DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	1	303
				(2) ALCOA RD. - HWY. 183 (S)				

ARKANSAS DEPARTMENT OF TRANSPORTATION
CONSTRUCTION PLANS FOR STATE HIGHWAY

ALCOA RD. - HWY. 183 (S)

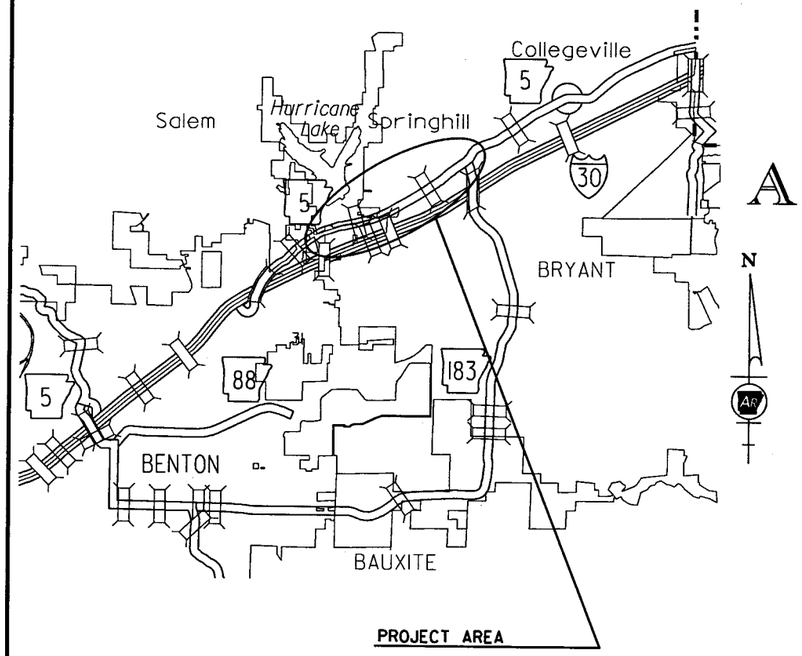
SALINE COUNTY

ROUTE 5 SECTION 8

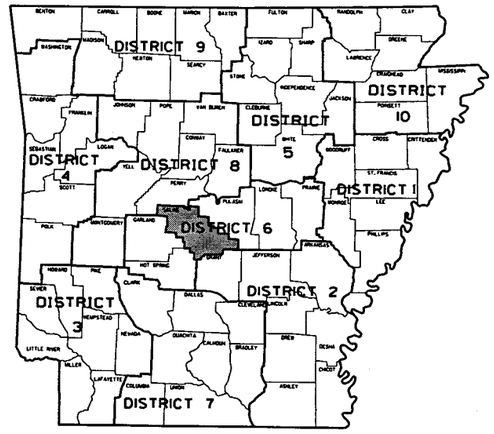
FEDERAL AID PROJ. STPC-9061(6)

JOB 061335

NOT TO SCALE



VICINITY MAP



ARK. HWY. DIST. NO. 6

DESIGN TRAFFIC DATA

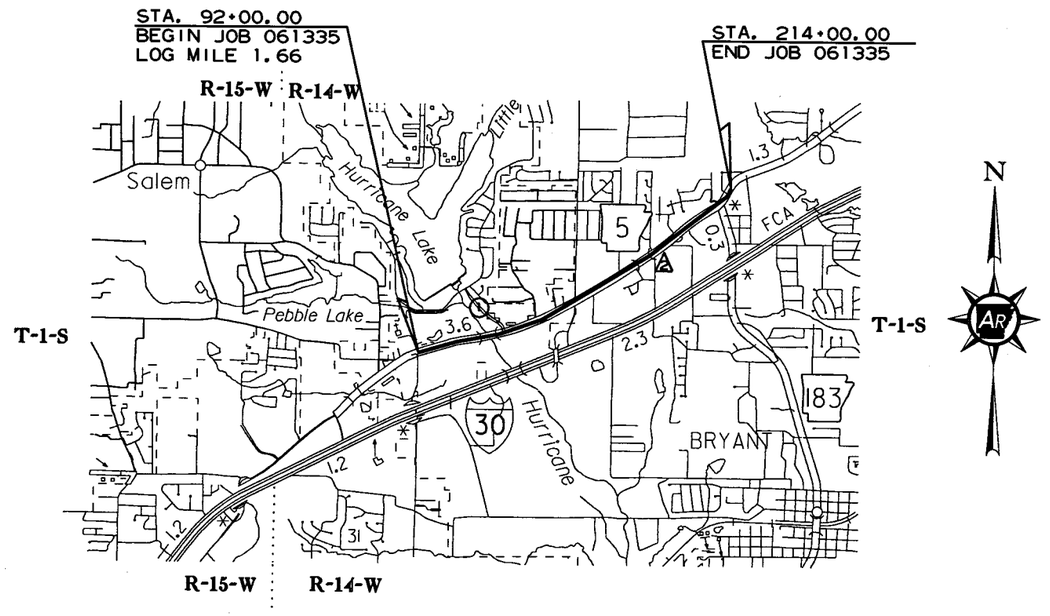
DESIGN YEAR	2038
2018 ADT	16,000
2038 ADT	24,400
2038 DHV	2684
DIRECTIONAL DISTRIBUTION	0.60
TRUCKS	2%
DESIGN SPEED	45 MPH

BRIDGE DATA

(1) STA. 115+36.83 BR. END
BR. NO. 07365
188'-0" CONTINUOUS COMP. W-BEAM
UNIT (61' - 66' - 61')
66'-0" CLEAR ROADWAY
190.34' BRIDGE LENGTH
STA. 117+27.17 BR. END

STRUCTURES OVER 20'-0" SPAN

(A) STA. 176+00 IN PLACE
TRIPLE 10' x 6' x 101' R.C. BOX CULVERT
ON A 20° LT. FWD. SKEW
WITH 3:1 WINGS LT. & STRAIGHT WINGS RT.
Q50 = 1605 CFS D.A. = 548 ACRES
SPAN = 32'-11"
RETAIN



	BEGIN PROJECT	MID-POINT OF PROJECT	END PROJECT
LATITUDE	N 34°36'41"	N 34°37'00"	N 34°37'33"
LONGITUDE	W 92°32'02"	W 92°30'50"	W 92°29'54"

LENGTH OF PROJECT CALCULATED ALONG C.L.

GROSS LENGTH OF	PROJECT	12200.00	FEET	OR	2.311	MILES
NET	ROADWAY	11976.74			2.269	MILES
NET	BRIDGES	223.26			0.042	MILES
NET	PROJECT	12200.00			2.311	MILES

APPROVED

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
NO. 7634
M.E. BANKS

8-1-18

DEPUTY DIRECTOR
AND CHIEF ENGINEER

2/13/2018

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	2	303

(2) INDEX OF SHEETS AND STANDARD DRAWINGS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

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 - 9	TYPICAL SECTIONS OF IMPROVEMENT		
10 - 19	SPECIAL DETAILS		
20 - 37	TEMPORARY EROSION CONTROL DETAILS		
38 - 53	MAINTENANCE OF TRAFFIC DETAILS		
54 - 61	PERMANENT PAVEMENT MARKING DETAILS		
62 - 77	QUANTITIES		
78	SCHEDULE OF BRIDGE QUANTITIES	07365	57780
79 - 80	SUMMARY OF QUANTITIES AND REVISIONS		
81 - 87	SURVEY CONTROL DETAILS		
88 - 109	PLAN AND PROFILE SHEETS		
110	SUMMARY OF TRAFFIC SIGNAL QUANTITIES		
111	TRAFFIC SIGNAL NOTES		
112	TRAFFIC SIGNAL QUANTITIES - ALCOA RD.		
113 - 122	SIGNALIZATION PLAN SHEETS		
123	TRAFFIC SIGNAL QUANTITIES -SPRINGHILL RD.		
124 - 133	SIGNALIZATION PLAN SHEETS		
134	TRAFFIC SIGNAL QUANTITIES - REYNOLDS RD.		
135 - 145	SIGNALIZATION PLAN SHEETS		
146	PEDESTRIAN HYBRID BEACON QUANTITIES - HWY. 5/PEDESTRIAN HYBRID BEACON		
147 - 153	SIGNALIZATION PLAN SHEETS		
154	LAYOUT OF BRIDGE OVER HURRICANE CREEK (SHEET 1 OF 2)	07365	57781
155	LAYOUT OF BRIDGE OVER HURRICANE CREEK (SHEET 2 OF 2)	07365	57782
156	DETAILS OF STAGE CONSTRUCTION	07365	57783
157	DETAILS OF END BENT 1	07365	57784
158	DETAILS OF END BENT 4	07365	57785
159	COMMON DETAILS OF END BENTS (SHEET 1 OF 2)	07365	57786
160	COMMON DETAILS OF END BENTS (SHEET 2 OF 2)	07365	57787
161	DETAILS OF TRANSITIONAL APPROACH RAILING	07365	57788
162	DETAILS INTERMEDIATE BENTS (SHEET 1 OF 2)	07365	57789
163	DETAILS INTERMEDIATE BENTS (SHEET 2 OF 2)	07365	57790
164	DETAILS OF 188'-0" CONTINUOUS COMPOSITE W-BEAM UNIT (SHEET 1 OF 6)	07365	57791
165	DETAILS OF 188'-0" CONTINUOUS COMPOSITE W-BEAM UNIT (SHEET 2 OF 6)	07365	57792
166	DETAILS OF 188'-0" CONTINUOUS COMPOSITE W-BEAM UNIT (SHEET 3 OF 6)	07365	57793
167	DETAILS OF 188'-0" CONTINUOUS COMPOSITE W-BEAM UNIT (SHEET 4 OF 6)	07365	57794
168	DETAILS OF 188'-0" CONTINUOUS COMPOSITE W-BEAM UNIT (SHEET 5 OF 6)	07365	57795
169	DETAILS OF 188'-0" CONTINUOUS COMPOSITE W-BEAM UNIT (SHEET 6 OF 6)	07365	57796
170	DETAILS OF ELASTOMERIC BEARINGS	07365	57797
171	DETAILS OF METAL BRIDGE RAILING	07365	57798
172 - 303	CROSS SECTIONS		

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

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
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
55010	STANDARD DETAILS FOR TYPE D BRIDGE NAME PLATE	01-17-17
55020	STANDARD DETAILS FOR STEEL H-PILES AND PILE ENCASEMENTS	03-24-16

ROADWAY STANDARD DRAWINGS

DRWG.NO.	TITLE	DATE
CG-1	CURBING DETAILS	11-29-07
DR-1	DETAILS OF DRIVEWAYS & ISLANDS	02-27-14
FES-1	FLARED END SECTION	10-18-96
FES-2	FLARED END SECTION	10-18-97
FPC-9	DETAILS OF DROP INLETS & JUNCTION BOXES	11-16-01
FPC-9E	DETAILS OF DROP INLETS (TYPE C)	08-22-02
FPC-9M	DETAILS OF DROP INLET (TYPE MO)	08-22-02
MB-1	MAILBOX DETAILS	11-18-04
PBC-1	PRECAST CONCRETE BOX CULVERTS	12-08-15
PCC-1	CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING	02-27-14
PCM-1	METAL PIPE CULVERT FILL HEIGHTS & BEDDING	02-27-14
PM-1	PAVEMENT MARKING DETAILS	06-01-17
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-1	ANTENNA POLE	11-16-17
SD-5	CONTROLLER CABINET UTILITY DRAWER	09-12-13
SD-6	HEAVY DUTY PULL BOX	11-16-17
SD-7	SPAN WIRE ASSEMBLY WOOD POLE	11-16-17
SD-8	SIGNAL HEAD PLACEMENT	12-08-16
SD-9	SERVICE POINT	11-16-17
SD-11	STEEL POLE WITH MAST ARM	11-16-17
SE-2	TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC	10-18-96
SI-1	DETAILS OF SPECIAL ITEMS	09-12-13
SI-2	REINFORCED CONCRETE RETAINING WALL (WITHOUT LIVE LOAD SURCHARGE)	05-12-16
TC-1	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	04-13-17
TC-2	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	09-02-15
TC-3	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	09-02-15
TC-4	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-TEMPORARY PRECAST BARRIER	02-27-14
TC-5	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-TEMPORARY PRECAST BARRIER	10-15-09
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
WF-2	WIRE FENCE WATER GAPS	04-20-79
WF-3	CHAIN LINK FENCE	11-17-10
WF-4	WIRE FENCE TYPE C AND D	08-22-02
WR-1	WHEELCHAIR RAMPS NEW CONSTRUCTION AND ALTERATIONS	11-10-05

7/27/2018

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				JOB NO.		061335	3	303

(2) GOVERNING SPECS. AND GENERAL NOTES

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
8-27-18

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 - TRAINING PROGRAM - JOB 061335
FHWA-1273__	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273__	SUPPLEMENT - WAGE RATE DETERMINATION
100-3_____	CONTRACTOR'S LICENSE
100-4_____	DEPARTMENT NAME CHANGE
102-2_____	ISSUANCE OF PROPOSALS
108-1_____	LIQUIDATED DAMAGES
108-2_____	WORK ALLOWED PRIOR TO ISSUANCE OF WORK ORDER
303-1_____	AGGREGATE BASE COURSE
400-1_____	TACK COATS
400-4_____	DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES
410-1_____	CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
505-1_____	PORTLAND CEMENT CONCRETE DRIVEWAY
604-1_____	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
606-1_____	PIPE CULVERTS FOR SIDE DRAINS
620-1_____	MULCH COVER
621-1_____	FILTER SOCKS
632-1_____	CONCRETE ISLAND
633-1_____	CONCRETE WALKS, CONCRETE STEPS, AND HAND RAILING
634-1_____	CURBING
JOB 061335__	ACTUATED CONTROLLER
JOB 061335__	AIRPORT CLEARANCE REQUIREMENTS
JOB 061335__	ANTENNA SUPPORT
JOB 061335__	ASSESSMENT OF WORKING DAYS - MAINTENANCE OF TRAFFIC
JOB 061335__	BIDDING REQUIREMENTS AND CONDITIONS
JOB 061335__	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 061335__	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 061335__	CABINET DRAWER ASSEMBLY
JOB 061335__	CARGO PREFERENCE ACT REQUIREMENTS
JOB 061335__	CLASS C FLY ASH IN PORTLAND CEMENT CONCRETE PAVEMENT AND CLASS S(AE) CONCRETE
JOB 061335__	CONCRETE WALKS (TYPE SPECIAL)
JOB 061335__	CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS
JOB 061335__	CONSTRUCTION PROJECT INFORMATION SIGN
JOB 061335__	DELAY IN RIGHT OF WAY OCCUPANCY
JOB 061335__	DIRECT TENSION INDICATORS FOR HIGH STRENGTH BOLT ASSEMBLIES
JOB 061335__	DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES
JOB 061335__	EDGE CARD VIDEO PROCESSOR
JOB 061335__	ELECTRICAL CONDUCTORS FOR LUMINAIRES
JOB 061335__	ELECTRICAL CONDUCTORS-IN-CONDUIT
JOB 061335__	EMBEDDED LED PEDESTRIAN ACTIVATED CROSSWALK SIGN
JOB 061335__	FLEXIBLE BEGINNING OF WORK - CALENDAR DAY CONTRACT
JOB 061335__	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 061335__	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
JOB 061335__	LED LUMINAIRE ASSEMBLY (BUG U0 TYPE)
JOB 061335__	LED TRAFFIC SIGNAL HEAD
JOB 061335__	LIQUID ANTI-STRIPPING ADDITIVE
JOB 061335__	MAINTENANCE OF TRAFFIC
JOB 061335__	MANDATORY ELECTRONIC CONTRACT
JOB 061335__	MANDATORY ELECTRONIC DOCUMENT SUBMITTAL
JOB 061335__	NESTING SITES OF MIGRATORY BIRDS
JOB 061335__	PARTNERING REQUIREMENTS
JOB 061335__	PERCENT WITHIN LIMITS/PAVEMENT SMOOTHNESS
JOB 061335__	PRICE ADJUSTMENT FOR ASPHALT BINDER
JOB 061335__	PROSECUTION AND PROGRESS WITH BID SCHEDULE
JOB 061335__	PROTECTION OF WATER QUALITY AND WETLANDS
JOB 061335__	RELOCATION OF TRAFFIC SIGNAL HEAD
JOB 061335__	REMOVAL AND DISPOSAL OF GUARDRAIL
JOB 061335__	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT
JOB 061335__	RESTRAINING CONDITIONS
JOB 061335__	SECTION 404 NATIONWIDE 23 PERMIT REQUIREMENTS
JOB 061335__	SERVICE POINT ASSEMBLY (TRAFFIC CONTROL DEVICES)
JOB 061335__	SHORING
JOB 061335__	SHORING FOR CULVERTS
JOB 061335__	SITE USE (A+C METHOD) - CALENDAR DAY CONTRACT
JOB 061335__	SOIL STABILIZATION
JOB 061335__	STORM WATER POLLUTION PREVENTION PLAN
JOB 061335__	STREET NAME SIGN (MAST ARM MOUNTED)
JOB 061335__	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 061335__	SYSTEM LOCAL CONTROLLER
JOB 061335__	SYSTEM LOCAL CONTROLLER (E-NET)
JOB 061335__	TRAFFIC SIGNAL CONTROLLER (MODIFICATION)
JOB 061335__	UTILITY ADJUSTMENTS
JOB 061335__	VALUE ENGINEERING
JOB 061335__	VIDEO DETECTOR (COLOR)
JOB 061335__	VIDEO DETECTOR ROTATION
JOB 061335__	WARM MIX ASPHALT

GENERAL NOTES

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

8/23/2018

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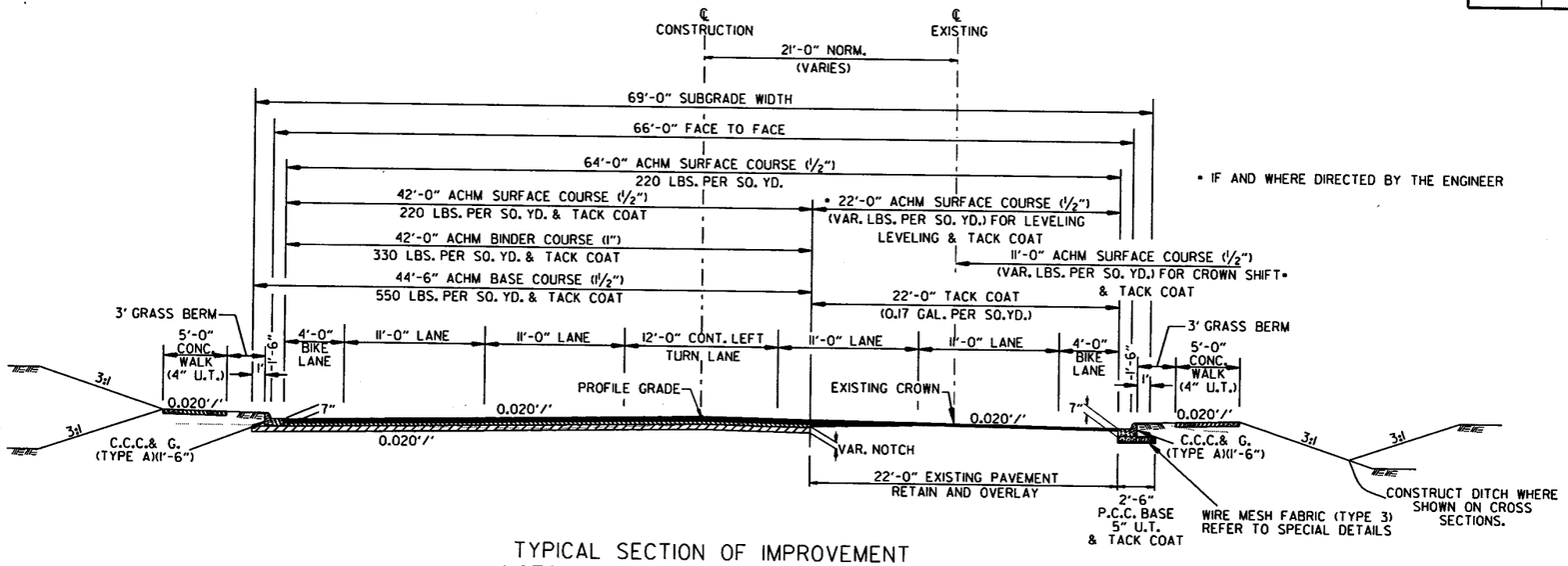
				JOB NO.		061335	4	303

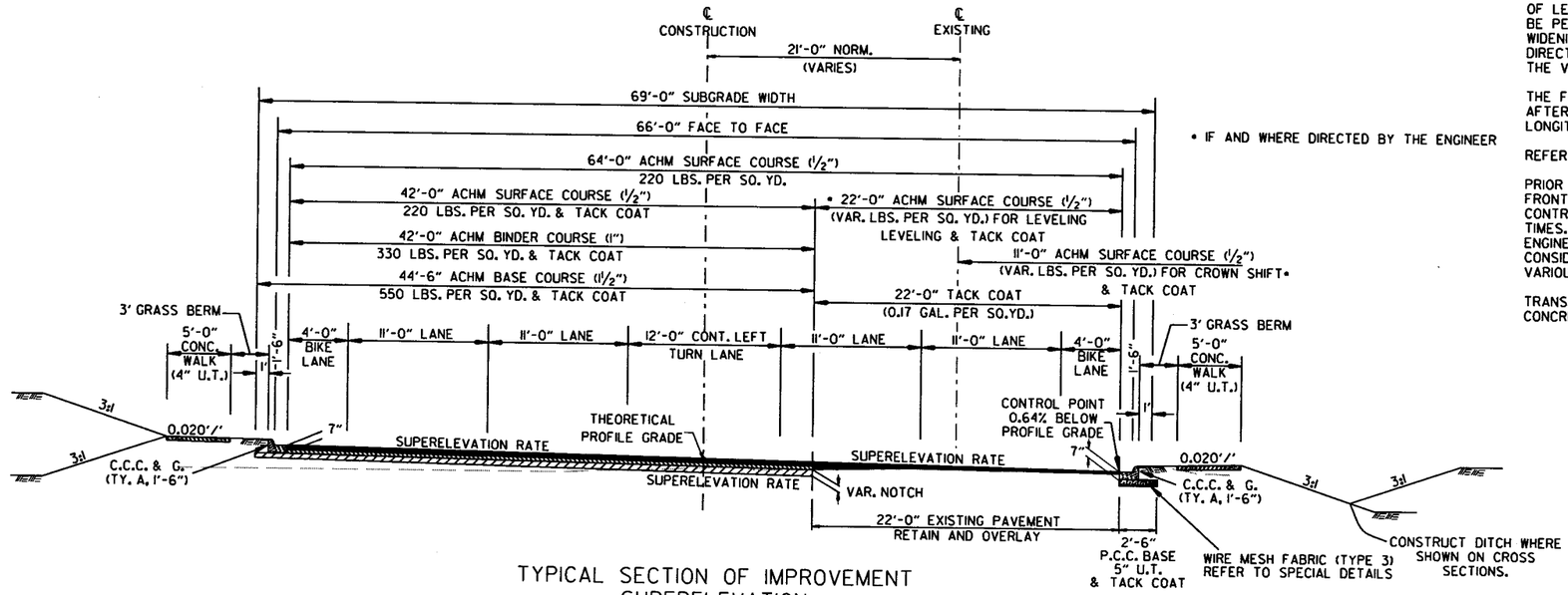
(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18



TYPICAL SECTION OF IMPROVEMENT
NOTCH AND WIDEN ON LEFT SECTION
CURB AND GUTTER

STA. 92+00.00 TO STA. 109+00.00
STA. 118+00.00 TO STA. 122+50.00
STA. 207+50.00 TO STA. 208+00.00



TYPICAL SECTION OF IMPROVEMENT
SUPERELEVATION
NOTCH AND WIDEN ON LEFT SECTION
CURB AND GUTTER

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

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

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

REFER TO PLAN SHEETS FOR SIDEWALK LOCATIONS.

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

TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE WALKS AT 45' INTERVALS.

2/13/2018

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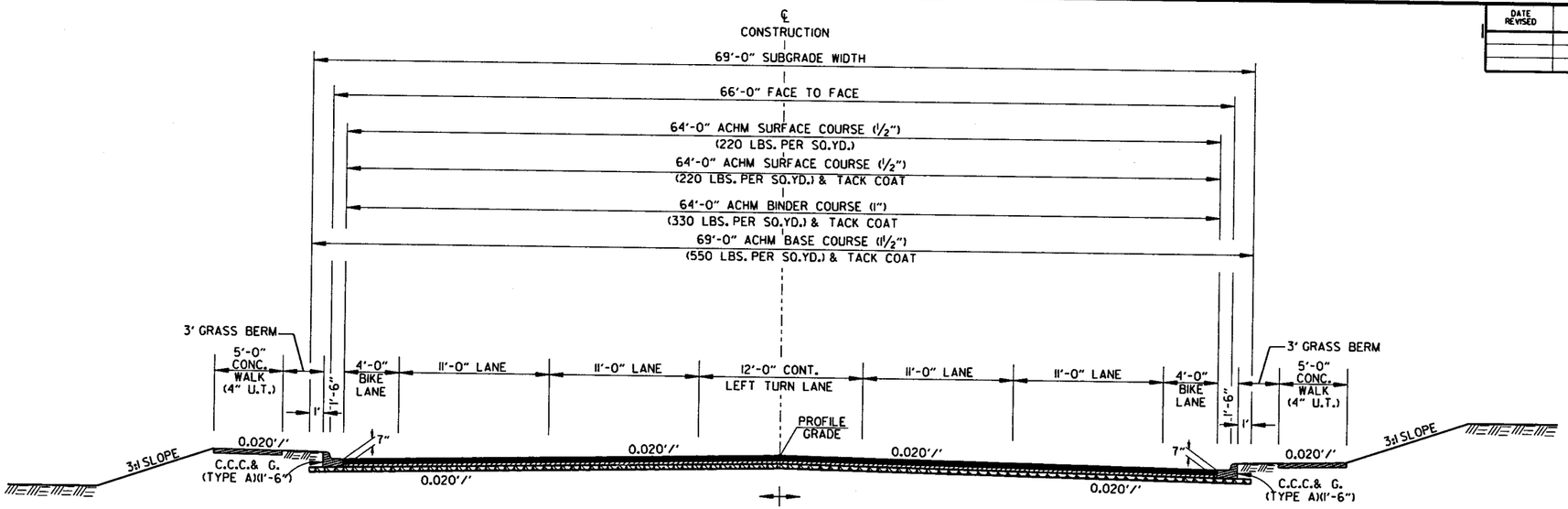
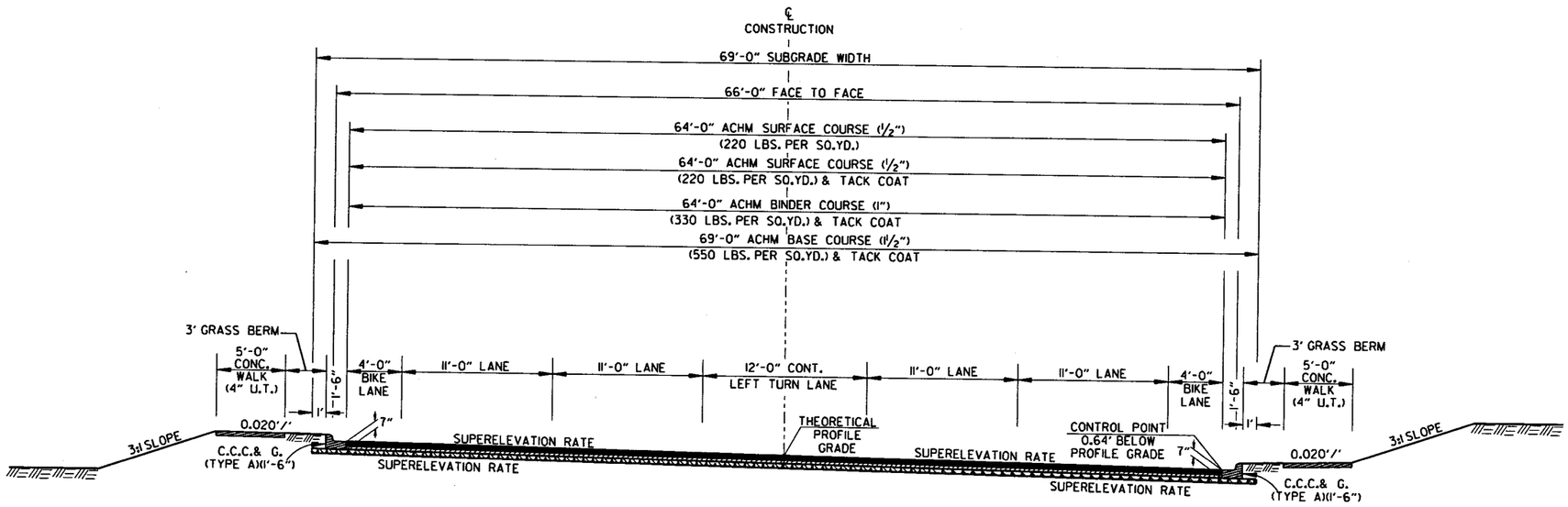
(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18



TYPICAL SECTION OF IMPROVEMENT
FULL DEPTH
CURB & GUTTER

STA. 109+00.00 TO STA. 115+36.83
STA. 117+27.17 TO STA. 118+00.00
STA. 134+00.00 TO STA. 135+50.00
STA. 138+00.00 TO STA. 147+00.00
STA. 155+00.00 TO STA. 157+50.00



TYPICAL SECTION OF IMPROVEMENT
SUPERELEVATION
FULL DEPTH
CURB & GUTTER

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

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TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE WALKS AT 45' INTERVALS.

2/13/2018

R061335.DGN

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(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
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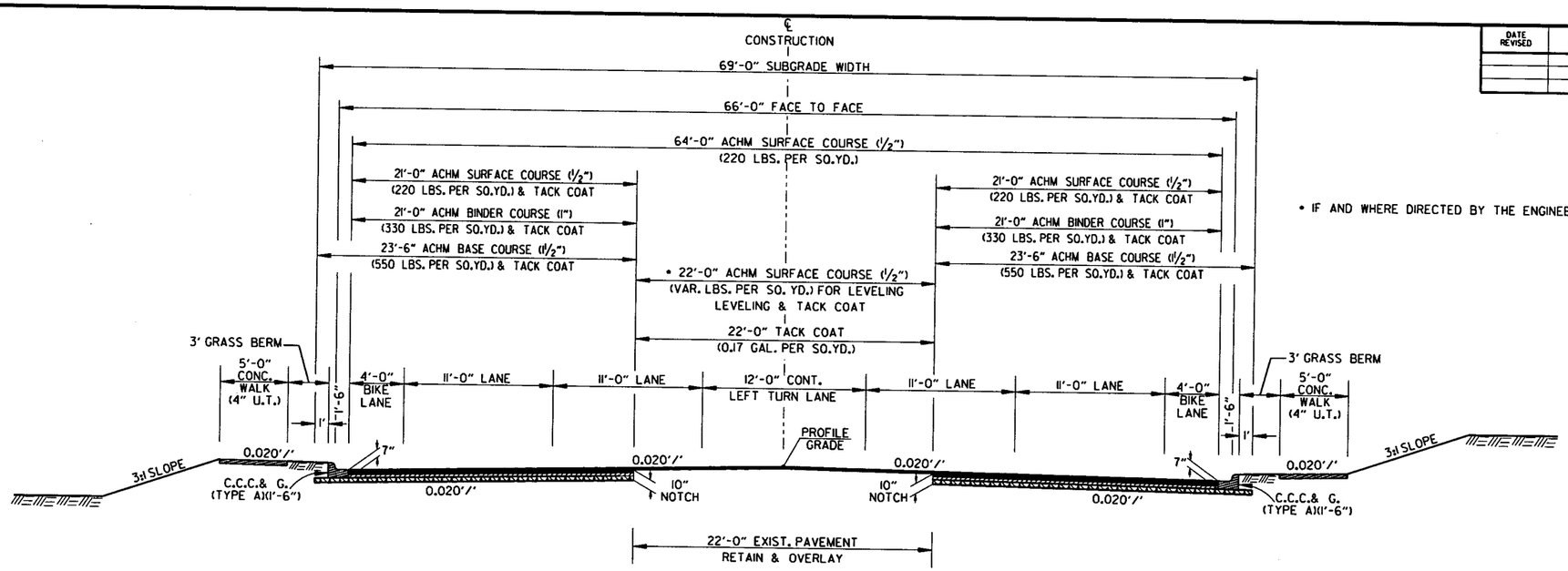
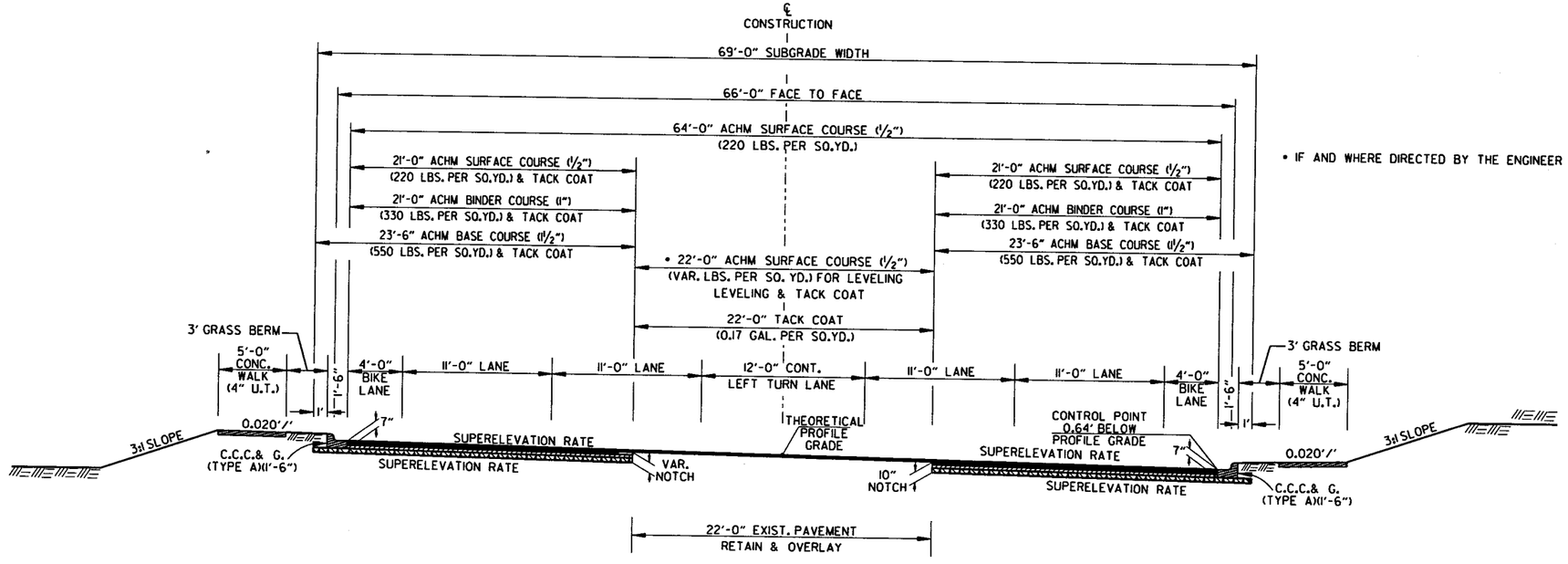


TYPICAL SECTION OF IMPROVEMENT
NOTCH & WIDEN
CURB & GUTTER

STA. 122+50.00 TO STA. 129+00.00
STA. 147+00.00 TO STA. 155+00.00
STA. 157+50.00 TO STA. 166+00.00
STA. 166+50.00 TO STA. 207+50.00
STA. 208+00.00 TO STA. 214+00.00

* IF AND WHERE DIRECTED BY THE ENGINEER



TYPICAL SECTION OF IMPROVEMENT
SUPERELEVATION
NOTCH & WIDEN
CURB & GUTTER

* IF AND WHERE DIRECTED BY THE ENGINEER

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

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

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

REFER TO PLAN SHEETS FOR SIDEWALK LOCATIONS.

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

TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE WALKS AT 45' INTERVALS.

2/13/2018

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TYPICAL SECTIONS OF IMPROVEMENT

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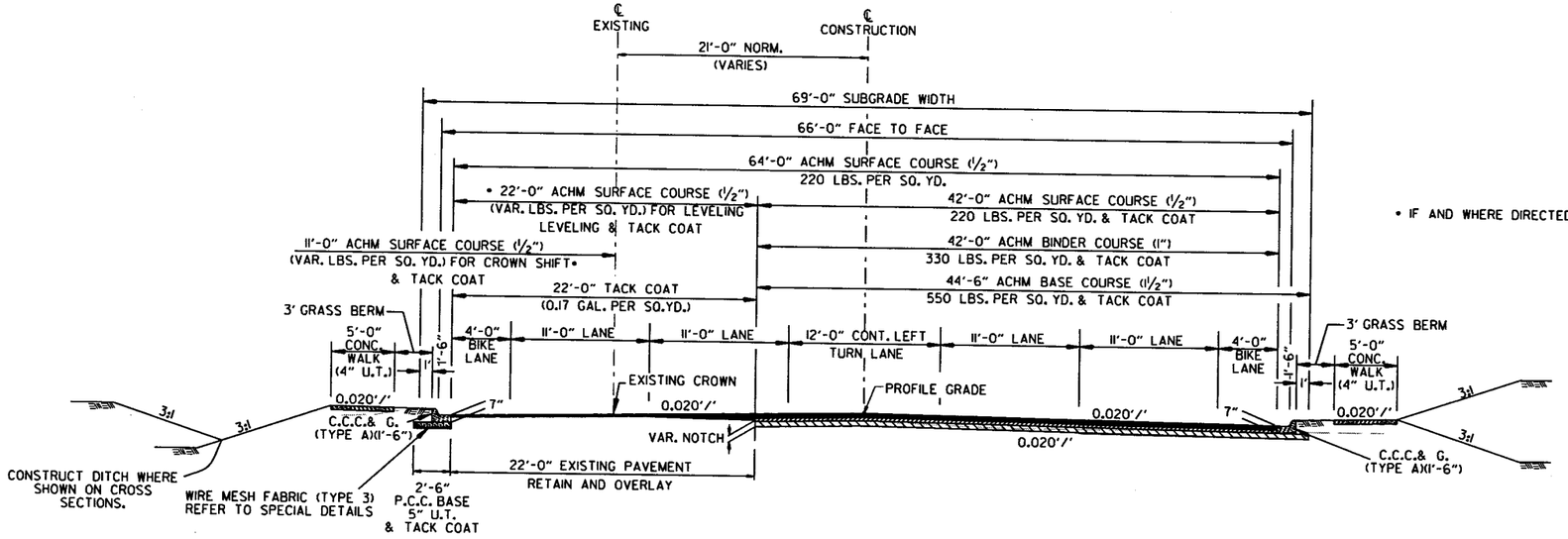
				6	ARK.			
				JOB NO.		061335	7	303

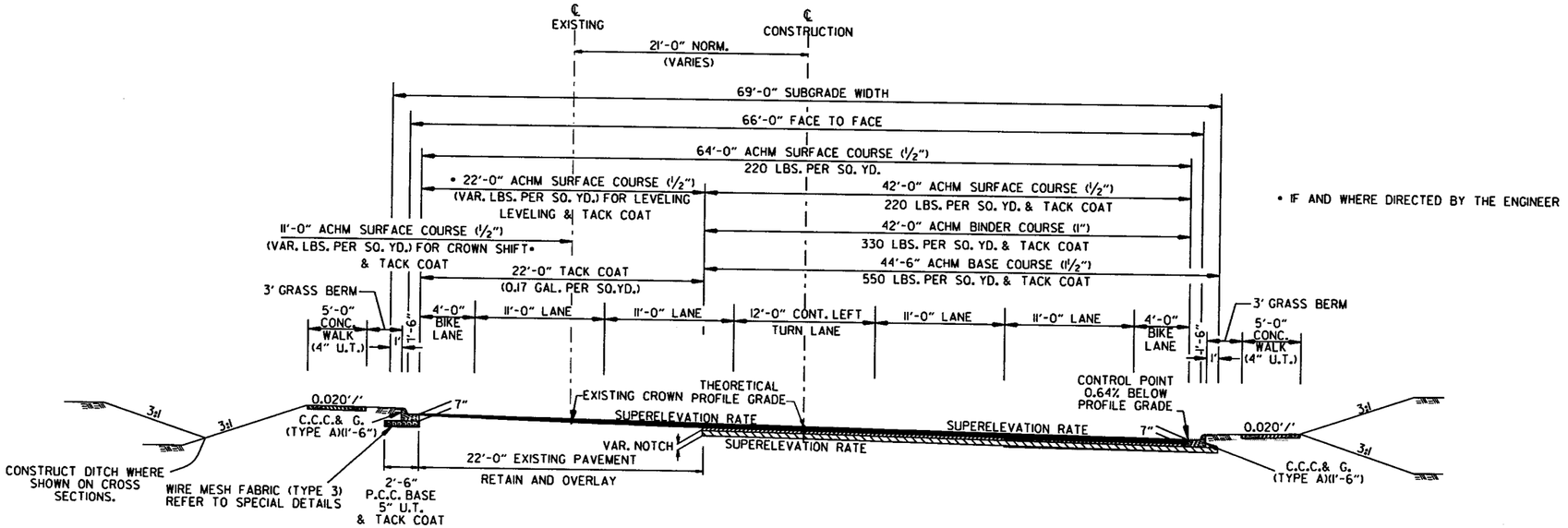
(2) TYPICAL SECTIONS OF IMPROVEMENT



• IF AND WHERE DIRECTED BY THE ENGINEER

TYPICAL SECTION OF IMPROVEMENT
NOTCH AND WIDEN ON RIGHT SECTION
CURB AND GUTTER

STA. 129+00.00 TO STA. 134+00.00
STA. 135+50.00 TO STA. 138+00.00
STA. 166+00.00 TO STA. 166+50.00



• IF AND WHERE DIRECTED BY THE ENGINEER

TYPICAL SECTION OF IMPROVEMENT
SUPERELEVATION
NOTCH AND WIDEN ON RIGHT SECTION
CURB AND GUTTER

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

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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 LANE LINES.

REFER TO PLAN SHEETS FOR SIDEWALK LOCATIONS.

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

TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE WALKS AT 45' INTERVALS.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

2/13/2018

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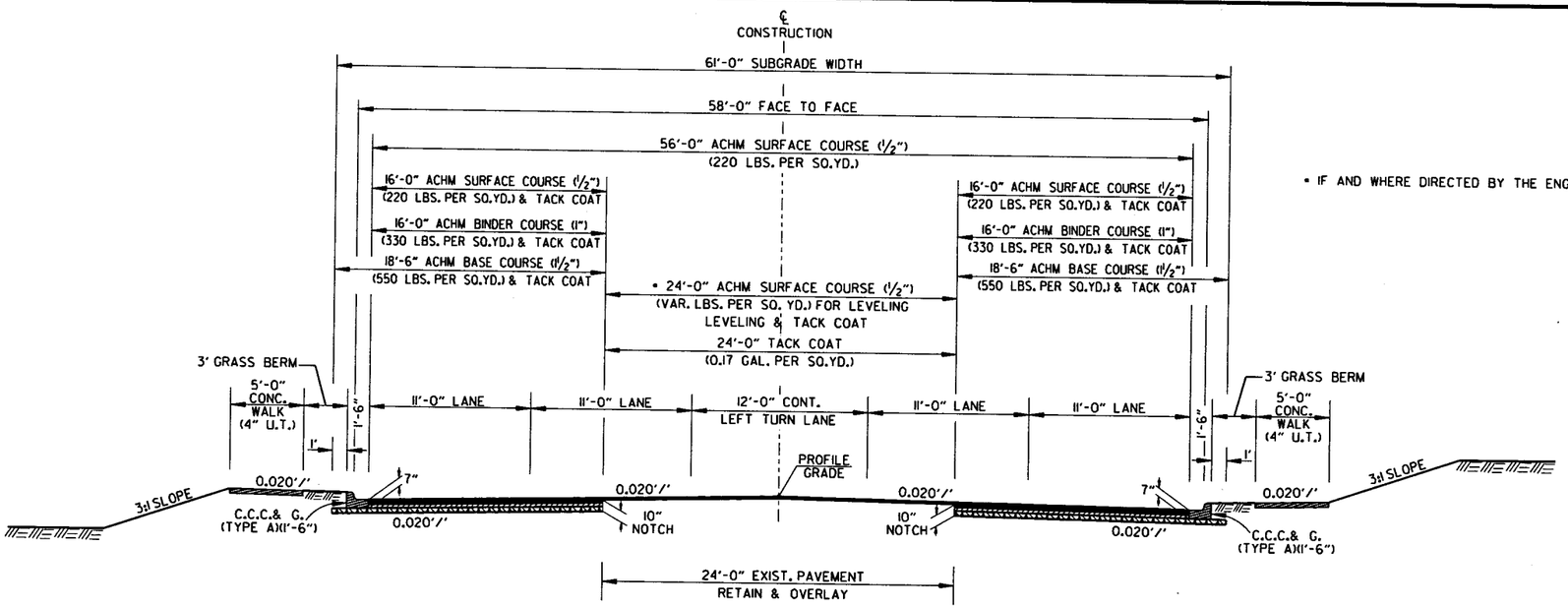
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	8	303

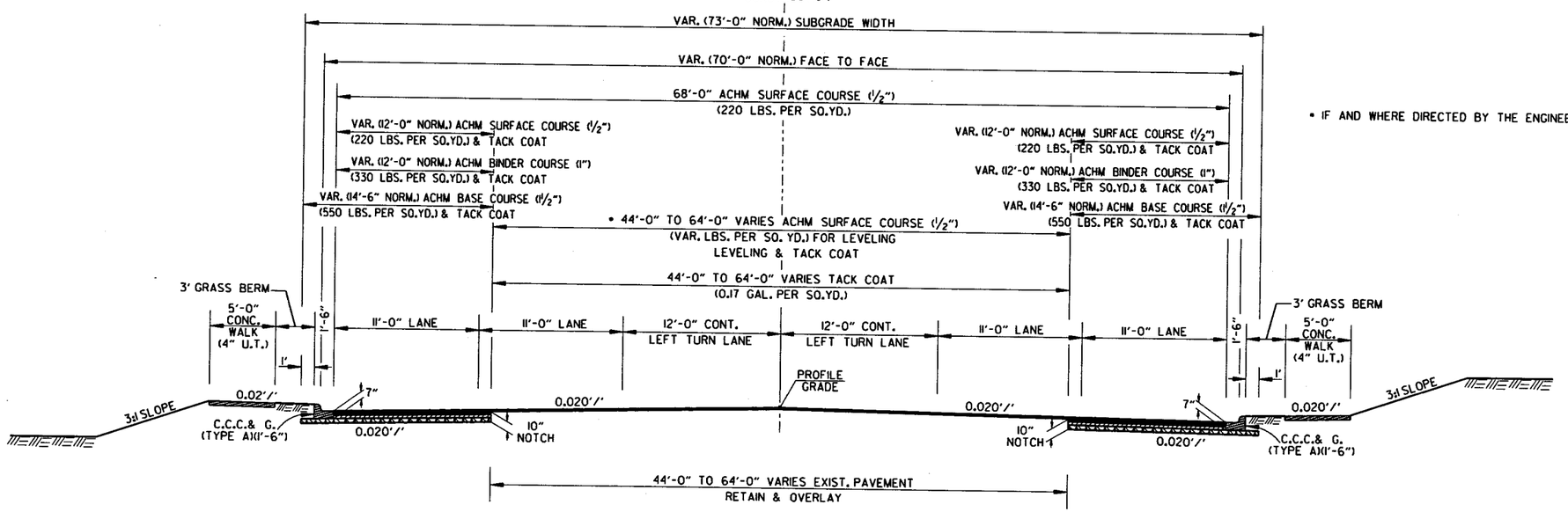
(2) TYPICAL SECTIONS OF IMPROVEMENT



• IF AND WHERE DIRECTED BY THE ENGINEER

TYPICAL SECTION OF IMPROVEMENT
NOTCH & WIDEN - SPRINGHILL RD.
CURB & GUTTER

STA. 55+50.00 TO STA. 62+35.00
STA. 65+65.00 TO STA. 70+00.00



• IF AND WHERE DIRECTED BY THE ENGINEER

TYPICAL SECTION OF IMPROVEMENT
NOTCH & WIDEN - SPRINGHILL RD.
CURB & GUTTER

STA. 62+35.00 TO STA. 62+84.72
STA. 63+73.59 TO STA. 65+65.00

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

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

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

REFER TO PLAN SHEETS FOR SIDEWALK LOCATIONS.

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

TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE WALKS AT 45' INTERVALS.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

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TYPICAL SECTIONS OF IMPROVEMENT

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				6	ARK.			
				JOB NO.		061335	9	303

(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
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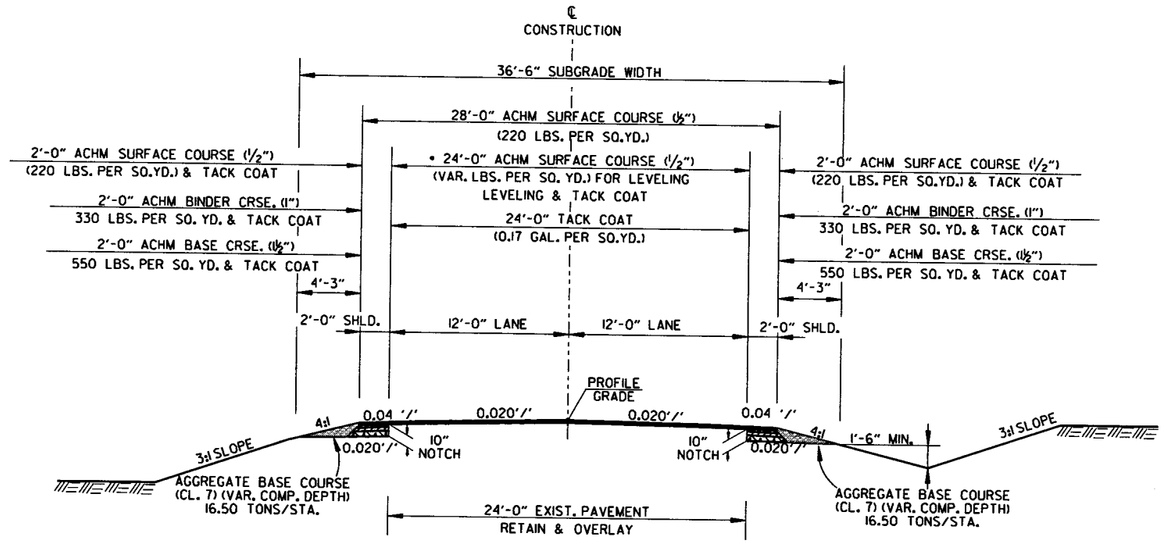
7-31-18



TYPICAL SECTION OF IMPROVEMENT
NOTCH AND WIDEN - SPRINGHILL RD.
OPEN SHOULDER

STA. 70+00.00 TO STA. 71+50.00

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

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

AFTER PLACING FINAL 2" OF SURFACE COURSE, THE EXISTING SLOPE SHALL BE REDRESSED AS DIRECTED BY THE ENGINEER PRIOR TO SEEDING IN ORDER TO MAINTAIN A UNIFORM SLOPE. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR VARIOUS CONTRACT ITEMS.

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 THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS 1" OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

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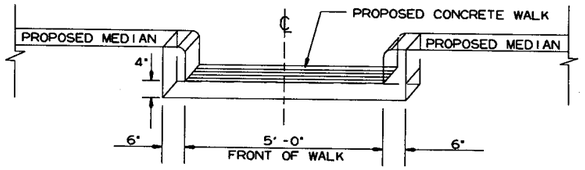
				6	ARK.			
				JOB NO.		061335	10	303

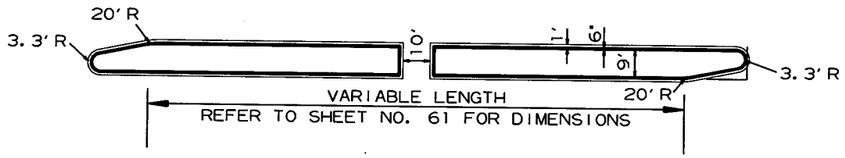
(2) SPECIAL DETAILS



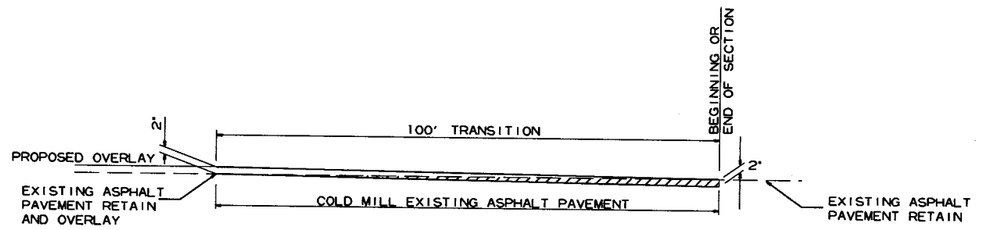
CONCRETE WALK THRU MEDIAN

FACE SHALL MEET REQUIREMENTS OF TYPE A CURB

NOTE: CONCRETE WALK THRU MEDIAN SHALL BE POURED MONOLITHICALLY. ALL MATERIALS REQUIRED TO CONSTRUCT CONCRETE WALK THRU MEDIAN SHALL BE INCLUDED IN THE PRICE BID FOR CONCRETE WALKS.



HWY. 5
INTERMITTENT TAPERED MEDIANS



STATE OF ARKANSAS
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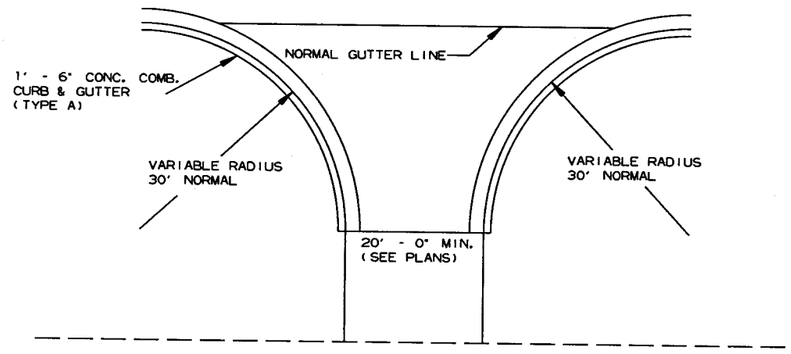
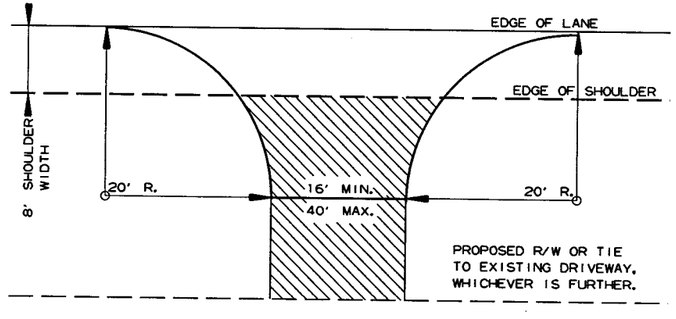
7-31-18

DETAIL FOR TRANSITIONS



DETAIL OF TURNOUTS ASPHALT STREETS
CURB & GUTTER SECTION

NOTE:
PAVEMENT STRUCTURE TO BE SAME AS MAIN LANES.



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)

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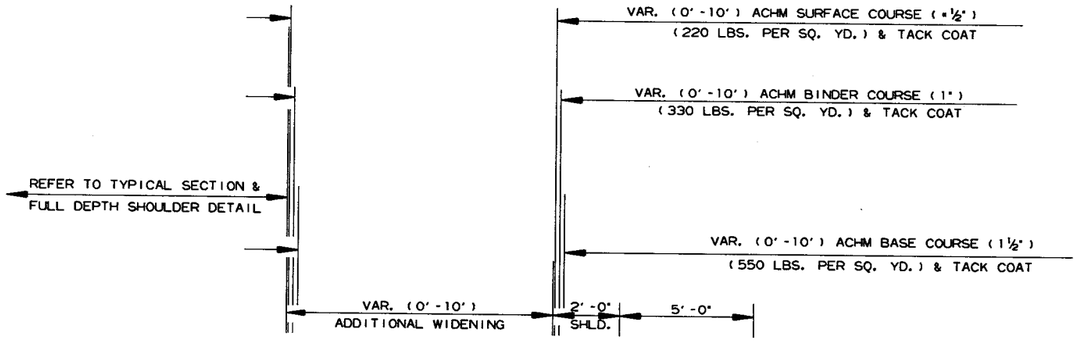
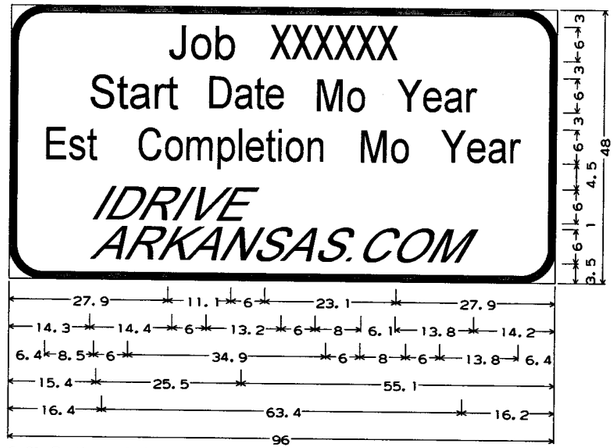
				6	ARK.			
				JOB NO.		061335	11	303

(2) SPECIAL DETAILS



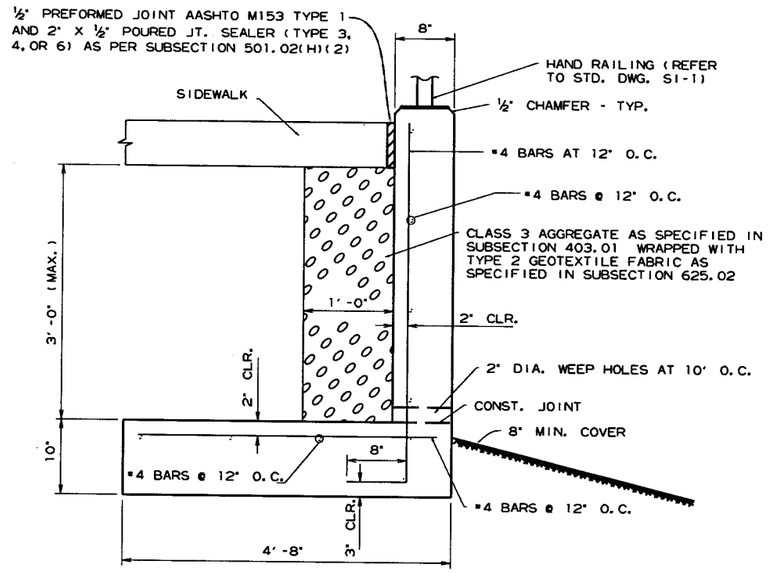
ADDITIONAL WIDENING FOR MAINTENANCE OF TRAFFIC

STATIONS: 214+00.00-215+00.00


Job XXXXXX
Start Date Mo Year
Est Completion Mo Year
IDRIVE
ARKANSAS.COM
27.9 11.1 6 23.1 27.9
14.3 14.4 6 13.2 6 8 6.1 13.8 14.2
6.4 8.5 6 34.9 6 8 6 13.8 6.4
15.4 25.5 55.1
16.4 63.4 16.2
96
3 6 3 6 3 6

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	12	303

(2) SPECIAL DETAILS



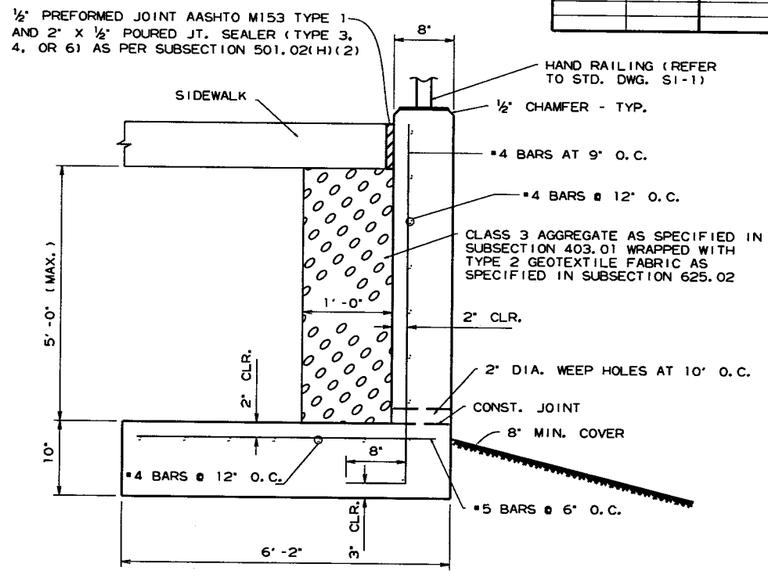
NOTES:
JOINTS IN THE WALL SHALL MATCH THE TYPE AND SPACING OF THE JOINTS IN THE WALK.

ALL CONCRETE SHALL BE CLASS S (F'C=3,500 PSI) AND SHALL BE POURED IN THE DRY.

REINFORCING STEEL SHALL BE AASHTO M31 OR M53, GRADE 60 (FY=60,000 PSI).

PAYMENT FOR THE WEEP HOLES, CLASS 3 AGGREGATE, TYPE 2 GEOTEXTILE FABRIC, PREFORMED JOINT FILLER, POURED JOINT SEALER, REINF. STEEL, AND CONCRETE SHALL BE INCLUDED IN THE UNIT BID PRICE PER SQ. YD. FOR CONCRETE WALKS (TYPE SPECIAL).

CONCRETE RETAINING WALL SPECIAL DETAIL
MAX. HEIGHT 3'-0"



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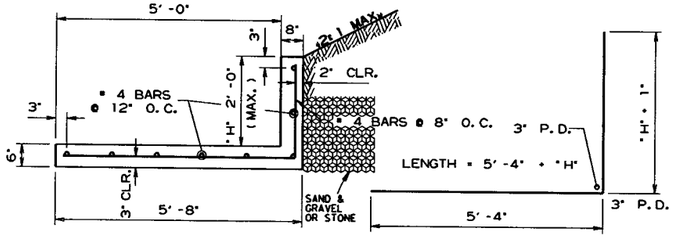
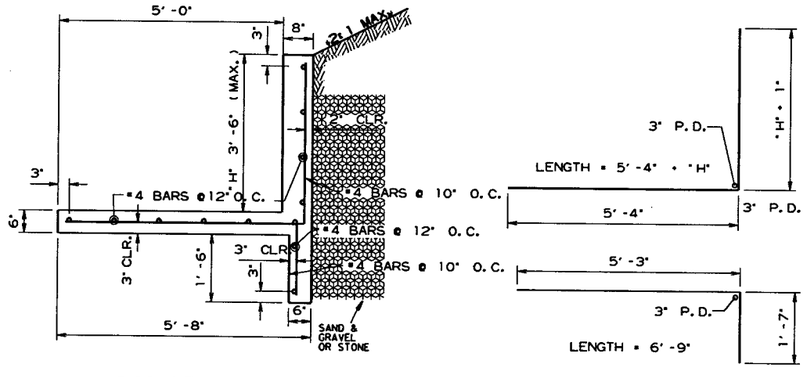
CONCRETE RETAINING WALL SPECIAL DETAIL
MAX. HEIGHT 5'-0"



CONCRETE WALK (TYPE SPECIAL) DETAILS
MAX. HEIGHT 2'-0"



CONCRETE WALK (TYPE SPECIAL) DETAILS
MAX. HEIGHT 3'-6"

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7-31-18

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09-07-18				6	ARK.			
				JOB NO.		061335	12A	303

(2) SPECIAL DETAILS

NOTE: REFER TO STANDARD DRAWING. SI-2
FOR RETAINING WALL DIMENSIONS AND BAR LISTS.

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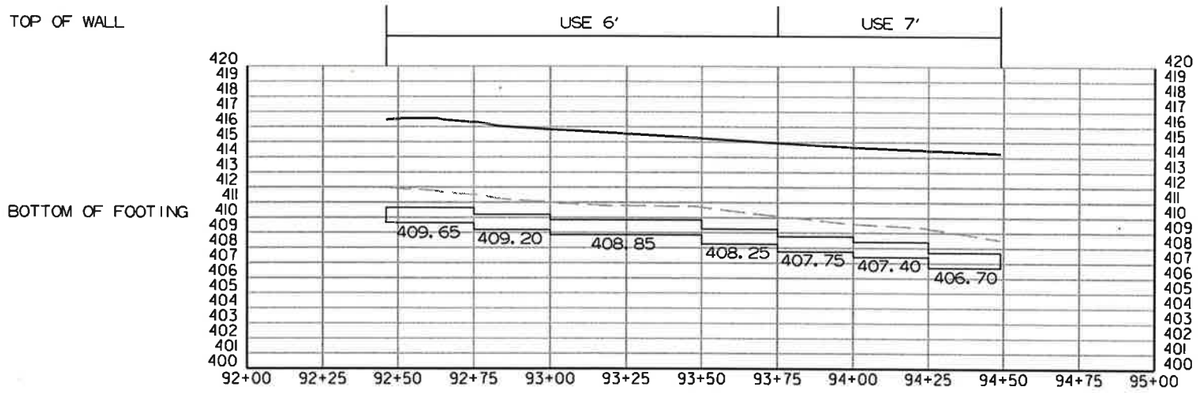
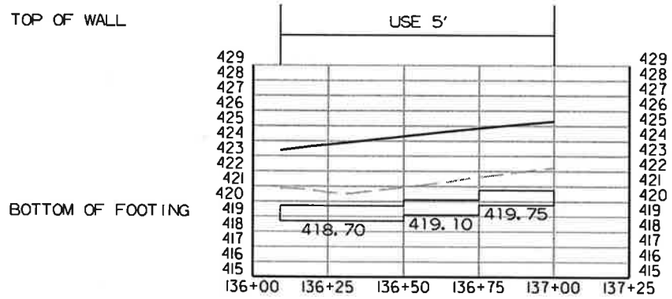
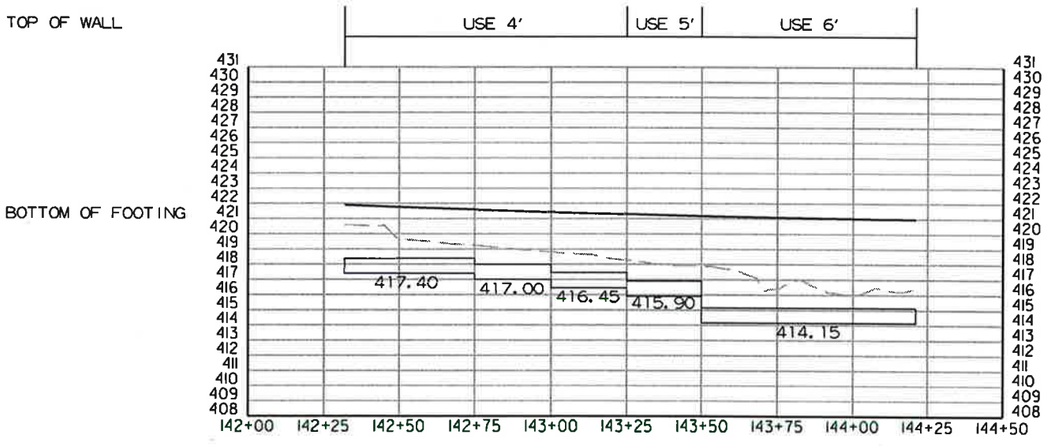


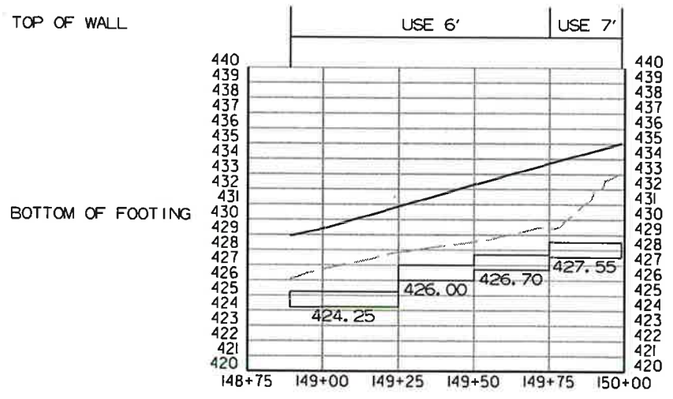
RETAINING WALL DETAILS - HWY. 5
STA. 92+46.09 - STA. 94+49.00 LT.



RETAINING WALL DETAILS - HWY. 5
STA. 136+09.00 - STA. 137+00.00 RT.



RETAINING WALL DETAILS - HWY. 5
STA. 142+32.00 - STA. 144+21.00 LT.



RETAINING WALL DETAILS - HWY. 5
STA. 148+89.11 - STA. 149+99.00 RT.

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09-07-18				6	ARK.			
				JOB NO.		061335	12B	303

(2) SPECIAL DETAILS

NOTE: REFER TO STANDARD DRAWING. SI-2
FOR RETAINING WALL DIMENSIONS AND BAR LISTS.

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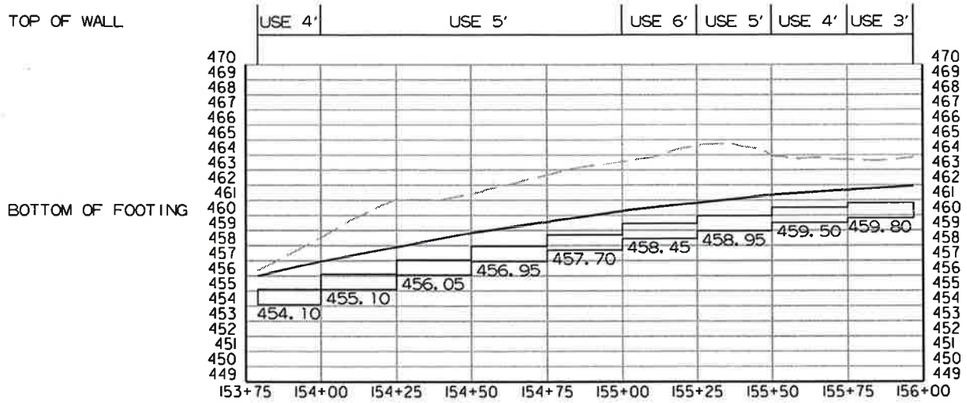
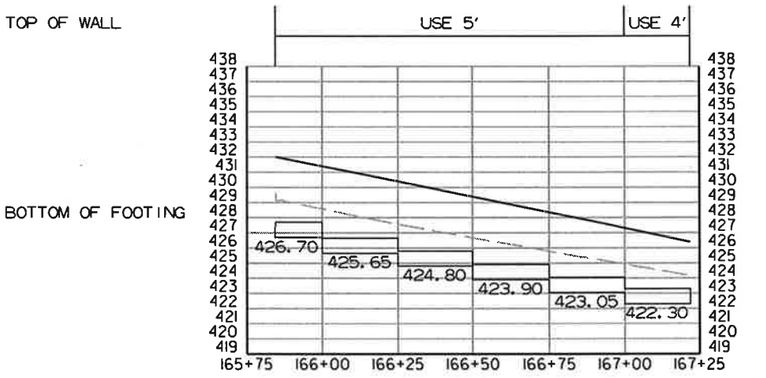
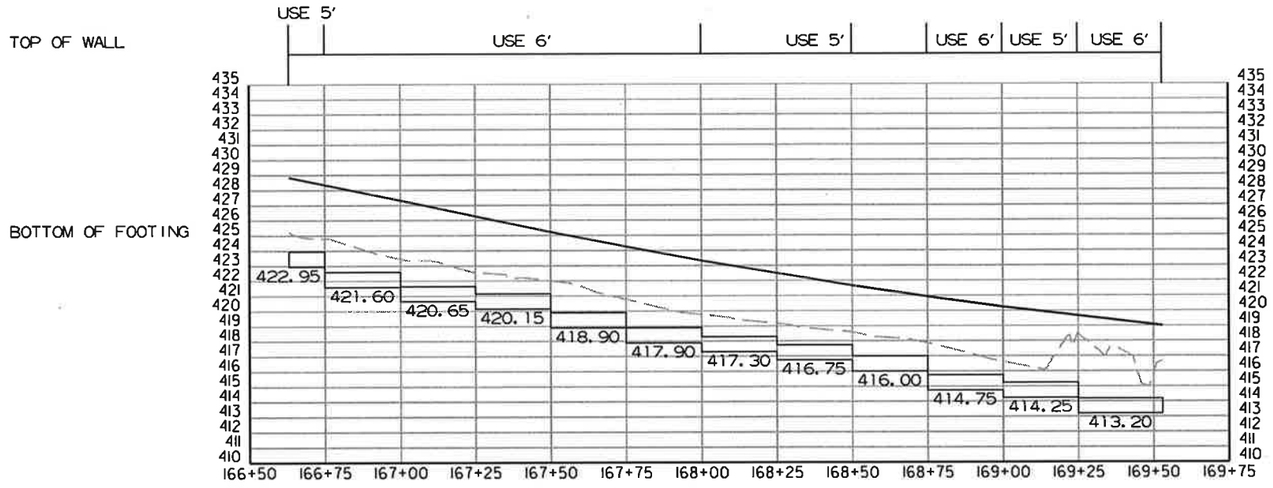


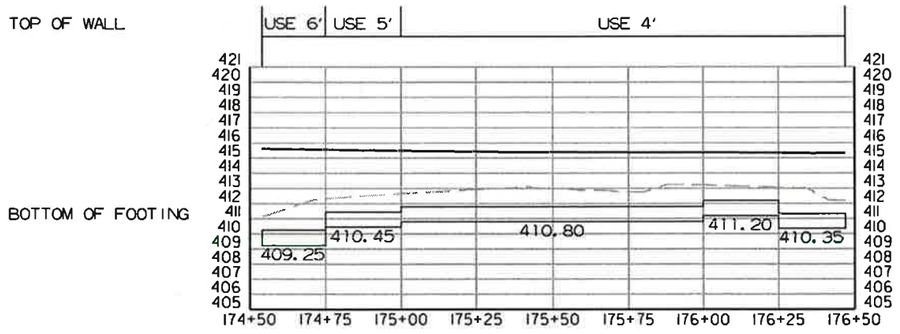
RETAINING WALL DETAILS - HWY. 5
STA. 153+79.00 - STA. 155+97.00 LT.



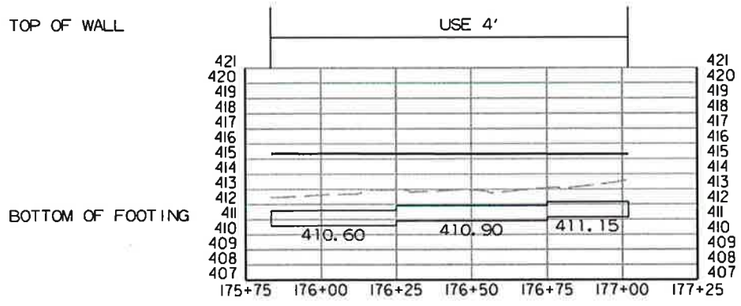
RETAINING WALL DETAILS - HWY. 5
STA. 165+84.56 - STA. 167+22.00 RT.



RETAINING WALL DETAILS - HWY. 5
STA. 166+63.15 - STA. 169+53.00 LT.



RETAINING WALL DETAILS - HWY. 5
STA. 174+54.00 - STA. 176+47.00 LT.



RETAINING WALL DETAILS - HWY. 5
STA. 175+83.54 - STA. 177+02.00 RT.

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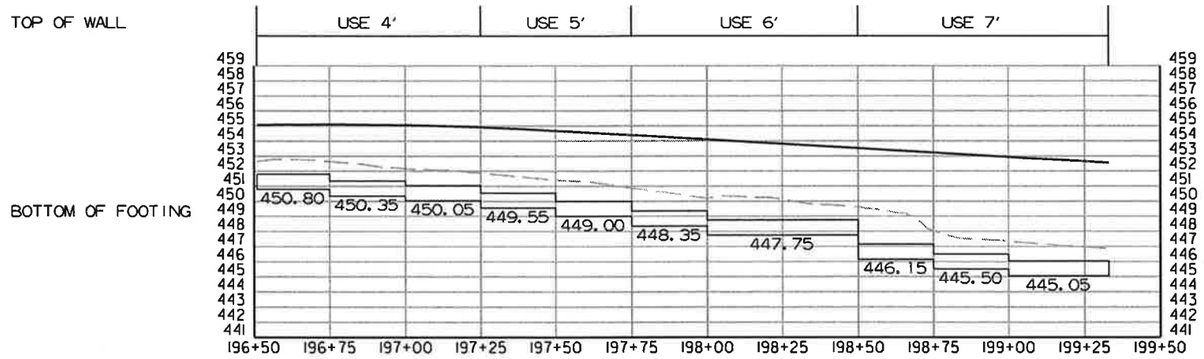
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	12C	303

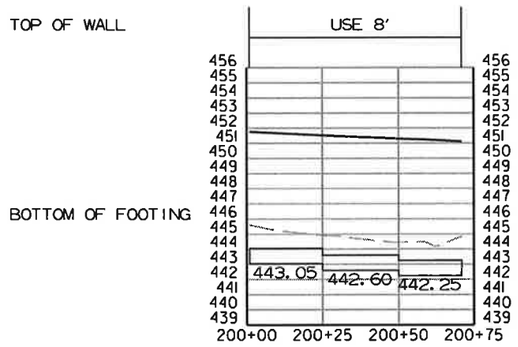
(2) SPECIAL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-18

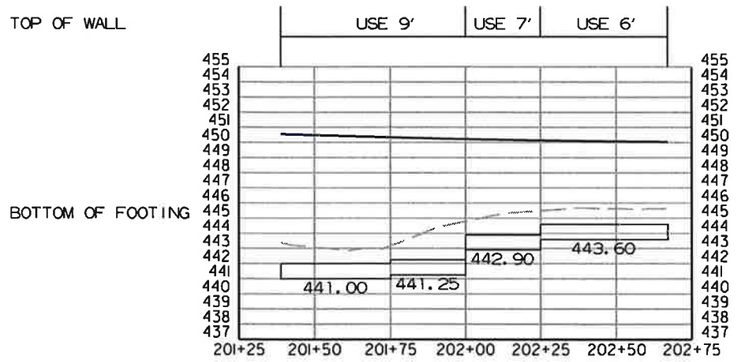
NOTE: REFER TO STANDARD DRAWING. SI-2
FOR RETAINING WALL DIMENSIONS AND BAR LISTS.



RETAINING WALL DETAILS - HWY. 5
STA. 196+51.00 - STA. 199+33.00 LT.



RETAINING WALL DETAILS - HWY. 5 - HWY. 5
STA. 200+01.00 - STA. 200+71.00 LT.



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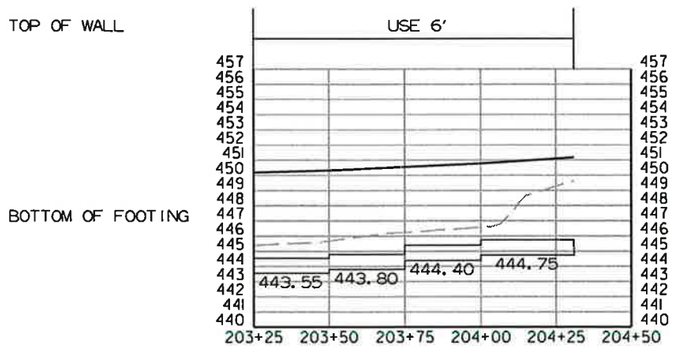
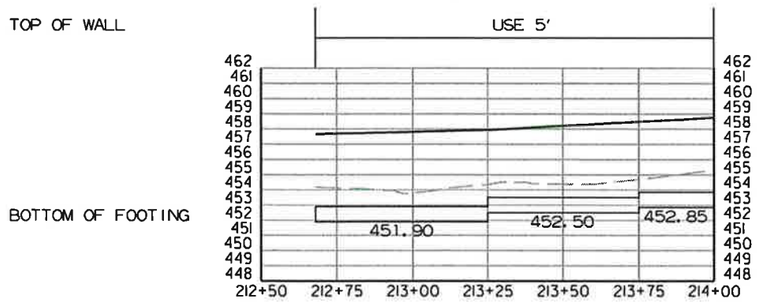
STA. 201+39.00 - STA. 202+67.00 LT.



RETAINING WALL DETAILS - HWY. 5
STA. 203+25.00 - STA. 204+31.00 LT.



RETAINING WALL DETAILS - HWY. 5
STA. 212+68.05 - STA. 214+00.00 LT.

9/7/2018

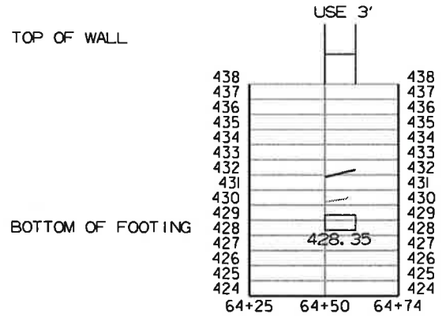
R061335.DGN

NOTE: REFER TO STANDARD DRAWING. SI-2
FOR RETAINING WALL DIMENSIONS AND BAR LISTS.

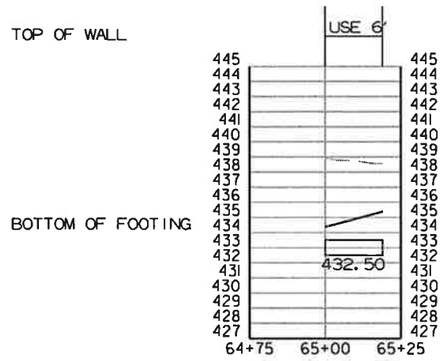
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	12D	303

(2) SPECIAL DETAILS

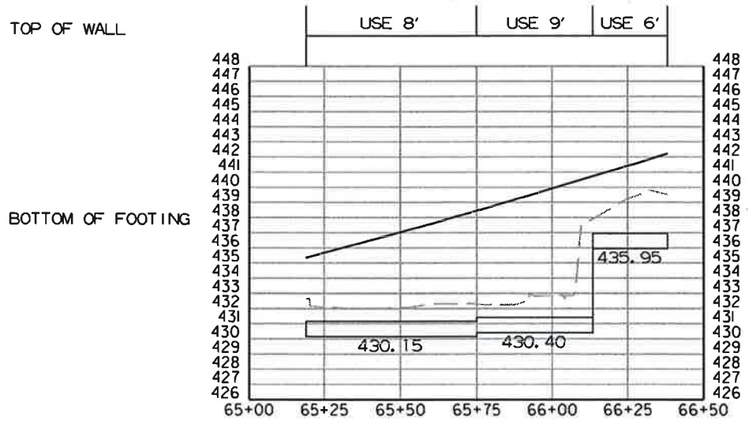
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-18



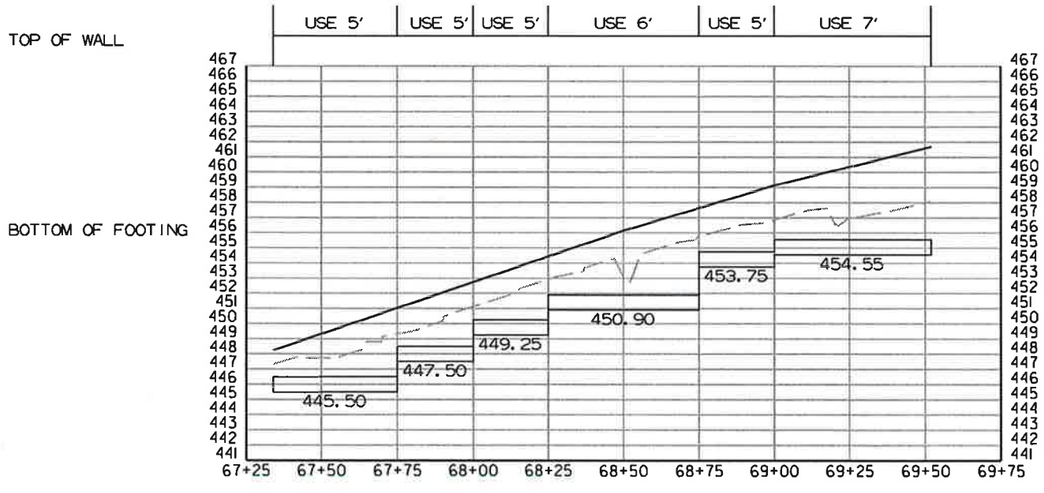
RETAINING WALL DETAILS - SPRINGHILL RD.
STA. 64+50.00 - STA. 64+60.00 LT.



RETAINING WALL DETAILS - SPRINGHILL RD.
STA. 65+00.00 - STA. 65+19.00 RT.



RETAINING WALL DETAILS - SPRINGHILL RD.
STA. 65+19.00 - STA. 66+38.14 LT.



RETAINING WALL DETAILS - SPRINGHILL RD.
STA. 67+34.00 - STA. 69+52.00 LT.

9/7/2018

R061335.DGN

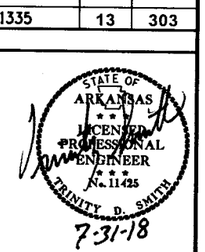
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	13	303

(2) SPECIAL DETAILS

NOTE:
1) EXCEPT FOR TOP & THROAT REINFORCING STEEL IS NOT SHOWN FOR CLARITY. SEE STANDARD DRAWING FPC-9E FOR REINFORCING STEEL DETAIL.

2) FOR DETAILS OF NOTCH FOR SIDEWALK, BACK OPENING, HEAVY DUTY RING AND COVER, AND STEP FOR DROP INLET SEE STANDARD DRAWING FPC-9E.

3) PIPES MAY ENTER BOX FROM ANY ANGLE OR ELEVATION AS MAY BE APPROVED BY THE ENGINEER. REINFORCING BARS SHALL BE CUT TO CLEAR PIPE BY 1½"



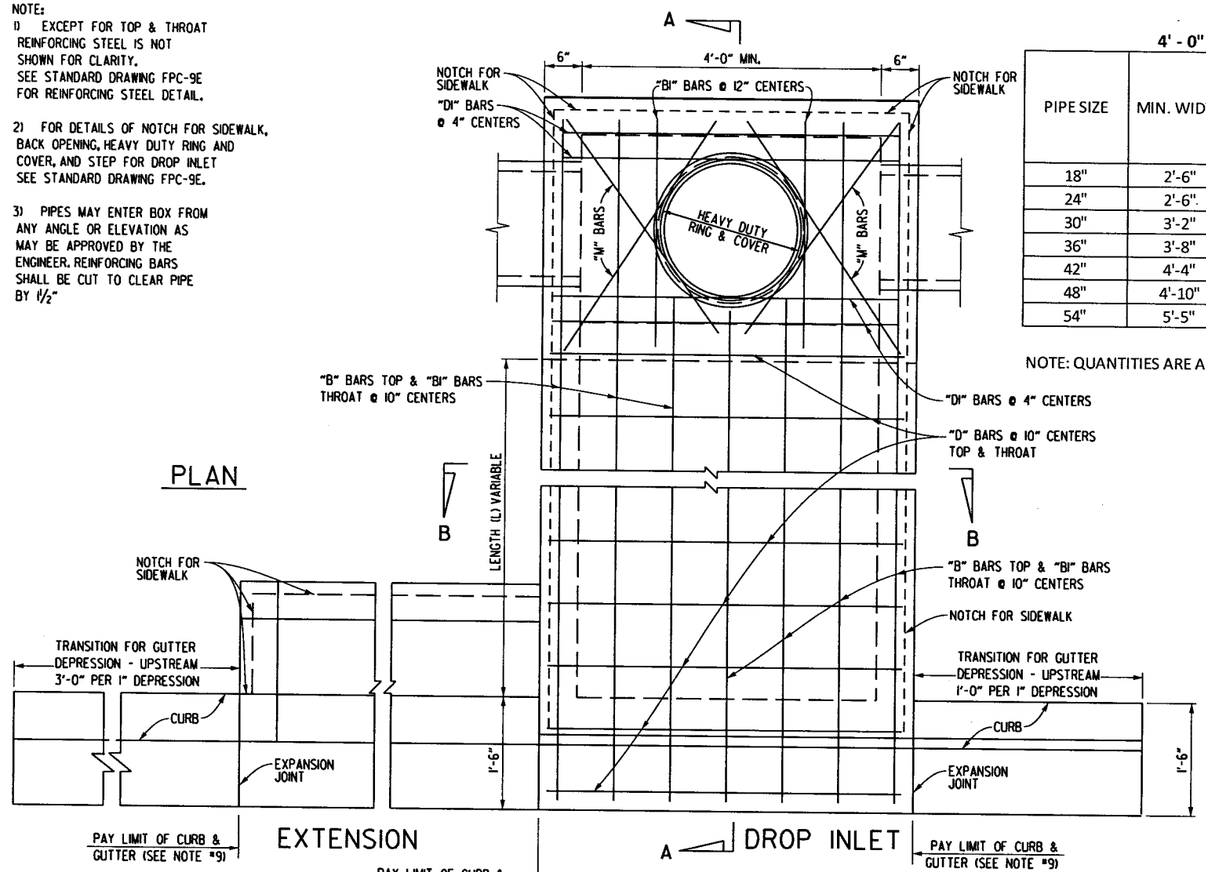
4' - 0" LENGTH DROP INLET WITH 5' THROAT

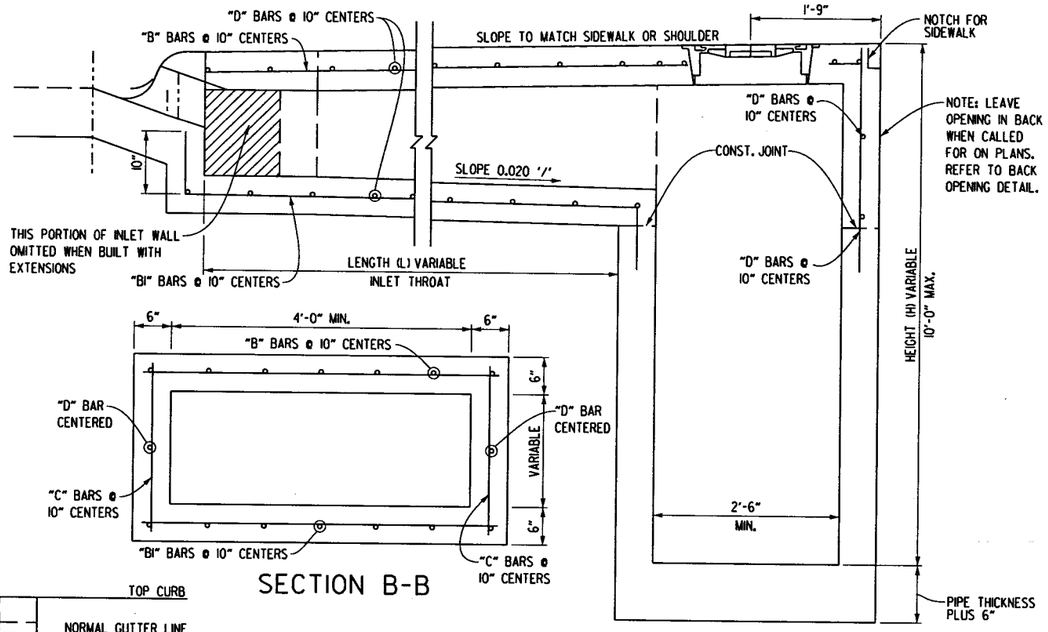
PIPE SIZE	MIN. WIDTH	HEIGHT 5'-0" CLASS A CONC. CU.YDS	HEIGHT 5'-0" REINF. STEEL POUNDS	PLUS OR MINUS PER LIN. FT. OF HEIGHT CLASS A CONC.	PLUS OR MINUS PER LIN. FT. OF HEIGHT REINF. STEEL POUNDS
18"	2'-6"	3.1	298	0.28	22
24"	2'-6".	3.12	298	0.28	22
30"	3'-2"	3.43	347	0.30	26
36"	3'-8"	3.67	378	0.32	28
42"	4'-4"	3.98	392	0.34	30
48"	4'-10"	4.24	407	0.36	32
54"	5'-5"	4.54	415	0.38	34

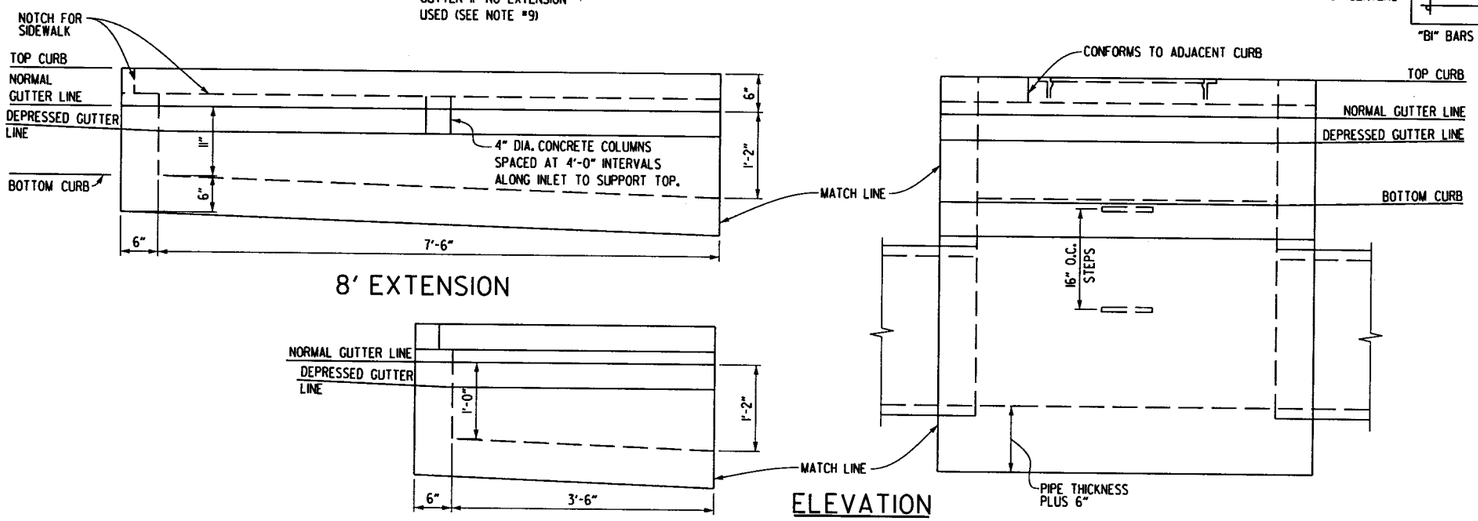
DROP INLET EXTENSION

4'-0" CLASS A CONC. CU.YDS	4'-0" REINF. STEEL POUNDS	8'-0" CLASS A CONC. CU.YDS	8'-0" REINF. STEEL POUNDS
0.58	38	0.87	72
DEDUCT FROM QUANTITY COMPUTED FOR EACH EXTENSION ADDED			
0.04	3		

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







DROP INLETS (TYPE C SPECIAL)
(NOT TO SCALE)

GENERAL NOTES:
1. ALL EXPOSED CORNERS TO HAVE ¾" CHAMFER.
2. STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER OF AS APPROVED BY THE ENGINEER.
3. ALL REINF. BARS SHALL BE #4 AND HAVE 1½" COVER.
4. DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO CURVATURE OF THE CURB.
5. THIS DROP INLET MAY BE CONSTRUCTED ON NEW OR EXISTING R.C. BOX CULVERT AS SHOWN ON F.P.C.-9.
6. WHEN PLANS CALL FOR DROP INLET OVER 10'-0" HIGH, FLOOR AND WALLS SHALL BE CONSTRUCTED AS SHOWN FOR TYPE "RM" DROP INLET (F.P.C.-9D).
7. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
8. DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
9. PAYMENT FOR CURB AND/OR CURB AND GUTTER WITHIN THE LIMITS OF DROP INLETS AND DROP INLET EXTENSIONS SHALL BE CONSIDERED INCLUDED IN PAYMENT MADE FOR DROP INLETS AND/OR DROP INLET EXTENSIONS.
10. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
11. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
12. 4"x2" NOTCH SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
13. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTINGS DESIGNS MAY BE REFERRING TO PREVIOUSLY APPROVED DRAWINGS.
14. 4" DIA. COLUMNS SPACED AT MAX. 4'-0" INTERVALS SHALL BE INSTALLED ALONG INLET AND EXTENSION TO SUPPORT TOP.
15. THE THROAT SHALL BE CAST INTEGRALLY WITH THE GUTTER.

2/13/2018

R061335.DGN

SPECIAL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	14	303

SPECIAL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9235
3-31-17
CHARLES R. ELLIS

TABULAR DATA BY: DHP DATE: 3/30/17
CHECKED BY: ZAS DATE: 3/30/17

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
9'-0"	5'-0"	0'-9"	0'-8"	0	3:1	8'-0"	1'-0"	5'-10"	1'-8"	0	0	2'-2"	2'-8 1/2"	2'-8 1/2"	1'-0 1/2"	1'-0 1/2"	12'-6"	12'-6"	12'-6"	12'-6"

CLASS "S" CONCRETE (Includes apron)	REINFORCING STEEL (Includes apron and laps if required)
INLET	INLET
CU.YD	LBS.
5.08	478

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	13	L	Min	2'-8"				L -				L -	4	18	4	Min	4	18	2	12'-2"
					Max	7'-3"												6'-4"				
				X	Min	0'-9"	-	-	-	X -	-	-	-	X -				Max				
					Max	1'-4"												10'-10"				
				Y	Min	2'-0"				Y -				Y -								
					Max	6'-0"																
WING B	4	12	13	L	Min	2'-8"				L -				L -	4	18	4	Min	4	18	2	12'-2"
					Max	7'-3"												6'-4"				
				X	Min	0'-9"	-	-	-	X -	-	-	-	X -				Max				
					Max	1'-4"												10'-10"				
				Y	Min	2'-0"				Y -				Y -								
					Max	6'-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	9	L	Min	3'-3"	4	6	12'-2"	4	18	8	Min	-	-	-	Min	4	2	12'-8"	4	2	13'-4"	6	12	5	L	3'-4"	239
					Max	7'-3"							1'-8"				-												
				X	Min	1'-4"							Max				Max										X	1'-8"	
					Max	1'-4"							2'-2"				-												
				Y	Min	2'-0"																							
					Max	6'-0"																							
WING B	4	18	9	L	Min	3'-3"	4	6	12'-2"	4	18	8	Min	-	-	-	Min	4	2	12'-8"	4	2	13'-4"	6	12	5	L	3'-4"	239
					Max	7'-3"							1'-8"				-												
				X	Min	1'-4"							Max				Max										X	1'-8"	
					Max	1'-4"							2'-2"				-												
				Y	Min	2'-0"																							
					Max	6'-0"																							

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 REINF. STEEL "a" SIZE	"a" SPACING	"a" LENGTHS VARY	"a" NO. REQ'D	BOTTOM SLAB REINF. STEEL "b" SIZE	"b" SPACING	"b" LENGTHS VARY	"b" NO. REQ'D	SIDE WALL REINF. STEEL "f" SIZE	"f" SPACING	"f" NO. REQ'D	"f" LENGTH
SK	SL	D	S	H	LL	T	B	C	HD	OW	OH			Max				Max					
														Min				Min					

TOP SLAB DISTRIBUTION REINF. STEEL "d" SIZE	"d" SPACING	"d" NO. REQ'D	"d" 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	HEADWALL REINF. STEEL "k1", "k2" & "h" BAR	"k1", "k2" & "h" SIZE	"k1", "k2" & "h" NO. REQ'D	"k1", "k2" & "h" LENGTH
			Max				Max				LONG	"k1"			
												"k2"			
			Min				Min				SHORT				
												"h"			Y

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

① Any Bar Lap Required for the Skewed End Section shall be considered subsidiary to the item "Reinforcing Steel - Roadway (Gr. 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 REINF. STEEL "a" LENGTH = OW - 4" SIZE	"a" SPACING	"a" NO. REQ'D	"a" LENGTH	BOTTOM SLAB REINF. STEEL "b" LENGTH = OW - 4" SIZE	"b" SPACING	"b" NO. REQ'D	"b" LENGTH	SIDE WALL REINF. STEEL "f" LENGTH = OH - 4" SIZE	"f" SPACING	"f" NO. REQ'D	"f" LENGTH	TOP SLAB DISTRIBUTION REINF. STEEL "d" LENGTH = SL SIZE	"d" SPACING	"d" 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
D	S	H	T	B	C	OW	OH	SL																					

HDWL DEPTH	ADDITIONAL REINF. FOR HDWL	"h" HDWL BARS			
HD	LBS	SIZE	Y	LENGTH	NO. REQ'D
3"	12	4	0'-10"	1'-10"	10

CLASS "S" CONCRETE	REINFORCING STEEL (GR. 50)
CU. YDS.	LBS.
TOTAL	
0.08	24

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 REINF. STEEL "a" LENGTH = OW - 4" SIZE	"a" SPACING	"a" NO. REQ'D	"a" LENGTH	BOTTOM SLAB REINF. STEEL "b" LENGTH = OW - 4" SIZE	"b" SPACING	"b" NO. REQ'D	"b" LENGTH	SIDE WALL REINF. STEEL "f" LENGTH = OH - 4" SIZE	"f" SPACING	"f" NO. REQ'D	"f" LENGTH	TOP SLAB DISTRIBUTION REINF. STEEL "d" LENGTH = SL SIZE	"d" SPACING	"d" 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
D	S	H	T	B	C	OW	OH	SL																					
A	2	8	5	11.5	11.5	6	9'-0"	6'-11"	108.00	4	4	324	8'-8"	5	7	185	8'-8"	4	6.5	398	6'-7"	4	9	12	4	9	12	4	12	10

CLASS "S" CONCRETE	REINFORCING STEEL (Gr. 60)
CU. YDS.	LBS.
89.00	7835

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 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 122+20

SPECIAL DETAILS

Ver. Lui4 061335 Culvert-Single.dgn

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.		061335	15	303

① SPECIAL DETAILS

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
3-31-17
CHARLES R. ELLIS

TABULAR DATA BY: DHP DATE: 3/30/17
CHECKED BY: ZAS DATE: 3/30/17

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	AP1	AF2	WE	WF1	WF2	G1	G2	W1	W2	W3	W4
9'-0"	5'-0"	0'-9"	0'-8"	0	3:1	8'-0"	1'-0"	5'-10"	1'-8"	0	0	2'-2"	2'-8 1/2"	2'-8 1/2"	1'-0 1/2"	1'-0 1/2"	12'-6"	12'-6"	12'-6"	12'-6"

CLASS "S" CONCRETE (Includes apron)	REINFORCING STEEL (Includes apron and laps if required)
OUTLET	OUTLET
CU.YD	LBS.
5.51	478

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	13	L	Min	2'-8"				L	-				L	-	4	18	4	Min
					Max	7'-3"														6'-4"
				X	Min	0'-9"	-	-	-	X	-	-	-	-	X	-				Max
					Max	1'-4"														10'-10"
				Y	Min	2'-0"				Y	-				Y	-				
					Max	6'-0"														
WING B	4	12	13	L	Min	2'-8"				L	-				L	-	4	18	4	Min
					Max	7'-3"														6'-4"
				X	Min	0'-9"	-	-	-	X	-	-	-	-	X	-				Max
					Max	1'-4"														10'-10"
				Y	Min	2'-0"				Y	-				Y	-				
					Max	6'-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	12'-2"	4	18	9	L	Min	3'-3"	4	6	12'-2"	4	18	8	Min	-	-	-	Min
									Max	7'-3"							1'-8"				-
								X	Min	1'-4"							Max				Max
									Max	1'-4"							2'-2"				-
								Y	Min	2'-0"											
									Max	6'-0"											
WING B	4	18	2	12'-2"	4	18	9	L	Min	3'-3"	4	6	12'-2"	4	18	8	Min	-	-	-	Min
									Max	7'-3"							1'-8"				-
								X	Min	1'-4"							Max				Max
									Max	1'-4"							2'-2"				-
								Y	Min	2'-0"											
									Max	6'-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'-8"	4	2	13'-4"	6	12	5	L	3'-4"	239
										X	1'-8"	
WING B	4	2	12'-8"	4	2	13'-4"	6	12	5	L	3'-4"	239
										X	1'-8"	

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

TOP SLAB REINFORCING STEEL "a" SIZE	SPACING	LENGTHS VARY	NO. REQ'D	BOTTOM SLAB REINFORCING STEEL "b" SIZE	SPACING	LENGTHS VARY	NO. REQ'D	SIDE WALL REINFORCING STEEL "f" SIZE	SPACING	NO. REQ'D	LENGTH
		Max				Max					
		Min				Min					

TOP SLAB DISTRIBUTION REINFORCING STEEL "d" 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	HDWL "k1", "k2" & "h" BAR	SIZE	NO. REQ'D	LENGTH
			Max				Max				LONG	"k1"			
			Min				Min					"k2"			
											SHORT	"h"			Y

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

① Any Bar Lap Required for the Skewed End Section shall be considered subsidiary to the Item "Reinforcing Steel - Roadway (Gr. 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

HDWL DEPTH	ADDITIONAL REINF. FOR HDWL	"h" HDWL BARS SIZE	Y	LENGTH	NO. REQ'D
HD	LBS				
3"	12	4	0'-10"	1'-10"	10

CLASS "S" CONCRETE CU. YDS.	REINFORCING STEEL (GR. 50) LBS.
TOTAL	
0.08	24

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.

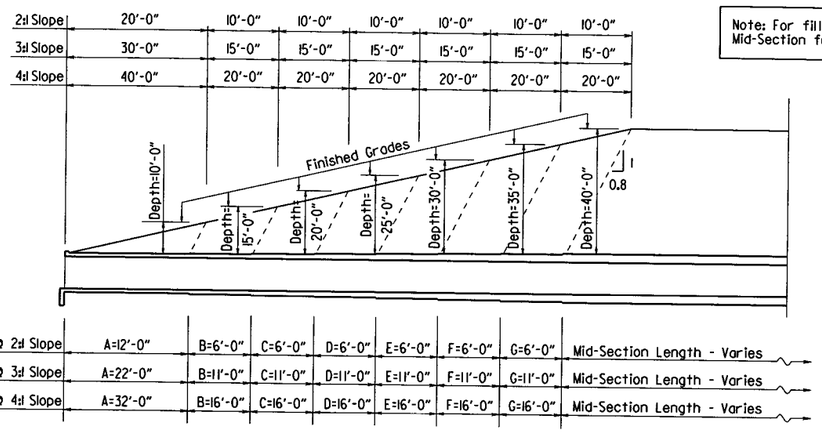
SHEET 2 OF 2
DETAILS OF R.C. BOX CULVERT

SINGLE BARREL BOX CULVERT
STA 122+20

SPECIAL DETAILS

Ver. Jul4 061335 Culvert-Single.dgn

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.		061335	16	303
				①		SPECIAL DETAILS		

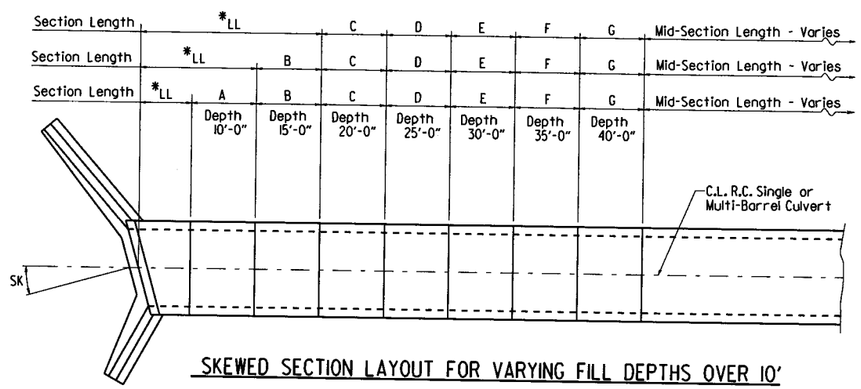


LONGITUDINAL SECTION LENGTH SCHEDULE FOR VARYING FILL DEPTHS OVER 10'

Lengths for Non-Skewed Boxes

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

*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'

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
3-31-17

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.

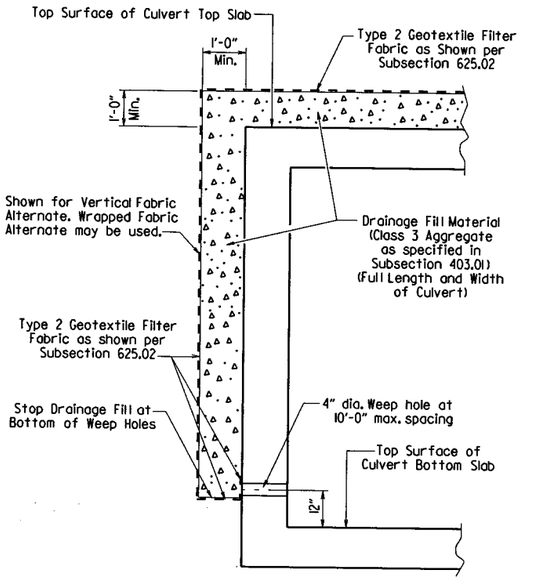
Weep Holes in wingwalls shall have a maximum horizontal spacing of 10'-0" and shall be spaced to clear all reinforcing steel. There shall be a minimum of two (2) weep holes in each wingwall. The drain opening shall be 4" diameter and shall be placed 12" above the top of the wingwall footing.

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 normal to the centerline of barrel and shall be keyed. Longitudinal reinforcing shall be continuous through joints unless shown otherwise. 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.

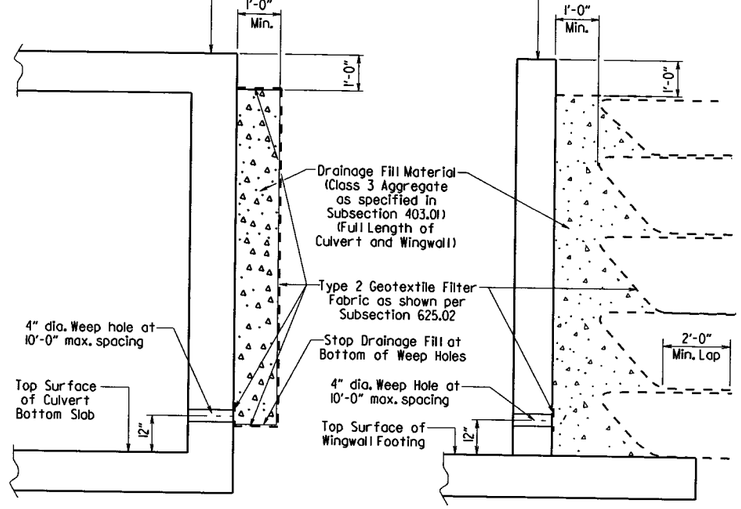
When the top slab of the box culvert serves as finished roadway surface, curing and finishing shall be in accordance with subsections 802.17 and 802.20 for bridge roadway surface and a tine finish shall be applied in accordance with subsection 802.19 for Class 5 Tined Bridge Roadway Surface Finish. Curing 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.



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)

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

WINGWALL & CULVERT DRAINAGE DETAIL

SHEET 1 OF 4

GENERAL DETAILS OF R.C. BOX CULVERT

GENERAL NOTES &
LONGITUDINAL SECTION LENGTH SCHEDULE

SPECIAL DETAILS

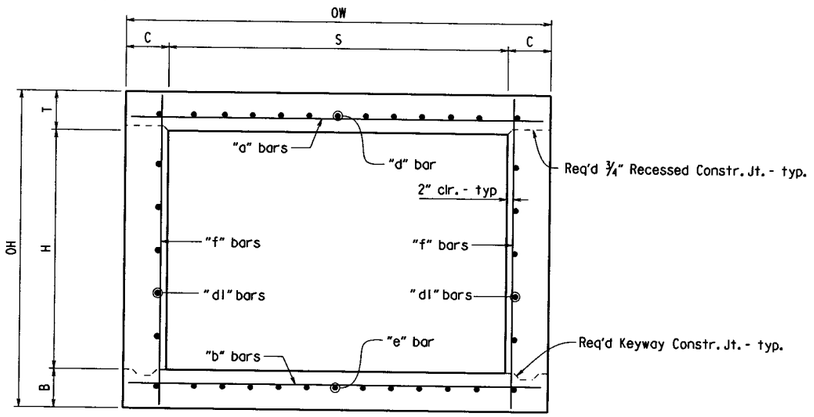
V 1.14 Culvert-General.dgn

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.		061335	17	303

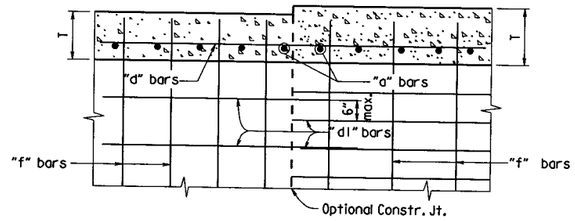
SPECIAL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9235
3-31-17
CHARLES R. ELLIS

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



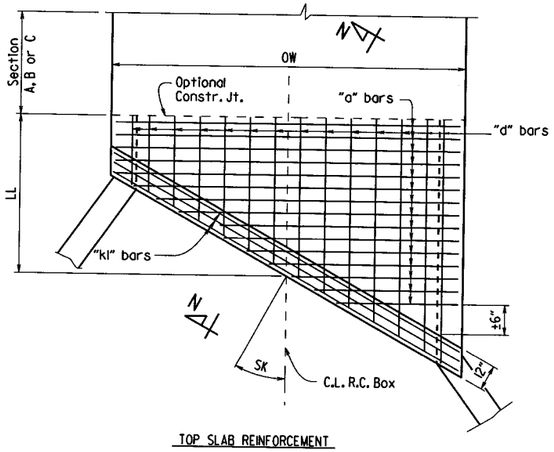
TYPICAL SECTION M-M



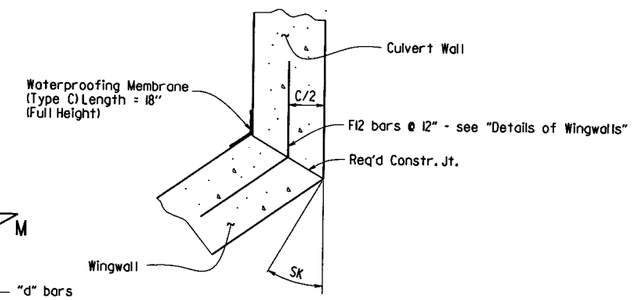
Longitudinal Bar Spacing at individual sections shall be maintained, which may result in noncontact bar laps.

LONGITUDINAL LAP DETAIL AT CHANGE IN SECTIONS

TOP SLAB SHOWN, BOTTOM SLAB SIMILAR

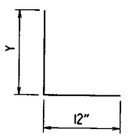


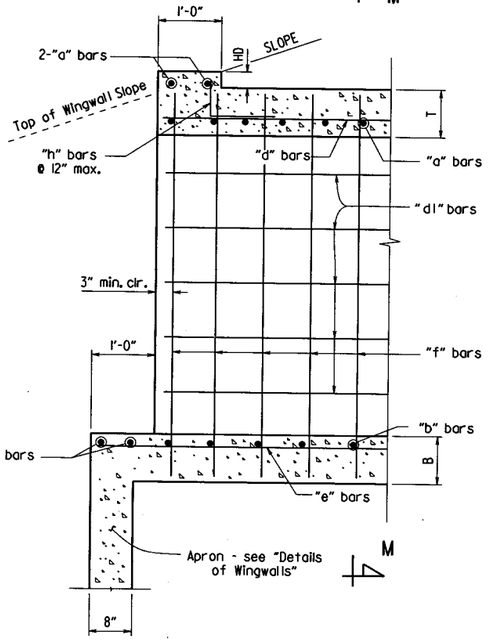
TOP SLAB REINFORCEMENT



WINGWALL ATTACHMENT

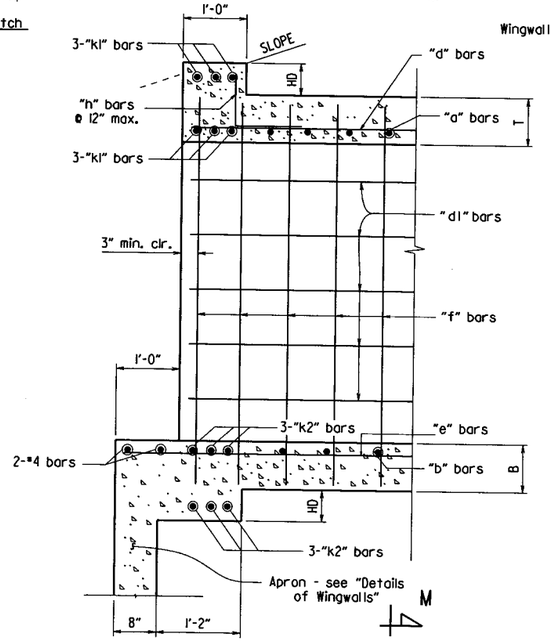
See "Details of Wingwalls" for additional information and wingwall details.





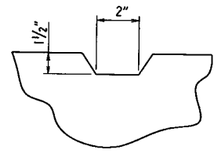
PART LONGITUDINAL SECTION

(Non-Skewed Ends)



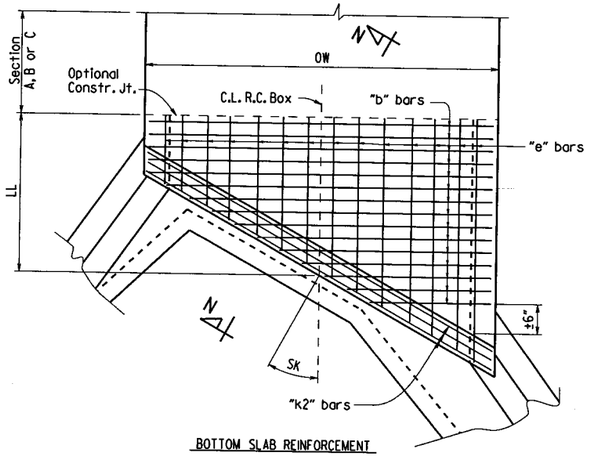
PART LONGITUDINAL SECTION N-N

(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

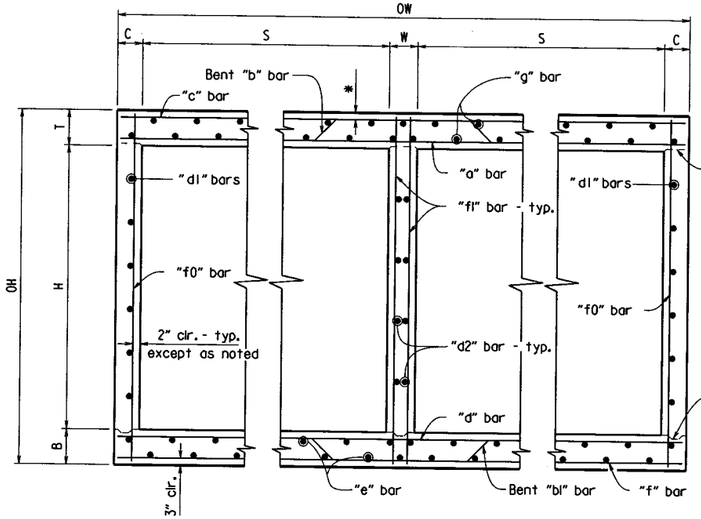
Culvert-General.dgn

*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.

DATE REVISED	DATE FILMED	REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	18	303

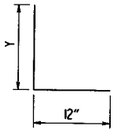
SPECIAL DETAILS



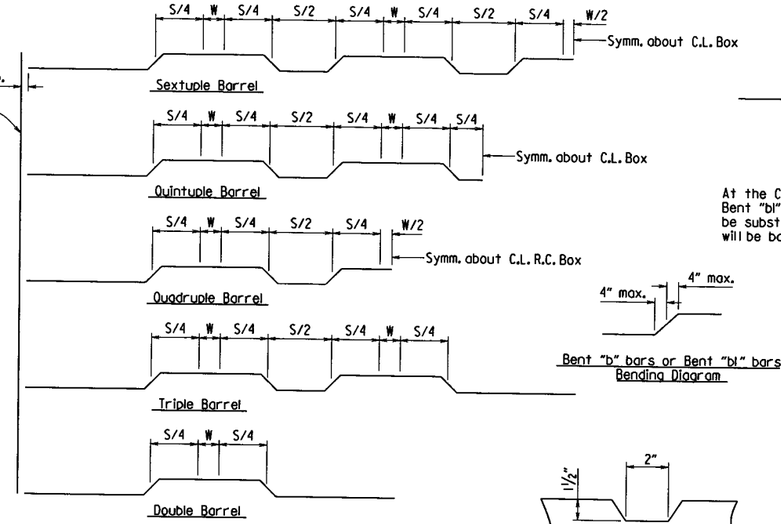
TYPICAL SECTION M-M

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

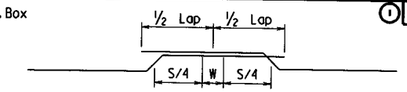
Bottom Slab
Straight "d" bars shall alternate with Bent "bl" bars in top.
Straight "f" bars shall alternate with Bent "bl" bars in bottom.



"h" bars sketch



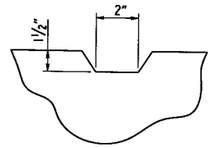
Bent "b" bars or Bent "bl" bars sketch



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

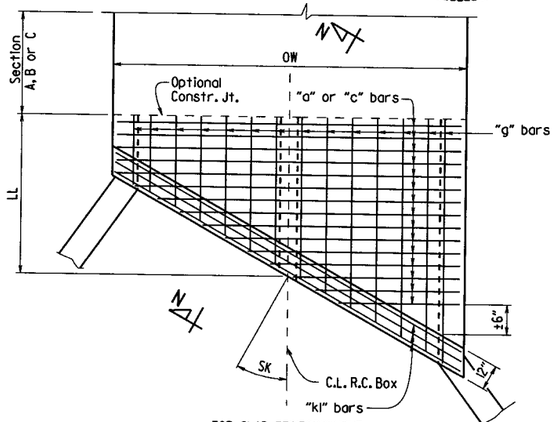
At the Contractor's option in lieu of providing Bent "b" or Bent "bl" bars, one bar top and bottom of equivalent size may be substituted for each bent bar. Payment for the reinforcing will be based on the weight of the "b" or "bl" bar.

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

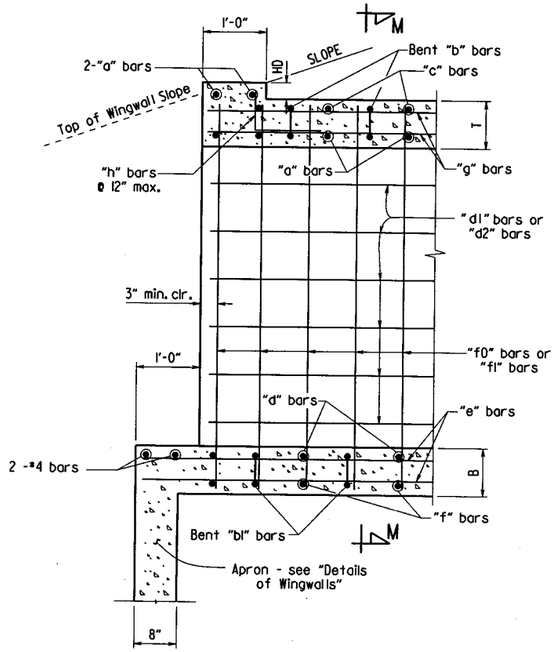


TYPICAL KEYWAY DETAIL

(All Construction Joints)

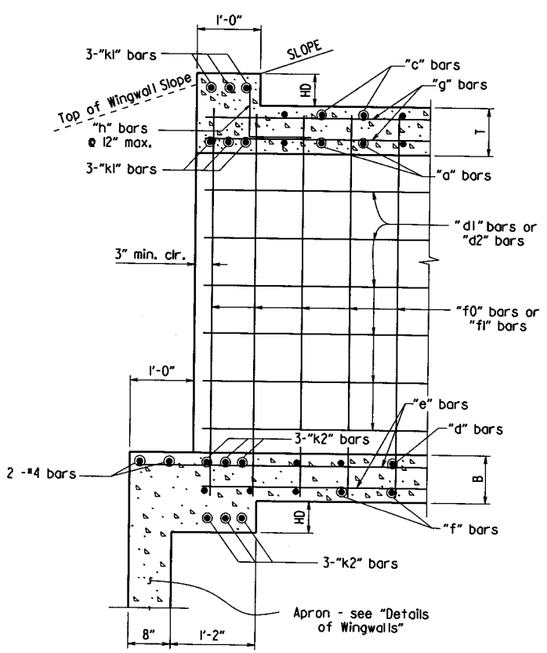


TOP SLAB REINFORCEMENT
Straight "c" bars in top.
Straight "a" bars in bottom.



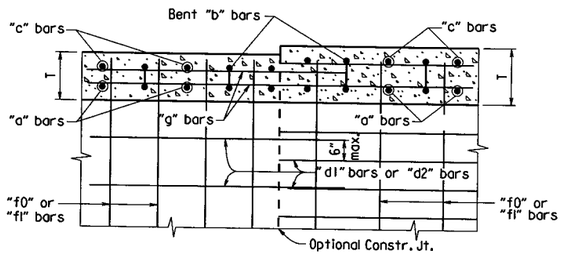
PART LONGITUDINAL SECTION

(Non-Skewed Ends)



PART LONGITUDINAL SECTION N-N

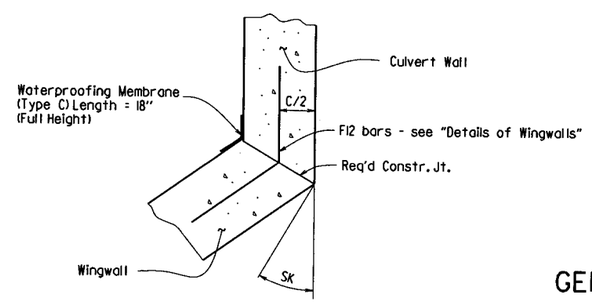
(Skewed Ends)



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

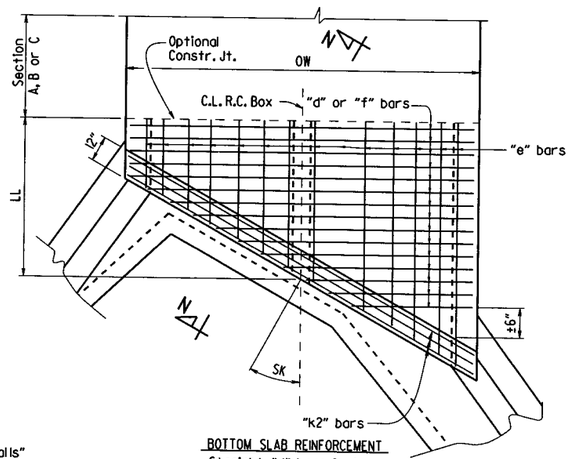
LONGITUDINAL LAP DETAIL AT CHANGE IN SECTIONS

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

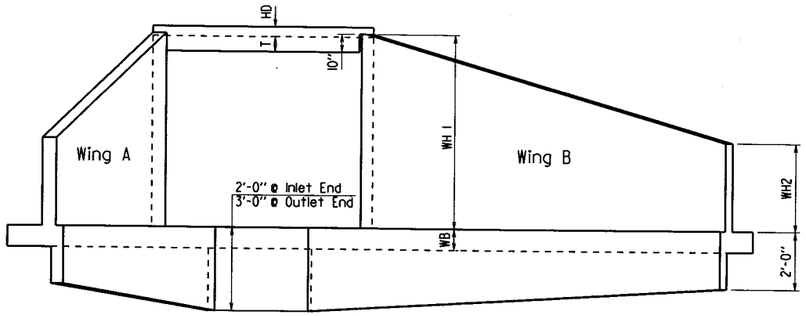
SPECIAL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9235
3-31-17
CHARLES R. ELLIS

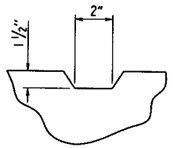
Culvert-General.dgn

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.		061335	19	303

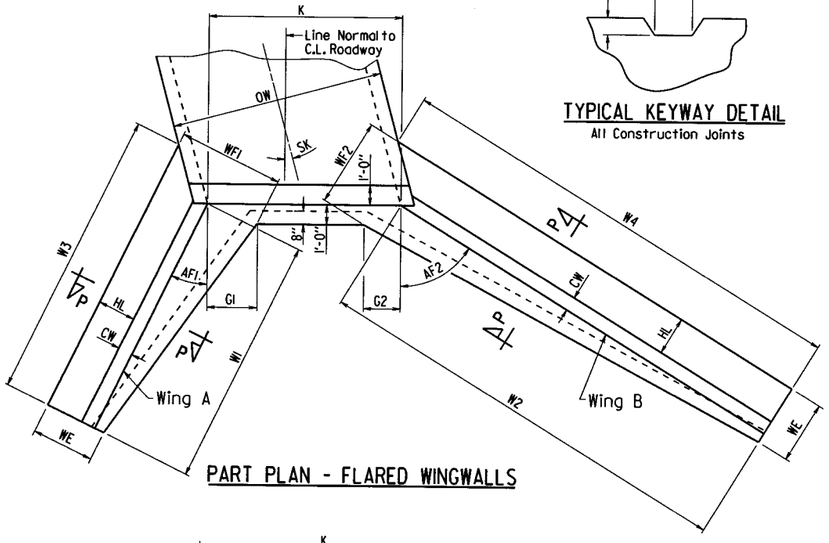
SPECIAL DETAILS



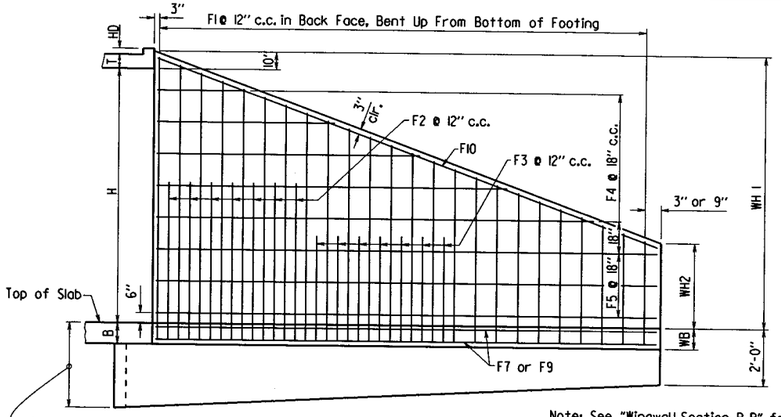
END ELEVATION
Flared Wingwalls Shown



TYPICAL KEYWAY DETAIL
All Construction Joints

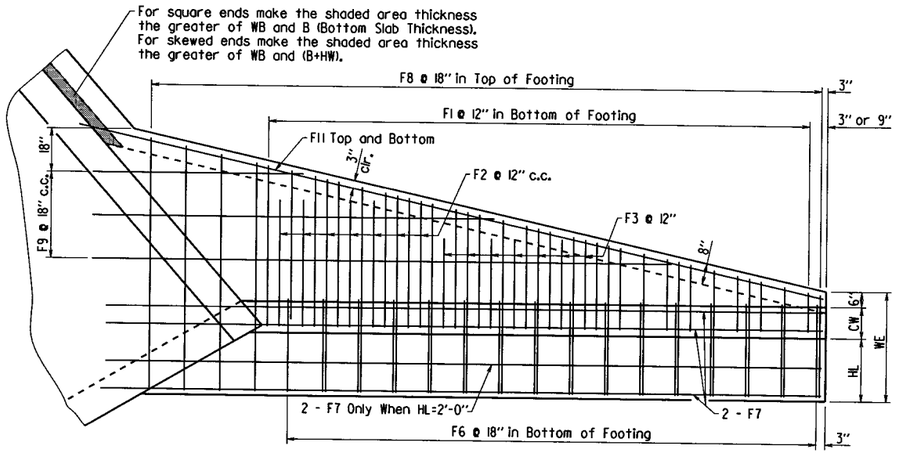


PART PLAN - FLARED WINGWALLS

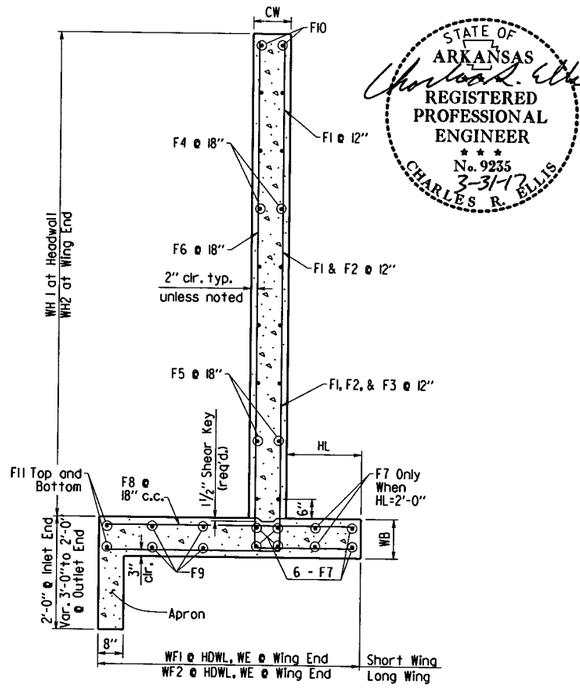


WINGWALL ELEVATION
Showing Back Face Reinforcement

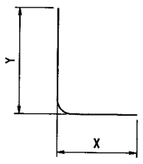
Note: See "Wingwall Section P-P" for additional details and reinforcing.



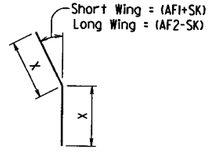
PLAN - FLARED WINGWALLS
Showing Footing Reinforcement



WINGWALL SECTION P-P

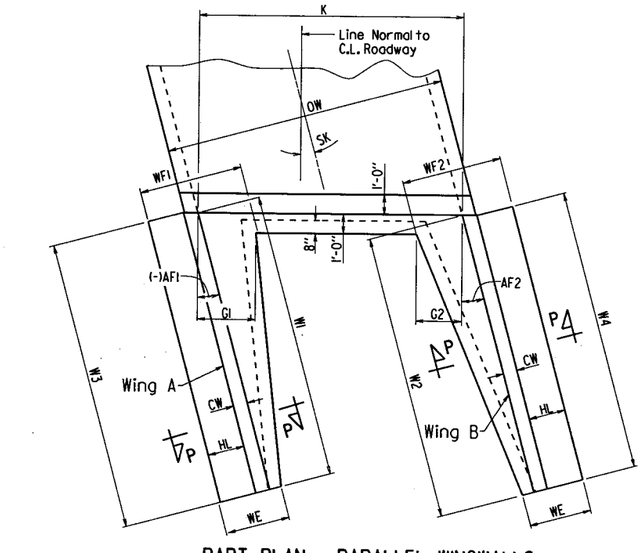


F1, F2, F3, & F6 BARS

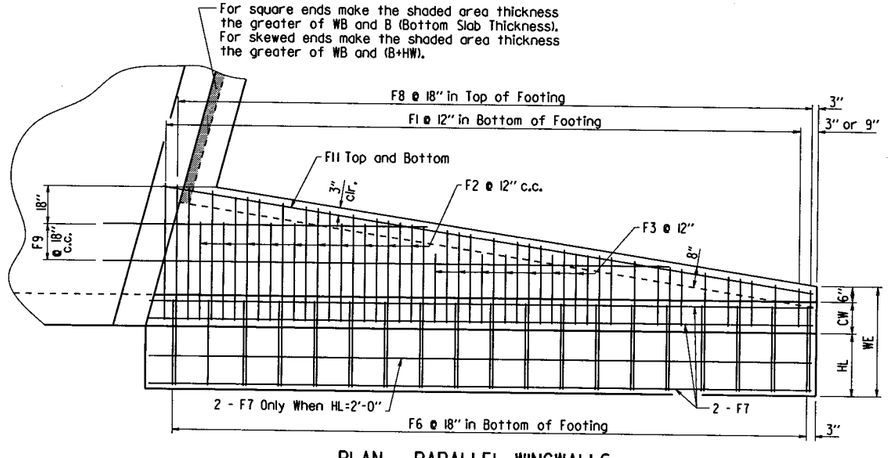


*F12 BAR

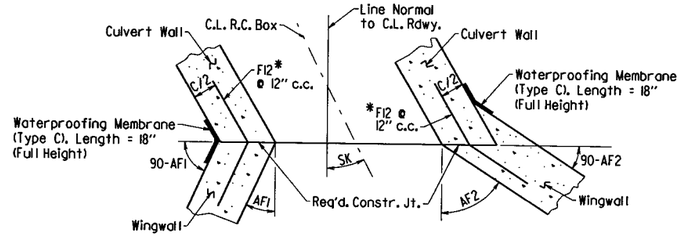
*F12 is a straight bar for parallel wingwalls



PART PLAN - PARALLEL WINGWALLS



PLAN - PARALLEL WINGWALLS
Showing Footing Reinforcement



CONSTRUCTION JOINTS
Flared Wingwalls Shown

SHEET 4 OF 4

GENERAL DETAILS OF R.C. BOX CULVERT

DETAILS OF WINGWALLS

SPECIAL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9235
3-31-17
CHARLES R. ELLIS

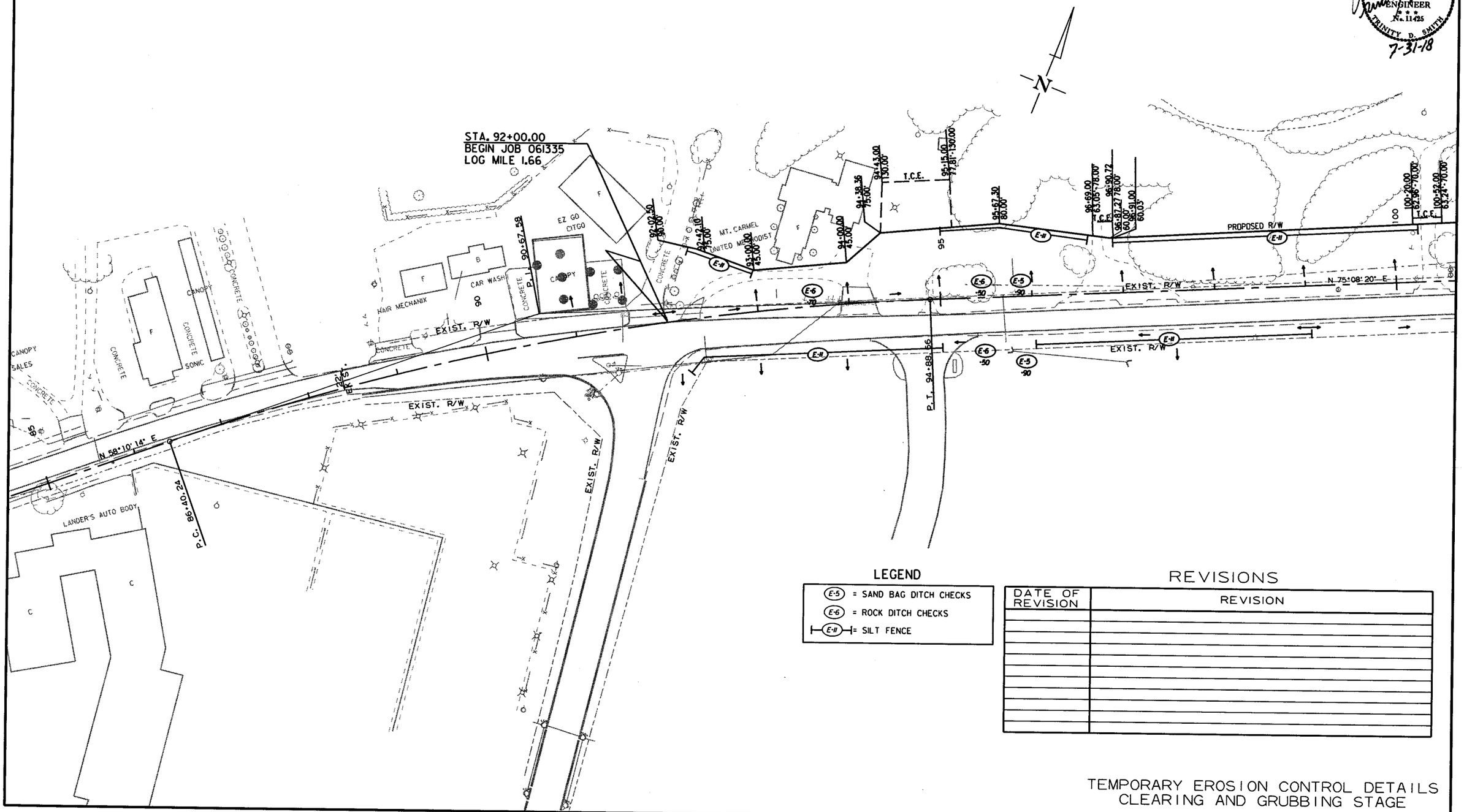
Culvert-General.dgn

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	20	303

(2) TEMPORARY EROSION CONTROL DETAILS

QUANTITIES:
SAND BAG DITCH CHECKS (E-5) = 110 BAGS
ROCK DITCH CHECKS (E-6) = 18 CU. YDS.
SILT FENCE (E-11) = 12475 LIN. FT.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18



LEGEND

E-5 = SAND BAG DITCH CHECKS
E-6 = ROCK DITCH CHECKS
E-11 = SILT FENCE

REVISIONS

DATE OF REVISION	REVISION

TEMPORARY EROSION CONTROL DETAILS
CLEARING AND GRUBBING STAGE

2/13/2018

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	21	303

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED
PROFESSIONAL
ENGINEER
TRINITY D. SMITH
No. 11425
7-31-18

REVISIONS

DATE OF REVISION	REVISION

LEGEND

E-II = SILT FENCE

2/13/2018

R061335.DGN

TEMPORARY EROSION CONTROL DETAILS
CLEARING AND GRUBBING STAGE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	22	303

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-11) = SILT FENCE

REVISIONS

DATE OF REVISION	REVISION

EXIST. R/W
PARKING
ANDERSON LAKE ROAD
FRED'S
ICE MACHINE
CONCRETE
METAL
EXISTING R/W
PROPOSED R/W
N 80°15'03" E
N 61°16'03" E
N 2°29'48" E
P.I. 132+42.32
P.T. 141+82.70
P.C. 160+12.02
T.C.E.
SPRINGHILL STORAGE CENTER
USA DRUG
VALERO
SPRINGHILL ROAD
SMALL BUSINESS
SPRINGHILL ANIMAL HOSPITAL
THE HAPPY HOUND
SPRINGHILL HARDWARE
POLARIS
BRANDON ROAD
OBSCURED
ST.WOOD FRAME PRODUCTS
ST.MFG.
PARKING
CONCRETE

2/13/2018

R061335.DGN

TEMPORARY EROSION CONTROL DETAILS
CLEARING AND GRUBBING STAGE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	23	303

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

REVISIONS

DATE OF REVISION	REVISION

LEGEND

(E-5) = SAND BAG DITCH CHECKS
(E-6) = ROCK DITCH CHECKS
E-11 = SILT FENCE

2/13/2018

R061335.DGN

TEMPORARY EROSION CONTROL DETAILS
CLEARING AND GRUBBING STAGE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
08-20-18			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		061335	24	303

2 TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
8-20-18

REVISIONS

DATE OF REVISION	REVISION

LEGEND

E-II = SILT FENCE

STA. 214+00.00
END JOB 061335

TEMPORARY EROSION CONTROL DETAILS
CLEARING AND GRUBBING STAGE

2/13/2018

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	25	303

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

STA. 55+50.00
BEGIN SPRINGHILL RD. CONST.

STA. 71+50.00
END SPRINGHILL RD. CONST.

REVISIONS

DATE OF REVISION	REVISION

LEGEND

E-H = SILT FENCE

TEMPORARY EROSION CONTROL DETAILS
CLEARING AND GRUBBING STAGE

2/13/2018

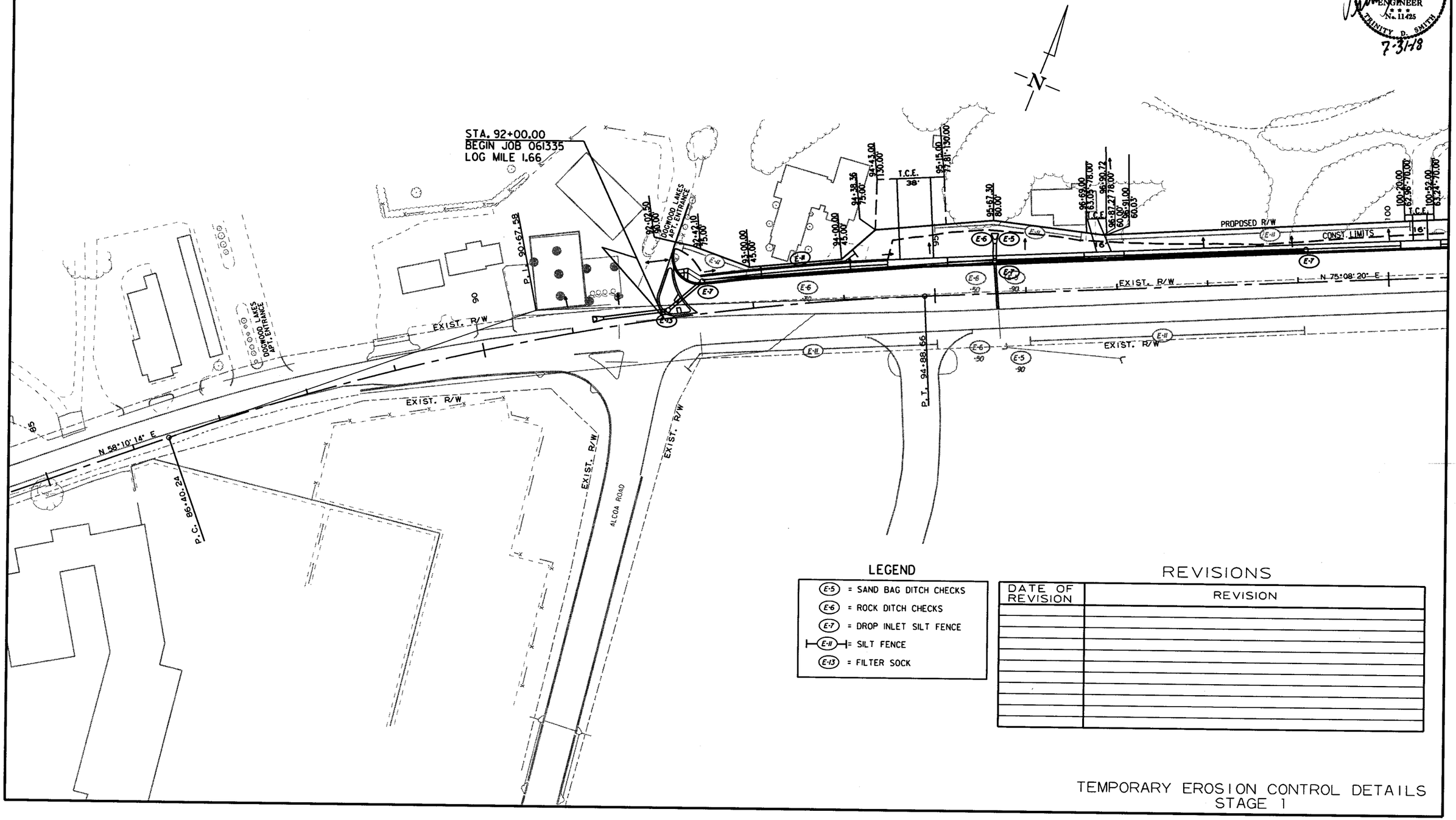
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	26	303

(2) TEMPORARY EROSION CONTROL DETAILS

QUANTITIES:
SAND BAG DITCH CHECKS (E-5) = 154 BAGS
ROCK DITCH CHECKS (E-6) = 21 CU. YDS.
DROP INLET SILT FENCE (E-7) = 902 LIN. FT.
SILT FENCE (E-11) = 490 LIN. FT.
FILTER SOCK (E-13) = 350 LIN. FT.
SEDIMENT BASIN (E-14) = 172 CU. YDS.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18



LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-7) = DROP INLET SILT FENCE
- (E-11) = SILT FENCE
- (E-13) = FILTER SOCK

REVISIONS

DATE OF REVISION	REVISION

2/13/2018

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TEMPORARY EROSION CONTROL DETAILS
STAGE 1

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	27	303

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-7) = DROP INLET SILT FENCE
- (E-11) = SILT FENCE
- (E-13) = FILTER SOCK
- (E-14) XX CU FT = SEDIMENT BASIN

2/13/2018

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TEMPORARY EROSION CONTROL DETAILS
STAGE 1

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	28	303

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-7) = DROP INLET SILT FENCE
- (E-11) = SILT FENCE
- (E-14) XX CU FT = SEDIMENT BASIN

REVISIONS

DATE OF REVISION	REVISION

EXIST. R/W
ANDERSON LAKE ROAD
EXISTING R/W
PROPOSED R/W
CONST. LIMITS
N 80°15'03" E
N 61°16'03" E
N 2°29'48" E
SPRINGHILL ROAD
BRANDON ROAD
P.I. 132+42.32
P.T. 141+82.70
P.C. 160+12.02
T.C.E.
C.F.

2/13/2018

R061335.DGN

TEMPORARY EROSION CONTROL DETAILS
STAGE 1

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	29	303

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-7) = DROP INLET SILT FENCE
- (E-11) = SILT FENCE
- (E-14) = SEDIMENT BASIN, XX CU FT

PROPOSED R/W
EXISTING R/W
CONST. LIMITS
T.C.E.
N 61°16'03" E
N 58°08'05" E
N 50°59'03" E
P.C. 160+12.02
P.T. 163+25.40
P.C. 182+65.16
P.T. 185+03.97
HERNANDO DE SOTO PLACE
PINE MEADOW DRIVE
SUNSET MEADOW DRIVE
N. PICKETT ROAD
HURRICANE CREEK TRIBUTARY
32 CU. YDS.
31 CU. YDS.

TEMPORARY EROSION CONTROL DETAILS
STAGE 1

2/13/2018

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
08-20-18				6	ARK.			
				JOB NO.		061335	30	303

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
8-20-18

REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-7) = DROP INLET SILT FENCE
- (E-11) = SILT FENCE
- (E-13) = FILTER SOCK
- (E-14) XX CU FT = SEDIMENT BASIN

STA. 214+00.00
END JOB 061335

TEMPORARY EROSION CONTROL DETAILS
STAGE 1

2/13/2018

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	31	303

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

STA. 55+50.00
BEGIN SPRINGHILL RD. CONST.

STA. 71+50.00
END SPRINGHILL RD. CONST.

REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-7) = DROP INLET SILT FENCE
- (E-11) = SILT FENCE
- (E-13) = FILTER SOCK
- (E-14) = SEDIMENT BASIN, XX CU FT

2/13/2018

R061335.DGN

TEMPORARY EROSION CONTROL DETAILS
STAGE 1

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	32	303

(2) TEMPORARY EROSION CONTROL DETAILS

QUANTITIES:
SAND BAG DITCH CHECKS (E-5) = 506 BAGS
ROCK DITCH CHECKS (E-6) = 69 CU. YDS.
DROP INLET SILT FENCE (E-7) = 814 LIN. FT.
SILT FENCE (E-11) = 2615 LIN. FT.
FILTER SOCK (E-13) = 1015 LIN. FT.
SEDIMENT BASIN (E-14) = 303 CU. YDS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

STA. 92+00.00
BEGIN JOB 061335
LOG MILE 1.66

N

PROPOSED R/W
CONST. LIMITS
EXIST. R/W
T.C.E.
38'
16'
95'
90'
85'
80'
40'
N 75°08' 20" E
N 72°10'54"E
N 58°10' 14" E
P.C. 86+40.24
P.T. 94+88.66
PC200+06.64
DOGWOOD LAKES APT. ENTRANCE
ALCOA ROAD
EXIST. R/W

LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-7) = DROP INLET SILT FENCE
- (E-11) = SILT FENCE
- (E-13) = FILTER SOCK
- (E-14) XX CU FT = SEDIMENT BASIN

REVISIONS

DATE OF REVISION	REVISION

TEMPORARY EROSION CONTROL DETAILS
STAGE 2

2/13/2018

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	33	303

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

REVISIONS

DATE OF REVISION	REVISION

P. I. = 105+54.48
Δ = 5°06'43.0" RT.
D = 2°00'00.0"
T = 127.88'
L = 255.60'
P.C. = 104+26.60
P.T. = 106+82.19
e = 0.034'/'
Ls = 405.00'

LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-7) = DROP INLET SILT FENCE
- (E-11) = SILT FENCE
- (E-13) = FILTER SOCK
- (E-14) = SEDIMENT BASIN, XX CU FT

2/13/2018

R061335.DGN

TEMPORARY EROSION CONTROL DETAILS
STAGE 2

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	34	303

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

RESTRAINING CONDITIONS "CEMETERY"

LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-7) = DROP INLET SILT FENCE
- (E-11) = SILT FENCE
- (E-13) = FILTER SOCK
- (E-14) XX CU FT = SEDIMENT BASIN

REVISIONS

DATE OF REVISION	REVISION

ANDERSON LAKE ROAD
SHADY PINE RD.
CEMETERY LIMITS
EXIST. R/W
CONST. LIMITS
PROPOSED R/W
EXISTING R/W
N 80°15'03" E
N 61°16'03" E
N61°04'06"E
N60°24'34"E
N 2°29'48" E
SPRINGHILL ROAD
BRANDON ROAD
P.I. 132+42.32
P.C. 160+12.02
PC258+69.09
PT243+24.11
PT244+04.48
PT243+91.20
PC252+33.98
PT253+24.42
PC244+59.22
PT166+53.69
PC166+59.56
PT259+92.04
P.T. 141+82.70
P1252+91.20
P1233+89.73
T.C.E.
SET WELL
SEPTIC

TEMPORARY EROSION CONTROL DETAILS
STAGE 2

2/13/2018
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	35	303

2 TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-7) = DROP INLET SILT FENCE
- (E-11) = SILT FENCE
- (E-14) XX CU FT = SEDIMENT BASIN

N 61°16'03" E
N58°33'55"E
N 58°08'05" E
N 50°59'03" E
PROPOSED R/W
EXISTING R/W
CONST. LIMITS
T.C.E.
N. PICKETT ROAD
MEADOW DRIVE
SUNSET AVENUE
HURRICANE CREEK TRIBUTARY
32 CU. YDS.
31 CU. YDS.
14 CU. YDS.

TEMPORARY EROSION CONTROL DETAILS
STAGE 2

2/13/2018
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
08-20-18				6	ARK.			
				JOB NO.		061335	36	303

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
8-2018

REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-7) = DROP INLET SILT FENCE
- (E-11) = SILT FENCE
- (E-13) = FILTER SOCK
- (E-14) XX CU FT = SEDIMENT BASIN

STA. 214+00.00
END JOB 061335

TEMPORARY EROSION CONTROL DETAILS
STAGE 2

2/13/2018

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	37	303

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

STA. 55+50.00
BEGIN SPRINGHILL RD. CONST.

STA. 71+50.00
END SPRINGHILL RD. CONST.

REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-7) = DROP INLET SILT FENCE
- (E-11) = SILT FENCE
- (E-13) = FILTER SOCK
- (E-14) XX CU FT = SEDIMENT BASIN

TEMPORARY EROSION CONTROL DETAILS
STAGE 2

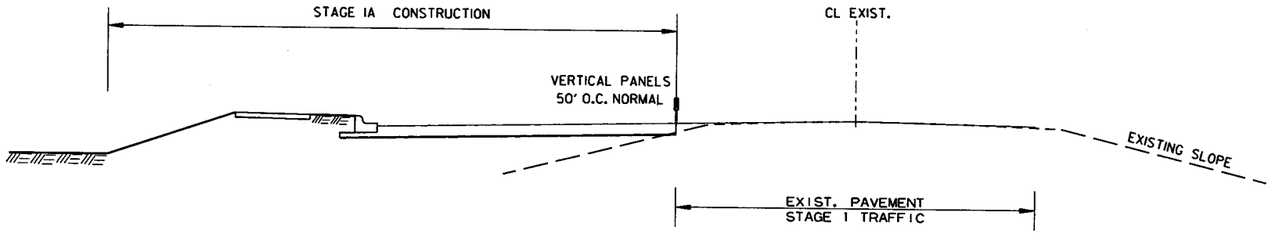
2/13/2018

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	38	303

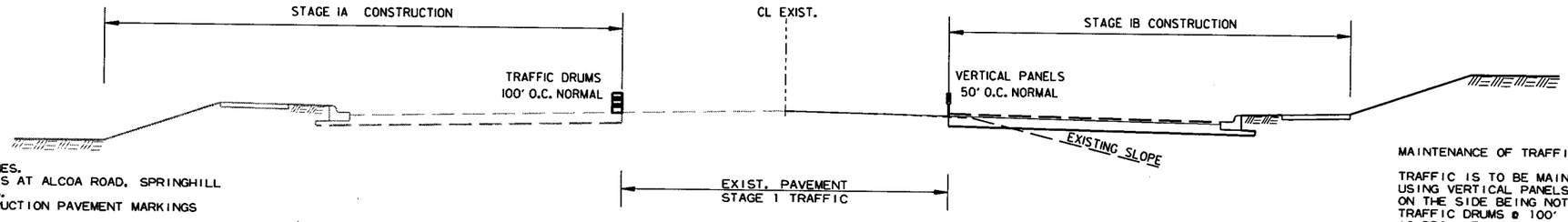
(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18



STAGE 1A TRAFFIC

STA. 92+00.00 TO STA. 129+00.00 LT.
STA. 166+00.00 TO STA. 214+00.00 LT.



STAGE 1B TRAFFIC

STA. 124+66.00 TO STA. 166+00.00 RT.

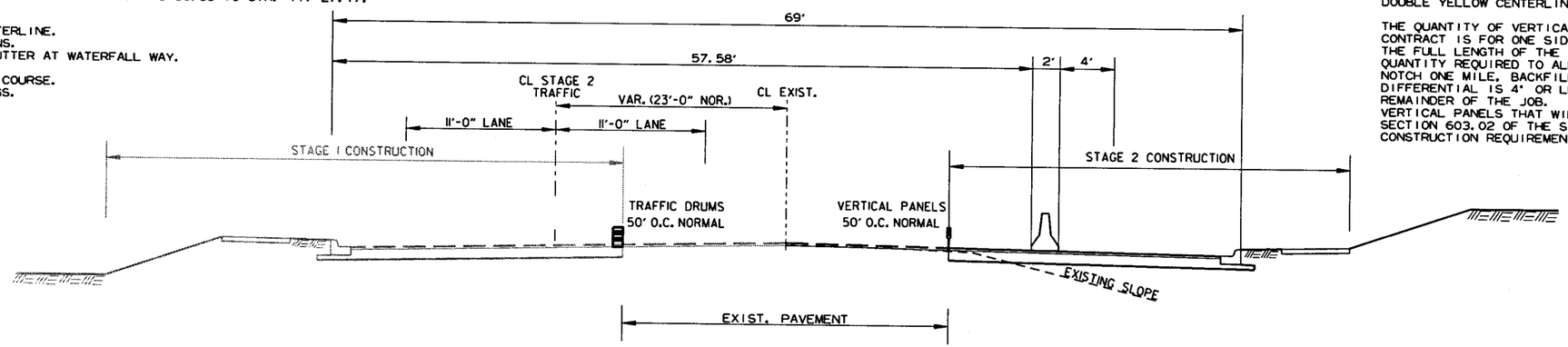
SEQUENCE OF CONSTRUCTION

STAGE 1A:
MAINTAIN TRAFFIC IN EXISTING LANES.
MAINTAIN EXISTING TRAFFIC SIGNALS AT ALCOA ROAD, SPRINGHILL ROAD, AND HWY. 183 INTERSECTIONS.
PLACE LEVELING COURSE AND CONSTRUCTION PAVEMENT MARKINGS AS DIRECTED BY THE ENGINEER.
NOTCH AND WIDEN LT. OF EXISTING LANES FROM STA. 92+00.00 TO STA. 129+00.00; AND FROM STA. 166+00.00 TO STA. 214+00.00.
CONSTRUCT BRIDGE BETWEEN STA. 115+36.83 TO STA. 117+27.17 AS PER BRIDGE STAGE CONSTRUCTION SHEET.

STAGE 1B:
NOTCH AND WIDEN RT. OF EXISTING LANES FROM STA. 124+66.61 TO STA. 166+00.00.
INSTALL TEMPORARY SIGNAL AT SPRINGHILL ROAD INTERSECTION BEFORE SHIFTING TO STAGE 2 CENTERLINE. SEE SIGNALIZATION DETAIL SHEET 123.

STAGE 2:
SHIFT TRAFFIC TO STAGE 2 CENTERLINE.
NOTCH AND WIDEN RT. OF EXISTING LANES FROM STA. 92+00.00 TO STA. 124+66.61; AND FROM STA. 166+00.00 TO STA. 214+00.00.
NOTCH AND WIDEN LT. OF EXISTING LANES FROM STA. 129+00 TO STA. 166+00.00.
CONSTRUCT REMAINING PORTION OF BRIDGE BETWEEN STA. 115+36.83 TO STA. 117+27.17.

STAGE 3:
SHIFT TRAFFIC TO CONSTRUCTION CENTERLINE.
CONSTRUCT ISLANDS AS SHOWN ON PLANS.
CONSTRUCT REMAINDER OF CURB AND GUTTER AT WATERFALL WAY.
COLD MILL TRANSITION AREAS.
PLACE FINAL LAYER OF ACHM SURFACE COURSE.
INSTALL PERMANENT PAVEMENT MARKINGS.



STAGE 2 TRAFFIC

STA. 92+00.00 TO STA. 124+66.00 RT.
STA. 129+00.00 TO STA. 166+00.00 LT.
STA. 166+00.00 TO STA. 214+00.00 RT.

MAINTENANCE OF TRAFFIC NOTES:

TRAFFIC IS TO BE MAINTAINED IN THE EXISTING LANES USING VERTICAL PANELS @ 50' SPACING ON THE SIDE BEING NOTCHED AND WIDENED AND TRAFFIC DRUMS @ 100' SPACING ONCE WIDENING IS BROUGHT TO GRADE.

PLACE OM-3 SIGNS AT EACH TEMPORARY PRECAST CONCRETE BARRIER INSTALLATION AS SHOWN.

R4-1 SIGNS ARE TO BE PLACED AT 1/2 MILE INTERVALS. W20-1 & G20-2 SIGNS ARE TO BE PLACED AT ALL STATE HIGHWAYS AND COUNTY ROAD INTERSECTIONS THROUGH THE WORK ZONE AS SHOWN.

ALL STATE HIGHWAYS, COUNTY ROAD INTERSECTIONS, AND DRIVEWAYS ON THE SIDE BEING WIDENED ARE TO BE DELINEATED USING TRAFFIC DRUMS.

CONSTRUCTION PAVEMENT MARKING QUANTITIES BASED ON ONE APPLICATION OF RT. & LT. EDGE LINES AND DOUBLE YELLOW CENTERLINE FOR THE ENTIRE PROJECT.

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

2/13/2018

R061335.DGN

MAINTENANCE OF TRAFFIC DETAILS ALL STAGES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	39	303

(2) MAINTENANCE OF TRAFFIC DETAILS

SEQUENCE OF CONSTRUCTION

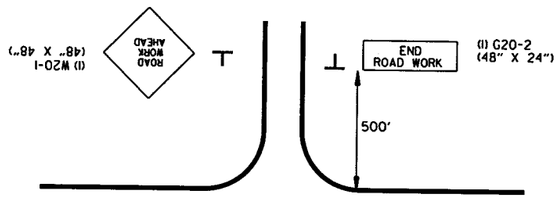
STAGE 1A:
MAINTAIN TRAFFIC IN EXISTING LANES.
MAINTAIN EXISTING TRAFFIC SIGNALS AT ALCOA ROAD, SPRINGHILL ROAD, AND HWY. 183 INTERSECTIONS.
PLACE LEVELING COURSE AND CONSTRUCTION PAVEMENT MARKINGS AS DIRECTED BY THE ENGINEER.
NOTCH AND WIDEN LT. OF EXISTING LANES FROM STA. 92+00.00 TO STA. 129+00.00; AND FROM STA. 166+00.00 TO STA. 214+00.00.
CONSTRUCT BRIDGE BETWEEN STA. 115+36.83 TO STA. 117+27.17 AS PER BRIDGE STAGE CONSTRUCTION SHEET.

STAGE 1B:
NOTCH AND WIDEN RT. OF EXISTING LANES FROM STA. 124+66.61 TO STA. 166+00.00.
INSTALL TEMPORARY SIGNAL AT SPRINGHILL ROAD INTERSECTION BEFORE SHIFTING TO STAGE 2 CENTERLINE. SEE SIGNALIZATION DETAIL SHEET 124.

STAGE 2:
SHIFT TRAFFIC TO STAGE 2 CENTERLINE.
NOTCH AND WIDEN RT. OF EXISTING LANES FROM STA. 92+00.00 TO STA. 124+66.61; AND FROM STA. 166+00.00 TO STA. 214+00.00.
NOTCH AND WIDEN LT. OF EXISTING LANES FROM STA. 129+00 TO STA. 166+00.00.
CONSTRUCT REMAINING PORTION OF BRIDGE BETWEEN STA. 115+36.83 TO STA. 117+27.17.

STAGE 3:
SHIFT TRAFFIC TO CONSTRUCTION CENTERLINE.
CONSTRUCT ISLANDS AS SHOWN ON PLANS.
CONSTRUCT REMAINDER OF CURB AND GUTTER AT WATERFALL WAY.
COLD MILL TRANSITION AREAS.
PLACE FINAL LAYER OF ACHM SURFACE COURSE.
INSTALL PERMANENT PAVEMENT MARKINGS.

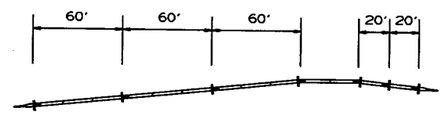
STA. 121+47 LT. WATERFALL WAY
STA. 127+69 LT. HURRICANE LAKE TRAILER PARK
STA. 133+44 LT. ANDERSON LAKE RD.
STA. 138+00 LT. SHADY PINE RD.
STA. 148+41 LT. & RT. SPRINGHILL RD.
STA. 155+55 RT. BRANDON RD.
STA. 166+30 LT. HENSON PL.
STA. 172+08 LT. PINE MEADOW DR.
STA. 180+19 RT. N. PRICKETT RD.
STA. 180+20 LT. FOREST RD.
STA. 189+53 LT. SUNSET MEADOW DR.
STA. 194+22 RT. N. COMMERSE ST.
STA. 199+13 RT. OFFICE PARK DR.
STA. 207+91 LT. COMMONWEALTH DR.
STA. 207+91 RT. HWY. 189
STA. 210+19 RT. HARVEST DR.
STA. 212+30 LT. DEARBORN CIR.



ADVANCE WARNING - SIDE ROADS (ALL ROADS)

STAGE 1
STA. 148+85 RT. *

STAGE 2
STA. 116+35 RT. *



* TEMPORARY IMPACT ATTENUATION BARRIER

DETAIL OF OM-3 AT PCCB INSTALLATION
OM-3 RT ON ENTRANCE = 4 EACH
OM-3 LT ON EXIT = 3 EACH

STAGE 1
STA. 92+60 LT.
STA. 102+75 LT.
STA. 123+10 LT.
STA. 146+90 LT.
STA. 155+20 RT.
STA. 165+20 RT.
STA. 166+65 LT.
STA. 180+60 LT.
STA. 189+85 LT.
STA. 208+65 LT.
STA. 212+76 LT.

STAGE 2
STA. 92+60 LT.
STA. 166+65 LT.
STA. 171+60 RT.
STA. 179+10 RT.
STA. 180+60 LT.
STA. 190+00 LT.
STA. 193+60 RT.
STA. 198+65 RT.
STA. 208+50 LT.
STA. 209+75 RT.
STA. 212+75 LT.

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

16' BARR. TYP. III LT.

STAGE 1
STA. 102+15 LT.
STA. 121+20 LT.
STA. 126+60 LT.
STA. 127+95 RT.
STA. 156+20 RT.
STA. 179+75 LT.
STA. 188+60 LT.
STA. 207+20 LT.
STA. 211+90 LT.

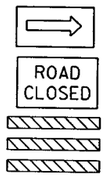
STAGE 1-SPRINGHILL
STA. 58+75 LT.

STAGE 2
STA. 165+55 LT.
STA. 172+50 RT.
STA. 179+65 LT.
STA. 180+80 RT.
STA. 189+05 LT.
STA. 194+95 RT.
STA. 199+90 RT.
STA. 207+05 LT.
STA. 210+65 RT.
STA. 211+90 LT.

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

16' BARR. TYP. III RT.

STAGE 2
STA. 123+85 RT.
STA. 130+50 LT.
STA. 134+00 LT.
STA. 150+05 LT.

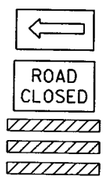


(1) W1-6 (48" X 24")

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

16' BARR. TYP. III LT.

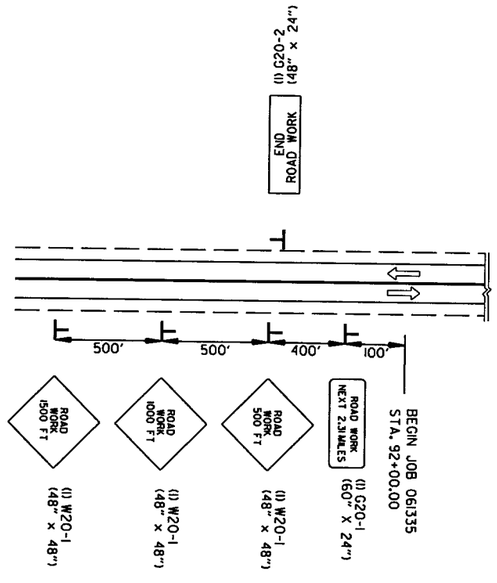
STAGE 2
STA. 103+45 RT.
STA. 133+00 LT.
STA. 148+00 LT.
STA. 161+25 LT.

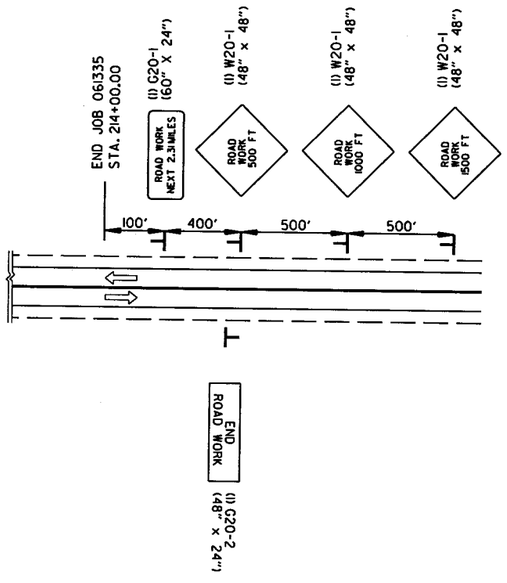


(1) W1-6 (48" X 24")

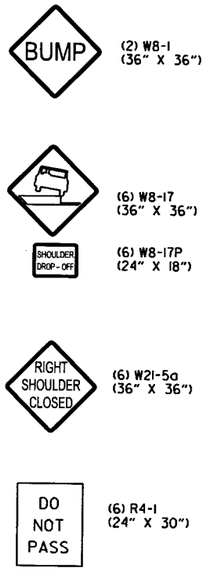
(1) R11-2 (48" X 30")

16' BARR. TYP. III RT.





ADVANCE WARNING (ALL STAGES)



STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

5/25/2018

R061335.DGN

MAINTENANCE OF TRAFFIC DETAILS

SEQUENCE OF CONSTRUCTION

STAGE 1A:
MAINTAIN TRAFFIC IN EXISTING LANES.
MAINTAIN EXISTING TRAFFIC SIGNALS AT ALCOA ROAD, SPRINGHILL ROAD, AND HWY. 183 INTERSECTIONS.
PLACE LEVELING COURSE AND CONSTRUCTION PAVEMENT MARKINGS AS DIRECTED BY THE ENGINEER.
NOTCH AND WIDEN LT. OF EXISTING LANES FROM STA. 92+00.00 TO STA. 129+00.00; AND FROM STA. 166+00.00 TO STA. 214+00.00.
CONSTRUCT BRIDGE BETWEEN STA. 115+36.83 TO STA. 117+27.17 AS PER BRIDGE STAGE CONSTRUCTION SHEET.

STAGE 1B:
NOTCH AND WIDEN RT. OF EXISTING LANES FROM STA. 124+66.61 TO STA. 166+00.00.
INSTALL TEMPORARY SIGNAL AT SPRINGHILL ROAD INTERSECTION BEFORE SHIFTING TO STAGE 2 CENTERLINE. SEE SIGNALIZATION DETAIL SHEET 124.

STAGE 2:
SHIFT TRAFFIC TO STAGE 2 CENTERLINE.
NOTCH AND WIDEN RT. OF EXISTING LANES FROM STA. 92+00.00 TO STA. 124+66.61; AND FROM STA. 166+00.00 TO STA. 214+00.00.
NOTCH AND WIDEN LT. OF EXISTING LANES FROM STA. 129+00 TO STA. 166+00.00.
CONSTRUCT REMAINING PORTION OF BRIDGE BETWEEN STA. 115+36.83 TO STA. 117+27.17.

STAGE 3:
SHIFT TRAFFIC TO CONSTRUCTION CENTERLINE.
CONSTRUCT ISLANDS AS SHOWN ON PLANS.
CONSTRUCT REMAINDER OF CURB AND GUTTER AT WATERFALL WAY.
COLD MILL TRANSITION AREAS.
PLACE FINAL LAYER OF ACHM SURFACE COURSE.
INSTALL PERMANENT PAVEMENT MARKINGS.

QUANTITIES

STAGE 1A & 1B:

SIGNS = 825 SQ. FT

TRAFFIC DRUMS = 405 EACH
VERTICAL PANELS = 250 EACH (50' O.C.)

FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER = 246 LIN. FT.

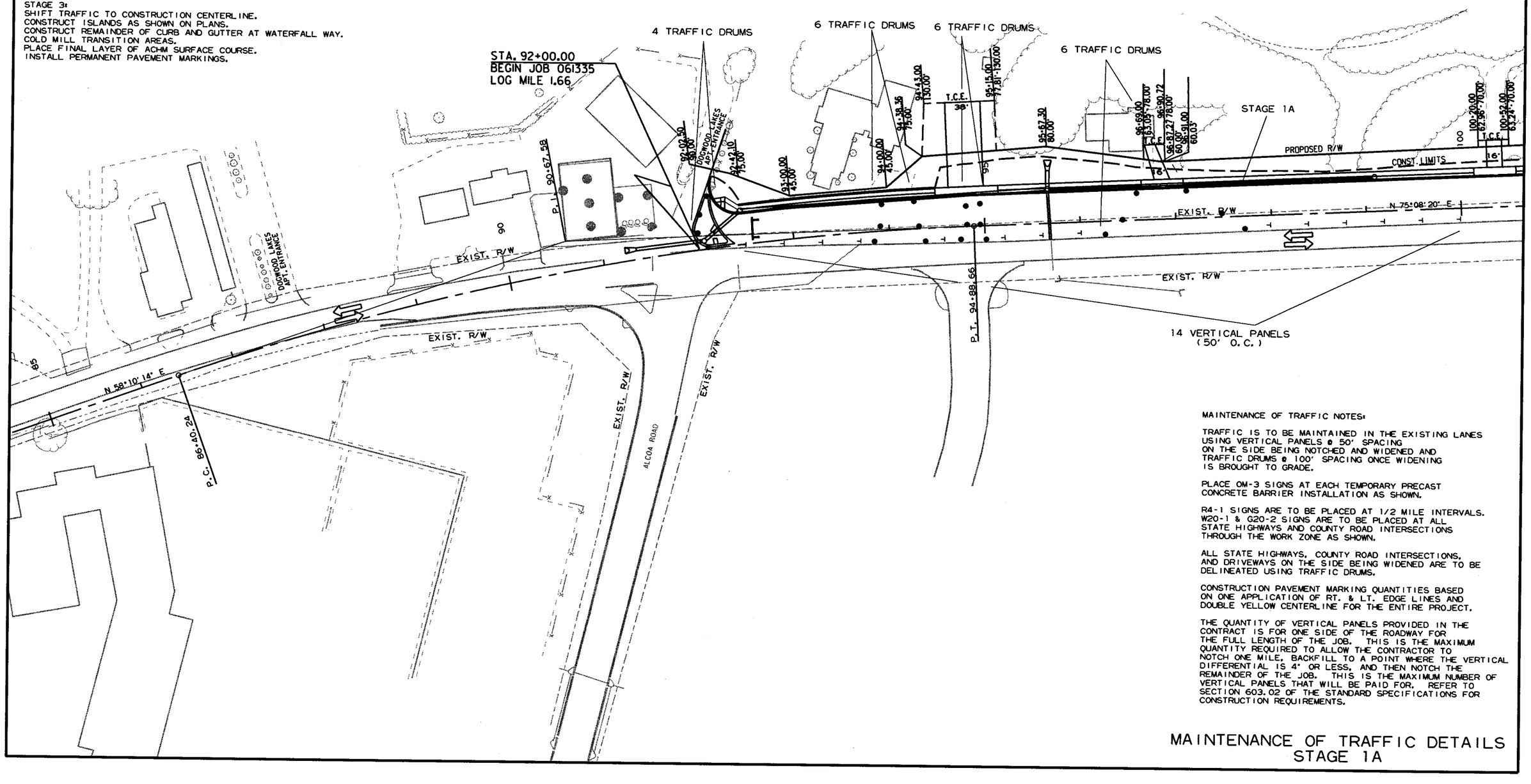
CONSTRUCTION PAVEMENT MARKINGS
WHITE = 29825 LIN. FT.
YELLOW = 32450 LIN. FT.
WORDS = 6 EACH
ARROWS = 15 EACH

BARRICADES (TYPE III)
LT. = 13 EACH
RT. = 9 EACH

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	40	303

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TIMOTHY D. SMITH
7-31-18



MAINTENANCE OF TRAFFIC NOTES:

TRAFFIC IS TO BE MAINTAINED IN THE EXISTING LANES USING VERTICAL PANELS @ 50' SPACING ON THE SIDE BEING NOTCHED AND WIDENED AND TRAFFIC DRUMS @ 100' SPACING ONCE WIDENING IS BROUGHT TO GRADE.

PLACE OM-3 SIGNS AT EACH TEMPORARY PRECAST CONCRETE BARRIER INSTALLATION AS SHOWN.

R4-1 SIGNS ARE TO BE PLACED AT 1/2 MILE INTERVALS. W20-1 & G20-2 SIGNS ARE TO BE PLACED AT ALL STATE HIGHWAYS AND COUNTY ROAD INTERSECTIONS THROUGH THE WORK ZONE AS SHOWN.

ALL STATE HIGHWAYS, COUNTY ROAD INTERSECTIONS, AND DRIVEWAYS ON THE SIDE BEING WIDENED ARE TO BE DELINEATED USING TRAFFIC DRUMS.

CONSTRUCTION PAVEMENT MARKING QUANTITIES BASED ON ONE APPLICATION OF RT. & LT. EDGE LINES AND DOUBLE YELLOW CENTERLINE FOR THE ENTIRE PROJECT.

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

MAINTENANCE OF TRAFFIC DETAILS STAGE 1A

2/13/2018

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	41	303

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

6 TRAFFIC DRUMS
6 TRAFFIC DRUMS
6 TRAFFIC DRUMS
8 TRAFFIC DRUMS
STAGE 1A
PROPOSED R/W
CONST. LIMITS
T.C.E.
P.I. 105+54.48
P.C. 104+26.60
P.T. 106+82.19
N 75°08' 20" E
N 80°15' 03" E
EXIST. R/W
32 VERTICAL PANELS (50' O.C.)
26 TRAFFIC DRUMS (20' O.C.)
STAGE 1B
26 VERTICAL PANELS (50' O.C.)
6 TRAFFIC DRUMS
P.C. 122+84.37
N 9° 42' W
BLVD.

2/13/2018

R061335.DGN

MAINTENANCE OF TRAFFIC DETAILS
STAGE 1A & 1B

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	42	303

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

27 VERTICAL PANELS (50' O.C.)

ANDERSON LAKE ROAD

EXIST. R/W

EXISTING R/W

N 80°15'03" E

N 61°16'03" E

P.I. 132+42.32

P.T. 141+82.70

6 TRAFFIC DRUMS

CONST. LIMITS

PROPOSED R/W

STAGE B

8 TRAFFIC DRUMS

SPRINGHILL ROAD

PC64+59.22

P.C. 160+12.02

N 2°29'48" E

S.E.U.

9 TRAFFIC DRUMS

STAGE 1A

STAGE 1B

FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER WITH SPECIAL END UNIT - 246 LIN. FT.

19 VERTICAL PANELS (50' O.C.)

BRANNON ROAD

MAINTENANCE OF TRAFFIC DETAILS
STAGE 1A & 1B

2/13/2018

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		061335	43	303

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

14 VERTICAL PANELS (50' O.C.)

6 TRAFFIC DRUMS (20' O.C.)

6 TRAFFIC DRUMS

6 TRAFFIC DRUMS

6 TRAFFIC DRUMS (20' O.C.)

STAGE 1A

P.C. 160+12.02

PROPOSED R/W

EXISTING R/W

CONST. LIMITS

N 61°16'03" E

N 58°08'05" E

ABERNATHY ROAD

PINE MEADOW DRIVE

STAGE 1B

6 TRAFFIC DRUMS

6 TRAFFIC DRUMS

5 TRAFFIC DRUMS

11 VERTICAL PANELS (50' O.C.)

12 VERTICAL PANELS (50' O.C.)

6 TRAFFIC DRUMS (20' O.C.)

6 TRAFFIC DRUMS

6 TRAFFIC DRUMS

7 TRAFFIC DRUMS

6 TRAFFIC DRUMS

6 TRAFFIC DRUMS

6 TRAFFIC DRUMS (20' O.C.)

STAGE 1A

N 58°08'05" E

N 50°59'03" E

HURRICANE CREEK TRIBUTARY

N. PICKETT ROAD

COLLEGEVILLE ELEMENTARY SCHOOL

14 VERTICAL PANELS (50' O.C.)

MAINTENANCE OF TRAFFIC DETAILS
STAGE 1A & 1B

2/13/2018

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
08-20-18				6	ARK.			
				JOB NO.		061335	44	303

2 MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
8-20-18

20 VERTICAL PANELS (50' O.C.)

6 TRAFFIC DRUMS

11 TRAFFIC DRUMS

10 TRAFFIC DRUMS

8 TRAFFIC DRUMS (20' O.C.)

STAGE 1A

EXISTING R/W

PROPOSED R/W

CONST. LIMITS

RET. WALL

T.C.E. 40'

T.C.E. 30'

N 50°59'03" E

N 60°20'57" E

N 30°34'32" E

N 67°46'27" E

P.C. 193+69.45

P.I. 198+38.75

P.T. 203+05.95

P.I. 210+52.14

P.I. 217+22.59

W. COMMERCE STREET

OFFICE PARK POND

DEAD END

HARVEST DRIVE

EXISTING R/W

ROAD CLOSED

(D) R11-2 (48" X 30")

6' BARR. TYP. III RT.

6 TRAFFIC DRUMS

HWY. 189 C.L.

17 VERTICAL PANELS (50' O.C.)

STA. 214+00.00
END JOB 061335

MAINTENANCE OF TRAFFIC DETAILS
STAGE 1A

2/13/2018

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	45	303

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

15 VERTICAL PANELS (50' O.C.)

6 TRAFFIC DRUMS

6 TRAFFIC DRUMS

STAGE 1A

STAGE 1B

6 TRAFFIC DRUMS

6 TRAFFIC DRUMS

6 TRAFFIC DRUMS

14 VERTICAL PANELS (50' O.C.)

STA. 55+50.00
BEGIN SPRINGHILL RD. CONST.

STA. 71+50.00
END SPRINGHILL RD. CONST.

SPRINGHILL ROAD

SPRINGHILL RD. C.L.

EXISTING R/W

PROPOSED R/W

CONST. LIMITS

EXIST. R/W

RETAINING WALL

N 24°18'00" E

N 2°29'48" E

N 3°28'09" E

N 2°52'45" E

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MAINTENANCE OF TRAFFIC DETAILS
SPRINGHILL ROAD - STAGE 1A & 1B

SEQUENCE OF CONSTRUCTION

STAGE 1A:
MAINTAIN TRAFFIC IN EXISTING LANES.
MAINTAIN EXISTING TRAFFIC SIGNALS AT ALCOA ROAD, SPRINGHILL ROAD, AND HWY. 183 INTERSECTIONS.
PLACE LEVELING COURSE AND CONSTRUCTION PAVEMENT MARKINGS AS DIRECTED BY THE ENGINEER.
NOTCH AND WIDEN LT. OF EXISTING LANES FROM STA. 92+00.00 TO STA. 129+00.00, AND FROM STA. 166+00.00 TO STA. 214+00.00.
CONSTRUCT BRIDGE BETWEEN STA. 115+36.83 TO STA. 117+27.17 AS PER BRIDGE STAGE CONSTRUCTION SHEET.

STAGE 1B:
NOTCH AND WIDEN RT. OF EXISTING LANES FROM STA. 124+66.61 TO STA. 166+00.00.
INSTALL TEMPORARY SIGNAL AT SPRINGHILL ROAD INTERSECTION BEFORE SHIFTING TO STAGE 2 CENTERLINE. SEE SIGNALIZATION DETAIL SHEET 124.

STAGE 2:
SHIFT TRAFFIC TO STAGE 2 CENTERLINE.
NOTCH AND WIDEN RT. OF EXISTING LANES FROM STA. 92+00.00 TO STA. 124+66.61, AND FROM STA. 166+00.00 TO STA. 214+00.00.
NOTCH AND WIDEN LT. OF EXISTING LANES FROM STA. 129+00 TO STA. 166+00.00.
CONSTRUCT REMAINING PORTION OF BRIDGE BETWEEN STA. 115+36.83 TO STA. 117+27.17.

STAGE 3:
SHIFT TRAFFIC TO CONSTRUCTION CENTERLINE.
CONSTRUCT ISLANDS AS SHOWN ON PLANS.
CONSTRUCT REMAINDER OF CURB AND GUTTER AT WATERFALL WAY.
COLD MILL TRANSITION AREAS.
PLACE FINAL LAYER OF ACHM SURFACE COURSE.
INSTALL PERMANENT PAVEMENT MARKINGS.

QUANTITIES

STAGE 2:

SIGNS = 1135.0 SQ. FT.

TRAFFIC DRUMS = 960 EACH
VERTICAL PANELS = 860 EACH

FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER WITH S.E.U. = 100 LIN. FT.

RELOCATE PRECAST CONCRETE BARRIER WITH S.E.U. = 246 LIN. FT.

CONSTRUCTION PAVEMENT MARKINGS
WHITE = 29825 LIN. FT.
YELLOW = 32450 LIN. FT.
ARROWS = 15 EACH
WORDS = 6 EACH

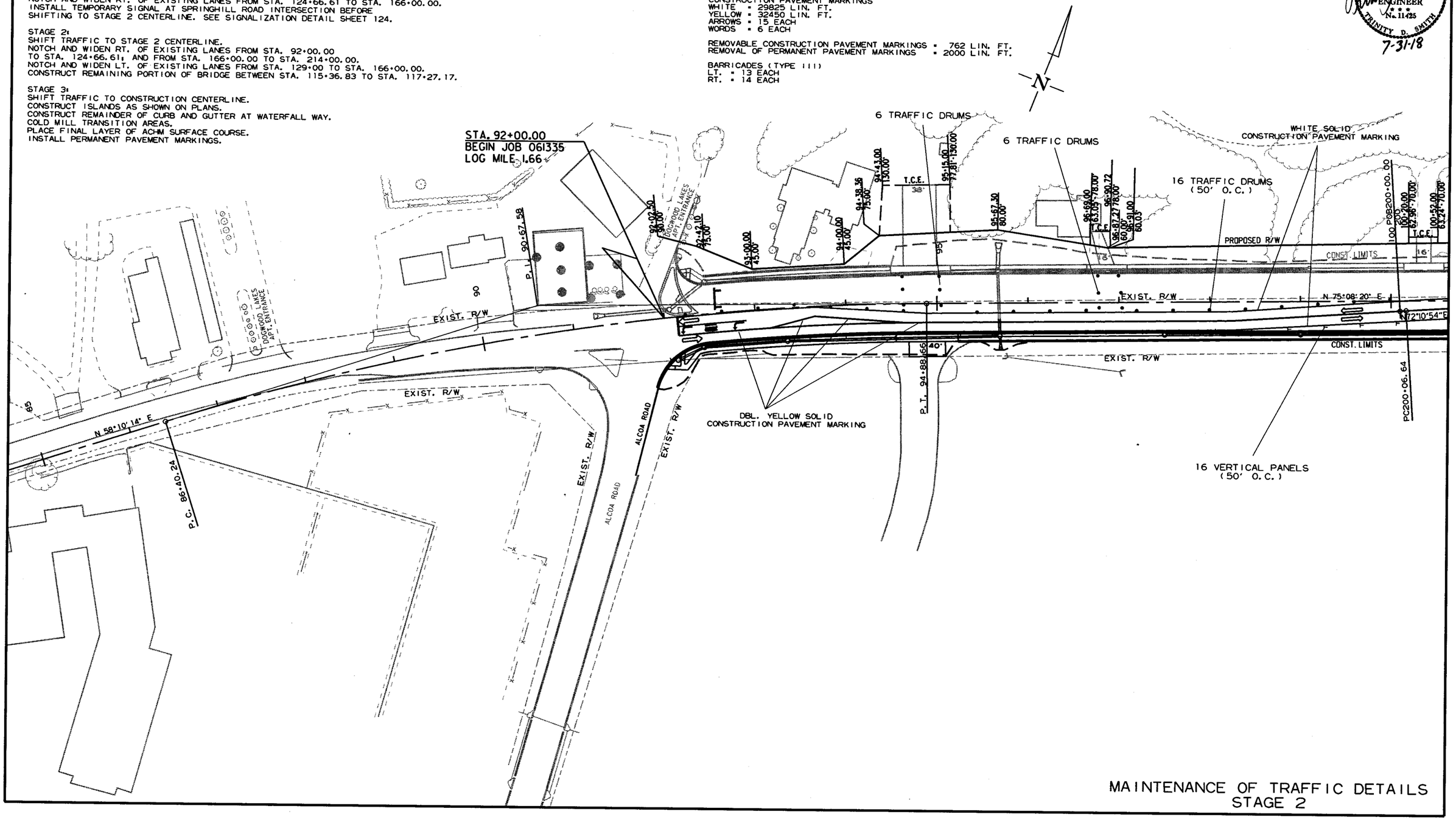
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS = 762 LIN. FT.
REMOVAL OF PERMANENT PAVEMENT MARKINGS = 2000 LIN. FT.

BARRICADES (TYPE III)
LT. = 13 EACH
RT. = 14 EACH

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	46	303

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18



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MAINTENANCE OF TRAFFIC DETAILS
STAGE 2

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	47	303

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-78

6 TRAFFIC DRUMS
6 TRAFFIC DRUMS
30 TRAFFIC DRUMS (50' O.C.)
WHITE SOLID CONSTRUCTION PAVEMENT MARKING
DBL. YELLOW SOLID CONSTRUCTION PAVEMENT MARKING
WHITE SOLID CONSTRUCTION PAVEMENT MARKING
DBL. YELLOW SOLID CONSTRUCTION PAVEMENT MARKING
6 TRAFFIC DRUMS
4 TRAFFIC DRUMS
6 TRAFFIC DRUMS
30 TRAFFIC DRUMS (50' O.C.)

STAGE 2 C.L.
P.I. = 205+46.05
Δ = 8°04'39" RT.
D = 0°45'00"
T = 539.41'
L = 1077.03'
P.C. = 200+06.64
P.T. = 210+83.67
NO SUPER

PROPOSED R/W
CONST. LIMITS
EXIST. R/W
S.E.U.
T.C.E.
STAGE 2 C.L.
N 75°38'20" E
N72°10'54"E
N80°15'33"E
N 80°15'03" E

RELOCATE PRECAST CONCRETE BARRIER WITH SPECIAL END UNIT - 246 LIN. FT.
FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER - 100 LIN. FT.

STAGE 2 C.L.
P.I. = 217+90.48
Δ = 0°19'52" LT.
D = 0°45'00"
T = 22.08'
L = 44.15'
P.C. = 217+68.40
P.T. = 218+12.55
NO SUPER

STAGE 2 C.L.
P.I. = 233+89.73
Δ = 18°51'35" LT.
D = 1°00'00"
T = 951.60'
L = 1885.98'
P.C. = 224+38.13
P.T. = 243+24.11
NO SUPER

WHITE SOLID CONSTRUCTION PAVEMENT MARKING
DBL. YELLOW SOLID REMOVABLE CONSTRUCTION PAVEMENT MARKING
WHITE SOLID REMOVABLE CONSTRUCTION PAVEMENT MARKING
DBL. YELLOW SOLID CONSTRUCTION PAVEMENT MARKING
30 TRAFFIC DRUMS (50' O.C.)
6 TRAFFIC DRUMS
DBL. YELLOW SOLID CONSTRUCTION PAVEMENT MARKING
WHITE SOLID CONSTRUCTION PAVEMENT MARKING

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MAINTENANCE OF TRAFFIC DETAILS STAGE 2

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	48	303

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

STAGE 2 C.L.
P.I. = 233+89.73
Δ = 18°51'35" LT.
D = 1°00'00"
T = 951.60'
L = 1885.98'
P.C. = 224+38.13
P.T. = 243+24.11
NO SUPER

STAGE 2 C.L.
P.I. = 243+91.20
Δ = 0°41'57" RT.
D = 0°45'00"
T = 13.28'
L = 26.56'
P.C. = 243+77.92
P.T. = 244+04.48
NO SUPER

STAGE 2 C.L.
P.I. = 252+91.20
Δ = 0°51'29" LT.
D = 0°45'00"
T = 57.22'
L = 114.44'
P.C. = 252+33.98
P.T. = 253+48.42
NO SUPER

STAGE 2 C.L.
P.I. = 259+92.04
Δ = 1°50'39" LT.
D = 0°45'00"
T = 122.95'
L = 245.88'
P.C. = 258+69.09
P.T. = 261+14.97
NO SUPER

30 TRAFFIC DRUMS (50' O.C.)
6 TRAFFIC DRUMS
4 TRAFFIC DRUMS
680' TAPER
495' TAPER
ANDERSON LAKE ROAD
SHADY PINE RD.
CEMETERY LIMITS
RESTRAINING CONDITIONS "CEMETERY"
DBL. YELLOW SOLID CONSTRUCTION PAVEMENT MARKING
WHITE SOLID CONSTRUCTION PAVEMENT MARKING
EXIST. R/W
EXISTING R/W
PROPOSED R/W
CONST. LIMITS
STAGE 2 C.L.
N 80°15'03" E
N61°16'03"E
N61°04'06"E
N60°24'34"E
BRANDON ROAD
T.C.E.

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MAINTENANCE OF TRAFFIC DETAILS
STAGE 2

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	49	303

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

STAGE 2 C.L.
P.I. = 259+92.04
Δ = 1°50' 38.6" LT.
D = 0°45' 00.0"
T = 122.95'
L = 245.88'
P.C. = 258+69.09
P.T. = 261+14.97

30 TRAFFIC DRUMS (50' O.C.)
6 TRAFFIC DRUMS
DBL. YELLOW SOLID CONSTRUCTION PAVEMENT MARKING
EXISTING R/W
PROPOSED R/W
CONST. LIMITS
N 61°16'03" E
N58°33'55"E
STAGE 2 C.L.
N 58°08'05" E
14 TRAFFIC DRUMS (50' O.C.)
4 TRAFFIC DRUMS
WHITE SOLID CONSTRUCTION PAVEMENT MARKING
16 VERTICAL PANELS (50' O.C.)
MEADOW DRIVE
N. PICKETT ROAD
SUNSET MEADOW DRIVE
30 VERTICAL PANELS (50' O.C.)
4 TRAFFIC DRUMS
N 50°59'03" E

MAINTENANCE OF TRAFFIC DETAILS
STAGE 2

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
08-20-18			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		061335	50	303

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
8-20-18

6 TRAFFIC DRUMS
30 TRAFFIC DRUMS (50' O.C.)
DBL. YELLOW SOLID CONSTRUCTION PAVEMENT MARKING
WHITE SOLID CONSTRUCTION PAVEMENT MARKING
30 VERTICAL PANELS (50' O.C.)
20 TRAFFIC DRUMS (50' O.C.)
24 VERTICAL PANELS (50' O.C.)
292.5' TAPER LT. & RT.
EXISTING R/W
PROPOSED R/W
CONST. LIMITS
T.C.E.
IBERIA BANK
DRIVE-IN
RETAINING WALL
TONNAGE SITES
EXISTING R/W
EXISTING INC. R/W
EXISTING R/W
EXISTING R/W
EXISTING

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	51	303

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED
PROFESSIONAL
ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

STA. 55+50.00
BEGIN SPRINGHILL RD. CONST.

DBL. YELLOW SOLID
CONSTRUCTION PAVEMENT MARKING

WHITE SOLID
CONSTRUCTION PAVEMENT MARKING

6 TRAFFIC DRUMS

30 VERTICAL PANELS
(50' O.C.)

3 TRAFFIC DRUMS

4 TRAFFIC DRUMS

STA. 71+50.00
END SPRINGHILL RD. CONST.

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MAINTENANCE OF TRAFFIC DETAILS
SPRINGHILL ROAD STAGE 2

SEQUENCE OF CONSTRUCTION

STAGE 1A:
MAINTAIN TRAFFIC IN EXISTING LANES.
MAINTAIN EXISTING TRAFFIC SIGNALS AT ALCOA ROAD, SPRINGHILL ROAD, AND HWY. 183 INTERSECTIONS.
PLACE LEVELING COURSE AND CONSTRUCTION PAVEMENT MARKINGS AS DIRECTED BY THE ENGINEER.
NOTCH AND WIDEN LT. OF EXISTING LANES FROM STA. 92+00.00 TO STA. 129+00.00, AND FROM STA. 166+00.00 TO STA. 214+00.00.
CONSTRUCT BRIDGE BETWEEN STA. 115+36.83 TO STA. 117+27.17 AS PER BRIDGE STAGE CONSTRUCTION SHEET.

STAGE 1B:
NOTCH AND WIDEN RT. OF EXISTING LANES FROM STA. 124+66.61 TO STA. 166+00.00.
INSTALL TEMPORARY SIGNAL AT SPRINGHILL ROAD INTERSECTION BEFORE SHIFTING TO STAGE 2 CENTERLINE. SEE SIGNALIZATION DETAIL SHEET 124.

STAGE 2:
SHIFT TRAFFIC TO STAGE 2 CENTERLINE.
NOTCH AND WIDEN RT. OF EXISTING LANES FROM STA. 92+00.00 TO STA. 124+66.61, AND FROM STA. 166+00.00 TO STA. 214+00.00.
NOTCH AND WIDEN LT. OF EXISTING LANES FROM STA. 129+00 TO STA. 166+00.00.
CONSTRUCT REMAINING PORTION OF BRIDGE BETWEEN STA. 115+36.83 TO STA. 117+27.17.

STAGE 3:
SHIFT TRAFFIC TO CONSTRUCTION CENTERLINE.
CONSTRUCT ISLANDS AS SHOWN ON PLANS.
CONSTRUCT REMAINDER OF CURB AND GUTTER AT WATERFALL WAY.
COLD MILL TRANSITION AREAS.
PLACE FINAL LAYER OF ACHM SURFACE COURSE.
INSTALL PERMANENT PAVEMENT MARKINGS.

QUANTITIES

STAGE 3:

SIGNS = 824 SQ. FT.

TRAFFIC DRUMS = 395 EACH (50' O.C.)

CONSTRUCTION PAVEMENT MARKINGS
WHITE = 9035 LIN. FT.
YELLOW = 12850 LIN. FT.
WORDS = 2 EACH
ARROWS = 5 EACH

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
08-20-18				6	ARK.			
				JOB NO.		061335	52	303

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
8-20-18

6 TRAFFIC DRUMS
DBL. YELLOW SOLID CONSTRUCTION PAVEMENT MARKING
EXISTING R/W
PROPOSED R/W
CONST. LIMITS
N 58°08'05" E
N 50°59'03" E
WHITE SOLID CONSTRUCTION PAVEMENT MARKING
765' TAPER
292.5' TAPER LT. & RT.
4 TRAFFIC DRUMS
N. PICKETT ROAD
SUNSET MEADOW DRIVE
IBERIA BANK
COMMERCE STREET
N. PARK DRIVE
RET. WALL
T.C.E.
P.C. 182+65.62
P.T. 185+03.97
P.C. 193+69.45
P.T. 203+05.95

MAINTENANCE OF TRAFFIC DETAILS
STAGE 3

5/17/2018

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	53	303

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

6 TRAFFIC DRUMS
DBL. YELLOW SOLID CONSTRUCTION PAVEMENT MARKING
EXISTING R/W
PROPOSED R/W
CONST. LIMITS
EXISTING R.I.W.
DEARBORN CIRCL
LIMEKILN
LIMEWEST DRIVE
292.5' TAPER LT. & RT.
WHITE SOLID CONSTRUCTION PAVEMENT MARKING
N 67°46'27" E
N 60°20'57" E
N 90°20'57" E
N 24°27'50" W
T.C.E.
40'
215
210
205
183

5/17/2018
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MAINTENANCE OF TRAFFIC DETAILS
STAGE 3

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	54	303

(2) PERMANENT PAVEMENT MARKING DETAILS

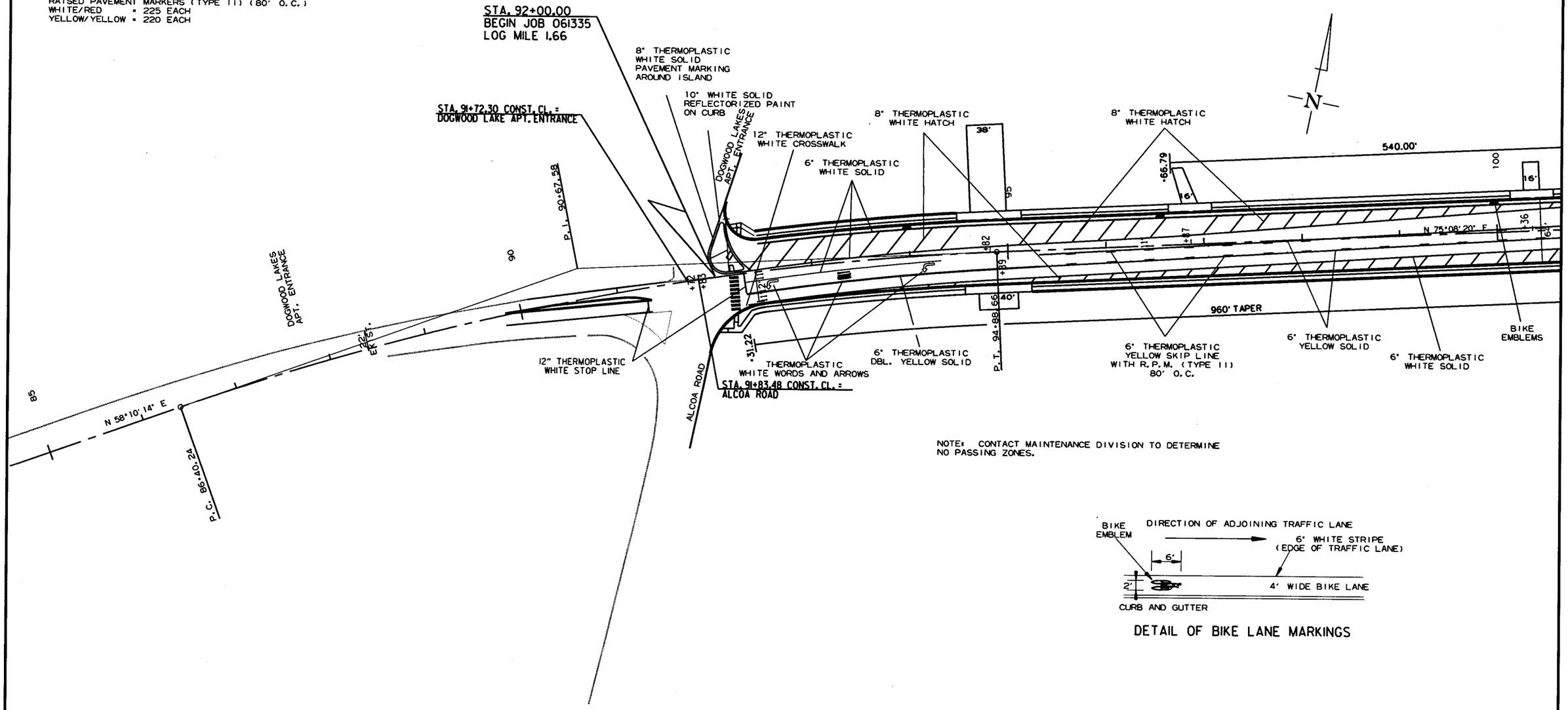
QUANTITIES:

THERMOPLASTIC
6" YELLOW SOLID = 27947 LIN. FT
6" YELLOW SKIP = 4455 LIN. FT.
6" WHITE SOLID = 22332 LIN. FT.
6" WHITE SKIP = 4489 LIN. FT.
6" WHITE DOTTED = 783 LIN. FT.
8" WHITE SOLID = 2002 LIN. FT.
8" YELLOW SOLID = 87 LIN. FT.
12" WHITE STOP LINE = 642 LIN. FT.
12" WHITE CROSSWALK = 1454 LIN. FT.
WORDS = 15 EACH
ARROWS = 31 EACH
BIKE EMBLEMS = 82 EACH

REFLECTORIZED PAINT PAVEMENT MARKING
10" WHITE SOLID = 597 LIN. FT. (ON ISLAND)
10" YELLOW SOLID = 196 LIN. FT. (ON ISLAND)

RAISED PAVEMENT MARKERS (TYPE II) (80' O.C.)
WHITE/RED = 225 EACH
YELLOW/YELLOW = 220 EACH

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18



NOTE: CONTACT MAINTENANCE DIVISION TO DETERMINE NO PASSING ZONES.

