 BAR SIZE	F4 SPACING	F4 NO. REQ'D	F4 LENGTHS VARY
WING A	4	12	10	L	Min	2'-0"				L	-					L	-		4	18	2	Min
					Max	4'-8"																5'-5"
				X	Min	0'-9"	-	-	-	X	-		-	-	-	X	-					Max
					Max	0'-9"																5'-5"
				Y	Min	1'-4"				Y	-					Y	-					
					Max	4'-0"																
WING B	4	12	10	L	Min	2'-0"				L	-					L	-		4	18	2	Min
					Max	4'-8"																5'-5"
				X	Min	0'-9"	-	-	-	X	-		-	-	-	X	-					Max
					Max	0'-9"																5'-5"
				Y	Min	1'-4"				Y	-					Y	-					
					Max	4'-0"																

WING	F5 BAR SIZE	F5 SPACING	F5 NO. REQ'D	F5 LENGTHS	F6 BAR SIZE	F6 SPACING	F6 NO. REQ'D	F6 LENGTHS VARY			F7 BAR SIZE	F7 NO. REQ'D	F7 LENGTHS	F8 BAR SIZE	F8 SPACING	F8 NO. REQ'D	F8 LENGTHS VARY		F9 BAR SIZE	F9 SPACING	F9 NO. REQ'D	F9 LENGTHS
WING A	4	18	2	9'-2"	4	18	7	L	Min	2'-7"	4	6	12'-3"	6	18	6	Min		-	-	-	Min
									Max	5'-3"												
								X	Min	1'-4"							Max					Max
									Max	1'-4"												
								Y	Min	1'-4"												
									Max	4'-0"												
WING B	4	18	2	9'-2"	4	18	7	L	Min	2'-7"	4	6	12'-3"	6	18	6	Min		-	-	-	Min
									Max	5'-3"												
								X	Min	1'-4"							Max					Max
									Max	1'-4"												
								Y	Min	1'-4"												
									Max	4'-0"												

WING	F10 BAR SIZE	F10 NO. REQ'D	F10 LENGTHS	F11 BAR SIZE	F11 NO. REQ'D	F11 LENGTHS	F12 BAR SIZE	F12 SPACING	F12 NO. REQ'D	F12 LENGTHS		REINF. STEEL QTY. PER WING (LBS)
WING A	4	2	9'-5"	4	2	10'-7"	6	12	3	L	3'-4"	178
										X	1'-8"	
WING B	4	2	9'-5"	4	2	10'-7"	6	12	3	L	3'-4"	178
										X	1'-8"	

MID-SECTION BAR LAP TABLE

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

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

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

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

For additional information and outlet sections, see Sheet 2 of 2.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBBERSON
DIGITALLY SIGNED 6/28/2024

TABULAR DATA BY: CGG DATE: 5/8/2024
CHECKED BY: SAR DATE: 5/9/2024

INLET SKEWED END SECTION

| SKEW (DEGREE) | SLOPE | DESIGN FILL DEPTH (FT.) | CLEAR SPAN (FT.) | CLEAR HEIGHT (FT.) | SECTION LENGTH | TOP SLAB THK. | HDWL DEPTH | BOTTOM SLAB THK. | SIDE WALL THK. | INTERIOR WALL THK. | OVER ALL WIDTH | OVER ALL HEIGHT | TOP SLAB REINFORCING STEEL "a" SIZE | "a" SPACING | "a" LENGTHS VARY | "a" NO. REQ'D | TOP SLAB REINFORCING STEEL "c" SIZE | "c" SPACING | "c" LENGTHS VARY | "c" NO. REQ'D | BOTTOM SLAB REINFORCING STEEL "d" SIZE | "d" SPACING | "d" LENGTHS VARY | "d" NO. REQ'D | BOTTOM SLAB REINFORCING STEEL "f" SIZE | "f" SPACING | "f" LENGTHS VARY | "f" NO. REQ'D | SIDE WALL REINFORCING STEEL "f0" SIZE | "f0" SPACING | "f0" NO. REQ'D | "f0" LENGTH | INTERIOR WALL REINFORCING STEEL "f1" SIZE | "f1" SPACING | "f1" NO. REQ'D | "f1" LENGTH | TOP SLAB DISTRIBUTION REINFORCING STEEL "g" SIZE | "g" SPACING | "g" NO. REQ'D | "g" LENGTHS VARY | BOTTOM SLAB DISTRIBUTION REINFORCING STEEL "e" SIZE | "e" SPACING | "e" NO. REQ'D | "e" LENGTHS VARY | SIDE WALL DISTRIBUTION REINFORCING STEEL "d1" SIZE | "d1" SPACING | "d1" NO. REQ'D | "d1" LENGTH | INTERIOR WALL DISTRIBUTION REINFORCING STEEL "d2" SIZE | "d2" SPACING | "d2" NO. REQ'D | "d2" LENGTH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	40	325
		SPECIAL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

TABULAR DATA BY: CGG DATE: 5/8/2024
CHECKED BY: SAR DATE: 5/9/2024

OUTLET WINGWALL TABLE

OVER ALL WIDTH	CLEAR HEIGHT	FOOTING THK.	WING WALL THK.	BOX SKEW (DEG.)	SLOPE	HDWL LENGTH	HFEI.	WALL HEIGHT AT HDWL	WALL HEIGHT AT WING END	WINGWALL ANGLE (DEGREE) WING A	WINGWALL ANGLE (DEGREE) WING B	FOOTING WIDTH AT WALL END	WIDTH OF WING FOOTINGS AT HDWL WING A	WIDTH OF WING FOOTINGS AT HDWL WING B	FOOTING DIMENSION PARALLEL WITH HDWL WING A	FOOTING DIMENSION PARALLEL WITH HDWL WING B	LENGTH OF WINGWALLS WING A	LENGTH OF WINGWALLS WING B	LENGTH OF FOOTING HEEL WING A	LENGTH OF FOOTING HEEL WING B
OW	H	WB	CW	SK	SL	K	HL	WH1	WH2	AF1	AF2	WE	WF1	WF2	G1	G2	W1	W2	W3	W4
17'-4"	3'-0"	0'-9"	0'-8"	0	3:1	16'-4"	1'-0"	3'-10"	1'-0"	30	30	2'-2"	2'-2"	2'-2"	0'-0"	0'-0"	9'-6"	9'-6"	11'-4 5/8"	11'-4 5/8"

CLASS "S" CONCRETE (Includes apron)	REINFORCING STEEL (Includes apron and laps if required)
OUTLET	OUTLET
CU.YD	LBS.
4.43	356

WING	F1 BAR SIZE	F1 MAX. SPACING	F1 NO. REQ'D	F1 LENGTHS VARY		F2 BAR SIZE	F2 SPACING	F2 NO. REQ'D	F2 LENGTHS	F3 BAR SIZE	F3 SPACING	F3 NO. REQ'D	F3 LENGTHS	F4 BAR SIZE	F4 SPACING	F4 NO. REQ'D	F4 LENGTHS VARY	F5 BAR SIZE	F5 SPACING	F5 NO. REQ'D	F5 LENGTHS
WING A	4	12	10	L	Min 2'-0"	-	-	-	L -	-	-	-	L -	4	18	2	Min	4	18	2	9'-2"
					Max 4'-8"												5'-5"				
				X	Min 0'-9"				X -				X -				Max				
					Max 0'-9"												5'-5"				
				Y	Min 1'-4"				Y -				Y -								
					Max 4'-0"																
WING B	4	12	10	L	Min 2'-0"	-	-	-	L -	-	-	-	L -	4	18	2	Min	4	18	2	9'-2"
					Max 4'-8"												5'-5"				
				X	Min 0'-9"				X -				X -				Max				
					Max 0'-9"												5'-5"				
				Y	Min 1'-4"				Y -				Y -								
					Max 4'-0"																

WING	F6 BAR SIZE	F6 SPACING	F6 NO. REQ'D	F6 LENGTHS VARY		F7 BAR SIZE	F7 NO. REQ'D	F7 LENGTHS	F8 BAR SIZE	F8 SPACING	F8 NO. REQ'D	F8 LENGTHS VARY	F9 BAR SIZE	F9 SPACING	F9 NO. REQ'D	F9 LENGTHS	F10 BAR SIZE	F10 NO. REQ'D	F10 LENGTHS	F11 BAR SIZE	F11 NO. REQ'D	F11 LENGTHS	F12 BAR SIZE	F12 SPACING	F12 NO. REQ'D	F12 LENGTHS		REINF. STEEL QTY. PER WING (LBS)
WING A	4	18	7	L	Min 2'-7"	4	6	12'-3"	6	18	6	Min	-	-	-	Min	4	2	9'-5"	4	2	10'-7"	6	12	3	L	3'-4"	178
					Max 5'-3"							1'-8"				-												
				X	Min 1'-4"							Max				Max										X	1'-8"	
					Max 1'-4"							1'-8"				-												
				Y	Min 1'-4"																							
					Max 4'-0"																							
WING B	4	18	7	L	Min 2'-7"	4	6	12'-3"	6	18	6	Min	-	-	-	Min	4	2	9'-5"	4	2	10'-7"	6	12	3	L	3'-4"	178
					Max 5'-3"							1'-8"				-												
				X	Min 1'-4"							Max				Max										X	1'-8"	
					Max 1'-4"							1'-8"				-												
				Y	Min 1'-4"																							
					Max 4'-0"																							

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

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

① Any Bar Lap Required for the Skewed End Section shall be considered subsidiary to the item "Reinforcing Steel - Roadway (Grade 60)."

OUTLET SKEWED END SECTION

SKEW (DEGREE)	SLOPE	DESIGN FILL DEPTH (FT.)	CLEAR SPAN (FT.)	CLEAR HEIGHT (FT.)	SECTION LENGTH	TOP SLAB THK.	HDWL DEPTH	BOTTOM SLAB THK.	SIDE WALL THK.	INTERIOR WALL THK.	OVER ALL WIDTH	OVER ALL HEIGHT
SK	SL	D	S	H	LL	T	HD	B	C	W	OW	OH

TOP SLAB REINFORCING STEEL "a" SIZE	"a" SPACING	"a" LENGTHS VARY	"a" NO. REQ'D	"c" SIZE	"c" SPACING	"c" LENGTHS VARY	"c" NO. REQ'D
		Max				Max	
		Min				Min	

BOTTOM SLAB REINFORCING STEEL "d" SIZE	"d" SPACING	"d" LENGTHS VARY	"d" NO. REQ'D	"f" SIZE	"f" SPACING	"f" LENGTHS VARY	"f" NO. REQ'D
		Max				Max	
		Min				Min	

SIDE WALL REINFORCING STEEL "f0" SIZE	"f0" SPACING	"f0" NO. REQ'D	"f0" LENGTH

INTERIOR WALL REINFORCING STEEL "f1" SIZE	"f1" SPACING	"f1" NO. REQ'D	"f1" LENGTH

TOP SLAB DISTRIBUTION REINFORCING STEEL "g" SIZE	"g" SPACING	"g" NO. REQ'D	"g" LENGTHS VARY
			Max
			Min

BOTTOM SLAB DISTRIBUTION REINFORCING STEEL "e" SIZE	"e" SPACING	"e" NO. REQ'D	"e" LENGTHS VARY
			Max
			Min

SIDE WALL DISTRIBUTION REINFORCING STEEL "d1" SIZE	"d1" SPACING	"d1" NO. REQ'D	"d1" LENGTH
			LONG
			SHORT

INTERIOR WALL DISTRIBUTION REINFORCING STEEL "d2" SIZE	"d2" SPACING	"d2" NO. REQ'D	"d2" LENGTH
			LONG
			SHORT

CLASS "S" CONCRETE (Includes HDWL) CU. YDS.	① REINFORCING STEEL (GR 60) (Includes HDWL) LBS.

"k1" HDWL BARS SIZE	"k1" HDWL BARS LENGTH	"k1" HDWL BARS NO. REQ'D	"k2" HDWL BARS SIZE	"k2" HDWL BARS LENGTH	"k2" HDWL BARS NO. REQ'D	"h" HDWL BARS SIZE	"h" HDWL BARS LENGTH	"h" HDWL BARS Y	"h" HDWL BARS NO. REQ'D

OUTLET SLOPE SECTION(S)

R.C. BOX SECTION	DESIGN FILL DEPTH (FT.) D	CLEAR SPAN (FT.) S	CLEAR HEIGHT (FT.) H	TOP SLAB THK. T	BOTTOM SLAB THK. B	SIDE WALL THK. C	INTERIOR WALL THK. W	OVER ALL WIDTH OW	OVER ALL HEIGHT OH	SECTION LENGTH (FT.) SL

LENGTH = OW - 4" + BENDS "a" SIZE	"a" L	Bent "b" SIZE	Bent "b" L	"c" SIZE	"c" L	SPACING	NO. REQ'D

BOTTOM SLAB REINFORCING STEEL LENGTH = OW - 4" + BENDS "d" SIZE	"d" L	Bent "b1" SIZE	Bent "b1" L	"f" SIZE	"f" L	SPACING	NO. REQ'D

SIDE WALL REINFORCING STEEL "f0" LENGTH = OH - 4" SIZE	SPACING	NO. REQ'D	LENGTH

INTERIOR WALL REINFORCING STEEL "f1" LENGTH = OH - 4" SIZE	SPACING	NO. REQ'D	LENGTH

TOP SLAB DISTRIBUTION REINFORCING STEEL "g" LENGTH = SL SIZE	SPACING	NO. REQ'D

BOTTOM SLAB DISTRIBUTION REINFORCING STEEL "e" LENGTH = SL SIZE	SPACING	NO. REQ'D

SIDE WALL DISTRIBUTION REINFORCING STEEL "d1" LENGTH = SL SIZE	SPACING	NO. REQ'D

INTERIOR WALL DISTRIBUTION REINFORCING STEEL "d2" LENGTH = SL SIZE	SPACING	NO. REQ'D

CLASS "S" CONCRETE CU. YDS.	REINFORCING STEEL (GR. 60) LBS.
TOTAL	
0.16	44

HDWL DEPTH HD	ADDITIONAL REINF. FOR HDWL LBS.	"h" HDWL BARS SIZE	"h" HDWL BARS Y	"h" HDWL BARS LENGTH	"h" HDWL BARS NO. REQ'D
3"	23	4	0'-8"	1'-8"	19

The required number of bars and lengths shown are for estimating purpose only. The actual number and length required shall be determined in field.

Unless otherwise noted, all dimensions are in inches.

SHEET 2 OF 2
DETAILS OF R.C. BOX CULVERT
TRIPLE BARREL BOX CULVERT
C.R. 139 STA. 220+92
SPECIAL DETAILS

CGervasini 6/28/2024 1:30:07 PM
WORKSPACE: AHTD
L:\2021\21T0046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_SD_BOX CULVERT_CR 139_220+92.dgn
REVISED DATE: Ver. 1.117 FILENAME

I-57

SILT FENCE (E-11)	LIN. FT.
STA. 2023+20 TO 2023+20 RT. & LT.	190

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	41	325
		TEMPORARY EROSION CONTROL DETAILS				

N

PROP. R/W

241+00

C.L. HWY. 62 TEMP. RAMP 3

300+00

C.L. HWY. 62 RAMP 3

EXIST. R/W

STA. 2023+50.00
BEGIN JOB 101172
BEGIN GRADING

245+00

EXIST. R/W

2030+00

PROP. R/W. C/A & FENCE

2035+00

2040+00

+20

(E-11)

2015+00

2020+00

2025+00

2030+00

2035+00

2040+00

2045+00

C.L. I-57

C.L. TEMP. HWY. 62

+20

(E-11)

2035+00

STA. 2033+00.00
BEGIN GRADING AND PAVING

2030+00

PROP. R/W. C/A & FENCE

C.L. HWY. 62 TEMP. RAMP 2

275+00

C.L. HWY. 62 RAMP 2

250+00

270+00

255+00

EXIST. R/W

EXIST. R/W

LEGEND

(E-5)	= SAND BAG DITCH CHECKS	(E-8)	= DIVERSION DITCH (TYPE E-8)
(E-6)	= ROCK DITCH CHECKS	(E-11)	= SILT FENCE
E-13	= FILTER SOCK	(E-12)	= SLOPE PIPE DRAIN (12") (TYPE E-12)

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

DATE	REVISION

TEMPORARY EROSION CONTROL DETAILS
CLEARING AND GRUBBING STAGE

CGGervasini 6/28/2024 1:30:34 PM
WORKSPACE: AHTD
L:\2021\21T0046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_EC_CG_01.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	42	325
		TEMPORARY EROSION CONTROL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBBERSON

DIGITALLY SIGNED 6/28/2024

PROP. R/W, C/A & FENCE

2040+00 C.L. HWY. 62 RAMP 3

2040+00 2045+00 C.L. I-57 2050+00 2055+00

PROP. R/W, C/A & FENCE

LEGEND

- E-5 = SAND BAG DITCH CHECKS
- E-6 = ROCK DITCH CHECKS
- E-13 = FILTER SOCK
- E-8 = DIVERSION DITCH (TYPE E-8)
- E-11 = SILT FENCE
- E-12 = SLOPE PIPE DRAIN (12") (TYPE E-12)

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

DATE	REVISION

PROP. R/W, C/A & FENCE

2055+00 C.L. I-57 2060+00 2065+00 2070+00

PROP. R/W, C/A & FENCE

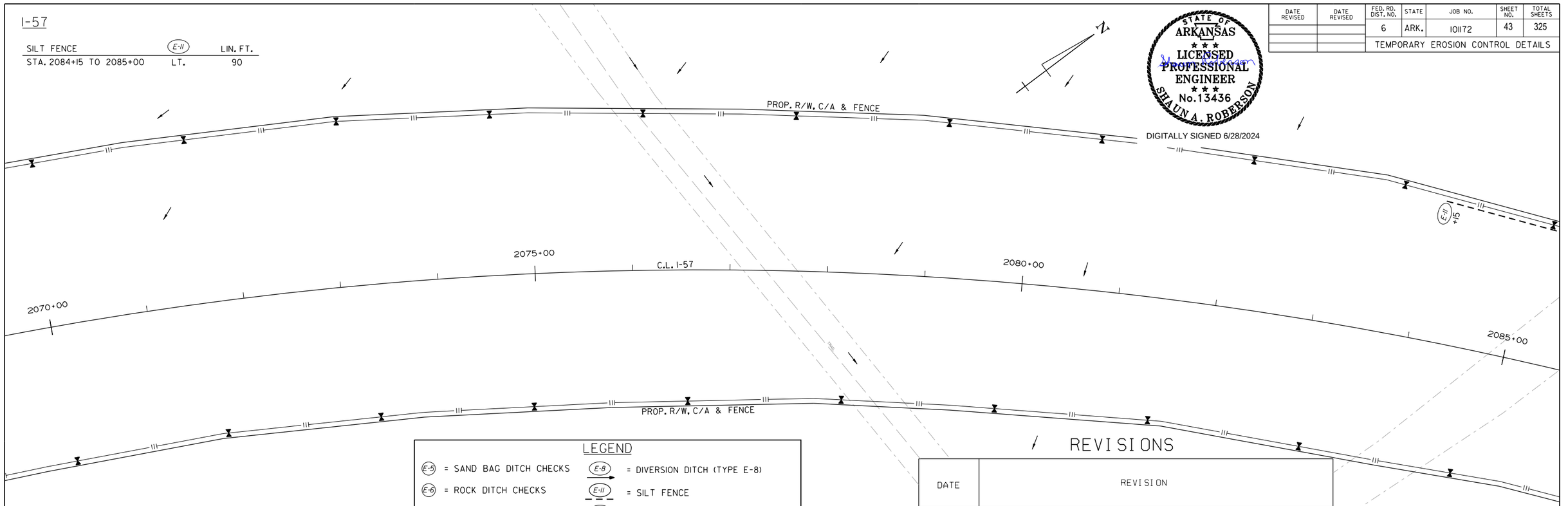
TEMPORARY EROSION CONTROL DETAILS
CLEARING AND GRUBBING STAGE

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	43	325
		TEMPORARY EROSION CONTROL DETAILS				

I-57

SILT FENCE	(E-11)	LIN. FT.
STA. 2084+15 TO 2085+00	LT.	90



STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- E-13 = FILTER SOCK
- (E-8) = DIVERSION DITCH (TYPE E-8)
- (E-11) = SILT FENCE
- (E-12) = SLOPE PIPE DRAIN (12") (TYPE E-12)

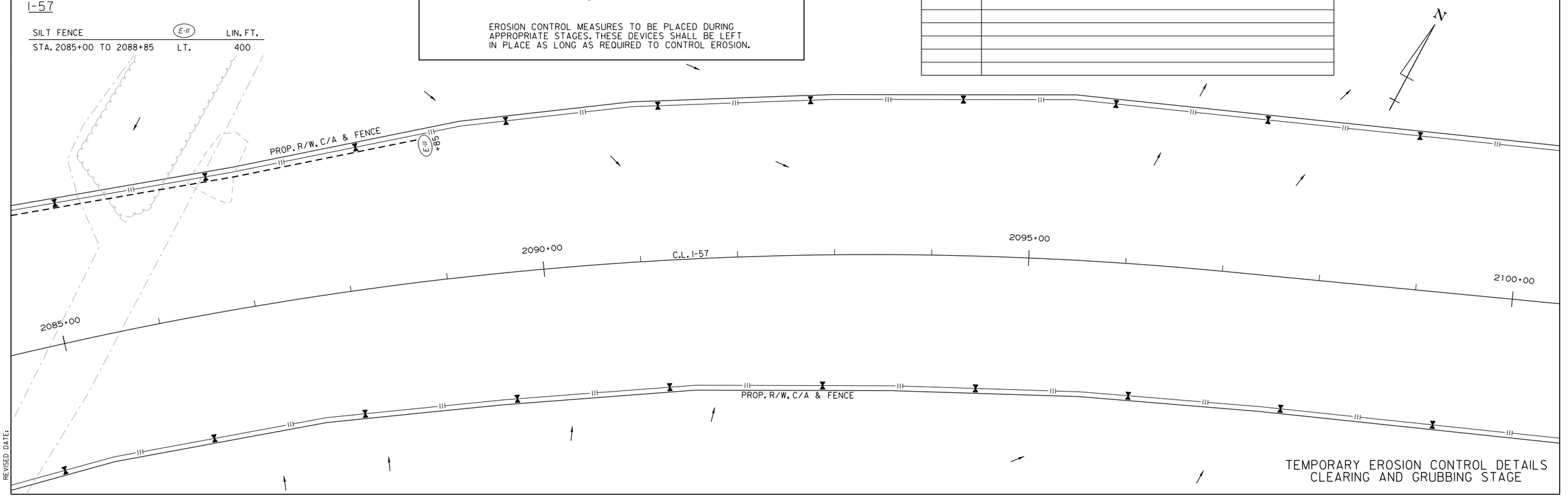
EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

DATE	REVISION

I-57

SILT FENCE	(E-11)	LIN. FT.
STA. 2085+00 TO 2088+85	LT.	400



TEMPORARY EROSION CONTROL DETAILS
CLEARING AND GRUBBING STAGE

CGervasini 6/28/2024 1:30:35 PM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	44	325

TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON

DIGITALLY SIGNED 6/28/2024

PROP. R/W, C/A & FENCE

2100+00 2105+00 C.L. I-57 2110+00 2115+00

PROP. R/W

E-11 +85

E-10 +00

PROP. R/W, C/A & FENCE

PROP. R/W

2115+00

E-11 +85

C.L. C.R. 139

E-11 +60

I-57

PROP. R/W

PROP. R/W, C/A & FENCE

2115+00 2120+00 C.L. I-57 2125+00 2130+00

PROP. R/W, C/A & FENCE

LEGEND

E-5	= SAND BAG DITCH CHECKS	E-8	= DIVERSION DITCH (TYPE E-8)
E-6	= ROCK DITCH CHECKS	E-11	= SILT FENCE
E-13	= FILTER SOCK	E-12	= SLOPE PIPE DRAIN (12") (TYPE E-12)

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

DATE	REVISION

TEMPORARY EROSION CONTROL DETAILS
CLEARING AND GRUBBING STAGE

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REVISED DATE:

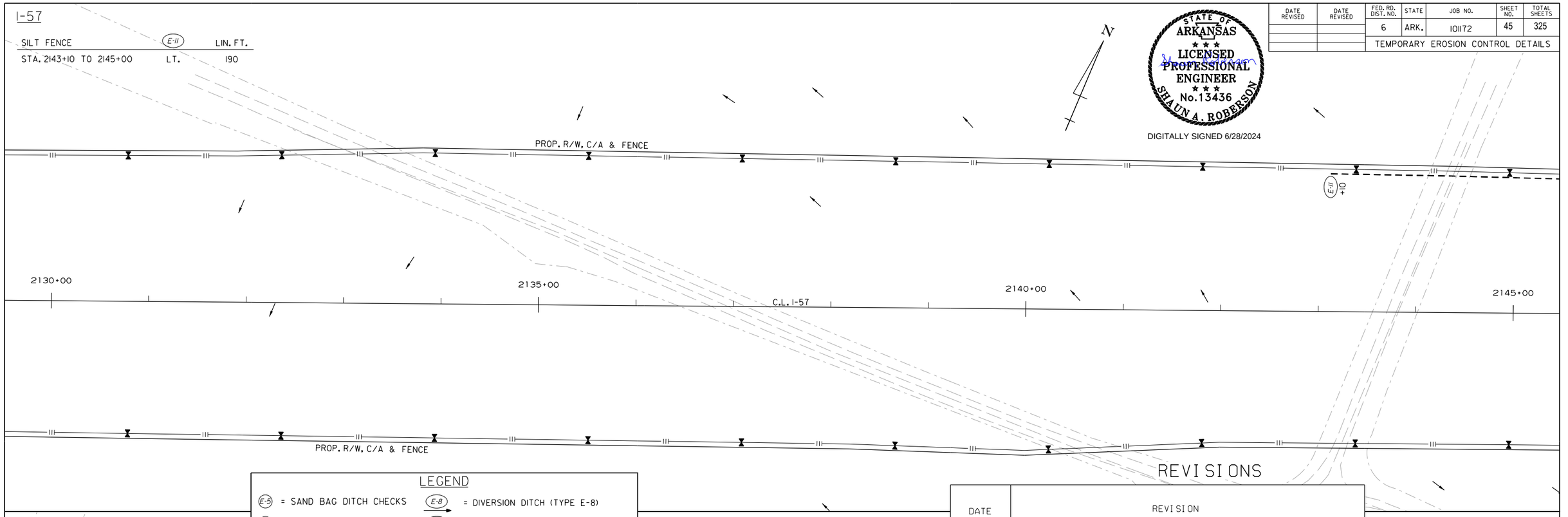
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	45	325
		TEMPORARY EROSION CONTROL DETAILS				

I-57

SILT FENCE	E-11	LIN. FT.
STA. 2143+10 TO 2145+00	LT.	190

STATE OF ARKANSAS
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SHAUN A. ROBERSON

DIGITALLY SIGNED 6/28/2024



LEGEND

E-5	= SAND BAG DITCH CHECKS	E-8	= DIVERSION DITCH (TYPE E-8)
E-6	= ROCK DITCH CHECKS	E-11	= SILT FENCE
E-13	= FILTER SOCK	E-12	= SLOPE PIPE DRAIN (12") (TYPE E-12)

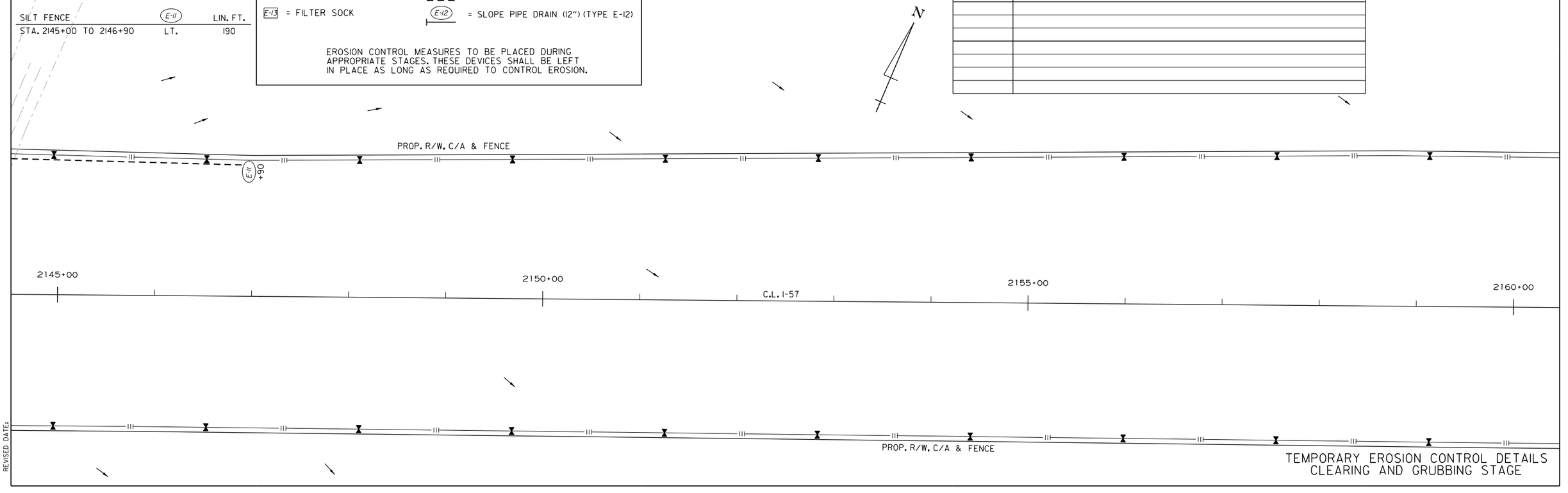
EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

DATE	REVISION

I-57

SILT FENCE	E-11	LIN. FT.
STA. 2145+00 TO 2146+90	LT.	190



TEMPORARY EROSION CONTROL DETAILS
CLEARING AND GRUBBING STAGE

CGervasini 6/28/2024 1:30:35 PM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	46	325

TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

PROP. R/W, C/A & FENCE

2160+00 2165+00 2170+00 2175+00

C.L. I-57

209+00

PROP. R/W

C.L. C.R. 143

PROP. R/W, C/A & FENCE

LEGEND

E-5 = SAND BAG DITCH CHECKS

E-6 = ROCK DITCH CHECKS

E-13 = FILTER SOCK

E-8 = DIVERSION DITCH (TYPE E-8)

E-11 = SILT FENCE

E-12 = SLOPE PIPE DRAIN (12") (TYPE E-12)

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

DATE	REVISION

PROP. R/W, C/A & FENCE

2175+00 2180+00 2185+00 2190+00

C.L. I-57

PROP. R/W, C/A & FENCE

TEMPORARY EROSION CONTROL DETAILS
CLEARING AND GRUBBING STAGE

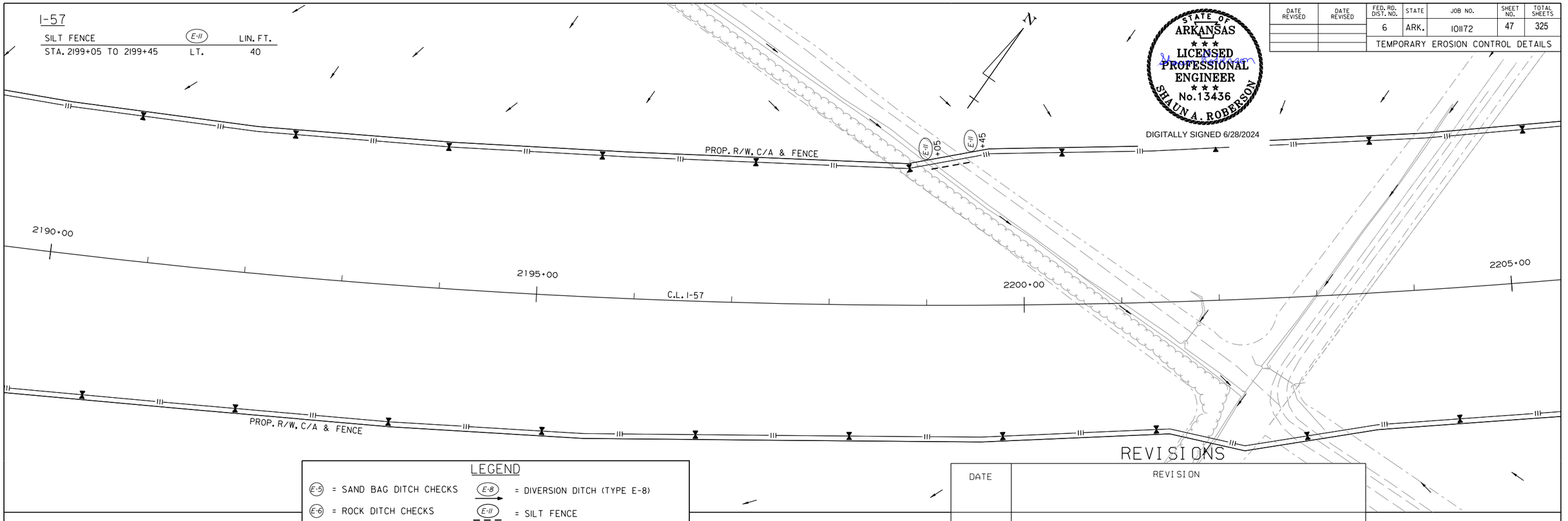
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	47	325
		TEMPORARY EROSION CONTROL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

I-57

SILT FENCE	E-11	LIN. FT.
STA. 2199+05 TO 2199+45	LT.	40



LEGEND

- E-5 = SAND BAG DITCH CHECKS
- E-6 = ROCK DITCH CHECKS
- E-13 = FILTER SOCK
- E-8 = DIVERSION DITCH (TYPE E-8)
- E-11 = SILT FENCE
- E-12 = SLOPE PIPE DRAIN (12") (TYPE E-12)

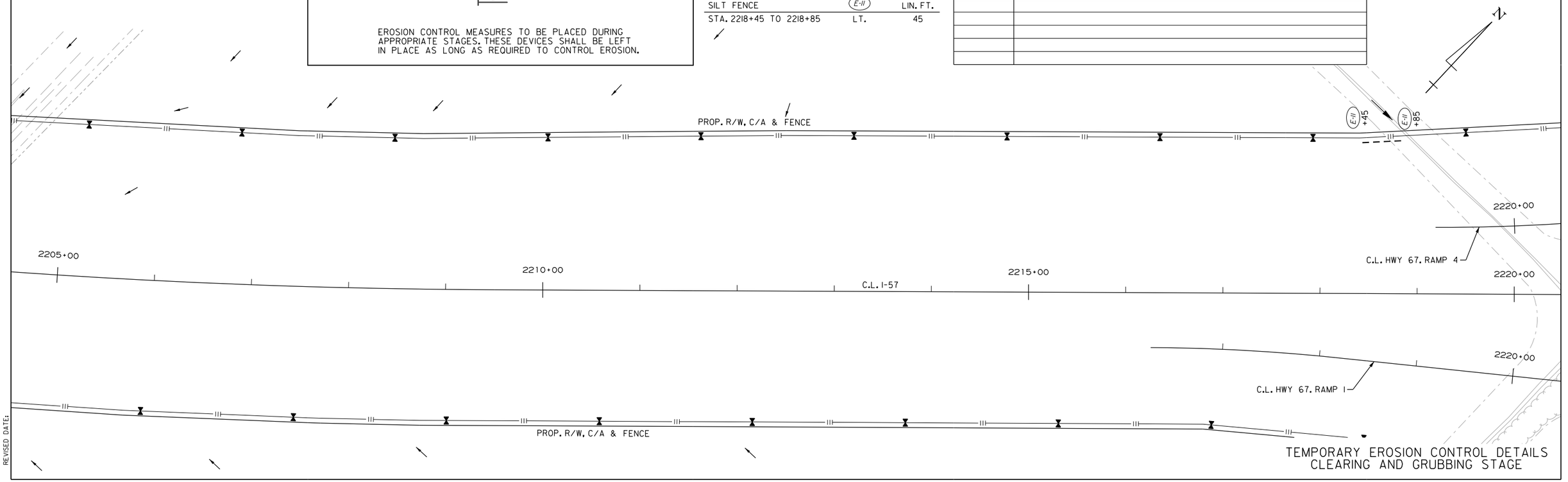
EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

DATE	REVISION

I-57

SILT FENCE	E-11	LIN. FT.
STA. 2218+45 TO 2218+85	LT.	45



TEMPORARY EROSION CONTROL DETAILS
CLEARING AND GRUBBING STAGE

CGervasini 6/28/2024 1:30:40 PM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	48	325
		TEMPORARY EROSION CONTROL DETAILS				

LEGEND

(E-5) = SAND BAG DITCH CHECKS
(E-6) = ROCK DITCH CHECKS
(E-13) = FILTER SOCK
(E-8) = DIVERSION DITCH (TYPE E-8)
(E-11) = SILT FENCE
(E-12) = SLOPE PIPE DRAIN (12") (TYPE E-12)

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

I-57

SILT FENCE	(E-11)	LIN. FT.
STA. 2236+10 TO 2236+20	LT & RT.	410

STATE OF ARKANSAS
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SHAUN A. ROBERSON
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STA. 2236+00.00
END JOB 101172
END GRADING

STA. 2225+00.00
END PAVING

C.L. HWY. 67 RAMP 4
C.L. HWY. 67 RAMP 1
C.L. HWY. 67
C.L. I-57
PROP. R/W, C/A & FENCE
EXIST. R/W
PROP. R/W
T.C.E.
75.00
70.00
65.00
60.00
55.00
50.00
48.00
2215+00
2220+00
2225+00
2230+00
2235+00
2240+00
2245+00
2250+00
(E-11) +45
(E-11) +85
(E-11) +20
(E-11) +10

REVISIONS

DATE	REVISION

TEMPORARY EROSION CONTROL DETAILS
CLEARING AND GRUBBING STAGE

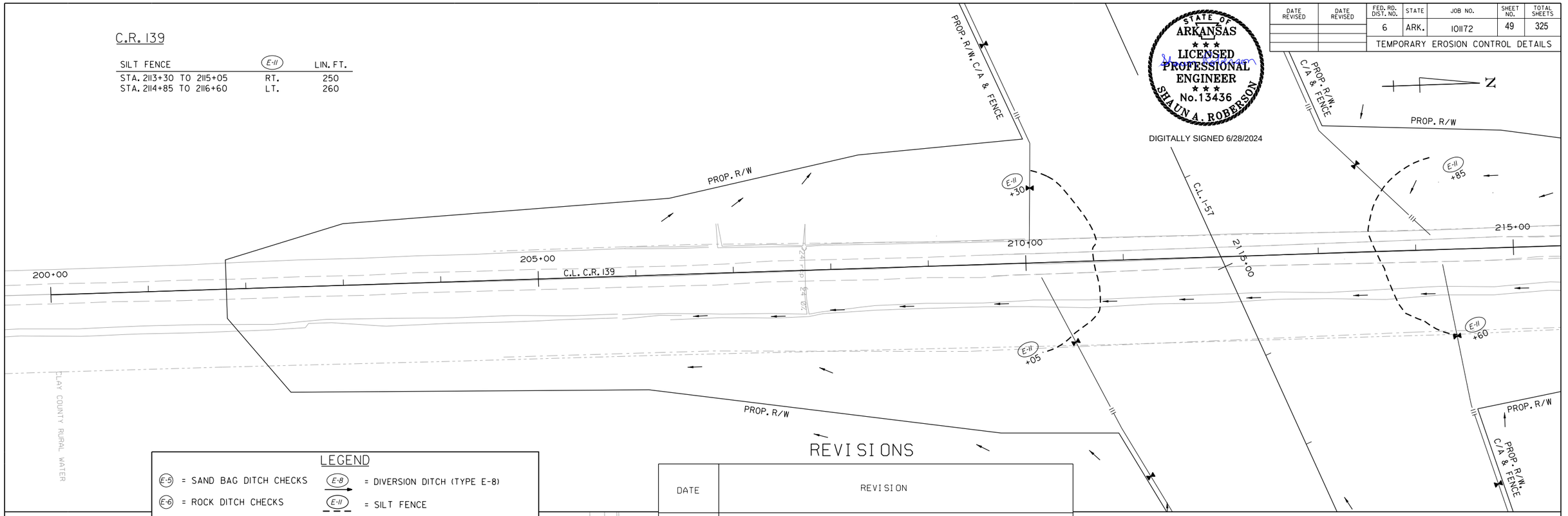
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	49	325
		TEMPORARY EROSION CONTROL DETAILS				

C.R. 139

SILT FENCE	(E-11)	LIN. FT.
STA. 2113+30 TO 2115+05	RT.	250
STA. 2114+85 TO 2116+60	LT.	260

STATE OF ARKANSAS
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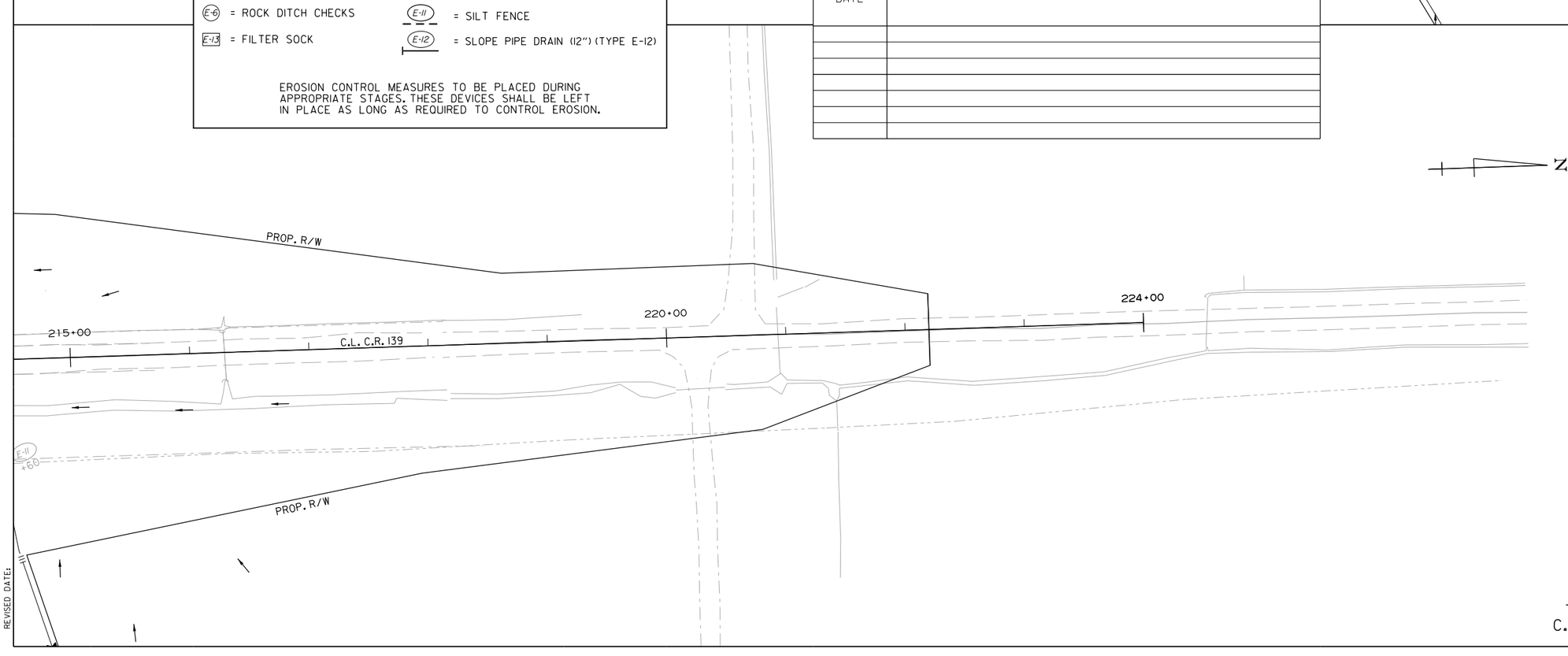
LEGEND

(E-5)	= SAND BAG DITCH CHECKS	(E-8)	= DIVERSION DITCH (TYPE E-8)
(E-6)	= ROCK DITCH CHECKS	(E-11)	= SILT FENCE
E-13	= FILTER SOCK	(E-12)	= SLOPE PIPE DRAIN (12") (TYPE E-12)

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

DATE	REVISION



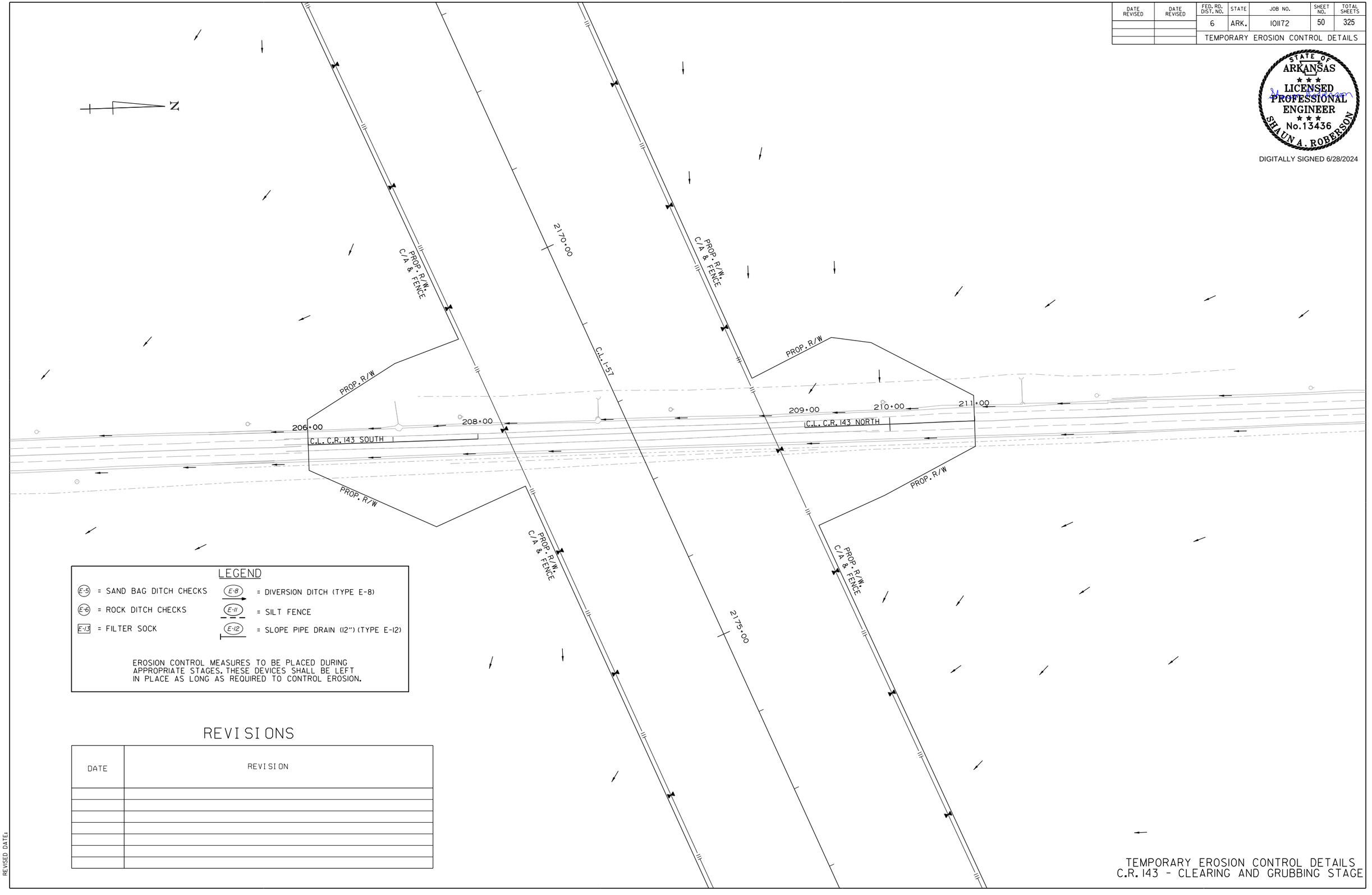
TEMPORARY EROSION CONTROL DETAILS
C.R. 139 - CLEARING AND GRUBBING STAGE

CGCervosini 6/28/2024 1:30:41 PM
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	50	325
		TEMPORARY EROSION CONTROL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON

DIGITALLY SIGNED 6/28/2024



LEGEND

E-5	= SAND BAG DITCH CHECKS	E-8	= DIVERSION DITCH (TYPE E-8)
E-6	= ROCK DITCH CHECKS	E-11	= SILT FENCE
E-13	= FILTER SOCK	E-12	= SLOPE PIPE DRAIN (12") (TYPE E-12)

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

DATE	REVISION

TEMPORARY EROSION CONTROL DETAILS
C.R. 143 - CLEARING AND GRUBBING STAGE

CGervasini 6/28/2024 1:30:41 PM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	51	325
		TEMPORARY EROSION CONTROL DETAILS				

I-57

SILT FENCE (E-11)		LIN. FT.
STA. 2023+20 TO 2023+20	RT. & LT.	RETAIN
STA. 2026+65 TO 2045+45	RT.	RETAIN

SAND BAG DITCH CHECK (E-5)		INSTALLATION
STA. 2022+80	LT.	1
STA. 2023+00	LT.	1
STA. 2023+15	RT.	1
STA. 2023+45	RT.	1
STA. 2023+50	LT.	1
STA. 2024+15	RT.	1
STA. 2025+25	RT.	1
STA. 2027+60	LT.	1
STA. 2028+00	RT.	1
STA. 2028+30	LT.	1
STA. 2029+15	RT.	2
STA. 2031+40	LT.	1

DROP INLET FILTER SOCK (E-13)		INSTALLATION
STA. 2024+00	CT.	1
STA. 2029+00	CT.	1

I-57

ROCK DITCH CHECK (E-6)		INSTALLATION
STA. 2023+00	RT.	1
STA. 2023+10	RT.	1
STA. 2023+20	LT.	1
STA. 2023+45	RT.	1
STA. 2025+65	RT.	1
STA. 2026+10	LT.	1
STA. 2026+90	RT.	1
STA. 2037+80	LT.	1

N

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13436
SHAUN A. ROBERSON

DIGITALLY SIGNED 6/28/2024

PROP. R/W

EXIST. R/W

C.L. HWY. 62 TEMP. RAMP 3

C.L. HWY. 62 RAMP 3

CONSTRUCTION LIMITS

PROP. R/W. C/A & FENCE

STA. 2023+50.00
BEGIN JOB 101172
BEGIN GRADING

C.L. I-57

STA. 2033+00.00
BEGIN GRADING AND PAVING

C.L. HWY. 62 TEMP. RAMP 2

C.L. HWY. 62 RAMP 2

C.L. TEMP. HWY. 62

2015+00 2020+00 2025+00 2030+00 2035+00 2040+00 2045+00

300+00 245+00 240+00 270+00 250+00 255+00

LEGEND

(E-5)	= SAND BAG DITCH CHECKS	(E-8)	= DIVERSION DITCH (TYPE E-8)
(E-6)	= ROCK DITCH CHECKS	(E-11)	= SILT FENCE
(E-13)	= FILTER SOCK	(E-12)	= SLOPE PIPE DRAIN (12") (TYPE E-12)

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

DATE	REVISION

TEMPORARY EROSION CONTROL DETAILS
STAGE 1

CGGervasini 6/28/2024 1:30:42 PM
WORKSPACE: AHTD
L:\2021\21T0104G - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_EC_STG1_01.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	52	325
		TEMPORARY EROSION CONTROL DETAILS				

I-57

SILT FENCE	E-11	LIN. FT.
STA. 2045+55 TO 2046+45	LT.	185
STA. 2045+55 TO 2046+45	RT.	185

I-57

SAND BAG DITCH CHECK	E-5	INSTALLATION
STA. 2045+80	LT.	1
STA. 2046+25	LT.	1
STA. 2046+35	RT.	1
STA. 2054+00	LT.	1
STA. 2054+15	RT.	1

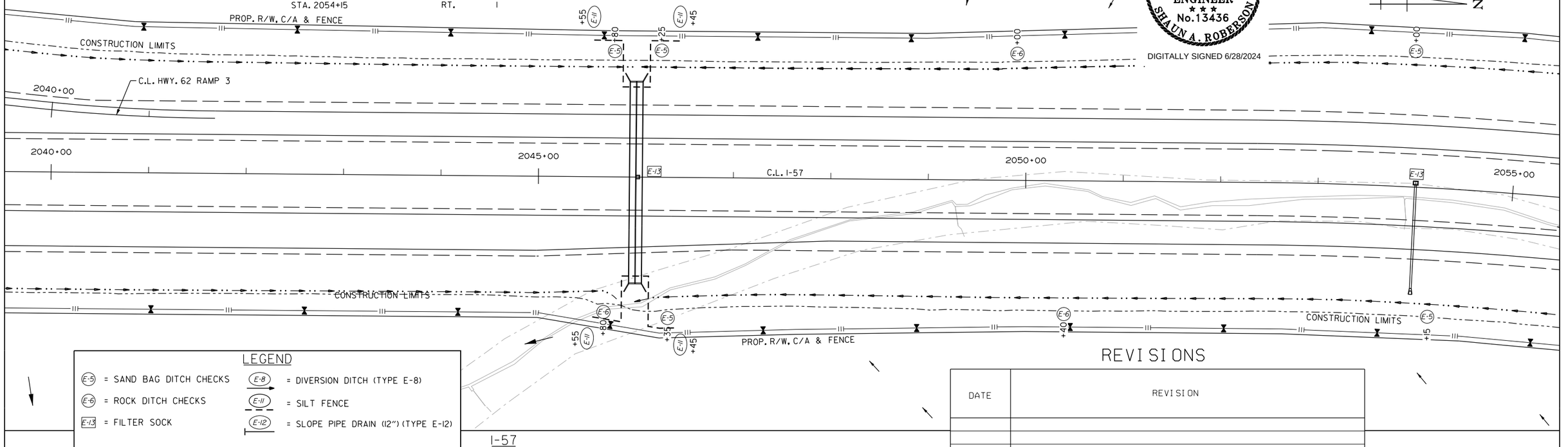
I-57

ROCK DITCH CHECK	E-6	INSTALLATION
STA. 2045+80	RT.	1
STA. 2050+00	LT.	1
STA. 2050+40	RT.	1

I-57

DROP INLET FILTER SOCK	E-13	INSTALLATION
STA. 2046+00	CT.	1
STA. 2054+00	CT.	1

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024



LEGEND

- E-5 = SAND BAG DITCH CHECKS
- E-6 = ROCK DITCH CHECKS
- E-13 = FILTER SOCK
- E-8 = DIVERSION DITCH (TYPE E-8)
- E-11 = SILT FENCE
- E-12 = SLOPE PIPE DRAIN (12") (TYPE E-12)

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

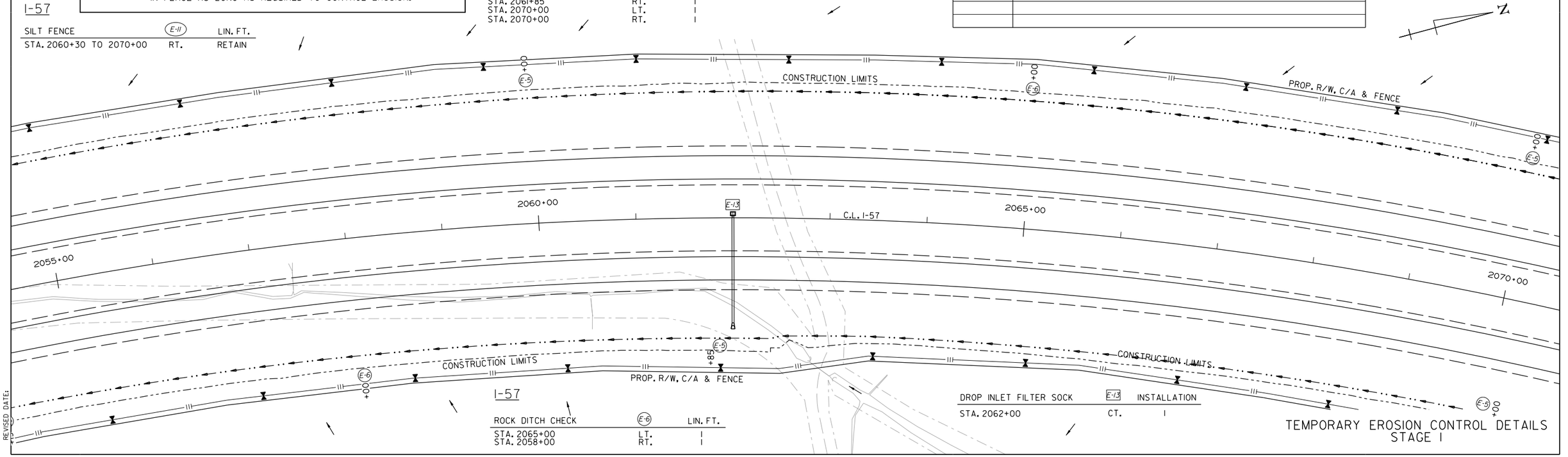
DATE	REVISION

I-57

SAND BAG DITCH CHECK	E-5	LIN. FT.
STA. 2060+00	LT.	1
STA. 2061+85	RT.	1
STA. 2070+00	LT.	1
STA. 2070+00	RT.	1

I-57

SILT FENCE	E-11	LIN. FT.
STA. 2060+30 TO 2070+00	RT.	RETAIN



I-57

ROCK DITCH CHECK	E-6	LIN. FT.
STA. 2065+00	LT.	1
STA. 2058+00	RT.	1

I-57

DROP INLET FILTER SOCK	E-13	INSTALLATION
STA. 2062+00	CT.	1

TEMPORARY EROSION CONTROL DETAILS
STAGE 1

CGGervasini 6/28/2024 1:30:42 PM
WORKSPACE: AHTD
L:\2021\2110046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_EC_ST01_02.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	53	325
		TEMPORARY EROSION CONTROL DETAILS				

I-57

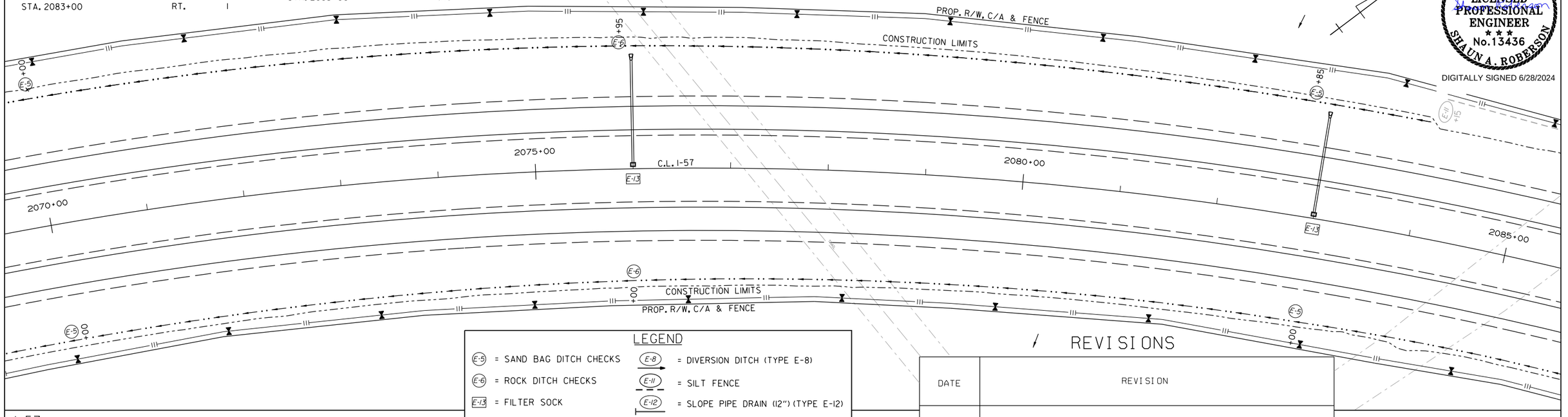
SILT FENCE	(E-11)	LIN. FT.
STA. 2084+15 TO 2085+00	LT.	RETAIN

SAND BAG DITCH CHECK	(E-5)	INSTALLATION
STA. 2082+85	LT.	1
STA. 2083+00	RT.	1

I-57

ROCK DITCH CHECK	(E-6)	INSTALLATION
STA. 2075+95	LT.	1
STA. 2076+00	RT.	1

DROP INLET FILTER SOCK	E-13	INSTALLATION
STA. 2076+00	CT.	1
STA. 2083+00	CT.	1



LEGEND

(E-5)	= SAND BAG DITCH CHECKS	(E-8)	= DIVERSION DITCH (TYPE E-8)
(E-6)	= ROCK DITCH CHECKS	(E-11)	= SILT FENCE
E-13	= FILTER SOCK	(E-12)	= SLOPE PIPE DRAIN (12") (TYPE E-12)

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

DATE	REVISION

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

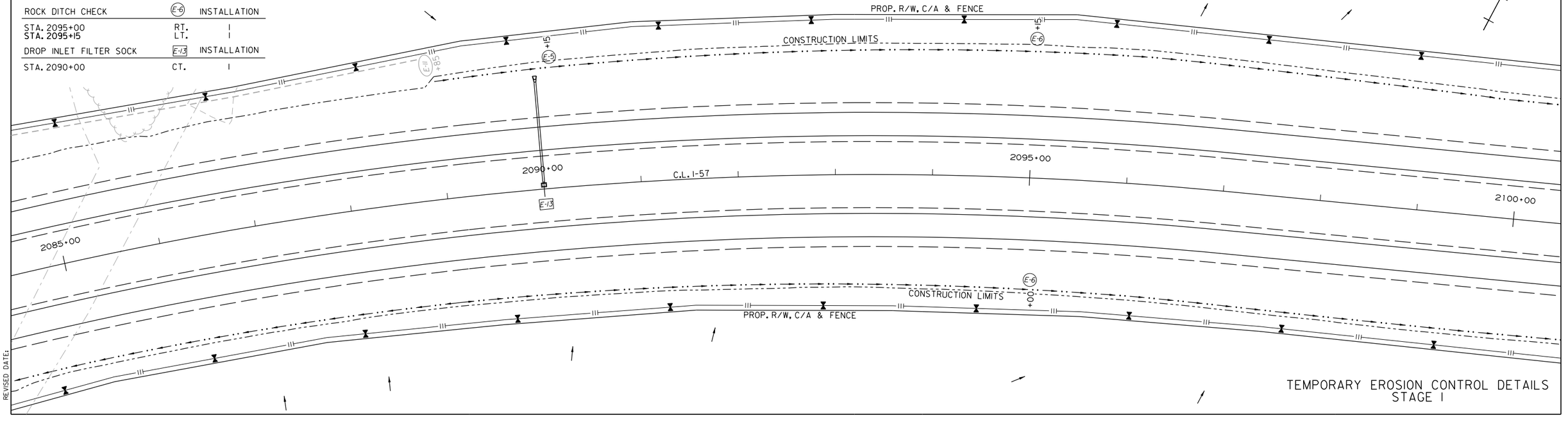
I-57

SILT FENCE	(E-11)	LIN. FT.
STA. 2085+00 TO 2089+85	LT.	RETAIN

SAND BAG DITCH CHECK	(E-5)	INSTALLATION
STA. 2090+15	LT.	1

ROCK DITCH CHECK	(E-6)	INSTALLATION
STA. 2095+00	RT.	1
STA. 2095+15	LT.	1

DROP INLET FILTER SOCK	E-13	INSTALLATION
STA. 2090+00	CT.	1



TEMPORARY EROSION CONTROL DETAILS
STAGE 1

CGGervasini 6/28/2024 1:30:43 PM
WORKSPACE: AHTD
L:\2021\21T0146 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_EC_STG1_03.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	54	325
		TEMPORARY EROSION CONTROL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

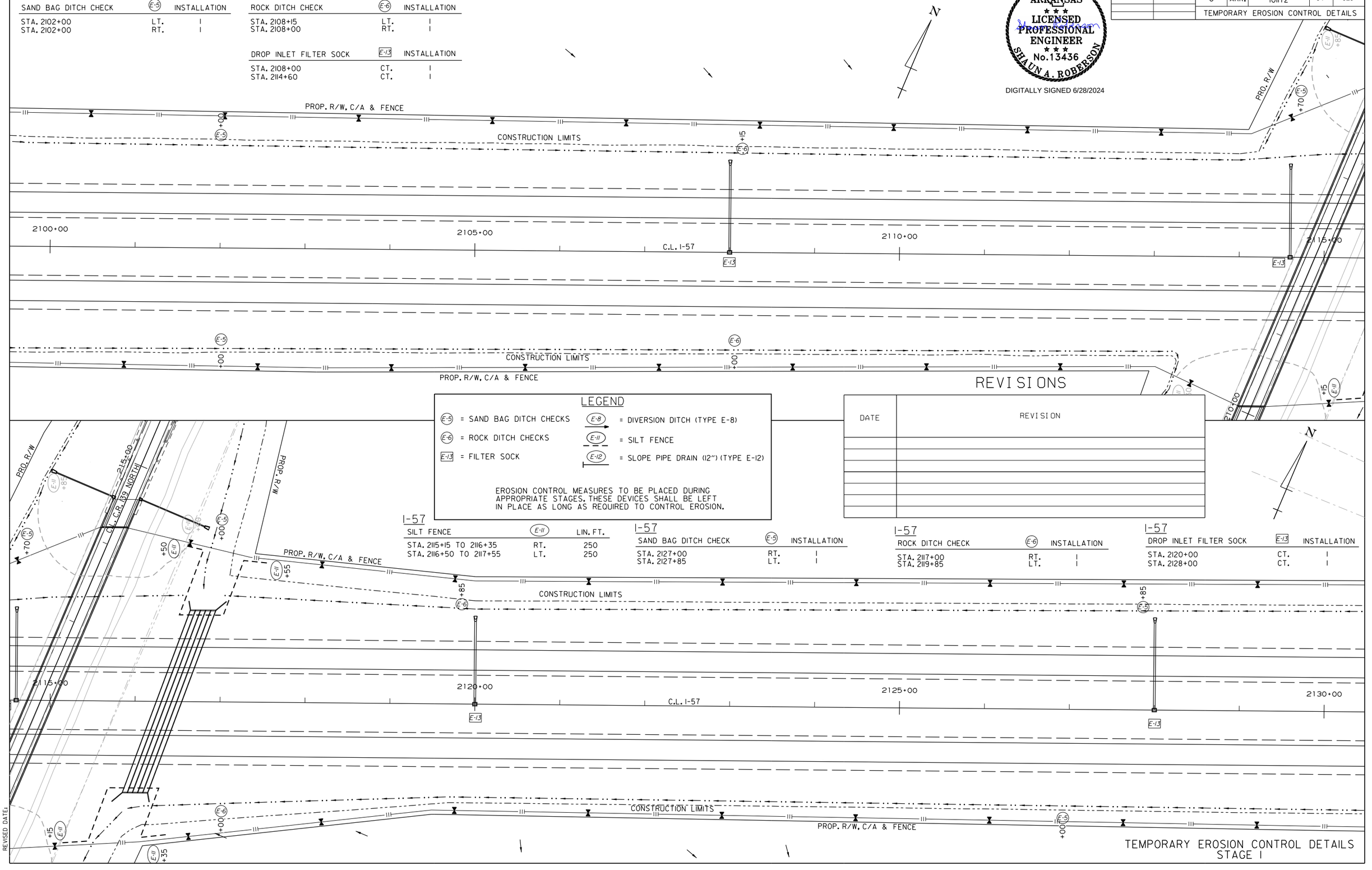
I-57

SAND BAG DITCH CHECK	(E-5)	INSTALLATION
STA. 2102+00	LT.	I
STA. 2102+00	RT.	I

I-57

ROCK DITCH CHECK	(E-6)	INSTALLATION
STA. 2108+15	LT.	I
STA. 2108+00	RT.	I

DROP INLET FILTER SOCK	E-13	INSTALLATION
STA. 2108+00	CT.	I
STA. 2114+60	CT.	I



LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- E-13 = FILTER SOCK
- (E-8) = DIVERSION DITCH (TYPE E-8)
- (E-11) = SILT FENCE
- (E-12) = SLOPE PIPE DRAIN (12") (TYPE E-12)

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

DATE	REVISION

I-57

SILT FENCE	(E-11)	LIN. FT.
STA. 2115+15 TO 2116+35	RT.	250
STA. 2116+50 TO 2117+55	LT.	250

I-57

SAND BAG DITCH CHECK	(E-5)	INSTALLATION
STA. 2127+00	RT.	I
STA. 2127+85	LT.	I

I-57

ROCK DITCH CHECK	(E-6)	INSTALLATION
STA. 2117+00	RT.	I
STA. 2119+85	LT.	I

I-57

DROP INLET FILTER SOCK	E-13	INSTALLATION
STA. 2120+00	CT.	I
STA. 2128+00	CT.	I

TEMPORARY EROSION CONTROL DETAILS
STAGE I

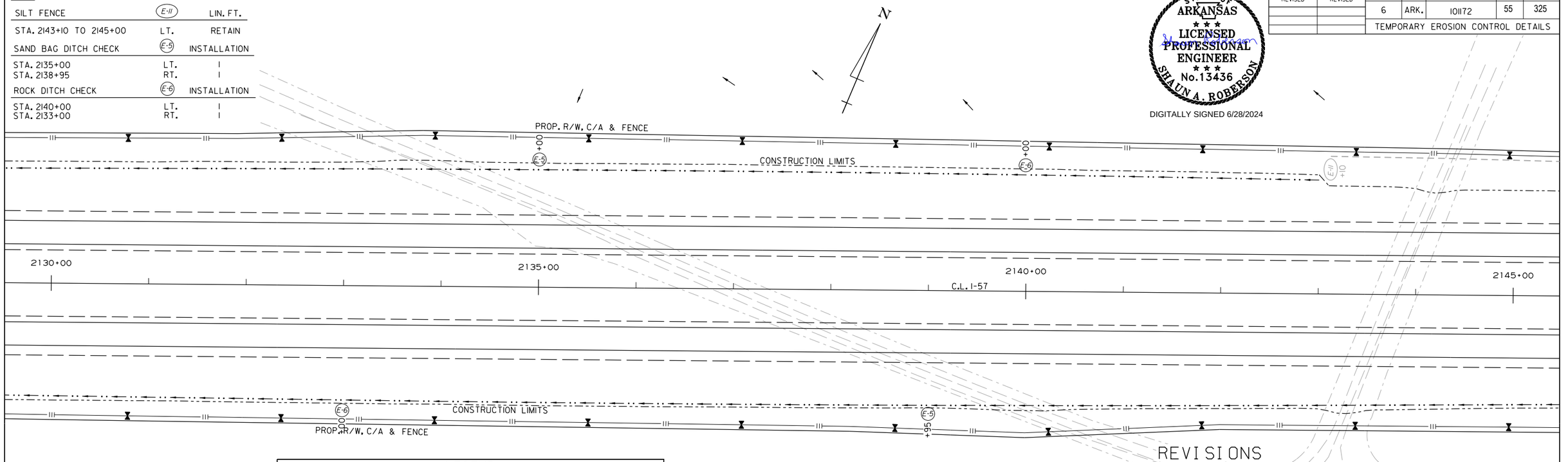
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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	55	325
		TEMPORARY EROSION CONTROL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
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SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

I-57

SILT FENCE	E-11	LIN. FT.
STA. 2143+10 TO 2145+00	LT.	RETAIN
SAND BAG DITCH CHECK	E-5	INSTALLATION
STA. 2135+00	LT.	1
STA. 2138+95	RT.	1
ROCK DITCH CHECK	E-6	INSTALLATION
STA. 2140+00	LT.	1
STA. 2133+00	RT.	1



LEGEND

E-5	= SAND BAG DITCH CHECKS	E-8	= DIVERSION DITCH (TYPE E-8)
E-6	= ROCK DITCH CHECKS	E-11	= SILT FENCE
E-13	= FILTER SOCK	E-12	= SLOPE PIPE DRAIN (12") (TYPE E-12)

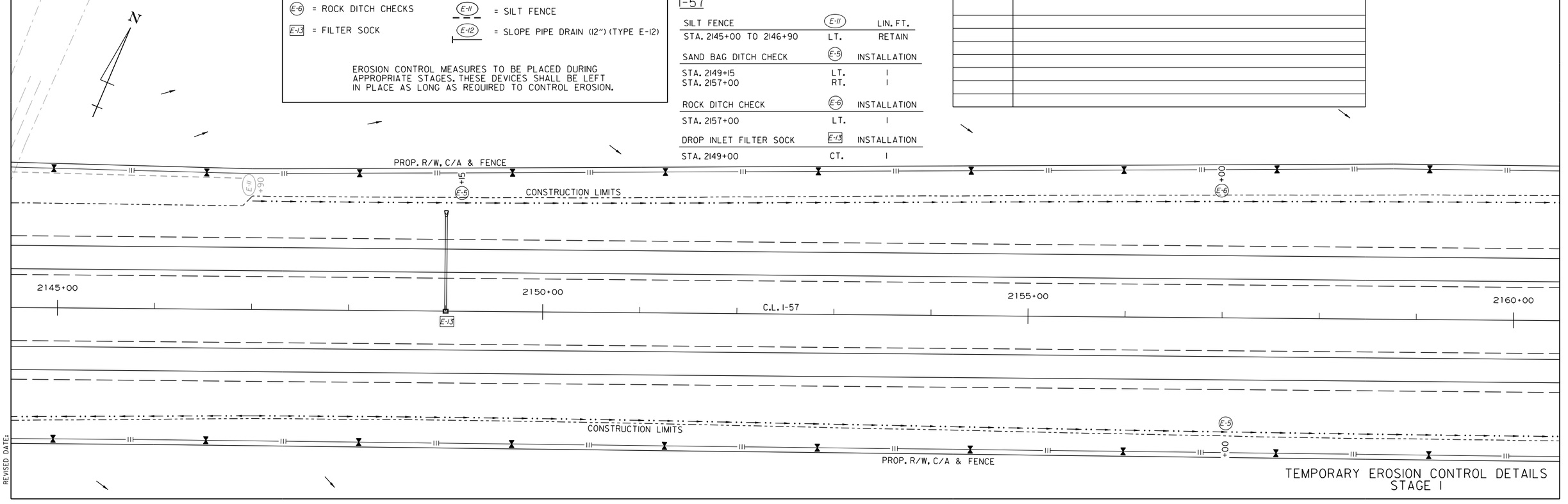
EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

DATE	REVISION

I-57

SILT FENCE	E-11	LIN. FT.
STA. 2145+00 TO 2146+90	LT.	RETAIN
SAND BAG DITCH CHECK	E-5	INSTALLATION
STA. 2149+15	LT.	1
STA. 2157+00	RT.	1
ROCK DITCH CHECK	E-6	INSTALLATION
STA. 2157+00	LT.	1
DROP INLET FILTER SOCK	E-13	INSTALLATION
STA. 2149+00	CT.	1



TEMPORARY EROSION CONTROL DETAILS
STAGE 1

CGCervasini 6/28/2024 1:30:44 PM
WORKSPACE: AHTD
L:\2021\21T0046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_ECC_STG1_05.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	56	325

TEMPORARY EROSION CONTROL DETAILS

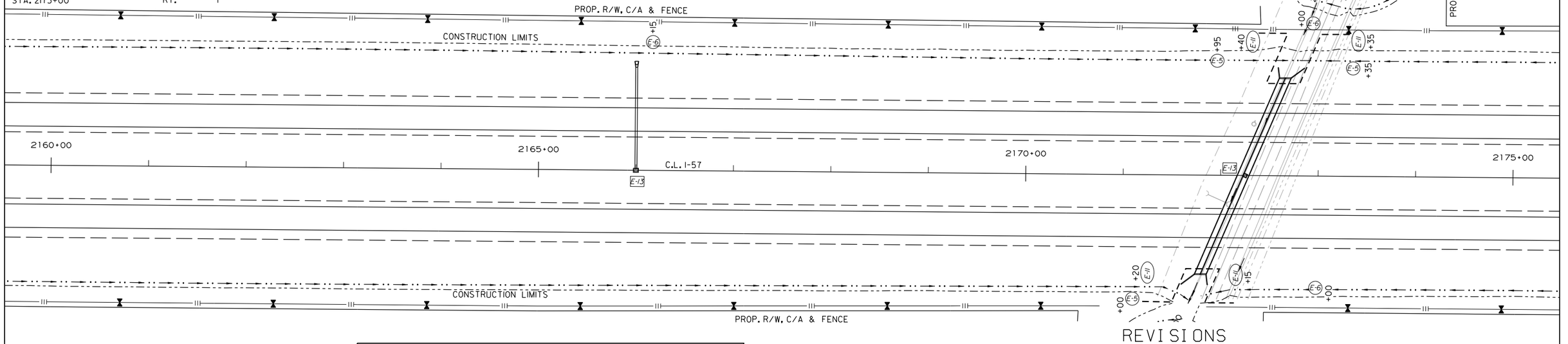
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

I-57

SILT FENCE	E-11	LIN. FT.
STA. 2171+20 TO 2172+15	RT.	170
STA. 2172+40 TO 2173+35	LT.	205
SAND BAG DITCH CHECK	E-5	INSTALLATION
STA. 2173+35	LT.	1
STA. 2171+95	LT.	1
ROCK DITCH CHECK	E-6	INSTALLATION
STA. 2166+15	LT.	1
STA. 2173+00	RT.	1

I-57

DROP INLET FILTER SOCK	E-13	INSTALLATION
STA. 2166+00	CT.	1
STA. 2172+25	CT.	1



LEGEND

E-5	= SAND BAG DITCH CHECKS	E-8	= DIVERSION DITCH (TYPE E-8)
E-6	= ROCK DITCH CHECKS	E-11	= SILT FENCE
E-13	= FILTER SOCK	E-12	= SLOPE PIPE DRAIN (12") (TYPE E-12)

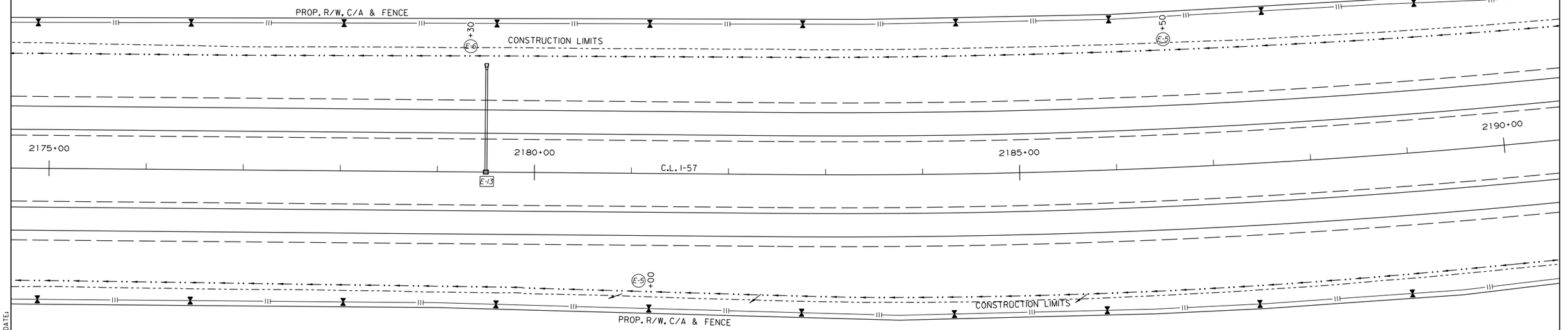
EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

DATE	REVISION

I-57

SAND BAG DITCH CHECK	E-5	INSTALLATION
STA. 2181+00	RT.	1
STA. 2186+50	LT.	1
ROCK DITCH CHECK	E-6	INSTALLATION
STA. 2179+30	LT.	1
DROP INLET FILTER SOCK	E-13	INSTALLATION
STA. 2179+50	CT.	1



TEMPORARY EROSION CONTROL DETAILS
STAGE 1

CGGervasini 6/28/2024 1:30:44 PM
WORKSPACE: AHTD
L:\2021\21T0I046 - ARDOT 100502 Walnut Ridge - MO I-57\Drawings\r101172\r101172.EC.ST01.06.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	57	325
		TEMPORARY EROSION CONTROL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
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DIGITALLY SIGNED 6/28/2024

I-57

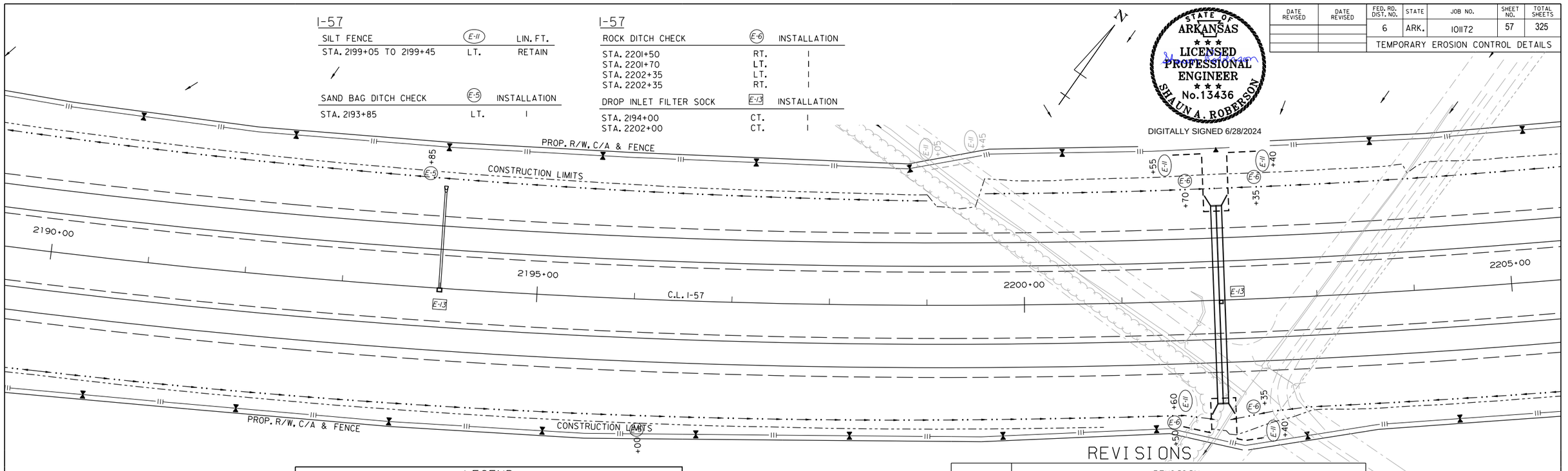
SILT FENCE	E-11	LIN. FT.
STA. 2199+05 TO 2199+45	LT.	RETAIN

SAND BAG DITCH CHECK	E-5	INSTALLATION
STA. 2193+85	LT.	1

I-57

ROCK DITCH CHECK	E-6	INSTALLATION
STA. 2201+50	RT.	1
STA. 2201+70	LT.	1
STA. 2202+35	LT.	1
STA. 2202+35	RT.	1

DROP INLET FILTER SOCK	E-13	INSTALLATION
STA. 2194+00	CT.	1
STA. 2202+00	CT.	1



REVISIONS

DATE	REVISION

LEGEND

E-5	= SAND BAG DITCH CHECKS	E-8	= DIVERSION DITCH (TYPE E-8)
E-6	= ROCK DITCH CHECKS	E-11	= SILT FENCE
E-13	= FILTER SOCK	E-12	= SLOPE PIPE DRAIN (12") (TYPE E-12)

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

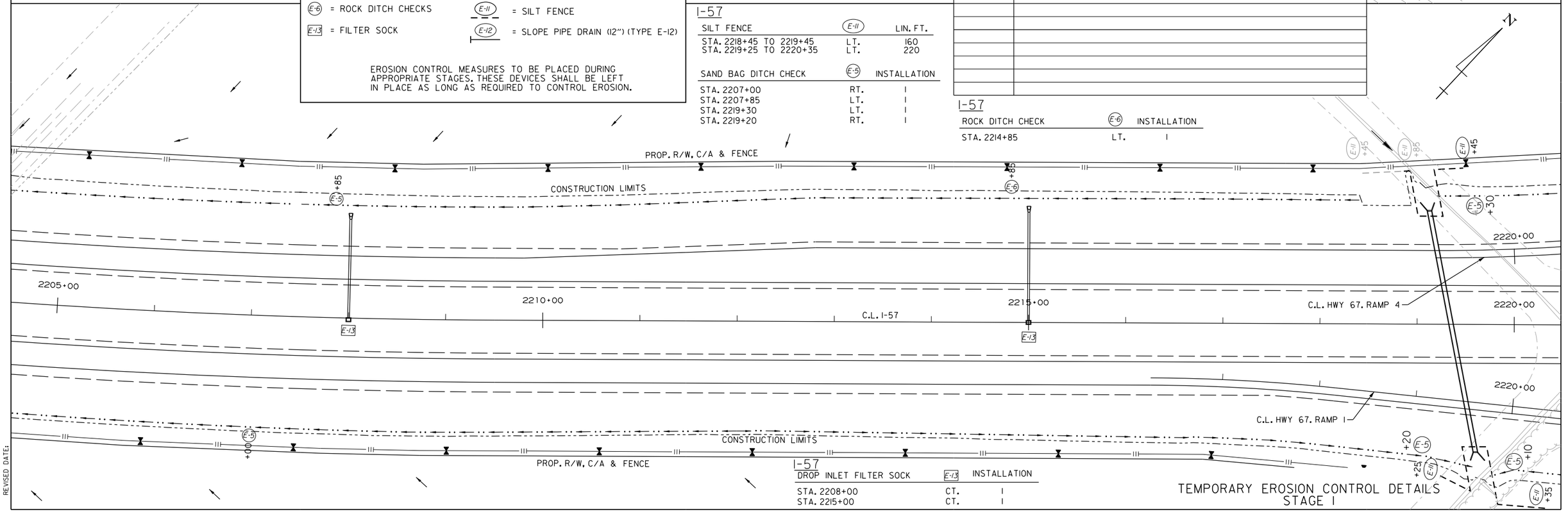
I-57

SILT FENCE	E-11	LIN. FT.
STA. 2218+45 TO 2219+45	LT.	160
STA. 2219+25 TO 2220+35	LT.	220

SAND BAG DITCH CHECK	E-5	INSTALLATION
STA. 2207+00	RT.	1
STA. 2207+85	LT.	1
STA. 2219+30	LT.	1
STA. 2219+20	RT.	1

I-57

ROCK DITCH CHECK	E-6	INSTALLATION
STA. 2214+85	LT.	1



I-57

DROP INLET FILTER SOCK	E-13	INSTALLATION
STA. 2208+00	CT.	1
STA. 2215+00	CT.	1

TEMPORARY EROSION CONTROL DETAILS
STAGE 1

CGervasini 6/28/2024 1:30:45 PM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	58	325
		TEMPORARY EROSION CONTROL DETAILS				

LEGEND

E-5 = SAND BAG DITCH CHECKS	E-8 = DIVERSION DITCH (TYPE E-8)
E-6 = ROCK DITCH CHECKS	E-11 = SILT FENCE
E-13 = FILTER SOCK	E-12 = SLOPE PIPE DRAIN (12") (TYPE E-12)

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

I-57

DIVERSION DITCH (E-8)		LIN. FT.
STA. 2232+00 TO 2236+00	RT.	400
STA. 2232+00 TO 2236+00	LT.	400

SLOPE DRAIN (E-12)		LIN. FT.
STA. 2232+00	RT.	65
STA. 2232+00	LT.	65

I-57

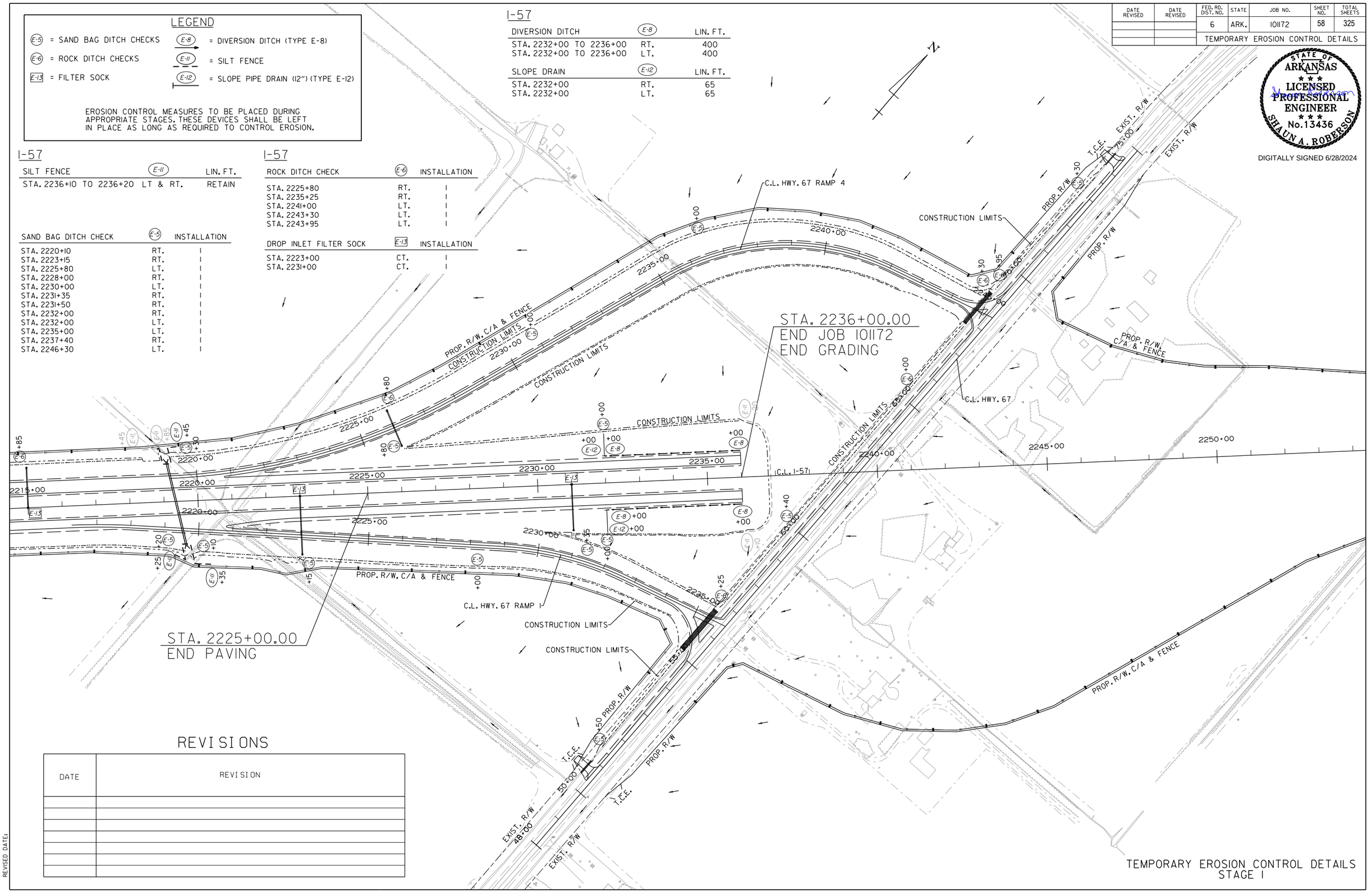
SILT FENCE (E-11)		LIN. FT.
STA. 2236+10 TO 2236+20	LT & RT.	RETAIN

I-57

ROCK DITCH CHECK (E-6)		INSTALLATION
STA. 2225+80	RT.	I
STA. 2235+25	RT.	I
STA. 2241+00	LT.	I
STA. 2243+30	LT.	I
STA. 2243+95	LT.	I

DROP INLET FILTER SOCK (E-13)		INSTALLATION
STA. 2223+00	CT.	I
STA. 2231+00	CT.	I

SAND BAG DITCH CHECK (E-5)		INSTALLATION
STA. 2220+10	RT.	I
STA. 2223+15	RT.	I
STA. 2225+80	LT.	I
STA. 2228+00	RT.	I
STA. 2230+00	LT.	I
STA. 2231+35	RT.	I
STA. 2231+50	RT.	I
STA. 2232+00	RT.	I
STA. 2232+00	LT.	I
STA. 2235+00	LT.	I
STA. 2237+40	RT.	I
STA. 2246+30	LT.	I



STATE OF ARKANSAS
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REVISIONS

DATE	REVISION

TEMPORARY EROSION CONTROL DETAILS
STAGE I

CGGervasini 6/28/2024 1:30:48 PM
WORKSPACE: AHTD
L:\2021\21101046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172r101172_EC_ST01_08.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	59	325
		TEMPORARY EROSION CONTROL DETAILS				

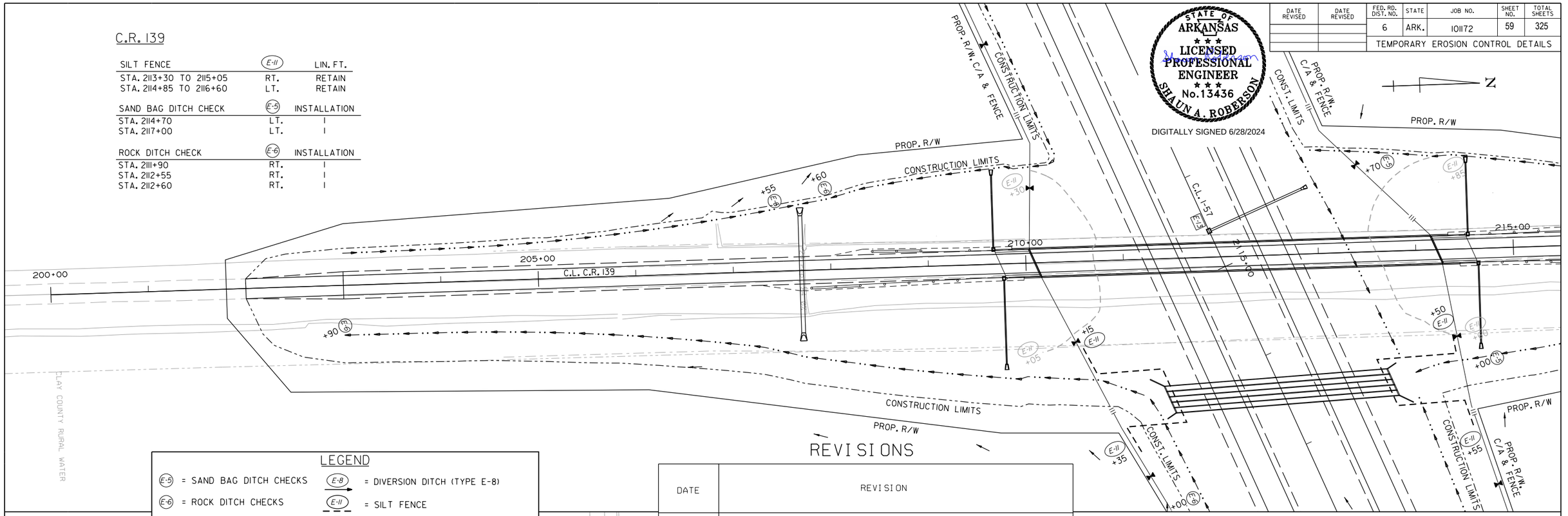
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

C.R. 139

SILT FENCE	(E-11)	LIN. FT.
STA. 2113+30 TO 2115+05	RT.	RETAIN
STA. 2114+85 TO 2116+60	LT.	RETAIN

SAND BAG DITCH CHECK	(E-5)	INSTALLATION
STA. 2114+70	LT.	1
STA. 2117+00	LT.	1

ROCK DITCH CHECK	(E-6)	INSTALLATION
STA. 2111+90	RT.	1
STA. 2112+55	RT.	1
STA. 2112+60	RT.	1



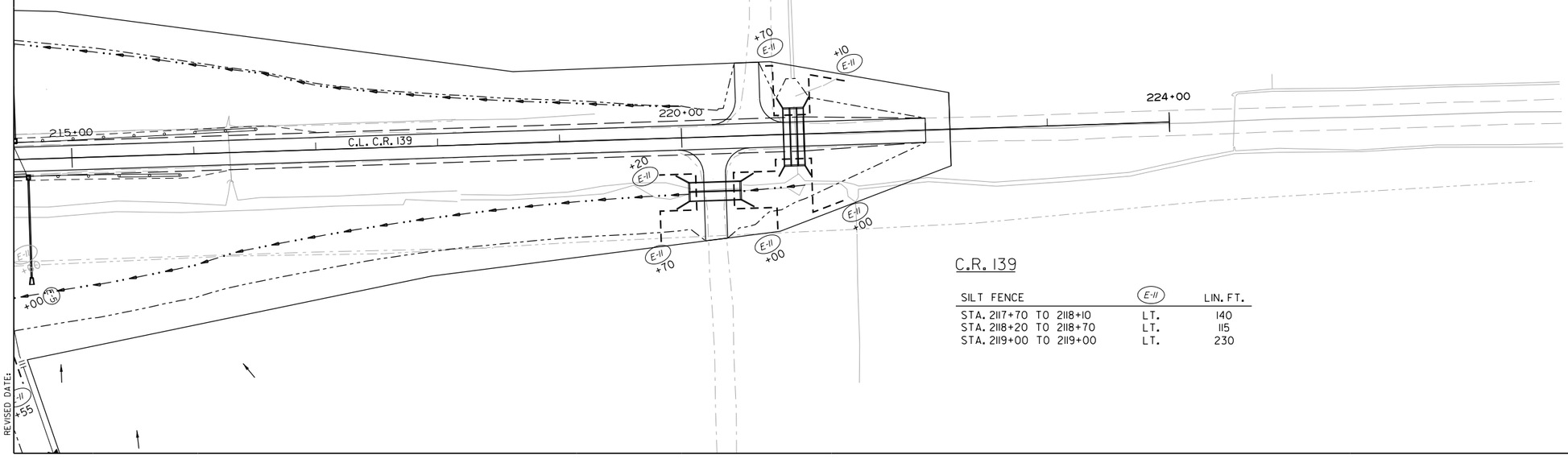
LEGEND

(E-5) = SAND BAG DITCH CHECKS
(E-6) = ROCK DITCH CHECKS
(E-13) = FILTER SOCK
(E-8) = DIVERSION DITCH (TYPE E-8)
(E-11) = SILT FENCE
(E-12) = SLOPE PIPE DRAIN (12") (TYPE E-12)

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

DATE	REVISION



C.R. 139

SILT FENCE	(E-11)	LIN. FT.
STA. 2117+70 TO 2118+10	LT.	140
STA. 2118+20 TO 2118+70	LT.	115
STA. 2119+00 TO 2119+00	LT.	230

TEMPORARY EROSION CONTROL DETAILS
C.R. 139 - STAGE 1

CGervasini 6/28/2024 1:30:48 PM
WORKSPACE: AHTD
L:\2021\21T0046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_EC_STG1_09_C.R. 139.dgn
REVISED DATE:

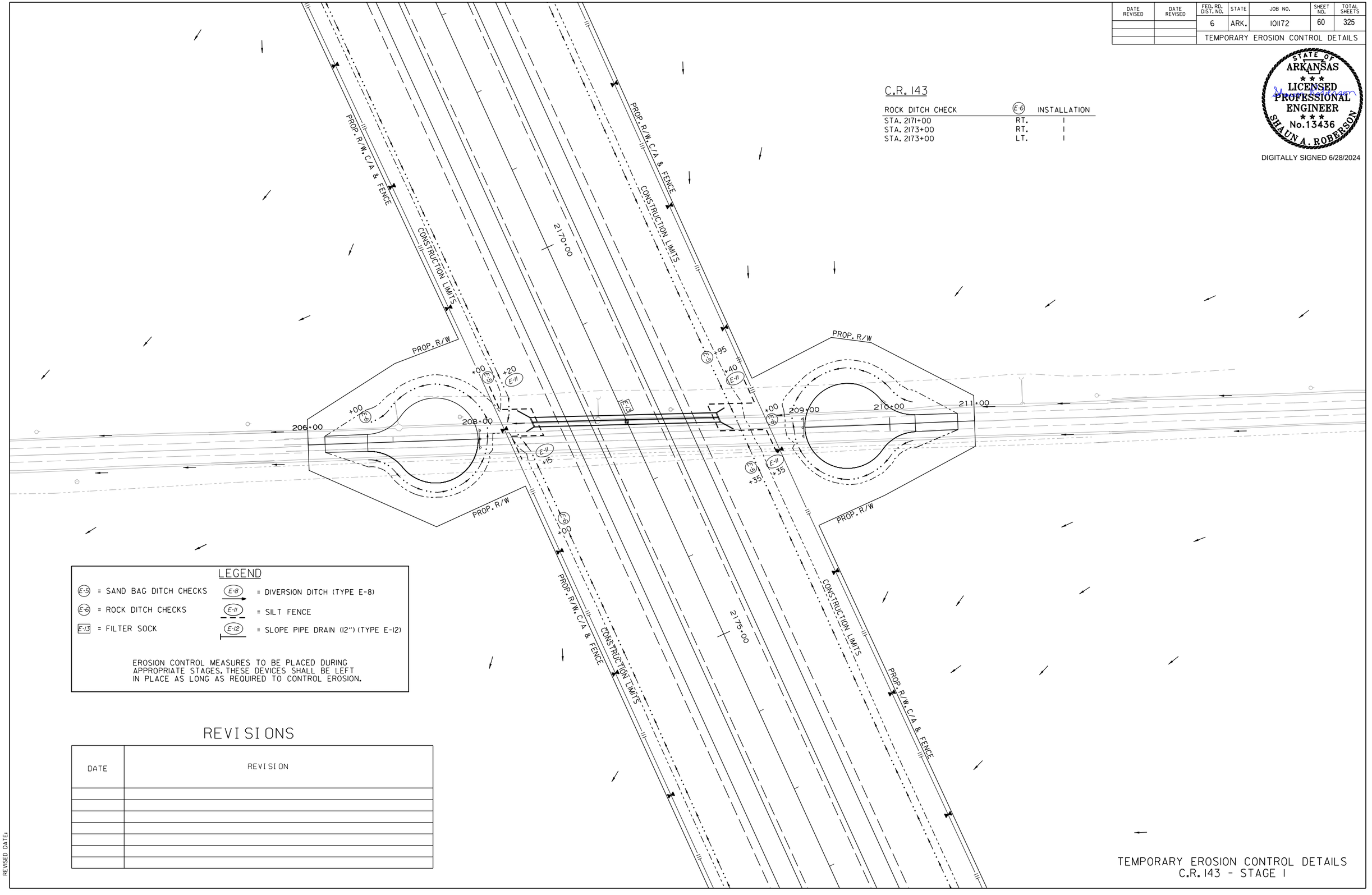
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	60	325
		TEMPORARY EROSION CONTROL DETAILS				

STATE OF ARKANSAS
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C.R. 143

ROCK DITCH CHECK	(E-6)	INSTALLATION
STA. 2171+00	RT.	I
STA. 2173+00	RT.	I
STA. 2173+00	LT.	I



LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- E-13 = FILTER SOCK
- (E-8) = DIVERSION DITCH (TYPE E-8)
- (E-11) = SILT FENCE
- (E-12) = SLOPE PIPE DRAIN (12") (TYPE E-12)

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

DATE	REVISION

TEMPORARY EROSION CONTROL DETAILS
C.R. 143 - STAGE I

CGervasini 6/28/2024 1:30:49 PM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	61	325

TEMPORARY EROSION CONTROL DETAILS

I-57

SILT FENCE (E-11)		LIN. FT.
STA. 2023+20 TO 2023+20	RT. & LT.	RETAIN
STA. 2026+65 TO 2045+45	RT.	RETAIN

SAND BAG DITCH CHECK (E-5)		INSTALLATION
STA. 2022+00	LT.	2
STA. 2022+80	LT.	RETAIN
STA. 2023+00	LT.	RETAIN
STA. 2023+15	RT.	RETAIN
STA. 2023+45	RT.	RETAIN
STA. 2023+50	LT.	RETAIN
STA. 2024+15	RT.	RETAIN
STA. 2025+25	RT.	RETAIN
STA. 2027+60	LT.	RETAIN
STA. 2028+30	LT.	RETAIN
STA. 2029+15	RT.	RETAIN
STA. 2031+40	LT.	RETAIN

DROP INLET FILTER SOCK (E-13)		INSTALLATION
STA. 2024+00	CT.	RETAIN
STA. 2029+00	CT.	RETAIN

I-57

ROCK DITCH CHECK (E-6)		INSTALLATION
STA. 2022+00	RT.	2
STA. 2023+00	RT.	RETAIN
STA. 2023+10	RT.	RETAIN
STA. 2023+20	LT.	RETAIN
STA. 2023+45	RT.	RETAIN
STA. 2025+65	RT.	RETAIN
STA. 2026+10	LT.	RETAIN
STA. 2026+90	RT.	RETAIN
STA. 2037+80	LT.	RETAIN

N

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBBERSON

DIGITALLY SIGNED 6/28/2024

STA. 2023+50.00
BEGIN JOB 101172
BEGIN GRADING

STA. 2033+00.00
BEGIN GRADING AND PAVING

C.L. HWY. 62 TEMP. RAMP 3
C.L. HWY. 62 RAMP 3
C.L. HWY. 62 TEMP. RAMP 2
C.L. HWY. 62 RAMP 2
C.L. I-57
C.L. TEMP. HWY. 62
CONSTRUCTION LIMITS
PROP. R/W, C/A & FENCE
EXIST. R/W

2015+00 2020+00 2025+00 2030+00 2035+00 2040+00 2045+00
241+00 245+00 250+00 255+00 270+00 275+00 300+00

LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-13) = FILTER SOCK
- (E-8) = DIVERSION DITCH (TYPE E-8)
- (E-11) = SILT FENCE
- (E-12) = SLOPE PIPE DRAIN (12") (TYPE E-12)

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

DATE	REVISION

TEMPORARY EROSION CONTROL DETAILS
STAGE 2

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	62	325
		TEMPORARY EROSION CONTROL DETAILS				

LEGEND

(E-5) = SAND BAG DITCH CHECKS
(E-6) = ROCK DITCH CHECKS
E-13 = FILTER SOCK
(E-8) = DIVERSION DITCH (TYPE E-8)
(E-11) = SILT FENCE
(E-12) = SLOPE PIPE DRAIN (12") (TYPE E-12)

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

I-57

SILT FENCE (E-11)		LIN. FT.
STA. 2236+10 TO 2236+20	LT & RT.	RETAIN

SAND BAG DITCH CHECK (E-5)		INSTALLATION
STA. 2220+10	RT.	RETAIN
STA. 2223+15	RT.	RETAIN
STA. 2225+80	LT.	RETAIN
STA. 2228+00	RT.	RETAIN
STA. 2230+00	LT.	RETAIN
STA. 2231+35	RT.	RETAIN
STA. 2231+50	RT.	RETAIN
STA. 2232+00	RT.	RETAIN
STA. 2232+00	LT.	RETAIN
STA. 2232+30	RT.	I
STA. 2235+00	LT.	RETAIN
STA. 2237+40	RT.	RETAIN
STA. 2238+05	RT.	I
STA. 2246+30	LT.	RETAIN
STA. 2247+05	LT.	I

I-57

ROCK DITCH CHECK (E-6)		INSTALLATION
STA. 2225+80	RT.	RETAIN
STA. 2235+25	RT.	RETAIN
STA. 2235+80	RT.	I
STA. 2241+00	LT.	RETAIN
STA. 2241+60	LT.	I
STA. 2243+30	LT.	RETAIN
STA. 2243+95	LT.	RETAIN
STA. 2244+60	LT.	I

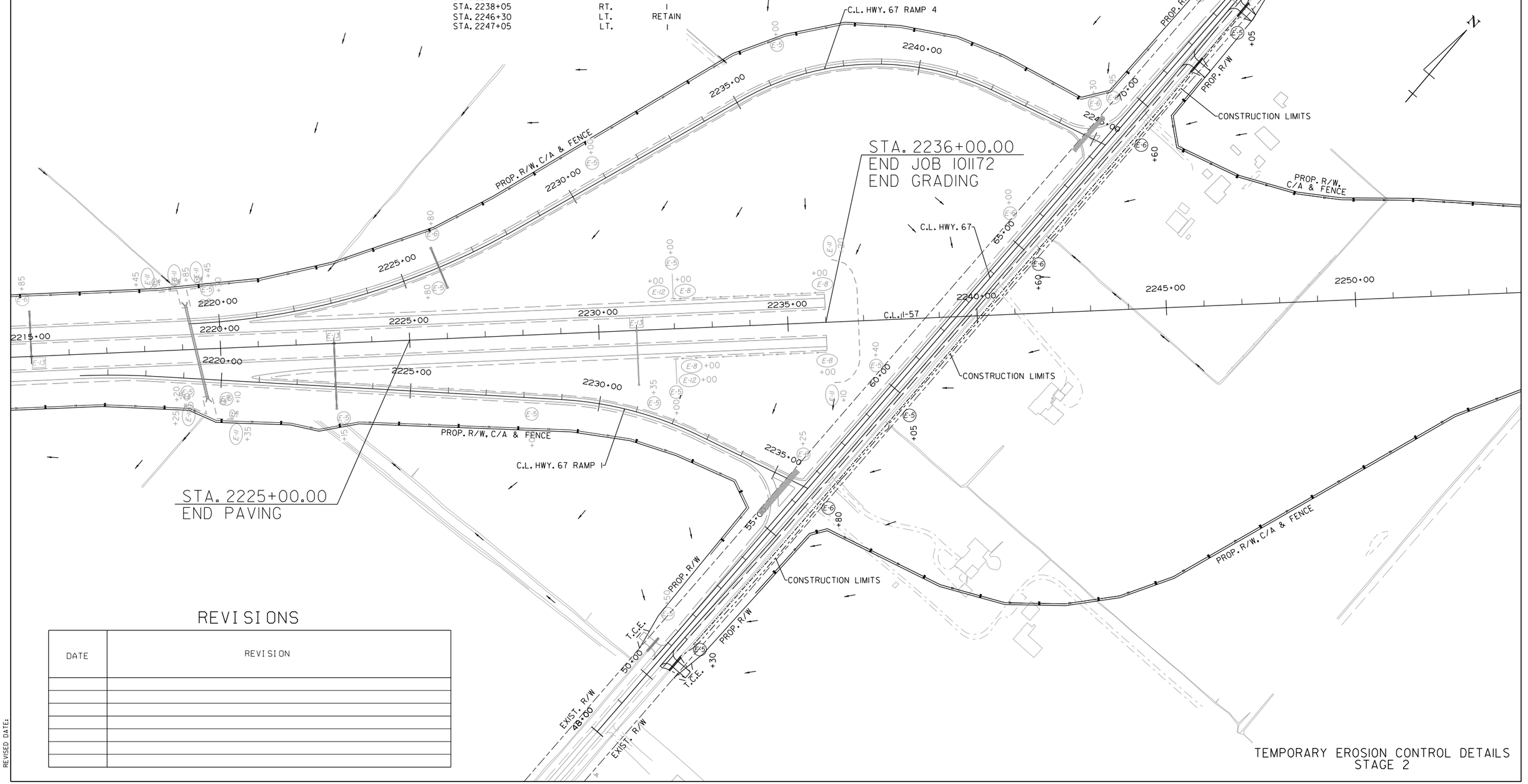
DROP INLET FILTER SOCK (E-13)		INSTALLATION
STA. 2223+00	CT.	RETAIN
STA. 2231+00	CT.	RETAIN

I-57

DIVERSION DITCH (E-8)		LIN. FT.
STA. 2232+00 TO 2236+00	RT.	RETAIN
STA. 2232+00 TO 2236+00	LT.	RETAIN

SLOPE DRAIN (E-12)		LIN. FT.
STA. 2232+00	RT.	RETAIN
STA. 2232+00	LT.	RETAIN

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024



REVISIONS

DATE	REVISION

TEMPORARY EROSION CONTROL DETAILS
STAGE 2

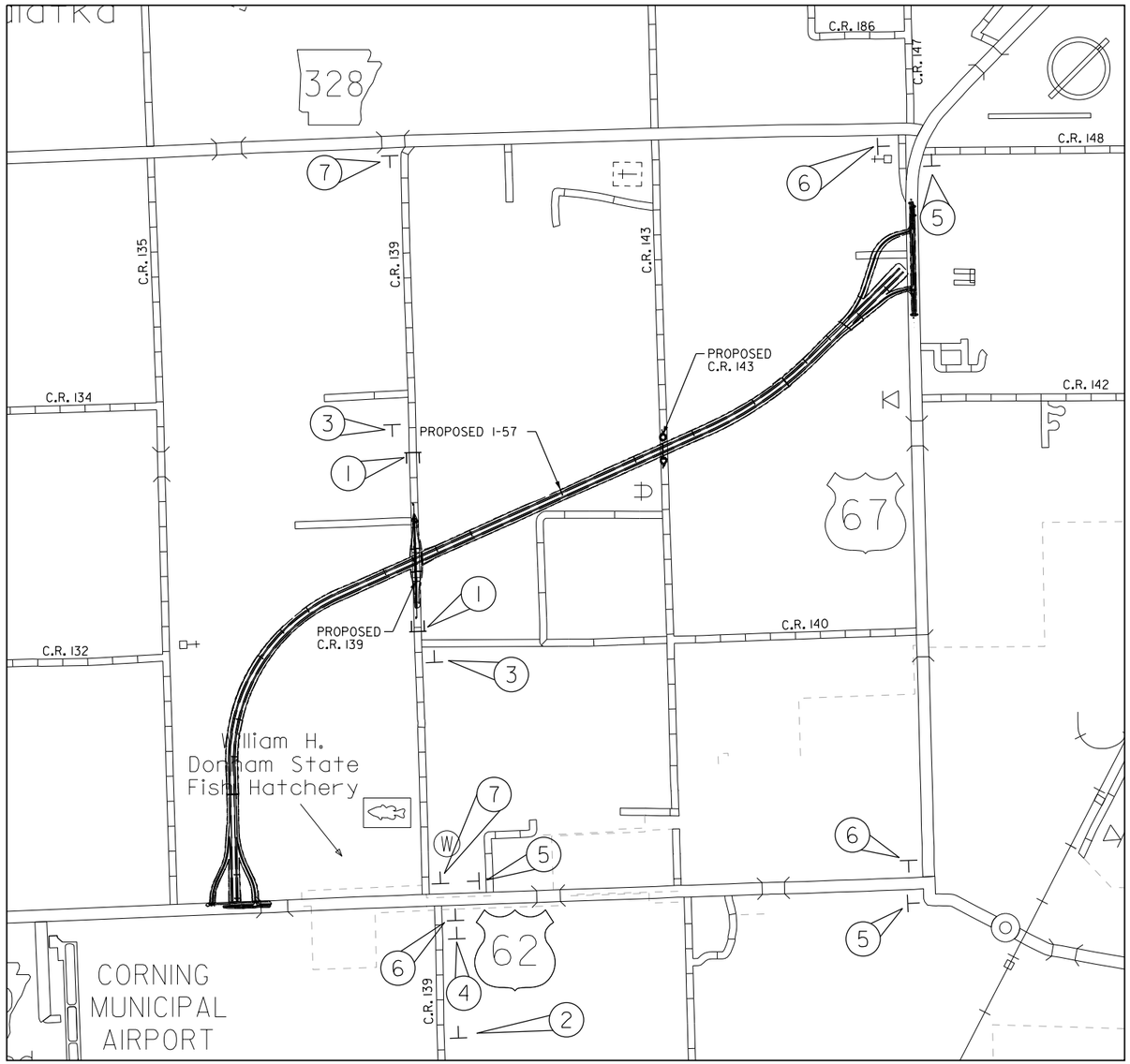
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	63	325
		MAINTENANCE OF TRAFFIC DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBBERSON

DIGITALLY SIGNED 6/28/2024

1. ROAD CLOSED — (I) R11-2 (48" X 30")
   8' BARR. TYPE III LT. — 8' BARR. TYPE III RT.
2. DETOUR 1500 FT — (I) W20-2 (48" X 48")
3. ROAD CLOSED 500 FT — (I) W20-2 (48" X 48")
4. DETOUR — (I) M4-8 (24" X 12")
   C.R. 139 — (I) D3-1 (24" X 12")
   (I) M5-1R (30" X 21")
5. DETOUR — (I) M4-10L (48" X 18")
   C.R. 139 — (I) D3-1 (24" X 12")
6. DETOUR — (I) M4-10R (48" X 18")
   C.R. 139 — (I) D3-1 (24" X 12")
7. ROAD CLOSED 1.00 MILES AHEAD LOCAL TRAFFIC ONLY — (I) R11-4 (60" X 30")



N

1" = 3000'

C.R. 139 DETOUR
MAINTENANCE OF TRAFFIC DETAILS

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	64	325

MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

N

1" = 100'

C.L. HWY. 62 TEMP. RAMP 3

(I) RII-2 (48" X 30") ROAD CLOSED

16' BARR. TYPE III LT.

(I) G20-2 (48" X 24") END ROAD WORK

28 TRAFFIC DRUMS AT 50' O.C.

(I) RII-2 (48" X 30") ROAD CLOSED

16' BARR. TYPE III LT. 16' BARR. TYPE III RT.

2025+00

C.L. I-57

CONSTRUCTION LIMITS

(I) RII-2 (48" X 30") ROAD CLOSED

16' BARR. TYPE III LT. 16' BARR. TYPE III RT.

4" DOUBLE YELLOW W/ TYPE II (YELLOW/YELLOW) RAISED PAVEMENT MARKERS @ 80' O.C.

C.L. HWY. 62 TEMP. RAMP 2

(I) RII-2 (48" X 30") ROAD CLOSED

16' BARR. TYPE II RT.

300+00 245+00 250+00 270+00 255+00

500' 500' 500'

ROAD WORK 1500 FT. (I) W20-1 (48" X 48")

ROAD WORK 1000 FT. (I) W20-1 (48" X 48")

ROAD WORK 500 FT. (I) W20-1 (48" X 48")

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

C.L. TEMP. HWY. 62

STAGE I CONSTRUCTION

STAGE I OVERLAY UNDER TRAFFIC

STAGE I TRAFFIC

TRAFFIC DRUMS

BUMP (4) W8-1 (30" X 30")

DO NOT PASS (4) R4-1 (24" X 30")

RIGHT SHOULDER CLOSED (4) W21-5a (36" X 36")

TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

C.L. TEMP. HWY. 62

STAGE I WORK AREA | 12'-0" TRAVEL LN. | 12'-0" TRAVEL LN.

EXISTING GROUND

3:1 6:1

24'-0" NOMINAL EXISTING PAVEMENT

STAGE I TRAFFIC DRUMS 50' O.C. (NORMAL)

PLACE LEVELING COURSE UNDER TRAFFIC TO 2" BELOW FINISHED GRADE

STAGE I TYPICAL SECTION

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

(I) W20-1 (48" X 48") ROAD WORK 500 FT.

(I) W20-1 (48" X 48") ROAD WORK 1000 FT.

(I) W20-1 (48" X 48") ROAD WORK 1500 FT.

500' 500' 500'

C.L. TEMP. HWY. 62 255+00

4" DOUBLE YELLOW W/ TYPE II (YELLOW/YELLOW) RAISED PAVEMENT MARKERS @ 80' O.C.

END ROAD WORK

(I) G20-2 (48" X 24")

STAGE I
CONSTRUCTION SEQUENCE NOTES

1. MAINTAIN TRAFFIC ON EXISTING LANES OF HWY. 62 AND HWY. 67.
2. INSTALL ADVANCE WARNING SIGNS AS SHOWN.
3. CONSTRUCT TEMP. HWY. 62, HWY. 67 AND I-57 MAIN LANES. PERFORM LEVELING, AND NOTCH AND WIDEN OPERATIONS.
4. CONSTRUCT C.R. 139 AND C.R. 143
5. PLACE CONSTRUCTION PAVEMENT MARKINGS SHOWN FOR STAGE 2 TRAFFIC CONFIGURATION PRIOR TO SWITCHING TRAFFIC.

CONSTRUCTION PAVEMENT MARKINGS

DOUBLE YELLOW CENTERLINE = 6810 LIN. FT.

RAISED PAVEMENT MARKERS TYPE II (YELLOW/YELLOW) 43 EACH

TRAFFIC DRUMS = 93 EACH
BARRICADES = 224 LIN. FT.

N

1" = 100'

PARKING

MAINTENANCE OF TRAFFIC DETAILS
TEMP. HWY. 62 - STAGE I

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	65	325

MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

N
1" = 100'

(1) G20-2 (48" X 24") END ROAD WORK

6 TRAFFIC DRUMS 10' O.C.

23 TRAFFIC DRUMS 50' O.C.

CONSTRUCTION LIMITS

50+00

55+00

60+00

500'

500'

500'

(1) W20-1 (48" X 48") ROAD WORK 1500 FT.

(1) W20-1 (48" X 48") ROAD WORK 1000 FT.

(1) W20-1 (48" X 48") ROAD WORK 500 FT.

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

C.L. HWY. 67

(1) R11-2 (48" X 30") ROAD CLOSED

16' BARR. TYPE III LT.

16' BARR. TYPE III RT.

C.L. HWY. 67 RAMP 1

2235.00

4" DOUBLE YELLOW W/ TYPE II (YELLOW/YELLOW) RAISED PAVEMENT MARKERS @ 80' O.C.

CONSTRUCTION LIMITS

C.L. I-57

STAGE I CONSTRUCTION

STAGE I OVERLAY UNDER TRAFFIC

STAGE I TRAFFIC

TRAFFIC DRUMS

BUMP (4) W8-1 (30" X 30")

DO NOT PASS (4) R4-1 (24" X 30")

RIGHT SHOULDER CLOSED (4) W21-5a (36" X 36")

TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

C.L. HWY. 67

STAGE I WORK AREA

12'-0" TRAVEL LN.

12'-0" TRAVEL LN.

EXISTING GROUND

3:1

6:1

24'-0" NOMINAL EXISTING PAVEMENT

STAGE I TRAFFIC DRUMS 50' O.C. (NORMAL)

PLACE LEVELING COURSE UNDER TRAFFIC TO 2" BELOW FINISHED GRADE

STAGE I TYPICAL SECTION

(1) R11-2 (48" X 30") ROAD CLOSED

16' BARR. TYPE III LT.

16' BARR. TYPE III RT.

C.L. HWY. 67 RAMP 4

2240.00

4" DOUBLE YELLOW W/ TYPE II (YELLOW/YELLOW) RAISED PAVEMENT MARKERS @ 80' O.C.

CONSTRUCTION LIMITS

65+00

70+00

75+00

24 TRAFFIC DRUMS 50' O.C.

C.L. HWY. 67

6 TRAFFIC DRUMS 10' O.C.

(1) R11-2 (48" X 30") ROAD CLOSED

16' BARR. TYPE III RT.

N
1" = 100'

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

(1) W20-1 (48" X 48") ROAD WORK 500 FT.

(1) W20-1 (48" X 48") ROAD WORK 1000 FT.

(1) W20-1 (48" X 48") ROAD WORK 1500 FT.

6 TRAFFIC DRUMS 10' O.C.

500'

500'

500'

CONSTRUCTION LIMITS

6 TRAFFIC DRUMS 10' O.C.

(1) G20-2 (48" X 24") END ROAD WORK

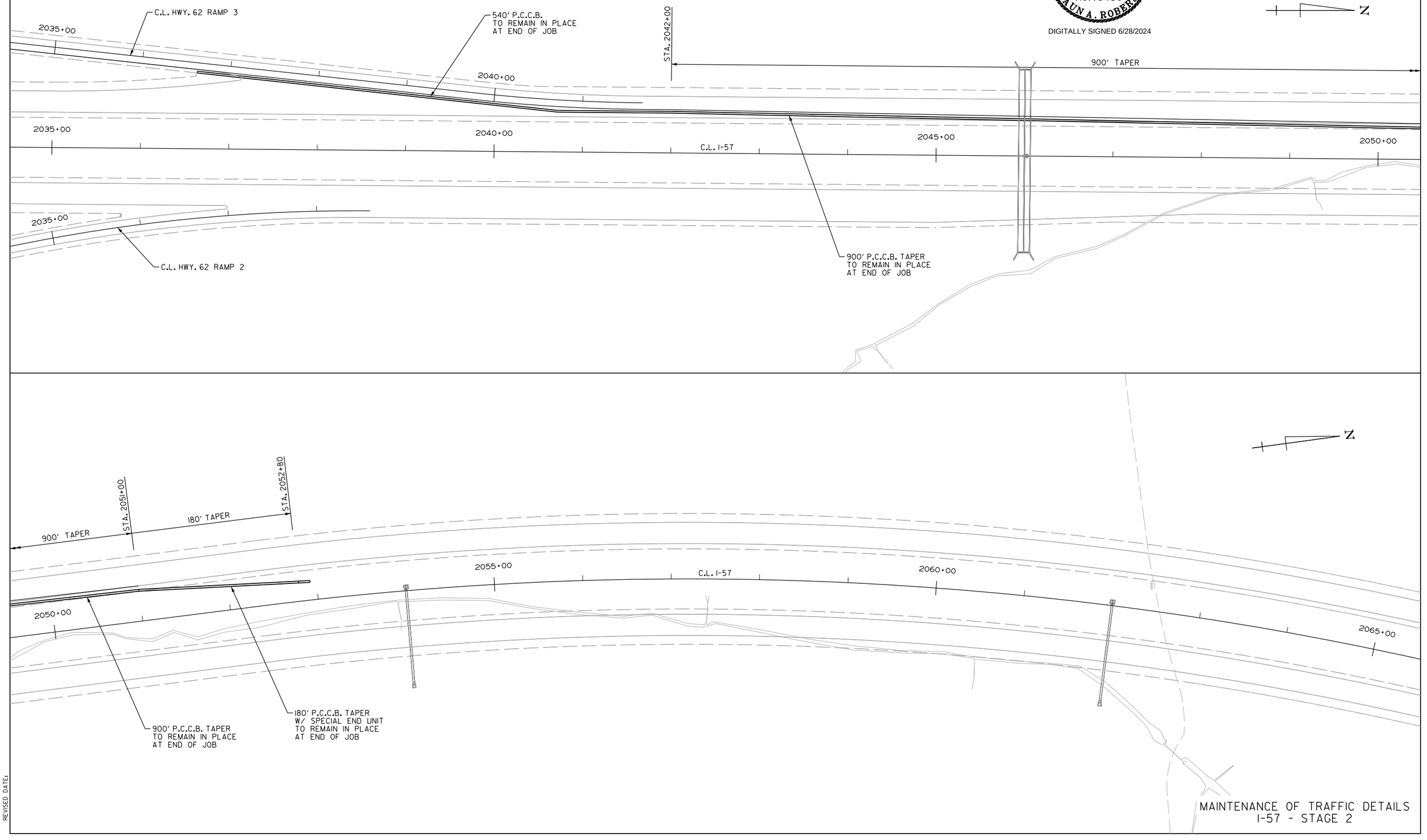
C.L. I-57

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	66	325
		MAINTENANCE OF TRAFFIC DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13436
SHAUN A. ROBERSON

DIGITALLY SIGNED 6/28/2024



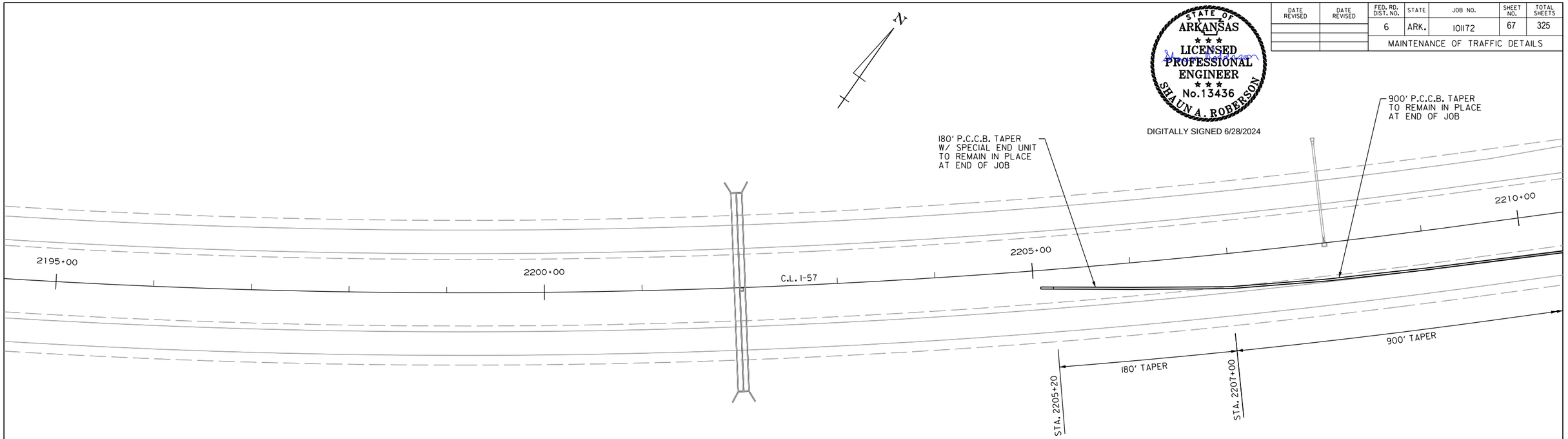
MAINTENANCE OF TRAFFIC DETAILS
I-57 - STAGE 2

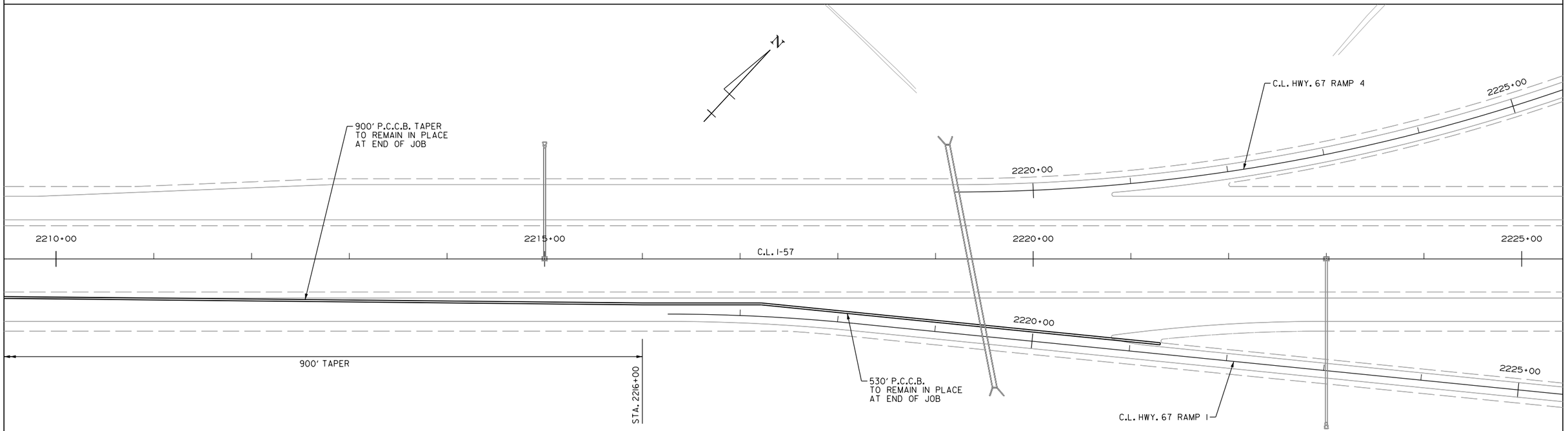
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	67	325
		MAINTENANCE OF TRAFFIC DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON

DIGITALLY SIGNED 6/28/2024





MAINTENANCE OF TRAFFIC DETAILS
I-57 - STAGE 2

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WORKSPACE: AHTD
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REVISED DATE:

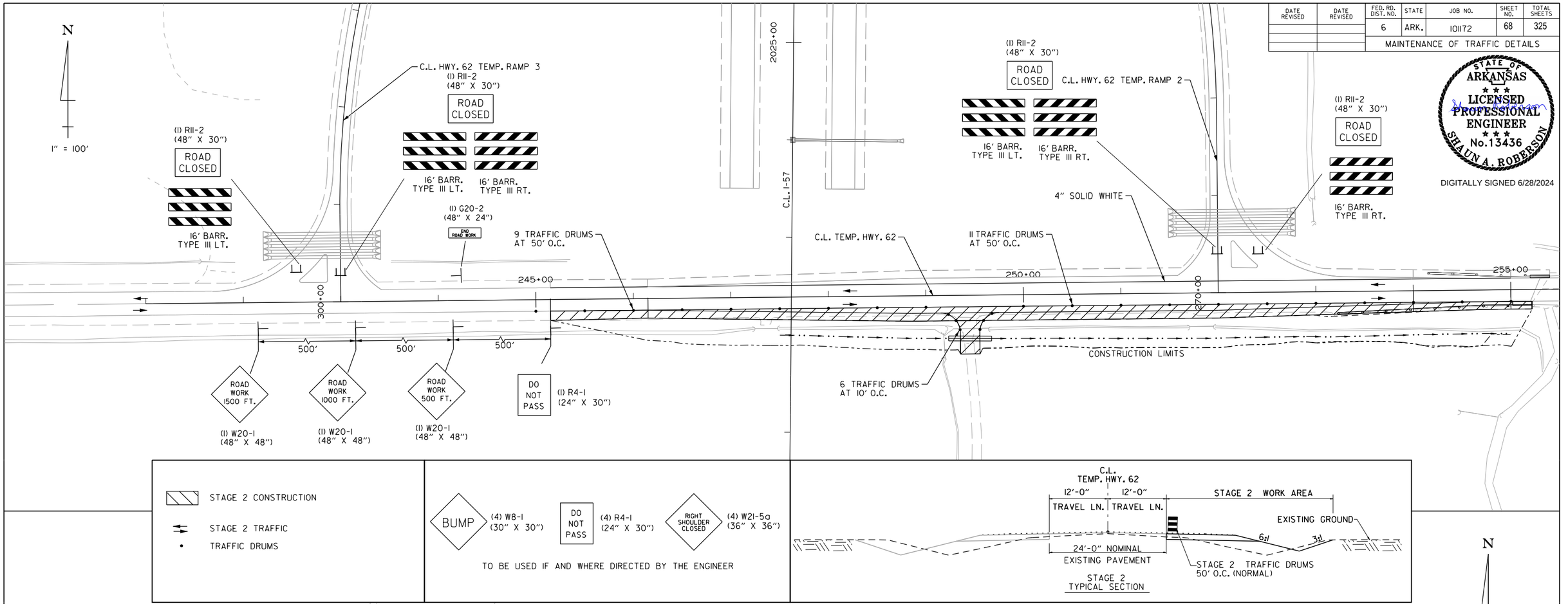
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		6	ARK.	101172	68	325

MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

N

1" = 100'



STAGE 2 CONSTRUCTION

STAGE 2 TRAFFIC

TRAFFIC DRUMS

BUMP (4) W8-1 (30" X 30")

DO NOT PASS (4) R4-1 (24" X 30")

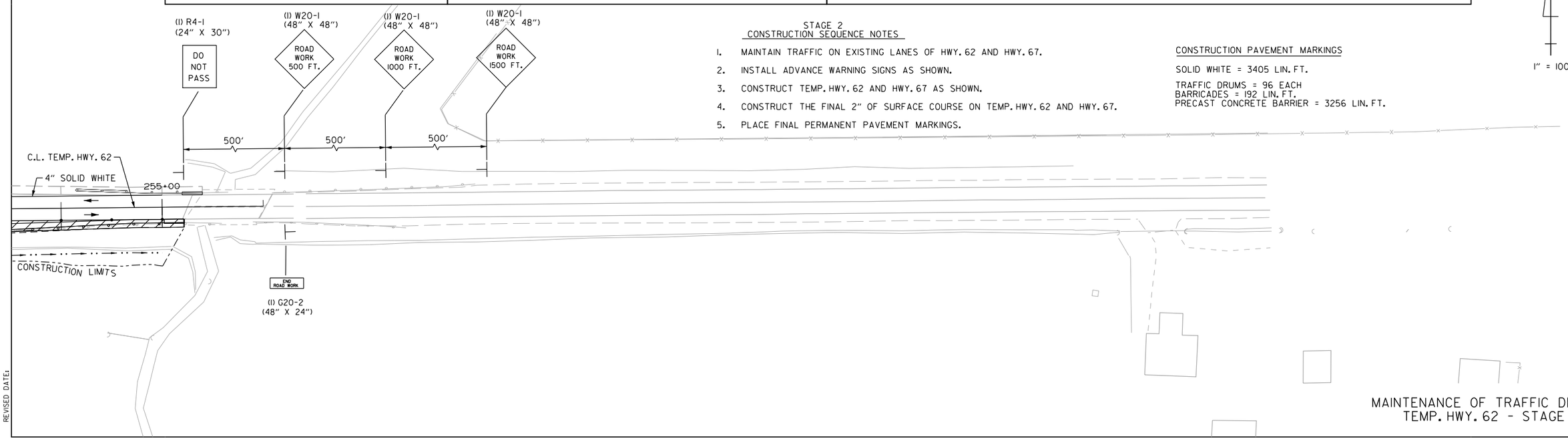
RIGHT SHOULDER CLOSED (4) W21-5a (36" X 36")

TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

STAGE 2 TYPICAL SECTION

N

1" = 100'



STAGE 2
CONSTRUCTION SEQUENCE NOTES

1. MAINTAIN TRAFFIC ON EXISTING LANES OF HWY. 62 AND HWY. 67.
2. INSTALL ADVANCE WARNING SIGNS AS SHOWN.
3. CONSTRUCT TEMP. HWY. 62 AND HWY. 67 AS SHOWN.
4. CONSTRUCT THE FINAL 2" OF SURFACE COURSE ON TEMP. HWY. 62 AND HWY. 67.
5. PLACE FINAL PERMANENT PAVEMENT MARKINGS.

CONSTRUCTION PAVEMENT MARKINGS

SOLID WHITE = 3405 LIN. FT.

TRAFFIC DRUMS = 96 EACH
BARRICADES = 192 LIN. FT.
PRECAST CONCRETE BARRIER = 3256 LIN. FT.

MAINTENANCE OF TRAFFIC DETAILS
TEMP. HWY. 62 - STAGE 2

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	69	325

MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

N
1" = 100'

(1) G20-2
(48" X 24")
END ROAD WORK

6 TRAFFIC DRUMS
10' O.C.

50+00

500'

ROAD WORK 1500 FT.
(1) W20-1
(48" X 48")

500'

ROAD WORK 1000 FT.
(1) W20-1
(48" X 48")

500'

ROAD WORK 500 FT.
(1) W20-1
(48" X 48")

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

CONSTRUCTION LIMITS

(1) R11-2
(48" X 30")
ROAD CLOSED
16' BARR. TYPE III LT.
16' BARR. TYPE III RT.

C.L. HWY. 67 RAMP 1

2235.00

4" SOLID WHITE

55+00

22 TRAFFIC DRUMS
50' O.C.

60+00

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

CONSTRUCTION LIMITS

C.L. I-57

STAGE 2 CONSTRUCTION
STAGE 2 TRAFFIC
TRAFFIC DRUMS

BUMP (4) W8-1 (30" X 30")
DO NOT PASS (4) R4-1 (24" X 30")
RIGHT SHOULDER CLOSED (4) W21-5a (36" X 36")
TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

C.L. HWY. 67
12'-0" TRAVEL LN.
12'-0" TRAVEL LN.
STAGE 2 WORK AREA
EXISTING GROUND
6:1
3:1
24'-0" NOMINAL EXISTING PAVEMENT
STAGE 2 TRAFFIC DRUMS 50' O.C. (NORMAL)

STAGE 2
TYPICAL SECTION

(1) R11-2
(48" X 30")
ROAD CLOSED
16' BARR. TYPE III LT.
16' BARR. TYPE III RT.

C.L. HWY. 67 RAMP 4

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

4" SOLID WHITE

2245.00

65+00

70+00

2240.00

CONSTRUCTION LIMITS

22 TRAFFIC DRUMS
50' O.C.

C.L. I-57

N
1" = 100'

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

(1) W20-1
(48" X 48")
ROAD WORK 500 FT.

(1) W20-1
(48" X 48")
ROAD WORK 1000 FT.

(1) W20-1
(48" X 48")
ROAD WORK 1500 FT.

6 TRAFFIC DRUMS
10' O.C.

500'
500'
500'

75+00

CONSTRUCTION LIMITS

6 TRAFFIC DRUMS
10' O.C.

6 TRAFFIC DRUMS
10' O.C.

END ROAD WORK
(1) G20-2
(48" X 24")

MAINTENANCE OF TRAFFIC DETAILS
HWY. 67 - STAGE 2

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	70	325
		PERMANENT PAVEMENT MARKING DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON

DIGITALLY SIGNED 6/28/2024

6" WHITE ENHANCED THERMOPLASTIC PAVEMENT MARKING

STA.	STA.	LOCATION	LIN. FT.
2033+00	2036+99	I-57 RT.	399
2038+60	2047+99	I-57 RT.	938
2041+68	2209+81	I-57 LT.	16865
2047+99	2216+26	I-57 RT.	16775
2209+81	2219+19	I-57 LT.	938
2220+81	2223+00	I-57 LT.	219
270+15	276+10	HWY. 62 TEMP. RAMP 2 RT.	666
2027+97	2038+60	HWY. 62 RAMP 2 RT.	1060
300+12	306+12	HWY. 62 TEMP. RAMP 3 LT.	675
2027+75	2041+68	HWY. 62 RAMP 3 LT.	1389
2216+26	2235+34	HWY. 67 RAMP 1 RT.	2013
2219+20	2245+34	HWY. 67 RAMP 4 LT.	2671

6" WHITE ENHANCED THERMOPLASTIC PAVEMENT MARKING W/ SKIP LINE

STA.	STA.	LOCATION	LIN. FT.
2035+00	2207+00	I-57 RT.	4289
2061+00	2223+00	I-57 LT.	4311

8" WHITE ENHANCED THERMOPLASTIC PAVEMENT MARKING

STA.	STA.	LOCATION	LIN. FT.
270+18	270+75	HWY. 62 TEMP. RAMP 2 RT.	197
300+12	300+70	HWY. 62 TEMP. RAMP 3 LT.	200
2234+79	2235+76	HWY. 67 RAMP 1	318
2244+70	2245+26	HWY. 67 RAMP 4	163

12" WHITE ENHANCED THERMOPLASTIC PAVEMENT MARKING

STA.	STA.	LOCATION	LIN. FT.
2036+99	2037+59	I-57 RT.	114
2037+66	2047+99	I-57 RT.	258
2209+81	2220+15	I-57 RT.	259
2220+21	2220+81	I-57 LT.	114

6" YELLOW ENHANCED THERMOPLASTIC PAVEMENT MARKING

STA.	STA.	LOCATION	LIN. FT.
2033+00	2216+26	I-57 RT.	18293
2041+68	2223+00	I-57 LT.	18165
270+18	276+10	HWY. 62 TEMP. RAMP 2 LT.	600
2027+97	2036+99	HWY. 62 RAMP 2 LT.	905
300+12	306+12	HWY. 62 TEMP. RAMP 3 RT.	608
2027+75	2041+68	HWY. 62 RAMP 3 RT.	1396
2216+26	2235+83	HWY. 67 RAMP 1 LT.	1962
2220+80	2245+00	HWY. 67 RAMP 4 RT.	2439

8" YELLOW THERMOPLASTIC PAVEMENT MARKING (DIAGONAL)

STA.	STA.	LOCATION	LIN. FT.
246+15	248+85	TEMP. HWY. 62	116
252+07	254+70	TEMP. HWY. 62	98
51+40	56+26	HWY. 67	258
68+61	73+60	HWY. 67	258

WHITE THERMOPLASTIC PAVEMENT MARKING (ARROW)

STA.	LOCATION	EA.
249+73	TEMP. HWY. 62	1
250+65	TEMP. HWY. 62	1
66+46	HWY. 67	1
67+34	HWY. 67	1
300+88	HWY. 62 TEMP. RAMP 3	1
2235+35	HWY. 67 RAMP 1	1

WHITE THERMOPLASTIC PAVEMENT MARKING (WORDS)

STA.	LOCATION	EA.
250+19	TEMP. HWY. 62	1
270+70	HWY. 62 TEMP. RAMP 2 RT.	1
300+24	HWY. 62 RAMP 3 LT.	1
66+89	HWY. 67	1
2235+41	HWY. 67 RAMP 1	1
2244+75	HWY. 67 RAMP 4	1

6" WHITE THERMOPLASTIC PAVEMENT MARKING

STA.	STA.	LOCATION	LIN. FT.
245+15	251+58	TEMP. HWY. 62 LT.	644
245+15	255+21	TEMP. HWY. 62 RT.	1006
249+19	251+58	TEMP. HWY. 62 RT.	243
253+30	255+40	TEMP. HWY. 62 LT.	210
50+40	54+75	HWY. 67 LT.	435
50+40	54+75	HWY. 67 RT.	2420
56+62	67+84	HWY. 67 LT.	1122
66+40	67+84	HWY. 67 RT.	144
69+49	74+60	HWY. 67 LT.	511

WHITE THERMOPLASTIC PAVEMENT MARKING (YIELD LINE)

STA.	LOCATION	LIN. FT.
270+76	HWY. 62 TEMP. RAMP 2 RT.	11
300+19	HWY. 62 TEMP. RAMP 3	11
2235+49	HWY. 67 RAMP 1	11
2244+69	HWY. 67 RAMP 4	11

12" WHITE THERMOPLASTIC PAVEMENT MARKING (STOP LINE)

STA.	LOCATION	LIN. FT.
300+22	HWY. 62 TEMP. RAMP 3	37
2235+66	HWY. 67 RAMP 1	17

6" YELLOW THERMOPLASTIC PAVEMENT MARKING

STA.	STA.	LOCATION	LIN. FT.
245+15	251+58	TEMP. HWY. 62	1828
252+07	255+00	TEMP. HWY. 62	1123
50+40	56+26	HWY. 67	2158
56+94	65+40	HWY. 67 LT.	1058
56+94	65+40	HWY. 67 RT.	1058
65+40	67+84	HWY. 67 LT.	488
68+61	74+60	HWY. 67	2074

6" WHITE REFLECTORIZED PAINT PAVEMENT MARKING

STA.	STA.	LOCATION	LIN. FT.
202+00	222+00	C.R. 139 LT.	2000
202+00	222+00	C.R. 139 RT.	2000

6" YELLOW REFLECTORIZED PAINT PAVEMENT MARKING

STA.	STA.	LOCATION	LIN. FT.
202+00	222+00	C.R. 139	4000

10" WHITE REFLECTORIZED PAINT PAVEMENT MARKING

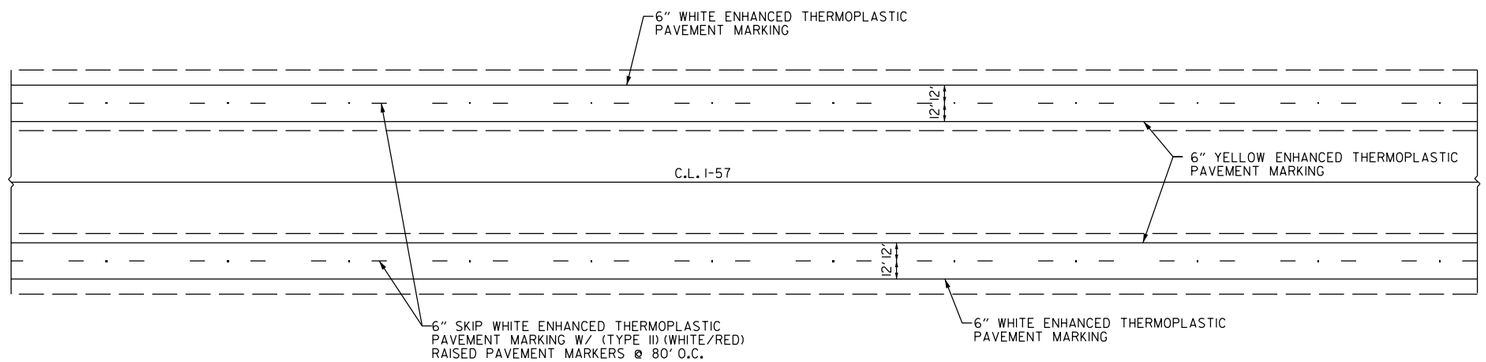
STA.	STA.	LOCATION	LIN. FT.
270+25	270+53	HWY. 62 TEMP. RAMP 2	92
300+20	300+49	HWY. 62 TEMP. RAMP 3	97

RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)

STA.	STA.	LOCATION	EA.
2035+00	2048+00	I-57 RT.	33
2036+99	2037+59	I-57 RT.	14
2037+66	2042+42	I-57 RT.	42
2048+00	2207+00	I-57 RT.	199
2051+00	2209+81	I-57 LT.	199
2209+81	2223+00	I-57 LT.	33
2215+35	2220+15	I-57 LT.	42
2220+21	2220+81	I-57 LT.	14
2036+11	2036+42	HWY. 62 TEMP. RAMP 3	19
2221+52	2221+83	HWY. 67 RAMP 1	19

RAISED PAVEMENT MARKERS TYPE II (YELLOW/YELLOW)

STA.	STA.	LOCATION	EA.
245+15	248+85	TEMP. HWY. 62	16
248+85	251+58	TEMP. HWY. 62	3
252+07	255+00	TEMP. HWY. 62	14
50+40	56+26	HWY. 67	13
56+94	67+84	HWY. 67 LT.	14
56+94	65+40	HWY. 67 RT.	11
68+61	74+60	HWY. 67	14
202+00	222+00	C.R. 139	25



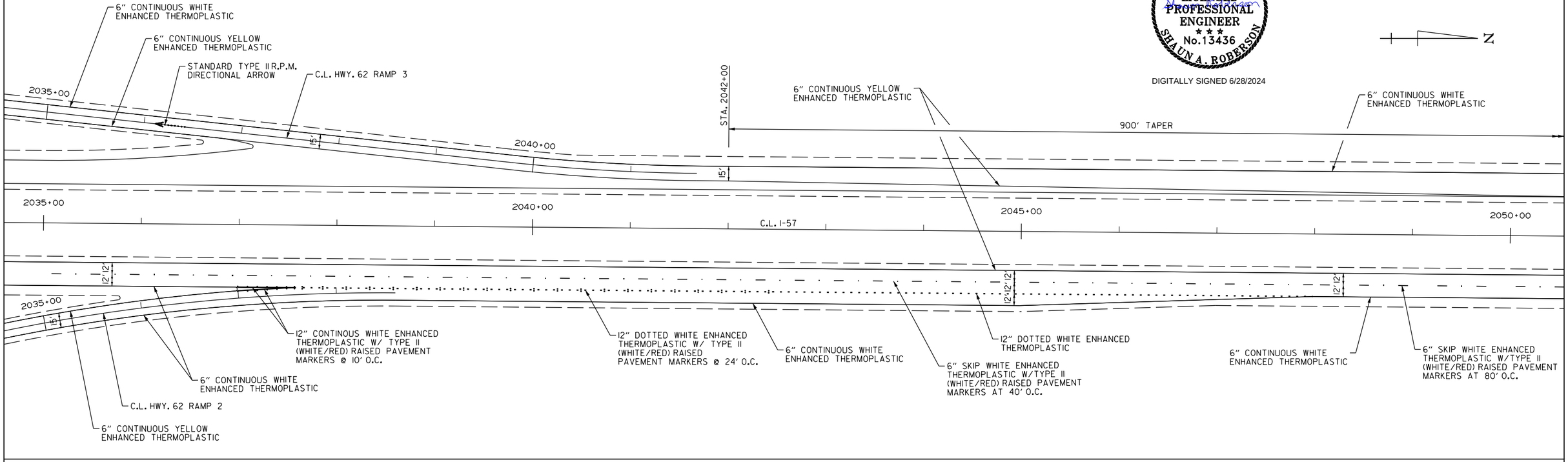
TYPICAL PERMANENT PAVEMENT MARKING LAYOUT - 4 LANE DIVIDED HIGHWAY

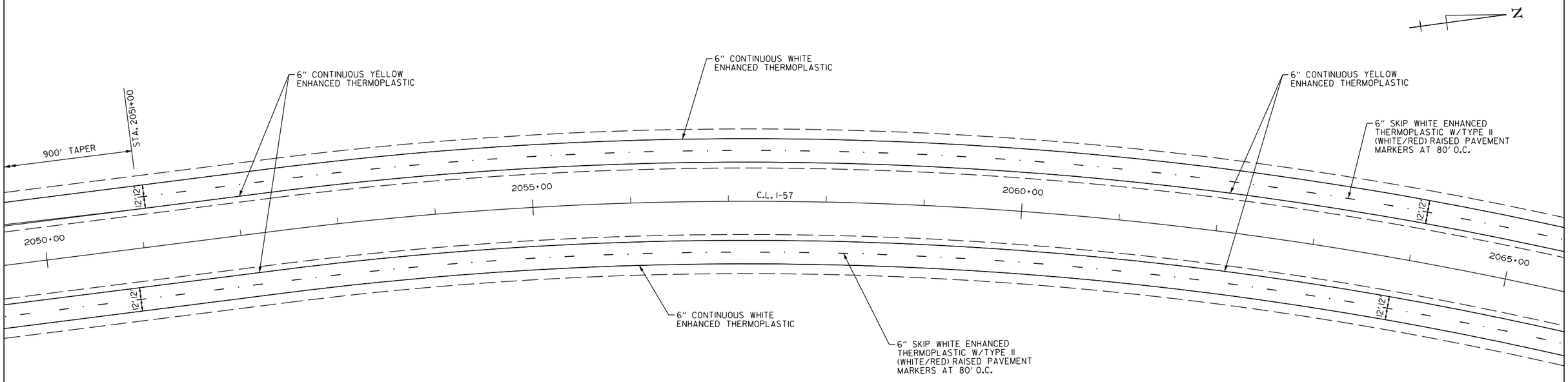
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	71	325
		PERMANENT PAVEMENT MARKING DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON

DIGITALLY SIGNED 6/28/2024





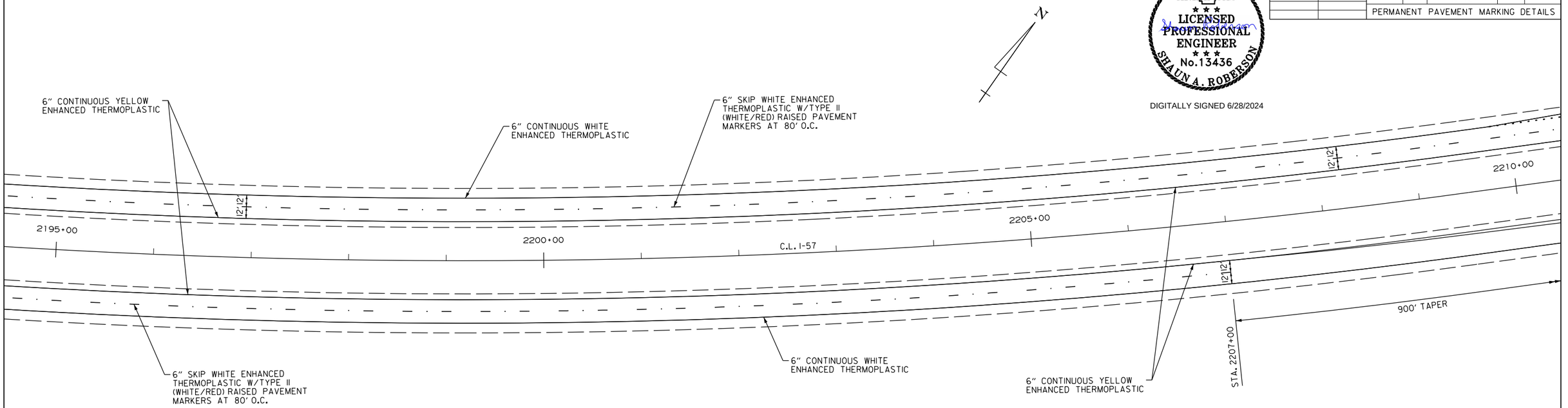
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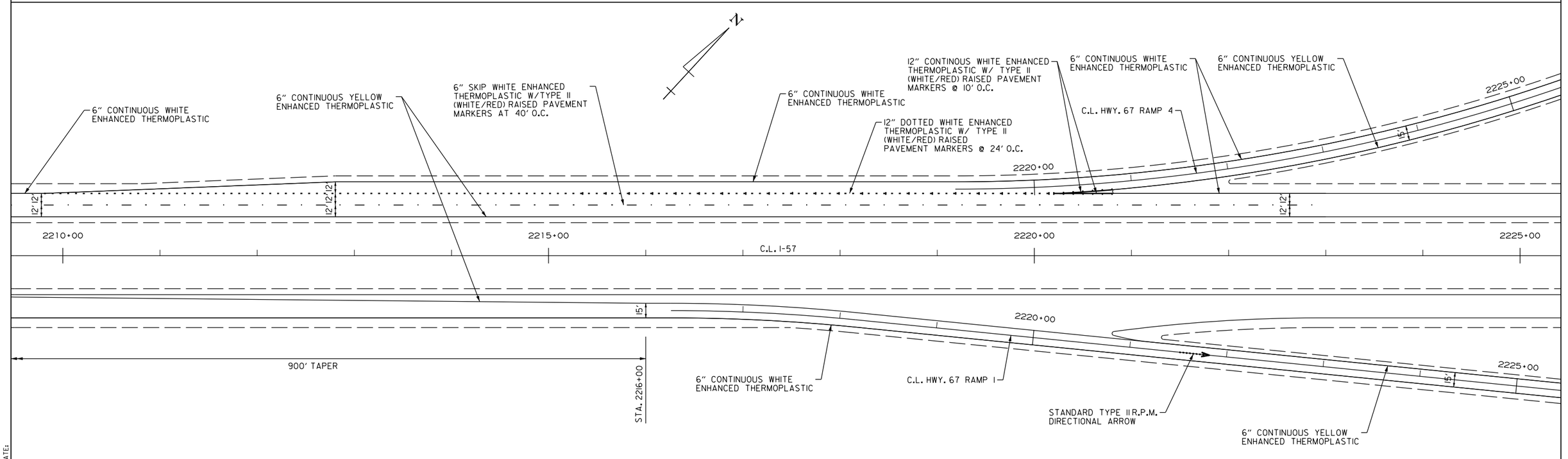
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	72	325
		PERMANENT PAVEMENT MARKING DETAILS				

STATE OF ARKANSAS
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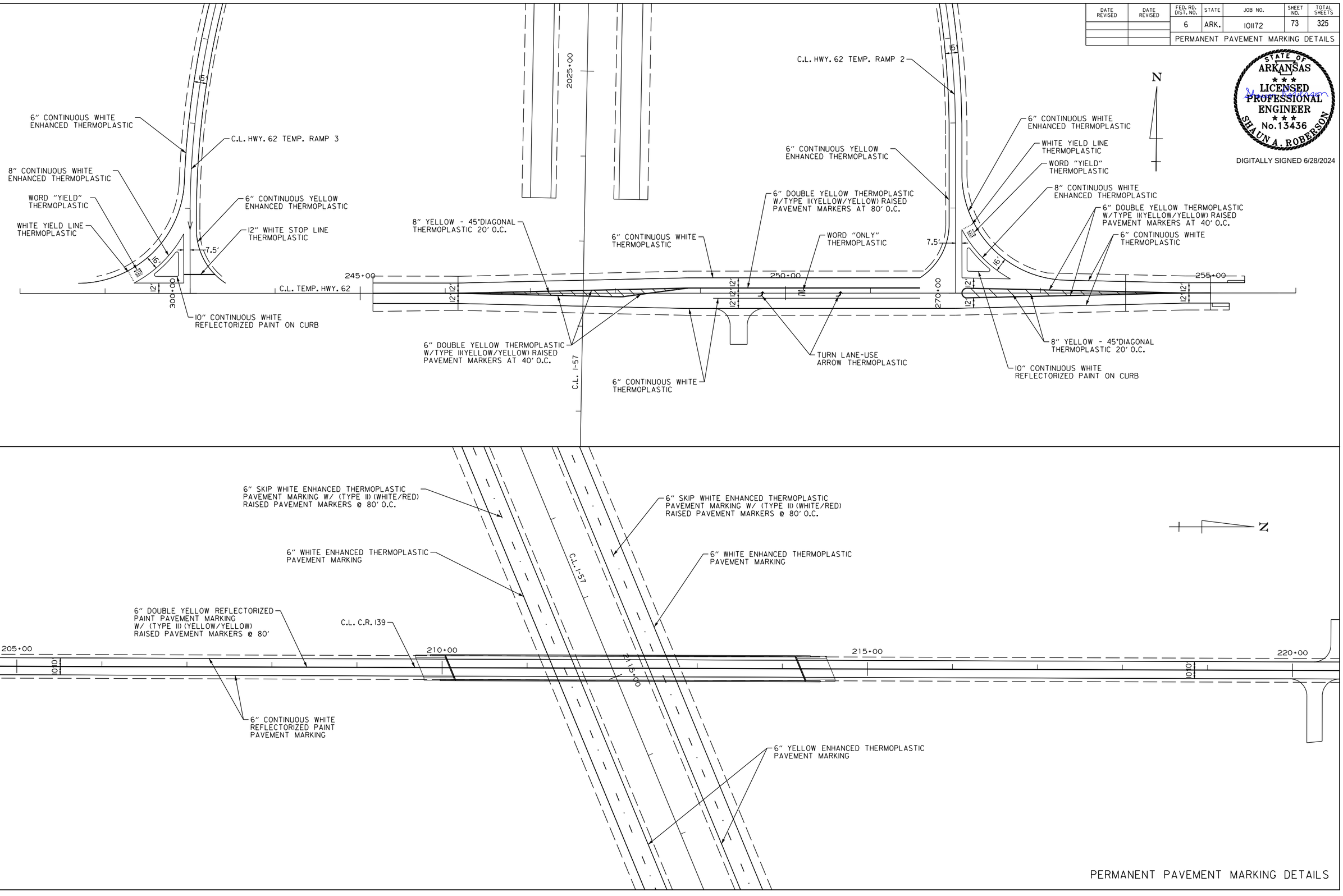
PERMANENT PAVEMENT MARKING DETAILS

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	73	325
		PERMANENT PAVEMENT MARKING DETAILS				

STATE OF ARKANSAS
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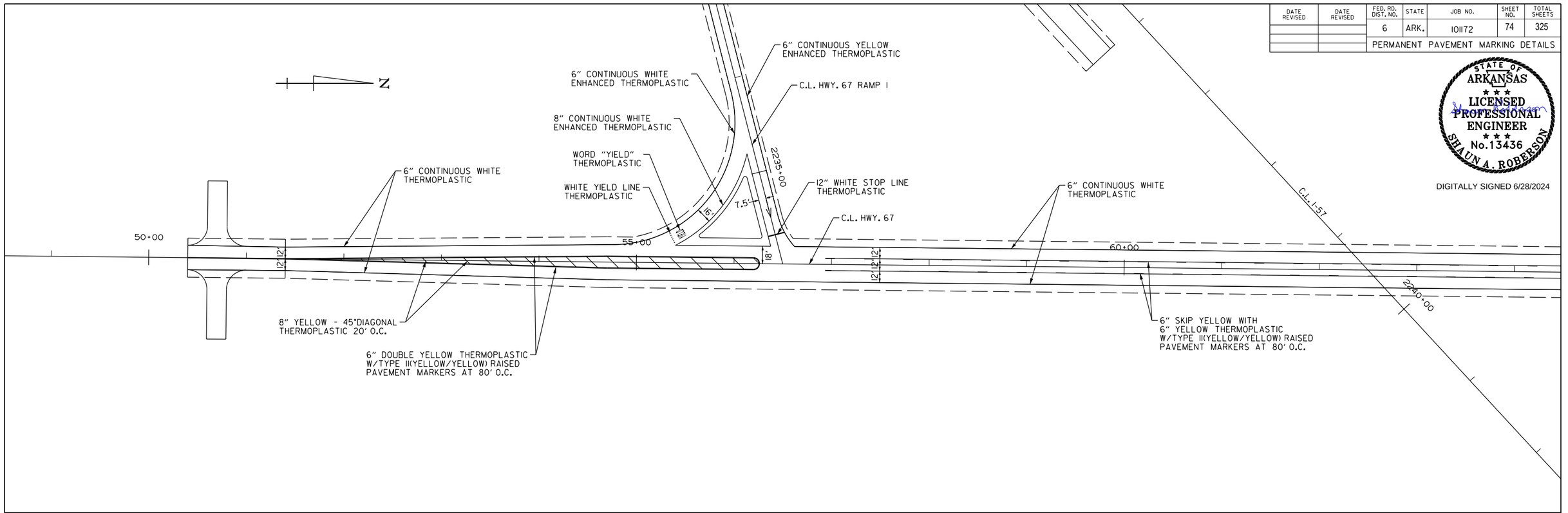
PERMANENT PAVEMENT MARKING DETAILS

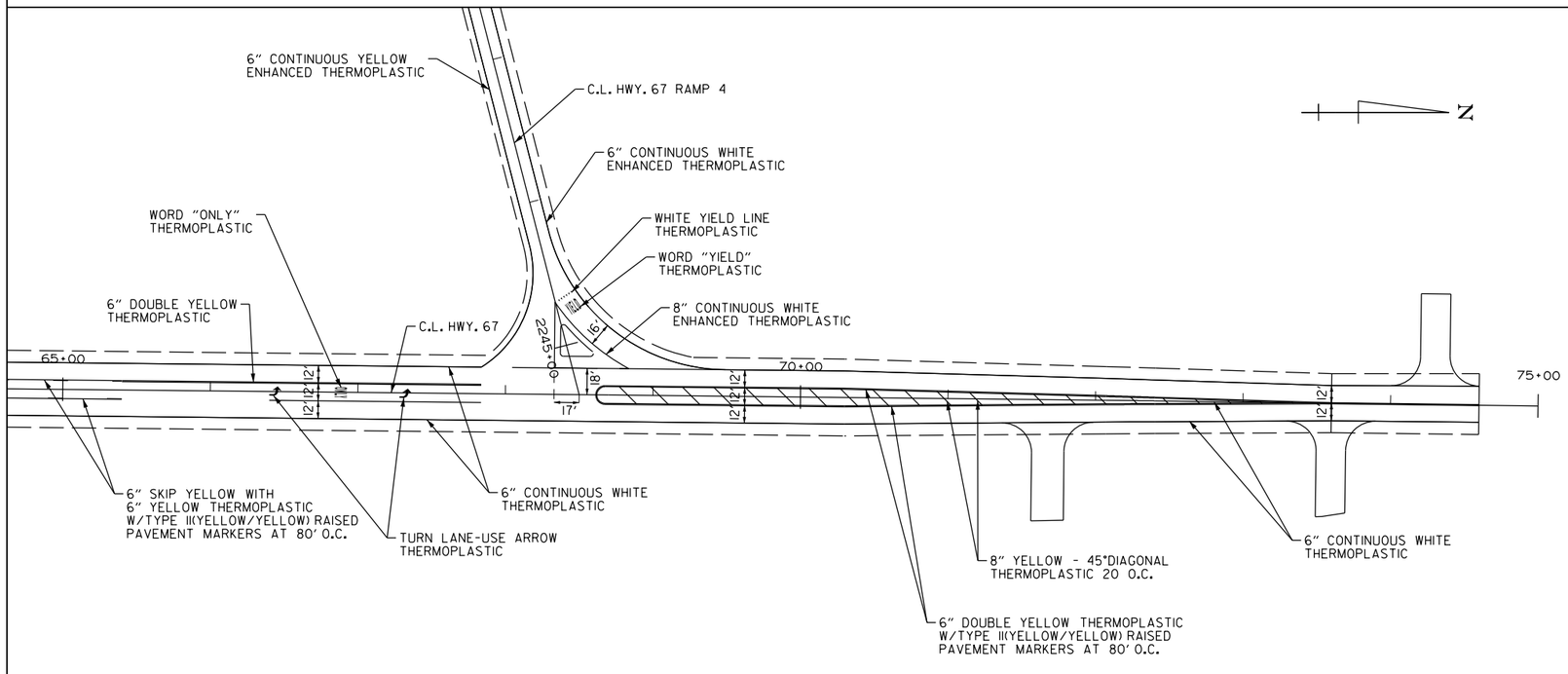
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	74	325
		PERMANENT PAVEMENT MARKING DETAILS				

STATE OF ARKANSAS
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REVISED DATE:

PERMANENT PAVEMENT MARKING DETAILS

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	75	325
		SOIL BORING LOG				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
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SOIL LOG

STATION	LOCATION	DEPTH FEET	LIQUID LIMIT	PLASTICITY INDEX	AASHTO CLASSIFICATION
210+08.80	C.R. 139	3.0-5.0	58	39	A-7-6
210+08.80	C.R. 139	8.0-10.0	73	42	A-7-5 (32)
210+08.80	C.R. 139	11.0-13.0	97	65	A-7-5
212+00.00	C.R. 139	3.0-5.0	119	91	A-7-6
212+00.00	C.R. 139	5.0-7.0	61	34	A-7-6 (37)
212+00.00	C.R. 139	9.0-11.0	83	50	A-7-5
212+00.00	C.R. 139	11.0-13.0	46	21	A-7-6
214+22.20	C.R. 139	3.0-5.0	62	38	A-7-6
214+22.20	C.R. 139	5.0-7.0	33	9	A-4
214+22.20	C.R. 139	7.0-9.0	31	5	A-4 (3)
214+22.20	C.R. 139	9.0-11.0	48	23	A-7-6

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.

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	76	325
		QUANTITIES				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON

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ADVANCE WARNING SIGNS AND DEVICES

	SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	STAGE 2	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		*CONSTRUCTION PROJECT INFORMATION SIGN UPDATE	TRAFFIC DRUMS	BARRICADES (TYPE III)	
											RIGHT	LEFT
				LIN. FT. - EACH			NO.	SQ. FT.	EACH		LIN. FT.	
	W20-1	ROAD WORK 1500 FT.	48"x48"	4	4	4	4	64.0				
	W20-1	ROAD WORK 1000 FT.	48"x48"	4	4	4	4	64.0				
	W20-1	ROAD WORK 500 FT.	48"x48"	4	4	4	4	64.0				
	W20-2	DETOUR 1500 FT.	48"x48"	1		1	1	16.0				
	W20-2	ROAD CLOSED 500 FT.	48"x48"	2		2	2	32.0				
	D3-1	C.R. 139	24"x12"	6		6	6	12.0				
	G20-2	END ROAD WORK	48"x24"	4	4	4	4	32.0				
	M4-8	DETOUR	24"x12"	1		1	1	2.0				
	M4-10L	DETOUR LEFT	48"x18"	3		3	3	18.0				
	M4-10R	DETOUR RIGHT	48"x18"	3		3	3	18.0				
	M5-1R	RIGHT TURN	30"x21"	1		1	1	4.4				
	R11-2	ROAD CLOSED	48"x30"	10	8	10	10	100.0				
	R11-4	ROAD CLOSED X.XX MILES AHEAD LOCAL TRAFFIC ONLY	60"x30"	2		2	2	25.0				
*	R4-1	DO NOT PASS	24"x30"	4	4	4	4	20.0				
*	W21-5a	RIGHT SHOULDER CLOSED	36"x36"	2	2	2	2	18.0				
*	W8-1	BUMP	30"x30"	4	4	4	4	25.0				
	SPECIAL	CONSTRUCTION PROJECT INFORMATION SIGN	48"x96"	2	2	2	2	64.0				
		CONSTRUCTION PROJECT INFORMATION SIGN UPDATE							4			
		TRAFFIC DRUMS		93	100	100				100		
		TYPE III BARRICADE-RT. (8')		2		2					16	
		TYPE III BARRICADE-LT. (8')		2		2						16
		TYPE III BARRICADE-RT. (16')		6	6	6					96	
		TYPE III BARRICADE-LT. (16')		6	6	6						96
	TOTALS:							578.4	4	100	112	112

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

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

PERMANENT ROAD BARRICADE

STATION	DESCRIPTION	GUARDRAIL (TYPE C)
		LIN. FT.
2171+72.23	I-57 - RT. OF RT. MAIN LANES	25
2173+18.00	I-57 - LT. OF LT. MAIN LANES	25
TOTAL:		50

NOTE: PRICE BID FOR GUARDRAIL (TYPE C) INCLUDES RED DIAMOND REFLECTORS AND SUPPORTS.

CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	STAGE 1	STAGE 2	END OF JOB	CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS		ENHANCED THERMOPLASTIC PAVEMENT MARKING				THERMOPLASTIC PAVEMENT MARKING							REFLECTORIZED PAINT PAVEMENT MARKING		
					TYPE II	TYPE II	6"		8"	12"	6"		8"	12"	YIELD LINE	WORDS	ARROWS	6"		10"
					(WHITE/RED)	(YELLOW/YELLOW)	WHITE	YELLOW	WHITE	WHITE	WHITE	YELLOW	YELLOW	WHITE				WHITE	YELLOW	WHITE
	LIN. FT. - EACH			LIN. FT.	EACH		LIN. FT.									EACH		LIN. FT.		
CONSTRUCTION PAVEMENT MARKINGS	6810	3405		10215																
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)			614		614															
RAISED PAVEMENT MARKERS TYPE II (YELLOW/YELLOW)	43		110			153														
ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (6")			53208				53208													
ENHANCED THERMOPLASTIC PAVEMENT MARKING YELLOW (6")			44368					44368												
ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (8")			878						878											
ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (12")			745							745										
THERMOPLASTIC PAVEMENT MARKING WHITE (6")			6735								6735									
THERMOPLASTIC PAVEMENT MARKING YELLOW (6")			9787									9787								
THERMOPLASTIC PAVEMENT MARKING YELLOW (8")			730										730							
THERMOPLASTIC PAVEMENT MARKING WHITE (12")			54											54						
THERMOPLASTIC PAVEMENT MARKING WHITE (YIELD LINE)			44												44					
THERMOPLASTIC PAVEMENT MARKING (WORDS)			6													6				
THERMOPLASTIC PAVEMENT MARKING (ARROWS)			6														6			
REFLECTORIZED PAINT PAVEMENT MARKING WHITE (6")			4000															4000		
REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (6")			4000																4000	
REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")			189																	189
TOTALS:				10215	614	153	53208	44368	878	745	6735	9787	730	54	44	6	6	4000	4000	189

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

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	77	325
		QUANTITIES				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
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CLEARING AND GRUBBING

STATION	STATION	LOCATION	CLEARING	GRUBBING
			STATION	
2085+67	2086+35	I-57	1	1
2198+59	2202+08	I-57	4	4
2219+51	2223+57	I-57	5	5
2236+37	2249+18	I-57	13	13
2254+40	2259+11	I-57	5	5
71+56	74+21	HWY. 67	3	3
TOTALS:			**31**	**31**

REMOVAL AND DISPOSAL OF FENCE

STATION	STATION	LOCATION	FENCE	GATES
			LIN. FT.	EACH
2241+55	2242+17	I-57 RT.	126	
2246+51	2249+53	I-57 LT. AND RT.	427	
241+67	241+99	TEMPORARY HWY. 62 - LT.		2
247+40	247+69	TEMPORARY HWY. 62 - LT.		2
TOTALS:			**553**	**4**

STONE BACKFILL

STATION	STATION	DESCRIPTION	STONE BACKFILL
			TON
2171+57.83	2172+87.54	I-57 - R.C. BOX CULVERT	541
219+92.06	220+59.94	C.R. 139 - R.C. BOX CULVERT	161
220+76.46	221+07.54	C.R. 139 - R.C. BOX CULVERT	183
TOTAL:			**885**

REMOVAL AND DISPOSAL OF ITEMS

STATION	STATION	LOCATION	WATER TANK	IRRIGATION WELL	WATER WELL	IRRIGATION/SPRINKLER SYSTEM	GUARDRAIL	BUILDINGS	MAILBOXES	GATE POST
			EACH	EACH	EACH	EACH	LIN. FT.	EACH	EACH	EACH
I-57										
2024+90	2024+90	I-57 RT.						1		
2135+02	2135+02	I-57 LT.	1							
2135+06	2135+06	I-57 LT.		1						
2202+48	2202+48	I-57 RT.				1				
2235+56	2235+56	I-57 RT.				1				
2235+91	2235+91	I-57 RT.								
2236+15	2236+15	I-57 RT.				1				
2238+83	2238+83	I-57 LT.				1				
2238+98	2238+98	I-57 LT.				1				
2239+12	2240+01	I-57 RT.						1		
2239+18	2239+56	I-57 RT.						1		
2240+50	2240+50	I-57 RT.			1					
2240+68	2240+68	I-57 RT.				1				
2240+82	2241+32	I-57 RT.						1		
2241+24	2242+45	I-57 RT.						1		
2243+44	2243+44	I-57 RT.			1					
2244+81	2244+81	I-57 LT.				1				
2245+09	2245+67	I-57 LT.						1		
2245+38	2245+85	I-57 LT.						1		
2245+42	2245+73	I-57 LT.						1		
2245+59	2245+73	I-57 LT.						1		
2246+10	2246+37	I-57 LT.						1		
2246+13	2246+84	I-57 LT.						1		
2255+33	2255+33	I-57 RT.				1				
SUBTOTALS I-57:			**1**	**1**	**2**	**8**		**11**		
HWY. 67										
48+50	48+50	HWY. 67 RT.							1	
57+28	57+28	HWY. 67 RT.							1	
62+42	62+55	HWY. 67 LT.						1		
63+62	63+62	HWY. 67 RT.							1	
SUBTOTALS HWY. 67:								**1**	**3**	
HWY. 62										
241+67	242+00	TEMP. HWY. 62 LT.								2
246+96	246+96	TEMP. HWY. 62 RT.								
247+42	247+69	TEMP. HWY. 62 LT.								2
251+36	251+36	TEMP. HWY. 62 RT.				1				
253+18	253+18	TEMP. HWY. 62 RT.								
253+19	255+59	TEMP. HWY. 62 LT.					241			
253+87	253+87	TEMP. HWY. 62 LT.								
253+90	255+66	TEMP. HWY. 62 LT.					175			
SUBTOTALS HWY. 62:						1	416			4
TOTALS:			**1**	**1**	**2**	**9**	**416**	**12**	**3**	**4**

REMOVAL AND DISPOSAL OF CULVERTS

STATION	DESCRIPTION	PIPE CULVERTS
		EACH
2049+29	I-57 RT.	1
2053+91	I-57 RT.	1
2057+41	I-57 RT.	1
2060+51	I-57 RT.	1
2171+97	I-57 RT.	1
2201+71	I-57 RT.	1
2202+32	I-57 RT.	1
2202+59	I-57 RT.	1
241+86	TEMP. HWY. 62 LT.	1
247+36	TEMP. HWY. 62 RT.	1
247+54	TEMP. HWY. 62 LT.	1
249+18	TEMP. HWY. 62 RT.	1
249+46	TEMP. HWY. 62 RT.	1
251+83	TEMP. HWY. 62 RT.	1
252+98	TEMP. HWY. 62 LT.	1
254+54	TEMP. HWY. 62 LT.	1
56+22	HWY. 67 RT.	1
57+08	HWY. 67 RT.	1
62+65	HWY. 67 LT.	1
63+36	HWY. 67 LT.	1
63+81	HWY. 67 RT.	1
64+40	HWY. 67 LT.	1
66+15	HWY. 67 RT.	1
67+42	HWY. 67 RT.	1
69+45	HWY. 67 RT.	1
73+57	HWY. 67 RT.	1
207+74	C.R. 139	1
216+29	C.R. 139	1
207+05	C.R. 143 SOUTH LT.	1
TOTAL:		**29**

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

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	78	325
		QUANTITIES				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON

DIGITALLY SIGNED 6/28/2024

APPROACH GUTTERS AND SLABS

STATION	STATION	LOCATION	APPROACH GUTTERS		APPROACH SLABS	REINFORCING STEEL-RDWY. (GR. 60)	AGGREGATE BASE CRS. (CLASS 7)
			TYPE 'CT'	TYPE F	TYPE F		
			CU.YD.		CU.YD.	POUND	TON
255+01.79	255+21.79	TEMPORARY HWY. 62 - RT.	2.65			198	
255+19.92	255+39.92	TEMPORARY HWY. 62 - LT.	1.95			135	
209+68.80	210+03.80	C.R. 139 - LT.		3.90		200	
209+78.81	210+13.81	C.R. 139 - RT.		3.90		200	
214+17.19	214+52.19	C.R. 139 - LT.		3.90		200	
214+27.20	214+62.20	C.R. 139 - RT.		3.90		200	
209+73.80	210+08.80	C.R. 139			48.70	5967	26.8
214+22.20	214+57.20	C.R. 139			48.70	5967	26.8
TOTALS:			**4.60**	**15.60**	**97.40**	**13067**	**53.6**

COLD MILLING ASPHALT PAVEMENT

STATION	STATION	LOCATION	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT
			FEET	SQ. YD.
245+15.00	246+15.00	TEMP. HWY. 62	40.00	444.44
254+00.00	255+00.00	TEMP. HWY. 62	35.00	388.89
50+40.00	51+40.00	HWY. 67	40.00	444.44
73+60.00	74+60.00	HWY. 67	40.00	444.44
TOTAL:				**1722.21**

NOTE: COORDINATE COLD MILLING STOCKPILE LOCATIONS WITH DISTRICT ENGINEER.
STOCKPILE LOCATIONS SHALL BE NO FURTHER THAN FIVE MILES FROM EACH SITE.

DRIVEWAYS

STATION	SIDE	LOCATION	WIDTH	ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG 64-22)		AGGREGATE BASE COURSE (CLASS 7)	SIDE DRAINS	STANDARD DRAWINGS
							24"	
			FEET	SQ. YD.	TON	TON	LIN. FT.	
249+45	RT.	TEMP. HWY. 62	20	106.05	11.67	43.30	88	DR-2, PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
50+70	LT.	HWY. 67	20	162.57	17.88	66.38	92	DR-2, PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
50+70	RT.	HWY. 67	20	171.14	18.83	69.88	92	DR-2, PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
71+68	RT.	HWY. 67	22	175.58	19.31	71.70	96	DR-2, PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
73+60	RT.	HWY. 67	20	154.38	16.98	63.04	92	DR-2, PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
74+30	LT.	HWY. 67	20	148.84	16.37	60.78	44	DR-2, PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
220+26	RT.	C.R. 139	18	182.58	20.08	74.55		DR-2
220+55	LT.	C.R. 139	20	146.34	16.10	59.76		DR-2
* ENTIRE PROJECT TEMPORARY DRIVES						40.00		
TOTALS:				**1247.48**	**137.22**	**549.39**	**504**	

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2") 94.4% MIN. AGGR 5.6% ASPHALT BINDER

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

* 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.

EARTHWORK

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION			COMPACTED EMBANKMENT
			UNDERCUT	TYPICAL	TOTAL	
			CU. YD.			
2022+90.00	2236+79.06	I-57		21334	21334	1203432
2027+97.04	2036+99.11	HWY. 62 RAMP 2		97	97	17285
2027+74.93	2037+12.79	HWY. 62 RAMP 3		280	280	11454
2220+80.88	2235+80.43	HWY. 67 RAMP 1		921	921	29590
2220+80.07	2245+13.99	HWY. 67 RAMP 4		1513	1513	67499
50+40.00	74+60.00	HWY. 67 - STAGE 1		2388	2388	1147
50+40.00	74+60.00	HWY. 67 - STAGE 2		2023	2023	1139
202+00.00	222+00.00	C.R. 139	2529	11561	14090	51468
206+20.00	208+00.00	C.R. 143 SOUTH	427	659	1086	455
209+00.00	210+80.00	C.R. 143 NORTH	546	479	1025	682
270+18.00	276+09.66	TEMP. HWY. 62 RAMP 2		1678	1678	8285
300+12.00	306+11.72	TEMP. HWY. 62 RAMP 3		2336	2336	1991
243+42.00	255+39.92	TEMP. HWY. 62 - STAGE 1		5039	5039	1032
243+42.00	255+39.92	TEMP. HWY. 62 - STAGE 2		1346	1346	569
ENTIRE PROJECT		APPROACHES				810
ENTIRE PROJECT		TEMPORARY APPROACHES				75
* ENTIRE PROJECT		UNDERCUT	1000		1000	1000
TOTALS:			**4502**	**51654**	**56156**	**1397913**

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

RUMBLE STRIPS IN ASPHALT SHOULDERS (ALTERNATE 1)

STATION	STATION	LOCATION	* RUMBLE STRIPS IN ASPHALT SHOULDERS	* CENTERLINE RUMBLE STRIPES IN ASPHALT ROADWAY
			LIN.FT.	LIN. FT.
2023+50	2036+63	I-57 - LT. OF LT. MAIN LANES	1313	
2023+50	2236+00	I-57 - RT. OF LT. MAIN LANES	21250	
2023+50	2236+00	I-57 - LT. OF RT. MAIN LANES	21250	
2023+50	2035+79	I-57 - RT. OF RT. MAIN LANES	1229	
2041+68	2219+19	I-57 - LT. OF LT. MAIN LANES	17751	
2038+60	2216+26	I-57 - RT. OF RT. MAIN LANES	17766	
2222+00	2236+00	I-57 - LT. OF LT. MAIN LANES	1400	
2221+31	2236+00	I-57 - RT. OF RT. MAIN LANES	1469	
2221+31	2235+83	HWY. 67 RAMP 1 - LT.	1456	
2216+26	2235+34	HWY. 67 RAMP 1 - RT.	2013	
2219+19	2245+00	HWY. 67 RAMP 4 - LT.	2671	
2221+99	2245+00	HWY. 67 RAMP 4 - RT.	2319	
51+40	54+70	HWY. 67 - LT.	264	
51+40	71+32	HWY. 67 - RT.	1594	
72+04	73+25	HWY. 67 - RT.	97	
56+67	67+79	HWY. 67 - LT.	890	
69+54	73+60	HWY. 67 - LT.	325	
50+40	56+20	HWY. 67 C.L.		580
56+94	67+84	HWY. 67 C.L.		1090
68+68	74+60	HWY. 67 C.L.		592
2027+97	2035+80	HWY. 62 RAMP 2 - LT.	783	
2027+97	2038+60	HWY. 62 RAMP 2 - RT.	1063	
2027+75	2041+68	HWY. 62 RAMP 3 - LT.	1393	
2027+75	2036+62	HWY. 62 RAMP 3 - RT.	887	
246+15	251+53	TEMP. HWY. 62 - LT.	430	
253+35	254+00	TEMP. HWY. 62 - LT.	52	
246+15	249+10	TEMP. HWY. 62 - RT.	236	
249+80	254+00	TEMP. HWY. 62 - RT.	336	
245+15	251+58	TEMP. HWY. 62 - C.L.		643
252+13	255+00	TEMP. HWY. 62 - C.L.		287
270+18	276+10	HWY. 62 TEMP. RAMP 2 - LT.	600	
270+15	276+10	HWY. 62 TEMP. RAMP 2 - RT.	666	
300+12	306+12	HWY. 62 TEMP. RAMP 3 - LT.	675	
300+12	306+12	HWY. 62 TEMP. RAMP 3 - RT.	608	
TOTALS:			**102786**	**3192**

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

RUMBLE STRIPS IN PORTLAND CEMENT CONCRETE SHOULDERS (ALTERNATE 2)

STATION	STATION	LOCATION	* RUMBLE STRIPS IN ASPHALT SHOULDERS	* RUMBLE STRIPS IN PORTLAND CEMENT CONCRETE SHOULDERS	* CENTERLINE RUMBLE STRIPES IN ASPHALT ROADWAY
			LIN.FT.	LIN. FT.	LIN. FT.
2023+50	2036+63	I-57 - LT. OF LT. MAIN LANES		1313	
2023+50	2236+00	I-57 - RT. OF LT. MAIN LANES		21250	
2023+50	2236+00	I-57 - LT. OF RT. MAIN LANES		21250	
2023+50	2035+79	I-57 - RT. OF RT. MAIN LANES		1229	
2041+68	2219+19	I-57 - LT. OF LT. MAIN LANES		17751	
2038+60	2216+26	I-57 - RT. OF RT. MAIN LANES		17766	
2222+00	2236+00	I-57 - LT. OF LT. MAIN LANES		1400	
2221+31	2236+00	I-57 - RT. OF RT. MAIN LANES		1469	
2221+31	2235+83	HWY. 67 RAMP 1 - LT.		1456	
2216+26	2235+34	HWY. 67 RAMP 1 - RT.		2013	
2219+19	2245+00	HWY. 67 RAMP 4 - LT.		2671	
2221+99	2245+00	HWY. 67 RAMP 4 - RT.		2319	
51+40	54+70	HWY. 67 - LT.	264		
51+40	71+32	HWY. 67 - RT.	1594		
72+04	73+25	HWY. 67 - RT.	97		
56+67	67+79	HWY. 67 - LT.	890		
69+54	73+60	HWY. 67 - LT.	325		
50+40	56+20	HWY. 67 C.L.			580
56+94	67+84	HWY. 67 C.L.			1090
68+68	74+60	HWY. 67 C.L.			592
2027+97	2035+80	HWY. 62 RAMP 2 - LT.		783	
2027+97	2038+60	HWY. 62 RAMP 2 - RT.		1063	
2027+75	2041+68	HWY. 62 RAMP 3 - LT.		1393	
2027+75	2036+62	HWY. 62 RAMP 3 - RT.		887	
246+15	251+53	TEMP. HWY. 62 - LT.	430		
253+35	254+00	TEMP. HWY. 62 - LT.	52		
246+15	249+10	TEMP. HWY. 62 - RT.	236		
249+80	254+00	TEMP. HWY. 62 - RT.	336		
245+15	251+58	TEMP. HWY. 62 - C.L.			643
252+13	255+00	TEMP. HWY. 62 - C.L.			287
270+18	276+10	HWY. 62 TEMP. RAMP 2 - LT.		600	
270+15	276+10	HWY. 62 TEMP. RAMP 2 - RT.		666	
300+12	306+12	HWY. 62 TEMP. RAMP 3 - LT.		675	
300+12	306+12	HWY. 62 TEMP. RAMP 3 - RT.		608	
TOTALS:			**4224**	**98562**	**3192**

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

TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES LEFT IN PLACE

STATION	STATION	LOCATION	FURNISHING, INSTALLING AND LEAVING IN PLACE PRECAST CONCRETE BARRIER WALL
			LIN. FT.
2036+60	2052+80	I-57 - LT. LANES	1633
2205+20	2221+30	I-57 - RT. LANES	1623
TOTAL:			**3256**

SOIL STABILIZATION

STATION	STATION	LOCATION / DESCRIPTION	SOIL STABILIZATION
			TON
ENTIRE	PROJECT	TO BE USED IF AND WHERE	1000
		DIRECTED BY THE ENGINEER	
TOTAL:			**1000**

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

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	79	325
		QUANTITIES				

4" PIPE UNDERDRAIN

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

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

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

SELECTED PIPE BEDDING

LOCATION	SELECTED PIPE BEDDING
	CU.YD.
ENTIRE PROJECT TO BE USED IF	380
AND WHERE DIRECTED BY THE	
ENGINEER	
TOTAL:	**380**

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

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

STRUCTURES

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE CULVERT (CLASS III) 24"	(CLASS III) 30"	(CLASS III) 36"	(CLASS IV) 48"	(CLASS V) 24"	(CLASS V) 36"	ZINC COATED (GALVANIZED) CORRUGATED STEEL PIPE CULVERTS 16 GAUGE 12"	FLARED END SECTIONS FOR R.C. PIPE CULVERTS 24"	30"	36"	48"	CONCRETE SPILLWAY TYPE A	DROP INLETS TYPE N2	RM	TM	SPAN	HEIGHT	LENGTH	CLASS S CONCRETE-ROADWAY	REINF. STEEL-ROADWAY (GRADE 60)	UNCL. EXC. FOR STR.-ROADWAY	SOLID SODDING	WATER	STD. DWG. NOS.
		LIN. FT.						LIN. FT.	EACH				EACH	EACH			LIN. FT.			CU. YD.	POUND	CU. YD.	SQ.YD.	M.GAL.	
2024+00	I-57 - CONSTRUCT MEDIAN DROP INLET AND PIPE OUTLET WITH F.E.S. RT.	106							1						1								8	0.10	FES-1, FES-2, FPC-9D PCC-1
2029+00	I-57 - CONSTRUCT MEDIAN DROP INLET AND PIPE OUTLET WITH F.E.S. RT.	102							1						1								8	0.10	FES-1, FES-2, FPC-9D PCC-1
2046+00	I-57 - CONSTRUCT DBL. R.C. BOX CULVERT																6	3	208	196.00	23704	104	16	0.20	RCB-1, RCB-2, SPECIAL DETAILS
2046+02	I-57 - CONSTRUCT MEDIAN DROP INLET ABOVE R.C. BOX CULVERT															1									FPC-9D
2054+00	I-57 - CONSTRUCT MEDIAN DROP INLET AND PIPE OUTLET WITH F.E.S. RT.	107							1						1								8	0.10	FES-1, FES-2, FPC-9D PCC-1
2062+00	I-57 - CONSTRUCT MEDIAN DROP INLET AND PIPE OUTLET WITH F.E.S. RT.	111							1						1								8	0.10	FES-1, FES-2, FPC-9D PCC-1
2076+00	I-57 - CONSTRUCT MEDIAN DROP INLET AND PIPE OUTLET WITH F.E.S. LT.	106							1						1								8	0.10	FES-1, FES-2, FPC-9D PCC-1
2083+00	I-57 - CONSTRUCT MEDIAN DROP INLET AND PIPE OUTLET WITH F.E.S. LT.	99							1						1								8	0.10	FES-1, FES-2, FPC-9D PCC-1
2090+00	I-57 - CONSTRUCT MEDIAN DROP INLET AND PIPE OUTLET WITH F.E.S. LT.	105							1						1								8	0.10	FES-1, FES-2, FPC-9D PCC-1
2108+00	I-57 - CONSTRUCT MEDIAN DROP INLET AND PIPE OUTLET WITH F.E.S. LT.	101							1						1								8	0.10	FES-1, FES-2, FPC-9D PCC-1
2114+60	I-57 - CONSTRUCT MEDIAN DROP INLET AND PIPE OUTLET WITH F.E.S. LT.	102							1						1								8	0.10	FES-1, FES-2, FPC-9D PCC-1
2120+00	I-57 - CONSTRUCT MEDIAN DROP INLET AND PIPE OUTLET WITH F.E.S. LT.	96							1						1								8	0.10	FES-1, FES-2, FPC-9D PCC-1
2128+00	I-57 - CONSTRUCT MEDIAN DROP INLET AND PIPE OUTLET WITH F.E.S. LT.	101							1						1								8	0.10	FES-1, FES-2, FPC-9D PCC-1
2149+00	I-57 - CONSTRUCT MEDIAN DROP INLET AND PIPE OUTLET WITH F.E.S. LT.	96							1						1								8	0.10	FES-1, FES-2, FPC-9D PCC-1
2166+00	I-57 - CONSTRUCT MEDIAN DROP INLET AND PIPE OUTLET WITH F.E.S. LT.	104							1						1								8	0.10	FES-1, FES-2, FPC-9D PCC-1
2172+23	I-57 - CONSTRUCT DBL. R.C. BOX CULVERT																5	4	220	201.00	22411	100	19	0.24	RCB-1, RCB-2, SPECIAL DETAILS
2172+25	I-57 - CONSTRUCT MEDIAN DROP INLET ABOVE R.C. BOX CULVERT															1									FPC-9D
2179+50	I-57 - CONSTRUCT MEDIAN DROP INLET AND PIPE OUTLET WITH F.E.S. LT.	104							1						1								8	0.10	FES-1, FES-2, FPC-9D PCC-1
2194+00	I-57 - CONSTRUCT MEDIAN DROP INLET AND PIPE OUTLET WITH F.E.S. LT.	99							1						1								8	0.10	FES-1, FES-2, FPC-9D PCC-1
2202+00	I-57 - CONSTRUCT DBL. R.C. BOX CULVERT																5	4	204	185.00	20581	92	17	0.21	RCB-1, RCB-2, SPECIAL DETAILS
2202+02	I-57 - CONSTRUCT MEDIAN DROP INLET ABOVE R.C. BOX CULVERT															1									FPC-9D
2208+00	I-57 - CONSTRUCT MEDIAN DROP INLET AND PIPE OUTLET WITH F.E.S. LT.	102							1						1								8	0.10	FES-1, FES-2, FPC-9D PCC-1
2215+00	I-57 - CONSTRUCT MEDIAN DROP INLET AND PIPE OUTLET WITH F.E.S. LT.	112							1						1								8	0.10	FES-1, FES-2, FPC-9D PCC-1
2219+35	I-57 - CONSTRUCT R.C. BOX CULVERT																4	3	254	90.00	7640	50	12	0.15	RCB-1, RCB-2, SPECIAL DETAILS
2223+00	I-57 - CONSTRUCT MEDIAN DROP INLET AND PIPE OUTLET WITH F.E.S. RT.	166							1						1								8	0.10	FES-1, FES-2, FPC-9D PCC-1
2231+00	I-57 - CONSTRUCT MEDIAN DROP INLET AND PIPE OUTLET WITH F.E.S. RT.	129							1						1								8	0.10	FES-1, FES-2, FPC-9D PCC-1
2235+43	HWY. 67 RAMP 1 - CONSTRUCT QUAD. R.C. PIPE CULVERT WITH F.E.S. LT. AND RT.					552			8														64	0.81	FES-1, FES-2, PCC-1
2226+00	HWY. 67 RAMP 4 - CONSTRUCT R.C. PIPE CULVERT WITH F.E.S. LT. AND RT.		104							2													26	0.33	FES-1, FES-2, PCC-1
2244+80	HWY. 67 RAMP 4 - CONSTRUCT TRP. R.C. PIPE CULVERT WITH F.E.S. LT. AND RT.					318			6														48	0.60	FES-1, FES-2, PCC-1
270+72	HWY. 62 TEMP. RAMP 2 - CONSTRUCT QUINT R.C. PIPE CULVERT WITH F.E.S. LT. AND RT.			570							10												170	2.14	FES-1, FES-2, PCC-1
300+58	HWY. 62 TEMP. RAMP 3 - CONSTRUCT QUINT R.C. PIPE CULVERT WITH F.E.S. LT. AND RT.						520				10												170	2.14	FES-1, FES-2, PCC-1
207+70	C.R. 139 - CONSTRUCT R.C. PIPE CULVERT WITH F.E.S. LT. AND RT.				120							2											58	0.73	FES-1, FES-2, PCC-1
209+67	C.R. 139 - CONSTRUCT DROP INLET WITH Z.C.C.S.P. CULVERT WITH CONCRETE SPILLWAY LT.							74					1	1											FPC-9N, PCM-1
209+77	C.R. 139 - CONSTRUCT DROP INLET WITH Z.C.C.S.P. CULVERT WITH CONCRETE SPILLWAY RT.							86					1	1											FPC-9N, PCM-1
214+54	C.R. 139 - CONSTRUCT DROP INLET WITH Z.C.C.S.P. CULVERT WITH CONCRETE SPILLWAY LT.							72					1	1											FPC-9N, PCM-1
214+64	C.R. 139 - CONSTRUCT DROP INLET WITH Z.C.C.S.P. CULVERT WITH CONCRETE SPILLWAY RT.							81					1	1											FPC-9N, PCM-1
220+26	C.R. 139 - CONSTRUCT DBL. R.C. BOX CULVERT RT.																7	4	43	58.00	7288	31	19	0.24	RCB-1, RCB-2, SPECIAL DETAILS
220+92	C.R. 139 - CONSTRUCT TRP. R.C. BOX CULVERT																5	3	48	70.00	9235	37	17	0.21	RCB-1, RCB-2, SPECIAL DETAILS
TOTALS:		2048	104	570	120	870	520	313	33	2	20	2	4	4	19	3				800.00	90859	414	788	9.90	

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

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

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

STRUCTURES OVER 20'-0" SPAN

STATION	DESCRIPTION	SPAN	HEIGHT	LENGTH	CLASS S CONCRETE-ROADWAY	REINF. STEEL-ROADWAY (GRADE 60)	UNCL.EXC. FOR STR.-ROADWAY	SOLID SODDING	WATER	STD. DWG. NOS.
		LIN. FT.			CU.YD.	POUND	CU.YD.	SQ.YD.	M.GAL.	
2116+40	I-57 - CONST. QUINT. 5'X4' R.C. BOX CULVERT	5	4	230	485.80	53928	213	27	0.33	RCB-1, RCB-2, SPECIAL DETAILS
TOTALS:					**485.80**	**53928**	**213**	**27**	**0.33**	

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

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	80	325
		QUANTITIES				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

GUARDRAIL

STATION	STATION	LOCATION	GUARDRAIL (TYPE A)	THRIE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)
			LIN. FT.	EACH	
207+79.57	209+98.32	C.R. 139 - RT.	150	1	1
208+42.90	209+86.65	C.R. 139 - LT.	75	1	1
214+32.68	216+51.43	C.R. 139 - LT.	150	1	1
214+44.35	215+88.10	C.R. 139 - RT.	75	1	1
253+21.79	255+21.79	TEMP. HWY. 62 - RT.	150		1
254+14.92	255+39.92	TEMP. HWY. 62 - LT.	75		1
TOTALS:			**675**	**4**	**6**

FENCING

STATION	STATION	LOCATION	WIRE FENCE (TYPE A)	* 16'-0" GATES
			LIN. FT.	EACH
2022+83	2040+00	I-57 - LT.	2020	
2023+57	2040+00	I-57 - RT.	1906	
2040+00	2055+00	I-57 - LT.	1512	
2040+00	2055+00	I-57 - RT.	1491	
2055+00	2070+00	I-57 - LT.	1567	
2055+00	2070+00	I-57 - RT.	1442	
2070+00	2085+00	I-57 - LT.	1566	
2070+00	2085+00	I-57 - RT.	1446	
2085+00	2100+00	I-57 - LT.	1551	
2085+00	2100+00	I-57 - RT.	1457	
2100+00	2115+00	I-57 - LT.	1507	
2100+00	2113+98	I-57 - RT.	1407	
2114+32	2115+00	I-57 - RT.	68	1
2115+00	2115+56	I-57 - LT.	60	1
2115+92	2130+00	I-57 - LT.	1413	
2115+00	2130+00	I-57 - RT.	1503	
2130+00	2145+00	I-57 - LT.	1500	
2130+00	2145+00	I-57 - RT.	1500	
2145+00	2160+00	I-57 - LT.	1500	
2145+00	2160+00	I-57 - RT.	1500	
2160+00	2175+00	I-57 - LT.	1500	
2160+00	2175+00	I-57 - RT.	1500	
2175+00	2190+00	I-57 - LT.	1484	
2175+00	2190+00	I-57 - RT.	1515	
2190+00	2205+00	I-57 - LT.	1466	
2190+00	2205+00	I-57 - RT.	1532	
2205+00	2220+00	I-57 - LT.	1491	
2205+00	2220+00	I-57 - RT.	1517	
2220+00	2235+00	I-57 - LT.	1626	
2220+00	2235+00	I-57 - RT.	1768	
2235+00	2270+56	I-57 - LT.	3862	
2235+00	2273+55	I-57 - RT.	4047	
TOTALS:			**51224**	**2**

* DENOTES ALTERNATE BID ITEM.