DETAIL OF BIKE LANE MARKINGS

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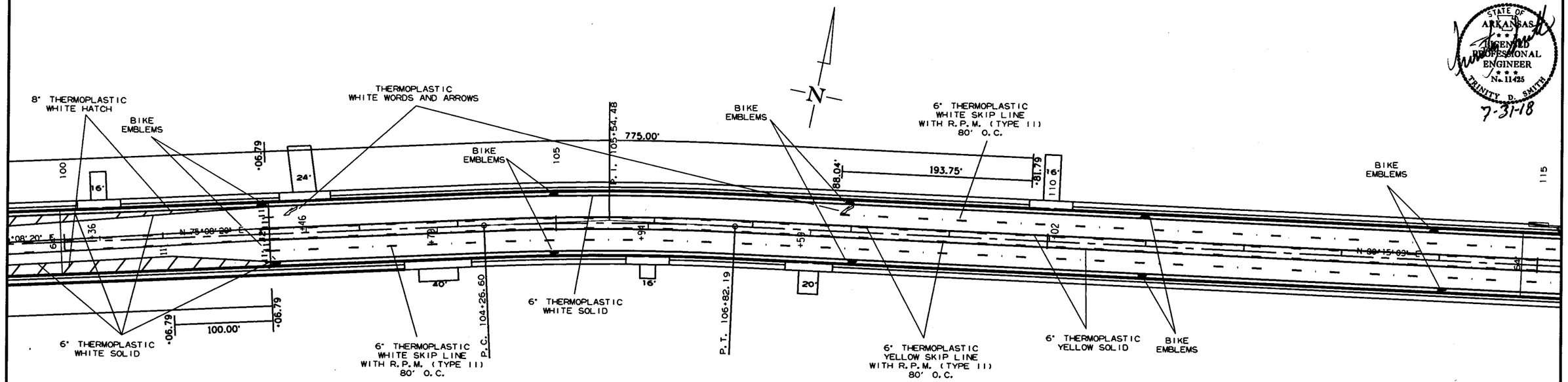
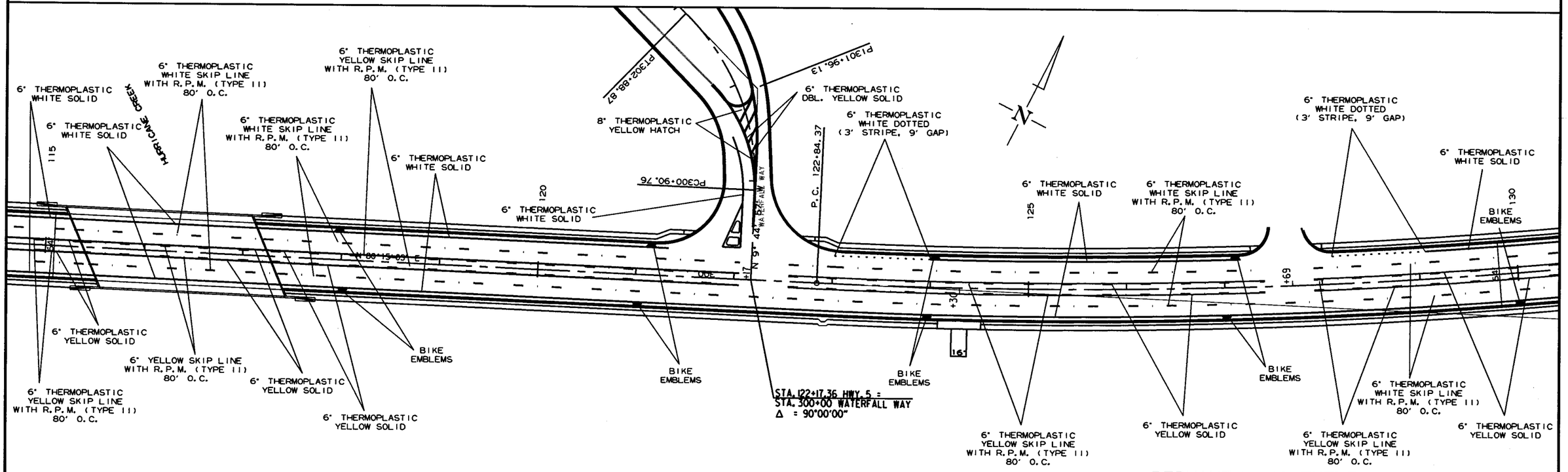
PERMANENT PAVEMENT MARKING DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	55	303

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18





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PERMANENT PAVEMENT MARKING DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	56	303

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

6" THERMOPLASTIC WHITE SOLID
6" THERMOPLASTIC WHITE DOTTED (3' STRIPE, 9' GAP)
6" THERMOPLASTIC WHITE SKIP LINE WITH R.P.M. (TYPE II) 80' O.C.
BIKE EMBLEMS
6" THERMOPLASTIC YELLOW SKIP LINE WITH R.P.M. (TYPE II) 80' O.C.
6" THERMOPLASTIC YELLOW SOLID
P.I. 132+42.32
N 80°15'03" E
SHADY PINE RD.
N
P.T. 141+82.70
270' TAPER
6" THERMOPLASTIC DBL. YELLOW SOLID
N 61°16'03" E
8" THERMOPLASTIC WHITE HATCH
12" THERMOPLASTIC WHITE STOP LINE
8" THERMOPLASTIC WHITE SOLID PAVEMENT MARKING AROUND ISLAND
THERMOPLASTIC WHITE WORDS AND ARROWS
YIELD LINE THERMOPLASTIC PAVEMENT MARKING
12" THERMO. WHITE CROSSWALK
10" WHITE SOLID REFLECTORIZED PAINT ON CURB
8" THERMOPLASTIC WHITE SOLID (CHEVRON)
6" THERMOPLASTIC DBL. YELLOW SOLID
STA. 148+40.75 HWY. 5 = STA. 63+29.15 SPRINGHILL ROAD
Δ = 58°46'15"
P.C. 160+12.02
PERMANENT PAVEMENT MARKING DETAILS

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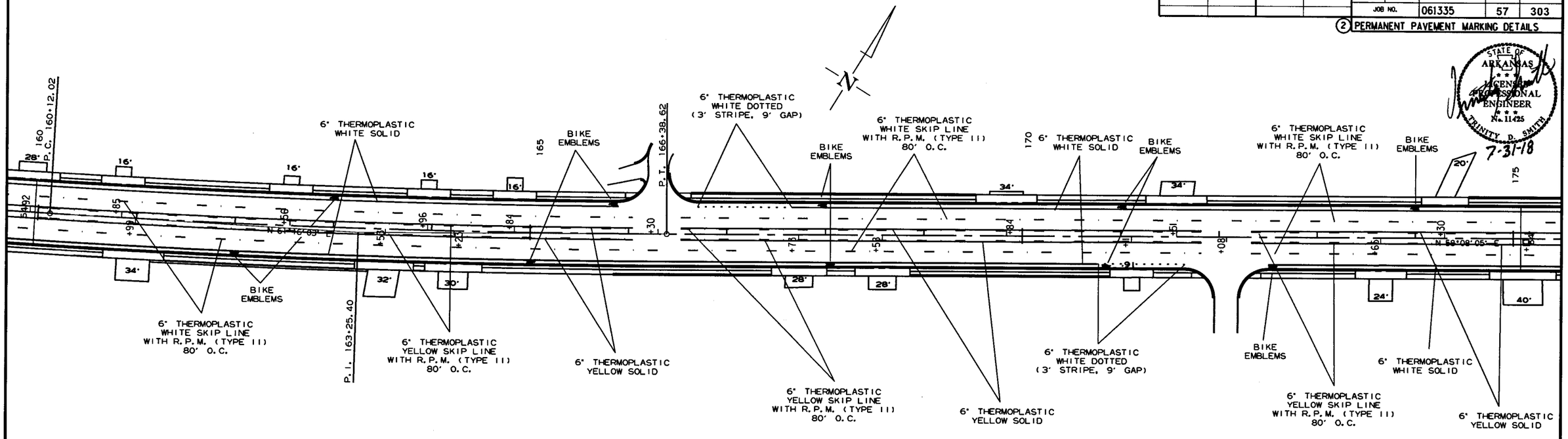
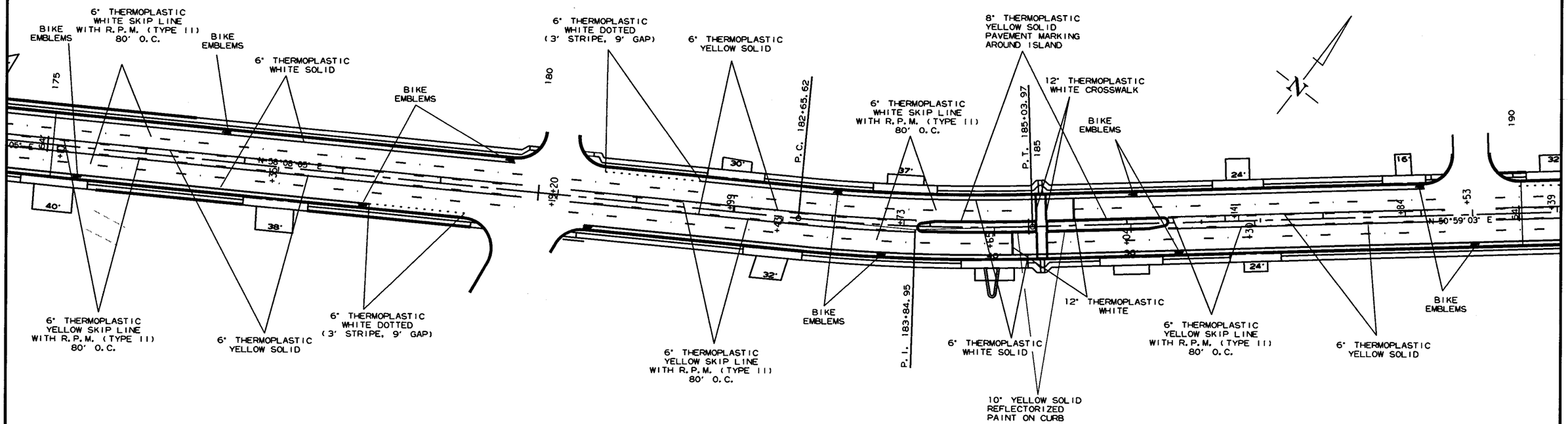
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	57	303

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
TRINITY D. SMITH
REGISTERED PROFESSIONAL ENGINEER
No. 11425
7-31-18





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PERMANENT PAVEMENT MARKING DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	58	303

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

6" THERMOPLASTIC WHITE DOTTED (3' STRIPE, 9' GAP)
6" THERMOPLASTIC WHITE SKIP LINE WITH R.P.M. (TYPE II) 80' O.C.
6" THERMOPLASTIC WHITE SOLID
6" THERMOPLASTIC YELLOW SKIP LINE WITH R.P.M. (TYPE II) 80' O.C.
6" THERMOPLASTIC YELLOW SOLID
BIKE EMBLEMS
P.C. 193+69.45
P.I. 198+38.75
+62 270' TAPER +32
8" THERMOPLASTIC WHITE HATCH
THERMOPLASTIC WHITE WORDS AND ARROWS
6" THERMOPLASTIC DBL. YELLOW SOLID
P.T. 203+05.95
6" THERMOPLASTIC WHITE DOTTED (4' STRIPE, 8' GAP)
N 60°20'57" E
N 60°50'03" E

STA. 207+91.48 HWY. 5 =
STA. 11+65.34 HWY. 183
COMMONWEALTH DRIVE
Δ = 80°30'00"

12" THERMO. WHITE CROSSWALK
12" THERMOPLASTIC WHITE STOP LINE
6" THERMOPLASTIC WHITE DOTTED (2' STRIPE, 6' GAP)
6" THERMOPLASTIC WHITE DOTTED (3' STRIPE, 9' GAP)
P.C. 206+26.81
P.I. 210+52.14
P.T. 211+71.69
P.I. 208+44.39
P.I. 217+22.59
+84 240' TAPER +24
8" THERMOPLASTIC WHITE SOLID (CHEVRON)
6" THERMOPLASTIC WHITE SOLID
6" THERMOPLASTIC WHITE SKIP LINE WITH R.P.M. (TYPE II) 80' O.C.
6" THERMOPLASTIC DBL. YELLOW SOLID
6" THERMOPLASTIC WHITE WORDS AND ARROWS
N 67°46'27" E
N 38°34'32" E
STA. 214+00.00
END JOB 061335

2/13/2018
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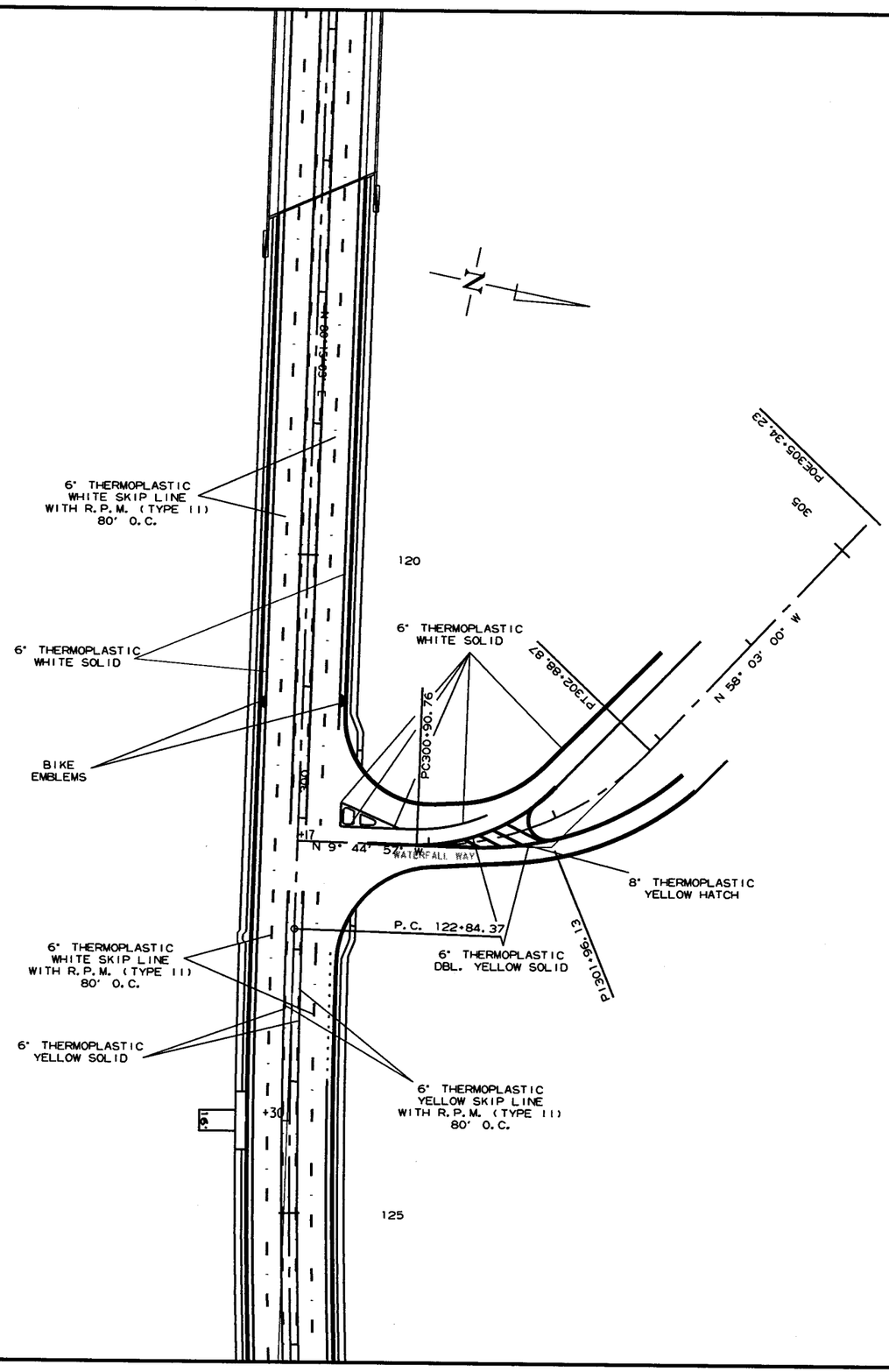
PERMANENT PAVEMENT MARKING DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	59	303

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18



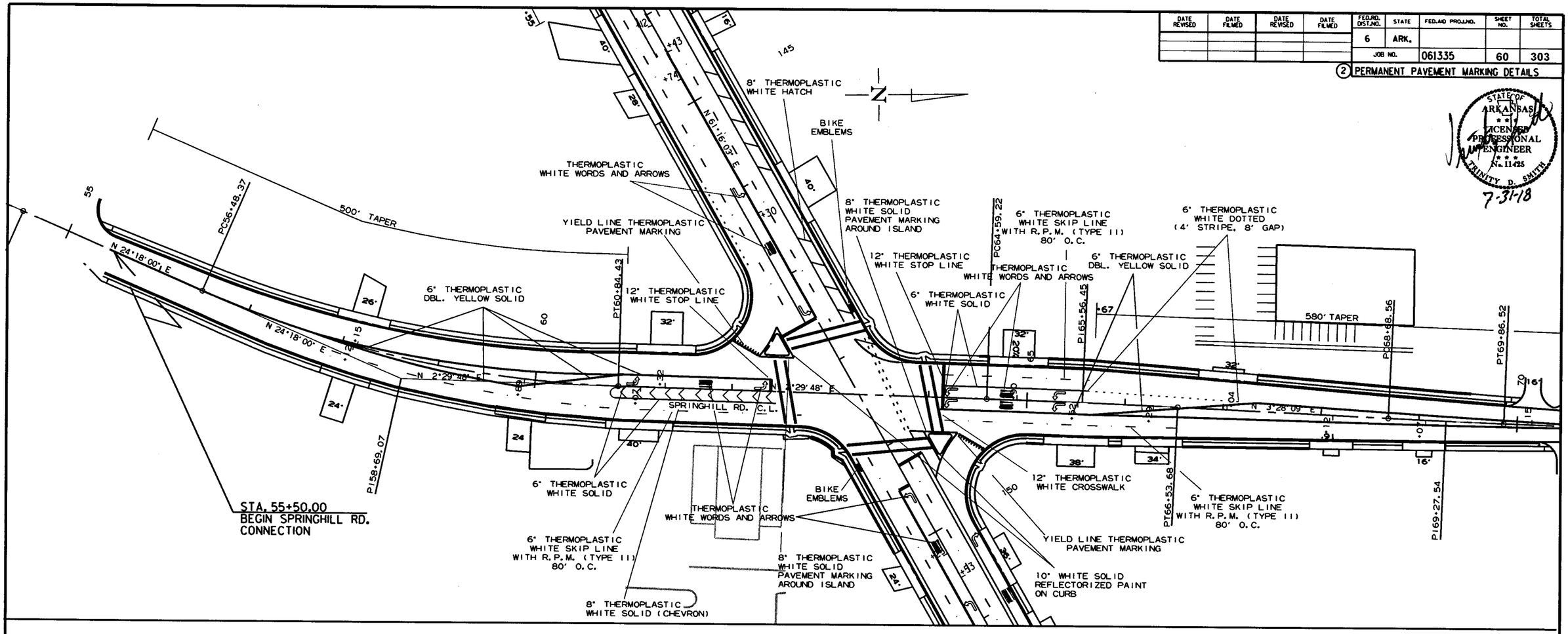
PERMANENT PAVEMENT MARKING DETAILS
WATERFALL WAY

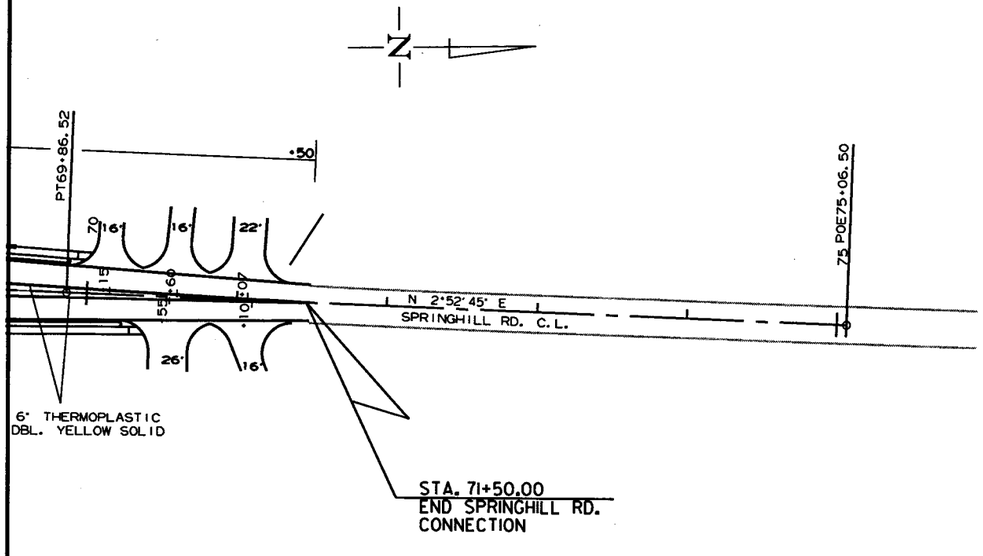
R061335.DGN 2/13/2018

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	60	303

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18





2/13/2018

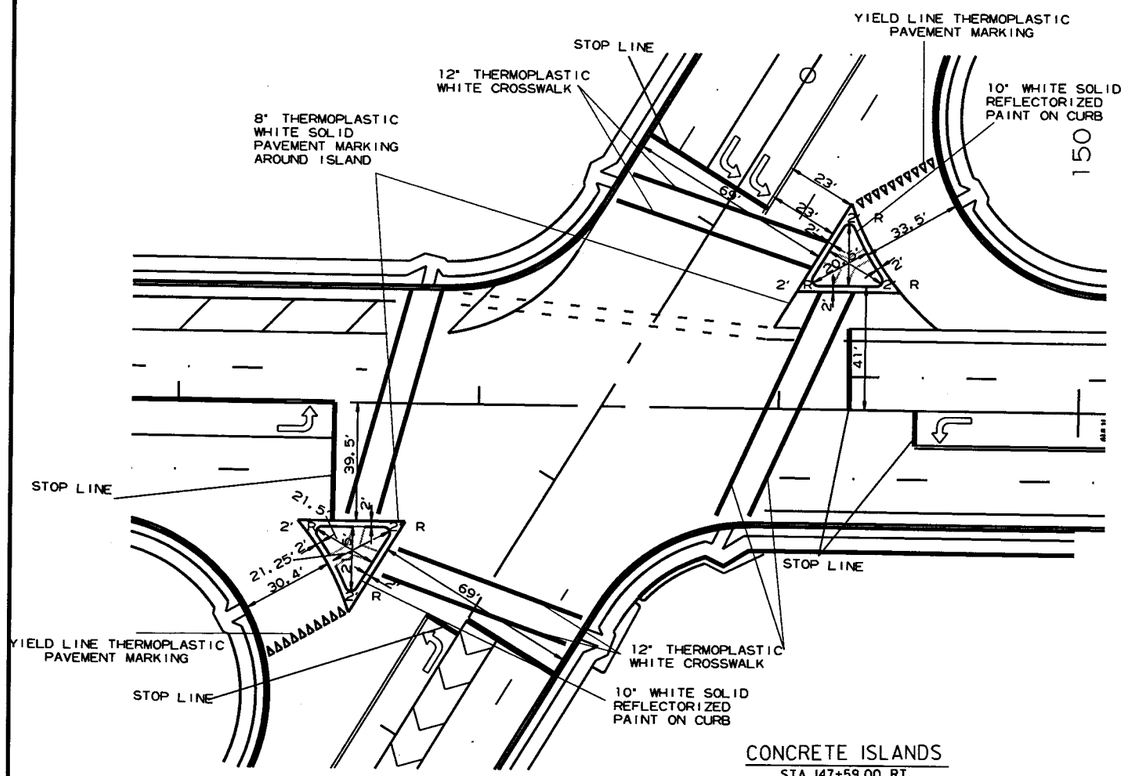
R061335.DGN

PERMANENT PAVEMENT MARKING DETAILS
SPRINGHILL ROAD

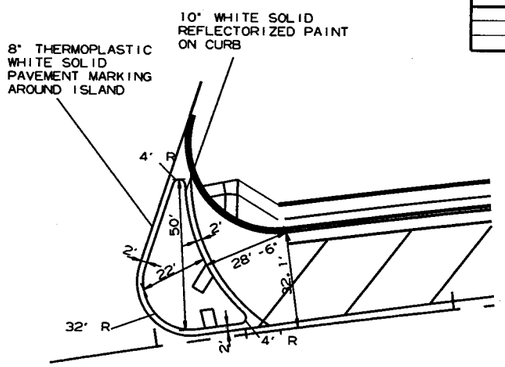
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	61	303

(2) PERMANENT PAVEMENT MARKING DETAILS

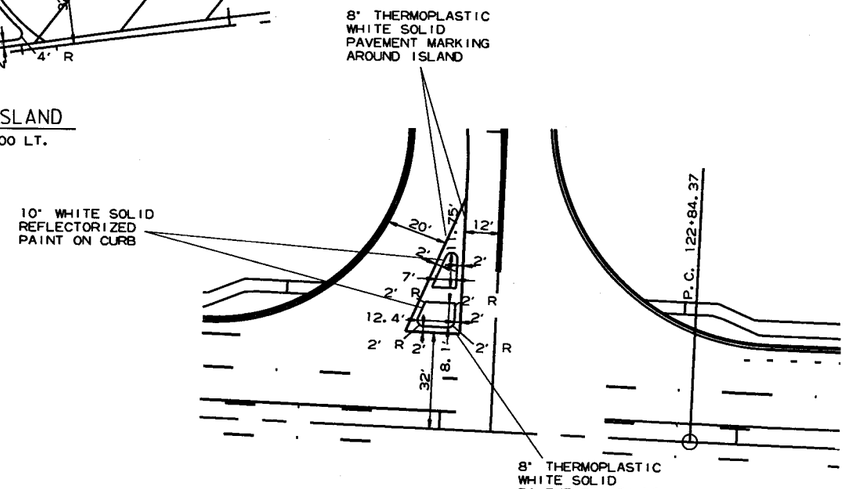
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

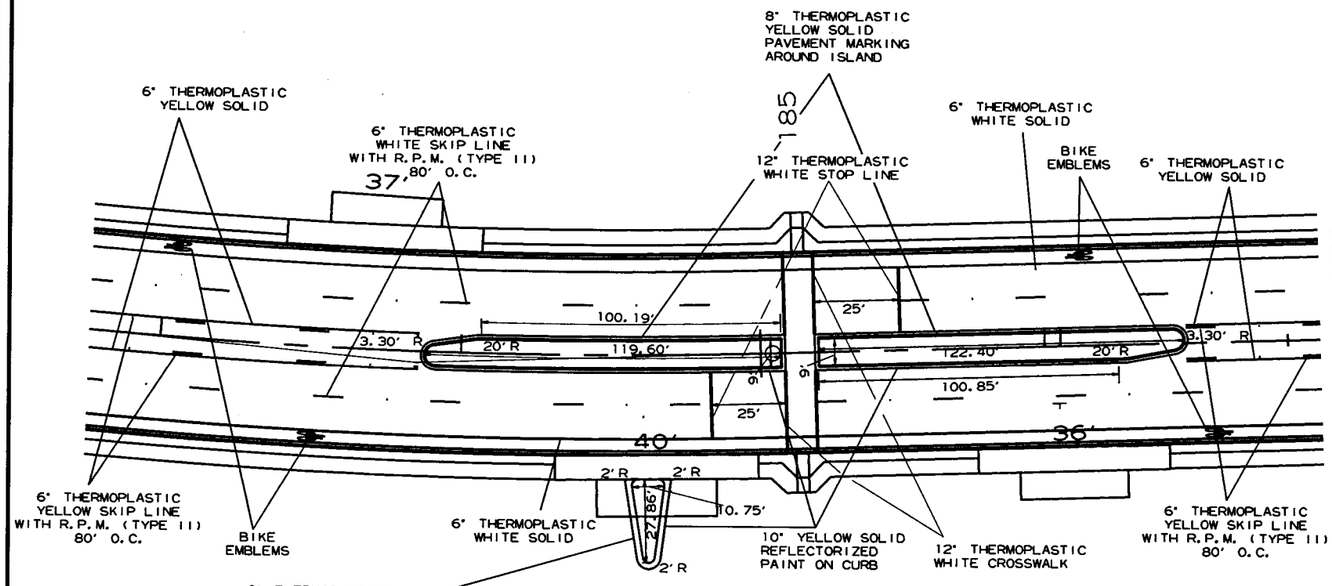


CONCRETE ISLANDS
STA. 147+59.00 RT.
STA. 149+22.00 LT.

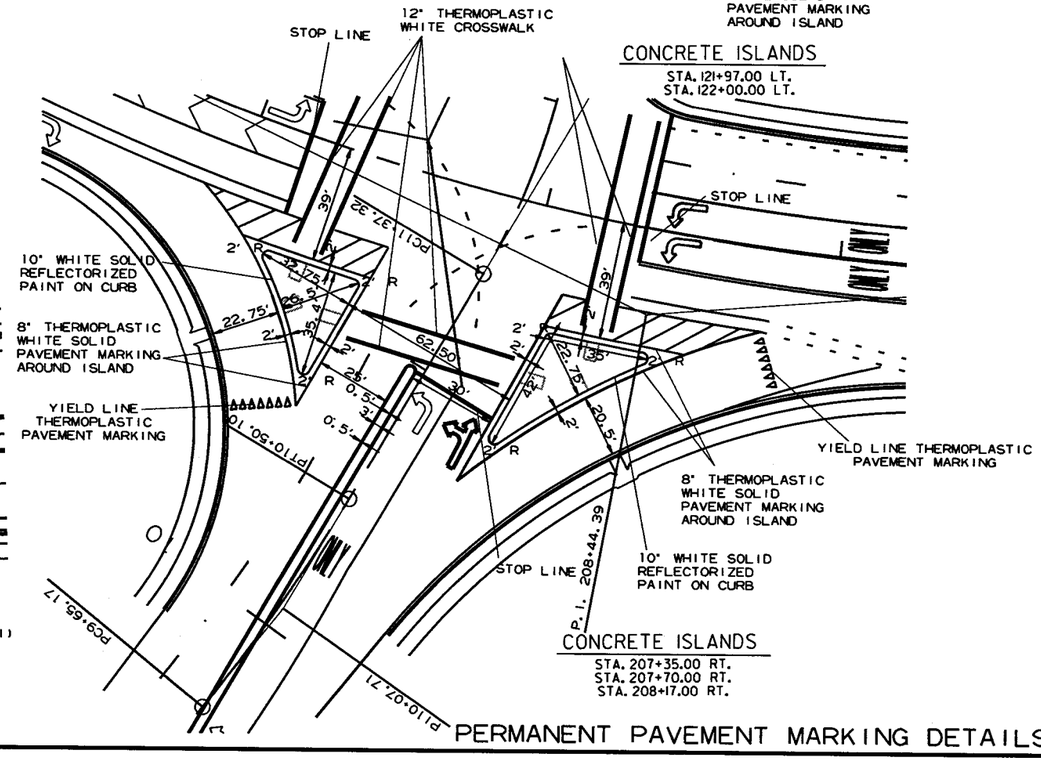


CONCRETE ISLAND
STA. 92+10.00 LT.





HYBRID PEDESTRIAN BEACON ISLANDS AND CROSSWALK
STA. 183+80.94 TO STA. 186+41.44 LT. & RT.



CONCRETE ISLANDS
STA. 121+97.00 LT.
STA. 122+00.00 LT.

CONCRETE ISLANDS
STA. 207+35.00 RT.
STA. 207+70.00 RT.
STA. 208+17.00 RT.

PERMANENT PAVEMENT MARKING DETAILS

2/13/2018

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	62	303

(2) QUANTITIES

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	STAGE 2	STAGE 3	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		CONSTRUCTION PROJECT INFORMATION SIGN UPDATE	VERTICAL PANELS	TRAFFIC DRUMS	BARRICADES (TYPE III)		FURNISHING & INSTALLING PRECAST CONC. BARRIER	RELOCATING PRECAST CONCRETE BARRIER
							NO.	SQ. FT.				RIGHT	LEFT		
			LIN. FT. - EACH						EACH	EACH				LIN. FT.	
W20-1	ROAD WORK 1500 FT.	48"x48"	4	4	4	4	4	64.0							
W20-1	ROAD WORK 1000 FT.	48"x48"	4	4	4	4	4	64.0							
W20-1	ROAD WORK 500 FT.	48"x48"	4	4	4	4	4	64.0							
W20-1	ROAD WORK AHEAD	48"x48"	15	15	15	15	15	240.0							
G20-2	END ROAD WORK	48"x24"	19	19	19	19	19	152.0							
G20-1	ROAD WORK NEXT xx MILES	60"x24"	2	2	2	2	2	20.0							
R11-2	ROAD CLOSED	48"x30"	20	29		29	29	290.0							
OM-3L	OBJECT MARKER	12"x36"	3	3		3	3	9.0							
OM-3R	OBJECT MARKER	12"x36"	4	4		4	4	12.0							
W1-6	LARGE ARROW	48"x24"		8		8	8	64.0							
R4-1	DO NOT PASS	24"x30"	6	6	6	6	6	30.0							
W21-5a	SHOULDER CLOSED	36"x36"	6	6	6	6	6	54.0							
W8-1	BUMP	36"x36"	2	2	2	2	2	18.0							
W8-17	UNEVEN LANES	36"x36"	6	6	6	6	6	54.0							
W8-17P	SHOULDER DROP-OFF	24"X18"	6	6	6	6	6	18.0							
SPECIAL	CONSTRUCTION PROJECT INFORMATION SIGN	96"X48"	2	2	2	2	2	64.0							
SP	CONSTRUCTION PROJECT INFORMATION SIGN UPDATE								10						
	VERTICAL PANELS		250	146		250				250					
	TRAFFIC DRUMS		405	957	395	957					957				
	TYPE III BARRICADE-RT. (8')			2		2						16			
	TYPE III BARRICADE-LT. (8')			2		2							16		
	TYPE III BARRICADE-RT. (16')		9	11		11						176			
	TYPE III BARRICADE-LT. (16')		13	12		13							208		
	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER		246	100		346								346	
	RELOCATING PRECAST CONCRETE BARRIER			246		246									246
TOTALS:								1217.0	10	250	957	192	224	346	246

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

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

CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	STAGE 1	STAGE 2	STAGE 3	END OF JOB	REMOVAL OF PERMANENT PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS		REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS		THERMOPLASTIC PAVEMENT MARKING							REFLECTORIZED PAINT PAVEMENT MARKING	
							WORDS	ARROWS		TYPE II (WHITE/RED)	TYPE II (YEL/YEL)	6" WHITE	6" YELLOW	8" WHITE	8" YELLOW	12" WHITE	WORDS	ARROWS	BIKE EMBLEMS	10" WHITE	10" YELLOW
	LIN. FT. - EACH				LIN. FT.		EACH		LIN. FT.	EACH		LIN. FT.					EACH			LIN. FT.	
REMOVAL OF PERMANENT PAVEMENT MARKINGS		2000			2000															
CONSTRUCTION PAVEMENT MARKINGS	62275	62275	21885			146435														
CONSTRUCTION PAVEMENT MARKINGS (WORDS)	6	6	2				14													
CONSTRUCTION PAVEMENT MARKINGS (ARROWS)	15	15	7					37												
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS		762							762											
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)				225						225										
RAISED PAVEMENT MARKERS TYPE II (YEL/YEL)				220							220									
THERMOPLASTIC PAVEMENT MARKING WHITE (6")				27604								27604								
THERMOPLASTIC PAVEMENT MARKING YELLOW (6")				32402									32402							
THERMOPLASTIC PAVEMENT MARKING WHITE (8")				2002										2002						
THERMOPLASTIC PAVEMENT MARKING YELLOW (8")				87											87					
THERMOPLASTIC PAVEMENT MARKING WHITE (12")				2096												2096				
THERMOPLASTIC PAVEMENT MARKING (WORDS)				15													15			
THERMOPLASTIC PAVEMENT MARKING (ARROWS)				31														31		
THERMOPLASTIC PAVEMENT MARKING (BIKE EMBLEMS)				82															82	
REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")				793																793
REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (10")				196																196
TOTALS:					2000	146435	14	37	762	225	220	27604	32402	2002	87	2096	15	31	82	793	196

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

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	63	303

(2) QUANTITIES

BENCH MARKS

STATION	LOCATION	BENCH MARKS
		EACH
115+36.83	HWY. 5 BRIDGE END RT.	1
176+00.00	HWY. 5 R.C. BOX CULVERT LT.	1
TOTAL:		2

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

MAILBOXES

LOCATION	MAILBOXES	MAILBOX SUPPORTS (SINGLE)	MAILBOX SUPPORTS (DOUBLE)
		EACH	
ENTIRE PROJECT	44	24	10
TOTALS:	44	24	10

CLEARING AND GRUBBING

STATION	STATION	LOCATION	CLEARING	GRUBBING
			STATION	
98+00	106+00	HWY. 5 LT.	8	8
106+00	126+00	HWY. 5 LT. AND RT.	20	20
127+00	130+00	HWY. 5 RT.	3	3
133+00	135+00	HWY. 5 RT.	2	2
139+00	141+00	HWY. 5 LT. AND RT.	2	2
141+00	142+00	HWY. 5 RT.	1	1
146+00	148+00	HWY. 5 RT.	2	2
153+00	154+00	HWY. 5 RT.	1	1
156+00	161+00	HWY. 5 RT.	5	5
161+00	166+00	HWY. 5 LT.	5	5
166+00	168+00	HWY. 5 LT. AND RT.	2	2
168+00	172+00	HWY. 5 LT.	4	4
172+00	175+00	HWY. 5 RT.	3	3
187+00	190+00	HWY. 5 LT.	3	3
194+00	196+00	HWY. 5 LT.	2	2
196+00	199+00	HWY. 5 LT. AND RT.	3	3
199+00	200+00	HWY. 5 RT.	1	1
201+00	204+00	HWY. 5 LT.	3	3
212+00	214+00	HWY. 5 LT. AND RT.	2	2
300+00	302+00	WATERFALL WAY LT. AND RT.	2	2
61+00	63+00	SPRINGHILL RD. RT.	2	2
65+00	66+00	SPRINGHILL RD. LT.	1	1
67+00	68+00	SPRINGHILL RD. LT.	1	1
69+00	71+00	SPRINGHILL RD. RT.	2	2
TOTALS:			80	80

REMOVAL AND DISPOSAL OF FENCE

STATION	STATION	LOCATION	FENCE	GATES
			LIN. FT.	EACH
92+04	92+29	HWY. 5 LT.	62	
92+21	92+41	HWY. 5 LT.	20	
93+92		HWY. 5 LT.	22	
94+29		HWY. 5 LT.	22	
104+97	106+00	HWY. 5 LT.	244	
120+86	121+26	HWY. 5 RT.	40	
121+98		HWY. 5 RT.		1
133+86	134+77	HWY. 5 LT.	86	
153+52		HWY. 5 LT.		2
158+61	158+66	HWY. 5 LT.	5	
160+15	161+21	HWY. 5 LT.	115	
164+70	165+11	HWY. 5 LT.	42	
166+94	167+63	HWY. 5 LT.	76	
170+77		HWY. 5 RT.	112	
172+37		HWY. 5 RT.	150	
182+42		HWY. 5 RT.		1
184+38		HWY. 5 RT.		1
186+75	187+18	HWY. 5 RT.	40	
187+10	188+25	HWY. 5 RT.	117	
210+92		HWY. 5 LT.	25	
212+96	213+17	HWY. 5 LT.	27	
67+40	67+75	SPRINGHILL ROAD LT.	35	
TOTALS:			1240	5

REMOVAL AND DISPOSAL OF CULVERTS AND DROP INLETS (BOX 1 OF 2)

STATION	DESCRIPTION	PIPE CULVERTS	DROP INLETS
		EACH	EACH
91+79	18" X 41' R.C. PIPE CULVERT ON LT.	1	
92+11	18" X 166' R.C. PIPE CULVERT ON RT. REMOVE 100' RT.	1	
92+24	24" X 29' R.C. PIPE CULVERT ON LT.	1	
93+50	24" X 93' R.C. PIPE CULVERT ON RT.	1	
94+05	24" X 42' R.C. PIPE CULVERT ON LT.	1	
94+86	24" X 21' R.C. PIPE CULVERT ON LT.	1	
95+68	18" X 51' R.C. PIPE CULVERT CROSS DRAIN	1	
102+46	18" X 75' C.M. PIPE CULVERT ON LT.	1	
102+50	18" X 33' C.M. PIPE CULVERT ON RT.	1	
106+00	18" X 20' C.M. PIPE CULVERT ON RT.	1	
107+59	18" X 24" X 20' C.M. ARCH PIPE CULVERT ON RT.	1	
122+00	18" X 20' C.M. PIPE CULVERT ON RT.	1	
122+17	TRI. 36" X 48" X 130' R.C. ARCH PIPE CULVERT ON LT.	3	
124+65	24" X 30" X 40' R.C. ARCH PIPE CULVERT CROSS DRAIN	1	
131+00	12" X 14' C.M. PIPE CULVERT ON LT.	1	
133+00	12" X 22' C.M. PIPE CULVERT ON LT.	1	
135+05	24" X 49' C.M. PIPE CULVERT ON LT.	1	
142+24	24" X 22' R.C. PIPE CULVERT ON LT.	1	
142+51	18" X 30' R.C. PIPE CULVERT ON RT.	1	
143+11	24" X 63' R.C. PIPE CULVERT ON RT.	1	
143+77	30" X 44' R.C. PIPE CULVERT CROSS DRAIN	1	
143+82	30" X 88' R.C. PIPE CULVERT ON RT.	1	
144+39	24" X 24' R.C. PIPE CULVERT ON LT.	1	
146+01	24" X 30" X 4' C.M. ARCH PIPE CULVERT ON LT.	1	
146+02	DROP INLET ON LT.		1
146+05	24" X 30" X 53' C.M. ARCH PIPE CULVERT ON LT.	1	
146+60	DROP INLET ON LT.		1
146+62	24" X 251' R.C. PIPE CULVERT ON LT.	1	
147+80	DROP INLET ON RT.		1
148+48	DROP INLET ON RT.		1
148+49	24" X 50' PVC PIPE CULVERT ON RT.	1	
148+51	12" X 178' CLAY PIPE CULVERT ON LT.	1	
148+61	DROP INLET ON LT.		1
148+61	8" X 34' PVC PIPE CULVERT ON LT.	1	
148+77	DROP INLET ON LT.		1
148+79	8" X 66' PVC PIPE CULVERT ON LT.	1	
148+79	8" X 69' PVC PIPE CULVERT ON LT.	1	
148+80	12" X 107' PVC PIPE CULVERT ON LT.	1	
148+91	DROP INLET ON RT.		1
148+92	18" X 32' R.C. PIPE CULVERT ON RT.	1	
149+15	DROP INLET ON LT.		1
149+16	24" X 21' R.C. PIPE CULVERT ON LT.	1	
149+25	DROP INLET ON RT.		1
149+27	18" X 25' R.C. PIPE CULVERT ON RT.	1	
149+52	12" X 15' PVC PIPE CULVERT ON LT.	1	
149+90	DROP INLET ON LT.		1
150+31	18" X 50' PVC PIPE CULVERT ON LT.	1	
150+32	DROP INLET ON LT.		1
150+53	24" X 46' PVC PIPE CULVERT ON LT.	1	
150+54	DROP INLET ON RT.		1
150+55	18" X 6' R.C. PIPE CULVERT ON RT.	1	
150+56	18" X 175' R.C. PIPE CULVERT ON RT.	1	
151+25	26" X 56' PVC PIPE CULVERT ON LT.	1	
151+83	DROP INLET ON LT.		1
151+84	18" X 45' PVC PIPE CULVERT ON LT.	1	
152+30	DROP INLET ON LT.		1
152+33	DROP INLET ON RT.		1
152+33	18" X 35' PVC PIPE CULVERT ON LT.	1	
152+35	18" X 39' R.C. PIPE CULVERT ON RT.	1	
152+68	DROP INLET ON LT.		1
152+70	18" X 35' PVC PIPE CULVERT ON LT.	1	
153+41	12" X 60' R.C. PIPE CULVERT ON LT.	1	
157+23	12" X 22' C.M. PIPE CULVERT ON RT.	1	
158+27	18" X 44' C.M. PIPE CULVERT W/FES ON RT.	1	
158+36	18" X 44' C.M. PIPE CULVERT W/FES ON RT.	1	
159+29	18" X 30' C.M. PIPE CULVERT W/FES ON RT.	1	
159+49	18" X 110' R.C. PIPE CULVERT ON LT.	1	
160+85	18" X 24' C.M. PIPE CULVERT ON LT.	1	
160+98	18" X 65' PVC PIPE CULVERT W/FES ON RT.	1	
162+56	24" X 24' R.C. PIPE CULVERT ON LT.	1	
163+29	DROP INLET ON RT.		1
163+53	12" X 54' PVC PIPE CULVERT ON RT.	1	
163+96	24" X 21' R.C. PIPE CULVERT ON LT.	1	
164+23	18" X 55' C.M. PIPE CULVERT W/FES ON RT.	1	
164+84	18" X 18' C.M. PIPE CULVERT ON LT.	1	
166+16	24" X 76' C.M. PIPE CULVERT ON LT.	1	
SUBTOTALS (BOX 1 OF 2):		61	17

REMOVAL AND DISPOSAL OF CULVERTS AND DROP INLETS (BOX 2 OF 2)

STATION	DESCRIPTION	PIPE CULVERTS	DROP INLETS
		EACH	EACH
167+39	4" X 8' PVC PIPE CULVERT ON RT.	1	
167+50	24" X 21' R.C. PIPE CULVERT ON LT.	1	
167+73	18" X 50' R.C. PIPE CULVERT W/FES ON RT.	1	
168+58	18" X 41' C.M. PIPE CULVERT W/FES ON RT.	1	
169+84	36" X 54' GALVANIZED PIPE CULVERT W/FES ON LT.	1	
171+51	36" X 94' R.C. PIPE CULVERT ON LT.	1	
172+08	16" X 56' R.C. PIPE CULVERT ON RT.	1	
173+81	12" X 8' PVC PIPE CULVERT ON LT.	1	
174+18	38" X 54" X 34' C.M. ARCH PIPE CULVERT ON LT.	1	
174+73	DROP INLET ON RT.		1
174+76	DROP INLET ON RT.		1
174+78	18" X 90' C.M. PIPE CULVERT ON RT.	1	
175+20	DROP INLET ON LT.		1
175+46	DROP INLET ON RT.		1
176+74	DROP INLET ON LT.		1
177+35	24" X 70' C.M. PIPE CULVERT ON RT.	1	
179+41	24" X 15" X 92' R.C. ARCH PIPE CULVERT W/FES ON RT.	1	
180+20	DROP INLET ON RT.		1
180+78	DROP INLET ON RT.		1
180+97	DROP INLET ON RT.		1
180+98	24" X 178' R.C. PIPE CULVERT ON RT.	1	
181+99	18" X 44' R.C. PIPE CULVERT ON LT.	1	
182+77	24" X 67' R.C. PIPE CULVERT ON RT.	1	
182+78	DROP INLET ON RT.		1
182+78	24" X 20' R.C. PIPE CULVERT ON RT.	1	
182+80	24" X 37' R.C. PIPE CULVERT ON RT.	1	
183+34	12" X 39' C.M. PIPE CULVERT ON LT.	1	
184+06	DROP INLET ON RT.		1
184+06	24" X 128' R.C. PIPE CULVERT ON RT.	1	
184+08	24" X 30' R.C. PIPE CULVERT ON RT.	1	
184+39	DROP INLET ON RT.		1
184+41	24" X 85' R.C. PIPE CULVERT ON RT.	1	
185+27	DROP INLET ON RT.		1
185+29	16" X 31' R.C. PIPE CULVERT ON RT.	1	
185+62	DROP INLET ON RT.		1
185+64	18" X 101' R.C. PIPE CULVERT W/FES ON RT.	1	
185+72	12" X 40' C.M. PIPE CULVERT ON LT.	1	
187+30	24" X 30' C.M. PIPE CULVERT ON RT.	1	
189+15	18" X 234' R.C. PIPE CULVERT ON LT.	1	
189+16	DROP INLET ON LT.		1
189+17	24" X 151' C.M. PIPE CULVERT ON LT.	1	
191+15	18" X 22' C.M. PIPE CULVERT ON RT.	1	
191+95	18" X 113' C.M. PIPE CULVERT ON LT.	1	
191+99	18" X 113' C.M. PIPE CULVERT ON LT.	1	
192+65	18" X 23' R.C. PIPE CULVERT ON RT.	1	
194+22	18" X 128' C.M. PIPE CULVERT ON RT.	1	
199+37	18" X 66' C.M. PIPE CULVERT ON RT.	1	
199+40	DROP INLET ON RT.		1
199+42	18" X 10' C.M. PIPE CULVERT ON RT.	1	
200+55	6" X 8' PVC PIPE CULVERT ON RT.	1	
201+23	18" X 20' R.C. PIPE CULVERT W/FES ON RT.	1	
201+87	18" X 64' PVC PIPE CULVERT ON RT.	1	
202+15	15" X 99' R.C. PIPE CULVERT CROSS DRAIN	1	
202+25	DROP INLET ON RT.		1
204+22	18" X 12' R.C. PIPE CULVERT ON RT.	1	
204+74	18" X 22' R.C. PIPE CULVERT ON RT.	1	
211+98	18" X 6' R.C. PIPE CULVERT ON LT.	1	
211+98	18" X 15' R.C. PIPE CULVERT ON LT.	1	
211+98	DROP INLET ON LT.		1
211+99	18" X 62' C.M. PIPE CULVERT ON LT.	1	
212+99	18" X 45' R.C. PIPE CULVERT ON LT.	1	
212+99	18" X 87' R.C. PIPE CULVERT ON RT. (REMOVE 20')	1	
213+00	18" X 116' PVC PIPE CULVERT ON RT.	1	
213+00	DROP INLET ON RT.		1
58+12	18" X 34' C.M. PIPE CULVERT ON RT.	1	
58+15	18" X 38' C.M. PIPE CULVERT ON LT.	1	
59+89	18" X 54' C.M. PIPE CULVERT ON RT.	1	
61+07	18" X 56' C.M. PIPE CULVERT ON RT.	1	
61+32	18" X 44' C.M. PIPE CULVERT ON LT.	1	
64+34	12" X 23' PVC PIPE CULVERT ON RT.	1	
66+41	18" X 31' BPP PIPE CULVERT W/FES ON LT.	1	
67+04	18" X 97' BPP PIPE CULVERT ON LT.	1	
68+12	16" X 25' R.C. PIPE CULVERT ON RT.	1	
68+30	18" X 171' BPP PIPE CULVERT ON LT.	1	
SUBTOTALS (BOX 1 OF 2):		61	17
SUBTOTALS (BOX 2 OF 2):		56	18
TOTALS:		117	35

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

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

2/13/2018

R061335.DGN

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	64	303

(2) QUANTITIES

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

REMOVAL AND DISPOSAL OF ITEMS (BOX 1 OF 6)

STATION	STATION	LOCATION	CURB	CURB AND GUTTER	RETAINING WALLS	CONCRETE PAVEMENT	CONCRETE DITCH PAVING	CONCRETE ISLANDS	CONCRETE DRIVEWAYS	WELL	WALKS	SIGN FOUNDATIONS	SATELLITE DISH	FLAG POLE	GUARDRAIL	SPRINKLER SYSTEM	COLUMNS	WATER FOUNTAIN	LUMINAIRE POLE & FOUNDATION	LUMINAIRE POLES	POSTS	WALLS	SIGNS	PLANTERS
			LIN. FT.	LIN. FT.	LIN. FT.	SQ. YD.	SQ. YD.	SQ. YD.	SQ. YD.	EACH	SQ. YD.	EACH	EACH	EACH	LIN. FT.	EACH	EACH	EACH	EACH	EACH	EACH	LIN. FT.	EACH	EACH
92+00	92+03	HWY. 5 LT.	27																					
92+03		HWY. 5 LT.										1					1						1	
92+10		HWY. 5 LT.															1							
92+25		HWY. 5 LT.							36								1							
92+30		HWY. 5 LT.																		1				
93+12		HWY. 5 LT.										1												
93+22		HWY. 5 LT.																		1			1	
93+22		HWY. 5 LT.																						
93+30		HWY. 5 LT.																		1				
93+91	94+29	HWY. 5 LT.							119											1				
94+32		HWY. 5 LT.																						
94+37		HWY. 5 RT.																			1			
94+55	94+70	HWY. 5 RT.		32																	1			
94+83		HWY. 5 RT.																						
94+88		HWY. 5 RT.							189											1				
95+00		HWY. 5 RT.										1											1	
95+05	95+20	HWY. 5 RT.		32																				
95+80		HWY. 5 LT.										1											1	
97+23		HWY. 5 LT.										1												
97+44		HWY. 5 LT.																			2			
97+47		HWY. 5 LT.																			1			
97+52		HWY. 5 LT.																			1			
102+17	102+33	HWY. 5 LT.		86																				
102+22		HWY. 5 LT.										1											1	
102+56	102+87	HWY. 5 LT.		90																		10	1	
102+68		HWY. 5 LT.																						1
102+68		HWY. 5 LT.																		1				
102+72		HWY. 5 LT.										1												1
102+76		HWY. 5 LT.										1										10	1	
103+15		HWY. 5 RT.																					1	
103+45	103+60	HWY. 5 RT.		32																				
103+79		HWY. 5 RT.							156															
103+98	104+13	HWY. 5 RT.		32																				
105+95		HWY. 5 LT.																						
114+95	115+99	HWY. 5 RT.																						
115+44	115+99	HWY. 5 RT.													104									
117+25	119+28	HWY. 5 RT.													55									
117+27	118+29	HWY. 5 RT.													204									
121+26	122+97	HWY. 5 LT.													102									
121+30	123+00	HWY. 5 LT.							517															
121+33	121+56	HWY. 5 LT.		128												1								
121+49		HWY. 5 LT.																						
121+53		HWY. 5 LT.																		1				
121+83	122+35	HWY. 5 LT.		285								1											1	
121+88		HWY. 5 RT.																						
121+94		HWY. 5 RT.																			1			
122+06		HWY. 5 RT.																			1			
122+10		HWY. 5 RT.																			1			
122+12		HWY. 5 RT.																			1			
122+16		HWY. 5 LT.										1											1	
122+53	122+85	HWY. 5 LT.		87														1						
122+63		HWY. 5 LT.																						
122+64		HWY. 5 LT.										1											1	
122+72		HWY. 5 LT.										1											1	
122+73		HWY. 5 LT.																		1				
127+20		HWY. 5 LT.																		1				
127+44		HWY. 5 LT.										1											1	
131+40	131+44	HWY. 5 LT.																			4			
131+55		HWY. 5 LT.																			2			
132+84		HWY. 5 RT.										1											1	
133+20		HWY. 5 RT.																			1			
135+05		HWY. 5 LT.																			1			
135+16		HWY. 5 LT.										1												
135+56		HWY. 5 RT.																			1			
135+65		HWY. 5 RT.																			1			
135+68	137+22	HWY. 5 RT.		352																	1			
135+83		HWY. 5 RT.							53															
135+87		HWY. 5 C.L.																						
136+25	136+90	HWY. 5 RT.									43										1			
136+34		HWY. 5 RT.																						
137+01		HWY. 5 LT.																				12	1	
SUBTOTALS (BOX 1 OF 6):			27	1156					1070		43	15			465	1	3	1		8	23	32	14	2

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	65	303

(2) QUANTITIES

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

REMOVAL AND DISPOSAL OF ITEMS (BOX 2 OF 6)

STATION	STATION	LOCATION	CURB	CURB AND GUTTER	RETAINING WALLS	CONCRETE PAVEMENT	CONCRETE DITCH PAVING	CONCRETE ISLANDS	CONCRETE DRIVEWAYS	WELL	WALKS	SIGN FOUNDATIONS	SATELLITE DISH	FLAG POLE	GUARDRAIL	SPRINKLER SYSTEM	COLUMNS	WATER FOUNTAIN	LUMINAIRE POLE & FOUNDATION	LUMINAIRE POLES	POSTS	WALLS	SIGNS	PLANTERS
			LIN. FT.	LIN. FT.	LIN. FT.	SQ. YD.	SQ. YD.	SQ. YD.	SQ. YD.	EACH	SQ. YD.	EACH	EACH	EACH	LIN. FT.	EACH	EACH	EACH	EACH	EACH	EACH	LIN. FT.	EACH	EACH
137+07		HWY. 5 LT.														1								
137+10		HWY. 5 LT.																						
137+44		HWY. 5 LT.																			1			
137+52		HWY. 5 LT.																			1			
137+56	139+41	HWY. 5 LT.							291												1			
137+56	137+84	HWY. 5 LT.	31																					
138+15	138+69	HWY. 5 LT.	59																					
139+05	139+41	HWY. 5 LT.	40																					
139+72	140+86	HWY. 5 LT.							173															
139+72	140+09	HWY. 5 LT.	40																					
140+48	140+86	HWY. 5 LT.	41																					
141+11		HWY. 5 LT.																						
143+11		HWY. 5 RT.							77											1				
144+00		HWY. 5 LT.										2												
144+33		HWY. 5 RT.							75															
144+44	144+64	HWY. 5 LT.										1											1	
144+64		HWY. 5 RT.										1											1	
144+95		HWY. 5 LT.										1												
145+05		HWY. 5 LT.										1											1	
145+57	145+78	HWY. 5 LT.												3										
145+91	146+71	HWY. 5 LT.							123															
146+04	146+09	HWY. 5 LT.		10																				
146+12		HWY. 5 RT.								1														
146+52	148+68	HWY. 5 LT.		242																				
146+55		HWY. 5 LT.										1											1	
146+70		HWY. 5 LT.																		1				
148+25		HWY. 5 LT.																		1				
148+47	150+16	HWY. 5 RT.		398																				
148+49	150+16	HWY. 5 RT.									97													
149+12	150+36	HWY. 5 LT.		170																				
149+84		HWY. 5 LT.																						
150+26		HWY. 5 RT.							111										1					
150+32		HWY. 5 LT.																						
150+36	151+88	HWY. 5 RT.		143															1					
150+53		HWY. 5 LT.							76															
150+70	151+32	HWY. 5 LT.		161																				
150+75		HWY. 5 LT.																		1				
151+09		HWY. 5 LT.										1												
151+27		HWY. 5 LT.																					1	
151+50		HWY. 5 LT.							85											1				
151+68	152+35	HWY. 5 LT.		132																				
151+72		HWY. 5 LT.																						
152+05		HWY. 5 RT.							23										1					
152+31		HWY. 5 RT.										1												
152+51		HWY. 5 LT.							103														1	
152+63	153+11	HWY. 5 LT.		79																				
152+66		HWY. 5 LT.										1											1	
152+96	153+05	HWY. 5 LT.																						
152+97	153+11	HWY. 5 LT.									8												10	
153+05		HWY. 5 LT.										1												
153+31		HWY. 5 LT.																					1	
153+55		HWY. 5 LT.																			1			
154+06		HWY. 5 RT.																			1			
154+08	154+64	HWY. 5 RT.				160						1											1	
154+50		HWY. 5 RT.																						
155+28		HWY. 5 LT.										1												
155+47		HWY. 5 RT.																			1			
156+00	156+11	HWY. 5 LT.		25								1											1	
156+29		HWY. 5 LT.							80															
156+50	156+60	HWY. 5 LT.		18																				
156+65		HWY. 5 LT.										1											1	
156+71	156+81	HWY. 5 LT.		17																				
157+00		HWY. 5 LT.							79															
157+21		HWY. 5 RT.							47															
157+21	157+30	HWY. 5 LT.		17																				
157+23	157+58	HWY. 5 LT.					13																	
157+25		HWY. 5 LT.																			2			
157+28		HWY. 5 LT.																			2			
159+60		HWY. 5 LT.										1											1	
161+85		HWY. 5 LT.											1											
161+72		HWY. 5 RT.										1											1	
162+21		HWY. 5 RT.																	1					
SUBTOTALS (BOX 2 OF 6):			211	1412		160	13		1343	1	105	17	1	3		1			6	3	10	10	13	

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	66	303

(2) QUANTITIES

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

REMOVAL AND DISPOSAL OF ITEMS (BOX 3 OF 6)

STATION	STATION	LOCATION	CURB	CURB AND GUTTER	RETAINING WALLS	CONCRETE PAVEMENT	CONCRETE DITCH PAVING	CONCRETE ISLANDS	CONCRETE DRIVEWAYS	WELL	WALKS	SIGN FOUNDATIONS	SATELLITE DISH	FLAG POLE	GUARDRAIL	SPRINKLER SYSTEM	COLUMNS	WATER FOUNTAIN	LUMINAIRE POLE & FOUNDATION	LUMINAIRE POLES	POSTS	WALLS	SIGNS	PLANTERS
			LIN. FT.	LIN. FT.	LIN. FT.	SQ. YD.	SQ. YD.	SQ. YD.	SQ. YD.	EACH	SQ. YD.	EACH	EACH	EACH	LIN. FT.	EACH	EACH	EACH	EACH	EACH	EACH	LIN. FT.	EACH	EACH
163+53		HWY. 5 RT.							113															
163+69	164+07	HWY. 5 RT.		89																				
164+00		HWY. 5 RT.										1												
164+15		HWY. 5 LT.																					1	
164+18		HWY. 5 RT.							78												1			
164+36	165+34	HWY. 5 RT.		121																				
165+25		HWY. 5 RT.					7																	
165+57		HWY. 5 RT.										1												
165+75	166+00	HWY. 5 LT.		41																			1	
165+84	167+59	HWY. 5 RT.		226																				
165+93		HWY. 5 LT.							36															
166+00	166+20	HWY. 5 LT.		29																				
166+29	166+49	HWY. 5 LT.		62																				
166+42		HWY. 5 LT.										1										10	1	
167+29		HWY. 5 RT.					3																	
167+73		HWY. 5 RT.							98															
167+86		HWY. 5 RT.					4																	
167+86		HWY. 5 RT.		61																				
168+17		HWY. 5 RT.					2																	
168+36	168+45	HWY. 5 RT.		14																				
168+74	168+83	HWY. 5 RT.		13																				
169+48		HWY. 5 RT.										1												
170+57		HWY. 5 LT.										1											1	1
170+89	174+00	HWY. 5 LT.																					1	
171+20	171+40	HWY. 5 LT.		39												1								
171+24		HWY. 5 LT.										1											1	
171+73	171+95	HWY. 5 RT.	57																					
171+73	171+92	HWY. 5 LT.		35																				
172+01	173+82	HWY. 5 LT.		186																				
172+06		HWY. 5 RT.							155															
172+07		HWY. 5 LT.																	1					
172+20	172+40	HWY. 5 RT.	52																					
173+51		HWY. 5 LT.																	1					
173+54		HWY. 5 RT.		35																				
173+71		HWY. 5 RT.							31															
173+78		HWY. 5 RT.		37																				
174+75		HWY. 5 RT.										1											1	
174+82	174+90	HWY. 5 RT.		37																				
175+13		HWY. 5 RT.							56															
175+30	175+38	HWY. 5 RT.		51																				
177+08	177+17	HWY. 5 RT.		27																				
177+37		HWY. 5 RT.							58															
177+54	177+63	HWY. 5 RT.		26																				
179+22	179+26	HWY. 5 RT.		139																				
179+50	182+28	HWY. 5 RT.										196												
179+75	182+28	HWY. 5 RT.		452																				
179+86	180+05	HWY. 5 LT.		54																				
180+34	180+52	HWY. 5 LT.		54																				
180+41		HWY. 5 LT.										18												
181+99		HWY. 5 LT.							117															
182+19		HWY. 5 RT.										1											1	
182+24	182+60	HWY. 5 RT.																						
182+56	182+71	HWY. 5 RT.		40																	2			
182+60	184+42	HWY. 5 RT.										104												
184+34	184+44	HWY. 5 RT.		38																				
184+37		HWY. 5 RT.																						
184+65		HWY. 5 RT.							175												2			
184+85	185+86	HWY. 5 RT.		136																				
185+46		HWY. 5 LT.										1											1	
185+72		HWY. 5 LT.							68															
186+04		HWY. 5 RT.							70															
186+22	186+66	HWY. 5 RT.		60																				
186+66	187+18	HWY. 5 RT.														1								
186+86	187+03	HWY. 5 LT.		40																				
187+27	188+76	HWY. 5 LT.		193																				
187+32		HWY. 5 LT.										1											1	
187+44	188+30	HWY. 5 RT.														1								
187+53	188+24	HWY. 5 RT.										1												
187+69		HWY. 5 RT.										1											1	
188+00		HWY. 5 LT.										1											1	
188+90		HWY. 5 LT.										1											1	
SUBTOTALS (BOX 3 OF 6):			109	2335			16		1055		318	13				3			2		5	10	13	1

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	67	303

(2) QUANTITIES

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

REMOVAL AND DISPOSAL OF ITEMS (BOX 4 OF 6)

STATION	STATION	LOCATION	CURB	CURB AND GUTTER	RETAINING WALLS	CONCRETE PAVEMENT	CONCRETE DITCH PAVING	CONCRETE ISLANDS	CONCRETE DRIVEWAYS	WELL	WALKS	SIGN FOUNDATIONS	SATELLITE DISH	FLAG POLE	GUARDRAIL	SPRINKLER SYSTEM	COLUMNS	WATER FOUNTAIN	LUMINAIRE POLE & FOUNDATION	LUMINAIRE POLES	POSTS	WALLS	SIGNS	PLANTERS
			LIN. FT.	LIN. FT.	LIN. FT.	SQ. YD.	SQ. YD.	SQ. YD.	SQ. YD.	EACH	SQ. YD.	EACH	EACH	EACH	LIN. FT.	EACH	EACH	EACH	EACH	EACH	EACH	LIN. FT.	EACH	EACH
188+92	189+33	HWY. 5 LT.		103																				
189+81		HWY. 5 RT.		136								1												
189+71	190+14	HWY. 5 LT.																					1	
189+81		HWY. 5 RT.										1												
190+00	191+50	HWY. 5 LT.																					1	
190+31	190+47	HWY. 5 LT.		54												1								
190+40		HWY. 5 LT.										1												
190+65	190+86	HWY. 5 LT.		55																			1	1
191+06		HWY. 5 RT.																			1			
191+21		HWY. 5 LT.										1									1		1	
191+25		HWY. 5 RT.																						
191+33	191+54	HWY. 5 LT.		48																				
191+67		HWY. 5 LT.							62															
191+79	192+21	HWY. 5 LT.		106																				
192+00		HWY. 5 LT.																						1
192+12		HWY. 5 RT.										1											1	
192+33		HWY. 5 LT.							68															
192+40		HWY. 5 LT.										1											1	
192+44	192+62	HWY. 5 LT.		43																				
192+49		HWY. 5 LT.			15																			
192+49	194+00	HWY. 5 LT.														1								
192+98	194+07	HWY. 5 LT.		144																				
193+68		HWY. 5 LT.										1											1	
193+71	194+02	HWY. 5 RT.		50																				
193+90		HWY. 5 RT.										2											2	1
194+26		HWY. 5 LT.							75															
194+41	195+11	HWY. 5 RT.		136																				
194+47	194+59	HWY. 5 LT.		43																				
194+52		HWY. 5 LT.										1											1	
194+64		HWY. 5 RT.																						1
194+64		HWY. 5 RT.										1											1	
195+21		HWY. 5 RT.							193															
195+30	195+59	HWY. 5 RT.		67																				
195+48		HWY. 5 LT.																						1
195+81	195+98	HWY. 5 LT.		41																				
196+06		HWY. 5 RT.										1											1	
196+13	196+37	HWY. 5 RT.		50																				
196+17		HWY. 5 LT.							179															
196+36	196+52	HWY. 5 LT.		40																				
196+53	196+76	HWY. 5 RT.		50																				
197+65	199+00	HWY. 5 LT.														1								
197+79		HWY. 5 LT.										1											1	
197+90		HWY. 5 RT.										2												
198+00		HWY. 5 LT.																						1
198+77		HWY. 5 RT.										1											1	
198+82		HWY. 5 RT.										1											1	
198+88	198+87	HWY. 5 RT.		39																				
199+29	199+51	HWY. 5 RT.		47																				
199+31	200+62	HWY. 5 RT.														1								
199+48		HWY. 5 RT.										1											1	
199+51		HWY. 5 RT.										1											1	
199+57		HWY. 5 LT.			10							1											1	
200+56		HWY. 5 LT.										1											1	
201+65	201+68	HWY. 5 RT.		36																				
201+66	202+11	HWY. 5 LT.					18																	
201+71		HWY. 5 LT.										1											1	
201+87		HWY. 5 RT.							108															
202+06	203+78	HWY. 5 RT.		208																				
202+13		HWY. 5 RT.																						1
202+46		HWY. 5 RT.																	1					
203+35	205+39	HWY. 5 RT.									119													
204+24	205+47	HWY. 5 RT.		148																				
204+26	204+42	HWY. 5 LT.		26							8													
204+42		HWY. 5 LT.																	1					
204+50		HWY. 5 RT.										1											1	
204+65		HWY. 5 LT.							155															
204+85	206+19	HWY. 5 LT.		176																				
204+87		HWY. 5 LT.																	1					
204+89		HWY. 5 LT.										1							1				1	
204+93	206+13	HWY. 5 LT.									67													
205+41		HWY. 5 RT.										1											1	
205+44		HWY. 5 RT.																	1					
SUBTOTALS (BOX 4 OF 6):				1846	25		18		840		194	25				4			5		2		23	7

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QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	68	303

(2) QUANTITIES

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

REMOVAL AND DISPOSAL OF ITEMS (BOX 5 OF 6)

STATION	STATION	LOCATION	CURB	CURB AND GUTTER	RETAINING WALLS	CONCRETE PAVEMENT	CONCRETE DITCH PAVING	CONCRETE ISLANDS	CONCRETE DRIVEWAYS	WELL	WALKS	SIGN FOUNDATIONS	SATELLITE DISH	FLAG POLE	GUARDRAIL	SPRINKLER SYSTEM	COLUMNS	WATER FOUNTAIN	LUMINAIRE POLE & FOUNDATION	LUMINAIRE POLES	POSTS	WALLS	SIGNS	PLANTERS
			LIN. FT.	LIN. FT.	LIN. FT.	SQ. YD.	SQ. YD.	SQ. YD.	SQ. YD.	EACH	SQ. YD.	EACH	EACH	EACH	LIN. FT.	EACH	EACH	EACH	EACH	EACH	EACH	LIN. FT.	EACH	EACH
205+62		HWY. 5 RT.		19				4																
205+86	207+35	HWY. 5 RT.		230							104													
206+14		HWY. 5 LT.										1												
206+28		HWY. 5 LT.							49														1	
206+36	207+59	HWY. 5 LT.		200																				
206+40	207+55	HWY. 5 LT.									71													
206+40		HWY. 5 LT.																						
207+47		HWY. 5 RT.	108					61											1					
207+85	210+09	HWY. 5 RT.		318																				
208+10	211+94	HWY. 5 LT.	153	408							177													
208+18	211+79	HWY. 5 LT.																						
208+30		HWY. 5 RT.	230					226			209													
209+34	210+83	HWY. 5 LT.				142																		
209+50		HWY. 5 LT.																						
209+64		HWY. 5 RT.																						1
209+85		HWY. 5 RT.																				20		
209+87		HWY. 5 RT.										1												
210+40	211+46	HWY. 5 RT.		174								1												
210+55	211+46	HWY. 5 RT.																						
211+40		HWY. 5 RT.									48													
211+64		HWY. 5 RT.										1												
211+82	213+56	HWY. 5 RT.		222					161														1	
211+90	213+50	HWY. 5 RT.									94													
211+93		HWY. 5 RT.																						
213+00		HWY. 5 RT.										1												
213+77		HWY. 5 RT.																					1	
213+97	214+37	HWY. 5 RT.		70					190															1
214+37		HWY. 5 RT.																						
												1												
8+49	11+19	NORTH REYNOLDS ROAD																					1	
								265																
59+89		SPRINGHILL ROAD RT.																						
60+62	60+87	SPRINGHILL ROAD RT.		52					76															
61+07		SPRINGHILL ROAD RT.																						
61+27	61+42	SPRINGHILL ROAD RT.		26					167															
61+28	62+94	SPRINGHILL ROAD RT.																						
61+34	62+94	SPRINGHILL ROAD RT.		199							79													
61+38	61+62	SPRINGHILL ROAD RT.																						
61+79	62+20	SPRINGHILL ROAD RT.				39																24		
61+79	62+20	SPRINGHILL ROAD RT.																						
61+82		SPRINGHILL ROAD RT.																						
62+11		SPRINGHILL ROAD RT.																				1		
62+60	62+97	SPRINGHILL ROAD RT.				29																1		
62+94		SPRINGHILL ROAD RT.					6																	
63+56	64+73	SPRINGHILL ROAD LT.		261																				
64+15	65+33	SPRINGHILL ROAD RT.		129																				
64+48	65+31	SPRINGHILL ROAD LT.							76															
64+63		SPRINGHILL ROAD LT.																						
64+71	64+86	SPRINGHILL ROAD RT.					7															1		
64+72		SPRINGHILL ROAD LT.																						
65+06		SPRINGHILL ROAD RT.										1											1	
65+07	66+86	SPRINGHILL ROAD LT.		340								1												
65+08	66+86	SPRINGHILL ROAD LT.																						
65+12		SPRINGHILL ROAD LT.														1								
65+16		SPRINGHILL ROAD LT.										1											1	
65+27		SPRINGHILL ROAD RT.																				1		
65+52		SPRINGHILL ROAD RT.																				1		
65+69	66+13	SPRINGHILL ROAD RT.		100					57															
65+76		SPRINGHILL ROAD RT.																						
66+07		SPRINGHILL ROAD RT.																	1					
66+30		SPRINGHILL ROAD RT.							58										1					
66+42	66+84	SPRINGHILL ROAD LT.									24													
66+45	67+33	SPRINGHILL ROAD RT.		141																				
66+50		SPRINGHILL ROAD RT.																						
66+79		SPRINGHILL ROAD LT.																	1					
67+18	69+12	SPRINGHILL ROAD LT.										1											1	
67+18	69+15	SPRINGHILL ROAD LT.		247					110															
67+19	69+12	SPRINGHILL ROAD LT.																						
68+13		SPRINGHILL ROAD RT.														1								
68+69		SPRINGHILL ROAD LT.							31															
70+15		SPRINGHILL ROAD LT.							47										1					
SUBTOTALS (BOX 5 OF 6):			491	3136		210	13	556	1022		806	10				2			5	5		44	7	2

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QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	69	303

(2) QUANTITIES

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

REMOVAL AND DISPOSAL OF ITEMS (BOX 6 OF 6)

STATION	STATION	LOCATION	CURB	CURB AND GUTTER	RETAINING WALLS	CONCRETE PAVEMENT	CONCRETE DITCH PAVING	CONCRETE ISLANDS	CONCRETE DRIVEWAYS	WELL	WALKS	SIGN FOUNDATIONS	SATELLITE DISH	FLAG POLE	GUARDRAIL	SPRINKLER SYSTEM	COLUMNS	WATER FOUNTAIN	LUMINAIRE POLE & FOUNDATION	LUMINAIRE POLES	POSTS	WALLS	SIGNS	PLANTERS
			LIN. FT.	LIN. FT.	LIN. FT.	SQ. YD.	SQ. YD.	SQ. YD.	SQ. YD.	EACH	SQ. YD.	EACH	EACH	EACH	LIN. FT.	EACH	EACH	EACH	EACH	EACH	EACH	LIN. FT.	EACH	EACH
70+59		SPRINGHILL ROAD RT.							131															
70+87		SPRINGHILL ROAD RT.																						
70+93		SPRINGHILL ROAD RT.																			1			
71+16		SPRINGHILL ROAD RT.																			1			
71+21		SPRINGHILL ROAD RT.																			1			
																					1			
300+73	302+91	RIO DE JANEIRO BLVD. RT.		440																				
301+11	303+11	RIO DE JANEIRO BLVD. LT.		352																				
SUBTOTALS (BOX 1 OF 6):			27	1156					1070		43	15			465	1	3	1		8	23	32	14	2
SUBTOTALS (BOX 2 OF 6):			211	1412		160	13		1343	1	105	17	1	3		1			6	3	10	10	13	
SUBTOTALS (BOX 3 OF 6):			109	2335			16		1055		318	13				3			2		5	10	13	1
SUBTOTALS (BOX 4 OF 6):				1846	25		18		840		194	25				4			5		2		23	7
SUBTOTALS (BOX 5 OF 6):			491	3136		210	13	556	1022		806	10				2			5	5		44	7	2
SUBTOTALS (BOX 6 OF 6):				792					131												4			
TOTALS:			838	10677	25	370	60	556	5461	1	1466	80	1	3	465	11	3	1	18	16	44	96	70	12

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

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	70	303

(2) QUANTITIES

ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC

LOCATION	TON	TACK COAT GALLON
ENTIRE PROJECT - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	60	120
TOTALS:	60	120

BASIS OF ESTIMATE:
ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC...25 TON/MILE
TACK COAT FOR MAINTENANCE OF TRAFFIC.....50 GAL./MILE
NOTE: QUANTITY ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.

FENCING

STATION	STATION	LOCATION	WIRE FENCE (TYPE C)	* 4' CHAIN LINK FENCE	* 16'-0" GATES
			LIN. FT.		EACH
104+97	106+00	HWY. 5 LT.	108		2
120+86	121+26	HWY. 5 RT.	42		
121+98		HWY. 5 RT.			1
160+15	161+21	HWY. 5 LT.		89	1
TOTALS:			150	89	4

* DENOTES ALTERNATE BID ITEM.

ACHM PATCHING OF EXISTING ROADWAY

DESCRIPTION	TON
ENTIRE PROJECT - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	100
TOTAL:	100

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

SELECTED PIPE BEDDING

LOCATION	SELECTED PIPE BEDDING CU.YD.
ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	300
TOTAL:	300

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

STATE OF ARKANSAS LICENSED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH
7-31-18

SOIL LOG

STATION	LATITUDE DEG	LATITUDE MIN	LATITUDE SEC	LONGITUDE DEG	LONGITUDE MIN	LONGITUDE SEC	LOCATION	DEPTH FEET	LIQUID LIMIT	PLASTICITY INDEX	AASHTO CLASSIFICATION	COLOR
144+00	34	36	54.50	92	31	2.80	13RT	0-5	39	22	A-6(7)	BR/GR
144+00	34	36	54.50	92	31	2.70	22RT	0-5	39	22	A-6(7)	BR/GR
144+00	34	36	54.50	92	31	2.70	22RT	0-5	34	18	A-6(4)	BROWN
144+00	34	36	54.60	92	31	2.80	06RT	0-5	48	29	A-7-6(15)	BROWN
151+00	34	36	58.00	92	30	55.40	11LT	0-5	19	5	A-2-4(0)	BROWN
151+00	34	36	58.10	92	30	55.50	25LT	0-5	41	27	A-2-7(3)	BROWN
159+00	34	37	1.80	92	30	47.00	05RT	0-5	49	30	A-7-6(12)	BROWN
159+00	34	37	1.70	92	30	47.00	13RT	0-5	48	29	A-7-6(6)	BR/GR
167+00	34	37	5.90	92	30	38.50	06LT	0-5	44	28	A-7-6(10)	BROWN
167+00	34	37	6.00	92	30	38.50	22LT	0-5	35	20	A-6(5)	BROWN
167+00	34	37	6.00	92	30	38.50	12LT	0-5	49	32	A-7-6(14)	BROWN
175+00	34	37	9.60	92	30	31.00	04RT	0-5	37	21	A-6(10)	BROWN
175+00	34	37	9.60	92	30	31.00	12RT	0-5	37	21	A-6(10)	BROWN
183+00	34	37	14.10	92	30	22.60	06LT	0-5	49	31	A-7-6(21)	BROWN
183+00	34	37	14.20	92	30	22.60	14LT	0-5	40	22	A-6(12)	BROWN
183+00	34	37	14.30	92	30	22.70	22LT	0-5	39	20	A-6(8)	BROWN
191+00	34	37	19.30	92	30	14.50	06RT	0-5	31	15	A-6(6)	BR/GR
191+00	34	37	19.30	92	30	14.50	13RT	0-5	29	13	A-6(4)	BR/GR
199+00	34	37	23.70	92	30	7.90	05LT	0-5	32	14	A-6(4)	BROWN
199+00	34	37	23.70	92	30	8.00	13LT	0-5	31	12	A-6(2)	BROWN
205+00	34	37	26.90	92	30	1.20	12RT	0-5	30	14	A-6(6)	BROWN

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

COLD MILLING ASPHALT PAVEMENT

STATION	STATION	LOCATION	AVG. WIDTH FEET	COLD MILLING ASPHALT PAVEMENT SQ. YD.
91+00.00	92+00.00	MAIN LANES	30.00	333.33
214+00.00	215+00.00	MAIN LANES	24.00	266.67
54+50.00	55+50.00	SPRINGHILL RD.	24.00	266.67
71+50.00	72+50.00	SPRINGHILL RD.	24.00	266.67
TOTAL:				1133.34

NOTE: AVERAGE MILLING DEPTH 1".

CONCRETE WALKS (SPECIAL) & HAND RAILING

STATION	STATION	LOCATION	LENGTH LIN. FT.	CONCRETE WALKS (TYPE SPECIAL) SQ.YD.	HAND RAILING LIN. FT.
95+23.00	103+45.00	RT. OF MAIN LANES	822	457	822
137+00.00	138+71.00	RT. OF MAIN LANES	171	95	171
160+38.00	160+68.00	RT. OF MAIN LANES	30	17	30
161+30.00	163+23.00	RT. OF MAIN LANES	193	107	71
163+83.00	163+94.00	RT. OF MAIN LANES	11	6	
168+86.00	170+89.00	RT. OF MAIN LANES	203	113	203
177+68.00	179+34.41	RT. OF MAIN LANES	166	92	166
62+65.00	63+12.67	RT. OF SPRINGHILL ROAD	48	27	48
64+60.00	65+00.00	RT. OF SPRINGHILL ROAD	40	22	40
65+85.00	65+98.00	RT. OF SPRINGHILL ROAD	13	7	
66+60.00	67+90.00	RT. OF SPRINGHILL ROAD	130	72	
TOTALS:				1015	1551

WHEELCHAIR RAMPS

STATION	LOCATION	TYPE 3 SQ.YD.	TYPE 4 SQ.YD.
92+06.20	MAIN LANES ON RT.	3.3	
92+15.78	MAIN LANES ON RT.	3.3	
92+15.99	MAIN LANES ON LT.	3.4	
92+18.16	MAIN LANES ON LT.	2.7	
92+29.22	MAIN LANES ON LT.	3.1	
92+31.26	MAIN LANES ON LT.	3.4	
121+47.01	MAIN LANES ON LT.	4.9	
122+80.54	MAIN LANES ON LT.	5.1	
127+26.77	MAIN LANES ON LT.	4.1	
128+00.67	MAIN LANES ON LT.	4.0	
133+08.05	MAIN LANES ON LT.	4.1	
133+79.93	MAIN LANES ON LT.	4.2	
137+65.80	MAIN LANES ON LT.	3.5	
138+33.99	MAIN LANES ON LT.	3.4	
147+16.88	MAIN LANES ON RT.		2.6
147+81.77	MAIN LANES ON LT.		2.9
148+38.17	MAIN LANES ON LT.		2.8
148+42.33	MAIN LANES ON RT.		2.8
148+78.43	MAIN LANES ON RT.		3.4
149+62.72	MAIN LANES ON LT.		2.7
155+21.30	MAIN LANES ON RT.	6.0	
155+87.40	MAIN LANES ON RT.	6.0	
165+96.50	MAIN LANES ON LT.	5.9	
166+63.28	MAIN LANES ON LT.	6.0	
171+72.12	MAIN LANES ON RT.	6.0	
172+42.66	MAIN LANES ON RT.	6.0	
179+34.41	MAIN LANES ON RT.	6.1	
179+87.20	MAIN LANES ON LT.	4.2	
180+42.17	MAIN LANES ON RT.	6.0	
180+42.59	MAIN LANES ON LT.	4.2	
185+13.03	MAIN LANES ON LT.	6.0	
185+13.03	MAIN LANES ON RT.	6.0	
189+11.22	MAIN LANES ON LT.	6.0	
189+94.89	MAIN LANES ON LT.	5.9	
193+80.32	MAIN LANES ON RT.	6.0	
194+64.31	MAIN LANES ON RT.	6.0	
198+77.30	MAIN LANES ON RT.	4.2	
199+49.06	MAIN LANES ON RT.	4.3	
207+02.91	MAIN LANES ON RT.		2.8
207+25.94	MAIN LANES ON RT.	2.8	
207+30.54	MAIN LANES ON RT.	2.7	
207+34.96	MAIN LANES ON LT.	3.3	
207+39.22	MAIN LANES ON RT.	2.9	
207+43.71	MAIN LANES ON LT.	3.4	
208+12.14	MAIN LANES ON RT.	3.2	
208+19.74	MAIN LANES ON RT.	2.7	
208+22.35	MAIN LANES ON LT.	3.5	
208+22.63	MAIN LANES ON RT.	2.7	
208+24.13	MAIN LANES ON LT.	3.2	
208+39.95	MAIN LANES ON RT.	2.7	
209+85.34	MAIN LANES ON RT.		8.7
210+56.86	MAIN LANES ON RT.	4.1	
211+93.35	MAIN LANES ON LT.	6.0	
212+66.59	MAIN LANES ON LT.	6.0	
55+39.14	SPRINGHILL ROAD LT.	5.9	
55+56.00	SPRINGHILL ROAD RT.	3.3	
69+93.14	SPRINGHILL ROAD LT.	4.4	
70+28.84	SPRINGHILL ROAD RT.	4.4	
TOTALS:		220.5	28.7

EARTHWORK

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION CU. YD.	COMPACTED EMBANKMENT CU. YD.	* SOIL STABILIZATION TON
ENTIRE	PROJECT	STAGE 1-MAIN LANES	12093	57040	
ENTIRE	PROJECT	STAGE 2-MAIN LANES	5391	11977	
ENTIRE	PROJECT	APPROACHES			
ENTIRE	PROJECT	TEMPORARY APPROACHES		200	
122+17.36		WATERFALL WAY		155	
127+69.18		HURRICANE LAKE TRAILER PARK RD.		5	
133+43.99		ANDERSON LAKE RD.		5	
138+00.00		SHADY PINE RD.		5	
155+54.62		BRANDON RD.	20		
166+29.91		HENSON PLACE		5	
172+07.70		PINE MEADOW DRIVE		10	
180+19.22		N. PRICKETT RD.		5	
180+19.85		FOREST RD.		10	
189+52.60		SUNSET MEADOW DRIVE		15	
194+21.97		N. COMMERCE ST.	30		
199+12.54		OFFICE PARK DRIVE	5		
207+91.48		COMMONWEALTH DRIVE	25		
207+91.48		HWY. 183		60	
210+18.57		HARVEST DRIVE		85	
212+30.05		DEARBORN CIRCLE		30	
		ADDITIONAL EXCAVATION FOR BRIDGE	790		
		CHANNEL CHANGE BOX CULVERT	676		
* ENTIRE	PROJECT	TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER			100
TOTALS:			19030	69607	100

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

RETAINING WALLS

STATION	STATION	LOCATION	CLASS S CONCRETE-ROADWAY CU.YDS.	REINF. STEEL-ROADWAY (GRADE 60) POUNDS	UNCL.EXC. FOR STR.-ROADWAY CU.YDS.
92+46.09	94+49.00	MAIN LANES LT.	98.79	8893	152
136+09.00	137+00.00	MAIN LANES RT.	28.61	2454	81
142+32.00	144+21.00	MAIN LANES LT.	69.30	5843	140
148+89.11	149+99.00	MAIN LANES RT.	26.07	2521	34
153+79.00	155+97.00	MAIN LANES LT.	50.79	5132	571
165+84.56	167+22.00	MAIN LANES RT.	31.41	3137	43
166+63.15	169+53.00	MAIN LANES LT.	74.43	6629	104
174+54.00	176+47.00	MAIN LANES LT.	49.47	4415	57
175+83.54	177+02.00	MAIN LANES RT.	21.86	2070	48
196+51.00	199+33.00	MAIN LANES LT.	86.17	7579	112
200+01.00	200+71.00	MAIN LANES LT.	34.51	3080	54
201+39.00	202+67.00	MAIN LANES LT.	62.05	5616	105
203+25.00	204+31.00	MAIN LANES LT.	43.50	3930	77
212+68.05	214+00.00	MAIN LANES LT.	56.61	4889	180
64+50.00	64+60.00	SPRINGHILL RD. LT.	2.41	238	43
65+00.00	65+19.00	SPRINGHILL RD. RT.	6.06	561	25
65+19.00	66+38.14	SPRINGHILL RD. LT.	41.07	3684	179
67+34.00	69+52.00	SPRINGHILL RD. LT.	83.33	6737	99
TOTALS:			866.44	77408	2104

2/13/2018

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	71	303

(2) QUANTITES

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

4" PIPE UNDERDRAIN

STATION	STATION	LOCATIONS	4" PIPE UNDERDRAINS	UNDERDRAIN OUTLET PROTECTORS
			LIN. FT.	EACH
* ENTIRE PROJECT TO BE USED IF AND			6000	24
WHERE DIRECTED BY THE ENGINEER				
TOTALS:			6000	24

* NOTE: QUANTITIES 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.

CONCRETE ISLAND

STATION	LOCATION	CURB FACE TYPE	CONCRETE ISLAND SQ.YD.
92+10	HWY. 5 LT.	C	122
121+97	HWY. 5 LT.	B	7
122+00	HWY. 5 LT.	B	6
147+59	HWY. 5 RT.	C	34
149+22	HWY. 5 LT.	C	31
184+57	HWY. 5 RT.	B	23
184+69	HWY. 5 ON C.L.	B	122
185+57	HWY. 5 ON C.L.	B	118
207+35	HWY. 5 RT.	C	71
207+70	HWY. 5 RT.	C	81
208+17	HWY. 5 RT.	C	85
TOTAL:			700

CONCRETE WALKS & HAND RAILING (BOX 1 OF 2)

STATION	STATION	LOCATION	LENGTH	CONCRETE WALKS	HAND RAILING
			LIN. FT.	SQ.YD.	LIN. FT.
92+06.00	94+55.00	RT. OF MAIN LANES	249	138	249
92+29.00	94+49.00	LT. OF MAIN LANES	220	122	208
95+15.00	96+65.00	LT. OF MAIN LANES	150	83	
97+09.00	100+14.00	LT. OF MAIN LANES	305	169	
100+58.00	102+20.00	LT. OF MAIN LANES	162	90	
102+72.00	109+80.00	LT. OF MAIN LANES	708	393	
104+13.00	105+72.00	RT. OF MAIN LANES	159	88	
106+16.00	107+35.00	RT. OF MAIN LANES	119	66	
107+83.00	115+53.79	RT. OF MAIN LANES	771	428	
110+24.00	115+16.56	LT. OF MAIN LANES	493	274	
115+16.56	117+10.21	LT. OF MAIN LANES	194	108	
115+53.79	117+47.44	RT. OF MAIN LANES	194	108	
117+10.21	121+47.62	LT. OF MAIN LANES	437	243	
117+47.44	124+08.00	RT. OF MAIN LANES	661	367	
122+80.54	127+26.76	LT. OF MAIN LANES	446	248	
124+52.00	132+76.00	RT. OF MAIN LANES	824	458	
128+00.67	133+08.05	LT. OF MAIN LANES	507	282	
133+20.00	135+57.00	RT. OF MAIN LANES	237	132	
133+79.94	134+71.00	LT. OF MAIN LANES	91	51	
135+39.00	135+56.00	LT. OF MAIN LANES	17	9	
136+10.00	137+65.69	LT. OF MAIN LANES	156	87	
136+09.00	137+00.00	RT. OF MAIN LANES	91	51	91
138+33.96	138+52.00	LT. OF MAIN LANES	18	10	
139+20.00	139+95.00	LT. OF MAIN LANES	75	42	
139+23.00	139+74.00	RT. OF MAIN LANES	51	28	
140+18.00	142+10.00	RT. OF MAIN LANES	192	107	
140+63.00	141+21.00	LT. OF MAIN LANES	58	32	
142+32.00	144+21.00	LT. OF MAIN LANES	189	105	189
142+54.00	142+82.00	RT. OF MAIN LANES	28	16	
143+40.00	143+78.00	RT. OF MAIN LANES	38	21	
144+65.00	145+96.00	LT. OF MAIN LANES	131	73	
145+02.00	147+16.88	RT. OF MAIN LANES	215	119	
146+64.00	147+81.77	LT. OF MAIN LANES	118	66	
147+85.67	148+38.17	LT. OF MAIN LANES	53	29	
148+42.33	148+78.43	RT. OF MAIN LANES	36	20	
148+82.03	149+99.00	RT. OF MAIN LANES	117	65	117
149+64.75	150+21.00	LT. OF MAIN LANES	56	31	
150+51.00	151+75.00	RT. OF MAIN LANES	124	69	
150+85.00	151+18.00	LT. OF MAIN LANES	33	18	
151+82.00	152+21.00	LT. OF MAIN LANES	39	22	
152+27.00	155+21.30	RT. OF MAIN LANES	294	163	
152+75.00	153+25.00	LT. OF MAIN LANES	50	28	
153+79.00	155+97.00	LT. OF MAIN LANES	218	121	
155+87.40	156+73.00	RT. OF MAIN LANES	86	48	
156+65.00	156+67.00	LT. OF MAIN LANES	2	1	
157+17.00	158+09.00	RT. OF MAIN LANES	92	51	
157+35.00	157+50.00	LT. OF MAIN LANES	15	8	
158+18.00	159+64.00	LT. OF MAIN LANES	146	81	
158+63.00	159+04.00	RT. OF MAIN LANES	41	23	
159+54.00	160+38.00	RT. OF MAIN LANES	84	47	
160+20.00	160+63.00	LT. OF MAIN LANES	43	24	
161+07.00	162+34.00	LT. OF MAIN LANES	127	71	
162+78.00	163+74.00	LT. OF MAIN LANES	96	53	
164+18.00	164+62.00	LT. OF MAIN LANES	44	24	
164+52.00	167+45.00	RT. OF MAIN LANES	293	163	137
165+06.00	165+96.50	LT. OF MAIN LANES	91	51	
166+63.28	169+53.00	LT. OF MAIN LANES	290	161	289
168+01.00	168+30.00	RT. OF MAIN LANES	29	16	
170+15.00	171+20.00	LT. OF MAIN LANES	105	58	
171+33.00	171+72.12	RT. OF MAIN LANES	39	22	
171+82.00	174+06.00	LT. OF MAIN LANES	224	124	
172+42.66	173+39.00	RT. OF MAIN LANES	96	53	
SUBTOTALS (BOX 1 OF 2):				6259	1280

CONCRETE WALKS & HAND RAILING (BOX 2 OF 2)

STATION	STATION	LOCATION	LENGTH	CONCRETE WALKS	HAND RAILING
			LIN. FT.	SQ.YD.	LIN. FT.
173+91.00	174+76.00	RT. OF MAIN LANES	85	47	
174+54.00	179+85.92	LT. OF MAIN LANES	532	296	193
175+44.00	177+02.00	RT. OF MAIN LANES	158	88	119
180+42.17	182+13.00	RT. OF MAIN LANES	171	95	
180+58.04	181+70.00	LT. OF MAIN LANES	112	62	
182+28.00	183+12.00	LT. OF MAIN LANES	84	47	
182+73.00	184+31.00	RT. OF MAIN LANES	158	88	
183+56.00	185+11.04	LT. OF MAIN LANES	155	86	
184+99.00	185+11.05	RT. OF MAIN LANES	12	7	
185+15.04	186+88.00	LT. OF MAIN LANES	173	96	
185+15.05	187+04.00	RT. OF MAIN LANES	189	105	
187+40.00	188+62.00	LT. OF MAIN LANES	122	68	
187+56.00	190+93.00	RT. OF MAIN LANES	337	187	
189+06.00	189+11.22	LT. OF MAIN LANES	5	3	
189+94.89	190+09.00	LT. OF MAIN LANES	14	8	
190+69.00	191+42.00	LT. OF MAIN LANES	73	41	
191+37.00	192+43.00	RT. OF MAIN LANES	106	59	
191+92.00	192+12.00	LT. OF MAIN LANES	20	11	
192+62.00	193+92.00	LT. OF MAIN LANES	130	72	
192+87.00	193+80.33	RT. OF MAIN LANES	93	52	
194+60.00	195+83.00	LT. OF MAIN LANES	123	68	
194+64.31	194+95.00	RT. OF MAIN LANES	31	17	
195+47.00	196+22.00	RT. OF MAIN LANES	75	42	
196+51.00	199+33.00	LT. OF MAIN LANES	282	157	282
196+68.00	198+77.30	RT. OF MAIN LANES	209	116	
199+49.06	201+53.00	RT. OF MAIN LANES	204	113	
200+01.00	200+71.00	LT. OF MAIN LANES	70	39	70
201+39.00	202+67.00	LT. OF MAIN LANES	128	71	128
202+21.00	205+31.00	RT. OF MAIN LANES	310	172	
203+25.00	204+31.00	LT. OF MAIN LANES	106	59	106
204+99.00	206+06.00	LT. OF MAIN LANES	107	59	
205+99.00	207+02.91	RT. OF MAIN LANES	104	58	
206+50.00	207+34.96	LT. OF MAIN LANES	85	47	
208+28.39	210+44.00	LT. OF MAIN LANES	216	120	
208+42.83	209+85.34	RT. OF MAIN LANES	143	79	
210+56.86	211+32.00	RT. OF MAIN LANES	75	42	
210+96.00	211+93.22	LT. OF MAIN LANES	97	54	
211+96.00	213+43.00	RT. OF MAIN LANES	147	82	
212+66.58	214+00.00	LT. OF MAIN LANES	133	74	136
55+39.14	57+88.00	LT. OF SPRINGHILL RD.	249	138	
55+56.00	57+86.00	RT. OF SPRINGHILL RD.	230	128	
58+38.00	59+63.00	RT. OF SPRINGHILL RD.	125	69	
58+42.00	61+02.00	LT. OF SPRINGHILL RD.	260	144	
60+15.00	60+73.00	RT. OF SPRINGHILL RD.	58	32	
61+41.00	62+60.81	RT. OF SPRINGHILL RD.	120	67	
61+62.00	62+02.76	LT. OF SPRINGHILL RD.	41	23	
63+95.32	64+60.00	LT. OF SPRINGHILL RD.	65	36	10
64+55.72	64+60.00	RT. OF SPRINGHILL RD.	4	2	
65+00.00	65+19.00	RT. OF SPRINGHILL RD.	19	11	
65+20.00	66+74.00	LT. OF SPRINGHILL RD.	154	86	118
67+34.00	69+52.00	LT. OF SPRINGHILL RD.	218	121	218
68+34.00	68+85.00	RT. OF SPRINGHILL RD.	51	28	
69+29.00	70+28.65	RT. OF SPRINGHILL RD.	100	56	
69+52.00	69+93.32	LT. OF SPRINGHILL RD.	41	23	
09+80.16	10+67.32	LT. OF HWY. 183	87	48	
10+18.25	11+03.00	RT. OF HWY. 183	85	47	
12+20.15	12+32.29	RT. OF HWY. 183	12	7	
SUBTOTALS (BOX 1 OF 2):				6259	1280
SUBTOTALS (BOX 2 OF 2):				4053	1380
TOTALS:				10312	2660

2/13/2018

R061335.DGN

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	72	303

(2) QUANTITIES

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

DUMPED RIPRAP AND FILTER BLANKET

STATION	LOCATION	DUMPED RIPRAP	FILTER BLANKET
		CU. YD.	SQ. YD.
ENTIRE PROJECT TO BE USED IF AND		60	120
WHERE DIRECTED BY THE ENGINEER			
TOTALS:		60	120

*NOTE: QUANTITIES ESTIMATED.
SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS

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

CONCRETE COMBINATION CURB AND GUTTER

STATION	STATION	LOCATION	TYPE A (1' 6")
			LIN. FT.
91+85	115+52	HWY. 5 RT.	2150
92+18	115+21	HWY. 5 LT.	2088
117+12	121+87	HWY. 5 LT.	1706
117+43	124+66	HWY. 5 RT.	678
124+66	147+31	HWY. 5 RT.	1922
127+82	129+00	HWY. 5 LT.	129
129+00	133+40	HWY. 5 LT.	465
133+60	148+41	HWY. 5 LT.	980
148+41	155+45	HWY. 5 RT.	629
149+50	166+00	HWY. 5 LT.	1039
155+65	166+00	HWY. 5 RT.	725
166+00	166+23	HWY. 5 LT.	68
166+00	171+94	HWY. 5 RT.	455
166+41	180+03	HWY. 5 LT.	1224
172+20	179+58	HWY. 5 RT.	661
179+76	194+02	HWY. 5 RT.	1159
180+37	189+34	HWY. 5 LT.	673
189+72	207+54	HWY. 5 LT.	1192
194+42	198+97	HWY. 5 RT.	388
199+30	207+27	HWY. 5 RT.	770
207+85	210+08	HWY. 5 RT.	299
208+10	212+16	HWY. 5 LT.	374
210+39	214+00	HWY. 5 RT.	249
212+44	216+08	HWY. 5 LT.	392
55+15	61+61	SPRINGHILL ROAD LT.	536
55+50	62+72	SPRINGHILL ROAD RT.	565
63+86	69+88	SPRINGHILL ROAD LT.	467
65+01	70+22	SPRINGHILL ROAD RT.	291
TOTAL:			22274

PAVEMENT REPAIR OVER CULVERTS (CONCRETE)

STATION	LOCATION	WIDTH	LENGTH	CU.YD.
		FEET		
95+69	HWY. 5	8.50	15	3.5
102+00	HWY. 5	7.92	18	4.0
124+64	HWY. 5	9.08	22	5.5
127+69	TRAILER PARK ENTRANCE LT.	7.92	35.6	7.8
133+44	ANDERSON LAKE ROAD LT.	7.92	61.2	13.5
137+00	HWY. 5	7.92	13	2.9
143+76	HWY. 5	10.25	22	6.3
148+89	SPRINGHILL ROAD LT.	7.92	52.9	11.6
149+10	HWY. 5	7.92	44.2	9.7
166+30	HENSON PLACE LT.	7.92	32	7.0
172+08	PINE MEADOW DRIVE RT.	9.08	30	7.6
180+19	NORTH PRICKETT ROAD RT.	10.25	90.7	25.8
180+20	NORTH PRICKETT ROAD LT.	8.50	33.1	7.8
189+53	SUNSET MEADOWS DRIVE LT.	7.92	37.7	8.3
194+22	WEST COMMERCE STREET RT.	7.92	48.8	10.7
199+13	OFFICE PARK DRIVE RT.	7.92	33.5	7.4
202+25	HWY. 5	9.08	22	5.5
210+24	HARVEST DRIVE RT.	7.92	39.9	8.8
212+30	DEARBORN CIRCLE LT.	7.92	34.6	7.6
212+92	HWY. 5	7.92	31.3	6.9
61+70	SPRINGHILL ROAD	7.92	35	7.7
64+09	SPRINGHILL ROAD	7.92	42.9	9.4
TOTAL:				185.3

AVG. DEPTH = 9"

EROSION CONTROL MATTING

STATION	STATION	LOCATION	LENGTH	CLASS 3
			LIN. FT.	SQ. YD.
ENTIRE PROJECT TO BE USED IF AND			1000.00	888.89
WHERE DIRECTED BY THE ENGINEER				
TOTAL:				888.89

NOTE: AVERAGE WIDTH = 8'-0"

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

EROSION CONTROL

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL						TEMPORARY EROSION CONTROL										
			SEEDING	LIME	MULCH COVER	WATER	SECOND SEEDING APPLICATION	SOLID SODDING	TEMPORARY SEEDING	MULCH COVER	WATER	SAND BAG DITCH CHECKS (E-5)	ROCK DITCH CHECKS (E-6)	DROP INLET SILT FENCE (E-7)	FILTER SOCK (18") (E-13)	SILT FENCE (E-11)	SEDIMENT BASIN (E-14)	OBLITERATION OF SEDIMENT BASIN	*SEDIMENT REMOVAL & DISPOSAL
			ACRE	TON	ACRE	M.GAL.	ACRE	SQ.YD.	ACRE	ACRE	M.GAL.	BAG	CU.YD.	LIN. FT.	LIN. FT.	LIN. FT.	CU.YD.	CU.YD.	CU. YD.
ENTIRE	PROJECT	CLEARING AND GRUBBING							32.83	32.83	669.7	110	18			12475			473
ENTIRE	PROJECT	STAGE 1	3.68	7.36	3.68	422.2	3.68	3720	22.18	22.18	452.5	154	21	902	350	490	172	172	238
ENTIRE	PROJECT	STAGE 2	1.39	2.78	1.39	184.9	1.39	3424	9.90	9.90	202.0	506	69	814	1015	2615	303	303	476
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.			1.00	2.00	1.00	124.5	1.00	1786	16.00	16.00	326.4	193	27	429	341	3895	119	119	289
TOTALS:			6.07	12.14	6.07	731.6	6.07	8930	80.91	80.91	1650.6	963	135	2145	1706	19475	594	594	1476

BASIS OF ESTIMATE:
LIME .....2 TONS / ACRE OF SEEDING
WATER.....102.0 M.G. / ACRE OF SEEDING
WATER.....20.4 M.G. / ACRE OF TEMPORARY SEEDING
WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING
SAND BAG DITCH CHECKS.....22 BAGS / LOCATION
ROCK DITCH CHECKS.....3 CU.YD./LOCATION
FILTER SOCKS.....35 LIN. FT./LOCATION

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

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

2/13/2018

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	73	303

(2) QUANTITIES

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-18

STRUCTURES (BOX 1 OF 2)

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE CULVERT (CLASS III) 18"	24"	30"	36"	42"	(CLASS IV) 18"	30"	42"	SIDE DRAIN 12"	PIPE CULVERT STORM DRAIN ALTERNATES 1 & 2 18"	24"	30"	36"	42"	FLARED END SECTIONS FOR R.C. PIPE CULVERTS 18"	24"	30"	36"	42"	DROP INLETS TYPE C	C SPECIAL	MO	EXT. 4'	8'	JUNCT. BOXES (TYPE E)	YARD DRAINS	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.														EACH					EACH							LIN. FT.			CU.YD.	POUND	CU.YD.	SQ.YD.	M.GAL.	
HWY. 5																																				
92+07	CONSTRUCT DROP INLET ON LT. W/PIPE INLET WITH FES & W/PIPE OUTLET			118									48					1					1											13	0.16	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1, PCM-1
92+11	CONSTRUCT DROP INLET ON RT. W/EXT. & W/PIPE OUTLET										28												1		1											FPC-9E, FPC-9M, PCC-1, PCM-1
92+41	CONSTRUCT DROP INLET ON RT. W/PIPE OUTLET										88												1													FPC-9E, FPC-9M, PCC-1, PCM-1
92+48	CONSTRUCT DROP INLET ON LT. W/PIPE OUTLET												320										1													FPC-9E, FPC-9M, PCC-1, PCM-1
93+34	CONSTRUCT DROP INLET ON RT. W/EXT. & W/PIPE OUTLET										230												1		1											FPC-9E, FPC-9M, PCC-1, PCM-1
95+67	CONSTRUCT DROP INLET ON LT. W/R.C. PIPE OUTLET W/FES				18															1				1										17	0.21	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
95+89	CONSTRUCT DROP INLET ON RT. W/R.C. PIPE INLET W/FES & R.C. PIPE OUTLET	6	68													1							1											5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
97+50	CONSTRUCT DROP INLET ON RT. W/PIPE OUTLET										146												1													FPC-9E, FPC-9M, PCC-1, PCM-1
99+00	CONSTRUCT DROP INLET ON RT. W/PIPE OUTLET										296												1													FPC-9E, FPC-9M, PCC-1, PCM-1
99+10	CONSTRUCT DROP INLET ON LT. W/EXT. & W/PIPE OUTLET										340												1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
102+00	CONSTRUCT DROP INLET ON RT. W/EXT. & W/PIPE OUTLET	6									222												1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
102+10	CONSTRUCT DROP INLET ON LT. W/EXT. & W/R.C. PIPE OUTLET						70																1	1												FPC-9E, FPC-9M, PCC-1
104+25	CONSTRUCT DROP INLET ON RT. W/EXT. & W/PIPE OUTLET										194												1		1											FPC-9E, FPC-9M, PCC-1, PCM-1
106+25	CONSTRUCT DROP INLET ON RT. W/EXT. & W/PIPE OUTLET										310												1		1											FPC-9E, FPC-9M, PCC-1, PCM-1
108+50	CONSTRUCT DROP INLET ON LT. W/PIPE OUTLET										102												1													FPC-9E, FPC-9M, PCC-1, PCM-1
109+39	CONSTRUCT DROP INLET ON RT. W/EXT. & W/PIPE OUTLET											56											1		1											FPC-9E, FPC-9M, PCC-1, PCM-1
109+55	CONSTRUCT DROP INLET ON LT. W/PIPE OUTLET										74												1													FPC-9E, FPC-9M, PCC-1, PCM-1
110+00	CONSTRUCT DROP INLET ON RT. W/PIPE OUTLET											62											1													FPC-9E, FPC-9M, PCC-1, PCM-1
110+32	CONSTRUCT DROP INLET ON LT. W/PIPE OUTLET										30												1													FPC-9E, FPC-9M, PCC-1, PCM-1
110+65	CONSTRUCT DROP INLET ON LT. W/PIPE OUTLET										82												1													FPC-9E, FPC-9M, PCC-1, PCM-1
110+66	CONSTRUCT DROP INLET ON RT. W/EXT. & W/PIPE OUTLET													280									1													FPC-9E, FPC-9M, PCC-1, PCM-1
111+50	CONSTRUCT DROP INLET ON LT. W/EXT. & W/PIPE OUTLET										336												1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
113+50	CONSTRUCT DROP INLET ON RT. W/PIPE OUTLET													180									1													FPC-9E, FPC-9M, PCC-1
114+90	CONSTRUCT DROP INLET ON LT. W/PIPE OUTLET	38														1							1											5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
115+35	CONSTRUCT DROP INLET ON RT. W/R.C. PIPE OUTLET W/FES				72															1				1										17	0.21	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
117+30	CONSTRUCT DROP INLET ON LT. W/R.C. PIPE OUTLET W/FES	44														1							1											5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
118+00	CONSTRUCT DROP INLET ON RT. W/R.C. PIPE OUTLET W/FES					78															1		1	1										23	0.29	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
120+98	CONSTRUCT DROP INLET ON LT. W/EXT. & W/R.C. PIPE OUTLET W/ FES	28														1							1	1										5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
121+00	CONSTRUCT DROP INLET ON RT. W/EXT. & W/PIPE OUTLET														296								1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
122+17	CONSTRUCT R.C. BOX CULVERT ON LT. W/STRAIGHT WINGS LT. & RT.																												8	5	108	99.75	8839	74	8	0.10	SPECIAL DETAILS, RCB-1, RCB-2
123+15	CONSTRUCT DROP INLET ON LT. W/EXT. & W/R.C. PIPE OUTLET W/ FES	12														1							1	1										5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
123+72	CONSTRUCT DROP INLET ON LT. W/PIPE OUTLET										88												1													FPC-9E, FPC-9M, PCC-1, PCM-1
124+64	CONSTRUCT DROP INLET ON LT. R.C. PIPE INLET W/FES & W/R.C. PIPE OUTLET	8						68								1							1											5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
124+64	CONSTRUCT DROP INLET ON RT. W/PIPE OUTLET														360								1													FPC-9E, FPC-9M, PCC-1, PCM-1
125+00	CONSTRUCT DROP INLET ON LT. W/EXT. & W/R.C. PIPE OUTLET										32												1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
127+10	CONSTRUCT DROP INLET ON LT. W/EXT. & W/PIPE OUTLET										210												1		1											FPC-9E, FPC-9M, PCC-1, PCM-1
128+24	CONSTRUCT DROP INLET ON LT. W/EXT. & W/PIPE OUTLET										110												1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
131+50	CONSTRUCT DROP INLET ON LT. W/EXT. & W/PIPE OUTLET										320												1		1											FPC-9E, FPC-9M, PCC-1, PCM-1
134+00	CONSTRUCT DROP INLET ON LT. W/EXT. & W/PIPE OUTLET										244												1		1											FPC-9E, FPC-9M, PCC-1, PCM-1
137+00	CONSTRUCT DROP INLET ON LT. W/EXT. & W/PIPE OUTLET										294												1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
137+00	CONSTRUCT DROP INLET ON RT. W/EXT. & W/R.C. PIPE OUTLET	68																					1	1												FPC-9E, FPC-9M, PCC-1
138+08	CONSTRUCT DROP INLET ON RT. W/R.C. PIPE OUTLET										110												1													FPC-9E, FPC-9M, PCC-1, PCM-1
138+43	CONSTRUCT DROP INLET ON LT. W/R.C. PIPE INLET W/FES & R.C. PIPE OUTLET	2									140					1							1													FPC-9E, FPC-9M, PCC-1, PCM-1
139+50	CONSTRUCT DROP INLET ON LT. W/EXT. & W/PIPE OUTLET										104												1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
141+00	CONSTRUCT DROP INLET ON LT. W/EXT. & W/PIPE OUTLET										146												1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
141+00	CONSTRUCT DROP INLET ON RT. W/EXT. & W/PIPE OUTLET										290												1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
143+74	CONSTRUCT DROP INLET ON RT. W/EXT. & W/R.C. PIPE OUTLET					68															1		1	1										23	0.29	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
143+76	CONSTRUCT DROP INLET ON LT. W/EXT. & W/R.C. PIPE OUTLET		6						78								1						1	1										8	0.10	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
145+07	CONSTRUCT DROP INLET ON LT. W/OPENING IN BACK W/EXT. & W/PIPE OUTLET										126												1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
145+13	CONSTRUCT DROP INLET ON RT. W/PIPE OUTLET										138												1													FPC-9E, FPC-9M, PCC-1, PCM-1
146+71	CONSTRUCT DROP INLET ON LT. W/EXT. & W/PIPE OUTLET										160												1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
146+72	CONSTRUCT DROP INLET ON RT. W/EXT. & W/PIPE OUTLET										154												1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
149+00	CONSTRUCT DROP INLET ON RT. W/EXT. & W/PIPE OUTLET										48												1		1											FPC-9E, FPC-9M, PCC-1, PCM-1
149+82	CONSTRUCT DROP INLET ON LT. W/PIPE OUTLET	308																					1													FPC-9E, FPC-9M, PCC-1, PCM-1
150+60	CONSTRUCT DROP INLET ON RT. W/EXT. & W/PIPE OUTLET										158												1		1											FPC-9E, FPC-9M, PCC-1, PCM-1
151+82	CONSTRUCT DROP INLET ON LT. W/OPENING IN BACK W/PIPE OUTLET										196												1													FPC-9E, FPC-9M, PCC-1, PCM-1
152+36	CONSTRUCT DROP INLET ON RT. W/EXT. & W/PIPE OUTLET										172												1		1											FPC-9E, FPC-9M, PCC-1, PCM-1
154+82	CONSTRUCT DROP INLET ON LT. W/EXT. & W/PIPE OUTLET										296												1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
156+00	CONSTRUCT DROP INLET ON RT. W/PIPE OUTLET										292												1													FPC-9E, FPC-9M, PCC-1, PCM-1
157+43	CONSTRUCT DROP INLET ON LT. W/EXT. & W/PIPE OUTLET										258												1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
158+95	CONSTRUCT DROP INLET ON RT. W/PIPE OUTLET										302												1													FPC-9E, FPC-9M, PCC-1, PCM-1
160+50	CONSTRUCT DROP INLET ON LT. W/EXT. W/OPENING IN BACK W/PIPE OUTLET										298												1		1											FPC-9E, FPC-9M, PCC-1, PCM-1
161+98	CONSTRUCT DROP INLET ON RT. W/EXT. & W/PIPE OUTLET										116												1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
163+17	CONSTRUCT DROP INLET ON RT. W/EXT. & W/PIPE OUTLET										200												1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
163+53	CONSTRUCT DROP INLET ON LT. W/EXT. W/OPENING IN BACK W/PIPE OUTLET										230												1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
165+19	CONSTRUCT DROP INLET ON RT. W/EXT. & W/PIPE OUTLET										206												1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
165+87	CONSTRUCT DROP INLET ON LT. W/EXT. & W/PIPE OUTLET										358												1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
167+29	CONSTRUCT DROP INLET ON RT. W/EXT. & W/PIPE OUTLET	4									82					1							1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
168+14	CONSTRUCT DROP INLET ON RT. W/EXT. W/OPENING IN BACK W/PIPE OUTLET											184											1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
169+48	CONSTRUCT DROP INLET ON LT. W/EXT. W/R.C. PIPE INLET & PIPE OUTLET	6										256											1		1											FPC-9E, FPC-9M, PCC-1, PCM-1
SUBTOTALS (BOX 1 OF 2):		530	74	118	90	146	70	68	78	0	8356	558	368	460	656	8	1	1	2	2	0	0	69	30	12	0	0				99.75	8839	74	139	1.72	

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.

2/13/2018

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	74	303

(2) QUANTITIES

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-18

STRUCTURES (BOX 2 OF 2)

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE CULVERT (CLASS III) 18"	24"	30"	36"	42"	(CLASS IV) 18"	30"	42"	SIDE DRAIN 12"	PIPE CULVERT STORM DRAIN ALTERNATES 1 & 2 18"	24"	30"	36"	42"	FLARED END SECTIONS FOR R.C. PIPE CULVERTS 18"	24"	30"	36"	42"	DROP INLETS TYPE C	C SPECIAL	MO	EXT. 4'	8'	JUNCT. BOXES (TYPE E)	YARD DRAINS	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.														EACH					EACH							LIN. FT.			CU.YD.	POUND	CU.YD.	SQ.YD.	M.GAL.	
170+00	CONSTRUCT DROP INLET ON RT. W/EXT. & W/PIPE OUTLET											158											1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
171+61	CONSTRUCT DROP INLET ON RT. W/EXT. & W/PIPE OUTLET												382										1		1											FPC-9E, FPC-9M, PCC-1, PCM-1
172+08	CONSTRUCT DROP INLET ON LT. W/EXT. & W/PIPE OUTLET											168											1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
173+80	CONSTRUCT DROP INLET ON LT. W/EXT. & W/PIPE OUTLET												212										1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
175+48	CONSTRUCT DROP INLET ON RT. W/EXT. & W/R.C. PIPE OUTLET			20																			1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
175+97	CONSTRUCT DROP INLET W/EXT. ON TOP OF R.C.BOX CULVERT ON LT.																						1	1												FPC-9, FPC-9E, FPC-9M
177+73	CONSTRUCT DROP INLET ON LT. W/PIPE OUTLET											144											1													FPC-9E, FPC-9M, PCC-1, PCM-1
177+73	CONSTRUCT DROP INLET ON RT. W/PIPE OUTLET					166																	1													FPC-9E, FPC-9M, PCC-1, PCM-1
178+55	CONSTRUCT DROP INLET ON LT. W/PIPE OUTLET											78											1													FPC-9E, FPC-9M, PCC-1, PCM-1
178+55	CONSTRUCT DROP INLET ON RT. W/PIPE OUTLET														78								1													FPC-9E, FPC-9M, PCC-1, PCM-1
180+47	CONSTRUCT DROP INLET ON RT. W/OPENING IN BACK W/PIPE OUTLET														188								1													FPC-9E, FPC-9M, PCC-1, PCM-1
180+69	CONSTRUCT DROP INLET ON LT. W/EXT. W/OPENING IN BACK W/PIPE OUTLET											210										1			1											PCC-1, PCM-1, SPECIAL DETAILS
182+78	CONSTRUCT DROP INLET ON RT. W/R.C. PIPE INLET W/FES & PIPE OUTLET	10												226		1							1											5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1, PCM-1
183+36	CONSTRUCT DROP INLET ON LT. W/EXT. & W/PIPE OUTLET										262											1		1												PCC-1, PCM-1, SPECIAL DETAILS
184+07	CONSTRUCT DROP INLET ON RT. W/R.C. PIPE INLET W/FES & PIPE OUTLET	4												126		1							1											5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1, PCM-1
185+28	CONSTRUCT DROP INLET ON RT. W/OPENING IN BACK W/PIPE OUTLET													118									1													FPC-9E, FPC-9M, PCC-1, PCM-1
186+50	CONSTRUCT DROP INLET ON LT. W/EXT. & W/PIPE OUTLET										306											1		1												PCC-1, PCM-1, SPECIAL DETAILS
186+88	CONSTRUCT DROP INLET ON RT. W/EXT. W/OPENING IN BACK W/PIPE OUTLET												158										1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
188+00	CONSTRUCT DROP INLET ON LT. W/PIPE OUTLET										146											1														PCC-1, PCM-1, SPECIAL DETAILS
189+98	CONSTRUCT DROP INLET ON RT. W/EXT. W/OPENING IN BACK W/PIPE OUTLET											306											1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
190+90	CONSTRUCT DROP INLET ON LT. W/PIPE OUTLET										290											1														PCC-1, PCM-1, SPECIAL DETAILS
192+35	CONSTRUCT DROP INLET ON RT. W/EXT. W/OPENING IN BACK W/PIPE OUTLET										234												1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
193+73	CONSTRUCT DROP INLET ON RT. W/EXT. W/OPENING IN BACK W/PIPE OUTLET										134												1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
193+85	CONSTRUCT DROP INLET ON LT. W/PIPE OUTLET										292											1														PCC-1, PCM-1, SPECIAL DETAILS
194+69	CONSTRUCT DROP INLET ON RT. W/EXT. W/OPENING IN BACK W/PIPE OUTLET										92												1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
196+80	CONSTRUCT DROP INLET ON RT. W/PIPE OUTLET										204												1													FPC-9E, FPC-9M, PCC-1, PCM-1
198+69	CONSTRUCT DROP INLET ON RT. W/EXT. W/OPENING IN BACK W/PIPE OUTLET										84												1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
199+57	CONSTRUCT DROP INLET ON RT. W/EXT. W/OPENING IN BACK W/PIPE OUTLET											162											1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
201+23	CONSTRUCT DROP INLET ON RT. W/EXT. W/R.C. PIPE INLET W/FES & PIPE OUTLE	6										98				1							1	1												FES-1, FES-2, FPC-9E, FPC-9M, PCC-1, PCM-1
202+17	CONSTRUCT DROP INLET ON LT. W/EXT. W/R.C. PIPE OUTLET			24																		1		1										35	0.44	FES-1, FES-2, PCC-1, PCM-1, SPECIAL DETAILS
202+17	CONSTRUCT JUNCTION BOX ON LT. W/R.C. PIPE OUTLET W/FES			182														1								1								35	0.44	FES-1, FES-2, PCC-1, PCM-1, SPECIAL DETAILS
202+25	CONSTRUCT DROP INLET ON RT. W/R.C. PIPE OUTLET			74																			1													FPC-9E, FPC-9M, PCC-1
203+37	CONSTRUCT DROP INLET ON RT. W/EXT. W/OPENING IN BACK W/PIPE OUTLET											106											1	1												FPC-9E, FPC-9M, PCC-1, PCM-1
204+00	CONSTRUCT DROP INLET ON LT. W/EXT. & W/PIPE OUTLET										179											1		1												PCC-1, PCM-1, SPECIAL DETAILS
204+69	CONSTRUCT DROP INLET ON RT. W/EXT. W/ OPENING IN BACK & W/PIPE OUTLET											126											1													FPC-9E, FPC-9M, PCC-1, PCM-1
205+17	CONSTRUCT DROP INLET ON LT. W/EXT. & W/PIPE OUTLET										114											1		1												PCC-1, PCM-1, SPECIAL DETAILS
205+20	CONSTRUCT DROP INLET ON RT. W/EXT. W/OPENING IN BACK W/PIPE OUTLET										50											1	1													FPC-9E, FPC-9M, PCC-1, PCM-1
207+21	CONSTRUCT DROP INLET ON LT. W/EXT. & W/PIPE OUTLET										196											1			1											PCC-1, PCM-1, SPECIAL DETAILS
208+50	CONSTRUCT DROP INLET ON LT. W/EXT. & W/PIPE OUTLET										318											1	1													FPC-9E, FPC-9M, PCC-1, PCM-1
209+81	CONSTRUCT DROP INLET ON RT. W/PIPE OUTLET										314											1														FPC-9E, FPC-9M, PCC-1, PCM-1
211+82	CONSTRUCT DROP INLET ON LT. W/PIPE OUTLET & W/R.C. PIPE INLET W/FES	6									110					1							1													FPC-9E, FPC-9M, PCC-1, PCM-1
212+92	CONSTRUCT DROP INLET ON LT. W/R.C. PIPE OUTLET	74																					1													FPC-9E, FPC-9M, PCC-1
212+94	CONSTRUCT DROP INLET ON RT.																						1													FPC-9E, FPC-9M
55+50	CONSTRUCT DROP INLET ON LT. W/R.C. PIPE OUTLET W/FES		10														1						1	1										8	0.10	FES-1, FES-2,FPC-9E, FPC-9M, PCC-1
55+55	CONSTRUCT DROP INLET ON RT. W/R.C. PIPE OUTLET W/FES	4														1							1											5	0.06	FES-1, FES-2, FPC-9M, PCC-1
58+50	CONSTRUCT DROP INLET ON LT. W/EXT. & W/PIPE OUTLET											292											1	1													FPC-9E, FPC-9M, PCC-1, PCM-1
60+00	CONSTRUCT DROP INLET ON LT. W/EXT. & W/PIPE OUTLET											142											1	1													FPC-9E, FPC-9M, PCC-1, PCM-1
61+70	CONSTRUCT DROP INLET ON LT. W/EXT. & W/PIPE OUTLET										164											1	1													FPC-9E, FPC-9M, PCC-1, PCM-1
61+70	CONSTRUCT DROP INLET ON RT. W/R.C. PIPE OUTLET	72																					1													FPC-9E, FPC-9M, PCC-1
62+82	CONSTRUCT DROP INLET ON RT. W/EXT. W/OPENING IN BACK W/PIPE OUTLET										108										1			1												FPC-9E, PCC-1, PCM-1
64+09	CONSTRUCT DROP INLET ON LT. W/EXT. & W/R.C. PIPE OUTLET	124																					1		1											FPC-9E, FPC-9M, PCC-1, PCM-1
64+56	CONSTRUCT DROP INLET ON RT. W/R.C. PIPE OUTLET	176																								1										FPC-9, PCC-1
65+00	CONSTRUCT DROP INLET ON RT. W/EXT. & W/PIPE OUTLET										58												1		1											FPC-9E, FPC-9M, PCC-1, PCM-1
66+41	CONSTRUCT DROP INLET ON LT. W/EXT.																						1	1													FPC-9E, FPC-9M
67+42	CONSTRUCT DROP INLET ON LT. W/EXT. & W/PIPE OUTLET										98												1	1													FPC-9E, FPC-9M, PCC-1, PCM-1
67+42	CONSTRUCT DROP INLET ON RT. W/EXT. & W/PIPE OUTLET										238												1	1													FPC-9E, FPC-9M, PCC-1, PCM-1
69+80	CONSTRUCT DROP INLET ON LT. W/PIPE OUTLET										234												1														FPC-9E, FPC-9M, PCC-1, PCM-1
70+16	CONSTRUCT DROP INLET ON LT. W/PIPE OUTLET										270												1														FPC-9M, PCC-1, PCM-1
*	ENTIRE PROJECT TO BE USED AS DIRECTED BY THE ENGINEER									1200																12										FPC-9, PCC-, PCM-1
	SUBTOTALS (BOX 1 OF 2):	**530**	**74**	**118**	**90**	**146**	**70**	**68**	**78**	**0**	**8356**	**558**	**368**	**460**	**656**	**8**	**1**	**1**	**2**	**2**	**0**	**0**	**69**	**30**	**12**	**0**	**0**						**99.75**	**8839**	**74**	**139**	**1.72**	
	SUBTOTALS (BOX 2 OF 2):	**476**	**10**	**300**	**0**	**166**	**166**			**1200**	**4495**	**1990**	**750**	**470**	**266**	**5**	**1**	**1**	**0**	**0**	**1**	**10**	**45**	**29**	**5**	**2**	**12**						**0**	**0**	**0**	**93**	**1.16**	
	TOTALS:	**1006**	**84**	**418**	**90**	**312**	**236**	**68**	**78**	**1200**	**12851**	**2548**	**1118**	**930**	**922**	**13**	**2**	**2**	**2**	**2**	**1**	**10**	**114**	**59**	**17**	**2**	**12**						**99.75**	**8839**	**74**	**232**	**2.88**	

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.

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

2/13/2018

R061335.DGN

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	75	303

(2) QUANTITIES

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

DRIVEWAYS & TURNOUTS (BOX 1 OF 2)

STATION	SIDE	LOCATION	WIDTH	**MODIFIED CURB		PORTLAND CEMENT CONCRETE DRIVEWAY	ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG 64-22)		AGGREGATE BASE COURSE (CLASS 7)	SIDE DRAINS				STANDARD DRAWINGS
										18"	48"	21"X15"	28"X20"	
			FEET	STATION	STATION	SQ. YD.	SQ. YD.	TON	TON	LIN. FT.				
94+82	LT.	MAIN LANES	38	94+49	95+15	58.67	372.74	41.00	152.20					DR-1
94+89	RT.	MAIN LANES	40	94+55	95+23	60.44	35.56	3.91	14.52					DR-1
96+87	LT.	MAIN LANES	16	96+65	97+09	39.11	64.34	7.08	26.27					DR-1
100+36	LT.	MAIN LANES	16	100+14	100+58	39.11	50.70	5.58	20.70					DR-1
102+46	LT.	MAIN LANES	24	102+20	102+72	48.89	523.34	57.57	213.70					DR-1
103+79	RT.	MAIN LANES	40	103+45	104+13	60.44	35.56	3.91	14.52					DR-1
105+94	RT.	MAIN LANES	16	105+72	106+16	39.11	17.78	1.96	7.26			28		DR-1, PCC-1, PCM-1, PCP-1, PCP-2
107+59	RT.	MAIN LANES	20	107+35	107+83	42.67	22.22	2.44	9.07				28	DR-1, PCC-1, PCM-1, PCP-1, PCP-2
110+02	LT.	MAIN LANES	16	109+80	110+24	39.11	82.49	9.07	33.68					DR-1
124+30	RT.	MAIN LANES	16	124+08	124+52	39.11	48.32	5.32	19.73	36				DR-1, PCC-1, PCM-1, PCP-1, PCP-2
127+69	LT.	MAIN LANES - HURRICANE LAKE TRAILER PARK	32				99.15	10.91	40.49					
132+98	RT.	MAIN LANES	16	132+76	133+20	39.11	130.44	14.35	53.26					DR-1
133+44	LT.	MAIN LANES - ANDERSON LAKE ROAD	22				2.44	0.27	1.00					
135+05	LT.	MAIN LANES	40	134+71	135+39	60.44	148.04	16.28	60.45	50				DR-1, PCC-1, PCM-1, PCP-1, PCP-2
135+83	LT.	MAIN LANES	26	135+56	136+10	48.00	2.89	0.32	1.18			32		DR-1, PCC-1, PCM-1, PCP-1, PCP-2
135+83	RT.	MAIN LANES	24	135+57	136+09	46.22	33.57	3.69	13.71					DR-1
138+00	LT.	MAIN LANES - SHADY PINE RD.	28				143.62	15.80	58.64					
138+86	LT.	MAIN LANES	40	138+52	139+20	60.44	87.64	9.64	35.79					DR-1
138+97	RT.	MAIN LANES	24	138+71	139+23	46.22	35.60	3.92	14.54					DR-1
139+96	RT.	MAIN LANES	16	139+74	140+18	39.11	20.52	2.26	8.38					DR-1
140+29	LT.	MAIN LANES	40	139+95	140+63	60.44	90.18	9.92	36.82					DR-1
141+43	LT.	MAIN LANES	16	141+21	141+65	39.11	31.86	3.50	13.01					DR-1
141+99	LT.	MAIN LANES	38	141+66	142+32	58.67								DR-1
142+32	RT.	MAIN LANES	16	142+10	142+54	39.11	37.08	4.08	15.14					DR-1
143+11	RT.	MAIN LANES	30	142+82	143+40	51.56	125.63	13.82	51.30					DR-1
144+12	RT.	MAIN LANES	40	143+78	144+46	60.44	229.78	25.28	93.83					DR-1
144+43	LT.	MAIN LANES	16	144+21	144+65	39.11	47.20	5.19	19.27					DR-1
144+74	RT.	MAIN LANES	28	144+46	145+02	49.78	75.38	8.29	30.78					DR-1
146+30	LT.	MAIN LANES	40	145+96	146+64	60.44	149.02	16.39	60.85					DR-1
150+25	RT.	MAIN LANES	24	149+99	150+51	46.22	49.36	5.43	20.16					DR-1
150+53	LT.	MAIN LANES	36	150+21	150+85	56.89	49.84	5.48	20.35					DR-1
151+50	LT.	MAIN LANES	36	151+18	151+82	56.89	50.44	5.55	20.60					DR-1
152+01	RT.	MAIN LANES	24	151+75	152+27	46.22	51.95	5.71	21.21					DR-1
152+48	LT.	MAIN LANES	26	152+21	152+75	48.00	35.94	3.95	14.68					DR-1
153+52	LT.	MAIN LANES	26	153+25	153+79	48.00	152.76	16.80	62.38					DR-1
155+55	RT.	MAIN LANES - BRANDON ROAD	20				87.64	9.64	35.79					
156+31	LT.	MAIN LANES	40	155+97	156+65	60.44	64.04	7.04	26.15					DR-1
156+95	RT.	MAIN LANES	16	156+73	157+17	39.11	68.82	7.57	28.10					DR-1
157+01	LT.	MAIN LANES	40	156+67	157+35	60.44	95.60	10.52	39.04					DR-1
157+84	LT.	MAIN LANES	40	157+50	158+18	60.44								DR-1
158+36	RT.	MAIN LANES	26	158+09	158+63	48.00	52.98	5.83	21.63					DR-1
159+29	RT.	MAIN LANES	22	159+04	159+54	44.44	44.49	4.89	18.17					DR-1
159+92	LT.	MAIN LANES	28	159+64	160+20	49.78	28.81	3.17	11.76					DR-1
160+85	LT.	MAIN LANES	16	160+63	161+07	39.11	17.99	1.98	7.35					DR-1
160+99	RT.	MAIN LANES	34	160+68	161+30	55.11	82.81	9.11	33.81					DR-1
162+56	LT.	MAIN LANES	16	162+34	162+78	39.11	15.24	1.68	6.22					DR-1
163+53	RT.	MAIN LANES	32	163+23	163+83	53.33	97.24	10.70	39.71					DR-1
163+96	LT.	MAIN LANES	16	163+74	164+18	39.11	16.18	1.78	6.61					DR-1
164+23	RT.	MAIN LANES	30	163+94	164+52	51.56	58.13	6.39	23.74					DR-1
164+84	LT.	MAIN LANES	16	164+62	165+06	39.11	23.72	2.61	9.69					DR-1
166+30	LT.	MAIN LANES - HENSON PLACE	20				51.95	5.71	21.21					
167+73	RT.	MAIN LANES	28	167+45	168+01	49.78	35.59	3.91	14.53					DR-1
168+58	RT.	MAIN LANES	28	168+30	168+86	49.78	42.00	4.62	17.15					DR-1
169+84	LT.	MAIN LANES	34	169+53	170+15	55.11	12.62	1.39	5.15					DR-1
171+11	RT.	MAIN LANES	16	170+89	171+33	39.11	23.79	2.62	9.71					DR-1
171+51	LT.	MAIN LANES	34	171+20	171+82	55.11	54.32	5.98	22.18					DR-1
172+08	RT.	MAIN LANES - PINE MEADOW DRIVE	24				95.60	10.52	39.04					
173+65	RT.	MAIN LANES	24	173+39	173+91	46.22	59.76	6.57	24.40					DR-1
174+30	LT.	MAIN LANES	20	174+06	174+54	42.67	102.18	11.24	41.72		42			DR-1, PCC-1, PCM-1, PCP-1, PCP-2
175+10	RT.	MAIN LANES	40	174+76	175+44	60.44	113.42	12.48	46.31					DR-1
177+35	RT.	MAIN LANES	38	177+02	177+68	58.67	99.39	10.93	40.58					DR-1
180+19	RT.	MAIN LANES - N. PRICKETT ROAD	44				136.74	15.04	55.84					
180+20	LT.	MAIN LANES - FOREST ROAD	32				99.15	10.91	40.49					
181+99	LT.	MAIN LANES	30	181+70	182+28	51.56								DR-1
182+43	RT.	MAIN LANES	32	182+13	182+73	53.33	78.90	8.68	32.22					DR-1
SUBTOTALS (BOX 1 OF 2):						**2807.95**	**4892.48**	**538.18**	**1997.77**	**86**	**42**	**60**	**28**	

BASIS OF ESTIMATE:
ACHM SURFACE COURSE 1/2".....94.9% MIN. AGGR.....5.1% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22

** FOR INFORMATION ONLY.

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

2/13/2018

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	76	303

(2) QUANTITIES

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

DRIVEWAYS & TURNOUTS (BOX 2 OF 2)

STATION	SIDE	LOCATION	WIDTH	**MODIFIED CURB		PORTLAND CEMENT CONCRETE DRIVEWAY	ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG 64-22)		AGGREGATE BASE COURSE (CLASS 7)	SIDE DRAINS				STANDARD DRAWINGS
										18"	48"	21"X15"	28"X20"	
			FEET	STATION	STATION	SQ. YD.	SQ. YD.	TON	TON	LIN. FT.				
183+34	LT.	MAIN LANES	16	183+12	183+56	39.11	17.78	1.96	7.26					DR-1
184+65	RT.	MAIN LANES	40	184+31	184+99	60.44	55.64	6.12	22.72					DR-1
186+04	RT.	MAIN LANES	36	185+72	186+36	56.89	36.32	4.00	14.83					DR-1
187+14	LT.	MAIN LANES	24	186+88	187+40	46.22	57.23	6.30	23.37					DR-1
187+30	RT.	MAIN LANES	24	187+04	187+56	46.22	26.61	2.93	10.87					DR-1
188+84	LT.	MAIN LANES	16	188+62	189+06	39.11	38.12	4.19	15.57					DR-1
189+53	LT.	MAIN LANES - SUNSET MEADOW DRIVE	36				109.59	12.05	44.75					
190+39	LT.	MAIN LANES	32	190+09	190+69	53.33	55.15	6.07	22.52					DR-1
191+15	RT.	MAIN LANES	16	190+93	191+37	39.11	22.51	2.48	9.19					DR-1
191+67	LT.	MAIN LANES	22	191+42	191+92	44.44	44.93	4.94	18.35					DR-1
192+37	LT.	MAIN LANES	22	192+12	192+62	44.44	70.28	7.73	28.70					DR-1
192+65	RT.	MAIN LANES	16	192+43	192+87	39.11	32.85	3.61	13.41					DR-1
194+22	RT.	MAIN LANES - N. COMMERCE STREET	38				114.81	12.63	46.88					
194+26	LT.	MAIN LANES	40	193+92	194+60	60.44	188.89	20.78	77.13					DR-1
195+21	RT.	MAIN LANES	24	194+95	195+47	46.22								DR-1
196+17	LT.	MAIN LANES	40	195+83	196+51	60.44	267.07	29.38	109.05					DR-1
196+45	RT.	MAIN LANES	18	196+22	196+68	40.89	41.04	4.51	16.76					DR-1
199+13	RT.	MAIN LANES - OFFICE PARK DRIVE	30				93.92	10.33	38.35					
199+67	LT.	MAIN LANES	40	199+33	200+01	60.44	205.64	22.62	83.97					DR-1
201+05	LT.	MAIN LANES	40	200+71	201+39	60.44	224.49	24.69	91.67					DR-1
201+87	RT.	MAIN LANES	40	201+53	202+21	60.44	31.73	3.49	12.96					DR-1
202+96	LT.	MAIN LANES	30	202+67	203+25	51.56	119.17	13.11	48.66					DR-1
204+65	LT.	MAIN LANES	40	204+31	204+99	60.44	86.40	9.50	35.28					DR-1
205+65	RT.	MAIN LANES	40	205+31	205+99	60.44	25.78	2.84	10.53					DR-1
206+28	LT.	MAIN LANES	16	206+06	206+50	39.11	38.44	4.23	15.70					DR-1
207+91	LT.	MAIN LANES - COMMONWEALTH DRIVE	48				140.92	15.50	57.54					
207+91	RT.	MAIN LANES - HWY. 183	60				2143.01	235.73	875.06					
210+19	RT.	MAIN LANES - HARVEST DRIVE	32				104.08	11.45	42.50					
210+70	LT.	MAIN LANES	24	210+44	210+96	46.22								DR-1
211+64	RT.	MAIN LANES	36	211+32	211+96	56.89	73.08	8.04	29.84					DR-1
212+30	LT.	MAIN LANES - DEARBORN CIRCLE	30				98.63	10.85	40.27					
213+77	RT.	MAIN LANES	40	213+43	214+11	60.44	127.02	13.97	51.87					DR-1
58+12	RT.	SPRINGHILL ROAD	24	57+86	58+38	46.22	122.19	13.44	49.89	32				DR-1, PCC-1, PCM-1, PCP-1, PCP-2
58+15	LT.	SPRINGHILL ROAD	26	57+88	58+42	48.00	114.02	12.54	46.56					DR-1
59+89	RT.	SPRINGHILL ROAD	24	59+63	60+15	46.22	93.47	10.28	38.17	42				DR-1, PCC-1, PCM-1, PCP-1, PCP-2
61+07	RT.	SPRINGHILL ROAD	40	60+73	61+41	60.44	49.64	5.46	20.27					DR-1
61+32	LT.	SPRINGHILL ROAD	32	61+02	61+62	53.33	118.26	13.01	48.29					DR-1
64+90	LT.	SPRINGHILL ROAD	32	64+60	65+20	53.33	97.64	10.74	39.87					DR-1
65+52	RT.	SPRINGHILL ROAD	38	65+19	65+85	58.67	90.19	9.92	36.83					DR-1
66+29	RT.	SPRINGHILL ROAD	34	65+98	66+60	55.11	65.73	7.23	26.84					DR-1
67+04	LT.	SPRINGHILL ROAD	32	66+74	67+34	53.33	14.19	1.56	5.79					DR-1
68+12	RT.	SPRINGHILL ROAD	16	67+90	68+34	39.11	10.20	1.12	4.17					DR-1
69+07	RT.	SPRINGHILL ROAD	16	68+85	69+29	39.11	11.38	1.25	4.65					DR-1
70+15	LT.	SPRINGHILL ROAD	16			39.11	20.00	2.20	8.17					
70+55	RT.	SPRINGHILL ROAD	26			48.00	40.53	4.46	16.55					
70+60	LT.	SPRINGHILL ROAD	16			39.11	43.38	4.77	17.71					
71+07	LT.	SPRINGHILL ROAD	22			44.44	33.15	3.65	13.54					
71+10	RT.	SPRINGHILL ROAD	16			39.11	38.77	4.26	15.83					
* ENTIRE PROJECT TEMPORARY DRIVES									1160.00					
SUBTOTALS (BOX 1 OF 2):						**2807.95**	**4892.48**	**538.18**	**1997.77**	**86**	**42**	**60**	**28**	
SUBTOTALS (BOX 2 OF 2):						**2035.47**	**5653.87**	**621.92**	**3468.69**	**74**				
TOTALS:						**4843.42**	**10546.35**	**1160.10**	**5466.46**	**160**	**42**	**60**	**28**	

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.9% MIN. AGGR.....5.1% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22

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

** FOR INFORMATION ONLY.

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

2/13/2018

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	77	303

(2) QUANTITIES

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

BASE AND SURFACING

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT				PORTLAND CEMENT CONCRETE BASE		ACHM BASE COURSE (1 1/2")				ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")							
				TON / STATION	TON	AVG. WID.	SQ.YD.	GALLONS / SQ.YD.	GALLON	5" UNIFORM THICKNESS AVG. WID.	SQ/ YD.	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 76-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22	TOTAL PG 76-22
			FEET			FEET				FEET		FEET			TON	FEET			TON	FEET			TON	FEET			TON	TON
MAIN LANES																											
91+00.00	92+00.00	TRANSITION - MAIN LANES	100.00			30.00	333.33	0.17	56.67															30.00	333.33	220.00	36.67	36.67
92+00.00	109+00.00	NOTCH AND WIDEN LT. - MAIN LANES	1700.00			150.50	28427.78	0.05	1421.39	2.50	472.22	44.50	8405.56	550.00	2311.53	42.00	7933.33	330.00	1309.00	42.00	7933.33	220.00	872.67	64.00	12088.89	220.00	1329.78	2202.45
109+00.00	115+36.83	FULL DEPTH - MAIN LANES	636.83			197.00	13939.50	0.05	696.98			69.00	4882.36	550.00	1342.65	64.00	4528.57	330.00	747.21	64.00	4528.57	220.00	498.14	64.00	4528.57	220.00	498.14	996.28
117+27.17	118+00.00	FULL DEPTH - MAIN LANES	72.83			197.00	1594.17	0.05	79.71			69.00	558.36	550.00	153.55	64.00	517.90	330.00	85.45	64.00	517.90	220.00	56.97	64.00	517.90	220.00	56.97	113.94
118+00.00	122+50.00	NOTCH AND WIDEN LT. - MAIN LANES	450.00			150.50	7525.00	0.05	376.25	2.50	125.00	44.50	2225.00	550.00	611.88	42.00	2100.00	330.00	346.50	42.00	2100.00	220.00	231.00	64.00	3200.00	220.00	352.00	583.00
122+50.00	129+00.00	NOTCH AND WIDEN - MAIN LANES	650.00			153.00	11050.00	0.05	552.50			47.00	3394.44	550.00	933.47	42.00	3033.33	330.00	500.50	42.00	3033.33	220.00	333.67	64.00	4622.22	220.00	508.44	842.11
129+00.00	134+00.00	NOTCH AND WIDEN RT. - MAIN LANES	500.00			150.50	8361.11	0.05	418.06	2.50	138.89	44.50	2472.22	550.00	679.86	42.00	2333.33	330.00	385.00	42.00	2333.33	220.00	256.67	64.00	3555.56	220.00	391.11	647.78
134+00.00	135+50.00	FULL DEPTH - MAIN LANES	150.00			197.00	3283.33	0.05	164.17	2.50	41.67	69.00	1150.00	550.00	316.25	64.00	1066.67	330.00	176.00	64.00	1066.67	220.00	117.33	64.00	1066.67	220.00	117.33	234.66
135+50.00	138+00.00	NOTCH AND WIDEN - MAIN LANES RT.	250.00			150.50	4180.56	0.05	209.03	2.50	69.44	44.50	1236.11	550.00	339.93	42.00	1166.67	330.00	192.50	42.00	1166.67	220.00	128.33	64.00	1777.78	220.00	195.56	323.89
138+00.00	140+85.00	FULL DEPTH - MAIN LANES	285.00			197.00	6238.33	0.05	311.92	2.50	79.17	69.00	2185.00	550.00	600.88	64.00	2026.67	330.00	334.40	64.00	2026.67	220.00	222.93	64.00	2026.67	220.00	222.93	445.86
140+85.00	143+55.00	FULL DEPTH - ADDITIONAL LANE TRANS. - MAIN LANES	270.00			VAR.	6436.23	0.05	321.81	2.50	75.00	VAR.	2236.23	550.00	614.96	VAR.	2100.00	330.00	346.50	VAR.	2100.00	220.00	231.00	VAR.	2100.00	220.00	231.00	462.00
143+55.00	147+00.00	FULL DEPTH - ADDITIONAL LANE - MAIN LANES	345.00			233.00	8931.67	0.05	446.58			81.00	3105.00	550.00	853.88	76.00	2913.33	330.00	480.70	76.00	2913.33	220.00	320.47	76.00	2913.33	220.00	320.47	640.94
147+00.00	150+50.00	NOTCH AND WIDEN - ADDITIONAL LANE - MAIN LANES	350.00			167.00	6494.44	0.05	324.72			59.00	2294.44	550.00	630.97	54.00	2100.00	330.00	346.50	54.00	2100.00	220.00	231.00	76.00	2955.56	220.00	325.11	556.11
150+50.00	153+30.00	NOTCH AND WIDEN - ADDITIONAL LANE - MAIN LANES	280.00			VAR.	5939.98	0.05	297.00			VAR.	2082.60	550.00	572.72	VAR.	1928.69	330.00	318.23	VAR.	1928.69	220.00	212.16	76.00	2364.44	220.00	260.09	472.25
153+30.00	155+00.00	NOTCH AND WIDEN - ADDITIONAL LANE TRANS. - MAIN LANES	170.00			VAR.	2971.74	0.05	148.59			VAR.	1053.56	550.00	289.73	VAR.	959.09	330.00	158.25	VAR.	959.09	220.00	105.50	VAR.	1364.19	220.00	150.06	255.56
155+00.00	156+00.00	FULL DEPTH - ADDITIONAL LANE TRANS. - MAIN LANES	100.00			VAR.	2262.97	0.05	113.15			VAR.	791.37	550.00	217.63	64.00	735.80	330.00	121.41	64.00	735.80	220.00	80.94	VAR.	735.80	220.00	80.94	161.88
156+00.00	157+50.00	FULL DEPTH - MAIN LANES	150.00			197.00	3283.33	0.05	164.17			69.00	1150.00	550.00	316.25	64.00	1066.67	330.00	176.00	64.00	1066.67	220.00	117.33	64.00	1066.67	220.00	117.33	234.66
157+50.00	166+00.00	NOTCH AND WIDEN - MAIN LANES	850.00			153.00	14450.00	0.05	722.50			47.00	4438.89	550.00	1220.69	42.00	3966.67	330.00	654.50	42.00	3966.67	220.00	436.33	64.00	6044.44	220.00	664.89	1101.22
166+00.00	166+50.00	NOTCH AND WIDEN RT. - MAIN LANES	50.00			150.50	836.11	0.05	41.81			44.50	247.22	550.00	67.99	42.00	233.33	330.00	38.50	42.00	233.33	220.00	25.67	64.00	355.56	220.00	39.11	64.78
166+50.00	200+62.00	NOTCH AND WIDEN - MAIN LANES	3412.00			153.00	58004.00	0.05	2900.20			47.00	17818.22	550.00	4900.01	42.00	15922.67	330.00	2627.24	42.00	15922.67	220.00	1751.49	64.00	24263.11	220.00	2668.94	4420.43
200+62.00	203+32.00	NOTCH AND WIDEN - ADDITIONAL LANE TRANS. - MAIN LANES	270.00			VAR.	4517.71	0.05	225.89			VAR.	1605.93	550.00	441.63	VAR.	1455.89	330.00	240.22	VAR.	1455.89	220.00	160.15	VAR.	2100.00	220.00	231.00	391.15
203+32.00	207+50.00	NOTCH AND WIDEN - ADDITIONAL LANE - MAIN LANES	418.00			167.00	7756.22	0.05	387.81			59.00	2740.22	550.00	753.56	54.00	2508.00	330.00	413.82	54.00	2508.00	220.00	275.88	76.00	3529.78	220.00	388.28	664.16
207+50.00	208+00.00	NOTCH AND WIDEN LT. - ADDITIONAL LANE - MAIN LANES	50.00			164.50	913.89	0.05	45.69	2.50	13.89	56.50	313.89	550.00	86.32	54.00	300.00	330.00	49.50	54.00	300.00	220.00	33.00	76.00	422.22	220.00	46.44	79.44
208+00.00	209+84.00	NOTCH AND WIDEN - ADDITIONAL LANE - MAIN LANES	184.00			167.00	3414.22	0.05	170.71			59.00	1206.22	550.00	331.71	54.00	1104.00	330.00	182.16	54.00	1104.00	220.00	121.44	76.00	1553.78	220.00	170.92	292.36
209+84.00	212+24.00	NOTCH AND WIDEN - ADDITIONAL LANE TRANS. - MAIN LANES	240.00			VAR.	2905.81	0.05	145.29			VAR.	1057.59	550.00	290.84	VAR.	924.11	330.00	152.48	VAR.	924.11	220.00	101.65	VAR.	1866.66	220.00	205.33	306.98
212+24.00	214+00.00	NOTCH AND WIDEN - MAIN LANES	176.00			153.00	2992.00	0.05	149.60			47.00	919.11	550.00	252.76	42.00	821.33	330.00	135.52	42.00	821.33	220.00	90.35	64.00	1251.56	220.00	137.67	228.02
214+00.00	215+00.00	TRANSITION - MAIN LANES	100.00			131.50	1461.11	0.05	73.06			45.50	505.56	550.00	139.03	43.00	477.78	330.00	78.83	43.00	477.78	220.00	52.56	43.00	477.78	220.00	52.56	105.12
214+00.00	216+00.00	TEMPORARY WIDENING RT.	200.00			15.00	333.33	0.05	16.67			5.00	111.11	550.00	30.56	5.00	111.11	330.00	18.33	5.00	111.11	220.00	12.22	5.00	111.11	220.00	12.22	24.44
300+32.00	301+01.00	FULL DEPTH - WATERFALL WAY	69.00			VAR.	1786.50	0.05	89.33			VAR.	595.50	550.00	163.76	VAR.	595.50	330.00	98.26	VAR.	595.50	220.00	65.51	VAR.	595.50	220.00	65.51	131.02
301+01.00	301+78.00	FULL DEPTH - WATERFALL WAY	77.00			138.00	1180.67	0.05	59.03			46.00	393.56	550.00	108.23	46.00	393.56	330.00	64.94	46.00	393.56	220.00	43.29	46.00	393.56	220.00	43.29	86.58
301+78.00	302+93.00	WATERFALL WAY RT.	115.00			47.00	600.56	0.05	30.03			19.00	242.78	550.00	66.76	14.00	178.89	330.00	29.52	14.00	178.89	220.00	19.68	14.00	178.89	220.00	19.68	39.36
301+78.00	303+50.00	WATERFALL WAY LT.	172.00			47.00	898.22	0.05	44.91			19.00	363.11	550.00	99.86	14.00	267.56	330.00	44.15	14.00	267.56	220.00	29.43	14.00	267.56	220.00	29.43	58.86
302+93.00	303+93.00	TRANSITION ON RT. - WATERFALL WAY	100.00					0.17																14.00	155.56	220.00	17.11	17.11
303+50.00	304+50.00	TRANSITION ON LT. - WATERFALL WAY	100.00					0.17																14.00	155.56	220.00	17.11	17.11
54+50.00	55+50.00	TRANSITION - SPRINGHILL RD.	100.00			42.00	466.67	0.17	79.33															42.00	466.67	220.00	51.33	51.33
55+50.00	62+35.00	NOTCH AND WIDEN - SPRINGHILL RD.	685.00			101.00	7687.22	0.05	384.36			37.00	2816.11	550.00	774.43	32.00	2435.56	330.00	401.87	32.00	2435.56	220.00	267.91	56.00	4262.22	220.00	468.84	736.75
62+35.00	62+84.72	NOTCH AND WIDEN - SPRINGHILL RD.	49.72			77.00	425.38	0.05	21.27			29.00	160.21	550.00	44.06	24.00	132.59	330.00	21.88	24.00	132.59	220.00	14.58	68.00	375.66	220.00	41.32	55.90
63+73.59	65+65.00	NOTCH AND WIDEN - SPRINGHILL RD.	191.41			77.00	1637.62	0.05	81.88			29.00	616.77	550.00	169.61	24.00	510.43	330.00	84.22	24.00	510.43	220.00	56.15	68.00	1446.21	220.00	159.08	215.23
65+65.00	70+00.00	NOTCH AND WIDEN - SPRINGHILL RD.	435.00			101.00	4881.67	0.05	244.08			37.00	1788.33	550.00	491.79	32.00	1546.67	330.00	255.20	32.00	1546.67	220.00	170.13	56.00	2706.67	220.00	297.73	467.86
70+00.00	71+50.00	NOTCH AND WIDEN - SPRINGHILL RD.	150.00	33.00	49.50	12.00	200.00	0.05	10.00			4.00	66.67	550.00	18.33	4.00	66.67	330.00	11.00	4.00	66.67	220.00	7.33	28.00	466.67	220.00	51.33	58.66
71+50.00	72+50.00	TRANSITION - SPRINGHILL RD.	100.00	16.50	16.50	6.00	66.67	0.05	3.33			2.00	22.22	550.00	6.11	2.00	22.22	330.00	3.67	2.00	22.22	220.00	2.44	26.00	288.89	220.00	31.78	34.22
ADDITIONAL FOR CROWN SHIFT																											
92+00.00	109+00.00	TRANSITION - MAIN LANES	1700.00			11.00	2077.78	0.05	103.89											11.00	2077.78	110.00	114.28				114.28
118+00.00	122+50.00	NOTCH AND WIDEN LT. - MAIN LANES	450.00			11.00	550.00	0.05	27.50											11.00	550.00	110.00	30.25				30.25
129+00.00	134+00.00	NOTCH AND WIDEN LT. - MAIN LANES	500.00			11.00	611.11	0.05	30.56											11.00	611.11	110.00	33.61				33.61
135+50.00	138+00.00	FULL DEPTH - MAIN LANES	250.00			11.00	305.56	0.05	15.28											11.00	305.56	110.00	16.81				16.81
166+00.00	166+50.00	FULL DEPTH - MAIN LANES	50.00			11.00	61.11	0.05	3.06											11.00	61.11	110.00	3.36				3.36
207+50.00	208+00.00	NOTCH AND WIDEN LT. - MAIN LANES	50.00			11.00	61.11	0.05	3.06											11.00	61.11	110.00	3.36				3.36
ADDITIONAL FOR LEVELING																											
92+00.00	109+00.00	MAIN LANES	1700.00			22.00	4155.56	0.17	706.45											22.00	4400.00	220.00	484.00				484.00
118+00.00	134+00.00	MAIN LANES	1600.00			22.00	3911.11	0.17	664.89											22.00	3911.11	220.00	430.22				430.22
135+50.00	138+00.00	MAIN LANES	250.00			22.00	611.11	0.17	103.89											22.00	611.11	220.00	67.22				67.22
147+00.00	155+00.00	MAIN LANES	800.00			VAR.	2587.00	0.17	439.79											VAR.	2578.00	220.00	283.58				283.58
157+50.00	199+50.00	MAIN LANES	4200.00			22.00	10266.67	0.17	1745.33											22.00	13846.00	220.00	1523.06				1523.06
199+67.00	214+00.00	MAIN LANES	1433.00			VAR.	9957.00	0.17	1692.69											VAR.	9957.00	220.00	1095.27				1095.27
55+50.00	62+84.72	SPRINGHILL RD.	734.72			VAR.	2777.00	0.17	472.09											VAR.	2777.00	220.00	305.47				305.47
63+73.59	65+00.00	SPRINGHILL RD.	126.41			VAR.	472.00	0.17	80.24											VAR.	472.00	220.00	51.92				51.92
68+50.00	71+50.00	SPRINGHILL RD.	300.00			VAR.	1133.00	0.17	192.61											VAR.	1133.00	220.00	124.63				124.63
TOTALS:					66.00		278206.17		18310.81		1015.28		77251.47		21244.18		70484.59		11629.96		113836.48		12320.34		100953.20		11104.83	23425.17

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.9% MIN. AGGR.....5.1% ASPHALT BINDER
ACHM BINDER COURSE (1").....95.7% MIN. AGGR.....4.3% ASPHALT BINDER
ACHM BASE COURSE (1 1/2").....96.1% MIN. AGGR.....3.9% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22
MAXIMUM NUMBER OF GYRATIONS = 205 FOR PG 76-22
TACK COAT QUANTITIES WERE CALCULATED USING THE EMULSIFIED ASPHALT RATES. REFER TO SS-400-1 FOR THE RESIDUAL ASPHALT APPLICATION RATES.

2/13/2018

R061335.DGN

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	78	303
				①	07365 - QUANTITIES - 57780			

SCHEDULE OF BRIDGE QUANTITIES-JOB 061335

BRIDGE NO. / NAME PLATE TITLE	UNIT OF STRUCTURE	ITEM NO.	205	801	802	SP & 802	803	804	804	805	805	806	806	SP & 807	808	809	812	816	816
		ITEM / UNIT	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO.)	UNCLASSIFIED EXCAVATION FOR STRUCTURES-BRIDGE	CLASS S CONCRETE-BRIDGE	CLASS S(AE) CONCRETE-BRIDGE	CLASS I PROTECTIVE SURFACE TREATMENT	EPOXY COATED REINFORCING STEEL (GRADE 60)	REINFORCING STEEL-BRIDGE (GRADE 60)	① STEEL PILING (HP 12X53)	PREBORING	TRANSITIONAL APPROACH RAILING	METAL BRIDGE RAILING (TYPE H)	STRUCTURAL STEEL IN BEAM SPANS (M 270, GRADE 50W)	ELASTOMERIC BEARINGS	SILICONE JOINT SEALANT	BRIDGE NAME PLATE (TYPE D)	FILTER BLANKET	DUMPED RIPRAP
			LUMP SUM	CU. YD.	CU. YD.	CU. YD.	GAL.	LB.	LB.	LIN. FT.	LIN. FT.	EACH	LIN.FT.	LB.	CU. IN.	LIN. FT.	EACH	SQ. YD.	CU. YD.
07365 HURRICANE CREEK	BENT 1				60.91		0.4		6,430	153		2		1,740	2,632.5			372	203
	BENT 2			123	94.51				16,435						3,327.5				
	BENT 3			151	93.23				16,245						3,327.5				
	BENT 4			5	60.75		0.4		6,430	135	126	2		1,740	2,632.5			517	276
	188'-0" W-BEAM UNIT					505.40	36.3	138,540					364	333,340		182	1		
	SITE NO. 1 (BRIDGE NO. 02715)		1																
TOTALS FOR JOB NO. 061335				② 279	309.40	505.40	37.1	138,540	45,540	288	126	4	364	336,820	11,920.0	182	1	889	479

KYLE YEARY
DESIGN SECTION SUPERVISOR

① All steel piling shall be Grade 50 and are required to have approved driving points which will not be paid for directly, but will be considered subsidiary to the item "Steel Piling (HP 12X53)". All piles shall conform to Std. Dwg. No. 55020.

② Includes approx. 197 cu. yds. of rock excavation.

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
6-5-17
CHARLES R. ELLIS
BRIDGE ENGINEER

SCHEDULE OF BRIDGE QUANTITIES
ALCOA RD. - HWY. 183 (S)
SALINE COUNTY
ROUTE 5 SEC. 8
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: BHS DATE: 6/17/15
CHECKED BY: DHP DATE: 6/5/17
DESIGNED BY: DATE:
FILENAME: b061335_ql.dgn
SCALE: No Scale

BRIDGE NO. 07365 DRAWING NO. 57780

PRINT DATE: 6/5/2017

SUMMARY OF QUANTITIES (BOX 1 OF 3)

ITEM NUMBER	ITEM		QUANTITY	UNIT
201	CLEARING		80	STATION
201	GRUBBING		80	STATION
202	REMOVAL AND DISPOSAL OF CURB		838	LIN. FT.
202	REMOVAL AND DISPOSAL OF CURB AND GUTTER		10677	LIN. FT.
202	REMOVAL AND DISPOSAL OF WELL		1	EACH
202	REMOVAL AND DISPOSAL OF FENCE		1240	LIN. FT.
202	REMOVAL AND DISPOSAL OF GATES		5	EACH
202	REMOVAL AND DISPOSAL OF POSTS		44	EACH
202	REMOVAL AND DISPOSAL OF WALLS		96	LIN. FT.
202	REMOVAL AND DISPOSAL OF RETAINING WALLS		25	LIN. FT.
202	REMOVAL AND DISPOSAL OF CONCRETE PAVEMENT		370	SQ. YD.
202	REMOVAL AND DISPOSAL OF CONCRETE ISLANDS		556	SQ. YD.
202	REMOVAL AND DISPOSAL OF COLUMNS		3	EACH
202	REMOVAL AND DISPOSAL OF CONCRETE DRIVEWAYS		5461	SQ. YD.
202	REMOVAL AND DISPOSAL OF WALKS		1466	SQ. YD.
202	REMOVAL AND DISPOSAL OF SIGN FOUNDATIONS		80	EACH
202	REMOVAL AND DISPOSAL OF DROP INLETS		35	EACH
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS		117	EACH
202	REMOVAL AND DISPOSAL OF CONCRETE DITCH PAVING		60	SQ. YD.
202	REMOVAL AND DISPOSAL OF LUMINAIRE POLES		16	EACH
202	REMOVAL AND DISPOSAL OF LUMINAIRE POLE AND FOUNDATION		18	EACH
202	REMOVAL AND DISPOSAL OF SATELLITE DISH		1	EACH
202	REMOVAL AND DISPOSAL OF SIGNS		70	EACH
202	REMOVAL AND DISPOSAL OF PLANTERS		12	EACH
202	REMOVAL AND DISPOSAL OF FLAG POLE		3	EACH
SP & 202	REMOVAL AND DISPOSAL OF GUARDRAIL		465	LIN. FT.
202	REMOVAL AND DISPOSAL OF SPRINKLER SYSTEM		11	EACH
202	REMOVAL AND DISPOSAL OF WATER FOUNTAIN		1	EACH
210	UNCLASSIFIED EXCAVATION		19030	CU. YD.
210	COMPACTED EMBANKMENT		69607	CU. YD.
SP & 210	SOIL STABILIZATION		100	TON
SS & 303	AGGREGATE BASE COURSE (CLASS 7)		5532	TON
309	PORTLAND CEMENT CONCRETE BASE (5" UNIFORM THICKNESS)		1015	SQ. YD.
SS & 401	TACK COAT		18431	GAL.
SP, SS, & 405	MINERAL AGGREGATE IN ACHM BASE COURSE (1 1/2")		20415	TON
SP, SS, & 405	ASPHALT BINDER (PG 64-22) IN ACHM BASE COURSE (1 1/2")		829	TON
SP, SS, & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")		11130	TON
SP, SS, & 406	ASPHALT BINDER (PG 64-22) IN ACHM BINDER COURSE (1")		500	TON
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")		23331	TON
SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")		59	TON
SP, SS, & 407	ASPHALT BINDER (PG 76-22) IN ACHM SURFACE COURSE (1/2")		1195	TON
412	COLD MILLING ASPHALT PAVEMENT		1133	SQ. YD.
SP, SS, & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC		60	TON
SP, SS, & 415	ACHM PATCHING OF EXISTING ROADWAY		100	TON
SS & 505	PORTLAND CEMENT CONCRETE DRIVEWAY		4843.42	SQ. YD.
601	MOBILIZATION		1.00	LUMP SUM
SP & 602	FURNISHING FIELD OFFICE		1	EACH
SP & 603	MAINTENANCE OF TRAFFIC		1.00	LUMP SUM
SS & 604	SIGNS		1217	SQ. FT.
SP, SS, & 604	CONSTRUCTION PROJECT INFORMATION SIGN UPDATE		10	EACH
SS & 604	BARRICADES		416	LIN. FT.
SS & 604	TRAFFIC DRUMS		957	EACH
604	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER		346	LIN. FT.
604	RELOCATING PRECAST CONCRETE BARRIER		246	LIN. FT.
604	CONSTRUCTION PAVEMENT MARKINGS		146435	LIN. FT.
604	CONSTRUCTION PAVEMENT MARKINGS (WORDS)		14	EACH
604	CONSTRUCTION PAVEMENT MARKINGS (ARROWS)		37	EACH
604	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS		762	LIN. FT.
604	REMOVAL OF PERMANENT PAVEMENT MARKINGS		2000	LIN. FT.
SS & 604	VERTICAL PANELS		250	EACH
606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		1006	LIN. FT.
* 606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)	12851	LIN. FT.
* 606	18" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 2)	12851	LIN. FT.
606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)		70	LIN. FT.
606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		84	LIN. FT.
* 606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)	2548	LIN. FT.
* 606	24" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 2)	2548	LIN. FT.
606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		418	LIN. FT.
* 606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)	1118	LIN. FT.
* 606	30" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 2)	1118	LIN. FT.
606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)		68	LIN. FT.
606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		90	LIN. FT.
* 606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)	930	LIN. FT.
* 606	36" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 2)	930	LIN. FT.
606	42" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		312	LIN. FT.
* 606	42" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)	922	LIN. FT.
* 606	42" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 2)	922	LIN. FT.
606	42" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)		78	LIN. FT.
SS & 606	12" SIDE DRAIN		1200	LIN. FT.
SP, SS, & 606	18" SIDE DRAIN		160	LIN. FT.
SP, SS, & 606	48" SIDE DRAIN		42	LIN. FT.
SS & 606	21" X 15" SIDE DRAIN		60	LIN. FT.
SS & 606	28" X 20" SIDE DRAIN		28	LIN. FT.
606	18" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		13	EACH
606	24" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		2	EACH
606	30" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		2	EACH
606	36" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		2	EACH
606	42" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		2	EACH
606	SELECTED PIPE BEDDING		300	CU. YD.
609	DROP INLETS (TYPE C)		1	EACH
609	DROP INLETS (TYPE C SPECIAL)		10	EACH
609	DROP INLETS (TYPE MO)		114	EACH

* DENOTES ALTERNATE BID ITEMS.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	79	303

(2) SUMMARY OF QUANTITIES

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-18

2/13/2018

R061335.DGN

SUMMARY OF QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
08-20-18		09-07-18		6	ARK.			
08-24-18				JOB NO.		061335	80	303
08-29-18				(2) SUMMARY OF QUANTITIES AND REVISIONS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-7-18

SUMMARY OF QUANTITIES (BOX 2 OF 3)

ITEM NUMBER	ITEM		QUANTITY	UNIT
609	JUNCTION BOXES (TYPE E)		2	EACH
609	DROP INLET EXTENSIONS (4')		59	EACH
609	DROP INLET EXTENSIONS (8')		17	EACH
609	YARD DRAINS		12	EACH
611	UNDERDRAIN OUTLET PROTECTORS		24	EACH
611	4" PIPE UNDERDRAINS		6000	LIN. FT.
615	PAVEMENT REPAIR OVER CULVERTS (CONCRETE)		185.3	CU. YD.
619	WIRE FENCE (TYPE C)		150	LIN. FT.
* 619	4' STEEL CHAIN LINK FENCE	(ALTERNATE NO. 1)	89	LIN. FT.
* 619	4' ALUMINUM CHAIN LINK FENCE	(ALTERNATE NO. 2)	89	LIN. FT.
* 619	16' STEEL GATES	(ALTERNATE NO. 1)	4	EACH
* 619	16' ALUMINUM GATES	(ALTERNATE NO. 2)	4	EACH
620	LIME		12	TON
620	SEEDING		6.07	ACRE
SS & 620	MULCH COVER		86.98	ACRE
620	WATER		2385.1	M. GAL.
621	TEMPORARY SEEDING		80.91	ACRE
621	SILT FENCE		19475	LIN. FT.
621	SAND BAG DITCH CHECKS		963	BAG
621	DROP INLET SILT FENCE		2145	LIN. FT.
621	SEDIMENT BASIN		594	CU. YD.
621	OBLITERATION OF SEDIMENT BASIN		594	CU. YD.
621	SEDIMENT REMOVAL AND DISPOSAL		1476	CU. YD.
621	ROCK DITCH CHECKS		135	CU. YD.
SS & 621	FILTER SOCK (18")		1706	LIN. FT.
623	SECOND SEEDING APPLICATION		6.07	ACRE
624	SOLID SODDING		9162	SQ. YD.
626	EROSION CONTROL MATTING (CLASS 3)		889	SQ. YD.
SS & 632	CONCRETE ISLAND		700	SQ. YD.
SS & 633	CONCRETE WALKS		10312	SQ. YD.
SP, SS, & 633	CONCRETE WALKS (TYPE SPECIAL)		1015	SQ. YD.
SS & 633	HAND RAILING		4211	LIN. FT.
SS & 634	CONCRETE COMBINATION CURB AND GUTTER (TYPE A) (1' 6")		22274	LIN. FT.
635	ROADWAY CONSTRUCTION CONTROL		1.00	LUMP SUM
637	MAILBOXES		44	EACH
637	MAILBOX SUPPORTS (SINGLE)		24	EACH
637	MAILBOX SUPPORTS (DOUBLE)		10	EACH
641	WHEELCHAIR RAMPS (TYPE 3)		221	SQ. YD.
641	WHEELCHAIR RAMPS (TYPE 4)		29	SQ. YD.
SP & 701	ACTUATED CONTROLLER TS2-TYPE 2 (8 PHASES)		4	EACH
SP & 701	SYSTEM LOCAL CONTROLLER TS2-TYPE 2 (8 PHASES)		1	EACH
SP & 701	SYSTEM LOCAL CONTROLLER TS2-TYPE 2, E-NET (8 PHASES)		2	EACH
SP	TRAFFIC SIGNAL CONTROLLER (MODIFICATION)		1	EACH
SP	ETHERNET SWITCH, T100 HARDENED (8-PORT)		2	EACH
SP	E-NET CABLE (EXTERIOR CAT 5E)		200	LIN. FT.
SP	ANTENNA SUPPORT (SHOE BASE, 35' HT.)		1	EACH
SP	ANTENNA SUPPORT (SHOE BASE, 50' HT.)		2	EACH
SP	LOCAL RADIO WITH ANTENNA		1	EACH
SP	ANTENNA CABLE (TYPE 6)		100	LIN. FT.
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)		65	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)		22	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (5 SECTION, 1 WAY)		2	EACH
SP	RELOCATION OF TRAFFIC SIGNAL HEAD		4	EACH
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED		20	EACH
SP	EMBEDDED LED PEDESTRIAN ACTIVATED CROSSWALK SIGN		2	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)		8592	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)		3233	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)		2112	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)		2014	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)		600	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)		120	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES		2613	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")		120	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")		60	LIN. FT.
709	GALVANIZED STEEL CONDUIT (3")		300	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")		120	LIN. FT.
710	NON-METALLIC CONDUIT (2")		200	LIN. FT.
710	NON-METALLIC CONDUIT (3")		1906	LIN. FT.
711	CONCRETE PULL BOX (TYPE 1)		3	EACH
711	CONCRETE PULL BOX (TYPE 2)		11	EACH
711	CONCRETE PULL BOX (TYPE 1 HD)		1	EACH
711	CONCRETE PULL BOX (TYPE 2 HD)		14	EACH
713	SPAN WIRE ASSEMBLY		4	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (26')		1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (28')		1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (32')		1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (34')		1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (36')		1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (42')		1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (46')		1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (48')		3	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (50')		1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (54')		1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (56')		2	EACH
SP	LED LUMINAIRE ASSEMBLY		13	EACH
715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION		5	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)		6	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT		1.00	LUMP SUM

* DENOTES ALTERNATE BID ITEMS.

SUMMARY OF QUANTITIES (BOX 3 OF 3)

ITEM NUMBER	ITEM	QUANTITY	UNIT
716	TREATED WOOD POLE (CLASS 2, 40')	10	EACH
718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")	793	LIN. FT.
718	REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (10")	196	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (6")	27604	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (8")	2002	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (12")	2096	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (6")	32402	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (8")	87	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING (WORDS)	15	EACH
719	THERMOPLASTIC PAVEMENT MARKING (ARROWS)	31	EACH
719	THERMOPLASTIC PAVEMENT MARKING (BIKE EMBLEMS)	82	EACH
721	RAISED PAVEMENT MARKERS (TYPE II)	445	EACH
726	STANDARD SIGN	35	SQ. FT.
SP	18" STREET NAME SIGN	14	EACH
SP	VIDEO DETECTOR ROTATION	3	EACH
SP & 733	VIDEO DETECTOR (CLR)	47	EACH
733	VIDEO CABLE	8364	LIN. FT.
733	VIDEO MONITOR (CLR)	3	EACH
SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	22	EACH
SP & 733	VIDEO EDGE CARD EXTENDER	2	EACH
SP & 733	VEHICLE DETECTOR RACK (16 CHANNEL)	3	EACH
SP & 733	VEHICLE DETECTOR RACK (24 CHANNEL)	3	EACH
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-ROADWAY	2178	CU. YD.
802	CLASS S CONCRETE-ROADWAY	966.19	CU. YD.
804	REINFORCING STEEL-ROADWAY (GRADE 60)	86247	POUND
816	FILTER BLANKET	120	SQ. YD.
816	DUMPED RIPRAP	60	CU. YD.
SP	NET-ACCESS RADIO (5.8 GHZ, 32 MBPS)	2	EACH
SP	NET-SUBSCRIBER RADIO (5.8 GHZ, 32 MBPS)	2	EACH
	STRUCTURES OVER 20' SPAN		
205	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. 1)	1.00	LUMP SUM
636	BRIDGE CONSTRUCTION CONTROL	1.00	LUMP SUM
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-BRIDGE	279	CU. YD.
802	CLASS S CONCRETE-BRIDGE	309.40	CU. YD.
SP & 802	CLASS S(AE) CONCRETE-BRIDGE	505.40	CU. YD.
803	CLASS 1 PROTECTIVE SURFACE TREATMENT	37.1	GAL.
804	REINFORCING STEEL-BRIDGE (GRADE 60)	45540	POUND
804	EPOXY COATED REINFORCING STEEL (GRADE 60)	138540	POUND
805	STEEL PILING (HP 12X53)	288	LIN. FT.
805	PREBORING	126	LIN. FT.
806	METAL BRIDGE RAILING (TYPE H)	364	LIN. FT.
806	TRANSITIONAL APPROACH RAILING	4	EACH
SP & 807	STRUCTURAL STEEL IN BEAM SPANS (M270-GR50W)	336820	POUND
808	ELASTOMERIC BEARINGS	11920.0	CU. IN.
809	SILICONE JOINT SEALANT	182	LIN. FT.
812	BRIDGE NAME PLATE (TYPE D)	1	EACH
816	FILTER BLANKET	889	SQ. YD.
816	DUMPED RIPRAP	479	CU. YD.

REVISIONS

DATE	REVISION	SHEET NUMBER
08-20-18	REVISED PDE AND ADDED TCE STA. 202+24.39	24, 30, 36, 44, 50, 52, 80, & 102
08-24-18	ADDED LIQUID ANTI-STRIPPING ADDITIVE SPECIAL PROVISION	3 & 80
08-29-18	REVISED SHEETS TO ADD POLE LOCATIONS AND DIMENSIONS	80, 113, 114, 119, & 120
09-07-18	ADDED SHEETS TO ADD RETAINING WALL DETAILS. REVISED SHEETS TO CORRECT RETAINING WALLS. REVISED "30" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)", "42" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)", AND "42" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)" QUANTITIES. ADDED 30" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)" QUANTITY.	12A, 12B, 12C, 12D, 74, 75, 79, 80, 172-174, 210, 215-218, 221, 222, 225-227, 237-240, 244-247, 267-276, 283, 293-300

2/13/2018

R061335.DGN

SUMMARY OF QUANTITIES AND REVISIONS

SURVEY CONTROL COORDINATES
Project Name: 061335
Date: 7/17/2014
Coordinate System: Arkansas State Plane Coordinates
Based on AHTD GPS PTS : *620019-620019A, 620020A, 620027-620027A*
Projected to Ground Coordinates
Units: U.S. Survey Foot

COORDINATES LISTED BELOW ARE GROUND (Localized) COORDINATES !!!!

Point No.	Northing	SY	Easting	SX	Elevation	SZ	Feature Code	Point Description
3	2023117.6512	0.0150	1158915.8858	0.0190	417.78	0.000	CTL	PD:AHTD STD. MON. STAMPED PN:3
4	2023395.3777	0.0070	1159440.7397	0.0060	414.36	0.012	CTL	PD:AHTD STD. MON. STAMPED PN:4
5	2024134.6412	0.0040	1160448.7843	0.0040	431.78	0.000	CTL	PD:AHTD STD. MON. STAMPED PN:5
6	2024905.1118	0.0090	1161555.8542	0.0080	448.21	0.002	CTL	PD:AHTD STD. MON. STAMPED PN:6
7	2025244.7623	0.0050	1162140.0416	0.0050	458.63	0.003	CTL	PD:PK NAIL
8	2025738.7830	0.0090	1162453.7012	0.0070	457.08	0.002	CTL	PD:AHTD STD. MON. STAMPED PN:8
9	2024755.2281	0.0050	1162300.4022	0.0040	451.04	0.003	CTL	PD:AHTD STD. MON. STAMPED PN:9
10	2033252.9412	0.0150	1179320.1201	0.0150	332.62	0.023	CTL	PD:AHTD STD. MON. STAMPED PN:10
11	2033094.7177	0.0210	1178618.6141	0.0230	332.77	0.023	CTL	PD:AHTD STD. MON. STAMPED PN:11
12	2022662.2135	0.0090	1158215.6766	0.0060	447.82	0.002	CTL	PD:AHTD STD. MON. STAMPED PN:12
13	2022436.0843	0.0040	1157712.2658	0.0040	462.94	0.002	CTL	PD:AHTD STD. MON. STAMPED PN:13
14	2022122.2449	0.0050	1157143.3178	0.0050	429.68	0.002	CTL	PD:AHTD STD. MON. STAMPED PN:14
15	2021672.9253	0.0060	1156285.7926	0.0050	424.94	0.003	CTL	PD:AHTD STD. MON. STAMPED PN:15
16	2022540.2923	0.0060	1157128.1501	0.0050	454.10	0.002	CTL	PD:AHTD STD. MON. STAMPED PN:16
17	2021544.6093	0.0050	1157064.1103	0.0050	414.61	0.003	CTL	PD:AHTD STD. MON. STAMPED PN:17
18	2021460.0837	0.0171	1155889.9998	0.0152	416.28	0.029	CTL	PD:AHTD STD. MON. STAMPED PN:18
19	2021119.5626	0.0228	1154926.8645	0.0214	377.73	0.029	CTL	PD:AHTD STD. MON. STAMPED PN:19
20	2020875.4701	0.0279	1153620.5198	0.0266	376.73	0.030	CTL	PD:AHTD STD. MON. STAMPED PN:20
21	2020738.5483	0.0231	1152765.4723	0.0230	403.54	0.030	CTL	PD:AHTD STD. MON. STAMPED PN:21
22	2020593.4950	0.0227	1152213.3520	0.0218	410.95	0.030	CTL	PD:AHTD STD. MON. STAMPED PN:22
23	2020401.9881	0.0206	1151670.5779	0.0200	416.87	0.031	CTL	PD:AHTD STD. MON. STAMPED PN:23
24	2020177.2604	0.0225	1151095.4884	0.0214	421.46	0.031	CTL	PD:AHTD STD. MON. STAMPED PN:24
25	2019611.8246	0.0244	1150324.6916	0.0233	422.04	0.031	CTL	PD:AHTD STD. MON. STAMPED PN:25
26	2019624.1069	0.0198	1151719.9706	0.0195	414.41	0.031	CTL	PD:AHTD STD. MON. STAMPED PN:26
27	2018621.5603	0.0221	1151424.9996	0.0212	432.05	0.031	CTL	PD:AHTD STD. MON. STAMPED PN:27
28	2029135.3382	0.0250	1157406.2981	0.0280	469.53	0.167	CTL	PD:AHTD STD. MON. STAMPED PN:28
29	2030063.1481	0.0293	1157442.3094	0.0331	474.91	0.193	CTL	PD:AHTD STD. MON. STAMPED PN:29
30	2026976.8933	0.0229	1151367.0529	0.0256	423.57	0.177	CTL	PD:AHTD STD. MON. STAMPED PN:30
31	2026996.5746	0.0230	1151826.5137	0.0258	425.56	0.173	CTL	PD:AHTD STD. MON. STAMPED PN:31
32	2021357.9454	0.0198	1155482.1298	0.0188	403.78	0.003	CTL	PD:AHTD STD. MON. STAMPED PN:1
33	2020990.4836	0.0167	1154191.8282	0.0158	375.31	0.004	CTL	PD:AHTD STD. MON. STAMPED PN:3
34	2020747.1055	0.0205	1152738.9886	0.0196	405.35	0.004	CTL	PD:AHTD STD. MON. STAMPED PN:6
902	2021969.8495	30.0000	1156852.3587	30.0000	421.81	0.026	TBM	PD:CHISELED SQUARE, W EDGE OF CONC STORM DRAIN
903	2022227.6183	30.0000	1157430.1965	30.0000	448.07	0.026	TBM	PD:CHISELED SQUARE, SW CORNER OF STORM DRAIN
904	2022746.3238	30.0000	1158399.0389	30.0000	442.41	0.025	TBM	PD:CHISELED SQUARE, N EDGE OF CONC STORM DRAIN
905	2023350.3403	30.0000	1159375.0937	30.0000	414.45	0.024	TBM	PD:CHISELED SQUARE, N EDGE OF CONC STORM DRAIN
906	2023938.2301	30.0000	1160288.0048	30.0000	428.62	0.023	TBM	PD:CHISELED SQUARE, SW CORNER OF STORM DRAIN
907	2024779.8707	30.0000	1161377.2303	30.0000	451.24	0.023	TBM	PD:CHISELED SQUARE, S EDGE OF CONC STORM DRAIN
908	2025588.2886	30.0000	1162304.5835	30.0000	455.89	0.022	TBM	PD:CHISELED SQUARE, S EDGE OF CONC STORM DRAIN
100	2023724.3898	0.0001	1160018.2817	0.0001	419.95	0.024	GPS	PD:AHTD GPS #620027
101	2024608.0502	0.0001	1161039.1193	0.0001	452.61	0.023	GPS	PD:AHTD GPS 620027A
102	2025637.8132	0.0001	1166594.7154	0.0001	406.03	0.038	GPS	PD:AHTD GPS #620020A
103	2020015.3132	0.0001	1156396.0001	0.0001	405.03		GPS	PD:AHTD GPS #620019
104	2020952.0790	0.0001	1154202.2864	0.0001	375.15		GPS	PD:AHTD GPS #620019A
997	282228.3349	10.0000	1179195.9644	10.0000	351.69	0.000	BM	PD:NGS 1ST ORDER BM D 291
998	285022.7267	10.0000	1178361.1922	10.0000	401.14	0.000	BM	PD:NGS 1ST ORDER BM E 291

*Standard Primary Control Monument - Rebar and Cap - Standard - 5/8"x 24" Rebar with 2"Aluminum Cap stamped: "(include all common information here)" plus other markings indicated in the point description of the individual point. AHTD monuments will be stamped "Arkansas Hwy & Trans Dept" with "PN: ###" & "Job ######". Monuments that are set by Consultants will be stamped "Arkansas Hwy & Trans Dept" with "PN:###", "Job#######", & "PS#####". The consultant Professional Surveyor in charge will stamp his/her PS license number on the cap.

**Standard GPS Control Point Monument - 5/8" x 48" Rebar with 2.5"Aluminum Cap stamped: "(include all common information here)" plus other markings indicated in the point description of the individual point. These monuments will be stamped "Ark. State Hwy Trans. Dept.", "GPS Survey", & "Point No. ########".

SX, SY, SZ – Represents the standard error estimate of the coordinate values of each point at the 67% confidence level (one sigma) based on the least squares analysis of the control network. See the AASHTO SDMS Technical Data Guide data tag definition for SX:, SY:, and SZ: for additional information. These values shall be used when control points are added and the entire network is reprocessed using least square analysis. A value of 0.001 is defined as fixed (no adjustment) in the least square analysis process. A value of 30 is defined as location by handheld GPS device or scaled from USGS Quadmap.

Reference Control points (1500 series) shall be used to re-establish horizontal datum if the primary control has been destroyed. These reference control points shall not be used for vertical control unless the elevation has been established from the project datum with 3-wire level techiniques.

All additional project control shall be occupied, measured, and adjusted with direct survey ties to at least two of the control points listed in the table above. New survey control shall not be independent of the survey control listed above. This includes horizontal coordinates and elevations.

Positional Accuracy:
- Horizontal - GPS (1.0 cm ± 1PPM) — *PN: 100-104*
- Horizontal - Primary (2.0cm ± 20PPM): — *PN:3-34*
- Horizontal - Secondary (3 cm ± 50PPM): — *PN:N/A*
- Vertical - NGS 1st Order (±4mm x √dist in km) — *PN:997 & 998*
- Vertical - NGS 2nd Order (±6mm x √dist in km) — *PN:N/A*
- Vertical - NGS 3rd Order (±8mm x √dist in km) — *PN:N/A*

Horizontal Datum: NAD 1983 (1997) State Plane Zone: 0302 - South Zone
The adjustment year is based on metadata in the SDMS Control file
A project CAF of: 0.9999621733 has been used to compute the above coordinates.
The project CAF shall have a minimum precision of 9 digits right of the decimal.
This CAF is intended for use within the project limits only.
Grid Distance = Ground Distance X CAF
If Coordinates are listed as Ground:
To compute Grid Coordinates, multiply the Ground Coordinates by CAF about the origin of X=0 & Y=0
If Coordinates are listed as Grid:
To compute Ground Coordinates, divide the Grid Coordinates by CAF about the origin of X=0 & Y=0

Vertical Datum: NAVD 1988 based NGS BM:
A project Elevation Factor of: 0.9999799079 has been computed and incorporated in the above CAF.
This is based on the average elevation of the project: 420.05 Feet
3-Wire Leveling techniques have been used to establish elevations on
Points: 3-34, 100-104 From NGS BM: D 291 & E 291

Basis of Bearing: Grid Bearings based on AHTD GPS points: *620019-620019A, 620020A, 620027-620027A*
Convergence Angle is: 0-17-00.33471 LEFT at PN: 100
LT: 34-37-13 N LG: 092-30-23 W
Grid Azimuth = Astronomical Azimuth - Convergence Angle

12/14/2017

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	81	303

(2) SURVEY CONTROL DETAIL SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

CONST C.L.

POINT NO.	TYPE	STATION	NORTHING	EASTING
8020	PC	86+40.24	2020206.8131	1151211.8843
8022	PT	94+88.66	2020541.7901	1151988.0049
8023	PC	104+26.60	2020782.3480	1152894.5696
8025	PT	106+82.19	2020836.8019	1153144.2121
8026	PC	122+84.37	2021108.1043	1154723.2521
8028	PT	141+82.70	2021730.8196	1156507.3616
8029	PC	160+12.02	2022610.2078	1158111.4427
8031	PT	166+38.62	2022926.2935	1158652.3827
8032	PC	182+65.62	2023785.2275	1160034.1780
8034	PT	185+03.97	2023923.3488	1160228.2416
8035	PC	193+69.45	2024468.1990	1160900.6925
8037	PT	203+05.95	2024995.8081	1161673.1701
8038	PC	206+26.81	2025154.5387	1161952.0094
8040	PT	210+52.14	2025449.5150	1162251.7850
8041	PC	211+71.69	2025552.4413	1162312.5963
8043	PRC	222+34.51	2026235.1215	1163102.7872

SPRINGHILL RD. C.L.

POINT NO.	TYPE	STATION	NORTHING	EASTING
8200	POB	50+00.00	2020761.4196	1156811.3426
8201	PC	50+95.38	2020856.7731	1156813.4979
8203	PT	54+49.30	2021199.5914	1156891.3677
8204	PC	56+48.37	2021381.0194	1156973.2851
8206	PT	60+84.43	2021802.6599	1157073.7207
8207	PC	64+59.22	2022177.0911	1157090.0471
8209	PT	66+53.68	2022371.2932	1157100.1665
8210	PC	68+68.56	2022585.7790	1157113.1687
8212	PT	69+86.52	2022703.5565	1157119.7002
8213	POE	75+06.50	2023222.8762	1157145.8191

HWY. 183 C.L.

POINT NO.	TYPE	STATION	NORTHING	EASTING
8300	POB	0+00.00	2024138.1620	1162430.1635
8301	PC	9+65.17	2025066.0757	1162164.5904
8303	PT	10+50.10	2025145.6962	1162135.2679
8304	PC	11+37.32	2025225.0909	1162099.1459
8306	PT	13+60.56	2025354.3308	1161928.3406
8307	POE	13+65.80	2025355.1235	1161923.1546

STAGE 2 CONST C.L.

POINT NO.	TYPE	STATION	NORTHING	EASTING
8405	POB	200+00.00	2020664.6813	1152494.6962
8406	PC	200+06.64	2020666.7141	1152501.0206
8408	PT	210+83.67	2020923.0371	1153546.1872
8409	PC	217+68.40	2021038.8866	1154221.0448
8411	PT	218+12.55	2021046.4817	1154264.5345
8412	PC	224+38.13	2021155.8847	1154880.4724
8414	PT	243+24.11	2021782.6530	1156650.2405
8415	PC	243+77.92	2021808.6846	1156697.3351
8417	PT	244+04.48	2021821.4955	1156720.6073
8418	PC	252+33.98	2022220.2522	1157447.9744
8420	PT	253+48.42	2022276.0113	1157547.9012
8421	PC	258+69.09	2022533.1201	1158000.6667
8423	PT	261+14.97	2022657.9527	1158212.4832
8424	POE	266+91.63	2022958.6988	1158704.5140

WATERFALL WAY

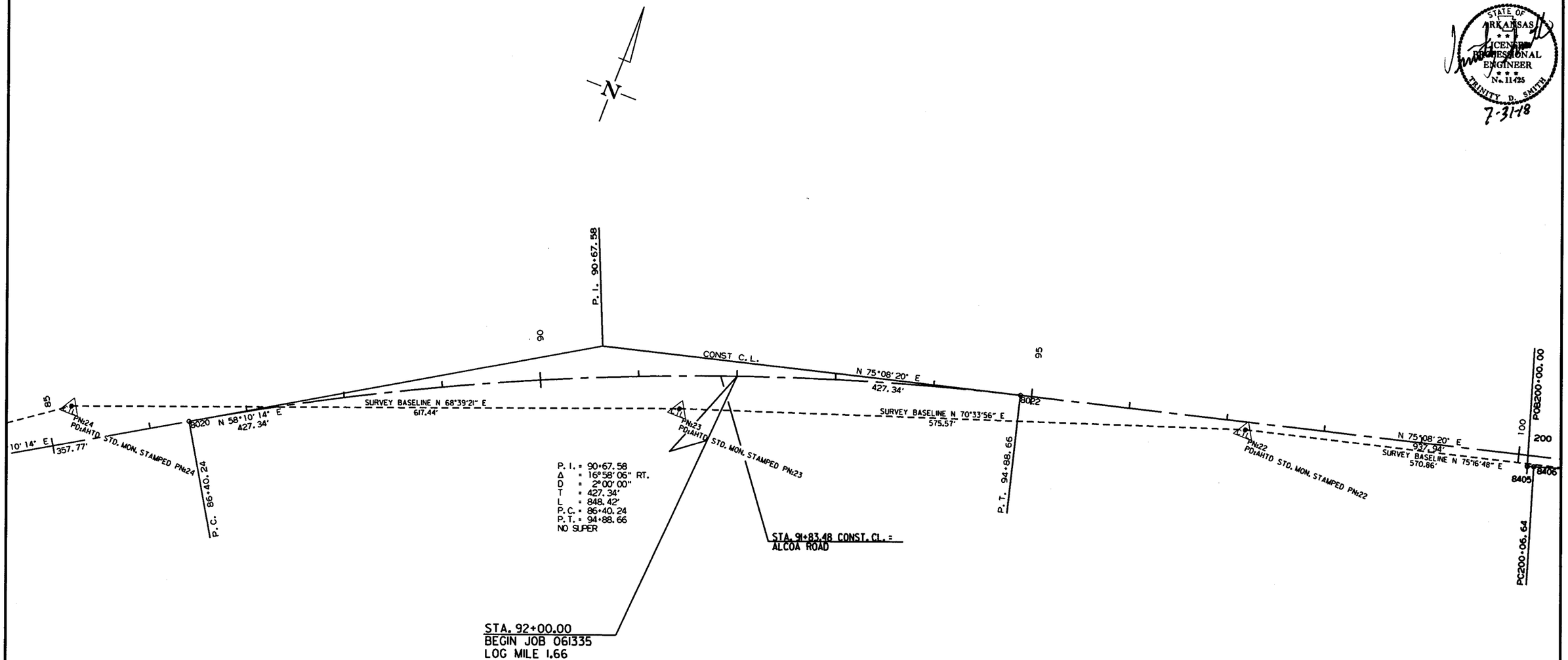
POINT NO.	TYPE	STATION	NORTHING	EASTING
8400	POB	300+00.00	2021096.7567	1154657.2067
8401	PC	300+90.76	2021186.2040	1154641.8384
8403	PT	302+88.87	2021345.8105	1154534.5890
8404	POE	305+34.23	2021475.6509	1154326.3967

SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	82	303

(2) SURVEY CONTROL DETAIL SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18



12/14/2017

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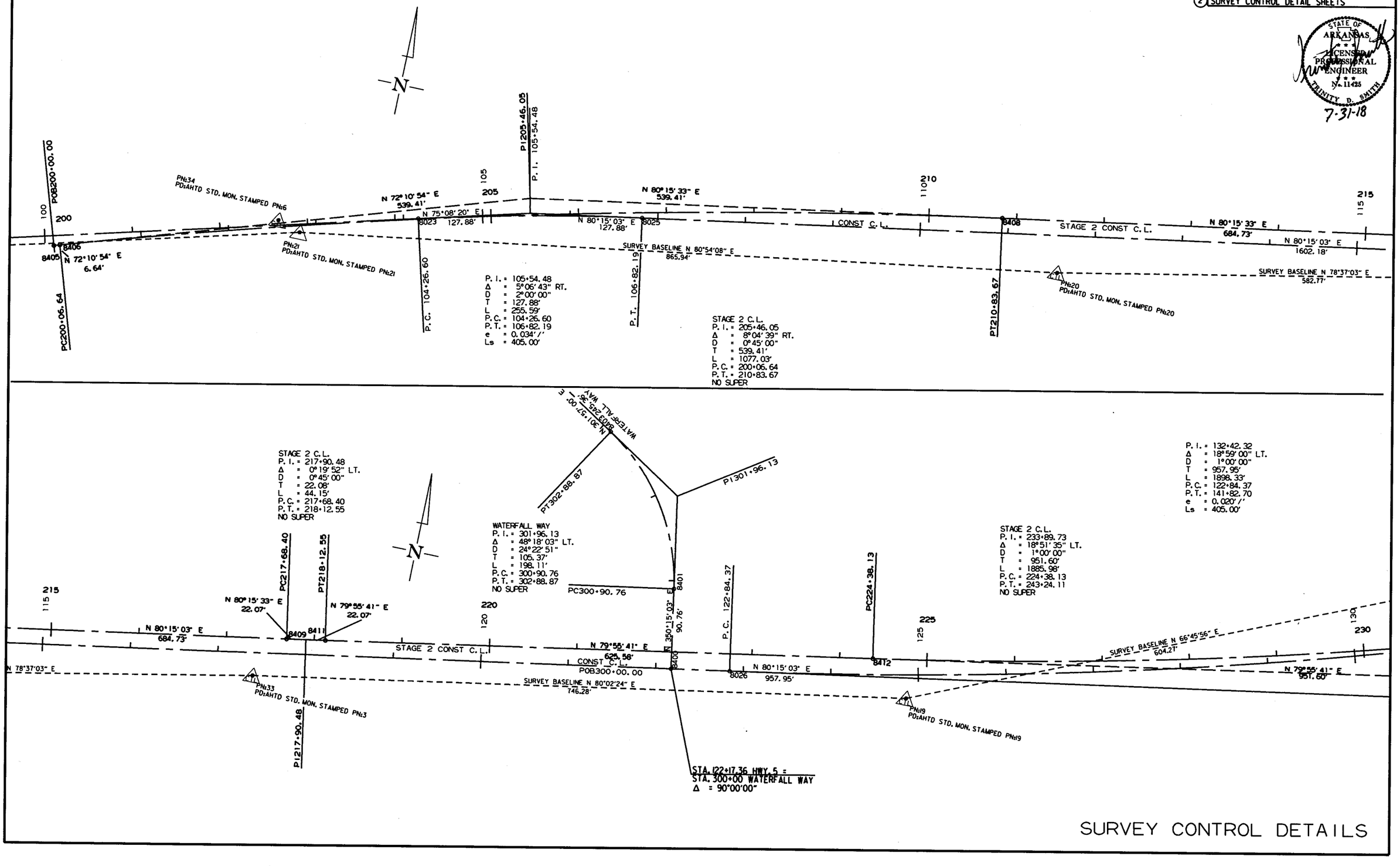
SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	83	303

(2) SURVEY CONTROL DETAIL SHEETS

STATE OF ARKANSAS
LICENSED
PROFESSIONAL
ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18



12/14/2017

R061335.DGN

SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	84	303

(2) SURVEY CONTROL DETAIL SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

P. I. = 132+42.32
Δ = 18°59'00" LT.
D = 1°00'00"
T = 957.95'
L = 1898.33'
P.C. = 122+84.37
P.T. = 141+82.70
e = 0.020'/'
Ls = 405.00'

STAGE 2 C.L.
P. I. = 233+89.73
Δ = 18°51'35" LT.
D = 1°00'00"
T = 951.60'
L = 1885.98'
P.C. = 224+38.13
P.T. = 243+24.11
NO SUPER

PNI32 PDIAHTD STD. MON. STAMPED PNI

PNI8 PDIAHTD STD. MON. STAMPED PNI8

SURVEY BASELINE N 75°56'28" E
420.46'

SURVEY BASELINE N 61°43'49" E
449.39'

CONST C.L.

PNI5 PDIREBAR/CAP

N 80°15'03" E
957.95'

N 79°55'41" E
951.60'

N 61°04'06" E
951.60'

N 61°16'03" E
957.95'

STAGE 2 CONST C.L.

8028

N 61°16'03" E
1829.32'

8414

N 61°04'06" E
13.28'

8415

N 61°16'03" E
13.28'

8417

N 61°04'06" E
53.81'

P. I. 132+42.32

P 1233+89.73

P.T. 141+82.70

PT 243+24.11

P 1243+91.20

SURVEY BASELINE N 62°20'48" E
968.11'

STAGE 2 C.L.
P. I. = 243+91.20
Δ = 0°11'57" RT.
D = 0°45'00"
T = 13.28'
L = 26.56'
P.C. = 243+77.92
P.T. = 244+04.48
NO SUPER

PC 243+77.92

PT 244+04.48

P.I. 65+56.45

N 3°28'09" E
97.24'

P.I. 66+53.68

N 2°29'48" E
97.24'

8207

P.C. 64+59.22

SPRINGHILL RD. C.L.

STAGE 2 C.L.
P. I. = 252+91.20
Δ = 0°51'29" LT.
D = 0°45'00"
T = 57.22'
L = 114.44'
P.C. = 252+33.98
P.T. = 253+48.42
NO SUPER

PC 252+33.98

PT 253+48.42

SURVEY BASELINE N 6°07'06" E
649.77'

PNI4 PDIREBAR/CAP

CONST C.L.

N 61°16'03" E
829.50'

N 61°16'03" E
1829.32'

8418

N 61°16'03" E
57.22'

8420

N 60°24'34" E
57.22'

STAGE 2 CONST C.L.