EROSION CONTROL MATTING

STATION	STATION	LOCATION	LENGTH	CLASS 3
			LIN. FT.	SQ. YD.
2022+90.00	2032+40.00	I-57 LT.	950.00	844.44
2023+00.00	2032+60.00	I-57 RT.	960.00	853.33
246+15.00	255+00.00	HWY. 62 RT.	885.00	786.67
2027+97.04	2032+60.00	HWY. 62 RAMP 2 LT.	462.96	411.52
270+72.00	272+32.00	HWY. 62 TEMP. RAMP 2 RT.	160.00	142.22
270+72.00	276+09.66	HWY. 62 TEMP. RAMP 2 LT.	537.66	477.92
2027+74.93	2032+50.00	HWY. 62 RAMP 3 RT.	475.07	422.28
300+58.00	306+11.72	HWY. 62 TEMP. RAMP 3 RT.	553.72	492.20
2243+50.00	2244+73.74	HWY. 67 RAMP 4 RT.	123.74	109.99
203+00.00	210+34.10	C.R. 139 LT.	734.10	652.53
212+90.00	220+50.00	C.R. 139 LT.	760.00	675.56
206+70.00	208+00.00	C.R. 143 SOUTH RT.	130.00	115.56
209+00.00	210+30.00	C.R. 143 NORTH RT.	130.00	115.56
TOTAL:				**6099.78**

NOTE: AVERAGE WIDTH = 8'-0"

CONCRETE ISLAND

STATION	LOCATION	CURB FACE TYPE	CONCRETE ISLAND SQ.YD.
270+40	HWY. 62 TEMP. RAMP 2 - RT.	TYPE C	47
300+30	HWY. 62 TEMP. RAMP 3 - LT.	TYPE C	51
2235+80	HWY. 67 RAMP 1 - RT.	TYPE C	218
2245+00	HWY. 67 RAMP 4 - C.L.	TYPE C	32
TOTAL:			**348**

ACHM PATCHING OF EXISTING ROADWAY

DESCRIPTION	TON
ENTIRE PROJECT - TO BE USED IF AND WHERE	100
DIRECTED BY THE ENGINEER	
TOTAL:	**100**

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	25	50
DIRECTED BY THE ENGINEER		
TOTALS:	**25**	**50**

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

DELINEATORS

STATION	STATION	LOCATION	TYPE-2 DELINEATORS (WHITE-RED)	TYPE-2 DELINEATORS (YELLOW-RED)
			EACH	EACH
300+00	306+12	HWY. 62 TEMP. RAMP 3	10	10
2027+75	2039+77	HWY. 62 RAMP 3	19	17
2218+16	2235+97	HWY. 67 RAMP 1	24	23
TOTALS:			**53**	**50**

BENCH MARKS

STATION	LOCATION	BENCH MARKS
		EACH
2046+02	I-57 NE HEADWALL	1
2116+40	I-57 NE HEADWALL	1
2172+23	I-57 NE HEADWALL	1
2202+00	I-57 NE HEADWALL	1
2219+35	I-57 NE HEADWALL	1
210+08	S.E. CORNER OF C.R. 139 BRIDGE	1
220+26	C.R. 139 NE HEADWALL	1
220+92	C.R. 139 NE HEADWALL	1
TOTAL:		**8**

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

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	ROCK DITCH CHECKS	SILT FENCE	DIVERSION DITCH	PIPE FOR SLOPE DRAINS	DROP INLET FILTER SOCK (18")	SEDIMENT BASIN	OBLITERATION OF SEDIMENT BASIN	*SEDIMENT REMOVAL & DISPOSAL
											(E-5)	(E-6)	(E-11)	(E-8)	SLOPE DRAIN (E-12)	(E-13)	(E-14)		
			ACRE	TON	ACRE	M.GAL.	ACRE	ACRE	ACRE	M.GAL.	BAG	CU.YD.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	CU. YD.	CU. YD.	CU. YD.
ENTIRE	PROJECT	CLEARING AND GRUBBING											2065						76
ENTIRE	PROJECT	STAGE 1									1210	132	2110	800	130	506			177
ENTIRE	PROJECT	STAGE 2	106.27	212.54	106.27	10839.5	106.27	106.27	106.27	2167.9	110	15							10
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.			26.57	53.14	26.57	2709.9	26.57	26.57	26.57	542.0	330	37	1044	200	33	127	500	500	
TOTALS:			**132.84**	**265.68**	**132.84**	**13549.4**	**132.84**	**132.84**	**132.84**	**2709.9**	**1650**	**184**	**5219**	**1000**	**163**	**633**	**500**	**500**	**263**

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
ROCK DITCH CHECKS.....3 CU.YD./LOCATION
FILTER SOCKS.....23 LIN. FT./ 4' DIA. INLET

*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.

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	81	325
		QUANTITIES				

BASE AND SURFACING - ALTERNATE 1

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT (0.05 GAL. PER SQ. YD.)			ACHM BASE COURSE (1 1/2")				ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")								TOTAL
				TON / STATION	TON	TOTAL WID.	SQ.YD.	GALLON	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22	PG 76-22
			FEET			FEET			FEET			TON	FEET			TON	FEET			TON	FEET			TON	TON
I-57 - LT. LANES																									
2033+00.00	2035+01.81	I-57 - LT. LANES	201.81	446.75	901.59	106.55	2389.21	119.46	26.92	603.64	880.00	265.60	26.46	593.32	330.00	97.90	26.25	588.61	220.00	64.75	38.00	852.09	220.00	93.73	158.48
2035+01.81	2036+98.67	I-57 - LT. LANES	196.86	474.25	933.61	114.87	2512.59	125.63	29.00	634.33	880.00	279.11	28.54	624.26	330.00	103.00	28.33	619.67	220.00	68.16	42.08	920.43	220.00	101.25	169.41
2036+98.67	2041+67.66	I-57 - LT. LANES	468.99	483.25	2266.39	156.55	8157.82	407.89	39.42	2054.18	880.00	903.84	38.96	2030.21	330.00	334.98	38.75	2019.26	220.00	222.12	48.50	2527.34	220.00	278.01	500.13
2041+67.66	2047+98.67	I-57 - LT. LANES	631.01	446.75	2819.04	106.55	7470.46	373.52	26.92	1887.42	880.00	830.46	26.46	1855.17	330.00	306.10	26.25	1840.45	220.00	202.45	38.00	2664.26	220.00	293.07	495.52
2047+98.67	2049+75.18	I-57 - LT. LANES	176.51	446.75	788.56	106.55	2089.68	104.48	26.92	527.96	880.00	232.30	26.46	518.94	330.00	85.63	26.25	514.82	220.00	56.63	38.00	745.26	220.00	81.98	138.61
2049+75.18	2099+66.85	I-57 - LT. LANES	4991.67	446.75	22300.29	106.55	59095.83	2954.79	26.92	14930.64	880.00	6569.48	26.46	14675.51	330.00	2421.46	26.25	14559.04	220.00	1601.49	38.00	21075.94	220.00	2318.35	3919.84
2099+66.85	2179+88.15	I-57 - LT. LANES	8021.30	446.75	35835.16	106.55	94963.28	4748.16	26.92	23992.60	880.00	10556.74	26.46	23582.62	330.00	3891.13	26.25	23395.46	220.00	2573.50	38.00	33867.71	220.00	3725.45	6298.95
2179+88.15	2209+80.51	I-57 - LT. LANES	2992.36	446.75	13368.37	106.55	35426.22	1771.31	26.92	8950.48	880.00	3938.21	26.46	8797.54	330.00	1451.59	26.25	8727.72	220.00	960.05	38.00	12634.41	220.00	1389.79	2349.84
2209+80.51	2212+13.15	I-57 - LT. LANES	232.64	438.50	1020.13	117.21	3029.75	151.49	29.58	784.61	880.00	336.43	29.13	752.98	330.00	124.24	28.92	747.55	220.00	82.23	38.67	999.58	220.00	109.95	192.18
2212+13.15	2212+80.51	I-57 - LT. LANES	67.36	465.75	313.73	141.21	1056.88	52.84	35.59	266.30	880.00	117.17	35.13	262.93	330.00	43.38	34.92	261.36	220.00	28.75	44.67	334.33	220.00	36.78	65.53
2212+80.51	2216+26.02	I-57 - LT. LANES	345.51	471.75	1629.94	146.55	5626.05	281.30	36.92	1417.36	880.00	623.64	36.46	1399.70	330.00	230.95	36.25	1391.64	220.00	153.08	46.00	1765.94	220.00	194.25	347.33
2216+26.02	2219+18.74	I-57 - LT. LANES	292.72	471.75	1380.91	146.55	4766.46	238.32	36.92	1200.80	880.00	528.35	36.46	1185.84	330.00	195.66	36.25	1179.01	220.00	129.69	46.00	1496.12	220.00	164.57	294.26
2219+18.74	2220+80.51	I-57 - LT. LANES	161.77	482.50	780.54	155.87	2801.68	140.08	39.25	705.50	880.00	310.42	38.79	697.23	330.00	115.04	38.58	693.45	220.00	76.28	48.33	868.70	220.00	95.56	171.84
2220+80.51	2222+91.87	I-57 - LT. LANES	211.36	446.75	944.25	106.55	2502.27	125.11	26.92	632.20	880.00	278.17	26.46	621.40	330.00	102.53	26.25	616.47	220.00	67.81	38.00	892.41	220.00	98.17	165.98
2222+91.87	2225+00.00	I-57 - LT. LANES	208.13	446.75	929.82	106.55	2464.03	123.20	26.92	622.54	880.00	273.92	26.46	611.90	330.00	100.96	26.25	607.05	220.00	66.78	38.00	878.77	220.00	96.66	163.44
I-57 - RT. LANES																									
2033+00.00	2035+01.81	I-57 - RT. LANES	201.81	446.75	901.59	106.55	2389.21	119.46	26.92	603.64	880.00	265.60	26.46	593.32	330.00	97.90	26.25	588.61	220.00	64.75	38.00	852.09	220.00	93.73	158.48
2035+01.81	2036+98.67	I-57 - RT. LANES	196.86	446.75	879.47	106.55	2330.60	116.53	26.92	588.83	880.00	259.09	26.46	578.77	330.00	95.50	26.25	574.18	220.00	63.16	38.00	831.19	220.00	91.43	154.59
2036+98.67	2038+60.45	I-57 - RT. LANES	161.78	482.50	780.59	155.87	2801.85	140.09	39.25	705.54	880.00	310.44	38.79	697.27	330.00	115.05	38.58	693.50	220.00	76.29	48.33	868.76	220.00	95.56	171.85
2038+60.45	2041+67.66	I-57 - RT. LANES	307.21	471.75	1449.26	146.55	5002.40	250.12	36.92	1260.24	880.00	554.51	36.46	1244.54	330.00	205.35	36.25	1237.37	220.00	136.11	46.00	1570.18	220.00	172.72	308.83
2041+67.66	2044+98.67	I-57 - RT. LANES	331.01	471.75	1561.54	146.55	5389.95	269.50	36.92	1357.88	880.00	597.47	36.46	1340.96	330.00	221.26	36.25	1333.23	220.00	146.66	46.00	1691.83	220.00	186.10	332.76
2044+98.67	2047+98.67	I-57 - RT. LANES	300.00	444.50	1333.50	122.55	4085.00	204.25	30.92	1030.67	880.00	453.49	30.46	1015.33	330.00	167.53	30.25	1008.33	220.00	110.92	40.00	1333.33	220.00	146.67	257.59
2047+98.67	2049+75.18	I-57 - RT. LANES	176.51	446.75	788.56	106.55	2089.68	104.48	26.92	527.96	880.00	232.30	26.46	518.94	330.00	85.63	26.25	514.82	220.00	56.63	38.00	745.26	220.00	81.98	138.61
2049+75.18	2099+66.85	I-57 - RT. LANES	4991.67	446.75	22300.29	106.55	59095.83	2954.79	26.92	14930.64	880.00	6569.48	26.46	14675.51	330.00	2421.46	26.25	14559.04	220.00	1601.49	38.00	21075.94	220.00	2318.35	3919.84
2099+66.85	2179+88.15	I-57 - RT. LANES	8021.30	446.75	35835.16	106.55	94963.28	4748.16	26.92	23992.60	880.00	10556.74	26.46	23582.62	330.00	3891.13	26.25	23395.46	220.00	2573.50	38.00	33867.71	220.00	3725.45	6298.95
2179+88.15	2209+80.51	I-57 - RT. LANES	2992.36	446.75	13368.37	106.55	35426.22	1771.31	26.92	8950.48	880.00	3938.21	26.46	8797.54	330.00	1451.59	26.25	8727.72	220.00	960.05	38.00	12634.41	220.00	1389.79	2349.84
2209+80.51	2212+13.15	I-57 - RT. LANES	232.64	446.75	1039.32	106.55	2754.20	137.71	26.92	695.85	880.00	306.17	26.46	683.96	330.00	112.85	26.25	678.53	220.00	74.64	38.00	982.26	220.00	108.05	182.69
2212+13.15	2216+26.02	I-57 - RT. LANES	412.87	446.75	1844.50	106.55	4887.92	244.40	26.92	1234.94	880.00	543.37	26.46	1213.84	330.00	200.28	26.25	1204.20	220.00	132.46	38.00	1743.23	220.00	191.76	324.22
2216+26.02	2220+80.51	I-57 - RT. LANES	454.49	483.25	2196.32	156.55	7905.60	395.28	39.42	1990.67	880.00	875.89	38.96	1967.44	330.00	324.63	38.75	1956.83	220.00	215.25	48.50	2449.20	220.00	269.41	484.66
2220+80.51	2222+91.87	I-57 - RT. LANES	211.36	477.25	1008.72	117.55	2760.60	138.03	29.67	696.78	880.00	306.58	29.21	685.98	330.00	113.19	29.00	681.05	220.00	74.92	42.75	1003.96	220.00	110.44	185.36
2222+91.87	2225+00.00	I-57 - RT. LANES	208.13	446.75	929.82	106.55	2464.03	123.20	26.92	622.54	880.00	273.92	26.46	611.90	330.00	100.96	26.25	607.05	220.00	66.78	38.00	878.77	220.00	96.66	163.44
RAMPS																									
2027+97.04	2028+27.11	HWY. 62 RAMP 2	30.07	353.25	106.22	62.55	208.99	10.45	15.92	53.19	880.00	23.40	15.46	51.65	330.00	3.52	15.25	50.95	220.00	5.60	25.00	83.53	220.00	9.19	14.79
2028+27.11	2036+99.11	HWY. 62 RAMP 2	872.00	353.25	3080.34	62.55	6060.40	303.02	15.92	1542.47	880.00	678.69	15.46	1497.90	330.00	247.15	15.25	1477.56	220.00	162.53	25.00	2422.22	220.00	266.44	428.97
2027+74.93	2028+04.73	HWY. 62 RAMP 3	29.80	353.25	105.27	62.55	207.11	10.36	15.92	52.71	880.00	23.19	15.46	51.19	330.00	3.45	15.25	50.49	220.00	5.55	25.00	82.78	220.00	9.11	14.66
2028+04.73	2036+67.23	HWY. 62 RAMP 3	862.50	353.25	3046.78	62.55	5994.38	299.72	15.92	1525.67	880.00	671.29	15.46	1481.58	330.00	244.46	15.25	1461.46	220.00	160.76	25.00	2395.83	220.00	263.54	424.30
2036+67.23	2037+12.79	HWY. 62 RAMP 3	45.56	353.25	160.94	62.55	316.64	15.83	15.92	80.59	880.00	35.46	15.46	78.26	330.00	12.91	15.25	77.20	220.00	8.49	25.00	126.56	220.00	13.92	22.41
2220+80.88	2227+10.00	HWY. 67 RAMP 1	629.12	353.25	2222.37	62.55	4372.38	218.62	15.92	1112.84	880.00	489.65	15.46	1080.69	330.00	178.31	15.25	1066.01	220.00	117.26	25.00	1747.56	220.00	192.23	309.49
2227+10.00	2234+62.36	HWY. 67 RAMP 1	752.36	353.25	2657.71	62.55	5228.90	261.45	15.92	1330.84	880.00	585.57	15.46	1292.39	330.00	213.24	15.25	1274.83	220.00	140.23	25.00	2089.89	220.00	229.89	370.12
2234+62.36	2235+80.43	HWY. 67 RAMP 1	118.07	353.25	417.08	62.55	820.59	41.03	15.92	208.85	880.00	91.89	15.46	202.82	330.00	33.47	15.25	200.06	220.00	22.01	25.00	327.97	220.00	36.06	58.09
2220+80.07	2230+57.62	HWY. 67 RAMP 4	977.55	353.25	3453.20	62.55	6793.97	339.70	15.92	1729.18	880.00	760.84	15.46	1679.21	330.00	277.07	15.25	1656.40	220.00	182.20	25.00	2715.42	220.00	298.70	480.90
2230+57.62	2232+87.55	HWY. 67 RAMP 4	229.93	353.25	812.23	62.55	1598.01	79.90	15.92	406.72	880.00	178.96	15.46	394.97	330.00	65.17	15.25	389.60	220.00	42.86	25.00	638.69	220.00	70.26	113.12
2232+87.55	2244+34.63	HWY. 67 RAMP 4	1147.08	353.25	4052.06	62.55	7972.21	398.61	15.92	2029.06	880.00	892.79	15.46	1970.43	330.00	325.12	15.25	1943.66	220.00	213.80	25.00	3186.33	220.00	350.50	564.30
2244+34.63	2245+13.99	HWY. 67 RAMP 4	79.36	353.25	280.34	62.55	551.55	27.58	15.92	140.38	880.00	61.77	15.46	136.32	330.00	22.49	15.25	134.47	220.00	14.79	25.00	220.44	220.00	24.25	39.04
270+18.00	271+85.02	HWY. 62 TEMPORARY RAMP 2	167.02	353.25	590.00	62.55	1160.79	58.04	15.92	295.44	880.00	129.99	15.46	286.90	330.00	47.34	15.25	283.01	220.00	31.13	25.00	463.94	220.00	51.03	82.16
271+85.02	276+09.66	HWY. 62 TEMPORARY RAMP 2	424.64	353.25	1500.04	62.55	2951.25	147.56	15.92	751.14	880.00	330.50	15.46	729.44	330.00	120.36	15.25	719.53	220.00	79.15	25.00	1179.56	220.00	129.75	208.90
300+12.00	300+66.36	HWY. 62 TEMPORARY RAMP 3	54.36	353.25	192.03	62.55	377.80	18.89	15.92	96.16	880.00	42.31	15.46	93.38	330.00	15.41	15.25	92.11	220.00	10.13	25.00	151.00	220.00	16.61	26.74
300+66.36	306+11.71	HWY. 62 TEMPORARY RAMP 3	545.35	353.25	1926.45	62.55	3790.18	189.51	15.92	964.66	880.00	424.45	15.46	936.79	330.00	154.57	15.25	924.07	220.00	101.65	25.00	1514.86	220.00	166.63	268.28
ADDITIONAL FOR TURNOUTS																									
2234+13.51	2235+68.13	HWY. 67 RAMP 1 RT.	154.62	VAR.	227.50	129.50	2224.81	111.24	32.43	557.15	880.00	245.15	32.34	555.60	330.00	91.67	32.30		220.00		20.94	359.75	220.00	39.57	39.57
2235+47.73	2235+72.15	HWY. 67 RAMP 1 LT.	24.42	VAR.	1.66	5.95	16.14	0.81	1.50	4.07	880.00	1.79	1.48	4.02	330.00	0.66	1.47		220.00		1.76	4.78	220.00	0.53	0.53
2244+22.09	2245+09.72	HWY. 67 RAMP 4 LT.	87.63	VAR.	73.75	73.78	718.37	35.92	18.55	180.62	880.00	79.47	18.38	178.96	330.00	29.53	18.30		220.00		19.00	185.00	220.00	20.35	20.35
2244+28.67	2245+05.70	HWY. 67 RAMP 4 RT.	77.03	VAR.	28.97	33.08	283.13	14.16	8.29	70.95	880.00	31.22	8.26	70.70	330.00	11.67	8.24		220.00		8.58	73.44	220.00	8.08	8.08
270+25.84	271+40.09	HWY. 62 TEMPORARY RAMP 2 CONNECTOR RT.	114.25	VAR.	112.12	86.20	1094.26	54.71	21.63	274.58	880.00	120.82	21.50	272.93	330.00	45.03	21.44		220.00		19.79	251.22	220.00	27.63	27.63
270+26.00	270+81.00	HWY. 62 TEMPORARY RAMP 2 CONNECTOR LT.	55.00	VAR.	18.74	29.92	182.84	9.14	7.51	45.89	880.00	20.19	7.46	45.59	330.00	7.52	7.44		220.00		7.94	48.52	220.00	5.34	5.34
300+12.18	300+75.00	HWY. 62 TEMPORARY RAMP 3 CONNECTOR RT.	62.82	VAR.	29.16	40.72	284.23	14.21	10.23	71.41	880.00	31.42	10.15	70.85	330.00	11.69	10.11		220.00		10.45	72.94	220.00	8.02	8.02
300+12.19	301+31.68	HWY. 62 TEMPORARY RAMP 3 CONNECTOR LT.	119.49	VAR.	148.98	109.33	1451.54	72.58	27.48	364.84	880.00	160.53	27.24	361.66	330.00	59.67	27.13		220.00		25.79	342.41	220.00	37.67	37.67
ADDITIONAL FOR SUPERELEVATION																									
2049+75.18	2053+25.18	I-57 - LT. LANES	350.00	82.68	289.38																				
2053+25.18	2096+16.85	I-57 - LT. LANES	4291.67	165.36	7096.71																				
2096+16.85	2099+66.85	I-57 - LT. LANES	350.00	82.68	289.38																				
2179+88.15	2183+38.15	I-57 - LT. LANES	350.00	36.75	128.63																				
2183+38.15	2208+63.15	I-57 - LT. LANES	2525.00	73.50	1855.88																				
2208+63.15	2209+80.51	I-57 - LT. LANES	117.36	68.44	80.32																				
2209+80.51	2212+13.15	I-57 - LT. LANES	232.64	26.60	61.88																				
2049+75.18	2053+25.18	I-57 - RT. LANES	350.00	67.71	236.99																				
2053+25.18	2096+16.85	I-57 - RT. LANES	4291.67	135.41	5811.35																				
2096+16.85	2099+66.85	I-57 - RT. LANES	350.00	67.71	236.99																				
2179+88.15	2183+38.15	I-57 - RT. LANES	350.00	46.86	164.01																				
2183+38.15	2208+63.15	I-57 - RT. LANES	2525.00	93.72	2366.43																				
2208+63.15	2212+13.15	I-57 - RT. LANES	350.00	46.86	164.01																				
2028+27.11	2031+27.11	HWY. 62 RAMP 2	300.00	45.93	137.79																				
2031+27.11	2036+99.11	HWY. 62 RAMP 2	572.00	91.86	525.44																				
2028+04.73	2031+04.73	HWY. 62 RAMP 3	300.00	71.71	215.13																				
2031+04.73	2033+67.23	HWY. 62 RAMP 3	262.50	143.42	376.48																				
2033+67.23	2036+67.23	HWY. 62 RAMP 3	300.00	71.71	215.13																				
2227+10.00	2229+60.00	HWY. 67 RAMP 1	250.00	56.55	141.38																				
2229+60.00	2232+12.36	HWY. 67 RAMP 1	252.36	113.09	285.39																				
2232+12.36	2234+62.36	HWY. 67 RAMP 1	250.00	56.55	141.38																				
2220+80.07	2227+57.62	HWY. 67 RAMP 4	677.55	91.86	622.40																				
2227+57.62	2230+57.62	HWY. 67 RAMP 4	300.00	45.93	137.79																				
2232+87.55	2235+87.55	HWY. 67 RAMP 4	300.00	88.75	266.25																				
2235+87.55	2241+34.63	HWY. 67 RAMP 4	547.08	177.49	971.01																				
2241+34.63	2244+34.63	HWY. 67 RAMP 4	300.00	88.75	266.25																				
271+85.02	273+97.34	HWY. 62 TEMPORARY RAMP 2	212.32	52.50	111.47																				
273+97.34	276+09.66	HWY. 62 TEMPORARY RAMP 2	212.32	52.50	111.47																				
300+66.36	303+16.36	HWY. 62 TEMPORARY RAMP 3	250.00	66.46	166.15																				
303+16.36	303+61.71	HWY. 62 TEMPORARY RAMP 3	45.35	132.92	60.28																				
303+61.71	306+11.71	HWY. 62 TEMPORARY RAMP 3	250.00	66.46	166.15																				
TOTALS:					**221372.58**		**523359.05**	**26167.93**		**132269.23**		**58198.44**		**129941.70**		**21440.34**		**127322.89**		**14005.52**		**185736.05**		**20430.99**	**34436.51**

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.4% MIN. AGGR.....5.6% ASPHALT BINDER
ACHM BINDER COURSE (1").....95.8% MIN. AGGR.....4.2% ASPHALT BINDER
ACHM BASE COURSE (1 1/2").....96.2% MIN. AGGR.....3.8% ASPHALT BINDER
TACK COAT QUANTITIES WERE CALCULATED USING THE EMULSIFIED ASPHALT RATES. REFER TO SS-400-1 FOR THE RESIDUAL ASPHALT APPLICATION RATES.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON

DIGITALLY SIGNED 6/28/2024

CGervasini 6/28/2024 1:31:32 PM
WORKSPACE: AHTD
\\garverinc.local\gdata\Projects\2021\21T0046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_QTY.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	82	325
		QUANTITIES				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBBERSON

DIGITALLY SIGNED 6/28/2024

BASE AND SURFACING - ALTERNATE 2

STATION	STATION	LOCATION	LENGTH	CEMENT STABILIZED CRUSHED STONE BASE COURSE (6" COMPACTED DEPTH)				GEOTEXTILE FABRIC (TYPE SPECIAL)		ACHM SURFACE COURSE (1/2")				PORTLAND CEMENT CONCRETE PAVEMENT (10" U.T.)		AGGREGATE BASE COURSE (CLASS 7)	
				AVG. WID.	PROCESSING	CEMENT	AGGREGATE	AVG. WID.	SQ.YD.	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 64-22	AVG. WID.	SQ.YD.	TON / STATION	TON
			FEET	FEET	SQ. YD.	TON	TON	FEET		FEET			TON	FEET			
I-57 - LT. LANES																	
2033+00.00	2035+01.81	I-57 - LT. LANES	201.81	30.00	672.70	9.42	226.03	30.00	672.70	12.00	269.08	220.00	29.60	26.00	583.01	181.00	365.28
2035+01.81	2036+98.67	I-57 - LT. LANES	196.86	32.08	701.70	9.82	235.77	32.08	701.70	14.00	306.23	220.00	33.69	28.08	614.20	194.00	381.91
2036+98.67	2041+67.66	I-57 - LT. LANES	468.99	42.50	2214.68	31.01	744.13	42.50	2214.68	10.00	521.10	220.00	57.32	38.50	2006.24	167.50	785.56
2041+67.66	2047+98.67	I-57 - LT. LANES	631.01	30.00	2103.37	29.45	706.73	30.00	2103.37	12.00	841.35	220.00	92.55	26.00	1822.92	181.00	1142.13
2047+98.67	2049+75.18	I-57 - LT. LANES	176.51	30.00	588.37	8.24	197.69	30.00	588.37	12.00	235.35	220.00	25.89	26.00	509.92	181.00	319.48
2049+75.18	2099+66.85	I-57 - LT. LANES	4991.67	30.00	16638.90	232.94	5590.67	30.00	16638.90	12.00	6655.56	220.00	732.11	26.00	14420.38	181.00	9034.92
2099+66.85	2179+88.15	I-57 - LT. LANES	8021.30	30.00	26737.67	374.33	8983.86	30.00	26737.67	12.00	10695.07	220.00	1176.46	26.00	23172.64	181.00	14518.55
2179+88.15	2209+80.51	I-57 - LT. LANES	2992.36	30.00	9974.53	139.64	3351.44	30.00	9974.53	12.00	3989.81	220.00	438.88	26.00	8644.60	181.00	5416.17
2209+80.51	2212+13.15	I-57 - LT. LANES	232.64	32.67	844.48	11.82	283.75	32.67	844.48	10.00	258.49	220.00	28.43	28.67	741.09	167.50	389.67
2212+13.15	2212+80.51	I-57 - LT. LANES	67.36	38.67	289.42	4.05	97.25	38.67	289.42	10.00	74.84	220.00	8.23	34.67	259.49	167.50	112.83
2212+80.51	2216+26.02	I-57 - LT. LANES	345.51	40.00	1535.60	21.50	515.96	40.00	1535.60	10.00	383.90	220.00	42.23	36.00	1382.04	167.50	578.73
2216+26.02	2219+18.74	I-57 - LT. LANES	292.72	40.00	1300.98	18.21	437.13	40.00	1300.98	10.00	325.24	220.00	35.78	36.00	1170.88	167.50	490.31
2219+18.74	2220+80.51	I-57 - LT. LANES	161.77	42.33	760.86	10.65	255.65	42.33	760.86	10.00	179.74	220.00	19.77	38.33	688.96	167.50	270.96
2220+80.51	2222+91.87	I-57 - LT. LANES	211.36	30.00	704.53	9.86	236.72	30.00	704.53	12.00	281.81	220.00	31.00	26.00	610.60	181.00	382.56
2222+91.87	2225+00.00	I-57 - LT. LANES	208.13	30.00	693.77	9.71	233.11	30.00	693.77	12.00	277.51	220.00	30.53	26.00	601.26	181.00	376.72
I-57 - RT. LANES																	
2033+00.00	2035+01.81	I-57 - RT. LANES	201.81	30.00	672.70	9.42	226.03	30.00	672.70	12.00	269.08	220.00	29.60	26.00	583.01	181.00	365.28
2035+01.81	2036+98.67	I-57 - RT. LANES	196.86	30.00	656.20	9.19	220.48	30.00	656.20	12.00	262.48	220.00	28.87	26.00	568.71	181.00	356.32
2036+98.67	2038+60.45	I-57 - RT. LANES	161.78	42.33	760.91	10.65	255.67	42.33	760.91	10.00	179.76	220.00	19.77	38.33	689.00	167.50	270.98
2038+60.45	2041+67.66	I-57 - RT. LANES	307.21	40.00	1365.38	19.12	458.77	40.00	1365.38	10.00	341.34	220.00	37.55	36.00	1228.84	167.50	514.58
2041+67.66	2044+98.67	I-57 - RT. LANES	331.01	40.00	1471.16	20.60	494.31	40.00	1471.16	10.00	367.79	220.00	40.46	36.00	1324.04	167.50	554.44
2044+98.67	2047+98.67	I-57 - RT. LANES	300.00	34.00	1133.33	15.87	380.80	34.00	1133.33	10.00	333.33	220.00	36.67	30.00	1000.00	167.50	502.50
2047+98.67	2049+75.18	I-57 - RT. LANES	176.51	30.00	588.37	8.24	197.69	30.00	588.37	12.00	235.35	220.00	25.89	26.00	509.92	181.00	319.48
2049+75.18	2099+66.85	I-57 - RT. LANES	4991.67	30.00	16638.90	232.94	5590.67	30.00	16638.90	12.00	6655.56	220.00	732.11	26.00	14420.38	181.00	9034.92
2099+66.85	2179+88.15	I-57 - RT. LANES	8021.30	30.00	26737.67	374.33	8983.86	30.00	26737.67	12.00	10695.07	220.00	1176.46	26.00	23172.64	181.00	14518.55
2179+88.15	2209+80.51	I-57 - RT. LANES	2992.36	30.00	9974.53	139.64	3351.44	30.00	9974.53	12.00	3989.81	220.00	438.88	26.00	8644.60	181.00	5416.17
2209+80.51	2212+13.15	I-57 - RT. LANES	232.64	30.00	775.47	10.86	260.56	30.00	775.47	12.00	310.19	220.00	34.12	26.00	672.07	181.00	421.08
2212+13.15	2216+26.02	I-57 - RT. LANES	412.87	30.00	1376.23	19.27	462.41	30.00	1376.23	12.00	550.49	220.00	60.55	26.00	1192.74	181.00	747.29
2216+26.02	2220+80.51	I-57 - RT. LANES	454.49	42.50	2146.20	30.05	721.12	42.50	2146.20	10.00	504.99	220.00	55.55	38.50	1944.21	167.50	761.27
2220+80.51	2222+91.87	I-57 - RT. LANES	211.36	32.75	769.12	10.77	258.42	32.75	769.12	14.00	328.78	220.00	36.17	28.75	675.18	194.00	410.04
2222+91.87	2225+00.00	I-57 - RT. LANES	208.13	30.00	693.77	9.71	233.11	30.00	693.77	12.00	277.51	220.00	30.53	26.00	601.26	181.00	376.72
RAMPS																	
2027+97.04	2028+27.11	HWY. 62 RAMP 2	30.07	19.00	63.48	0.89	21.33	19.00	63.48	10.00	33.41	220.00	3.68	15.00	50.12	151.00	45.41
2028+27.11	2036+99.11	HWY. 62 RAMP 2	872.00	19.00	1840.89	25.77	618.54	19.00	1840.89	10.00	968.89	220.00	106.58	15.00	1453.33	151.00	1316.72
2027+74.93	2028+04.73	HWY. 62 RAMP 3	29.80	19.00	62.91	0.88	21.14	19.00	62.91	10.00	33.11	220.00	3.64	15.00	49.67	151.00	45.00
2028+04.73	2036+67.23	HWY. 62 RAMP 3	862.50	19.00	1820.83	25.49	611.80	19.00	1820.83	10.00	958.33	220.00	105.42	15.00	1437.50	151.00	1302.38
2036+67.23	2037+12.79	HWY. 62 RAMP 3	45.56	19.00	96.18	1.35	32.32	19.00	96.18	10.00	50.62	220.00	5.57	15.00	75.93	151.00	68.80
2220+80.88	2227+10.00	HWY. 67 RAMP 1	629.12	19.00	1328.14	18.59	446.26	19.00	1328.14	10.00	699.02	220.00	76.89	15.00	1048.53	151.00	949.97
2227+10.00	2234+62.36	HWY. 67 RAMP 1	752.36	19.00	1588.32	22.24	533.68	19.00	1588.32	10.00	835.96	220.00	91.96	15.00	1253.93	151.00	1136.06
2234+62.36	2235+80.43	HWY. 67 RAMP 1	118.07	19.00	249.26	3.49	83.75	19.00	249.26	10.00	131.19	220.00	14.43	15.00	196.78	151.00	178.29
2220+80.07	2230+57.62	HWY. 67 RAMP 4	977.55	19.00	2063.72	28.89	693.41	19.00	2063.72	10.00	1086.17	220.00	119.48	15.00	1629.25	151.00	1476.10
2230+57.62	2232+87.55	HWY. 67 RAMP 4	229.93	19.00	485.41	6.80	163.10	19.00	485.41	10.00	255.48	220.00	28.10	15.00	383.22	151.00	347.19
2232+87.55	2244+34.63	HWY. 67 RAMP 4	1147.08	19.00	2421.61	33.90	813.66	19.00	2421.61	10.00	1274.53	220.00	140.20	15.00	1911.80	151.00	1732.09
2244+34.63	2245+13.99	HWY. 67 RAMP 4	79.36	19.00	167.54	2.35	56.29	19.00	167.54	10.00	88.18	220.00	9.70	15.00	132.27	151.00	119.83
270+18.00	271+85.02	HWY. 62 TEMPORARY RAMP 2	167.02	19.00	352.60	4.94	118.47	19.00	352.60	10.00	185.58	220.00	20.41	15.00	278.37	151.00	252.20
271+85.02	276+09.66	HWY. 62 TEMPORARY RAMP 2	424.64	19.00	896.46	12.55	301.21	19.00	896.46	10.00	471.82	220.00	51.90	15.00	707.73	151.00	641.21
300+12.00	300+66.36	HWY. 62 TEMPORARY RAMP 3	54.36	19.00	114.76	1.61	38.56	19.00	114.76	10.00	60.40	220.00	6.64	15.00	90.60	151.00	82.08
300+66.36	306+11.71	HWY. 62 TEMPORARY RAMP 3	545.35	19.00	1151.29	16.12	386.83	19.00	1151.29	10.00	605.94	220.00	66.65	15.00	908.92	151.00	823.48
ADDITIONAL FOR TURNOUTS																	
2234+13.51	2235+68.13	HWY. 67 RAMP 1 RT.	154.62	32.62	560.41	7.85	188.30	32.62	560.41					19.57	336.21		
2235+47.73	2235+72.15	HWY. 67 RAMP 1 LT.	24.42	1.54	4.18	0.06	1.40	1.54	4.18					1.45	3.93		
2244+22.09	2245+09.72	HWY. 67 RAMP 4 LT.	87.63	18.93	184.32	2.58	61.93	18.93	184.32					14.97	145.76		
2244+28.67	2245+05.70	HWY. 67 RAMP 4 RT.	77.03	8.36	71.55	1.00	24.04	8.36	71.55					8.22	70.35		
270+25.84	271+40.09	HWY. 62 TEMPORARY RAMP 2 CONNECTOR RT.	114.25	21.94	278.52	3.90	93.58	21.94	278.52					17.69	224.56		
270+26.00	270+81.00	HWY. 62 TEMPORARY RAMP 2 CONNECTOR LT.	55.00	7.62	46.57	0.65	15.65	7.62	46.57					7.41	45.28		
300+12.18	300+75.00	HWY. 62 TEMPORARY RAMP 3 CONNECTOR RT.	62.82	10.40	72.59	1.02	24.39	10.40	72.59					10.06	70.22		
300+12.19	301+31.68	HWY. 62 TEMPORARY RAMP 3 CONNECTOR LT.	119.49	28.05	372.41	5.21	125.13	28.05	372.41					23.15	307.35		
ADDITIONAL FOR SUPERELEVATION																	
2049+75.18	2053+25.18	I-57 - LT. LANES	350.00													62.30	218.05
2053+25.18	2096+16.85	I-57 - LT. LANES	4291.67													124.60	5347.42
2096+16.85	2099+66.85	I-57 - LT. LANES	350.00													62.30	218.05
2179+88.15	2183+38.15	I-57 - LT. LANES	350.00													28.00	98.00
2183+38.15	2208+63.15	I-57 - LT. LANES	2525.00													56.00	1414.00
2208+63.15	2209+80.51	I-57 - LT. LANES	117.36													52.81	61.98
2209+80.51	2212+13.15	I-57 - LT. LANES	232.64													19.06	44.34
2049+75.18	2053+25.18	I-57 - RT. LANES	350.00													49.51	173.29
2053+25.18	2096+16.85	I-57 - RT. LANES	4291.67													99.01	4249.18
2096+16.85	2099+66.85	I-57 - RT. LANES	350.00													49.51	173.29
2179+88.15	2183+38.15	I-57 - RT. LANES	350.00													36.52	127.82
2183+38.15	2208+63.15	I-57 - RT. LANES	2525.00													73.03	1844.01
2208+63.15	2212+13.15	I-57 - RT. LANES	350.00													36.52	127.82
2028+27.11	2031+27.11	HWY. 62 RAMP 2	300.00													32.09	96.27
2031+27.11	2036+99.11	HWY. 62 RAMP 2	572.00													64.17	367.05
2028+04.73	2031+04.73	HWY. 62 RAMP 3	300.00													48.07	144.21
2031+04.73	2033+67.23	HWY. 62 RAMP 3	262.50													96.13	252.34
2033+67.23	2036+67.23	HWY. 62 RAMP 3	300.00													48.07	144.21
2227+10.00	2229+60.00	HWY. 67 RAMP 1	250.00													38.74	96.85
2229+60.00	2232+12.36	HWY. 67 RAMP 1	252.36													77.47	195.50
2232+12.36	2234+62.36	HWY. 67 RAMP 1	250.00													38.74	96.85
2220+80.07	2227+57.62	HWY. 67 RAMP 4	677.55													64.24	435.26
2227+57.62	2230+57.62	HWY. 67 RAMP 4	300.00													32.12	96.36
2232+87.55	2235+87.55	HWY. 67 RAMP 4	300.00													62.34	187.02
2235+87.55	2241+34.63	HWY. 67 RAMP 4	547.08													124.68	682.10
2241+34.63	2244+34.63	HWY. 67 RAMP 4	300.00													62.34	187.02
271+85.02	273+97.34	HWY. 62 TEMPORARY RAMP 2	212.32													38.42	81.57
273+97.34	276+09.66	HWY. 62 TEMPORARY RAMP 2	212.32													38.42	81.57
300+66.36	303+16.36	HWY. 62 TEMPORARY RAMP 3	250.00													47.80	119.50
303+16.36	303+61.71	HWY. 62 TEMPORARY RAMP 3	45.35													95.59	43.35
303+61.71	306+11.71	HWY. 62 TEMPORARY RAMP 3	250.00													47.80	119.50
TOTALS:					147815.45	2069.44	49666.00		147815.45		58335.24		6416.90		127266.44		97175.99

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.4% MIN. AGGR.....5.6% ASPHALT BINDER
TACK COAT QUANTITIES WERE CALCULATED USING THE EMULSIFIED ASPHALT RATES. REFER TO SS-400-1 FOR THE RESIDUAL ASPHALT APPLICATION RATES.
CEMENT STABILIZED CRUSHED STONE BASE COURSE .....96.0% AGGREGATE.....4.0% CEMENT

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WORKSPACE: AHTD
\\garverinc.local\gdata\Projects\2021\01046 - ARDOT 100512 Walnut Ridge - M0 I-57\Drawings\r101172\r101172_QTY.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	83	325
		QUANTITIES				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON

DIGITALLY SIGNED 6/28/2024

BASE AND SURFACING - LOCAL ROADS

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT							ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")							
						(0.05 GAL. PER SQ. YD.)			(0.17 GAL. PER SQ. YD.)															
				TON / STATION	TON	TOTAL WID.	SQ.YD.	GALLON	TOTAL WID.	SQ.YD.	GALLON	TOTAL GALLONS	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 64-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 64-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 64-22	TOTAL PG 64-22
			FEET			FEET			FEET				FEET			TON	FEET			TON	FEET			TON	TON
LOCAL ROADS																									
50+40.00	51+40.00	HWY. 67 - TRANSITION	100.00						40.00	444.44	75.55	75.55									40.00	444.44	220.00	48.89	48.89
51+40.00	54+70.00	HWY. 67	330.00	147.75	487.58	44.77	1641.57	82.08	24.00	880.00	149.60	231.68	10.52	385.73	495.00	95.47	10.25	375.83	220.00	41.34	46.00	1686.67	220.00	185.53	226.87
54+70.00	70+30.00	HWY. 67	1560.00	274.00	4274.40	56.77	9840.13	492.01	24.00	4160.00	707.20	1199.21	16.52	2863.47	495.00	708.71	16.25	2816.67	220.00	309.83	52.00	9013.33	220.00	991.47	1301.30
70+30.00	73+60.00	HWY. 67	330.00	147.75	487.58	44.77	1641.57	82.08	24.00	880.00	149.60	231.68	10.52	385.73	495.00	95.47	10.25	375.83	220.00	41.34	46.00	1686.67	220.00	185.53	226.87
73+60.00	74+60.00	HWY. 67 - TRANSITION	100.00						40.00	444.44	75.55	75.55									40.00	444.44	220.00	48.89	48.89
202+00.00	203+00.00	C.R. 139 - TRANSITION	100.00	154.50	154.50																23.50	261.11	220.00	28.72	28.72
203+00.00	209+73.80	C.R. 139	673.80	230.00	1549.74																28.00	2096.27	220.00	230.59	230.59
214+57.20	221+00.00	C.R. 139	642.80	230.00	1478.44																28.00	1999.82	220.00	219.98	219.98
221+00.00	222+00.00	C.R. 139 - TRANSITION	100.00	154.50	154.50																24.00	266.67	220.00	29.33	29.33
206+20.00	206+70.00	C.R. 143 SOUTH - TRANSITION	50.00	179.00	89.50																19.50	108.33	220.00	11.92	11.92
206+70.00	208+00.00	C.R. 143 SOUTH	130.00	182.50	237.25																20.00	288.89	220.00	31.78	31.78
209+00.00	210+30.00	C.R. 143 NORTH	130.00	182.50	237.25																20.00	288.89	220.00	31.78	31.78
210+30.00	210+80.00	C.R. 143 NORTH - TRANSITION	50.00	179.00	89.50																19.50	108.33	220.00	11.92	11.92
245+15.00	246+15.00	TEMPORARY HWY. 62 - TRANSITION	100.00						40.00	444.44	75.55	75.55									40.00	444.44	220.00	48.89	48.89
246+15.00	248+85.00	TEMPORARY HWY. 62	270.00	147.75	398.93	44.77	1343.10	67.16	24.00	720.00	122.40	189.56	10.52	315.60	495.00	78.11	10.25	307.50	220.00	33.83	46.00	1380.00	220.00	151.80	185.63
248+85.00	252+00.00	TEMPORARY HWY. 62	315.00	274.00	863.10	56.77	1986.95	99.35	24.00	840.00	142.80	242.15	16.52	578.20	495.00	143.10	16.25	568.75	220.00	62.56	52.00	1820.00	220.00	200.20	262.76
252+00.00	254+70.00	TEMPORARY HWY. 62	270.00	242.75	655.43	44.77	1343.10	67.16	24.00	720.00	122.40	189.56	10.52	315.60	495.00	78.11	10.25	307.50	220.00	33.83	46.00	1380.00	220.00	151.80	185.63
254+70.00	255+00.00	TEMPORARY HWY. 62	30.00	211.50	63.45	32.77	109.23	5.46	24.00	80.00	13.60	19.06	4.52	15.07	495.00	3.73	4.25	14.17	220.00	1.56	40.00	133.33	220.00	14.67	16.23
255+00.00	255+01.79	TEMPORARY HWY. 62	1.79	211.50	3.79	8.77	1.74	0.09				0.09	4.52	0.90	495.00	0.22	4.25	0.85	220.00	0.09	16.00	3.18	220.00	0.35	0.44
255+01.79	255+19.92	TEMPORARY HWY. 62	18.13	182.50	33.09	4.39	8.84	0.44				0.44	2.26	4.55	495.00	1.13	2.13	4.29	220.00	0.47	12.00	24.17	220.00	2.66	3.13
255+19.92	255+21.82	TEMPORARY HWY. 62	1.90	165.00	3.14																9.25	1.95	220.00	0.21	0.21
255+21.82	255+39.92	TEMPORARY HWY. 62 - LT.	18.10	88.25	15.97																5.25	10.56	220.00	1.16	1.16
ADDITIONAL FOR CUL-DE-SACS																									
206+70.00	208+00.00	C.R. 143 SOUTH	130.00	336.39	437.31																47.18	681.49	220.00	74.96	74.96
209+00.00	210+30.00	C.R. 143 NORTH	130.00	336.39	437.31																47.18	681.49	220.00	74.96	74.96
ADDITIONAL FOR LEVELING																									
51+40.00	73+60.00	HWY. 67	2220.00														24.00	5920.00	VAR.	316.42					316.42
246+15.00	254+00.00	TEMPORARY HWY. 62	785.00														24.00	2093.33	VAR.	51.27					51.27
ADDITIONAL FOR GUARDRAIL																									
207+27.57	209+97.72	C.R. 139 RT.	270.15	VAR.	58.34																4.76	142.88	220.00	15.72	15.72
207+99.87	209+86.05	C.R. 139 LT.	186.18	VAR.	33.87																4.01	82.95	220.00	9.12	9.12
214+33.28	217+03.43	C.R. 139 LT.	270.15	VAR.	58.34																4.76	142.88	220.00	15.72	15.72
214+44.95	216+31.13	C.R. 139 RT.	186.18	VAR.	33.87																4.01	82.95	220.00	9.12	9.12
252+97.47	254+20.34	TEMPORARY HWY. 62 RT.	122.87	VAR.	12.36																1.07	14.61	220.00	1.61	1.61
TOTALS:					**12348.54**		**17916.23**	**895.83**		**9613.32**	**1634.25**	**2530.08**		**4864.85**		**1204.05**		**12784.72**		**892.54**		**25720.74**		**2829.28**	**3721.82**

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.4% MIN. AGGR.....5.6% ASPHALT BINDER
ACHM BINDER COURSE (1").....95.8% MIN. AGGR.....4.2% ASPHALT BINDER
TACK COAT QUANTITIES WERE CALCULATED USING THE EMULSIFIED ASPHALT RATES. REFER TO SS-400-1 FOR THE RESIDUAL ASPHALT APPLICATION RATES.

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WORKSPACE: AHTD
\\garverinc.local\gdata\Projects\2021\21T0046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_QTY.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. ROAD DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
07-25-2024		6	ARK.	101172	84	325
		07688		QUANTITIES		64121

SCHEDULE OF BRIDGE QUANTITIES - JOB NO. 101172

BRIDGE NO.	NAME PLATE TITLE	UNIT OF STRUCTURE	ITEM NO.	801	SP, SS & 802	SP, SS & 802	SP & 803	SS & 804	SS & 804	SS & 805	SP, SS & 807	SS & 807	SS & 808	SS & 809	812	SS & 816	SP JOB 101172	SP JOB 101172
			ITEM	UNCLASSIFIED EXCAVATION FOR STRUCTURES -BRIDGE	CLASS S CONCRETE -BRIDGE	CLASS S(AE) CONCRETE -BRIDGE	CLASS 2 PROTECTIVE SURFACE TREATMENT	REINFORCING STEEL- BRIDGE (GRADE 60)	EPOXY COATED REINFORCING STEEL (GRADE 60)	STEEL SHELL PILING (18" DIA.) (1)	STRUCTURAL STEEL IN PLATE GIRDER SPANS (A709, GR. 50)	PAINTING STRUCTURAL STEEL	ELASTOMERIC BEARINGS	SILICONE JOINT SEALANT	BRIDGE NAME PLATE (TYPE D)	CONCRETE RIPRAP	ARCHITECTURAL FINISH	TEXTURED COATING FINISH
			UNIT	CU. YD.	CU. YD.	CU. YD.	SQ. YD.	LB.	LB.	LIN. FT.	LB.	TON	CU. IN.	LIN. FT.	EACH	CU. YD.	SQ. FT.	SQ. YD.
07688	COUNTY ROAD 139 OVER INTERSTATE 57	BENT NO. 1			56.38		18.1	7,654	1,096	511 (2)	581		3,654.0	33	1	126	47	35
		BENT NO. 2		218	144.15			33,367		900			2,184.0					89
		BENT NO. 3		194	143.62			33,367		888			2,457.0					90
		BENT NO. 4		316	148.42			34,268		828			2,730.0					96
		BENT NO. 5			56.73		18.1	7,654	1,096	567 (2)	581		3,654.0	33		113	47	34
		411'-0" CONTINUOUS PLATE GIRDER UNIT				432.40	1,614.0		115,178		394,668	197.8					1,664	562
		TOTALS FOR JOB NO. 101172		728	549.30	432.40	1,650.2	116,310	117,370	3,694	395,830	197.8	14,679.0	66	1	239	1,758	906

(1) Steel shell piles shall conform to ASTM A252, Grade 36, Fy = 45 ksi.

(2) Steel shell piling at end bents only shall have a nominal shell thickness, "T" = 0.625", an alternate flat tip bottom plate thickness, "X" = 2¾", and an alternate vaned tip bottom plate thickness, "Y" = 1¾".

TABLE OF APPROACH SLAB QUANTITIES

(For Information Only)

Bridge No.	Item	Reinforcing Steel	Concrete
	Unit	Lbs.	Cu. Yds.
07688	Begin Bridge	5,967	48.70
	End Bridge	5,967	48.70

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.21243
COLTON S. WYLIE

DIGITALLY SIGNED 07/25/2024
BRIDGE ENGINEER

SCHEDULE OF BRIDGE QUANTITIES
CORNING BYPASS (FUTURE I-57) (S)
CLAY COUNTY
ROUTE 657 SEC. 3
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: RAK DATE: APR. 2024 FILENAME: b101172_q1.dgn
CHECKED BY: CSW DATE: APR. 2024 SCALE: No Scale
DESIGNED BY: RAK DATE: APR. 2024

BRIDGE NO. 07688 DRAWING NO. 64121

abhall
7/25/2024 1:31:45 PM
WORKSPACE\ARDOT Bridge (2019)
L:\2021\21T01046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\b101172_S001_QT.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
07-25-2024		6	ARK.	101172	85	325
		SUMMARY OF QUANTITIES				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON

DIGITALLY SIGNED 7/25/2024

SUMMARY OF QUANTITIES (BOX 1 OF 2)

	ITEM NUMBER	ITEM	ASPHALT QUANTITIES - ALTERNATE NO. 1	CONCRETE QUANTITIES - ALTERNATE NO. 2	UNIT
	201	CLEARING	31	31	STATION
	201	GRUBBING	31	31	STATION
	202	REMOVAL AND DISPOSAL OF WATER WELL	2	2	EACH
	202	REMOVAL AND DISPOSAL OF FENCE	553	553	LIN. FT.
	202	REMOVAL AND DISPOSAL OF GATES	4	4	EACH
	202	REMOVAL AND DISPOSAL OF GATE POSTS	4	4	EACH
	202	REMOVAL AND DISPOSAL OF PIPE CULVERTS	29	29	EACH
	202	REMOVAL AND DISPOSAL OF GUARDRAIL	416	416	LIN. FT.
	202	REMOVAL AND DISPOSAL OF BUILDINGS	12	12	EACH
	202	REMOVAL AND DISPOSAL OF MAILBOXES	3	3	EACH
	202	REMOVAL AND DISPOSAL OF WATER TANK	1	1	EACH
	202	REMOVAL AND DISPOSAL OF IRRIGATION WELL	1	1	EACH
	202	REMOVAL AND DISPOSAL OF IRRIGATION/SPRINKLER SYSTEM	9	9	EACH
	SP & 207	STONE BACKFILL	885	885	TON
	SP, SS, & 210	UNCLASSIFIED EXCAVATION	56156	56156	CU. YD.
	SP & 210	COMPACTED EMBANKMENT	1397913	1397913	CU. YD.
	SP & 210	SOIL STABILIZATON	1000	1000	TON
	SP, SS, & 303	AGGREGATE BASE COURSE (CLASS 7)	234324	110128	TON
	SP, SS, & 308	AGGREGATE IN CEMENT STABILIZED CRUSHED STONE BASE COURSE		49666	TON
	SP, SS, & 308	CEMENT IN CEMENT STABILIZED CRUSHED STONE BASE COURSE		2069	TON
	SS & 308	PROCESSING CEMENT STABILIZED CRUSHED STONE BASE COURSE		147815	SQ. YD.
	SS & 401	TACK COAT	28748	2580	GAL.
	SP, SS, & 405	MINERAL AGGREGATE IN ACHM BASE COURSE (1 1/2")	55986		TON
	SP, SS, & 405	ASPHALT BINDER (PG 76-22) IN ACHM BASE COURSE (1 1/2")	2212		TON
	SP, SS, & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")	21693	1153	TON
	SP, SS, & 406	ASPHALT BINDER (PG 64-22) IN ACHM BINDER COURSE (1")	51	51	TON
	SP, SS, & 406	ASPHALT BINDER (PG 76-22) IN ACHM BINDER COURSE (1")	900		TON
	SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	36151	9700	TON
	SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	216	575	TON
	SP, SS, & 407	ASPHALT BINDER (PG 76-22) IN ACHM SURFACE COURSE (1/2")	1928		TON
	SP & 412	COLD MILLING ASPHALT PAVEMENT	1722	1722	SQ. YD.
	SP, SS, & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC	25	25	TON
	SP, SS, & 415	ACHM PATCHING OF EXISTING ROADWAY	100	100	TON
	SP, SS, & 501	PORTLAND CEMENT CONCRETE PAVEMENT (10" UNIFORM THICKNESS)		127266	SQ. YD.
	SP, SS, & 504	APPROACH SLABS	97.40	97.40	CU. YD.
	SP, SS, & 504	APPROACH GUTTERS	20.20	20.20	CU. YD.
	601	MOBILIZATION	1.00	1.00	LUMP SUM
	SP & 602	FURNISHING FIELD OFFICE	1	1	EACH
	SS & 603	MAINTENANCE OF TRAFFIC	1.00	1.00	LUMP SUM
	SS & 604	SIGNS	578	578	SQ. FT.
	SP, SS, & 604	CONSTRUCTION PROJECT INFORMATION SIGN UPDATE	4	4	EACH
	SS & 604	BARRICADES	224	224	LIN. FT.
	SS & 604	TRAFFIC DRUMS	100	100	EACH
	SP, SS, & 604	FURNISHING, INSTALLING AND LEAVING IN PLACE PRECAST CONCRETE BARRIER	3256	3256	LIN. FT.
	604	CONSTRUCTION PAVEMENT MARKINGS	10215	10215	LIN. FT.
	SS & 606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	2048	2048	LIN. FT.
	SS & 606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)	870	870	LIN. FT.
	SS & 606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	104	104	LIN. FT.
	SS & 606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	570	570	LIN. FT.
	SS & 606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)	520	520	LIN. FT.
	SS & 606	48" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)	120	120	LIN. FT.
	SS & 606	12" ZINC COATED (GALVANIZED) CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)	313	313	LIN. FT.
	SS & 606	24" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	33	33	EACH
	SS & 606	30" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	2	2	EACH
	SS & 606	36" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	20	20	EACH
	SS & 606	48" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	2	2	EACH
	SP, SS, & 606	24" SIDE DRAIN	504	504	LIN. FT.
	SS & 606	SELECTED PIPE BEDDING	380	380	CU. YD.
	SS & 609	DROP INLETS (TYPE M2)	4	4	EACH
	SS & 609	DROP INLETS (TYPE RM)	19	19	EACH
	SS & 609	DROP INLETS (TYPE TM)	3	3	EACH
	SS & 611	4" PIPE UNDERDRAINS	500	500	LIN. FT.
	SS & 611	UNDERDRAIN OUTLET PROTECTORS	4	4	EACH
	614	CONCRETE SPILLWAY (TYPE A)	4	4	EACH
	SS & 617	GUARDRAIL (TYPE A)	675	675	LIN. FT.
	SS & 617	GUARDRAIL (TYPE C)	50	50	LIN. FT.
	SS & 617	GUARDRAIL TERMINAL (TYPE 2)	6	6	EACH
	SS & 617	THRIE BEAM GUARDRAIL TERMINAL	4	4	EACH
	SS & 619	WIRE FENCE (TYPE A)	51224	51224	LIN. FT.
*	SS & 619	16' STEEL GATES (ALTERNATE NO. 1)	2	2	EACH
*	SS & 619	16' ALUMINUM GATES (ALTERNATE NO. 2)	2	2	EACH
	620	LIME	266	266	TON
	620	SEEDING	132.84	132.84	ACRE
	SS & 620	MULCH COVER	265.68	265.68	ACRE
	620	WATER	16269.5	16269.5	M. GAL.
	621	TEMPORARY SEEDING	132.84	132.84	ACRE
	621	SILT FENCE	5219	5219	LIN. FT.
	621	SAND BAG DITCH CHECKS	1650	1650	BAG
	621	DIVERSION DITCH	1000	1000	LIN. FT.
	621	SEDIMENT BASIN	500	500	CU. YD.
	621	OBLITERATION OF SEDIMENT BASIN	500	500	CU. YD.
	621	SEDIMENT REMOVAL AND DISPOSAL	263	263	CU. YD.
	621	PIPE FOR SLOPE DRAINS	163	163	LIN. FT.
	621	ROCK DITCH CHECKS	184	184	CU. YD.
	SS & 621	FILTER SOCK (18")	633	633	LIN. FT.
	623	SECOND SEEDING APPLICATION	132.84	132.84	ACRE
	624	SOLID SODDING	815	815	SQ. YD.
	SP & 625	GEOTEXTILE FABRIC (TYPE SPECIAL)		147815	SQ. YD.

* DENOTES ALTERNATE BID ITEMS.

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
07-25-2024		6	ARK.	101172	86	325
08-22-2024		SUMMARY OF QUANTITIES AND REVISIONS				
09-04-2024						

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON

DIGITALLY SIGNED 9/04/2024

SUMMARY OF QUANTITIES (BOX 2 OF 2)

ITEM NUMBER	ITEM	ASPHALT QUANTITIES - ALTERNATE NO. 1	CONCRETE QUANTITIES - ALTERNATE NO. 2	UNIT
626	EROSION CONTROL MATTING (CLASS 3)	6100	6100	SQ. YD.
SP, SS, & 632	CONCRETE ISLAND	348	348	SQ. YD.
635	ROADWAY CONSTRUCTION CONTROL	1.00	1.00	LUMP SUM
642	RUMBLE STRIPS IN ASPHALT SHOULDERS	102786	4224	LIN. FT.
642	RUMBLE STRIPS IN PORTLAND CEMENT CONCRETE SHOULDERS		98562	LIN. FT.
SP & 642	CENTERLINE RUMBLE STRIPES IN ASPHALT ROADWAYS	3192	3192	LIN. FT.
SP	MULTIDUCT CONDUIT (4" NON-METALLIC, 3 x 1.25" INNERDUCTS, 3 x 0.75" INNERDUCTS)	25193	25193	LIN. FT.
SP, SS, & 711	FIBER OPTIC CONCRETE PULL BOX (TYPE 4 HD)	16	16	EACH
718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (6")	4000	4000	LIN. FT.
718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")	189	189	LIN. FT.
718	REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (6")	4000	4000	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (6")	6735	6735	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (12")	54	54	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (6")	9787	9787	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (8")	730	730	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING (WORDS)	6	6	EACH
719	THERMOPLASTIC PAVEMENT MARKING (ARROWS)	6	6	EACH
SP & 719	THERMOPLASTIC PAVEMENT MARKING (YIELD LINE)	44	44	LIN. FT.
SP	ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (6")	53208	53208	LIN. FT.
SP	ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (8")	878	878	LIN. FT.
SP	ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (12")	745	745	LIN. FT.
SP	ENHANCED THERMOPLASTIC PAVEMENT MARKING YELLOW (6")	44368	44368	LIN. FT.
721	RAISED PAVEMENT MARKERS (TYPE II)	767	767	EACH
SS & 725	GUIDE SIGN-ROADSIDE MOUNTED (DEMOUNTABLE LEGEND)	548	548	SQ. FT.
SS & 726	STANDARD SIGN	1358	1358	SQ. FT.
SS & 728	DELINEATOR (TYPE 2)	103	103	EACH
SS & 730	BREAKAWAY SIGN SUPPORT (TYPE G-2)	4327	4327	POUND
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G-1)	38	38	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-1)	48	48	EACH
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-ROADWAY	414	414	CU. YD.
SP, SS, & 802	CLASS S CONCRETE-ROADWAY	800.00	800.00	CU. YD.
SS & 804	REINFORCING STEEL-ROADWAY (GRADE 60)	103926	103926	POUND
	STRUCTURES OVER 20' SPAN			
636	BRIDGE CONSTRUCTION CONTROL	1.00	1.00	LUMP SUM
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-BRIDGE	728	728	CU. YD.
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-ROADWAY	213	213	CU. YD.
SP, SS, & 802	CLASS S CONCRETE-ROADWAY	485.80	485.80	CU. YD.
SP, SS, & 802	CLASS S CONCRETE-BRIDGE	549.30	549.30	CU. YD.
SP, SS, & 802	CLASS S(AE) CONCRETE-BRIDGE	432.40	432.40	CU. YD.
SP	ARCHITECTURAL FINISH	1758	1758	SQ. FT.
SP	TEXTURED COATING FINISH	906	906	SQ. YD.
SP & 803	CLASS 2 PROTECTIVE SURFACE TREATMENT	1650.2	1650.2	SQ. YD.
SS & 804	REINFORCING STEEL-ROADWAY (GRADE 60)	53928	53928	POUND
SS & 804	REINFORCING STEEL-BRIDGE (GRADE 60)	116310	116310	POUND
SS & 804	EPOXY COATED REINFORCING STEEL (GRADE 60)	117370	117370	POUND
SS & 805	STEEL SHELL PILING (18" DIAMETER)	3694	3694	LIN. FT.
SP, SS, & 807	STRUCTURAL STEEL IN PLATE GIRDER SPANS (A709, GR. 50)	395830	395830	POUND
SS & 807	PAINTING STRUCTURAL STEEL	197.8	197.8	TON
SS & 808	ELASTOMERIC BEARINGS	14679.0	14679.0	CU. IN.
SS & 809	SILICONE JOINT SEALANT	66	66	LIN. FT.
812	BRIDGE NAME PLATE (TYPE D)	1	1	EACH
SS & 816	CONCRETE RIPRAP	239	239	CU. YD.

REVISIONS

DATE	REVISION	SHEET NUMBER
07-25-24	UPDATED PLANS TO REFLECT THE NEW HWY. 657 AND SECTION 3 DESIGNATION; ADDED SS 619-1 AND DELAY IN RIGHT OF WAY OCCUPANCY SPECIAL PROVISION; ADDED MISSING NOTE TO SUMMARY OF QUANTITIES DENOTING ALTERNATE BID ITEMS; CORRECTED MULTIDUCT CONDUIT AND OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS QUANTITIES	1, 3, 84-86, 138-160, 181-183
08-22-24	REPLACED SS-307-1 CEMENT WITH SS-307-2 CEMENT TREATED BASE COURSE; REPLACED SS-308-1 CEMENT WITH SS-308-2 CEMENT STABILIZED CRUSHED STONE BASE COURSE; REPLACED SS-501-2 CEMENT WITH SS-501-3 PORTLAND CEMENT CONCRETE PAVEMENT; REPLACED SS-802-4 CEMENT WITH SS-802-5 CONCRETE FOR STRUCTURES; REPLACED CEMENT STABILIZED CRUSHED STONE BASE COURSE SPECIAL PROVISION WITH LATEST VERSION; REMOVED CLASS C FLY ASH IN PORTLAND CEMENT CONCRETE PAVEMENT AND CLASS S(AE) CONCRETE SPECIAL PROVISION; REMOVED REACTIVE AGGREGATE TESTING SPECIAL PROVISION; ADDED PORTLAND CEMENT CONCRETE PAVEMENT SPECIAL PROVISION; ADDED CONCRETE FOR STRUCTURES SPECIAL PROVISION; REPLACED COMPACTED EMBANKMENT SPECIAL PROVISION WITH COMPACTED EMBANKMENT ZONING SPECIAL PROVISION; ADDED A COMPACTED EMBANKMENT SPECIAL DETAIL	3, 20, 86
09-04-24	REVISED UTILITY ADJUSTMENTS SPECIAL PROVISION	86

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	87	325
		SURVEY CONTROL DETAILS				

SURVEY CONTROL COORDINATES

Project Name: s101172
Date: 9/6/2023
Coordinate System: ARKANSAS STATE PLANE - NORTH ZONE BASED ON GPS CONTROL, PROJECTED TO GROUND.
Units: U.S. SURVEY FOOT

Point Name	Northing	Easting	Elev	Feature	Description
100	744603.8054	1701755.3101	288.78	GPS	ARDOT GPS *110016
101	745815.5195	1701676.8509	289.76	GPS	ARDOT GPS *110016A
102	751267.0142	1709856.2314	276.74	GPS	ARDOT GPS *110017
103	751283.9227	1711349.2757	277.98	GPS	ARDOT GPS *110017A
104	761410.1510	1712307.1728	291.02	GPS	ARDOT GPS *110018
105	761215.1465	1710953.9883	292.86	GPS	ARDOT GPS *110018A
106	767277.2960	1720212.3171	293.05	GPS	ARDOT GPS *110019
107	768611.0560	1720286.9422	293.89	GPS	ARDOT GPS *110019A
108	774436.4447	1728374.7397	298.33	GPS	ARDOT GPS *110020
109	775481.2977	1728845.5232	300.08	GPS	ARDOT GPS *110020A
110	783002.8391	1736694.9286	296.37	GPS	ARDOT GPS *110021
111	784125.4989	1737772.8059	301.77	GPS	ARDOT GPS *110021A
112	791275.1335	1740736.2322	293.16	GPS	ARDOT GPS *110022
113	791258.6916	1739413.8581	297.15	GPS	ARDOT GPS *110022A

*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).
ALL DISTANCES ARE GROUND.
USE CAF = 1.0 FOR STAKEOUT FOR THIS PROJECT.
A PROJECT CAF OF 1.0000369384 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.
HORIZONTAL DATUM: NAD 83 (2011)
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: 100-113
CONVERGENCE ANGLE: 0°48'25.51" RIGHT AT PN: 107 LT: N 36°26'13.51" LG: W 90°36'46.84"
GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.

ALIGNMENT NAME: I - 57

POINT	STATION	TYPE	NORTHING	EASTING
8000	2000+00.00	POB	757021.9434	1713561.3251
8001	2052+37.68	PC	762259.4272	1713607.0319
8002	2097+04.35	PT	765755.0542	1715964.8620
8003	2182+50.65	PC	769025.5823	1723860.6153
8004	2209+50.65	PT	770473.6913	1726122.7850
8005	2360+84.18	PC	780746.3401	1737235.6738

ALIGNMENT NAME: HWY. 62 RAMP 2

POINT	STATION	TYPE	NORTHING	EASTING
8100	2027+97.04	POB	759862.3178	1713927.9111
8101	2030+52.11	PC	760095.7891	1713825.1812
8102	2038+60.45	PT	760881.6451	1713663.5108

ALIGNMENT NAME: HWY. 62 RAMP 3

POINT	STATION	TYPE	NORTHING	EASTING
8200	2027+74.93	POB	759847.3480	1713240.5116
8201	2030+29.73	PC	760074.7117	1713355.5273
8202	2034+42.23	PT	760468.0504	1713472.1951
8203	2039+77.38	PC	761000.0609	1713530.0683
8204	2041+67.66	PT	761189.9342	1713541.1964

ALIGNMENT NAME: HWY. 67 RAMP 1

POINT	STATION	TYPE	NORTHING	EASTING
8300	2216+26.02	PC	770890.6396	1726657.0722
8301	2218+16.29	PT	771012.6321	1726802.9951
8302	2228+97.50	PC	771663.9456	1727666.0107
8303	2232+74.86	PT	771826.6518	1728003.7749
8304	2235+97.05	POE	771906.7784	1728315.8475

ALIGNMENT NAME: HWY. 67 RAMP 4

POINT	STATION	TYPE	NORTHING	EASTING
8400	2219+18.74	PC	771181.1284	1726787.1729
8401	2228+32.62	PT	771935.5940	1727287.3322
8402	2235+12.55	PC	772575.1870	1727518.0202
8403	2242+09.63	PT	773025.8884	1728013.6242
8404	2245+34.63	POE	773106.7126	1728328.4137

ALIGNMENT NAME: HWY. 67

POINT	STATION	TYPE	NORTHING	EASTING
8500	48+00.00	POB	771056.8250	1728306.9465
8501	72+07.07	PC	773463.7675	1728332.1529
8502	72+40.41	PT	773497.0985	1728332.5504
8503	75+00.00	POE	773756.6674	1728336.0239

ALIGNMENT NAME: C.R. 139

POINT	STATION	TYPE	NORTHING	EASTING
8600	200+00.00	POB	765238.0135	1717610.8712
8601	224+00.00	POE	767638.0070	1717616.4562

ALIGNMENT NAME: C.R. 143 SOUTH

POINT	STATION	TYPE	NORTHING	EASTING
8700	206+00.00	POB	768257.5399	1722927.7379
8701	208+00.00	POE	768457.5399	1722927.7379

ALIGNMENT NAME: C.R. 143 NORTH

POINT	STATION	TYPE	NORTHING	EASTING
8800	209+00.00	POB	768842.2703	1722927.6685
8801	211+00.00	POE	769042.2681	1722926.7377

ALIGNMENT NAME: HWY. 62 TEMP. RAMP 2

POINT	STATION	TYPE	NORTHING	EASTING
8900	270+00.00	POB	759265.0812	1714018.7261
8901	271+86.81	PC	759451.8855	1714016.7970
8902	276+07.87	PT	759860.6860	1713928.6290
8903	276+09.66	POE	759862.3178	1713927.9111

ALIGNMENT NAME: HWY. 62 TEMP. RAMP 3

POINT	STATION	TYPE	NORTHING	EASTING
9000	300+00.00	POB	759255.7875	1713118.7741
9001	300+89.72	PC	759345.5001	1713117.8477
9002	305+88.35	PT	759826.4962	1713229.9634
9003	306+11.72	POE	759847.3480	1713240.5116

ALIGNMENT NAME: HWY. 62 TEMP.

POINT	STATION	TYPE	NORTHING	EASTING
9100	241+00.00	POB	759253.7222	1712918.7848
9101	256+00.00	POE	759269.2117	1714418.7048

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON

DIGITALLY SIGNED 6/28/2024

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	88	325
		SURVEY CONTROL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
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SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

N

100 50 0 100

Scale: 1" = 100'

ALL BEARINGS ARE GRID
BASED ON GPS
ALL DISTANCES ARE GROUND

9100 POB 241+00.00

300+00

9000 N00°35'30"W 89.72' 9001

N00°35'30"W 254.19'

PI 303+43.91

N26°50'00"E 254.19'

C.L. HWY. 62 TEMP. RAMP 3

305+00

C.L. HWY. 62 TEMP. RAMP 3
PI = 303+43.91
Δ = 27°25'30" RT.
D = 5°30'00"
T = 254.19'
L = 498.63'
PC = 300+89.72
PT = 305+88.35
e = 0.066'/'
Ls = 250'

C.L. HWY. 62 TEMP. RAMP 3 STA. 300+00.00 =
C.L. TEMP. HWY. 62 STA. 243+00.00
∢ 90°00'00"

PC 300+89.72

N89°24'30"E 1500.00'

245+00

C.L. TEMP. HWY. 62

N26°50'00"E 23.37'

C.L. HWY. 62 RAMP 3 STA. 2027+74.93 =
C.L. HWY. 62 TEMP. RAMP 3 STA. 306+11.72

9002 9003 8200

PT 305+88.35

C.L. HWY. 62 RAMP 3

N26°50'00"E 254.80'

2030+00

PC 2030+29.73

8201

C.L. HWY. 62 RAMP 3
PI = 2032+38.24
Δ = 20°37'30" LT.
D = 5°00'00"
T = 208.51'
L = 412.50'
PC = 2030+29.73
PT = 2034+42.23
e = 0.084'/'
Ls = 300'

PI 2032+38.24

PT 2034+42.23

N26°50'00"E 208.51'

N06°12'30"E 208.51'

8202 2035+00 N06°12'30"E 535.15'

STA. 2023+50.00
BEGIN JOB 101172
BEGIN GRADING

STA. 2033+00.00
BEGIN GRADING AND PAVING

C.L. I-57 STA. 2022+38.70 =
C.L. TEMP. HWY. 62 STA. 247+62.11
∢ 88°54'30"

2000+00 8000

2025+00

C.L. I-57

2030+00

N00°30'00"E 5237.68'

2035+00

POB 2000+00

250+00

N00°30'00"E 410.31'
2035+00

N23°45'00"W 410.31'

PI 2034+62.42

C.L. HWY. 62 RAMP 2
PI = 2034+62.42
Δ = 24°15'00" RT.
D = 3°00'00"
T = 410.31'
L = 808.34'
PC = 2030+52.11
PT = 2038+60.45
e = 0.058'/'
Ls = 300'

PC 2030+52.11

8101

2030+00

N23°45'00"W 255.07'

C.L. HWY. 62 RAMP 2

PT 276+07.87

8100 8902 8903

N23°45'00"W 1.79'

C.L. HWY. 62 RAMP 2 STA. 2027+97.04 =
C.L. HWY. 62 TEMP. RAMP 2 STA. 276+09.66

275+00

PI 274+00.26

PC 271+86.81

C.L. HWY. 62 TEMP. RAMP 2
PI = 274+00.26
Δ = 23°09'30" LT.
D = 5°30'00"
T = 213.45'
L = 421.06'
PC = 271+86.81
PT = 276+07.87
e = 0.066'/'
Ls = 250'

270+00 8900 N00°35'30"W 186.81' 8901 C.L. HWY. 62 TEMP. RAMP 2 N00°35'30"W 213.45' N23°45'00"W 213.45'

C.L. HWY. 62 TEMP. RAMP 2 STA. 270+00.00 =
C.L. TEMP. HWY. 62 STA. 252+00.00
∢ 90°00'00"

9101 POE 256+00.00

SURVEY CONTROL DETAILS

CGervasini 6/28/2024 1:32:11 PM
WORKSPACE: AHTD
L:\202\21T0046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_SC_02.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	89	325
		SURVEY CONTROL DETAILS				

N

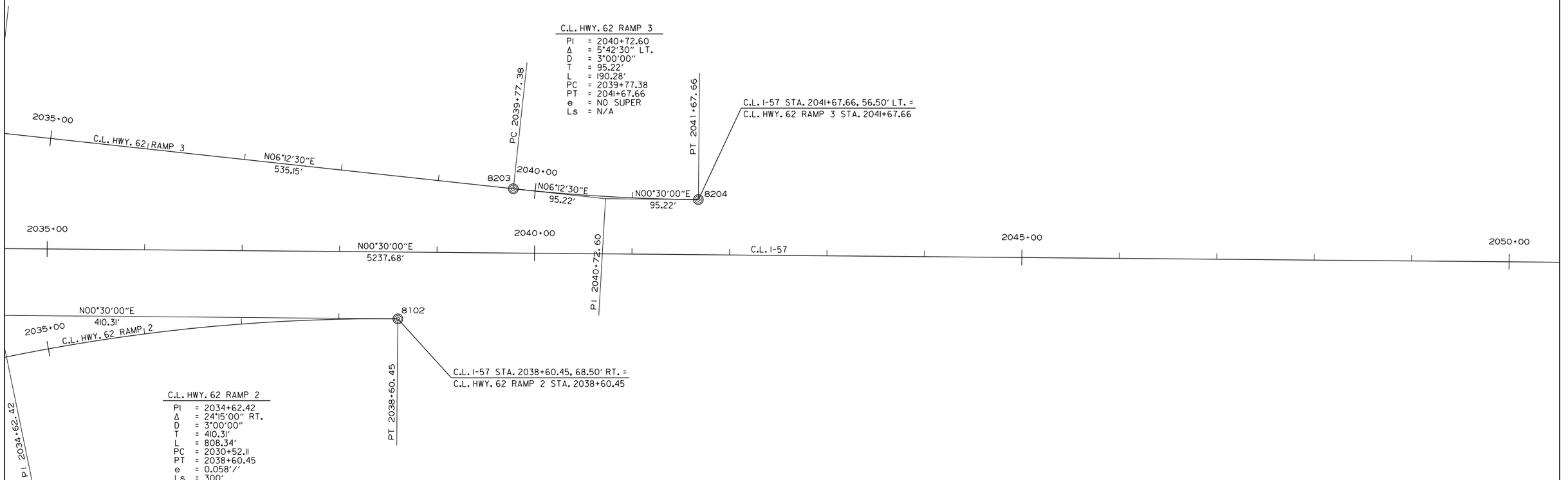
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ALL BEARINGS ARE GRID
BASED ON GPS
ALL DISTANCES ARE GROUND

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBBERSON

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	90	325
		SURVEY CONTROL DETAILS				

N

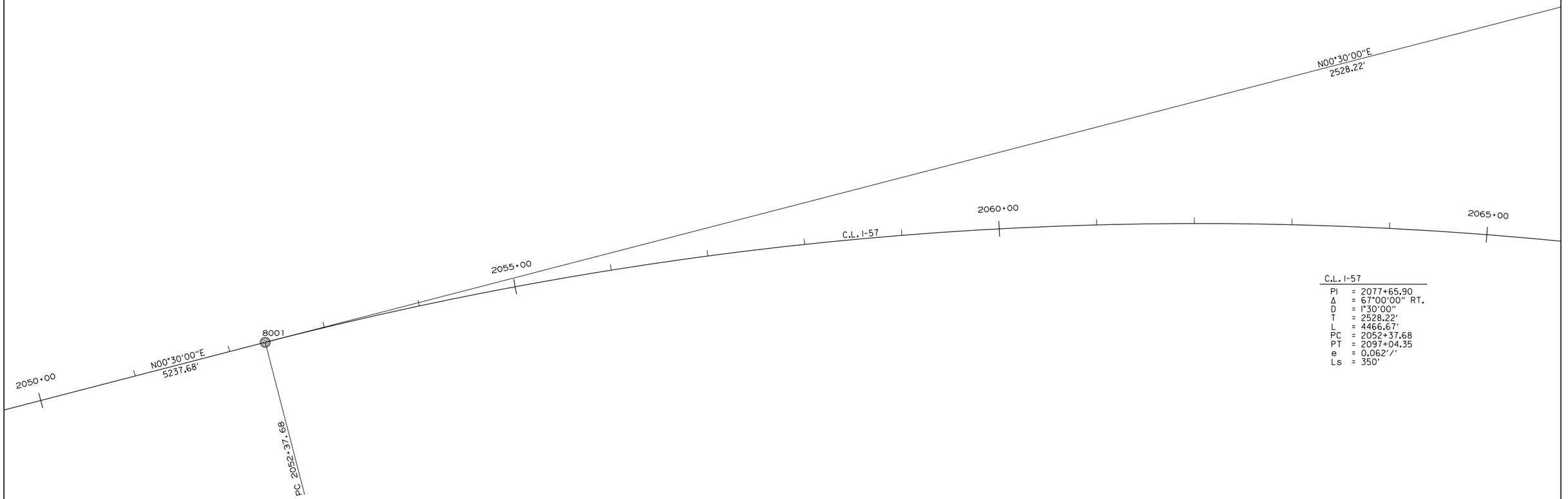
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Scale: 1" = 100'

ALL BEARINGS ARE GRID
BASED ON GPS
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STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
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C.L. I-57

PI	= 2077+65.90
Δ	= 67°00'00" RT.
D	= 1°30'00"
T	= 2528.22'
L	= 4466.67'
PC	= 2052+37.68
PT	= 2097+04.35
e	= 0.062'/'
Ls	= 350'

CGGervasini 6/28/2024 1:32:12 PM
WORKSPACE: AHTD
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REVISED DATE:

SURVEY CONTROL DETAILS

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	91	325
		SURVEY CONTROL DETAILS				

STATE OF ARKANSAS
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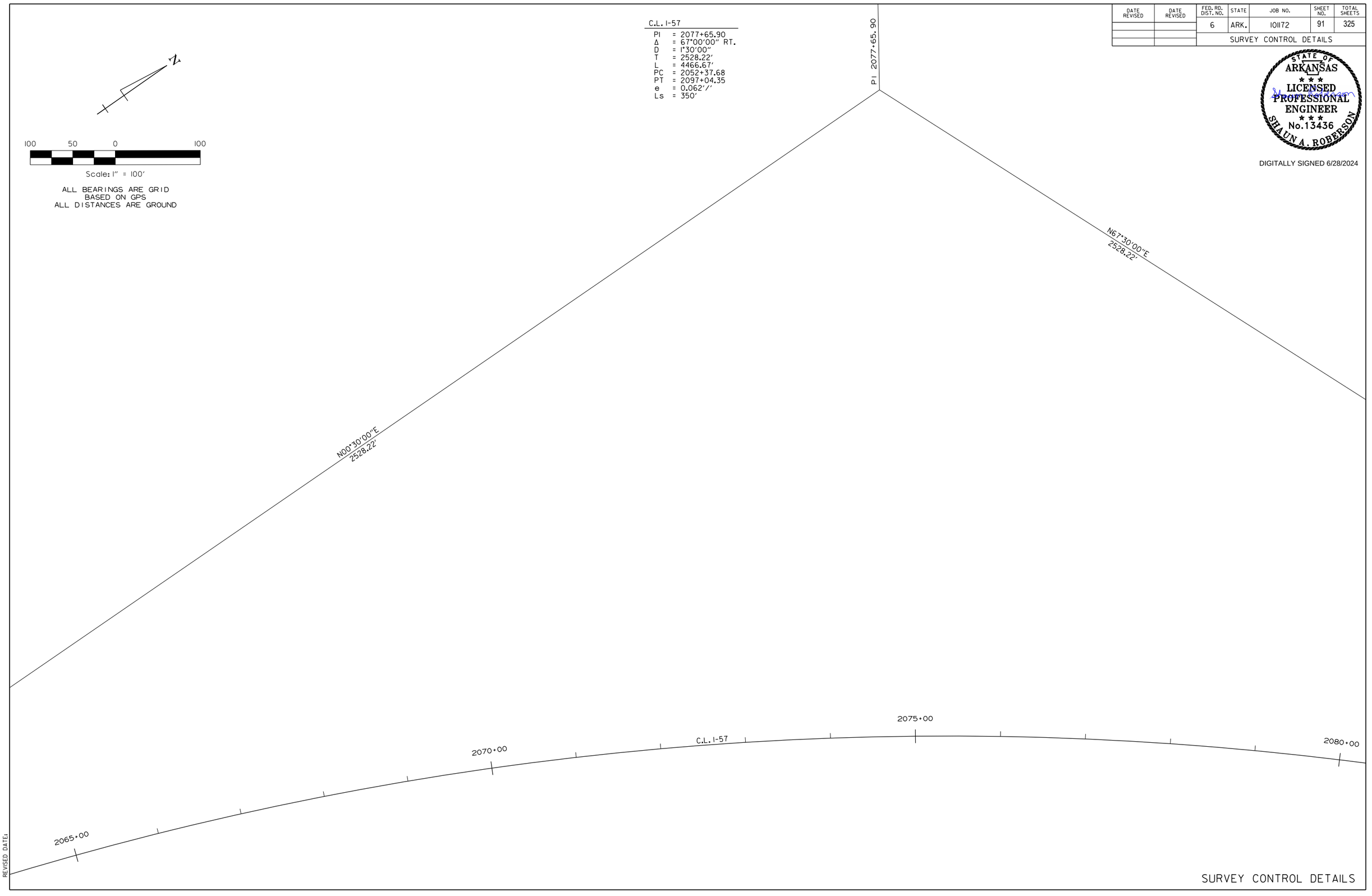
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Scale: 1" = 100'

ALL BEARINGS ARE GRID
BASED ON GPS
ALL DISTANCES ARE GROUND

C.L. I-57

PI	= 2077+65.90
Δ	= 67°00'00" RT.
D	= 1°30'00"
T	= 2528.22'
L	= 4466.67'
PC	= 2052+37.68
PT	= 2097+04.35
e	= 0.062'/'
Ls	= 350'



CGGervasini 6/28/2024 1:32:13 PM
WORKSPACE: AHTD
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REVISED DATE:

SURVEY CONTROL DETAILS

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	92	325
		SURVEY CONTROL DETAILS				

STATE OF ARKANSAS
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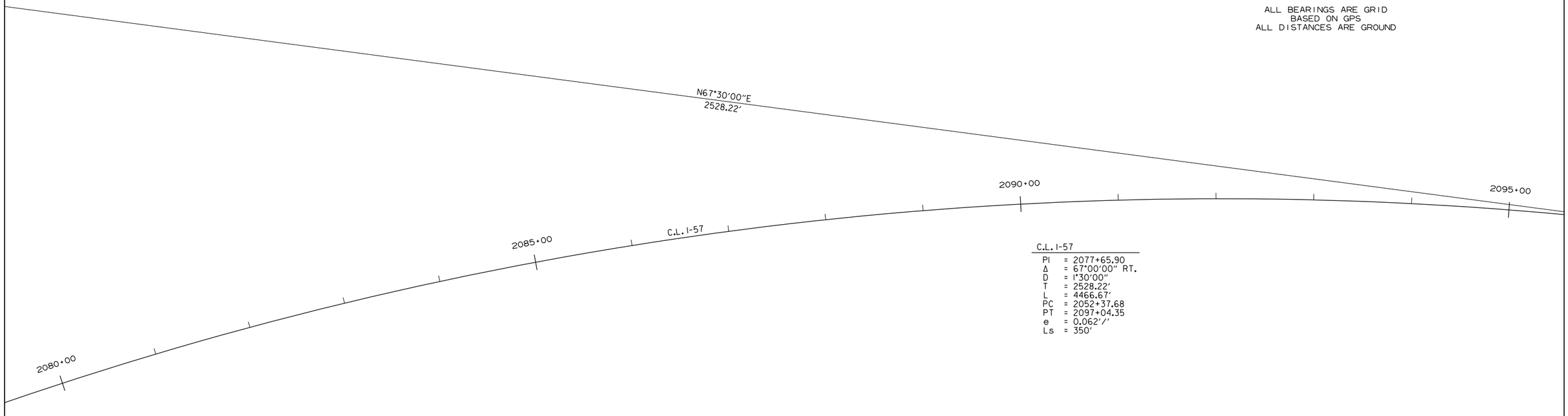
DIGITALLY SIGNED 6/28/2024



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Scale: 1" = 100'

ALL BEARINGS ARE GRID
BASED ON GPS
ALL DISTANCES ARE GROUND



C.L. I-57

PI	= 2077+65.90
Δ	= 67°00'00" RT.
D	= 1°30'00"
T	= 2528.22'
L	= 4466.67'
PC	= 2052+37.68
PT	= 2097+04.35
e	= 0.062'/'
Ls	= 350'

SURVEY CONTROL DETAILS

CGarvasini 6/28/2024 1:32:13 PM
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	93	325
		SURVEY CONTROL DETAILS				

100 50 0 100

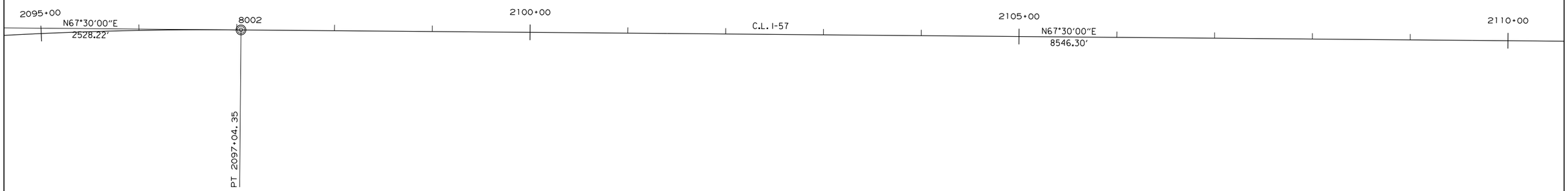
Scale: 1" = 100'

ALL BEARINGS ARE GRID
BASED ON GPS
ALL DISTANCES ARE GROUND

N

STATE OF ARKANSAS
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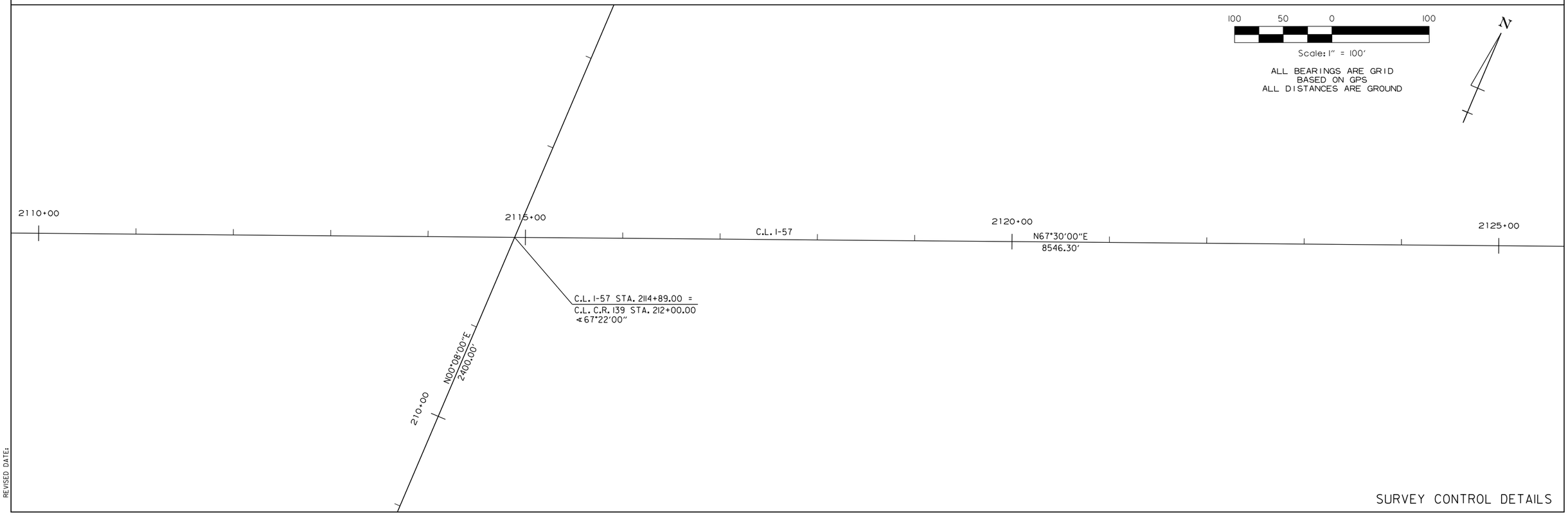


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Scale: 1" = 100'

ALL BEARINGS ARE GRID
BASED ON GPS
ALL DISTANCES ARE GROUND

N



SURVEY CONTROL DETAILS

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
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		SURVEY CONTROL DETAILS				

100 50 0 100

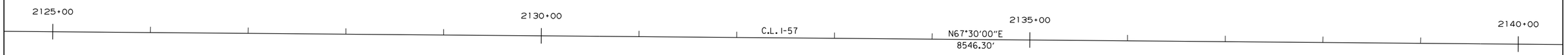
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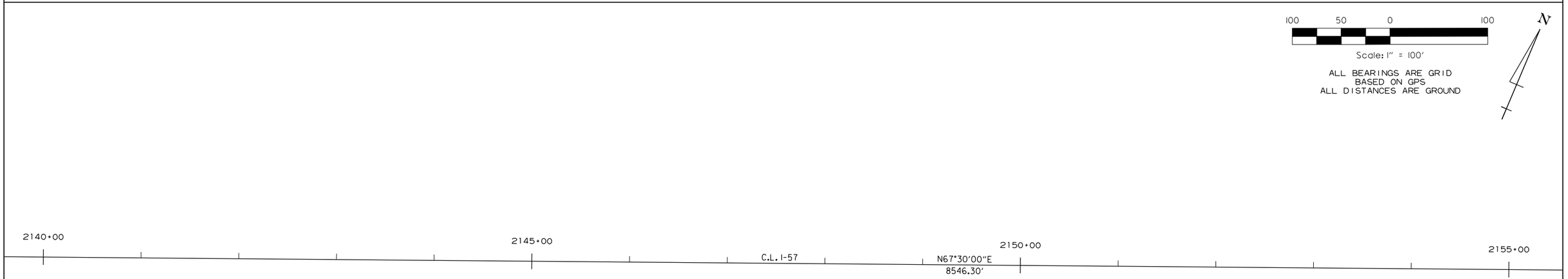
ALL BEARINGS ARE GRID
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N

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100 50 0 100

Scale: 1" = 100'

ALL BEARINGS ARE GRID
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ALL DISTANCES ARE GROUND

N

GPS PN: 106
PD: ARDOT GPS • 110019

SURVEY CONTROL DETAILS

CGGervasini 6/28/2024 1:32:13 PM
WORKSPACE: AHTD
L:\2021\21T0046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_SC_08.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	95	325
		SURVEY CONTROL DETAILS				

100 50 0 100

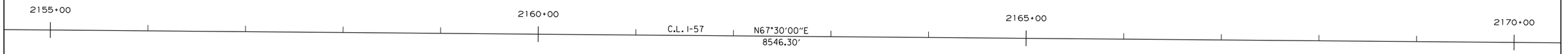
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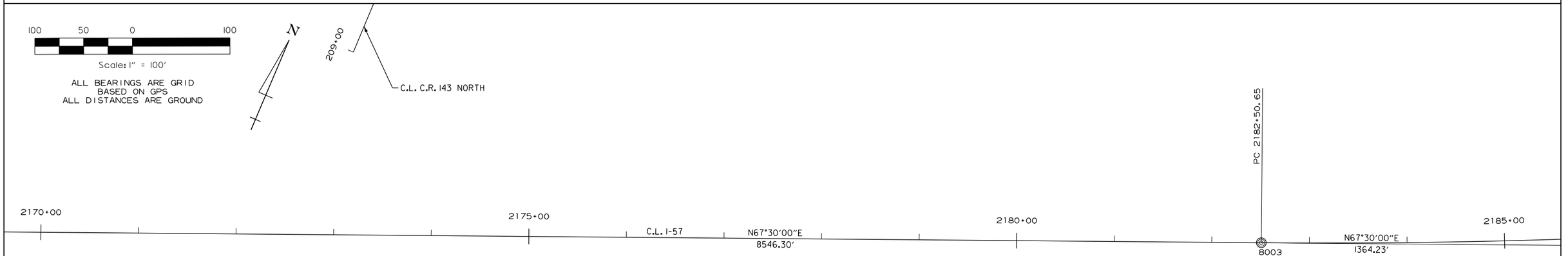
ALL BEARINGS ARE GRID
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CGGervasini 6/28/2024 1:32:14 PM
WORKSPACE: AHTD
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REVISED DATE:

SURVEY CONTROL DETAILS

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	96	325
		SURVEY CONTROL DETAILS				

STATE OF ARKANSAS
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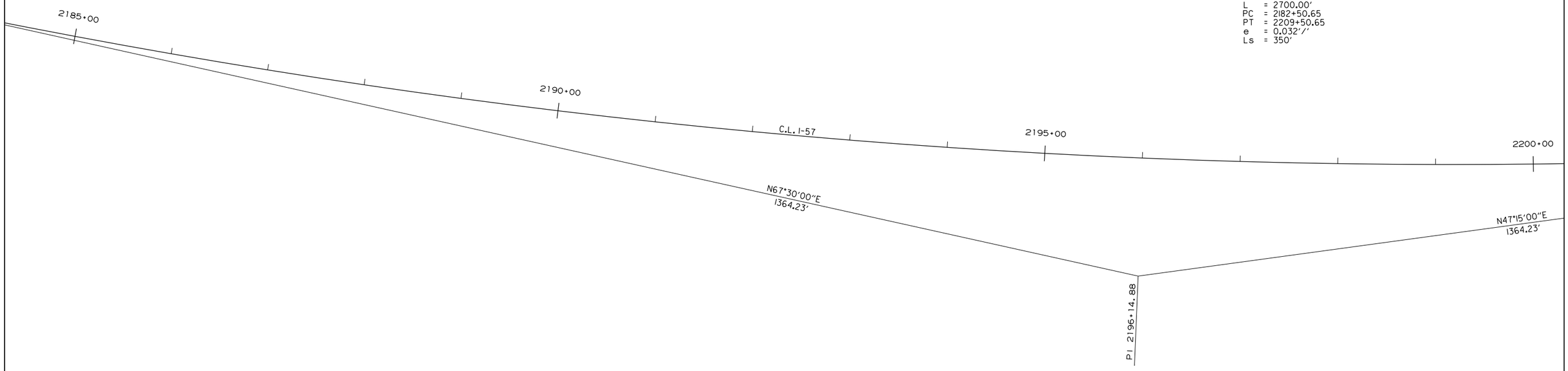
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100 50 0 100

Scale: 1" = 100'

ALL BEARINGS ARE GRID
BASED ON GPS
ALL DISTANCES ARE GROUND

C.L. I-57
PI = 2196+14.88
Δ = 20°15'00" LT.
D = 0°45'00"
T = 1364.23'
L = 2700.00'
PC = 2182+50.65
PT = 2209+50.65
e = 0.032'/'
Ls = 350'



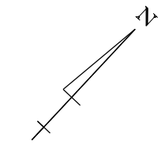
SURVEY CONTROL DETAILS

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	97	325
		SURVEY CONTROL DETAILS				

STATE OF ARKANSAS
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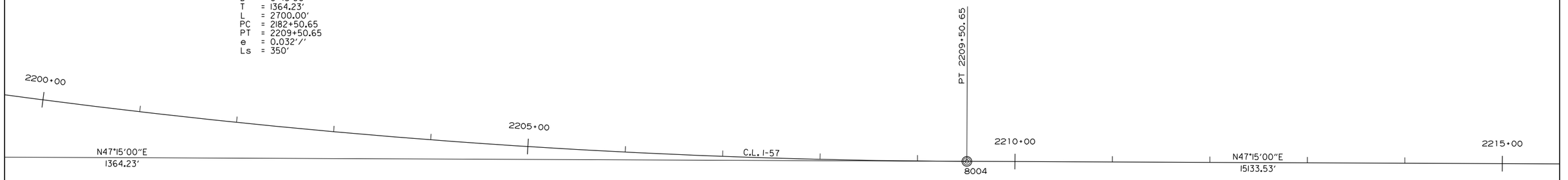


Scale: 1" = 100'

ALL BEARINGS ARE GRID
BASED ON GPS
ALL DISTANCES ARE GROUND

C.L. I-57

PI	= 2196+14.88
Δ	= 20°15'00" LT.
D	= 0°45'00"
T	= 1364.23'
L	= 2700.00'
PC	= 2182+50.65
PT	= 2209+50.65
e	= 0.032'/'
Ls	= 350'

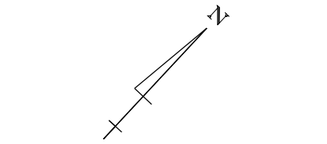


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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	98	325
		SURVEY CONTROL DETAILS				

STATE OF ARKANSAS
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100 50 0 100

Scale: 1" = 100'

ALL BEARINGS ARE GRID
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ALL DISTANCES ARE GROUND

C.L. I-57 STA. 2219+18.74, 68.50' LT. =
C.L. HWY. 67 RAMP 4 STA. 2219+18.74

PC 2219+18.74

C.L. HWY. 67 RAMP 4
PI = 2223+84.60
Δ = 27°25'00" LT.
D = 3°00'00"
T = 465.86'
L = 913.88'
PC = 2219+18.74
PT = 2228+32.62
e = 0.058'/'
Ls = 300'

PI 2223+84.60

PT 2228+32.62

8400

2220+00

N47°15'00"E
465.86'

2225+00

C.L. HWY. 67 RAMP 4

N19°50'00"E
465.86'

8401

2230+00

N19°50'00"E
679.93'

2215+00

2220+00

2225+00

2230+00

N47°15'00"E
1513.53'

C.L. I-57

STA. 2225+00.00
END PAVING

8300

N47°15'00"E
95.21'

N52°57'30"E
95.21'

8301

2220+00

PC 2216+26.02

PI 2217+21.23

PT 2218+16.29

C.L. I-57 STA. 2216+26.02, 56.50' RT. =
C.L. HWY. 67 RAMP 1 STA. 2216+26.02

C.L. HWY. 67 RAMP 1
PI = 2217+21.23
Δ = 5°42'30" RT.
D = 3°00'00"
T = 95.21'
L = 190.27'
PC = 2216+26.02
PT = 2218+16.29
e = NO SUPER
Ls = N/A

C.L. HWY. 67 RAMP 1

2225+00

N52°57'30"E
1081.21'

8302

2230+00

N52°57'30"E
191.17'

PC 2228+97.50

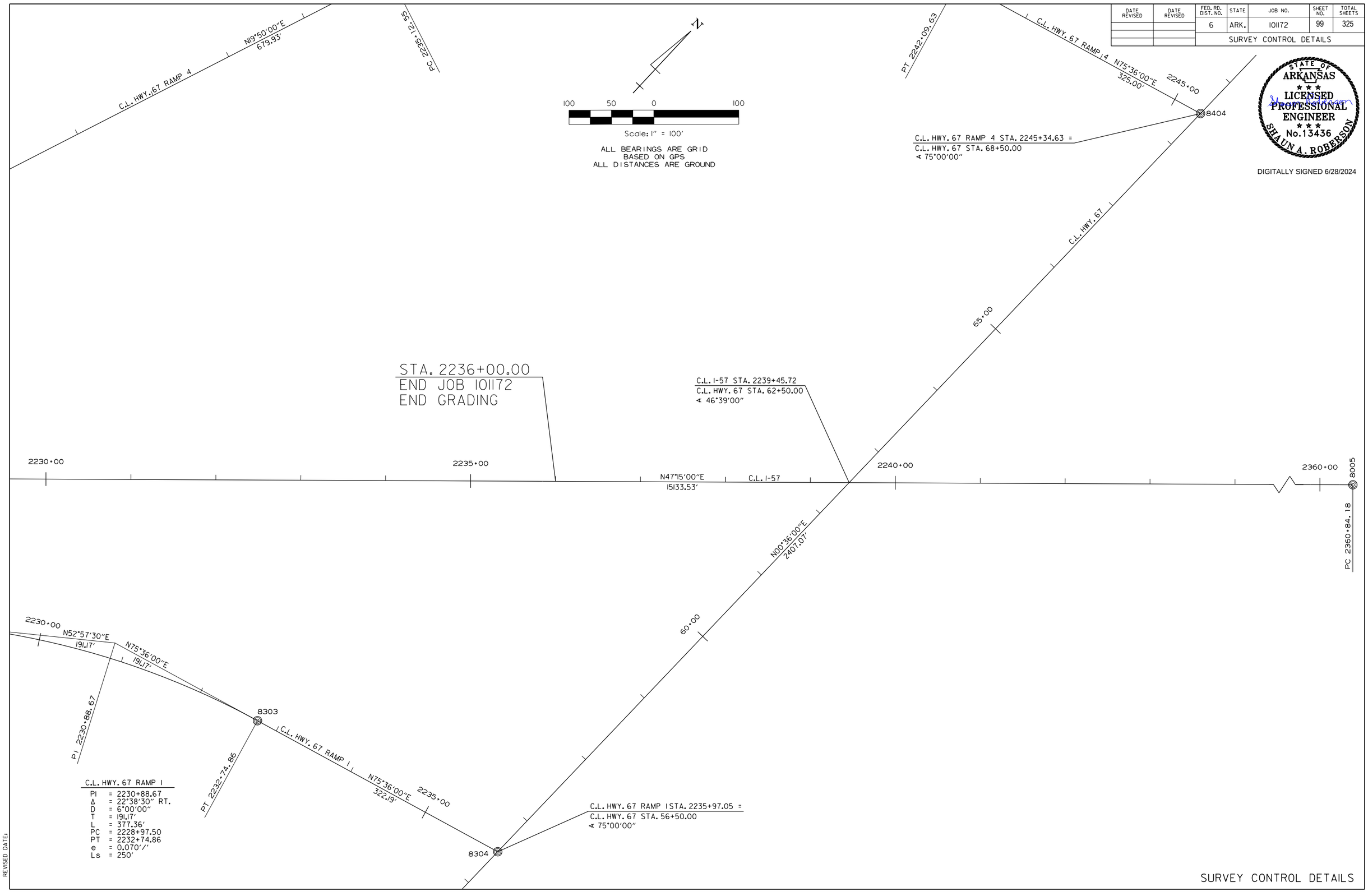
C.L. HWY. 67 RAMP 1
PI = 2230+88.67
Δ = 22°38'30" RT.
D = 6°00'00"
T = 191.17'
L = 377.36'
PC = 2228+97.50
PT = 2232+74.86
e = 0.070'/'
Ls = 250'

PI 2230+88.67

SURVEY CONTROL DETAILS

CGGervasini 6/28/2024 1:32:15 PM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	99	325
		SURVEY CONTROL DETAILS				



STATE OF ARKANSAS
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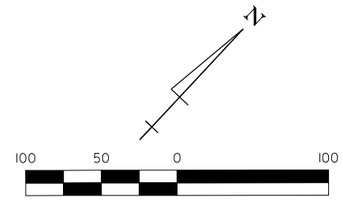
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REVISED DATE:

SURVEY CONTROL DETAILS

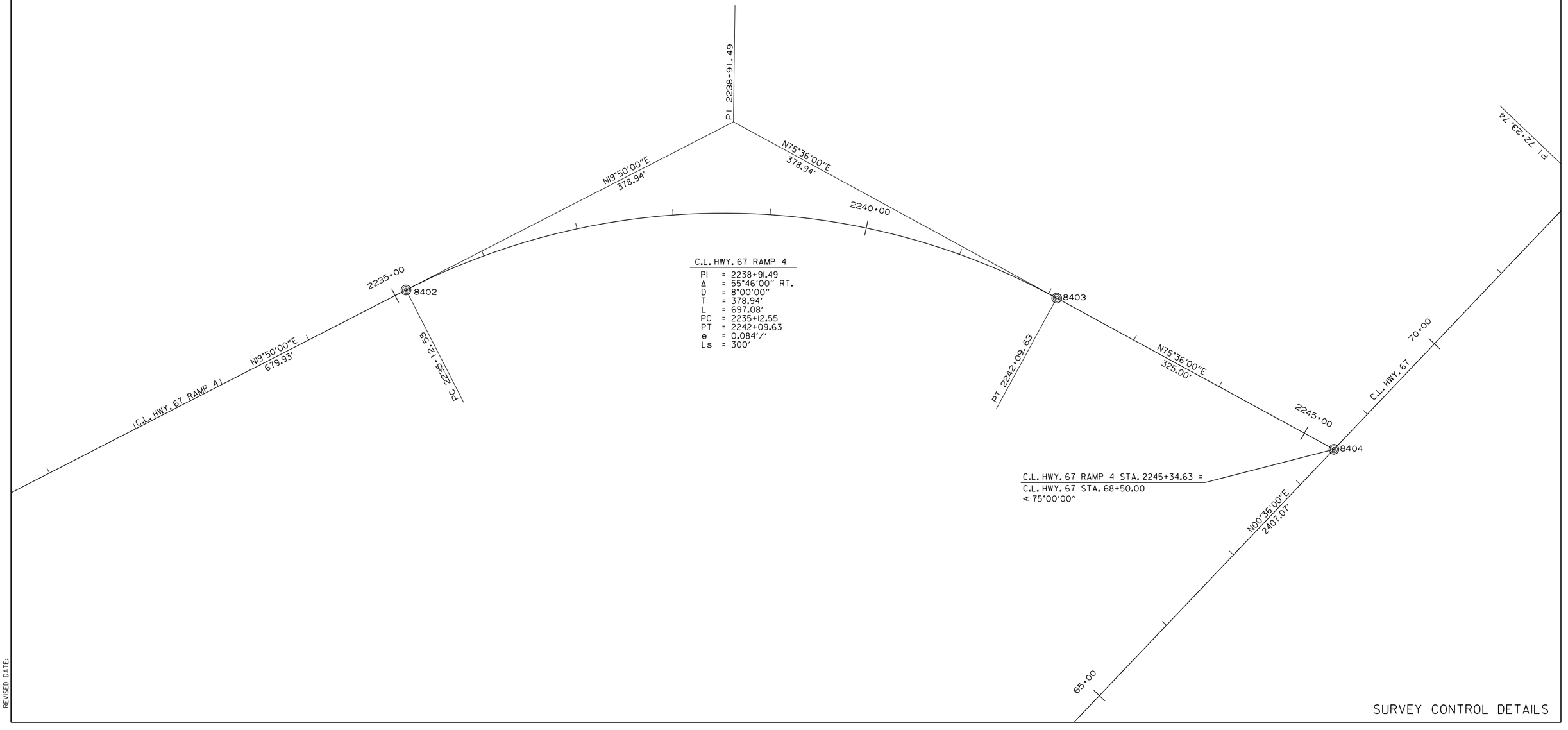
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	100	325
		SURVEY CONTROL DETAILS				

STATE OF ARKANSAS
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ALL BEARINGS ARE GRID
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C.L. HWY. 67 RAMP 4

PI	= 2238+91.49
Δ	= 55°46'00" RT.
D	= 8°00'00"
T	= 378.94'
L	= 697.08'
PC	= 2235+12.55
PT	= 2242+09.63
e	= 0.084'/'
Ls	= 300'

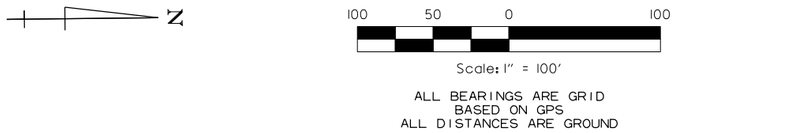
SURVEY CONTROL DETAILS

CGGervasini 6/28/2024 1:32:15 PM
WORKSPACE: AHTD
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REVISED DATE:

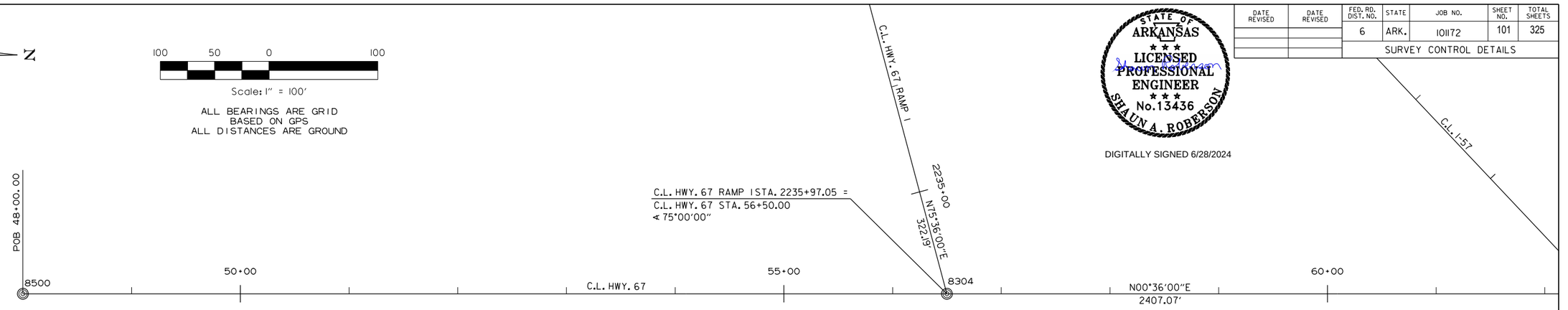
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	101	325
		SURVEY CONTROL DETAILS				

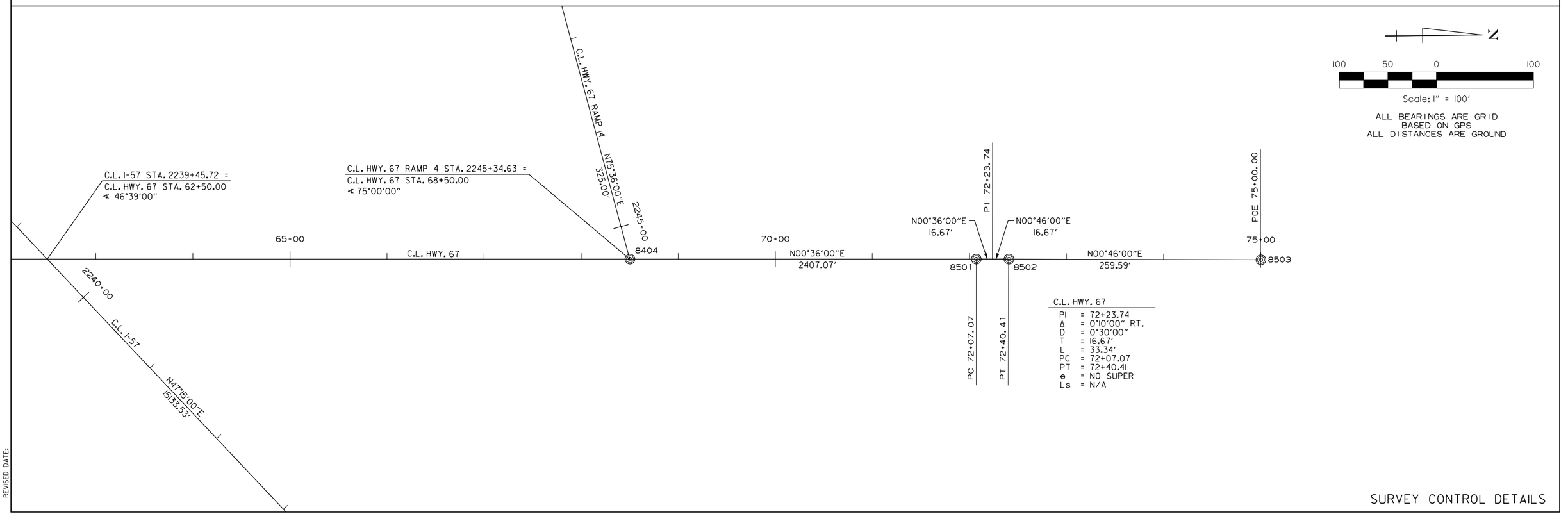
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
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SHAUN A. ROBERSON

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ALL BEARINGS ARE GRID
BASED ON GPS
ALL DISTANCES ARE GROUND





N
100 50 0 100
Scale: 1" = 100'

ALL BEARINGS ARE GRID
BASED ON GPS
ALL DISTANCES ARE GROUND

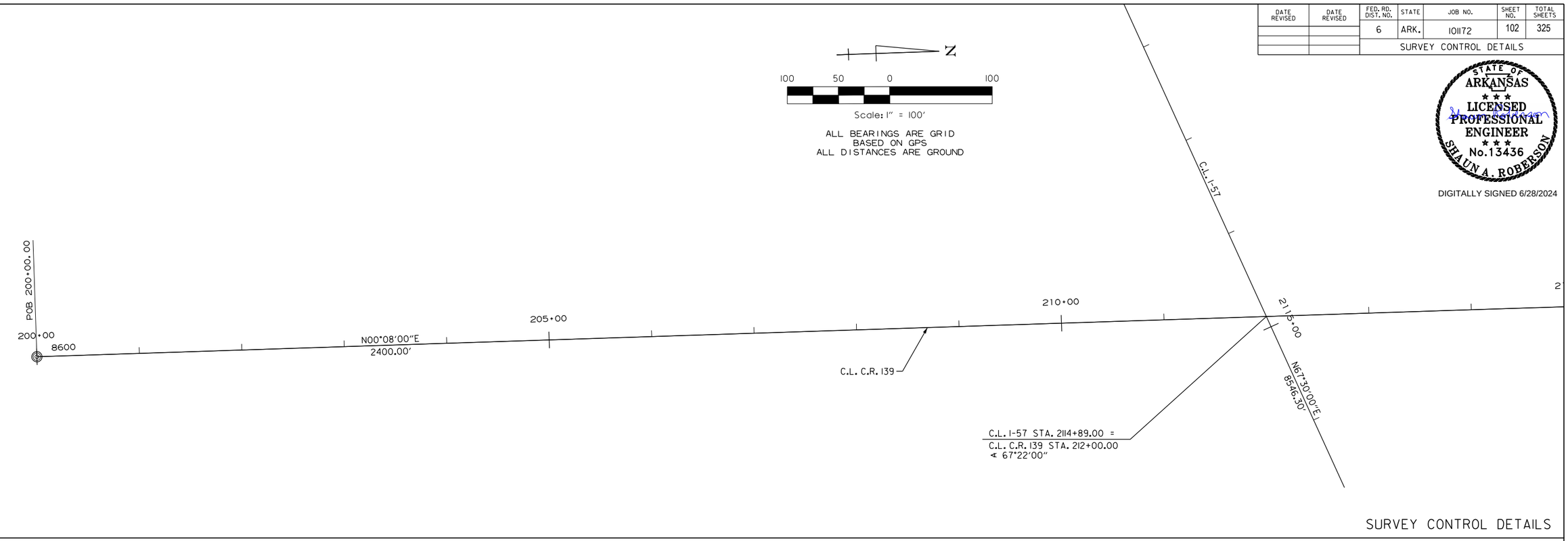
C.L. HWY. 67

PI	= 72+23.74
Δ	= 0°10'00" RT.
D	= 0°30'00"
T	= 16.67'
L	= 33.34'
PC	= 72+07.07
PT	= 72+40.41
e	= NO SUPER
Ls	= N/A

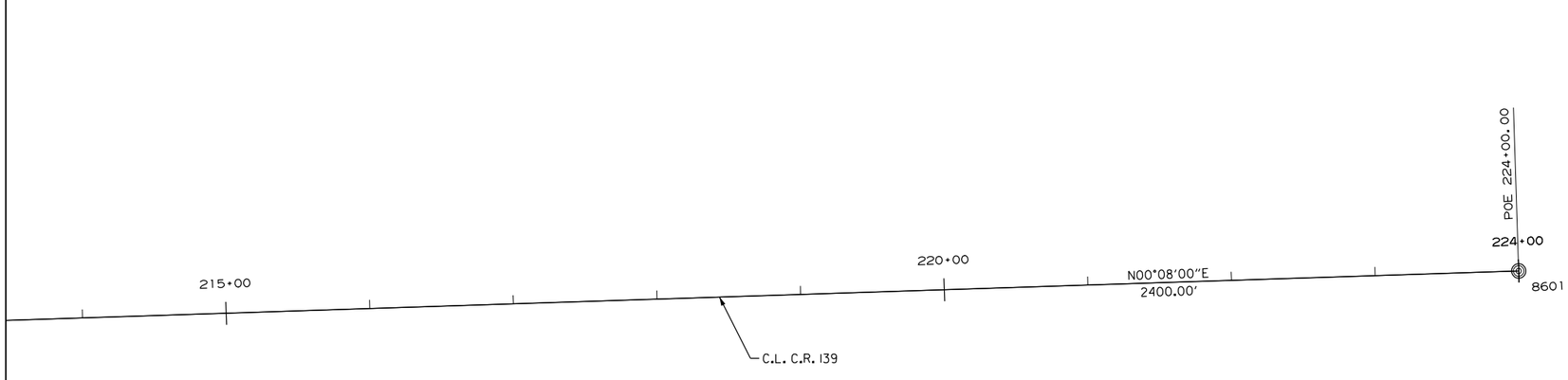
SURVEY CONTROL DETAILS

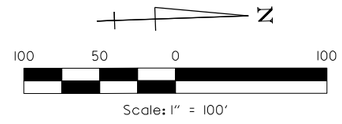
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	102	325
		SURVEY CONTROL DETAILS				



SURVEY CONTROL DETAILS

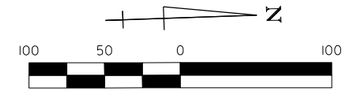




SURVEY CONTROL DETAILS

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	103	325
		SURVEY CONTROL DETAILS				

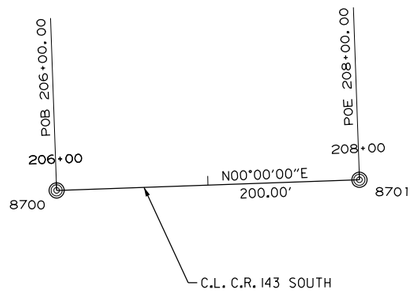


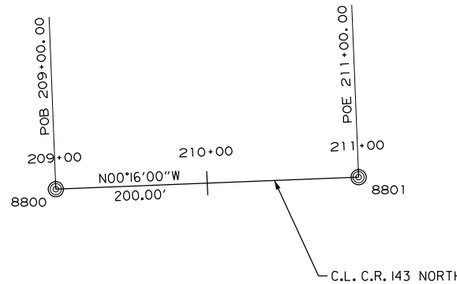
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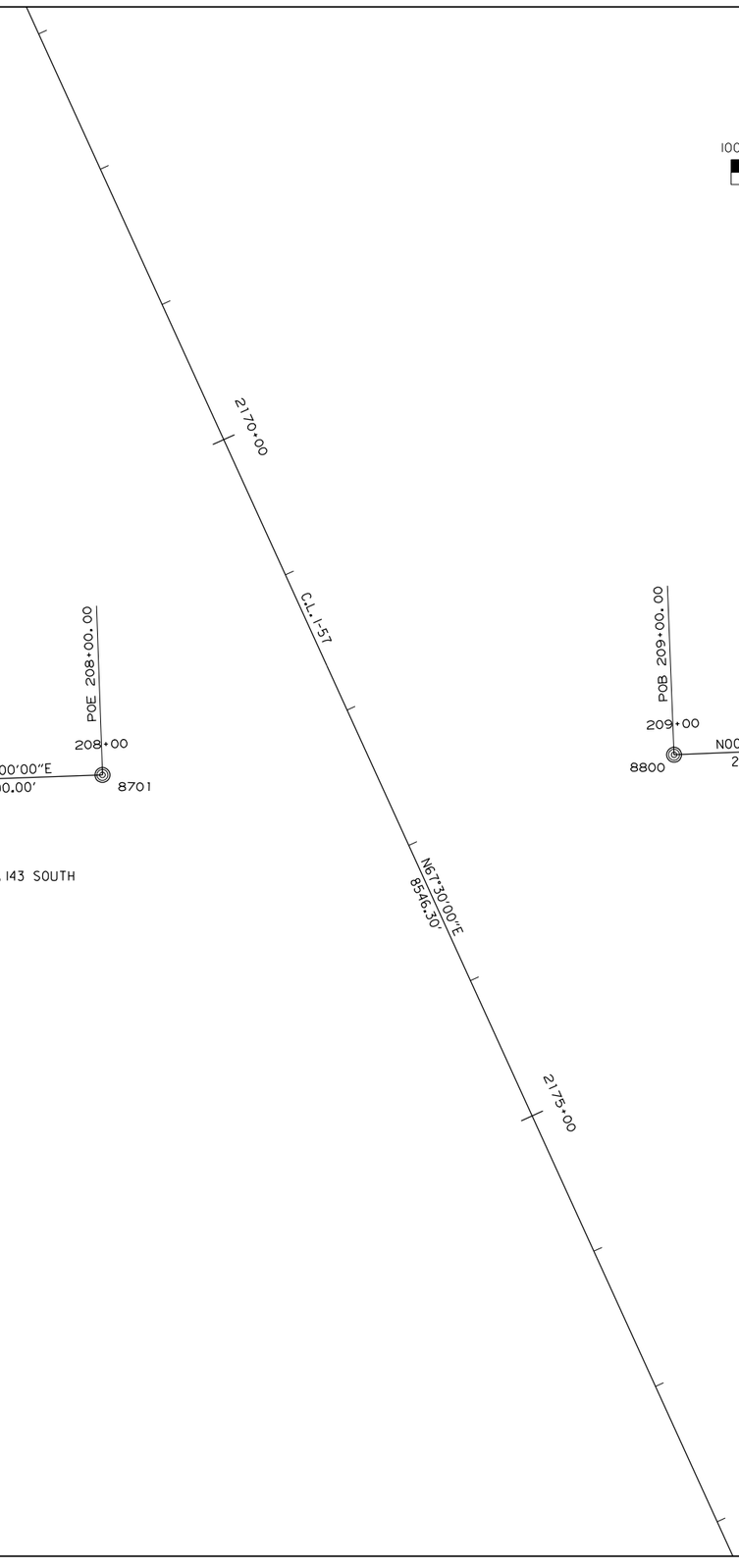
ALL BEARINGS ARE GRID
BASED ON GPS
ALL DISTANCES ARE GROUND

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON

DIGITALLY SIGNED 6/28/2024







SURVEY CONTROL DETAILS

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	104	325
		PLAN AND PROFILE - I-57				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

N

STA. 2024+00 CONSTRUCT MEDIAN DROP INLET H=3'-0" WITH 24" x 106' PIPE OUTLET TO FES RT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 106 LIN. FT.
24" FES = 1 EACH

245+00

STA. 2023+50.00
BEGIN JOB 101172
BEGIN GRADING

CONSTRUCTION LIMITS

C.L. I-57 STA. 2022+38.70 =
C.L. TEMP. HWY. 62 STA. 247+62.11
∢88°54'30"

10'
24'
6'
80'
6'
24'
10'

2025+00

2010+00 — N00°30'00"E — 2015+00 — C.L. I-57 (FUTURE) — 2020+00 — C.L. I-57

C.L. TEMP. HWY. 62

CONSTRUCTION LIMITS

I-57

REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS

STA. 2023+50.00
BEGIN JOB 101172
BEGIN GRADING
ELEV. 295.21

PROFILE GRADE (FUTURE)

PVC 2019+50.00
ELEV. 295.45

VC=1000.00'
K=1666.67
e=-0.75'

PVT 2012+00.00
ELEV. 297.70

-0.30%

EXISTING GROUND

VC=500.00'
K=833.33
e=0.38'

PVI 2022+00.00
ELEV. 294.70

0.30%

PROFILE GRADE

3:1

I-57 2024+00
TOP ELEV.=290.90

PVT 2024+50.00
ELEV. 295.45

0.50% LT. DITCH GRADE
0.60% RT. DITCH GRADE

F.L. ELEV.=287.90
F.L. ELEV.=283.44 RT.

+90.00 LT. 284.55
+00.00 RT. 282.84

330 320 310 300 290 280 270 260 250 240

2010+00 2011+00 2012+00 2013+00 2014+00 2015+00 2016+00 2017+00 2018+00 2019+00 2020+00 2021+00 2022+00 2023+00 2024+00 2025+00

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	105	325
		PLAN AND PROFILE - I-57				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

N

FENCING

STA.	STA.	LOCATION	WIRE FENCE (TYPE A)
2022+83	2040+00	LT.	2020 LIN. FT.
2023+57	2040+00	RT.	1906 LIN. FT.

PT 2030+88.35
PC 2030+00
C.L. HWY 62 RAMP 3
+66.27 275'
PI 2032+38.24
+95 235'
+35 210'
PT 2034+42.23
4' 16.6'
PROP. R/W, C/A & FENCE
CONSTRUCTION LIMITS
PC 2039+77.38
2040+00
NOSE +12.79 7.50' RT.
NOSE +13.67 84.82' LT.
NOSE +98.67 67.84' RT.
STA. 2033+00.00
BEGIN GRADING AND PAVING
CONSTRUCTION LIMITS
10' 24' 6' 80' 6' 24' 10'
2025+00
2030+00
C.L. I-57
N00°30'00"E
2035+00
2040+00
80'
6' 36' 6'
C.L. HWY 62 RAMP 2
2035+00
4' 16.6'
NOSE +99.11 150' LT.
CONSTRUCTION LIMITS
PROP. R/W, C/A & FENCE
PT 2038+60.45
+70 145'
C.L. I-57 STA. 2038+60.45, 68.50' RT. =
C.L. HWY. 62 RAMP 2 STA. 2038+60.45
+05 165'
I-57
800' ACCELERATION LANE
CONSTRUCTION LIMITS

STA. 2029+00 CONSTRUCT
MEDIAN DROP INLET H=3'-0"
WITH 24" x 102' PIPE OUTLET
TO FES RT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 102 LIN. FT.
24" FES = 1 EACH

REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS

STA. 2033+00.00
BEGIN GRADING AND PAVING

PVI 2036+00.00
ELEV. 298.90
PROFILE GRADE
0.30%
-0.30%
I-57 2029+00
TOP ELEV.=292.38
VC=1000.00'
K=1666.67
e=-0.75'
-0.20% RT. DITCH GRADE
(5' FLAT BOTTOM DITCH)
-0.10% LT. DITCH GRADE
(10' FLAT BOTTOM DITCH)
0.50% LT. DITCH GRADE
0.60% RT. DITCH GRADE
F.L. ELEV.=289.38
F.L. ELEV.=286.44 RT.
PVC 2031+00.00
ELEV. 297.40
+40.50 LT. 289.30
+60.00 RT. 288.60
EXISTING GROUND
+98.67 RT. 289.00
+19.50 LT. 288.38

330 320 310 300 290 280 270 260 250 240

2025+00 2026+00 2027+00 2028+00 2029+00 2030+00 2031+00 2032+00 2033+00 2034+00 2035+00 2036+00 2037+00 2038+00 2039+00 2040+00

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WORKSPACE: AHTD
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REVISED DATE:

FENCING			
STA.	STA.	LOCATION	WIRE FENCE (TYPE A)
2040+00	2055+00	LT.	1512 LIN. FT.
2040+00	2055+00	RT.	1491 LIN. FT.

STA. 2046+00 CONSTRUCT
DBL. 6' x 3' x 208' R.C. BOX CULVERT
WITH 31 WINGS LT. AND RT.
Q50 = 198 CFS DA = 205.9 ACRES

STA. 2046+02 CONSTRUCT
MEDIAN DROP INLET H=1'-8"
ABOVE R.C. BOX CULVERT
TYPE TM DROP INLET = 3'X2'

STA. 2054+00 CONSTRUCT
MEDIAN DROP INLET 4' LT. H=3'-0"
WITH 24" x 107' PIPE OUTLET
TO FES RT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 107 LIN. FT.
24" FES = 1 EACH

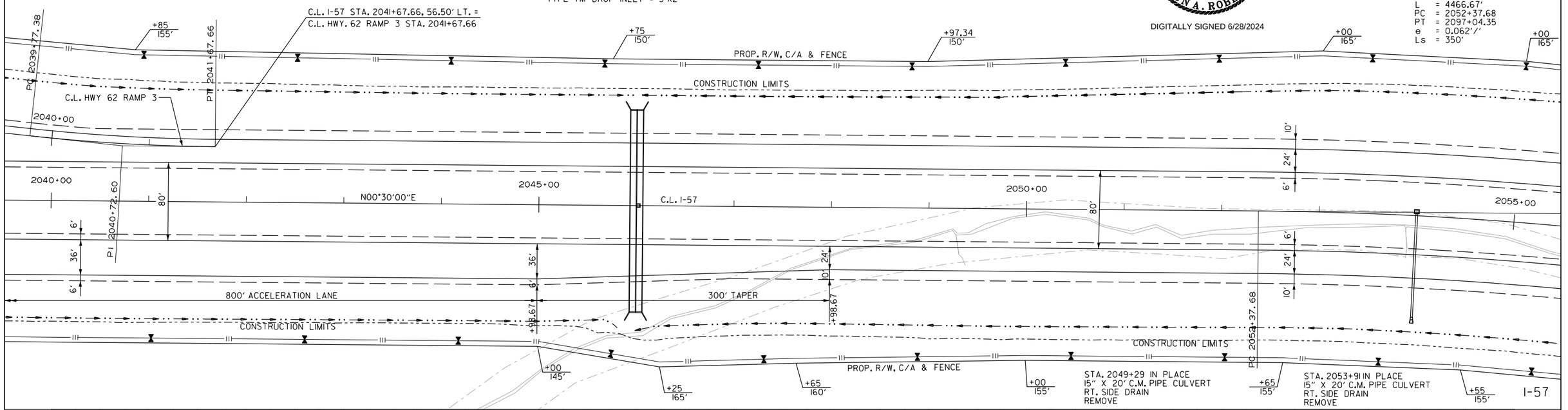
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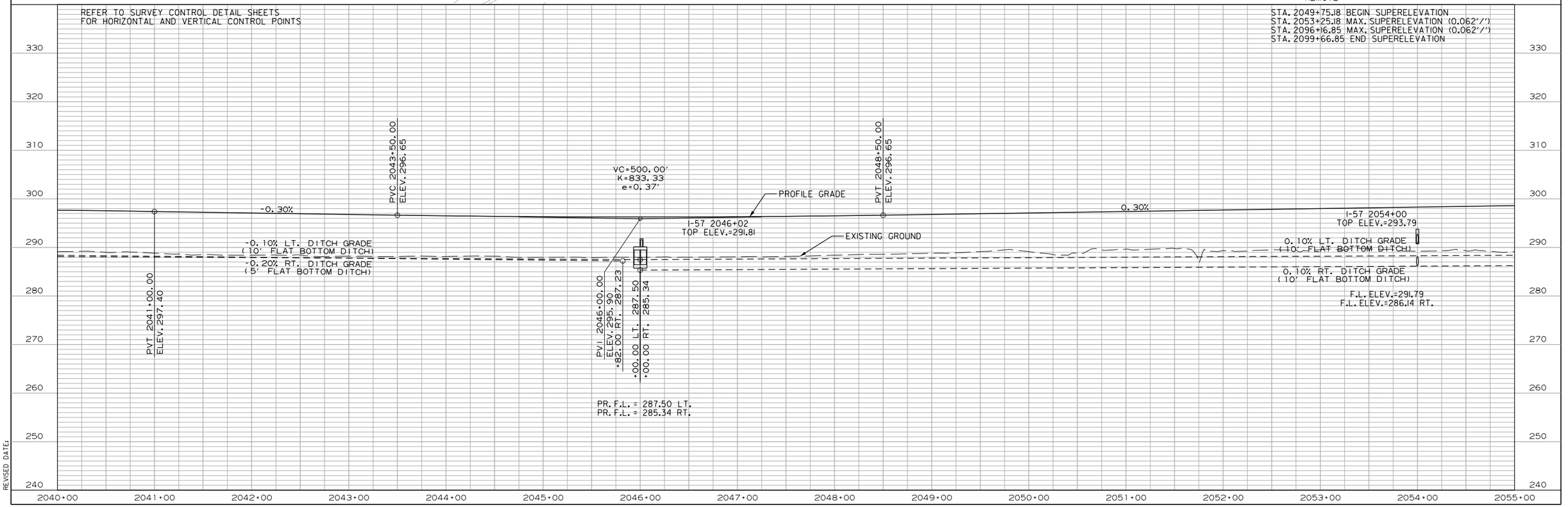
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON

DIGITALLY SIGNED 6/28/2024

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	106	325
		PLAN AND PROFILE - I-57				

C.L. I-57
PI = 2077+65.90
Δ = 67°00'00" RT.
D = 1°30'00"
T = 2528.22'
L = 4466.67'
PC = 2052+37.68
PT = 2097+04.35
e = 0.062'/'
Ls = 350'





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WORKSPACE: AHTD
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REVISED DATE:

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	107	325
		PLAN AND PROFILE - I-57				

C.L. I-57
PI = 2077+65.90
Δ = 67°00'00" RT.
D = 1°30'00"
T = 2528.22'
L = 4466.67'
PC = 2052+37.68
PT = 2097+04.35
e = 0.062'/'
Ls = 350'

N00°30'00"E

FENCING

STA.	STA.	LOCATION	WIRE FENCE (TYPE A)
2055+00	2070+00	LT.	1567 LIN. FT.
2055+00	2070+00	RT.	1442 LIN. FT.

+00 165'
+90 165'
+05 170'
+05 170'
+40.36 170'
+00 175'
+85 175'
+05 175'
PROP. R/W, C/A & FENCE
CONSTRUCTION LIMITS
10' 24' 6' 80' 6' 24' 10'
2055+00
2060+00
2065+00
2070+00
C.L. I-57
+55 155'
+55 155'
+60 155'
+50 160'
+45 145'
+70 140'
+70 145'
+70 145'
I-57

STA. 2057+41 IN PLACE
15" X 19' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 2060+51 IN PLACE
12" X 18' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 2062+00 CONSTRUCT
MEDIAN DROP INLET 4' LT.
H=3'-0" WITH 24" x 111'
PIPE OUTLET TO FES RT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 111 LIN. FT.
24" FES = 1 EACH

REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS

STA. 2049+75.18 BEGIN SUPERELEVATION
STA. 2053+25.18 MAX. SUPERELEVATION (0.062'/')
STA. 2096+16.85 MAX. SUPERELEVATION (0.062'/')
STA. 2099+66.85 END SUPERELEVATION

330 320 310 300 290 280 270 260 250 240

0.30%
PROFILE GRADE
PVI 2069+00.00
ELEV. 302.80
-0.30%
VC=1000.00'
K=1666.67
e=-0.75'
I-57 2062+00
TOP ELEV.=296.19
EXISTING GROUND
0.10% LT. DITCH GRADE
(10' FLAT BOTTOM DITCH)
0.10% RT. DITCH GRADE
(10' FLAT BOTTOM DITCH)
F.L. ELEV.=293.19
F.L. ELEV.=286.94 RT.
+40.00 RT. 286.98
+40.00 RT. 287.93
PVC 2064+00.00
ELEV. 301.30
0.10% LT. DITCH GRADE
(10' FLAT BOTTOM DITCH)
0.10% RT. DITCH GRADE
(5' FLAT BOTTOM DITCH)
0.95% RT. DITCH GRADE
(5' FLAT BOTTOM DITCH)

2055+00 2056+00 2057+00 2058+00 2059+00 2060+00 2061+00 2062+00 2063+00 2064+00 2065+00 2066+00 2067+00 2068+00 2069+00 2070+00

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	108	325
		PLAN AND PROFILE - I-57				

C.L. I-57

PI	= 2077+65.90
Δ	= 67°00'00" RT.
D	= 1°30'00"
T	= 2528.22'
L	= 4466.67'
PC	= 2052+37.68
PT	= 2097+04.35
e	= 0.062'/'
Ls	= 350'

FENCING

STA.	STA.	LOCATION	WIRE FENCE (TYPE A)
2070+00	2085+00	LT.	1566 LIN. FT.
2070+00	2085+00	RT.	1446 LIN. FT.

N67°30'00"E

STA. 2083+00 CONSTRUCT
MEDIAN DROP INLET 3' LT.
H=3'-0" WITH 24" x 99'
PIPE OUTLET TO FES LT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 99' LIN. FT.
24" FES = 1 EACH

STATE OF ARKANSAS
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+00 175' | +10 175' | +00 170' | +10 165' | +90 165' | +00 160' | +50 160'

PROP. R/W, C/A & FENCE

CONSTRUCTION LIMITS

10' 24' 6' 80'

2070+00 | 2075+00 | C.L. I-57 | 2080+00 | 2085+00

+70 145' | +60 140' | +75 140' | +75 140' | +90 135' | +35 135' | +60 130' | +89.45 135'

STA. 2076+00 CONSTRUCT
MEDIAN DROP INLET 4' LT. H=3'-0"
WITH 24" x 106' PIPE OUTLET
TO FES LT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 106 LIN. FT.
24" FES = 1 EACH

I-57

REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS

STA. 2049+75.18 BEGIN SUPERELEVATION
STA. 2053+25.18 MAX. SUPERELEVATION (0.062'/')
STA. 2096+16.85 MAX. SUPERELEVATION (0.062'/')
STA. 2099+66.85 END SUPERELEVATION

PROFILE GRADE

VC=1000.00'
K=1666.67
e=-0.75'

-0.30%

0.30%

VC=500.00'
K=833.33
e=0.38'

0.10% LT. DITCH GRADE
(10' FLAT BOTTOM DITCH)

0.10% RT. DITCH GRADE
(5' FLAT BOTTOM DITCH)

I-57 2076+00
TOP ELEV.=296.19

F.L. ELEV.=293.19
F.L. ELEV.=290.50 LT.

EXISTING GROUND

I-57 2083+00
TOP ELEV.=294.46

F.L. ELEV.=291.46
F.L. ELEV.=291.20 LT.

PVT 2074+00.00
ELEV.301.30

PVC 2080+50.00
ELEV.299.35

PVI 2083+00.00
ELEV.298.60
+00.00 RT. 289.89

+00.00 LT. 291.30

+00.00 RT. 290.89

0.50% RT. DITCH GRADE
(5' FLAT BOTTOM DITCH)

330 320 310 300 290 280 270 260 250 240

2070+00 2071+00 2072+00 2073+00 2074+00 2075+00 2076+00 2077+00 2078+00 2079+00 2080+00 2081+00 2082+00 2083+00 2084+00 2085+00

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WORKSPACE: AHTD
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REVISED DATE:

STA. 2090+00 CONSTRUCT
MEDIAN DROP INLET 4' LT. H=3'-0"
WITH 24" x 105' PIPE OUTLET
TO FES LT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 105 LIN. FT.
24" FES = 1 EACH

C.L. I-57

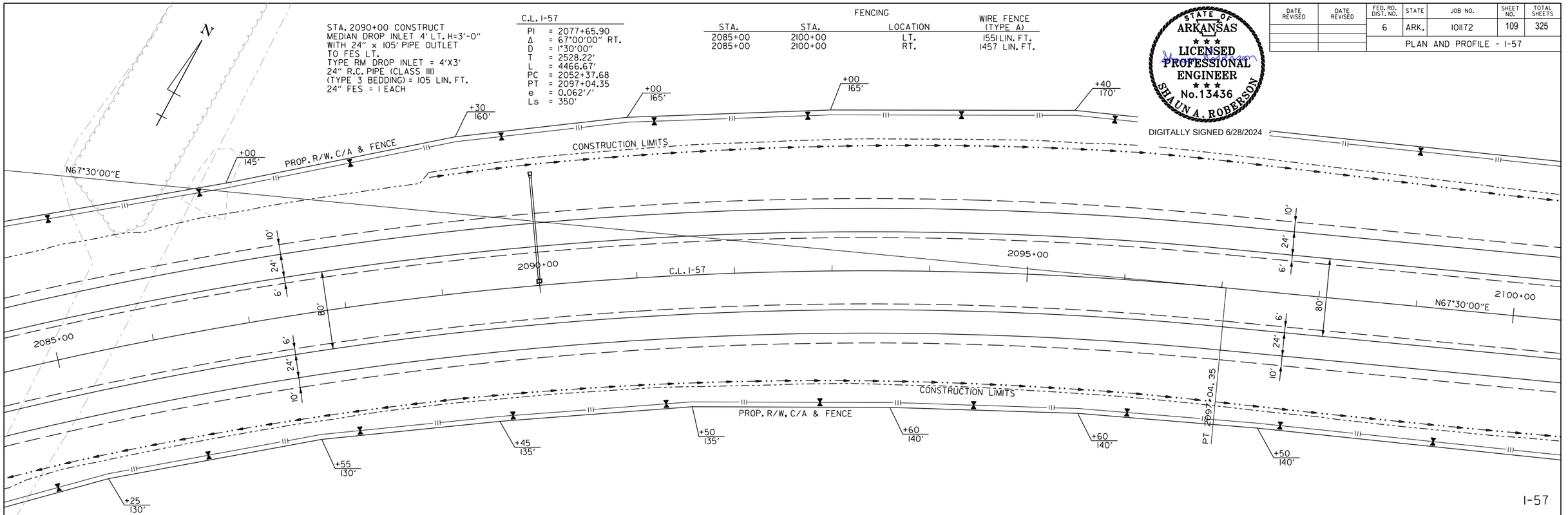
PI	= 2077+65.90
Δ	= 67°00'00" RT.
D	= 1°30'00"
T	= 2528.22'
L	= 4466.67'
PC	= 2052+37.68
PT	= 2097+04.35
e	= 0.062'/'
Ls	= 350'

FENCING

STA.	STA.	LOCATION	WIRE FENCE (TYPE A)
2085+00	2100+00	LT.	1551 LIN. FT.
2085+00	2100+00	RT.	1457 LIN. FT.

STATE OF ARKANSAS
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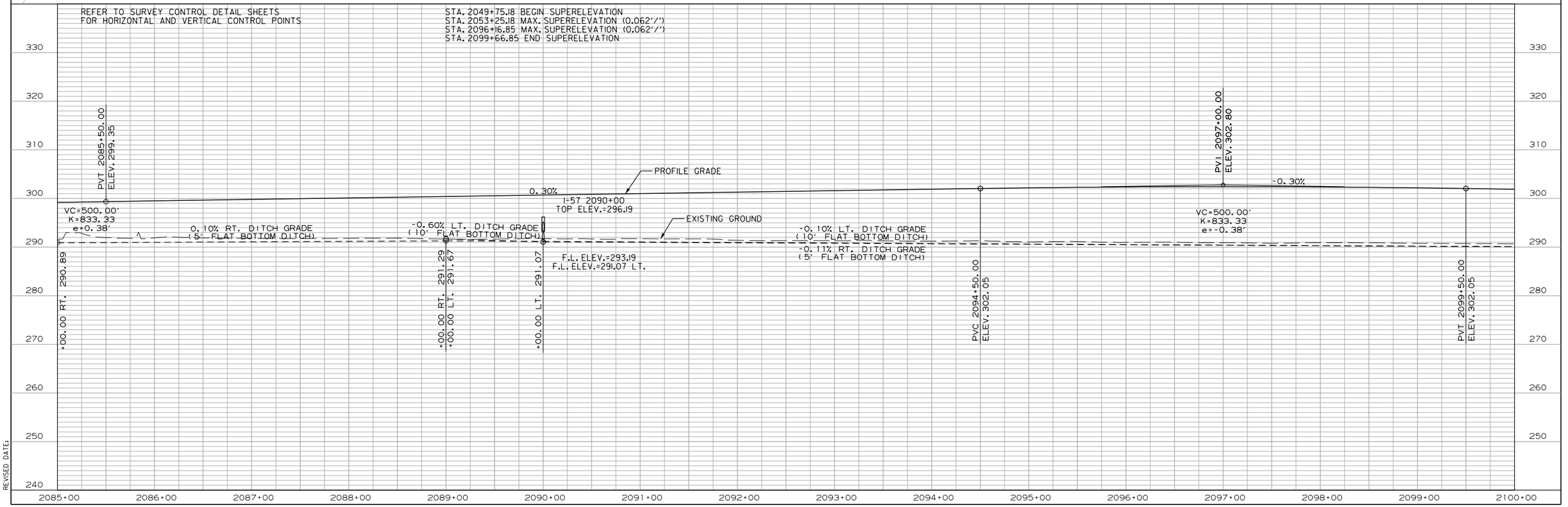
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	109	325
		PLAN AND PROFILE - I-57				



I-57

REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS

STA. 2049+75.18 BEGIN SUPERELEVATION
STA. 2053+25.18 MAX. SUPERELEVATION (0.062'/')
STA. 2096+16.85 MAX. SUPERELEVATION (0.062'/')
STA. 2099+66.85 END SUPERELEVATION



CGervasini 6/28/2024 1:32:19 PM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	110	325
		PLAN AND PROFILE - I-57				

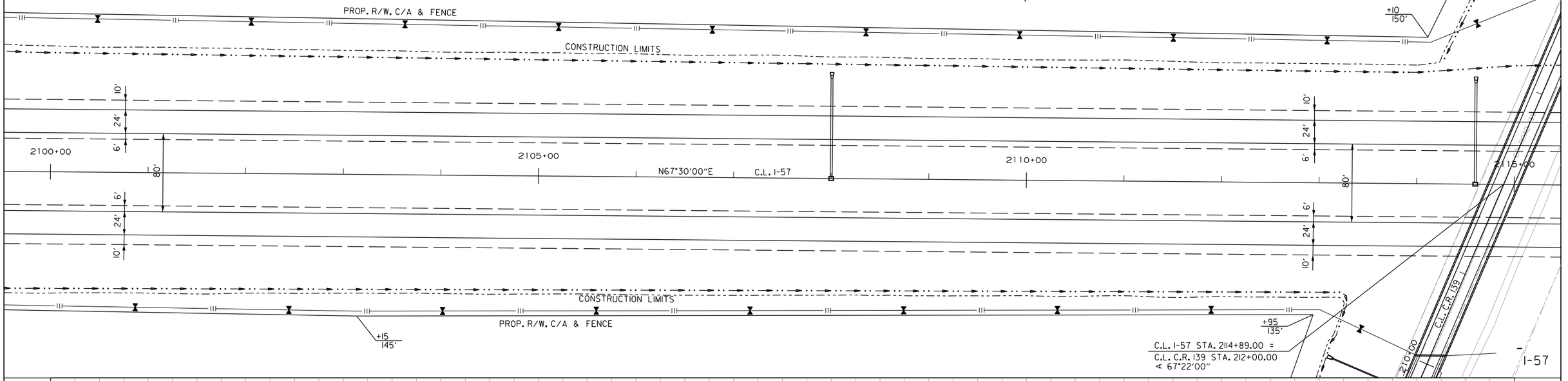
FENCING

STA.	STA.	LOCATION	WIRE FENCE (TYPE A)	16' GATE
2100+00	2115+00	LT.	1507 LIN. FT.	
2100+00	2113+98	RT.	1407 LIN. FT.	
2114+32	2115+00	RT.	68 LIN. FT.	1 EACH

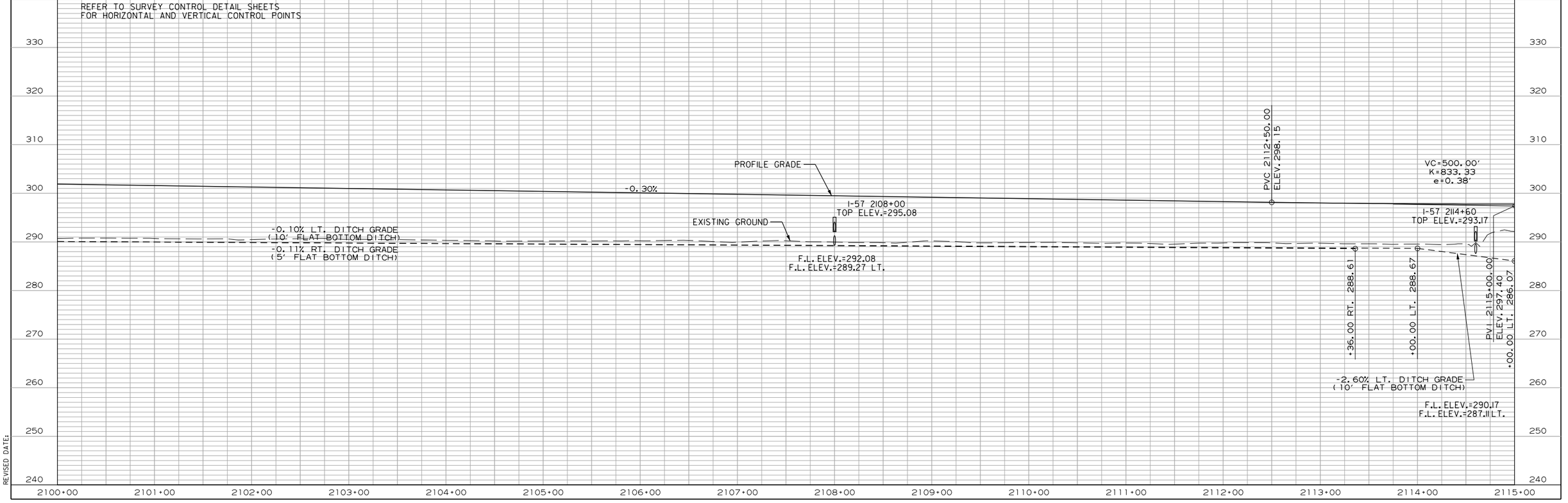
STA. 2108+00 CONSTRUCT
MEDIAN DROP INLET H=3'-0"
WITH 24" x 101' PIPE OUTLET
TO FES LT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 101 LIN. FT.
24" FES = 1 EACH

STATE OF ARKANSAS
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STA. 2114+60 CONSTRUCT
MEDIAN DROP INLET H=3'-0"
WITH 24" x 102' PIPE OUTLET
TO FES LT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 102 LIN. FT.
24" FES = 1 EACH



REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS



CGervasini 6/28/2024 1:32:20 PM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	111	325
		PLAN AND PROFILE - I-57				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

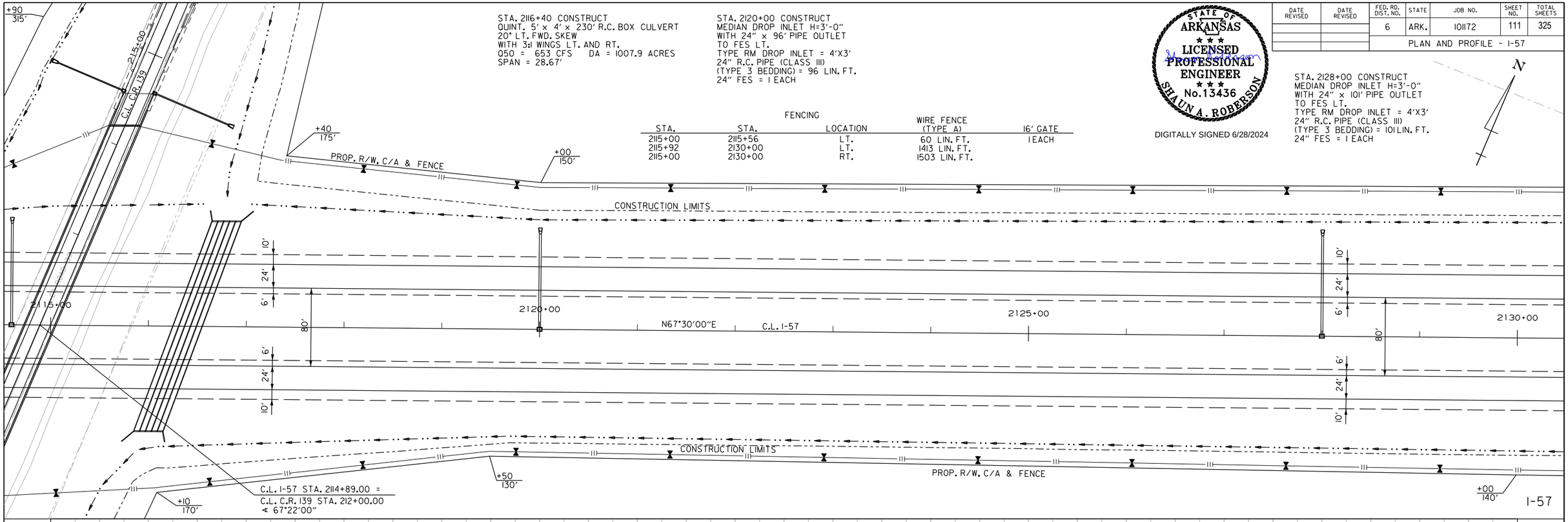
STA. 2116+40 CONSTRUCT
QUINT. 5' x 4' x 230' R.C. BOX CULVERT
20° LT. FWD. SKEW
WITH 3:1 WINGS LT. AND RT.
Q50 = 653 CFS DA = 1007.9 ACRES
SPAN = 28.67'

STA. 2120+00 CONSTRUCT
MEDIAN DROP INLET H=3'-0"
WITH 24" x 96' PIPE OUTLET
TO FES LT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 96 LIN. FT.
24" FES = 1 EACH

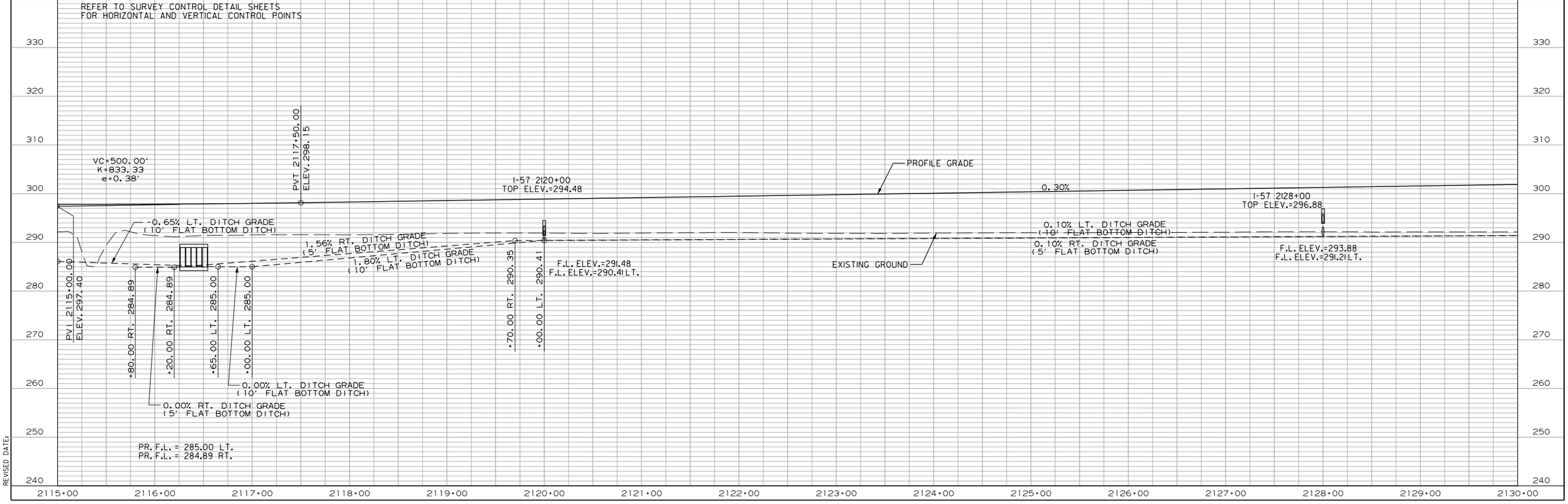
STA. 2128+00 CONSTRUCT
MEDIAN DROP INLET H=3'-0"
WITH 24" x 101' PIPE OUTLET
TO FES LT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 101 LIN. FT.
24" FES = 1 EACH

FENCING

STA.	STA.	LOCATION	WIRE FENCE (TYPE A)	16' GATE
2115+00	2115+56	LT.	60 LIN. FT.	1 EACH
2115+92	2130+00	LT.	1413 LIN. FT.	
2115+00	2130+00	RT.	1503 LIN. FT.	



REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS



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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	112	325
		PLAN AND PROFILE - I-57				

FENCING

STA.	STA.	LOCATION	WIRE FENCE (TYPE A)
2130+00	2145+00	LT.	1500 LIN. FT.
2130+00	2145+00	RT.	1500 LIN. FT.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
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+90
155'

+80.31
159.76'

PROP. R/W, C/A & FENCE

CONSTRUCTION LIMITS

+33.74
150.06'

10'
24'
6'
80'

2130+00
2135+00
2140+00
C.L. I-57
N67°30'00"E
2145+00

CONSTRUCTION LIMITS

PROP. R/W, C/A & FENCE

+00
140'

+20
145'

+00
150'

+00
140'

I-57

REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS

PVI 2138+00.00
ELEV. 304.30

PROFILE GRADE

0.30%

-0.30%

VC=1000.00'
K=1666.67
e=-0.75'

0.10% LT. DITCH GRADE
(10' FLAT BOTTOM DITCH)
0.10% RT. DITCH GRADE
(5' FLAT BOTTOM DITCH)

EXISTING GROUND

PVC 2133+00.00
ELEV. 302.80

+00.00 LT. 292.71

PVT 2143+00.00
ELEV. 302.80

330 320 310 300 290 280 270 260 250 240

2130+00 2131+00 2132+00 2133+00 2134+00 2135+00 2136+00 2137+00 2138+00 2139+00 2140+00 2141+00 2142+00 2143+00 2144+00 2145+00

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	113	325
		PLAN AND PROFILE - I-57				

STA. 2149+00 CONSTRUCT
MEDIAN DROP INLET H=3'-0"
WITH 24" x 96' PIPE OUTLET
TO FES LT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 96 LIN. FT.
24" FES = 1 EACH

FENCING

STA.	STA.	LOCATION	WIRE FENCE (TYPE A)
2145+00	2160+00	LT.	1500 LIN. FT.
2145+00	2160+00	RT.	1500 LIN. FT.

N

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
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DIGITALLY SIGNED 6/28/2024

+00 145'
PROP. R/W, C/A & FENCE
+00 150'
CONSTRUCTION LIMITS
+75.10 160'

10' 24' 6' 80' 6' 24' 10'

2145+00 2150+00 2155+00 2160+00

N67°30'00"E C.L. I-57

CONSTRUCTION LIMITS
+00 140'
PROP. R/W, C/A & FENCE
+00 145'

I-57

REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS

PVC 2146+50.00 ELEV. 301.75
VC=500.00'
K=833.33
e=0.38'
PVT 2151+50.00 ELEV. 301.75
PVI 2160+00.00 ELEV. 304.30
VC=1000.00'
K=1666.67
e=-0.75'
-0.30%
0.30%
PROFILE GRADE
I-57 2149+00
TOP ELEV.=296.96
0.10% RT. DITCH GRADE
(5' FLAT BOTTOM DITCH)
-0.10% LT. DITCH GRADE
(10' FLAT BOTTOM DITCH)
-0.10% RT. DITCH GRADE
(5' FLAT BOTTOM DITCH)
EXISTING GROUND
+00.00 LT. 293.17
+00.00 RT. 293.08
PVI 2149+00.00 ELEV. 301.00
F.L. ELEV.=293.96
F.L. ELEV.=292.97 LT.
PVC 2155+00.00 ELEV. 302.80

330 320 310 300 290 280 270 260 250 240

2145+00 2146+00 2147+00 2148+00 2149+00 2150+00 2151+00 2152+00 2153+00 2154+00 2155+00 2156+00 2157+00 2158+00 2159+00 2160+00

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	114	325
		PLAN AND PROFILE - I-57				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

FENCING

STA.	STA.	LOCATION	WIRE FENCE (TYPE A)
2160+00	2175+00	LT.	1500 LIN. FT.
2160+00	2175+00	RT.	1500 LIN. FT.

STA. 2166+00 CONSTRUCT
MEDIAN DROP INLET H=3'-0"
WITH 24" x 104' PIPE OUTLET
TO FES LT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 104 LIN. FT.
24" FES = 1 EACH

STA. 2172+23 CONSTRUCT
DBL. 5' x 4' x 220' R.C. BOX CULVERT
23° LT. FWD. SKEW
WITH 3:1 WINGS LT. AND RT.
Q50 = 303 CFS DA = 285.3 ACRES

STA. 2172+25 CONSTRUCT
MEDIAN DROP INLET H=1'-6"
ABOVE R.C. BOX CULVERT
TYPE TM DROP INLET = 3'X2'

PROP. R/W, C/A & FENCE
CONSTRUCTION LIMITS
2160+00
2165+00
2170+00
2175+00
N67°30'00"E
C.L. I-57
10' 24' 6' 80'
+00 145'
+40 155'
+55 140'
+45 140'
+30 240'
+30 155'
209.00 C.L. C.R. 143 NORTH
208.00 C.L. C.R. 143 SOUTH
PROP. R/W
STA. 2171+97 IN PLACE
12" X 21' C.P. PIPE CULVERT
RT. SIDE DRAIN
REMOVE
I-57

REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS

PVI 2160+00.00
ELEV. 304.30
VC=1000.00'
K=1666.67
e=-0.75'
-0.10% LT. DITCH GRADE
(10' FLAT BOTTOM DITCH)
-0.10% RT. DITCH GRADE
(5' FLAT BOTTOM DITCH)
PVT 2165+00.00
ELEV. 302.80
I-57 2166+00
TOP ELEV.=298.08
F.L. ELEV.=295.08
F.L. ELEV.=291.27 LT.
PROFILE GRADE
-0.30%
EXISTING GROUND
PVC 2170+50.00
ELEV. 301.15
+00.00 LT. 290.87
-0.25% LT. DITCH GRADE
(10' FLAT BOTTOM DITCH)
I-57 2172+25
TOP ELEV.=296.12
+70.00 RT. 290.61
+75.00 RT. 289.70
PR. F.L. = 290.19 LT.
PR. F.L. = 289.70 RT.
+73.00 LT. 290.19
VC=500.00'
K=833.33
e=0.37'
PVI 2173+00.00
ELEV. 300.40
0.30%
0.07% LT. DITCH GRADE
(10' FLAT BOTTOM DITCH)
0.24% RT. DITCH GRADE
(5' FLAT BOTTOM DITCH)
+00.00 LT. 290.36
+00.00 RT. 290.48
330 320 310 300 290 280 270 260 250 240
2160+00 2161+00 2162+00 2163+00 2164+00 2165+00 2166+00 2167+00 2168+00 2169+00 2170+00 2171+00 2172+00 2173+00 2174+00 2175+00

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	115	325
		PLAN AND PROFILE - I-57				

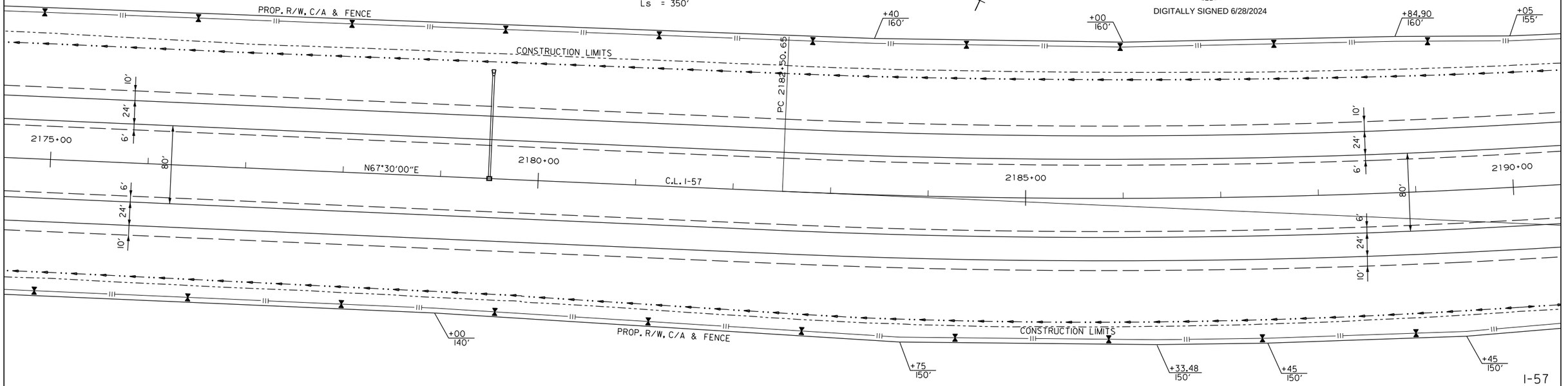
FENCING			
STA.	STA.	LOCATION	WIRE FENCE (TYPE A)
2175+00	2190+00	LT.	1484 LIN. FT.
2175+00	2190+00	RT.	1515 LIN. FT.

STA. 2179+50 CONSTRUCT MEDIAN DROP INLET H=3'-0" WITH 24" x 104' PIPE OUTLET TO FES LT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 104 LIN. FT.
24" FES = 1 EACH

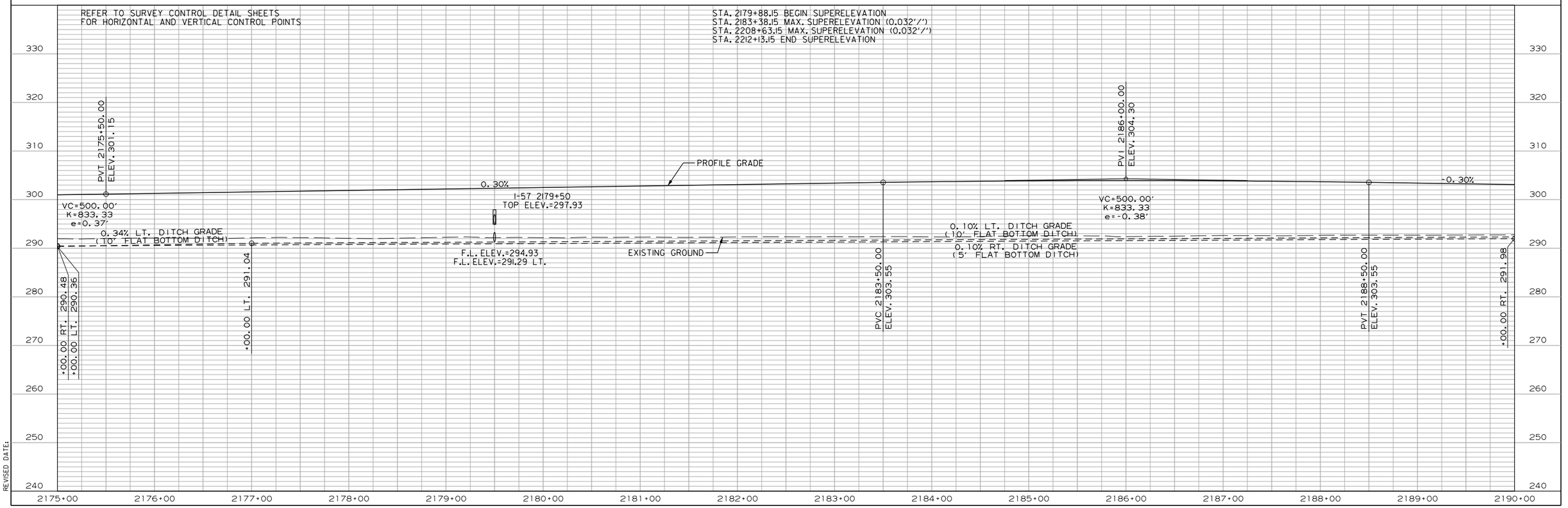
C.L. I-57

PI	=	2196+14.88
Δ	=	20°15'00" LT.
D	=	0°45'00"
T	=	1364.23'
L	=	2700.00'
PC	=	2182+50.65
PT	=	2209+50.65
e	=	0.032'/'
Ls	=	350'

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
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I-57



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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	116	325
		PLAN AND PROFILE - I-57				

FENCING

STA.	STA.	LOCATION	WIRE FENCE (TYPE A)
2190+00	2205+00	LT.	1466 LIN. FT.
2190+00	2205+00	RT.	1532 LIN. FT.

STA. 2194+00 CONSTRUCT
MEDIAN DRAIN INLET 2' RT. H=3'-0"
WITH 24" x 99' PIPE OUTLET
TO FES LT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 99 LIN. FT.
24" FES = 1 EACH

C.L. I-57

PI	= 2196+14.88
Δ	= 20°15'00" LT.
D	= 0°45'00"
T	= 1364.23'
L	= 2700.00'
PC	= 2182+50.65
PT	= 2209+50.65
e	= 0.032'/'
Ls	= 350'

STA. 2202+00 CONSTRUCT
DBL. 5' x 4' x 204' R.C. BOX CULVERT
WITH 3:1 WINGS LT. AND RT.
Q50 = 280 CFS DA = 227.2 ACRES

STA. 2202+02 CONSTRUCT
MEDIAN DROP INLET H=1'-1"
ABOVE R.C. BOX CULVERT
TYPE TM DROP INLET = 3'X2'

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
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+05 155'
+00 150'
PROP. R/W, C/A & FENCE
+05 150'
+90 150'
+80 145'
+65 160'
+35 160'
+21.73 160'
CONSTRUCTION LIMITS
10' 24' 6' 80'
2190+00
2195+00
C.L. I-57
2200+00
2205+00
N67°30'00"E
N47°15'00"E
+55 145'
PROP. R/W, C/A & FENCE
+60 145'
CONSTRUCTION LIMITS
+55 145'
PI 2196+14.88
+55 140'
+55 140'
+45 135'
+20 155'
+55 140'

STA. 2201+71 IN PLACE
18" X 21' STEEL PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 2202+32 IN PLACE
18" X 30' STEEL PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 2202+59 IN PLACE
10" X 29' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

I-57

REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS

STA. 2179+88.15 BEGIN SUPERELEVATION
STA. 2183+38.15 MAX. SUPERELEVATION (0.032'/')
STA. 2208+63.15 MAX. SUPERELEVATION (0.032'/')
STA. 2212+13.15 END SUPERELEVATION

330 320 310 300 290 280 270 260 250 240

-0.30%
I-57 2194+00
TOP ELEV.=297.55
F.L. ELEV.=294.55
F.L. ELEV.=292.74 LT.
0.10% LT. DITCH GRADE
(10' FLAT BOTTOM DITCH)
-0.10% RT. DITCH GRADE
(5' FLAT BOTTOM DITCH)
EXISTING GROUND
PROFILE GRADE
+00.00 RT. 291.98
+00.00 LT. 293.24
PVC 2199+50.00
ELEV. 300.25
+55.00 LT. 290.61
-0.21% LT. DITCH GRADE
(10' FLAT BOTTOM DITCH)
VC=500.00'
K=833.33 I-57 2202+02
e=0.38' TOP ELEV.=295.46
+90.00 RT. 290.79
+00.00 LT. 290.09
+06.00 RT. 290.02
PVI 2202+00.00
ELEV. 299.50
PR. F.L. = 290.09 LT.
PR. F.L. = 289.30 RT.
+86.00 RT. 292.10
2.60% RT. DITCH GRADE
(5' FLAT BOTTOM DITCH)
0.10% LT. DITCH GRADE
(10' FLAT BOTTOM DITCH)
0.10% RT. DITCH GRADE
(5' FLAT BOTTOM DITCH)
PVT 2204+50.00
ELEV. 300.25
0.30%
+00.00 LT. 290.39

2190+00 2191+00 2192+00 2193+00 2194+00 2195+00 2196+00 2197+00 2198+00 2199+00 2200+00 2201+00 2202+00 2203+00 2204+00 2205+00

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	117	325
		PLAN AND PROFILE - I-57				

STATE OF ARKANSAS
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FENCING			
STA.	STA.	LOCATION	WIRE FENCE (TYPE A)
2205+00	2220+00	LT.	1491 LIN. FT.
2205+00	2220+00	RT.	1517 LIN. FT.

STA. 2208+00 CONSTRUCT
MEDIAN DROP INLET 2' RT. H=3'-0"
WITH 24" x 102' PIPE OUTLET
TO FES LT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 102 LIN. FT.
24" FES = 1 EACH

C.L. I-57
PI = 2196+14.88
Δ = 20°15'00" LT.
D = 0°45'00"
T = 1364.23'
L = 2700.00'
PC = 2182+50.65
PT = 2209+50.65
e = 0.032'/'
Ls = 350'

STA. 2215+00 CONSTRUCT
MEDIAN DROP INLET H=3'-0"
WITH 24" x 112' PIPE OUTLET
TO FES LT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 112 LIN. FT.
24" FES = 1 EACH

STA. 2219+35.00 CONSTRUCT
4' x 3' x 254' R.C. BOX CULVERT
11° RT. FWD. SKEW
WITH 3:1 WINGS LT. AND RT.
Q50 = 70.2 CFS DA = 90.6 ACRES

C.L. I-57 STA. 2219+18.74, 68.50' LT. =
C.L. HWY. 67 RAMP 4 STA. 2219+18.74

C.L. I-57 STA. 2216+26.02, 56.50' RT. =
C.L. HWY. 67 RAMP 1 STA. 2216+26.02

PROP. R/W, C/A & FENCE
CONSTRUCTION LIMITS
300' TAPER
800' ACCELERATION LANE
N47°15'00"E
C.L. I-57
C.L. HWY. 67 RAMP 4
C.L. HWY. 67 RAMP 1
PC 2209+50.65
PC 2219+18.74
PC 2216+26.02
PI 2217+21.23
PT 2218+19.29
I-57

REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS

STA. 2179+88.15 BEGIN SUPERELEVATION
STA. 2183+38.15 MAX. SUPERELEVATION (0.032'/')
STA. 2208+63.15 MAX. SUPERELEVATION (0.032'/')
STA. 2212+13.15 END SUPERELEVATION

PROFILE GRADE
0.30%
I-57 2208+00
TOP ELEV.=296.95
F.L. ELEV.=293.95
F.L. ELEV.=291.14 LT.
EXISTING GROUND
0.10% RT. DITCH GRADE
(5' FLAT BOTTOM DITCH)
0.25% LT. DITCH GRADE
(10' FLAT BOTTOM DITCH)
+00.00 RT. 293.01
I-57 2215+00
TOP ELEV.=298.98
F.L. ELEV.=295.98
F.L. ELEV.=292.89 LT.
-0.10% RT. DITCH GRADE
(5' FLAT BOTTOM DITCH)
0.08% RT. DITCH GRADE
(10' FLAT BOTTOM DITCH)
0.23% LT. DITCH GRADE
10' FLAT BOTTOM DITCH
+00.00 LT. 290.39
+40.00 LT. 293.74
+14.00 LT. 292.24
+58.00 RT. 292.26
+75.00 RT. 291.70
PR. F.L. = 292.24 LT.
PR. F.L. = 291.70 RT.

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WORKSPACE: AHTD
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		PLAN AND PROFILE - I-57				

STATE OF ARKANSAS
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STA. 2223+00 CONSTRUCT
MEDIAN DROP INLET H=3'-0"
WITH 24" x 166' PIPE OUTLET
TO FES RT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 166 LIN. FT.
24" FES = 1 EACH

STA. 2231+00 CONSTRUCT
MEDIAN DROP INLET H=3'-0"
WITH 24" x 129' PIPE OUTLET
TO FES RT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 129 LIN. FT.
24" FES = 1 EACH

FENCING

STA.	STA.	LOCATION	WIRE FENCE (TYPE A)
2220+00	2235+00	LT.	1626 LIN. FT.
2220+00	2235+00	RT.	1768 LIN. FT.

STA. 2225+00.00
END PAVING

I-57

REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS

0.08% RT. DITCH GRADE
(10' FLAT BOTTOM DITCH)
0.23% LT. DITCH GRADE
10' FLAT BOTTOM DITCH
0.30%
I-57 2223+00
TOP ELEV.=301.38
F.L. ELEV.=298.38
F.L. ELEV.=292.08 RT.
PVC 2224+50.00
ELEV. 306.25
EXISTING GROUND
+80.00 RT. 291.78
+80.51 LT. 292.62
+10.00 LT. 293.80
PVI 2227+00.00
ELEV. 307.00
VC=500.00'
K=333.33
e=0.94'
PVT 2229+50.00
ELEV. 311.50
1.80%
I-57 2231+00
TOP ELEV.=309.78
PROFILE GRADE
+00.00 RT. 294.10
F.L. ELEV.=306.78
F.L. ELEV.=294.10 RT.
PVC 2232+00.00
ELEV. 316.00
VC=1500.00'
K=416.67
e=-6.75'
0.10% LT. DITCH GRADE
(10' FLAT BOTTOM DITCH)
0.05% RT. DITCH GRADE
(5' FLAT BOTTOM DITCH)

330 320 310 300 290 280 270 260 250 240

2220+00 2221+00 2222+00 2223+00 2224+00 2225+00 2226+00 2227+00 2228+00 2229+00 2230+00 2231+00 2232+00 2233+00 2234+00 2235+00

CGervasini 6/28/2024 1:32:23 PM
WORKSPACE: AHTD
L:\202\2101046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_PP_i6.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	119	325
		PLAN AND PROFILE - I-57				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON

DIGITALLY SIGNED 6/28/2024

STA. 2236+00.00
END JOB 101172
END GRADING

CONSTRUCTION LIMITS

EXIST. R/W

65.00'

EXIST. R/W

10'
24'
6'
80'
6'
24'
10'

2235+00
C.L. I-57

2240+00

N47°15'00"E

C.L. I-57 (FUTURE)

2245+00

2250+00

CONSTRUCTION LIMITS

CONSTRUCTION LIMITS

60.00'

CONSTRUCTION LIMITS

CONSTRUCTION LIMITS

C.L. I-57 STA. 2239+45.72 =
C.L. HWY. 67 STA. 62+50.00
∢ 46°39'00"

FENCING

STA.	STA.	LOCATION	WIRE FENCE (TYPE A)
2235+00	2270+56	LT.	3862 LIN. FT.
2235+00	2273+55	RT.	4047 LIN. FT.

I-57

REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS

STA. 2236+00.00
END JOB 101172
END GRADING
ELEV. 321.28

BEGIN BRIDGE
STA. 2237+29.14
(FUTURE)

BEGIN BRIDGE
STA. 2238+27.32
(FUTURE)

PVI 2239+50.00
ELEV. 329.50

END BRIDGE
STA. 2240+64.12
(FUTURE)

END BRIDGE
STA. 2241+62.30
(FUTURE)

1.80%

PROFILE GRADE

3:1

VC=1500.00'
K=416.67
e=-6.75'

PROFILE GRADE (FUTURE)

-1.80%

PVC 2248+00.00
ELEV. 314.20

VC=400.00'
K=266.67
e=0.75'

PVT 2247+00.00
ELEV. 316.00

PVI 2250+00.00
ELEV. 310.60

0.10% LT. DITCH GRADE
(10' FLAT BOTTOM DITCH)

+00.00 LT. 294.79
+00.00 RT. 294.35

EXISTING GROUND

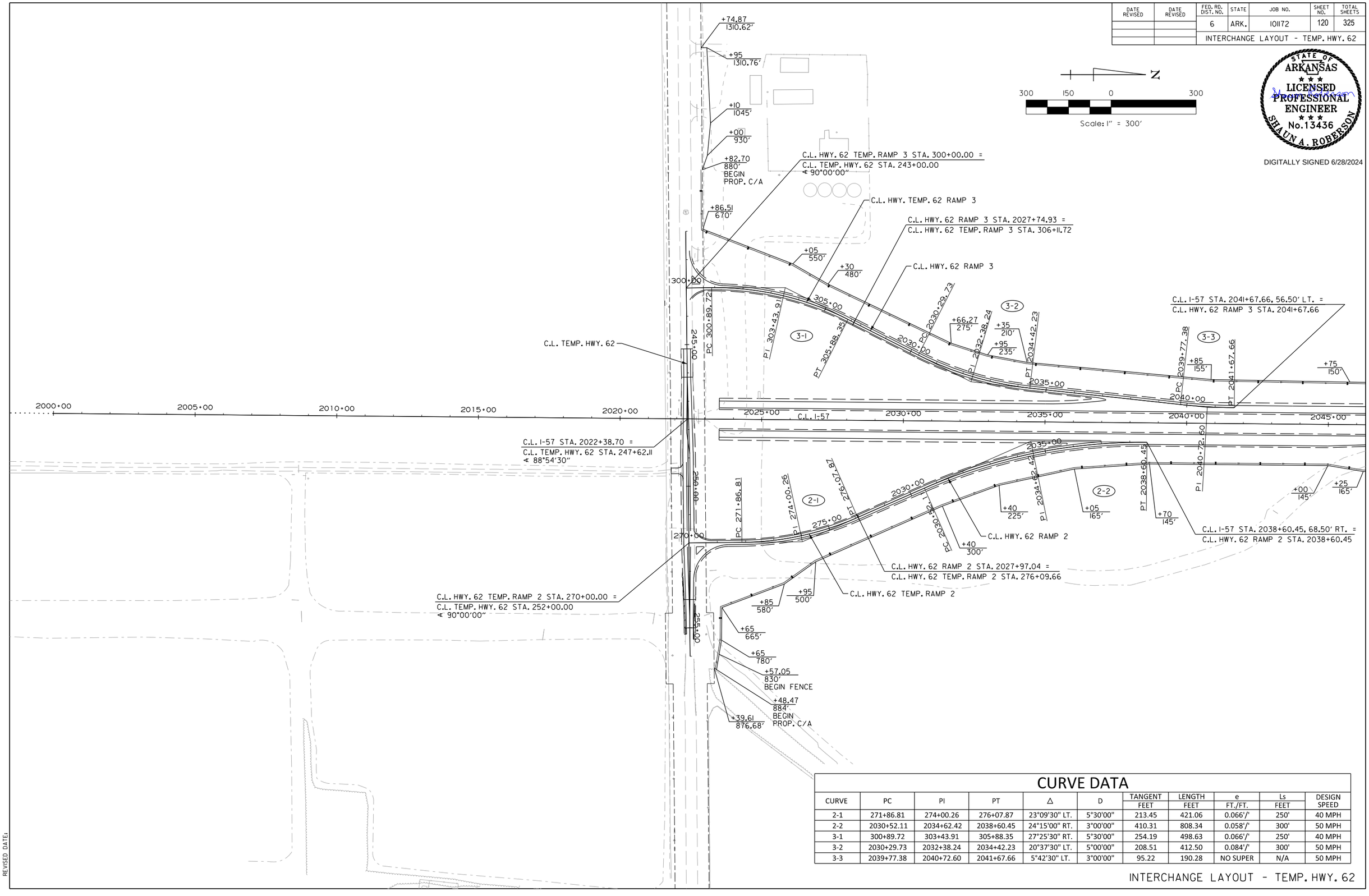
0.05% RT. DITCH GRADE
(5' FLAT BOTTOM DITCH)

340
330
320
310
300
290
280
270
260
250

2235+00 2236+00 2237+00 2238+00 2239+00 2240+00 2241+00 2242+00 2243+00 2244+00 2245+00 2246+00 2247+00 2248+00 2249+00 2250+00

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	120	325
		INTERCHANGE LAYOUT - TEMP. HWY. 62				



STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBBERSON

DIGITALLY SIGNED 6/28/2024

CURVE DATA

CURVE	PC	PI	PT	Δ	D	TANGENT FEET	LENGTH FEET	e FT./FT.	Ls FEET	DESIGN SPEED
2-1	271+86.81	274+00.26	276+07.87	23°09'30" LT.	5°30'00"	213.45	421.06	0.066'/'	250'	40 MPH
2-2	2030+52.11	2034+62.42	2038+60.45	24°15'00" RT.	3°00'00"	410.31	808.34	0.058'/'	300'	50 MPH
3-1	300+89.72	303+43.91	305+88.35	27°25'30" RT.	5°30'00"	254.19	498.63	0.066'/'	250'	40 MPH
3-2	2030+29.73	2032+38.24	2034+42.23	20°37'30" LT.	5°00'00"	208.51	412.50	0.084'/'	300'	50 MPH
3-3	2039+77.38	2040+72.60	2041+67.66	5°42'30" LT.	3°00'00"	95.22	190.28	NO SUPER	N/A	50 MPH

INTERCHANGE LAYOUT - TEMP. HWY. 62

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WORKSPACE: AHTD
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REVISED DATE:

CURVE DATA

CURVE	PC	PI	PT	△	D	TANGENT FEET	LENGTH FEET	e FT./FT.	Ls FEET	DESIGN SPEED
1-1	2216+26.02	2217+21.23	2218+16.29	5°42'30" RT.	3°00'00"	95.21	190.27	NO SUPER	N/A	50 MPH
1-2	2228+97.50	2230+88.67	2232+74.86	22°38'30" RT.	6°00'00"	191.17	377.36	0.070'/'	250'	40 MPH
4-1	2219+18.74	2223+84.60	2228+32.62	27°25'00" LT.	3°00'00"	465.86	913.88	0.058'/'	300'	50 MPH
4-2	2235+12.55	2238+91.49	2242+09.63	55°46'00" RT.	8°00'00"	378.94	697.08	0.084'/'	300'	40 MPH
67-1	72+07.07	72+23.74	72+40.41	0°10'00" RT.	0°30'00"	16.67	33.34	NO SUPER	N/A	55 MPH

STATE OF ARKANSAS
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DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	121	325
		INTERCHANGE LAYOUT - HWY. 67				

N

400 200 0 200

Scale: 1" = 400'

C.L. HWY. 67 RAMP 4 STA. 2245+34.63 =
C.L. HWY. 67 STA. 68+50.00
∢ 75°00'00"

C.L. I-57 STA. 2219+18.74, 68.50' LT. =
C.L. HWY. 67 RAMP 4 STA. 2219+18.74

C.L. I-57 STA. 2239+45.72 =
C.L. HWY. 67 STA. 62+50.00
∢ 46°39'00"

C.L. I-57 STA. 2216+26.02, 56.50' RT. =
C.L. HWY. 67 RAMP 1 STA. 2216+26.02

C.L. HWY. 67 RAMP 1 STA. 2235+97.05 =
C.L. HWY. 67 STA. 56+50.00
∢ 75°00'00"

+87.14
710.37
BEGIN
PROP. C/A

+66.35
596.34'
END
PROP. C/A

+02.46
712.10'
END
PROP. C/A

+23.43
597.91'
BEGIN
PROP. C/A

C.L. HWY. 67

C.L. HWY. 67 RAMP 4

C.L. HWY. 67 RAMP 1

C.L. I-57 (FUTURE)

PC 2238+91.49
PI 2242+09.63
PT

PC 2235+12.55
PI 2238+32.62
PT

PC 2228+97.50
PI 2230+88.67
PT 2232+74.86

PC 2223+84.60
PI 2228+32.62
PT

PC 2219+18.74
PI 2221+21.23
PT 2223+84.60

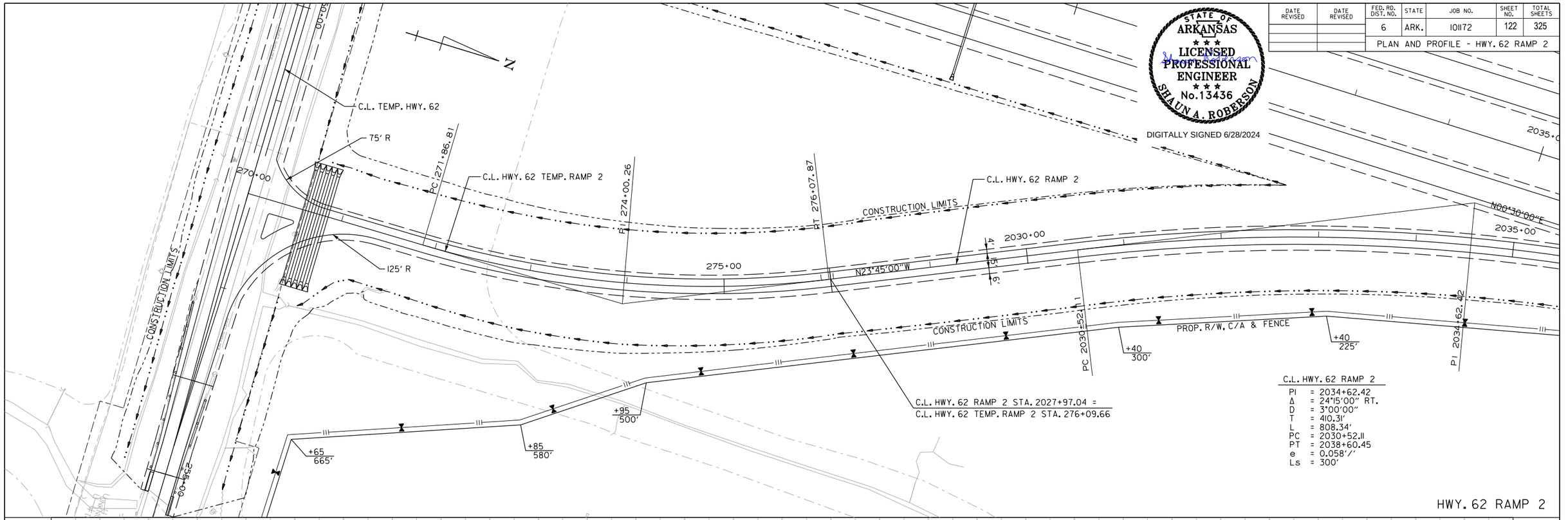
PC 2216+26.02
PI 2217+21.23
PT 2218+16.29

4-2
1-2
67-1
4-1
1-1

CGervasini 6/28/2024 1:32:25 PM
WORKSPACE: AHTD
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REVISED DATE:

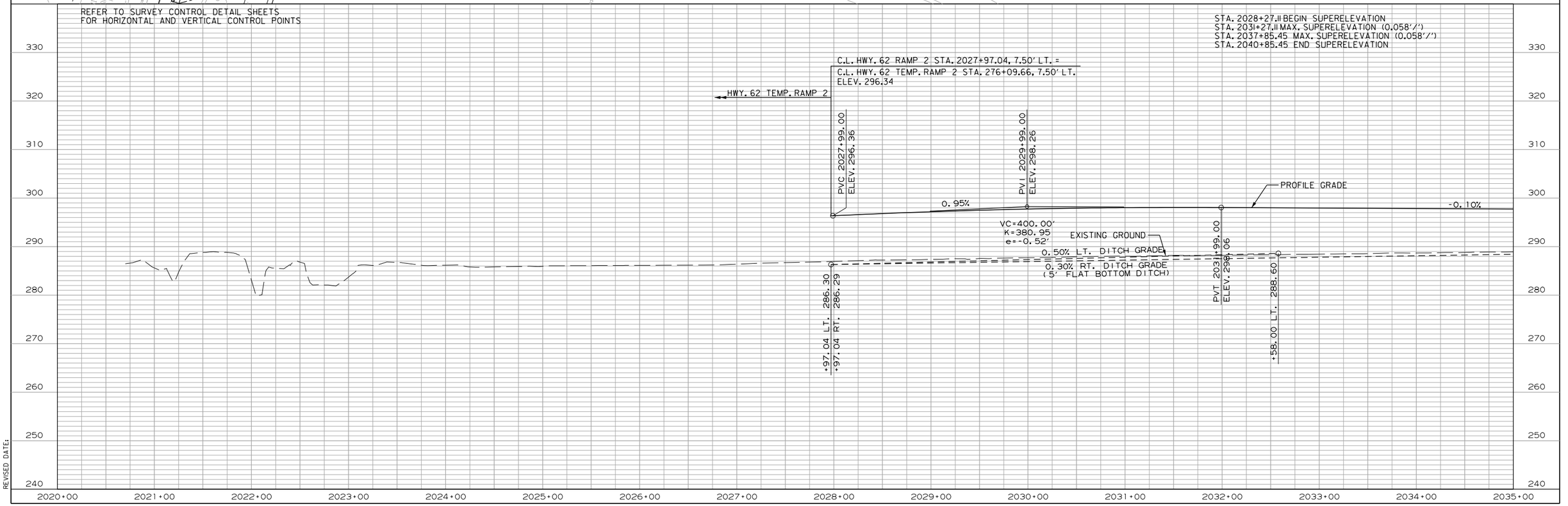
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	122	325
		PLAN AND PROFILE - HWY. 62 RAMP 2				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024



REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS

STA. 2028+27.11 BEGIN SUPERELEVATION
STA. 2031+27.11 MAX. SUPERELEVATION (0.058'/')
STA. 2037+85.45 MAX. SUPERELEVATION (0.058'/')
STA. 2040+85.45 END SUPERELEVATION



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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	123	325
		PLAN AND PROFILE - HWY. 62 RAMP 2				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

2035+00 | 2040+00 | 2045+00 | 2050+00

C.L. HWY. 62 RAMP 3
C.L. I-57
C.L. HWY. 62 RAMP 2
N00°30'00"E
PC 2039+77.38
PT 2041+67.66
PI 2040+72.60
NOSE +98.67 67.84' RT.
NOSE +99.11 7.50' LT.
PI 2034+62.42
PT 2038+60.45
+85 155'
+75 150'
+97.34 150'
+05 165'
+70 145'
+00 145'
+25 165'
+65 160'
+00 155'
PROP. R/W, C/A & FENCE
CONSTRUCTION LIMITS
6' 34' 34' 6'
4' 16' 6'

C.L. HWY. 62 RAMP 2
PI = 2034+62.42
Δ = 24°15'00" RT.
D = 3°00'00"
T = 410.31'
L = 808.34'
PC = 2030+52.11
PT = 2038+60.45
e = 0.058'/'
Ls = 300'

C.L. I-57 STA. 2038+60.45, 68.50' RT. =
C.L. HWY. 62 RAMP 2 STA. 2038+60.45

HWY. 62 RAMP 2

REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS

STA. 2028+27.11 BEGIN SUPERELEVATION
STA. 2031+27.11 MAX. SUPERELEVATION (0.058'/')
STA. 2037+85.45 MAX. SUPERELEVATION (0.058'/')
STA. 2040+85.45 END SUPERELEVATION

C.L. HWY. 62 RAMP 2 STA. 2036+99.11, 7.50' LT. =
C.L. I-57 STA. 2036+98.67, 67.84' RT.
ELEV. 297.56

PVI 2036+99.11
ELEV. 297.56
+99.11 RT. 289.00

PROFILE GRADE
-0.10%
0.30% RT. DITCH GRADE
(5' FLAT BOTTOM DITCH)
EXISTING GROUND

330 320 310 300 290 280 270 260 250 240

2035+00 | 2036+00 | 2037+00 | 2038+00 | 2039+00 | 2040+00

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	124	325
		PLAN AND PROFILE - HWY. 62 RAMP 3				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON

DIGITALLY SIGNED 6/28/2024

C.L. HWY. 62 RAMP 3
PI = 2032+38.24
Δ = 20°37'30" LT.
D = 5°00'00"
T = 208.51'
L = 412.50'
PC = 2030+29.73
PT = 2034+42.23
e = 0.084'/'
Ls = 300'

N

EXIST. R/W. PROP. C/A & FENCE
+86.51 670'
PROP. R/W. C/A & FENCE
+05 550'
+30 480'
PI 303+43.91
C.L. HWY. 62 RAMP 3 STA. 2027+74.93 =
C.L. HWY. 62 TEMP. RAMP 3 STA. 306+11.72
305+00
N26°50'00"E
CONSTRUCTION LIMITS
PC 2030+29.73
+66.27 275'
PI 2032+38.24
+95 235'
+35 210'
PT 2034+42.23
2030+00
4' to 6'
2035+00
N06°12'30"E
300+00
C.L. HWY. 62 TEMP. RAMP 3
PC 300+89.72
PT 305+88.35
CONSTRUCTION LIMITS
C.L. HWY. 62 RAMP 3
C.L. TEMP. HWY. 62
245+00
2035+00

HWY. 62 RAMP 3

REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS

STA. 2028+04.73 BEGIN SUPERELEVATION
STA. 2031+04.73 MAX. SUPERELEVATION (0.084'/')
STA. 2033+67.23 MAX. SUPERELEVATION (0.084'/')
STA. 2036+67.23 END SUPERELEVATION

C.L. HWY. 62 RAMP 3 STA. 2027+74.93, 7.50' RT.
C.L. HWY. 62 TEMP. RAMP 3 STA. 306+11.72, 7.50' RT. =
ELEV. 294.78

HWY. 62 TEMP. RAMP 3

PROFILE GRADE
EXISTING GROUND
0.70%
0.40% RT. DITCH GRADE
-0.10%
-0.14% LT. DITCH GRADE
(10' FLAT BOTTOM DITCH)

PVI 2031+96.00
ELEV. 297.73
VC=300.00'
K=375.00
e=-0.30'
PVC 2030+46.00
ELEV. 296.68
PVT 2033+46.00
ELEV. 297.68
+74.93 LT. 289.69
+74.93 RT. 287.41
+47.50 RT. 289.30

330 320 310 300 290 280 270 260 250 240

2020+00 2021+00 2022+00 2023+00 2024+00 2025+00 2026+00 2027+00 2028+00 2029+00 2030+00 2031+00 2032+00 2033+00 2034+00 2035+00

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	125	325
		PLAN AND PROFILE - HWY. 62 RAMP 3				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13436
SHAUN A. ROBERSON

DIGITALLY SIGNED 6/28/2024

N

C.L. HWY. 62 RAMP 3
PI = 2040+72.60
Δ = 5°42'30" LT.
D = 3°00'00"
T = 95.22'
L = 190.28'
PC = 2039+77.38
PT = 2041+67.66
e = NO SUPER
Ls = N/A

C.L. I-57 STA. 2041+67.66, 56.50' LT. =
C.L. HWY. 62 RAMP 3 STA. 2041+67.66

PROP. R/W, C/A & FENCE
CONSTRUCTION LIMITS
C.L. HWY. 62 RAMP 3
C.L. I-57
C.L. HWY. 62 RAMP 2
NOSE +12.79 7.50' RT.
NOSE +13.67 84.82' LT.
PC 2039+77.38
PT 2041+67.66
PI 2040+72.60
N06°12'30"E
N00°30'00"E
2035+00
2040+00
2045+00
2050+00
+85 155'
+75 150'
+97.34 150'
+00 145'
+25 165'
+65 160'
+00 155'
4'
6'
16'
HWY. 62 RAMP 3

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL POINTS

STA. 2028+04.73 BEGIN SUPERELEVATION
STA. 2031+04.73 MAX. SUPERELEVATION (0.084'/')
STA. 2033+67.23 MAX. SUPERELEVATION (0.084'/')
STA. 2036+67.23 END SUPERELEVATION

C.L. HWY. 62 RAMP 3 STA. 2037+12.79, 7.50' RT. =
C.L. I-57 STA. 2037+13.67, 84.82' LT.
ELEV. 297.21

PVI 2037+12.79
ELEV. 297.21

PROFILE GRADE
-0.10%
-0.14% LT. DITCH GRADE
(10' FLAT BOTTOM DITCH)
+12.79 LT. 288.38
EXISTING GROUND

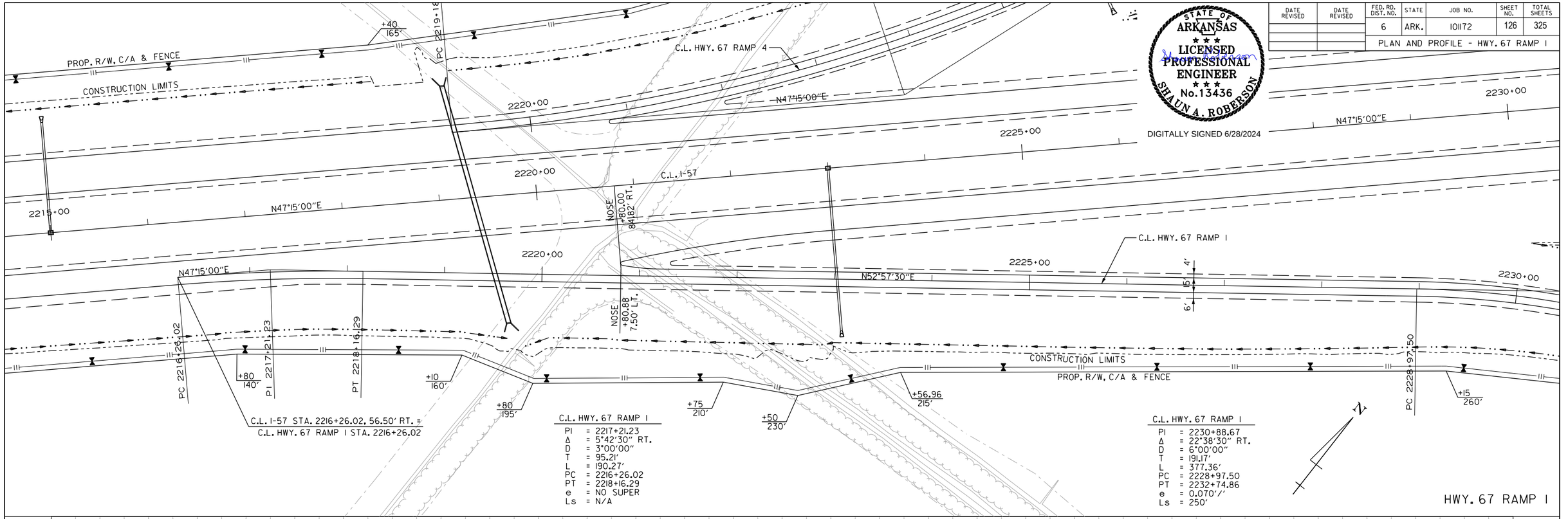
330 320 310 300 290 280 270 260 250 240

2035+00 2036+00 2037+00 2038+00 2039+00 2040+00 2041+00 2042+00 2043+00 2044+00

CGGervasini 6/28/2024 1:32:27 PM
WORKSPACE: AHTD
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REVISED DATE:

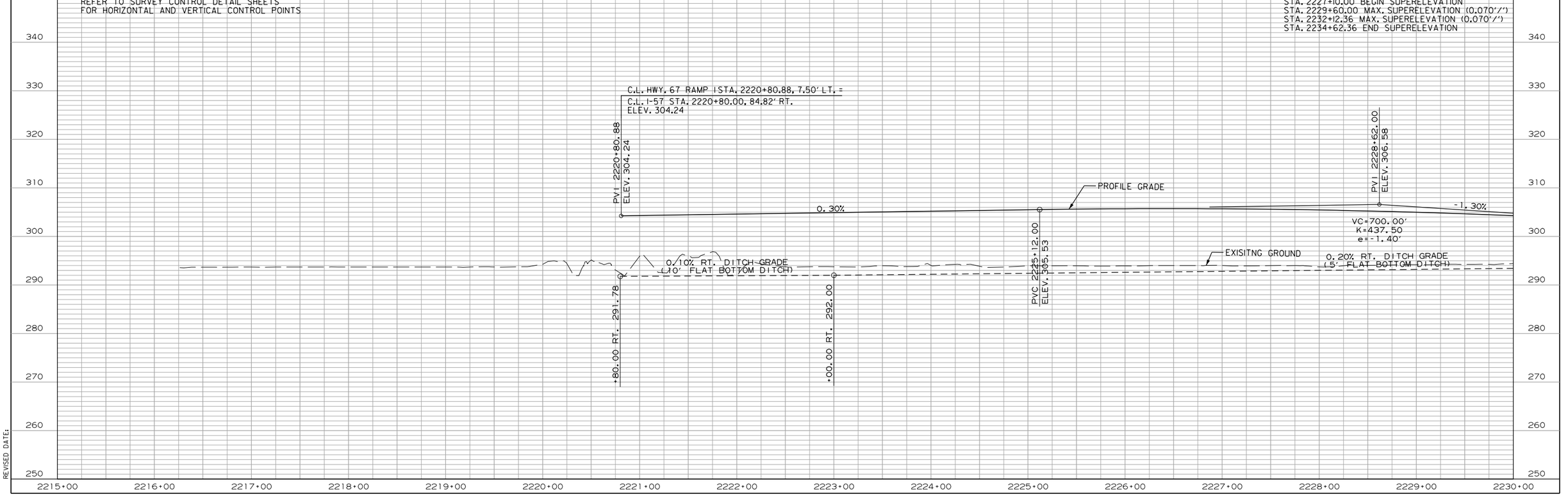
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	126	325
		PLAN AND PROFILE - HWY. 67 RAMP 1				

STATE OF ARKANSAS
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SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024



REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS

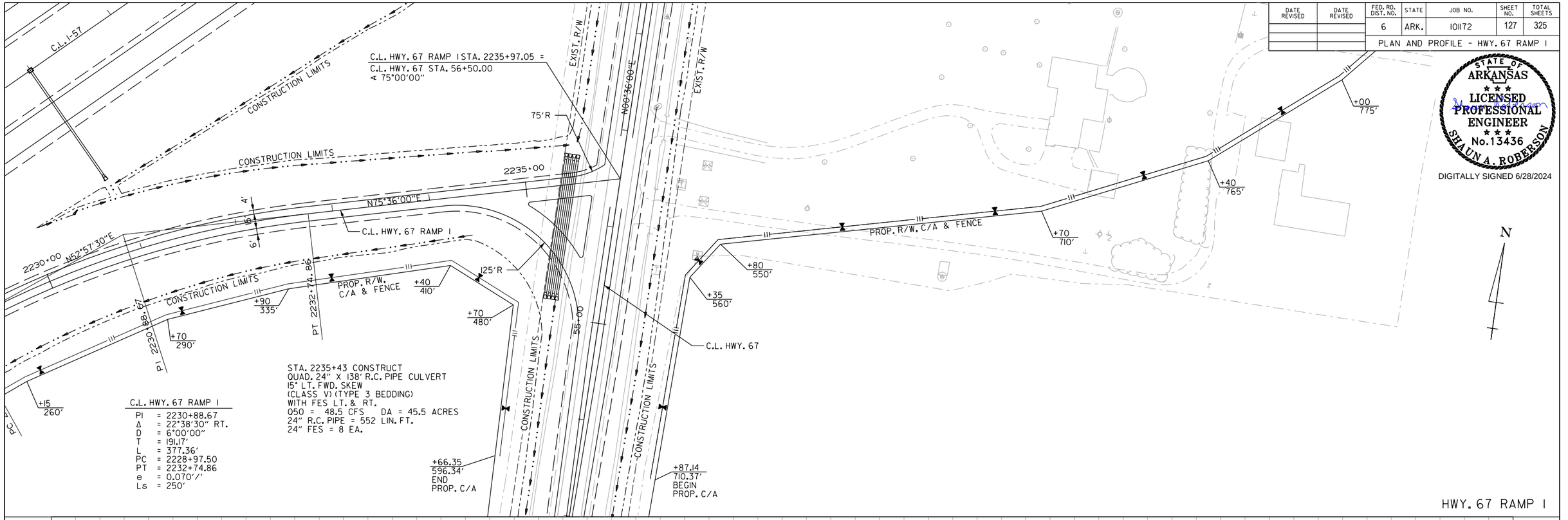
STA. 2227+10.00 BEGIN SUPERELEVATION
STA. 2229+60.00 MAX. SUPERELEVATION (0.070'/')
STA. 2232+12.36 MAX. SUPERELEVATION (0.070'/')
STA. 2234+62.36 END SUPERELEVATION



CGGervasini 6/28/2024 1:32:27 PM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	127	325
		PLAN AND PROFILE - HWY. 67 RAMP I				

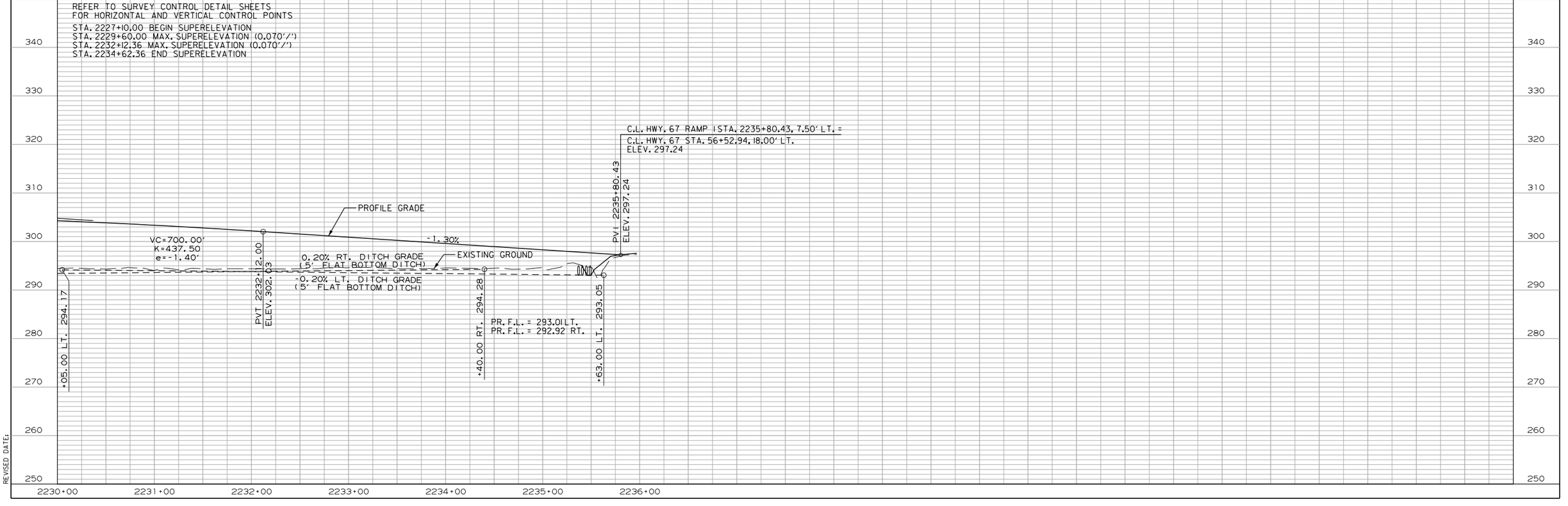
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13436
SHAUN A. ROBBERSON
DIGITALLY SIGNED 6/28/2024



HWY. 67 RAMP I

REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS

STA. 2227+10.00 BEGIN SUPERELEVATION
STA. 2229+60.00 MAX. SUPERELEVATION (0.070'/')
STA. 2232+12.36 MAX. SUPERELEVATION (0.070'/')
STA. 2234+62.36 END SUPERELEVATION



CGervasini 6/28/2024 1:32:28 PM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	128	325
		PLAN AND PROFILE - HWY. 67 RAMP 4				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

C.L. HWY. 67 RAMP 4
PI = 2223+84.60
Δ = 27°25'00" LT.
D = 3°00'00"
T = 465.86'
L = 913.88'
PC = 2219+18.74
PT = 2228+32.62
e = 0.058'/'
Ls = 300'

STA. 2226+00 CONSTRUCT
30" X 104' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
WITH FES LT. & RT.
Q50 = 25.9 CFS DA = 13.5 ACRES

N

+40 165'
PC 2219+18.74
C.L. I-57 STA. 2219+18.74, 68.50' LT. =
C.L. HWY. 67 RAMP 4 STA. 2219+18.74
+10 180'
+04.75 215'
PI 2223+84.60
PROP. R/W, C/A & FENCE
+75 295'
CONSTRUCTION LIMITS
+35 370'
PT 2228+32.62
2230+00
N47°50'00"E
2220+00
NOSE +80.07 7.50' RT.
C.L. HWY. 67 RAMP 4
2225+00
6'
15'
4'
N47°15'00"E
C.L. I-57
C.L. HWY. 67 RAMP 1
NOSE +80.51 67.84' LT.
2220+00
2225+00
CONSTRUCTION LIMITS
CONSTRUCTION LIMITS
HWY. 67 RAMP 4

REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS

STA. 2216+93.74 BEGIN SUPERELEVATION
STA. 2219+93.74 MAX. SUPERELEVATION (0.058'/')
STA. 2227+57.62 MAX. SUPERELEVATION (0.058'/')
STA. 2230+57.62 END SUPERELEVATION

C.L. HWY. 67 RAMP 4 STA. 2220+80.07, 7.50' RT. =
C.L. I-57 STA. 2220+80.51, 67.84' LT.
ELEV. 304.58

PVI 2220+80.07
ELEV. 304.58

PROFILE GRADE
0.30%

EXISTING GROUND

+80.07 LT. 292.62

+00.00 RT. 293.70

0.10% RT. DITCH GRADE
5' FLAT BOTTOM DITCH
0.11% LT. DITCH GRADE
10' FLAT BOTTOM DITCH

PR. F.L. = 293.19 LT.
PR. F.L. = 293.70 RT.