N 60°24'34" E
520.67'

8421

N 60°24'34" E
122.95'

8029

N 58°33'55" E
122.95'

P 1252+91.20

P 1259+92.04

STAGE 2 C.L.
P. I. = 259+92.04
Δ = 1°50'39" LT.
D = 0°45'00"
T = 122.95'
L = 245.88'
P.C. = 258+69.09
P.T. = 261+14.97
NO SUPER

PC 258+69.09

P.C. 160+12.02

PNI3 PDIREBAR/CAP

SURVEY BASELINE N 65°48'38" E
551.87'

P.I. 60+84.43

N 2°29'48" E
374.79'

8206

STA. 148+40.75 HWY. 5 =
STA. 63+29.35 SPRINGHILL ROAD
Δ = 58°46'15"

12/14/2017

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SURVEY CONTROL DETAILS

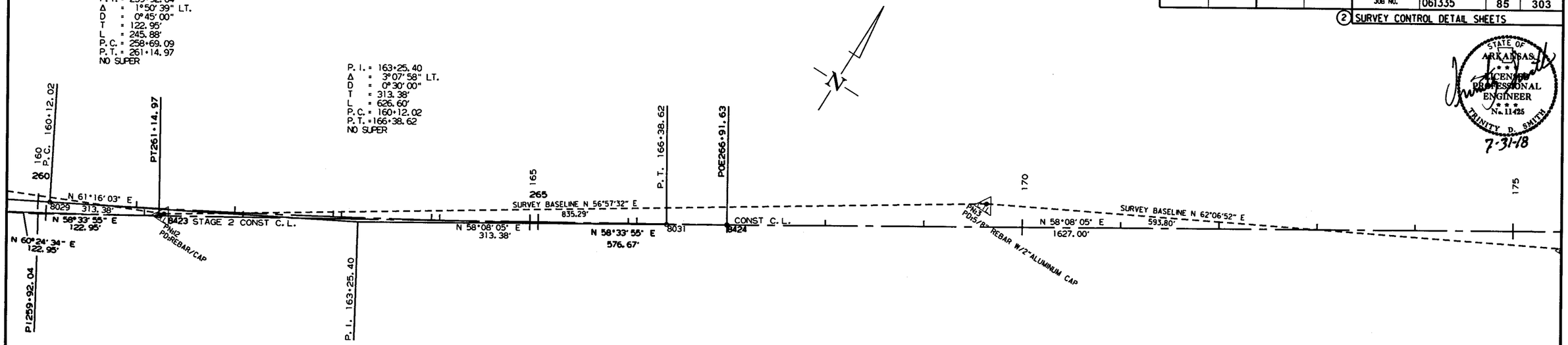
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	85	303

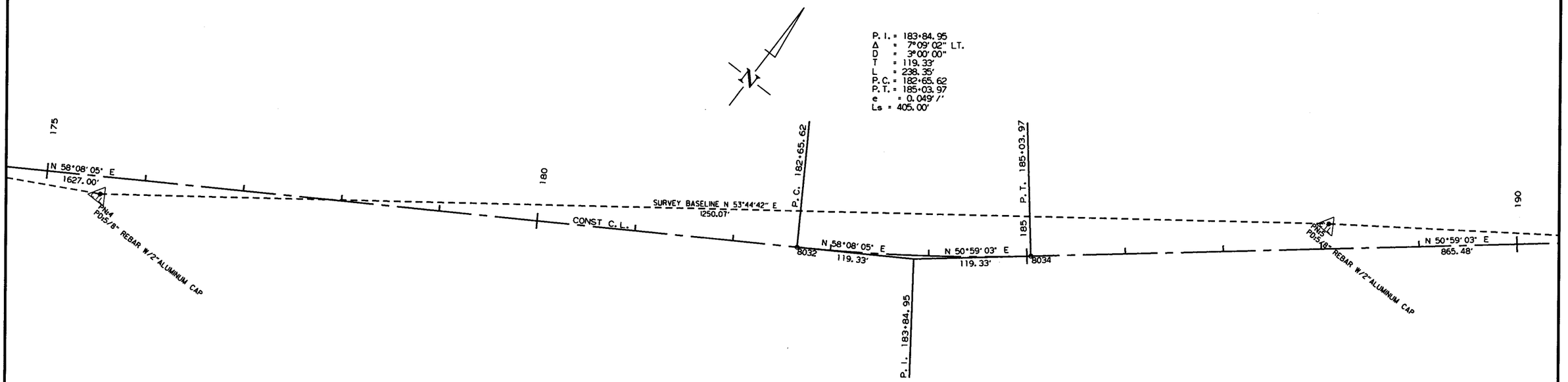
(2) SURVEY CONTROL DETAIL SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

STAGE 2 C.L.
P.I. = 259+92.04
Δ = 1°50'39" LT.
D = 0°45'00"
T = 122.95'
L = 245.88'
P.C. = 258+69.09
P.T. = 261+14.97
NO SUPER

P.I. = 163+25.40
Δ = 3°07'58" LT.
D = 0°30'00"
T = 313.38'
L = 626.60'
P.C. = 160+12.02
P.T. = 166+38.62
NO SUPER





12/14/2017

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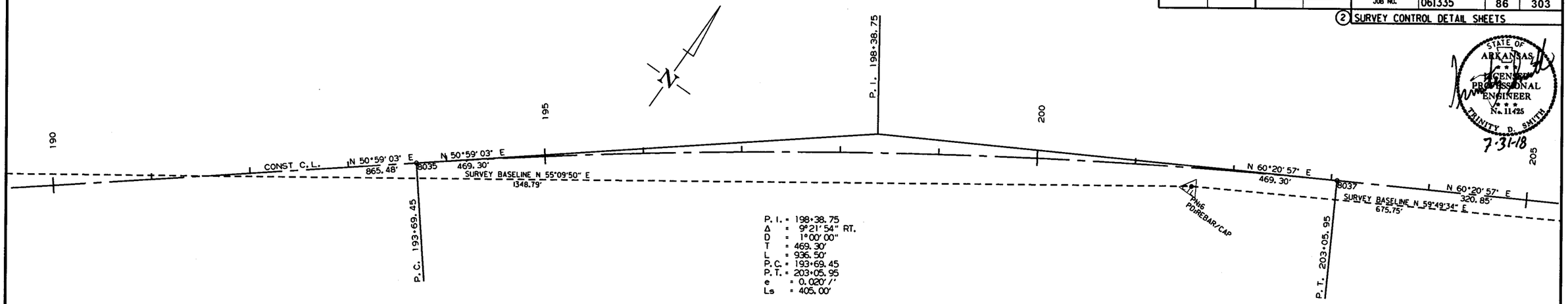
SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	86	303

(2) SURVEY CONTROL DETAIL SHEETS

STATE OF ARKANSAS
LICENSED
PROFESSIONAL
ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18



12/14/2017

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SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	87	303

(2) SURVEY CONTROL DETAIL SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

P.I. = 58+69.07
Δ = 21°48' 11.5" LT.
D = 5°00' 00.0"
T = 220.70'
L = 436.06'
P.C. = 56+48.37
P.T. = 60+84.43
e = 0.061'/'
Ls = 360.00'

STA. 148+40.75 HWY. 5 =
STA. 63+29.15 SPRINGHILL ROAD
Δ = 58°46'15"

P.I. = 69+27.54
Δ = 0°35' 24" LT.
D = 0°30' 00"
T = 58.98'
L = 117.96'
P.C. = 68+68.56
P.T. = 69+86.52
NO SUPER

P.I. = 65+56.45
Δ = 0°58' 21" RT.
D = 0°30' 00"
T = 97.23'
L = 194.46'
P.C. = 64+59.22
P.T. = 66+53.68
NO SUPER

STA. 55+50.00
BEGIN SPRINGHILL RD.
CONSTRUCTION

STA. 71+50.00
END SPRINGHILL RD.
CONSTRUCTION

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SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	88	303

(2) PLAN SHEET STA. 85+00 - STA. 100+00

STATE OF ARKANSAS
LICENSED
PROFESSIONAL
ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

STA. 91+79 IN PLACE
18" X 41' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 92+07.00 CONSTRUCT
DI ON LT. H = 4'-0"
AND 30" X 70' R.C. PIPE INLET
WITH F.E.S.
AND 30" X 48' R.C. PIPE OUTLET
CONNECT TO D.I. ON LT.
@ STA. 92+48.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
30" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 118 LIN. FT.
30" SLPPMCC PIPE (CLASS III)
(TYPE 3 BEDDING) = 48 LIN. FT.
30" F.E.S. = 1 EACH

STA. 92+15.99 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 3.4 SQ. YDS.

STA. 92+18.16 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 2.7 SQ. YDS.

STA. 92+24 IN PLACE
24" X 29' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 92+29.22 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 3.1 SQ. YDS.

STA. 92+31.26 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 3.4 SQ. YDS.

STA. 92+48.00 CONSTRUCT
DI ON LT. H = 8'-4"
AND 30" X 320' PIPE OUTLET
CONNECT TO D.I. ON LT.
@ STA. 95+67.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 5' DIA.
30" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 320 LIN. FT.
30" SLPPMCC (CLASS III)
(TYPE 3 BEDDING) = 320 LIN. FT.

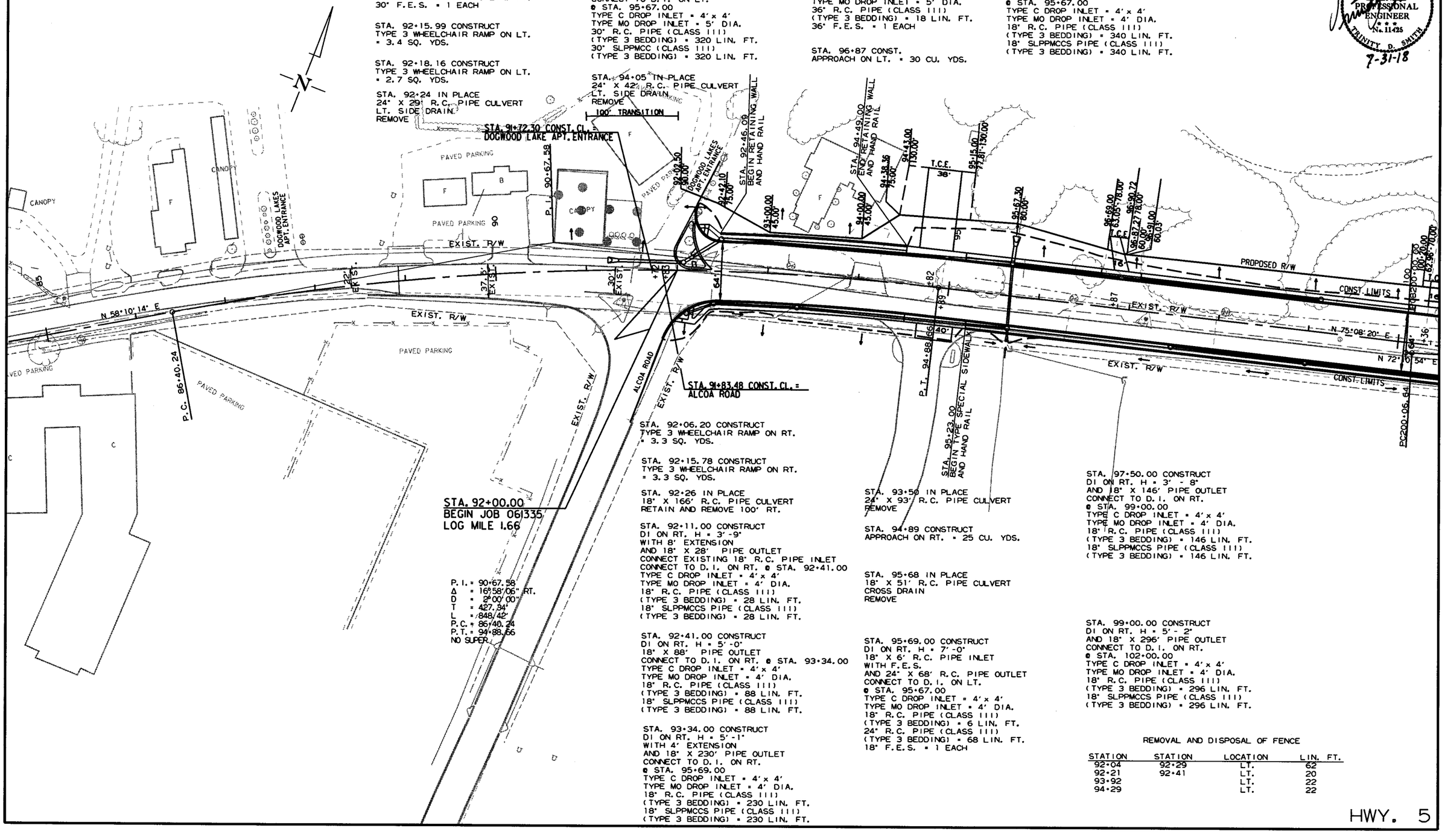
STA. 94+05 IN PLACE
24" X 42' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 94+82 IN PLACE
24" X 21' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONST.
APPROACH ON LT. = 470 CU. YDS.

STA. 95+67.00 CONSTRUCT
DI ON LT. H = 8'-0"
AND 36" X 18' R.C.
PIPE OUTLET WITH F.E.S.
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 5' DIA.
36" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 18 LIN. FT.
36" F.E.S. = 1 EACH

STA. 96+87 CONST.
APPROACH ON LT. = 30 CU. YDS.

STA. 99+10.00 CONSTRUCT
DI ON LT. H = 6'-0"
WITH 4' EXTENSION
AND 18" X 340' PIPE OUTLET
CONNECT TO D.I. ON LT.
@ STA. 95+67.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 340 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 340 LIN. FT.



STA. 92+06.20 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 3.3 SQ. YDS.

STA. 92+15.78 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 3.3 SQ. YDS.

STA. 92+26 IN PLACE
18" X 166' R.C. PIPE CULVERT
RETAIN AND REMOVE 100' RT.

STA. 92+11.00 CONSTRUCT
DI ON RT. H = 3'-9"
WITH 8' EXTENSION
AND 18" X 28' PIPE OUTLET
CONNECT EXISTING 18" R.C. PIPE INLET
CONNECT TO D.I. ON RT. @ STA. 92+41.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 28 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 28 LIN. FT.

STA. 92+41.00 CONSTRUCT
DI ON RT. H = 5'-0"
18" X 88' PIPE OUTLET
CONNECT TO D.I. ON RT. @ STA. 93+34.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 88 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 88 LIN. FT.

STA. 93+34.00 CONSTRUCT
DI ON RT. H = 5'-1"
WITH 4' EXTENSION
AND 18" X 230' PIPE OUTLET
CONNECT TO D.I. ON RT.
@ STA. 95+69.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 230 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 230 LIN. FT.

STA. 93+50 IN PLACE
24" X 93' R.C. PIPE CULVERT
REMOVE

STA. 94+89 CONSTRUCT
APPROACH ON RT. = 25 CU. YDS.

STA. 95+68 IN PLACE
18" X 51' R.C. PIPE CULVERT
CROSS DRAIN
REMOVE

STA. 95+69.00 CONSTRUCT
DI ON RT. H = 7'-0"
18" X 6' R.C. PIPE INLET
WITH F.E.S.
AND 24" X 68' R.C. PIPE OUTLET
CONNECT TO D.I. ON LT.
@ STA. 95+67.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 6 LIN. FT.
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 68 LIN. FT.
18" F.E.S. = 1 EACH

STA. 97+50.00 CONSTRUCT
DI ON RT. H = 3'-8"
AND 18" X 146' PIPE OUTLET
CONNECT TO D.I. ON RT.
@ STA. 99+00.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 146 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 146 LIN. FT.

STA. 99+00.00 CONSTRUCT
DI ON RT. H = 5'-2"
AND 18" X 296' PIPE OUTLET
CONNECT TO D.I. ON RT.
@ STA. 102+00.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 296 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 296 LIN. FT.

REMOVAL AND DISPOSAL OF FENCE

STATION	STATION	LOCATION	LIN. FT.
92+04	92+29	LT.	62
92+21	92+41	LT.	20
93+92		LT.	22
94+29		LT.	22

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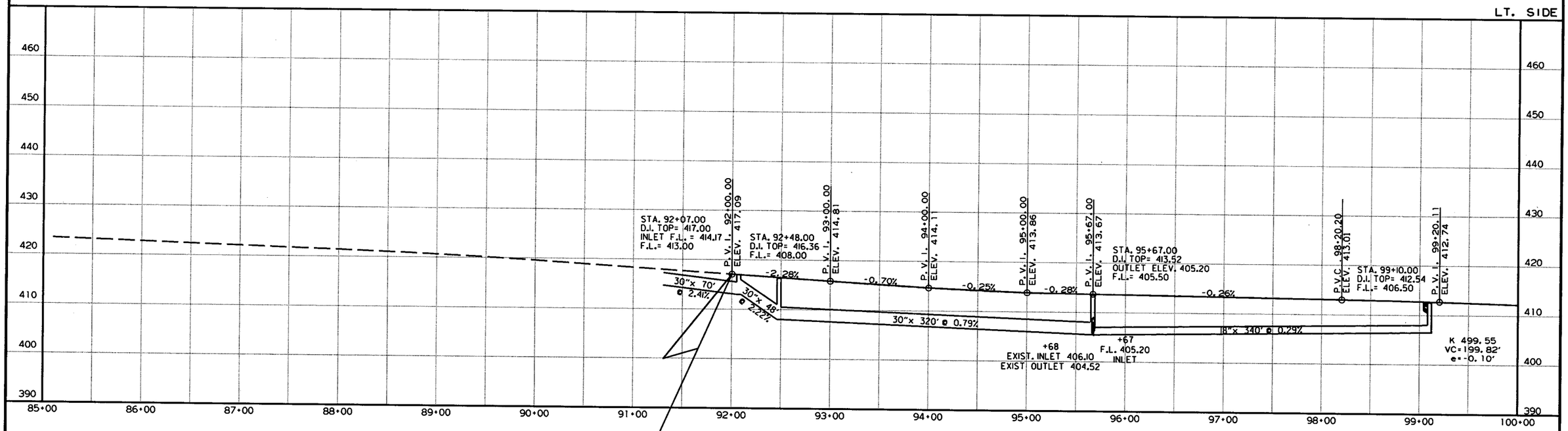
HWY. 5

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	89	303

(2) PROFILE SHEET STA. 85+00 - STA. 100+00

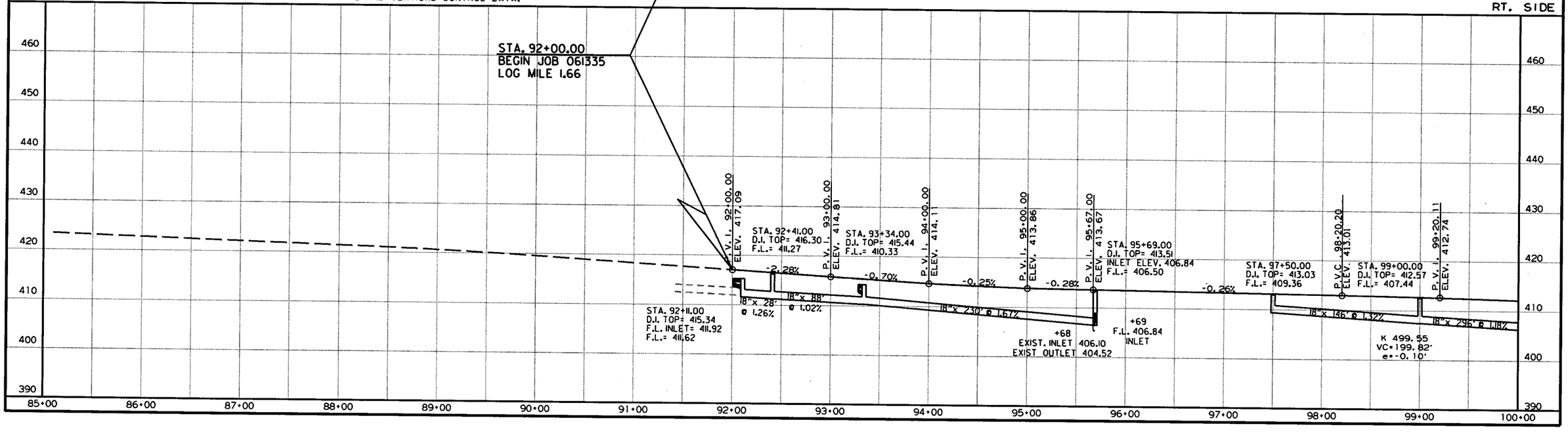
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

LT. SIDE



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

RT. SIDE



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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	90	303

(2) PLAN SHEET STA. 100+00 - STA. 115+00

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

STA. 100+36 CONST.
APPROACH ON LT. = 15 CU. YDS.

STA. 102+10.00 CONSTRUCT
DI ON LT. H = 4'-2"
WITH 4' EXTENSION
AND 18" X 70' R.C. PIPE OUTLET
CONNECT TO D.I. ON RT.
@ STA. 102+00.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS IV)
(TYPE 3 BEDDING) = 70 LIN. FT.

STA. 102+46 IN PLACE
18" X 75' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONST.
APPROACH ON LT. = 75 CU. YDS.

STA. 108+50.00 CONSTRUCT
DI ON LT. H = 4'-0"
AND 18" X 102' PIPE OUTLET
CONNECT TO D.I. ON LT.
@ STA. 109+55.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 102 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 102 LIN. FT.

STA. 109+55.00 CONSTRUCT
DI ON LT. H = 3'-4"
AND 18" X 74' PIPE OUTLET
CONNECT TO DROP INLET ON LT.
@ STA. 110+32
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 74 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 74 LIN. FT.

STA. 110+02 CONST.
APPROACH ON LT. = 105 CU. YDS.

STA. 110+32.00 CONSTRUCT
DI ON LT. H = 3'-9"
AND 18" X 30' PIPE OUTLET
CONNECT TO D.I. ON LT.
@ STA. 110+65.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 30 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 30 LIN. FT.

STA. 110+65.00 CONSTRUCT
DI ON LT. H = 4'-1"
AND 18" X 82' PIPE OUTLET
CONNECT TO D.I. ON RT.
@ STA. 111+50.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 82 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 82 LIN. FT.

STA. 111+50.00 CONSTRUCT
DI ON LT. H = 5'-6"
WITH 4' EXTENSION
AND 18" X 336' PIPE OUTLET
CONNECT TO D.I. ON LT.
@ STA. 114+90.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 336 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 336 LIN. FT.

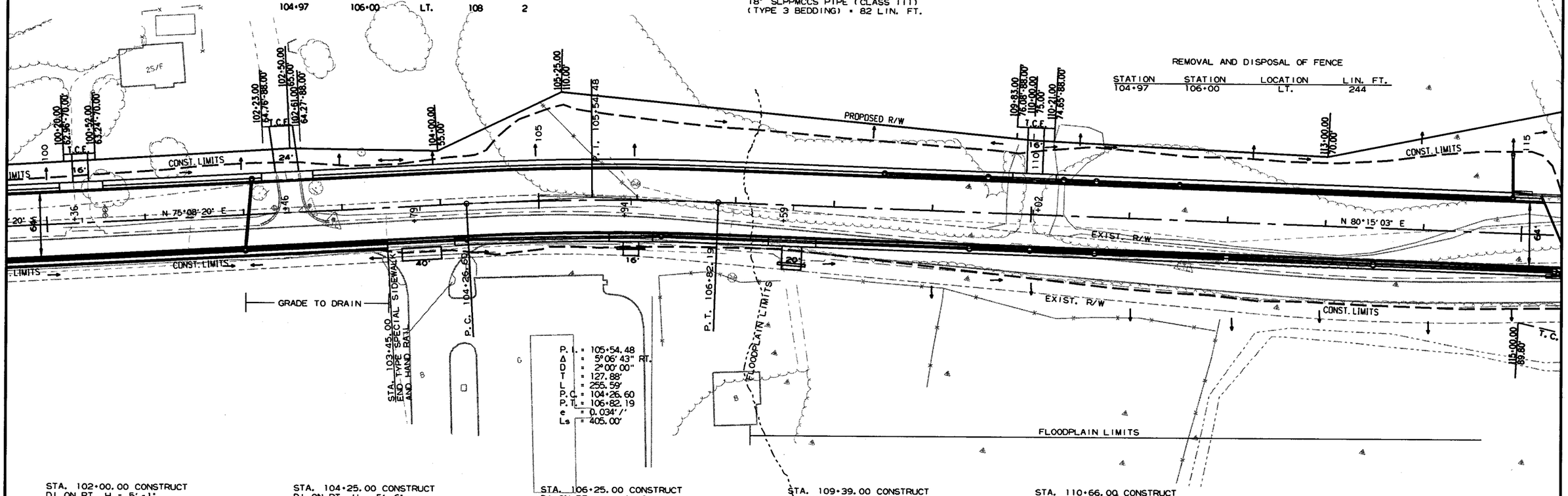
STA. 114+90.00 CONSTRUCT
DI ON LT. H = 8'-6"
AND 18" X 38' R.C. PIPE
OUTLET WITH F.E.S.
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 38 LIN. FT.
18" F.E.S. = 1 EACH

FENCE

STATION	STATION	SIDE	TYPE C	GATES
104+97	106+00	LT.	108	2

REMOVAL AND DISPOSAL OF FENCE

STATION	STATION	LOCATION	LIN. FT.
104+97	106+00	LT.	244



STA. 102+00.00 CONSTRUCT
DI ON RT. H = 5'-1"
WITH 4' EXTENSION
AND 18" X 6' PIPE INLET
AND 18" X 222' PIPE OUTLET
CONNECT TO D.I. ON RT.
@ STA. 104+25.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 228 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 222 LIN. FT.

STA. 102+50 IN PLACE
18" X 33' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 103+79 CONST.
APPROACH ON RT. = 5 CU. YDS.

STA. 104+25.00 CONSTRUCT
DI ON RT. H = 5'-6"
WITH 8' EXTENSION
AND 18" X 194' PIPE OUTLET
CONNECT TO D.I. ON RT.
@ STA. 106+25.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 194 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 194 LIN. FT.

STA. 105+94 IN PLACE
18" X 20' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
21" X 15" X 28' ARCH PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH= 5 CU. YDS.

STA. 106+25.00 CONSTRUCT
DI ON RT. H = 4'-8"
WITH 8' EXTENSION
AND 18" X 310' PIPE OUTLET
CONNECT TO D.I. ON RT.
@ STA. 109+39.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 310 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 310 LIN. FT.

STA. 107+59 IN PLACE
18"X 24" X 20' C.M. ARCH PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
28" X 20" X 28' ARCH PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 10 CU. YDS.

STA. 109+39.00 CONSTRUCT
DI ON RT. H = 3'-8"
WITH 8' EXTENSION
AND 24" X 56' PIPE OUTLET
CONNECT TO D.I. ON RT.
@ STA. 110+00.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 5' DIA.
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 56 LIN. FT.
24" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 56 LIN. FT.

STA. 110+00.00 CONSTRUCT
DI ON RT. H = 3'-9"
AND 24" X 62' PIPE OUTLET
CONNECT TO D.I. ON RT.
@ STA. 110+66.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 62 LIN. FT.
24" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 62 LIN. FT.

STA. 110+66.00 CONSTRUCT
DI ON RT. H = 4'-5"
AND 36" X 280' PIPE OUTLET
CONNECT TO D.I. ON RT.
@ STA. 113+50.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 5' DIA.
36" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 280 LIN. FT.
36" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 280 LIN. FT.

STA. 113+50.00 CONSTRUCT
DI ON RT. H = 8'-4"
AND 36" X 180' PIPE OUTLET
CONNECT TO D.I. ON RT.
@ STA. 115+35.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 5' DIA.
36" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 180 LIN. FT.
36" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 180 LIN. FT.

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HWY. 5

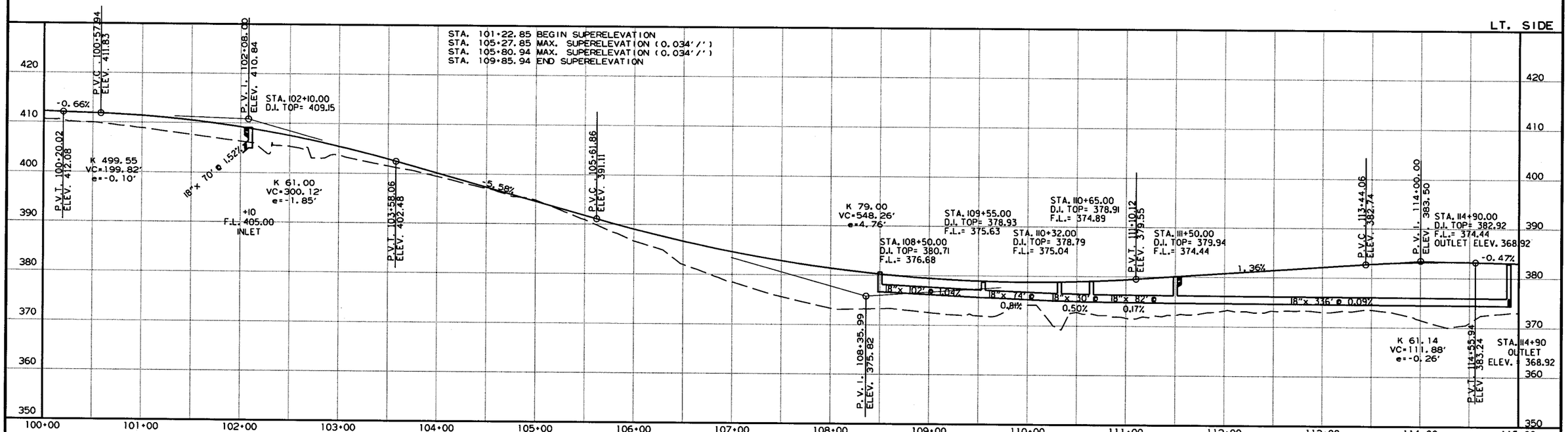
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	91	303

(2) PROFILE SHEET STA. 100+00 - STA. 115+00

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

LT. SIDE

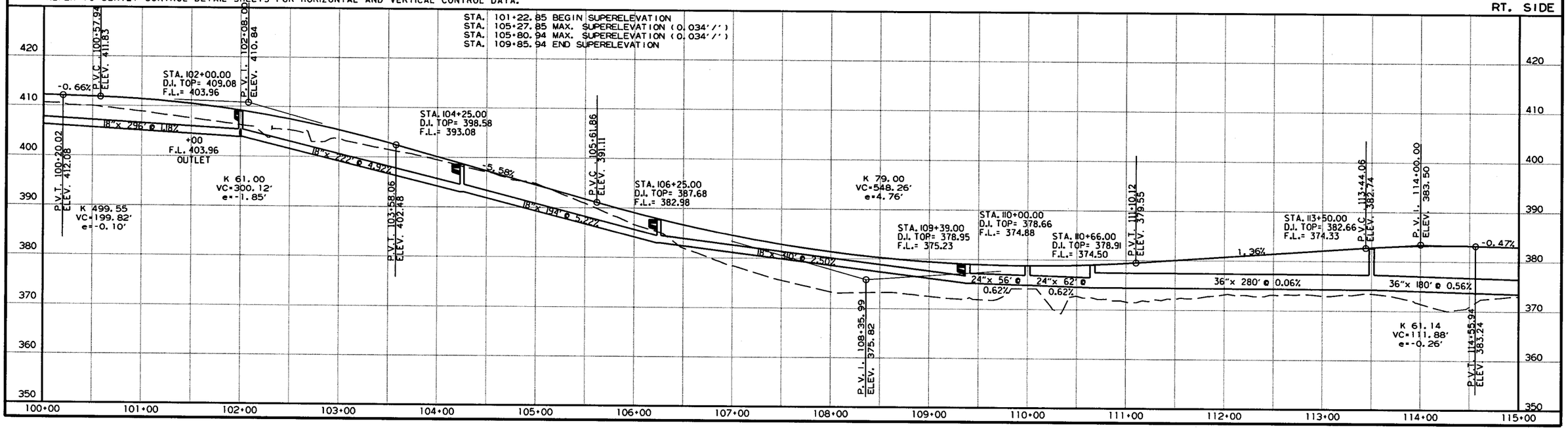
STA. 101+22.85 BEGIN SUPERELEVATION
STA. 105+27.85 MAX. SUPERELEVATION (0.034'/')
STA. 105+80.94 MAX. SUPERELEVATION (0.034'/')
STA. 109+85.94 END SUPERELEVATION



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

RT. SIDE

STA. 101+22.85 BEGIN SUPERELEVATION
STA. 105+27.85 MAX. SUPERELEVATION (0.034'/')
STA. 105+80.94 MAX. SUPERELEVATION (0.034'/')
STA. 109+85.94 END SUPERELEVATION



12/7/2017

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	92	303

(2) PLAN SHEET STA. 115+00 - STA. 130+00

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

STA. 115+36.83 - STA. 117+27.17 CONSTRUCT
190.46' X 66'-0" CLEAR ROADWAY BRIDGE.
188'-0" CONTINUOUS COMP. W-BEAM UNIT (61'-66'-61')
BR. NO. 07365

STA. 117+30.00 CONSTRUCT
DI ON LT. H = 8'-9"
AND 18" X 44' R.C. PIPE
OUTLET WITH F.E.S.
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 44 LIN. FT.
18" F.E.S. = 1 EACH

STA. 120+96.00 CONSTRUCT
DI ON LT. H = 6'-0"
WITH 4' EXTENSION
AND 18" X 28' R.C. PIPE
OUTLET WITH F.E.S.
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 28 LIN. FT.
18" F.E.S. = 1 EACH

STA. 121+47.01 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 4.9 SQ. YDS.

STA. 122+17 IN PLACE
TRP. 36" X 48" X 130'
R.C. ARCH PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
8' X 5' X 108' R.C. BOX CULVERT
W/STRAIGHT WINGS LT. & RT.
LT. SIDE DRAIN
CONST. APPROACH ON LT. = 155 CU. YDS.
Q10 = 166 C.F.S. D.A. = 93 ACRES

STA. 122+80.54 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 5.1 SQ. YDS.

STA. 123+15.00 CONSTRUCT
DI ON LT. H = 3'-8"
WITH 4' EXTENSION
AND 18" X 12' R.C. PIPE
OUTLET WITH F.E.S.
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 12 LIN. FT.
18" F.E.S. = 1 EACH

STA. 123+72.00 CONSTRUCT
DI ON LT. H = 3'-0"
AND 18" X 88' PIPE OUTLET
CONNECT TO D. I. ON LT.
@ STA. 124+64.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 88 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 88 LIN. FT.

STA. 124+64.00 CONSTRUCT
DI ON LT. H = 5'-7"
18" X 8' R.C. PIPE INLET W/F.E.S.
AND 30" X 68' R.C. PIPE OUTLET
CONNECT TO D. I. ON RT.
@ STA. 124+64.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 5' DIA.
18" R.C. PIPE (CLASS III)
(TYP 3 BEDDING) = 8 LIN. FT.
30" R.C. PIPE (CLASS IV)
(TYPE 3 BEDDING) = 68 LIN. FT.
18" F.E.S. = 1 EACH

STA. 125+00.00 CONSTRUCT
DI ON LT. H = 3'-10"
WITH 4' EXTENSION
AND 18" X 32' PIPE OUTLET
CONNECT TO D. I. ON LT.
@ STA. 124+64.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 32 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 32 LIN. FT.

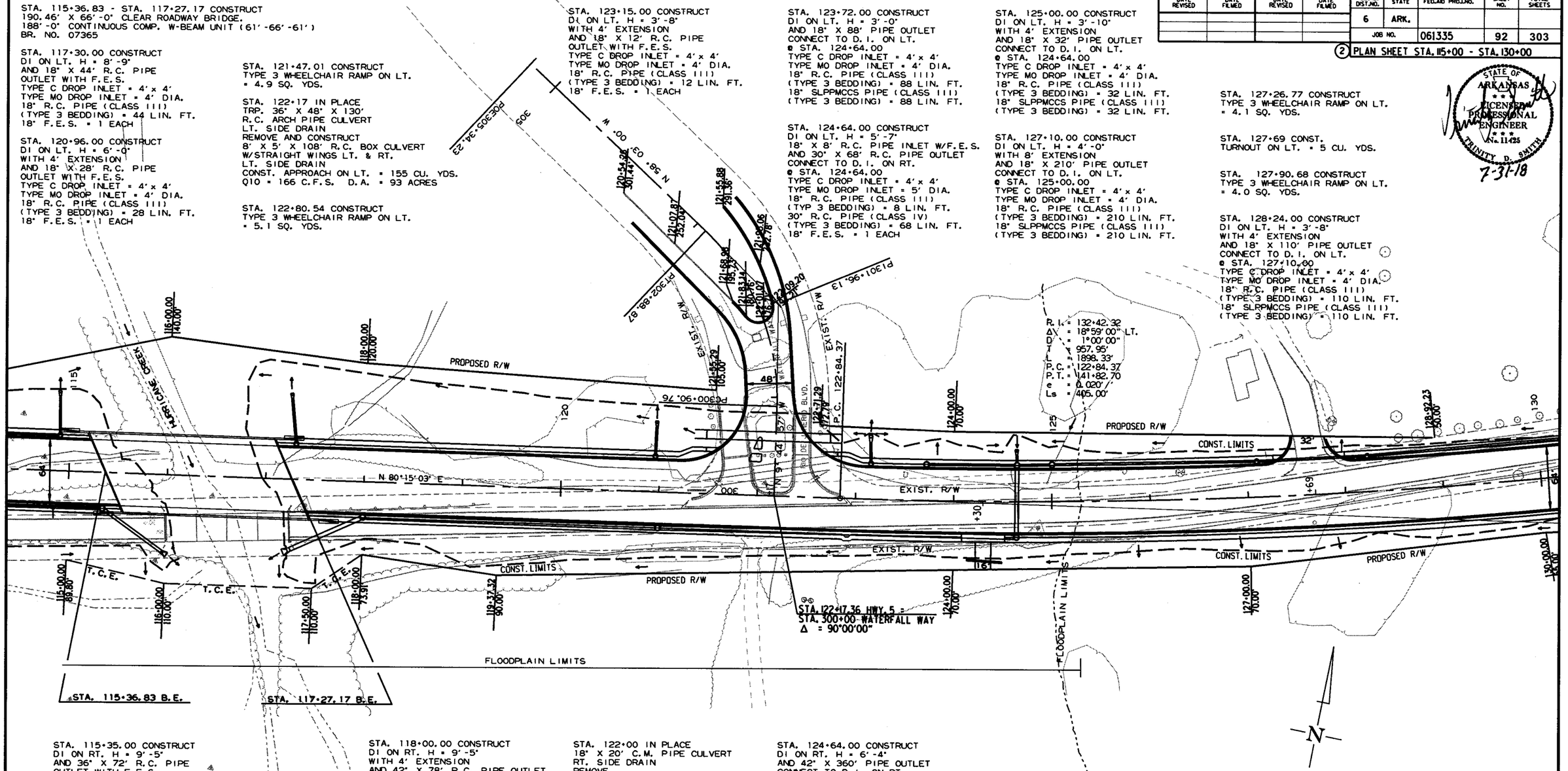
STA. 127+10.00 CONSTRUCT
DI ON LT. H = 4'-0"
WITH 8' EXTENSION
AND 18" X 210' PIPE OUTLET
CONNECT TO D. I. ON LT.
@ STA. 125+00.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 210 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 210 LIN. FT.

STA. 127+26.77 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 4.1 SQ. YDS.

STA. 127+69 CONST.
TURNOUT ON LT. = 5 CU. YDS.

STA. 127+90.68 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 4.0 SQ. YDS.

STA. 128+24.00 CONSTRUCT
DI ON LT. H = 3'-8"
WITH 4' EXTENSION
AND 18" X 110' PIPE OUTLET
CONNECT TO D. I. ON LT.
@ STA. 127+10.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 110 LIN. FT.
18" SLRPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 110 LIN. FT.



STA. 115+35.00 CONSTRUCT
DI ON RT. H = 9'-5"
AND 36" X 72' R.C. PIPE
OUTLET WITH F.E.S.
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 5' DIA.
36" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 72 LIN. FT.
36" F.E.S. = 1 EACH

STA. 115+99.95 TO STA. 116+23.69 IN PLACE
124' X 31.5' CONC. ABUTMENTS AND CONC. PIERS
BRIDGE NO. 02175
REMOVE AS EXISTING BRIDGE STRUCTURE
(SITE NO. 1) = 1.00 LUMP SUM

STA. 118+00.00 CONSTRUCT
DI ON RT. H = 9'-5"
WITH 4' EXTENSION
AND 42" X 78' R.C. PIPE OUTLET
WITH F.E.S.
TYPE C DROP INLET = 5'x 5'
TYPE MO DROP INLET = 5' DIA.
42" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 78 LIN. FT.
42" F.E.S. = 1 EACH

STA. 121+00.00 CONSTRUCT
DI ON RT. H = 7'-5"
WITH 4' EXTENSION
AND 42" X 296' PIPE OUTLET
CONNECT TO D. I. ON RT.
@ STA. 118+00.00
TYPE C DROP INLET = 5'x 5'
TYPE MO DROP INLET = 5' DIA.
42" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 296 LIN. FT.
42" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 296 LIN. FT.

STA. 122+00 IN PLACE
18" X 20' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 124+30 INSTALL
18" X 36' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 50 CU. YDS.

STA. 124+64.00 CONSTRUCT
DI ON RT. H = 6'-4"
AND 42" X 360' PIPE OUTLET
CONNECT TO D. I. ON RT.
@ STA. 121+00.00
TYPE C DROP INLET = 5'x 5'
TYPE MO DROP INLET = 5' DIA.
42" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 360 LIN. FT.
42" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 360 LIN. FT.

STA. 124+65 IN PLACE
24" X 30" X 40' R.C.
PIPE CULVERT
CROSS DRAIN
REMOVE

REMOVAL AND DISPOSAL OF FENCE

STATION	STATION	LOCATION	LIN. FT.	GATES
120+86	121+26	RT.	40	
121+98		RT.		1

FENCE

STATION	STATION	SIDE	TYPE C	GATES
120+86	121+26	RT.	42	
121+98		RT.		1

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HWY. 5

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	93	303

(2) PROFILE SHEET STA. 115+00 - STA. 130+00

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

LT. SIDE

FOR THE CONSTRUCTION OF TEMPORARY RAMPS OR HAUL ROADS, THIS STREAM IS CLASSIFIED AS A PERENNIAL STREAM. THE STREAM BANK ELEVATION IS 368.00 FT. MSL. BETWEEN STATIONS 115+35 AND 117+25. REFER TO SECTION 110.05 (c) OF THE 2014 STANDARD SPECIFICATIONS.

STA. 119+80.62 BEGIN SUPERELEVATION
STA. 123+85.62 MAX. SUPERELEVATION (0.020'/')
STA. 140+81.45 MAX. SUPERELEVATION (0.020'/')
STA. 144+86.45 END SUPERELEVATION

STA. 117+30
TOP ELEV.=381.78
F.L. ELEV.=373.00
OUTLET ELEV. = 365.64

STA. 120+96.00
D.I. TOP= 380.04
F.L.= 374.00
OUTLET ELEV. 369.61

STA. 123+15.00
D.I. TOP= 379.02
F.L.= 375.36
OUTLET ELEV. 374.20

STA. 123+72.00
D.I. TOP= 378.75
F.L.= 375.76

P.V.C. 124+01.99
ELEV. 378.77

STA. 124+64.00
D.I. TOP= 379.56
INLET ELEV. 374.66
F.L.= 374.00

STA. 125+00.00
D.I. TOP= 378.75
F.L.= 374.96

K 79.73
VC=414.57'
e=2.69'

STA. 127+10
TOP ELEV.=383.11
F.L. ELEV.=379.16

P.V.I. 128+16.56
ELEV. 387.59

STA. 128+24.00
D.I. TOP= 387.78
F.L.= 384.13

4.73%

18"x 320' @ 4.82%

18"x 110' @ 4.54%

-0.47%

18"x 88' @ 2.01%

18"x 32' @ 3.10%

18"x 210' @ 2.01%

+64
F.L. 374.00
INLET

+65
EXIST. INLET 372.21
EXIST OUTLET 371.80

P.V.I. 126+09.28
ELEV. 377.79

050 DESIGN H.W.
ELEVATION 375.9

2:1

1.18% LT. D.G.

STA. 117+30
OUTLET
ELEV. = 365.64

STA. 116+00
ELEV. 362.98

STA. 121+46
ELEV. 369.42

STA. 115+36.83 B.E.

STA. 117+27.17 B.E.

410 400 390 380 370 360 350 340

115+00 116+00 117+00 118+00 119+00 120+00 121+00 122+00 123+00 124+00 125+00 126+00 127+00 128+00 129+00 130+00

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

RT. SIDE

FOR THE CONSTRUCTION OF TEMPORARY RAMPS OR HAUL ROADS, THIS STREAM IS CLASSIFIED AS AN PERENNIAL STREAM. THE STREAM BANK ELEVATION IS 368.00 FT. MSL. BETWEEN STATIONS 115+35 AND 117+25. REFER TO SECTION 110.05 (c) OF THE 2014 STANDARD SPECIFICATIONS.

STA. 119+80.62 BEGIN SUPERELEVATION
STA. 123+85.62 MAX. SUPERELEVATION (0.020'/')
STA. 140+81.45 MAX. SUPERELEVATION (0.020'/')
STA. 144+86.45 END SUPERELEVATION

STA. 115+35.00
D.I. TOP= 382.70
F.L.= 373.32
OUTLET ELEV. 372.53

STA. 118+00.00
D.I. TOP= 381.45
F.L.= 372.00
OUTLET ELEV. 369.41

STA. 121+00.00
D.I. TOP= 380.41
F.L.= 373.00

P.V.C. 124+01.99
ELEV. 378.77

STA. 124+64.00
D.I. TOP= 379.84
F.L.= 373.50

K 79.73
VC=414.57'
e=2.69'

P.V.I. 128+16.56
ELEV. 387.59

4.73%

-0.47%

36"x 180' @ 0.56%

36"x 72' @ 1.86%

42"x 68' @ 3.18%

42"x 296' @ 0.34%

42"x 360' @ 0.14%

+64
F.L. 373.50
OUTLET

+65
EXIST. INLET 372.21
EXIST OUTLET 371.80

P.V.I. 126+09.28
ELEV. 377.79

050 DESIGN H.W.
ELEVATION 375.9

2:1

STA. 115+35
OUTLET
ELEV. = 372.53'

STA. 118+00
OUTLET
ELEV. = 369.41'

410 400 390 380 370 360 350 340

115+00 116+00 117+00 118+00 119+00 120+00 121+00 122+00 123+00 124+00 125+00 126+00 127+00 128+00 129+00 130+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	94	303

(2) PLAN SHEET STA. 130+00 - STA. 145+00

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

STA. 131+00 IN PLACE
12" X 14' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 131+50.00 CONSTRUCT
DI ON LT. H = 3'-8"
WITH 8' EXTENSION
AND 18" X 320' PIPE OUTLET
CONNECT TO D.I. ON LT.
@ STA. 128+24.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 320 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 320 LIN. FT.

STA. 133+00 IN PLACE
12" X 22' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 133+08.05 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 4.1 SQ. YDS.

STA. 133+44 CONST.
TURNOUT ON LT. = 5 CU. YDS.

STA. 133+79.93 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 4.2 SQ. YDS.

STA. 134+00.00 CONSTRUCT
DI ON LT. H = 3'-8"
WITH 8' EXTENSION
AND 18" X 244' PIPE OUTLET
CONNECT TO D.I. ON LT.
@ STA. 131+50.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 244 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 244 LIN. FT.

STA. 135+05 IN PLACE
12" X 46' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
18" X 50' PIPE CULVERT
LT. SIDE DRAIN
CONSTRUCT APPROACH ON LT. = 50 CU. YDS.

STA. 135+83 INSTALL
21" X 15" X 32' ARCH PIPE CULVERT
LT. SIDE DRAIN
APPROACH ON LT. = 10 CU. YDS.

STA. 137+00.00 CONSTRUCT
DI ON LT. H = 6'-11"
WITH 4' EXTENSION
AND 18" X 294' PIPE OUTLET
CONNECT TO D.I. ON LT.
@ STA. 134+00.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 294 LIN. FT.
18" SLRPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 294 LIN. FT.

STA. 137+65.80 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 3.5 SQ. YDS.

P.I. = 132+42.32
Δ = 18°59'00" LT.
D = 1°00'00"
T = 957.95'
L = 1898.33'
P.C. = 122+84.37
P.T. = 141+82.70
e = 0.020'/'
Ls = 405.00'

STA. 138+00 CONST.
TURNOUT ON LT. = 5 CU. YDS.

STA. 138+24.53 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 3.4 SQ. YDS.

STA. 138+43.00 CONSTRUCT
DI ON LT. H = 7'-1"
AND 18" X 2' PIPE INLET
WITH F.E.S.
AND 18" X 140' PIPE OUTLET
CONNECT TO D.I. ON LT.
@ STA. 137+00.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 142 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 140 LIN. FT.
18" F.E.S. = 1 EACH

STA. 138+86 CONST.
APPROACH ON LT. = 5 CU. YDS. EXC.

STA. 139+50.00 CONSTRUCT
DI ON LT. H = 5'-11"
WITH 4' EXTENSION
AND 18" X 104' PIPE OUTLET
CONNECT TO D.I. ON LT.
@ STA. 138+43.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 104 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 104 LIN. FT.

STA. 140+29 CONST.
APPROACH ON LT. = 5 CU. YDS.

STA. 141+00.00 CONSTRUCT
DI ON LT. H = 3'-8"
WITH 4' EXTENSION
AND 18" X 146' PIPE OUTLET
CONNECT TO D.I. ON LT.
@ STA. 139+50.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 146 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 146 LIN. FT.

STA. 141+43 IN PLACE
18" X 24' R.C. PIPE CULVERT
LT. SIDE DRAIN
RETAIN ADN CONST.
APPROACH ON LT. = 5 CU. YDS.

STA. 141+99 CONST.
APPROACH ON LT. = 35 CU. YDS.

STA. 142+24 IN PLACE
24" X 22' R.C. PIPE CULVERT
LT. SIDE DRAIN
RETAIN

STA. 144+39 IN PLACE
24" X 24' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 144+43 CONSTRUCT
APPROACH ON LT. = 15 CU. YDS.

STA. 143+76.00 CONSTRUCT
DI ON LT. H = 6'-6"
WITH 4' EXTENSION
AND 42" X 78' R.C. PIPE OUTLET
CONNECT TO D.I. ON RT.
@ STA. 143+76.00
24" X 6' R.C. PIPE INLET
WITH F.E.S.
TYPE C DROP INLET = 5' x 5'
TYPE MO DROP INLET = 5' DIA.
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 6 LIN. FT.
42" R.C. PIPE (CLASS IV)
(TYPE 3 BEDDING) = 78 LIN. FT.
24" F.E.S. = 1 EACH

STA. 132+98 CONST.
APPROACH ON RT. = 100 CU. YDS.

STA. 135+83 CONST.
APPROACH ON RT. = 10 CU. YDS.

STA. 137+00.00 CONSTRUCT
DI ON RT. H = 6'-2"
WITH 4' EXTENSION
AND 18" X 68' R.C. PIPE OUTLET
CONNECT TO D.I. ON LT.
@ STA. 137+00.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 68 LIN. FT.

STA. 138+06.00 CONSTRUCT
DI ON RT. H = 7'-2"
AND 18" X 110' PIPE OUTLET
CONNECT TO D.I. ON RT.
@ STA. 137+00.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 110 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 110 LIN. FT.

STA. 138+97 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 139+96 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 141+00.00 CONSTRUCT
DI ON RT. H = 4'-7"
WITH 4' EXTENSION
AND 18" X 290' PIPE OUTLET
CONNECT TO D.I. ON RT.
@ STA. 138+06.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 290 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 290 LIN. FT.

STA. 142+32 CONSTRUCT
APPROACH ON RT. = 20 CU. YDS.

STA. 142+51 IN PLACE
18" X 30' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 143+11 IN PLACE
24" X 63' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND CONST.
APPROACH ON RT. = 80 CU. YDS.

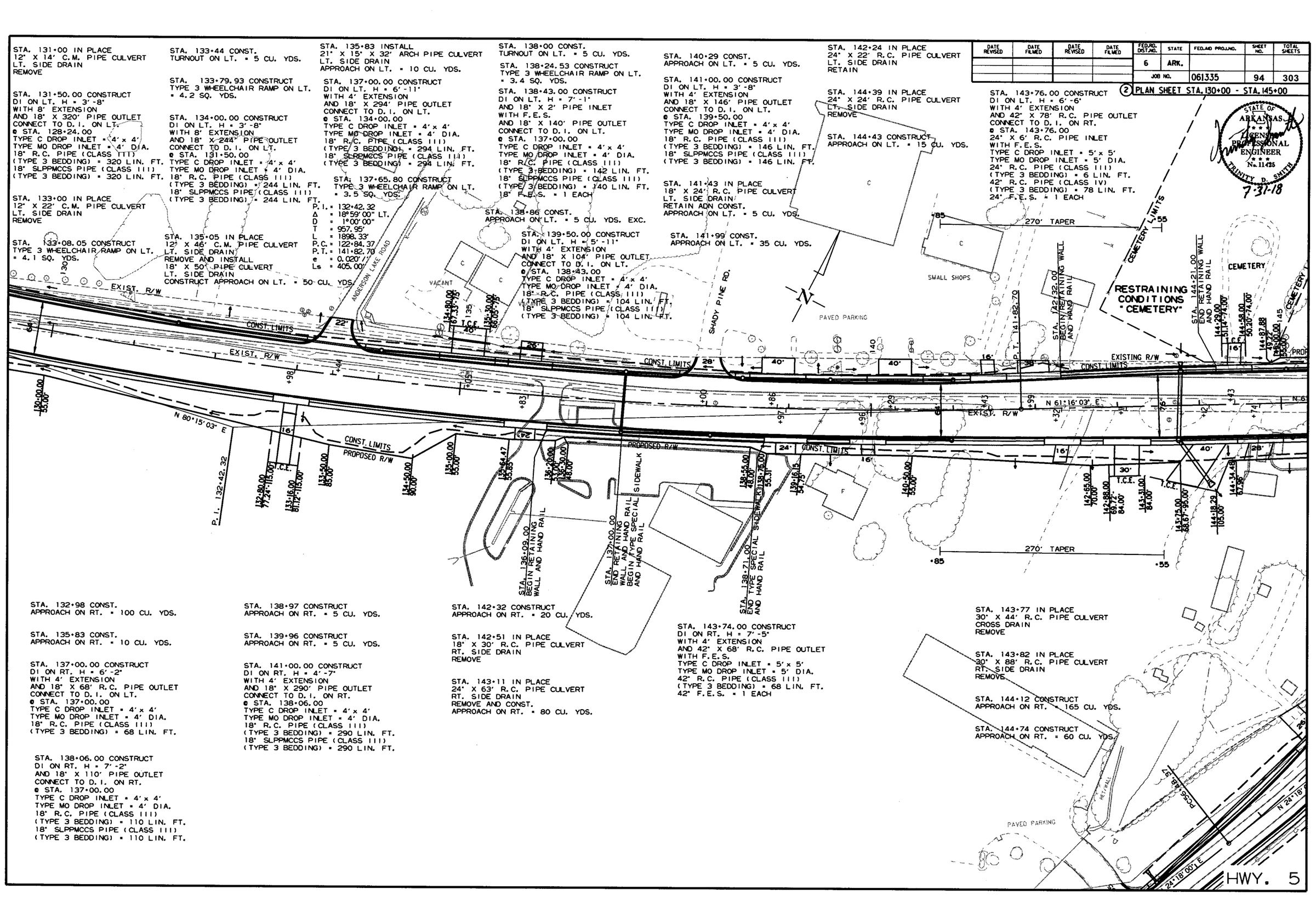
STA. 143+74.00 CONSTRUCT
DI ON RT. H = 7'-5"
WITH 4' EXTENSION
AND 42" X 68' R.C. PIPE OUTLET
WITH F.E.S.
TYPE C DROP INLET = 5' x 5'
TYPE MO DROP INLET = 5' DIA.
42" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 68 LIN. FT.
42" F.E.S. = 1 EACH

STA. 143+77 IN PLACE
30" X 44' R.C. PIPE CULVERT
CROSS DRAIN
REMOVE

STA. 143+82 IN PLACE
30" X 88' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 144+12 CONSTRUCT
APPROACH ON RT. = 165 CU. YDS.

STA. 144+74 CONSTRUCT
APPROACH ON RT. = 60 CU. YDS.



12/7/2017

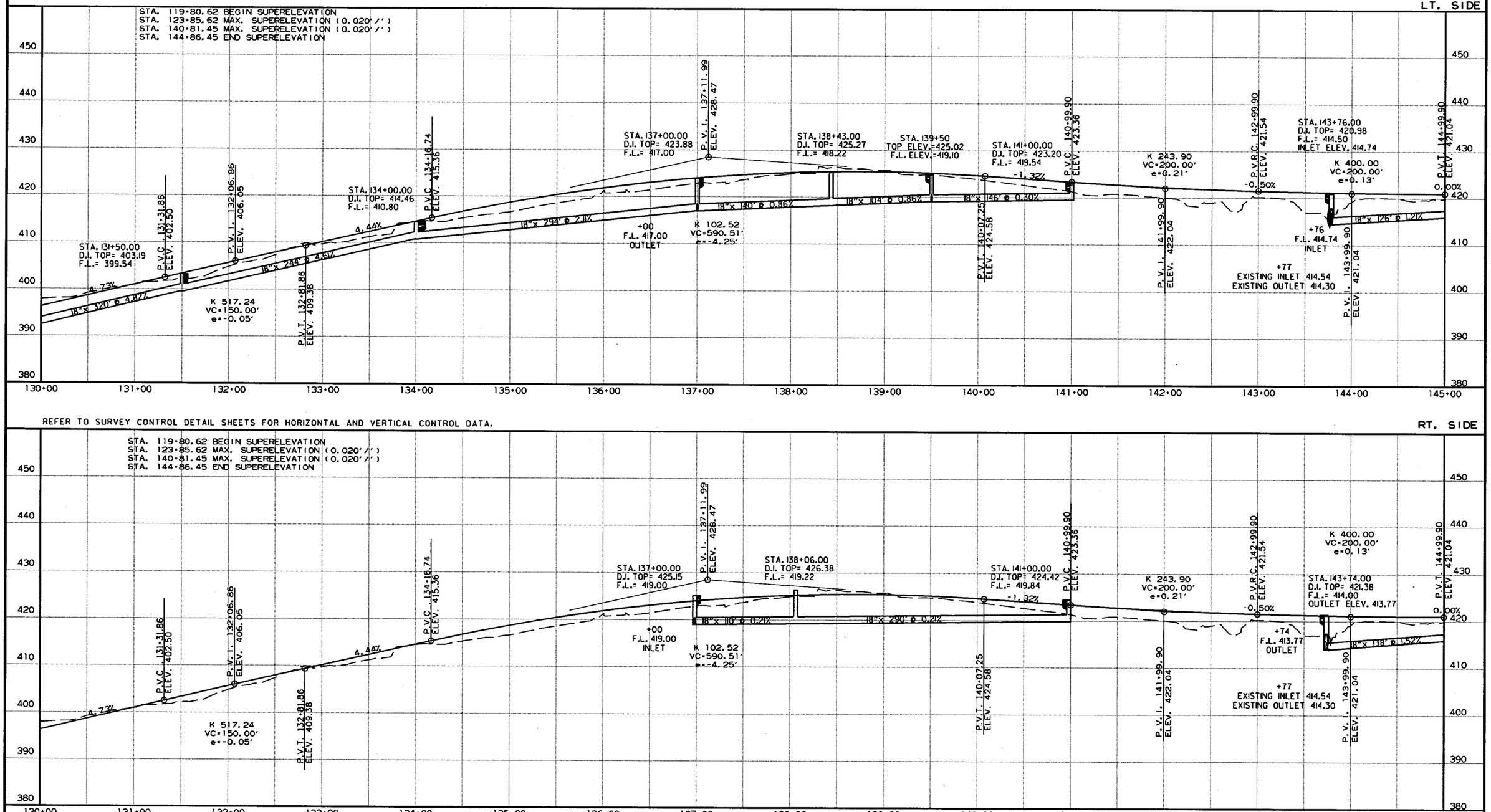
R061335.DGN

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	95	303

(2) PROFILE SHEET STA. 130+00 - STA. 145+00

LT. SIDE



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

RT. SIDE

12/7/2017

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	96	303

(2) PLAN SHEET STA. 145+00 - STA. 160+00

STATE OF ARKANSAS
TRINITY D. SMITH
REGISTERED PROFESSIONAL ENGINEER
No. 11425
7-31-18

STA. 145+07.00 CONSTRUCT
DI ON LT. H = 4'-8"
WITH 4' EXTENSION
WITH OPENING IN BACK
AND 18" X 126' PIPE OUTLET
CONNECT TO D.I. ON LT.
@ STA. 143+76.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 126 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 126 LIN. FT.

STA. 146+01 IN PLACE
24" X 30" X 4' C.M.
ARCH PIPE CULVERT
ON LT.
REMOVE

STA. 146+05 IN PLACE
24" X 30" X 53' C.M.
ARCH PIPE CULVERT
ON LT.
REMOVE

STA. 146+30 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 146+50 IN PLACE
8" X 222' PVC PIPE CULVERT
ON LT.
RETAIN

STA. 146+62 IN PLACE
24" X 251' R.C. PIPE CULVERT
ON LT.
REMOVE

STA. 146+71.00 CONSTRUCT
DI ON LT. H = 3'-11"
WITH 4' EXTENSION
AND 18" X 160' PIPE OUTLET
CONNECT TO D.I. ON LT.
@ STA. 145+07.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 160 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 160 LIN. FT.

STA. 146+72 IN PLACE
18" X 30' R.C. PIPE CULVERT
ON LT.
RETAIN

STA. 146+76 IN PLACE
36" X 88' C.M. PIPE CULVERT
ON LT.
RETAIN

STA. 147+68 IN PLACE
36" X3' C.M. PIPE CULVERT
ON LT.
RETAIN

STA. 147+81.77 CONSTRUCT
TYPE 4 WHEELCHAIR RAMP ON LT.
= 2.9 SQ. YDS.

STA. 148+34 IN PLACE
18" X112' R.C. PIPE CULVERT
AND DROP INLET ON LT.
RETAIN AND MODIFY DROP INLET

STA. 148+38.17 CONSTRUCT
TYPE 4 WHEELCHAIR RAMP ON LT.
= 2.8 SQ. YDS.

STA. 148+51 IN PLACE
12" X 178' CLAY PIPE CULVERT
REMOVE

STA. 148+61 IN PLACE
8" X 34' PVC PIPE CULVERT
ON LT.
REMOVE

STA. 148+79 IN PLACE
8" X 66' PVC PIPE CULVERT
8" X 69' PVC PIPE CULVERT
ON LT.
REMOVE

STA. 148+80 IN PLACE
12" X 107' PVC PIPE CULVERT
ON LT.
REMOVE

STA. 149+16 IN PLACE
24" X 21' R.C. PIPE CULVERT
ON LT.
REMOVE

STA. 149+52 IN PLACE
12" X 15' PVC PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 149+62.72 CONSTRUCT
TYPE 4 WHEELCHAIR RAMP ON LT.
= 2.7 SQ. YDS.

STA. 149+78 IN PLACE
12" X 258' CLAY PIPE CULVERT
ON LT.
RETAIN

STA. 149+82.00 CONSTRUCT
DI ON LT. H = 3'-10"
AND 18" X 308' PIPE OUTLET
CONNECT TO D.I. ON LT.
@ STA. 146+69.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 308 LIN. FT.

STA. 150+31 IN PLACE
18" X 50' PVC PIPE CULVERT
ON LT.
REMOVE

STA. 150+53 IN PLACE
24" X 46' PVC PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 150+53 CONSTRUCT
APPROACH ON LT. = 10 CU. YDS.

STA. 151+25 IN PLACE
26" X 56' PVC PIPE CULVERT
ON LT.
REMOVE

STA. 151+50 CONSTRUCT
APPROACH ON LT. = 10 CU. YDS.

STA. 151+84 IN PLACE
18" X 45' PVC PIPE CULVERT
ON LT.
REMOVE

STA. 152+33 IN PLACE
18" X 35' PVC PIPE CULVERT
ON LT.
REMOVE

STA. 151+82.00 CONSTRUCT
DI ON LT. H = 4'-2"
AND 18" X 196' PIPE OUTLET
WITH OPENING IN BACK
CONNECT TO D.I. ON LT.
@ STA. 149+82.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 196 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 196 LIN. FT.

STA. 152+48 CONSTRUCT
APPROACH ON LT. = 10 CU. YDS.

STA. 152+70 IN PLACE
18" X 35' PVC PIPE CULVERT
ON LT.
REMOVE

STA. 153+52 CONSTRUCT
APPROACH ON LT. = 75 CU. YDS. EXC.

STA. 153+41 IN PLACE
12" X 60' R.C. PIPE
CULVERT
LT. SIDE DRAIN
REMOVE

STA. 154+82.00 CONSTRUCT
DI ON LT. H = 4'-4"
WITH 4' EXTENSION
AND 18" X 296' PIPE OUTLET
CONNECT TO D.I. ON LT.
@ STA. 151+82.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 296 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 296 LIN. FT.

STA. 156+31 CONSTRUCT
APPROACH ON LT. = 35 CU. YDS. EXC.

STA. 157+01 CONSTRUCT
APPROACH ON LT. = 30 CU. YDS. EXC.

STA. 157+84 CONSTRUCT
APPROACH ON LT. = 45 CU. YDS.

STA. 157+43.00 CONSTRUCT
DI ON LT. H = 3'-11"
WITH 4' EXTENSION
AND 18" X 258' PIPE OUTLET
CONNECT TO D.I. ON LT.
@ STA. 154+82.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 258 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 258 LIN. FT.

STA. 159+92 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 159+49 IN PLACE
18" X 110' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 145+13.00 CONSTRUCT
DI ON RT. H = 4'-9"
AND 18" X 138' PIPE OUTLET
CONNECT TO D.I. ON RT.
@ STA. 143+74.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 138 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 138 LIN. FT.

STA. 146+72.00 CONSTRUCT
DI ON RT. H = 3'-8"
WITH 4' EXTENSION
AND 18" X 154' PIPE OUTLET
CONNECT TO D.I. ON RT.
@ STA. 145+13.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 154 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 154 LIN. FT.

STA. 147+16.88 CONSTRUCT
TYPE 4 WHEELCHAIR RAMP ON RT.
= 2.6 SQ. YDS.

STA. 147+20 IN PLACE
18" X 44' C.M. PIPE CULVERT
RT. SIDE DRAIN
RETAIN

STA. 147+55 IN PLACE
24" X 90' R.C. PIPE CULVERT
W/F.E.S. ON RT.
RETAIN

STA. 147+81 IN PLACE
12" X 141' CLAY PIPE CULVERT
ON RT.
RETAIN

STA. 148+42.33 CONSTRUCT
TYPE 4 WHEELCHAIR RAMP ON RT.
= 2.8 SQ. YDS.

STA. 148+49 IN PLACE
24" X50' PVC PIPE CULVERT
ON RT.
REMOVE

STA. 148+78.43 CONSTRUCT
TYPE 4 WHEELCHAIR RAMP ON RT.
= 3.4 SQ. YDS.

STA. 148+92 IN PLACE
18" X 32' R.C. PIPE CULVERT
ON RT.
REMOVE

STA. 149+00.00 CONSTRUCT
DI ON RT. H = 3'-7"
WITH 8' EXTENSION
AND 18" X 48' PIPE OUTLET
CONNECT TO D.I. ON RT.
@ STA. 62+82.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 48 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 48 LIN. FT.

STA. 149+27 IN PLACE
18" X 25' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 150+25 CONSTRUCT
APPROACH ON RT. = 15 CU. YDS.

STA. 150+55 IN PLACE
18" X 6' R.C. PIPE CULVERT
ON RT.
REMOVE

STA. 150+56 IN PLACE
18" X 175' R.C. PIPE CULVERT
ON RT.
REMOVE

STA. 150+60.00 CONSTRUCT
DI ON RT. H = 4'-1"
WITH 8' EXTENSION
AND 18" X 158' PIPE OUTLET
CONNECT TO D.I. ON RT.
@ STA. 149+00.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 158 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 158 LIN. FT.

STA. 152+01 CONSTRUCT
APPROACH ON RT. = 15 CU. YDS. EXC.

STA. 152+35 IN PLACE
18" X 39' R.C. PIPE CULVERT
ON RT.
REMOVE

STA. 152+36.00 CONSTRUCT
DI ON RT. H = 4'-2"
WITH 8' EXTENSION
AND 18" X 172' PIPE OUTLET
CONNECT TO D.I. ON RT.
@ STA. 150+60.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 172 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 172 LIN. FT.

STA. 155+21.30 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 6.0 SQ. YDS.

STA. 155+55 CONSTRUCT
TURNOUT ON RT. = 20 CU. YDS. EXC.

STA. 155+87.40 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 6.0 SQ. YDS.

STA. 156+00.00 CONSTRUCT
DI ON RT. H = 3'-8"
AND 18" X 292' PIPE OUTLET
CONNECT TO D.I. ON RT.
@ STA. 158+95.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 292 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 292 LIN. FT.

STA. 156+95 CONSTRUCT
APPROACH ON RT. = 30 CU. YDS.

STA. 157+23 IN PLACE
12" X 22' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 158+27 IN PLACE
18" X 44' C.M. PIPE CULVERT
W/F.E.S.
RT. SIDE DRAIN
REMOVE

STA. 158+36 IN PLACE
18" X 44' C.M. PIPE CULVERT
W/F.E.S.
RT. SIDE DRAIN
REMOVE AND CONST.
APPROACH ON RT. = 20 CU. YDS.

STA. 158+95.00 CONSTRUCT
DI ON RT. H = 3'-8"
AND 18" X 302' PIPE OUTLET
CONNECT TO D.I. ON RT.
@ STA. 161+98.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 302 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 302 LIN. FT.

STA. 159+29 IN PLACE
18" X 30' C.M. PIPE CULVERT
W/F.E.S.
RT. SIDE DRAIN
REMOVE AND CONST.
APPROACH ON RT. = 10 CU. YDS.

REMOVAL AND DISPOSAL OF DROP INLETS

STATION	SIDE
146+02	LT.
146+60	LT.
147+80	RT.
148+48	RT.
148+61	LT.
148+77	LT.
148+91	RT.
149+15	LT.
149+25	RT.
149+90	LT.
150+32	LT.
150+54	RT.
151+83	LT.
152+30	LT.
152+33	RT.
152+68	LT.

REMOVAL AND DISPOSAL OF FENCE

STATION	STATION	LOCATION	LIN. FT.	GATES
153+52		LT.		2
158+61	158+66	LT.	5	

12/7/2017

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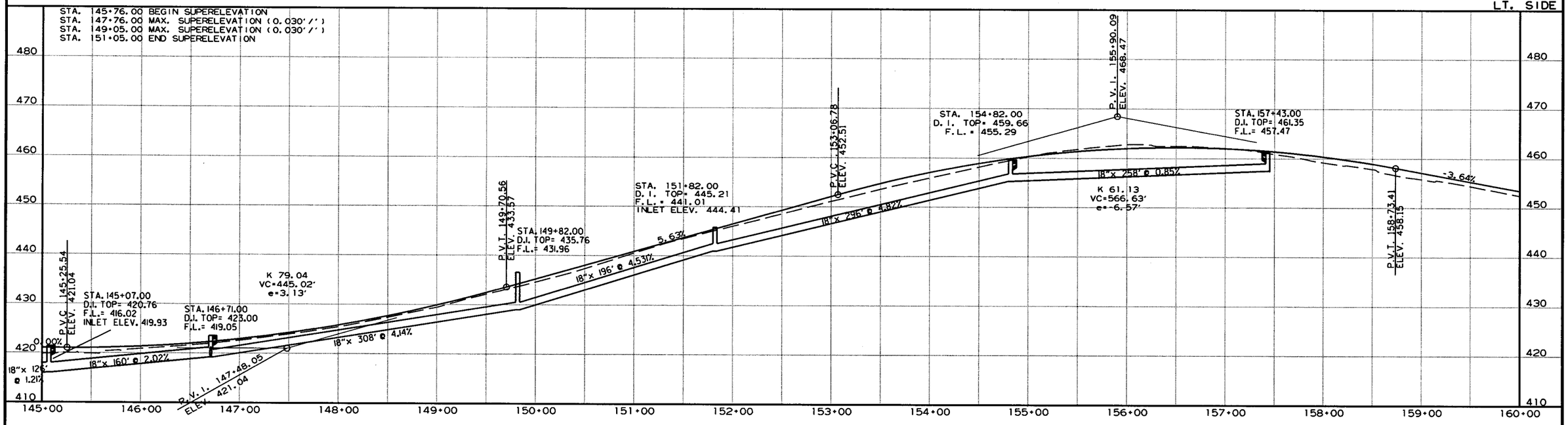
HWY. 5

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	97	303

(2) PROFILE SHEET STA. 145+00 - STA. 160+00

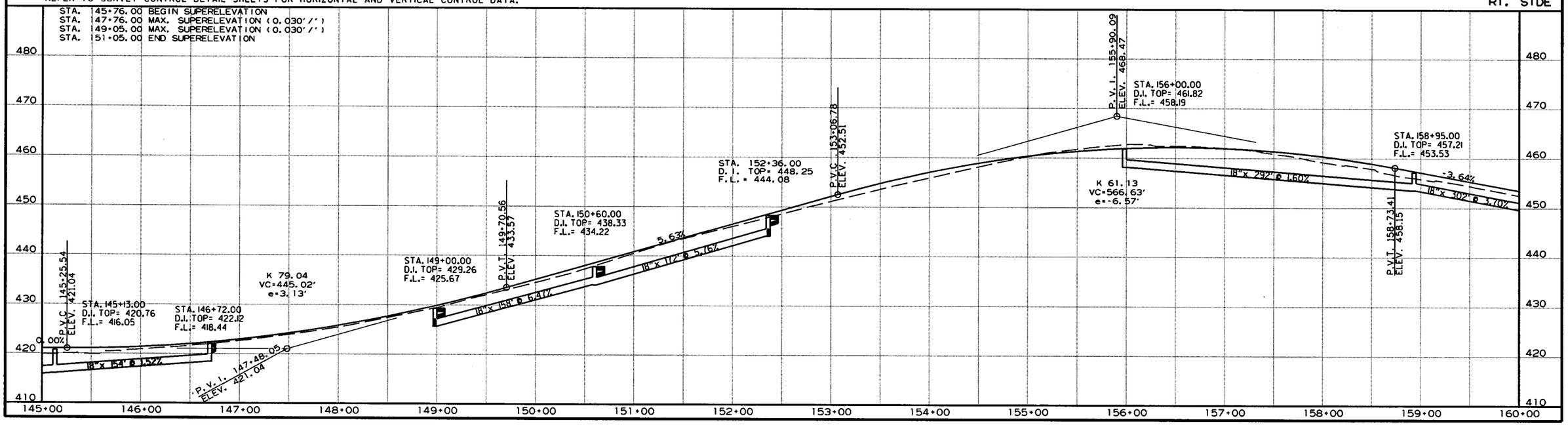
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

LT. SIDE



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

RT. SIDE



12/7/2017

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	98	303

(2) PLAN SHEET STA. 160+00 - STA. 175+00

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

STA. 160+50.00 CONSTRUCT
DI ON LT. H = 4'-9"
WITH 8' EXTENSION
AND 18" X 298' PIPE OUTLET
WITH OPENING IN BACK
CONNECT TO D. I. ON LT.
@ STA. 163+53.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 298 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 298 LIN. FT.

STA. 160+85 IN PLACE
18" X 24' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 160+85 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 162+56 IN PLACE
24" X 24' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

P.I. = 163+25.40
Δ = 3°07'58" LT.
D = 0°30'00"
T = 313.38'
L = 626.60'
P.C. = 160+12.02
P.T. = 166+38.62
NO SUPER.

STA. 162+56 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 163+96 IN PLACE
24" X 21' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONST.
APPROACH ON LT. = 5 CU. YDS.

STA. 164+84 IN PLACE
18" X 18' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 164+84 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 165+87.00 CONSTRUCT
DI ON LT. H = 4'-8"
WITH 4' EXTENSION
AND 18" X 358' PIPE OUTLET
WITH OPENING IN BACK
CONNECT TO D. I. ON LT.
@ STA. 169+48.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 358 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 358 LIN. FT.

STA. 165+96.50 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 5.9 SQ. YDS.

STA. 166+16 IN PLACE
24" X 76' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 166+30 CONSTRUCT
TURNOUT ON LT. = 5 CU. YDS.

STA. 167+50 IN PLACE
24" X 21' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 166+45 IN PLACE
8" X 239' PVC PIPE CULVERT
ON LT.
RETAIN

STA. 166+63.28 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 6.0 SQ. YDS.

STA. 167+71 IN PLACE
24" X 101' C.M. PIPE CULVERT
ON LT.
RETAIN

STA. 167+80 IN PLACE
24" X 103' PVC PIPE CULVERT
ON LT.
RETAIN

STA. 168+29 IN PLACE
30" X 37' C.M. PIPE CULVERT
ON LT.
RETAIN

STA. 168+54 IN PLACE
30" X 71' C.M. PIPE CULVERT
ON LT.
RETAIN

STA. 168+77 IN PLACE
24" X 36' EX. 106' C.M. ARCH
PIPE CULVERT ON LT.
RETAIN

STA. 168+68 IN PLACE
8" X 270' PVC PIPE CULVERT
ON LT.
RETAIN

STA. 169+48.00 CONSTRUCT
DI ON LT. H = 8'-0"
WITH 8' EXTENSION
AND 24" X 256' PIPE OUTLET
AND 18" X 6' R.C. PIPE INLET
CONNECT TO D. I. ON LT.
@ STA. 172+08.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 6 LIN. FT.
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 256 LIN. FT.
24" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 256 LIN. FT.

STA. 172+08.00 CONSTRUCT
DI ON LT. H = 6'-2"
WITH 4' EXTENSION
AND 24" X 168' PIPE OUTLET
CONNECT TO D. I. ON LT.
@ STA. 173+80.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 168 LIN. FT.
24" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 168 LIN. FT.

STA. 169+84 IN PLACE
36" X 54' GALVANIZED
PIPE CULVERT WITH F.E.S.
LT. SIDE DRAIN
REMOVE AND CONST.
APPROACH ON LT. = 5 CU. YDS.

STA. 171+15 IN PLACE
10" X 150' PVC PIPE CULVERT
ON LT.
RETAIN

STA. 171+51 IN PLACE
36" X 94' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONST.
APPROACH ON LT. = 10 CU. YDS.

STA. 173+53 IN PLACE
12" X 20' R.C. PIPE CULVERT
ON LT.
RETAIN

STA. 173+55 IN PLACE
40" X 34' R.C. PIPE CULVERT
ON LT.
RETAIN

STA. 173+80.00 CONSTRUCT
DI ON LT. H = 8'-0"
WITH 4' EXTENSION
AND 30" X 212' PIPE OUTLET
CONNECT TO R.C. BOX CULVERT
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 5' DIA.
30" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 212 LIN. FT.
30" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 212 LIN. FT.

STA. 173+81 IN PLACE
12" X 8' PVC PIPE
CULVERT
REMOVE

STA. 173+92 IN PLACE
40" X 158' R.C. PIPE
CULVERT ON LT.
RETAIN

STA. 174+18 IN PLACE
38" X 54" X 34' C.M.
ARCH PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 174+30 INSTALL
48" X 42" PIPE CULVERT
LT. SIDE DRAIN
CONSTRUCT APPROACH ON LT. = 20 CU. YDS.

STA. 160+99 IN PLACE
18" X 65' PVC PIPE CULVERT
W/F.E.S.
RT. SIDE DRAIN
REMOVE AND CONST.
APPROACH ON RT. = 35 CU. YDS.

STA. 161+98.00 CONSTRUCT
DI ON RT. H = 3'-8"
WITH 4' EXTENSION
AND 18" X 116' PIPE OUTLET
CONNECT TO D. I. ON RT.
@ STA. 163+17.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 116 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 116 LIN. FT.

STA. 163+17.00 CONSTRUCT
DI ON RT. H = 3'-9"
WITH 4' EXTENSION
AND 18" X 200' PIPE OUTLET
CONNECT TO D. I. ON RT.
@ STA. 165+19.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 200 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 200 LIN. FT.

STA. 163+53 IN PLACE
12" X 54' PVC PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND CONST.
APPROACH ON RT. = 55 CU. YDS.

STA. 164+23 IN PLACE
18" X 55' C.M. PIPE CULVERT
W/F.E.S.
RT. SIDE DRAIN
REMOVE AND CONST.
APPROACH ON RT. = 20 CU. YDS.

STA. 165+19.00 CONSTRUCT
DI ON RT. H = 3'-11"
WITH 4' EXTENSION
AND 18" X 206' PIPE OUTLET
CONNECT TO D. I. ON RT.
@ STA. 167+29.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 206 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 206 LIN. FT.

STA. 167+29.00 CONSTRUCT
DI ON RT. H = 4'-2"
WITH 4' EXTENSION
AND 18" X 82' PIPE OUTLET
CONNECT TO D. I. ON RT.
@ STA. 168+14.00
& 18" x 4' R.C. PIPE INLET
WITH F.E.S.
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 86 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 82 LIN. FT.
18" F.E.S. = 1 EACH

STA. 167+39 IN PLACE
4" X 8' PVC PIPE CULVERT
REMOVE

STA. 167+73 IN PLACE
18" X 50' R.C. PIPE CULVERT
W/F.E.S.
RT. SIDE DRAIN
REMOVE

STA. 167+73 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 168+14.00 CONSTRUCT
DI ON RT. H = 3'-8"
WITH 4' EXTENSION
AND 24" X 184' PIPE OUTLET
WITH OPENING IN BACK
CONNECT TO D. I. ON RT.
@ STA. 170+00.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 184 LIN. FT.
24" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 184 LIN. FT.

STA. 168+58 IN PLACE
18" X 41' C.M. PIPE CULVERT
W/F.E.S.
RT. SIDE DRAIN
REMOVE AND CONST.
APPROACH ON RT. = 10 CU. YDS.

STA. 170+00.00 CONSTRUCT
DI ON RT. H = 3'-11"
WITH 4' EXTENSION
AND 24" X 158' PIPE OUTLET
CONNECT TO D. I. ON RT.
@ STA. 171+61.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 158 LIN. FT.
24" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 158 LIN. FT.

STA. 171+11 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 171+72.12 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 6.0 SQ. YDS.

STA. 171+61.00 CONSTRUCT
DI ON RT. H = 3'-8"
WITH 8' EXTENSION
AND 30" X 382' PIPE OUTLET
CONNECT TO D. I. ON RT.
@ STA. 175+48.00
TYPE C DROP INLET = 5'x 4'
TYPE MO DROP INLET = 5' DIA.
30" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 382 LIN. FT.
30" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 382 LIN. FT.

STA. 172+08 IN PLACE
16" X 56' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND CONST.
TURNOUT ON RT. = 10 CU. YDS.

STA. 172+42.66 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 6.0 SQ. YDS.

STA. 173+65 CONSTRUCT
APPROACH ON RT. = 20 CU. YDS.

STA. 174+78 IN PLACE
18" X 90' C.M. PIPE CULVERT
ON RT.
REMOVE

DROP INLETS TO BE RETAINED

STATION	SIDE
166+45	LT.
169+58	LT.

REMOVAL AND DISPOSAL OF DROP INLETS

STATION	SIDE
163+29	RT.
174+73	RT.
174+76	RT.

REMOVAL AND DISPOSAL OF FENCE

STATION	STATION	LOCATION	LIN. FT.
160+15	161+21	LT.	115
164+70	165+11	LT.	42
166+94	167+63	LT.	76

FENCE

STATION	STATION	SIDE	4' CHAIN LINK	GATES
160+15	161+21	LT.	89	1

HWY. 5

12/7/2017

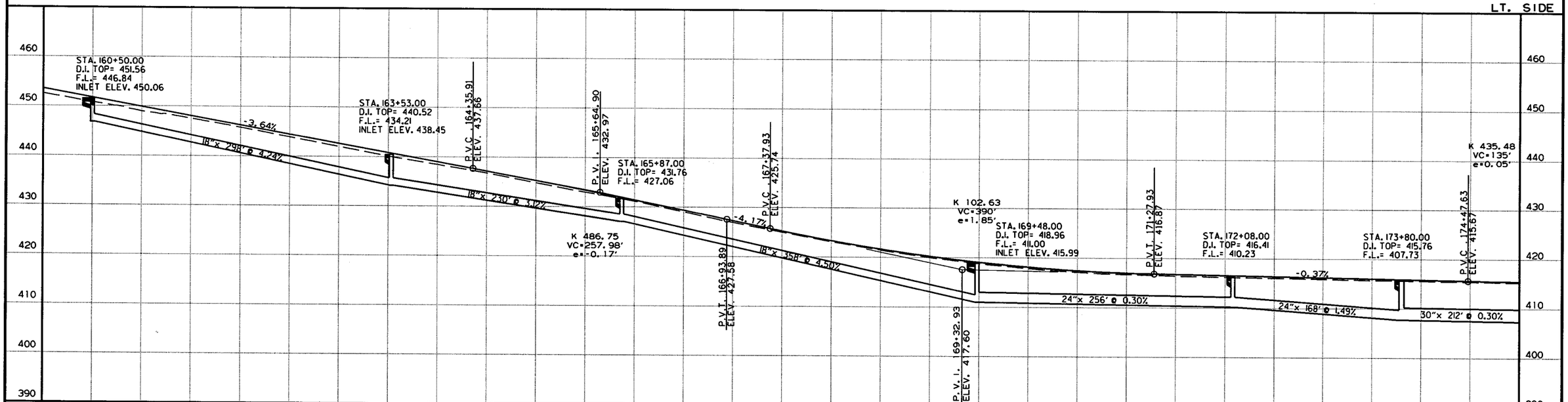
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	99	303

(2) PROFILE SHEET STA. 160+00 - STA. 175+00

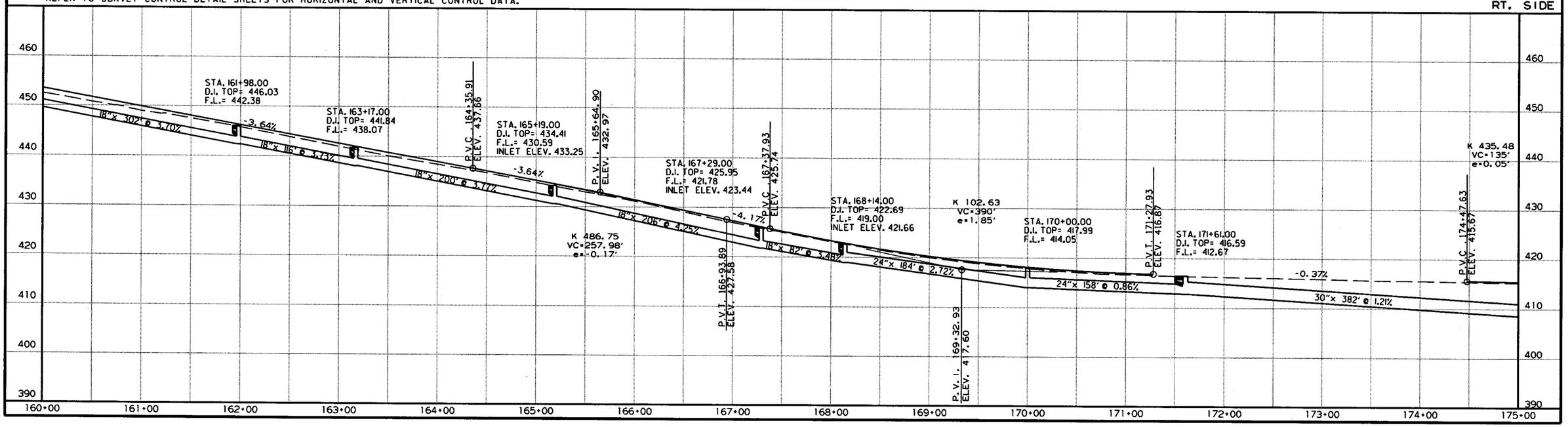
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

LT. SIDE



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

RT. SIDE



12/7/2017

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	100	303

(2) PLAN SHEET STA. 175+00 - STA. 190+00

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY P. SMITH
7-31-18

STA. 175+21 IN PLACE
14" X 151' PVC PIPE CULVERT
LT. SIDE DRAIN
RETAIN

STA. 175+97.00 CONSTRUCT
DI ON LT. H = 3'-10"
WITH 4' EXTENSION
ON TOP OF R.C. BOX CULVERT
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.

STA. 176+00 IN PLACE
TRIPLE 10' x 6' x 101' R.C.
BOX CULVERT
ON A 20° LT. FWD. SKEW
WITH 3:1 WINGS LT. &
STRAIGHT WINGS RT.
Q50 = 1605 CFS
D.A. = 548 ACRES
SPAN = 32'-11"
RETAIN

STA. 176+26 IN PLACE
18" X 24' C.M. PIPE CULVERT
LT. SIDE DRAIN
RETAIN

STA. 176+30 IN PLACE
24" X 24' C.M. PIPE CULVERT
LT. SIDE DRAIN
RETAIN

STA. 176+74 IN PLACE
10" X 95' PVC PIPE CULVERT
LT. SIDE DRAIN
RETAIN

STA. 177+73.00 CONSTRUCT
DI ON LT. H = 5'-4"
AND 24" X 144' R.C. PIPE OUTLET
CONNECT TO R.C. BOX CULVERT
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 144 LIN. FT.
24" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 144 LIN. FT.

STA. 178+55.00 CONSTRUCT
DI ON LT. H = 5'-0"
AND 24" X 78' PIPE OUTLET
CONNECT TO DROP INLET ON LT.
@ STA. 177+73.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 78 LIN. FT.
24" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 78 LIN. FT.

STA. 178+99 IN PLACE
18" X 237' PVC PIPE CULVERT
ON LT.
RETAIN

STA. 179+20 IN PLACE
18" X 57' C.M. PIPE CULVERT
ON LT.
RETAIN

STA. 179+58 IN PLACE
14" X 249' R.C. PIPE CULVERT
ON LT.
RETAIN

STA. 179+59 IN PLACE
12" X 384' R.C. PIPE CULVERT
ON LT.
RETAIN

STA. 179+79 IN PLACE
18" X 135' C.M. PIPE CULVERT
ON LT.
RETAIN

STA. 179+87.20 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 4.2 SQ. YDS.

STA. 180+10 IN PLACE
TRIPLE 9' x 6' x 50' R.C.
BOX CULVERT
WITH STRAIGHT WINGS LT. & RT.
LT. SIDE DRAIN
RETAIN

STA. 180+13 IN PLACE
48" X 40' PVC PIPE CULVERT
ON LT.
RETAIN

STA. 180+20 IN PLACE
18" X 98' R.C. PIPE CULVERT
ON LT.
RETAIN AND CONST.
APPROACH ON LT. = 10 CU. YDS.

STA. 180+42.59 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 4.2 SQ. YDS.

STA. 185+13.03 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 6.0 SQ. YDS.

STA. 180+69.00 CONSTRUCT
DI ON LT. H = 5'-11"
WITH 8' EXTENSION
AND 24" X 210' PIPE OUTLET
CONNECT TO D. I. ON LT
@ STA. 178+65.00
TYPE C SPECIAL DROP INLET = 4'x 4'
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 210 LIN. FT.
24" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 210 LIN. FT.
"L" TO BE DETERMINED BY THE ENGINEER

STA. 181+09 IN PLACE
6' X 39' PVC PIPE CULVERT
ON LT.
RETAIN

STA. 181+12 IN PLACE
8' X 106' PVC PIPE CULVERT
ON LT.
RETAIN

STA. 181+99 IN PLACE
18" X 44' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONST.
APPROACH ON LT. = 5 CU. YDS.

STA. 183+34 IN PLACE
12" X 39' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONST.
APPROACH ON LT. = 5 CU. YDS.

STA. 183+36.00 CONSTRUCT
DI ON LT. H = 4'-3"
WITH 4' EXTENSION
AND 18" X 262' PIPE OUTLET
CONNECT TO D. I. ON LT
@ STA. 180+69.00
TYPE C SPECIAL DROP INLET = 4'x 4'
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 262 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 262 LIN. FT.
"L" IS TO BE DETERMINED BY THE ENGINEER

STA. 185+72 IN PLACE
12" X 40' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 187+14 CONSTRUCT
APPROACH ON LT. = 15 CU. YDS.

STA. 186+50.00 CONSTRUCT
DI ON LT. H = 5'-11"
WITH 4' EXTENSION
AND 18" X 306' PIPE OUTLET
CONNECT TO D. I. ON LT
@ STA. 183+36.00
TYPE C SPECIAL DROP INLET = 4'x 4'
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 306 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 306 LIN. FT.
"L" TO BE DETERMINED BY THE ENGINEER

STA. 188+84 CONSTRUCT
APPROACH ON LT. = 10 CU. YDS.

STA. 188+00.00 CONSTRUCT
DI ON LT. H = 5'-3"
AND 18" X 146' PIPE OUTLET
CONNECT TO D. I. ON LT @
STA. 186+50.00
TYPE C SPECIAL DROP INLET = 4'x 4'
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 146 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 146 LIN. FT.
"L" TO BE DETERMINED BY THE ENGINEER

STA. 189+11.22 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 6.0 SQ. YDS.

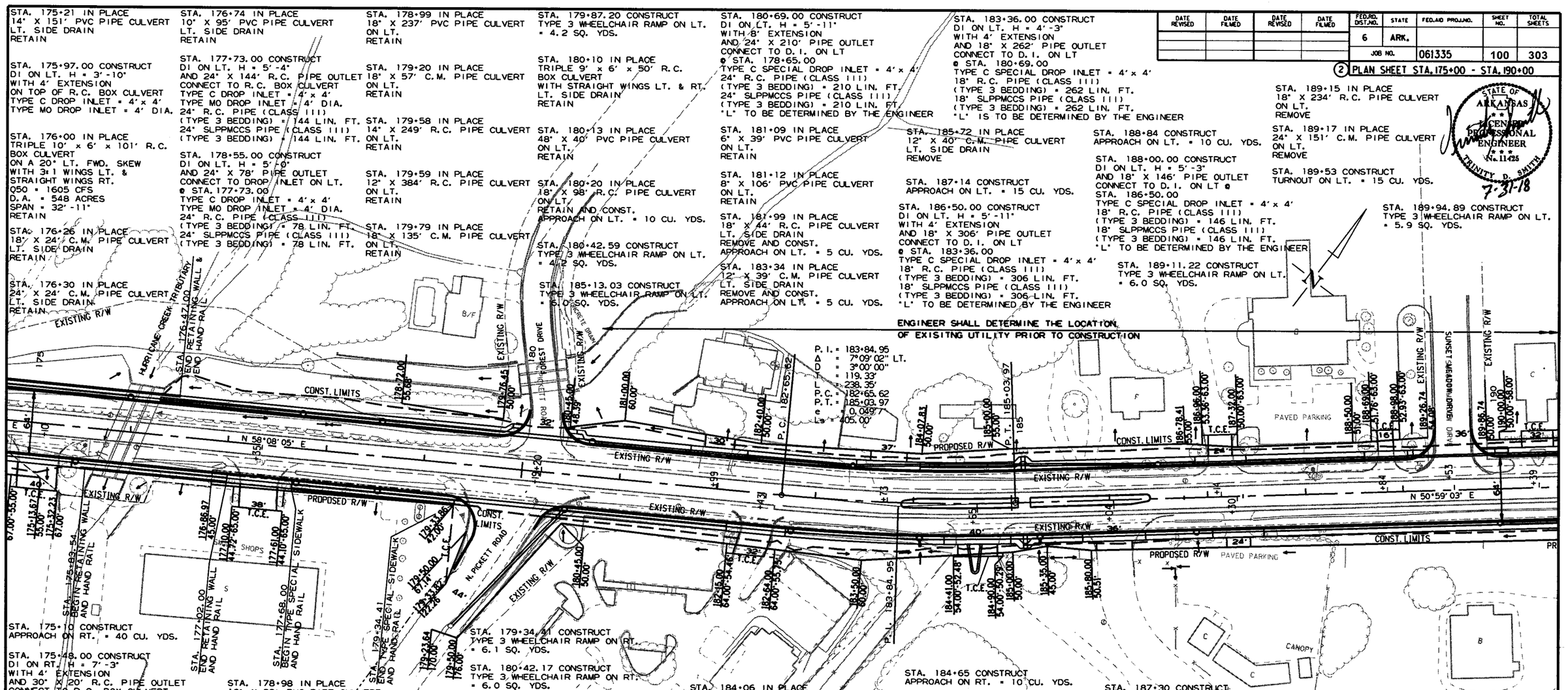
STA. 189+15 IN PLACE
18" X 234' R.C. PIPE CULVERT
ON LT.
REMOVE

STA. 189+17 IN PLACE
24" X 151' C.M. PIPE CULVERT
ON LT.
REMOVE

STA. 189+53 CONSTRUCT
TURNOUT ON LT. = 15 CU. YDS.

STA. 189+94.89 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 5.9 SQ. YDS.

ENGINEER SHALL DETERMINE THE LOCATION
OF EXISITNG UTILITY PRIOR TO CONSTRUCTION



STA. 175+10 CONSTRUCT
APPROACH ON RT. = 40 CU. YDS.

STA. 175+48.00 CONSTRUCT
DI ON RT. H = 7'-3"
WITH 4' EXTENSION
AND 30" X 20' R.C. PIPE OUTLET
CONNECT TO R.C. BOX CULVERT
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 5' DIA.
30" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 20 LIN. FT.
30" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 20 LIN. FT.

STA. 177+35 IN PLACE
24" X 70' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND CONST.
APPROACH ON RT. = 30 CU. YDS.

STA. 177+73 CONSTRUCT
DI ON RT. H = 7'-1"
AND 42" X 166' R.C. PIPE OUTLET
CONNECT TO R.C. BOX CULVERT
TYPE C DROP INLET = 5'x 4'
TYPE MO DROP INLET = 5' DIA.
42" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 166 LIN. FT.
42" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 166 LIN. FT.

STA. 178+55.00 CONSTRUCT
DI ON RT. H = 6'-4"
AND 42" X 78' PIPE OUTLET
CONNECT TO D. I. ON RT.
@ STA. 177+73.00
TYPE C DROP INLET = 4'x 5'
TYPE MO DROP INLET = 5' DIA.
42" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 78 LIN. FT.
42" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 78 LIN. FT.

STA. 178+98 IN PLACE
18" X 38' PVC PIPE CULVERT
ON RT.
RETAIN

STA. 179+41 IN PLACE
14" X 153' R.C. PIPE CULVERT
ON RT.
RETAIN

STA. 179+41 IN PLACE
24" X 15' X 92' R.C. ARCH
PIPE CULVERT
W/ F.E.S. ON RT.
REMOVE

STA. 180+19 IN PLACE
14" X 153' R.C. PIPE CULVERT
ON RT.
RETAIN AND CONSTRUCT
TURNOUT ON RT. = 5 CU. YDS.

STA. 180+47.00 CONSTRUCT
DI ON RT. H = 6'-6"
AND 42" X 188' PIPE OUTLET
WITH OPENING IN BACK
CONNECT TO D. I. ON RT.
@ STA. 178+55.00
TYPE C DROP INLET = 4'x 5'
TYPE MO DROP INLET = 5' DIA.
42" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 188 LIN. FT.
42" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 188 LIN. FT.

STA. 180+98 IN PLACE
24" X 178' R.C. PIPE CULVERT
ON RT.
REMOVE

STA. 179+34.41 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 6.1 SQ. YDS.

STA. 180+42.17 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 6.0 SQ. YDS.

STA. 182+43 CONSTRUCT
APPROACH ON RT. = 25 CU. YDS.

STA. 182+77 IN PLACE
24" X 67' R.C. PIPE CULVERT
ON RT.
REMOVE

STA. 182+78 IN PLACE
24" X 20' R.C. PIPE CULVERT
ON RT.
REMOVE

STA. 182+78.00 CONSTRUCT
DI ON RT. H = 6'-3"
AND 36" X 226' PIPE OUTLET
AND 18" X 10' R.C. PIPE INLET
WITH F.E.S.
CONNECT TO D. I. ON RT.
@ STA. 180+47.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 5' DIA.
36" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 226 LIN. FT.
36" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 226 LIN. FT.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 10 LIN. FT.
18" F.E.S. = 1 EACH

STA. 182+80 IN PLACE
24" X 37' R.C. PIPE CULVERT
ON RT.
REMOVE

STA. 184+06 IN PLACE
24" X 128' R.C. PIPE CULVERT
ON RT.
REMOVE

STA. 184+07.00 CONSTRUCT
DI ON RT. H = 4'-6"
AND 36" X 126' PIPE OUTLET
AND 18" X 4' R.C. PIPE INLET
WITH F.E.S.
CONNECT TO D. I. ON RT.
@ STA. 182+78.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 5' DIA.
36" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 126 LIN. FT.
36" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 126 LIN. FT.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 4 LIN. FT.
18" F.E.S. = 1 EACH

STA. 184+08 IN PLACE
24" X 30' R.C. PIPE CULVERT
ON RT.
REMOVE

STA. 184+41 IN PLACE
24" X 85' R.C. PIPE CULVERT
ON RT.
REMOVE

STA. 184+65 CONSTRUCT
APPROACH ON RT. = 10 CU. YDS.

STA. 185+13.03 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 6.0 SQ. YDS.

STA. 185+28.00 CONSTRUCT
DI ON RT. H = 4'-2"
AND 36" X 118' PIPE OUTLET
WITH OPENING IN BACK
CONNECT TO D. I. ON RT.
@ STA. 184+07.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 5' DIA.
36" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 118 LIN. FT.
36" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 118 LIN. FT.

STA. 185+29 IN PLACE
16" X 31' R.C. PIPE CULVERT
ON RT.
REMOVE

STA. 185+64 IN PLACE
18" X 101' R.C. PIPE CULVERT
W/F.E.S. ON RT.
REMOVE

STA. 186+04 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 187+30 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 186+88.00 CONSTRUCT
DI ON RT. H = 4'-6"
WITH 4' EXTENSION
AND 30" X 156' PIPE OUTLET
WITH OPENING IN BACK
CONNECT TO D. I. ON RT.
@ STA. 185+28.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 5' DIA.
30" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 156 LIN. FT.
30" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 156 LIN. FT.

STA. 187+30 IN PLACE
24" X 30' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 189+98.00 CONSTRUCT
DI ON RT. H = 3'-11"
WITH 4' EXTENSION
AND 24" X 306' PIPE OUTLET
WITH OPENING IN BACK
CONNECT TO D. I. ON RT.
@ STA. 186+88.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 306 LIN. FT.
24" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 306 LIN. FT.

DROP INLETS TO BE RETAINED

STATION	SIDE
179+43	RT.

REMOVAL AND DISPOSAL OF DROP INLETS

STATION	SIDE
175+20	LT.
175+46	RT.
176+74	LT.
180+20	RT.
180+78	RT.
180+97	RT.
182+78	RT.
184+06	RT.
184+39	RT.
185+27	RT.
185+62	RT.
189+16	LT.

REMOVAL AND DISPOSAL OF FENCE

STATION	STATION	LOCATION	LIN. FT.	GATES
182+42		RT.		1
184+38		RT.		1
187+10	188+25	LT.	117	

12/7/2017

R061335.DGN

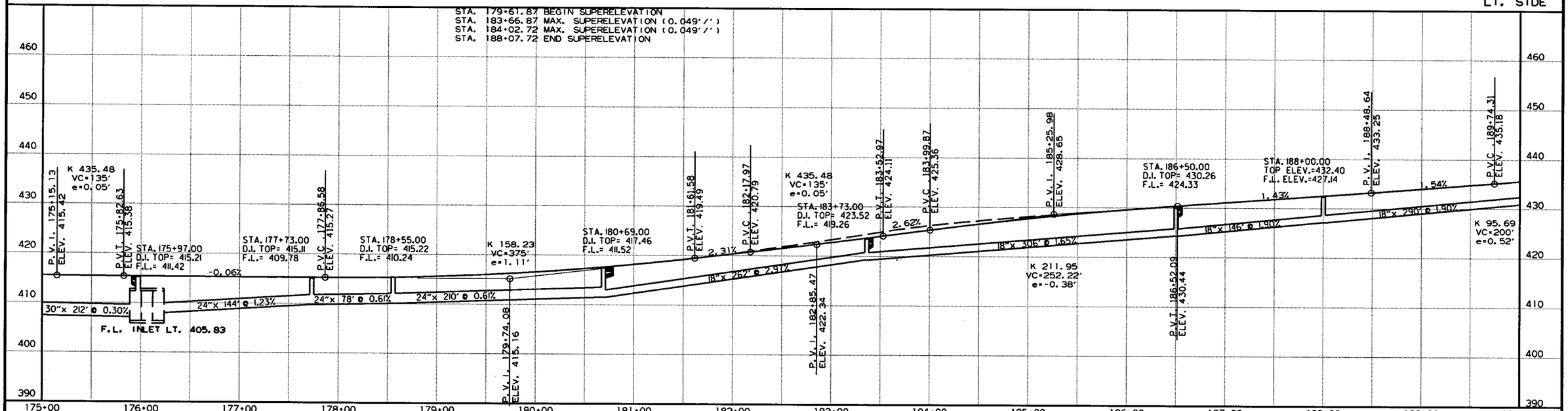
HWY. 5

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	101	303

(2) PROFILE SHEET STA. 175+00 - STA. 190+00

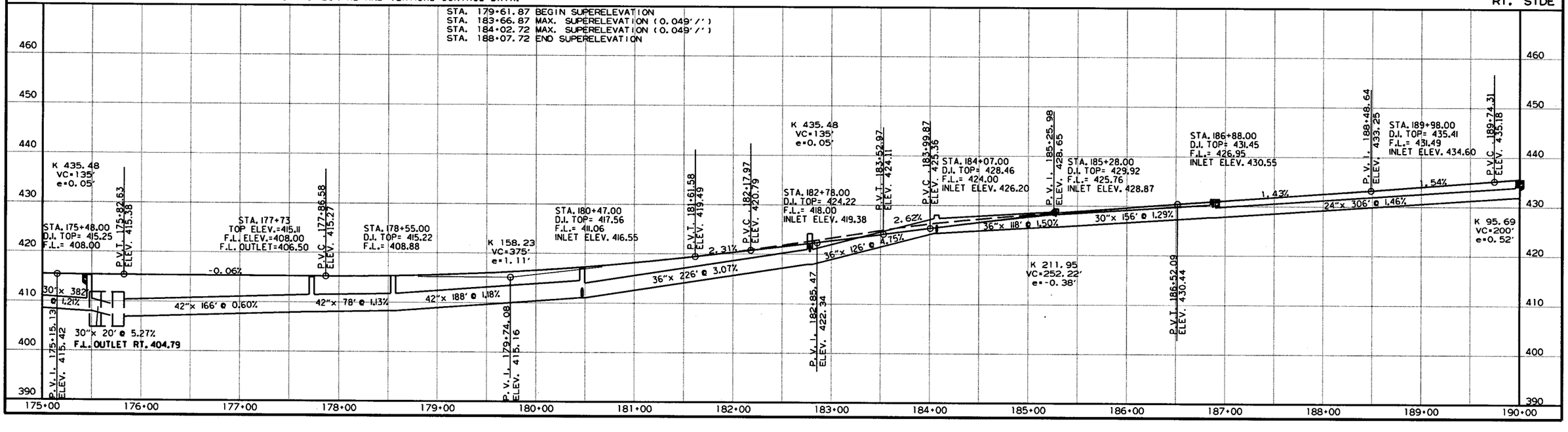
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

LT. SIDE



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

RT. SIDE



12/7/2017

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
08-20-18				6	ARK.			
				JOB NO.		061335	102	303

(2) PLAN SHEET STA. 190+00 - STA. 205+00

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
8-20-18

STA. 190+39 CONSTRUCT
APPROACH ON LT. = 15 CU. YDS.

STA. 191+67 CONSTRUCT
APPROACH ON LT. =10 CU. YDS.

STA. 192+37 CONSTRUCT
APPROACH ON LT. = 35 CU. YDS.

STA. 196+17 CONSTRUCT
APPROACH ON LT. = 120 CU. YDS.

STA. 191+95 IN PLACE
18" X 113' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 193+85.00 CONSTRUCT
DI ON LT. H = 4'-7"
AND 18" X 292' PIPE OUTLET
CONNECT TO D.I. ON LT
@ STA. 190+90.00
TYPE C SPECIAL DROP INLET = 4'x 4'
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 292 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 292 LIN. FT.
"L" TO BE DETERMINED BY THE ENGINEER

STA. 199+67 CONSTRUCT
APPROACH ON LT. = 165 CU. YDS.

STA. 201+05 CONSTRUCT
APPROACH ON LT. = 315 CU. YDS.

STA. 202+17.00 CONSTRUCT
DI 39'-0" LT. H = 7'-6"
WITH 4' EXTENSION
AND 30" X 24' R.C. PIPE OUTLET
CONNECT TO J.B. 67'-0" LT. @ STA. 202+17.00
TYPE C SPECIAL DROP INLET = 4'x 4'
30" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 24 LIN. FT.
"L" TO BE DETERMINED BY THE ENGINEER

STA. 204+00.00 CONSTRUCT
DI ON LT. H = 4'-8"
WITH 4' EXTENSION
AND 18" X 180' PIPE OUTLET
CONNECT TO DI ON LT.
@ STA. 202+17.00
TYPE C SPECIAL DROP INLET = 4'x 4'
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 180 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 180 LIN. FT.
"L" TO BE DETERMINED BY THE ENGINEER

STA. 190+90.00 CONSTRUCT
DI ON LT. H = 4'-11"
AND 18" X 290' PIPE OUTLET
CONNECT TO D.I. ON LT
@ STA. 188+00.00
TYPE C SPECIAL DROP INLET = 4'x 4'
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 290 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 290 LIN. FT.
"L" TO BE DETERMINED BY THE ENGINEER

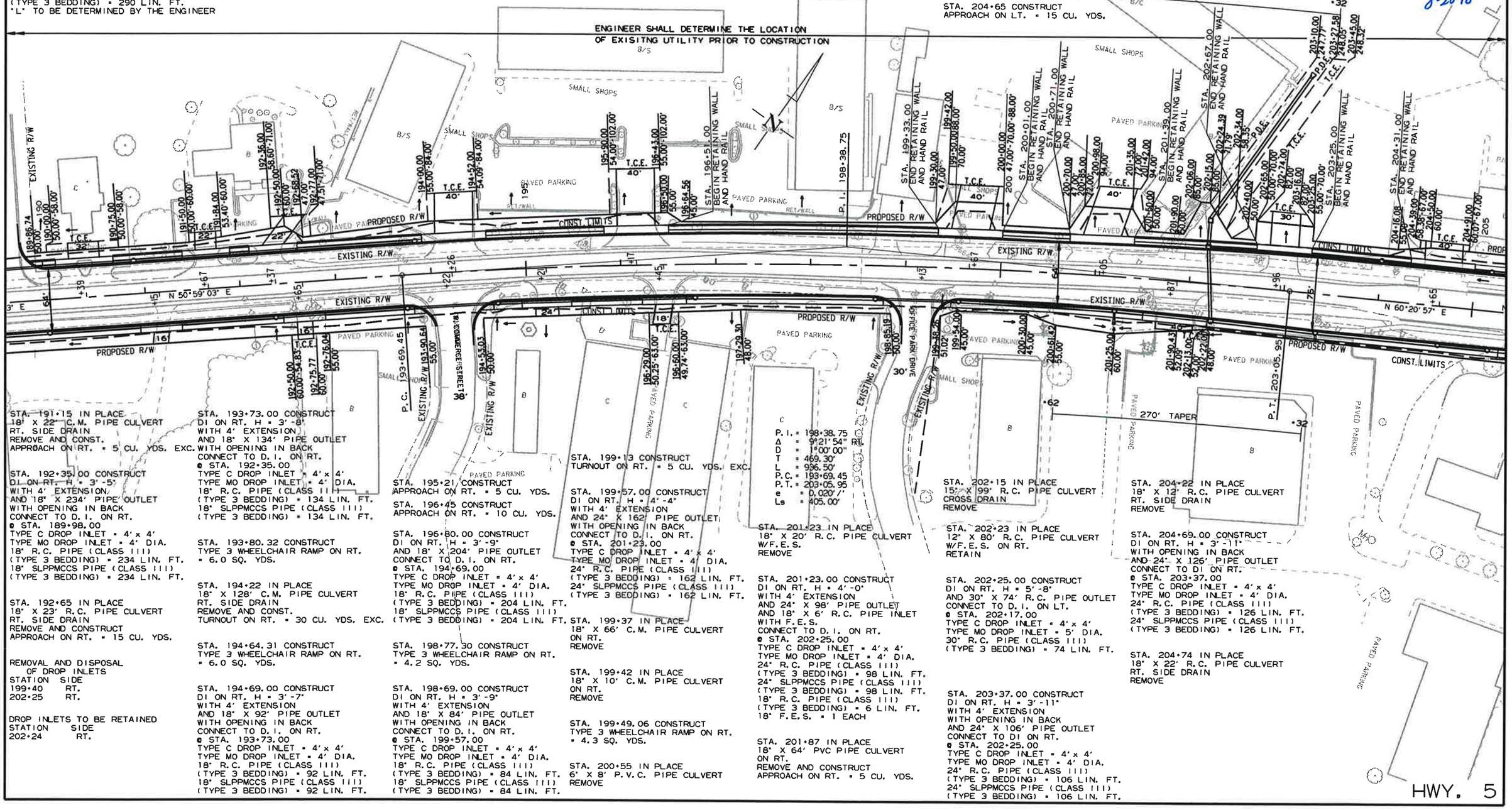
STA. 191+99 IN PLACE
18" X 113' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 194+26 CONSTRUCT
APPROACH ON LT. = 80 CU. YDS.

STA. 202+17.00 CONSTRUCT
JUNCTION BOX 67'-0" LT. H = 7'-6"
AND 30" X 182' R.C. PIPE OUTLET
W/ F.E.S.
TYPE E JUNCTION BOX = 4'x 4'
30" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 182 LIN. FT.
30" F.E.S. = 1 EACH

STA. 202+96 CONSTRUCT
APPROACH ON LT. = 140 CU. YDS.

STA. 204+65 CONSTRUCT
APPROACH ON LT. = 15 CU. YDS.



STA. 191+15 IN PLACE
18" X 22' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND CONST.
APPROACH ON RT. = 5 CU. YDS. EXC.

STA. 192+35.00 CONSTRUCT
DI ON RT. H = 3'-5"
WITH 4' EXTENSION
AND 18" X 234' PIPE OUTLET
WITH OPENING IN BACK
CONNECT TO D.I. ON RT.
@ STA. 189+98.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 234 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 234 LIN. FT.

STA. 192+65 IN PLACE
18" X 23' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON RT. = 15 CU. YDS.

REMOVAL AND DISPOSAL
OF DROP INLETS
STATION SIDE
199+40 RT.
202+25 RT.

DROP INLETS TO BE RETAINED
STATION SIDE
202+24 RT.

STA. 193+73.00 CONSTRUCT
DI ON RT. H = 3'-8"
WITH 4' EXTENSION
AND 18" X 134' PIPE OUTLET
WITH OPENING IN BACK
CONNECT TO D.I. ON RT.
@ STA. 192+35.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 134 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 134 LIN. FT.

STA. 193+80.32 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 6.0 SQ. YDS.

STA. 194+22 IN PLACE
18" X 128' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND CONST.
TURNOUT ON RT. = 30 CU. YDS. EXC.

STA. 194+64.31 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 6.0 SQ. YDS.

STA. 194+69.00 CONSTRUCT
DI ON RT. H = 3'-7"
WITH 4' EXTENSION
AND 18" X 92' PIPE OUTLET
WITH OPENING IN BACK
CONNECT TO D.I. ON RT.
@ STA. 193+73.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 92 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 92 LIN. FT.

STA. 195+21 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 196+45 CONSTRUCT
APPROACH ON RT. = 10 CU. YDS.

STA. 196+80.00 CONSTRUCT
DI ON RT. H = 3'-9"
AND 18" X 204' PIPE OUTLET
CONNECT TO D.I. ON RT.
@ STA. 194+69.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 204 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 204 LIN. FT.

STA. 198+77.30 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 4.2 SQ. YDS.

STA. 198+69.00 CONSTRUCT
DI ON RT. H = 3'-9"
WITH 4' EXTENSION
AND 18" X 84' PIPE OUTLET
WITH OPENING IN BACK
CONNECT TO D.I. ON RT.
@ STA. 199+57.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 84 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 84 LIN. FT.

STA. 199+13 CONSTRUCT
TURNOUT ON RT. = 5 CU. YDS. EXC.

STA. 199+57.00 CONSTRUCT
DI ON RT. H = 4'-4"
WITH 4' EXTENSION
AND 24" X 162' PIPE OUTLET
WITH OPENING IN BACK
CONNECT TO D.I. ON RT.
@ STA. 201+23.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 162 LIN. FT.
24" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 162 LIN. FT.

STA. 199+37 IN PLACE
18" X 66' C.M. PIPE CULVERT
ON RT.
REMOVE

STA. 199+42 IN PLACE
18" X 10' C.M. PIPE CULVERT
ON RT.
REMOVE

STA. 199+49.06 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 4.3 SQ. YDS.

STA. 200+55 IN PLACE
6' X 8' P.V.C. PIPE CULVERT
REMOVE

STA. 201+23 IN PLACE
18" X 20' R.C. PIPE CULVERT
W/F.E.S.
REMOVE

STA. 201+23.00 CONSTRUCT
DI ON RT. H = 4'-0"
WITH 4' EXTENSION
AND 24" X 98' PIPE OUTLET
AND 18" X 6' R.C. PIPE INLET
WITH F.E.S.
CONNECT TO D.I. ON RT.
@ STA. 202+25.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 98 LIN. FT.
24" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 98 LIN. FT.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 6 LIN. FT.
18" F.E.S. = 1 EACH

STA. 201+87 IN PLACE
18" X 64' PVC PIPE CULVERT
ON RT.
REMOVE AND CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 202+15 IN PLACE
15" X 99' R.C. PIPE CULVERT
CROSS DRAIN
REMOVE

STA. 202+23 IN PLACE
12" X 80' R.C. PIPE CULVERT
W/F.E.S. ON RT.
RETAIN

STA. 202+25.00 CONSTRUCT
DI ON RT. H = 5'-8"
AND 30" X 74' R.C. PIPE OUTLET
CONNECT TO D.I. ON LT.
@ STA. 202+17.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 5' DIA.
30" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 74 LIN. FT.

STA. 203+37.00 CONSTRUCT
DI ON RT. H = 3'-11"
WITH 4' EXTENSION
WITH OPENING IN BACK
AND 24" X 106' PIPE OUTLET
CONNECT TO DI ON RT.
@ STA. 202+25.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 106 LIN. FT.
24" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 106 LIN. FT.

STA. 204+22 IN PLACE
18" X 12' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 204+69.00 CONSTRUCT
DI ON RT. H = 3'-11"
WITH OPENING IN BACK
AND 24" X 126' PIPE OUTLET
CONNECT TO DI ON RT.
@ STA. 203+37.00
TYPE C DROP INLET = 4'x 4'
TYPE MO DROP INLET = 4' DIA.
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 126 LIN. FT.
24" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 126 LIN. FT.

STA. 204+74 IN PLACE
18" X 22' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

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HWY. 5

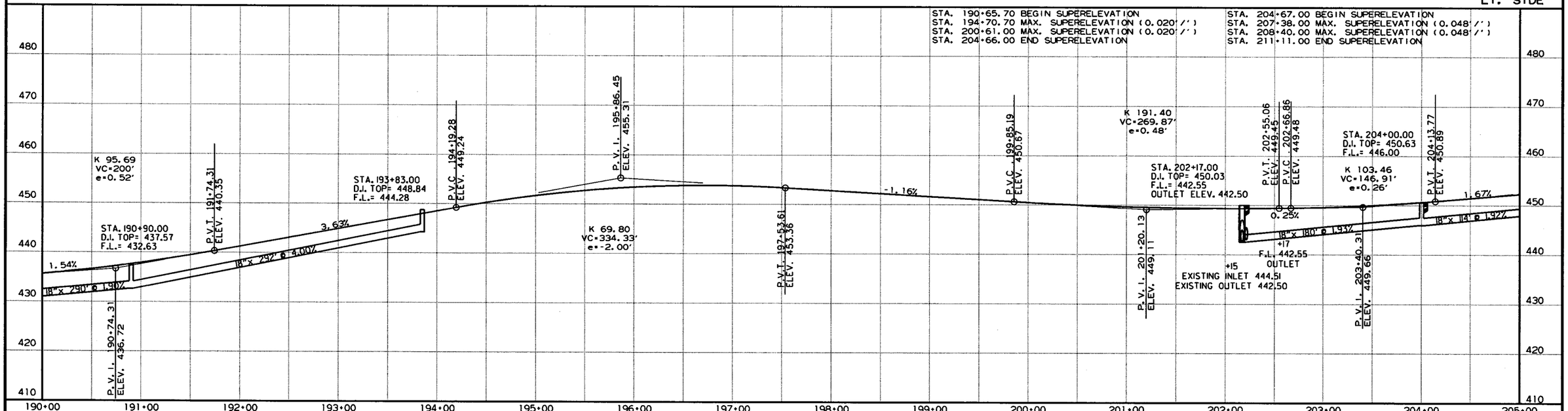
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	103	303

(2) PROFILE SHEET STA. 190+00 - STA. 205+00

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

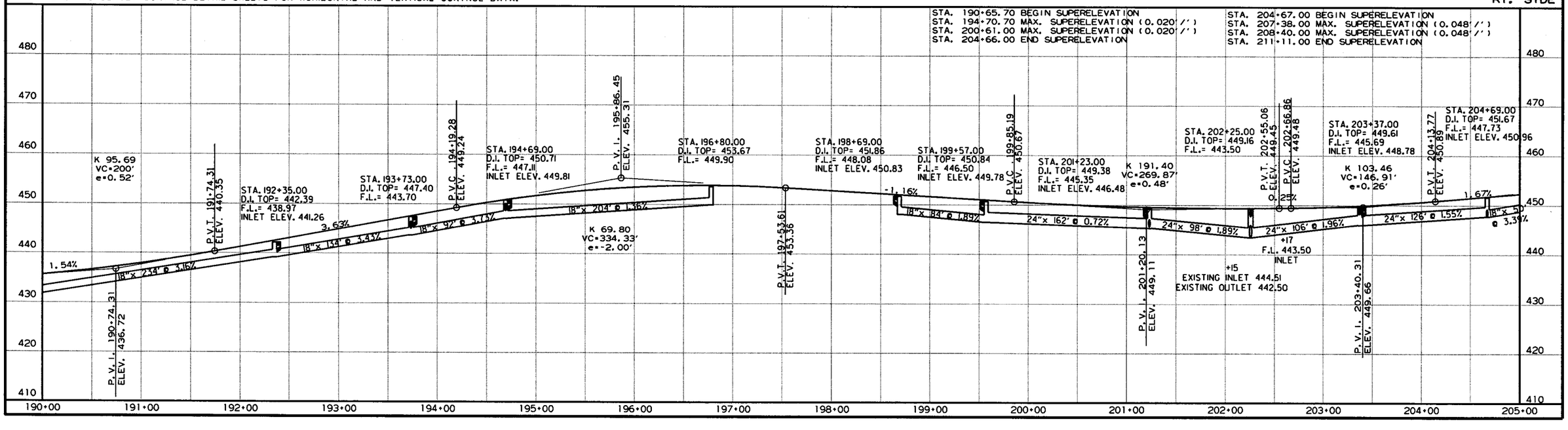
7-31-18

LT. SIDE



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

RT. SIDE



12/7/2017

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	104	303

(2) PLAN SHEET STA. 205+00 - STA. 220+00

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
TRINITY D. SMITH
No. 11425
7-31-18

STA. 205+17.00 CONSTRUCT
DI ON LT. H = 4'-0"
WITH 4' EXTENSION
AND 18" X 114' PIPE OUTLET
TYPE C SPECIAL DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 114 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 114 LIN. FT.
"L" TO BE DETERMINED BY THE ENGINEER

STA. 206+28 CONSTRUCT
APPROACH ON LT. = 10 CU. YDS.

STA. 207+21.00 CONSTRUCT
DI ON LT. H = 4'-5"
WITH 8' EXTENSION
AND 18" X 196' PIPE OUTLET
CONNECT TO DI ON LT.
@ STA. 205+17.00
TYPE C SPECIAL DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 196 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 196 LIN. FT.
"L" TO BE DETERMINED BY THE ENGINEER

STA. 207+34.96 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 3.3 SQ. YDS.

STA. 208+50.00 CONSTRUCT
DI ON LT. H = 3'-11"
WITH 4' EXTENSION
AND 18" X 318' PIPE OUTLET
CONNECT TO DI ON LT.
@ STA. 211+82.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 318 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 318 LIN. FT.

STA. 207+43.71 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 3.4 SQ. YDS.

STA. 207+91 CONSTRUCT
TURNOUT ON LT. = 25 CU. YDS. EXC.

STA. 208+22.35 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 3.5 SQ. YDS.

STA. 208+24.13 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 3.2 SQ. YDS.

STA. 210+70 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 211+82.00 CONSTRUCT
DI ON LT. H = 4'-9"
AND 18" X 110' PIPE OUTLET
AND 18" X 6' PIPE INLET
W/ F.E.S.
CONNECT TO DI ON LT.
@ STA. 212+92.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 116 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 110 LIN. FT.
18" F.E.S. = 1 EACH

STA. 211+93.35 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 6.0 SQ. YDS.

STA. 211+98 IN PLACE
18" X 6' R.C. PIPE CULVERT
ON LT.
REMOVE

STA. 211+98 IN PLACE
18" X 15' R.C. PIPE CULVERT
ON LT.
REMOVE

STA. 211+99 IN PLACE
18" X 62' C.M. PIPE CULVERT
ON LT.
REMOVE

STA. 212+66.59 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 6.0 SQ. YDS.

STA. 212+30 CONSTRUCT
TURNOUT ON LT. = 30 CU. YDS.

STA. 212+92.00 CONSTRUCT
DI ON LT. H = 5'-8"
AND 18" X 68' R.C. PIPE OUTLET
AND 18" X 6' PIPE INLET
CONNECT TO DI ON RT.
@ STA. 212+94.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 74 LIN. FT.

STA. 212+99 IN PLACE
18" X 45' R.C. PIPE CULVERT
ON LT.
REMOVE

ENGINEER SHALL DETERMINE THE LOCATION OF EXISTING UTILITY PRIOR TO CONSTRUCTION

P.I. = 208+44.39
Δ = 29°46'25" LT.
D = 7°00'00"
T = 217.68
L = 425.33
P.C. = 206+26.81
P.T. = 210+52.14
e = 0.088'/'
Ls = 495.00'

240' TAPER

100' TRANSITION

REMOVAL AND DISPOSAL OF FENCE

STATION	STATION	LOCATION	LIN. FT.
210+92		LT.	25
212+96	213+17	LT.	27

P.I. = 217+22.59
Δ = 37°11'55" RT.
D = 3°30'00"
T = 550.90'
L = 1062.82'
P.C. = 211+71.69
R.P.C. = 222+34.51
e = 0.065'/'
Ls = 405.00'

STA. 214+00.00
END JOB 061335

STA. 207+91.48 HWY. 5 -
STA. 11+65.34 HWY. 183
COMMONWEALTH DRIVE
Δ = 80°30'00"

STA. 207+02.91 CONSTRUCT
TYPE 4 WHEELCHAIR RAMP ON RT.
= 2.8 SQ. YDS.

STA. 207+25.94 CONSTRUCT
TYPE 4 WHEELCHAIR RAMP ON RT.
= 2.8 SQ. YDS.

STA. 207+30.54 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 2.7 SQ. YDS.

STA. 207+39.22 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 2.9 SQ. YDS.

STA. 205+20.00 CONSTRUCT
DI ON RT. H = 3'-8"
WITH 4' EXTENSION
WITH OPENING IN BACK
AND 18" X 50' PIPE OUTLET
CONNECT TO DI ON RT.
@ STA. 204+69.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 50 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 50 LIN. FT.

STA. 205+65 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 208+12.14 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 3.2 SQ. YDS.

STA. 208+19.74 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 2.6 SQ. YDS.

STA. 208+22.63 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 2.7 SQ. YDS.

STA. 208+25.94 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 2.8 SQ. YDS.

STA. 206+37 IN PLACE
18" X 7' R.C. PIPE CULVERT
ON RT.
RETAIN

STA. 206+42 IN PLACE
18" X 46' R.C. PIPE CULVERT
ON RT.
RETAIN

STA. 206+43 IN PLACE
18" X 66' R.C. PIPE CULVERT
ON RT.
RETAIN

STA. 206+84 IN PLACE
18" X 225' R.C. PIPE CULVERT
ON RT.
RETAIN

STA. 206+84 IN PLACE
18" X 11' R.C. PIPE CULVERT
ON RT.
RETAIN

STA. 208+39.95 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 2.7 SQ. YDS.

STA. 209+85.34 CONSTRUCT
TYPE 4 WHEELCHAIR RAMP ON RT.
= 8.7 SQ. YDS.

STA. 206+36 IN PLACE
18" X 23' R.C. PIPE CULVERT
ON RT.
RETAIN

STA. 206+86 IN PLACE
18" X 67' R.C. PIPE CULVERT
ON RT.
RETAIN

STA. 207+91 CONSTRUCT
TURNOUT ON RT. = 60 CU. YDS.

STA. 209+24 IN PLACE
12" X 100' PVC PIPE CULVERT
ON RT.
RETAIN

STA. 209+25 IN PLACE
6" X 50' PVC PIPE CULVERT
ON RT.
RETAIN

STA. 210+56.86 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 4.1 SQ. YDS.

STA. 209+26 IN PLACE
12" X 26' R.C. PIPE CULVERT
ON RT.
RETAIN

STA. 209+81.00 CONSTRUCT
DI ON RT. H = 3'-8"
AND 18" X 314' PIPE OUTLET
CONNECT TO DI ON RT.
@ STA. 212+94.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 314 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 314 LIN. FT.

STA. 210+19 IN PLACE
18" X 51' PVC PIPE CULVERT
ON RT.
RETAIN AND CONST.
TURNOUT ON RT. = 85 CU. YDS.

STA. 211+64 CONSTRUCT
APPROACH ON RT. = 15 CU. YDS.

STA. 212+88 IN PLACE
24" X 39' R.C. PIPE CULVERT
ON RT.
RETAIN

STA. 212+94.00 CONSTRUCT
DI ON RT. H = 6'-11"
CONNECT EXISTING PIPE OUTLET
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.

STA. 212+99 IN PLACE
18" X 87' R.C. PIPE CULVERT
ON RT.
RETAIN & REMOVE 20'

STA. 213+00 IN PLACE
18" X 116' PVC PIPE CULVERT
ON RT.
REMOVE

STA. 213+77 CONSTRUCT
APPROACH ON RT. = 25 CU. YDS.

REMOVAL AND DISPOSAL OF DROP INLETS

STATION	SIDE
211+98	LT.
213+00	RT.

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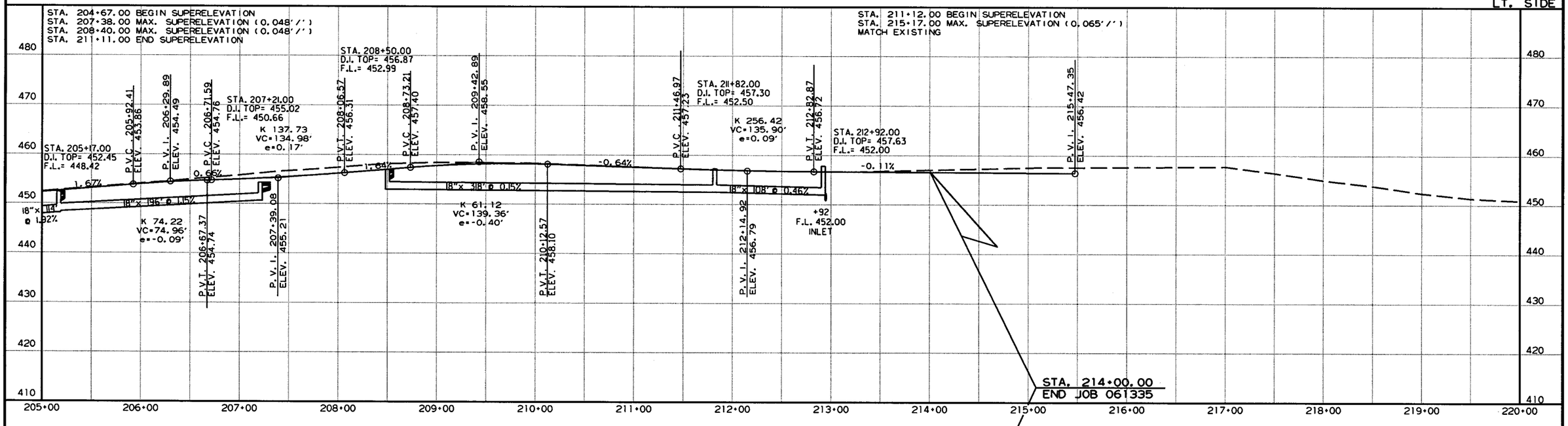
HWY. 5

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	105	303

(2) PROFILE SHEET STA. 205+00 - STA. 220+00

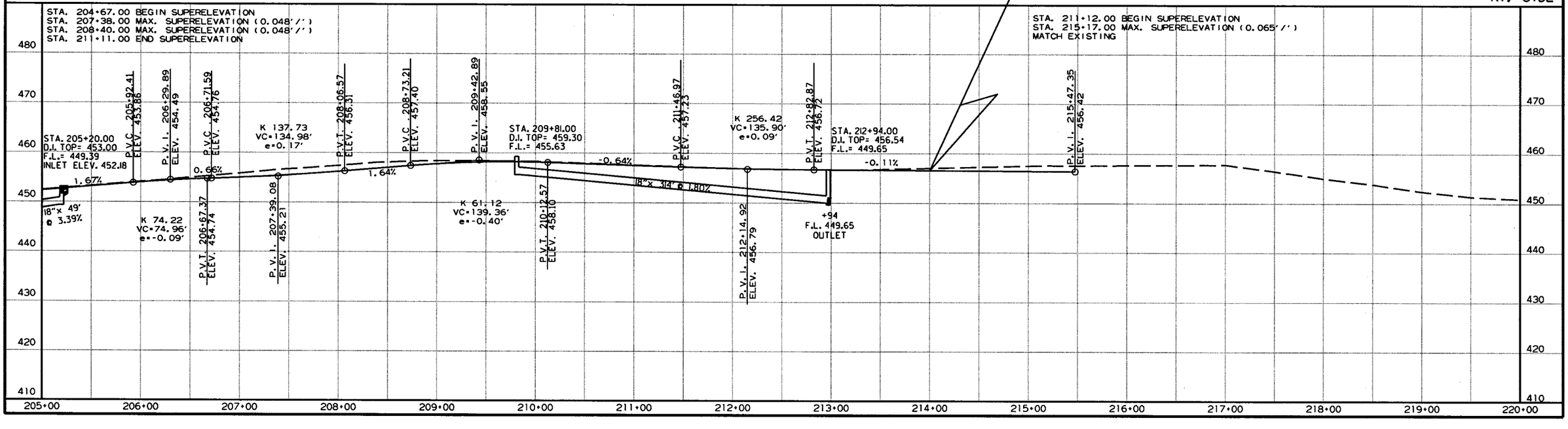
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

LT. SIDE



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

RT. SIDE



12/7/2017

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	106	303

(2) PLAN SHEET STA. 55+00 - STA. 70+00

STA. 50+22 IN PLACE
36" X 52' C.M. PIPE CULVERT
ON LT. SIDE
RETAIN

STA. 52+72 IN PLACE
24" X 98' C.M. PIPE CULVERT
WITH F.E.S.
ON LT. SIDE
RETAIN

STA. 54+75 IN PLACE
24" X 99' B.P.P. PIPE CULVERT
WITH F.E.S.
LT. SIDE DRAIN
RETAIN

STA. 54+95 IN PLACE
24" X 71' B.P.P. PIPE CULVERT
LT. SIDE DRAIN
RETAIN

STA. 55+39.14 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 5.9 SQ. YDS.

STA. 55+50.00 CONSTRUCT
DI ON LT. H = 4'-4"
WITH 4' EXTENSION
AND 24" X 10' R.C. PIPE OUTLET
WITH F.E.S.
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 10 LIN. FT.
24" F.E.S. = 1 EACH

STA. 58+15 IN PLACE
18" X 38' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONST.
APPROACH ON LT. = 50 CU. YDS.

STA. 58+50.00 CONSTRUCT
DI ON LT. H = 4'-11"
WITH 4' EXTENSION
AND 24" X 292' PIPE OUTLET
CONNECT TO D. I. ON LT.
@ STA. 55+50.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 292 LIN. FT.
24" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 292 LIN. FT.

STA. 60+00.00 CONSTRUCT
DI ON LT. H = 5'-4"
WITH 4' EXTENSION
AND 24" X 142' PIPE OUTLET
CONNECT TO D. I. ON LT.
@ STA. 58+50.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 142 LIN. FT.
24" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 142 LIN. FT.

STA. 60+47 IN PLACE
36" X 10' C.M. PIPE CULVERT
LT. SIDE DRAIN
RETAIN

STA. 61+32 IN PLACE
18" X 44' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONST.
APPROACH ON LT. = 70 CU. YDS.

STA. 61+70.00 CONSTRUCT
DI ON LT. H = 7'-0"
WITH 4' EXTENSION
AND 24" X 164' PIPE OUTLET
CONNECT TO D. I. ON LT.
@ STA. 60+00.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 164 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 164 LIN. FT.

STA. 64+09.00 CONSTRUCT
DI ON LT. H = 8'-0"
WITH 8' EXTENSION
AND 18" X 124' R.C. PIPE OUTLET
CONNECT EXISTING PIPE INLET
CONNECT TO D. I. ON RT.
@ STA. 64+56.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 124 LIN. FT.

STA. 64+90 CONSTRUCT
APPROACH ON LT. = 45 CU. YDS.

STA. 66+41.00 CONSTRUCT
DI ON LT. H = 3'-8"
WITH 4' EXTENSION
CONNECT EXISTING PIPE OUTLET
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.

STA. 66+41 IN PLACE
18" X 31' B.P.P. PIPE CULVERT
WITH F.E.S.
LT. SIDE DRAIN
REMOVE

STA. 66+65 IN PLACE
36" X 88' B.P.P. PIPE CULVERT
LT. SIDE DRAIN
RETAIN

STA. 66+73 IN PLACE
36" X 85' B.P.P. PIPE CULVERT
LT. SIDE DRAIN
RETAIN

STA. 67+04 IN PLACE
18" X 97' B.P.P. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONST.
APPROACH ON LT. = 5 CU. YDS.

STA. 67+42.00 CONSTRUCT
DI ON LT. H = 3'-8"
WITH 4' EXTENSION
AND 18" X 98' PIPE OUTLET
CONNECT TO D. I. ON LT.
@ STA. 66+41.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 98 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 98 LIN. FT.

STA. 68+30 IN PLACE
18" X 171' B.P.P. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 69+80.00 CONSTRUCT
DI ON LT. H = 4'-4"
AND 18" X 234' PIPE OUTLET
CONNECT TO D. I. ON LT.
@ STA. 67+42.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 234 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 234 LIN. FT.

STA. 69+93.14 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 4.4 SQ. YDS.

REMOVAL AND DISPOSAL OF FENCE

STATION	STATION	LOCATION	LIN. FT.
67+40	67+75	LT.	35

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P. I. = 58+69.07
Δ = 21°48' 12" LT.
D = 5°00' 00"
T = 220.70'
L = 436.06'
P.C. = 56+48.37
P.T. = 60+84.43
e = 0.061'/'
Ls = 360.00'

P. I. = 65+56.45
Δ = 0°58' 21" RT.
D = 0°30' 00"
T = 97.23'
L = 194.46'
P.C. = 64+59.22
P.T. = 66+53.68
NO SUPER

P. I. = 69+27.54
Δ = 0°35' 24" LT.
D = 0°30' 00"
T = 58.98'
L = 117.96'
P.C. = 68+68.56
P.T. = 69+86.52
NO SUPER

575' TAPER

555' TAPER

STA. 148+40.75 HWY. 5 =
STA. 63+29.15 SPRINGHILL ROAD
Δ = 58°46'15"

STA. 55+50.00
BEGIN SPRINGHILL RD. CONSTRUCTION

STA. 55+56.00 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 3.3 SQ. YDS.

STA. 51+54 IN PLACE
36" X 99' C.M. PIPE CULVERT
WITH F.E.S.
RETAIN

STA. 52+70 IN PLACE
24" X 44' C.M. PIPE CULVERT
RT. SIDE DRAIN
RETAIN

STA. 53+17 IN PLACE
18" X 60' C.M. PIPE CULVERT
ON RT. SIDE
RETAIN

STA. 55+55.00 CONSTRUCT
DI ON RT. H = 2'-5"
AND 18" X 4' R.C. PIPE OUTLET
WITH F.E.S.
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 4 LIN. FT.
18" F.E.S. = 1 EACH

STA. 58+12 IN PLACE
18" X 34' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
18" X 32' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPROACH ON RT. = 50 CU. YDS.

STA. 59+89 IN PLACE
18" X 54' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
18" X 42' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPROACH ON RT. = 5 CU. YDS.

STA. 61+07 IN PLACE
18" X 56' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND CONST.
APPROACH ON RT. = 5 CU. YDS. EXC.

STA. 61+10 IN PLACE
18" X 154' B.P.P.. PIPE CULVERT
ON RT. SIDE
RETAIN

STA. 61+70.00 CONSTRUCT
DI ON RT. H = 5'-8"
AND 18" X 72' R.C. PIPE OUTLET
CONNECT TO D. I. ON LT.
@ STA. 61+70.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 72 LIN. FT.

STA. 62+82.00 CONSTRUCT
DI ON RT. H = 5'-7"
WITH 4' EXTENSION
AND 18" X 108' PIPE OUTLET
AND OPENING IN BACK
CONNECT TO D. I. ON RT.
@ STA. 61+70.00
TYPE C DROP INLET = 12' x 4'
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 108 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 108 LIN. FT.

STA. 64+34 IN PLACE
12" X 23' PVC PIPE CULVERT
ON RT. SIDE
REMOVE

STA. 64+56.00 CONSTRUCT
JUNCTION BOX ON RT. H = 11'-6"
AND 18" X 176' R.C. PIPE OUTLET
CONNECT EXISTING PIPE INLET
CONNECT TO D. I. ON RT.
@ STA. 62+82.00
TYPE E JUNCTION BOX = 12' x 4'
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 176 LIN. FT.

STA. 65+00.00 CONSTRUCT
DI ON RT. H = 6'-3"
WITH 8' EXTENSION
AND 18" X 58' PIPE OUTLET
CONNECT TO D. I. ON RT.
@ STA. 64+56.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 58 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 58 LIN. FT.

STA. 65+52 CONSTRUCT
APPROACH ON RT. = 40 CU. YDS.

STA. 66+29 CONSTRUCT
APPROACH ON RT. = 15 CU. YDS.

STA. 69+07 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 67+42.00 CONSTRUCT
DI ON RT. H = 5'-9"
WITH 4' EXTENSION
AND 18" X 238' PIPE OUTLET
CONNECT TO D. I. ON RT.
@ STA. 65+00.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 238 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 238 LIN. FT.

STA. 68+12 IN PLACE
16" X 25' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND CONST.
APPROACH ON RT. = 5 CU. YDS. EXC.

STA. 69+43 IN PLACE
10" X 12' PVC PIPE CULVERT
ON RT. SIDE
RETAIN

SPRINGHILL ROAD

12/7/2017

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				6	ARK.			
				JOB NO.		061335	107	303

(2) PROFILE SHEET STA. 55+00 - STA. 70+00

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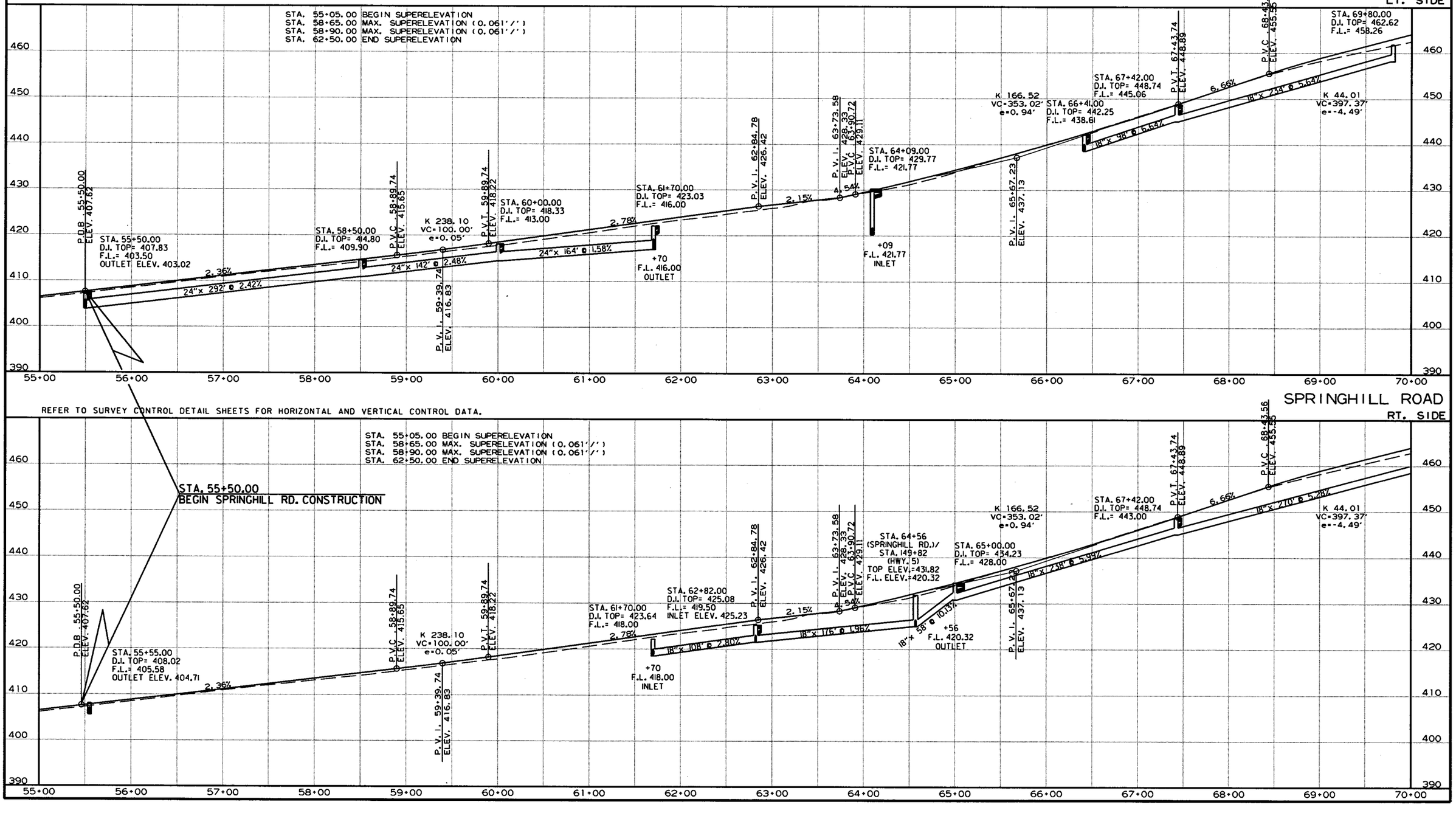
TRINITY D. SMITH
7-31-18

LT. SIDE



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SPRINGHILL ROAD

RT. SIDE

12/7/2017

R061335.DGN

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				6	ARK.			
				JOB NO.		061335	108	303

(2) PLAN SHEET STA. 70+00 - STA. 85+00

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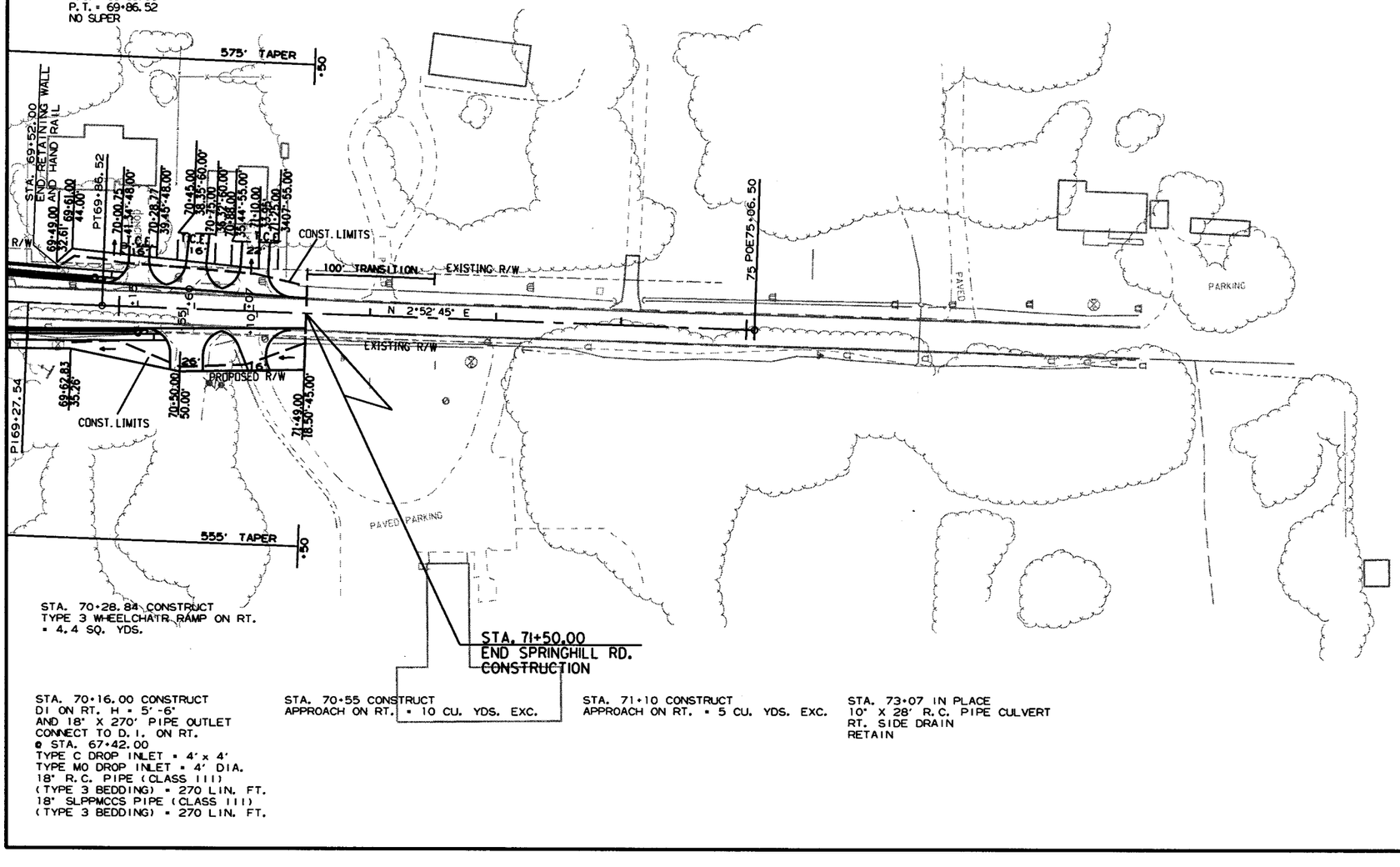
STA. 70+15 IN PLACE
16' X 22' R.C. PIPE CULVERT
LT. SIDE DRAIN
RETAIN AND CONST.
APPROACH ON LT. = 5 CU. YDS.

STA. 70+60 CONSTRUCT
APPROACH ON LT. = 30 CU. YDS.

STA. 71+07 CONSTRUCT
APPROACH ON LT. = 45 CU. YDS.

STA. 72+10 IN PLACE
12' X 20' C.M. PIPE CULVERT
LT. SIDE DRAIN
RETAIN

P. I. = 69+27.54
Δ = 0°35'24" LT.
D = 0°30'00"
T = 58.98'
L = 117.96'
P.C. = 68+68.56
P.T. = 69+86.52
NO SUPER



STA. 70+28.84 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 4.4 SQ. YDS.

STA. 71+50.00
END SPRINGHILL RD.
CONSTRUCTION

STA. 70+16.00 CONSTRUCT
DI ON RT. H = 5'-6"
AND 18" X 270' PIPE OUTLET
CONNECT TO D. I. ON RT.
@ STA. 67+42.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 270 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 270 LIN. FT.

STA. 70+55 CONSTRUCT
APPROACH ON RT. = 10 CU. YDS. EXC.

STA. 71+10 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS. EXC.

STA. 73+07 IN PLACE
10' X 28' R.C. PIPE CULVERT
RT. SIDE DRAIN
RETAIN

12/7/2017

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SPRINGHILL ROAD

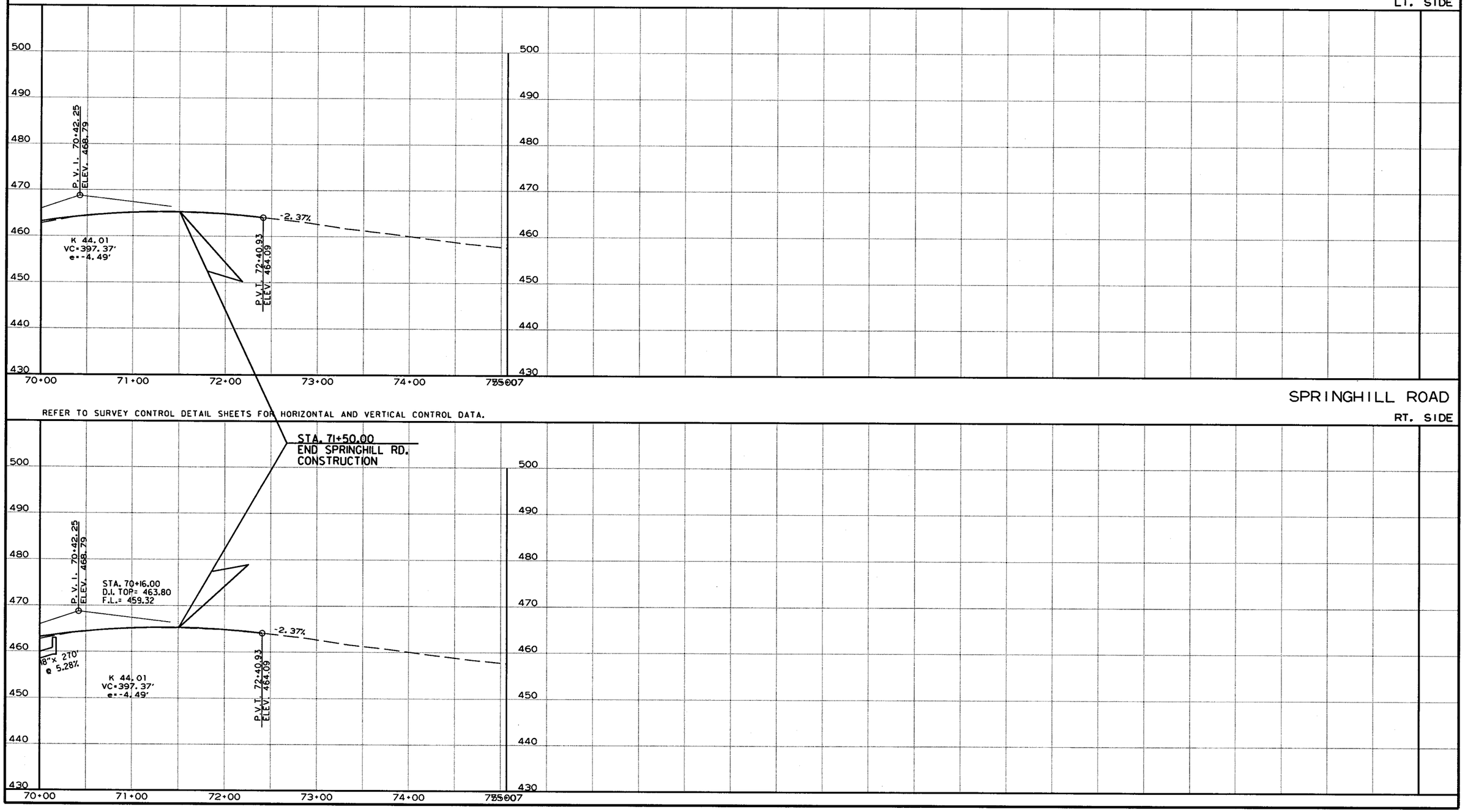
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		061335	109	303

(2) PROFILE SHEET STA. 70+00 - STA. 85+00

LT. SIDE



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

SPRINGHILL ROAD

RT. SIDE

12/7/2017

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	110	303

(2) SUMMARY OF TRAFFIC SIGNAL QUANTITIES

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

SUMMARY OF TRAFFIC SIGNAL QUANTITIES

	ITEM NUMBER	ITEM	HWY. 5/ALCOA RD.	HWY. 5/SPRINGHILL RD.	HWY. 5/HWY. 183	HWY. 5/ PEDESTRIAN HYBRID BEACON	QUANTITY	UNIT
	SP & 701	ACTUATED CONTROLLER TS2-TYPE 2 (8 PHASES)	1	1	1	1	4	EACH
	SP & 701	SYSTEM LOCAL CONTROLLER TS2-TYPE 2 (8 PHASES)	1				1	EACH
	SP & 701	SYSTEM LOCAL CONTROLLER TS2-TYPE 2, E-NET (8 PHASES)		1	1		2	EACH
	SP	TRAFFIC SIGNAL CONTROLLER (MODIFICATION)		1			1	EACH
	SP	ETHERNET SWITCH, T100 HARDENED (8-PORT)		1	1		2	EACH
	SP	E-NET CABLE (EXTERIOR CAT 5E)		100	100		200	LIN. FT.
	SP	ANTENNA SUPPORT (SHOE BASE, 35' HT.)	1				1	EACH
	SP	ANTENNA SUPPORT (SHOE BASE, 50' HT.)		1	1		2	EACH
	SP	LOCAL RADIO WITH ANTENNA	1				1	EACH
	SP	ANTENNA CABLE (TYPE 6)	100				100	LIN. FT.
	SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	16	26	15	8	65	EACH
	SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	4	11	7		22	EACH
	SP & 706	TRAFFIC SIGNAL HEAD, LED, (5 SECTION, 1 WAY)	2				2	EACH
	SP	RELOCATION OF TRAFFIC SIGNAL HEAD				4	4	EACH
	SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	2	8	8	2	20	EACH
	SP	EMBEDDED LED PEDESTRIAN ACTIVATED CROSSWALK SIGN				2	2	EACH
	708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	1525	3588	3145	334	8592	LIN. FT.
	708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	744	1335	1154		3233	LIN. FT.
	708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	518	819	775		2112	LIN. FT.
	SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	424	748	712	130	2014	LIN. FT.
	SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)	195	180	180	45	600	LIN. FT.
	SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	20	40	40	20	120	LIN. FT.
	SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	705	999	864	45	2613	LIN. FT.
	709	GALVANIZED STEEL CONDUIT (1.25")	20	40	40	20	120	LIN. FT.
	709	GALVANIZED STEEL CONDUIT (2")	20	20		20	60	LIN. FT.
	709	GALVANIZED STEEL CONDUIT (3")	30	80	80	110	300	LIN. FT.
	710	NON-METALLIC CONDUIT (1.25")	20	40	40	20	120	LIN. FT.
	710	NON-METALLIC CONDUIT (2")	20	90	70	20	200	LIN. FT.
	710	NON-METALLIC CONDUIT (3")	335	873	663	35	1906	LIN. FT.
	711	CONCRETE PULL BOX (TYPE 1)		1	2		3	EACH
	711	CONCRETE PULL BOX (TYPE 2)	3	4	4		11	EACH
	711	CONCRETE PULL BOX (TYPE 1 HD)		1			1	EACH
	711	CONCRETE PULL BOX (TYPE 2 HD)	4	5	3	2	14	EACH
	713	SPAN WIRE ASSEMBLY	1	2	1		4	EACH
	714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (26')	1				1	EACH
	714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (28')			1		1	EACH
	714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (32')			1		1	EACH
	714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (34')	1				1	EACH
	714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (36')	1				1	EACH
	714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (42')				1	1	EACH
	714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (46')				1	1	EACH
	714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (48')	1	2			3	EACH
	714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (50')		1			1	EACH
	714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (54')			1		1	EACH
	714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (56')		1	1		2	EACH
	SP	LED LUMINAIRE ASSEMBLY	4	4	4	1	13	EACH
	715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION		3	2		5	EACH
	SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	2	2	1	6	EACH
	SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.26	0.36	0.26	0.12	1.00	LUMP SUM
	716	TREATED WOOD POLE (CLASS 2, 40')	2	3	5		10	EACH
	726	STANDARD SIGN				35	35	SQ. FT.
	SP	18" STREET NAME SIGN	4	4	6		14	EACH
	SP	VIDEO DETECTOR ROTATION	2	1			3	EACH
*	SP & 733	VIDEO DETECTOR (CLR)	13	22	12		47	EACH
	733	VIDEO CABLE	1843	3960	2561		8364	LIN. FT.
	733	VIDEO MONITOR (CLR)	1	1	1		3	EACH
*	SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	7	9	6		22	EACH
	SP & 733	VIDEO EDGE CARD EXTENDER	2				2	EACH
	SP & 733	VEHICLE DETECTOR RACK (16 CHANNEL)	1	1	1		3	EACH
	SP & 733	VEHICLE DETECTOR RACK (24 CHANNEL)	1	1	1		3	EACH
	SP	NET-ACCESS RADIO (5.8 GHZ, 32 MBPS)		1	1		2	EACH
	SP	NET-SUBSCRIBER RADIO (5.8 GHZ, 32 MBPS)		1	1		2	EACH

* ONE SPARE VIDEO DETECTOR AND ONE SPARE VIDEO PROCESSOR SHALL BE SUPPLIED TO THE CITY OF BENTON.
* ONE SPARE VIDEO DETECTOR AND ONE SPARE VIDEO PROCESSOR SHALL BE SUPPLIED TO THE CITY OF BRYANT.

DATE: 07-27-18 FILE NAME: t061335_job.dgn

LOCATION: ALCOA RD. - HWY. 183
CITY:
COUNTY: SALINE
DISTRICT: 6 SCALE: N/A DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	111	303

(2) TRAFFIC SIGNAL NOTES

TRAFFIC SIGNAL NOTES:

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE NFPA 70 (2017) NATIONAL ELECTRICAL CODE, NFPA 101 (CURRENT EDITION) LIFE SAFETY CODE, STATE ELECTRICAL CODE AND LOCAL ELECTRICAL CODE.

2. EXTEND GREEN EQUIPMENT GROUNDING CONDUCTOR (E.G.C.) FROM GROUND BAR AT MAIN BREAKER TO CONTROL PANEL AND TO FIRST POLE. SOLIDLY BOND E.G.C. TO GROUND LUG OF CONTROL CABINET AND TO POLE GROUND. ENSURE THAT ONLY ONE NEUTRAL-TO-GROUND BOND EXISTS IN THE SYSTEM AND THAT IT IS AT THE MAIN BREAKER.

3. ELECTRICAL SERVICE SHALL BE PROVIDED BY THE CITY/COUNTY TO A SERVICE POLE WITH EXTERNAL RAINTIGHT BREAKER (MAIN BREAKER), GALVANIZED STEEL SERVICE RISER, METER LOOP (IF REQUIRED), AND WEATHERHEAD AT A MUTUALLY ACCEPTABLE POINT WITHIN THE RIGHT-OF-WAY. IF THE SERVICE POINT IS OVER 10 FEET FROM THE CONTROLLER, THE CONTRACTOR SHALL PROVIDE AND INSTALL A SEPARATE TWO CIRCUIT EXTERNAL BREAKER (SECONDARY BREAKER) ON OR NEAR THE TRAFFIC SIGNAL CONTROLLER CABINET AND SHALL INSTALL CONDUIT, ELECTRICAL SERVICE WIRE (2c/#6 A.W.G. USE RATED, WITH GROUND TYPICAL), AND PERFORM WIRING TO TAP INTO THE CITY'S/ COUNTY'S MAIN BREAKER AS PART OF THIS CONTRACT. CONDUIT IS PAID FOR AS A SEPARATE ITEM OF THIS CONTRACT. TWO CIRCUIT BREAKERS, CONSIDERED SUBSIDIARY TO THE CONTROL EQUIPMENT, ARE NEEDED WHERE STREET LIGHTING IS INCLUDED. AS PART OF THE SIGNAL INSTALLATION, STREET LIGHTING CIRCUIT (2c/#12 A.W.G. UF RATED, TYPICAL) SHALL BE KEPT FROM THE CIRCUIT SERVING THE TRAFFIC SIGNAL CONTROL EQUIPMENT FROM THE POINT OF TIE-IN AT THE SECONDARY BREAKER PROVIDED BY THE CONTRACTOR.

4. CONTRACTOR SHALL CONNECT A SEPARATE NEUTRAL FOR EACH LOAD SWITCH REPRESENTED ON EACH SIGNAL POLE.

5. TRAFFIC CONTROLLER CABINET AND LAYOUT SHALL BE SUCH THAT IT IS NOT NECESSARY TO SHUT DOWN POWER OR REMOVE LOAD SWITCHES IN ORDER TO EASILY TEST OR MODIFY DETECTOR INPUTS TO THE CONTROLLER.

6. CONTROLLER CABINET SHALL BE WIRED SUCH THAT DURING FLASH OPERATIONS POWER TO THE LOAD SWITCHES CANNOT BACKFEED TO LOAD SWITCH POWER BUSS.

7. ALL PARTS OF THIS INSTALLATION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, STANDARD DRAWINGS AND WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION.

8. CONDUIT INSTALLED UNDER ROADWAY SURFACES SHALL BE INSTALLED BY PUSHING OR BORING METHODS. IF THE ENGINEER DETERMINES THIS IS NOT FEASIBLE, THEN A TRENCHING METHOD AS SHOWN IN THE STANDARD DRAWINGS MAY BE USED.

9. TRAFFIC SIGNAL POLES SHALL BE GALVANIZED. BACKPLATES SHALL BE SUPPLIED FOR ALL SIGNAL HEADS.

10. PAVEMENT MARKING SHOWN FOR REFERENCE ONLY. SEE PERMANENT PAVEMENT MARKING DETAILS.

11. FOUNDATION FOR ALL POLES SHALL BE EXTENDED IF NECESSARY TO ACCOMMODATE THE REQUIREMENTS FOR SIGNAL HEAD CLEARANCE ABOVE ROADWAY ONLY AT LOCATIONS WHERE THE GROUND ELEVATION AT THE POLE IS BELOW THE ELEVATION OF THE ROADWAY (SEE NOTES ON STANDARD DRAWING). PAYMENT WILL BE INCLUDED IN SECTION 714 TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, CURRENT EDITION.

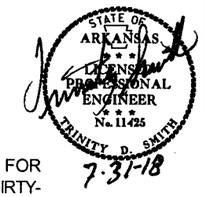
12. ALL CONCRETE PULL BOXES SHALL BE (TYPE 2 HD) UNLESS OTHERWISE INDICATED. ALL CONDUIT SHALL BE THREE (3") INCH DIAMETER UNLESS SPECIFIED ON PLANS.

13. CONTRACTOR SHALL NOTIFY ALL EXISTING UTILITY OWNERS BEFORE BEGINNING WORK ON THIS PROJECT.

14. LUMINAIRE ASSEMBLIES SHALL BE OF THE FULL CUTOFF TYPE.

15. HARDWARE INPUTS MAY BE DETERMINED BY SUPPLIER. EACH DETECTOR OUTPUT SHALL INPUT THE CONTROLLER THROUGH A SEPARATE INPUT UNLESS OTHERWISE NOTED AND BE PROGRAMMED TO ACTUATE THE ASSOCIATED PHASE. COMBINATION (COMB.) DETECTORS SHALL ALSO BE PROGRAMMED TO PROVIDE VEHICLE COUNT/OCCUPANCY DATA.

16. THE LOCAL RADIO WITH ANTENNA SHALL BE COMPATIBLE WITH THE EXISTING CLOSED LOOP COORDINATION SYSTEM IN THE CITY/COUNTY.



17. TO DETERMINE UTILITY CLEARANCES ABOVE THE TRAFFIC SIGNAL POLE, REFER TO THE POLE SCHEDULE FOR VERTICAL SHAFT HEIGHT. WHERE THE POLE SCHEDULE INDICATES THAT A LUMINAIRE ARM WILL BE USED, THIRTY-EIGHT (38') FEET SHOULD BE USED TO DETERMINE UTILITY CLEARANCE ABOVE THE LUMINAIRE ARM. WHERE THE POLE SCHEDULE INDICATES A TRAFFIC SIGNAL POLE WITHOUT A LUMINAIRE ARM, A HEIGHT OF TWENTY-ONE (21') FEET SHOULD BE USED TO DETERMINE UTILITY CLEARANCE ABOVE THE TRAFFIC SIGNAL MAST ARM. AN ADDITIONAL SIX (6') FEET SHOULD BE USED DIRECTLY ABOVE "VIDEO DETECTOR" AT LOCATIONS SHOWN ON THE SIGNAL PLANS.

18. THE DESIRABLE MINIMUM DISTANCE FROM THE FACE OF ROADWAY CURB OR SHOULDER EDGE TO THE FACE OF NON-BREAKAWAY POLE OR OBSTRUCTION IS SIX (6') FEET. REFER TO TRAFFIC SIGNAL PLANS FOR SPECIFIC LOCATION OF POLES, CONTROLLER AND ANY OTHER NON-BREAKAWAY OBSTRUCTIONS. REFER TO "DESIGN PARAMETERS, MINIMUM CLEAR ZONE DISTANCE" FOR MINIMUM DISTANCE FROM THE EDGE OF TRAVELED WAY TO THE FACE OF A NON-BREAKAWAY POLE OR OBSTRUCTION. TRAFFIC SIGNAL POLES OR ANY OTHER NON-BREAKAWAY OBSTRUCTION SHALL NOT BE INSTALLED WITHIN THE CLEAR ZONE.

19. AS DETERMINED BY THE ENGINEER, FOUNDATION EMBEDMENT MAY BE DECREASED BY A MAXIMUM OF TWO FEET IF COMPETENT ROCK IS ENCOUNTERED PRIOR TO ACHIEVING PLAN EMBEDMENT AND AT LEAST HALF OF THE REMAINING PLAN EMBEDMENT LENGTH IS KEYED INTO COMPETENT ROCK.

20. CONNECTION OF TRAFFIC SIGNAL DISPLAY TO FIELD WIRING SHALL UTILIZE AN APPROVED TERMINAL STRIP BEHIND HAND-HOLE COVER AT BASE OF POLE. TERMINAL STRIP SHALL PROVIDE PROTECTION TO PREVENT EXPOSURE TO THE PUBLIC IN THE EVENT THAT POLE COVER IS MISSING. PAYMENT FOR TERMINAL STRIPS SHALL BE INCLUDED IN ITEM 714 TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, CURRENT EDITION.

21. CONTROLLER CABINET LAYOUT AND ORIENTATION SHALL CONFORM TO IMSA STANDARDS.

22. ONE VIDEO PROGRAMMNG MODULE SHALL BE PROVIDED FOR AIMING AND SETUP OF DETECTORS IF THE VIDEO SYSTEM CANNOT BE ADJUSTED THROUGH HARDWARE AND SOFTWARE PROVIDED BY ITEMS WITHIN THE JOB.

23. TRAFFIC SIGNAL CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER OR ASSIGNED DEPARTMENT PROJECT INSPECTOR EACH DAY PRIOR TO SIGNAL RELATED WORK. NO WORK ON TRAFFIC SIGNALS WILL BE ALLOWED OR APPROVED WITHOUT THIS PRIOR NOTIFICATION.

24. ALL STEEL POLES SHALL BE DESIGNED TO MEET THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 4th EDITION (2001) WITH 2003 AND 2006 INTERIMS.

25. DOOR PANEL TEST PUSH BUTTONS SHALL ACTUATE INDICATED PHASES. DETECTOR ASSIGNMENTS AND/OR SIDE PANEL JUMPERS MAY REQUIRE MODFICATION.

26. ALL SYSTEM DETECTOR RACKS AND ASSOCIATED EQUIPMENT SHALL BE PROTECTED BY THE MAIN CONTROLLER CABINET POWER SURGE PROTECTION.

27. IN PULL BOXES, POLE BASES, JUNCTION BOXES AND CONTROLLER CABINETS, THE DIRECTION OF EACH CABLE RUN SHALL BE INDICATED BY ATTACHING A PERMANENT TAG OF RIGID PLASTIC OR NON-FERROUS METAL TO THE CONDUIT. TAGS SHALL BE EMBOSSED, STAMPED OR ENGRAVED WITH LETTERS 1/4" OR GREATER IN HEIGHT AND SECURED TO THE CONDUIT WITH NYLON OR PLASTIC TIES. IN INSTANCES WHERE THE CONDUIT OR CONDUIT ENTRANCES ARE NOT VISIBLE OR ACCESSIBLE, A DIRECTION TAG SHALL BE ATTACHED TO EACH CABLE.

28. THE CONTRACTOR SHALL PERFORM ALL WORK POSSIBLE THAT WILL MINIMIZE THE TIME THAT THE TRAFFIC SIGNAL IS OUT OF OPERATION. IF, IN THE OPINION OF THE ENGINEER, TRAFFIC CONDITIONS WARRANT THE CONTRACTOR SHALL PROVIDE FLAGMEN TO DIRECT TRAFFIC WHILE THE TRAFFIC SIGNAL IS OUT OF OPERATION.

DATE: 07-27-18 FILE NAME: t061335_job.dgn

LOCATION: ALCOA RD. - HWY. 183
CITY:
COUNTY: SALINE
DISTRICT: 6 SCALE: N/A DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	112	303

(2) TRAFFIC SIGNAL QUANTITIES - ALCOA RD.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

STAGE 1 TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP & 701	ACTUATED CONTROLLER TS2-TYPE 2 (8 PHASES)	1	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	8	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	2	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (5 SECTION, 1 WAY)	1	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	860	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	516	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	20	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	20	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	20	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")	20	LIN. FT.
709	GALVANIZED STEEL CONDUIT (3")	30	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	20	LIN. FT.
711	CONCRETE PULL BOX (TYPE 2 HD)	1	EACH
713	SPAN WIRE ASSEMBLY	1	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.13	LUMP SUM
716	TREATED WOOD POLE (CLASS 2, 40')	2	EACH
SP & 733	VIDEO DETECTOR (CLR)	6	EACH
733	VIDEO CABLE	756	LIN. FT.
SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	3	EACH
SP & 733	VIDEO EDGE CARD EXTENDER	1	EACH
SP & 733	VEHICLE DETECTOR RACK (16 CHANNEL)	1	EACH

STAGE 1
INSTALL ALL TEMPORARY TRAFFIC SIGNAL EQUIPMENT AND REMOVE ALL EXISTING TRAFFIC SIGNAL EQUIPMENT.
MAINTAIN THIS TRAFFIC SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 1 TRAFFIC SIGNAL PLANS.
(REFER TO MAINTENANCE OF TRAFFIC DETAILS.)

STAGE 2 TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP	VIDEO DETECTOR ROTATION	2	EACH

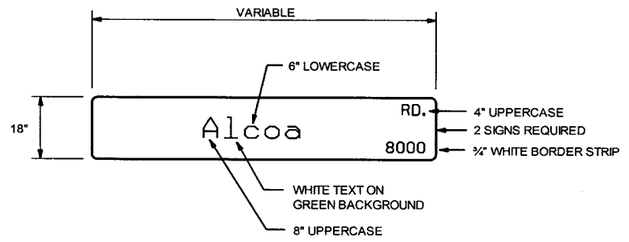
STAGE 2
ROTATE VIDEO DETECTORS V2 AND V5 TO ACCOMMODATE THE LANE SHIFT FOR HWY. 5.
MAINTAIN THIS TRAFFIC SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 2 TRAFFIC SIGNAL PLANS.

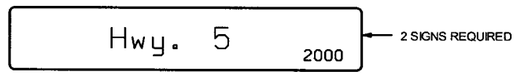
PERMANENT TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP & 701	SYSTEM LOCAL CONTROLLER TS2-TYPE 2 (8 PHASES)	1	EACH
SP	ANTENNA SUPPORT (SHOE BASE, 35' HT.)	1	EACH
SP	LOCAL RADIO WITH ANTENNA	1	EACH
SP	ANTENNA CABLE (TYPE 6)	100	LIN. FT.
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	8	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	2	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (5 SECTION, 1 WAY)	1	EACH
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	2	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	665	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	228	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	518	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	404	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)	195	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	705	LIN. FT.
710	NON-METALLIC CONDUIT (2")	20	LIN. FT.
710	NON-METALLIC CONDUIT (3")	335	LIN. FT.
711	CONCRETE PULL BOX (TYPE 2)	3	EACH
711	CONCRETE PULL BOX (TYPE 2 HD)	3	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (26')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (34')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (36')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (48')	1	EACH
SP	LED LUMINAIRE ASSEMBLY	4	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.13	LUMP SUM
SP	18" STREET NAME SIGN	4	EACH
* SP & 733	VIDEO DETECTOR (CLR)	7	EACH
733	VIDEO CABLE	1087	LIN. FT.
733	VIDEO MONITOR (CLR)	1	EACH
* SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	4	EACH
SP & 733	VIDEO EDGE CARD EXTENDER	1	EACH
SP & 733	VEHICLE DETECTOR RACK (24 CHANNEL)	1	EACH

* ONE SPARE VIDEO DETECTOR AND ONE SPARE VIDEO PROCESSOR SHALL BE SUPPLIED.
PERMANENT TRAFFIC SIGNAL:
THE STAGE 2 TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL REMAIN IN OPERATION UNTIL THE PERMANENT TRAFFIC SIGNAL IS COMPLETED AND OPERATIONAL. INSTALL PERMANENT TRAFFIC SIGNAL, REMOVE ALL STAGE 1 AND 2 TEMPORARY TRAFFIC SIGNAL COMPONENTS.
(REFER TO PERMANENT TRAFFIC SIGNAL PLANS.)

OVERHEAD STREET NAME MARKER STANDARD MAST ARM MOUNTED





NOTES:
1. REFLECTIVE SHEETING SHALL COMPLY WITH ASTM 4956 TYPE 8 OR 9 REFLECTIVE SHEETING. SHEETING AND LEGEND SHALL BE APPLIED IN SUCH A MANNER TO PROVIDE WRINKLE AND BUBBLE FREE SURFACES. APPLICATION OF SHEETING IS CAUSE FOR REJECTION OF MATERIALS DUE TO WORKMANSHIP.
2. ALUMINUM SIGN BLANK SHALL BE ALLOY 6061-T6 OR 5052-H38. THE ALUMINUM SIGN SHALL BE ALSO ALODIZED. THE ALUMINUM SHEETING SHALL BE 0.100 INCH NOMINAL THICKNESS AND OF THE SIZE SHOWN WITH 1.5" CORNER RADII. PRIOR TO FABRICATION OF THE SIGNS, THE LAYOUT SHALL FIRST BE APPROVED BY AN AGENT OF THE CITY/ COUNTY.
3. WHEN CROSSROAD HAS TWO NAMES, THE SIGN FOR THE CROSSROAD TO THE LEFT MAY BE INSTALLED ON THE BACKSIDE OF THE MAST ARM ON THE NEARSIDE LEFT POLE. SEE STANDARD DRAWING SHEET FOR MORE INFORMATION FOR MOUNTING ON MAST ARM ASSEMBLY.
4. THE SERIES C 2000 STANDARD ALPHABET SHALL BE USED FOR ALL LETTERS.

DATE: 07-27-18 FILE NAME: t061335_01.dgn

LOCATION: HWY. 5/ALCOA RD.
CITY: BENTON
COUNTY: SALINE
DISTRICT: 6 SCALE: N/A DRAWN BY: GWE

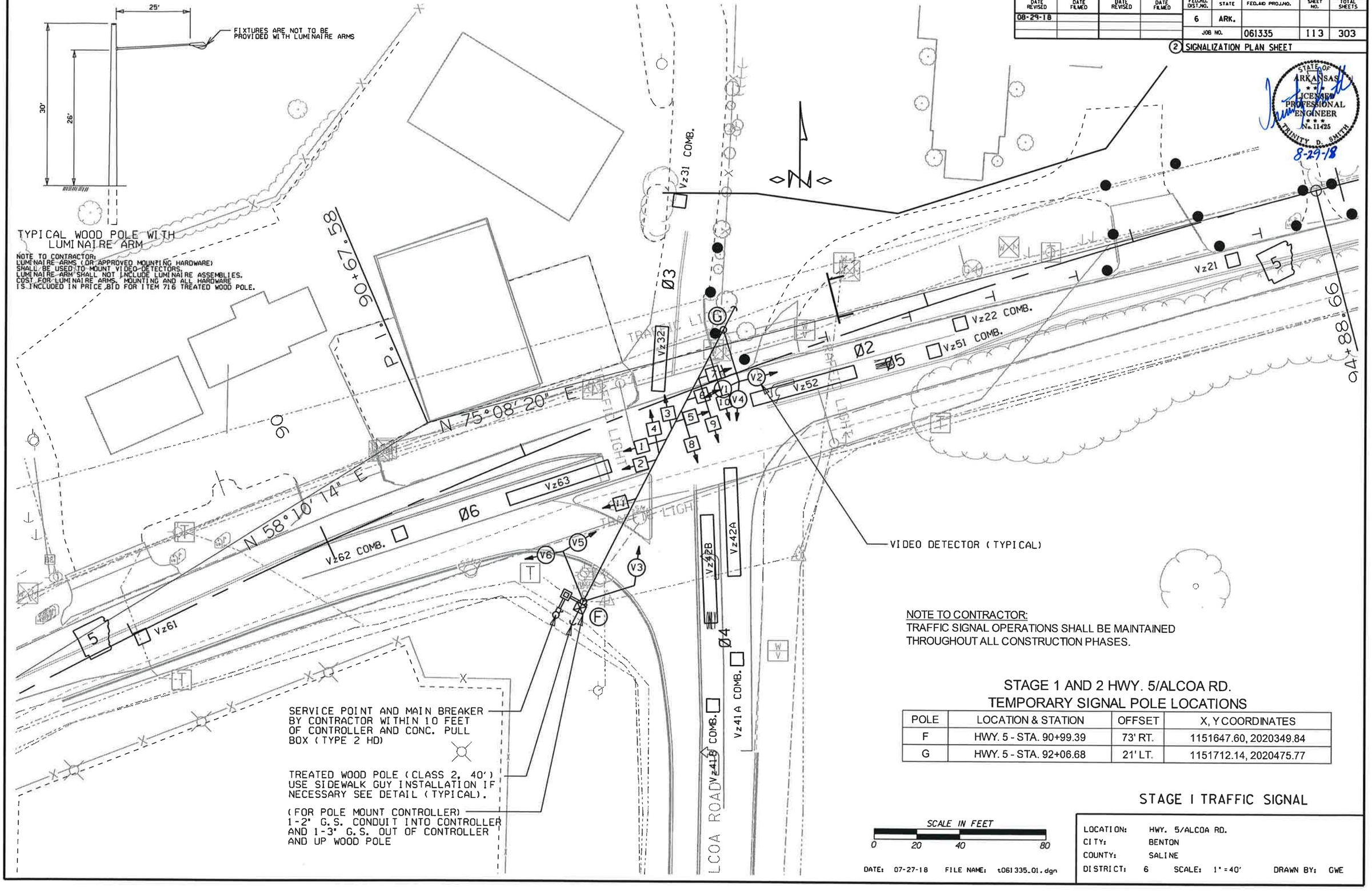
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
08-29-18				6	ARK.			
				JOB NO.		061335	113	303

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
8-29-18

TYPICAL WOOD POLE WITH LUMINAIRE ARM

NOTE TO CONTRACTOR:
LUMINAIRE ARMS (OR APPROVED MOUNTING HARDWARE) SHALL BE USED TO MOUNT VIDEO-DETECTORS. LUMINAIRE ARM SHALL NOT INCLUDE LUMINAIRE ASSEMBLIES. COST FOR LUMINAIRE ARMS, MOUNTING AND ALL HARDWARE IS INCLUDED IN PRICE BID FOR ITEM 716 TREATED WOOD POLE.



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

STAGE 1 AND 2 HWY. 5/ALCOA RD. TEMPORARY SIGNAL POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
F	HWY. 5 - STA. 90+99.39	73' RT.	1151647.60, 2020349.84
G	HWY. 5 - STA. 92+06.68	21' LT.	1151712.14, 2020475.77

SCALE IN FEET
0 20 40 80

DATE: 07-27-18 FILE NAME: t061335_01.dgn

STAGE I TRAFFIC SIGNAL

LOCATION: HWY. 5/ALCOA RD.
CITY: BENTON
COUNTY: SALINE
DISTRICT: 6 SCALE: 1" = 40' DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
08-29-18			

FED.RO. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		061335	114	303

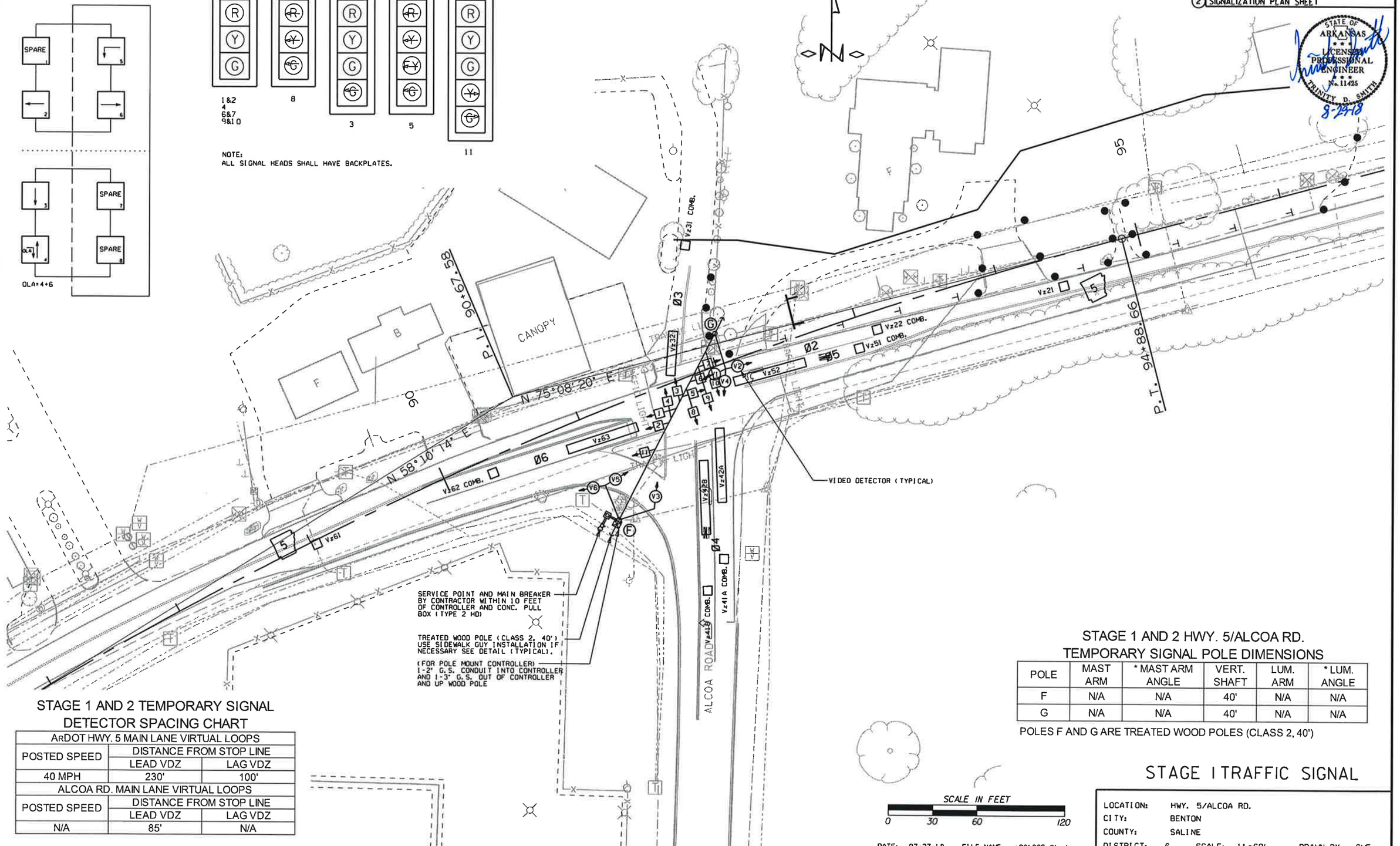
(2) SIGNALIZATION PLAN SHEET

STAGE I AND 2 TEMP. PHASING DIAGRAM

STAGE I AND 2 SIGNAL FACES

12" LENSES

NOTE:
ALL SIGNAL HEADS SHALL HAVE BACKPLATES.



STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
8-29-18

STAGE 1 AND 2 TEMPORARY SIGNAL DETECTOR SPACING CHART

ARDOT HWY. 5 MAIN LANE VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
40 MPH	230'	100'
ALCOA RD. MAIN LANE VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
N/A	85'	N/A

STAGE 1 AND 2 HWY. 5/ALCOA RD. TEMPORARY SIGNAL POLE DIMENSIONS

POLE	MAST ARM	* MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	* LUM. ANGLE
F	N/A	N/A	40'	N/A	N/A
G	N/A	N/A	40'	N/A	N/A

POLES F AND G ARE TREATED WOOD POLES (CLASS 2, 40')

SCALE IN FEET
0 30 60 120

DATE: 07-27-18 FILE NAME: t061335_01.dgn

STAGE I TRAFFIC SIGNAL

LOCATION: HWY. 5/ALCOA RD.
CITY: BENTON
COUNTY: SALINE
DISTRICT: 6 SCALE: 1"=60' DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	115	303

(2) SIGNALIZATION PLAN SHEET

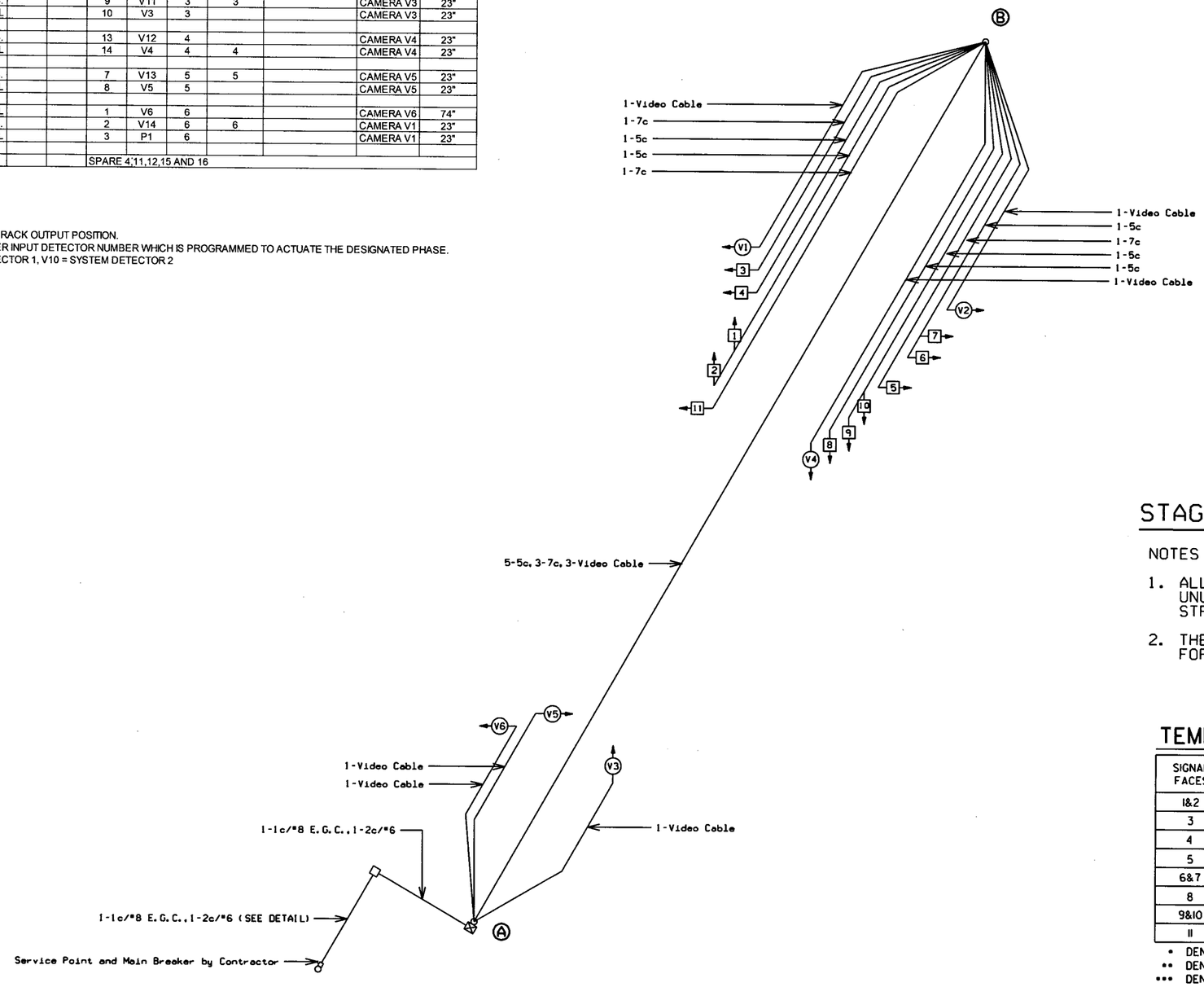
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

DETECTOR CHART

STAGE 1 TEMPORARY DETECTOR SYSTEM DESCRIPTION: JOB 061335											
HWY. 5/ALCOA RD. DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS LOCAL		MASTER SYSTEM DETECTOR NUMBERS	COMMENTS	TUBE LENGTHS
DET. ID #	LOCATION DIRECTION	TPYE	DET. #	CAB. TRM. #	AMP CHN. #	CON. IMP. #	PHS	SYSTEM DET. #			
Vz21	WB ADVANCE	LOCAL			5	V2	2			CAMERA V2	23"
Vz22	WB NEAR	COMB.			6	V10	2	2		CAMERA V5	23"
Vz31	SB ADVANCE	COMB.			9	V11	3	3		CAMERA V3	23"
Vz32	SB NEAR	LOCAL			10	V3	3			CAMERA V3	23"
Vz41A&B	NB ADVANCE	COMB.			13	V12	4			CAMERA V4	23"
Vz42A&B	NB NEAR	LOCAL			14	V4	4	4		CAMERA V4	23"
Vz51	WB LEFT TURN FAR	COMB.			7	V13	5	5		CAMERA V5	23"
Vz52	WB LEFT TURN	LOCAL			8	V5	5			CAMERA V5	23"
Vz61	EB ADVANCE	LOCAL			1	V6	6			CAMERA V6	74"
Vz62	EB INTERMIDIATE	COMB.			2	V14	6	6		CAMERA V1	23"
Vz63	EB NEAR	LOCAL			3	P1	6			CAMERA V1	23"
					SPARE 4,11,12,15 AND 16						

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

NOTE: "AMP CHN =" REFERS TO THE RACK OUTPUT POSITION.
THIS IS WIRED TO CONTROLLER INPUT DETECTOR NUMBER WHICH IS PROGRAMMED TO ACTUATE THE DESIGNATED PHASE.
EXAMPLE: V9 = SYSTEM DETECTOR 1, V10 = SYSTEM DETECTOR 2



STAGE 1 TEMPORARY WIRING DIAGRAM

NOTES TO CONTRACTOR:

1. ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA OF CABINET.
2. THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.

STAGE 1 TEMP. SIGNAL INTERVAL CHART

SIGNAL FACES	HWY. 5/ALCOA RD. 2+5	CLR.	2+6	CLR.	3	CLR.	4	CLR.		FLASH SEQ.
1&2	R	R	G	••	R	R	R	R		R
3	R	R	R	R	G / ~~G~~	••/•	R	R		R
4	R	R	R	R	G	••	R	R		R
5	~~G~~	•	~~FY~~	•••	~~R~~	~~R~~	~~R~~	~~R~~		~~R~~
6&7	G	••	G	••	R	R	R	R		R
8	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~G~~	•		~~R~~
9&10	R	R	R	R	R	R	G	••		R
11	R	R	G	••	R	R	G / ~~G~~	••/•		R

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

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COUNTY:	SALINE
DISTRICT:	6 SCALE: N/A DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	116	303

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

N 75° 08' 20" E

N 58° 10' 14" E

P.I. 90+67.58

94+88.66

Ø1 Ø2 Ø3 Ø4 Ø5 Ø6

Vz21 Vz22 COMB. Vz31 COMB. Vz32 Vz41A COMB. Vz41B COMB. Vz42A Vz42B Vz51 COMB. Vz52 Vz61 Vz62 COMB. Vz63

V1 V2 V3 V4 V5 V6

TRAFFIC LIGHT

ALCOA ROAD

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

SCALE IN FEET
0 20 40 80

DATE: 07-27-18 FILE NAME: t061335_01.dgn

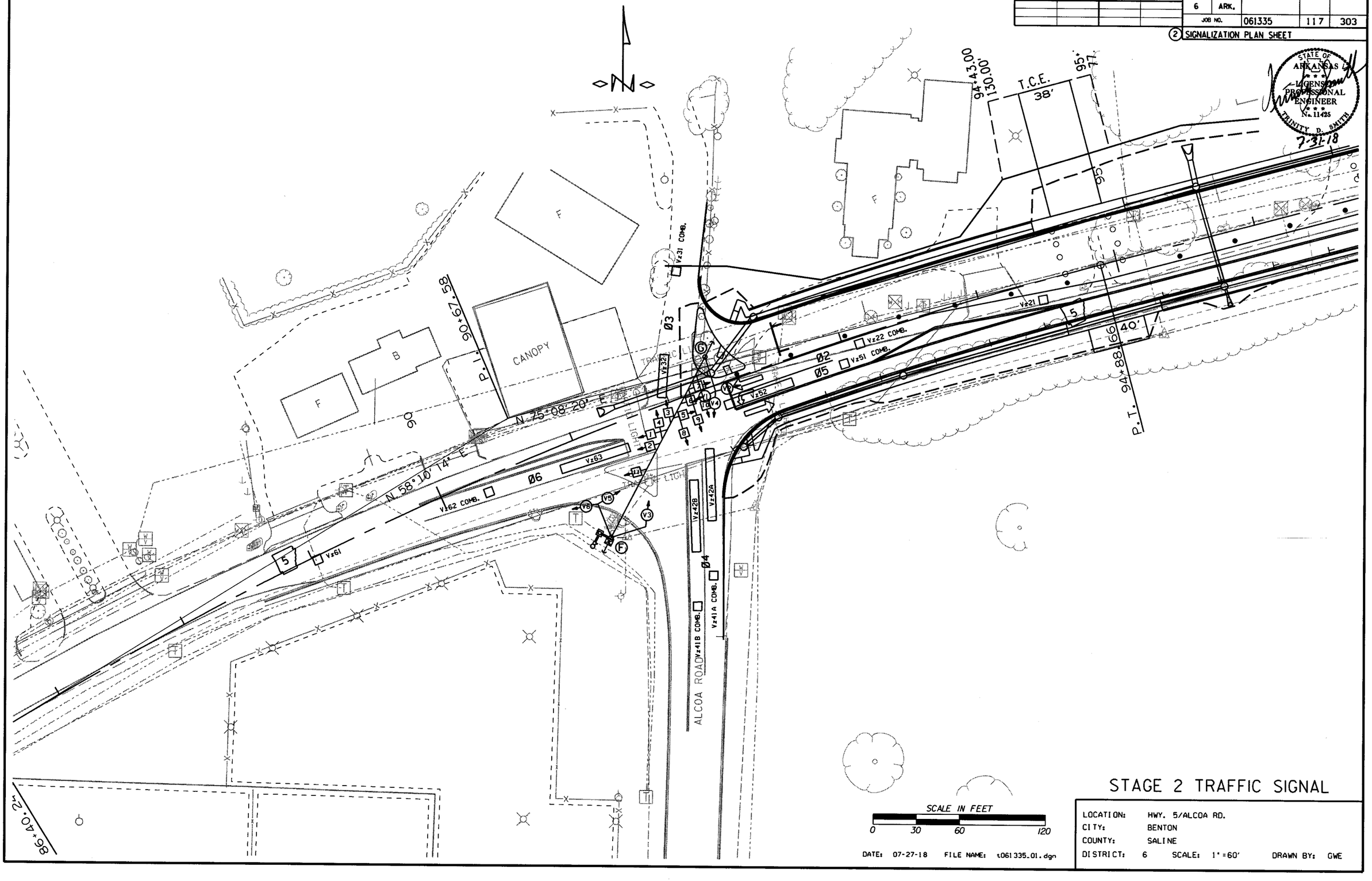
STAGE 2 TRAFFIC SIGNAL

LOCATION: HWY. 5/ALCOA RD.
CITY: BENTON
COUNTY: SALINE
DISTRICT: 6 SCALE: 1"=40' DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	117	303

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18



SCALE IN FEET
0 30 60 120

DATE: 07-27-18 FILE NAME: t061335_01.dgn

STAGE 2 TRAFFIC SIGNAL

LOCATION:	HWY. 5/ALCOA RD.
CITY:	BENTON
COUNTY:	SALINE
DISTRICT:	6 SCALE: 1"=60' DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	118	303

(2) SIGNALIZATION PLAN SHEET

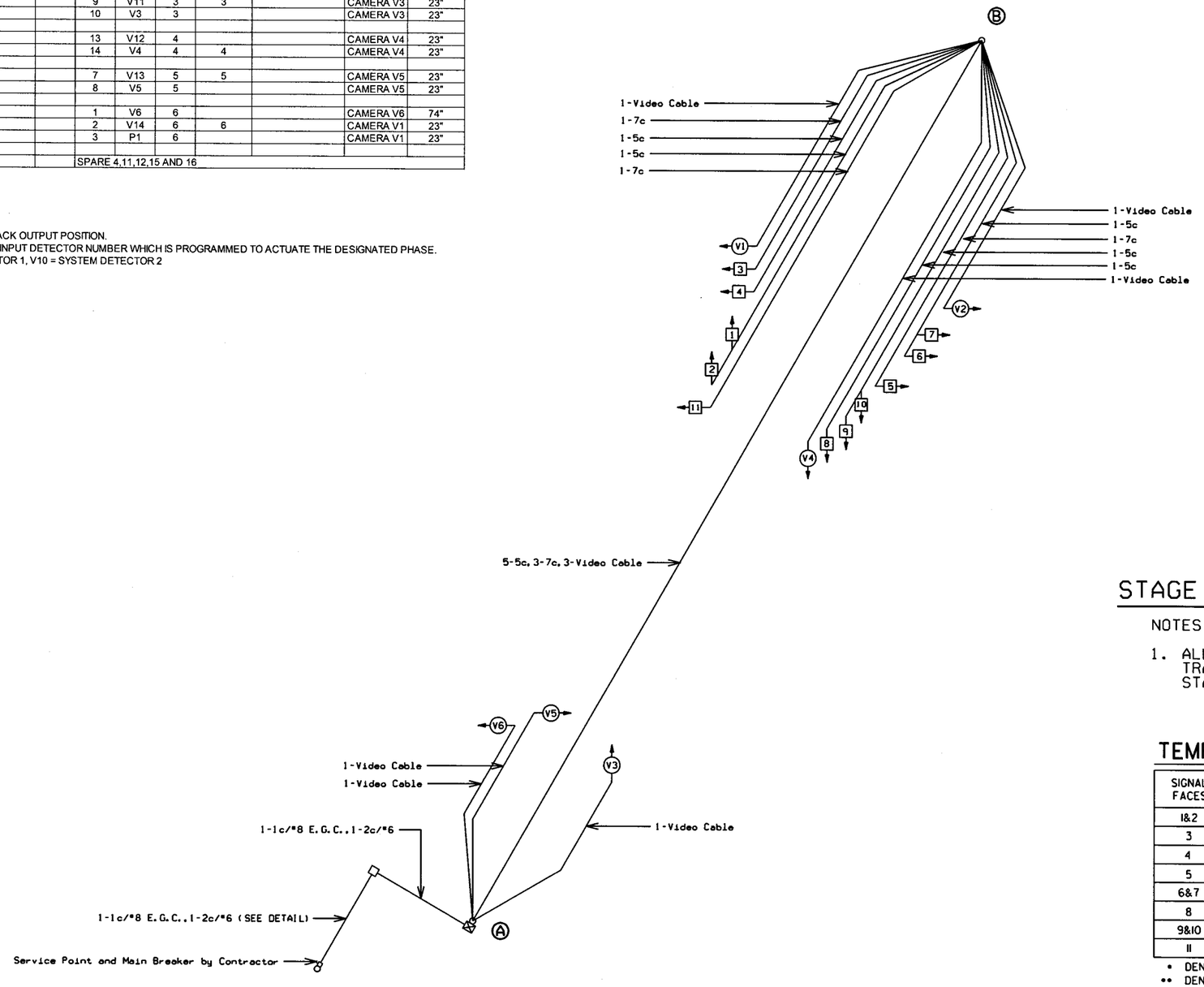
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

DETECTOR CHART

STAGE 2 TEMPORARY DETECTOR SYSTEM DESCRIPTION: JOB 061335											
HWY. 5/ALCOA RD. DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS LOCAL		MASTER SYSTEM DETECTOR NUMBERS	COMMENTS	TUBE LENGTHS
DET. ID #	LOCATION DIRECTION	TPYE	DET. #	CAB. TRM. #	AMP CHN. #	CON. IMP. #	PHS	SYSTEM DET. #			
Vz21	WB ADVANCE	LOCAL			5	V2	2			CAMERA V2	23"
Vz22	WB NEAR	COMB.			6	V10	2	2		CAMERA V5	23"
Vz31	SB ADVANCE	COMB.			9	V11	3	3		CAMERA V3	23"
Vz32	SB NEAR	LOCAL			10	V3	3			CAMERA V3	23"
Vz41A&B	NB ADVANCE	COMB.			13	V12	4			CAMERA V4	23"
Vz42A&B	NB NEAR	LOCAL			14	V4	4	4		CAMERA V4	23"
Vz51	WB LEFT TURN FAR	COMB.			7	V13	5	5		CAMERA V5	23"
Vz52	WB LEFT TURN	LOCAL			8	V5	5			CAMERA V5	23"
Vz61	EB ADVANCE	LOCAL			1	V6	6			CAMERA V6	74"
Vz62	EB INTERMIDIATE	COMB.			2	V14	6	6		CAMERA V1	23"
Vz63	EB NEAR	LOCAL			3	P1	6			CAMERA V1	23"
				SPARE 4,11,12,15 AND 16							

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

NOTE: "AMP CHN =" REFERS TO THE RACK OUTPUT POSITION.
THIS IS WIRED TO CONTROLLER INPUT DETECTOR NUMBER WHICH IS PROGRAMMED TO ACTUATE THE DESIGNATED PHASE.
EXAMPLE: V9 = SYSTEM DETECTOR 1, V10 = SYSTEM DETECTOR 2



STAGE 2 TEMPORARY WIRING DIAGRAM

NOTES TO CONTRACTOR:

1. ALL TRAFFIC SIGNAL CABLE, VIDEO CABLE, AND TRAFFIC SIGNAL HEADS WERE INSTALLED PRIOR TO STAGE 1 OR WERE EXISTING.

STAGE 2 TEMP. SIGNAL INTERVAL CHART

SIGNAL FACES	HWY. 5/ALCOA RD. 2+5	CLR.	2+6	CLR.	3	CLR.	4	CLR.		FLASH SEQ.
1&2	R	R	G	••	R	R	R	R		R
3	R	R	R	R	G / ~~G~~	•• / •	R	R		R
4	R	R	R	R	G	••	R	R		R
5	~~G~~	•	~~FY~~	•••	~~R~~	~~R~~	~~R~~	~~R~~		~~R~~
6&7	G	••	G	••	R	R	R	R		R
8	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~G~~	•		~~R~~
9&10	R	R	R	R	R	R	G	••		R
11	R	R	G	••	R	R	G / ~~G~~	•• / •		R

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

LOCATION: HWY. 5/ALCOA RD.
CITY: BENTON
COUNTY: SALINE
DISTRICT: 6 SCALE: N/A DRAWN BY: GWE

DATE: 07-27-18 FILE NAME: t061335_01.dgn

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
08-29-18				6	ARK.			
				JOB NO.		061335	119	303

(2) SIGNALIZATION PLAN SHEET

TRAFFIC FLOW DIAGRAM

EXISTING (2014) PEAK HOUR TRAFFIC VOLUMES

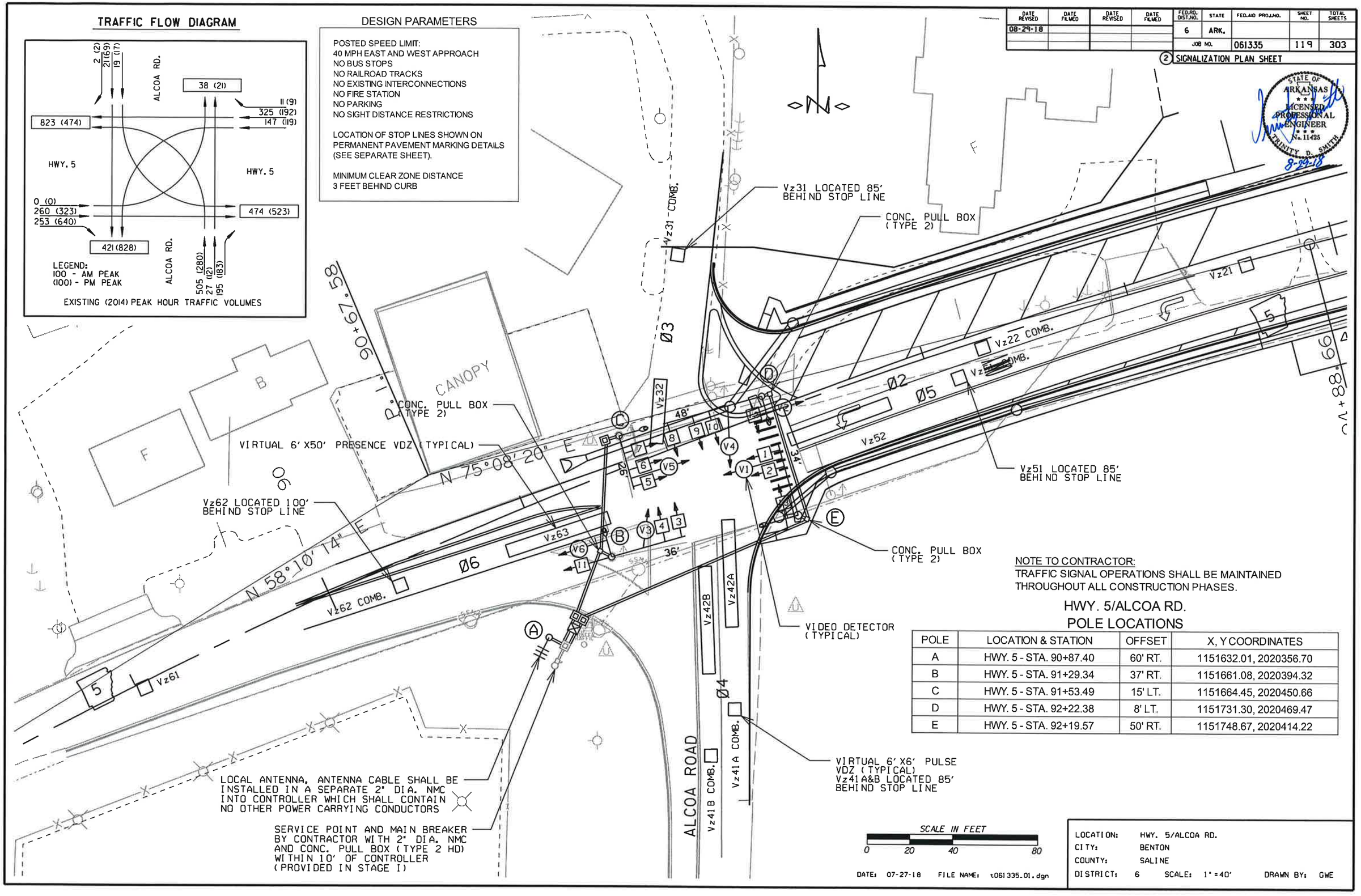
DESIGN PARAMETERS

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

LOCATION OF STOP LINES SHOWN ON PERMANENT PAVEMENT MARKING DETAILS (SEE SEPARATE SHEET).

MINIMUM CLEAR ZONE DISTANCE
3 FEET BEHIND CURB

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
8-29-18



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

HWY. 5/ALCOA RD.
POLE LOCATIONS

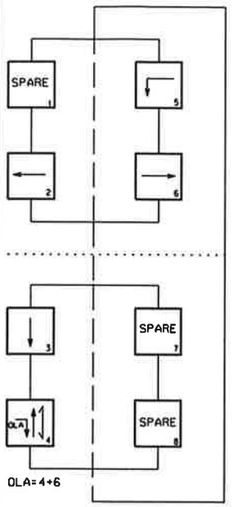
POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 5 - STA. 90+87.40	60' RT.	1151632.01, 2020356.70
B	HWY. 5 - STA. 91+29.34	37' RT.	1151661.08, 2020394.32
C	HWY. 5 - STA. 91+53.49	15' LT.	1151664.45, 2020450.66
D	HWY. 5 - STA. 92+22.38	8' LT.	1151731.30, 2020469.47
E	HWY. 5 - STA. 92+19.57	50' RT.	1151748.67, 2020414.22

SCALE IN FEET
0 20 40 80

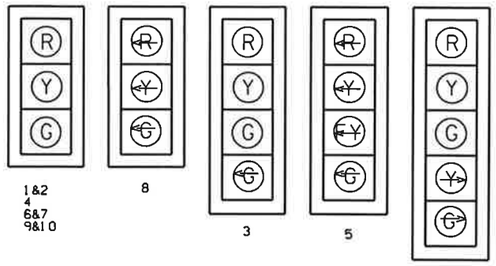
DATE: 07-27-18 FILE NAME: t061335_01.dgn

LOCATION: HWY. 5/ALCOA RD.
CITY: BENTON
COUNTY: SALINE
DISTRICT: 6 SCALE: 1" = 40' DRAWN BY: GWE

PHASING DIAGRAM



SIGNAL FACES
12" LENSES



One Section
(Solid Symbol)

12&13

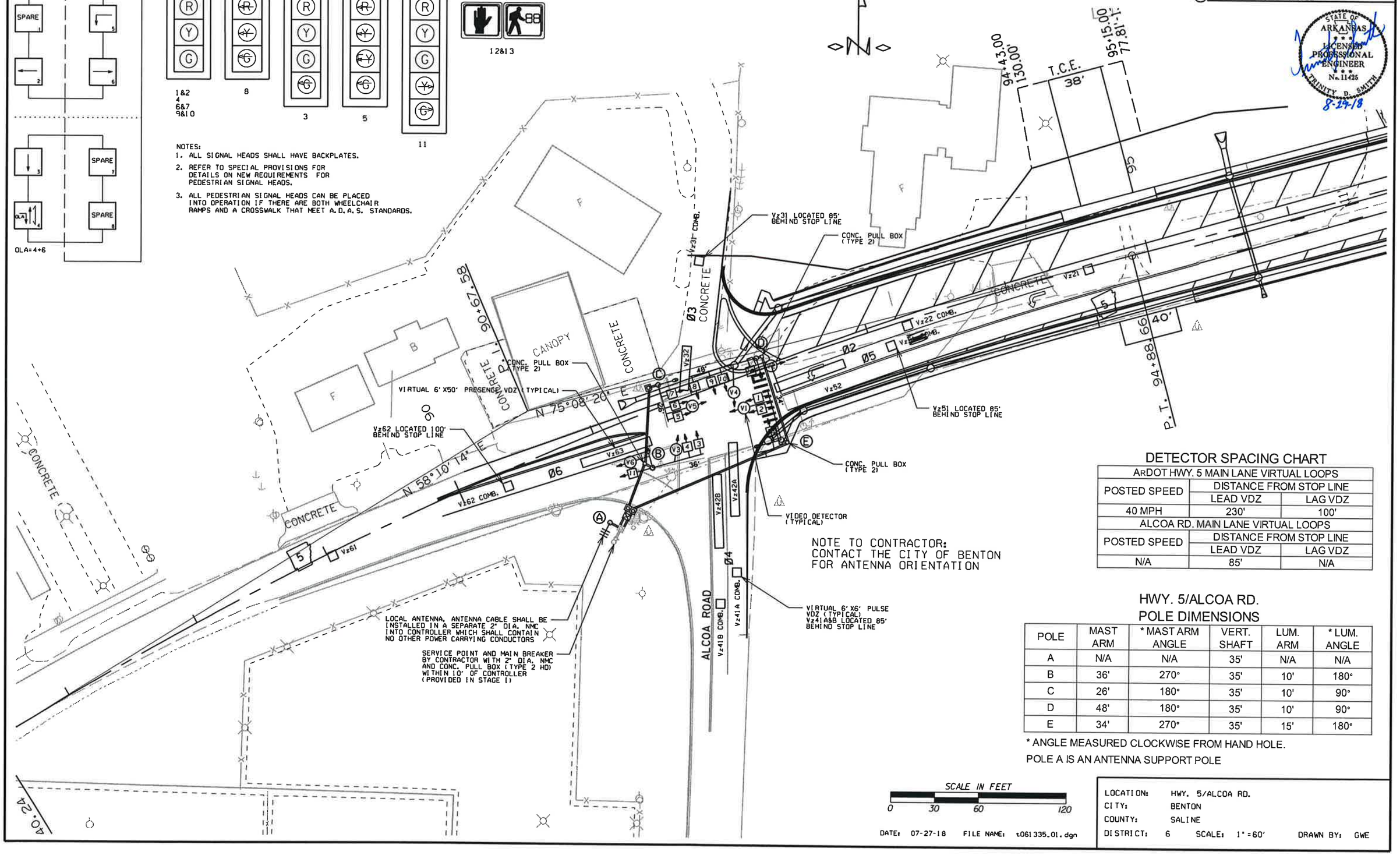
NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISIONS FOR DETAILS ON NEW REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.
3. ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEET A.D.A.S. STANDARDS.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
08-29-18			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		061335	120	303

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
8-29-18



NOTE TO CONTRACTOR:
CONTACT THE CITY OF BENTON FOR ANTENNA ORIENTATION

DETECTOR SPACING CHART

ARDOT HWY. 5 MAIN LANE VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
40 MPH	230'	100'
ALCOA RD. MAIN LANE VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
N/A	85'	N/A

HWY. 5/ALCOA RD.
POLE DIMENSIONS

POLE	MAST ARM	* MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	* LUM. ANGLE
A	N/A	N/A	35'	N/A	N/A
B	36'	270°	35'	10'	180°
C	26'	180°	35'	10'	90°
D	48'	180°	35'	10'	90°
E	34'	270°	35'	15'	180°

* ANGLE MEASURED CLOCKWISE FROM HAND HOLE.
POLE A IS AN ANTENNA SUPPORT POLE

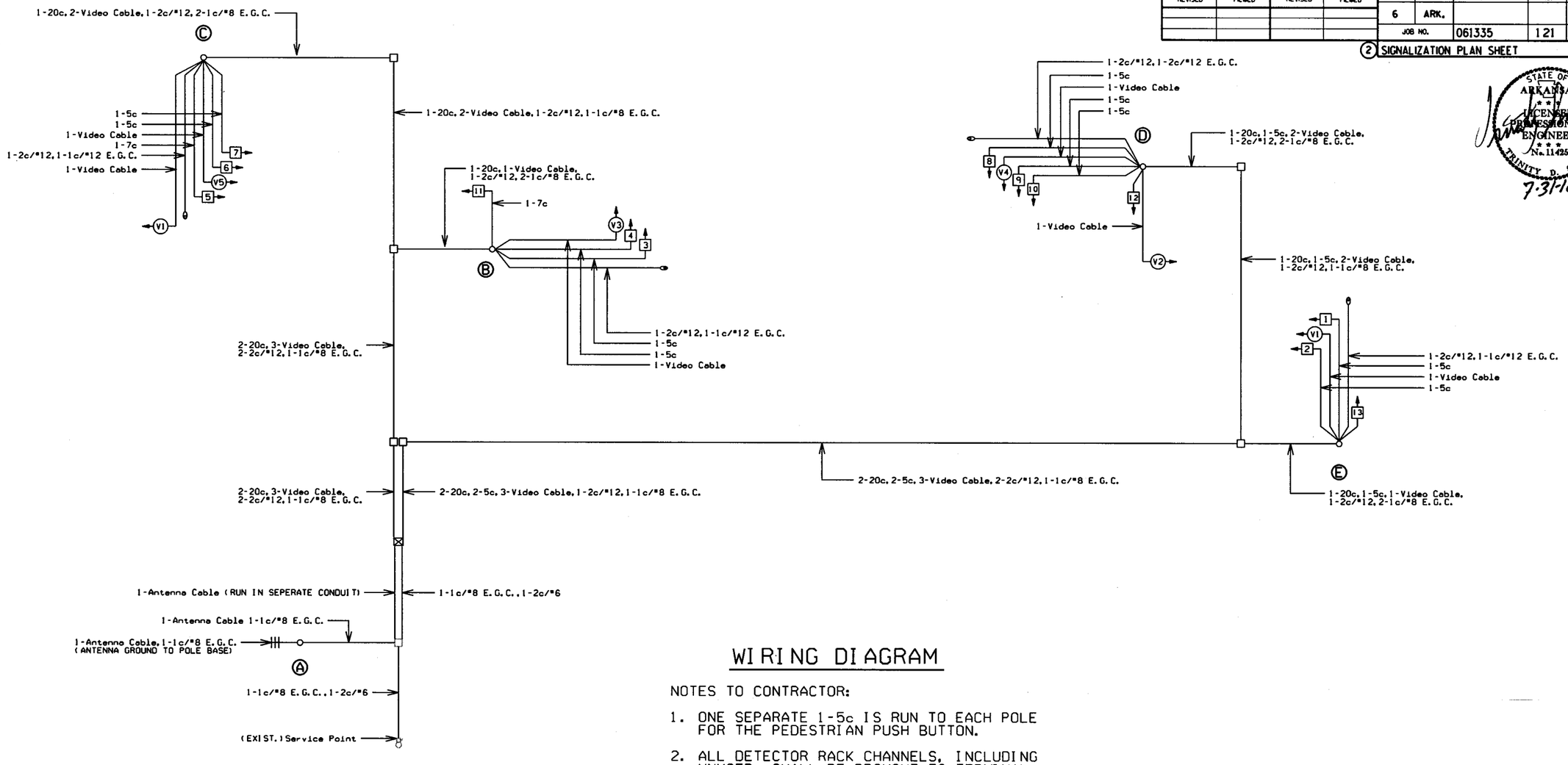
SCALE IN FEET
0 30 60 120

DATE: 07-27-18 FILE NAME: t061335_01.dgn

LOCATION: HWY. 5/ALCOA RD.
CITY: BENTON
COUNTY: SALINE
DISTRICT: 6 SCALE: 1"=60' DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	121	303

(2) SIGNALIZATION PLAN SHEET

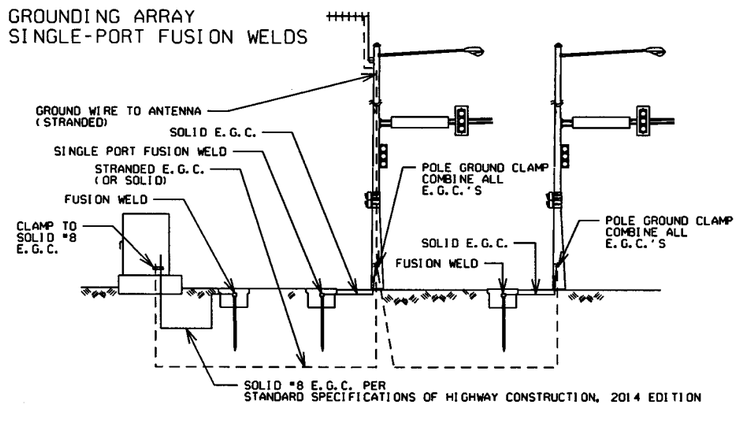


STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

WIRING DIAGRAM

NOTES TO CONTRACTOR:

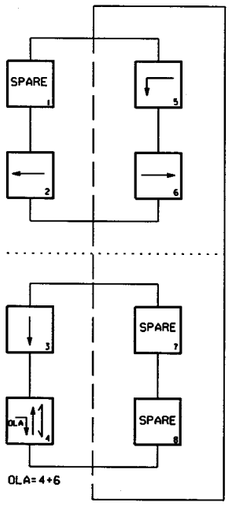
1. ONE SEPARATE 1-5c IS RUN TO EACH POLE FOR THE PEDESTRIAN PUSH BUTTON.
2. ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA OF CABINET.
3. THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.



DATE: 07-27-18 FILE NAME: t061335_01.dgn

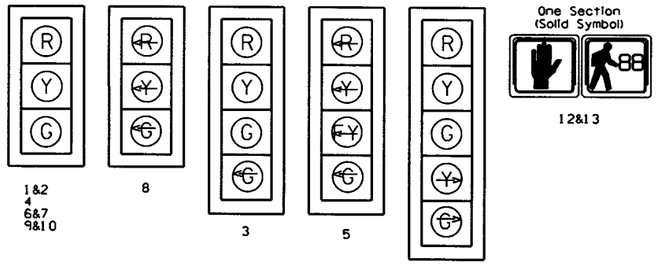
LOCATION:	HWY. 5/ALCOA RD.				
CITY:	BENTON				
COUNTY:	SALINE				
DISTRICT:	6	SCALE:	N/A	DRAWN BY:	GWE

PHASING DIAGRAM



SIGNAL FACES

12" LENSES



One Section (Solid Symbol)

12&13

NOTES:

1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISIONS FOR DETAILS ON NEW REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.
3. ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEET A.D.A.S. STANDARDS.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	122	303

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS LICENSED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH 7-31-18

DETECTOR CHART

DETECTOR SYSTEM DESCRIPTION: JOB 061335											
HWY. 5/ALCOA RD. DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS			COMMENTS	TUBE LENGTHS
							LOCAL		MASTER SYSTEM DETECTOR NUMBERS		
DET. ID #	LOCATION DIRECTION	TPYE	DET. #	CAB. TRM. #	AMP CHN. #	CON. IMP. #	PHS	SYSTEM DET. #			
Vz21	WB ADVANCE	LOCAL			5	V2	2			CAMERA V2	23"
Vz22	WB NEAR	COMB.			6	V10	2	2		CAMERA V5	23"
Vz31	SB ADVANCE	COMB.			9	V11	3	3		CAMERA V3	23"
Vz32	SB NEAR	LOCAL			10	V3	3			CAMERA V3	23"
Vz41A&B	NB ADVANCE	COMB.			13	V12	4			CAMERA V4	23"
Vz42A&B	NB NEAR	LOCAL			14	V4	4	4		CAMERA V4	23"
Vz51	WB LEFT TURN FAR	COMB.			7	V13	5	5		CAMERA V5	23"
Vz52	WB LEFT TURN	LOCAL			8	V5	5			CAMERA V5	23"
Vz61	EB ADVANCE	LOCAL			1	V6	6			CAMERA V6	74"
Vz62	EB INTERMIDIATE	COMB.			2	V14	6	6		CAMERA V1	23"
Vz63	EB NEAR	LOCAL			3	P1	6			CAMERA V1	23"
PB4 A&B	HWY. 5 E. LEG	PED.				P4	4				
SPARE 4,11,12,15 AND 16											

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

NOTE: "AMP CHN =" REFERS TO THE RACK OUTPUT POSITION.
THIS IS WIRED TO CONTROLLER INPUT DETECTOR NUMBER WHICH IS PROGRAMMED TO ACTUATE THE DESIGNATED PHASE.
EXAMPLE: V9 = SYSTEM DETECTOR 1, V10 = SYSTEM DETECTOR 2

INTERVAL CHART

SIGNAL FACES	HWY. 5/ALCOA RD. 2+5	CLR.	2+6	CLR.	3	CLR.	4	CLR.	FLASH SEQ.
1&2	R	R	G	••	R	R	R	R	R
3	R	R	R	R	G/G	••/•	R	R	R
4	R	R	R	R	G	••	R	R	R
5	~~G~~	•	~~FY~~	•••	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
6&7	G	••	G	••	R	R	R	R	R
8	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~G~~	•	~~R~~
9&10	R	R	R	R	R	R	G	••	R
11	R	R	G	••	R	R	G/G	••/•	R
12&13	DW	DW	DW	DW	DW	DW	W	FDW	BLK

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

DATE: 07-27-18 FILE NAME: t061335_01.dgn

LOCATION: HWY. 5/ALCOA RD.
CITY: BENTON
COUNTY: GARLAND
DISTRICT: 6 SCALE: N/A DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	123	303

(2) TRAFFIC SIGNAL QUANTITIES - SPRINGHILL RD.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

STAGE 1 TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP & 701	ACTUATED CONTROLLER TS2-TYPE 2 (8 PHASES)	1	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	8	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	4	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	600	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	560	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	20	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	20	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	20	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")	20	LIN. FT.
709	GALVANIZED STEEL CONDUIT (3")	80	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	20	LIN. FT.
710	NON-METALLIC CONDUIT (2")	20	LIN. FT.
711	CONCRETE PULL BOX (TYPE 1)	1	EACH
713	SPAN WIRE ASSEMBLY	1	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.12	LUMP SUM
716	TREATED WOOD POLE (CLASS 2, 40')	2	EACH
SP & 733	VIDEO DETECTOR (CLR)	8	EACH
733	VIDEO CABLE	900	LIN. FT.
SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	4	EACH
SP & 733	VEHICLE DETECTOR RACK (16 CHANNEL)	1	EACH

STAGE 1
INSTALL ALL STAGE 1 TEMPORARY TRAFFIC SIGNAL EQUIPMENT AND REMOVE ALL EXISTING TRAFFIC SIGNAL EQUIPMENT.
MAINTAIN THIS TRAFFIC SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 1 TRAFFIC SIGNAL PLANS.
(REFER TO MAINTENANCE OF TRAFFIC DETAILS.)

STAGE 2 TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP	TRAFFIC SIGNAL CONTROLLER (MODIFICATION)	1	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	8	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	4	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	600	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	560	LIN. FT.
713	SPAN WIRE ASSEMBLY	1	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.12	LUMP SUM
716	TREATED WOOD POLE (CLASS 2, 40')	1	EACH
SP	VIDEO DETECTOR ROTATION	1	EACH
SP & 733	VIDEO DETECTOR (CLR)	5	EACH
733	VIDEO CABLE	850	LIN. FT.

STAGE 2
CONSTRUCT ALL NEW STAGE 2 TEMPORARY TRAFFIC SIGNAL EQUIPMENT AFTER ALL STAGE 1 DRAINAGE STRUCTURES HAVE BEEN INSTALLED AT THE INTERSECTION OF HWY. 5/SPRINGHILL ROAD. ALL NEW STAGE 2 TRAFFIC SIGNAL CABLE AND VIDEO CABLE SHALL BE COILED AT THE TOP OF POLE H. THE STAGE 2 TRAFFIC SIGNAL CANNOT BE PLACED INTO OPERATION UNTIL THE CONTROLLER MODIFICATION HAS BEEN COMPLETED. THIS MODIFICATION WILL REQUIRE THE REWIRING OF THE CONTROLLER AND THE REMOVAL OF ALL STAGE 1 TRAFFIC SIGNAL CABLE AND VIDEO CABLE EXCEPT FOR CAMERAS V2, V7, AND V8. ROTATE VIDEO DETECTOR V2 TO ACCOMMODATE STAGE 2 LANE SHIFT FOR HWY. 5. AFTER THE STAGE 2 TRAFFIC SIGNAL HAS BEEN PLACED INTO OPERATION, REMOVE ALL THE REMAINING STAGE 1 TRAFFIC SIGNAL EQUIPMENT.
MAINTAIN THIS TRAFFIC SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 2 TRAFFIC SIGNAL PLANS.
(REFER TO MAINTENANCE OF TRAFFIC DETAILS.)

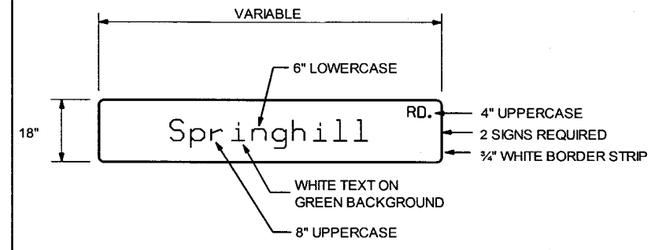
PERMANENT TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP & 701	SYSTEM LOCAL CONTROLLER TS2-TYPE 2, E-NET (8 PHASES)	1	EACH
SP	ETHERNET SWITCH, T100 HARDENED (8-PORT)	1	EACH
SP	E-NET CABLE (EXTERIOR CAT 5E)	100	LIN. FT.
SP	ANTENNA SUPPORT (SHOE BASE, 50' HT.)	1	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	10	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	3	EACH
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	8	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	2388	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	215	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	819	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	728	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)	180	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	20	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	999	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	20	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	20	LIN. FT.
710	NON-METALLIC CONDUIT (2")	70	LIN. FT.
710	NON-METALLIC CONDUIT (3")	873	LIN. FT.
711	CONCRETE PULL BOX (TYPE 2)	4	EACH
711	CONCRETE PULL BOX (TYPE 1 HD)	1	EACH
711	CONCRETE PULL BOX (TYPE 2 HD)	5	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (48')	2	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (50')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (56')	1	EACH
SP	LED LUMINAIRE ASSEMBLY	4	EACH
715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	3	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.12	LUMP SUM
SP	18" STREET NAME SIGN	4	EACH
* SP & 733	VIDEO DETECTOR (CLR)	9	EACH
733	VIDEO CABLE	2210	LIN. FT.
733	VIDEO MONITOR (CLR)	1	EACH
* SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	5	EACH
SP & 733	VEHICLE DETECTOR RACK (24 CHANNEL)	1	EACH
SP	NET-ACCESS RADIO (5.8 GHZ, 32 MBPS)	1	EACH
SP	NET-SUBSCRIBER RADIO (5.8 GHZ, 32 MBPS)	1	EACH

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

PERMANENT TRAFFIC SIGNAL:
THE STAGE TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL REMAIN IN OPERATION UNTIL THE PERMANENT TRAFFIC SIGNAL IS COMPLETED AND OPERATIONAL. INSTALL PERMANENT TRAFFIC SIGNAL AND REMOVE ALL STAGE 2 TEMPORARY TRAFFIC SIGNAL COMPONENTS.
(REFER TO PERMANENT TRAFFIC SIGNAL PLANS.)

OVERHEAD STREET NAME MARKER STANDARD MAST ARM MOUNTED



NOTES:

1. REFLECTIVE SHEETING SHALL COMPLY WITH ASTM 4956 TYPE 8 OR 9 REFLECTIVE SHEETING. SHEETING AND LEGEND SHALL BE APPLIED IN SUCH A MANNER TO PROVIDE WRINKLE AND BUBBLE FREE SURFACES. APPLICATION OF SHEETING IS CAUSE FOR REJECTION OF MATERIALS DUE TO WORKMANSHIP.
2. ALUMINUM SIGN BLANK SHALL BE ALLOY 6061-T6 OR 5052-H38. THE ALUMINUM SIGN SHALL BE ALSO ALODIZED. THE ALUMINUM SHEETING SHALL BE 0.100 INCH NOMINAL THICKNESS AND OF THE SIZE SHOWN WITH 1.5" CORNER RADII. PRIOR TO FABRICATION OF THE SIGNS, THE LAYOUT SHALL FIRST BE APPROVED BY AN AGENT OF THE CITY.
3. WHEN CROSSROAD HAS TWO NAMES, THE SIGN FOR THE CROSSROAD TO THE LEFT MAY BE INSTALLED ON THE BACKSIDE OF THE MAST ARM ON THE NEARSIDE LEFT POLE. SEE STANDARD DRAWING SHEET FOR MORE INFORMATION FOR MOUNTING ON MAST ARM ASSEMBLY.
4. THE SERIES C 2000 STANDARD ALPHABET SHALL BE USED FOR ALL LETTERS.

DATE: 07-27-18 FILE NAME: t061335_03.dgn

LOCATION: HWY. 5/SPRINGHILL RD.
CITY: BRYANT
COUNTY: SALINE
DISTRICT: 6 SCALE: N/A DRAWN BY: GWE

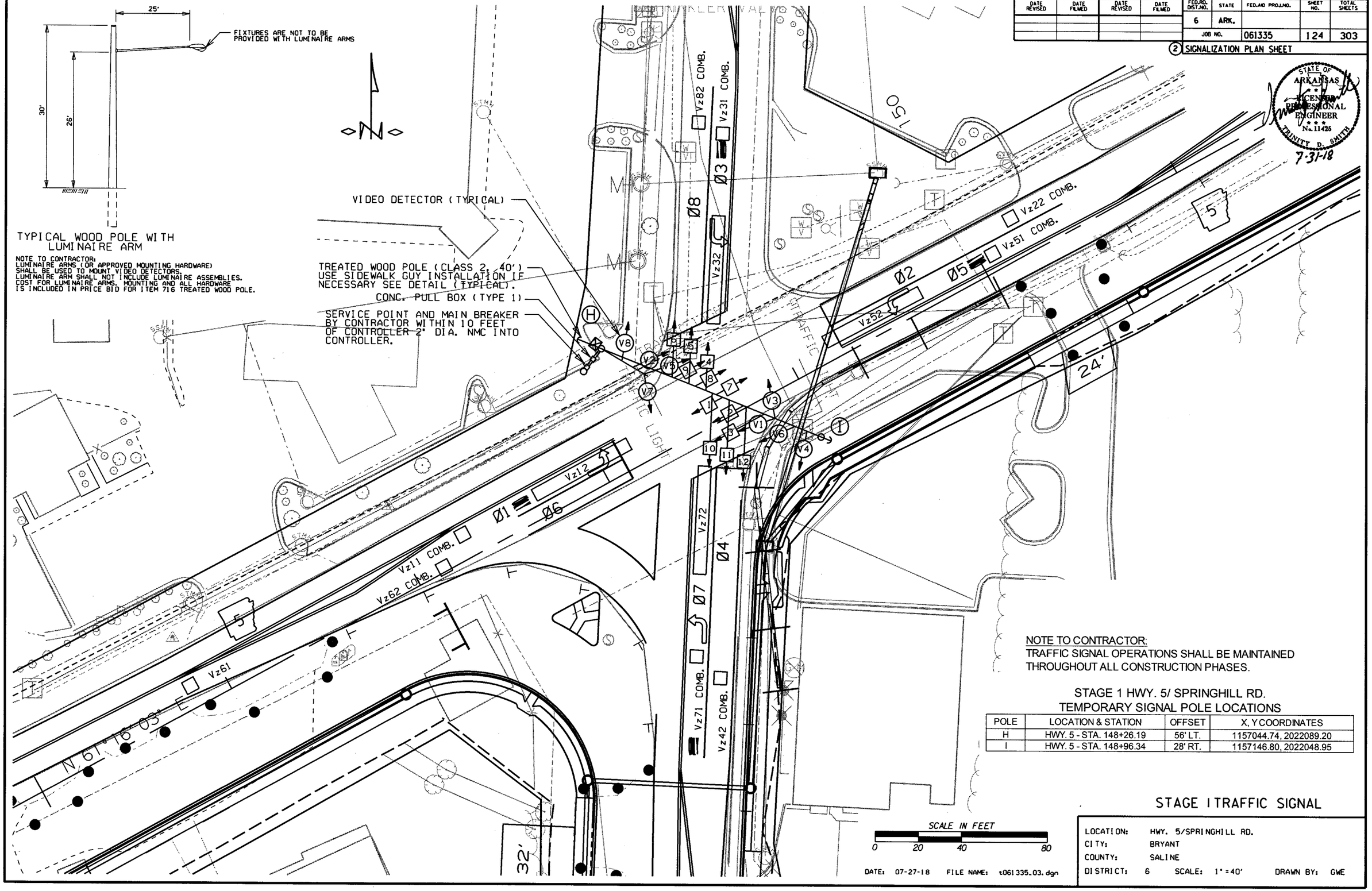
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	124	303

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

TYPICAL WOOD POLE WITH LUMINAIRE ARM

NOTE TO CONTRACTOR:
LUMINAIRE ARMS (OR APPROVED MOUNTING HARDWARE) SHALL BE USED TO MOUNT VIDEO DETECTORS. LUMINAIRE ARM SHALL NOT INCLUDE LUMINAIRE ASSEMBLIES. COST FOR LUMINAIRE ARMS, MOUNTING AND ALL HARDWARE IS INCLUDED IN PRICE BID FOR ITEM 716 TREATED WOOD POLE.



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

STAGE 1 HWY. 5/ SPRINGHILL RD.
TEMPORARY SIGNAL POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
H	HWY. 5 - STA. 148+26.19	56' LT.	1157044.74, 2022089.20
I	HWY. 5 - STA. 148+96.34	28' RT.	1157146.80, 2022048.95

DATE: 07-27-18 FILE NAME: t061335_03.dgn

STAGE I TRAFFIC SIGNAL

LOCATION: HWY. 5/SPRINGHILL RD.
CITY: BRYANT
COUNTY: SALINE
DISTRICT: 6 SCALE: 1" = 40' DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	125	303

(2) SIGNALIZATION PLAN SHEET

STAGE 1 AND 2 PHASING DIAGRAM

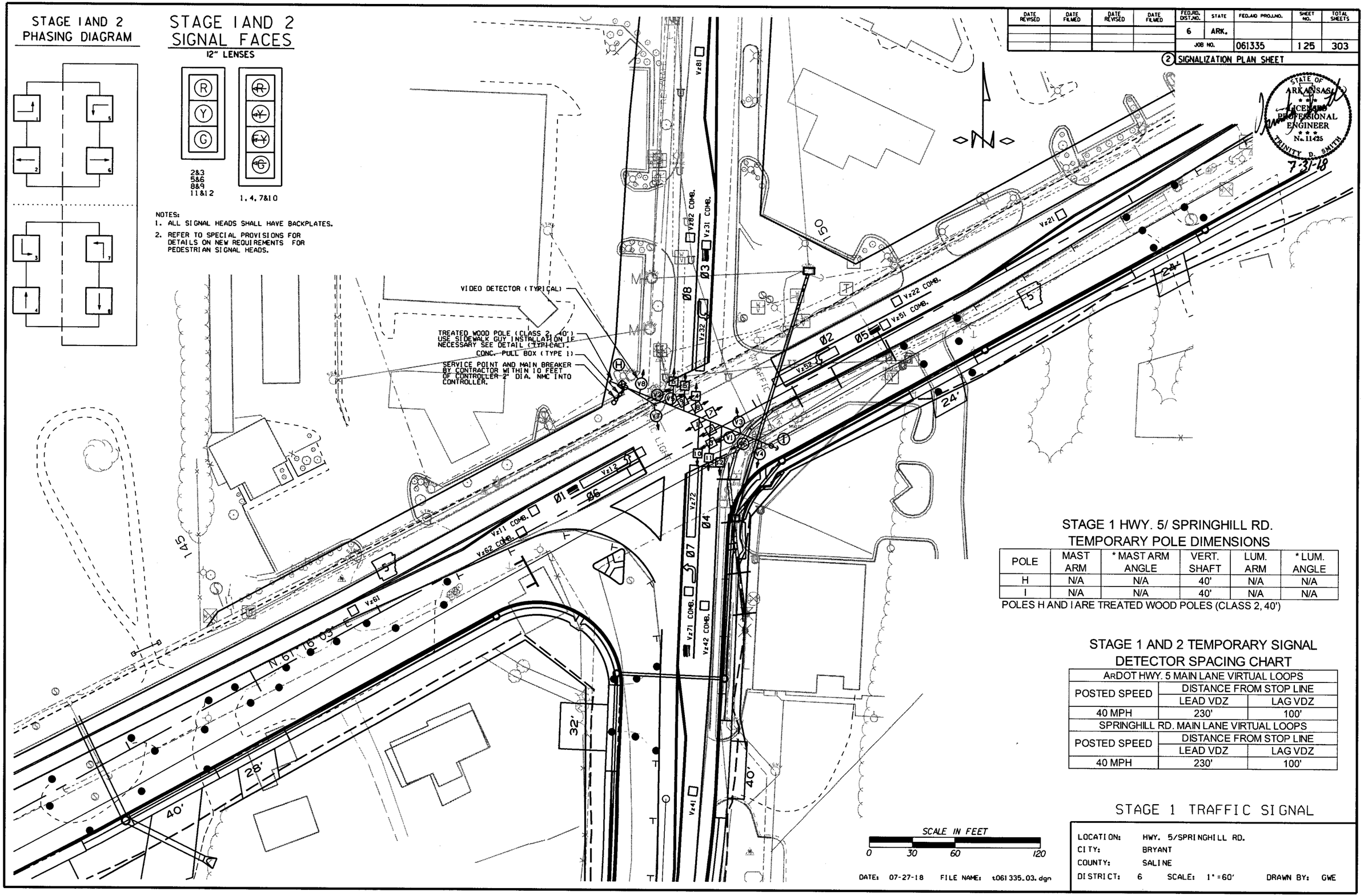
STAGE 1 AND 2 SIGNAL FACES

12" LENSES

2&3
5&6
8&9
11&12

1, 4, 7&10

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



STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

STAGE 1 HWY. 5/ SPRINGHILL RD. TEMPORARY POLE DIMENSIONS

POLE	MAST ARM	* MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	* LUM. ANGLE
H	N/A	N/A	40'	N/A	N/A
I	N/A	N/A	40'	N/A	N/A

POLES H AND I ARE TREATED WOOD POLES (CLASS 2, 40')

STAGE 1 AND 2 TEMPORARY SIGNAL DETECTOR SPACING CHART

ARDOT HWY. 5 MAIN LANE VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
40 MPH	230'	100'
SPRINGHILL RD. MAIN LANE VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
40 MPH	230'	100'

SCALE IN FEET
0 30 60 120

DATE: 07-27-18 FILE NAME: t061335_03.dgn

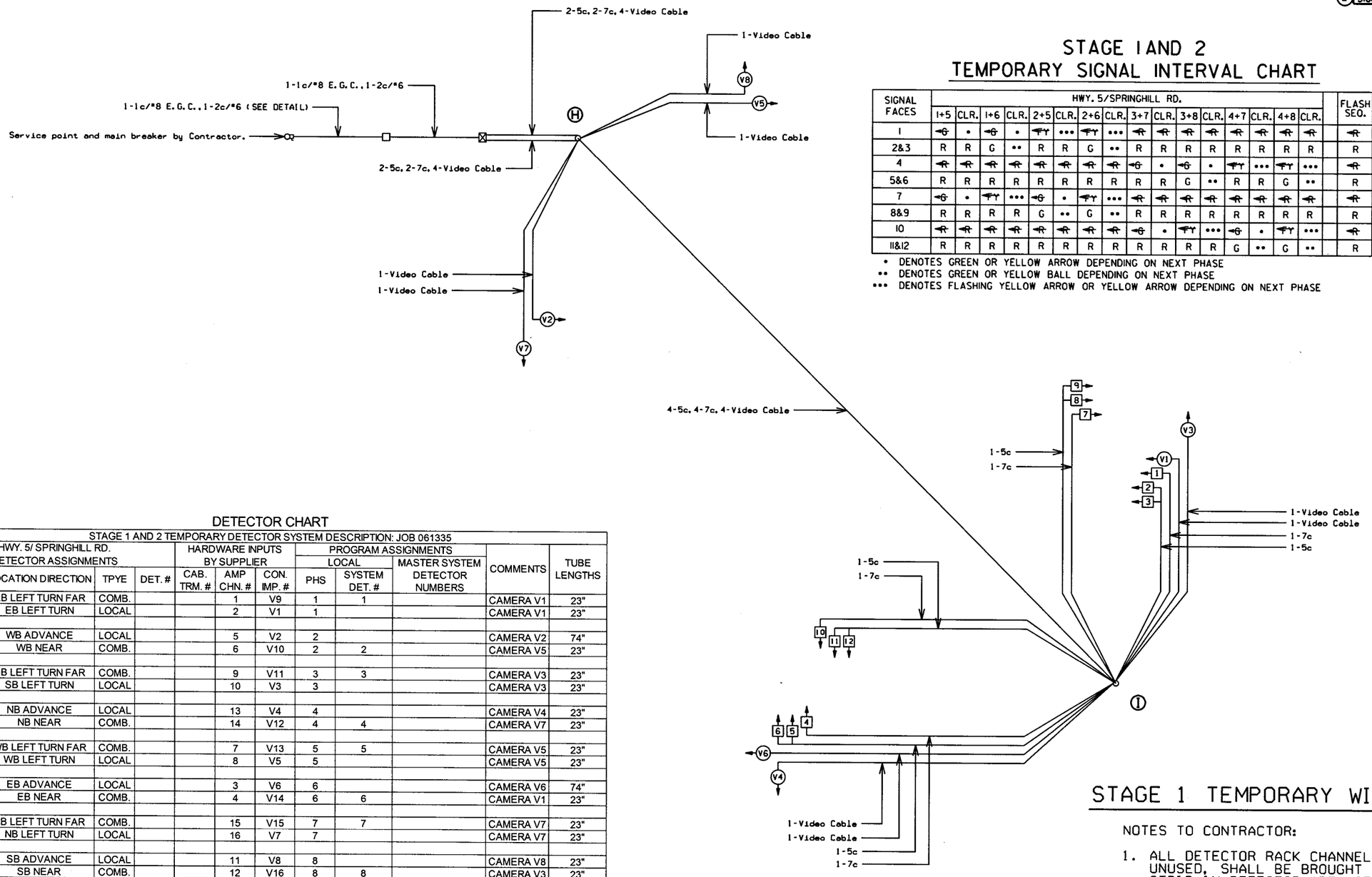
STAGE 1 TRAFFIC SIGNAL

LOCATION: HWY. 5/SPRINGHILL RD.
CITY: BRYANT
COUNTY: SALINE
DISTRICT: 6 SCALE: 1"=60' DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	126	303

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18



STAGE 1 AND 2 TEMPORARY SIGNAL INTERVAL CHART

SIGNAL FACES	HWY. 5/SPRINGHILL RD. 1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	3+7	CLR.	3+8	CLR.	4+7	CLR.	4+8	CLR.	FLASH SEQ.
1	~~G~~	•	~~G~~	•	~~Y~~	•••	~~Y~~	•••	←	←	←	←	←	←	←	←	←
2&3	R	R	G	••	R	R	G	••	R	R	R	R	R	R	R	R	R
4	←	←	←	←	←	←	←	←	~~G~~	•	~~G~~	•	~~Y~~	•••	~~Y~~	•••	←
5&6	R	R	R	R	R	R	R	R	R	R	G	••	R	R	G	••	R
7	~~G~~	•	~~Y~~	•••	~~G~~	•	~~Y~~	•••	←	←	←	←	←	←	←	←	←
8&9	R	R	R	R	G	••	G	••	R	R	R	R	R	R	R	R	R
10	←	←	←	←	←	←	←	←	~~G~~	•	~~Y~~	•••	~~G~~	•	~~Y~~	•••	←
11&12	R	R	R	R	R	R	R	R	R	R	R	R	G	••	G	••	R

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

DETECTOR CHART

STAGE 1 AND 2 TEMPORARY DETECTOR SYSTEM DESCRIPTION: JOB 061335											
HWY. 5/ SPRINGHILL RD. DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS LOCAL		MASTER SYSTEM DETECTOR NUMBERS	COMMENTS	TUBE LENGTHS
DET. ID #	LOCATION DIRECTION	TPYE	DET. #	CAB. TRM. #	AMP CHN. #	CON. IMP. #	PHS	SYSTEM DET. #			
Vz11	EB LEFT TURN FAR	COMB.			1	V9	1	1		CAMERA V1	23"
Vz12	EB LEFT TURN	LOCAL			2	V1	1			CAMERA V1	23"
Vz21	WB ADVANCE	LOCAL			5	V2	2			CAMERA V2	74"
Vz22	WB NEAR	COMB.			6	V10	2	2		CAMERA V5	23"
Vz31	SB LEFT TURN FAR	COMB.			9	V11	3	3		CAMERA V3	23"
Vz32	SB LEFT TURN	LOCAL			10	V3	3			CAMERA V3	23"
Vz41	NB ADVANCE	LOCAL			13	V4	4			CAMERA V4	23"
Vz42	NB NEAR	COMB.			14	V12	4	4		CAMERA V7	23"
Vz51	WB LEFT TURN FAR	COMB.			7	V13	5	5		CAMERA V5	23"
Vz52	WB LEFT TURN	LOCAL			8	V5	5			CAMERA V5	23"
Vz61	EB ADVANCE	LOCAL			3	V6	6			CAMERA V6	74"
Vz62	EB NEAR	COMB.			4	V14	6	6		CAMERA V1	23"
Vz71	NB LEFT TURN FAR	COMB.			15	V15	7	7		CAMERA V7	23"
Vz72	NB LEFT TURN	LOCAL			16	V7	7			CAMERA V7	23"
Vz81	SB ADVANCE	LOCAL			11	V8	8			CAMERA V8	23"
Vz82	SB NEAR	COMB.			12	V16	8	8		CAMERA V3	23"
					SPARE						

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

NOTE: "AMP CHN =" REFERS TO THE RACK OUTPUT POSITION.
THIS IS WIRED TO CONTROLLER INPUT DETECTOR NUMBER WHICH IS PROGRAMMED TO ACTUATE THE DESIGNATED PHASE.
EXAMPLE: V9 = SYSTEM DETECTOR 1, V10 = SYSTEM DETECTOR 2

STAGE 1 TEMPORARY WIRING DIAGRAM

NOTES TO CONTRACTOR:

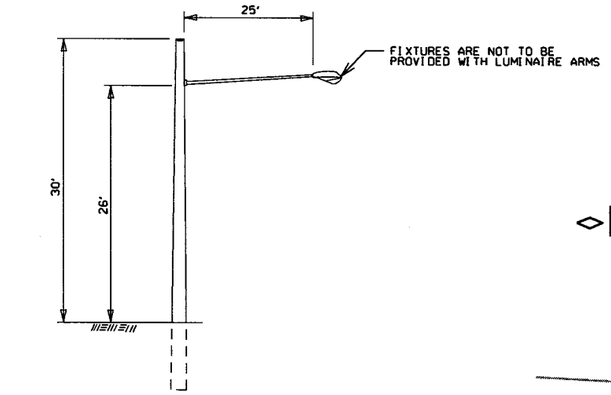
1. ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA OF CABINET.
2. THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.

LOCATION: HWY. 5/SPRINGHILL RD.
CITY: BRYANT
COUNTY: SALINE
DISTRICT: 6 SCALE: N/A DRAWN BY: GWE

DATE: 07-27-18 FILE NAME: t061335_03.dgn

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	127	303

(2) SIGNALIZATION PLAN SHEET



TYPICAL WOOD POLE WITH LUMINAIRE ARM

NOTE TO CONTRACTOR:
LUMINAIRE ARMS (OR APPROVED MOUNTING HARDWARE) SHALL BE USED TO MOUNT VIDEO DETECTORS. LUMINAIRE ARM SHALL NOT INCLUDE LUMINAIRE ASSEMBLIES. COST FOR LUMINAIRE ARMS, MOUNTING AND ALL HARDWARE IS INCLUDED IN PRICE BID FOR ITEM 716 TREATED WOOD POLE.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

TREATED WOOD POLE (CLASS 2, 40') USE SIDEWALK GUY INSTALLATION IF NECESSARY SEE DETAIL (TYPICAL).

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

STAGE 2 HWY. 5/ SPRINGHILL RD.
TEMPORARY SIGNAL POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
J	HWY. 5 - STA. 148+69.04	47' RT.	1157131.93, 2022019.28

SCALE IN FEET
0 20 40 80

DATE: 07-27-18 FILE NAME: t061335_03.dgn

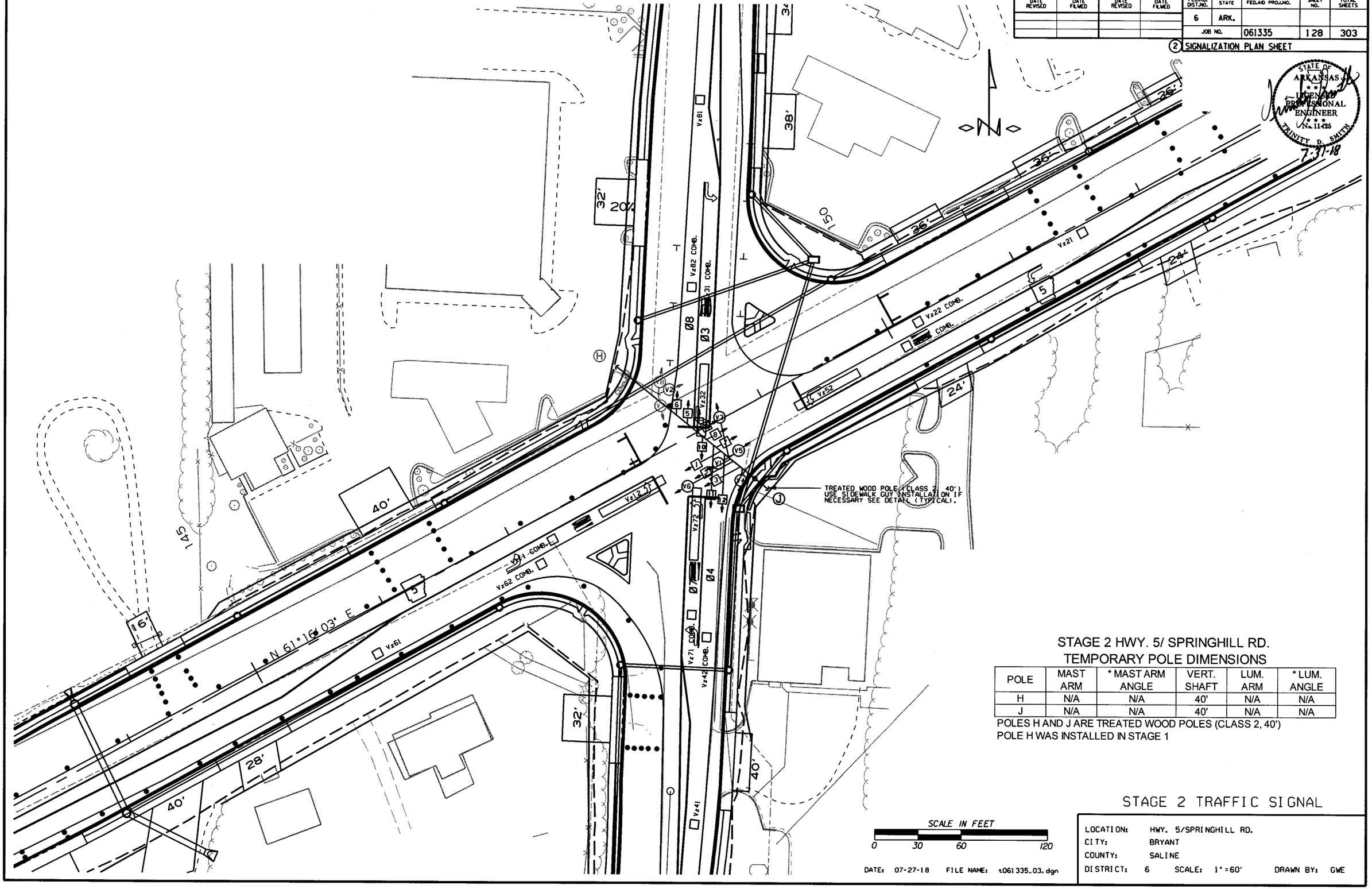
STAGE 2 TRAFFIC SIGNAL

LOCATION: HWY. 5/SPRINGHILL RD.
CITY: BRYANT
COUNTY: SALINE
DISTRICT: 6 SCALE: 1"=40' DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	128	303

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18



STAGE 2 HWY. 5/ SPRINGHILL RD.
TEMPORARY POLE DIMENSIONS

POLE	MAST ARM	* MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	* LUM. ANGLE
H	N/A	N/A	40'	N/A	N/A
J	N/A	N/A	40'	N/A	N/A

POLES H AND J ARE TREATED WOOD POLES (CLASS 2, 40')
POLE H WAS INSTALLED IN STAGE 1

SCALE IN FEET
0 30 60 120

DATE: 07-27-18 FILE NAME: t061335_03.dgn

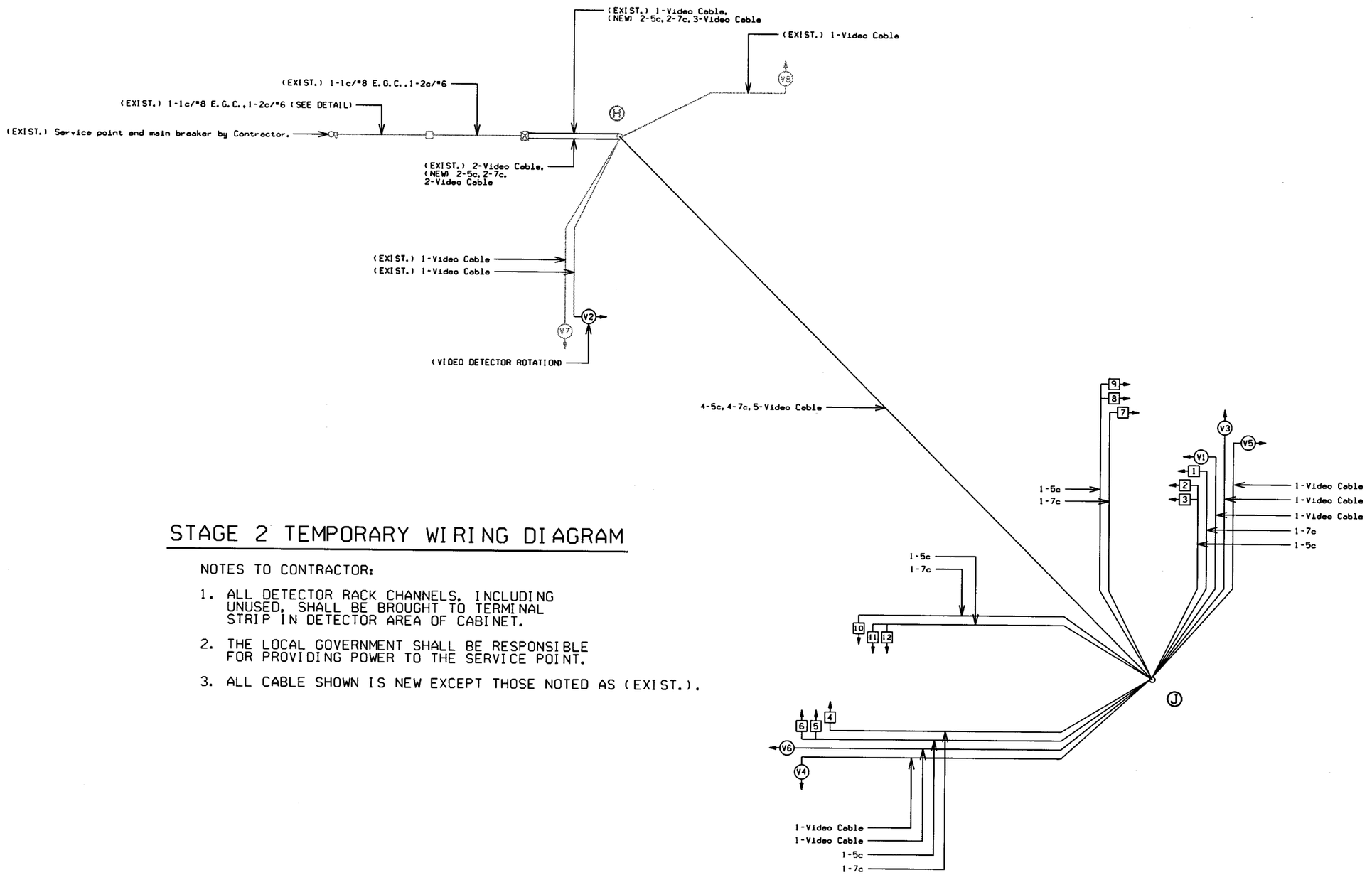
STAGE 2 TRAFFIC SIGNAL

LOCATION: HWY. 5/SPRINGHILL RD.
CITY: BRYANT
COUNTY: SALINE
DISTRICT: 6 SCALE: 1"=60' DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	129	303

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18



STAGE 2 TEMPORARY WIRING DIAGRAM

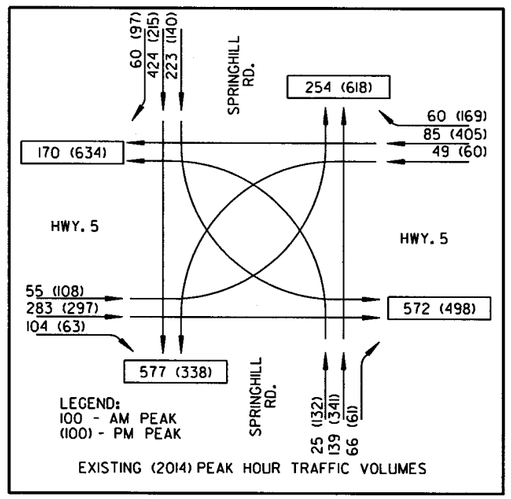
NOTES TO CONTRACTOR:

1. ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA OF CABINET.
2. THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.
3. ALL CABLE SHOWN IS NEW EXCEPT THOSE NOTED AS (EXIST.).

DATE: 07-27-18 FILE NAME: t061335_03.dgn

LOCATION:	HWY. 5/SPRINGHILL RD.		
CITY:	BRYANT		
COUNTY:	SALINE		
DISTRICT:	6	SCALE: N/A	DRAWN BY: GWE

TRAFFIC FLOW DIAGRAM



EXISTING (2014) PEAK HOUR TRAFFIC VOLUMES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	130	303

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

SPRINGHILL ROAD

SPRINGHILL ROAD

CANOPY

VACANT

DESIGN PARAMETERS

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

LOCATION OF STOP LINES SHOWN ON PERMANENT PAVEMENT MARKING DETAILS (SEE SEPARATE SHEET).

MINIMUM CLEAR ZONE DISTANCE
3 FEET BEHIND CURB

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

HWY. 5/ SPRINGHILL RD.
POLE LOCATIONS

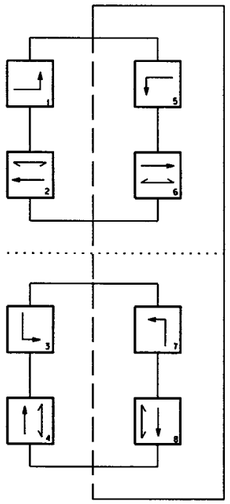
POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 5 - STA. 147+07.05	88' RT.	1157009.89, 2021905.76
B	HWY. 5 - STA. 147+59.21	53' LT.	1157038.54, 2021961.16
C	HWY. 5 - STA. 147+93.00	50' LT.	1157018.59, 2022067.83
D	HWY. 5 - STA. 148+43.81	79' LT.	1157049.31, 2022117.50
E	HWY. 5 - STA. 149+22.03	53' LT.	1157130.30, 2022132.48
F	HWY. 5 - STA. 148+77.26	55' RT.	1157142.78, 2022016.59
G	HWY. 5 - STA. 148+42.21	86' RT.	1157127.13, 2021972.22

SCALE IN FEET
0 20 40 80

DATE: 07-27-18 FILE NAME: t061335_03.dgn

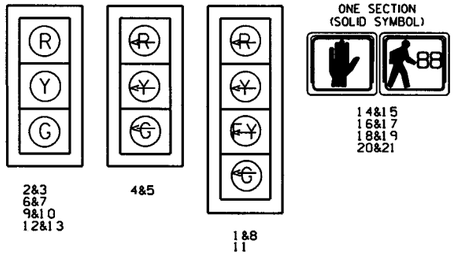
LOCATION: HWY. 5/SPRINGHILL RD.
CITY: BRYANT
COUNTY: SALINE
DISTRICT: 6 SCALE: 1"=40' DRAWN BY: GWE

PHASING DIAGRAM



SIGNAL FACES

12" LENSES



ONE SECTION
(SOLID SYMBOL)

14&15
16&17
18&19
20&21

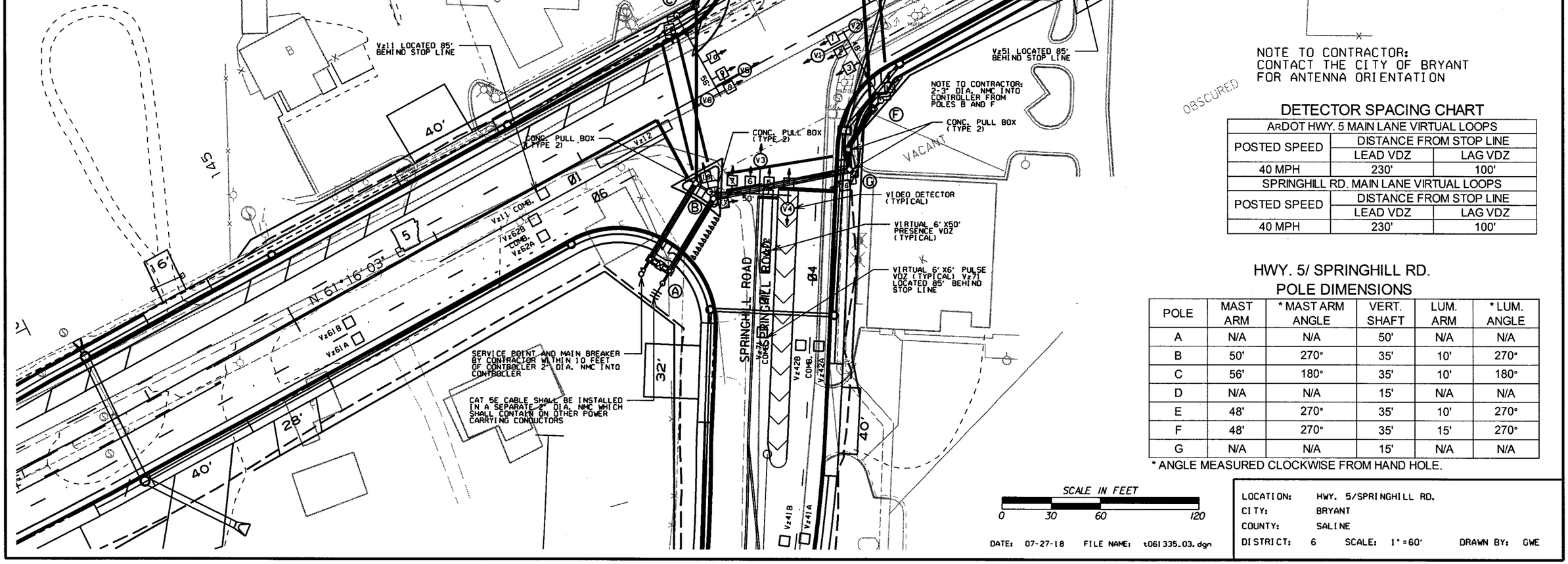
NOTES:

1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISIONS FOR DETAILS ON NEW REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.
3. ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEET A.D.A.S. STANDARDS.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	131	303

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18



NOTE TO CONTRACTOR:
CONTACT THE CITY OF BRYANT
FOR ANTENNA ORIENTATION

DETECTOR SPACING CHART

ARDOT HWY. 5 MAIN LANE VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
40 MPH	230'	100'
SPRINGHILL RD. MAIN LANE VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
40 MPH	230'	100'

HWY. 5/ SPRINGHILL RD.
POLE DIMENSIONS

POLE	MAST ARM	* MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	* LUM. ANGLE
A	N/A	N/A	50'	N/A	N/A
B	50'	270°	35'	10'	270°
C	56'	180°	35'	10'	180°
D	N/A	N/A	15'	N/A	N/A
E	48'	270°	35'	10'	270°
F	48'	270°	35'	15'	270°
G	N/A	N/A	15'	N/A	N/A

* ANGLE MEASURED CLOCKWISE FROM HAND HOLE.

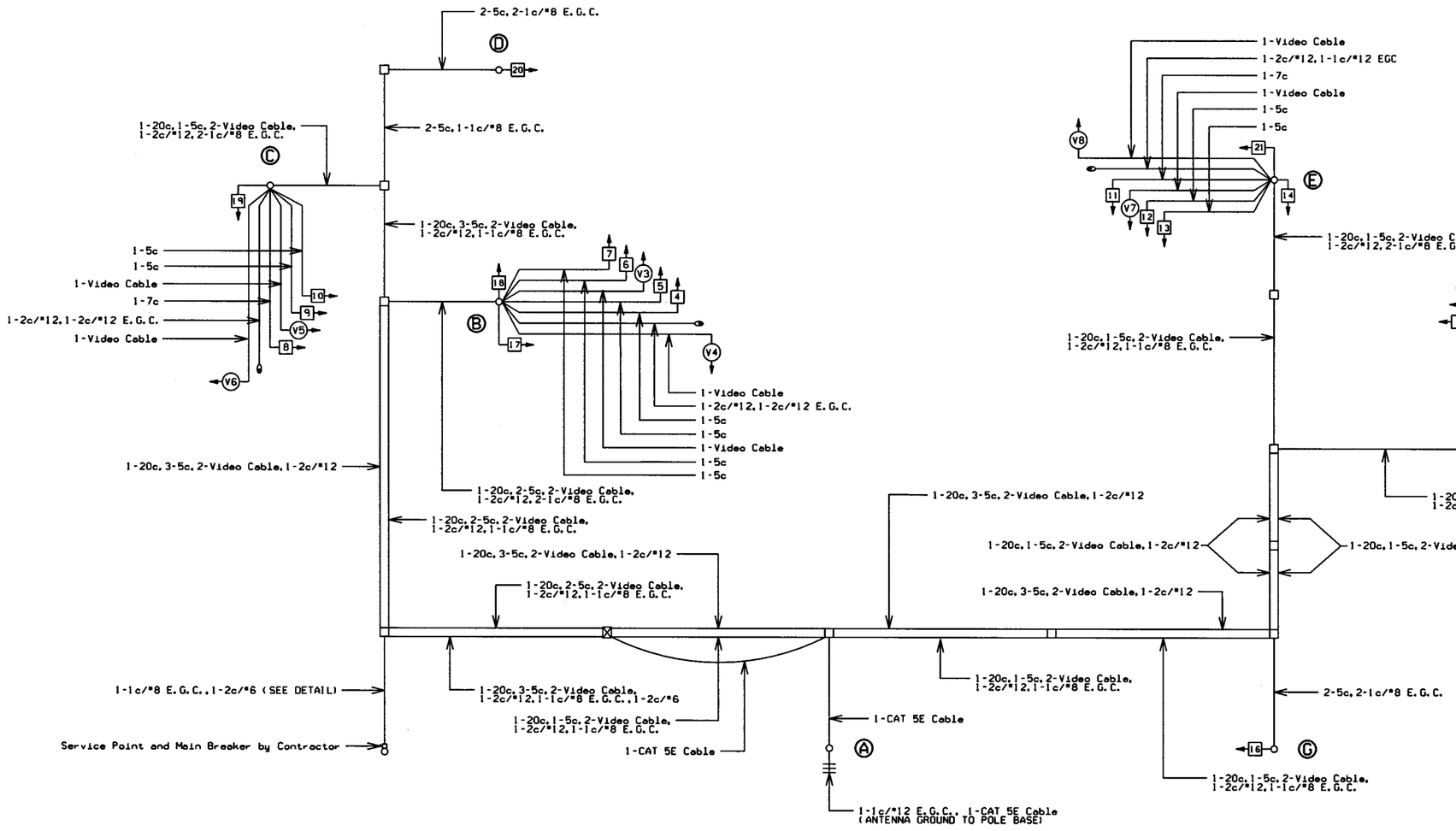
SCALE IN FEET
0 30 60 120

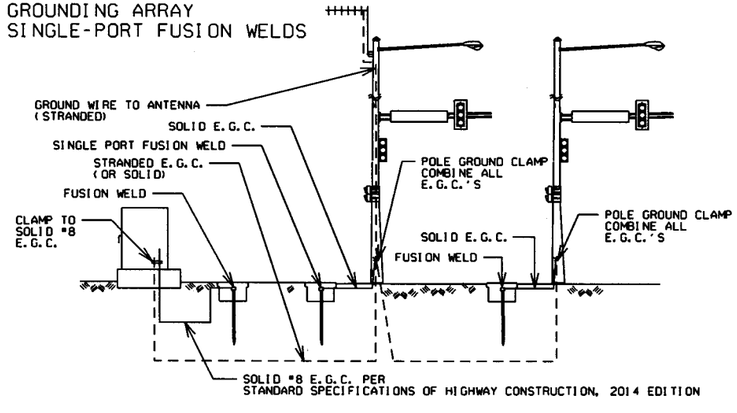
DATE: 07-27-18 FILE NAME: t061335_03.dgn

LOCATION: HWY. 5/SPRINGHILL RD.
CITY: BRYANT
COUNTY: SALINE
DISTRICT: 6 SCALE: 1"=60' DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	132	303

(2) SIGNALIZATION PLAN SHEET





WIRING DIAGRAM

NOTES TO CONTRACTOR:

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

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

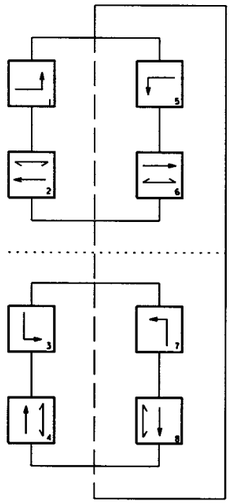
DATE: 07-27-18 FILE NAME: t061335_03.dgn

LOCATION: HWY. 5/SPRINGHILL RD.
CITY: BRYANT
COUNTY: SALINE
DISTRICT: 6 SCALE: N/A DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	133	303

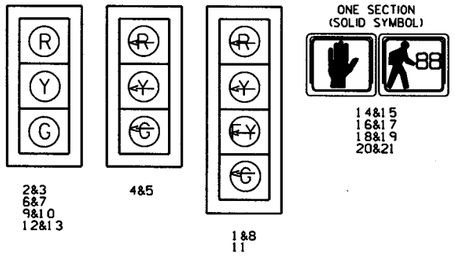
(2) SIGNALIZATION PLAN SHEET

PHASING DIAGRAM



SIGNAL FACES

12" LENSES



NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISIONS FOR DETAILS ON NEW REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.
3. ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEET A.D.A.S. STANDARDS.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

INTERVAL CHART

SIGNAL FACES	HWY. 5/SPRINGHILL RD. 1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	3+7	CLR.	3+8	CLR.	4+7	CLR.	4+8	CLR.	FLASH SEQ.
1	~~G~~	•	~~G~~	•	~~Y~~	•••	~~Y~~	•••	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
2&3	R	R	G	••	R	R	G	••	R	R	R	R	R	R	R	R	R
4&5	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~G~~	•	~~G~~	•	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
6&7	R	R	R	R	R	R	R	R	R	R	G	••	R	R	G	••	R
8	~~G~~	•	~~Y~~	•••	~~G~~	•	~~Y~~	•••	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
9&10	R	R	R	R	G	••	G	••	R	R	R	R	R	R	R	R	R
11	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~G~~	•	~~Y~~	•••	~~G~~	•	~~Y~~	•••	~~R~~
12&13	R	R	R	R	R	R	R	R	R	R	R	R	G	••	G	••	R
14&15	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	W	FDW	BLK
16&17	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLK
18&19	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	W	FDW	BLK
20&21	DW	DW	DW	DW	W	FDW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLK

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

DETECTOR CHART

DETECTOR SYSTEM DESCRIPTION: JOB 061335											
HWY. 5/ SPRINGHILL RD. DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS LOCAL		PROGRAM ASSIGNMENTS MASTER SYSTEM DETECTOR NUMBERS	COMMENTS	TUBE LENGTHS
DET. ID #	LOCATION DIRECTION	TPYE	DET. #	CAB. TRM. #	AMP CHN. #	CON. IMP. #	PHS	SYSTEM DET. #			
Vz11	EB LEFT TURN FAR	COMB.			1	V9	1	1		CAMERA V1	37"
Vz12	EB LEFT TURN	LOCAL			2	V1	1			CAMERA V1	37"
Vz21 A&B	WB ADVANCE	LOCAL			5	V2	2			CAMERA V2	74"
Vz22 A&B	WB NEAR	COMB.			6	V10	2	2		CAMERA V5	46"
Vz31 A&B	SB LEFT TURN FAR	COMB.			9	V11	3	3		CAMERA V3	74"
Vz32 A&B	SB LEFT TURN	LOCAL			10	V3	3			CAMERA V3	74"
Vz41 A&B	NB ADVANCE	LOCAL			13	V4	4			CAMERA V4	23"
Vz42 A&B	NB NEAR	COMB.			14	V12	4	4		CAMERA V7	74"
Vz51	WB LEFT TURN FAR	COMB.			7	V13	5	5		CAMERA V5	46"
Vz52	WB LEFT TURN	LOCAL			8	V5	5			CAMERA V5	46"
Vz61 A&B	EB ADVANCE	LOCAL			3	V6	6			CAMERA V6	74"
Vz62 A&B	EB NEAR	COMB.			4	V14	6	6		CAMERA V1	37"
Vz71	NB LEFT TURN FAR	COMB.			15	V15	7	7		CAMERA V7	74"
Vz72	NB LEFT TURN	LOCAL			16	V7	7			CAMERA V7	74"
Vz81 A&B	SB ADVANCE	LOCAL			11	V8	8			CAMERA V8	23"
Vz82 A&B	SB NEAR	COMB.			12	V16	8	8		CAMERA V3	74"
PB2 A&B	SPRINGHILL N. LEG	PED.				P2	2				
PB4 A&B	HWY. 5 E. LEG	PED.				P4	4				
PB6 A&B	SPRINGHILL S. LEG	PED.				P6	6				
PB8 A&B	HWY. 5 W. LEG	PED.				P8	8				
					SPARE						

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

NOTE: "AMP CHN =" REFERS TO THE RACK OUTPUT POSITION.
THIS IS WIRED TO CONTROLLER INPUT DETECTOR NUMBER WHICH IS PROGRAMMED TO ACTUATE THE DESIGNATED PHASE.
EXAMPLE: V9 = SYSTEM DETECTOR 1, V10 = SYSTEM DETECTOR 2

DATE: 07-27-18 FILE NAME: t061335_03.dgn

LOCATION: HWY. 5/SPRINGHILL RD.
CITY: BRYANT
COUNTY: SALINE
DISTRICT: 6 SCALE: N/A DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	134	303

(2) TRAFFIC SIGNAL QUANTITIES - REYNOLDS RD.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

STAGE 1, 2, AND 3 TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP & 701	ACTUATED CONTROLLER TS2-TYPE 2 (8 PHASES)	1	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	6	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	4	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	975	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	975	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	20	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	20	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	20	LIN. FT.
709	GALVANIZED STEEL CONDUIT (3")	80	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	20	LIN. FT.
711	CONCRETE PULL BOX (TYPE 1)	1	EACH
713	SPAN WIRE ASSEMBLY	1	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.13	LUMP SUM
716	TREATED WOOD POLE (CLASS 2, 40')	5	EACH
SP & 733	VIDEO DETECTOR (CLR)	6	EACH
733	VIDEO CABLE	1140	LIN. FT.
SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	3	EACH
SP & 733	VEHICLE DETECTOR RACK (16 CHANNEL)	1	EACH

STAGE 1, 2, AND 3

INSTALL ALL TEMPORARY TRAFFIC SIGNAL EQUIPMENT AND UTILIZE THIS TEMPORARY TRAFFIC SIGNAL INSTALLATION FOR ALL STAGES 1, 2 AND 3.

MAINTAIN THIS TRAFFIC SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 1, 2, AND 3 TRAFFIC SIGNAL PLANS. (REFER TO MAINTENANCE OF TRAFFIC DETIALS.)

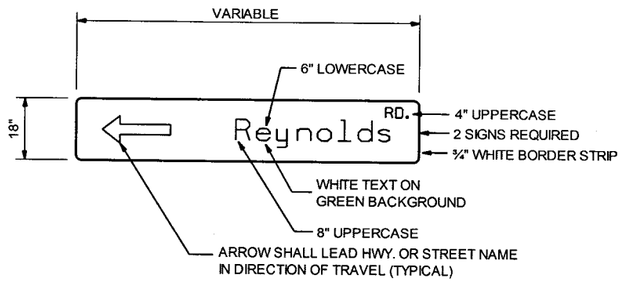
PERMANENT TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP & 701	SYSTEM LOCAL CONTROLLER TS2-TYPE 2, E-NET (8 PHASES)	1	EACH
SP	ETHERNET SWITCH, T100 HARDENED (8-PORT)	1	EACH
SP	E-NET CABLE (EXTERIOR CAT 5E)	100	LIN. FT.
SP	ANTENNA SUPPORT (SHOE BASE, 50' HT.)	1	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	9	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	3	EACH
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	8	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	2170	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	179	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	775	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	692	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)	180	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	20	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	864	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	20	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	20	LIN. FT.
710	NON-METALLIC CONDUIT (2")	70	LIN. FT.
710	NON-METALLIC CONDUIT (3")	663	LIN. FT.
711	CONCRETE PULL BOX (TYPE 1)	1	EACH
711	CONCRETE PULL BOX (TYPE 2)	4	EACH
711	CONCRETE PULL BOX (TYPE 2 HD)	3	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (28')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (32')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (54')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (56')	1	EACH
SP	LED LUMINAIRE ASSEMBLY	4	EACH
715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	2	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.13	LUMP SUM
SP	18" STREET NAME SIGN	6	EACH
SP & 733	VIDEO DETECTOR (CLR)	6	EACH
733	VIDEO CABLE	1421	LIN. FT.
733	VIDEO MONITOR (CLR)	1	EACH
SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	3	EACH
SP & 733	VEHICLE DETECTOR RACK (24 CHANNEL)	1	EACH
SP	NET-ACCESS RADIO (5.8 GHZ, 32 MBPS)	1	EACH
SP	NET-SUBSCRIBER RADIO (5.8 GHZ, 32 MBPS)	1	EACH

PERMANENT TRAFFIC SIGNAL:

THE STAGE 1, 2, AND 3 TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL REMAIN IN OPERATION UNTIL THE PERMANENT TRAFFIC SIGNAL IS COMPLETED AND OPERATIONAL. INSTALL PERMANENT TRAFFIC SIGNAL AND REMOVE ALL STAGE 1, 2, AND 3 TEMPORARY TRAFFIC SIGNAL COMPONENTS. (REFER TO PERMANENT TRAFFIC SIGNAL PLANS.)

OVERHEAD STREET NAME MARKER STANDARD MAST ARM MOUNTED



NOTES:

1. REFLECTIVE SHEETING SHALL COMPLY WITH ASTM 4956 TYPE 8 OR 9 REFLECTIVE SHEETING. SHEETING AND LEGEND SHALL BE APPLIED IN SUCH A MANNER TO PROVIDE WRINKLE AND BUBBLE FREE SURFACES. APPLICATION OF SHEETING IS CAUSE FOR REJECTION OF MATERIALS DUE TO WORKMANSHIP.
2. ALUMINUM SIGN BLANK SHALL BE ALLOY 6061-T6 OR 5052-H38. THE ALUMINUM SIGN SHALL BE ALSO ALODIZED. THE ALUMINUM SHEETING SHALL BE 0.100 INCH NOMINAL THICKNESS AND OF THE SIZE SHOWN WITH 1.5" CORNER RADII. PRIOR TO FABRICATION OF THE SIGNS, THE LAYOUT SHALL FIRST BE APPROVED BY AN AGENT OF THE CITY.
3. WHEN CROSSROAD HAS TWO NAMES, THE SIGN FOR THE CROSSROAD TO THE LEFT MAY BE INSTALLED ON THE BACKSIDE OF THE MAST ARM ON THE NEARSIDE LEFT POLE. SEE STANDARD DRAWING SHEET FOR MORE INFORMATION FOR MOUNTING ON MAST ARM ASSEMBLY.
4. THE SERIES C 2000 STANDARD ALPHABET SHALL BE USED FOR ALL LETTERS.

DATE: 07-27-18 FILE NAME: t061335_04.dgn

LOCATION: HWY. 5/HWY. 183
CITY: BRYANT
COUNTY: SALINE
DISTRICT: 6 SCALE: N/A DRAWN BY: GWE

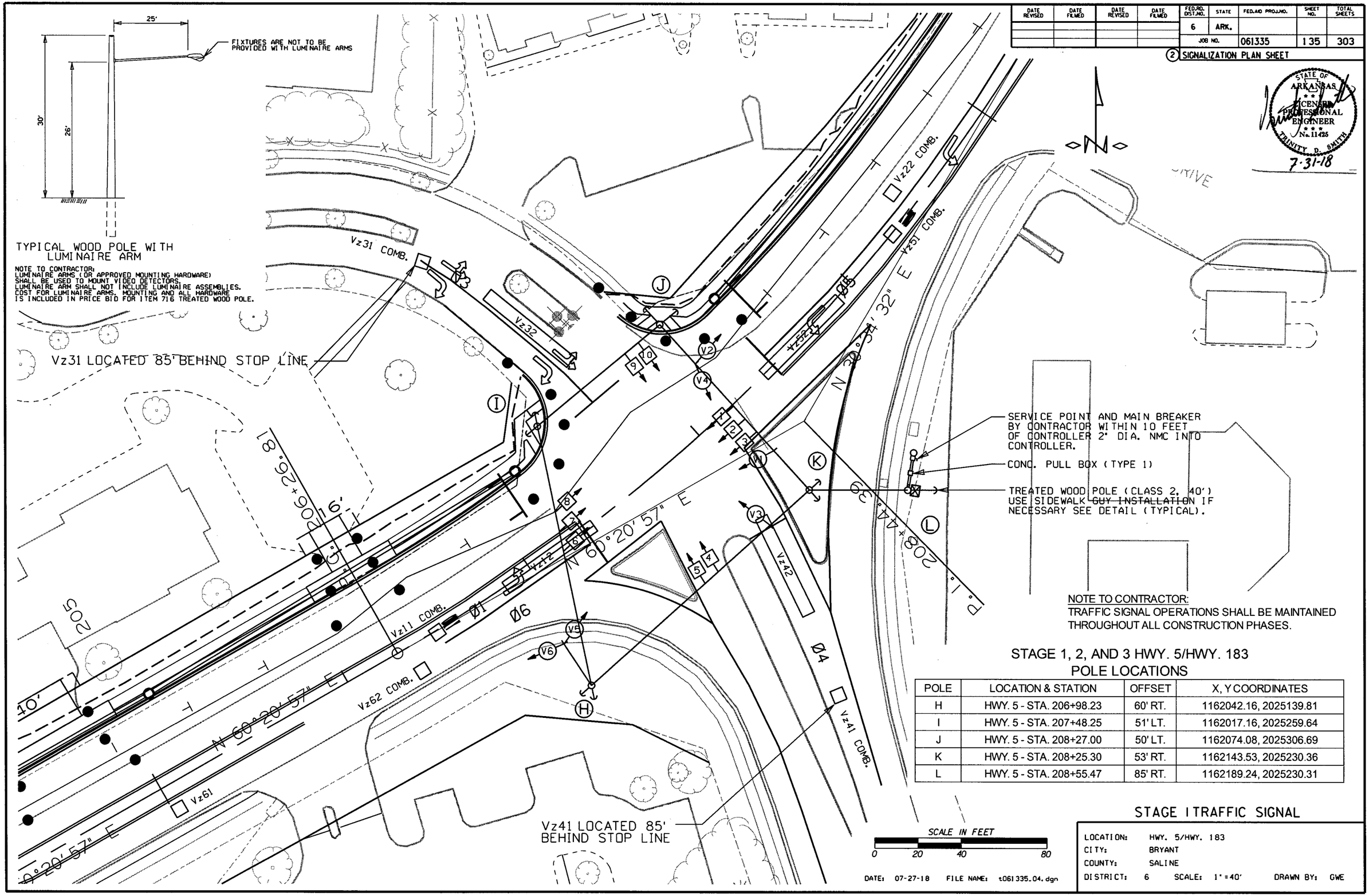
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	135	303

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

TYPICAL WOOD POLE WITH LUMINAIRE ARM

NOTE TO CONTRACTOR:
LUMINAIRE ARMS (OR APPROVED MOUNTING HARDWARE) SHALL BE USED TO MOUNT VIDEO DETECTORS. LUMINAIRE ARM SHALL NOT INCLUDE LUMINAIRE ASSEMBLIES. COST FOR LUMINAIRE ARMS, MOUNTING AND ALL HARDWARE IS INCLUDED IN PRICE BID FOR ITEM 716 TREATED WOOD POLE.



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

STAGE 1, 2, AND 3 HWY. 5/HWY. 183 POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
H	HWY. 5 - STA. 206+98.23	60' RT.	1162042.16, 2025139.81
I	HWY. 5 - STA. 207+48.25	51' LT.	1162017.16, 2025259.64
J	HWY. 5 - STA. 208+27.00	50' LT.	1162074.08, 2025306.69
K	HWY. 5 - STA. 208+25.30	53' RT.	1162143.53, 2025230.36
L	HWY. 5 - STA. 208+55.47	85' RT.	1162189.24, 2025230.31

SCALE IN FEET
0 20 40 80

DATE: 07-27-18 FILE NAME: t061335_04.dgn

STAGE I TRAFFIC SIGNAL

LOCATION: HWY. 5/HWY. 183
CITY: BRYANT
COUNTY: SALINE
DISTRICT: 6 SCALE: 1"=40' DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	136	303

(2) SIGNALIZATION PLAN SHEETS

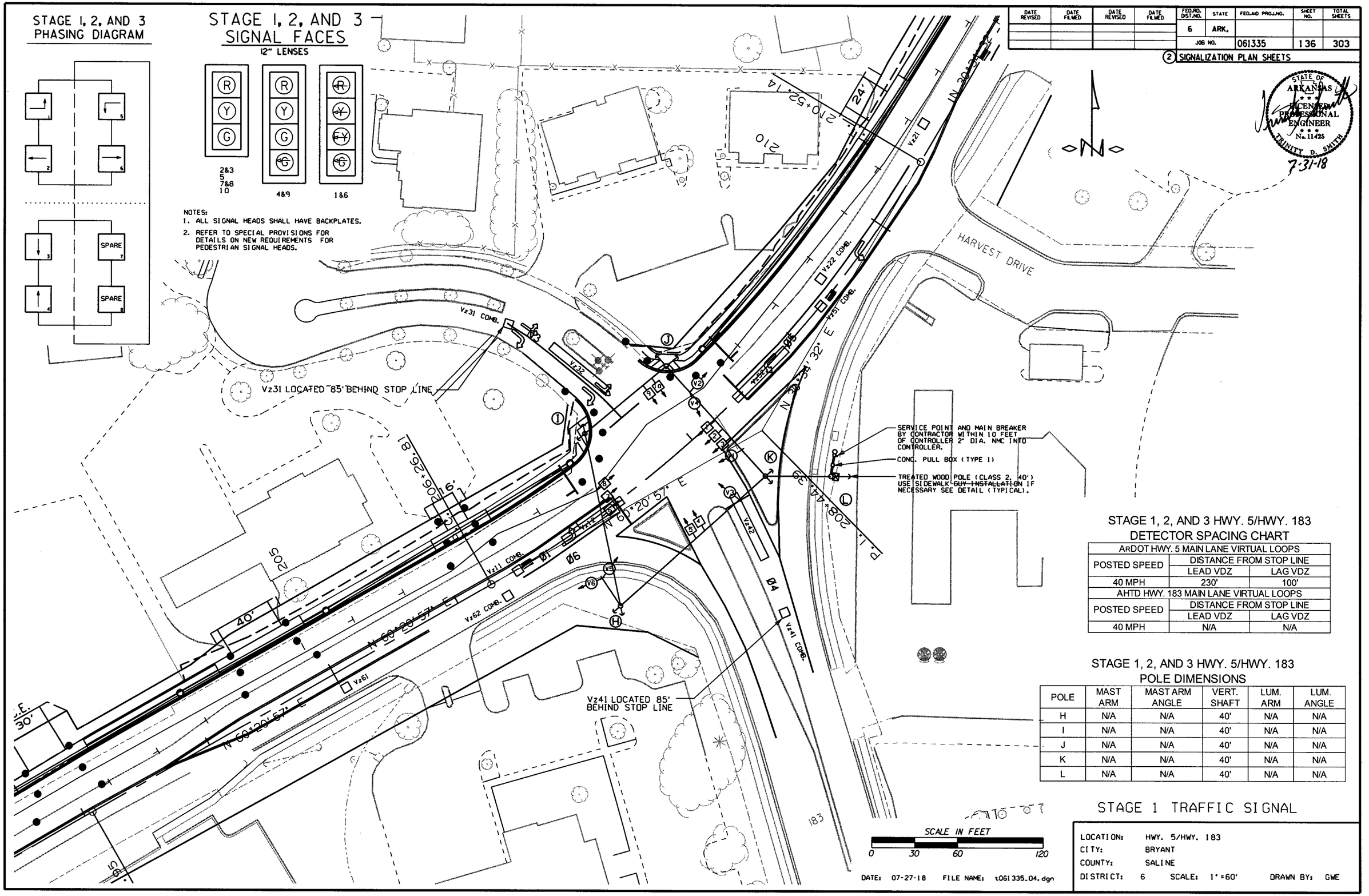
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

STAGE 1, 2, AND 3 PHASING DIAGRAM

STAGE 1, 2, AND 3 SIGNAL FACES

12" LENSES

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



STAGE 1, 2, AND 3 HWY. 5/HWY. 183 DETECTOR SPACING CHART

ARDOT HWY. 5 MAIN LANE VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
40 MPH	230'	100'
AHTD HWY. 183 MAIN LANE VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
40 MPH	N/A	N/A

STAGE 1, 2, AND 3 HWY. 5/HWY. 183 POLE DIMENSIONS

POLE	MAST ARM	MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	LUM. ANGLE
H	N/A	N/A	40'	N/A	N/A
I	N/A	N/A	40'	N/A	N/A
J	N/A	N/A	40'	N/A	N/A
K	N/A	N/A	40'	N/A	N/A
L	N/A	N/A	40'	N/A	N/A

STAGE 1 TRAFFIC SIGNAL

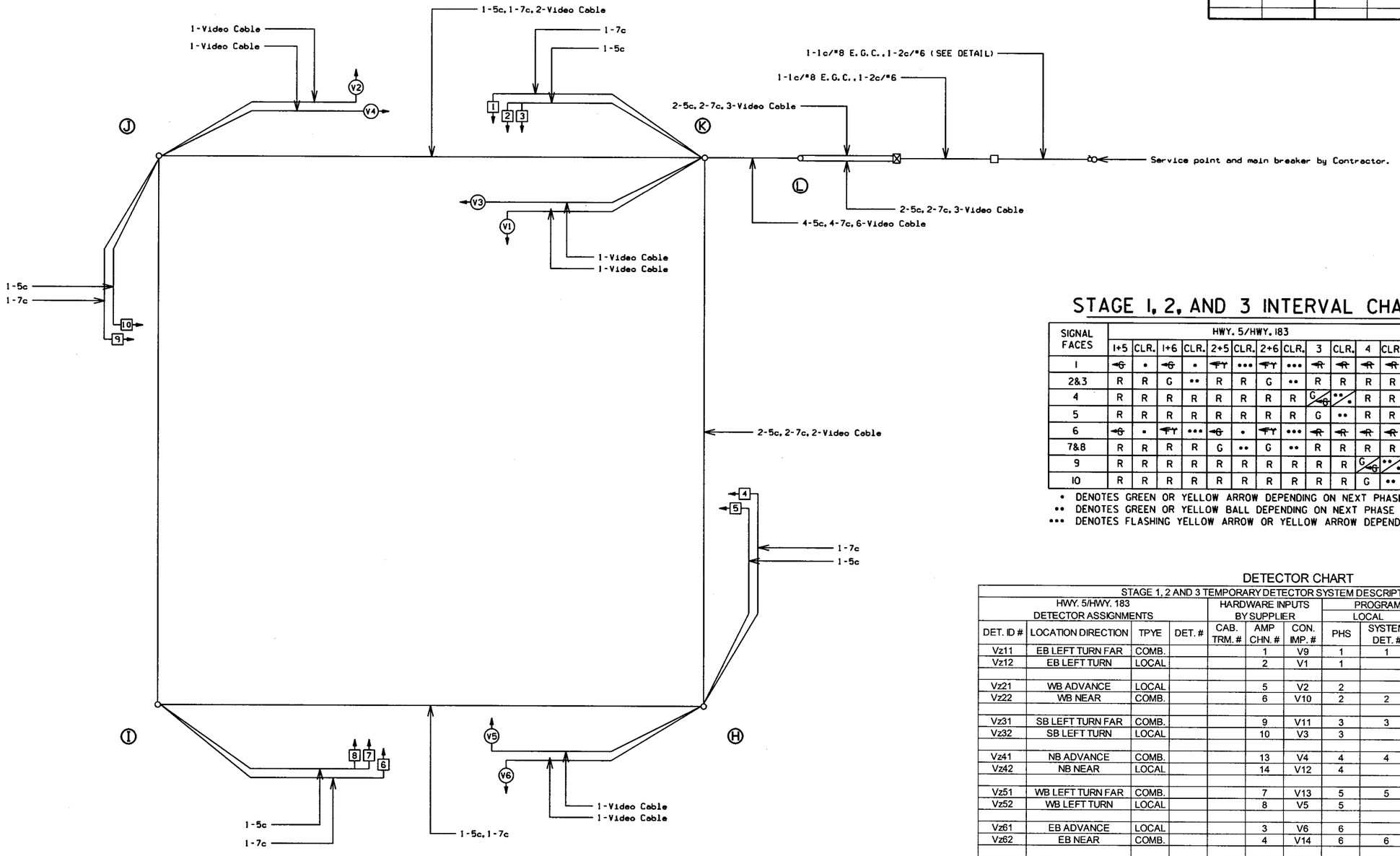
LOCATION: HWY. 5/HWY. 183
CITY: BRYANT
COUNTY: SALINE
DISTRICT: 6 SCALE: 1"=60' DRAWN BY: GWE

DATE: 07-27-18 FILE NAME: t061335_04.dgn

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	137	303

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18



STAGE 1, 2, AND 3 TEMPORARY WIRING DIAGRAM

NOTES TO CONTRACTOR:

1. ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA OF CABINET.
2. THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.

STAGE 1, 2, AND 3 INTERVAL CHART

SIGNAL FACES	HWY. 5/HWY. 183 I+5	CLR.	I+6	CLR.	2+5	CLR.	2+6	CLR.	3	CLR.	4	CLR.	FLASH SEQ.
1	~~G~~	•	~~G~~	•	~~FY~~	•••	~~FY~~	•••	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
2&3	R	R	G	••	R	R	G	••	R	R	R	R	R
4	R	R	R	R	R	R	R	R	G / ~~G~~	•• / •	R	R	R
5	R	R	R	R	R	R	R	R	G	••	R	R	R
6	~~G~~	•	~~FY~~	•••	~~G~~	•	~~FY~~	•••	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
7&8	R	R	R	R	G	••	G	••	R	R	R	R	R
9	R	R	R	R	R	R	R	R	R	R	G / ~~G~~	•• / •	R
10	R	R	R	R	R	R	R	R	R	R	G	••	R

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

DETECTOR CHART

STAGE 1, 2 AND 3 TEMPORARY DETECTOR SYSTEM DESCRIPTION: JOB 061335

HWY. 5/HWY. 183 DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS LOCAL		PROGRAM ASSIGNMENTS MASTER SYSTEM DETECTOR NUMBERS	COMMENTS	TUBE LENGTHS
DET. ID #	LOCATION DIRECTION	TPYE	DET. #	CAB. TRM. #	AMP CHN. #	CON. IMP. #	PHS	SYSTEM DET. #			
Vz11	EB LEFT TURN FAR	COMB.			1	V9	1	1		CAMERA V1	23"
Vz12	EB LEFT TURN	LOCAL			2	V1	1			CAMERA V1	23"
Vz21	WB ADVANCE	LOCAL			5	V2	2			CAMERA V2	23"
Vz22	WB NEAR	COMB.			6	V10	2	2		CAMERA V5	23"
Vz31	SB LEFT TURN FAR	COMB.			9	V11	3	3		CAMERA V3	23"
Vz32	SB LEFT TURN	LOCAL			10	V3	3			CAMERA V3	23"
Vz41	NB ADVANCE	COMB.			13	V4	4	4		CAMERA V4	23"
Vz42	NB NEAR	LOCAL			14	V12	4			CAMERA V4	23"
Vz51	WB LEFT TURN FAR	COMB.			7	V13	5	5		CAMERA V5	23"
Vz52	WB LEFT TURN	LOCAL			8	V5	5			CAMERA V5	23"
Vz61	EB ADVANCE	LOCAL			3	V6	6			CAMERA V6	23"
Vz62	EB NEAR	COMB.			4	V14	6	6		CAMERA V1	23"
					SPARE 11,12,15 & 16						

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

NOTE: "AMP CHN =" REFERS TO THE RACK OUTPUT POSITION.
THIS IS WIRED TO CONTROLLER INPUT DETECTOR NUMBER WHICH IS PROGRAMMED TO ACTUATE THE DESIGNATED PHASE.
EXAMPLE: V9 = SYSTEM DETECTOR 1, V10 = SYSTEM DETECTOR 2

DATE: 07-27-18 FILE NAME: t061335_04.dgn

LOCATION: HWY. 5/HWY. 183
CITY: BRYANT
COUNTY: SALINE
DISTRICT: 6 SCALE: N/A DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	138	303

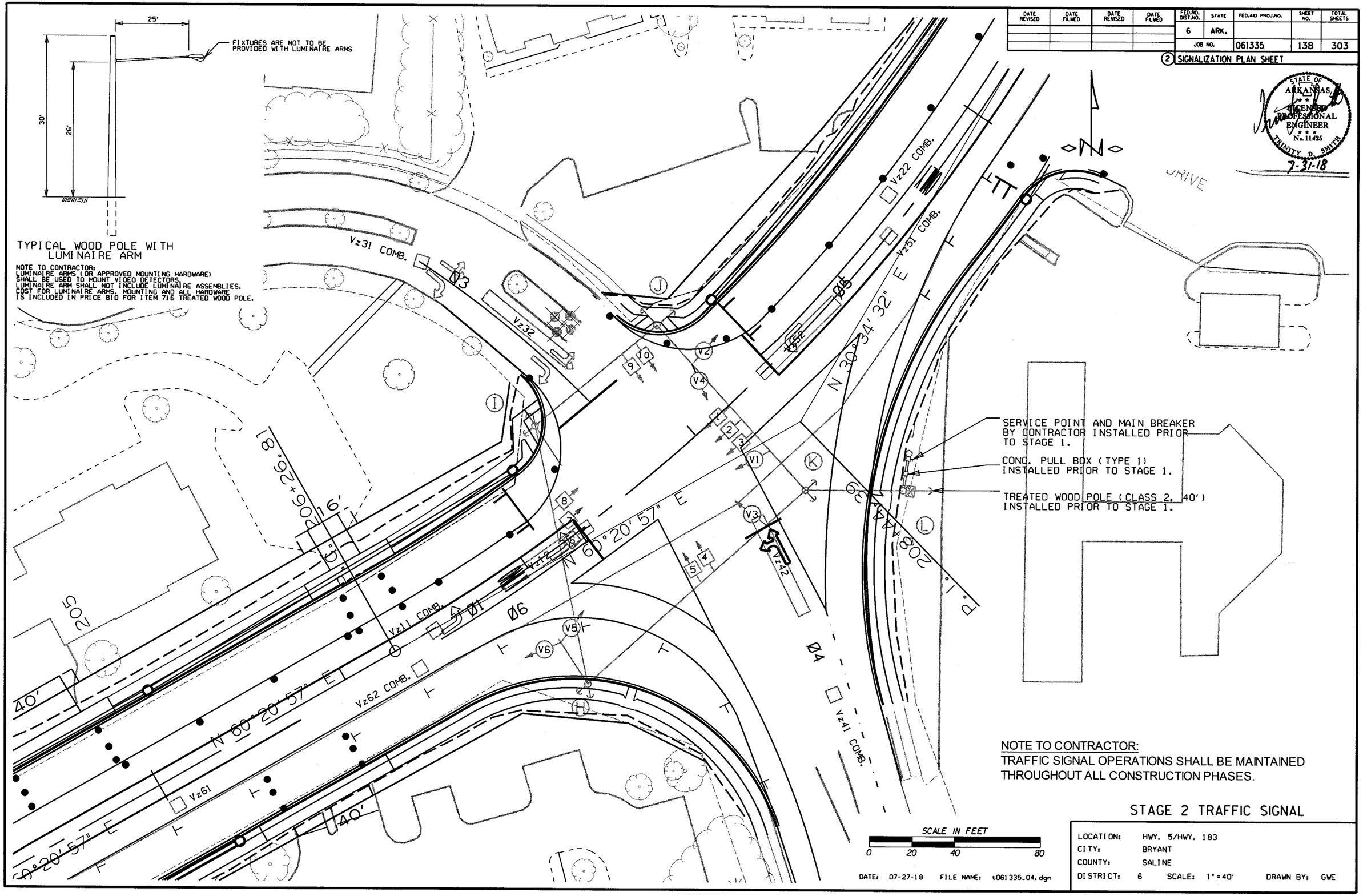
(2) SIGNALIZATION PLAN SHEET

FIXTURES ARE NOT TO BE PROVIDED WITH LUMINAIRE ARMS

TYPICAL WOOD POLE WITH LUMINAIRE ARM

NOTE TO CONTRACTOR:
LUMINAIRE ARMS (OR APPROVED MOUNTING HARDWARE) SHALL BE USED TO MOUNT VIDEO DETECTORS. LUMINAIRE ARM SHALL NOT INCLUDE LUMINAIRE ASSEMBLIES. COST FOR LUMINAIRE ARMS, MOUNTING AND ALL HARDWARE IS INCLUDED IN PRICE BID FOR ITEM 716 TREATED WOOD POLE.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18



SERVICE POINT AND MAIN BREAKER BY CONTRACTOR INSTALLED PRIOR TO STAGE 1.

CONC. PULL BOX (TYPE 1) INSTALLED PRIOR TO STAGE 1.

TREATED WOOD POLE (CLASS 2, 40') INSTALLED PRIOR TO STAGE 1.

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

STAGE 2 TRAFFIC SIGNAL

SCALE IN FEET
0 20 40 80

DATE: 07-27-18 FILE NAME: t061335_04.dgn

LOCATION: HWY. 5/HWY. 183
CITY: BRYANT
COUNTY: SALINE
DISTRICT: 6 SCALE: 1"=40' DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	139	303

(2) SIGNALIZATION PLAN SHEETS

STATE OF ARKANSAS
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CONST. LIMITS
24'
210+52.14
210
V=21
IN 30°34'32"
F.
CONST. LIMITS
HARVEST DRIVE
V=22 COMB.
V=51 COMB.
105
N 30°34'32" E
V=31 COMB.
Ø3
V=32
Ø5
Ø2
Ø4
V=41 COMB.
208+14.39
P.I.
183
SERVICE POINT AND MAIN BREAKER BY CONTRACTOR INSTALLED PRIOR TO STAGE 1.
CONC. PULL BOX (TYPE 1) INSTALLED PRIOR TO STAGE 1.
TREATED WOOD POLE (CLASS 2, 40') INSTALLED PRIOR TO STAGE 1.
206+26.81
205
40'
N 60°20'57" E
V=11 COMB.
Ø1
Ø6
V=62 COMB.
V=61
30'
CONST. LIMITS
CONST. LIMITS
N 60°20'57" E
40'

SCALE IN FEET
0 30 60 120

DATE: 07-27-18 FILE NAME: t061335_04.dgn

STAGE 2 TRAFFIC SIGNAL

LOCATION: HWY. 5/HWY. 183
CITY: BRYANT
COUNTY: SALINE
DISTRICT: 6 SCALE: 1"=60' DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	140	303

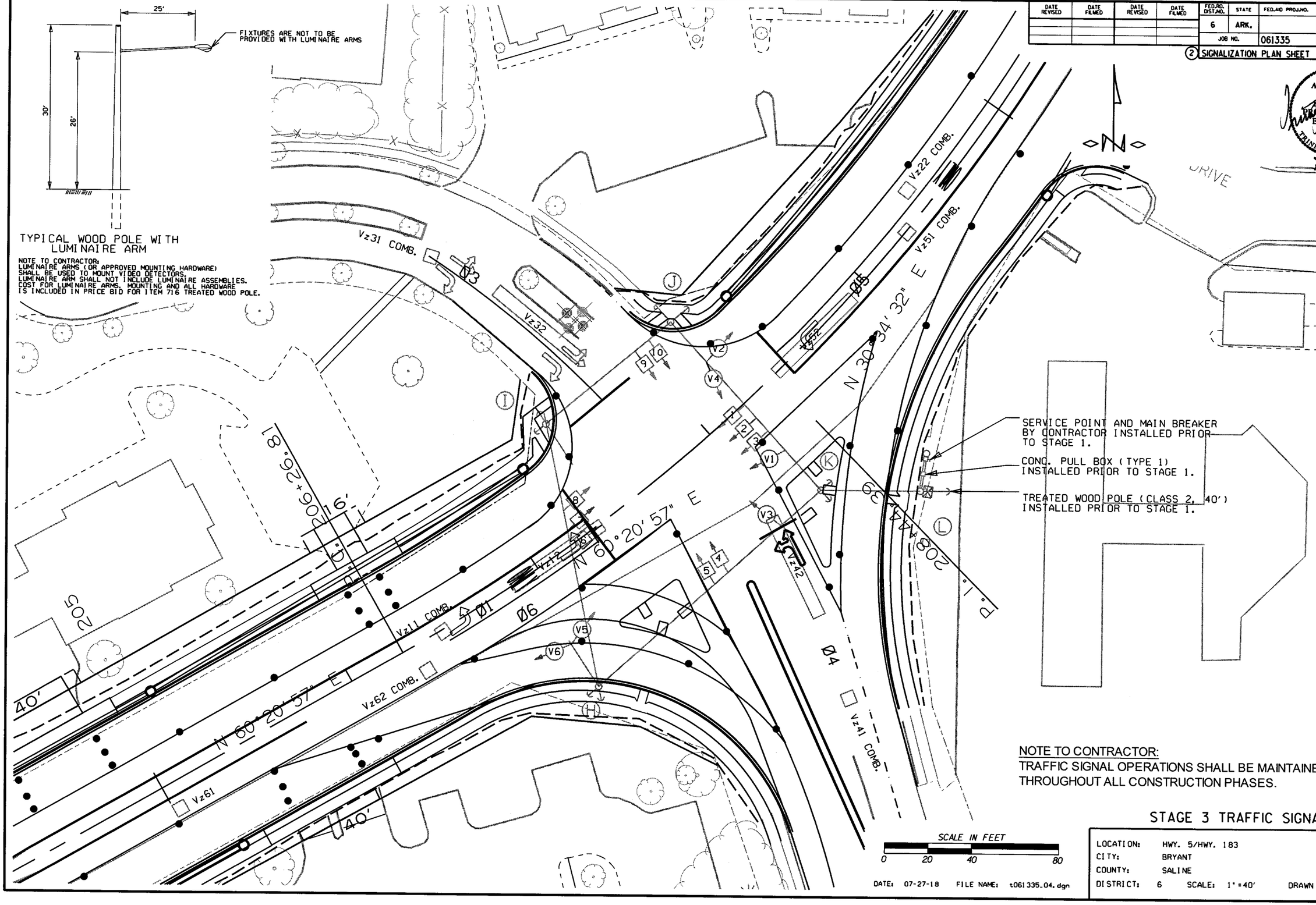
(2) SIGNALIZATION PLAN SHEET

FIXTURES ARE NOT TO BE PROVIDED WITH LUMINAIRE ARMS

TYPICAL WOOD POLE WITH LUMINAIRE ARM

NOTE TO CONTRACTOR:
LUMINAIRE ARMS (OR APPROVED MOUNTING HARDWARE) SHALL BE USED TO MOUNT VIDEO DETECTORS. LUMINAIRE ARM SHALL NOT INCLUDE LUMINAIRE ASSEMBLIES. COST FOR LUMINAIRE ARMS, MOUNTING AND ALL HARDWARE IS INCLUDED IN PRICE BID FOR ITEM 716 TREATED WOOD POLE.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18



SERVICE POINT AND MAIN BREAKER BY CONTRACTOR INSTALLED PRIOR TO STAGE 1.

CONC. PULL BOX (TYPE 1) INSTALLED PRIOR TO STAGE 1.

TREATED WOOD POLE (CLASS 2, 40') INSTALLED PRIOR TO STAGE 1.

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

STAGE 3 TRAFFIC SIGNAL

SCALE IN FEET
0 20 40 80

DATE: 07-27-18 FILE NAME: t061335_04.dgn

LOCATION:	HWY. 5/HWY. 183		
CITY:	BRYANT		
COUNTY:	SALINE		
DISTRICT:	6	SCALE: 1"=40'	DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	141	303

(2) SIGNALIZATION PLAN SHEETS

STATE OF ARKANSAS
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No. 11425
TRINITY D. SMITH
7-31-18

HARVEST DRIVE

CONST. LIMITS

24'

N 30°34'32" E

N 60°20'57" E

210+52.14

208+14.71

206+26.81

SERVICE POINT AND MAIN BREAKER BY CONTRACTOR INSTALLED PRIOR TO STAGE I.

CONC. PULL BOX (TYPE 1) INSTALLED PRIOR TO STAGE I.

TREATED WOOD POLE (CLASS 2, 40') INSTALLED PRIOR TO STAGE I.

Ø1 Ø2 Ø3 Ø4 Ø5 Ø6

V=11 COMB. V=12 V=21 V=22 COMB. V=31 COMB. V=32 V=41 COMB. V=42 COMB. V=51 COMB. V=61

183

STAGE 3 TRAFFIC SIGNAL

SCALE IN FEET
0 30 60 120

LOCATION:	HWY. 5/HWY. 183		
CITY:	BRYANT		
COUNTY:	SALINE		
DISTRICT:	6	SCALE: 1"=60'	DRAWN BY: GWE

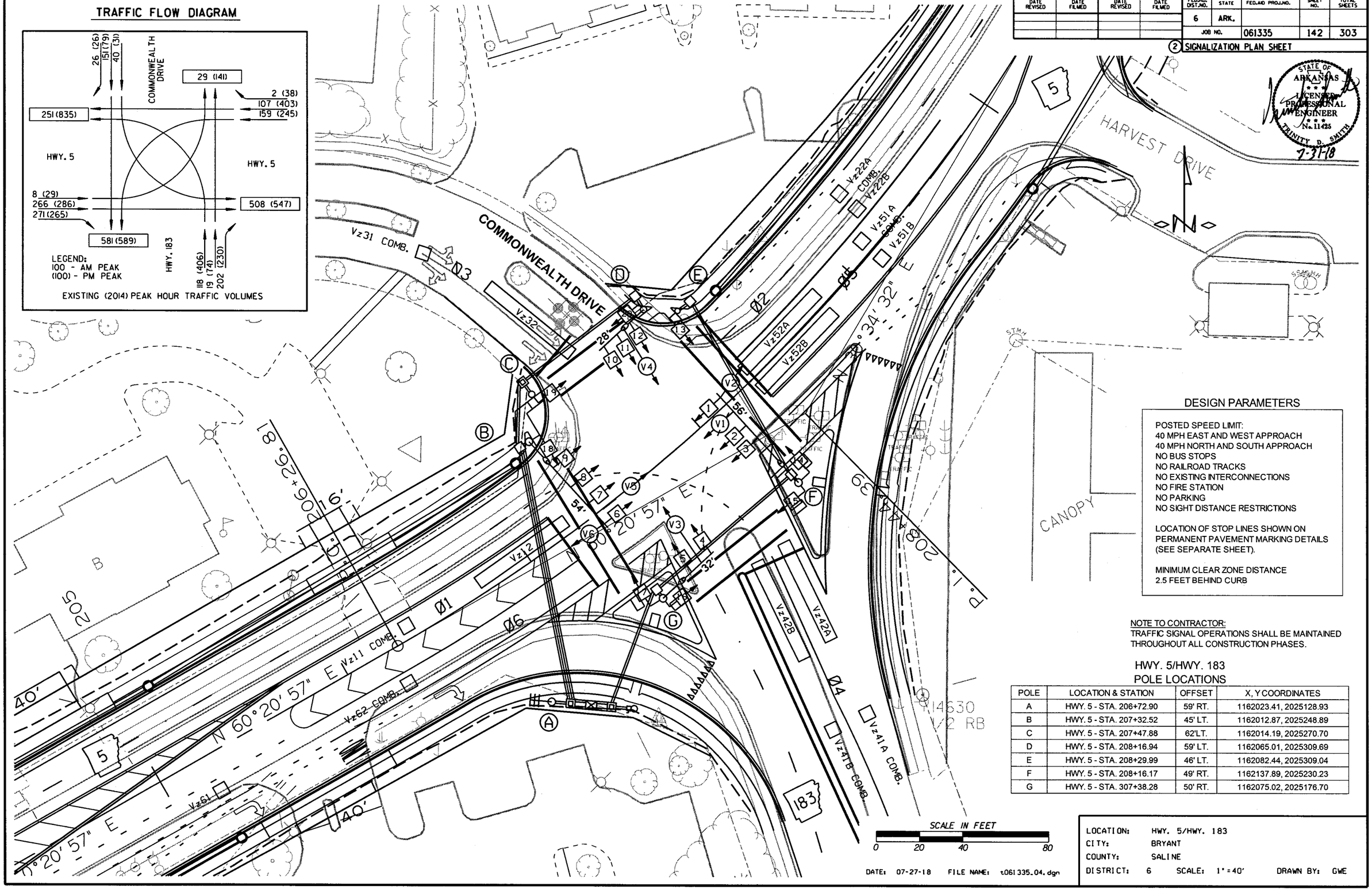
DATE: 07-27-18 FILE NAME: t061335_04.dgn

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	142	303

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

TRAFFIC FLOW DIAGRAM



DESIGN PARAMETERS

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

LOCATION OF STOP LINES SHOWN ON PERMANENT PAVEMENT MARKING DETAILS (SEE SEPARATE SHEET).

MINIMUM CLEAR ZONE DISTANCE
2.5 FEET BEHIND CURB

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

HWY. 5/HWY. 183
POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 5 - STA. 206+72.90	59' RT.	1162023.41, 2025128.93
B	HWY. 5 - STA. 207+32.52	45' LT.	1162012.87, 2025248.89
C	HWY. 5 - STA. 207+47.88	62'LT.	1162014.19, 2025270.70
D	HWY. 5 - STA. 208+16.94	59' LT.	1162065.01, 2025309.69
E	HWY. 5 - STA. 208+29.99	46' LT.	1162082.44, 2025309.04
F	HWY. 5 - STA. 208+16.17	49' RT.	1162137.89, 2025230.23
G	HWY. 5 - STA. 307+38.28	50' RT.	1162075.02, 2025176.70

LOCATION: HWY. 5/HWY. 183
CITY: BRYANT
COUNTY: SALINE
DISTRICT: 6 SCALE: 1"=40' DRAWN BY: GWE

DATE: 07-27-18 FILE NAME: t061335_04.dgn

PHASING DIAGRAM

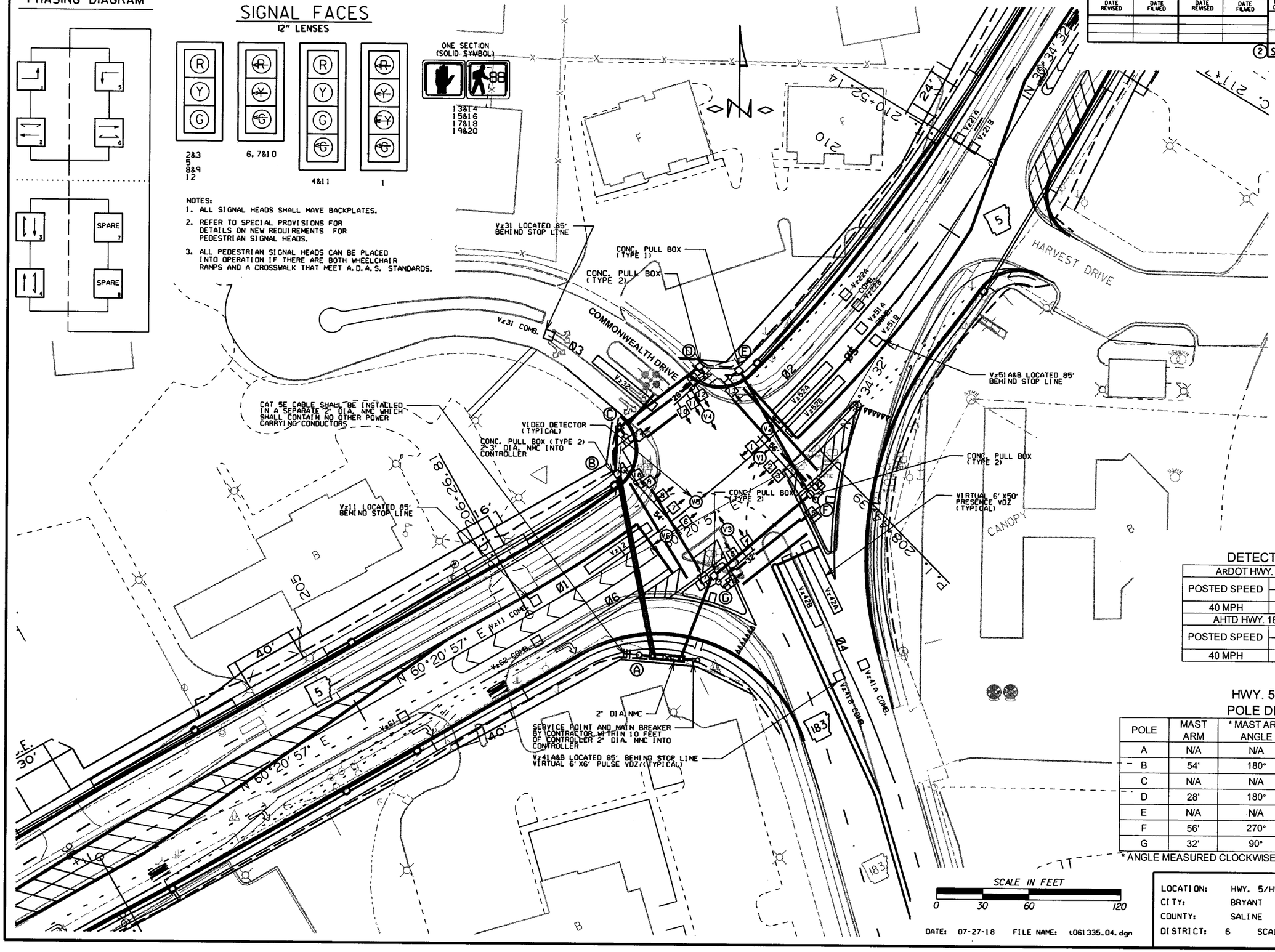
SIGNAL FACES
12" LENSES

NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISIONS FOR DETAILS ON NEW REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.
3. ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEET A.D.A.S. STANDARDS.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	143	303

(2) SIGNALIZATION PLAN SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18



DETECTOR SPACING CHART

ARDOT HWY. 5 MAIN LANE VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
40 MPH	230'	100'
AHTD HWY. 183 MAIN LANE VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
40 MPH	N/A	N/A

HWY. 5/HWY. 183 POLE DIMENSIONS

POLE	MAST ARM	*MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	*LUM. ANGLE
A	N/A	N/A	50'	N/A	N/A
B	54'	180°	35'	10'	180°
C	N/A	N/A	15'	N/A	N/A
D	28'	180°	35'	10'	180°
E	N/A	N/A	15'	N/A	N/A
F	56'	270°	35'	10'	270°
G	32'	90°	35'	10'	90°

*ANGLE MEASURED CLOCKWISE FROM HAND HOLE.

SCALE IN FEET
0 30 60 120

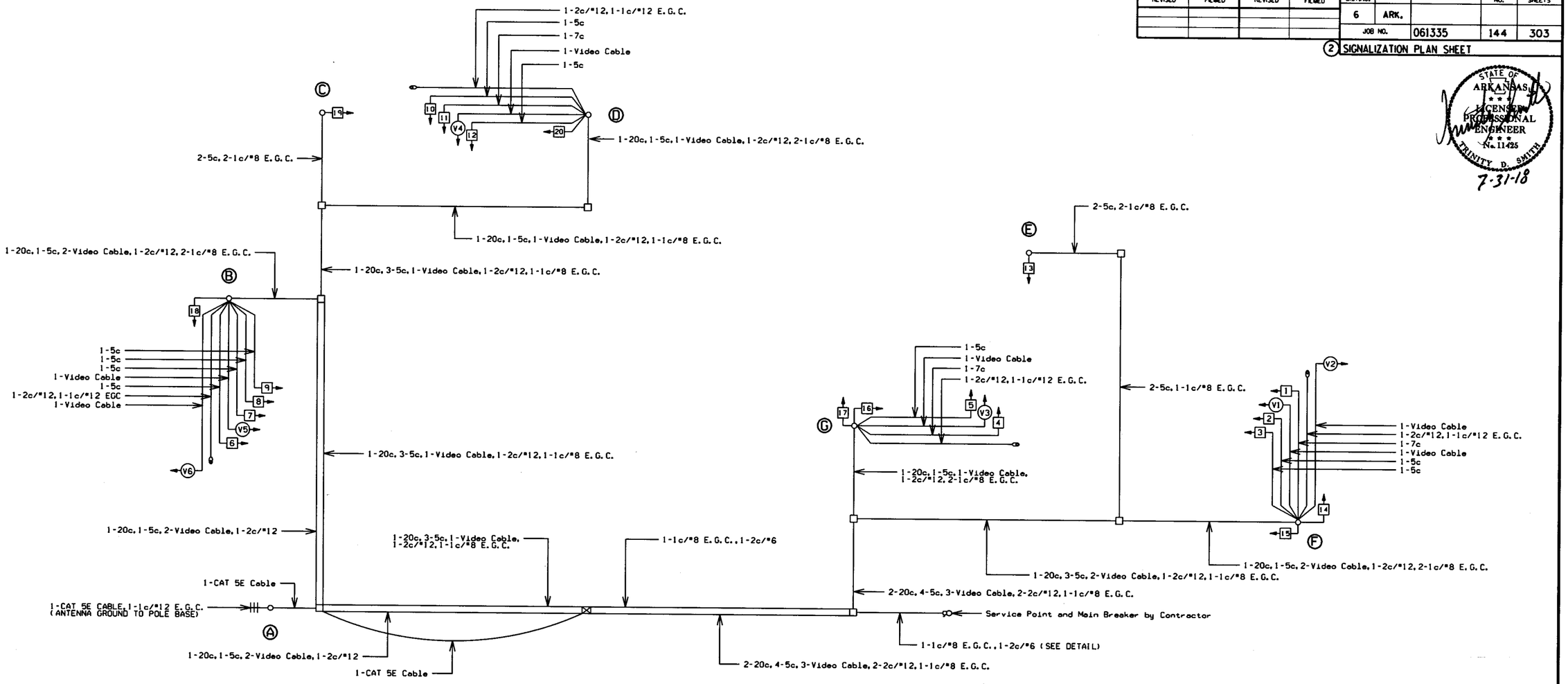
DATE: 07-27-18 FILE NAME: t061335.04.dgn

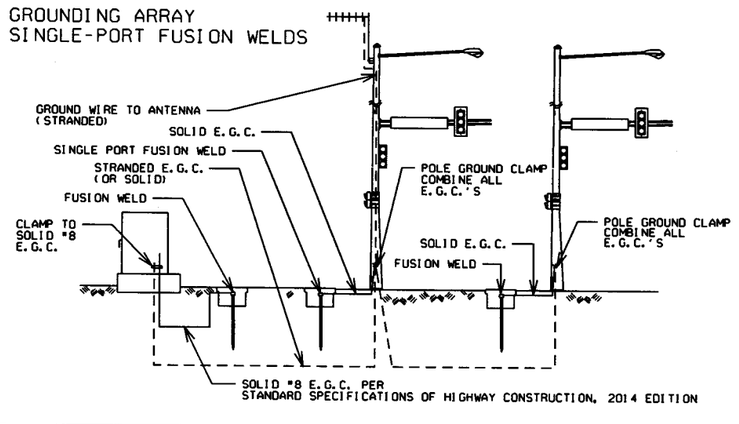
LOCATION: HWY. 5/HWY. 183
CITY: BRYANT
COUNTY: SALINE
DISTRICT: 6 SCALE: 1"=60' DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	144	303

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18





WIRING DIAGRAM

NOTES TO CONTRACTOR:

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

DATE: 07-27-18 FILE NAME: t061335_04.dgn

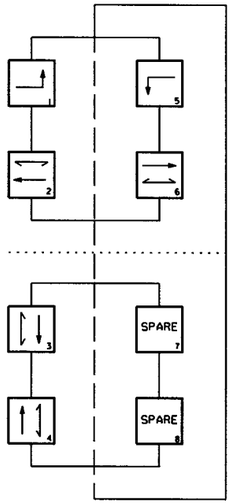
LOCATION: HWY. 5/HWY. 183
CITY: BRYANT
COUNTY: SALINE
DISTRICT: 6 SCALE: N/A DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	145	303

(2) SIGNALIZATION PLAN SHEET

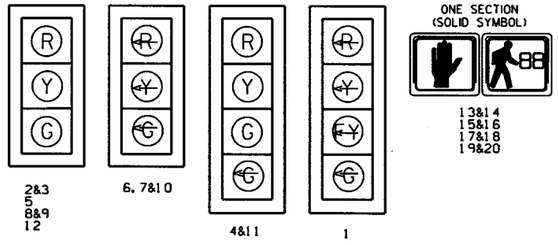
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

PHASING DIAGRAM



SIGNAL FACES

12" LENSES



NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISIONS FOR DETAILS ON NEW REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.
3. ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEET A.D.A.S. STANDARDS.

INTERVAL CHART

SIGNAL FACES	HWY. 5/HWY. 183 I+5	CLR.	I+6	CLR.	2+5	CLR.	2+6	CLR.	3	CLR.	4	CLR.		FLASH SEQ.
1	~~G~~	•	~~G~~	•	~~Y~~	•••	~~Y~~	•••	~~R~~	~~R~~	~~R~~	~~R~~		~~R~~
2&3	R	R	G	••	R	R	G	••	R	R	R	R		R
4	R	R	R	R	R	R	R	R	G/~~G~~	••/•	R	R		R
5	R	R	R	R	R	R	R	R	G	••	R	R		R
6&7	~~G~~	•	~~G~~	•	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~		~~R~~
8&9	R	R	R	R	G	••	G	••	R	R	R	R		R
10	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~G~~	•		~~R~~
11	R	R	R	R	R	R	R	R	R	R	G/~~G~~	••/•		R
12	R	R	R	R	R	R	R	R	R	R	G	••		R
13&14	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW		BLK
15&16	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	DW	DW		BLK
17&18	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW		BLK
19&20	DW	DW	DW	DW	W	FDW	W	FDW	DW	DW	DW	DW		BLK

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

DETECTOR CHART

DETECTOR SYSTEM DESCRIPTION: JOB 061335											
HWY. 5/HWY. 183 DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS LOCAL		MASTER SYSTEM DETECTOR NUMBERS	COMMENTS	TUBE LENGTHS
DET. ID #	LOCATION DIRECTION	TPYE	DET. #	CAB. TRM. #	AMP CHN. #	CON. IMP. #	PHS	SYSTEM DET. #			
Vz11	EB LEFT TURN FAR	COMB.			1	V9	1	1		CAMERA V1	23"
Vz12	EB LEFT TURN	LOCAL			2	V1	1			CAMERA V1	23"
Vz21 A&B	WB ADVANCE	LOCAL			5	V2	2			CAMERA V2	74"
Vz22 A&B	WB NEAR	COMB.			6	V10	2	2		CAMERA V5	23"
Vz31 A&B	SB LEFT TURN FAR	COMB.			9	V11	3	3		CAMERA V3	74"
Vz32 A&B	SB LEFT TURN	LOCAL			10	V3	3			CAMERA V3	74"
Vz41 A&B	NB ADVANCE	COMB.			13	V4	4	4		CAMERA V4	74"
Vz42 A&B	NB NEAR	LOCAL			14	V12	4			CAMERA V4	74"
Vz51 A&B	WB LEFT TURN FAR	COMB.			7	V13	5	5		CAMERA V5	23"
Vz52 A&B	WB LEFT TURN	LOCAL			8	V5	5			CAMERA V5	23"
Vz61	EB ADVANCE	LOCAL			3	V6	6			CAMERA V6	74"
Vz62	EB NEAR	COMB.			4	V14	6	6		CAMERA V1	23"
PB2 A&B	COMMONWEALTH N. LEG	PED.				P2	2				
PB3 A&B	HWY. 5 W. LEG	PED.				P3	3				
PB4 A&B	HWY. 5 E. LEG	PED.				P4	4				
PB6 A&B	HWY. 183 S. LEG	PED.				P6	6				
				SPARE 11,12,15 & 16							

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

NOTE: "AMP CHN =" REFERS TO THE RACK OUTPUT POSITION.
THIS IS WIRED TO CONTROLLER INPUT DETECTOR NUMBER WHICH IS PROGRAMMED TO ACTUATE THE DESIGNATED PHASE.
EXAMPLE: V9 = SYSTEM DETECTOR 1, V10 = SYSTEM DETECTOR 2

DATE: 07-27-18 FILE NAME: t061335_04.dgn

LOCATION: HWY. 5/HWY. 183
CITY: BRYANT
COUNTY: SALINE
DISTRICT: 6 SCALE: N/A DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	146	303

(2) PEDESTRIAN HYBRID BEACON QUANTITIES

STATE OF ARKANSAS LICENSED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH
7-31-18

TEMPORARY PEDESTRIAN HYBRID BEACON QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP & 701	ACTUATED CONTROLLER TS2-TYPE 2 (8 PHASES)	1	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	4	EACH
SP	RELOCATION OF TRAFFIC SIGNAL HEAD	4	EACH
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	2	EACH
SP	EMBEDDED LED PEDESTRIAN ACTIVATED CROSSWALK SIGN	2	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	334	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	130	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)	45	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	20	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	45	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	20	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")	20	LIN. FT.
709	GALVANIZED STEEL CONDUIT (3")	110	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	20	LIN. FT.
710	NON-METALLIC CONDUIT (2")	20	LIN. FT.
710	NON-METALLIC CONDUIT (3")	35	LIN. FT.
711	CONCRETE PULL BOX (TYPE 2 HD)	2	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (42')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (46')	1	EACH
SP	LED LUMINAIRE ASSEMBLY	1	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH

TEMPORARY:
THE TEMPORARY PEDESTRIAN HYBRID BEACON ITEMS SHALL BE INSTALLED AS SOON AS POSSIBLE. PRIOR TO STAGE 1 CONSTRUCTION INSTALL EMBEDDED LED PEDESTRIAN ACTIVATED CROSSWALK SIGNS AND MAINTAIN UNTIL THE TEMPORARY HYBRID BEACON IS INSTALLED. WHEN THE TEMPORARY HYBRID BEACON IS PLACED INTO OPERATION, REMOVE THE EMBEDDED LED PEDESTRIAN ACTIVATED CROSSWALK SIGNS. INSTALL ALL TEMPORARY PEDESTRIAN HYBRID BEACON EQUIPMENT SHOWN ON THE TEMPORARY PLAN SHEETS NECESSARY TO ESTABLISH THE TEMPORARY PEDESTRIAN CROSSING FOR HWY. 5.
MAINTAIN TRAFFIC SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 1, 2, AND 3 PEDESTRIAN HYBRID BEACON PLANS.
(REFER TO MAINTENANCE OF TRAFFIC DETAILS.)

PERMANENT PEDESTRIAN HYBRID BEACON QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	4	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.12	LUMP SUM
726	STANDARD SIGN	34.5	SQ. FT.

PERMANENT PEDESTRIAN HYBRID BEACON:
THE PERMANENT PEDESTRIAN HYBRID BEACON ITEMS CANNOT BE INSTALLED UNTIL THE PERMANENT PAVEMENT MARKING IS COMPLETE. ONCE ALL OF THE PERMANENT PEDESTRIAN HYBRID BEACON ITEMS HAVE BEEN INSTALLED AND ARE OPERATIONAL THE TEMPORARY PEDESTRIAN HYBRID BEACON ITEMS CAN BE REMOVED AND THE PERMANENT HYBRID BEACON PLACED INTO OPERATION. THE MAST ARM FOR POLE "A" SHALL BE REDUCED TO A LENGTH OF 38' AND THE MAST ARM FOR POLE "B" SHALL BE REDUCED TO A LENGTH OF 34'.
(REFER TO PERMANENT PEDESTRIAN HYBRID BEACON PLANS.)

STANDARD SIGNS (INFORMATION ONLY)

SIGN NUMBER	DESCRIPTION	SIGN SIZE	END OF JOB	TOTAL SIGNS REQUIRED	
			EACH	NO.	SQ. FT.
W11-2	PEDESTRIAN	36"x36"	2	2	18.0
W16-9P	AHEAD	24"x12"	2	2	4.0
SPECIAL	CROSSWALK, STOP ON RED, PROCEED ON FLASHING RED WHEN CLEAR	30"x30"	2	2	12.5
TOTAL:					34.5

* TOTAL REFLECTED IN PERMANENT PEDESTRIAN HYBRID BEACON QUANTITIES BOX.

DATE: 07-27-18 FILE NAME: t061335_05.dgn

LOCATION: HWY. 5/PEDESTRIAN HYBRID BEACON
CITY: BRYANT
COUNTY: SALINE
DISTRICT: 6 SCALE: N/A DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	147	303

(2) SIGNALIZATION PLAN SHEET

DESIGN PARAMETERS

POSTED SPEED LIMIT:
40 MPH EAST AND WEST APPROACH

NO BUS STOPS
NO RAILROAD TRACKS
NO EXISTING INTERCONNECTIONS
NO FIRE STATION
NO PARKING
NO SIGHT DISTANCE RESTRICTIONS

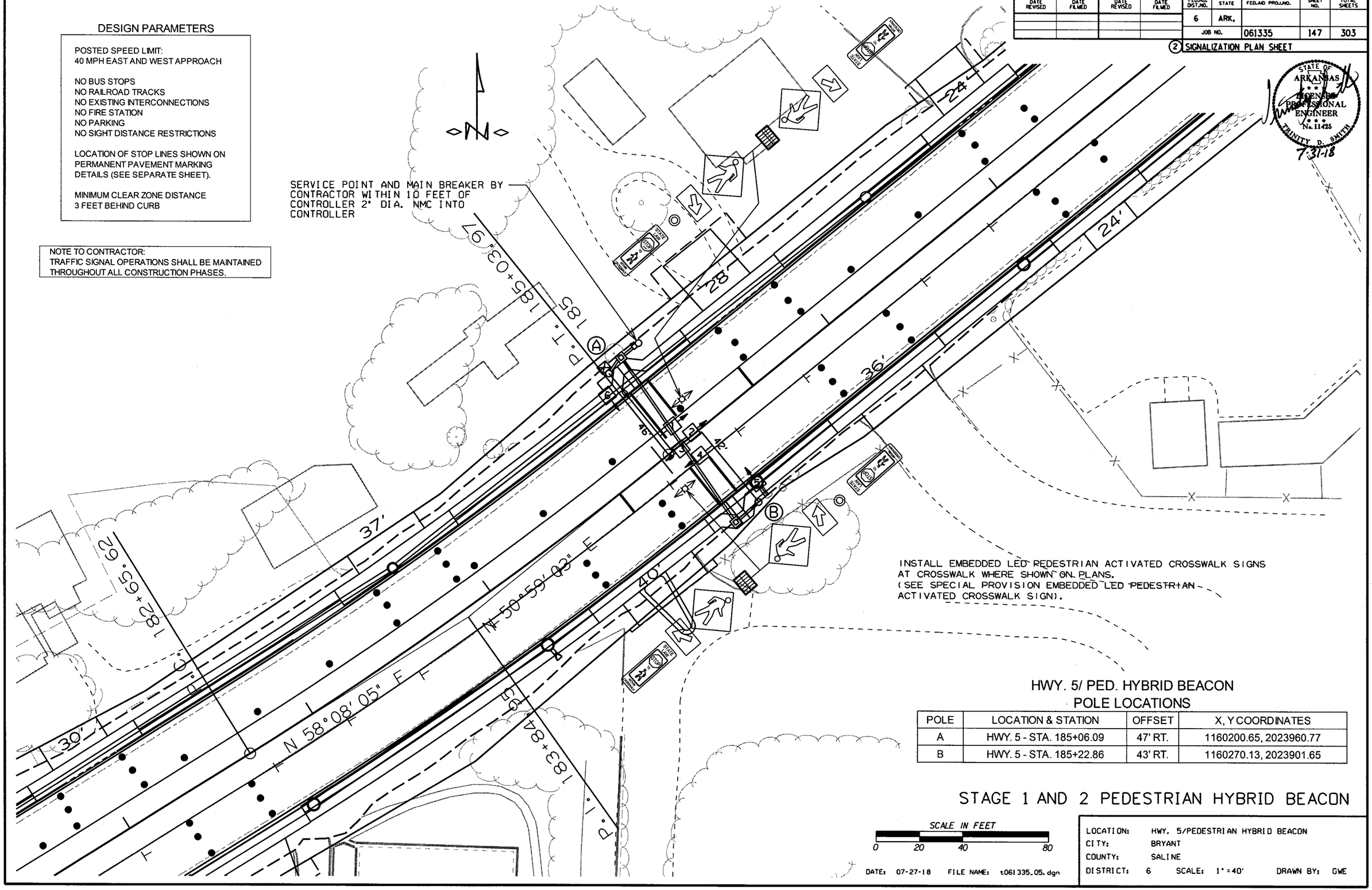
LOCATION OF STOP LINES SHOWN ON PERMANENT PAVEMENT MARKING DETAILS (SEE SEPARATE SHEET).

MINIMUM CLEAR ZONE DISTANCE
3 FEET BEHIND CURB

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

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

SERVICE POINT AND MAIN BREAKER BY CONTRACTOR WITHIN 10 FEET OF CONTROLLER 2" DIA. NMC INTO CONTROLLER



INSTALL EMBEDDED LED PEDESTRIAN ACTIVATED CROSSWALK SIGNS AT CROSSWALK WHERE SHOWN ON PLANS.
(SEE SPECIAL PROVISION EMBEDDED LED PEDESTRIAN ACTIVATED CROSSWALK SIGN).

HWY. 5/ PED. HYBRID BEACON
POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 5 - STA. 185+06.09	47' RT.	1160200.65, 2023960.77
B	HWY. 5 - STA. 185+22.86	43' RT.	1160270.13, 2023901.65

STAGE 1 AND 2 PEDESTRIAN HYBRID BEACON

SCALE IN FEET
0 20 40 80

DATE: 07-27-18 FILE NAME: t061335_05.dgn

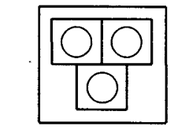
LOCATION: HWY. 5/PEDESTRIAN HYBRID BEACON
CITY: BRYANT
COUNTY: SALINE
DISTRICT: 6 SCALE: 1"=40' DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	148	303

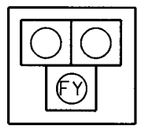
(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
2-27-18

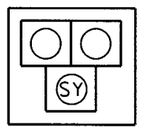
SEQUENCE FOR A PEDESTRIAN HYBRID BEACON



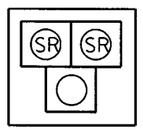
1. DARK UNTIL ACTIVATED



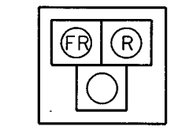
2. FLASHING YELLOW UPON ACTIVATION



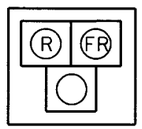
3. STEADY YELLOW

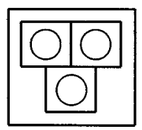


4. STEADY RED DURING PEDESTRIAN WALK INTERVAL



5. ALTERNATING FLASHING RED DURING PEDESTRIAN CLEARANCE INTERVAL



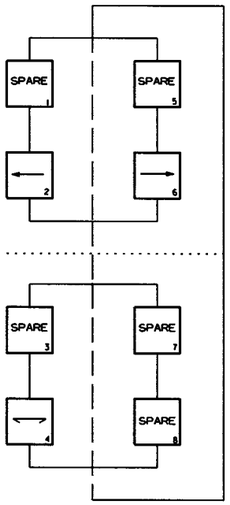


6. DARK AGAIN UNTIL ACTIVATED

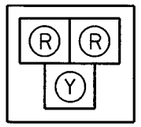
LEGEND
SY STEADY YELLOW
FY FLASHING YELLOW
SR STEADY RED
FR FLASHING RED

SERVICE POINT AND MAIN BREAKER BY CONTRACTOR WITHIN 10 FEET OF CONTROLLER 2" DIA. NMC INTO CONTROLLER

PHASING DIAGRAM



SIGNAL FACES
12" LENSES

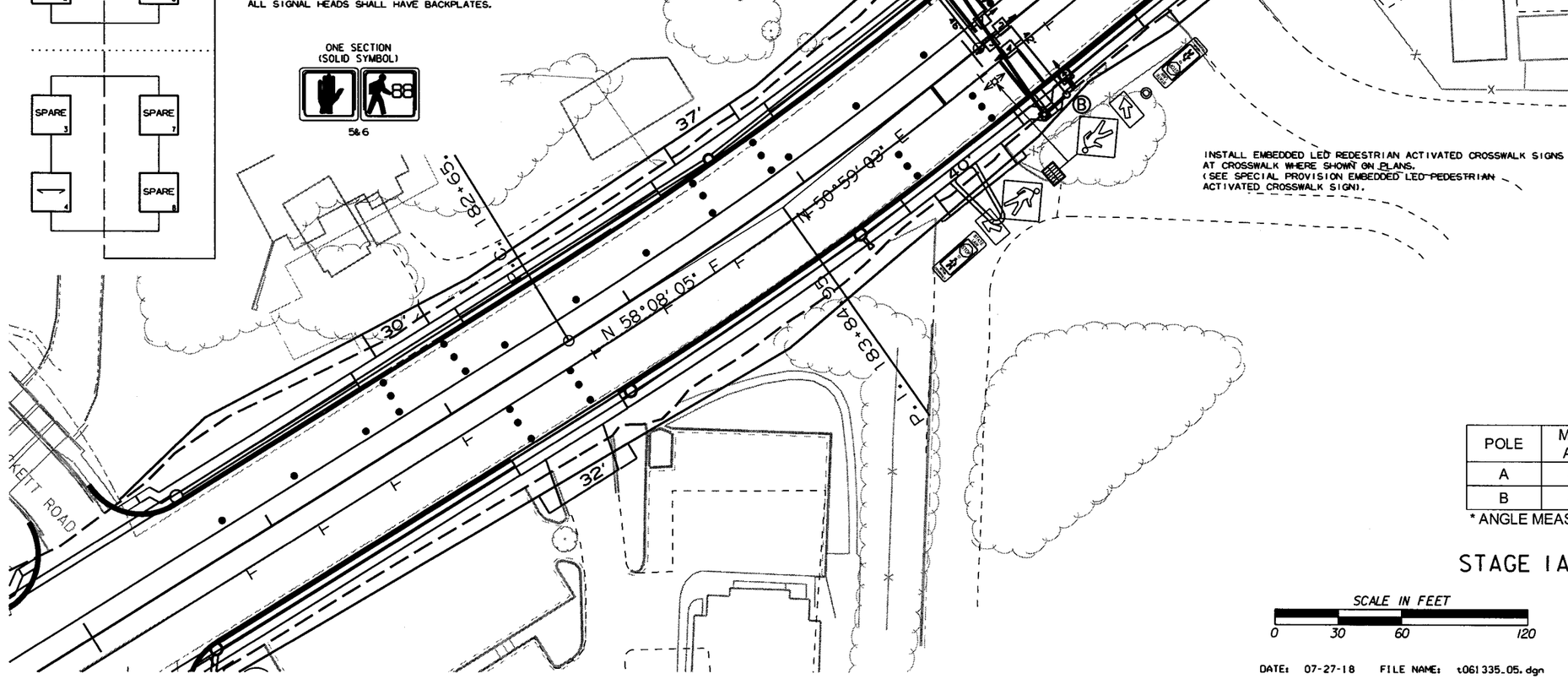


1&2
3&4

NOTE:
ALL SIGNAL HEADS SHALL HAVE BACKPLATES.

ONE SECTION (SOLID SYMBOL)

5&6



INTERVAL CHART

SIGNAL FACES	HWY. 5/PED. HYBRID BEACON						FLASH
	2+6	ACT.	CLR.	4	CLR.		SEQ.
1&2	BLK	FY	Y	R	FR		FY
3&4	BLK	FY	Y	R	FR		FY
5&6	DW	DW	DW	W	FDW		BLK

ACT. - ACTUATION

HWY. 5/ PED. HYBRID BEACON POLE DIMENSIONS

POLE	MAST ARM	* MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	* LUM. ANGLE
A	46'	270°	35'	10'	270°
B	42'	180°	21'	10'	180°

* ANGLE MEASURED CLOCKWISE FROM HAND HOLE.

STAGE I AND 2 PEDESTRIAN HYBRID BEACON

SCALE IN FEET
0 30 60 120

DATE: 07-27-18 FILE NAME: t061335_05.dgn

LOCATION: HWY. 5/PEDESTRIAN HYBRID BEACON
CITY: BRYANT
COUNTY: SALINE
DISTRICT: 6 SCALE: 1"=60' DRAWN BY: GWE

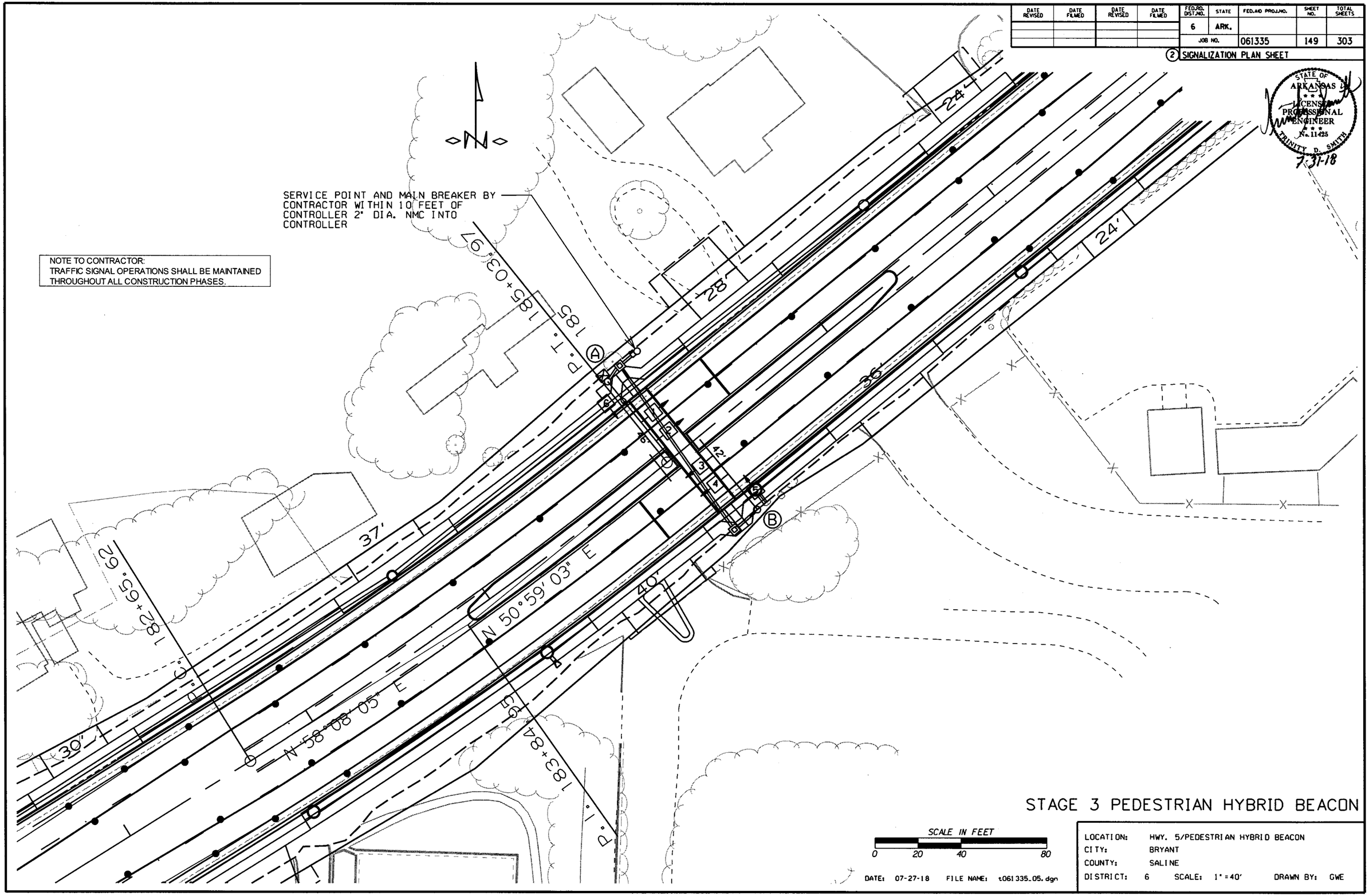
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	149	303

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

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

SERVICE POINT AND MAIN BREAKER BY CONTRACTOR WITHIN 10 FEET OF CONTROLLER 2" DIA. NMC INTO CONTROLLER



STAGE 3 PEDESTRIAN HYBRID BEACON

SCALE IN FEET
0 20 40 80

DATE: 07-27-18 FILE NAME: t061335_05.dgn

LOCATION:	HWY. 5/PEDESTRIAN HYBRID BEACON				
CITY:	BRYANT				
COUNTY:	SALINE				
DISTRICT:	6	SCALE:	1"=40'	DRAWN BY:	GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	150	303

(2) SIGNALIZATION PLAN SHEET

SEQUENCE FOR A PEDESTRIAN HYBRID BEACON

PHASING DIAGRAM

SIGNAL FACES

12" LENSES

1&2
3&4

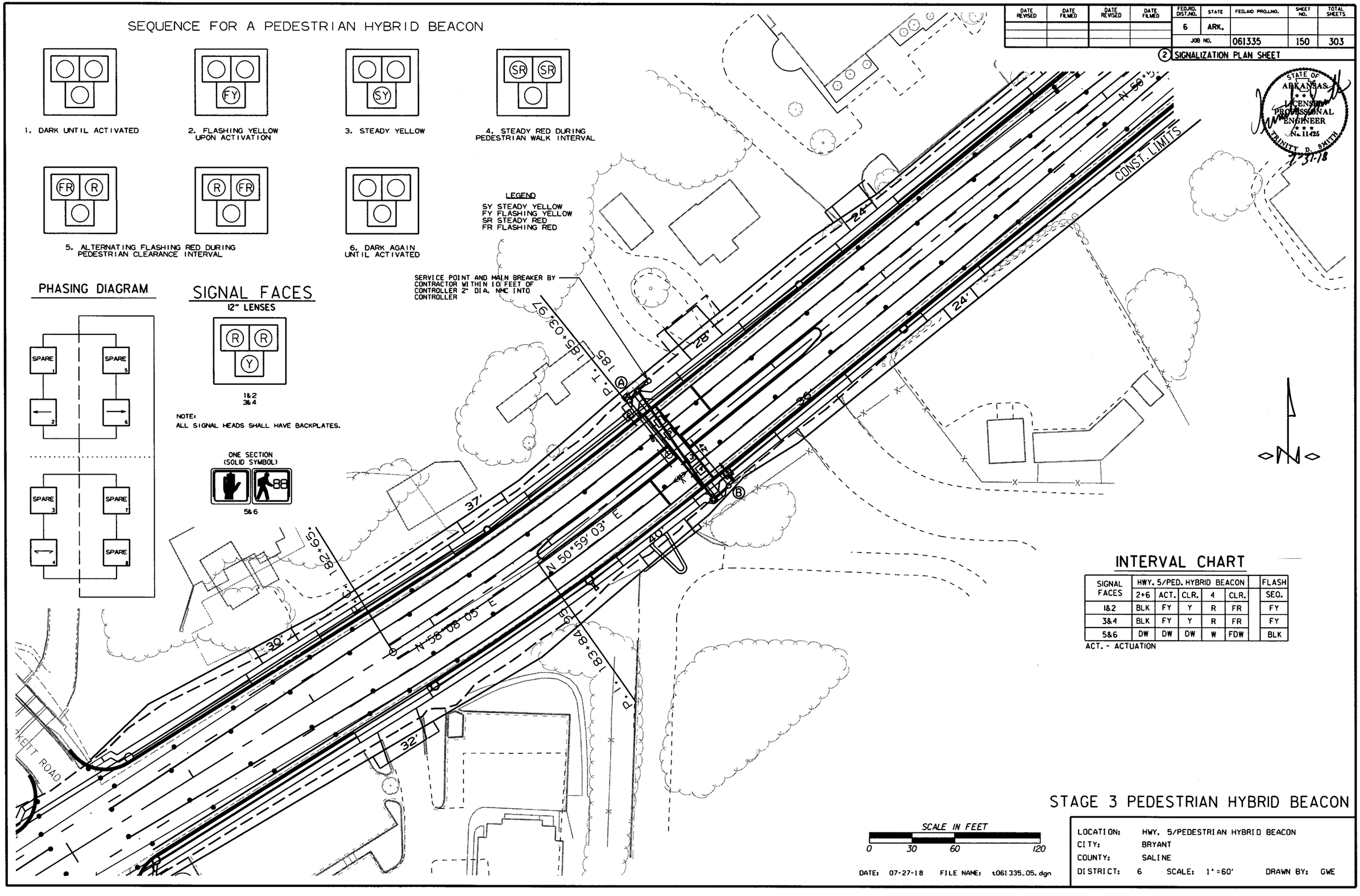
NOTE:
ALL SIGNAL HEADS SHALL HAVE BACKPLATES.

ONE SECTION
(SOLID SYMBOL)

5&6

LEGEND
SY STEADY YELLOW
FY FLASHING YELLOW
SR STEADY RED
FR FLASHING RED

SERVICE POINT AND MAIN BREAKER BY CONTRACTOR WITHIN 10 FEET OF CONTROLLER 2" DIA. NMC INTO CONTROLLER



INTERVAL CHART

SIGNAL FACES	HWY. 5/PED. HYBRID BEACON 2+6	ACT.	CLR.	4	CLR.		FLASH SEQ.
1&2	BLK	FY	Y	R	FR		FY
3&4	BLK	FY	Y	R	FR		FY
5&6	DW	DW	DW	W	FDW		BLK

ACT. - ACTUATION

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

SCALE IN FEET
0 30 60 120

DATE: 07-27-18 FILE NAME: t061335_05.dgn

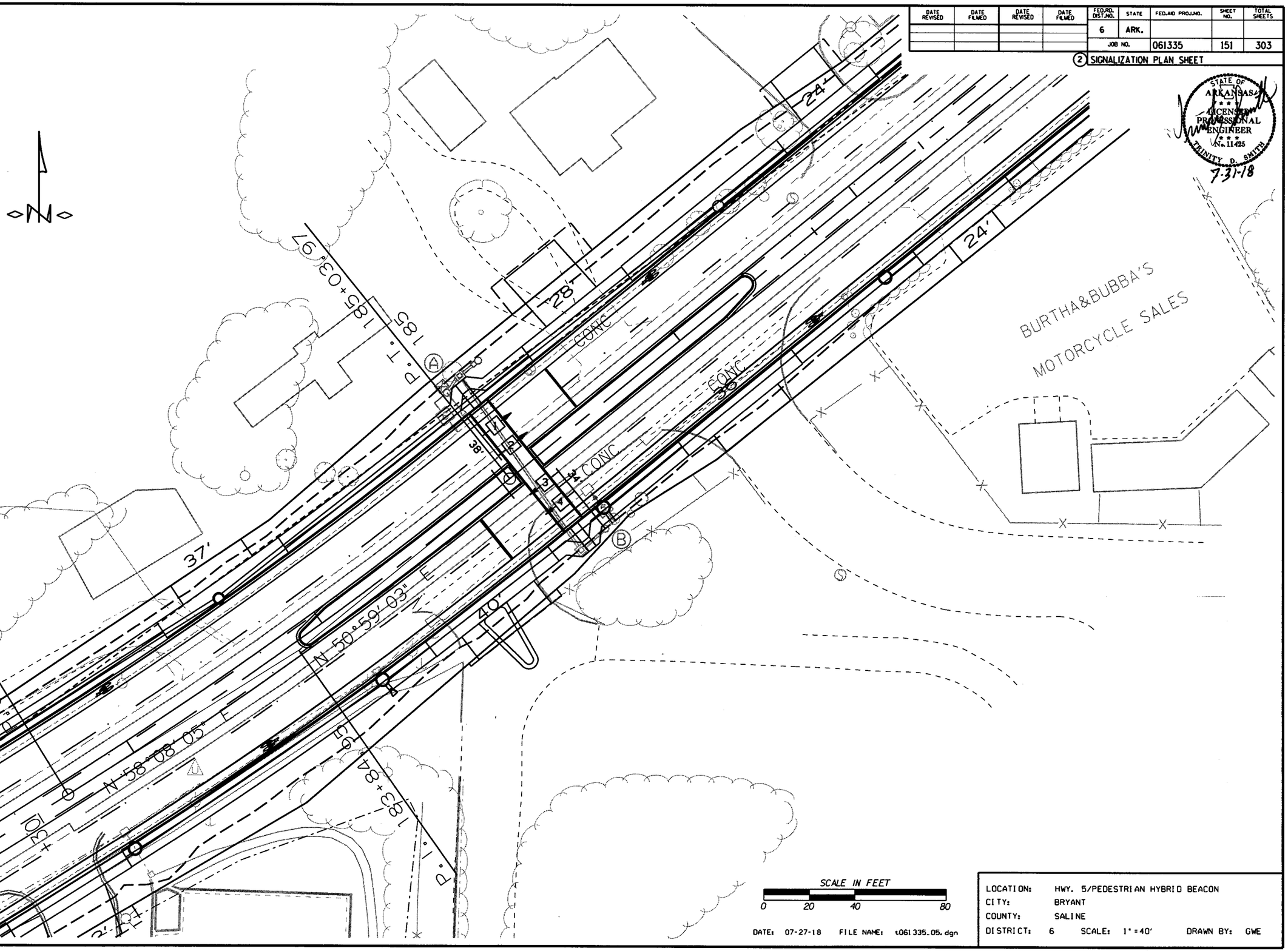
STAGE 3 PEDESTRIAN HYBRID BEACON

LOCATION: HWY. 5/PEDESTRIAN HYBRID BEACON
CITY: BRYANT
COUNTY: SALINE
DISTRICT: 6 SCALE: 1"=60' DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	151	303

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18



SCALE IN FEET
0 20 40 80

DATE: 07-27-18 FILE NAME: t061335_05.dgn

LOCATION: HWY. 5/PEDESTRIAN HYBRID BEACON
CITY: BRYANT
COUNTY: SALINE
DISTRICT: 6 SCALE: 1" = 40' DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	152	303

(2) SIGNALIZATION PLAN SHEET

(2) W11-2
(36" X 36")

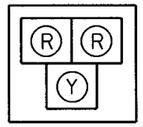
(2) W16-9P
(24" X 12")

(2) SPECIAL
(30" X 30")

NOTE:
CROSSWALK SIGN W11-2 WITH W16-9P SHALL BE INSTALLED 100 FEET IN ADVANCE OF CROSSWALK IN EACH DIRECTION.

SIGNAL FACES

12" LENSES

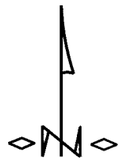


1&2
3&4

NOTE:
ALL SIGNAL HEADS SHALL HAVE BACKPLATES.

ONE SECTION
(SOLID SYMBOL)

5&6



NOTE:
THE MAST ARM FOR POLE "A" SHALL BE REDUCED TO 38' AT THE END OF STAGE 3.
THE MAST ARM FOR POLE "B" SHALL BE REDUCED TO 34' AT THE END OF STAGE 3.

SCALE IN FEET
0 30 60 120

DATE: 07-27-18 FILE NAME: t061335_05.dgn

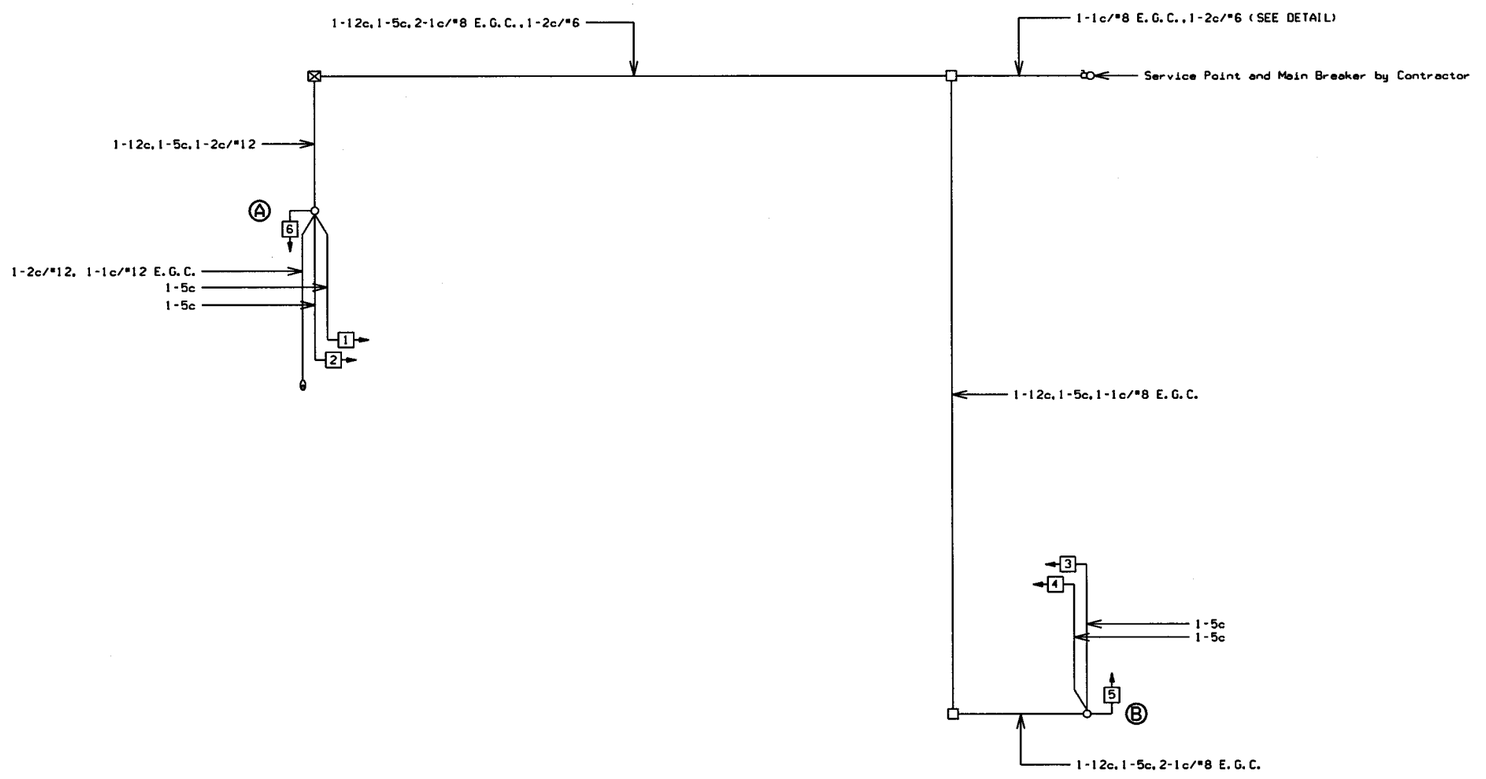
LOCATION:	HWY. 5/PEDESTRIAN HYBRID BEACON				
CITY:	BRYANT				
COUNTY:	SALINE				
DISTRICT:	6	SCALE:	1"=60'	DRAWN BY:	GWE

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	153	303

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-31-18

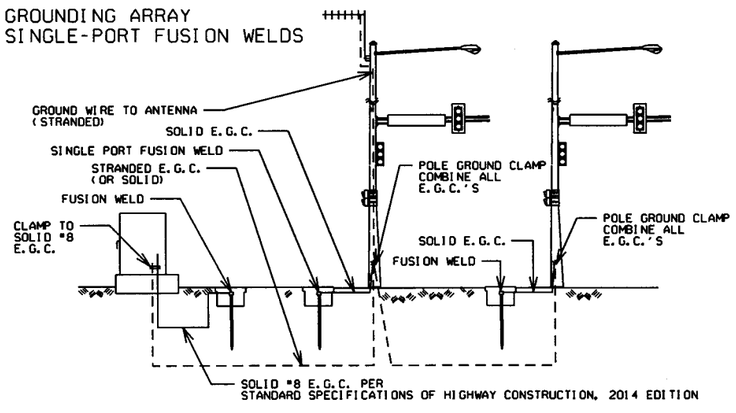


WIRING DIAGRAM

NOTES TO CONTRACTOR:

1. ONE SEPARATE 1-5c IS RUN TO EACH POLE FOR THE PEDESTRIAN PUSH BUTTON.
2. THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.

GROUNDING ARRAY
SINGLE-PORT FUSION WELDS

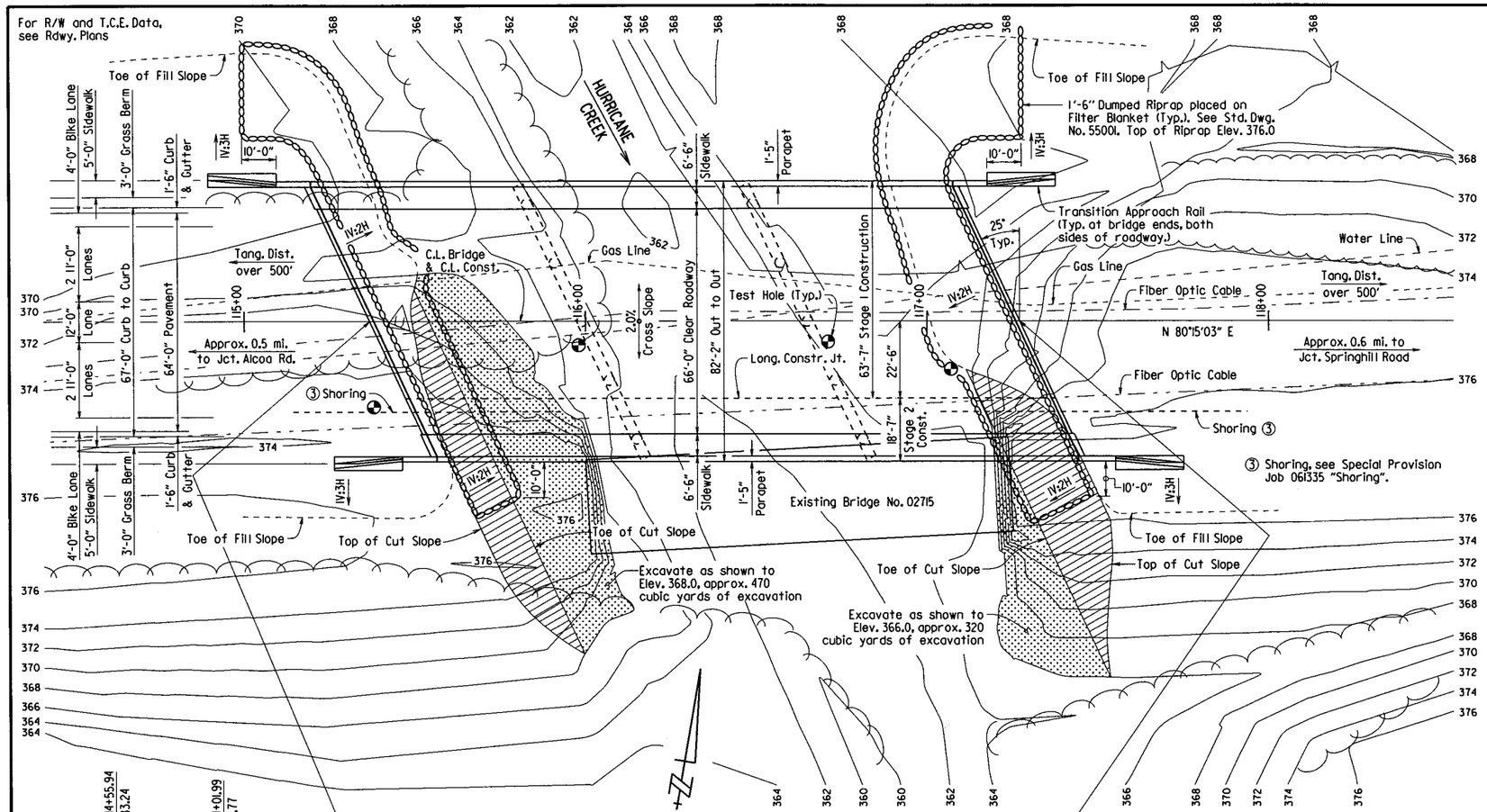


DATE: 07-27-18 FILE NAME: t061335_05.dgn

LOCATION: HWY. 5/PEDESTRIAN HYBRID BEACON
CITY: BRYANT
COUNTY: SALINE
DISTRICT: 6 SCALE: N/A DRAWN BY: GWE

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.		061335	154	303
				①		07365 - BRIDGE LAYOUT - 57781		

For R/W and T.C.E. Data, see Rdwy. Plans

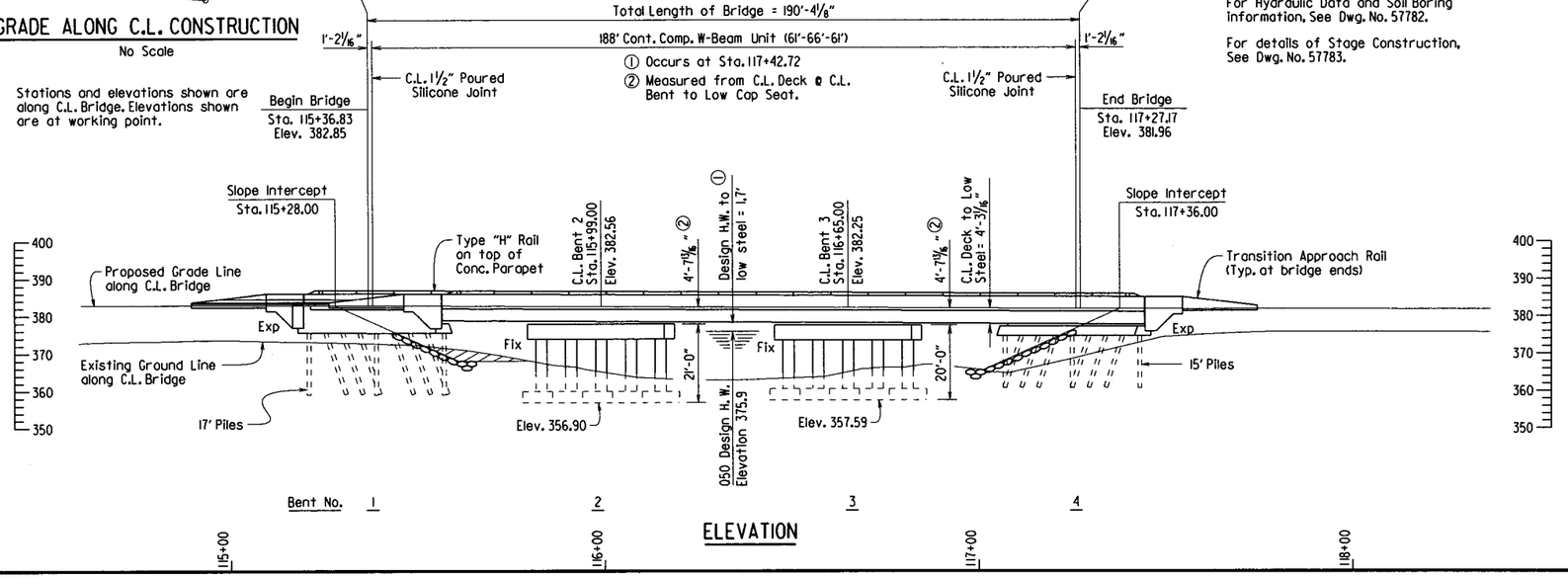


PLAN

GRADE ALONG C.L. CONSTRUCTION

No Scale

Stations and elevations shown are along C.L. Bridge. Elevations shown are at working point.



ELEVATION

For Hydraulic Data and Soil Boring information, See Dwg. No. 57782.

For details of Stage Construction, See Dwg. No. 57783.

GENERAL NOTES

BENCH MARK: Horizontal and Vertical Control Data are shown on Survery Control Details.

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 on the plans, Section and Subsection refer to the Standard Construction Specifications.

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications, 6th Edition (2012), with 2013 interim revisions.

LIVE LOADING: HL-93

SEISMIC ZONE: 1 S_{DI}=0.081 SITE CLASS = B

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 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. 50W)	Fy = 50,000 psi

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

STEEL PILING: All piling shall be HP 12X53 (Grade 50) and shall be driven with an approved air, steam, or diesel hammer to a minimum safe bearing capacity of 95 tons and into the material designated as Shale on the boring legend. Piling in end bents shall be driven after embankment to bottom of cap is in place. Lengths of piling shown are for estimating quantities and for use in determining payment for cut-off and build-up in accordance with Section 805. The Contractor shall use approved steel H-Pile driving points.

PREBORING: Preboring is required for all piling at Bent 4. Preboring shall be to a minimum 3' depth into material designated as Shale on the boring legend. The actual size and depth of preboring shall be determined in the field by the Engineer. The Contractor shall be responsible for keeping prebored holes free of debris prior to driving piles and backfilling which may require the use of temporary casings or other methods. After driving is completed, the prebored hole shall be backfilled with Class S Concrete to the top of the rock and the remaining length backfilled in accordance with Subsection 805.08(a). Any related cost for backfilling and temporary casing will not be paid for directly, but shall be considered subsidiary to the item "Preboring".

FOOTINGS: Footings shall be set a minimum of 2'-0" into material designated as Shale on the boring legend. The top of the footings shall be set a minimum of 2'-0" below natural ground as determined by the lowest surface elevation within the footprint of the footing. Foundations for footings shall be prepared in accordance with Subsection 801.04. Rock excavations shall be made to neat lines of the concrete footings. Care shall be exercised to avoid shattering of rock faces by excessive blasting. Concrete in footings shall be poured directly against excavated surfaces of rock.

BRIDGE DECK: The concrete bridge deck, except sidewalks, shall be given a tine finish as specified for final finishing in Subsection 802.19 for Class 5 Tined Roadway Surface Finish. Sidewalks shall be given a Class 6 Broomed Finish.

DETAIL DRAWINGS:

	DRAWING NO.
Stage Construction	57783
End Bents	57784 - 57787
Transitional Approach Railing	57788
Intermediate Bents	57789 - 57790
188'-0" Continuous Composite W-Beam Unit	57791 - 57796
Elastomeric Bearings	57797
Metal Bridge Railing	57798
General Notes	55006
Steel Piling	55020

EXISTING BRIDGE: Existing Bridge No. 02715 (Log Mile 2.12) is 31.5' wide (27.9' Roadway) and 124.0' long and consists of a concrete deck on two 2-span Continuous I-Beam Units supported by concrete abutments and concrete piers. The existing bridge is approximately 50' downstream of the proposed bridge.

REMOVAL AND SALVAGE: After Stage I construction is complete and open to traffic, the Contractor shall remove existing Bridge No. 02175 in accordance with Section 205. All material from the existing bridge shall become the property of the Contractor.

MAINTENANCE OF TRAFFIC: See Roadway Plans.

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
6-5-17
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 1 OF 2
LAYOUT OF BRIDGE OVER HURRICANE CREEK ALCOA RD. - HWY. 183 (S) SALINE COUNTY

ROUTE 5 SEC. 8

ARKANSAS STATE HIGHWAY COMMISSION

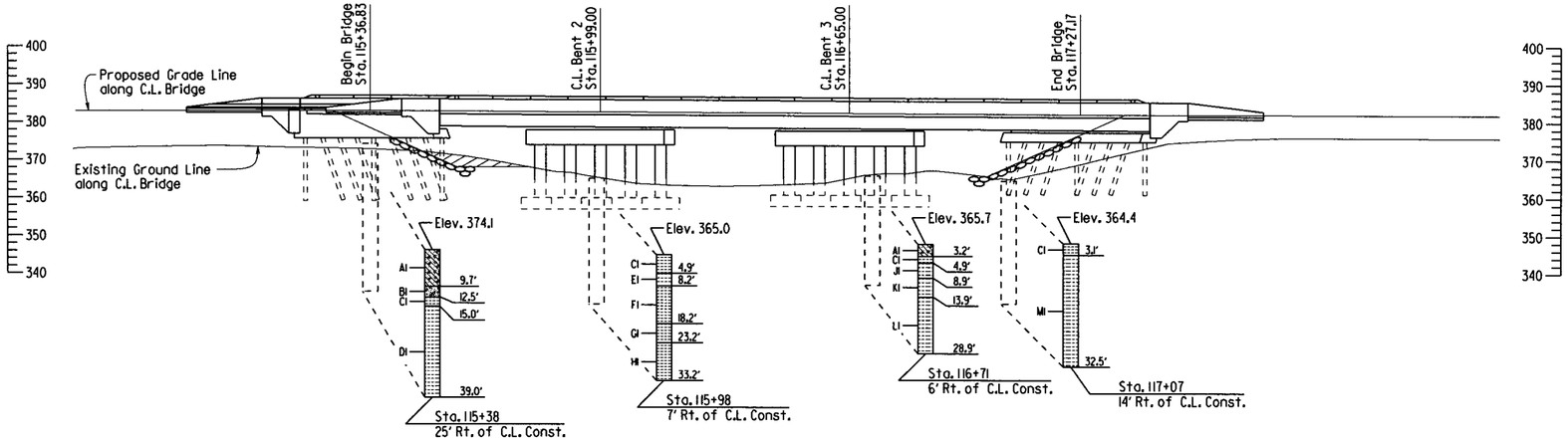
LITTLE ROCK, ARK.

DRAWN BY: BHS DATE: 12/3/2014 FILENAME: b061335_ll.dgn
CHECKED BY: DHP DATE: 6/5/17 SCALE: 1" = 20'
DESIGNED BY: BHS DATE: 12/2014

BRIDGE NO. 07365 DRAWING NO. 57781

PRINT DATE: 6/5/2017

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.		061335	155	303
				①		07365 - BRIDGE LAYOUT - 57782		



ELEVATION OF SOIL BORINGS

BORING LEGEND

A1-Moist, Soft, Brown Sandy Clay with Gravel (Sandstone Fragments)
B1-Moist to Wet, Medium Dense, Brown Clayey Sand with Quartz Gravel
C1-SHALE - Dark Gray, Medium Hard
D1-SHALE WITH WEATHERED SHALE AND GRAY SANDSTONE SEAMS - Dark Gray, Laminated, Medium Hard, with Moderate Dip, Slickensides and some Pyrite
E1-SHALE WITH WEATHERED SHALE AND GRAY SANDSTONE SEAMS - Dark Gray, Laminated, Medium Hard, with Moderate Dip, Slickensides and some Quartz and Fractured Layers
F1-SHALE WITH WEATHERED SHALE SEAMS AND OCCASIONAL WHITE QUARTZ LAYERS - Dark Gray, Laminated, Medium Hard, with Moderate Dip, and Slickensides
G1-SHALE WITH WEATHERED SHALE SEAMS AND OCCASIONAL WHITE QUARTZ LAYERS - Dark Gray, Laminated, Medium Hard, with Moderate Dip, Slickensides, and Trace of Pyrite
H1-SHALE WITH WEATHERED SHALE SEAMS AND OCCASIONAL WHITE QUARTZ LAYERS - Dark Gray, Laminated, Medium Hard, with Moderate Dip, and Slickensides
J1-SHALE WITH WEATHERED SHALE AND GRAY SANDSTONE SEAMS - Dark Gray, Laminated, Medium Hard, with Moderate Dip, and Slickensides
K1-SHALE WITH WEATHERED SHALE AND SANDSTONE SEAMS - Dark Gray, Laminated, Medium Hard, with Moderate Dip, and Slickensides
L1-SHALE WITH WEATHERED SHALE AND GRAY SANDSTONE SEAMS AND OCCASIONAL WHITE QUARTZ LAYERS - Dark Gray, Laminated, Medium Hard, with Moderate Dip, and Slickensides
M1-SHALE WITH WEATHERED SHALE AND GRAY SANDSTONE SEAMS AND OCCASIONAL WHITE QUARTZ LAYERS - Dark Gray, Laminated, Medium Hard, with Moderate Dip, and Slickensides

"N" VALUES

Sta. 115+38 - 25' Right of Center Line of Construction
5.2- 6.2, N=3
10.2- 11.2, N=29
14.7- 14.9, N=60(3")

Sta. 115+98 - 7' Right of Center Line of Construction
4.6- 4.8, N=60(3")

Sta. 116+71 - 6' Right of Center Line of Construction
4.7- 4.9, N=60(2")

HYDRAULIC DATA

FLOOD DESCRIPTION	FREQUENCY	DISCHARGE	①NATURAL WATER SURFACE ELEVATION	WATER SURFACE ELEV. WITH BACKWATER
	YEARS	CFS	FEET	FEET
Design	50	10880	376.0	376.2
Base	100	12220	376.9	377.0
Extreme	500	15200	378.1	378.2
Overtopping	>500	-	-	-

①Unconstricted water surface includes approach roadway, but does not include the Hwy. 5 structure.
Drainage area = 26.5 square miles.
Historical H.W. Elev. = 375.0 ft.
0100 Backwater Elev. for existing structure = 377.2 ft.
Proposed Low Bridge Chord Elev. = 377.63 ft. @ Sta. 117+42.72

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
6-5-17
BRIDGE ENGINEER

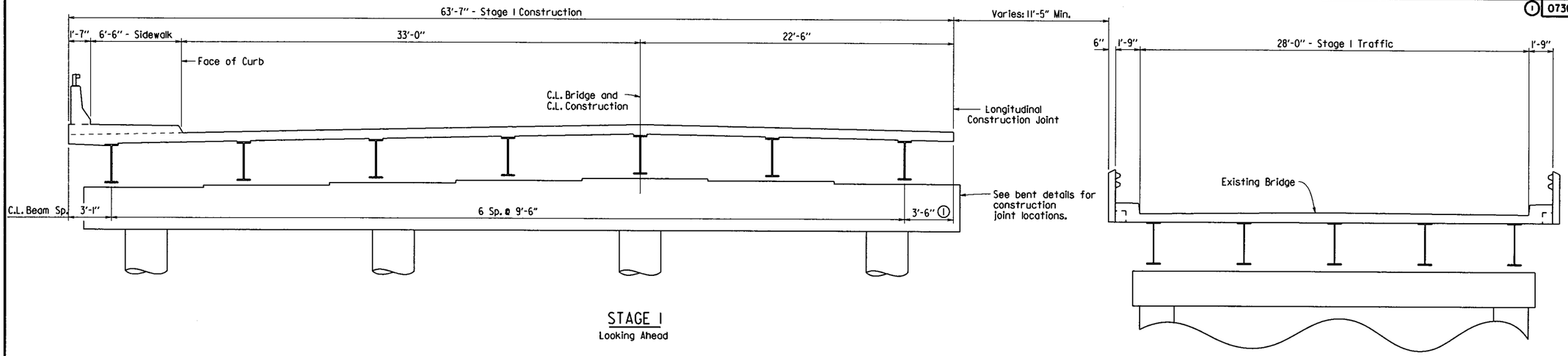
SHEET 2 OF 2
LAYOUT OF BRIDGE OVER HURRICANE CREEK
ALCOA RD. - HWY. 183 (S)
SALINE COUNTY

ROUTE 5 SEC. 8
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

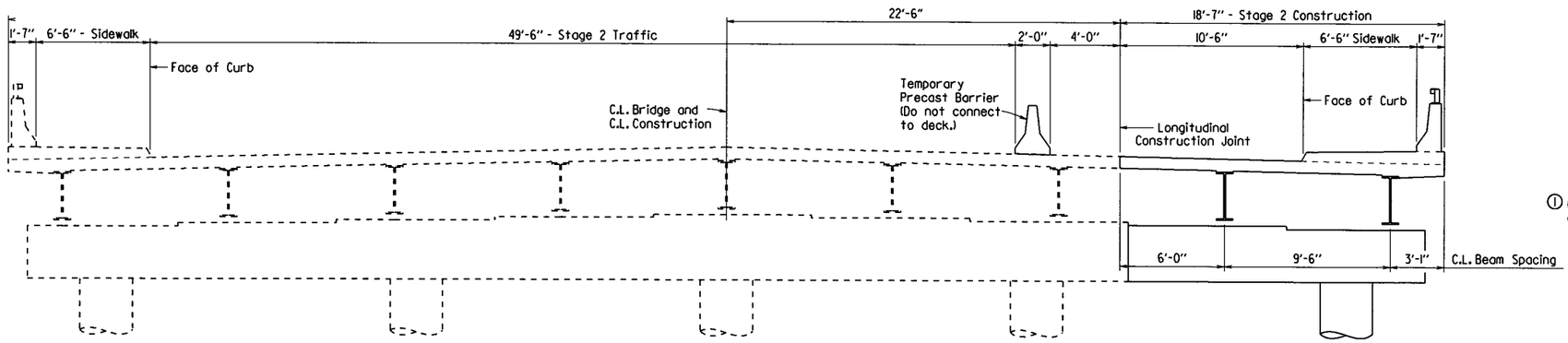
DRAWN BY: BHS DATE: 12/3/2014 FILENAME: b061335_11.dgn
CHECKED BY: DHP DATE: 6/5/17 SCALE: 1" = 20'
DESIGNED BY: BHS DATE: 12/2014
BRIDGE NO. 07365 DRAWING NO. 57782

PRINT DATE: 6/5/2017

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.		061335	156	363
				①	07365 - STAGE CONSTRUCTION - 57783			

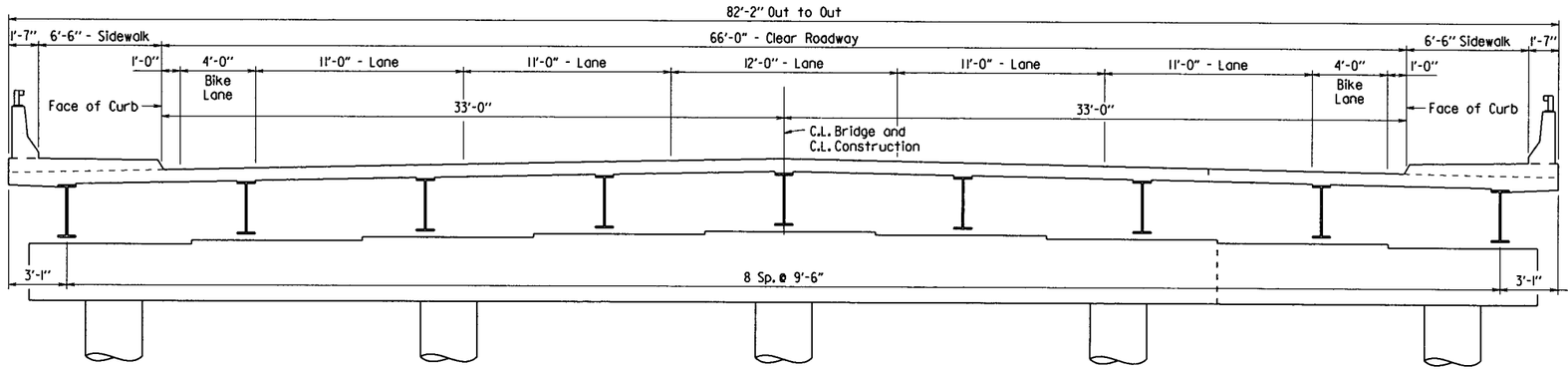


STAGE 1
Looking Ahead



① Construction vehicles shall not travel on the cantilever portion of the deck.

STAGE 2
Looking Ahead



FINAL
Looking Ahead

NOTES:

Details which relate to maintenance of traffic are shown on bridge plans for information only. See Roadway Plans for actual Maintenance of Traffic.

For details of Temporary Precast Barrier, See Std. Dwg. No. TC-4. The Temporary Precast Barrier shall not be attached to the bridge deck.

See Layout and Substructure details for additional Stage Construction information.

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
6-5-17
CHARLES R. ELLIS
BRIDGE ENGINEER

DETAILS OF STAGE CONSTRUCTION
HURRICANE CREEK
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: BHS DATE: 1/7/2015 FILENAME: b061335_sc.dgn
CHECKED BY: DHP DATE: 6/5/17 SCALE: 1/4" = 1'-0"
DESIGNED BY: CHS DATE: 12/2014

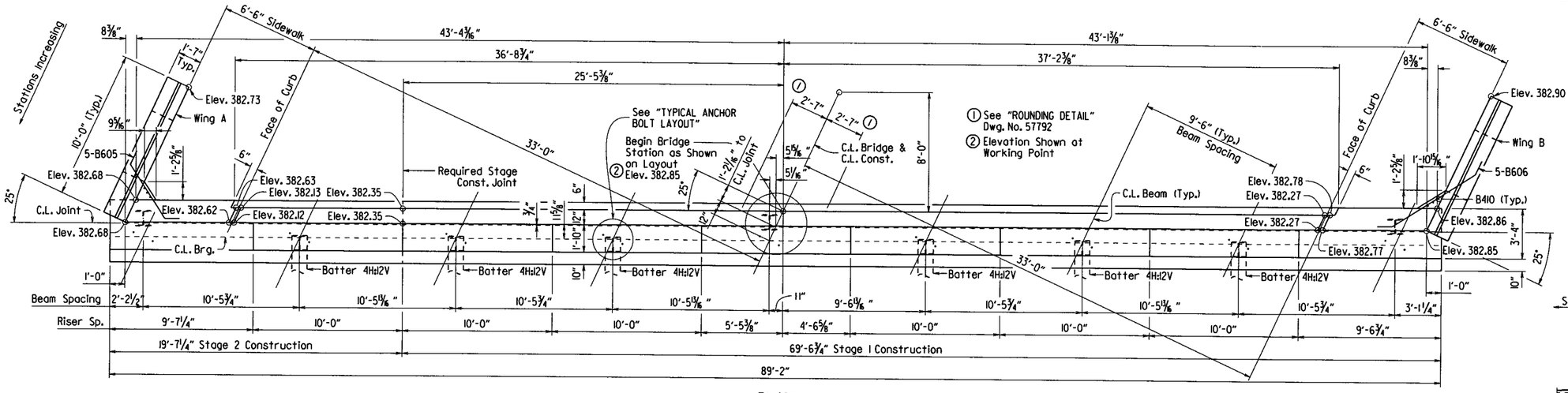
BRIDGE NO. 07365 DRAWING NO. 57783

PRINT DATE: 05-JUN-2017

Class I Protective Surface Treatment shall be applied to the top of the backwall, sidewalk surface, and the roadway face and top of the concrete parapet rail.

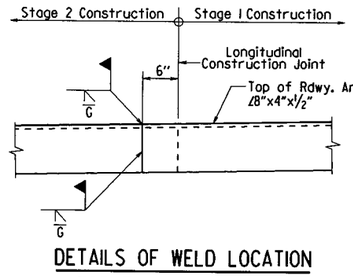
For details of wings and rails, See Dwg. No. 57787.

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.		061335	157	303
				①	07365 - END BENT DETAILS - 57784			



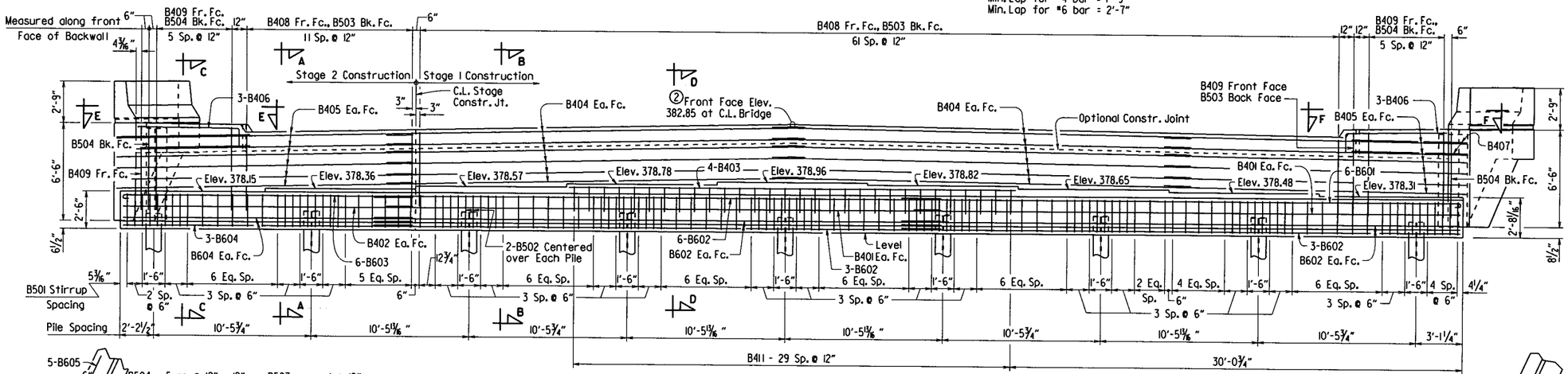
PLAN

Unless otherwise noted.
Min. Lap for #4 bar = 1'-9"
Min. Lap for #6 bar = 2'-7"



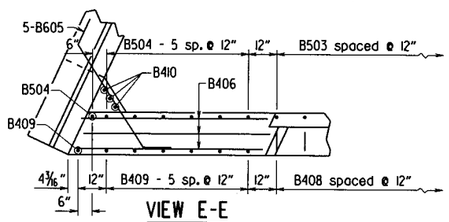
DETAILS OF WELL LOCATION FOR EXPANSION DEVICE

No Scale



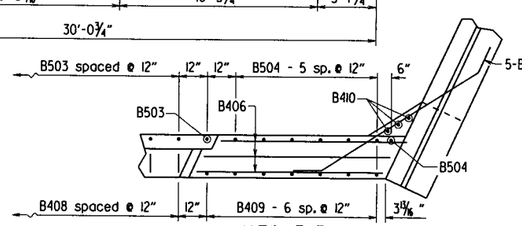
ELEVATION

Looking Back



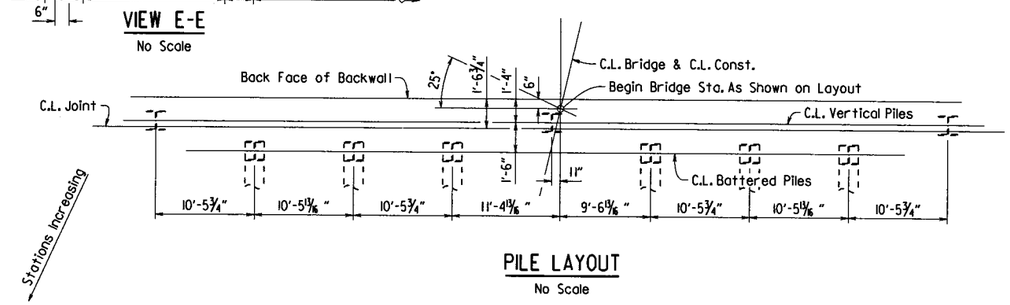
VIEW E-E

No Scale



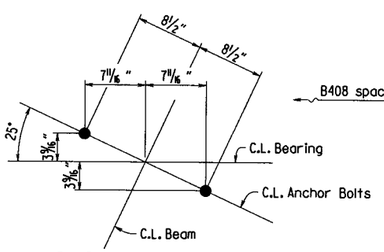
VIEW F-F

No Scale



PILE LAYOUT

No Scale

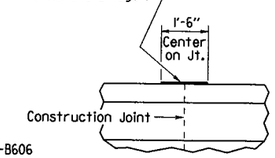


For Details of Elastomeric Bearings, See Dwg. No. 57797.

TYPICAL ANCHOR BOLT LAYOUT

No Scale

Membrane Waterproofing System Type C or an approved equal to extend full height of backwall and cap. See Section 815. No direct payment shall be made for this work. Payment will be subsidiary to the item "Class S Concrete-Bridge".



CONSTRUCTION JOINT DETAIL

½" = 1'-0"

For Sections A-A, B-B, C-C & D-D, See Dwg. No. 57786.

STATE OF ARKANSAS
CHARLES R. ELLIS
REGISTERED PROFESSIONAL ENGINEER
No. 9235
6-5-17

BRIDGE ENGINEER

DETAILS OF END BENT 1 HURRICANE CREEK

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: BHS DATE: 6/5/15 FILENAME: b061335_b1.dgn
CHECKED BY: SHP DATE: 6/6/17 SCALE: 1/4" = 1'-0"
DESIGNED BY: ACP DATE: 5/2015 or As Shown

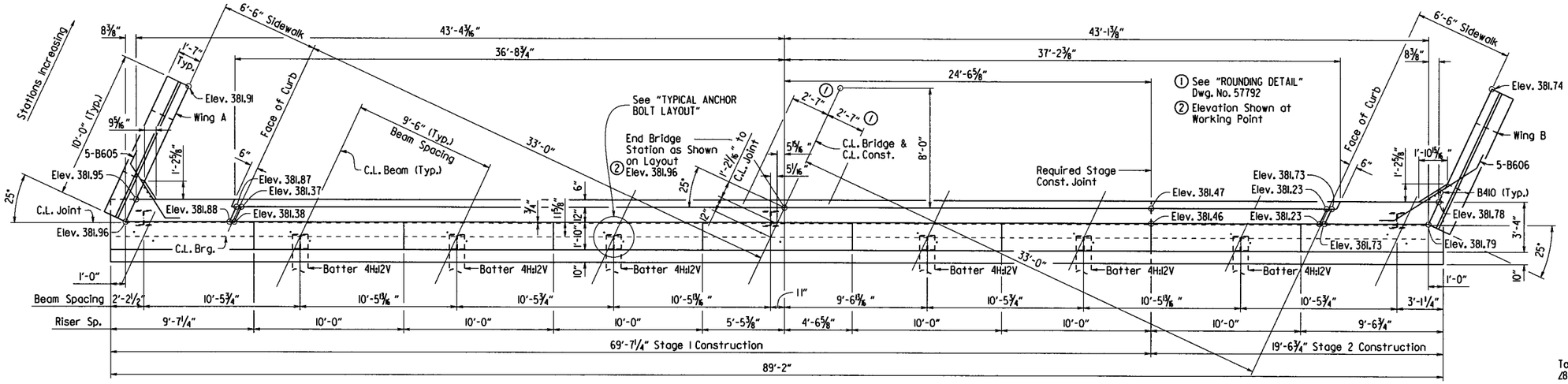
BRIDGE NO. 07365 DRAWING NO. 57784

PRINT DATE: 6/5/2017

Class I Protective Surface Treatment shall be applied to the top of the backwall, sidewalk surface, and the roadway face and top of the concrete parapet rail.

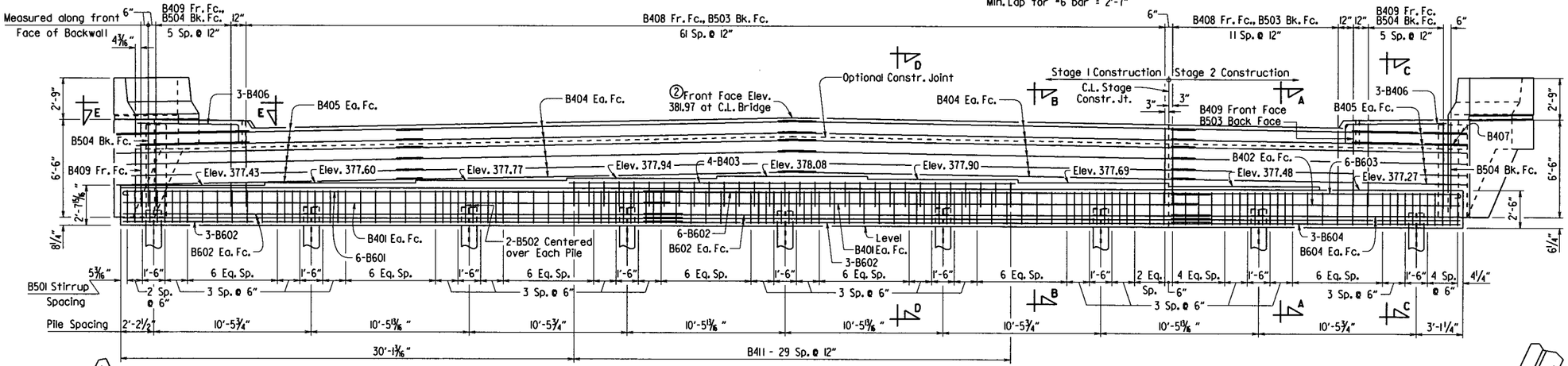
For details of wings and rails, See Dwg. No. 57787.