340 330 320 310 300 290 280 270 260 250

2219+00 2220+00 2221+00 2222+00 2223+00 2224+00 2225+00 2226+00 2227+00 2228+00 2229+00 2230+00 2231+00 2232+00 2233+00

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	129	325
		PLAN AND PROFILE - HWY. 67 RAMP 4				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13436
SHAUN A. ROBBERSON
DIGITALLY SIGNED 6/28/2024

STA. 2244+80 CONSTRUCT
TRP. 24" X 106' R.C. PIPE CULVERT
15° LT. FWD. SKEW
(CLASS V) (TYPE 3 BEDDING)
WITH FES LT. & RT.
Q50 = 32.9 CFS DA = 29.9 ACRES
24" R.C. PIPE = 318 LIN. FT.
24" FES = 6 EA.

C.L. HWY. 67 RAMP 4
PI = 2238+91.49
Δ = 55°46'00" RT.
D = 8°00'00"
T = 378.94'
L = 697.08'
PC = 2235+12.55
PT = 2242+09.63
e = 0.084'/'
Ls = 300'

C.L. HWY. 67 RAMP 4 STA. 2245+34.63 =
C.L. HWY. 67 STA. 68+50.00
∢ 75°00'00"

C.L. HWY. 67 RAMP 4 STA. 2245+13.99, 7.50' RT.
C.L. HWY. 67 STA. 68+37.41, 18.00' LT. =
ELEV. 298.03

REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS

STA. 2232+87.55 BEGIN SUPERELEVATION
STA. 2235+87.55 MAX. SUPERELEVATION (0.084'/')
STA. 2241+34.63 MAX. SUPERELEVATION (0.084'/')
STA. 2244+34.63 END SUPERELEVATION

HWY. 67 RAMP 4

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	130	325
		PLAN AND PROFILE - HWY. 67				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

STA. 50+70 INSTALL
DBL. 24" X 46' PIPE CULVERT
LT. SIDE DRAIN
CONSTRUCT APPROACH = 85 CU. YDS.

PT 2232+74.86
PROP. R/W, C/A & FENCE
N
C.L. HWY. 67 RAMP I
CONSTRUCTION LIMITS
+66.35
596.34'
END
PROP. C/A
+40
410'
+70
480'
+40.00
100' TRANSITION
TO MATCH EXISTING
330' TAPER
+70.00
+65
810'
+84
790'
+25
755'
+71.45
838.67'
T.C.E.
+99.40
795'
PROP. R/W
125'R
2235.00
75' R
C.L. HWY. 67 STA. 56+50.00 =
C.L. HWY. 67 RAMP I STA. 2235+97.05
Δ 75°00'00"
EXIST. R/W
20'
CONSTRUCTION LIMITS
CONSTRUCTION LIMITS
N47°15'00"E
C.L. I-57
8'
50+00
EXISTING
24'
+70
8'
55+00
60+00
65+00
N00°36'00"E
C.L. HWY 67
35'
EXIST. R/W
+58.72
921.04'
20'
T.C.E.
+06.71
885'
+40
860'
PROP. R/W
+87.14
710.37'
BEGIN
PROP. C/A
PROP. R/W, C/A & FENCE
+35
560'
+10
910'
+90
930'
+80
550'
CONSTRUCTION LIMITS
2240.00

STA. 50+70 INSTALL
DBL. 24" X 46' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 85 CU. YDS.

STA. 56+22 IN PLACE
24" X 45' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 57+08 IN PLACE
24" X 24' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

C.L. HWY. 67 STA. 62+50.00 =
C.L. I-57 STA. 2239+45.72
Δ 46°39'00"

STA. 62+65 IN PLACE
24" X 25' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 63+36 IN PLACE
24" X 31' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 64+40 IN PLACE
18" X 25' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 63+81 IN PLACE
24" X 26' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

HWY. 67

REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS

100' VERTICAL TRANSITION
TO MATCH EXISTING
+40.00
+40.00
+40.00 LT. 292.70
+40.00 RT. 292.98
EXISTING GROUND
NOTCH, WIDEN, AND OVERLAY
0.07% RT. DITCH GRADE
(3' FLAT BOTTOM DITCH)
0.06% LT. DITCH GRADE
(3' FLAT BOTTOM DITCH)

340 330 320 310 300 290 280 270 260 250

50+00 51+00 52+00 53+00 54+00 55+00 56+00 57+00 58+00 59+00 60+00 61+00 62+00 63+00 64+00 65+00

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	131	325
		PLAN AND PROFILE - HWY. 67				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

N

PT 2242+09.63

C.L. HWY. 67 RAMP 4

CONSTRUCTION LIMITS

C.L. HWY. 67
PI = 72+23.74
Δ = 0°10'00" RT.
D = 0°30'00"
T = 16.67'
L = 33.34'
PC = 72+07.07
PT = 72+40.41
e = NO SUPER
Ls = N/A

STA. 74+30 INSTALL
24" X 44' PIPE CULVERT
LT. SIDE DRAIN
CONSTRUCT APPROACH = 78 CU. YDS.

C.L. HWY. 67 STA. 68+50.00 =
C.L. HWY. 67 RAMP 4 STA. 2245+34.63
∢ 75°00'00"

+00 565'

+75 580'

125'R

75'R

CONSTRUCTION LIMITS

2245+00

65+00

8' 35' 8'

C.L. HWY 67 N00°36'00"E

70+00

+30.00

+02.46
712.10'
END
PROP. C/A

330' TAPER

PROP. R/W, C/A & FENCE

72+23.74 PI

PROP. R/W

+60.00

100' TRANSITION
TO MATCH EXISTING

+50 865'

+85 905'

+05 925'

+86.61 890'

T.C.E.

+32.59 921.41'

EXIST. R/W

20'

8' 24' 8'

N00°46'00"E

+68

+30

75+00

8' EXISTING 24'

CONSTRUCTION LIMITS

22'

20'

EXIST. R/W

STA. 66+15 IN PLACE
18" X 33' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 69+75 IN PLACE
18" X 24' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

PROP. R/W, C/A & FENCE

PROP. R/W

+19.62 838.78'

+60 750'

+40 505'

+23.43 597.91'
BEGIN
PROP. C/A

PC 72+07.07

PT 72+40.41

STA. 67+42 IN PLACE
18" X 33' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

+50 425'

STA. 71+68 INSTALL
DBL. 24" X 48' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 75 CU. YDS.

STA. 73+60 IN PLACE
18" X 24' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
DBL. 24" X 46' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 72 CU. YDS.

HWY. 67

REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS

NOTCH, WIDEN, AND OVERLAY

+60.00 +60.00

100' VERTICAL TRANSITION
TO MATCH EXISTING

EXISTING GROUND

0.07% RT. DITCH GRADE
(3' FLAT BOTTOM DITCH)
0.06% LT. DITCH GRADE
(3' FLAT BOTTOM DITCH)

+60.00 LT. 294.00
+60.00 RT. 294.53

340 330 320 310 300 290 280 270 260 250

65+00 66+00 67+00 68+00 69+00 70+00 71+00 72+00 73+00 74+00 75+00

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	132	325
		PLAN AND PROFILE - C.R. 139				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

STA.	STA.	SIDE	GUARDRAIL (TYPE A)	THRIE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)
207+79.57	209+98.32	RT.	150 LIN. FT.	1 EACH	1 EACH
208+42.90	209+86.65	LT.	75 LIN. FT.	1 EACH	1 EACH

STA. 207+70 CONSTRUCT
48" X 120' R.C. PIPE CULVERT
(CLASS IV) (TYPE 3 BEDDING)
WITH FES LT. & RT.
QIO = 32.4 CFS DA = 46.3 ACRES

STA. 209+67.19 CONSTRUCT
TYPE N-2 DROP INLET LT.
(2'3" X 3' X H=3'0") WITH
12" X 74' Z.C.C.S.P. CULVERT
TO CONCRETE SPILLWAY (TYPE A)

STA. 214+53.81 CONSTRUCT
TYPE N-2 DROP INLET LT.
(2'3" X 3' X H=3'0") WITH
12" X 72' Z.C.C.S.P. CULVERT
TO CONCRETE SPILLWAY (TYPE A)

100' TRANSITION TO MATCH EXIST.

EXISTING 19'

20'

4'

4'

PROP. R/W

PROP. R/W C/A & FENCE

CONSTRUCTION LIMITS

C.L. C.R. 139

N00°08'00"E

C.L. I-57

BEGIN BRIDGE
STA. 210+08.80

END BRIDGE
STA. 214+22.20

STA. 207+74 IN PLACE
24" R.C. PIPE CULVERT
CROSS DRAIN
REMOVE

STA. 209+77.19 CONSTRUCT
TYPE N-2 DROP INLET RT.
(2'3" X 3' X H=3'0") WITH
12" X 86' Z.C.C.S.P. CULVERT
TO CONCRETE SPILLWAY (TYPE A)

C.L. C.R. 139 STA. 212+00.00 =
C.L. I-57 STA. 211+89.00
∢ 67°22'00"

STA. 214+63.81 CONSTRUCT
TYPE N-2 DROP INLET RT.
(2'3" X 3' X H=3'0") WITH
12" X 81' Z.C.C.S.P. CULVERT
TO CONCRETE SPILLWAY (TYPE A)

C.R. 139

REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS

100' VERTICAL TRANSITION TO MATCH EXISTING

PVI 203+00.00
ELEV. 294.12

PVC 204+00.00
ELEV. 294.42

VC=400.00'
K=70.18
e=2.85'

PVI 206+00.00
ELEV. 295.02

PVT 208+00.00
ELEV. 307.02

PVC 208+37.50
ELEV. 309.27

PVI 212+00.00
ELEV. 331.02

VC=725.00'
K=60.42
e=-10.88'

PROFILE GRADE

EXISTING GROUND

0.30%

6.00%

-6.00%

-0.10% LT. DITCH GRADE

0.06% RT. DITCH GRADE

0.45% LT. DITCH GRADE

0.10% LT. DITCH GRADE

+00.00 LT. 287.97
+00.00 RT. 284.40

+70.00 LT. 287.50
PR. F.L. = 287.50 LT.
PR. F.L. = 284.68 RT.

+55.00 LT. 288.78

+25.00 RT. 284.89

+85.00 LT. 288.30

+90.00 RT. 285.00

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	133	325
		PLAN AND PROFILE - C.R. 139				

STA.	STA.	SIDE	GUARDRAIL (TYPE A)	THRIE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)
214+32.68	216+51.43	LT.	150 LIN. FT.	1 EACH	1 EACH
214+44.35	215+88.10	RT.	75 LIN. FT.	1 EACH	1 EACH

STA. 220+92.00 CONSTRUCT
TRP. 5' x 3' x 48' R.C. BOX CULVERT
WITH 3:1 WINGS LT. AND RT.
QIO = 135.1 CFS DA = 202.8 ACRES

STA. 220+55 CONSTRUCT
APPROACH ON LT. = 30 CU. YDS.

N

+90
315'

CONSTRUCTION LIMITS

PROP. R/W

+90
635'

+70
830'

+00.00

100' TRANSITION
TO MATCH EXIST.

+00.00

+53.84
953'

20'

4'

220+00

224+00

215+00

N00°08'00"E

C.L. C.R. 139

+55

+26

20'

4'

20'
EXISTING

+09.26
930'

18'

+00
780'

CONSTRUCTION LIMITS

PROP. R/W

+15
505'

STA. 220+26 CONSTRUCT
APPROACH ON RT. = 290 CU. YDS.

STA. 220+26.00 CONSTRUCT
DBL. 7' x 4' x 43' R.C. BOX CULVERT
WITH 3:1 WINGS LT. AND RT.
QIO = 385 CFS DA = 860 ACRES

+40
175'

PROP. R/W
C/A & FENCE

STA. 216+29 IN PLACE
24" C.M. PIPE CULVERT
CROSS DRAIN
REMOVE

C.R. 139

REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS

PVC 216+15.00
ELEV. 306.12

-6.00%

PVT 215+62.50
ELEV. 309.27

VC=400.00'
K=69.69
e=2.87'

PROFILE GRADE

EXISTING GROUND

PVT 220+15.00
ELEV. 293.60

PVI 221+00.00
ELEV. 293.38

-0.26%

1.00% LT.
DITCH GRADE

0.10% LT. DITCH GRADE

0.08% RT. DITCH GRADE

PVI 218+15.00
ELEV. 294.12

+05.00 LT. 288.92

+00.00 LT. 289.87
+05.00 RT. 285.49

+45.00 RT. 285.65

+00.00 RT. 285.86

PR. F.L. = 287.80 LT.
PR. F.L. = 285.83 RT.

+00.00

+00.00

100' VERTICAL TRANSITION
TO MATCH EXISTING

0.38% RT. DITCH GRADE

350
340
330
320
310
300
290
280
270
260

215+00 216+00 217+00 218+00 219+00 220+00 221+00 222+00 223+00 224+00

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13436
SHAUN A. ROBBERSON
DIGITALLY SIGNED 6/28/2024

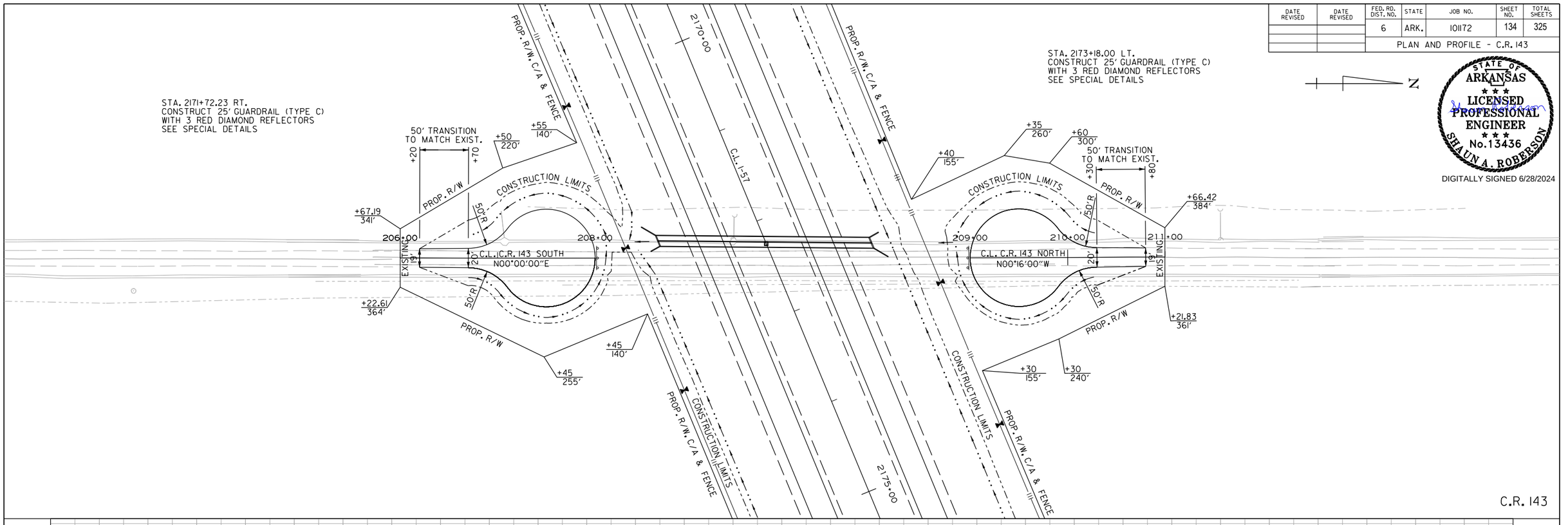
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	134	325
		PLAN AND PROFILE - C.R. 143				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13436
SHAUN A. ROBERSON
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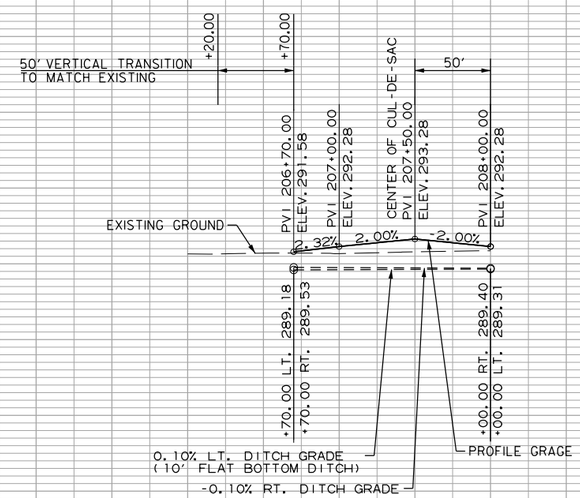
STA. 2171+72.23 RT.
CONSTRUCT 25' GUARDRAIL (TYPE C)
WITH 3 RED DIAMOND REFLECTORS
SEE SPECIAL DETAILS

STA. 2173+18.00 LT.
CONSTRUCT 25' GUARDRAIL (TYPE C)
WITH 3 RED DIAMOND REFLECTORS
SEE SPECIAL DETAILS

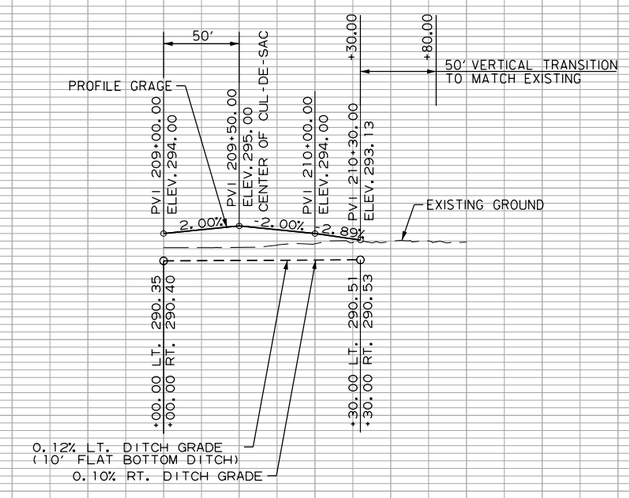


C.R. 143

REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS



C.R. 143 SOUTH



C.R. 143 NORTH

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	135	325
		PLAN AND PROFILE - HWY. 62 TEMP. RAMP 2				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

C.L. TEMP. HWY. 62

C.L. HWY. 62 TEMP. RAMP 2 STA. 270+00.00 =
C.L. TEMP. HWY. 62 STA. 252+00.00
∢ 90°00'00"

STA. 270+72 CONSTRUCT
QUINT. 36" X 114' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
WITH FES LT. & RT.
Q50 = 289 CFS DA = 241.8 ACRES
36" R.C. PIPE = 570 LIN. FT.
36" FES = 10 EA.

75' R
125' R
270+00
PC 271+86.81
C.L. HWY. 62 TEMP. RAMP 2
PI 274+00.26
PT 276+07.87
C.L. HWY. 62 RAMP 2
CONSTRUCTION LIMITS
N00°35'30"W
6%
4%
275+00
2030+00
N23°45'00"W
N00°30'00"E
2035+00
CONSTRUCTION LIMITS
PROP. R/W, C/A & FENCE
PC 2030+52
+40
300'
+40
225'
PI 2034+62.42
+95
500'
+85
580'
+65
665'
25+00
00+00

C.L. HWY. 62 TEMP. RAMP 2 STA. 276+09.66 =
C.L. HWY. 62 RAMP 2 STA. 2027+97.04

C.L. HWY. 62 TEMP. RAMP 2
PI = 274+00.26
Δ = 23°09'30" LT.
D = 5°30'00"
T = 213.45'
L = 421.06'
PC = 271+86.81
PT = 276+07.87
e = 0.066'/'
Ls = 205'

HWY. 62 TEMP. RAMP 2

REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS

STA. 271+85.02 BEGIN SUPERELEVATION
STA. 273+97.34 MAX SUPERELEVATION (0.053'/')
STA. 273+97.34 MAX SUPERELEVATION (0.053'/')
STA. 276+09.66 END SUPERELEVATION

C.L. HWY. 62 TEMP. RAMP 2 STA. 270+18.00, 7.50' LT. =
C.L. TEMP. HWY. 62 STA. 251+92.50, 18.00' LT.
ELEV. 288.96

C.L. HWY. 62 TEMP. RAMP 2 STA. 276+09.66, 7.50' LT. =
C.L. HWY. 62 RAMP 2 STA. 2027+97.04, 7.50' LT.
ELEV. 296.34

PVI 270+18.00
ELEV. 288.96
PVI 272+00.00
ELEV. 292.45
PVI 276+09.66
ELEV. 296.34
PROFILE GRADE
1.92%
0.95%
EXISTING GROUND
1.05% LT. DITCH GRADE
1.20% RT. DITCH GRADE
(5' FLAT BOTTOM DITCH
STA. 273+00 TO STA. 276+09.66)
VC=200.00'
K=206.19
e=-0.24'
+72.00 LT. 280.68
+72.00 RT. 279.84
PVC 271+00.00
ELEV. 290.53
PVT 273+00.00
ELEV. 293.40
+09.66 LT. 286.30
+09.66 RT. 286.29
PR. F.L. = 280.68 LT.
PR. F.L. = 279.84 RT.

330 320 310 300 290 280 270 260 250 240

270+00 271+00 272+00 273+00 274+00 275+00 276+00 277+00

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	136	325
		PLAN AND PROFILE - HWY. 62 TEMP. RAMP 3				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

EXIST. R/W, PROP. C/A & FENCE

C.L. HWY. 62 TEMP. RAMP 3 STA. 300+00.00 =
C.L. TEMP. HWY. 62 STA. 243+00.00
∧ 90°00'00"

+86.51
670'

+05
550'

+30
480'

STA. 300+58 CONSTRUCT
QUINT. 36" X 104' R.C. PIPE CULVERT
(CLASS V) (TYPE 3 BEDDING)
WITH FES LT. & RT.
Q50 = 196 CFS DA = 222.3 ACRES
36" R.C. PIPE = 520 LIN. FT.
36" FES = 10 EA.

PROP. R/W, C/A & FENCE

C.L. HWY. 62 RAMP 3

125' R

PI 303+43.91

CONSTRUCTION LIMITS

305+00

N26°50'00"E

PC 2030+29.73

+66.27
275'

2032+38.24

+95
235'

+35
210'

PT 2034+42.23

2030+00

2035+00

N06°12'30"E

6'

18'

4'

300+00

N00°35'30"W

75' R

PC 300+89.72

C.L. HWY. 62 TEMP. RAMP 3

PT 305+88.35

CONSTRUCTION LIMITS

C.L. HWY. 62 TEMP. RAMP 3 STA. 306+11.72 =
C.L. HWY. 62 RAMP 3 STA. 2027+74.93

C.L. TEMP. HWY. 62

245+00

2035+00

C.L. HWY. 62 TEMP. RAMP 3

PI = 303+43.91
Δ = 27°25'30" RT.
D = 5°30'00"
T = 254.19'
L = 498.63'
PC = 300+89.72
PT = 305+88.35
e = 0.066'/'
Ls = 250'

HWY. 62 TEMP. RAMP 3

REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS

STA. 300+66.36 BEGIN SUPERELEVATION
STA. 303+16.36 MAX SUPERELEVATION (0.066'/')
STA. 303+61.71 MAX SUPERELEVATION (0.066'/')
STA. 306+11.71 END SUPERELEVATION

C.L. HWY. 62 TEMP. RAMP 3 STA. 300+12.00, 7.50' RT. =
C.L. TEMP. HWY. 62 STA. 243+07.50, 12.00' LT.
ELEV. 290.45

C.L. HWY. 62 TEMP. RAMP 3 STA. 306+11.72, 7.50' RT. =
C.L. HWY. 62 RAMP 2 STA. 2027+74.93, 7.50' RT.
ELEV. 294.78

PVI 300+12.00
ELEV. 290.45

PVI 302+00.00
ELEV. 291.86

PVI 306+11.72
ELEV. 294.78

PROFILE GRADE

EXISTING GROUND

0.71%

0.75%

0.78% LT. DITCH GRADE

10' FLAT BOTTOM DITCH

0.48% RT. DITCH GRADE

PVC 301+00.00
ELEV. 291.11

PVT 303+00.00
ELEV. 292.37

VC=200.00'
K=5000.00
e=-0.01'

+58.00 LT. 285.35
+58.00 RT. 284.77

+11.72 LT. 289.69
+11.72 RT. 287.41

PR. F.L. = 285.35 LT.
PR. F.L. = 284.77 RT.

330 320 310 300 290 280 270 260 250 240

300+00 301+00 302+00 303+00 304+00 305+00 306+00 307+00

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	137	325
		PLAN AND PROFILE - TEMPORARY HWY. 62				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.13436
SHAUN A. ROBERSON
DIGITALLY SIGNED 6/28/2024

STA. 241+86 IN PLACE
42" X 52' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 247+54 IN PLACE
48" X 52' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 252+98 IN PLACE
40" X 25' STEEL PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 254+54 IN PLACE
15" X 22' C.P. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

PROP. R/W, C/A & FENCE
CONSTRUCTION LIMITS
C.L. I-57
2025+00
N
C.L. HWY. 62 TEMP. RAMP 3
C.L. TEMP. HWY. 62 STA. 243+00.00 =
C.L. HWY. 62 TEMP. RAMP 3 STA. 300+00.00
∢ 90°00'00"
C.L. TEMP. HWY. 62 STA. 247+62.11
C.L. I-57 STA. 2022+38.70
∢ 88°54'30"
PC 300+89.78
EXISTING R/W
+86.51
670'
300+00
C.L. TEMP. HWY. 62
245+00
N89°24'30"E
EXISTING
24'
8'
EXISTING R/W
+15.00
100' TRANSITION
TO MATCH EXISTING
C.L. I-57 (FUTURE)
270' TAPER
250+00
36'
20'
CONSTRUCTION LIMITS
+85.00
PC 271+86.81
C.L. HWY. 62 TEMP. RAMP 2
C.L. TEMP. HWY. 62 STA. 252+00.00 =
C.L. HWY. 62 TEMP. RAMP 2 STA. 270+00.00
∢ 90°00'00"
270+00
+57.05
830'
BEGIN FENCE
+48.47
884'
BEGIN
PROP. C/A
+65
665'
+65
780'
+39.61
876.68'
255+00
+00.00
+70.00

STA.	STA.	SIDE	GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)
253+21.79	255+21.79	RT.	150 LIN. FT.	1 EACH
254+14.92	255+39.92	LT.	75 LIN. FT.	1 EACH

STA. 247+36 IN PLACE
24" X 24' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 249+18 IN PLACE
18" X 26' STEEL PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 249+45 IN PLACE
24" X 38' C.M. PIPE CULVERT
REMOVE AND INSTALL
DBL. 30" X 44' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 56 CU. YDS.

STA. 251+83 IN PLACE
24" X 25' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

TEMPORARY HWY. 62

REFER TO SURVEY CONTROL DETAIL SHEETS
FOR HORIZONTAL AND VERTICAL CONTROL POINTS

100' VERTICAL TRANSITION TO MATCH EXISTING
+15.00
+15.00
NOTCH, WIDEN, AND OVERLAY
+00.00
100' VERTICAL TRANSITION TO MATCH EXISTING
+00.00
EXISTING GROUND
-0.30% LT. DITCH GRADE
(5' FLAT BOTTOM DITCH)
-0.50% RT. DITCH GRADE
-0.68% LT. DITCH GRADE
(5' FLAT BOTTOM DITCH)
+42.00 LT. 284.77
+12.00 LT. 283.66
+50.00 RT. 286.30
+00.00 LT. 278.30
+00.00 RT. 282.55

330 320 310 300 290 280 270 260 250 240

241+00 242+00 243+00 244+00 245+00 246+00 247+00 248+00 249+00 250+00 251+00 252+00 253+00 254+00 255+00 256+00

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
07-25-2024		6	ARK.	101172	138	325
		SIGN QUANTITY SHEET				



DIGITALLY SIGNED 7/25/2024

SIGN NO./LOCATION	STANDARD ROADSIDE SIGNS TO BE MOUNTED	OMNI-DIRECTIONAL POST ASSEMBLIES				
		G-1	G-2	G2-1	G2-2	G2-3
		EACH	EACH	EACH	EACH	EACH
SS-062-11-STA223+50EB	W3-5	1				
SS-062-11-STA231+00WB	R2-1	1				
SS-062-11-STA231+00EB	R2-1	1				
SS-062-11-STA237+00EB	M2-1, M1-5	1				
SS-062-11-STA240+00WB	M3-4,M1-4; M3-3, M1-4; D2-1			1		
SS-062-11-STA243+00EB	W1-7			1		
GM-062-11-STA249+00EB	M3-1,M1-5, M5-1L; M3-2, M1-4, M6-3; M3-1, M1-4, M6-3, D1-2			1		
SS-062-11-STA251+50EB	M3-1, M1-5, M6-1L	1				
SS-062-11-STA254+00EB	M3-2, M1-4; M3-1, M1-4			1		
GM-062-11-STA255+00WB	M3-4,M1-4, M6-3; M3-3, M1-4, M6-3; M3-1, M1-5, M6-1R, D1-2			1		
SS-RAMP-11-STA270+85NB	R1-2	1				
SS-RAMP-11-STA300+25SB	R5-1, R6-1L, R6-1R			1		
SS-RAMP-11-STA300+25SB	R1-1, R6-1L, R6-1R, R5-1			1		
SS-RAMP-11-STA300+30SB	R1-2, R5-1	1				
SS-RAMP-11-STA302+50SB	M3-2,M1-4,M3-1,M1-4,M6-1L; M3-4, M1-4, M3-3,M1-4,M6-1R; D1-2, R5-1a			1		
SS-RAMP-11-STA302+50SB	R5-1a	1				
SS-062-11-STA258+50EB	R2-1	1				
SS-062-11-STA260+00WB	M2-1, M1-5	1				
SS-RAMP-11-STA2029+00SB(L)	W3-1			1		
SS-RAMP-11-STA2029+00SB(R)	W3-1			1		
SS-RAMP-11-STA2032+50SB	W8-1L	1				
SS-RAMP-11-STA2034+00SB	W8-1L	1				
SS-657-11-STA2036+00SB	E5-1			1		
SS-RAMP-11-STA2038+00SB	W8-1L	1				
SS-RAMP-11-STA2038+00SB	W13-2			1		
SS-RAMP-11-STA2039+50SB	W8-1L	1				
SS-RAMP-11-STA2041+00SB	W8-1L	1				
SS-657-11-STA2052+00NB	M3-1, M1-5	1				
SS-657-11-STA2057+00NB	R2-1, R2-2			1		
SS-657-11-STA2067+00SB(L)	W4-2L			1		
SS-657-11-STA2067+00SB(R)	W4-2L			1		
SS-657-11-STA2072+00SB(L)	W9-2R			1		
SS-657-11-STA2072+00SB(R)	W9-2R			1		
SS-657-11-STA2077+00SB(L)	R2-1			1		
SS-657-11-STA2077+00SB(R)	R2-1			1		
SS-657-11-STA2082+00SB(L)	W9-1L			1		
SS-657-11-STA2082+00SB(R)	W9-1L			1		
SS-657-11-STA2087+00SB(L)	R2-1			1		
SS-657-11-STA2087+00SB(R)	R2-1			1		
SS-657-11-STA2100+00SB(L)	W3-5			1		
SS-657-11-STA2100+00SB(R)	W3-5			1		
SS-139-11-STA206+00NB	W8-13	1				
SS-139-11-STA210+05NB	OM3-L	1				
SS-139-11-STA210+15NB	OM3-R	1				
SS-139-11-STA214+15SB	OM3-R	1				
SS-139-11-STA214+30SB	OM3-L	1				
SS-139-11-STA218+25SB	W8-13	1				
SS-657-11-STA2155+00NB(L)	W3-5			1		
SS-657-11-STA2155+00NB(R)	W3-5			1		
SUBTOTALS		22	0	27	0	0

SIGN NO./LOCATION	STANDARD ROADSIDE SIGNS TO BE MOUNTED	OMNI-DIRECTIONAL POST ASSEMBLIES				
		G-1	G-2	G2-1	G2-2	G2-3
		EACH	EACH	EACH	EACH	EACH
SS-657-11-STA2170+00NB(L)	R2-1			1		
SS-657-11-STA2170+00NB(R)	R2-1			1		
SS-657-11-STA2177+00NB(L)	W9-1L			1		
SS-657-11-STA2177+00NB(R)	W9-1L			1		
SS-657-11-STA2182+00NB(L)	R2-1			1		
SS-657-11-STA2182+00NB(R)	R2-1			1		
SS-657-11-STA2187+00NB(L)	W9-2R			1		
SS-657-11-STA2187+00NB(R)	W9-2R			1		
SS-657-11-STA2192+00NB(L)	W4-2L			1		
SS-657-11-STA2192+00NB(R)	W4-2L			1		
SS-657-11-STA2201+00SB	R2-1, R2-2	1				
SS-657-11-STA2206+00SB	M3-3, M1-5	1				
SS-RAMP-11-STA2217+00NB	W8-1L	1				
SS-RAMP-11-STA2218+50NB	W8-1L	1				
SS-RAMP-11-STA2219+00NB	W13-2			1		
SS-RAMP-11-STA2220+00NB	W8-1L	1				
SS-657-STA2223+50NB	E5-1			1		
SS-RAMP-11-STA2224+00NB	W8-1L	1				
SS-RAMP-11-STA2225+50NB	W8-1L	1				
SS-RAMP-STA2229+00NB(L)	W3-1			1		
SS-RAMP-STA2229+00NB(R)	W3-1			1		
SS-067-11-STA50+00NB	M2-1, M1-5	1				
SS-067-11-STA50+00SB	R2-1	1				
SS-067-11-STA52+00SB	M3-3, M1-4	1				
SS-067-11-STA56+50NB	W1-7			1		
GM-067-11-STA65+00NB	M3-3, M1-5, M5-1L; M3-1, M1-4, M6-3; D1-2			1		
SS-RAMP-11-STA2233+50NB	R5-1a	1				
SS-RAMP-11-STA2233+50NB	M3-1,M1-4,M6-1L; M3-3,M1-4,M6-1R; D1-2, R5-1a			1		
SS-RAMP-11-STA2235+20NB	R1-2, R5-1	1				
SS-RAMP-11-STA2235+55NB	R1-1, R6-1L, R6-1R, R5-1			1		
SS-RAMP-11-STA2235+65NB	R5-1, R6-1L, R6-1R			1		
SS-067-11-STA68+00NB	M3-3, M1-5, M6-1L	1				
SS-067-11-STA71+00NB	M3-1, M1-4, D2-1			1		
GM-067-11-STA70+00SB	M3-3, M1-4, M6-3; M3-3, M1-5, M6-1R; D1-2			1		
SS-067-11-STA74+50NB	R2-1	1				
SS-067-11-STA75+00SB	M2-1, M1-5	1				
SS-RAMP-11-STA2244+65SB	R1-2	1				
SUBTOTAL		16	0	21	0	0
TOTALS		**38**	**0**	**48**	**0**	**0**

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
07-25-2024		6	ARK.	101172	139	325
		SIGN QUANTITY SHEET				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16675
CLAIRE E. MCKINNEY

DIGITALLY SIGNED 7/25/2024

STANDARD ROADSIDE SIGN
SHEET ALUMINUM 0.100" THICKNESS (5 SF OR LESS)

SIGN NO.	SIZE OF SIGN	UNIT AREA (SQ. FT.)	QUANTITY REQUIRED	TOTAL SIGN AREA (SQ. FT.)	LEGEND/BACKGROUND
M1-4	24" x 24"	4.00	18	72.00	BLACK/WHITE
M1-5	45" x 36"	11.25	2	22.50	BLACK/WHITE
M1-5	30" x 24"	5.00	10	50.00	BLACK/WHITE
M2-1	21" x 15"	2.19	4	8.75	WHITE/BLUE
M3-1	24" x 12"	2.00	3	6.00	WHITE/BLUE
M3-1	36" x 18"	4.50	1	4.50	WHITE/BLUE
M3-1	24" x 12"	2.00	6	12.00	BLACK/WHITE
M3-2	24" x 12"	2.00	3	6.00	BLACK/WHITE
M3-3	24" x 12"	2.00	5	10.00	BLACK/WHITE
M3-3	24" x 12"	2.00	3	6.00	WHITE/BLUE
M3-3	36" x 18"	4.50	1	4.50	WHITE/BLUE
M3-4	24" x 12"	2.00	3	6.00	BLACK/WHITE
M5-1L	21" x 15"	2.19	2	4.38	WHITE/BLUE
M6-1L	21" x 15"	2.19	2	4.38	WHITE/BLUE
M6-1L	21" x 15"	2.19	2	4.38	BLACK/WHITE
M6-1R	21" x 15"	2.19	2	4.38	WHITE/BLUE
M6-1R	21" x 15"	2.19	2	4.38	BLACK/WHITE
M6-3	21" x 15"	2.19	6	13.13	BLACK/WHITE
OM3-L	12" x 36"	3.00	2	6.00	BLACK/YELLOW
OM3-R	12" x 36"	3.00	2	6.00	BLACK/YELLOW
R2-1	24" x 30"	5.00	5	25.00	BLACK/WHITE
TOTAL 0.100" THICKNESS				**280.25**	

STANDARD ROADSIDE SIGNS
SHEET ALUMINUM 0.125" THICKNESS (GREATER THAN 5 SF)

SIGN NO.	SIZE OF SIGN	UNIT AREA (SQ. FT.)	QUANTITY REQUIRED	TOTAL SIGN AREA (SQ. FT.)	LEGEND/BACKGROUND
D1-2	60" x 30"	12.5	1	12.50	WHITE/GREEN
D1-2	60" x 30"	12.5	1	12.50	WHITE/GREEN
D1-2	72" x 30"	15	1	15.00	WHITE/GREEN
D1-2	72" x 30"	15	1	15.00	WHITE/GREEN
D1-2	72" x 30"	15	1	15.00	WHITE/GREEN
D1-2	72" x 30"	15	1	15.00	WHITE/GREEN
D2-1	72" x 18"	9	1	9.00	WHITE/GREEN
D2-1	72" x 18"	9	1	9.00	WHITE/GREEN
E5-1	72" x 60"	30	2	60.00	WHITE/GREEN
R1-1	48" x 48"	16	2	32.00	WHITE/RED
R1-2	36" x 36"	9	4	36.00	WHITE/RED
R2-1	48" x 60"	20	10	200.00	BLACK/WHITE
R2-2	48" x 48"	16	2	32.00	BLACK/WHITE
R5-1	36" x 36"	9	6	54.00	WHITE/RED
R5-1a	42" x 30"	8.75	4	35.00	WHITE/RED
R6-1L	48" x 18"	6.00	4	24.00	BLACK/WHITE
R6-1R	48" x 18"	6.00	4	24.00	BLACK/WHITE
W1-7	48" x 24"	8	2	16.00	BLACK/YELLOW
W1-8L	30" x 36"	7.5	10	75.00	BLACK/YELLOW
W3-1	48" x 48"	16	4	64.00	BLACK/YELLOW
W3-5	36" x 36"	9	1	9.00	BLACK/YELLOW
W3-5	48" x 48"	16	4	64.00	BLACK/YELLOW
W8-13	36" x 36"	9	2	18.00	BLACK/YELLOW
W4-2L	48" x 48"	16	4	64.00	BLACK/YELLOW
W9-1L	48" x 48"	16	4	64.00	BLACK/YELLOW
W9-2R	48" x 48"	16	4	64.00	BLACK/YELLOW
W13-2	48" x 60"	20	2	40.00	BLACK/YELLOW
TOTAL 0.125" THICKNESS				**1,078.00**	

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
07-25-2024		6	ARK.	101172	140	325
		SIGN QUANTITY SHEET				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16675
CLAIRE E. MCKINNEY

DIGITALLY SIGNED 7/25/2024

SIGN NO./LOCATION	STRUCTURE TYPE	SIGN				BREAKAWAY SIGN SUPPORT								
	TYPE	STANDARD SIGN	GUIDE SIGN LENGTH	GUIDE SIGN HEIGHT	GUIDE SIGN AREA	STEEL SECT. A-572		SIGN POST LENGTH		STUB POST		FOOTINGS			SIGN POST AND STUB
								H-1	H-2	H-1	H-2	DIA.	DEPTH	EMBED.	
	G-2	SQ. FT.	FT.	FT.	SQ. FT.	BEAM	LBS	LIN FT		LIN FT		LIN FT			POUND
GM-657-11-STA2042+00SB	1		14.50	10.50	152.25	W10	22	20.5	22.675	3.33	3.33	2	4.5	3.00	1096.38
GM-657-11-STA2091+00SB	1		14.50	10.00	145.00	W10	22	20	22.175	3.33	3.33	2	4.5	3.00	1074.38
GM-657-11-STA2165+00NB	1		12.50	10.00	125.00	W10	22	20	21.875	3.33	3.33	2	4.5	3.00	1067.78
GM-657-11-STA2216+00NB	1		12.00	10.50	126.00	W10	22	20.5	22.3	3.33	3.33	2	4.5	3.00	1088.13
TOTALS:	**4**				**548.25**										**4326.67**

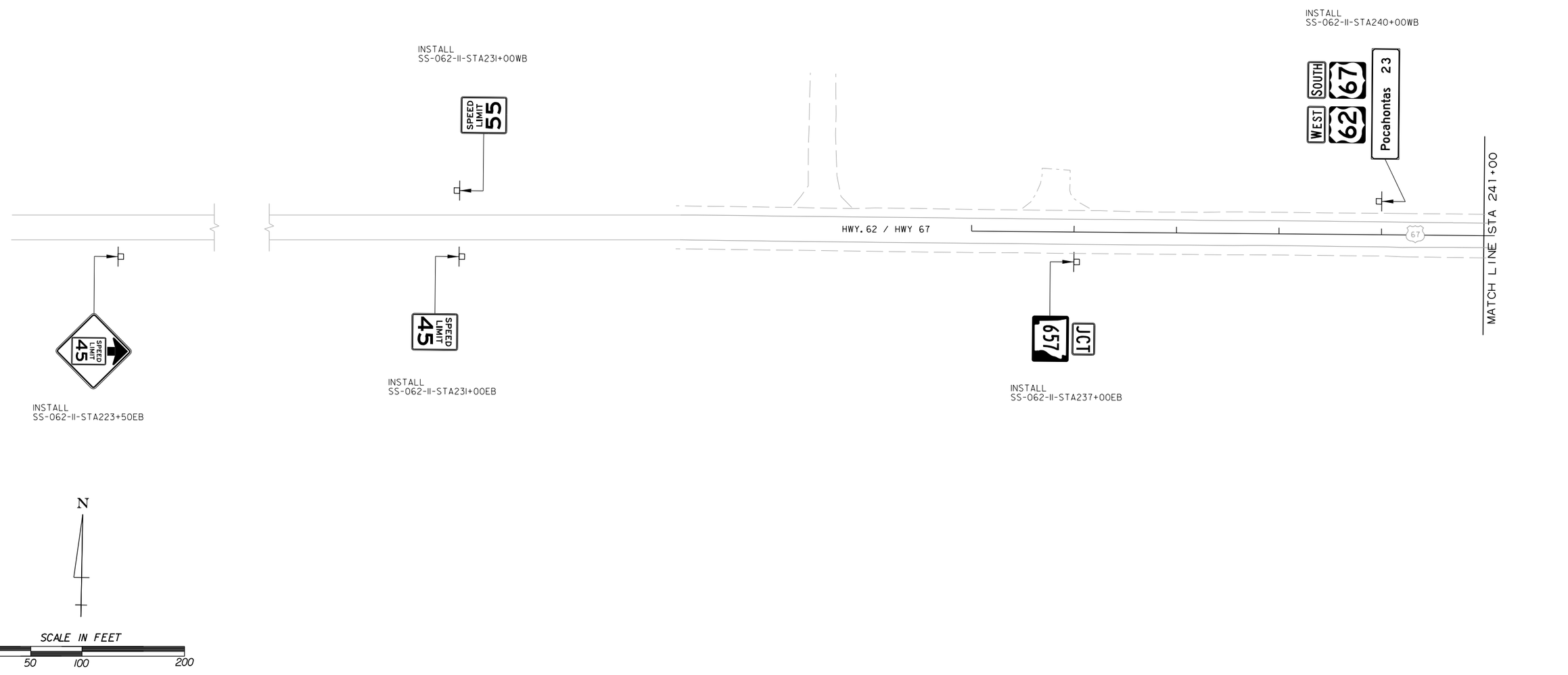
ITEM NUMBER	ITEM	UNIT	ESTIMATED QUANTITY
SS & 725	GUIDE SIGN-ROADSIDE MOUNTED (DEMOUNTABLE LEGEND)	SQ. FT.	548
SS & 726	STANDARD SIGN	SQ. FT.	1358
SS & 730	BREAKAWAY SIGN SUPPORT (TYPE G-2)	POUND	4327
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G-1)	EACH	38
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-1)	EACH	48

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
07-25-2024		6	ARK.	101172	141	325
		SIGN PLACEMENT SHEET				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16675
CLAIRE E. MCKINNEY

DIGITALLY SIGNED 7/25/2024



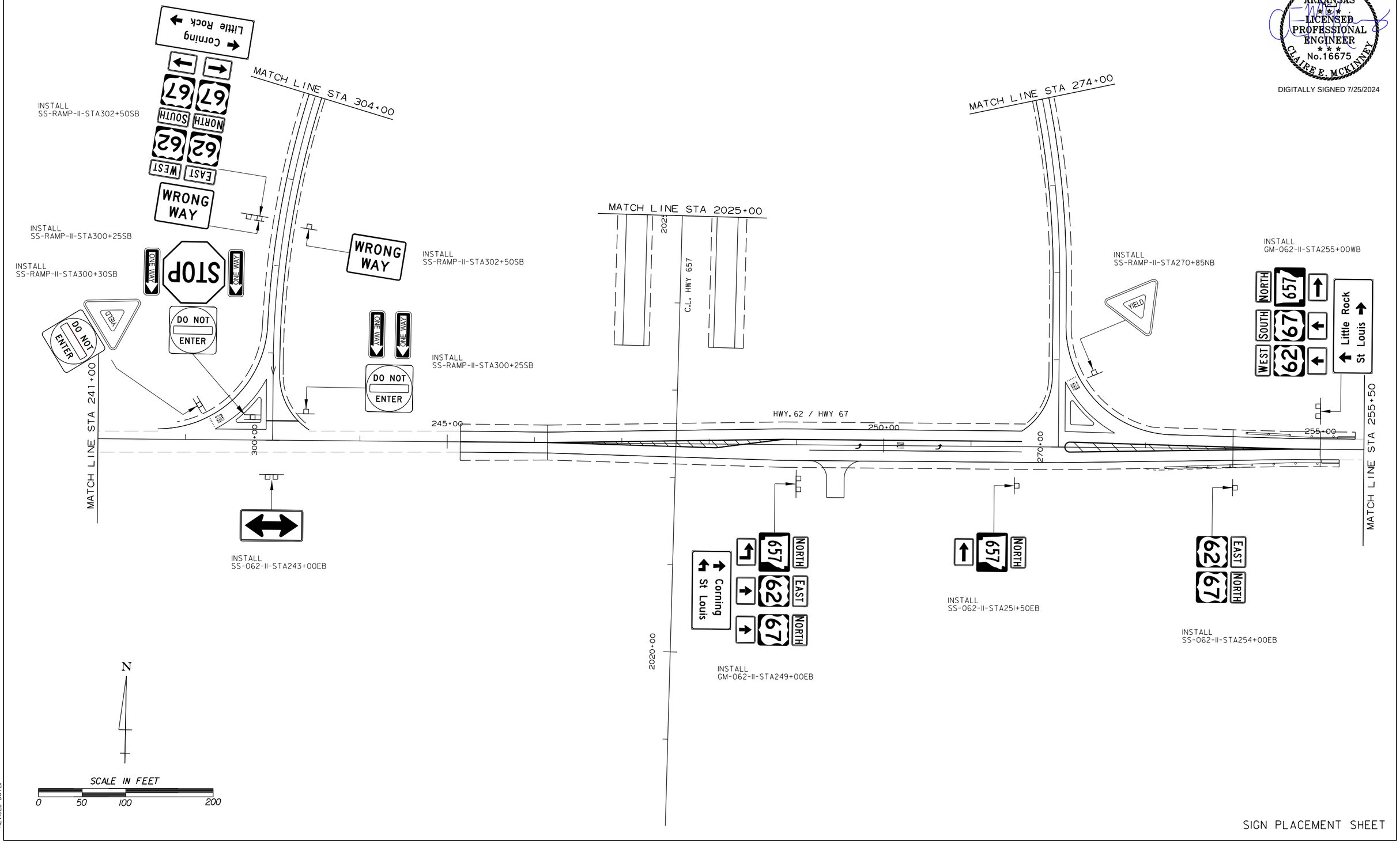
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
07-25-2024		6	ARK.	101172	142	325
		SIGN PLACEMENT SHEET				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16675
CLAIRE E. MCKINNEY

DIGITALLY SIGNED 7/25/2024

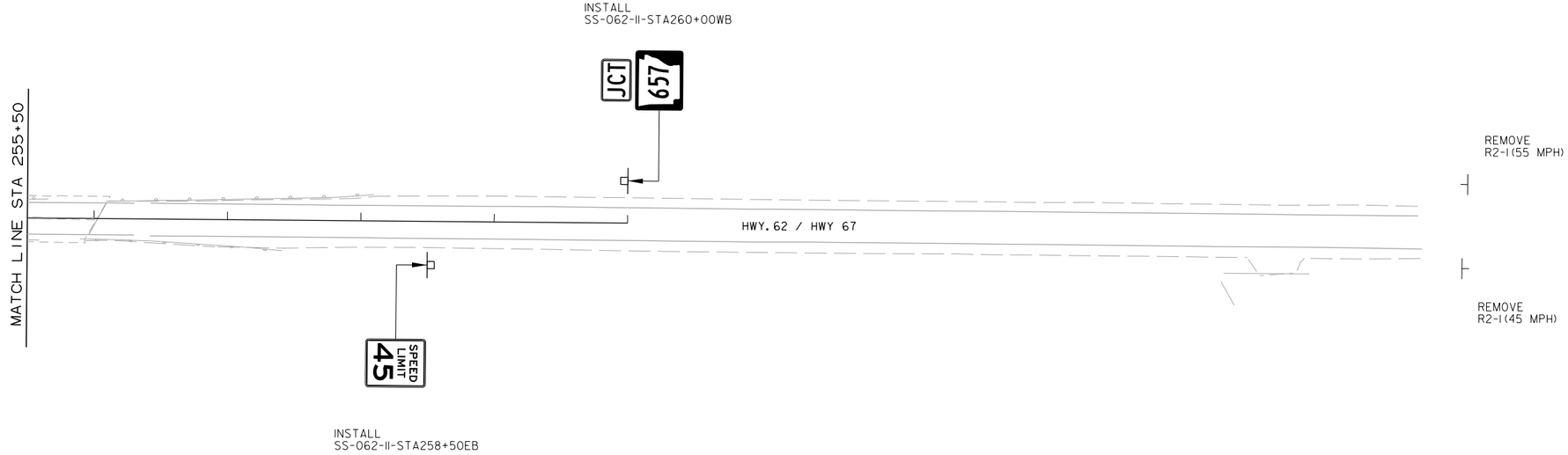


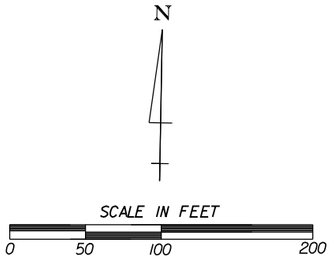
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
07-25-2024		6	ARK.	101172	143	325
		SIGN PLACEMENT SHEET				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16675
CLAIRE E. MCKINNEY

DIGITALLY SIGNED 7/25/2024



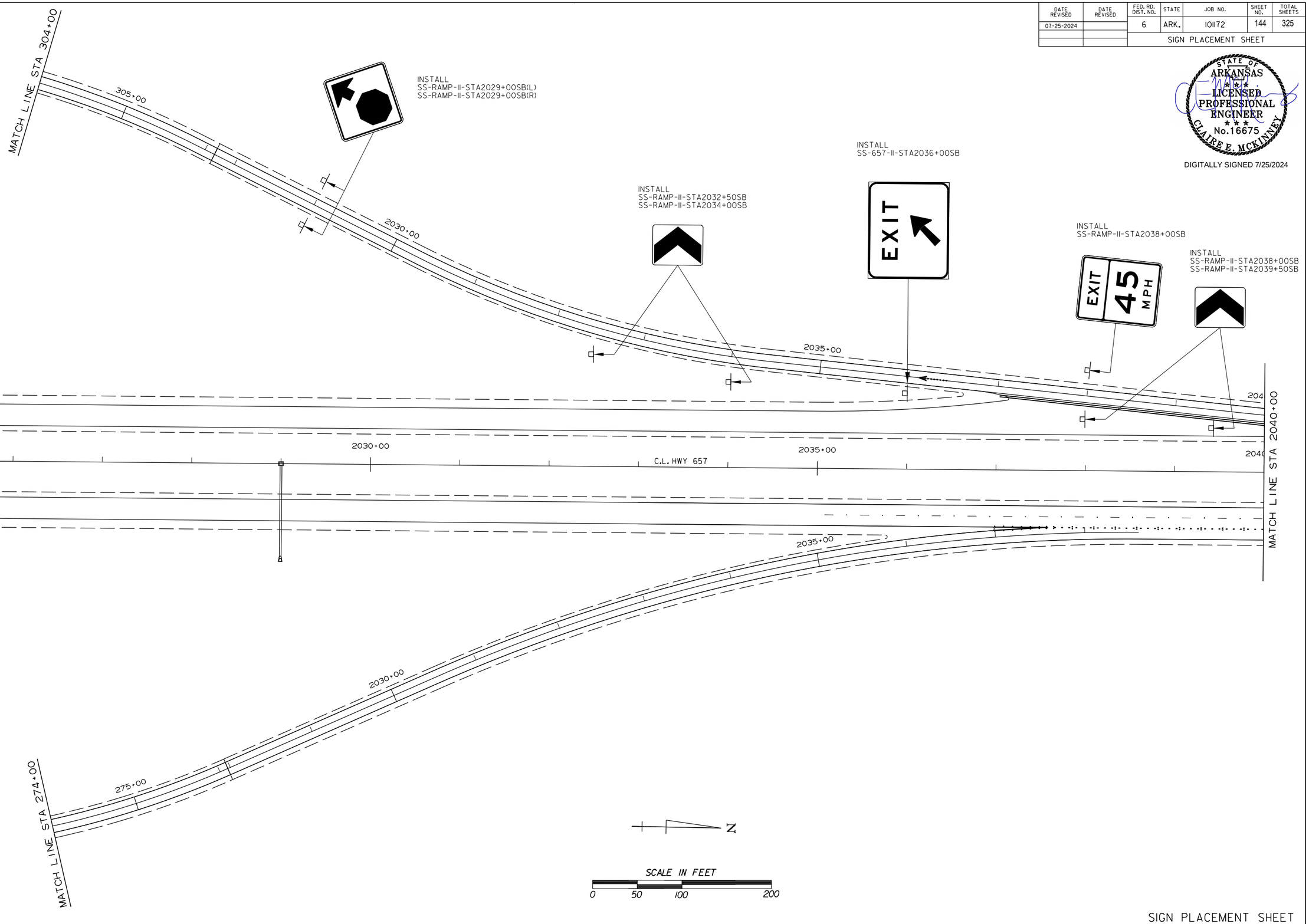


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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
07-25-2024		6	ARK.	101172	144	325
		SIGN PLACEMENT SHEET				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16675
CLAIRE E. MCKINNEY

DIGITALLY SIGNED 7/25/2024



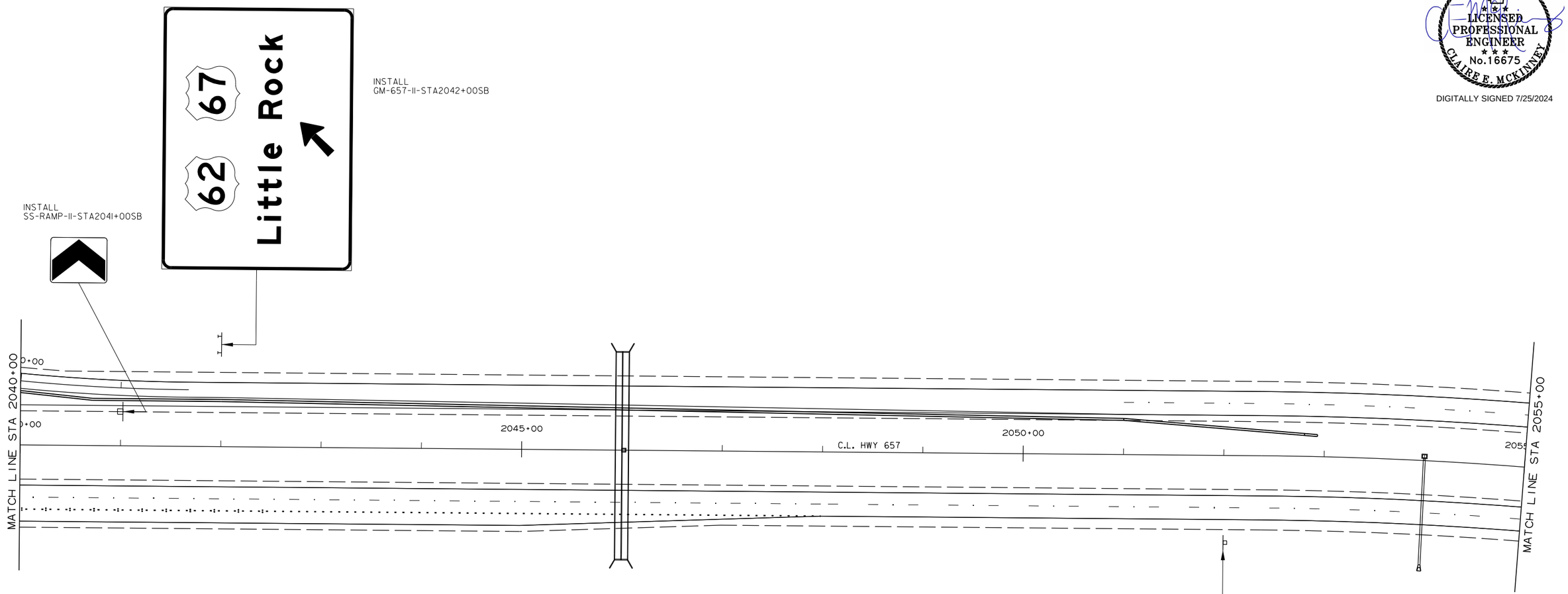
SIGN PLACEMENT SHEET

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
07-25-2024		6	ARK.	101172	145	325
		SIGN PLACEMENT SHEET				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16675
CLAIRE E. MCKINNEY

DIGITALLY SIGNED 7/25/2024



N

SCALE IN FEET

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SIGN PLACEMENT SHEET

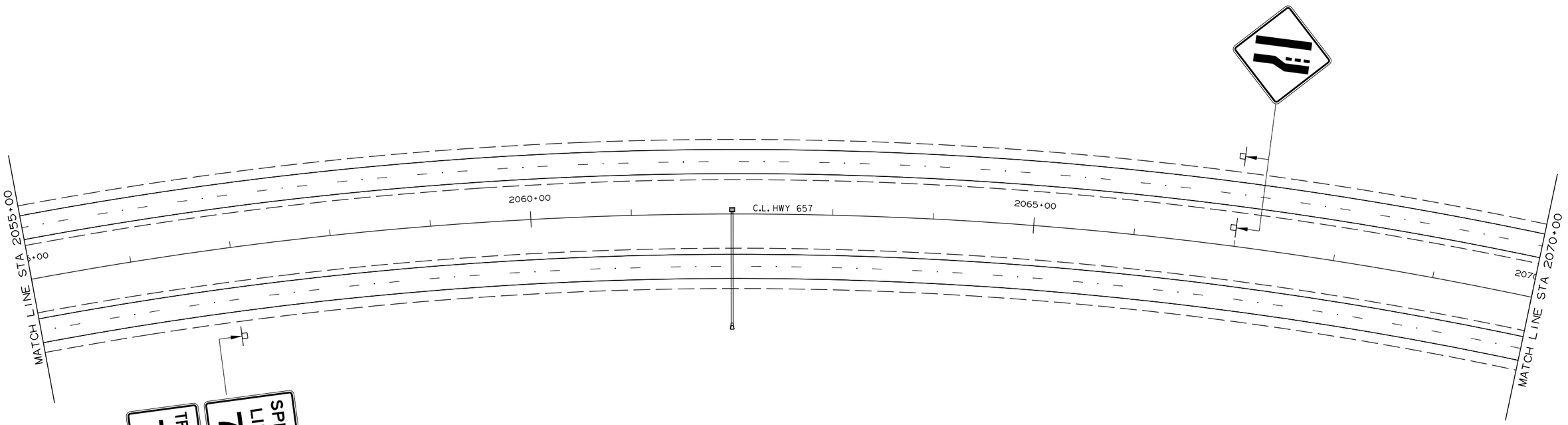
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REVISED DATE:

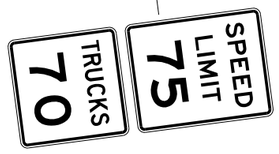
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
07-25-2024		6	ARK.	101172	146	325
		SIGN PLACEMENT SHEET				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16675
CLAIRE E. MCKINNEY

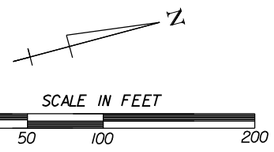
DIGITALLY SIGNED 7/25/2024

INSTALL
SS-657-11-STA2067+00SB(L)
SS-657-11-STA2067+00SB(R)





INSTALL
SS-657-11-STA2057+00NB



CGGervasini 7/23/2024 5:57:47 PM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
07-25-2024		6	ARK.	101172	147	325
		SIGN PLACEMENT SHEET				

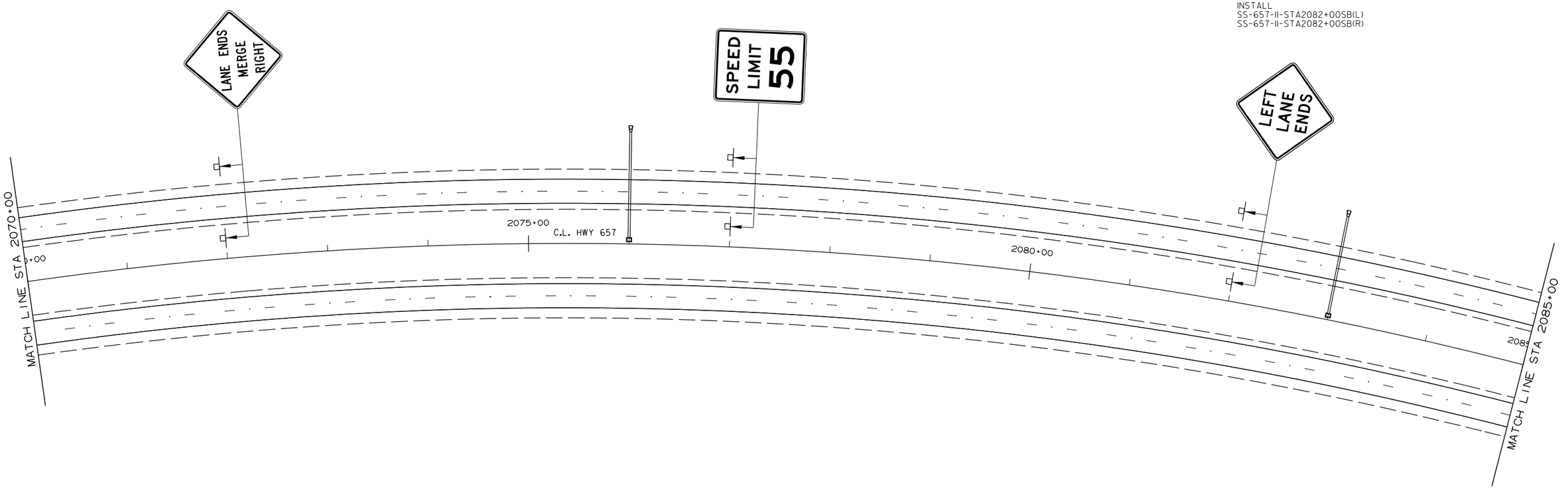
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16675
CLAIRE E. MCKINNEY

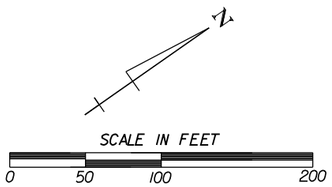
DIGITALLY SIGNED 7/25/2024

INSTALL
SS-657-II-STA2072+00SB(L)
SS-657-II-STA2072+00SB(R)

INSTALL
SS-657-II-STA2077+00SB(L)
SS-657-II-STA2077+00SB(R)

INSTALL
SS-657-II-STA2082+00SB(L)
SS-657-II-STA2082+00SB(R)





CGGer-vasini 7/23/2024 5:57:47 PM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
07-25-2024		6	ARK.	101172	148	325
		SIGN PLACEMENT SHEET				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16675
CLAIRE E. MCKINNEY

DIGITALLY SIGNED 7/25/2024

INSTALL
GM-657-11-STA2091+00SB

INSTALL
SS-657-11-STA2087+00SB(L)
SS-657-11-STA2087+00SB(R)

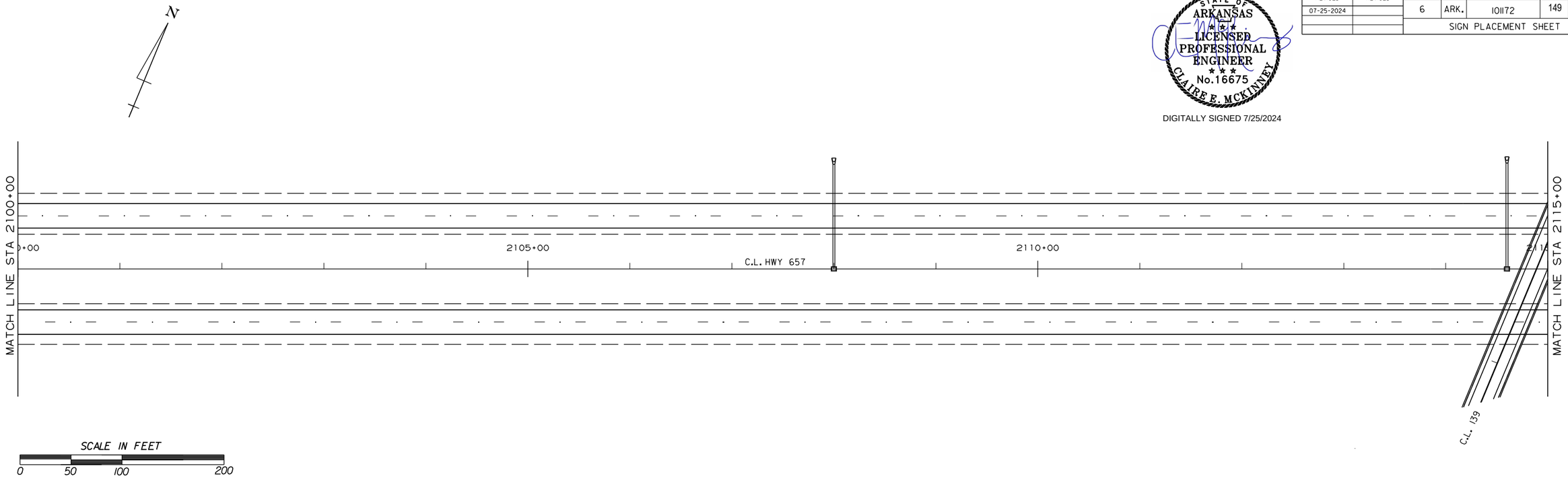
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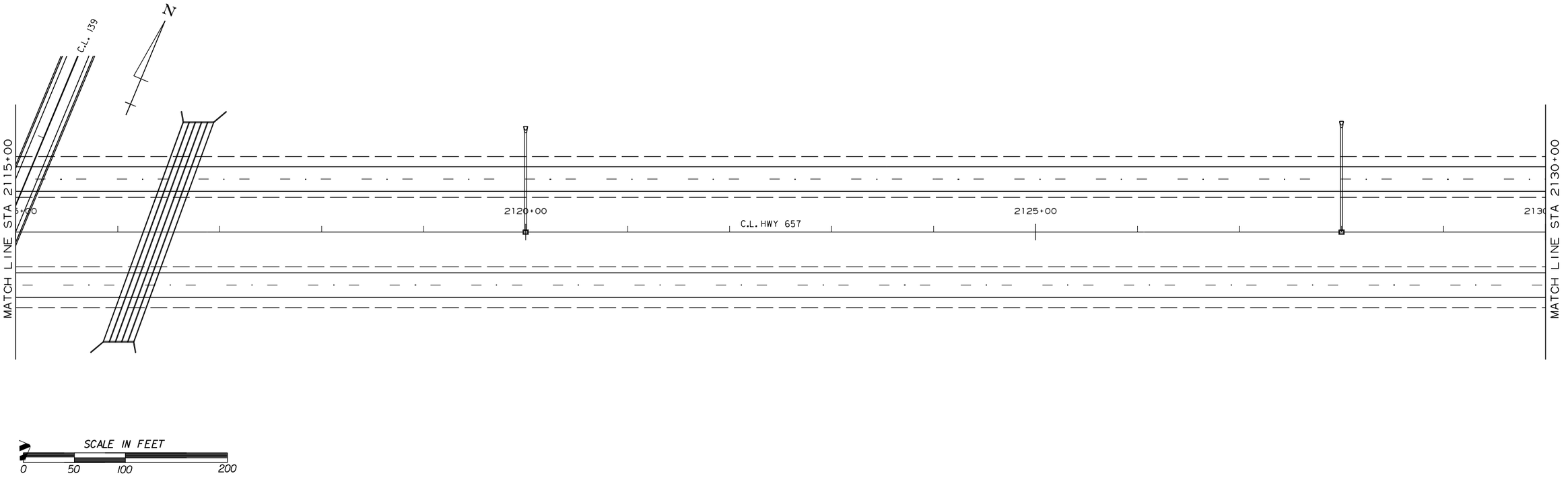
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
07-25-2024		6	ARK.	101172	149	325
		SIGN PLACEMENT SHEET				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16675
CLAIRE E. MCKINNEY

DIGITALLY SIGNED 7/25/2024





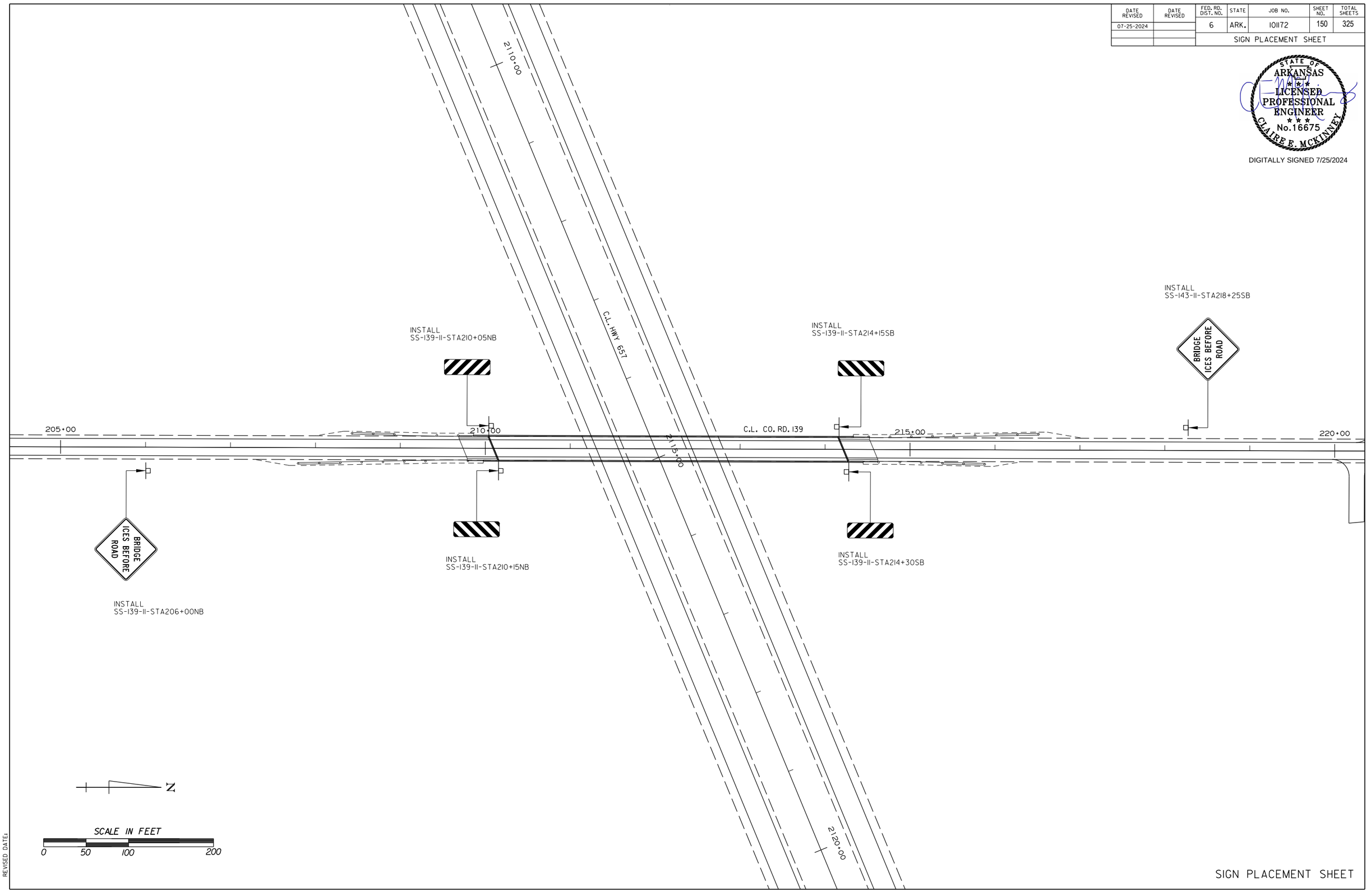
SIGN PLACEMENT SHEET

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
07-25-2024		6	ARK.	101172	150	325
		SIGN PLACEMENT SHEET				

STATE OF ARKANSAS
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No. 16675
CLAIRE E. MCKINNEY

DIGITALLY SIGNED 7/25/2024



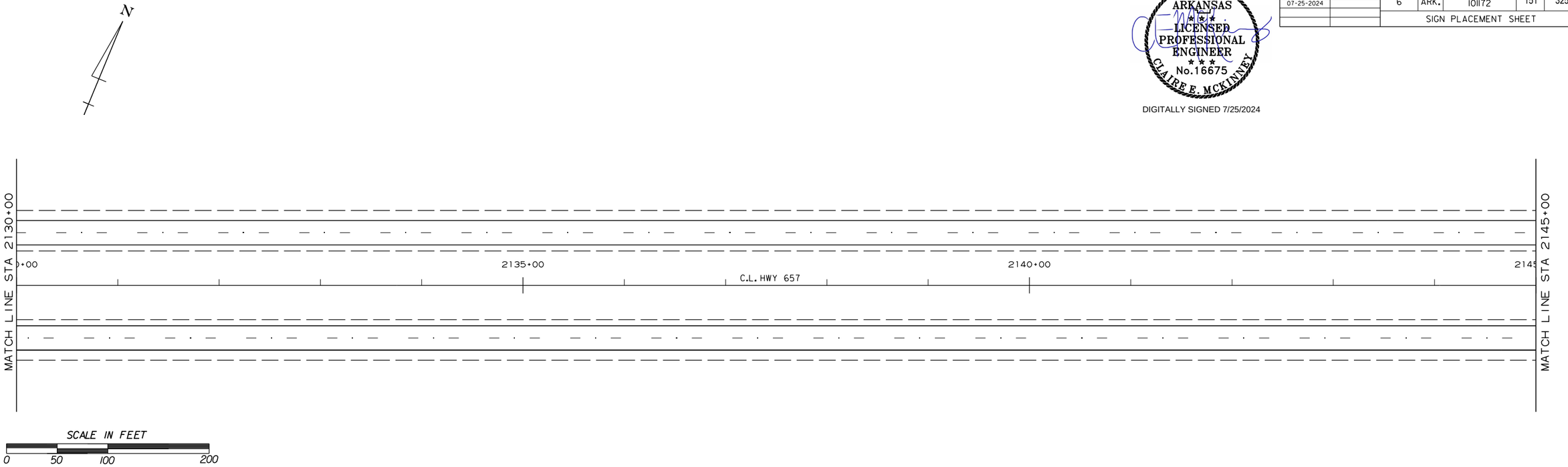
SIGN PLACEMENT SHEET

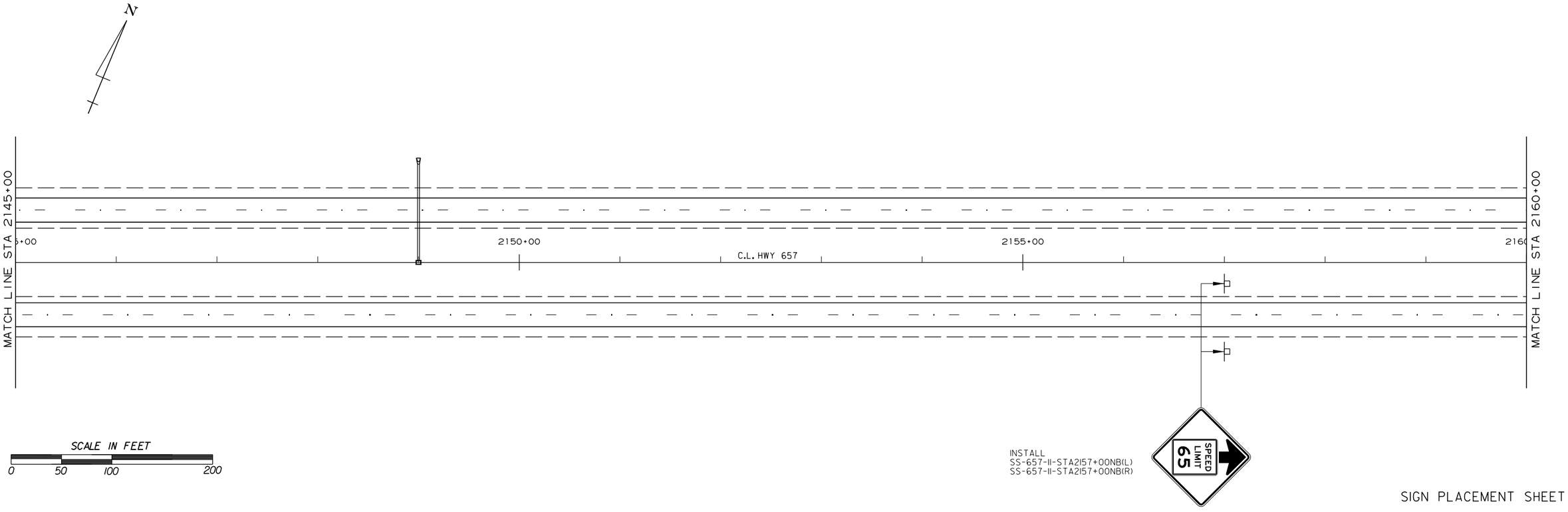
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
07-25-2024		6	ARK.	101172	151	325
		SIGN PLACEMENT SHEET				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16675
CLAIRE E. MCKINNEY

DIGITALLY SIGNED 7/25/2024





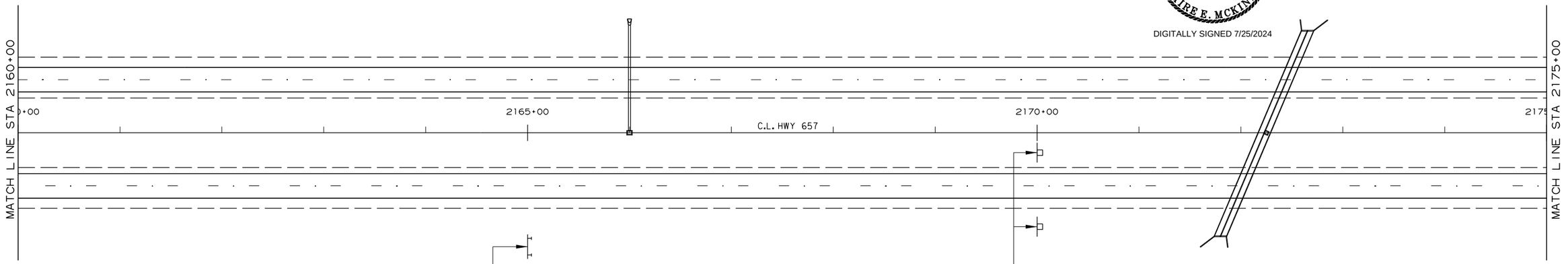
SIGN PLACEMENT SHEET

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
07-25-2024		6	ARK.	101172	152	325
		SIGN PLACEMENT SHEET				

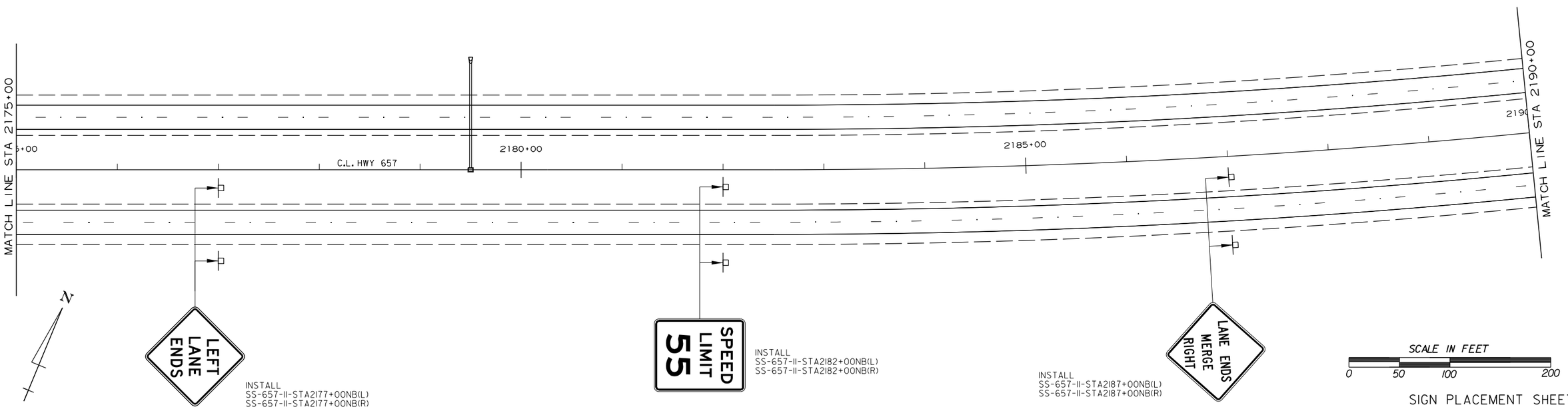
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16675
CLAIRE E. MCKINNEY

DIGITALLY SIGNED 7/25/2024



INSTALL
SS-657-II-STA2170+00NB(L)
SS-657-II-STA2170+00NB(R)

INSTALL
GM-657-II-STA2165+00NB



INSTALL
SS-657-II-STA2177+00NB(L)
SS-657-II-STA2177+00NB(R)

INSTALL
SS-657-II-STA2182+00NB(L)
SS-657-II-STA2182+00NB(R)

INSTALL
SS-657-II-STA2187+00NB(L)
SS-657-II-STA2187+00NB(R)

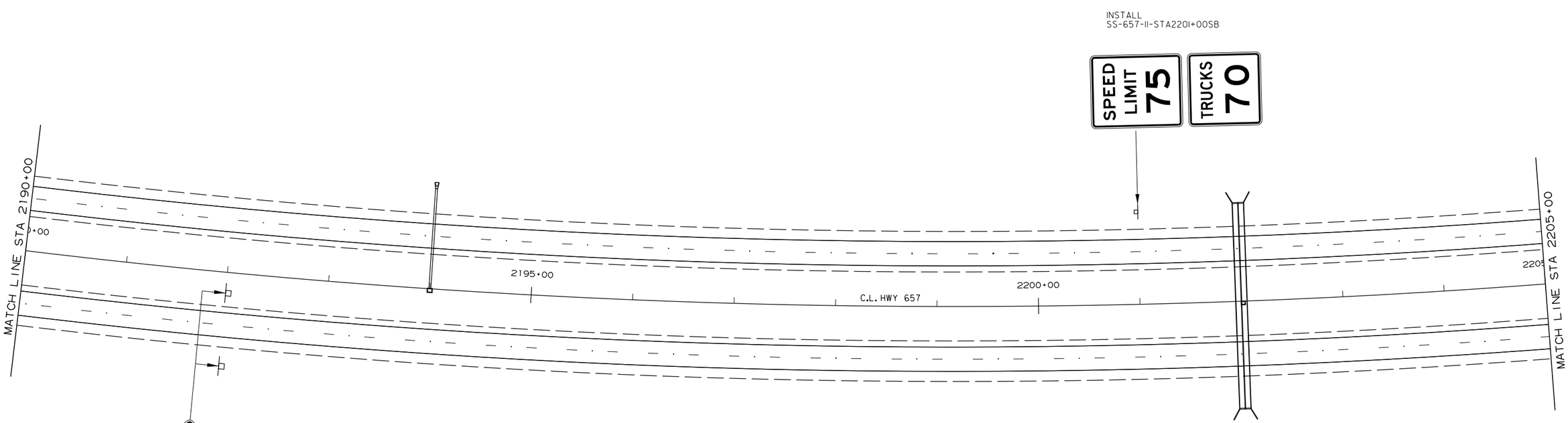
SIGN PLACEMENT SHEET

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REVISED DATE:

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07-25-2024		6	ARK.	101172	153	325
		SIGN PLACEMENT SHEET				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16675
CLAIRE E. MCKINNEY

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CGGervasini 7/23/2024 5:57:50 PM
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
07-25-2024		6	ARK.	101172	154	325
		SIGN PLACEMENT SHEET				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16675
CLAIRE E. MCKINNEY

DIGITALLY SIGNED 7/25/2024

INSTALL
SS-657-II-STA2206+00SB

INSTALL
GM-657-II-STA2216+00NB

INSTALL
SS-RAMP-STA2217+00NB
SS-RAMP-STA2218+50NB

INSTALL
SS-RAMP-II-STA2219+00NB

INSTALL
SS-RAMP-STA2220+00NB

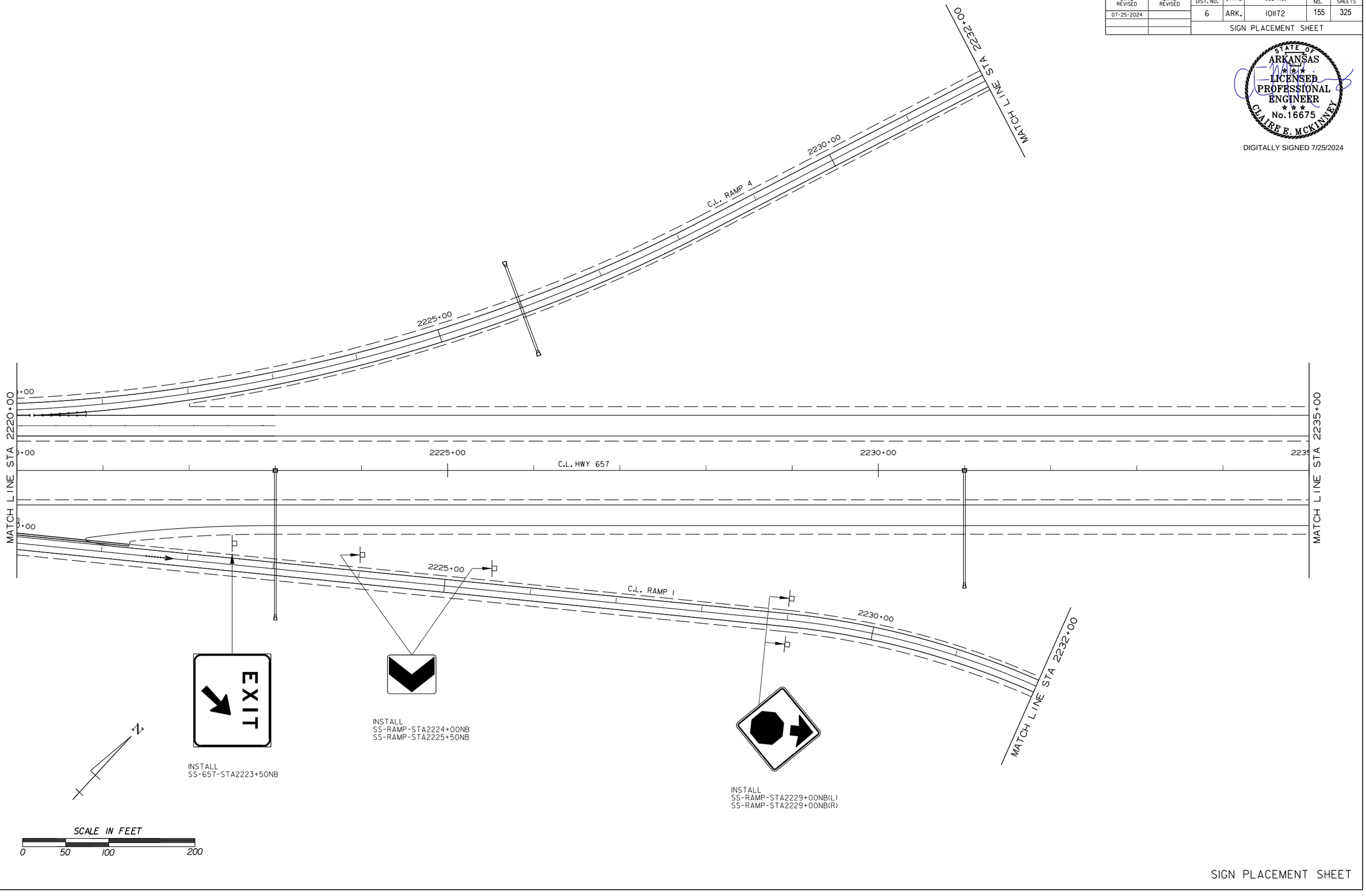
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
07-25-2024		6	ARK.	101172	155	325
		SIGN PLACEMENT SHEET				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16675
CLAIRE E. MCKINNEY

DIGITALLY SIGNED 7/25/2024

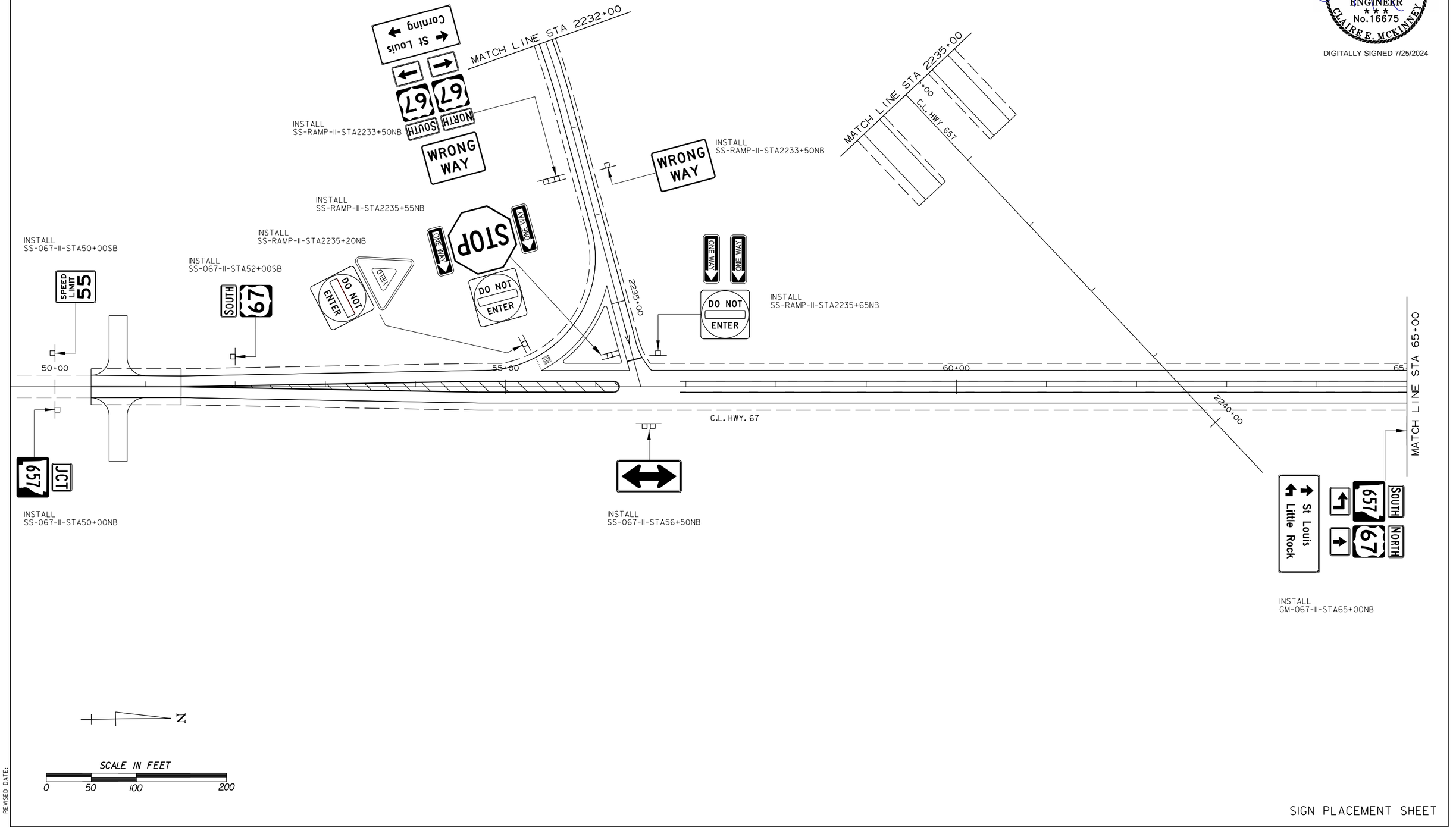


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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
07-25-2024		6	ARK.	101172	156	325
		SIGN PLACEMENT SHEET				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16675
CLAIRE E. MCKINNEY

DIGITALLY SIGNED 7/25/2024

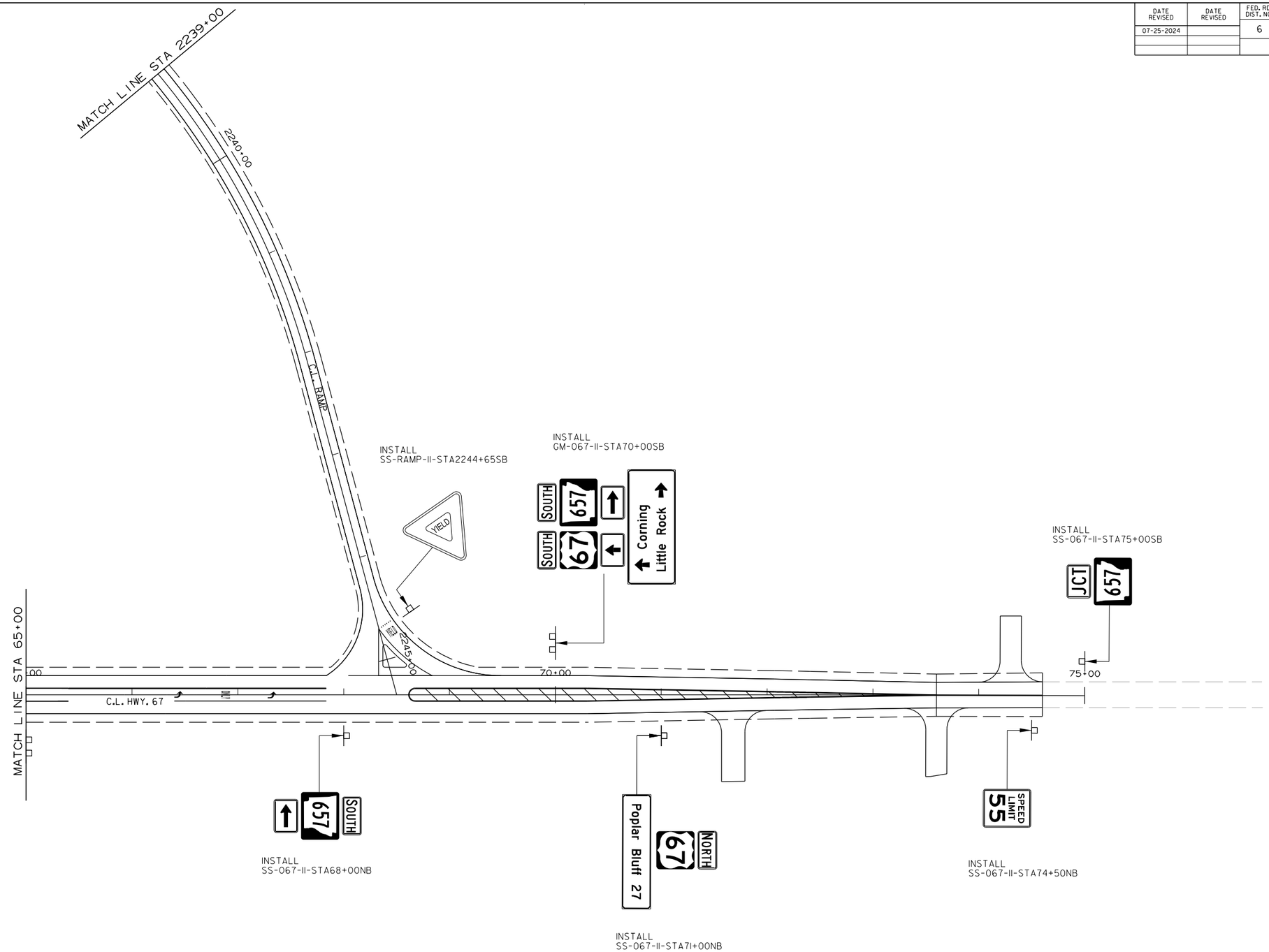


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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
07-25-2024		6	ARK.	101172	157	325
		SIGN PLACEMENT SHEET				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16675
CLAIRE E. MCKINNEY

DIGITALLY SIGNED 7/25/2024



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SCALE IN FEET
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CGervasini 7/23/2024 5:57:52 PM
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
07-25-2024		6	ARK.	101172	158	325
		SIGN DETAIL SHEET				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16675
CLAIRE E. MCKINNEY
DIGITALLY SIGNED 7/25/2024

JCT M2-1 (21" X 15")
657 M1-5 (30" X 24")

SS-062-II-STA237+00EB
SS-062-II-STA260+00WB
SS-067-II-STA50+00NB
SS-067-II-STA75+00SB

NORTH M3-1 (24" X 12")
657 M1-5 (30" X 24")
M6-1L (21" X 15")

SS-062-II-STA251+50EB

SOUTH M3-3 (24" X 12")
657 M1-5 (30" X 24")
M6-1L (21" X 15")

SS-067-II-STA68+00NB

NORTH M3-1 (36" X 18")
657 M1-5 (45" X 36")

SS-657-II-STA2052+00NB

SOUTH M3-3 (36" X 18")
657 M1-5 (45" X 36")

SS-657-II-STA2206+00SB

M3-2 (24" X 12") EAST NORTH M3-1 (24" X 12")
M1-4 (24" X 24") 62 67 M1-4 (24" X 24")

SS-062-II-STA254+00EB

SOUTH M3-3 (24" X 12")
67 M1-4 (24" X 24")

SS-067-II-STA52+00SB

M3-1 (24" X 12") NORTH EAST NORTH M3-2 (24" X 12") M3-1 (24" X 12")
M1-5 (30" X 24") 657 62 67 M1-4 (24" X 24") M1-4 (24" X 24")
M5-1L (21" X 15") M6-3 (21" X 15") M6-3 (21" X 15")

Corning
St Louis

2,3" Radius, 0,8" Border, White on Green;
Arrow Custom - 9,5" 90°;
"Corning", D 2K;
2,3" Radius, 0,8" Border, White on Green;
arrow; "St Louis", D 2K;

GM-062-II-STA249+00EB

M3-4 (24" X 12") M3-3 (24" X 12") WEST SOUTH NORTH M3-1 (24" X 12")
M1-4 (24" X 24") M1-4 (24" X 24") 62 67 657 M1-5 (30" X 24")
M6-3 (21" X 15") M6-3 (21" X 15") M6-1R (21" X 15")

Little Rock
St Louis

2,3" Radius, 0,8" Border, White on Green;
Arrow Custom - 9,5" 90°;
"Little Rock", D 2K;
"St Louis", D 2K;
Arrow Custom - 9,5" 0°;

GM-062-II-STA255+00WB

M3-4 (24" X 12") WEST SOUTH M3-3 (24" X 12")
M1-4 (24" X 24") 62 67 M1-4 (24" X 24")

Pocahontas 23

2,3" Radius, 0,8" Border, White on Green;
"Pocahontas", D 2K; "23", D 2K;

SS-062-II-STA240+00WB

NORTH M3-1 (24" X 12")
67 M1-4 (24" X 24")

Poplar Bluff 27

2,3" Radius, 0,8" Border, White on Green;
"Poplar Bluff", D 2K; "27", D 2K;

SS-067-II-STA71+00NB

M3-3 (24" X 12") SOUTH SOUTH M3-3 (24" X 12")
M1-4 (24" X 24") 67 657 M1-5 (30" X 24")
M6-3 (21" X 15") M6-1R (21" X 15")

Corning
Little Rock

2,3" Radius, 0,8" Border, White on Green;
Arrow Custom - 9,5" 90°;
"Corning", D 2K;
"Little Rock", D 2K;
Arrow Custom - 9,5" 0°;

GM-067-II-STA70+00SB

M3-3 (24" X 12") SOUTH NORTH M3-1 (24" X 12")
M1-5 (30" X 24") 657 67 M1-4 (24" X 24")
M5-1L (21" X 15") M6-3 (21" X 15")

St Louis
Little Rock

2,3" Radius, 0,8" Border, White on Green;
Arrow Custom - 9,5" 90°;
"St Louis", D 2K;
2,3" Radius, 0,8" Border, White on Green;
arrow; "Little Rock", D 2K;

GM-067-II-STA65+00NB

WRONG WAY R5-1a (42" X 30")
M3-1 (24" X 12") NORTH SOUTH M3-3 (24" X 12")
M1-4 (24" X 24") 67 67 M1-4 (24" X 24")
M6-1L (21" X 15") M6-1R (21" X 15")

St Louis
Corning

2,3" Radius, 0,8" Border, White on Green;
Arrow Custom - 9,5" 180°;
"St Louis", D 2K;
"Corning", D 2K;
Arrow Custom - 9,5" 0°;

SS-RAMP-II-STA2233+50NB

WRONG WAY R5-1a (42" X 30")
M3-2 (24" X 12") EAST WEST M3-4 (24" X 12")
M1-4 (24" X 24") 62 62 M1-4 (24" X 24")
M3-1 (24" X 12") NORTH SOUTH M3-3 (24" X 12")
M1-4 (24" X 24") 67 67 M1-4 (24" X 24")
M6-1L (21" X 15") M6-1R (21" X 15")

Corning
Little Rock

2,3" Radius, 0,8" Border, White on Green;
Arrow Custom - 9,5" 180°;
"Corning", D 2K;
"Little Rock", D 2K;
Arrow Custom - 9,5" 0°;

SS-RAMP-II-STA302+50SB

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REVISED DATE:

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07-25-2024		6	ARK.	101172	159	325
		SIGN DETAIL SHEET				

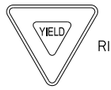
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16675
CLAIRE E. MCKINNEY

DIGITALLY SIGNED 7/25/2024



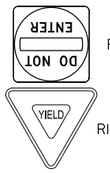
R6-1R (48" X 18")
R6-1L (48" X 18")
R5-1 (36" X 36")
R1-1 (48" X 48")

SS-RAMP-II-STA300+25SB
SS-RAMP-II-STA2235+55NB



R1-2 (48" X 48" X 48")

SS-RAMP-II-STA270+85NB
SS-RAMP-II-STA2244+65SB



R5-1 (36" X 36")
R1-2 (48" X 48" X 48")

SS-RAMP-II-STA300+30SB
SS-RAMP-II-STA2235+20NB



R5-1a (42" X 30")

SS-RAMP-II-STA302+50SB
SS-RAMP-II-STA2233+50NB



R2-1 (24" X 30")

SS-062-II-STA231+00EB
SS-062-II-STA258+50EB



R2-1 (24" X 30")

SS-062-II-STA231+00WB
SS-067-II-STA50+00SB
SS-067-II-STA74+50NB



R2-1 (48" X 60")

SS-657-II-STA2077+00SB(L)
SS-657-II-STA2077+00SB(R)
SS-657-II-STA2182+00NB(L)
SS-657-II-STA2182+00NB(R)



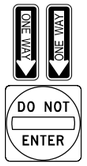
R2-1 (48" X 60")

SS-657-II-STA2087+00SB(L)
SS-657-II-STA2087+00SB(R)
SS-657-II-STA2170+00NB(L)
SS-657-II-STA2170+00NB(R)



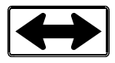
R2-1 (48" X 60")
R2-2 (48" X 48")

SS-657-II-STA2057+00NB
SS-657-II-STA2201+00SB



R6-1R (48" X 18")
R6-1L (48" X 18")
R5-1 (36" X 36")

SS-RAMP-II-STA300+25SB
SS-RAMP-II-STA2235+65NB



W1-7 (48" X 24")

SS-062-II-STA243+00EB
SS-067-II-STA56+50NB



W3-1 (48" X 48")

SS-RAMP-II-STA2029+00SB(L)
SS-RAMP-II-STA2029+00SB(R)
SS-RAMP-II-STA2229+00NB(L)
SS-RAMP-II-STA2229+00NB(R)



W3-5 (36" X 36")

SS-062-II-STA223+50EB



W3-5 (48" X 48")

SS-657-II-STA2100+00SB(L)
SS-657-II-STA2100+00SB(R)
SS-657-II-STA2157+00NB(L)
SS-657-II-STA2157+00NB(R)



W4-2L (48" X 48")

SS-657-II-STA2067+00SB(L)
SS-657-II-STA2067+00SB(R)
SS-657-II-STA2192+00NB(L)
SS-657-II-STA2192+00NB(R)



W1-8L (30" X 36")

SS-RAMP-II-STA2217+00NB)
SS-RAMP-II-STA2218+50NB)
SS-RAMP-II-STA2220+00NB)
SS-RAMP-II-STA2224+00NB)
SS-RAMP-II-STA2225+50NB)
SS-RAMP-II-STA2232+50SB)
SS-RAMP-II-STA2234+00SB)
SS-RAMP-II-STA2238+00SB)
SS-RAMP-II-STA2239+50SB)
SS-RAMP-II-STA2241+00SB)



W8-13 (36" X 36")

SS-139-II-STA206+00NB
SS-139-II-STA218+25SB



W13-2 (48" X 60")

SS-RAMP-II-STA2038+00SB
SS-RAMP-II-STA2219+00NB



W9-1L (48" X 48")

SS-657-II-STA2082+00SB(L)
SS-657-II-STA2082+00SB(R)
SS-657-II-STA2177+00NB(L)
SS-657-II-STA2177+00NB(R)



W9-2R (48" X 48")

SS-657-II-STA2072+00SB(L)
SS-657-II-STA2072+00SB(R)
SS-657-II-STA2187+00NB(L)
SS-657-II-STA2187+00NB(R)



OM3-L (12" X 36")

SS-139-II-STA210+05NB
SS-139-II-STA214+30SB



OM3-R (12" X 36")

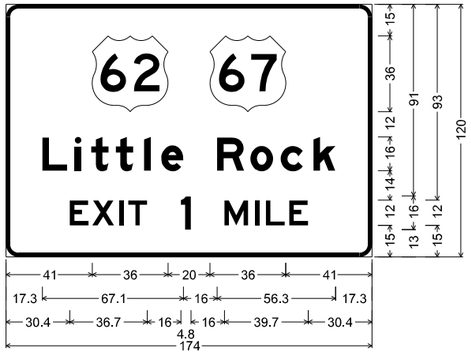
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SS-139-II-STA214+15SB

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07-25-2024		6	ARK.	101172	160	325
		SIGN DETAIL SHEET				

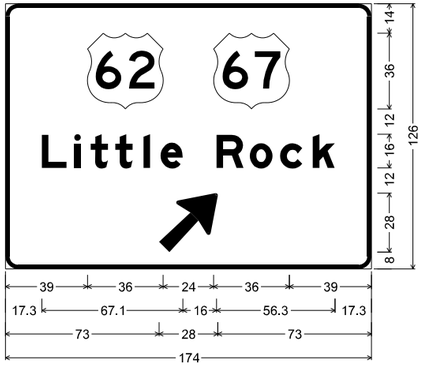
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16675
CLAIRE E. MCKINNEY

DIGITALLY SIGNED 7/25/2024



6.0" Radius, 2.0" Border, White on Green;
"Little Rock", E Mod 2K; "EXIT 1 MILE", E 2K;

GM-657-II-STA2091+00SB



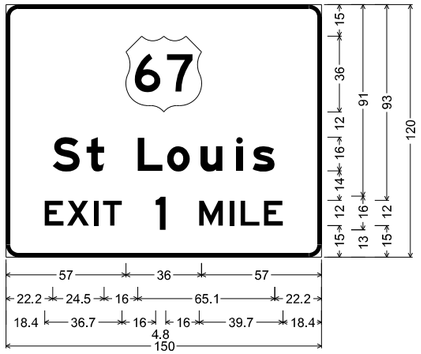
6.0" Radius, 2.0" Border, White on Green;
"Little Rock", E Mod 2K; Arrow Custom - 35.6" 45°;

GM-657-II-STA2042+00SB



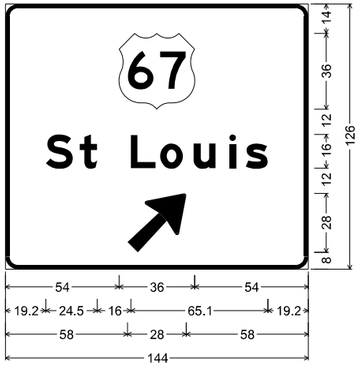
E5-1 (72" X 60")

SS-657-STA2036+00SB
SS-657-STA2223+50NB



6.0" Radius, 2.0" Border, White on Green;
"St Louis", E Mod 2K; "EXIT 1 MILE", E 2K;

GM-657-II-STA2165+00NB



6.0" Radius, 2.0" Border, White on Green;
"St Louis", E Mod 2K;
Arrow Custom - 35.6" 45°;

GM-657-II-STA2216+00NB

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DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	161	325
		ITS QUANTITIES				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16675
CLAIRE E. MCKINNEY

Digitally Signed 06/28/2024

SUMMARY OF ITS QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP	MULTIDUCT CONDUIT (4" NON-METALLIC, 3 x 1.25" INNERDUCTS, 3 x 0.75" INNERDUCTS)	25193	LIN. FT.
SP, SS, & 711	FIBER OPTIC CONCRETE PULL BOX (TYPE 4 HD)	16	EACH

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DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	162	325
		ITS GENERAL NOTES				

NOTES:

1. ALL PARTS OF THIS INSTALLATION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, STANDARD DRAWINGS, AND WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION.

2. CONDUIT INSTALLED UNDER ROADWAY SURFACES SHALL BE INSTALLED BY PUSHING OR BORING METHOD OR AS DIRECTED BY THE ENGINEER. PVC OR HDPE CONDUIT SHALL BE USED AND SHALL BE UL LISTED. PVC CONDUIT SHALL BE MARKED "DIR. BORING" OR "DIRECTIONAL BORING" PER NEC. IF THE ENGINEER DETERMINES THIS IS NOT FEASIBLE, THEN A TRENCHING METHOD AS SHOWN IN THE STANDARD DRAWINGS MAY BE USED. THE ENGINEER SHALL GRANT A WRITTEN APPROVAL PRIOR TO USING THE TRENCHING METHOD.

3. CONTRACTOR SHALL NOTIFY ALL EXISTING UTILITY OWNERS BEFORE BEGINNING WORK ON THIS PROJECT.

4. CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER OR ASSIGNED DEPARTMENT PROJECT INSPECTOR EACH DAY PRIOR TO ITS RELATED WORK. NO WORK WILL BE ALLOWED OR APPROVED WITHOUT THIS PRIOR NOTIFICATION.

5. CONTRACTOR SHALL ATTACH A PERMANENT TAG OR RIGID PLASTIC OR NON-FERROUS METAL TO EACH CONDUIT AT PULL BOXES, POLE BASES, JUNCTION BOXES AND CONTROLLER CABINETS. TAGS SHALL BE EMBOSSED, STAMPED, OR ENGRAVED WITH LETTERS 1/4 INCH OR GREATER IN HEIGHT AND SECURED TO THE CONDUIT WITH NYLON OR PLASTIC TIES. EACH TAG SHALL INDICATE THE END LOCATION OF CONDUIT RUN. THE COST OF THE TAGS SHALL BE SUBSIDIARY TO THE CONDUIT PAY ITEM.

6. CONTRACTOR SHALL NOT ENGAGE IN EXCAVATION OR DEMOLITION ACTIVITIES WITHOUT HAVING FIRST NOTIFIED THE ARKANSAS ONE CALL CENTER IN ACCORDANCE WITH A.C.A. & 14-271 UNDERGROUND FACILITIES DAMAGE PREVENTION ACT. NOT ALL UTILITY COMPANIES ARE MEMBERS OF THE ARKANSAS ONE CALL SYSTEM. THE CONTRACTOR IS ADVISED TO CONTACT ALL NON-MEMBER UTILITIES AS WELL AS THE ONE CALL CENTER.

7. UNDERGROUND UTILITIES MAY EXIST WITHIN AND ADJACENT TO THE LIMITS OF CONSTRUCTION. SOME UTILITIES MAY HAVE BEEN RELOCATED SINCE THE TIME OF DESIGN AND THE CONTRACTOR'S NOTICE TO PROCEED. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANIES INVOLVED AND VERIFY THE LOCATIONS OF UNDERGROUND UTILITIES. THE CONTRACTOR SHALL MAINTAIN THE UTILITY LOCATION MARKINGS UNTIL IT IS NO LONGER NECESSARY.

8. ITS EQUIPMENT SHOWN ON THESE PLANS ARE IN APPROXIMATE LOCATIONS. ALL EQUIPMENT SHALL BE FIELD LOCATED BY THE CONTRACTOR WITH PROPOSED LOCATIONS APPROVED BY THE ENGINEER TO VERIFY PROPER PLACEMENT AND BEST SIGHT DISTANCE FOR EQUIPMENT, ADEQUATE ROADSIDE PROTECTION, ETC. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT, PULL BOXES, AND CONDUIT WITHIN PUBLIC RIGHT-OF-WAY.

9. WHERE APPLICABLE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE ITS LOCATIONS AND EQUIPMENT ARE INSTALLED AND OPERATIONAL PRIOR TO THE BEGINNING OF OTHER CONSTRUCTION PARTS OF THE PROJECT. LOCATIONS WHERE THE GUARDRAIL INSTALLATION IS REQUIRED, THE ITS EQUIPMENT SHALL BE INSTALLED AFTER THE REQUIRED GUARDRAIL IS IN PLACE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE ITS WORK WITH THE DEPARTMENT'S ITS MANAGEMENT SECTION -MAINTENANCE DIVISION AND THE RESIDENT ENGINEER OFFICE.

10. MINIMUM OFFSET DISTANCE FROM EDGE OF GUARDRAIL TO ITS EQUIPMENT SHALL BE GREATER THAN 5'.

11. ROADWAY EDGE OF ABOVE GROUND ITS EQUIPMENT TO BE 30' MINIMUM. FROM EDGE TO TRAVEL LANE. TO MAINTAIN CLEAR ZONE UNLESS PROTECTED BY GUARD RAIL, WIRE ROPE SAFETY FENCE SHALL BE USED AS APPROVED BY THE PROJECT ENGINEER.

12. ALL CONCRETE PULL BOXES SHALL BE TYPE 4 HD UNLESS OTHERWISE INDICATED. PULL BOX LIDS SHALL CLOSE FLUSH WITHOUT PINCHING ANY CONDUCTORS. CONDUIT LENGTHS IN PULL BOXES SHALL BE SET ACCORDINGLY. ANY CONDUCTORS THAT HAVE BEEN DAMAGED BY PINCHING SHALL BE COMPLETELY REPLACED AT THE CONTRACTOR'S EXPENSE.

13. ALL ABOVE GROUND CONDUIT SHALL BE RMC. NMC SHALL NOT BE ALLOWED ABOVE GROUND UNLESS SPECIFICALLY NOTED ON PLANS.

14. CONDUIT FOR FIBER OPTIC CABLE SHALL UTILIZE MINIMUM OF 6" RADIUS BENDS. NO ELBOW JOINTS ALLOWED.

15. A TRACER WIRE SHALL BE INSTALLED IN CONDUIT THAT CARRIES FIBER OPTIC AND/OR COMMUNICATION CABLE. COST TO BE ABSORBED, NO SEPARATE PAYMENT SHALL BE MADE.

16. BEFORE FINAL ACCEPTANCE OF ITS ITEMS, THE CONTRACTOR SHALL PROVIDE TWO (2) SETS OF LEDGER SIZE (11"X17") AS BUILT ITS PLANS TO ARDOT ITS MANAGEMENT.

17. CONDUIT WITHIN DUCT BANK SHALL BE ONE (4") FOUR INCH DIAMETER, THREE (1.5") ONE AND A HALF INCH DIAMETER, AND THREE (0.75") THREE QUARTERS INCH DIAMETER UNLESS SPECIFIED ON PLANS. ALL CONDUIT UNDER THE ROADWAY SHALL HAVE MINIMUM DEPTH OF 24" FROM THE TOP OF THE CONDUIT TO THE FINISH GRADE. CONDUIT DEPTH MAY NEED TO INCREASE NEAR OTHER STRUCTURES.

18. ALL ELECTRICAL COMPONENTS SHALL BE UL LISTED.

19. SLACK CABLES IN PULL BOXES SHALL BE 3 FEET MINIMUM.

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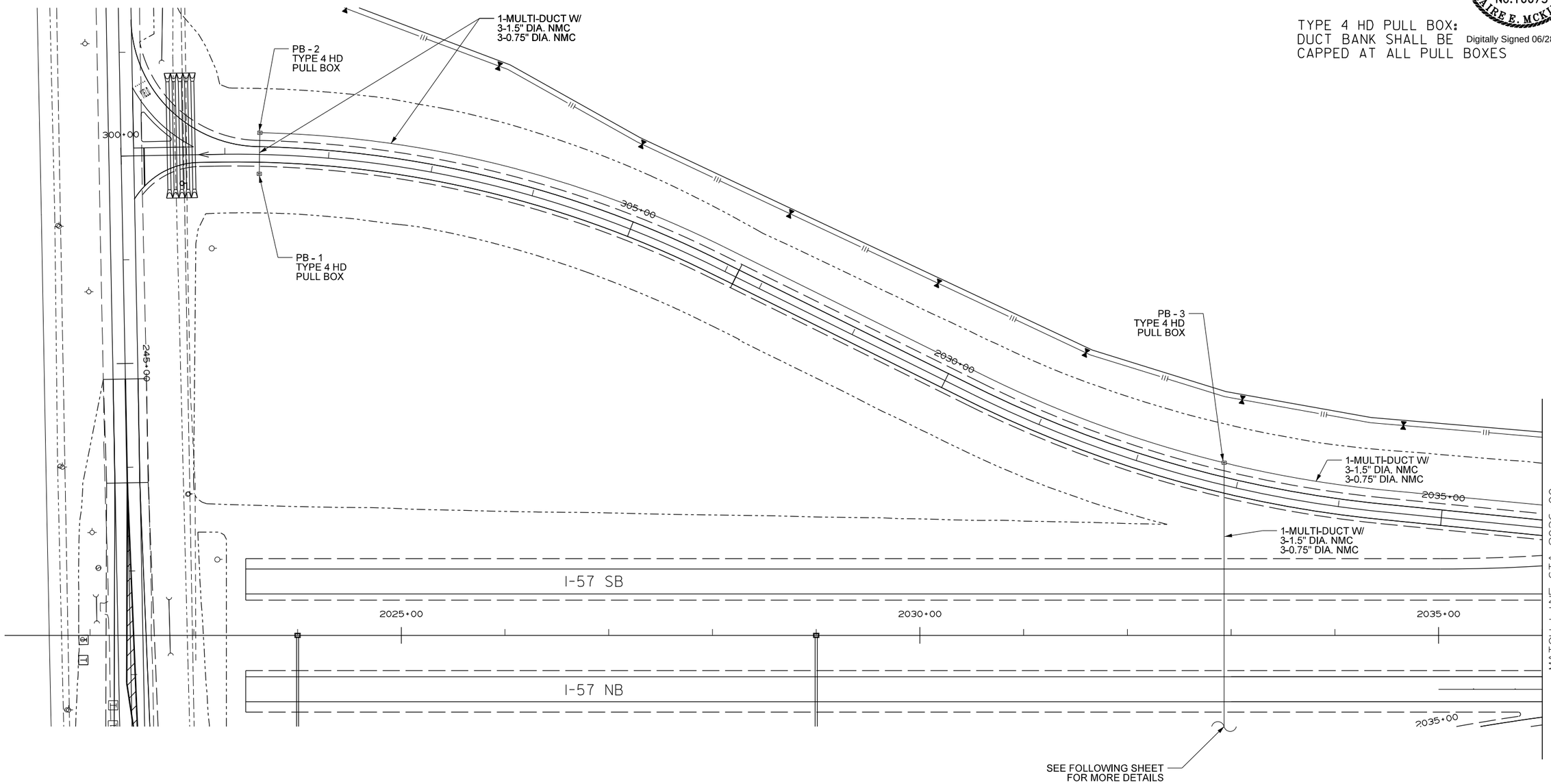
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TYPE 4 HD PULL BOX:
DUCT BANK SHALL BE CAPPED AT ALL PULL BOXES



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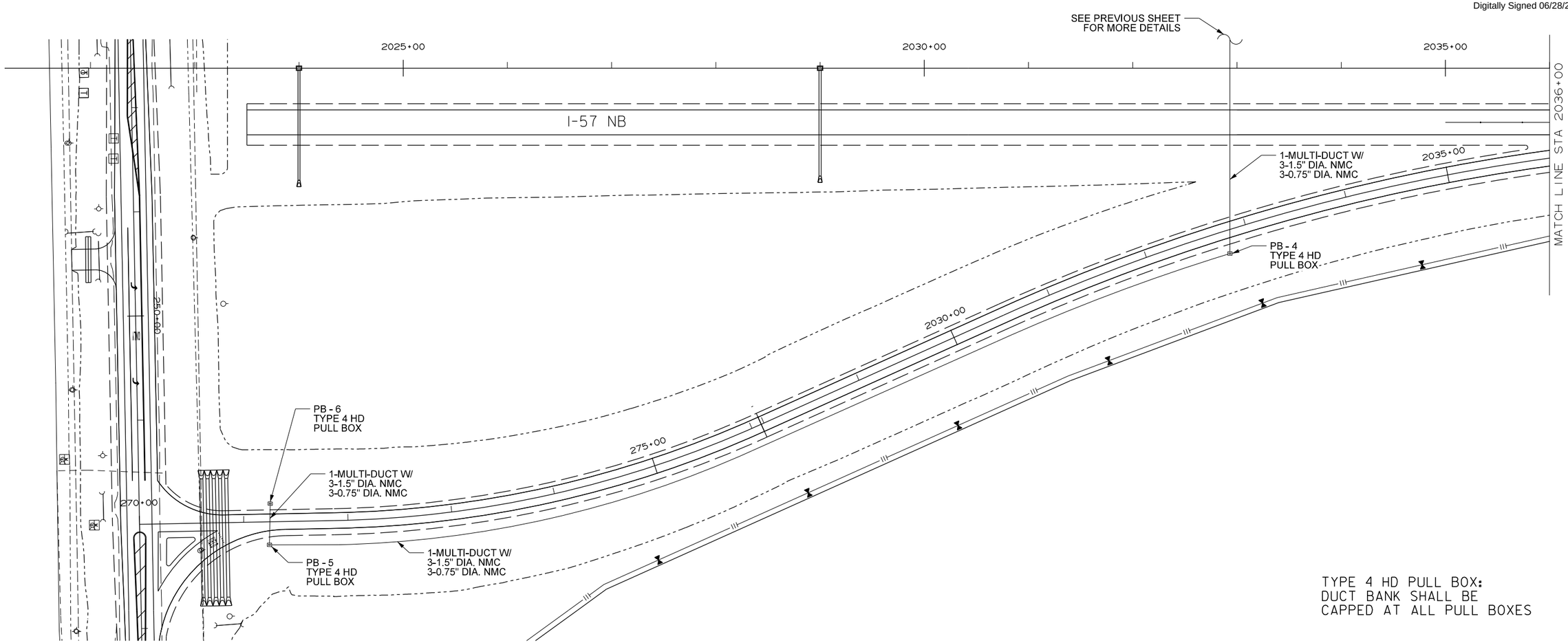
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TYPE 4 HD PULL BOX:
DUCT BANK SHALL BE
CAPPED AT ALL PULL BOXES

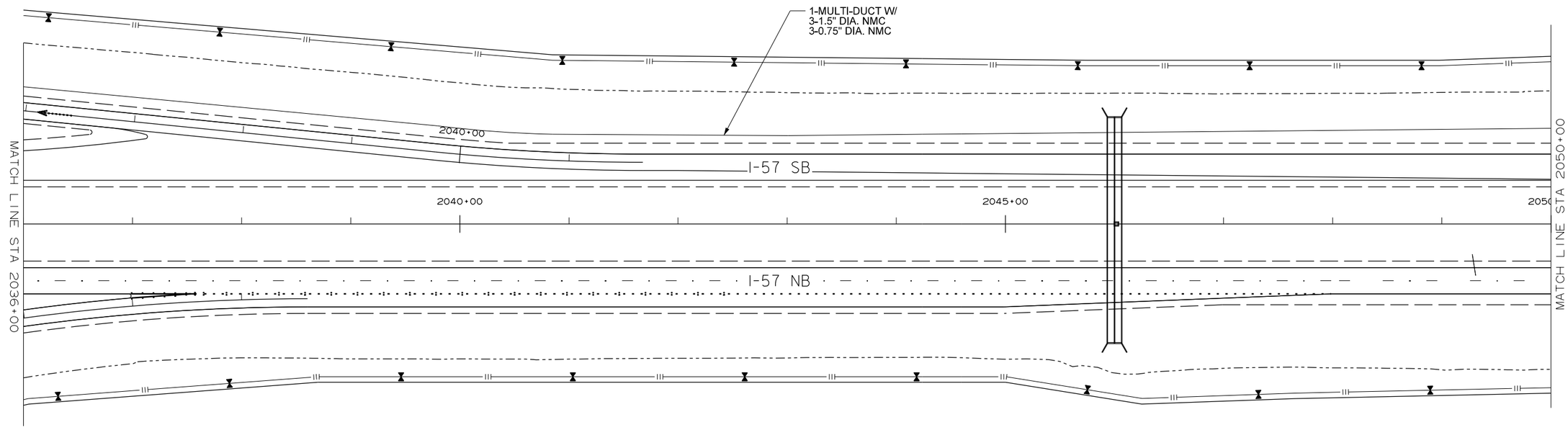
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STATE OF ARKANSAS
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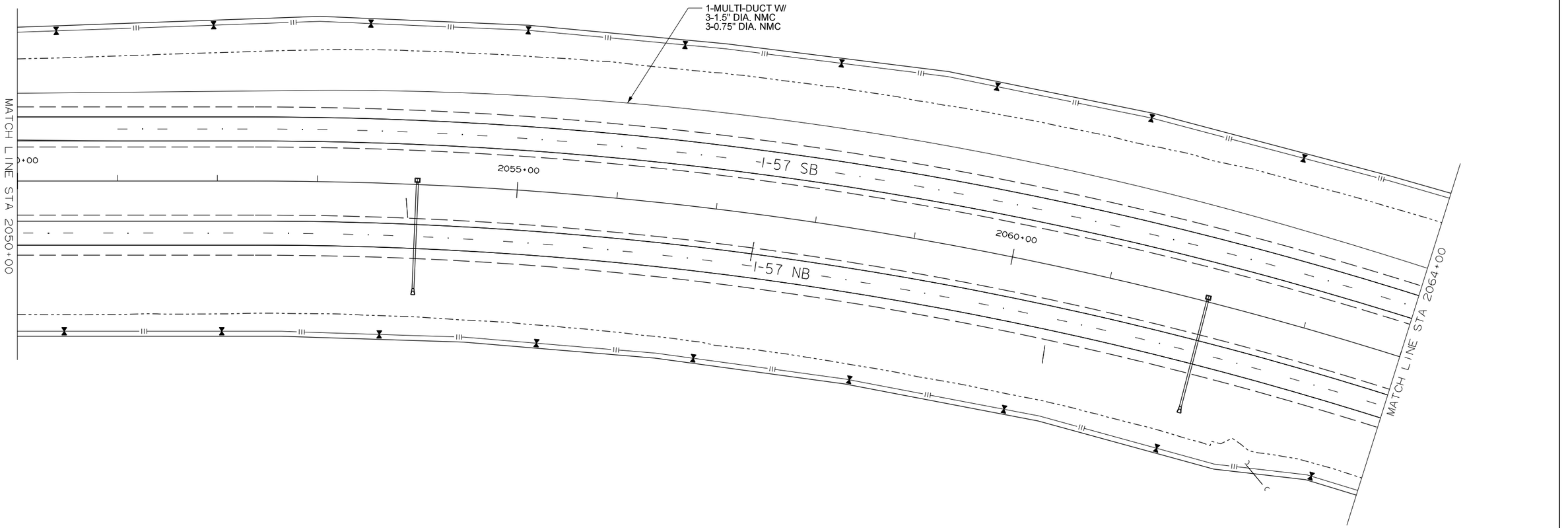
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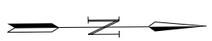
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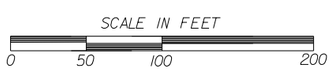
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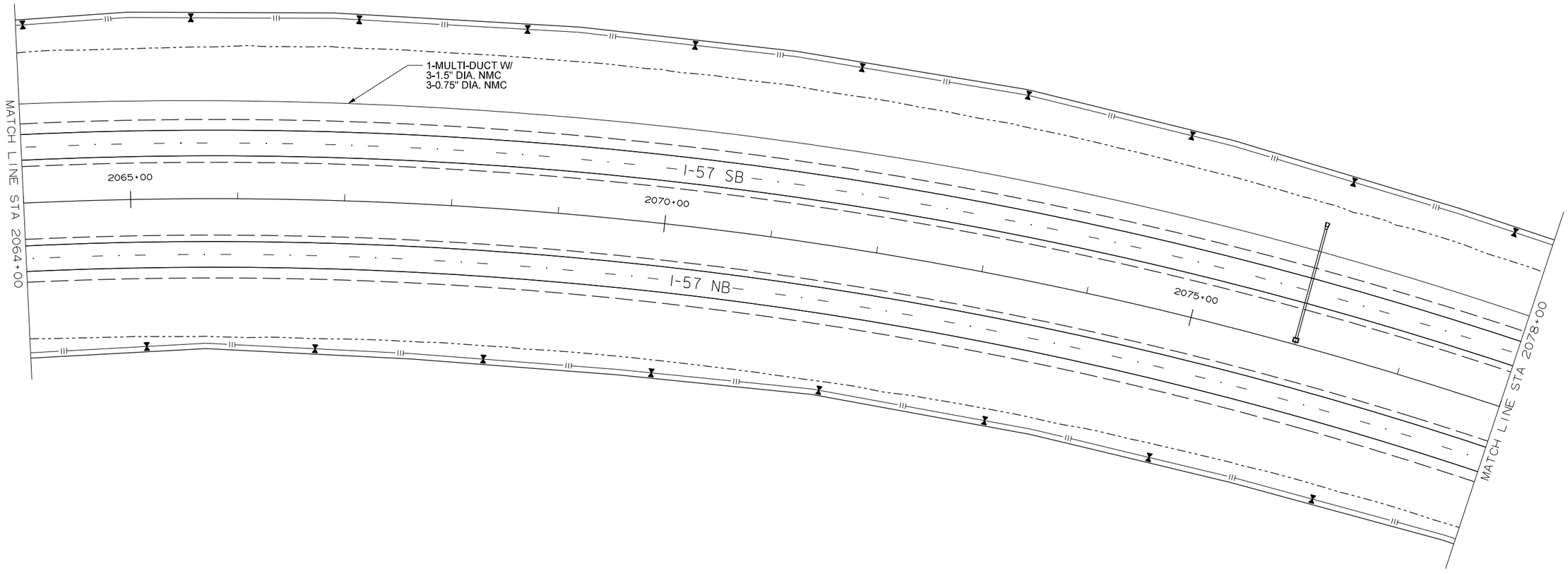


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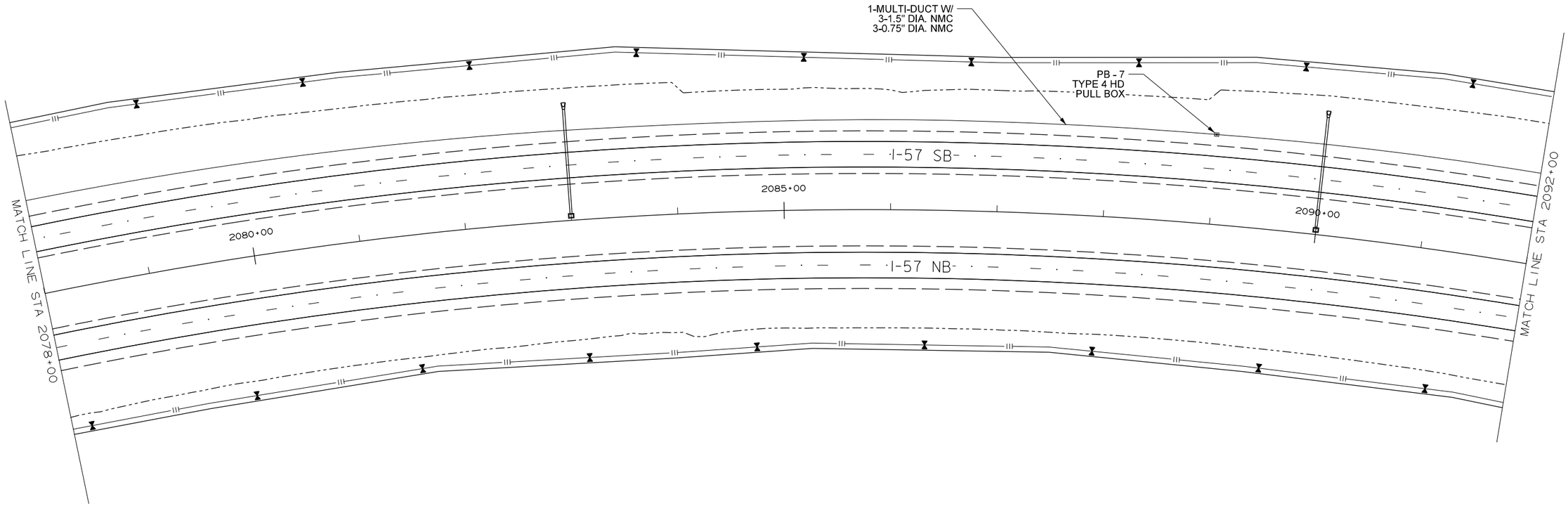
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TYPE 4 HD PULL BOX:
DUCT BANK SHALL BE
CAPPED AT ALL PULL BOXES

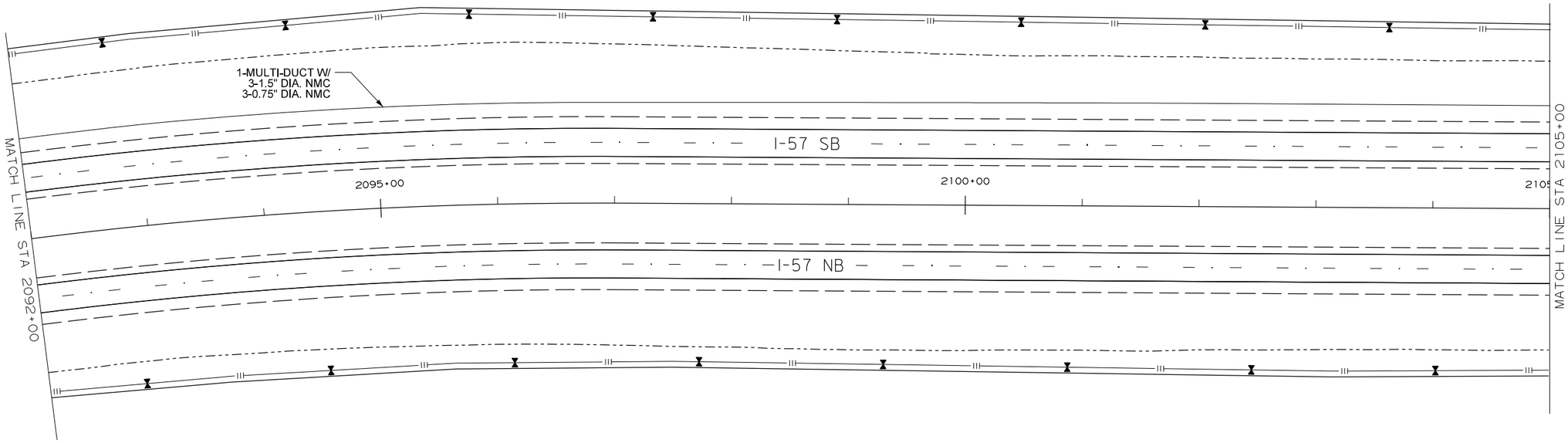
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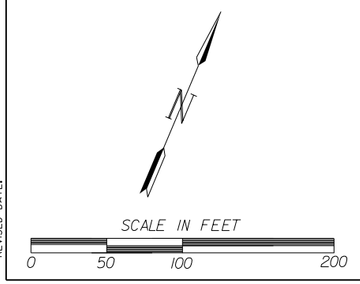
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	169	325
		ITS PLAN SHEET				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16675
CLAIRE E. MCKINNEY

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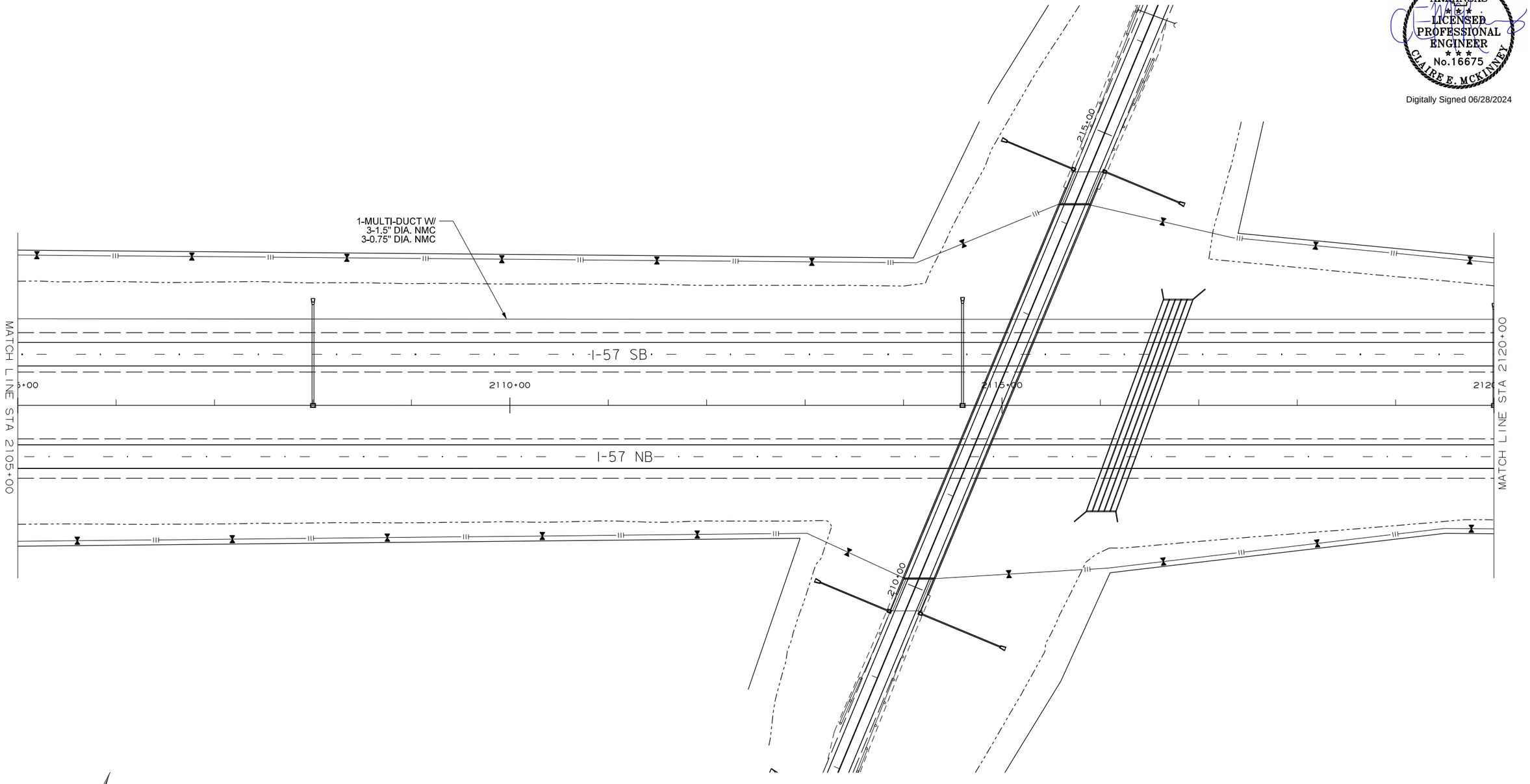


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		ITS PLAN SHEET				

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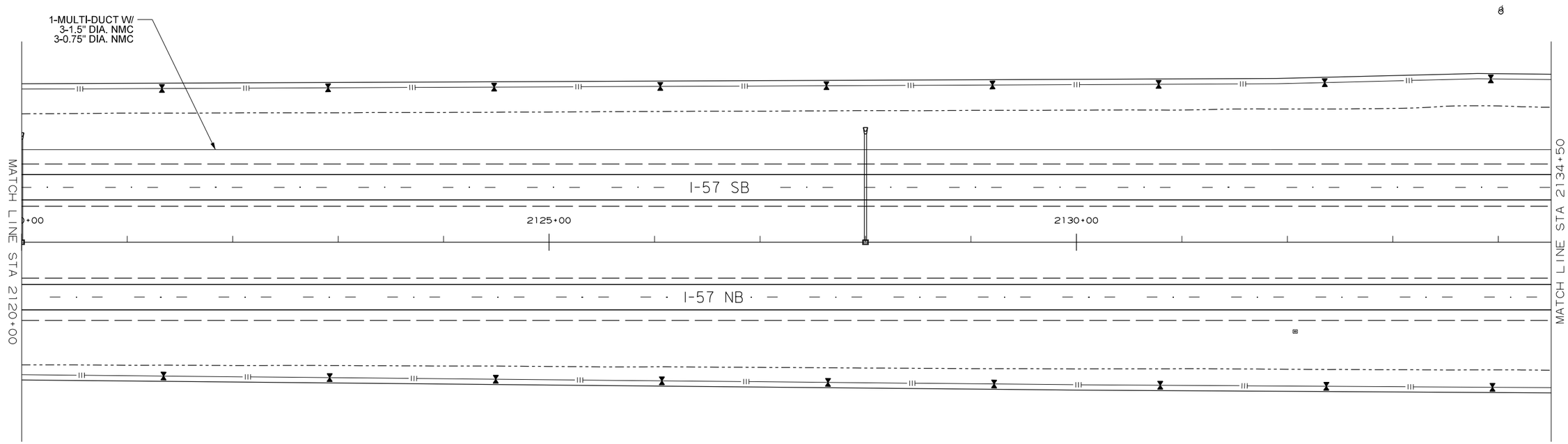
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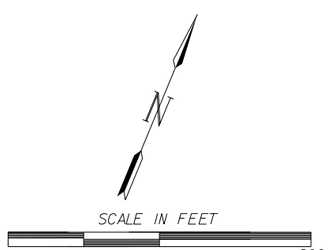
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
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		ITS PLAN SHEET				

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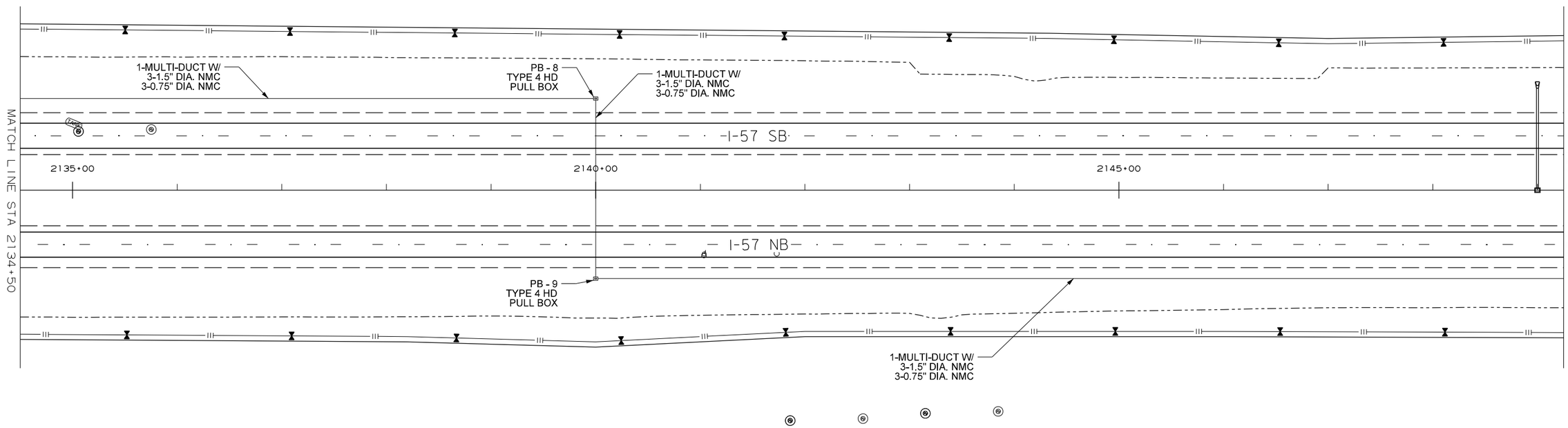


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		6	ARK.	101172	172	325
		ITS PLAN SHEET				

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No.16675
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TYPE 4 HD PULL BOX:
DUCT BANK SHALL BE
CAPPED AT ALL PULL BOXES

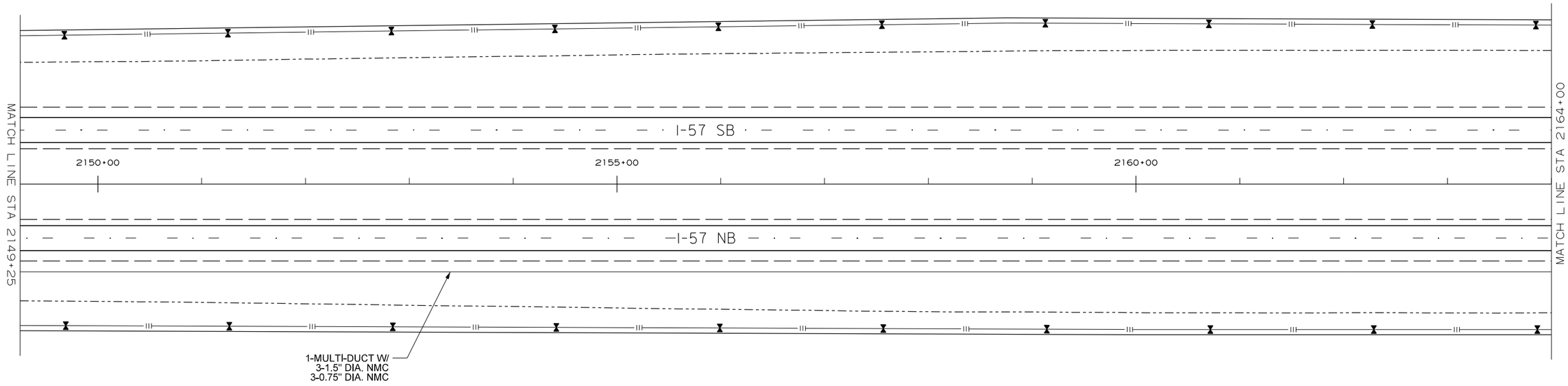
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	173	325
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LICENSED PROFESSIONAL ENGINEER
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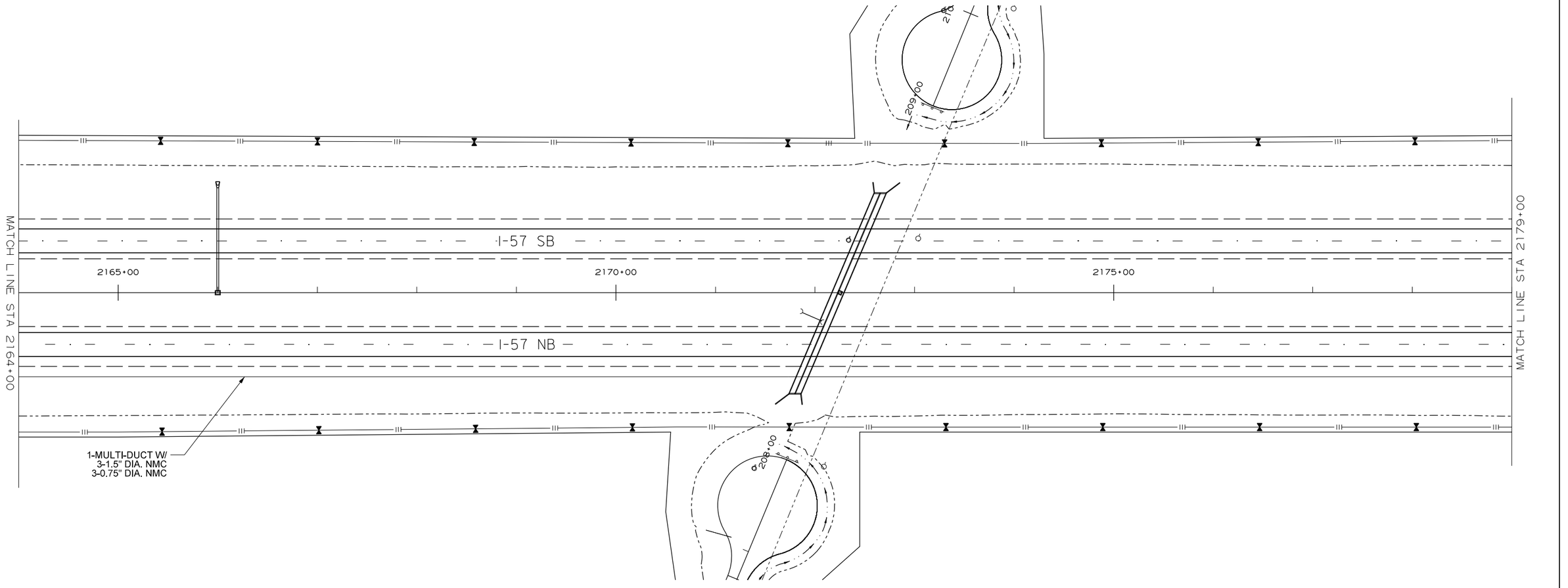


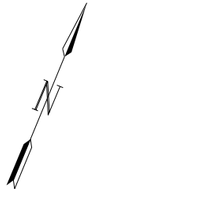
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	174	325
		ITS PLAN SHEET				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16675
CLAIRE E. MCKINNEY

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SCALE IN FEET

0 50 100 200

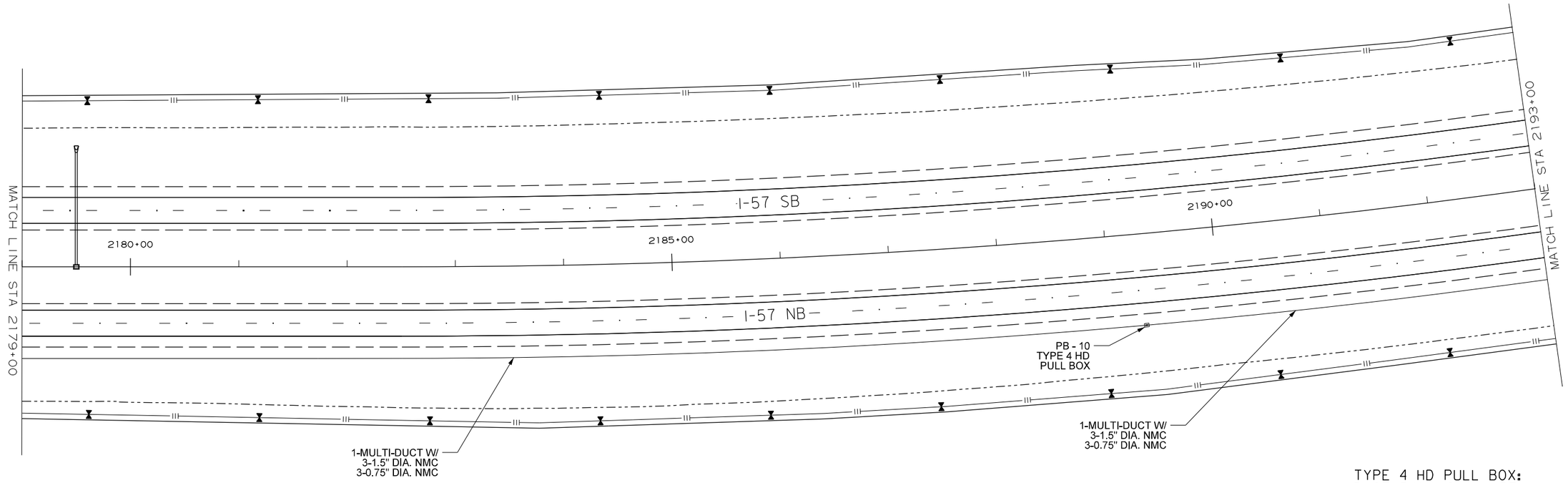
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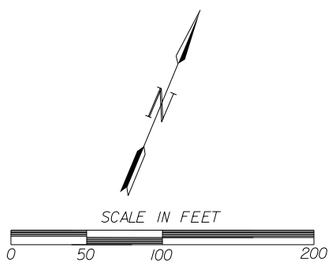
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		ITS PLAN SHEET				

STATE OF ARKANSAS
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No.16675
CLAIRE E. MCKINNEY

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TYPE 4 HD PULL BOX:
DUCT BANK SHALL BE
CAPPED AT ALL PULL BOXES

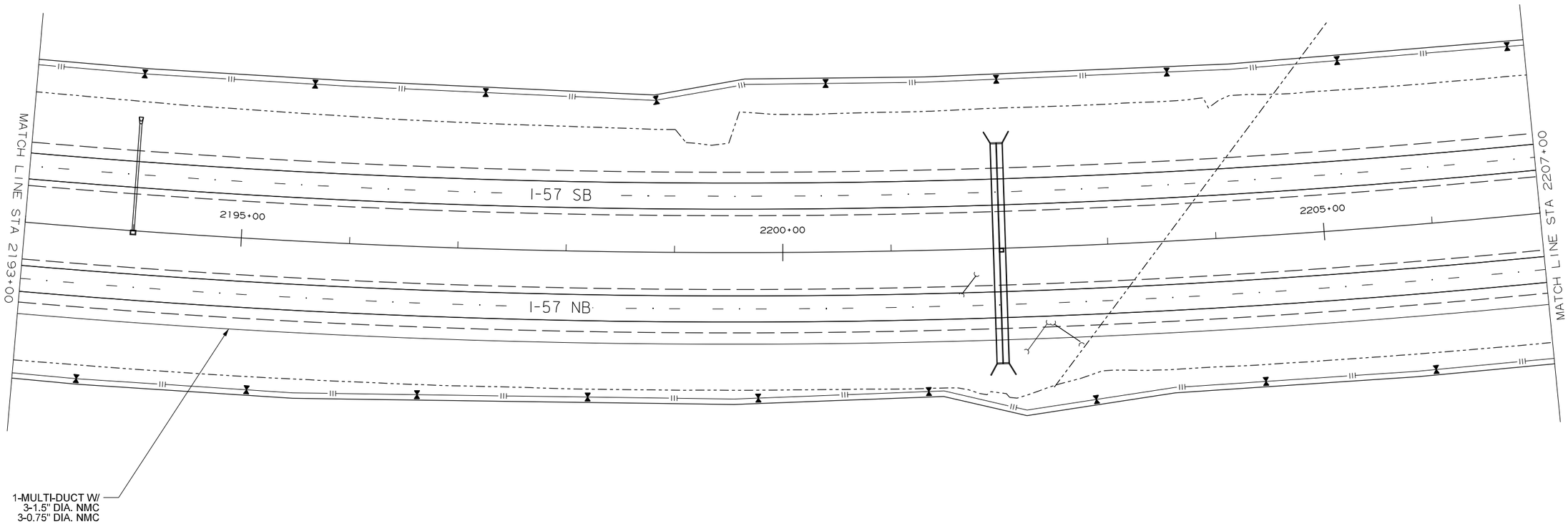


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DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	176	325
		ITS PLAN SHEET				

STATE OF ARKANSAS
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No.16675
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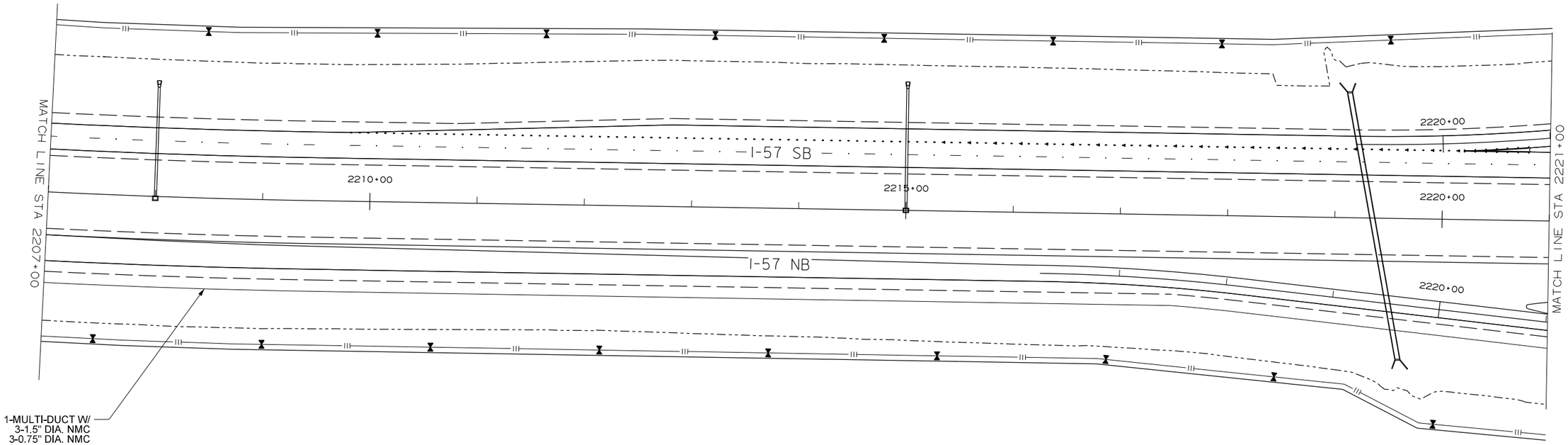
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	177	325
		ITS PLAN SHEET				

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LICENSED PROFESSIONAL ENGINEER
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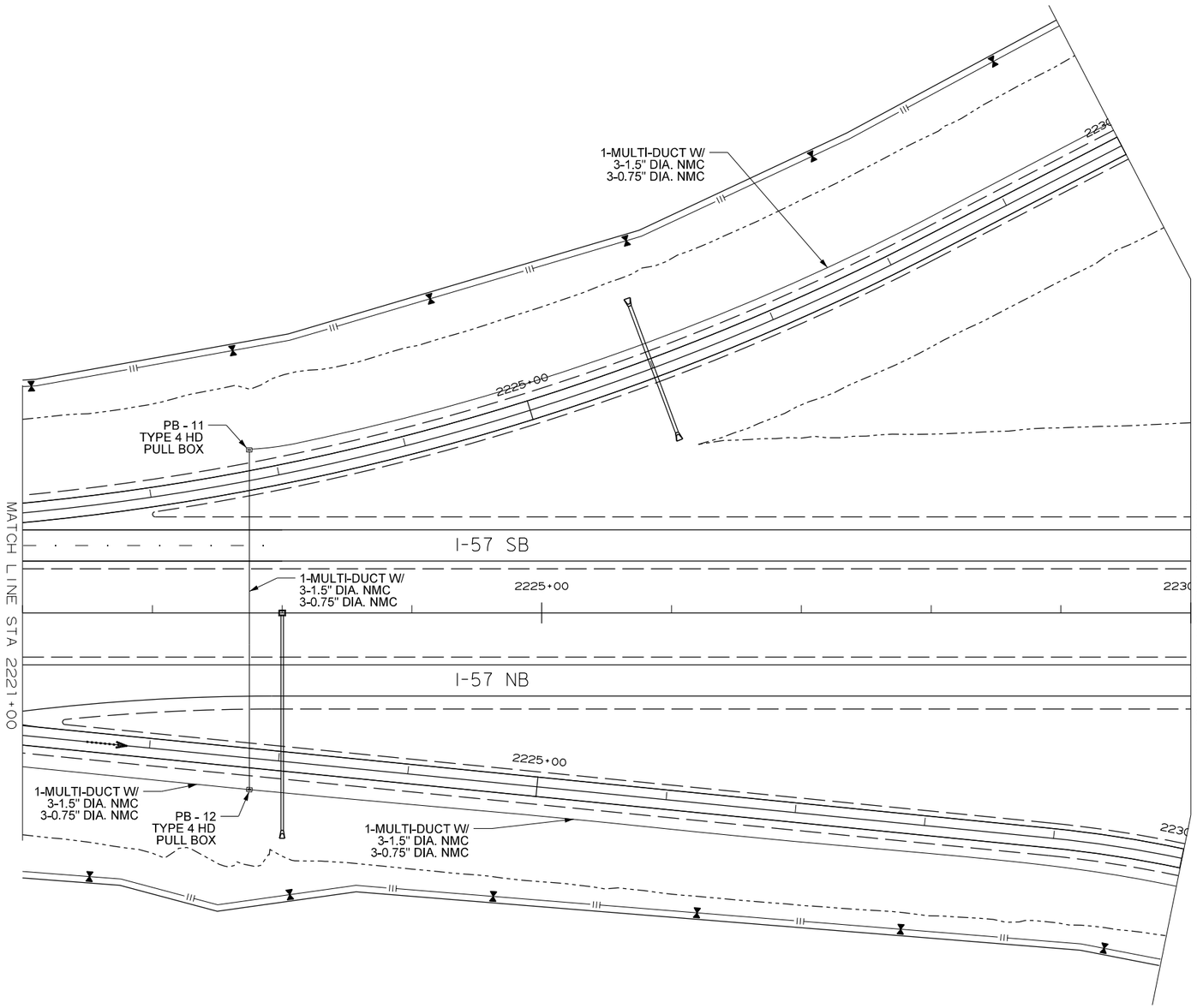
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	178	325
		ITS PLAN SHEET				

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No.16675
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TYPE 4 HD PULL BOX:
DUCT BANK SHALL BE
CAPPED AT ALL PULL BOXES

SCALE IN FEET
0 50 100 200

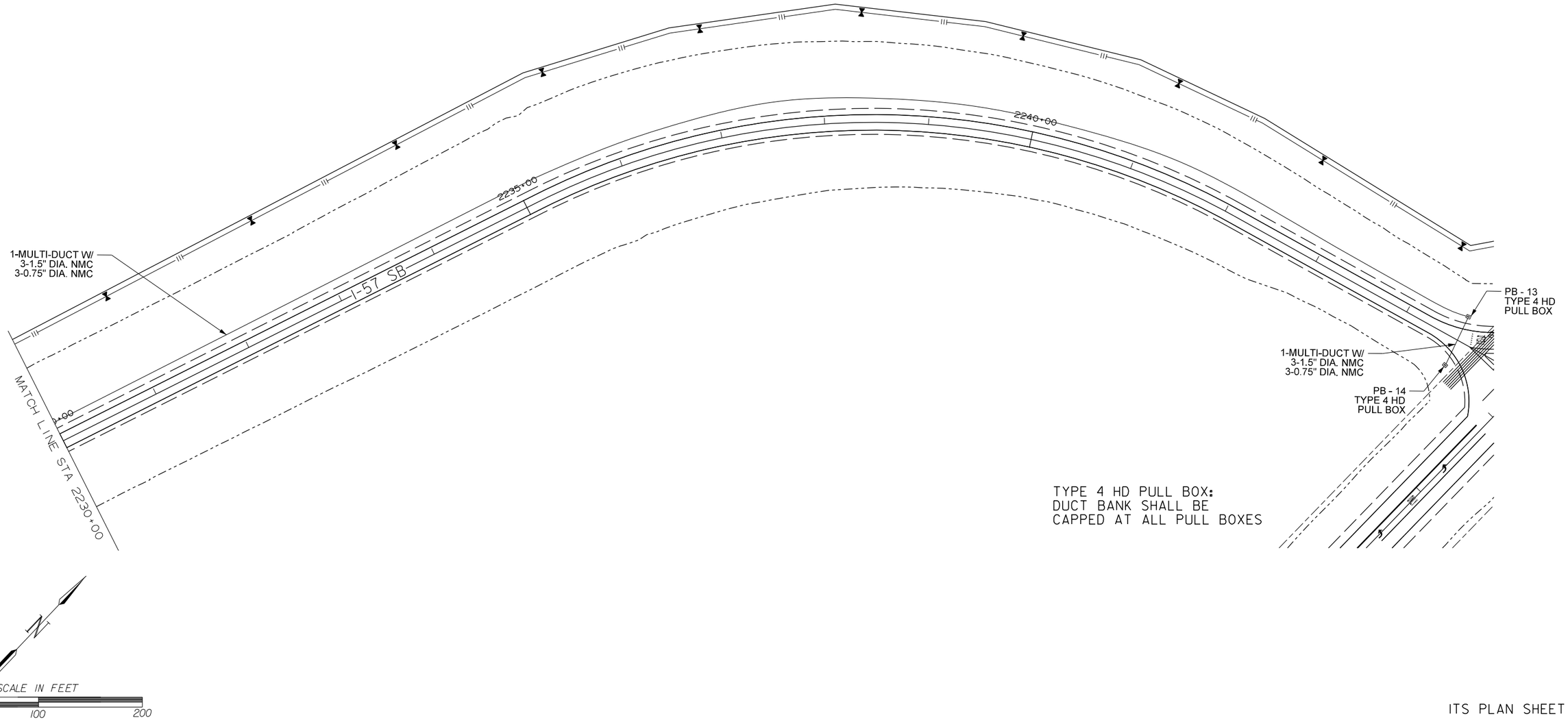
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REVISED DATE:

ITS PLAN SHEET

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	179	325
		ITS PLAN SHEET				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16675
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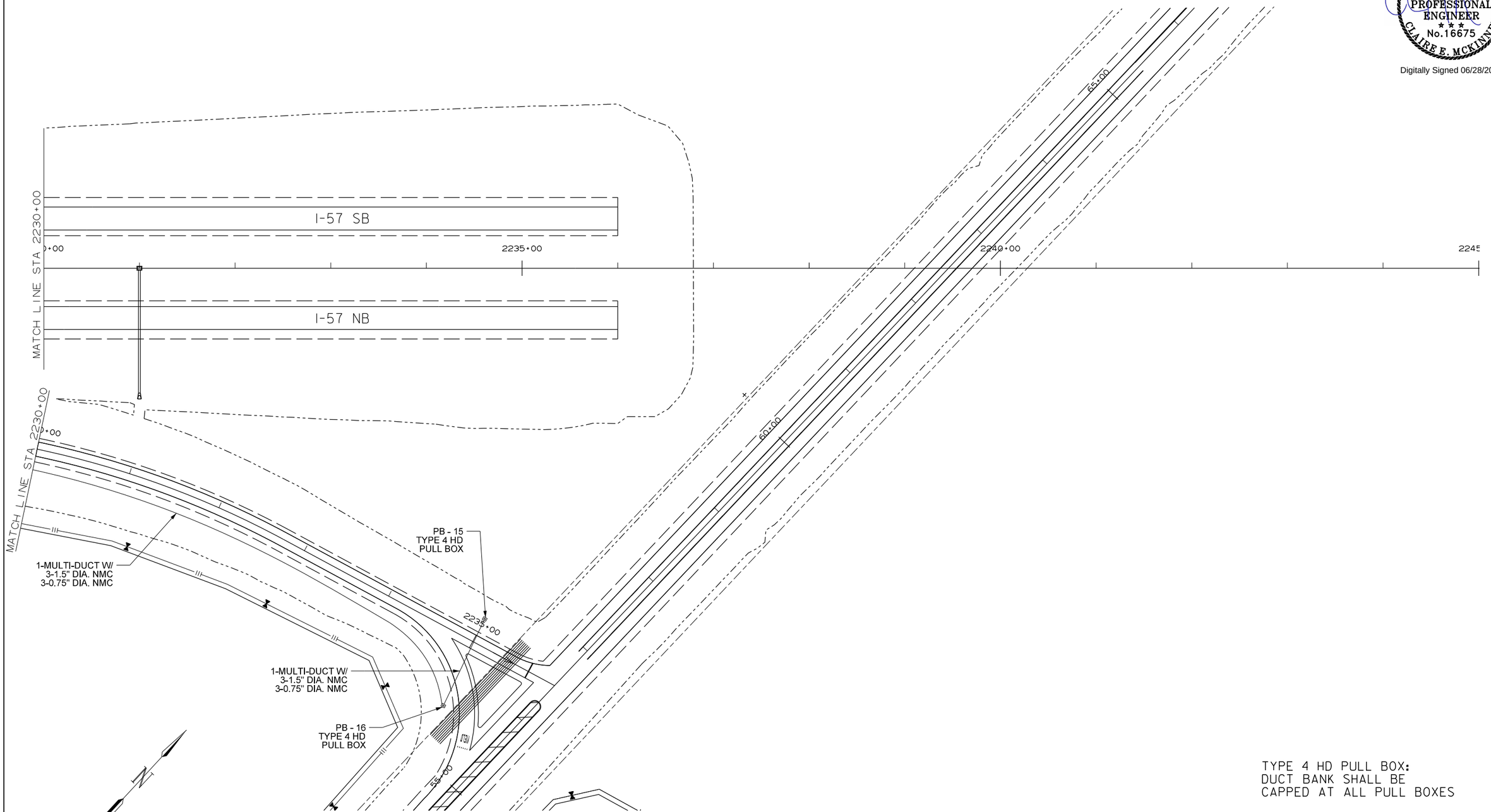
TYPE 4 HD PULL BOX:
DUCT BANK SHALL BE
CAPPED AT ALL PULL BOXES

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	180	325
		ITS PLAN SHEET				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.16675
CLAIRE E. MCKINNEY

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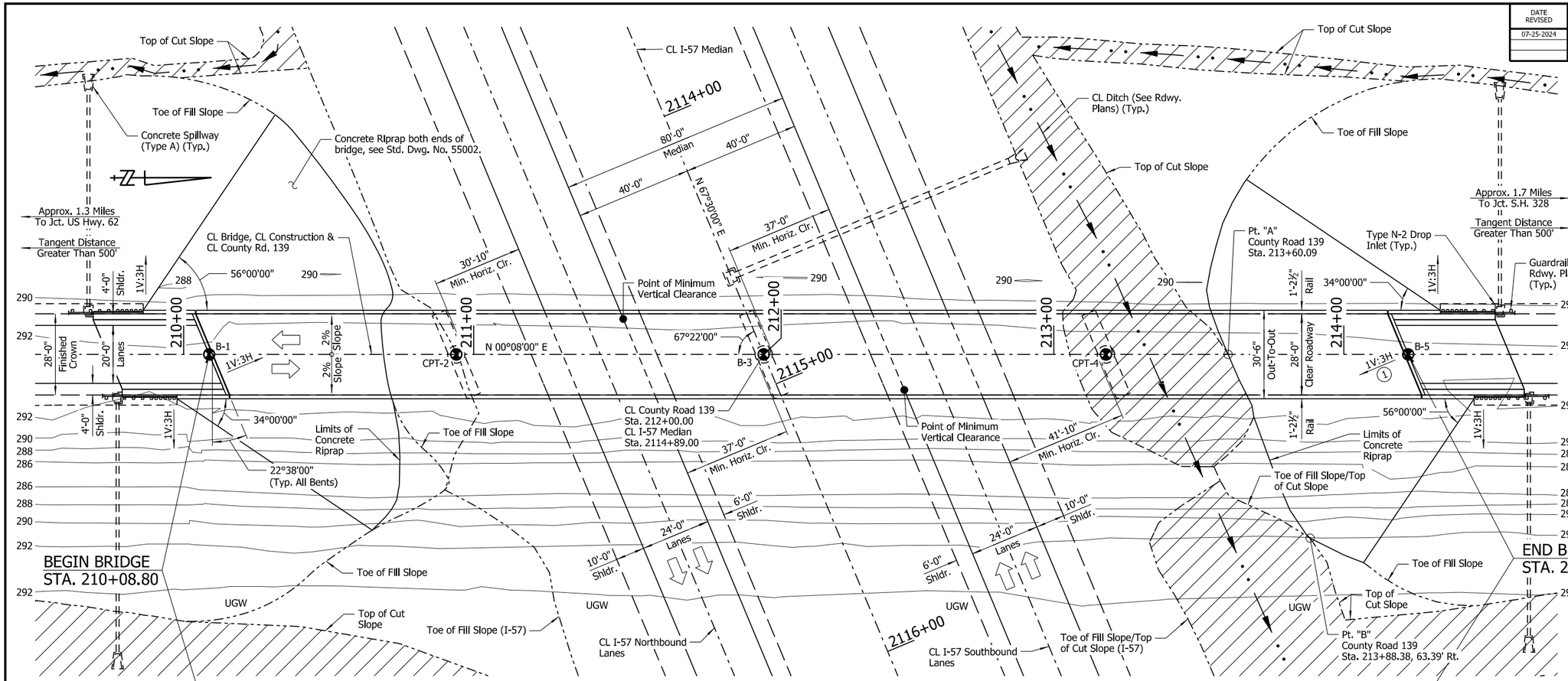


TYPE 4 HD PULL BOX:
DUCT BANK SHALL BE
CAPPED AT ALL PULL BOXES

ITS PLAN SHEET

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. ROAD DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
07-25-2024		6	ARK.	101172	181	325
		07688		LAYOUT		64122



NOTES:
Use Type F Approach Slab (W = 24'-0") at each end of bridge. See Std. Dwg. No. 55040F1.

Use Type F Approach Gutters at each end of bridge. See Std. Dwg. No. 55030F.

Use Type N-2 Drop Inlets at each end of bridge.

For "ELEVATION OF SOIL BORINGS", "BORING LEGEND" and "N-VALUES", see Dwg. No. 64123.

For "GENERAL NOTES", see Dwg. No. 64124.

State of Arkansas form inserts shall be placed on exterior faces of wing rails at both ends of bridge in accordance with Dwg. No. 64126. A Class 3 Textured Coating Finish shall be applied to the form inserts in accordance with Special Provision "TEXTURED COATING FINISH".

EXISTING UTILITIES LEGEND

UGW = Underground Water

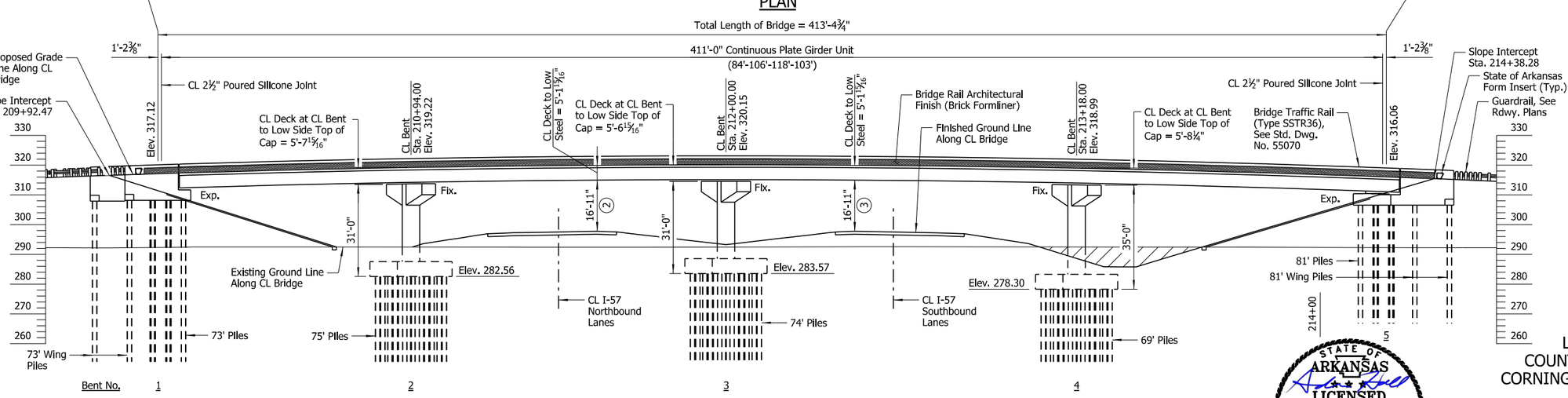
NOTE:
Utilities shown are based on locations at time of survey and do not reflect any potential utility relocations prior to construction.

(1) Or flatter. Between Pt. "A" and Pt. "B", bridge end grading shall tie into the I-57 roadway ditch as shown in "ELEVATION". See Roadway Plans for flat bottom ditch details.

(2) Point of Minimum Vertical Clearance County Road 139 Sta. 211+51.55, Offset 12.25' Left

(3) Point of Minimum Vertical Clearance County Road 139 Sta. 212+48.45, Offset 12.25' Right

PLAN



NOTE:
Stations shown are along CL Construction. Elevations shown are theoretical working point elevations at CL Bridge. Any vertical dimension referenced to CL Deck is based on theoretical working point elevation at CL Bridge. See "ROUNDING DETAIL" on Std. Dwg. No. 55007 for additional information.

ELEVATION

PVI Sta. 212+00.00
Elev. 331.02
V.C. = 725'
+6.00%
-6.00%

VERTICAL CURVE DATA

County Road 139
(Profile Grade Along CL Construction)

FOR R/W DATA, SEE ROADWAY PLANS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.14498
ADAM B. HALL

DIGITALLY SIGNED 07/25/2024
BRIDGE ENGINEER

SHEET 1 OF 3
LAYOUT OF BRIDGE
COUNTY ROAD 139 OVER I-57
CORNING BYPASS (FUTURE I-57) (S)
CLAY COUNTY

ROUTE 657 SEC. 3

ARKANSAS STATE HIGHWAY COMMISSION

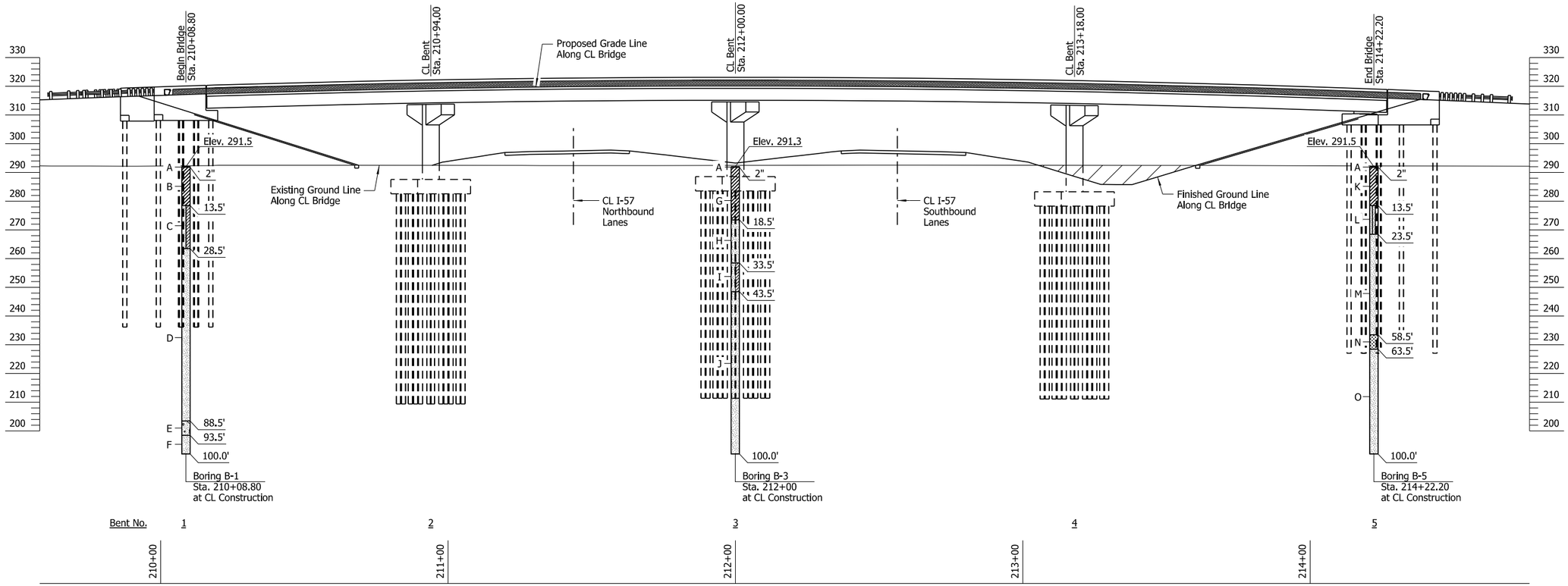
LITTLE ROCK, ARK.

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CHECKED BY: CSW DATE: MAR. 2024 SCALE: 1" = 20'-0"
DESIGNED BY: ABH DATE: MAR. 2024

BRIDGE NO. 07688 DRAWING NO. 64122

abhall
WORKSPACE\ARDOT Bridge (2019)
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REVISED DATE:
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07-25-2024		6	ARK.	101172	182	325
		07688		LAYOUT		64123



ELEVATION OF SOIL BORINGS

N-VALUES

Boring B-1 (Sta. 210+08.80, at CL)

1.5-2.5, N=12
6.5-7.5, N=9
14.0-15.0, N=10
19.0-20.0, N=8
24.0-25.0, N=5
29.0-30.0, N=16
34.0-35.0, N=9
39.0-40.0, N=9
44.0-45.0, N=10
49.0-50.0, N=13
54.0-55.0, N=20
59.0-60.0, N=16
64.0-65.0, N=20
69.0-70.0, N=18
74.0-75.0, N=19
79.0-80.0, N=13
84.0-85.0, N=22
89.0-90.0, N=8
94.0-95.0, N=29
99.0-100.0, N=26

CPT-2 (1) (Sta. 210+94.00, at CL)

Depth Interval	Average
0-5	N=6
5-10	N=6
10-15	N=15
15-20	N=20
20-25	N=36
25-30	N=87
30-35	N=20
35-40	N=27
40-45	N=29
45-50	N=40
50-55	N=39
55-60	N=42
60-65	N=42
65-70	N=41
70-75	N=50
75-80	N=46
80-85	N=39
85-90	N=46
90-95	N=54
95-100	N=57

Boring B-3 (Sta. 212+00, at CL)

1.5-2.5, N=8
19.0-20.0, N=5
24.0-25.0, N=16
29.0-30.0, N=12
34.0-35.0, N=38
39.0-40.0, N=13
44.0-45.0, N=17
49.0-50.0, N=21
54.0-55.0, N=14
59.0-60.0, N=15
69.0-70.0, N=8
79.0-80.0, N=18
89.0-90.0, N=25
99.0-100.0, N=37

CPT-4 (1) (Sta. 213+18.00, at CL)

Depth Interval	Average
0-5	N=6
5-10	N=6
10-15	N=6
15-20	N=26
20-25	N=29
25-30	N=58
30-35	N=37
35-40	N=37
40-45	N=35
45-50	N=39
50-55	N=39
55-60	N=42
60-65	N=41
65-70	N=40
70-75	N=50
75-80	N=48
80-85	N=62
85-90	N=52
90-95	N=57
95-100	N=56

Boring B-5 (Sta. 214+22.20, at CL)

1.5-2.5, N=4
14.0-15.0, N=13
19.0-20.0, N=37
24.0-25.0, N=16
29.0-30.0, N=22
34.0-35.0, N=8
39.0-40.0, N=12
44.0-45.0, N=15
49.0-50.0, N=21
54.0-55.0, N=11
59.0-60.0, N=10
64.0-65.0, N=8
69.0-70.0, N=14
74.0-75.0, N=23
79.0-80.0, N=20
84.0-85.0, N=21
89.0-90.0, N=31
94.0-95.0, N=29
99.0-100.0, N=31

(1) "N-VALUES" shown for Cone Penetration Tests (CPT) are estimated based on correlations to conventional SPT blow counts as provided by the geotechnical consultant.

BORING LEGEND

A - Topsoil
B - Stiff, brown and gray, FAT CLAY
C - Loose, gray SAND, trace clay
D - Loose to medium dense, gray and brown SAND, trace gravel
E - Loose, brown and gray SAND and gravel
F - Medium dense, gray and black to gray SAND, trace gravel
G - Medium stiff, brown and gray, FAT CLAY
H - Loose to medium dense, gray and brown SAND
I - Medium dense to dense, gray SAND, trace clay and silt
J - Medium dense to dense, gray and brown SAND, trace gravel
K - Soft, brown to gray, FAT CLAY
L - Medium dense to dense, tan to brown, SILTY SAND
M - Loose to medium dense, gray and brown SAND, trace gravel
N - Loose, gray, WELL-GRADED SAND with gravel
O - Loose to dense, gray SAND

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.14498
ADAM B. HALL

DIGITALLY SIGNED 07/25/2024
BRIDGE ENGINEER

SHEET 2 OF 3
LAYOUT OF BRIDGE
COUNTY ROAD 139 OVER I-57
CORNING BYPASS (FUTURE I-57) (S)
CLAY COUNTY
ROUTE 657 SEC. 3
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

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CHECKED BY: CSW DATE: MAR. 2024 SCALE: 1" = 20'-0"
DESIGNED BY: ABH DATE: MAR. 2024

BRIDGE NO. 07688 DRAWING NO. 64123

abhall
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. ROAD DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
07-25-2024		6	ARK.	101172	183	325
		07688		LAYOUT		64124

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. Unless otherwise noted in the plans, Section and Subsection refer to the Standard Construction Specifications.

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications, Ninth Edition (2020)
AASHTO Guide Specifications for LRFD Seismic Bridge Design (2011, 2nd Edition) with current interims

LIVE LOADING: HL-93

SEISMIC DESIGN CATEGORY: C S_{D1} = 0.388g Site Class = D

SEISMIC OPERATIONAL CLASSIFICATION: Other

MATERIALS AND STRENGTHS:

Class S(AE) Concrete (Superstructure)	f'c = 4,000 psi
Class S Concrete (Substructure)	f'c = 3,500 psi
Reinforcing Steel (AASHTO M31 or M 322, Type A)	fy = 60,000 psi
Reinforcing Steel (ASTM A706)	fy = 60,000 psi
Structural Steel (ASTM A709, Gr. 50)	Fy = 50,000 psi
Structural Steel (ASTM A709, Gr. 36)	Fy = 36,000 psi

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

STEEL SHELL PILING: Piling in Bents 1 and 5 shall be 18" diameter concrete filled steel shell piles and shall be driven to a minimum ultimate bearing capacity of 475 tons per pile. Piling in Bents 2 thru 4 shall be 18" diameter concrete filled steel shell piles and shall be driven to a minimum ultimate bearing capacity of 378 tons per pile. All piling shall be driven with an approved air, steam, or diesel hammer to a minimum tip elevation of 237.00 or lower. Piling in 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). No piles will be paid for as test piles.

Water jetting or other methods as 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 (18" DIA.)".

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 will be 152,000 foot-pounds per blow at Bents 1 and 5, and will be 90,000 foot-pounds per blow at Bents 2 thru 4.

PILE FOOTINGS: The top of the footing at Bents 2 thru 4 shall be set a minimum of 2' below natural or finished ground or at the elevation shown on the plans, whichever is lower. Foundations for footings shall be prepared in accordance with Subsection 801.04. Foundation piles shall not be driven until after the excavation to bottom of footing is complete. Excavations shall be backfilled and compacted to the level of the existing or finished ground in accordance with Subsection 801.08.

PAINTING: All Grade 50 structural steel, except galvanized members and surfaces in contact with concrete, shall be painted as specified in Subsection 807.75. The color of paint shall be Brown and shall match Federal Standard 595B, Color Chip No. 20219.

TEXTURED COATING FINISH: Class 3 Textured Coating Finish shall be applied to bridge surfaces as specified in Special Provision "TEXTURED COATING FINISH" and in accordance with Subsection 802.19(b)(3). Textured Coating Finish shall not be applied on surfaces where Class 2 Protective Surface Treatment is applied.

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

PROTECTIVE SURFACE TREATMENT: Class 2 Protective Surface Treatment shall be applied to the roadway surface and to the roadway face and top of the bridge traffic rails in accordance with Section 803.

MAINTENANCE OF TRAFFIC: See Roadway Plans.