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.		061335	158	303
				①	07365 - END BENT DETAILS - 57785			

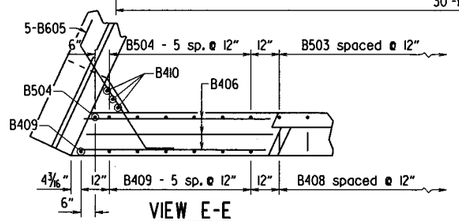


PLAN

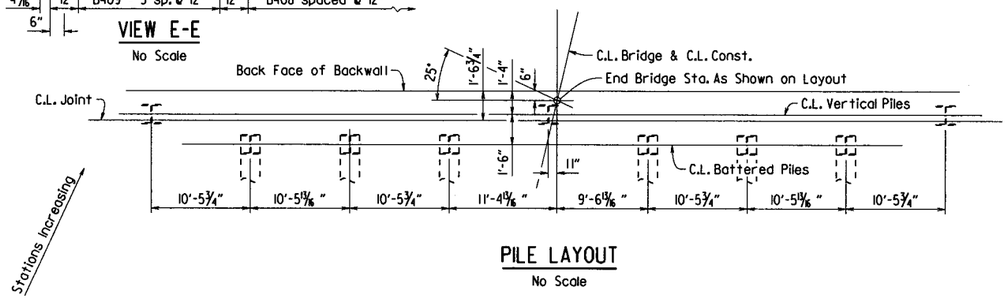
Unless otherwise noted.
Min. Lap for #4 bar = 1'-9"
Min. Lap for #6 bar = 2'-7"



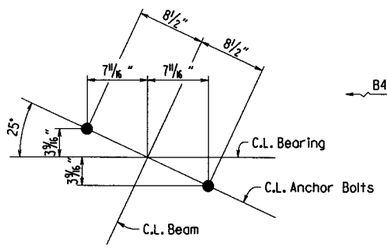
ELEVATION
Looking Ahead



VIEW E-E
No Scale

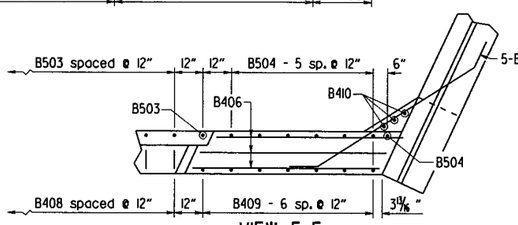


PILE LAYOUT
No Scale

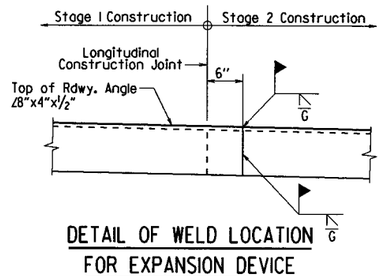


For Details of Elastomeric Bearings, See Dwg. No. 57797.

TYPICAL ANCHOR BOLT LAYOUT
No Scale

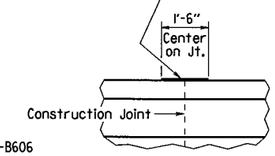


VIEW F-F
No Scale



DETAIL OF WELD LOCATION G FOR EXPANSION DEVICE
No Scale

Membrane Waterproofing System Type C or an approved equal to extend full height of backwall and cap. See Section 815. No direct payment shall be made for this work. Payment will be subsidiary to the item "Class S Concrete-Bridge".



CONSTRUCTION JOINT DETAIL
½" = 1'-0"

For Sections A-A, B-B, C-C & D-D, See Dwg. No. 57786.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9235
6-5-17
CHARLES R. ELLIS
BRIDGE ENGINEER

DETAILS OF END BENT 4 HURRICANE CREEK

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

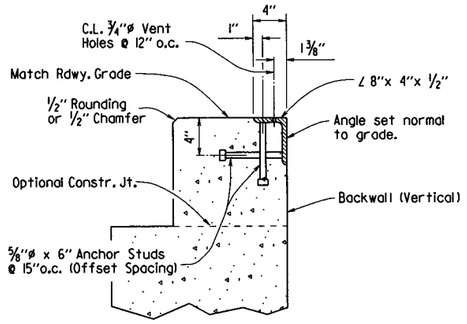
LITTLE ROCK, ARK.

DRAWN BY: BHS DATE: 6/5/15 FILENAME: b061335_bl.dgn
CHECKED BY: DHP DATE: 6/5/17 SCALE: 1/4" = 1'-0"
DESIGNED BY: ACP DATE: 5/2015 or As Shown

BRIDGE NO. 07365 DRAWING NO. 57785

PRINT DATE: 6/5/2017

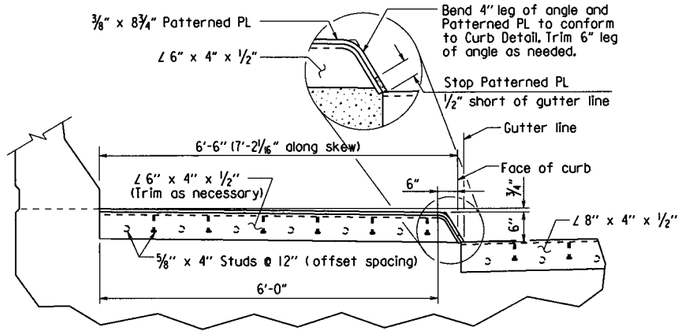
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	159	303
				1	07365 - END BENT DETAILS - 57786			



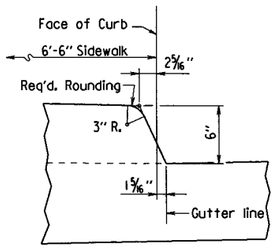
For additional Joint Details See Dwg. No. 57796.

Concrete shall be hand packed under joint armor in the backwall.

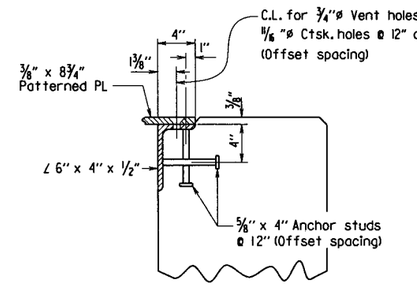
JOINT DETAIL
No Scale



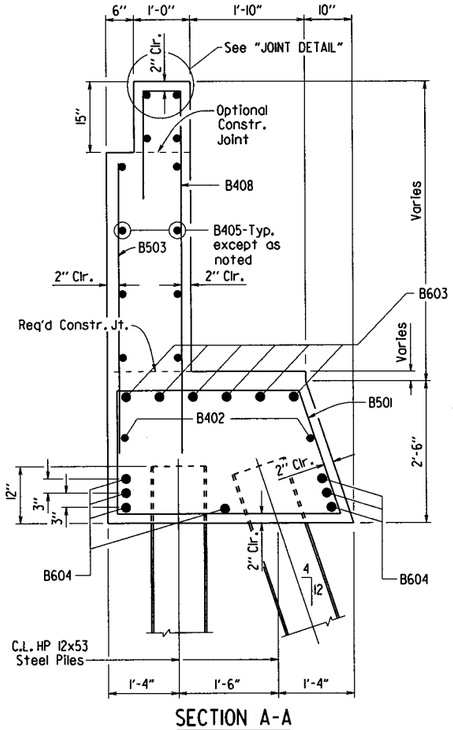
SIDEWALK DETAIL
Perpendicular to C.L. Bridge
No Scale



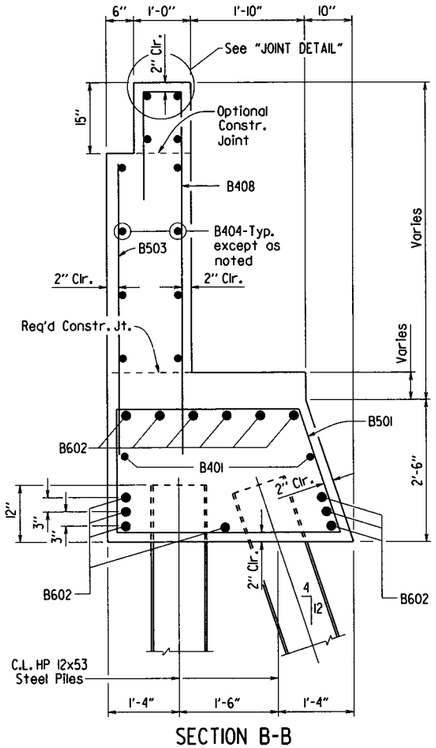
SIDEWALK CURB DETAIL
Perpendicular to C.L. Bridge
No Scale



DETAIL A
No Scale



SECTION A-A
No Scale



SECTION B-B
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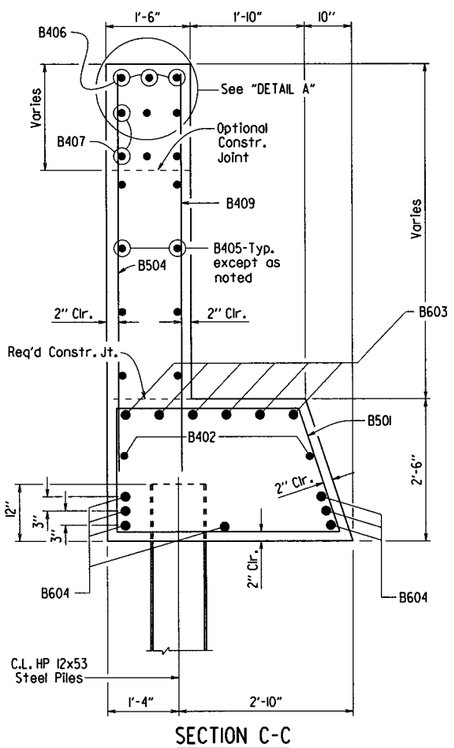
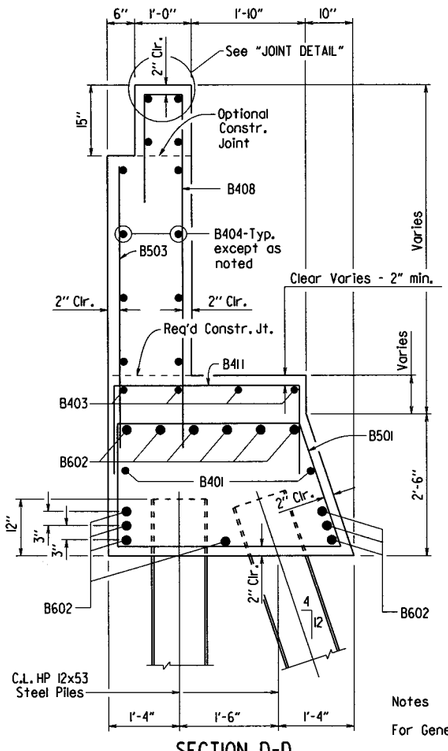


SECTION C-C
No Scale



SECTION D-D
No Scale

Notes

For General Notes, See Std. Dwg. No. 55006

No portion of the backwall shall be poured before beams are in place. The portion of the backwall above the optional construction joint at the paving bracket shall not be placed until the deck pour has been made. Refer to the "EXPANSION DEVICE INSTALLATION" note on Dwg. No. 57796.

For additional information, See Layout.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
6-5-17

BRIDGE ENGINEER

SHEET 1 OF 2
COMMON DETAILS OF END BENTS
HURRICANE CREEK

ROUTE SEC.

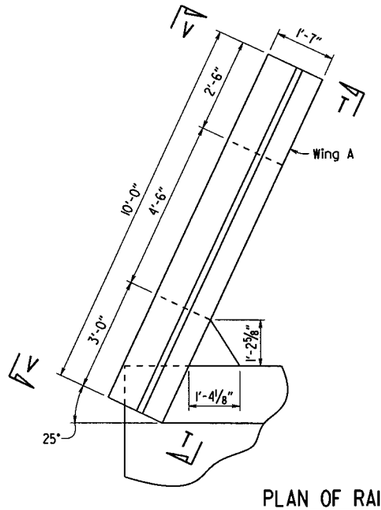
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

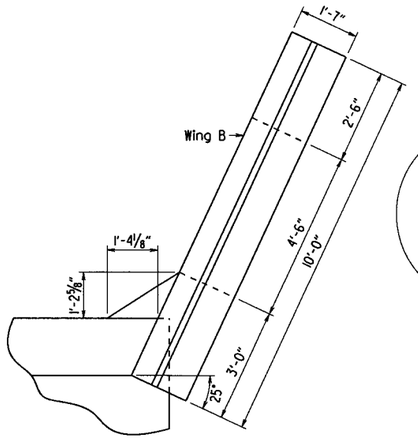
DRAWN BY: BHS DATE: 6/5/15 FILENAME: b061335_bl.dgn
CHECKED BY: DHP DATE: 6/5/17 SCALE: As Shown
DESIGNED BY: ACR DATE: 3/2015

BRIDGE NO. 07365 DRAWING NO. 57786

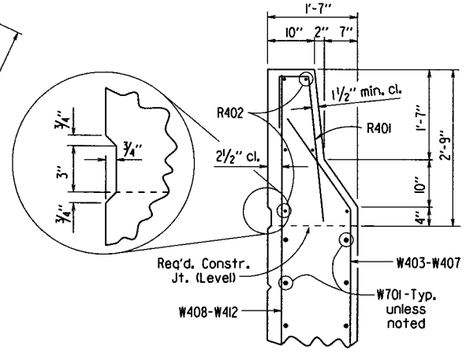
PRINT DATE: 6/5/2017

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.		061335	160	303
				①	07365 - END BENT DETAILS - 57787			

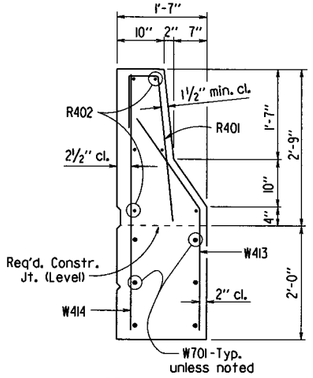




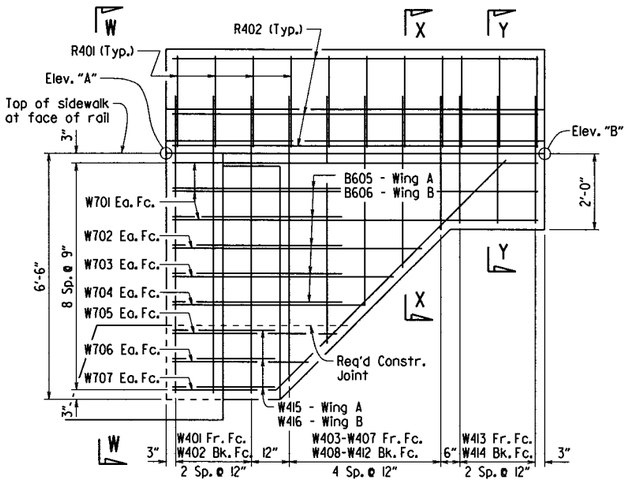
PLAN OF RAILS



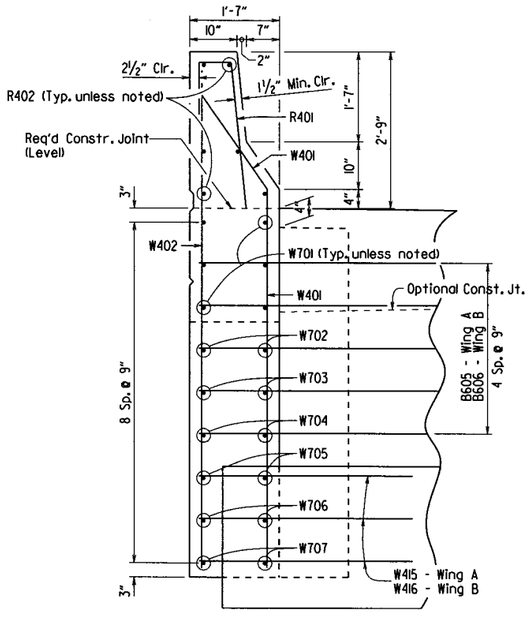
SECTION X-X



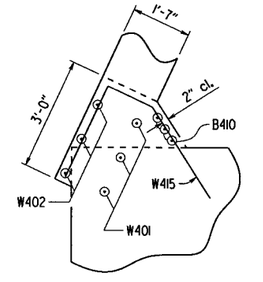
SECTION Y-Y



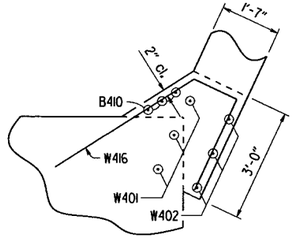
VIEW T-T



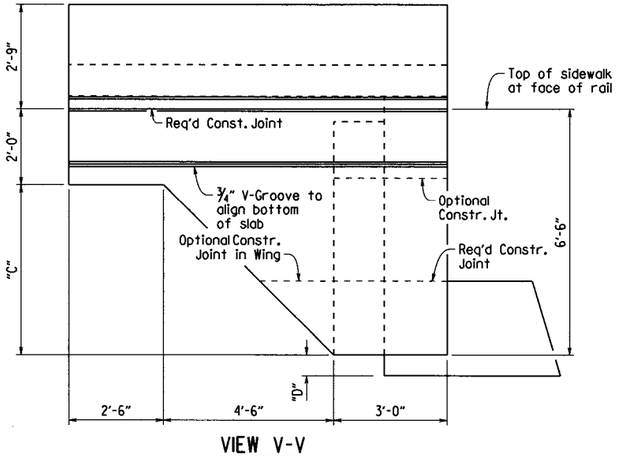
VIEW W-W



WING A



WING B



VIEW V-V

TABLE OF VARIABLES

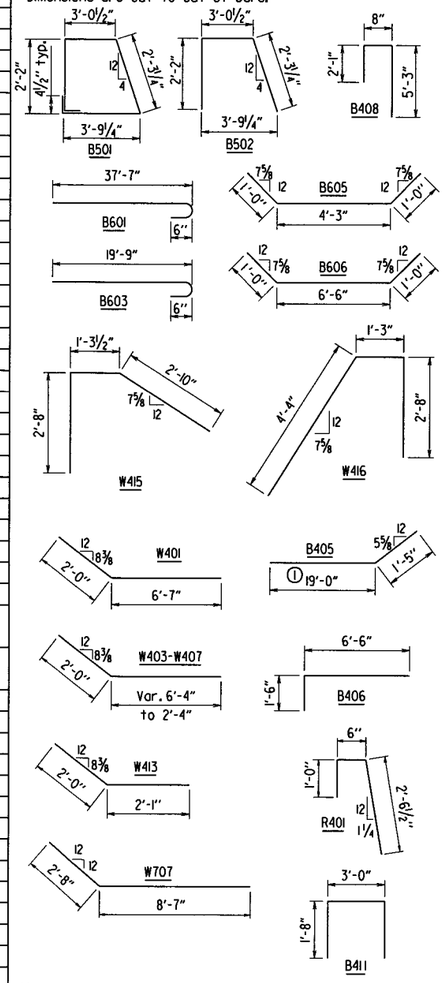
	Bent 1		Bent 4	
	Wing A	Wing B	Wing A	Wing B
Elev. "A"	382.68	382.85	381.96	381.79
Elev. "B"	382.73	382.90	381.91	381.74
"C"	4'-6⅜"	4'-6⅜"	4'-5⅜"	4'-5⅜"
"D"	6½"	8½"	8¼"	6¼"

BAR LIST - PER BENT

MARK	NO. REQ'D.	LENGTH	P.D.
B401	4	36'-9"	Str.
B402	2	19'-3"	Str.
B403	4	29'-8"	Str.
B404	24	27'-10"	Str.
B405	24	20'-5"	3"
B406	6	7'-11"	3"
B407	4	8'-8"	Str.
B408	74	7'-10"	2"
B409	14	5'-7"	Str.
B410	6	5'-10"	Str.
B411	30	6'-2"	2"
B501	113	11'-7"	2½"
B502	18	7'-4"	2½"
B503	75	4'-3"	Str.
B504	14	5'-8"	Str.
B601	6	38'-3"	4½"
B602	20	37'-7"	Str.
B603	6	20'-0"	4½"
B604	7	19'-3"	Str.
B605	5	6'-3"	4½"
B606	5	8'-6"	4½"
R401	22	3'-11"	2"
R402	12	9'-8"	Str.
W401	6	8'-7"	2"
W402	6	8'-11"	Str.
W403-W407	2 each	Var. 8'-4" to 4'-4"	2"
W408-W412	2 each	Var. 8'-7" to 4'-7"	Str.
W413	6	4'-1"	2"
W414	6	4'-5"	Str.
W415	3	6'-9"	2"
W416	3	8'-2"	2"
W701	12	9'-8"	Str.
W702	4	6'-7"	Str.
W703	4	5'-10"	Str.
W704	4	5'-1"	Str.
W705	4	4'-4"	Str.
W706	4	3'-7"	Str.
W707	4	11'-5"	5¼"

BENDING DIAGRAMS

Dimensions are out to out of bars.



① Trim to fit in field (Stage 2) to provide 2" end clearance.

Dimensions are out to out of bars.

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
6-5-17
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 2 OF 2
COMMON DETAILS OF END BENTS
HURRICANE CREEK

ROUTE SEC.

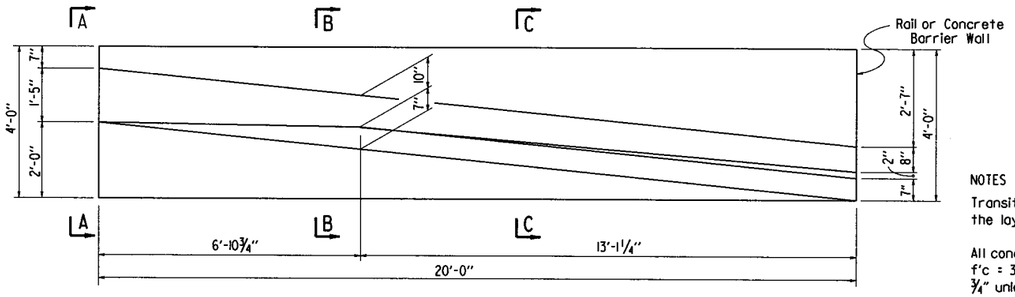
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: BHS DATE: 6/9/15
CHECKED BY: DHP DATE: 6/16/17
DESIGNED BY: RCP DATE: 5/2015
FILENAME: b061335_bl.dgn
SCALE: No Scale

BRIDGE NO. 07365 DRAWING NO. 57787

PRINT DATE: 6/5/2017

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.		061335	161	303
				①		07365 - TRANSITION RAIL - 57788		



PLAN OF TRANSITIONAL APPROACH RAILING

Note: Railings on each side of Roadway are opposite hand to each other.

NOTES

Transitional Approach Railing shall be placed at ends of wings at locations shown on the layout.

All concrete shall be Class "S" with a minimum 28 day compressive strength f'c = 3,500 psi and shall be poured in the dry. All exposed corners to be chamfered ¾" unless otherwise noted.

All reinforcing steel shall be Grade 60 conforming to AASHTO M 31 or M 322, Type A with mill test reports.

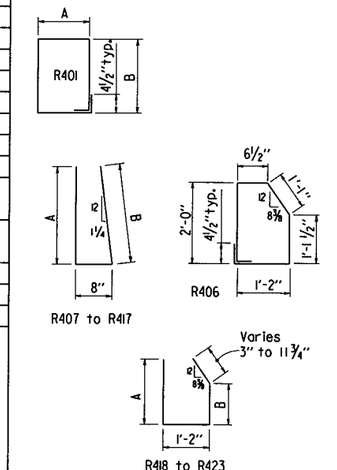
Class I Protective Surface Treatment shall be applied to the sidewalk surface and to the front face and top of the transitional approach rail. Payment for Class I Protective Surface Treatment will not be paid for directly, but shall be considered incidental to the unit price bid for "Transitional Approach Railing".

Transitional Approach Railing shall be paid for at the contract unit price bid per each for "Transitional Approach Railing." See Section 806 for additional information.

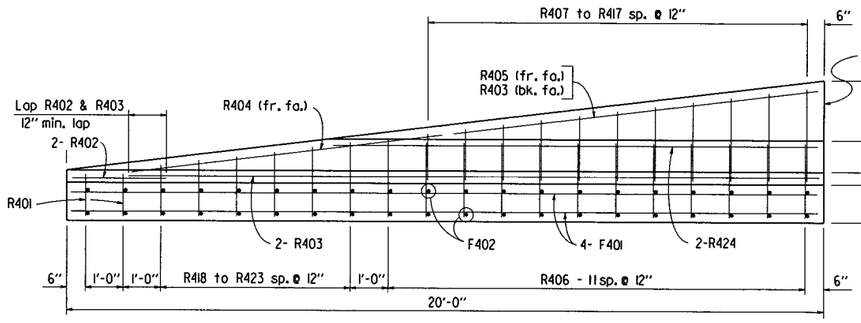
BAR LIST - ONE TRANSITIONAL RAIL

Mark	No. Req'd.	Length	A	B	Pin Dia.
F401	8	19'-8"			Str.
F402	40	3'-8"			Str.
R401	2	4'-10"	1'-2"	1'-1"	2"
R402	2	3'-0"			Str.
R403	3	17'-9"			Str.
R404	1	5'-0"			Str.
R405	1	12'-9"			Str.
R406	12	6'-3"			2"
R407-R417	1ea.	3'-0"-5'-5"	1'-3"-2'-5½"	1'-3"-2'-5½"	2"
R418-R423	1ea.	3'-9"-5'-1"	1'-4"-1'-11¼"	1'-1½"	2"
R424	2	12'-0"			Str.

Bending Diagram



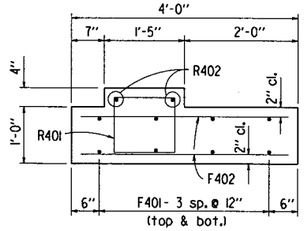
Dimensions are out to out of bars.



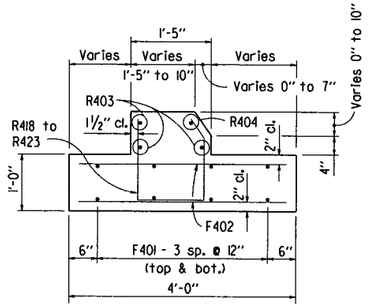
ELEVATION OF TRANSITIONAL APPROACH RAILING

FOR INFORMATION ONLY
SCHEDULE OF QUANTITIES PER RAIL UNIT

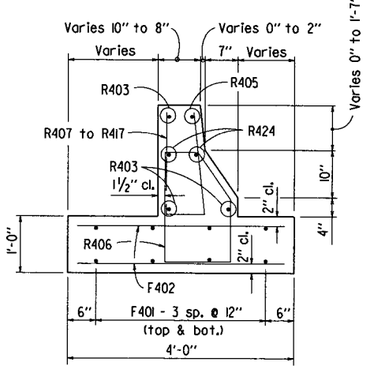
CLASS "S" CONCRETE	STEEL (GRADE 60)	CLASS I PROTECTIVE SURFACE TREATMENT
4.20 Cu. Yds.	376 Lbs.	0.2 gal



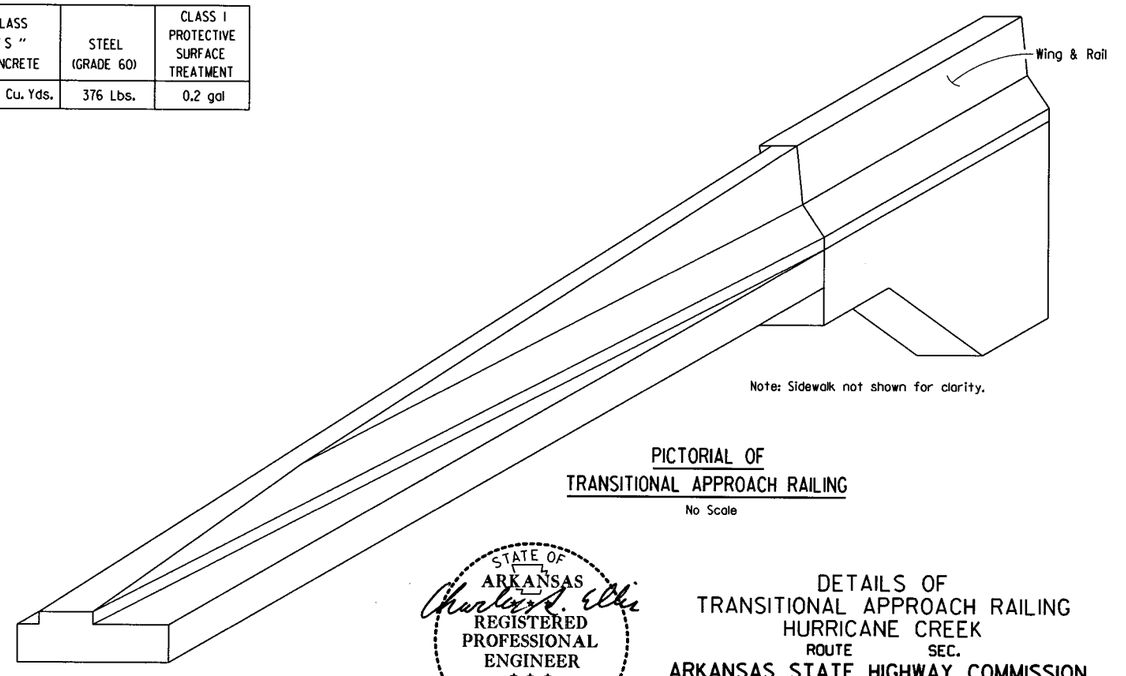
VIEW A-A
¾" = 1'-0"



SECTION B-B
¾" = 1'-0"



SECTION C-C
¾" = 1'-0"



Note: Sidewalk not shown for clarity.

PICTORIAL OF TRANSITIONAL APPROACH RAILING

No Scale

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
6-5-17
CHARLES R. ELLIS
BRIDGE ENGINEER

DETAILS OF TRANSITIONAL APPROACH RAILING HURRICANE CREEK

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: KWY DATE: 3/1/17
CHECKED BY: DHP DATE: 6/6/17
DESIGNED BY: STD. DATE:

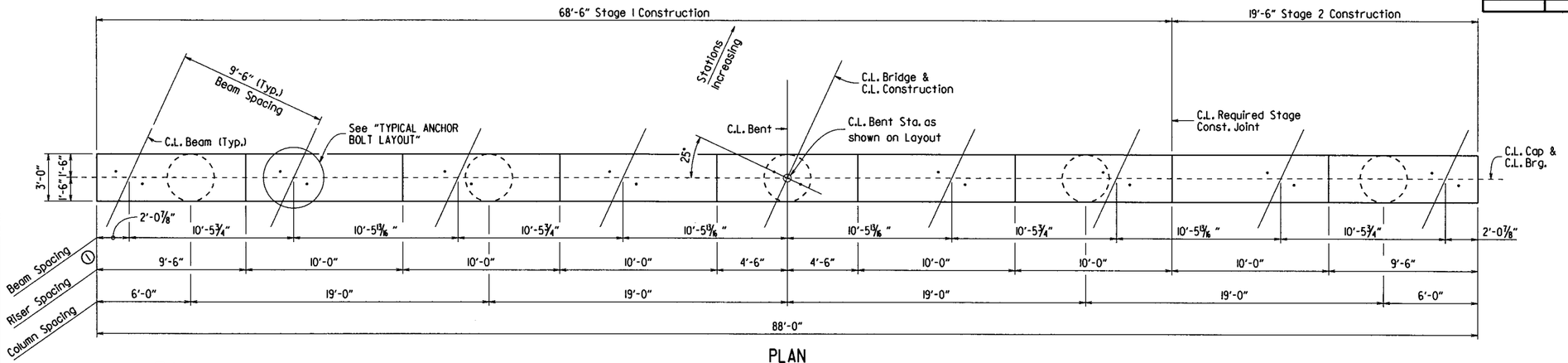
FILENAME: b061335_tri.dgn
SCALE: ½" = 1'-0" or as noted

BRIDGE NO. 07365

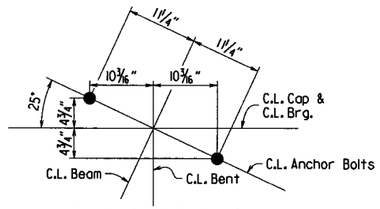
DRAWING NO. 57788

PRINT DATE: 6/5/2017

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.		061335	162	303
				①	07365 - INT BENT DETAILS - 57789			



PLAN

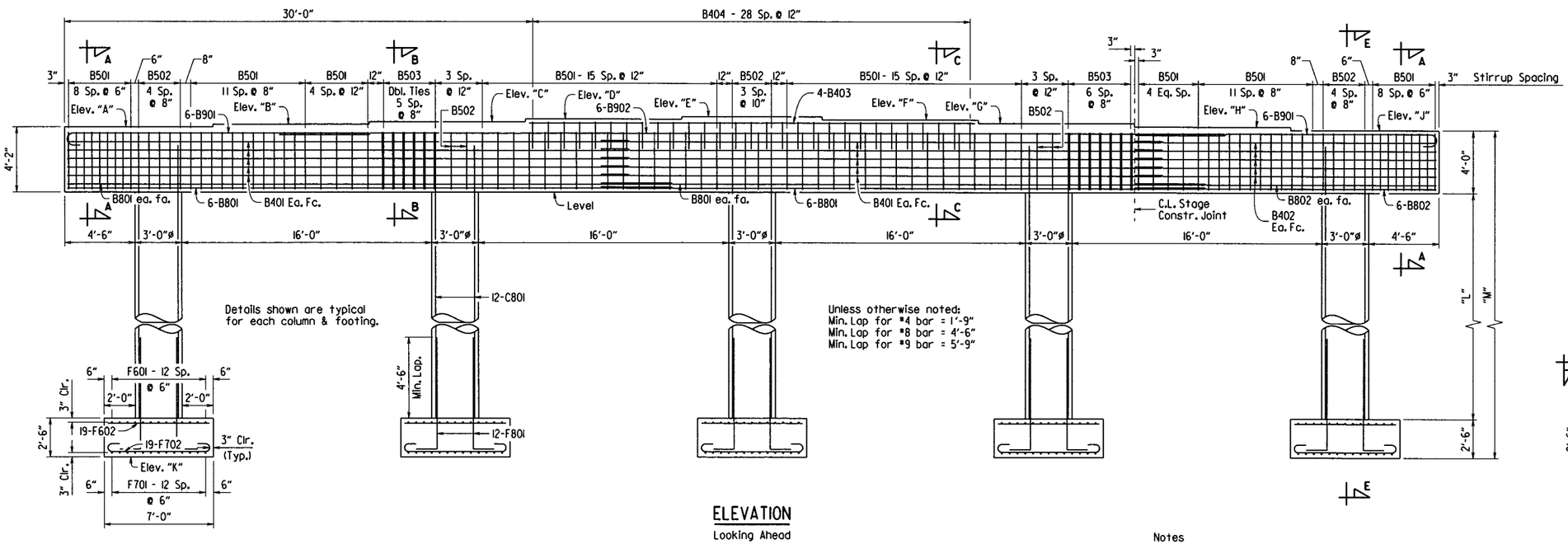


For Details of Elastomeric Bearings, See Dwg. No. 57797

TYPICAL ANCHOR BOLT LAYOUT

1/16" = 1'-0"

① Steps shall be cast level at the elevations shown

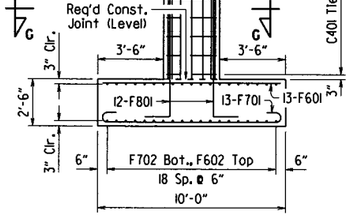


Details shown are typical for each column & footing.

ELEVATION

Looking Ahead

Unless otherwise noted:
Min. Lap for #4 bar = 1'-9"
Min. Lap for #8 bar = 4'-6"
Min. Lap for #9 bar = 5'-9"



SECTION E-E

Notes

For General Notes, See Std. Dwg. No. 55006.

For Sections A-A, B-B, C-C, D-D, F-F, and G-G, See Dwg. No. 57790.

For Additional Information, See Layout.

TABLE OF VARIABLES

Bent	Elev. "A"	Elev. "B"	Elev. "C"	Elev. "D"	Elev. "E"	Elev. "F"	Elev. "G"	Elev. "H"	Elev. "J"	Elev. "K"	"L"	"M"	"N"
2	378.08	378.24	378.41	378.58	378.72	378.54	378.33	378.12	377.91	356.90	14'-6"	21'-0"	14
3	377.76	377.93	378.10	378.27	378.41	378.23	378.02	377.81	377.60	357.59	13'-6"	20'-0"	13

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9235
6-5-17
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 1 OF 2
DETAILS OF INTERMEDIATE BENTS
HURRICANE CREEK

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: BHS DATE: 6/15/15 FILENAME: b061335_b2.dgn
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DESIGNED BY: ACP DATE: 3/26/15 or As Shown

BRIDGE NO. 07365 DRAWING NO. 57789

PRINT DATE: 6/5/2017

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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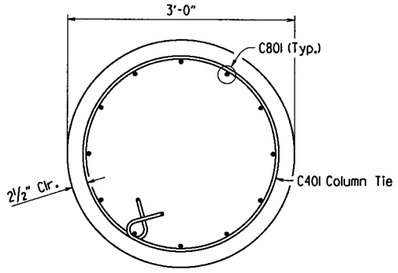
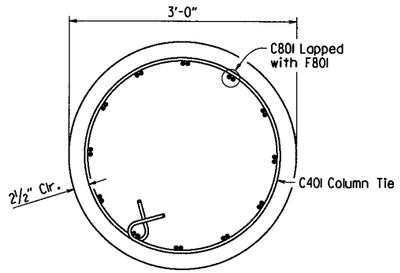
				①		07365 - INT BENT DETAILS - 57790		



SECTION F-F

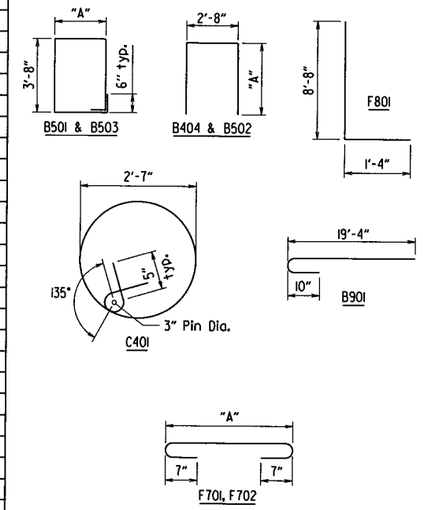


SECTION G-G

BAR LIST - PER BENT

MARK	NO. REQ'D.	LENGTH	"A"	P.D.
B401	20	36'-0"		Str.
B402	10	19'-2"		Str.
B403	4	28'-8"		Str.
B404	29	5'-10"	1'-8"	2"
B501	82	13'-2"	2'-8"	2½"
B502	18	9'-10"	3'-8"	2½"
B503	26	11'-8"	1'-11"	2½"
B801	16	38'-9"		Str.
B802	8	19'-4"		Str.
B901	12	20'-7"		9"
B902	6	60'-10"		Str.
C401	"B"	9'-3"		3"
C801	60	"C"		Str.
F601	65	9'-6"		Str.
F602	95	6'-6"		Str.
F701	65	11'-2"	9'-6"	5¼"
F702	95	8'-2"	6'-6"	5¼"
F801	60	9'-10"		6"

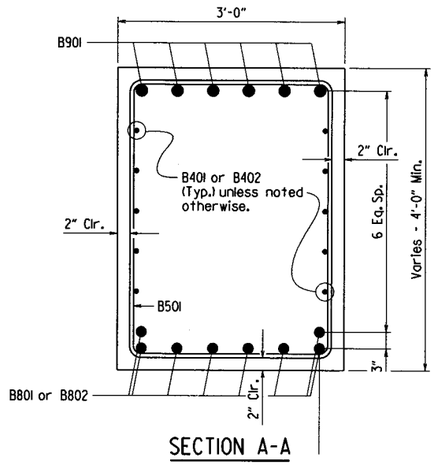
BENDING DIAGRAMS



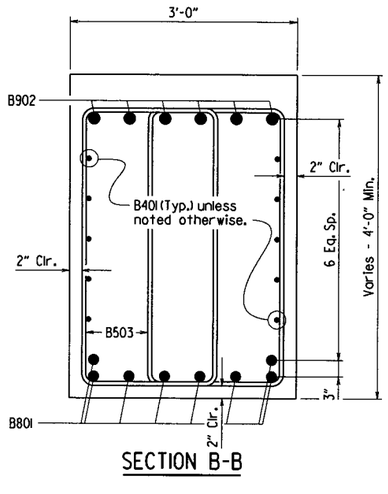
Dimensions are out to out of bars.

TABLE OF VARIABLES

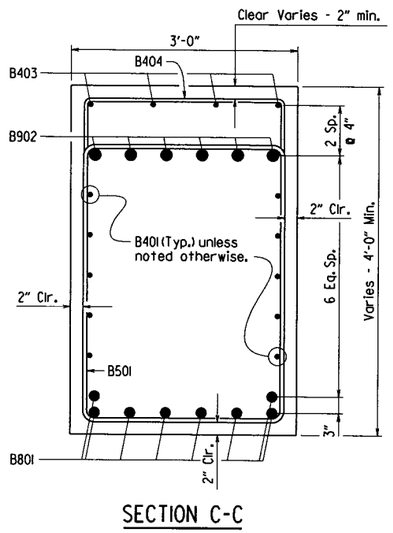
Bent	"B"	"C"
2	90	17'-6"
3	85	16'-6"



SECTION A-A



SECTION B-B



SECTION C-C

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
6-5-17
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 2 OF 2
DETAILS OF INTERMEDIATE BENTS
HURRICANE CREEK

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: BHS DATE: 6/16/15 FILENAME: b061335_b2.dgn
CHECKED BY: DHP DATE: 6/5/17 SCALE: No Scale
DESIGNED BY: ACP DATE: 5/2015

BRIDGE NO. 07365 DRAWING NO. 57790

PRINT DATE: 6/5/2017

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.		061335	164	303
				①	07365 - SPAN DETAILS - 57791			

SLAB REINFORCING:

Longitudinal: S401E in top (placed as shown)
S401E in bottom (placed as shown)
S601E centered over Int.
Supports and placed as shown

Transverse: S602E & S603E in Top @ 6" o.c.
S501E & S502E @ 12" o.c. in bottom — Alternate
S402E & S403E @ 12" o.c. in bottom —
S604E @ 6" o.c. in Top of Each Overhang

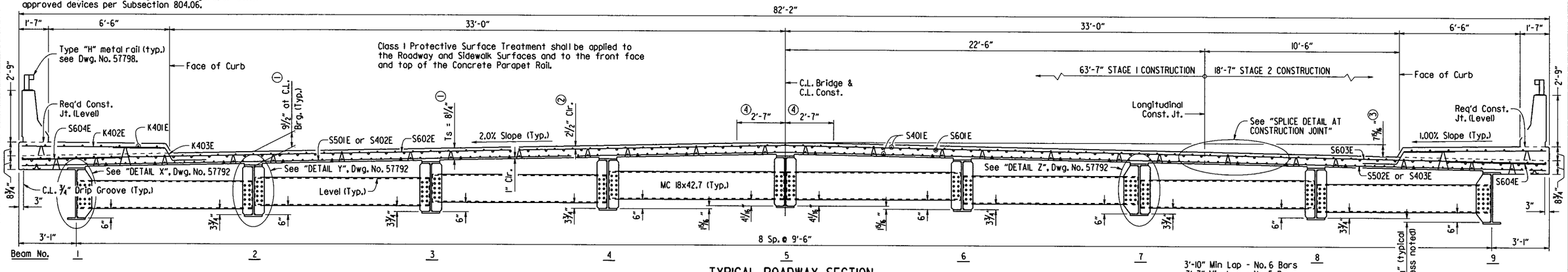
SIDEWALK REINFORCING:

Longitudinal: K401E in top (placed as shown)
Transverse: K402E & K403E @ 12" o.c.

① Tolerance: Minus = 1/4"; Plus = The amount of slab thickening used to meet slab thickness tolerance.
② See "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE".
③ Working Point to Gutter Line
④ See "ROUNDING DETAIL", Dwg. No. 57792

The superstructure details shown are for use when removable deck forming is used and are the basis for measurement of Class S(AE) Concrete.

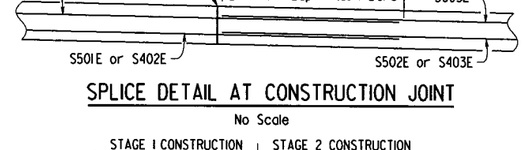
Bar positions or clearances from the forms shall be maintained by means of stays, ties, hangers, or other approved devices per Subsection 804.06.



TYPICAL ROADWAY SECTION

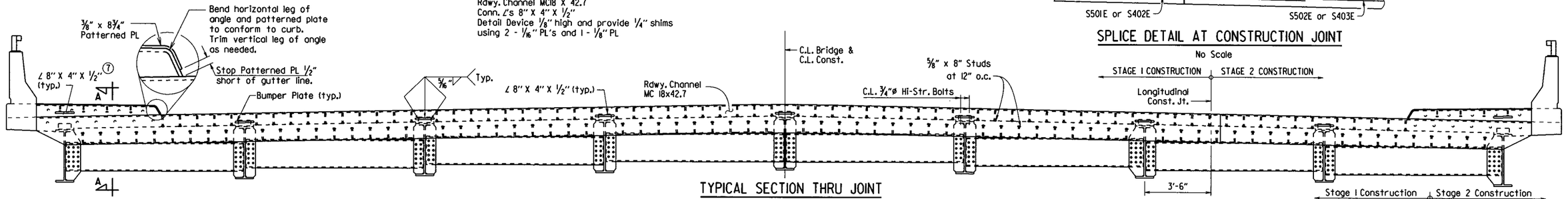
Looking Ahead

EXPANSION DEVICE:
Rdwy. Channel MC18 X 42.7
Conn. ∠'s 8" X 4" X 1/2"
Detail Device 1/8" high and provide 1/4" shims using 2 - 1/16" PL's and 1 - 1/8" PL



SPLICE DETAIL AT CONSTRUCTION JOINT

No Scale



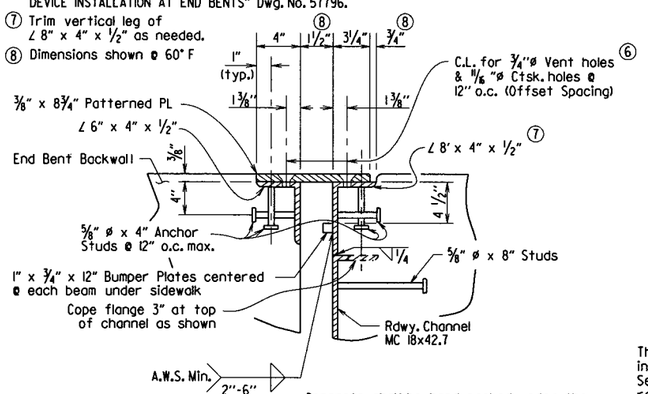
TYPICAL SECTION THRU JOINT

Looking Ahead

⑥ Ctsk. 11/16 "ø holes in 3/8" Patterned Plate. Top 4" leg of angles for ASTM A449 5/8" ø screws @ 12" o.c. Install screws in the shop and ship as a unit. Screws on the span side to be removed. Screws on backwall side to remain in place after erection. See "EXPANSION DEVICE INSTALLATION AT END BENTS" Dwg. No. 57796.

⑦ Trim vertical leg of ∠ 8" x 4" x 1/2" as needed.

⑧ Dimensions shown @ 60° F

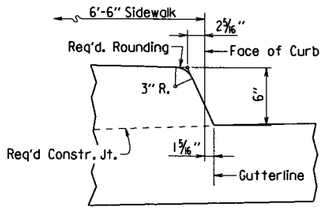


SECTION A-A

No Scale

Concrete shall be hand packed under the joint armor in the sidewalk. For expansion joint detail see "DETAIL OF POURED SILICONE JOINT SEAL" Dwg. No. 57796

For additional details of joint not at sidewalk see Dwg. No. 57796.

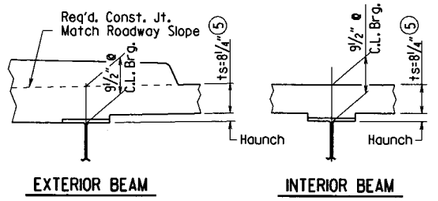


SIDEWALK CURB DETAIL

Perpendicular to C.L. Bridge
No Scale

The surfaces of the 3/8" pattern PL and ∠ 6" x 4" x 1/2" not in contact with concrete shall be painted in accordance with Section 638 or as approved by the Engineer. Only one coat is required and shall be applied in the Fabricator's shop. Painting will not be paid for directly, but shall be considered subsidiary to "Structural Steel in Beam Spans (M 270, Gr. 50W)". Pattern Plate and angle shall be M 270, Gr. 36 or as approved by the Engineer and shall be paid for as "Structural Steel in Beam Spans (M 270, Gr. 50W)".

⑤ Tolerance when removable deck forming is used is + 1/2", - 1/4". Haunch forming is required and shall be adjusted to maintain slab thickness tolerance.



EXTERIOR BEAM INTERIOR BEAM

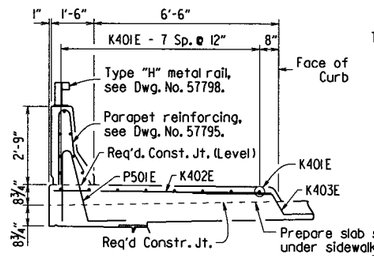
Haunch dimension may vary within the following limits to maintain the grade and slab thickness tolerance : Minimum - occurs when top flange contacts bottom reinforcing steel; Maximum - top flange thickness plus 1 3/4". No increase in concrete and structural steel quantities will be made to maintain tolerances.

Tolerances shown are applicable only when removable deck forming is used. See Standard Drawing No. 55005 for tolerances when permanent steel deck forms are used. Payment for concrete shall be based on removable deck forming.

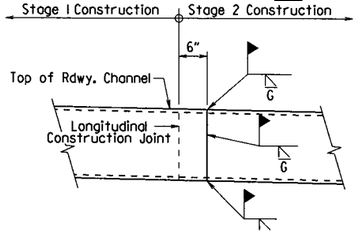
ts = Slab thickness as shown in "TYPICAL ROADWAY SECTION".

ADJUSTMENT FOR SLAB THICKNESS TOLERANCE

No Scale



Perpendicular to C.L. Bridge



DETAIL OF WELD LOCATION FOR EXPANSION DEVICE

Looking Ahead
No Scale

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
6-5-17
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 1 OF 6
DETAILS OF 188'-0" CONTINUOUS COMPOSITE W-BEAM UNIT HURRICANE CREEK

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

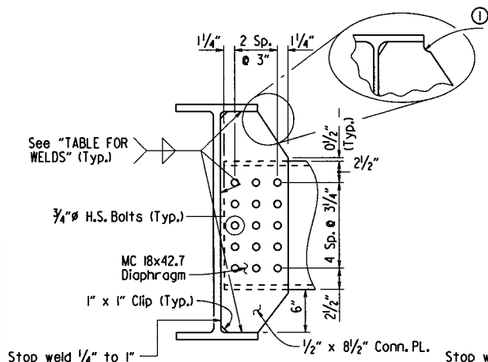
LITTLE ROCK, ARK.

DRAWN BY: BHS DATE: 5/26/15
CHECKED BY: DHP DATE: 6/5/17
DESIGNED BY: BHS DATE: 1/2015
FILENAME: b061335_sl.dgn
SCALE: 3/8" = 1'-0" or As Shown

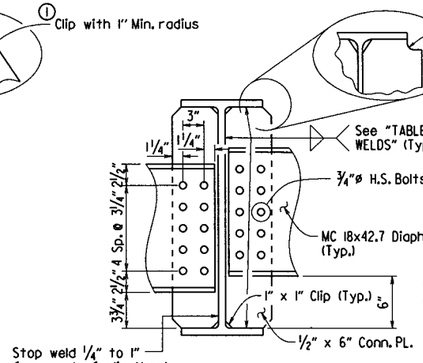
BRIDGE NO. 07365 DRAWING NO. 57791

PRINT DATE: 6/5/2017

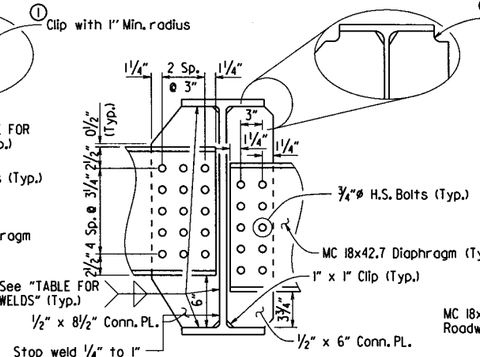
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	165	303
				①	07365 - SPAN DETAILS - 57792			



DETAIL X
No Scale

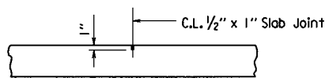


DETAIL Y
No Scale



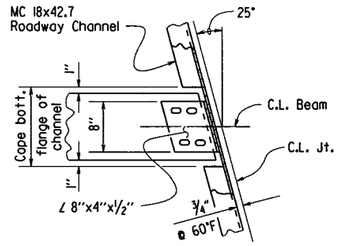
DETAIL Z
No Scale

① If permanent steel bridge deck forms are used, the fabricator shall clip the plate as necessary to accommodate the deck form support.

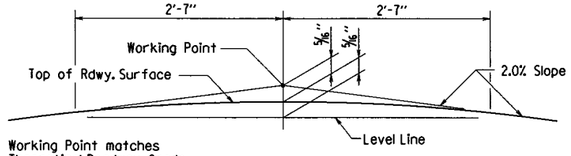


Use Type 3 or 4 Joint Sealer. See Subsections 501.02 (h) and 501.05 (j). Backer Rod filler will not be required. Joint Sealer shall be measured and paid for as Class S(AE) Concrete-Bridge. Slab joints shall extend to the outside edge of the deck slab. Slab joints shall be installed before the sidewalk is poured. The slab joints in the sidewalk shall extend to the outside of the sidewalk and shall be installed before parapet railing is to be 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 or sidewalk. Slab joints shall be placed at all pouring sequence construction joints and required slab joint locations. The joint sealer shall extend across the deck slab and across the top of the sidewalk. No joint sealer shall be placed on the deck slab under the sidewalk or parapet rail. Slab joints shall align with parapet open joints.

SLAB JOINT DETAIL
No Scale

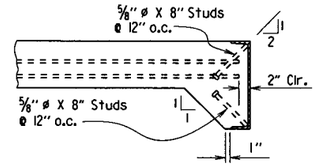


CHANNEL CONNECTION DETAIL
No Scale

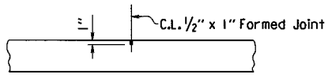


Working Point matches Theoretical Roadway Grade.

ROUNDING DETAIL
No Scale

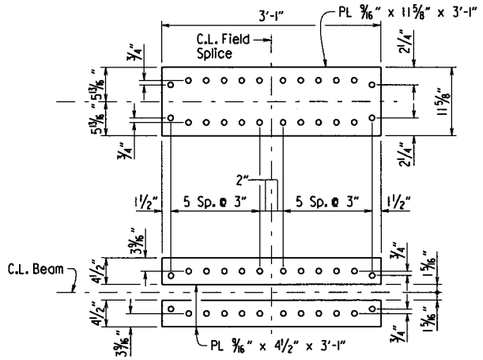


DETAILS OF ANCHORS AND PLACEMENT OF LONGITUDINAL REINFORCEMENT
No Scale

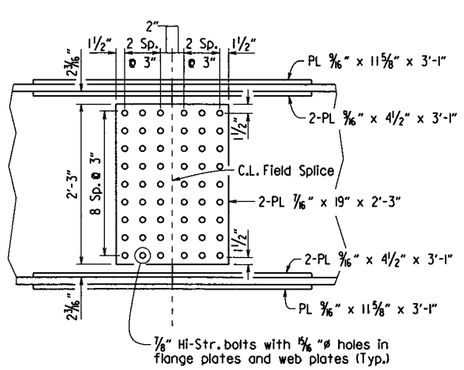


Use Type 3 or 4 Joint Sealer. See Subsections 501.02(h) and 501.05(j). Backer Rod filler will not be required. Joint sealer shall be measured and paid for as Class S(AE) Concrete-Bridge. This joint shall be formed. Seal color shall be gray or other color similar to concrete.

LONGITUDINAL CONSTRUCTION JOINT DETAIL
No Scale



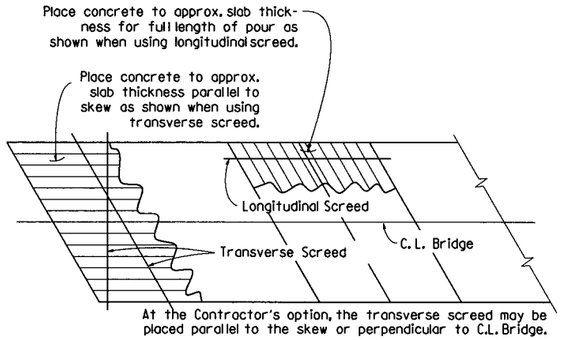
Flange Splice



Web Splice

DETAILS OF FIELD SPLICE

All field splice plates shall be AASHTO M 270, Gr. 50W steel.
All field splice bolts shall be ⅞"ø H.S. Bolts
All field splice bolt Holes shall be 15/16 "ø



CONCRETE PLACEMENT PROCEDURE
No Scale

TABLE FOR WELDS

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"	5/16"	

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.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9235
6-5-17
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 2 OF 6
DETAILS OF 188'-0" CONTINUOUS COMPOSITE W-BEAM UNIT
HURRICANE CREEK
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

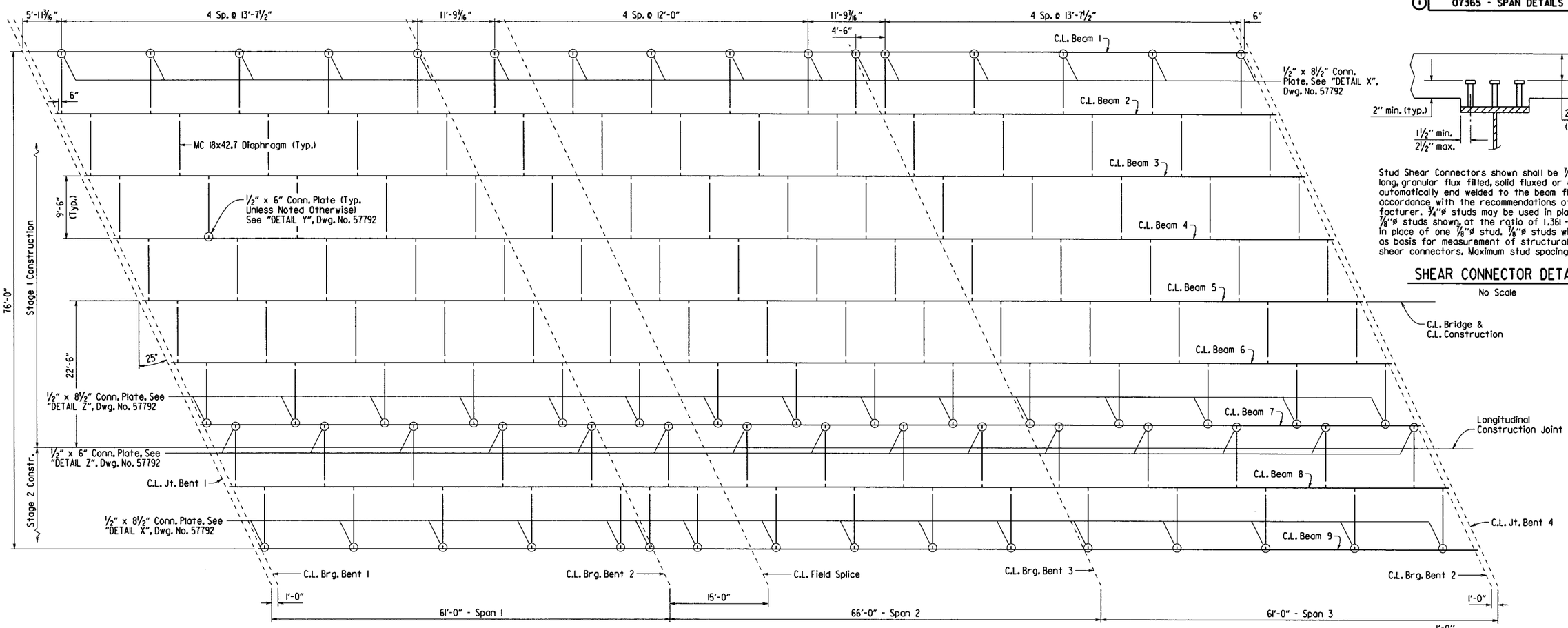
DRAWN BY: BHS DATE: 5/26/15
CHECKED BY: DHP DATE: 6/5/17
DESIGNED BY: BHS DATE: 11/2015
FILENAME: b061335_sl.dgn
SCALE: ¾" = 1'-0" or As Shown

BRIDGE NO. 07365
DRAWING NO. 57792

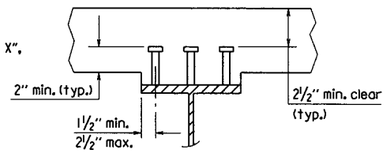
PRINT DATE: 6/5/2017

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.		061335	166	303

① 07365 - SPAN DETAILS - 57793



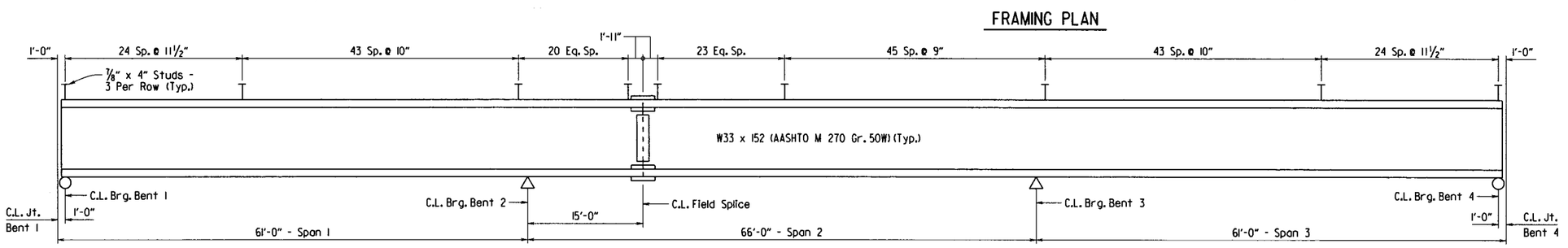
FRAMING PLAN



Stud Shear Connectors shown shall be 7/8"ø x 4" long, granular flux filled, solid fluxed or equal, and automatically end welded to the beam flange in accordance with the recommendations of the Manufacturer. 3/4"ø studs may be used in place of the 7/8"ø studs shown, at the ratio of 1.361 - 3/4"ø studs in place of one 7/8"ø stud. 7/8"ø studs will be used as basis for measurement of structural steel in shear connectors. Maximum stud spacing = 24".

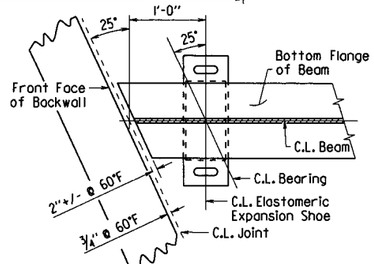
SHEAR CONNECTOR DETAIL

No Scale



BEAM ELEVATION

No Scale



PLAN OF BEARING AT END BENTS

No Scale

All structural Steel shall be AASHTO M 270, Gr. 50W unless otherwise noted, and shall be paid for as "STRUCTURAL STEEL IN BEAM SPANS (M 270, GR. 50W)". Bolted field splices may be eliminated or shop welded splices may be substituted with the approval of the Engineer. Payment will be made on the basis of plan quantities.

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
6-5-17
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 3 OF 6
DETAILS OF 188'-0" CONTINUOUS COMPOSITE W-BEAM UNIT
HURRICANE CREEK
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: BHS DATE: 5/26/15 FILENAME: b061335_sl.dgn
CHECKED BY: DHP DATE: 6/5/17 SCALE: 1/8" = 1'-0" or As Shown
DESIGNED BY: BHS DATE: 1/20/15
BRIDGE NO. 07365 DRAWING NO. 57793

PRINT DATE: 6/5/2017

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.		061335	167	303

(1) 07365 - SPAN DETAILS - 57794

S607E-S623E Top
S505E-S521E Bottom
16 Sp. @ 12"

S680E-S692E Top
S420E-S432E Bot.
12 Sp. @ 12"

S602E Top, S501E Bottom - 156 Sp. @ 12"

S664E-S679E Top
S404E-S419E Bottom
15 Sp. @ 12"

S624E-S635E Top
S522E-S533E Bot.
11 Sp. @ 12"

S602E Top, S402E Bottom - 156 Sp. @ 12"

2'-2" | 6" | 4"

See "DETAIL A" | See "DETAIL B"

3 Sp. @ 6"

2-S503E

3/4" - C.L. Jt. to Face of Channel

2-S504E

3'-3" Min. Lap

(5) Unless otherwise noted:
Min. Lap for #4 bar = 2'-7"
Min. Lap for #5 bar = 3'-3"
Min. Lap for #6 bar = 3'-10"
At the Contractor's option, lap splices shown can be eliminated and replaced with continuous bars.

(1) K401E — 2'-7" Min. Lap. (Typ.)

Face of Curb

1'-5" | 6'-6" Sidewalk

15'-0" | 15'-0" | 15'-0" | 15'-0"

S601E Placed over Intermediate Bents

Req'd Slab Joint | Req'd Slab Joint

63'-7" Stage 1 Construction

33'-0"

Pouring Sequence Joint

C.L. Bridge & C.L. Construction

12'-9" To C.L. Jt. | 18'-9" To C.L. Jt. | 10'-3" To C.L. Jt.

25°

22'-6"

(1) S401E — 2'-7" Min. Lap. (Typ.)

S636E-S647E Top
S534E-S545E Bot.
11 Sp. @ 12"

S693E-S6104E Top
S433E-S444E Bot.
11 Sp. @ 12"

S648E-S663E Top
S546E-S561E Bot.
15 Sp. @ 12"

S6105E-S6119E Top
S445E-S459E Bot.
14 Sp. @ 12"

(2) Longitudinal Construction Joint

18'-7" Stage 2 Const.

10'-6"

S603E Top, S502E Bottom - 179 Sp. @ 12"

S603E Top, S403E Bottom - 179 Sp. @ 12"

S604E Bundled with No. 6 Bars in Top of Each Overhang - 371 Sp. @ 6". See "DETAIL E"

6'-6" Sidewalk

Face of Curb

See "DETAIL C" | See "DETAIL D"

S6120E-S6125E Top, S562E-S567E Bottom
5 Sp. @ 12"

S6132E-S6137E Top, S460E-S465E Bottom
5 Sp. @ 12"

S6126E-S6131E Top, S568E-S573E Bot.
5 Sp. @ 12"

S6138E-S6143E Top, S466E-S471E Bot.
5 Sp. @ 12"

5 Sp. @ 6"

C.L. Joint Bent 1 | C.L. Joint Bent 4

Parapet Rail Spacing Typ. Each Side	16'-0" (Closed)	16'-0" (Closed) (4)	16'-0" (Closed) (4)	13'-0" (Closed) (4)	15'-0" (Closed) (3)	18'-0" (Closed) (4)	18'-0" (Closed) (4)	15'-0" (Closed) (4)	13'-0" (Closed) (3)	16'-0" (Closed) (4)	16'-0" (Closed) (4)	16'-0" (Closed) (4)
Slab Pouring Sequence	48'-0" - Pour 1			28'-0" - Pour 2		36'-0" - Pour 1		28'-0" - Pour 2		48'-0" - Pour 1		
	61'-0" - Span 1				66'-0" - Span 2					61'-0" - Span 3		

SIDEWALK REINFORCING DETAIL

No Scale

2 Sp. @ 12" | K403E 183 Sp. @ 12" | K403E 183 Sp. @ 12"

K405E | K404E | K406E

2'-7" Min. Lap (Typ.)

K406E 4" 3 Sp. @ 12"

C.L. Joint 4" | K402E 183 Sp. @ 12" | K402E 183 Sp. @ 12" 4'-8" C.L. Joint

C.L. Long. Const. Joint

2-S504E | 2-S606E | 3'-3" Min. Lap | 2-S503E

(3) C.L. Full-Depth Parapet Joint (1/4" to 1" Max.) Stop 4" from top of sidewalk.

(4) C.L. Partial-Depth Parapet Joint (1/4" to 1" Max.) Stop 1'-2" from top of sidewalk.

(1) Placed as shown in "TYPICAL ROADWAY SECTION", Dwg. No. 57791

(2) See "SLAB JOINT DETAIL" and "LONGITUDINAL CONSTRUCTION JOINT DETAIL", Dwg. No. 57792

REINFORCING PLAN & SLAB POURING SEQUENCE

Pours with the same number may be placed simultaneously or separately. All Pours (1) must be placed before Pours (2) 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 the end of a pour and the start of an adjacent pour. Any railing or sidewalk pours made before the entire slab unit has been placed must be approved by the Engineer. A minimum of 72 hours shall elapse between completion of the bridge deck slab and the pouring of the sidewalk and a minimum of 72 hours shall elapse between completion of the sidewalk and the pouring of the parapet railing. Concrete in bridge superstructure shall be placed, consolidated, and screeded off for the entire pour before any concrete has taken its initial set. The Contractor must obtain approval from the Engineer for any deviations from the pouring sequence shown.

S604E at 6" in Top of Overhang Bundled with No. 6 Bars

2" | 1'-5" | Face of Parapet Rail

No. 6 in Top, No. 5 & No. 4 Alternating in bottom

6" (Typ.)

DETAIL E

No Scale

2'-2" | No. 6 Top, No. 5 Bottom Sp. @ 12" | No. 6 Top, No. 4 Bottom Sp. @ 12" | 4"

13/16" | 6" | 4" | 6 Sp. | No. 6 Top, No. 4 Bottom Sp. @ 12" | No. 6 Top, No. 5 Bottom Sp. @ 12" | 13/16" | 6"

C.L. Joint | 2-S605E | 2-S503E | S604E

DETAIL A

No Scale

No. 6 Top, No. 5 Bottom Sp. @ 12" | No. 6 Top, No. 4 Bottom Sp. @ 12" | 6"

C.L. Joint | 6" | No. 6 Top, No. 5 Bottom Sp. @ 12" | 2-S503E | S604E | 6" | No. 6 Top, No. 4 Bottom Sp. @ 12"

DETAIL B

No Scale

6" | No. 6 Top, No. 4 Bottom Sp. @ 12" | No. 6 Top, No. 5 Bottom Sp. @ 12"

2-S503E | S604E | 6"

S604E | C.L. Joint | 4" | 13/16" | No. 6 Top, No. 5 Bottom Sp. @ 12"

DETAIL C

No Scale

No. 6 Top, No. 4 Bottom Sp. @ 12" | 2'-2" | No. 6 Top, No. 5 Bottom Sp. @ 12" | 6"

S604E | 2-S503E | 2-S605E | C.L. Joint | 6 Sp. @ 3" | 4" | 13/16"

DETAIL D

No Scale

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
6-5-17
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 4 OF 6
DETAILS OF 188'-0" CONTINUOUS COMPOSITE W-BEAM UNIT HURRICANE CREEK

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: BHS DATE: 5/26/15
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BRIDGE NO. 07365 DRAWING NO. 57794

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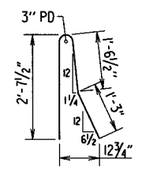
BAR LIST

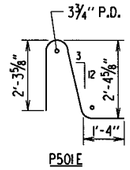
MARK	NO. REQ'D.	LENGTH	P.D.
P401E	752	5'-6"	2"
P402E	72	5'-3"	Str.
P403E	84	15'-8"	Str.
P404E	28	12'-8"	Str.
P405E	28	14'-8"	Str.
P406E	28	17'-8"	Str.
P407E	12	4'-6"	3"
P408E	4	3'-10"	2"
P501E	752	6'-2"	3¾"
K401E	80	39'-8"	Str.
K402E	368	7'-6"	Str.
K403E	368	5'-5"	2"
K404E	2	6'-11"	2"
K405E	2	4'-9"	2"
K406E	10	8'-3"	2"
S401E	1,165	39'-8"	Str.
S402E	314	34'-5"	Str.
S403E	180	18'-3"	Str.
S404E-S419E	1 Each	6'-7"-38'-9"	Str.
S420E-S432E	2 Each	21'-9"-34'-8"	Str.
S433E-S444E	2 Each	32'-9"-20'-11"	Str.
S445E-S459E	1 Each	37'-1"-7'-1"	Str.
S460E-S465E	1 Each	5'-2"-15'-11"	Str.
S466E-S471E	1 Each	16'-3"-5'-6"	Str.
S501E	314	35'-1"	Str.
S502E	180	18'-3"	Str.
S503E	8	20'-0"	3¾"
S504E	4	56'-6"	Str.
S505E-S521E	1 Each	5'-6"-39'-10"	Str.
S522E-S533E	2 Each	22'-8"-34'-5"	Str.
S534E-S545E	2 Each	33'-11"-22'-1"	Str.
S546E-S561E	1 Each	38'-10"-6'-8"	Str.
S562E-S567E	1 Each	4'-1"-14'-10"	Str.
S568E-S573E	1 Each	17'-3"-6'-7"	Str.
S601E	172	30'-0"	Str.
S602E	628	35'-8"	Str.
S603E	360	18'-3"	Str.
S604E	744	5'-3"	Str.
S605E	24	5'-8"	4½"
S606E	2	6'-2"	4½"
S607E-S623E	1 Each	5'-6"-39'-10"	Str.
S624E-S635E	2 Each	22'-11"-34'-9"	Str.
S636E-S647E	2 Each	34'-6"-22'-8"	Str.
S648E-S663E	1 Each	39'-5"-7'-3"	Str.
S664E-S679E	1 Each	6'-7"-38'-9"	Str.
S680E-S692E	2 Each	22'-5"-35'-3"	Str.
S693E-S6104E	2 Each	34'-0"-22'-2"	Str.
S6105E-S6119E	1 Each	38'-4"-8'-4"	Str.
S6120E-S6125E	1 Each	4'-1"-14'-10"	Str.
S6126E-S6131E	1 Each	17'-3"-6'-7"	Str.
S6132E-S6137E	1 Each	5'-2"-15'-11"	Str.
S6138E-S6143E	1 Each	16'-3"-5'-6"	Str.

BENDING DIAGRAMS

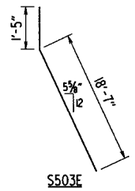
Dimensions are out to out of bars.



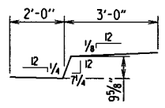
P401E



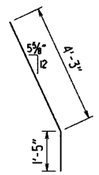
P501E



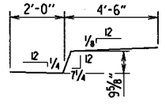
S503E



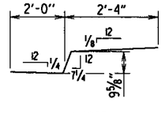
K403E



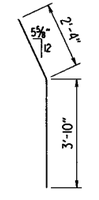
S605E



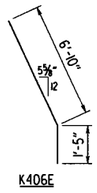
K404E



K405E



S606E



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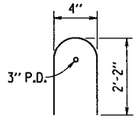
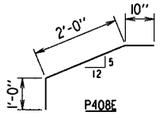


P407E



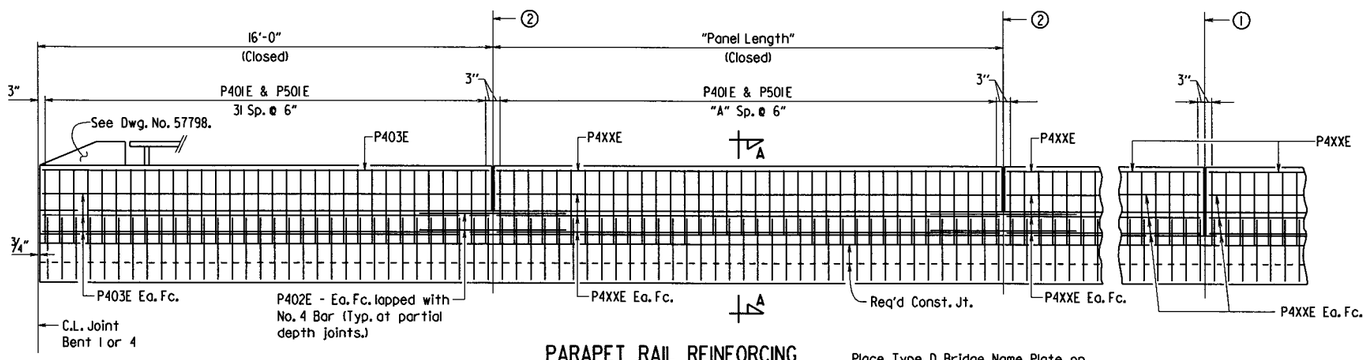
P408E

All bars with an "E" suffix shall be Epoxy Coated.

① C.L. Full-Depth Parapet Joint (¼" to 1" max.) as shown in "REINFORCING PLAN", Dwg. No. 57794. Stop 4" from top of sidewalk.

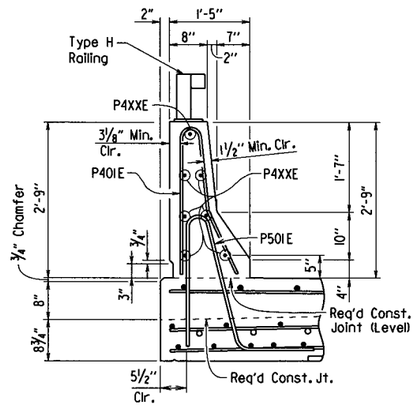
② C.L. Partial-Depth Parapet Joint (¼" to 1" max.) as shown in "REINFORCING PLAN", Dwg. No. 57794. Stop 1'-2" from top of sidewalk.

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.		061335	168	303
				①	07365 - SPAN DETAILS - 57795			



PARAPET RAIL REINFORCING

⅜" = 1'-0"



SECTION A-A

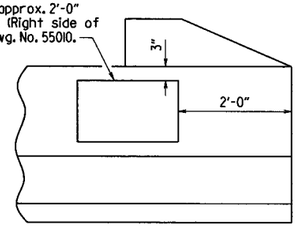
No Scale

TABLE OF VARIABLES

Panel Length	"A"	P4XXE
16'-0"	31	P403E
13'-0"	25	P404E
15'-0"	29	P405E
18'-0"	35	P406E

For location of panels, see "REINFORCING PLAN & SLAB POURING SEQUENCE" Dwg. No. 57794

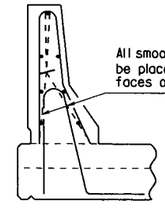
Place Type D Bridge Name Plate on front face of span rail approx. 2'-0" from beginning of bridge (Right side of roadway only). See Std. Dwg. No. 550110.



NAME PLATE DETAIL

3/16" = 1'-0"

For actual placement of reinforcing steel, see parapet details.



All smooth wire bracing shall be placed on the inside faces of the reinforcing

All panels shall be braced as required to prevent racking. All open joints shall be sawed as soon as practical to a minimum width of ¼". To control cracking before sawing all joints must be grooved before the concrete is set. Sawing of the joints must be controlled so it will follow the grooved joint.

The extruded parapet 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. Exposed surface may be given a light brush finish or a class 3 Textured Coating Finish, in place of the Class 2, Rubbed Finish.

DETAILS OF OPTIONAL SLIPFORMING OF CONCRETE PARAPET RAIL

No Scale

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
6-5-17
BRIDGE ENGINEER

SHEET 5 OF 6
DETAILS OF 188'-0" CONTINUOUS COMPOSITE W-BEAM UNIT
HURRICANE CREEK
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: BHS DATE: 6/1/15
CHECKED BY: CHP DATE: 6/6/17
DESIGNED BY: BHS DATE: 1/2017
FILENAME: b061335_sl.dgn
SCALE: As Shown

BRIDGE NO. 07365 DRAWING NO. 57795

PRINT DATE: 6/5/2017

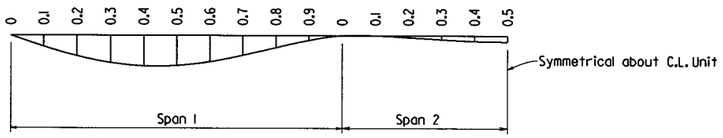
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	169	303
				①	07365 - SPAN DETAILS - 57796			

TABLE OF DEAD LOAD DEFLECTIONS (INCHES)

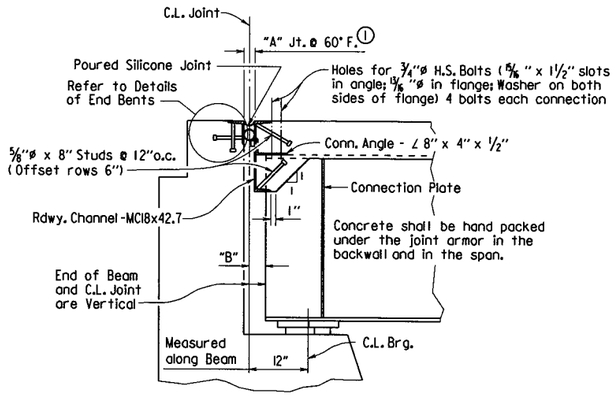
Span	Point of Deflection	Structural Steel		Structural Steel + Slab		Structural Steel + Slab + Sidewalk + Parapet	
		Beams 2-8	Beams 1& 9	Beams 2-8	Beams 1& 9	Beams 2-8	Beams 1& 9
1	0	0	0	0	0	0	0
	0.1	0.041	0.037	0.283	0.231	0.299	0.292
	0.2	0.077	0.069	0.526	0.428	0.557	0.541
	0.3	0.102	0.091	0.697	0.567	0.737	0.717
	0.4	0.113	0.102	0.778	0.634	0.823	0.802
	0.5	0.112	0.1	0.767	0.624	0.812	0.789
	0.6	0.097	0.088	0.668	0.545	0.707	0.689
	0.7	0.074	0.066	0.505	0.411	0.534	0.52
	0.8	0.045	0.04	0.307	0.249	0.325	0.315
	0.9	0.017	0.016	0.119	0.097	0.126	0.123
	0	0	0	0	0	0	0
2	0.1	0	0	0	0	0	0
	0.2	0.012	0.011	0.084	0.069	0.089	0.087
	0.3	0.028	0.025	0.191	0.155	0.202	0.196
	0.4	0.04	0.036	0.273	0.222	0.289	0.281
	0.5	0.044	0.04	0.303	0.247	0.321	0.312

Symmetrical about C.L. Unit

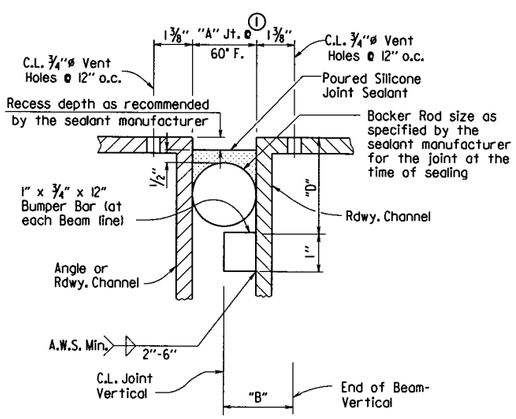
Note: Camber for dead load deflection plus vertical curve +/- 1/4" tolerance. Deflections shown are along C.L. Beam from a chord from C.L. Bearing to C.L. Bearing. Negative sign (-) indicates point above chord. Vertical curve corrections not included.



DEAD LOAD DEFLECTION DIAGRAM



SECTION THRU JOINT AT BENTS 1 & 4



DETAIL OF POURED SILICONE JOINT SEAL

SILICONE JOINT DATA

Bent Number	"A" Width Perpendicular to Joint at 24 Hour Average Temperature* Of:			"B" Perpendicular to Joint at 60°F	Bumper Plate Size	"D"
	40°F	60°F	80°F			
1 & 4	1 5/8"	1 1/2"	1 3/8"	+/- 2"	1" x 3/4"	5"

① 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.

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.

BACKER ROD NOTE:

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.

Except as noted, do not install more backer rod that can be sealed in the same day.

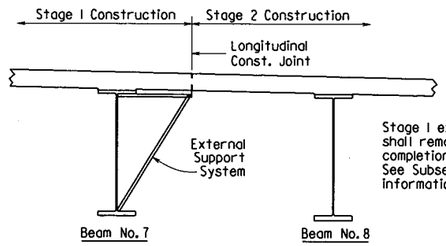
The Contractor shall verify separation of the backer rod from the joint material after the joint material has set.

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 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, the opening adjusted for temperature, and the backwall constructed.

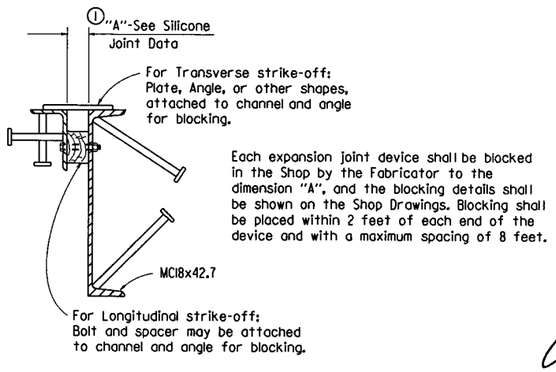
2) The backwall shall be poured to the optional construction joint after beams are erected. The blocked expansion device shall be installed and adjusted for grade. All connection bolts shall be fully tightened prior to placing the deck concrete adjacent to the bent. Immediately prior to pouring the remainder of the backwall concrete, the blocking shall be removed and the opening adjusted for temperature.



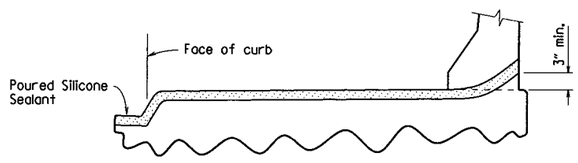
Stage 1 external supports in this bay shall remain in place until after completion of the Stage 2 deck pour. See Subsection 802.15 for additional information regarding their removal.

DECK SUPPORT AT LONGITUDINAL CONSTRUCTION JOINT

Looking Ahead



DETAILS FOR BLOCKING EXPANSION JOINT DEVICE



JOINT SEAL PLACEMENT AT SIDEWALK & PARAPET

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
6-5-17
CHARLES R. ELLIS

BRIDGE ENGINEER

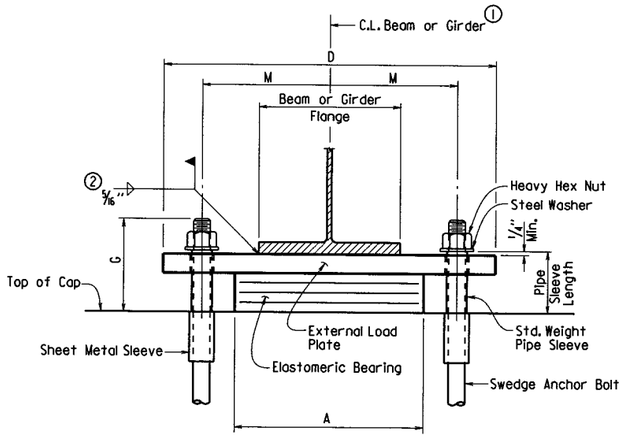
SHEET 6 OF 6
DETAILS OF 188'-0" CONTINUOUS COMPOSITE W-BEAM UNIT
HURRICANE CREEK
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: BHS DATE: 6/1/15 FILENAME: b061335_sl.dgn
CHECKED BY: DHP DATE: 6/2/17 SCALE: No Scale
DESIGNED BY: BHS DATE: 1/2015
BRIDGE NO. 07365 DRAWING NO. 57796

PRINT DATE: 6/5/2017

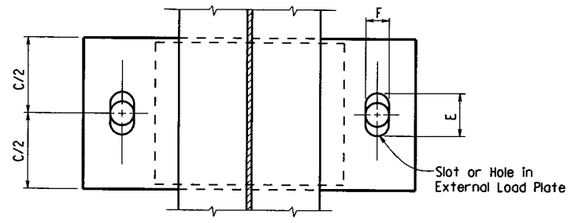
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	170	303

① 07365 - ELASTOMERIC BEARINGS - 57797



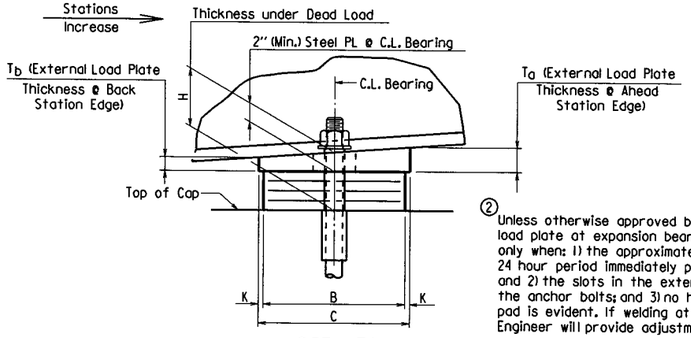
FRONT VIEW

① C.L Elastomeric Pad shall be aligned with C.L. Beam or Girder.



PLAN VIEW

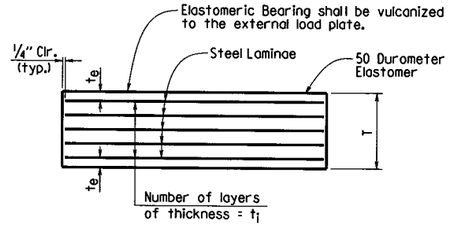
The direction of bevel of the external load plate may not be accurately depicted with respect to Ta and Tb values shown in the "Table of Fabricator Variables".



SIDE VIEW

② Unless otherwise approved by the Engineer, welding of the external load plate at expansion bearings to the beam or 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.

Care shall be taken to ensure that the external load plate is in full and complete contact with the beam or girder flange before welding begins.



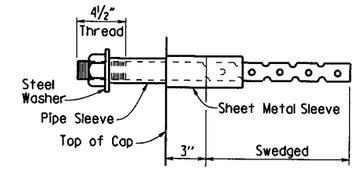
t_e = Thickness of elastomer cover on top and bottom of pad

t_i = Thickness of elastomer between steel laminae

N = Number of elastomer layers of thickness t_i

ELASTOMERIC BEARING

Prior to erection of the beams or girders, the Contractor shall verify the orientation of the bearings with respect to T_a and T_b.



ANCHOR BOLT DETAIL

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 will not be paid for directly, but will be considered subsidiary to the item "Structural Steel in Beam Spans (M 270, Gr. 50W)"

TABLE OF FABRICATOR VARIABLES

③ Maximum Design Load = Service I Limit State

BRIDGE NO.	LOCATION BENT NO(S).	LOCATION BEAM OR GIRDER NO.	BEARING TYPE	NO. of BEARINGS EACH BENT	③ MAXIMUM DESIGN LOAD (KIPS)	G	H	ELASTOMERIC PAD A	B	N	t_i	t_e	NO. & THICKNESS OF STEEL LAMINAE	T	EXTERNAL LOAD PLATE C	D	E	F	K	M	T_a	T_b	ANCHOR BOLT ANCHOR BOLT (ø x L)	GRADE	PIPE SLEEVE SIZE (ø x L)	SHEET METAL SLEEVE SIZE (ø x L)	STEEL WASHER SIZE (O.D.)
07365	1 & 4	1 Thru 9	Exp.	9	118	7 1/4"	4 3/8"	12"	10"	3	1/2"	1/4"	4 @ 12 ga.	2 1/16"	11"	22 1/2"	3 3/4"	2 1/4"	1/2"	8 1/2"	1.97"	2.03"	1 1/2" x 24"	55	1 1/2" x 4 5/8"	3" x 6"	3"
	2 & 3	1 Thru 9	Fix.	9	237	7 1/4"	3 15/16"	17"	12"	2	1/2"	1/4"	3 @ 12 ga.	1 13/16"	13"	29"	3 1/8"	3 1/8"	1/2"	11 1/4"	1.97"	2.03"	2" x 29"	55	2 1/2" x 4 1/8"	4" x 6"	3 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 shall conform to AASHTO M 270, Grade 50W. 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 shall be completely fabricated (including bevel and bolt holes) and shall be cleaned before vulcanizing to the elastomeric bearing. The surface 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 and 807.84(e) for unpainted Grade 50W 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 Beam Spans (M 270, Gr. 50W)". External load plates will not be measured and paid for separately, but will be considered incidental to the unit price bid for "Elastomeric Bearings".

Bearings 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.

STATE OF ARKANSAS
Charles R. Ellis
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6-5-17
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DETAILS OF ELASTOMERIC BEARINGS HURRICANE CREEK

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: BHS DATE: 6/15/2015 FILENAME: b061335_el.dgn

CHECKED BY: DHP DATE: 6/5/17 SCALE: None

DESIGNED BY: BHS DATE: 6/2015

BRIDGE NO. 07365 DRAWING NO. 57797

PRINT DATE: 6/5/2017

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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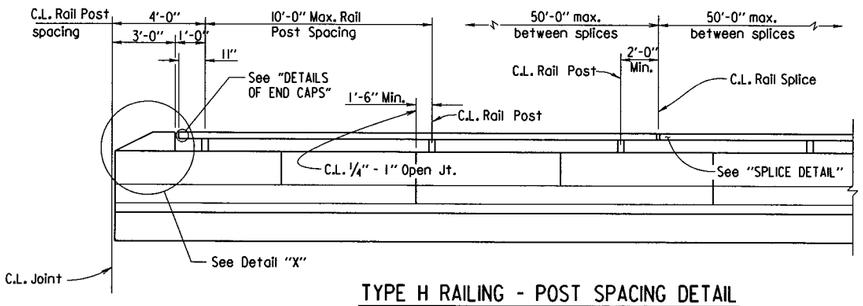
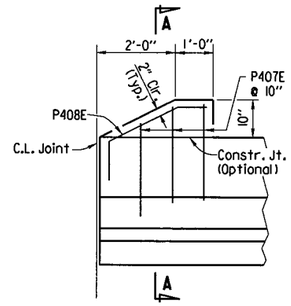
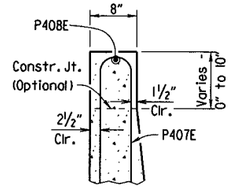
				JOB NO.		061335	171	303
				①		07365 - BRIDGE RAILING - 57798		



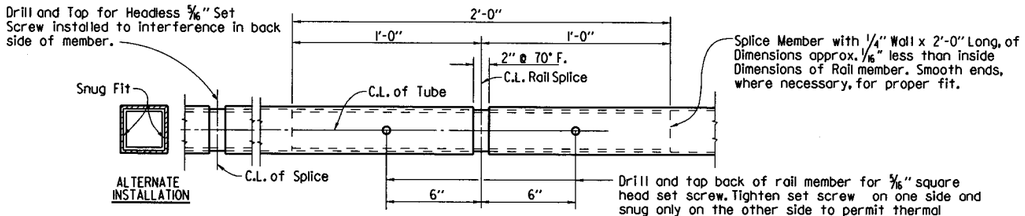
TYPE H RAILING - POST SPACING DETAIL



DETAIL X

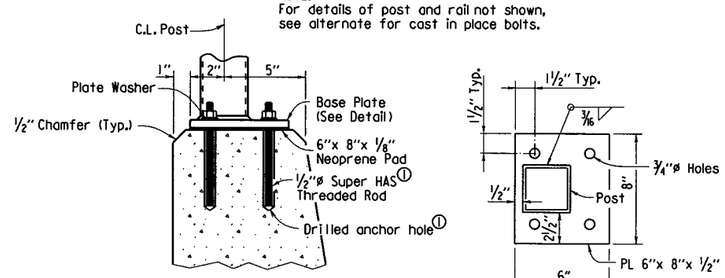


SECTION A-A



SPLICE DETAIL

NOTE:
For details of post and rail not shown, see alternate for cast in place bolts.

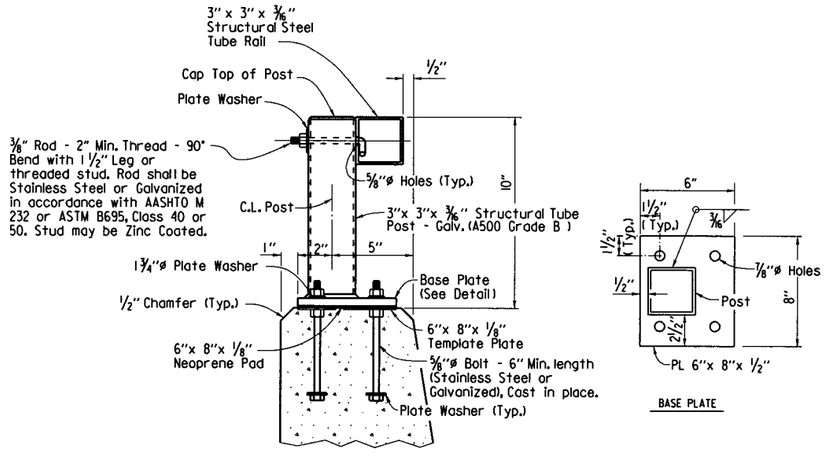


①HILTI HIT RE 500 Epoxy Adhesive Anchor System with 4½" embedment or an approved equal.

The HILTI Epoxy Adhesive Anchor System shall be installed in accordance with Manufacturer's recommendations.

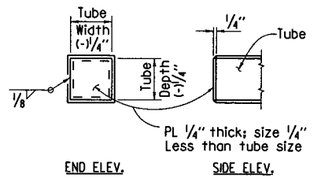
BASE PLATE

DETAILS OF ALTERNATE POST ANCHOR SYSTEM
(EPOXY ADHESIVE ANCHORS)



BASE PLATE

DETAILS OF POST ANCHOR SYSTEM
(CAST IN PLACE BOLTS)



END ELEV. SIDE ELEV.

DETAILS OF END CAPS

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
6-5-17
CHARLES R. ELLIS

BRIDGE ENGINEER

MATERIALS:

Rail tubing, posts, end caps, and base plates shall conform to AASHTO M 270, Gr. 36 or ASTM A 500-Grade B, and shall be galvanized after fabrication in accordance with Subsection 806.02(c). Galvanized surfaces shall be prepared in accordance with Subsection 807.87.

Cast-in-place anchor bolts, nuts, washers, and set screws shall be galvanized high-strength steel or stainless steel. Mixing of galvanized fasteners and stainless steel will not be permitted.

High-Strength Steel:
Cast-in-place anchor bolts shall conform to ASTM A325, Type 1.
Nuts shall conform to ASTM A563, Grade DH or AASHTO M 292, Grade 2H.
Washers shall conform to ASTM F436.
Plate Washers shall conform to AASHTO M 270, Gr. 36.
Splice Set Screws shall conform to AASHTO M 270, Grade 36.
Anchor bolts, nuts, washers, plate washers, and set screws shall be galvanized in accordance with AASHTO M 232, Class C or ASTM B695, Class 50.

Stainless Steel:
Cast-in-place anchor bolts shall conform to ASTM A193 or A320-Grade B8 with a minimum yield strength of 80,000 psi.
Nuts shall conform to AASHTO M 292, Grade 8 or ASTM A563.
Washers shall conform to ASTM A240, Type 302.
Plate Washers shall conform to ASTM A240, Type 302.
Splice Set Screws shall conform to ASTM A193 or A320-Grade B8.

Threads on bolts, screws, and nuts shall conform to American Standard Coarse Series, Class 2 FIT, ASA Specification B1.1. Plate washers shall have dimensions meeting the requirements of ANSI/ASME B18.22.1, Type A plain washer (Wide Series). Neoprene pads shall conform to the requirements of Subsection 807.15(b).

GENERAL NOTES FOR BRIDGE RAILING:

Rail layout shall conform to vertical and horizontal alignment of bridge. All posts shall be vertical.

Maximum post spacing = 10'-0". Minimum distance from centerline post to centerline open or contraction joints in parapet rail = 1'-0".

Splices in rail tubing shall be at 50' maximum spacing. The centerline of splices shall be located a maximum of 2 feet from centerline of post. Rail sections shall be fabricated to attach to at least three posts.

Base plates shall not be placed upon areas that are improperly finished, deformed or irregular.

Bridge railing, including posts, template and base plates, fasteners, and neoprene pads shall be paid for at the contract unit price bid per linear foot for "Metal Bridge Railing (Type H)".

Shop drawings showing details of railing shall be submitted and approval secured prior to fabrication.

DETAILS OF METAL BRIDGE RAILING
HURRICANE CREEK
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

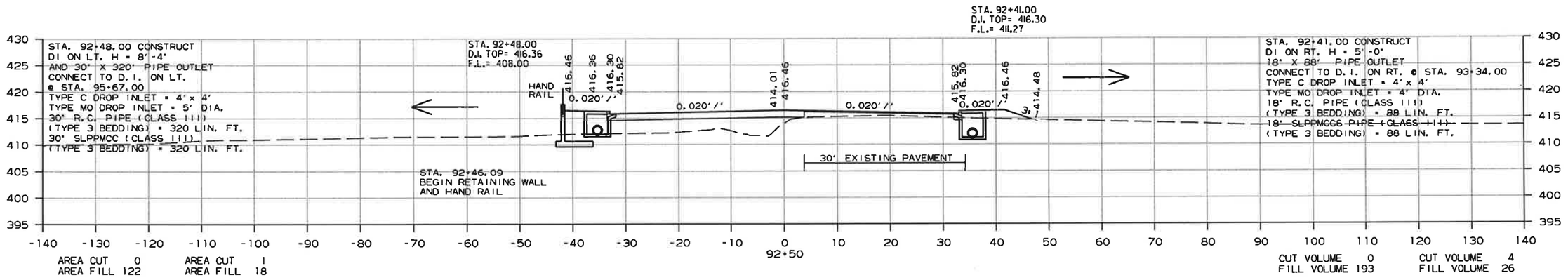
DRAWN BY: BHS DATE: 6/4/15 FILENAME: b061335_rl.dgn
CHECKED BY: DHP DATE: 6/5/17 SCALE: No Scale
DESIGNED BY: BHS DATE: 1/2015
BRIDGE NO. 07365 DRAWING NO. 57798

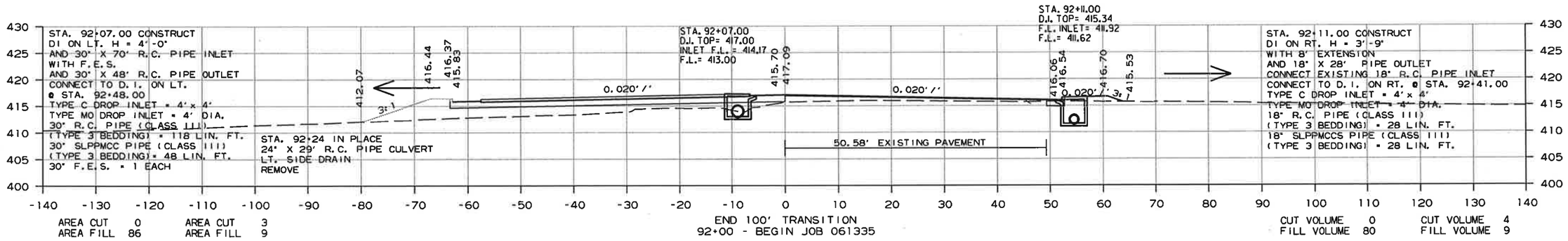
PRINT DATE: 6/5/2017

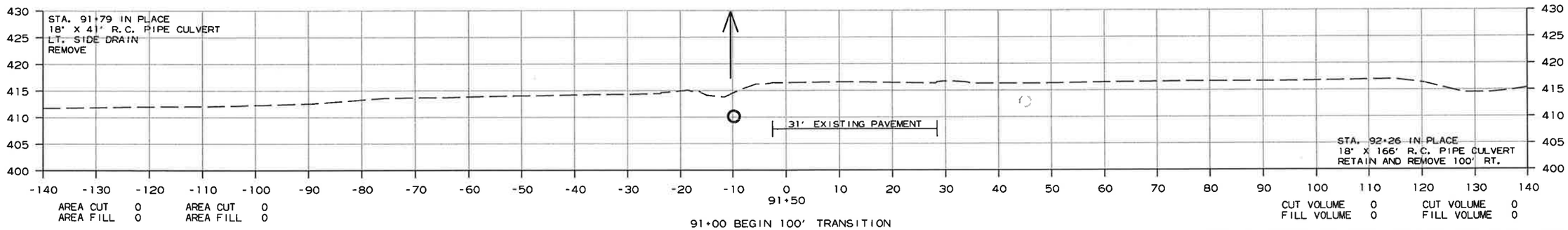
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	172	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2







CROSS SECTION STA. 91+50 TO STA. 92+50

12/7/2017

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
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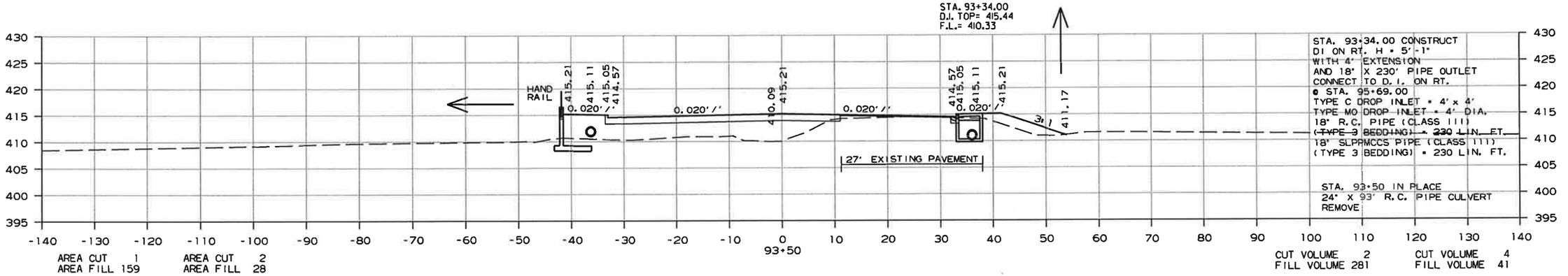
				JOB NO.		061335	173	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2



CROSS SECTION STA. 93+00 TO STA. 93+50

12/7/2017

R061335.DGN

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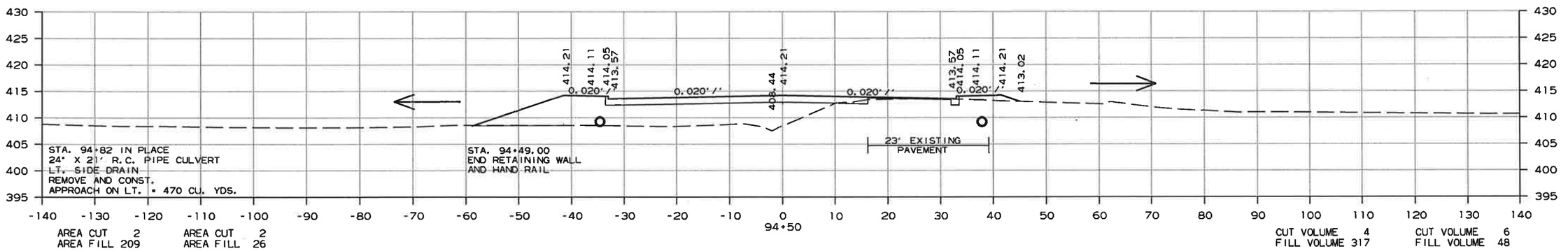
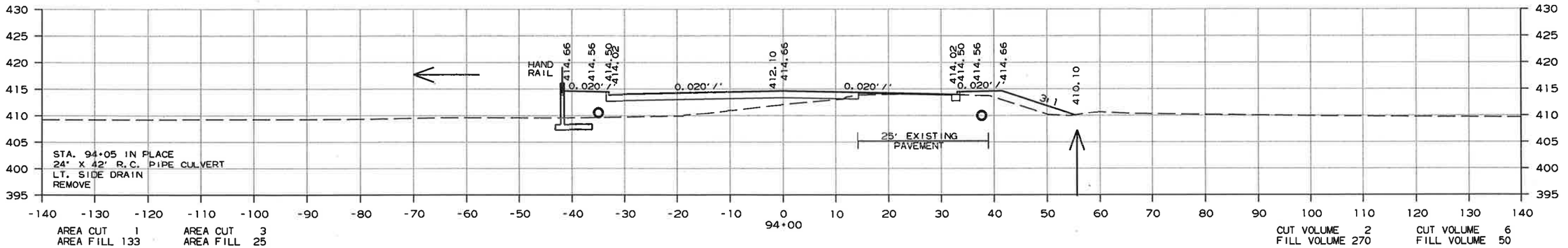
(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2





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12/7/2017

R061335.DGN

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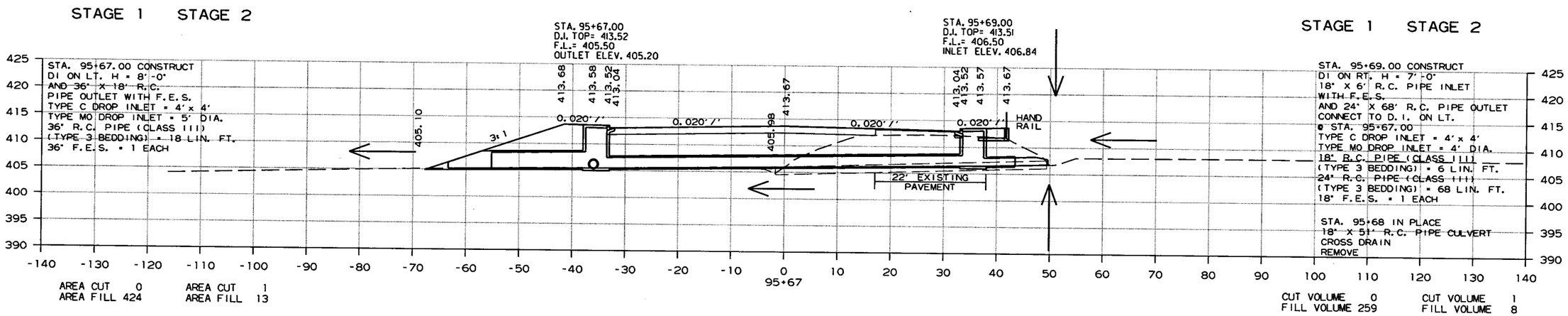

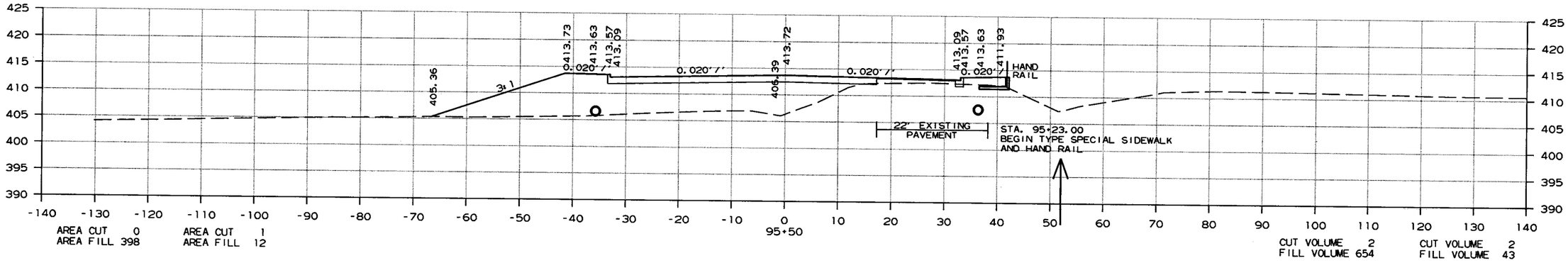

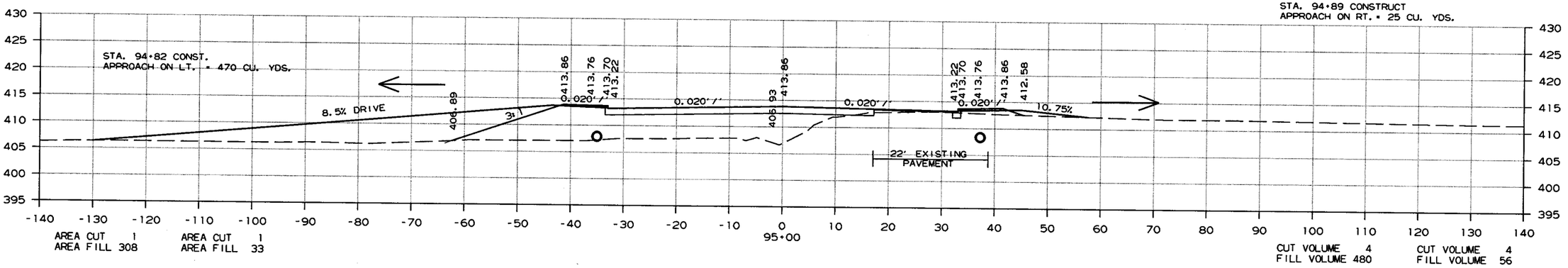

CROSS SECTION STA. 95+00 TO STA. 95+50

12/7/2017

R061335.DGN

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(2) CROSS SECTIONS

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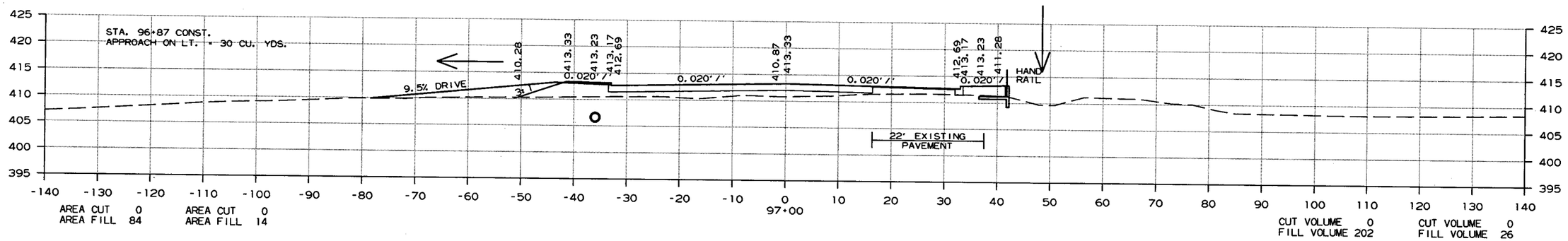

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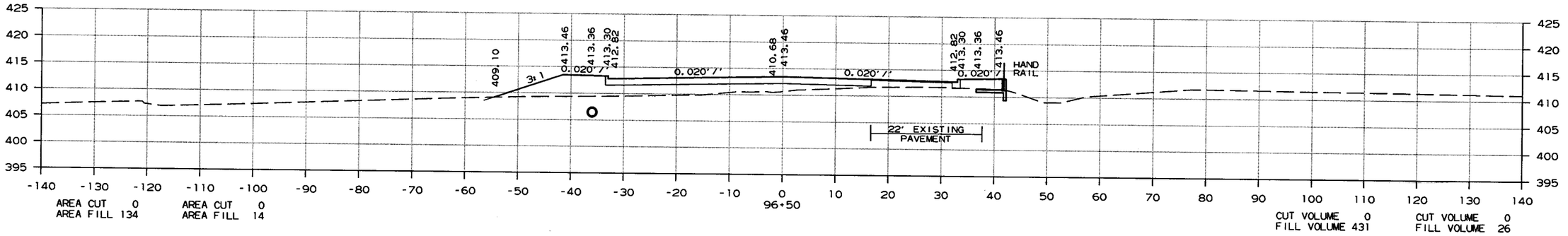

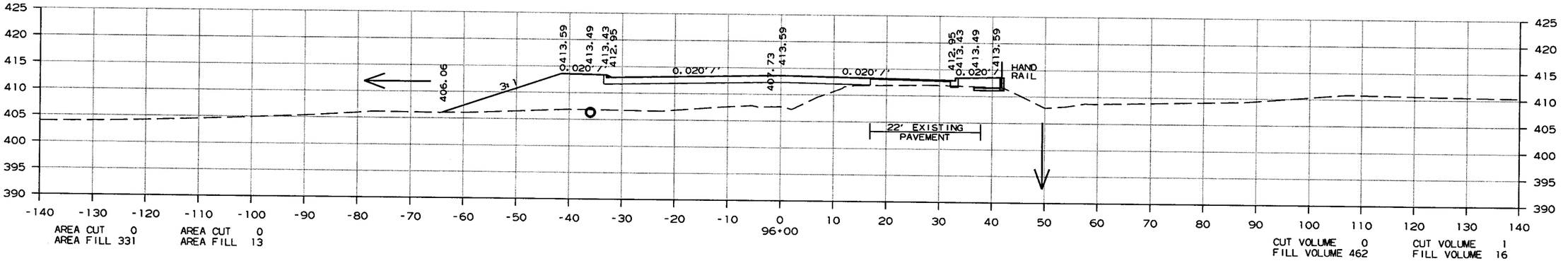

CROSS SECTION STA. 96+00 TO STA. 97+00

12/7/2017

R061335.DGN

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(2) CROSS SECTIONS

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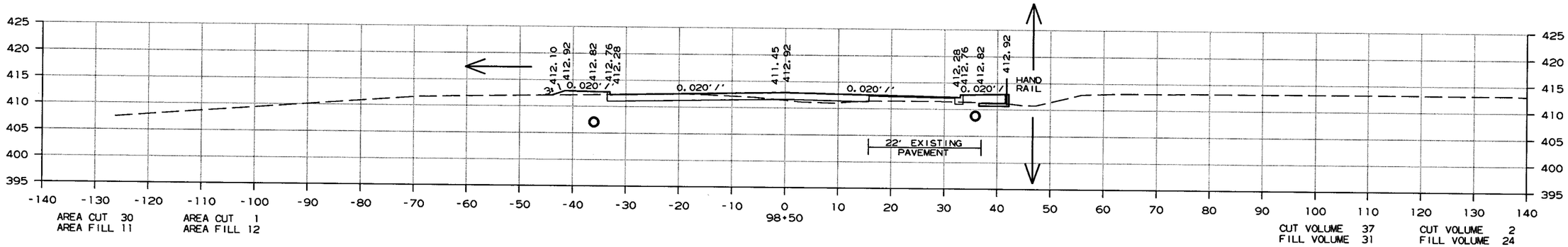

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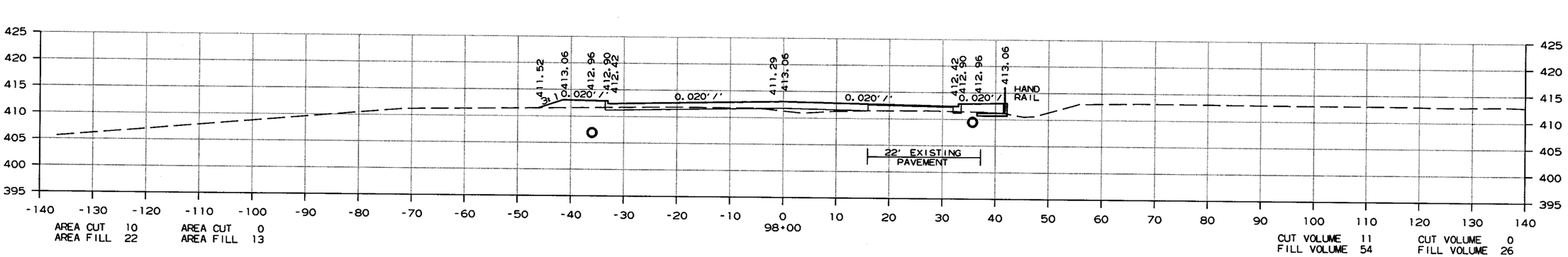
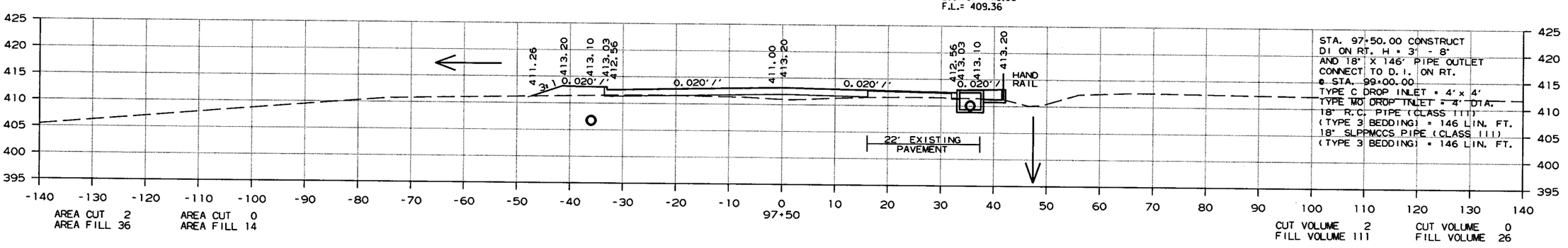


STA. 97+50.00
D.I. TOP= 413.03
F.L.= 409.36



STA. 97+50.00 CONSTRUCT DI ON RT. H = 3' - 8" AND 18" X 146' PIPE OUTLET CONNECT TO D. I. ON RT.
@ STA. 99+00.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 146 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 146 LIN. FT.

CROSS SECTION STA. 97+50 TO STA. 98+50

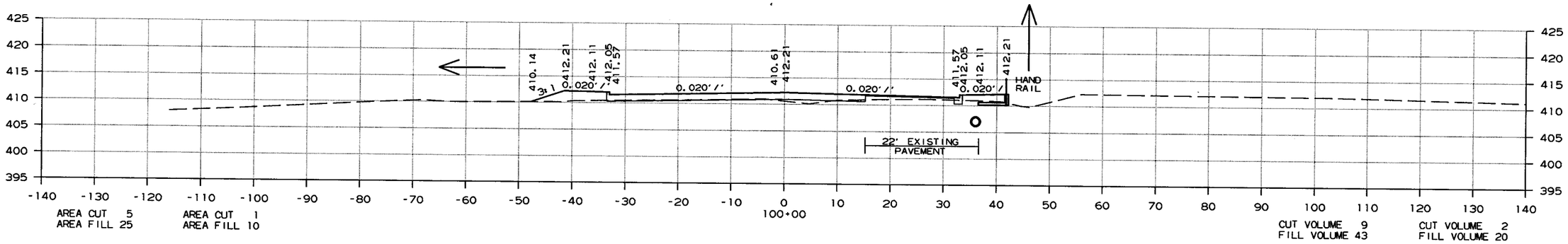
12/7/2017

R061335.DGN

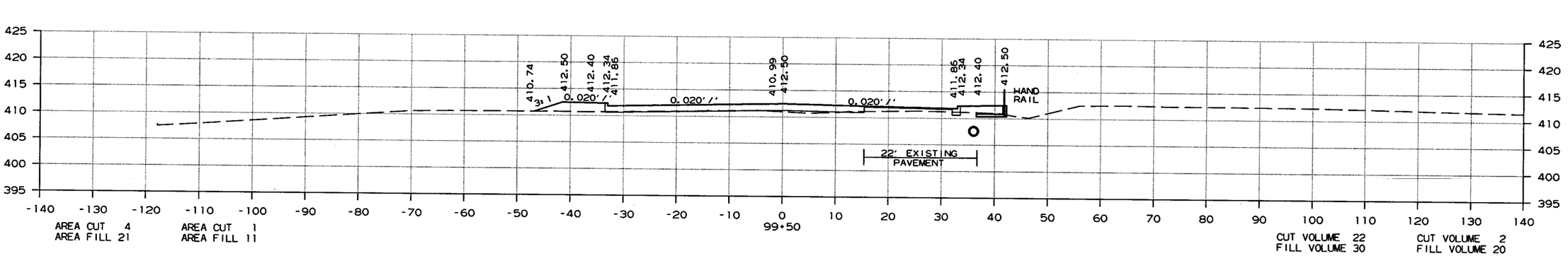
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	178	303

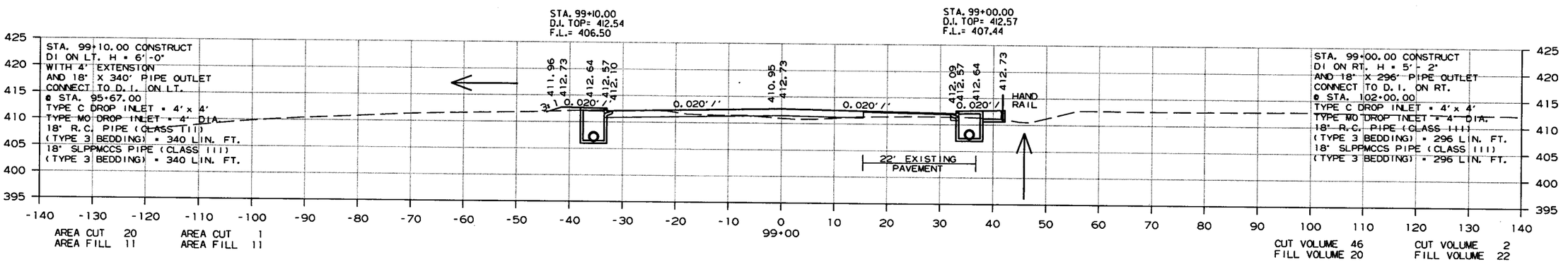
(2) CROSS SECTIONS

STAGE 1 STAGE 2



STAGE 1 STAGE 2





CROSS SECTION STA. 99+00 TO STA. 100+00

12/7/2017

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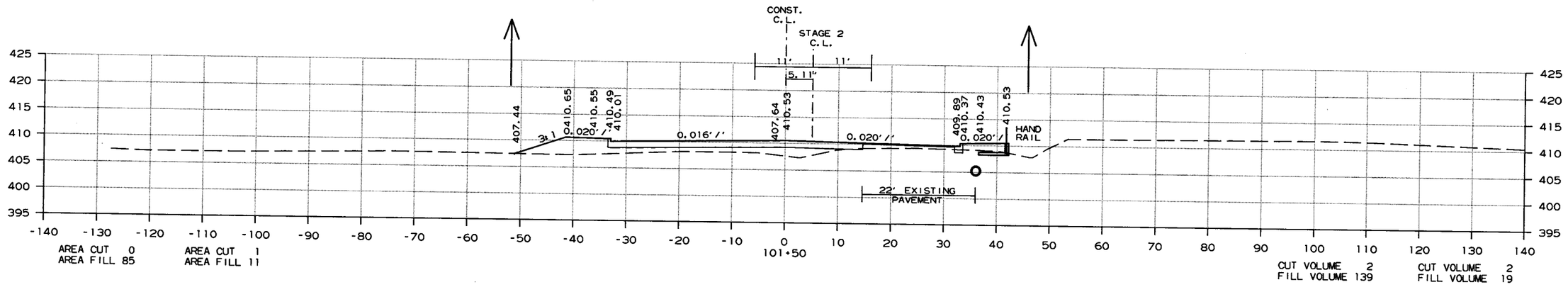
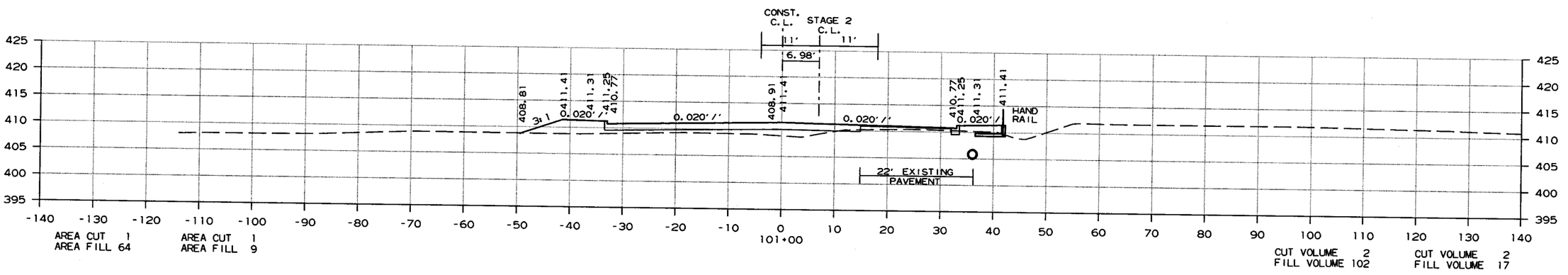
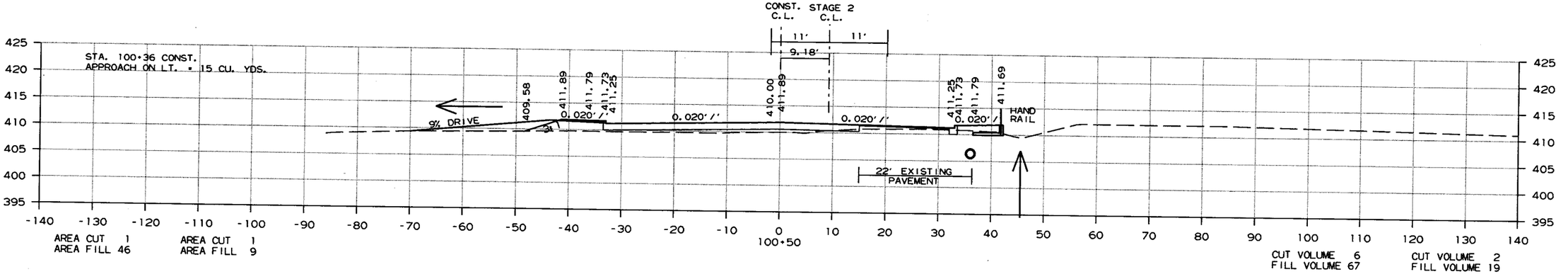
(2) CROSS SECTIONS

STAGE 1 STAGE 2



STAGE 1 STAGE 2





CROSS SECTION STA. 100+50 TO STA. 101+50

12/7/2017

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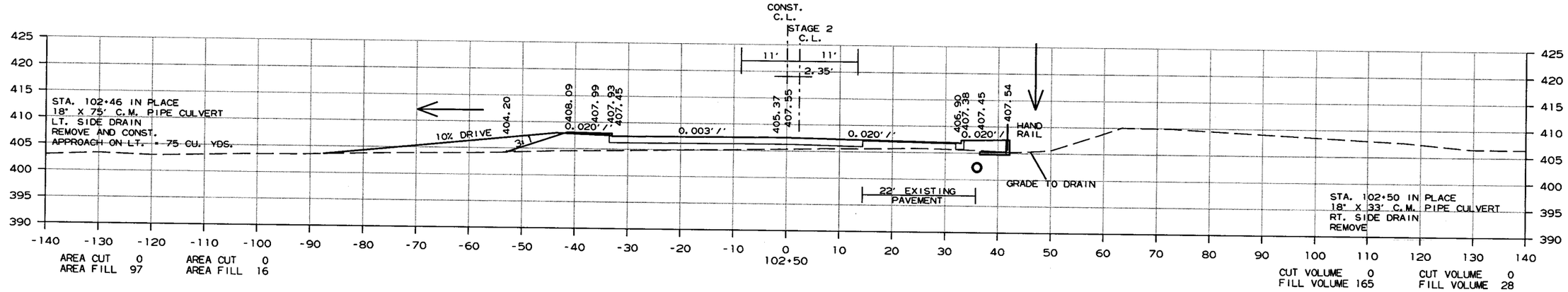
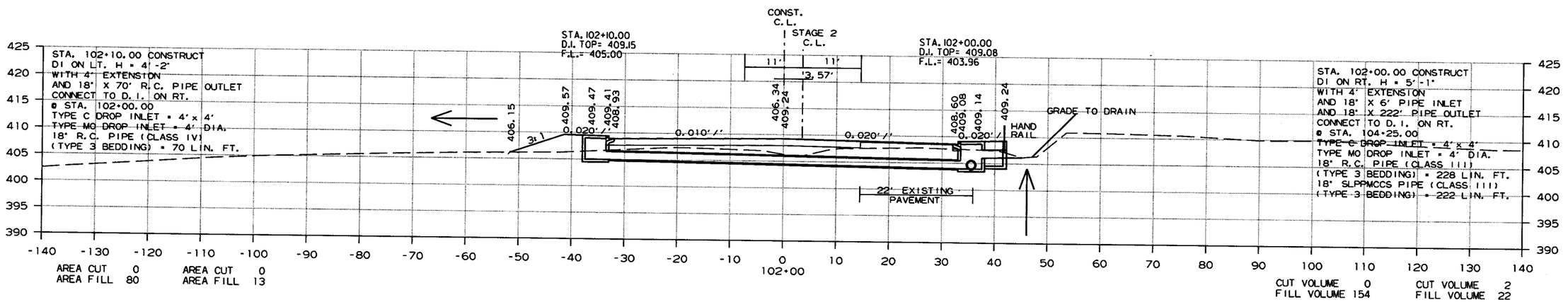
(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 102+00 TO STA. 102+50

12/7/2017

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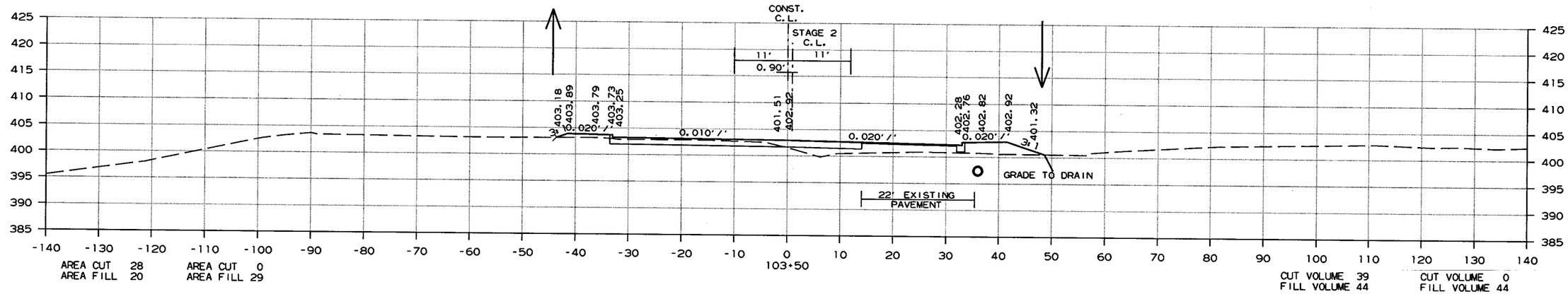
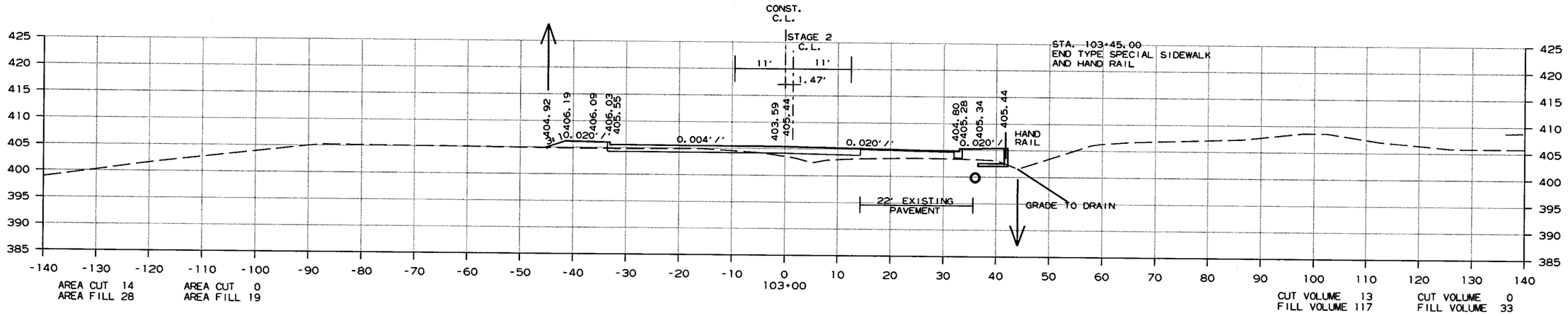
(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2





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12/7/2017

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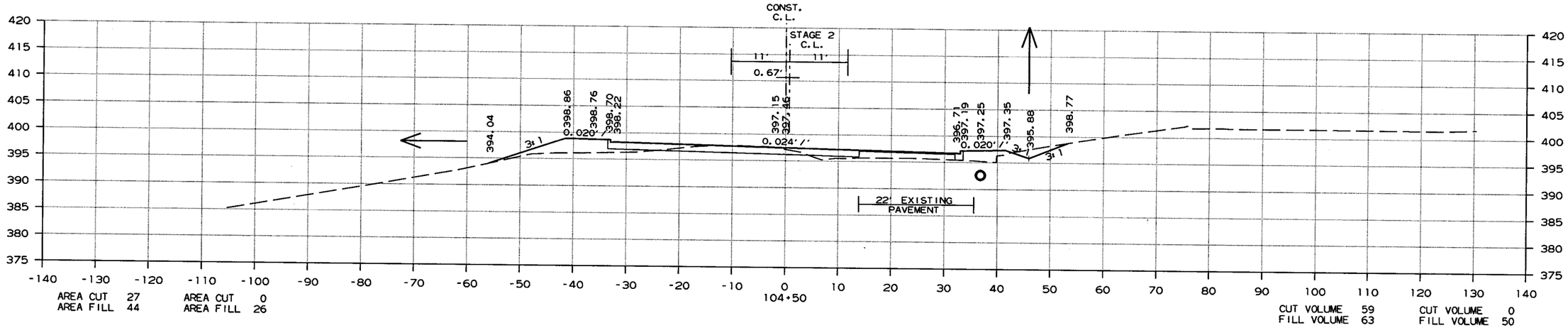
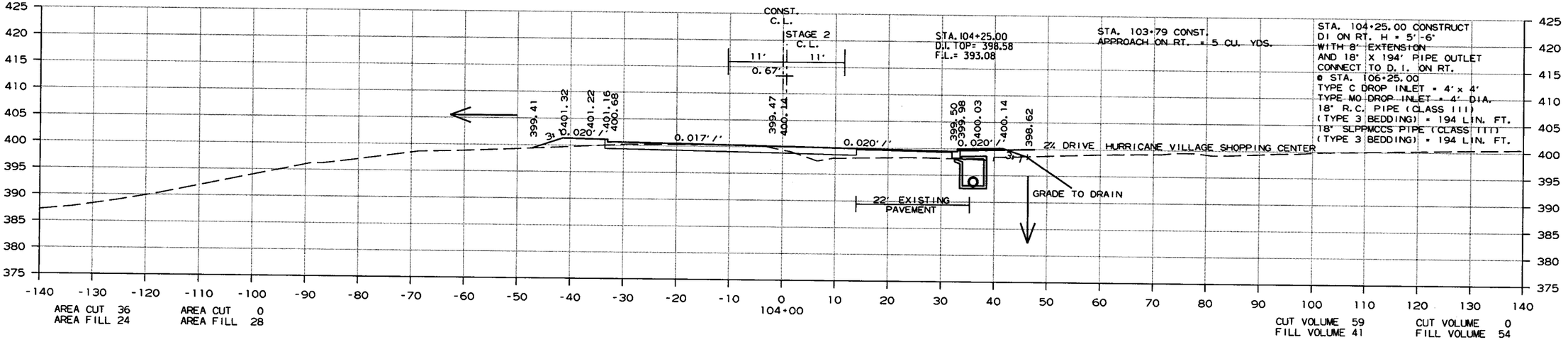
(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2





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12/7/2017

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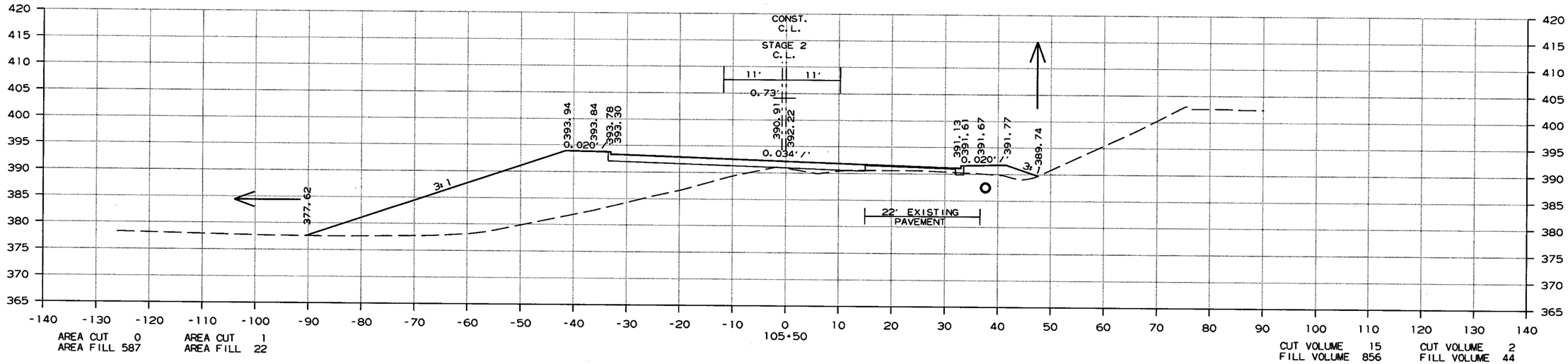
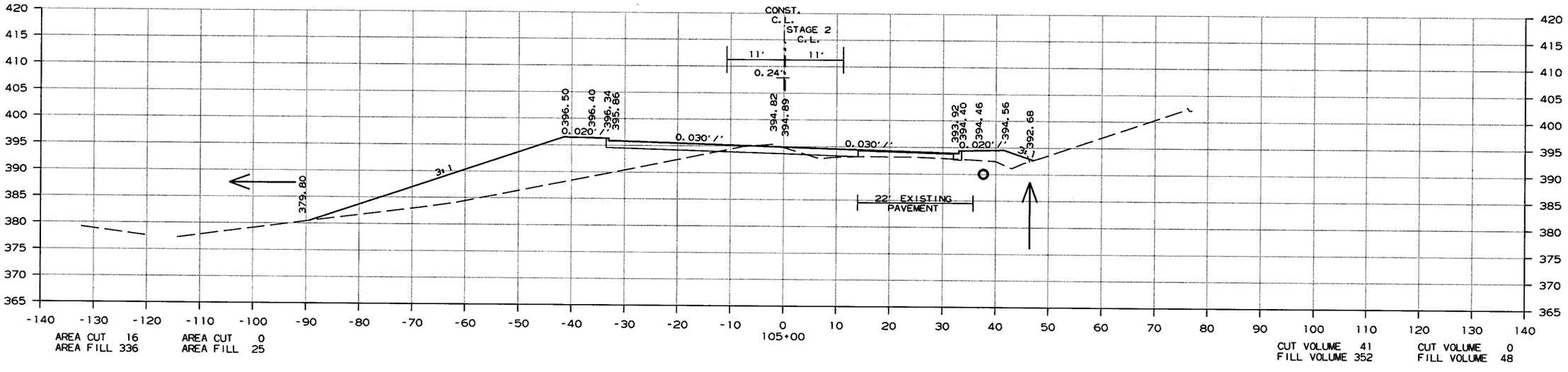
(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2





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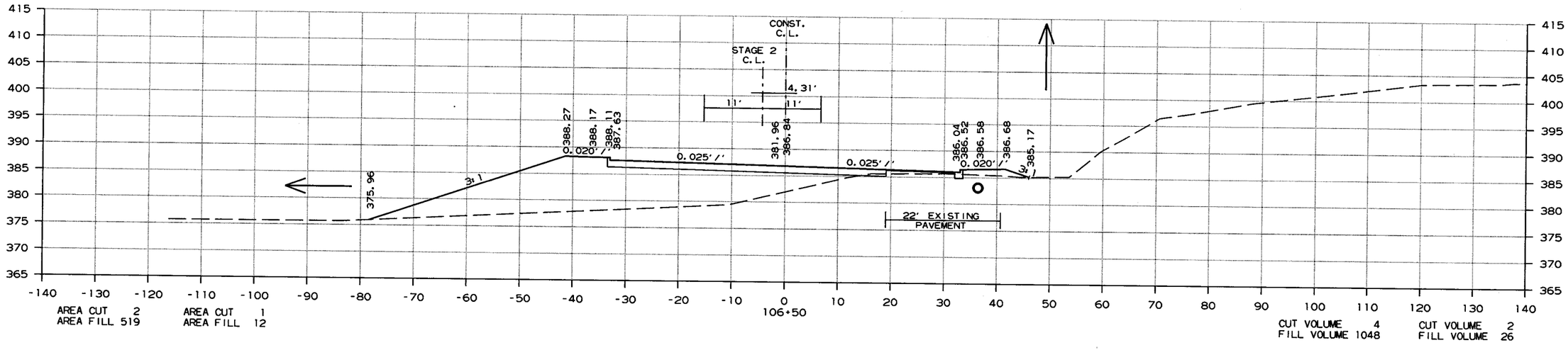
(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2



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12/7/2017

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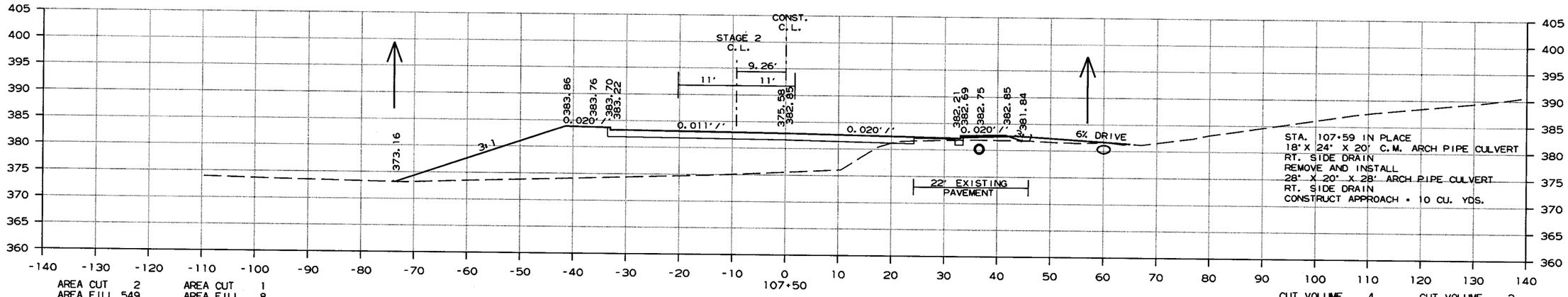
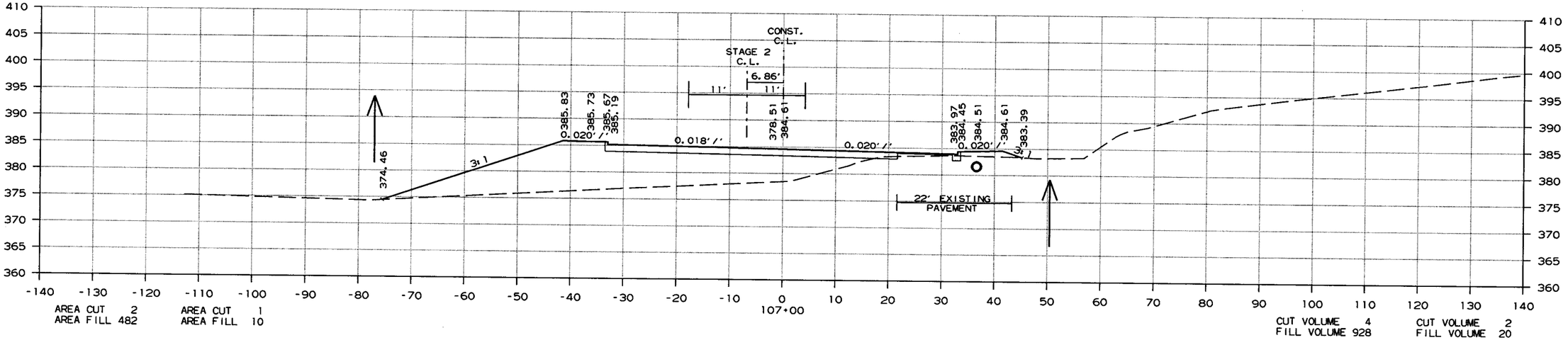
(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 107+00 TO STA. 107+50

12/7/2017

R061335.DGN

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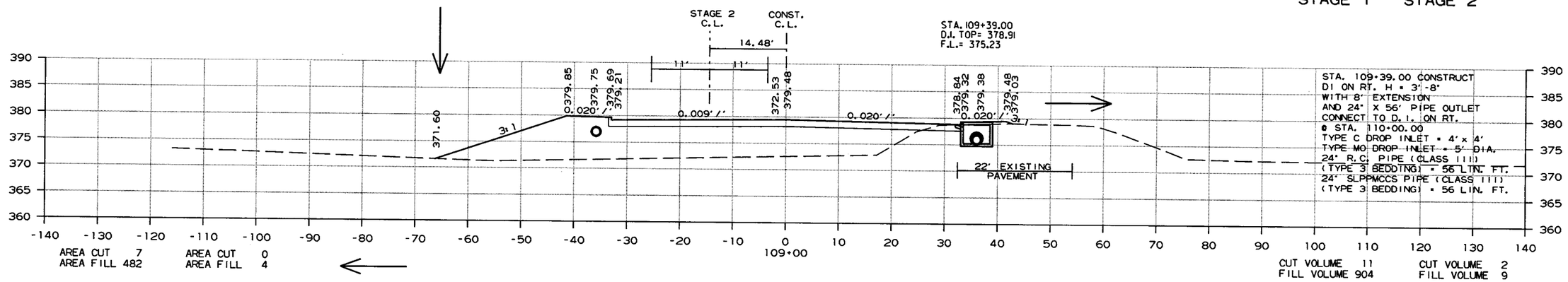

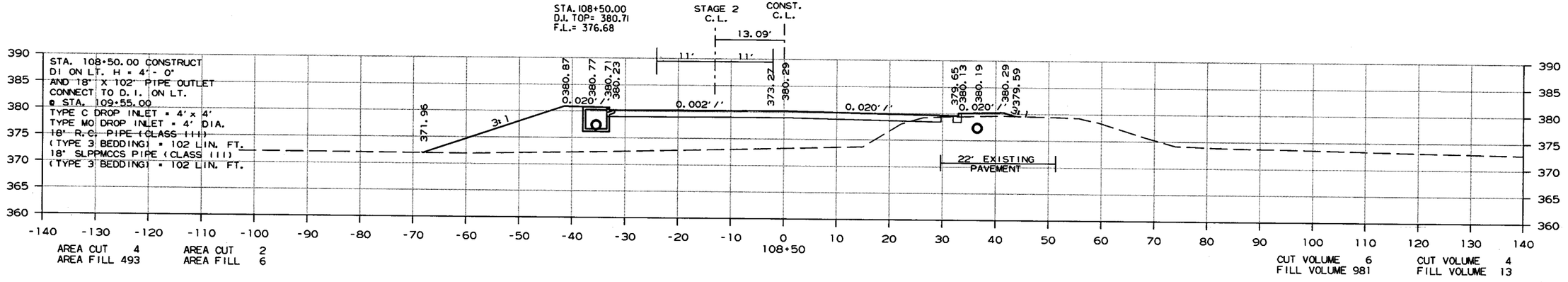

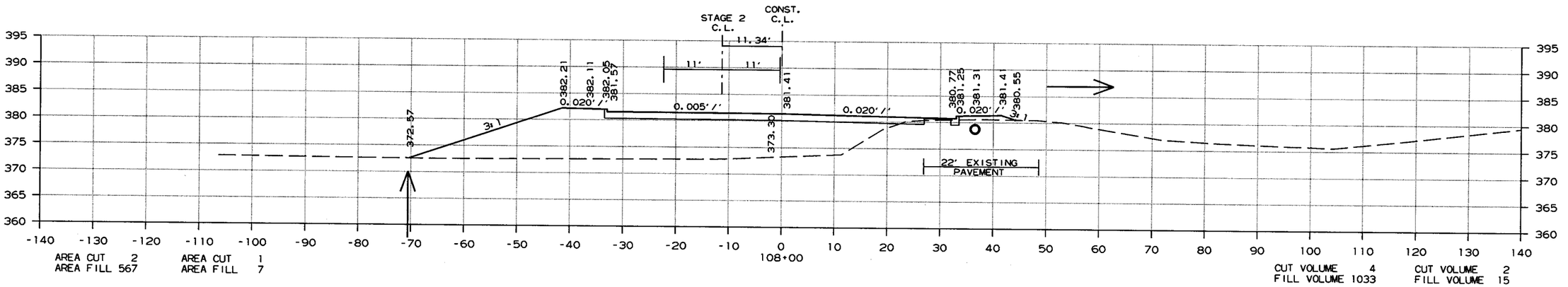

CROSS SECTION STA. 108+00 TO STA. 109+00

12/7/2017

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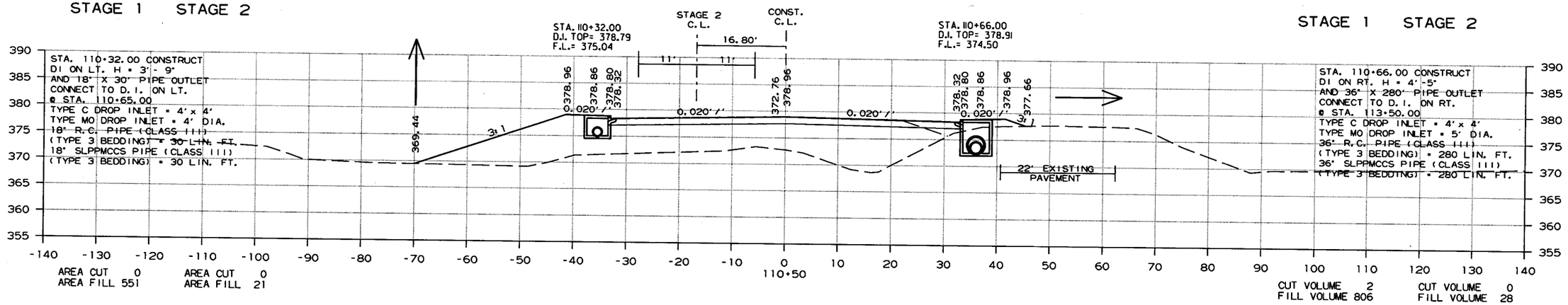
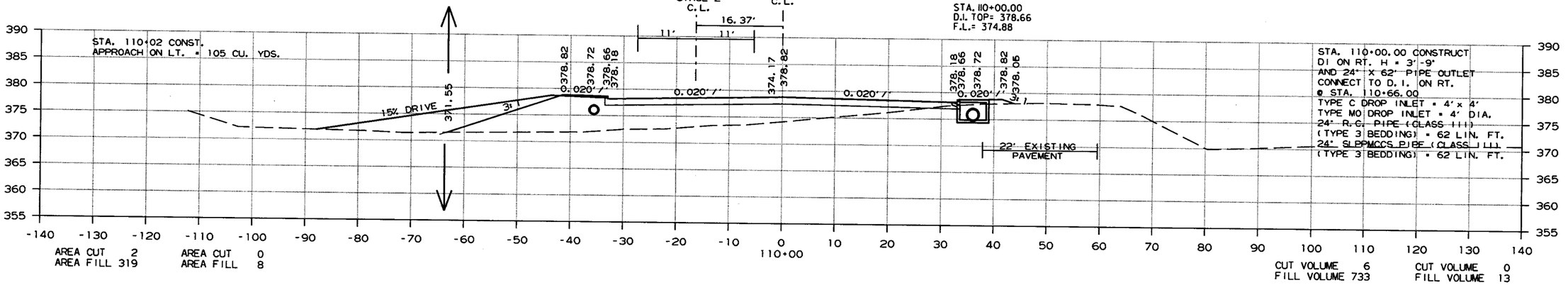
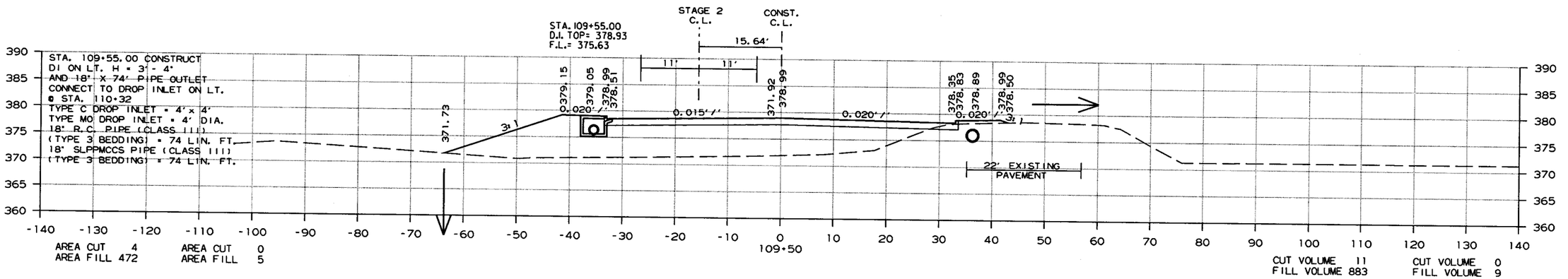
(2) CROSS SECTIONS







CROSS SECTION STA. 109+50 TO STA. 110+50

12/7/2017

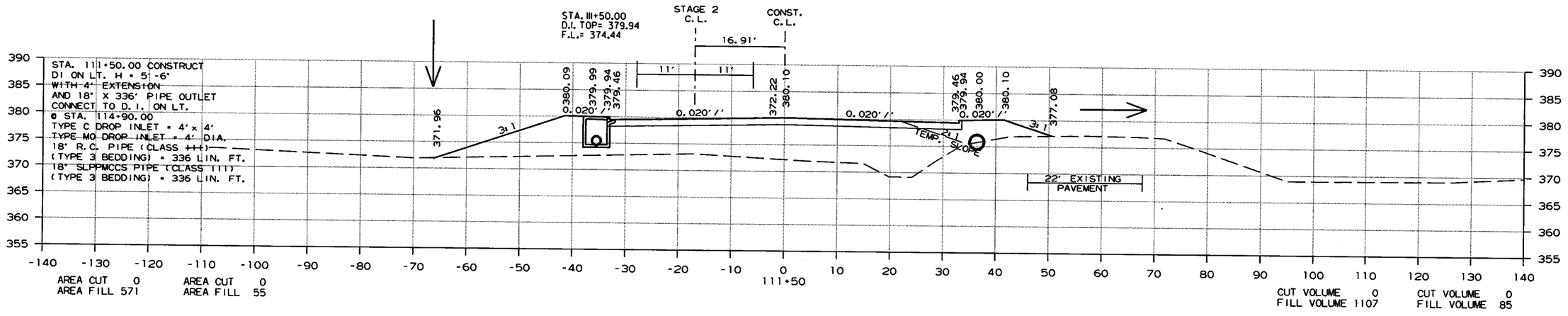
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	188	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2



CROSS SECTION STA. 111+00 TO STA. 111+50

12/7/2017

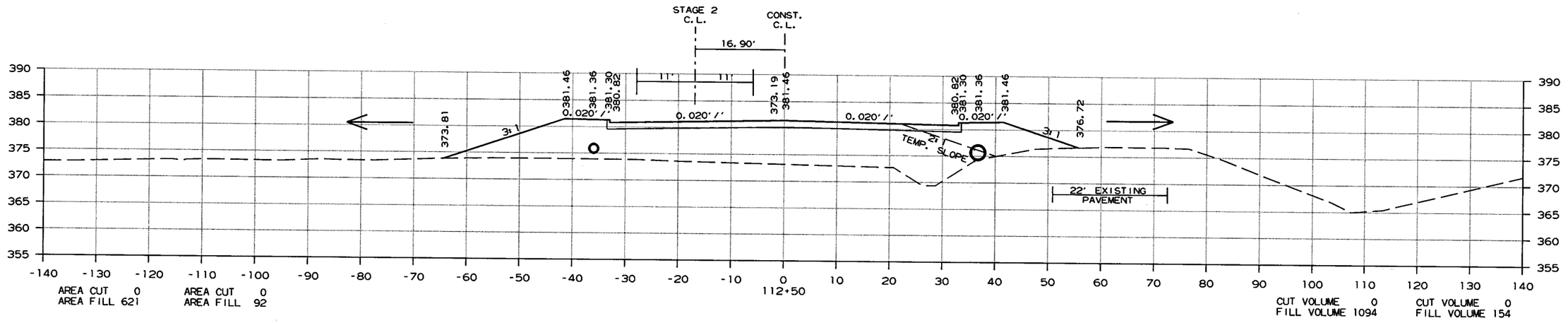
R061335.DGN

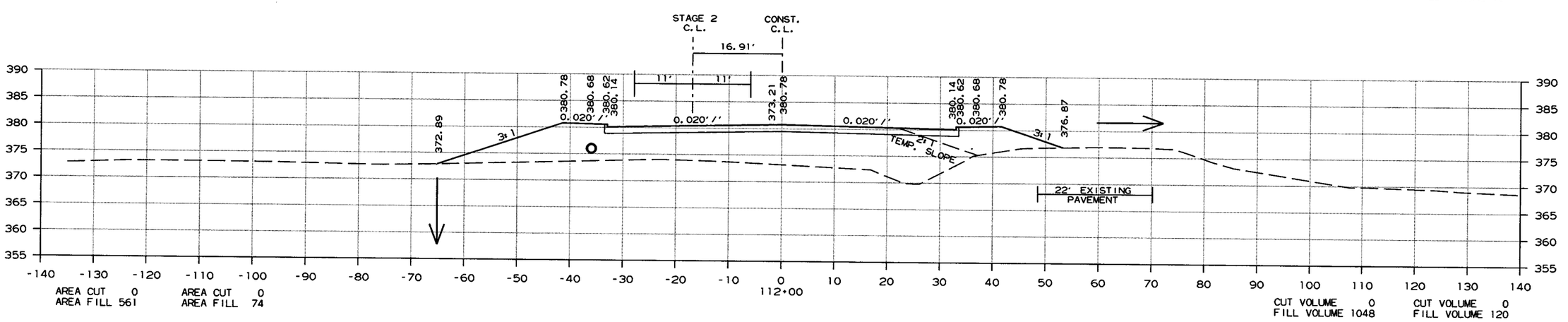
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	189	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 112+00 TO STA. 112+50

12/7/2017

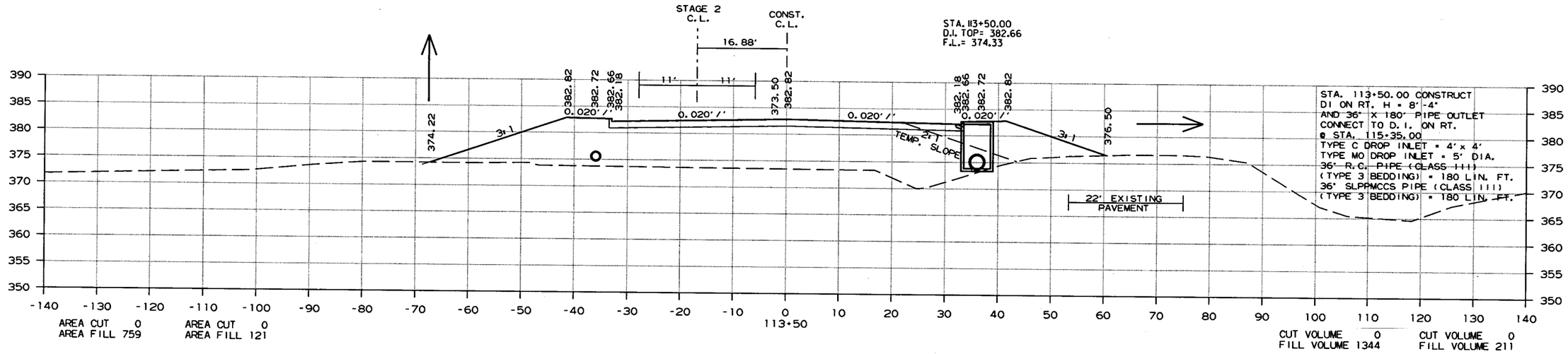
R061335.DGN

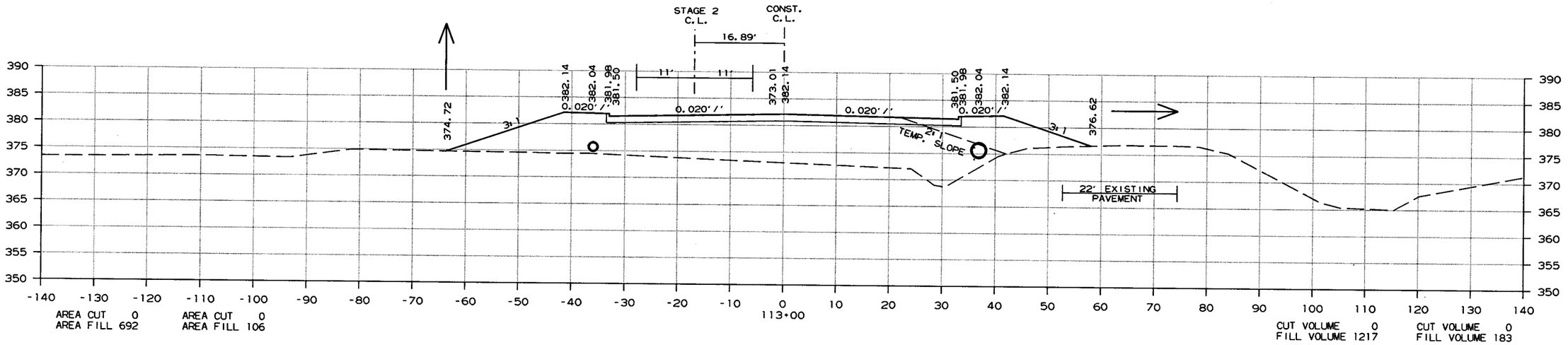
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	190	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 113+00 TO STA. 113+50

12/7/2017

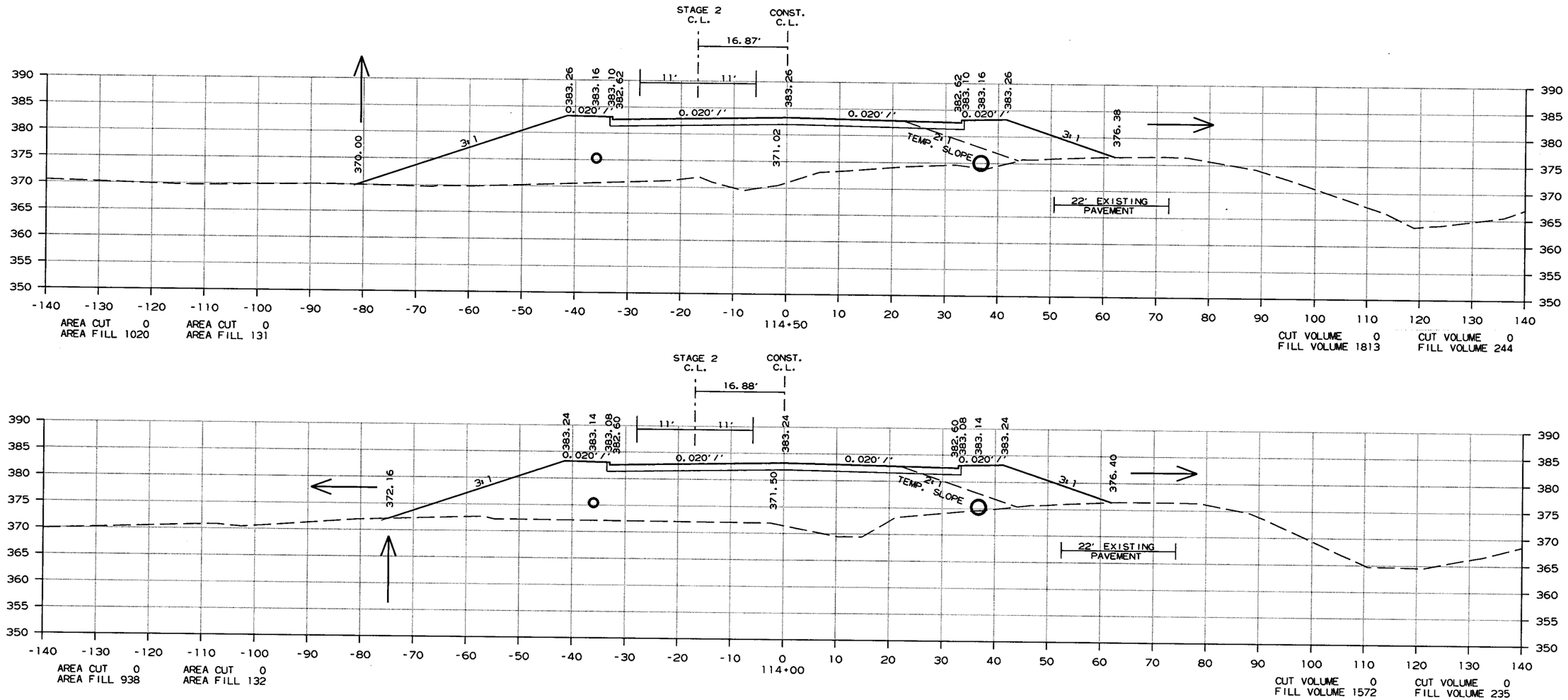
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	191	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2



CROSS SECTION STA. 114+00 TO STA. 114+50

12/7/2017

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	192	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2

AREA CUT 0 AREA CUT 0
AREA FILL 0 AREA FILL 0

AREA CUT 0 AREA CUT 0
AREA FILL 0 AREA FILL 0

STA. 115+54.09 TOE OF SLOPE

STAGE 2 C.L. CONST. C.L.

16.86'

11' 11'

382.79 382.69 382.63 382.15 371.67 382.79

0.020'/' 0.020'/' 0.020'/'

STA. 115+35.00
D.I. TOP= 382.70
F.L.= 373.32
OUTLET ELEV. 372.53

382.15 382.63 382.69 382.79

0.020'/' 0.020'/'

3:1 375.93

22' EXISTING PAVEMENT

STA. 115+35.00 CONSTRUCT
DI ON RT. H = 9'-5"
AND 36" X 72' R.C. PIPE
OUTLET WITH F.E.S.
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 5' DIA.
36" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 72 LIN. FT.
36" F.E.S. = 1 EACH

STA. 115+36.83 - STA. 117+27.17 CONSTRUCT
190.34' X 66'-0" CLEAR ROADWAY BR. NO. 07365
188'-0" CONTINUOUS COMP. W-BEAM UNIT (61'-66'-61')

CUT VOLUME 0 CUT VOLUME 0
FILL VOLUME 0 FILL VOLUME 0

CUT VOLUME 0 CUT VOLUME 0
FILL VOLUME 735 FILL VOLUME 86

390 385 380 375 370 365 360 355 350

-140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

115+50

STA. 115+36.83 -B.E.

AREA CUT 0 AREA CUT 0
AREA FILL 0 AREA FILL 0

AREA CUT 0 AREA CUT 0
AREA FILL 0 AREA FILL 0

STAGE 2 C.L. CONST. C.L.

16.86'

11' 11'

383.03 382.93 382.87 382.39 383.03

0.020'/' 0.020'/' 0.020'/'

382.39 382.87 382.93 383.03

0.020'/'

3:1 376.22

TEMP. 2% SLOPE

373.00

22' EXISTING PAVEMENT

STA. 114+90.00 CONSTRUCT
DI ON LT. H = 8'-6"
AND 18" X 38' R.C. PIPE
OUTLET WITH F.E.S.
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 38 LIN. FT.
18" F.E.S. = 1 EACH

368.88

3:1

STA. 114+90.00
D.I. TOP= 382.92
F.L.= 374.44
OUTLET ELEV. 368.92

CUT VOLUME 0 CUT VOLUME 0
FILL VOLUME 1937 FILL VOLUME 239

390 385 380 375 370 365 360 355 350

-140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

115+00

AREA CUT 0 AREA CUT 0
AREA FILL 1071 AREA FILL 126

CROSS SECTION STA. 115+00 TO STA. 115+50

12/7/2017

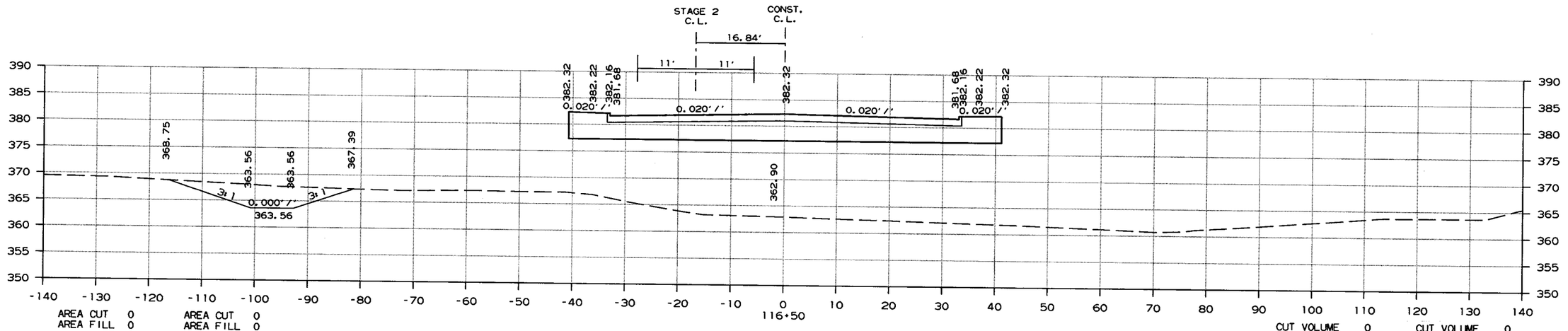
R061335.DGN

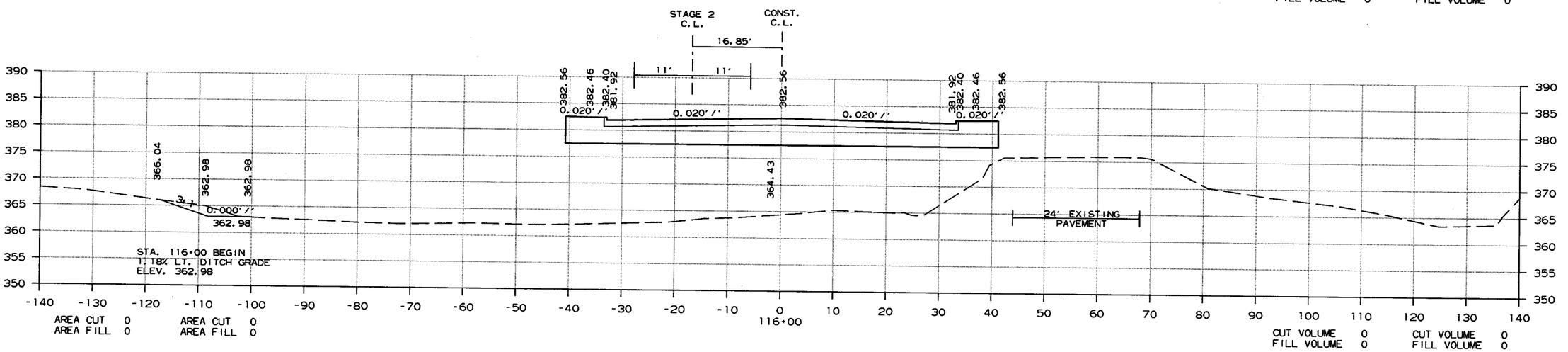
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	193	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 116+00 TO STA. 116+50

12/7/2017

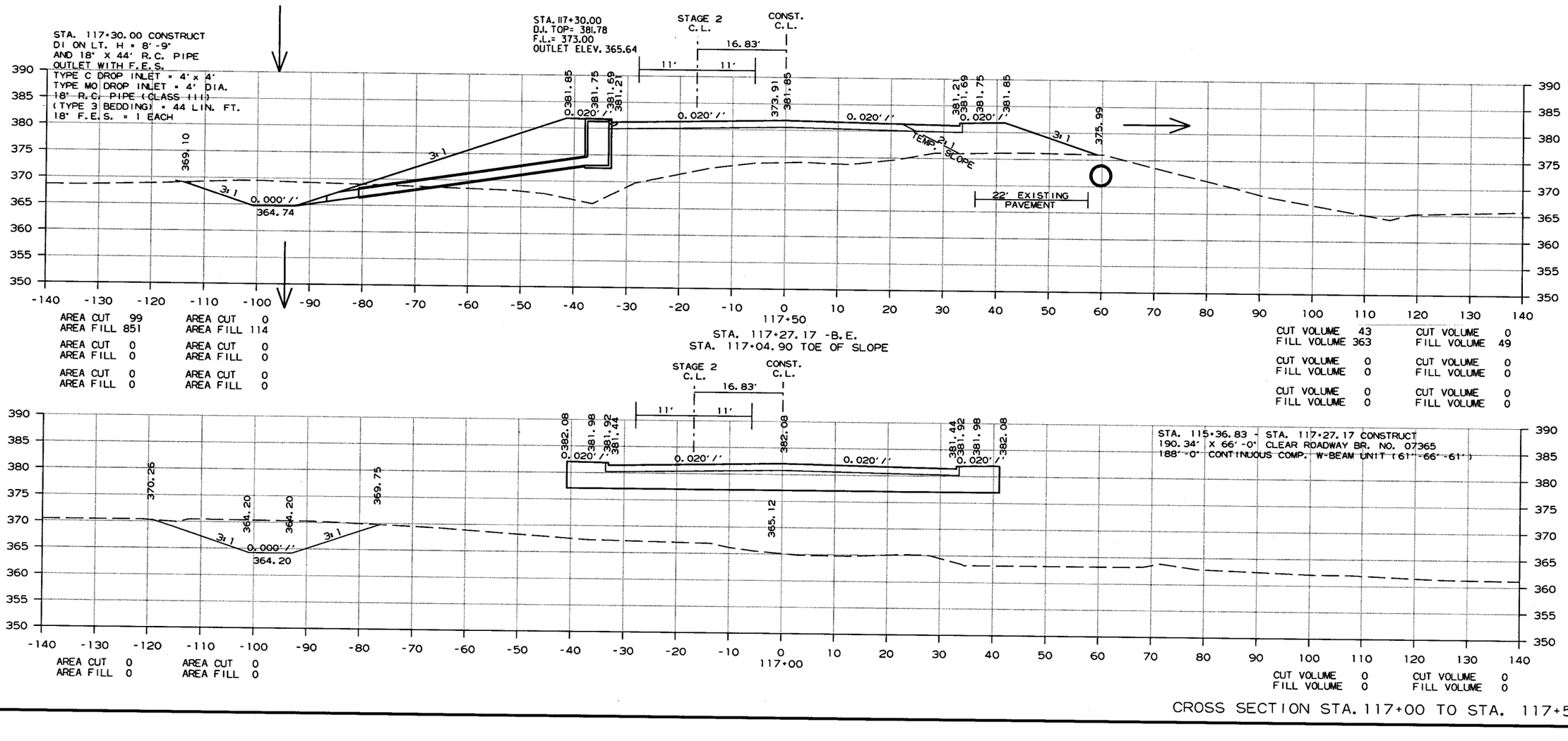
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	194	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2



CROSS SECTION STA. 117+00 TO STA. 117+50

12/7/2017

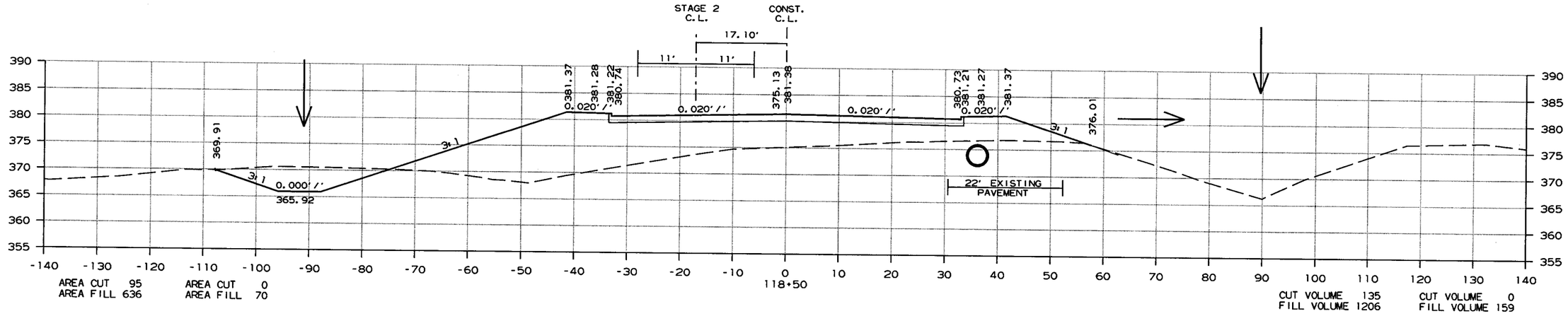
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	195	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2



CROSS SECTION STA. 118+00 TO STA. 118+50

12/7/2017

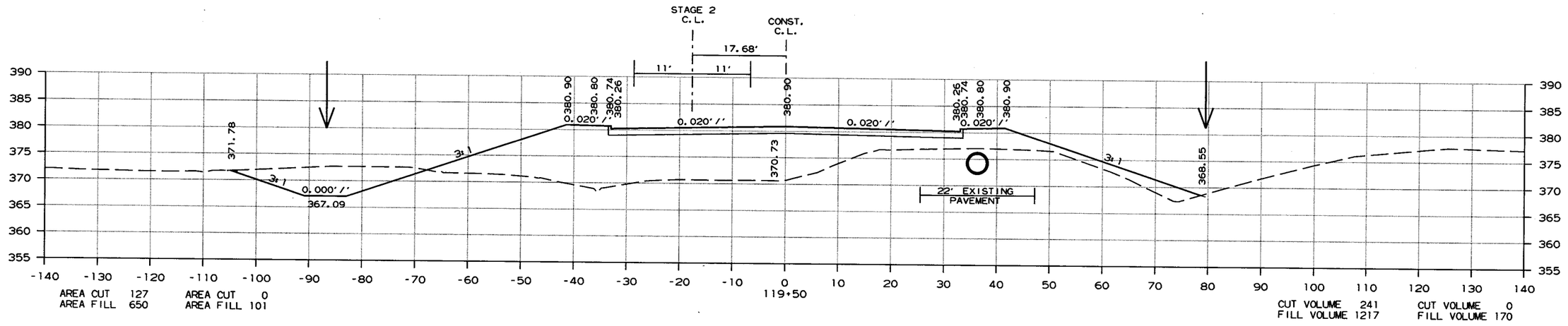
R061335.DGN

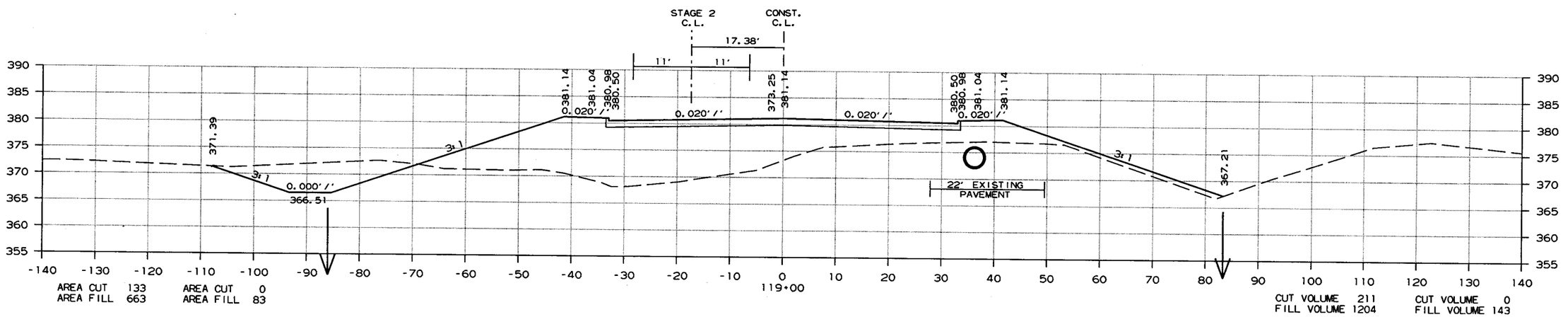
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	196	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 119+00 TO STA. 119+50

12/7/2017

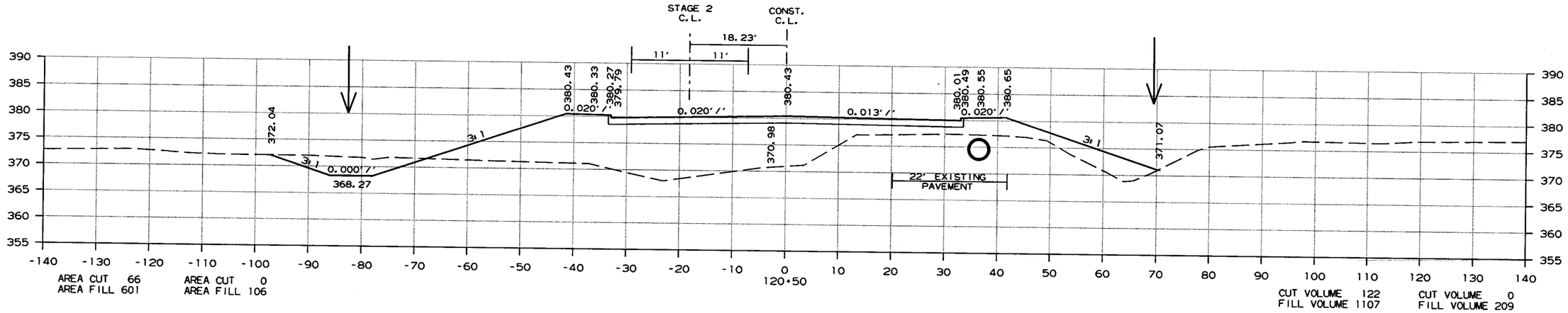
R061335.DGN

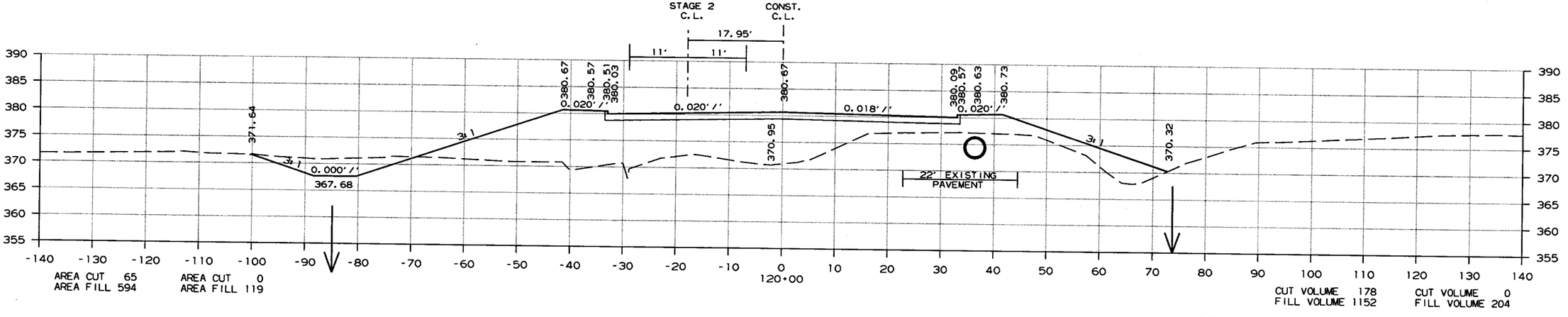
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	197	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 120+00 TO STA. 120+50

12/7/2017

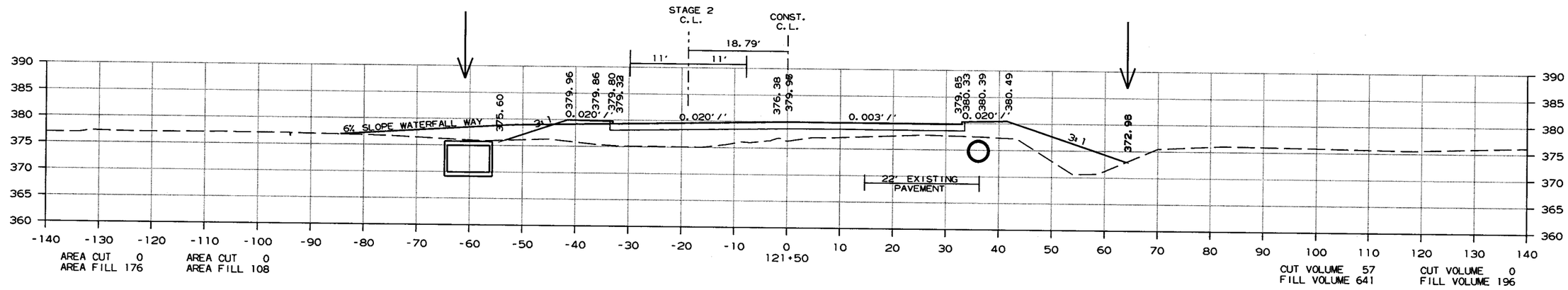
R061335.DGN

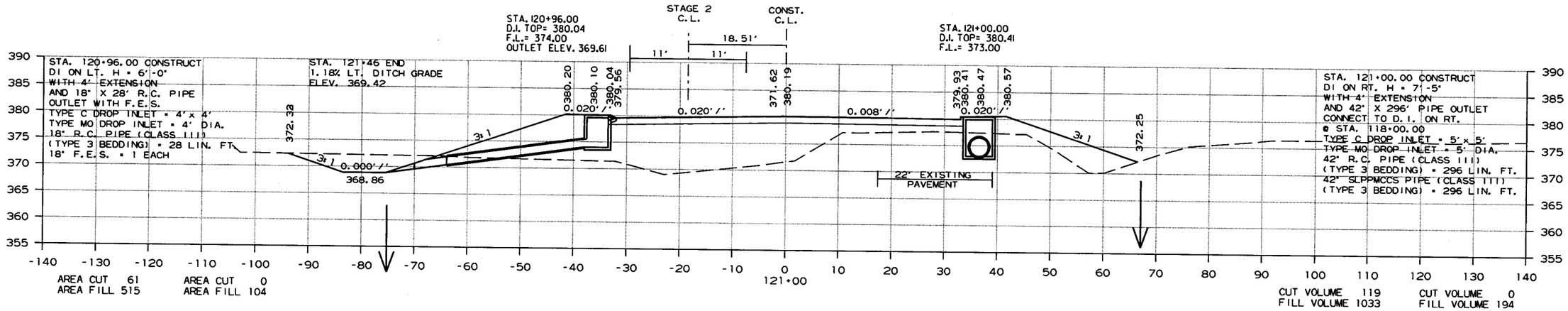
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	198	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 121+00 TO STA. 121+50

12/7/2017

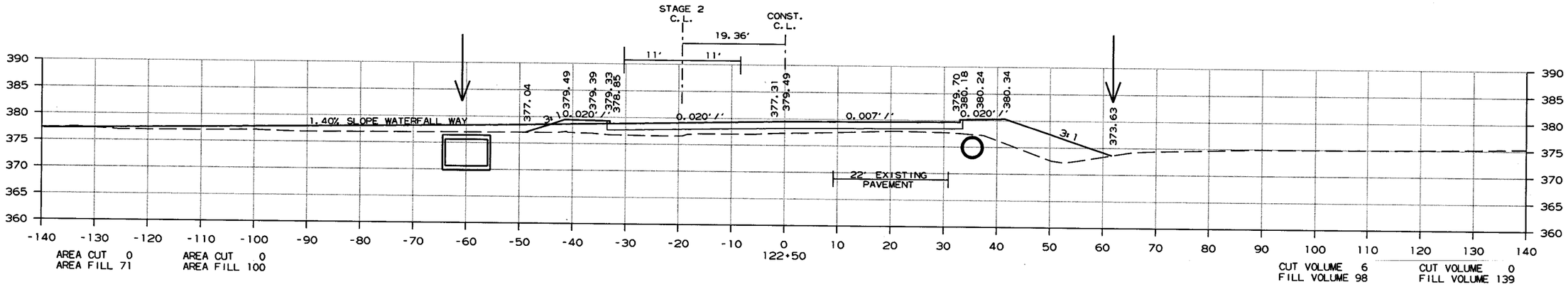
R061335.DGN

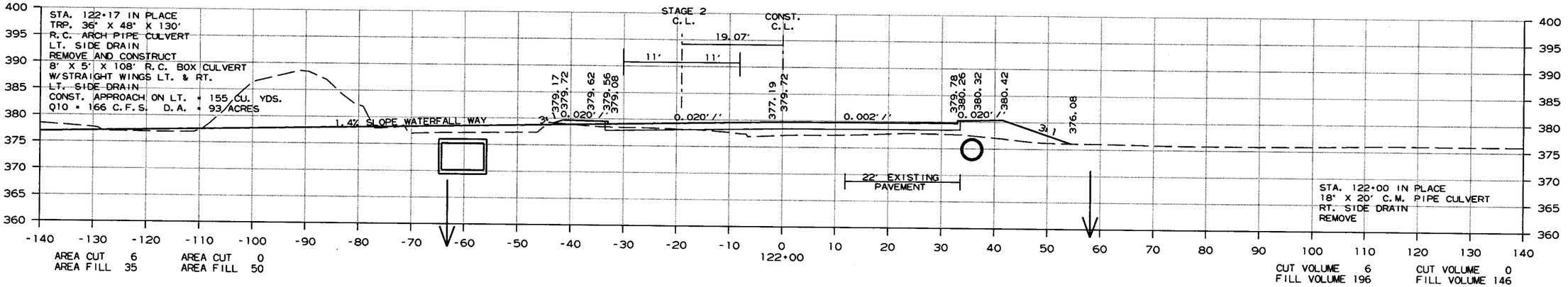
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	199	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 122+00 TO STA. 122+50

12/7/2017

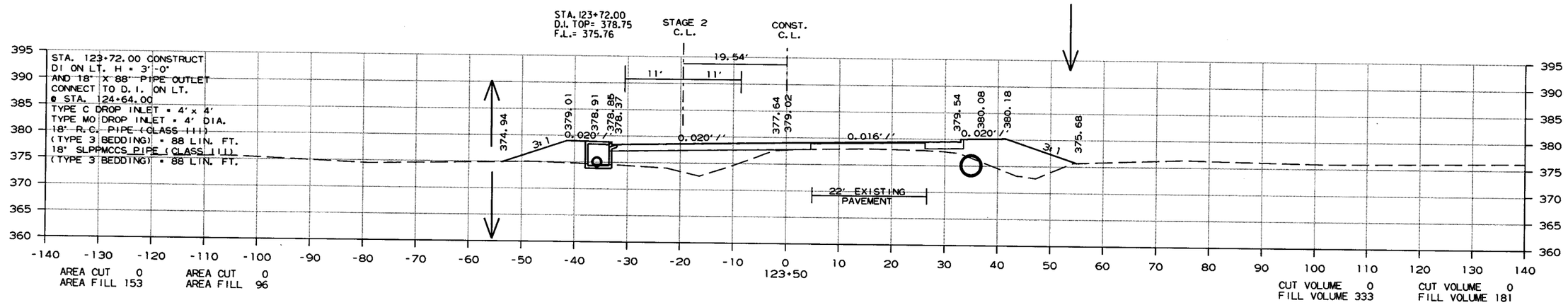
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	200	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2



CROSS SECTION STA. 123+00 TO STA. 123+50

12/7/2017

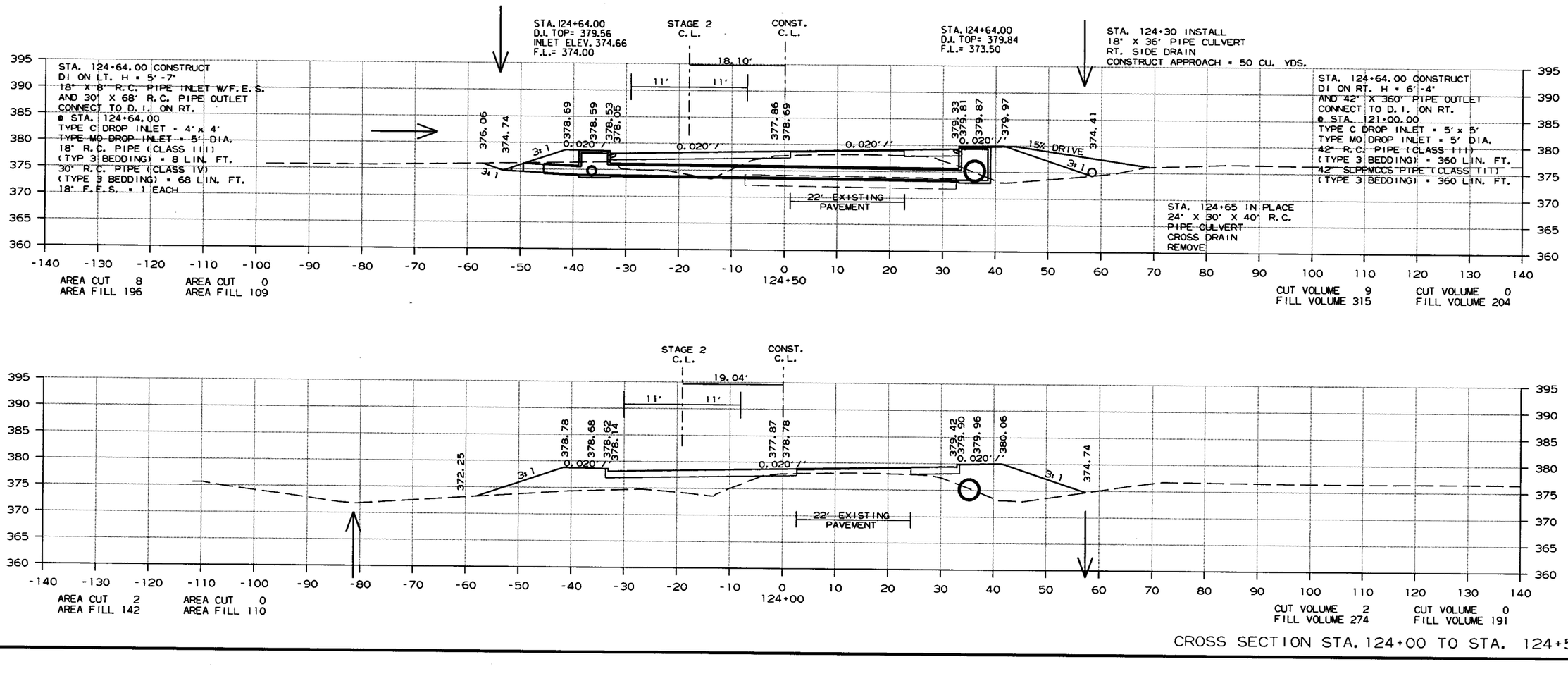
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	201	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2



CROSS SECTION STA. 124+00 TO STA. 124+50

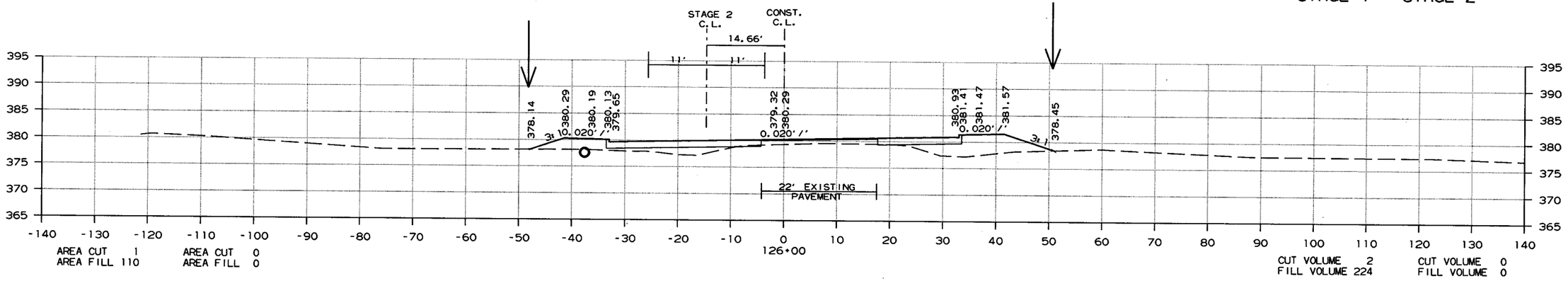
12/7/2017

R061335.DGN

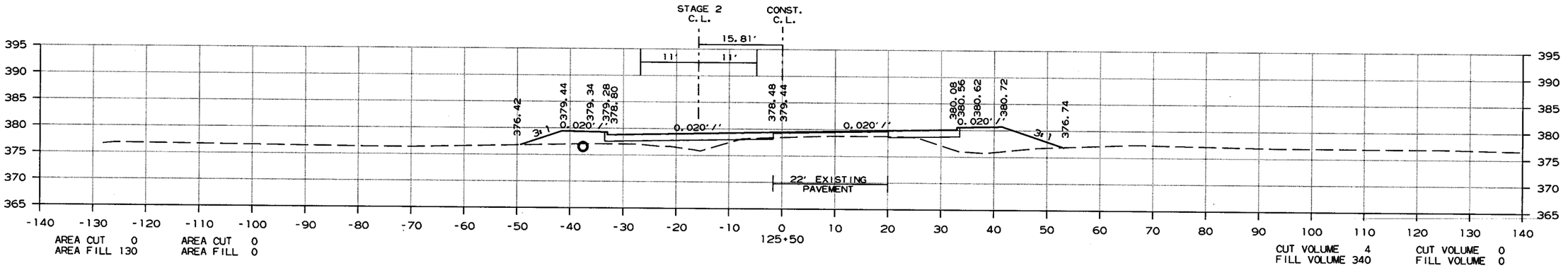
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	202	303

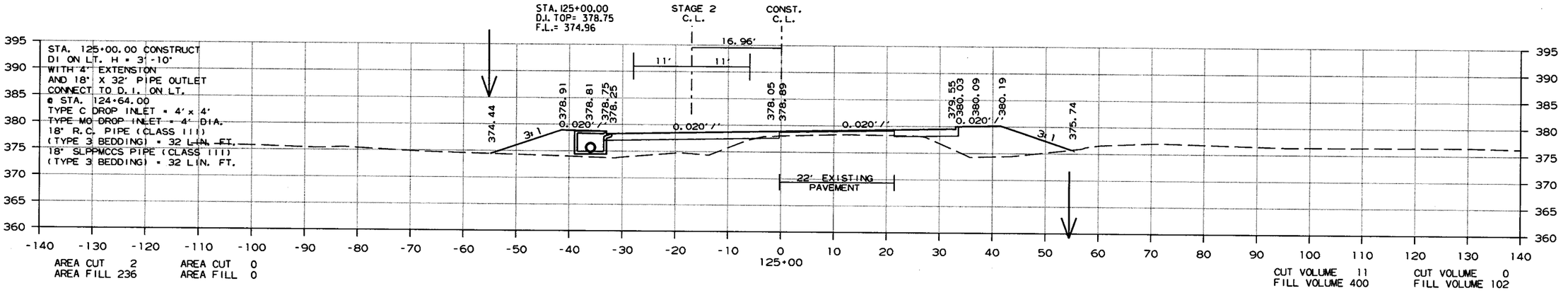
(2) CROSS SECTIONS

STAGE 1 STAGE 2



STAGE 1 STAGE 2





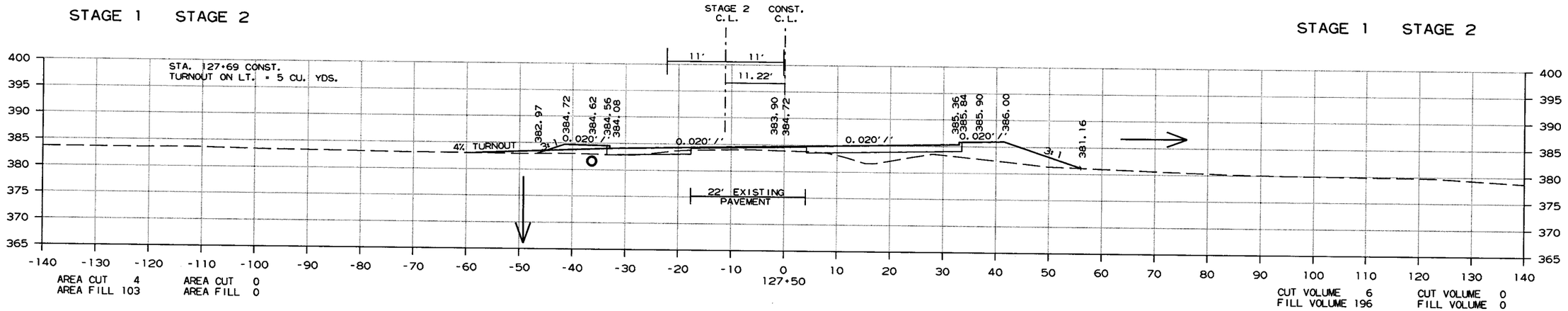
CROSS SECTION STA. 125+00 TO STA. 126+00

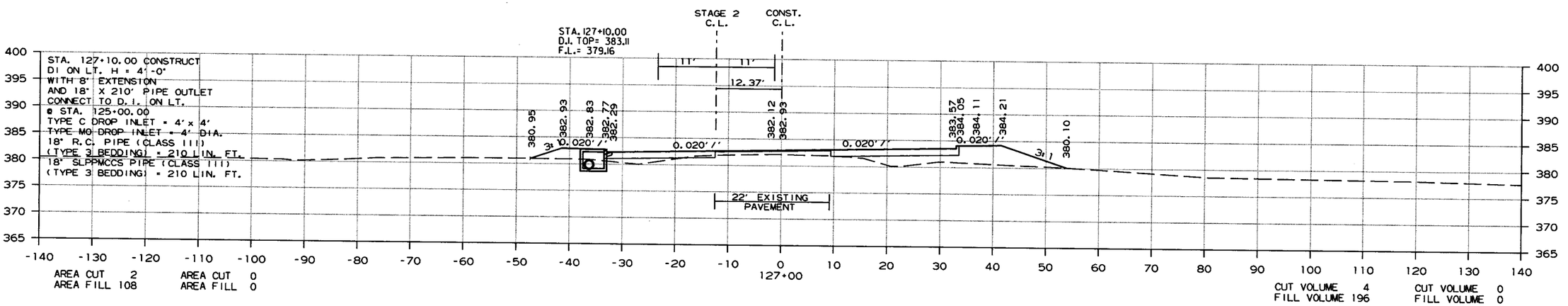
12/7/2017

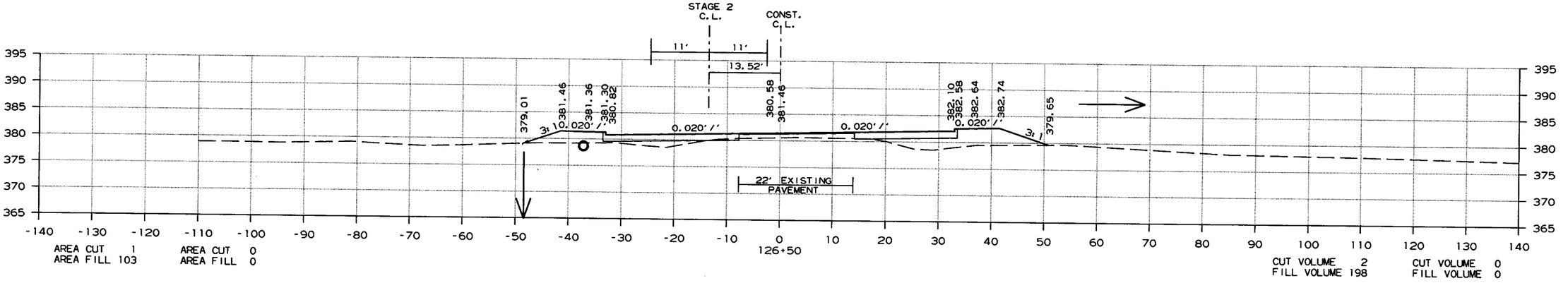
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	203	303

(2) CROSS SECTIONS







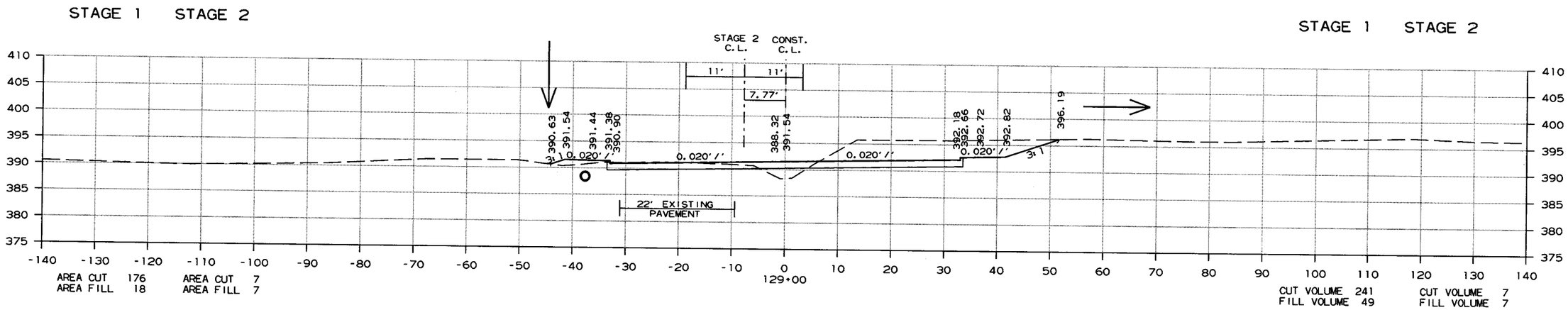
CROSS SECTION STA. 126+50 TO STA. 127+50

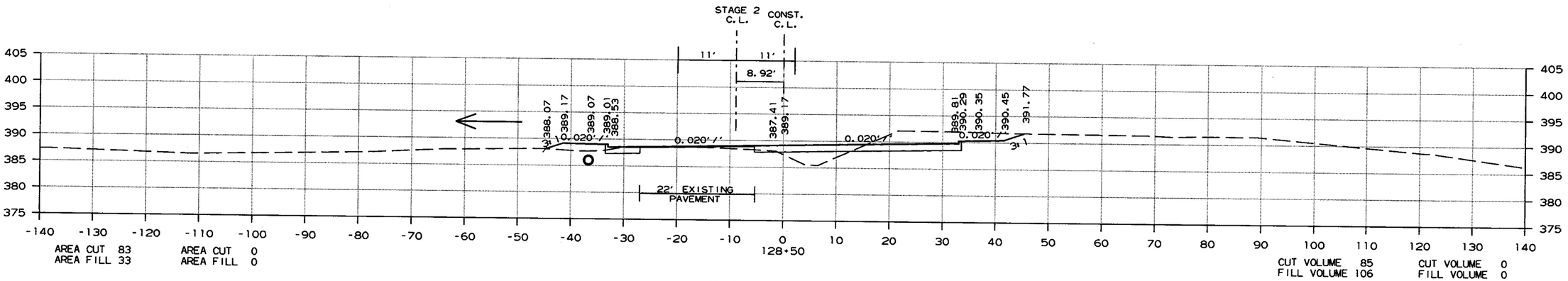
12/7/2017

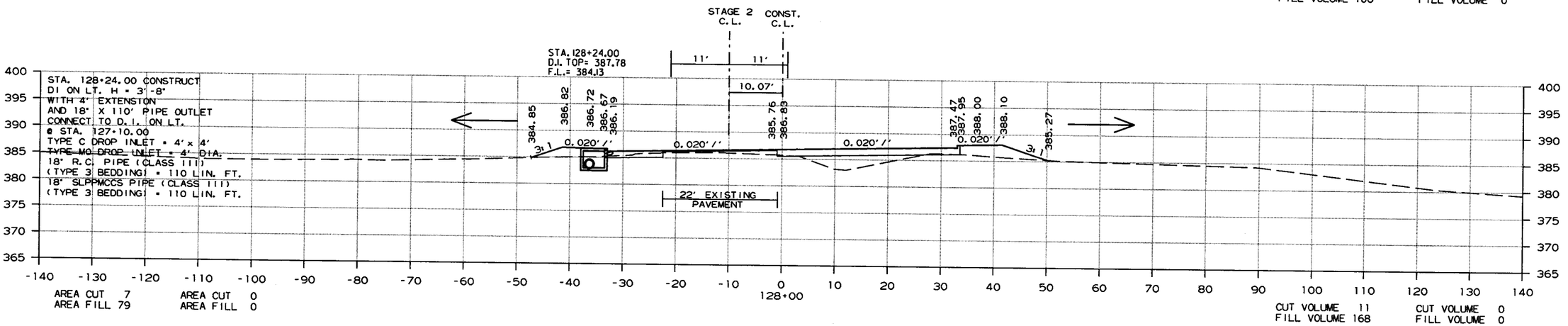
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	204	303

(2) CROSS SECTIONS







CROSS SECTION STA. 128+00 TO STA. 129+00

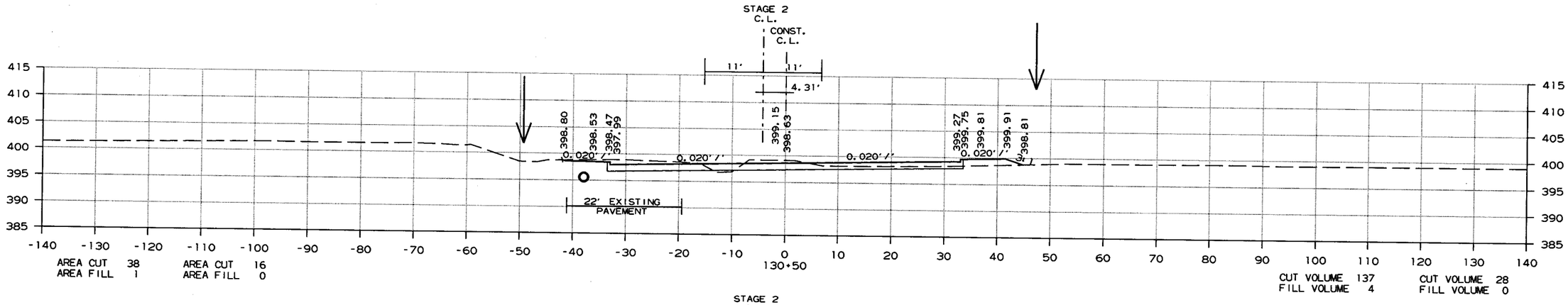
12/7/2017

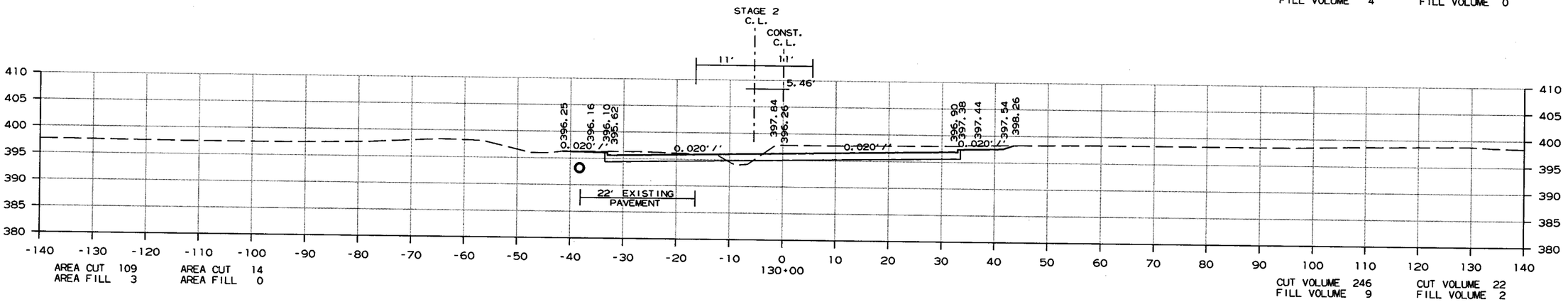
R061335.DGN

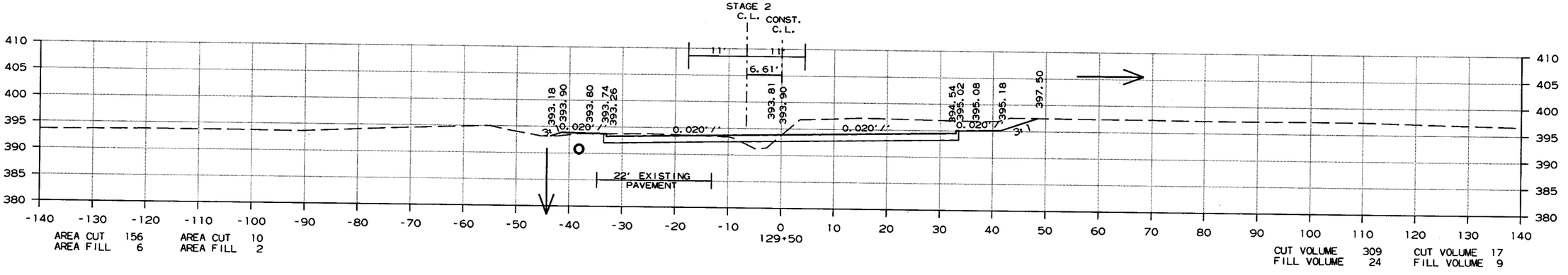
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	205	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2







CROSS SECTION STA. 129+50 TO STA. 130+50

12/7/2017

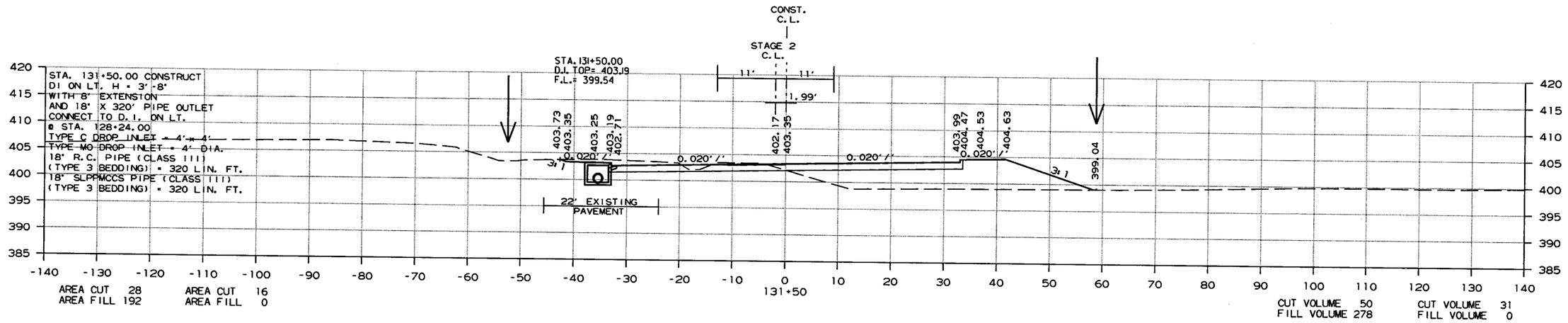
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	206	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2



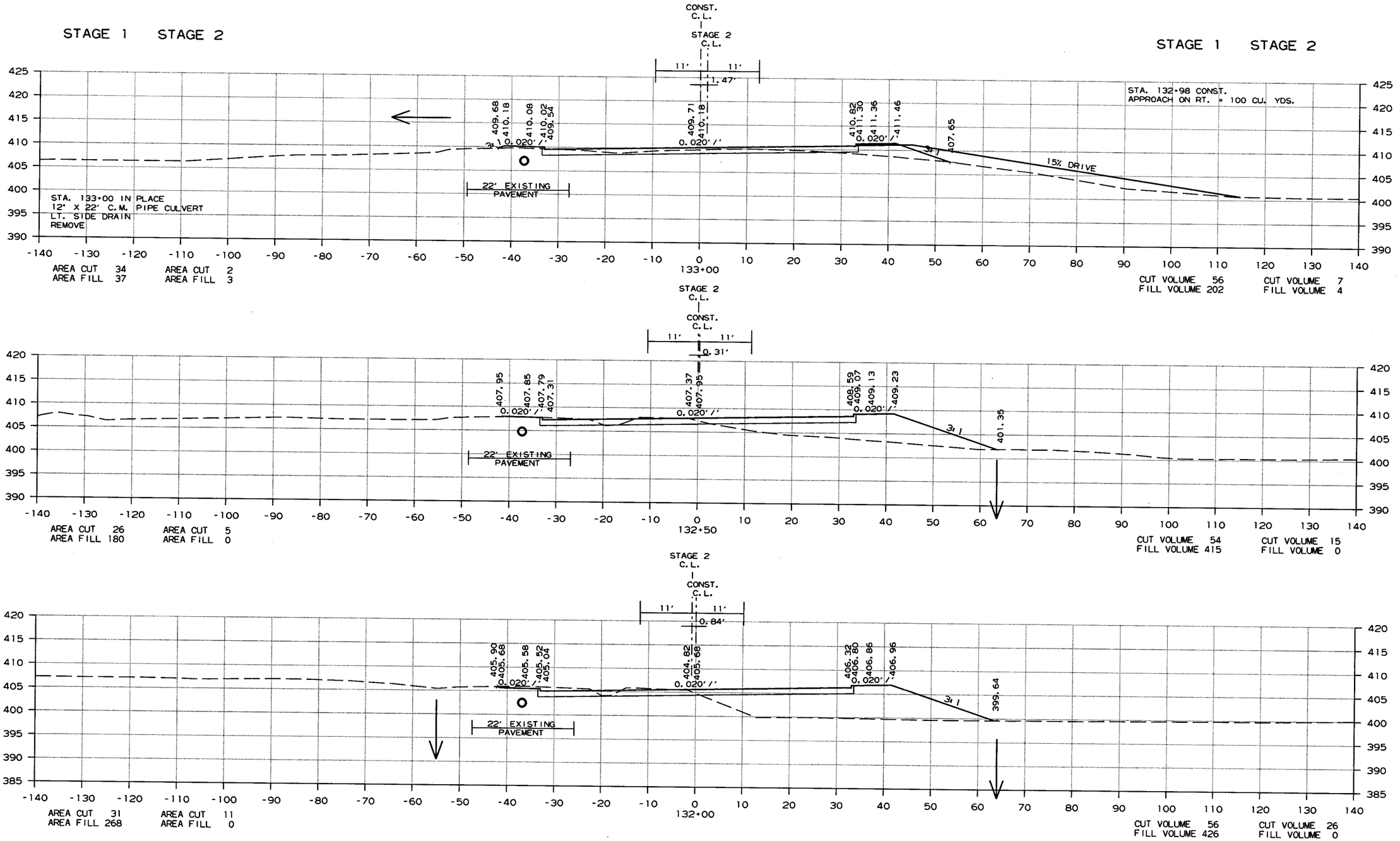
CROSS SECTION STA. 131+00 TO STA. 131+50

12/7/2017

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	207	303

(2) CROSS SECTIONS



CROSS SECTION STA. 132+00 TO STA. 133+00

12/7/2017

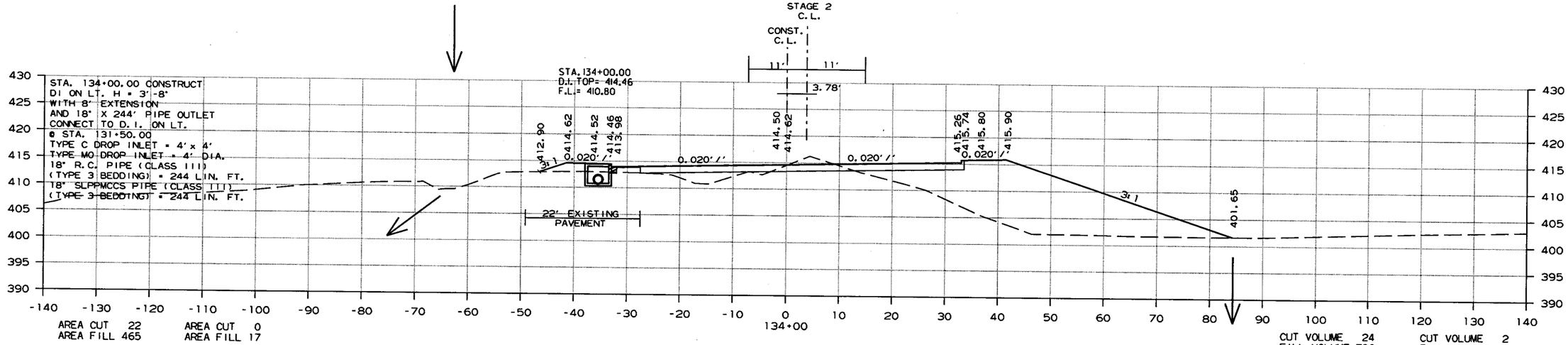
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	208	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2



CROSS SECTION STA. 133+50 TO STA. 134+00

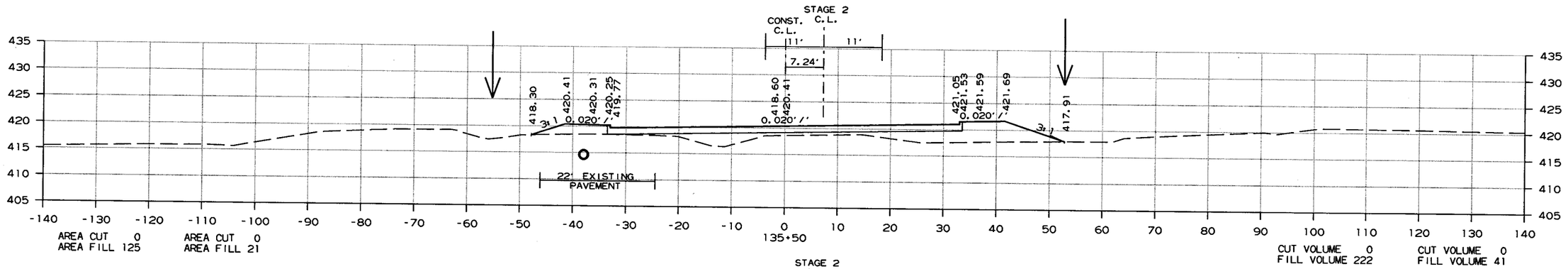
12/7/2017

R061335.DGN

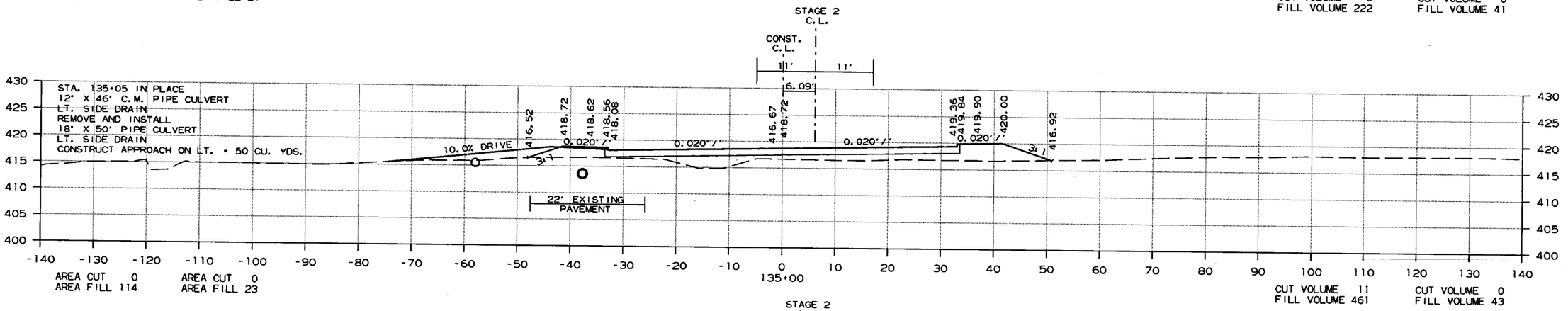
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	209	303

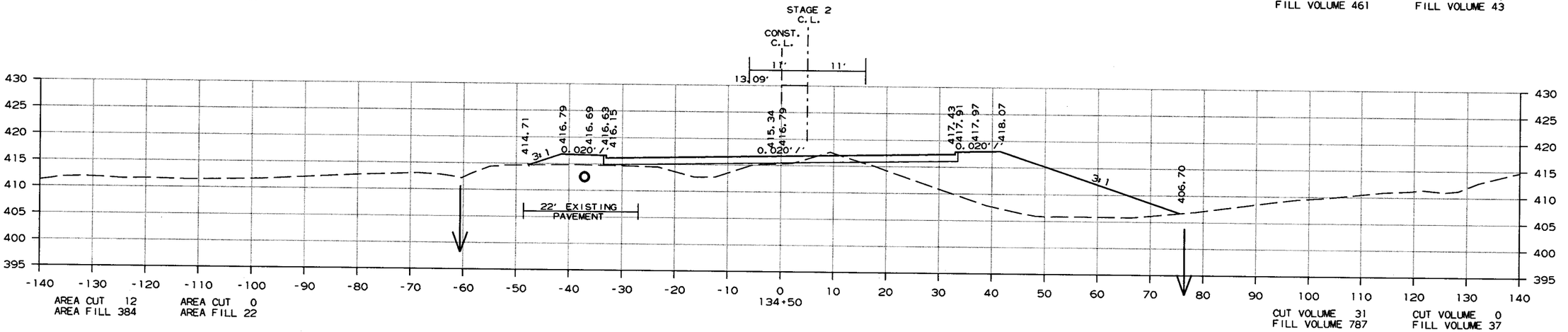
(2) CROSS SECTIONS

STAGE 1 STAGE 2



STAGE 1 STAGE 2





CROSS SECTION STA. 134+50 TO STA. 135+50

12/7/2017

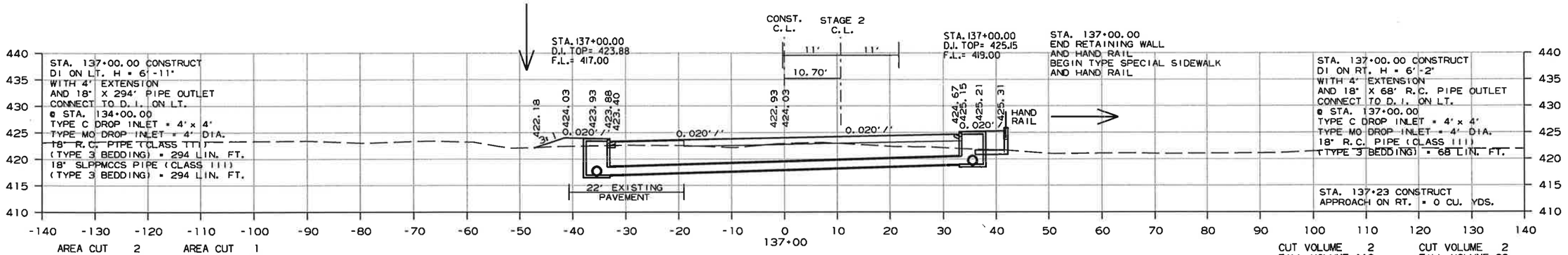
R061335.DGN

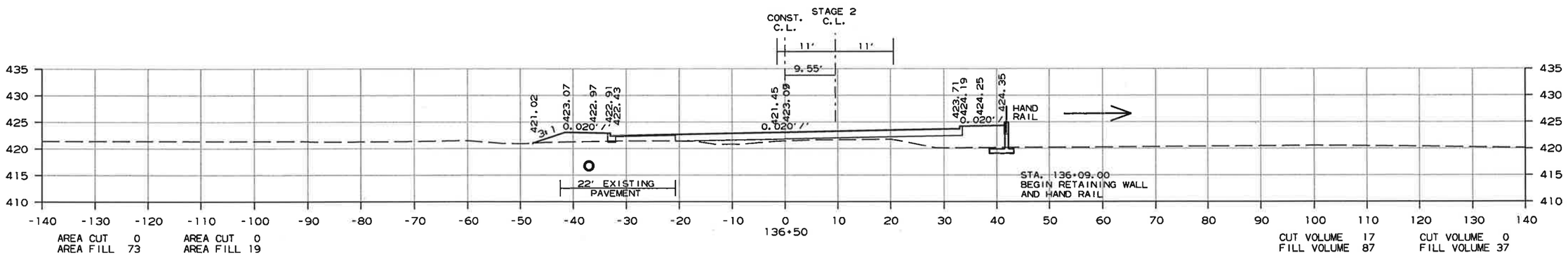
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	210	303

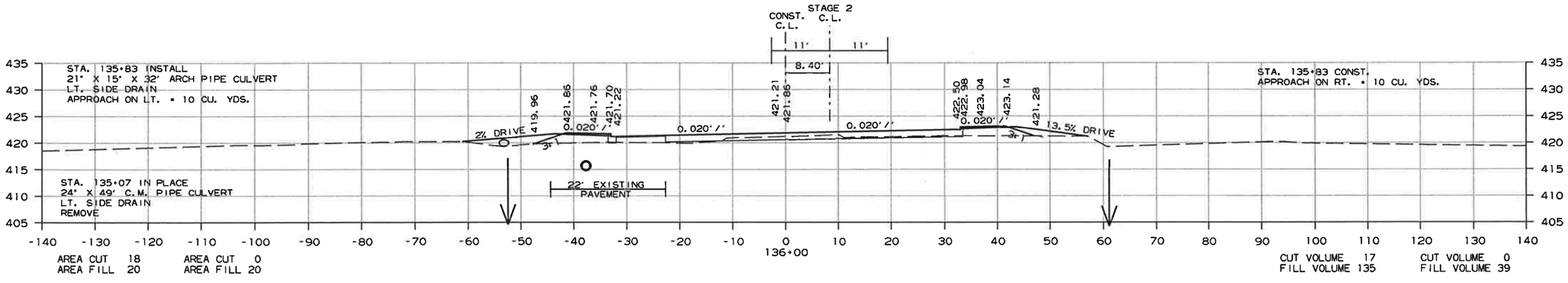
(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2







CROSS SECTION STA. 136+00 TO STA. 137+00

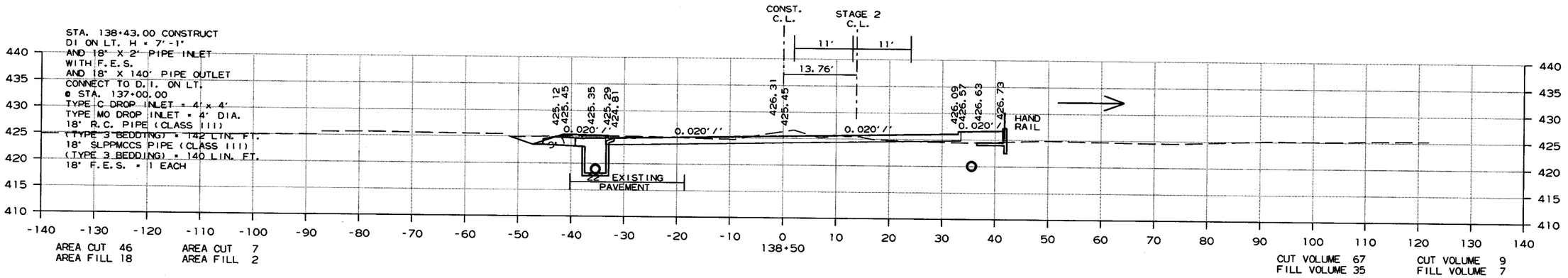
12/7/2017

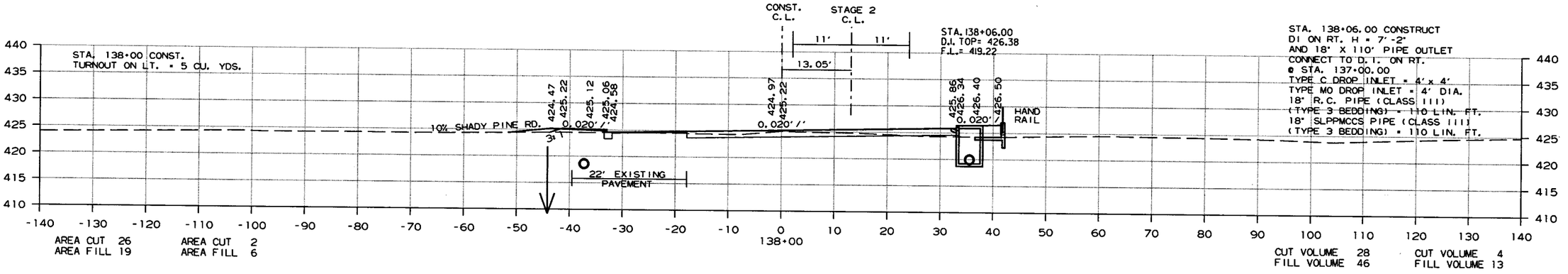
R061335.DGN

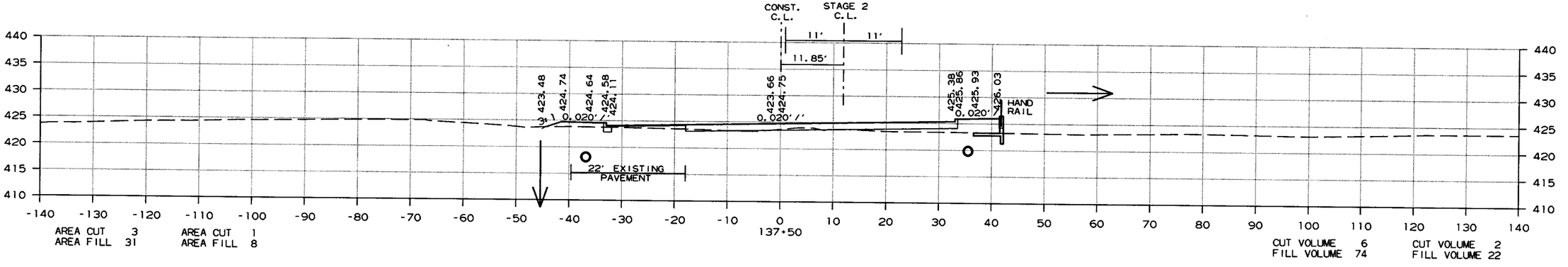
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	211	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2







CROSS SECTION STA. 137+50 TO STA. 138+50

12/7/2017

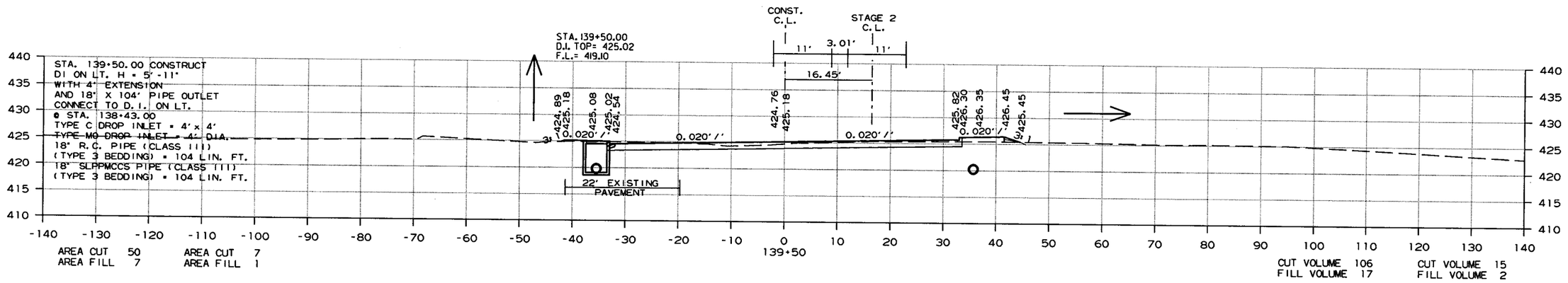
R061335.DGN

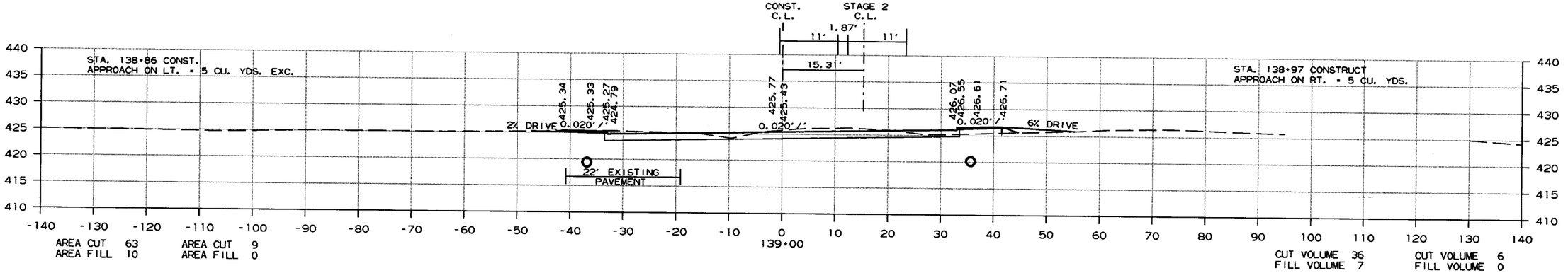
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	212	303

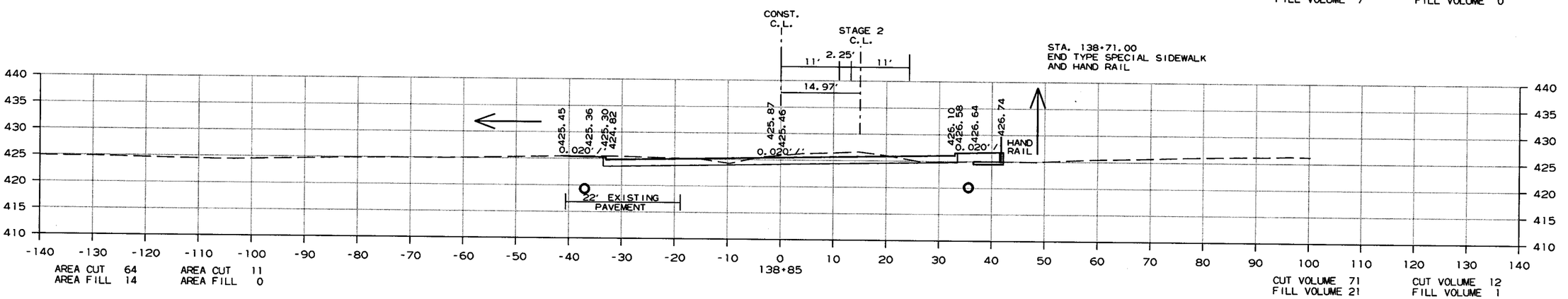
(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2







CROSS SECTION STA. 138+85 TO STA. 139+50

12/7/2017

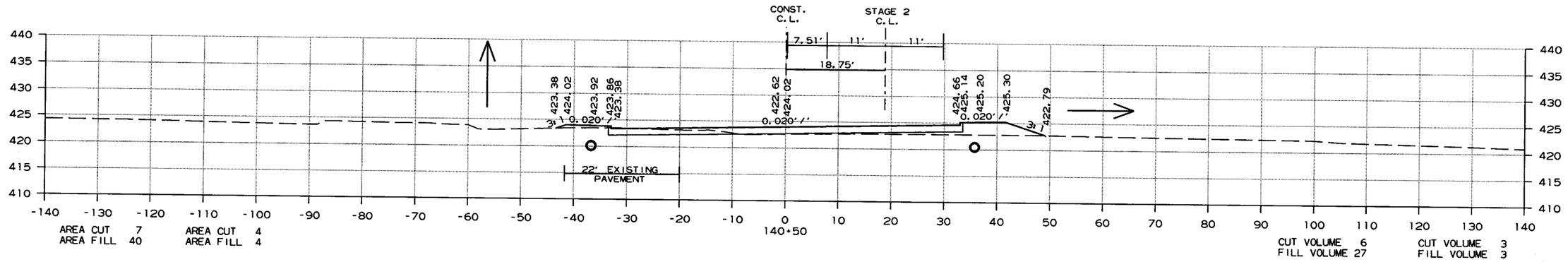
R061335.DGN

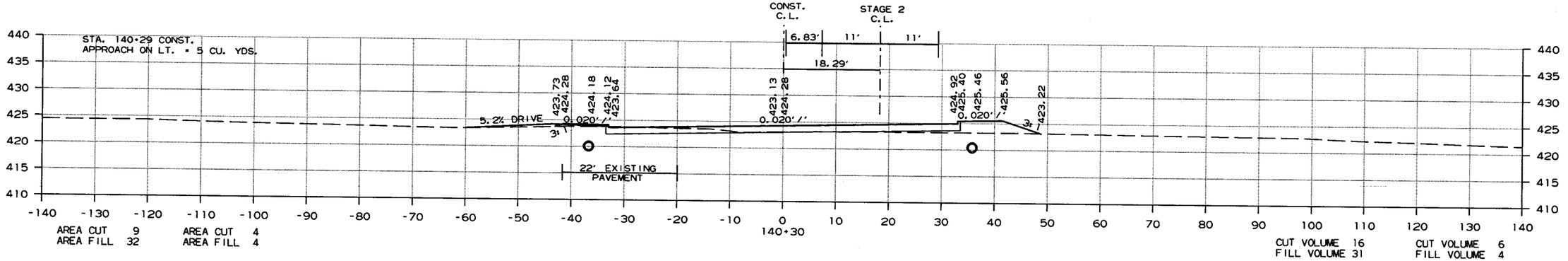
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	213	303

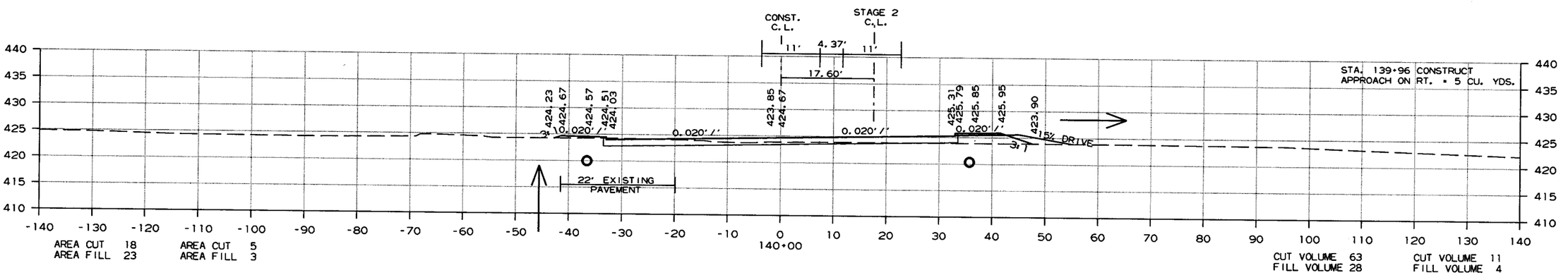
(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2







CROSS SECTION STA. 140+00 TO STA. 140+50

12/7/2017

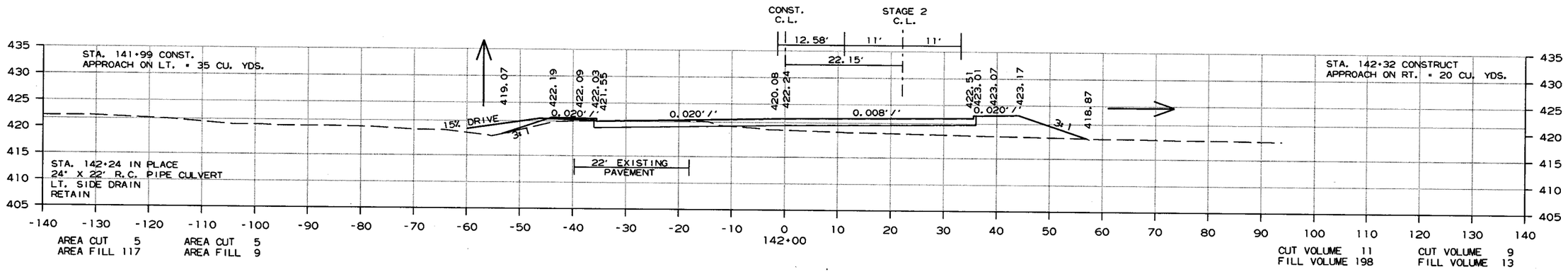
R061335.DGN

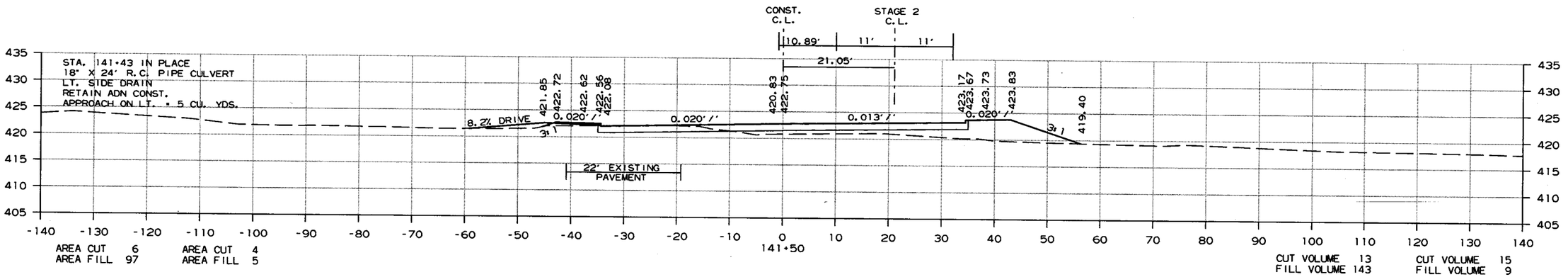
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	214	303

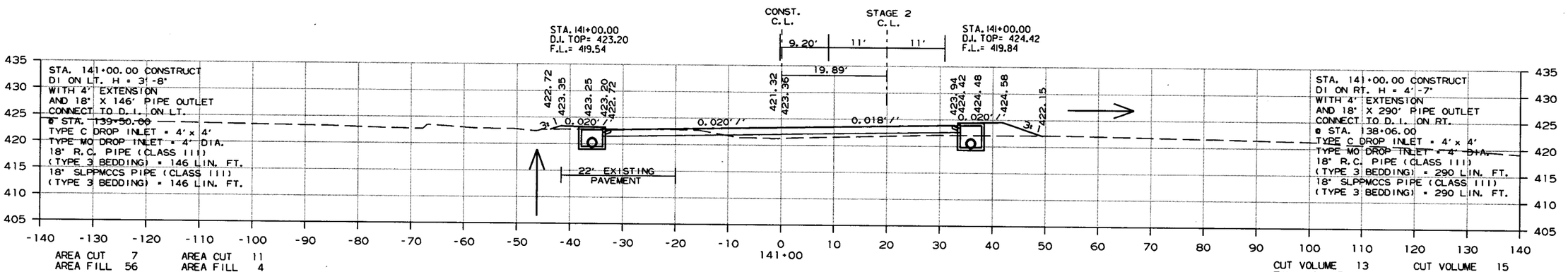
(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2







CROSS SECTION STA. 141+00 TO STA. 142+00

12/7/2017

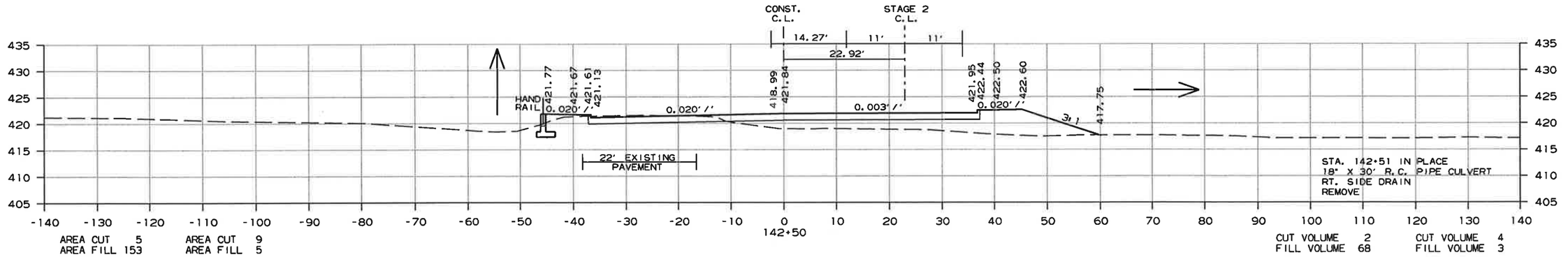
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	215	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2



CROSS SECTION STA. 142+38 TO STA. 142+50

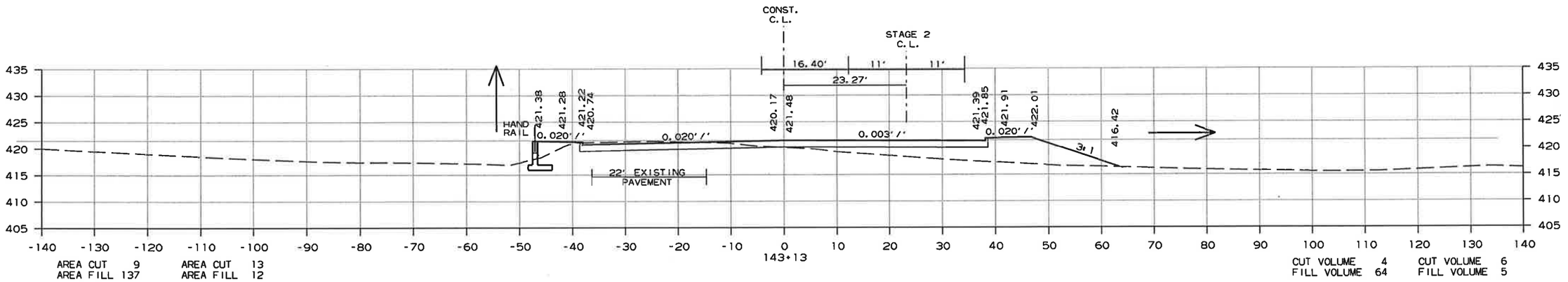
12/7/2017

R061335.DGN

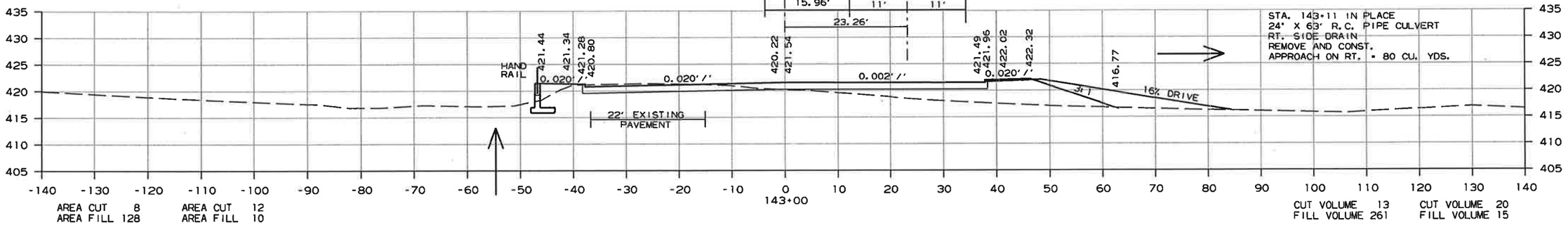
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	216	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2



STAGE 1 STAGE 2



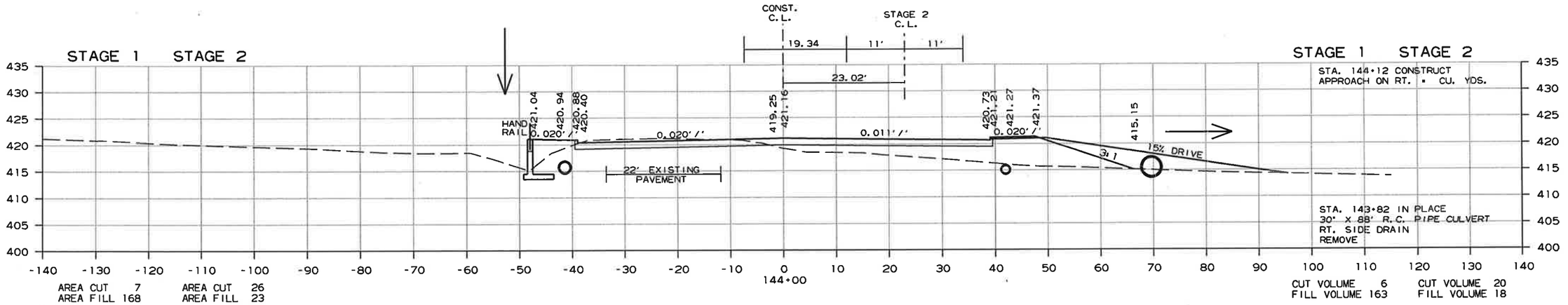
12/7/2017

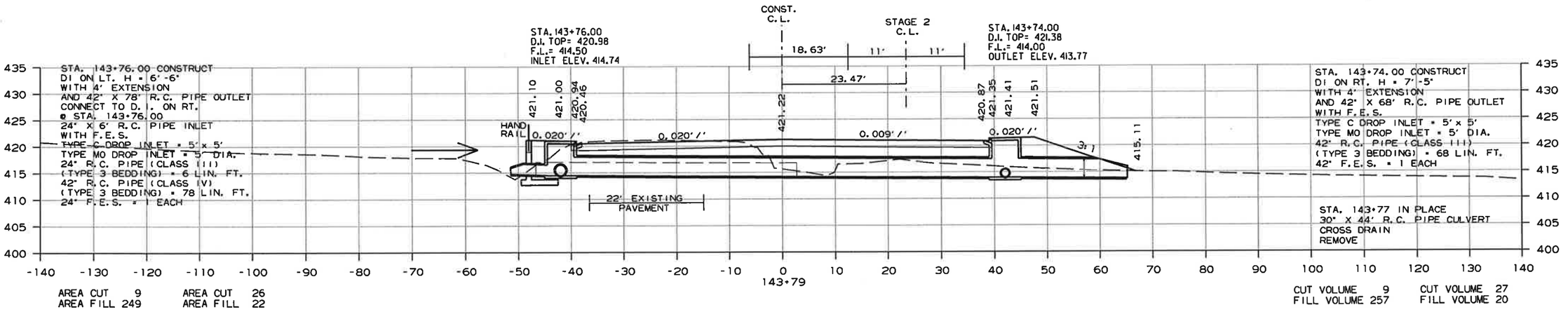
R061335.DGN

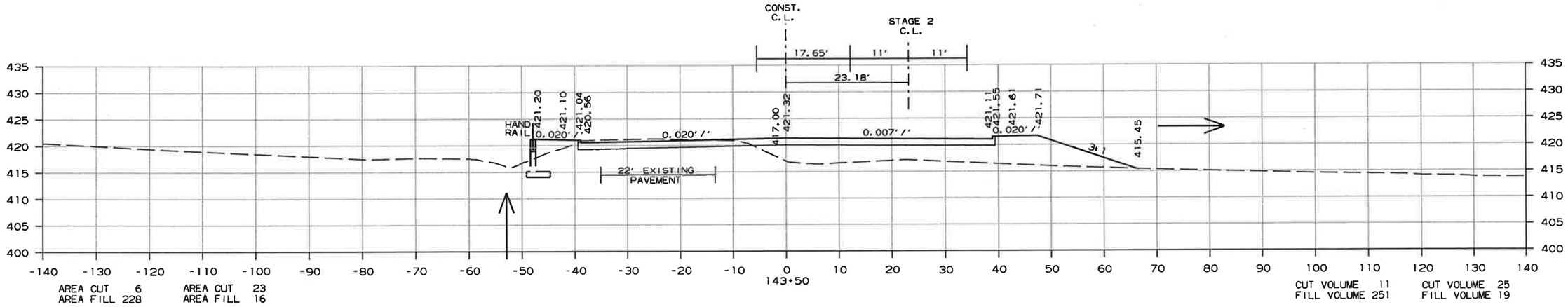
CROSS SECTION STA. 143+00 TO STA. 143+13

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	217	303

(2) CROSS SECTIONS







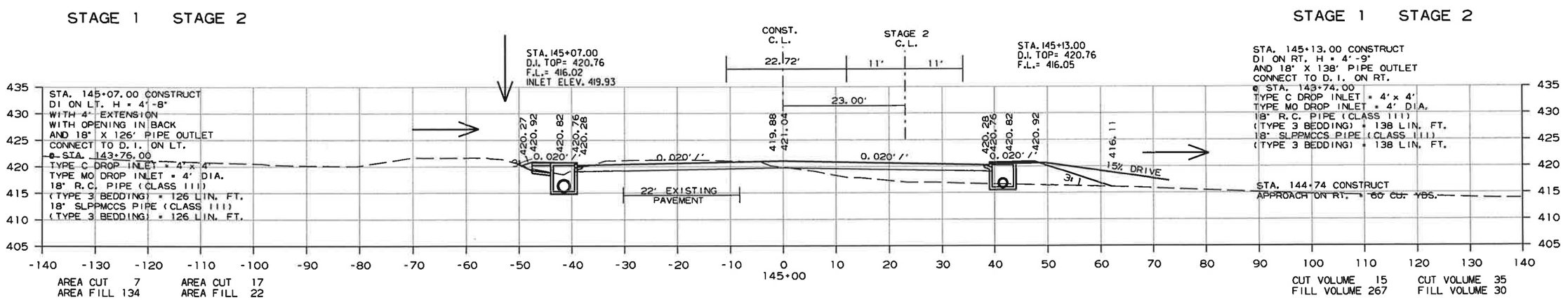
CROSS SECTION STA. 143+50 TO STA. 144+00

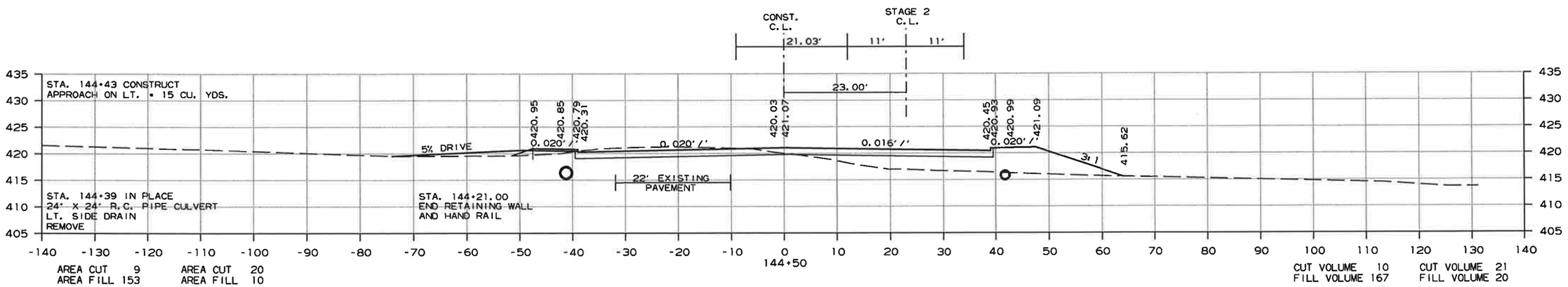
12/7/2017

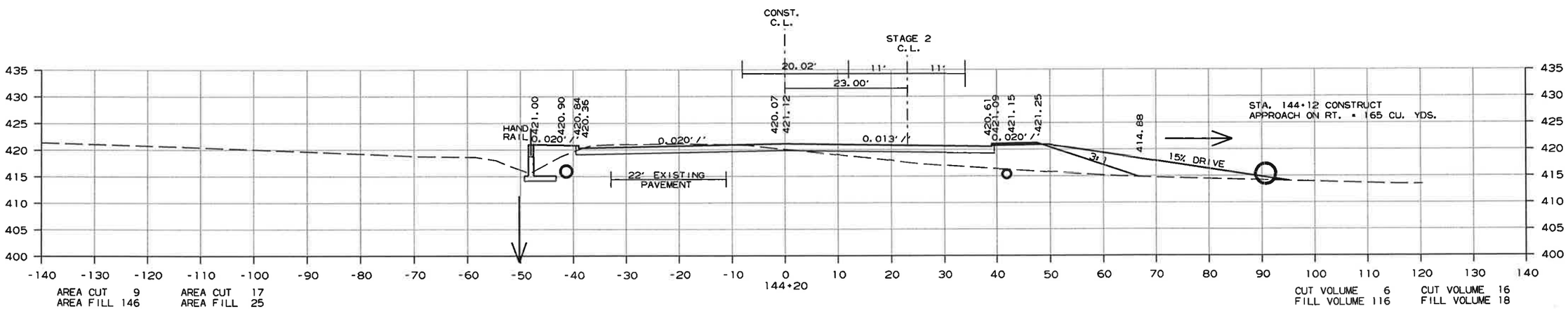
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	218	303

(2) CROSS SECTIONS







CROSS SECTION STA. 144+20 TO STA. 145+00

12/7/2017

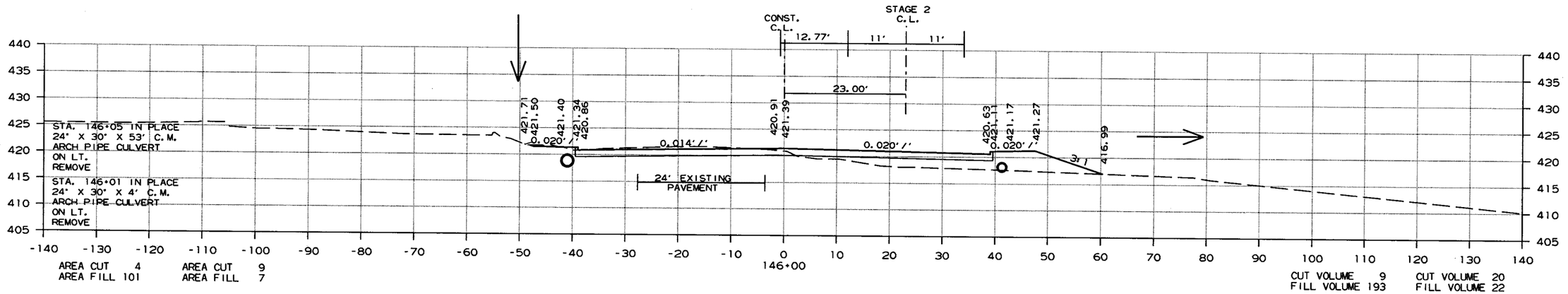
R061335.DGN

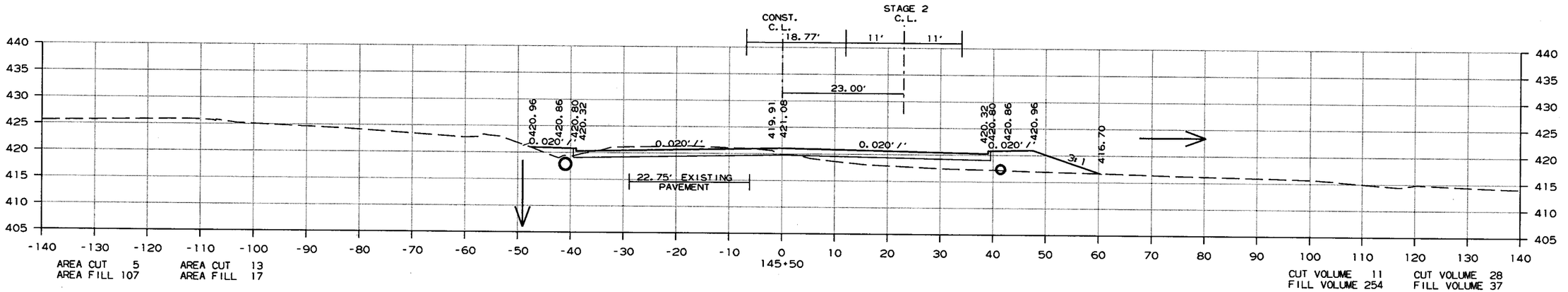
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	219	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2





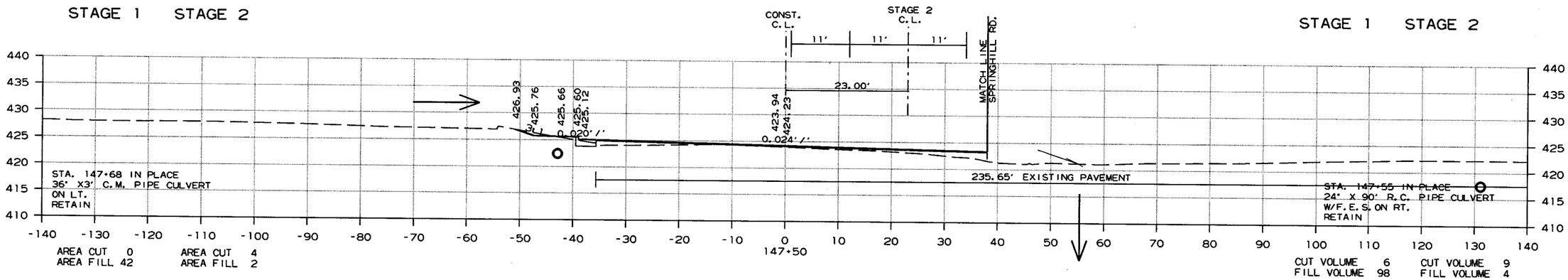
CROSS SECTION STA. 145+50 TO STA. 146+00

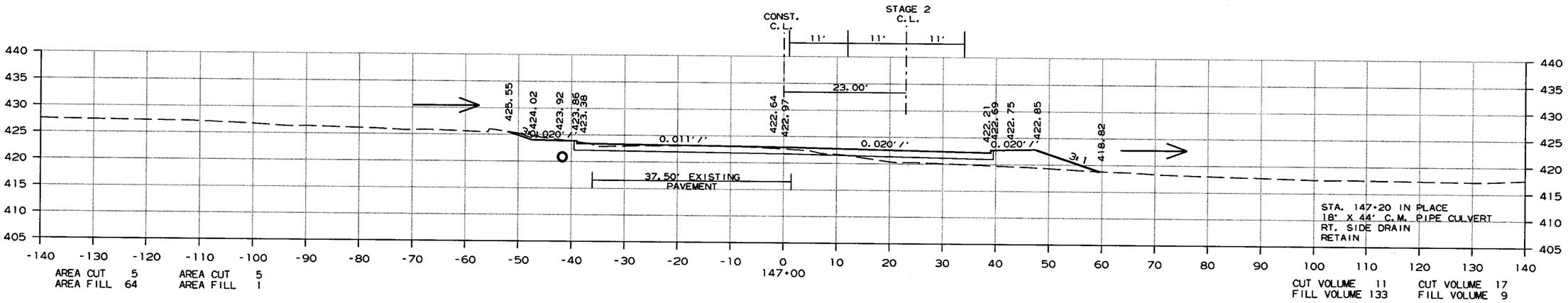
12/7/2017

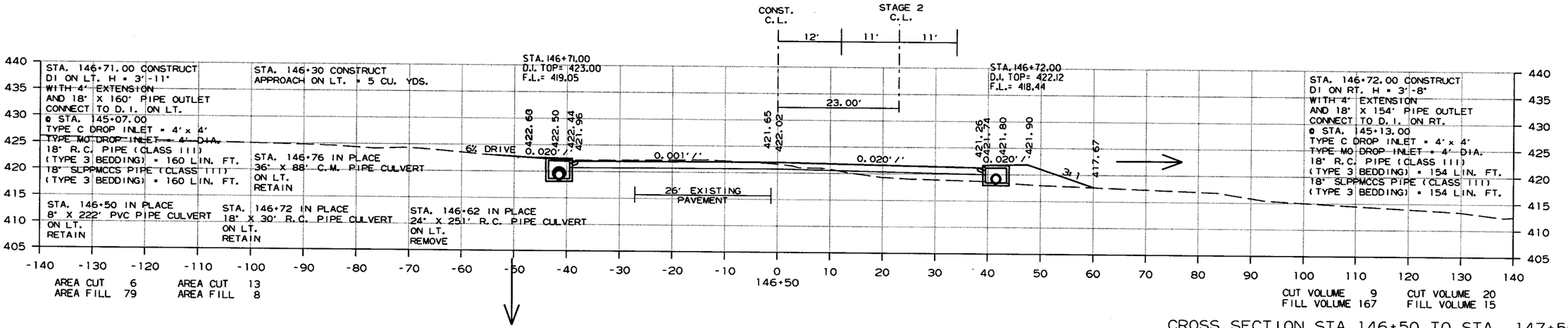
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	220	303

(2) CROSS SECTIONS







CROSS SECTION STA. 146+50 TO STA. 147+50

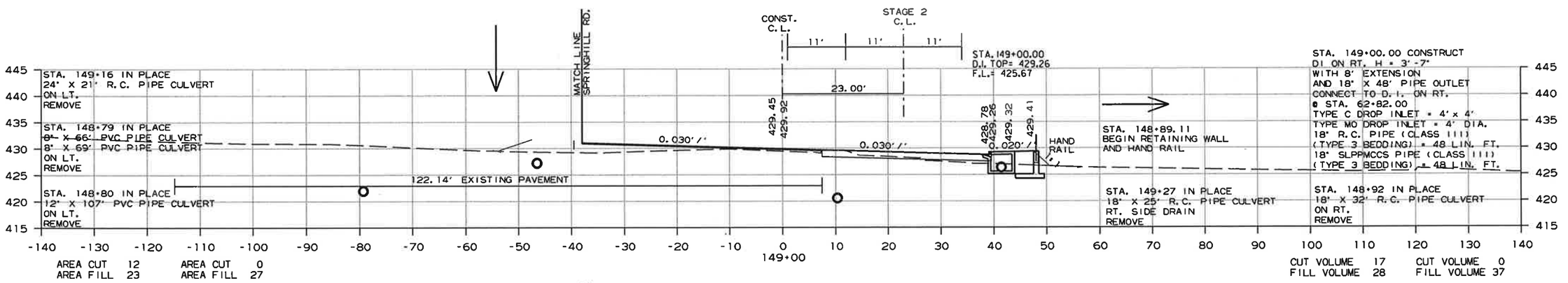
12/7/2017

R061335.DGN

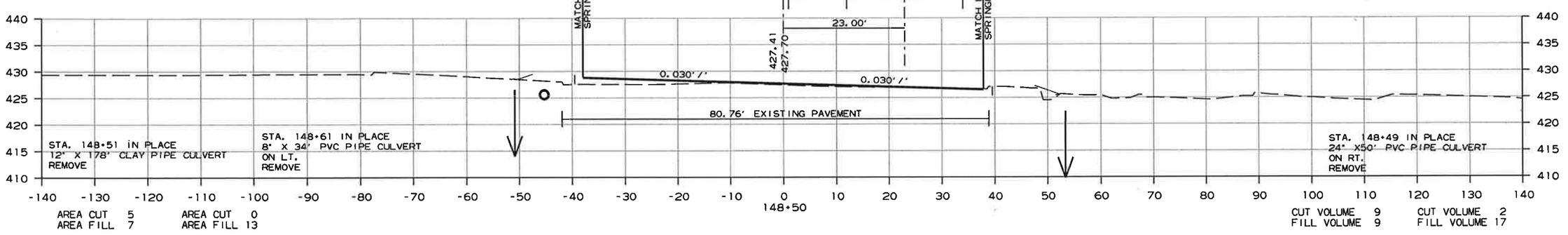
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	221	303

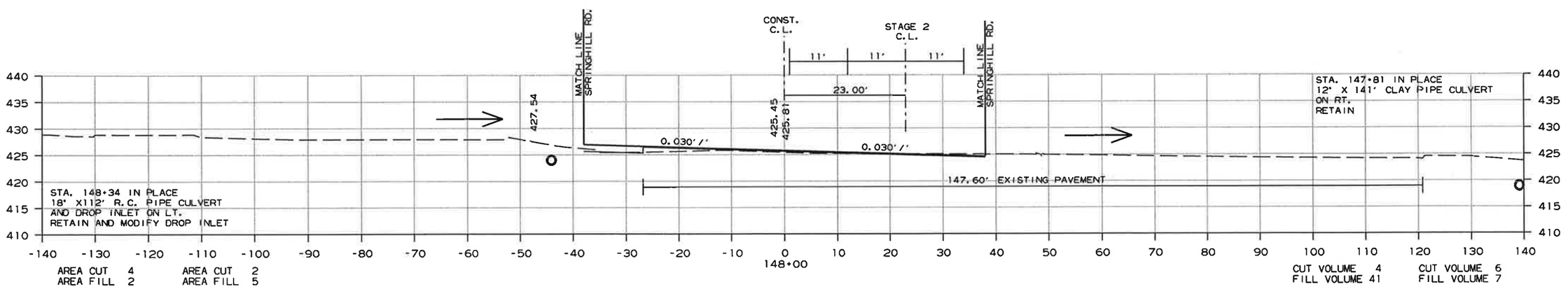
(2) CROSS SECTIONS

STAGE 1 STAGE 2



STAGE 1 STAGE 2





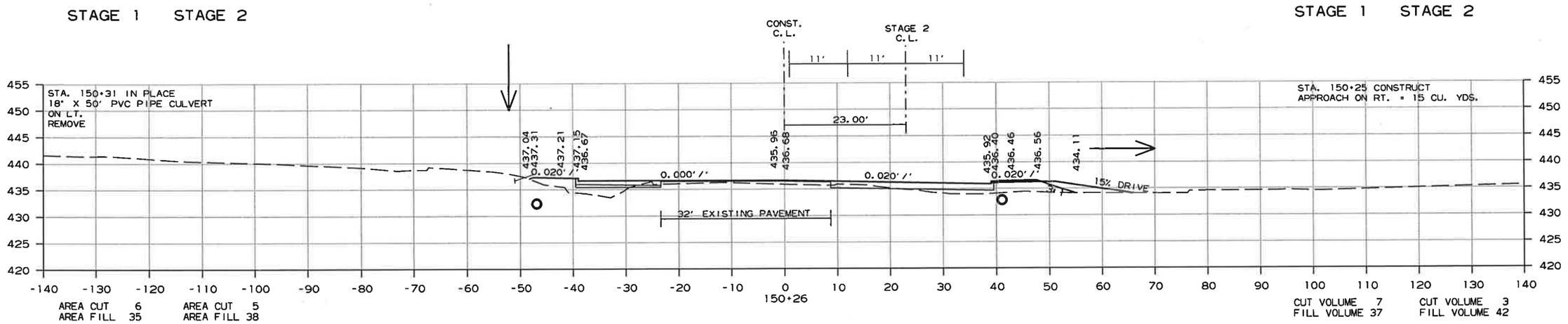
CROSS SECTION STA. 148+00 TO STA. 149+00

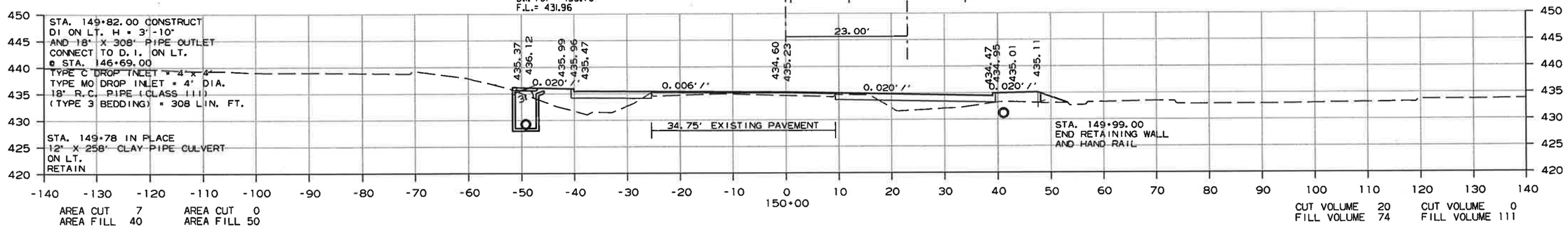
12/7/2017

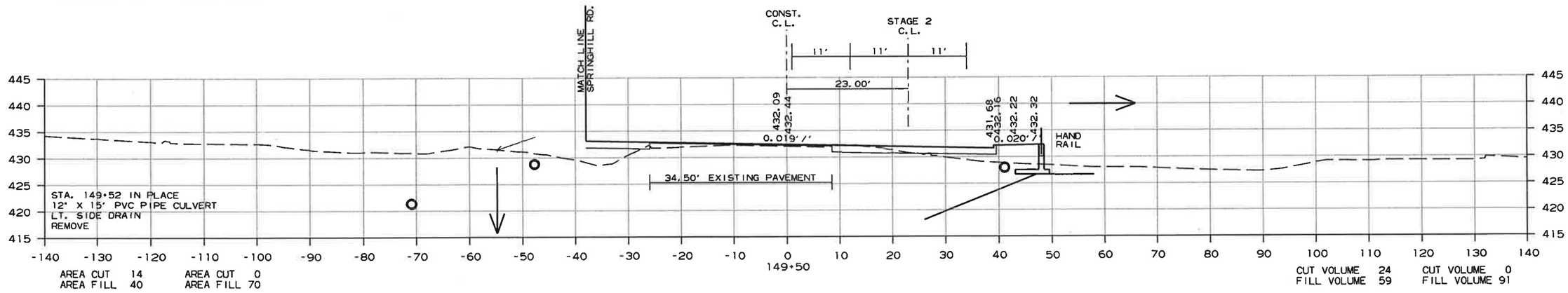
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	222	303

(2) CROSS SECTIONS







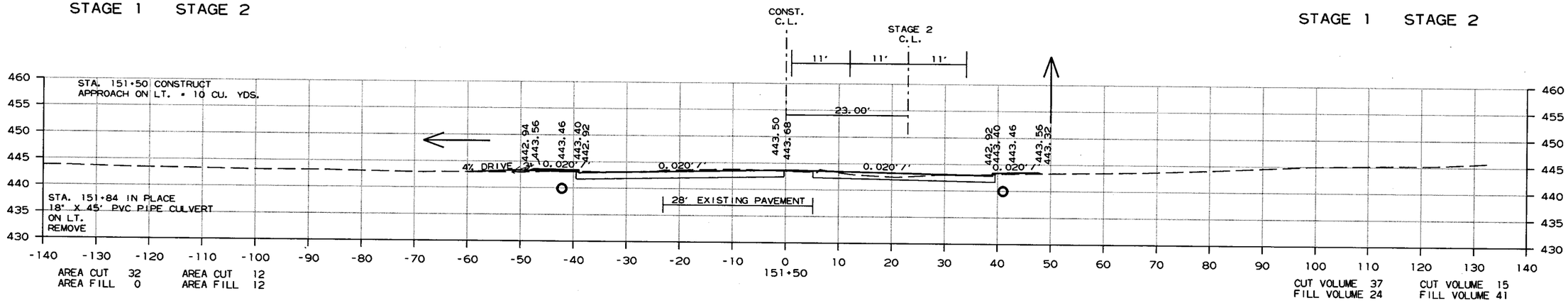
CROSS SECTION STA. 149+50 TO STA. 150+26

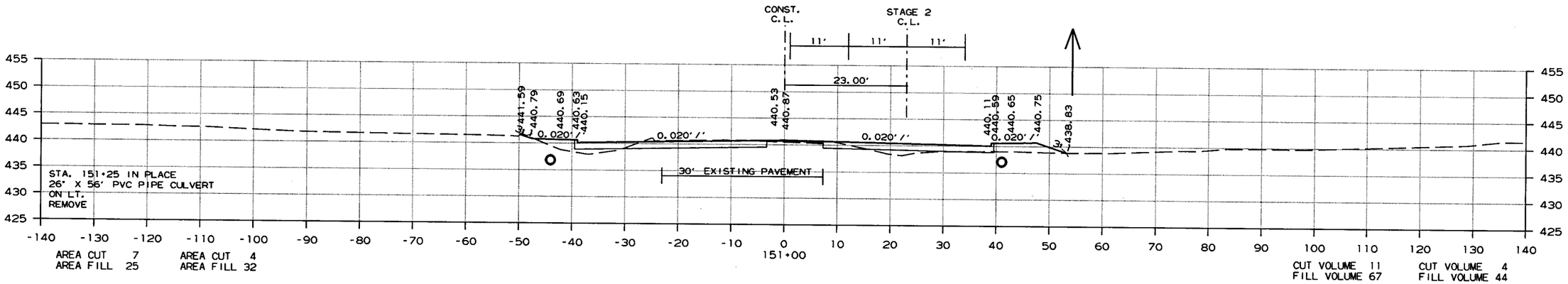
12/7/2017

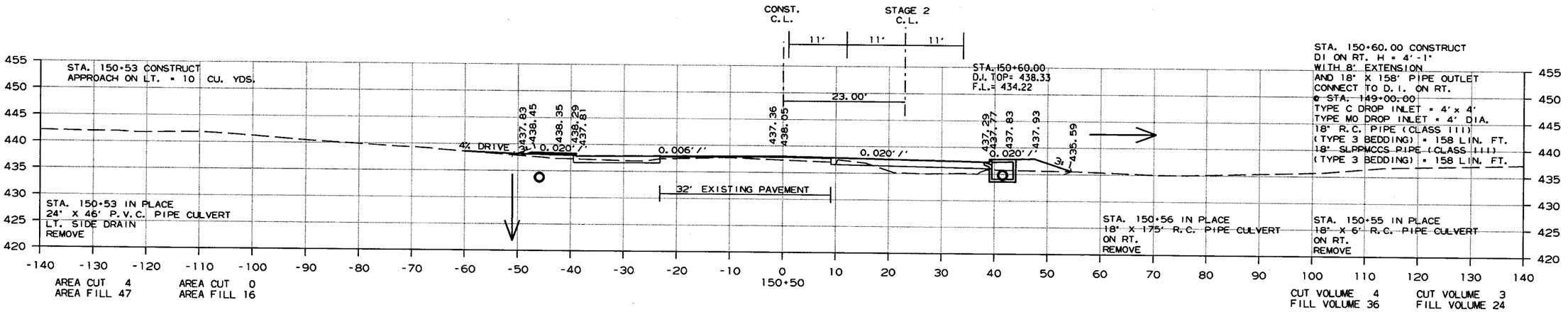
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	223	303

(2) CROSS SECTIONS







CROSS SECTION STA. 150+50 TO STA. 151+50

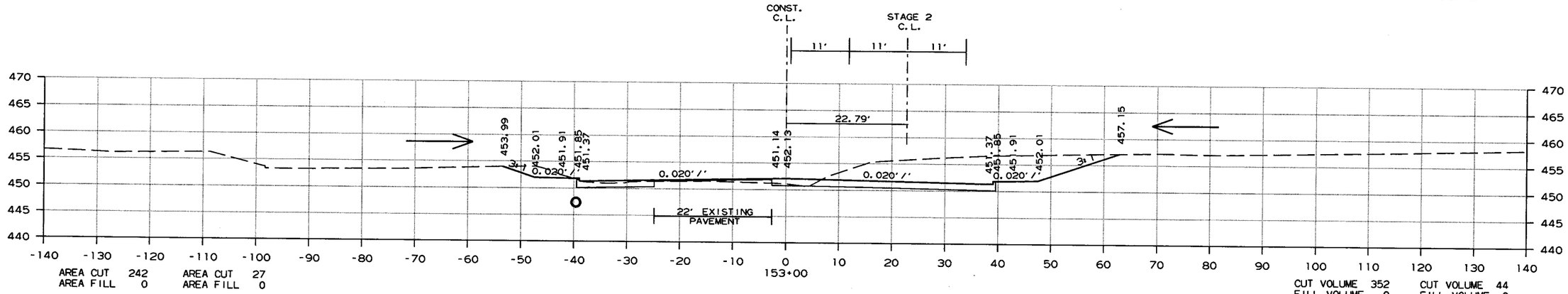
12/7/2017

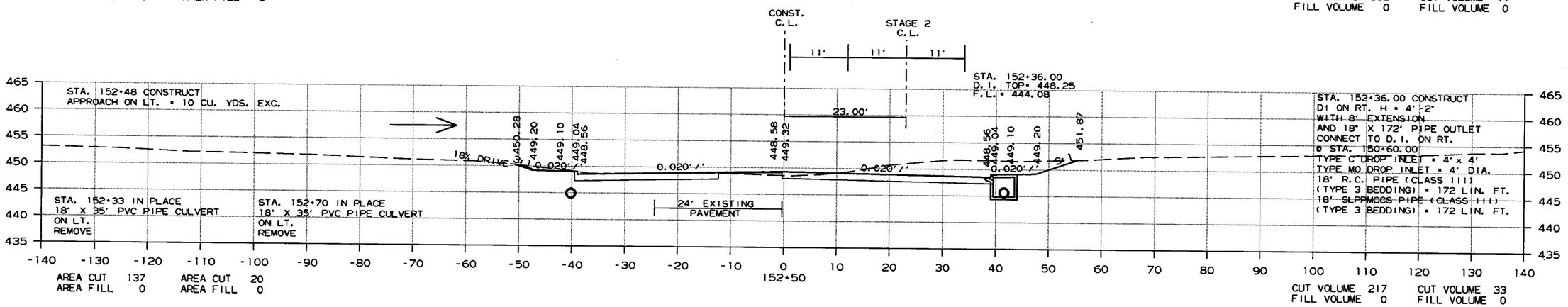
R061335.DGN

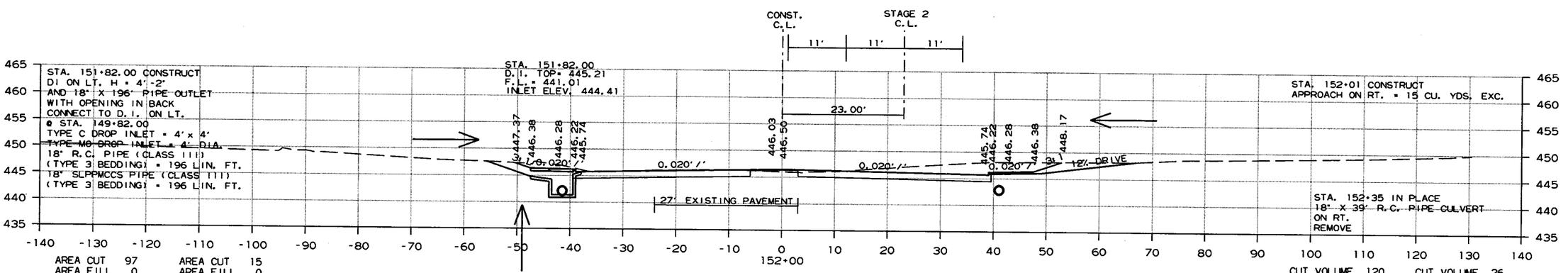
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	224	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2







CROSS SECTION STA. 152+00 TO STA. 153+00

12/7/2017

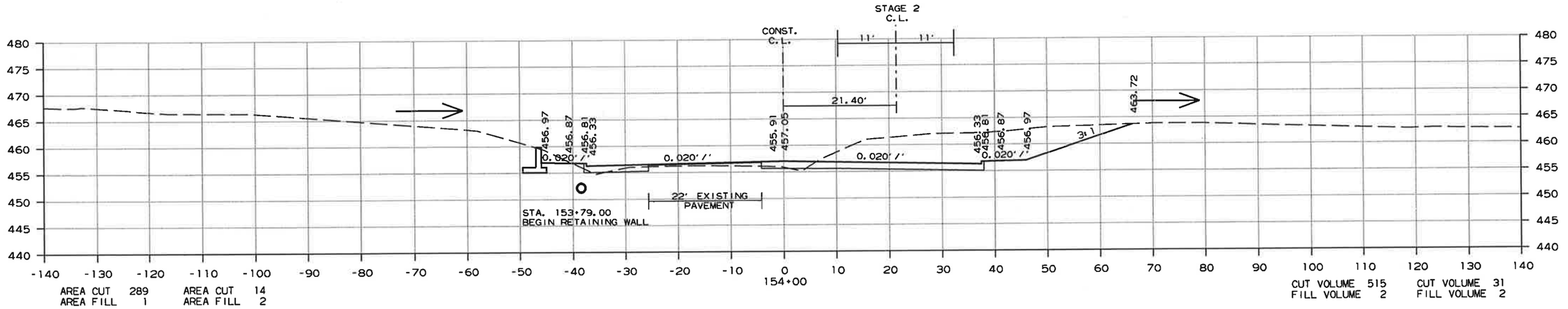
R061335.DGN

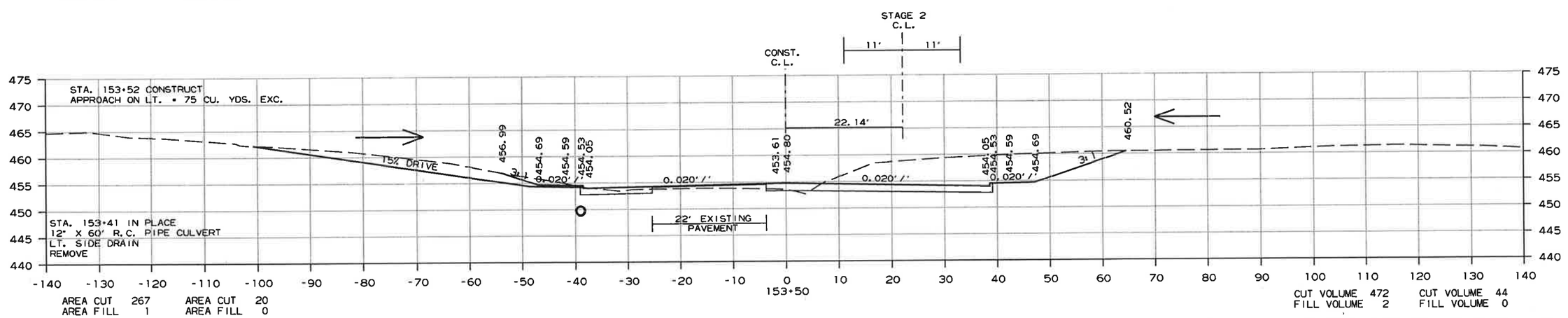
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	225	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 153+50 TO STA. 154+00

12/7/2017

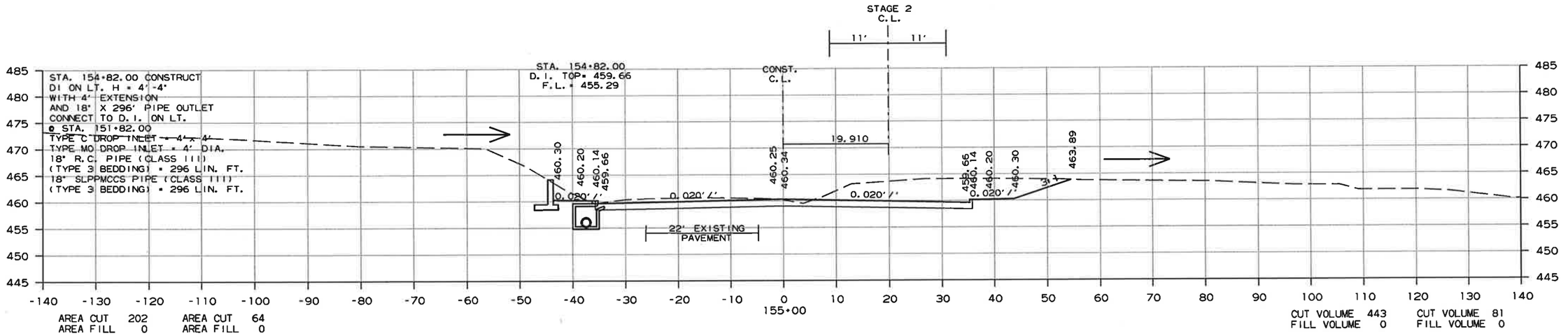
R061335.DGN

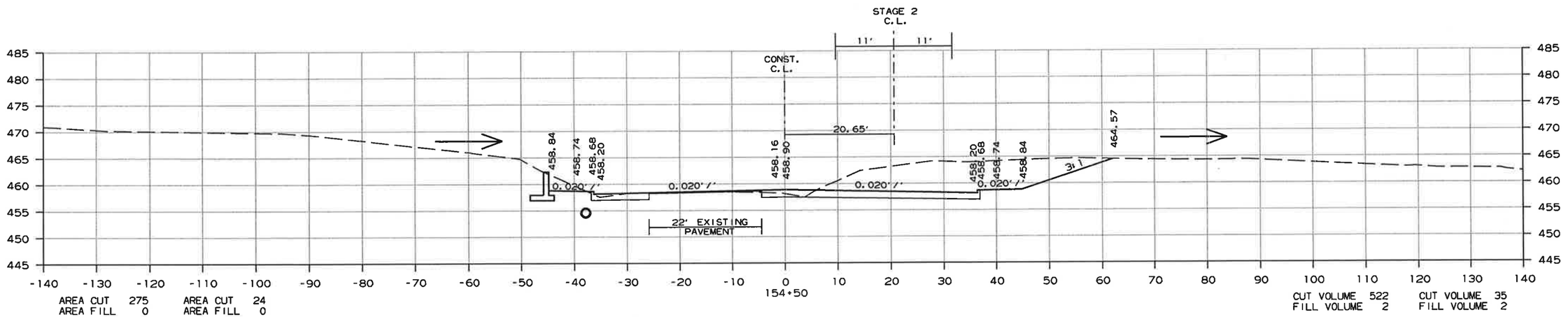
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	226	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 154+50 TO STA. 155+00

12/7/2017

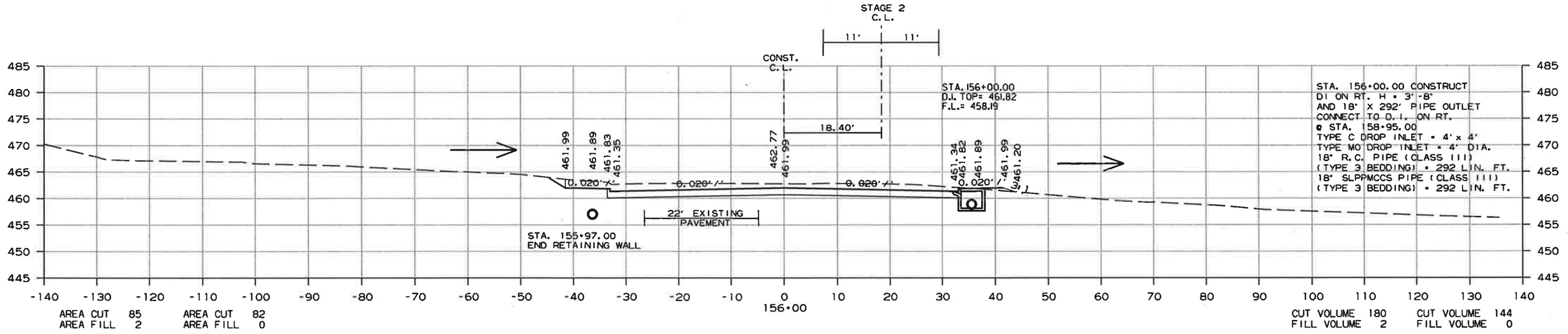
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	227	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2



CROSS SECTION STA. 155+50 TO STA. 156+00

12/7/2017

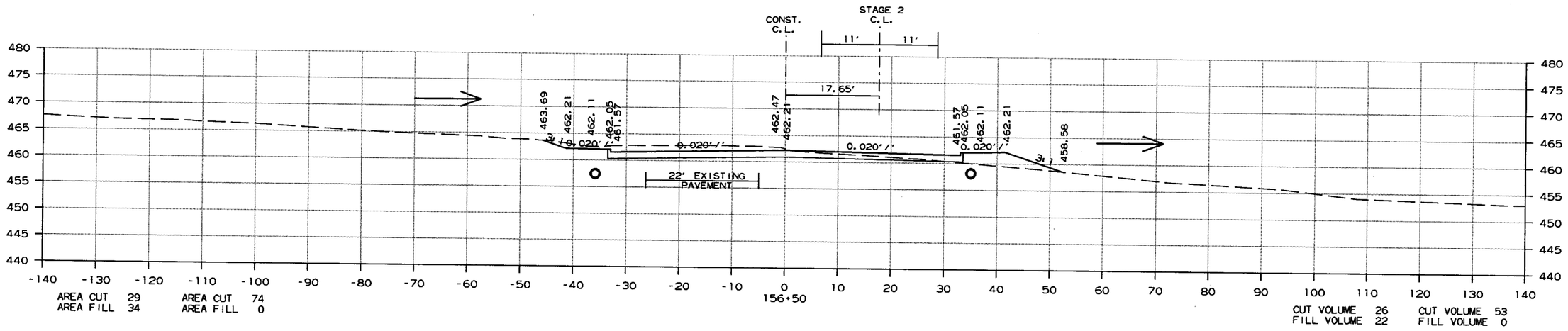
R061335.DGN

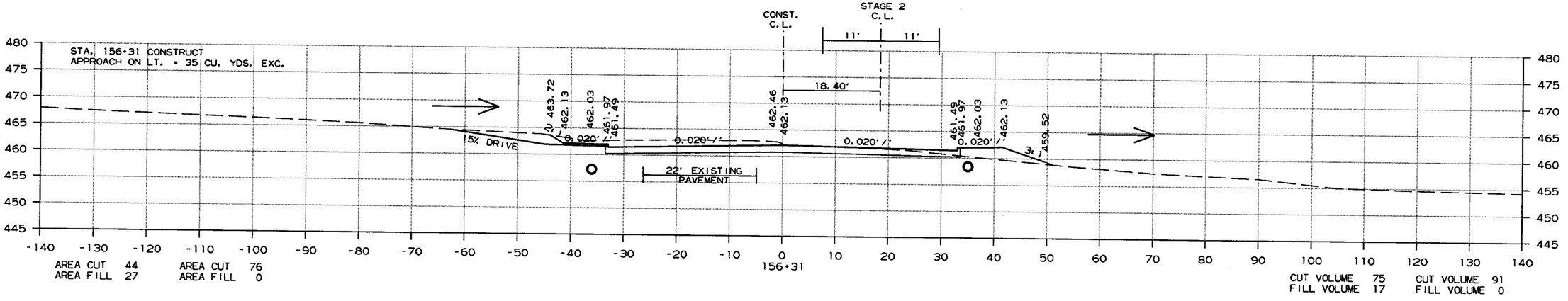
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	228	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 156+31 TO STA. 156+50

12/7/2017

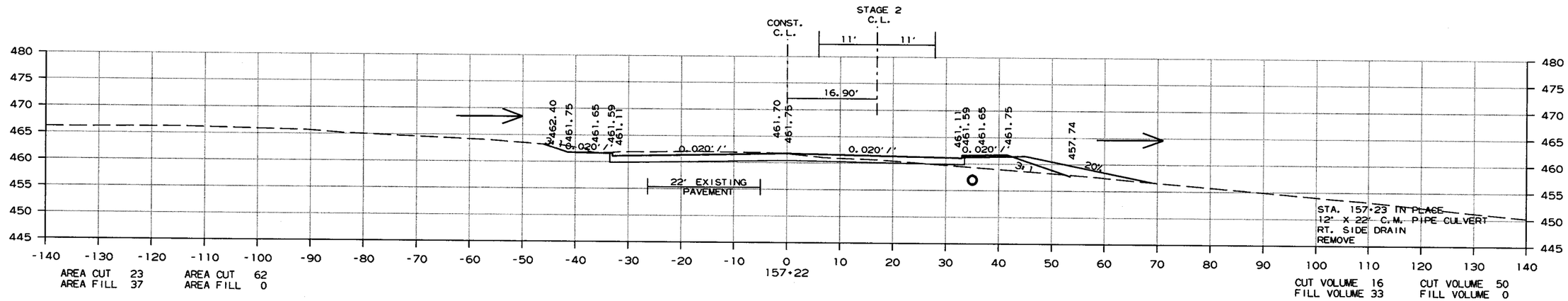
R061335.DGN

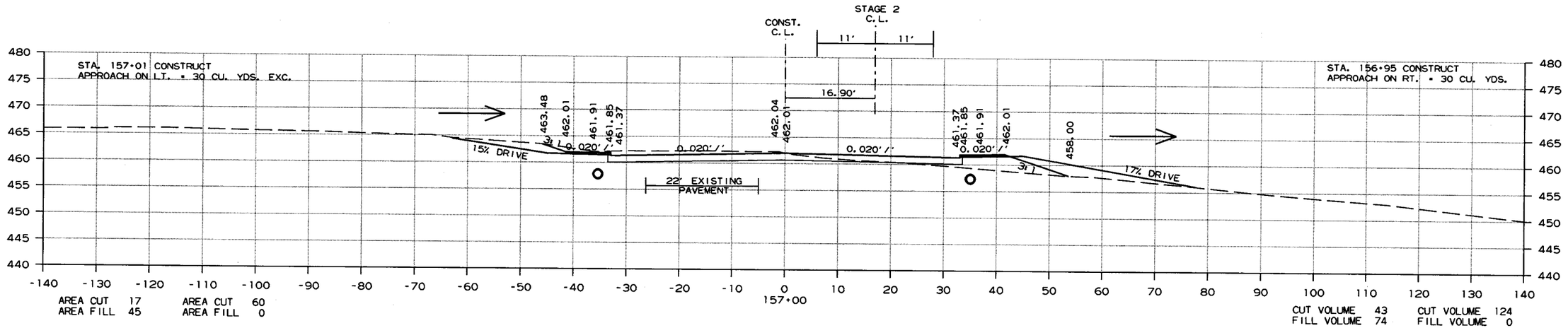
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	229	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2





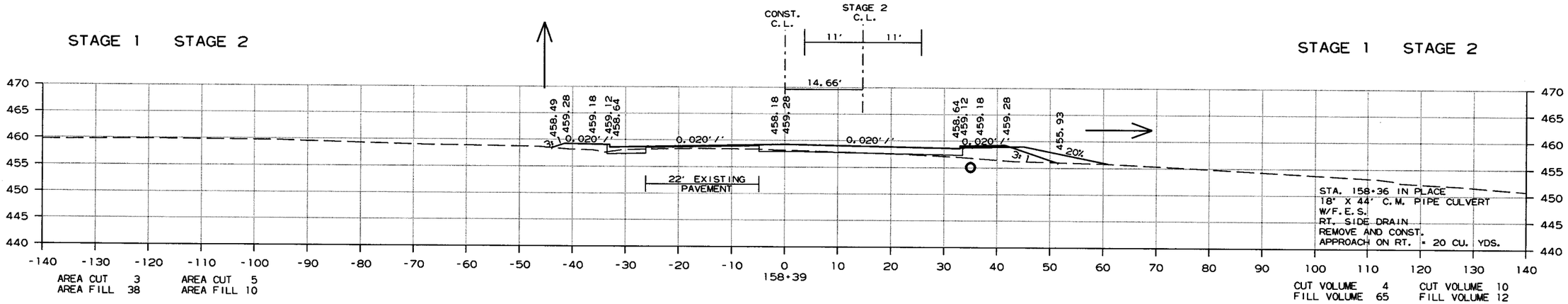
CROSS SECTION STA. 157+00 TO STA. 157+22

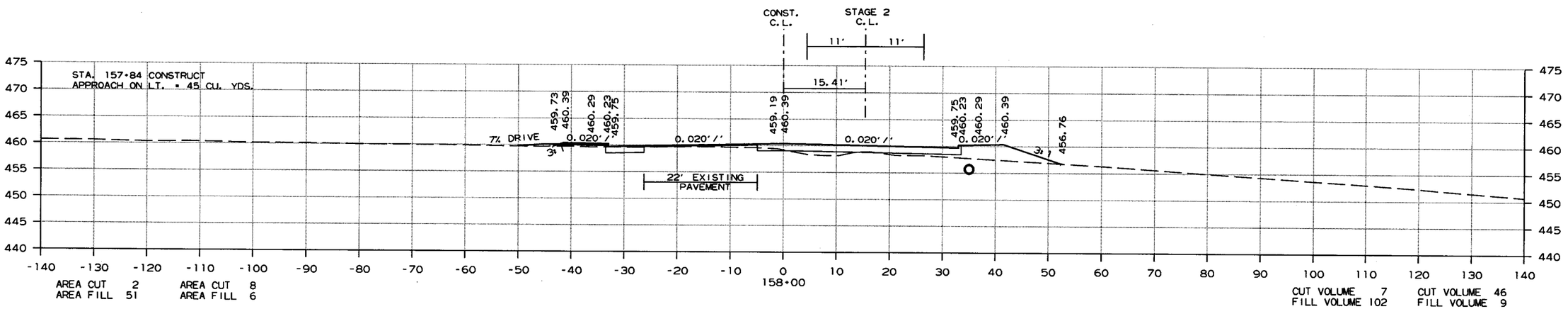
12/7/2017

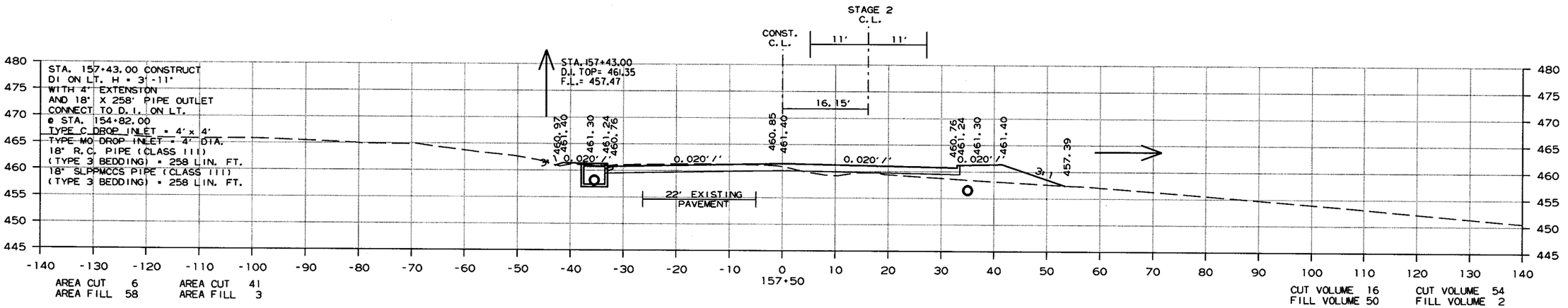
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	230	303

(2) CROSS SECTIONS







CROSS SECTION STA. 157+50 TO STA. 158+39

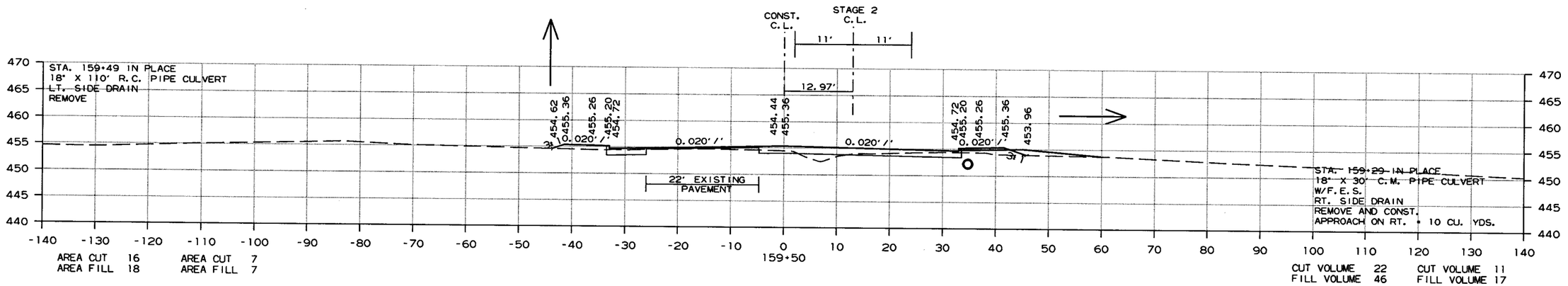
12/7/2017

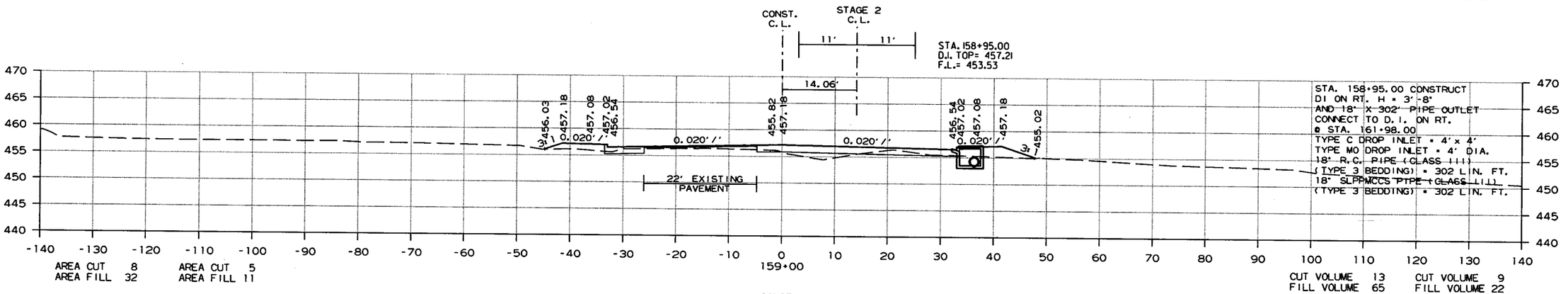
R061335.DGN

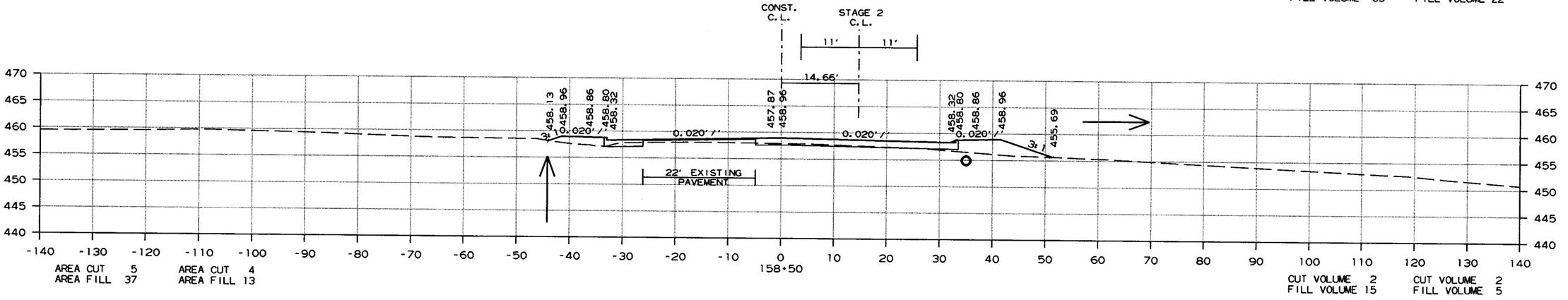
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	231	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2







CROSS SECTION STA. 158+50 TO STA. 159+50

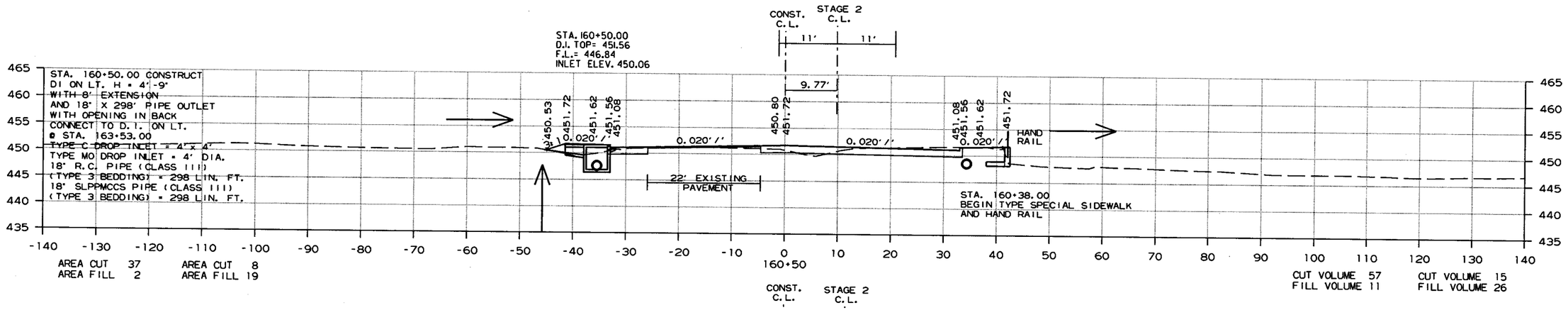
12/7/2017

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	232	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2



CROSS SECTION STA. 159+91 TO STA. 160+50

12/7/2017

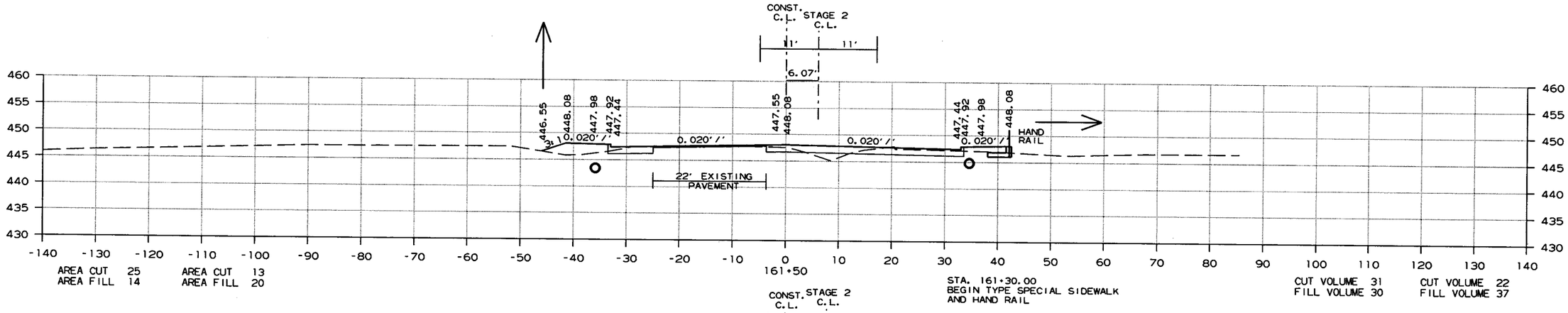
R061335.DGN

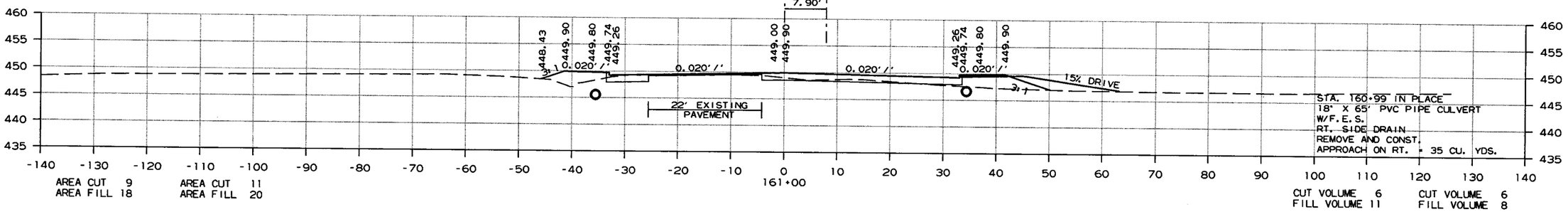
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	233	303

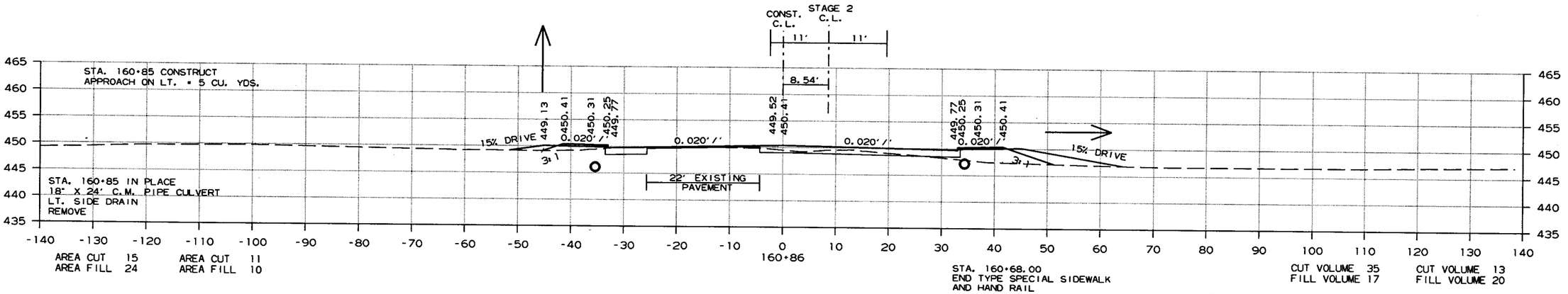
(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2







CROSS SECTION STA. 160+86 TO STA. 161+50

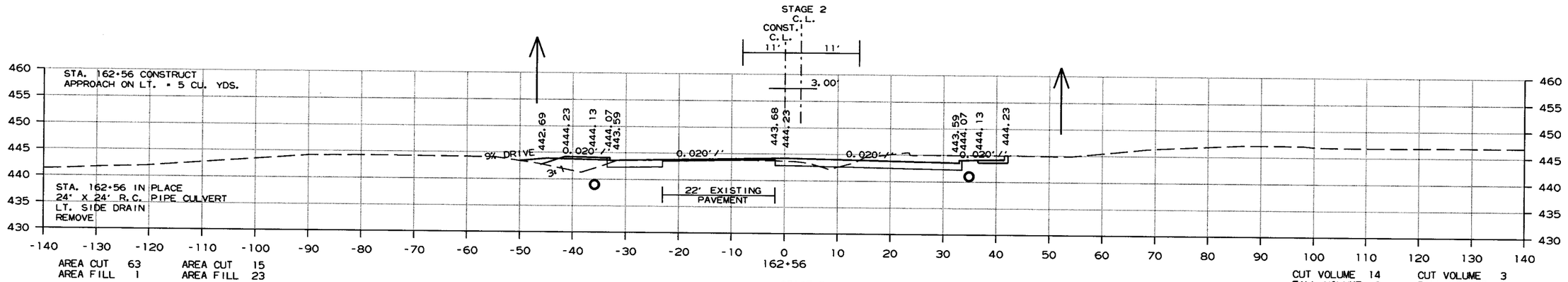
12/7/2017

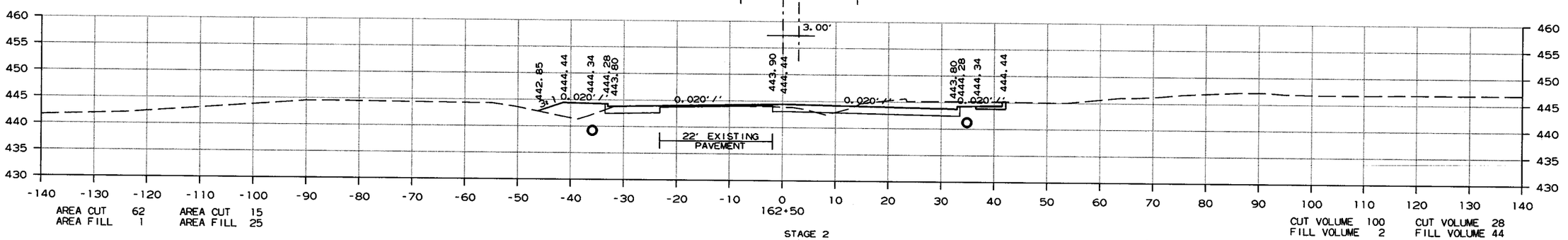
R061335.DGN

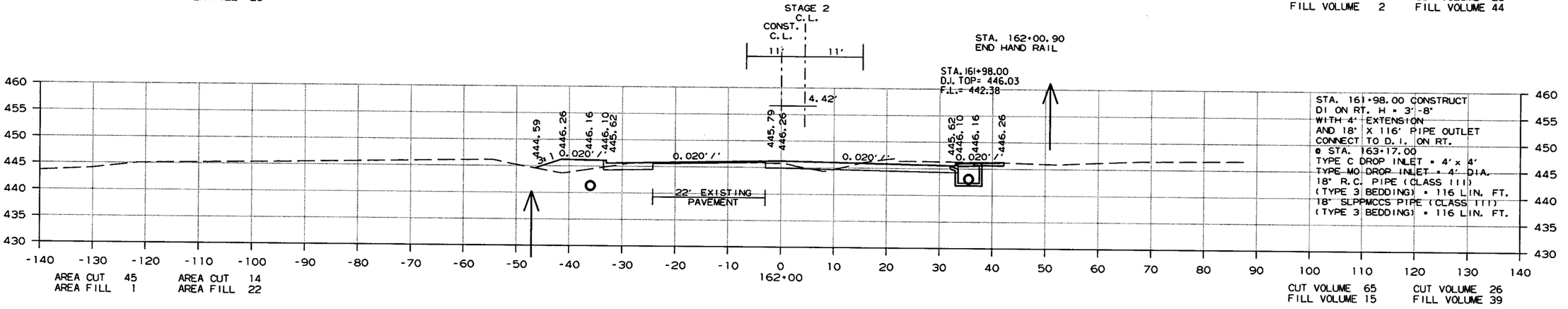
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	234	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2







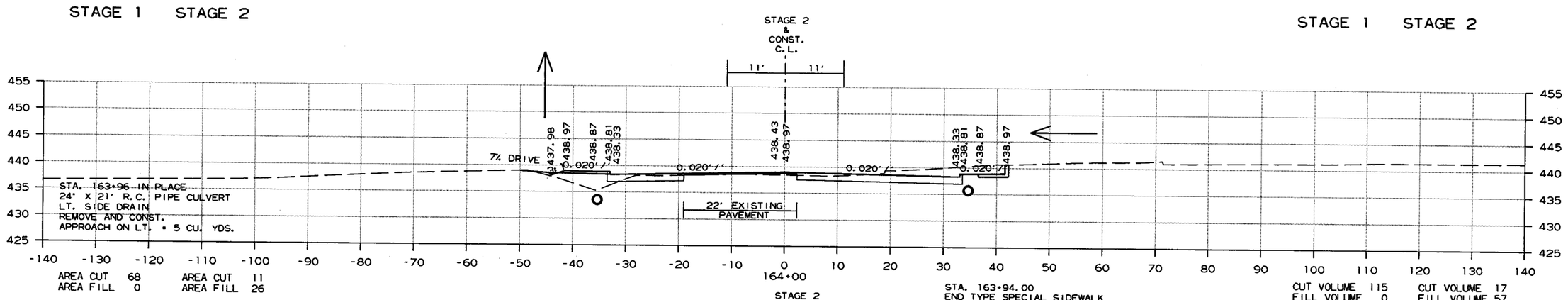
CROSS SECTION STA. 162+00 TO STA. 162+56

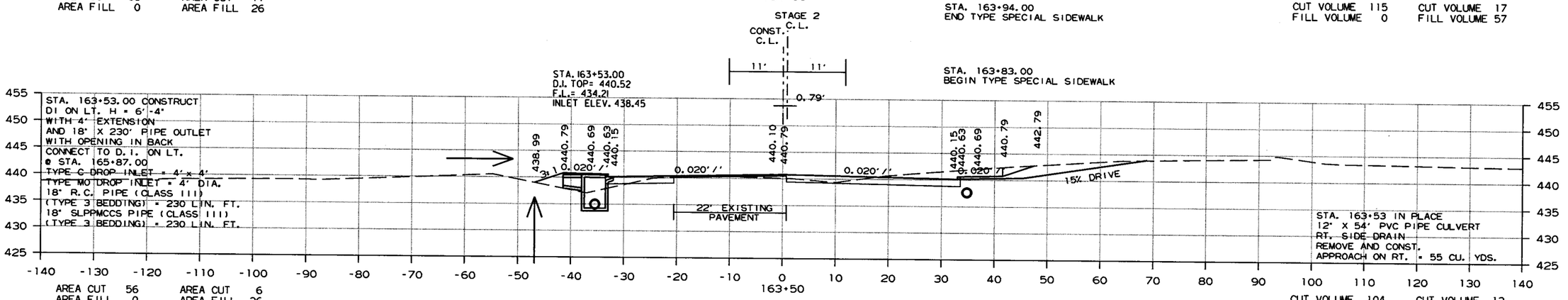
12/7/2017

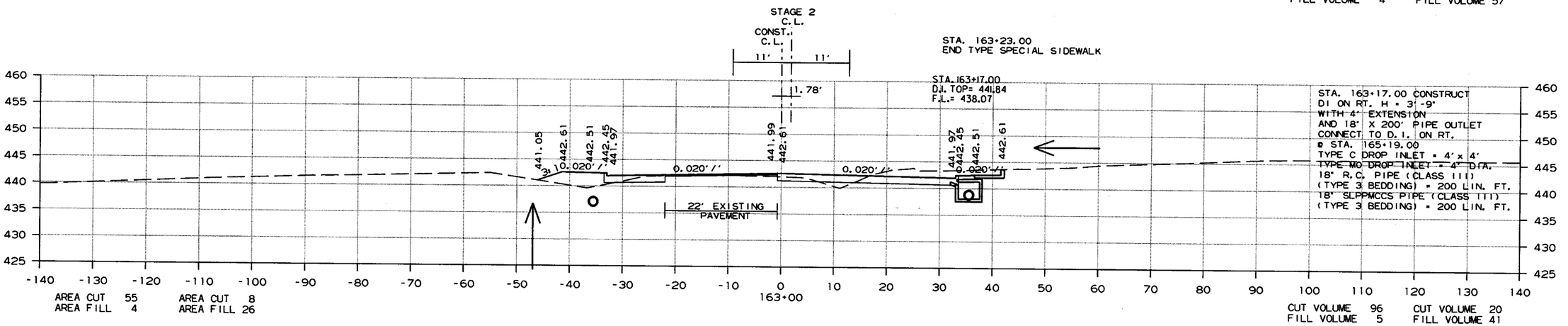
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RO. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	235	303

(2) CROSS SECTIONS







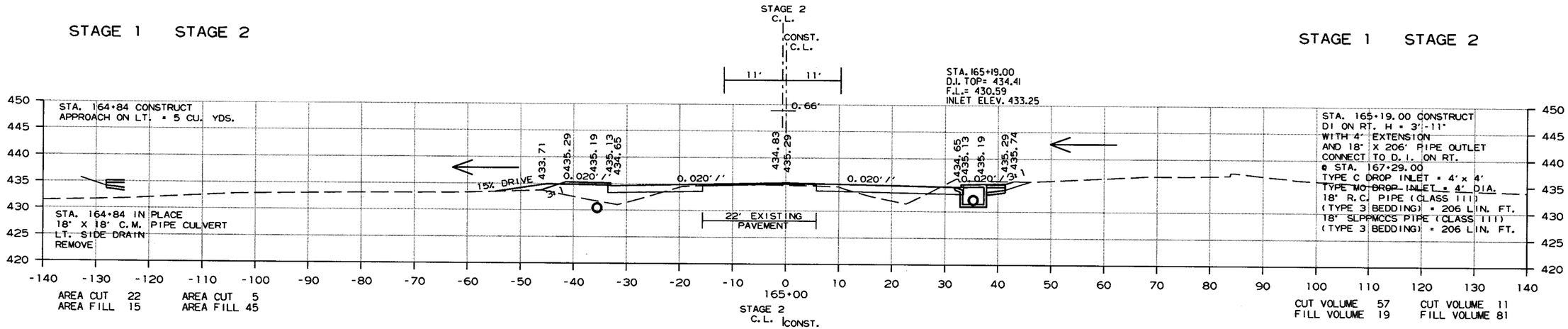
CROSS SECTION STA. 163+00 TO STA. 164+00

12/7/2017

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	236	303

(2) CROSS SECTIONS



CROSS SECTION STA. 164+21 TO STA. 165+00

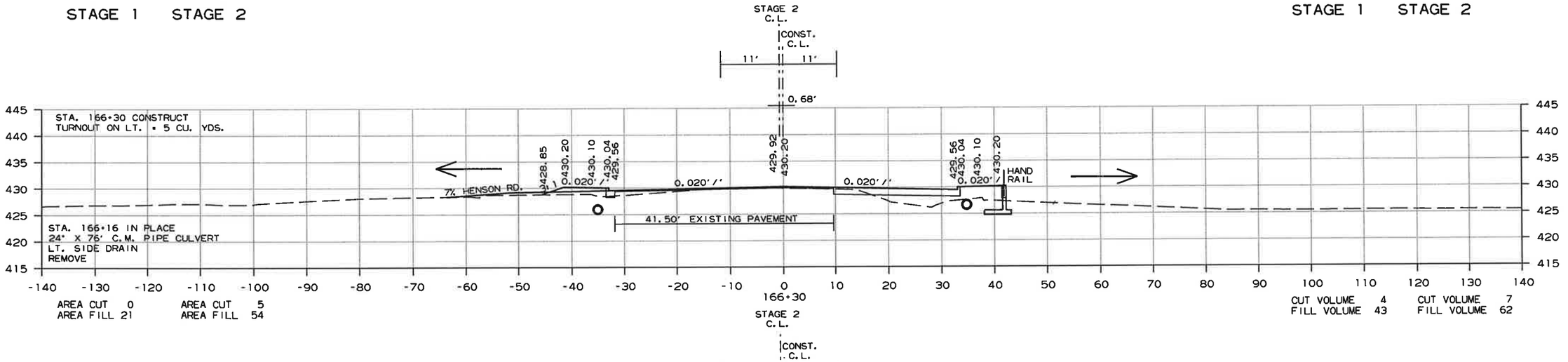
12/7/2017

R061335.DGN

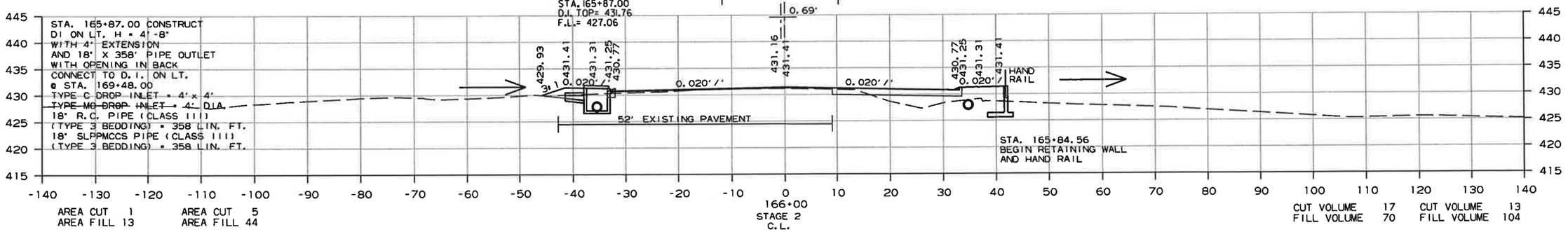
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	237	303

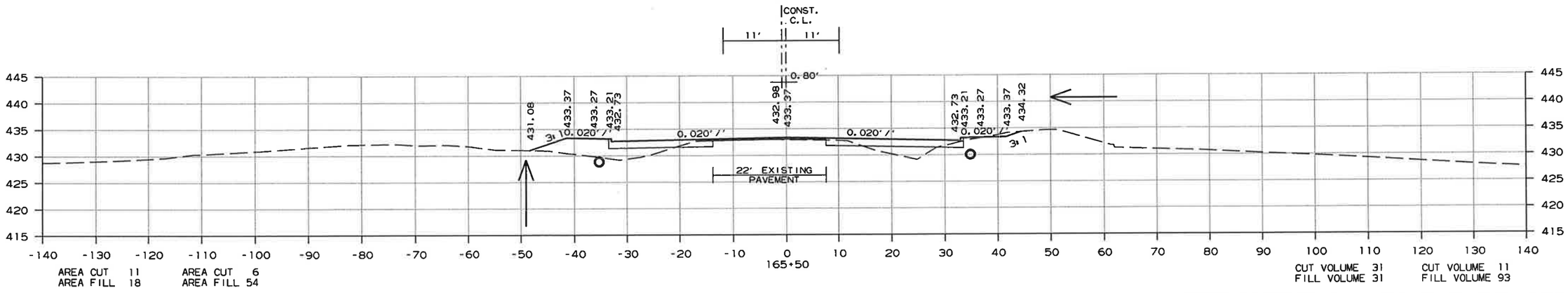
(2) CROSS SECTIONS

STAGE 1 STAGE 2



STAGE 1 STAGE 2





CROSS SECTION STA. 165+50 TO STA. 166+30

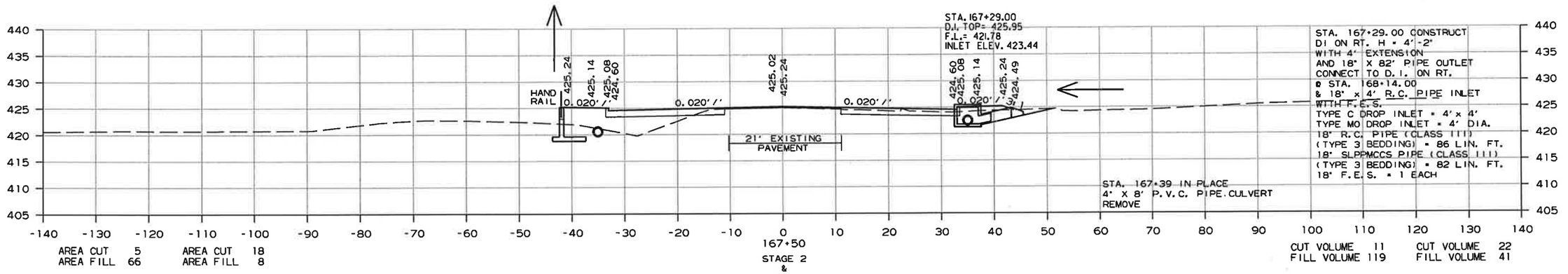
12/7/2017

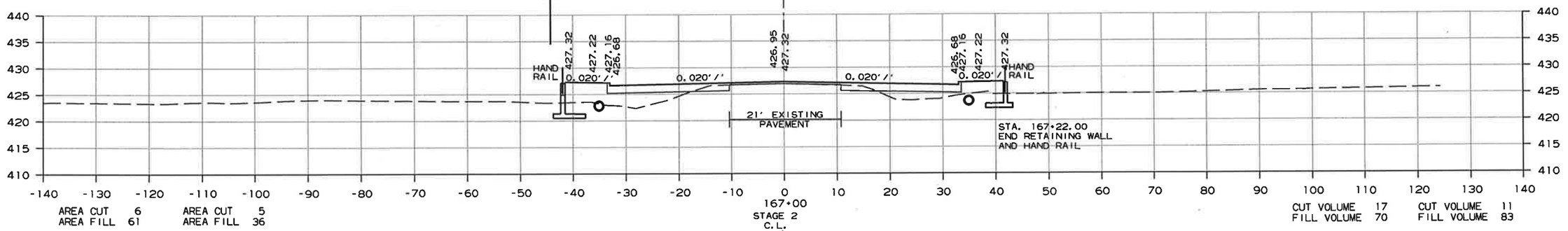
R061335.DGN

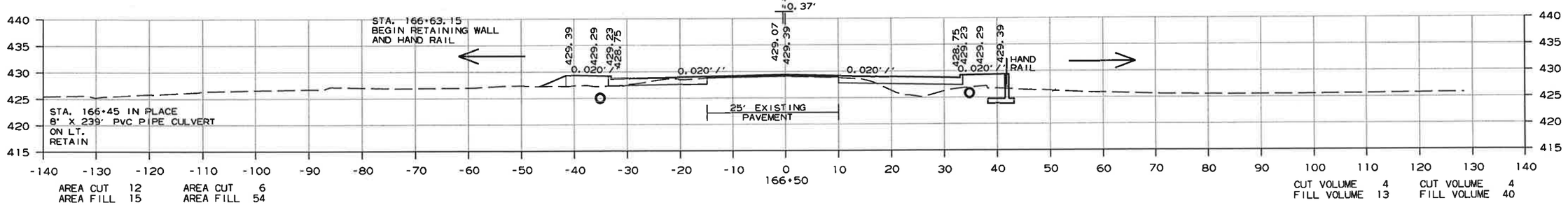
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	238	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2







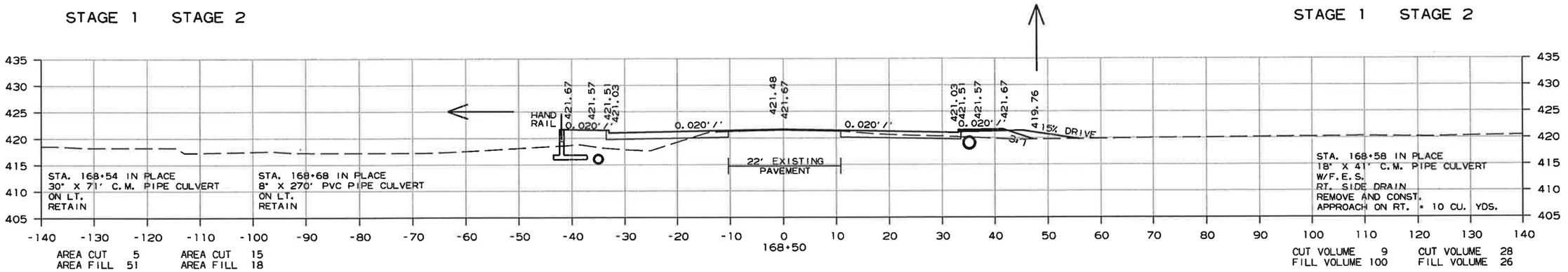
CROSS SECTION STA. 166+50 TO STA. 167+50

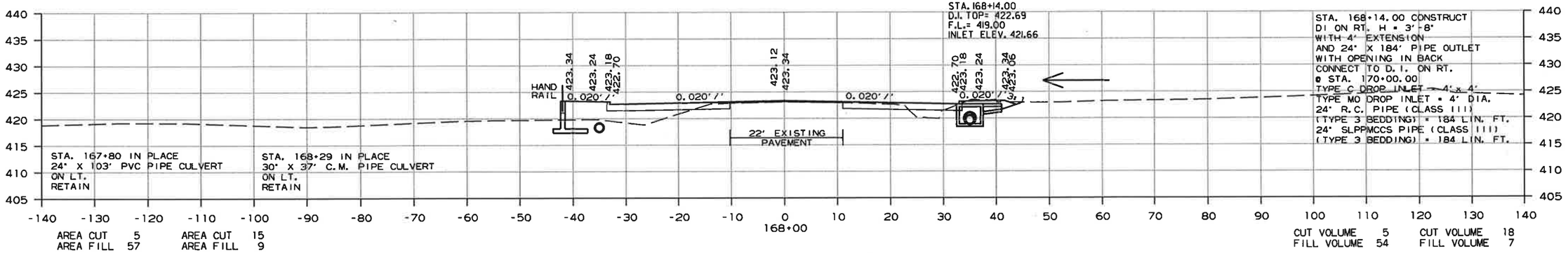
12/7/2017

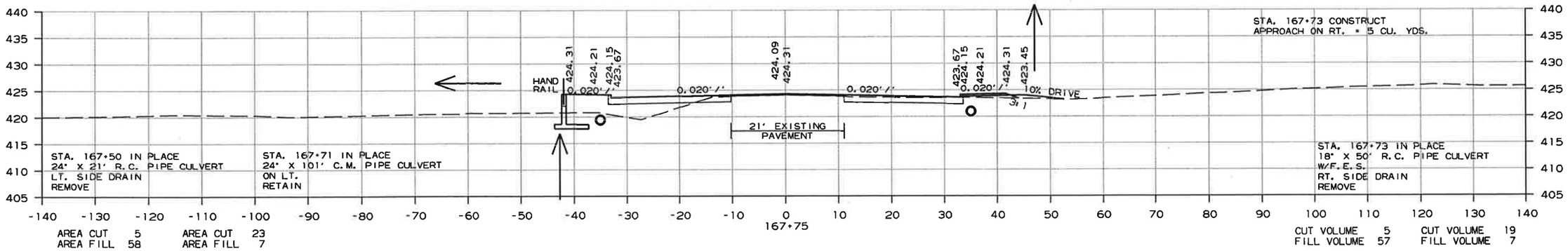
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	239	303

(2) CROSS SECTIONS







CROSS SECTION STA. 167+75 TO STA. 168+50

12/7/2017

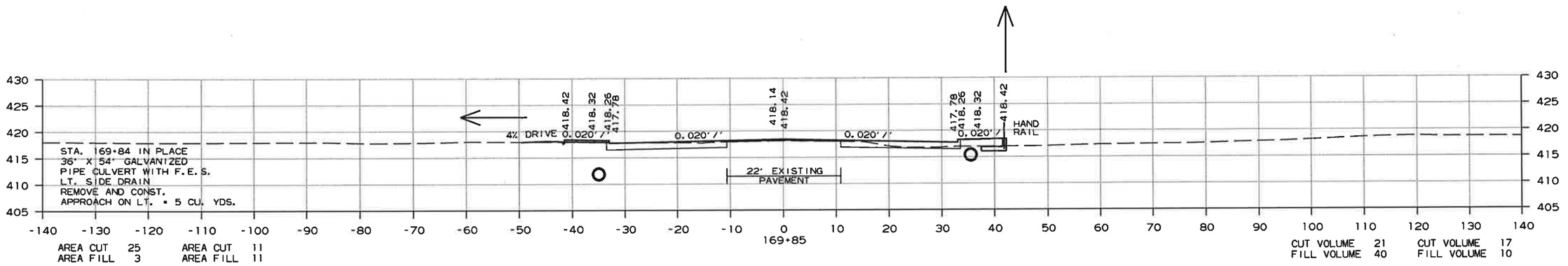
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	240	303

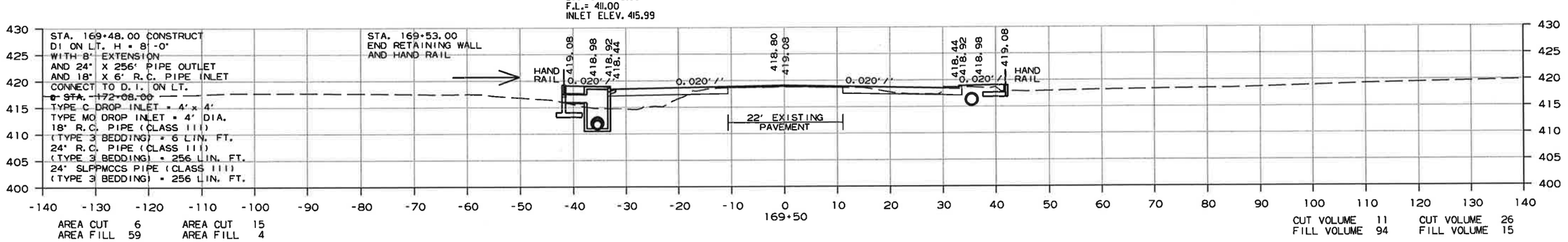
(2) CROSS SECTIONS

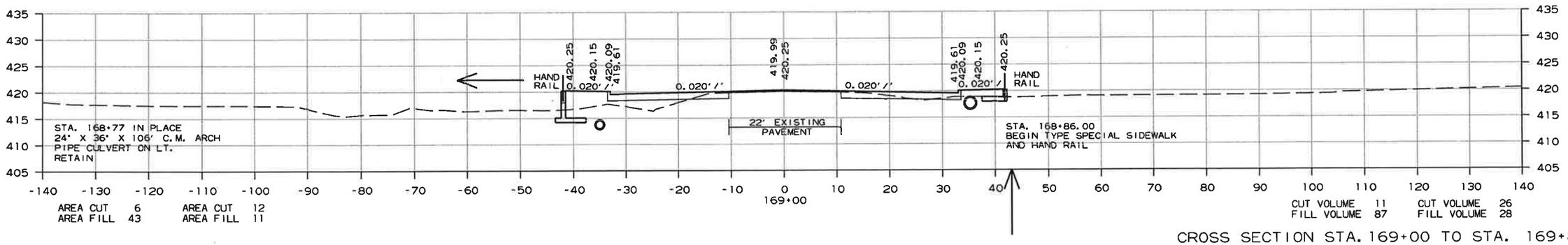
STAGE 1 STAGE 2

STAGE 1 STAGE 2



STA. 169+48.00
D.I. TOP= 418.96
F.L.= 411.00
INLET ELEV. 415.99





CROSS SECTION STA. 169+00 TO STA. 169+85

12/7/2017

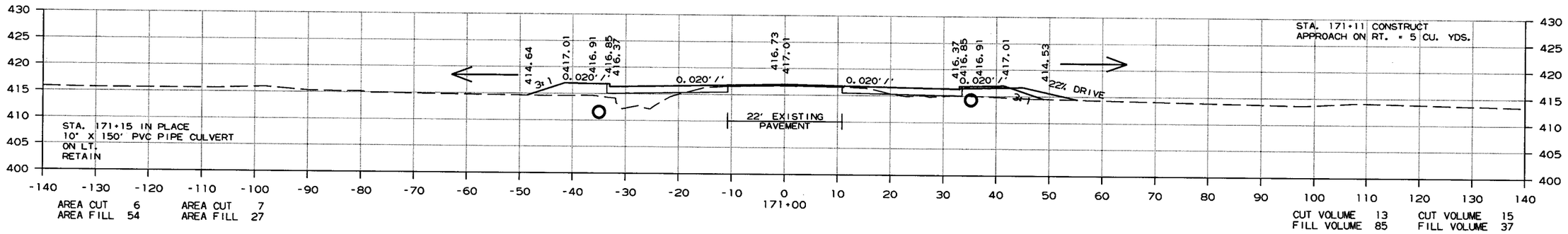
R061335.DGN

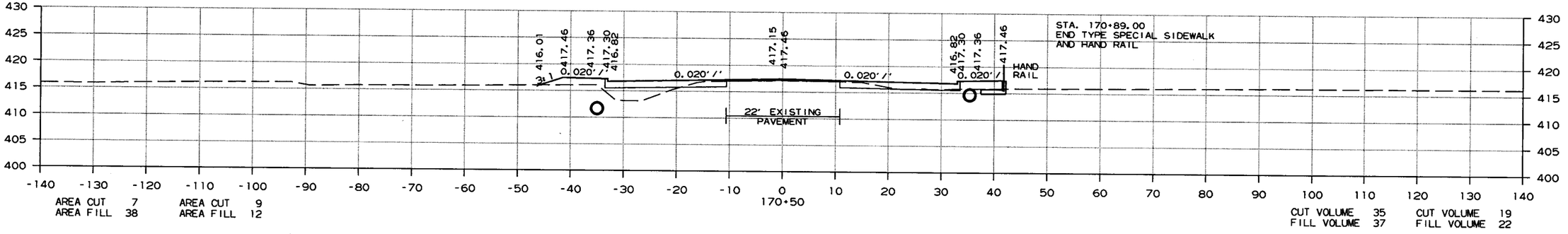
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	241	303

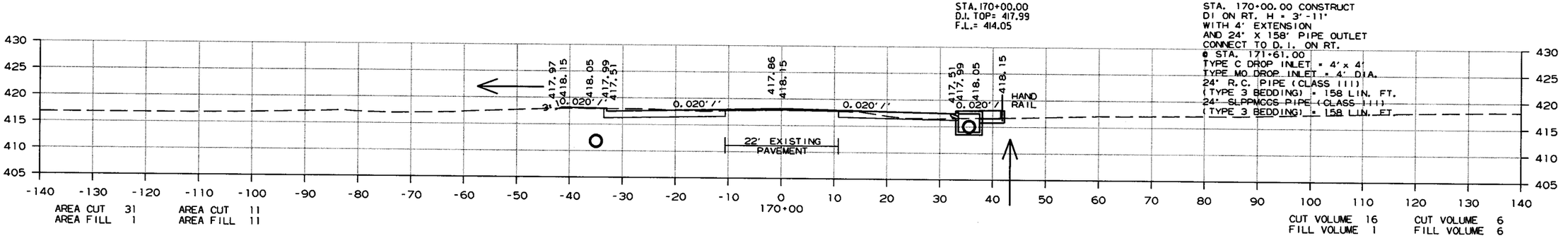
(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2







CROSS SECTION STA. 170+00 TO STA. 171+00

12/7/2017

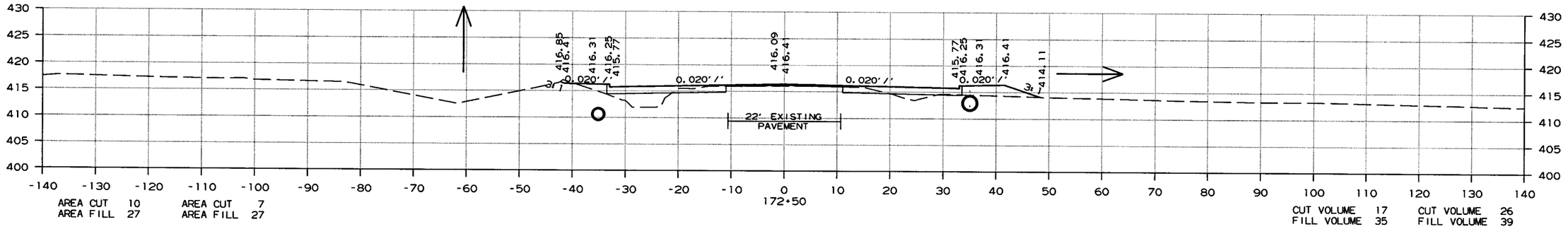
R061335.DGN

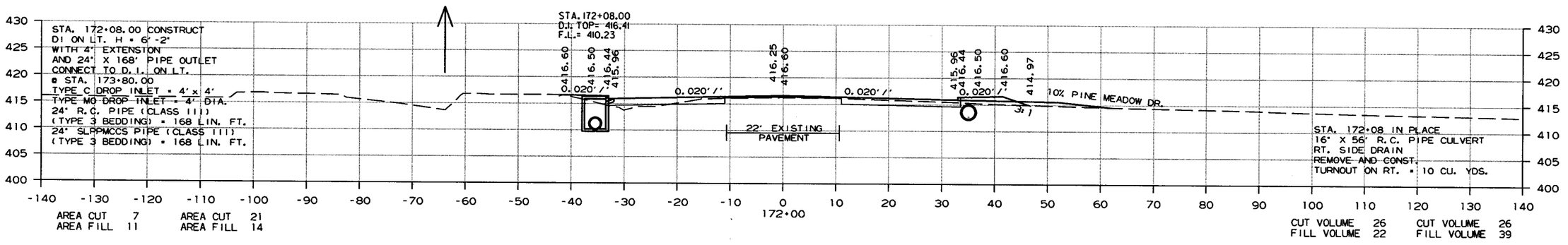
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	242	303

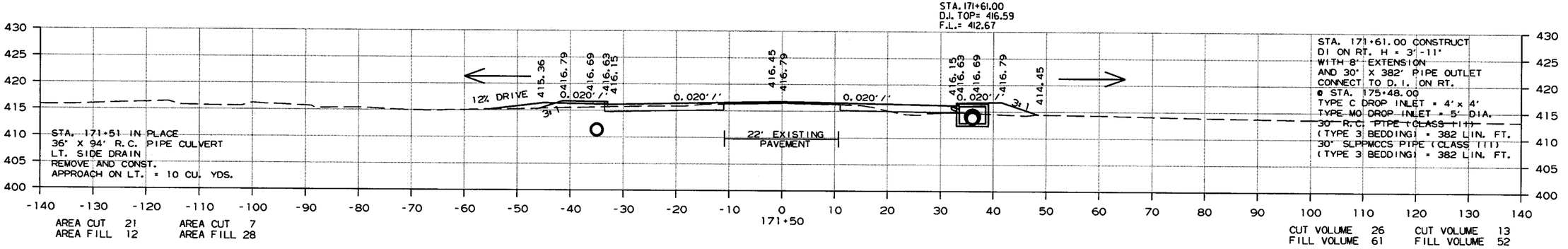
(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2







CROSS SECTION STA. 171+50 TO STA. 172+50

12/7/2017

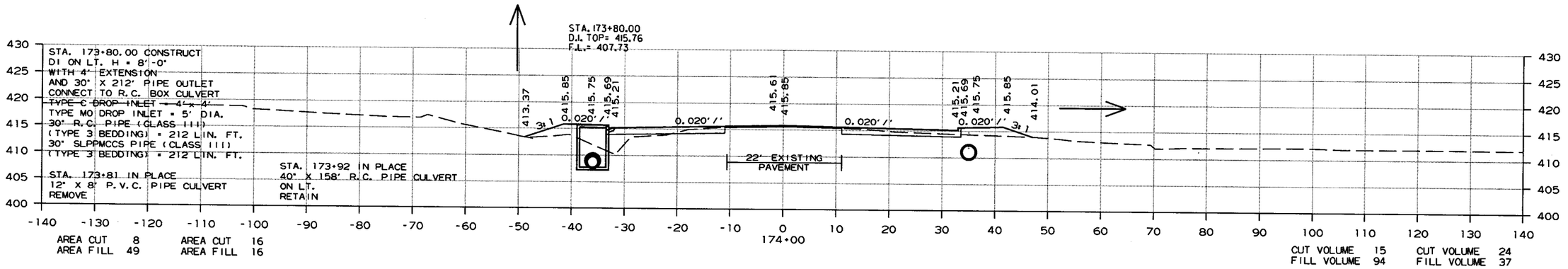
R061335.DGN

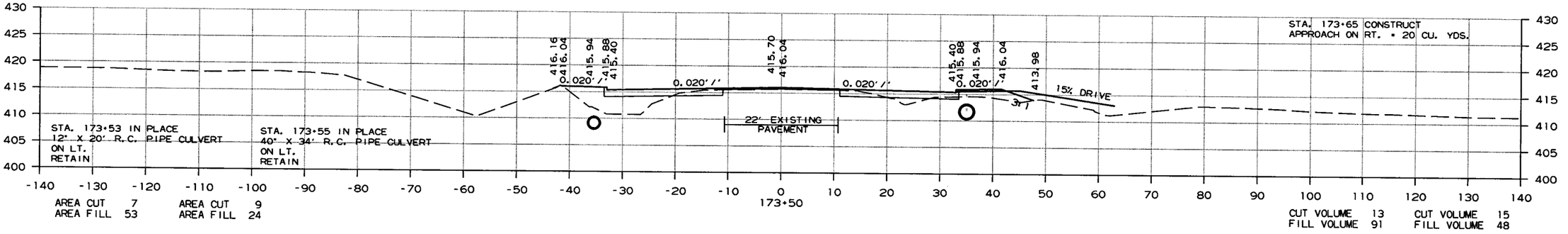
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	243	303

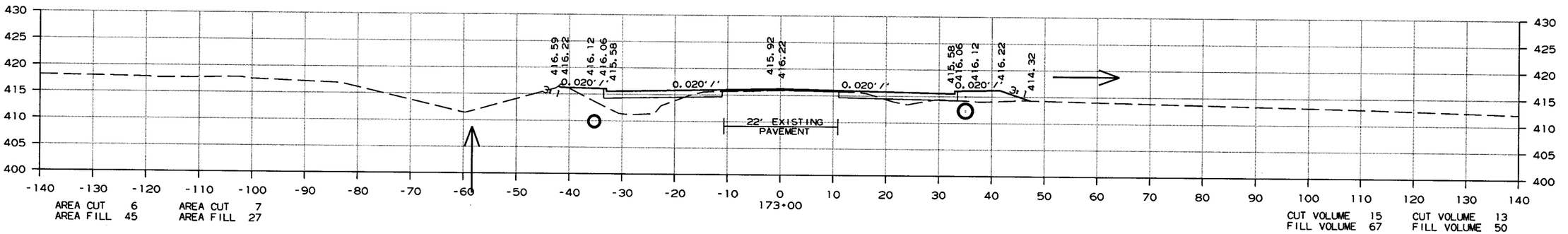
(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2







CROSS SECTION STA. 173+00 TO STA. 174+00

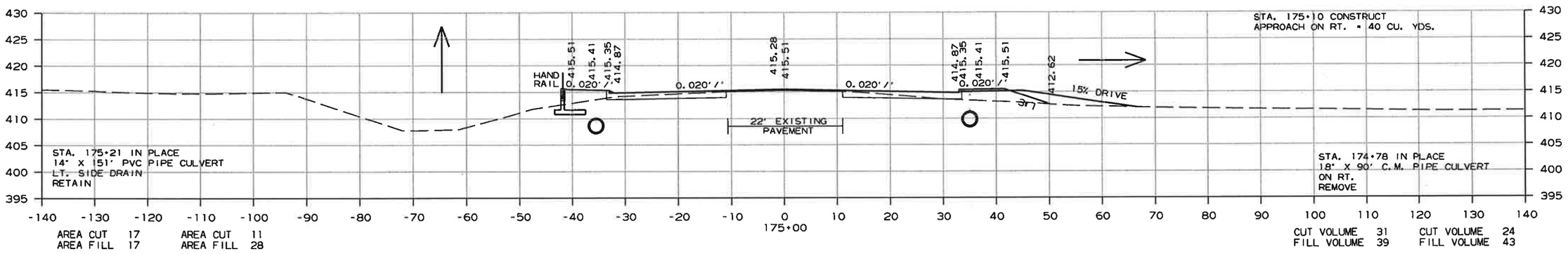
12/7/2017

R061335.DGN

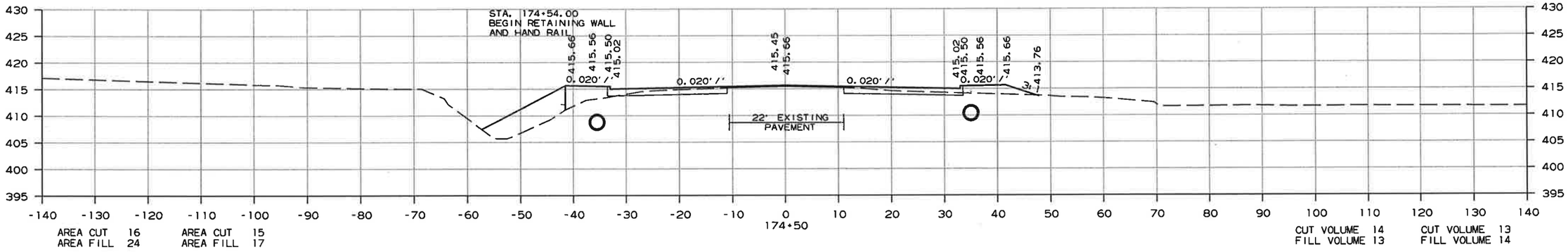
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	244	303

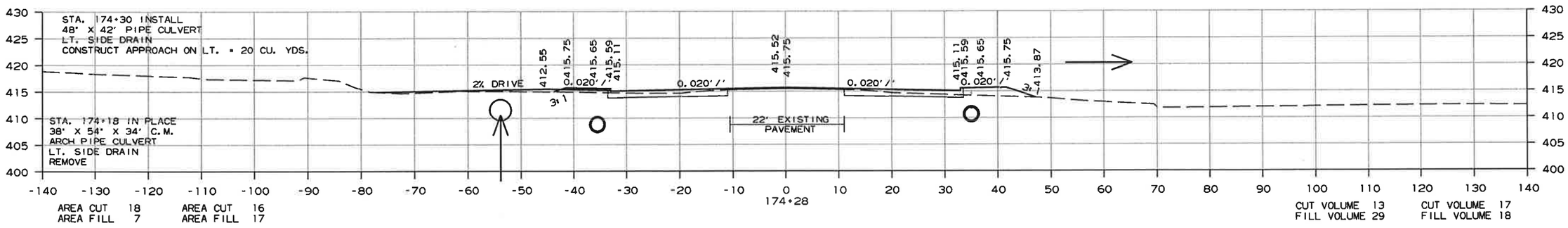
(2) CROSS SECTIONS

STAGE 1 STAGE 2



STAGE 1 STAGE 2





CROSS SECTION STA. 174+28 TO STA. 175+00

12/7/2017

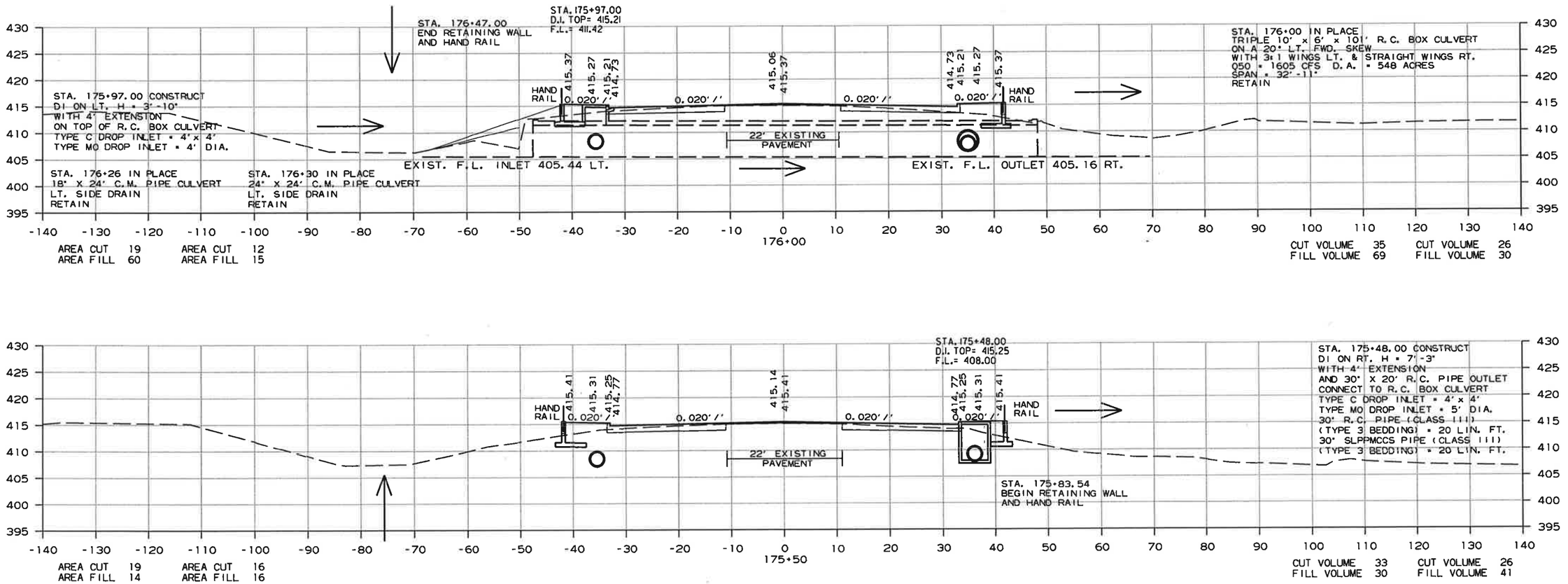
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	245	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2



CROSS SECTION STA. 175+50 TO STA. 176+00

12/7/2017

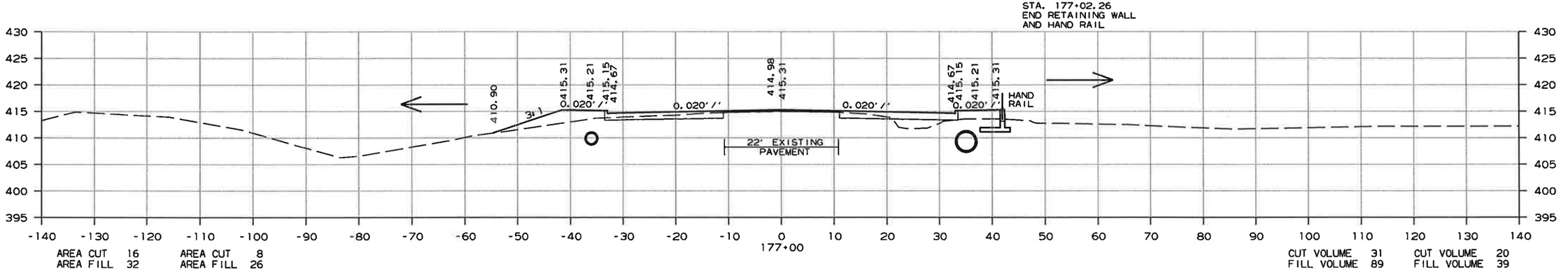
R061335.DGN

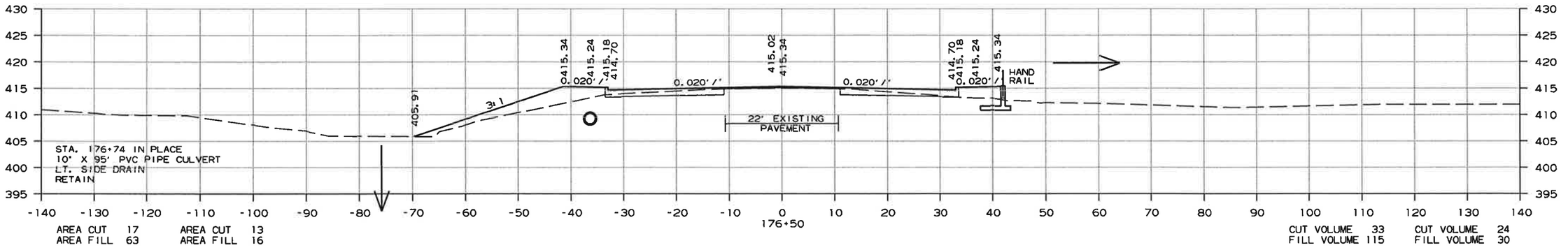
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	246	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 176+50 TO STA. 177+00

12/7/2017

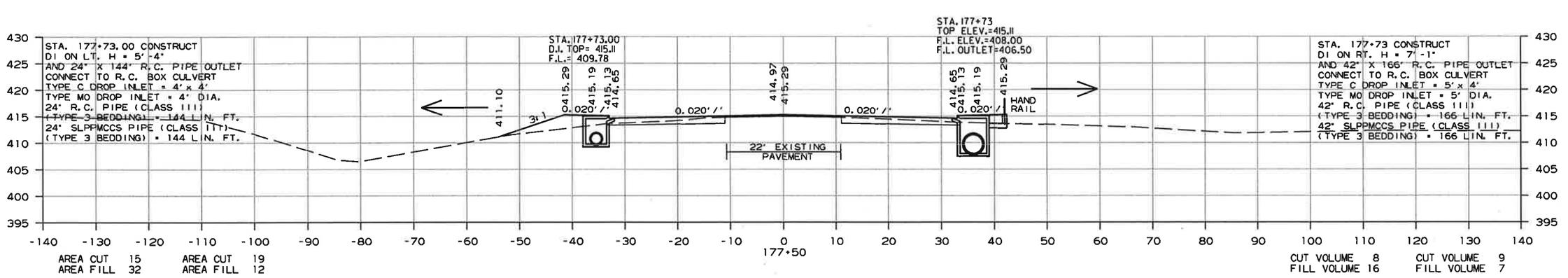
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	247	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2



CROSS SECTION STA. 177+36 TO STA. 177+50

12/7/2017

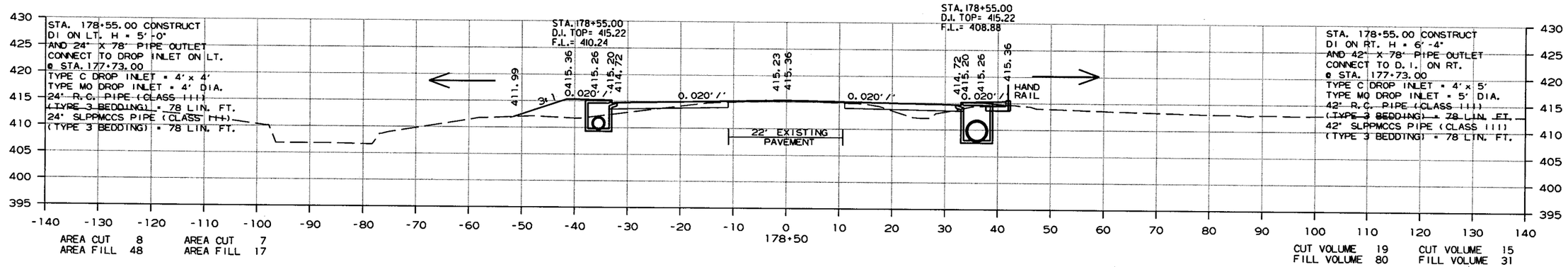
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	248	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2



CROSS SECTION STA. 178+00 TO STA. 178+50

12/7/2017

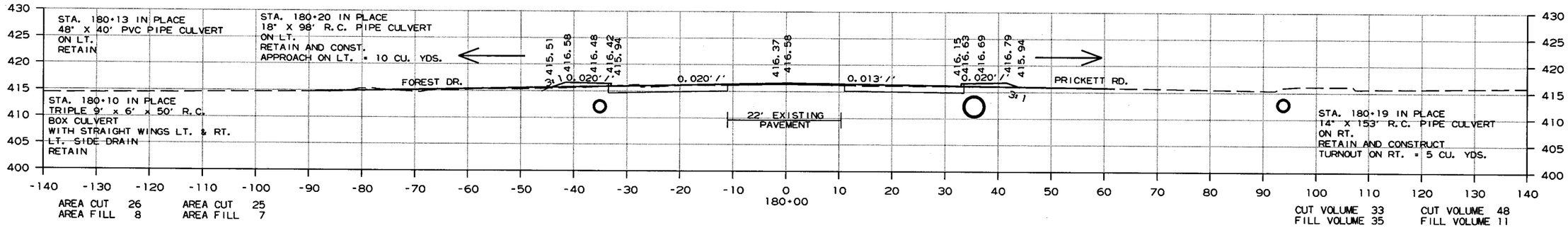
R061335.DGN

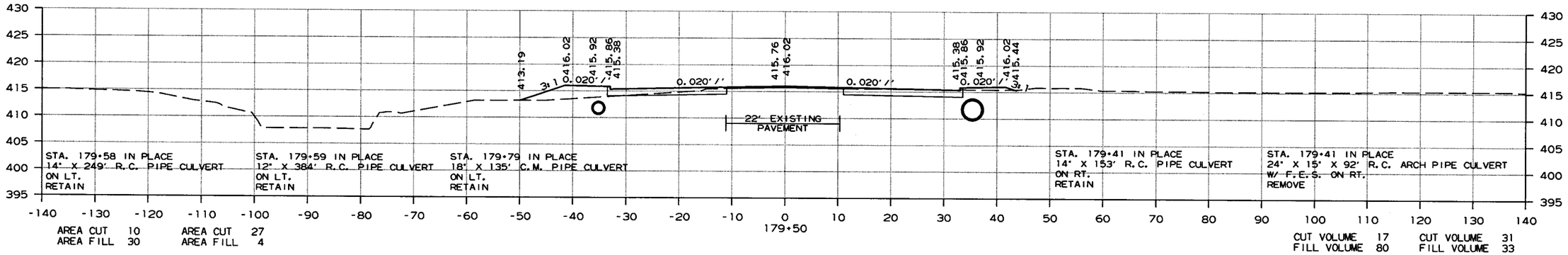
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	249	303

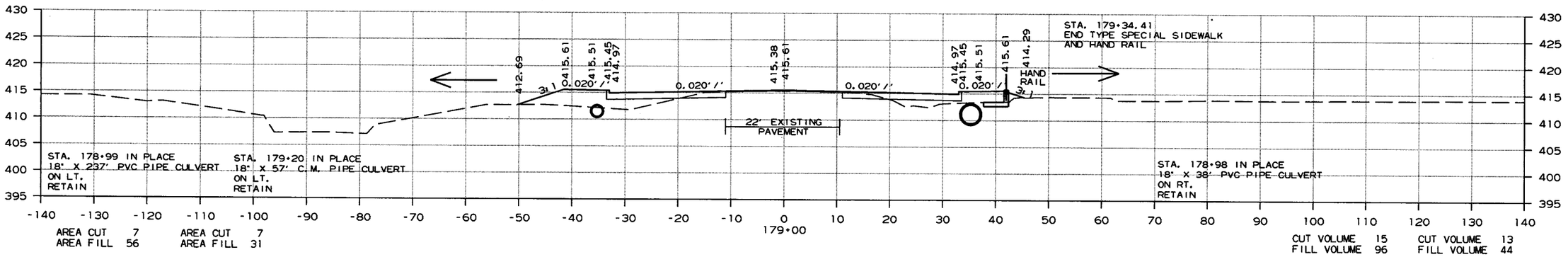
(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2







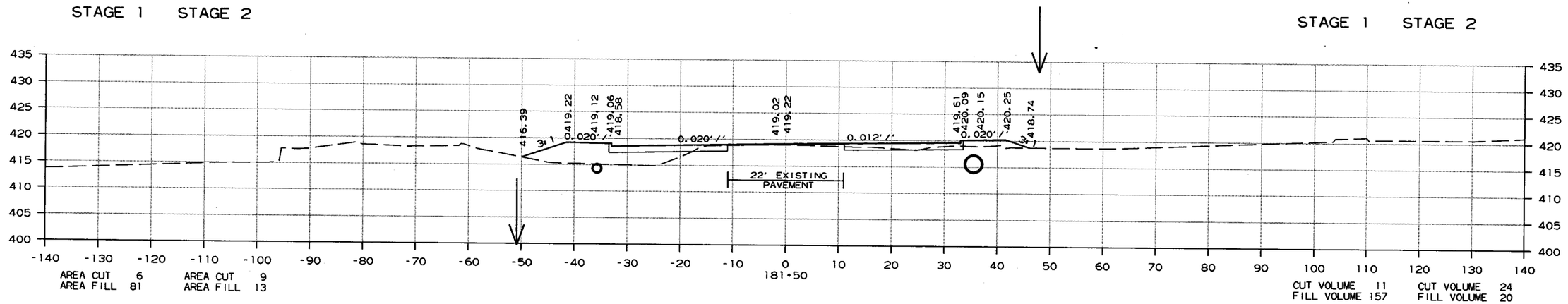
CROSS SECTION STA. 179+00 TO STA. 180+00

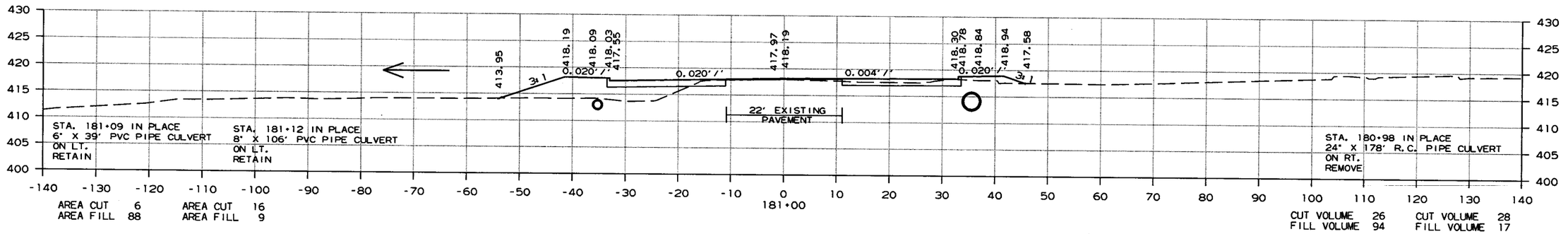
12/7/2017

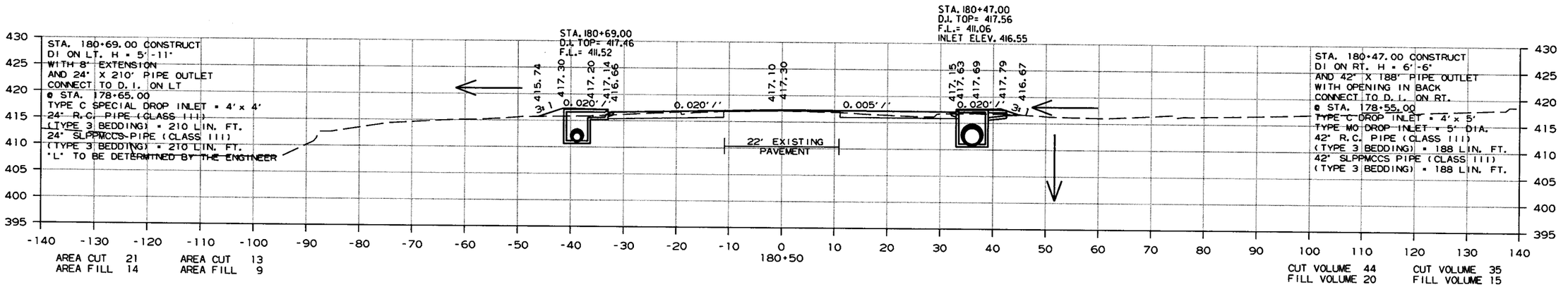
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	250	303

(2) CROSS SECTIONS







CROSS SECTION STA. 180+50 TO STA. 181+50

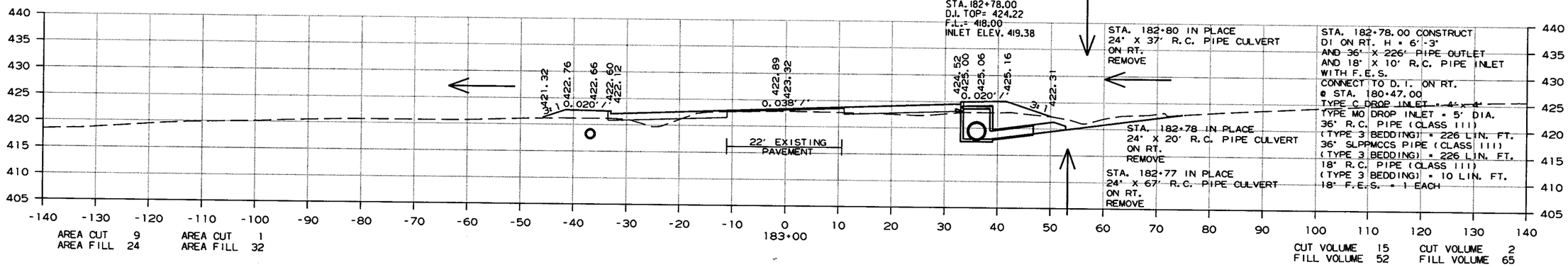
12/7/2017

R061335.DGN

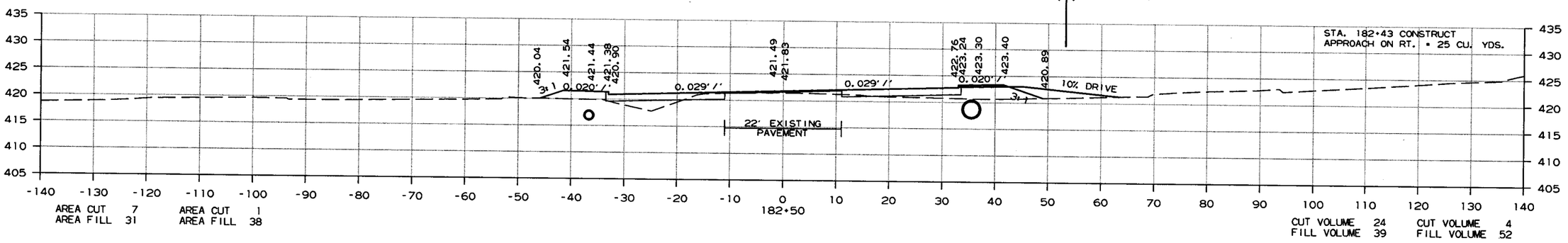
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	251	303

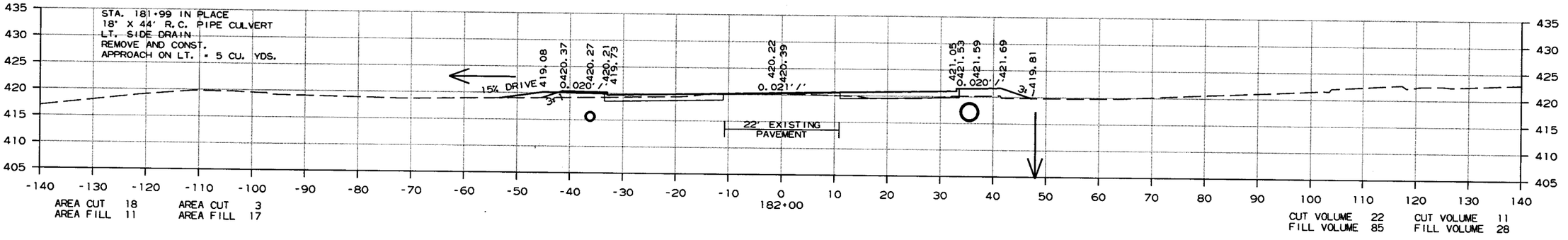
(2) CROSS SECTIONS

STAGE 1 STAGE 2



STAGE 1 STAGE 2





CROSS SECTION STA. 182+00 TO STA. 183+00

12/7/2017

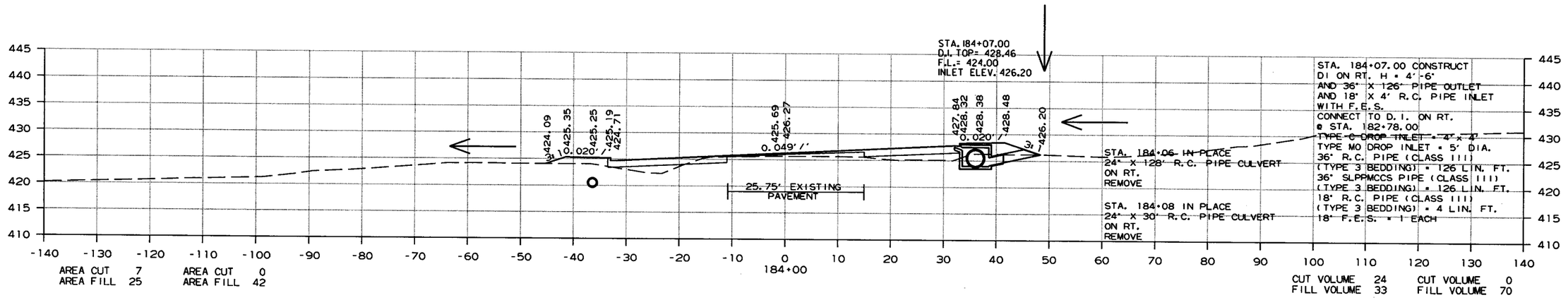
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	252	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2



CROSS SECTION STA. 183+50 TO STA. 184+00

12/7/2017

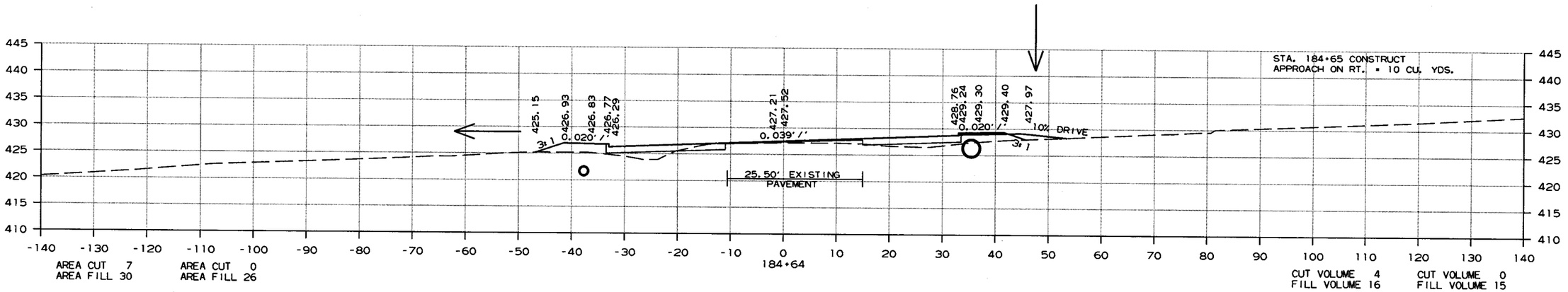
R061335.DGN

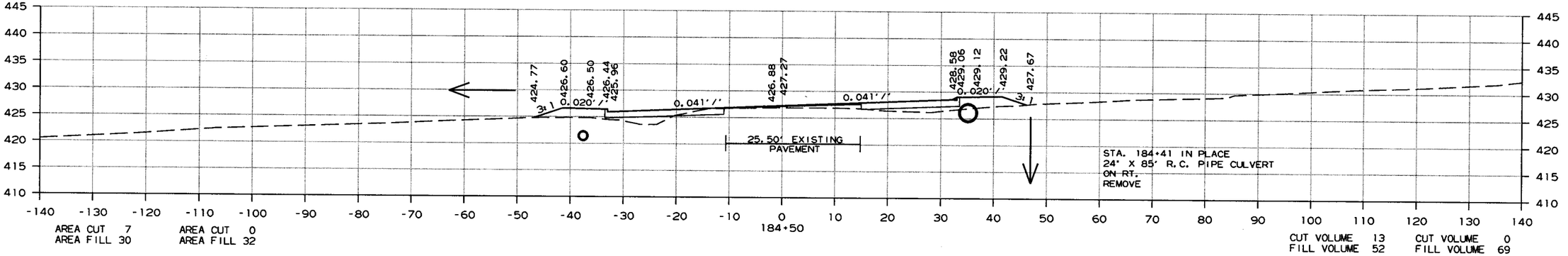
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	253	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 184+50 TO STA. 184+64

12/7/2017

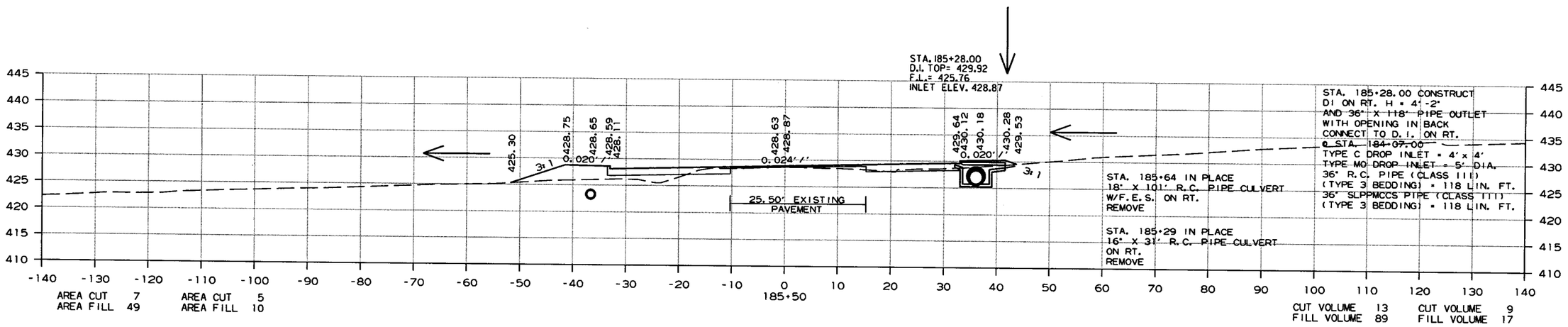
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	254	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2



CROSS SECTION STA. 185+00 TO STA. 185+50

12/7/2017

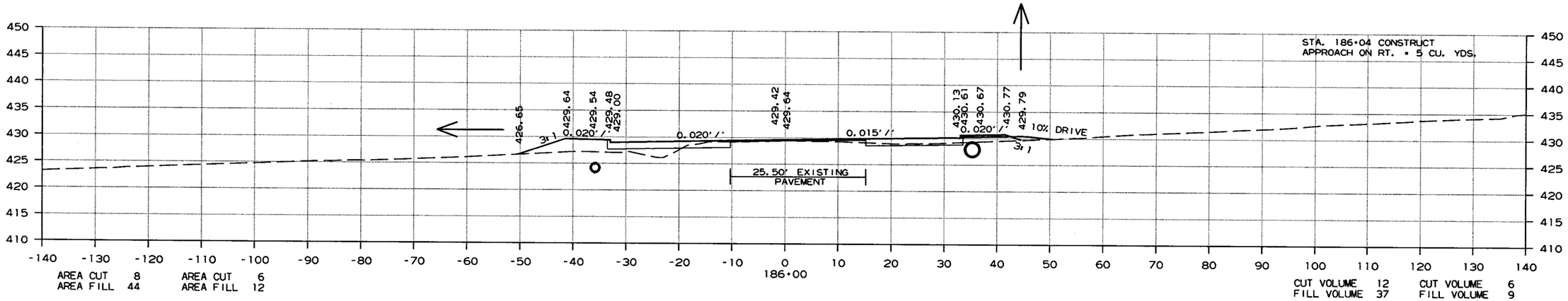
R061335.DGN

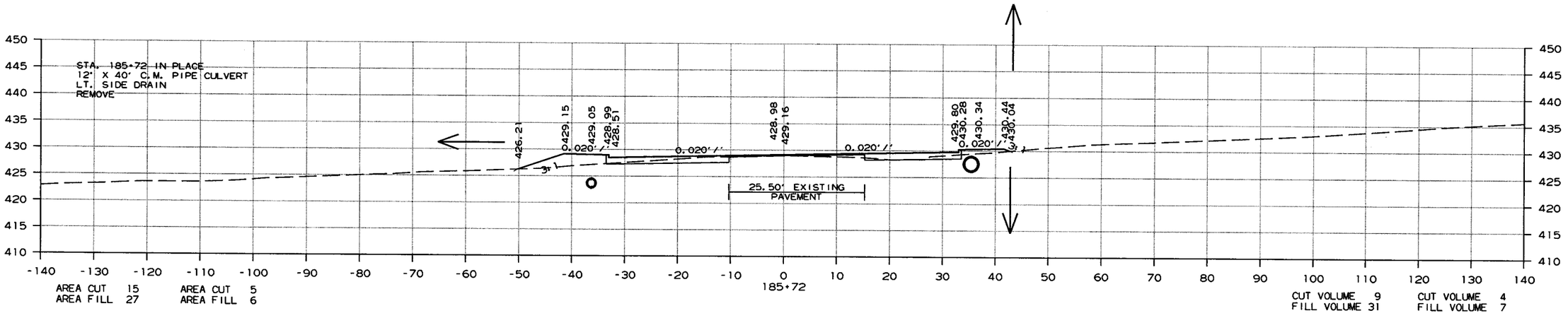
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	255	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 185+72 TO STA. 186+00

12/7/2017

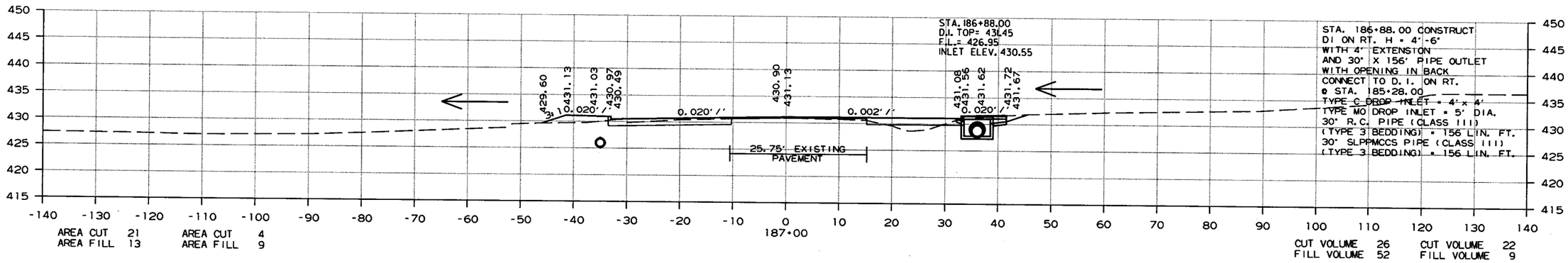
R061335.DGN

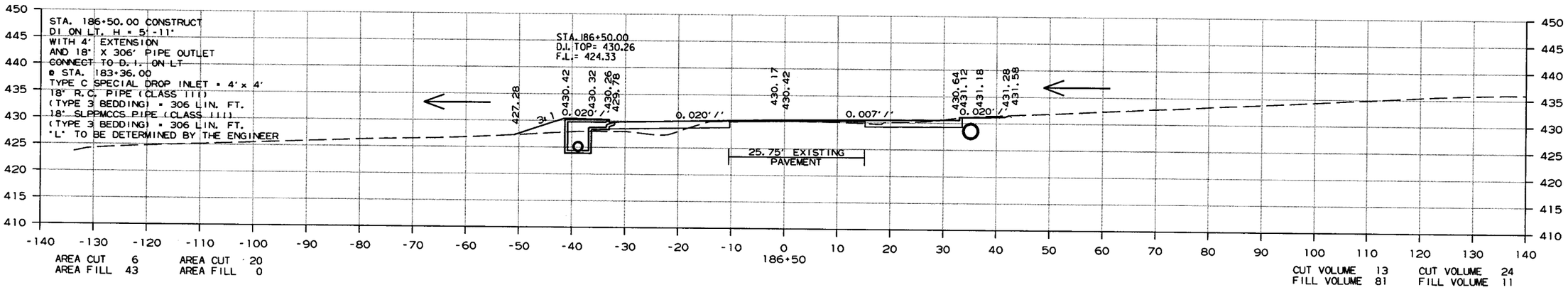
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	256	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 186+50 TO STA. 187+00

12/7/2017

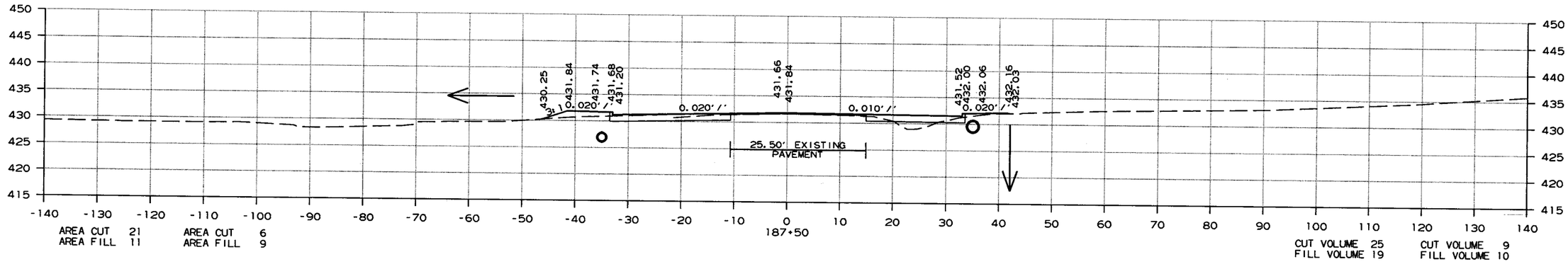
R061335.DGN

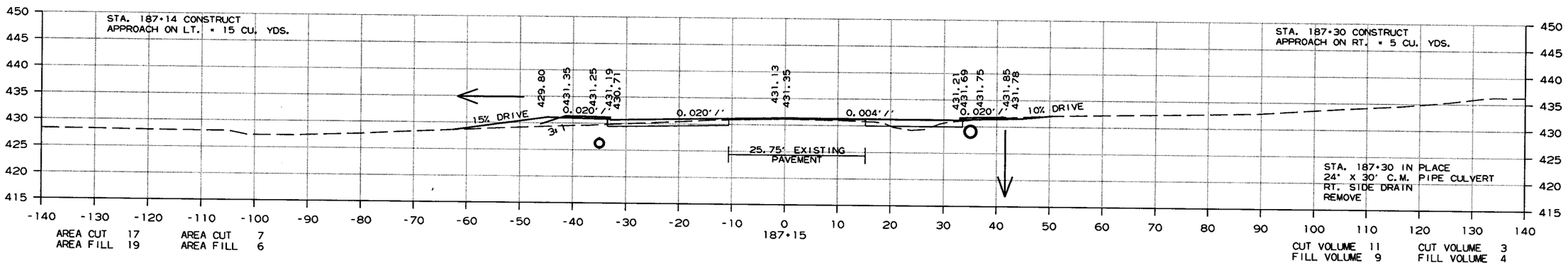
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	257	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 187+15 TO STA. 187+50

12/7/2017

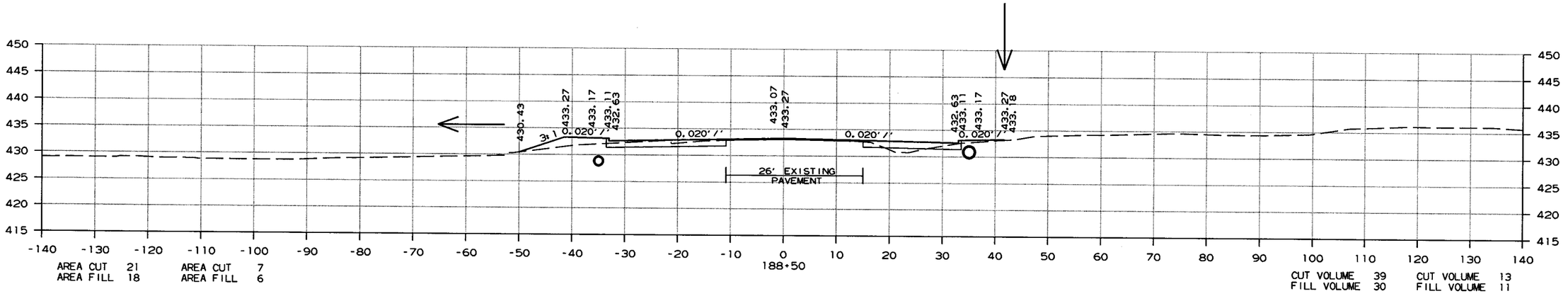
R061335.DGN

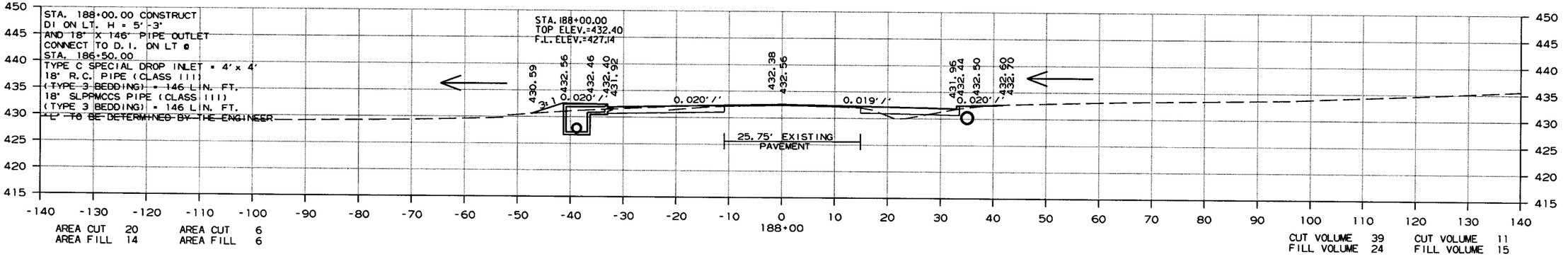
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	258	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 188+00 TO STA. 188+50

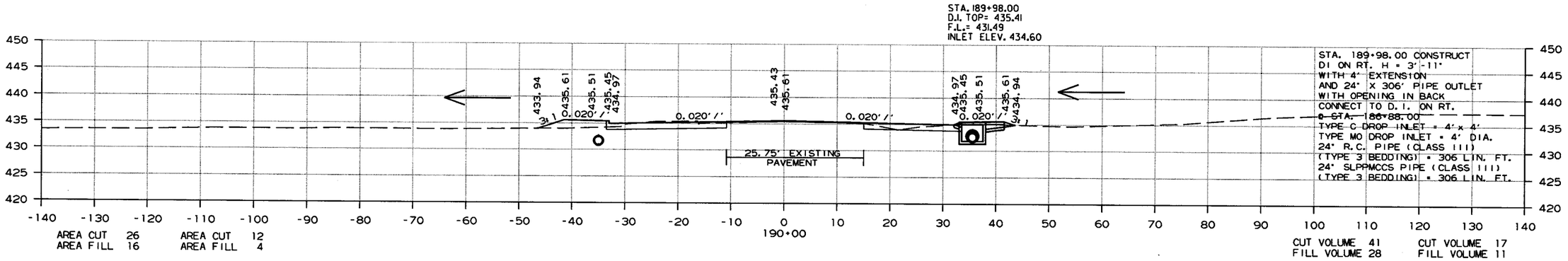
12/7/2017

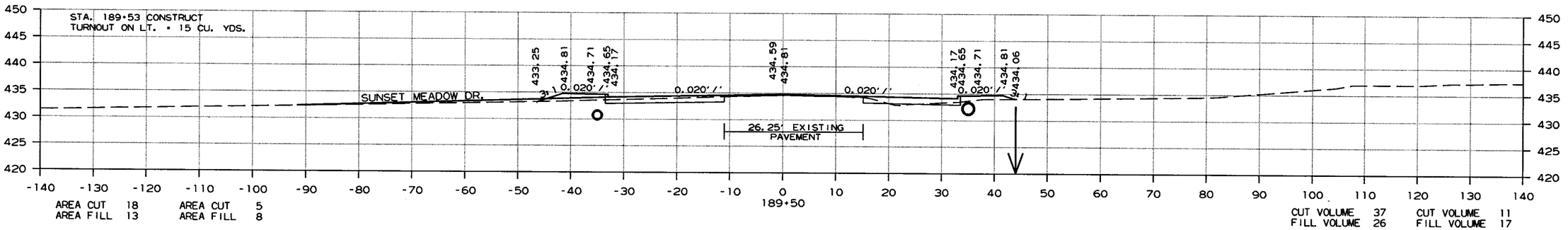
R061335.DGN

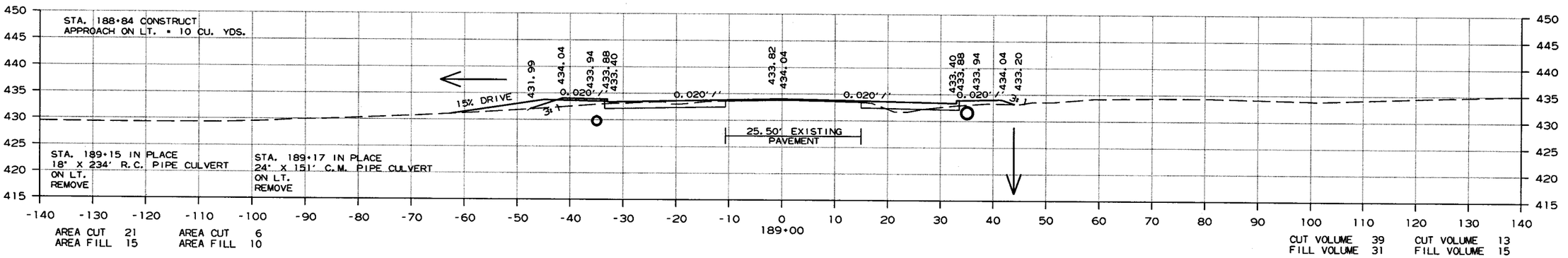
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	259	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2







CROSS SECTION STA. 189+00 TO STA. 190+00

12/7/2017

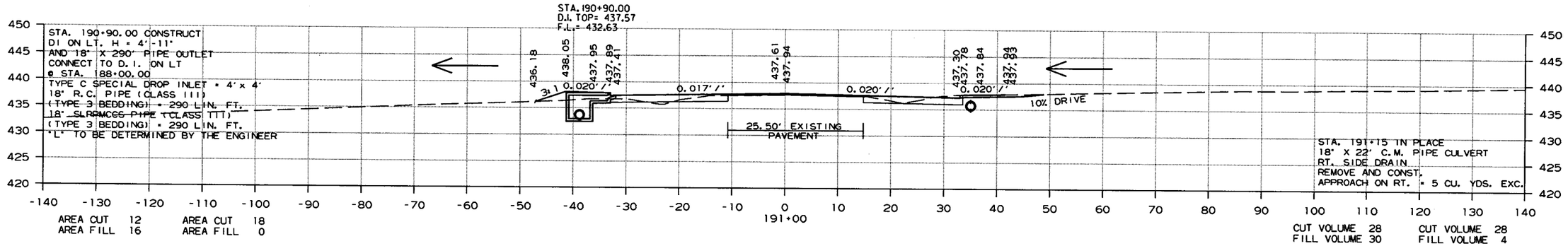
R061335.DGN

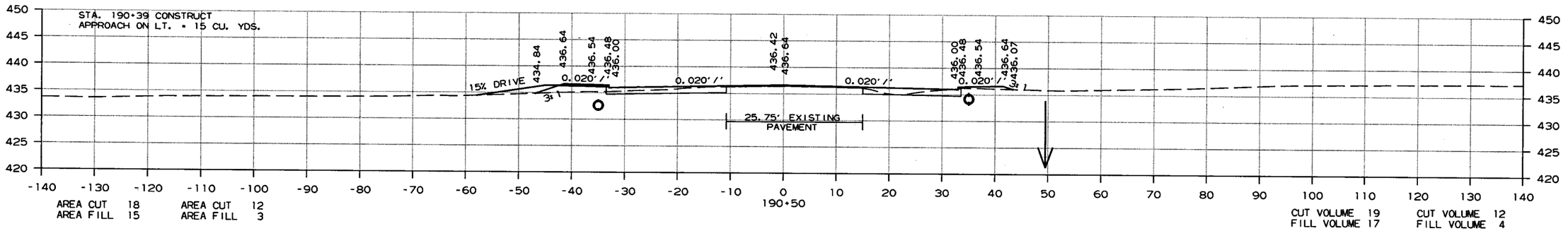
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	260	303

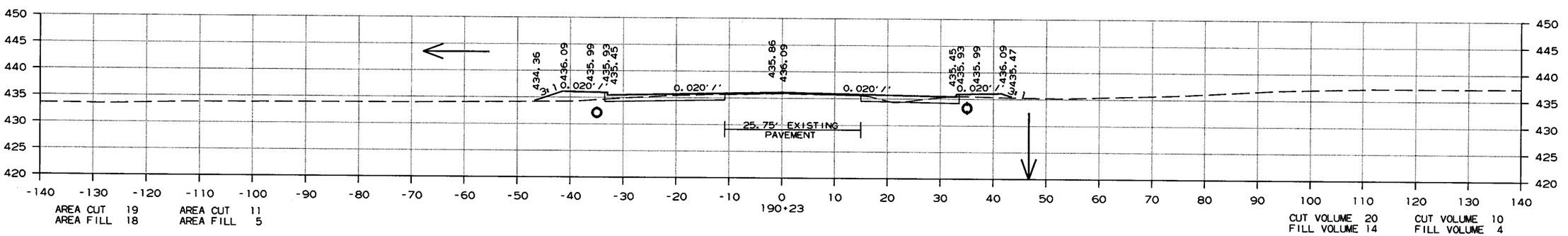
(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2