DETAIL DRAWINGS:	DRAWING NO(S):
End Bents	64125-64128
Intermediate Bents	64129-64131
Elastomeric Bearings	64132
411'-0" Continuous Plate Girder Unit	64133-64142
General Notes For Steel Bridge Structures	55006
Details For Steel Bridge Structures	55007
Poured Silicone Joints	55008
Concrete Filled Steel Shell Piling	55021 (1)
Type F Approach Gutters	55030F
Type F Approach Slab	55040F1
Bridge Traffic Rail (Type SSTR36)	55070

(1) Modified as noted in the plans for piling at end bents

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LICENSED PROFESSIONAL ENGINEER
No.14498
ADAM B. HALL

DIGITALLY SIGNED 07/25/2024
BRIDGE ENGINEER

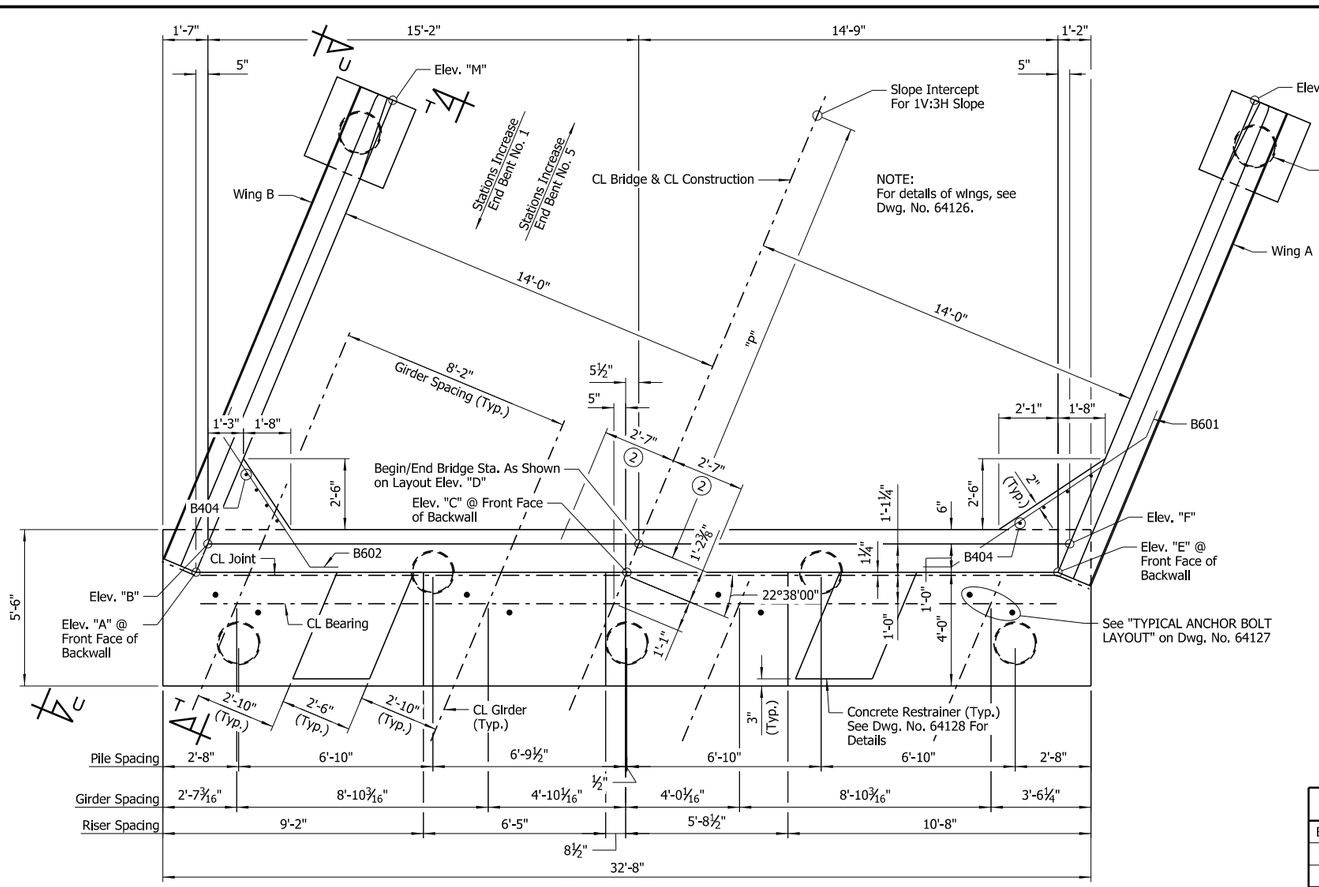
SHEET 3 OF 3
LAYOUT OF BRIDGE
COUNTY ROAD 139 OVER I-57
CORNING BYPASS (FUTURE I-57) (S)
CLAY COUNTY
ROUTE 657 SEC. 3
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

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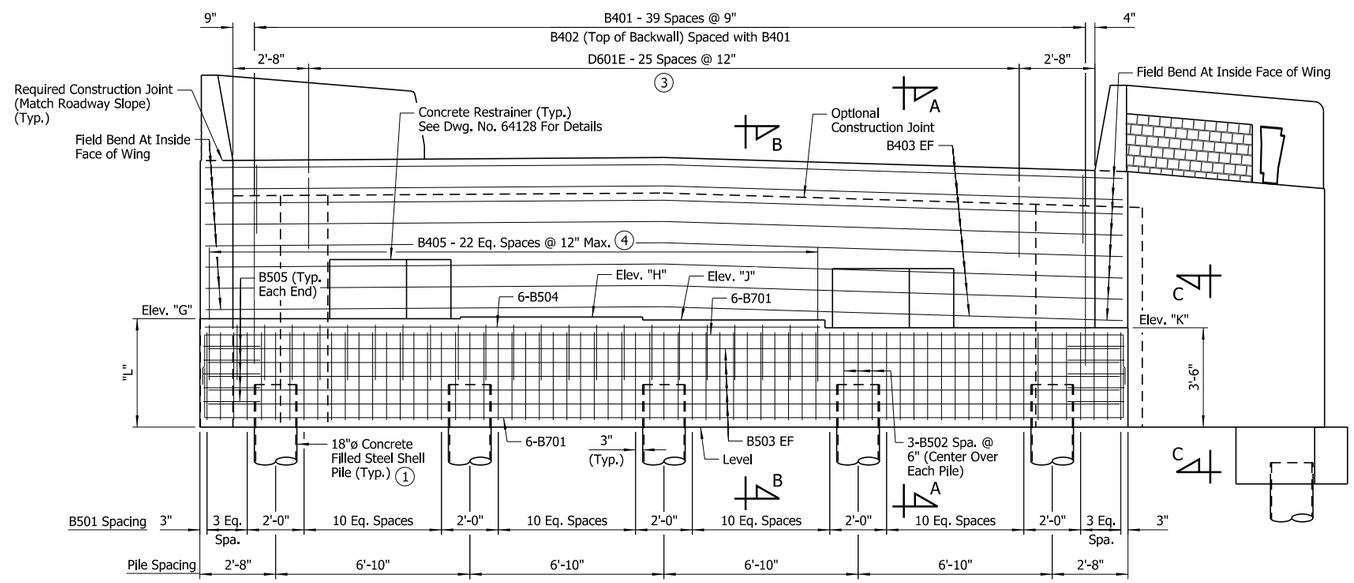
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		6	ARK.	101172	184	325
		07688		END BENTS		64125



PLAN - END BENT NOS. 1 & 5

Scale: ⅜" = 1'-0"



ELEVATION - END BENT NOS. 1 & 5

(Bent No. 1 - Looking Back; Bent No. 5 - Looking Ahead)
Scale: ⅜" = 1'-0"

4 Space with every other B501 or B502 Bar as shown.

GENERAL NOTES

Finish top of backwall to match bridge deck.

Structural steel in end bents shall be ASTM A709, Gr. 50 and shall be paid for as "STRUCTURAL STEEL IN PLATE GIRDER SPANS (A709, GR. 50)".

See Standard Drawing No. 55006 for additional notes.

For additional information, see Layout.

1. See Std. Dwg. No. 55021 for details of piles and pile anchorage, with modifications as noted. Piles shall have a nominal shell thickness, "T" = 0.625", an alternate flat tip bottom plate thickness, "X" = 2¾", and an alternate vaned tip bottom plate thickness, "Y" = 1¾". Pile anchorage shall be placed to minimize interference with anchor bolts and reinforcing in cap.
2. See "ROUNDING DETAIL" on Std. Dwg. No. 55007.
3. Horizontal leg of D601E shall be placed parallel to CL Bridge.

NOTES:
For "SECTION T-T" and "VIEW U-U", see Dwg. No. 64126.

For "SECTION A-A", "SECTION B-B", "VIEW C-C", "END BENT WALL ARMOR DETAIL" & "FOUNDATION PLAN", see Dwg. No. 64127.

For "BAR LIST (EACH END BENT)" & "BAR BENDING DIAGRAMS", see Dwg. No. 64128.

Class 2 Protective Surface Treatment shall be applied to the top of the backwall and to the roadway face and top of the wing rails.

Class 3 Textured Coating Finish shall be applied to bridge surfaces as specified in Special Provision "TEXTURED COATING FINISH" and in accordance with Subsection 802.19(b)(3). Textured Coating Finish shall not be applied on surfaces where Class 2 Protective Surface Treatment is applied.

TABLE OF VARIABLES

Bent No.	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"J"	"K"	"L"	"M"	"N"	"P"
1	317.05	317.02	317.15	317.12	316.69	316.65	311.48	311.54	311.43	311.16	3'-9 13/16"	316.48	316.08	16'-4"
5	316.03	315.99	316.10	316.06	315.60	315.56	310.45	310.49	310.36	310.07	3'-10 9/16"	315.36	314.90	16'-1"

NOTE:
No portion of the backwall shall be poured until the girders are in place. The portion of the backwall above the optional construction joint at the paving bracket shall not be placed until the adjacent deck pour has been made. See Std. Dwg. No. 55008, "EXPANSION DEVICE INSTALLATION AT END BENTS", for additional information.

No heavy construction equipment shall be allowed within 10' of the backwall until the deck concrete placement for the adjacent span has been completed.

LEGEND

EF = Each Face

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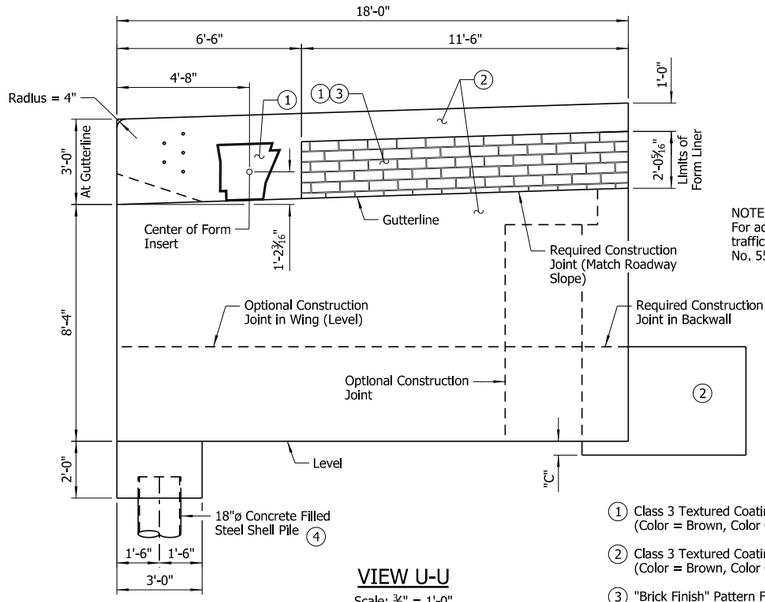
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SHEET 1 OF 4
DETAILS OF END BENTS
ROUTE SEC.
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LITTLE ROCK, ARK.

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		07688		END BENTS		64126



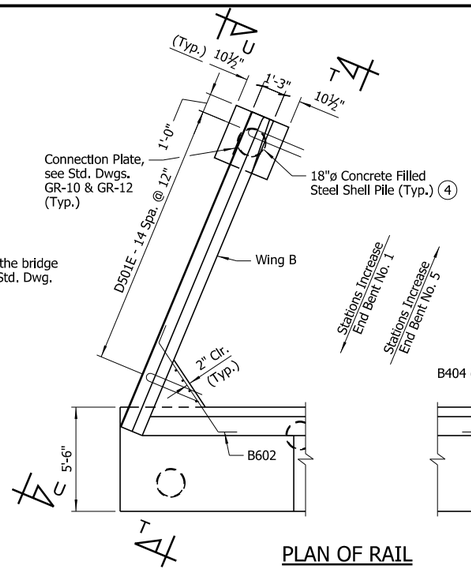
VIEW U-U

Scale: ⅜" = 1'-0"

NOTE:
See Special Provision "TEXTURED COATING FINISH" for additional information regarding the placement of the Class 3 Textured Coating Finish.

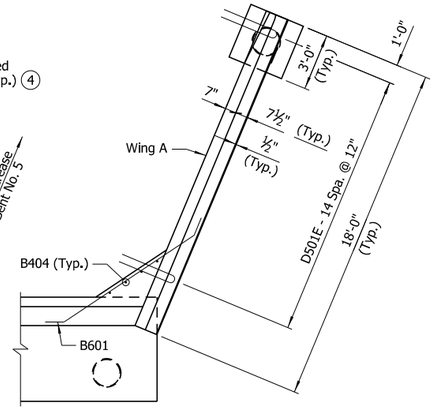
NOTE:
For additional details of the bridge traffic rail on wing, see Std. Dwg. No. 55070.

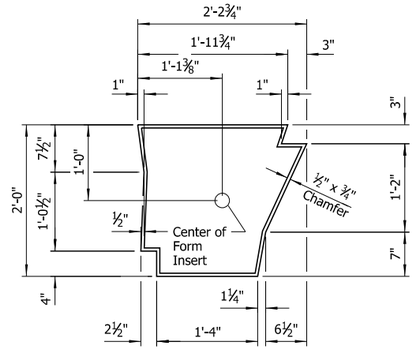
1. Class 3 Textured Coating Finish (Color = Brown, Color Chip No. 33578)
2. Class 3 Textured Coating Finish (Color = Brown, Color Chip No. 30108)
3. "Brick Finish" Pattern Form Liner. For additional information, see "ARCHITECTURAL FINISH ELEVATION" on Dwg. No. 64133 and Special Provision "ARCHITECTURAL FINISH".
4. "ALTERNATE PILE ANCHORAGE DETAIL" on Std. Dwg. No. 55021 required to minimize interference with reinforcing in footing.
5. Place inside R401E bars positioned with 2" end cover as shown.



PLAN OF RAIL

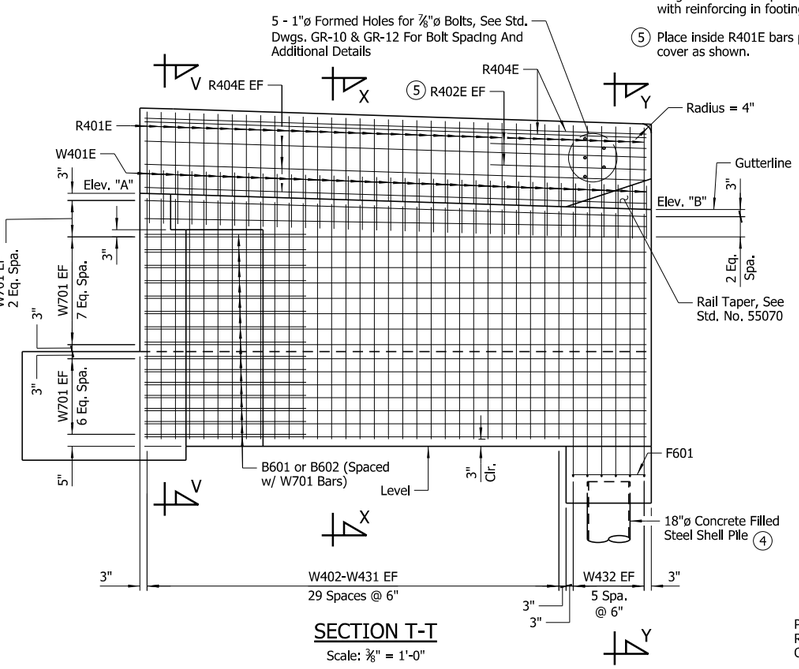
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FORM INSERT DETAILS

Scale: 1" = 1'-0"



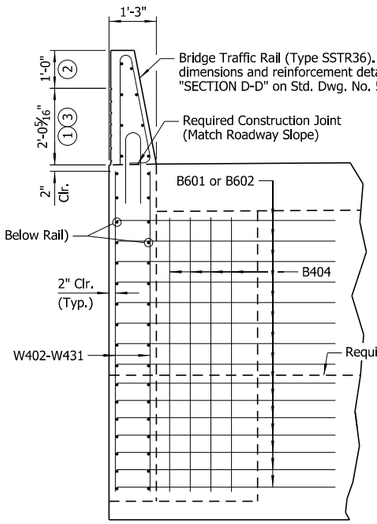
SECTION T-T

Scale: ⅜" = 1'-0"

LEGEND

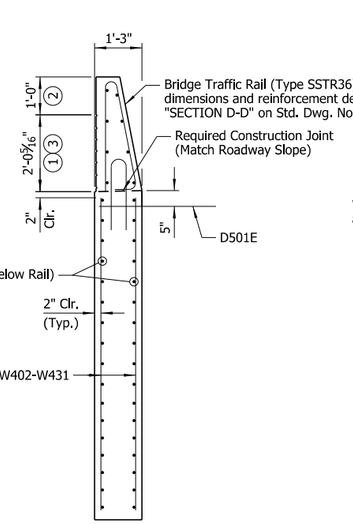
U.N.O. = Unless Noted Otherwise

TABLE OF WING VARIABLES				
Bent No.	Location	"A"	"B"	"C"
1	Wing A	316.69	316.08	1"
1	Wing B	317.05	316.48	5⅞"
5	Wing A	315.60	314.90	0"
5	Wing B	316.03	315.36	5½"



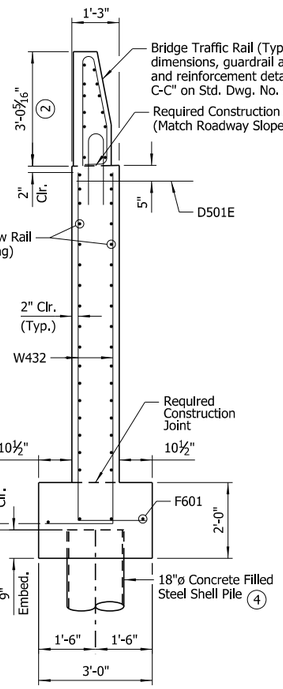
SECTION V-V

Scale: ½" = 1'-0"



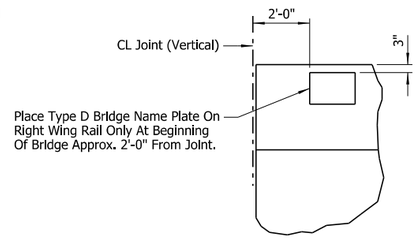
SECTION X-X

Scale: ½" = 1'-0"



SECTION Y-Y

Scale: ½" = 1'-0"



VIEW SHOWING LOCATION OF NAME PLATE

No Scale

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SHEET 2 OF 4
DETAILS OF END BENTS

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

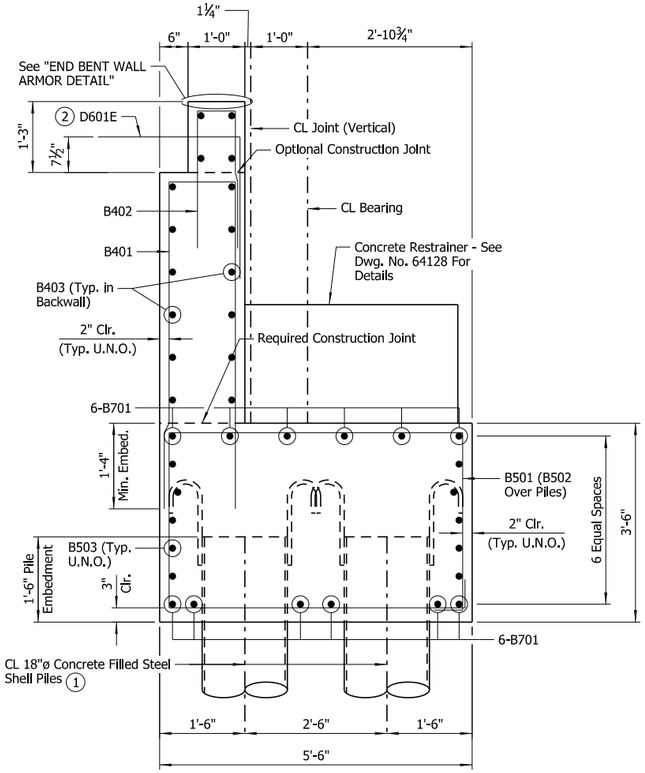
LITTLE ROCK, ARK.

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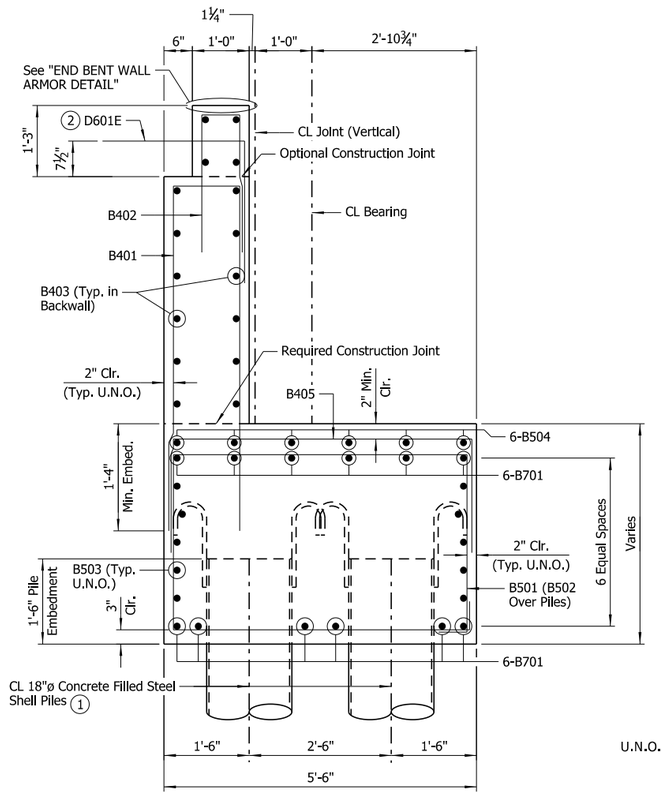
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		07688		END BENTS		64127



SECTION A-A

Scale: ¾" = 1'-0"

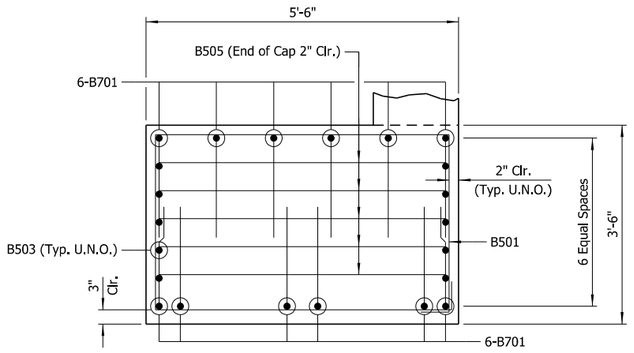


SECTION B-B

Scale: ¾" = 1'-0"

① See Std. Dwg. No. 55021 for details of piles and pile anchorage, with modifications as noted. Piles shall have a nominal shell thickness, "T" = 0.625", an alternate flat tip bottom plate thickness, "X" = 2¾", and an alternate vaned tip bottom plate thickness, "Y" = 1¾". Pile anchorage shall be placed to minimize interference with anchor bolts and reinforcing in cap.

② Horizontal leg of D601E shall be placed parallel to CL Bridge.

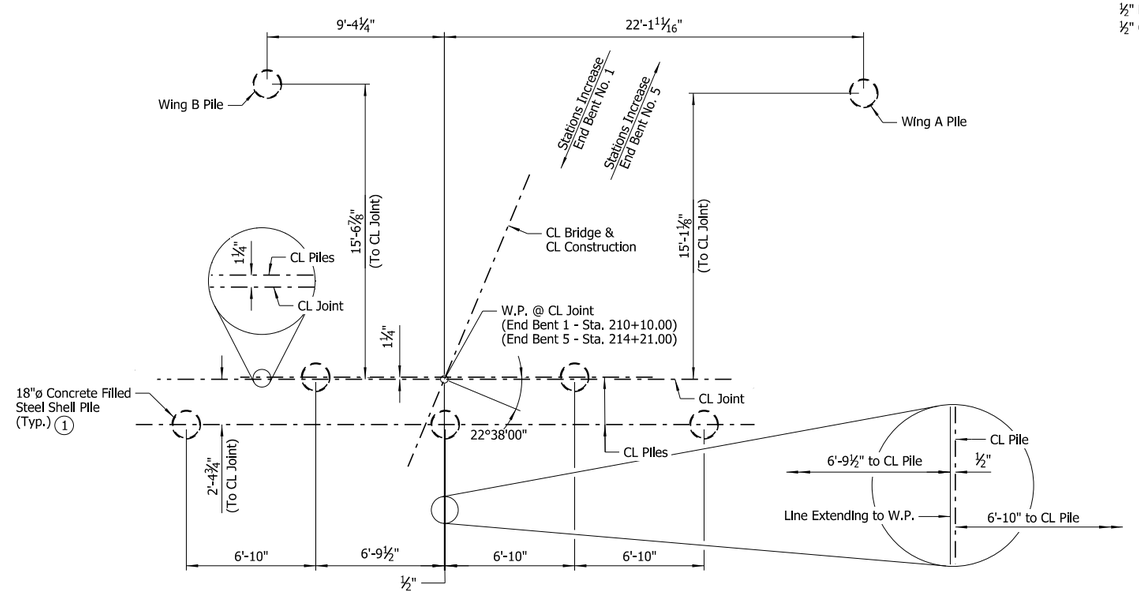


VIEW C-C

Scale: ¾" = 1'-0"

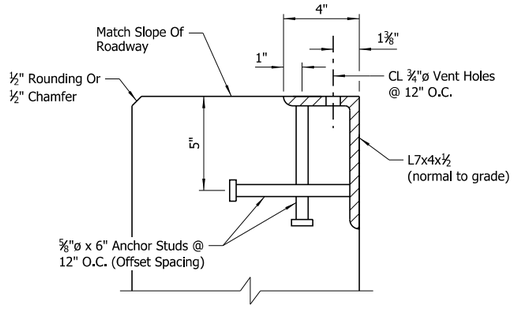
LEGEND

U.N.O. = Unless Noted Otherwise



FOUNDATION PLAN

Scale: ¼" = 1'-0"



NOTES:
Transverse spacing between vertical anchor studs and vent holes shall be 6".

Concrete shall be hand packed under joint armor.

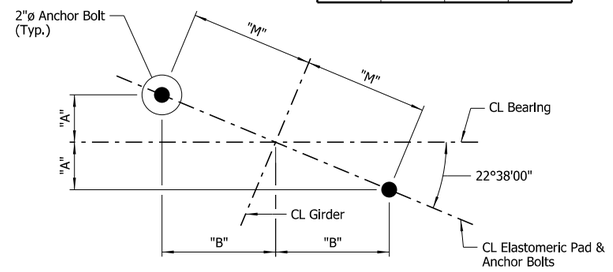
Special care shall be taken to properly and thoroughly consolidate the concrete in the vicinity of the expansion joint device in the backwall. See Section 802.09(a)(3).

The profile of the backwall angle shall be established based on the vertical curve in conjunction with the skew.

END BENT WALL ARMOR DETAIL

No Scale

TABLE OF VARIABLES			
Bent No.	"A"	"B"	"M"
1	3¾"	9"	9¾"
5	3⅞"	9¼"	10"



TYPICAL ANCHOR BOLT LAYOUT

No Scale

NOTE:
For details of Elastomeric Bearings, see Dwg. No. 64132.

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SHEET 3 OF 4
DETAILS OF END BENTS
ROUTE SEC.
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LITTLE ROCK, ARK.

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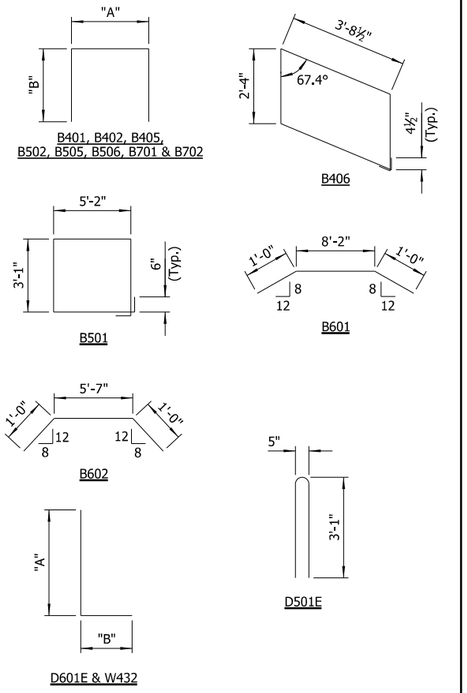
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		6	ARK.	101172	187	325
		07688		END BENTS		64128

BAR LIST (EACH END BENT)

MARK	NO. REQ'D	LENGTH	"A"	"B"	P.D.
B401	40	12'-6"	1'-2"	5'-9"	2"
B402	40	5'-4"	8"	2'-5"	2"
B403	16	32'-3½"			Str.
B404	8	7'-2½"			Str.
B405	23	9'-0"	5'-2"	2'-0"	2"
B406	8	12'-5"			2"
B501	52	17'-0"			2½"
B502	15	11'-1½"	5'-2"	3'-1"	2½"
B503	10	32'-0"			Str.
B504	6	21'-8"			Str.
B505	10	8'-9"	5'-0"	2'-0"	2½"
B506	8	11'-8½"	3'-7"	4'-2"	2½"
B601	15	10'-2"			4½"
B602	15	7'-5"			4½"
B701	12	35'-4"	32'-2½"	1'-9"	5¼"
B702	12	10'-2"	2'-2½"	4'-2"	5¼"
D501E	30	6'-4"			3¾"
D601E	26	4'-8"	2'-5"	2'-5"	4½"
F601	8	2'-8"			Str.
R401E	72	6'-4"			2½", 3"
R402E	8	5'-6"			Str.
R404E	16	17'-8"			Str.
W401E	72	3'-11"			3¾"
W402 To W431	4 Ea.	8'-5½" To 8'-0"			Str.
W432	24	10'-11"	9'-3"	1'-9"	3"
W701	68	17'-8"			Str.

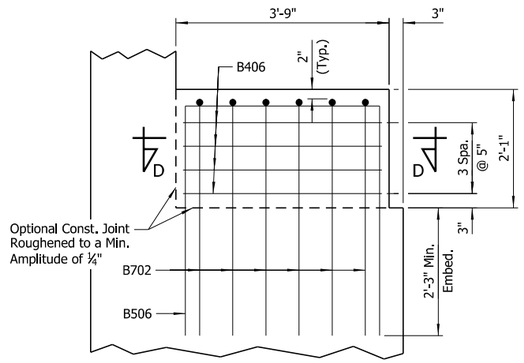
BAR BENDING DIAGRAMS



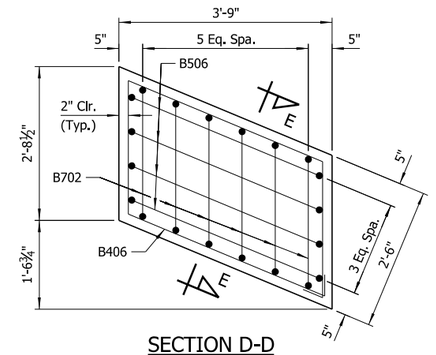
NOTES:
Dimensions of bars are out-to-out.

Bars designated with "E" suffix shall be epoxy coated.

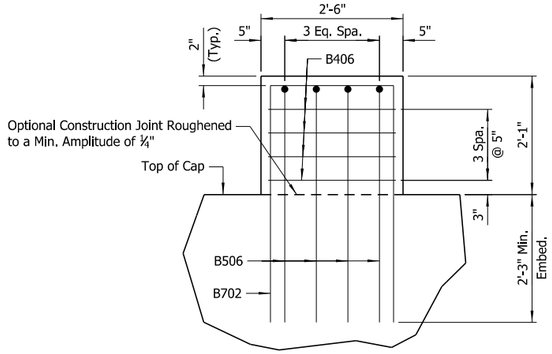
For bar bending diagrams of R401E & W401E, see Std. Dwg. No. 55070.



ELEVATION - CONCRETE RESTRAINER
(Looking Normal To End Bent Backwall)
Scale: ¾" = 1'-0"



SECTION D-D
Scale: ¾" = 1'-0"



SECTION E-E
Scale: ¾" = 1'-0"

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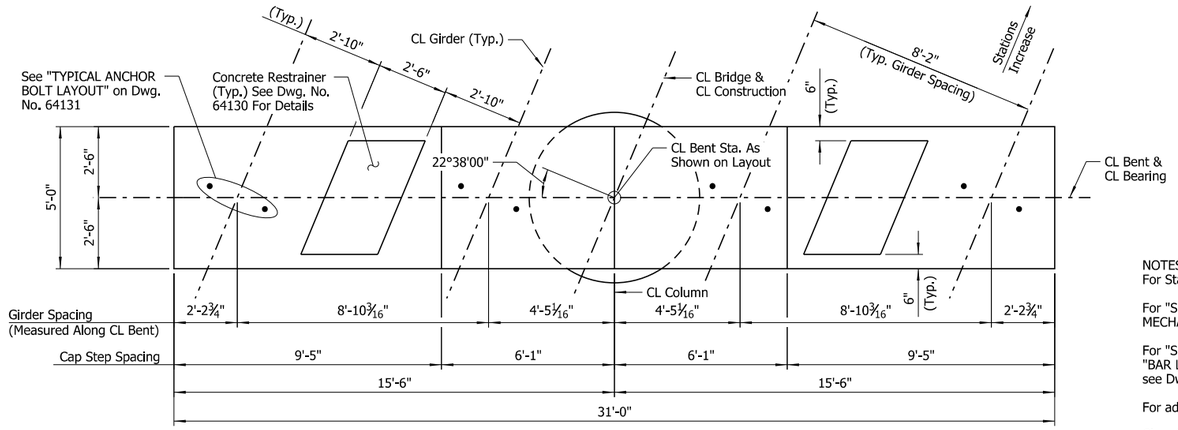
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SHEET 4 OF 4
DETAILS OF END BENTS
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. ROAD DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	188	325
		07688		INTERMEDIATE BENTS		64129



NOTES:
For Standard General Notes, see Std. Dwg. No. 55006.

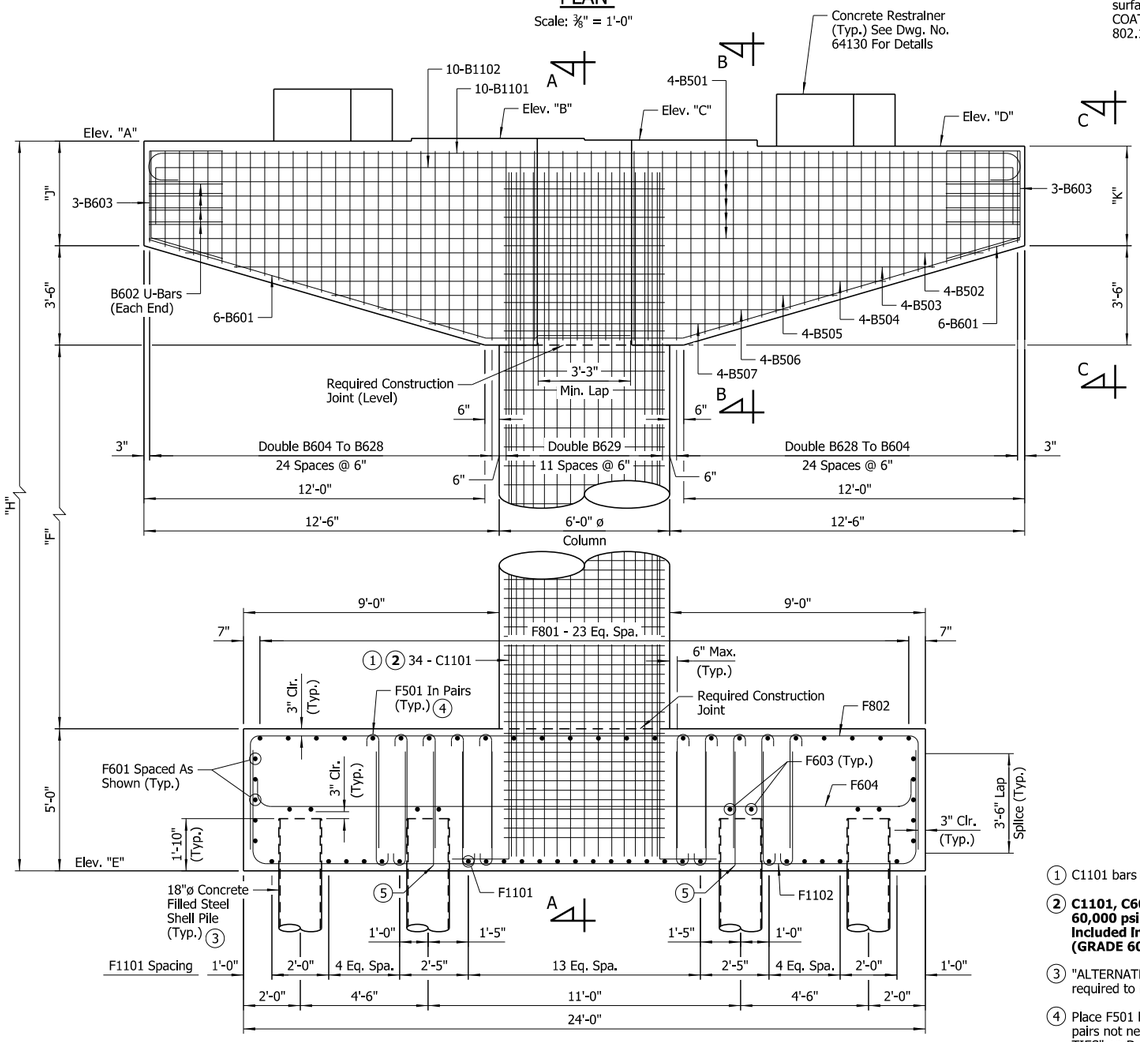
For "SECTION B-B", "VIEW C-C" and "OPTIONAL MECHANICAL SPLICE DETAIL", see Dwg. No. 64130.

For "SECTION D-D", "SECTION E-E", "FOOTING PLAN", "BAR LIST (PER BENT)" and "BAR BENDING DIAGRAMS", see Dwg. No. 64131.

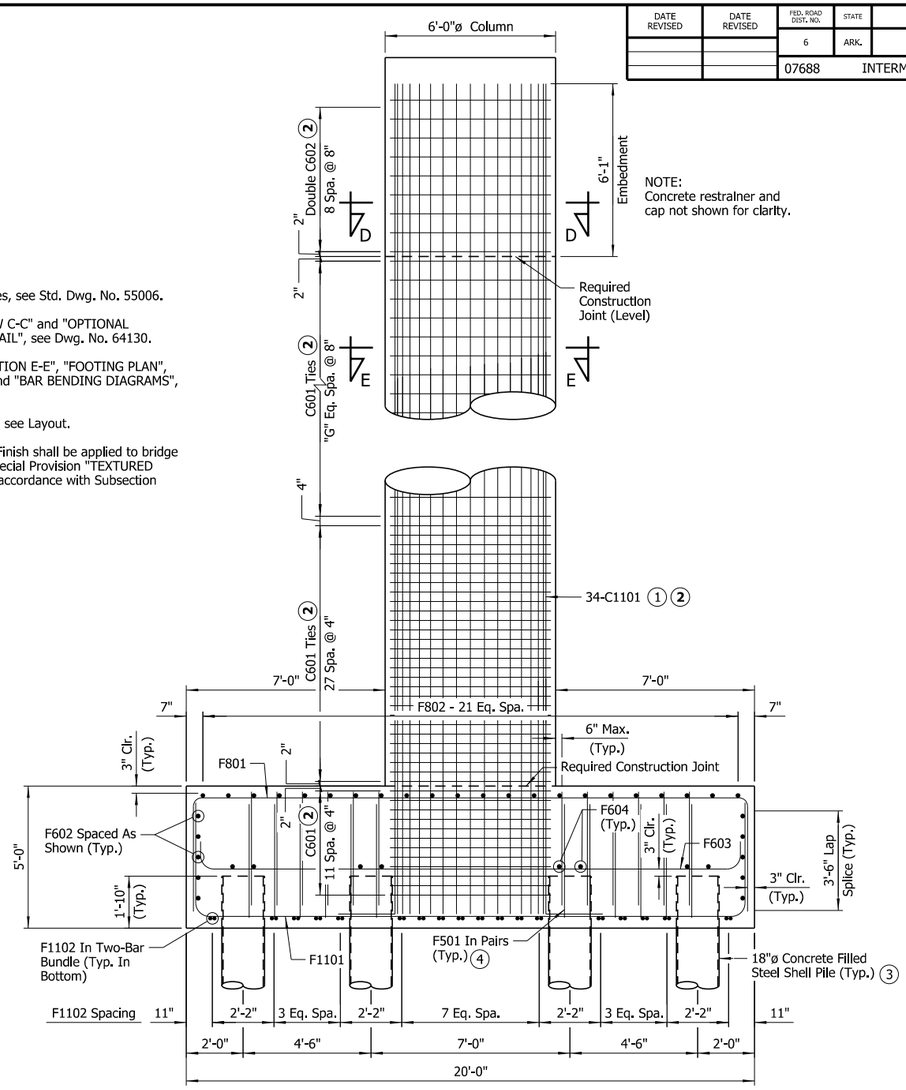
For additional information, see Layout.

Class 3 Textured Coating Finish shall be applied to bridge surfaces as specified in Special Provision "TEXTURED COATING FINISH" and in accordance with Subsection 802.19(b)(3).

PLAN
Scale: ⅜" = 1'-0"



ELEVATION
(Looking Ahead)
Scale: ⅜" = 1'-0"



SECTION A-A
Scale: ⅜" = 1'-0"

TABLE OF VARIABLES

BENT NO.	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"J"	"K"
2	313.56	313.78	313.84	313.74	282.56	19'-0"	14	31'-0"	3'-6"	3'-8⅛"
3	314.57	314.73	314.73	314.57	283.57	19'-0"	14	31'-0"	3'-6"	3'-6"
4	313.50	313.60	313.54	313.30	278.30	23'-0"	20	35'-2⅜"	3'-8⅜"	3'-6"

1 C1101 bars to rest on bottom mat of footing reinforcement as shown.

2 **C1101, C601 and C602 bars shall be A706, Gr. 60 (yield strength = 60,000 psi). These bars will not be paid for separately but shall be included in the quantity bid for "REINFORCING STEEL-BRIDGE (GRADE 60)".**

3 "ALTERNATE PILE ANCHORAGE DETAIL" on Std. Dwg. No. 55021 required to minimize interference with reinforcing in footing.

4 Place F501 bar pairs as shown @ 12" spacing in both directions. F501 bar pairs not needed in area of column reinforcing. See "PLAN OF FOOTING TIES" on Dwg. No. 64131.

5 F501 bars placed in areas where F1101 bars are not present shall be rotated and hooked around F1102 two-bar bundle.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.21243
COLTON S. WYLIE

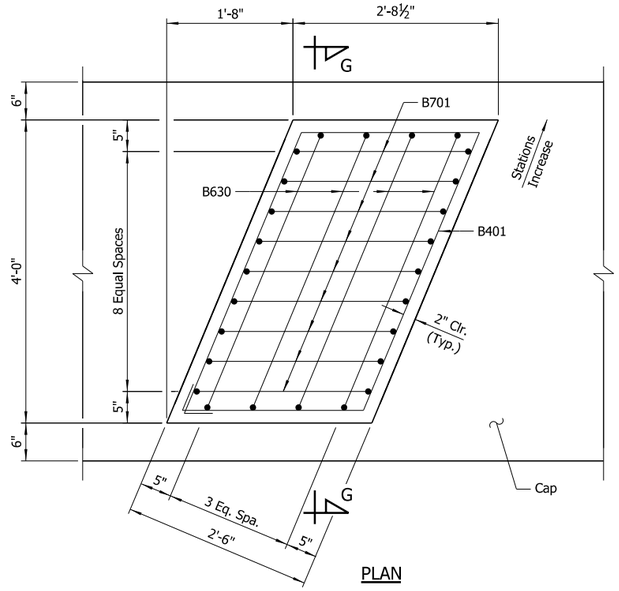
DIGITALLY SIGNED 06/14/2024
BRIDGE ENGINEER

SHEET 1 OF 3
DETAILS OF INTERMEDIATE BENTS
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

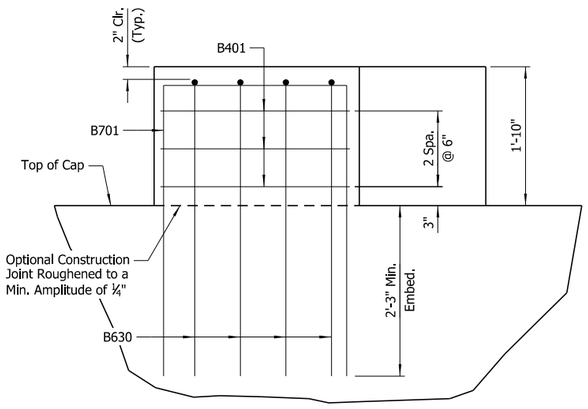
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CHECKED BY: CSW DATE: APR. 2024 SCALE: As Shown
DESIGNED BY: MJS DATE: APR. 2024
BRIDGE NO. 07688 DRAWING NO. 64129

abhall
6/13/2024 4:45:00 PM
WORKSPACE\ARDOT Bridge (2019)
L:\2021\21T01046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\b101172_S211_BE.dgn
REVISED DATE:

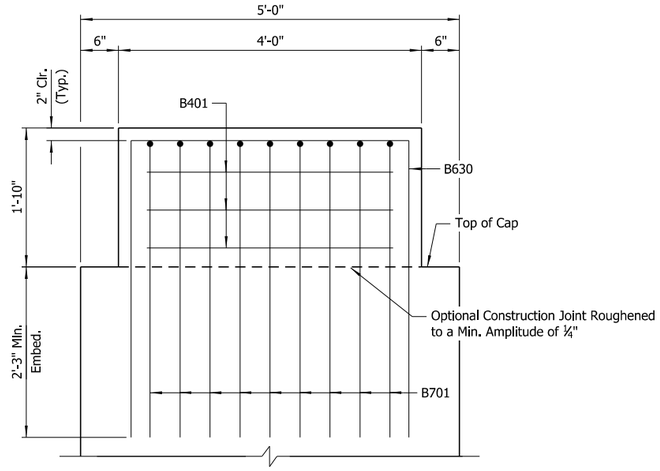
DATE REVISED	DATE REVISED	FED. ROAD DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	189	325
		07688		INTERMEDIATE BENTS		64130



PLAN

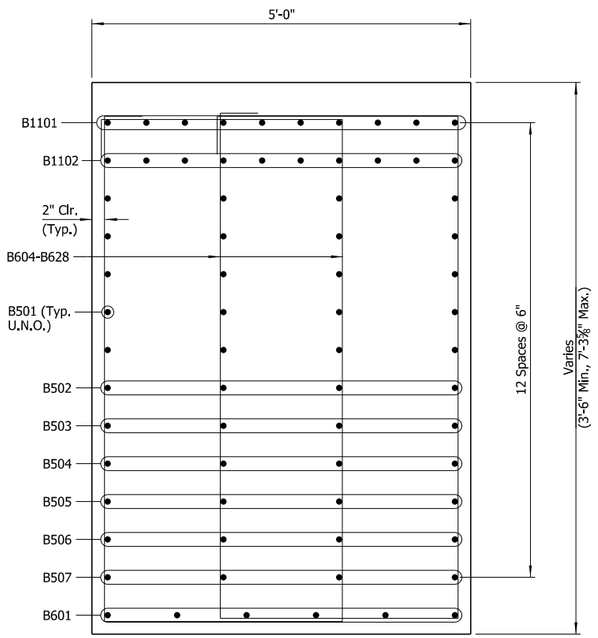


ELEVATION
(Looking Ahead)

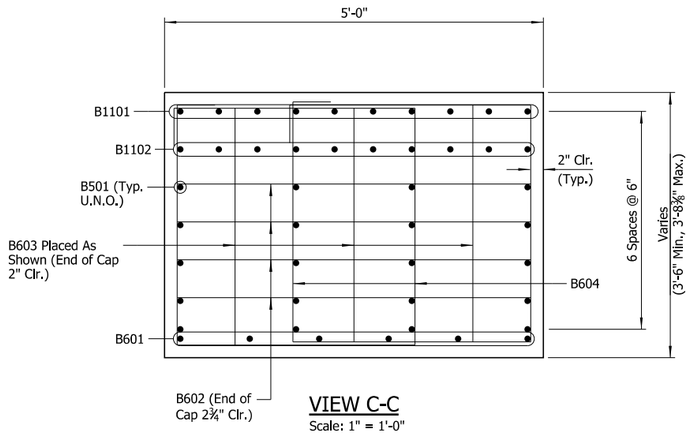


SECTION G-G
Scale: 1" = 1'-0"

CONCRETE RESTRAINER
Scale: 1" = 1'-0"



SECTION B-B
Scale: 1" = 1'-0"

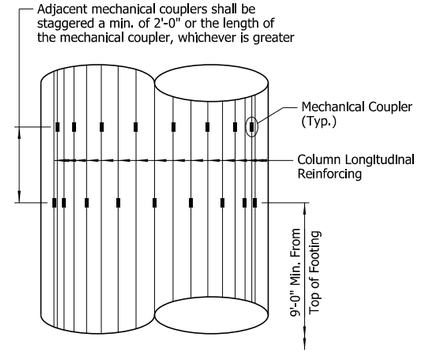


VIEW C-C
Scale: 1" = 1'-0"

LEGEND
U.N.O. = Unless Noted Otherwise

NOTE:
Mechanical couplers in the columns shall consist of a QPL-approved mechanical splice and shall maintain the clearances shown. Their payment shall be subsidiary to the item "REINFORCING STEEL-BRIDGE (GRADE 60)". The couplers shall develop at least 125% of the specified yield strength of the bar.

The couplers shall be assembled as shown in "OPTIONAL MECHANICAL SPLICE DETAIL". No more than one mechanical coupler per bar shall be permitted. Not more than alternate bars shall be spliced at a given location.



OPTIONAL MECHANICAL SPLICE DETAIL
Scale: ½" = 1'-0"

NOTE:
Lap splices in column longitudinal reinforcing shall not be allowed.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.21243
COLTON S. WYLIE

DIGITALLY SIGNED 06/14/2024
BRIDGE ENGINEER

SHEET 2 OF 3
DETAILS OF INTERMEDIATE BENTS
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: HEW DATE: APR. 2024 FILENAME: b101172_b2.dgn
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DESIGNED BY: MJS DATE: APR. 2024
BRIDGE NO. 07688 DRAWING NO. 64130

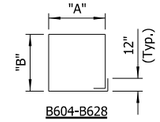
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. ROAD DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
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		07688		INTERMEDIATE BENTS		64131

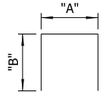
BAR LIST (PER BENT)

	MARK	NO. REQ'D	LENGTH	"A"	"B"	P.D.
	B401	6	12'-11"			2"
	B501	20	30'-8"			Str.
	B502 To B507	4 Each	28'-1" To 10'-11½"			Str.
	B601	12	17'-6"			4½"
	B602	8	9'-4½"	4'-6½"	2'-7"	4½"
	B603	6	7'-10"			4½"
	B604 To B628	4 Each	13'-11" To 20'-10"	3'-2"	3'-2½" To 6'-8"	4½"
	B629	24	16'-2"	3'-2"	6'-8"	4½"
	B630	8	11'-4½"	3'-10½"	3'-11"	4½"
	B701	18	9'-8½"	2'-3"	3'-11"	5¼"
	B1101	10	33'-8"			11¼"
	B1102	10	33'-5½"	30'-2"	2'-0"	11¼"
1	C601	"C"	19'-2"			4½"
1	C602	18	13'-5"			4½"
1	C1101	34	"E"			11¼"
	F501	504	4'-7"			3¾"
	F601	10	24'-11"	19'-3"	3'-0"	4½"
	F602	10	23'-6"			Str.
	F603	8	20'-7"	18'-11"	1'-0"	4½"
	F604	8	24'-7"	22'-11"	1'-0"	4½"
	F801	24	27'-1"	19'-6"	4'-0"	6"
	F802	22	31'-1"	23'-6"	4'-0"	6"
	F1101	26	26'-10"	19'-6"	4'-0"	11¼"
	F1102	36	30'-10"	23'-6"	4'-0"	11¼"

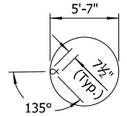
BAR BENDING DIAGRAMS



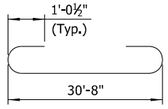
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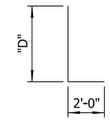
B602, B629, B630, B701, B1102, F601, F603, F604, F801, F802, F1101, & F1102



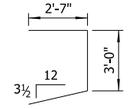
1 C601



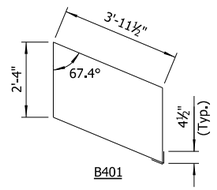
B1101



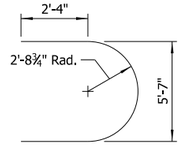
1 C1101



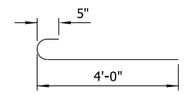
B603



B401



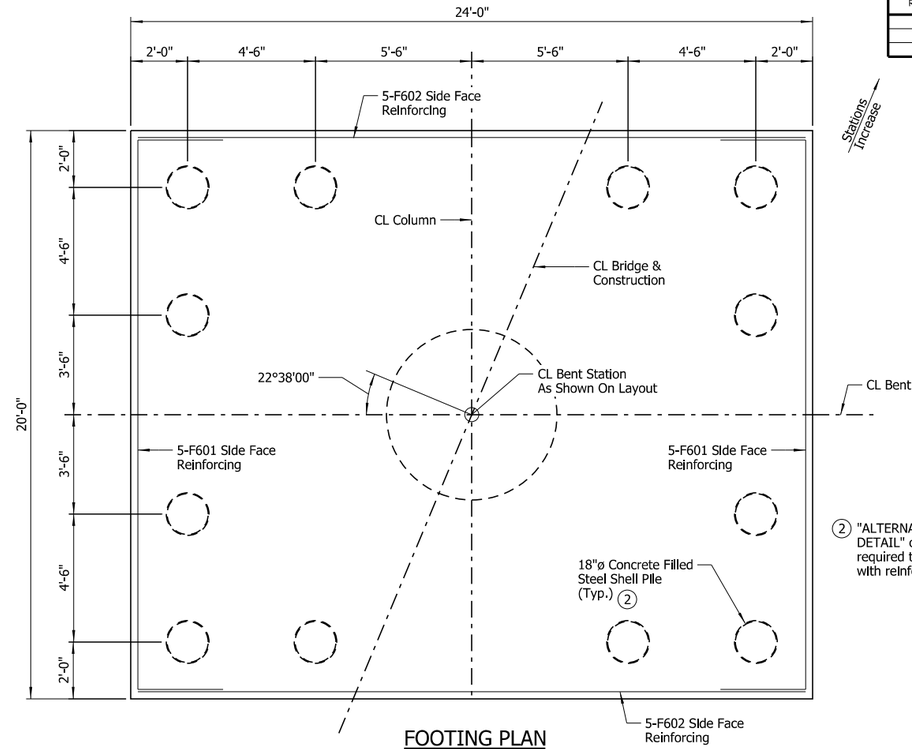
1 C602



F501

NOTES:
Dimensions of bars are out-to-out.

Number of bars shown is for a single bent.



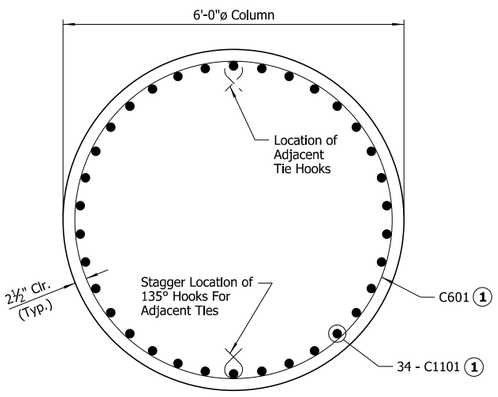
FOOTING PLAN

Scale: ⅜" = 1'-0"

2 "ALTERNATE PILE ANCHORAGE DETAIL" on Std. Dwg. No. 55021 required to minimize interference with reinforcing in footing.

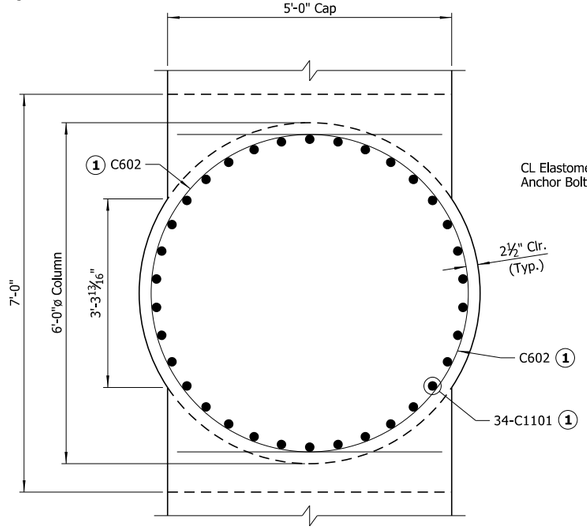
TABLE OF VARIABLES

BENT NO.	"C"	"D"	"E"
2 & 3	55	29'-7"	31'-3"
4	61	33'-7"	35'-3"



SECTION E-E

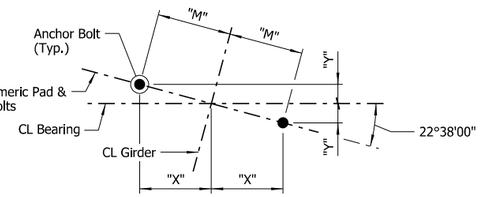
Scale: ¾" = 1'-0"



SECTION D-D

Scale: ¾" = 1'-0"

1 **C1101, C601 and C602 bars shall be A706, Gr. 60 (yield strength = 60,000 psi). These bars will not be paid for separately but shall be included in the quantity bid for "REINFORCING STEEL-BRIDGE (GRADE 60)".**



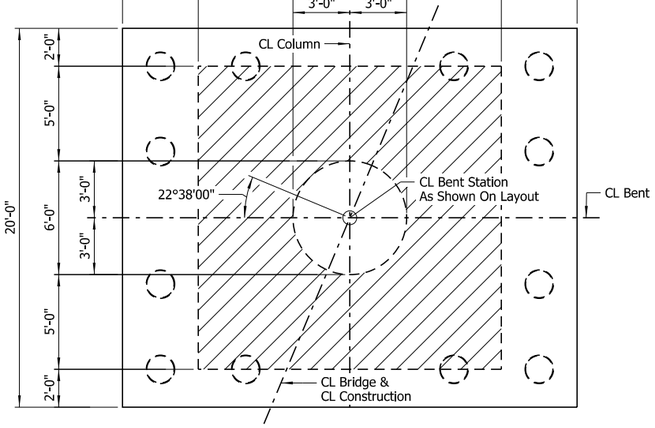
TYPICAL ANCHOR BOLT LAYOUT

No Scale

NOTE:
For details of elastomeric bearings and anchor bolts, see Dwg. No. 64132.

TABLE OF ANCHOR BOLT VARIABLES

BENT NO.	"M"	"X"	"Y"
2	12⅝"	11⅝"	4⅞"
3	13⅜"	12 13/16"	5¼"
4	14⅝"	13½"	5⅝"



NOTE:
Place F501 bar pairs within hatched area at 12" max. spacing in both directions.

PLAN OF FOOTING TIES

No Scale

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.21243
COLTON S. WYLIE

DIGITALLY SIGNED 06/14/2024
BRIDGE ENGINEER

SHEET 3 OF 3
DETAILS OF INTERMEDIATE BENTS

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY:	HEW	DATE:	APR. 2024	FILENAME:	b101172_b3.dgn
CHECKED BY:	CSW	DATE:	APR. 2024	SCALE:	As Shown
DESIGNED BY:	MJS	DATE:	APR. 2024		

BRIDGE NO. 07688 DRAWING NO. 64131

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6/13/2024 4:45:01 PM
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. ROAD DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	191	325
		07688	ELASTOMERIC BEARINGS			64132

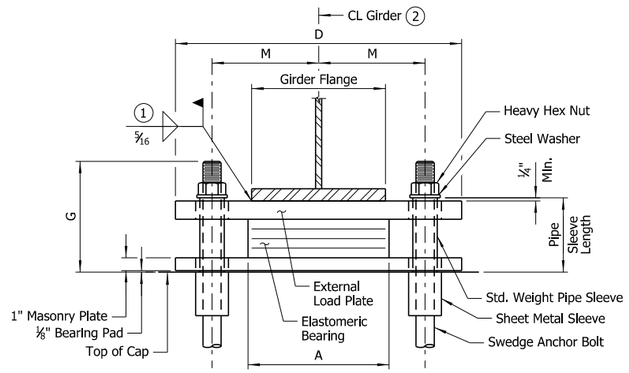
TABLE OF FABRICATOR VARIABLES

Location		Bearing Type	No. Of Bearings Each Bent	③ Maximum Design Load (Kips)	G	H	Elastomeric Pad						External Load Plate								Anchor Bolt				
Bent No.	Girder No.						A	B	N	t_i	t_e	No. & Thickness Of Steel Laminae	T	C	D	E	F	J	K	M	T_a	T_b	Anchor Bolt (Dia. x L)	Anchor Bolt Grade	Pipe Sleeve Size (Dia. x L)	Sheet Metal Sleeve Size (Dia. x L)	Steel Washer Size (O.D.)
1	All	Exp.	4	118	11¾"	8½"	14"	12"	8	½"	¼"	9 @ 12 Ga.	5⁷⁄₁₆"	13"	26"	6¾"	3⅛"	-	½"	9¾"	2.21"	1.79"	2" x 35"	55	2½" x 8¾"	4" x 10"	3¾"
2	All	Fixed	4	297	7⅛"	4⅜"	16"	14"	3	½"	¼"	4 @ 12 Ga.	2⁷⁄₁₆"	15"	33½"	-	2¼"	1⅞"	½"	12⅝"	2.13"	1.87"	1½" x 26"	55	1½" x 4⅝"	3" x 15"	3"
3	All	Fixed	4	314	7⅛"	4⅜"	18"	14"	3	½"	¼"	4 @ 12 Ga.	2⁷⁄₁₆"	15"	35½"	-	2¼"	1⅞"	½"	13⅜"	2.00"	2.00"	1½" x 26"	55	1½" x 4⅝"	3" x 15"	3"
4	All	Fixed	4	347	7⅛"	4⅜"	20"	14"	3	½"	¼"	4 @ 12 Ga.	2⁷⁄₁₆"	15"	37½"	-	2¼"	1⅞"	½"	14⅝"	1.86"	2.14"	1½" x 26"	55	1½" x 4⅝"	3" x 15"	3"
5	All	Exp.	4	134	11¾"	8½"	14"	12"	8	½"	¼"	9 @ 12 Ga.	5⁷⁄₁₆"	13"	26½"	6¾"	3⅛"	-	½"	10"	1.77"	2.23"	2" x 35"	55	2½" x 8¾"	4" x 10"	3¾"

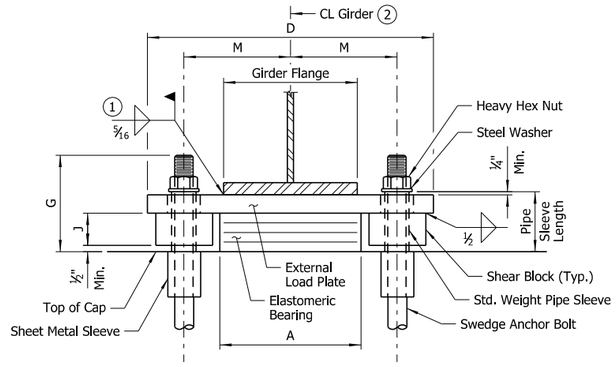
③ Maximum Design Load = LRFD Service I Limit State

① Care shall be taken to ensure that the external load plate is in full and complete contact with the girder flange before welding begins. Unless otherwise approved by the Engineer, welding of the external load plate at expansion bearings to the girder will be allowed only when: 1) the approximate average air temperature during the 24 hour period immediately preceding welding is between 40°F and 80°F; and 2) the slots in the external load plate are positioned to center on the anchor bolts; and 3) no horizontal deformation of the elastomeric pad is evident. If welding at other temperatures is required, the Engineer will provide adjustment data.

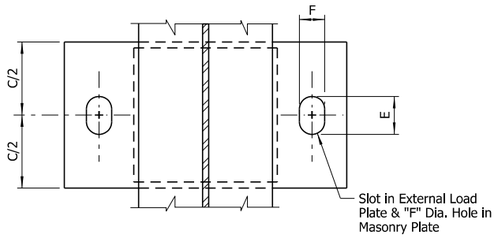
② Centerline elastomeric pad shall be aligned with centerline girder.



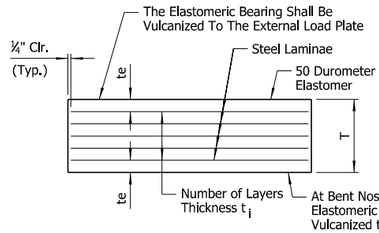
FRONT VIEW - AT BENT NOS. 1 & 5



FRONT VIEW - AT BENT NOS. 2, 3 & 4

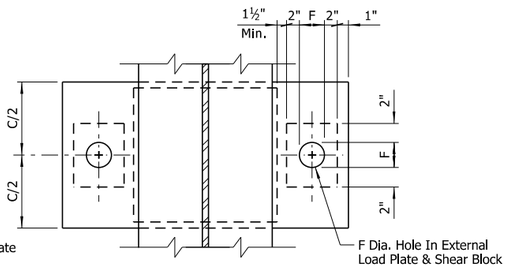


PLAN VIEW - AT BENT NOS. 1 & 5

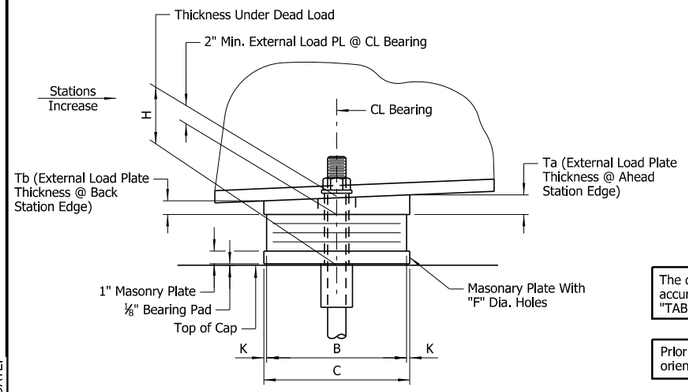


t_e = Thickness Of Elastomer Cover On Top And Bottom Of Pad
t_i = Thickness Of Elastomer Between Steel Laminae
N = Number Of Elastomer Layers Of Thickness t_i

ELASTOMERIC BEARING



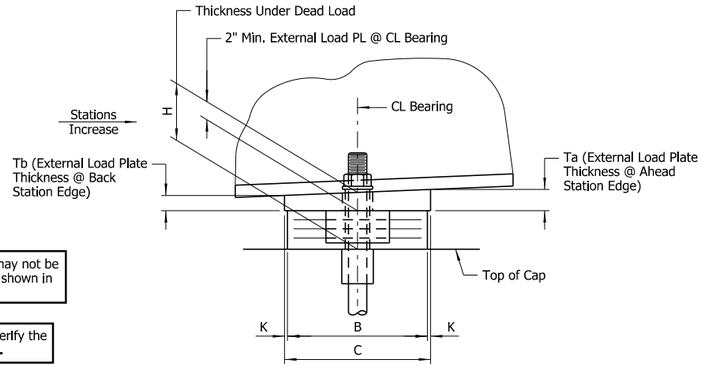
PLAN VIEW - AT BENT NOS. 2, 3 & 4



SIDE VIEW - AT BENT NOS. 1 & 5

The direction of the bevel of the external load plate may not be accurately depicted with respect to Ta and Tb values shown in "TABLE OF FABRICATOR VARIABLES".

Prior to erection of the girders, the Contractor shall verify the orientation of the bearings with respect to Ta and Tb.



SIDE VIEW - AT BENT NOS. 2, 3 & 4

GENERAL NOTES

Elastomeric bearings shall conform to Section 808 and shall be paid for at the unit price bid for "ELASTOMERIC BEARINGS."

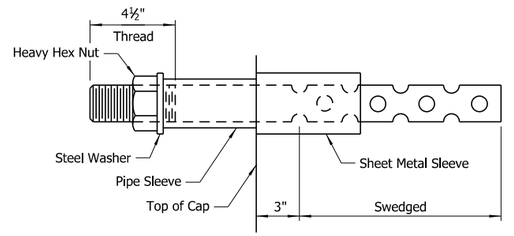
External load plates, shear blocks and masonry plates shall conform to ASTM A709, Grade 50. Pipe sleeves shall be ASTM A500, Grade B, and shall be galvanized to conform to AASHTO M 232, Class C or ASTM B695, Class 50.

External load plates, shear blocks and masonry plates shall be completely fabricated (including bevel, bolt holes and all shop welding) and shall be cleaned before vulcanizing to the elastomeric bearing. The surfaces in contact with the elastomeric bearing shall be cleaned in accordance with Subsection 808.03. Other surfaces shall be blast cleaned in accordance with Subsection 807.84(b) for painted steel.

Anchor bolts, washers and nuts shall conform to Subsection 807.07. The anchor bolt grade of steel shall be as specified in the "TABLE OF FABRICATOR VARIABLES". Indentations shall be circular with rounded bottoms and staggered as shown in the details.

Pipe sleeves, anchor bolts, washers and nuts shall be paid for at the unit price bid for "STRUCTURAL STEEL IN PLATE GIRDER SPANS (A709, GR. 50)". External load plates, shear blocks and masonry plates will not be measured or paid for separately but will be considered subsidiary to the unit price bid for "ELASTOMERIC BEARINGS".

Bearings with masonry plates shall be seated in accordance with Subsection 807.66. Bearings without masonry plates shall be seated in accordance with Subsection 808.08. This work and materials are considered subsidiary to the item "ELASTOMERIC BEARINGS" and will not be paid for directly.



ANCHOR BOLT DETAIL

NOTES:
Anchor bolts may be cast in place or drilled and grouted into place. If anchor bolts are to be cast in place, the galvanized sheet metal sleeves will not be required.

If anchor bolts are to be drilled and grouted in place, the galvanized sheet metal sleeves shall be cast in place as shown. Sleeves shall be dry packed with styrofoam, urethane foam or approved equal prior to pouring of concrete. After pouring of the cap and prior to erection of structural steel, the dry pack shall be removed and holes for the anchor bolts shall be accurately drilled into the concrete. Bolts placed in drilled holes shall be accurately set and fixed using a QPL-approved epoxy or non-shrink grout that completely fills the holes. Galvanized sheet metal sleeves shall meet the requirements of ASTM A653, CS Type B or approved equivalent, be of minimum 16 gage thickness, and be galvanized according to ASTM B695, Class 50. Sheet metal sleeves will not be paid for directly but will be considered subsidiary to the item "STRUCTURAL STEEL IN PLATE GIRDER SPANS (A709, GR. 50)".

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.14498
ADAM B. HALL

DIGITALLY SIGNED 06/14/2024
BRIDGE ENGINEER

DETAILS OF ELASTOMERIC BEARINGS

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

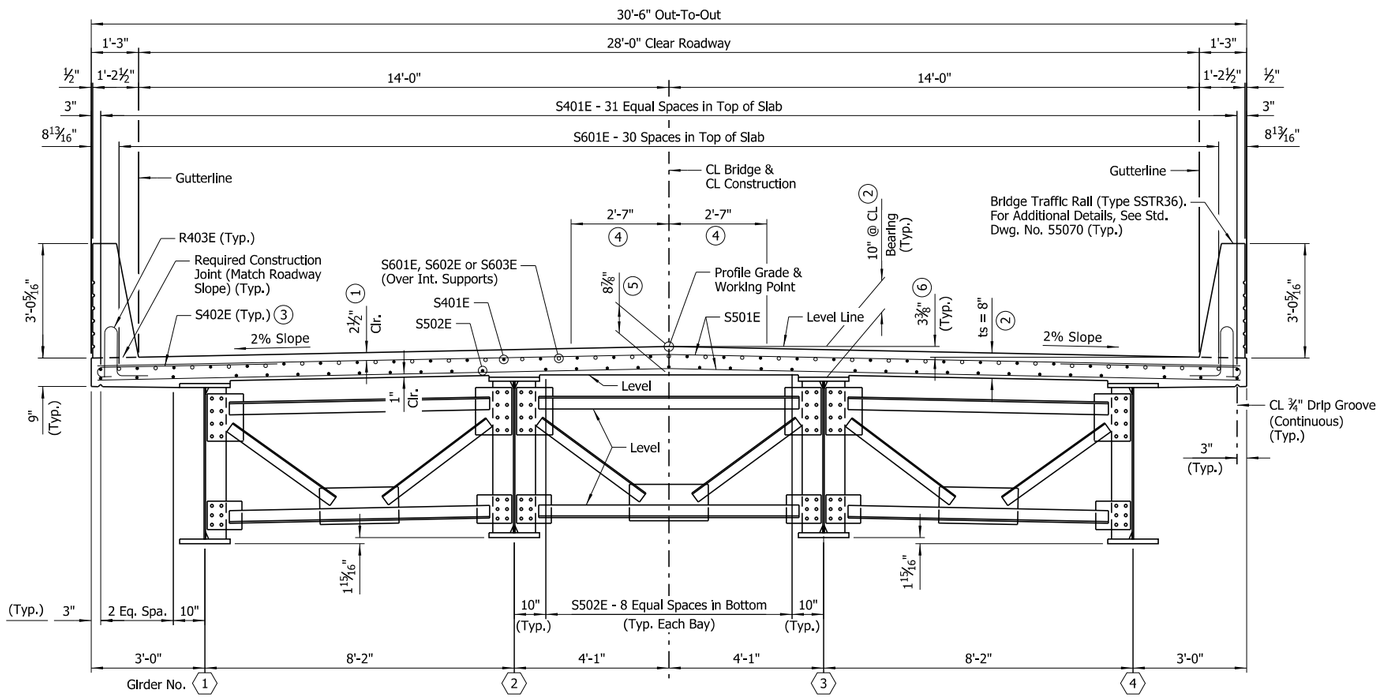
LITTLE ROCK, ARK.

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CHECKED BY:	KWY	DATE:	APR. 2024	SCALE:	No Scale
DESIGNED BY:	RAK	DATE:	MAR. 2024		

BRIDGE NO. 07688 DRAWING NO. 64132

abhall 6/13/2024 4:45:01 PM
WORKSPACE\ARDOT Bridge (2019)
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. ROAD DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	192	325
		07688		411'-0" UNIT		64133



TYPICAL ROADWAY SECTION

(Looking Ahead)
Scale: ½" = 1'-0"

SLAB REINFORCING:

Transverse: S501E @ 6" O.C. in Top and Bottom
S402E @ 6" O.C. in Top of Overhangs
(Bundled With S501E Bars)

Longitudinal: S401E in Top (Placed as Shown)
S502E in Bottom (Placed as Shown)
S601E, S602E & S603E in Top (Placed as Shown over Int. Supports, see "REINFORCING PLAN & SLAB POURING SEQUENCE" on Dwg. No. 64141 for additional information)

NOTES:
For Standard General Notes and details, see Std. Dwg. Nos. 55006 & 55007.

Class 2 Protective Surface Treatment shall be applied to the roadway surface and roadway face and top of the concrete bridge rail.

Class 3 Textured Coating Finish shall be applied to bridge surfaces as specified in Special Provision "TEXTURED COATING FINISH" and in accordance with Subsection 802.19(b)(3). Textured Coating Finish shall not be applied on surfaces where Class 2 Protective Surface Treatment is applied.

Bar positions and clearances from the forms shall be maintained by means of stays, ties, hangers, or other approved devices per Subsection 804.06. Placement of slab bolsters or high-chairs with full-length lower runners directly on removable deck forms will not be allowed.

All structural steel shall be ASTM A709, Gr. 50 unless noted otherwise, and all structural steel shall be paid for as "STRUCTURAL STEEL IN PLATE GIRDER SPANS (A709, GR. 50)".

For "BAR LIST" and "BAR BENDING DIAGRAMS", see Dwg. No. 64142.

(1) TOLERANCE:
Minus = ¼"
Plus = Amount of slab thickening used to meet slab thickness tolerance - See "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE" on Std. Dwg. No. 55007.

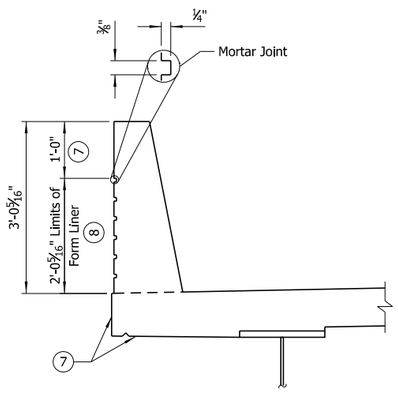
(2) See "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE" on Std. Dwg. No. 55007.

(3) Bundled with S501E bars in top. Rotate hook as needed to avoid interference with bottom mat of deck reinforcement.

(4) See "ROUNDING DETAIL" on Std. Dwg. No. 55007.

(5) Measured to Working Point, see "ROUNDING DETAIL" on Std. Dwg. No. 55007

(6) Measured from Working Point to Gutterline

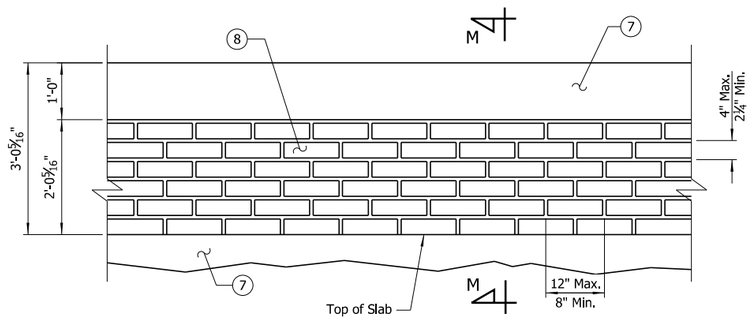


SECTION M-M

No Scale

(7) Class 3 Textured Coating Finish (Color = Brown, Color Chip No. 30108)

(8) Class 3 Textured Coating Finish (Color = Brown, Color Chip No. 33578)



ARCHITECTURAL FINISH ELEVATION

(Showing Outside Face of Left or Right Bridge Rail)
Scale: ¾" = 1'-0"

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.14498
ADAM B. HALL

DIGITALLY SIGNED 06/14/2024
BRIDGE ENGINEER

SHEETS 1 OF 10
DETAILS OF 411'-0" CONTINUOUS PLATE GIRDER UNIT

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

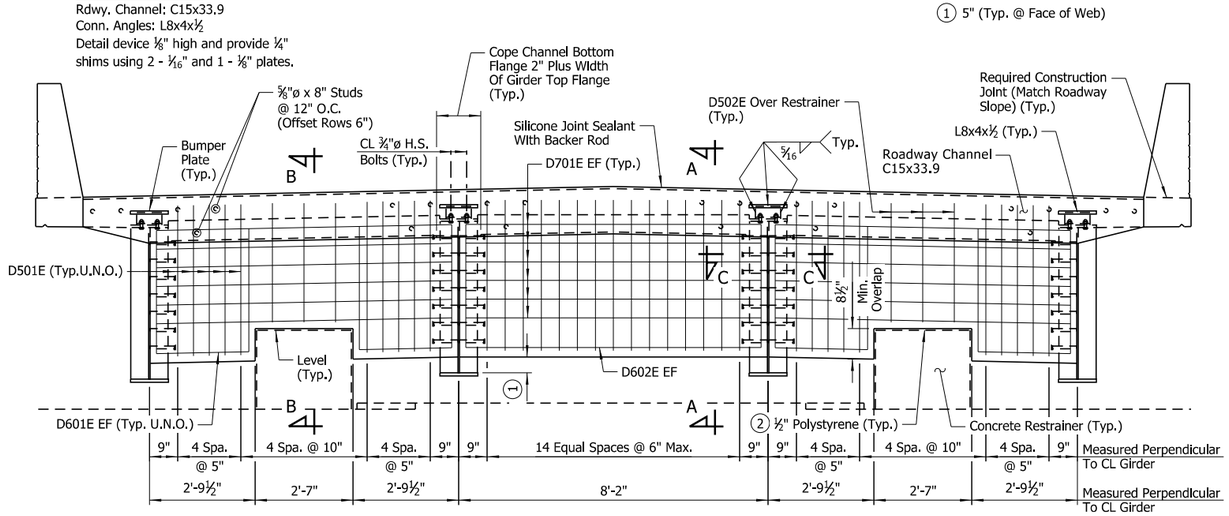
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DESIGNED BY: RAK DATE: MAR. 2024

BRIDGE NO. 07688 DRAWING NO. 64133

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WORKSPACE\ARDOT Bridge (2019)
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. ROAD DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	193	325
		07688		411'-0" UNIT		64134

EXPANSION DEVICE:
Rdwy. Channel: C15x33.9
Conn. Angles: L8x4x½
Detail device ⅛" high and provide ¼" shims using 2 - 1/16" and 1 - ⅛" plates.

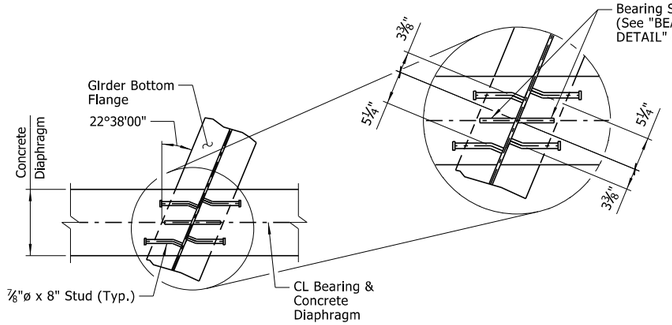


TYPICAL ROADWAY SECTION THRU JOINT

(Looking Ahead at End Bent No. 1, End Bent No. 5 Similar)
No Scale

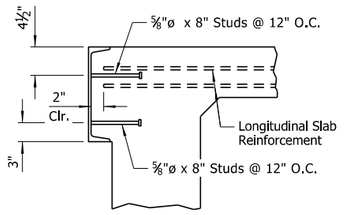
LEGEND

U.N.O. = Unless Noted Otherwise
EF = Each Face



SECTION C-C

No Scale



NOTE:
As an alternate to ⅝"ø studs, ½"ø x 8" studs spaced @ 8" O.C. may be used. Use weight of ⅝"ø stud as basis of measurement of Structural Steel in anchors.

DETAIL OF ANCHORS AND PLACEMENT OF LONGITUDINAL REINFORCEMENT

No Scale

NOTES:
All structural steel shall be ASTM A709, Gr. 50 unless noted otherwise, and all structural steel shall be paid for as "STRUCTURAL STEEL IN PLATE GIRDER SPANS (A709, GR. 50)".

For additional details of poured silicone joint, see Std. Dwg. No. 55008.

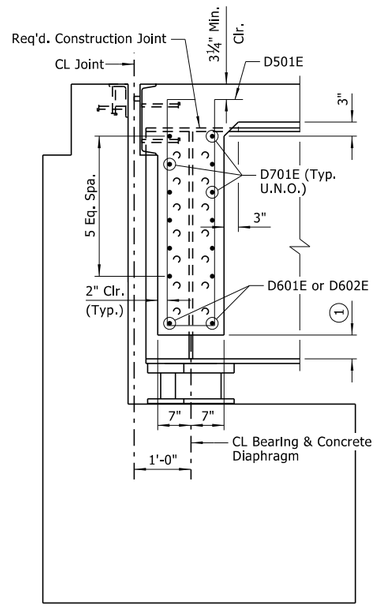
The profile of the Roadway Channel shall be established based on the vertical curve in conjunction with skew.

(2) ½" Polystyrene shall be used as a bond breaker between the concrete restrainer and the concrete diaphragm and may remain in place. Polystyrene will not be paid for directly but will be considered subsidiary to the item "CLASS S(AE) CONCRETE-BRIDGE".

TABLE OF SILICONE JOINT DATA

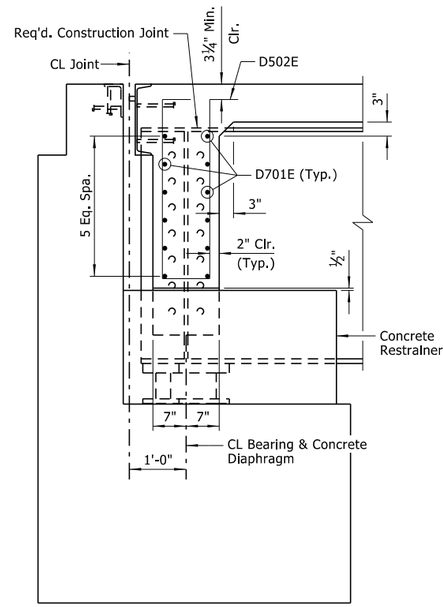
Bent No(s).	"A" Width Perpendicular To Joint At 24 Hour Average Temperature (3) Of:			"B" Perpendicular To Joint At 60°F	Bumper Plate Size
	40°F	60°F	80°F		
1	2¾"	2½"	2¼"	2½"	1" x 1¼" x 12"
5	2 13/16"	2½"	2 3/16"	2½"	1" x 1¼" x 12"

(3) The temperature used to set the joint opening shall be the approximate average air temperature during the 24-hour period immediately before the bolts are tightened. The Engineer shall establish the temperature. Interpolation of the table may be necessary.



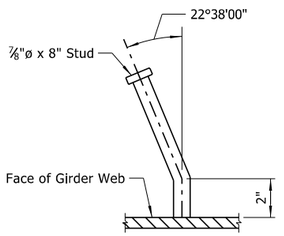
SECTION A-A

(Taken Normal To Concrete Diaphragm)
Scale: ¾" = 1'-0"



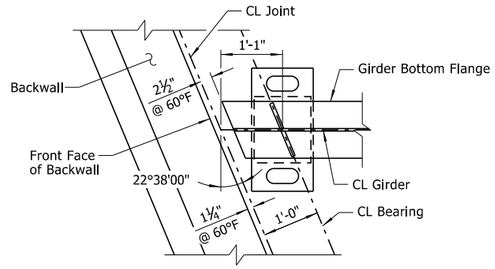
SECTION B-B

(Taken Normal To Concrete Diaphragm)
Scale: ¾" = 1'-0"



STUD DETAIL AT DIAPHRAGM

No Scale



PLAN OF BEARING AT END BENT

(End Bent No. 1 Shown, End Bent No. 5 Similar)
Scale: ¾" = 1'-0"

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.14498
ADAM B. HALL

DIGITALLY SIGNED 06/14/2024
BRIDGE ENGINEER

SHEET 2 OF 10
DETAILS OF 411'-0" CONTINUOUS PLATE GIRDER UNIT

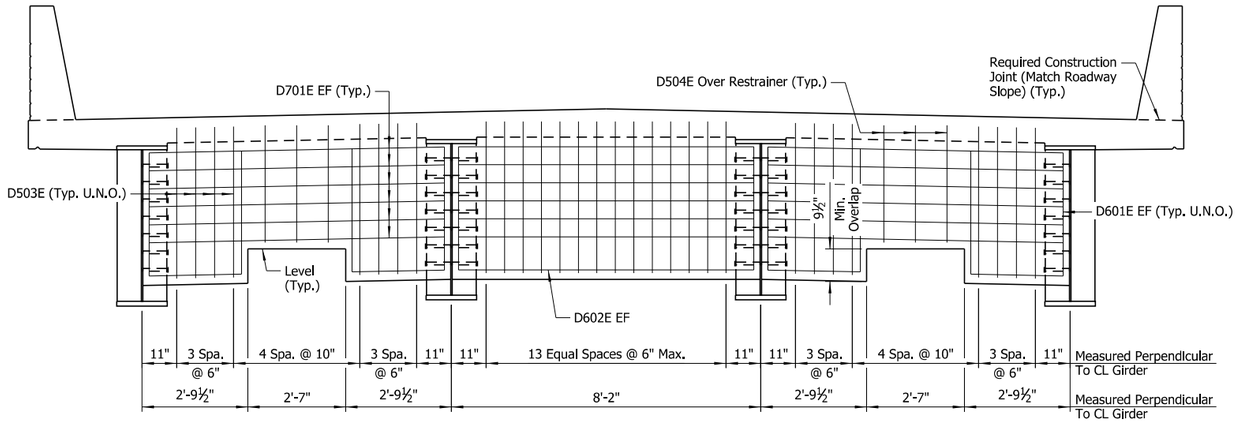
ROUTE SEC.

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LITTLE ROCK, ARK.

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BRIDGE NO. 07688 DRAWING NO. 64134

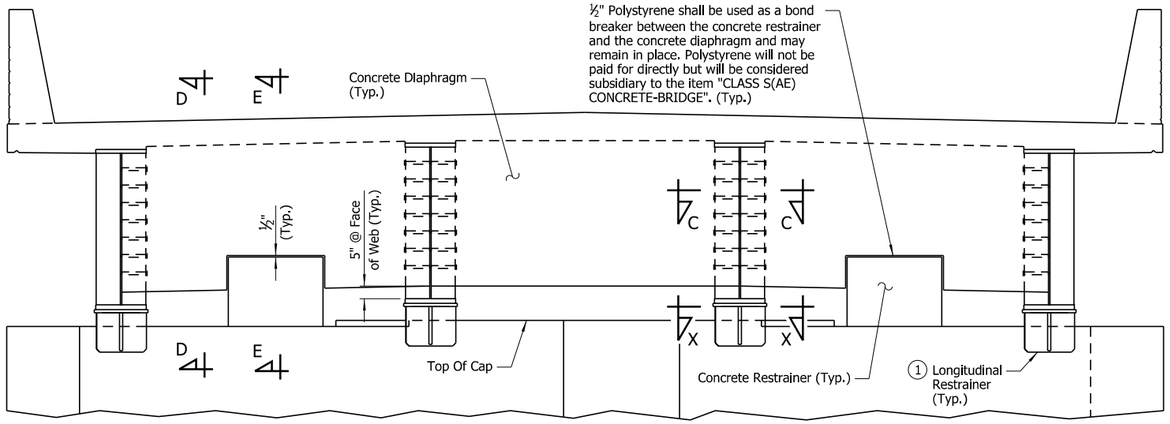
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REVISED DATE:

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		6	ARK.	101172	194	325
		07688		411'-0" UNIT		64135



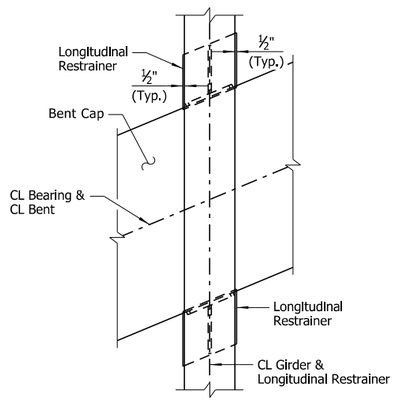
TYPICAL ROADWAY SECTION AT INTERMEDIATE BENTS

(Looking Ahead)
No Scale



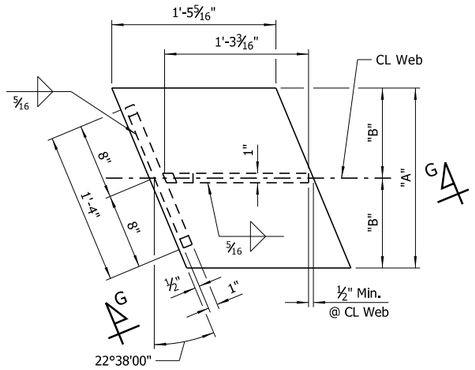
TYPICAL ROADWAY SECTION AT INTERMEDIATE BENTS SHOWING CONCRETE RESTRAINERS

(Looking Ahead)
No Scale



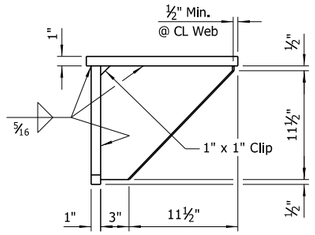
VIEW X-X

No Scale



PLAN OF LONGITUDINAL RESTRAINER

No Scale



VIEW G-G

No Scale

TABLE OF VARIABLES			
Location	"A"	"B"	"C"
Bent No. 2	1'-5"	8½"	17"
Bent No. 3	1'-7"	9½"	19"
Bent No. 4	1'-9"	10½"	21"

NOTES:
Forms for concrete diaphragms shall be removable.

Prior to pouring concrete diaphragms, remove mill scale from steel surfaces to be in contact with concrete with a wire brush.

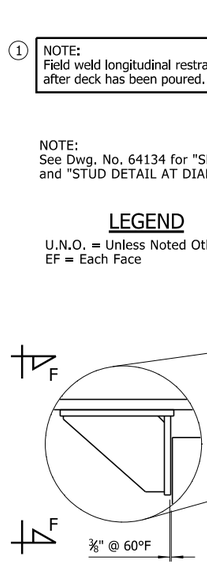
All concrete diaphragms shall be poured a minimum of 48 hours before the first deck pour.

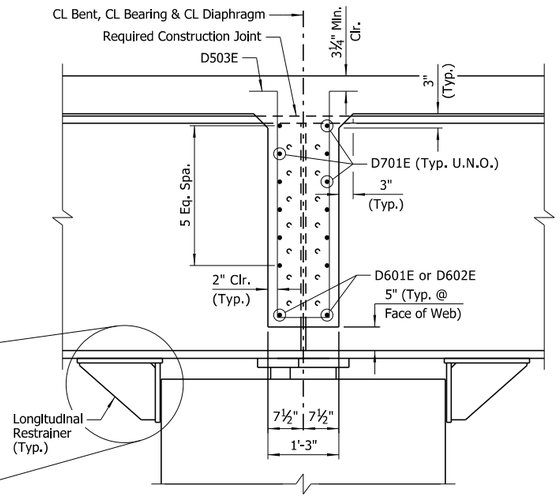
1 NOTE:
Field weld longitudinal restrainer after deck has been poured.

NOTE:
See Dwg. No. 64134 for "SECTION C-C" and "STUD DETAIL AT DIAPHRAGM".

LEGEND

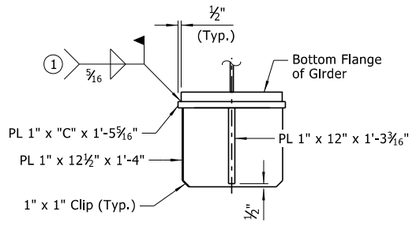
U.N.O. = Unless Noted Otherwise
EF = Each Face





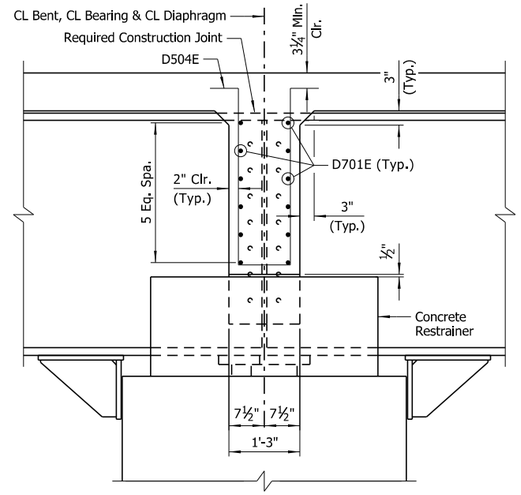
SECTION D-D

(Taken Normal To Concrete Diaphragm)
Scale: ¾" = 1'-0"



VIEW F-F

(Looking Along CL Girder)
No Scale



SECTION E-E

(Taken Normal To Concrete Diaphragm)
Scale: ¾" = 1'-0"

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.14498
ADAM B. HALL

DIGITALLY SIGNED 06/14/2024
BRIDGE ENGINEER

SHEET 3 OF 10
DETAILS OF 411'-0" CONTINUOUS PLATE GIRDER UNIT

ROUTE SEC.

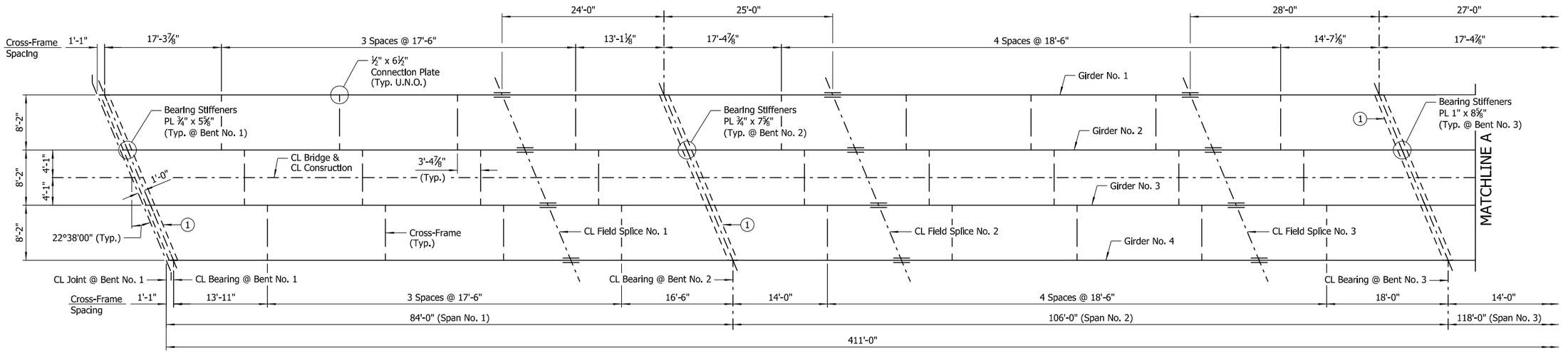
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

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DESIGNED BY: RAK DATE: MAR. 2024
BRIDGE NO. 07688 DRAWING NO. 64135

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REVISED DATE:

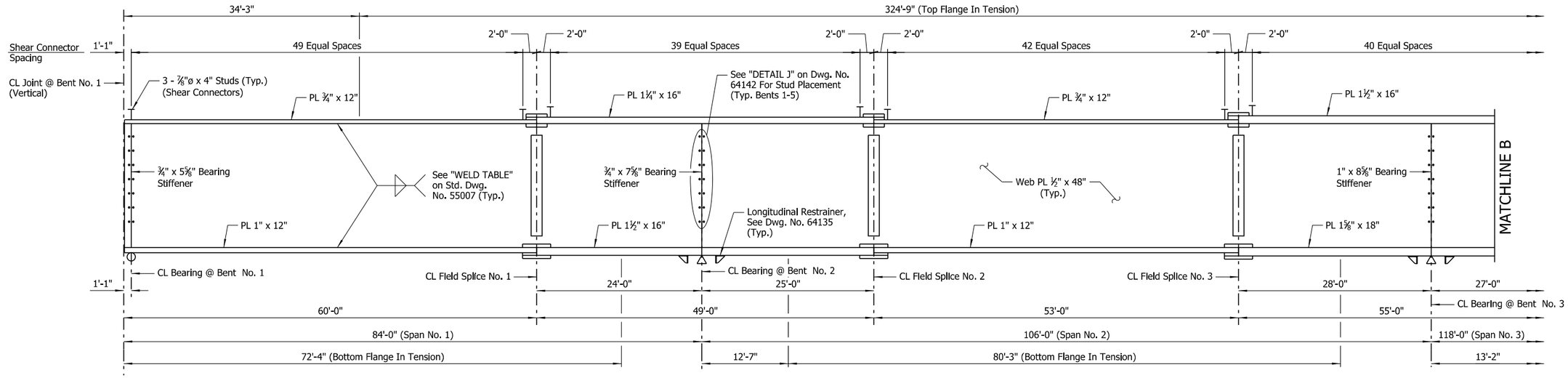
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		6	ARK.	101172	195	325
		07688		411'-0" UNIT		64136

(1) Concrete Diaphragm - Typical as shown at Bents 1-5. For details, see Dwg. Nos. 64134 and 64135.



PART FRAMING PLAN

Scale: ⅛" = 1'-0"



PART GIRDER ELEVATION

No Scale

NOTES:
For "GENERAL NOTES", see Std. Dwg. No. 55006.

All structural steel shall be ASTM A709, Gr. 50 unless noted otherwise and shall be paid for at the unit price per pound bid for "STRUCTURAL STEEL IN PLATE GIRDER SPANS (A709, GR. 50)".

Bolted Field Splices shown may be eliminated or shop welded splices may be substituted with approval of the Engineer. Payment will be made on the basis of the Plan Quantities.

For "DETAILS OF WELDED SPLICES FOR PLATE GIRDERS", "SHEAR CONNECTOR DETAIL" and "SCREED RAIL SUPPORT FOR PLATE GIRDERS", see Std. Dwg. No. 55007.

NOTES:
The Contractor shall ensure that girders are stable throughout the erection process. The Contractor will be responsible for providing temporary bracing or stiffening devices to accommodate handling stresses in individual members or segments of the structure during erection.

For field splice details, see Dwg. No. 64139.

For cross-frame, stiffener and connection plate details, see Dwg. No. 64138.

For painting of girders, see "GENERAL NOTES" on Dwg. No. 64124.

LEGEND

U.N.O. = Unless Noted Otherwise

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.14498
ADAM B. HALL

DIGITALLY SIGNED 06/14/2024
BRIDGE ENGINEER

SHEET 4 OF 10
DETAILS OF 411'-0" CONTINUOUS PLATE GIRDER UNIT

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

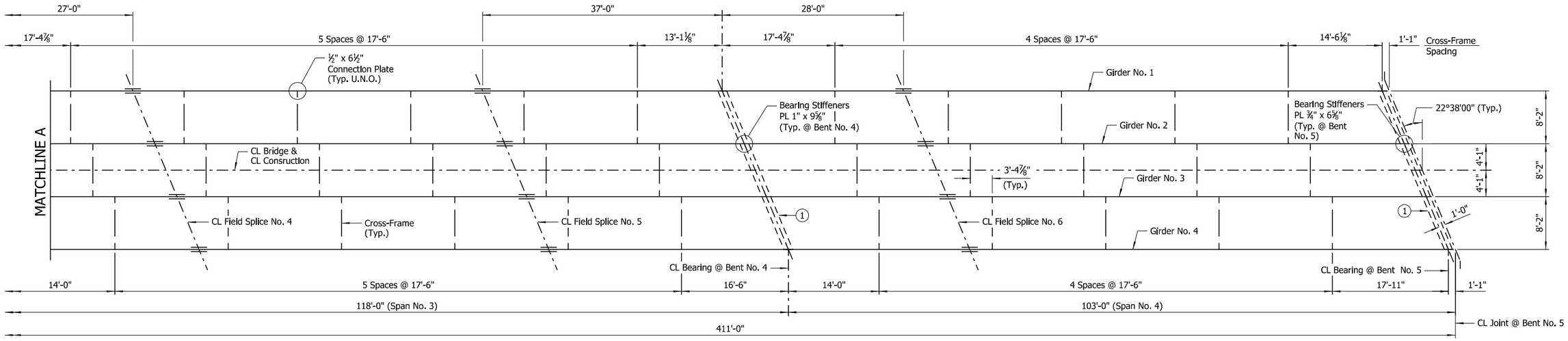
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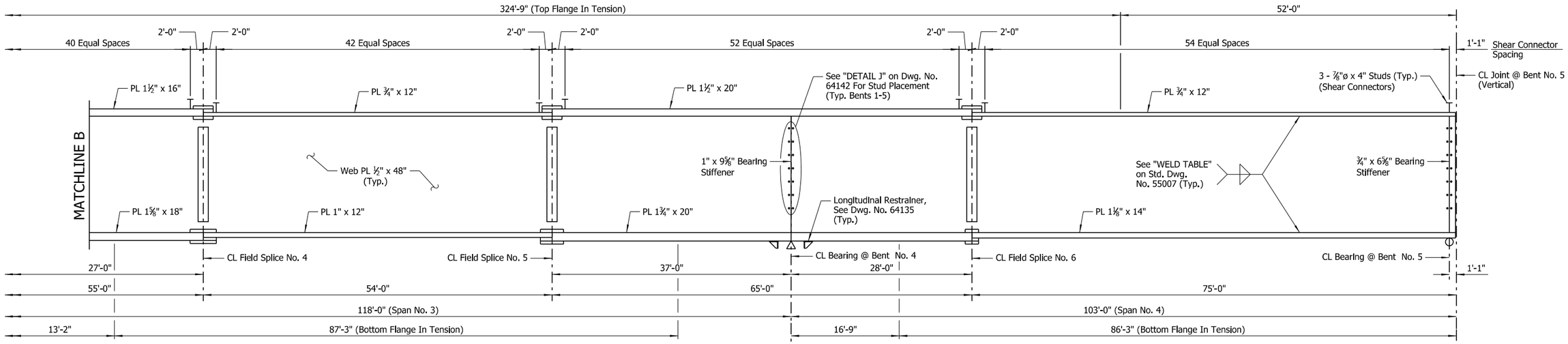
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		6	ARK.	101172	196	325
		07688		411'-0" UNIT		64137

(1) Concrete Diaphragm - Typical as shown at Bents 1-5. For details, see Dwg. Nos. 64134 and 64135.



PART FRAMING PLAN

Scale: ⅛" = 1'-0"



PART GIRDER ELEVATION

No Scale

NOTES:
For "GENERAL NOTES", see Std. Dwg. No. 55006.

All structural steel shall be ASTM A709, Gr. 50 unless noted otherwise and shall be paid for at the unit price per pound bid for "STRUCTURAL STEEL IN PLATE GIRDER SPANS (A709, GR. 50)".

Bolted Field Splices shown may be eliminated or shop welded splices may be substituted with approval of the Engineer. Payment will be made on the basis of the Plan Quantities.

For "DETAILS OF WELDED SPLICES FOR PLATE GIRDERS", "SHEAR CONNECTOR DETAIL" and "SCREED RAIL SUPPORT FOR PLATE GIRDERS", see Std. Dwg. No. 55007.

NOTES:
The Contractor shall ensure that girders are stable throughout the erection process. The Contractor will be responsible for providing temporary bracing or stiffening devices to accommodate handling stresses in individual members or segments of the structure during erection.

For field splice details, see Dwg. No. 64139.

For cross-frame, stiffener and connection plate details, see Dwg. No. 64138.

For painting of girders, see "GENERAL NOTES" on Dwg. No. 64124.

LEGEND

U.N.O. = Unless Noted Otherwise

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.14498
ADAM B. HALL

DIGITALLY SIGNED 06/14/2024
BRIDGE ENGINEER

SHEET 5 OF 10
DETAILS OF 411'-0" CONTINUOUS PLATE GIRDER UNIT

ROUTE SEC.

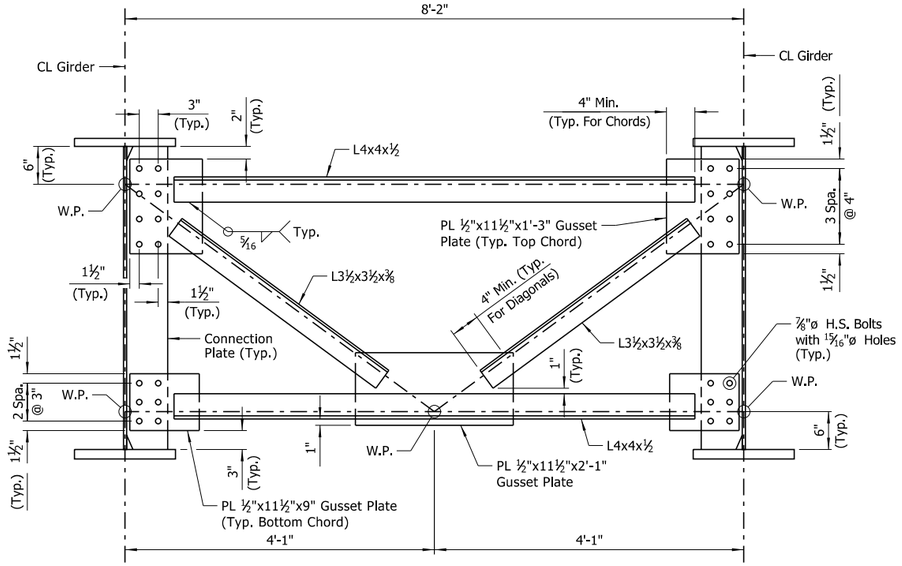
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LITTLE ROCK, ARK.

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CHECKED BY: KWY DATE: APR. 2024 SCALE: As Shown
DESIGNED BY: RAK DATE: MAR. 2024

BRIDGE NO. 07688 DRAWING NO. 64137

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abhall
WORKSPACE\ARDOT Bridge (2019)
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. ROAD DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
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		07688		411'-0" UNIT		64138

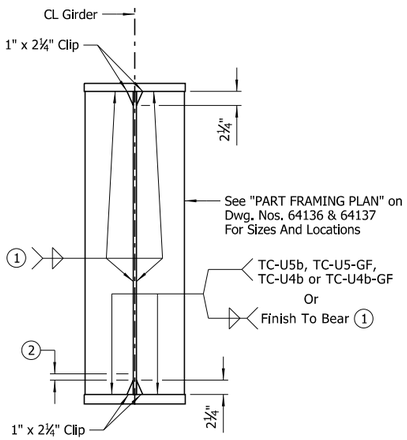


CROSS-FRAME DETAIL

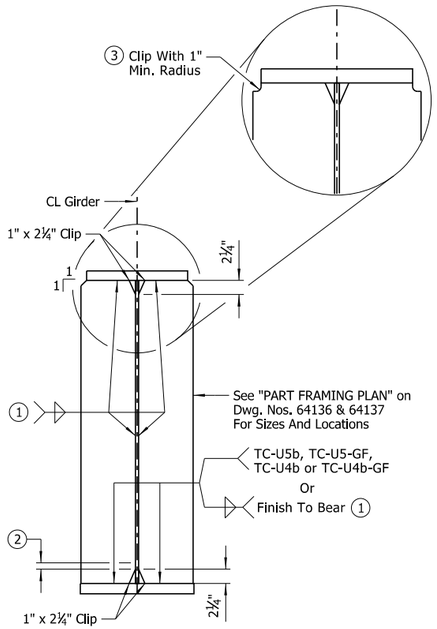
No Scale

NOTES:
All field connections shall be bolted with ⅞"ø H.S. bolts using 15/16"ø open holes.

Bearing Stiffeners shall be fabricated to be vertical in their final positions. Bearing stiffeners shall be placed on both sides of all girder webs at bent locations. Bearing stiffeners at interior girders and the inside face of exterior girders shall be parallel to the bent skew. Bearing stiffeners on the outside face of exterior girders shall be normal to the web.



AT BENTS 1, 2 & 4



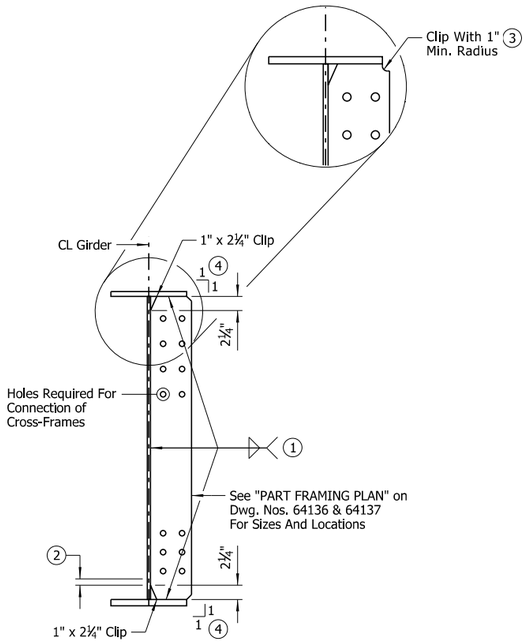
AT BENTS 3 & 5

BEARING STIFFENER DETAIL

No Scale

LEGEND

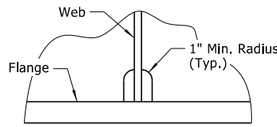
W.P. = Working Point



CONNECTION PLATE DETAIL

No Scale

1. See "WELD TABLE" on Std. Dwg. No. 55007 for minimum weld size.
2. Stop weld ¼" to 1" from end of clip (Typ.)
3. If permanent deck forms are used, the Fabricator shall clip the plate as necessary to accommodate the deck form supports.
4. Add clips on Cross-Frame Connection Plates as needed.



Height and width of clip shall be as noted in other details.

ALTERNATE CLIP DETAIL

(For Bearing Stiffeners and Cross-Frame Connection Plates)
No Scale

STATE OF ARKANSAS
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BRIDGE ENGINEER

SHEET 6 OF 10
DETAILS OF 411'-0" CONTINUOUS PLATE GIRDER UNIT

ROUTE SEC.

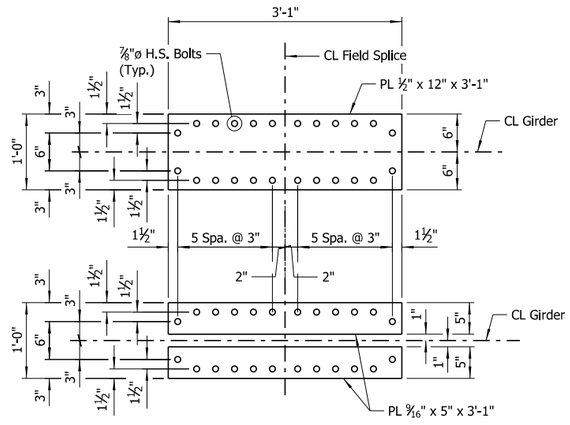
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DESIGNED BY: RAK DATE: MAR. 2024

BRIDGE NO. 07688 DRAWING NO. 64138

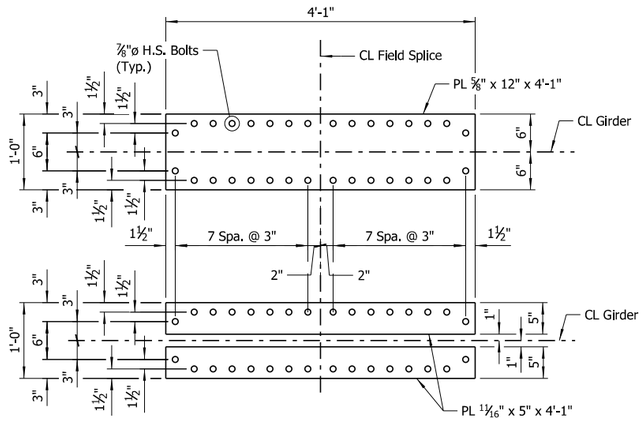
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REVISED DATE:

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		6	ARK.	101172	198	325
		07688		411'-0" UNIT		64139



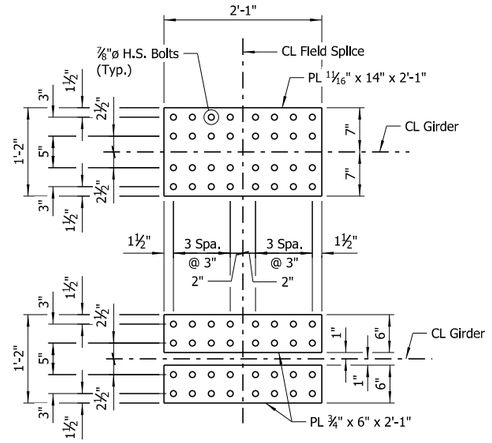
TOP FLANGE FIELD SPLICE NOS. 1-6

Scale: 1" = 1'-0"



BOTTOM FLANGE FIELD SPLICE NOS. 1-5

Scale: 1" = 1'-0"

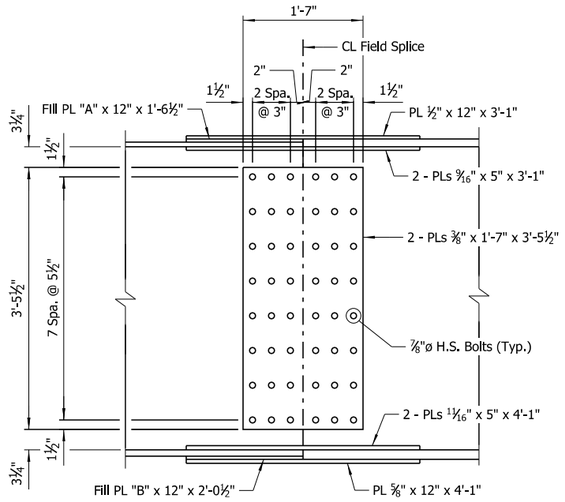


BOTTOM FLANGE FIELD SPLICE NO. 6

Scale: 1" = 1'-0"

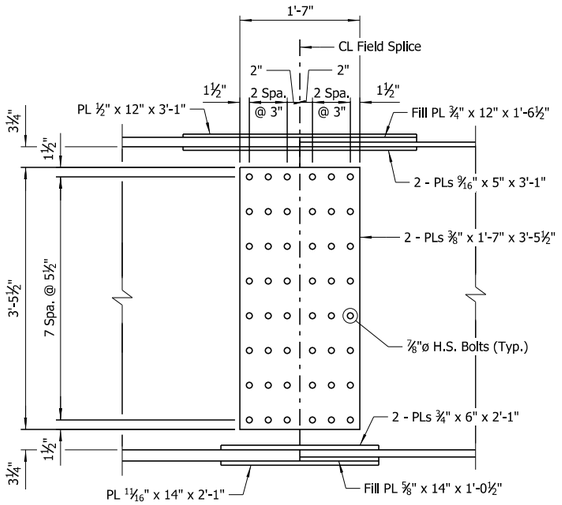
TABLE OF VARIABLES		
Location	"A"	"B"
Field Splice No. 1	½"	½"
Field Splice No. 2	½"	½"
Field Splice No. 3	¾"	⅝"
Field Splice No. 4	¾"	⅝"
Field Splice No. 5	¾"	¾"

NOTE:
All field splice connections shall be bolted with ⅞"ø H.S. bolts using 15/16"ø open holes.



ELEVATION OF FIELD SPLICE NOS. 1-5

No Scale



ELEVATION OF FIELD SPLICE NO. 6

Scale: 1" = 1'-0"

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DIGITALLY SIGNED 06/14/2024
BRIDGE ENGINEER

SHEET 7 OF 10
DETAILS OF 411'-0" CONTINUOUS PLATE GIRDER UNIT

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: HEW DATE: MAR. 2024 FILENAME: b101172_s7.dgn
CHECKED BY: KWY DATE: APR. 2024 SCALE: As Shown
DESIGNED BY: RAK DATE: MAR. 2024

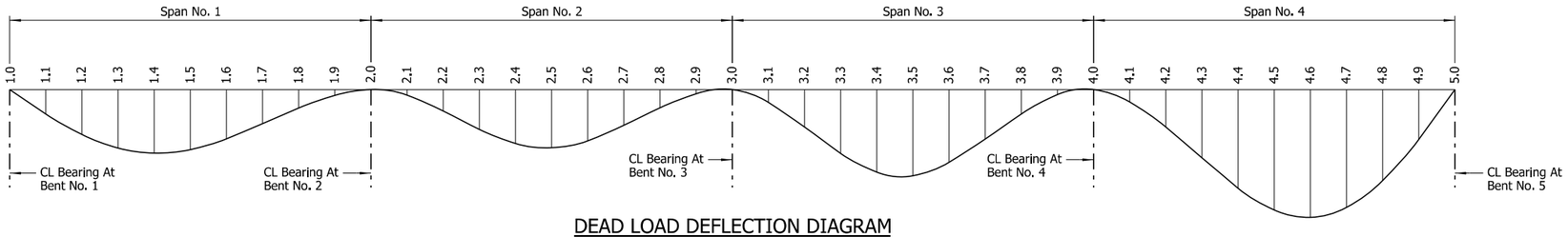
BRIDGE NO. 07688 DRAWING NO. 64139

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REVISED DATE:

DATE REVISED	DATE REVISED	FED. ROAD DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	199	325
		07688		411'-0" UNIT		64140

TABLE OF DEAD LOAD DEFLECTIONS (INCHES)

	Point Of Deflection	All Girders		
		Structural Steel	Structural Steel + Slab	Structural Steel + Slab + Rail
SPAN NO. 1	1.0	0.000	0.000	0.000
	1.1	0.057	0.322	0.351
	1.2	0.105	0.589	0.642
	1.3	0.137	0.766	0.835
	1.4	0.149	0.832	0.908
	1.5	0.141	0.786	0.858
	1.6	0.116	0.647	0.707
	1.7	0.081	0.447	0.489
	1.8	0.044	0.243	0.265
	1.9	0.015	0.078	0.085
SPAN NO. 2	2.0	0.000	0.000	0.000
	2.1	0.013	0.072	0.081
	2.2	0.049	0.275	0.304
	2.3	0.090	0.508	0.559
	2.4	0.120	0.693	0.762
	2.5	0.127	0.748	0.822
	2.6	0.109	0.659	0.725
	2.7	0.073	0.461	0.508
	2.8	0.032	0.233	0.257
	2.9	0.003	0.052	0.057
SPAN NO. 3	3.0	0.000	0.000	0.000
	3.1	0.044	0.167	0.184
	3.2	0.118	0.489	0.540
	3.3	0.195	0.829	0.913
	3.4	0.250	1.067	1.175
	3.5	0.265	1.116	1.229
	3.6	0.231	0.941	1.038
	3.7	0.167	0.642	0.710
	3.8	0.092	0.313	0.347
	3.9	0.028	0.066	0.074
SPAN NO. 4	4.0	0.000	0.000	0.000
	4.1	0.022	0.168	0.184
	4.2	0.078	0.493	0.540
	4.3	0.148	0.892	0.977
	4.4	0.220	1.292	1.414
	4.5	0.273	1.575	1.722
	4.6	0.292	1.673	1.827
	4.7	0.272	1.546	1.687
	4.8	0.211	1.193	1.302
	4.9	0.116	0.655	0.714
	5.0	0.000	0.000	0.000



DEAD LOAD DEFLECTION DIAGRAM

No Scale

NOTES:
Camber for dead load deflection plus vertical curve +/- ¼" tolerance. Deflections shown are along CL Girder from a chord from CL Bearing to CL Bearing. Negative sign (-) indicates point above chord. Vertical curve corrections are not included.

Dead load deflections shown include an assumed loading of 18 psf to account for stay-in-place metal deck forms. Revision to the deflection tables may be necessary upon review of the Contractor's submitted forming details or any approved changes to the pouring sequence shown in "REINFORCING PLAN & SLAB POURING SEQUENCE" on Dwg. No. 64141.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
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BRIDGE ENGINEER

SHEET 8 OF 10
DETAILS OF 411'-0" CONTINUOUS PLATE GIRDER UNIT

ROUTE SEC.

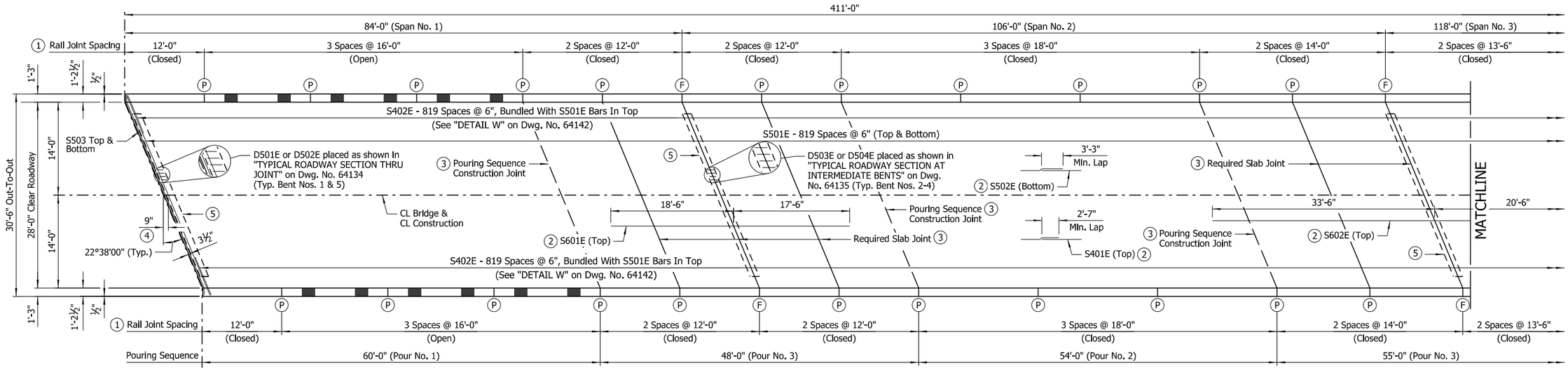
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

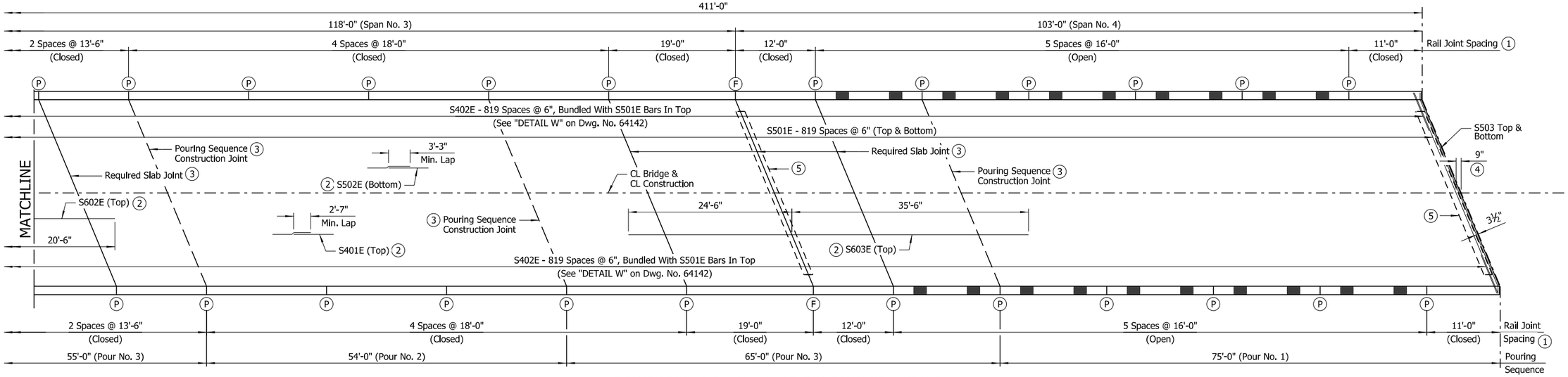
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BRIDGE NO. 07688 DRAWING NO. 64140

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REVISED DATE:

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		6	ARK.	101172	200	325
		07688		411'-0" UNIT		64141





REINFORCING PLAN & SLAB POURING SEQUENCE

Scale: ⅛" = 1'-0"

NOTES:
All concrete diaphragms shall be cast in place and poured a minimum of 48 hours before the first deck pour. Removable forms shall be used when pouring diaphragms.

Pours with the same number may be placed simultaneously or separately. All Pours (1) must be placed before Pours (2) can be placed. All Pours (2) must be placed before Pours (3) can be placed. 48 hours shall elapse between the end of a pour and the start of the next pour. 72 hours shall elapse between adjacent pours.

Concrete in bridge superstructure shall be placed, consolidated and screeded off for the entire pour before any concrete has taken its initial set. This may require the use of a retarding agent.

A minimum of 72 hours shall elapse between the completion of the entire deck slab and the start of a railing pour. Any railing pours made before the entire slab unit has been placed must be approved by the Engineer. The Contractor must obtain approval from the Engineer for any deviations from the pouring sequence shown.

All transverse slab reinforcing ("S" bars) shall be placed parallel to the skew.

Required slab joints and pouring sequence joints shall align with rail joints as shown.

For "GENERAL NOTES", see Std. Dwg. No. 55006.

For Concrete Bridge Rail details, see Std. Dwg. No. 55070.

TABLE OF VARIABLES

Closed Rail Panels			Open Rail Panels					
Panel Length	A	R4XXE	Panel Length	B	C	D	E	R4XXE
11'-0"	21	04	16'-0"	8	3'-0"	11	6'-0"	10
12'-0"	23	05						
13'-6"	26	06						
14'-0"	27	07						
18'-0"	35	08						
19'-0"	37	09						

1. Rail joints designated with symbol (F) shall be stopped 6" from top of slab. All other rail joints with symbol (P) shall be partial-depth joints stopped 16" from top of slab.
2. Place as shown in "TYPICAL ROADWAY SECTION" on Dwg. No. 64133
3. See "TRANSVERSE SLAB JOINT DETAIL" on Std. Dwg. No. 55007
4. Measured Along CL Bridge from CL Joint to placement of first S402E and S501E bars.
5. Concrete Diaphragm - Typical as shown at Bents 1-5. For details, see Dwg. Nos. 64134 and 64135.

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SHEET 9 OF 10
DETAILS OF 411'-0" CONTINUOUS PLATE GIRDER UNIT

ROUTE SEC.

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DESIGNED BY: RAK DATE: MAR. 2024

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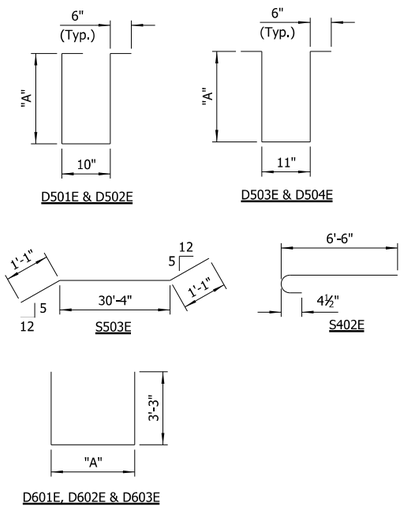
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. ROAD DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	201	325
		07688		411'-0" UNIT		64142

BAR LIST

MARK	NO. REQ'D	LENGTH	"A"	P.D.
D501E	70	9'-5"	4'-0"	2½"
D502E	12	7'-10"	3'-2"	2½"
D503E	90	9'-6"	4'-0"	2½"
D504E	30	7'-11"	3'-2"	2½"
D601E	40	8'-9"	2'-7"	4½"
D602E	10	14'-7"	8'-5"	4½"
D701E	90	8'-5"		Str.
R400E	128	5'-3"		2½"
R401E	1612	6'-4"		2½", 3"
R402E	184	5'-6"		Str.
R403E	1612	3'-6"		3", 3¾"
R404E	16	10'-8"		Str.
R405E	96	11'-8"		Str.
R406E	32	13'-2"		Str.
R407E	32	13'-8"		Str.
R408E	112	17'-8"		Str.
R409E	16	18'-8"		Str.
R410E	128	15'-8"		Str.
S401E	352	39'-9"		Str.
S402E	1640	7'-0"		3"
S501E	1640	32'-8"		Str.
S502E	264	54'-3"		Str.
S503E	4	32'-6"		3¾"
S601E	31	36'-0"		Str.
S602E	31	54'-0"		Str.
S603E	31	60'-0"		Str.

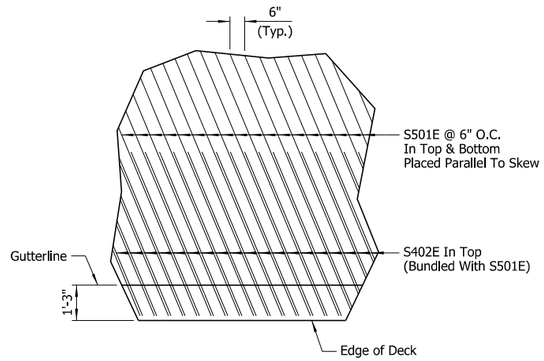
BAR BENDING DIAGRAMS



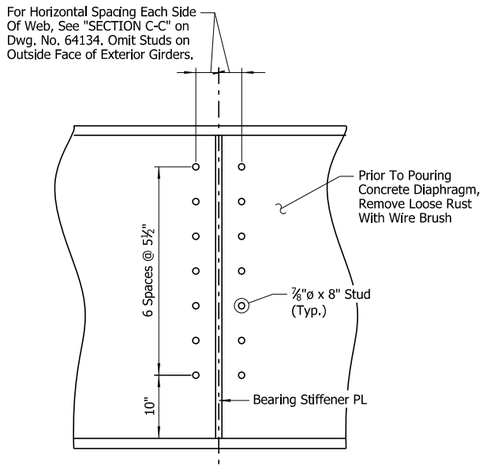
NOTES:
Dimensions of bars are out-to-out.

Bar designations ending with "E" indicate epoxy coated bars.

For bar bending diagrams of R400E, R401E & R403E, see Std. Dwg. No. 55070.



DETAIL W
No Scale



DETAIL J
No Scale

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SHEET 10 OF 10
DETAILS OF 411'-0" CONTINUOUS PLATE GIRDER UNIT

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

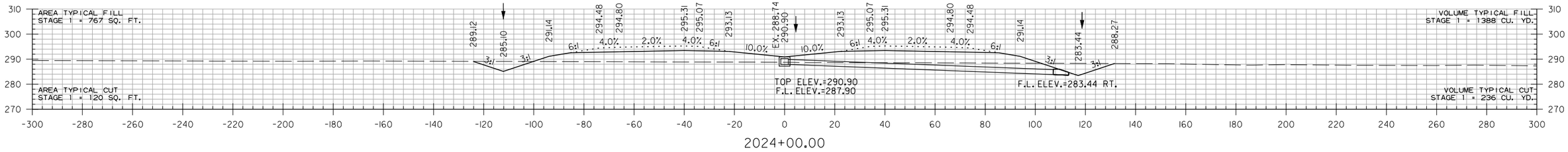
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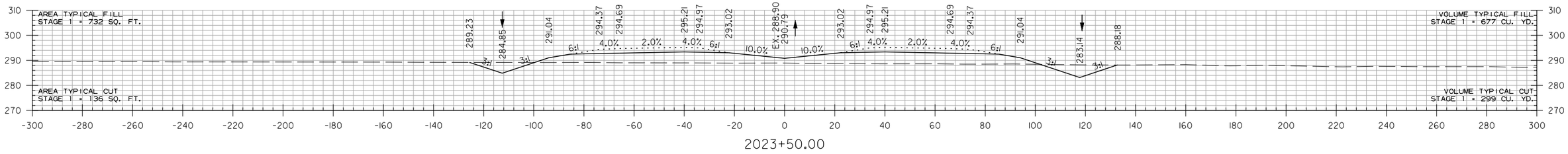
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	202	325
		CROSS SECTIONS				

STA. 2024+00 CONSTRUCT
MEDIAN DROP INLET 3' LT. H=3'-0"
WITH 24" x 106' PIPE OUTLET
TO FES RT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 106 LIN. FT.
24" FES = 1 EACH



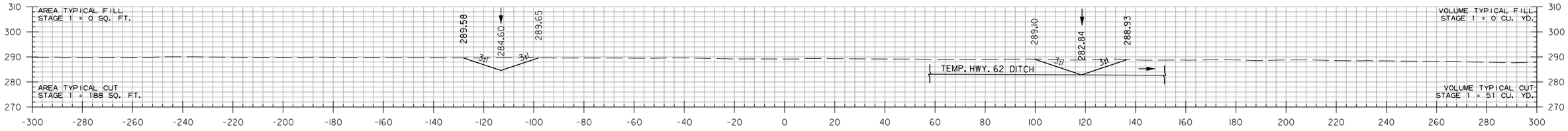
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2023+50.00

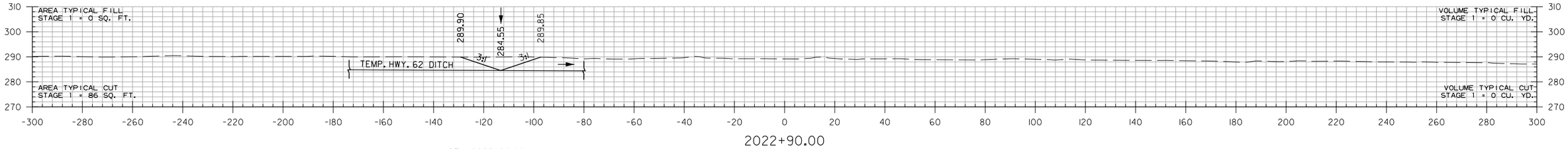
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BEGIN GRADING

STA. 2023+31.40 BEGIN TOE OF SLOPE



2023+00.00

STA. 2023+00.00
BEGIN SP. DT. RT. 0.60%
ELEV. 282.84

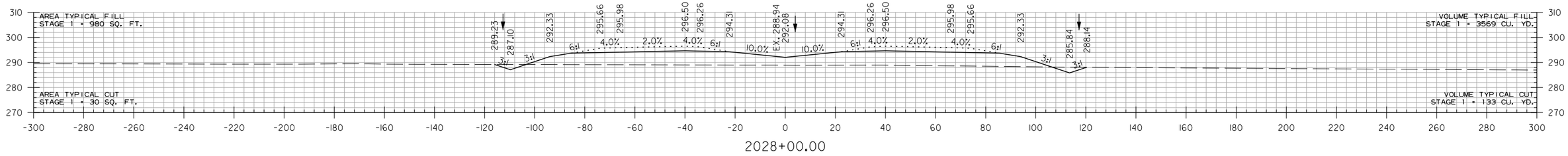


2022+90.00

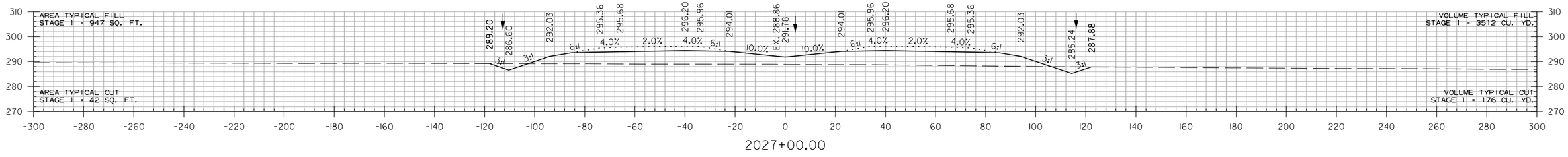
STA. 2022+90.00
BEGIN SP. DT. LT. 0.50%
ELEV. 284.55

CGGervasini 6/28/2024 3:17:02 PM
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L:\2021\21T0146 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

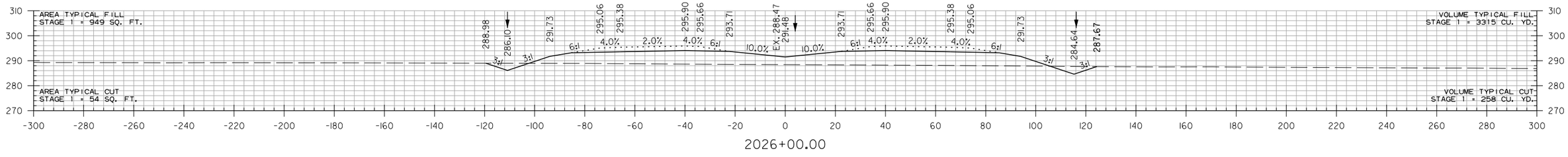
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	203	325
		CROSS SECTIONS				



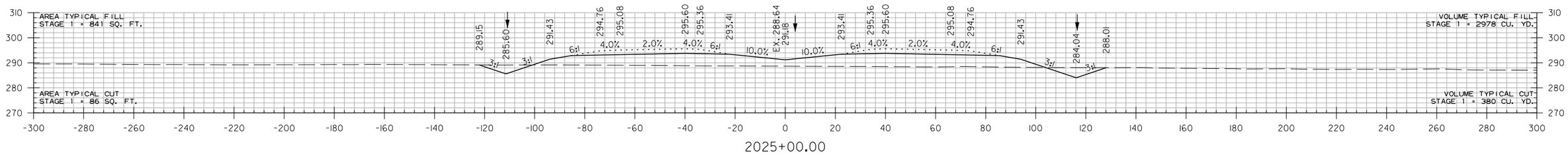
2028+00.00



2027+00.00



2026+00.00

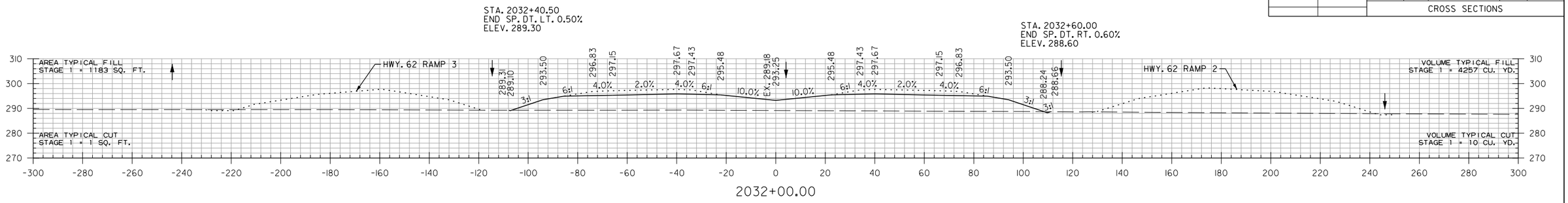


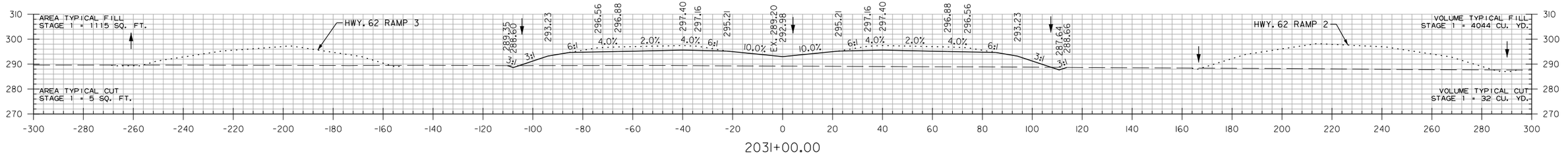
2025+00.00

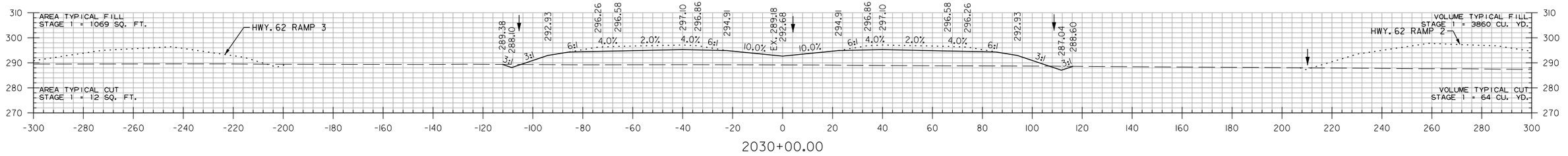
I-57
STA. 2025+00 TO STA. 2028+00

CGGervasini 6/28/2024 1:34:10 PM
WORKSPACE: AHTD
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REVISED DATE:

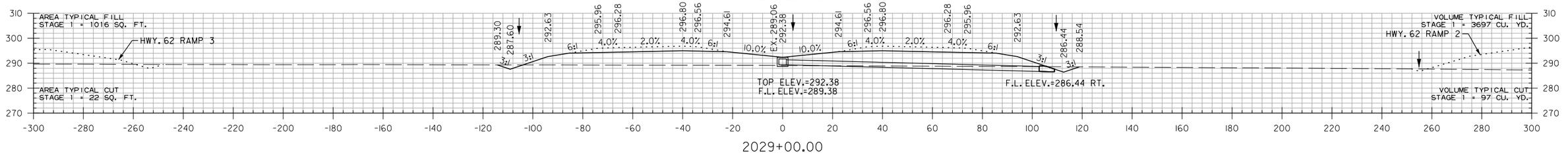
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	204	325
		CROSS SECTIONS				







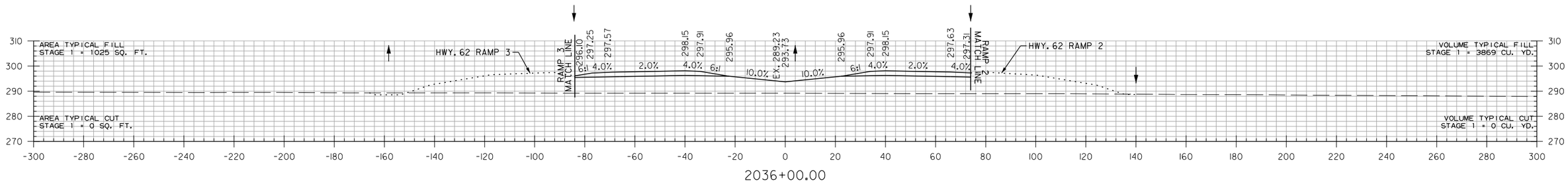
STA. 2029+00 CONSTRUCT
MEDIAN DROP INLET H=3'-0"
WITH 24" x 102' PIPE OUTLET
TO FES RT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 102 LIN. FT.
24" FES = 1 EACH



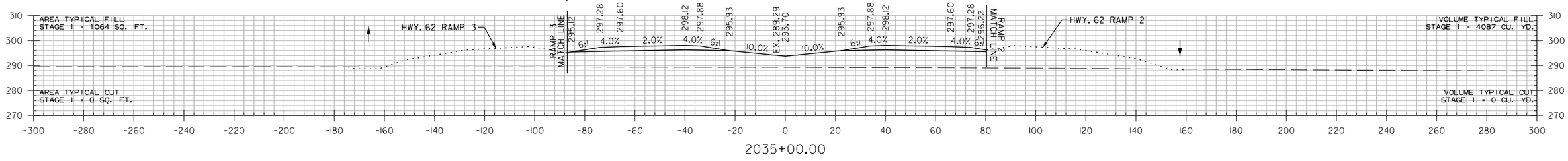
I-57
STA. 2029+00 TO STA. 2032+00

CGervasini 6/28/2024 1:34:11 PM
WORKSPACE: AHTD
L:\2021\210046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

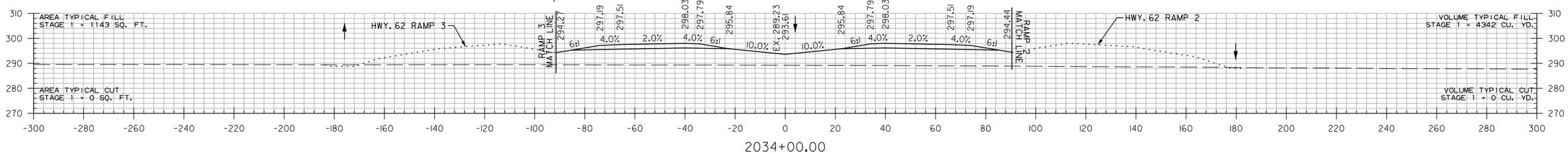
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	205	325
		CROSS SECTIONS				



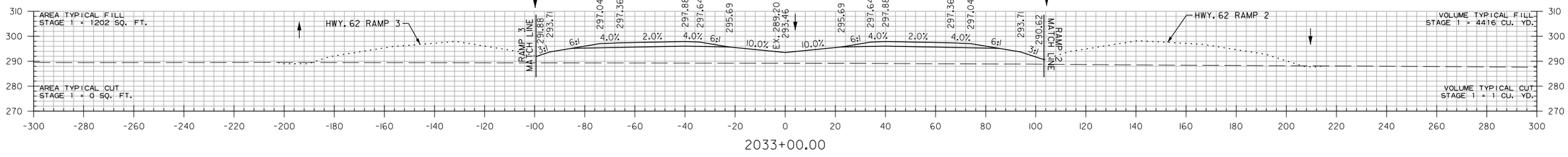
2036+00.00



2035+00.00



2034+00.00



2033+00.00

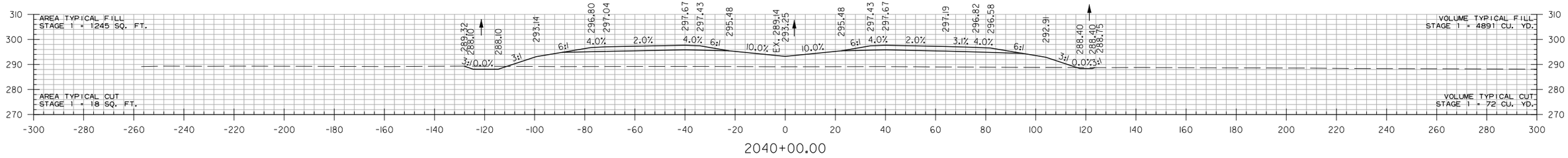
STA. 2033+00.00 BEGIN GRADING AND PAVING

I-57

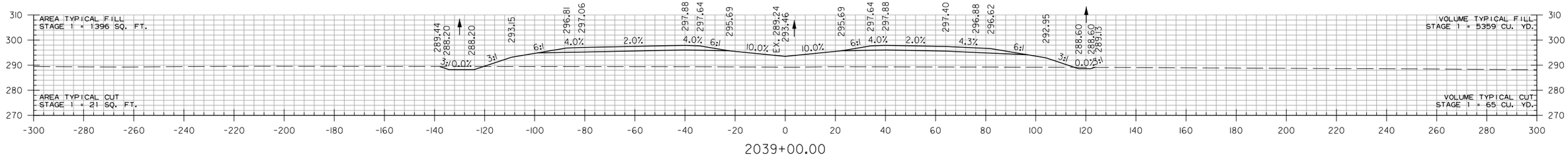
STA. 2033+00 TO STA. 2036+00

CGGervasini 6/28/2024 1:34:11 PM
WORKSPACE: AHTD
L:\2021\21101046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

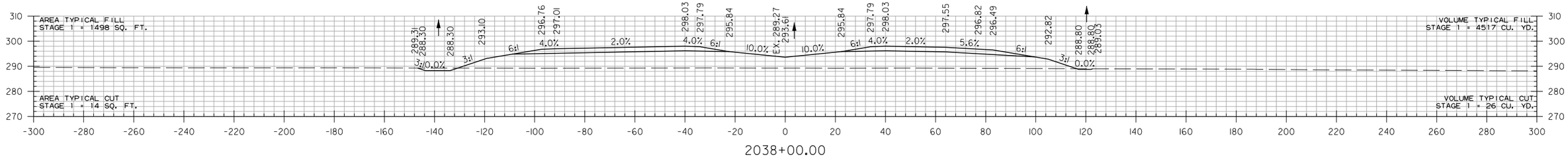
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	206	325
		CROSS SECTIONS				



2040+00.00

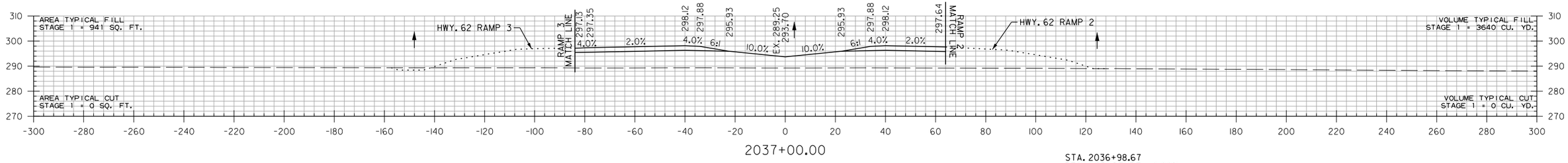


2039+00.00



2038+00.00

STA. 2037+19.50
BEGIN SP. DT. LT. -0.10%
ELEV. 288.38



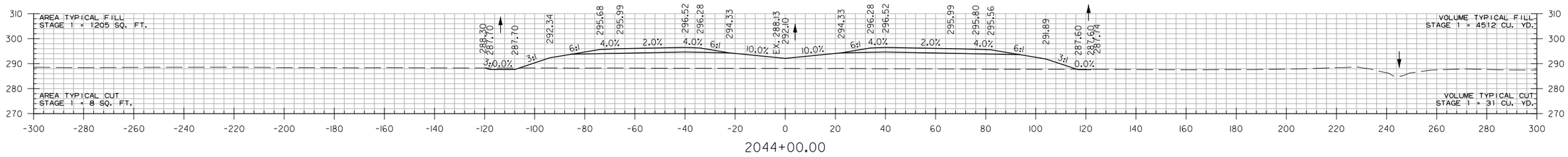
2037+00.00

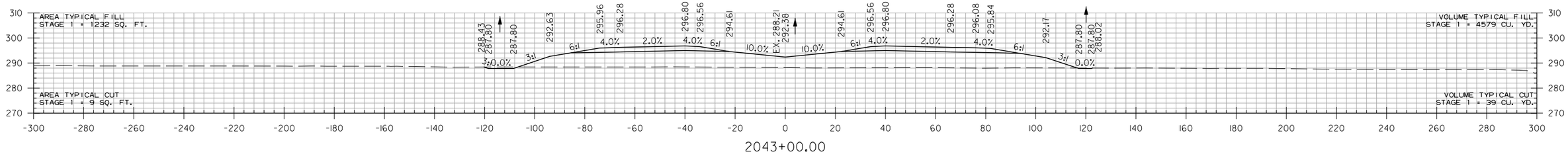
STA. 2036+98.67
BEGIN SP. DT. RT. -0.20%
ELEV. 289.00

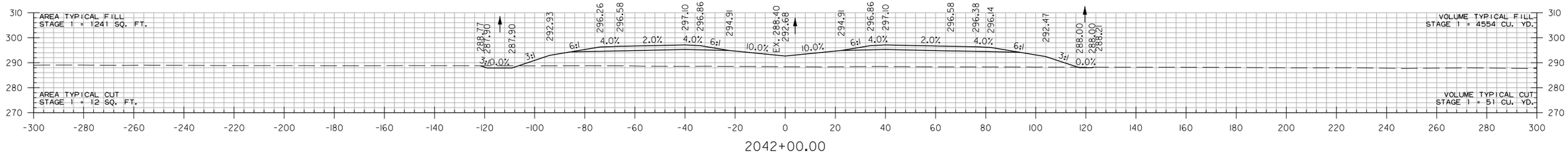
I-57
STA. 2037+00 TO STA. 2040+00

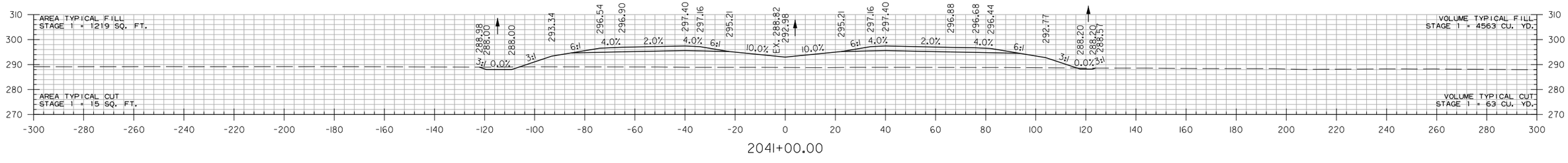
CGGervasini 6/28/2024 1:34:11 PM
WORKSPACE: AHTD
L:\2021\21101046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	207	325
		CROSS SECTIONS				





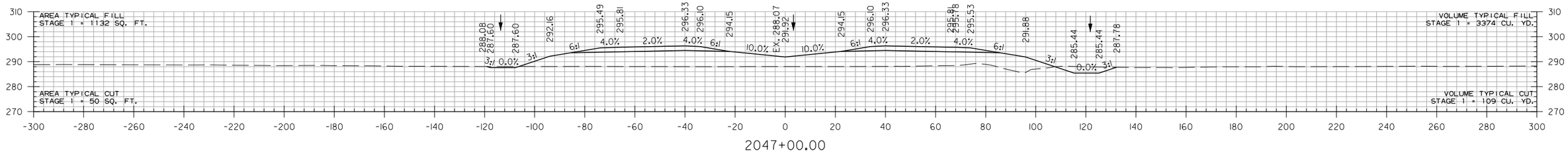




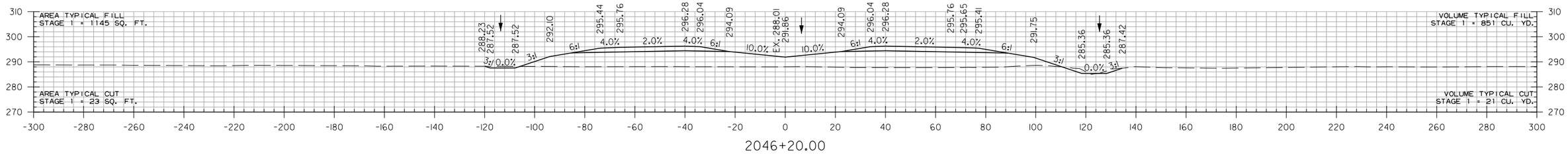
I-57
STA. 2041+00 TO STA. 2044+00

CGGervasini 6/28/2024 1:34:11 PM
WORKSPACE: AHTD
L:\2021\2101046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	208	325
		CROSS SECTIONS				

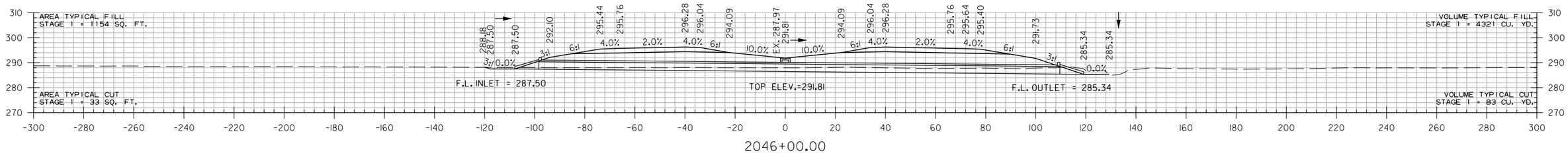


2047+00.00



2046+20.00

STA. 2046+02 CONSTRUCT
MEDIAN DROP INLET H=1'-8"
ABOVE R.C. BOX CULVERT
TYPE TM DROP INLET = 3'X2'



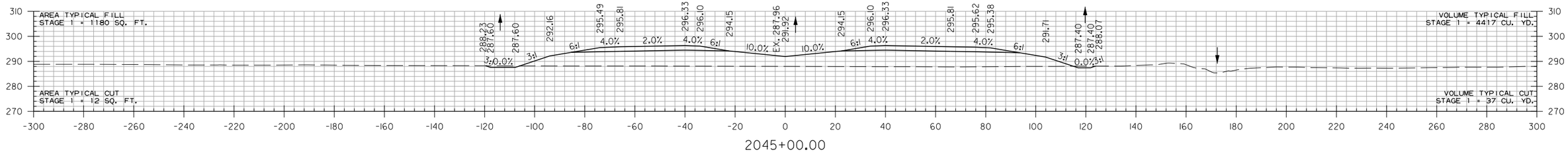
2046+00.00

STA. 2046+00.00
END SP. DT. LT. -0.10%
BEGIN SP. DT. LT. 0.10%
ELEV. 287.50

STA. 2046+00 CONSTRUCT
DBL. 6' x 3' x 208' R.C. BOX CULVERT
WITH 3:1 WINGS LT. AND RT.
Q50 = 198 CFS DA = 205.9 ACRES

STA. 2046+00.00
BEGIN SP. DT. RT. 0.10%
ELEV. 285.34

STA. 2045+82.00
END SP. DT. RT. -0.20%
ELEV. 287.23

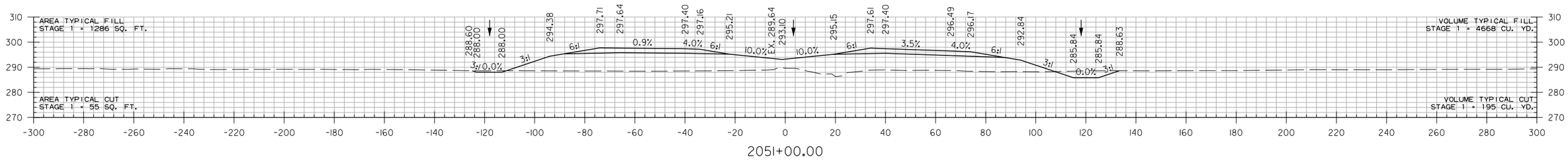


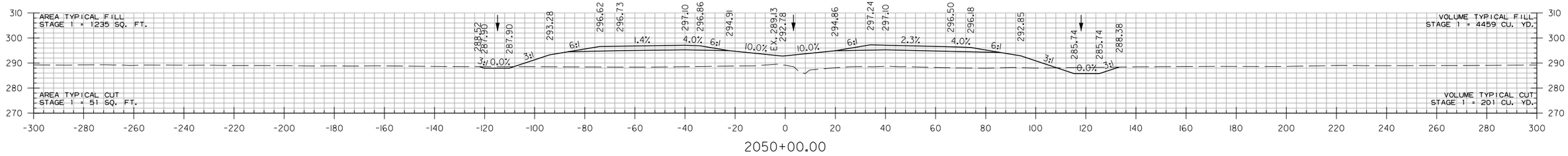
2045+00.00

I-57
STA. 2045+00 TO STA. 2047+00

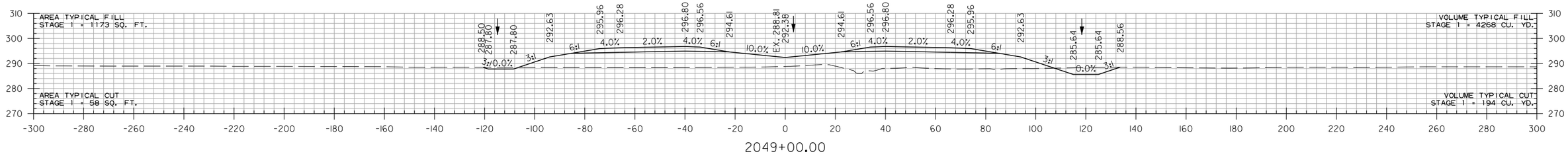
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WORKSPACE: AHTD
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REVISED DATE:

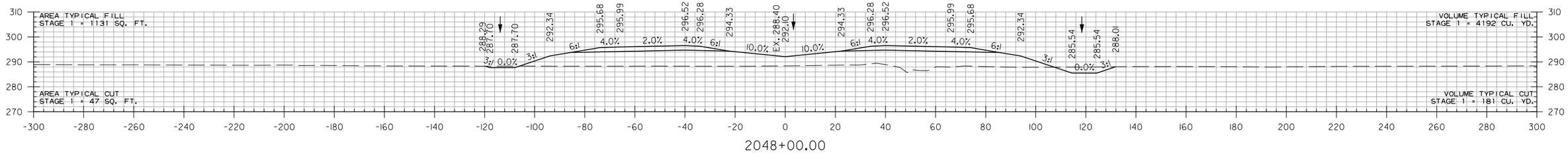
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	209	325
		CROSS SECTIONS				





STA. 2049+75.18 BEGIN SUPERELEVATION



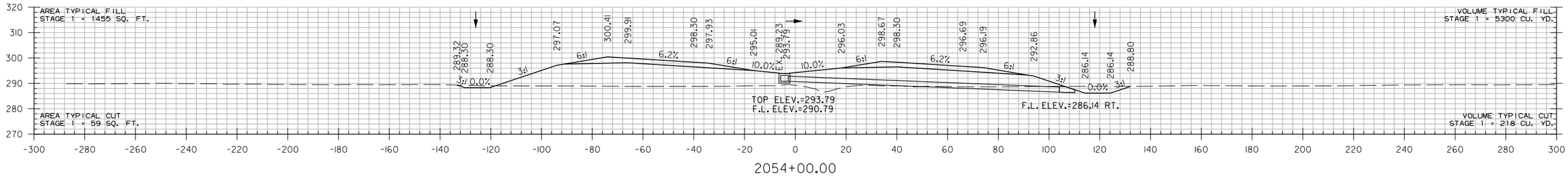


I-57
STA. 2048+00 TO STA. 2051+00

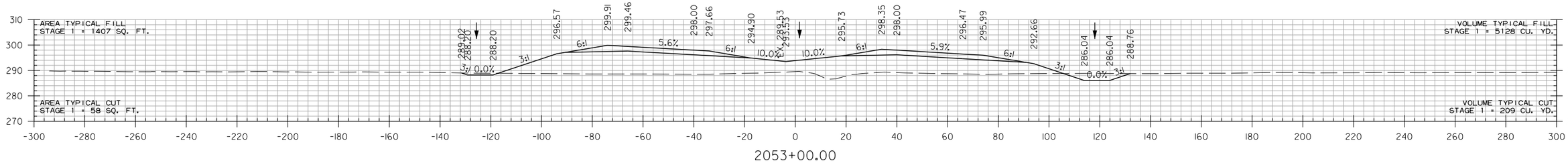
CGervasini 6/28/2024 1:34:12 PM
WORKSPACE: AHTD
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REVISED DATE:

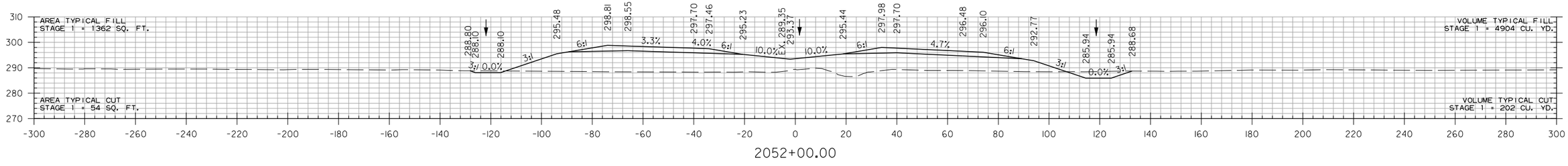
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	210	325
		CROSS SECTIONS				

STA. 2054+00 CONSTRUCT
MEDIAN DROP INLET 4' LT. H=3'-0"
WITH 24" x 107' PIPE OUTLET
TO FES RT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 107 LIN. FT.
24" FES = 1 EACH



STA. 2053+25.18 MAX. SUPERELEVATION (0.062'/')

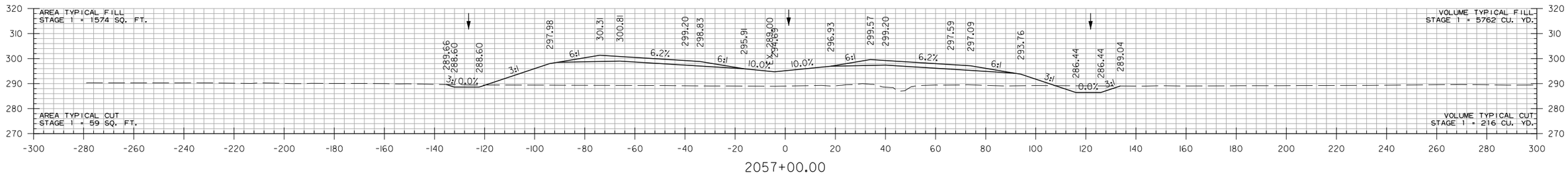


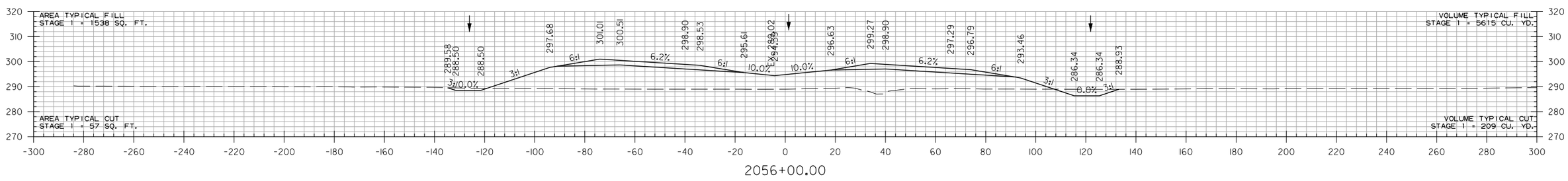


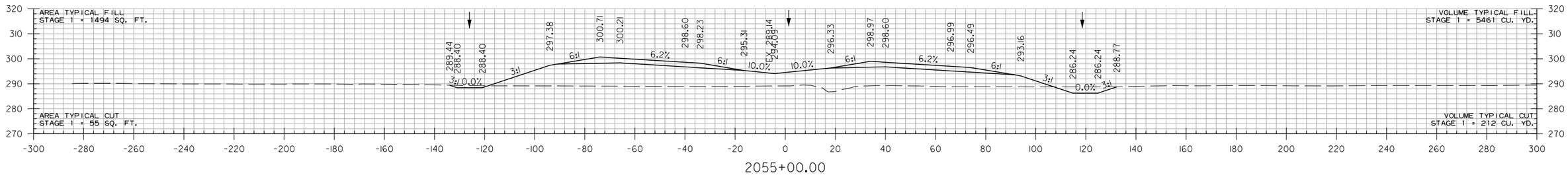
I-57
STA. 2052+00 TO STA. 2054+00

CGGervasini 6/28/2024 1:34:12 PM
WORKSPACE: AHTD
L:\2021\210046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	211	325
		CROSS SECTIONS				



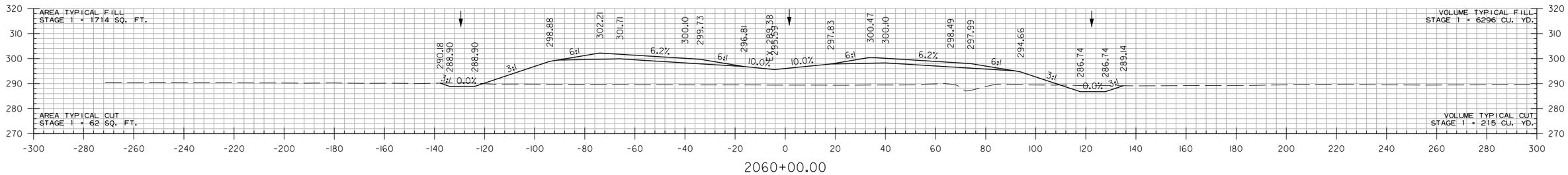


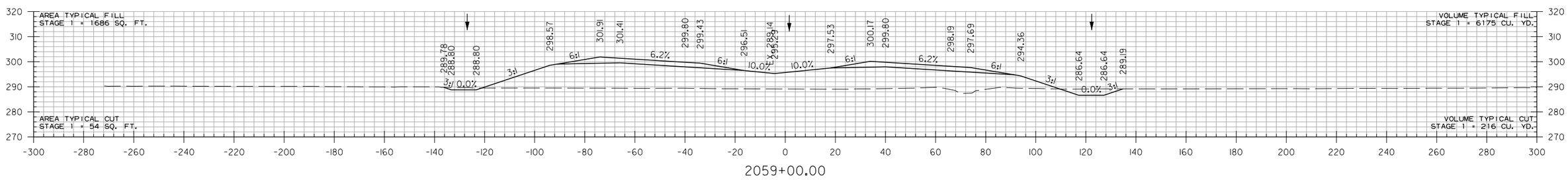


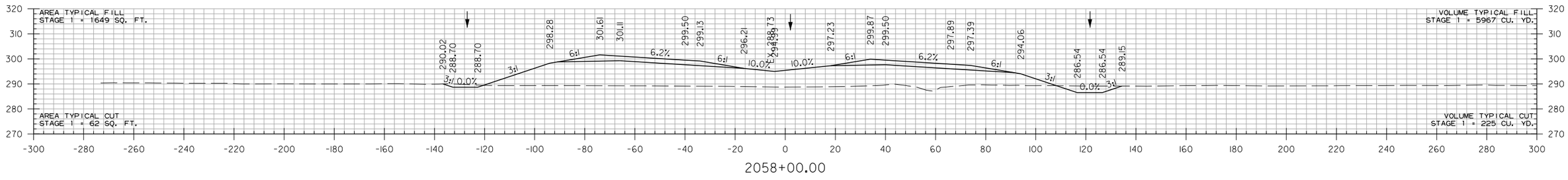
I-57
STA. 2055+00 TO STA. 2057+00

CGGervasini 6/28/2024 1:34:12 PM
WORKSPACE: AHTD
L:\2021\2101046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	212	325
		CROSS SECTIONS				



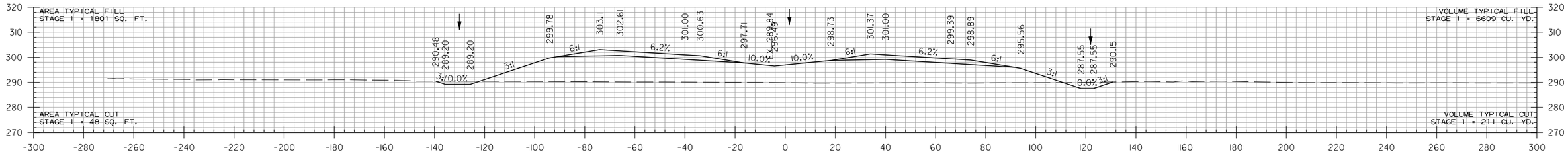




I-57
STA. 2058+00 TO STA. 2060+00

CGGervasini 6/28/2024 1:34:13 PM
WORKSPACE: AHTD
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REVISED DATE:

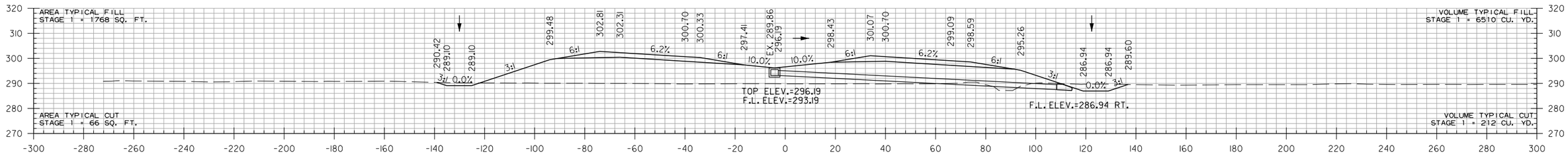
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	213	325
		CROSS SECTIONS				



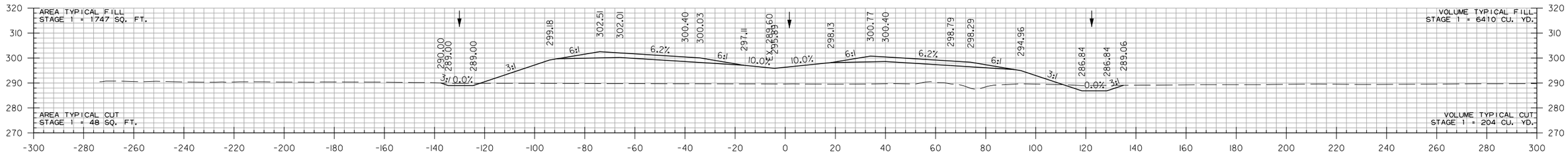
2063+00.00

STA. 2062+00 CONSTRUCT
MEDIAN DROP INLET 4' LT. H=3'-0"
WITH 24" x 111' PIPE OUTLET
TO FES RT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 111 LIN. FT.
24" FES = 1 EACH

STA. 2062+40.00
END SP. DT. RT. 0.10%
BEGIN SP. DT. RT. 0.95%
ELEV. 286.98



2062+00.00

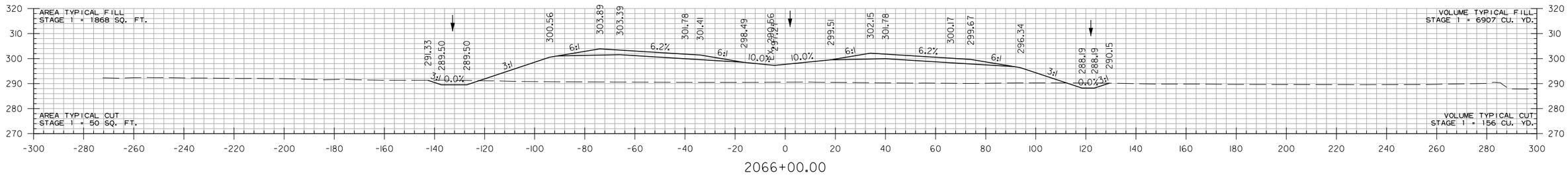


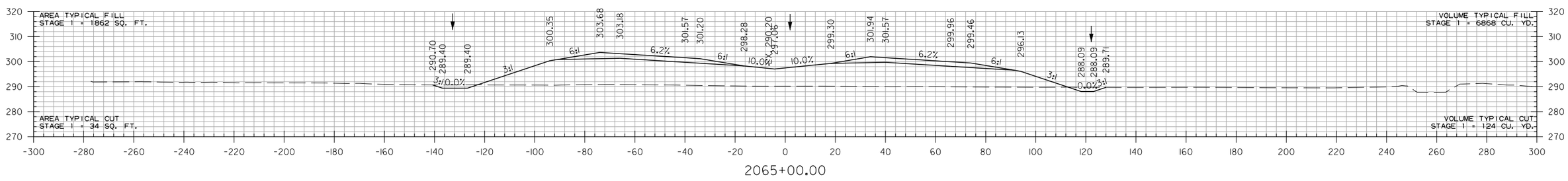
2061+00.00

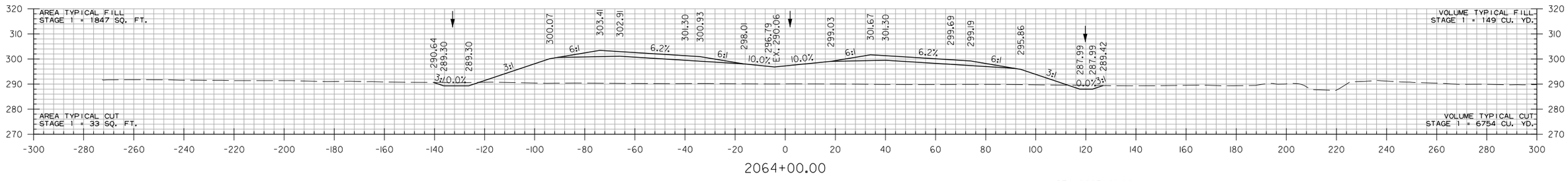
I-57
STA. 2061+00 TO STA. 2063+00

CGGervasini 6/28/2024 1:34:13 PM
WORKSPACE: AHTD
L:\2021\21T0I046 - ARDOT I00502 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_0I_I-57.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	214	325
		CROSS SECTIONS				





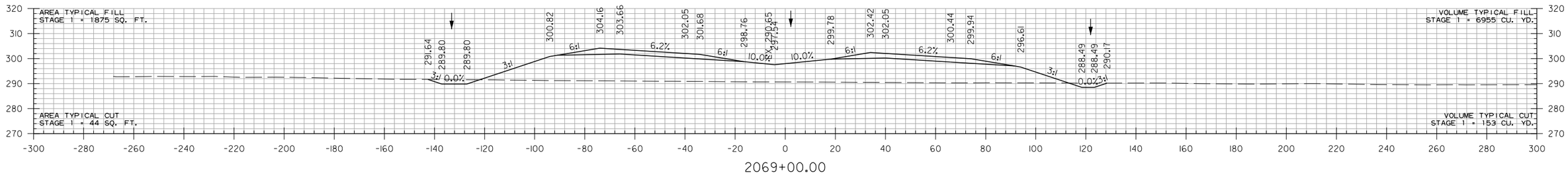


STA. 2063+40.00
END SP. DT. RT. 0.95%
BEGIN SP. DT. RT. 0.10%
ELEV. 287.93

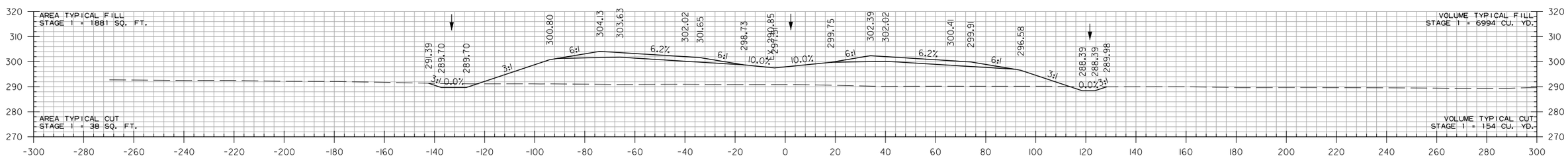
I-57
STA. 2064+00 TO STA. 2066+00

CGervasini 6/28/2024 1:34:13 PM
WORKSPACE: AHTD
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REVISED DATE:

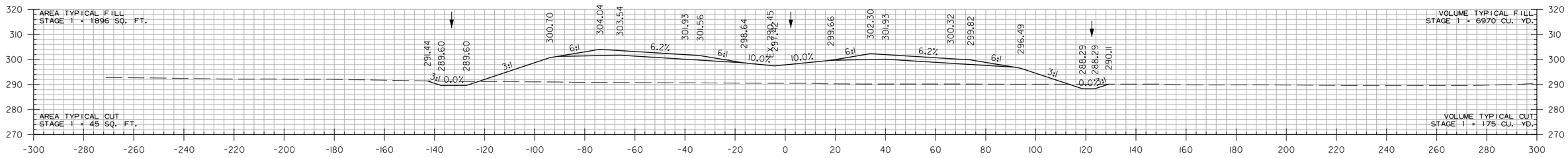
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	215	325
		CROSS SECTIONS				



2069+00.00



2068+00.00

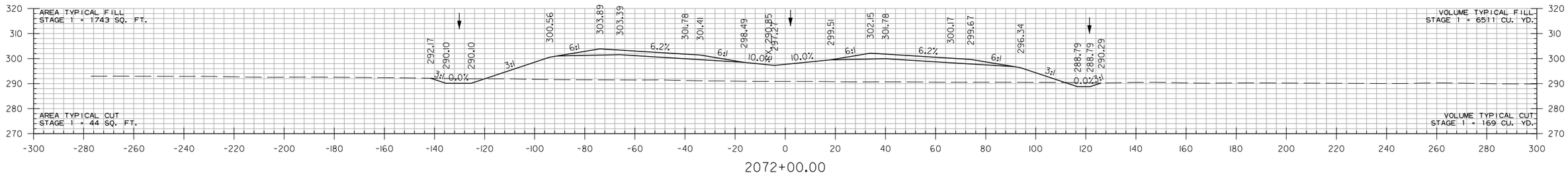


2067+00.00

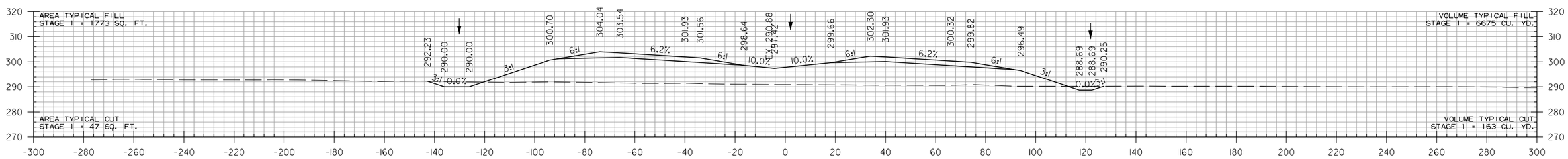
I-57
STA. 2067+00 TO STA. 2069+00

CGGervasini 6/28/2024 1:34:13 PM
WORKSPACE: AHTD
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REVISED DATE:

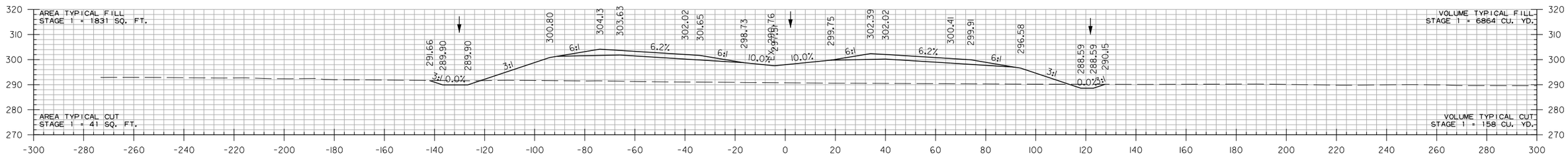
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	216	325
		CROSS SECTIONS				



2072+00.00



2071+00.00

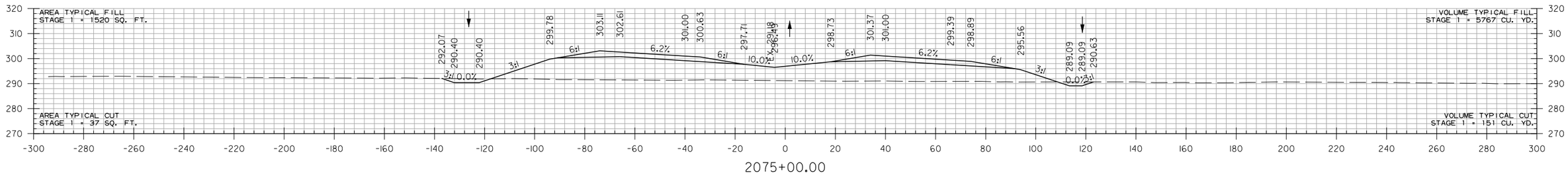


2070+00.00

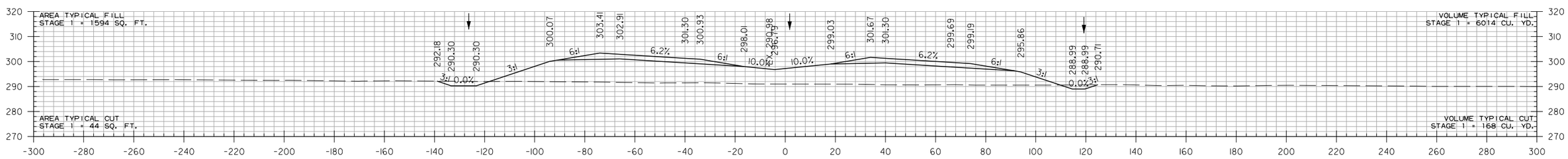
I-57
STA. 2070+00 TO STA. 2072+00

CGGervasini 6/28/2024 1:34:4 PM
WORKSPACE: AHTD
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REVISED DATE:

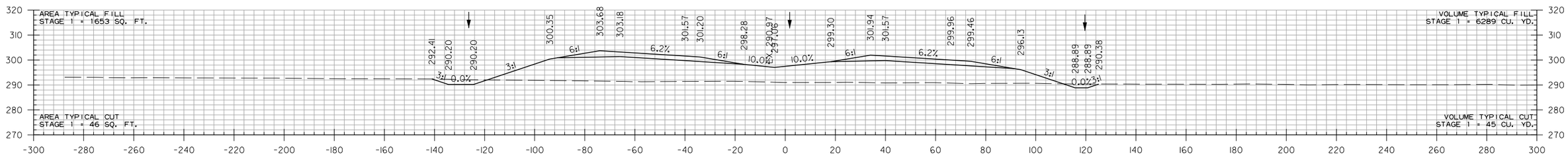
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	217	325
		CROSS SECTIONS				



2075+00.00



2074+00.00

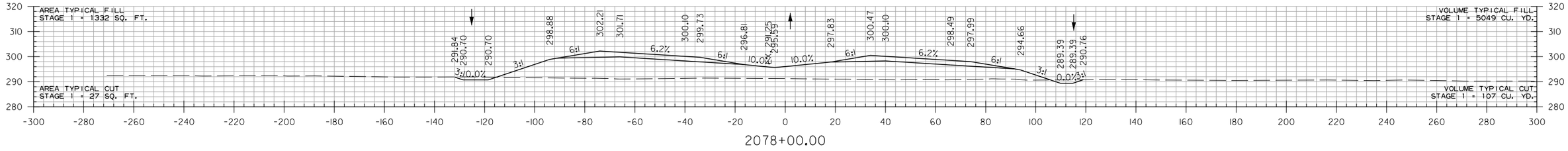


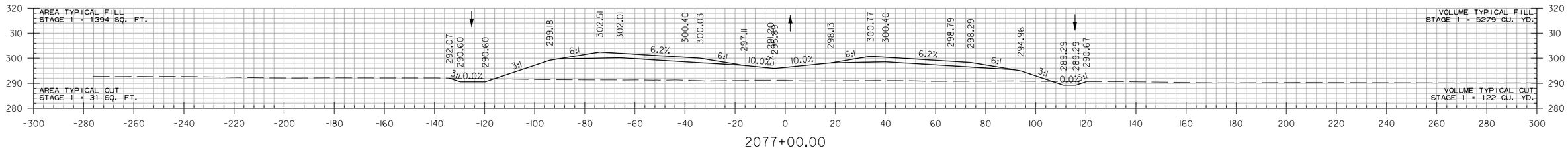
2073+00.00

I-57
STA. 2073+00 TO STA. 2075+00

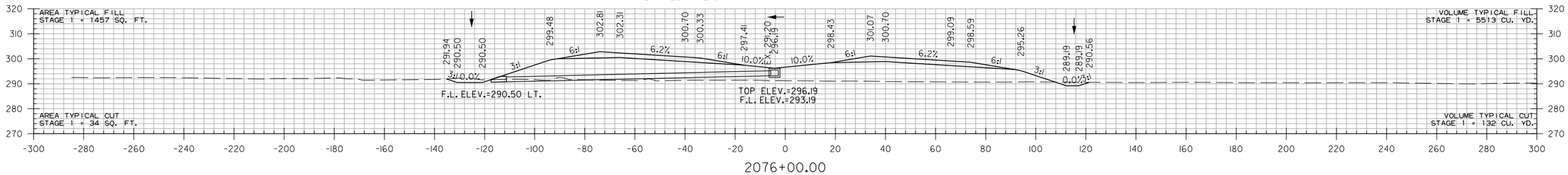
CGervasini 6/28/2024 1:34:4 PM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	218	325
		CROSS SECTIONS				



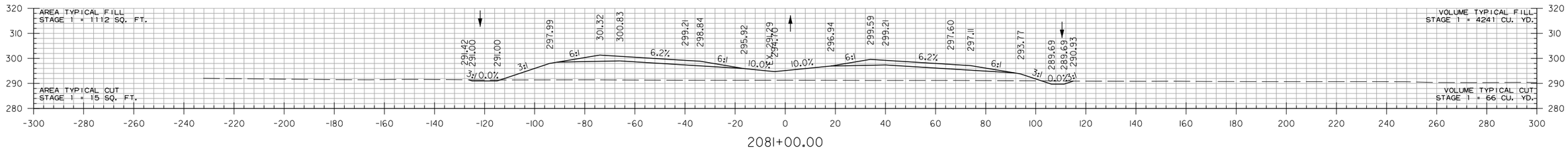


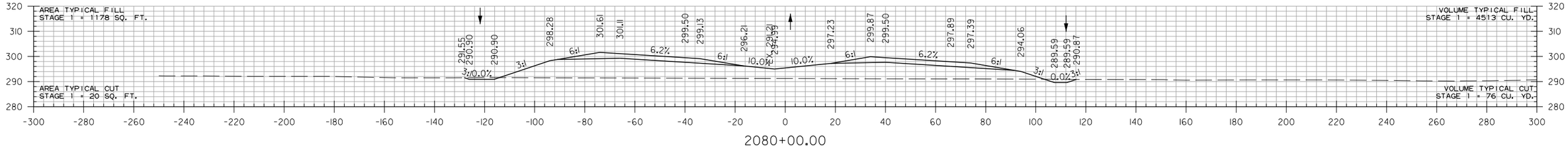
STA. 2076+00 CONSTRUCT
MEDIAN DROP INLET 4' LT. H=3'-0"
WITH 24" x 106' PIPE OUTLET
TO FES LT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 106 LIN. FT.
24" FES = 1 EACH

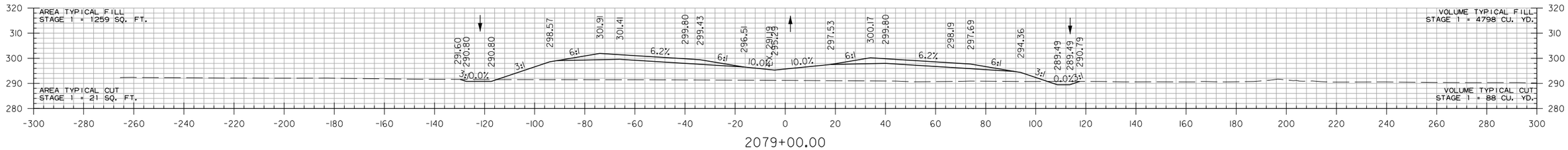


CGGervasini 6/28/2024 1:34:14 PM
WORKSPACE: AHTD
L:\2021\2101046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	219	325
		CROSS SECTIONS				



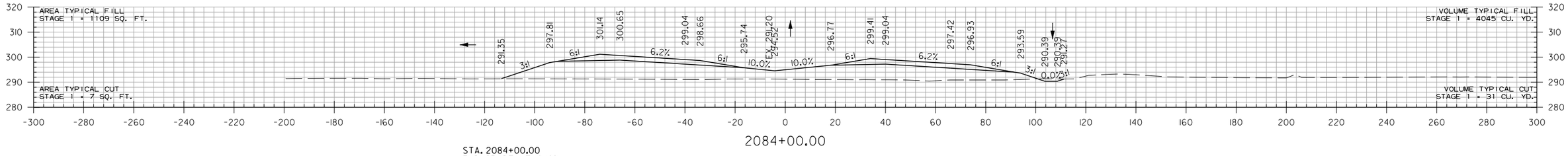




I-57
STA. 2079+00 TO STA. 2081+00

CGGervasini 6/28/2024 1:34:14 PM
WORKSPACE: AHTD
L:\2021\21101046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

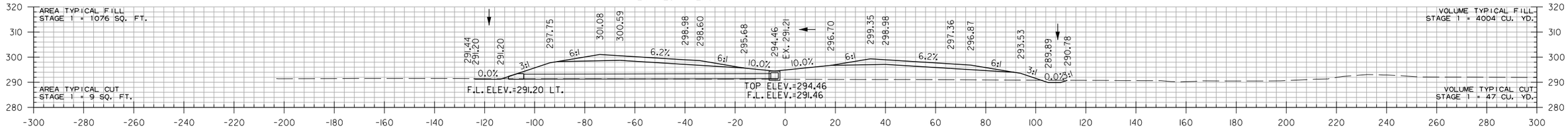
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	220	325
		CROSS SECTIONS				



2084+00.00

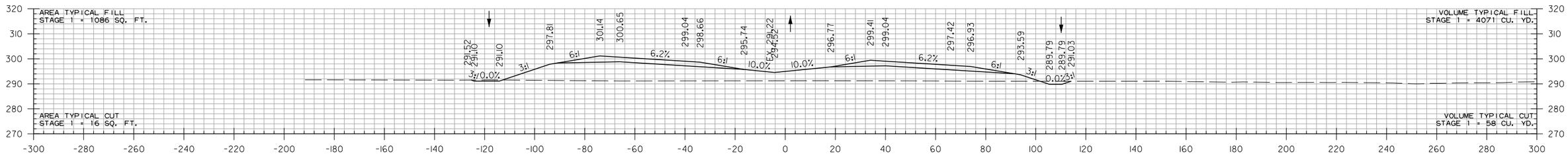
STA. 2084+00.00
END SP. DT. LT. 0.10%
ELEV. 291.30

STA. 2083+00 CONSTRUCT
MEDIAN DROP INLET 4' LT. H=3'-0"
WITH 24" x 99' PIPE OUTLET
TO FES LT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 99 LIN. FT.
24" FES = 1 EACH



2083+00.00

STA. 2083+00.00
END SP. DT. RT. 0.10%
BEGIN SP. DT. RT. 0.50%
ELEV. 289.89

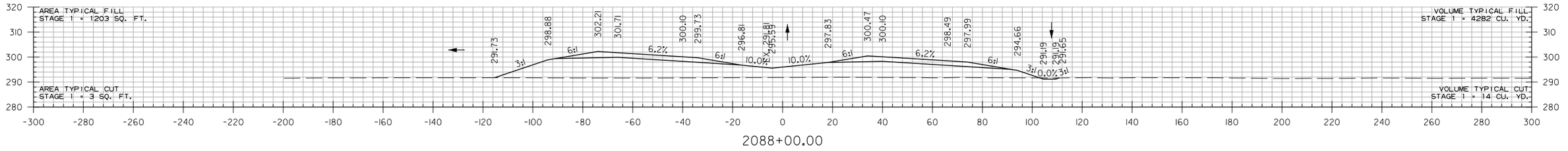


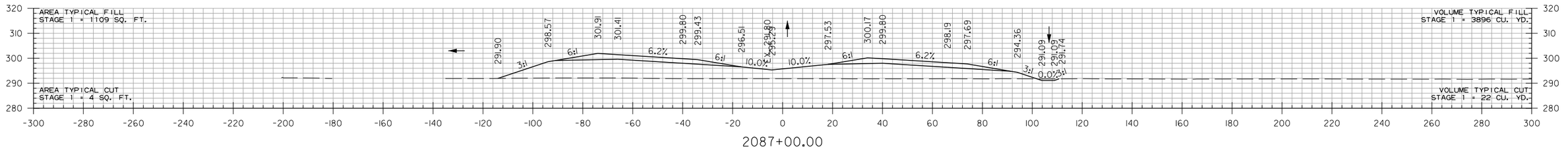
2082+00.00

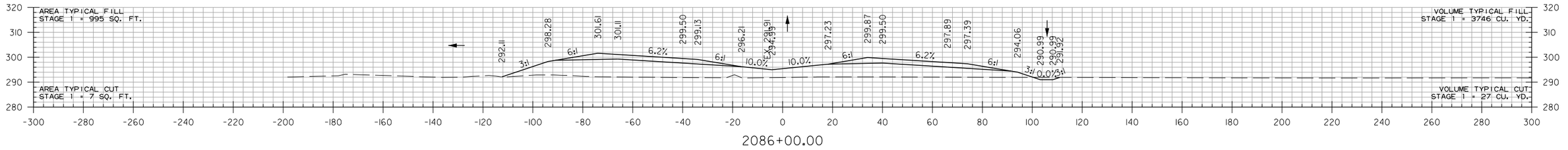
I-57
STA. 2082+00 TO STA. 2084+00

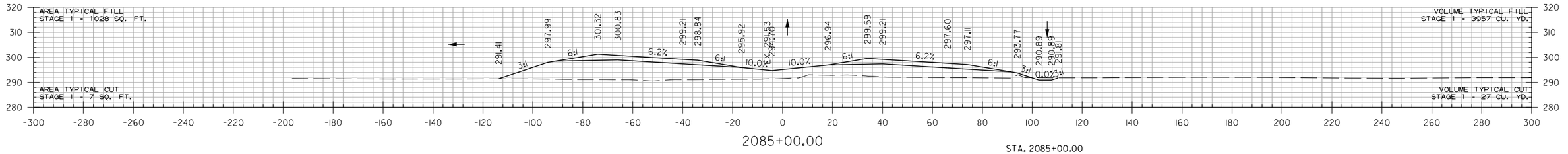
CGervasini 6/28/2024 1:34:14 PM
WORKSPACE: AHTD
L:\2021\21T0146 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r-101172\r-101172_CX.01_I-57.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	221	325
		CROSS SECTIONS				







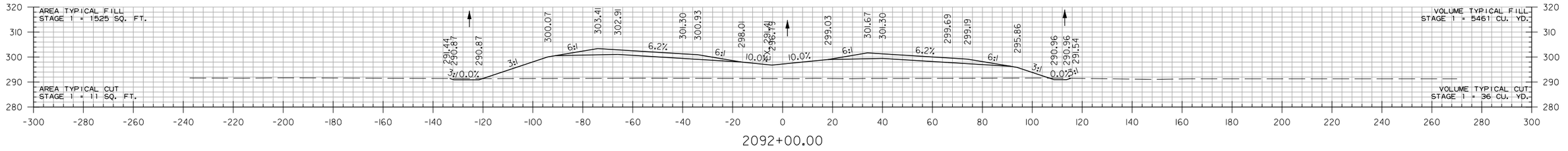


STA. 2085+00.00
END SP. DT. RT. 0.50%
BEGIN SP. DT. RT. 0.10%
ELEV. 290.89

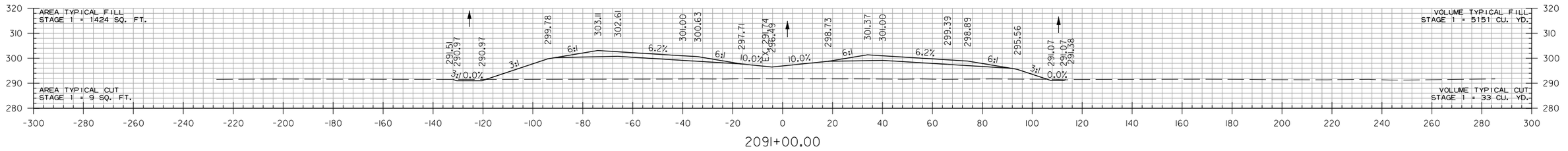
I-57
STA. 2085+00 TO STA. 2088+00

CGGervasini 6/28/2024 1:34:15 PM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	222	325
		CROSS SECTIONS				

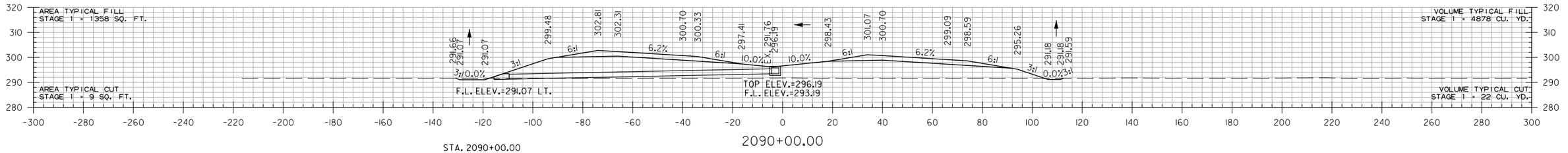


2092+00.00



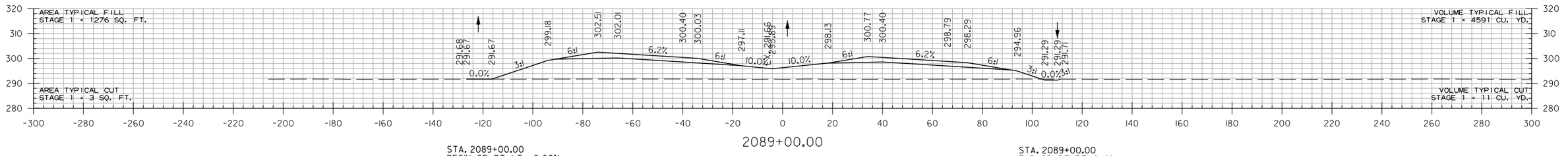
2091+00.00

STA. 2090+00 CONSTRUCT
MEDIAN DROP INLET 4' LT. H=3'-0"
WITH 24" x 105' PIPE OUTLET
TO FES LT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 105 LIN. FT.
24" FES = 1 EACH



2090+00.00

STA. 2090+00.00
END SP. DT. LT. -0.60%
BEGIN SP. DT. LT. -0.10%
ELEV. 291.07



2089+00.00

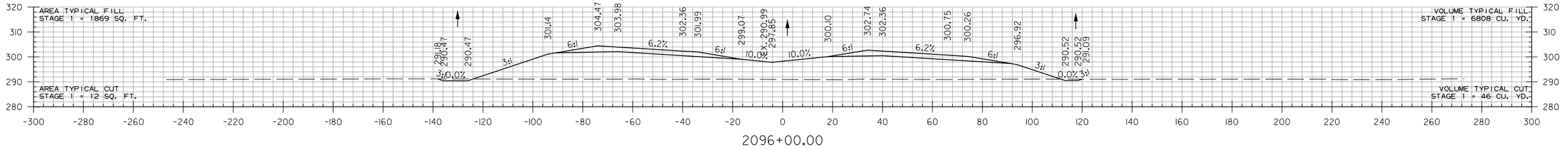
STA. 2089+00.00
BEGIN SP. DT. LT. -0.60%
ELEV. 291.67

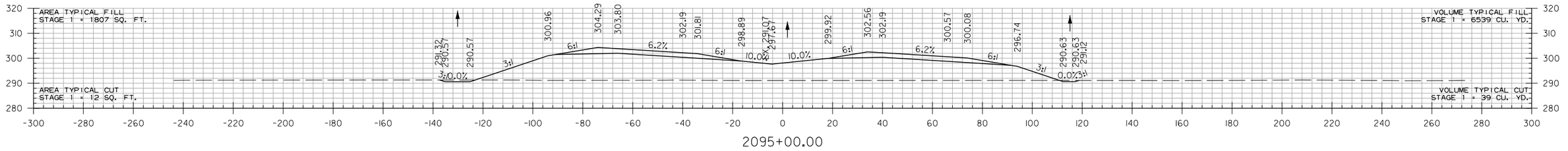
STA. 2089+00.00
END SP. DT. RT. 0.10%
BEGIN SP. DT. RT. -0.11%
ELEV. 291.29

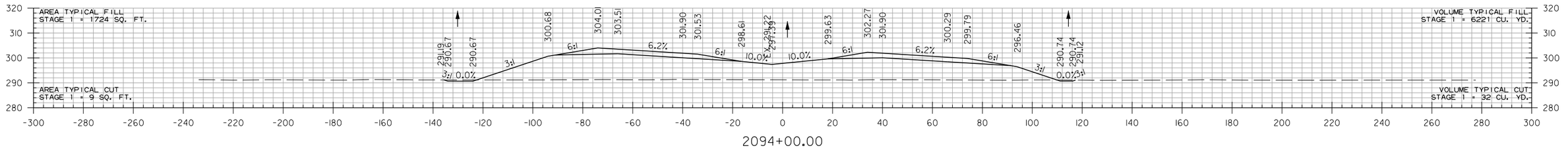
I-57
STA. 2089+00 TO STA. 2092+00

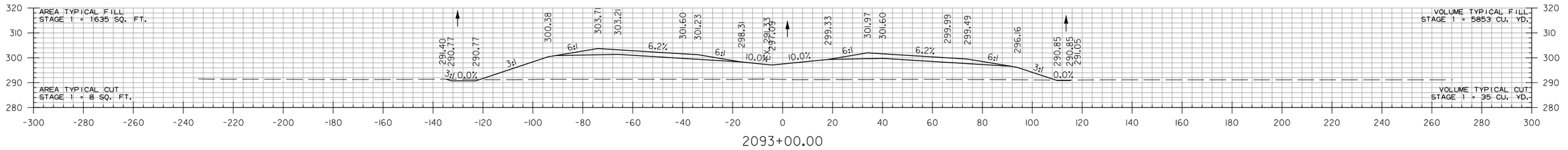
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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	223	325
		CROSS SECTIONS				