CROSS SECTION STA. 190+23 TO STA. 191+00

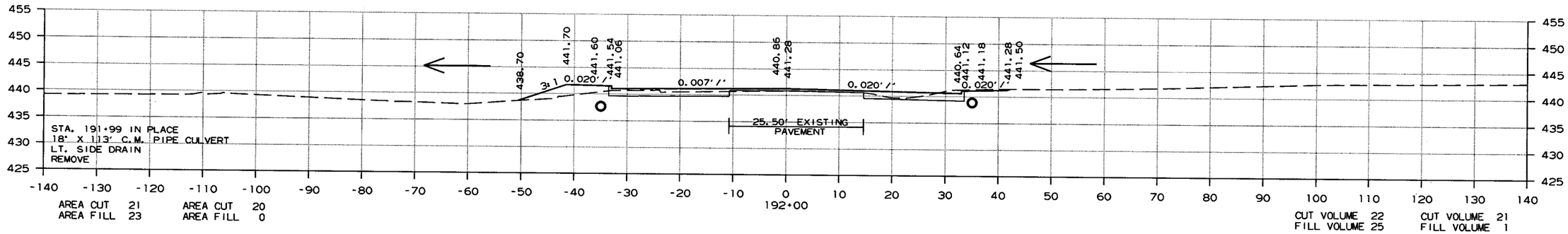
12/7/2017

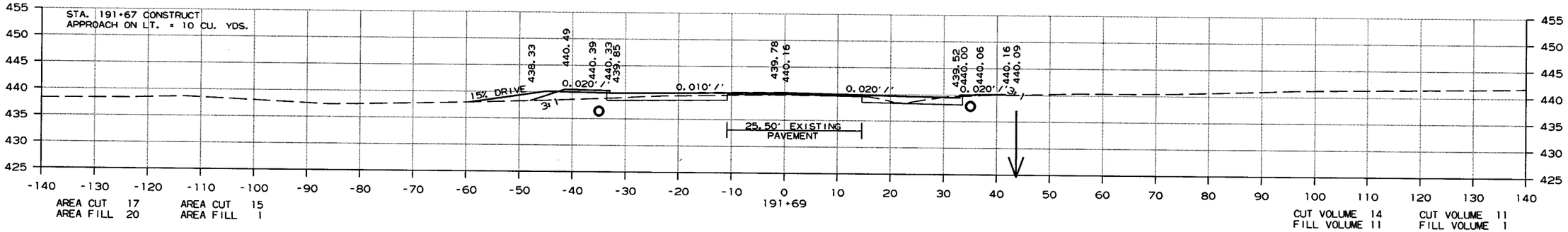
R061335.DGN

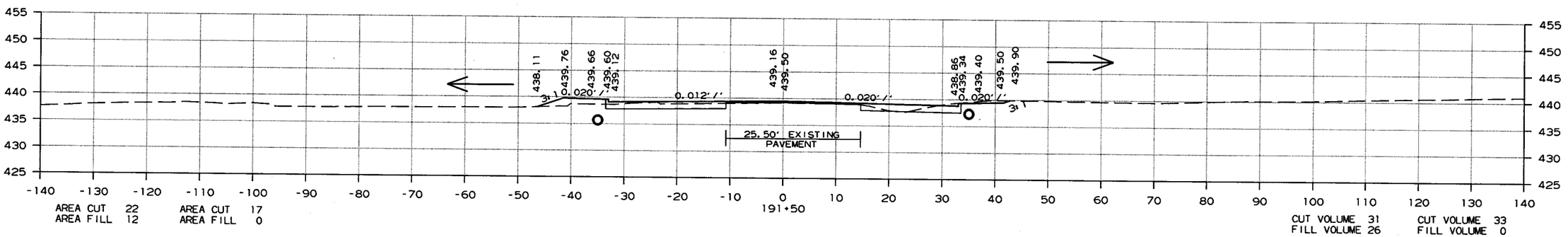
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	261	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2







CROSS SECTION STA. 191+50 TO STA. 192+00

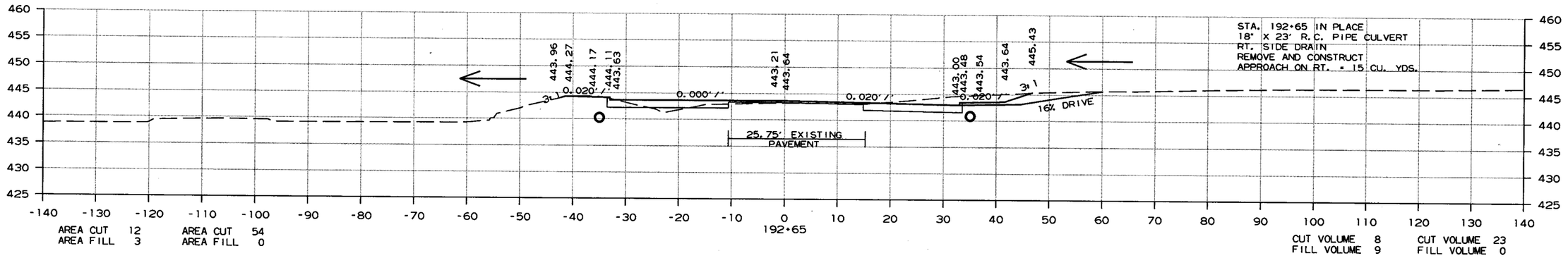
12/7/2017

R061335.DGN

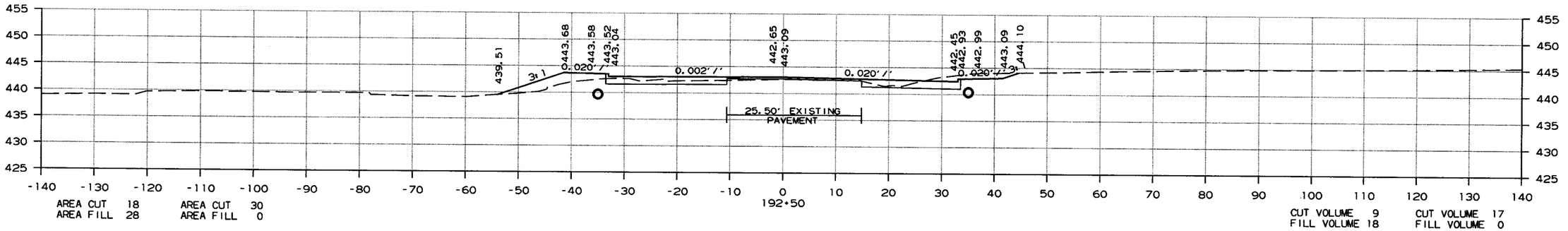
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	262	303

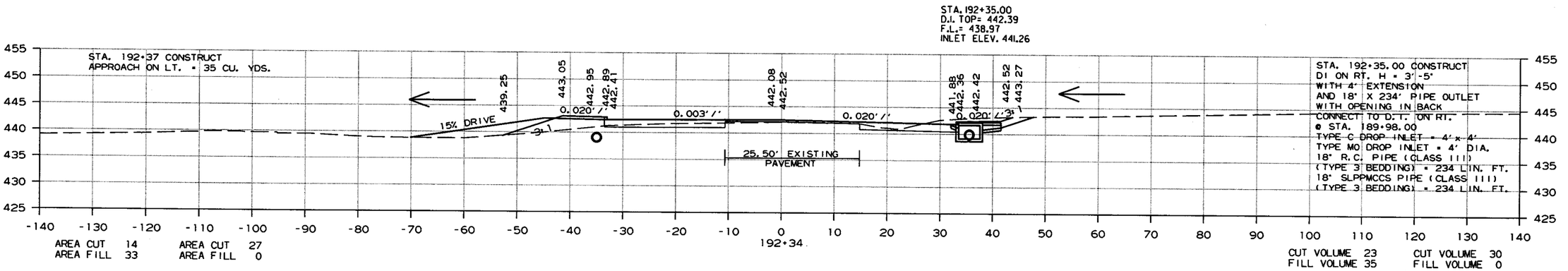
(2) CROSS SECTIONS

STAGE 1 STAGE 2



STAGE 1 STAGE 2





CROSS SECTION STA. 192+34 TO STA. 192+65

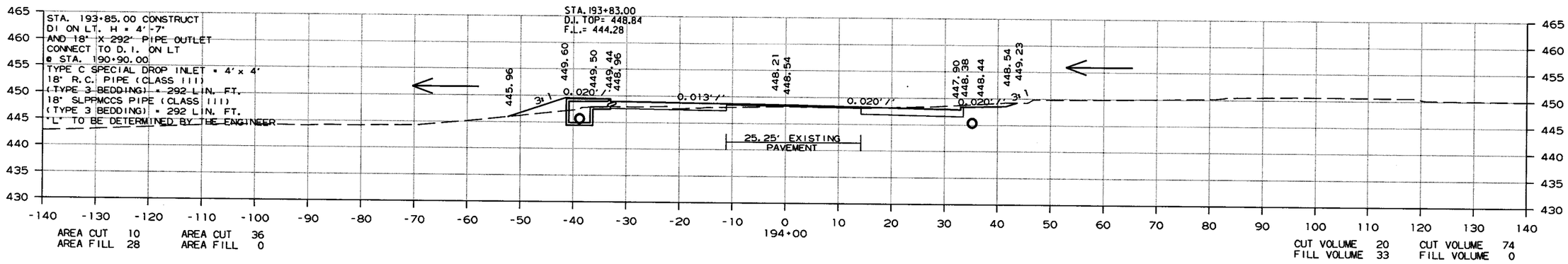
12/7/2017

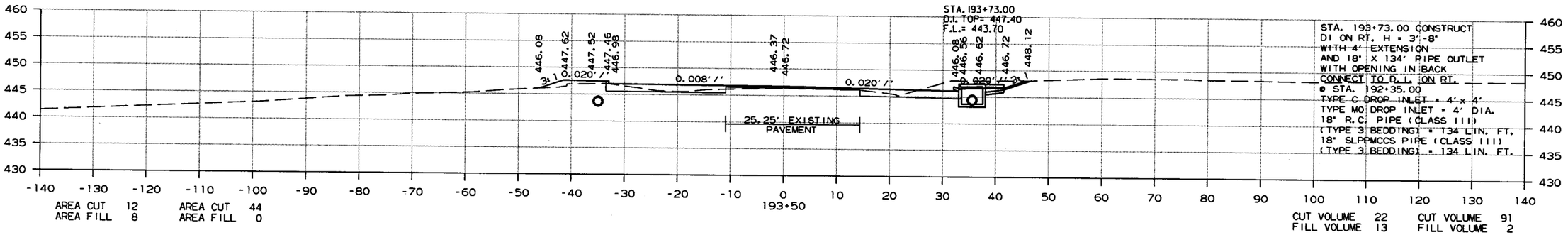
R061335.DGN

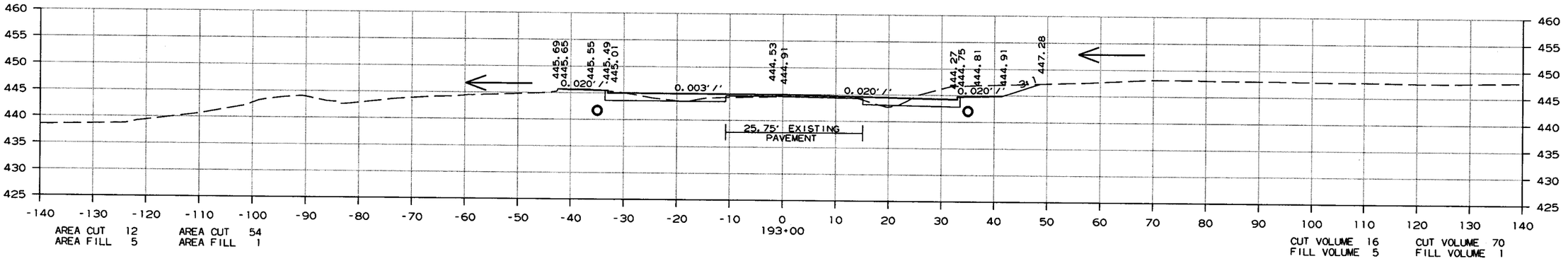
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	263	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2







CROSS SECTION STA. 193+00 TO STA. 194+00

12/7/2017

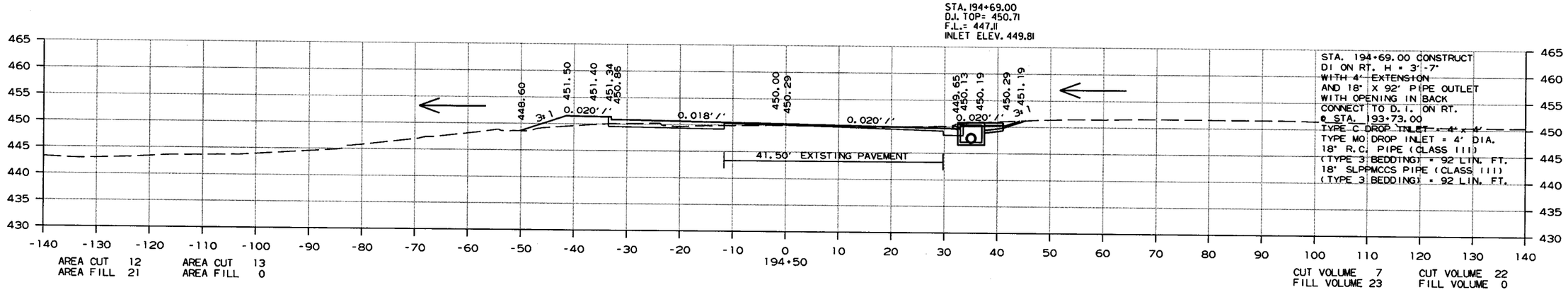
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	264	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2



CROSS SECTION STA. 194+25 TO STA. 194+50

12/7/2017

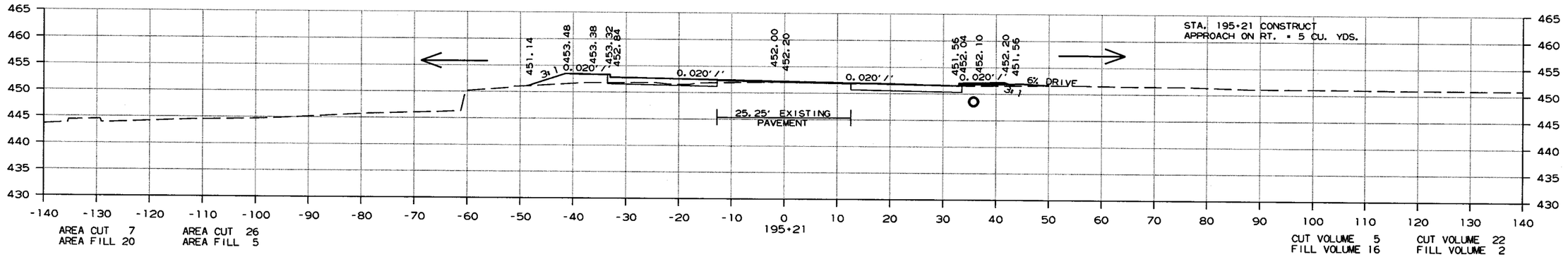
R061335.DGN

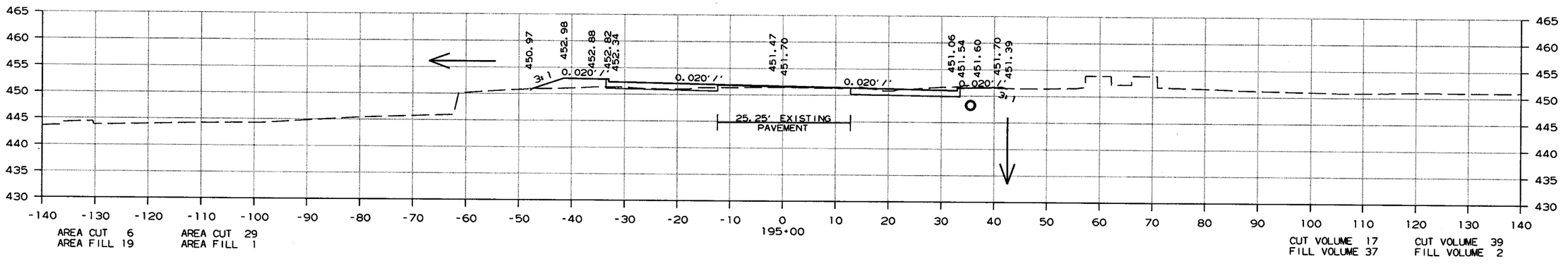
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	265	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 195+00 TO STA. 195+21

12/7/2017

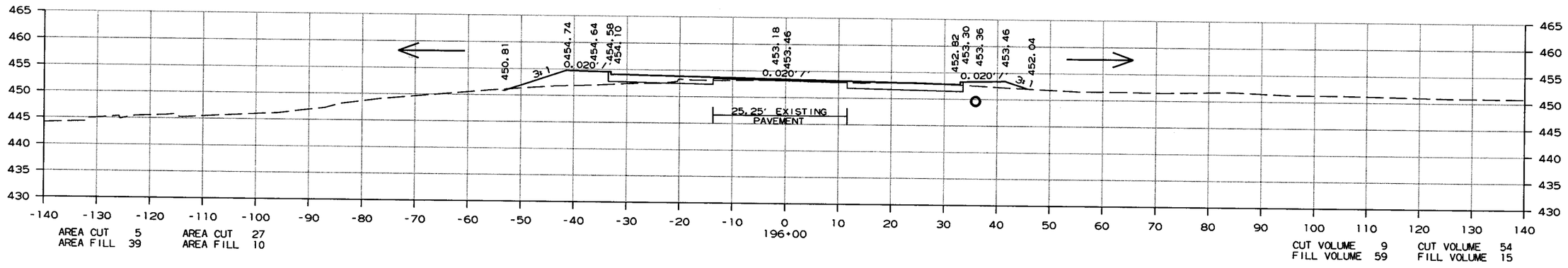
R061335.DGN

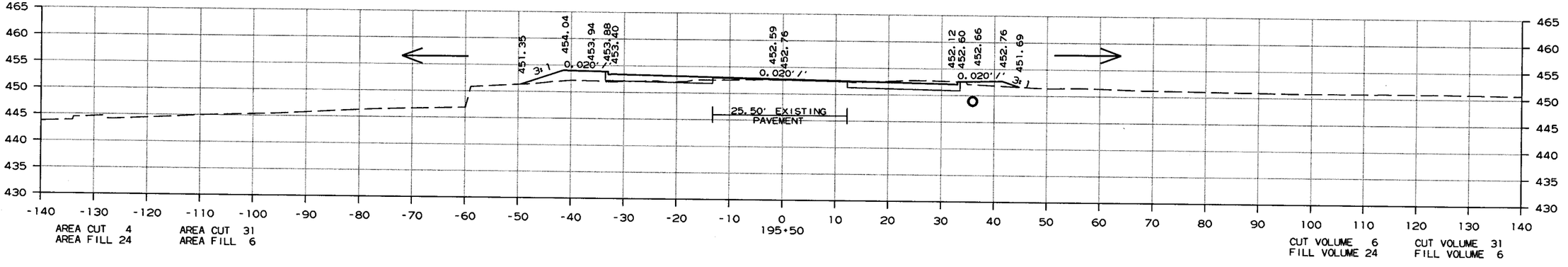
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	266	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 195+50 TO STA. 196+00

12/7/2017

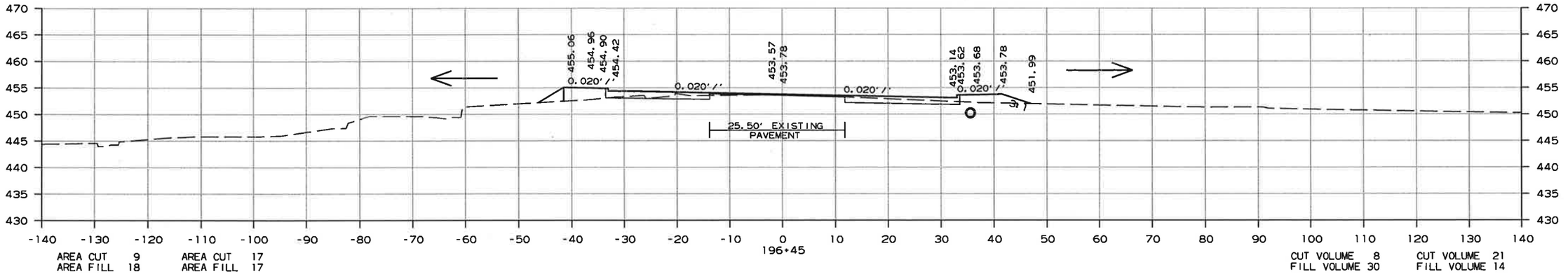
R061335.DGN

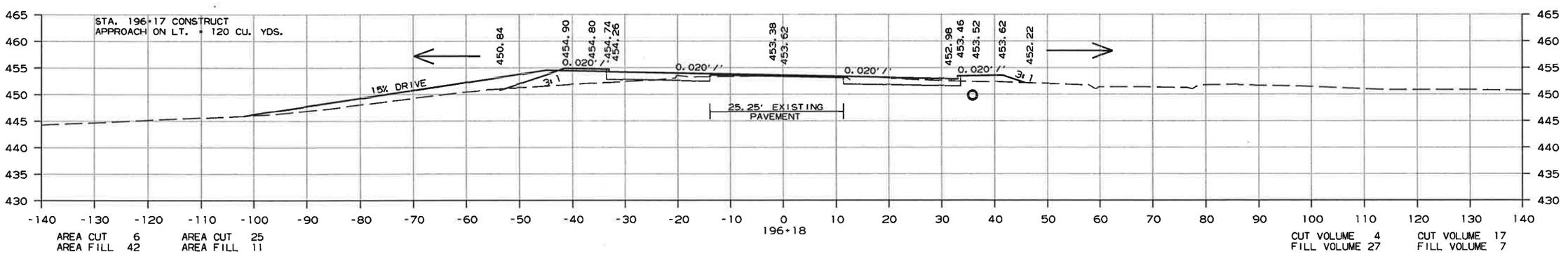
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	267	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 196+18 TO STA. 196+45

12/7/2017

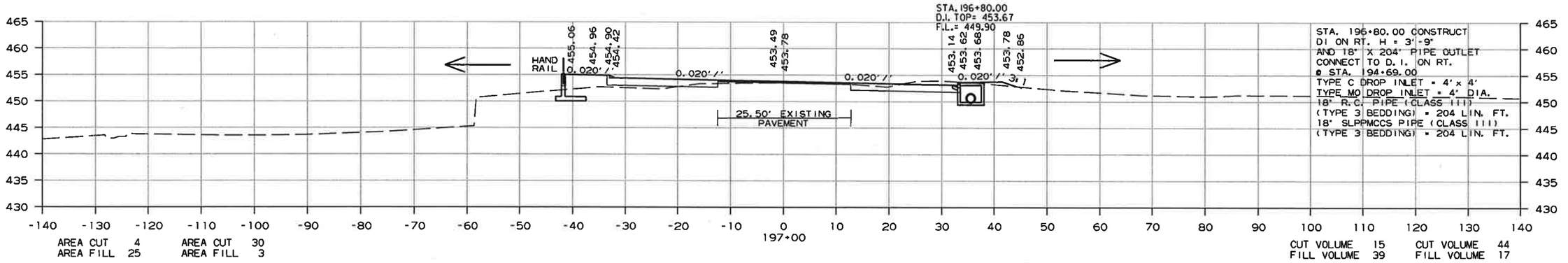
R061335.DGN

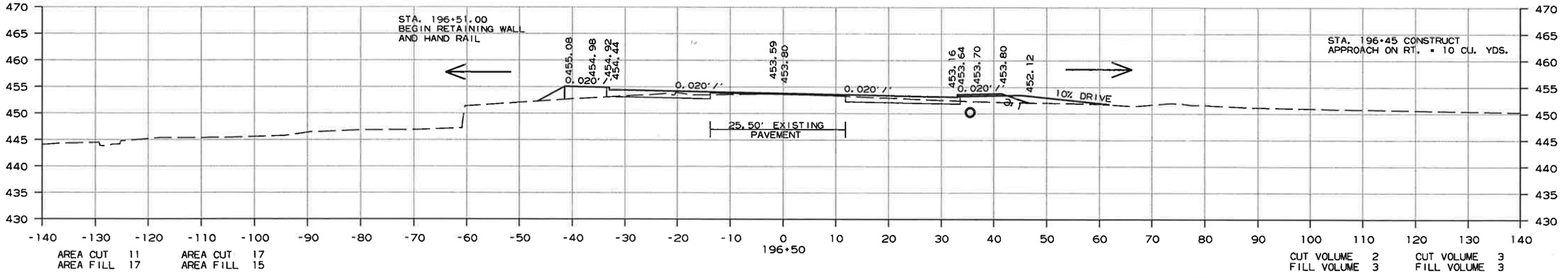
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	268	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 196+50 TO STA. 197+00

12/7/2017

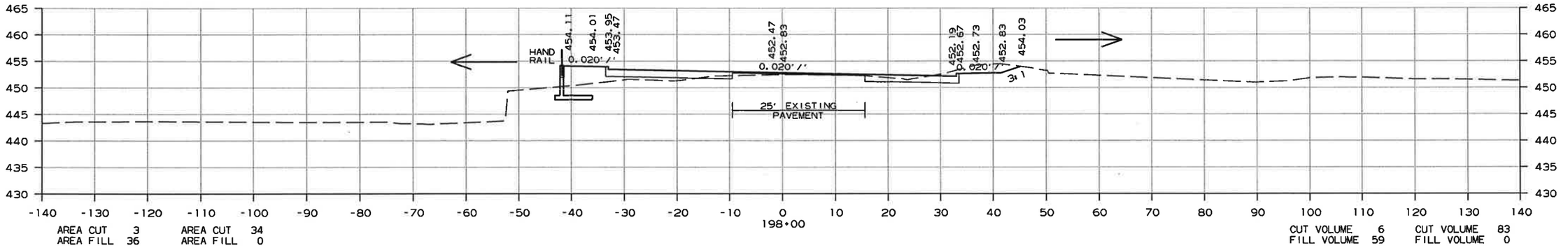
R061335.DGN

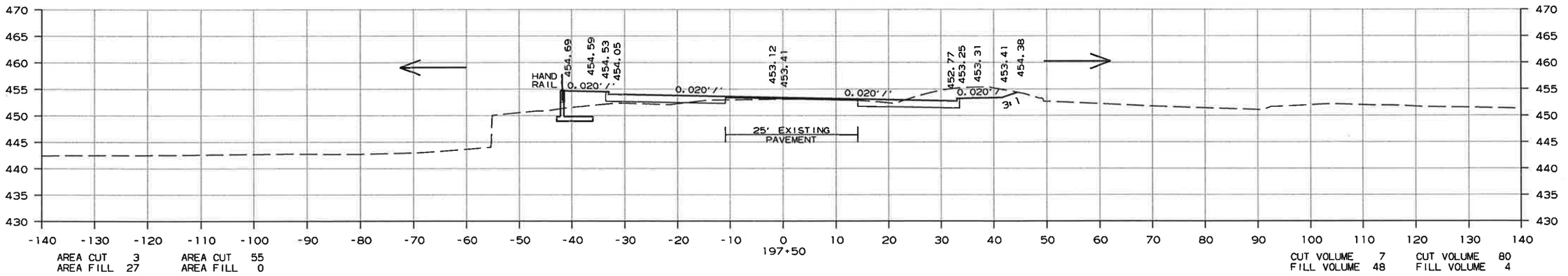
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	269	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 197+50 TO STA. 198+00

12/7/2017

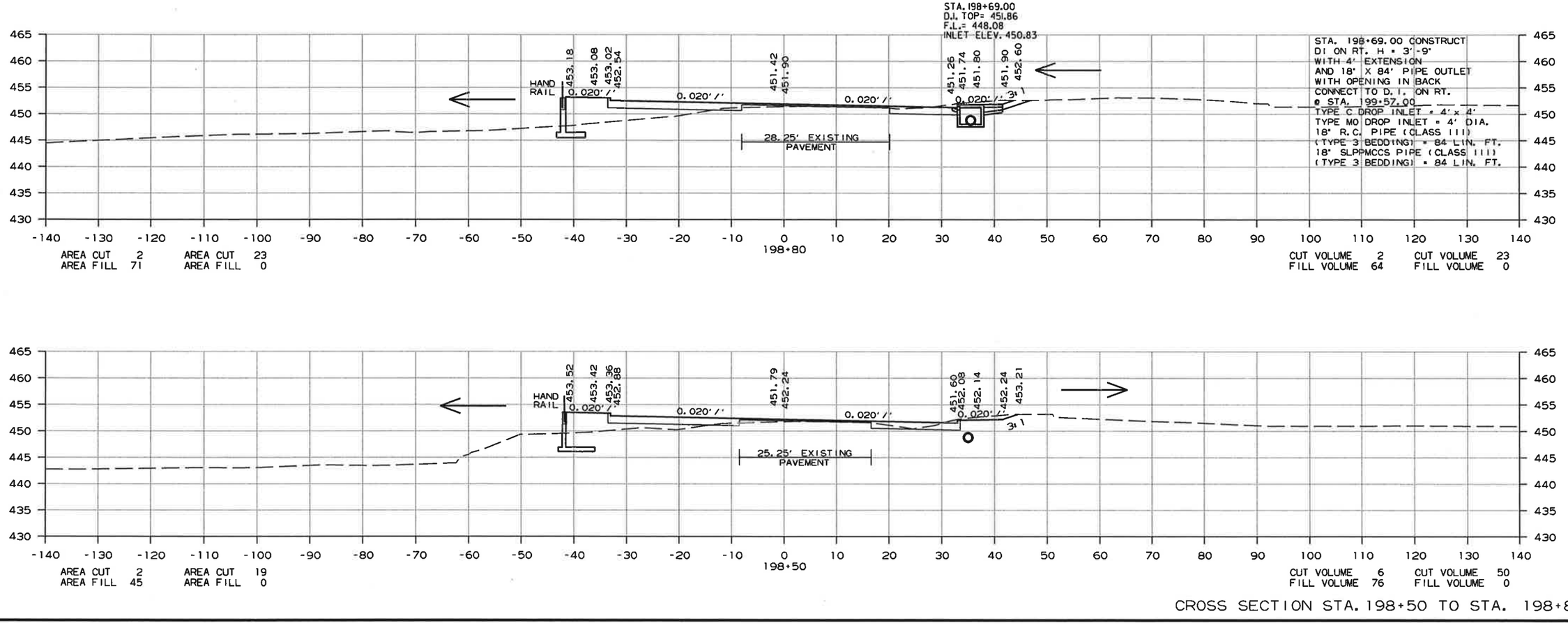
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	270	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2



CROSS SECTION STA. 198+50 TO STA. 198+80

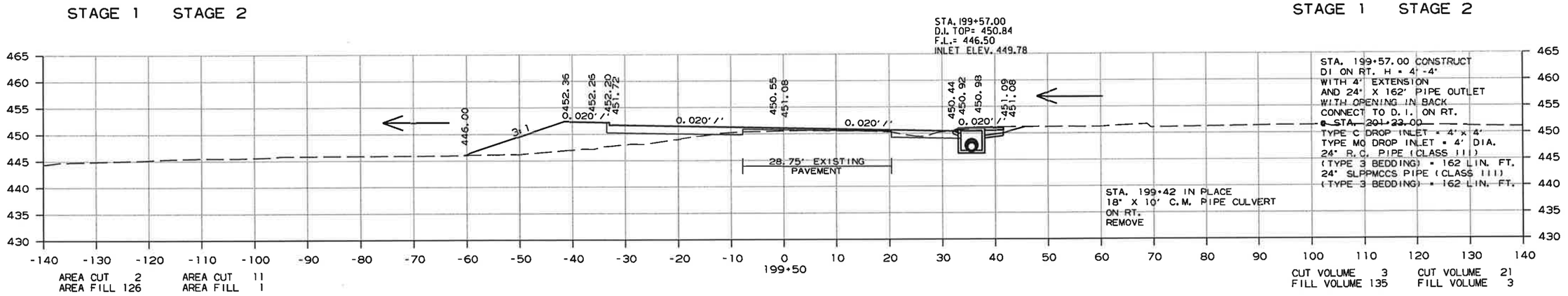
12/7/2017

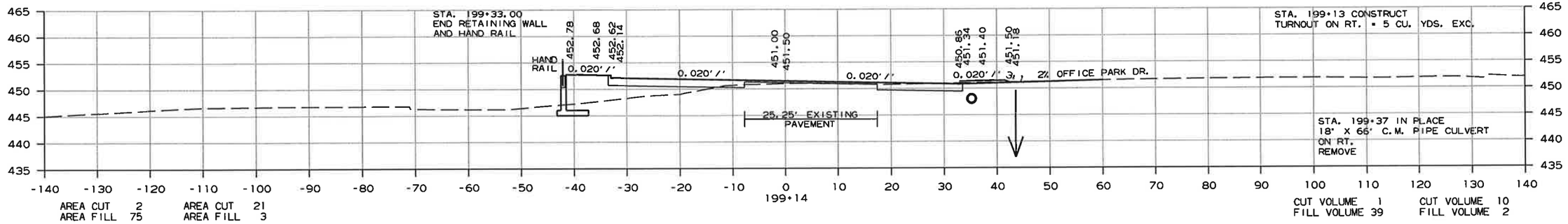
R061335.DGN

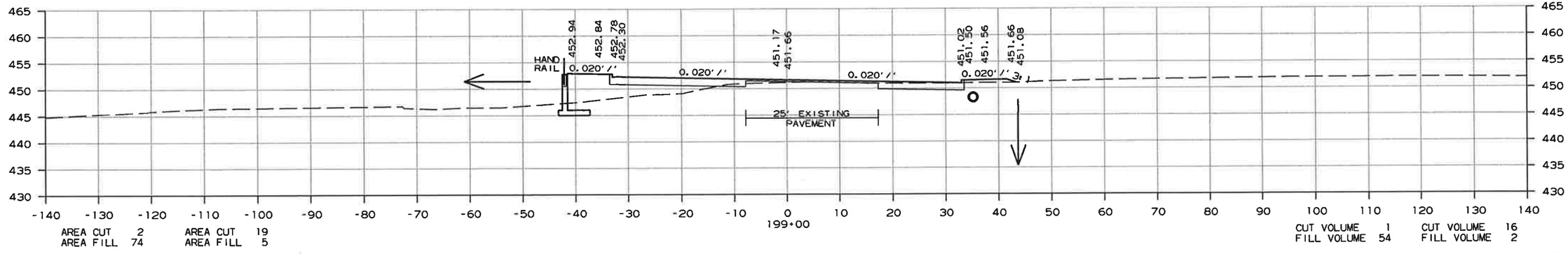
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	271	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2







CROSS SECTION STA. 199+00 TO STA. 199+50

12/7/2017

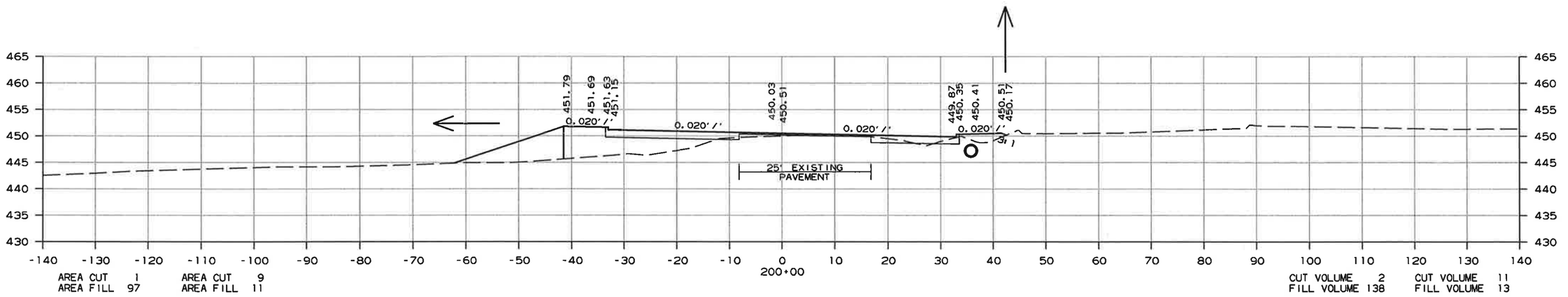
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	272	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2



CROSS SECTION STA. 199+67 TO STA. 200+00

12/7/2017

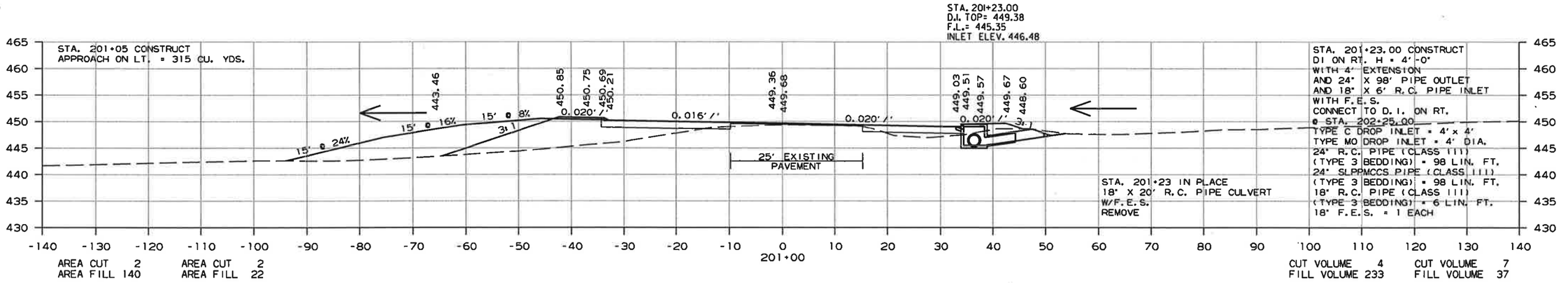
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	273	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2



CROSS SECTION STA. 200+50 TO STA. 201+00

12/7/2017

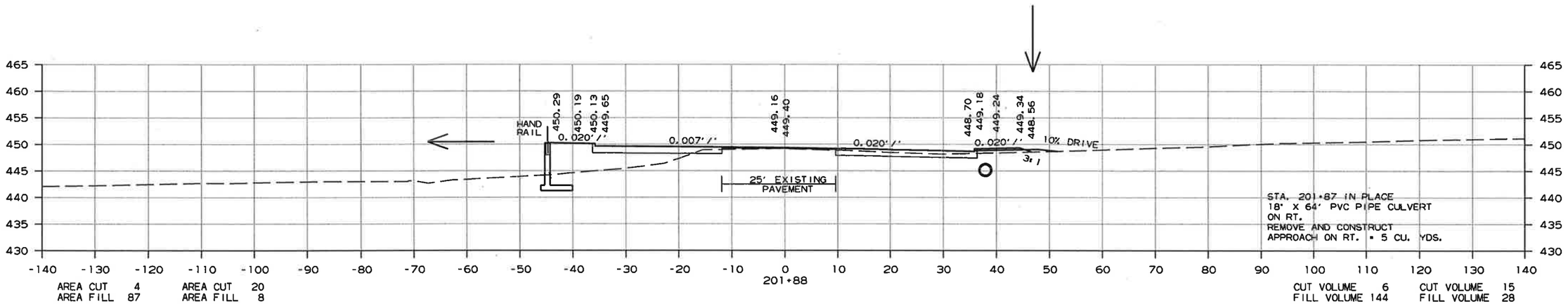
R061335.DGN

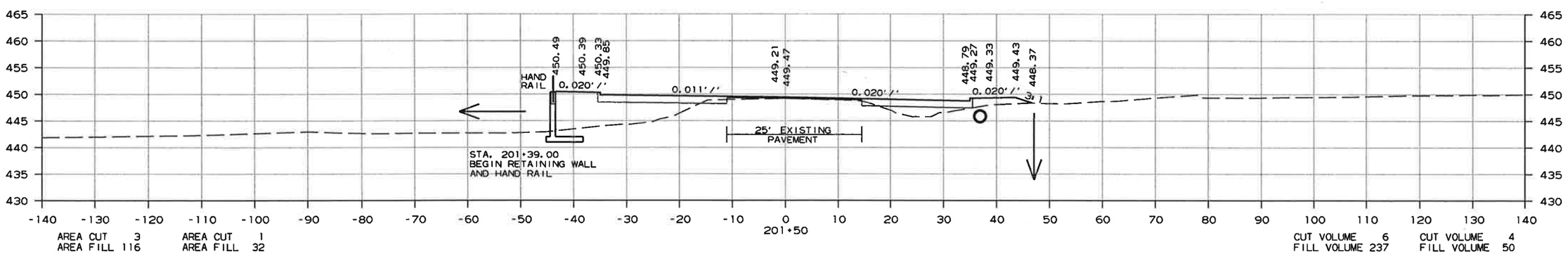
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	274	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 201+50 TO STA. 201+88

12/7/2017

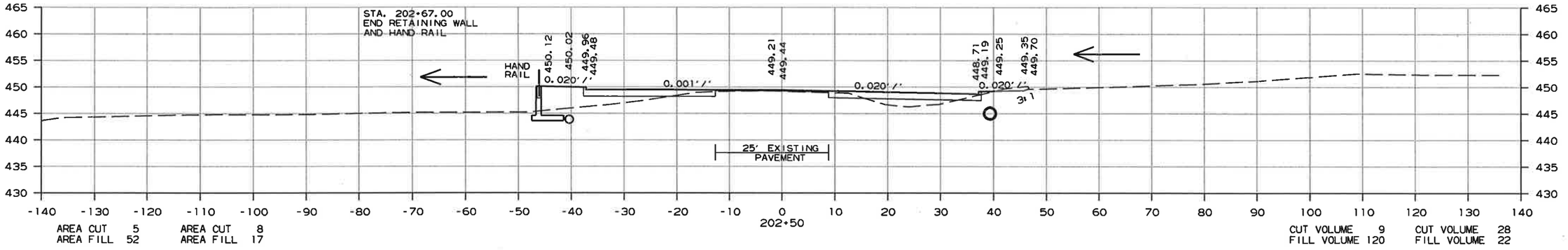
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	275	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2



CROSS SECTION STA. 202+00 TO STA. 202+50

12/7/2017

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	276	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STA. 204+00.00
D.I. TOP= 450.63
F.L.= 446.00

STA. 204+00.00 CONSTRUCT
DI ON LT. H = 4'-8"
WITH 4' EXTENSION
AND 18" X 180' PIPE OUTLET
CONNECT TO DI ON LT.
@ STA. 202+17.00
TYPE C SPECIAL DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 180 LIN. FT.
18" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 180 LIN. FT.
"L" TO BE DETERMINED BY THE ENGINEER

STA. 204+31.00
END RETAINING WALL
AND HAND RAIL

HAND RAIL

450.79 450.69 450.63 450.15

0.020'/' 0.013'/' 450.39 450.67 0.020'/'

449.91 450.39 450.45 450.55 451.09

3:1

31.75' EXISTING PAVEMENT

STA. 204+22 IN PLACE
18" X 12' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

465 460 455 450 445 440 435

-140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

204+00

AREA CUT 9 AREA FILL 27

AREA CUT 38 AREA FILL 0

CUT VOLUME 15 FILL VOLUME 72

CUT VOLUME 76 FILL VOLUME 0

STA. 203+37.00
D.I. TOP= 449.61
F.L.= 445.69
INLET ELEV. 448.78

STA. 203+37.00 CONSTRUCT
DI ON RT. H = 3'-11"
WITH 4' EXTENSION
WITH OPENING IN BACK
AND 24" X 106' PIPE OUTLET
CONNECT TO DI ON RT.
@ STA. 202+25.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 106 LIN. FT.
24" SLPPMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 106 LIN. FT.

HAND RAIL

450.34 450.24 450.18 449.70

0.020'/' 0.009'/' 449.76 450.02 0.020'/'

449.26 449.74 449.80 449.90 450.51

3:1

22' EXISTING PAVEMENT

465 460 455 450 445 440 435 430

-140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

203+50

AREA CUT 6 AREA FILL 50

AREA CUT 44 AREA FILL 0

CUT VOLUME 11 FILL VOLUME 102

CUT VOLUME 56 FILL VOLUME 9

STA. 202+96 CONSTRUCT
APPROACH ON LT. = 140 CU. YDS.

STA. 203+25.00
BEGIN RETAINING WALL
AND HAND RAIL

15% DRIVE

445.07

450.12 450.02 449.96 449.48

0.020'/' 0.004'/' 449.39 449.61 0.020'/'

448.87 449.35 449.41 449.51 450.11

3:1

25' EXISTING PAVEMENT

465 460 455 450 445 440 435 430

-140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

203+00

AREA CUT 5 AREA FILL 59

AREA CUT 16 AREA FILL 9

CUT VOLUME 9 FILL VOLUME 104

CUT VOLUME 22 FILL VOLUME 24

CROSS SECTION STA. 203+00 TO STA. 204+00

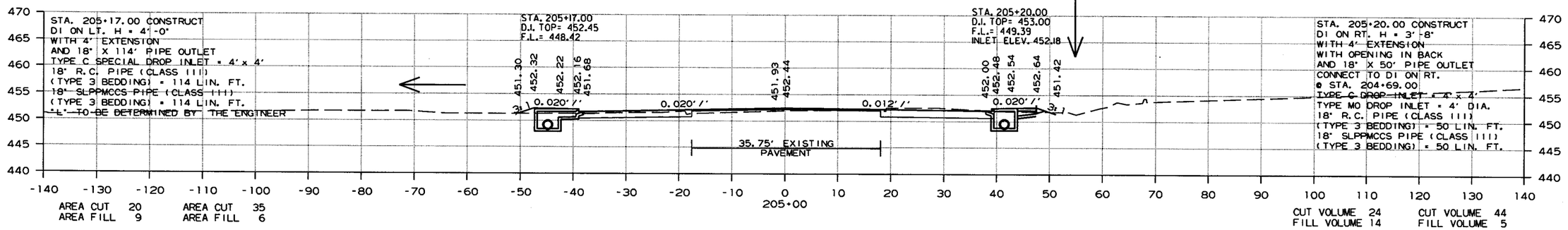
12/7/2017

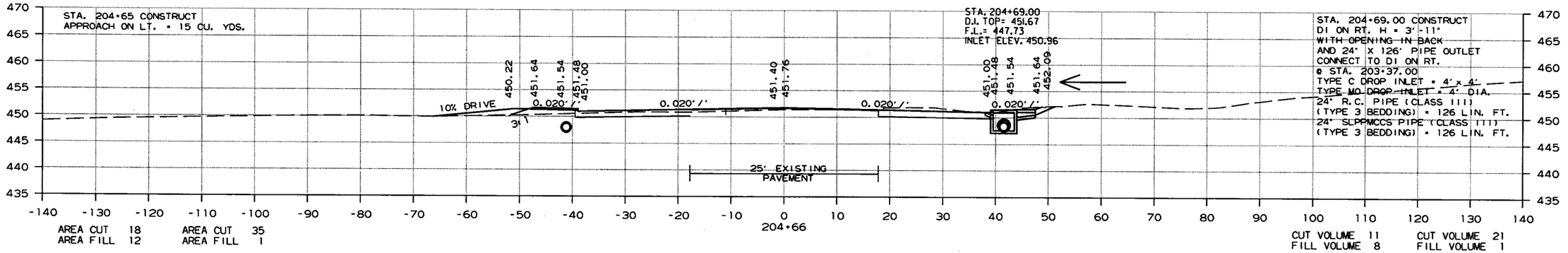
R061335.DGN

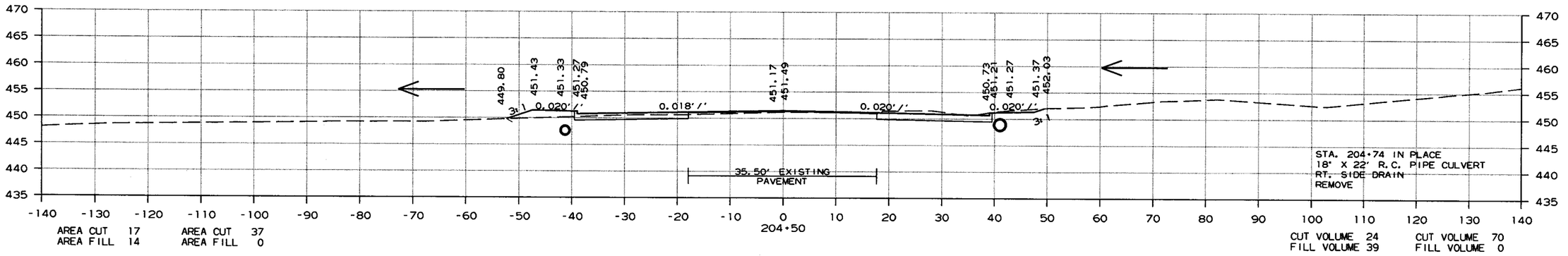
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	277	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2







CROSS SECTION STA. 204+50 TO STA. 205+00

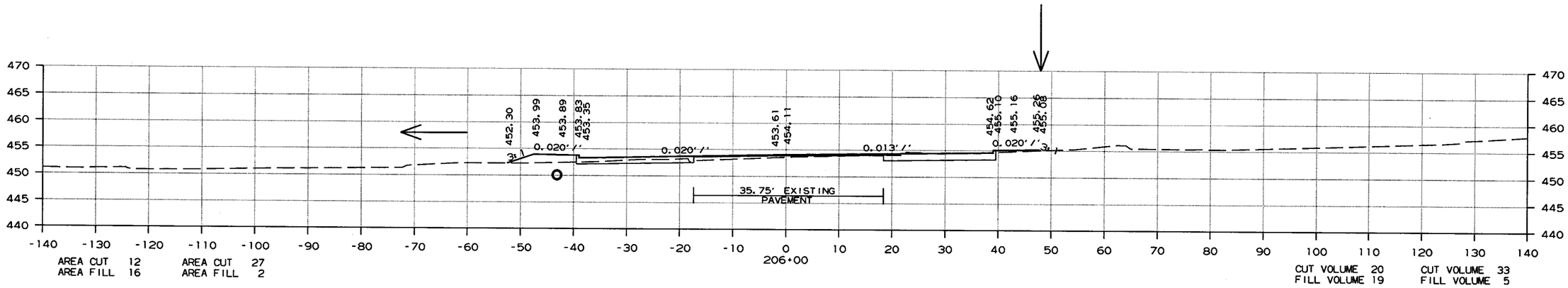
12/7/2017

R061335.DGN

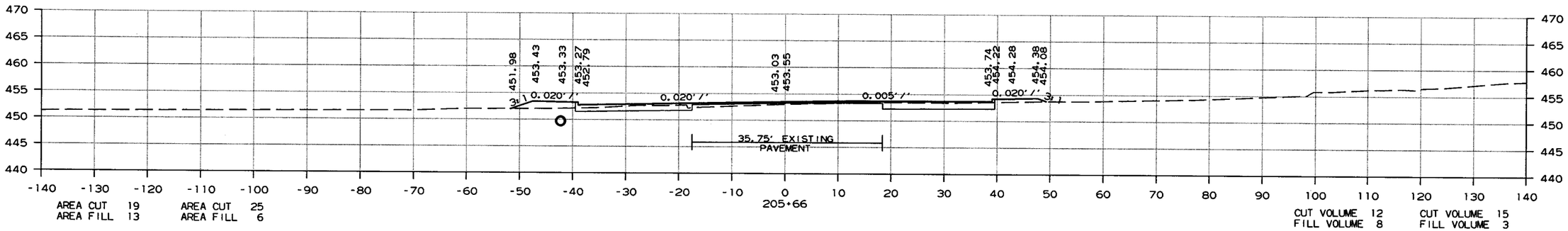
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	278	303

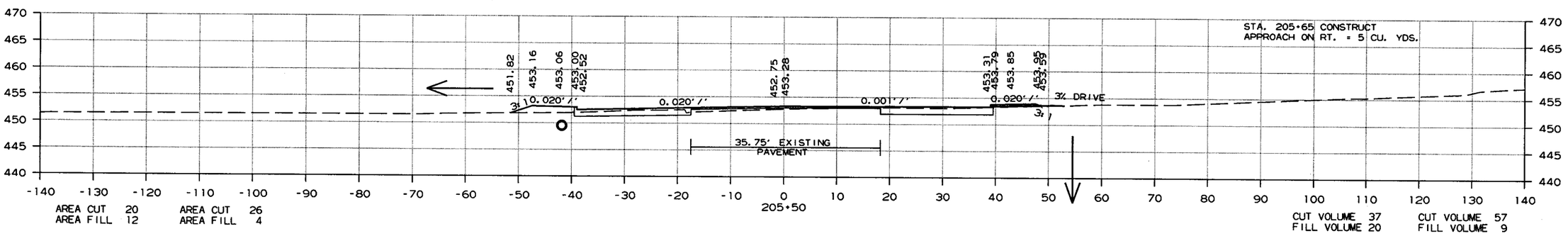
(2) CROSS SECTIONS

STAGE 1 STAGE 2



STAGE 1 STAGE 2





CROSS SECTION STA. 205+50 TO STA. 206+00

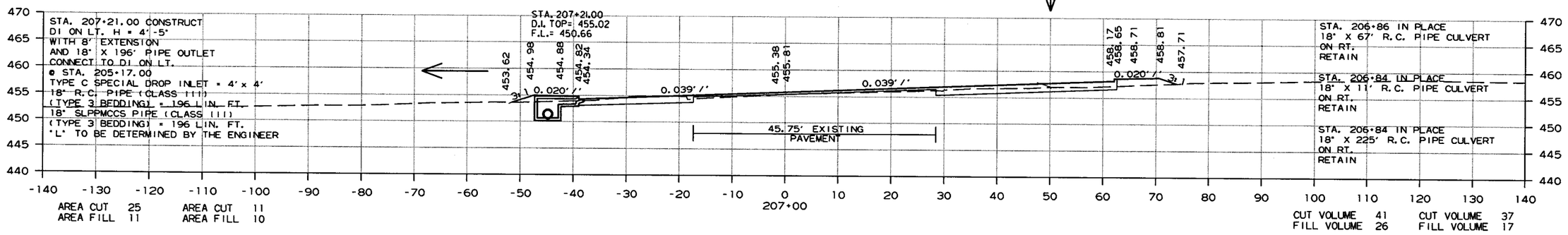
12/7/2017

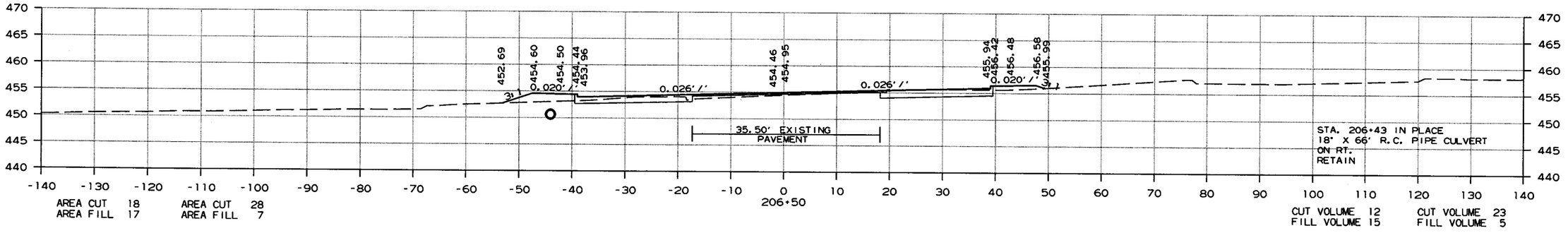
R061335.DGN

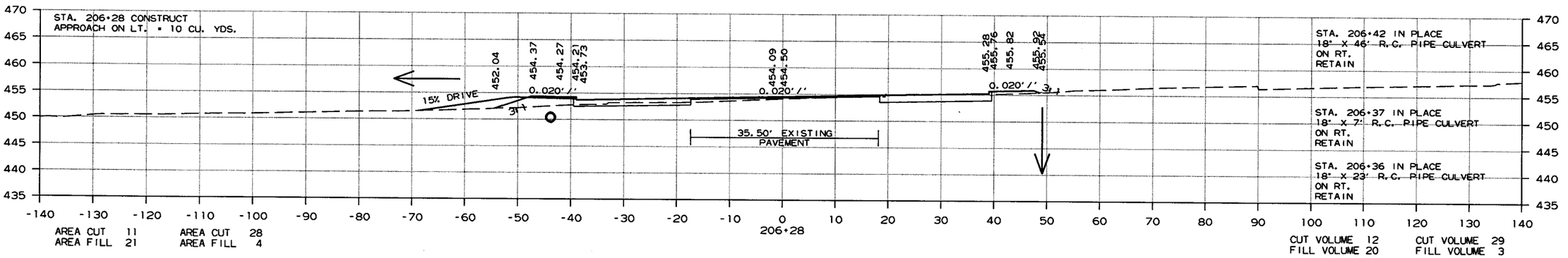
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	279	303

(2) CROSS SECTIONS

STAGE 1 STAGE 2







CROSS SECTION STA. 206+28 TO STA. 207+00

12/7/2017

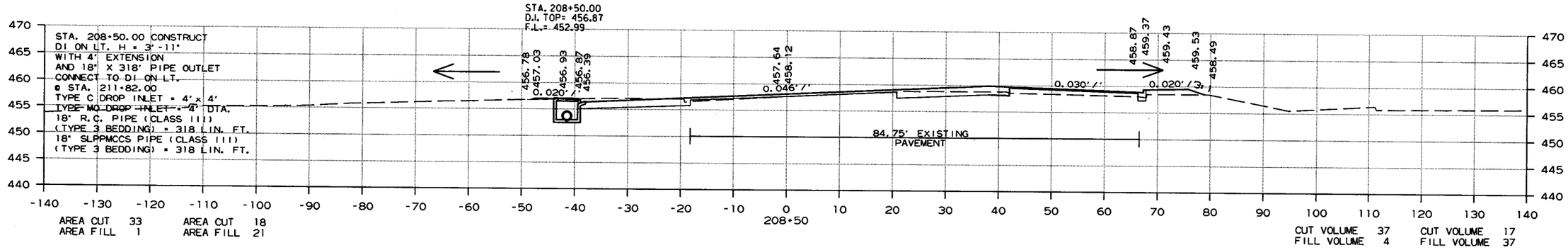
R061335.DGN

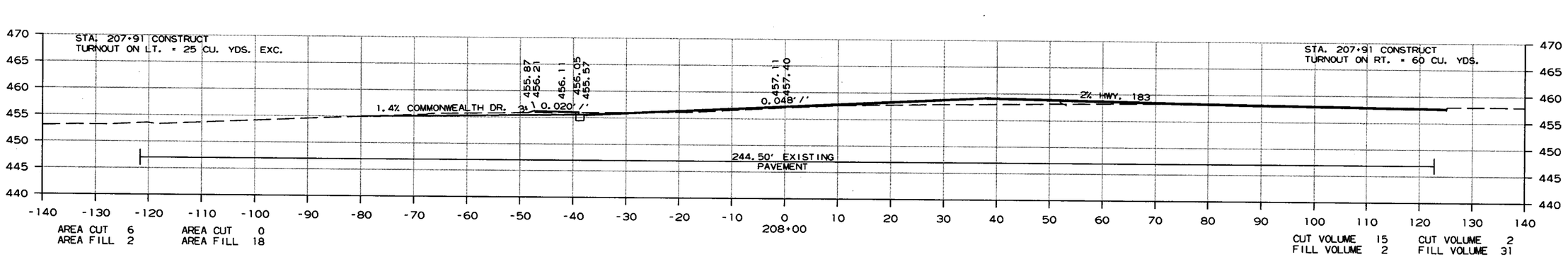
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	280	303

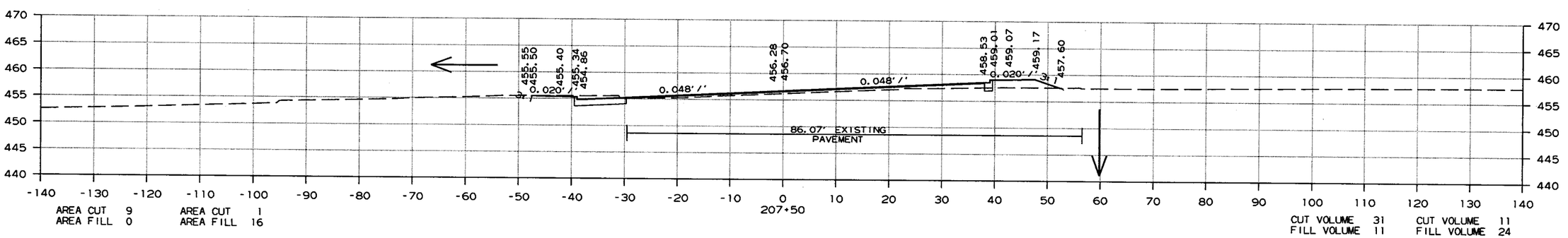
(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2







CROSS SECTION STA. 207+50 TO STA. 208+50

12/7/2017

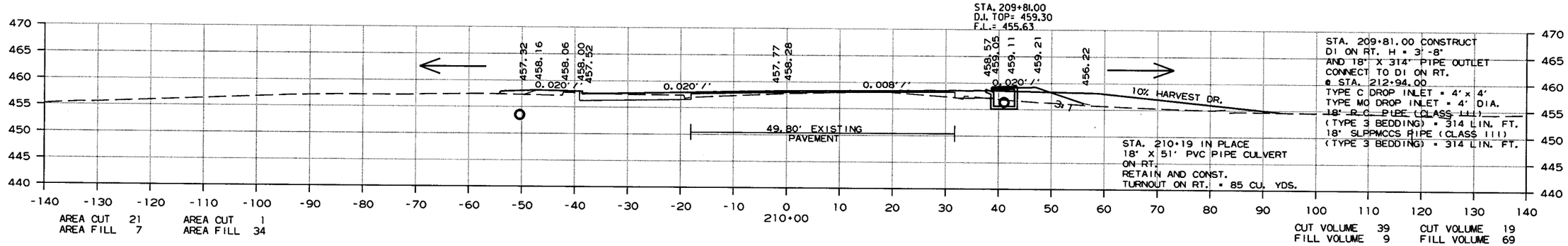
R061335.DGN

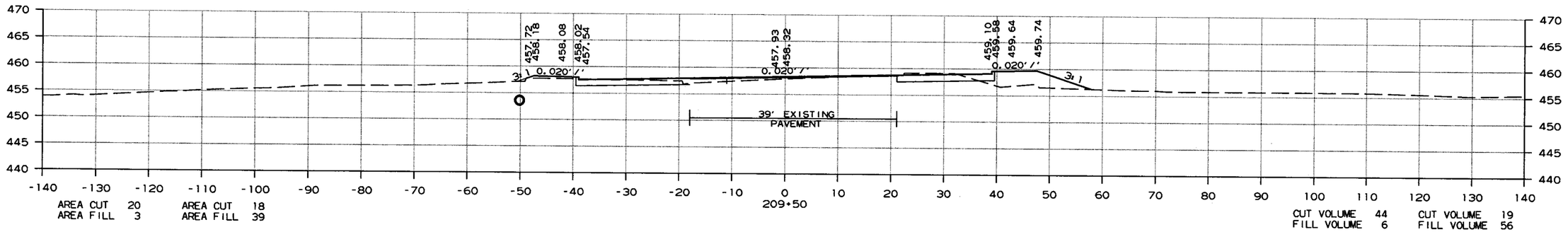
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	281	303

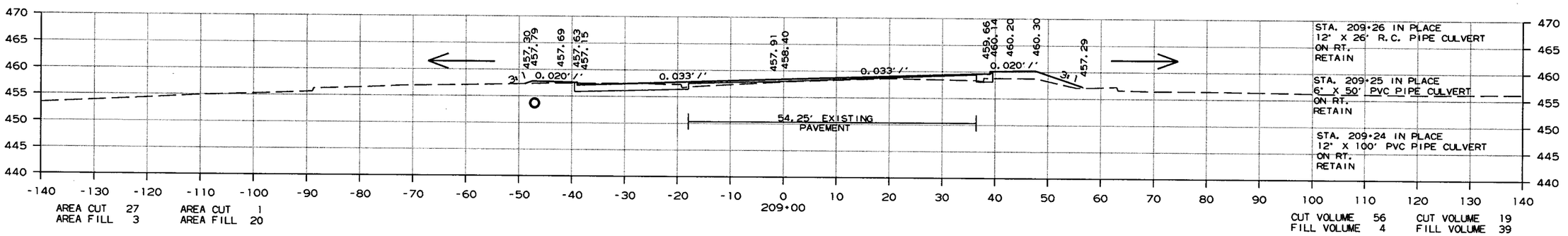
(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2







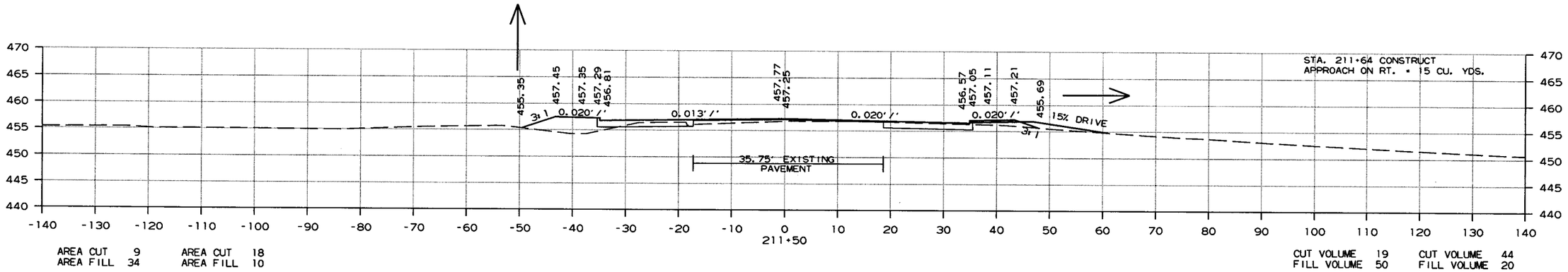
CROSS SECTION STA. 209+00 TO STA. 210+00

12/7/2017

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	282	303
				(2) CROSS SECTIONS				

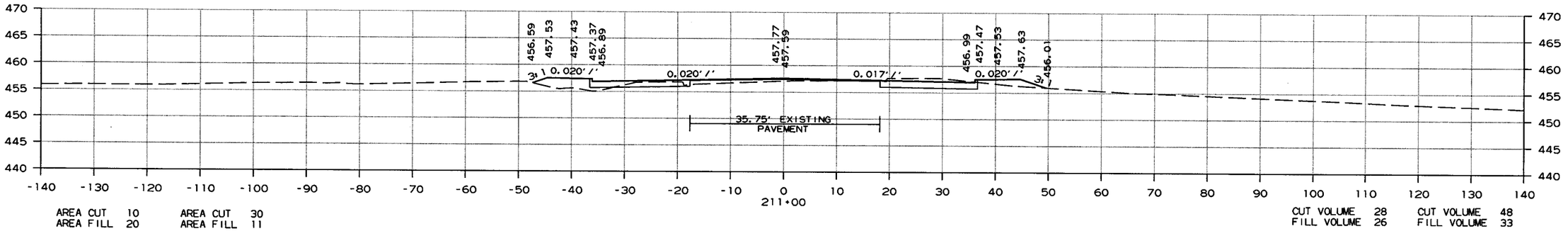
STAGE 1 STAGE 2



AREA CUT 9 AREA FILL 34
AREA CUT 18 AREA FILL 10

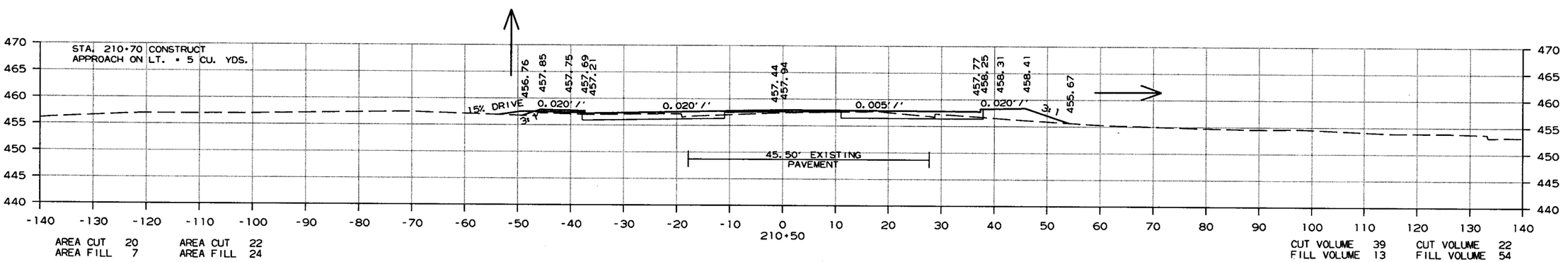
CUT VOLUME 19 FILL VOLUME 50
CUT VOLUME 44 FILL VOLUME 20

STAGE 1 STAGE 2



AREA CUT 10 AREA FILL 20
AREA CUT 30 AREA FILL 11

CUT VOLUME 28 FILL VOLUME 26
CUT VOLUME 48 FILL VOLUME 33



AREA CUT 20 AREA FILL 7
AREA CUT 22 AREA FILL 24

CUT VOLUME 39 FILL VOLUME 13
CUT VOLUME 22 FILL VOLUME 54

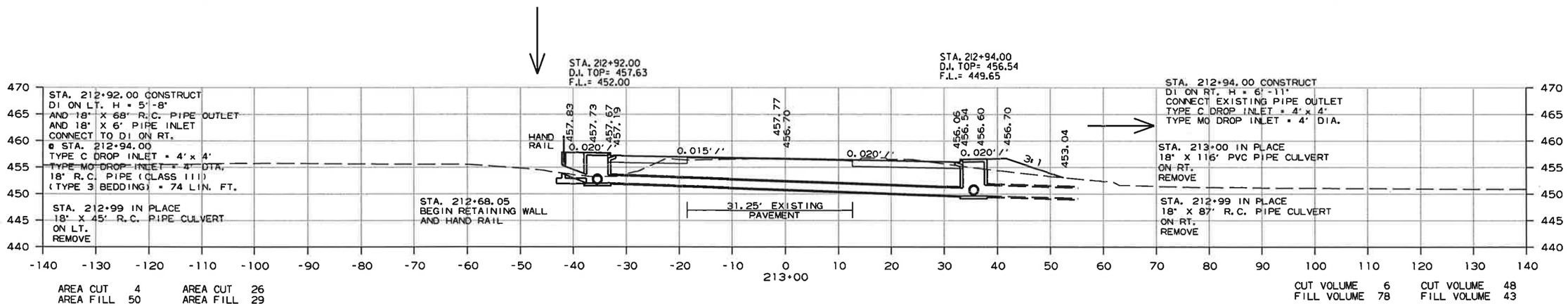
CROSS SECTION STA. 210+50 TO STA. 211+50

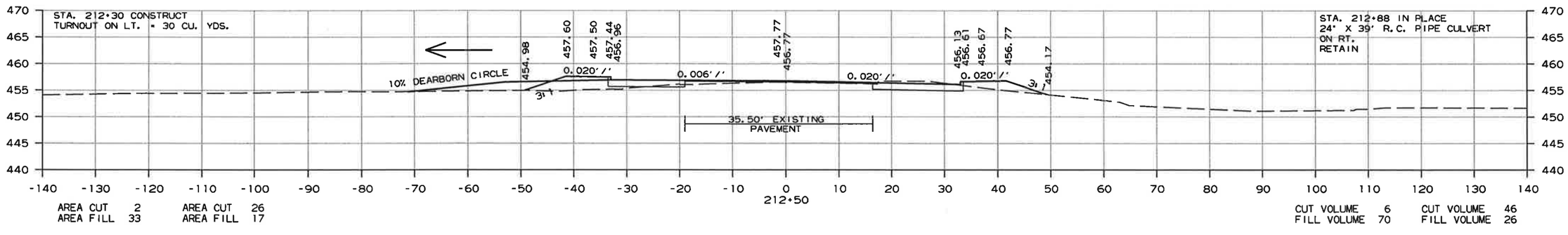
12/7/2017

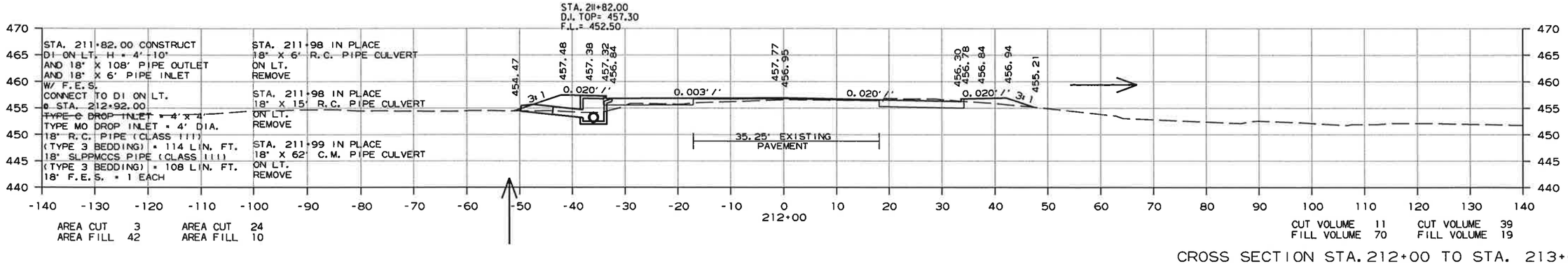
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	283	303

(2) CROSS SECTIONS







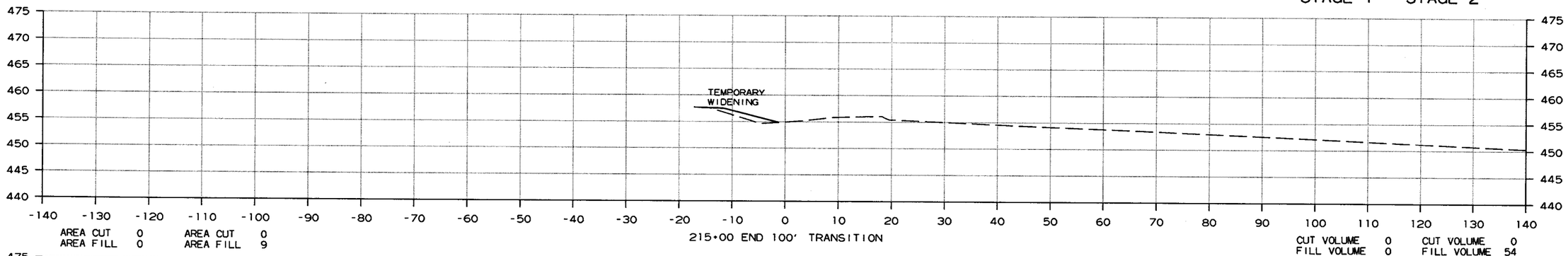
CROSS SECTION STA. 212+00 TO STA. 213+00

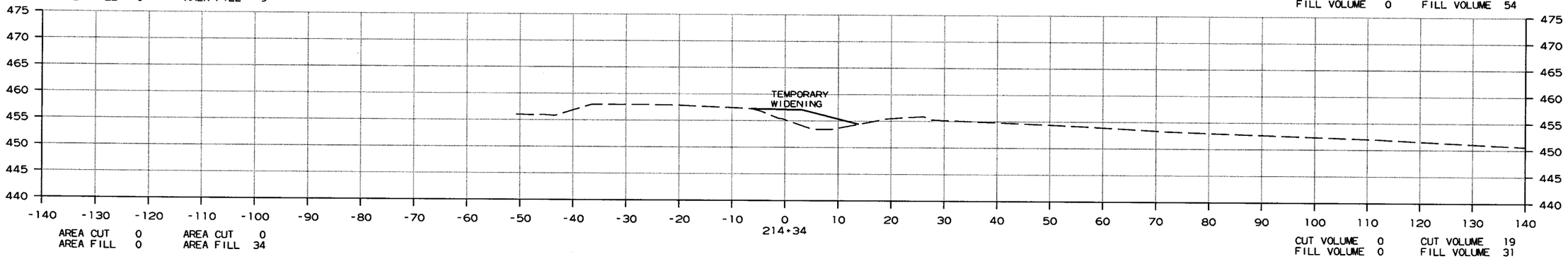
12/7/2017

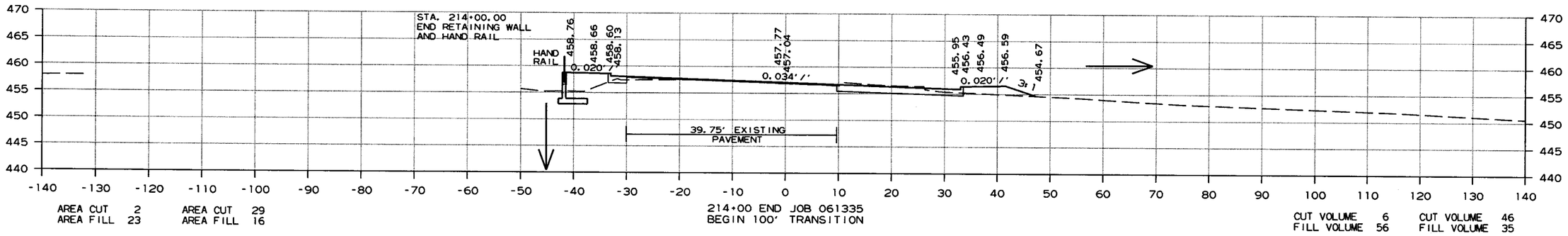
R061335.DGN

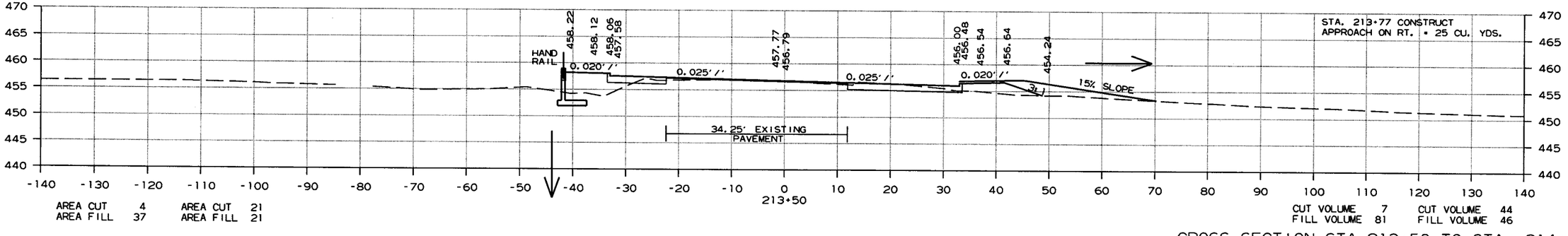
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	284	303

(2) CROSS SECTIONS









CROSS SECTION STA. 213+50 TO STA. 214+00

12/7/2017

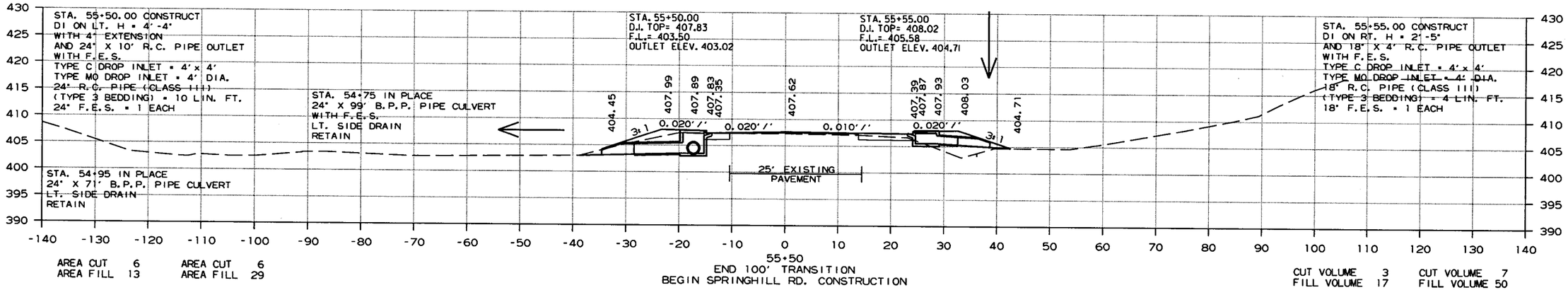
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	285	303

(2) CROSS SECTIONS SPRINGHILL RD.

STAGE 1 STAGE 2

STAGE 1 STAGE 2



CROSS SECTION STA. 55+00 TO STA. 55+50

12/7/2017

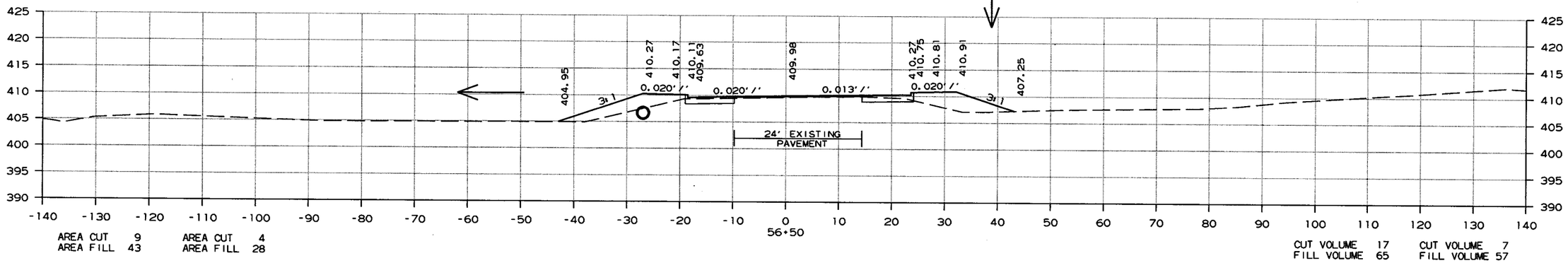
R061335.DGN

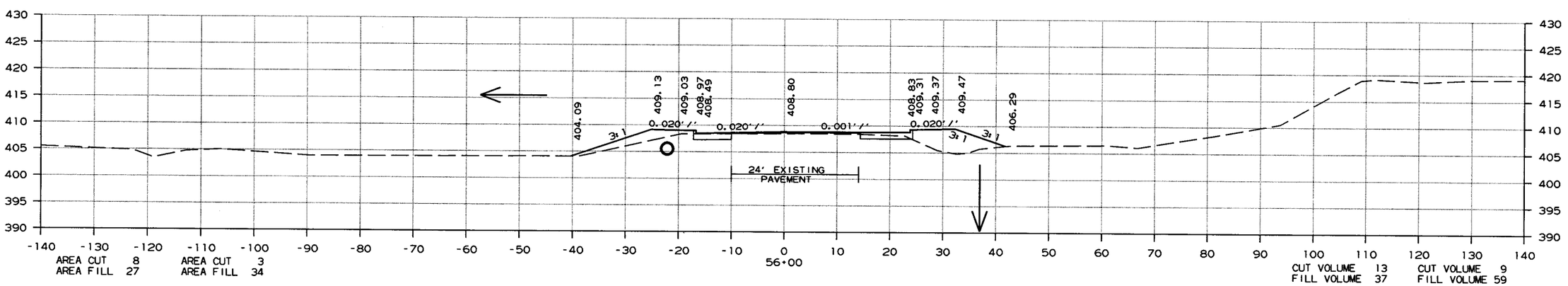
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	286	303

(2) CROSS SECTIONS SPRINGHILL RD.

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 56+00 TO STA. 56+50

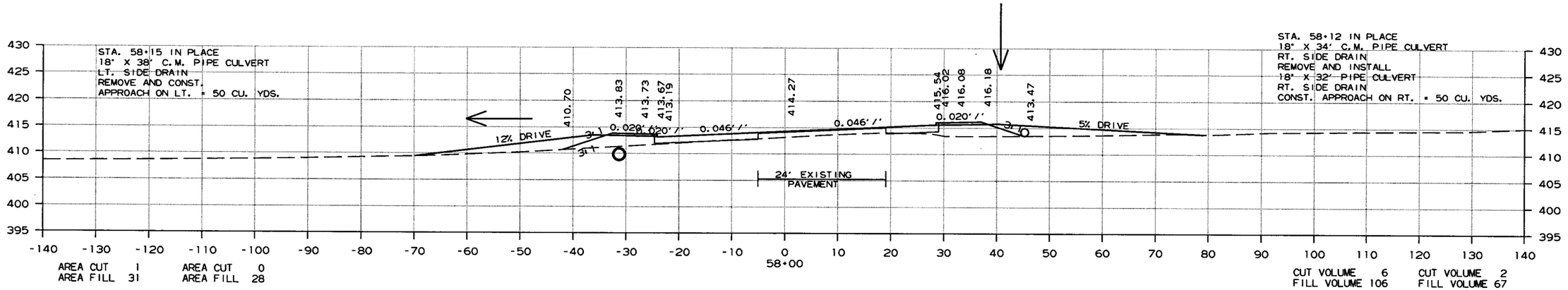
12/7/2017

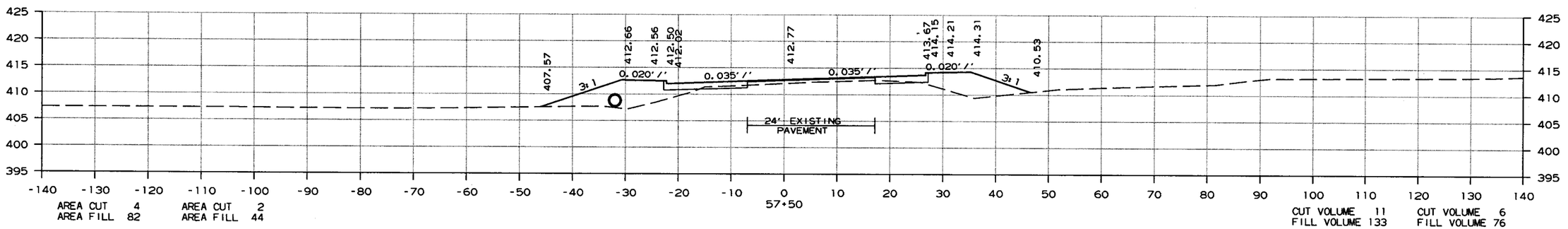
R061335.DGN

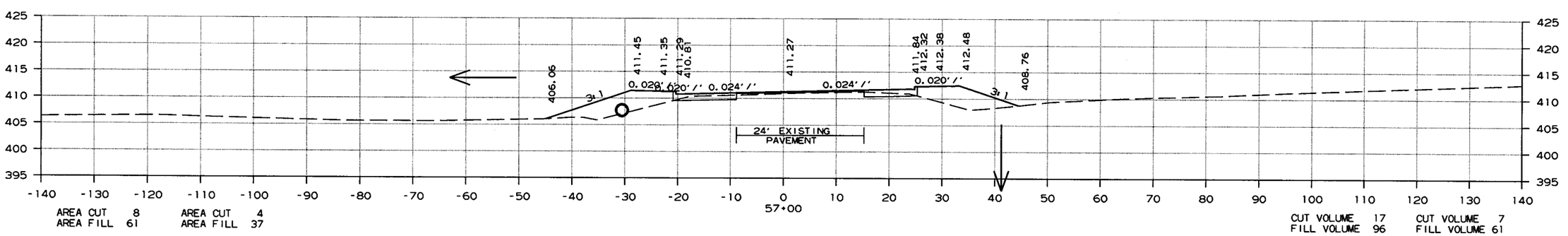
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	287	303

(2) CROSS SECTIONS SPRINGHILL RD.

STAGE 1 STAGE 2







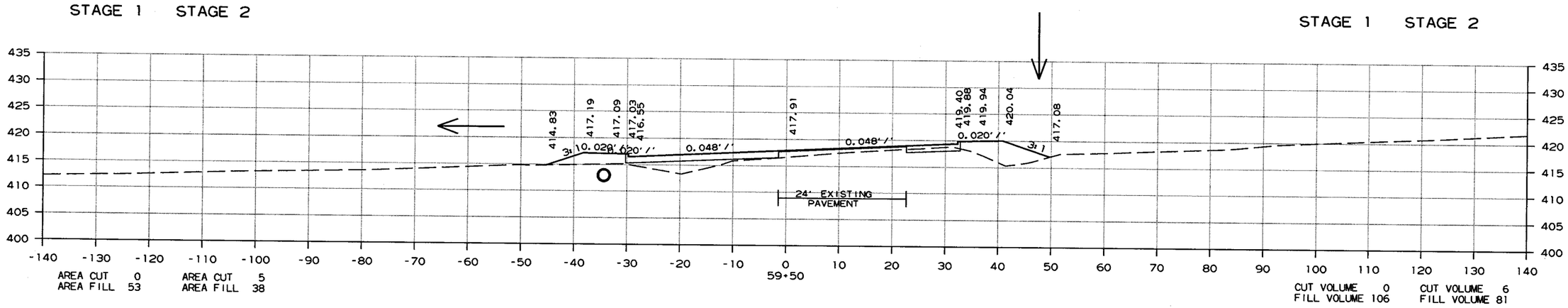
CROSS SECTION STA. 57+00 TO STA. 58+00

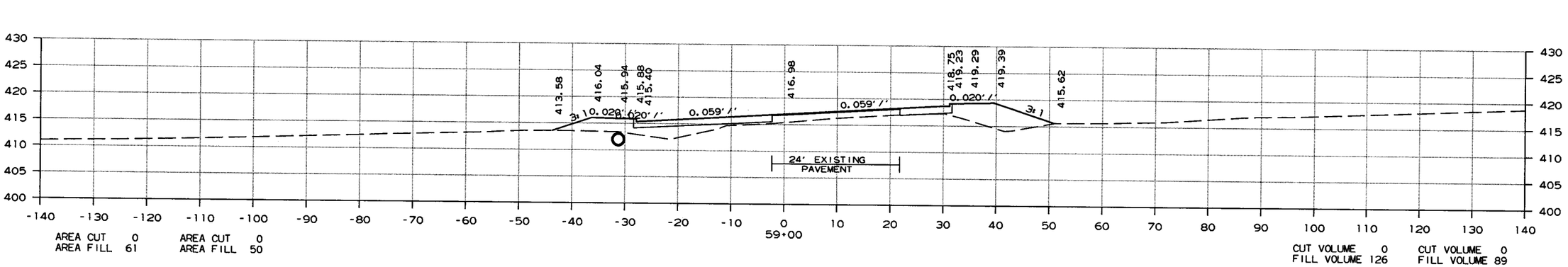
12/7/2017

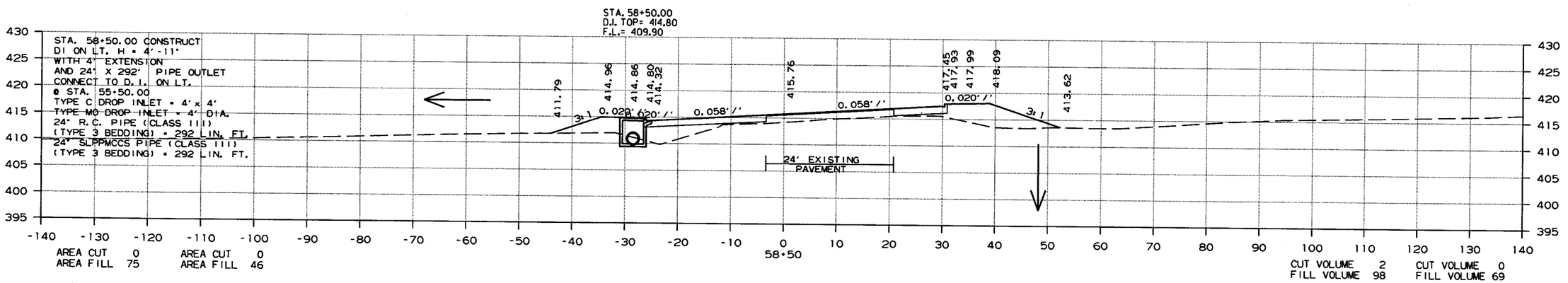
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	288	303

(2) CROSS SECTIONS







CROSS SECTION STA. 58+50 TO STA. 59+50

12/7/2017

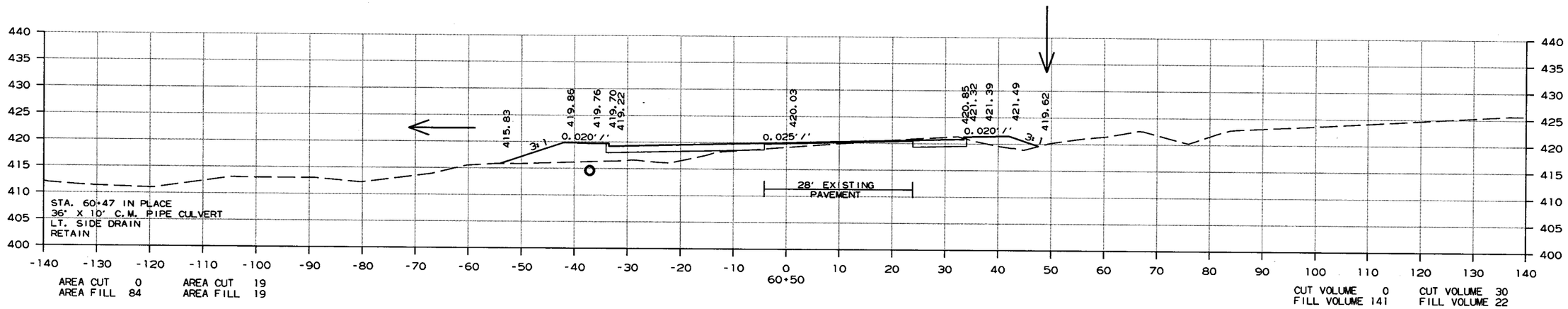
R061335.DGN

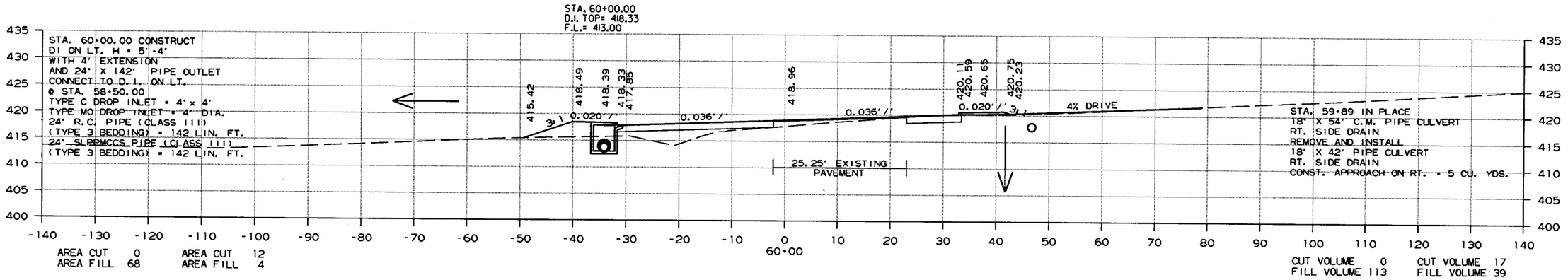
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	289	303

(2) CROSS SECTIONS SPRINGHILL RD.

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 60+00 TO STA. 60+50

12/7/2017

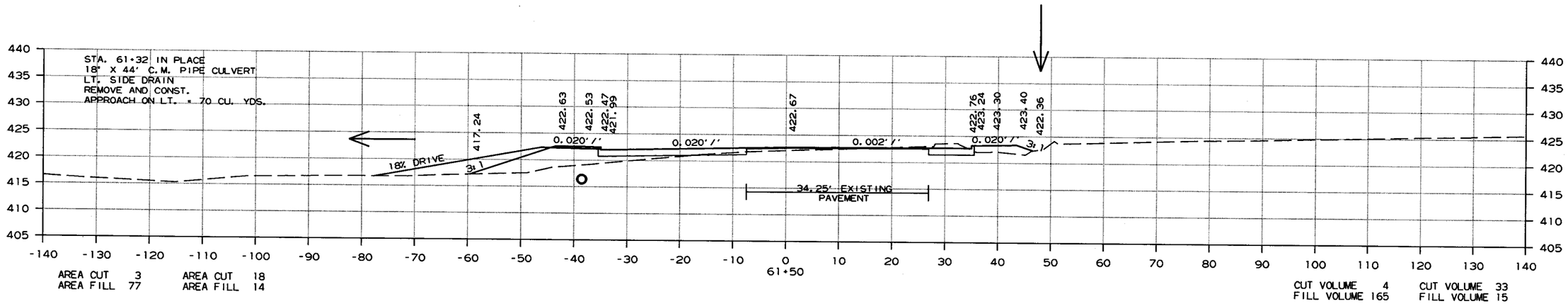
R061335.DGN

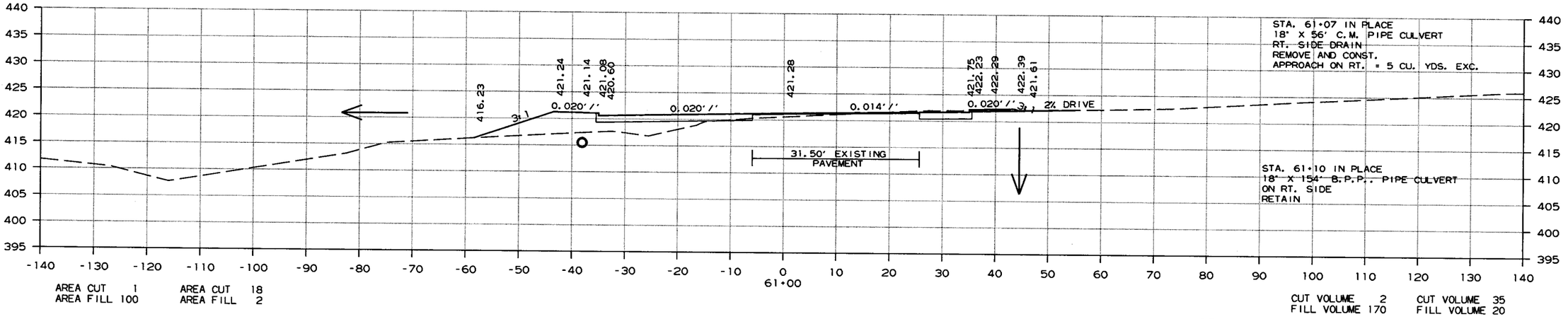
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	290	303

(2) CROSS SECTIONS SPRINGHILL RD.

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 61+00 TO STA. 61+50

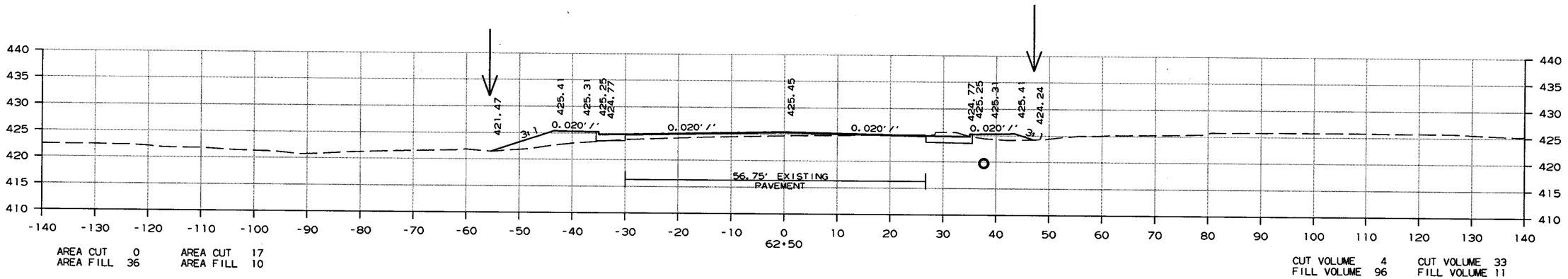
12/7/2017

R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	291	303

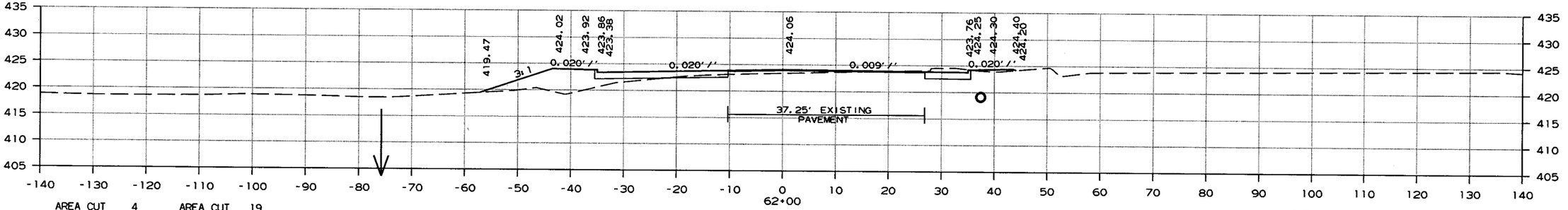
(2) CROSS SECTIONS SPRINGHILL RD.

STAGE 1 STAGE 2



AREA CUT 0 AREA FILL 36
AREA CUT 17 AREA FILL 10

CUT VOLUME 4 FILL VOLUME 96
CUT VOLUME 33 FILL VOLUME 11



AREA CUT 4 AREA FILL 67
AREA CUT 19 AREA FILL 2

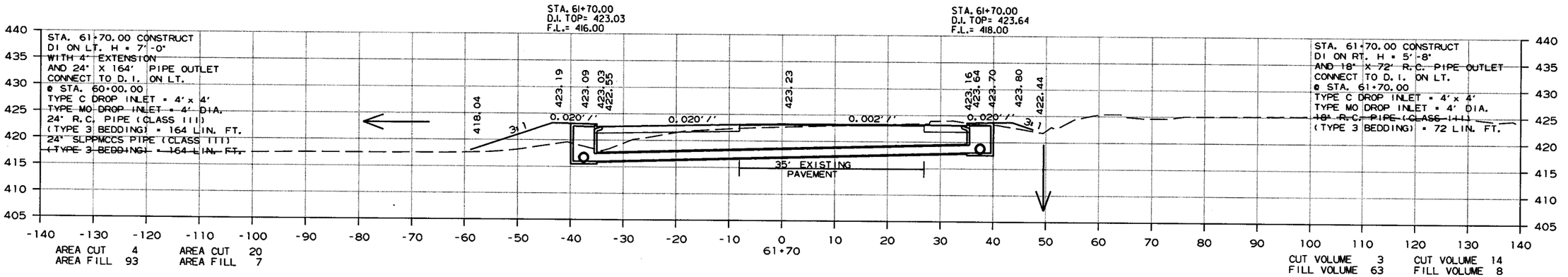
CUT VOLUME 4 FILL VOLUME 89
CUT VOLUME 22 FILL VOLUME 6

STA. 61+70.00
D.I. TOP= 423.03
F.L.= 416.00

STA. 61+70.00
D.I. TOP= 423.64
F.L.= 418.00

STA. 61+70.00 CONSTRUCT DI ON LT. H = 7'-0" WITH 4' EXTENSTON AND 24" X 164' PIPE OUTLET CONNECT TO D.I. ON LT. @ STA. 60+00.00
TYPE C DROP INLET = 4' x 4'
~~TYPE MO DROP INLET = 4' DIA.~~
24" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 164 LIN. FT.
~~24" SLPPMCCS PIPE (CLASS III)~~
~~(TYPE 3 BEDDING) = 164 LIN. FT.~~

STA. 61+70.00 CONSTRUCT DI ON RT. H = 5'-8" AND ~~18" X 72" R.C. PIPE OUTLET~~ CONNECT TO D.I. ON LT. @ STA. 61+70.00
TYPE C DROP INLET = 4' x 4'
TYPE MO DROP INLET = 4' DIA.
~~18" R.C. PIPE (CLASS III)~~
(TYPE 3 BEDDING) = 72 LIN. FT.



AREA CUT 4 AREA FILL 93
AREA CUT 20 AREA FILL 7

CUT VOLUME 3 FILL VOLUME 63
CUT VOLUME 14 FILL VOLUME 8

CROSS SECTION STA. 61+70 TO STA. 62+50

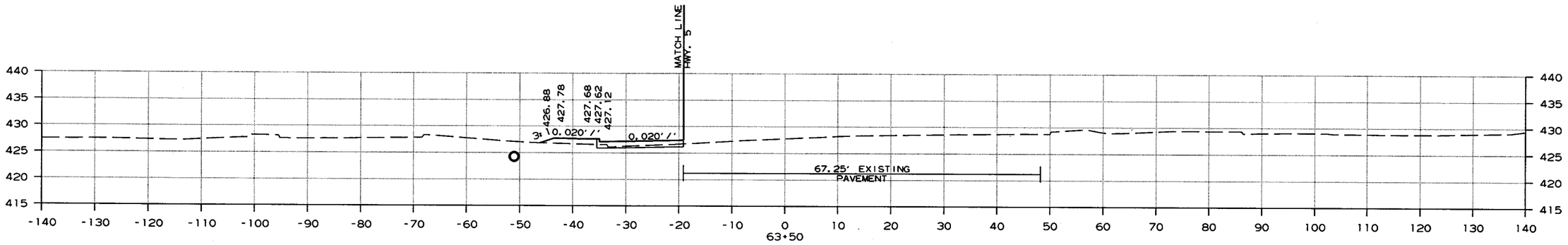
12/7/2017

R061335.DGN

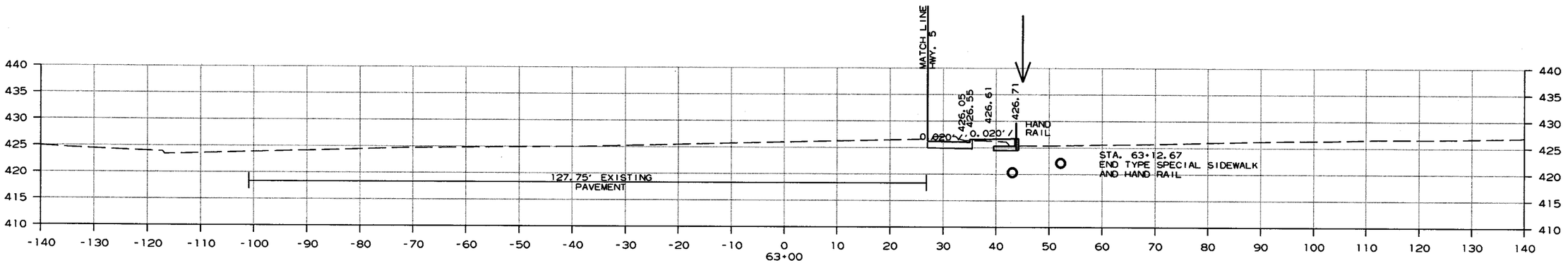
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	292	303

(2) CROSS SECTIONS SPRINGHILL RD.

STAGE 1 STAGE 2

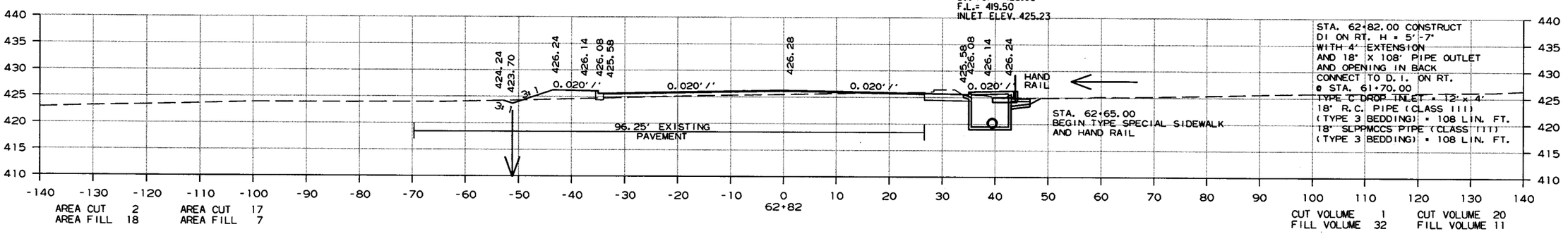


STAGE 1 STAGE 2



STA. 62+89.39 C.L. SPRINGHILL RD. =
STA. 148+20.13 HWY. 5 RT.

STA. 62+82.00
D.I. TOP= 425.08
F.L.= 419.50
INLET ELEV. 425.23



STA. 62+82.00 CONSTRUCT
DI ON RT. H = 5'-7"
WITH 4' EXTENSION
AND 18" X 108' PIPE OUTLET
AND OPENING IN BACK
CONNECT TO D. I. ON RT.
@ STA. 61+70.00
TYPE C DROP INLET = 12' x 4'
18" R.C. PIPE (CLASS III)
(TYPE 3 BEDDING) = 108 LIN. FT.
18" SLPRMCCS PIPE (CLASS III)
(TYPE 3 BEDDING) = 108 LIN. FT.

AREA CUT 2
AREA FILL 18

AREA CUT 17
AREA FILL 7

CUT VOLUME 1
FILL VOLUME 32

CUT VOLUME 20
FILL VOLUME 11

CROSS SECTION STA. 62+82 TO STA. 63+50

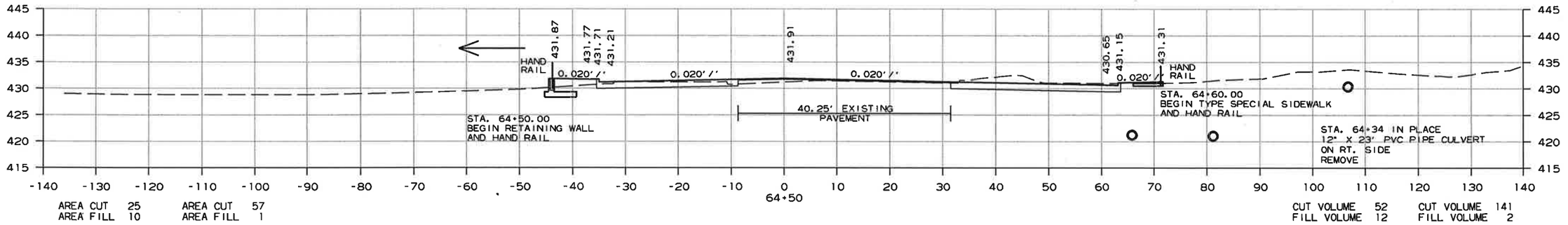
12/7/2017

R061335.DGN

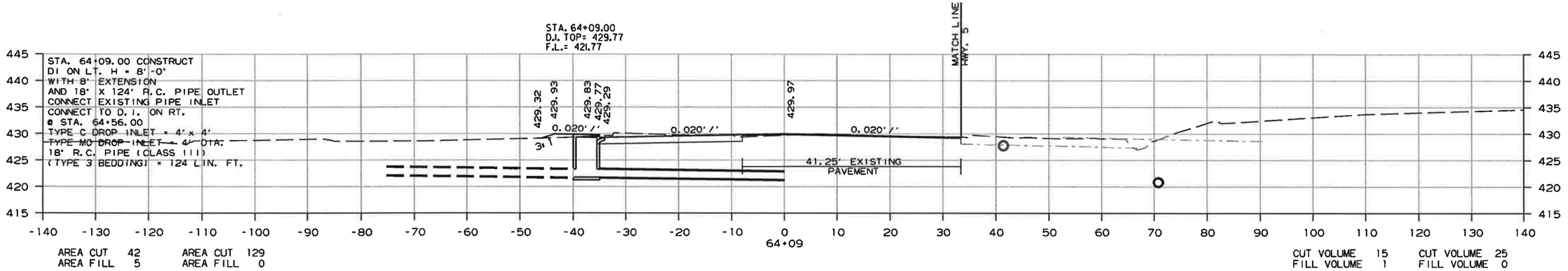
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	293	303

(2) CROSS SECTIONS SPRINGHILL RD.

STAGE 1 STAGE 2



STAGE 1 STAGE 2



CROSS SECTION STA. 64+00 TO STA. 64+50

12/7/2017

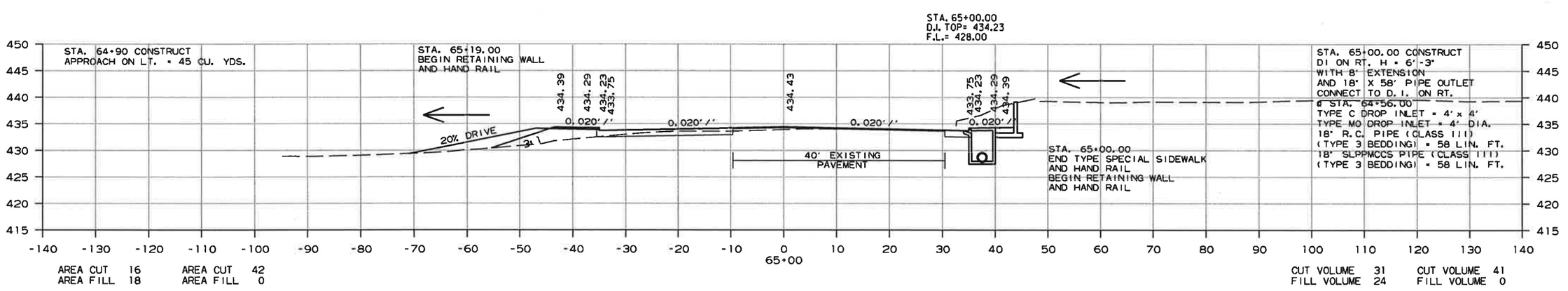
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	294	303

(2) CROSS SECTIONS SPRINGHILL RD.

STAGE 1 STAGE 2

STAGE 1 STAGE 2



CROSS SECTION STA. 64+56 TO STA. 65+00

12/7/2017

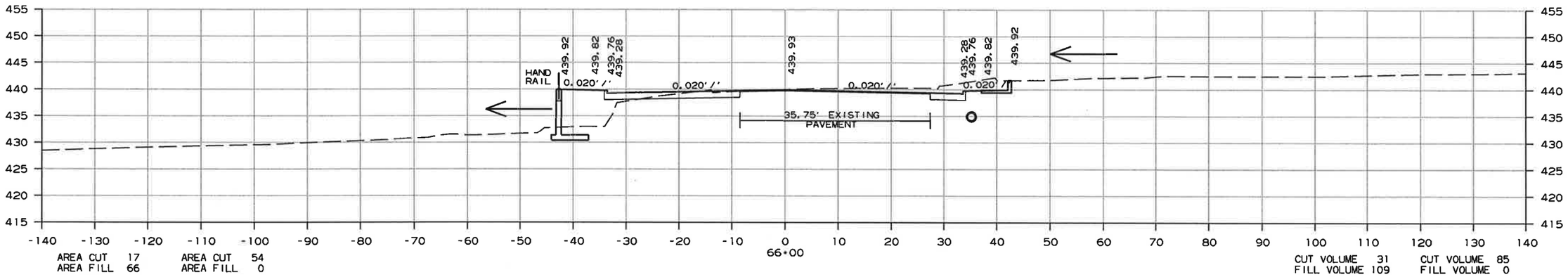
R061335.DGN

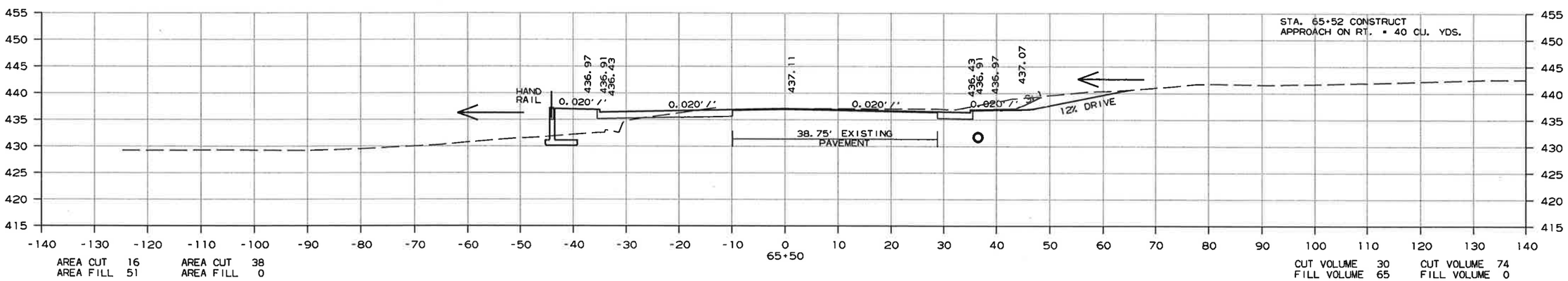
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	295	303

(2) CROSS SECTIONS SPRINGHILL RD.

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 65+50 TO STA. 66+00

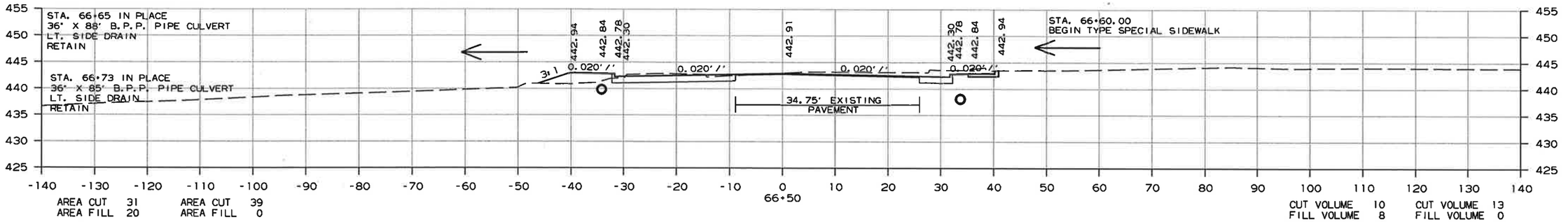
12/7/2017

R061335.DGN

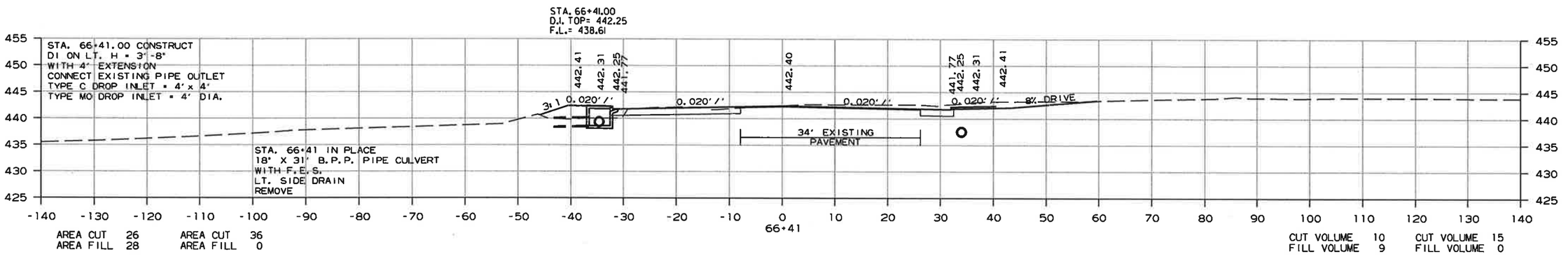
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	296	303

(2) CROSS SECTIONS SPRINGHILL RD.

STAGE 1 STAGE 2



STAGE 1 STAGE 2



CROSS SECTION STA. 66+30 TO STA. 66+50

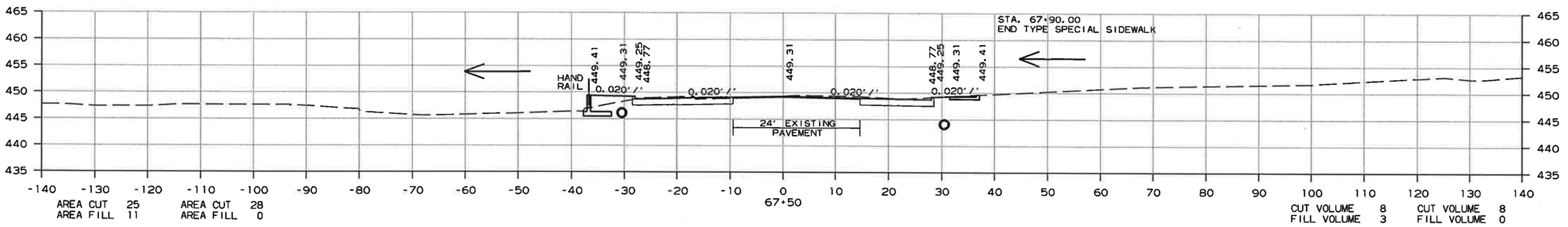
12/7/2017

R061335.DGN

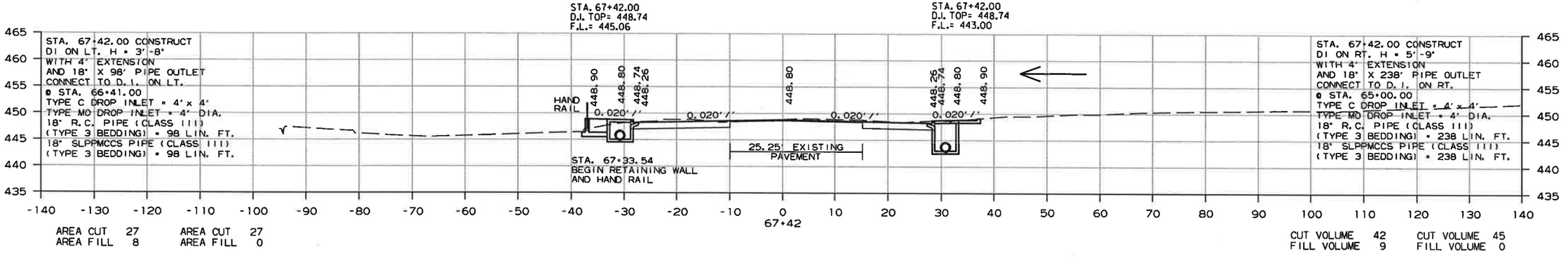
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	297	303

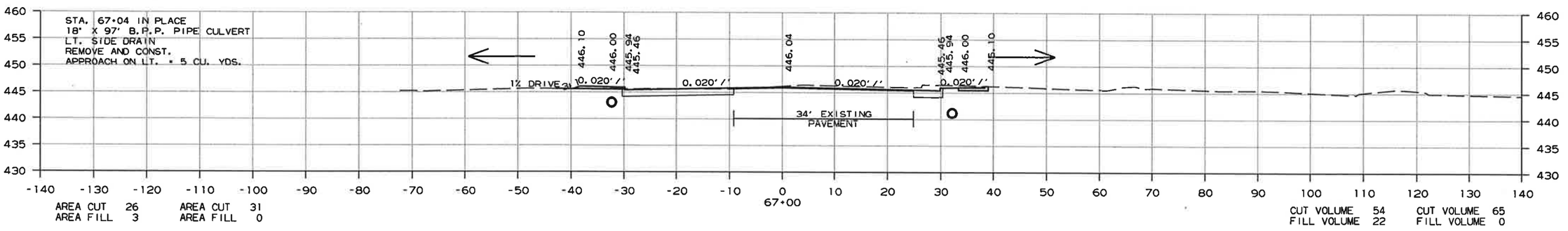
(2) CROSS SECTIONS SPRINGHILL RD.

STAGE 1 STAGE 2



STAGE 1 STAGE 2





CROSS SECTION STA. 67+00 TO STA. 67+50

12/7/2017

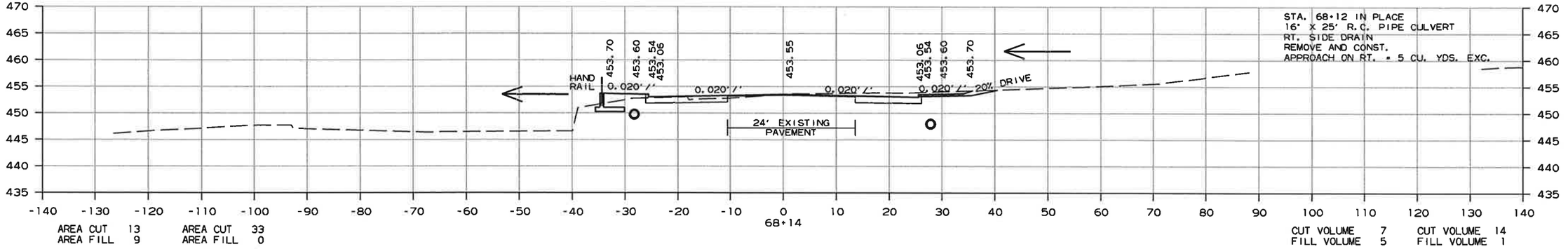
R061335.DGN

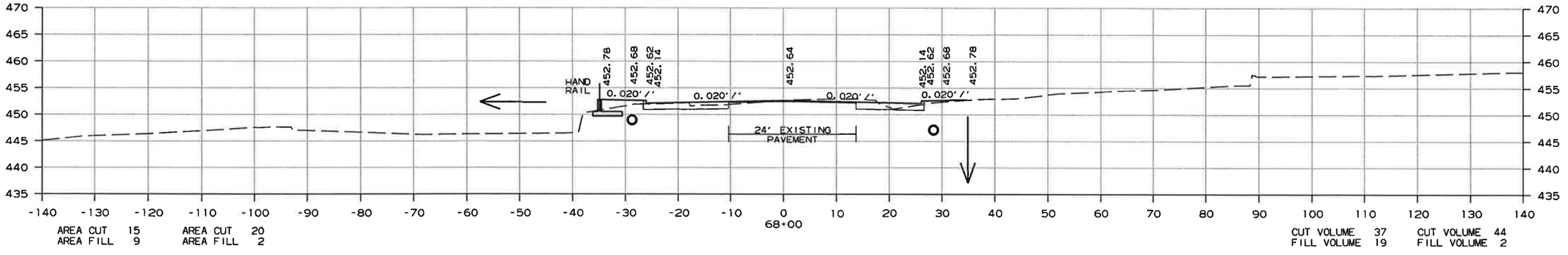
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	298	303

(2) CROSS SECTIONS SPRINGHILL RD.

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 68+00 TO STA. 68+14

12/7/2017

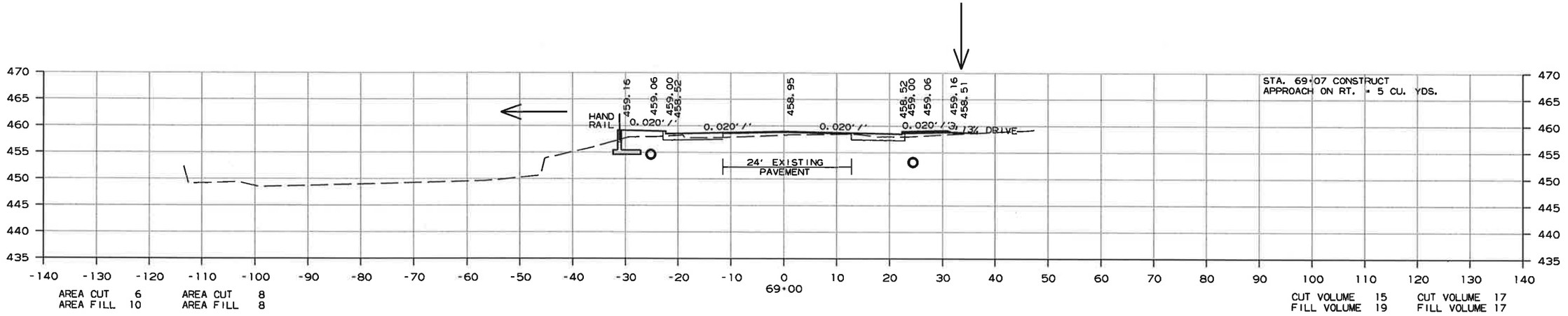
R061335.DGN

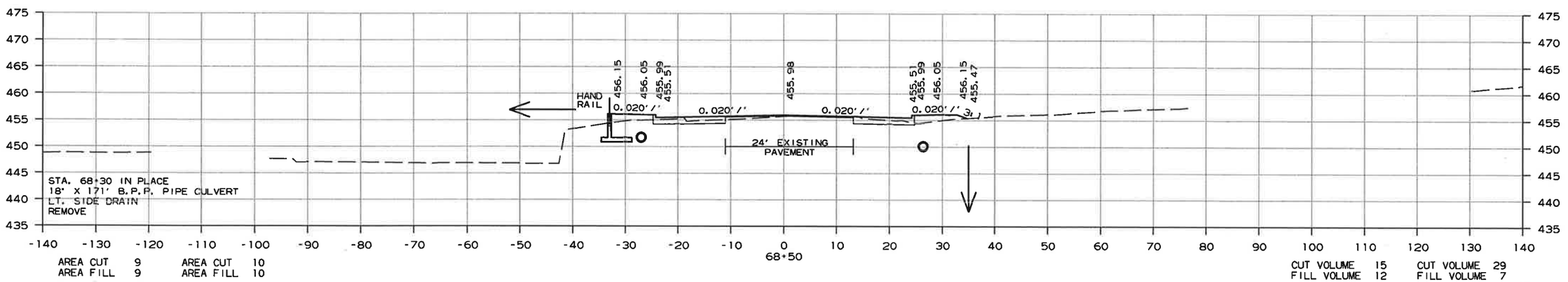
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	299	303

(2) CROSS SECTIONS SPRINGHILL RD.

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 68+50 TO STA. 69+00

12/7/2017

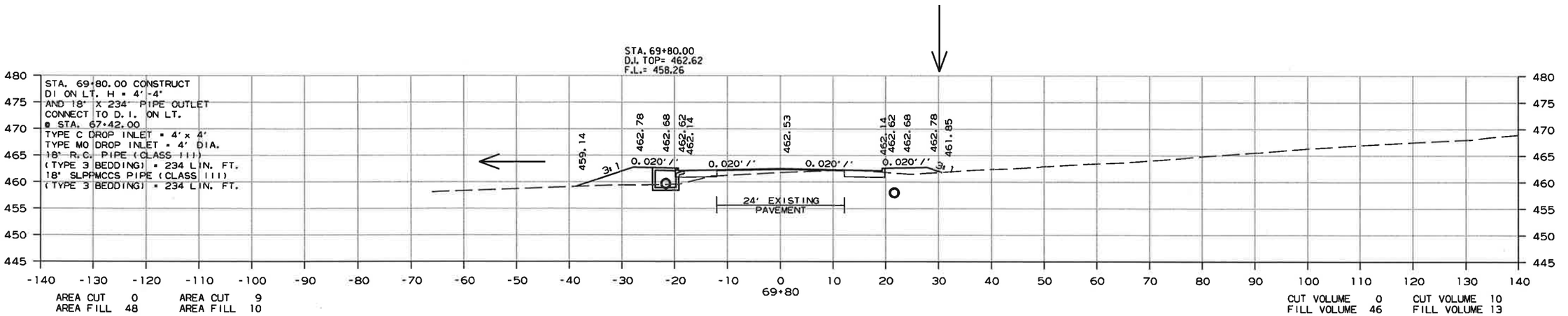
R061335.DGN

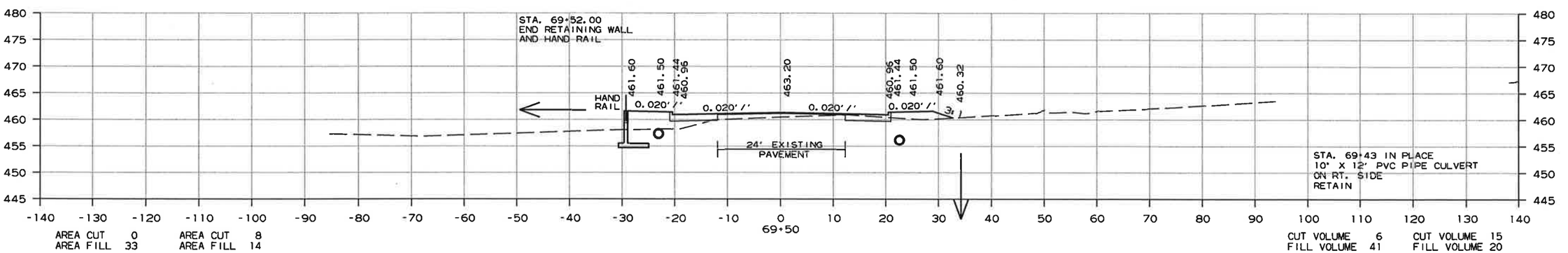
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
09-07-18				6	ARK.			
				JOB NO.		061335	300	303

(2) CROSS SECTIONS SPRINGHILL RD.

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 69+50 TO STA. 69+80

12/7/2017

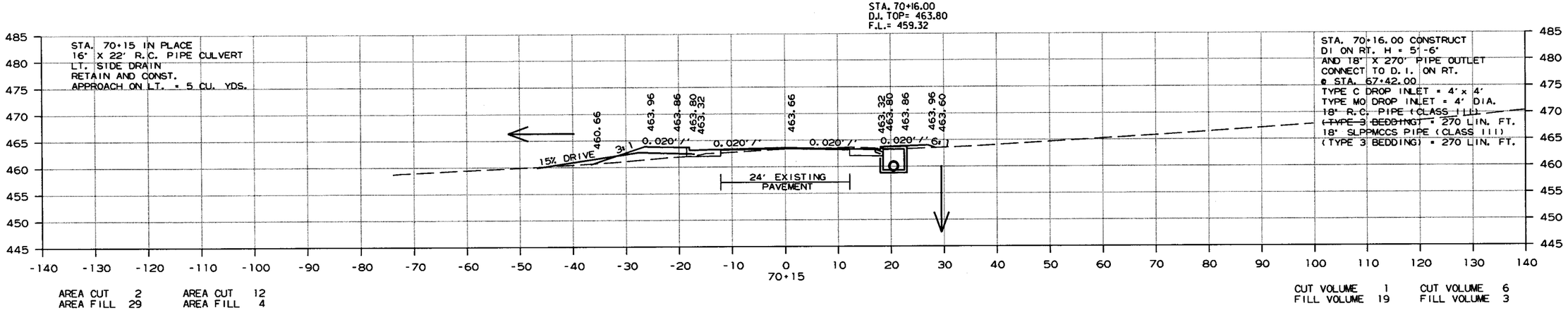
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	301	303

(2) CROSS SECTIONS SPRINGHILL RD.

STAGE 1 STAGE 2

STAGE 1 STAGE 2



CROSS SECTION STA. 70+00 TO STA. 70+15

12/7/2017

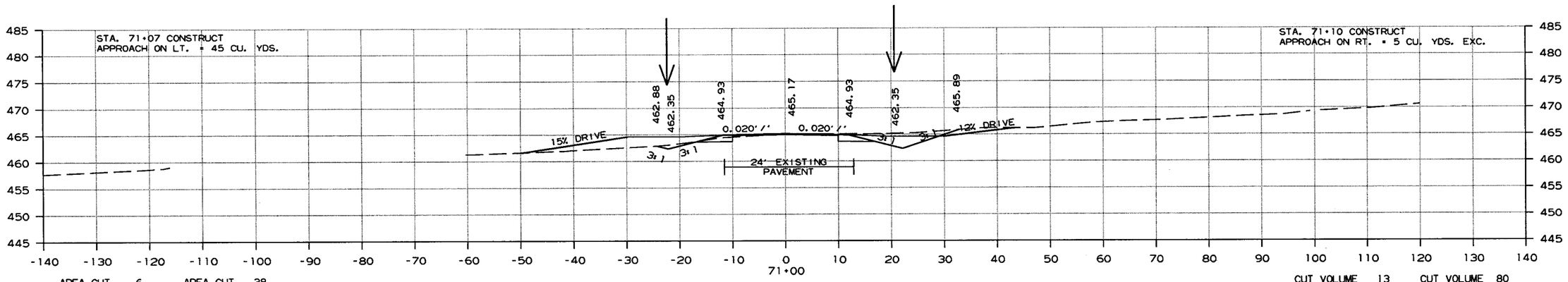
R061335.DGN

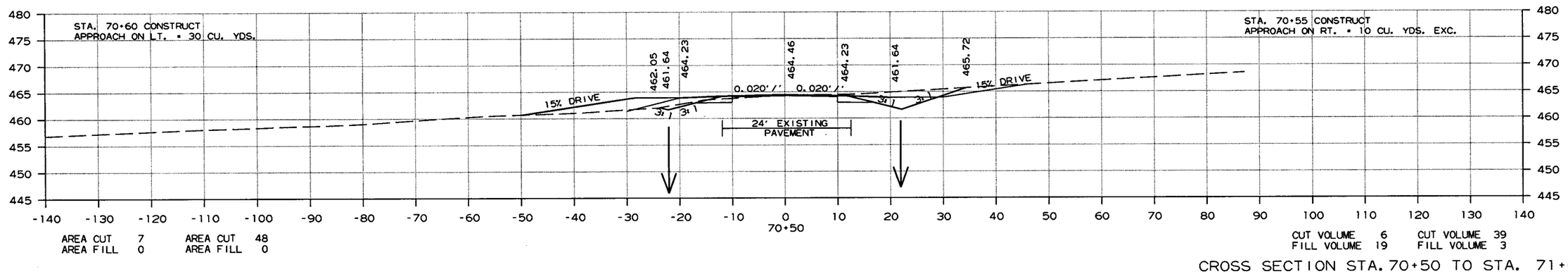
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	302	303

(2) CROSS SECTIONS SPRINGHILL RD.

STAGE 1 STAGE 2

STAGE 1 STAGE 2





CROSS SECTION STA. 70+50 TO STA. 71+00

12/7/2017

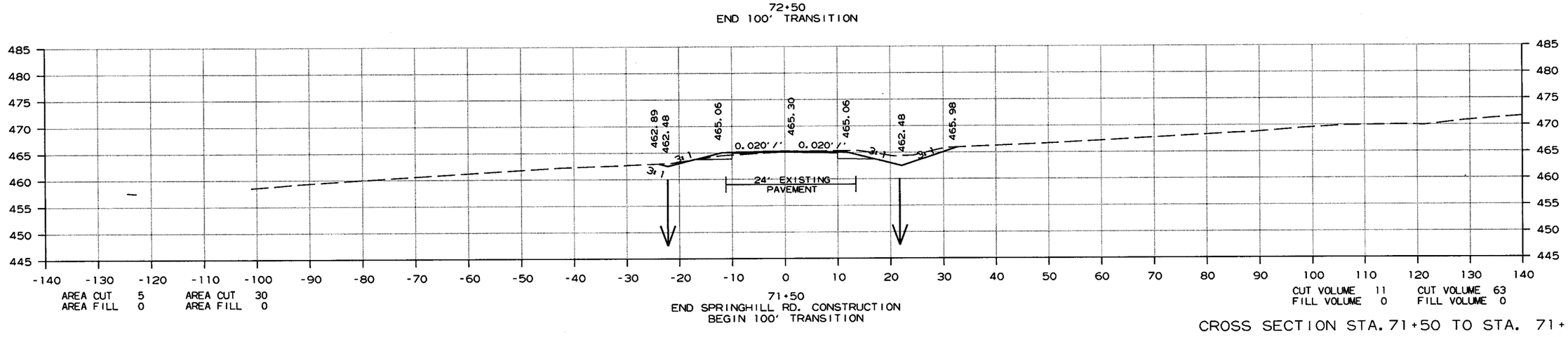
R061335.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061335	303	303

(2) CROSS SECTIONS SPRINGHILL RD.

STAGE 1 STAGE 2

STAGE 1 STAGE 2



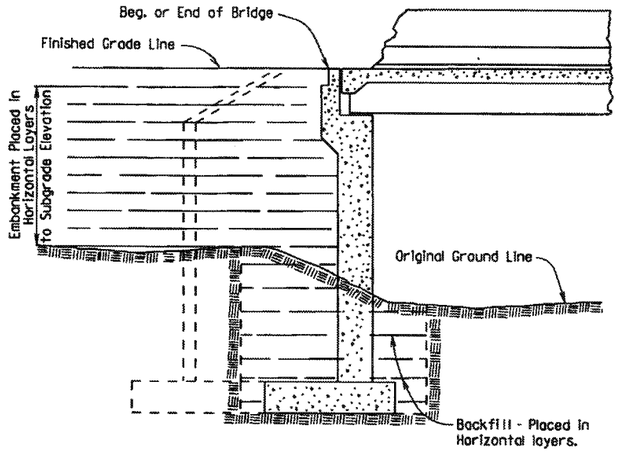
CROSS SECTION STA. 71+50 TO STA. 71+50

12/7/2017

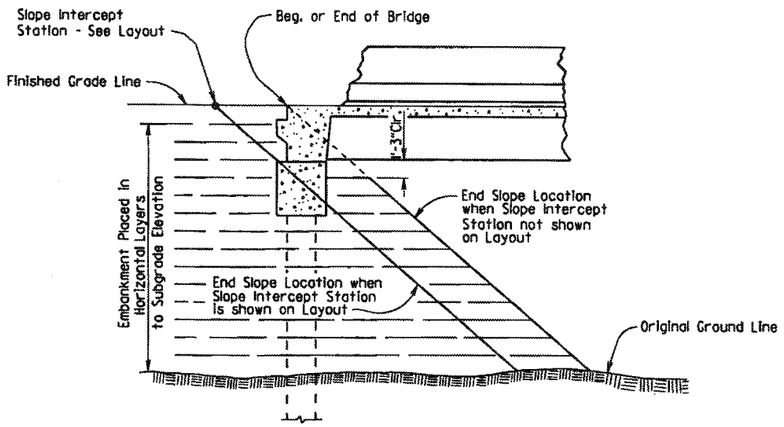
R061335.DGN

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.				

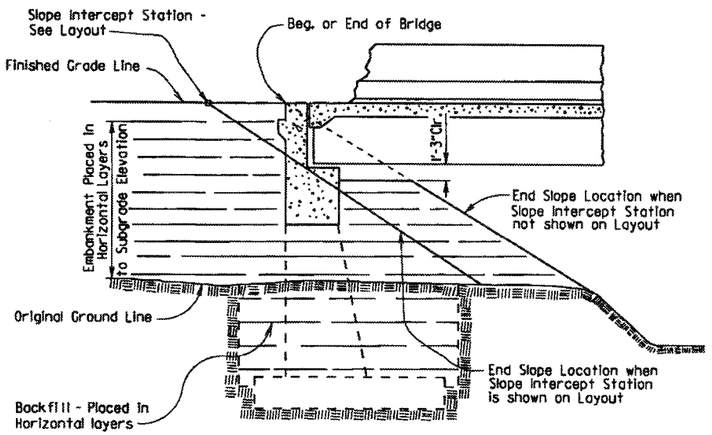
(1) EMBANKMENT & BACKFILL 55000



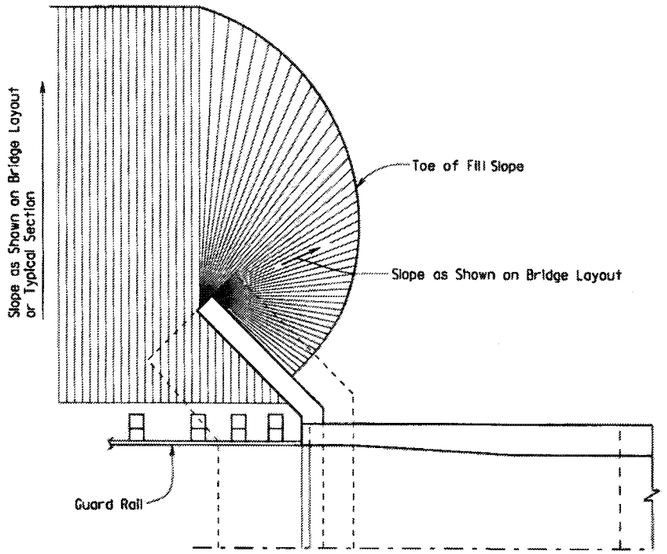
EMBANKMENT CONSTRUCTION AND FOOTING BACKFILL AT VERTICAL WALL ABUTMENTS



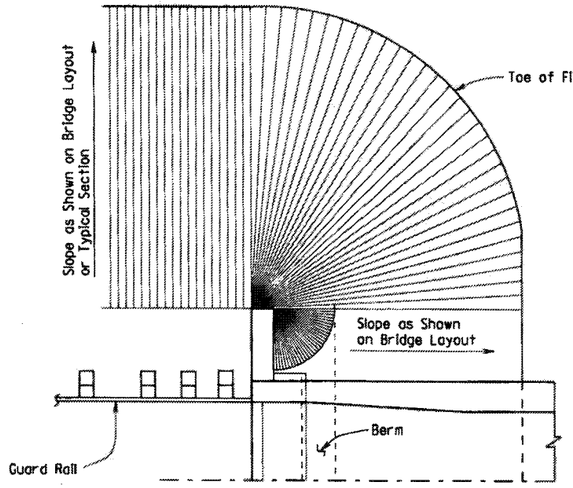
EMBANKMENT CONSTRUCTION AT SPILL-THROUGH PILE END BENTS



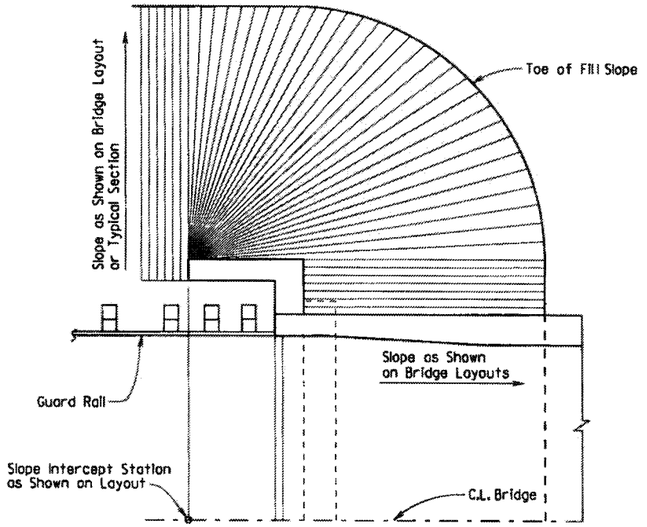
EMBANKMENT CONSTRUCTION AND FOOTING BACKFILL AT SPILL-THROUGH END BENTS



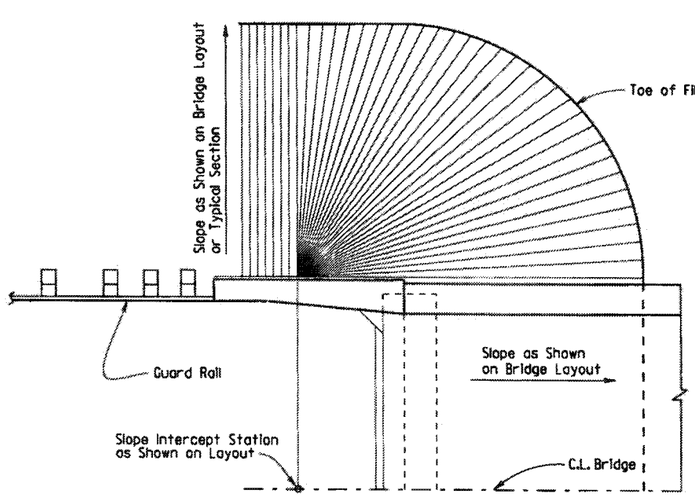
VERTICAL WALL ABUTMENTS



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 thon 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.

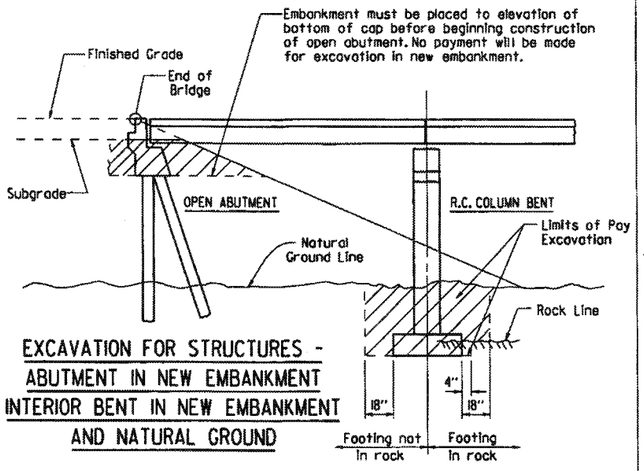
STANDARD DETAILS FOR EMBANKMENT CONSTRUCTION AND BACKFILL AT BRIDGE ENDS

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

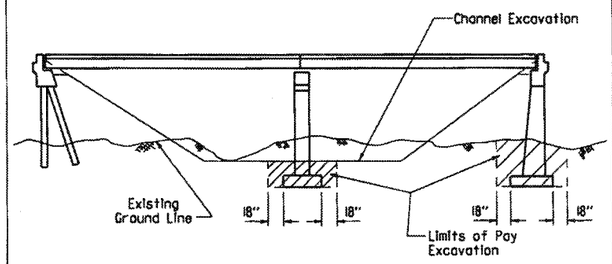
DRAWN BY: KDH DATE: 2-27-2014 FILENAME: b55000.dgn
CHECKED BY: BEF DATE: 2-27-2014 SCALE: NO SCALE
DESIGNED BY: STD. DATE: -

DRAWING NO. 55000

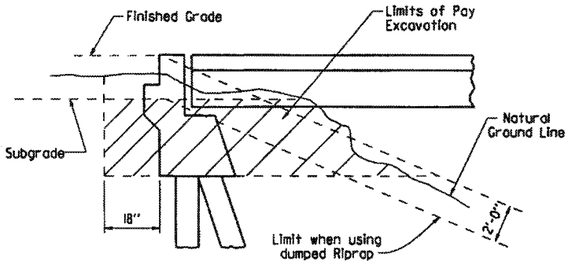
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.				
				①	RIPRAP & EXCAV. 5500I			



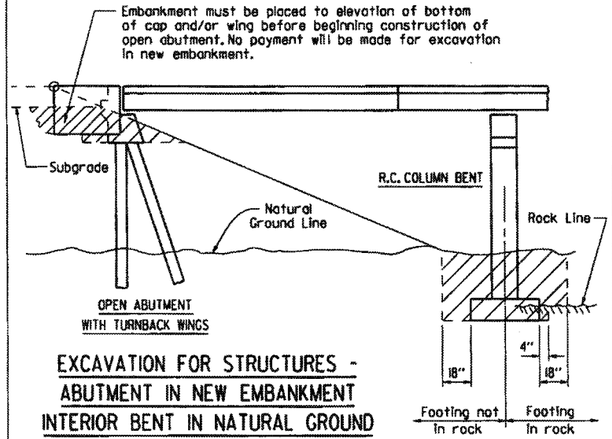
EXCAVATION FOR STRUCTURES - ABUTMENT IN NEW EMBANKMENT INTERIOR BENT IN NEW EMBANKMENT AND NATURAL GROUND



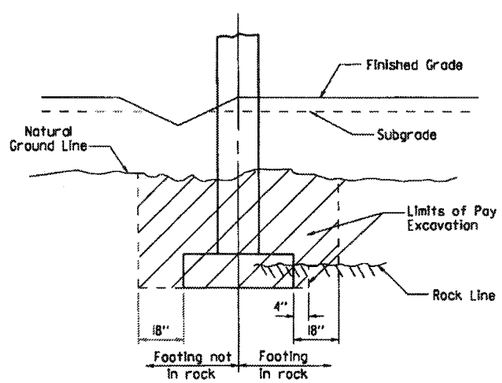
EXCAVATION FOR STRUCTURES - BRIDGE LOCATION WITH DESIGNATED CHANNEL CHANGE



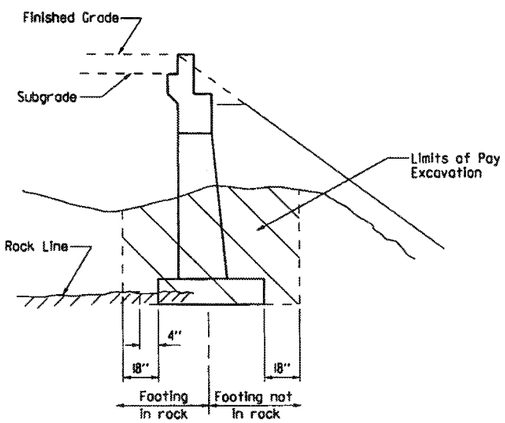
EXCAVATION FOR STRUCTURES - ABUTMENT IN NATURAL GROUND



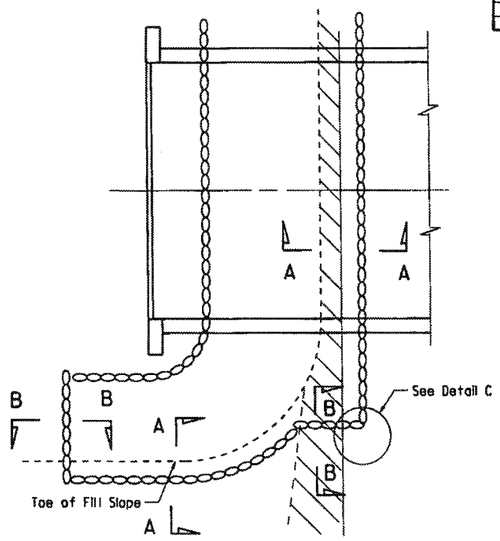
EXCAVATION FOR STRUCTURES - ABUTMENT IN NEW EMBANKMENT INTERIOR BENT IN NATURAL GROUND



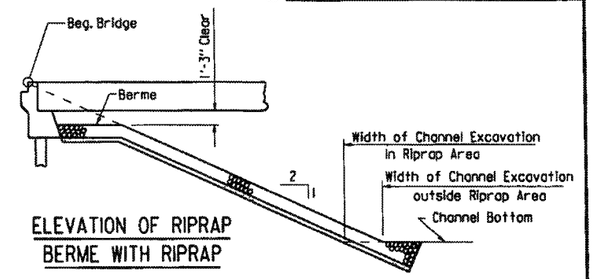
EXCAVATION FOR STRUCTURES - BENT IN ROADWAY FILL SECTION AND NATURAL GROUND



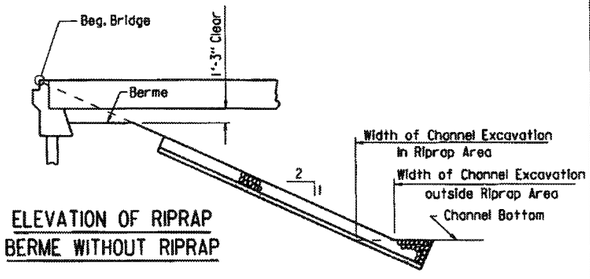
EXCAVATION FOR STRUCTURES - ABUTMENT IN NATURAL GROUND AND NEW EMBANKMENT



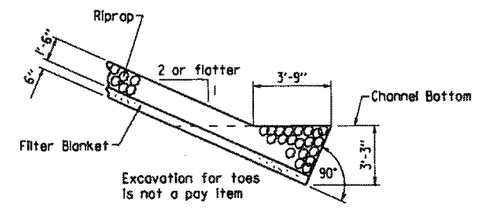
PLAN OF DUMPED RIPRAP



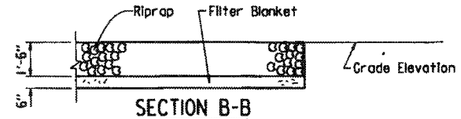
ELEVATION OF RIPRAP BERME WITH RIPRAP



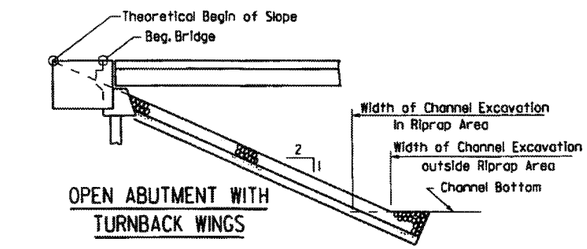
ELEVATION OF RIPRAP BERME WITHOUT RIPRAP



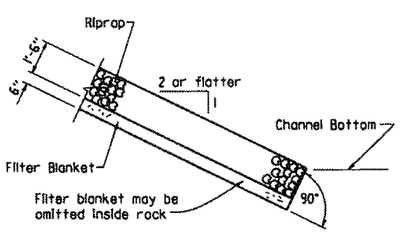
SECTION A-A
(Toe Excavation in Soil)



SECTION B-B



OPEN ABUTMENT WITH TURNBACK WINGS

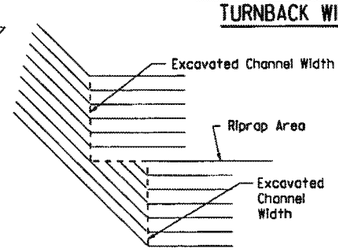


SECTION A-A
(Toe Excavation in Rock)

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

STANDARD DETAILS FOR DUMPED RIPRAP AND FILTER BLANKET AND COMPUTING EXCAVATION FOR STRUCTURES

ARKANSAS STATE HIGHWAY COMMISSION

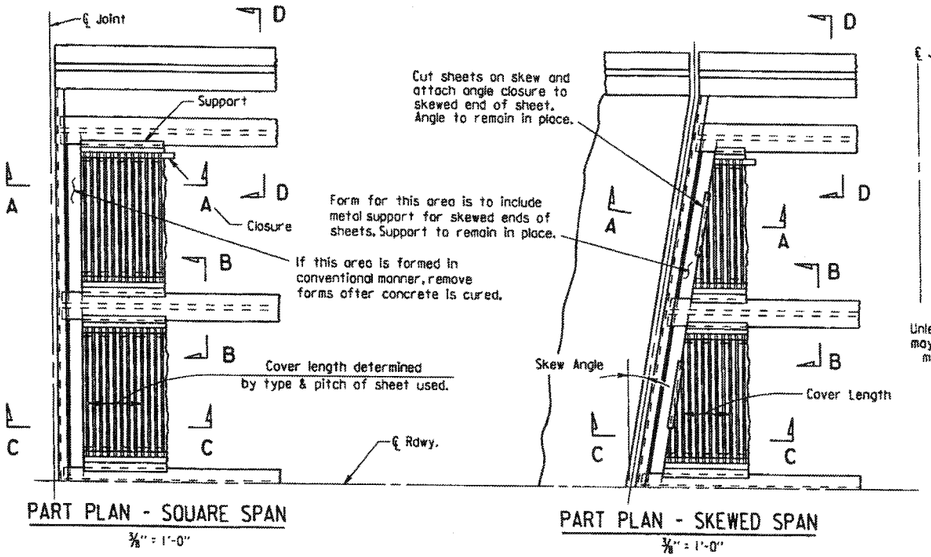
LITTLE ROCK, ARK.

DRAWN BY: KDH	DATE: 2-27-2014	FILENAME: b5500I.dgn		
CHECKED BY: BEF	DATE: 2-27-2014	SCALE: NO SCALE		
DESIGNED BY: STD.	DATE:			

DRAWING NO. 5500I

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

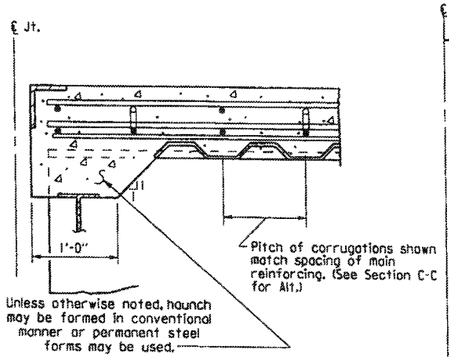


PART PLAN - SQUARE SPAN

3/8" = 1'-0"

PART PLAN - SKEWED SPAN

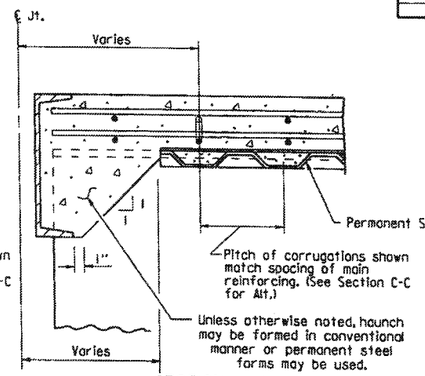
3/8" = 1'-0"



SECTION A-A

N.T.S.

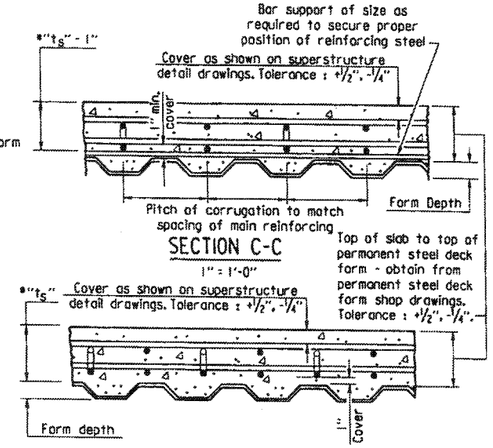
(Angle at end of span)



SECTION A-A

N.T.S.

(Channel at end of span)



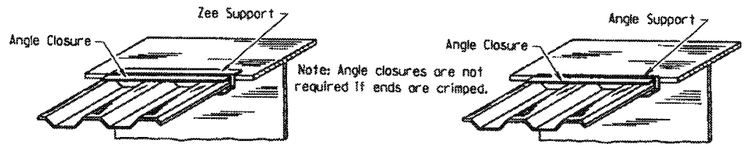
SECTION C-C

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.

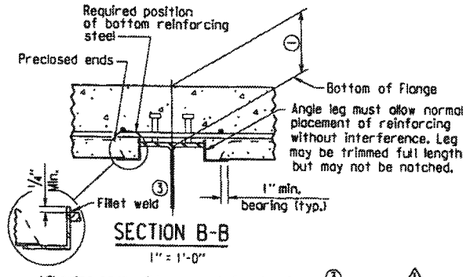
Form sheets shall be fastened to supporting members and to each other with galvanized metal screws sufficient in size and number to provide a secure attachment. Alternate methods of attachment must be approved by the Engineer.

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.

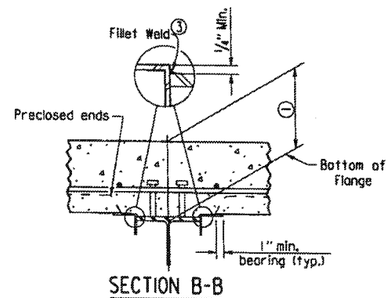


SECTION B-B

1" = 1'-0"

(Showing permissible support for tension flange where shear connectors are used, and for all compression flanges)

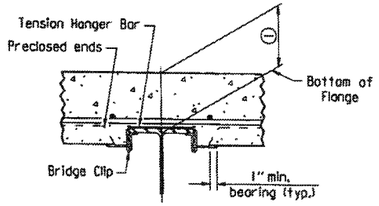
③ ⚠ Minimum weld: ⅛" x 1" @ 18". More weld may be required; maximum length per weld = 1½" (typ.)



SECTION B-B

1" = 1'-0"

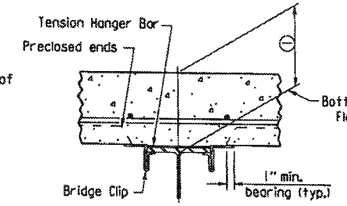
(Showing permissible support for tension flange where shear connectors are used and for all compression flanges)



SECTION B-B

1" = 1'-0"

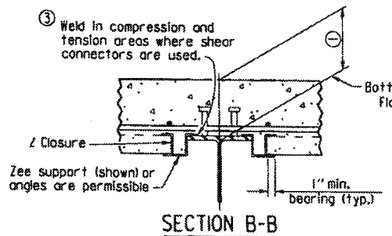
(Showing permissible support for tension flange where shear connectors are not used)



SECTION B-B

1" = 1'-0"

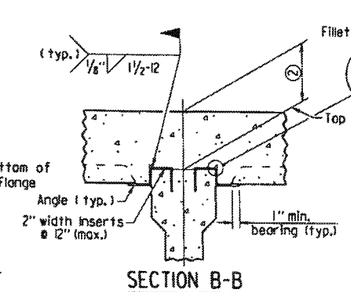
(Showing permissible support for tension flange where shear connectors are not used)



SECTION B-B

1" = 1'-0"

(Showing ∠ Closure)

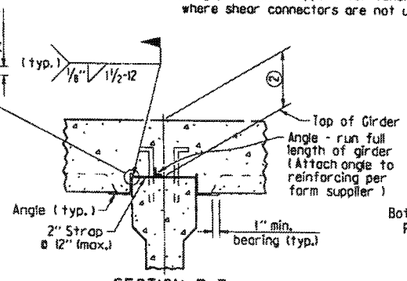


SECTION B-B

(FOR CONCRETE GIRDERS)

1" = 1'-0"

(Showing support by insert cast in girder)

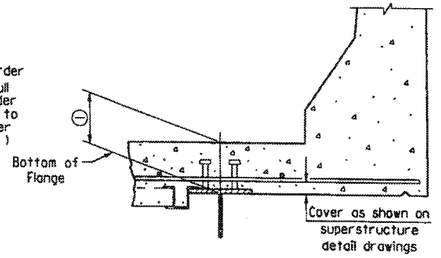


SECTION B-B

(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 + 1¾" + 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 S Tined Bridge Roadway Surface Finish. Sidewalks shall receive a broomed finish as specified for final finishing in Subsection 802.19 for Class S 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 15/16" ø open holes. Holes for ¾" ø high-strength bolts may be 5/8" 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.

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

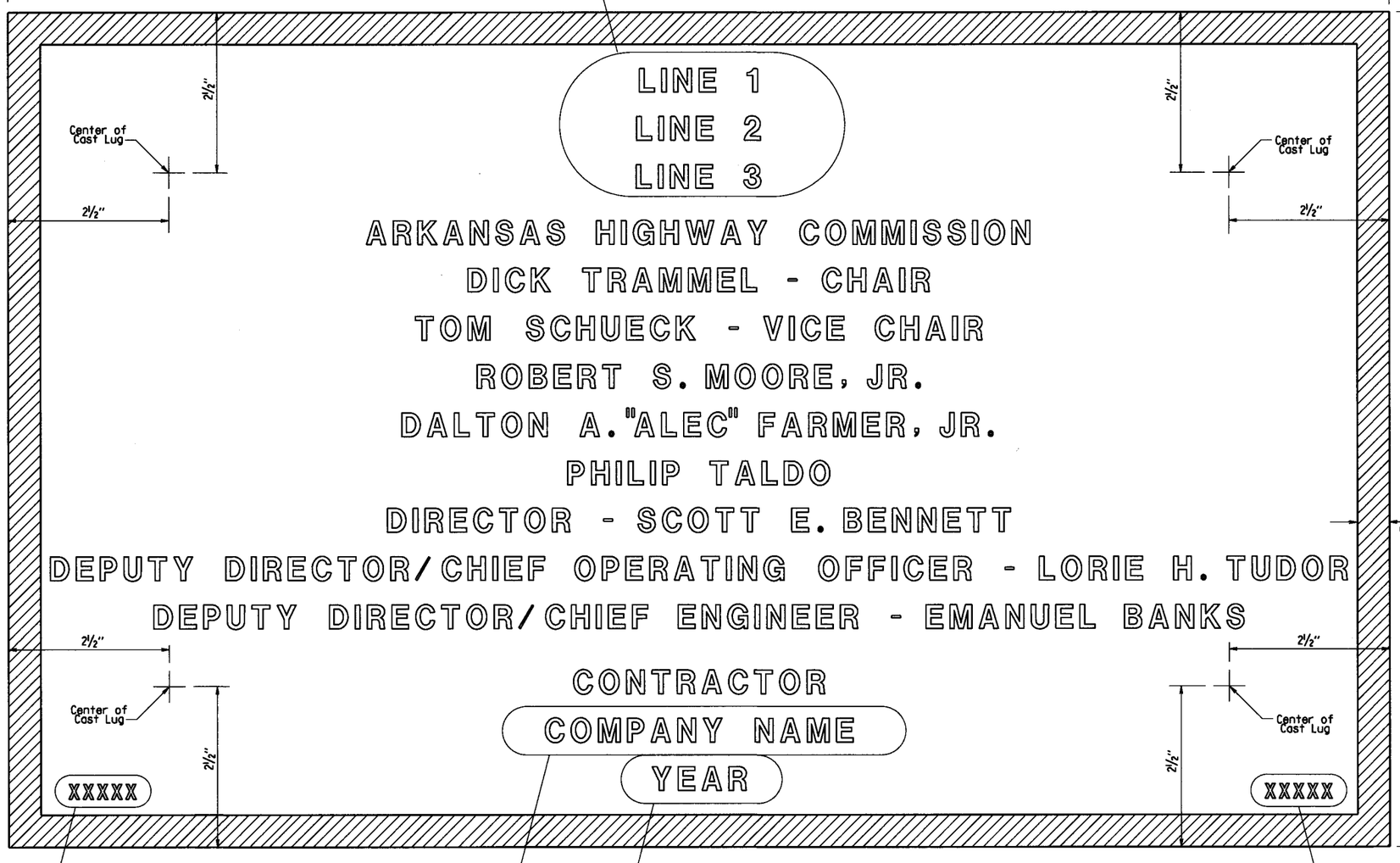
PRINT DATE: 9/21/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
12-1-14				6	ARK.			
1-14-15				JOB NO.				
1-17-17								

1 TYPE D NAME PLATE 55010

The name of the bridge as shown on the plans shall be placed on Lines 1 - 3 using 1/8" raised letters and numerals 3/8" high.

	Example 1	Example 2	Example 3	Example 4
Line 1	Red River	Southern	Saline	
Line 2	Relief	Railroad	River	Highway 5
Line 3		Overpass	Relief	



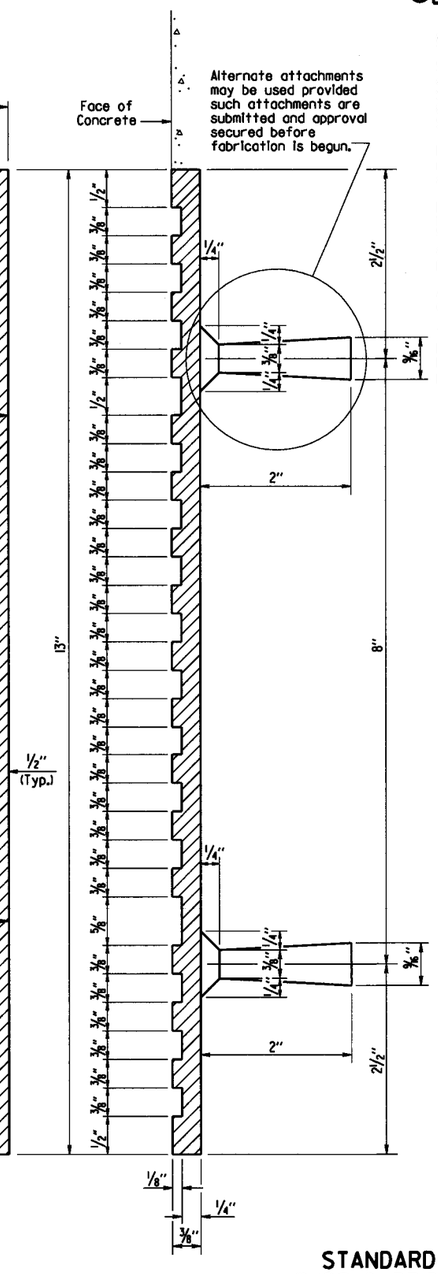
Place the design live loading here using 1/8" raised letters and numerals 1/4" high. Examples : HS 20
HL-93

Place the Year in which Contract was awarded here using 1/8" raised numerals 3/8" high. Example : 2001

Place the name of the company awarded the construction contract here using 1/8" raised letters and numerals 3/8" high. Example : ABCD CONSTRUCTION, INC.

Place the Bridge number here using 1/8" raised letters and numerals 1/4" 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 1/4" thick and shall include four tapering cone lugs 3/8" to 5/8"x 2" long. The border and all lettering shall be raised 1/8" 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.

3 Added New Commissioner
1-17-17 KDH Checked By: CRE

2 Revised Chair and Vice Chair Added New Commissioner
1-14-15 KDH Checked By: CRE

1 Revised Deputy Director/ Chief Engineer Added Deputy Director/ Chief Operating Officer
12-1-14 KDH Checked By: CRE

STANDARD DETAILS FOR TYPE D BRIDGE NAME PLATE

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

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 H-PILES		55020

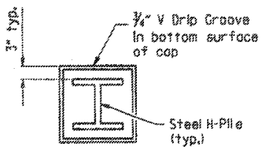
GENERAL NOTES FOR STEEL H-PILES:

Steel H-Piles shall conform to AASHTO M 270, Grade 36 or greater.

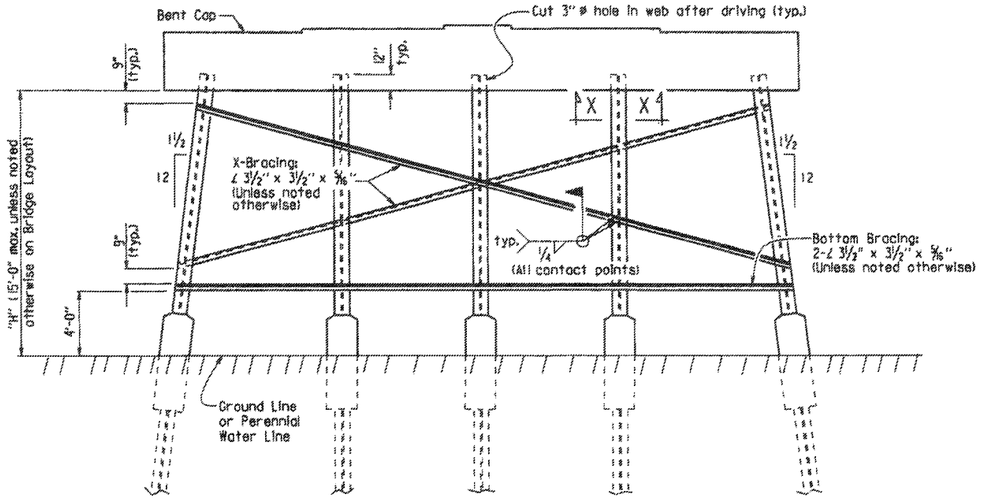
See Bridge Layout and Bent Details for pile size, estimated length, spacing, pile anchorage (if required) and for driving information.

Steel H-Piles that extend above the ground and are not protected by pile encasement shall be painted in accordance with Subsection 805.02.

Brackets, lugs, cap plates, pile tips, driving points, pile painting, splicing and welding shall not be paid for directly, but shall be considered subsidiary to the item "Steel Piling".



VIEW X-X



Notes:
All bracing shall be cut and welded in the field. Each brace shall be furnished in one piece. Payment shall be made under Item 807.

Unless noted otherwise, omit X-Bracing when "H" is less than 8 feet.

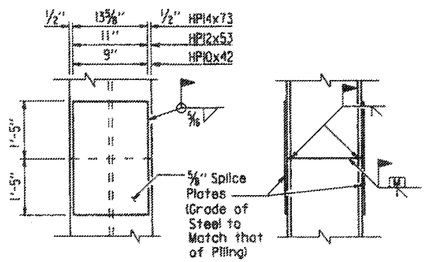
Omit X-Bracing and Bottom Bracing when "H" is 5 feet or less.

When required on the Bridge Layout sheet, pile encasements shall be constructed. See Notes and Details for H-Pile Encasements.

Omit all bracing (and V-groove in cap) when pile encasement is extended to bottom of bent cap.

TYPICAL DETAILS OF H-PILE TRESTLE INTERMEDIATE BENT

(Shown with Partial Height Encasement)



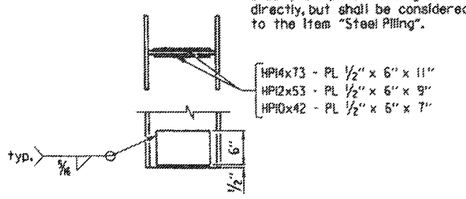
The Contractor may for his own convenience and at his own expense provide as many as three splices per pile. Minimum spacing between splices shall be 5 feet.

TYPICAL SPLICE DETAILS

⚠ H-pile splicers manufactured by Associated Pile and Fitting Corporation, LB Foster Piling, Skyline Steel or equivalent may be used in lieu of the "Typical Splice Details" shown. H-pile splicers shall match the same grade of steel specified for the piling and shall be welded to the pile with a ⅝" fillet weld around the entire perimeter of the splice. Flanges shall be welded with a complete penetration groove weld complying with AASHTO/AWS Joint Designation B-U4a or B-U4b. All welding shall conform to Subsection 807.26 of the AHTD Standard Specifcations for Highway Construction (2014 Edition).

Notes:
Steel pile tip reinforcing not required when approved H-Pile driving points are used.

Steel pile tip reinforcing shall not be paid for directly, but shall be considered subsidiary to the item "Steel Piling".



REINFORCING DETAIL FOR STEEL H-PILE TIP

GENERAL NOTES FOR H-PILE ENCASEMENTS:

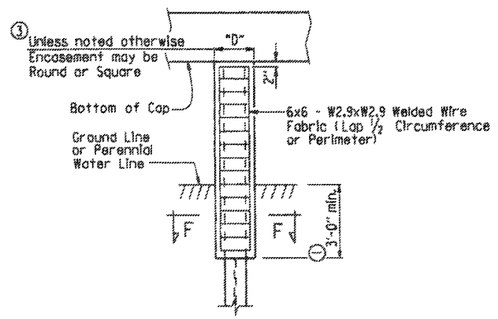
⚠ See Bridge Layout for additional notes, any pile encasement restrictions and required location of pile encasements.

All 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.

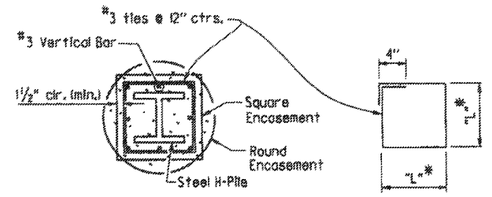
Welded Wire Fabric shall conform to AASHTO M 55 or M 221. Galvanized Corrugated Steel Pipe shall conform to AASHTO M 36 and M 218.

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".



PILE ENCASEMENT DETAIL FOR STEEL H-PILES

④ (Shown with Encasement to Bottom of Cap)

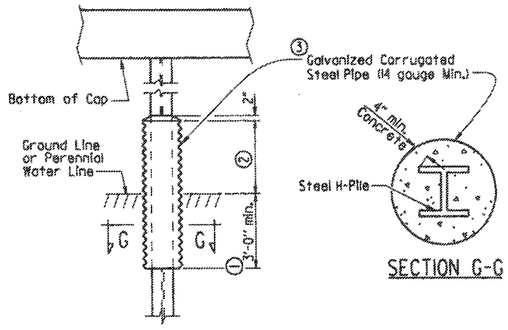


SECTION F-F

*Measured out-to-out of bar.

TABLE OF VARIABLES FOR PILE ENCASEMENT

Pile Size	"D" Square Encsmt.	"D" Round Encsmt.	"L"*
HP10x42	1'-7"	2'-0"	1'-4"
HP12x53	1'-8"	2'-2"	1'-5"
HP14x73	1'-11"	2'-6"	1'-8"



SECTION G-G

① Unless otherwise noted on Bridge Layout.

② 3'-0" minimum or as shown on Bridge Layout.

③ Encasement dimensions shall be sized to maintain a minimum concrete cover of 4" from the H-Pile. Reinforcement shall be sized to provide a minimum concrete cover of 1½" and a minimum clearance of 1¼" from the pile.

④ Alternate pile encasement, when not extended to bottom of cap, shall have 2" concrete taper for water runoff as shown in the Partial Height Encasement detail.

ALTERNATE PILE ENCASEMENT DETAIL FOR STEEL H-PILES

(Shown with Partial Height Encasement)

⚠ Added alternate method of splicing H-piles and revised pile encasement note.
3/24/2016 AMS

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

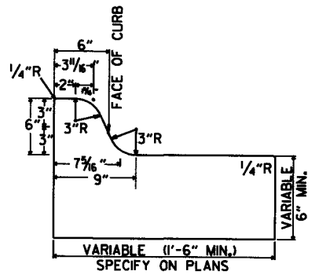
STANDARD DETAILS FOR STEEL H-PILES AND PILE ENCASEMENTS

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: A.M.S. DATE: 2/27/2014 FILENAME: b55020.dgn
CHECKED BY: B.E.F. DATE: 2/27/2014 SCALE: NO SCALE
DESIGNED BY: STD. DATE: —

DRAWING NO. 55020



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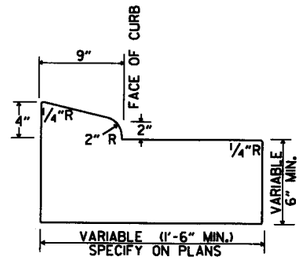
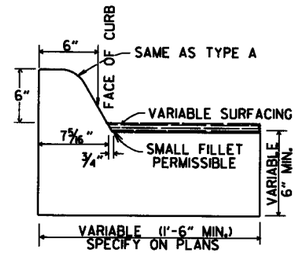


TYPE B-1



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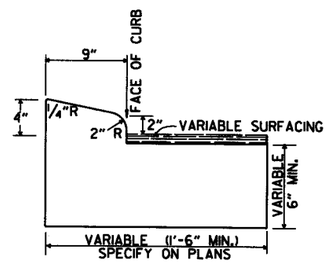

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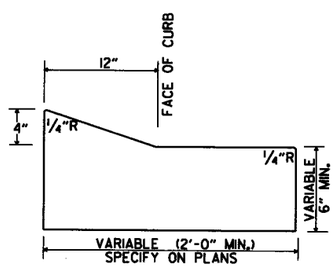

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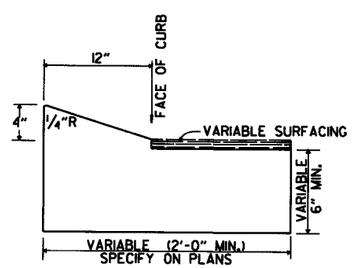
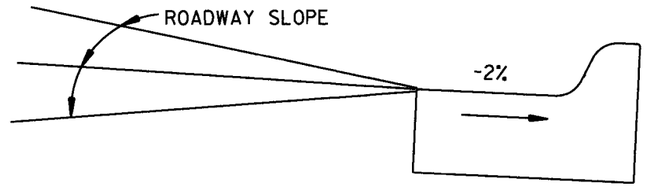


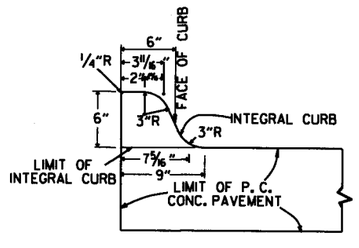
TYPE E-2

CONCRETE COMBINATION CURB AND GUTTER

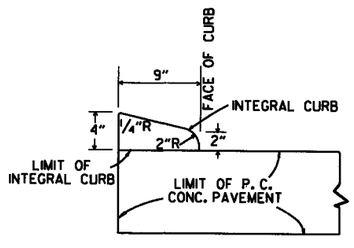


DETAIL OF GUTTER SLOPE

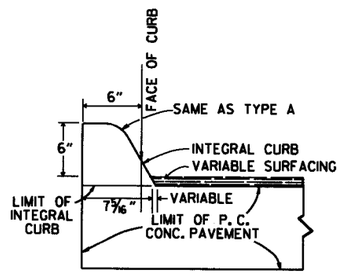
GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.



TYPE A

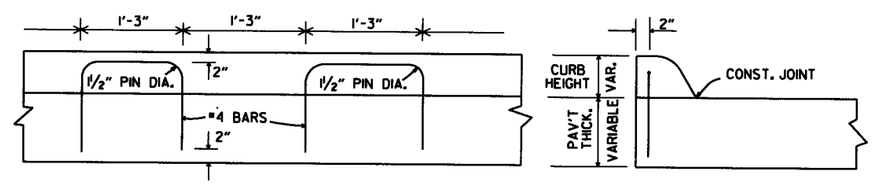


TYPE B

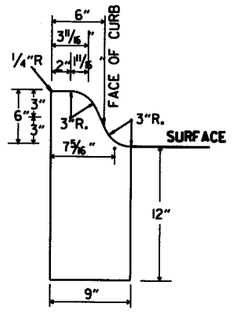


TYPE C

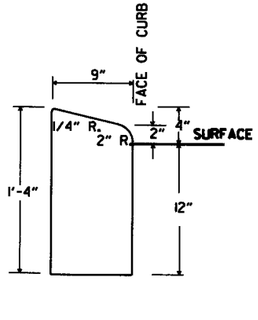
INTEGRAL CURB



ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



TYPE A



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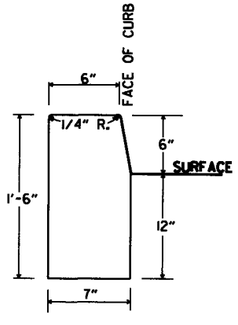
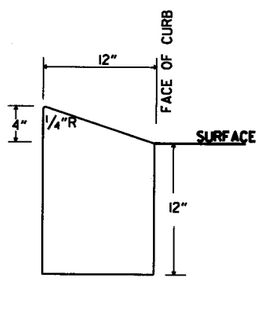
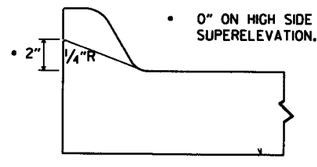


TYPE D



TYPE E

CONCRETE CURB



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

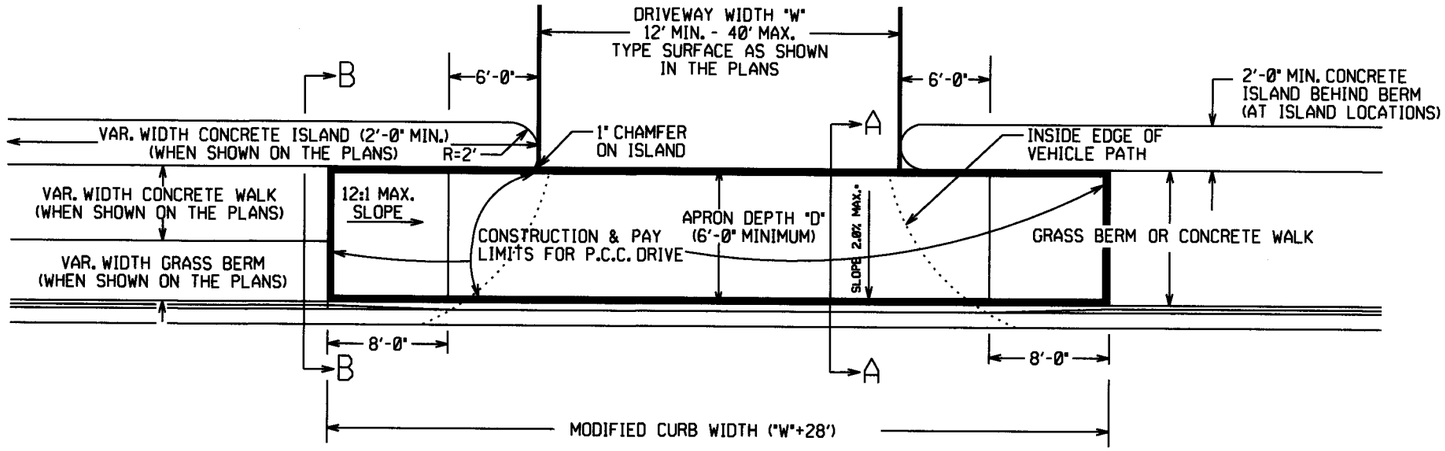
DETAILS OF MODIFIED CURB

DATE	REVISION	DATE FILMED
11-29-07	REVISED GUTTER SLOPE & MODIFIED CURB DETAILS	
8-10-05	ADDED DETAILS OF TYPE E CURBS	
11-16-01	REVISED CONCRETE CURB TYPE B	
8-18-98	REVISED MODIFIED CURB	
6-2-94	ADDED NOTE TO SPECIAL MODIFIED CURB	
8-5-93	CORRECTED GUTTER SLOPE	8-5-93
10-1-92	ADDED DETAILS OF GUTTER SLOPE	10-1-92
5-24-90	ADDED DETAILS OF MODIFIED CURB	5-24-90
11-30-89	VARIABLE DEPTH TYPE A & B 1	8-10-89
7-15-88	REVISED MODIFIED CURB	630-7-15-88
8-1-79	REVISED MODIFIED CURB	500-8-1-79
10-2-72	REVISED AND REDRAWN	412-10-2-72

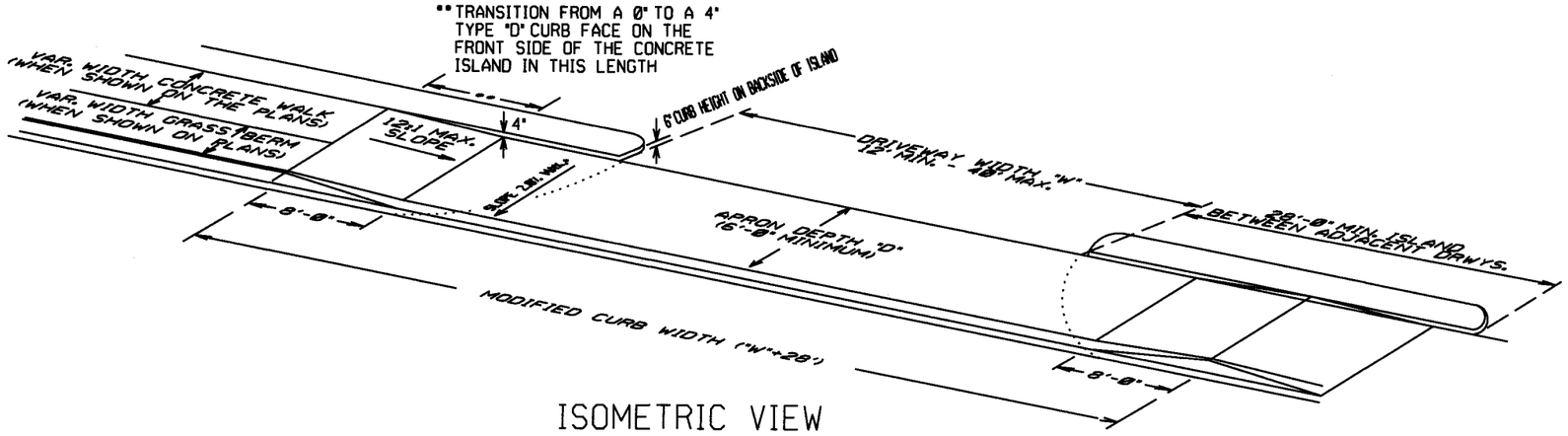
ARKANSAS STATE HIGHWAY COMMISSION

CURBING DETAILS

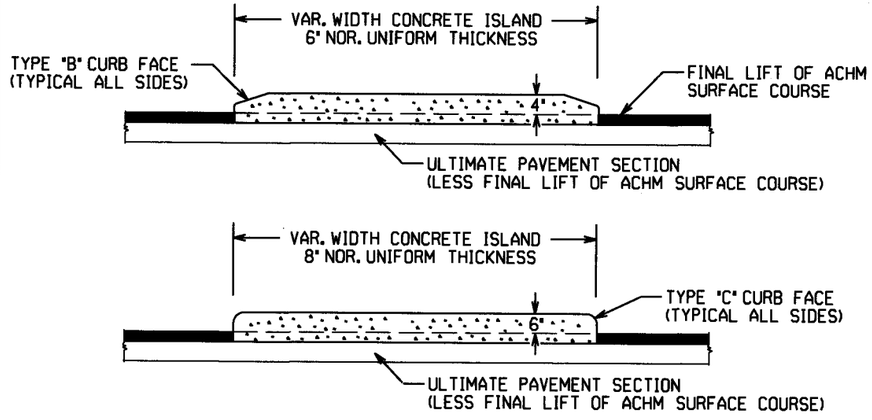
STANDARD DRAWING CG-1



PLAN VIEW

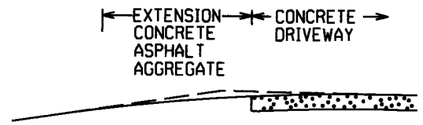


ISOMETRIC VIEW



CURBED ISLANDS FOR CHANNELIZATION

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



EXTENSION TYPICAL SECTIONS

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

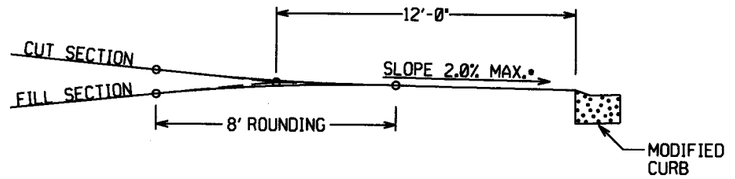
2: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
4" ACHM BINDER COURSE,(1") OR
4" ACHM BASE COURSE (1-1/2")

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

4: AGGREGATE - 6" AGGREGATE BASE COURSE

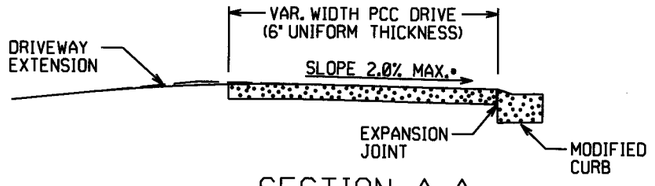
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

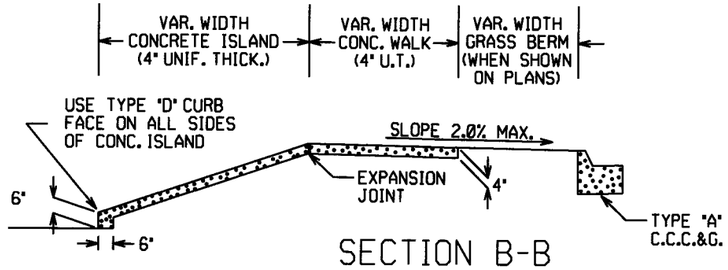


DRIVEWAY VERTICAL ALIGNMENT DETAILS

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



SECTION A-A



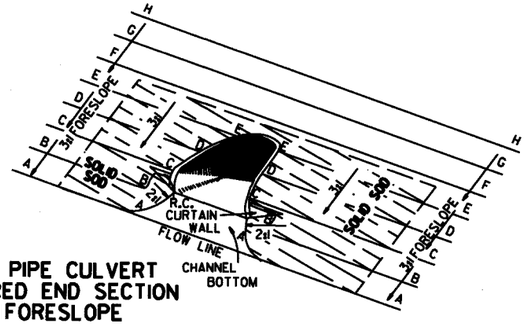
SECTION B-B
CURBED ISLAND BEHIND WALK

DATE REV	DATE FILMED	DESCRIPTION
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

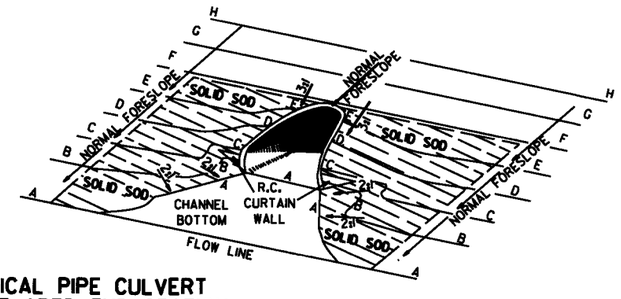
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DRIVEWAYS & ISLANDS

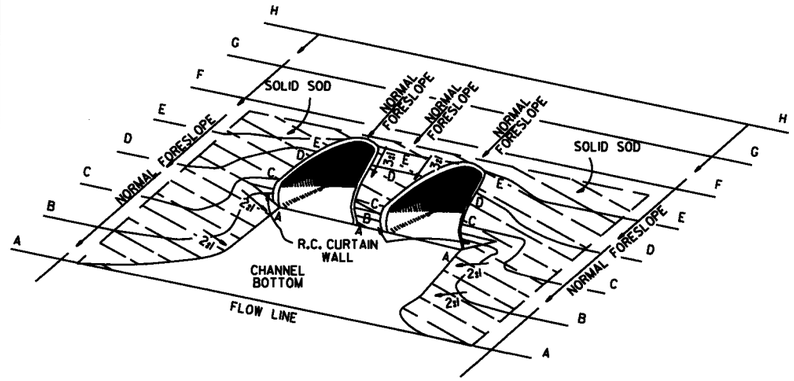
STANDARD DRAWING DR-1



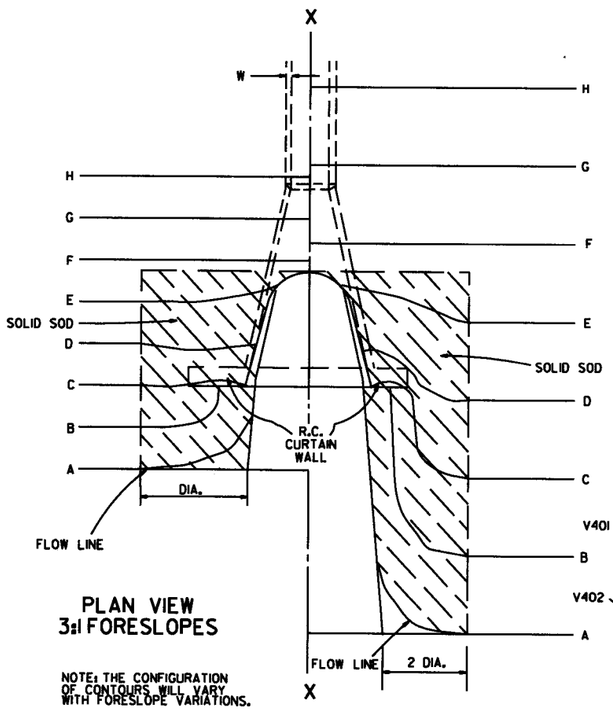
TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& 3:1 FORESLOPE



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

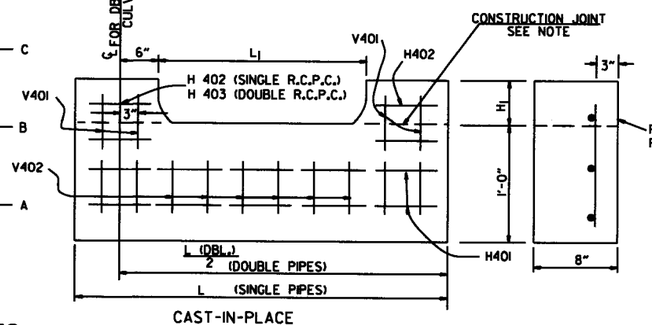
NOTE: THE CONFIGURATION OF CONTOURS WILL VARY WITH FORESLOPE VARIATIONS.

PLAN VIEW
FLATTENED FORESLOPES

R.C. CURTAIN WALL
DIMENSIONS & QUANTITIES

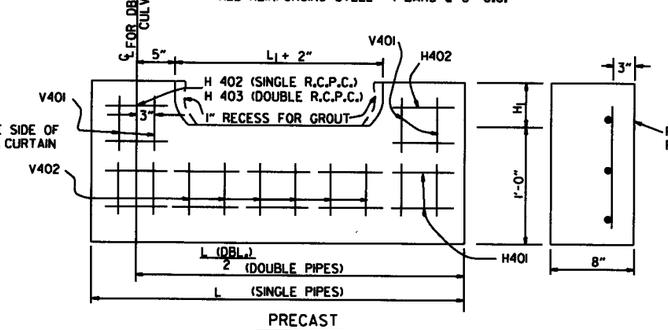
PIPE DIA.	H_1	L_1	L	L (DBL.)/2	SINGLE R.C.P.C.		DOUBLE R.C.P.C.	
					CONC.	REINF. STEEL	CONC.	REINF. STEEL
					CU. YDS.	LBS.	CU. YDS.	LBS.
18"	11½"	3'-5"	8'-0"	6'-3"	0.31	27.7	0.45	39.5
24"	1'-0½"	4'-6"	9'-6"	7'-6"	0.37	33.4	0.53	48.0
30"	1'-3½"	5'-7"	11'-0"	9'-0"	0.45	39.0	0.67	59.0
36"	1'-7"	6'-8"	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

REINFORCING STEEL SCHEDULE

PIPE DIA.	SINGLE R.C. PIPE CULVERT								DOUBLE R.C. PIPE CULVERT									
	H401		H402		V401		V402		H401		H402		H403		V401		V402	
	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	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.

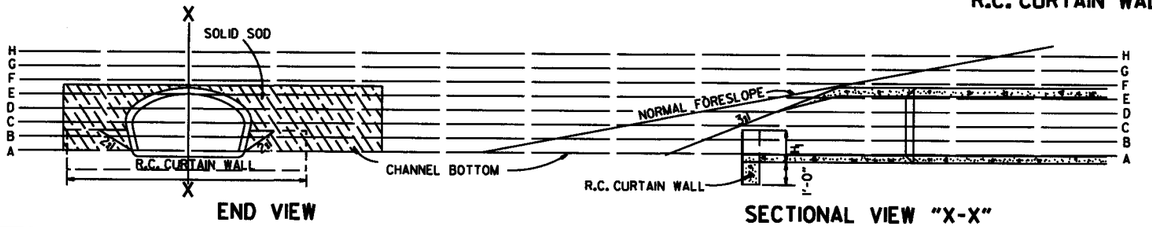
SOLID SODDING

PIPE DIA.	SINGLE R.C.P.C.			DOUBLE R.C.P.C.		
	3:1	4:1	6:1	3:1	4:1	6:1
	SQ. YDS.			SQ. YDS.		
18"	5	7	12	6	8	13
24"	8	12	18	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.



END VIEW

SECTIONAL VIEW "X-X"

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

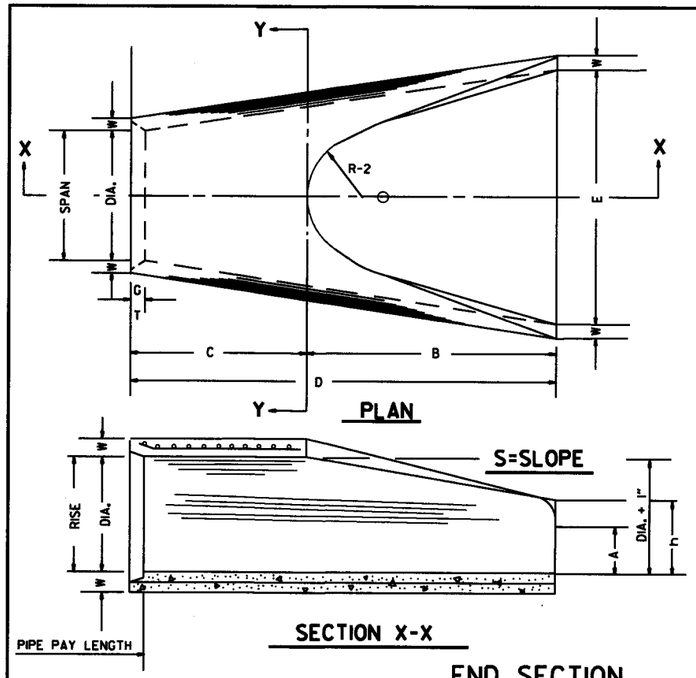
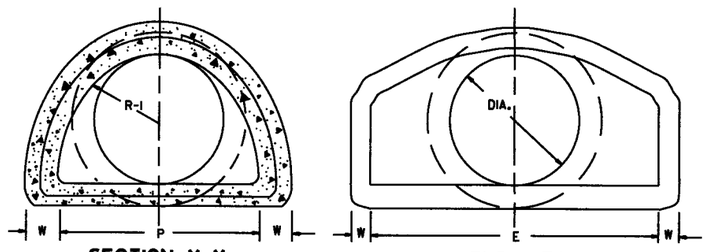


TABLE OF DIMENSIONS

DIA.	WALL	A	B	C	D	E	S	DIA. + I"	P	R-I	R-2	G-T	WT.	h
18"	2½"	9"	2'-3"	3'-10"	6'-1"	3'-0"	3sl	19"	29"	15½"	12"	2"	1000	1'-0½"
24"	3"	9½"	3'-7½"	2'-6"	6'-1½"	4'-0"	3sl	25"	33⅜"	16⅝"	14"	2½"	1600	1'-1½"
30"	3½"	1'-0"	4'-6"	1'-7¾"	6'-1¾"	5'-0"	3sl	31"	37"	18½"	15"	3¼"	1940	1'-4⅝"
36"	4"	1'-3"	5'-3"	2'-10¾"	8'-1¾"	6'-0"	3sl	37"	47⅛"	24⅛"	20"	3½"	4100	1'-8"
42"	4½"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	3sl	43"	53⅛"	27½"	22"	3½"	5380	2'-2½"
48"	5"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	3sl	49"	56½"	28½"	22"	3½"	6550	2'-6"
54"	5½"	2'-4"	6'-6"	1'-10"	8'-4"	7'-6"	3sl	55"	65½"	33⅛"	24"	4"	8750	2'-10½"
60"	6"	2'-10"	6'-6"	1'-10"	8'-4"	8'-0"	3sl	61"	72½"	36⅛"	24"	4"	9270	3'-5"
72"	7"	3'-10"	6'-6"	1'-10"	8'-4"	9'-0"	3sl	73"	77⅝"	38⅝"	24"	5"	13250	4'-6"



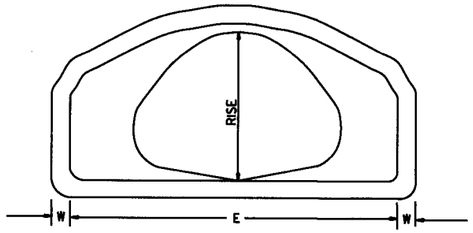
NOTE: TONGUE END ON UPSTREAM SECTION
GROOVE END ON DOWNSTREAM SECTION

END SECTION
FOR REINFORCED CONCRETE PIPE CULVERTS

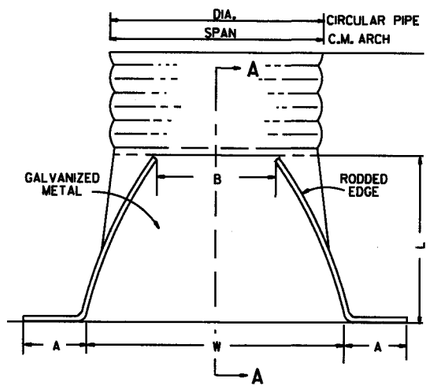
ARCH PIPE

EQUIV. DIA.	• SPAN		• RISE		W	A	B	C	D	E	P	R2	G-T	S
	AASHTO M 206	AHD NOMINAL	AASHTO M 206	AHD NOMINAL										
	INCHES													
15	18	18	11	11	2"	4"	2'-0"	4'-0"	6'-0"	3'-0"	29"	12"	1½"	2½sl
18	22	22	13½	14	2½"	5"	2'-0"	4'-1"	6'-1"	3'-6"	32⅛"	13"	2½"	2½sl
21	26	26	15½	16	2¾"	7"	2'-3"	3'-10"	6'-1"	4'-0"	34⅛"	14"	2½"	2½sl
24	28½	29	18	18	3"	9"	2'-3"	3'-10"	6'-1"	5'-0"	36⅝"	15"	2½"	2½sl
30	36¼	36	22½	23	3½"	10"	3'-1"	3'-0½"	6'-1½"	6'-0"	47⅛"	20"	3"	2½sl
36	43¾	44	26⅞	27	4"	10½"	4'-0"	2'-11½"	6'-1½"	6'-6"	54⅛"	22"	3½"	2½sl
42	51⅛	51	31⅝	31	4½"	11½"	4'-7"	1-10¼"	6'-5¼"	7'-2"	59½"	23"	3¾"	2½sl
48	58½	59	36	36	5"	1'-3"	5'-3"	2'-10¾"	8'-1¾"	7'-10"	70⅝"	24"	4¼"	2½sl
54	65	65	40	40	5½"	1'-7"	5'-3"	2'-11"	8'-2"	8'-6"	72⅛"	24"	4¾"	2¼sl
60	73	73	45	45	6"	1'-10"	5'-6"	2'-8"	8'-2"	9'-0"	77⅝"	24"	5"	2¼sl

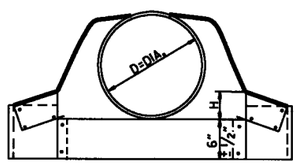
• THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PER CENT FROM THE VALUES SPECIFIED BY AASHTO M 206.