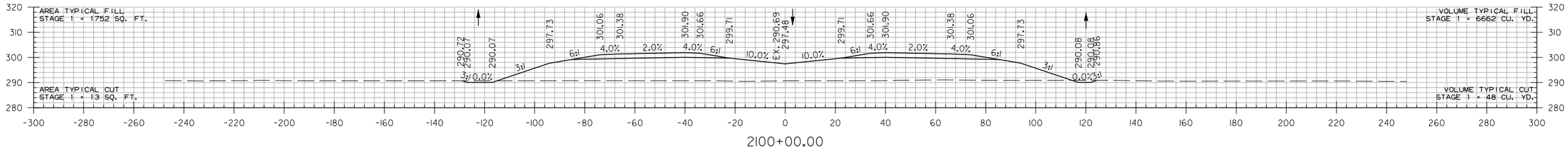




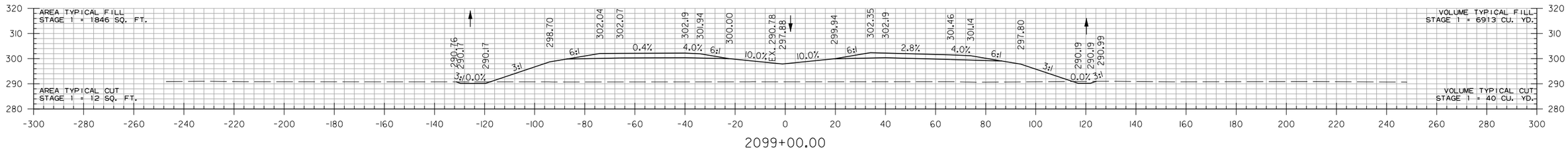
I-57
STA. 2093+00 TO STA. 2096+00

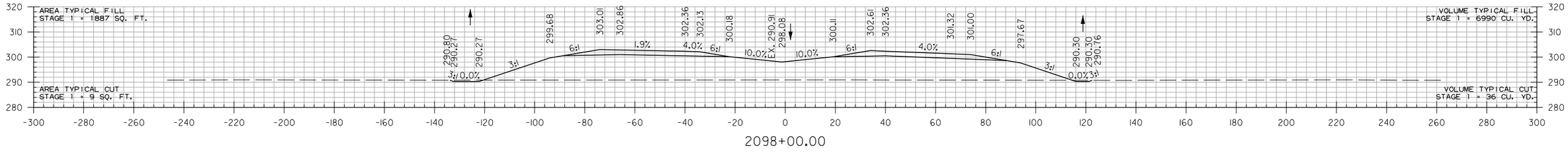
CGervasini 6/28/2024 1:34:15 PM
WORKSPACE: AHTD
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REVISED DATE:

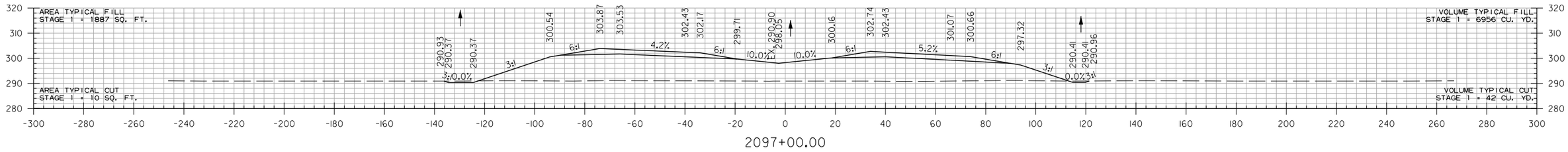
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	224	325
		CROSS SECTIONS				



STA. 2099+66.85 END SUPERELEVATION



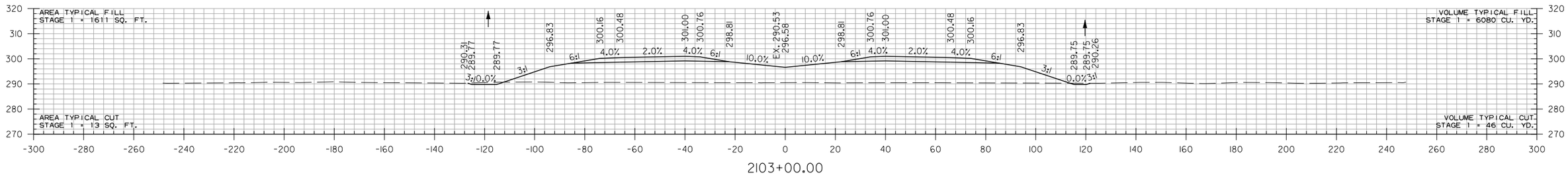


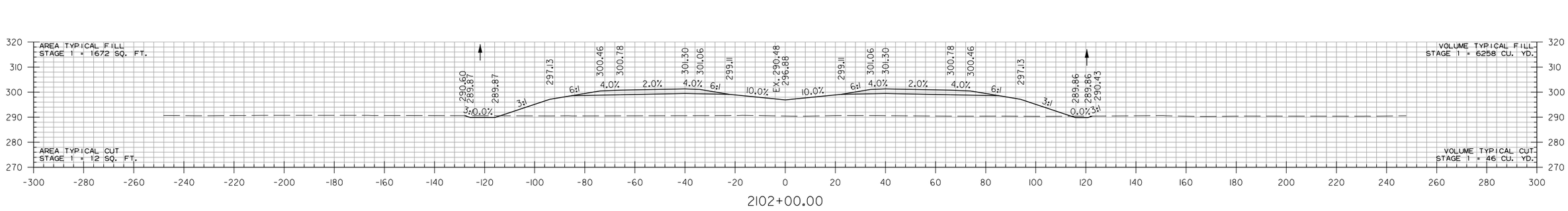


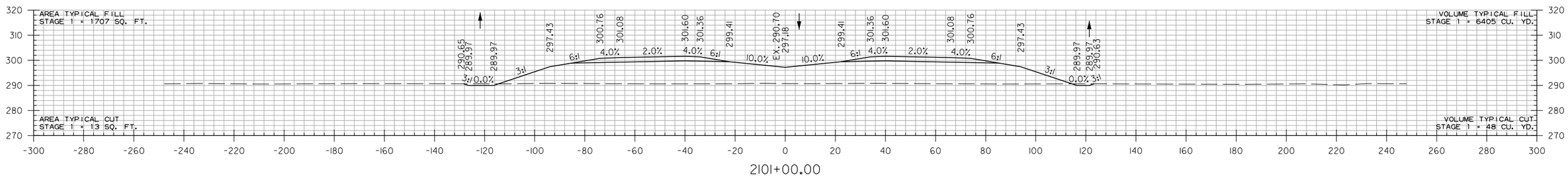
STA. 2096+16.85 MAX. SUPERELEVATION (0.062'/')

CGGervasini 6/28/2024 1:34:15 PM
WORKSPACE: AHTD
L:\2021\21101046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	225	325
		CROSS SECTIONS				



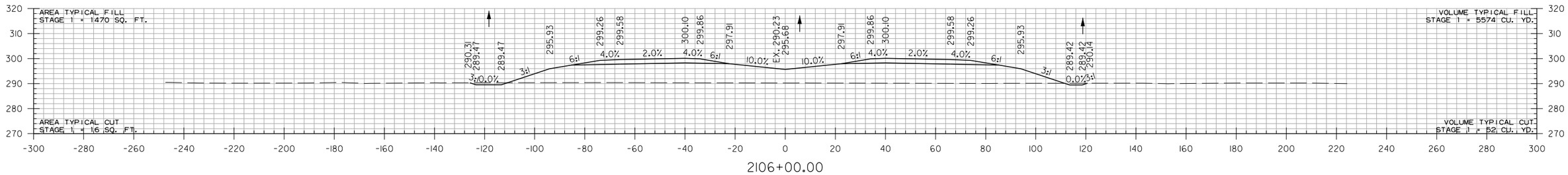




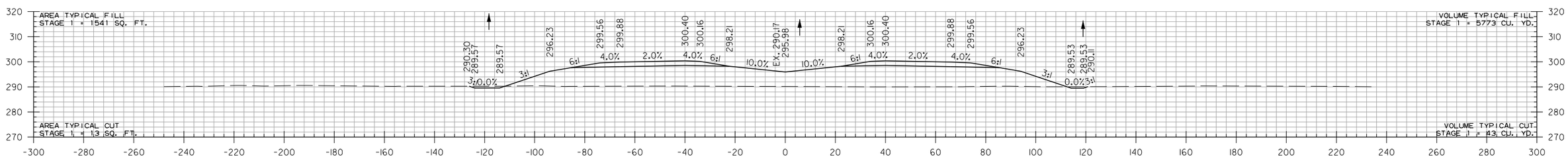
I-57
STA. 2101+00 TO STA. 2103+00

CGGervasini 6/28/2024 1:34:16 PM
WORKSPACE: AHTD
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REVISED DATE:

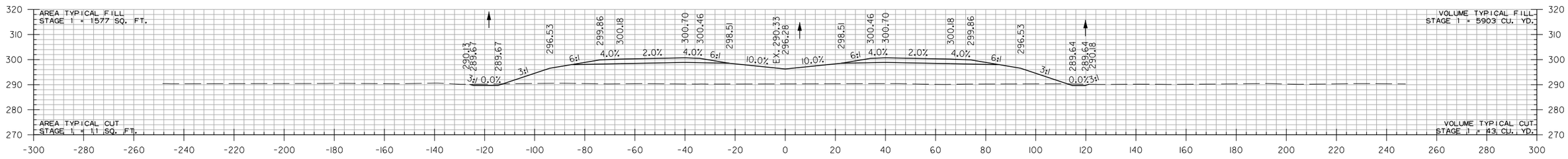
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	226	325
		CROSS SECTIONS				



2106+00.00



2105+00.00

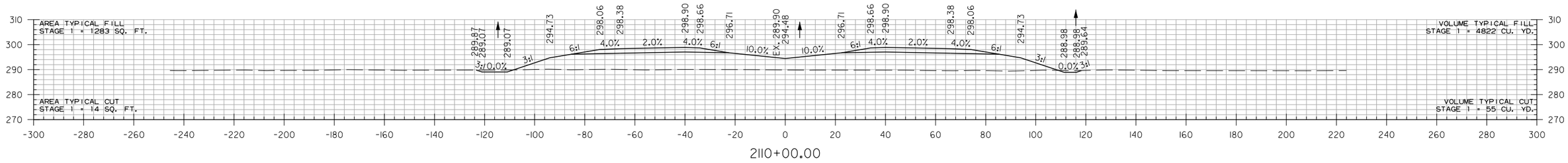


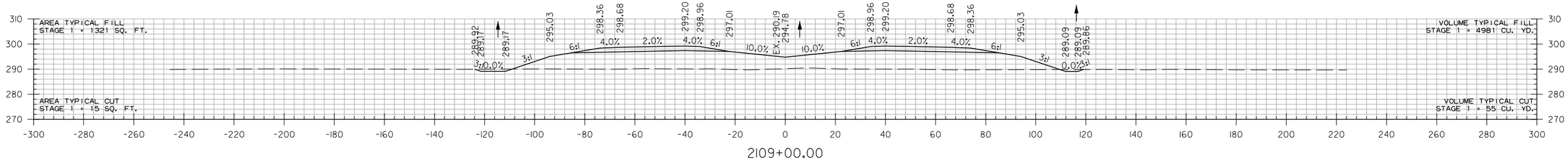
2104+00.00

I-57
STA. 2104+00 TO STA. 2106+00

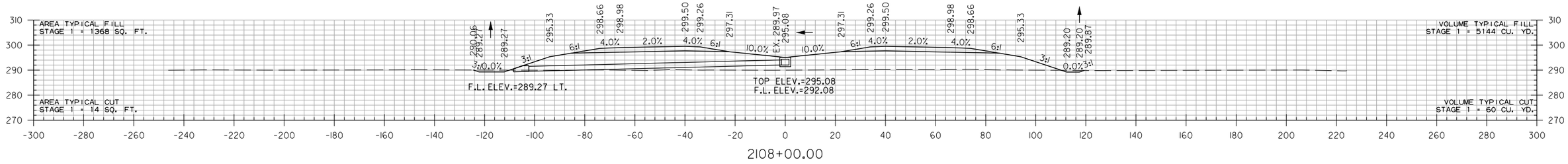
CGGervasini 6/28/2024 1:34:16 PM
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REVISED DATE:

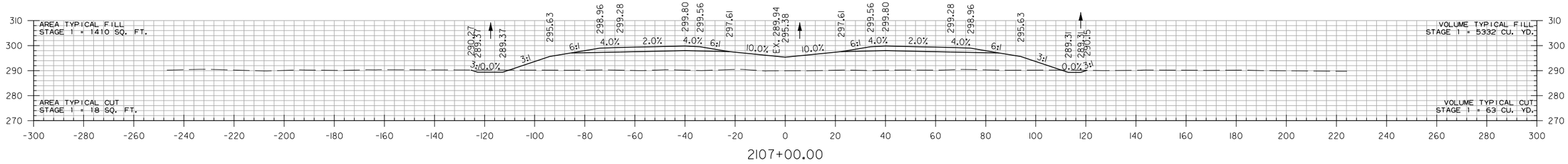
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	227	325
		CROSS SECTIONS				





STA. 2108+00 CONSTRUCT
MEDIAN DROP INLET H=3'-0"
WITH 24" x 101' PIPE OUTLET
TO FES LT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 101 LIN. FT.
24" FES = 1 EACH

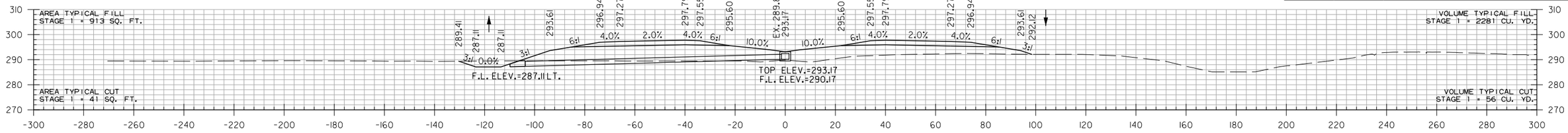




I-57
STA. 2107+00 TO STA. 2110+00

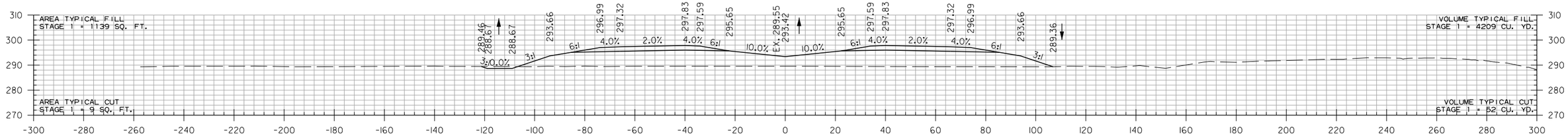
CGGervasini 6/28/2024 1:34:16 PM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	228	325
		CROSS SECTIONS				



2114+60.00

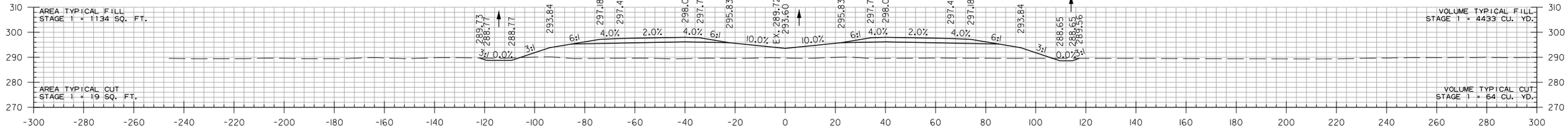
STA. 2114+60 CONSTRUCT
MEDIAN DROP INLET H=3'-0"
WITH 24" x 102' PIPE OUTLET
TO FES LT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 102 LIN. FT.
24" FES = 1 EACH



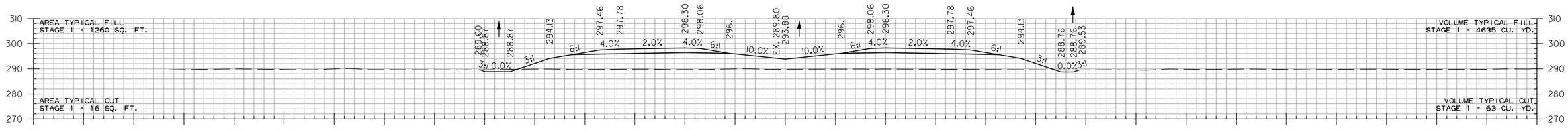
2114+00.00

STA. 2114+00.00
END SP. DT. LT. -0.10%
BEGIN SP. DT. LT. -2.60%
ELEV. 288.67

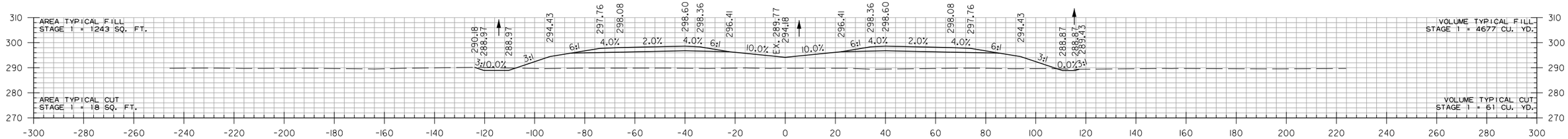
STA. 2113+36.00
END SP. DT. RT. -0.11%
ELEV. 288.61



2113+00.00



2112+00.00

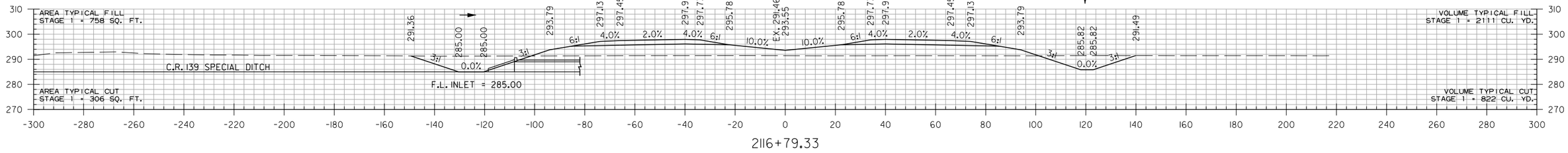


2111+00.00

I-57
STA. 2111+00 TO STA. 2114+60

CGGervasini 6/28/2024 1:34:16 PM
WORKSPACE: AHTD
L:\2021\2170046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	229	325
		CROSS SECTIONS				

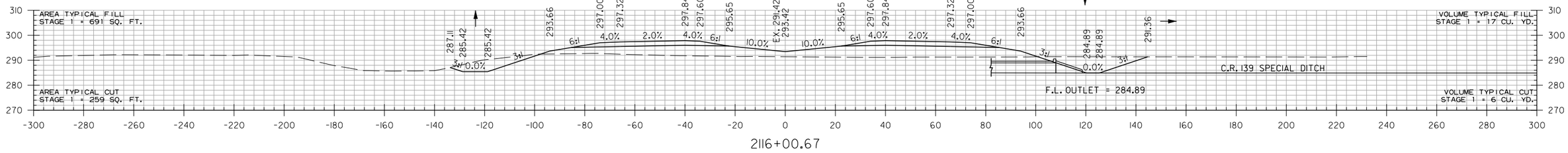


2116+79.33

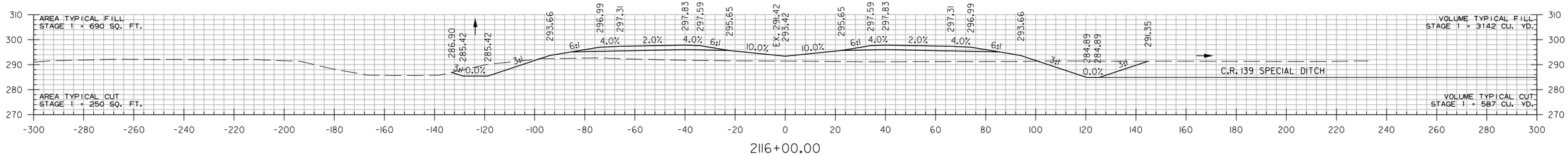
STA. 2116+65.00
END SP. DT. LT. -0.65%
BEGIN SP. DT. LT. 0.00
ELEV. 285.00

STA. 2116+40 CONSTRUCT
QUINT. 5' x 4' x 230' R.C. BOX CULVERT
20° LT. FWD. SKEW
WITH 3:1 WINGS LT. AND RT.
Q50 = 653 CFS DA = 1007.9 ACRES
SPAN = 28.67'

STA. 2116+20.00
END SP. DT. RT. 0.00%
BEGIN SP. DT. RT. 1.56%
ELEV. 284.89

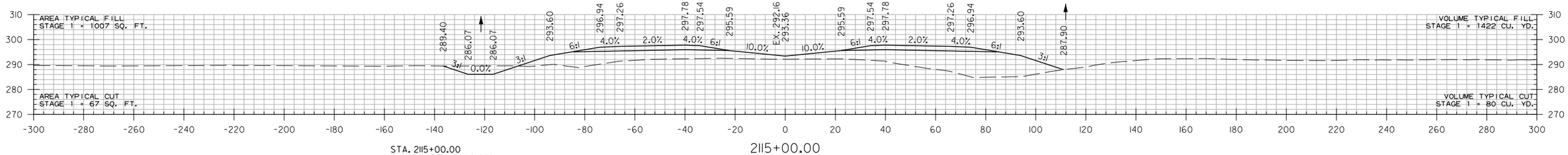


2116+00.67



2116+00.00

STA. 2115+80.00
BEGIN SP. DT. RT. 0.00%
ELEV. 284.89



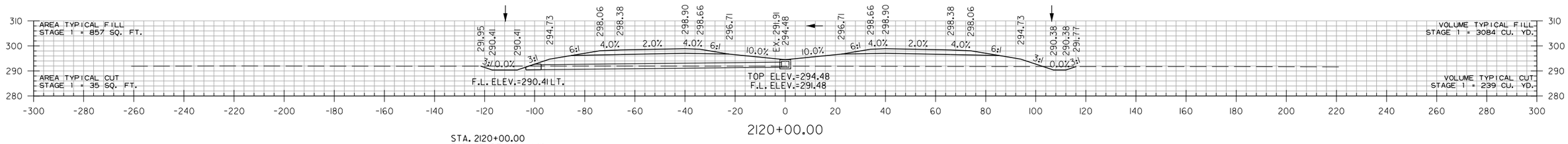
2115+00.00

STA. 2115+00.00
END SP. DT. LT. -2.60%
BEGIN SP. DT. LT. -0.65%
ELEV. 286.07

CGGervasini 6/28/2024 1:34:17 PM
WORKSPACE: AHTD
L:\2021\211046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	230	325
		CROSS SECTIONS				

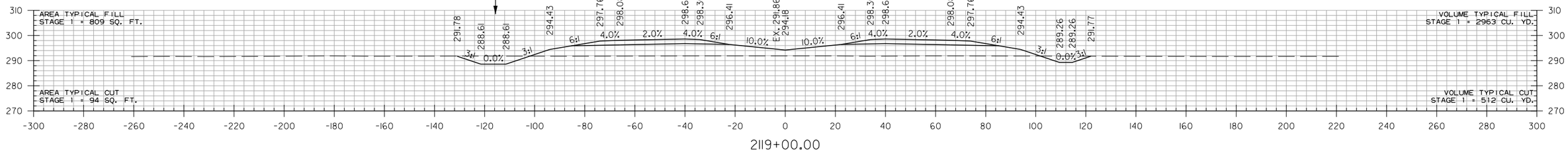
STA. 2120+00 CONSTRUCT
MEDIAN DROP INLET H=3'-0"
WITH 24" x 96' PIPE OUTLET
TO FES LT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 96 LIN. FT.
24" FES = 1 EACH



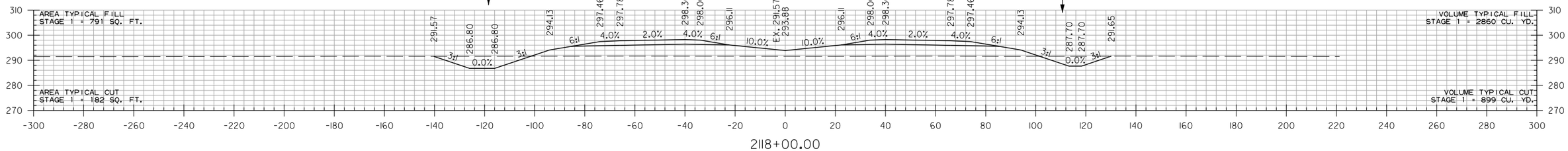
2120+00.00

STA. 2120+00.00
END SP. DT. LT. 1.80%
BEGIN SP. DT. LT. 0.10%
ELEV. 290.41

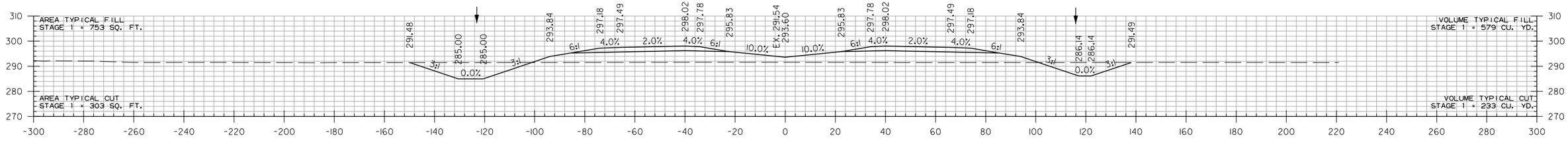
STA. 2119+70.00
END SP. DT. RT. 1.56%
BEGIN SP. DT. RT. 0.10%
ELEV. 290.35



2119+00.00



2118+00.00

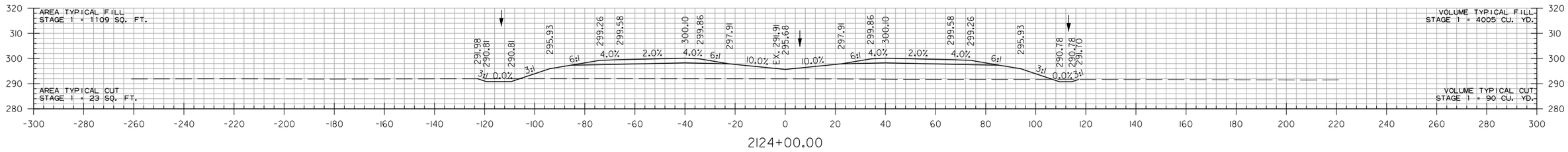


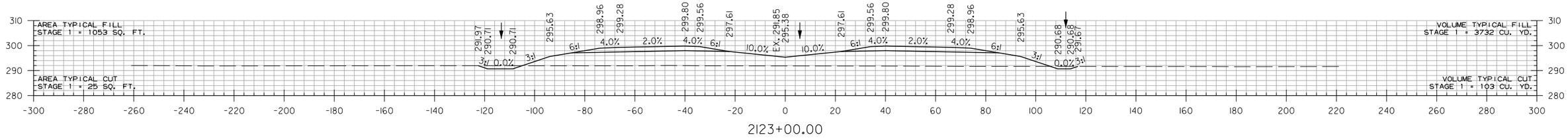
2117+00.00

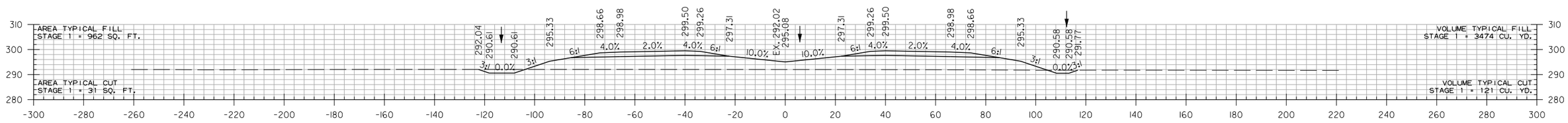
STA. 2117+00.00
END SP. DT. LT. 0.00%
BEGIN SP. DT. LT. 1.80%
ELEV. 285.00

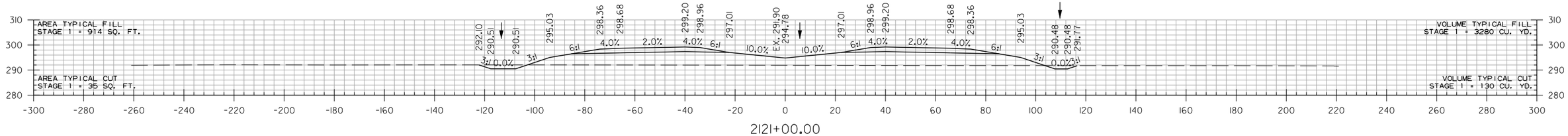
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	231	325
		CROSS SECTIONS				







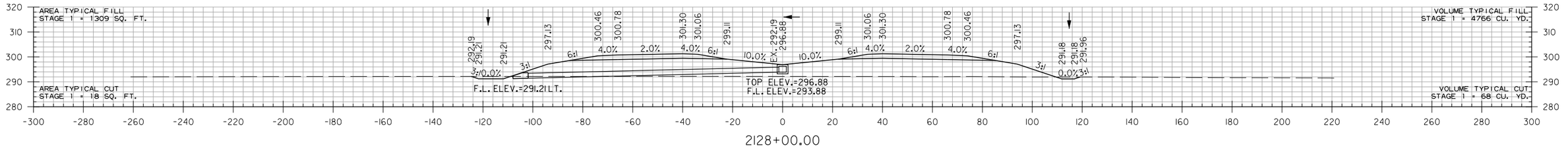


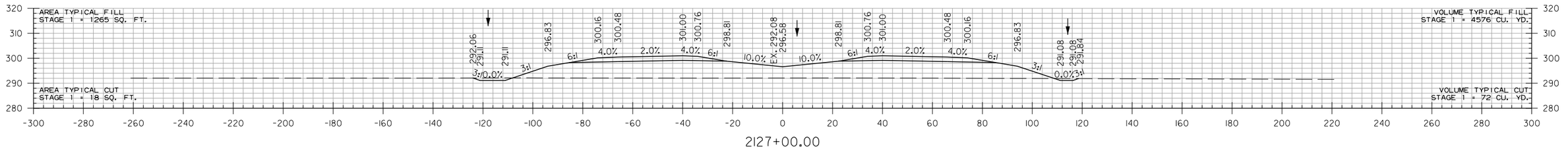
I-57
STA. 2121+00 TO STA. 2124+00

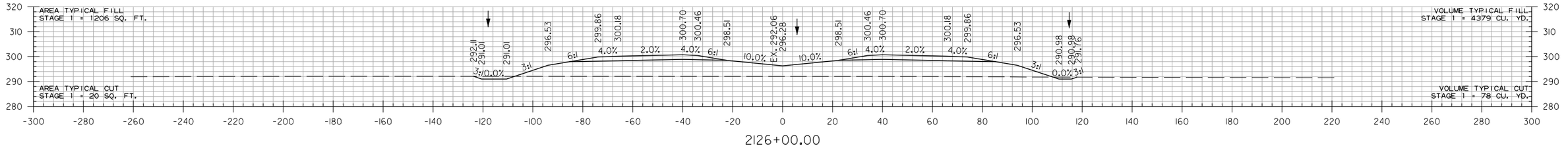
CGGervasini 6/28/2024 1:34:17 PM
WORKSPACE: AHTD
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REVISED DATE:

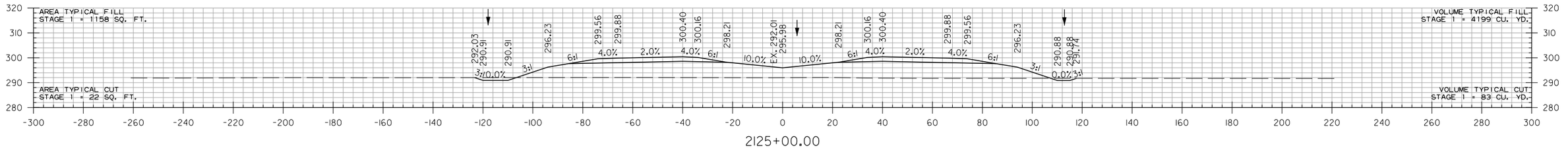
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	232	325
		CROSS SECTIONS				

STA. 2128+00 CONSTRUCT
MEDIAN DROP INLET H=3'-0"
WITH 24" x 101' PIPE OUTLET
TO FES LT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 101 LIN. FT.
24" FES = 1 EACH





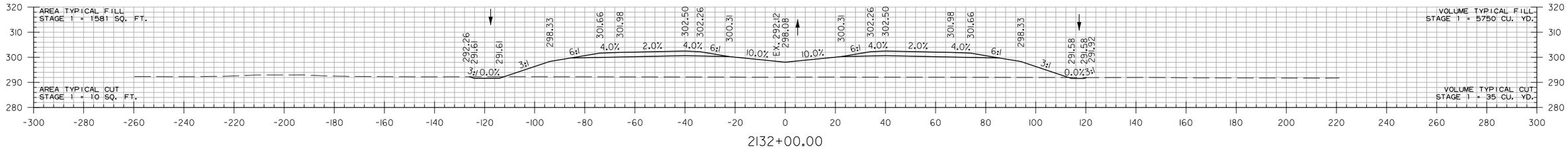




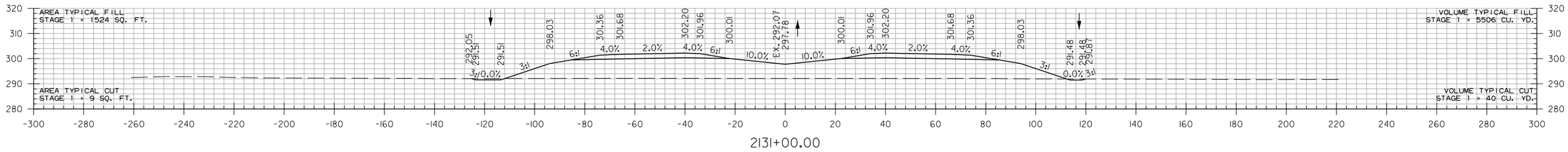
I-57
STA. 2125+00 TO STA. 2128+00

CGGervasini 6/28/2024 1:34:18 PM
WORKSPACE: AHTD
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REVISED DATE:

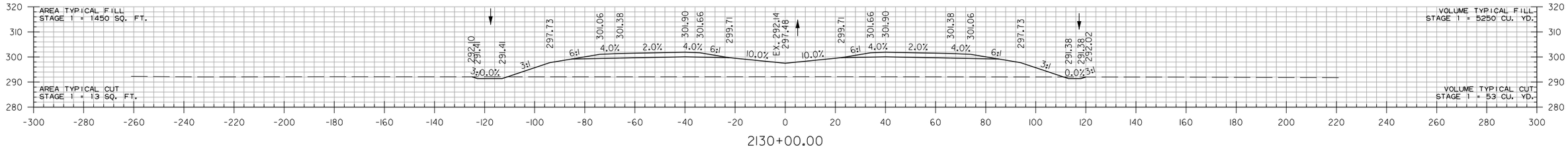
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	233	325
		CROSS SECTIONS				



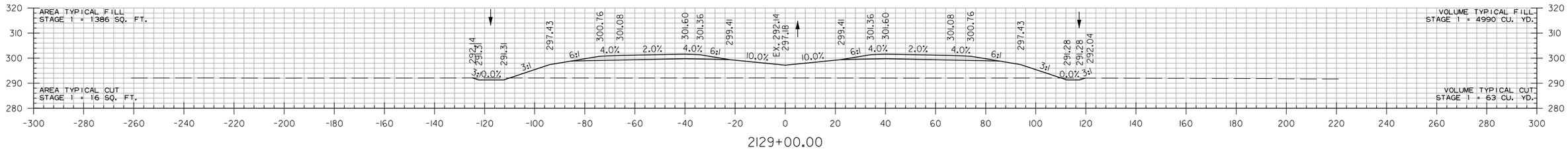
2132+00.00



2131+00.00



2130+00.00

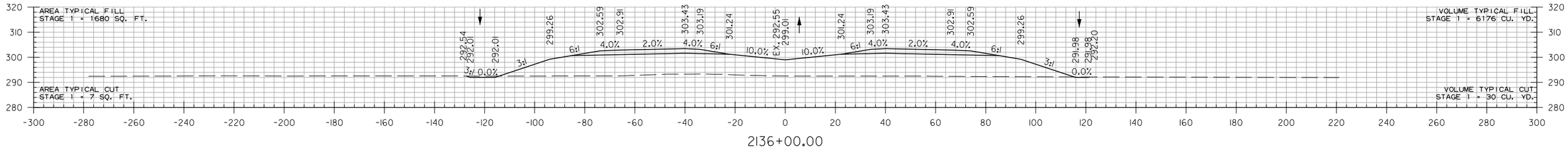


2129+00.00

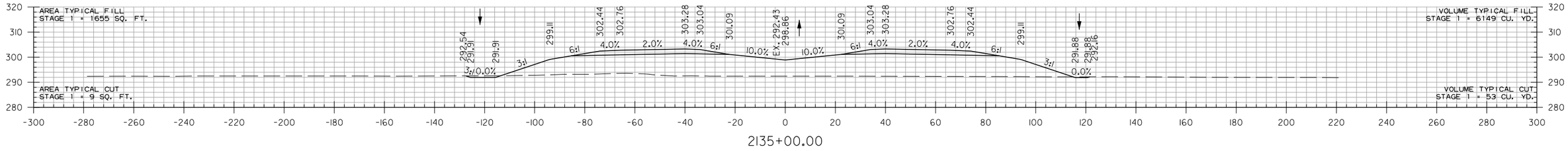
I-57
STA. 2129+00 TO STA. 2132+00

CGGervasini 6/28/2024 1:34:18 PM
WORKSPACE: AHTD
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REVISED DATE:

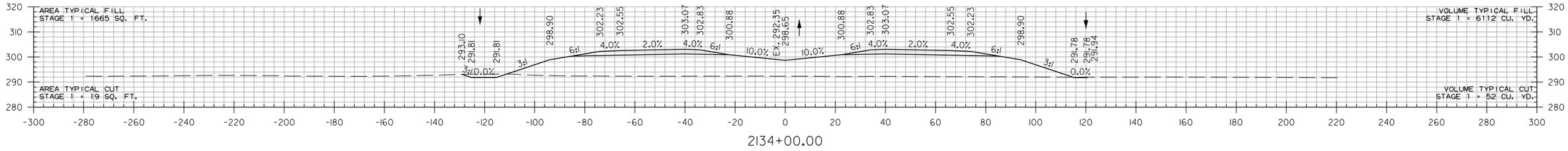
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	234	325
		CROSS SECTIONS				



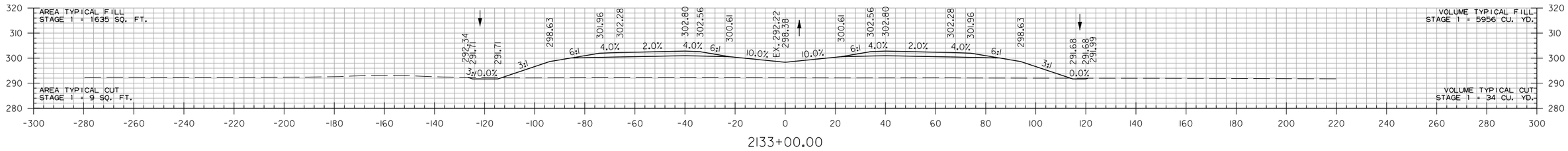
2136+00.00



2135+00.00



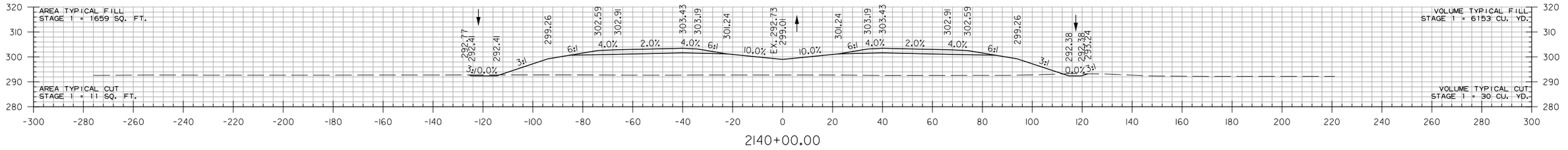
2134+00.00



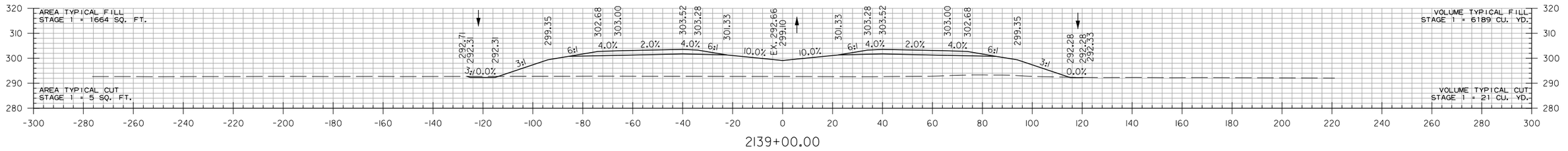
2133+00.00

CGervasini 6/28/2024 1:34:18 PM
WORKSPACE: AHTD
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REVISED DATE:

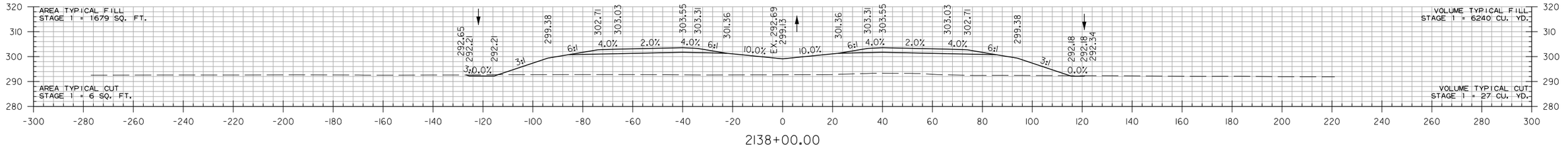
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	235	325
		CROSS SECTIONS				



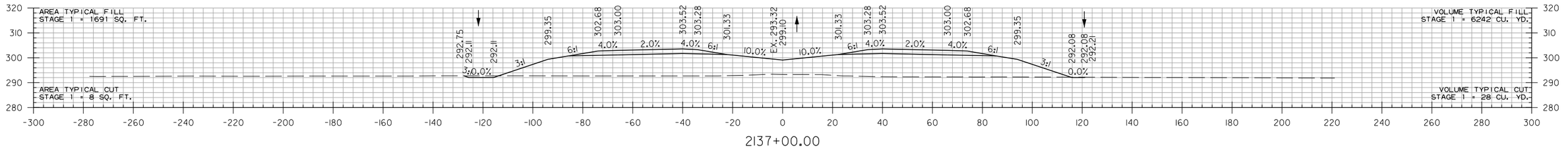
2140+00.00



2139+00.00



2138+00.00

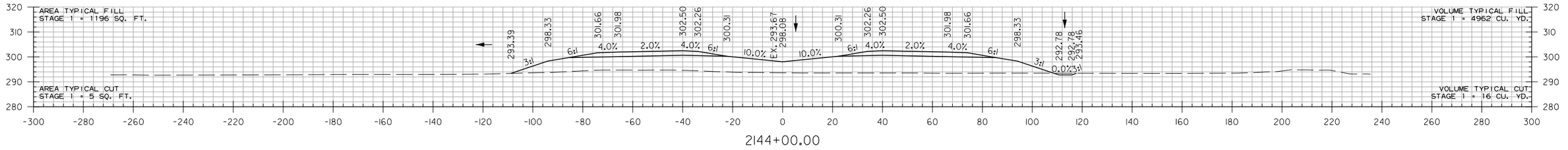


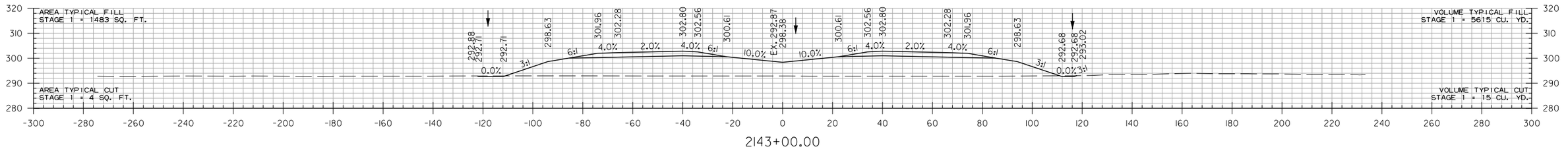
2137+00.00

I-57
STA. 2137+00 TO STA. 2140+00

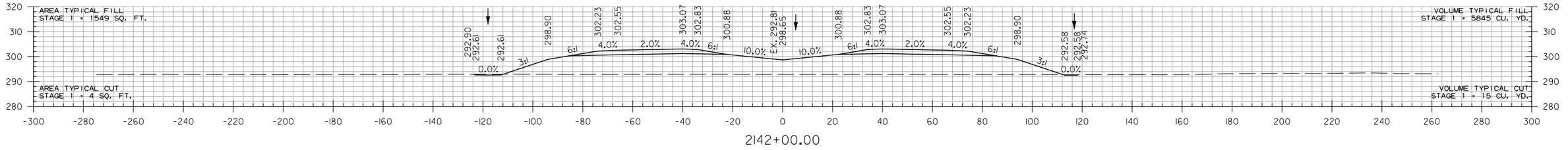
CGervasini 6/28/2024 1:34:18 PM
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REVISED DATE:

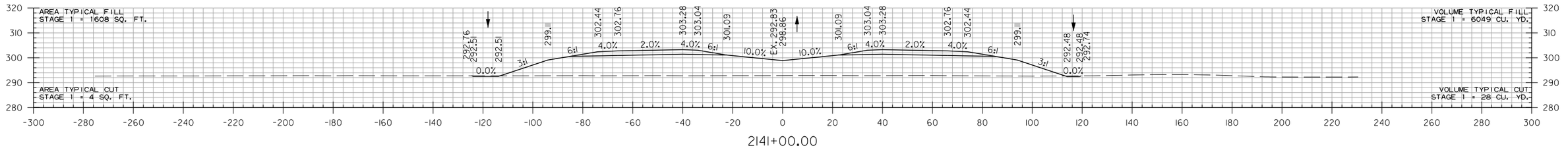
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	236	325
		CROSS SECTIONS				





STA. 2143+00.00
END SP. DT. LT. 0.10%
ELEV. 292.71

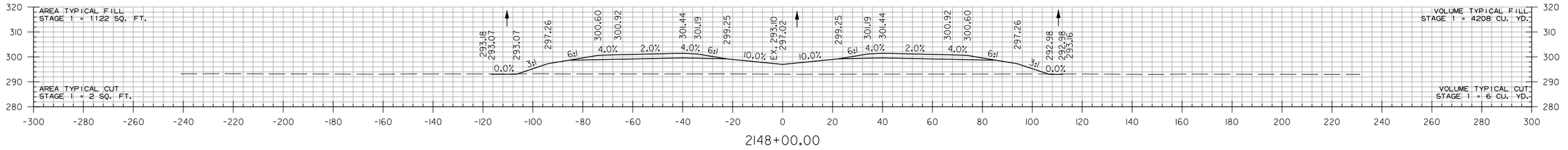




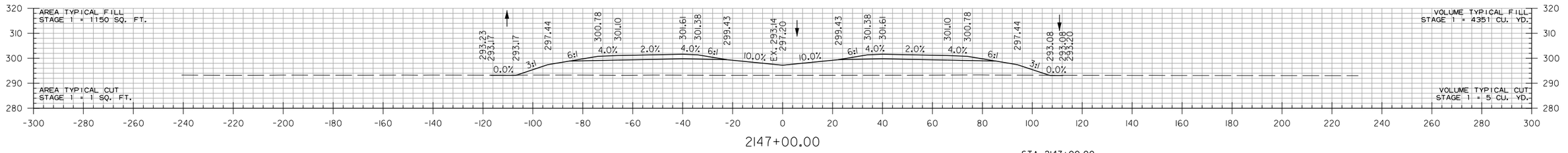
I-57
STA. 2141+00 TO STA. 2144+00

CGervasini 6/28/2024 1:34:19 PM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	237	325
		CROSS SECTIONS				



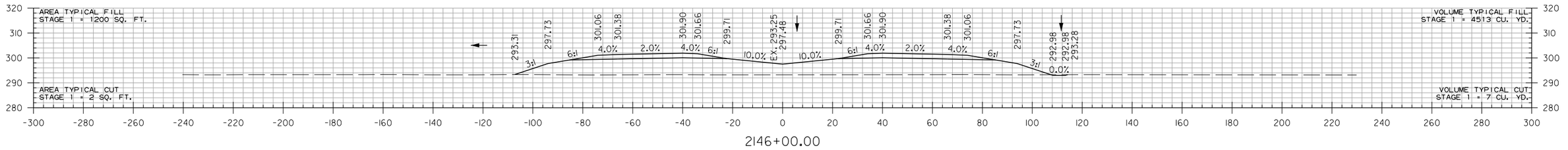
2148+00.00



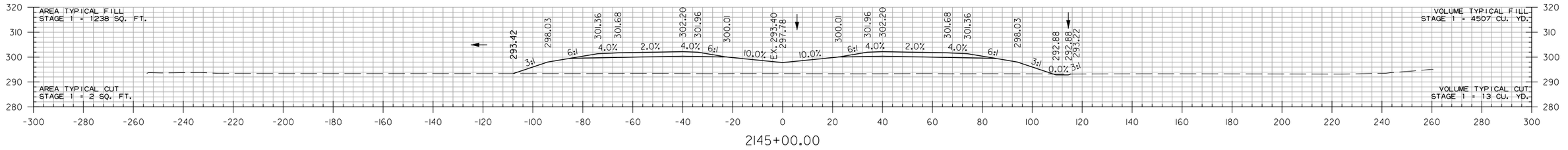
2147+00.00

STA. 2147+00.00
BEGIN SP. DT. LT. -0.10%
ELEV. 293.17

STA. 2147+00.00
END SP. DT. RT. 0.10%
BEGIN SP. DT. RT. -0.10%
ELEV. 293.08



2146+00.00

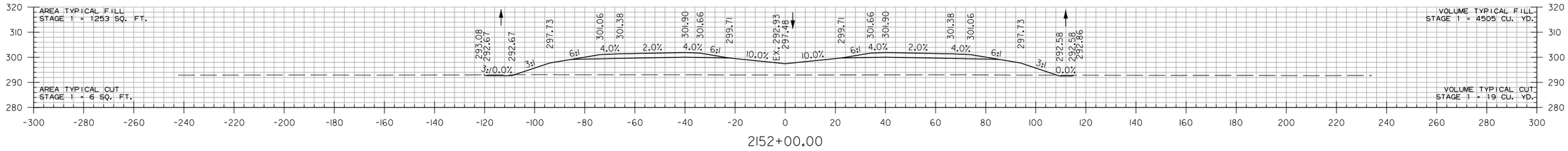


2145+00.00

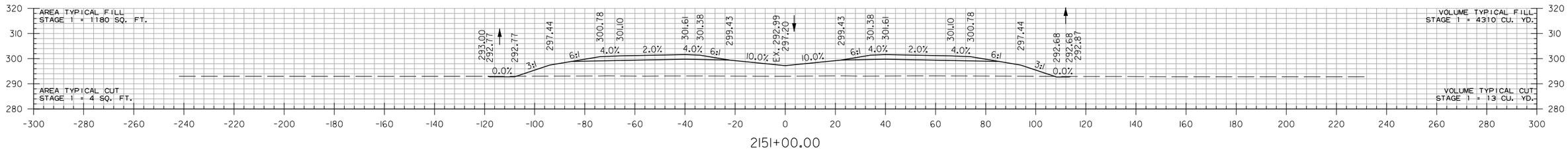
I-57
STA. 2145+00 TO STA. 2148+00

CGGervasini 6/28/2024 1:34:19 PM
WORKSPACE: AHTD
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REVISED DATE:

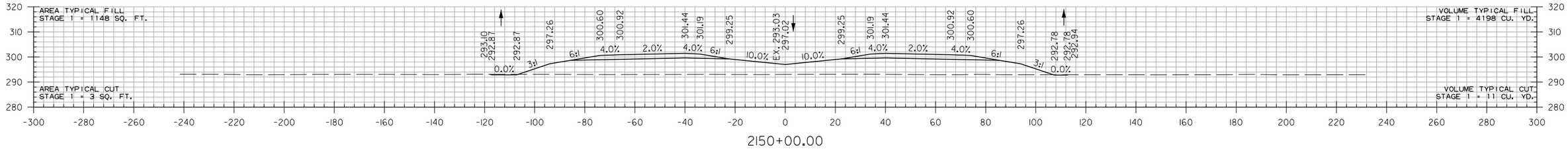
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	238	325
		CROSS SECTIONS				



2152+00.00

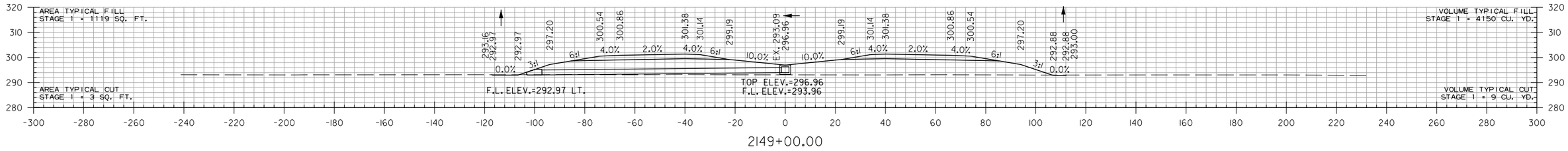


2151+00.00



2150+00.00

STA. 2149+00 CONSTRUCT
MEDIAN DROP INLET H=3'-0"
WITH 24" x 96' PIPE OUTLET
TO FES LT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 96 LIN. FT.
24" FES = 1 EACH

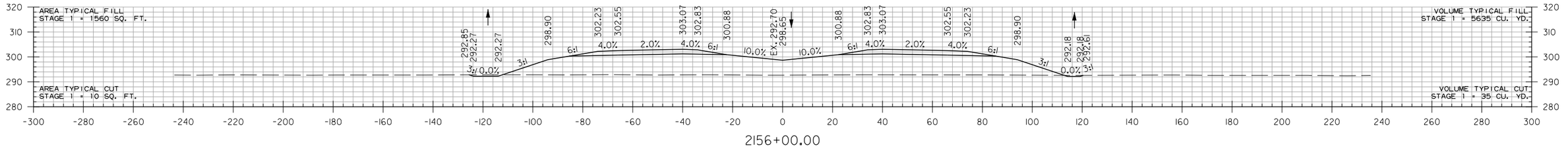


2149+00.00

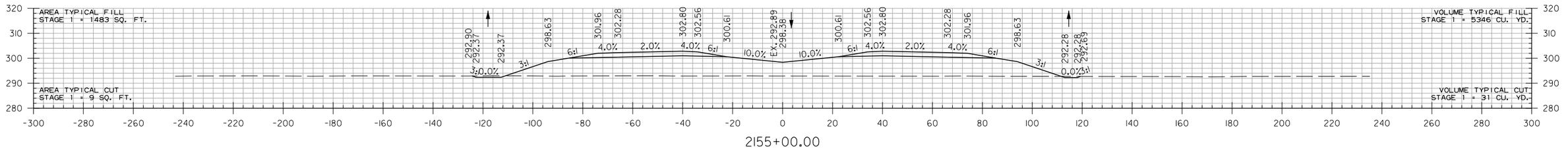
I-57
STA. 2149+00 TO STA. 2152+00

CGGervasini 6/28/2024 1:34:19 PM
WORKSPACE: AHTD
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REVISED DATE:

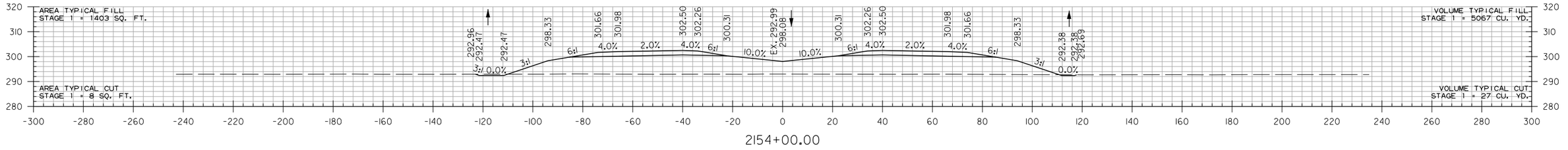
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	239	325
		CROSS SECTIONS				



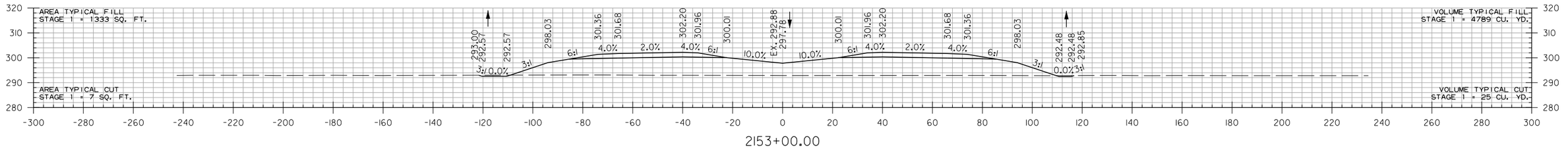
2156+00.00



2155+00.00



2154+00.00

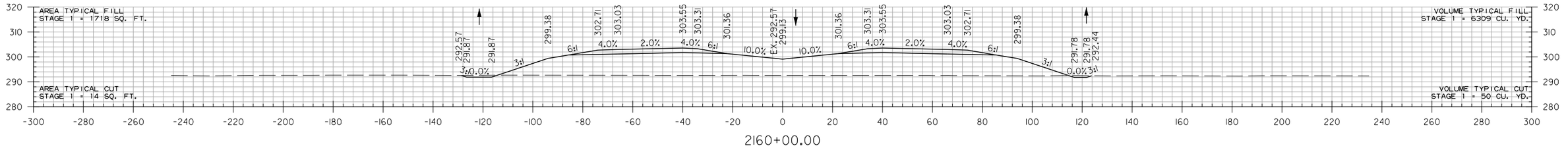


2153+00.00

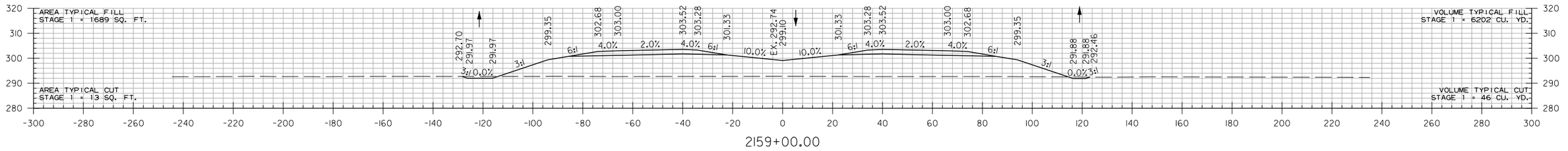
I-57
STA. 2153+00 TO STA. 2156+00

CGGervasini 6/28/2024 1:34:19 PM
WORKSPACE: AHTD
L:\2021\210046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

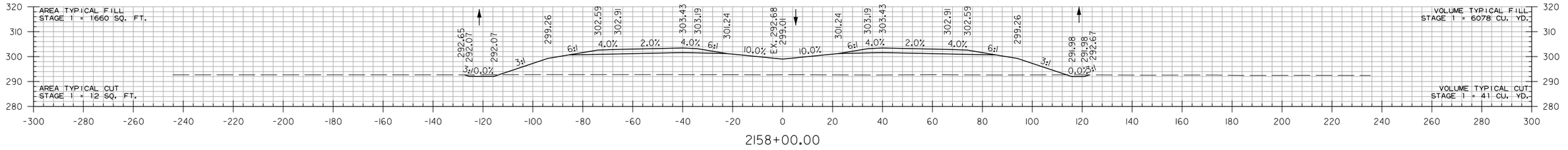
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	240	325
		CROSS SECTIONS				



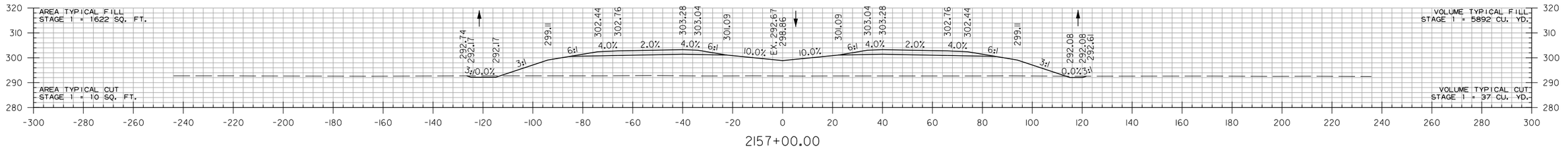
2160+00.00



2159+00.00



2158+00.00

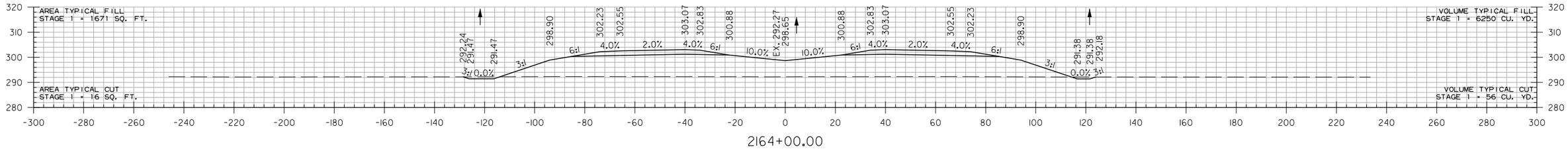


2157+00.00

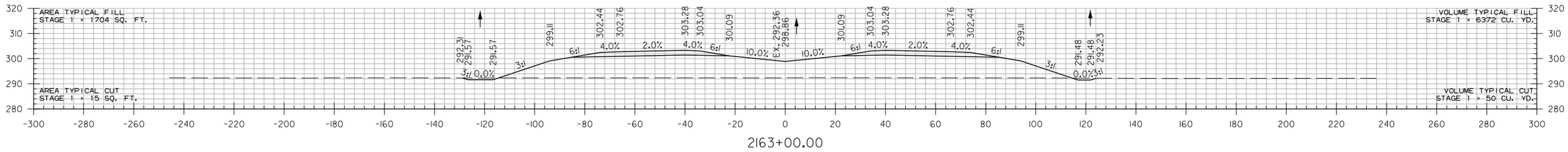
I-57
STA. 2157+00 TO STA. 2160+00

CGervasini 6/28/2024 1:34:20 PM
WORKSPACE: AHTD
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REVISED DATE:

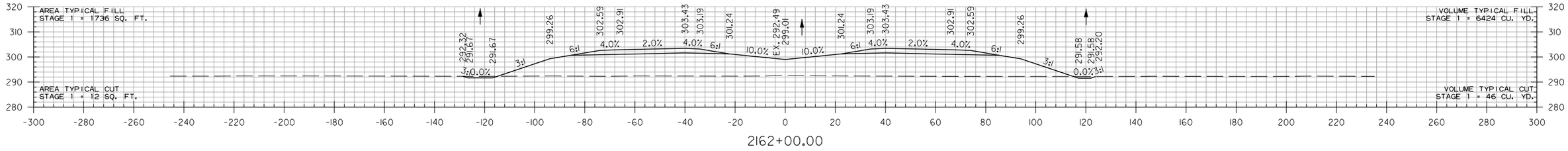
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	241	325
		CROSS SECTIONS				



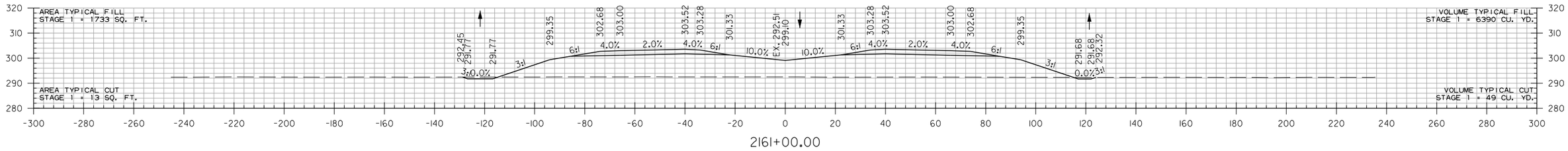
2164+00.00



2163+00.00



2162+00.00

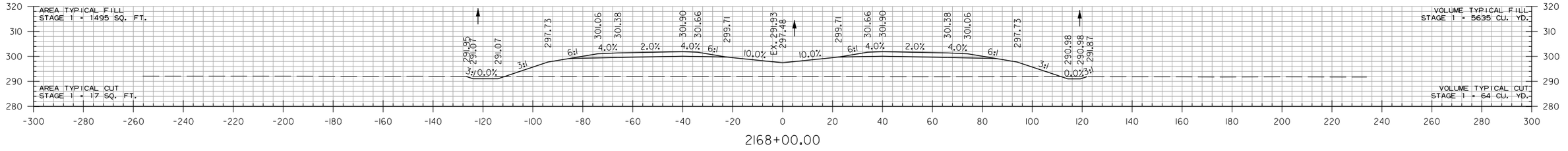


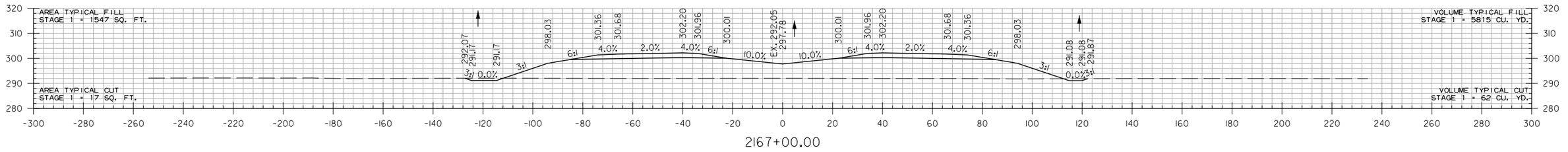
2161+00.00

I-57
STA. 2161+00 TO STA. 2164+00

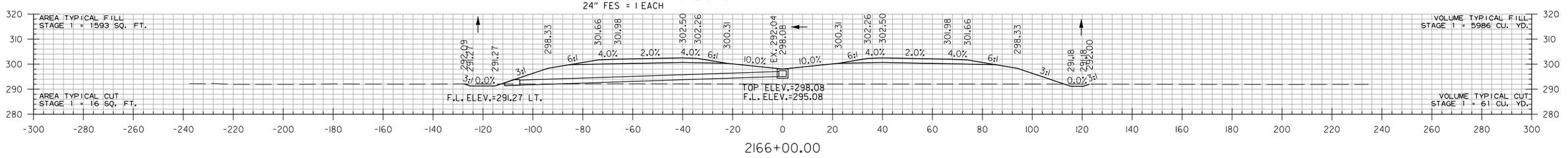
CGervasini 6/28/2024 1:34:20 PM
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L:\2021\210046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

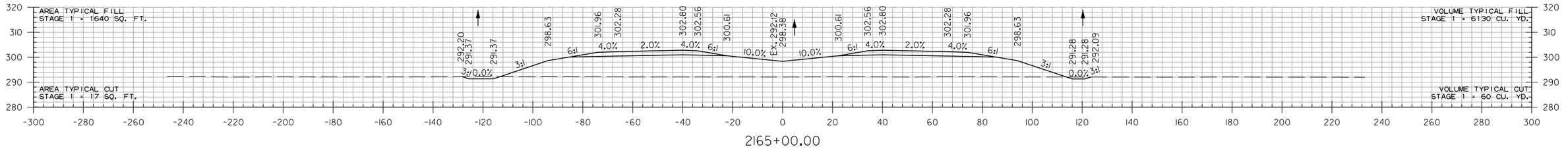
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	242	325
		CROSS SECTIONS				





STA. 2166+00 CONSTRUCT
MEDIAN DROP INLET H=3'-0"
WITH 24" x 104' PIPE OUTLET
TO FES LT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 104 LIN. FT.
24" FES = 1 EACH



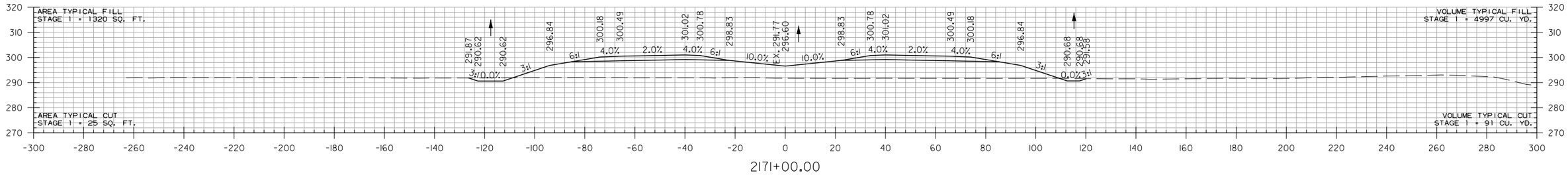


I-57
STA. 2165+00 TO STA. 2168+00

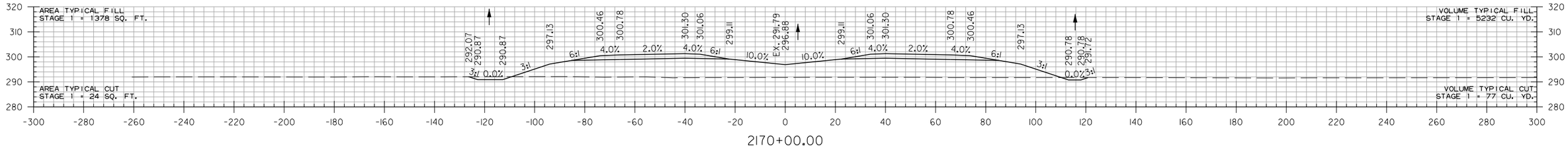
CGervasini 6/28/2024 1:34:20 PM
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	243	325
		CROSS SECTIONS				

STA. 2171+70.00
END SP. DT. RT. -0.10%
ELEV. 290.61

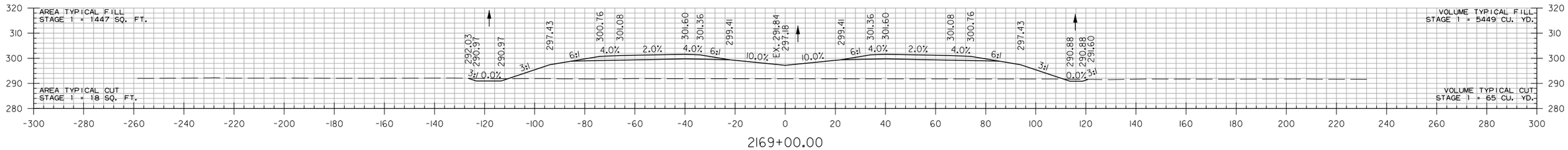


2171+00.00



2170+00.00

STA. 2170+00.00
END SP. DT. LT. -0.10%
BEGIN SP. DT. LT. -0.25%
ELEV. 290.87



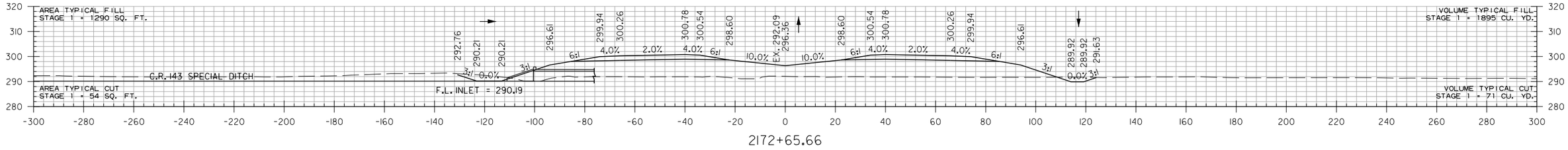
2169+00.00

STA. 2169+00 TO STA. 2170+75

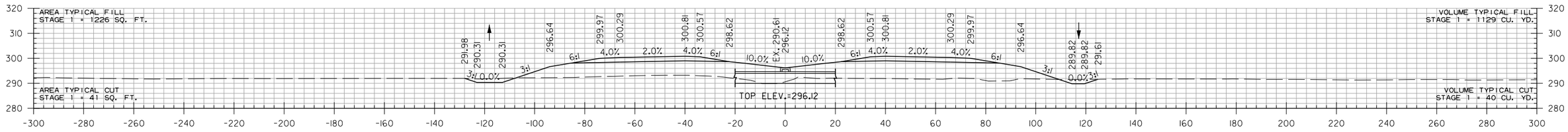
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	244	325
		CROSS SECTIONS				

STA. 2172+73.00
END SP. DT. LT. -0.25%
BEGIN SP. DT. LT. 0.07%
ELEV. 290.19



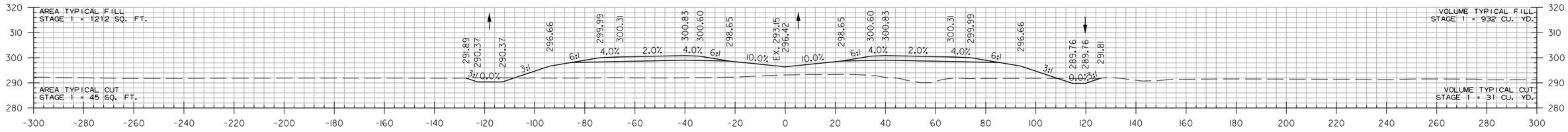
2172+65.66



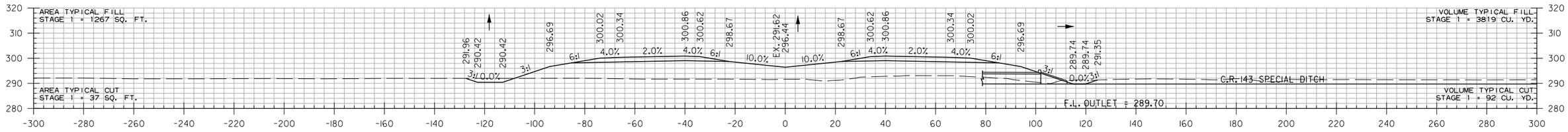
2172+25.00

STA. 2172+25 CONSTRUCT
MEDIAN DROP INLET H=1'-6"
ABOVE R.C. BOX CULVERT
TYPE TM DROP INLET = 3'X2'

STA. 2172+23 CONSTRUCT
DBL. 5' x 4' x 220' R.C. BOX CULVERT
23° LT. FWD. SKEW
WITH 3:1 WINGS LT. AND RT.
Q50 = 303 CFS DA = 285.3 ACRES



2172+00.00



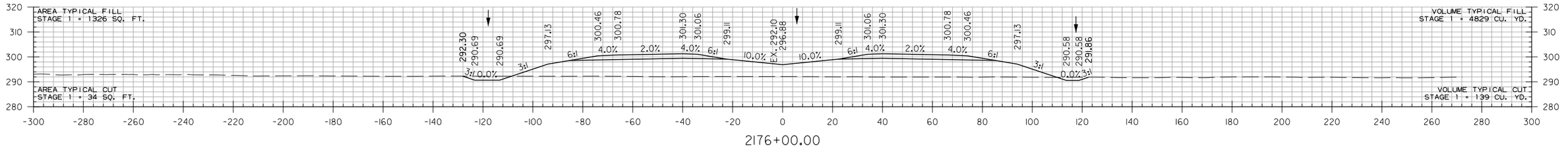
2171+79.70

STA. 2171+75.00
BEGIN SP. DT. RT. 0.24%
ELEV. 289.70

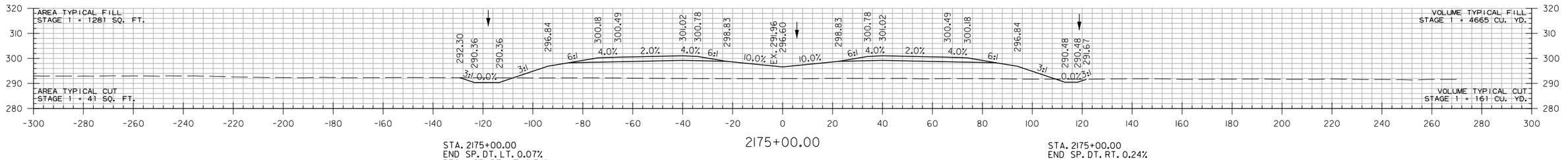
I-57
STA. 2171+00 TO STA. 2172+00

CGervasini 6/28/2024 1:34:21 PM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	245	325
		CROSS SECTIONS				



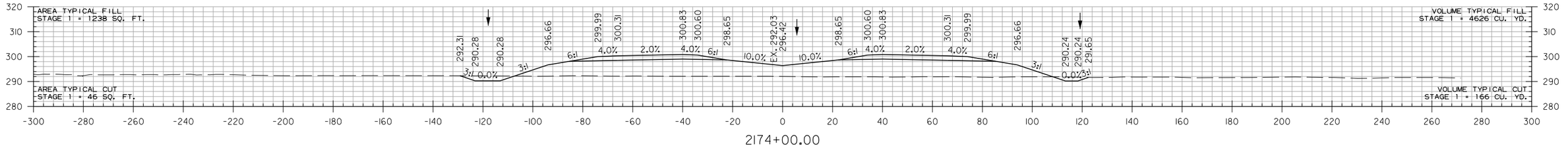
2176+00.00



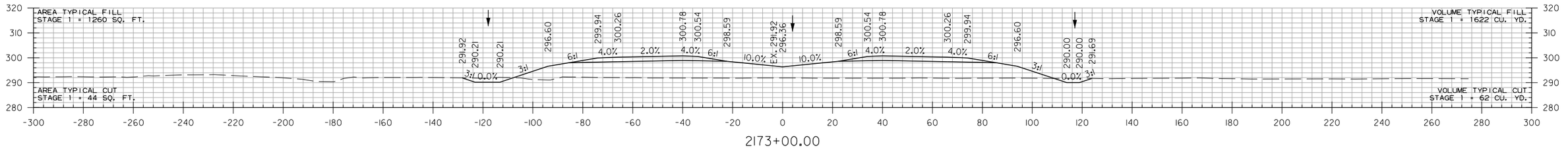
2175+00.00

STA. 2175+00.00
END SP. DT. LT. 0.07%
BEGIN SP. DT. LT. 0.34%
ELEV. 290.36

STA. 2175+00.00
END SP. DT. RT. 0.24%
BEGIN SP. DT. RT. 0.10%
ELEV. 290.48



2174+00.00



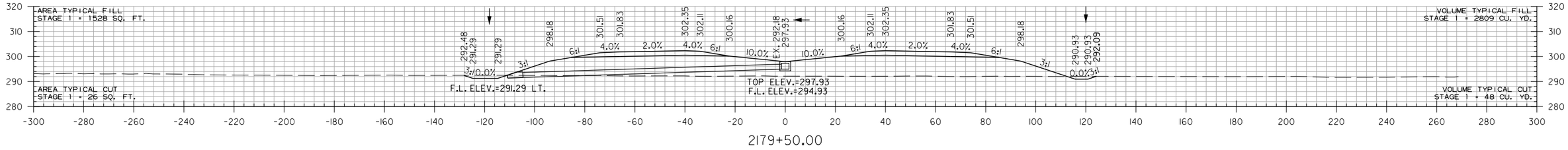
2173+00.00

I-57
STA. 2173+00 TO STA. 2176+00

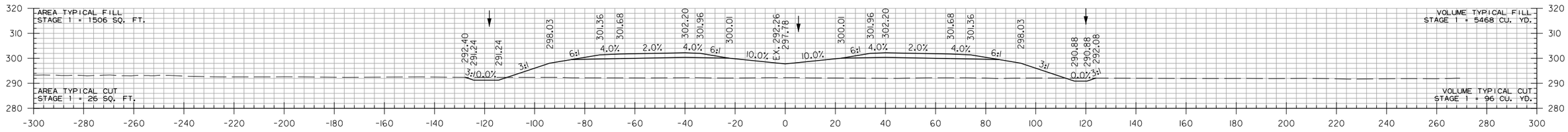
CGGervasini 6/28/2024 1:34:21PM
WORKSPACE: AHTD
L:\2021\210046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	246	325
		CROSS SECTIONS				

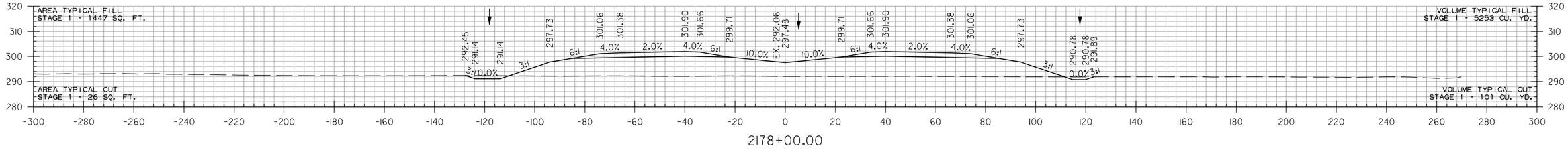
STA. 2179+50 CONSTRUCT
MEDIAN DROP INLET H=3'-0"
WITH 24" x 104' PIPE OUTLET
TO FES LT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 104 LIN. FT.
24" FES = 1 EACH



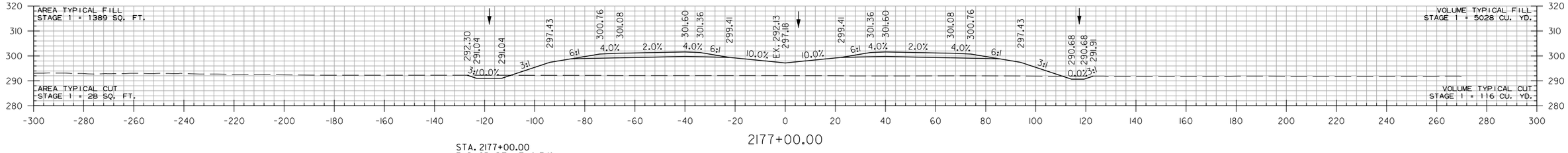
2179+50.00



2179+00.00



2178+00.00



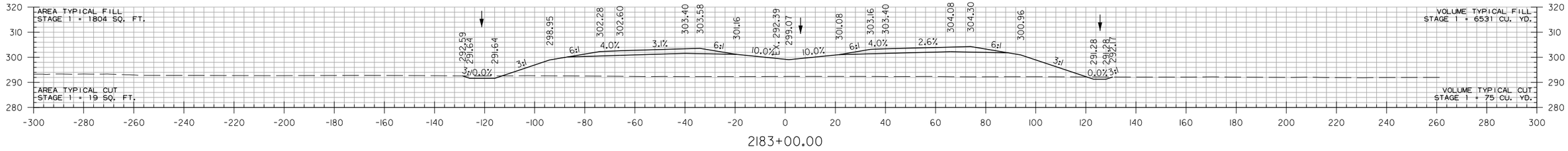
2177+00.00

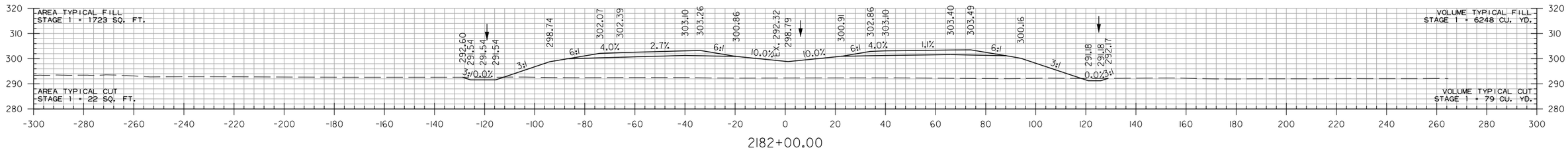
STA. 2177+00.00
END SP. DT. LT. 0.34%
BEGIN SP. DT. LT. 0.10%
ELEV. 291.04

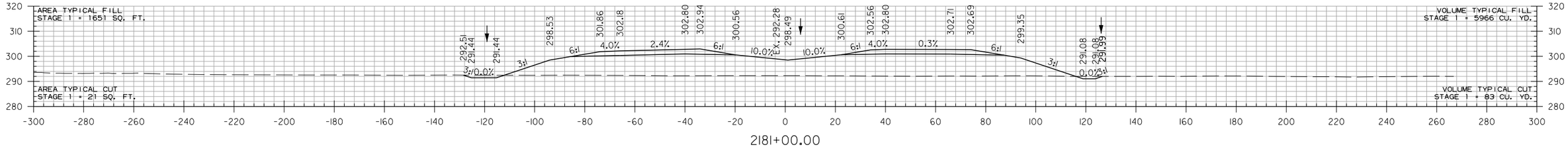
I-57
STA. 2177+00 TO STA. 2179+50

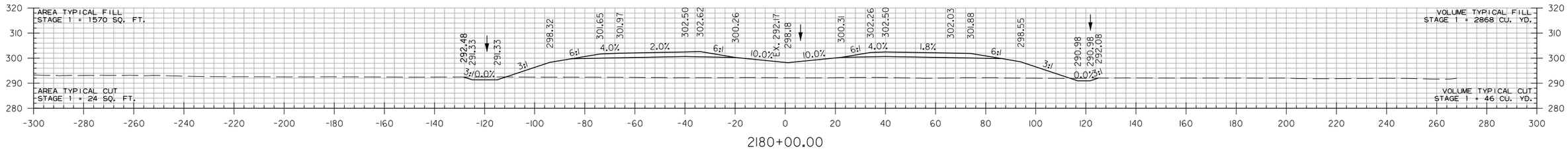
CGGervasini 6/28/2024 1:34:21 PM
WORKSPACE: AHTD
L:\2021\2110046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	247	325
		CROSS SECTIONS				





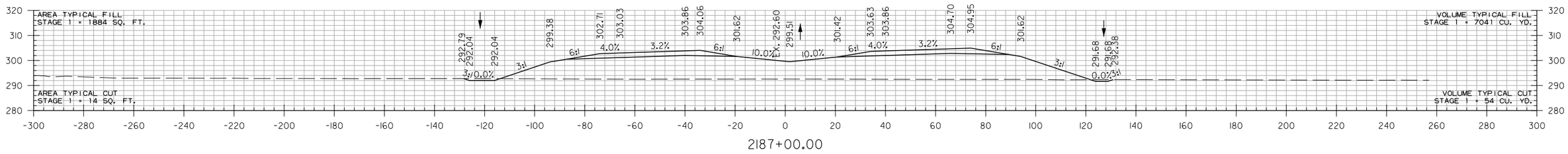


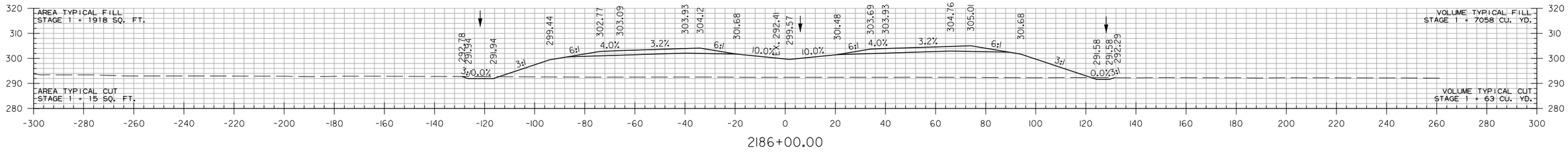


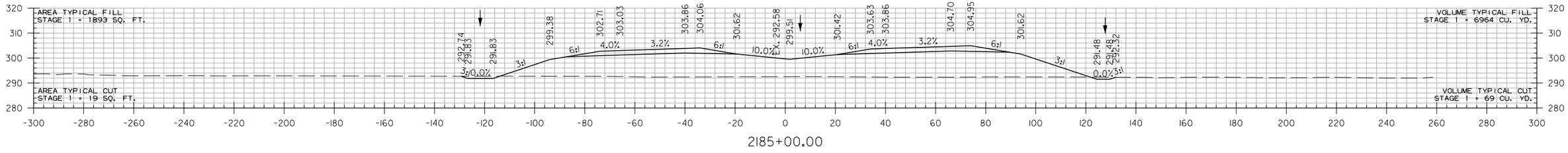
STA. 2179+88.15 BEGIN SUPERELEVATION

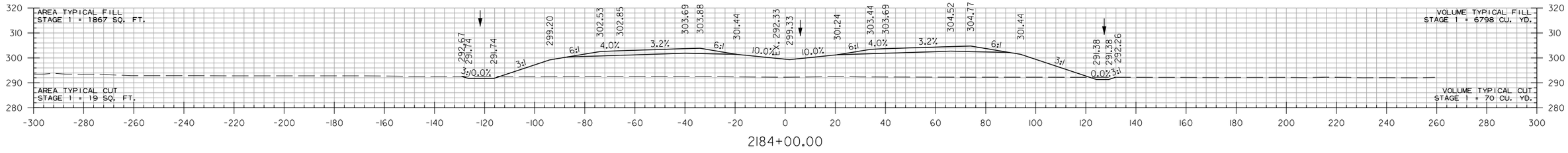
CGGervasini 6/28/2024 1:34:21 PM
WORKSPACE: AHTD
L:\2021\21101046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	248	325
		CROSS SECTIONS				







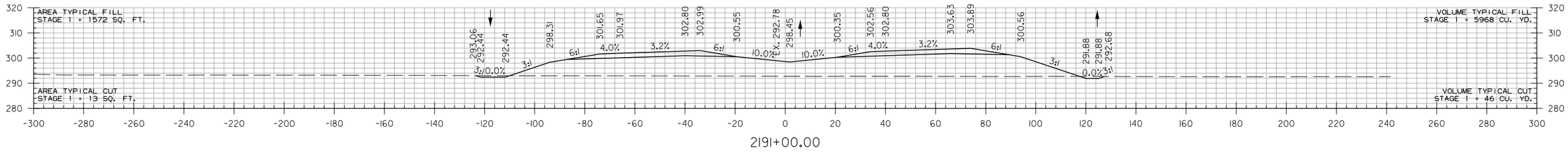


STA. 2183+38.15 MAX. SUPERELEVATION (0.032'/')

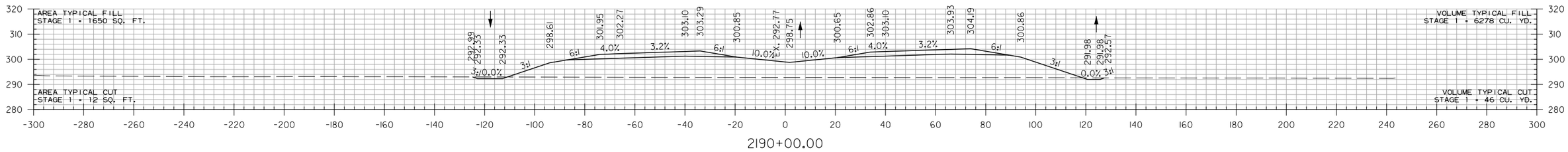
I-57
STA. 2184+00 TO STA. 2187+00

CGervasini 6/28/2024 1:34:22 PM
WORKSPACE: AHTD
L:\2021\2101046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	249	325
		CROSS SECTIONS				

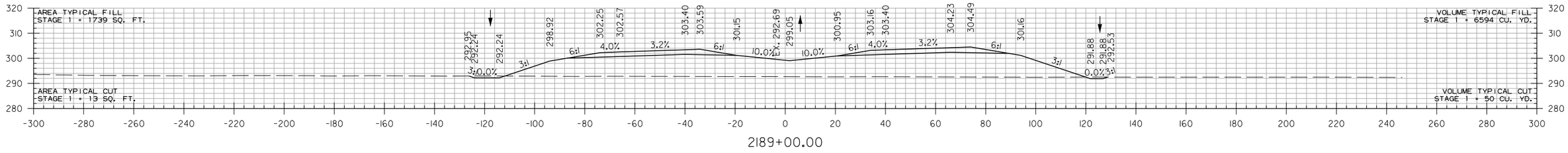


2191+00.00

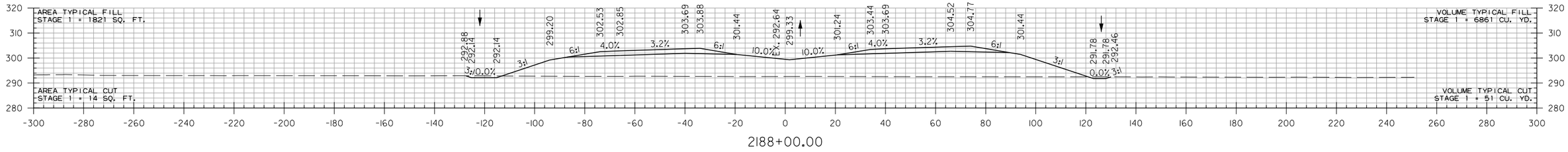


2190+00.00

STA. 2190+00.00
END SP. DT. RT. 0.10%
BEGIN SP. DT. RT. -0.10%
ELEV. 291.98



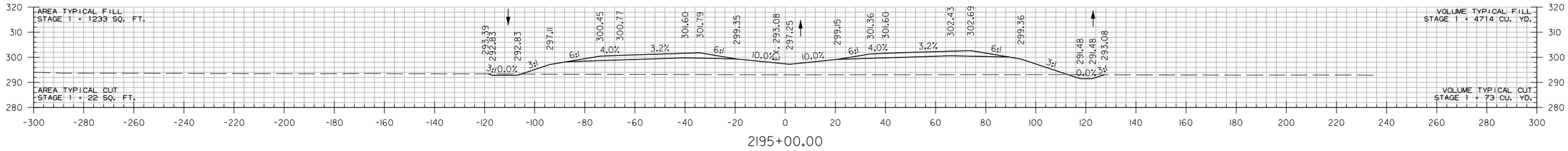
2189+00.00



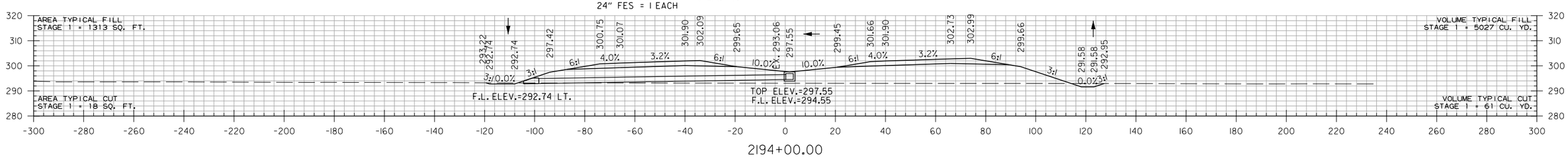
2188+00.00

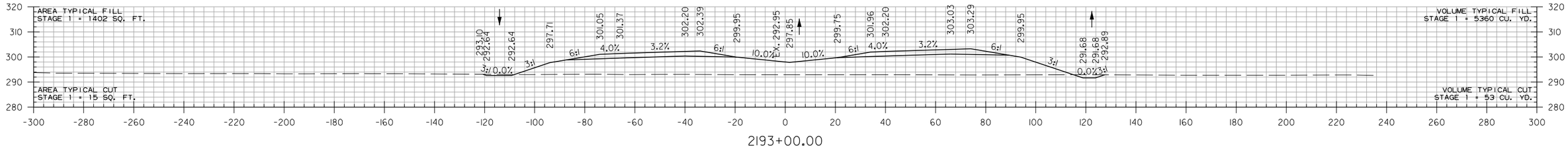
CGgervasini 6/28/2024 1:34:22 PM
WORKSPACE: AHTD
L:\2021\2110146 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

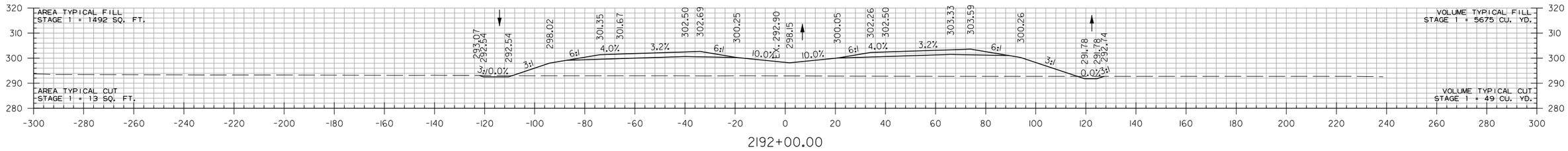
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	250	325
		CROSS SECTIONS				



STA. 2194+00 CONSTRUCT
MEDIAN DROP INLET 2' RT. H=3'-0"
WITH 24" x 99' PIPE OUTLET
TO FES LT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 99 LIN. FT.
24" FES = 1 EACH



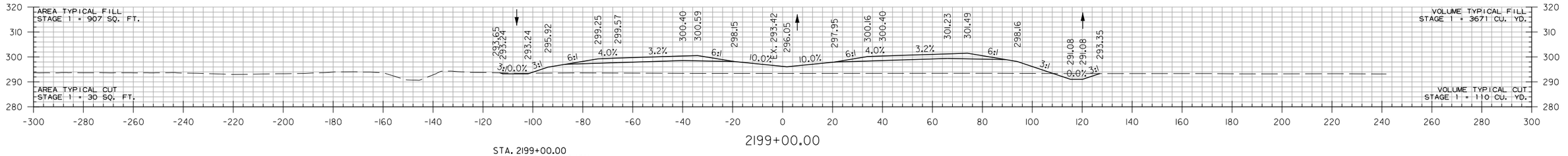




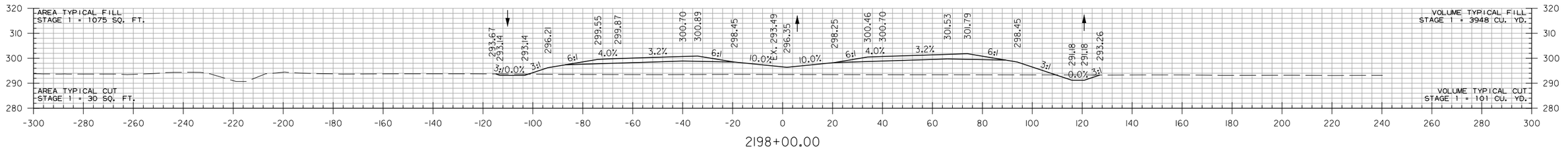
I-57
STA. 2192+00 TO STA. 2195+00

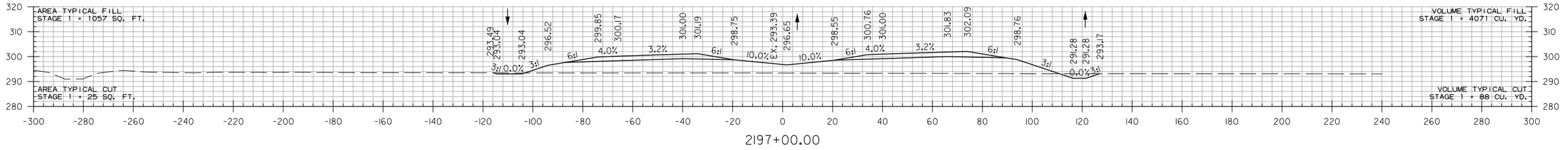
CGGervasini 6/28/2024 1:34:22 PM
WORKSPACE: AHTD
L:\2021\210046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

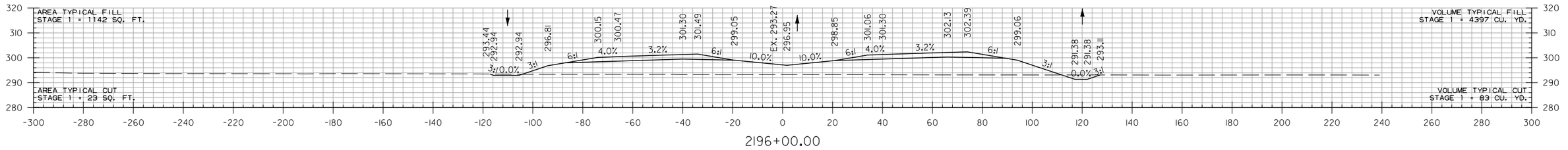
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	251	325
		CROSS SECTIONS				



STA. 2199+00.00
END SP. DT. LT. 0.10%
ELEV. 293.24



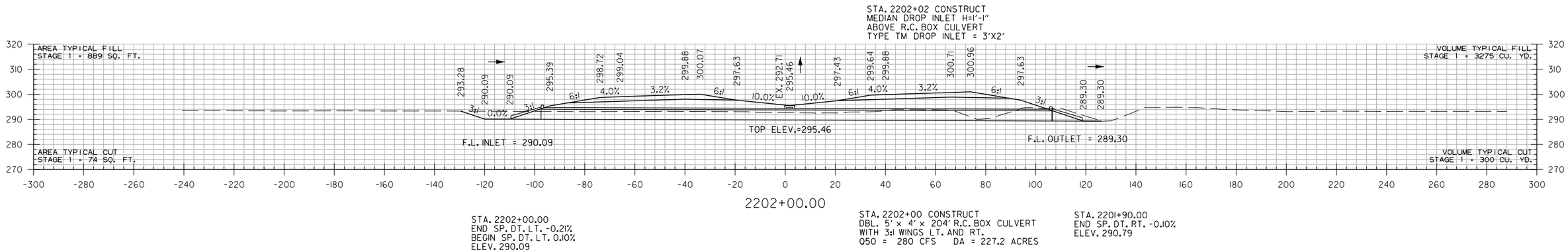


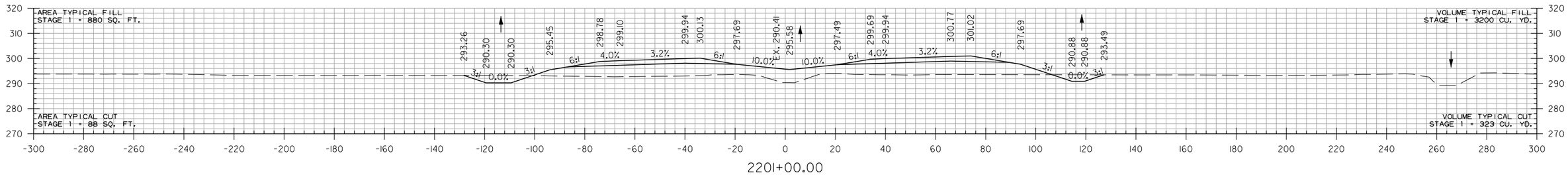


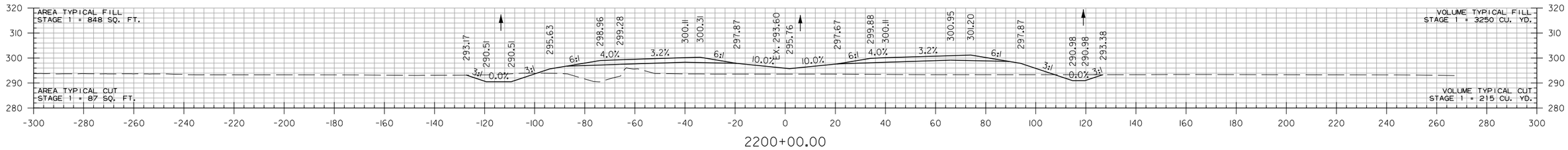
I-57
STA. 2196+00 TO STA. 2199+00

CGGervasini 6/28/2024 1:34:22 PM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	252	325
		CROSS SECTIONS				





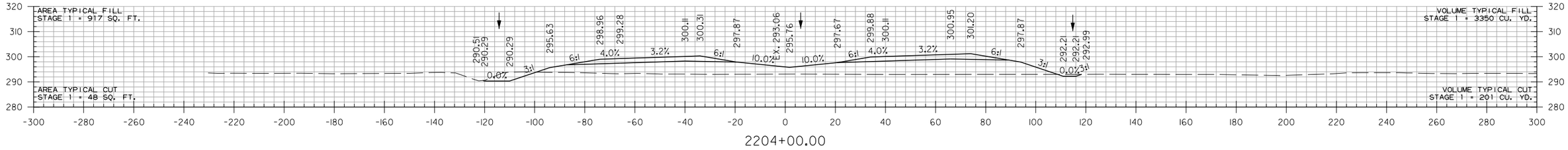


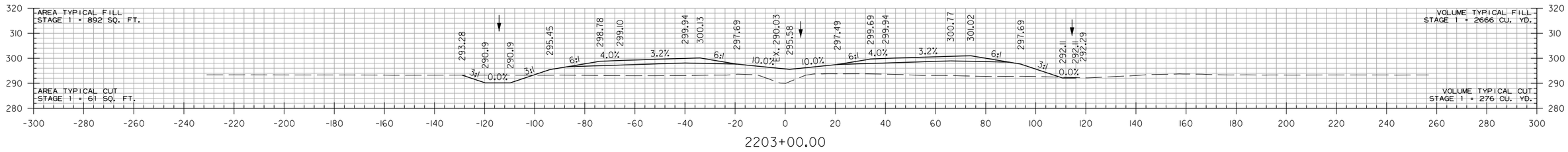
STA. 2199+55.00
BEGIN SP. DT. LT. -0.21%
ELEV. 290.61

I-57
STA. 2200+00 TO STA. 2202+00

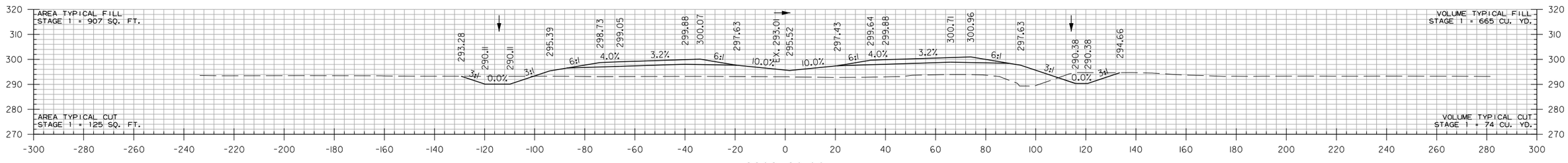
CGervasini 6/28/2024 1:34:23 PM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	253	325
		CROSS SECTIONS				





STA. 2202+86.00
END SP. DT. RT. 2.60%
BEGIN SP. DT. RT. 0.10%
ELEV. 292.10



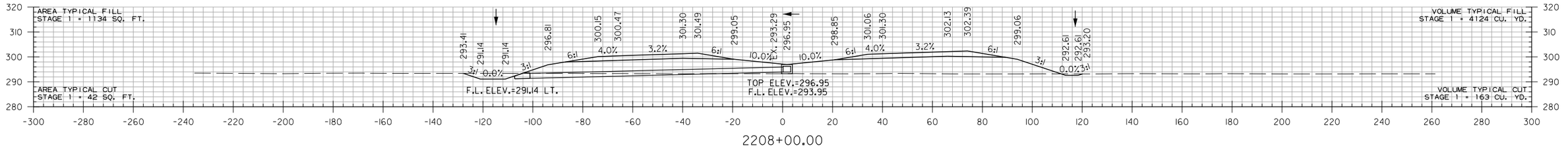
STA. 2202+06.00
BEGIN SP. DT. RT. 2.60%
ELEV. 290.02

I-57
STA. 2202+20 TO STA. 2204+00

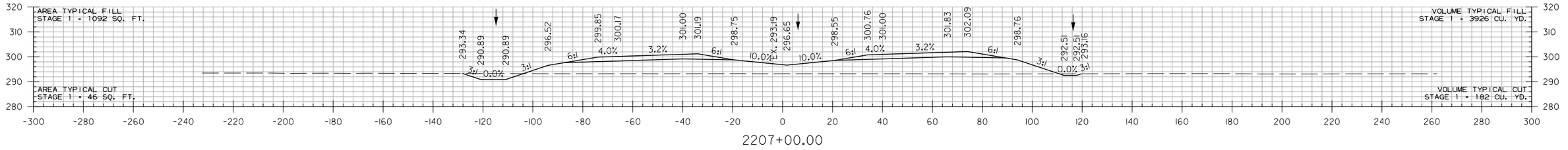
CGGervasini 6/28/2024 1:34:23 PM
WORKSPACE: AHTD
L:\2021\21T0046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	254	325
		CROSS SECTIONS				

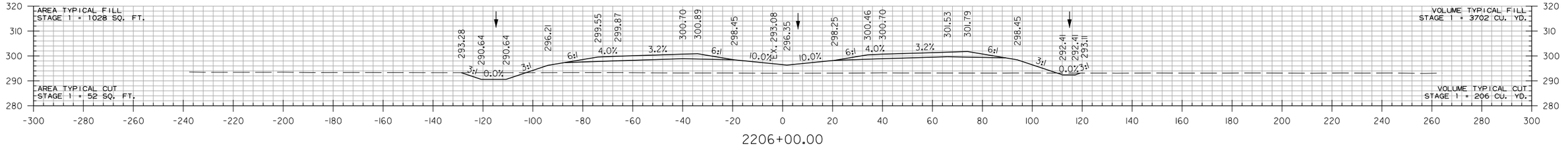
STA. 2208+00 CONSTRUCT
MEDIAN DROP INLET 2' RT. H=3'-0"
WITH 24" x 102' PIPE OUTLET
TO FES LT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 102 LIN. FT.
24" FES = 1 EACH



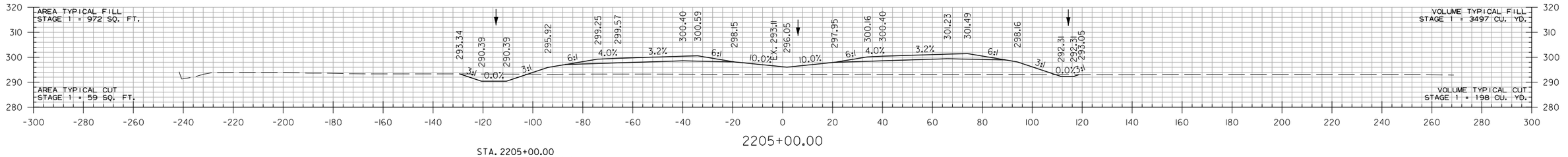
2208+00.00



2207+00.00



2206+00.00



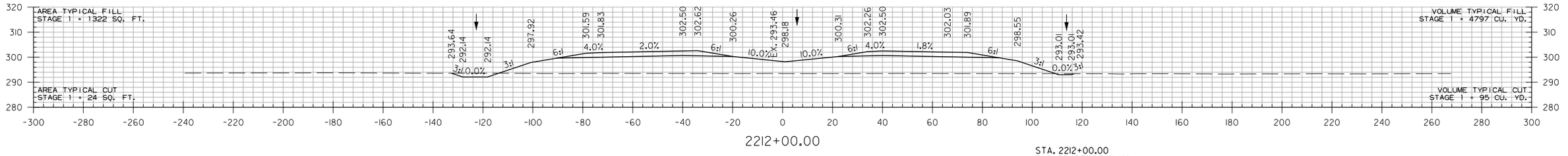
2205+00.00

STA. 2205+00.00
END SP. DT. LT. 0.10%
BEGIN SP. DT. LT. 0.25%
ELEV. 290.39

I-57
STA. 2205+00 TO STA. 2208+00

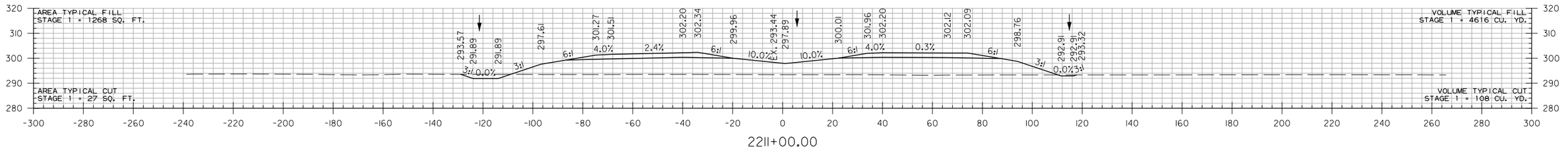
CGGervasini 6/28/2024 1:34:23 PM
WORKSPACE: AHTD
L:\2021\2101046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	255	325
		CROSS SECTIONS				

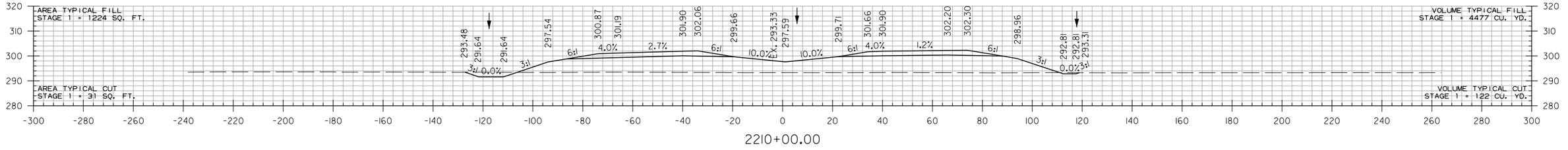


2212+00.00

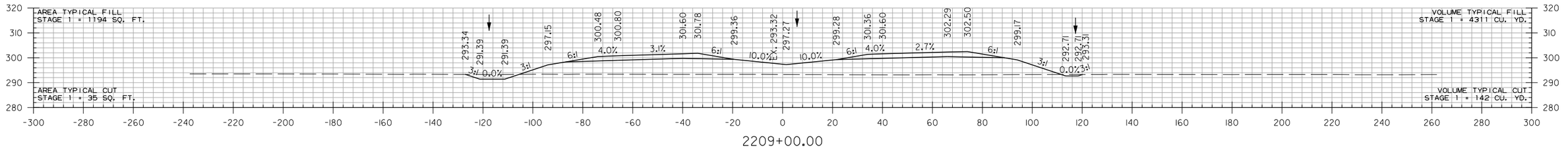
STA. 2212+00.00
END SP. DT. RT. 0.10%
BEGIN SP. DT. RT. -0.10%
ELEV. 293.01



2211+00.00



2210+00.00



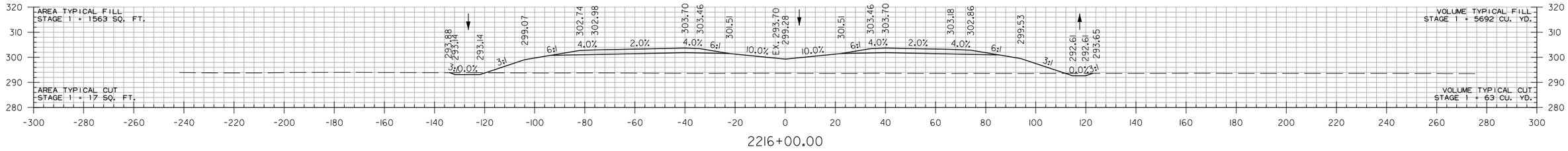
2209+00.00

STA. 2208+63.15 MAX. SUPERELEVATION (0.032'/')

I-57
STA. 2209+00 TO STA. 2212+00

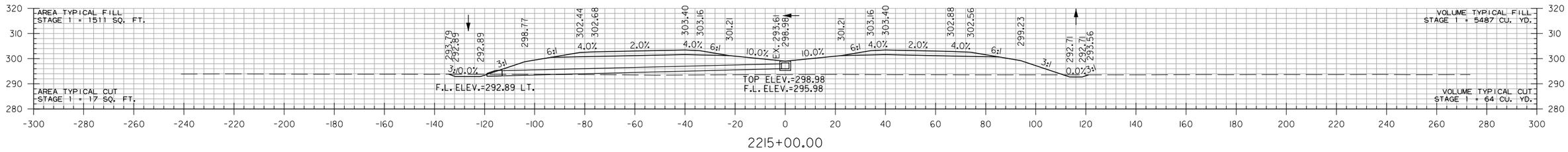
CGGervasini 6/28/2024 1:34:23 PM
WORKSPACE: AHTD
L:\2021\210046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	256	325
		CROSS SECTIONS				

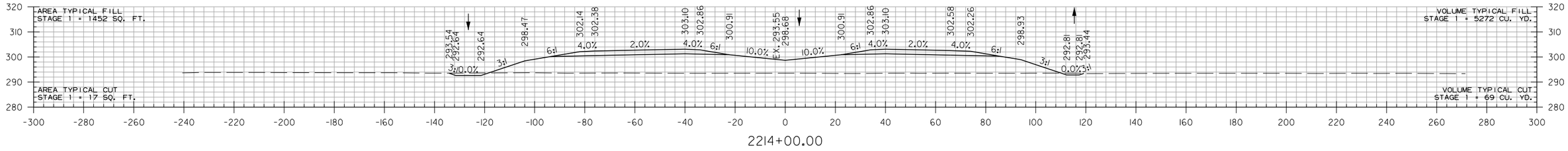


2216+00.00

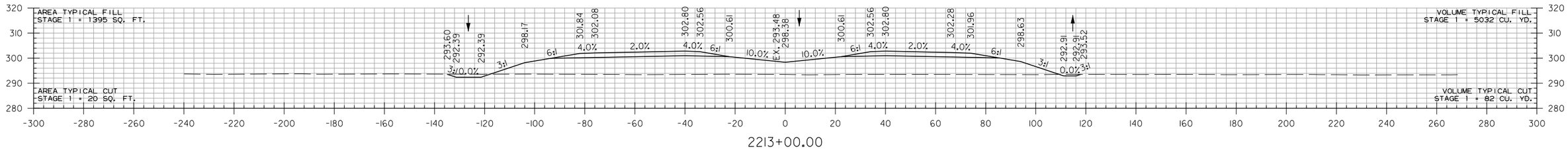
STA. 2215+00 CONSTRUCT
MEDIAN DROP INLET H=3'-0"
WITH 24" x 112' PIPE OUTLET
TO FES LT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 112 LIN. FT.
24" FES = 1 EACH



2215+00.00



2214+00.00



2213+00.00

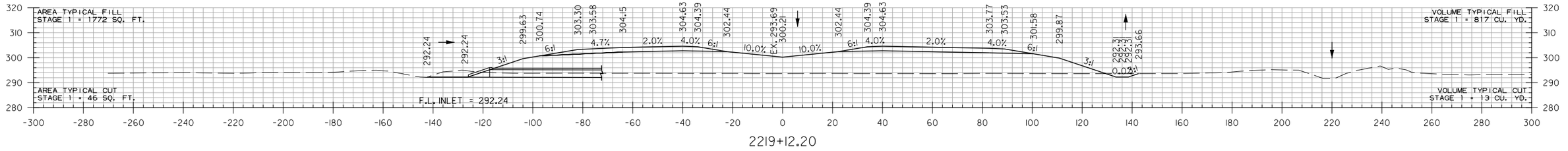
STA. 2212+13.15 END SUPERELEVATION

I-57
STA. 2213+00 TO STA. 2216+00

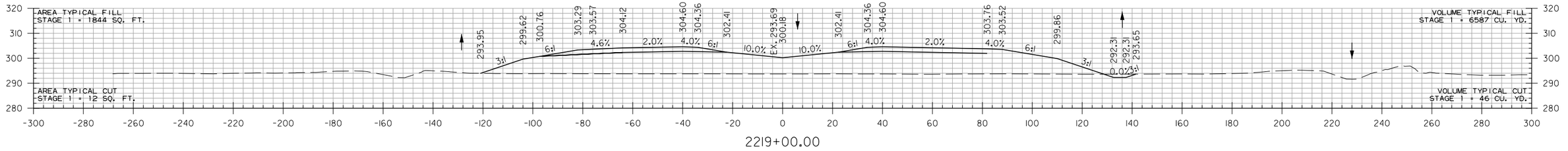
CGGervasini 6/28/2024 1:34:24 PM
WORKSPACE: AHTD
L:\2021\210046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	257	325
		CROSS SECTIONS				

STA. 2219+35.00 CONSTRUCT
4' x 3' x 254' R.C. BOX CULVERT
11° RT. FWD. SKEW
WITH 3:1 WINGS LT. AND RT.
Q50 = 70.2 CFS DA = 90.6 ACRES

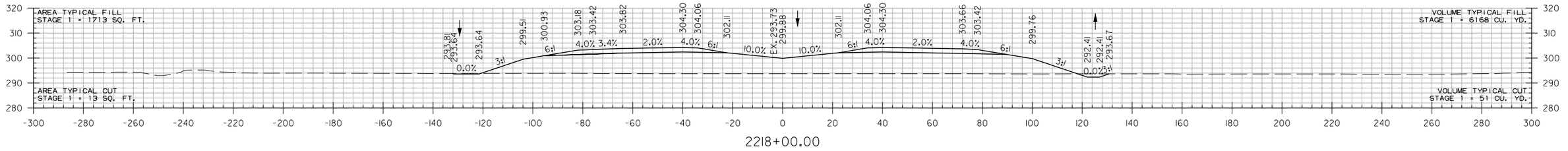


2219+12.20

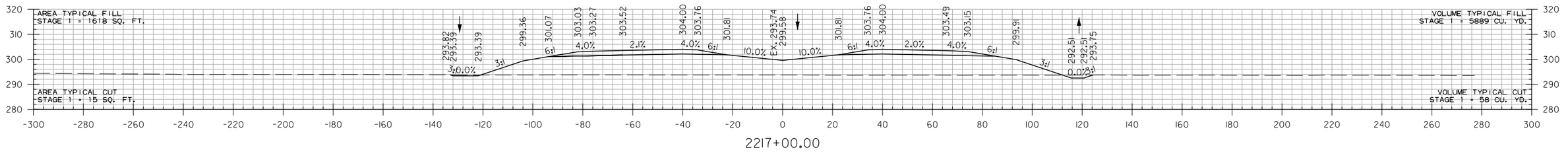


2219+00.00

STA. 2218+40.00
END SP. DT. LT. 0.25%
ELEV. 293.74



2218+00.00

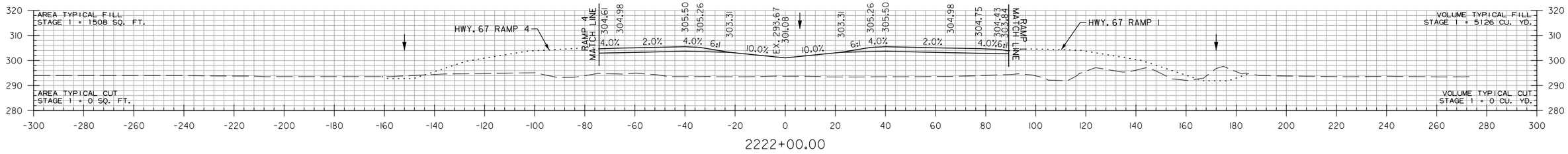


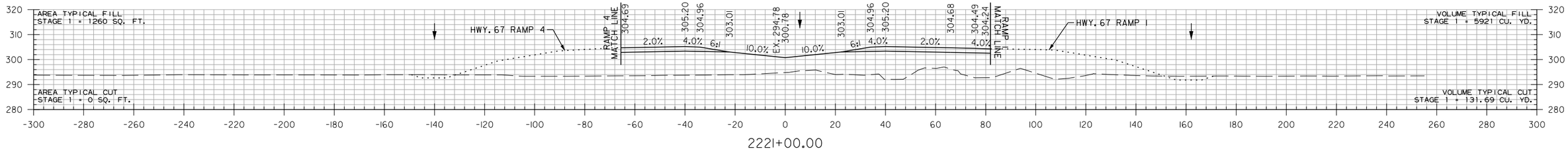
2217+00.00

I-57
STA. 2217+00 TO STA. 2219+09

CGGervasini 6/28/2024 1:34:24 PM
WORKSPACE: AHTD
L:\2021\211010046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

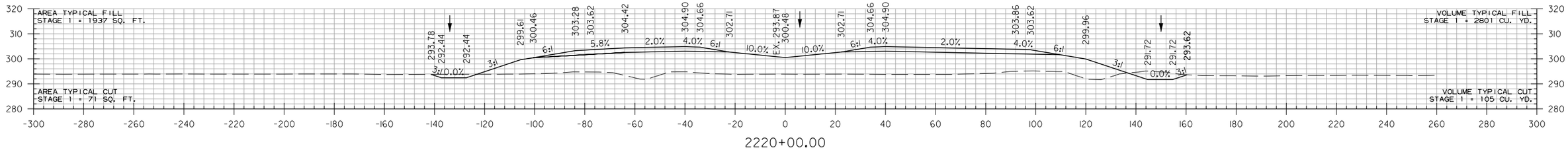
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	258	325
		CROSS SECTIONS				



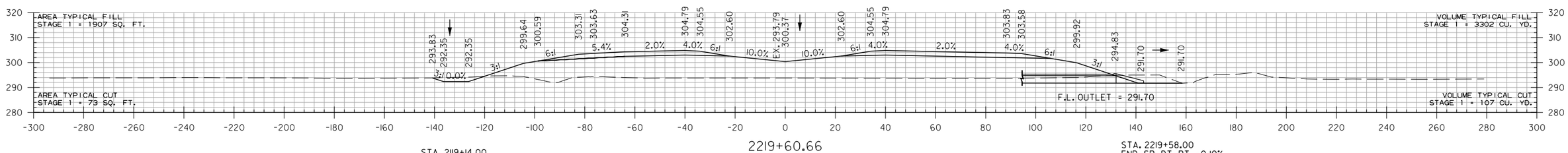


STA. 2220+80.51
END SP. DT. LT. 0.23%
ELEV. 292.62

STA. 2220+80.00
END SP. DT. RT. 0.08%
ELEV. 291.78



STA. 2219+75.00
BEGIN SP. DT. RT. 0.08%
ELEV. 291.70

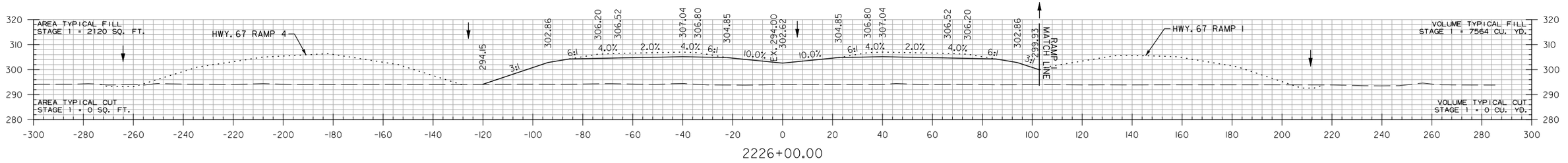


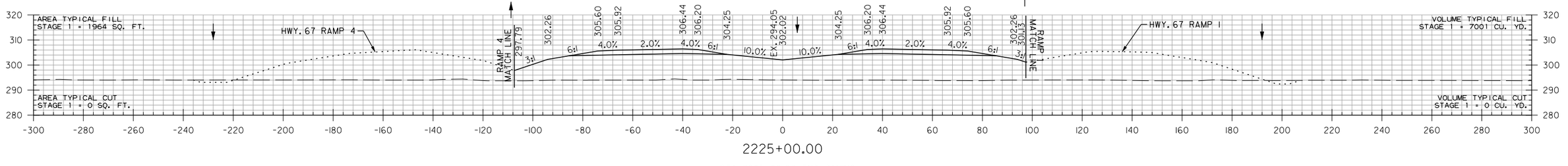
STA. 2119+14.00
BEGIN SP. DT. LT. 0.23%
ELEV. 292.24

STA. 2219+58.00
END SP. DT. RT. -0.10%
ELEV. 292.26

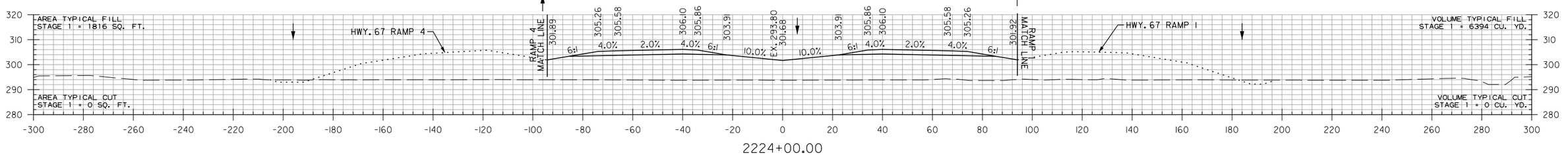
CGGervasini 6/28/2024 1:34:24 PM
WORKSPACE: AHTD
L:\2021\211010046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	259	325
		CROSS SECTIONS				

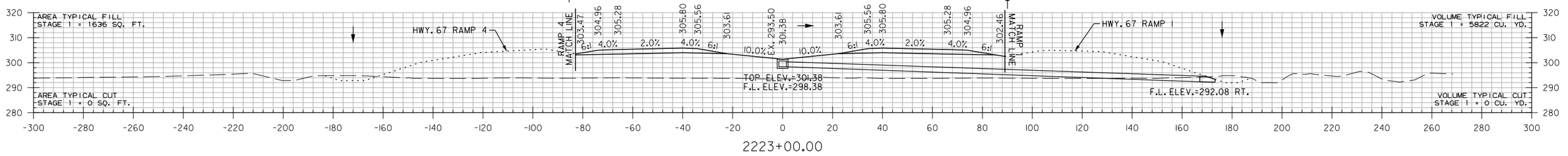




STA. 2225+00.00 END PAVING



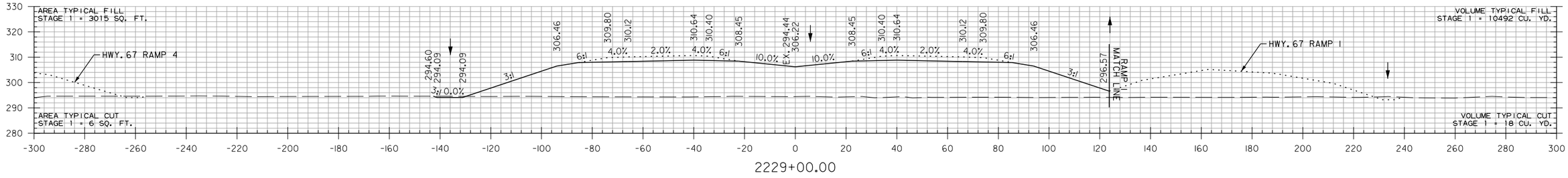
STA. 2223+00 CONSTRUCT
MEDIAN DROP INLET H=3'-0"
WITH 24" x 166' PIPE OUTLET
TO FES RT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 166 LIN. FT.
24" FES = 1 EACH

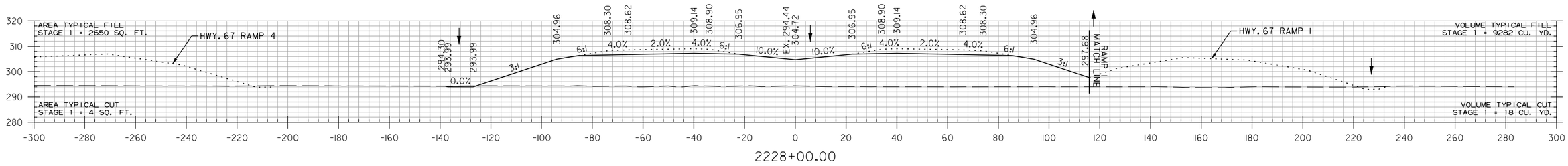


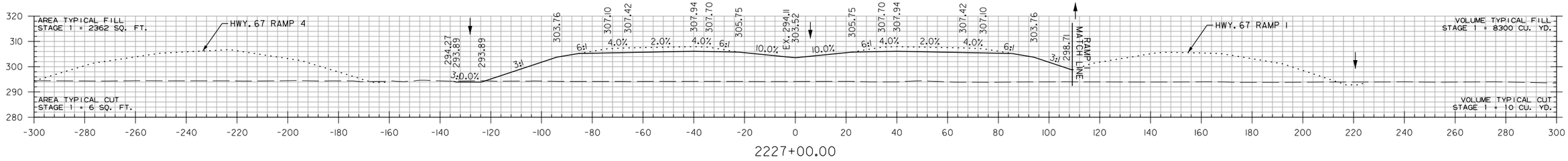
I-57
STA. 2223+00 TO STA. 2226+00

CGGervasini 6/28/2024 1:34:24 PM
WORKSPACE: AHTD
L:\2021\2110046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	260	325
		CROSS SECTIONS				



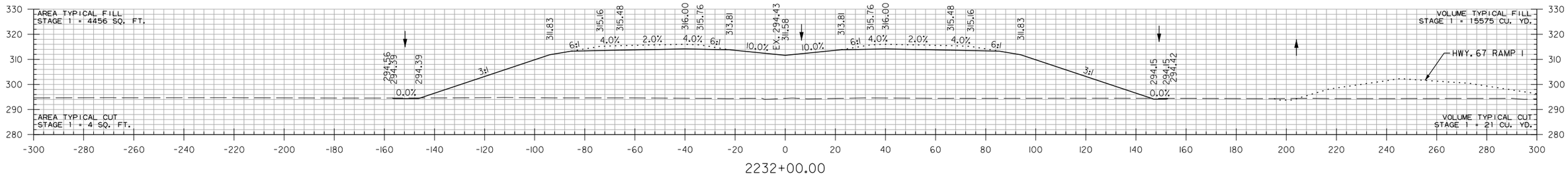




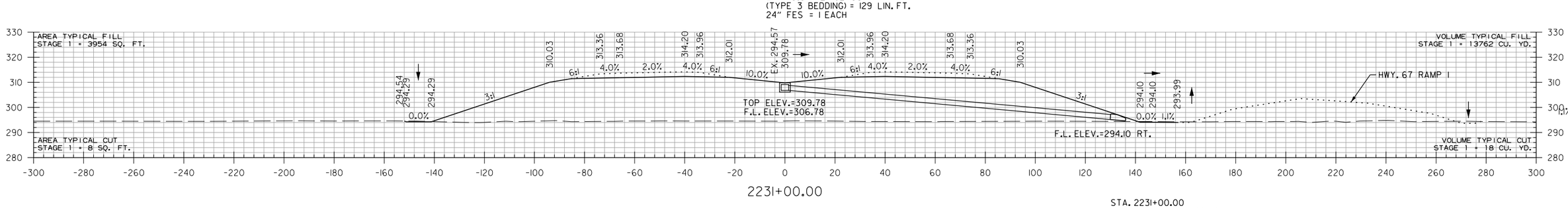
I-57
STA. 2227+00 TO STA. 2229+00

CGGervasini 6/28/2024 1:34:25 PM
WORKSPACE: AHTD
L:\2021\210046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

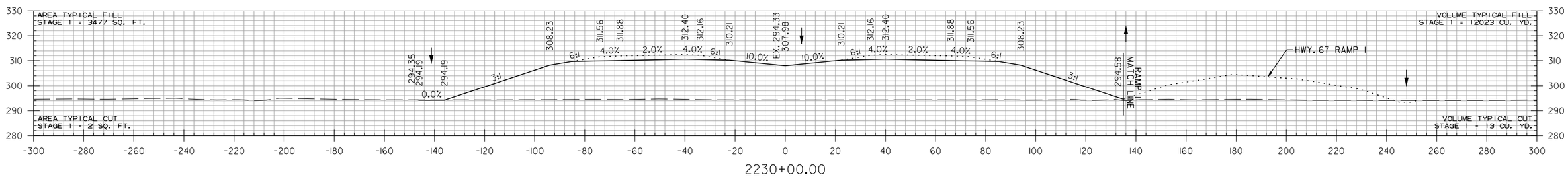
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	261	325
		CROSS SECTIONS				



STA. 2231+00 CONSTRUCT
MEDIAN DROP INLET H=3'-0"
WITH 24" x 129' PIPE OUTLET
TO FES RT.
TYPE RM DROP INLET = 4'X3'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 129 LIN. FT.
24" FES = 1 EACH

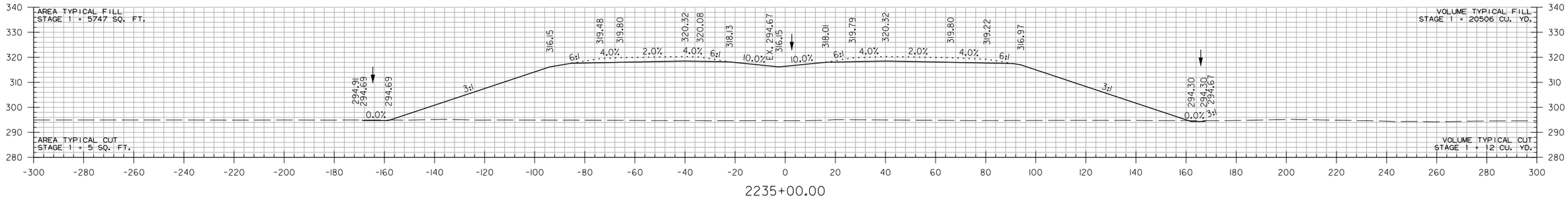


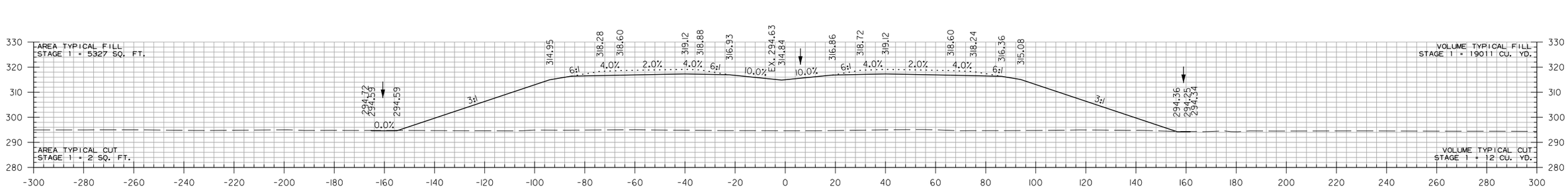
STA. 2231+00.00
BEGIN SP. DT. RT. 0.05%
ELEV. 294.10

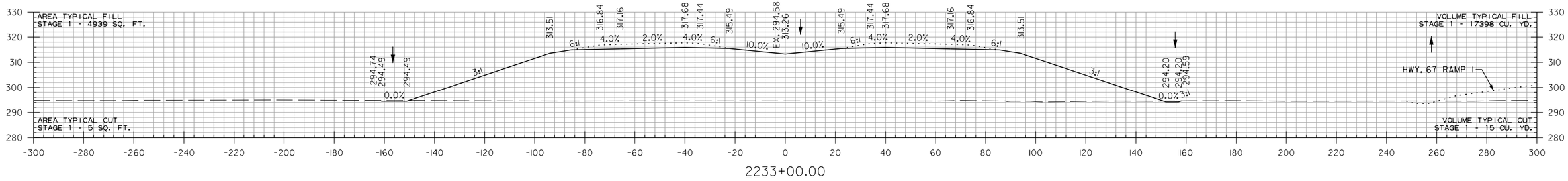


CGGervasini 6/28/2024 11:34:25 PM
WORKSPACE: AHTD
L:\2021\21T0046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	262	325
		CROSS SECTIONS				







I-57
STA. 2233+00 TO STA. 2235+00

CGGervasini 6/28/2024 1:34:25 PM
WORKSPACE: AHTD
L:\2021\2101046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	263	325
		CROSS SECTIONS				

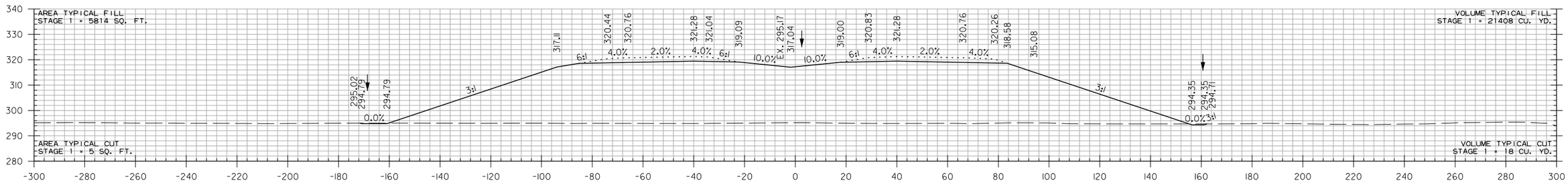
AREA TYPICAL FILL
STAGE 1 = 0 SQ. FT.

AREA TYPICAL CUT
STAGE 1 = 0 SQ. FT.

VOLUME TYPICAL FILL
STAGE 1 = 8512 CU. YD.

VOLUME TYPICAL CUT
STAGE 1 = 7 CU. YD.

STA. 2236+79.06 END TOE OF SLOPE



2236+00.00

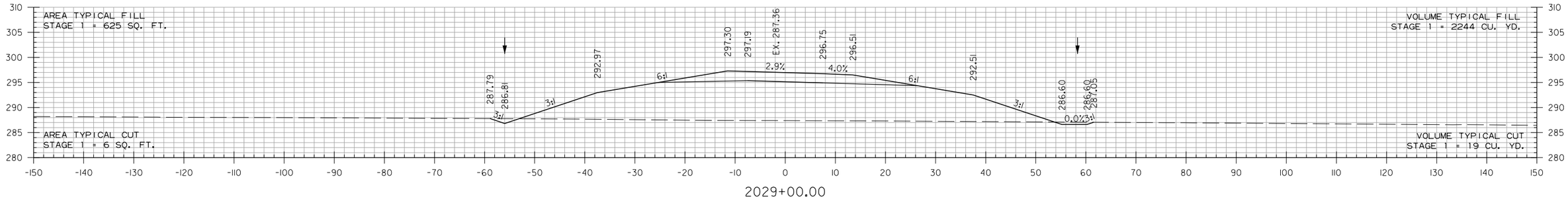
STA. 2236+00.00 END JOB 101172
END GRADING

STA. 2236+00.00
END SP. DT. RT. 0.05%
ELEV. 294.35

I-57
STA. 2236+00 TO STA. 2236+00

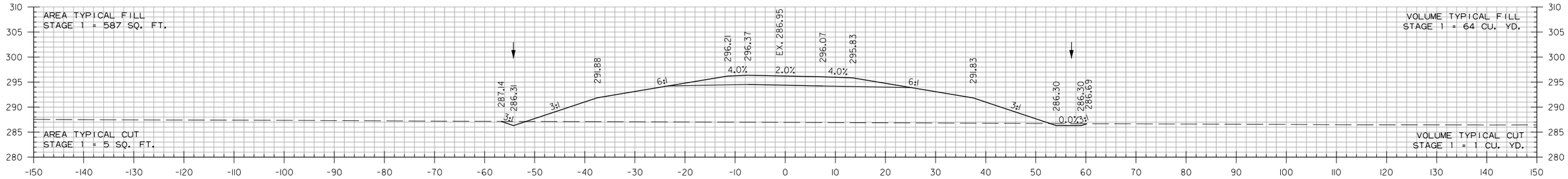
CGervasini 6/28/2024 1:34:26 PM
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L:\2021\21T0046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_01_I-57.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	264	325
		CROSS SECTIONS				

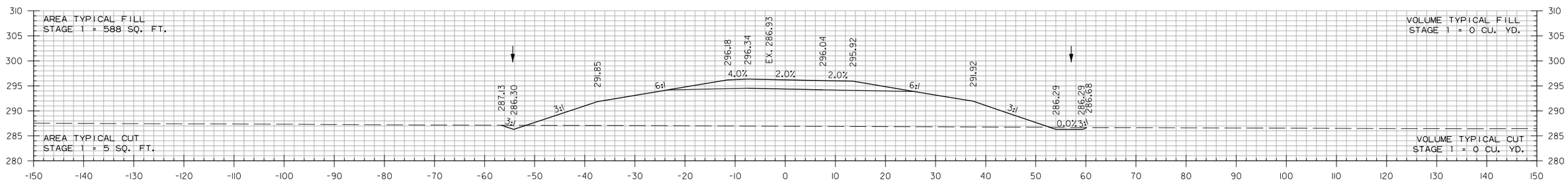


2029+00.00

STA. 2028+27.11 BEGIN SUPERELEVATION



2028+00.00



2027+97.04

STA. 2027+97.04
BEGIN SP. DT. LT. 0.50%
ELEV. 286.30

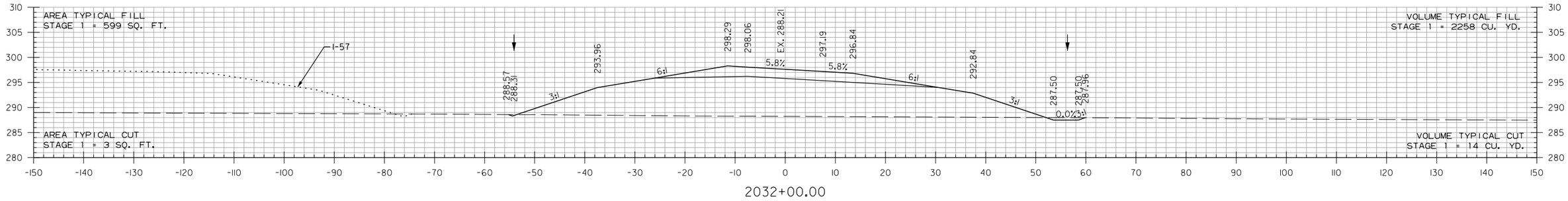
STA. 2027+97.04 BEGIN HWY. 62 RAMP 2

STA. 2027+97.04
BEGIN SP. DT. RT. 0.30%
ELEV. 286.29

HWY. 62 RAMP 2
STA. 2027+97 TO STA. 2029+00

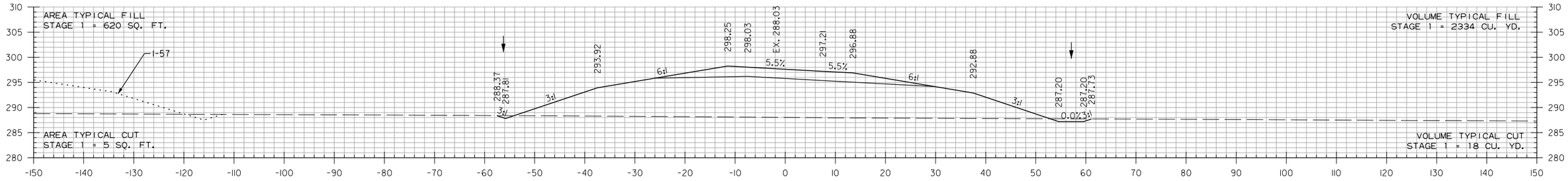
CGGervasini 6/28/2024 1:34:26 PM
WORKSPACE: AHTD
L:\2021\21T0046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_02_HWY. 62 RAMP 2.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	265	325
		CROSS SECTIONS				

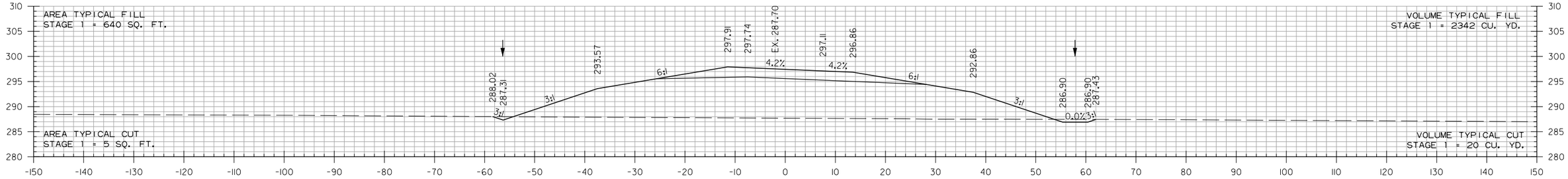


2032+00.00

STA. 2031+27.11 MAX. SUPERELEVATION (0.058'/')



2031+00.00

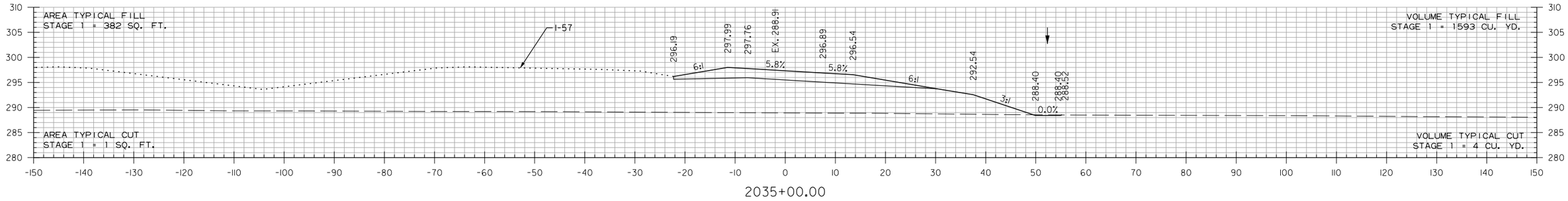


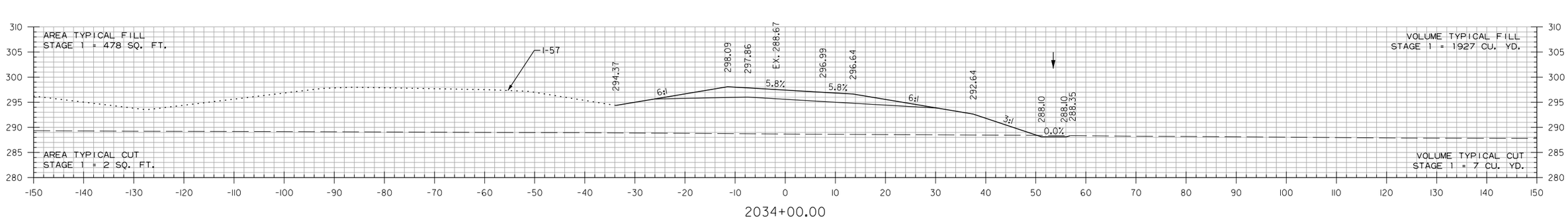
2030+00.00

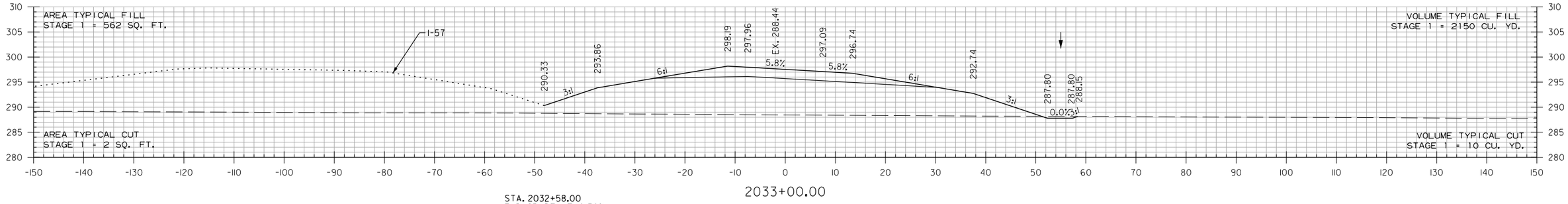
HWY. 62 RAMP 2
STA. 2030+00 TO STA. 2032+00

CGGervasini 6/28/2024 11:34:26 PM
WORKSPACE: AHTD
L:\2021\21T0046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_02_HWY. 62 RAMP 2.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	266	325
		CROSS SECTIONS				







STA. 2032+58.00
END SP. DT. LT. 0.50%
ELEV. 288.60

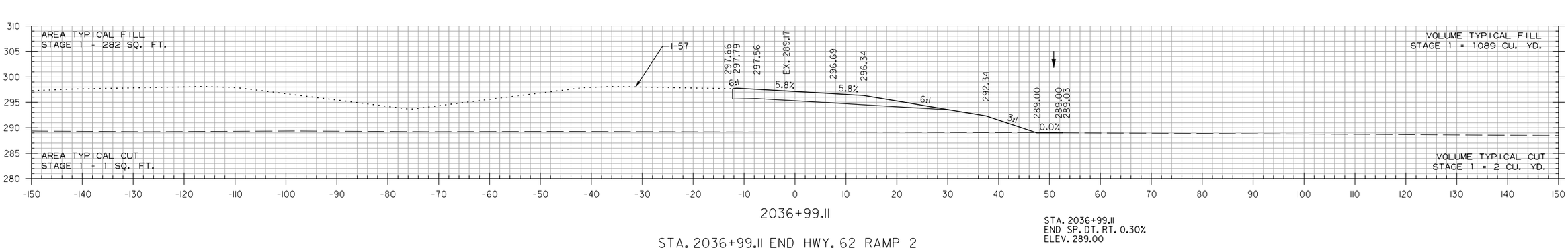
HWY. 62 RAMP 2
STA. 2033+00 TO STA. 2035+00

CGGervasini 6/28/2024 1:34:26 PM
WORKSPACE: AHTD
L:\2021\21T0046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_02_HWY. 62 RAMP 2.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	267	325
		CROSS SECTIONS				

STA. 2040+85.45 END SUPERELEVATION

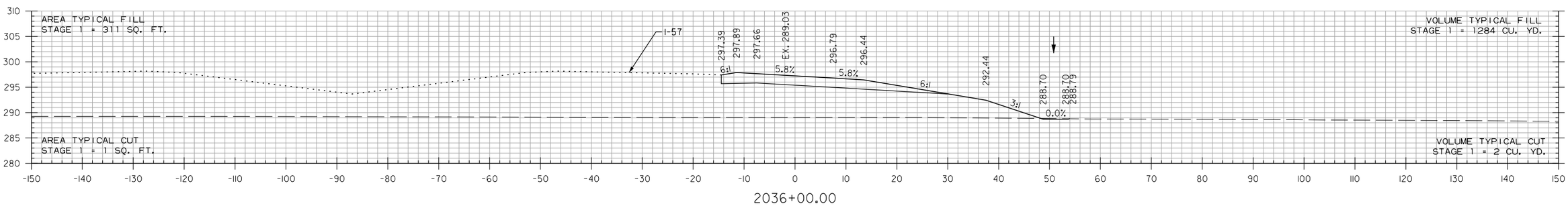
STA. 2037+85.45 MAX. SUPERELEVATION (0.058'/')



2036+99.11

STA. 2036+99.11 END HWY. 62 RAMP 2

STA. 2036+99.11
END SP. DT. RT. 0.30%
ELEV. 289.00

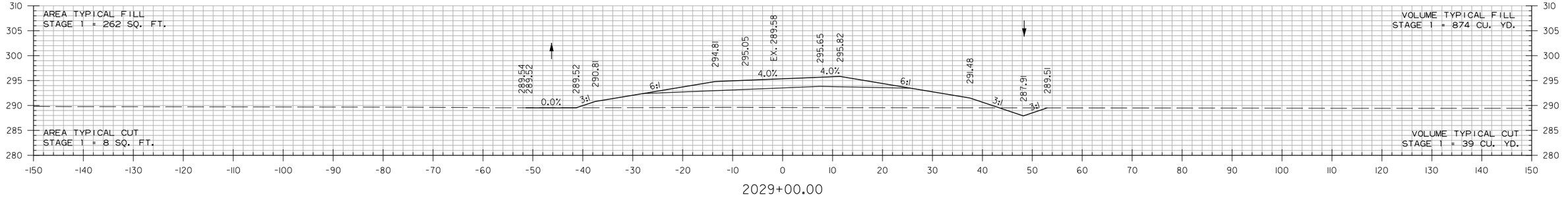


2036+00.00

HWY. 62 RAMP 2
STA. 2036+00 TO STA. 2036+99

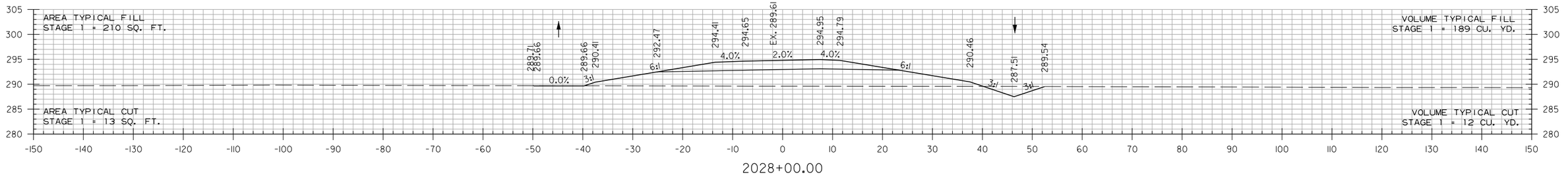
CGGervasini 6/28/2024 11:34:27 PM
WORKSPACE: AHTD
L:\2021\21T0046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_02_HWY. 62 RAMP 2.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	268	325
		CROSS SECTIONS				

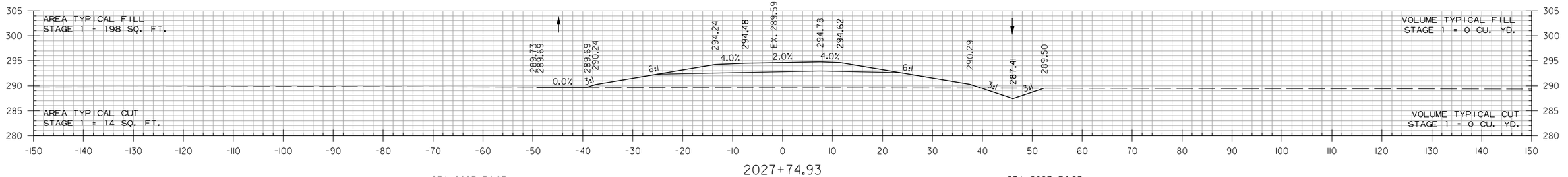


2029+00.00

STA. 2028+04.73 BEGIN SUPERELEVATION



2028+00.00



2027+74.93

STA. 2027+74.93
BEGIN SP. DT. LT. -0.14%
ELEV. 289.69

STA. 2027+74.93 BEGIN HWY. 62 RAMP 3

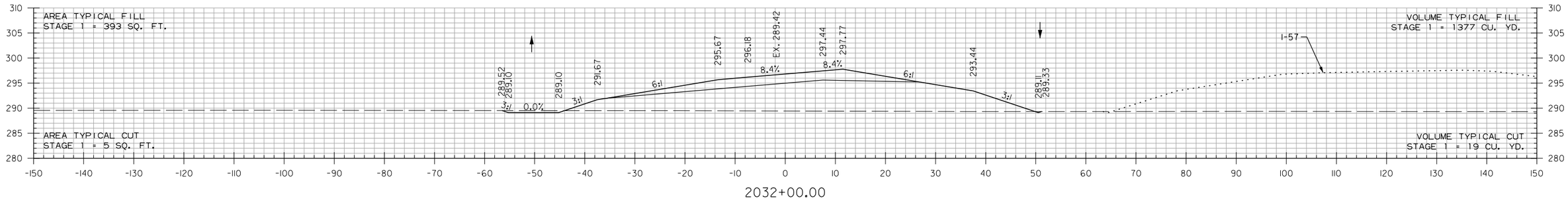
STA. 2027+74.93
BEGIN SP. DT. RT. 0.40%
ELEV. 287.41

HWY. 62 RAMP 3
STA. 2027+75 TO STA. 2029+00

CGervasini 6/28/2024 1:34:27 PM
WORKSPACE: AHTD
L:\2021\21T0046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_03_HWY. 62 RAMP 3.dgn
REVISED DATE:

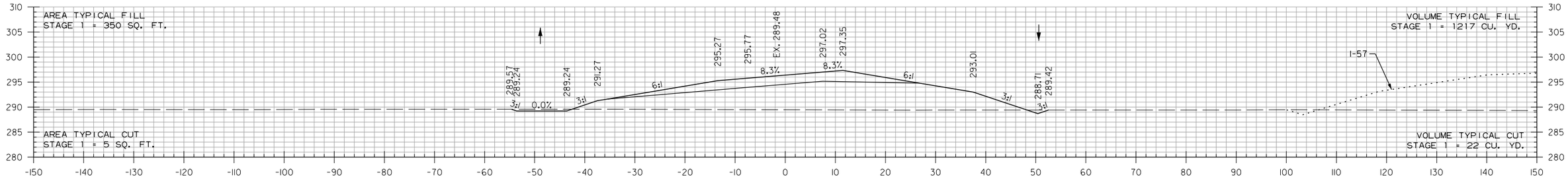
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	269	325
		CROSS SECTIONS				

STA. 2032+47.50
END SP. DT. RT. 0.40%
ELEV. 289.30

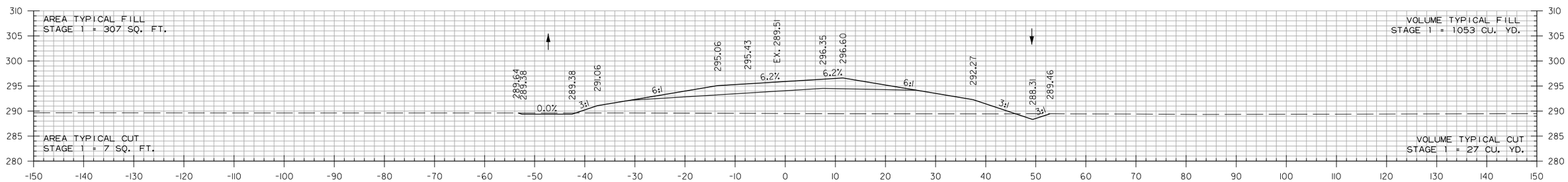


2032+00.00

STA. 2031+04.73 MAX. SUPERELEVATION (0.084'/')



2031+00.00

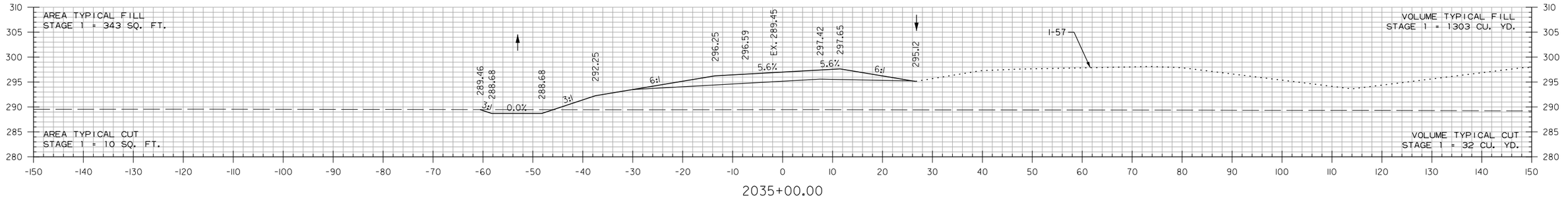


2030+00.00

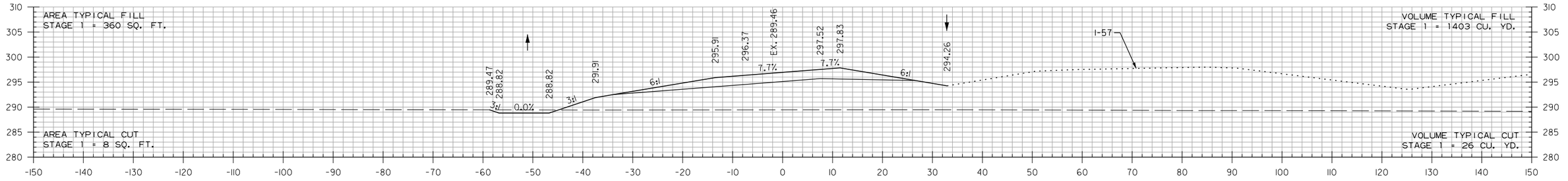
HWY. 62 RAMP 3
STA. 2030+00 TO STA. 2032+00

CGGervasini 6/28/2024 11:34:27 PM
WORKSPACE: AHTD
L:\2021\211010046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_03_HWY. 62 RAMP 3.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	270	325
		CROSS SECTIONS				

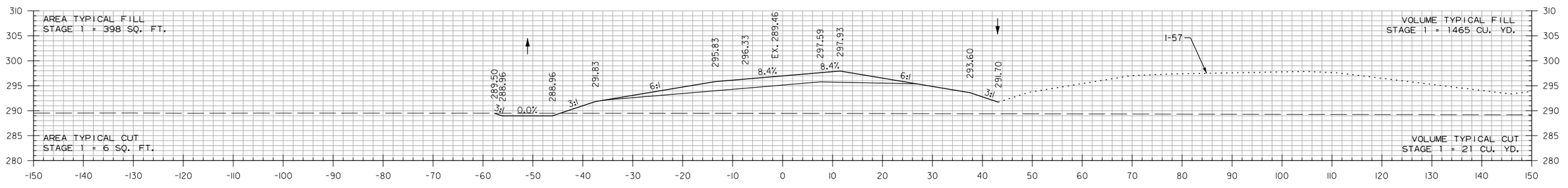


2035+00.00



2034+00.00

STA. 2033+67.23 MAX. SUPERELEVATION (0.084'/')

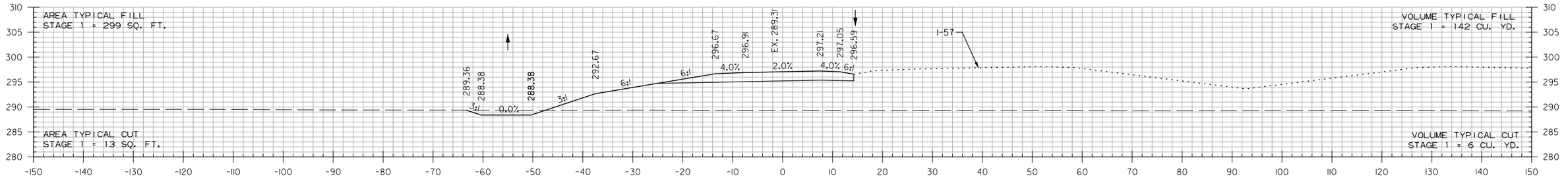


2033+00.00

HWY. 62 RAMP 3
STA. 2033+00 TO STA. 2035+00

CGervasini 6/28/2024 11:34:27 PM
WORKSPACE: AHTD
L:\2021\210046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_03_HWY. 62 RAMP 3.dgn
REVISED DATE:

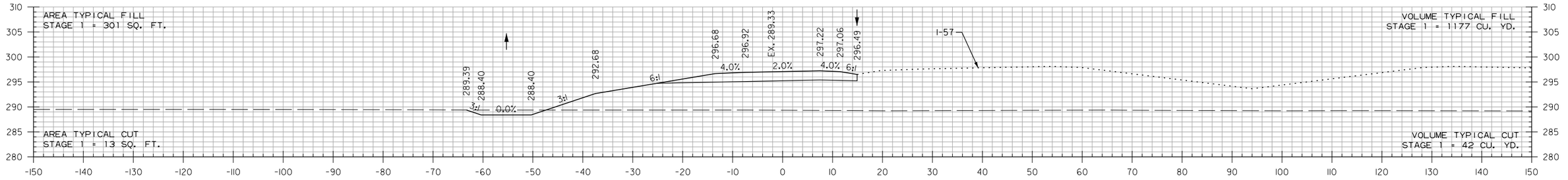
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	271	325
		CROSS SECTIONS				



2037+12.79

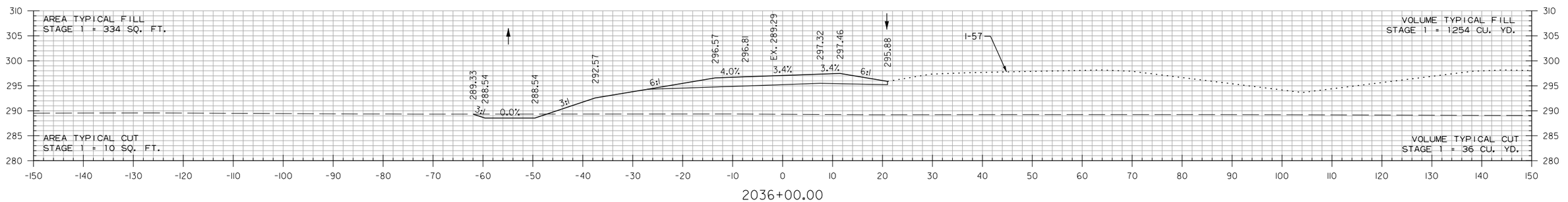
STA. 2037+12.79
END SP. DT. LT. -0.14%
ELEV. 288.38

STA. 2037+12.79 END HWY. 62 RAMP 3



2037+00.00

STA. 2036+67.23 END SUPERELEVATION

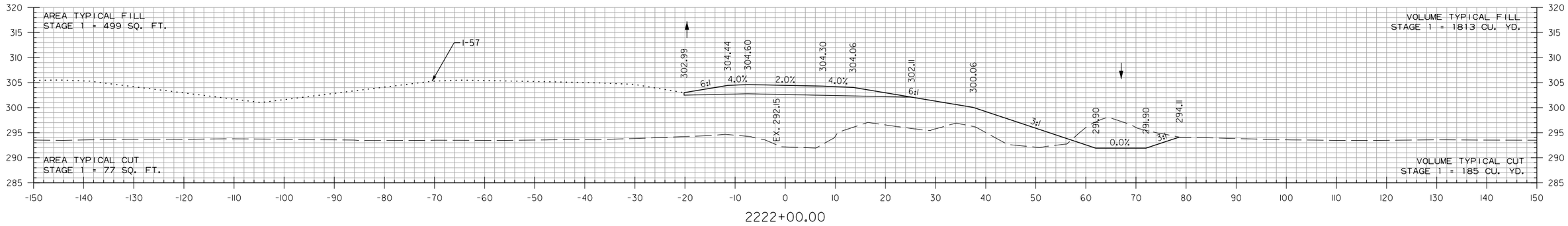


2036+00.00

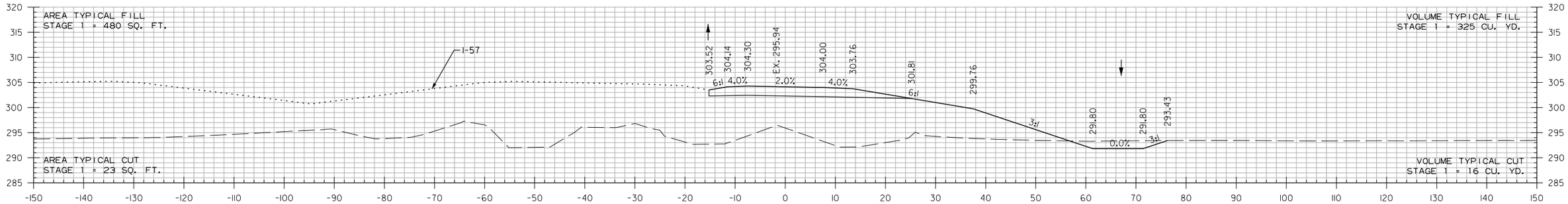
HWY. 62 RAMP 3
STA. 2036+00 TO STA. 2037+13

CGGervasini 6/28/2024 11:34:28 PM
WORKSPACE: AHTD
L:\2021\21T0046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_03_HWY. 62 RAMP 3.dgn
REVISED DATE:

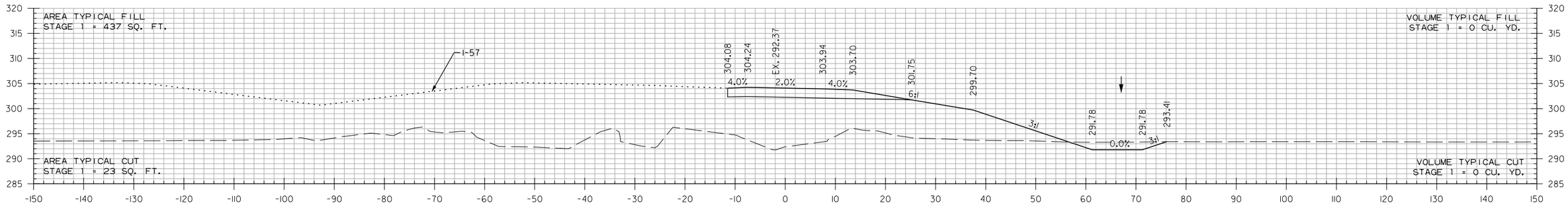
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	272	325
		CROSS SECTIONS				



2222+00.00



2221+00.00



2220+80.88

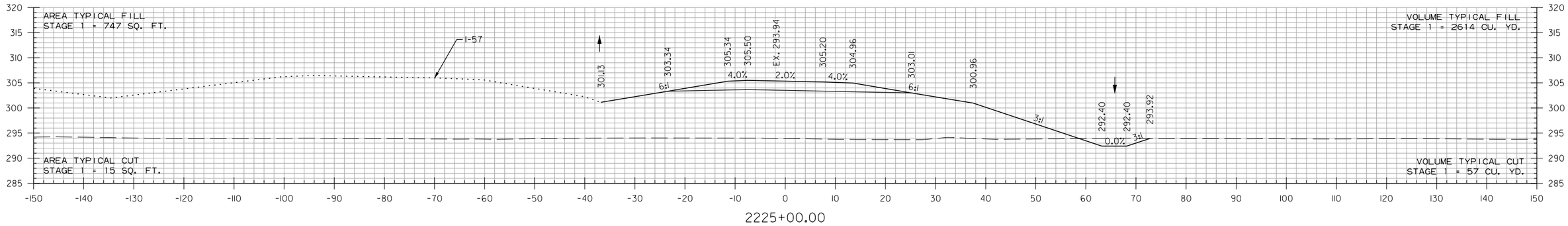
STA. 2220+80.88 BEGIN HWY. 67 RAMP I

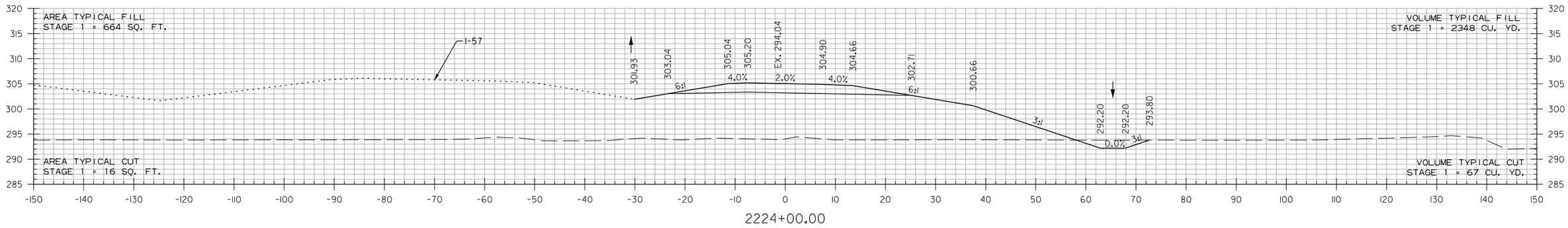
STA. 2220+80.00
BEGIN SP. DT. RT. 0.10%
ELEV. 291.78

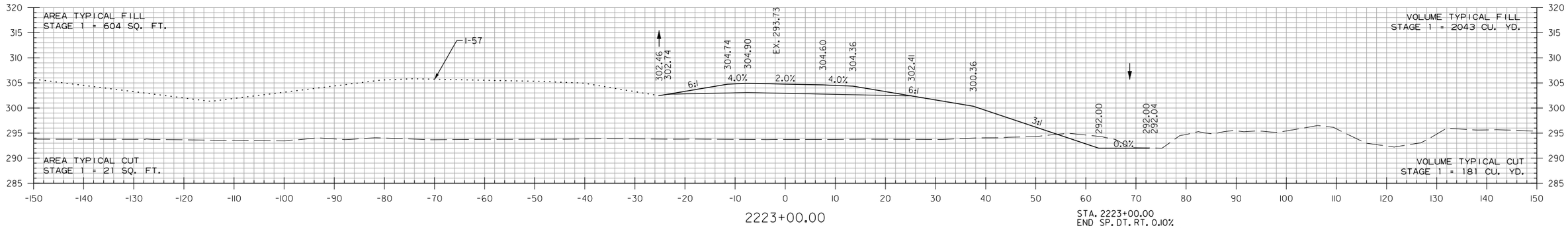
HWY. 67 RAMP I
STA. 2220+81 TO STA. 2222+00

CGervasini 6/28/2024 1:34:28 PM
WORKSPACE: AHTD
L:\2021\21101046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_04_HWY. 67 RAMP 1.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	273	325
		CROSS SECTIONS				





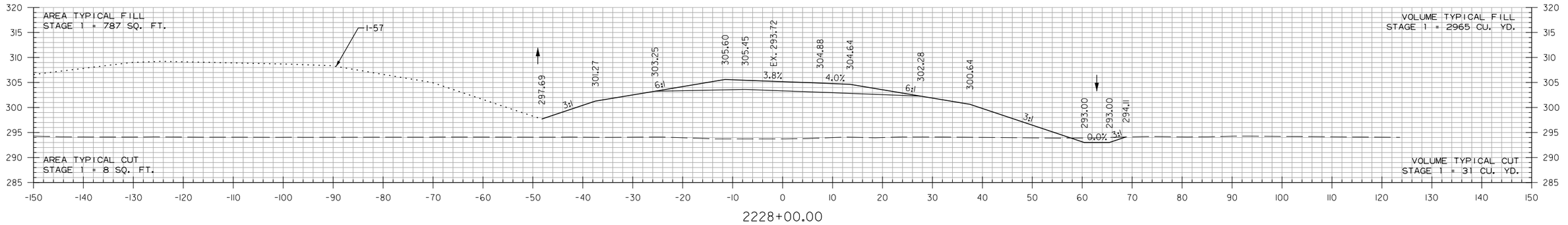


STA. 2223+00.00
END SP. DT. RT. 0.10%
BEGIN SP. DT. RT. 0.20%
ELEV. 292.00

HWY. 67 RAMP I
STA. 2223+00 TO STA. 2225+00

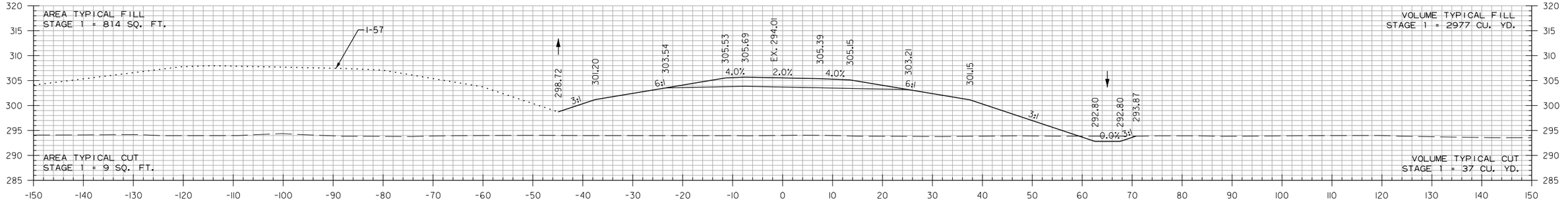
CGGervasini 6/28/2024 1:34:28 PM
WORKSPACE: AHTD
L:\2021\2101046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_04_HWY. 67 RAMP I.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	274	325
		CROSS SECTIONS				

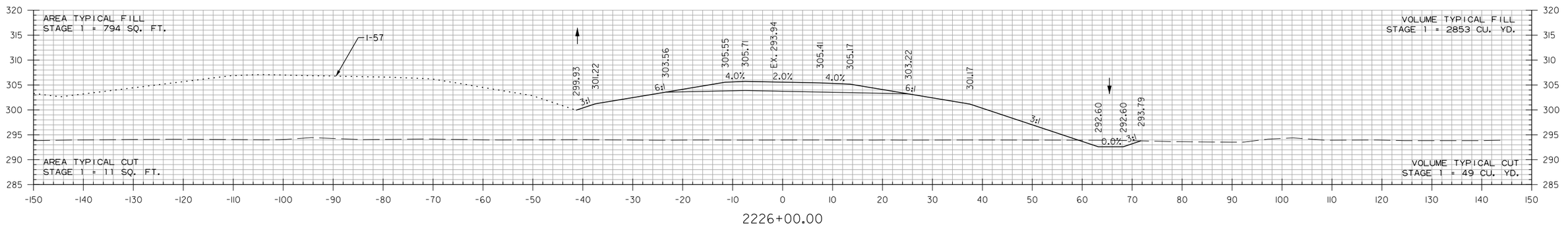


2228+00.00

STA. 2227+10.00 BEGIN SUPERELEVATION



2227+00.00

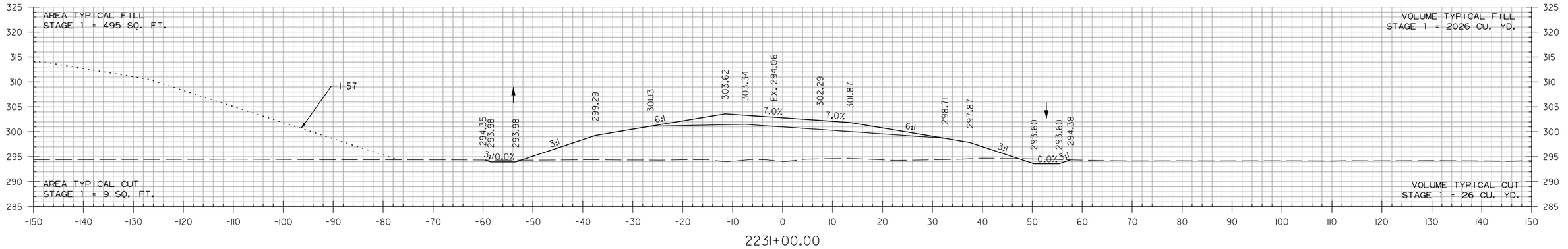


2226+00.00

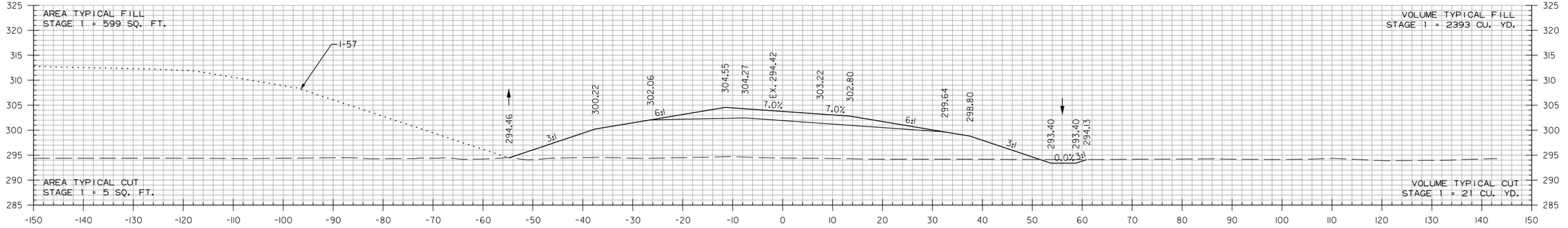
HWY. 67 RAMP 1
STA. 2226+00 TO STA. 2228+00

CGGervasini 6/28/2024 1:34:28 PM
WORKSPACE: AHTD
L:\2021\21T0I046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_04_HWY. 67 RAMP 1.dgn
REVISED DATE:

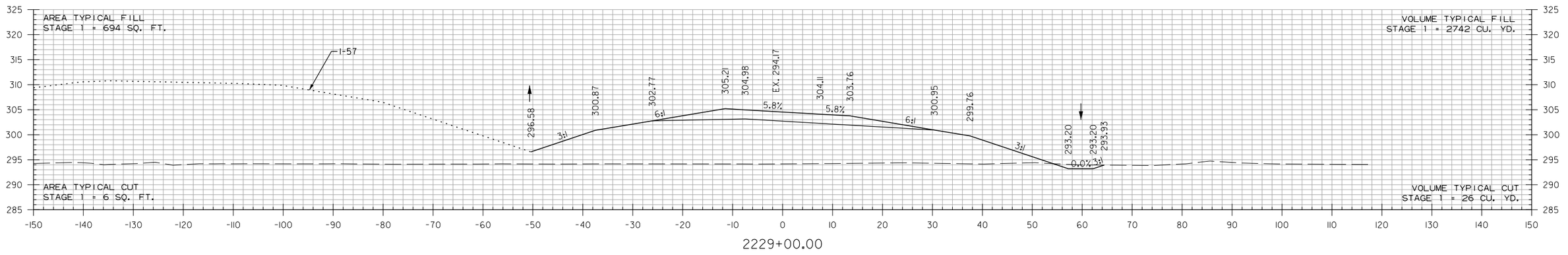
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	275	325
		CROSS SECTIONS				



STA. 2230+05.00
BEGIN SP. DT. LT. -0.20%
ELEV. 294.17



STA. 2229+60.00 MAX. SUPERELEVATION (0.070'/')



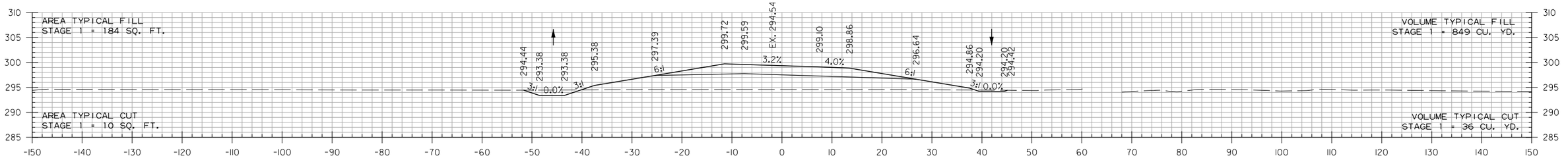
HWY. 67 RAMP I
STA. 2229+00 TO STA. 2231+00

CGervasini 6/28/2024 1:34:29 PM
WORKSPACE: AHTD
L:\2021\21T0046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_04_HWY. 67 RAMP 1.dgn
REVISED DATE:

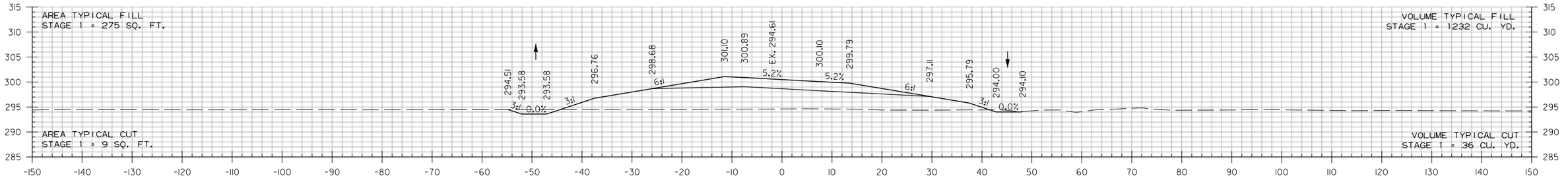
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	276	325
		CROSS SECTIONS				

STA. 2234+62.36 END SUPERELEVATION

STA. 2234+40.00
END SP. DT. RT. 0.20%
ELEV. 294.28

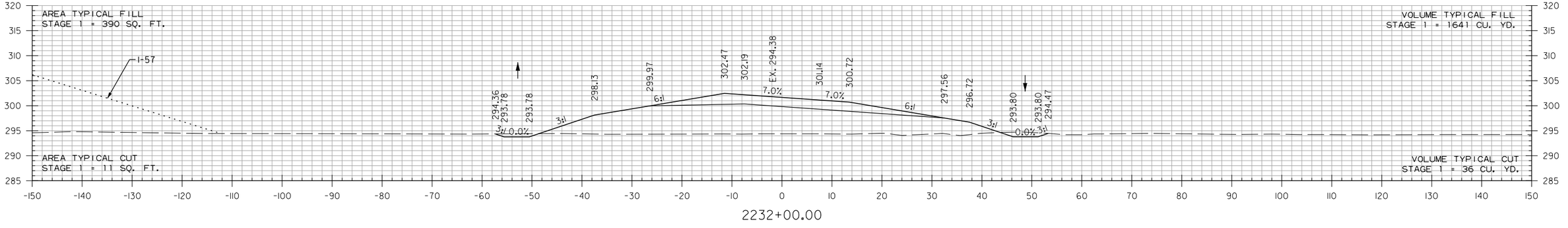


2234+00.00



2233+00.00

STA. 2232+12.36 MAX. SUPERELEVATION (0.070'/')



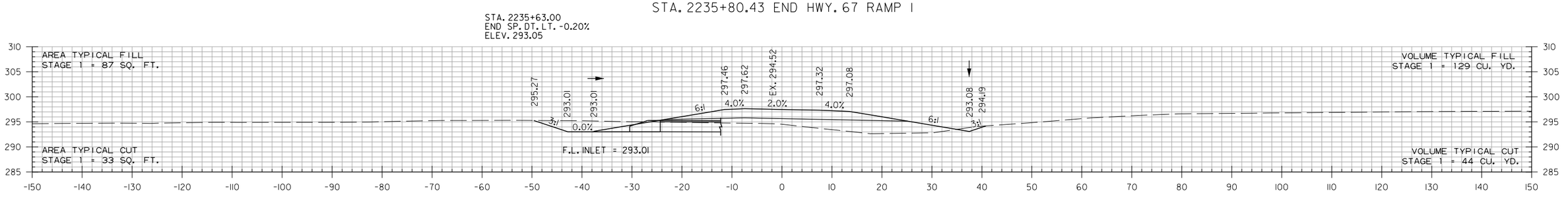
2232+00.00

HWY. 67 RAMP 1
STA. 2232+00 TO STA. 2234+00

CGervasini 6/28/2024 1:34:29 PM
WORKSPACE: AHTD
L:\2021\21T0146 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_04_HWY. 67 RAMP 1.dgn
REVISED DATE:

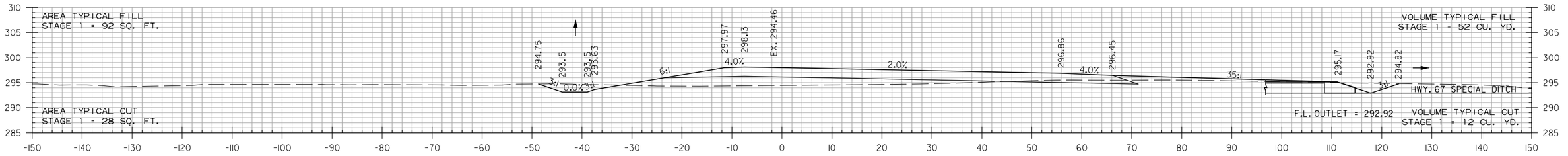
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	277	325
		CROSS SECTIONS				

STA. 2235+80.43 END HWY. 67 RAMP I

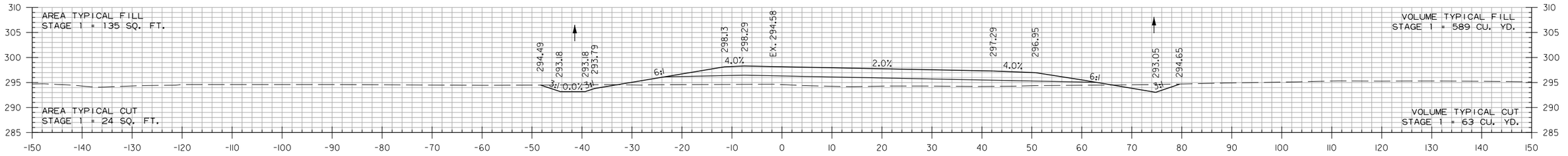


2235+51.16

STA. 2235+43 CONSTRUCT
QUAD. 24" X 138' R.C. PIPE CULVERT
15° LT. FWD. SKEW
(CLASS V) (TYPE 3 BEDDING)
WITH FES LT. & RT.
Q50 = 48.5 CFS DA = 45.5 ACRES
24" R.C. PIPE = 552 LIN. FT.
24" FES = 8 EA.



2235+12.28

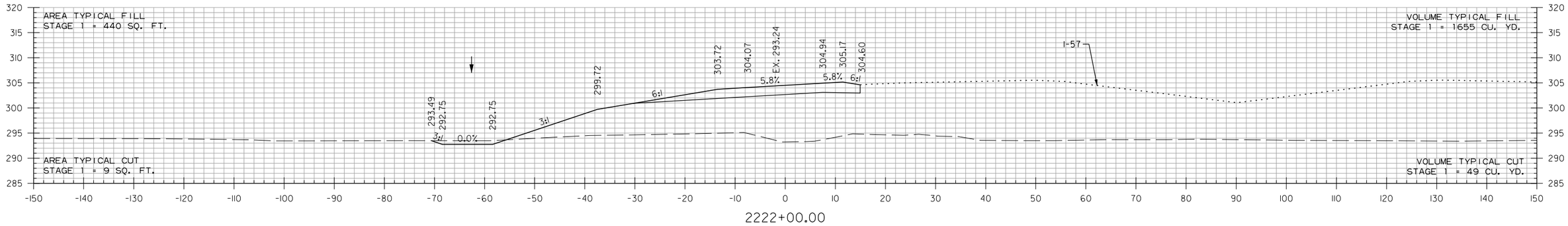


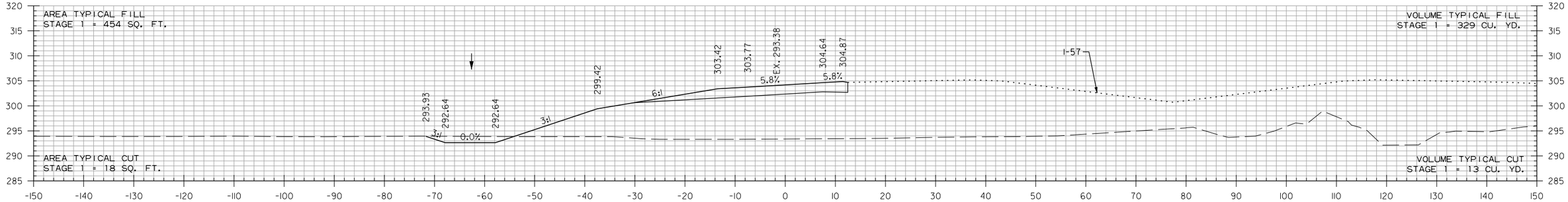
2235+00.00

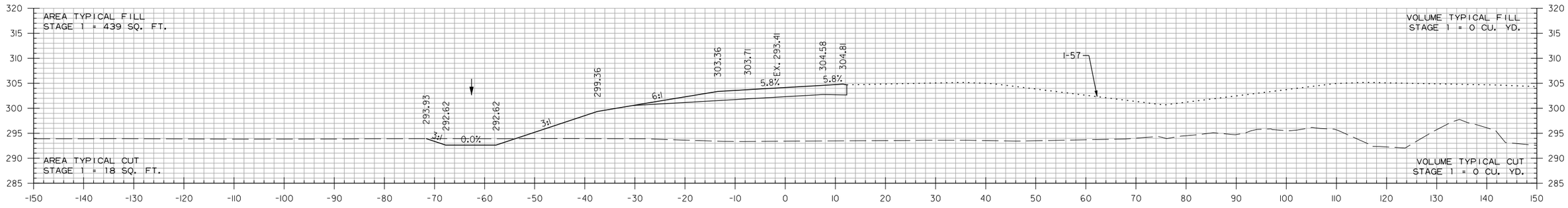
HWY. 67 RAMP I
STA. 2235+00 TO STA. 2235+51

CGervasini 6/28/2024 1:34:29 PM
WORKSPACE: AHTD
L:\2021\21T0046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_04_HWY. 67 RAMP I.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	278	325
		CROSS SECTIONS				







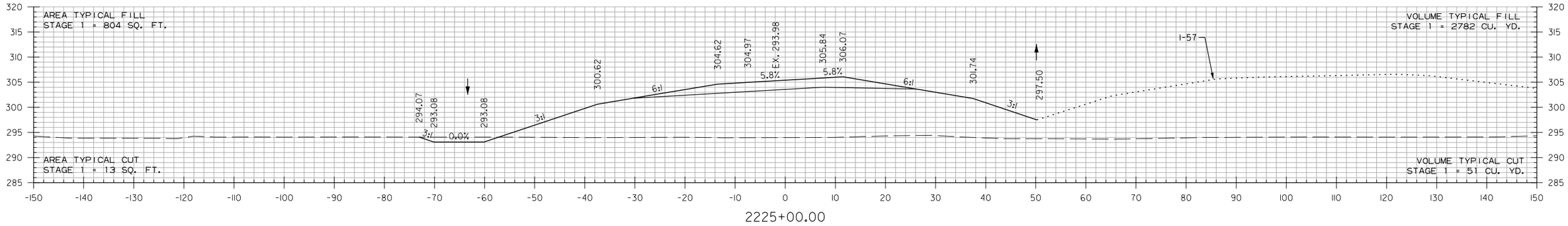
STA. 2220+80.07
BEGIN SP. DT. LT. 0.11%
ELEV. 292.62

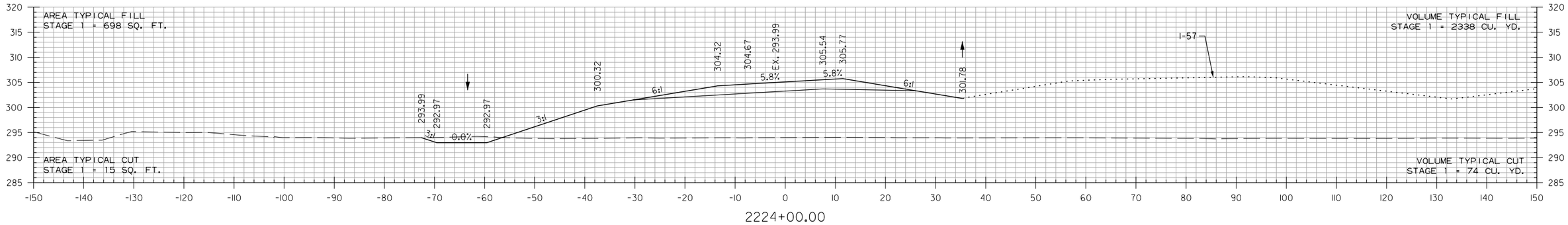
2220+80.07
STA. 2220+80.07 BEGIN HWY. 67 RAMP 4
STA. 2219+93.74 MAX. SUPERELEVATION (0.058'/')
STA. 2216+93.74 BEGIN SUPERELEVATION

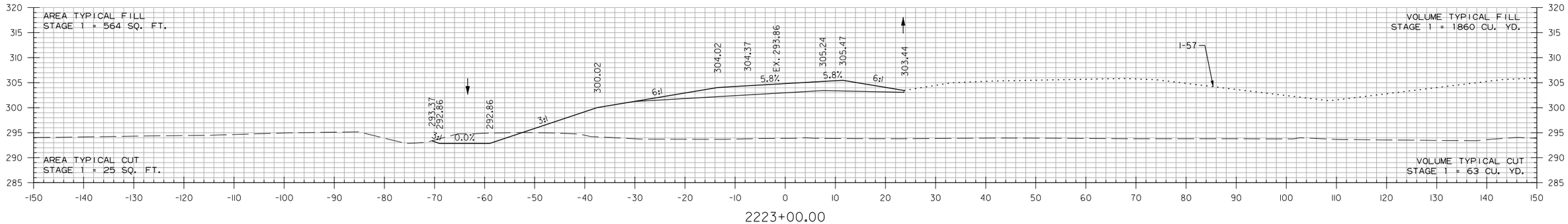
HWY. 67 RAMP 4
STA. 2220+80 TO STA. 2222+00

CGervasini 6/28/2024 1:34:29 PM
WORKSPACE: AHTD
L:\202\2101046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_05_HWY. 67 RAMP 4.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	279	325
		CROSS SECTIONS				



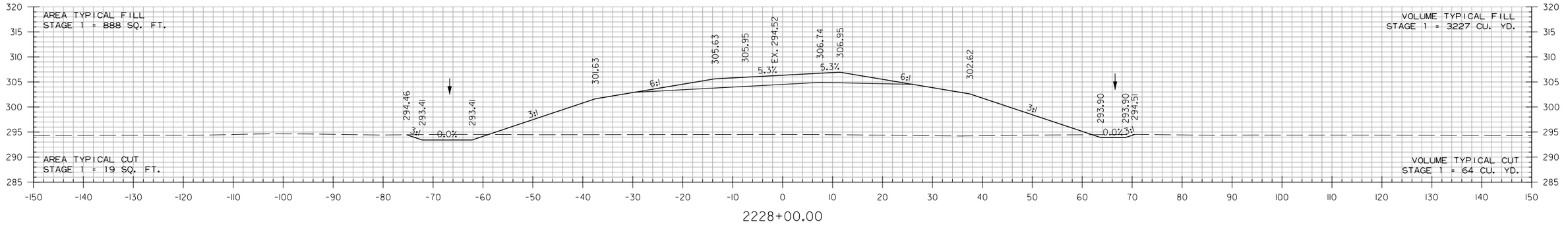




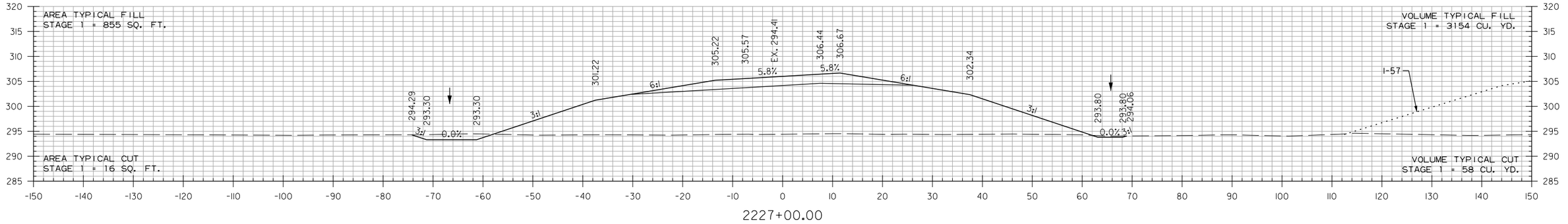
HWY. 67 RAMP 4
STA. 2223+00 TO STA. 2225+00

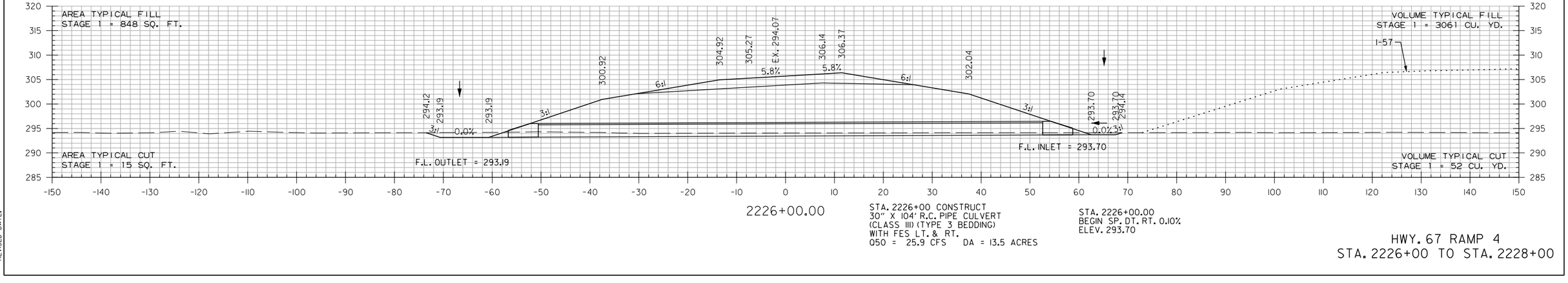
CGGervasini 6/28/2024 1:34:30 PM
WORKSPACE: AHTD
L:\2021\21T0046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_05_HWY. 67 RAMP 4.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	280	325
		CROSS SECTIONS				



STA. 2227+57.62 MAX. SUPERELEVATION (0.058'/')





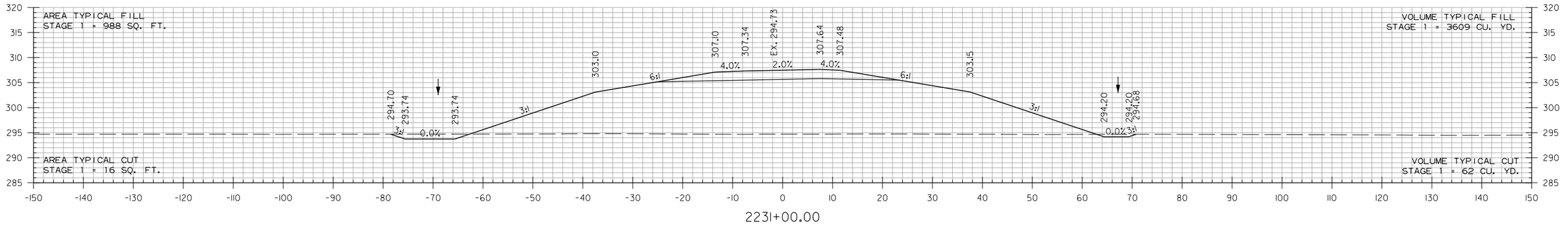
STA. 2226+00 CONSTRUCT
30" X 104' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
WITH FES LT. & RT.
Q50 = 25.9 CFS DA = 13.5 ACRES

STA. 2226+00.00
BEGIN SP. DT. RT. 0.10%
ELEV. 293.70

HWY. 67 RAMP 4
STA. 2226+00 TO STA. 2228+00

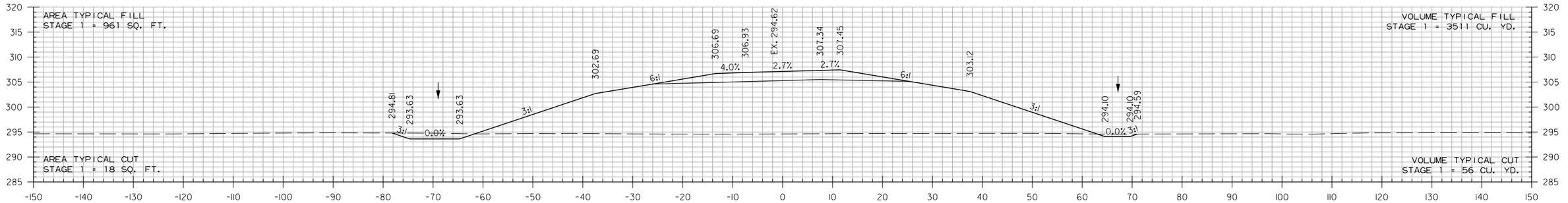
CGGervasini 6/28/2024 1:34:30 PM
WORKSPACE: AHTD
L:\2021\21T0046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_05_HWY. 67 RAMP 4.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	281	325
		CROSS SECTIONS				

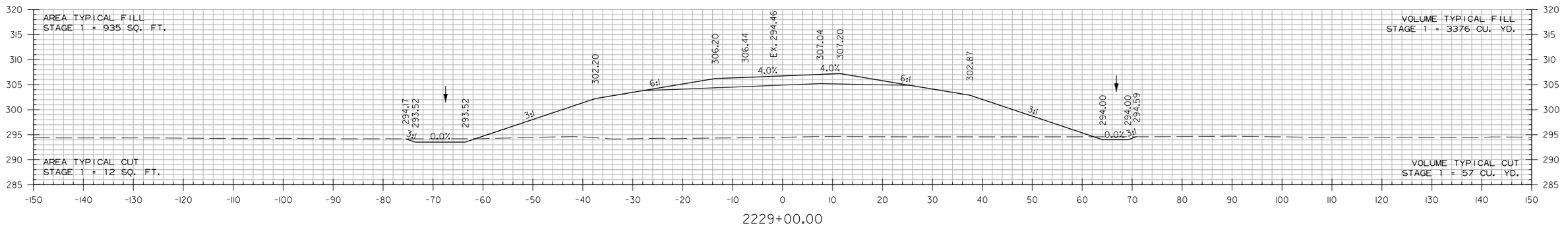


2231+00.00

STA. 2230+57.62 END SUPERELEVATION



2230+00.00

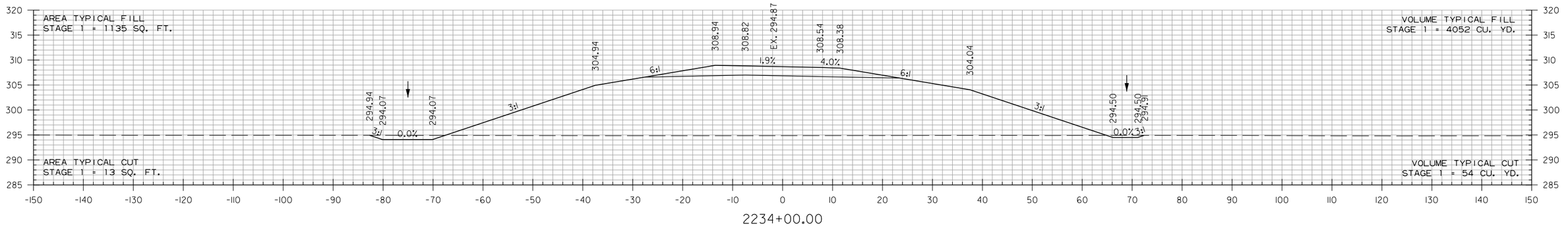


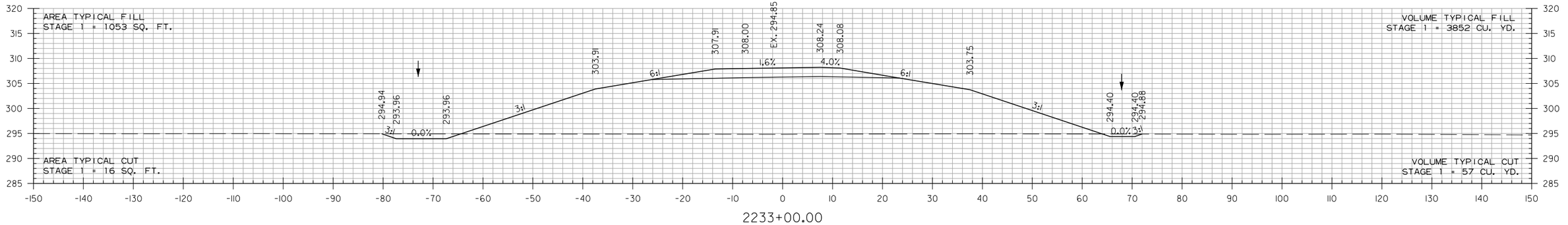
2229+00.00

HWY. 67 RAMP 4
STA. 2229+00 TO STA. 2231+00

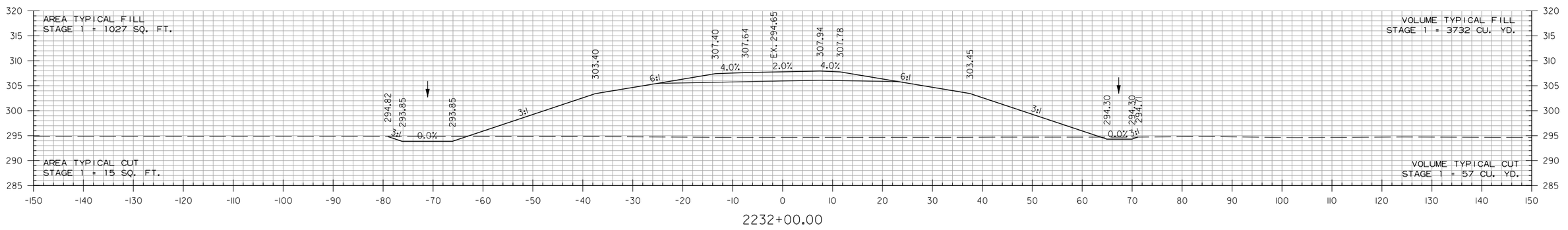
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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	282	325
		CROSS SECTIONS				





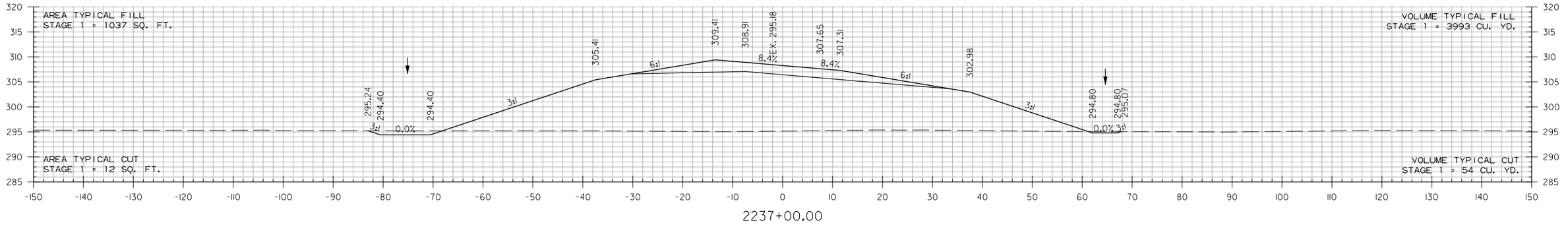
STA. 2232+87.55 BEGIN SUPERELEVATION

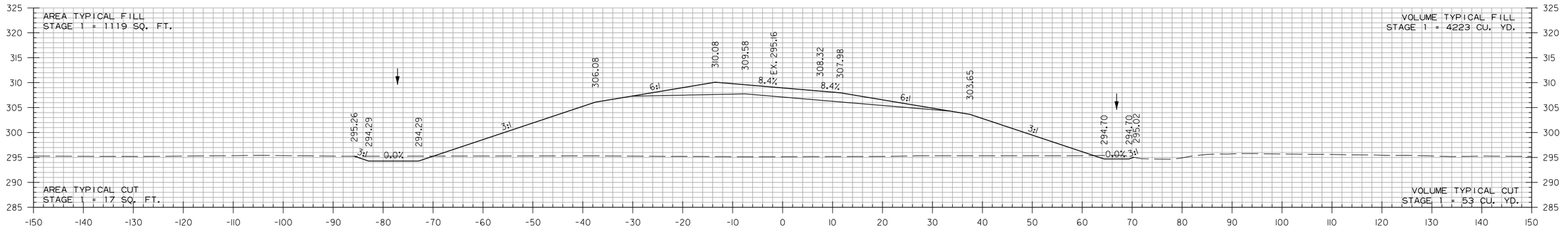


HWY. 67 RAMP 4
STA. 2232+00 TO STA. 2234+00

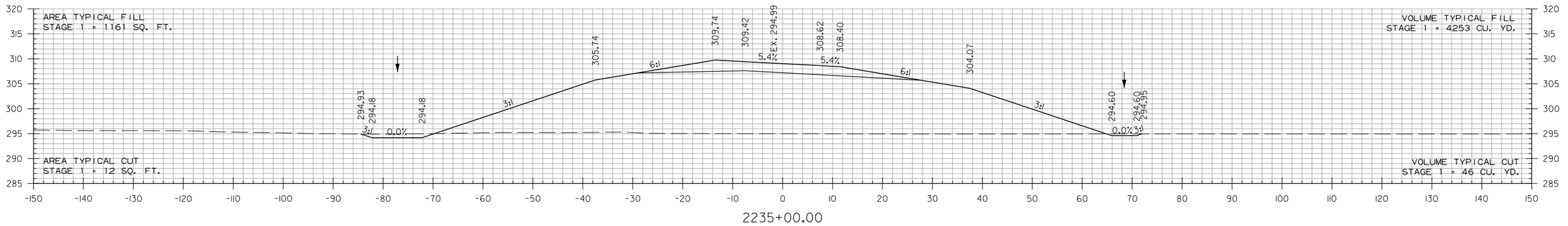
CGervasini 6/28/2024 1:34:30 PM
WORKSPACE: AHTD
L:\2021\210104G - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_05_HWY. 67 RAMP 4.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	283	325
		CROSS SECTIONS				





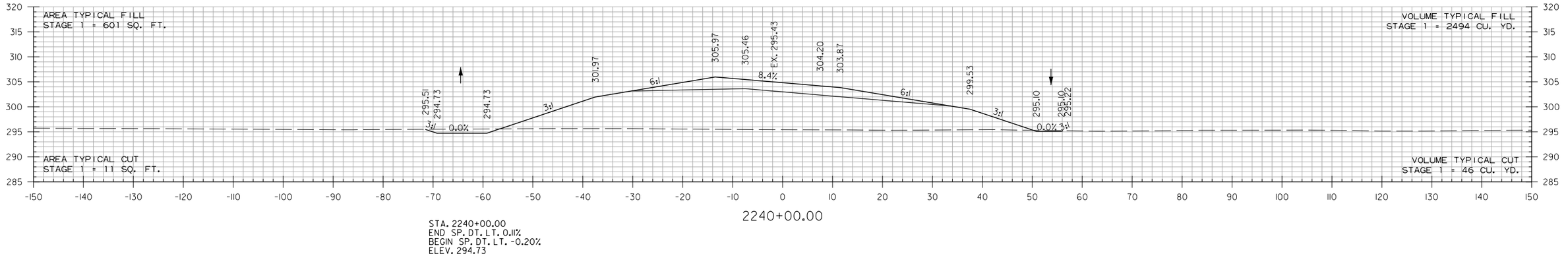
STA. 2235+87.55 MAX. SUPERELEVATION (0.084'/')



HWY. 67 RAMP 4
STA. 2235+00 TO STA. 2237+00

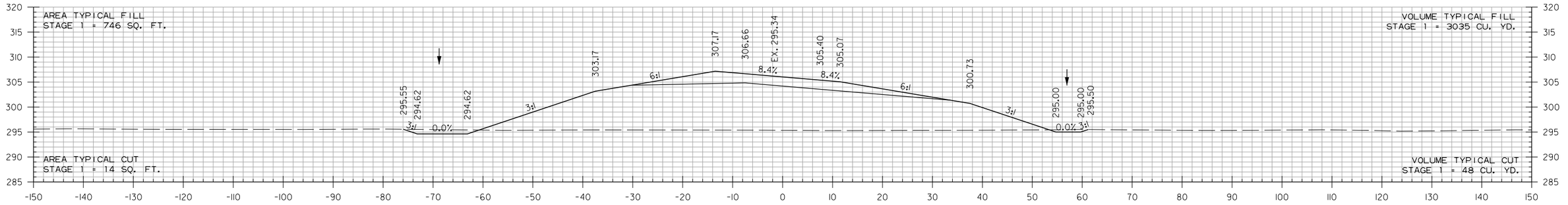
CGGervasini 6/28/2024 1:34:30 PM
WORKSPACE: AHTD
L:\2021\21T0I046 - ARDOT I00512 Walnut Ridge - MO I-57\Drawings\r-I0II72\r-I0II72_CX_05_HWY. 67 RAMP 4.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	284	325
		CROSS SECTIONS				

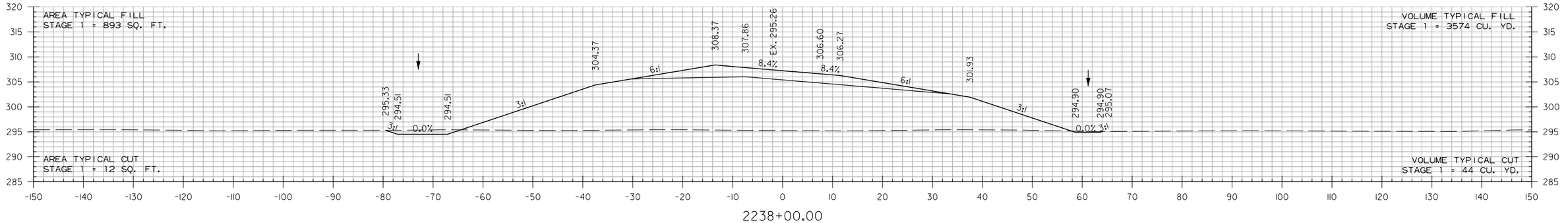


2240+00.00

STA. 2240+00.00
END SP. DT. LT. 0.11%
BEGIN SP. DT. LT. -0.20%
ELEV. 294.73



2239+00.00

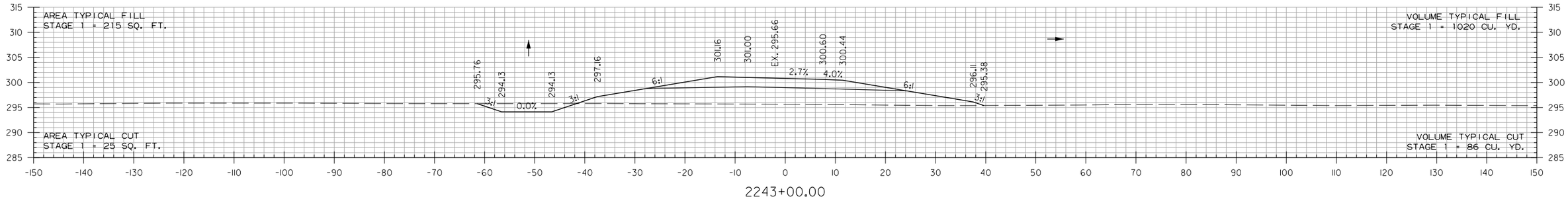


2238+00.00

HWY. 67 RAMP 4
STA. 2238+00 TO STA. 2240+00

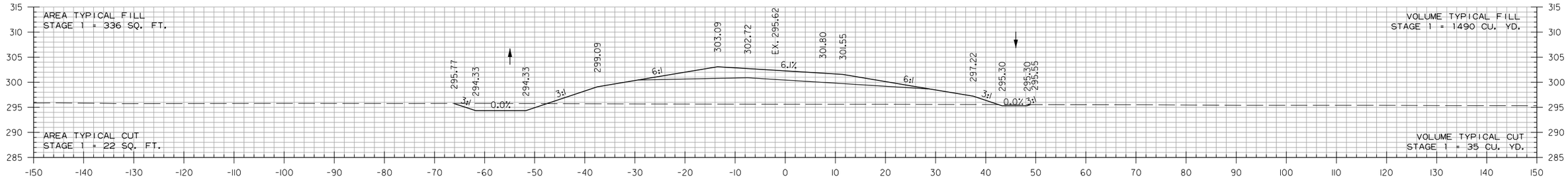
CGGervasini 6/28/2024 1:34:31 PM
WORKSPACE: AHTD
L:\2021\21101046 - ARDOT 100512 Walnut Ridge - M0 I-57\Drawings\r101172\r101172_CX_05_HWY. 67 RAMP 4.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	285	325
		CROSS SECTIONS				



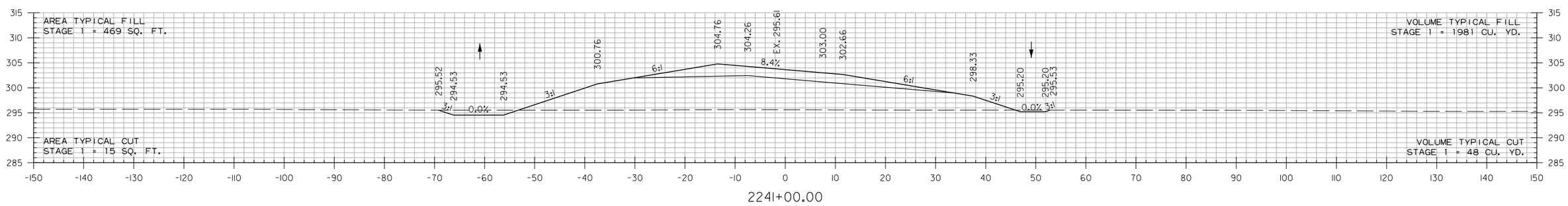
2243+00.00

STA. 2242+50.00
END SP. DT. RT. 0.10%
ELEV. 295.35



2242+00.00

STA. 2241+34.63 MAX. SUPERELEVATION (0.084'/')

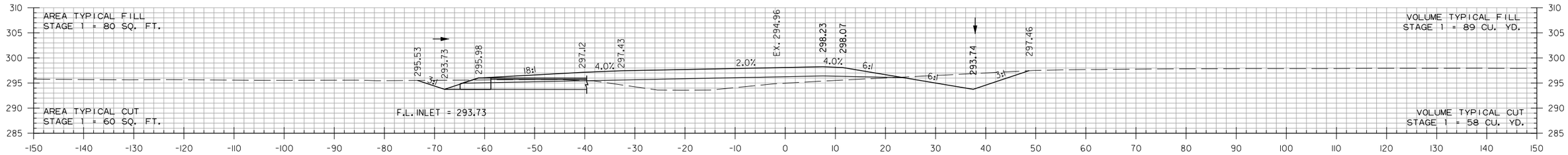


2241+00.00

HWY. 67 RAMP 4
STA. 2241+00 TO STA. 2243+00

CGGervasini 6/28/2024 11:34:31 PM
WORKSPACE: AHTD
L:\2021\21T0046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_05_HWY. 67 RAMP 4.dgn
REVISED DATE:

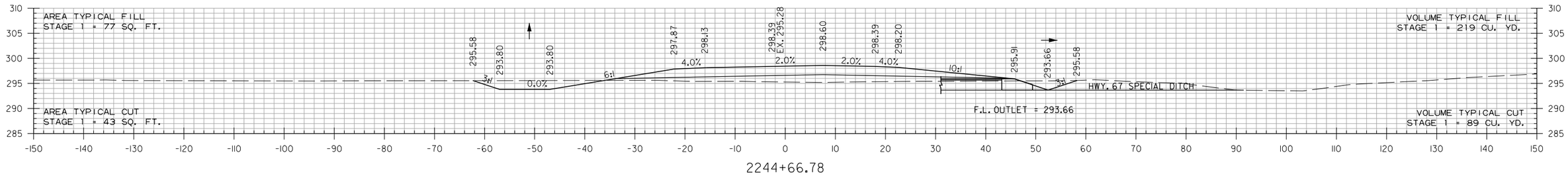
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	286	325
		CROSS SECTIONS				



2244+97.38

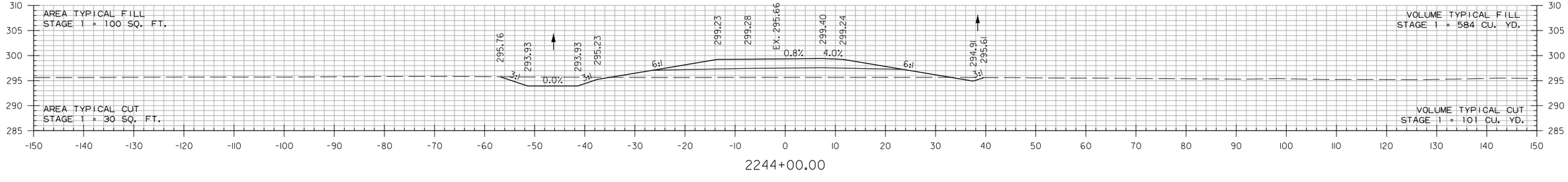
STA. 2244+90.00
END SP. DT. LT. -0.20%
ELEV. 293.75

STA. 2244+80 CONSTRUCT
TRP. 24" X 106' R.C. PIPE CULVERT
15° LT. FWD. SKEW
(CLASS V) (TYPE 3 BEDDING)
WITH FES LT. & RT.
Q50 = 32.9 CFS DA = 29.9 ACRES
24" R.C. PIPE = 318 LIN. FT.
24" FES = 6 EA.



2244+66.78

STA. 2244+34.63 END SUPERELEVATION



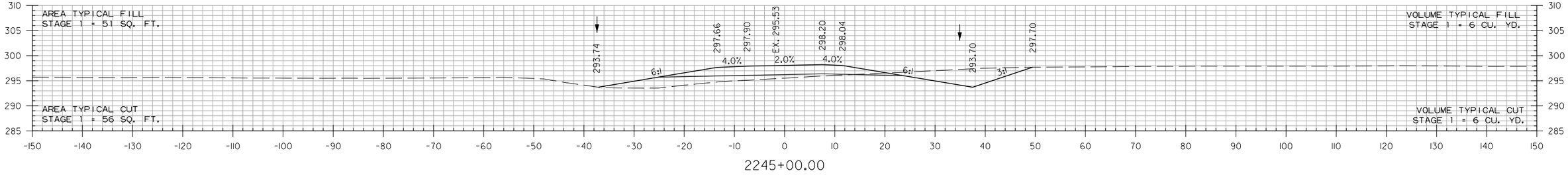
2244+00.00

HWY. 67 RAMP 4
STA. 2244+00 TO STA. 2244+97

CGGervasini 6/28/2024 1:34:31 PM
WORKSPACE: AHTD
L:\2021\21T0I046 - ARDOT 100502 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_05_HWY. 67 RAMP 4.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	287	325
		CROSS SECTIONS				

STA. 2245+13.99 END HWY. 67 RAMP 4



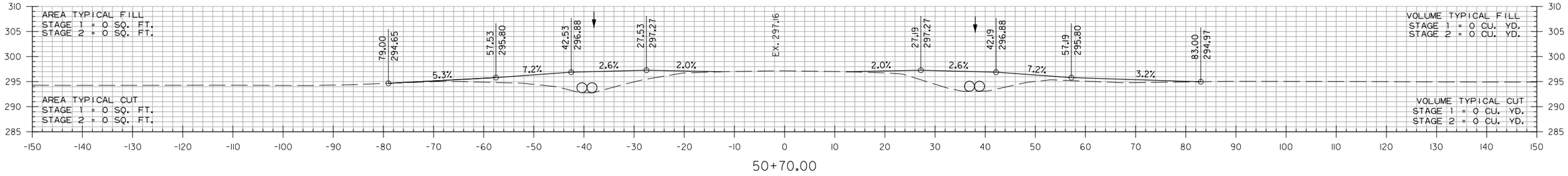
HWY. 67 RAMP 4
STA. 2245+00 TO STA. 2245+00

CGervasini 6/28/2024 1:34:31PM
WORKSPACE: AHTD
L:\2021\21T0046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_05_HWY. 67 RAMP 4.dgn
REVISED DATE:

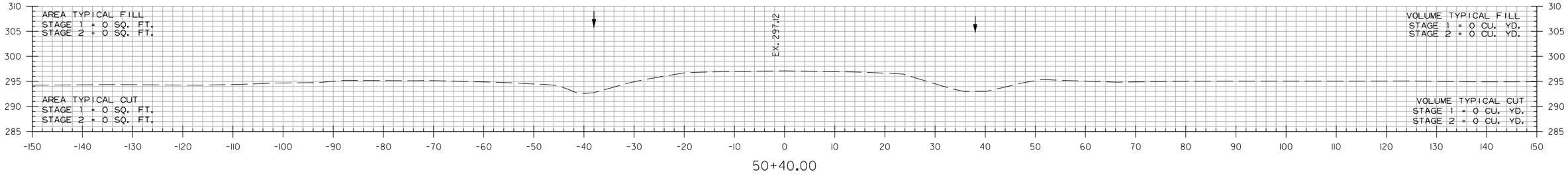
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	288	325
		CROSS SECTIONS				

STA. 50+70 INSTALL
DBL. 24" X 46' PIPE CULVERT
LT. SIDE DRAIN
CONSTRUCT APPROACH = 85 CU. YDS.

STA. 50+70 INSTALL
DBL. 24" X 46' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 85 CU. YDS.

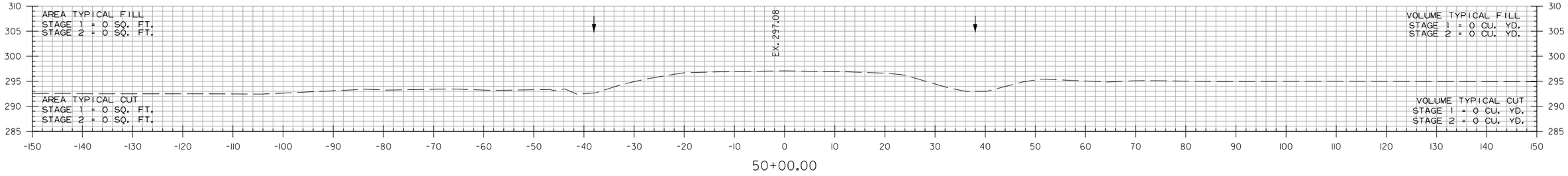


50+70.00



50+40.00

STA. 50+40.00 BEGIN 100' TRANSITION

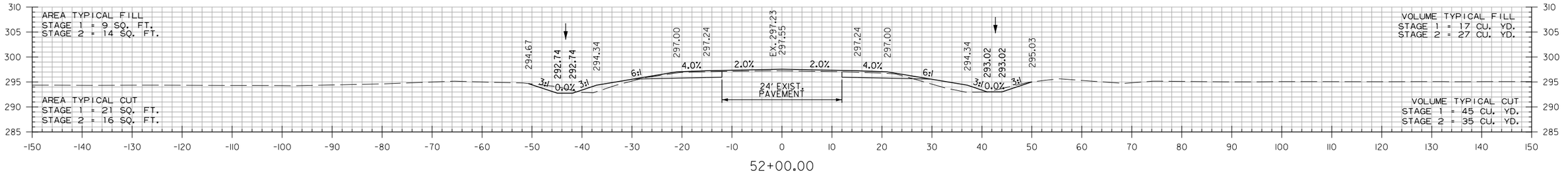


50+00.00

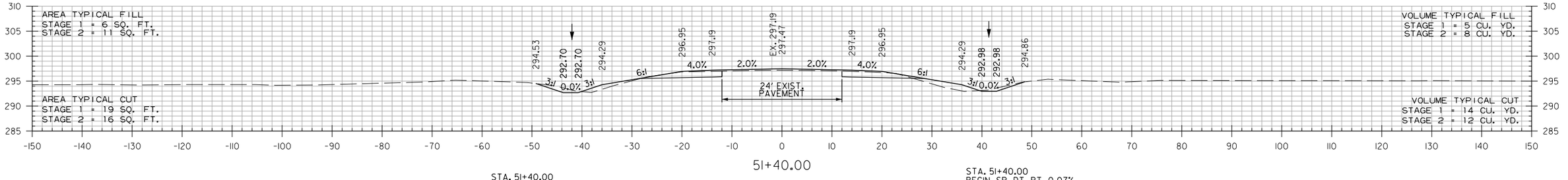
HWY. 67
STA. 50+00 TO STA. 50+70

CGervasini 6/28/2024 1:34:32 PM
WORKSPACE: AHTD
L:\2021\210046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_06.HWY. 67.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	289	325
		CROSS SECTIONS				



52+00.00

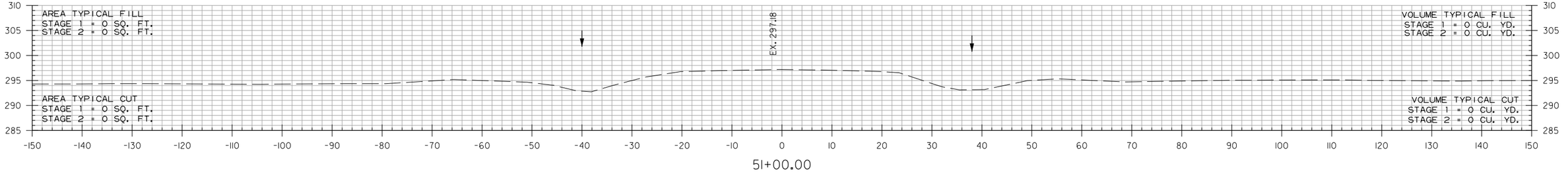


51+40.00

STA. 51+40.00
BEGIN SP. DT. LT. 0.06%
ELEV. 292.70

STA. 51+40.00
BEGIN SP. DT. RT. 0.07%
ELEV. 292.98

STA. 51+40.00 BEGIN HWY. 67

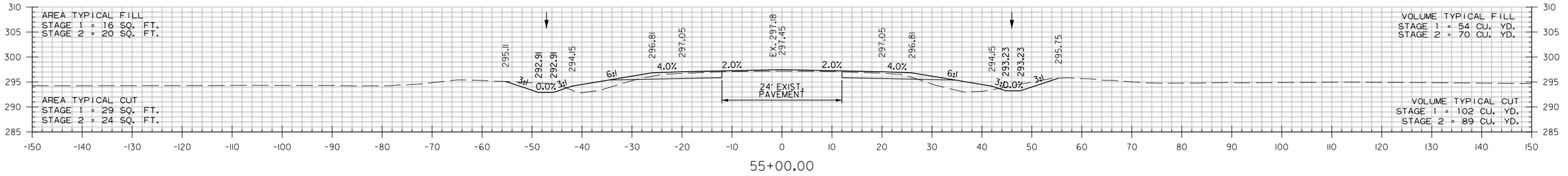


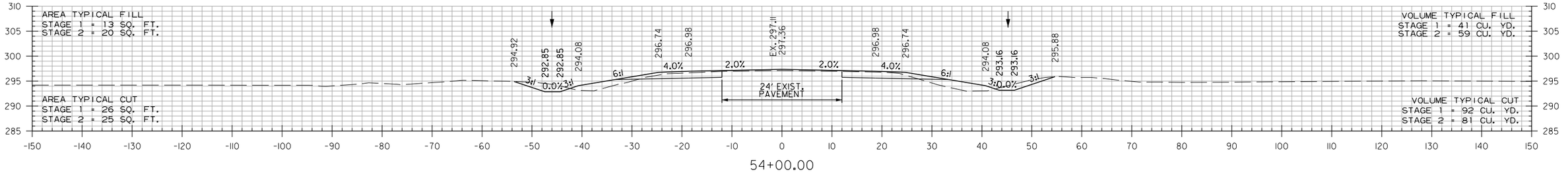
51+00.00

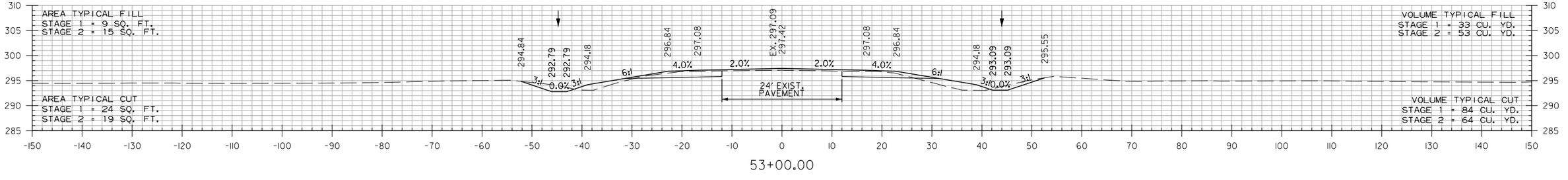
HWY. 67
STA. 51+00 TO STA. 52+00

CGervasini 6/28/2024 1:34:32 PM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	290	325
		CROSS SECTIONS				



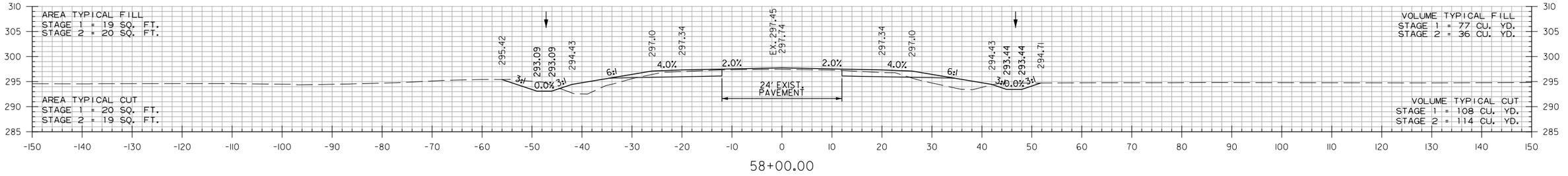


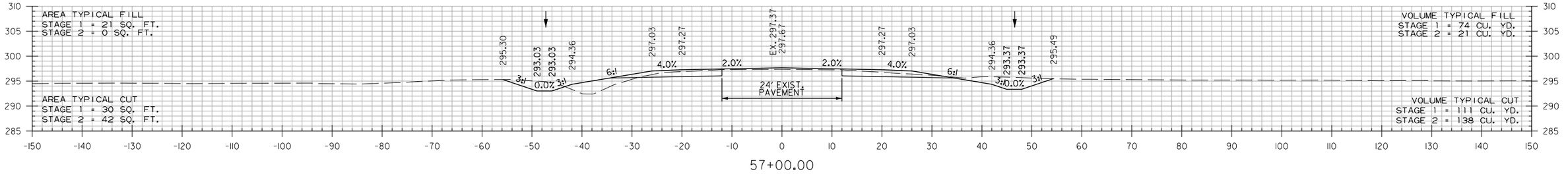


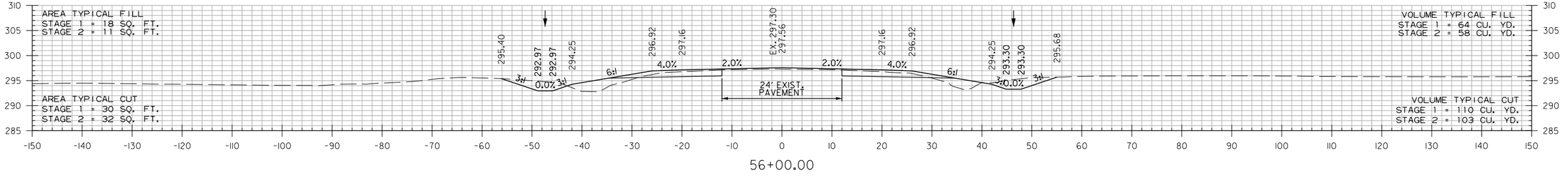
HWY. 67
STA. 53+00 TO STA. 55+00

CGGervasini 6/28/2024 1:34:32 PM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	291	325
		CROSS SECTIONS				



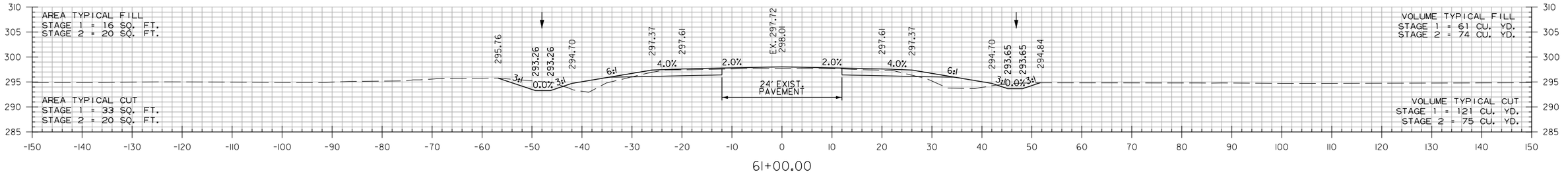




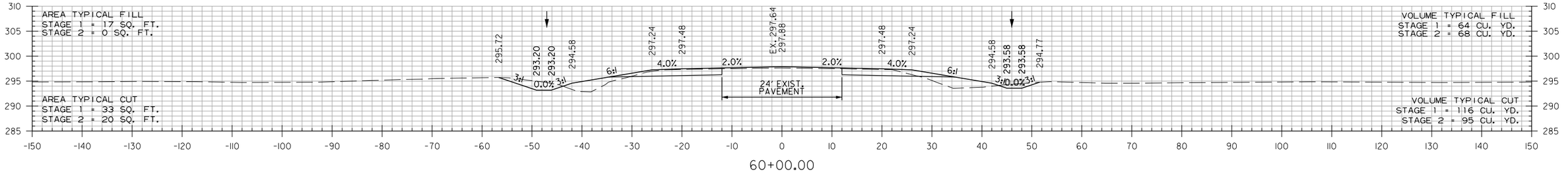
HWY. 67
STA. 56+00 TO STA. 58+00

CGGervasini 6/28/2024 1:34:32 PM
WORKSPACE: AHTD
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REVISED DATE:

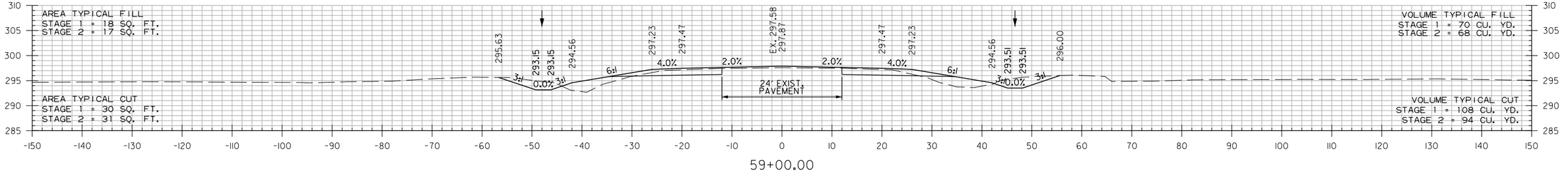
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	292	325
		CROSS SECTIONS				



61+00.00



60+00.00

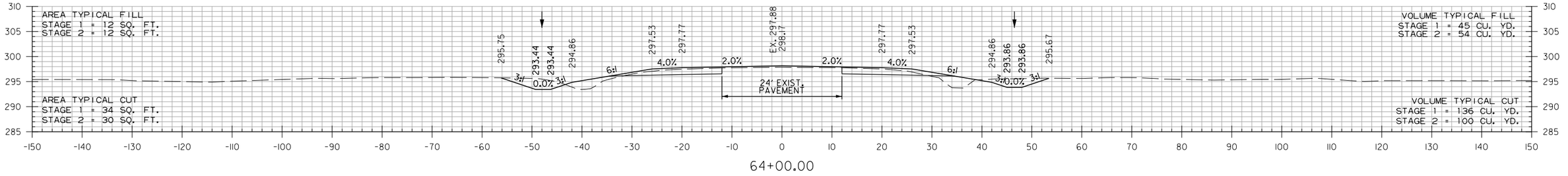


59+00.00

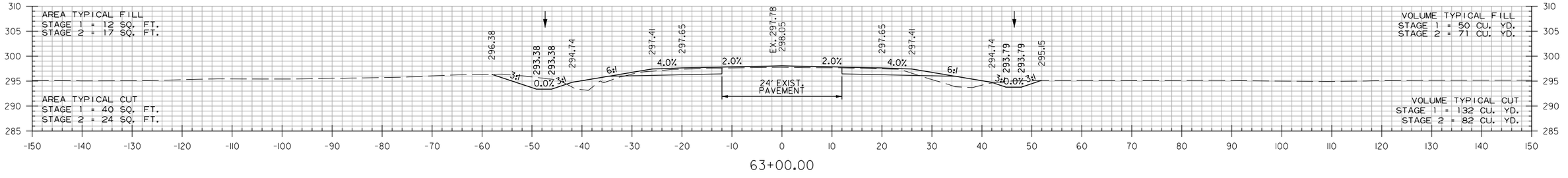
HWY. 67
STA. 59+00 TO STA. 61+00

CGGervasini 6/28/2024 1:34:33 PM
WORKSPACE: AHTD
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REVISED DATE:

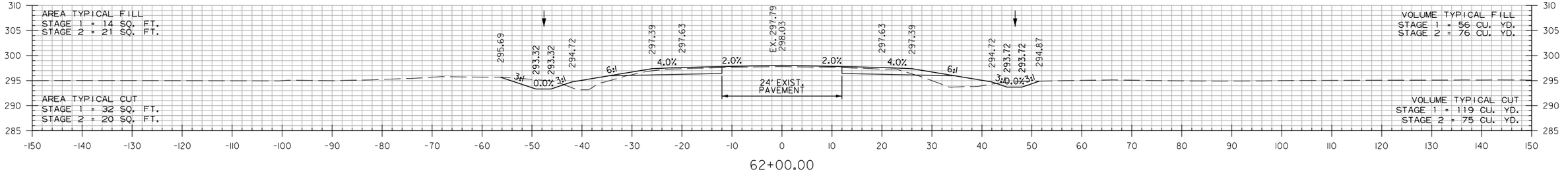
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	293	325
		CROSS SECTIONS				



64+00.00



63+00.00

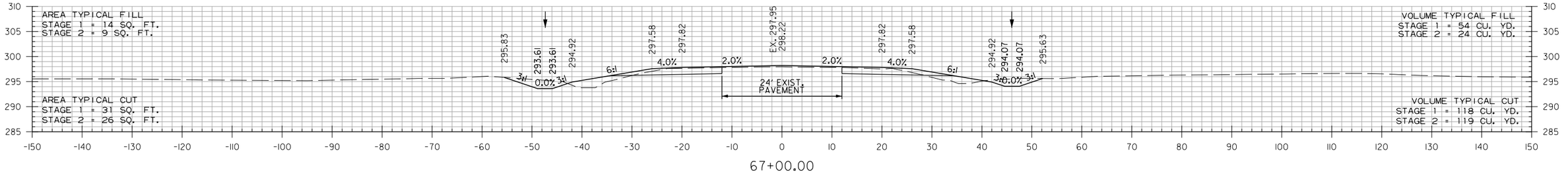


62+00.00

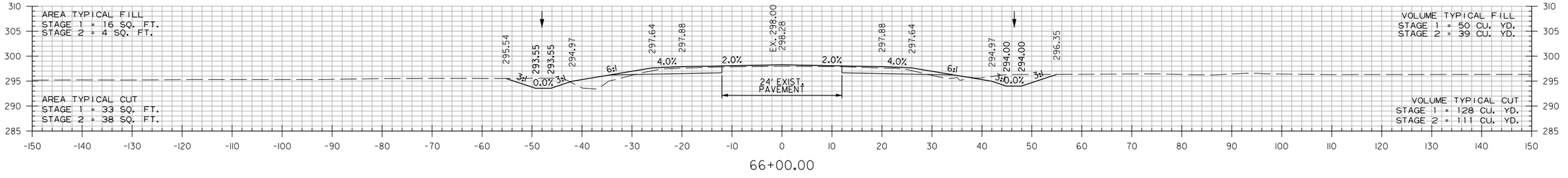
HWY. 67
STA. 62+00 TO STA. 64+00

CGGervasini 6/28/2024 1:34:33 PM
WORKSPACE: AHTD
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REVISED DATE:

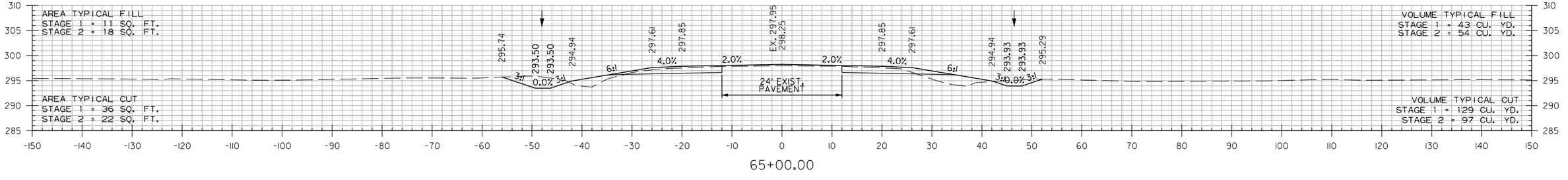
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	294	325
		CROSS SECTIONS				



67+00.00



66+00.00

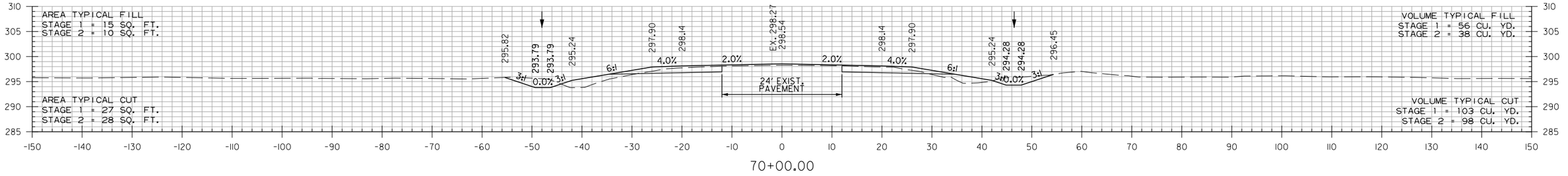


65+00.00

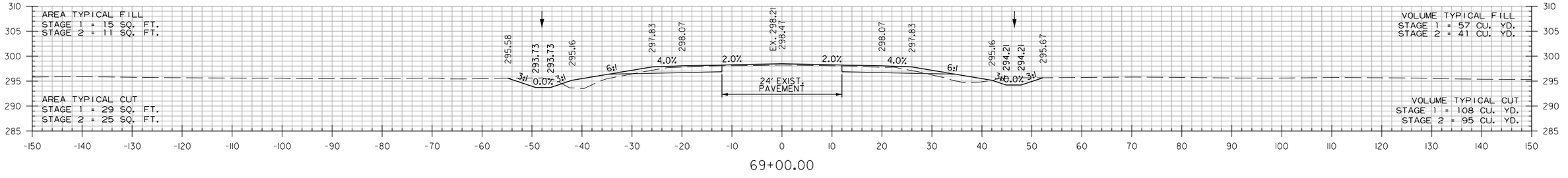
HWY. 67
STA. 65+00 TO STA. 67+00

CGGervasini 6/28/2024 1:34:33 PM
WORKSPACE: AHTD
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REVISED DATE:

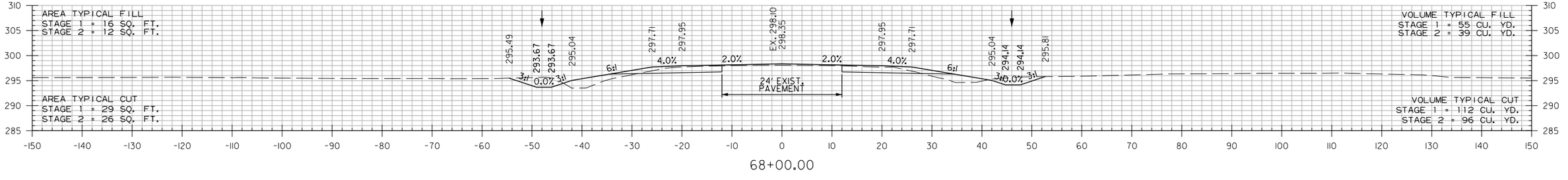
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	295	325
		CROSS SECTIONS				



70+00.00



69+00.00

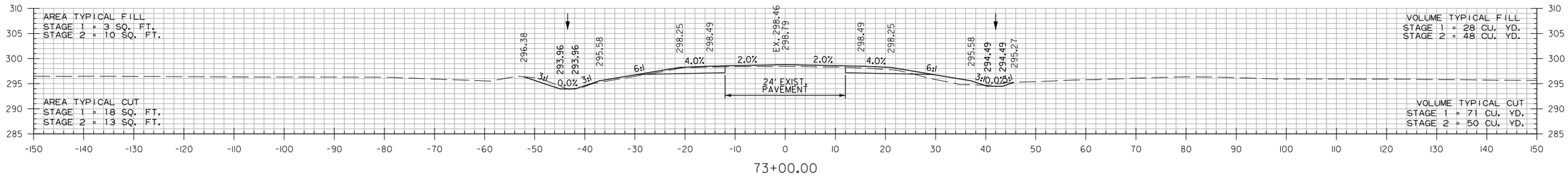


68+00.00

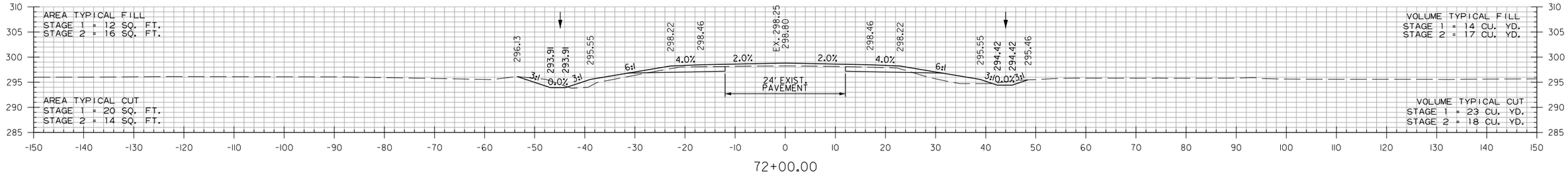
HWY. 67
STA. 68+00 TO STA. 70+00

CGGervasini 6/28/2024 1:34:33 PM
WORKSPACE: AHTD
L:\2021\210046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_06.HWY. 67.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	296	325
		CROSS SECTIONS				

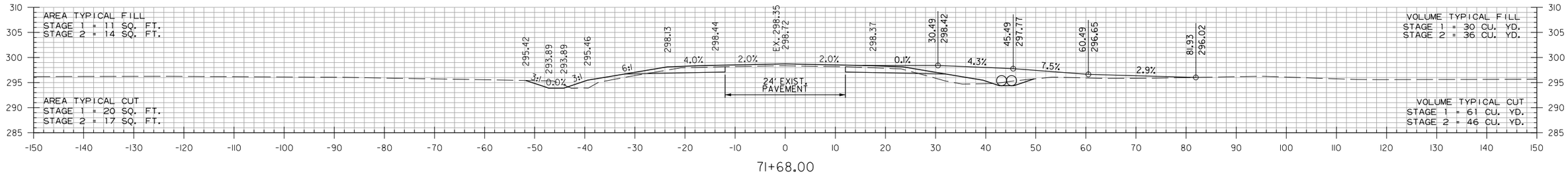


73+00.00

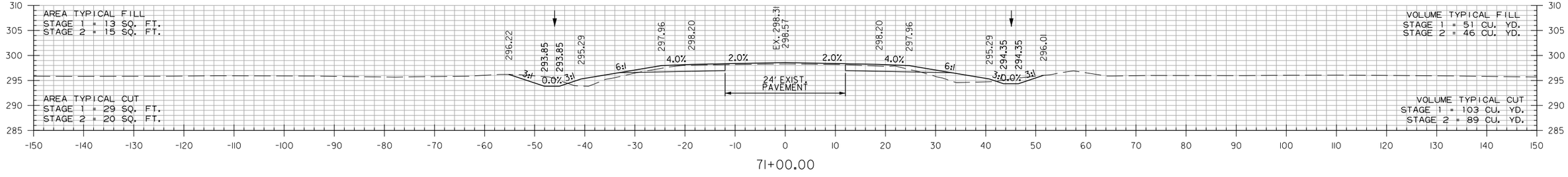


72+00.00

STA. 71+68 INSTALL
DBL. 24" X 48' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 75 CU. YDS.



71+68.00



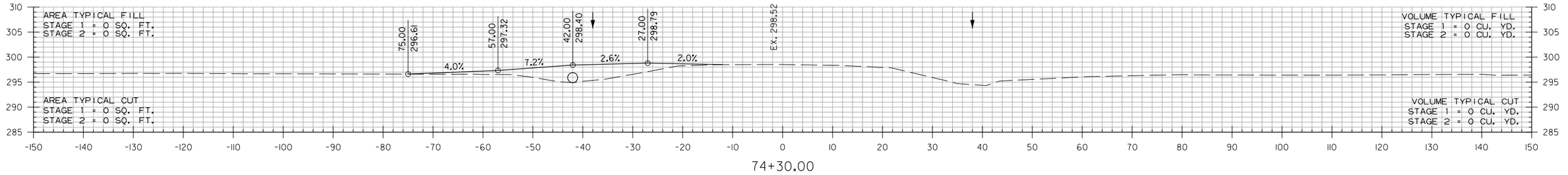
71+00.00

HWY. 67
STA. 71+00 TO STA. 73+00

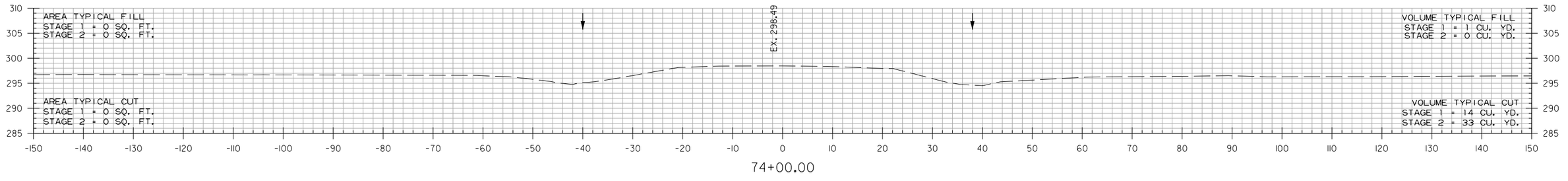
CGGervasini 6/28/2024 1:34:33 PM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	297	325
		CROSS SECTIONS				

STA. 74+30 INSTALL
24" X 44' PIPE CULVERT
LT. SIDE DRAIN
CONSTRUCT APPROACH = 78 CU. YDS.

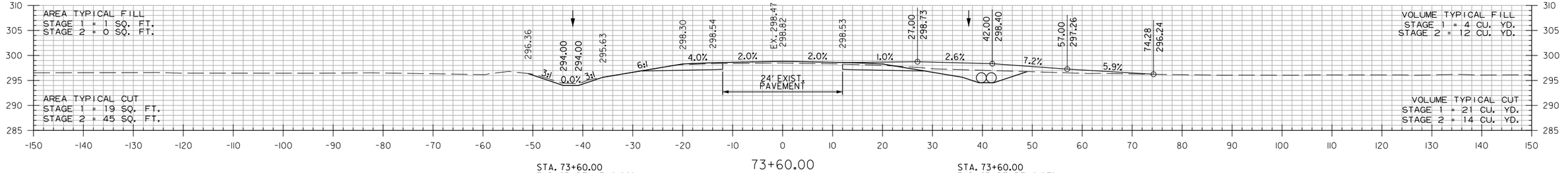


74+30.00



74+00.00

STA. 73+60 IN PLACE
18" X 24' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
DBL. 24" X 46' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 72 CU. YDS.



STA. 73+60.00
END SP. DT. LT. 0.06%
ELEV. 294.00

73+60.00

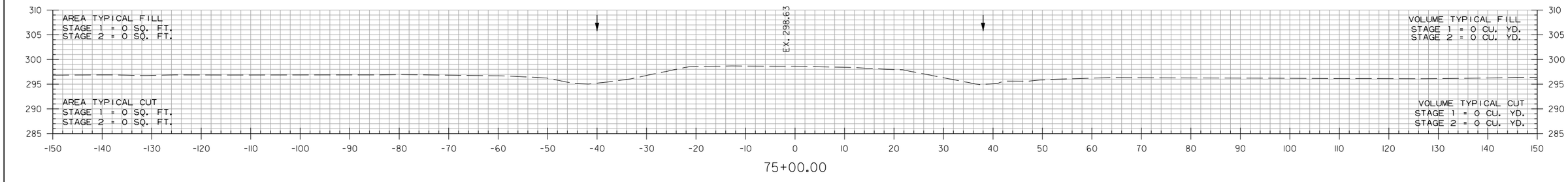
STA. 73+60.00
END SP. DT. RT. 0.07%
ELEV. 294.53

STA. 73+60.00 END HWY. 67

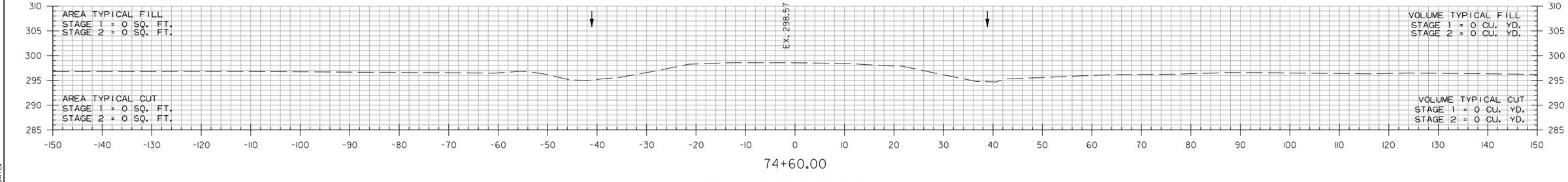
HWY. 67
STA. 73+60 TO STA. 74+30

CGGervasini 6/28/2024 1:34:34 PM
WORKSPACE: AHTD
L:\2021\2101046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_06.HWY. 67.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	298	325
		CROSS SECTIONS				



75+00.00



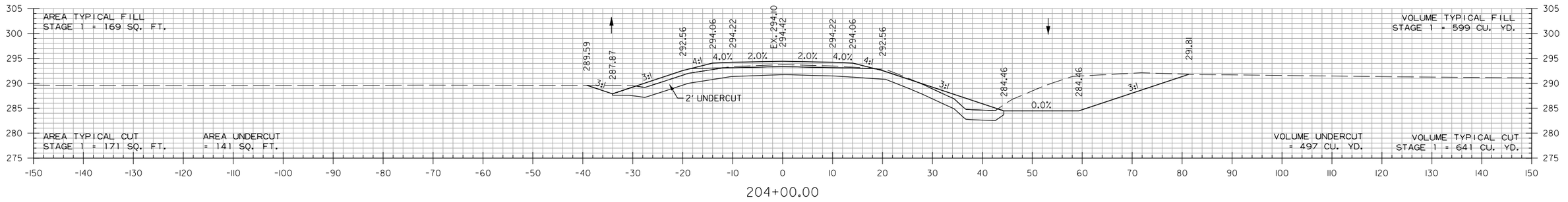
74+60.00

STA. 74+60.00 END 100' TRANSITION

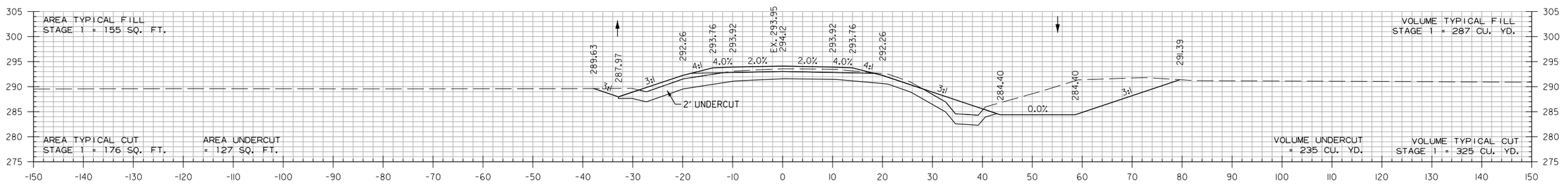
HWY. 67
STA. 74+60 TO STA. 75+00

CGervasini 6/28/2024 1:34:34 PM
WORKSPACE: AHTD
L:\2021\210046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_06.HWY. 67.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	299	325
		CROSS SECTIONS				



204+00.00

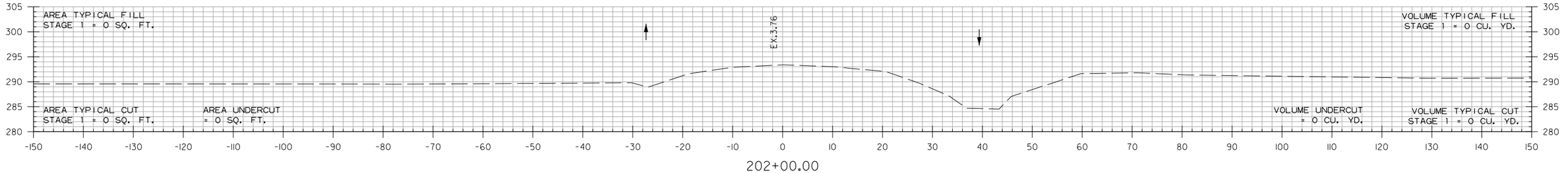


203+00.00

STA. 203+00.00
BEGIN SP. DT. LT. -0.10%
ELEV. 287.97

STA. 203+00.00 BEGIN C.R. 139

STA. 203+00.00
BEGIN SP. DT. RT. 0.06%
ELEV. 284.40



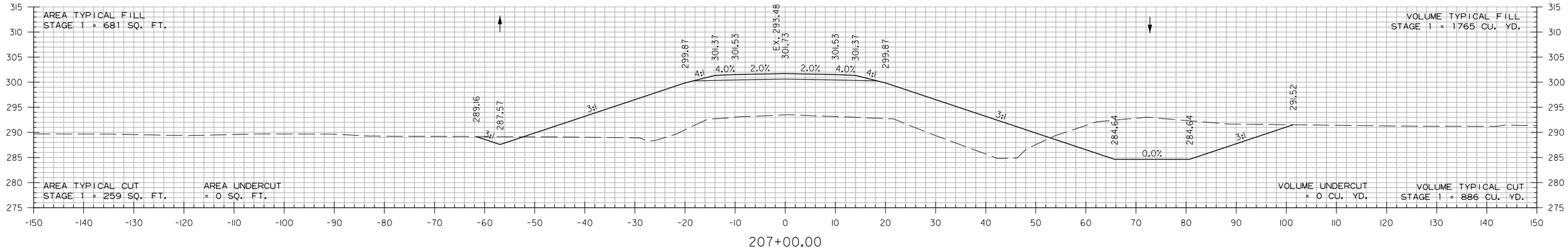
202+00.00

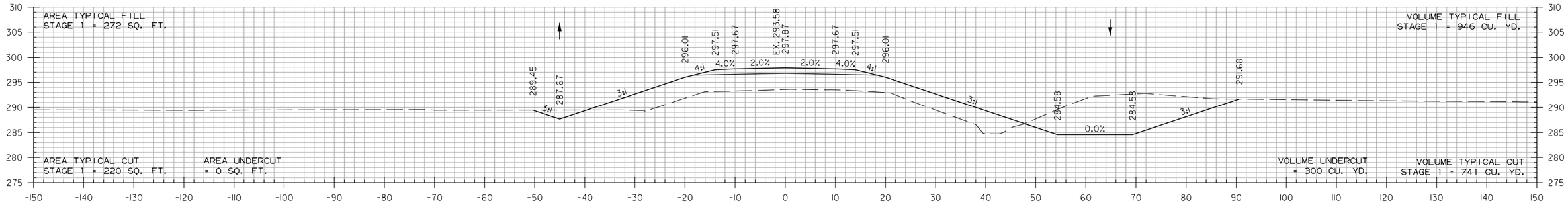
STA. 202+00.00 BEGIN 100' TRANSITION

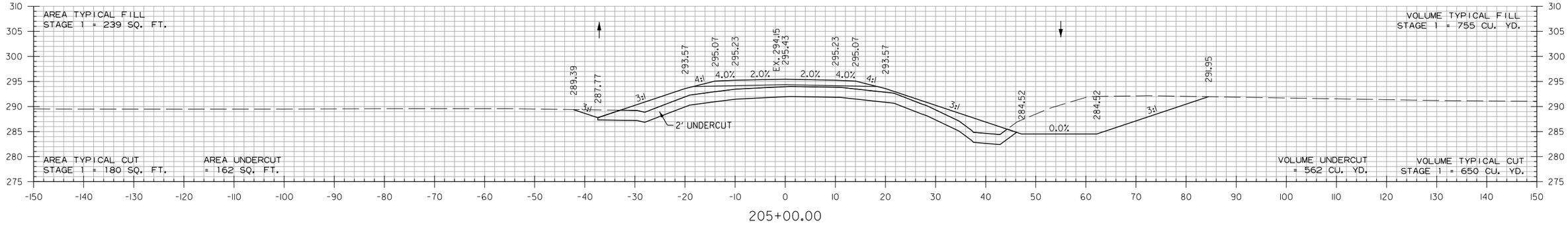
C.R. 139
STA. 202+00 TO STA. 204+00

CGervasini 6/28/2024 1:34:34 PM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	300	325
		CROSS SECTIONS				



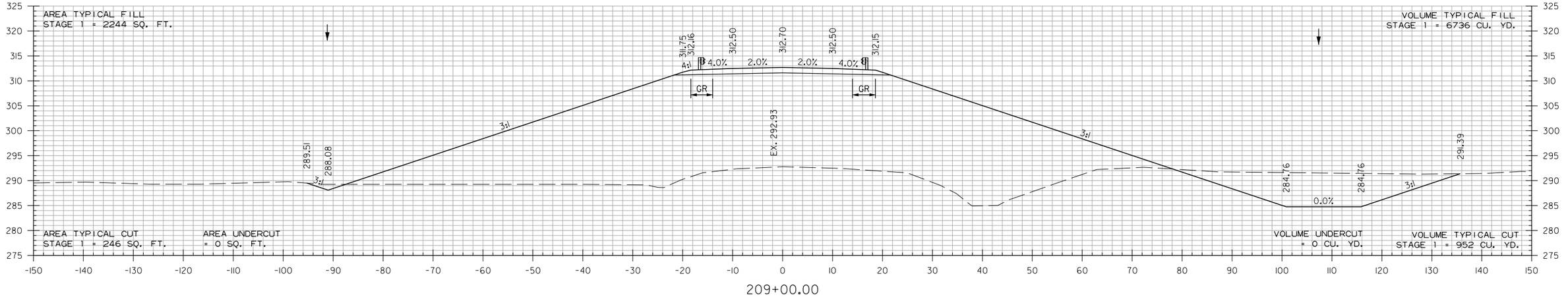


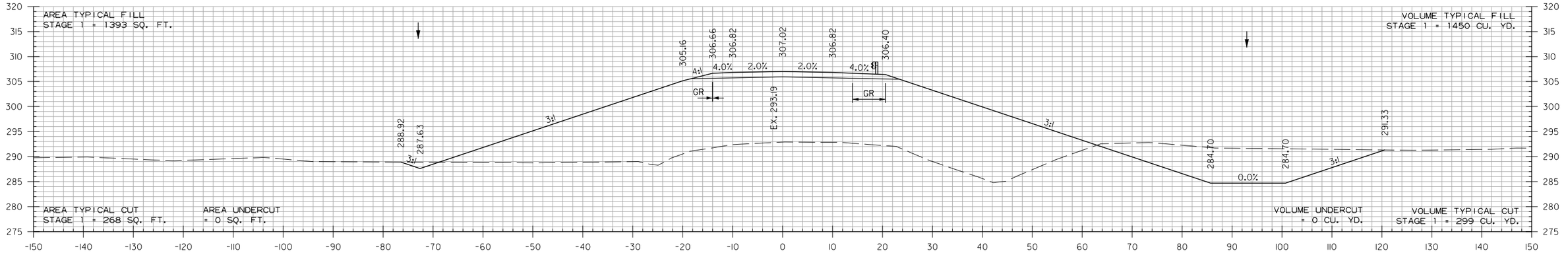


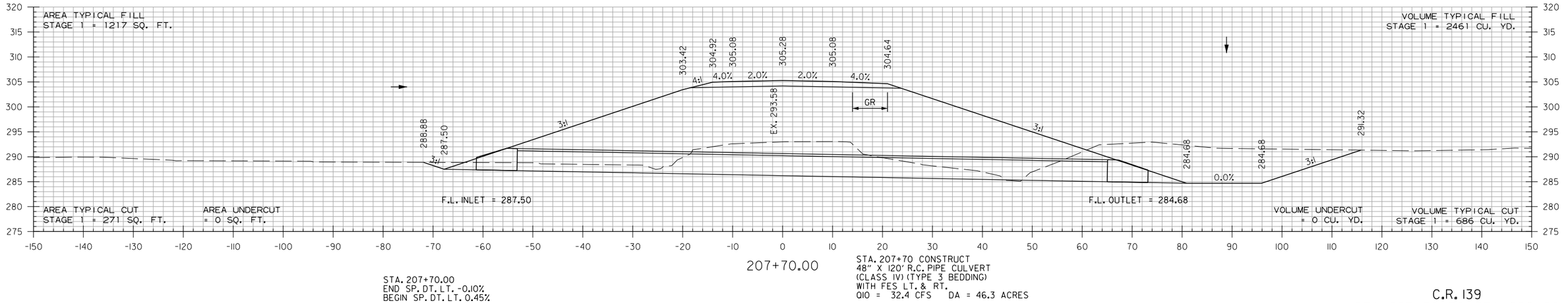
C.R. 139
STA. 205+00 TO STA. 207+00

CGGervasini 6/28/2024 1:34:34 PM
WORKSPACE: AHTD
L:\2021\21T0046 - ARDOT 100502 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_07_CR 139.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	301	325
		CROSS SECTIONS				







STA. 207+70.00
END SP. DT. LT. -0.10%
BEGIN SP. DT. LT. 0.45%
ELEV. 287.50

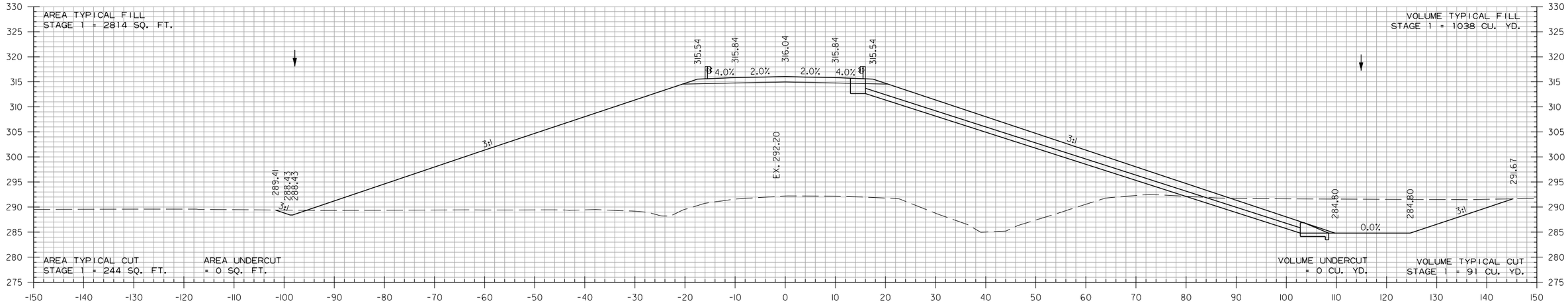
STA. 207+70 CONSTRUCT
48" X 120' R.C. PIPE CULVERT
(CLASS IV) (TYPE 3 BEDDING)
WITH FES LT. & RT.
QIO = 32.4 CFS DA = 46.3 ACRES

C.R. 139
STA. 207+70 TO STA. 208+00

CGGervasini 6/28/2024 1:34:35 PM
WORKSPACE: AHTD
L:\202\2IT0I046 - ARDOT 100516 Walnut Ridge - MO 1-57\Drawings\r-I0II72\r-I0II72_CX_07_CR 139.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	302	325
		CROSS SECTIONS				

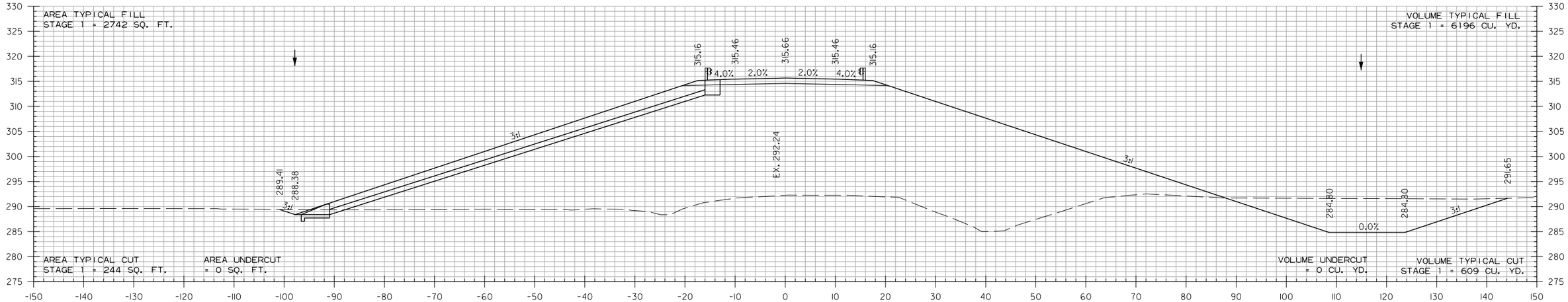
STA. 209+77.19 CONSTRUCT
TYPE N-2 DROP INLET RT.
(2'3" X 3' X H=3'0") WITH
12" X 86' Z.C.C.S.P. CULVERT
TO CONCRETE SPILLWAY (TYPE A)



209+77.19

STA. 209+77
TOP = 315.66
INV. = 312.66
F.L. = 284.80

STA. 209+67.19 CONSTRUCT
TYPE N-2 DROP INLET LT.
(2'3" X 3' X H=3'0") WITH
12" X 74' Z.C.C.S.P. CULVERT
TO CONCRETE SPILLWAY (TYPE A)



STA. 209+67
TOP = 315.28
INV. = 312.28
F.L. = 288.38

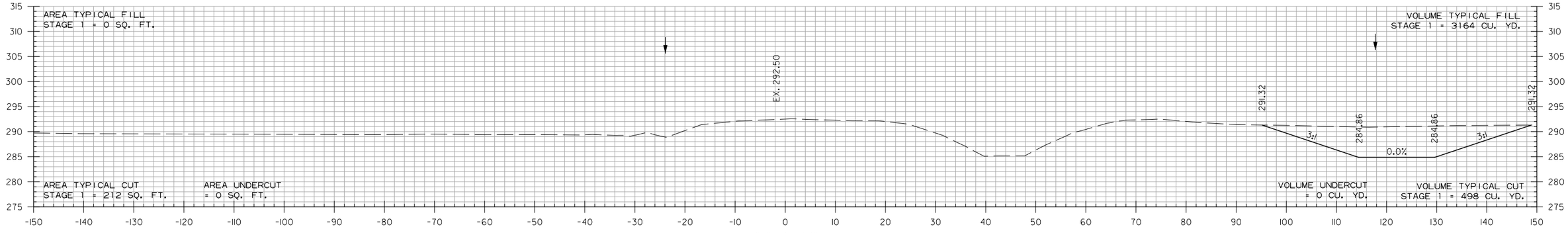
209+67.19

C.R. 139
STA. 209+00 TO STA. 210+00

CGGervasini 6/28/2024 1:34:40 PM
WORKSPACE: AHTD
L:\2021\210046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_07_CR 139.dgn
REVISED DATE:

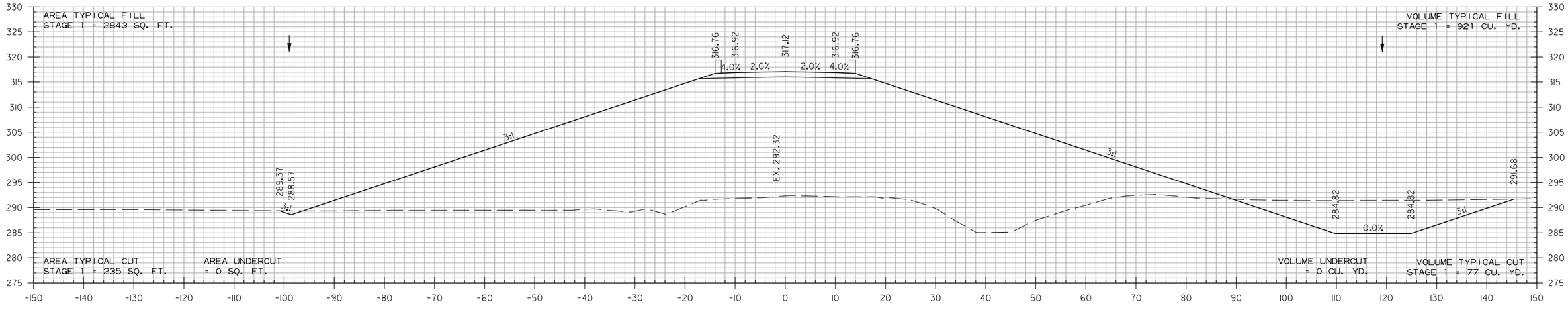
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	303	325
		CROSS SECTIONS				

STA. 211+25.00
END SP. DT. RT. 0.06%
ELEV. 284.89

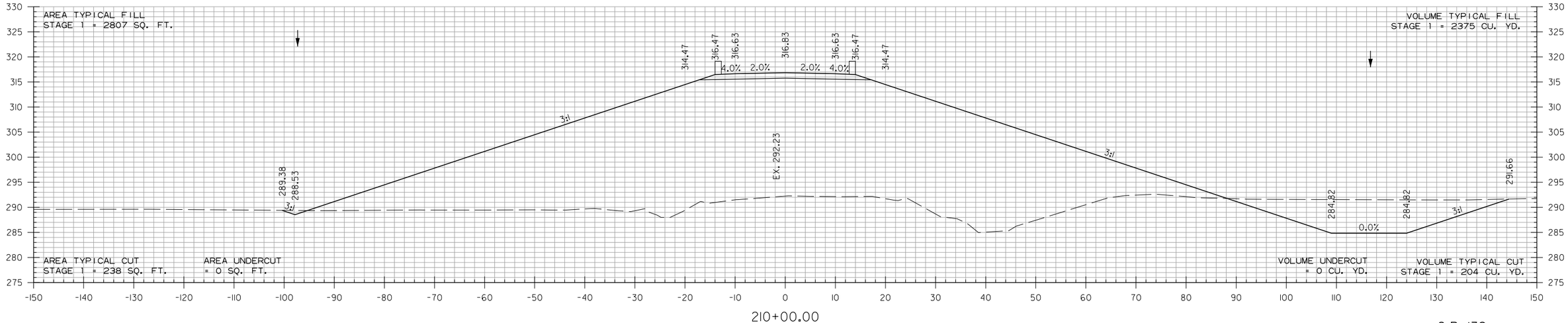


STA. 210+55.00
END SP. DT. LT. 0.45%
ELEV. 288.78

210+68.89
STA. 210+68.89 END TOE OF SLOPE



210+08.80
STA. 210+08.80 BEGIN BRIDGE

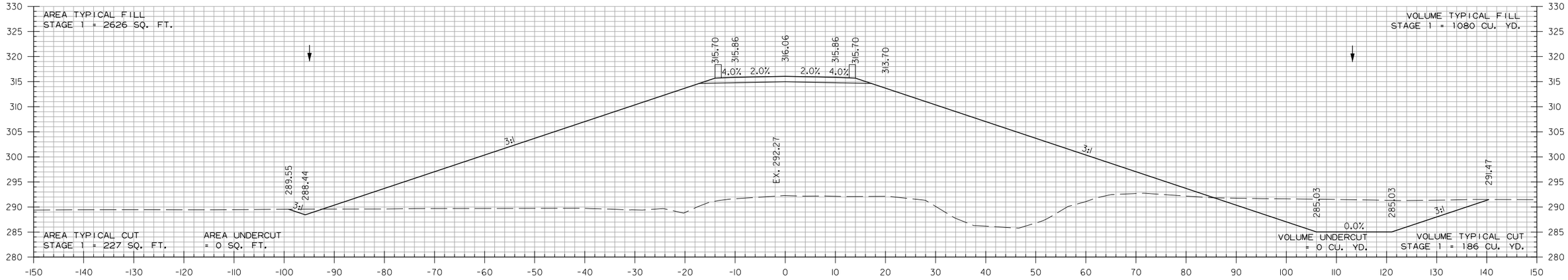


210+00.00

C.R. 139
STA. 210+09 TO STA. 210+69

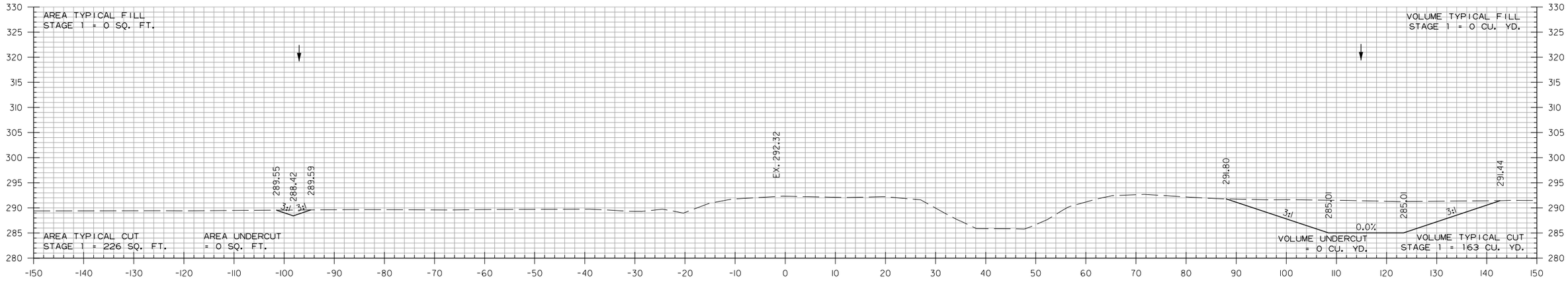
CGervasini 6/28/2024 11:34:40 PM
WORKSPACE: AHTD
L:\2021\21T0046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_07_CR 139.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	304	325
		CROSS SECTIONS				



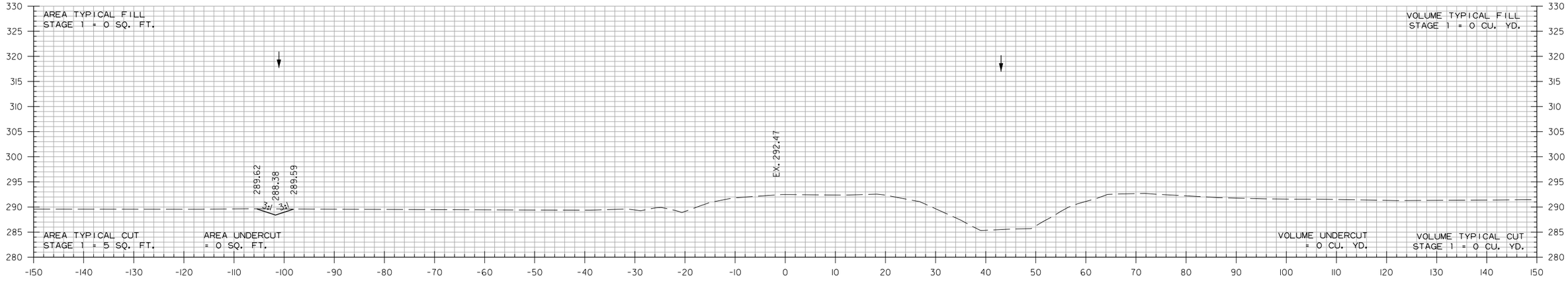
214+22.20

STA. 214+22.20 END BRIDGE



214+00.00

STA. 213+90.00
BEGIN SP. DT. RT. 0.08%
ELEV. 285.00



213+61.80

STA. 213+61.80 BEGIN TOE OF SLOPE

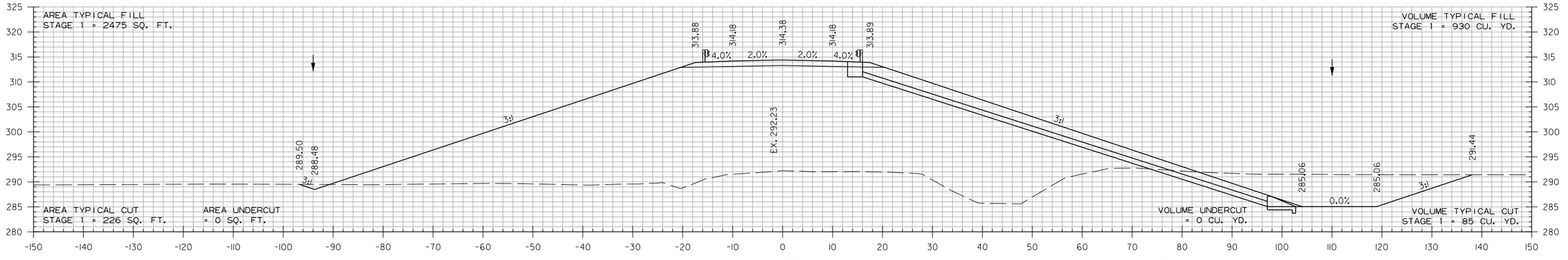
STA. 212+85.00
BEGIN SP. DT. LT. 0.10%
ELEV. 288.30

C.R. 139
STA. 213+00 TO STA. 213+62

CGGervasini 6/28/2024 1:34:40 PM
WORKSPACE: AHTD
L:\2021\211010\46 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_07_CR 139.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	305	325
		CROSS SECTIONS				

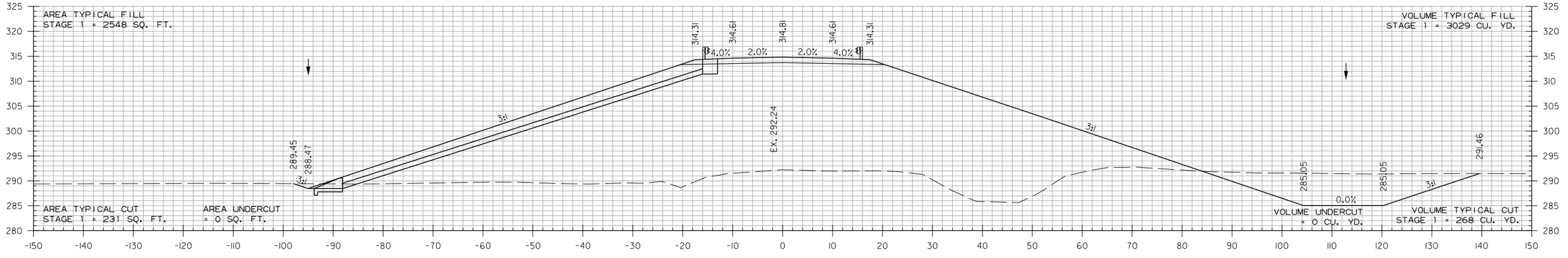
STA. 214+63.81 CONSTRUCT
TYPE N-2 DROP INLET RT.
(2'3" X 3' X H=3'0") WITH
12" X 81' Z.C.C.S.P. CULVERT
TO CONCRETE SPILLWAY (TYPE A)



214+63.81

STA. 214+64
TOP = 314.00
INV. = 311.00
F.L. = 285.06

STA. 214+53.81 CONSTRUCT
TYPE N-2 DROP INLET LT.
(2'3" X 3' X H=3'0") WITH
12" X 72' Z.C.C.S.P. CULVERT
TO CONCRETE SPILLWAY (TYPE A)



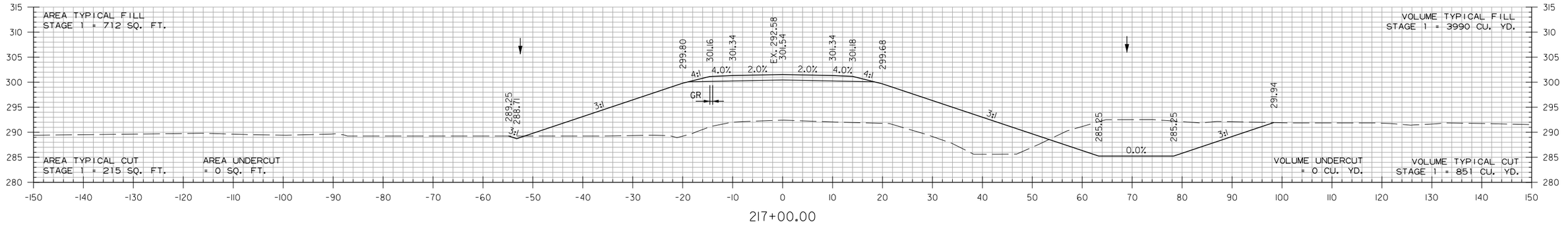
STA. 214+54
TOP = 314.43
INV. = 311.43
F.L. = 288.47

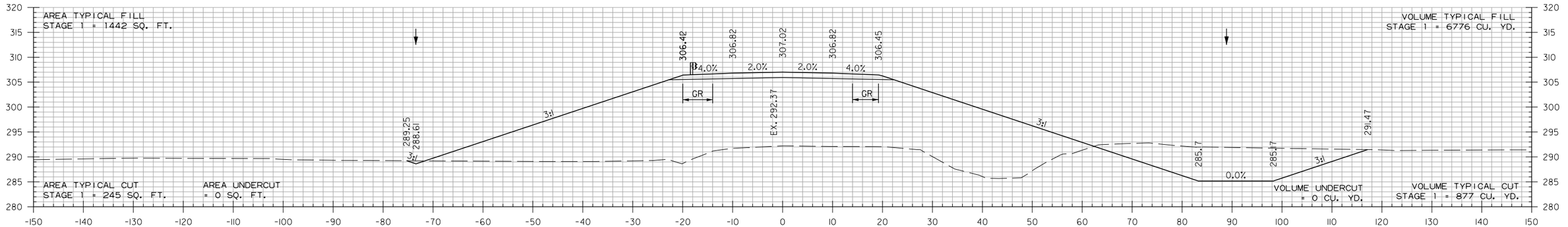
214+53.81

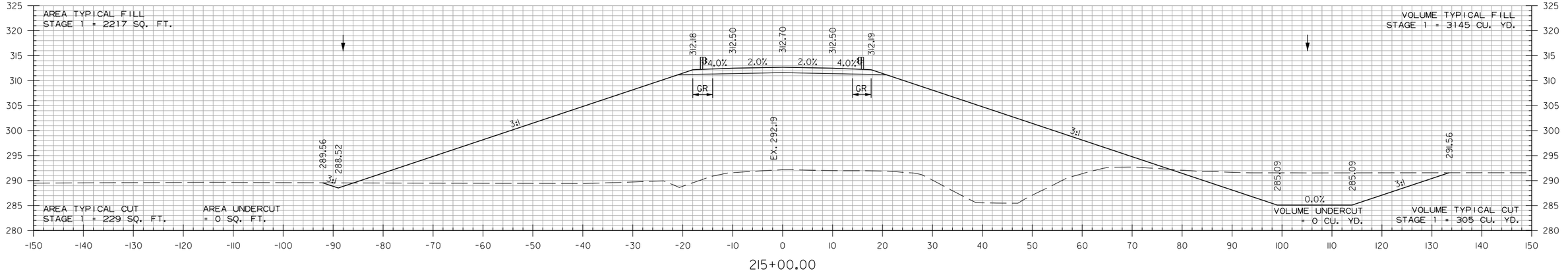
C.R. 139
STA. 214+00 TO STA. 214+22

CGGervasini 6/28/2024 1:34:41 PM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	306	325
		CROSS SECTIONS				



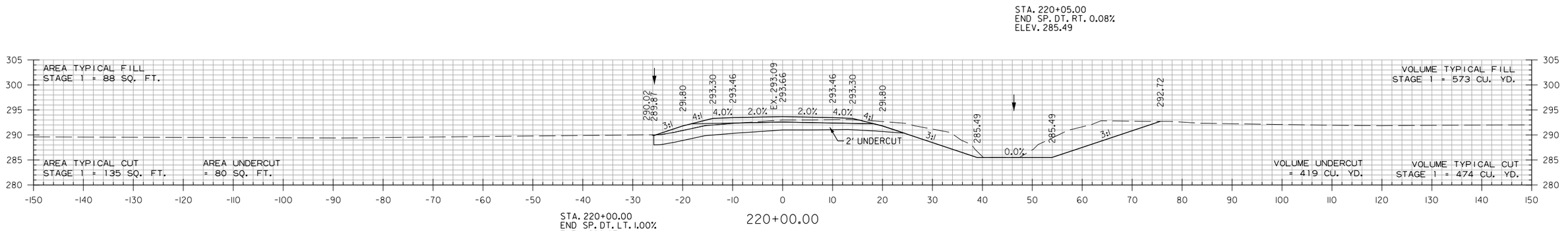


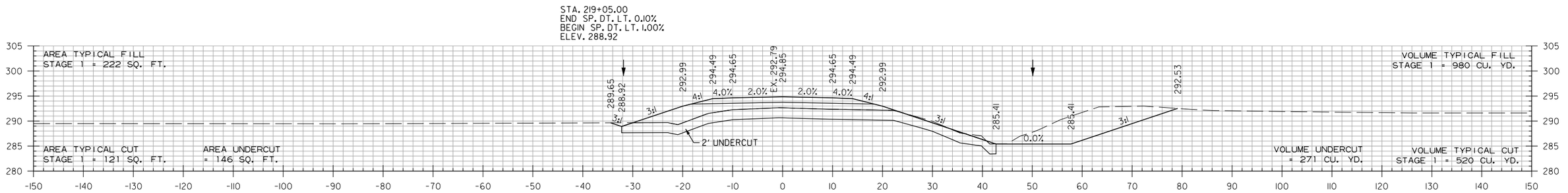


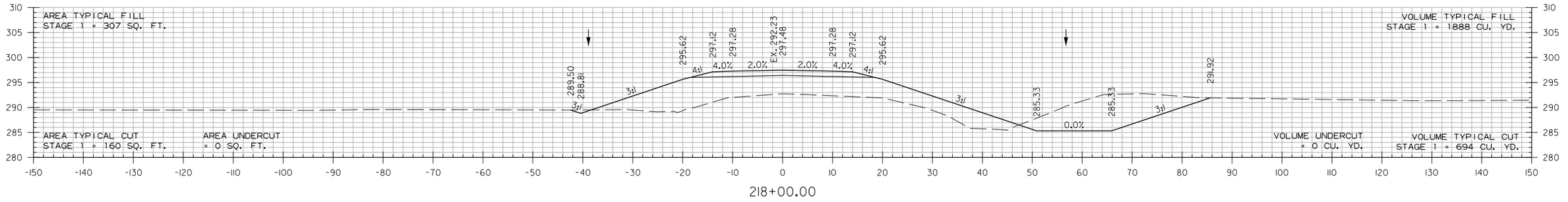
C.R. 139
STA. 215+00 TO STA. 217+00

CGGervasini 6/28/2024 1:34:41 PM
WORKSPACE: AHTD
L:\2021\21T0I046 - ARDOT 100502 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_07_CR 139.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	307	325
		CROSS SECTIONS				



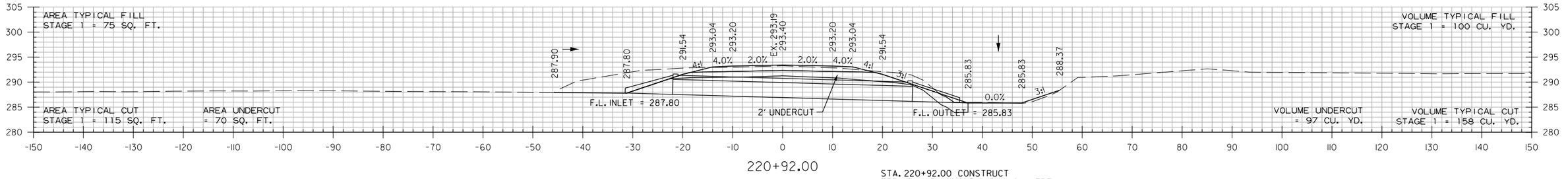




C.R. 139
STA. 218+00 TO STA. 220+00

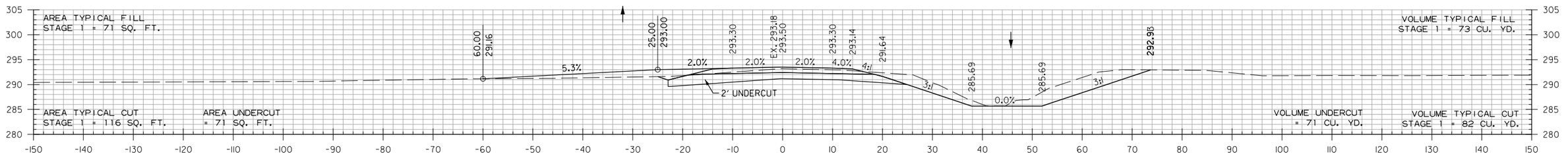
CGGervasini 6/28/2024 1:34:41PM
WORKSPACE: AHTD
L:\2021\21T0046 - ARDOT 100502 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_07_CR 139.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	308	325
		CROSS SECTIONS				



220+92.00

STA. 220+92.00 CONSTRUCT
TRP. 5' x 3' x 48' R.C. BOX CULVERT
WITH 3:1 WINGS LT. AND RT.
Q10 = 135.1 CFS DA = 202.8 ACRES

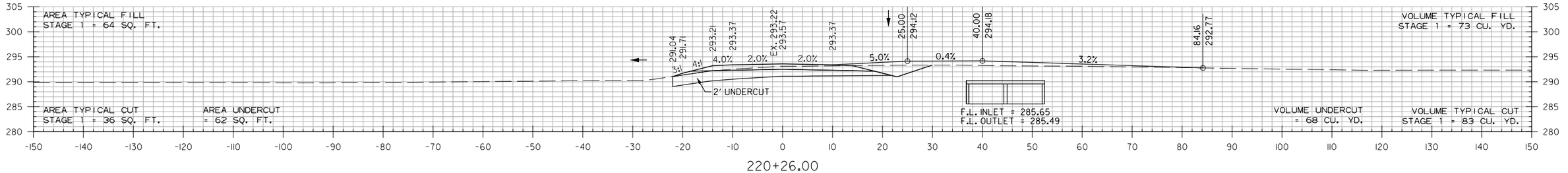


220+55.00

STA. 220+55 CONSTRUCT
APPROACH ON LT. = 30 CU. YDS.

STA. 220+45.00
BEGIN SP. DT. RT. 0.38%
ELEV. 285.65

STA. 220+26.00 CONSTRUCT
DBL. 7' x 4' x 43' R.C. BOX CULVERT
WITH 3:1 WINGS LT. AND RT.
Q10 = 385 CFS DA = 860 ACRES



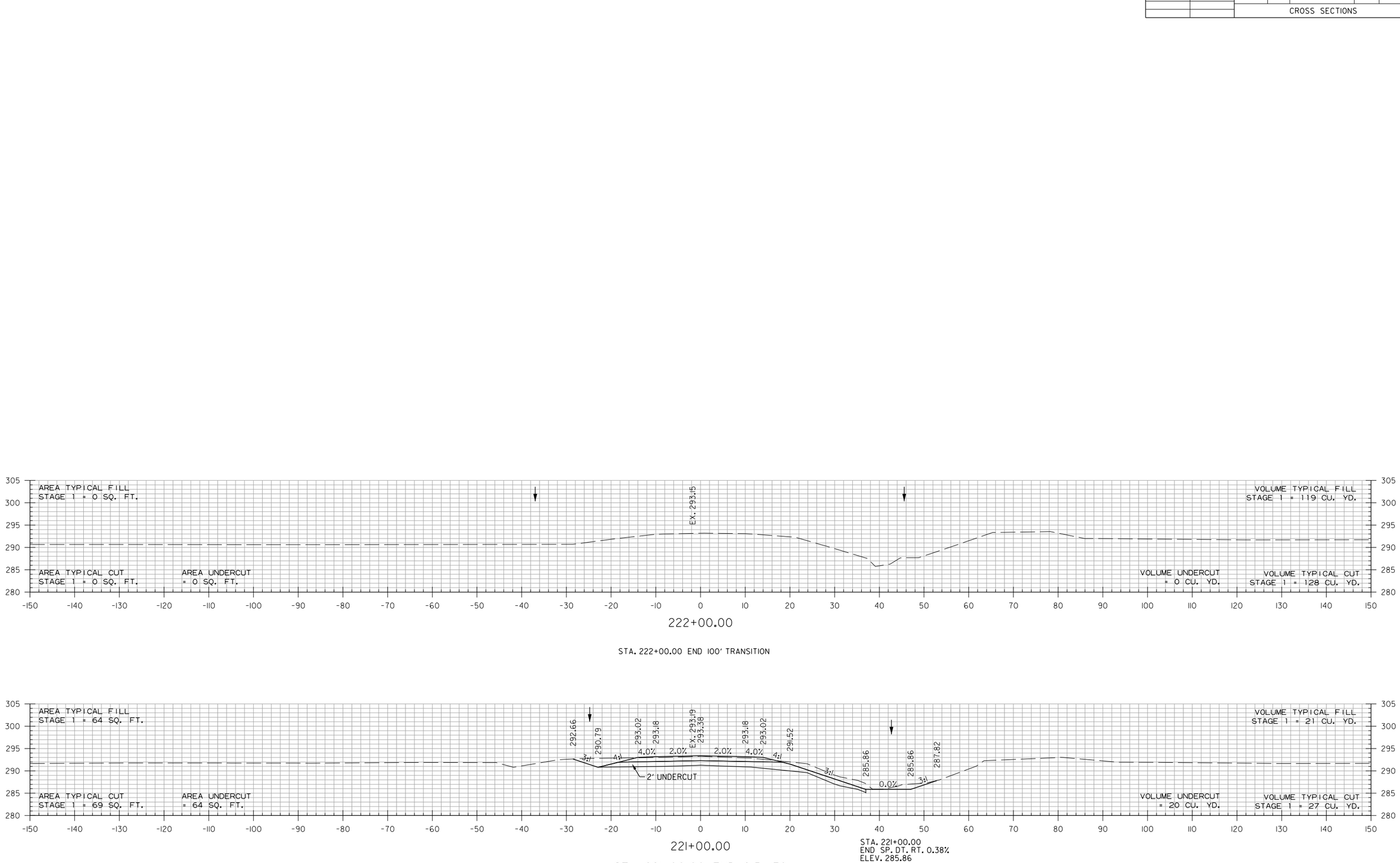
220+26.00

STA. 220+26 CONSTRUCT
APPROACH ON RT. = 290 CU. YDS.

C.R. 139
STA. 220+26 TO STA. 220+92

CGGervasini 6/28/2024 1:34:41 PM
WORKSPACE: AHTD
L:\2021\21101046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_07_CR 139.dgn
REVISED DATE:

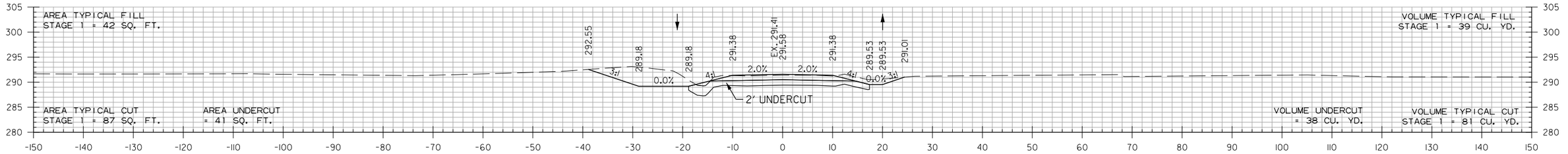
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	309	325
		CROSS SECTIONS				



C.R. 139
STA. 221+00 TO STA. 222+00

CGGervasini 6/28/2024 1:34:41PM
WORKSPACE: AHTD
L:\2021\2101046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_07_CR 139.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	310	325
		CROSS SECTIONS				

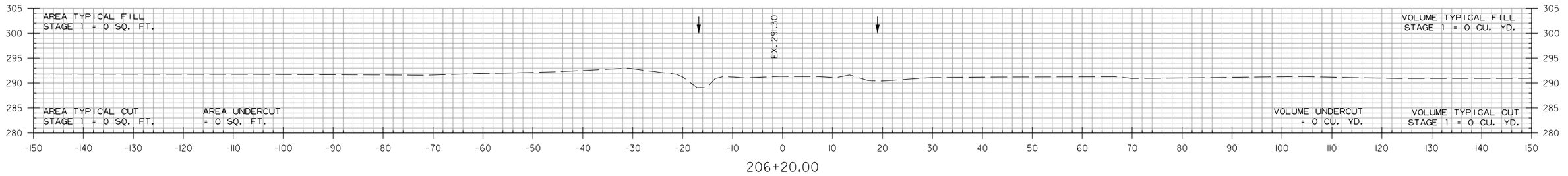


206+70.00

STA. 206+70.00
BEGIN SP. DT. LT. 0.10%
ELEV. 289.18

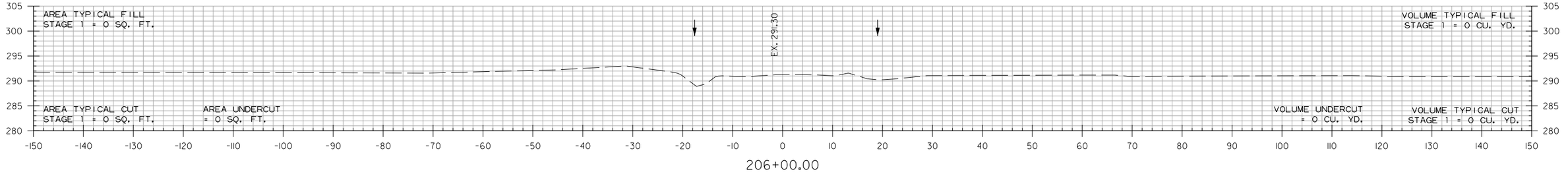
STA. 206+70.00
BEGIN SP. DT. RT. -0.10%
ELEV. 289.53

STA. 206+70.00 BEGIN C.R. 143 SOUTH



206+20.00

STA. 206+20.00 BEGIN 50' TRANSITION



206+00.00

C.R. 143 SOUTH
STA. 206+00 TO STA. 206+70

CGGervasini 6/28/2024 1:34:42 PM
WORKSPACE: AHTD
L:\2021\210046 - ARDOT 100512 Walnut Ridge - MO I-57\Drawings\r101172\r101172_CX_09_CR 143 SOUTH.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	311	325
		CROSS SECTIONS				

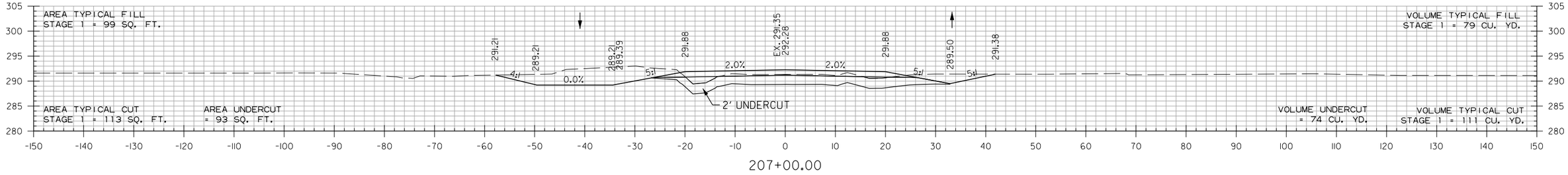
STA. 208+00.00
END SP. DT. LT. 0.10%
ELEV. 289.31

STA. 208+00.00
END SP. DT. RT. -0.10%
ELEV. 289.40



208+00.00

STA. 208+00.00 END C.R. 143 SOUTH

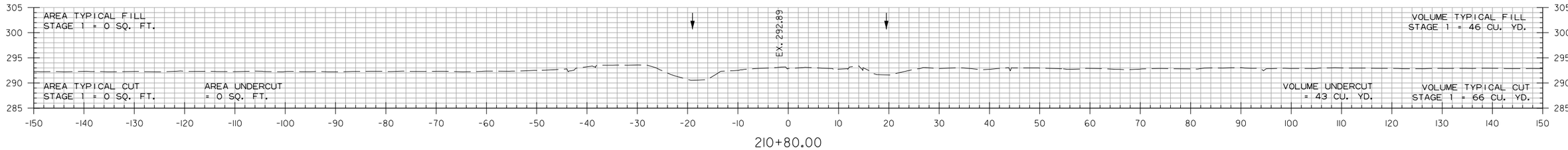


207+00.00

C.R. 143 SOUTH
STA. 207+00 TO STA. 208+00

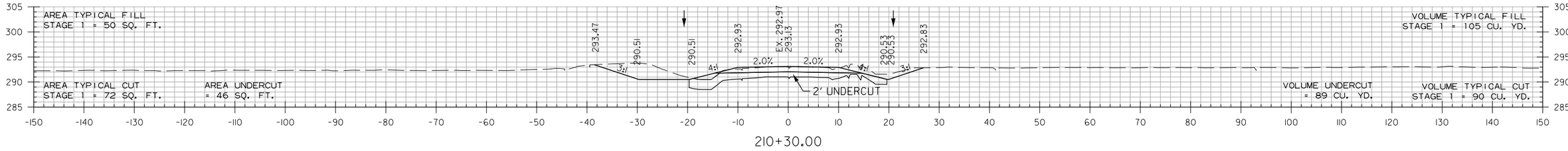
CGervasini 6/28/2024 1:34:42 PM
WORKSPACE: AHTD
L:\202I\2I10I046 - ARDOT I00512 Walnut Ridge - MO I-57\Drawings\r10I172\r10I172_CX_09_CR 143 SOUTH.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	312	325
		CROSS SECTIONS				



210+80.00

STA. 210+80.00 END 50' TRANSITION

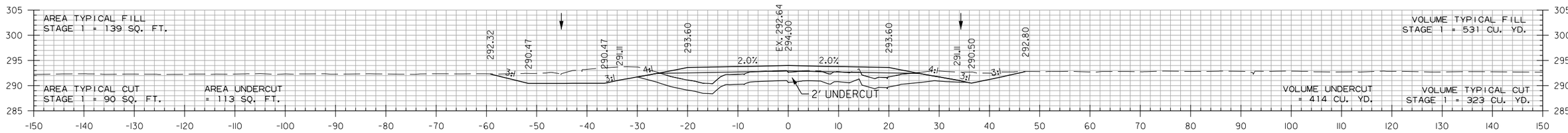


210+30.00

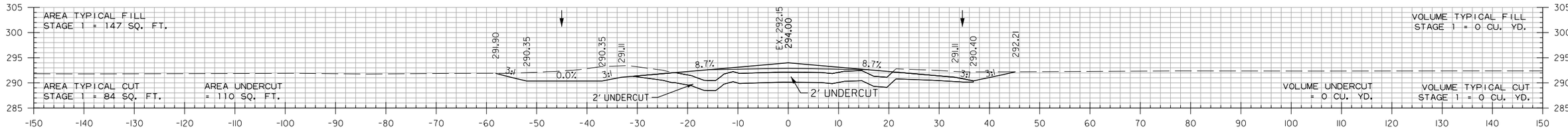
STA. 210+30.00
END SP. DT. LT. 0.12%
ELEV. 290.51

STA. 210+30.00 END C.R. 143 NORTH

STA. 210+30.00
END SP. DT. RT. 0.10%
ELEV. 290.53



210+00.00



209+00.00

STA. 209+00.00
BEGIN SP. DT. LT. 0.12%
ELEV. 290.35

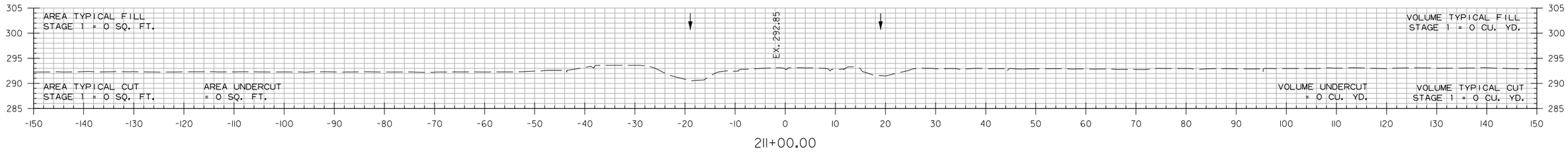
STA. 209+00.00 BEGIN C.R. 143 NORTH

STA. 209+00.00
BEGIN SP. DT. RT. 0.10%
ELEV. 290.40

C.R. 143 NORTH
STA. 209+00 TO STA. 210+80

CGGervasini 6/28/2024 11:34:42 PM
WORKSPACE: AHTD
L:\2021\211010046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_09_CR 143 NORTH.dgn
REVISED DATE:

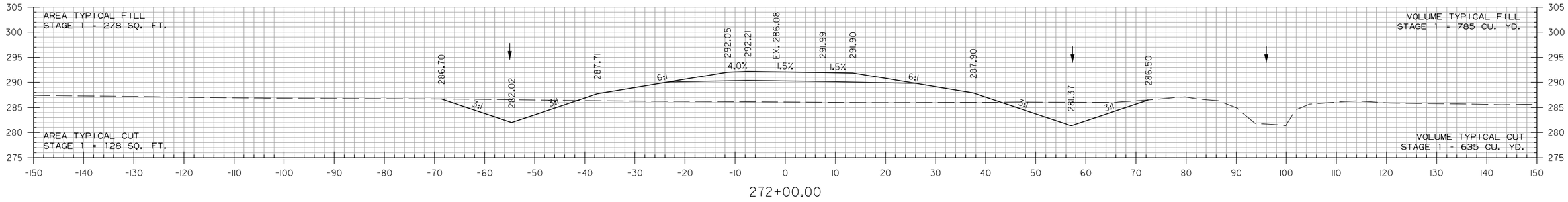
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	313	325
		CROSS SECTIONS				



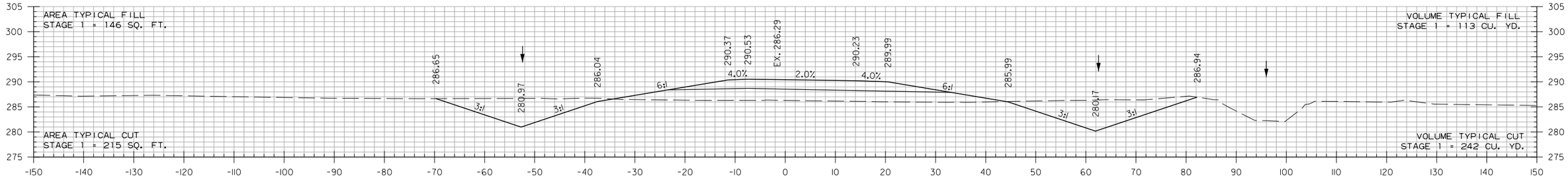
C.R. 143 NORTH
STA. 211+00 TO STA. 211+00

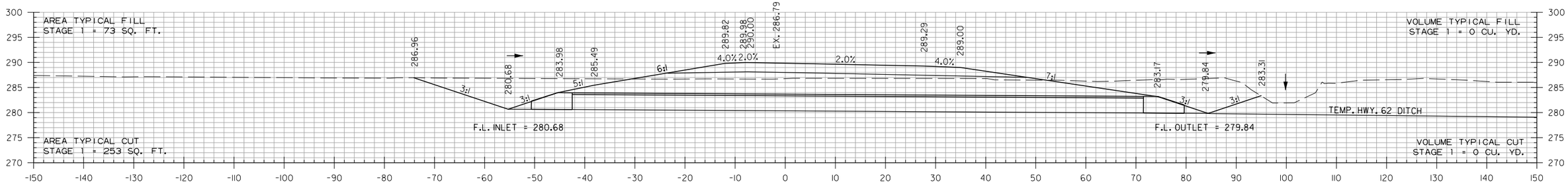
CGervasini 6/28/2024 1:34:43 PM
WORKSPACE: AHTD
L:\2021\21101046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_09_CR 143 NORTH.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	314	325
		CROSS SECTIONS				



STA. 271+85.02 BEGIN SUPERELEVATION





STA. 270+72.00
BEGIN SP. DT. LT. 1.05%
ELEV. 280.68

STA. 270+18.00 BEGIN HWY. 62 TEMP. RAMP 2

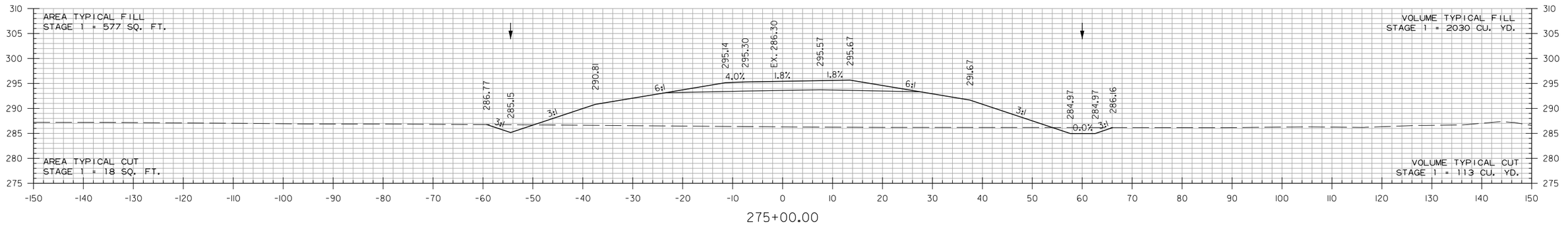
STA. 270+72 CONSTRUCT
QUINT. 36" X 114' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
WITH FES LT. & RT.
Q50 = 289 CFS DA = 241.8 ACRES
36" R.C. PIPE = 570 LIN. FT.
36" FES = 10 EA.

STA. 270+72.00
BEGIN SP. DT. RT. 1.20%
ELEV. 279.84

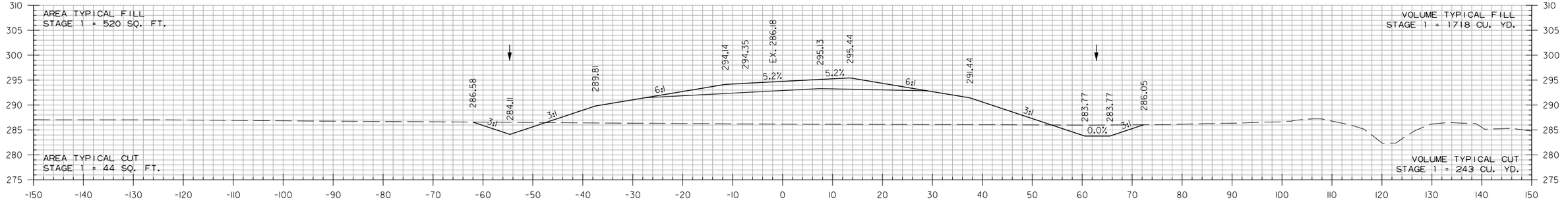
HWY. 62 TEMP. RAMP 2
STA. 270+72 TO STA. 272+00

CGGervasini 6/28/2024 1:34:43 PM
WORKSPACE: AHTD
L:\2021\21T0146 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_10_HWY. 62 TEMP RAMP 2.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	315	325
		CROSS SECTIONS				

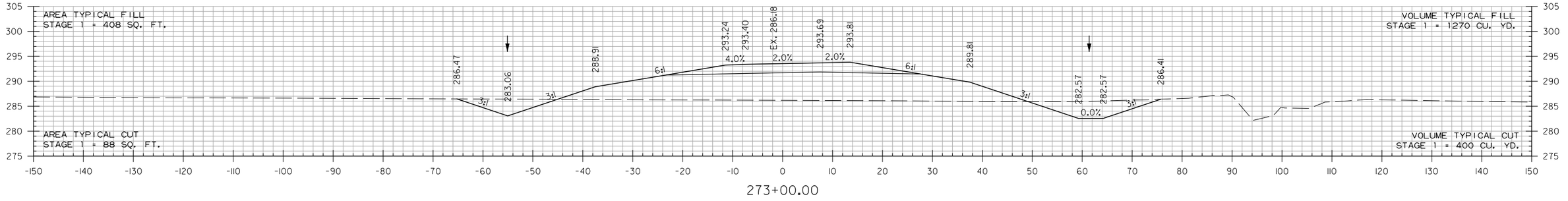


275+00.00



274+00.00

STA. 273+97.34 MAX. SUPERELEVATION (0.053'/')

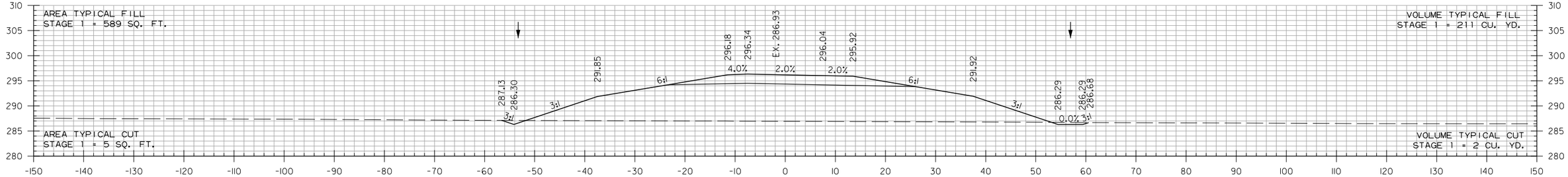


273+00.00

HWY. 62 TEMP. RAMP 2
STA. 273+00 TO STA. 275+00

CGGervasini 6/28/2024 1:34:43 PM
WORKSPACE: AHTD
L:\2021\21T0l046 - ARDOT l00512 Walnut Ridge - WO 1-57\Drawings\r101172\r101172_CX_l0_HWY. 62 TEMP RAMP 2.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	316	325
		CROSS SECTIONS				



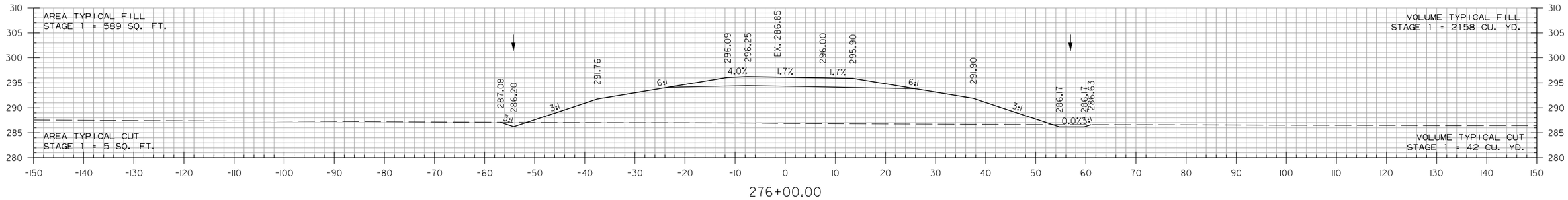
276+09.66

STA. 276+09.66
END SP. DT. LT. 1.05%
ELEV. 286.30

STA. 276+09.66 END HWY. 62 TEMP. RAMP 2

STA. 276+09.66 END SUPERELEVATION

STA. 276+09.66
END SP. DT. RT. 1.20%
ELEV. 286.29

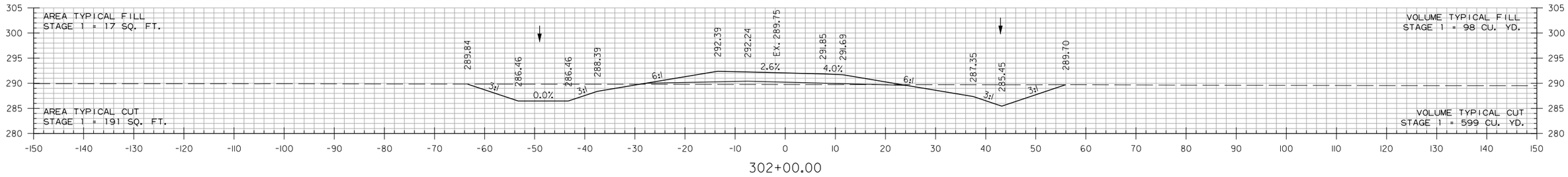


276+00.00

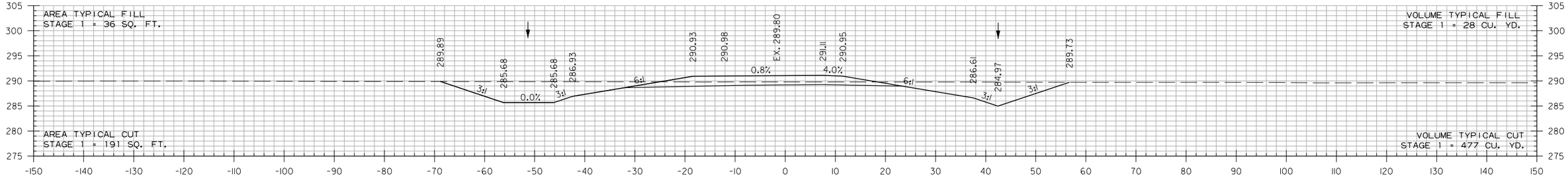
HWY. 62 TEMP. RAMP 2
STA. 276+00 TO STA. 276+10

CGGervasini 6/28/2024 11:34:44 PM
WORKSPACE: AHTD
L:\2021\211046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_10_HWY. 62 TEMP. RAMP 2.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	317	325
		CROSS SECTIONS				

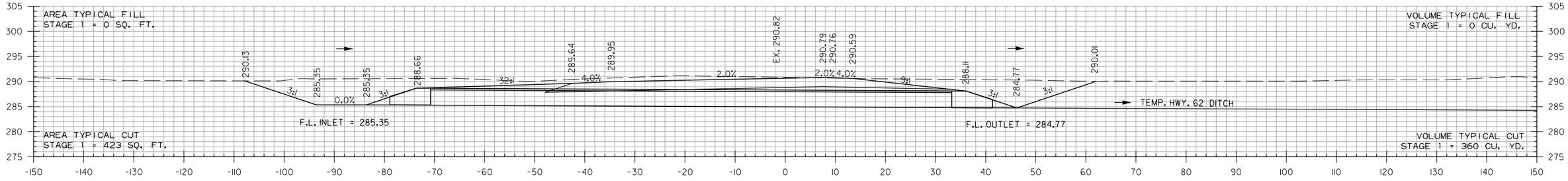


302+00.00



301+00.00

STA. 300+66.36 BEGIN SUPERELEVATION



300+58.00

STA. 300+12.00 BEGIN HWY. 62 TEMP. RAMP 3

AREA TYPICAL FILL
STAGE 1 = 0 SQ. FT.

AREA TYPICAL CUT
STAGE 1 = 0 SQ. FT.

STA. 300+58.00
BEGIN SP. DT. LT. 0.78%
ELEV. 285.35

STA. 300+58 CONSTRUCT
QUINT. 36" X 104' R.C. PIPE CULVERT
(CLASS V) (TYPE 3 BEDDING)
WITH FES LT. & RT.
Q50 = 196 CFS DA = 222.3 ACRES
36" R.C. PIPE = 520 LIN. FT.
36" FES = 10 EA.

STA. 300+58.00
BEGIN SP. DT. RT. 0.48%
ELEV. 284.77

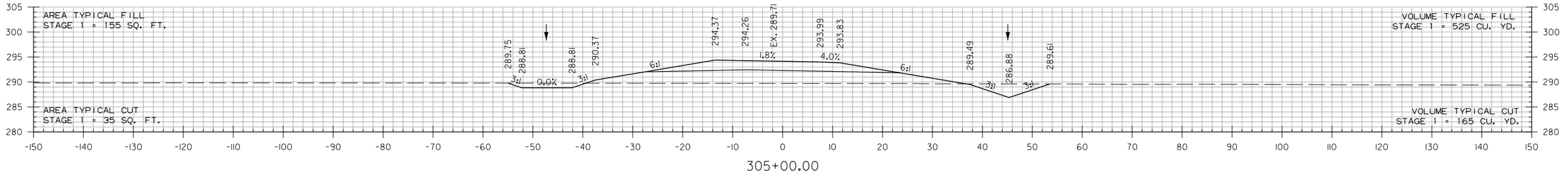
VOLUME TYPICAL FILL
STAGE 1 = 0 CU. YD.

VOLUME TYPICAL CUT
STAGE 1 = 0 CU. YD.

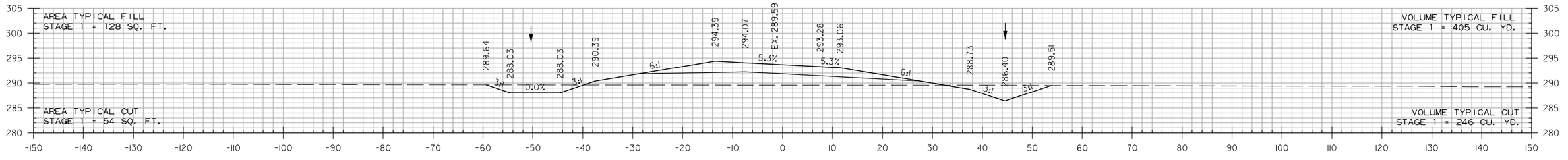
HWY. 62 TEMP. RAMP 3
STA. 300+58 TO STA. 302+00

CGGervasini 6/28/2024 11:34:44 PM
WORKSPACE: AHTD
L:\2021\210046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_TL.HWY. 62 TEMP RAMP 3.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	318	325
		CROSS SECTIONS				



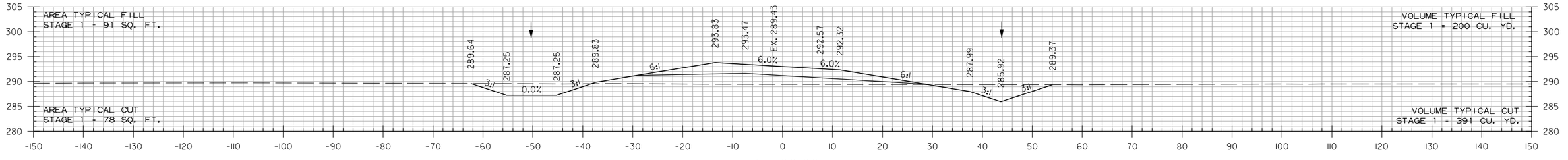
305+00.00



304+00.00

STA. 303+61.71 MAX. SUPERELEVATION (0.066'/')

STA. 303+16.36 MAX. SUPERELEVATION (0.066'/')

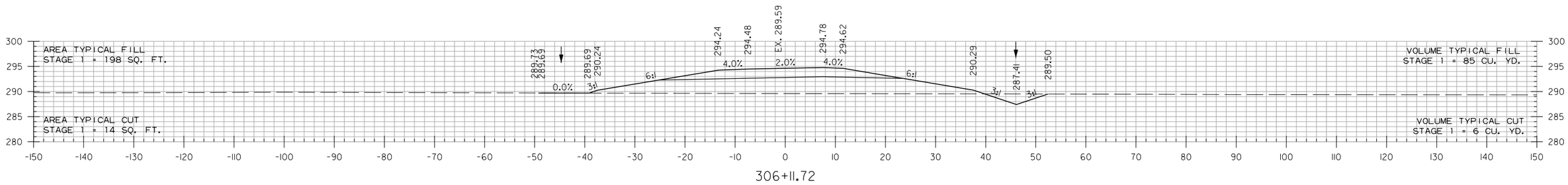


303+00.00

HWY. 62 TEMP. RAMP 3
STA. 303+00 TO STA. 305+00

CGGervasini 6/28/2024 11:34:44 PM
WORKSPACE: AHTD
L:\2021\210046 - ARDOT 100512 Walnut Ridge - MO 1-57\Drawings\r101172\r101172_CX_IL_HWY. 62 TEMP RAMP 3.dgn
REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	319	325
		CROSS SECTIONS				



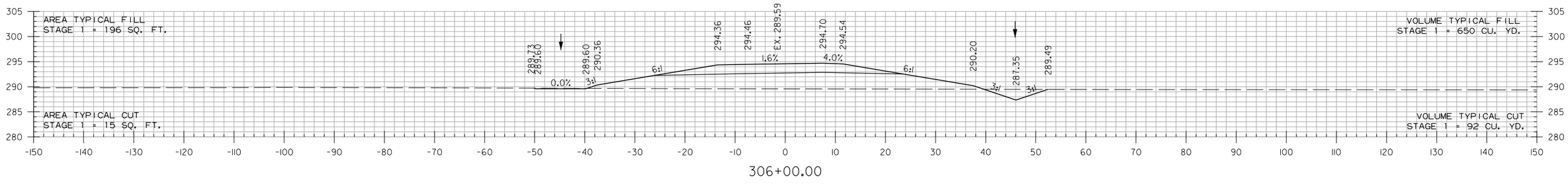
306+11.72

STA. 306+11.72
END SP. DT. LT. 0.78%
ELEV. 289.69

STA. 306+11.72 END HWY. 62 TEMP. RAMP 3

STA. 306+11.72
END SP. DT. RT. 0.48%
ELEV. 287.41

STA. 306+11.71 END SUPERELEVATION

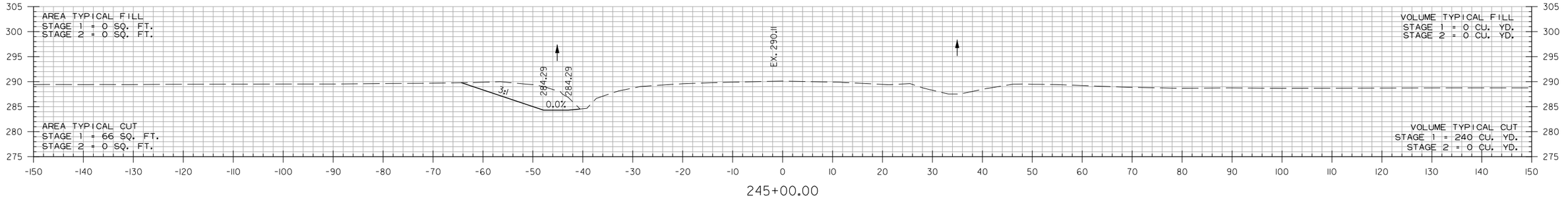


306+00.00

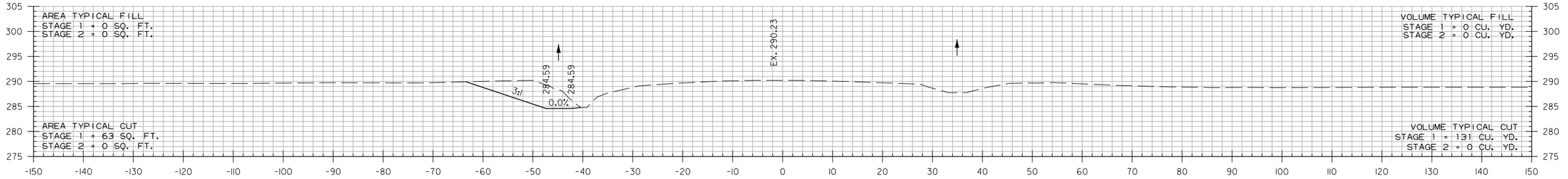
HWY. 62 TEMP. RAMP 3
STA. 306+00 TO STA. 306+12

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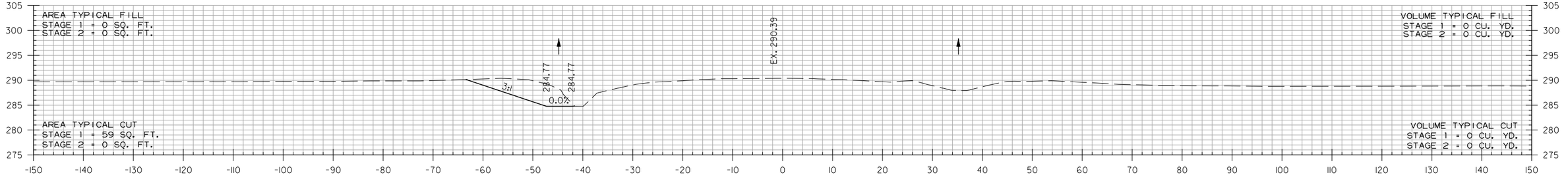
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	320	325
		CROSS SECTIONS				



245+00.00



244+00.00



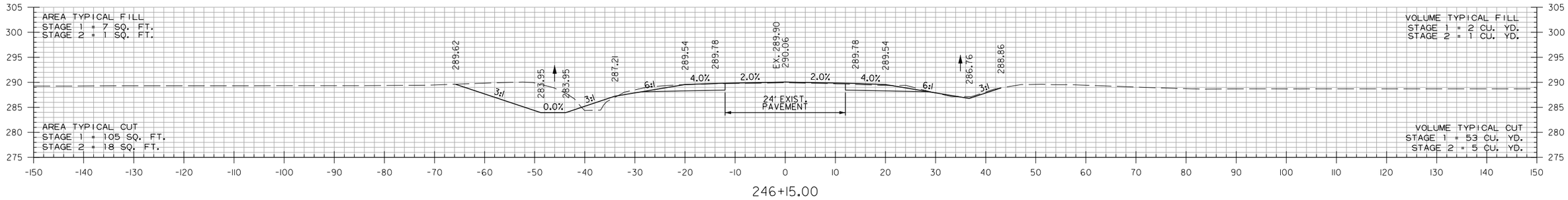
243+42.00

STA. 243+42.00
BEGIN SP. DT. LT. -0.30%
ELEV. 284.77

TEMP. HWY. 62
STA. 243+42 TO STA. 245+00

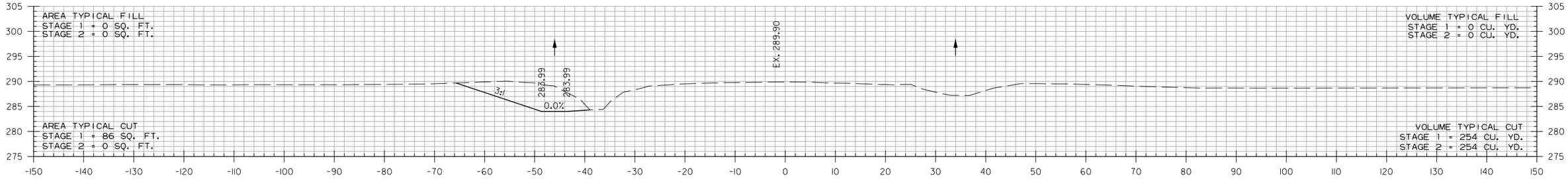
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	321	325
		CROSS SECTIONS				

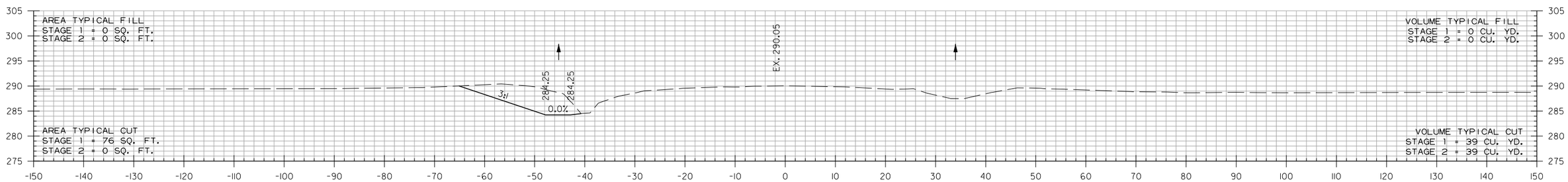


246+15.00

STA. 246+15.00 BEGIN TEMP. HWY. 62



246+00.00



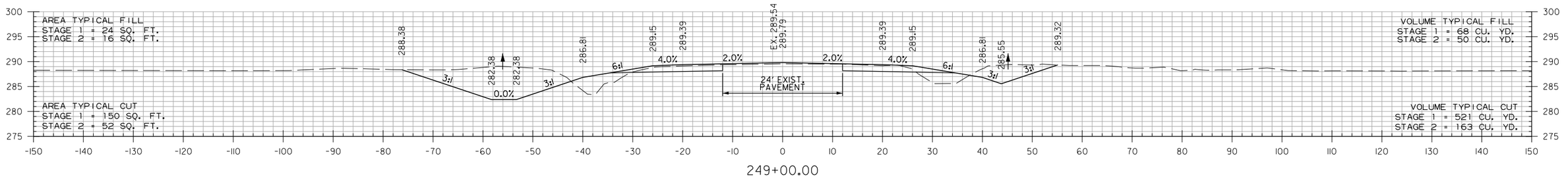
245+15.00

STA. 245+15.00 BEGIN 100' TRANSITION

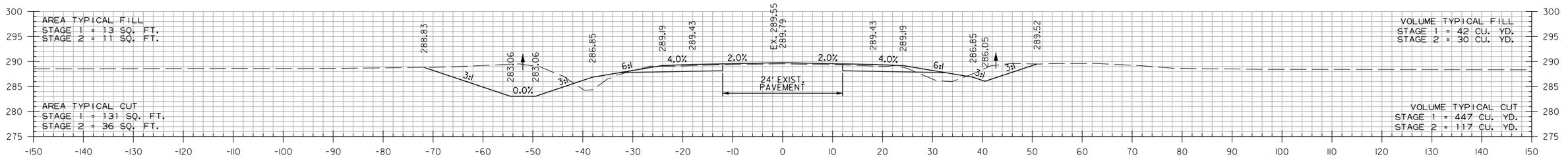
TEMP. HWY. 62
STA. 245+15 TO STA. 246+15

CGervasini 6/28/2024 11:34:45 PM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
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		CROSS SECTIONS				



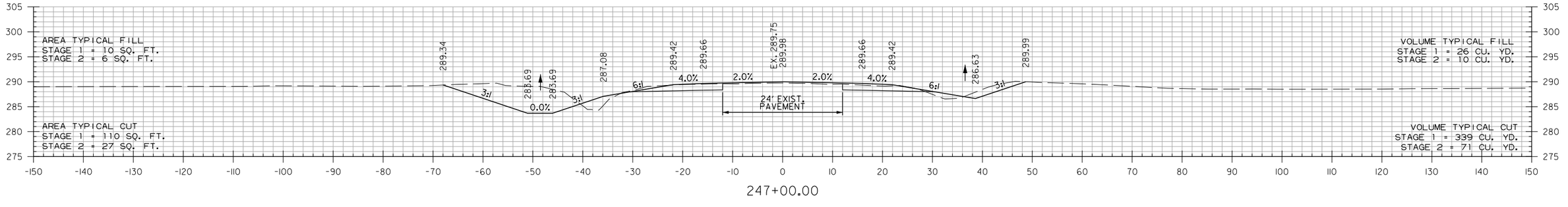
249+00.00



248+00.00

STA. 247+12.00
END SP. DT. LT. -0.30%
BEGIN SP. DT. LT. -0.68%
ELEV. 283.66

STA. 247+50.00
BEGIN SP. DT. RT. -0.50%
ELEV. 286.30

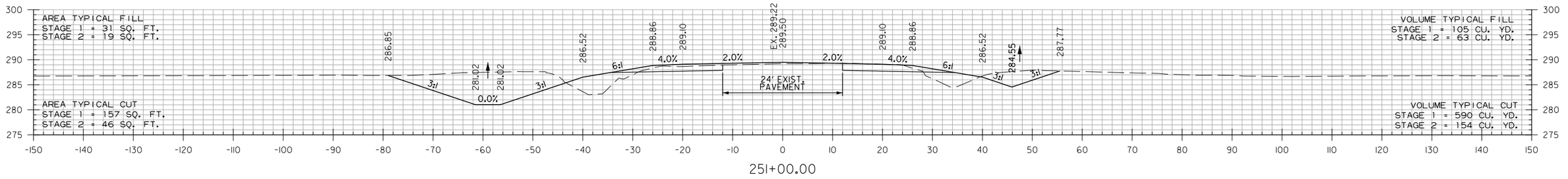


247+00.00

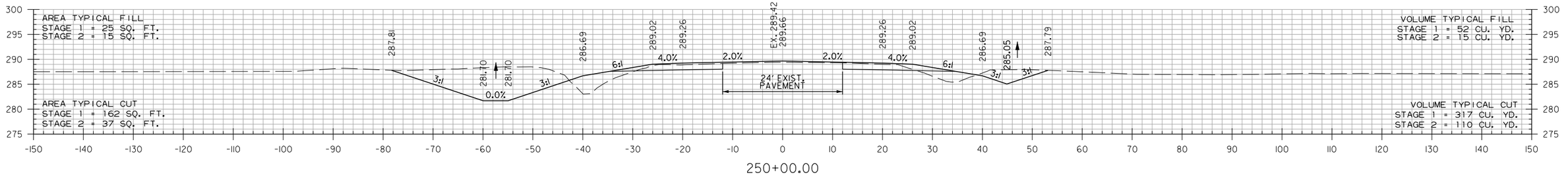
TEMP. HWY. 62
STA. 247+00 TO STA. 249+00

CGGervasini 6/28/2024 1:34:45 PM
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
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		CROSS SECTIONS				

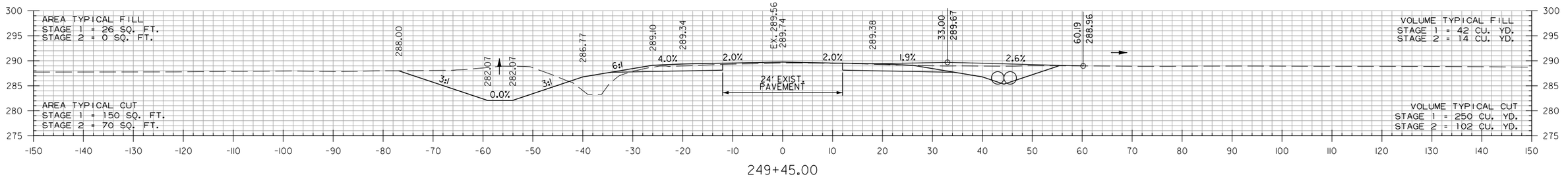


251+00.00



250+00.00

STA. 249+45 IN PLACE
24" X 38' C.M. PIPE CULVERT
REMOVE AND INSTALL
DBL. 30" X 44' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 56 CU. YDS.

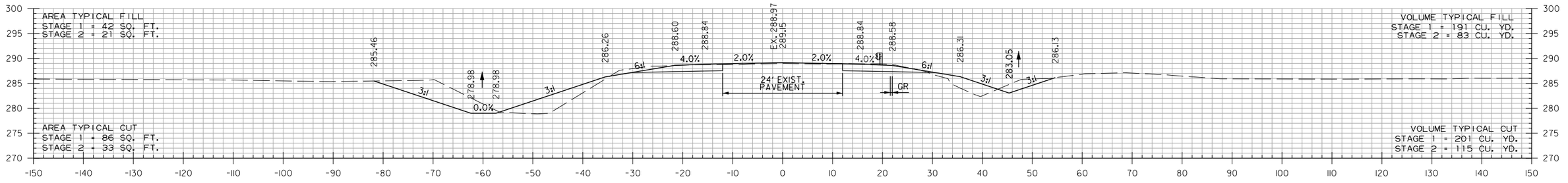


249+45.00

TEMP. HWY. 62
STA. 249+45 TO STA. 251+00

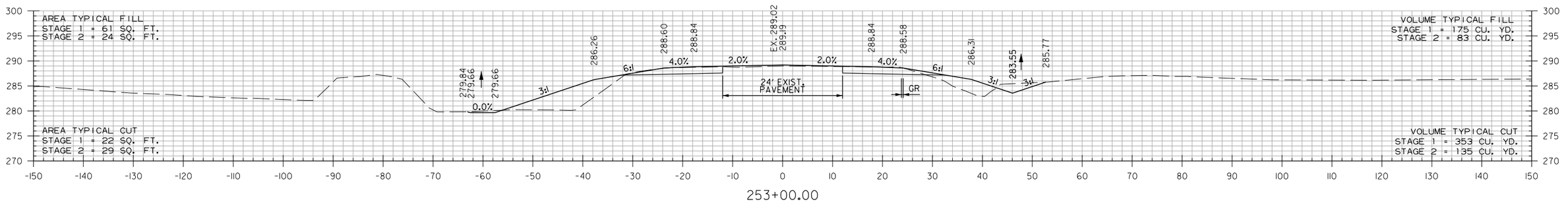
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
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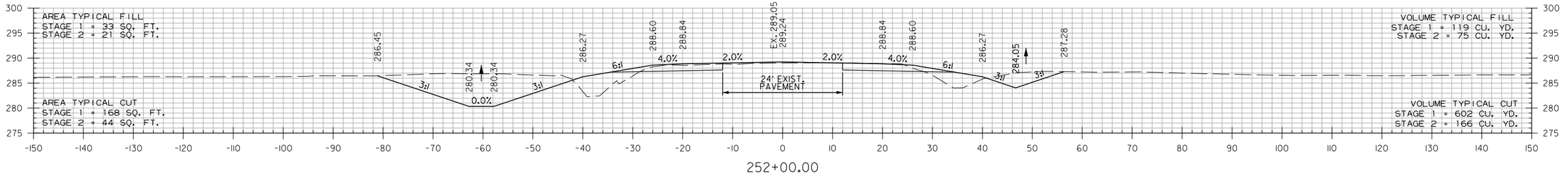


254+00.00

STA. 254+00.00 END TEMP. HWY. 62



253+00.00

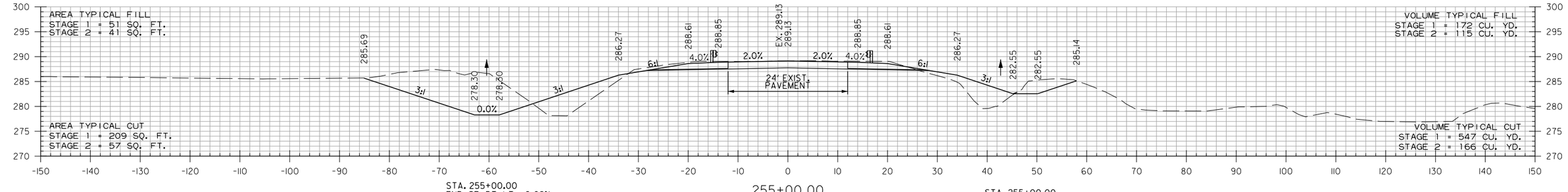


252+00.00

TEMP. HWY. 62
STA. 252+00 TO STA. 254+00

CGervasini 6/28/2024 1:34:45 PM
WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101172	325	325
		CROSS SECTIONS				



STA. 255+00.00
END SP. DT. LT. -0.68%
ELEV. 278.30

255+00.00

STA. 255+00.00 END 100' TRANSITION

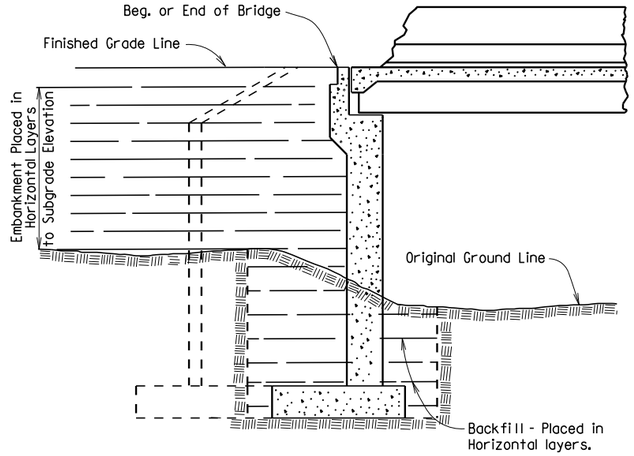
STA. 255+00.00
END SP. DT. RT. -0.50%
ELEV. 282.55

TEMP. HWY. 62
STA. 255+00 TO STA. 255+00

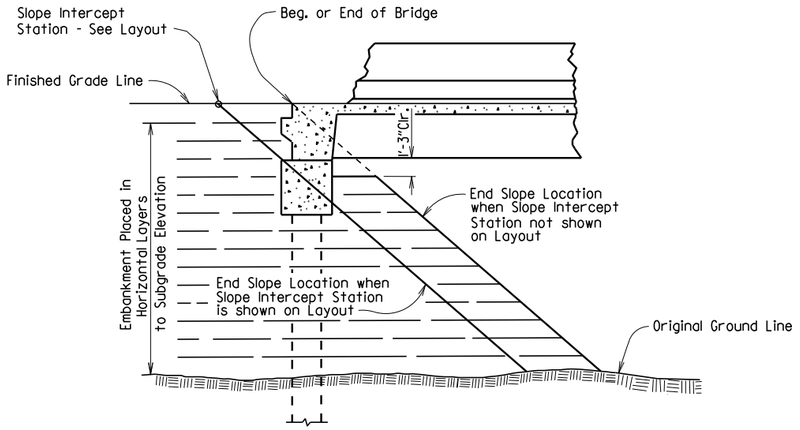
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REVISED DATE:

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.				

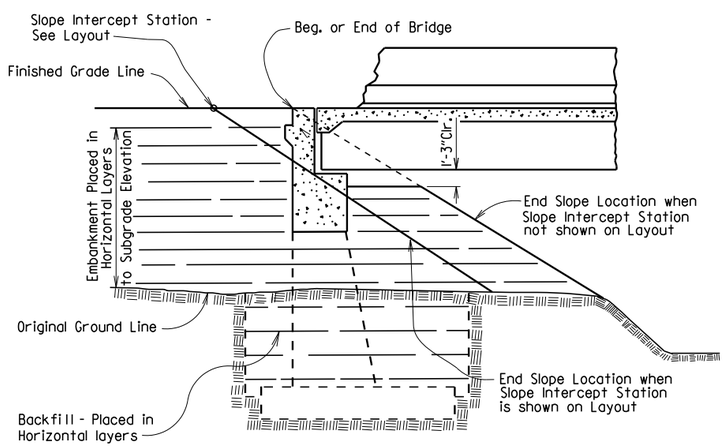
(1) EMBANKMENT & BACKFILL 55000



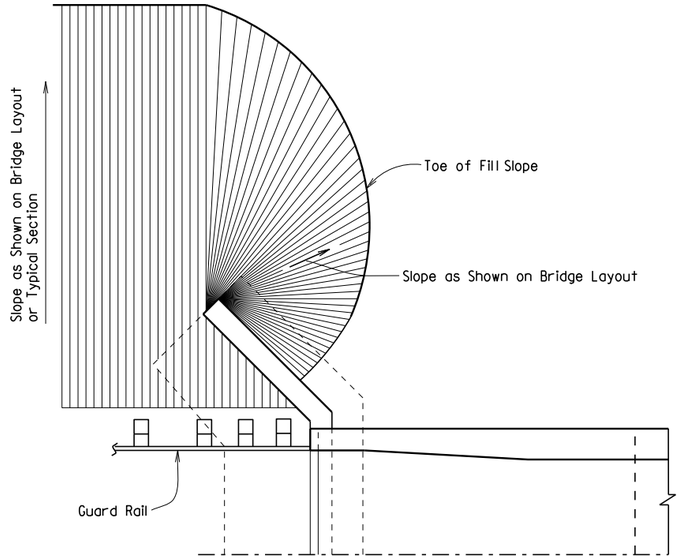
EMBANKMENT CONSTRUCTION AND FOOTING BACKFILL AT VERTICAL WALL ABUTMENTS



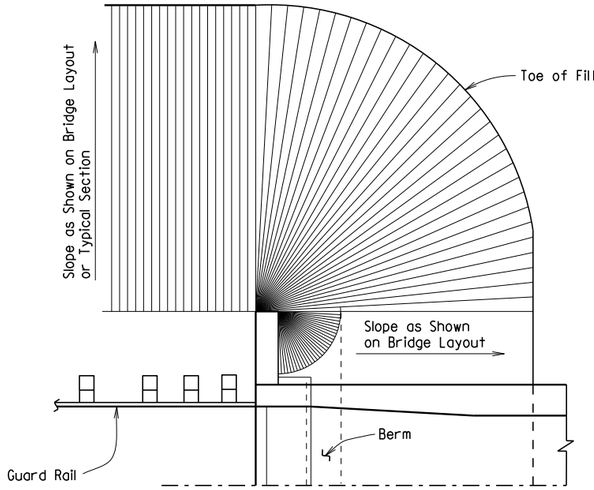
EMBANKMENT CONSTRUCTION AT SPILL-THROUGH PILE END BENTS



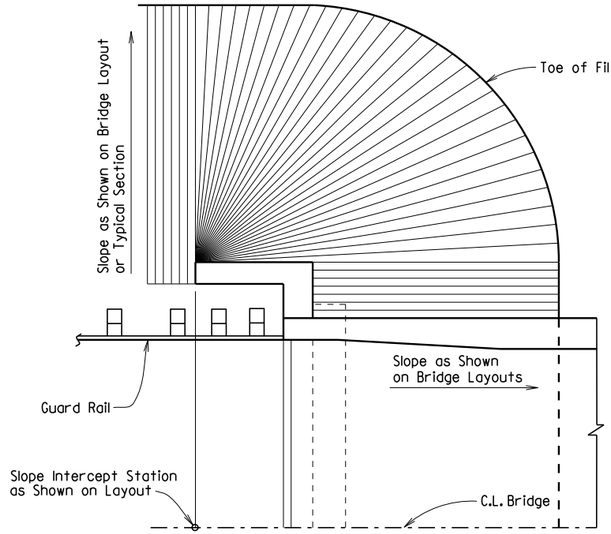
EMBANKMENT CONSTRUCTION AND FOOTING BACKFILL AT SPILL-THROUGH END BENTS



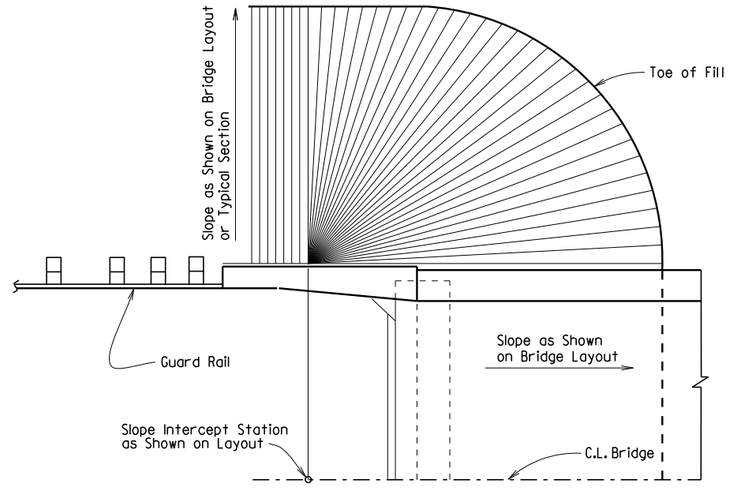
VERTICAL WALL ABUTMENTS



SPILL-THROUGH END BENTS WITH STUB WING



SPILL-THROUGH END BENTS WITH TURNBACK WING



SPILL-THROUGH END BENTS WITH TRANSITION WING

METHOD OF DETERMINING FILL SLOPE LOCATION AT BRIDGE ENDS

GENERAL NOTES

The Bridge End Embankment shall be defined as a section of embankment, not less than 20 feet long adjacent to the bridge end, together with the side slopes and slopes under the bridge end including around the end of wingwalls. Embankment adjacent to structures shall be constructed in 6 inch horizontal layers (loose measure) and compacted by the use of mechanical equipment to the satisfaction of the Engineer. Refer to Subsections 210.09, 210.10 and 801.08 for construction requirements.

STANDARD DETAILS FOR EMBANKMENT CONSTRUCTION AND BACKFILL AT BRIDGE ENDS

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

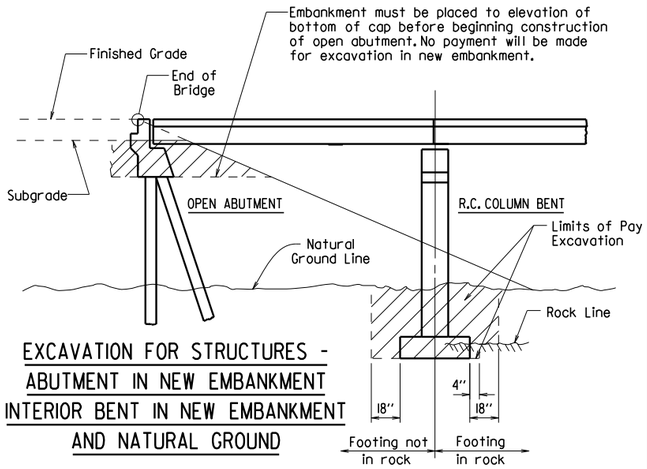
DRAWN BY: KDH DATE: 2-27-2014 FILENAME: b55000.dgn

CHECKED BY: BEF DATE: 2-27-2014 SCALE: NO SCALE

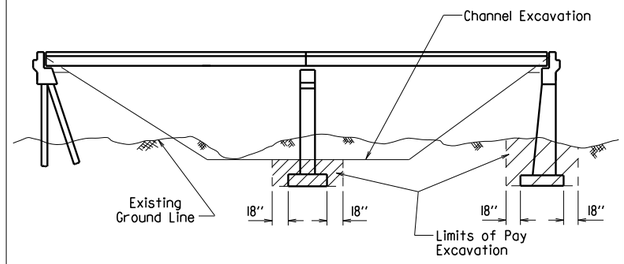
DESIGNED BY: STD. DATE: -

DRAWING NO. 55000

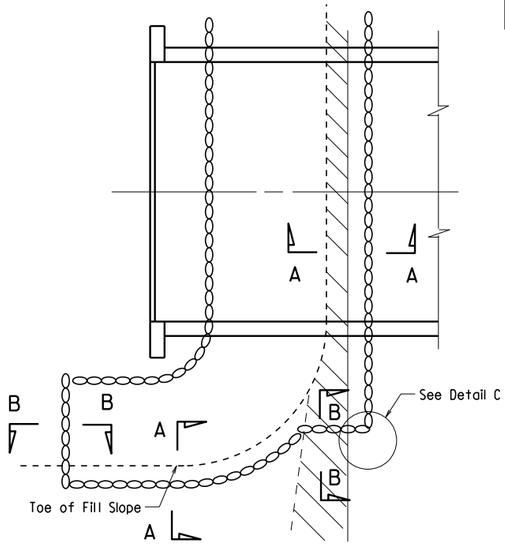
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.				
				(1)	RIPRAP & EXCAV. 55001			



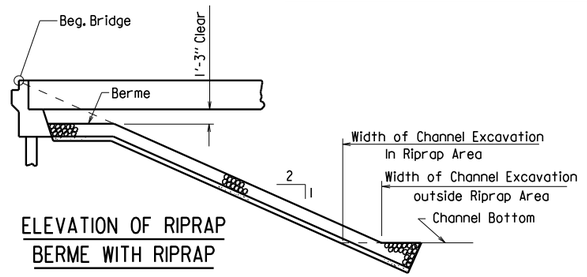
EXCAVATION FOR STRUCTURES - ABUTMENT IN NEW EMBANKMENT INTERIOR BENT IN NEW EMBANKMENT AND NATURAL GROUND



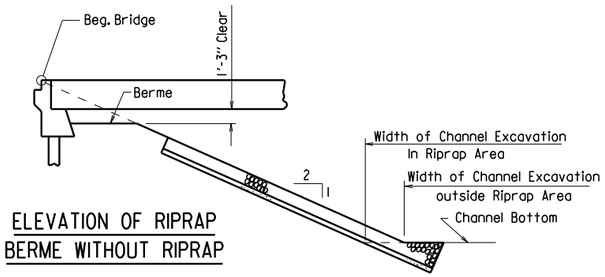
EXCAVATION FOR STRUCTURES - BRIDGE LOCATION WITH DESIGNATED CHANNEL CHANGE



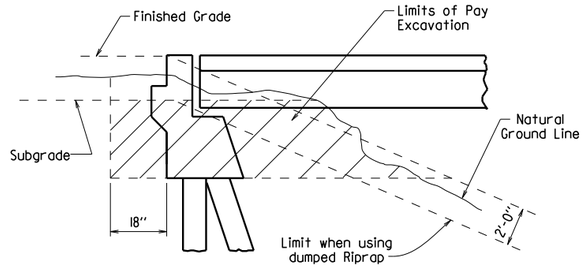
PLAN OF DUMPED RIPRAP



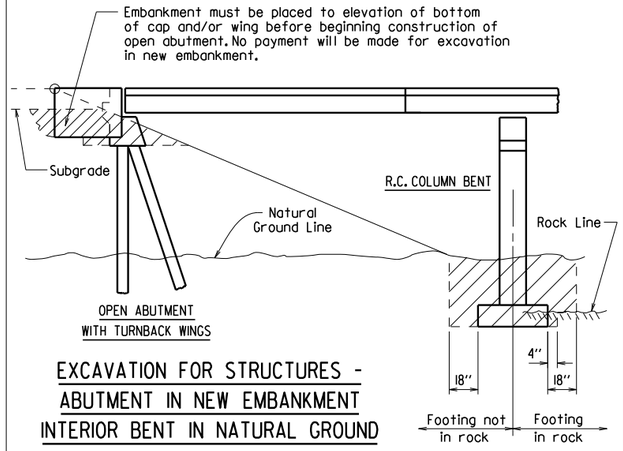
ELEVATION OF RIPRAP BERME WITH RIPRAP



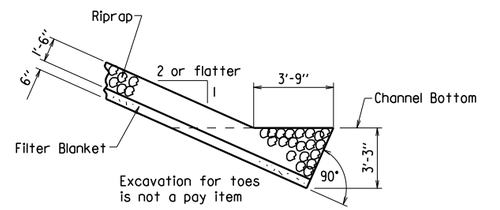
ELEVATION OF RIPRAP BERME WITHOUT RIPRAP



EXCAVATION FOR STRUCTURES - ABUTMENT IN NATURAL GROUND

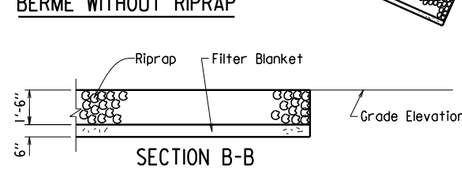


EXCAVATION FOR STRUCTURES - ABUTMENT IN NEW EMBANKMENT INTERIOR BENT IN NATURAL GROUND

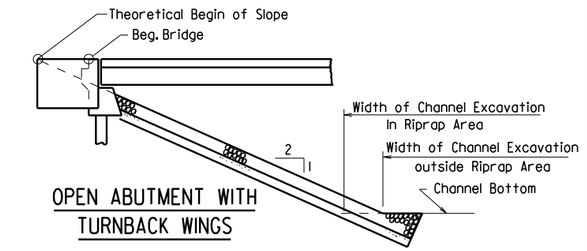


SECTION A-A

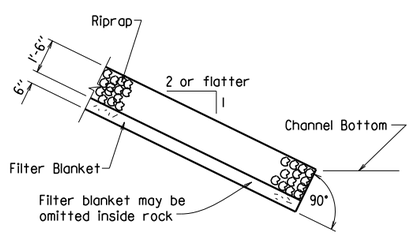
(Toe Excavation in Soil)



SECTION B-B



OPEN ABUTMENT WITH TURNBACK WINGS



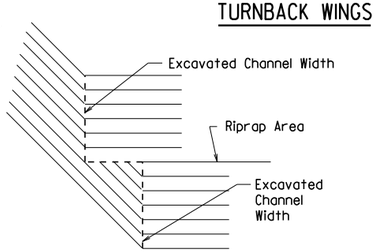
SECTION A-A

(Toe Excavation in Rock)

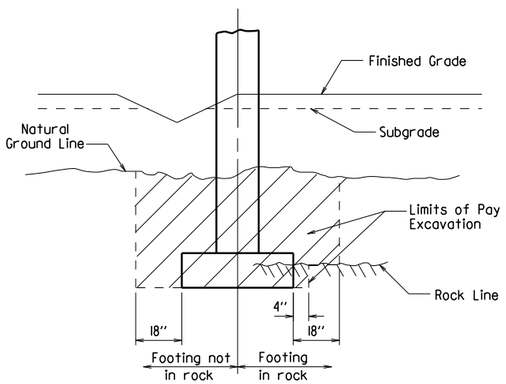
Note : Use this type of toe when rock is encountered which is in a stable condition.

Note : In lieu of an aggregate filter blanket, a synthetic fiber geotextile fabric complying with the requirements of Subsection 816.02(e) may be used.

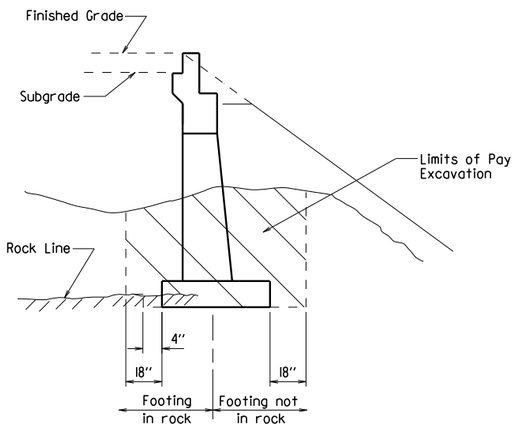
Note : Details for computing excavation for structures are included for information as to how plan quantities were calculated and for use when adjusting quantities when changing footing elevation.



DETAIL C



EXCAVATION FOR STRUCTURES - BENT IN ROADWAY FILL SECTION AND NATURAL GROUND



EXCAVATION FOR STRUCTURES - ABUTMENT IN NATURAL GROUND AND NEW EMBANKMENT

STANDARD DETAILS FOR DUMPED RIPRAP AND FILTER BLANKET AND COMPUTING EXCAVATION FOR STRUCTURES

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 2-27-2014 FILENAME: b55001.dgn

CHECKED BY: BEF DATE: 2-27-2014 SCALE: NO SCALE

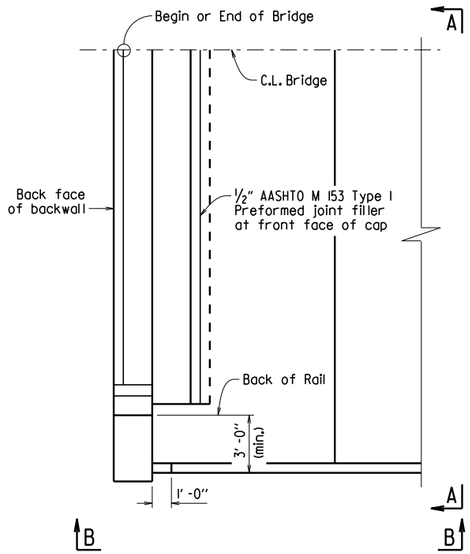
DESIGNED BY: STD. DATE:

DRAWING NO. 55001

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				JOB NO.				

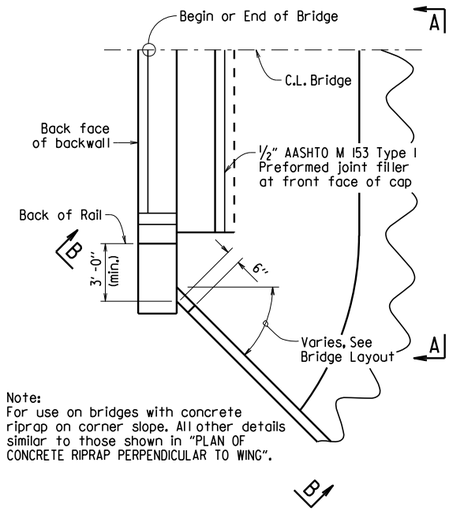
① CONCRETE RIPRAP 55002

Note:
Sloped surfaces of concrete riprap to be marked off into blocks (construction joints optional) with an approved grooving tool, spacing the grooved lines about 5' apart.



PLAN OF CONCRETE RIPRAP PERPENDICULAR TO WING

1/4" = 1'-0"

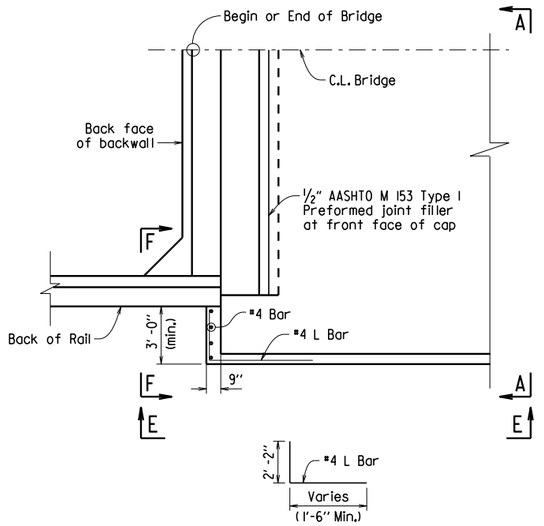


Note:
For use on bridges with concrete riprap on corner slope. All other details similar to those shown in "PLAN OF CONCRETE RIPRAP PERPENDICULAR TO WING".

PLAN OF CONCRETE RIPRAP AT ANGLE TO WING

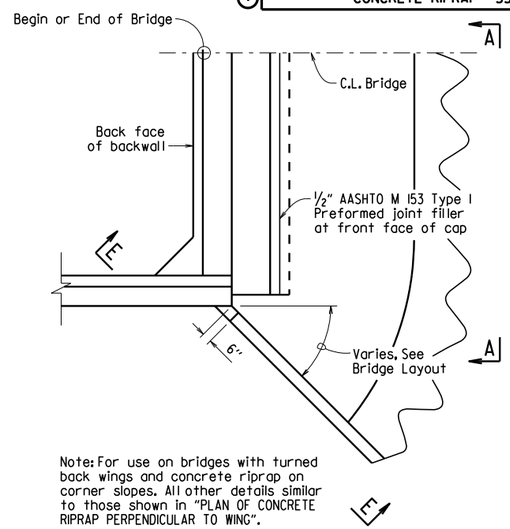
1/4" = 1'-0"

Note:
For use on bridges with turned back wings. All other details similar to those shown in "PLAN OF CONCRETE RIPRAP PERPENDICULAR TO WING".



PLAN OF CONCRETE RIPRAP PERPENDICULAR TO TURNED BACK WING

1/4" = 1'-0"

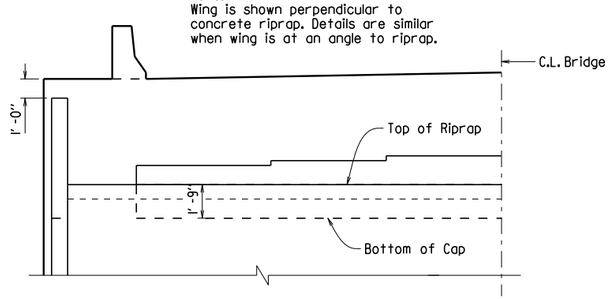


Note: For use on bridges with turned back wings and concrete riprap on corner slopes. All other details similar to those shown in "PLAN OF CONCRETE RIPRAP PERPENDICULAR TO WING".

PLAN OF CONCRETE RIPRAP AT ANGLE FROM TURNED BACK WING

1/4" = 1'-0"

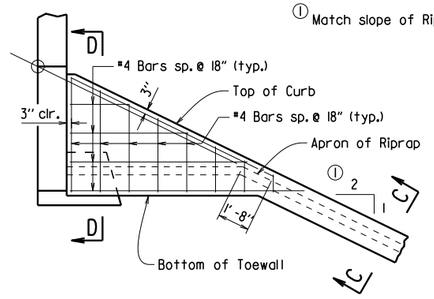
Note:
Wing is shown perpendicular to concrete riprap. Details are similar when wing is at an angle to riprap.



VIEW A-A

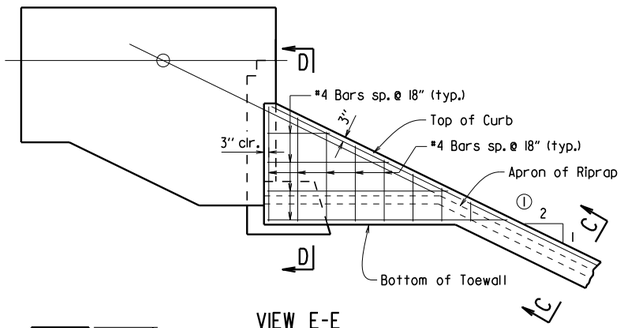
1/4" = 1'-0"

① Match slope of Riprap Apron.



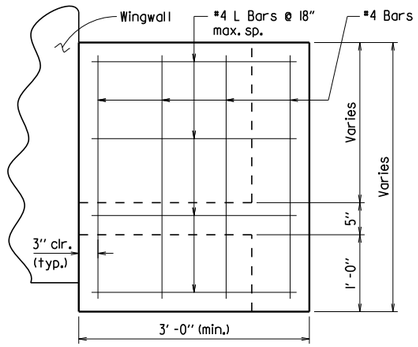
VIEW B-B

1/4" = 1'-0"



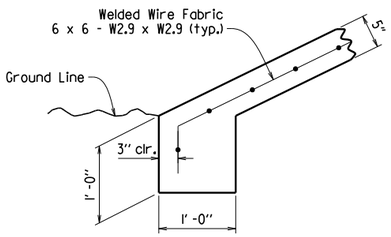
VIEW E-E

1/4" = 1'-0"



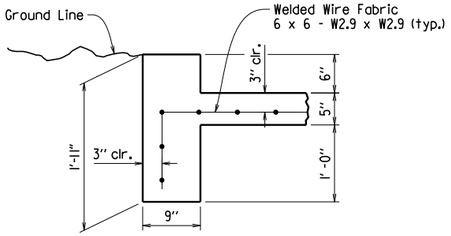
VIEW F-F

1" = 1'-0"



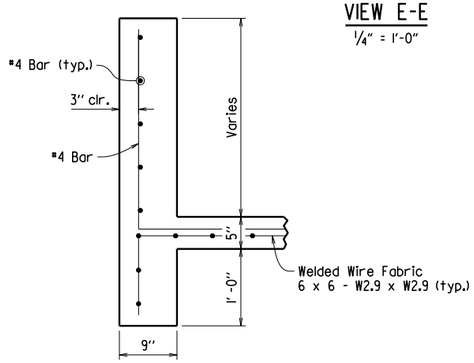
TOE OF CONCRETE RIPRAP

1" = 1'-0"



SECTION C-C

1" = 1'-0"



SECTION D-D

1" = 1'-0"

GENERAL NOTES

All concrete shall be Class A with a minimum compressive strength, f'c = 2,100 psi.

Welded wire fabric shall conform to AASHTO M55 or M221.

STANDARD DETAILS FOR CONCRETE RIPRAP

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

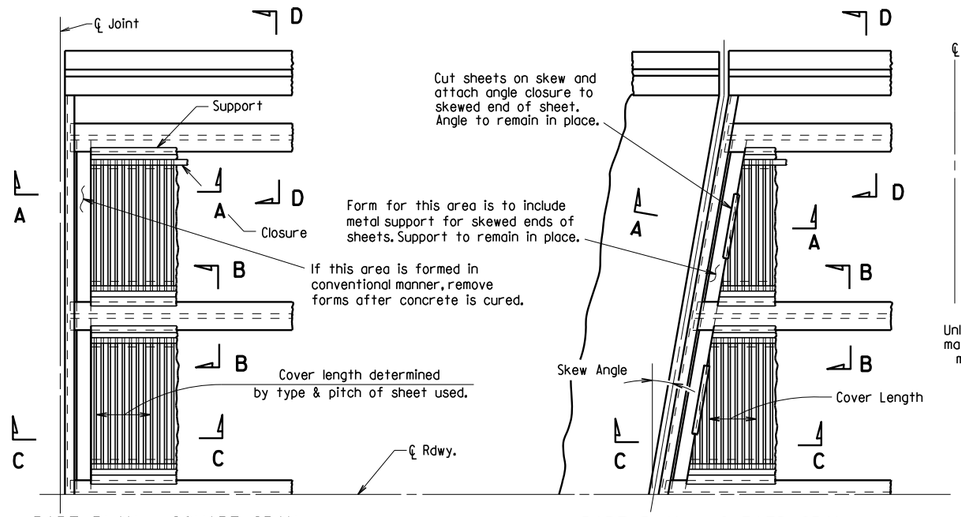
DRAWN BY: ACP DATE: 2/27/2014 FILENAME: b55002.dgn

CHECKED BY: BEF DATE: 2/27/2014 SCALE: AS SHOWN

DESIGNED BY: Std. DATE: ---

DRAWING NO. 55002

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3/24/16				6	ARK.			
				JOB NO.				
				①	BRIDGE DECK FORMS		55005	

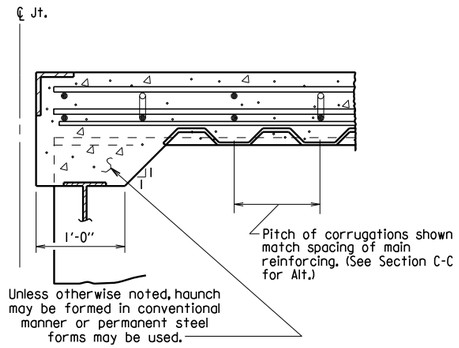


PART PLAN - SQUARE SPAN

3/8" = 1'-0"

PART PLAN - SKEWED SPAN

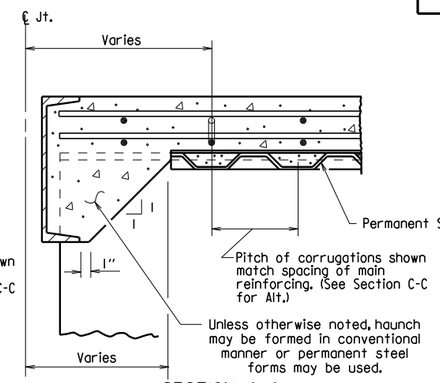
3/8" = 1'-0"



SECTION A-A

N.T.S.

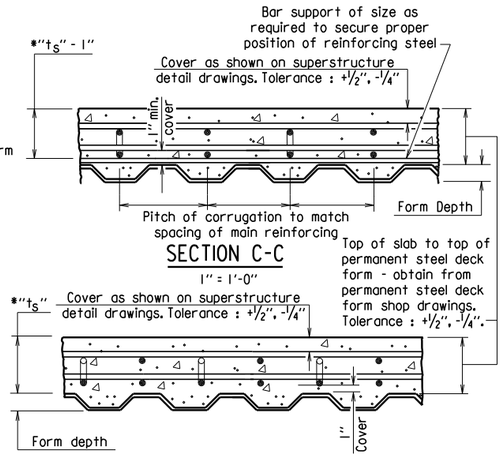
(Angle at end of span)



SECTION A-A

N.T.S.

(Channel at end of span)



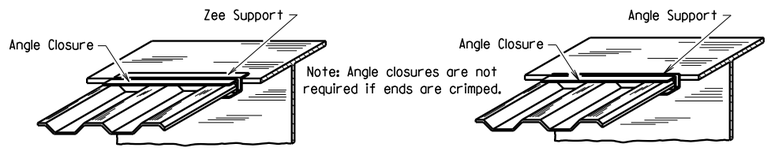
SECTION C-C

1" = 1'-0"

SECTION C-C - ALTERNATE

1" = 1'-0"

(Applicable when corrugations do not match spacing of main reinforcement)



SKETCH OF PERMISSIBLE SUPPORTS

N.T.S.

*t_s = slab thickness as shown on superstructure detail drawings.

GENERAL NOTES

Permanent steel deck forms may be used at the Contractor's option and shall be at no additional cost to the Department. Such use may result in changes to the dead load deflection of the girder. Any cost for adjustments due to a change in the dead load deflection will be borne by the Contractor. Payment for deck concrete and structural steel will not be increased due to use of permanent steel deck forms.

Permanent steel deck forms shall conform to Subsection 802.14(b). Detailed plans, including detailed calculations and manufacturer's technical brochure, shall be submitted to and approved by the Engineer before work of forming the bridge deck is started.

Welding of form supports to the tension flange of steel girders will be permitted only in areas where shear connectors are used. When welding is not allowed, the method of fastening Z or ∠ supports to the flange must be approved by the Engineer.

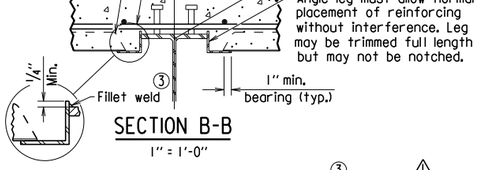
Form sheets shall be fastened to supporting members and to each other with galvanized metal screws sufficient in size and number to provide a secure attachment. Alternate methods of attachment must be approved by the Engineer.

When the pitch of form corrugations match the reinforcing spacing, transversely align form sheets across the bridge to maintain the correct orientation of continuous reinforcing bars in the corrugations.

Bar support rods, when used, shall be sized and spaced to adequately support the bottom reinforcing mat at the required position.

High chairs shall be sized to support the top mat of reinforcing at the proper position. High chairs shall be placed at locations shown on the detail drawings.

Specifications: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2014 Edition), with applicable Supplemental Specifications and Special Provisions.

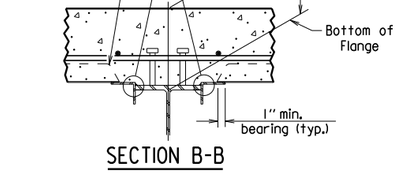


SECTION B-B

1" = 1'-0"

(Showing permissible support for tension flange where shear connectors are used, and for all compression flanges)

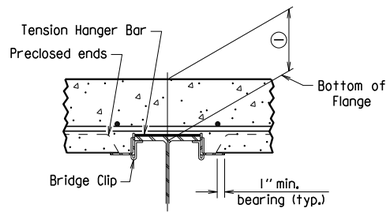
③ ⚠ Minimum weld: 1/8" x 1" @ 18". More weld may be required; maximum length per weld = 1 1/2" (typ.)



SECTION B-B

1" = 1'-0"

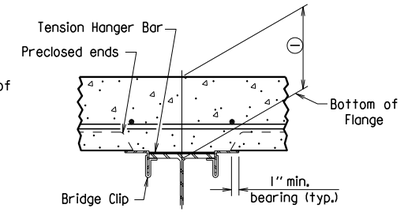
(Showing permissible support for tension flange where shear connectors are used and for all compression flanges)



SECTION B-B

1" = 1'-0"

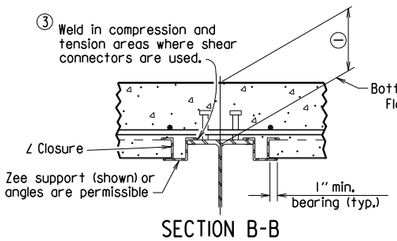
(Showing permissible support for tension flange where shear connectors are not used)



SECTION B-B

1" = 1'-0"

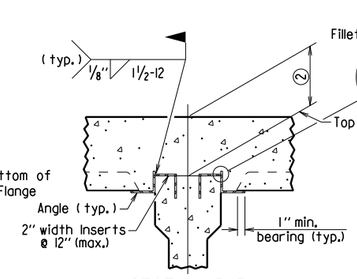
(Showing permissible support for tension flange where shear connectors are not used)



SECTION B-B

1" = 1'-0"

(Showing ∠ Closure)

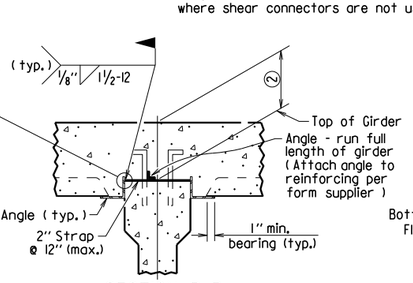


SECTION B-B

(FOR CONCRETE GIRDERS)

1" = 1'-0"

(Showing support by Insert cast in girder)

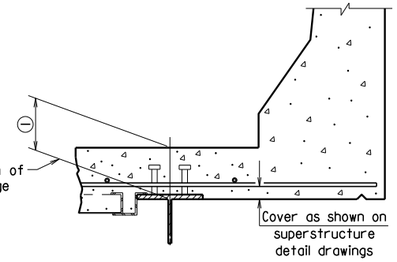


SECTION B-B

(FOR CONCRETE GIRDERS)

1" = 1'-0"

(Showing support by Strap)



SECTION D-D

1" = 1'-0"

Note: Only Bottom Reinforcing is shown.

① Distance from top of slab to bottom of top flange as measured at centerline girder and as shown on superstructure detail drawings. This dimension may vary within the following limits to maintain the grade and slab thickness tolerances : Minimum - occurs when either the top flange or the support angle leg contacts the bottom reinforcing steel; Maximum = t_S + 1 3/4" + flange thickness. See Section C-C for slab thickness tolerance between adjacent girder flanges.

② Distance from top of slab to top of girder as measured at centerline girder and as shown on superstructure detail drawings. This dimension may vary within the following limits to maintain the grade and slab thickness tolerances : Minimum - occurs when either the top of girder or the support angle leg contacts the bottom reinforcing steel; Maximum - value shown on the superstructure detail drawings when removable forms are used. See Section C-C for slab thickness tolerance between adjacent girder flanges.

⚠ Revised weld dimension by KWY, Ck'd. by BEF, 3/24/16.

STANDARD DETAILS FOR PERMANENT STEEL BRIDGE DECK FORMS FOR STEEL & CONCRETE GIRDER SPANS

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY:	KDH	DATE:	2-27-2014	FILENAME:	b55005.dgn
CHECKED BY:	BEF	DATE:	2-27-2014	SCALE:	NONE
DESIGNED BY:	STD.	DATE:	—		

DRAWING NO. 55005

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.				
				①		GENERAL NOTES		55006

GENERAL NOTES

These GENERAL NOTES are applicable unless otherwise shown in the Plan Details, Special Provisions, or Supplemental Specifications.

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 Specifications.

DESIGN SPECIFICATIONS: See Bridge Layout(s).

SUPERSTRUCTURE NOTES:

MATERIALS AND STRENGTHS:

Class S(AE) Concrete	f'c =	4,000 psi
Reinforcing Steel (Gr. 60, AASHTO M 31 or M 322, Type A)	fy =	60,000 psi
Structural Steel (AASHTO M 270, Gr. 36)	Fy =	36,000 psi
Structural Steel (AASHTO M 270, Gr. 50)	Fy =	50,000 psi
Structural Steel (AASHTO M 270, Gr. 50W)	Fy =	50,000 psi
Structural Steel (AASHTO M 270, Gr. HPS70W)	Fy =	70,000 psi

See Plan Details for Grade(s) of Structural Steel required.

CONCRETE:

All concrete shall be Class S(AE) with a minimum 28 day compressive strength f'c = 4,000 psi. Concrete shall be poured in the dry and all exposed corners shall be chamfered ¾" unless otherwise noted.

The superstructure details shown are for use when removable deck forming is used and are the basis for measurement of Class S(AE) Concrete. See Standard Drawing No. 55005 for allowable modifications and for tolerances when Permanent Steel Bridge Deck Forms are used.

Use of a longitudinal screed is not permitted on any span of a bridge deck with horizontal curvature.

The concrete deck (roadway surface) shall be given a tine finish in accordance with Subsection 802.19 for Class 5 Tined Bridge Roadway Surface Finish. Sidewalks shall receive a broomed finish as specified for final finishing in Subsection 802.19 for Class 6 Broomed Finish. Movement of the finishing machine across new concrete shall be on planks placed on the surface and shall be prohibited for 72 hours after finishing the pour. Sufficient concrete must be placed ahead of the strike-off to fully load the beam or girder. When permitted, the use of a longitudinal strike-off will require that a vertical camber adjustment be made in the strike-off to account for the future dead load deflection due to any railings, median barrier, and sidewalks.

REINFORCING STEEL:

All reinforcing steel shall be Grade 60 conforming to AASHTO M 31 or M 322, Type A, with mill test reports and shall be epoxy coated. The reinforcing steel is to be accurately located in the forms and firmly held in place by steel wire supports, sufficient in number and size to prevent displacement during the course of construction. The wire supports will not be paid for directly, but will be considered subsidiary to the item "Epoxy Coated Reinforcing Steel (Grade 60)".

STRUCTURAL STEEL (COMMON TO W-BEAMS AND PLATE GIRDERS):

Structural steel shall be AASHTO M 270 with grade and payment as specified in the plans. Grade 50W steel shall not be painted and all exposed surfaces shall be cleaned in accordance with Subsection 807.84(e). Grade 36 and Grade 50 steel shall be painted unless otherwise noted and all exposed surfaces shall be cleaned in accordance with Subsection 807.84. Structural steel completely embedded in concrete may be AASHTO M 270, Gr. 36, Gr. 50 or Gr. 50W unless otherwise noted.

Drawings show general features of design only. Shop drawings shall be made in accordance with the specifications, submitted and approval secured before fabrication is begun.

Requests for substitution of structural steel shapes shown with shapes of greater size must be submitted by the Contractor to the Engineer for approval. Steels of equal or greater strengths will be accepted only when shown on the approved shop drawings. Payment will be based on the basis of shapes and materials shown in the plans, and no additional compensation will be made for any adjustments due to substitutions.

All welding that is to be done during fabrication of structural steel, including temporary welds, shall be detailed on the shop drawings and submitted for approval. If additional welds are required, whether permanent or temporary, a formal request with detailed drawings shall be submitted to the Engineer for approval; however, additional welds used for attaching falsework support devices or screed rail supports to the structural steel that do not exceed the limitations of Subsection 802.13 will not require approval prior to construction. All welding shall conform to Subsection 807.26.

Unless otherwise noted, field connections shall be bolted with ¾" ø high-strength bolts using 13/16 " ø open holes. Holes for ¾" ø high-strength bolts may be 15/16 " ø if a washer is supplied for use under both the nut and head of the bolt. The use of oversized holes will not be allowed on main members unless otherwise noted. Bolts shall be placed with heads on the outside face of the exterior beam or girder webs and on the bottom of the beam or girder flanges.

All stud shear connectors shall be granular flux filled, solid fluxed, or equal and shall be automatically end welded in accordance with recommendations of the Manufacturer.

When painting is required, all structural steel except galvanized steel and steel completely encased in concrete shall be painted in accordance with Subsection 807.75. The color of paint shall be as specified in the plans.

STRUCTURAL STEEL (W-BEAMS):

All beams and field splice plates, and all diaphragms and connection plates attached to horizontally curved beams are considered main load carrying members and shall meet the Longitudinal Charpy V-Notch Test specified in Subsection 807.05. This work and material will not be paid for directly, but shall be considered subsidiary to the item "Structural Steel in Beam Spans (M 270, Gr. ___)".

All beams in continuous units and simple spans with field splices shall be blocked in their true position in the shop in groups as specified in Subsection 807.54(b)(2) with the webs horizontal. The camber, length of sections, distance between bearings, and openings of joints shall be measured and this information shall become part of the permanent records. The component parts shall be match marked in this assembly and these marks shall be shown on the erection diagram.

All beams in simple spans without field splices shall be blocked in their true position with webs horizontal. The camber, distance between bearings, and openings of joints shall be measured and this information shall become part of the permanent records.

Flange field splice plates shall be cut and fabricated so that the primary direction of rolling is parallel to the direction of the main tensile and/or compressive stresses.

All beam dimensions are based on a temperature of 60 degrees F. A tolerance of ¼" +/- is allowed for camber.

Bent plate diaphragms for horizontally curved beams shall be cut and fabricated so that the primary direction of rolling is parallel to the direction of the main tensile and/or compressive stresses. Bent plate diaphragms for straight beams may be cut and fabricated in accordance with Subsection 807.35 or as required for horizontally curved beams.

Unless otherwise noted, diaphragms shall be installed as beams are erected. All bolts in diaphragms and field splices shall be installed and tightened in accordance with Subsection 807.71 prior to pouring the concrete deck.

STRUCTURAL STEEL (PLATE GIRDERS):

All references to cross-frames shall include "X" or "K" types.

All girder web and flange plates, all field splice plates, and all diaphragms, cross-frames and connection plates attached to horizontally curved girders are considered main load carrying members and shall meet the Longitudinal Charpy V-Notch Test specified in Subsection 807.05. This work and material will not be paid for directly, but shall be considered subsidiary to the item "Structural Steel in Plate Girder Spans (M 270, Gr. ___)".

All girders in continuous units and simple spans with field splices shall be assembled in the shop as specified in Subsection 807.54(b)(2) and blocked in their true position with webs horizontal. The camber, length of sections, distance between bearings, and openings of joints shall be measured and this information shall become part of the permanent records. The component parts shall be match marked in this assembly and these marks shall be shown on the erection diagram.

All girders in simple spans without field splices shall be blocked in their true position with webs horizontal. The camber, distance between bearings, and openings of joints shall be measured and this information shall become part of the permanent records.

Web and flange plates for main members and flange splice plates for main members shall be cut and fabricated so that the primary direction of rolling is parallel to the direction of the main tensile and/or compressive stresses.

Girder webs may be made by shop splicing with minimum lengths of 25 feet for sections. Flange plates longer than 50 feet may be made by shop splicing with minimum lengths of 25 feet for sections. No additional payment will be made for shop welded splices.

All girder dimensions are based on a temperature of 60 degrees F. A tolerance of ¼" +/- is allowed for camber.

Groove welds in web and flange plates shall be Quality Control (Q.C.) tested by nondestructive testing, as required in Subsection 807.23(b). Fillet welds at flange to web plate connections shall be Q.C. tested by the magnetic particle method. All Q.C. testing shall be considered subsidiary to the item "Structural Steel in Plate Girder Spans (M 270, Gr. ___)".

Bent plate diaphragms for horizontally curved girders shall be cut and fabricated so that the primary direction of rolling is parallel to the direction of the main tensile and/or compressive stresses. Bent plate diaphragms for straight girders may be cut and fabricated in accordance with Subsection 807.35 or as required for horizontally curved girders.

Unless otherwise noted, cross-frames and diaphragms shall be installed as girders are erected. All bolts in cross-frames, diaphragms, and field splices shall be installed and tightened in accordance with Subsection 807.71 prior to pouring the concrete deck.

SUBSTRUCTURE NOTES:

CONCRETE:

Unless otherwise noted, concrete in caps, columns and footings (except seal footings) shall be Class "S" with a minimum 28 day compressive strength f'c = 3,500 psi and shall be poured in the dry. Seal Concrete for footings shall have a minimum 28 day compressive strength f'c = 2,100 psi.

Concrete in drilled shafts shall be Class "S" as modified by Job SP "Drilled Shaft Foundations".

All exposed corners shall be chamfered ¾" unless otherwise noted.

REINFORCING STEEL:

All reinforcing steel shall be Grade 60 (yield strength = 60,000 psi) conforming to AASHTO M 31 or M 322, Type A, with mill test reports.

Top reinforcing bars in cap shall be properly placed to avoid interference with anchor bolts or sheet metal sleeves.

STRUCTURAL STEEL:

Structural steel in end bents shall be AASHTO M 270 with grade and payment as specified in the plans.

FOR ADDITIONAL INFORMATION AND NOTES, SEE LAYOUT(S) AND PLAN DETAILS.

FOR ADDITIONAL INFORMATION AND NOTES, SEE LAYOUT(S) AND PLAN DETAILS.

STANDARD GENERAL NOTES
FOR STEEL BRIDGE STRUCTURES

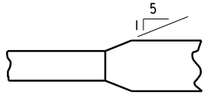
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: A.M.S. DATE: 9-2-2015 FILENAME: b55006.dgn
CHECKED BY: B.E.F. DATE: 9-2-2015 SCALE: NO SCALE
DESIGNED BY: STD. DATE:

DRAWING NO. 55006

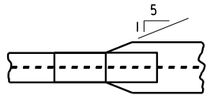
PRINT DATE: 11/7/2019

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.				
				①	STEEL BRIDGE STRUCTURES 55007			

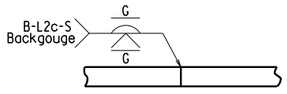


Plan-Unequal Width (Flg.)

FLANGE SPLICE

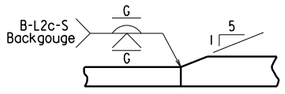


FLANGE SPLICE AT UNEQUAL BOTTOM FLANGE WIDTHS



Equal Thickness

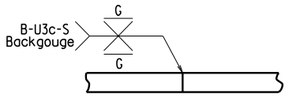
WEB & FLANGE SPLICE



Unequal Thickness

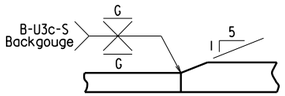
FLANGE SPLICE

(Use when Base Metal Thickness is Equal to or Less than 2")



Equal Thickness

WEB & FLANGE SPLICE

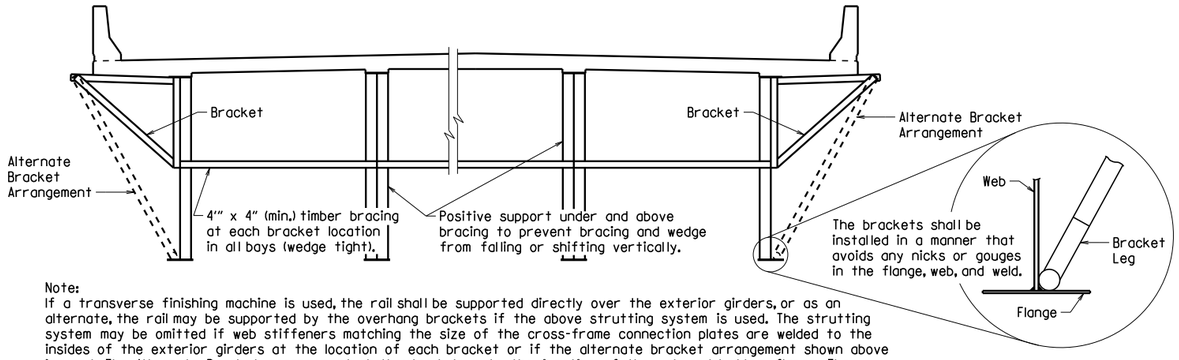


Unequal Thickness

FLANGE SPLICE

(Use when Base Metal Thickness is Greater than 2")

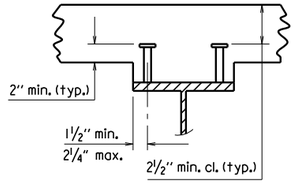
DETAILS OF WELDED SPLICES FOR PLATE GIRDERS



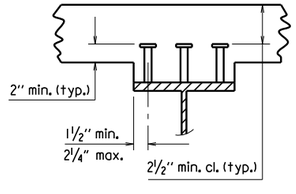
Note:
If a transverse finishing machine is used, the rail shall be supported directly over the exterior girders, or as an alternate, the rail may be supported by the overhang brackets if the above strutting system is used. The strutting system may be omitted if web stiffeners matching the size of the cross-frame connection plates are welded to the insides of the exterior girders at the location of each bracket or if the alternate bracket arrangement shown above is used. The Alternate Bracket arrangement shall extend down to the junction of the web and bottom flange. The stiffener shall conform to the details for cross frame connection plates shown on the plans. No direct payment will be made for brackets, timber bracing, supports, or welded stiffeners. Payment shall be subsidiary to "Structural Steel in Plate Girder Spans (___)".

SCREED RAIL SUPPORT FOR PLATE GIRDERS

(USE WHEN WEB DEPTHS ARE 48" OR GREATER)



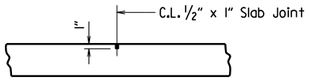
2 STUDS PER ROW



3 STUDS PER ROW

Stud Shear Connectors shall be automatically end welded to the beam or girder flange in accordance with the recommendations of the Manufacturer. See plan details for number and size.

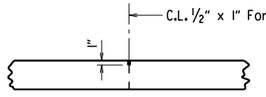
SHEAR CONNECTOR DETAIL



Use Type 3 or 4 Joint Sealer. See Subsections 501.02(h) and 501.05(j). Backer Rod filler will not be required. Joint Sealer shall be measured and paid for as Class S(AE) Concrete-Bridge. Slab Joints shall extend to the outside edge of the deck slab and shall align with open joints at the front face of the parapet. Slab joints shall be installed before the parapet railing is poured. If slab joints are to be sawed, they shall be sawed as soon as the concrete has sufficiently set to allow sawing of the joint without damage to the slab. Slab joints shall be placed at all pouring sequence construction joints and required slab joint locations. The joint sealer shall extend across the deck from gutterline to gutterline.

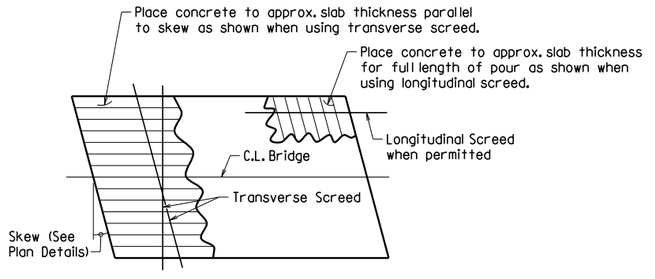
ADDITIONAL NOTES IF SIDEWALKS OR RAISED MEDIANS ARE REQUIRED:
Slab Joints shall be installed before the sidewalk or raised median is poured. After installation of the joint in the sidewalk or raised median and prior to pouring the parapet rail, the joint sealer shall be placed extending across the deck slab from gutterline to gutterline and acrosss the top of the sidwalk or raised median to the edge of the slab. No joint sealer shall be placed on the deck slab under the sidewalk or raised median.

TRANSVERSE SLAB JOINT DETAIL



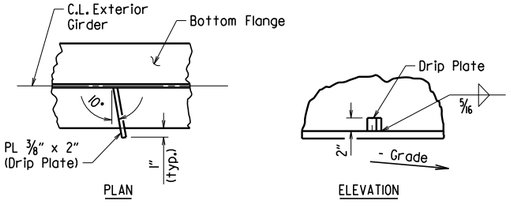
Use ½" x 1" Type 3 or 4 Joint Sealer. See Subsections 501.02(h) and 501.05(j). Backer Rod filler will not be required. Joint sealer shall be measured and paid for as Class S(AE) Concrete-Bridge. This joint shall be formed. Seal color shall be gray or other color similar to concrete.

LONGITUDINAL CONSTRUCTION JOINT



Note: At the Contractor's option, the transverse screed may be placed parallel to the skew or perpendicular to C. L. Bridge.

CONCRETE PLACEMENT PROCEDURE FOR BRIDGES WITH SKEW



PLAN ELEVATION

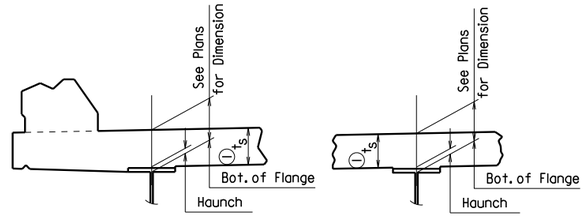
Drip Plate to be welded to the outer side of the bottom flange of the exterior girders.

Locate drip plate 5'-0" from C.L. Bearing on high side of each Bent, unless otherwise noted in the plans.

BOTTOM FLANGE DRIP PLATE

(USE WHEN WEB DEPTHS ARE 54" OR GREATER AND UNIT OR SPAN IS NOT IN LEVEL GRADE)

t_s = slab thickness. See "Typical Roadway Section" in the plans.



EXTERIOR BEAM OR GIRDER INTERIOR BEAM OR GIRDER

Ⓘ Tolerance when removable deck forming is used is + ½", - ¼". Haunch forming is required and shall be adjusted to maintain slab thickness tolerance.

NOTES:
Haunch dimension may vary within the following limits to maintain the grade and slab thickness tolerance: Minimum occurs when top flange contacts bottom reinforcing steel; Maximum = top flange thickness plus 1¾" unless otherwise noted in the plans. No increase in concrete and structural steel quantities will be made to maintain tolerances.

Tolerances shown are applicable only when removable deck forming is used. See Std. Dwg. No. 55005 for tolerances when permanent steel deck forms are used. Payment for concrete shall be based on removable deck forming.

ADJUSTMENT FOR SLAB THICKNESS TOLERANCE

NOTE: Working Point matches Theoretical Roadway Grade.

ROUNDING DETAIL

BRIDGES IN NORMAL CROWN

WELD TABLE

Material Thickness of Thicker Part Joined (Inches)	Minimum Size of Fillet Weld (Inches)	Single Pass Weld Must Be Used
To ¾" Inclusive	¼"	
Over ¾"	⅝"	

NOTE: When a fillet weld size, as shown on the plans, is larger than the minimum, the first pass shall be that specified for minimum size of fillet weld.

SECTION AND SUBSECTION REFER TO THE ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2014 EDITION).

THESE DETAILS ARE APPLICABLE UNLESS OTHERWISE SHOWN IN THE PLAN DETAILS, SPECIAL PROVISIONS, OR SUPPLEMENTAL SPECIFICATIONS.

STANDARD DETAILS FOR STEEL BRIDGE STRUCTURES

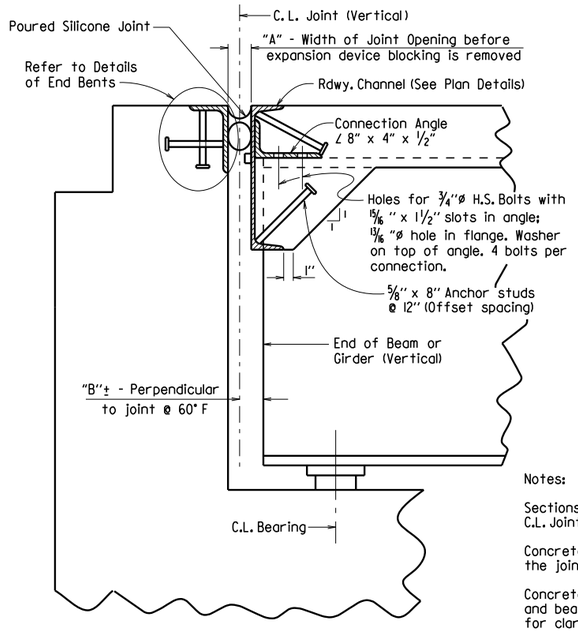
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: JYP DATE: 2/11/2016 FILENAME: b55007.dgn
CHECKED BY: AMS DATE: 2/11/2016 SCALE: No Scale
DESIGNED BY: STD. DATE: —

DRAWING NO. 55007

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.				
				①		POURED SILICONE JOINT		55008



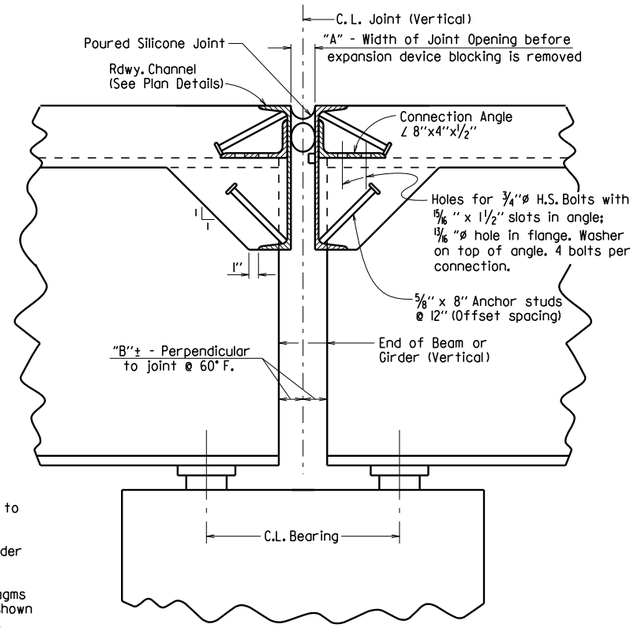
SECTION THRU JOINT AT END BENT

Notes:

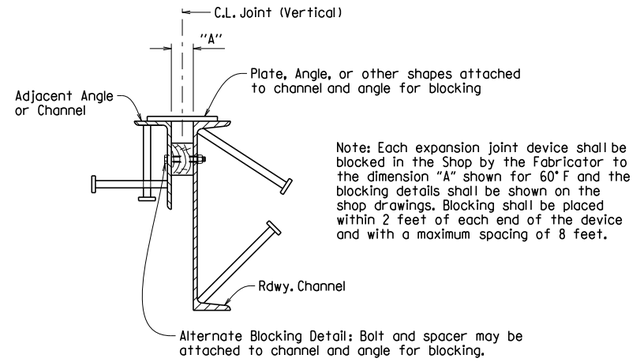
Sections are taken perpendicular to C.L. Joint.

Concrete shall be hand packed under the joint armor.

Concrete diaphragms, steel diaphragms and bearing stiffeners are not shown for clarity. See plans for details.



SECTION THRU JOINT AT INTERMEDIATE BENT



Note: Each expansion joint device shall be blocked in the Shop by the Fabricator to the dimension "A" shown for 60° F and the blocking details shall be shown on the shop drawings. Blocking shall be placed within 2 feet of each end of the device and with a maximum spacing of 8 feet.

DETAILS FOR BLOCKING EXPANSION JOINT DEVICE

EXPANSION DEVICE INSTALLATION AT END BENTS:

The Contractor may elect to install the expansion device using one of the following two alternatives:

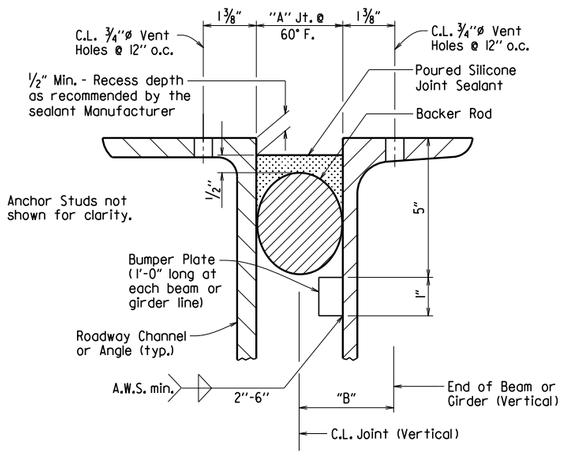
1) The concrete span pour adjacent to joint shall be placed before the end bent backwall is placed. After the end bent backwall forms are in place and the beams or girders erected, the blocked expansion device shall be installed and adjusted for grade. All connection bolts shall be fully tightened prior to placing the deck concrete adjacent to the bent. Immediately prior to pouring the backwall concrete, the blocking shall be removed, and the opening adjusted for temperature and grade.

2) The backwall shall be poured to the optional construction joint after beams or girders are erected. The blocked expansion device shall be installed and adjusted for grade. All connection bolts shall be fully tightened prior to placing the deck concrete adjacent to the bent. Immediately prior to pouring the remainder of the backwall concrete, the blocking shall be removed and the opening adjusted for temperature and grade.

EXPANSION DEVICE INSTALLATION AT INTERMEDIATE BENTS:

After all beams or girders on each side of the joint are erected the blocked expansion device shall be installed and adjusted for grade. Deck concrete shall be placed for the entire unit or span on one side of the joint before deck concrete on the other side is placed. Connection bolts for the first side to have deck concrete placed shall be completely bolted. Bolts on the other side shall be loosely installed so that thermal and rotational movements will not be restricted during concrete placement on the first side.

Connection bolts on the second side shall remain loose until the concrete pour adjacent to the joint is to be placed. Immediately prior to pouring the span concrete on the second side, the blocking shall be removed, the joint adjusted for temperature and grade, and the connection bolts tightened.



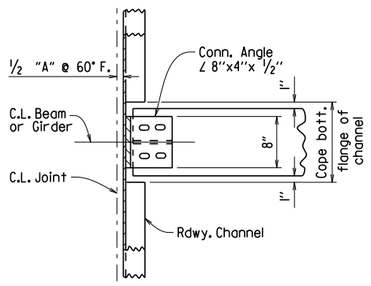
DETAIL OF POURED SILICONE JOINT

Silicone joint material and installation shall conform to Section 809. The temperature limitations recommended by the sealant Manufacturer shall be observed. The sealant shall be installed only when the average 24 hour air temperature is between 40° and 80° F.

Use an appropriately sized backer rod at the depth shown in the Manufacturer's literature based on the joint width at the time of sealing. Unless otherwise noted, do not install more backer rod than can be sealed in the same day.

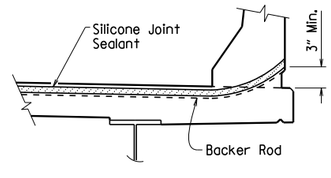
The Contractor shall verify separation of the backer rod from the joint material after the joint material has set.

When bridge deck is constructed in stages, backer rods shall be extended beyond length of poured joint in initial construction stage so that the two pieces can be properly spliced together prior to installing sealant in subsequent stages. Manufacturer's recommendations shall be followed to prevent sealant from "running out of joint" during stage construction.

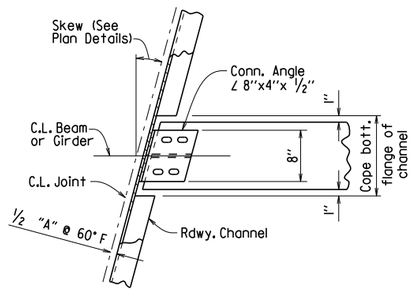


CHANNEL CONNECTION DETAIL

BENTS WITHOUT SKEW

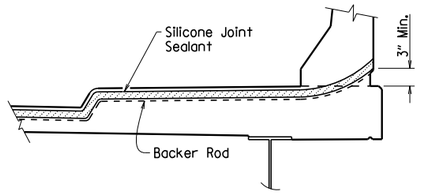


JOINT SEAL PLACEMENT AT RAIL



CHANNEL CONNECTION DETAIL

BENTS WITH SKEW



JOINT SEAL PLACEMENT AT SIDEWALK

SECTION AND SUBSECTION REFER TO THE ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2014 EDITION).

THESE DETAILS ARE APPLICABLE UNLESS OTHERWISE SHOWN IN THE PLAN DETAILS, SPECIAL PROVISIONS, OR SUPPLEMENTAL SPECIFICATIONS. SEE "TABLE OF SILICONE JOINT DATA" IN PLAN DETAILS FOR VARIABLES "A" AND "B", AND BUMPER PLATE SIZE.

STANDARD DETAILS FOR POURED SILICONE JOINTS

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: A.C.P. DATE: 2/11/2016 FILENAME: b55008.dgn

CHECKED BY: A.M.S. DATE: 2/11/2016 SCALE: No Scale

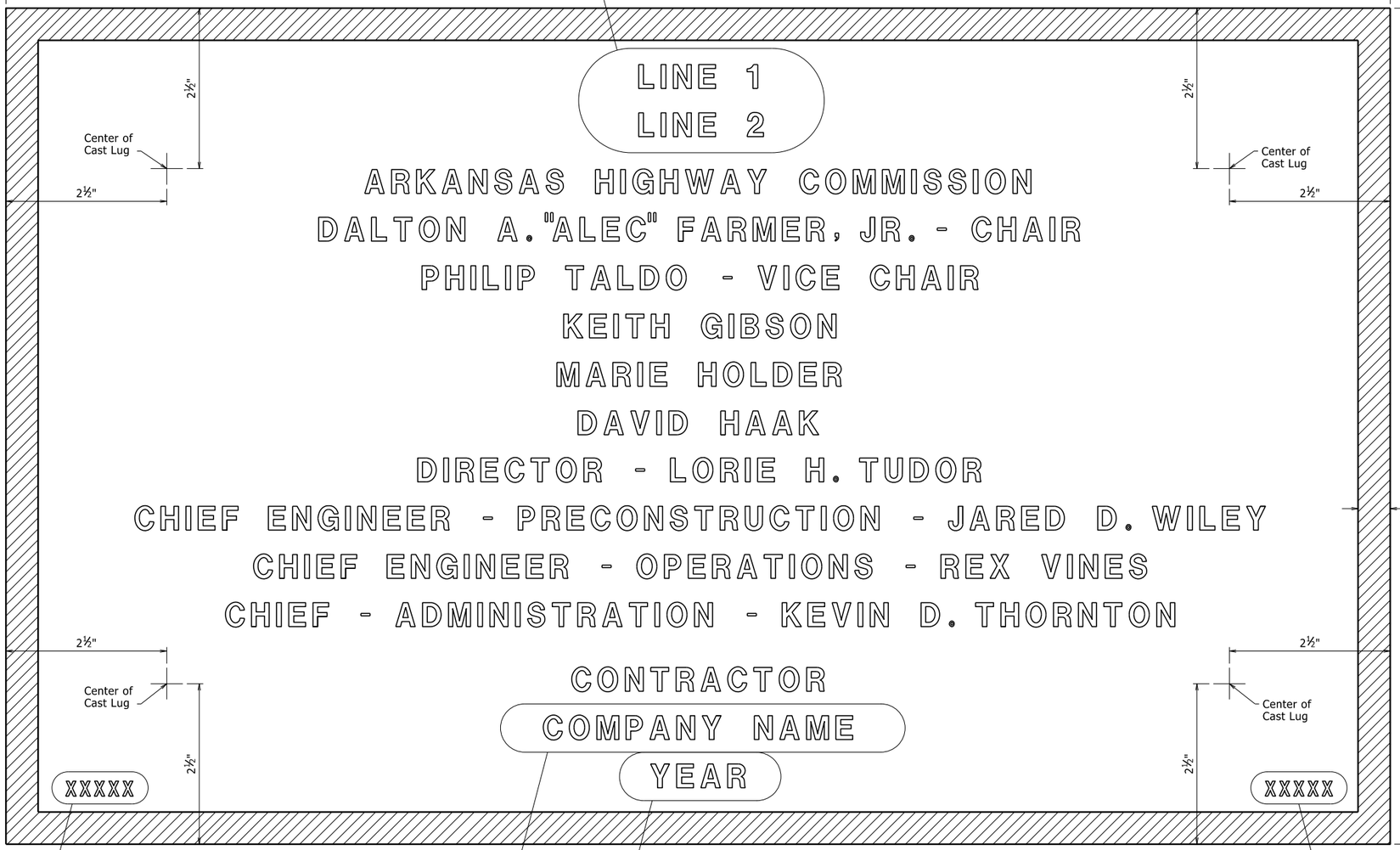
DESIGNED BY: STD. DATE: —

DRAWING NO. 55008

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
4-14-23		6	ARK.			
		TYPE D NAME PLATE - 55010				

The name of the bridge as shown on the plans shall be placed on Lines 1 & 2 using ⅛" raised letters and numerals ⅜" high.

	Example 1	Example 2	Example 3	Example 4
Line 1	RED RIVER	SOUTHERN RAILROAD	SALINE RIVER	HIGHWAY 5
Line 2	RELIEF	OVERPASS	RELIEF	



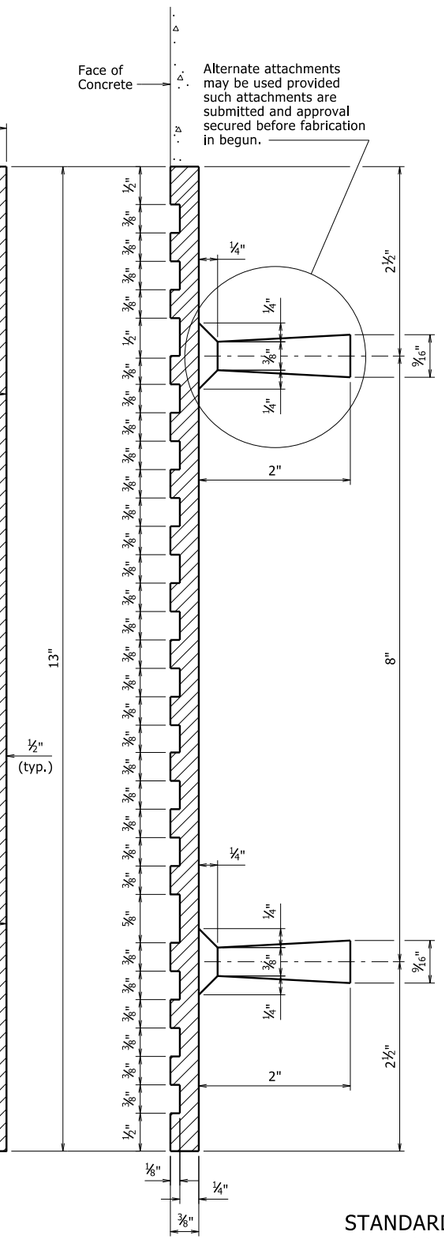
Place the design live loading here using ⅛" raised letters and numerals ¼" high. Examples: HS20, HL-93

Place the Year in which Contract was awarded here using ⅛" raised numerals ⅜" high. Example: 2001

Place the name of the company awarded the construction contract here using ⅛" raised letters and numerals ⅜" high. Example: ABCD CONSTRUCTION, INC.

Place the Bridge number here using ⅛" raised letters and numerals ¼" high. Examples: A1234, 05432

TYPICAL BRIDGE NAME PLATE



GENERAL NOTES

Specifications: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, (2014 Edition) with applicable Supplemental Specifications and Special Provisions.

Name plates shall be cast bronze and shall meet the material requirements as specified in Section 812.

Body of plate shall be ¼" thick and shall include four tapering cone lugs ⅜" to 9/16" x 2" long. The border and all lettering shall be raised ⅛" above the face of plate and shall be polished.

All lettering shall be plain gothic, square cut and not tapered.

The number of plates required and the location and name on the plate for each bridge shall be as designated on the plans.

1 Revised and Redrawn
4-14-23 CGP Checked By: CRE

STANDARD DETAILS FOR
TYPE D BRIDGE NAME PLATE

ROUTE SEC.

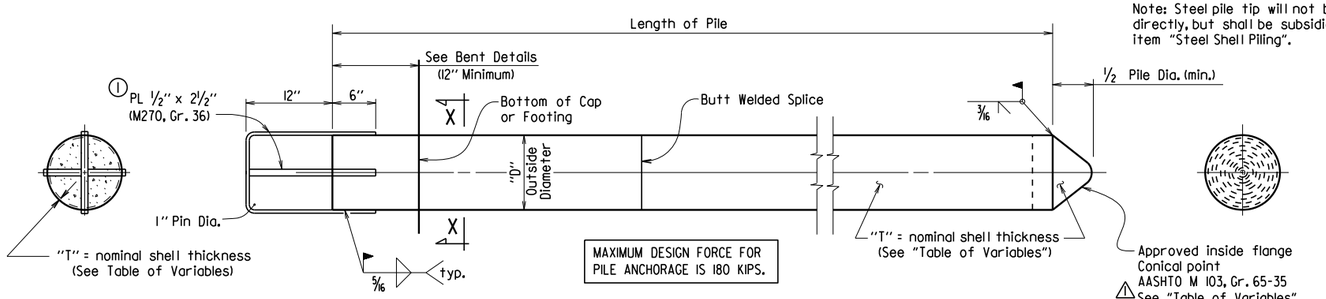
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 2-27-2014 FILENAME: b55010.dgn
CHECKED BY: BEF DATE: 2-27-2014 SCALE: NO SCALE
DESIGNED BY: STD. DATE:

DRAWING NO. 55010

PRINT DATE: 4/20/2023

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3/24/16				6	ARK.			
				JOB NO.				
				①		STEEL SHELL PILES		55021

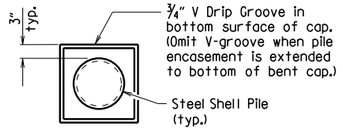


Note: Steel pile tip will not be paid for directly, but shall be subsidiary to the item "Steel Shell Piling".

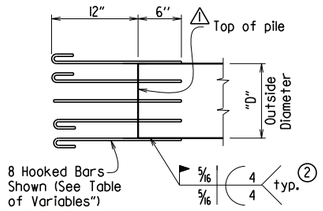
CONCRETE FILLED STEEL SHELL PILE

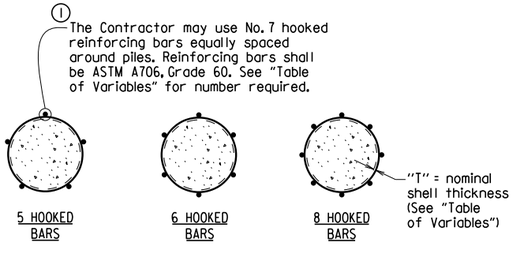
① Pile anchorage shall be placed to minimize interference with anchor bolts and reinforcing in cap or footing.

② Welding shall comply with ANSI/AWS D1.4 Structural Welding Code-Reinforcing Steel and applicable portions of ANSI/AWS D1.5 Bridge Welding Code.



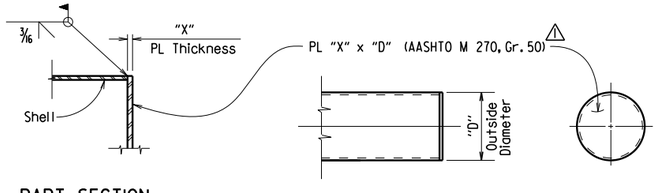
VIEW X-X





ALTERNATE PILE ANCHORAGE DETAIL

Note: Hooked bars shall be oriented to provide the required concrete clearances shown in the plans.

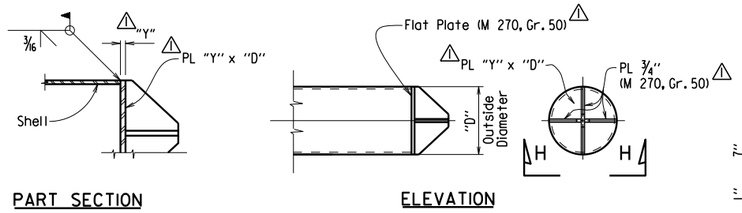


PART SECTION

ELEVATION

ALTERNATE FLAT TIP DETAIL

Note: The alternate flat tip detail shall not be used on steel shell piling to be driven through embankments constructed with internal geosynthetic reinforcement.



PART SECTION

ELEVATION

VIEW H-H

ALTERNATE VANED TIP DETAIL

GENERAL NOTES FOR CONCRETE FILLED STEEL SHEEL PILES:

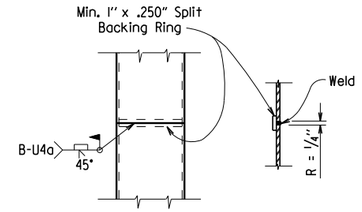
Steel shells shall conform ASTM A252, Grade 3 (Fy = 45,000 psi.)

Concrete used for filling of steel shell shall be Class S with a minimum 28-day compressive strength, f'c = 3,500 psi. and shall be poured in the dry.

Steel shell piling that extends above the ground and is not protected by pile encasement shall be painted in accordance with Subsection 805.02.

See Bridge Layout for size and estimated length of steel shell piles and for driving information.

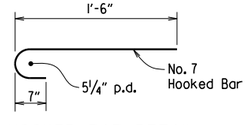
Concrete, structural steel, reinforcing steel (including welding), and painting shall not be paid for directly, but shall be considered subsidiary to the item "Steel Shell Piling".



TYPICAL SPLICE DETAILS

TABLE OF VARIABLES

OUTSIDE DIAMETER "D"	NOMINAL SHELL THICKNESS "T"	⚠ PLATE THICKNESS "X"	⚠ PLATE THICKNESS "Y"	NO. OF HOOKED BARS FOR ALTERNATE PILE ANCHORAGE	⚠ MINIMUM CONICAL TIP DESIGN LOAD (KIPS)
14"	0.50"	2¼"	1½"	5	859
16"	0.50"	2¼"	1½"	5	986
18"	0.50"	2½"	1½"	6	1,114
20"	0.50"	2½"	1¾"	6	1,241
24"	0.50"	2¾"	1¾"	8	1,495



HOOKED BAR DETAIL

⚠ Revised and added various details by KWY, Ck'd. by BEF, 3/24/16.

GENERAL NOTES FOR PILE ENCASEMENTS:

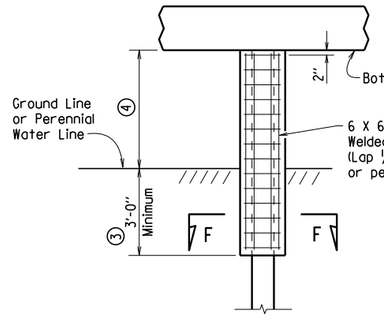
⚠ See Bridge Layout for additional notes, any pile encasement restrictions and required location of pile encasements.

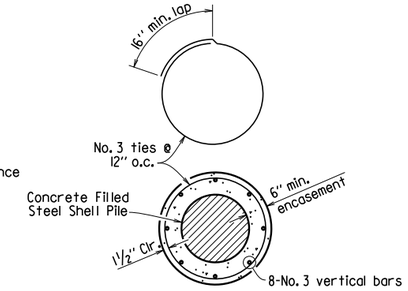
Concrete shall be Class S with a minimum 28-day compressive strength, f'c = 3,500 psi. If concrete cannot be placed in the dry, Seal Concrete may be used from top to bottom of encasement.

Reinforcing steel shall be Grade 60 conforming to AASHTO M 31 or M 322, Type A.

Welded wire fabric shall conform to AASHTO M 55 or M 221.

Concrete, welded wire fabric or reinforcing steel, and galvanized pipe shall not be paid for directly, but shall be considered subsidiary to the item "Pile Encasement".





SECTION F-F (REINF. ALTERNATE)

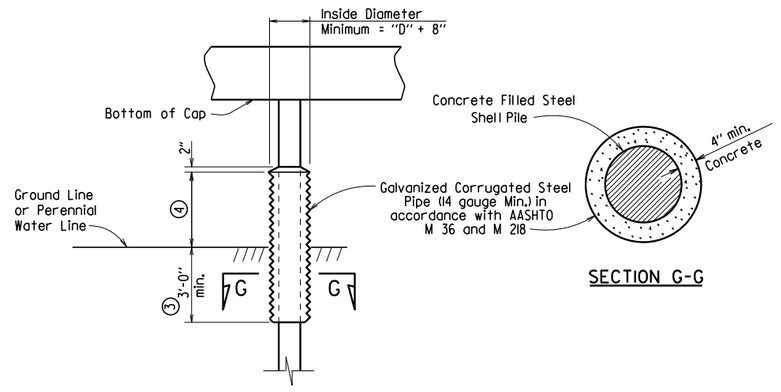
PILE ENCASEMENT DETAIL FOR STEEL SHELL PILES

⑤ (Shown with Encasement to Bottom of Cap)

③ Unless otherwise noted on Bridge Layout.

④ See Bridge Layout for height of pile encasement (3'-0" Minimum).

⑤ Pile encasement, when not extended to bottom of cap, shall have 2" concrete taper for water runoff as shown in the detail for partial height encasement.



SECTION G-G

ALTERNATE PILE ENCASEMENT DETAIL FOR STEEL SHELL PILES

(Shown with Partial Height Encasement)

This document was originally issued and sealed by Charles R. Ellis, PE No. 9235, on March 24, 2016. This copy is not a signed and sealed document.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS

BRIDGE ENGINEER

STANDARD DETAILS FOR CONCRETE FILLED STEEL SHELL PILES AND PILE ENCASEMENTS

ARKANSAS STATE HIGHWAY COMMISSION

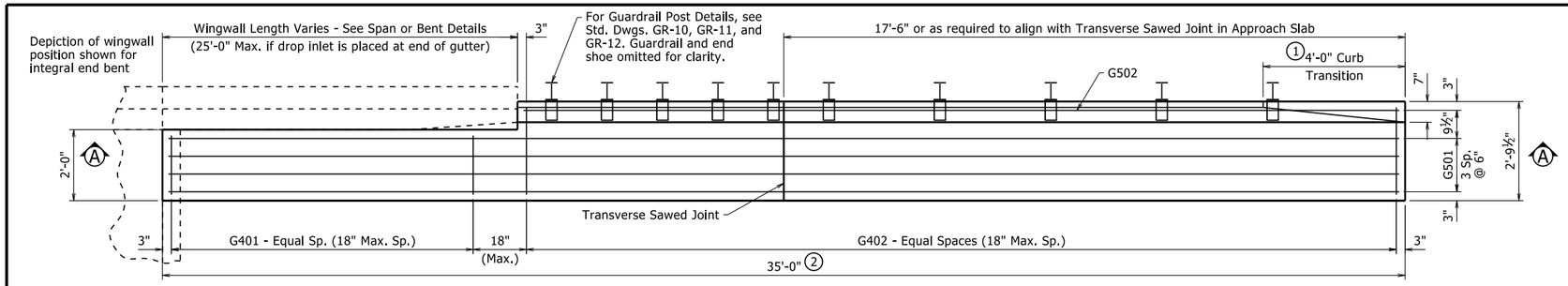
LITTLE ROCK, ARK.

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CHECKED BY:	B.E.F.	DATE:	2/27/2014	SCALE:	NO SCALE
DESIGNED BY:	STD.	DATE:	—		

DRAWING NO. 55021

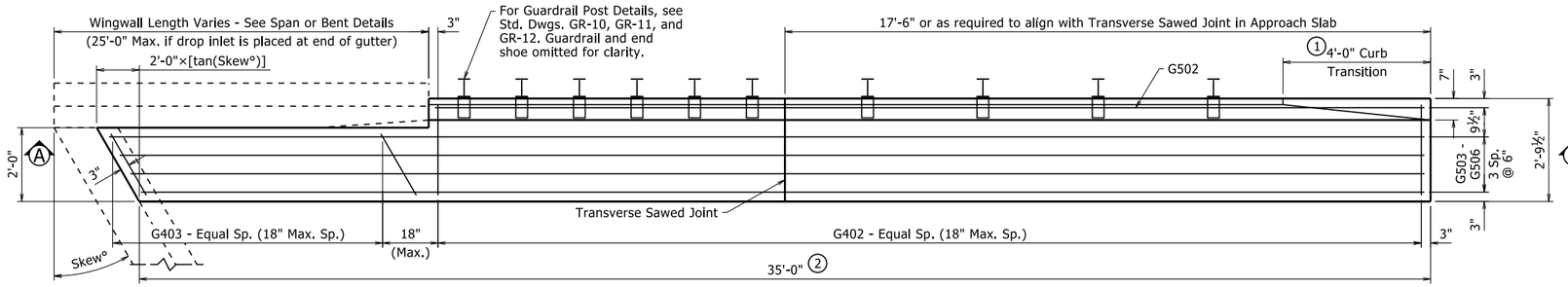
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				6	ARK.			
				JOB NO.				

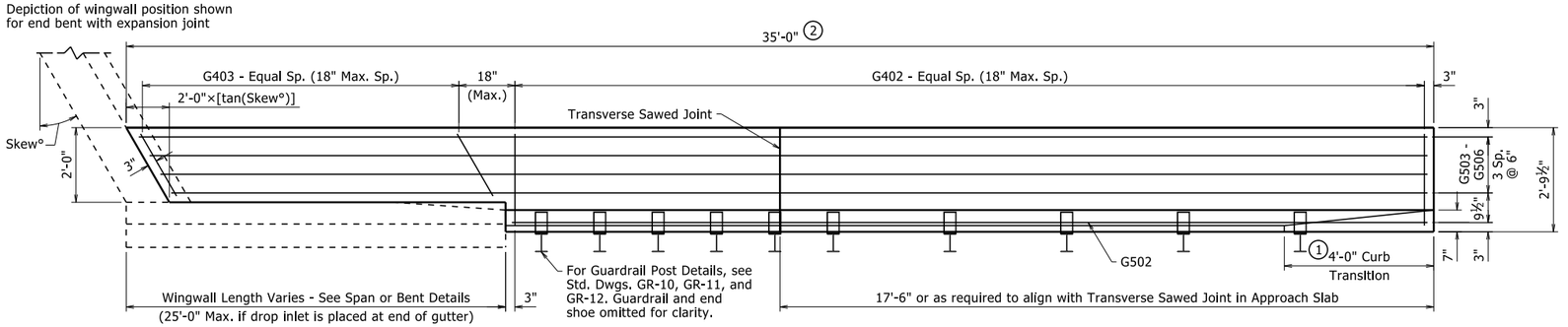
① Type F Approach Gutters - 55030F



HALF PLAN OF APPROACH GUTTERS FOR SQUARE END BENT

½" = 1'-0"





PLAN OF SKEWED APPROACH GUTTERS FOR SKEWED END BENT

½" = 1'-0"

QUANTITIES FOR ONE APPROACH GUTTER

(For Information Only)

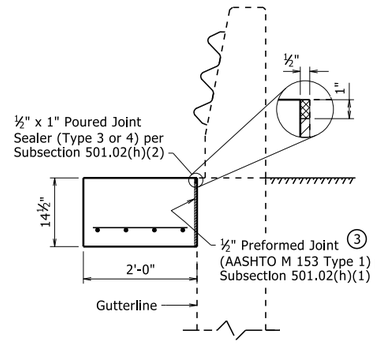
Reinforcing Steel (Lbs.)	Concrete (Cu. Yds.)
210	4.20

Quantities are based on one gutter for a square, integral end bent and a wingwall length of 10'-0"

BAR LIST FOR ONE APPROACH GUTTER

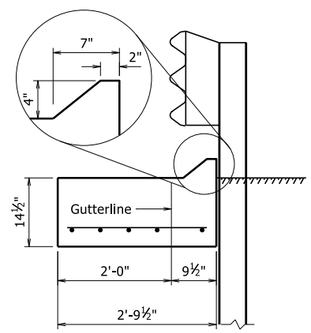
	Mark	No. Req'd.	Length
Square End Bent	G401	④	1'-8"
	G402	④	2'-5½"
	G501	4	34'-8"
	G502	1	④
Skewed End Bent	G402	④	2'-5½"
	G403	④	④
	G502	1	④
	G503 - G506	1 ea.	④

④ Varies with Skew and/or Wingwall Length



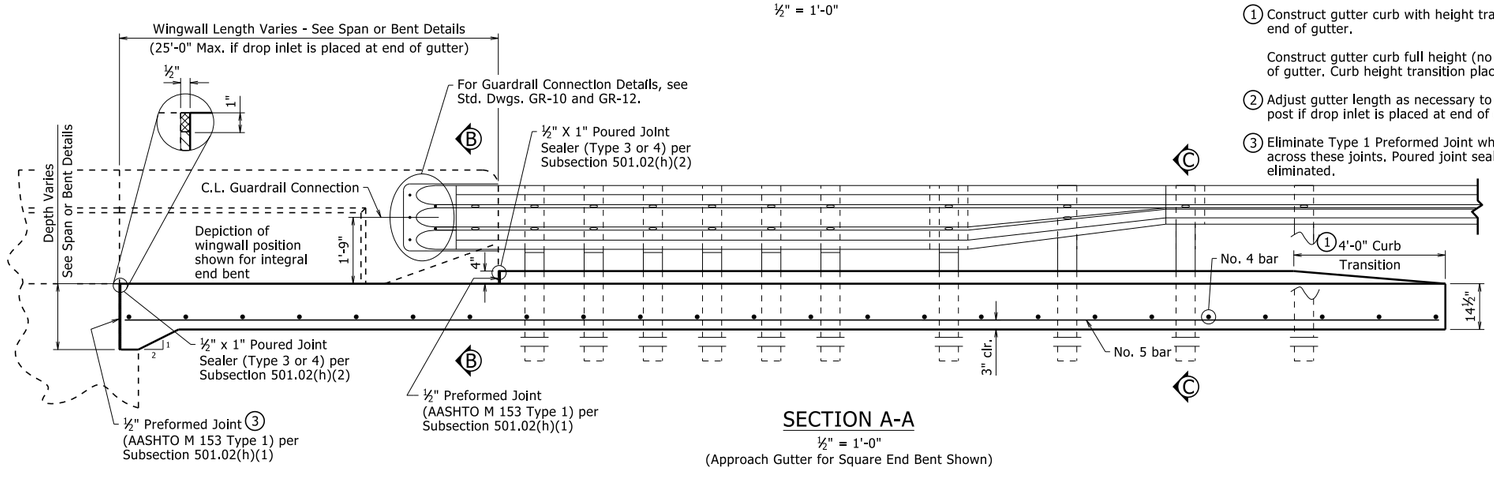
SECTION B-B

¾" = 1'-0"



SECTION C-C

¾" = 1'-0"



SECTION A-A

½" = 1'-0"

(Approach Gutter for Square End Bent Shown)

① Construct gutter curb with height transition as shown if drop inlet is not placed at end of gutter.

Construct gutter curb full height (no height transition) if drop inlet is placed at end of gutter. Curb height transition placed on drop inlet.

② Adjust gutter length as necessary to avoid outlet pipe interference with guardrail post if drop inlet is placed at end of gutter.

③ Eliminate Type 1 Preformed Joint when bridge details show reinforcing dowels across these joints. Poured joint sealer is required, however, backer rod shall be eliminated.

GENERAL NOTES

All concrete shall be Class S(AE) with a minimum 28 day compressive strength f'c = 4,000 psi and shall be poured in the dry.

All reinforcing steel shall be Grade 60 (yield strength = 60,000 psi) conforming to AASHTO M 31 or M 322, Type A, with mill test reports.

Approach Gutters will be measured and paid for in accordance with Section 504.

All longitudinal lines within the limits of horizontal curves shall be on curves concentric to C.L. Bridge. Adjustment to longitudinal bar lengths may be required. Transverse reinforcing shall be placed on radial lines to C.L. Bridge.

Scales shown are for 22"x34" drawings. When using 11"x17" drawings, reduce scale by one half.

STANDARD DETAILS FOR TYPE F APPROACH GUTTERS

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

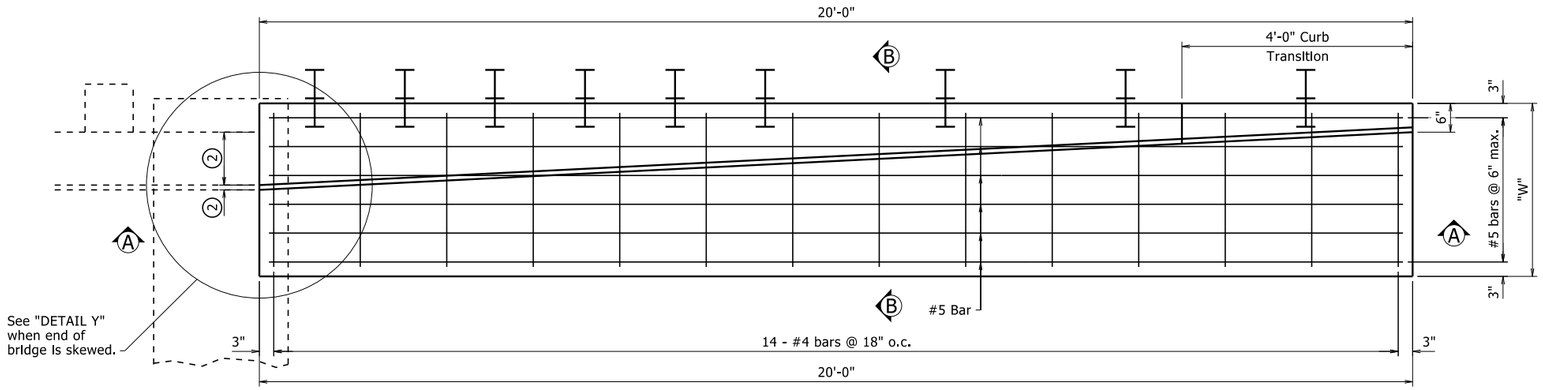
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CHECKED BY:	LJB	DATE:	4-8-2021	SCALE:	AS NOTED
DESIGNED BY:	STD	DATE:	-		

DRAWING NO. 55030F

PRINT DATE: 9/8/2023

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.				

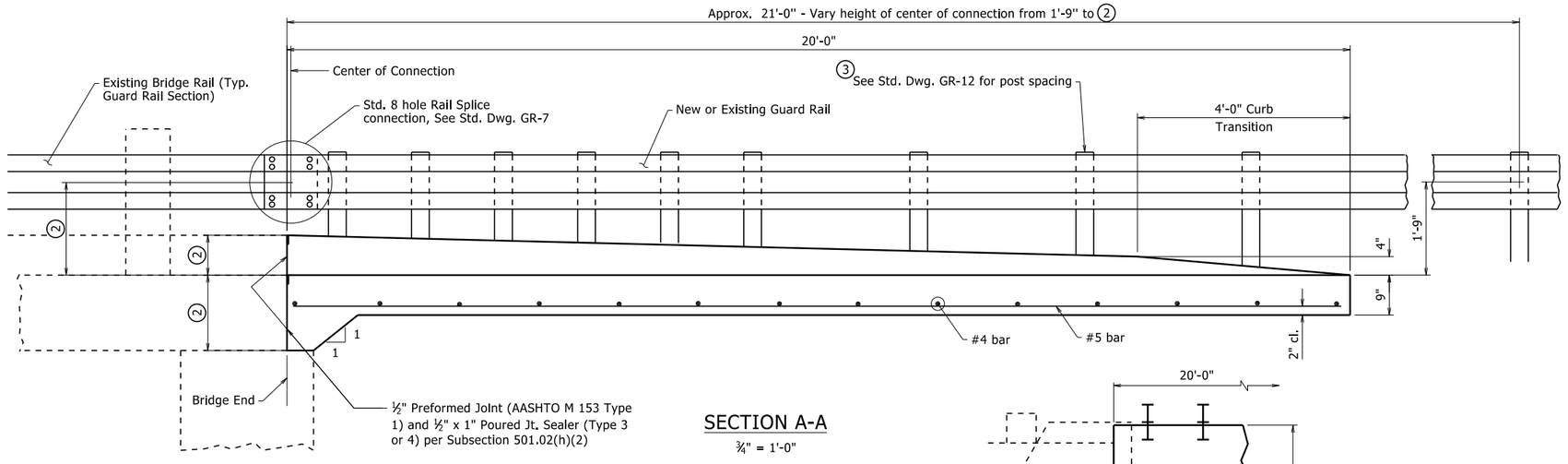
(1) - TYPE CT GUTTERS - 55039



PLAN OF APPROACH GUTTER (1)

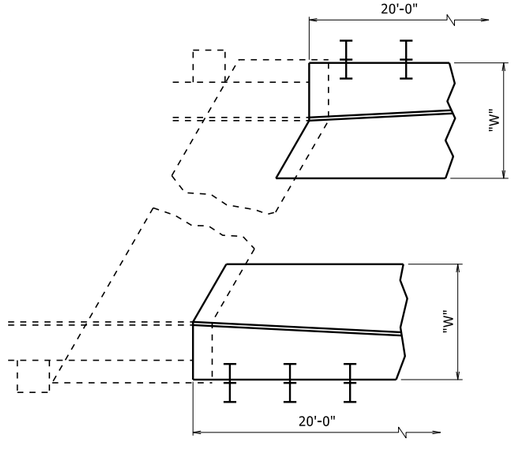
¾" = 1'-0"

Remove the existing terminal section as needed and attach a new guard rail to the existing guard rail on the bridge.



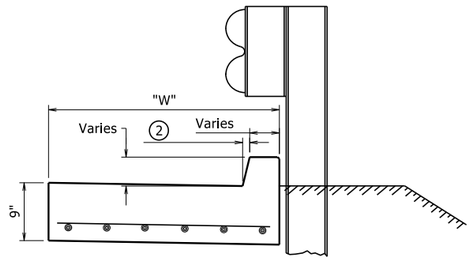
SECTION A-A

¾" = 1'-0"



DETAIL Y

No Scale



SECTION B-B

1" = 1'-0"

APPROXIMATE QUANTITIES FOR ONE SQUARE 20'-0" APPROACH GUTTER

Concrete (Cu. Yd.)	("W" x 0.56) + 0.41
Reinforcing Steel (lb.)	("W" x 50.38) - 3.11

Variables: Units of "W" are in feet.

(1) Square approach gutter is shown. Modify approach gutter as necessary to accommodate a bridge on a skew. See "DETAIL Y."

(2) Match existing conditions at bridge end.

(3) Vary post height, as necessary, to match height of existing w-beam bridge rail.

GENERAL NOTES

This drawing shall only be used as a retrofit of an existing bridge end where an existing curb creates a snag point.

Concrete shall be Class S or S(AE) or mixture used for Portland Cement Concrete Pavement.

Reinforcing steel shall be Grade 60 (fy = 60,000 psi.) conforming to AASHTO M 31 or M 322, Type A, with mill test reports. Fabricate bar lengths to provide 2" minimum cover at each end.

Approach gutters will be measured and paid for in accordance with Section 504.

Preformed Joint and Poured Joint Sealer included in the item "Approach Gutters".

All longitudinal lines within the limits of horizontal curves shall be on curves concentric to C.L. Bridge. Adjustment to longitudinal bar lengths may be required. Transverse reinforcing shall be placed on radial lines to C.L. Bridge.

If an existing drop inlet is located within the Plan of the approach gutter, adjust the reinforcing as needed to facilitate construction of the approach gutter, unless otherwise noted.

STATE OF ARKANSAS
* * *
LICENSED PROFESSIONAL ENGINEER
* * *
No. 9235
CHARLES R. ELLIS

BRIDGE ENGINEER

This document was originally issued and sealed by Charles R. Ellis, PE No. 9235, on November 7, 2019. This copy is not a signed and sealed document.

STANDARD DETAILS FOR TYPE 'CT' APPROACH GUTTERS (BRIDGES WITH CURB)

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

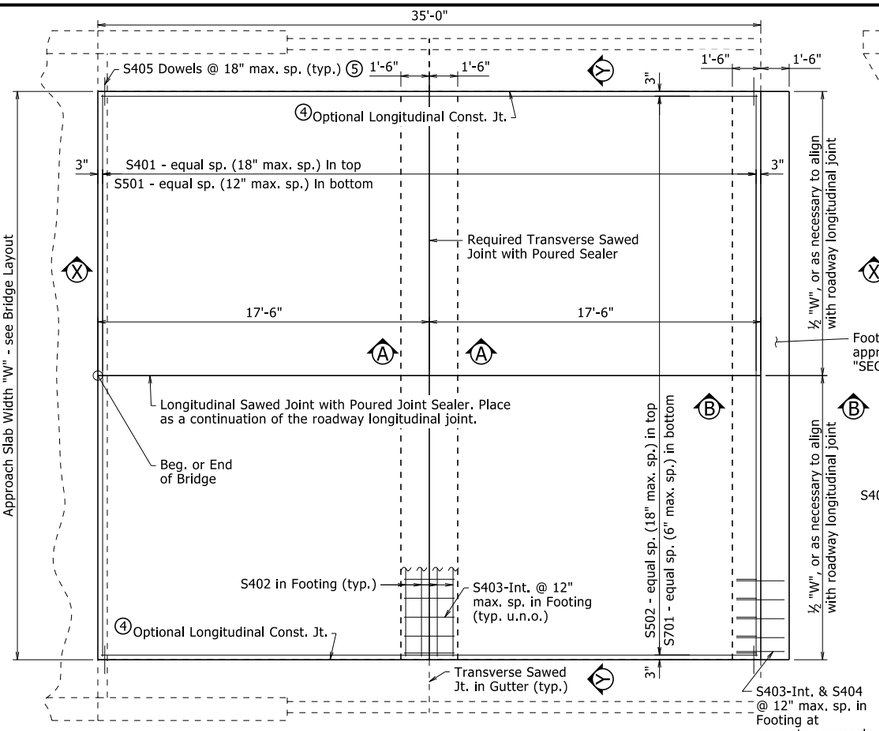
LITTLE ROCK, ARK.

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CHECKED BY: CRE DATE: 11/7/2019 SCALE: AS NOTED
DESIGNED BY: STD. DATE: -

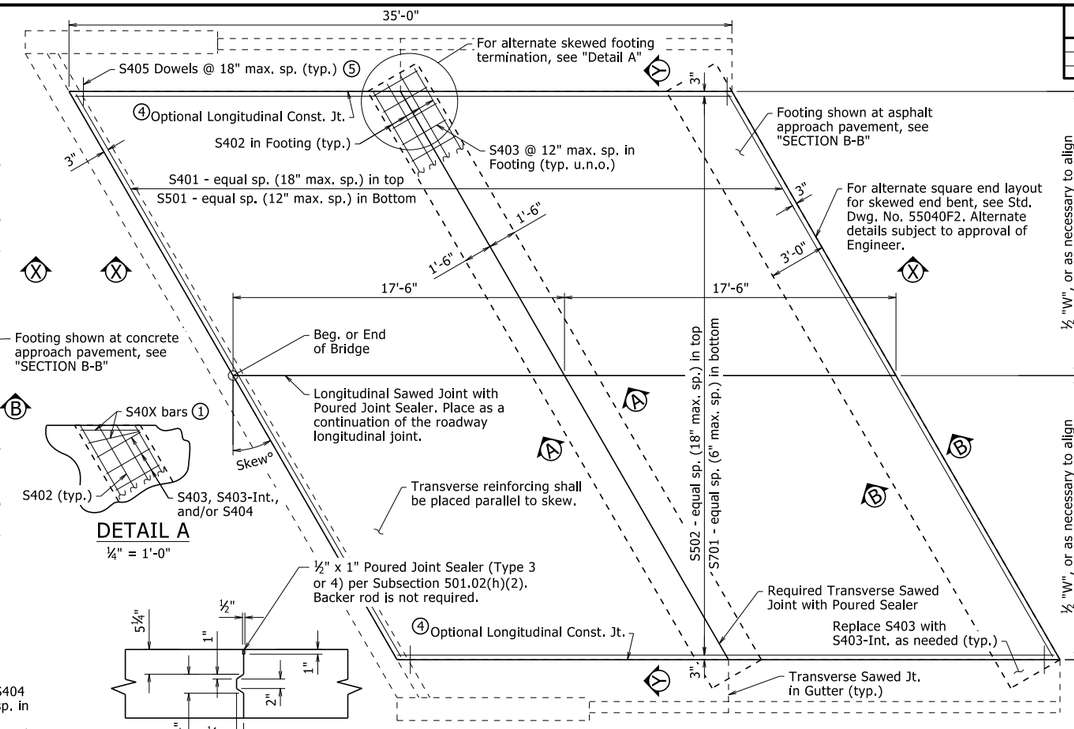
DRAWING NO. 55039

PRINT DATE: 11/25/2019

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.			
		Type F Approach Slab - 55040F1				

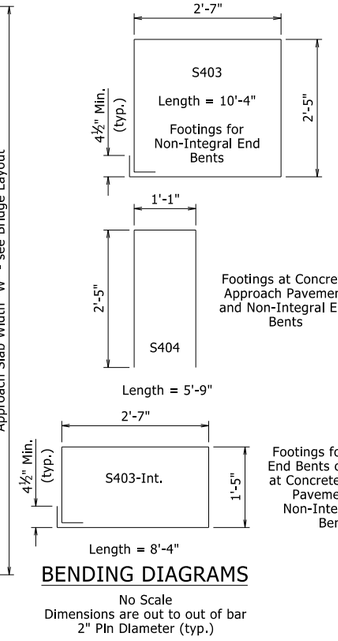


PLAN - APPROACH SLAB AT SQUARE END BENT



LONGITUDINAL CONSTRUCTION JOINT

½" = 1'-0"

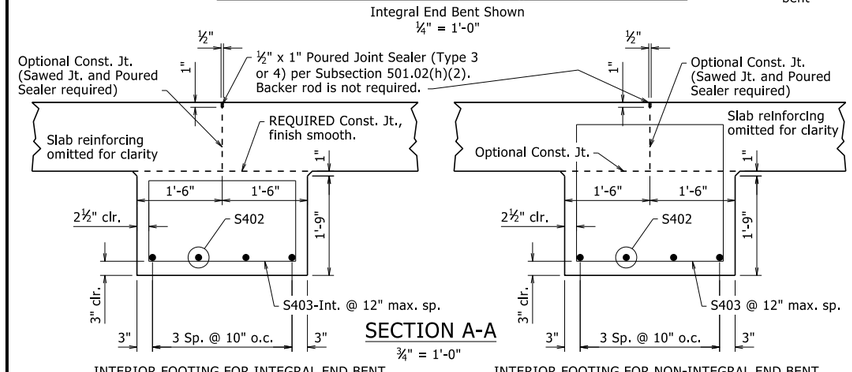


BENDING DIAGRAMS

No Scale
Dimensions are out to out of bar
2" PIn Diameter (typ.)

PLAN - APPROACH SLAB AT SKEWED END BENT

Non-Integral End Bent Shown
¼" = 1'-0"

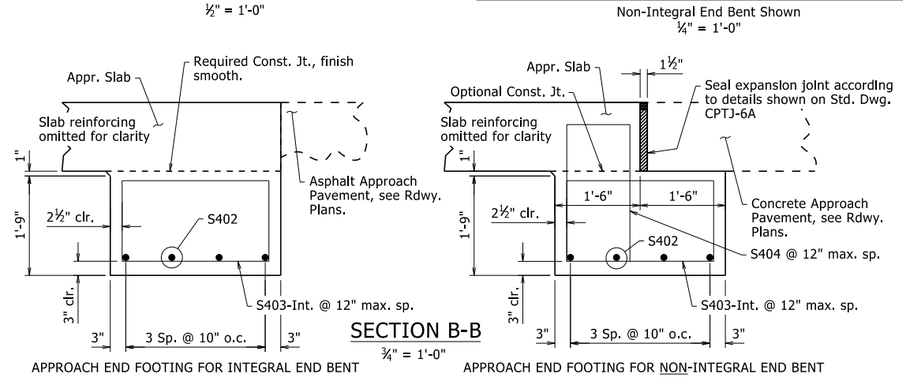


SECTION A-A

¾" = 1'-0"

INTERIOR FOOTING FOR INTEGRAL END BENT

INTERIOR FOOTING FOR NON-INTEGRAL END BENT



SECTION B-B

¾" = 1'-0"

APPROACH END FOOTING FOR INTEGRAL END BENT

Asphalt Approach Shown. For Concrete Approach, adjust footing location by 1'-6" to add paving notch and include expansion joint.

APPROACH END FOOTING FOR NON-INTEGRAL END BENT

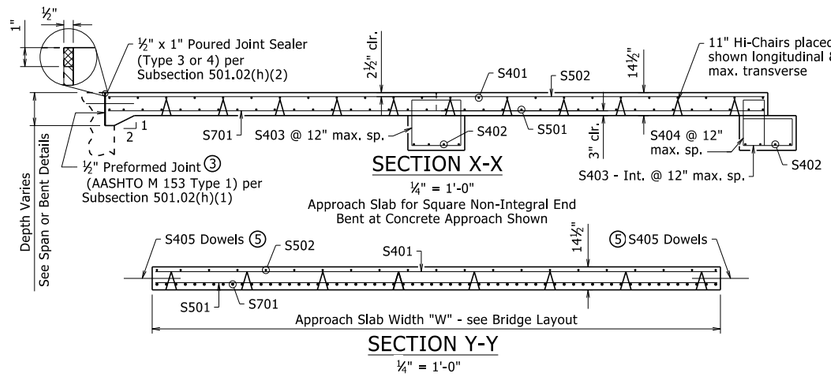
Concrete Approach Shown. For Asphalt Approach, adjust footing location by 1'-6", omit expansion joint, and replace bars S403-Int. & S404 with S403.

BAR LIST - PER APPROACH SLAB

	Square End Bent		Skewed End Bent	
Mark	No. Req'd.	Length	No. Req'd.	Length
S401	24	"W" - 0.33'	24	("W" - 0.33') / cos (Skew°)
S402	8	"W" - 0.33'	8	"W"/cos(Skew°) + 3.0'×tan(Skew°) - 0.33'
S403	①	②	①	②
S403-Int.	①	②	①	②
S404	①	②	①	②
S405	48	1'-6"	48	1'-6"
S501	36	"W" - 0.33'	36	("W" - 0.33') / cos (Skew°)
S502	①	34'-8"	①	34'-8"
S701	①	34'-8"	①	34'-8"

All bar lengths are in feet.

① Varies with Approach Slab Type, Width and/or Skew.
② See "BENDING DIAGRAMS"



SECTION X-X

¼" = 1'-0"

SECTION Y-Y

¼" = 1'-0"

MINIMUM BAR LAP LENGTH

#4	1'-8"
#5	2'-0"
#7	2'-10"

③ Eliminate Type 1 Preformed Joint when bridge details show reinforcing dowels across these joints. Poured joint sealer is required, however, backer rod shall be eliminated.

④ When construction joint is eliminated, place 1" Sawed Joint with ½" x 1" Poured Joint Sealer (Type 3 or 4) per Subsection 501.02(h)(2). Backer rod is not required.

⑤ Eliminate dowels when approach slab is adjacent to curb and gutter, or as directed by the Engineer.

The document was originally issued and sealed by Charles R. Ellis, PE No. 9235, on September 7, 2023. This copy is not a signed and sealed document.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS

BRIDGE ENGINEER

GENERAL NOTES

All concrete shall be Class S(AE) with a minimum 28 day compressive strength f'c = 4,000 psi and shall be poured in the dry.

All reinforcing steel shall be Grade 60 (yield strength = 60,000 psi) conforming to AASHTO M 31 or M 322, Type A, with mill test reports.

The surface finish for Approach Slabs shall match that used on the bridge deck.

All longitudinal lines within the limits of horizontal curves shall be on curves concentric to C.L. Bridge. Adjustment to longitudinal bar lengths may be required. Transverse reinforcing shall be placed on radial lines to C.L. Bridge.

See Plans for actual Approach Slab Width, "W", end bent or span details, and approach pavement. Units of "W" are in Feet.

Approach Slabs will be measured and paid for in accordance with Section 504.

Scales shown are for full size 22"x34" drawings. When using 11"x17" drawings, reduce scale by one half.

For Table of Quantities, see "SCHEDULE OF BRIDGE QUANTITIES".

STANDARD DETAILS FOR TYPE F APPROACH SLAB

ARKANSAS STATE HIGHWAY COMMISSION

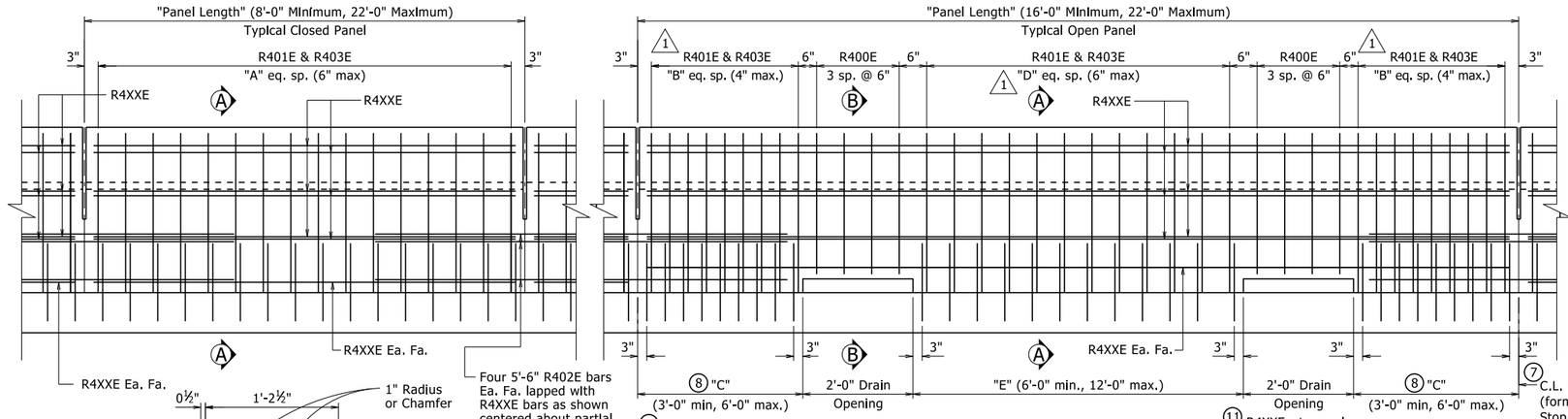
LITTLE ROCK, ARK.

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DESIGNED BY: STD. DATE: -

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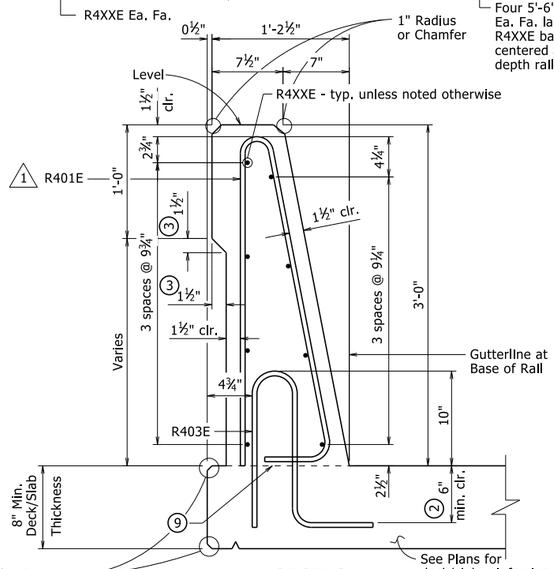
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09/27/2022				6	ARK.			
				JOB NO.				

TYPE SSTR36 - 55070



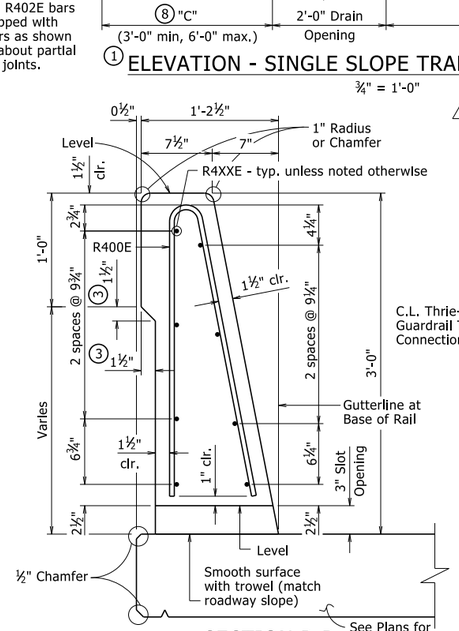
(1) ELEVATION - SINGLE SLOPE TRAFFIC RAIL

¾" = 1'-0"



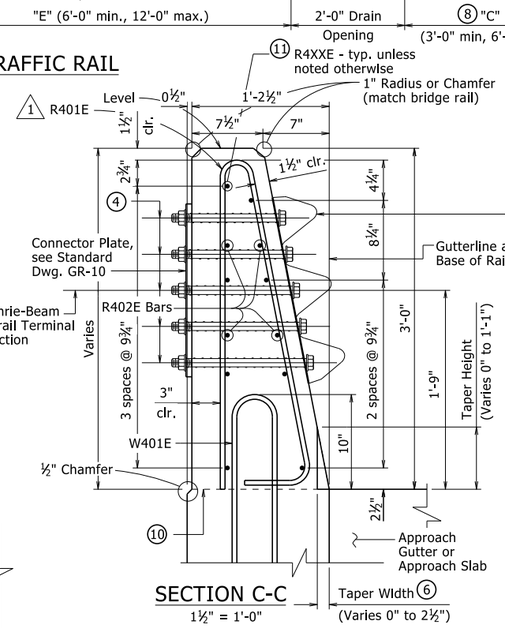
SECTION A-A

1½" = 1'-0"



SECTION B-B

1½" = 1'-0"



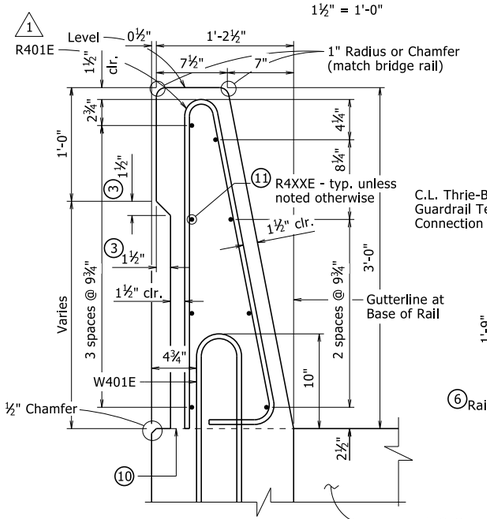
SECTION C-C

1½" = 1'-0"

(9) Required Construction Joint. Level where water flows away from rail, match roadway slope where water flows toward rail.

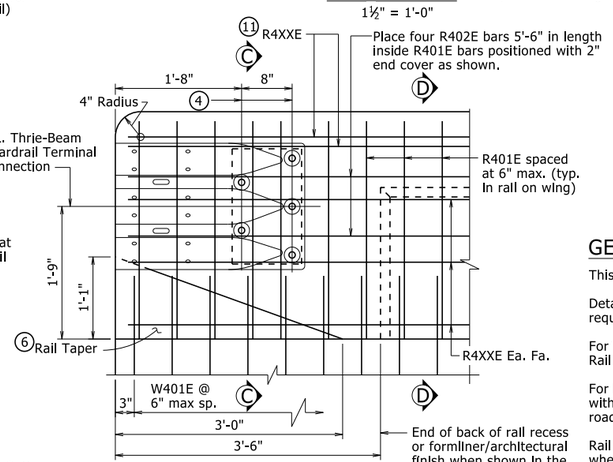
(10) Top of Abutment Wing & Required Construction Joint (match bridge deck/slab construction joint slope). See Plans for Wing reinforcing.

(11) These bars will not be included in the "Table of Variables". See Plans for details.



SECTION D-D

1½" = 1'-0"



(1) RAIL TERMINUS DETAILS

1" = 1'-0"

TABLE OF VARIABLES

Closed Rail Panels			Open Rail Panels					
Panel Length	A	R4XXE	Panel Length	B	C	D	E	R4XXE

See Plans for table with values.

GENERAL NOTES

This rail has been successfully evaluated by full-scale crash test to meet MASH TL-4 criteria.

Details shown are general for bridges without sidewalks. See Plans for additional details and requirements specific to bridges with sidewalks.

For Table of Variables, Rail Bar List, locations of Full and Partial Depth Rail Joints, and Wing & Rail Bar Lists, see Plans.

For location of drain openings, see Plans. Drain openings shown are not applicable for bridges with sidewalks. Drain openings will not be allowed over Railroad Right of Way, travelled roadways, and protected waterways.

Rail Terminus details, including Rail Taper, are not applicable for bridges with sidewalks or when bridge railing is continuous with roadway railing.

Scales shown are for 22"x34" drawings. When using 11"x17" drawings, reduce scale by one half.

(7) C.L. Full-Depth Rail Joint (formed width ¼" to 1" max). Stop 6" from top of deck/slab or sidewalk. Place at all intermediate bents locations where rail is continuous.

(1) All measurements shown are along gutterline at base of rail.

(2) Minimum embedment into deck/slab.

(3) Eliminate recess when formliner with architectural finish is used. See Plans for additional information.

(4) C.L. 1" ø formed holes for ⅞" ø bolts. See Standard Drawings GR-10 and GR-12 for additional information.

(5) Only applicable for bridges with rail cast directly on bridge deck/slab surface. Increase height as necessary for sidewalks, see Plans for additional information.

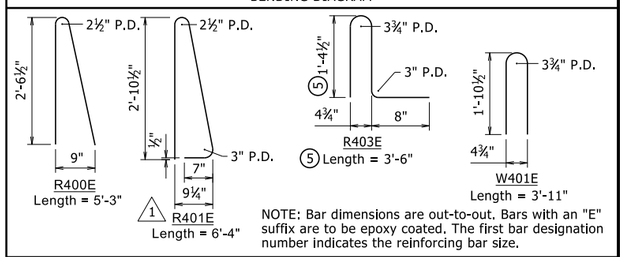
(6) Field bend front leg of R401E bar as required to maintain minimum 1½" front face clearance within limits of taper.

(7) When optional slip forming is used: to control cracking, all rail joints must be V-grooved around the perimeter of the rail prior to concrete set and sawing. Depth of V-groove shall be ½". Sawing of the joints shall be done as soon as practical to a width of ¼", and must be controlled so it will follow the V-Groove.

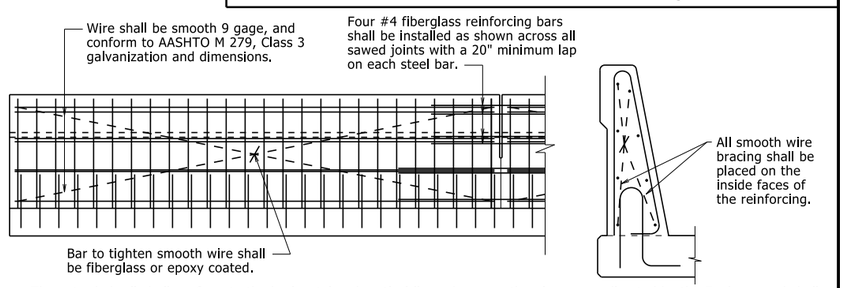
(8) End posts shall be the same length within a panel.

Bolt Special End Shoe to face of rail as shown. Tapered washers are not required between the head of the bolts and the sloped face of the rail. Tighten the five terminal connection bolts in a well distributed pattern to prevent damage or distortion of the thrie-beam connection. Cut bolts off after installation so as to extend no more than ¾" beyond nut. Paint ends of cut-off bolts with zinc-rich paint. This work and material will not be paid for directly but shall be considered subsidiary to associated contract items.

BENDING DIAGRAM



NOTE: Bar dimensions are out-to-out. Bars with an "E" suffix are to be epoxy coated. The first bar designation number indicates the reinforcing bar size.



The extruded rail shall conform to the horizontal and vertical lines shown on the plans or as directed by the Engineer and shall present a smooth, uniform appearance and texture. Unless otherwise noted, exposed surfaces may be given a light brush finish or a Class 3, Textured Coating Finish in place of Class 2, Rubbed Finish.

All panels shall be braced as required to prevent racking.

Slip forming will not be allowed on bridges where formliner with architectural treatment is used unless approval from the Engineer is obtained.

DETAILS OF OPTIONAL SLIP FORMING OF BRIDGE TRAFFIC RAIL

No Scale

(1) Modified bending diagram and spacing for R401E bar.

By: CGP, Checked by: CMW 09/27/2022

This document was originally issued and sealed by Charles R. Ellis, PE No. 9235, on November 5, 2020. This copy is not a signed and sealed document.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS

BRIDGE ENGINEER

THESE DETAILS ARE APPLICABLE UNLESS OTHERWISE SHOWN IN THE PLAN DETAILS, SPECIAL PROVISIONS, OR SUPPLEMENTAL SPECIFICATIONS.

STANDARD DETAILS FOR BRIDGE TRAFFIC RAIL TYPE SSTR36

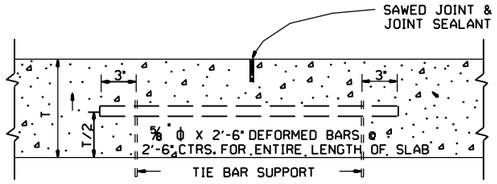
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: KWY DATE: 11/5/2020
CHECKED BY: LJB DATE: 11/5/2020
DESIGNED BY: STD. DATE: -----
FILENAME: b55070.dgn
SCALE: As Noted

DRAWING NO. 55070

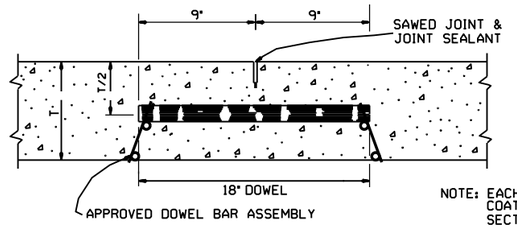
PRINT DATE: 10/6/2022



LONGITUDINAL JOINT

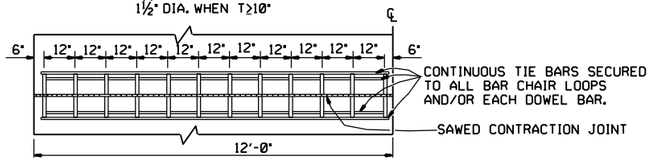
NOTE: THE TIE BAR SUPPORT SHOWN ABOVE MAY BE ELIMINATED IF OTHER APPROVED METHODS FOR PLACING AND SUPPORTING THE TIE BARS ARE PROVIDED.

TIE BARS SHALL BE 15" FROM TRANSVERSE JOINTS.



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

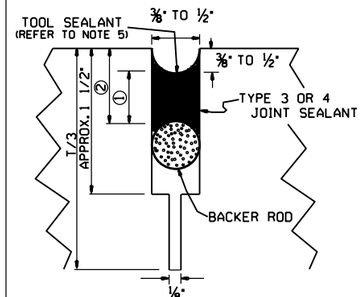
ROUND STEEL BAR DOWEL
1¼" DIA. WHEN T<10"
1½" DIA. WHEN T≥10"



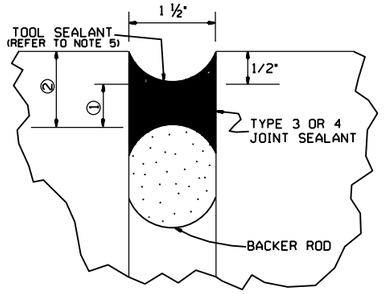
ONE-HALF 24' PAVEMENT
12 DOWELS
PLAN

NOTE: FOR 20' PAVEMENT USE 20 DOWELS @ 12" CTRS. WITH 6" SPACING FROM C.L. AND EDGE OF SLAB TO FIRST BAR. FOR 15' PAVEMENT USE 15 DOWELS @ 12" CTRS. WITH 6" SPACING FROM C.L. AND EDGE OF SLAB TO FIRST BAR. FOR 26' PAVEMENT USE 26 DOWELS @ 12" CTRS. WITH 6" SPACING FROM C.L. AND EDGE OF SLAB TO FIRST BAR. FOR PAVEMENT WIDTHS OTHER THAN THOSE SHOWN ABOVE, USE DOWELS AT 12" CTRS. WITH 6" MAX. SPACING FROM C.L. TO FIRST BAR. DISTANCE FROM EDGE OF SLAB TO FIRST BAR SHALL BE ADJUSTED TO MAINTAIN 12" DOWEL BAR SPACING

CONTRACTION JOINT DETAILS



DETAIL OF SAWED CONTRACTION JOINT



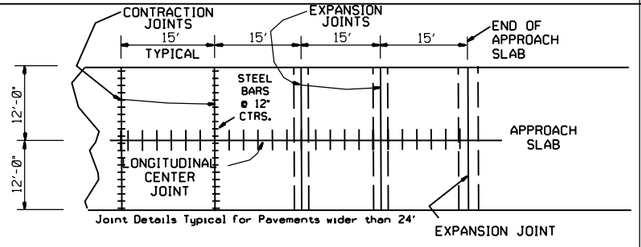
DETAIL OF EXPANSION JOINT

JOINT CONFIGURATION FOR TYPE 3 OR 4 JOINT SEALANT

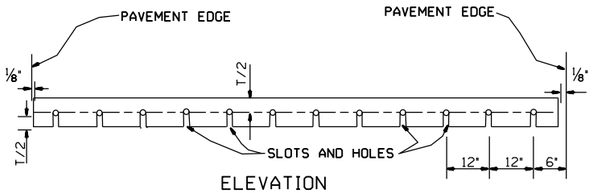
JOINT WIDTH	SEALANT THICKNESS ①	BACKER ROD DIAMETER	BACKER ROD PLACEMENT DEPTH ②
INCHES			
¼	¼	⅜	½
⅜	¼	½	½
½	¼	⅝	½
⅝	5/16	¾	7/16
¾	⅜	⅞	⅜
1 ½	¾	2	1 ¼

JOINT CONFIGURATION FOR TYPE 5 JOINT SEALANT

JOINT WIDTH	SEALANT THICKNESS ①	BACKER ROD DIAMETER	BACKER ROD PLACEMENT DEPTH ②
INCHES			
¼	½	⅜	¾
⅜	¾	½	1

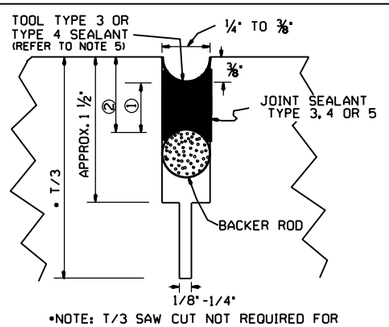


PLAN SHOWING EXPANSION JOINTS AT BRIDGE APPROACH SLABS



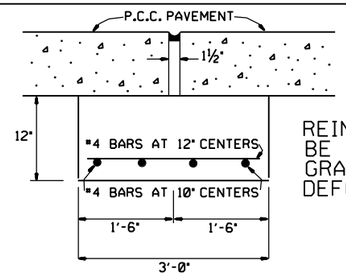
ELEVATION

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



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

DETAIL OF SAWED LONGITUDINAL JOINT AND LONGITUDINAL CONSTRUCTION JOINT

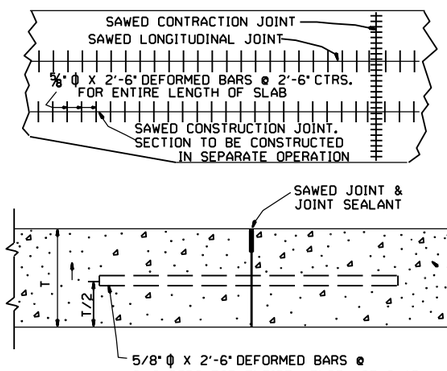


REINFORCING SHALL BE GRADE 40 OR GRADE 60 DEFORMED BARS.

DETAIL OF JOINT SUPPORT FOR EXPANSION JOINTS

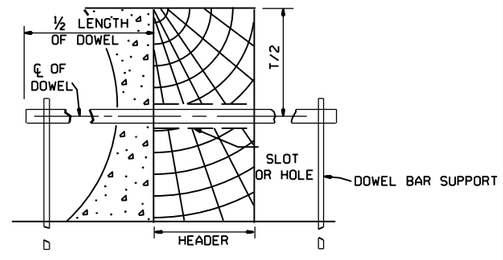
GENERAL NOTES

1. "T" DENOTES THICKNESS OF SLAB.
2. DOWEL BARS SHALL BE PLACED IN ACCORDANCE WITH THE DIMENSIONS SHOWN. A TOLERANCE OF PLUS OR MINUS ONE INCH WILL BE ALLOWED FOR THE VERTICAL AND LATERAL PLACEMENT AND A TOLERANCE OF PLUS OR MINUS ¼" WILL BE ALLOWED FOR THE TILT AND SKEW. DOWEL BARS SHALL BE FIELD COATED FOR A MINIMUM DISTANCE OF 2" GREATER THAN HALF THE LENGTH OF THE BAR WITH AN APPROVED GREASE AS A BOND BREAKER JUST PRIOR TO PLACEMENT OF CONCRETE.
3. THE EXPANSION JOINT SUPPORT MAY BE CONSTRUCTED WITH CLASS "A", "S" OR PAVING CONCRETE. PAYMENT FOR THE JOINT SUPPORT SHALL BE FOR THE CONTRACT UNIT PRICE BID FOR THE CLASS OF CONCRETE SPECIFIED IN THE PLANS. PAYMENT FOR ALL OTHER WORK AND MATERIALS REQUIRED FOR THE CONSTRUCTION OF THE JOINT SUPPORT SHALL BE INCLUDED IN THE PRICE BID FOR THE ABOVE ITEMS.
4. CONTRACTION JOINTS SHALL BE CONSTRUCTED ON 15' CENTERS.
5. TOOLING NOT REQUIRED FOR SELF-LEVELING SILICONE.
6. UNLESS OTHERWISE SPECIFIED IN THE PLANS, CONCRETE SHOULDERS SHALL BE CONSTRUCTED ACCORDING TO THE DETAILS SHOWN HEREON. CONTRACTION JOINTS SHALL MATCH CONTRACTION JOINTS IN THE LANES.
7. TIE WIRES IN DOWEL BAR ASSEMBLIES SHALL NOT BE CUT PRIOR TO PLACEMENT OF PAVING CONCRETE.



NOTE: TIE BARS SHALL BE 15" FROM TRANSVERSE JOINTS.

LONGITUDINAL CONSTRUCTION JOINT



SECTION

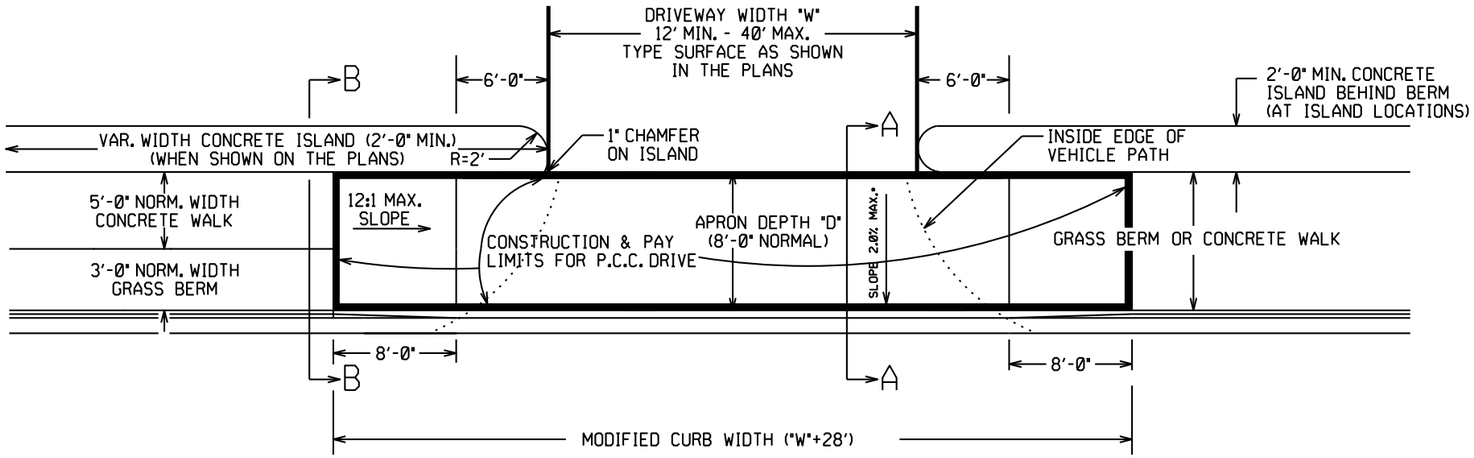
TRANSVERSE CONSTRUCTION JOINT

DATE	REVISION	DATE FILMED
11-07-19	REV. EXP. JOINT REF ON APP. SLAB	
5-25-06	ADDED GENERAL NOTE 7	
10-9-03	REMOVED TIE BAR COATING & REVISED GENERAL NOTES	
11-16-01	ADDED TOOL SEALANT AND NOTE 5; REVISED NOTE 3	
4-26-96	REVISED CONTRACTION JOINT NOTE	
11- 3-94	ADDED NOTE RE: REINF. BARS	
4- 1-93	REVISED DOWEL BARS & GEN. NOTES	4- 1-93
10- 1-92	REVISED DOWEL SPACING	10- 1-92
8- 15-91	ADDED SPAC FOR CONTR JTS & DEL KEYWAY	
05-24-90	REVISED TIE BAR, DOWEL & JOINT SIZE	
01-25-90	ADDED EXPANSION JOINT	01-25-90
11-30-89	CHANGED T/4+1 TO T/3+1	11-30-89
03-23-89	ALTERED SAWED JOINT & ADDED NOTE	512-03-23-89
07-15-88	REVISED AND REDRAWN	632-07-15-88

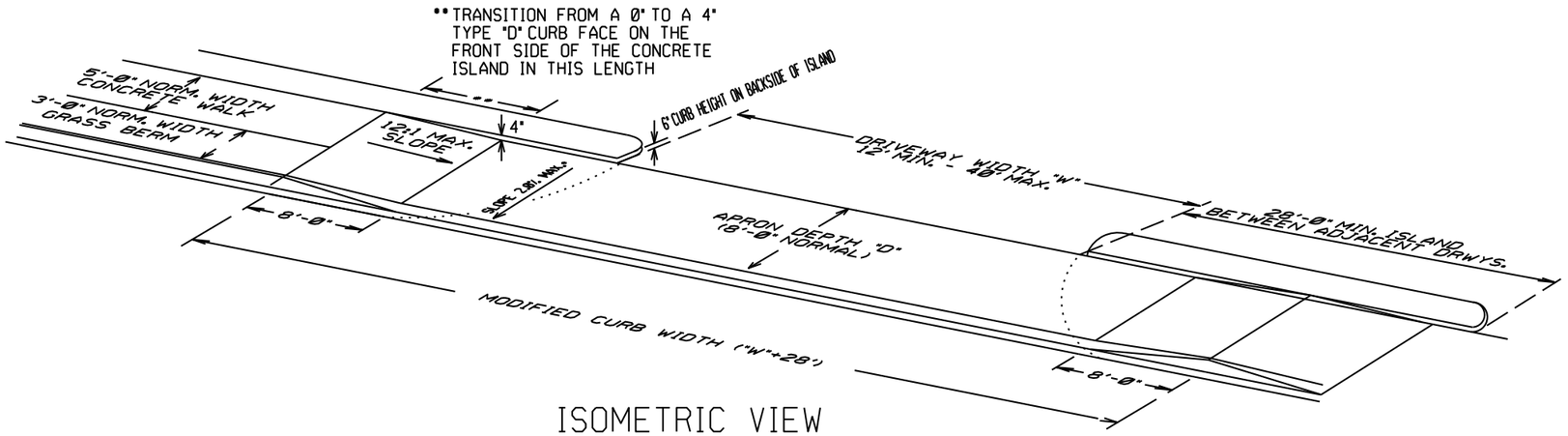
ARKANSAS STATE HIGHWAY COMMISSION

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

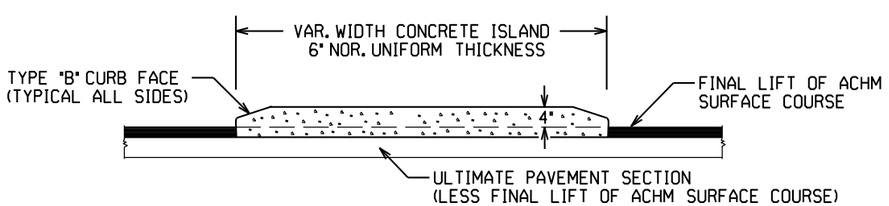
STANDARD DRAWING CPTJ - 6A



PLAN VIEW



ISOMETRIC VIEW

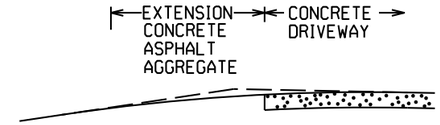


CURBED ISLANDS FOR CHANNELIZATION

CONCRETE ISLAND NOTES:

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

2. TRANSVERSE EXPANSION JOINTS, NOT LESS THAN 1/2" WIDE, SHALL BE PLACED AT MINIMUM INTERVAL OF 45'. TRANSVERSE JOINT SHALL BE CONSTRUCTED USING A JOINT FILLER COMPLYING WITH AASHTO M213.



EXTENSION TYPICAL SECTIONS

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

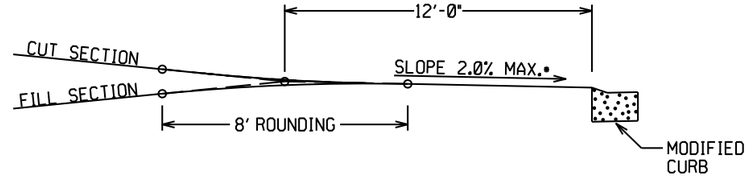
2: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
4" ACHM BINDER COURSE (1") OR
4" ACHM BASE COURSE (1-1/2")

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

4: AGGREGATE - 6" AGGREGATE BASE COURSE

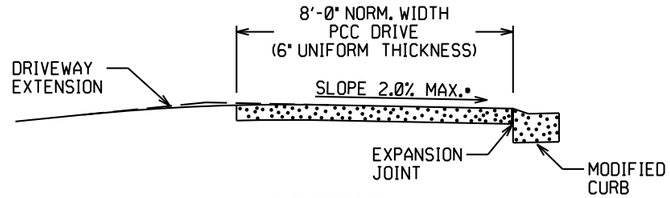
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

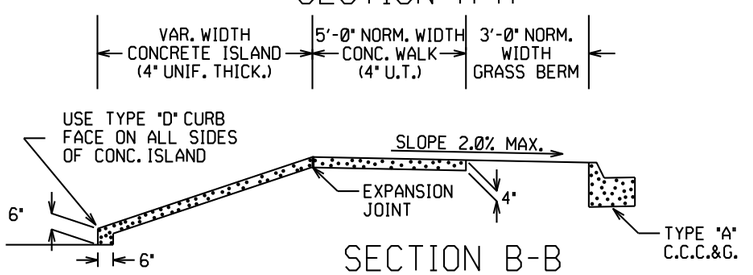


DRIVEWAY VERTICAL ALIGNMENT DETAILS

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



SECTION A-A



SECTION B-B

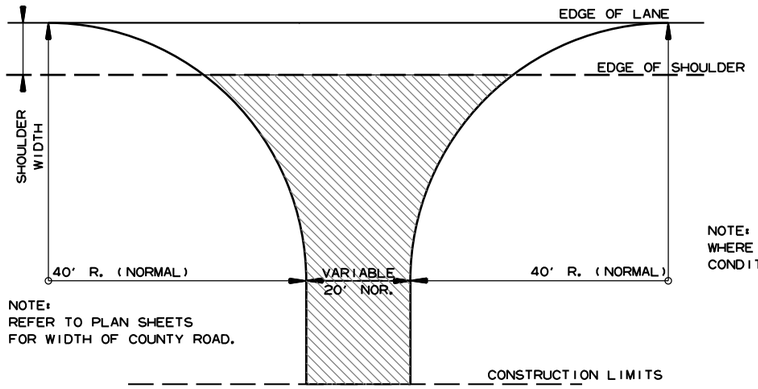
CURBED ISLAND BEHIND WALK

DATE REV	DATE FILMED	DESCRIPTION
5-19-22		REVISED ISLAND NOTES
11-07-19		REVISED WALK DETAILS
2-27-14		REVISED PLAN & ISOMETRIC VIEW
11-29-07		ADDED CHANNELIZATION ISLAND WITH TYPE C CURB FACE & REVISED DRIVEWAY SLOPE NOTE & VERTICAL ALIGNMENT DETAIL
11-10-05		REV. APRON SLOPE & DEPTH OF AGG. BASE.
8-22-02		ADDED ISLAND DETAILS & NOTES
3-30-00		REV. MOD. CURB WIDTH & TRANS. NOTE
11-19-98		REVISED NOTES
11-18-98		REDRAWN AND REISSUED

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DRIVEWAYS & ISLANDS

STANDARD DRAWING DR-1

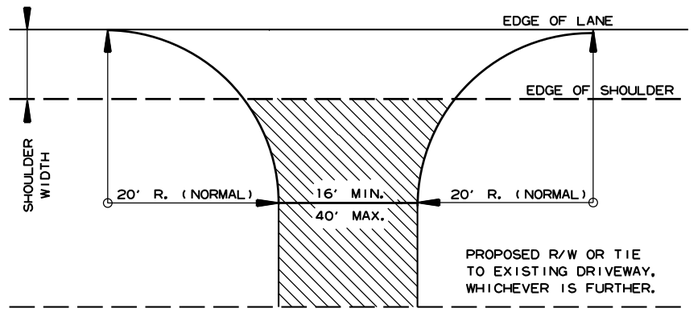


NOTE:
REFER TO PLAN SHEETS
FOR WIDTH OF COUNTY ROAD.

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

ACHM SURFACE COURSE (1/2")
(220 LBS. PER SQ. YD.) AND
AGGREGATE BASE COURSE (CLASS 7)
7" COMP. DEPTH, UNLESS OTHERWISE
SPECIFIED IN PLANS.

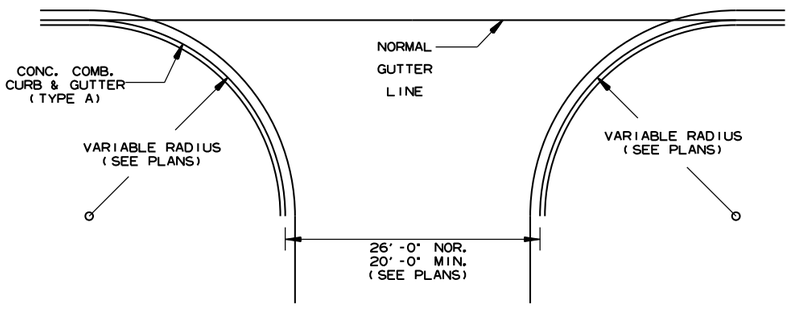
DETAIL FOR COUNTY ROAD TURNOUTS OPEN SHOULDER SECTION



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

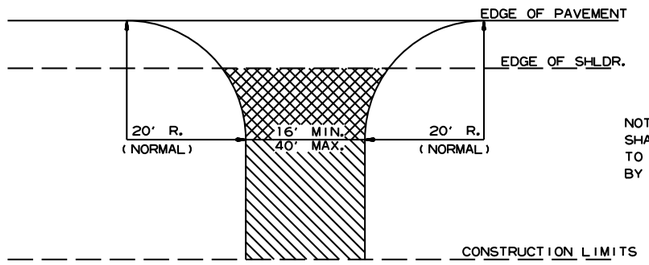
ACHM SURFACE COURSE (1/2")
(220 LBS. PER SQ. YD.) AND
AGGREGATE BASE COURSE (CLASS 7)
7" COMP. DEPTH IF ASPHALT OR
GRAVEL DRIVE EXISTING; OR 6"
CONCRETE IF CONCRETE DRIVE
EXISTING.

DETAIL FOR DRIVEWAY TURNOUTS OPEN SHOULDER SECTION (ARTERIALS)



NOTE:
PAVEMENT STRUCTURE FOR STATE HIGHWAYS, CITY STREETS,
& COUNTY ROADS TO BE SAME AS MAIN LANES.

DETAIL OF TURNOUTS, ASPHALT STREETS, COUNTY ROADS & STATE HIGHWAYS CURB & GUTTER SECTION



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

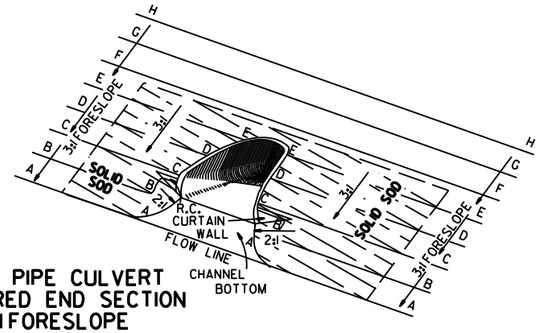
DETAIL FOR DRIVEWAY TURNOUTS (COLLECTORS)

DATE REV	DATE FILMED	DESCRIPTION
5-19-22		ISSUED

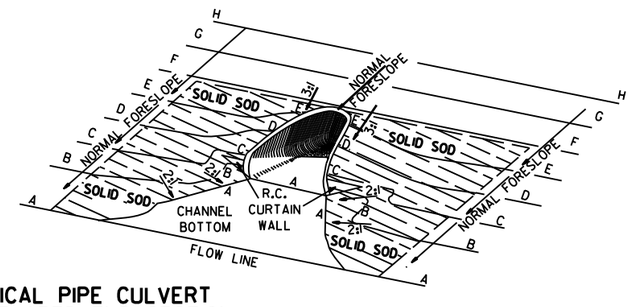
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DRIVEWAYS & STREET TURNOUTS

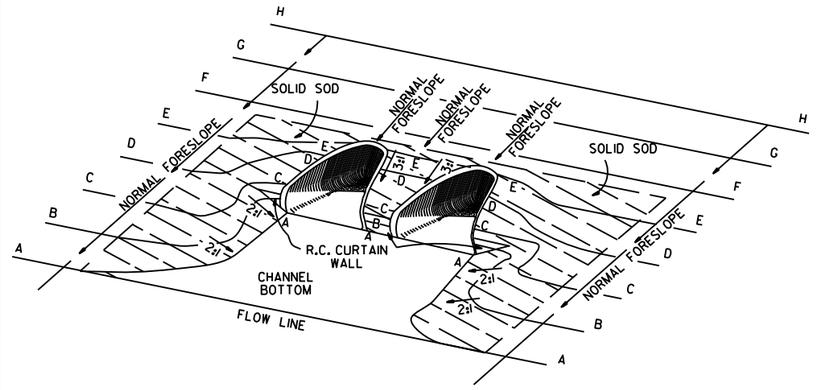
STANDARD DRAWING DR-2



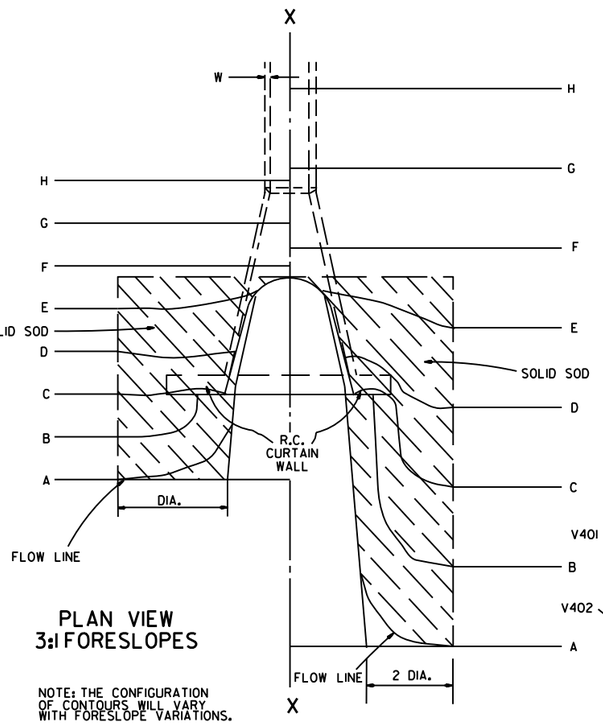
TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& 3:1 FORESLOPE



TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& FLATTENED ADJACENT SLOPES



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



PLAN VIEW
3:1 FORESLOPES

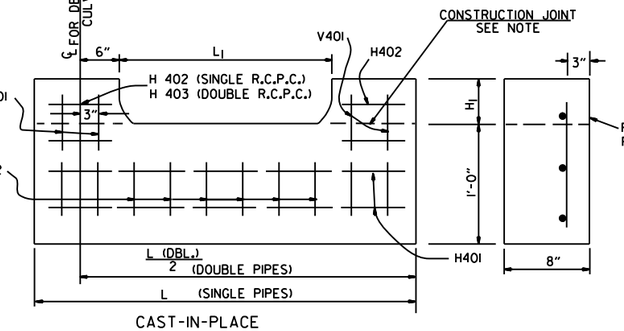
NOTE: THE CONFIGURATION OF CONTOURS WILL VARY WITH FORESLOPE VARIATIONS.

PLAN VIEW
FLATTENED FORESLOPES

R.C. CURTAIN WALL
DIMENSIONS & QUANTITIES

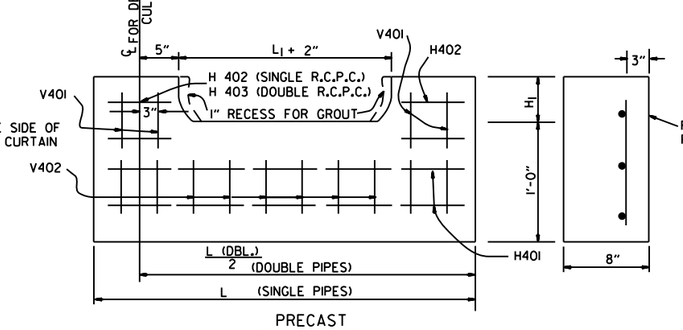
PIPE DIA.	H_1	L_1	L	L (DBL.) / 2	SINGLE R.C.P.C. CONC.	SINGLE R.C.P.C. REINF. STEEL	DOUBLE R.C.P.C. CONC.	DOUBLE R.C.P.C. REINF. STEEL
					CU. YDS.	LBS.	CU. YDS.	LBS.
18"	1'-11½"	3'-5"	8'-0"	6'-3"	0.31	27.7	0.45	39.5
24"	1'-0½"	4'-6"	9'-6"	7'-6"	0.37	33.4	0.53	48.0
30"	1'-3½"	5'-7"	11'-0"	9'-0"	0.45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

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



CAST-IN-PLACE

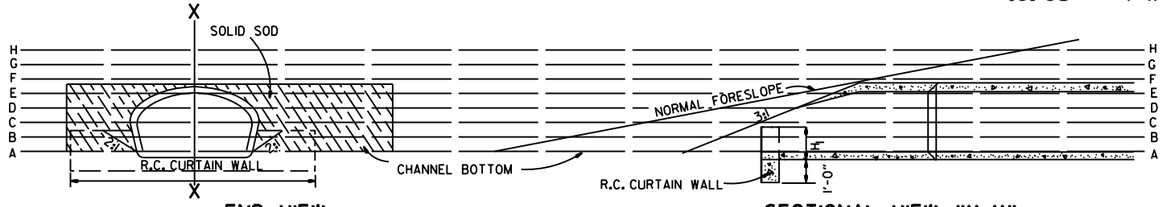
NOTE: THE PORTION OF THE R.C. CURTAIN WALL BENEATH THE FLARED END SECTION (LOWER 1'-0") SHALL BE PLACED MONOLITHICALLY. THE FLARED END SECTION SHALL THEN BE SET IN PLACE & THE REMAINING PORTIONS OF THE R.C. CURTAIN WALL PLACED.



PRECAST

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

R.C. CURTAIN WALL DETAILS



END VIEW

SECTIONAL VIEW "X-X"

REINFORCING STEEL SCHEDULE

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

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

SOLID SODDING

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

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

GENERAL NOTES

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

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

ARKANSAS STATE HIGHWAY COMMISSION

FLARED END SECTION

STANDARD DRAWING FES-1

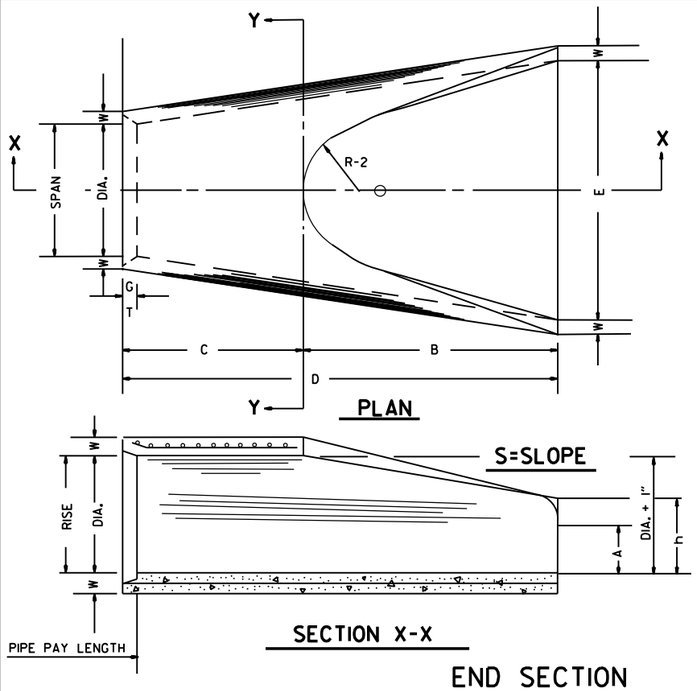
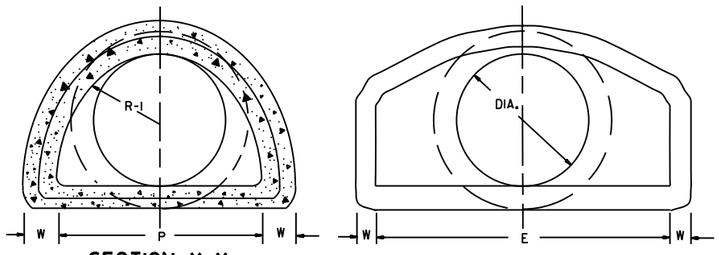


TABLE OF DIMENSIONS

DIA.	WALL	A	B	C	D	E	S	DIA. + 1"	P	R-1	R-2	G-T	WT.	h
18"	2½"	9"	2'-3"	3'-10"	6'-1"	3'-0"	3:1	19"	29"	15½"	12"	2"	1000	1'-0½"
24"	3"	9½"	3'-7½"	2'-6"	6'-1½"	4'-0"	3:1	25"	33 3/16"	16 15/16"	14"	2½"	1600	1'-1½"
30"	3½"	1'-0"	4'-6"	1'-7 3/4"	6'-1 3/4"	5'-0"	3:1	31"	37"	18½"	15"	3¼"	1940	1'-4 5/8"
36"	4"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	6'-0"	3:1	37"	47 13/16"	24 5/16"	20"	3½"	4100	1'-8"
42"	4½"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	3:1	43"	53⅞"	27½"	22"	3½"	5380	2'-2½"
48"	5"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	3:1	49"	56½"	28½"	22"	3½"	6550	2'-6"
54"	5½"	2'-4"	6'-6"	1'-10"	8'-4"	7'-6"	3:1	55"	65½"	33⅛"	24"	4"	8750	2'-10½"
60"	6"	2'-10"	6'-6"	1'-10"	8'-4"	8'-0"	3:1	61"	72½"	36 11/16"	24"	4"	9270	3'-5"
72"	7"	3'-10"	6'-6"	1'-10"	8'-4"	9'-0"	3:1	73"	77 13/16"	38 15/16"	24"	5"	13250	4'-6"

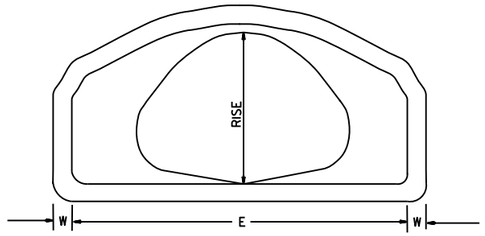


NOTE: TONGUE END ON UPSTREAM SECTION
GROOVE END ON DOWNSTREAM SECTION

ARCH PIPE

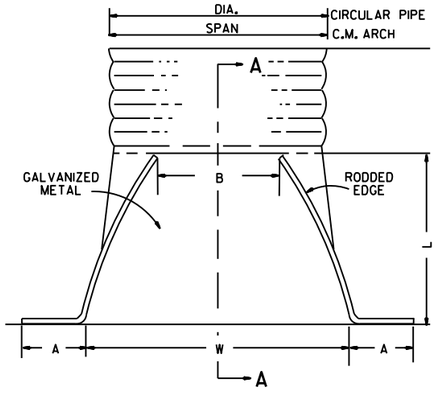
EQUIV. DIA.	• SPAN AASHTO M 206	• SPAN AHD NOMINAL	• RISE AASHTO M 206	• RISE AHD NOMINAL	W	A	B	C	D	E	P	R2	G-T	S
	INCHES													
15	18	18	11	11	2"	4"	2'-0"	4'-0"	6'-0"	3'-0"	29"	12"	1½"	2½:1
18	22	22	13½	14	2½"	5"	2'-0"	4'-1"	6'-1"	3'-6"	32⅛"	13"	2½"	2½:1
21	26	26	15½	16	2¾"	7"	2'-3"	3'-10"	6'-1"	4'-0"	34⅛"	14"	2½"	2½:1
24	28½	29	18	18	3"	9"	2'-3"	3'-10"	6'-1"	5'-0"	36 11/16"	15"	2½"	2½:1
30	36¼	36	22½	23	3½"	10"	3'-1"	3'-0½"	6'-1½"	6'-0"	47 11/16"	20"	3"	2½:1
36	43¾	44	26⅜	27	4"	10½"	4'-0"	2'-11½"	6'-1½"	6'-6"	54 5/16"	22"	3½"	2½:1
42	51⅛	51	31 5/16	31	4½"	11½"	4'-7"	1-10¼"	6'-5¼"	7'-2"	59½"	23"	3¾"	2½:1
48	58½	59	36	36	5"	1'-3"	5'-3"	2'-10¾"	8'-1¾"	7'-10"	70 5/16"	24"	4¼"	2½:1
54	65	65	40	40	5½"	1'-7"	5'-3"	2'-11"	8'-2"	8'-6"	72 1/16"	24"	4¾"	2¼:1
60	73	73	45	45	6"	1'-10"	5'-6"	2'-8"	8'-2"	9'-0"	77 1/16"	24"	5"	2¼:1

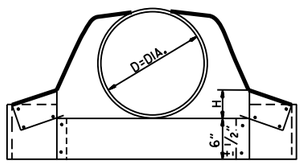
• THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PER CENT FROM THE VALUES SPECIFIED BY AASHTO M 206.



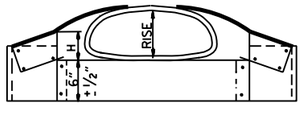
END VIEW
CONCRETE ARCH PIPE

END SECTION FOR REINFORCED CONCRETE PIPE CULVERTS





CIRCULAR PIPE



C.M. ARCH PIPE

CIRCULAR PIPE

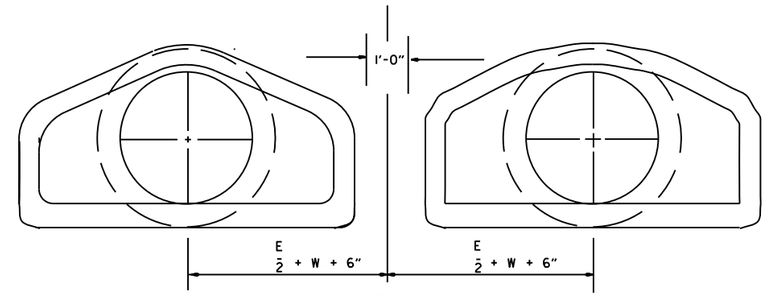
D. DIA.	GAUGE	A 1" ±	B. MAX.	H 1" ±	L 1½" ±	W 2" ±	S
		INCHES					
12	16	6	6	6	21	24	2½:1
15	16	7	8	6	26	30	2½:1
18	16	8	10	6	31	36	2½:1
21	16	9	12	6	36	42	2½:1
24	16	10	13	6	41	48	2½:1
30	14	12	16	8	51	60	2½:1
36	14	14	19	9	60	72	2½:1
42	12	16	22	11	69	84	2½:1
48	12	18	27	12	78	90	2½:1
54	12	18	30	12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

C.M. ARCH PIPE

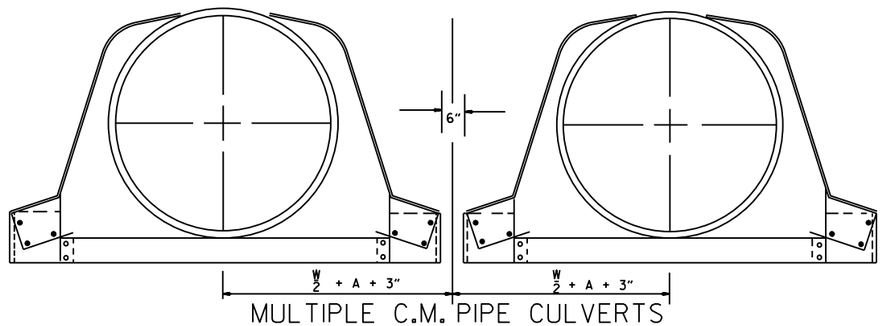
EQUIV. DIA.	SPAN	RISE	A 1" ±	B MAX.	H 1" ±	L 1½" ±	W 2" ±	S	GAUGE
	INCHES								
15"	17	13	7	9	6	19	30	2½:1	16
18"	21	15	7	10	6	23	36	2½:1	16
21"	24	18	8	12	6	28	42	2½:1	16
24"	28	20	9	14	6	32	48	2½:1	16
30"	35	24	10	16	6	39	60	2½:1	14
36"	42	29	12	18	8	46	75	2½:1	14
42"	49	33	13	21	9	53	85	2½:1	12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

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

END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS



MULTIPLE R.C. PIPE CULVERTS



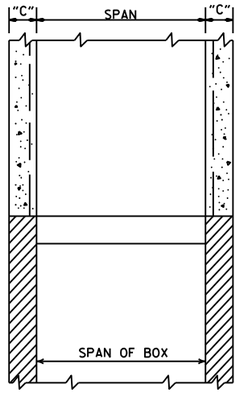
MULTIPLE C.M. PIPE CULVERTS

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

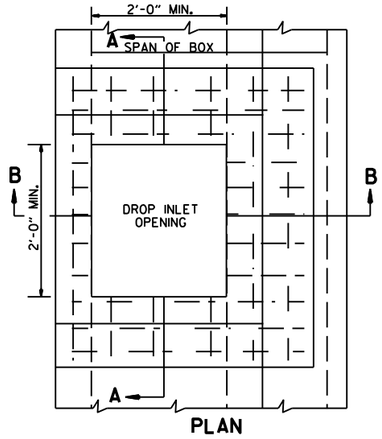
ARKANSAS STATE HIGHWAY COMMISSION

FLARED END SECTION

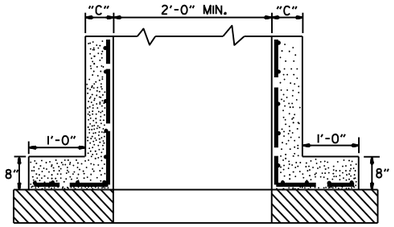
STANDARD DRAWING FES-2



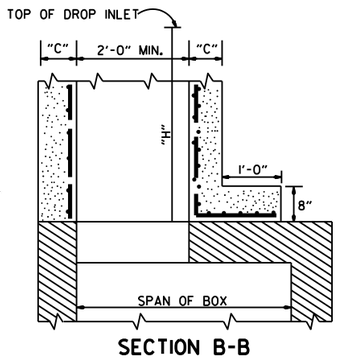
SECTION B-B



PLAN

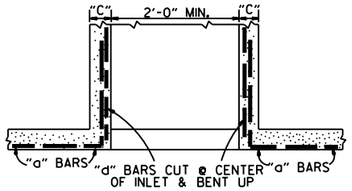


SECTION A-A

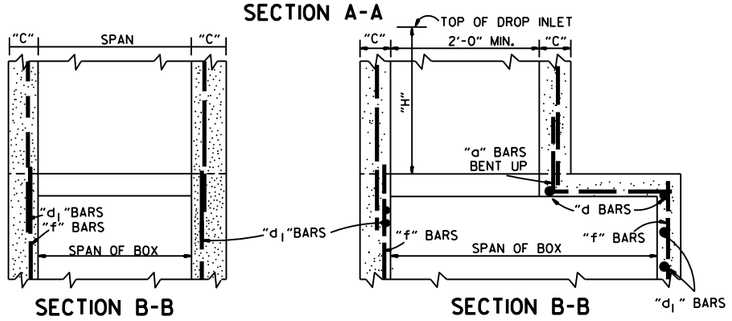


SECTION B-B

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



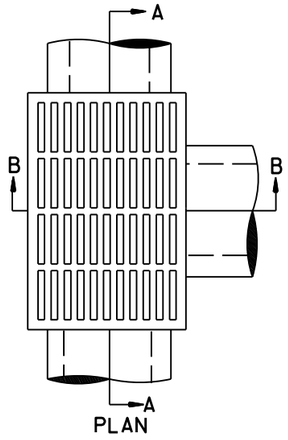
SECTION A-A



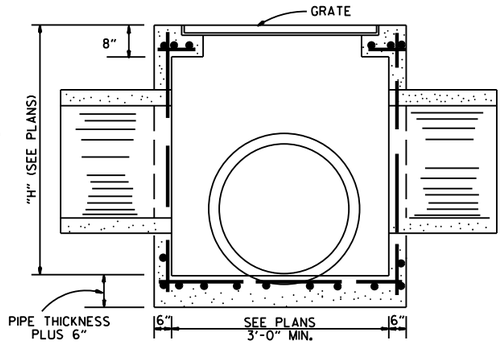
SECTION B-B SECTION B-B

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

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

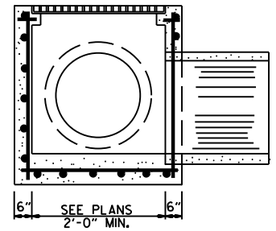


PLAN



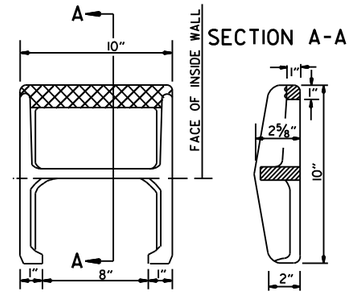
SECTION A-A

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



SECTION B-B

DROP INLET (TYPE E)

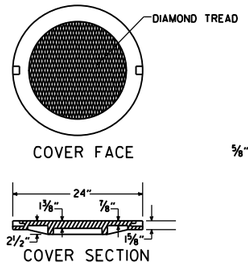


APPROX. WEIGHT = 11 LBS. (CAST IRON)

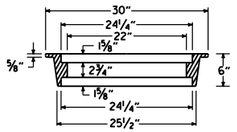
PLAN

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

DETAIL OF STEP FOR DROP INLET



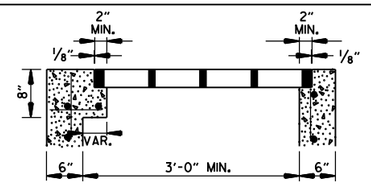
COVER SECTION



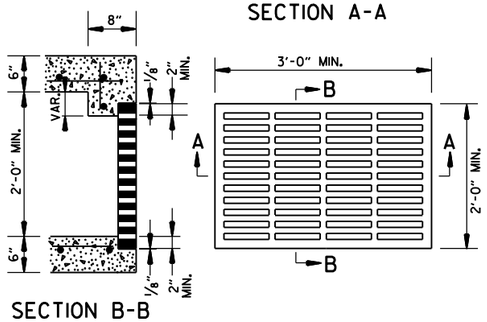
RING SECTION

APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER



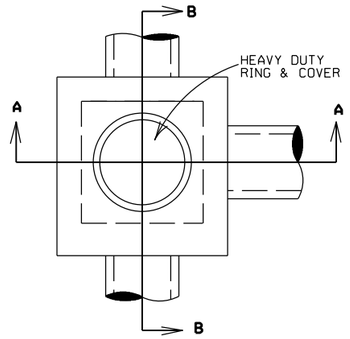
SECTION A-A



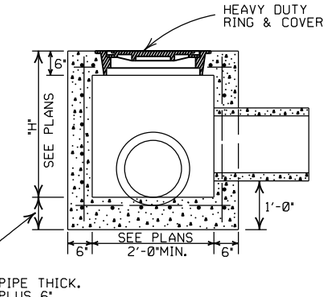
SECTION B-B

APPROXIMATE MINIMUM WATERWAY OPENING = 260 SQ. IN.

GRATE FOR TYPE E DROP INLET

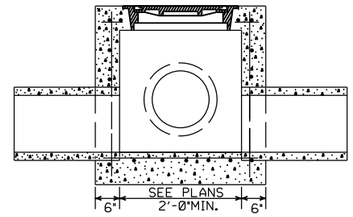


PLAN



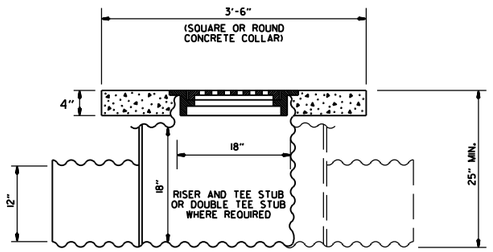
SECTION A-A

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

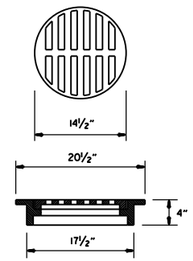


SECTION B-B

JUNCTION BOX (TYPE E)



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



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

DETAIL OF YARD DRAIN

GENERAL NOTES:

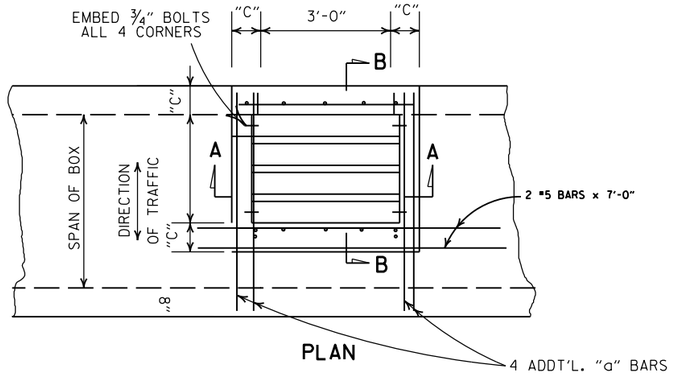
1. ALL EXPOSED CORNERS SHALL BE ¾" CHAMFERED.
2. STEPS SHALL BE INSTALLED ON 16" CENTERS ON ALL INLETS 4'-0" HIGH OR OVER, OR AS APPROVED BY THE ENGINEER.
3. EXPANSION JOINT MATERIAL SHALL BE ¾" PREFORMED FIBER.
4. GRATE OR GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS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

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

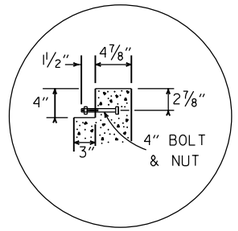
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS & JUNCTION BOXES

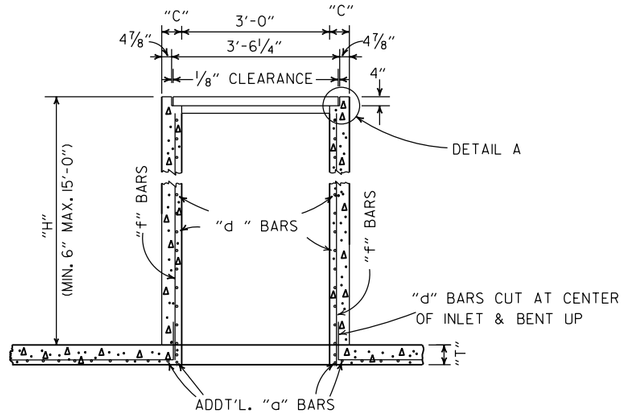
STANDARD DRAWING FPC-9



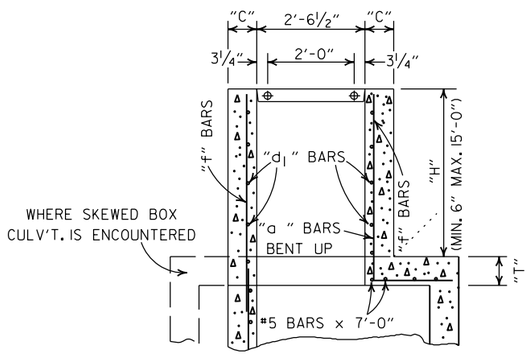
PLAN



DETAIL A



SECTION A-A

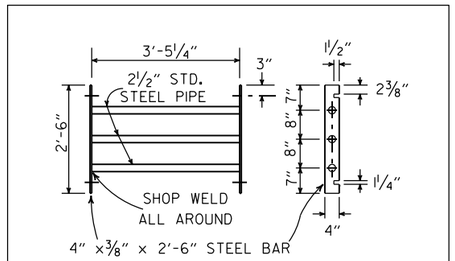


SECTION B-B

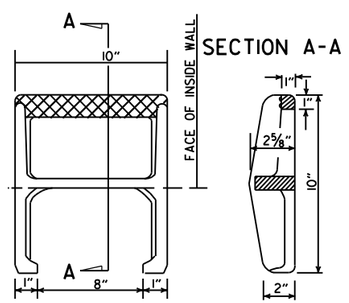
NOTE: ADDT'L.REINF. STEEL TO BE INCLUDED IN UNIT PRICE BID PER TYPE "TM" D.I.

DIMENSIONS & REINF. BARS FOR D.I. TO BE THE SAME AS THOSE SHOWN ON APPLICABLE STD. BARREL DRAWING FOR R.C. BOX CULVERTS.

DROP INLET TYPE "TM"
FOR REINFORCED CONC. BOX CULVERTS



GRATE DETAIL



APPROX. WEIGHT = 11 LBS. (CAST IRON)

PLAN

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

DETAIL OF STEP FOR DROP INLET

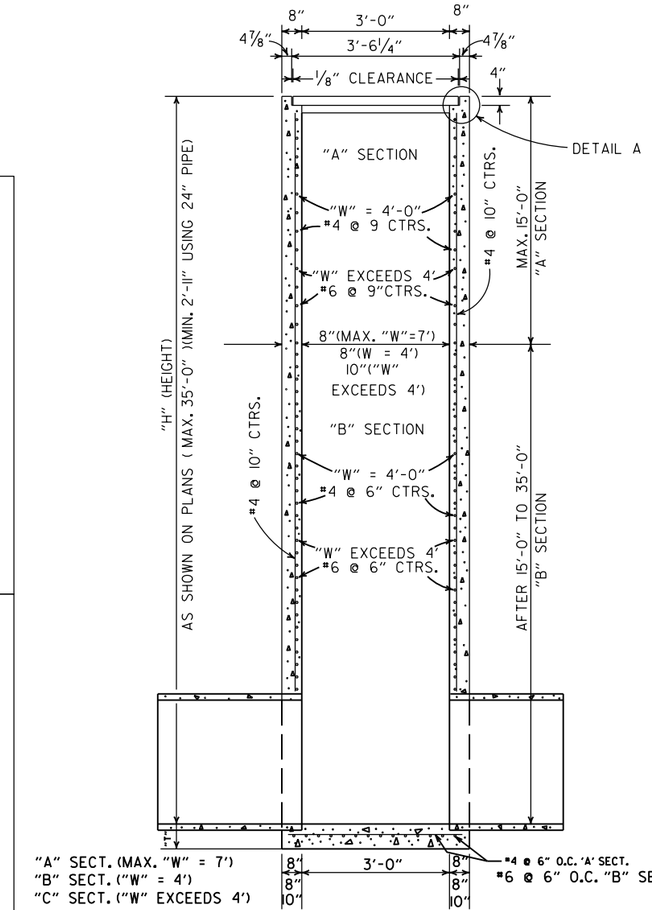
GENERAL NOTES:

1. STEEL PIPE FOR GRATES AND BOLTS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 807. BOLTS SHALL CONFORM TO ONE OF THE FOLLOWING: ASTM A193, GRADE B8 CLASS 1 OR 2, ASTM A307 OR AASHTO M 164.
2. STEEL PIPE FOR GRATES SHALL BE "STANDARD WEIGHT" PIPE CONFORMING TO ASTM A53 NATIONAL STANDARD PIPE.
3. BOLTS, NUTS, WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M 232 OR AASHTO M 298, CLASS 40 OR 50.
4. ALL EXPOSED CORNERS TO HAVE ¾" CHAMFER.
5. ALL #4 AND #5 REINFORCING BARS TO HAVE 1½" COVER. LARGER SIZES TO HAVE 2" COVER.
6. THE COMPLETE PIPE GRATE SHALL BE PAINTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

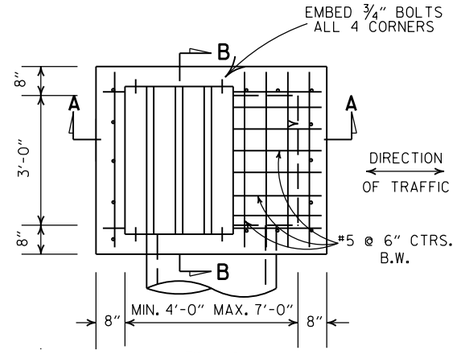
TABLE OF "W" DIMENSIONS

I.D. PIPE	SKEW OF CROSS DRAIN		
	STRAIGHT	30°	45°
	"W"	"W"	"W"
24"	4'-0"	4'-0"	4'-0"
30"	4'-0"	4'-0"	4'-5"
36"	4'-0"	4'-3"	5'-3"
42"	4'-3"	4'-11"	6'-1"
48"	4'-10"	5'-7"	6'-11"

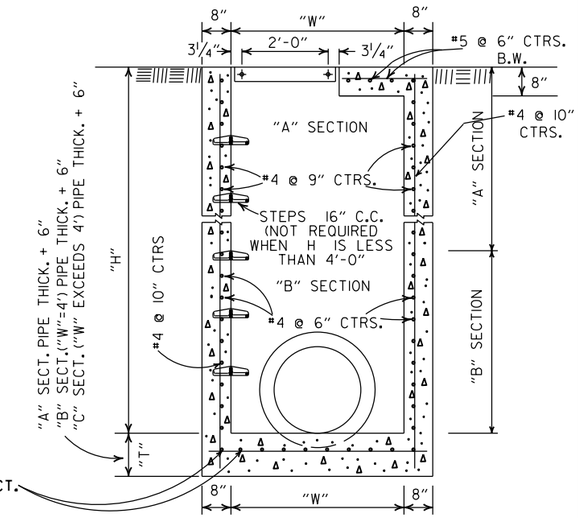
NOTE: DIMENSIONS SHOWN ABOVE ARE FOR PIPES INTERSECTING DROP INLET ON ONE SIDE ONLY. FOR SKEWED PIPES INTERSECTING BOTH SIDES OF DROP INLET, "W" WILL NEED TO BE INCREASED OR AXIS OF INTERSECTING PIPES WILL NEED TO BE SHIFTED.



SECTION B-B



PLAN



SECTION A-A

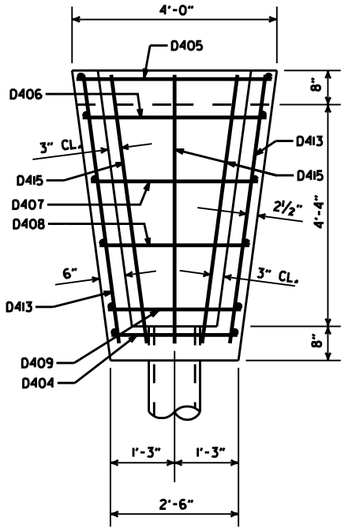
DROP INLET(TYPE RM)

REVISED		DATE FILMED
8-22-02	ADDED & REVISED DIMENSION TO SECTION A-A	
1-12-00	CORRECTED DIMENSION ON SECTION B-B	
11-06-97	ADDED DIMENSION TO SECTION A-A	
10-18-96	REVISED ASTM REF. TO AASHTO AND ADDED NOTE TO TABLE OF "W" DIMENSIONS	
10-1-92	ADDED DIRECTION OF TRAFFIC	10-1-92
8-15-91	ADDED NOTE ABOUT PAINTING OF GRATE	8-15-91
11-30-89	ALTERED DETAIL A	11-30-89
7-15-88	REVISED STEP DETAIL,TM & RM D.I. & GRATE DETAIL	719-7-15-88
10-2-72	REVISED AND REDRAWN	542-10-2-72

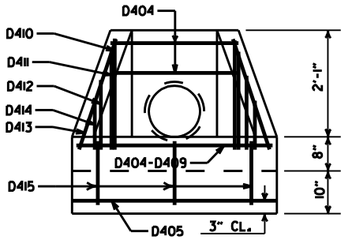
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS

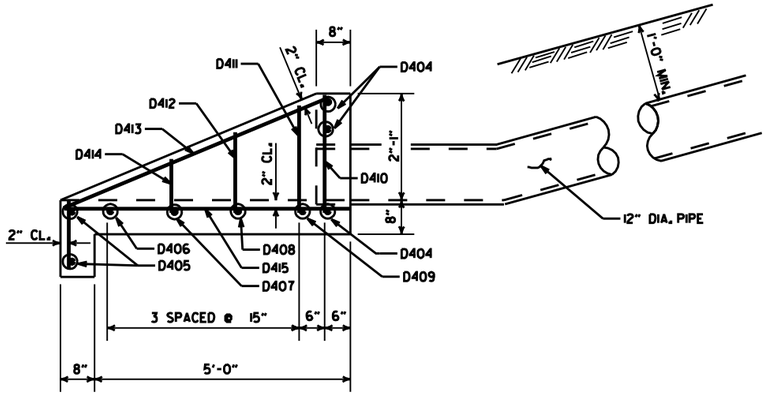
STANDARD DRAWING FPC-9D



PLAN



FRONT ELEVATION

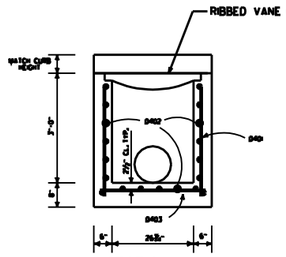


SIDE ELEVATION
CONCRETE SPILLWAY

BAR LIST (CONCRETE SPILLWAY)

MARK	NO. REQ'D.	LENGTH	BENDING DIAGRAM
D404	3	2'-2"	5'-4", 1'-2", 2" P.D., D415
D405	2	3'-8"	
D406	1	3'-5"	
D407	1	3'-1"	
D408	1	2'-9"	
D409	1	2'-5"	
D410	2	2'-5"	
D411	2	2'-2"	
D412	2	1'-9"	
D413	2	5'-6"	
D414	2	1'-2"	
D415	3	6'-5"	

DETAILS OF CONCRETE SPILLWAY (TYPE A)

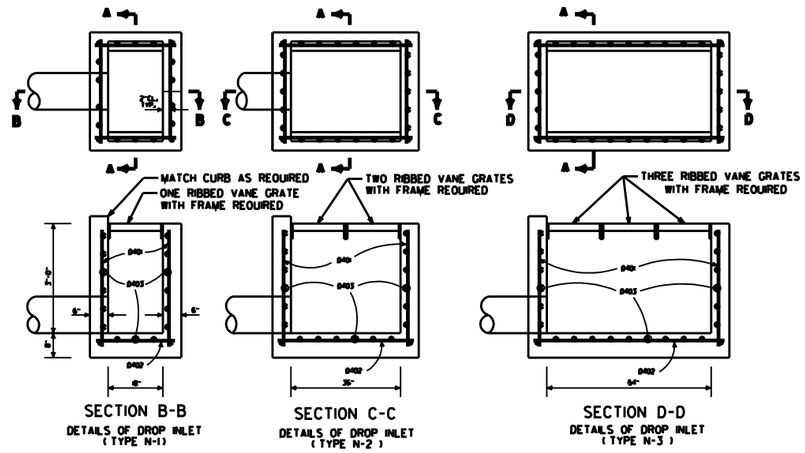


SECTION A-A

BAR LIST (DROP INLET)

MARK	TYPE N-1		TYPE N-2		TYPE N-3	
	NO. REQ'D.	LENGTH	NO. REQ'D.	LENGTH	NO. REQ'D.	LENGTH
D401	20	3'-0"	26	3'-0"	32	3'-0"
D402	19	2'-2"	19	3'-8"	19	5'-2"
D403	17	2'-11"	20	2'-11"	23	2'-11"

ALL BARS #4 @ 6" SPACING



SECTION B-B
DETAILS OF DROP INLET
(TYPE N-1)

SECTION C-C
DETAILS OF DROP INLET
(TYPE N-2)

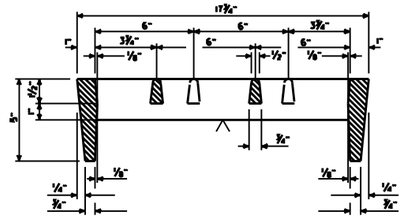
SECTION D-D
DETAILS OF DROP INLET
(TYPE N-3)

DETAILS OF DROP INLET

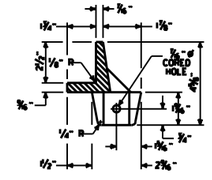
GENERAL NOTES (GRATE & FRAME)

1. RIBBED VANE GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105 CLASS 35B & AASHTO M 306.
2. GRATE AND FRAME SHALL NOT BE PAINTED.
3. GRATE AND FRAME SHALL BE INSTALLED IN DROP INLET IN ASSEMBLED POSITION.
4. APPROXIMATE WEIGHT OF GRATE SHALL BE 170 LBS.

SECTION A-A



SECTION B-B



SECTION THRU FRAME

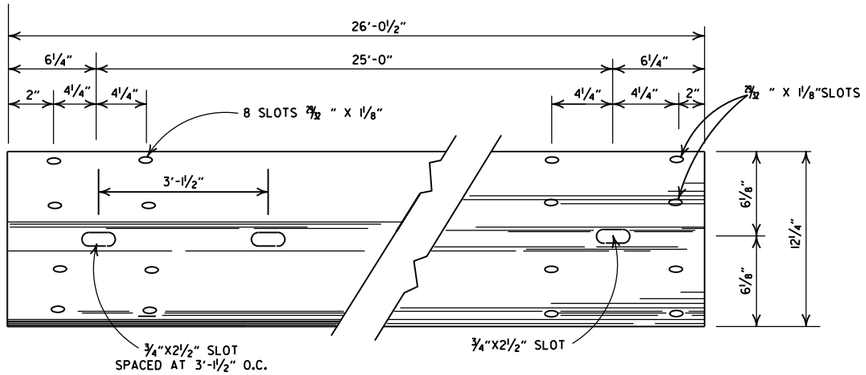
DETAILS OF RIBBED VANE GRATE AND FRAME

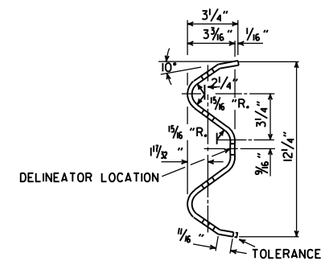
DATE REVISED	DATE FILMED	DESCRIPTION
7-02-98		REVISED SECT. A-A DETAIL OF DROP INLET & ADDED AASHTO REF. TO NOTE 1, REVISED GRATE
10-18-96		REVISED ASTM REF. TO AASHTO
8-15-91		ISSUED

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS AND SPILLWAY OUTLET

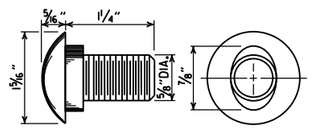
STANDARD DRAWING FPC-9N



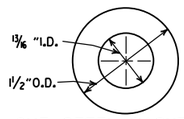


DETAILS OF W-BEAM GUARDRAIL

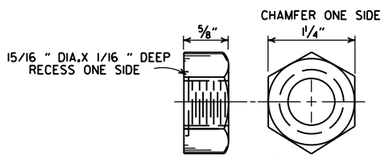
RAIL SECTION OF CLOSELY SIMILAR DIMENSIONS AND COMPARABLE STRENGTH MAY BE SUBSTITUTED IF APPROVED BY THE ENGINEER.



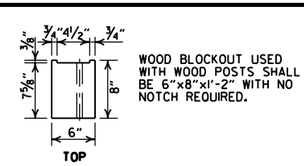
SPLICE BOLT
POST BOLT - SAME EXCEPT LENGTH



CUT STEEL WASHER

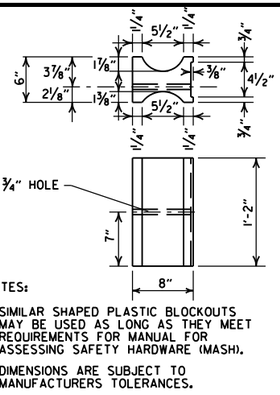


NUT



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

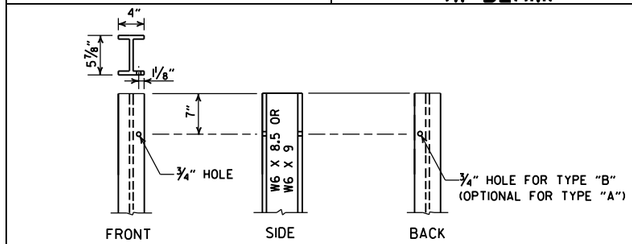
WOOD BLOCKOUT (W-BEAM)



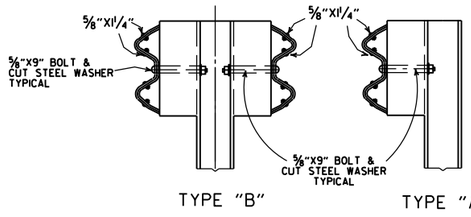
NOTES:

1. SIMILAR SHAPED PLASTIC BLOCKOUTS MAY BE USED AS LONG AS THEY MEET REQUIREMENTS FOR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).
2. DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCES.

PLASTIC BLOCKOUT (W-BEAM)



STEEL POST



DETAILS OF STEEL 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 ¾" BEYOND IT.

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

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

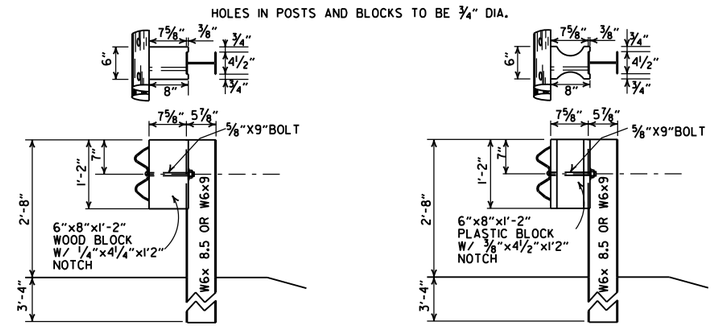
USE W-BEAM GUARDRAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB. FOR EXTENSIONS OR MODIFICATION OF EXISTING GUARDRAIL, W-BEAM GUARDRAIL COMPONENTS OF THE SAME TYPE AS THOSE EXISTING SHALL BE USED.

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 f (1400 f) OR NO. 1 1350 f SOUTHERN PINE.

CONTRACTOR SHALL HAVE THE OPTION OF USING WOOD BLOCKOUTS FOR W-BEAM GUARDRAIL OR PLASTIC BLOCKOUTS, AS LONG AS BLOCKOUT USED MEETS REQUIREMENTS FOR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) FOR W-BEAM GUARDRAIL.

DELINEATORS SHALL BE MOUNTED AT 37.5' SPACING ON THE FRONT FACE OF THE GUARDRAIL. SPACING MAY BE REDUCED IN CURVES, AS DIRECTED BY THE ENGINEER. 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 GUARDRAIL.



WOOD BLOCKOUT CONNECTIONS

PLASTIC BLOCKOUT CONNECTIONS

DETAILS OF STEEL LINE POST CONNECTIONS (W-BEAM)

POSTS AND BLOCKS TO BE ROUGH SAWN 6"X8" WITH A TOLERANCE OF + OR - ¼".

WOOD BLOCKOUT CONNECTIONS

PLASTIC BLOCKOUT CONNECTIONS

DETAILS OF WOOD LINE POST CONNECTIONS (W-BEAM)

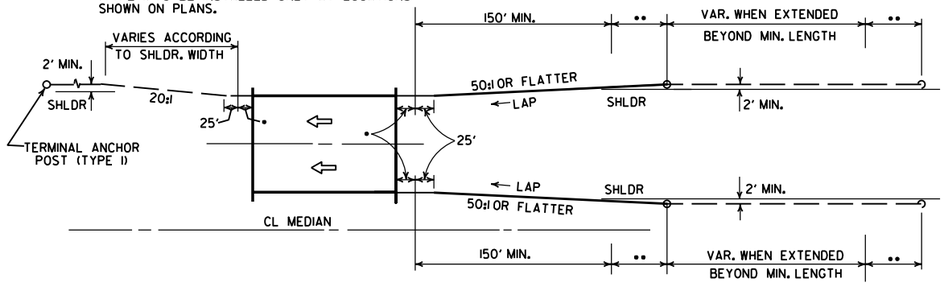
DATE	REVISION	FILMED
05-19-22	REVISED GENERAL NOTES, ADDED DELINEATOR LOCATION.	
11-07-19	RENUMBERED AND RENAMED	
11-16-17	REVISED GENERAL NOTES AND RAISED GUARDRAIL HEIGHT 3"	
07-14-10	RAISED HEIGHT OF GUARDRAIL 1"	
10-15-09	ADDED REFERENCE TO MASH	
04-10-03	REVISED GENERAL NOTES	
08-22-02	REVISED DIMENSION ON WOOD & PLASTIC BLOCKOUT CONNECTIONS & STEEL POST	
11-16-01	REVISED WOOD BLOCKOUT & DETAILS OF WOOD LINE POST CONNECTIONS	
03-30-00	REMOVED GUARDRAIL AT BRIDGE ENDS	
01-12-00	ADDED PLASTIC BLOCKOUT	
08-12-98	REV. BLOCKOUTS TO WOOD, DELETED CONC. POST & REV. GENERAL NOTE, DELETED DET. OF GUARDRAIL 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	
04-03-97	REMOVED "LAP IN DIRECTION OF TRAFFIC" NOTE & PLACED ARROWS ON WASHERS	
10-18-96	REVISED WOOD POST NOTE	
06-02-94	ADDED ALT. STEEL POST SIZE	
08-05-93	REVISED STEEL POST SIZE	8-5-93
10-01-92	REDRAWN & REVISED	10-1-92
08-15-91	REVISED WASHER NOTE	8-15-91
08-02-90	REV. GEN. NOTE & DEPTH OF ANC. POST IN ROCK	8-2-90
07-15-88	REVISED SECTION 3 & GENERAL NOTES	
03-04-88	REV. ANCHOR POST, ELEV. NOTES & POST IN ROCK	780-3-4-88
10-30-87	REVISED WOOD LINE POST DETAIL	546-10-30-87
10-09-87	REDRAWN & REVISED	802-10-9-87

ARKANSAS STATE HIGHWAY COMMISSION

GUARDRAIL DETAILS

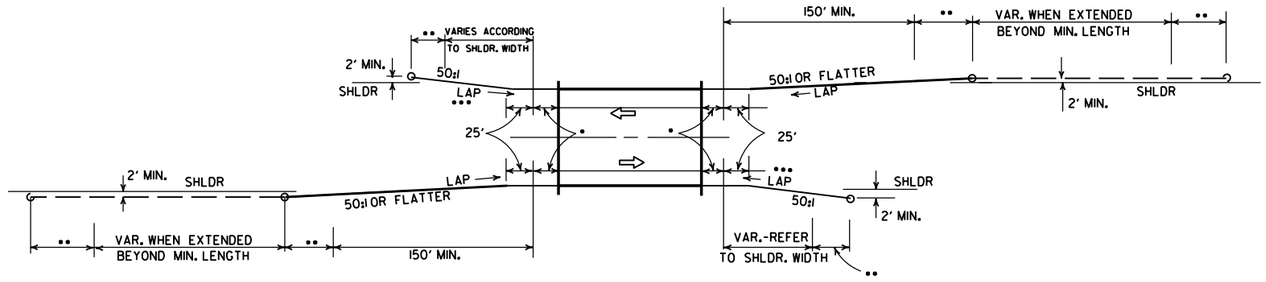
STANDARD DRAWING GR-6

NOTE: GUARDRAIL WITH GUARDRAIL TERMINAL (TYPE 1) TO BE INSTALLED ONLY AT LOCATIONS SHOWN ON PLANS.



ONE-WAY TRAFFIC

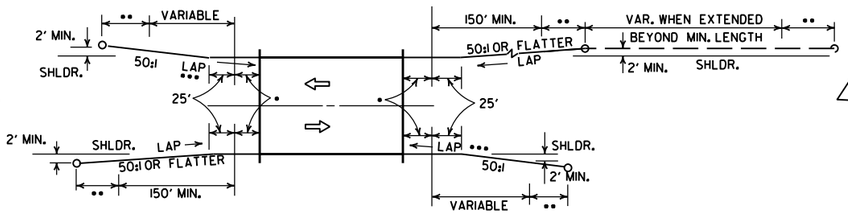
••• LAP OF GUARDRAIL SHALL BE AS SHOWN FOR A DISTANCE OF UP TO 200'. CHANGE TO LAP IN DIRECTION OF TRAVEL.



TWO-WAY TRAFFIC

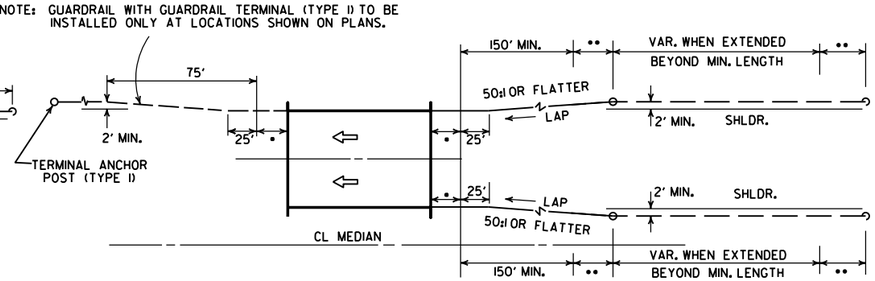
METHODS OF INSTALLATION OF GUARDRAIL AT LESS THAN FULL SHOULDER WIDTH BRIDGES USING GUARDRAIL TERMINAL (TYPE 2)

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



TWO-WAY TRAFFIC

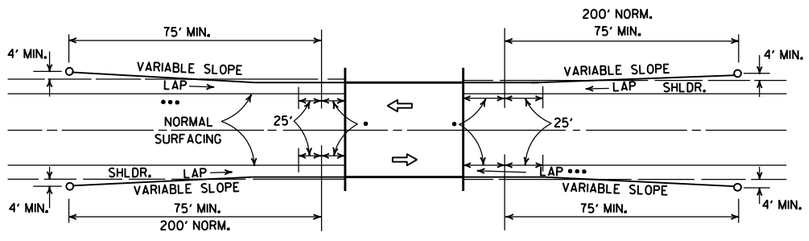
NOTE: GUARDRAIL WITH GUARDRAIL TERMINAL (TYPE 1) TO BE INSTALLED ONLY AT LOCATIONS SHOWN ON PLANS.



ONE-WAY TRAFFIC

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

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



METHOD OF INSTALLATION OF GUARDRAIL USING GUARDRAIL TERMINAL (TYPE 1) (FULL SHOULDER WIDTH OR LESS BRIDGES)

LEGEND

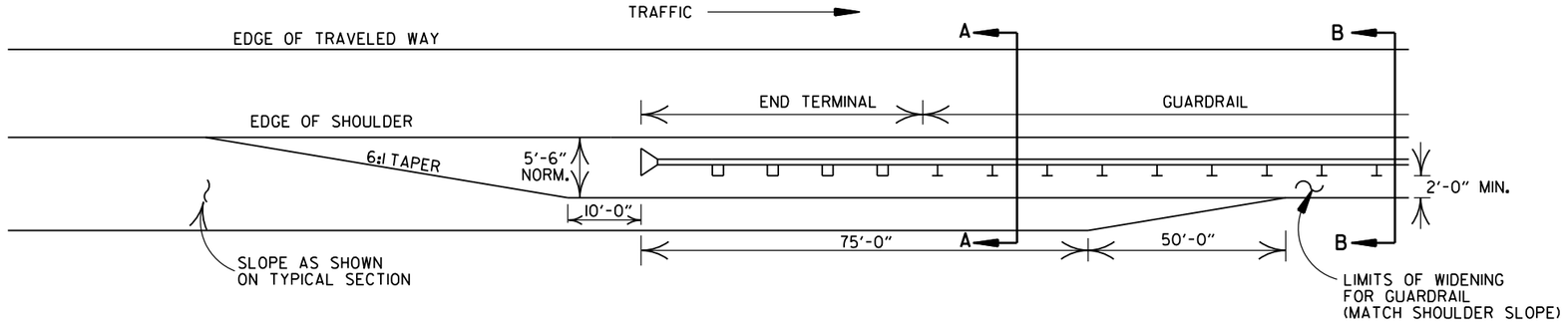
- • THRIE BEAM GUARDRAIL TERMINAL
- •• GUARDRAIL TERMINAL (TYPE 2)

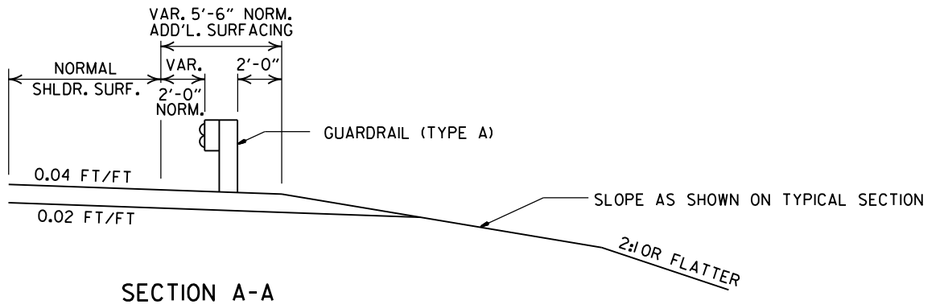
DATE	REVISION	DATE FILM
11-07-19	RENUMBERED AND RENAMED	
4-17-08	REVISED LAYOUTS	
11-10-05	REMOVED GUARDRAIL NOTES AND DETAILS	
11-16-01	DELETED NOTE-METHOD OF INSTALLATION OF GUARDRAIL USING GUARDRAIL TERM. (TY. 1)	
1-12-00	ADDED CONSTRUCTION NOTE	1-12-00
6-26-97	REVISED LAYOUT	
10-1-92	REDRAWN & REVISED	10-1-92
	ADDED NOTE	
10-9-87	REDRAWN & REVISED	

ARKANSAS STATE HIGHWAY COMMISSION

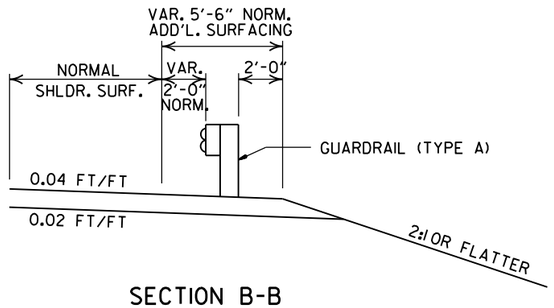
GUARDRAIL DETAILS

STANDARD DRAWING GR-8



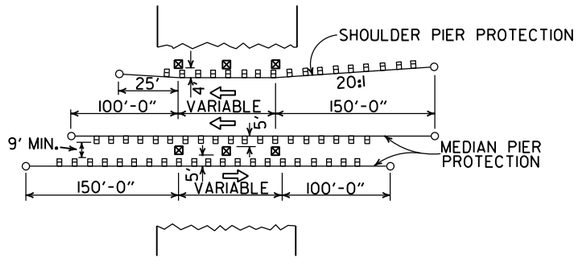


SECTION A-A



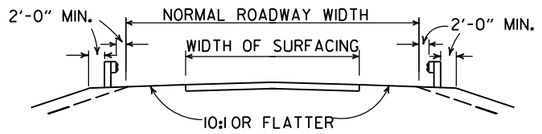
SECTION B-B

DETAILS OF WIDENING FOR GUARDRAIL

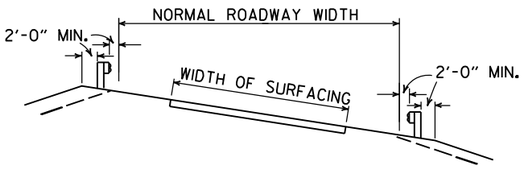


METHOD OF INSTALLATION OF GUARDRAIL AT FIXED OBSTACLE

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



SECTION ON TANGENT



SECTION ON CURVE

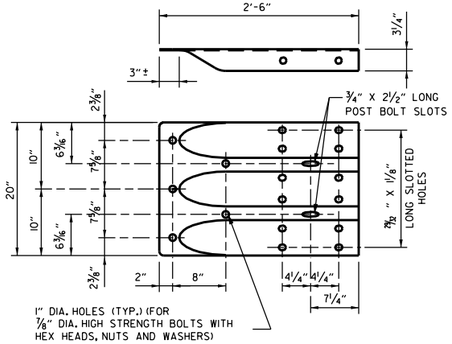
DETAILS SHOWING POSITION OF GUARDRAIL ON HIGHWAY

DATE	REVISION	DATE FILM
11-07-19	RENUMBERED AND RENAMED	
4-17-08	MINOR REVISION	
11-10-05	DRAWN	

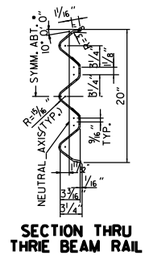
ARKANSAS STATE HIGHWAY COMMISSION

GUARDRAIL DETAILS

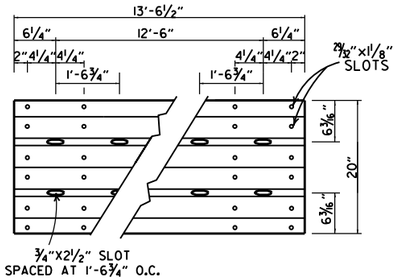
STANDARD DRAWING GR-9



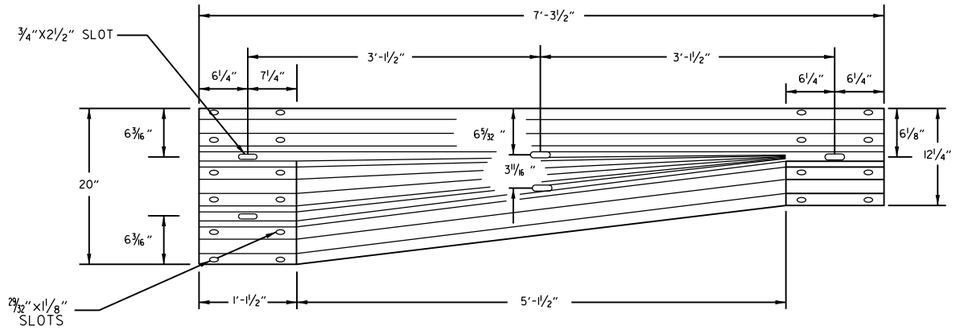
SPECIAL END SHOE



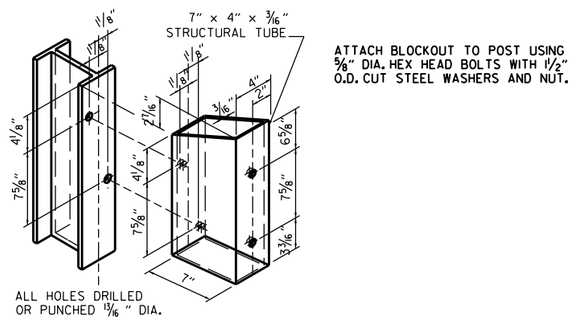
SECTION THRU THRIE BEAM RAIL



THRIE BEAM RAIL

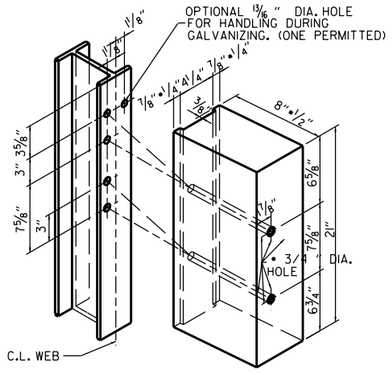


TRANSITION SECTION



ATTACH BLOCKOUT TO POST USING ⅝" DIA. HEX HEAD BOLTS WITH 1½" O.D. CUT STEEL WASHERS AND NUT.

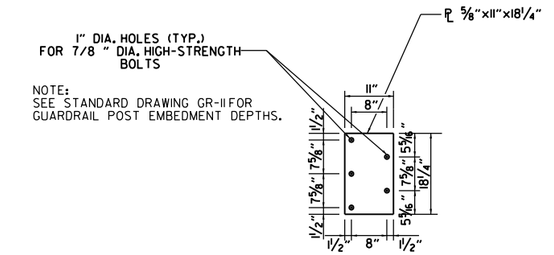
STRUCTURAL STEEL TUBING BLOCKOUT DETAIL



ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED

HOLE PUNCHING DETAIL FOR STEEL POST & WOOD OR PLASTIC BLOCKOUTS

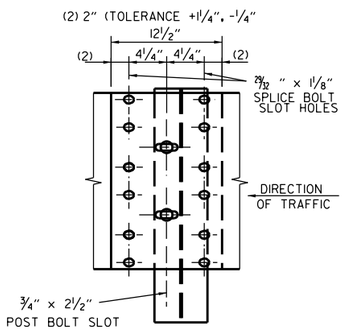
NOTE: BLOCKS SHALL BE THE SAME TYPE THROUGHOUT THE PROJECT LIMITS.



NOTE:
SEE STANDARD DRAWING GR-11 FOR GUARDRAIL POST EMBEDMENT DEPTHS.

CONNECTOR PLATE

CONNECTOR PLATE SHALL BE AASHTO M270, GR. 36 AND SHALL BE GALVANIZED AFTER FABRICATION. GALVANIZING SHALL CONFORM TO SUBSECTION 807.19 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.



THRIE BEAM RAIL SPLICE AT POST

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 1.

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 3"4" BEYOND IT.

ALL LAP SPLICES, INCLUDING SPECIAL END SHOES, SHALL BE MADE IN THE DIRECTION SHOWN ON STANDARD DRAWINGS GR-8 & GR-13.

REFER TO STD. DRWG. GR-11 FOR POST DETAILS.

USE THRIE BEAM GUARDRAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB.

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

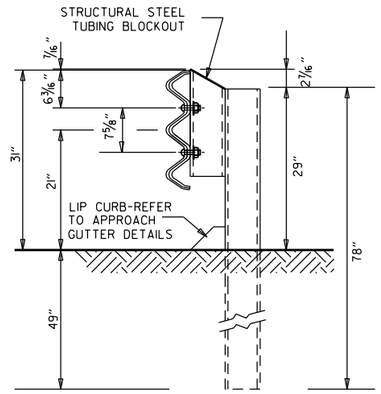
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7 f (1400 f) OR NO. 1 1350 f SOUTHERN PINE.

DATE	REVISION	FILMED
11-07-19	RENAMED AND REVISED REFERENCES	
11-16-17	REVISED TRANSITION SECTION, GUARD RAIL HEIGHT, AND GENERAL NOTES; MOVED THRIE BEAM GUARD RAIL CONNECTIONS AT BRIDGES ENDS TO STD. DRWG. GR-12	
07-14-10	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	
04-10-03	REVISED GENERAL NOTES	
08-22-02	REVISED NOTE (2)	
06-29-00	MOVED DIMENSION LINES	
05-18-00	ADDED NOTE	
03-30-00	DRAWN & ISSUED	

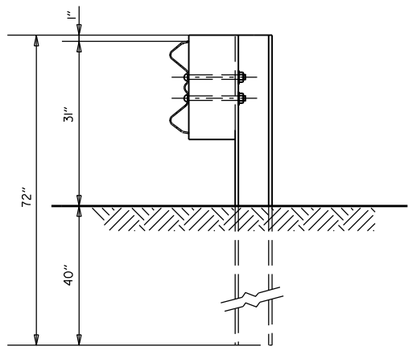
ARKANSAS STATE HIGHWAY COMMISSION

GUARDRAIL DETAILS

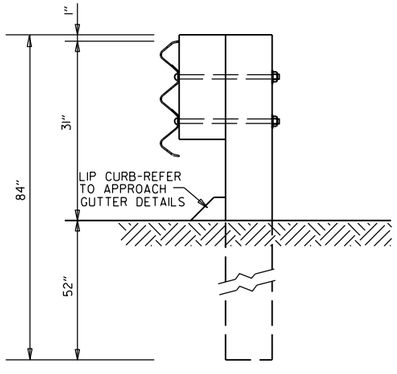
STANDARD DRAWING GR-10



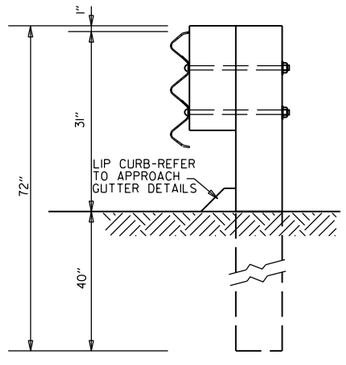
THRIE BEAM RAIL WITH STEEL TUBING BLOCKOUT
AND STEEL POST
POSTS 1-7



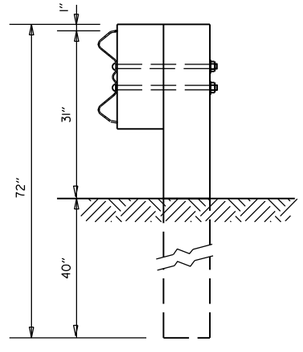
W-BEAM TO THRIE BEAM TRANSITION RAIL
WITH WOOD OR PLASTIC BLOCKOUT AND STEEL POST
POST 8



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.

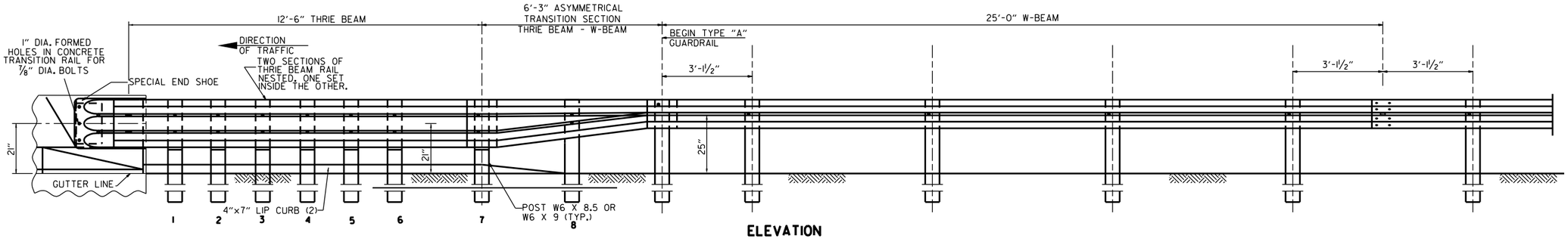
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1STRUCTURAL OR BETTER 9.7f (1400 f) OR NO.1 1350 f SOUTHERN PINE.

DATE	REVISION	FILMED
11-07-19	RENAMED	
11-16-17	REVISED GUARDRAIL HEIGHT, CHANGED STD. DWG. NUMBER FROM GR-10A TO GR-11	
07-14-10	REVISED POST 8 DIMENSIONS	
11-29-07	ADDED PLASTIC BLOCKOUTS	
08-22-02	REVISED LIP CURB NOTE	
03-30-00	DRAWN & ISSUED	

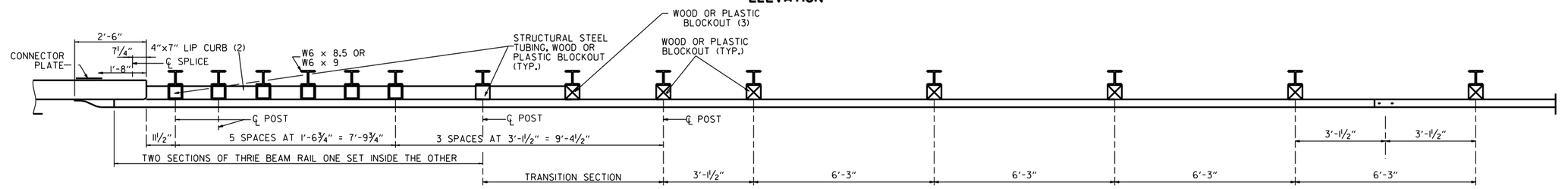
ARKANSAS STATE HIGHWAY COMMISSION

GUARDRAIL DETAILS

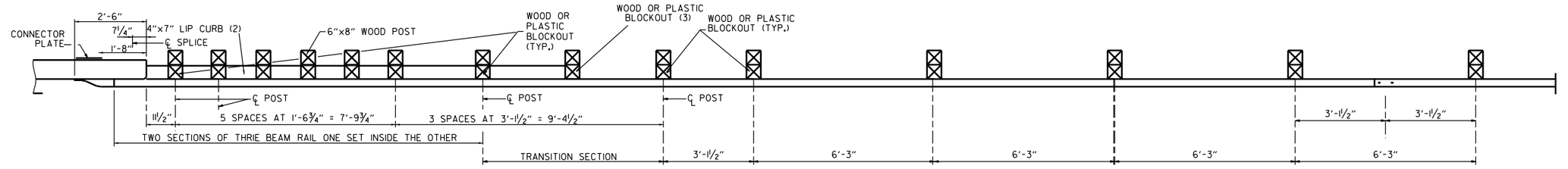
STANDARD DRAWING GR-11



ELEVATION



PLAN



PLAN

(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 GUARDRAIL CONNECTION AT BRIDGE ENDS

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 3/4" BEYOND IT.

ALL LAP SPLICES, INCLUDING SPECIAL END SHOES, SHALL BE MADE IN THE DIRECTION SHOWN ON STANDARD DRAWINGS GR-8 & GR-13.

REFER TO STD. DRWG. GR-11 FOR POST DETAILS.

USE THRIE BEAM GUARDRAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB.

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

POSTS SHALL NOT BE PLACED AT SPLICE LOCATIONS ALONG W-BEAM RAILS.

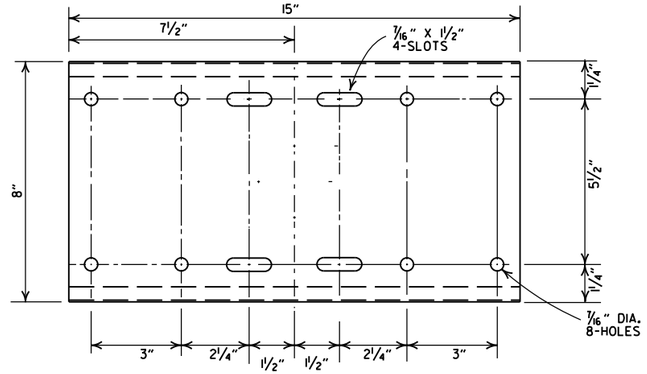
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7f (1400 f) OR NO. 1 1350 f SOUTHERN PINE.

DATE	REVISION	FILMED
05-14-20	REVISED NOTES	
11-07-19	RENAMED & REVISED REFERENCES	
11-16-17	RE-DRAWN FROM STD. DWG. GR-10 & ISSUED	

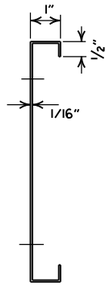
ARKANSAS STATE HIGHWAY COMMISSION

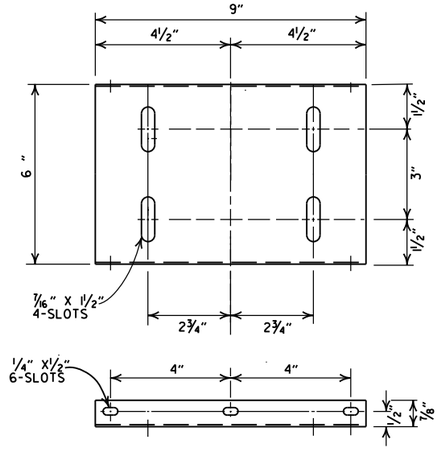
GUARDRAIL DETAILS

STANDARD DRAWING GR-12

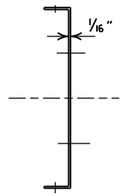


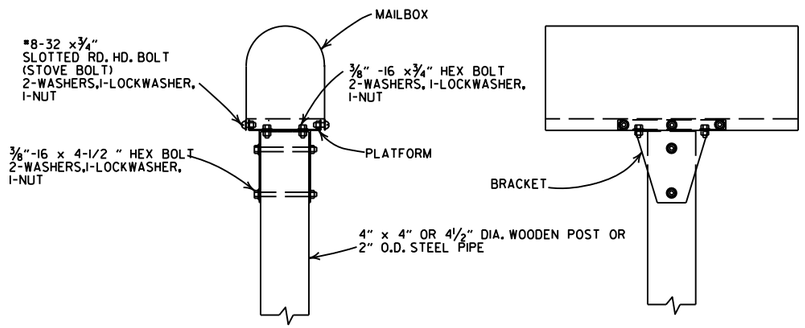
SHELF



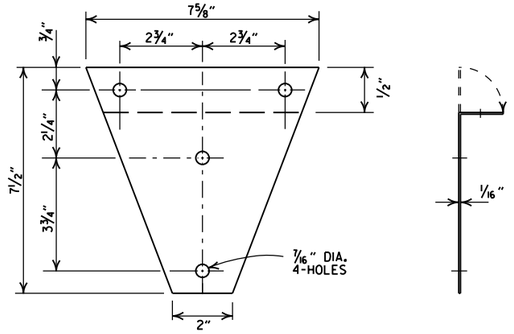


PLATFORM





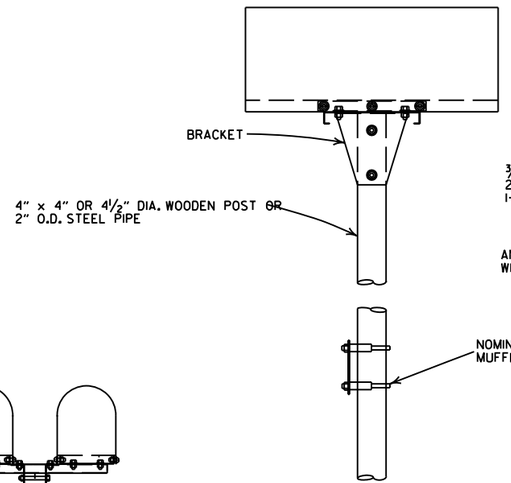
SINGLE INSTALLATION



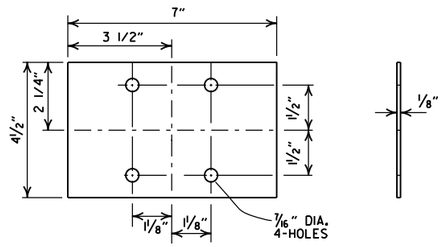
BRACKET

GENERAL NOTES

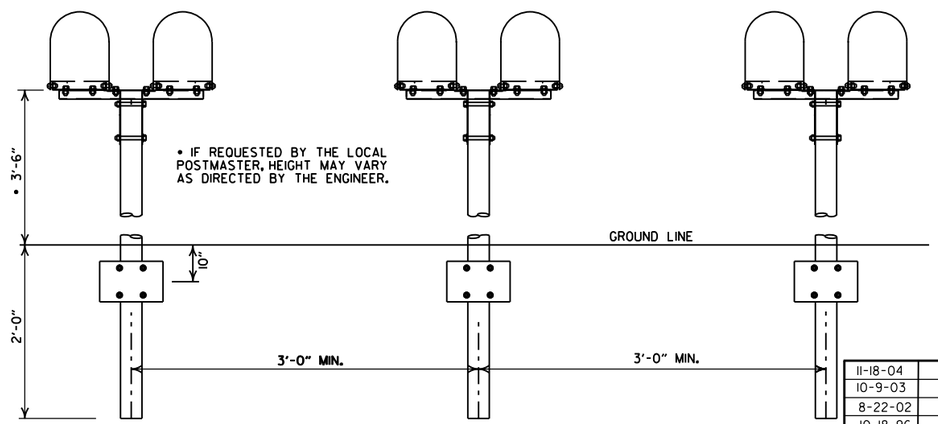
1. MAILBOX POSTS MAY BE WOOD OR METAL. WOOD POSTS SHALL BE PRESSURE TREATED FOR GROUND CONTACT IN ACCORDANCE WITH SECTION 637.02 OF THE STANDARD SPECIFICATIONS.
2. ANTI-TWIST PLATES SHALL BE USED ONLY ON METAL POSTS.
3. MAILBOX SHELF, BRACKET & PLATFORM SHALL BE GALVANIZED OR PAINTED STEEL, HOWEVER TREATED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



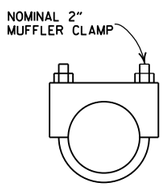
DOUBLE INSTALLATION



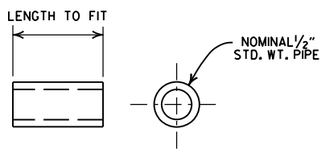
ANTI-TWIST PLATE



SPACING FOR MULTIPLE POST INSTALLATION



CLAMP



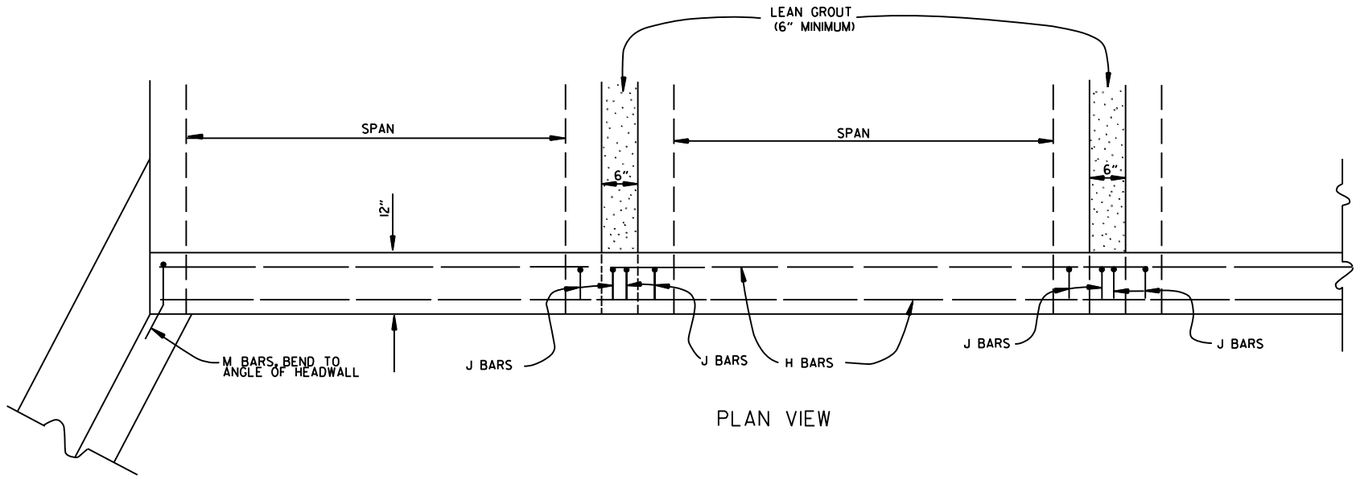
SPACER

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

ARKANSAS STATE HIGHWAY COMMISSION

MAILBOX DETAILS

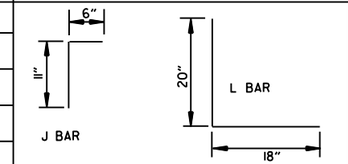
STANDARD DRAWING MB-1



PLAN VIEW

BAR LIST

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



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

GENERAL NOTES

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

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

ALL EXPOSED CORNERS TO HAVE ¾" CHAMFERS.

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

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

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

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

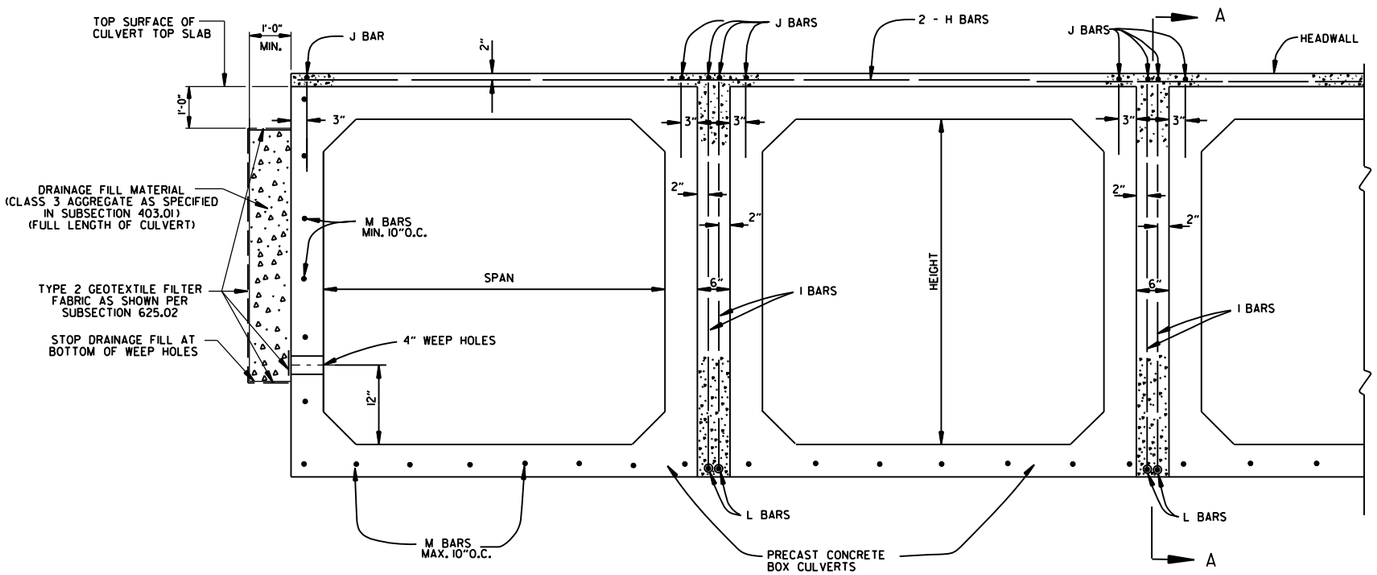
THE MEMBRANE WATERPROOFING WILL BE REQUIRED ON THE TOP EXTERNAL JOINT AND SHALL EXTEND 1 FOOT DOWN THE SIDES OF THE CULVERT.

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

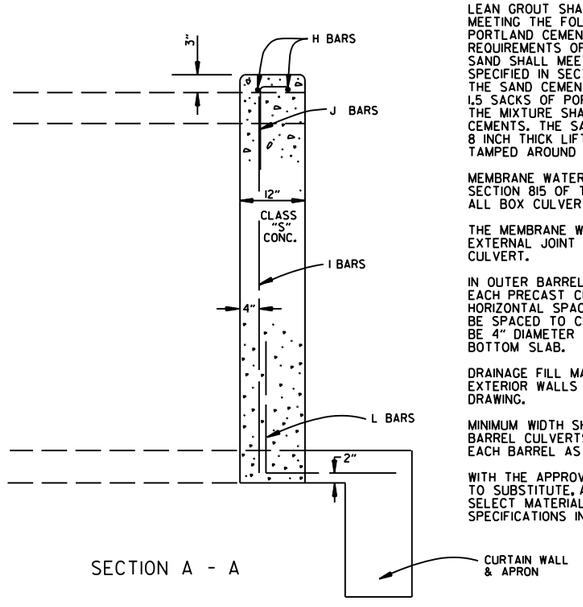
DRAINAGE FILL MATERIAL WITH GEOTEXTILE FABRIC IS REQUIRED AT THE EXTERIOR WALLS OF THE ASSEMBLED CULVERT, SEE DETAILS ON THIS DRAWING.

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

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



END VIEW



SECTION A - A

DATE	REVISION	DATE FILMED
1-28-15	REVISED GEOTEXTILE FABRIC PLACEMENT	
12-15-11	ADDED NOTE & DTLS FOR WEEP HOLE AND DRAINAGE FILL	
10-15-09	ADDED GENERAL NOTE	
11-10-05	REVISED SPACING OF "M" BARS	
4-10-03	REVISED GENERAL NOTES	
10-18-96	CORRECTED AASHTO REF.	
10-1-92	ADDED NOTE FOR MEMBRANE WATERPROOFING	
8-15-91	ADDED NOTE FOR LEAN GROUT	
11- 8-90	REVISED FOR 1991 SPECS	
11-30-89	ISSUED; JABE	

ARKANSAS STATE HIGHWAY COMMISSION

PRECAST CONCRETE BOX CULVERTS

STANDARD DRAWING PBC-1

REINFORCED CONCRETE ARCH PIPE DIMENSIONS

EQUIV. DIA.	SPAN		RISE	
	AASHTO M 206	ARDOT NOMINAL	AASHTO M 206	ARDOT NOMINAL
INCHES	INCHES			
15	18	18	11	11
18	22	22	13½	14
21	26	26	15½	16
24	28½	29	18	18
30	36¼	36	22½	23
36	43⅜	44	26⅝	27
42	51⅛	51	31⅜	31
48	58½	59	36	36
54	65	65	40	40
60	73	73	45	45
72	88	88	54	54
84	102	102	62	62
90	115	115	72	72
96	122	122	77½	77
108	138	138	87⅛	87
120	154	154	96⅞	97
132	168¾	169	106½	107

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

REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE DIMENSIONS

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

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

CONSTRUCTION SEQUENCE

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

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

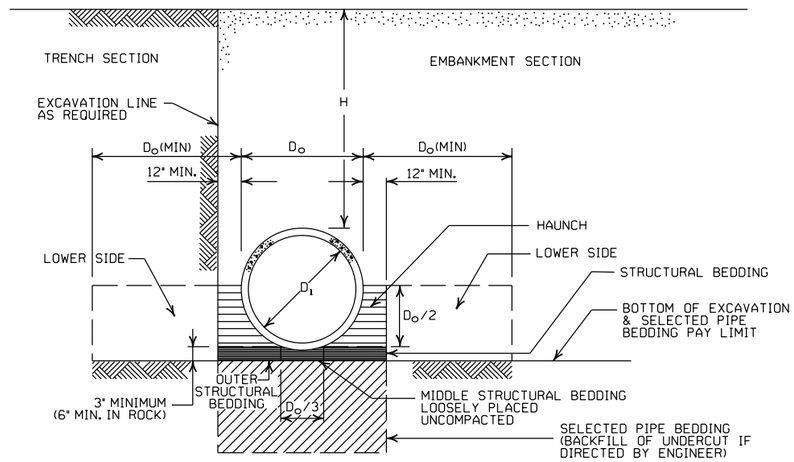
- LEGEND -

D_1 = NORMAL INSIDE DIAMETER OF PIPE
D_O = OUTSIDE DIAMETER OF PIPE
H = FILL COVER HEIGHT OVER PIPE (FEET)
MIN. = MINIMUM
= UNDISTURBED SOIL

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

* SM-3 WILL NOT BE ALLOWED.

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



EMBANKMENT AND TRENCH INSTALLATIONS

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REVISED FOR LRFD DESIGN SPECIFICATIONS	
5-18-00	REVISED TYPE 3 BEDDING & ADDED NOTE	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCC-1

CORRUGATED STEEL PIPE (ROUND)

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

CORRUGATED ALUMINUM PIPE (ROUND)

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

CONSTRUCTION SEQUENCE

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

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

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

③ SM-3 WILL NOT BE ALLOWED.

EQUIVALENT METAL THICKNESSES AND GAUGES

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

CORRUGATED METAL PIPE ARCHES

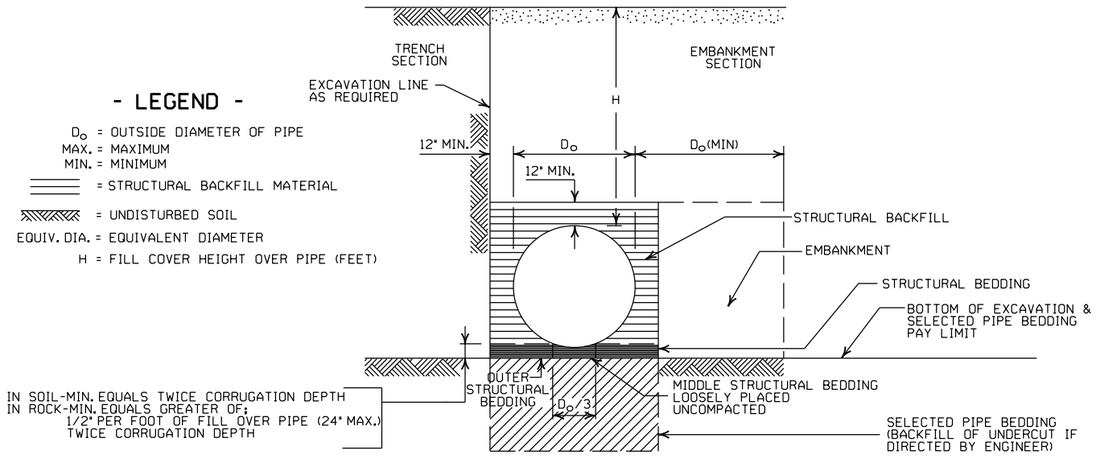
EQUIV. DIA. (INCHES)	PIPE DIMENSION SPAN X RISE (INCHES)	MINUMUM CORNER RADIUS (INCHES)	STEEL				ALUMINUM			
			MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)	MAX. HEIGHT OF FILL, "H" (FT.)		MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)	MAX. HEIGHT OF FILL, "H" (FT.)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

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

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

- LEGEND -

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



EMBANKMENT AND TRENCH INSTALLATIONS

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

GENERAL NOTES

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

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REVISED FOR LRFD DESIGN SPECS	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

METAL PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCM-1

INSTALLATION TYPE	•• MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 2	•SELECTED MATERIALS (CLASS SM-1, SM-2 OR SM-4)

• AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7) MAY BE USED IN LIEU OF SELECTED MATERIAL.

SM3 WILL NOT BE ALLOWED.

•• STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1INCH. STRUCTURAL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, STONES LARGER THAN 1.50 INCH IN GREATEST DIMENSION, OR FROZEN LUMPS.

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

MULTIPLE INSTALLATION OF HIGH DENSITY POLYETHYLENE PIPES

PIPE DIAMETER	CLEAR DISTANCE BETWEEN PIPES
18"	1'-6"
24"	2'-0"
30"	2'-6"
36"	3'-0"
42"	3'-6"
48"	4'-0"

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

PIPE DIAMETER	TRENCH WIDTH (FEET)	
	"H" < 10'-0"	"H" >OR= 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"
42"	7'-0"	10'-6"
48"	8'-0"	12'-0"

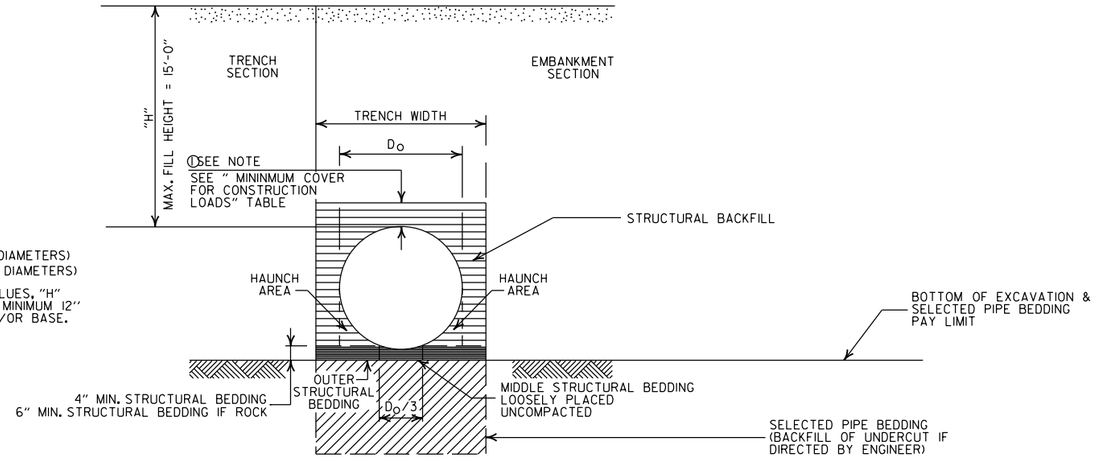
①NOTE:
18" MIN. (18" - 30" DIAMETERS)
24" MIN. (36" - 48" DIAMETERS)

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

MINIMUM COVER FOR CONSTRUCTION LOADS

PIPE DIAMETER	② MIN. COVER (FEET) FOR INDICATED CONSTRUCTION LOADS			
	18.0-50.0 (KIPS)	50.0-75.0 (KIPS)	75.0-110.0 (KIPS)	110.0-175.0 (KIPS)
36" OR LESS	2'-0"	2'-6"	3'-0"	3'-0"
42" OR GREATER	3'-0"	3'-0"	3'-6"	4'-0"

②MINIMUM COVER SHALL BE MEASURED FROM TOP OF PIPE TO TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE. THE SURFACE SHALL BE MAINTAINED.



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. THE STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8". THE LAYERS SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.
5. PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING OR OTHER APPROVED METHODS IN ORDER TO HELP MAINTAIN GRADE AND ALIGNMENT.

GENERAL NOTES

1. PIPE SHALL CONFORM TO AASHTO M294, TYPE S. INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICIATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
2. PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
4. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
5. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
6. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
7. FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
8. HIGH DENSITY POLYETHYLENE PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
9. JOINTS FOR HDPE PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN AASHTO SECTION 26.4.2.4 AND 30.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

- LEGEND -

H = FILL HEIGHT (FT.)
D = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM

= STRUCTURAL BACKFILL MATERIAL

= UNDISTURBED SOIL

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REVISED GENERAL NOTES & MINIMUM COVER NOTE	
11-17-10	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)

STANDARD DRAWING PCP-1

INSTALLATION TYPE	•• MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 2	•SELECTED MATERIALS (CLASS SM-1, SM-2, OR SM-4)

• AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7) MAY BE USED IN LIEU OF SELECTED MATERIAL.

SM3 WILL NOT BE ALLOWED.

•• STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1INCH. STRUCTURAL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, STONES LARGER THAN 1.50 INCH IN GREATEST DIMENSION, OR FROZEN LUMPS.

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

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

PIPE DIAMETER	TRENCH WIDTH (FEET)	
	"H" < 10'-0"	"H" >OR= 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"

MULTIPLE INSTALLATION OF PVC PIPES

PIPE DIAMETER	CLEAR DISTANCE BETWEEN PIPES
18"	1'-6"
24"	2'-0"
30"	2'-6"
36"	3'-0"

MAXIMUM FILL HEIGHT BASED ON STRUCTURAL BACKFILL

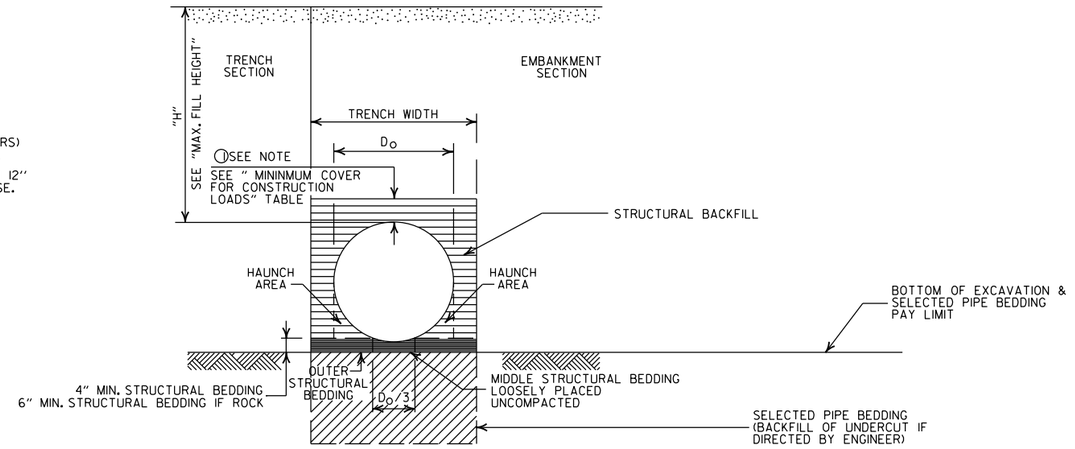
PIPE DIAMETER	"H"
18"	45'-0"
24"	45'-0"
30"	40'-0"
36"	40'-0"

① NOTE:
12" MIN. (18" - 36" DIAMETERS)
MINIMUM COVER VALUE, "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.

MINIMUM COVER FOR CONSTRUCTION LOADS

PIPE DIAMETER	② MIN. COVER (FEET) FOR INDICATED CONSTRUCTION LOADS			
	18.0-50.0 (KIPS)	50.0-75.0 (KIPS)	75.0-110.0 (KIPS)	110.0-175.0 (KIPS)
18" THRU 36"	2'-0"	2'-6"	3'-0"	3'-0"

②MINIMUM COVER SHALL BE MEASURED FROM TOP OF PIPE TO TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE. THE SURFACE SHALL BE MAINTAINED.



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. THE STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8". THE LAYERS SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.
5. PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING OR OTHER APPROVED METHODS IN ORDER TO HELP MAINTAIN GRADE AND ALIGNMENT.

GENERAL NOTES

1. PIPE SHALL CONFORM TO ASTM F949, CELL CLASS 12454. INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
2. PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
4. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
5. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
6. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
7. FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
8. PVC PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
9. JOINTS FOR PVC PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN AASHTO SECTION 26.4.2.4 AND 30.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

- LEGEND -

H = FILL HEIGHT (FT.)
D_O = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM

= STRUCTURAL BACKFILL MATERIAL
= UNDISTURBED SOIL

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REV GENERAL NOTES & MINIMUM COVER NOTE; DELETED SM3 MATERIAL	
11-17-10	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

PLASTIC PIPE CULVERT (PVC F949)

STANDARD DRAWING PCP-2

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

*SM3 WILL NOT BE ALLOWED.

** STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1INCH. STRUCTURAL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, STONES LARGER THAN 1.50 INCH IN GREATEST DIMENSION, OR FROZEN LUMPS.

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

MULTIPLE INSTALLATION OF POLYPROPYLENE PIPES

PIPE DIAMETER	CLEAR DISTANCE BETWEEN PIPES
18"	1'-6"
24"	2'-0"
30"	2'-6"
36"	3'-0"
42"	3'-6"
48"	4'-0"
60"	5'-0"

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

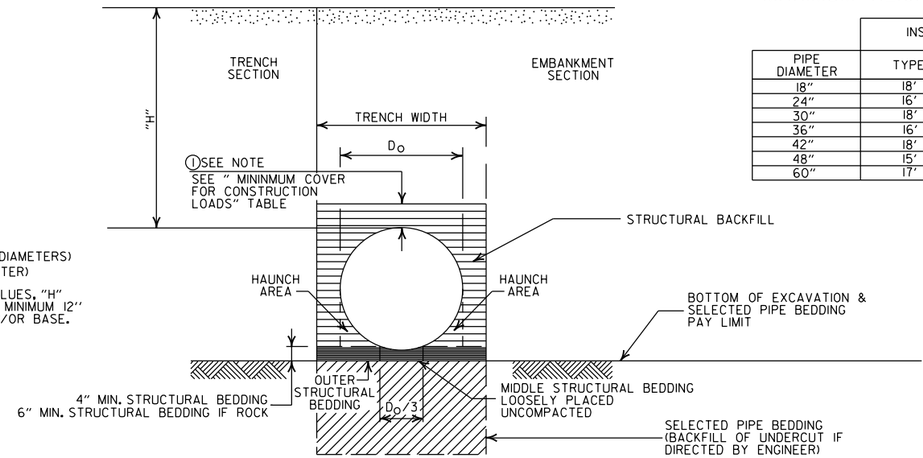
PIPE DIAMETER	TRENCH WIDTH (FEET)	
	"H" < 10'-0"	"H" >OR= 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"
42"	7'-0"	10'-6"
48"	8'-0"	12'-0"
60"	10'-0"	15'-0"

①NOTE:
12" MIN. (18" - 42" DIAMETERS)
24" MIN. (60" DIAMETER)

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

MAXIMUM HEIGHT OF FILL "H"

PIPE DIAMETER	INSTALLATION TYPE	
	TYPE 1	TYPE 2
18"	18'	14'
24"	16'	12'
30"	18'	14'
36"	16'	12'
42"	18'	13'
48"	15'	11'
60"	17'	12'



MINIMUM COVER FOR CONSTRUCTION LOADS

PIPE DIAMETER	② MIN. COVER (FEET) FOR INDICATED CONSTRUCTION LOADS			
	18.0-50.0 (KIPS)	50.0-75.0 (KIPS)	75.0-110.0 (KIPS)	110.0-150.0 (KIPS)
36" OR LESS	2'-0"	2'-6"	3'-0"	3'-0"
42" OR GREATER	3'-0"	3'-0"	3'-6"	4'-0"

②MINIMUM COVER SHALL BE MEASURED FROM TOP OF PIPE TO TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE. THE SURFACE SHALL BE MAINTAINED.

EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. THE STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8". THE LAYERS SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.
5. PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING OR OTHER APPROVED METHODS IN ORDER TO HELP MAINTAIN GRADE AND ALIGNMENT.

GENERAL NOTES

1. PIPE SHALL CONFORM TO AASHTO M330, TYPE S, INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICIATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
2. PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SIXTH EDITION (2012) WITH 2013 INTERIMS.
3. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
4. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
5. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
6. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
7. FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
8. POLYPROPYLENE PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
9. JOINTS FOR POLYPROPYLENE PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN SECTION 26.4.2.4 AND 30.4.2 OF THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS 3RD EDITION (2010) WITH 2012 INTERIMS. JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

- LEGEND -

H = FILL HEIGHT (FT.)
D_O = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM

= STRUCTURAL BACKFILL MATERIAL

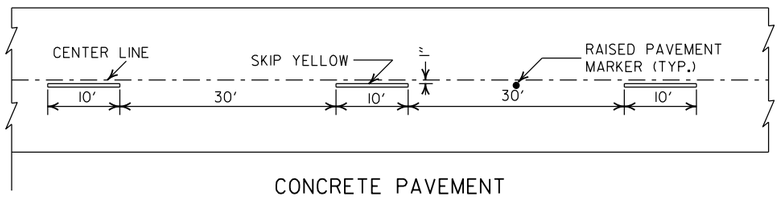
= UNDISTURBED SOIL

DATE	REVISION	DATE FILMED
02-27-20	REVISED	
11-07-19	ISSUED	

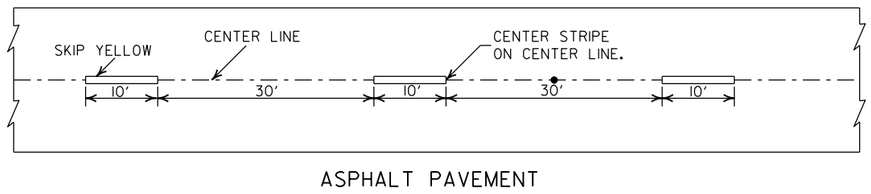
ARKANSAS STATE HIGHWAY COMMISSION

PLASTIC PIPE CULVERT (POLYPROPYLENE)

STANDARD DRAWING PCP-3

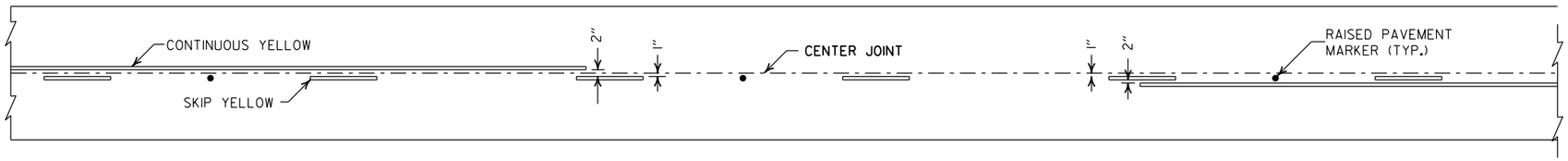


CONCRETE PAVEMENT

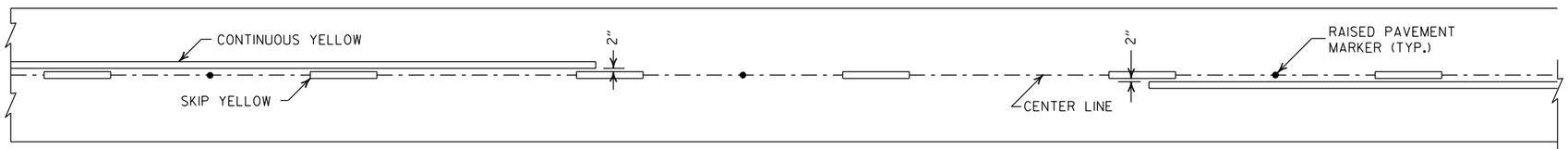


ASPHALT PAVEMENT

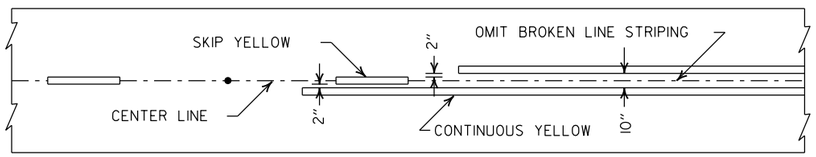
BROKEN LINE STRIPING



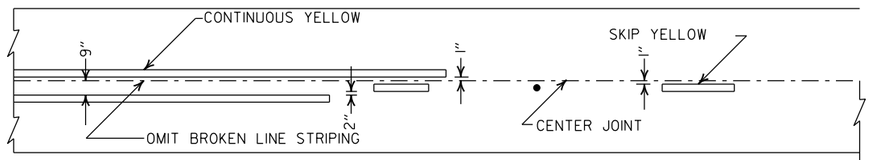
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

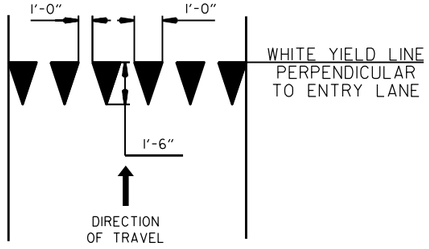


ASPHALT PAVEMENT

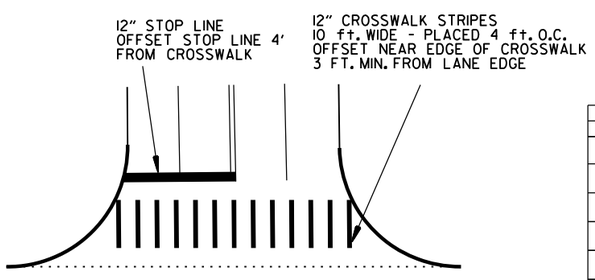


CONCRETE PAVEMENT

STRIPING AT ADJACENT NO PASSING LANES

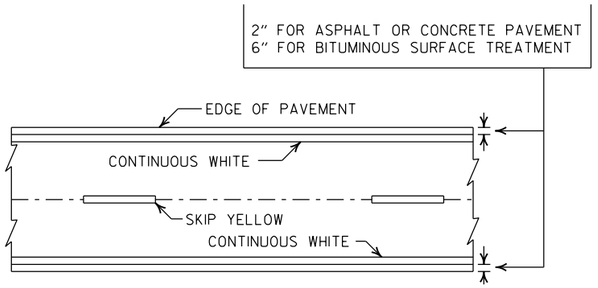


YIELD LINE DETAIL



CROSSWALK AND STOP LINE DETAILS

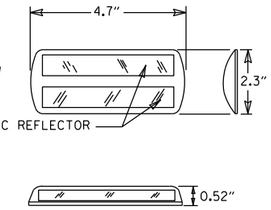
NOTES:
1. REFER TO THE STRIPING DETAILS FOR PAVEMENT MARKING LINE WIDTHS.
2. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
3. RAISED PAVEMENT MARKERS SHALL BE PLACED ON AN 80 FEET SPACING UNLESS OTHERWISE SHOWN IN THE PLANS.



PAVEMENT EDGE LINE MARKING

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

TYPE II
RED/CLEAR OR
YELLOW/YELLOW



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 ARDOT QUALIFIED PRODUCTS LIST.

DETAIL OF STANDARD RAISED PAVEMENT MARKERS

DATE	REVISION	FILMED
2-27-20	REVISED STOP LINE DETAILS	
6-1-17	ADDED YIELD LINE DETAIL	
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

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PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1

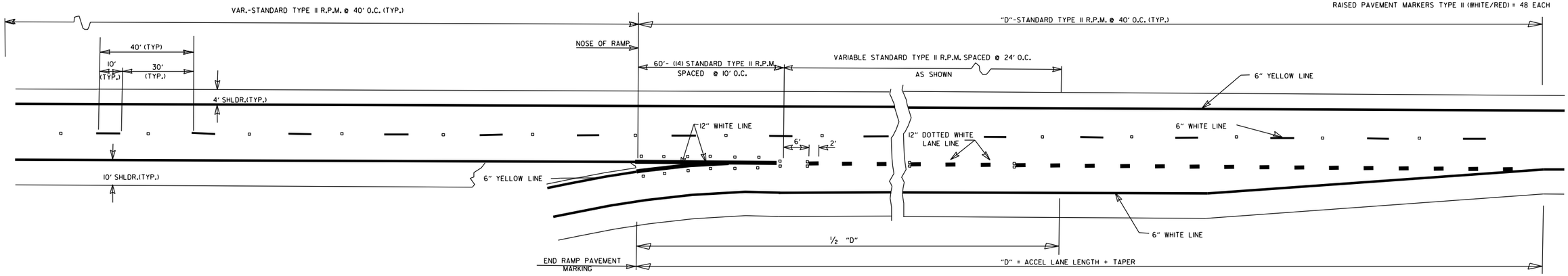
PAVEMENT MARKING QUANTITIES
(BASED ON 700' ACCEL. LANE + 300' TAPER)

ENTRANCE RAMP

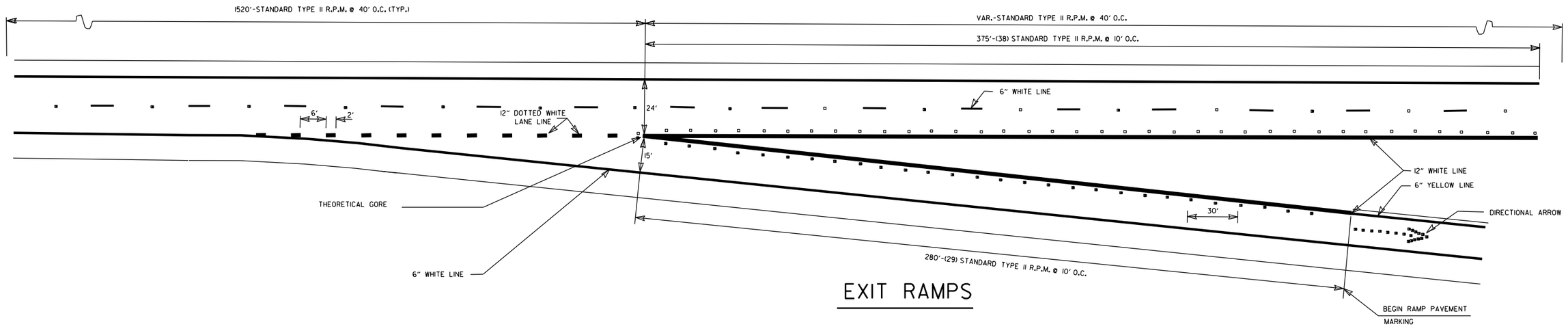
12" WHITE = 370 LIN. FT.
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH

EXIT RAMP

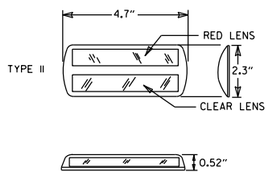
6" WHITE = 280 LIN. FT.
12" WHITE = 815 LIN. FT.
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 48 EACH



ENTRANCE RAMPS

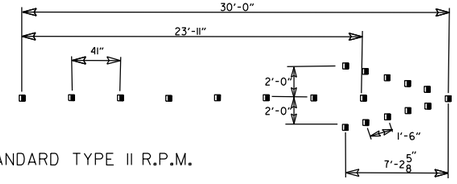


EXIT RAMPS



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 ARDOT QUALIFIED PRODUCTS LIST.

DATE	REVISION	FILMED
05-14-20	REMOVED CROSSHATCH MARKINGS ON EXIT RAMPS	
11-07-19	REVISED DOTTED PAV'T MARKINGS; ADDED CROSSHATCH MARKINGS ON EXIT RAMPS	
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

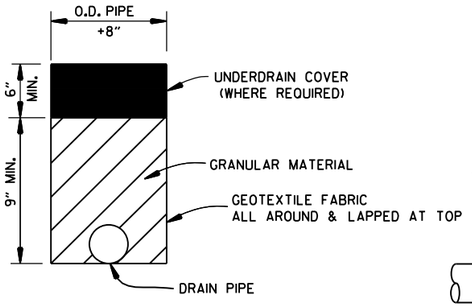
PAVEMENT MARKING DETAILS ON ACCESS CONTROLLED ROADWAYS

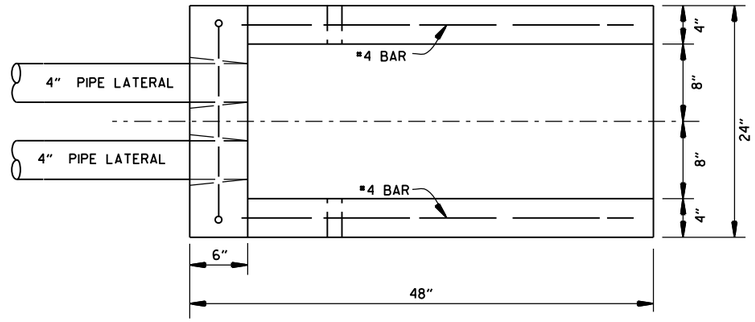
STANDARD DRAWING PM-2

NOTE:

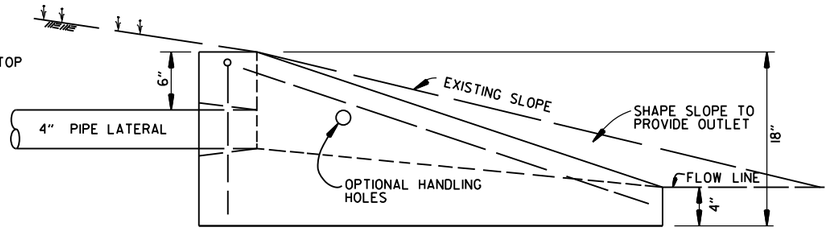
1. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THOROUGHLY COMPACTED EARTH AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.

2. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC. LAP FABRIC 12" OR THE WIDTH OF THE TRENCH AT THE TOP.

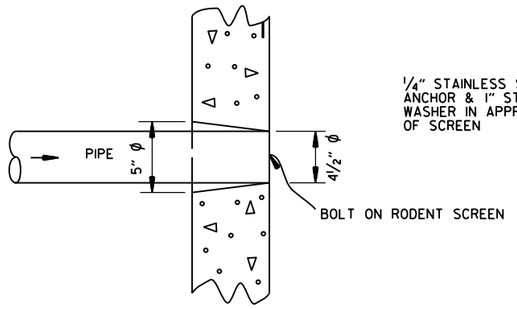




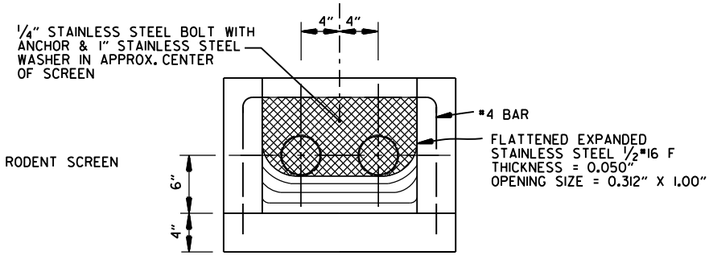
PLAN VIEW



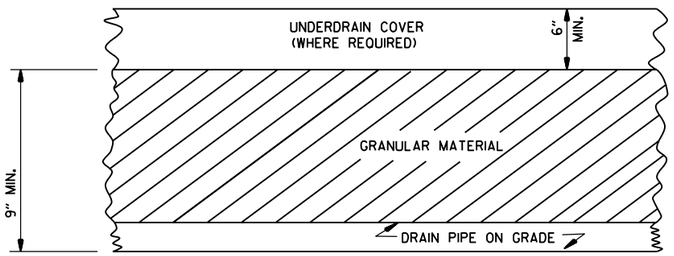
SIDE VIEW



DETAIL OF HOLE
FOR 4" PIPE



FRONT VIEW
(DETAIL OF RODENT SCREEN)



DETAILS OF PIPE UNDERDRAIN

NOTES FOR PIPE UNDERDRAINS

1. GEOTEXTILE FABRIC SHALL MEET THE REQUIREMENTS OF SECTION 625 FOR TYPE 1. PAYMENT FOR GEOTEXTILE FABRIC AND GRANULAR FILTER MATERIAL SHALL BE INCLUDED IN THE PRICE BID PER LIN. FT. FOR "4" PIPE UNDERDRAINS" IN ACCORDANCE WITH SECTION 611 OF THE STANDARD SPECIFICATIONS.

2. 4" NON-PERFORATED SCHEDULE 40 PVC PIPE LATERALS WITH OUTLET PROTECTORS SHALL BE INSTALLED AS SHOWN HEREON. LATERALS WILL BE MEASURED AND PAID FOR AS "4" PIPE UNDERDRAINS." UNDERDRAIN OUTLET PROTECTORS WILL BE MEASURED AND PAID FOR BY THE UNIT IN ACCORDANCE WITH SECTION 611 OF THE STANDARD SPECIFICATIONS.

3. EXISTING 4" PIPE UNDERDRAINS MAY BE CONNECTED TO PROPOSED DROP INLETS OR EXTENDED WHERE DIRECTED BY THE ENGINEER. PAYMENT FOR CONNECTING TO DROP INLETS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR "4" PIPE UNDERDRAINS."

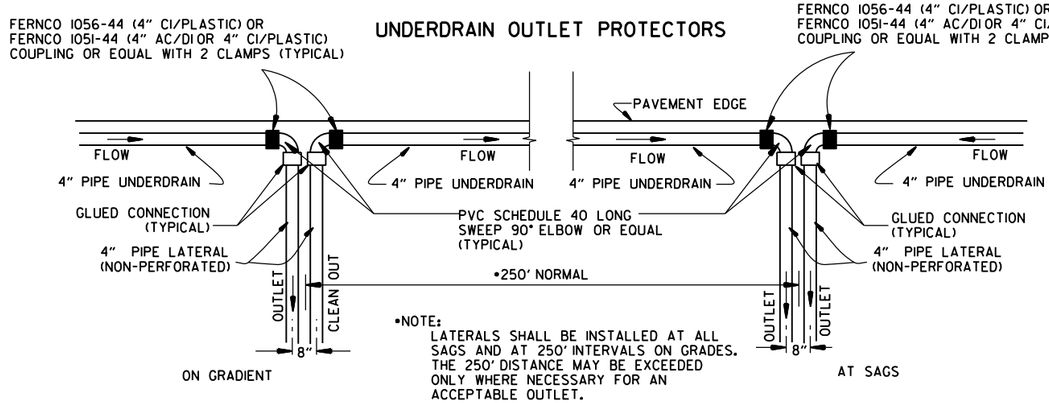
4. THE LOCATION OF ALL LATERALS SHALL BE MARKED WITH 4" X 12" PERMANENT PAVEMENT MARKING TAPE (TYPE III WHITE) AT THE OUTSIDE EDGE OF THE SHOULDER, PLACED TRANSVERSE TO TRAFFIC. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

5. PAYMENT FOR THE RODENT SCREEN SHALL BE INCLUDED IN THE PRICE BID PER EACH FOR "UNDERDRAIN OUTLET PROTECTORS."

6. ANY EXISTING UNDERDRAINS THAT INTERFERE WITH INSTALLATION OF THE NEW UNDERDRAIN SYSTEM SHALL BE REMOVED AND DISPOSED OF AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS. EXISTING UNDERDRAIN OUTLET PROTECTORS SHALL BE REMOVED UNDER THE ITEM "REMOVAL AND DISPOSAL OF UNDERDRAIN OUTLET PROTECTORS."

7. AT LOCATIONS WHERE A SINGLE LATERAL IS USED THE CONTRACTOR SHALL HAVE THE FOLLOWING OPTIONS: 1. INSTALL OUTLET PROTECTOR AS SHOWN ON STANDARD DRAWING PU-1 AND GROUT THE UNUSED HOLE OR 2. INSTALL AN OUTLET PROTECTOR WITH A SINGLE HOLE.

UNDERDRAIN OUTLET PROTECTORS



DETAIL OF PIPE UNDERDRAIN LATERALS
WHEN PLACED ALONG PAVEMENT EDGE

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

DATE	REVISION	DATE FILMED
12-8-16	ADDED NOTES FOR PIPE UNDERDRAINS, REVISED RODENT SCREEN DETAIL AND NOTES, REMOVED NOTE 1 FOR GRANULAR MATERIAL, ADDED NOTE FOR GEOTEXTILE FABRIC	
4-10-03	REVISED NOTE 3	
1-12-00	REVISED DETAIL OF UNDERDRAIN LATERALS	
11-18-98	REVISED NOTE	
10-18-96	REVISED MIN. DEPTH & GEOTEXTILE FABRIC	
4-26-96	ADDED LATERAL NOTE; 5½" TO 5"	
11-22-95	REVISED LATERALS	
7-20-95	REVISED LATERALS & ADDED NOTE	
11- 3-94	REVISED FOR DUAL LATERALS	11- 3-94
10- 1-92	SUBSTITUTED GEOTEXTILE	10- 1-92
8-15-91	ADDED POLYEDTHYLENE PIPE	8-15-91
11- 8-90	DELETED ALTERNATE NOTE	11- 8-90
1-25-90	ADDED 4" SNAP ADAPTER	1-25-90
11-30-89	DEL. (SUBGRADE); ADDED (WHERE REQUIRED)	11-30-89
7-15-88	ISSUED P.L.M.	647-7-15-88

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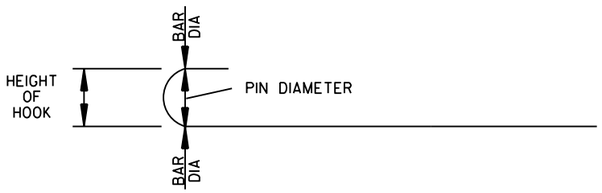
DETAILS OF PIPE UNDERDRAIN

STANDARD DRAWING PU-1

STEEL FABRICATION: REINFORCING STEEL FABRICATION SHALL CONFORM TO THE DIMENSIONS LISTED IN THE TABLE BELOW:

BAR SIZE	PIN DIAMETER	HOOK EXTENSION "K"
3	2¼"	4"
4	3 "	4½"
5	3¾"	5"
6	4½"	6"
7	5¼"	7"
8	6"	8"

IF THE OVERALL HEIGHT OF THE HOOK (SEE DIAGRAM BELOW) FOR A "b", "b1", "b2" or "b3" BENT BAR IS GREATER THAN THE CORRESPONDING TOP OR BOTTOM SLAB THICKNESS, LESS 2¾ INCHES, EACH BENT BAR SHALL BE REPLACED WITH ONE HOOKED BAR AND ONE STRAIGHT BAR, USING LENGTHS AS SHOWN IN THE TABLE BELOW. THE TWO BARS SHALL BE THE SAME DIAMETER AS, AND PLACED AT THE SAME SPACING AS, THE "b", "b1", "b2" OR "b3" BENT BARS THEY REPLACE.



NOTE: DIMENSIONS OF BARS ARE MEASURED OUT TO OUT OF BARS.

OVERALL HEIGHT OF HOOKED BAR DIAGRAM

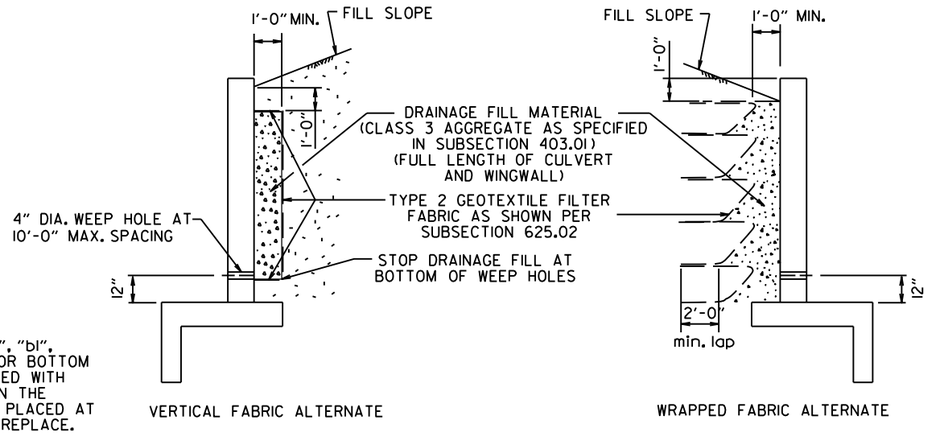
THE HOOKED BARS SHALL BE PLACED IN THE BOTTOM OF THE TOP SLAB AND THE TOP OF THE BOTTOM SLAB. THE STRAIGHT BARS SHALL BE PLACED IN THE TOP OF THE TOP SLAB AND THE BOTTOM OF THE BOTTOM SLAB. SEE TABLE BELOW FOR LENGTHS OF REPLACEMENT HOOKED AND STRAIGHT BARS.

FOR SKEWED CULVERTS, THE REPLACEMENT STRAIGHT BAR MAY HAVE TO BE CUT IN FIELD TO FIT.

REPLACEMENT BAR LENGTHS TABLE

BAR SIZE: "b", "b1", "b2" OR "b3"	LENGTH OF HOOKED BAR	LENGTH OF STRAIGHT BAR
#4	L + 1' - 0"	SEE "c" BAR LENGTH
#5	L + 1' - 2"	SEE "c" BAR LENGTH
#6	L + 1' - 4"	SEE "c" BAR LENGTH
#7	L + 1' - 8"	SEE "c" BAR LENGTH
#8	L + 1' - 10"	SEE "c" BAR LENGTH
#9	L + 2' - 6"	SEE "c" BAR LENGTH

L = "OW" - 3 INCHES



WINGWALL & CULVERT DRAINAGE DETAIL

REINFORCED CONCRETE BOX CULVERT GENERAL NOTES

CONCRETE SHALL BE CLASS S WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3500 PSI.

REINFORCING STEEL SHALL BE AASHTO M 31 OR M 53, GRADE 60.

CONSTRUCTION AND MATERIALS FOR WINGWALL & CULVERT DRAINAGE, INCLUDING WEEP HOLES AND GRANULAR MATERIAL, SHALL BE SUBSIDIARY TO THE BID ITEM, "CLASS S CONCRETE".

MEMBRANE WATERPROOFING SHALL CONFORM TO THE REQUIREMENTS OF SECTION 815 OF THE STANDARD SPECIFICATIONS.

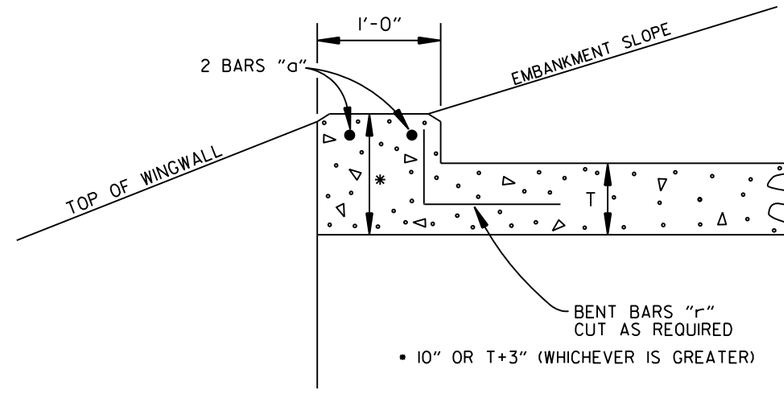
MEMBRANE WATERPROOFING SHALL BE APPLIED TO ALL CONSTRUCTION JOINTS IN THE TOP SLAB AND THE SIDEWALLS OF R.C. BOX CULVERTS AS DIRECTED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FOR THIS ITEM, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS BID FOR THE R.C. BOX CULVERT.

REINFORCING STEEL TOLERANCES: THE TOLERANCES FOR REINFORCING STEEL SHALL MEET THOSE LISTED IN "MANUAL OF STANDARD PRACTICE" PUBLISHED BY CONCRETE REINFORCING STEEL INSTITUTE (CRSI) EXCEPT THAT THE TOLERANCE FOR TRUSS BARS SUCH AS FIGURE 3 ON PAGE 7-4 OF THE CRSI MANUAL SHALL BE MINUS ZERO TO PLUS ½ INCH.

WEEP HOLES IN BOX CULVERT WALLS SHALL HAVE A MAXIMUM HORIZONTAL SPACING OF 10'-0" AND SHALL BE SPACED TO CLEAR ALL REINFORCING STEEL. THE DRAIN OPENING SHALL BE 4" DIAMETER AND SHALL BE PLACED 12" ABOVE THE TOP OF THE BOTTOM SLAB.

WEEP HOLES IN WINGWALLS SHALL HAVE A MAXIMUM HORIZONTAL SPACING OF 10'-0" AND SHALL BE SPACED TO CLEAR ALL REINFORCING STEEL. THERE SHALL BE A MINIMUM OF TWO (2) WEEP HOLES IN EACH WINGWALL. THE DRAIN OPENING SHALL BE 4" DIAMETER AND SHALL BE PLACED 12" ABOVE THE TOP OF THE WINGWALL FOOTING.

THE REQUIREMENTS SHOWN ON THIS DRAWING SHALL SUPERCEDE THE CORRESPONDING REQUIREMENTS ON ALL REINFORCED CONCRETE BOX CULVERT STANDARD DRAWINGS.



NOTE: FOR ALL SKEWED R.C. BOX CULVERTS THE LENGTH "K" OF THE MODIFIED HEADWALL SHALL BE EQUAL TO THE ROADWAY LENGTH "RL". THE ENDS OF THE HEADWALL SHALL BE CONSTRUCTED PARALLEL TO THE SKEW ANGLE OF THE BOX CULVERT.

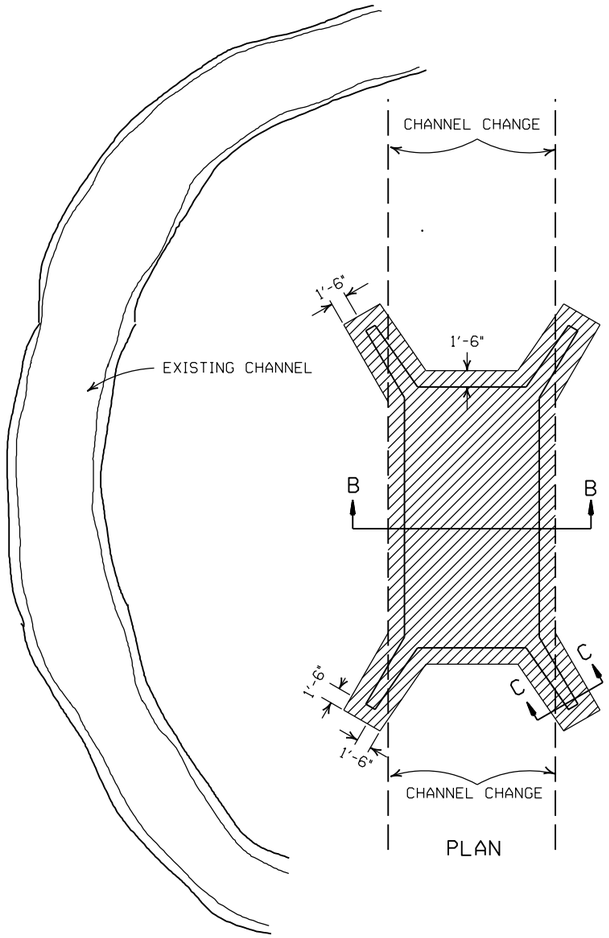
R.C. BOX CULVERT HEADWALL MODIFICATIONS

DATE	REVISION	DATE FILMED
7/26/12	REV. DRAINAGE FILL MATERIAL & DETAIL	
12/15/11	REQUIRE WEEP HOLES IN BOX CULVERT WALLS	
5-25-06	REV. GEN. NOTES AND DETAILS FOR WEEP HOLES; BAR DIAGRAM	
11-16-01	ADDED WINGWALL DRAINAGE DETAIL/EDITED GEN. NOTES	
10-18-96	REV. ASTM REF. TO AASHTO & ADDED BAR DIAGRAM	
10-12-95	MOVED SOLID SODDING DETAIL TO RCB-2	
6-2-94	ADDED SOLID SODDING PLAN DETAIL	
8-5-93	REVISED PIN DIAMETER TO SPECS.	
8-15-91	DRAWN AND ISSUED	

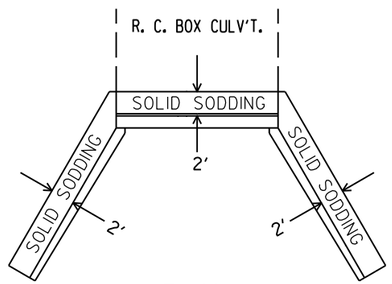
ARKANSAS STATE HIGHWAY COMMISSION

REINFORCED CONCRETE BOX CULVERT DETAILS

STANDARD DRAWING RCB-1



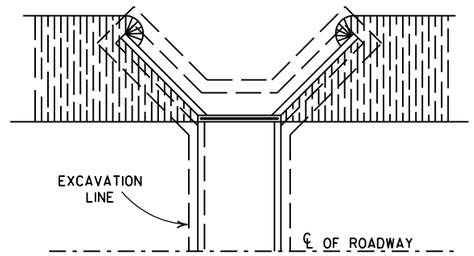
PLAN



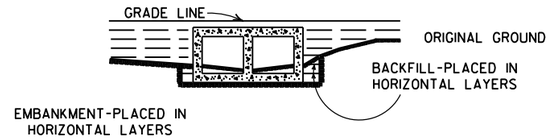
PLAN

PARTIAL SECTION SHOWING SOLID SODDING AT HEADWALLS AND WING WALLS

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

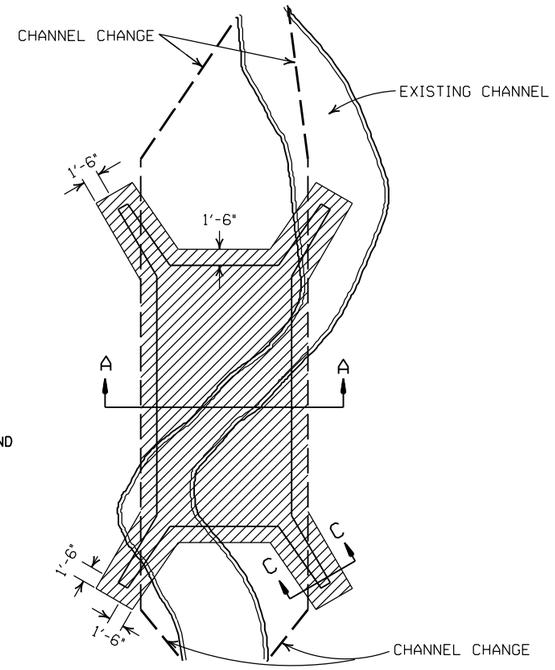


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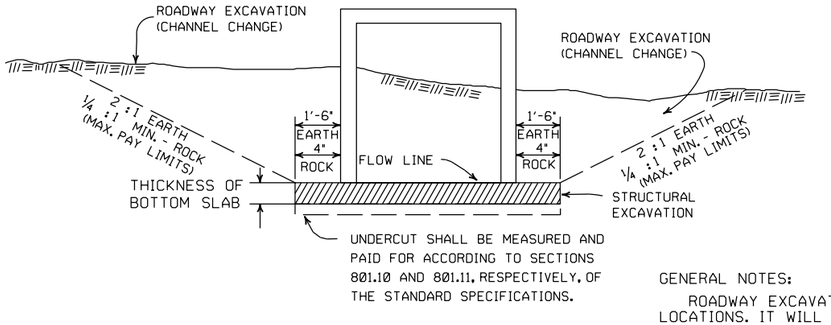


LONGITUDINAL SECTION

BACKFILL DETAILS FOR BOX CULVERT

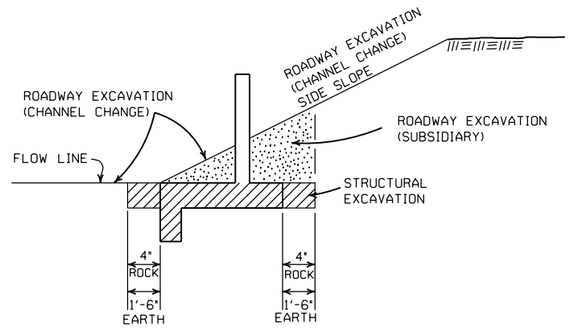


PLAN

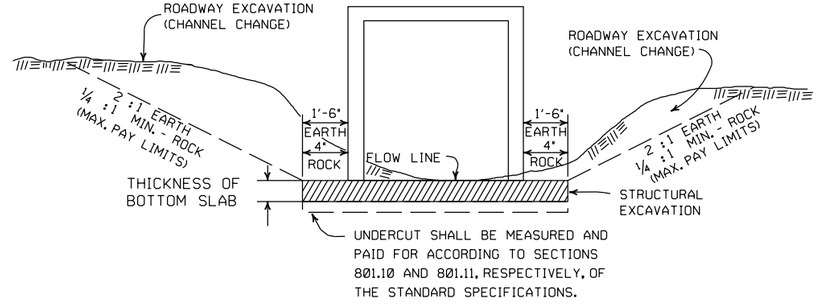


SECTION B-B

DETAILS FOR NEW CHANNELS



SECTION C-C



SECTION A-A

DETAILS THROUGH EXISTING CHANNELS

GENERAL NOTES:

ROADWAY EXCAVATION (CHANNEL CHANGE) WILL BE PAID FOR AT R.C. BOX CULVERT LOCATIONS. IT WILL BE PAID TO THE LIMITS ACTUALLY CUT AND WILL BE CONFINED TO THAT PORTION OF THE INDICATED AREA THAT IS ABOVE THE FLOW LINE. ROADWAY EXCAVATION (CHANNEL CHANGE) SHALL BE MEASURED BY CROSS SECTIONS AND VOLUMES COMPUTED BY AVERAGE END AREA METHOD. ALL CHANNEL CHANGES SHALL BE BROUGHT TO GRADE PRIOR TO MAKING ANY EXCAVATION FOR STRUCTURES.

EXCAVATION FOR STRUCTURES WILL BE PAID FOR AT ALL R.C. BOX CULVERT LOCATIONS. IT WILL BE PAID TO THE LIMITS SHOWN AND SHALL BE CONFINED TO THAT PORTION OF THE INDICATED AREA THAT IS BELOW THE CHANNEL FLOW LINE.

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

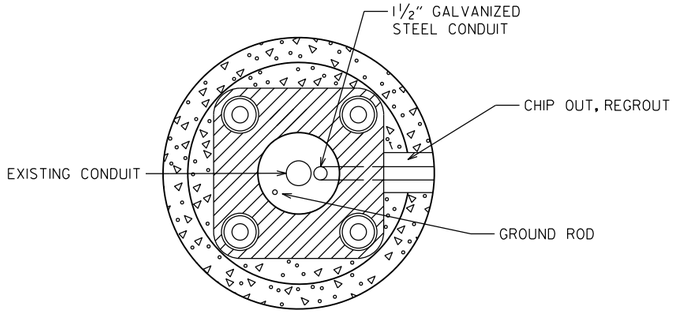
DATE	REVISION	FILMED
11-20-03	REVISED SECTION A-A NOTE	
8-22-02	REVISED SECTION B-B NOTE	
10-12-95	COMBINED 1891B AND 1888A	
1-4-83	REVISED GENERAL NOTES	674-1-4-83
	AND ADDED MAXIMUM PAY	
	LIMIT NOTES.	
2-2-76	EXCAV. PAY LIMITS	917-2-2-76
10-2-72	REVISED AND REDRAWN	564-10-16-72

ARKANSAS STATE HIGHWAY COMMISSION

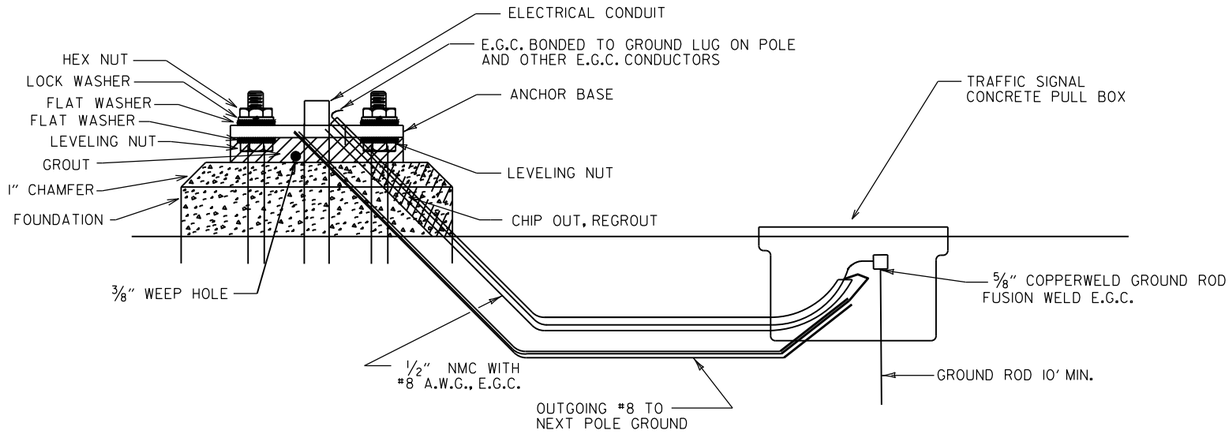
EXCAVATION PAY LIMITS, BACKFILL, & SOLID SODDING FOR BOX CULVERTS

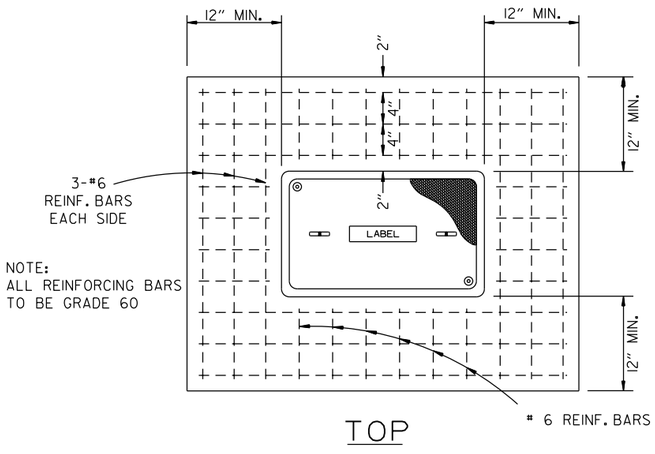
STANDARD DRAWING RCB-2

CONDUIT ENTRY TO EXISTING POLE BASE

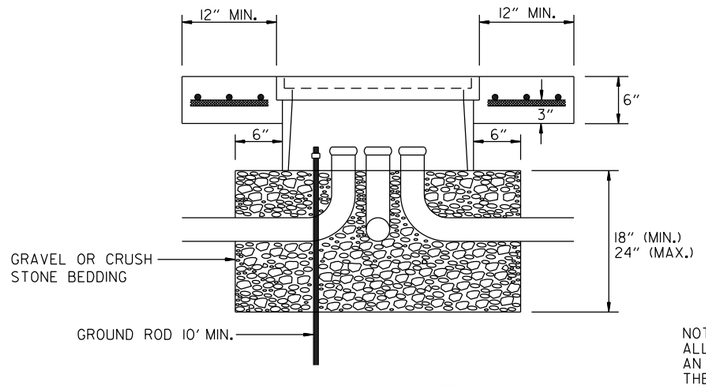


ANCHOR BASE



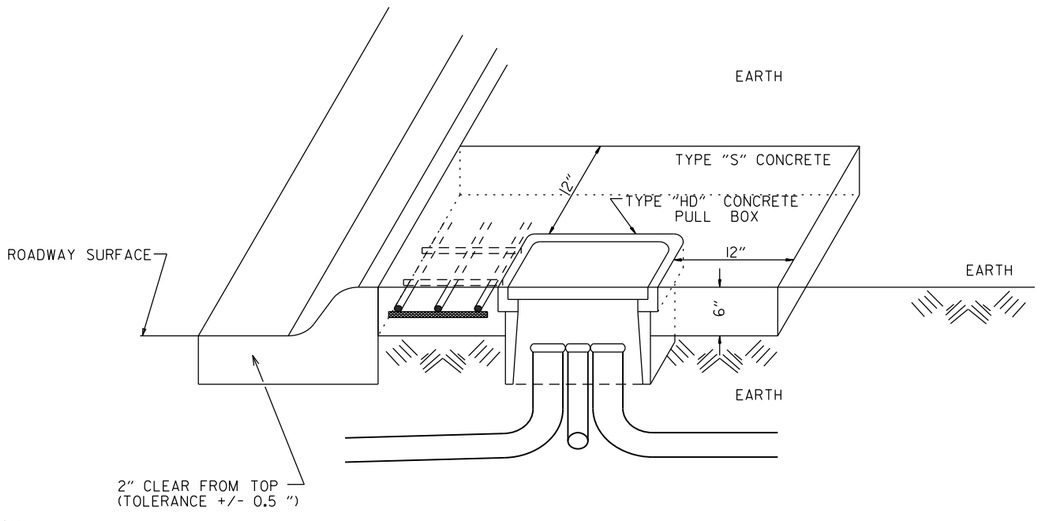


TOP



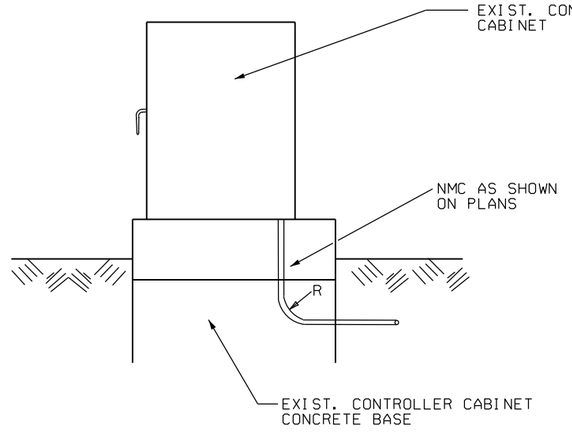
ELEVATION

TYPE "HD" CONCRETE PULL BOX DETAIL



NOTE:
ALL TYPE 1 HD, TYPE 2 HD, AND TYPE 3 HD CONCRETE PULL BOXES ARE INSTALLED WITH AN APRON OF CONCRETE 12" WIDE AND 6" IN DEPTH. ALL PAYMENT SHALL BE INCLUDED IN THE PRICE OF THE TYPE HD CONCRETE PULL BOX. THE CONCRETE PULL BOX SHALL BE INSTALLED FLUSH TO SURROUNDING GRADE UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER. THE CONCRETE SHALL BE CLASS "S". THREE #6 REINFORCING BARS IN THE APRON ON ALL SIDES OF THE CONCRETE PULL BOX IS REQUIRED IN CONCRETE.

CONDUIT ENTRY TO EXISTING CONTROLLER CABINET



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

DATE	REVISION	FILMED
02-13-24	REVISED NOTES AND TYPE "HD" CONCRETE PULL BOX DETAILS	
11-16-17	REVISED NOTES	
09-02-15	REVISED PULL BOX DEPTH	
09-12-13	ISSUED AS STANDARD DRAWING	
05-21-09	REVISED GROUNDING	
07-31-08	ADDED & REVISED CONDUIT ENTRY	
06-23-04	REVISED CLEARANCE AT CURB ENTRY	
01-04-02	ADDED REINFORCING TO BOX APRON	
07-02-01	REVISED	
12-27-99	REVISED NOTES	
11-18-98	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

HEAVY DUTY PULL BOX

STANDARD DRAWING SD-6

SUPERELEVATION TABLE FOR ONE - WAY TRAFFIC

DEGREE OF CURVE	30 MPH			35 MPH			40 MPH			45 MPH			50 MPH			55 MPH			60 MPH			65 MPH			70 MPH			75 MPH		
	e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)	
		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE
0° 15'	NC			NC			NC			NC			NC			NC			NC			NC			NC			NC		
0° 30'	NC			NC			NC			NC			NC			NC			RC	115		RC	115		RC	115		0.022	121	
0° 45'	NC			NC			NC			NC			RC	115		RC	115		0.024	127		0.026	132		0.030	144		0.032	150	
1° 00'	NC			NC			NC			RC	108		0.022	121		0.026	132		0.030	144		0.034	156		0.038	167		0.042	179	350
1° 15'	NC			NC			RC	101		0.022	114		0.028	138		0.032	150		0.038	167		0.042	179		0.046	190	350	0.052	208	
1° 30'	NC			RC	94		0.022	106		0.028	130		0.032	150		0.038	167		0.044	185		0.050	202	350	0.056	218		0.062	236	
1° 45'	RC	86		RC	94		0.026	116		0.030	136		0.036	161		0.044	185		0.050	202	350	0.056	218		0.064	242		0.070	259	
2° 00'	RC	86		0.024	103		0.028	121		0.034	146		0.042	179		0.048	196		0.056	218		0.064	242		0.070	259		0.080	288	400
2° 15'	RC	86		0.026	108		0.032	131		0.038	157		0.046	190		0.054	214		0.062	236		0.070	259		0.078	282	400	0.088	311	
2° 30'	0.022	90		0.028	113		0.034	136		0.042	168		0.050	202		0.058	224	350	0.068	253		0.076	276		0.086	305		0.096	334	450
2° 45'	0.024	95		0.030	118		0.038	146		0.046	179		0.054	214		0.064	242		0.072	265		0.082	294		0.092	323		0.100	346	
3° 00'	0.026	100		0.034	126		0.040	151		0.050	190	300	0.058	224		0.068	253		0.078	282		0.088	311		0.098	340	450	D MAX = 2° 45'		
3° 15'	0.028	103		0.036	131		0.044	161		0.052	194		0.062	236		0.072	265		0.082	294		0.092	323		0.100	346				
3° 30'	0.030	108		0.038	136		0.046	167	250	0.056	205		0.066	247		0.076	276		0.086	305		0.096	334		D MAX = 3° 30'					
3° 45'	0.032	112		0.040	140		0.050	176		0.058	211		0.070	259		0.080	288		0.090	317		0.098	340							
4° 00'	0.034	116		0.042	145	250	0.052	181		0.062	222		0.072	265		0.084	300		0.094	329	400	0.100	346							
4° 15'	0.036	120		0.044	150		0.054	186		0.064	227		0.076	276		0.086	305		0.096	334		D MAX = 4° 15'								
4° 30'	0.036	120		0.046	155		0.056	192		0.068	238		0.078	282		0.090	317	400	0.098	340										
4° 45'	0.038	125		0.048	160		0.060	202		0.070	244		0.082	294		0.092	323		0.100	346										
5° 00'	0.040	130		0.050	164		0.062	206		0.072	248		0.084	300		0.094	329		D MAX = 5° 15'										
5° 30'	0.044	138		0.054	173		0.066	217		0.078	265		0.088	311		0.098	340												
6° 00'	0.046	143	250	0.058	182		0.070	227		0.082	276		0.092	323		0.100	346												
6° 30'	0.050	151		0.062	192		0.074	238		0.086	287		0.096	334	350	D MAX = 6° 30'													
7° 00'	0.052	156		0.064	197		0.078	247		0.090	298		0.098	340															
7° 30'	0.054	160		0.068	206		0.080	252		0.092	302	350	0.100	346															
8° 00'	0.058	168		0.070	211		0.084	263		0.094	308		D MAX = 8° 25'																
8° 30'	0.060	173		0.072	215		0.086	268	300	0.096	313																		
9° 00'	0.062	178		0.076	224		0.088	272		0.098	319																		
9° 30'	0.064	181		0.078	229		0.092	282		0.100	324																		
10° 00'	0.066	186		0.080	234		0.094	288		D MAX = 10° 30'																			
11° 00'	0.070	194		0.084	244		0.096	293																					
12° 00'	0.074	203		0.088	253	300	0.098	298																					
13° 00'	0.076	208		0.090	258		0.100	302	350																				
14° 00'	0.080	216		0.094	266		D MAX = 13° 45'																						
15° 00'	0.082	221		0.096	271																								
16° 00'	0.086	229		0.098	276																								
17° 00'	0.088	233		0.100	281																								
18° 00'	0.090	238		D MAX = 19° 30'																									
19° 00'	0.092	242																											
20° 00'	0.094	246																											
21° 00'	0.096	251	300																										
22° 00'	0.096	251																											
23° 00'	0.098	254																											
24° 00'	0.098	254																											
25° 00'	0.100	259																											
D MAX = 28° 30'																													

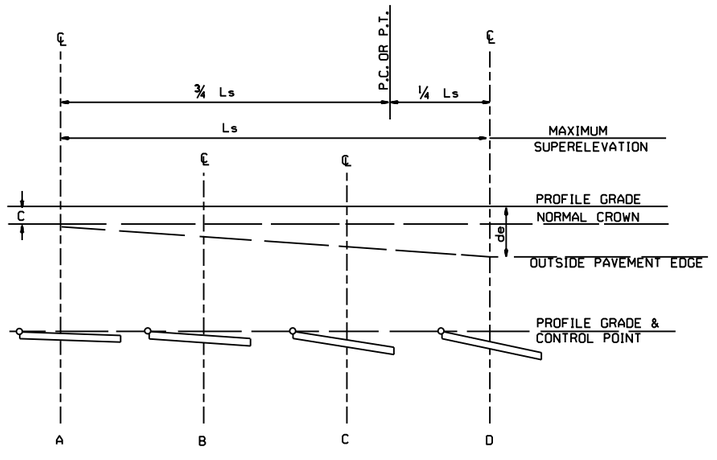
GENERAL NOTES

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%

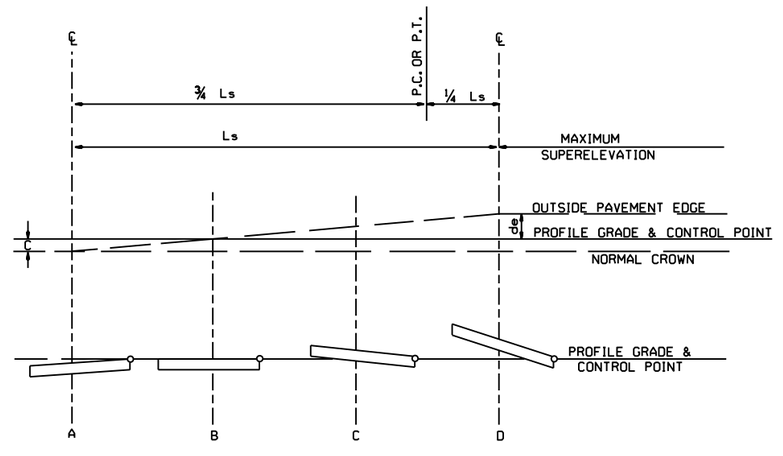
ABBREVIATIONS

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.)



ONE-WAY TRAFFIC
INSIDE LANE

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



ONE-WAY TRAFFIC
OUTSIDE LANE

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

DATE	REVISION	DATE FILLMED
11-07-19	REVISED SUPERELEVATION TABLE	
01-09-87	ISSUED	578-1-15-87

ARKANSAS STATE HIGHWAY COMMISSION

TABLES AND METHOD OF SUPERELEVATION FOR ONE-WAY TRAFFIC

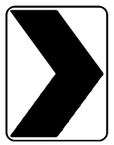
STANDARD DRAWING SE-1



R1-1
30"X30"



W1-3
30"X30"
(LT. OR RT.)



W1-8
18"X24"



W2-5
30"X30"



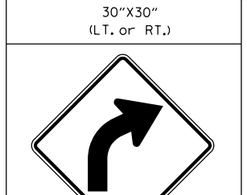
W3-1
36"X36"



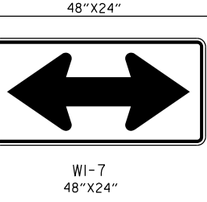
W5-1
36"X36"



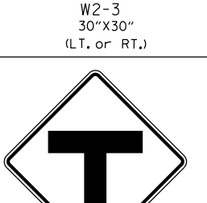
M6-3
21"X15"



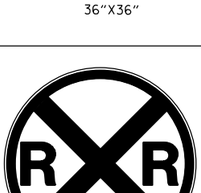
R1-2
36"X36"X36"



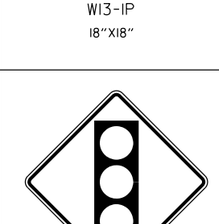
W1-4
30"X30"
(LT. or RT.)



W2-1
30"X30"



S1-1
36"X36"



W3-2
36"X36"

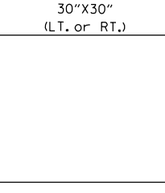


County
Route Marker
M1-6
24"X24"

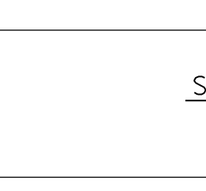
NOTE: REFLECTORIZED YELLOW LEGEND (COUNTY NAME, ROUTE LETTER & NUMBER) & BORDER ON A BLUE BACKGROUND.



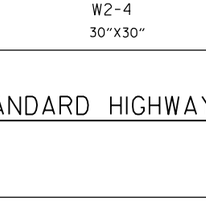
M6-4
21"X15"



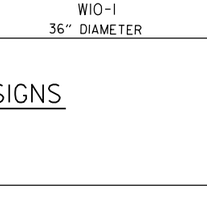
R2-1
24"X30"



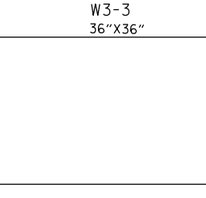
W1-5
30"X30"
(LT. or RT.)



W2-2
30"X30"

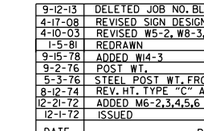


W5-2
36"X36"



W8-3
36"X36"

R1-3P
18"X6"



M6-5
21"X15"

W1-1
30"X30"
(LT. or RT.)

W1-6
48"X24"

W1-7
48"X24"

W2-3
30"X30"
(LT. or RT.)

W5-3
36"X36"

W13-1P
18"X18"

M6-1
21"X15"

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

M6-6
21"X15"

W1-2
30"X30"
(LT. or RT.)

W2-4
30"X30"

W10-1
36" DIAMETER

W3-3
36"X36"

M6-2
21"X15"

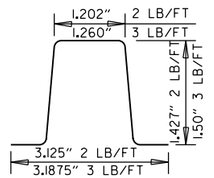
S4-3P
24"X8"

S4-2P
24"X10"

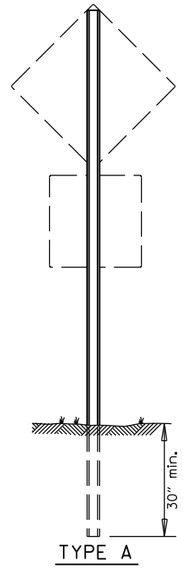
OM-3
12"X36"
(LT. or RT.)

MINIMUM DIMENSIONS SHOWN

SUPPORT SECTION



(U-CHANNEL)
STANDARD SUPPORT
ASSEMBLIES



TYPE A

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

TYPE B

TYPE C

MINIMUM WEIGHT

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

STANDARD HIGHWAY SIGNS

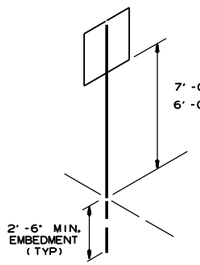
DATE	REVISION	DATE FILMED
9-12-13	DELETED JOB NO. BLOCK; REVISED RI-3 TO RI-3P	
4-17-08	REVISED SIGN DESIGNATION - W3-1 & W3-2	
4-10-03	REVISED W5-2, W8-3, OM-3; ADDED WI-8	
1-5-81	REDRAWN	960-1-15-81
9-15-78	ADDED WI4-3	877-9-15-78
9-2-76	POST WT.	623-9-3-76
5-3-76	STEEL POST WT. FROM 2"-3"; ADDED S4-2 & S4-3	504-5-3-76
8-12-74	REV. HT. TYPE "C" ASSEMBLY	500-8-21-74
12-21-72	ADDED M6-2,3,4,5,6	500-12-21-72
12-1-72	ISSUED	562-12-1-72

SUPPORT ASSEMBLIES

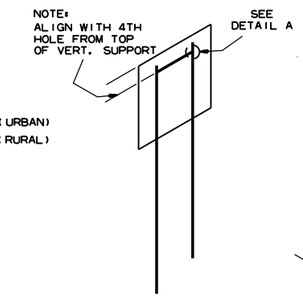
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD HIGHWAY SIGNS AND SUPPORT ASSEMBLIES

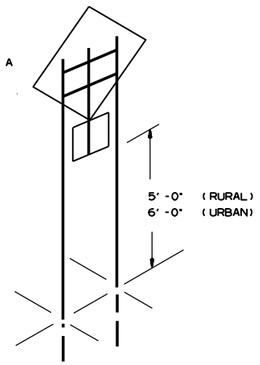
STANDARD DRAWING SHS-1



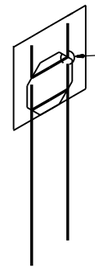
U-1



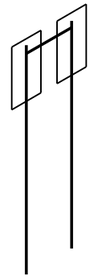
U-2



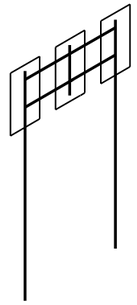
U-2 (A)



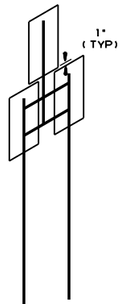
U-2 (B)



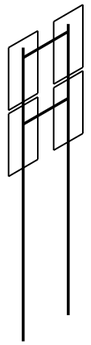
U-2 (1)



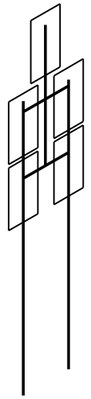
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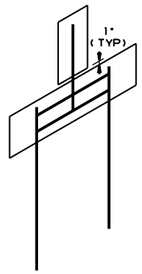
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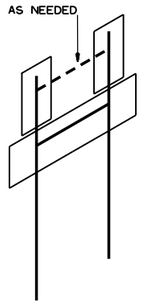
U-2 (4)



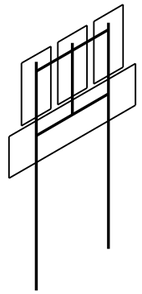
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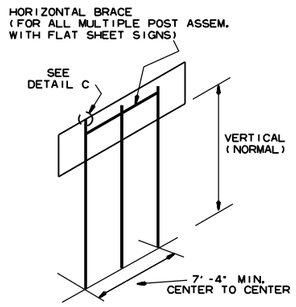
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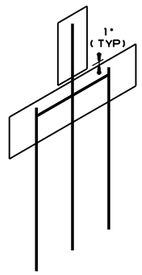
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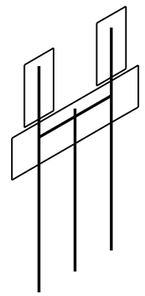
U-2 (8)



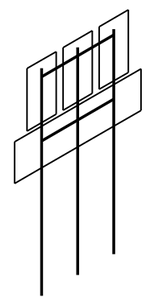
U-3



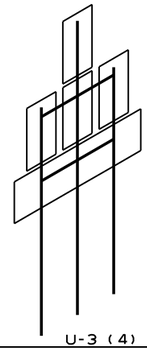
U-3 (1)



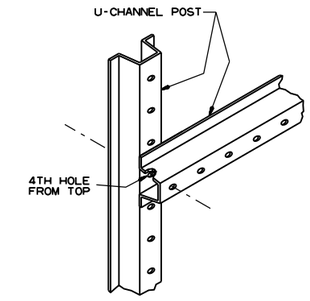
U-3 (2)



U-3 (3)

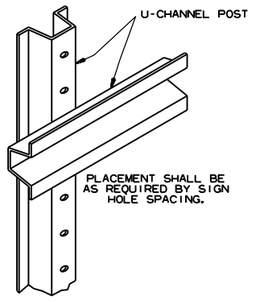


U-3 (4)



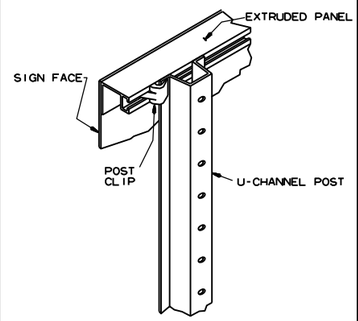
DETAIL A

SHOWING HORIZONTAL BRACE



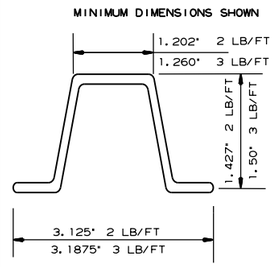
DETAIL B

SHOWING BACK-TO-BACK INSTALLATION



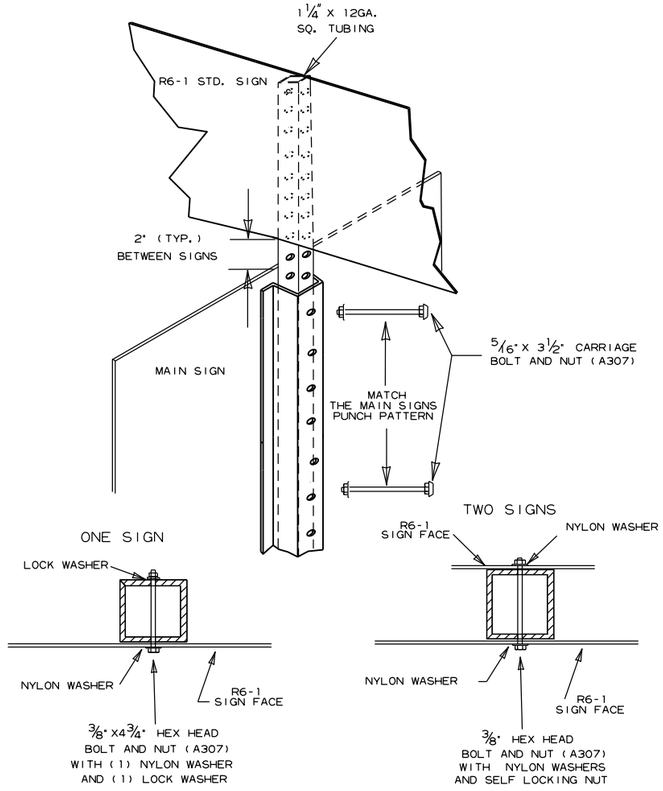
DETAIL C

SHOWING GUIDE SIGN MOUNTING WITH EXTRUDED PANELS



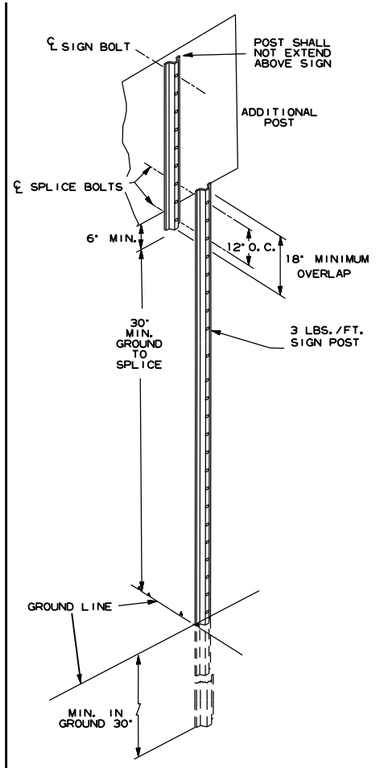
DETAIL C

U-CHANNEL POST



DETAIL E

R6-1 EXTENSION FOR U-CHANNEL POST



DETAIL F

DETAIL OF SPLICES

NOTES:

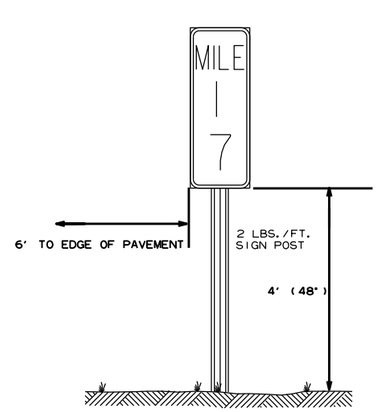
SIGNS AT LEAST 8' IN LENGTH MAY BE INSTALLED ON THREE 3 LB. POST. IN NO CASE SHALL THERE BE MORE THAN TWO 3 LB. POSTS WITHIN A 7' PATH.

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

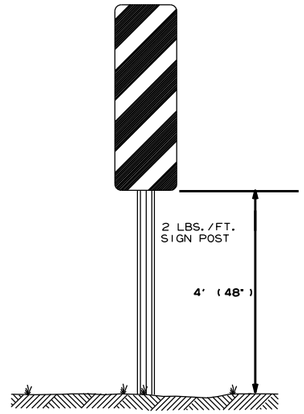
NORMAL INSTALLATIONS WILL REQUIRE 5/16" DIA. CARRIAGE BOLTS TO MOUNT SIGNS TO POST AND TO ASSEMBLE THE VARIOUS POST SUPPORTS.

ALL SIGN POSTS SHALL BE PLUMB.

THE POST FOR "TYPE U" SUPPORTS SHALL BE HOT DIP GALVANIZED.



TYPICAL MILE MARKER INSTALLATION



TYPICAL OM-3 INSTALLATION AT EDGE OF OBSTRUCTION

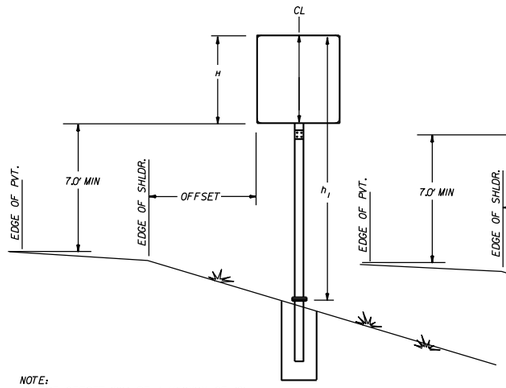
DATE	REVISION	FILMED
7-25-19	REVISED CARRIAGE BOLT WITH MATERIAL REQUIREMENT	
2-27-14	REVISED NOTES.	
9-12-13	REVISED U-2(3), U-2(6), U-3(1), DETAIL D; ADDED DETAILS E & F; ADDED TYPICAL MARKERS	
10-9-03	REMOVED ROUND POST & REVISED SPACING	
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL	6-8-95
2-2-95	REDRAWN	2-2-95

ARKANSAS STATE HIGHWAY COMMISSION

U-CHANNEL POST ASSEMBLIES

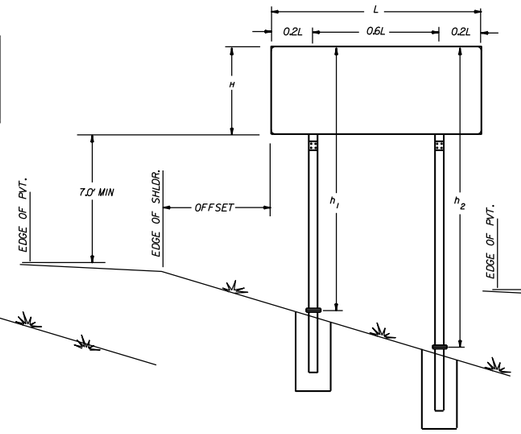
STANDARD DRAWING SHS-2

POST SIZE	BASE CONNECTION DATA											FUSE PLATE DATA									
	BOLT SIZE	BOLT TORQUE (INCH/LBS)	A	B	C	D	E	t_1	t_2	W	R	F	G		J	K	M	d_1	d_2	t_3	BOLT SIZE	WT.OF EACH FUSE PLATE LBS.
W 6X9																						
W 6X12	5/8" x 2 3/4"	450"-680"	5"	2"	1 1/4"	2 3/4"	1 1/8"	3/4"	1/2"	1/4"	11/32"	4 1/4"	2"		4"	2 1/4"	1"	9/16"	3/4"	1/4"	1/2" x 1 1/2"	1.01
W 6X15												5"	2 1/2"		6"	3 1/2"	1 1/2"	11/16"	1 1/4"	3/8"	5/8" x 2 1/4"	2.51
W 8X18												5"	2 1/2"		5 1/4"	2 3/4"	1 1/4"	13/16"	1 11/16"	3/8"	3/4" x 2 1/4"	2.26
W 8X21												5 1/2"	2 1/2"		5 1/4"	2 3/4"	1 1/4"	13/16"	1"	1/2"	3/4" x 2 1/4"	3.35
W 10X22	3/4" x 3 1/2"	750"-1050"	6"	2 1/4"	1 3/8"	3 1/2"	1 1/4"	1"	3/4"	5/16"	11/32"	6"	3"		5 3/4"	2 3/4"	1 3/8"	1 3/16"	1 1/8"	1/2"	3/4" x 2 1/4"	4.03
W 10X26																						
W 12X26												6"	3"		6 1/2"	3 1/2"	1 5/8"	1 3/16"	1 15/16"	1/2"	3/4" x 2 1/4"	4.47

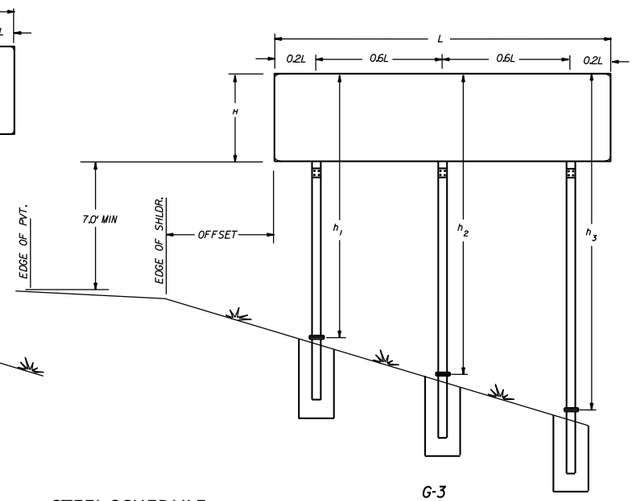


NOTE:
THE OFFSET WILL BE A MINIMUM OF 10' FROM THE EDGE OF PAVED SURFACE OR AS DIRECTED BY THE ENGINEER

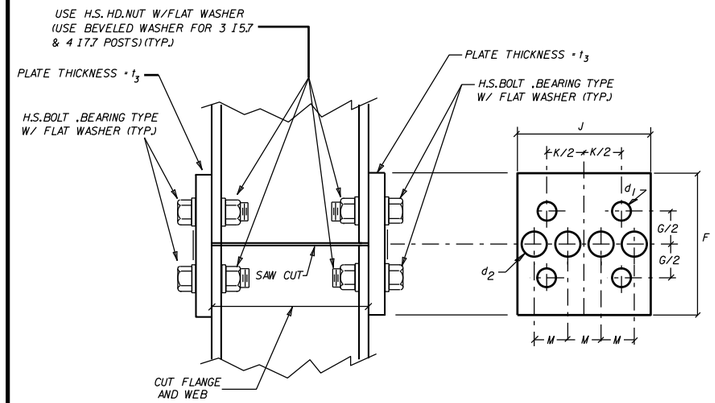
G-1



G-2

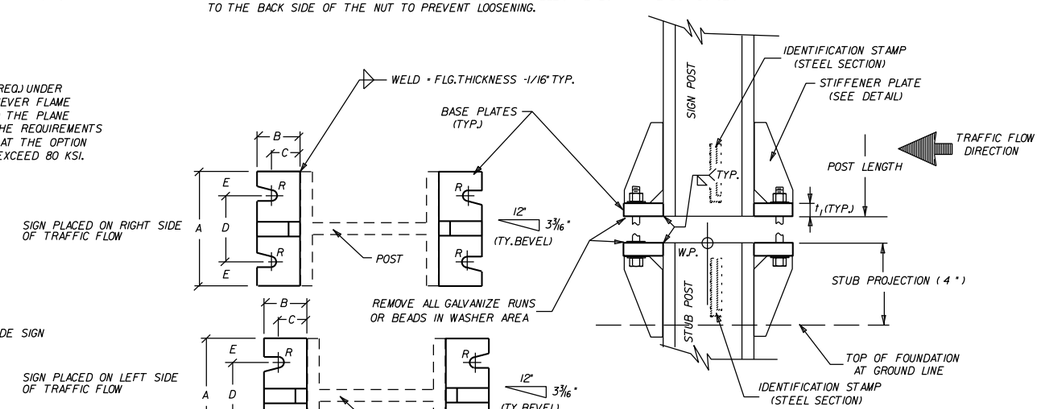


G-3

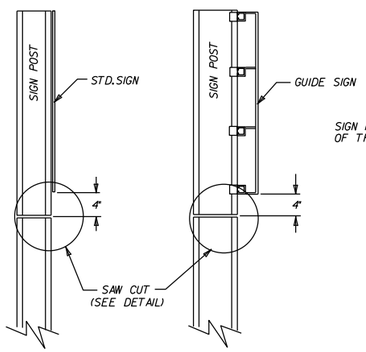


NOTE: USE H.S.HEX HEAD BOLTS,HEX HEAD NUTS AND BEVEL OR FLAT WASHERS (WHERE REQ.) UNDER NUTS. ALL HOLES SHALL BE DRILLED.ALL PLATE CUTS SHALL PREFERABLY BE SAW CUTS,HOWEVER FLAME CUTTING WILL BE PERMITTED PROVIDED ALL EDGES ARE GROUND. METAL PROJECTING BEYOND THE PLANE OF THE PLATE FACE WILL NOT BE PERMITTED. STEEL FUSE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM-A36,ASTM-A441,ASTM-572 GRADE 50,OR ASTM-A588 MAY BE SUBSTITUTED FOR A36 AT THE OPTION OF THE FABRICATOR. STEEL USED SHALL HAVE AN ULTIMATE TENSILE STRENGTH NOT TO EXCEED 80 KSI.

NOTE: SECTIONS SHOWN ARE FOR INSTALLATION ON THE RIGHT SHOULDER AND IN THE GORE. BOLT HOLES IN BASE PLATE ARE SLOTTED AND BEVELED AS SHOWN. USE H.S.BOLTS WITH HEX HD.,HEX NUT AND THREE FLAT WASHERS FOR EACH BOLT.SEE TABLE FOR BOLT DIA. AND TORQUE.
NOTE: ASSEMBLE SIGN POST TO STUB POST USING THE BOLTS SPEC.IN THE TABLE AND AS SHOWN IN THE ELEVATION DETAILS. THERE SHALL BE THREE FLAT WASHERS ON EACH BOLT LOCATED AS SHOWN IN THE ELEVATIONS. USE A SHIM TO PLUMB THE SIGN POST. THEN TIGHTEN THE BOLTS USING A 12" TO 15" WRENCH UNTIL THE WASHERS AND SHIMS ARE SEATED AND THE BOLT THREADS ARE CLEAR ,THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE (SEE TABLE). THE BURR THREADS ADJACENT TO THE BACK SIDE OF THE NUT TO PREVENT LOOSENING.



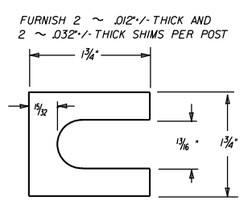
NOTE: BOLT HOLES,USED IN THE MOUNTING OF STANDARD SIGNS SHALL BE LOCATED IN THE FLANGE ADJACENT TO THE NEAR EDGE OF PAVEMENT FOR SINGLE POST ASSEMBLIES AND IN THE OUTSIDE FLANGES FOR MULTIPLE POST ASSEMBLIES.



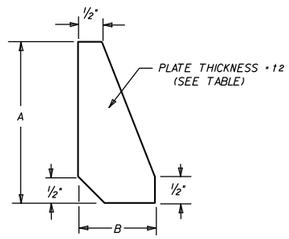
NOTE: POST SHALL BE SAW CUT AFTER GALVANIZING AND THE CUT SURFACE TREATED. AFTER PLATE IS INSTALLED AND ALL BOLTS FULLY TIGHTENED. REPAIR OF CUT SURFACES AFTER GALVANIZING SHALL BE IN ACCORDANCE WITH ASTM A123.

STANDARD SIGNS GUIDE SIGNS

FUSE PLATE DETAILS



SHIM DETAIL



STIFFENER PLATE DETAIL

GENERAL NOTES

TIGHTEN THE HIGH STRENGTH BOLTS IN THE BASE CONNECTION ONLY TO THE TORQUE SHOWN. DO NOT OVERTIGHTEN.

BASE PLATES AND STIFFENER PLATES SHALL BE OF THE SAME MATERIAL AS THE PRIMARY SUPPORT POSTS WHICH THEY ARE WELDED.

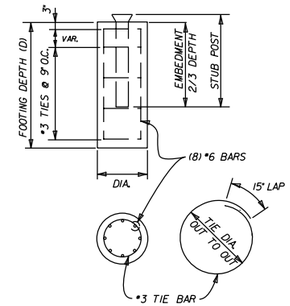
REFER TO THE PLANS FOR FOOTING DIMENSIONS.

EACH STUB POST AND SIGN POST SHALL HAVE A PERMANENT IDENTIFYING STAMP WHICH SPECIFIES THE STEEL SECTION USED. IF THE CONTRACTOR ELECTS TO SHIP THE STUB POST SEPARATE FROM THE SIGN POST A MATCH MARK SYSTEM WILL BE REQUIRED.

STEEL SCHEDULE

FOOTING DIAMETER	#3 TIE BARS		
	DIAMETER	BAR LENGTH	POUNDS
INCHES	INCHES	FEET	
18	12	4.39	1.65
24	18	5.96	2.24
30	24	7.53	2.83
36	30	9.1	3.42

FOOTINIG DEPTH	#6 STRAIGHT BARS		
	BAR LENGTH	NUMBER REQ'D.	POUNDS
FEET	FEET		
2.50	2.00	8	24.03
3.00	2.50	8	30.04
3.50	3.00	8	36.05
4.00	3.50	8	42.06
4.50	4.00	8	48.06
5.00	4.50	8	54.07
5.50	5.00	8	60.08
6.00	5.50	8	66.09
6.50	6.00	8	72.10
7.00	6.50	8	78.10
7.50	7.00	8	84.11
8.00	7.50	8	90.12



FOOTING QUANTITIES

FOOTING DEPTH	NUMBER TIE BARS REQ'D	18" DIAMETER		24" DIAMETER		30" DIAMETER		36" DIAMETER	
		CLASS S CONCRETE	REINF STEEL	CLASS S CONCRETE	REINF STEEL	CLASS S CONCRETE	REINF STEEL	CLASS S CONCRETE	REINF STEEL
FEET		CU. YD.	(GRADE 60)	CU. YD.	(GRADE 60)	CU. YD.	(GRADE 60)	CU. YD.	(GRADE 60)
2.50	4	0.16	31						
3.00	4	0.20	37						
3.50	5	0.23	44						
4.00	6	0.26	52	0.47	56				
4.50	6	0.29	58	0.52	62				
5.00	7	0.33	66	0.58	70	0.91	74		
5.50	8			0.64	78	1.00	83		
6.00	8			0.70	84	1.09	89	1.57	93
6.50	9					1.18	98	1.70	103
7.00	10					1.27	106	1.83	112
7.50	10							1.96	118
8.00	11							2.09	128

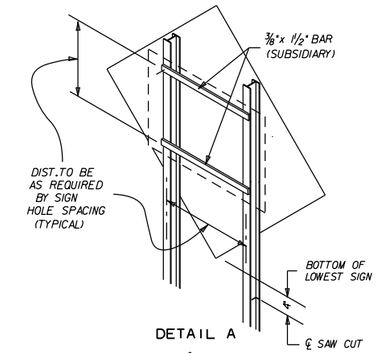
SIGN POST AND STUB POST

DATE	REVISION	FILMED
5-19-22	REVISED FUSE PLATE DETIALS' NOTE.	
9-12-13	ISSUED	

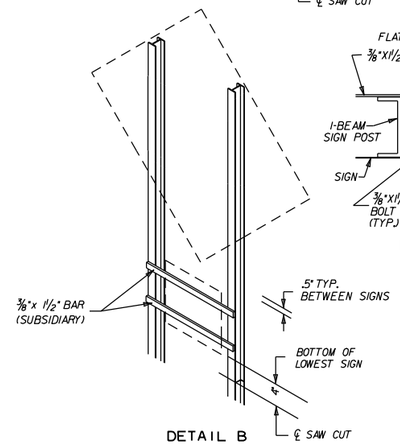
ARKANSAS STATE HIGHWAY COMMISSION

DETAIL OF BREAKAWAY SIGN SUPPORTS FOR GUIDE SIGNS

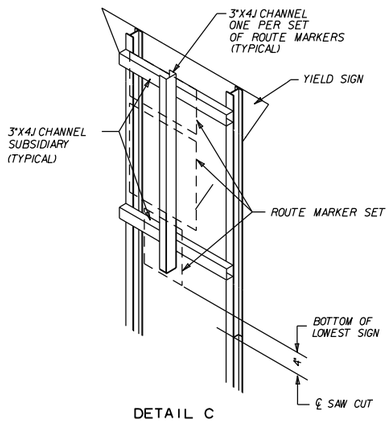
STANDARD DRAWING SHS-3



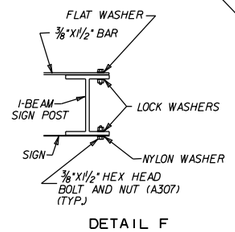
DETAIL A



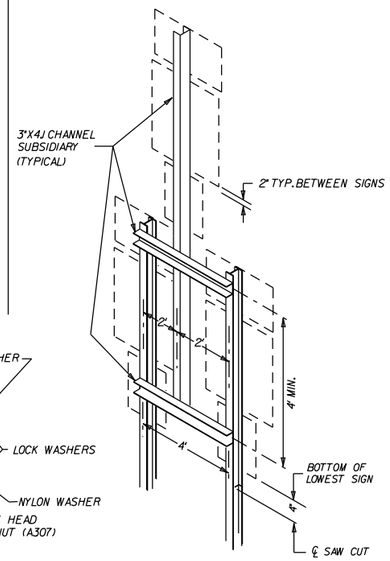
DETAIL B



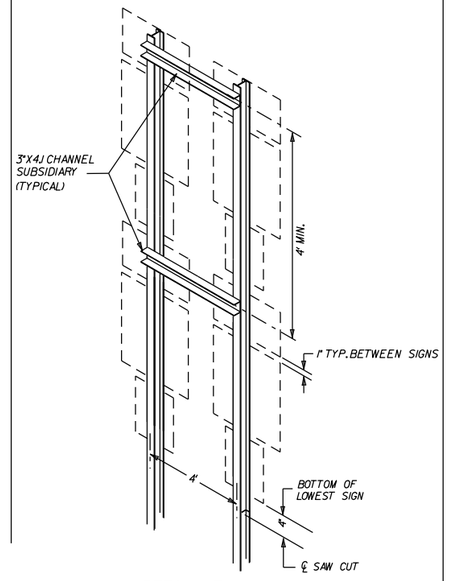
DETAIL C



DETAIL F



DETAIL D



DETAIL E

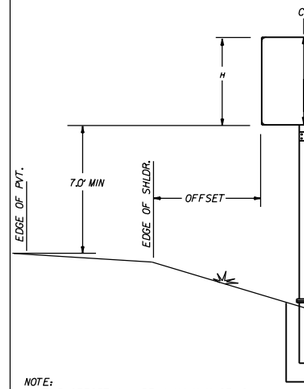
NOTE

ALL ADDITIONAL MOUNTING HARDWARE, BOLTS, NUTS, CHANNELS AND BAR STRAPS REQUIRED TO MOUNT SECONDARY SIGNS WILL BE CONSIDERED TO BE SUPPLEMENTAL TO THE MAIN SIGN SUPPORT SPECIFIED. PAYMENT WILL BE CONSIDERED SUBSIDIARY TO THE MAIN SUPPORT.

THE GALVANIZED STEEL CHANNEL AND BAR SUPPORTS MAY BE ASTM A-36.

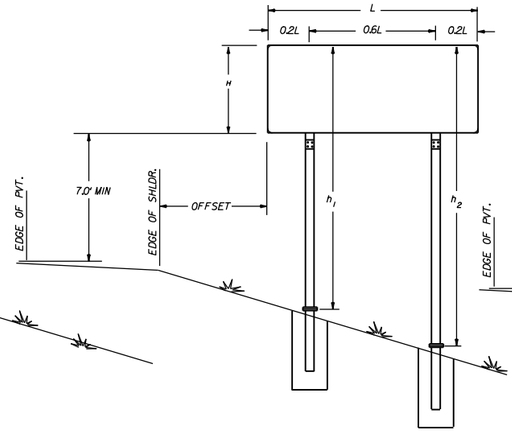
REFER TO THE P.C. RUTLEDGE FORMULA ON PAGE 58 OF THE AASHTO PUBLICATION "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS.

ALL BOLT HOLES SHALL BE 1/8" DIA. UNLESS OTHERWISE SHOWN.

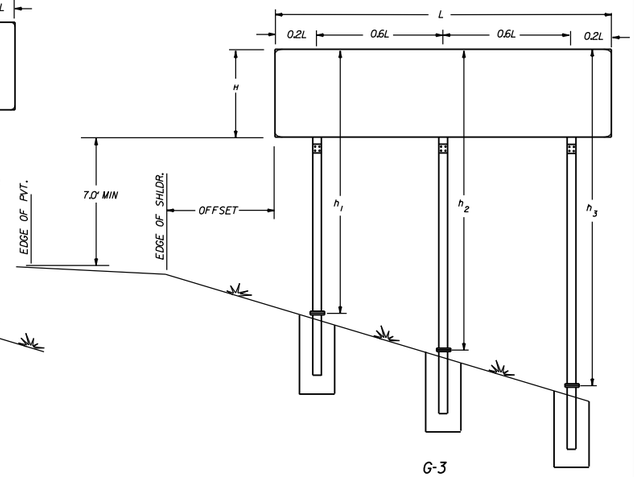


G-1

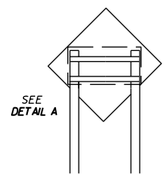
NOTE:
THE OFFSET WILL BE A MINUTE OF 10' FROM THE EDGE OF PAVED SURFACE OR AS DIRECTED BY THE ENGINEER.



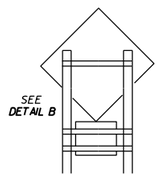
G-2



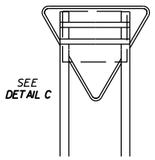
G-3



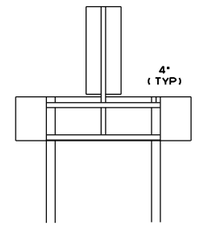
G2-1



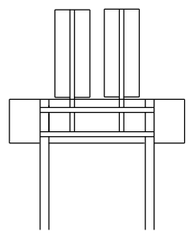
G2-2



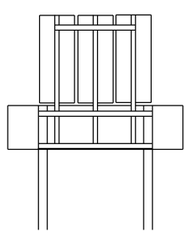
G2-3



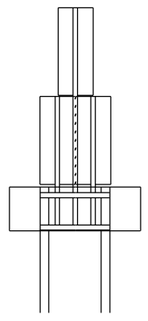
G2-4



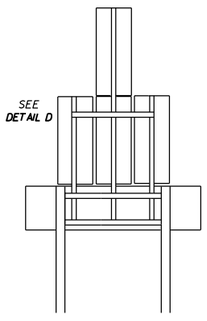
G2-5



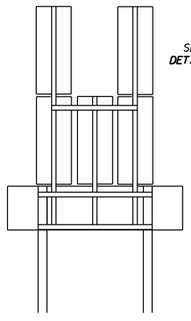
G2-6



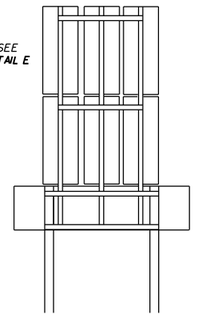
G2-7



G2-8



G2-9



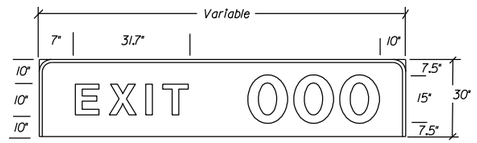
G2-10

			ARKANSAS STATE HIGHWAY COMMISSION
			DETAIL OF BREAKAWAY SIGN SUPPORTS FOR STANDARD SIGNS
9-12-13	ISSUED		STANDARD DRAWING SHS-4
DATE	REVISION	FILMED	



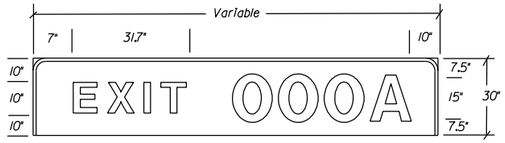
TYPICAL DETAIL

TYPE A



EXIT WITH 1 DIGIT 84"X30"=17.50 SF
EXIT WITH 2 DIGITS 96"X30"=20.0 SF
EXIT WITH 3 DIGITS 114"X30"=23.57 SF

TYPE B

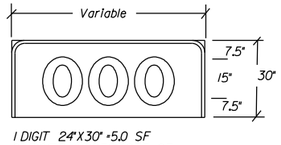


EXIT WITH 1 DIGIT PLUS "A"OR"B" 96"X30"=20.0 SF
EXIT WITH 2 DIGITS PLUS "A"OR"B" 114"X30"=23.57 SF
EXIT WITH 3 DIGITS PLUS "A"OR"B" 126"X30"=26.25 SF

TYPE C

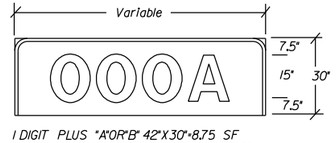
EXITS WITH 1 DIGIT PLUS "A"&"B" 132"X30"=27.50 SF
EXITS WITH 2 DIGITS PLUS "A"&"B" 150"X30"=31.25 SF
EXITS WITH 3 DIGITS PLUS "A"&"B" 168"X30"=35.00 SF

TYPE D



1 DIGIT 24"X30" =5.0 SF
2 DIGITS 42"X30" =8.75 SF
3 DIGITS 60"X30" =12.50 SF

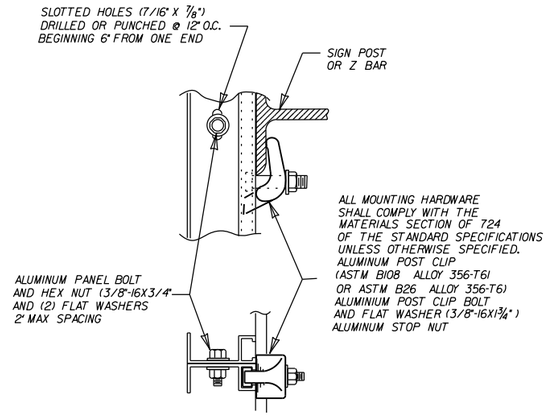
TYPE E

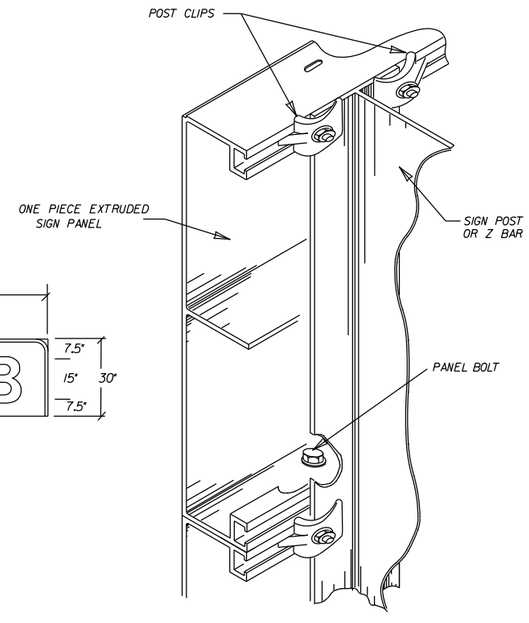


1 DIGIT PLUS "A"OR"B" 42"X30"=8.75 SF
2 DIGITS PLUS "A"OR"B" 60"X30"=12.50 SF
3 DIGITS PLUS "A"OR"B" 78"X30"=16.25 SF

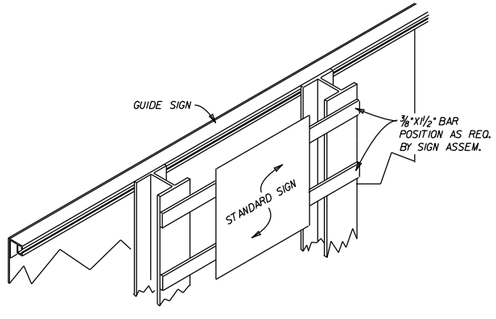
EXIT PANEL DETAILS

NOTE: EXIT NUMBER PANELS SHALL HAVE WHITE LEGENDS AND BORDERS. THE BACK GROUND COLOR WILL BE AS USE SPECIFIES. SHEETING TYPE WILL BE THE SAME AS THE GUIDE SIGN WHICH THE EXIT PANEL IS ATTACHED OR AS SPECIFIED IN THE PLANS. PAYMENT FOR ALL POST CLIPS, BOLTS, AND ANGLES SHALL BE SUBSIDIARY TO THE ITEM "EXIT NUMBER PANEL".

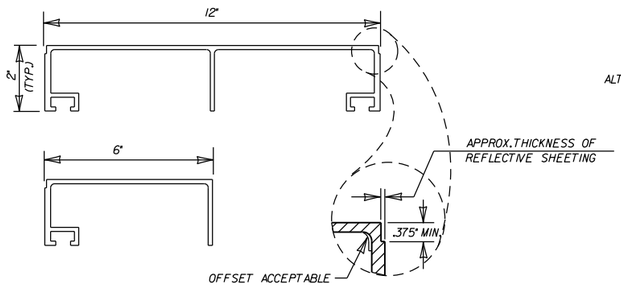




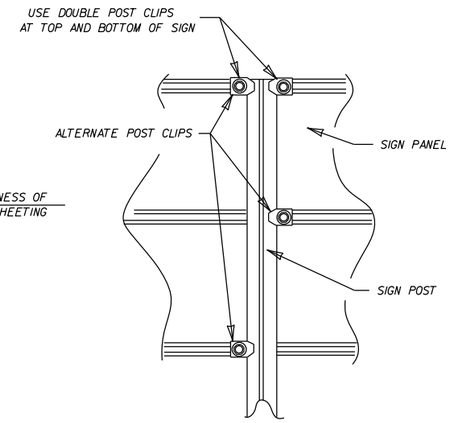
MOUNTING HARDWARE



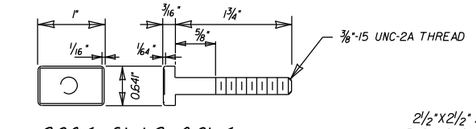
SECONDARY SIGN INSTALLATION ON BACKSIDE OF GUIDE SIGN



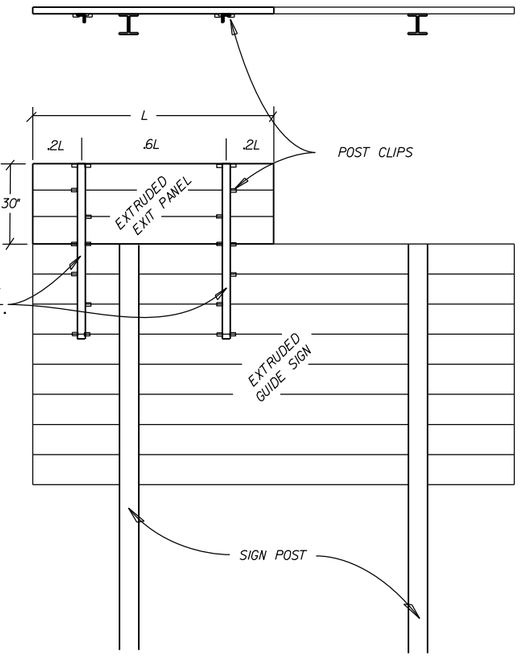
ONE PIECE EXTRUDED SIGN PANELS



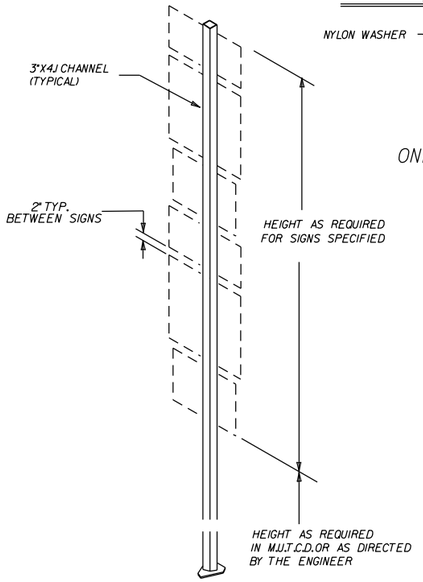
POST CLIP PLACEMENT

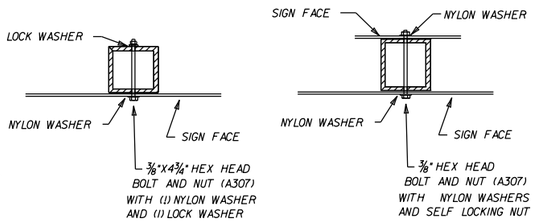


POST CLIP BOLT



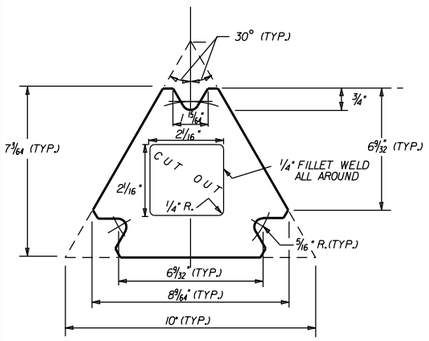
			ARKANSAS STATE HIGHWAY COMMISSION
			DETAILS OF GUIDE SIGN PANELS
9-12-13	ISSUED		STANDARD DRAWING SHS-5
DATE	REVISION	FILMED	



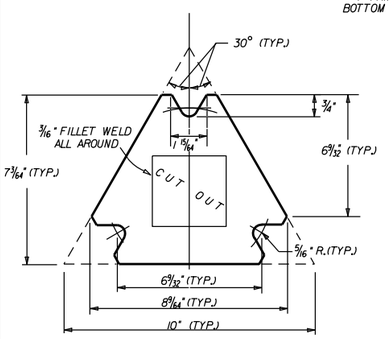


CHANNEL SHALL BE FULL LENGTH OF RECTANGULAR AND SQUARE SIGNS AND SHALL EXTEND 1½" BEYOND BOLT HOLES ON DIAMOND OR IRREGULAR SHAPED SIGNS.

MOUNTING HARDWARE



TOP PLATE



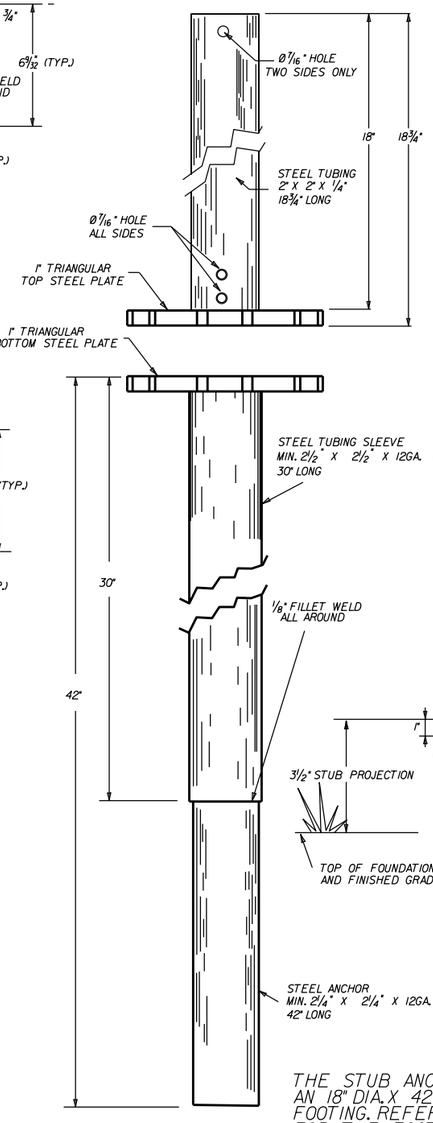
BOTTOM PLATE

GENERAL NOTES:

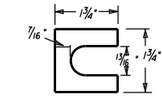
THE TOP PLATE OF TRIANGULAR SLIP BASES SHALL HAVE THE SAME EXTERIOR DIMENSIONS AS THE BOTTOM PLATE.

INSIDE DIAMETER OF THE SIGN POST SHALL BE CUT THROUGH THE CENTER OF THE TOP PLATE WITH THE HOLE EDGE BEVELED AS SHOWN. THE BEVEL END SHALL BE TANGENT TO THE BOLT HOLE . ANY MISALIGNMENT SHALL BE REMOVED BY GRINDING . FACE OF BEVEL SHALL BE FINISHED TO A MINIMUM SMOOTHNESS OF 1•500 .

OTHER MASH COMPLIANT BREAKAWAY SIGN SUPPORTS THAT HAVE THE SAME TOP PLATE DIMENSIONS AND SUPPORT 2¼" X 2¼" SQUARE TUBE SIGN POSTS MAY BE SUBSTITUTED AS APPROVED BY THE ENGINEER.

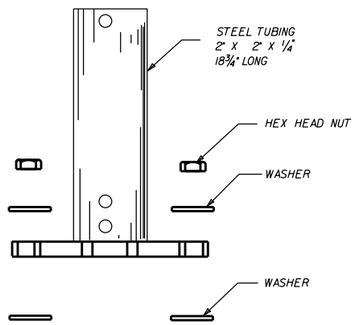


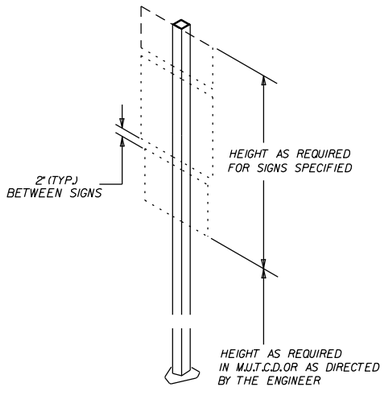
THE STUB ANCHOR SHALL BE SET IN AN 18" DIA. X 42" DEEP CONCRETE FOOTING. REFER TO STD.DRWG.SHS-3 FOR THE FOOTING DETAILS.



FURNISH (2) .012" THICK AND (2) .032" THICK SHIMS PER POST

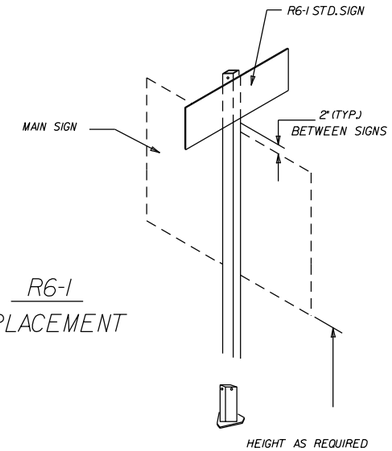
SHIM DETAIL





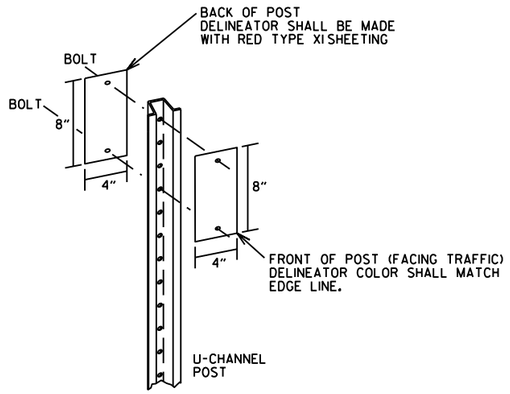
TYPE-I

BASIS OF ESTIMATE
APPROX. 100 lbs STEEL

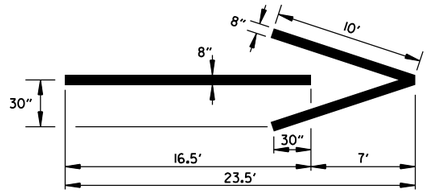


R6-1 PLACEMENT

			ARKANSAS STATE HIGHWAY COMMISSION
			DETAIL OF OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS
9-12-13	ISSUED		STANDARD DRAWING SHS-7
DATE	REVISION	FILMED	



TYPE 2 DELINEATOR DETAILS



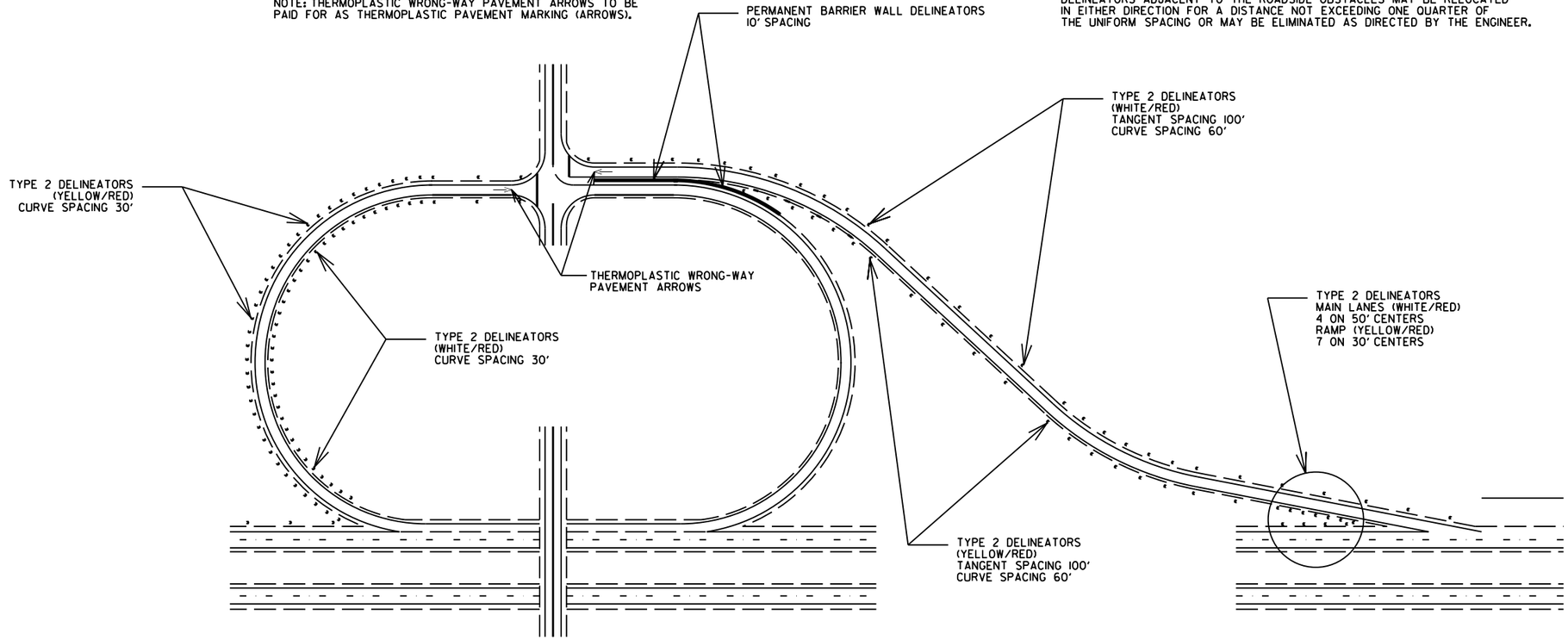
THERMOPLASTIC WRONG-WAY
PAVEMENT ARROWS

NOTE: THERMOPLASTIC WRONG-WAY PAVEMENT ARROWS TO BE PAID FOR AS THERMOPLASTIC PAVEMENT MARKING (ARROWS).

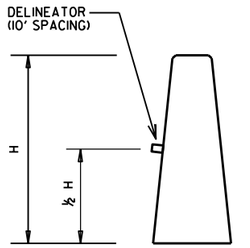
LEGEND

DELINEATOR

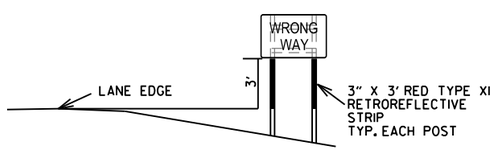
NOTE: WHEN UNIFORM SPACING IS INTERRUPTED BY ROADSIDE OBSTACLES, DELINEATORS ADJACENT TO THE ROADSIDE OBSTACLES MAY BE RELOCATED IN EITHER DIRECTION FOR A DISTANCE NOT EXCEEDING ONE QUARTER OF THE UNIFORM SPACING OR MAY BE ELIMINATED AS DIRECTED BY THE ENGINEER.



TYPICAL EXIT RAMP DELINEATOR PLACEMENT

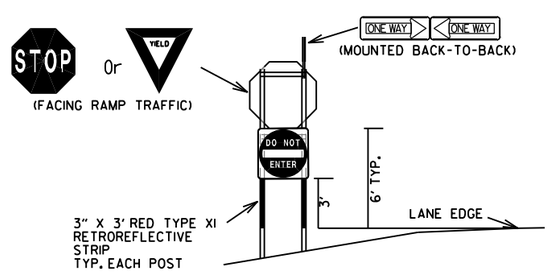


PERMANENT BARRIER WALL
DELINEATOR DETAIL



WRONG-WAY SIGN ASSEMBLY DETAILS

NOTES
1. WRONG-WAY SIGNS MAY BE MOUNTED ON THE BACK SIDE OF EXISTING SIGN SUPPORTS WHERE POSSIBLE.
2. WRONG-WAY SIGNS ARE NORMALLY GATED, BUT MAY BE OFFSET WHEN BARRIER WALLS ARE PRESENT ON THE INSIDE SHOULDER. IN SUCH CASES, THE SIGN ON THE INSIDE SHOULDER SIDE MAY BE LOCATED PAST THE END OF THE BARRIER WALL. IN RARE CASES WHERE THE BARRIER WALL EXTENDS TO OR NEAR THE MAIN LANES, BOTH SIGNS MAY BE LOCATED ON THE OUTSIDE SHOULDER SIDE OF THE RAMP, WITH APPROXIMATELY 300' SPACING BETWEEN THE SIGNS.



RAMP INTERSECTION SIGN ASSEMBLY DETAILS

THE DELINEATORS SHALL BE PLACED AT A 4' HEIGHT MEASURED FROM THE PAVEMENT EDGE TO THE BOTTOM OF THE DELINEATOR. DELINEATOR POSTS SHALL BE PLACED 2 TO 8 FT. OUTSIDE THE OUTER EDGE OF THE SHOULDER, OR IF APPROPRIATE, IN LINE WITH THE ROADSIDE BARRIER THAT IS 8 FT. OR LESS OUTSIDE THE OUTER EDGE OF THE SHOULDER.

DELINEATOR SPACING IN CURVES SHALL BE REDUCED TO 30' WHEN THE RAMP ADVISORY SPEED IS 30 MPH OR LESS.

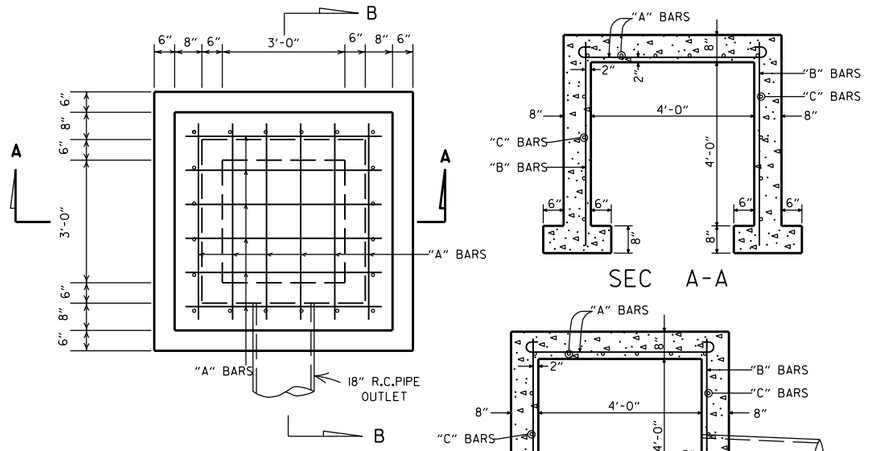
IF MULTIPLE LANES EXIST AT THE RAMP TERMINAL, THE THERMOPLASTIC WRONG-WAY ARROW SHALL BE PLACED AS CLOSE TO THE RAMP TERMINAL TURNOUT AS POSSIBLE.

DATE	REVISION	FILMED
11-16-17	ADDED NOTES	
06-01-17	RE-DRAWN	
09-12-13	ISSUED AS STANDARD DRAWING	

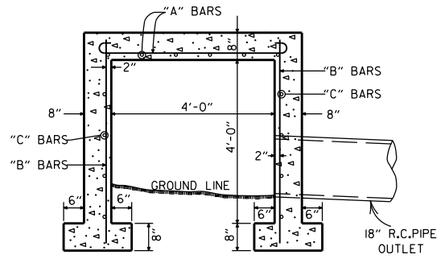
ARKANSAS STATE HIGHWAY COMMISSION

TYPICAL EXIT RAMP SIGN AND DELINEATOR DETAILS

STANDARD DRAWING SHS-8



SEC A-A



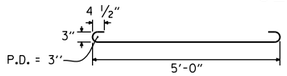
SEC B-B

NOTE: MAX FILL HEIGHT ABOVE TOP OF BOX = 13'-0".

STEEL SCHEDULE

BARS	NUMBER	LENGTH	SPACING
"A"	12	6'-0"	10"
"B"	20	5'-0"	10 ½"
"C"	16	5'-0"	12"

ALL STEEL TO BE #4 BARS



"A" BARS

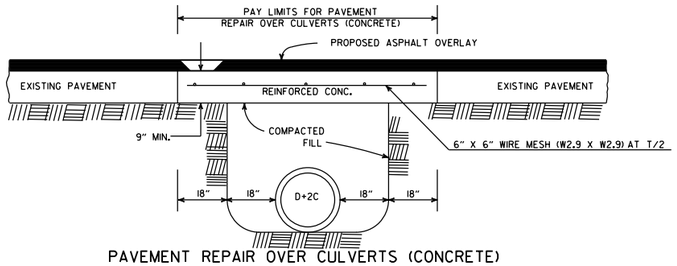
QUANTITIES

CONCRETE 3.31 CU. YDS.
REINFORCING STEEL 168 LB.

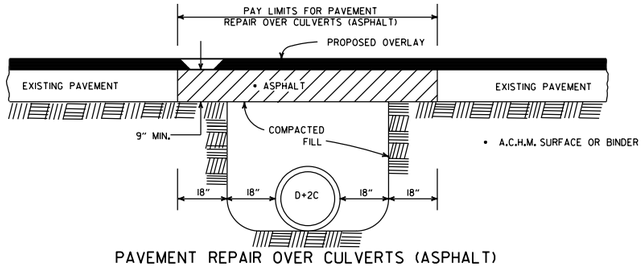
GENERAL NOTE:

THE PAY ITEMS FOR REINFORCED CONCRETE SPRING BOXES SHALL BE FOR THE QUANTITIES OF CONCRETE OF THE CLASS SPECIFIED, REINFORCING STEEL, EXCAVATION FOR STRUCTURES AND 18" R.C. PIPE CULVERT.

REINFORCED CONCRETE SPRING BOX



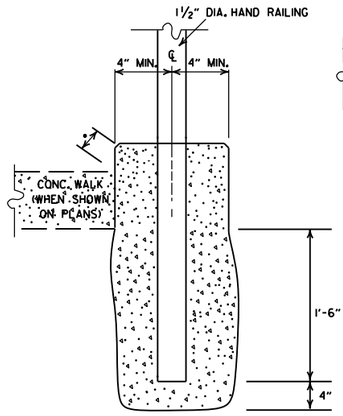
PAVEMENT REPAIR OVER CULVERTS (CONCRETE)



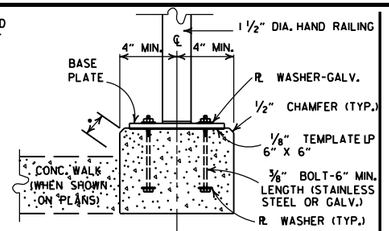
PAVEMENT REPAIR OVER CULVERTS (ASPHALT)

DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS

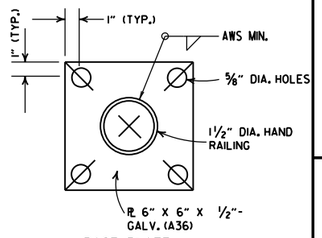
• A 2" MIN. HIGH CURB IS REQUIRED WHEN CONCRETE WALK IS ADJACENT TO THE HAND RAILING. PAYMENT FOR CURB SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR CONCRETE WALKS.



DETAIL OF HAND RAILING SET IN CONCRETE

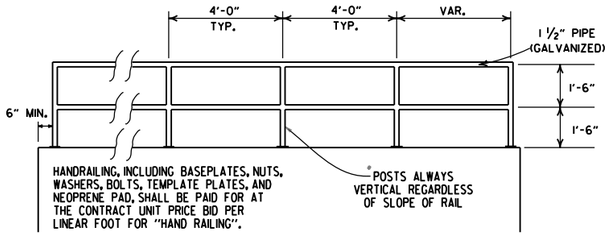


POST CONNECTION TO WALL

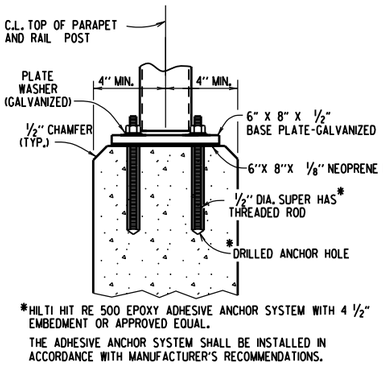


BASE PLATE

POST CONNECTION DETAILS



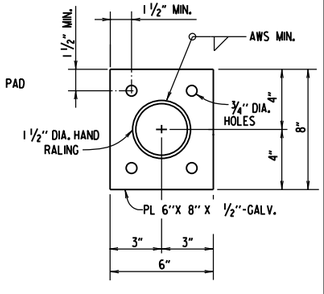
HAND RAILING SHALL CONFORM TO SECTION 633.



*HILTI HIT RE 500 EPOXY ADHESIVE ANCHOR SYSTEM WITH 4 ½" EMBEDMENT OR APPROVED EQUAL.

THE ADHESIVE ANCHOR SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

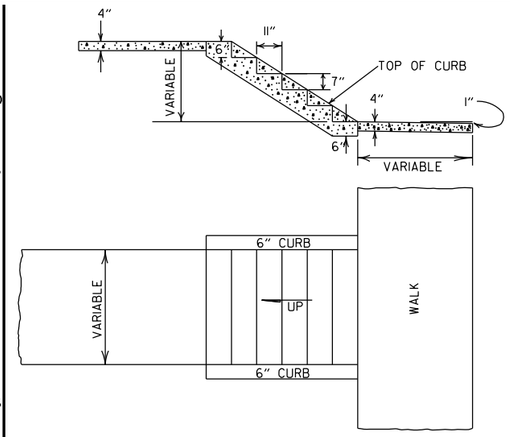
POST CONNECTION TO WALL



BASE PLATE

DETAILS OF ALTERNATE POST ANCHOR SYSTEM (EPOXY ADHESIVE ANCHORS)

HAND RAILING DETAILS



GENERAL NOTES

1. RISE AND TREAD DIMENSIONS OF STEPS MAY BE VARIED AS DIRECTED BY THE ENGINEER, HOWEVER, TREAD WIDTHS SHALL BE 11" MIN. ALL STEPS IN A FLIGHT SHALL HAVE CONSISTENT TREAD & RISER DIMENSIONS.
2. 1" TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE WALKS AT 45' INTERVALS.

DETAILS OF CONCRETE STEPS & WALKS

DATE	REVISION	DATE FILMED
10-25-18	REVISED DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS	
9-12-13	REVISED REINFORCED CONCRETE SPRING BOX	
7-26-12	REMOVED RETAINING WALL DETAILS & REVISED HAND RAILING DETAILS	
4-17-08	REV. JOINT & FOOTING STEP DETAILS	
11-29-07	REVISED RETAINING WALL DRAINAGE	
5-25-06	REVISED PVMT REPAIR OVER CULVERTS (CONC); REVISED REINFORCED CONC SPRING BOX	
10-9-03	REVISED PIPE RAILING DETAILS TO HAND RAILING DETAILS	
4-10-03	REVISED RETAINING WALL DRAWING	
8-22-02	ADDED HAND RAILING DETAIL	
11-16-01	REVISED PVMT REPAIR OVER CULVERTS (CONC); CORRECTED SPELLING IN GENERAL NOTES	
11-18-98	ADDED GENERAL NOTES TO CONCRETE STEPS & WALKS	
7-02-98	ENLARGED PIPE	
4-03-97	ADDED NOTE TO STEEL BAR SCHED.	
10-18-96	CORRECTED SPELLING	
4-26-94	ADD WEEP HOLE;REV. JOINT SPACING IN RET. WALL	
6-2-94	CHANGED CONST. TO CONTRACTION JOINT	
10-1-92	CHANGED MESH FABRIC TO WIRE MESH	10-1-92
8-15-91	DELETED HDWL MODIFICATION DETAIL	8-15-91
11-8-90	DELETED COLD MIX FROM CULV'T. REPAIR	11-8-90
11-30-89	REV. RETAINING WALL STEEL SCHEDULE	11-30-89
11-17-88	V. BARS BEHIND ARROW	665-11-17-88
7-15-88	REV. PAVEMENT REPAIR ADDED HDWL. MODS, DEL. PIPE UNDERDRAINS	649-7-15-88
11-1-84	REV. TRENCH FOR PIPE UNDERDRAIN	510-11-1-84
1-4-83	ELIMINATED CONC. CLASS & ADDED CHAMFER NOTE	682-1-4-83
3-2-81	SPELLING OF "UNDERDRAIN"	721-3-2-81
4-20-79	REV. UNDERDRAIN DET& PAVEMENT REPAIR	674-4-20-79
2-2-76	12"MIN. GRAN. MAT'L. OVER PIPE	919-2-2-76
4-10-75	REM. SPECS. FOR GRAN. MAT'L.	568-4-10-75-853
5-22-74	GRANULAR MAT'L. TO BE SB-3	567-5-22-74-740
10-2-72	REVISED AND REDRAWN	564-10-16-72

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF SPECIAL ITEMS

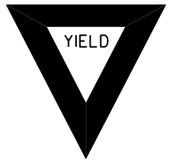
STANDARD DRAWING SI - 1

R1-1



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

R1-2



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

R2-1



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

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



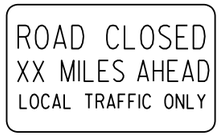
STD. 30"X30"
EXPWY. 36"X36"
SPECIAL 48"X48"

R11-2



48"X30"

R11-3A



60"X30"

R11-4



60"X30"

W21-5a



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

W1-1



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

W1-2



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

W1-3



STD. 48"X48"

W1-4



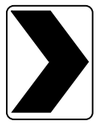
STD. 48"X48"

W1-6



STD. 48"X24"
SPECIAL 60"X30"

W1-8



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

W3-1



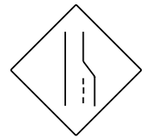
STD. 36"X36"
SPECIAL 48"X48"

W3-2



STD. 36"X36"
SPECIAL 48"X48"

W4-2



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

W5-1



STD. 36"X36"
SPECIAL 48"X48"

W6-3



EXPWY. 36"X36"
SPECIAL 48"X48"

W8-7



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

W9-2



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

W13-1



STD. 24"X24"

W20-1



STD. 48"X48"

W20-2



STD. 48"X48"

W20-3



STD. 48"X48"

W20-4



STD. 48"X48"

W20-5



STD. 48"X48"

W20-7a



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

W21-2



STD. 30"X30"
SPECIAL 36"X36"

W21-5



STD. 30"X30"
SPECIAL 36"X36"

W24-1



STD. 36"X36"

W1-4b



STD. 48"X48"

R56-1



STD. 18"X18"

W8-11



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

W8-9



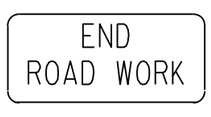
STD. 36"X36"
FWY. 48"X48"

G20-1



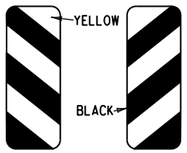
60"X24"

G20-2



48"X24"

OM-3L OM-3R



12"X36"

M4-9



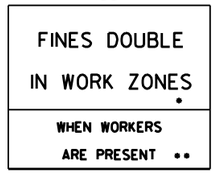
STD. 30"X24"
SPECIAL 48"X36"
SPECIAL 60"X48"

M4-10



48"X18"

R55-1



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.

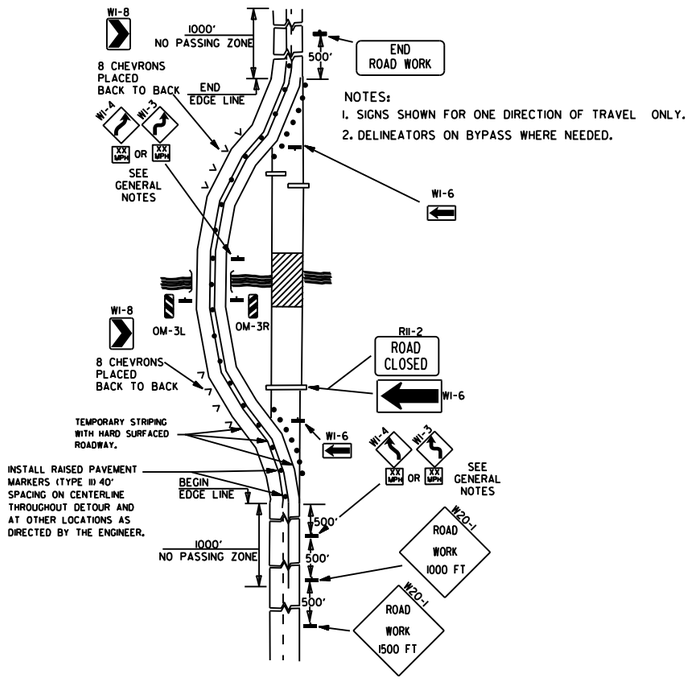
- NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) IS REQUIRED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

DATE	REVISION	FILMED
11-07-19	REVISED FOR MASH	
4-13-17	DELETED RSP-1 & ADDED W21-5a	
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

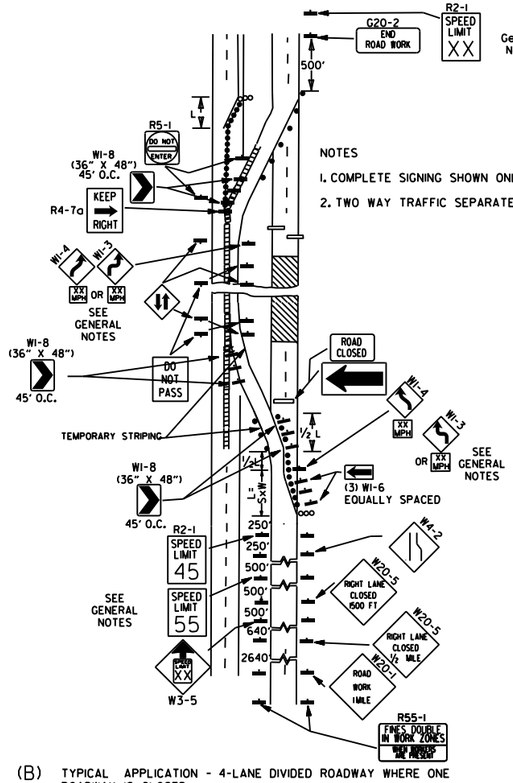
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

STANDARD DRAWING TC-1



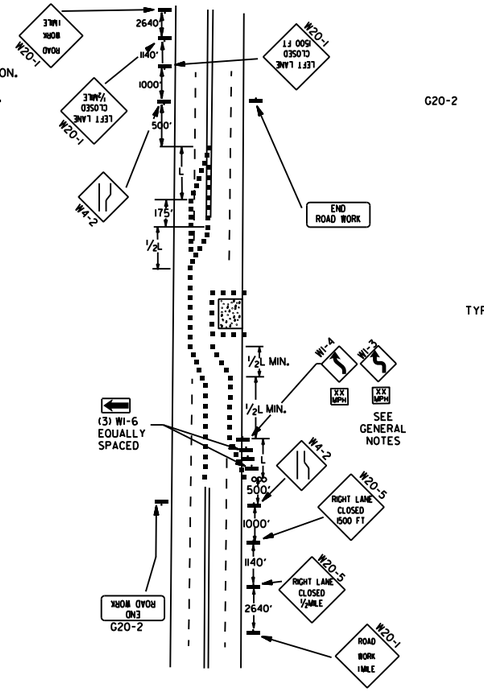
NOTES:
1. SIGNS SHOWN FOR ONE DIRECTION OF TRAVEL ONLY.
2. DELINEATORS ON BYPASS WHERE NEEDED.

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

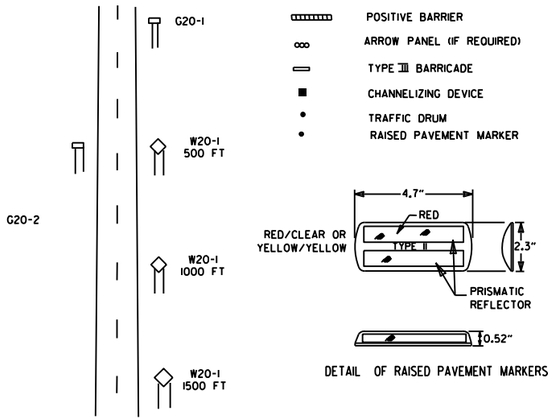


NOTES
1. COMPLETE SIGNING SHOWN ONLY IN CROSSOVER DIRECTION.
2. TWO WAY TRAFFIC SEPARATED WITH POSITIVE BARRIER.

(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:

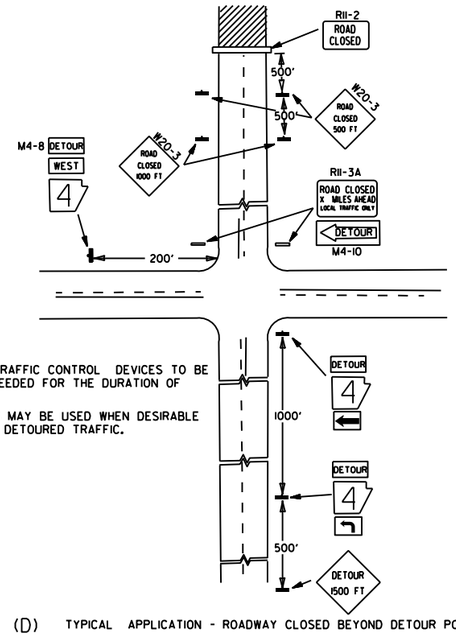
L= MINIMUM LENGTH OF TAPER.

S= NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85TH PERCENTILE SPEED.

W= WIDTH OF OFFSET.

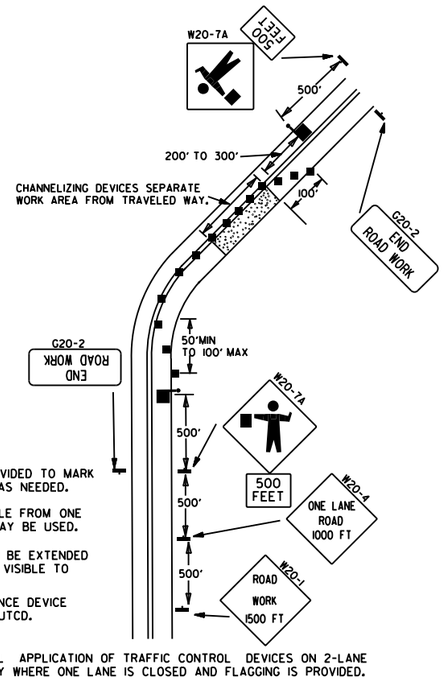
GENERAL NOTES:

1. THE MAINTENANCE DIVISION SHALL CONDUCT A BALL BANK STUDY TO DETERMINE THE ADVISORY SPEED LIMIT PRIOR TO OPENING TO TRAFFIC. THE ADVISORY SPEED WILL BE POSTED ON WI-3 OR WI-4 CURVE WARNING SIGNS. USE WI-4 WHEN SPEED IS GREATER THAN 30MPH AND WI-3 WHEN 30MPH OR LESS
2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-1(55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-145MPH 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 R2-155MPH 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. PAYMENT FOR TRAFFIC DRUMS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR VARIOUS TRAILER MOUNTED DEVICES.
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 ARDOT QUALIFIED PRODUCTS LIST.
9. ALL TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).



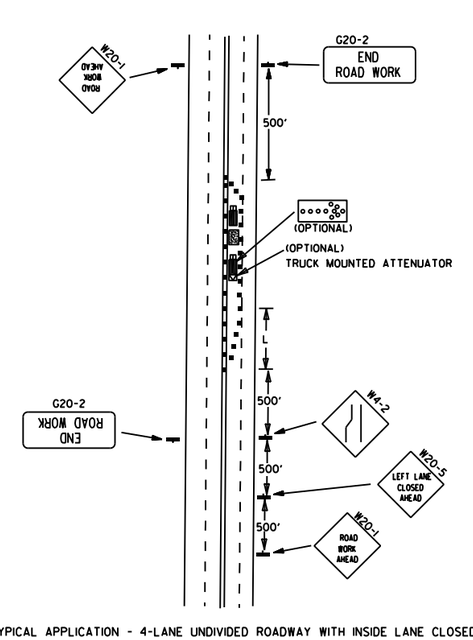
NOTES:
1. REGULATORY TRAFFIC CONTROL DEVICES TO BE MODIFIED AS NEEDED FOR THE DURATION OF THE DETOUR.
2. STREET NAMES MAY BE USED WHEN DESIRABLE FOR DIRECTING DETOURED TRAFFIC.

(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.



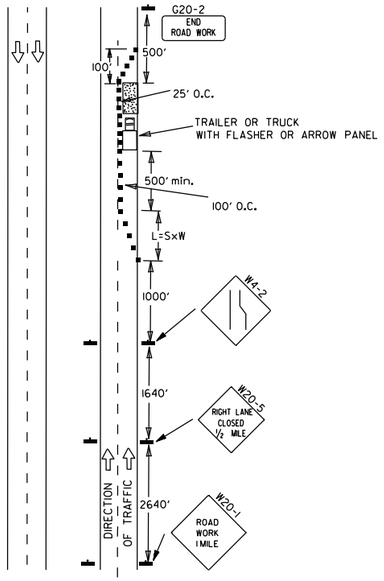
(F) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WITH INSIDE LANE CLOSED.

DATE	REVISION	FILMED
05-20-21	REVISED NOTE 7	
11-07-19	REVISED NOTE 1, ADDED NOTE 9	
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	
3-11-10	ADDED (AFAD)	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED GENERAL NOTE	
10-18-96	ADDED R55-1	
4-26-96	CORRECTED (a) BEHIND G20-2	
6-8-95	CORRECTED SIGN IDENT. ON W1-4A	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

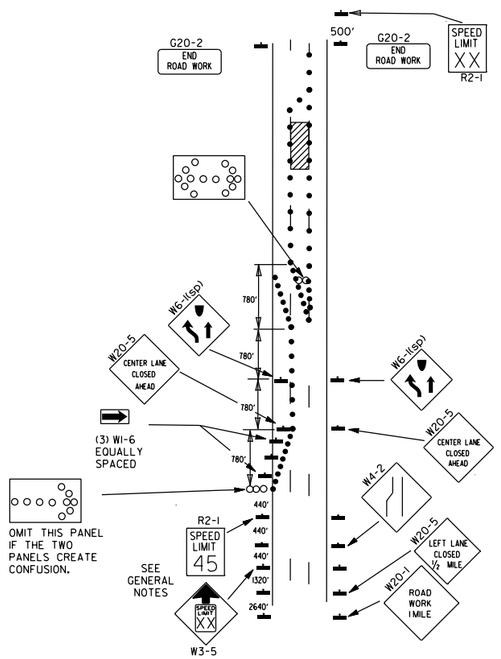
ARKANSAS STATE HIGHWAY COMMISSION

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.

KEY:

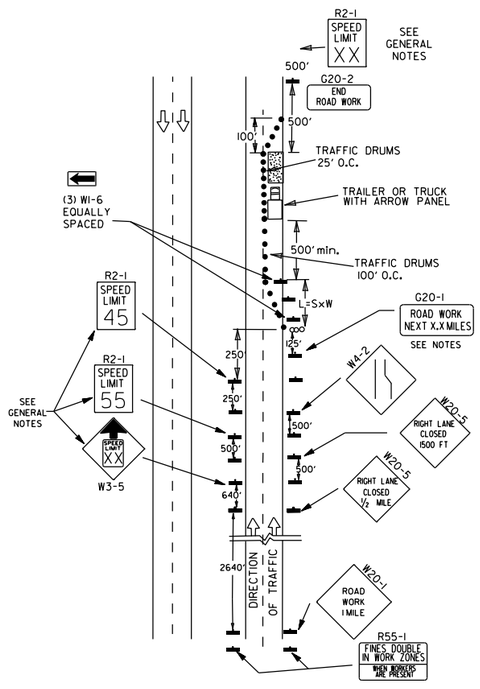
ARROW PANEL (IF REQUIRED)

■ CHANNELIZING DEVICE

● TRAFFIC DRUM

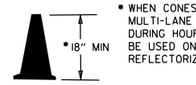
GENERAL NOTES:

1. A SPEED LIMIT REDUCTION MAY BE IMPLEMENTED ONLY WHEN DESIGNATED IN THE PLAN OR WHEN RECOMMENDED BY THE ROADWAY DESIGN DIVISION.
2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-1(55) SHALL BE OMITTED AND THE 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. THE G20-1 SIGN WILL BE REQUIRED ON JOBS OF OVER TWO MILES IN LENGTH. WHEN THE LANE CLOSURE IS NOT AT THE BEGINNING OF THE PROJECT, THE G20-1 SIGN SHALL BE ERECTED 125' IN ADVANCE OF THE JOB LIMIT. ADDITIONAL W20-1 (1 MILE) SIGNS ARE NOT REQUIRED IN ADVANCE OF LANE CLOSURES THAT BEGIN INSIDE THE PROJECT LIMITS.
8. FLAGGERS SHALL USE STOP/SLOW PADDLES FOR CONTROLLING TRAFFIC THROUGH WORK ZONES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.
9. ALL PLASTIC DRUMS AND CONES SHALL MEET THE REQUIREMENTS OF 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. PAYMENT FOR TRAFFIC DRUMS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR VARIOUS TRAILER MOUNTED DEVICES.
11. ALL TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).



(C) TYPICAL APPLICATION - CONSTRUCTION OPERATIONS OF INTERMEDIATE TO LONG TERM DURATION ON A 4-LANE DIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.

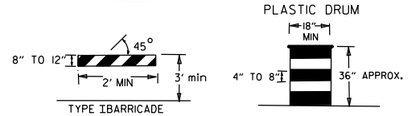
CHANNELIZING DEVICES



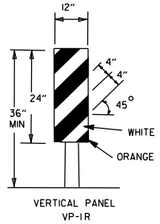
* WHEN CONES ARE USED ON FREEWAYS AND MULTI-LANE HIGHWAYS, THEY SHALL BE 28" MIN. DURING HOURS OF DARKNESS, 28" CONES SHALL BE USED ON ALL ROADWAYS, AND SHALL BE REFLECTORIZED IN ACCORDANCE WITH THE M.U.T.C.D.

CONES

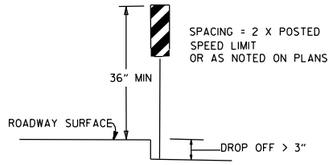
PLASTIC DRUM



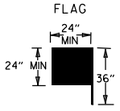
NOTE:
FOR ALL ROAD CLOSURES, THE TYPE III BARRICADES SHALL BE OF SUFFICIENT LENGTH TO EXTEND ACROSS ENTIRE ROADWAY.



VERTICAL PANEL PLACEMENT



FLAG



FLAG SHALL BE OF GOOD GRADE RED MATERIAL

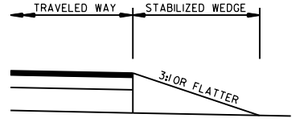
TRAFFIC CONTROL DEVICES			
NON-INTERSTATE			
VERTICAL DIFFERENTIAL	LOCATION	TRAFFIC CONTROL	
		≤ 45 MPH	> 45 MPH
≤ 1"	CENTERLINE	W8-11	W8-11
> 1" ≤ 3"	CENTERLINE	W8-11 AND CENTERLINE LANE STRIPING	W8-11 AND CENTERLINE LANE STRIPING
> 3"	CENTERLINE	STANDARD LANE CLOSURE[6]	STANDARD LANE CLOSURE[6]
≤ 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-9 AND TRAFFIC DRUMS[1]	W8-9 AND TRAFFIC DRUMS[1]
> 3" ≤ 6"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS[1]	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS[1]
> 6" ≤ 18"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS[1]	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS[2]
> 18" ≤ 24"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS[1]	A STABILIZED WEDGE, W8-17, EDGE LINE STRIPING AND TRAFFIC DRUMS[3]
> 24"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	PRECAST CONCRETE BARRIER[4] & EDGE LINES	PRECAST CONCRETE BARRIER[4] & EDGE LINES

INTERSTATE		
VERTICAL DIFFERENTIAL	LOCATION	TRAFFIC CONTROL
≤ 3"	CENTERLINE	W8-11 AND LANE STRIPING
≤ 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-9, EDGE LINE STRIPING, AND TRAFFIC DRUMS[2]
> 3" ≤ 6"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS[2]
> 6"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	PRECAST CONCRETE BARRIER & EDGE LINES

INTERSTATE AND NON-INTERSTATE		
FORESLOPE	HEIGHT	TRAFFIC CONTROL
1:1	> 2 FT	PRECAST CONCRETE BARRIER
2:1	≤ 5 FT	TRAFFIC DRUMS
2:1	> 5 FT	PRECAST CONCRETE BARRIER
Flatter than 2:1	N/A	TRAFFIC DRUMS

GENERAL NOTES:

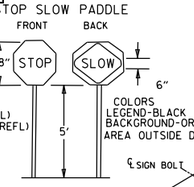
1. WHEN THE SHOULDER AREA IS USED AS PART OF THE TRAVELED LANE AND THERE IS INSUFFICIENT WIDTH TO PLACE TRAFFIC DRUMS ON THE REMAINING SHOULDER WIDTH, THEN VERTICAL PANELS SHALL BE USED.
2. WHEN THERE IS INSUFFICIENT WIDTH TO PLACE TRAFFIC DRUMS ON THE REMAINING SHOULDER WIDTH, A STABILIZED WEDGE SHALL BE USED.
3. PRECAST CONCRETE BARRIER WALL CAN BE USED IN LIEU OF A STABILIZED WEDGE, W8-17 SIGN, EDGE LINE STRIPING, AND TRAFFIC DRUMS, IF AND WHERE DIRECTED BY THE ENGINEER.
4. A STABILIZED WEDGE, W8-17 SIGN, EDGE LINE STRIPING, AND TRAFFIC DRUMS CAN BE USED IN LIEU OF PRECAST CONCRETE BARRIER WALL, IF AND WHERE DIRECTED BY THE ENGINEER.
5. W21-5, W21-5a, AND/OR W21-5b SIGNS SHALL BE USED WHERE THE ROADWAY IS UNOBSTRUCTED IF AND WHERE DIRECTED BY THE ENGINEER.
6. TIME LIMITATIONS MUST CONFORM TO SECTION 603 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).

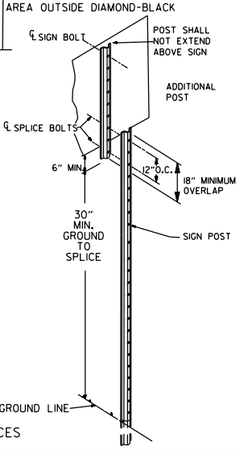


STABILIZED WEDGE

NOTE:
MATERIALS FOR THE STABILIZED WEDGE SHALL MEET THE REQUIREMENTS PROVIDED IN SECTION 603.02 OF THE STANDARD SPECIFICATIONS.

STOP SLOW PADDLE

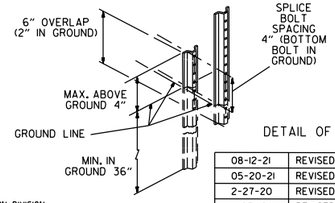




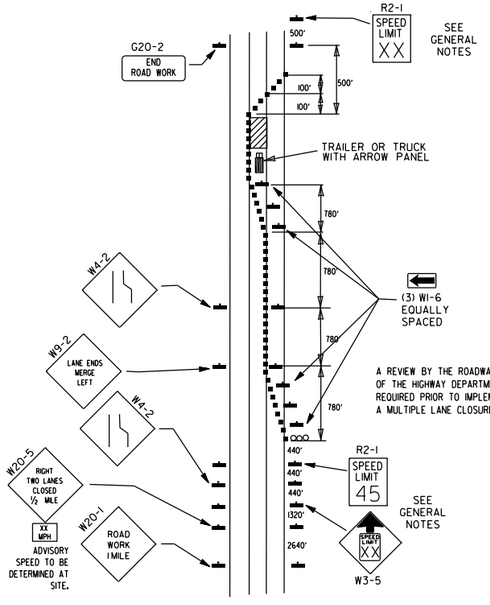
NOTES: USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-21)

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

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



DETAIL OF SPLICES



A REVIEW BY THE ROADWAY DESIGN DIVISION OF THE HIGHWAY DEPARTMENT WILL BE REQUIRED PRIOR TO IMPLEMENTING A MULTIPLE LANE CLOSURE.

(D) TYPICAL APPLICATION - CLOSING MULTIPLE LANES OF A MULTILANE HIGHWAY.

DATE	REVISION	FILMED
08-12-21	REVISED TRAFFIC CONTROL DEVICES AND NOTES	
05-20-21	REVISED NOTE 10	
2-27-20	REVISED TRAFFIC CONTROL DEVICES DETAILS	
11-07-19	REVISED NOTE 9, ADDED NOTE 11	
7-25-19	REVISED TRAFFIC CONTROL DEVICES DETAILS	
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	

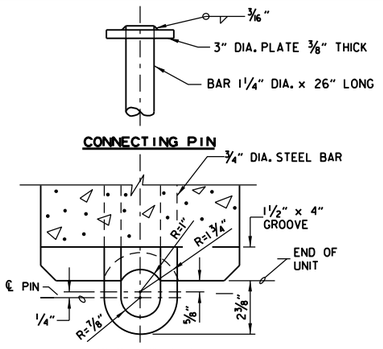
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

STANDARD DRAWING TC-3

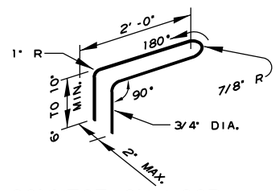
REINFORCING BAR TABLE PER BARRIER UNIT

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°; 1 1/2"; 9"; 2'-1 3/8"; 4 3/8"

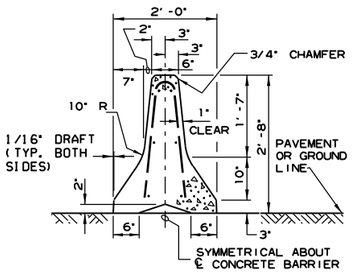


SECTION E-E

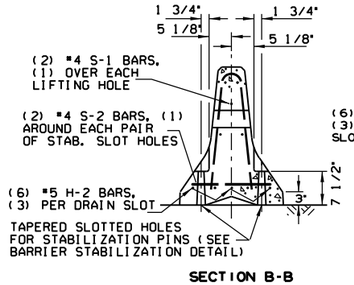
CONNECTION DETAILS



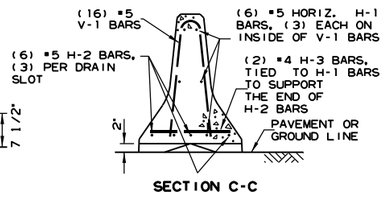
CONNECTION LOOP



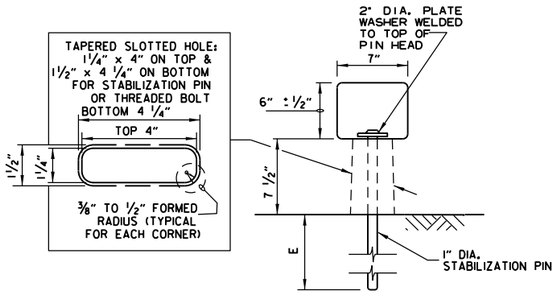
SECTION A-A



SECTION B-B



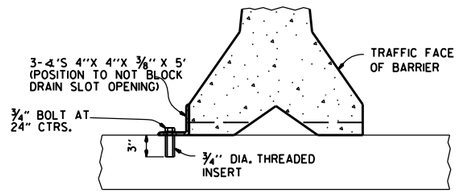
SECTION C-C



BARRIER STABILIZATION DETAIL

ROADWAY SECTION

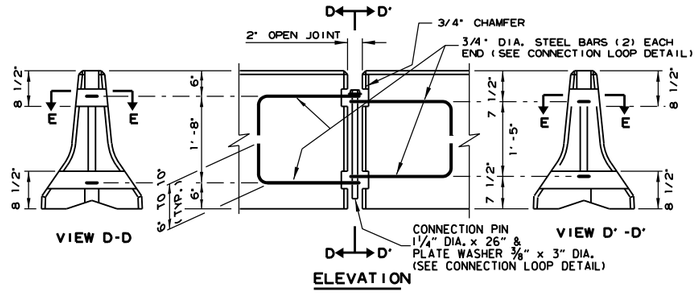
(E) 4" - CONCRETE PAVEMENT
8" - ASPHALT PAVEMENT
12" - SHOULDER AREAS



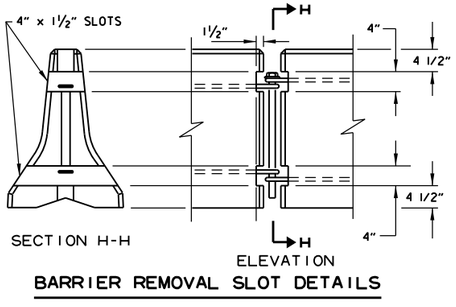
NOTE: " THREADED INSERTS SHALL BE CAST IN PLACE FOR ALL NEW BRIDGE DECKS AND DRILLED AND GROUTED FOR EXISTING BRIDGE DECKS. INSERTS SHALL HAVE A MINIMUM ULTIMATE LOAD CAPACITY OF 8000 LBS. IN TENSION. AFTER REMOVAL OF BARRIER, BOLTS, AND ANGLES, THE INSERTS SHALL BE FILLED WITH APPROVED NON-SHRINK EPOXY.

BARRIER STABILIZATION DETAIL

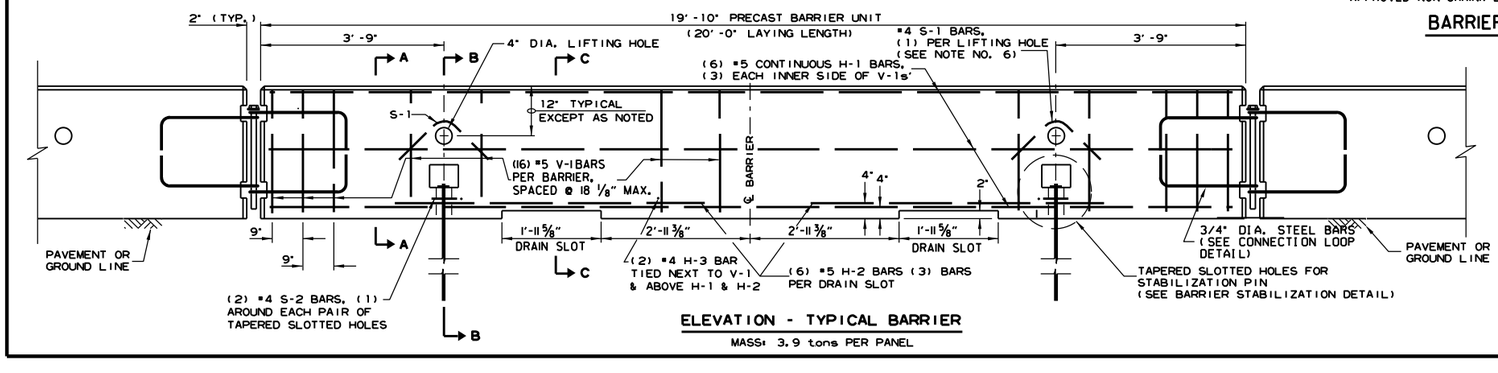
BRIDGE DECKS



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 ARDOT 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 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 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 MANUAL FOR ASSESSING SAFETY HARDWARE (MASH). 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.

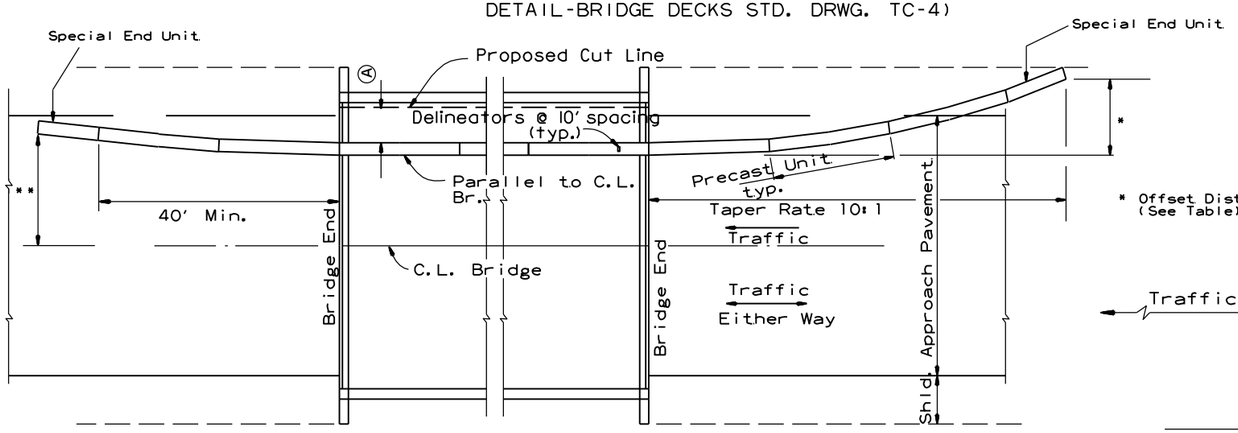
DATE	REVISION	FILMED
11-07-19	REVISED NOTE 3	
2-27-14	REVISED BARRIER STABILIZATION DETAIL	
10-15-09	ADDED REFERENCE TO WASH	
8-5-09	REV. NOTE 3 CONCERNING DRAIN SLOTS	
11-29-07	REVISED NOTE 3	
5-25-06	DELETED GENERAL NOTE 7	
11-18-04	REVISED BARRIER STABILIZATION DETAIL BRIDGE DECKS	
4-10-03	REVISED 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

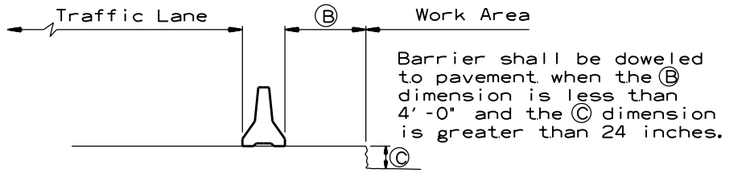
Ⓐ 4 feet or greater preferred. If less than 4 feet, Precast Units shall be connected to slab (SEE BARRIER STABILIZATION DETAIL-BRIDGE DECKS STD. DRWG. TC-4)



* Offset Distance (See Table)

BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET

No Scale

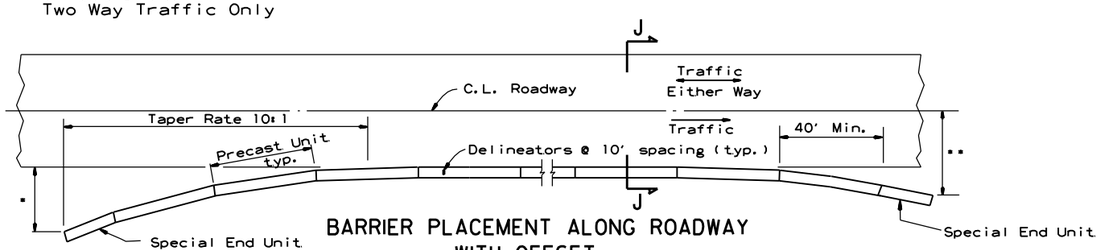


Barrier shall be doweled to pavement when the Ⓑ dimension is less than 4'-0" and the Ⓒ dimension is greater than 24 inches.

SECTION J-J

No Scale

** Offset Distance for Two Way Traffic Only



BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET

No Scale

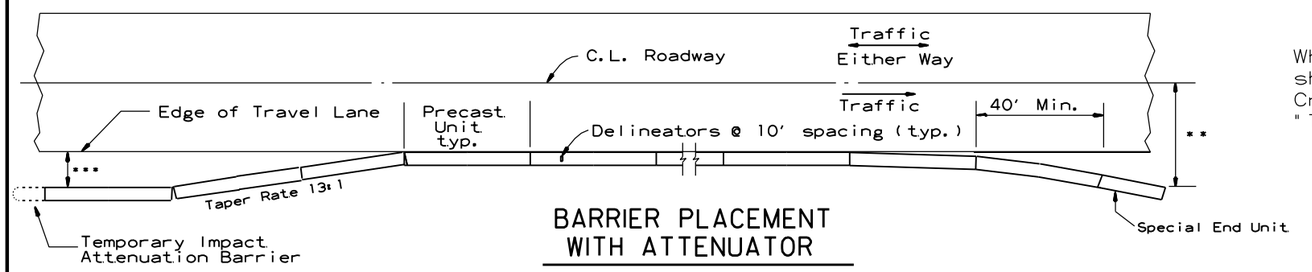
* Offset Distance (See Table)

** 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.

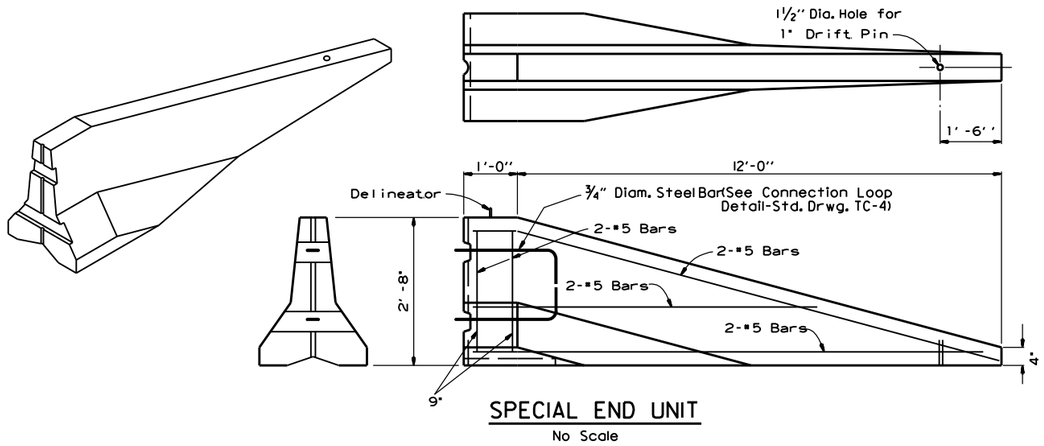


BARRIER PLACEMENT WITH ATTENUATOR

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 a 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
11-07-19	REVISED NOTE	
10-15-09	ADDED REFERENCE TO MASH	
5-25-06	REVISED BARRIER PLACEMENT	
8-22-02	ISSUED NEW DRAWING	

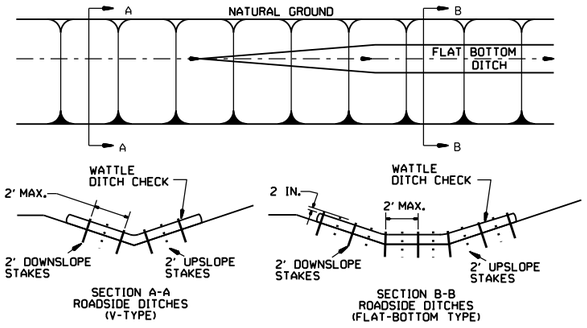
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

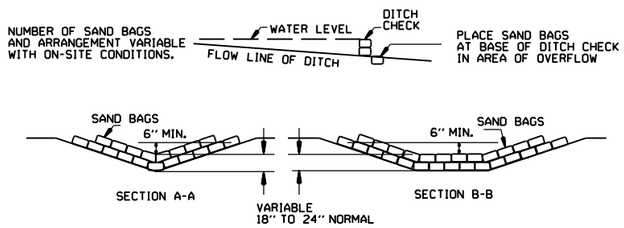
STANDARD DRAWING TC-5

GENERAL NOTES

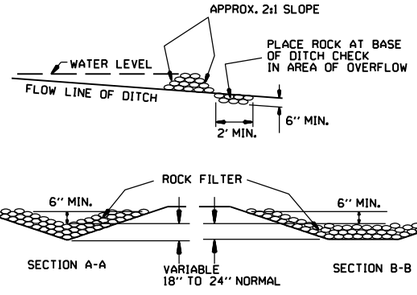
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



SAND BAG DITCH CHECK (E-5)

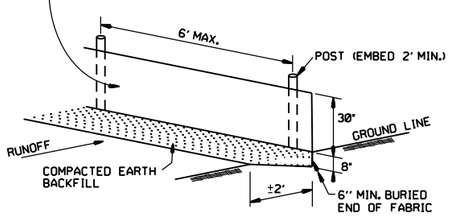


ROCK DITCH CHECK (E-6)

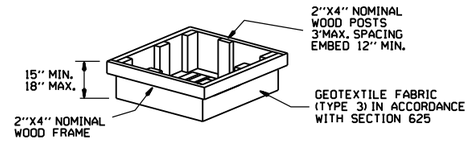
GENERAL NOTES

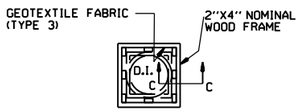
GEOTEXTILE FABRIC (TYPE 4) IN ACCORDANCE WITH SECTION 625

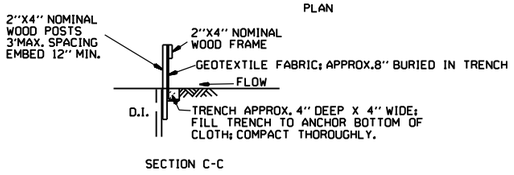
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.



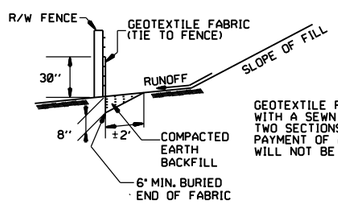
SILT FENCE (E-11)





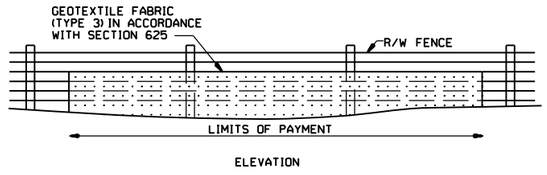


DROP INLET SILT FENCE (E-7)



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.



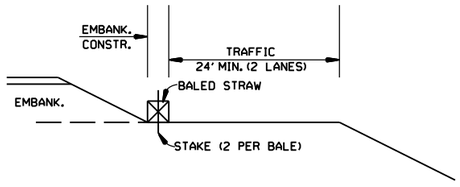
SILT FENCE ON R/W FENCE (E-4)

GENERAL NOTES

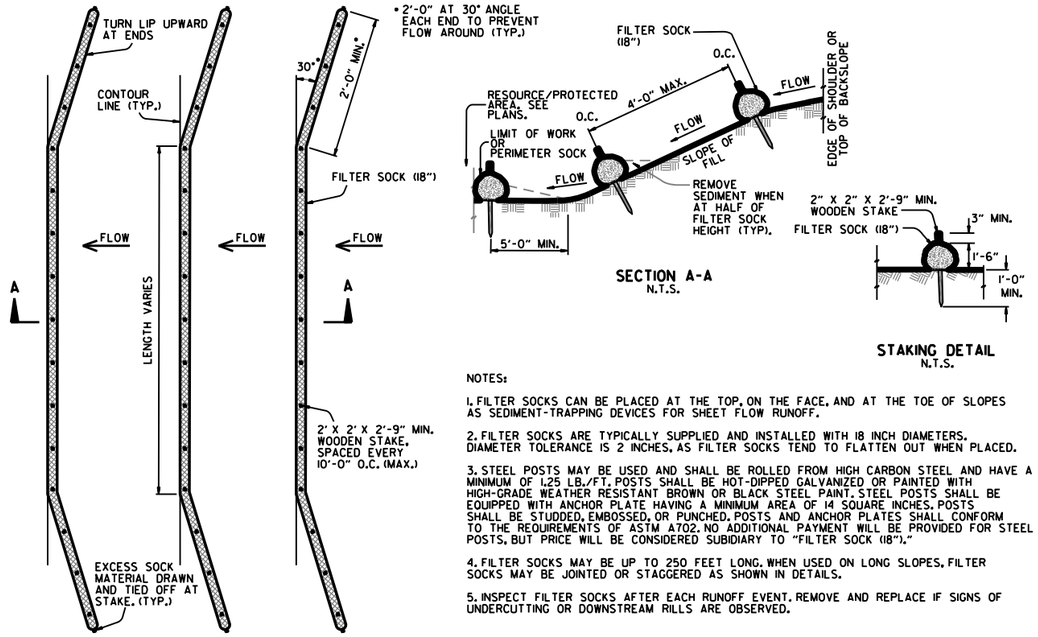
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.

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)



NOTES:

1. FILTER SOCKS CAN BE PLACED AT THE TOP, ON THE FACE, AND AT THE TOE OF SLOPES AS SEDIMENT-TRAPPING DEVICES FOR SHEET FLOW RUNOFF.

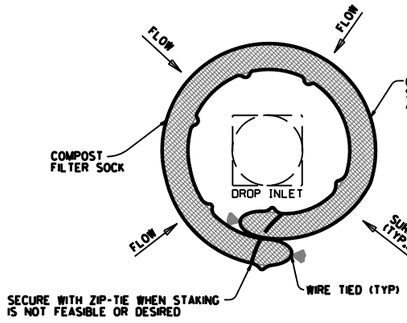
2. FILTER SOCKS ARE TYPICALLY SUPPLIED AND INSTALLED WITH 18 INCH DIAMETERS. DIAMETER TOLERANCE IS 2 INCHES, AS FILTER SOCKS TEND TO FLATTEN OUT WHEN PLACED.

3. STEEL POSTS MAY BE USED AND SHALL BE ROLLED FROM HIGH CARBON STEEL AND HAVE A MINIMUM OF 1.25 LB./FT. POSTS SHALL BE HOT-DIPPED GALVANIZED OR PAINTED WITH HIGH-GRADE WEATHER RESISTANT BROWN OR BLACK STEEL PAINT. STEEL POSTS SHALL BE EQUIPPED WITH ANCHOR PLATE HAVING A MINIMUM AREA OF 14 SQUARE INCHES. POSTS SHALL BE STUDDED, EMBOSSED, OR PUNCHED. POSTS AND ANCHOR PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A702. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR STEEL POSTS, BUT PRICE WILL BE CONSIDERED SUBIDIARY TO "FILTER SOCK (18")."

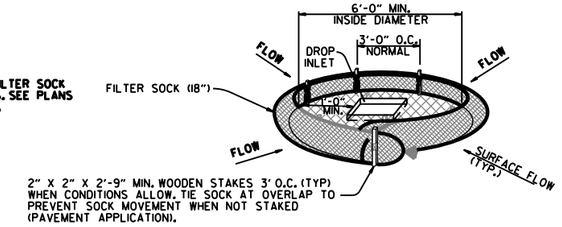
4. FILTER SOCKS MAY BE UP TO 250 FEET LONG. WHEN USED ON LONG SLOPES, FILTER SOCKS MAY BE JOINTED OR STAGGERED AS SHOWN IN DETAILS.

5. INSPECT FILTER SOCKS AFTER EACH RUNOFF EVENT. REMOVE AND REPLACE IF SIGNS OF UNDERCUTTING OR DOWNSTREAM RILLS ARE OBSERVED.

FILTER SOCK ALONG SLOPE (E-3)



DROP INLET PLAN VIEW
N.T.S.



DROP INLET PERSPECTIVE VIEW
N.T.S.

NOTES:

1. OVERLAP ENDS OF SOCK (1' MIN. 3' MAX.).

2. USE 18" DIA. SOCK IN NON-TRAFFIC AREAS OR AREAS WHERE SAFETY IS NOT A CONCERN.

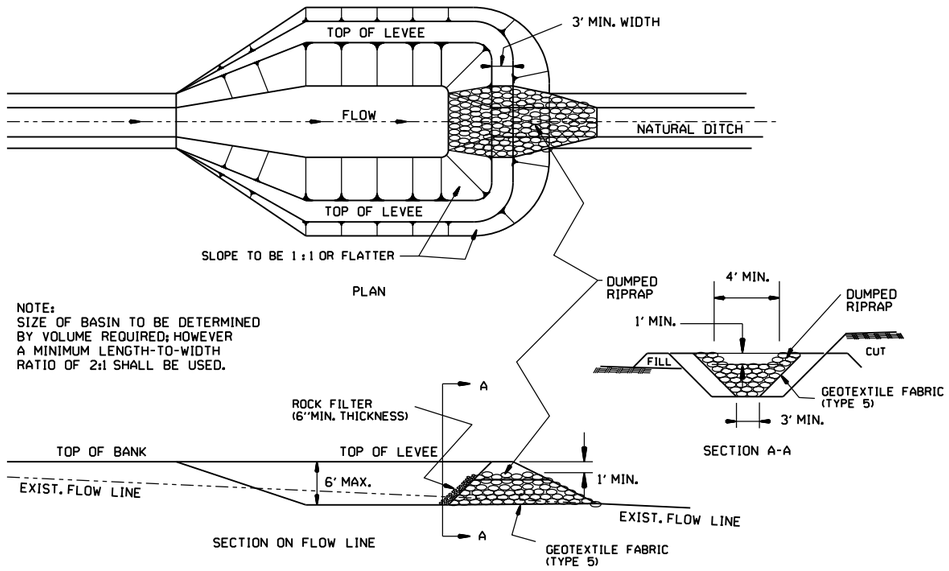
COMPOST FILTER SOCK DROP INLET PROTECTION (E-13)

DATE	REVISION	FILMED
11-16-17	ADDED FILTER SOCK E-3 AND E-13	
12-15-11	DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK	
11-18-98	ADDED NOTES	
07-02-98	ADDED BALED STRAW FILTER BARRIER (E-2)	
07-20-95	REVISED SILT FENCE E-4 AND E-11	7-20-95
07-15-94	REV. E-4 & E-11 MIN. 13" BURIED END OF FABRIC	
06-02-94	REVISED E-1,4,7 & 11; DELETED E-2 & 3	6-2-94
04-01-93	REDRAWN	
10-01-92	REDRAWN	
08-02-76	ISSUED R.D.M.	298-7-28-76

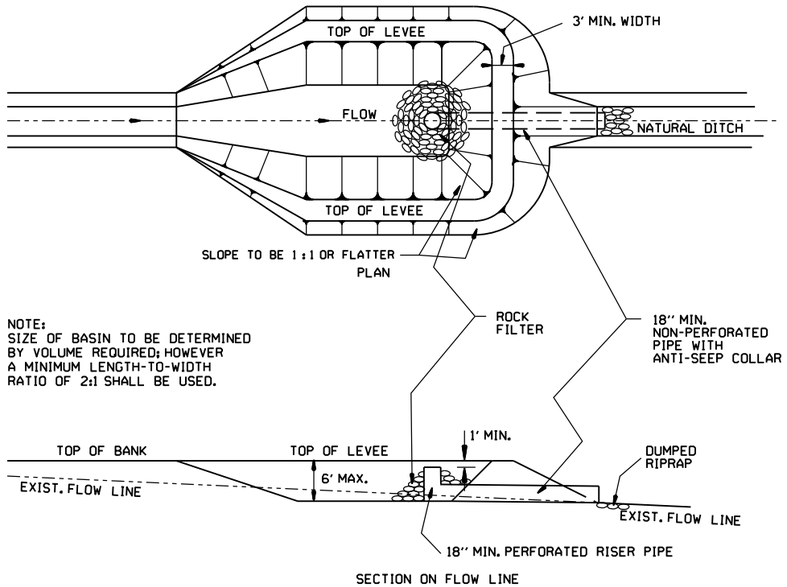
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

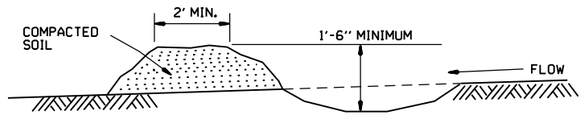
STANDARD DRAWING TEC-1



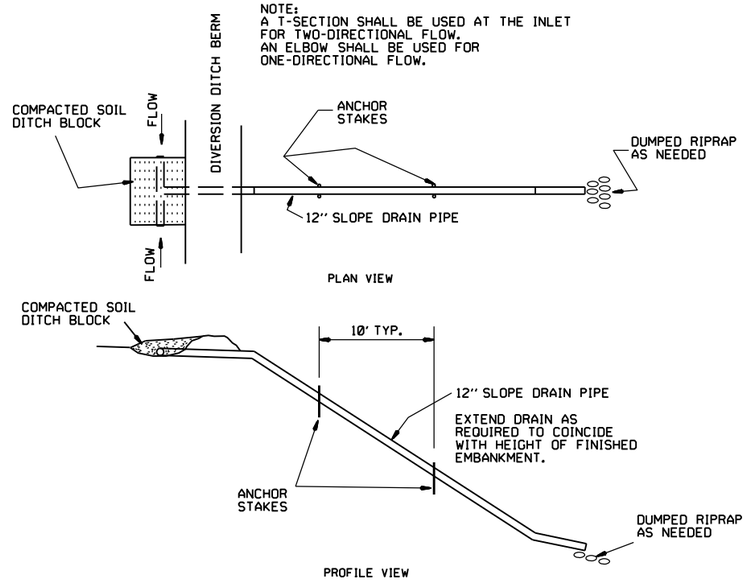
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



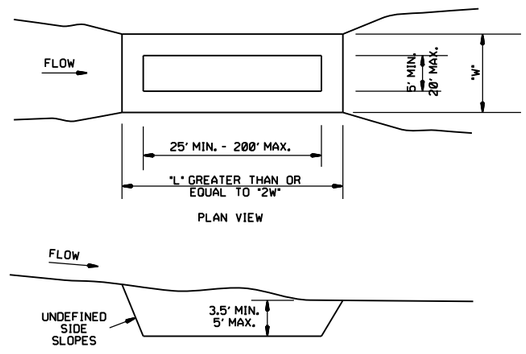
SEDIMENT BASIN WITH PIPE OUTLET (E-10)



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

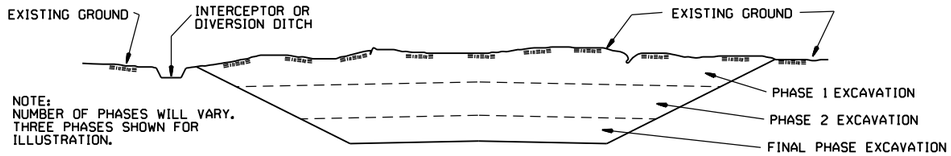
STANDARD DRAWING TEC-2

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



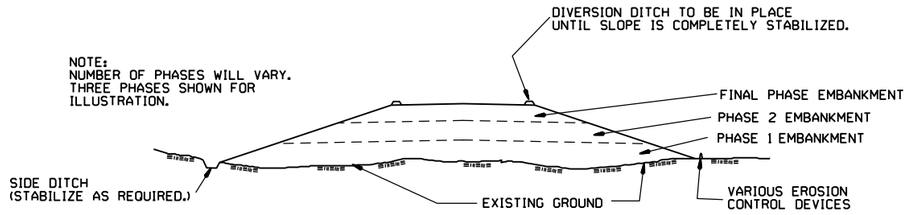
GENERAL NOTE

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

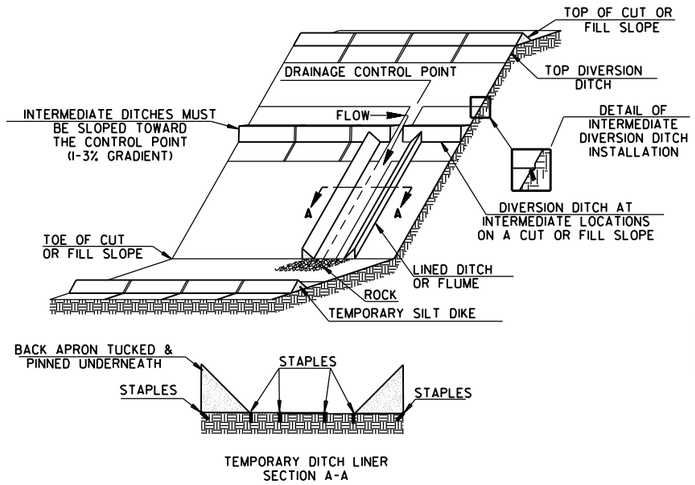
1. CONSTRUCT DIVERSION DITCHES, DITCH CHECKS, SEDIMENT BASINS, SILT FENCES, OR OTHER EROSION CONTROL DEVICES AS SPECIFIED.
2. PLACE PHASE 1 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD 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.

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

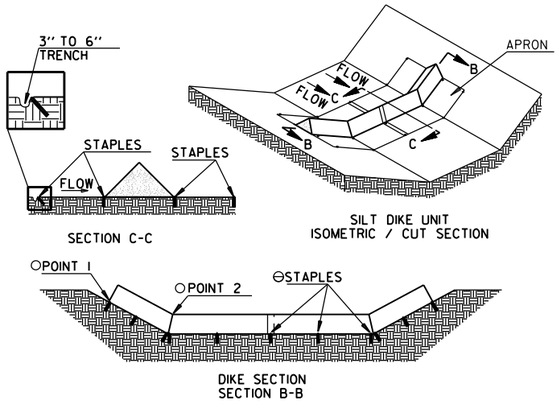
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-3



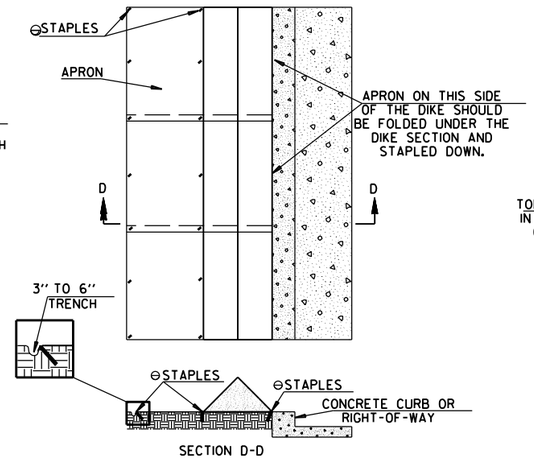
TRIANGULAR SILT DIKE INSTALLATION FOR DIVERSION DITCH AND/OR DITCH LINER



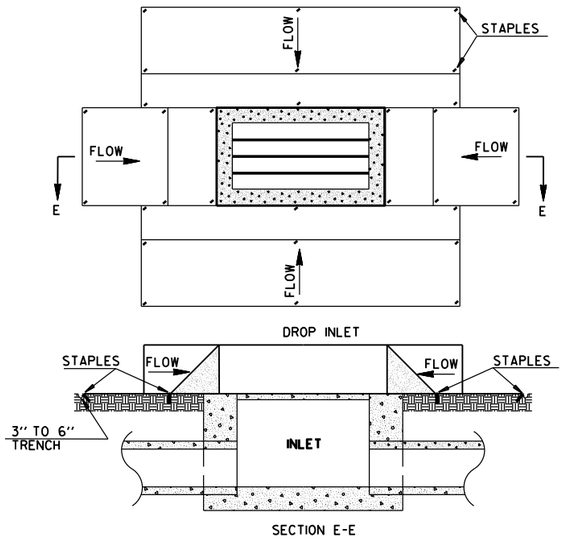
TRIANGULAR SILT DIKE INSTALLATION FOR ROADWAY DITCH OR DRAINAGE DITCH

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

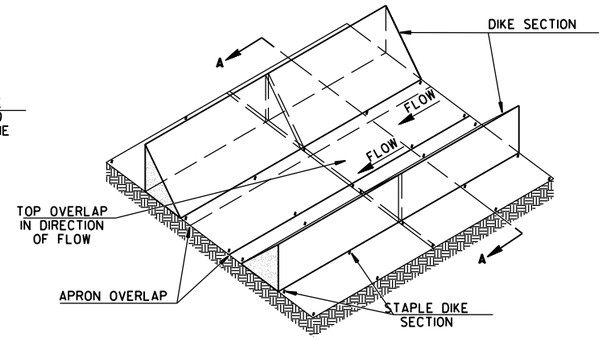
⊖ STAPLES SHALL BE PLACED WHERE THE UNITS OVERLAP AND IN THE CENTER OF THE UNIT AS SHOWN ON THE DIAGRAM.



TRIANGULAR SILT DIKE INSTALLATION FOR CONTINUOUS BARRIER



TRIANGULAR SILT DIKE INSTALLATION FOR DROP INLETS



TRIANGULAR SILT DIKE INSTALLATION FOR TEMPORARY DITCH LINER

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.

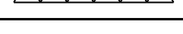
2. TRIANGULAR SILT DIKE SHALL BE TRIANGULAR SHAPED HAVING A HEIGHT OF AT LEAST 8" TO 10" IN THE CENTER WITH EQUAL SIDES AND A 16" TO 20" BASE. THE TRIANGULAR SHAPED INNER MATERIAL SHALL BE URETHANE FOAM. THE OUTER COVER SHALL BE A WOVEN GEOTEXTILE FABRIC PLACED AROUND THE INNER MATERIAL & ALLOWED TO 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.

SYMBOLOGY

SYMBOL TO BE USED TO DENOTE DEVICE ON PLANS



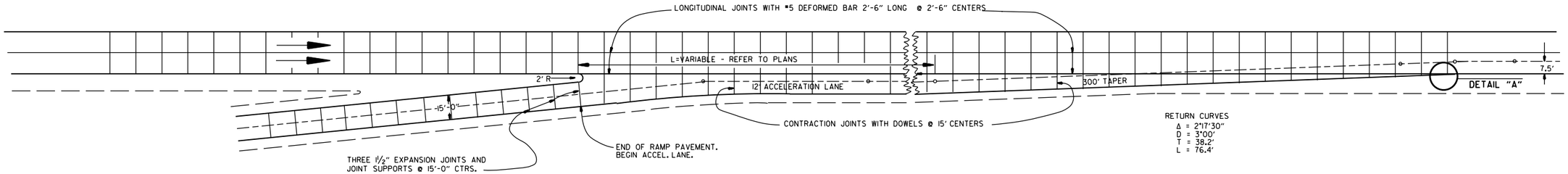
NOTE: SILT DIKE SHOULD ONLY BE USED FOR DROP INLETS IN SUMP LOCATIONS.

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

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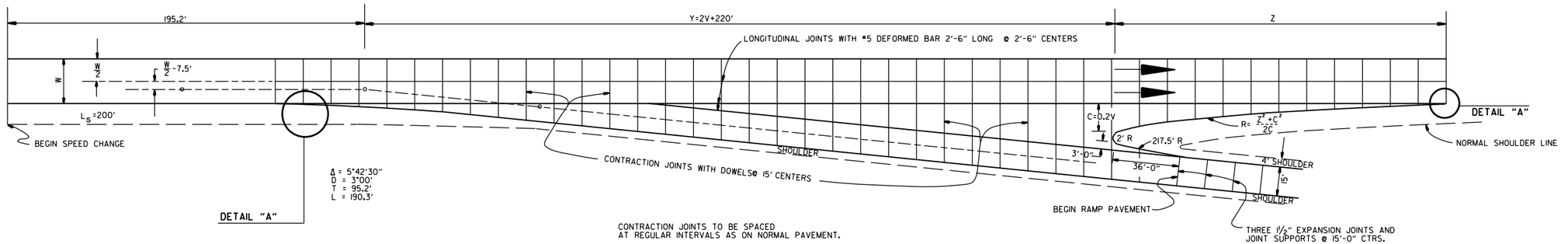
TEMPORARY EROSION CONTROL DEVICES

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.

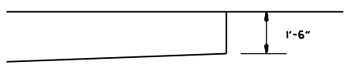


CONTRACTION JOINTS TO BE SPACED AT REGULAR INTERVALS AS ON NORMAL PAVEMENT.

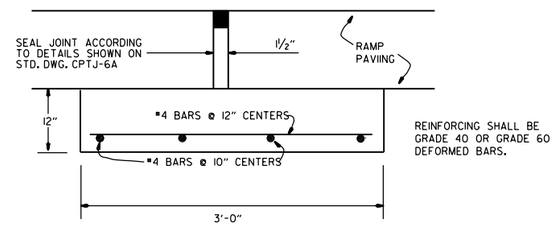
EXIT RAMP

EXIT RAMP

DESIGN SPEED V	X 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

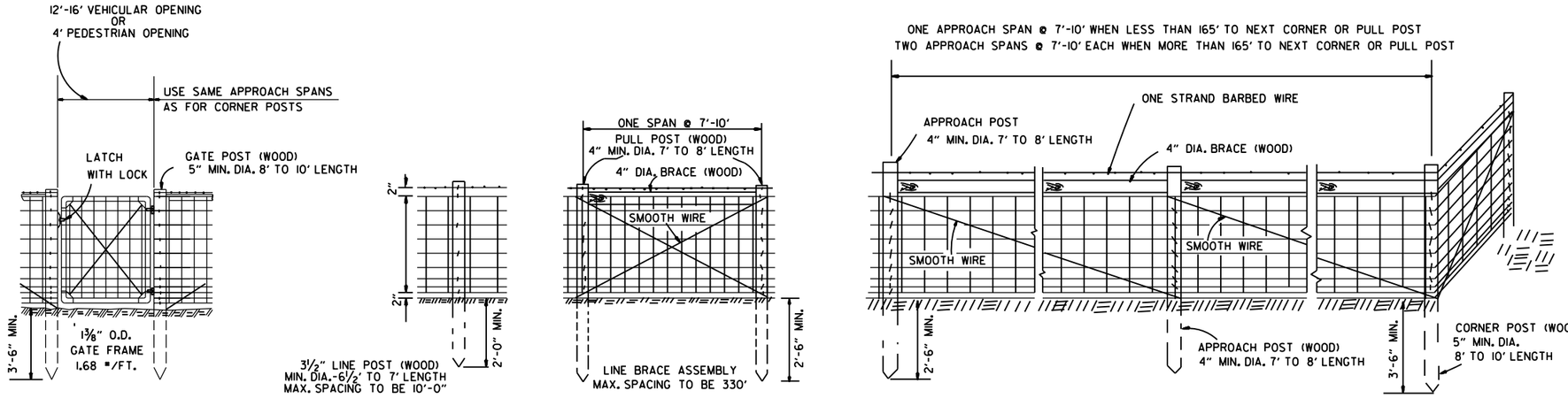
NOTE: THE EXPANSION JOINTS SHALL BE MEASURED AND PAID FOR AS P.C.C. PAVEMENT (RAMP THICKNESS). WHEN RAMP PAVING IS ASPHALT, EXPANSION JOINT IS NOT REQUIRED.
THE JOINT SUPPORT MAY BE CONSTRUCTED WITH CLASS "A", "S", OR PAVING CONCRETE. PAYMENT FOR THE JOINT SUPPORT SHALL BE FOR THE CONTRACT UNIT PRICE 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

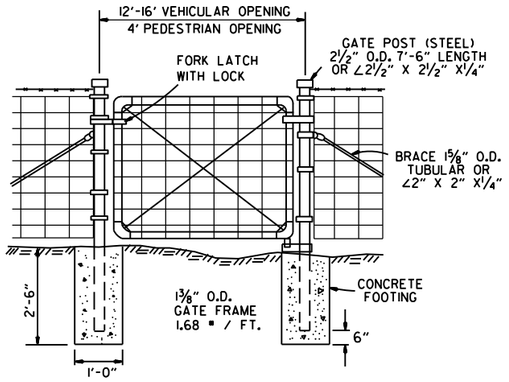
DETAILS OF STANDARD TURNOUT FOR ENTRANCE & EXIT RAMPS (NON-REINFORCED)

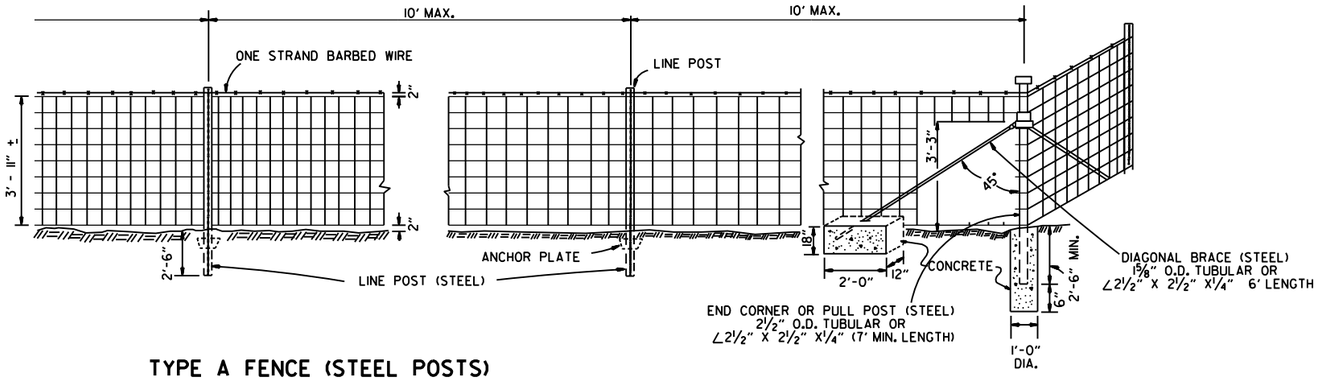
STANDARD DRAWING TR-1A



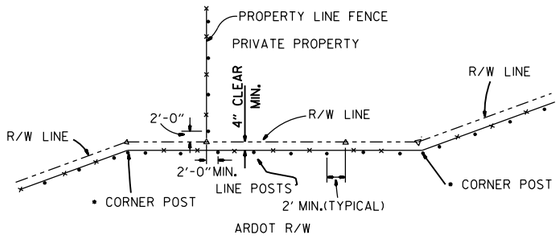
NOTE: STAPLE AT LEAST TOP, BOTTOM AND ALTERNATE WIRES OF WOVEN FABRIC FOR WOOD LINE POSTS.

TYPE A FENCE (WOOD POSTS)





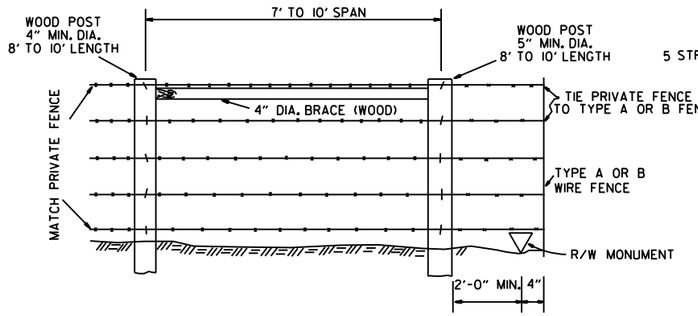
TYPE A FENCE (STEEL POSTS)



•NOTE: RIGHT-OF-WAY MONUMENTS SHALL NOT BE DISTURBED BY FENCE CONSTRUCTION. CORNER POSTS SHALL BE CONSTRUCTED 2' FROM THE RIGHT-OF-WAY MONUMENT OR AS DIRECTED BY THE ENGINEER.

△ - R/W MONUMENTS
• - FENCE POSTS

RIGHT-OF-WAY FENCE LOCATION



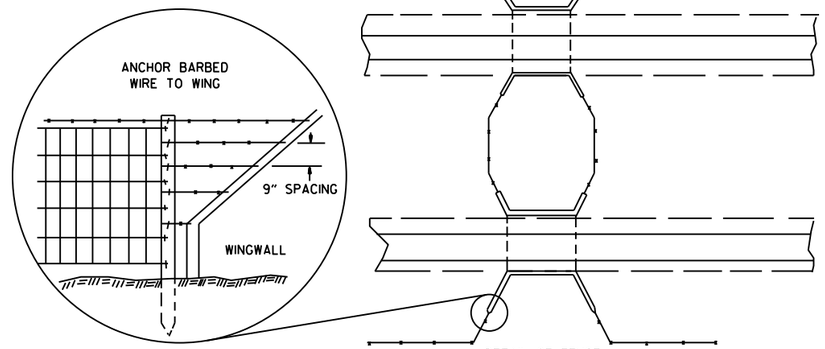
WHERE EXISTING PRIVATE FENCE CONSISTS OF STEEL POSTS, USE END POST ASSEMBLY AS SHOWN WITH TYPE A FENCE OR OTHER END POST ASSEMBLY AS APPROVED BY THE ENGINEER.

PRIVATE FENCE TERMINAL INSTALLATION



SPACING AND SIZE OF POSTS FOR TYPE B FENCE SHALL BE THE SAME AS TYPE A FENCE.

TYPE B FENCE



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

GENERAL NOTES:

STEEL LINE POSTS SHALL BE GALVANIZED, 7 FT. IN LENGTH.

TUBULAR END, CORNER, PULL, OR DIAGONAL BRACES MUST CONFORM TO THE DIMENSIONS AND WEIGHTS SPECIFIED ON STANDARD DRAWING WF-3 (CHAIN LINK).

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

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

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

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

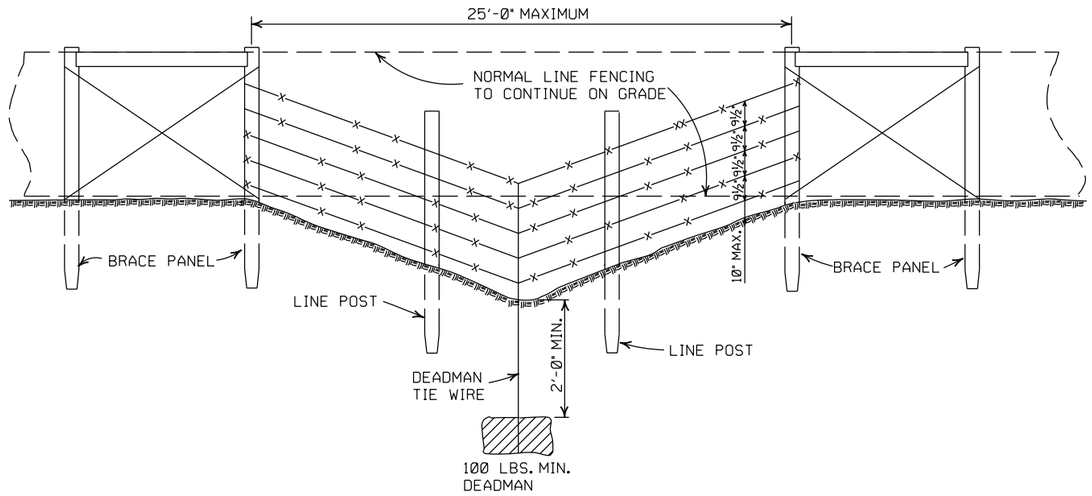
SPLICE FOR BARBED WIRE BETWEEN PULL POST ASSEMBLY SHALL BE BY THE "EYE METHOD": AS DESCRIBED AS FOLLOWS: THE ENDS OF THE BARBED WIRE SHALL BE BENT TO FORM A LOOP. THE LOOPS SHALL BE CONNECTED. AFTER THE LOOPS ARE CONNECTED THE ENDS OF THE WIRE SHALL BE WRAPPED AROUND THE PROJECTING WIRE A MINIMUM OF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

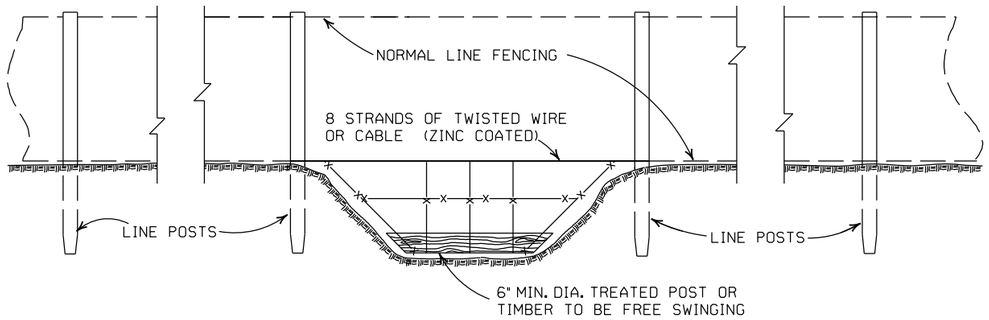
DATE	REVISION	DATE FILMED
8-22-02	REVISED GENERAL NOTES	
10-18-96	REVISED ASTM REF. TO AASHTO	
11-22-95	REVISED R-O-W LOCATION DETAIL	
6-2-94	ADDED CORNER POST NOTE	6-2-94
8-5-93	REVISED R-O-W LOCATION DETAIL	8-5-93
10-1-92	ADDED STAPLE NOTE	
8-2-90	REV'D PULL POST LENGTH	
11-30-89	DELETED CLASS CONC.	
7-15-88	ADDED SPLICE NOTES	
7-15-88	ADDED HEIGHT DIMENSION	
4-3-87	REVISED VARIOUS NOTES	
	AND GENERAL NOTES	
11-1-84	MAX. POST SPACING	
1-4-83	MIN. DIA. LINE POST	
10-2-72	REVISED & REDRAWN	

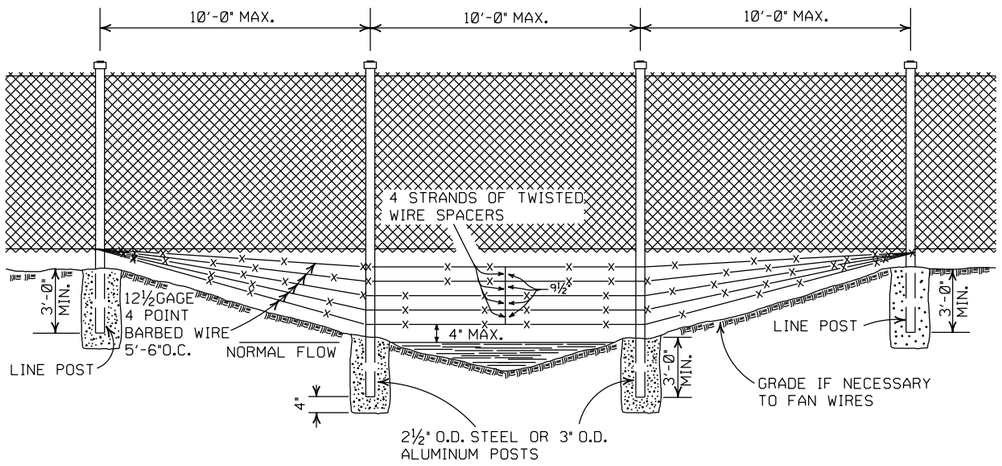
ARKANSAS STATE HIGHWAY COMMISSION

WIRE FENCE
TYPE A AND B

STANDARD DRAWING WF-1







GENERAL NOTES:

THESE INSTALLATIONS TO BE USED WHERE NORMAL FENCING INSTALLATION WOULD CAUSE THE COLLECTING OF DRIFT IN THE CHANNEL OR THE DEPRESSION WILL NOT PERMIT NORMAL INSTALLATION. INSTALLATIONS WILL BE MADE ONLY WHERE DIRECTED BY THE ENGINEER.

WHEN A FENCE LINE APPROACHES A DITCH, GULLY OR DEPRESSION, THE LAST POST ON LEVEL GROUND SHALL BE PLACED CLOSE ENOUGH TO THE EDGE OF THE DROP OFF THAT THE FENCE MAY BE STRUNG TO THE POST IN THE DEPRESSION WITHOUT TOUCHING THE GROUND.

IN TERRAIN OF SUCH EXTREME IRREGULARITY THAT MINOR GRADING WILL NOT BE FEASIBLE, THE NORMAL FENCE SHALL CONTINUE ON GRADE AND THE GULLIES OR DEPRESSIONS TREATED BY AUXILIARY FENCES AS SHOWN.

PAYMENT FOR THE TYPE INSTALLATION USED WILL NOT BE MADE DIRECTLY BUT WILL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR WIRE FENCE OR CHAIN LINK FENCE.

DATE	REVISION	FILMED
4-20-79	REVISED TOP RAIL & TENSION WIRE	696-4-20-79
10-2-72	REVISED AND REDRAWN	529-10-2-72

ARKANSAS STATE HIGHWAY COMMISSION

WIRE FENCE WATER GAPS

STANDARD DRAWING WF-2