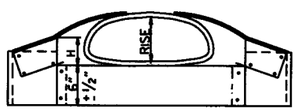


END VIEW
CONCRETE ARCH PIPE



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



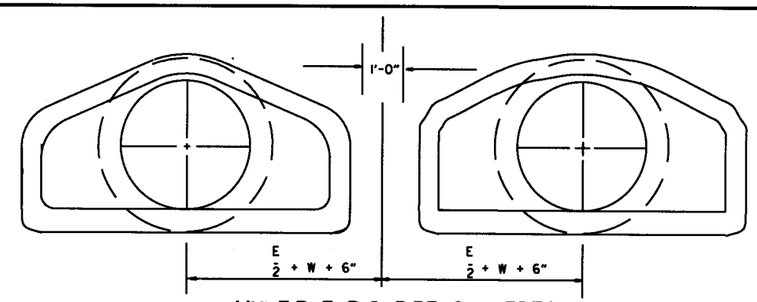


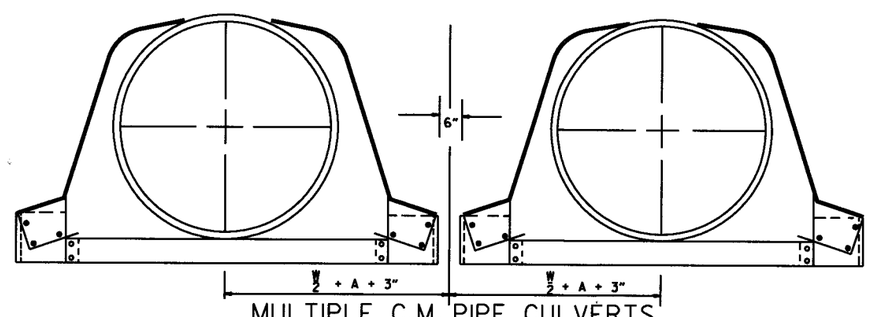
CIRCULAR PIPE

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

C.M. ARCH PIPE

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





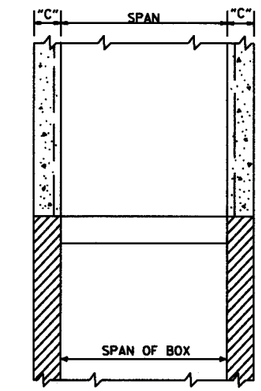
END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS

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

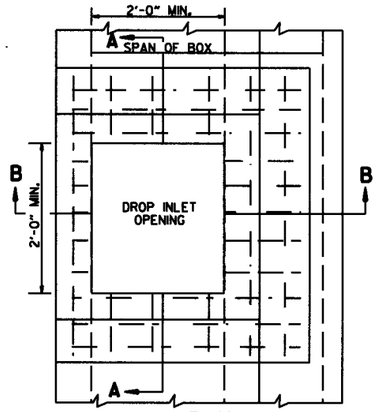
ARKANSAS STATE HIGHWAY COMMISSION

FLARED END SECTION

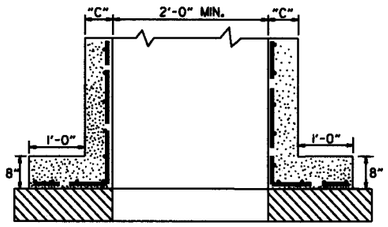
STANDARD DRAWING FES-2



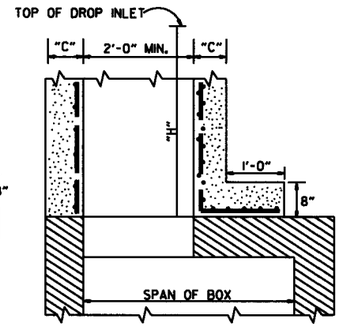
SECTION B-B



PLAN

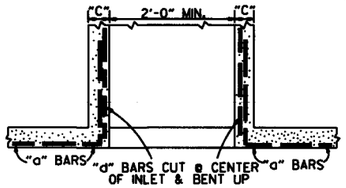


SECTION A-A

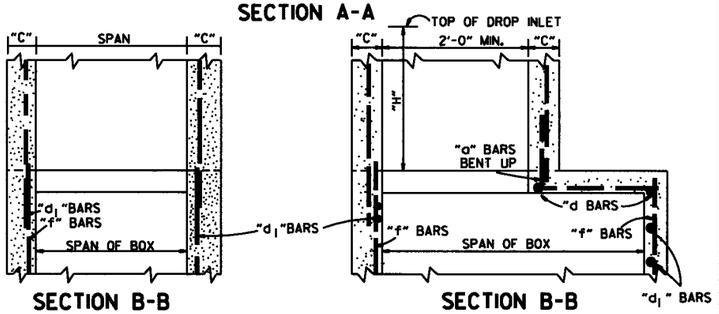


SECTION B-B

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



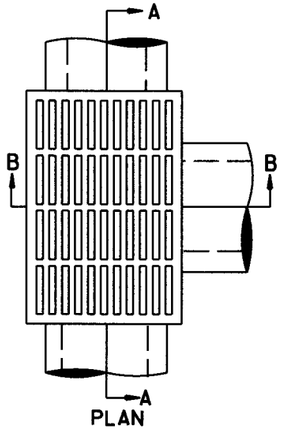
SECTION A-A



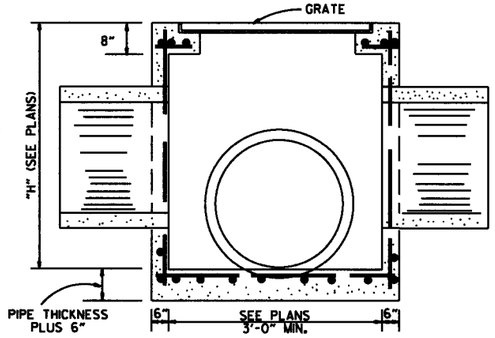
SECTION B-B SECTION B-B

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.

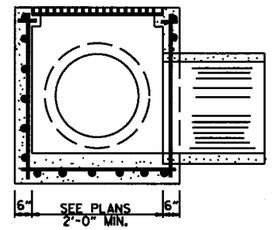


PLAN



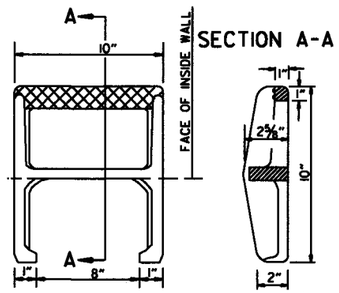
SECTION A-A

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)

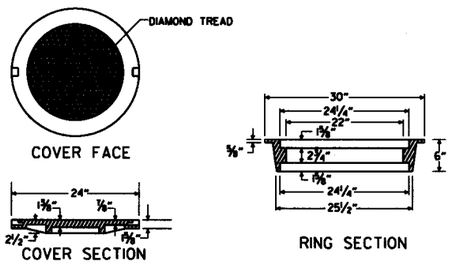


APPROX. WEIGHT = 11 LBS. (CAST IRON)

PLAN

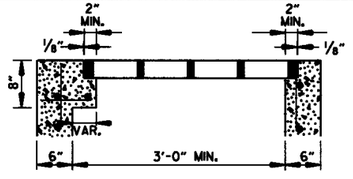
NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.

DETAIL OF STEP FOR DROP INLET

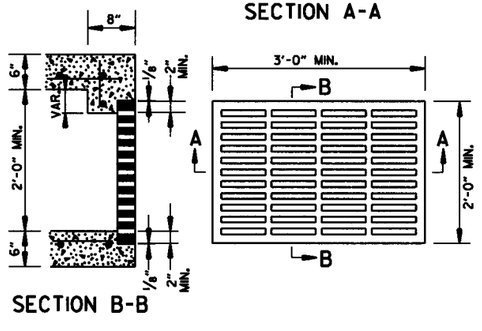


APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER



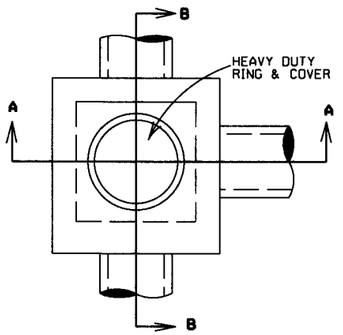
SECTION A-A



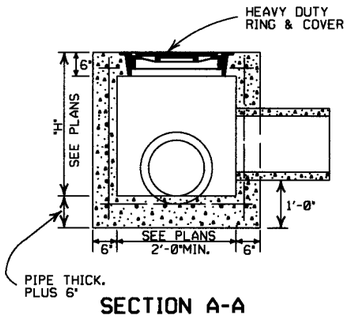
SECTION B-B

APPROXIMATE MINIMUM WATERWAY OPENING = 260 SQ. IN.

GRATE FOR TYPE E DROP INLET

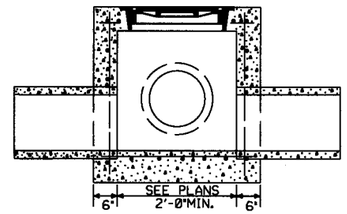


PLAN



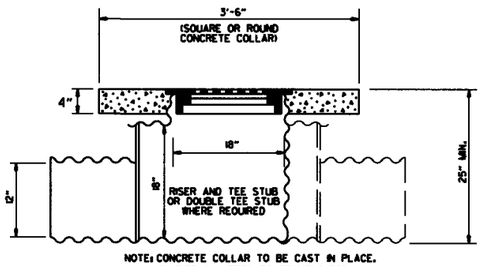
SECTION A-A

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.

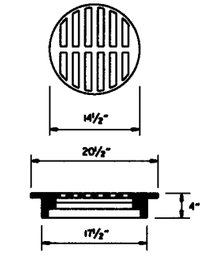


SECTION B-B

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:

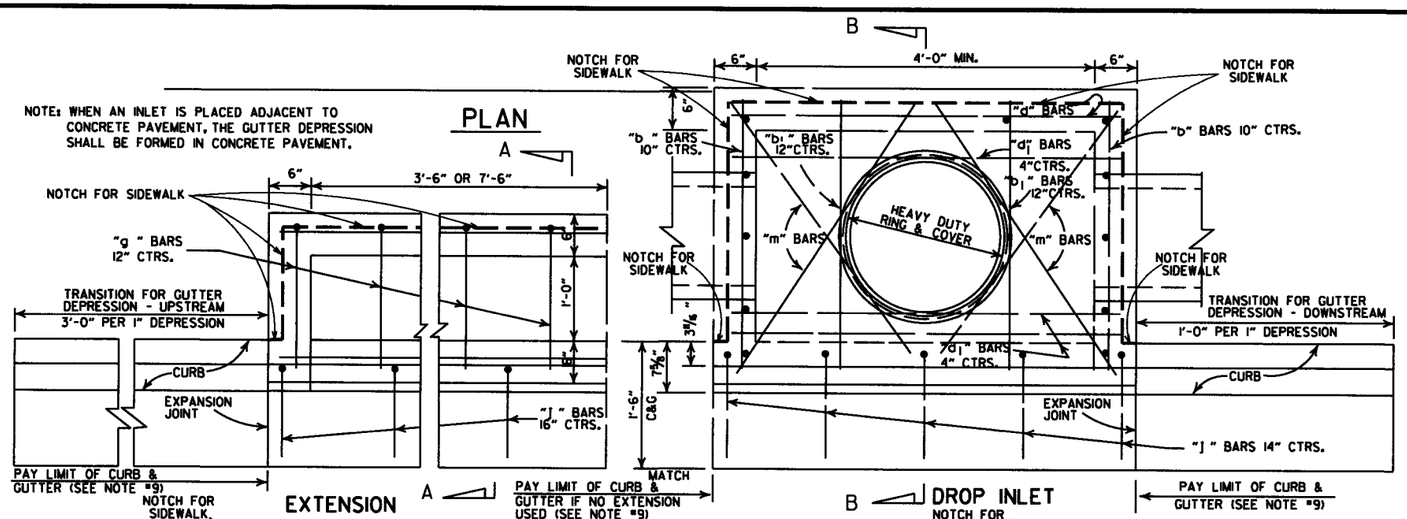
1. ALL EXPOSED CORNERS SHALL BE ¾" CHAMFERED.
2. STEPS SHALL BE INSTALLED ON 16" CENTERS ON ALL INLETS 4'-0" HIGH OR OVER, OR AS APPROVED BY THE ENGINEER.
3. EXPANSION JOINT MATERIAL SHALL BE ¾" PREFORMED FIBER.
4. GRATE OR GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS 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



4'-0" LENGTH DROP INLET

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

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

DROP INLET EXTENSION

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

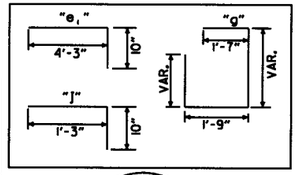
DEDUCT FROM QUANTITY COMPUTED FOR EACH EXTENSION ADDED.

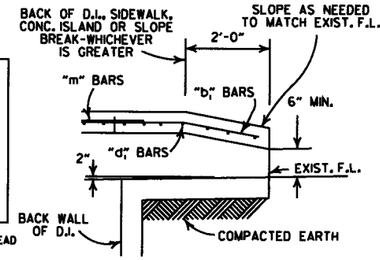
0.04	3		

DEDUCT FROM QUANTITY COMPUTED FOR EACH PIPE ENTERING INLET

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

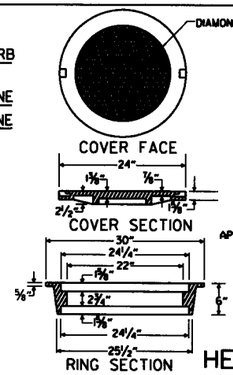
BAR DIAMETER





BACK OPENING

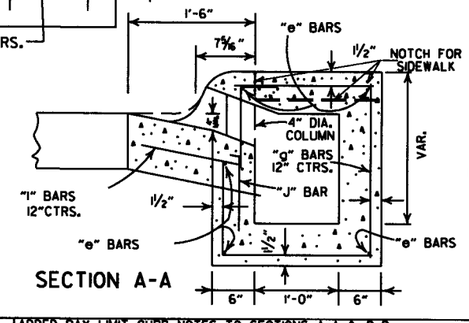
WHEN OPENING IN BACK IS CALLED FOR ON PLANS EXTEND OPENING AS SHOWN IN DETAIL. PAYMENT TO BE INCLUDED IN PRICE BID FOR DROP INLET (TYPE C).



APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER

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



SECTION A-A

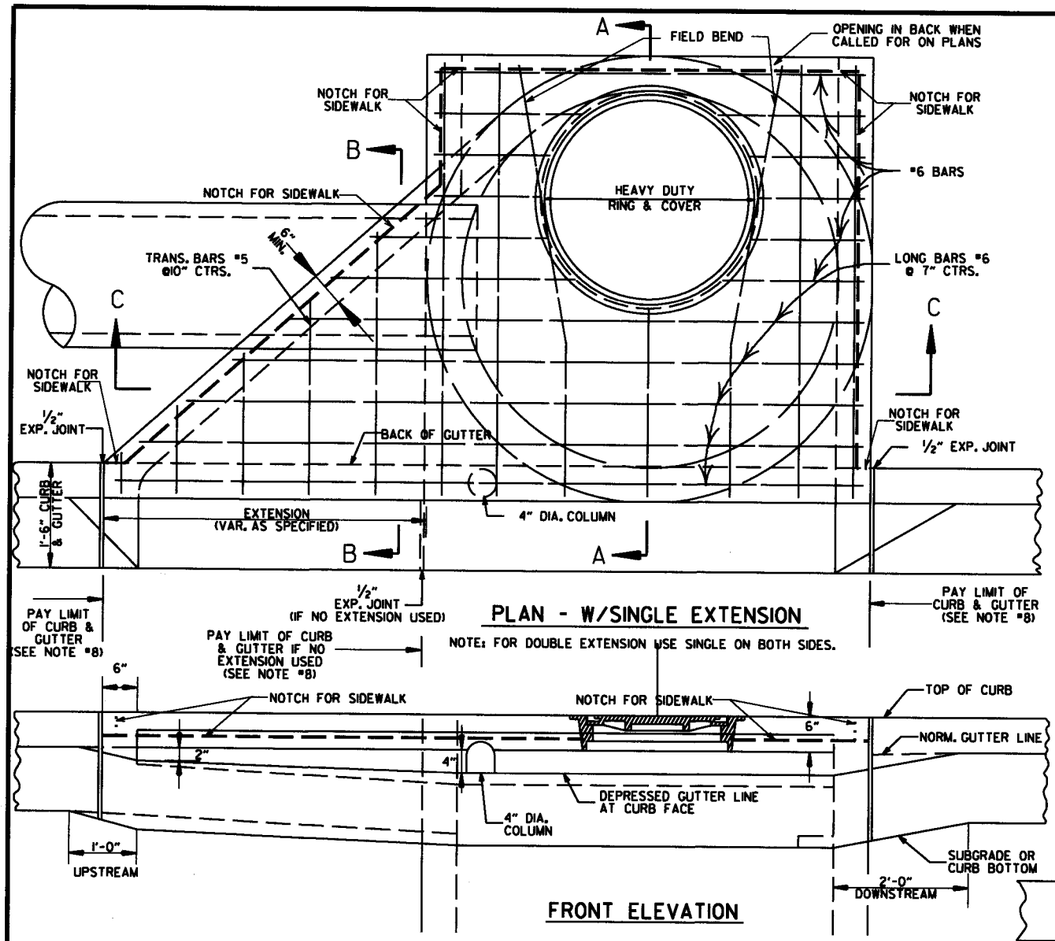
DATE REV.	REVISION	DATE FILMED
8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01	ADDED NOTE 13; REVISED SECTION B-B	
1-12-00	CORRECTED DIMENSION ON SECTION B-B & REVISED RING & COVER	
5-13-99	ADDED DETAIL OF NOTCH FOR SIDEWALKS	
7-02-98	REPLACED RING & COVER W/HEAVY DUTY RING & COVER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

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS

(TYPE C)

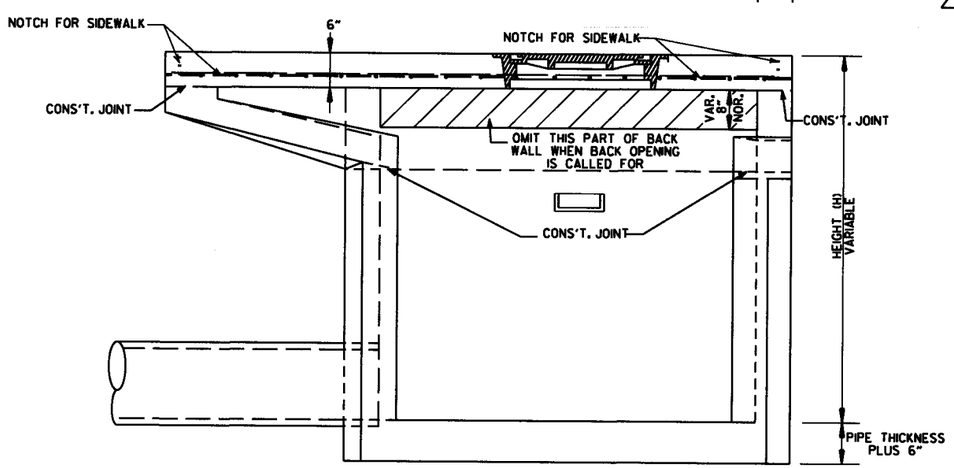
STANDARD DRAWING FPC-9E



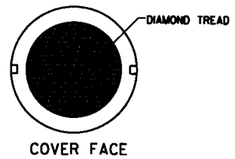
PLAN - W/SINGLE EXTENSION

NOTE: FOR DOUBLE EXTENSION USE SINGLE ON BOTH SIDES.

FRONT ELEVATION



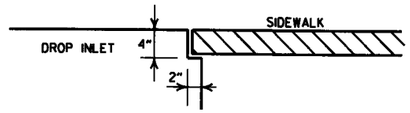
SECTION C-C



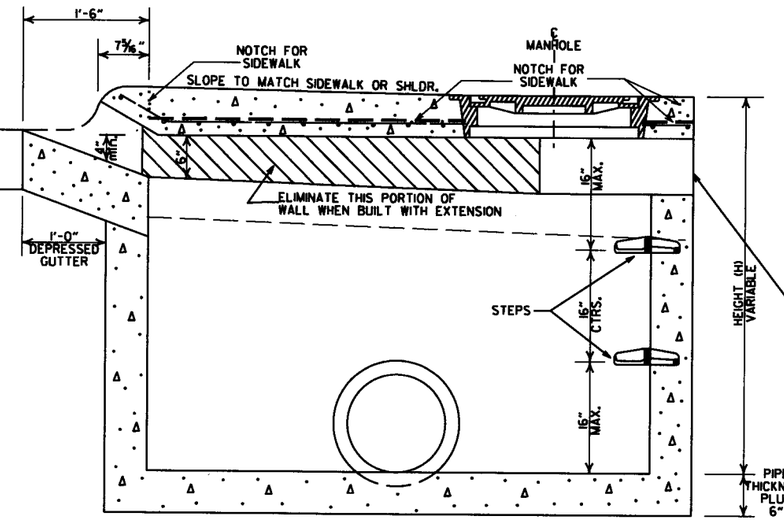
APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER

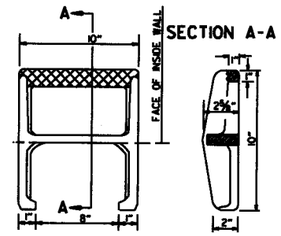
1. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
2. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
3. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON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



DETAIL OF NOTCH FOR SIDEWALKS



SECTION A-A

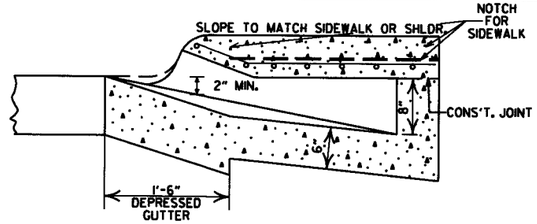


APPROX. WEIGHT = 81 LBS. (CAST IRON)

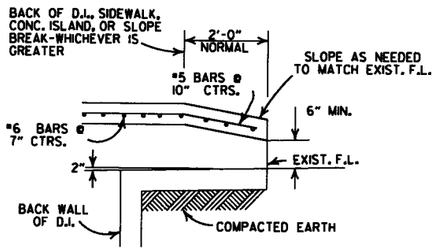
PLAN

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

DETAIL OF STEP FOR DROP INLET



SECTION B-B



BACK OPENING

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

GENERAL NOTES:

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

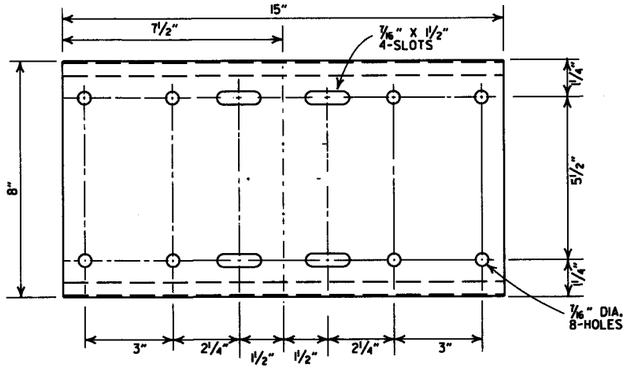
DIA. OF D.I.	DIA. OF OUTLET PIPE	MINIMUM WALL THICKNESS	
		CAST IN PLACE	PRECAST
4' I.D.	12" THRU 27"	6"	5"
5' I.D.	30" THRU 42"	8"	6"
6' I.D.	48" THRU 54"	8"	7"

DATE	REVISIONS	DATE FILMED
8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
8-16-01	ADDED NOTE 13	
1-12-00	REVISED HEAVY DUTY RING & COVER	
5-13-99	ADDED NOTCH DETAIL FOR SIDEWALKS	
7-02-98	REM. NOTE 8, REM. PLAN DET., REV. PICTURE FOR NEW RING & COVER, ADDED HEAVY DUTY RING & COVER AND DETAIL OF STEP FOR DROP INLET	
4-26-96	ADDED NOTE 11 ON OPENING DIMENSION	
9-12-95	CORRECTED #5 BAR SPACING	
8-28-95	CORRECTED DIAMETER OF D.I. IN BOX	
7-27-95	TYPE C TO MO (OPEN BACK DETAIL)	
11-1-94	REVISED GENERAL NOTES	11-3-94
8-1-93	REV. BACK OPEN DETAIL & NOTE	8-3-93
8-15-91	REVISED NOTES 10 & 11 & ADDED BACKOPEN DETAIL	8-16-91
11-10-89	ADDED NOTE NO. 12	11-10-89
4-24-89	ADDED NOTE 9 & MINIMUM WALL THICKNESS	5-1-89
7-25-88	ADDED FAIRED NOTE TO SECTION A-A	8-5-88
11-1-87	MODIFIED WALL THICKNESS	11-1-87
6-12-87	REVISED	6-12-87

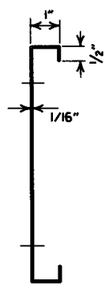
ARKANSAS STATE HIGHWAY COMMISSION

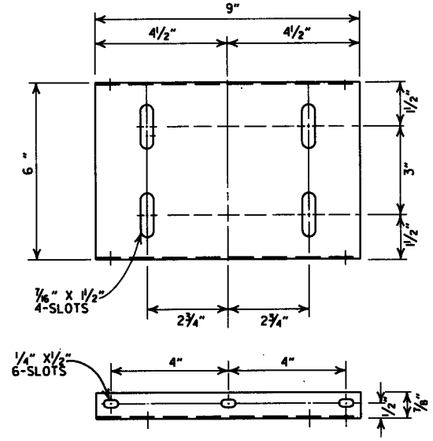
DETAILS OF DROP INLET (TYPE MO)

STANDARD DRAWING FPC-9M

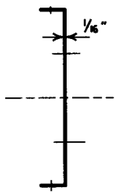


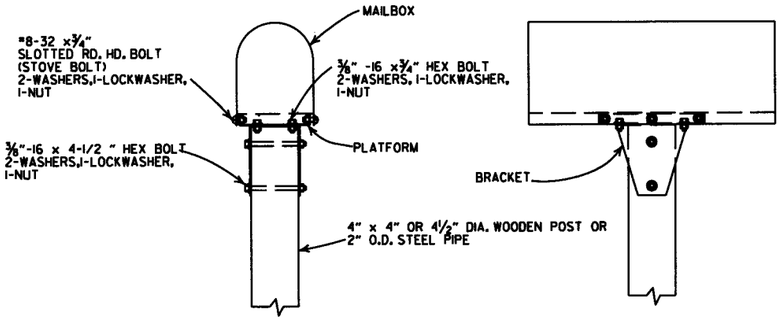
SHELF



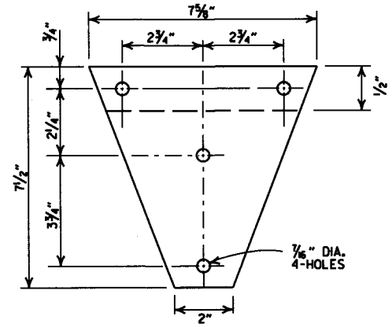


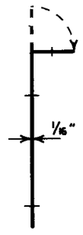
PLATFORM





SINGLE INSTALLATION

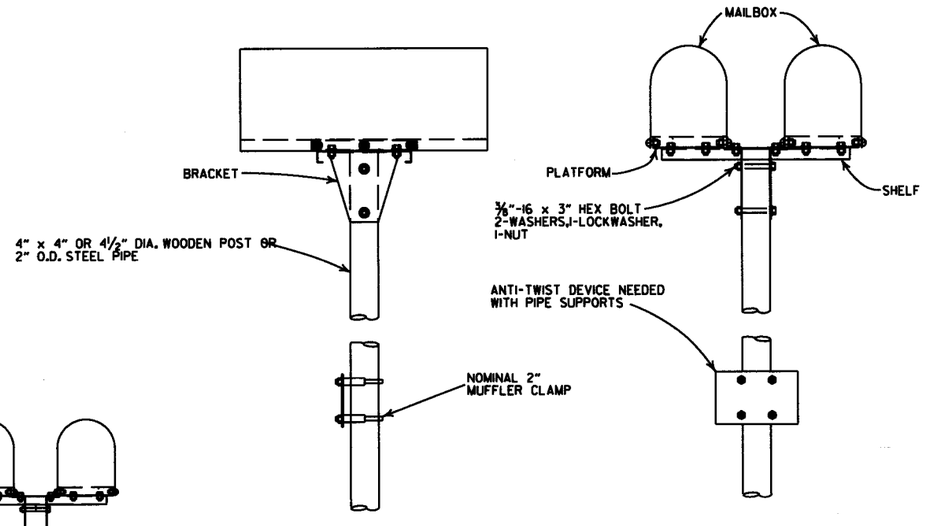




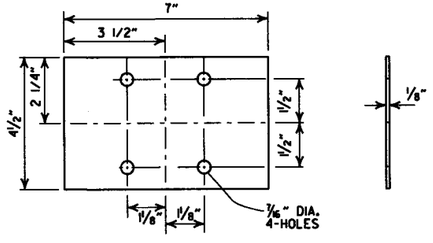
BRACKET

GENERAL NOTES

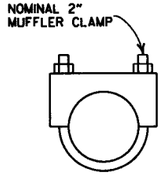
1. MAILBOX POSTS MAY BE WOOD OR METAL. WOOD POSTS SHALL BE PRESSURE TREATED FOR GROUND CONTACT IN ACCORDANCE WITH SECTION 637.02 OF THE STANDARD SPECIFICATIONS.
2. ANTI-TWIST PLATES SHALL BE USED ONLY ON METAL POSTS.
3. MAILBOX SHELF, BRACKET & PLATFORM SHALL BE GALVANIZED OR PAINTED STEEL, HOWEVER TREATED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



DOUBLE INSTALLATION



ANTI-TWIST PLATE



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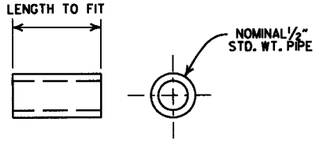
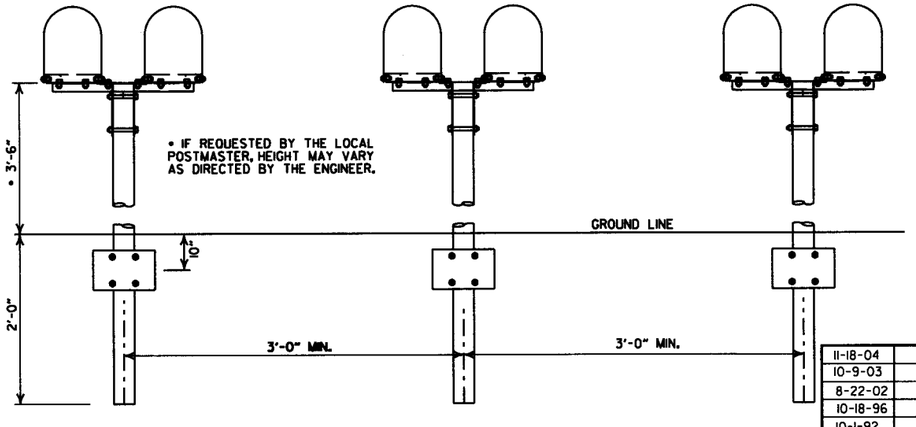


SPACER



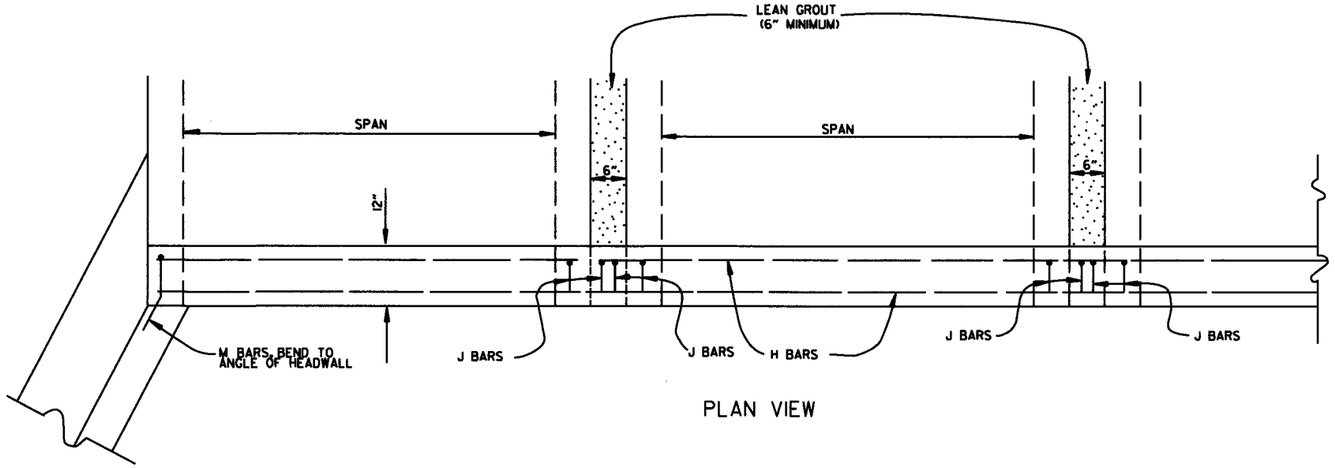
SPACING FOR MULTIPLE POST INSTALLATION

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

ARKANSAS STATE HIGHWAY COMMISSION

MAILBOX DETAILS

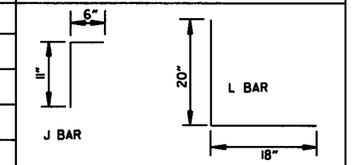
STANDARD DRAWING MB-1



PLAN VIEW

BAR LIST

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



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

GENERAL NOTES

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

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

ALL EXPOSED CORNERS TO HAVE ¾" CHAMFERS.

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

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

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

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

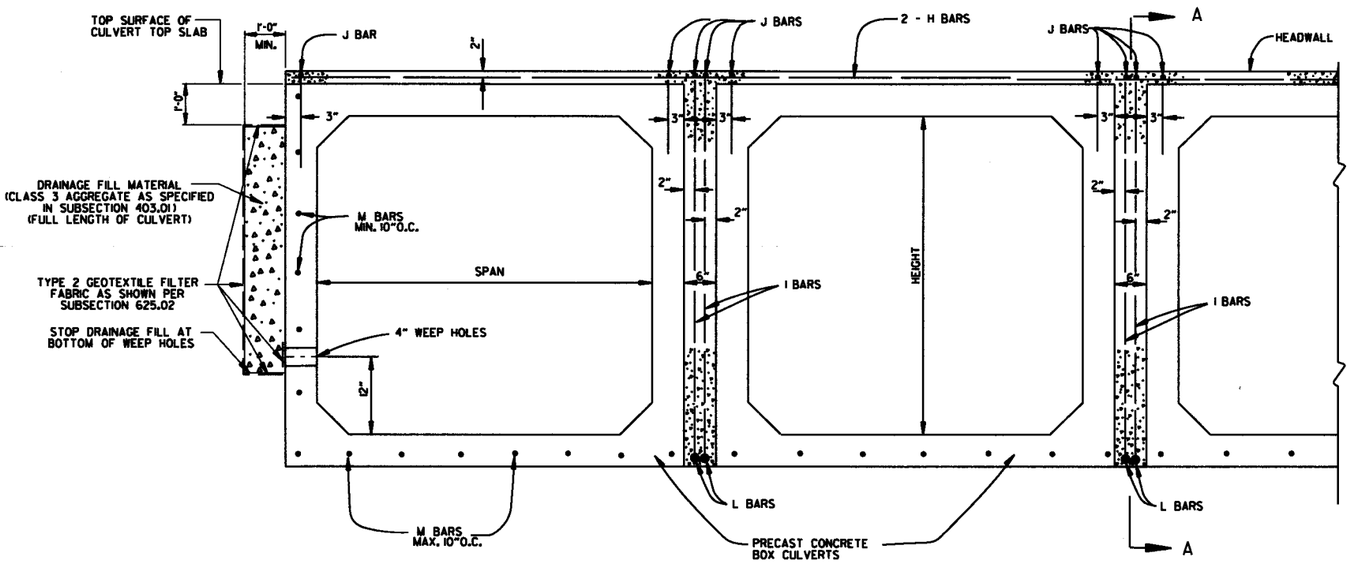
THE MEMBRANE WATERPROOFING WILL BE REQUIRED ON THE TOP EXTERNAL JOINT AND SHALL EXTEND 1 FOOT DOWN THE SIDES OF THE CULVERT.

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

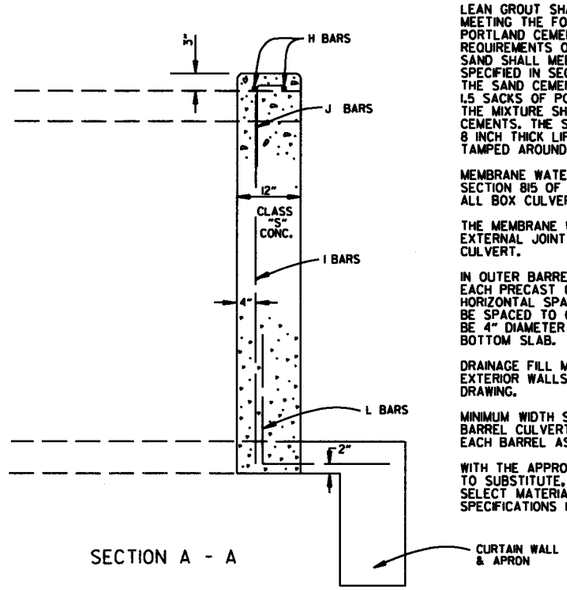
DRAINAGE FILL MATERIAL WITH GEOTEXTILE FABRIC IS REQUIRED AT THE EXTERIOR WALLS OF THE ASSEMBLED CULVERT. SEE DETAILS ON THIS DRAWING.

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

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



END VIEW



SECTION A - A

DATE	REVISION	DATE FILMED
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	
8-10-05	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	
8- 8-90	REVISED FOR 1991 SPECS	
8-30-89	ISSUED, JABE	

ARKANSAS STATE HIGHWAY COMMISSION

PRECAST CONCRETE BOX CULVERTS

STANDARD DRAWING PBC-1

REINFORCED CONCRETE ARCH PIPE DIMENSIONS

EQUIV. DIA.	SPAN		RISE	
	AASHTO M 206	AHTD NOMINAL	AASHTO M 206	AHTD NOMINAL
INCHES	INCHES			
15	18	18	11	11
18	22	22	13½	14
21	26	26	15½	16
24	28½	29	18	18
30	36¼	36	22½	23
36	43⅜	44	26⅝	27
42	51⅛	51	31 5/16	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)(ii).

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

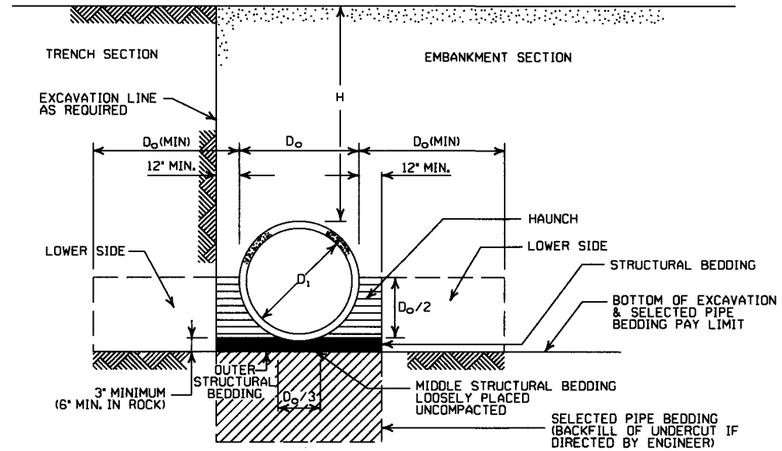
- LEGEND -

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

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

*SM-3 WILL NOT BE ALLOWED.

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



EMBANKMENT AND TRENCH INSTALLATIONS

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

GENERAL NOTES

1. CONCRETE PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (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
		2⅔ 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

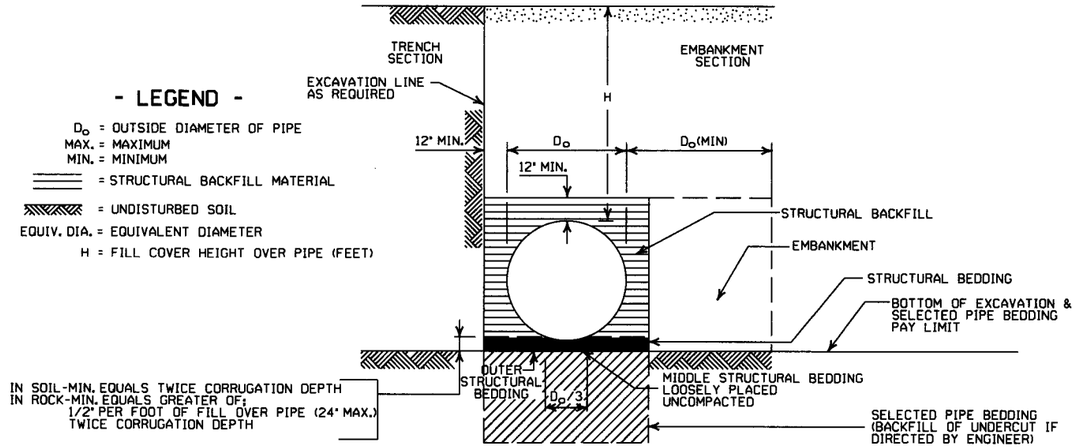
METAL THICKNESS IN INCHES			GAUGE NUMBER
STEEL			
ZINC COATED	UNCOATED	ALUMINUM	
0.064	0.0598	0.060	16
0.079	0.0747	0.075	14
0.109	0.1046	0.105	12
0.138	0.1345	0.135	10
0.168	0.1644	0.164	8

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.) INSTALLATION TYPE 1		MAX. HEIGHT OF FILL, "H" (FT.) INSTALLATION TYPE 1	MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.) INSTALLATION TYPE 1		MAX. HEIGHT OF FILL, "H" (FT.) INSTALLATION 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.



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 STATE HIGHWAY AND TRANSPORTATION DEPARTMENT 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."

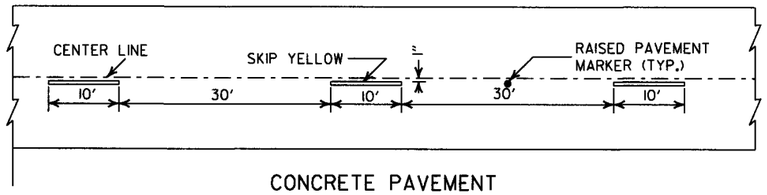
DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REVISED FOR LRFD DESIGN SPECS	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

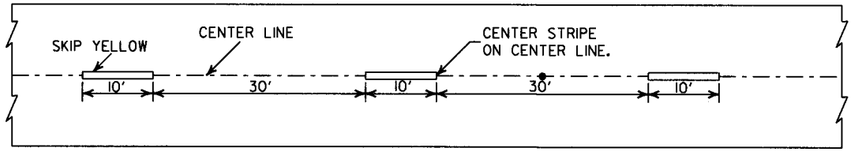
METAL PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCM-1

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

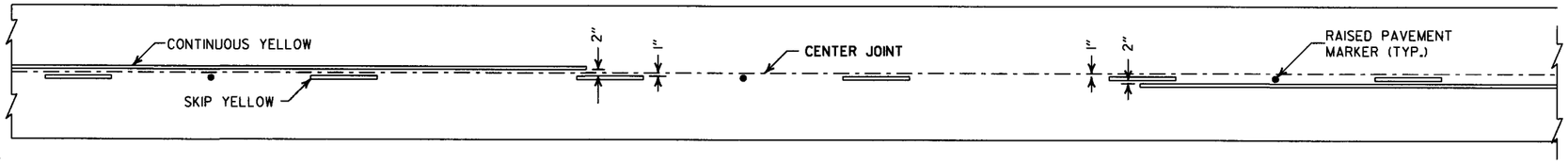


CONCRETE PAVEMENT

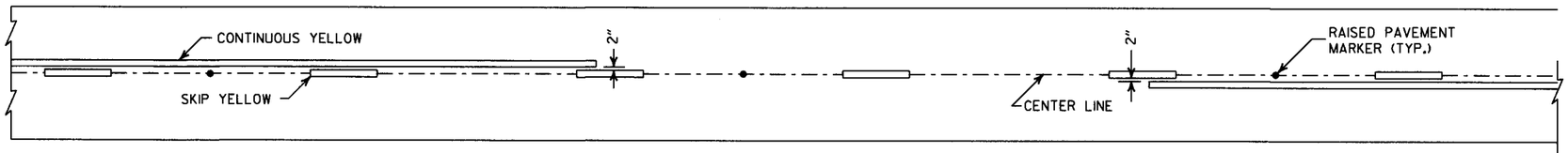


ASPHALT PAVEMENT

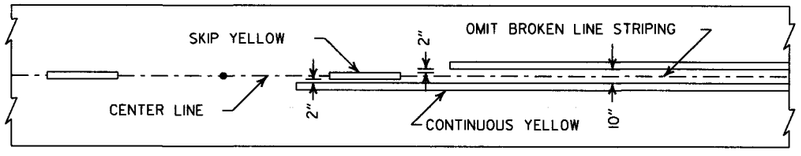
BROKEN LINE STRIPING



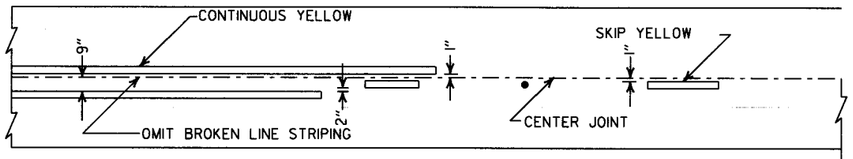
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

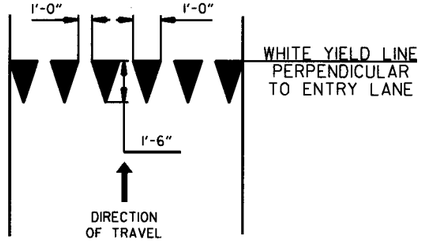


ASPHALT PAVEMENT

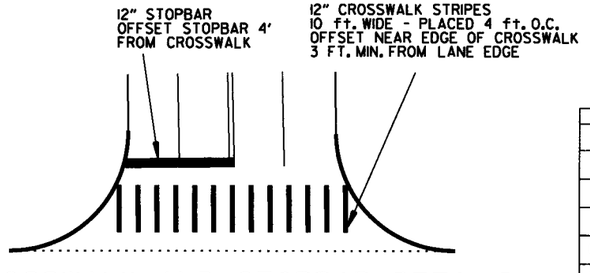


CONCRETE PAVEMENT

STRIPING AT ADJACENT NO PASSING LANES

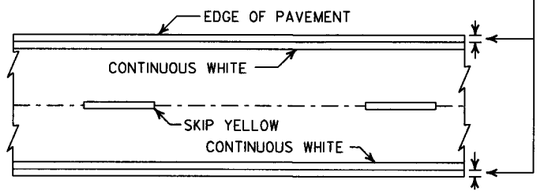


YIELD LINE DETAIL



CROSSWALK AND STOPBAR DETAILS

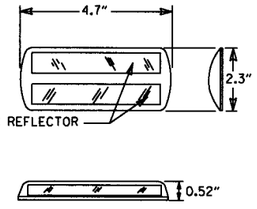
2" FOR ASPHALT OR CONCRETE PAVEMENT
6" FOR BITUMINOUS SURFACE TREATMENT



PAVEMENT EDGE LINE MARKING

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

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 AHTD QUALIFIED PRODUCTS LIST.

DETAIL OF STANDARD RAISED PAVEMENT MARKERS

DATE	REVISION	FILMED
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

ARKANSAS STATE HIGHWAY COMMISSION

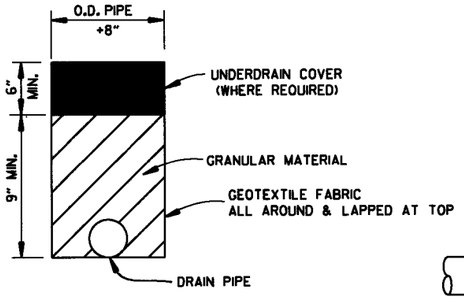
PAVEMENT MARKING DETAILS

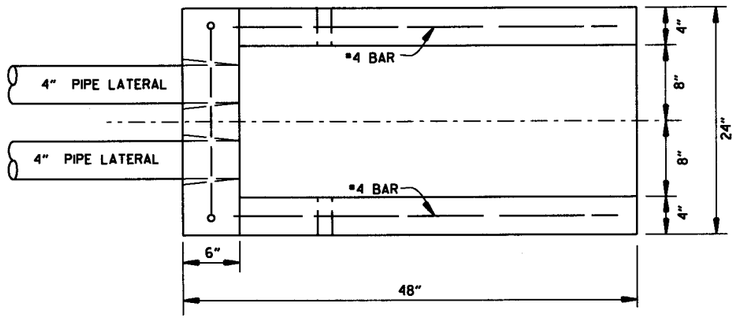
STANDARD DRAWING PM-1

NOTE:

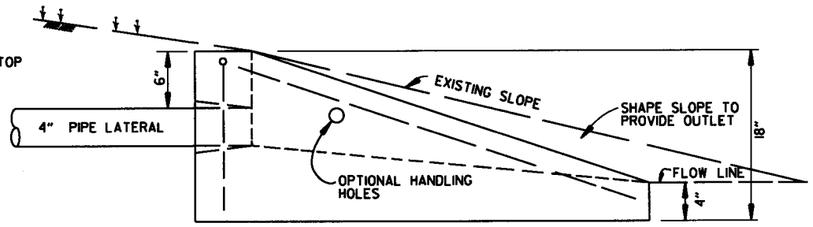
1. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THOROUGHLY COMPACTED EARTH AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.

2. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC. LAP FABRIC 12" OR THE WIDTH OF THE TRENCH AT THE TOP.

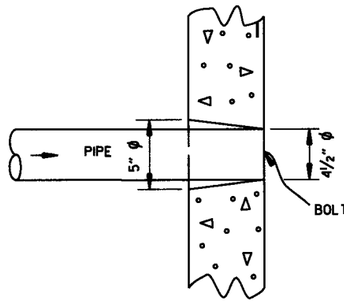




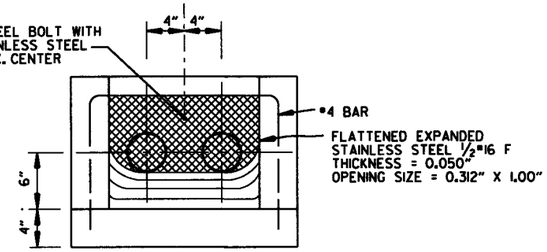
PLAN VIEW



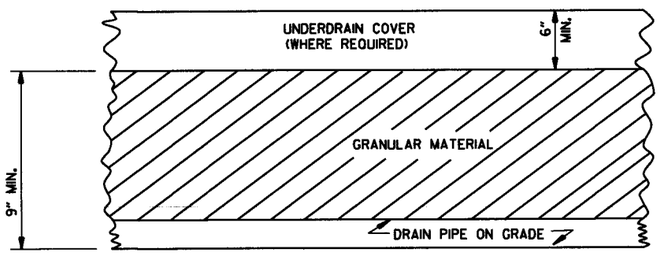
SIDE VIEW



DETAIL OF HOLE FOR 4" PIPE

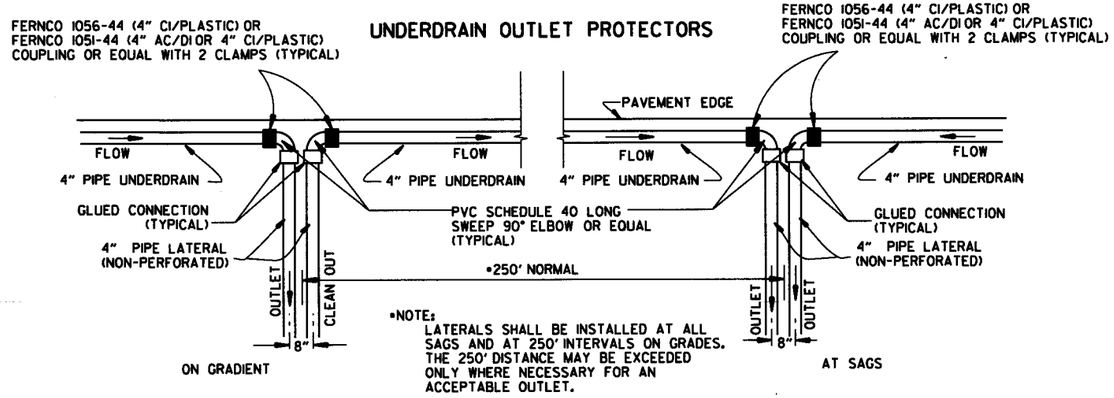


FRONT VIEW
(DETAIL OF RODENT SCREEN)



DETAILS OF PIPE UNDERDRAIN

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.

NOTES FOR PIPE UNDERDRAINS

1. GEOTEXTILE FABRIC SHALL MEET THE REQUIREMENTS OF SECTION 625 FOR TYPE I. 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.

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

ARKANSAS STATE HIGHWAY COMMISSION

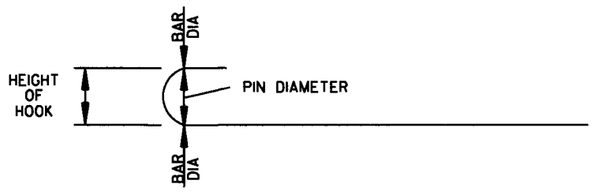
DETAILS OF PIPE UNDERDRAIN

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

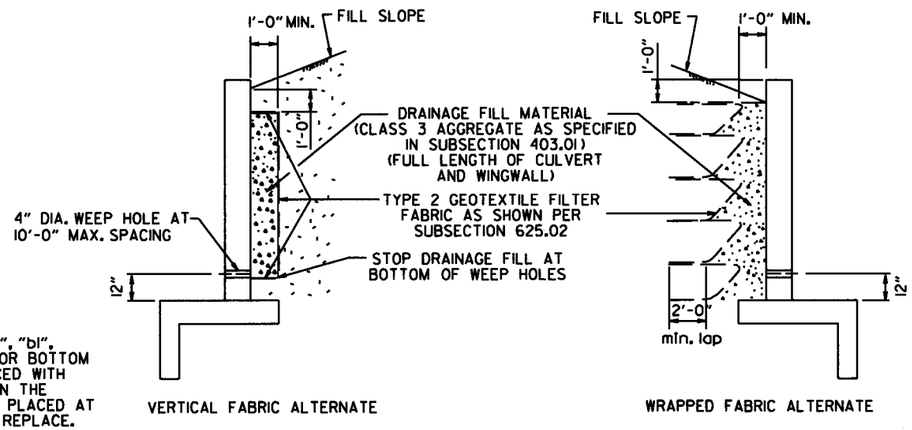
THE HOOKED BARS SHALL BE PLACED IN THE BOTTOM OF THE TOP SLAB AND THE TOP OF THE BOTTOM SLAB. THE STRAIGHT BARS SHALL BE PLACED IN THE TOP OF THE TOP SLAB AND THE BOTTOM OF THE BOTTOM SLAB. SEE TABLE BELOW FOR LENGTHS OF REPLACEMENT HOOKED AND STRAIGHT BARS.

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.

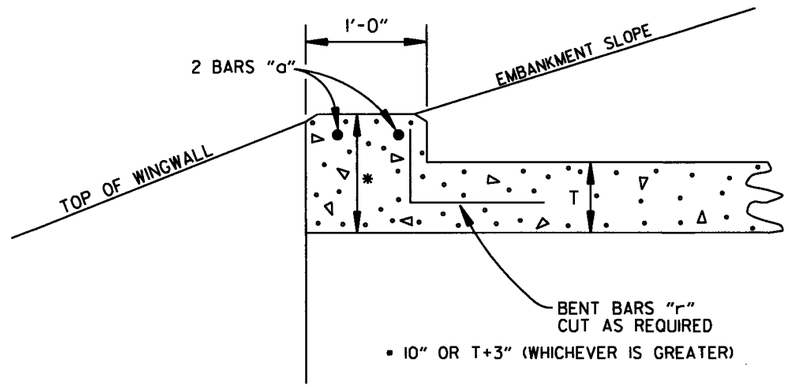
MEMBRANE WATERPROOFING SHALL BE APPLIED TO ALL CONSTRUCTION JOINTS IN THE TOP SLAB AND THE SIDEWALLS OF R.C. BOX CULVERTS AS DIRECTED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FOR THIS ITEM, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS BID FOR THE R.C. BOX CULVERT.

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.

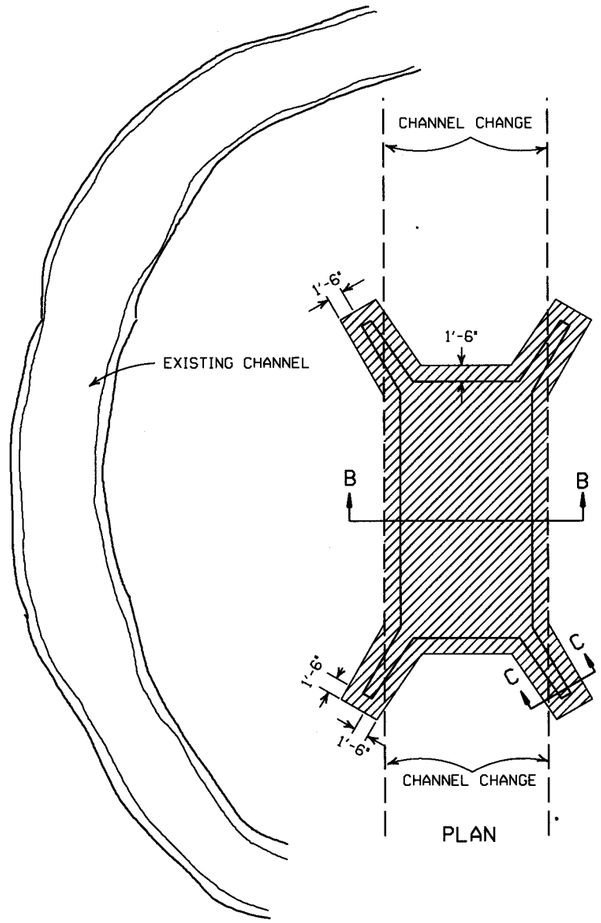
R.C. BOX CULVERT HEADWALL MODIFICATIONS

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

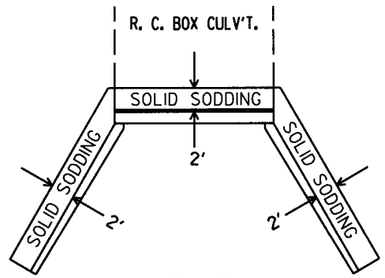
REINFORCED CONCRETE BOX CULVERT DETAILS

STANDARD DRAWING RCB-1



PLAN

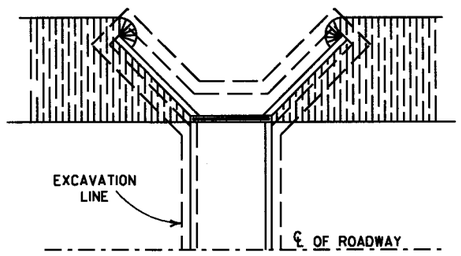
SOLID SODDING



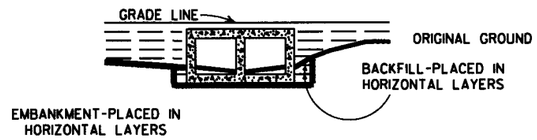
PLAN

PARTIAL SECTION SHOWING SOLID SODDING AT HEADWALLS AND WING WALLS

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

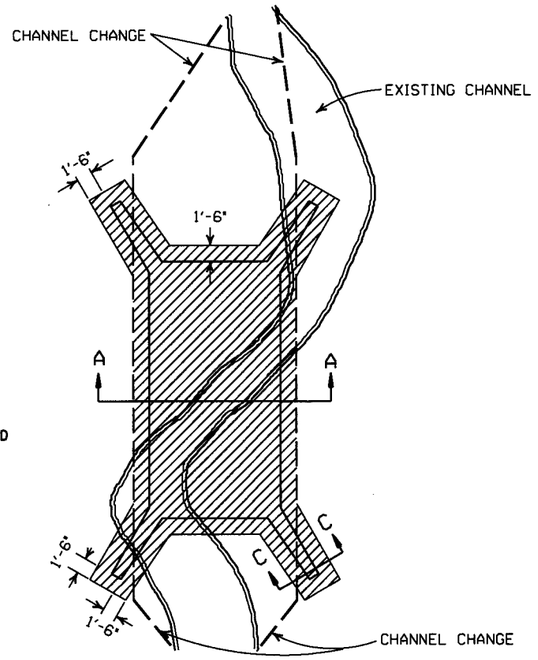


PLAN

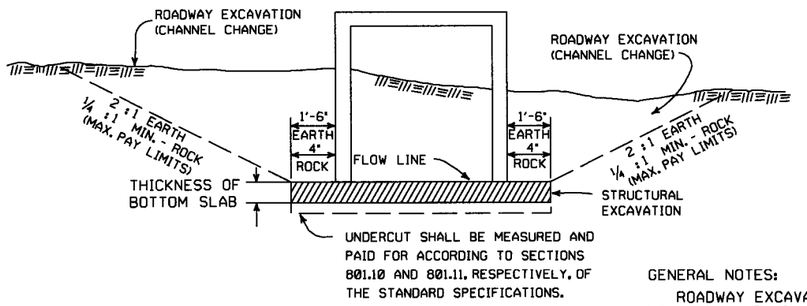


LONGITUDINAL SECTION

BACKFILL DETAILS FOR BOX CULVERT

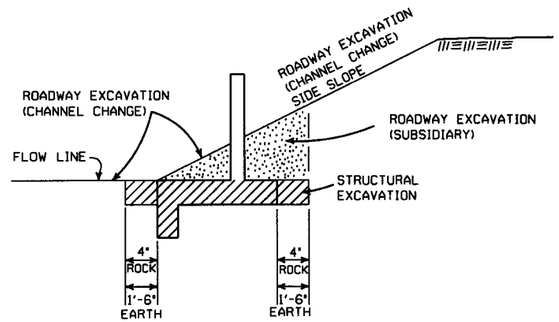


PLAN

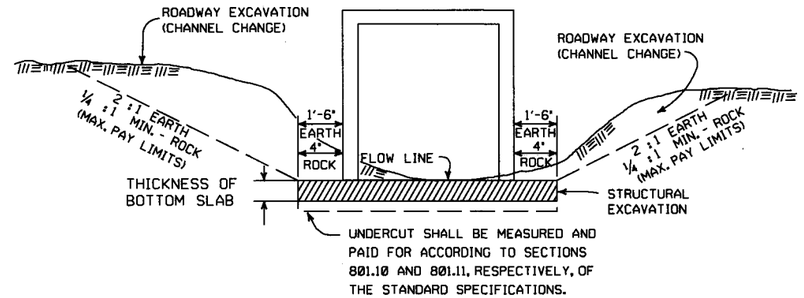


SECTION B-B

DETAILS FOR NEW CHANNELS



SECTION C-C



SECTION A-A

DETAILS THROUGH EXISTING CHANNELS

GENERAL NOTES:

ROADWAY EXCAVATION (CHANNEL CHANGE) WILL BE PAID FOR AT R.C. BOX CULVERT LOCATIONS. IT WILL BE PAID TO THE LIMITS ACTUALLY CUT AND WILL BE CONFINED TO THAT PORTION OF THE INDICATED AREA THAT IS ABOVE THE FLOW LINE. ROADWAY EXCAVATION (CHANNEL CHANGE) SHALL BE MEASURED BY CROSS SECTIONS AND VOLUMES COMPUTED BY AVERAGE END AREA METHOD. ALL CHANNEL CHANGES SHALL BE BROUGHT TO GRADE PRIOR TO MAKING ANY EXCAVATION FOR STRUCTURES.

EXCAVATION FOR STRUCTURES WILL BE PAID FOR AT ALL R.C. BOX CULVERT LOCATIONS. IT WILL BE PAID TO THE LIMITS SHOWN AND SHALL BE CONFINED TO THAT PORTION OF THE INDICATED AREA THAT IS BELOW THE CHANNEL FLOW LINE.

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

DATE	REVISION	FILMED
11-20-03	REVISED SECTION A-A NOTE	
8-22-02	REVISED SECTION B-B NOTE	
10-12-95	COMBINED 1891B AND 1888A	
1-4-83	REVISED GENERAL NOTES AND ADDED MAXIMUM PAY LIMIT NOTES.	674-1-4-83
2-2-76	EXCAV. PAY LIMITS	917-2-2-76
10-2-72	REVISED AND REDRAWN	564-10-16-72

ARKANSAS STATE HIGHWAY COMMISSION

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

STANDARD DRAWING RCB-2

MINIMUM STRUCTURAL REQUIREMENTS:

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

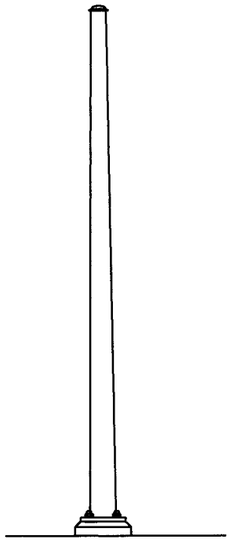
USE FATIGUE CATEGORY II.

CONSTRUCTION SPECIFICATIONS: STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION) WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

BASE WIND SPEED: 90 MPH

STEEL MEMBERS CONSIDERED MAIN LOAD CARRYING MEMBERS WITH A THICKNESS GREATER THAN ½" SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TEST SPECIFIED IN SUBSECTION 807.05 OF THE STANDARD SPECIFICATIONS.

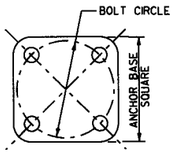
THE GROUND ROD SHALL BE FUSION WELDED TO A IC/#8 A.W.G. SOLID COPPER GROUND WIRE. ATTACHMENT TO THE PRIMARY GROUND MAY BE BY AN APPROVED CLAMP. THE ROD IS TO BE LOCATED IN THE CONCRETE PULL BOX PAID FOR SEPARATELY AS SHOWN ON THE PLANS.



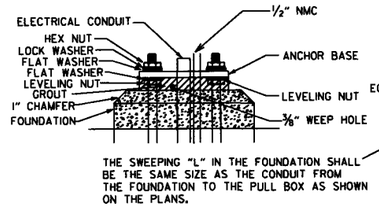
ANTENNA POLE

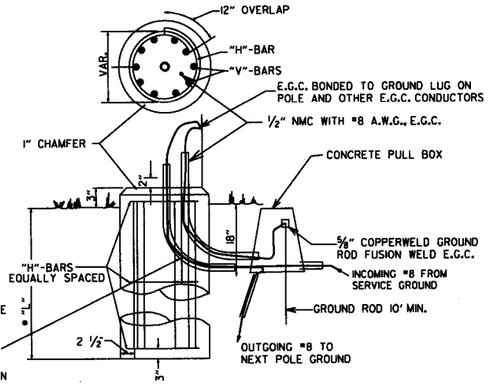
NOTE:

COMMUNICATION CABLE SHIELD SHALL BE TIED TO THE GROUND AT ONE ONE POINT (MASTER CABINET). THE SHIELD SHALL BE MAINTAINED CONTINUOUS (THROUGH ALL SPLICES). PLEASE REFER TO TESTING PROCEDURES IN SPECIAL PROVISIONS.



ANCHOR BASE





TYPICAL FOUNDATION DETAILS

POLE FOUNDATION MINIMUM DIMENSIONS AND STEEL REINFORCING.

POLE HEIGHT	FOUNDATION DIAMETER	DEPTH "L"	VERTICAL	HORIZONTAL	TIE SPACING
20.0'	30"	5'-6"	12-#7	#4	5 SP @ 12"
25.0'	30"	6'-0"	12-#7	#4	6 SP @ 11"
30.0'	30"	6'-6"	12-#7	#4	6 SP @ 12"
35.0'	30"	7'-0"	12-#7	#4	7 SP @ 11"
40.0'	30"	7'-6"	12-#7	#4	7 SP @ 12"
45.0'	36"	8'-6"	13-#8	#4	8 SP @ 12"
50.0'	36"	9'-6"	13-#8	#4	9 SP @ 12"
55.0'	36"	10'-0"	13-#8	#4	10 SP @ 11"
60.0'	36"	10'-6"	13-#8	#4	10 SP @ 12"
65.0'	36"	11'-0"	13-#8	#4	12 SP @ 10 ½"
70.0'	36"	11'-6"	13-#8	#4	11 SP @ 12"
75.0'	42"	13'-0"	18-#8	#4	14 SP @ 10 ½"
80.0'	42"	13'-6"	18-#8	#4	13 SP @ 12"
85.0'	42"	14'-6"	18-#8	#4	14 SP @ 12"
90.0'	42"	15'-0"	18-#8	#4	18 SP @ 9 ½"

ALL CONCRETE SHALL BE CLASS "S" WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH F'C=3500 PSI. CONCRETE SHALL BE POURED IN THE DRY AND ALL EXPOSED CORNERS CHAMFERED ¾" UNLESS NOTED OTHERWISE.

ALL REINFORCING STEEL SHALL CONFORM TO AASHTO M31 OR M53, GRADE 40 (YIELD STRENGTH=40,000 PSI).

PROVIDE 3" CLEAR TIES. DETAIL 3" TO FIRST TIE AT TOP OF SHAFT.

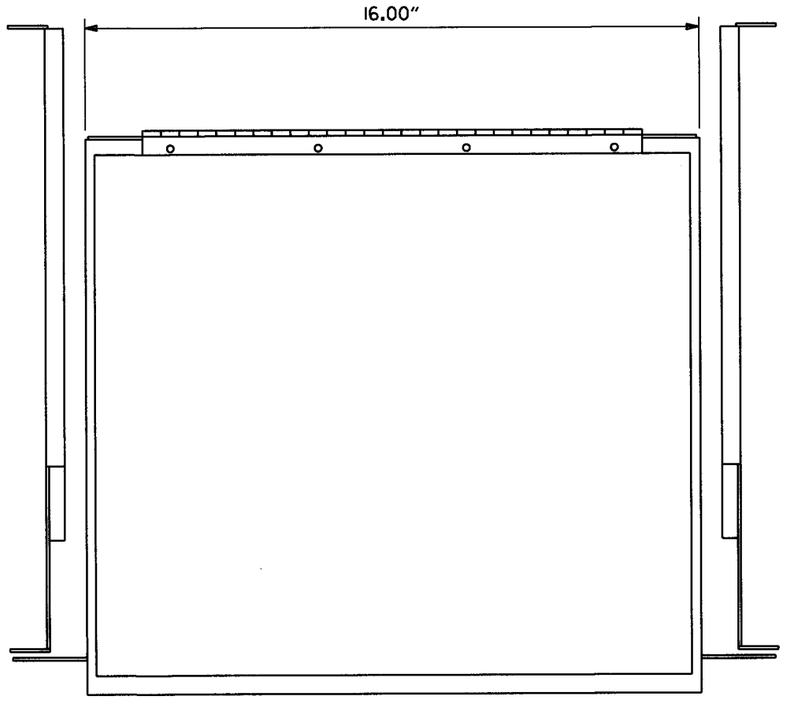
DATE	REVISION	FILMED
11-16-17	REVISED NOTES	
02-27-14	REVISED NOTES.	
09-12-13	ISSUED AS STANDARD DRAWING	
05-21-09	REVISED GROUNDING	
07-31-08	REVISED GROUNDING	
04-18-08	REVISED AASHTO NOTES	
04-17-08	REVISED TO 2001 AASHTO STANDARDS	
09-06-00	ISSUED	

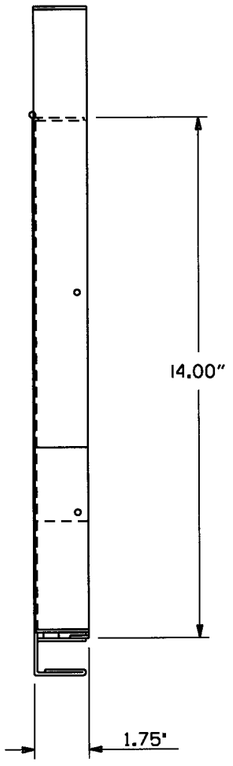
ARKANSAS STATE HIGHWAY COMMISSION

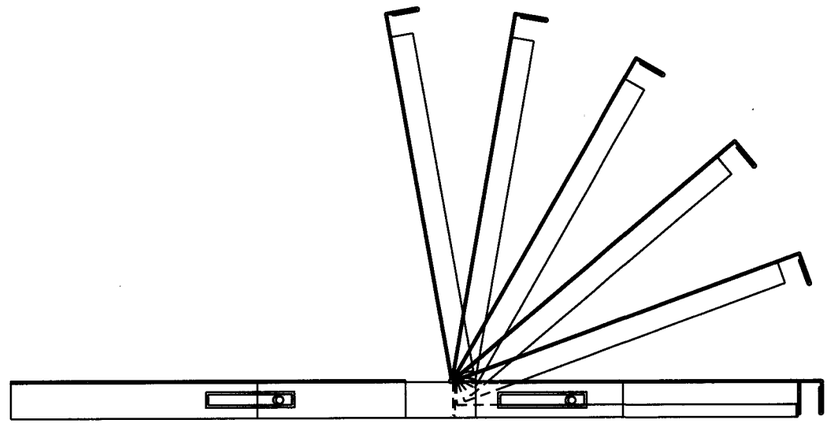
ANTENNA POLE

STANDARD DRAWING SD-1

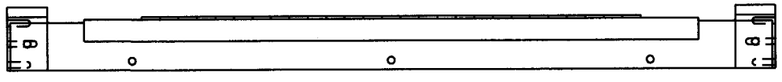
DRAWER PLAN VIEW



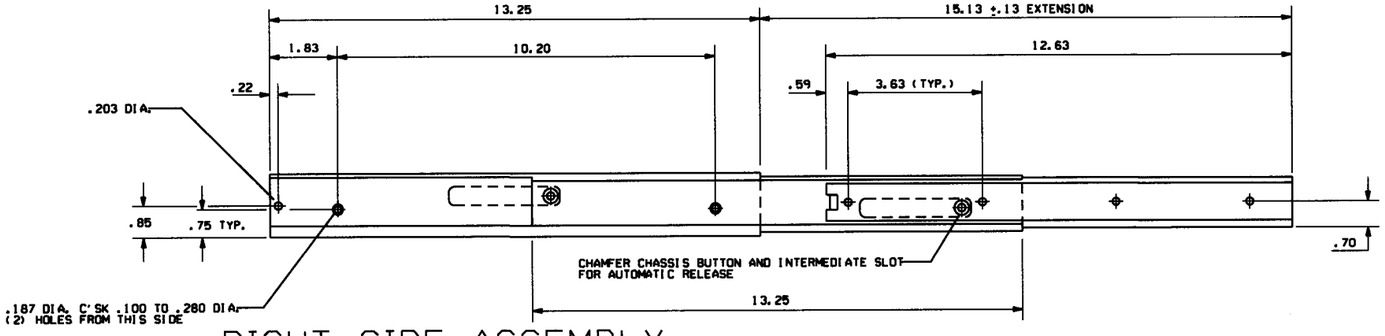




NOTES:
1. RIGHT HAND SLIDE SHOWN, LEFT SLIDE OPPOSITE.
2. GENERAL DEVICES (CC3002-99-0102) OR EQUAL AND CONTAINS (1) RIGHT HAND SLIDE ASSEMBLY, (1) LEFT HAND SLIDE ASSEMBLY.
3. ALL HARDWARE NECESSARY TO FASTEN SLIDE ASSEMBLY TO UNDERSIDE OF CONTROLLER SHELF SHALL BE INCLUDED.



FRONT VIEW



RIGHT SIDE ASSEMBLY

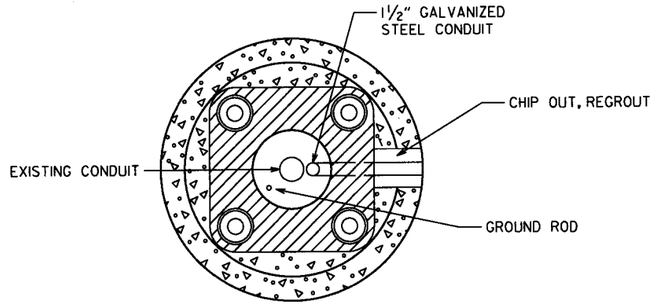
DATE	REVISION	DATE FILM
9-12-13	ISSUED AS STANDARD DRAWING	
6-15-05	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

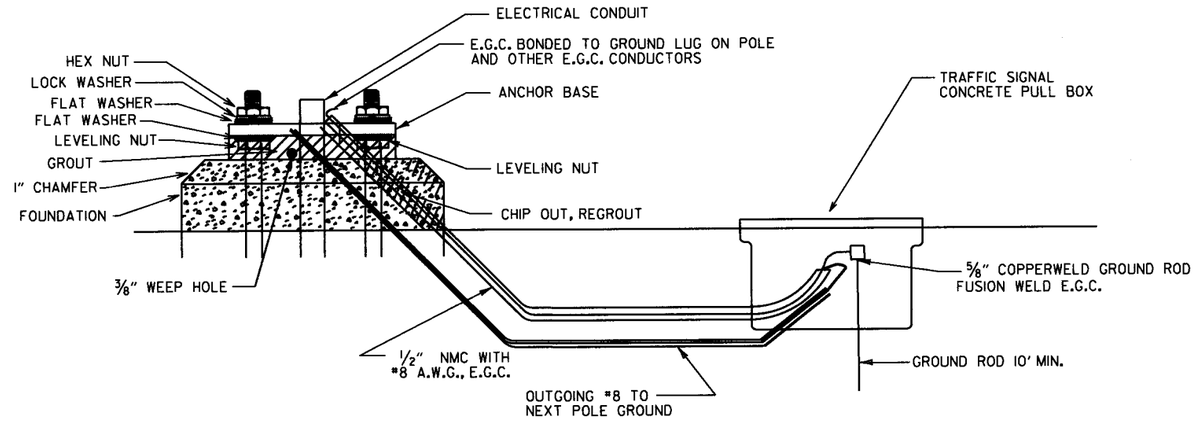
CONTROLLER CABINET UTILITY DRAWER

STANDARD DRAWING SD-5

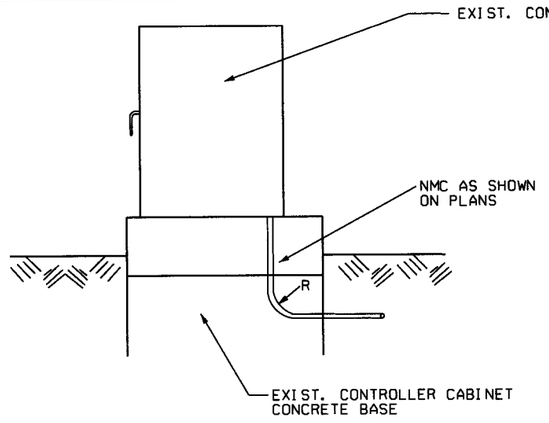
CONDUIT ENTRY TO EXISTING POLE BASE



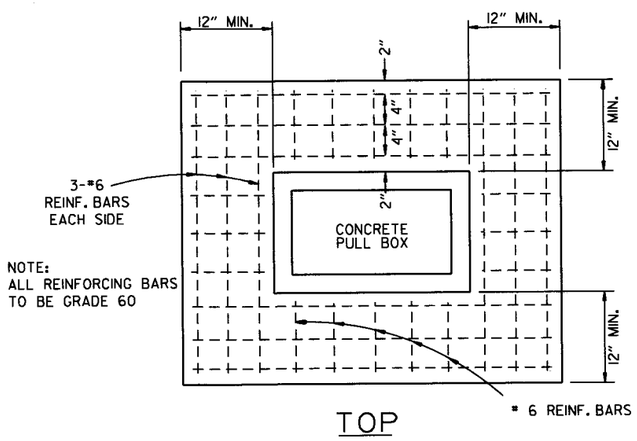
ANCHOR BASE



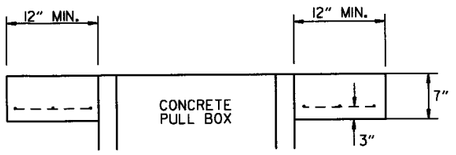
CONDUIT ENTRY TO EXISTING CONTROLLER CABINET



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

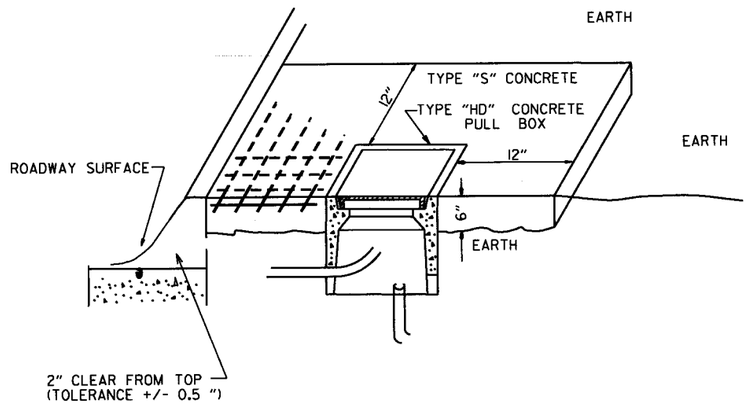


TOP



ELEVATION

TYPE "HD" CONCRETE PULL BOX DETAIL



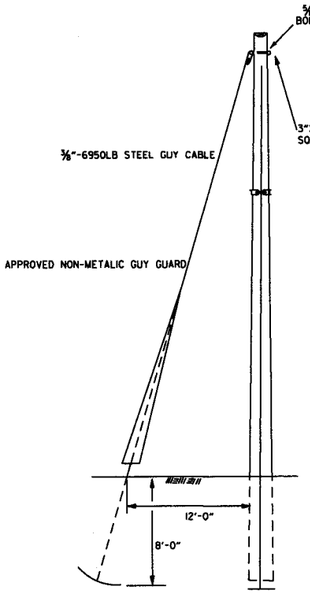
NOTE:
ALL TYPE 1 AND TYPE 2 HD CONCRETE PULL BOXES ARE INSTALLED WITH AN APRON OF CONCRETE 12" WIDE AND 7" IN DEPTH. ALL PAYMENT SHALL BE INCLUDED IN THE PRICE OF THE TYPE HD CONCRETE PULL BOX. THE CONCRETE PULL BOX SHALL BE INSTALLED FLUSH TO SURROUNDING GRADE UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER. 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.

DATE	REVISION	FILMED
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	
04-04-02	ADDED REINFORCING TO BOX APRON	
07-02-01	REVISED	
12-27-99	REVISED NOTES	
11-18-98	ISSUED	

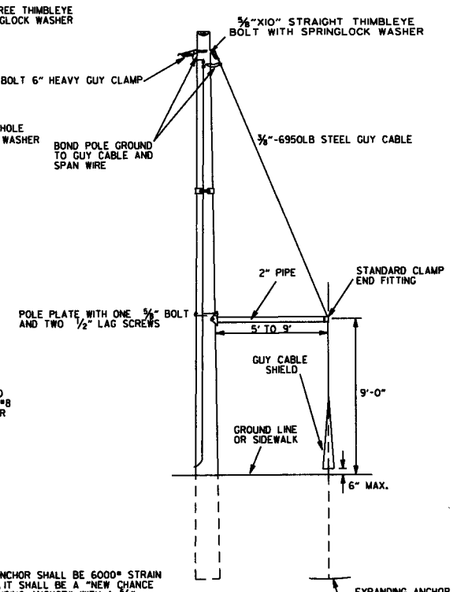
ARKANSAS STATE HIGHWAY COMMISSION

HEAVY DUTY PULL BOX

STANDARD DRAWING SD-6



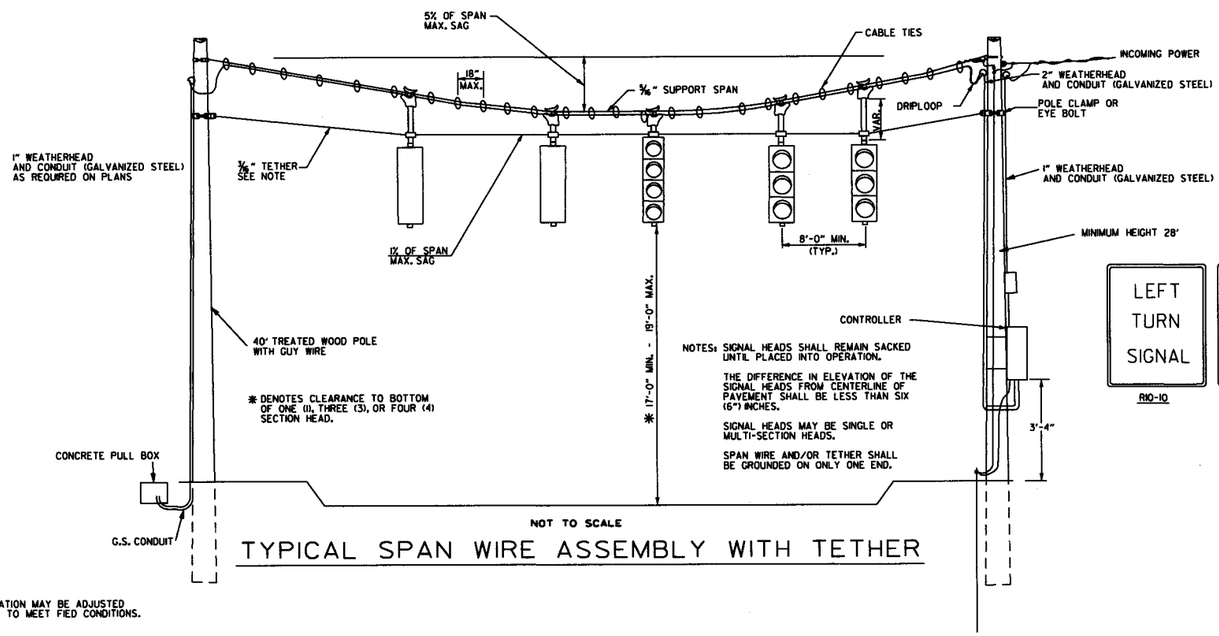
STANDARD GUY INSTALLATION



SIDEWALK GUY INSTALLATION

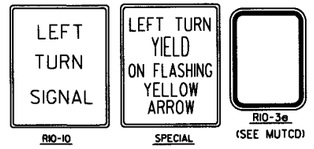
NOTE:
EXPANDING ANCHOR SHALL BE 6000# STRAIN OR GREATER. IT SHALL BE A "NEW CHANCE 8-WAY EXPANDING ANCHOR", WITH A ⅝" MINIMUM GUY ROD.

NOTE:
CONDUIT INSTALLATION MAY BE ADJUSTED BY THE ENGINEER TO MEET FIED CONDITIONS.



NOT TO SCALE

TYPICAL SPAN WIRE ASSEMBLY WITH TETHER

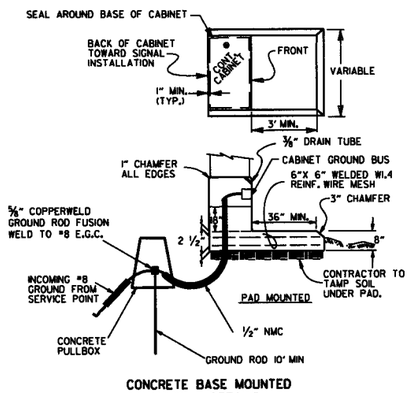


NOTES:
SPAN WIRE POLES SHALL BE MOUNTED A MINIMUM OF FOUR (4') FEET BEHIND CURB OR SHOULDER.

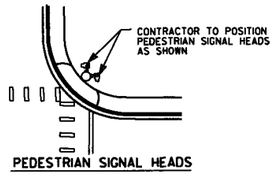
SPAN WIRE ASSEMBLIES WILL REQUIRE TETHER UNLESS OTHERWISE NOTED ON PLAN SHEETS.

CABLE TIES SHALL BE SUITABLE FOR OUTSIDE USE (BLACK).

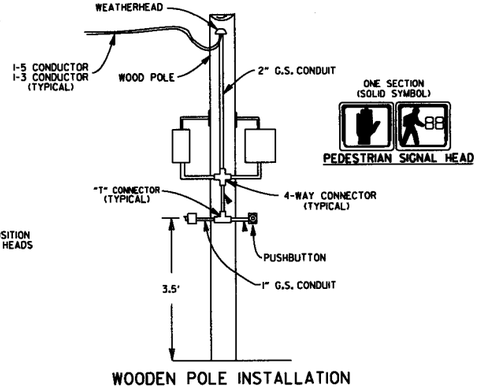
THE CONTROLLER POWER SUPPLY GROUND BUSS SHALL BE BONDED TO THE FOUNDATION GROUND ROD WITH A #8 A.W.G. SOLID COPPER WIRE. ON EXISTING FOUNDATIONS WITH NO GROUND ROD, CONTRACTOR SHALL INSTALL A 10' X ⅝" COPPERWELD GROUND ROD.



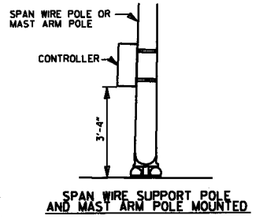
CONCRETE BASE MOUNTED CABINET DETAILS



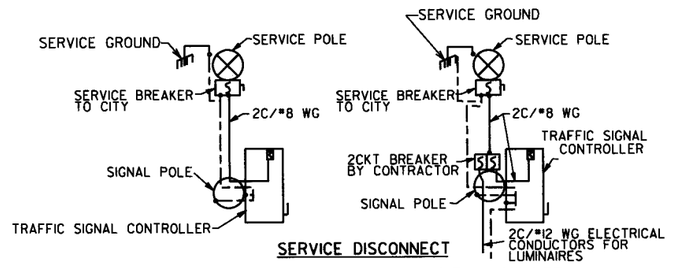
PEDESTRIAN SIGNAL HEADS



WOODEN POLE INSTALLATION OF PED HEADS



SPAN WIRE SUPPORT POLE AND MAST ARM POLE MOUNTED



SERVICE DISCONNECT

NO LUMINAIRE WITH LUMINAIRE

NOTE: ELECTRICAL GROUND CONDUCTOR IS BONDED TO ALL METAL ENCLOSURES

NOTES:

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

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

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

ALL SIGN FACE SHALL BE CONSTRUCTED OF HIGH INTENSITY SHEETING (TYPE III) WITH SILKSCREEN LEGEND AND BORDER.

SIGNAL OPERATION NOTES:

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

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

CABINET NOTE:

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

MINIMUM STRUCTURAL REQUIREMENTS:

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

CONSTRUCTION SPECIFICATIONS: STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION) WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

BASE WIND SPEED: 90 MPH

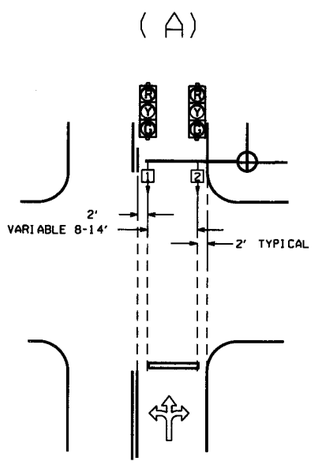
STEEL MEMBERS CONSIDERED MAIN LOAD CARRYING MEMBERS WITH THICKNESS GREATER THAN ½" SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TEST SPECIFIED IN SUBSECTION 807.05 OF THE STANDARD SPECIFICATIONS.

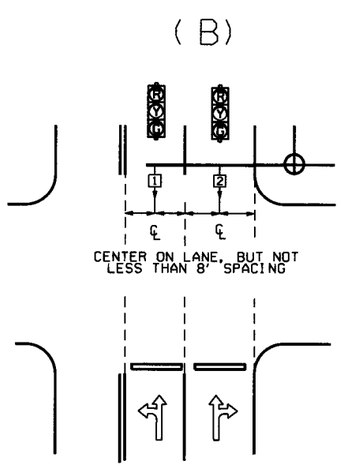
DATE	REVISION	FILMED
11-16-17	REVISED NOTES, ADDED SPAN WIRE SUPPORT POLE DETAIL, ADDED PEDESTRIAN SIGNAL HEAD DETAIL	
02-27-14	REVISED NOTES.	
09-12-13	ISSUED AS STANDARD DRAWING	
07-21-11	REVISED PEDESTRIAN SIGN & GROUNDING	
04-17-08	REVISED TO 2001 AASHTO STANDARDS	
10-12-04	REV. CABINET ORIENTATION & SIGNAL OPERATION	
05-22-02	REV. TYP. SPAN WIRE ASSEMBLY	
12-27-99	REVISED	
11-18-98	REVISION TO NOTES	
11-21-95	ISSUED	

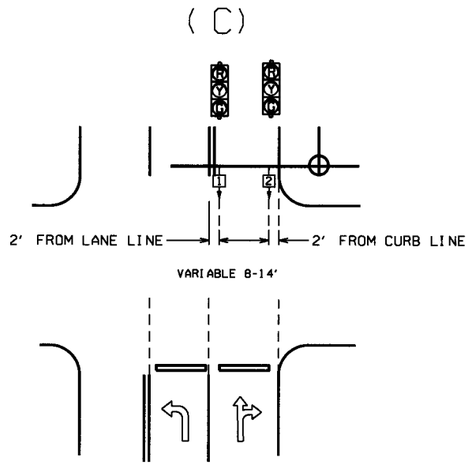
ARKANSAS STATE HIGHWAY COMMISSION

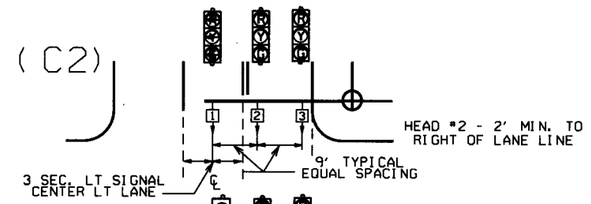
SPAN WIRE ASSEMBLY WOOD POLE

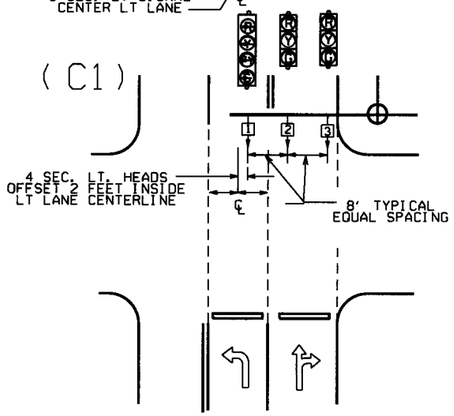
STANDARD DRAWING SD-7

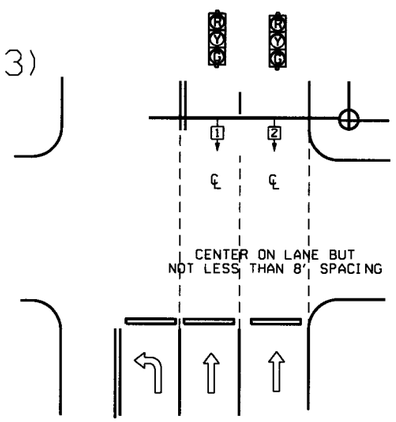


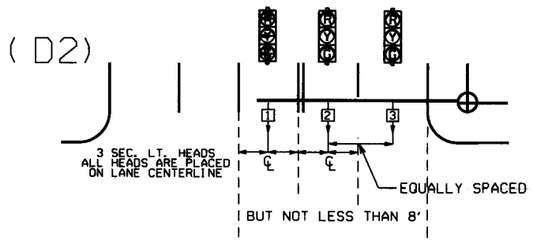


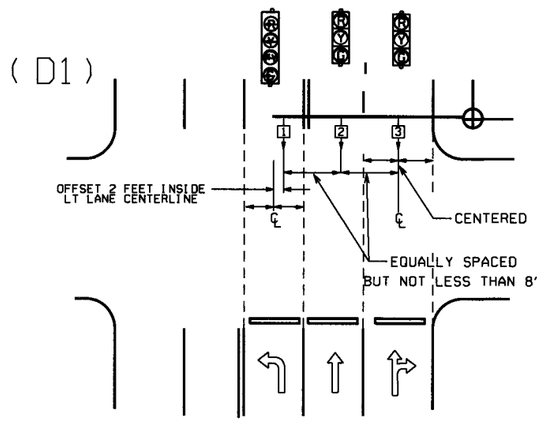




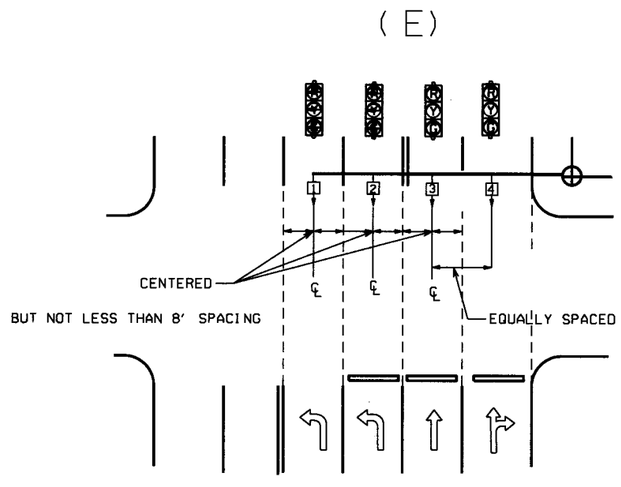








NOTE: WHERE LEFT TURN HEAD (HEAD 1 ON D1 AND D2) IS NOT CALLED FOR ON PLANS, MAST ARM LENGTH MAY STILL BE ALLOWED FOR FUTURE INSTALLATION. HEADS FOR THROUGH MOVEMENTS SHALL STILL BE ALIGNED WITH THROUGH LANES AS SHOWN ON DETAILS.



℄ = CENTER OF LANE FROM APPROACH SIDE

GENERAL NOTES:

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

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

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

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

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

6. MAXIMUM MOUNTING HEIGHT OF SIGNAL FACES LOCATED BETWEEN 40 FEET AND 53 FEET FROM STOP BAR SHALL BE IN ACCORDANCE WITH FIGURE 4D-5 OF 2009 MUTCD.

DATE	REVISION	DATE FILM
12-8-16	REVISED NOTE 6	
9-12-13	ISSUED AS STANDARD DRAWING	
3-11-10	2009 MUTCD	
12-9-99	ISSUED	

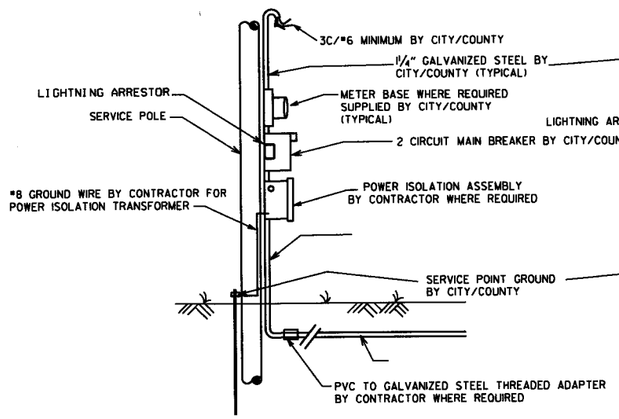
ARKANSAS STATE HIGHWAY COMMISSION

SIGNAL HEAD PLACEMENT

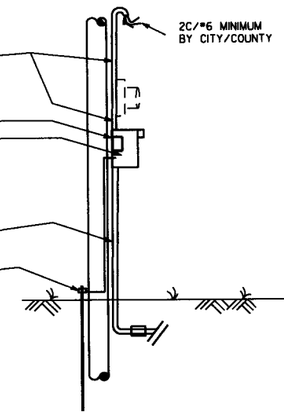
STANDARD DRAWING SD-8

MAIN BREAKER NOT NEAR CONTROLLER CABINET
SECONDARY REQUIRED

WITH POWER ISOLATION ASSEMBLY



WITHOUT POWER ISOLATION ASSEMBLY



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

ELECTRICAL SERVICE TYPICALLY FALLS INTO TWO CATEGORIES:
MAIN BREAKER NEAR CONTROLLER CABINET; AND MAIN BREAKER NOT NEAR CONTROLLER CABINET. THE CONTRACTOR'S AND THE CITY'S/COUNTY'S RESPONSIBILITY VARIES ACCORDINGLY AS INDICATED ON THESE DETAILS.

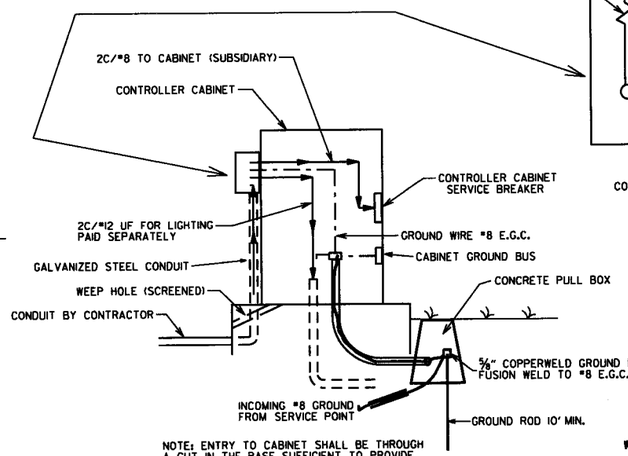
ALL SITUATIONS:
ELECTRICAL SERVICE SHALL BE PROVIDED BY THE CITY/COUNTY TO A SERVICE POLE WITH EXTERNAL RAINTIGHT BREAKER (MAIN BREAKER) AT A MUTUALLY ACCEPTABLE POINT WITHIN THE RIGHT-OF-WAY. SERVICE POINT INCLUDES GALVANIZED STEEL CONDUIT TO A POINT 18" BELOW GROUND LINE, TWO CIRCUIT MAIN BREAKER, LIGHTNING ARRESTOR, POWER ISOLATION ASSEMBLY WHERE REQUIRED, METER LOOP IF REQUIRED BY LOCAL UTILITY COMPANY, ELECTRICAL CONDUCTORS AND WEATHERHEAD. WHERE STREET LIGHTING IS INCLUDED AS PART OF SIGNAL INSTALLATION STREET LIGHTING CIRCUIT (2C/#12 A.W.G. UF RATED, TYPICAL) SHALL BE KEPT SEPARATE FROM THE CIRCUIT SERVING TRAFFIC SIGNAL. SERVICE WIRE AND WIRING FROM THE CONTROLLER TO MAIN BREAKER IS PROVIDED BY THE CONTRACTOR AS A PART OF THIS CONTRACT. WIRE AND WIRING FROM MAIN BREAKER, AND CONNECTION TO THE UTILITY IS THE RESPONSIBILITY OF THE CITY/COUNTY.

MAIN BREAKER NOT NEAR CONTROLLER CABINET:
THE MAIN BREAKER ASSEMBLY, GALVANIZED STEEL CONDUIT, WEATHERHEAD AND WIRE ABOVE MAIN BREAKER AND CONNECTION TO THE UTILITY SHALL BE PROVIDED BY CITY/COUNTY. CONTRACTOR SHALL PROVIDE AS PART OF CONTRACT SECONDARY BREAKER, CONDUIT, WIRE AND WIRING TO THE MAIN BREAKER.

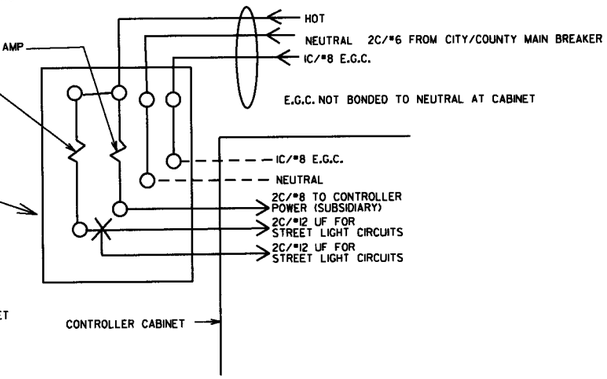
MAIN BREAKER NEAR CONTROLLER CABINET:
ALL COMPONENTS OF THE SERVICE POINT WITH THE EXCEPTION OF THE WIRE AND WIRING ABOVE THE MAIN BREAKER IS FURNISHED AND INSTALLED BY THE CONTRACTOR. WIRING FROM MAIN BREAKER INCLUDING CONNECTION TO THE UTILITY, IS THE RESPONSIBILITY OF THE CITY/COUNTY. IF METER LOOP IS REQUIRED, METER BASE AND HARDWARE IS PROVIDED BY THE CITY/COUNTY AND INSTALLED BY THE CONTRACTOR.

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

SECONDARY BREAKER BY CONTRACTOR (SUBSIDIARY)



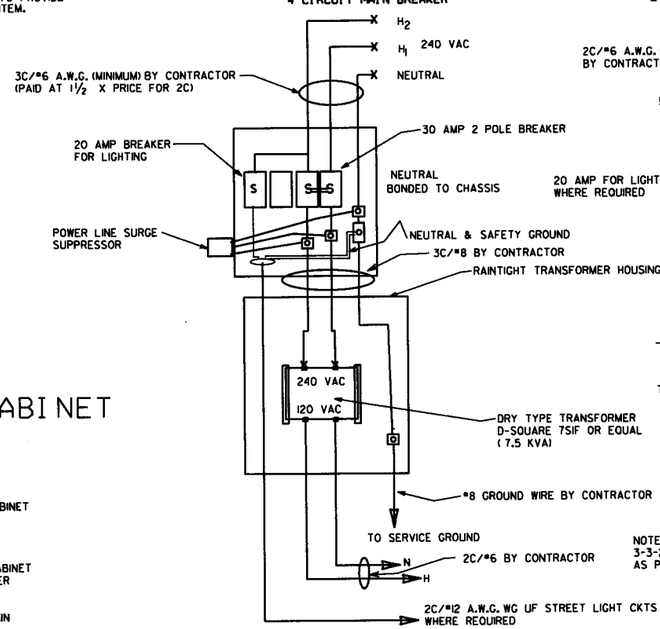
NOTE: ENTRY TO CABINET SHALL BE THROUGH A CUT IN THE BASE SUFFICIENT TO PROVIDE ADEQUATE CONDUIT RADIUS FOR ITEM.



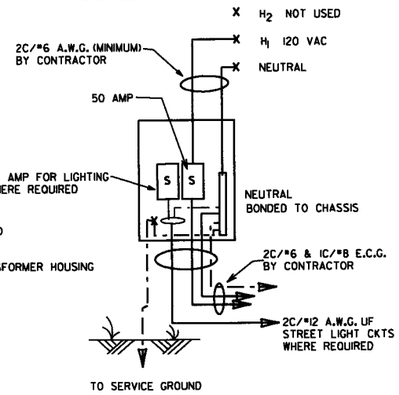
MAIN BREAKER WIRING (TYPICAL)

SERVICE GROUND IS TYPICALLY TIED TO NEUTRAL AT THE MAIN BREAKER. AS SUCH, CONTROLLER GROUND IS NOT TIED TO NEUTRAL AT SECONDARY BREAKER OR IN CONTROLLER CABINET.

WITH POWER ISOLATION ASSEMBLY
4 CIRCUIT MAIN BREAKER

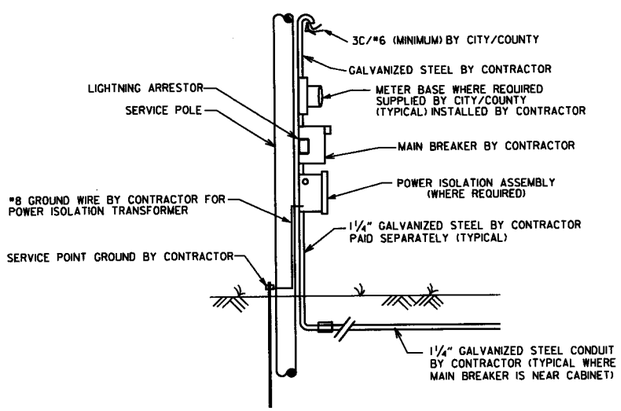


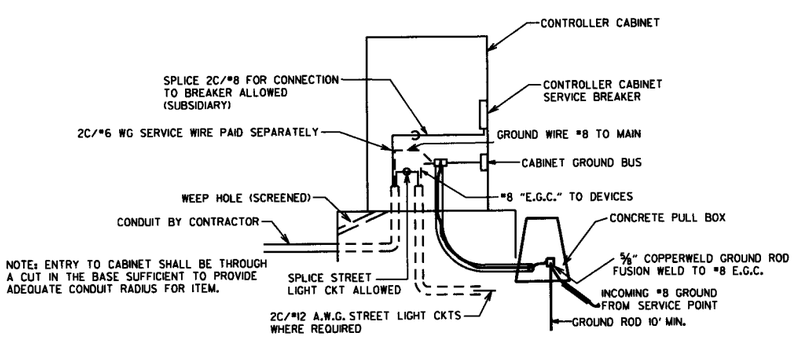
WITHOUT POWER ISOLATION ASSEMBLY
2 CIRCUIT MAIN BREAKER



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

MAIN BREAKER NEAR CONTROLLER CABINET
SECONDARY NOT REQUIRED





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

DATE	REVISION	FILMED
11-16-17	REVISED NOTES	
09-12-13	ISSUED AS STANDARD DRAWING	
04-18-13	ADDED LIGHTNING ARRESTOR	
05-21-09	REVISED GROUNDING	
07-31-08	REVISED GROUNDING	
03-03-03	ADDED EGC NOTE	
09-26-01	REVISED	
12-27-99	REVISED	
07-28-99	REVISED	
02-05-99	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

SERVICE POINT

STANDARD DRAWING SD-9

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

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

EACH PEDESTRIAN PUSHBUTTON SHALL HAVE ONE R10-3E SIGN ATTACHED TO THE POLE ABOVE THE BUTTON. ALL SIGNS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 723 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

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

GENERAL NOTES:
1. MAST ARM POLES SHALL BE MOUNTED A MINIMUM OF FOUR (4') FEET BEHIND CURB OR SHOULDER.

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

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

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

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

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

CONSTRUCTION SPECIFICATIONS:
STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION) WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

BASE WIND SPEED: 90 MPH.

STEEL MEMBERS CONSIDERED MAIN LOAD CARRYING MEMBERS WITH A THICKNESS GREATER THAN ½" SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TEST SPECIFIED IN SUBSECTION 807.05 OF THE STANDARD SPECIFICATIONS.

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

ALL SIGNAL HEADS TO BE ONE WAY, TWELVE (12") INCH AND HAVE FIVE (5") INCH BACK PLATES:

SIGNAL HEADS AT THE END OF MAST ARM - ONE 4 SEC., 85 LB., 14.5 SQ. FT., ONE SIGN MOUNTED 3 FEET FROM SIGNAL HEAD (2'-0" X 2'-6"; 20 LB.) REMAINING SIGNAL HEADS SPACED AT 8 FT. (3 SEC., 56 LB., 8.3 SQ. FT.):
DESIGN TO ACCOMMODATE:
2 SIGNAL HEADS FOR MAST ARMS 10 FT. TO 16 FT.
3 SIGNAL HEADS FOR MAST ARMS 18 FT. TO 24 FT.
4 SIGNAL HEADS FOR MAST ARMS OVER 26 FT.

STREET NAME SIGN - 72" X 18", 36 LB., MOUNTED SUCH THAT OUTSIDE EDGE IS NOT GREATER THAT 12 FT. FROM POLE. DEPENDING UPON POSITION OF SIGNAL HEAD ADJACENT TO POLE, SIGN MAY OVERLAP POLE SHAFT.
ROADWAY LUMINAIRES (WHERE REQUIRED ON PLAN SHEET) - VARIABLE ARM LENGTH (MAX. WT. 75 LB., 3.3 SQ. FT.)
PEDESTRIAN SIGNALS - TWO 1 SEC., 12 INCH MOUNTED 8 FT. FROM BASE OF POLE. POST MOUNTED 3 SEC. SIGNAL HEAD AT 10 FT. ON SIDE OF POLE.

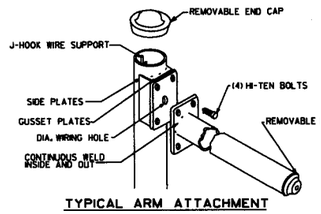
4. POLE/MAST ARM CAP - POLE AND MAST ARM CAPS SHALL BE PROVIDED, FABRICATED OF EITHER STEEL OR CAST ALUMINUM.

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

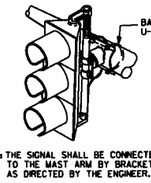
6. POLE/MAST ARM TAPER SLOPE - AVERAGE TAPER OF SIGNAL MAST ARMS AND POLE SHAFT SHALL BE 0.125 TO 0.15 INCHES PER FOOT.

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

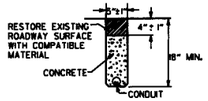
7. NUT COVERS - EACH POLE SHALL INCLUDE A BOLT DOWN NUT COVER FOR EACH ANCHOR BOLT.



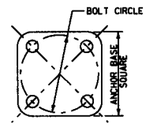
TYPICAL ARM ATTACHMENT



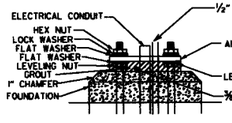
NOTE: THE SIGNAL SHALL BE CONNECTED TO THE MAST ARM BY BRACKETING AS DIRECTED BY THE ENGINEER.



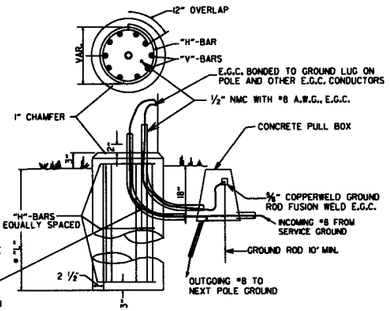
TRENCHING DETAIL
(FOR SAW CUT TRENCH IN ROADWAY)



ANCHOR BASE



THE SWEEPING "L" IN THE FOUNDATION SHALL BE THE SAME SIZE AS THE CONDUIT FROM THE FOUNDATION TO THE PULL BOX AS SHOWN ON THE PLANS.

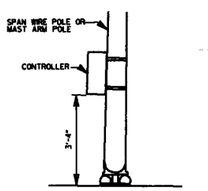


THE GROUND ROD SHALL BE FUSION WELDED TO A 1C/#8 A.W.G. SOLID COPPER GROUND WIRE. ATTACHMENT TO THE PRIMARY GROUND MAY BE BY AN APPROVED CLAMP. THE GROUND ROD IS TO BE LOCATED IN THE CONCRETE PULL BOX.

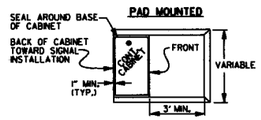
TYPICAL FOUNDATION DETAILS

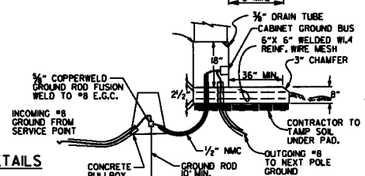
POLE FOUNDATION MINIMUM DIMENSIONS AND STEEL REINFORCING. ALL REINFORCING STEEL SHALL BE GRADE 40 MIN.

ARM LENGTH	FOUNDATION DIAMETER	DEPTH "L"*	STEEL VERTICAL	STEEL HORIZONTAL	O.C.
PED	30"	7'-0"	12-#7 (6'-6")	10-#4	8.44"
2' TO 12'	30"	10'-6"	12-#7 (10'-0")	15-#4	8.42"
OVER 12' TO 20'	30"	11'-6"	12-#7 (11'-0")	16-#4	8.66"
OVER 20' TO 35'	36"	12'-6"	13-#8 (12'-0")	17-#4	8.88"
OVER 35' TO 50'	36"	13'-6"	13-#8 (13'-0")	19-#4	8.56"
OVER 50' TO 72'	42"	14'-6"	18-#8 (14'-0")	20-#4	8.74"
TWINS TO 20'	30"	16'-0"	12-#6 (15'-6")	22-#4	8.76"
TWINS OVER 20' TO 44'	36"	16'-0"	13-#8 (15'-6")	22-#4	8.76"
TWINS OVER 44' TO 50'	42"	16'-0"	18-#8 (15'-6")	22-#4	8.76"
TWINS OVER 50' TO 72'	42"	16'-6"	18-#8 (16'-0")	23-#4	8.64"



SPAN WIRE SUPPORT POLE AND MAST ARM POLE MOUNTED





CONCRETE BASE MOUNTED CABINET DETAILS

CONTROLLER CABINET MOUNTING DETAILS

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

8. GROUND ROD - A 10' X ⅝" GROUND ROD SHALL BE INSTALLED IN THE CONCRETE PULL BOX FOR EACH POLE AND THE CONTROLLER. PAYMENT FOR THE GROUND ROD AND ½" NMC SHALL BE INCLUDED IN ITEM 714 FOR SIGNAL POLES AND ITEM 701 FOR THE CONTROLLER. THE CONCRETE PULL BOX AND CONDUCTOR BOX SHALL BE PAID SEPERATELY.

9. POLE BASE/FOUNDATION - ANCHOR BOLTS SHALL INCLUDE AS A MINIMUM, ONE LEVELING NUT, TWO FLAT WASHERS, ONE LOCK WASHER, AND ONE HEX NUT. PERIMETER OF ANCHOR BASE SHALL BE GROUTED WITH A ¼" WEEP HOLE. ALL CONCRETE SHALL BE CLASS "S" OR GREATER.

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

11. PEDESTRIAN PHASES - PEDESTRIAN MOVEMENTS SHALL BE PUSH BUTTON ACTUATED AND CONCURRENTLY TIMED, UNLESS OTHERWISE INDICATED ON THE PLAN SHEET(S). FURNISHING AND INSTALLING PEDESTRIAN PUSH SWITCH SHALL BE CONSIDERED SUBSIDIARY TO THE ITEM 707 PEDESTRIAN SIGNAL HEAD.

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

** IN LIEU OF DESIGNING THE STRUCTURE TO RESIST PERIODIC GALLOPING, A VIBRATORY MITIGATION DEVICE MAY BE PROVIDED BY THE POLE MANIFACTURER. THE VIBRATORY MITIGATION DEVICE SHALL BE AN ANTI-GALLOPING PANEL CONSISTING OF A 60" X 16" X 0.125" SIGN BLANK MOUNTED NEAR THE END OF THE MAST ARM NOT TO EXCEED ONE QUARTER OF THE LENGTH OF THE MAST ARM FROM THE END OF THE MAST ARM WITH THE LONG AXIS OF THE PANEL COLLINEAR WITH THE LONG AXIS OF THE MAST ARM. THE PANEL SHOULD BE MOUNTED AT SUCH THE HEIGHT AS TO PROVIDE AT LEAST 6" CLEAR FROM THE TOP OF ANY SIGNAL ASSEMBLY OF SIGN PANEL LOCATED ON THE MAST ARM WITHIN THE LENGTH OF THE ANTI-GALLOPING PANEL.

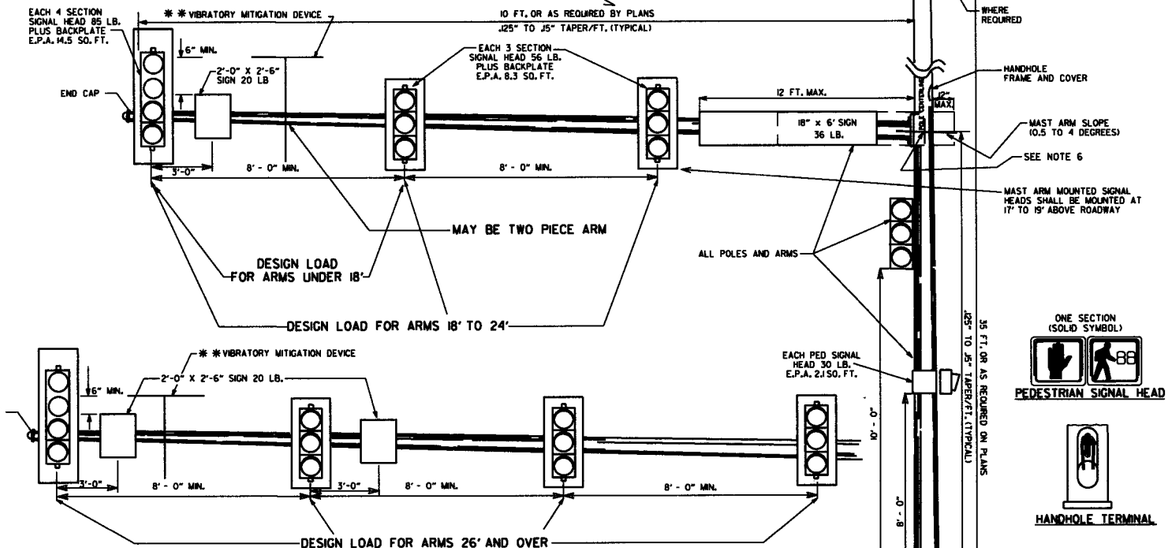
TRUCK-INDUCED GUST LOADS SHALL BE EXCLUDED FOR FATIGUE DESIGN FOR ALL STRUCTURES EXCEPT MAST ARMS MOUNTED OVER FACILITIES WITH POSTED SPEEDS OF 65 MPH OR GREATER AT THE LOCATION OF THE STRUCTURE.

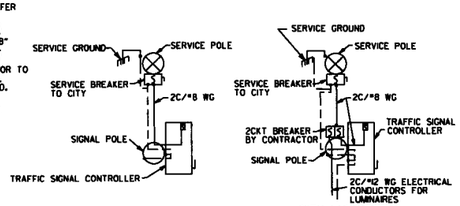
SIGNAL OPERATION NOTES:

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

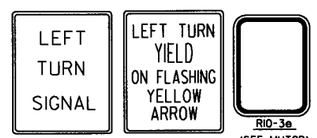
THE CONTRACTOR MAY BE REQUIRED TO ALTER THE FLASHING DISPLAY DURING THE TEMPORARY FLASH PERIOD, AT THE TIME THE INTERSECTION IS PLACED IN PERMANENT OPERATION, THE FLASH SEQUENCE SHALL THEN BE RETURNED TO THAT INDICATED ON THE PLAN SHEETS. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR THESE ALTERATION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

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

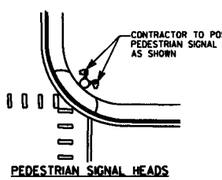




SERVICE DISCONNECT
NOTE: ELECTRICAL GROUND CONDUCTOR IS BONDED TO ALL METAL ENCLOSURES



R10-10 SPECIAL



PEDESTRIAN SIGNAL HEADS

DATE	REVISION	FILMED
11-16-17	REVISED NOTES, ADDED PEDESTRIAN SIGNAL HEAD DETAIL, ADDED HANDHOLE TERMINAL DETAIL, ADDED TRENCHING DETAIL	
02-27-14	REVISED NOTES.	
09-12-13	ISSUED AS STANDARD DRAWING	
12-06-12	REVISED NOTES	
02-27-12	REVISED NOTES	
09-12-13	ISSUED AS STANDARD DRAWING	
07-21-11	REVISED VMD, SIGNAL HEADS	
05-21-09	REVISED GROUNDING	
07-31-08	REVISED GROUNDING	
04-25-08	ADDED VIBRATORY MITIGATION DEVICE & NOTES	
04-18-08	REVISED AASHTO NOTES	
04-17-08	REVISED TO 2001 AASHTO STANDARDS	
10-12-04	REVISED CABINET ORIENTATION	
06-23-04	REVISED	
05-11-04	REV. NOTE 3/AASHTO REQUIREMENTS	
06-8-01	REV. NOTES & POLE MAST ARM SLOPE	
04-11-01	REVISED POLE TAPERS	
04-25-00	REV. NOTES & SIGNAL HEAD PLACEMENT	
11-22-99	REVISED FOUNDATION DETAILS	
11-17-98	REVISED DETAILS AND NOTES	
11-21-95	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

STEEL POLE WITH MAST ARM

STANDARD DRAWING SD-11

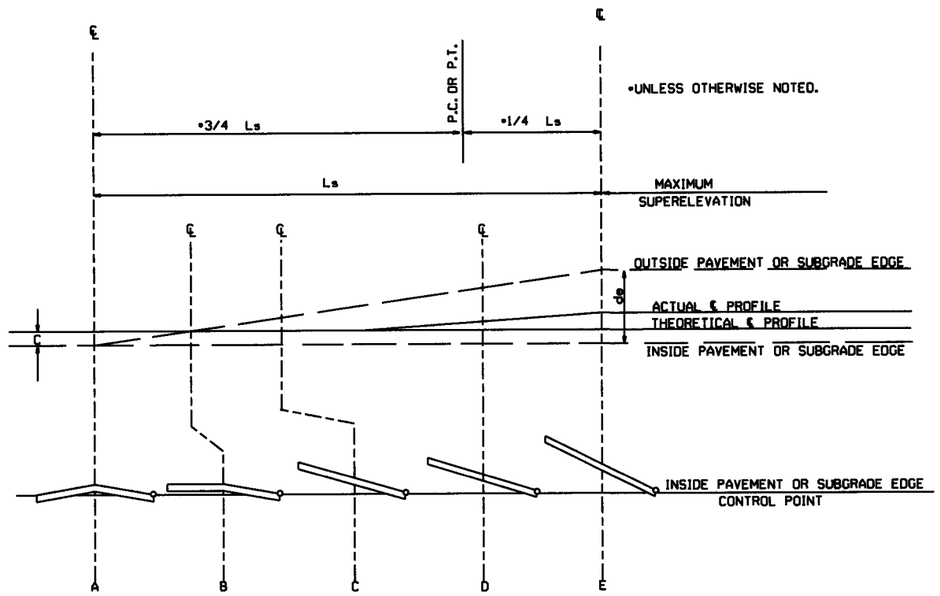
SUPERELEVATION TABLE FOR TWO - WAY TRAFFIC

DEGREE OF CURVE	30 MPH e	30 MPH Ls (FT) MINIMUM	30 MPH Ls (FT) DESIRABLE	40 MPH e	40 MPH Ls (FT) MINIMUM	40 MPH Ls (FT) DESIRABLE	50 MPH e	50 MPH Ls (FT) MINIMUM	50 MPH Ls (FT) DESIRABLE	55 MPH e	55 MPH Ls (FT) MINIMUM	55 MPH Ls (FT) DESIRABLE	60 MPH e	60 MPH Ls (FT) MINIMUM	60 MPH Ls (FT) DESIRABLE	70 MPH e	70 MPH Ls (FT) MINIMUM	70 MPH Ls (FT) DESIRABLE
0° 15'	N.C.			N.C.			N.C.			N.C.			N.C.			N.C.		
0° 30'	N.C.			N.C.			N.C.			N.C.			N.C.			N.C.		
0° 45'	N.C.			N.C.			R.C.			0.022			0.023			N.C.		
1° 00'	N.C.			N.C.			0.021			0.026			0.030			0.028		
1° 15'	N.C.			R.C.			0.026			0.032			0.037			0.037	275	300
1° 30'	N.C.			0.021			0.031	200		0.037	225	300	0.043	250	300	0.046		
1° 45'	N.C.			0.025	175		0.036			0.043			0.048			0.054		
2° 00'	R.C.			0.028			0.040			0.048			0.055			0.062		
2° 15'	R.C.			0.031			0.045			0.053			0.061			0.070		
2° 30'	0.021			0.034			0.049			0.058			0.067			0.078	300	350
2° 45'	0.023			0.037			0.053			0.063			0.072			0.085	315	
3° 00'	0.025			0.040			0.057			0.067	230		0.077	260		0.091	335	
3° 15'	0.027	150		0.043			0.061			0.072	245		0.082	275		0.096	350	
3° 30'	0.029			0.046			0.065	205		0.076	255		0.086	285		0.098	360	400
3° 45'	0.031			0.049			0.069	215		0.080	265		0.090	295		0.100	360	
4° 00'	0.033			0.051			0.072	225		0.083	270		0.093	305				
4° 30'	0.037			0.056			0.078	240		0.087	280		0.096	315				
5° 00'	0.040			0.061			0.083	250		0.091	295		0.098	320				
5° 30'	0.043			0.066	185		0.088	260		0.094	300							
6° 00'	0.046			0.070	190		0.092	270		0.096	305							
6° 30'	0.050			0.074	200		0.095	280		0.100	315							
7° 00'	0.053			0.078	210		0.098	285										
7° 30'	0.056			0.081	215		0.099	290										
8° 00'	0.058			0.084	220		0.100	290										
8° 30'	0.061			0.087	225													
9° 00'	0.063			0.089	230													
10° 00'	0.068	160		0.094	235													
11° 00'	0.072	170		0.097	250													
12° 00'	0.076	175		0.099	250													
13° 00'	0.080	180		0.100	250													
14° 00'	0.083	190																
15° 00'	0.086	195																
16° 00'	0.089	200																
17° 00'	0.091	200																
18° 00'	0.093	205																
19° 00'	0.095	210																
20° 00'	0.097	215	250															
21° 00'	0.098	215																
22° 00'	0.099	215																
23° 00'	0.099	215																
24° 00'	0.100	220																

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

ABBREVIATIONS

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



STANDARD METHOD WHEN SUPERELEVATION REVOLVES AROUND INNER SUBGRADE POINT OR INNER PAVEMENT EDGE

NOTE: MAINTAIN NORMAL CROWN ON INSIDE UNTIL SUPERELEVATION EXCEEDS 2C.

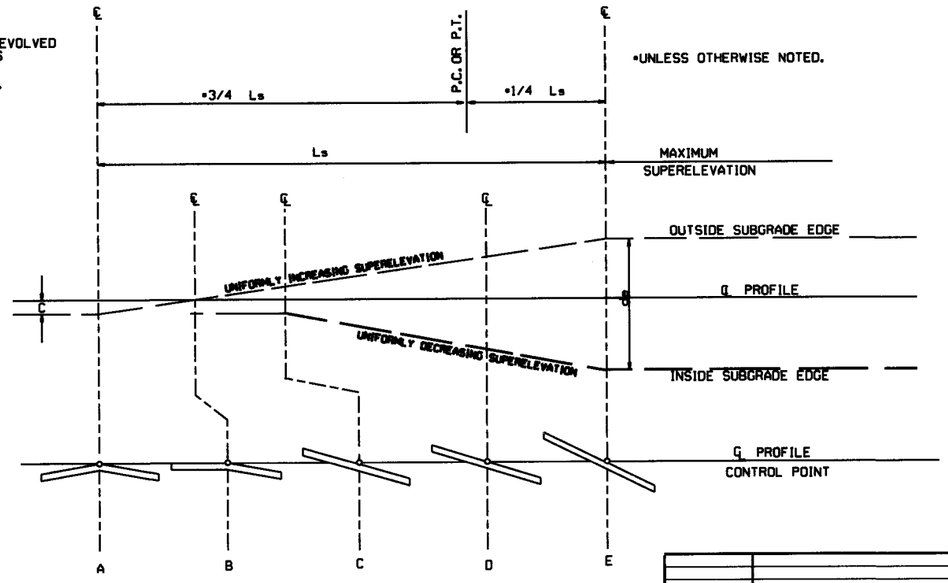
GENERAL NOTES

1. ON PAVEMENT WITH TWO-WAY TRAFFIC, THE SUPERELEVATION SHALL BE REVOLVED ON THE INSIDE PAVEMENT EDGE UNLESS OTHERWISE NOTED ON THE PLANS
2. SUPERELEVATION VALUES SHOWN ON THE CROSS SECTIONS ARE VALUES (+) OR (-) TO BE ADDED TO OR SUBTRACTED FROM THE POINT OF CONTROL.
3. LENGTHS FOR L MAY BE ROUNDED IN MULTIPLES OF 25 FT. OR 50 FT. TO PERMIT SIMPLER CALCULATIONS.
4. PAVEMENTS WIDER THAN 2 LANES SHALL HAVE ADDITIONAL TRANSITION LENGTHS AS FOLLOWS:

3 LANE UNDIVIDED - - - - - +20%
4 LANE UNDIVIDED - - - - - +50%
5 LANE UNDIVIDED - - - - - +80%
6 LANE UNDIVIDED - - - - - +100%

NOTE: MAINTAIN NORMAL CROWN ON INSIDE UNTIL SUPERELEVATION EXCEEDS 2C.

RATE OF SUPERELEVATION SHALL BE COMPUTED ON STRAIGHT LINE METHOD USING APPLICABLE Ls.



STANDARD METHOD WHEN SUPERELEVATION REVOLVES AROUND CENTER LINE

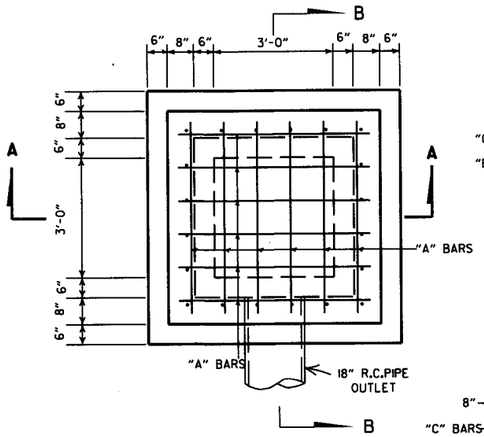
SUPERELEVATION FORMULA = $\frac{Lde}{Ls}$

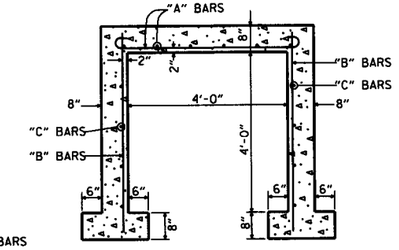
DATE	REVISION	DATE FILMED
10-18-96	ADDED FORMULA	
01-09-87	ISSUED	534-1-9-87

ARKANSAS STATE HIGHWAY COMMISSION

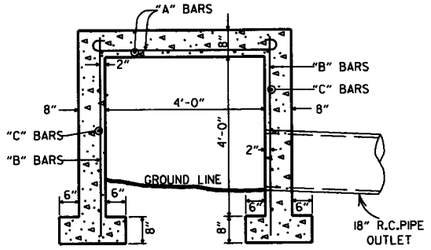
TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC

STANDARD DRAWING SE-2





SEC A-A



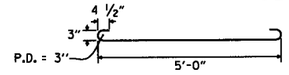
SEC B-B

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



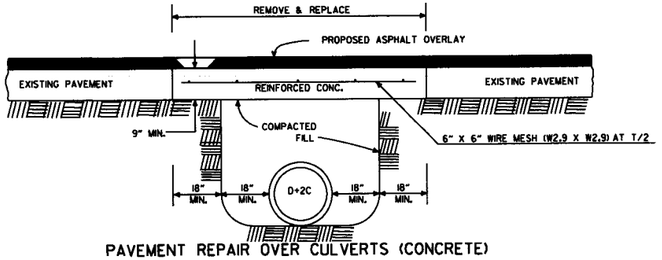
QUANTITIES

CONCRETE 3.31 CU. YDS.
REINFORCING STEEL 168 LB.

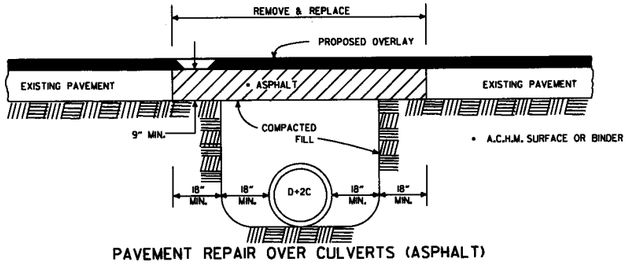
GENERAL NOTE:

THE PAY ITEMS FOR REINFORCED CONCRETE SPRING BOXES SHALL BE FOR THE QUANTITTIES OF CONCRETE OF THE CLASS SPECIFIED, REINFORCING STEEL, EXCAVATION FOR STRUCTURES AND 18" R.C. PIPE CULVERT.

REINFORCED CONCRETE SPRING BOX



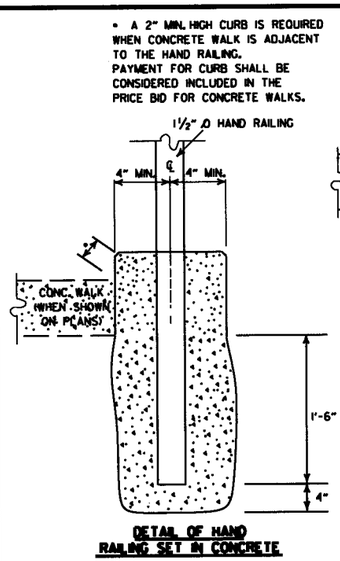
PAVEMENT REPAIR OVER CULVERTS (CONCRETE)



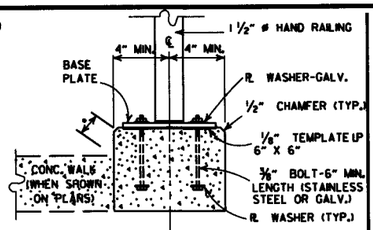
PAVEMENT REPAIR OVER CULVERTS (ASPHALT)

DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS

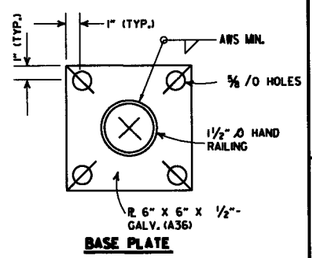
* A 2" MIN. HIGH CURB IS REQUIRED WHEN CONCRETE WALK IS ADJACENT TO THE HAND RAILING. PAYMENT FOR CURB SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR CONCRETE WALKS.



DETAIL OF HAND RAILING SET IN CONCRETE

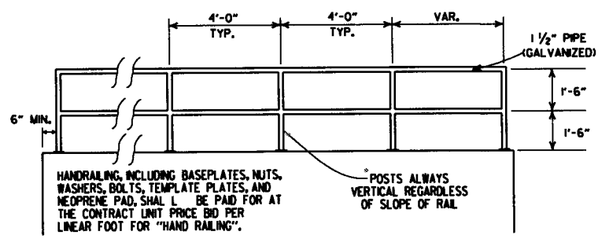


POST CONNECTION TO WALL

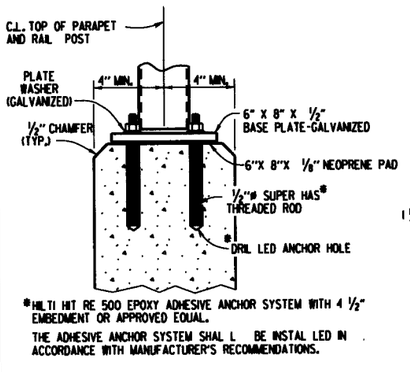


BASE PLATE

POST CONNECTION DETAILS



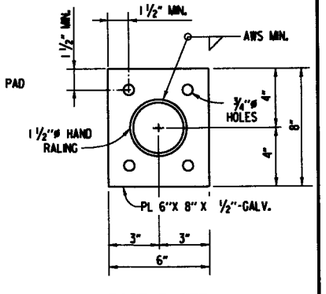
HAND RAILING SHALL CONFORM TO SECTION 633.



*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.

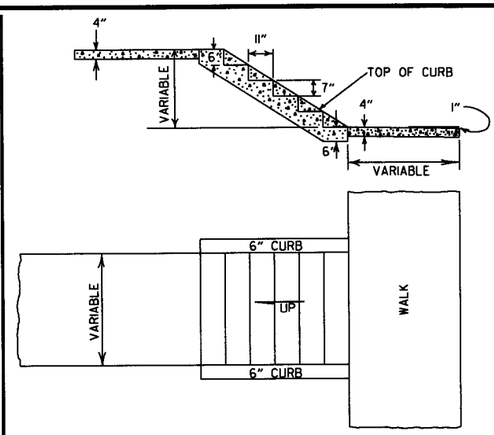
POST CONNECTION TO WALL



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.

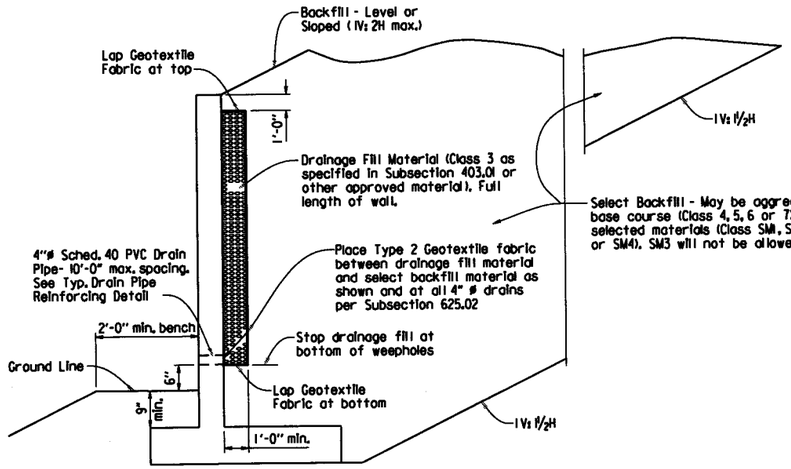
DETAILS OF CONCRETE STEPS & WALKS

DATE	REVISION	DATE FILMED
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	
4-26-96	ADD WEEP HOLE; REV. JOINT SPACING IN RET. WALL	
6-2-94	CHANGED CONST. TO CONTRACTION JOINT	
10-1-92	CHANGED MESH FABRIC TO WIRE MESH	10-1-92
8-15-91	DELETED HDWL MODIFICATION DETAIL	8-15-91
11-8-90	DELETED COLD MIX FROM CULV'T. REPAIR	11-8-90
11-30-89	REV. RETAINING WALL STEEL SCHEDULE	11-30-89
11-17-88	V. BARS BEHIND ARROW	665-11-17-88
7-15-88	REV. PAVEMENT REPAIR 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

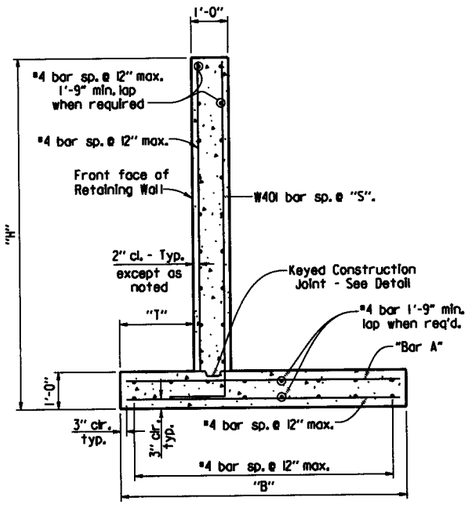
DETAILS OF SPECIAL ITEMS

STANDARD DRAWING SI - 1



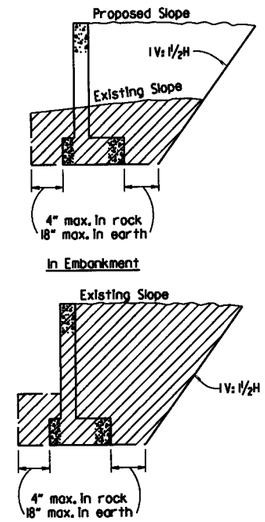
TYPICAL DRAINAGE & BACKFILL DETAILS

N.T.S



TYPICAL SECTION

N.T.S



NOTE: Hatched area denotes maximum limits of pay excavation.

DETAILS OF EXCAVATION

N.T.S

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS: Arkansas state Highway and Transportation Department 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.

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications, Sixth Edition (2012).

LIVE LOAD: Live Load Surcharge is not included in the design of these walls. Vehicular Live Load shall not be allowed within a distance equal to one-half the height of the wall.

CONCRETE: Concrete shall be poured in the dry and all exposed corners to be chamfered ½". All concrete shall be Class S with a minimum 28 day compressive strength f'c = 3,500 psi. A Class 2 Surface finish shall be used on all surfaces of the concrete unless otherwise noted.

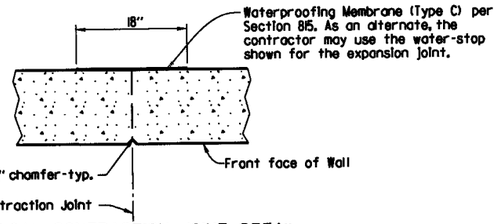
REINFORCING STEEL: All reinforcing steel shall conform to AASHTO M31 or M53, Grade 60.

Foundations for footings shall be prepared in accordance with subsection 801.04. Backfill for retaining walls shall be in accordance with subsection 801.08.

Waterproof Membrane (Type C), waterstops, preformed joints, weep holes & geotextile fabric shall not be paid for directly, but shall be considered subsidiary to Class S Concrete.

Drainage fill material (Class 3) and select backfill shall be measured and paid for as Compacted Embankment.

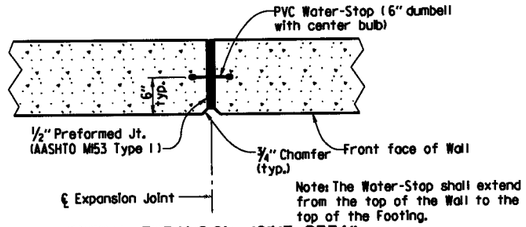
These details are not intended for use along streams or ditches without consideration for scour.



TYPICAL CONTRACTION JOINT DETAIL

N.T.S.

Note: 20'-0" Max. Spacing between Contraction Joints. Horizontal reinforcement shall be continuous through Contraction Joints.

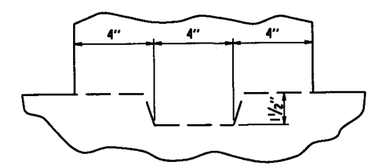


Note: The Water-Stop shall extend from the top of the Wall to the top of the Footing.

TYPICAL EXPANSION JOINT DETAIL

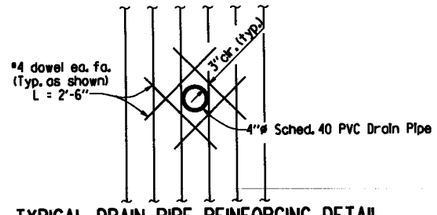
N.T.S.

Note: 60'-0" Max. Spacing between Expansion Joints. Horizontal reinforcing shall stop 2" from ℄ Expansion Joint.



KEYED CONSTRUCTION JOINT DETAIL

N.T.S



TYPICAL DRAIN PIPE REINFORCING DETAIL

N.T.S

SEISMIC ZONE: These walls have been designed for the following site adjusted peak ground accelerations (A_S):
Level Backfill - $A_S \leq .40g$
Sloped Backfill (1V: 2H max.) - $A_S \leq .30g$

TABLE OF RETAINING WALL VARIABLES (LEVEL BACKFILL)

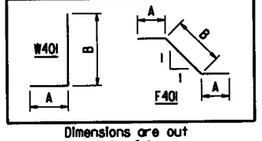
"H"	"T"	"B"	"S"	"Bar A" Size @ Spacing
3'-0"	9"	2'-6"	12"	#4 @ 12"
4'-0"	9"	3'-6"	12"	#4 @ 12"
5'-0"	9"	4'-0"	12"	#4 @ 12"
6'-0"	9"	4'-6"	12"	#4 @ 12"
7'-0"	9"	5'-6"	12"	#4 @ 10"
8'-0"	9"	6'-0"	12"	#5 @ 10"
9'-0"	1'-0"	7'-0"	12"	#5 @ 6½"

TABLE OF RETAINING WALL VARIABLES (SLOPED BACKFILL) (1V: 2H MAX.)

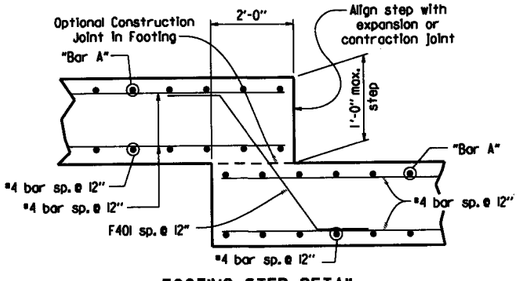
"H"	"T"	"B"	"S"	"Bar A" Size @ Spacing
3'-0"	9"	2'-6"	12"	#4 @ 12"
4'-0"	9"	3'-6"	12"	#4 @ 12"
5'-0"	9"	4'-6"	12"	#4 @ 12"
6'-0"	9"	5'-6"	12"	#4 @ 6"
7'-0"	9"	6'-6"	12"	#5 @ 6½"
8'-0"	1'-6"	8'-0"	7½"	#6 @ 6"
9'-0"	1'-11"	9'-6"	5"	#8 @ 6"

BENDING DIAGRAMS

MARK	A	B	P.D.
W401	8"	"H" - 6"	3"
F401	1'-6"	1'-10"	2½"



Dimensions are out to out of bars.



FOOTING STEP DETAIL

N.T.S.

DATE	REVISION	DATE FILMED
5-12-16	REVISED SLOPES FOR SELECT BACKFILL	
2-27-14	REVISED GENERAL NOTES	
7-26-12	DRAWING ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

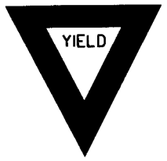
REINFORCED CONCRETE RETAINING WALL (WITHOUT LIVE LOAD SURCHARGE)

STANDARD DRAWING SI - 2

R1-1

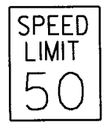
STANDARD 30"X30"
EXPRESSWAY 36"X36"
SPECIAL 48"X48"

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"

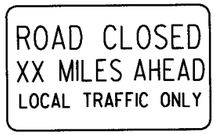
R5-1

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

RII-2

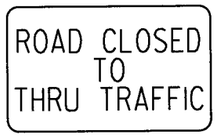
48"X30"

RII-3A



60"X30"

RII-4



60"X30"

W21-5a

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

WI-1

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

WI-2

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

WI-3

STD. 48"X48"

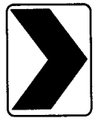
WI-4

STD. 48"X48"

WI-6

STD. 48"X24"
SPECIAL 60"X30"

WI-8



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

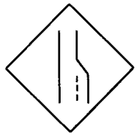
W3-1

STD. 36"X36"
SPECIAL 48"X48"

W3-2

STD. 36"X36"
SPECIAL 48"X48"

W4-2



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

W5-1

STD. 36"X36"
SPECIAL 48"X48"

W6-3

EXPWY. 36"X36"
SPECIAL 48"X48"

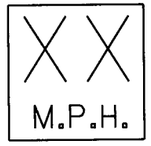
W8-7

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

W9-2

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

WI3-1



STD. 24"X24"

W20-1

STD. 48"X48"

W20-2

STD. 48"X48"

W20-3

STD. 48"X48"

W20-4

STD. 48"X48"

W20-5

STD. 48"X48"

W20-7a

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

W21-2

STD. 30"X30"
SPECIAL 36"X36"

W21-5

STD. 30"X30"
SPECIAL 36"X36"

W24-1

STD. 36"X36"

WI-4b

STD. 48"X48"

R56-1

STD. 18"X18"

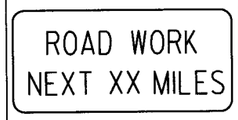
W8-11

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

W8-9

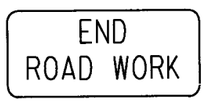
STD. 36"X36"
FWY. 48"X48"

G20-1



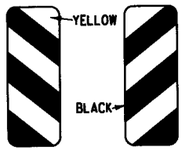
60"X24"

G20-2



48"X24"

OM-3L OM-3R



12"X36"

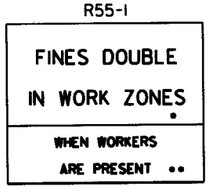
M4-9

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

M4-10

48"X18"

R55-1



36"X60"

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

ADVANCE DISTANCES
(XXXX)

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

GENERAL NOTES:

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

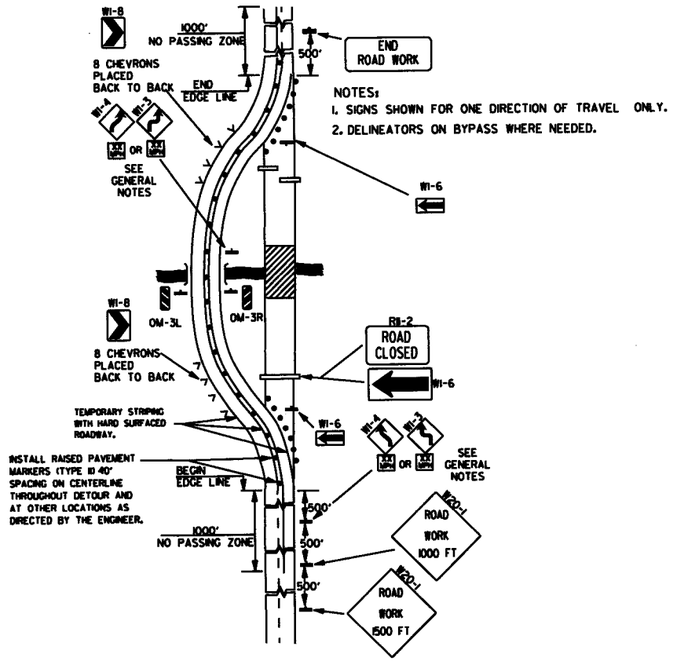
• NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY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

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

ARKANSAS STATE HIGHWAY COMMISSION

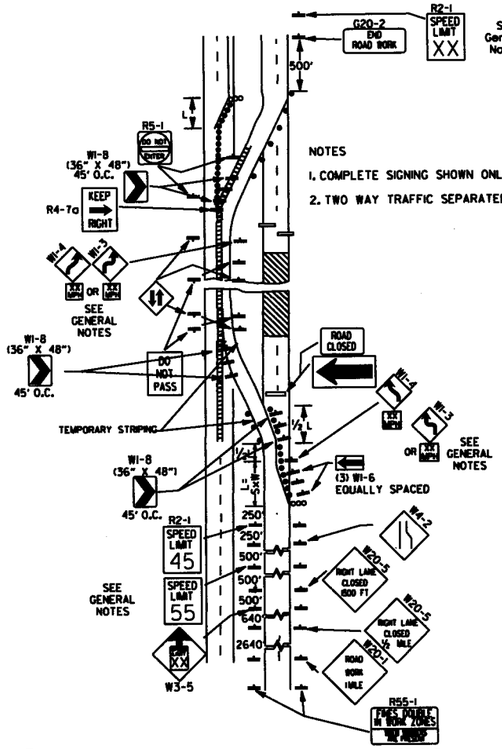
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

STANDARD DRAWING TC-1



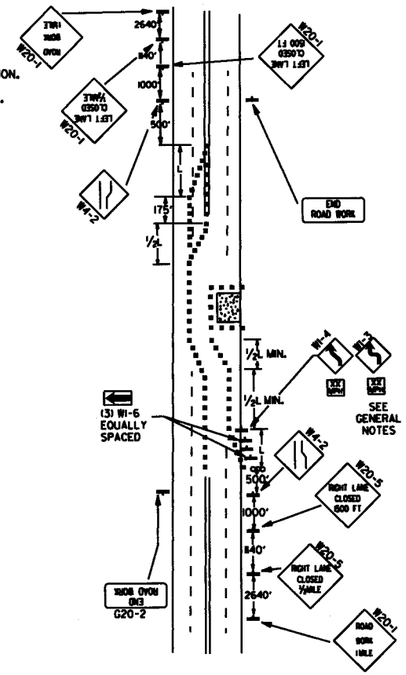
NOTES:
1. SIGNS SHOWN FOR ONE DIRECTION OF TRAVEL ONLY.
2. DELINEATORS ON BYPASS WHERE NEEDED.

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

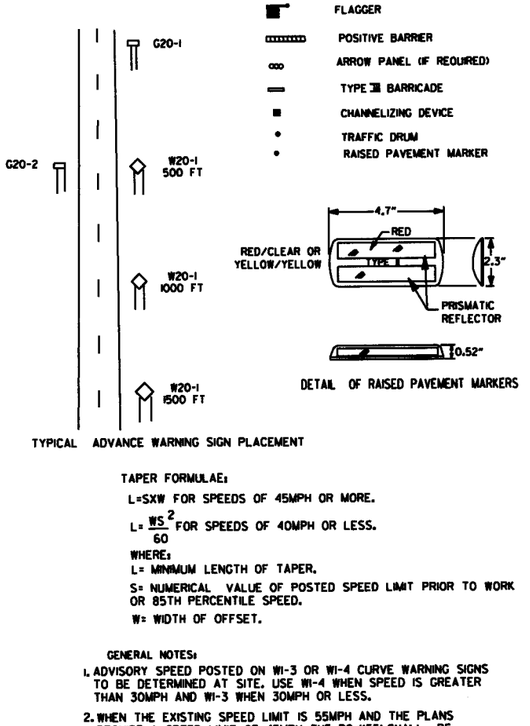


NOTES
1. COMPLETE SIGNING SHOWN ONLY IN CROSSOVER DIRECTION.
2. TWO WAY TRAFFIC SEPARATED WITH POSITIVE BARRIER.

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



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



DETAIL OF RAISED PAVEMENT MARKERS

TYPICAL ADVANCE WARNING SIGN PLACEMENT

TAPER FORMULAE:

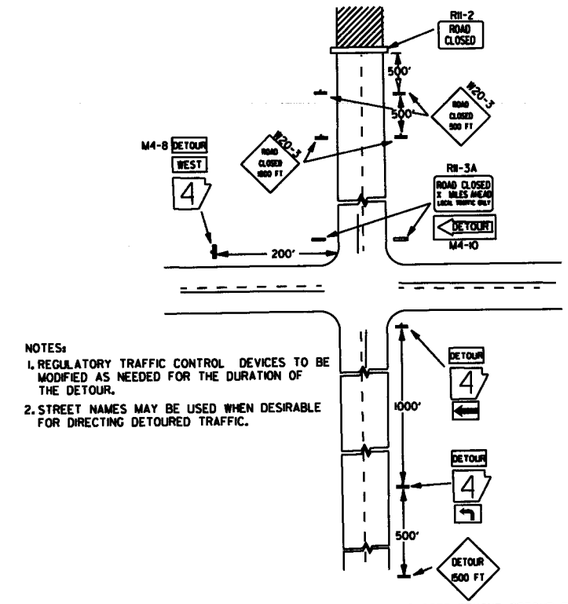
L=SXW FOR SPEEDS OF 45MPH OR MORE.

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

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

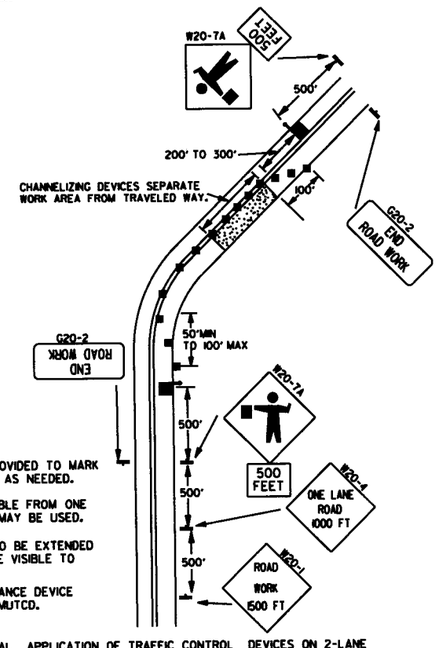
GENERAL NOTES:

1. ADVISORY SPEED POSTED ON W1-3 OR W1-4 CURVE WARNING SIGNS TO BE DETERMINED AT SITE. USE W1-4 WHEN SPEED IS GREATER THAN 30MPH AND W1-3 WHEN 30MPH OR LESS.
2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-K(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-(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-K(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-(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
4. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT. BEYOND THE TAPER, MAXIMUM SPACING SHALL BE TWO TIMES THE SPEED LIMIT, OR AS DIRECTED BY THE ENGINEER.
5. WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
6. PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICABLE.
7. TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE DELINEATED BY AFFIXING CONSPICUITY MATERIAL IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER. WHEN PLACED ON OR ADJACENT TO THE SHOULDER AND NOT BEHIND A POSITIVE BARRIER, THESE DEVICES SHALL BE DELINEATED BY PLACING FIVE (5) TRAFFIC DRUMS, EQUALLY SPACED ALONG THE TRAFFIC SIDE OF THE DEVICE.
8. DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING TO THE AHTD QUALIFIED PRODUCTS LIST.



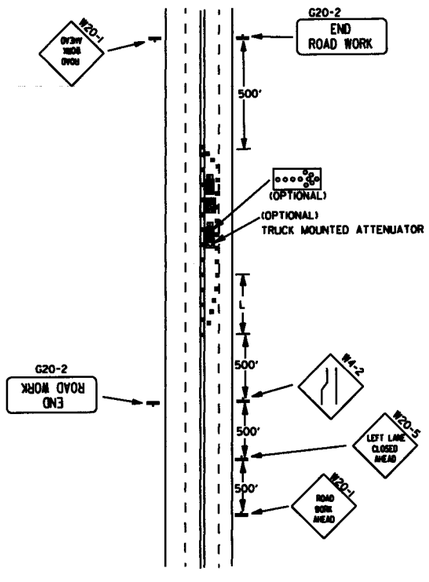
NOTES:
1. REGULATORY TRAFFIC CONTROL DEVICES TO BE MODIFIED AS NEEDED FOR THE DURATION OF THE DETOUR.
2. STREET NAMES MAY BE USED WHEN DESIRABLE FOR DIRECTING DETOURED TRAFFIC.

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



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

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



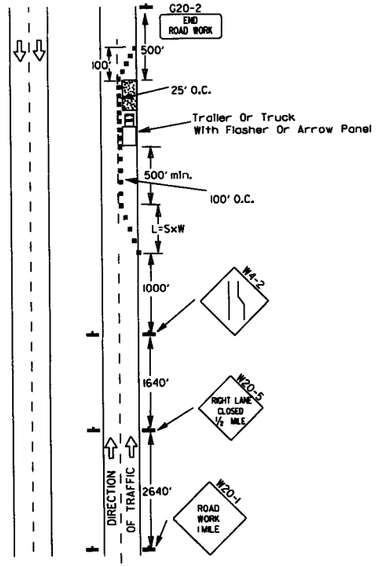
(F) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WITH INSIDE LANE CLOSED.

DATE	REVISION	FILMED
9-2-15	REVISED NOTE 2, ADDED NOTE 8, REVISED DRAWING (A) & REPLACED R2-5A WITH W3-5	
9-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKERS	
3-8-10	ADDED (AFAD)	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED GENERAL NOTE	
10-18-96	ADDED R55-1	
4-26-96	CORRECTED (a) BEHIND G20-2	
6-8-95	CORRECTED SIGN IDENT. ON W1-4A	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

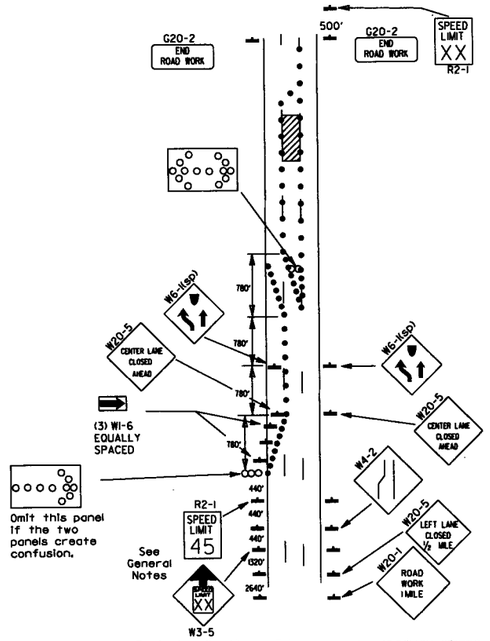
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

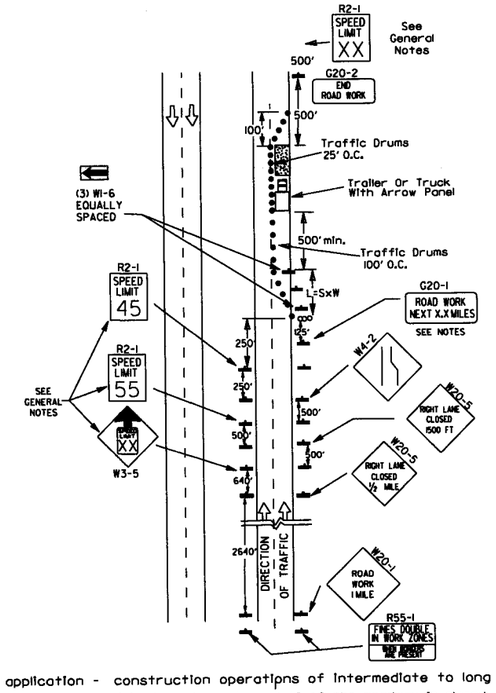
STANDARD DRAWING TC-2



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



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



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

KEY:

ooo Arrow Panel(if Required)

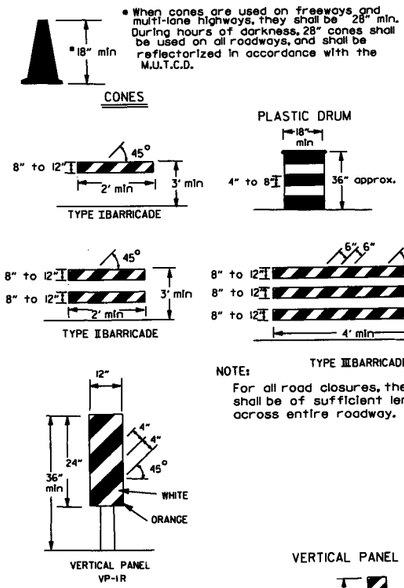
■ Channelizing Device

● Traffic drum

GENERAL NOTES:

1. A speed limit reduction may be implemented ONLY when designated in the plan or when recommended by the Roadway Design Division.
2. When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(55) shall be omitted and the W3-5 shall be installed at that location. Additional R2-1 45mph speed limit signs shall be installed at a maximum of 1 mile intervals. At the end of the work area a R2-1(XX) shall be installed to match original speed limit.
3. When the existing speed limit is 65mph and the plans require a speed limit of 55mph, the R2-1(45) shall be omitted. Additional R2-1 55mph speed limit signs shall be installed at a maximum of 1 mile intervals. At the end of the work area a R2-1(XX) shall be installed to match original speed limit.
4. The maximum spacing between channelizing devices in a taper should be approximately equal in feet to the speed limit. Beyond the taper, maximum spacing shall be two times the speed limit or as directed by the Engineer.
5. Warning lights and/or flags may be mounted to signs or channelizing devices at night as needed.
6. Pavement markings no longer applicable which might create confusion in the minds of vehicle operators shall be removed or obliterated as soon as practicable.
7. The G20-1 sign will be required on jobs of over two miles in length. When the lane closure is not at the beginning of the project, the G20-1 sign shall be erected 125' in advance of the job limit. Additional W20-1 (1 MILE) signs are not required in advance of lane closures that begin inside the project limits.
8. Flaggers shall use STOP/SLOW paddles for controlling traffic through work zones. Flags may be used only for emergency situations.
9. All plastic drums and cones shall meet the requirements of NCHRP-350 or Manual For Assessing Safety Hardware (MASH).
10. Trailer mounted devices such as arrow panels and portable changeable message signs shall be delineated by affixing conspicuity material in a continuous line on the face of the trailer. When placed on or adjacent to the shoulder and not behind a positive barrier, these devices shall be delineated by placing five (5) traffic drums, equally spaced along the traffic side of the device.

Channelizing devices



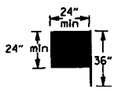
NOTE:
For all road closures, the Type III barricades shall be of sufficient length to extend across entire roadway.

TRAFFIC CONTROL DEVICES
FOR
VERTICAL PAVEMENT DIFFERENTIALS

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

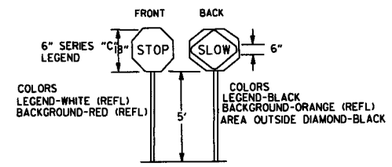
• When shown on the plans concrete barrier will be used.
When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.

FLAG

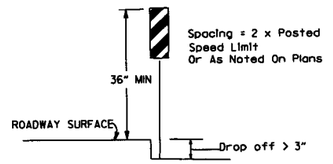


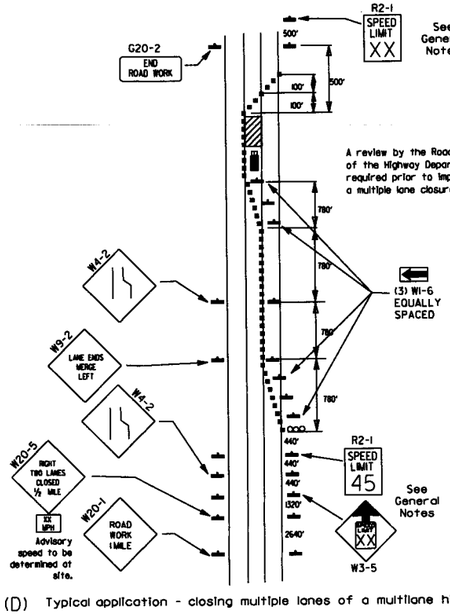
Flag shall be of good grade red material

STOP SLOW PADDLE



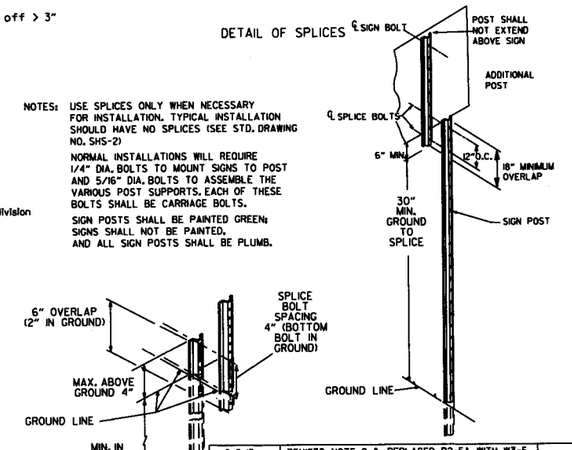
VERTICAL PANEL PLACEMENT





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

DETAIL OF SPLICES



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

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

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

DATE	REVISION	FILMED
9-2-15	REVISED NOTE 2 & REPLACED R2-5A WITH W3-5	
10-15-09	ADDED REFERENCE TO MASH	
8-20-08	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	

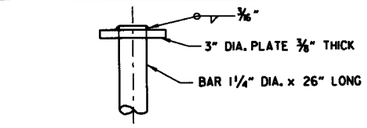
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

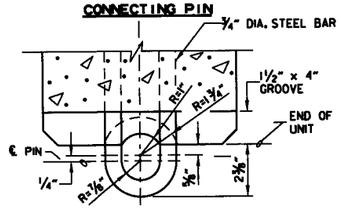
STANDARD DRAWING TC-3

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'-3" 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° 9 1/2" 2'-1 3/8" 4 3/8"

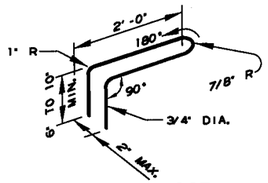


CONNECTING PIN

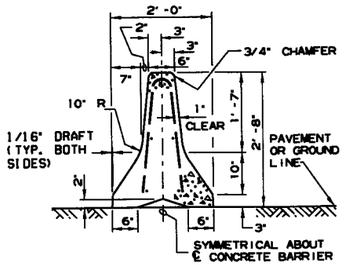


SECTION E-E

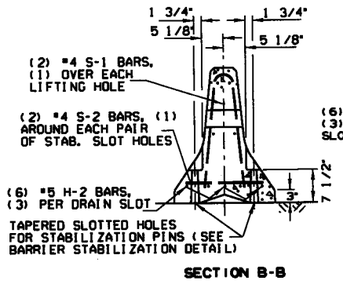
CONNECTION DETAILS



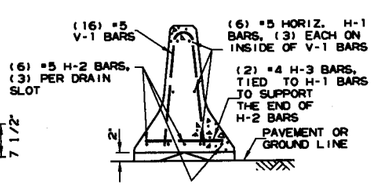
CONNECTION LOOP



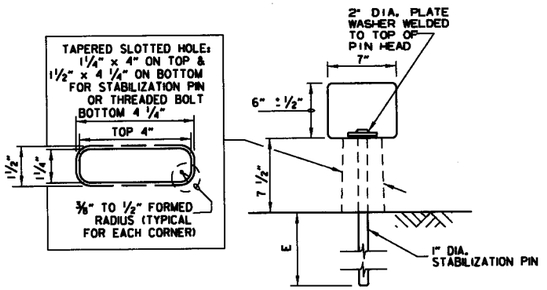
SECTION A-A



SECTION B-B



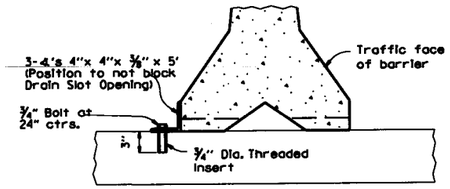
SECTION C-C



BARRIER STABILIZATION DETAIL

ROADWAY SECTION

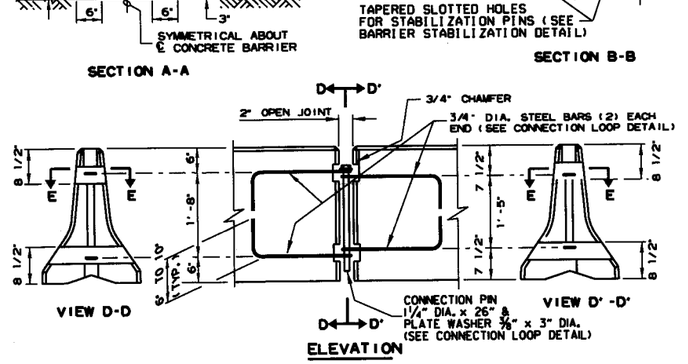
(E) 4" - Concrete Pavement
8" - Asphalt Pavement
12" - Shoulder Areas



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

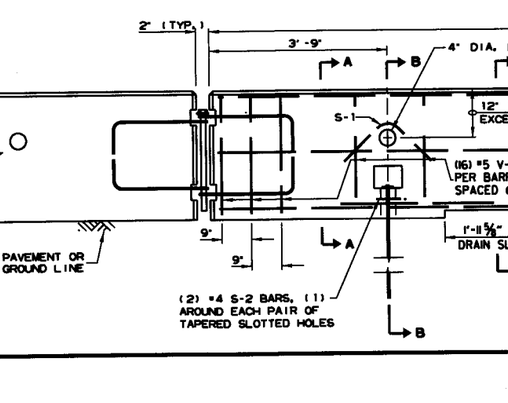
BARRIER STABILIZATION DETAIL

BRIDGE DECKS



ELEVATION - TYPICAL BARRIER

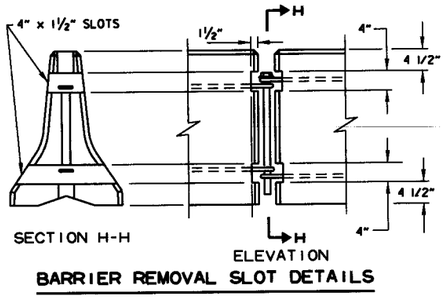
MASS: 3.9 tons PER PANEL



VIEW D-D

VIEW D'-D'

ELEVATION



BARRIER REMOVAL SLOT DETAILS

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

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

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

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

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

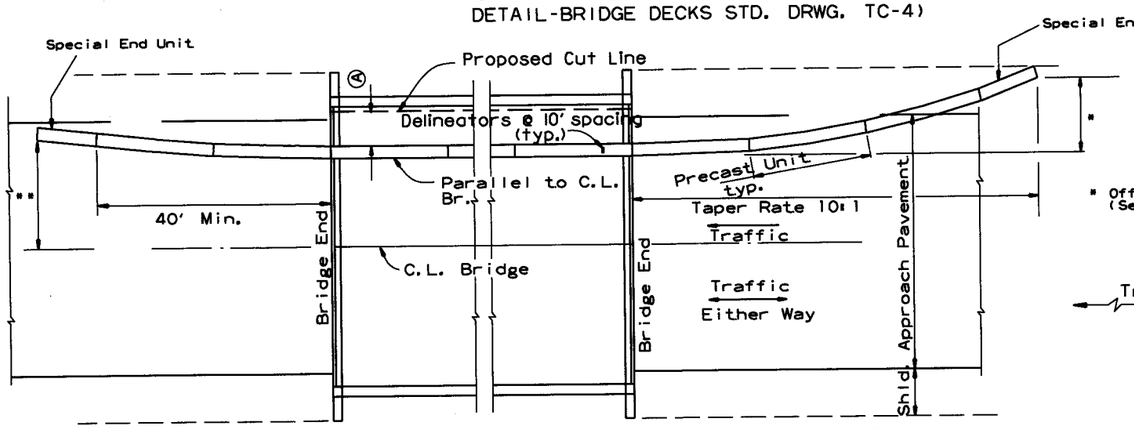
DATE	REVISION	FILMED
2-27-14	REVISED BARRIER STABILIZATION DETAIL	
10-15-09	ADDED REFERENCE TO MASH	
8-5-09	REV. NOTE 3 CONCERNING DRAIN SLOTS	
11-29-07	REVISED NOTE 3	
5-25-06	DELETED GENERAL NOTE 7	
11-18-04	REVISED BARRIER STABILIZATION DETAIL BRIDGE DECKS	
4-10-03	REVISED GENERAL NOTE 2	
8-22-02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

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

STANDARD DRAWING TC-4

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

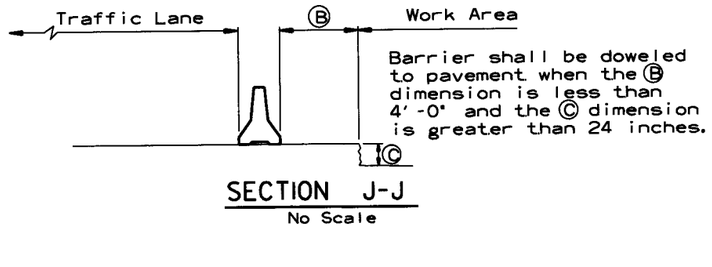


BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET

No Scale

* Offset Distance (See Table)

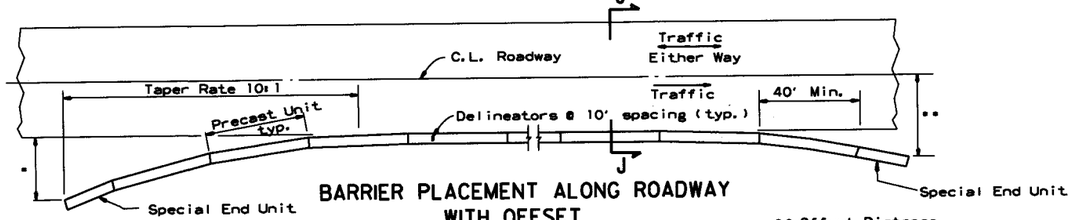
** Offset Distance for Two Way Traffic Only



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

SECTION J-J

No Scale



BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET

No Scale

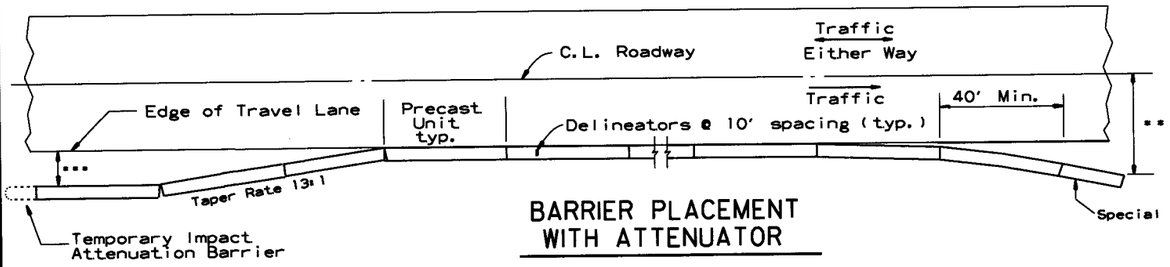
* Offset Distance (See Table)

** Offset Distance For Two Way Traffic Only

Offset Distance Table

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

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

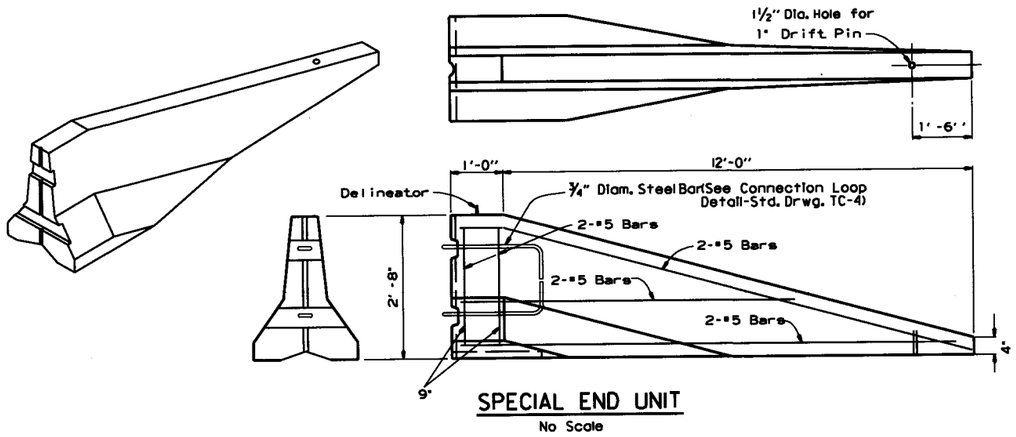


BARRIER PLACEMENT WITH ATTENUATOR

No Scale

** Offset Distance For Two Way Traffic Only

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



SPECIAL END UNIT

No Scale

General Notes

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

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

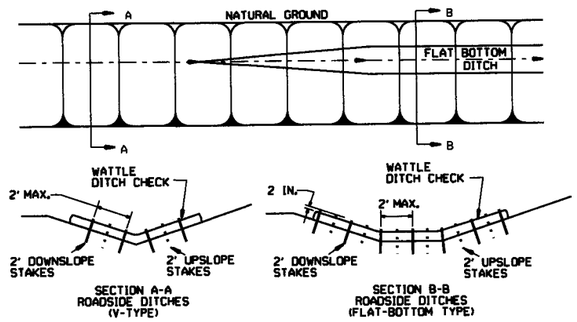
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

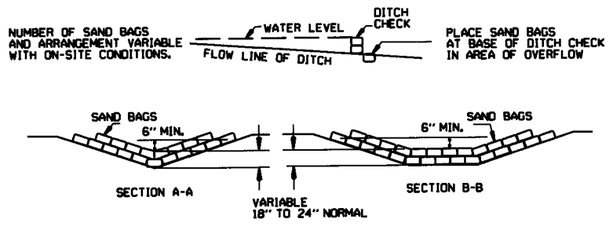
STANDARD DRAWING TC-5

GENERAL NOTES

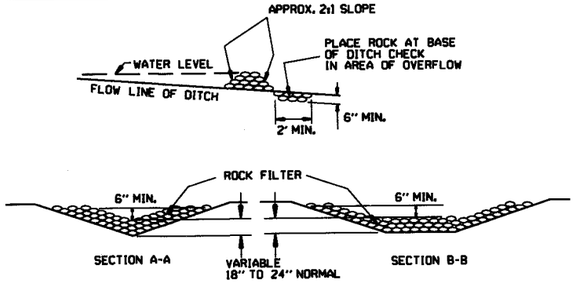
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



SAND BAG DITCH CHECK (E-5)

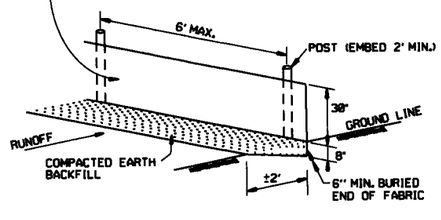


ROCK DITCH CHECK (E-6)

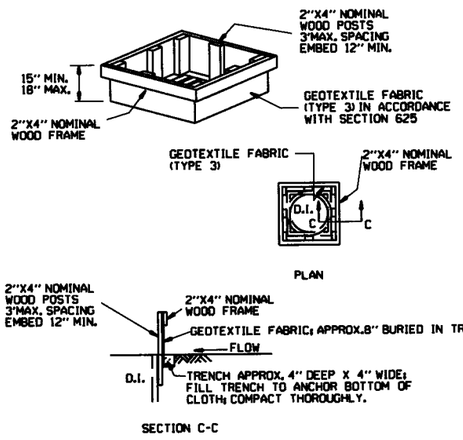
GENERAL NOTES

GEOTEXTILE FABRIC (TYPE 4) IN ACCORDANCE WITH SECTION 625

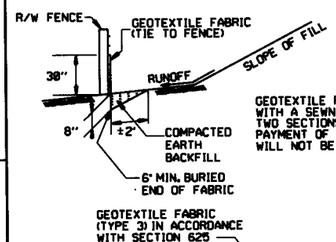
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.



SILT FENCE (E-11)

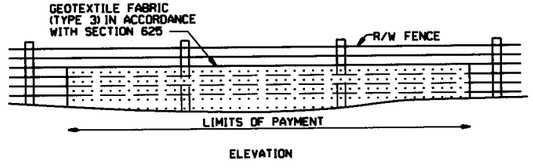


DROP INLET SILT FENCE (E-7)



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.



ELEVATION

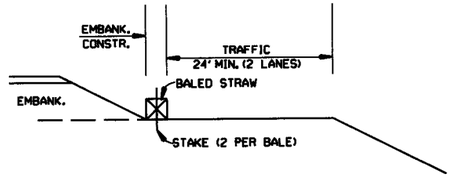
SILT FENCE ON R/W FENCE (E-4)

GENERAL NOTES

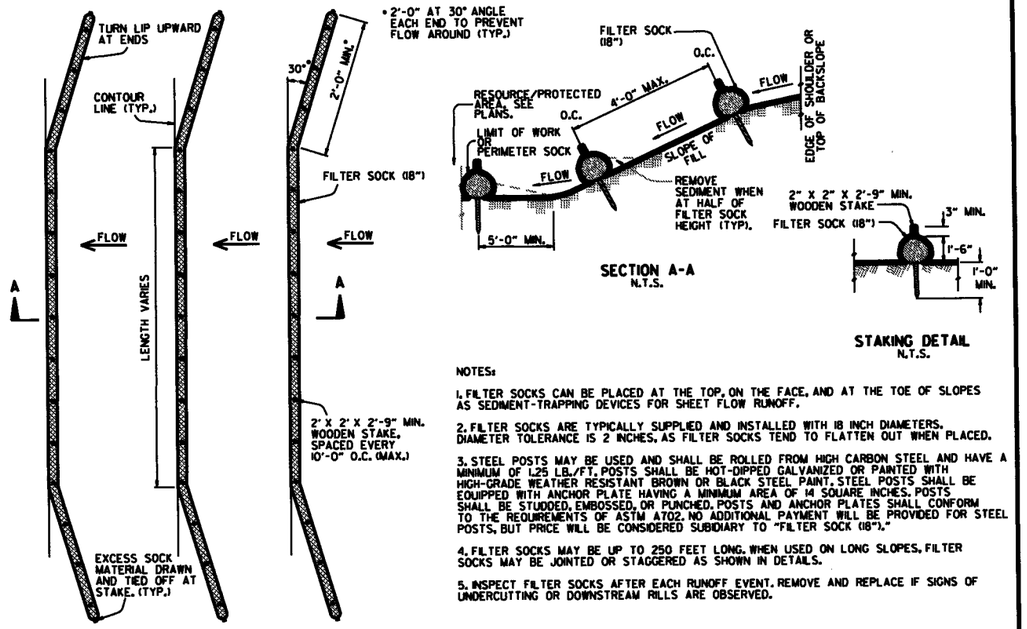
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.

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.

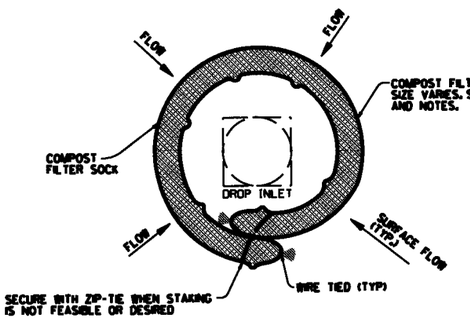
2. FILTER SOCKS ARE TYPICALLY SUPPLIED AND INSTALLED WITH 18 INCH DIAMETERS. DIAMETER TOLERANCE IS 2 INCHES, AS FILTER SOCKS TEND TO FLATTEN OUT WHEN PLACED.

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 SUBSIDIARY TO "FILTER SOCK (18")."

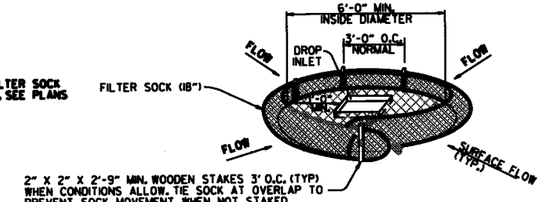
4. FILTER SOCKS MAY BE UP TO 250 FEET LONG. WHEN USED ON LONG SLOPES, FILTER SOCKS MAY BE JOINTED OR STAGGERED AS SHOWN IN DETAILS.

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.

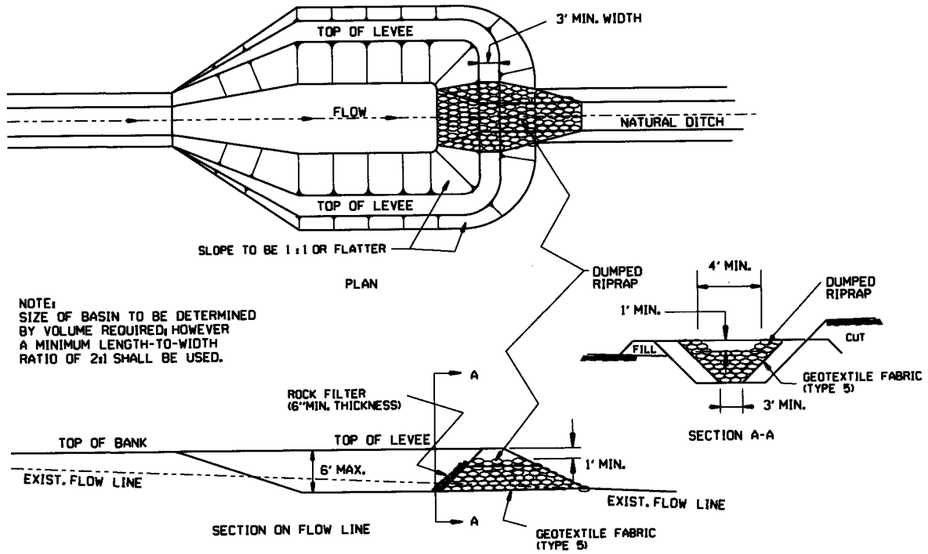
COMPOST FILTER SOCK DROP INLET PROTECTION (E-13)

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. 15" 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

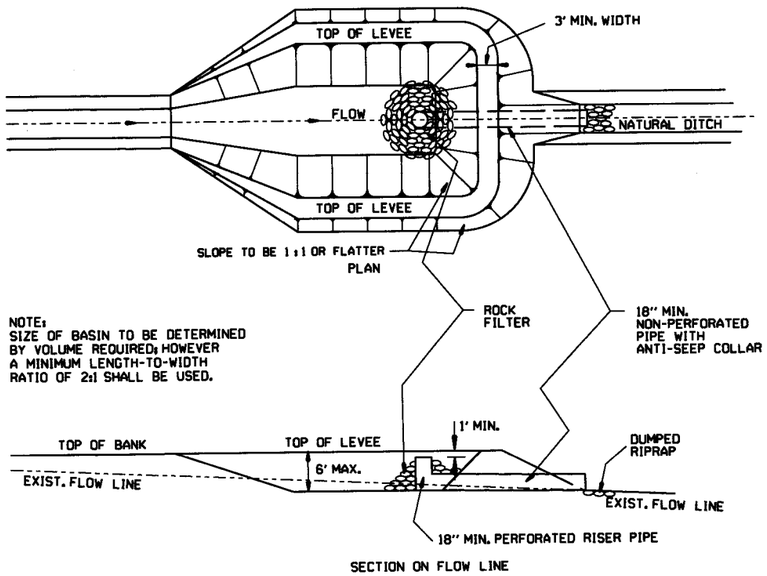
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

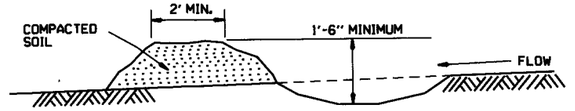
STANDARD DRAWING TEC-1



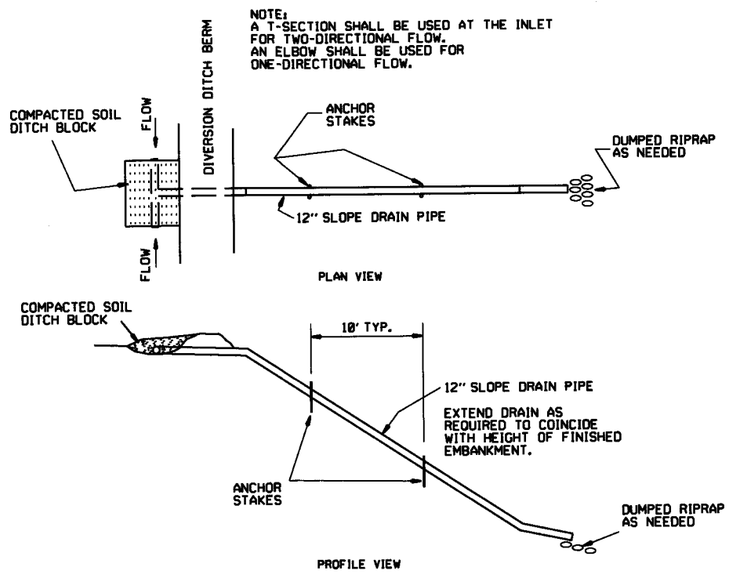
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



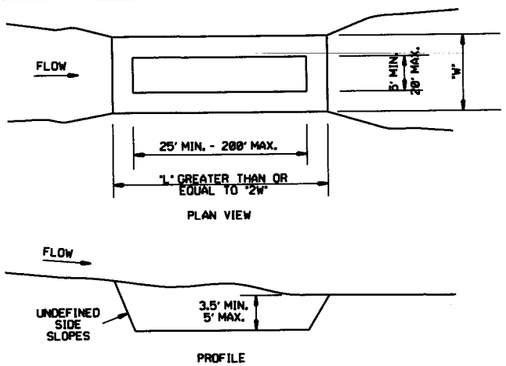
SEDIMENT BASIN WITH PIPE OUTLET (E-10)



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

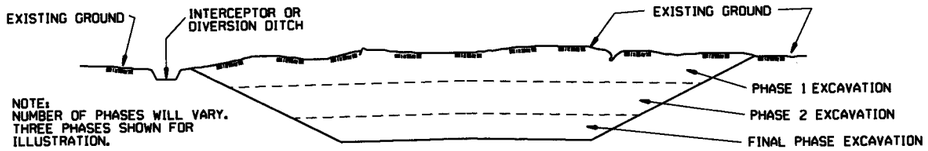
STANDARD DRAWING TEC-2

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



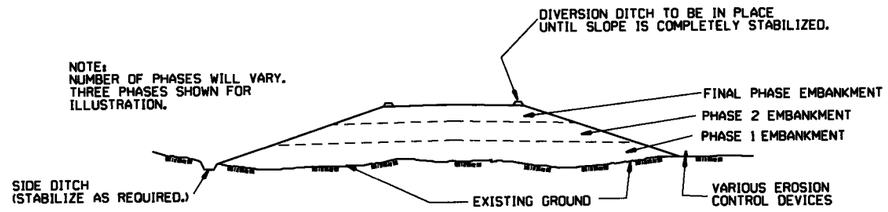
GENERAL NOTE

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

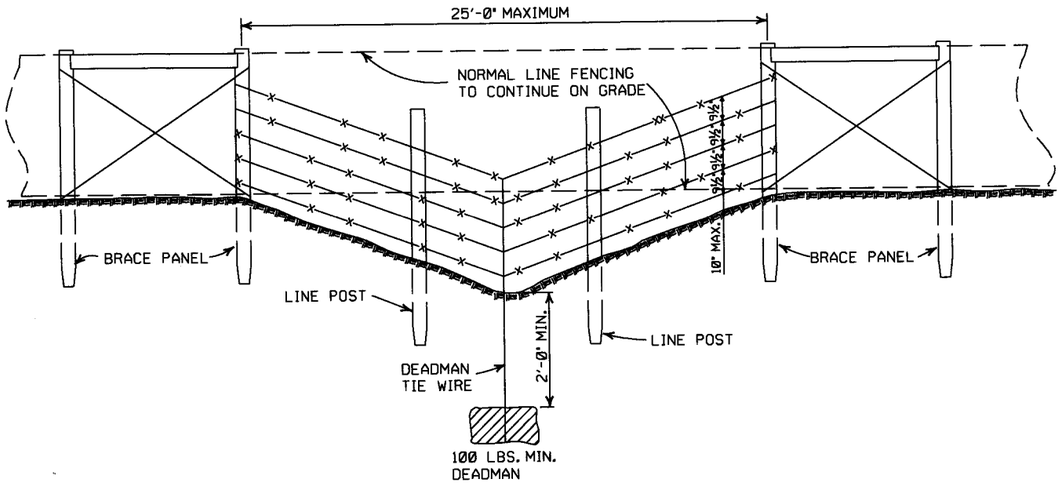
1. CONSTRUCT DIVERSION DITCHES, DITCH CHECKS, SEDIMENT BASINS, SILT FENCES, OR OTHER EROSION CONTROL DEVICES AS SPECIFIED.
2. PLACE PHASE 1 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD 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.

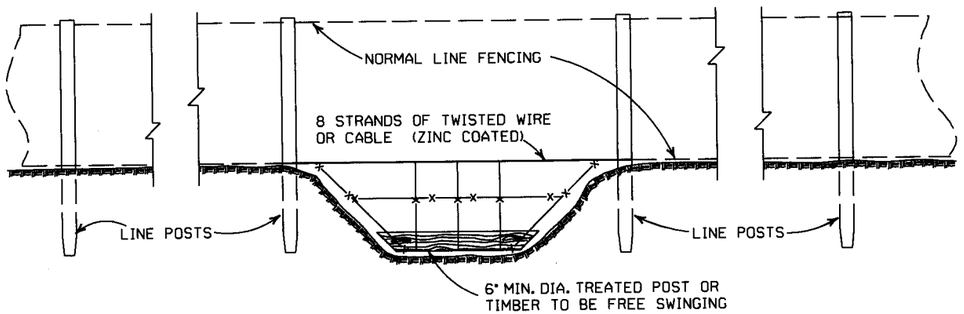
DATE	REVISION	FILMED
11-03-94	CORRECTED SPELLING	
6-2-94	Drawn & Issued	6-2-94

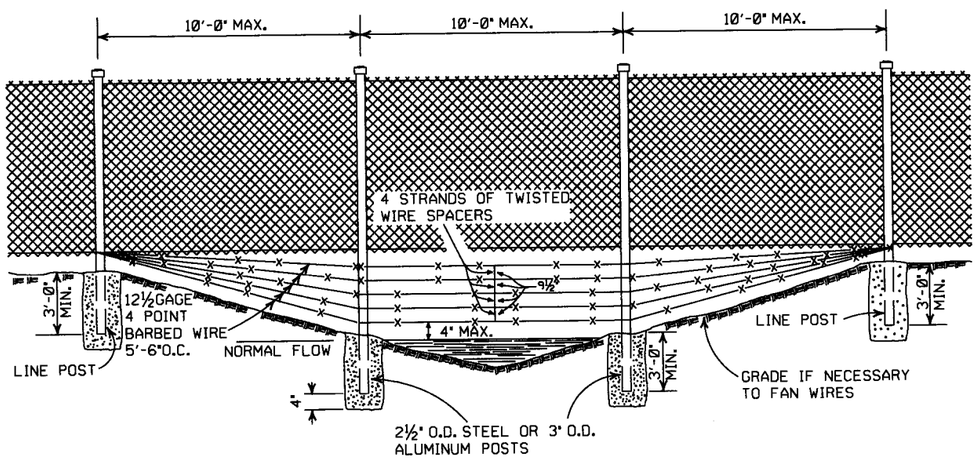
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-3







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.

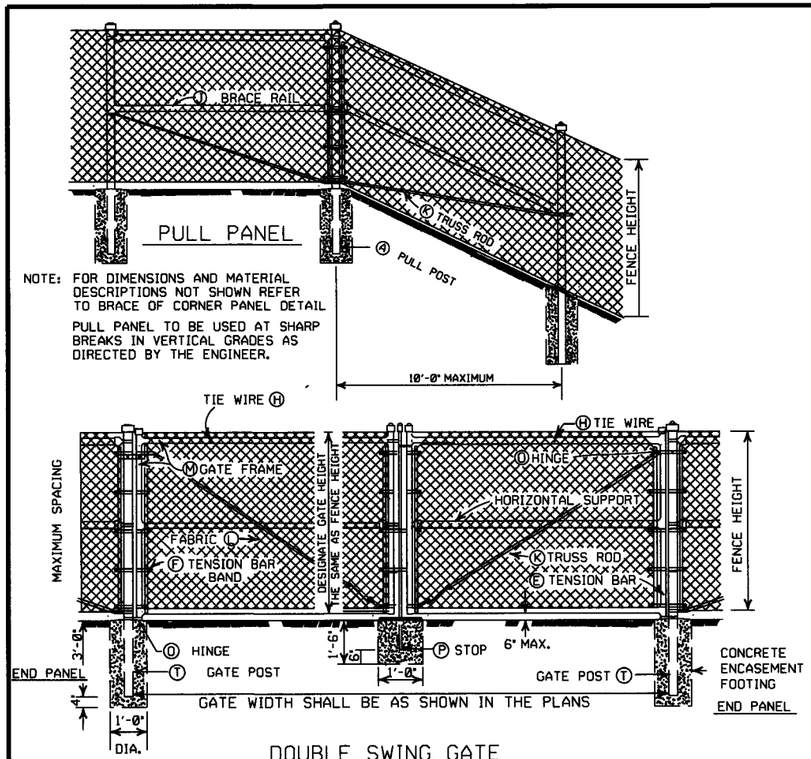
PAYMENT FOR THE TYPE INSTALLATION USED WILL NOT BE MADE DIRECTLY BUT WILL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR WIRE FENCE OR CHAIN LINK FENCE.

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

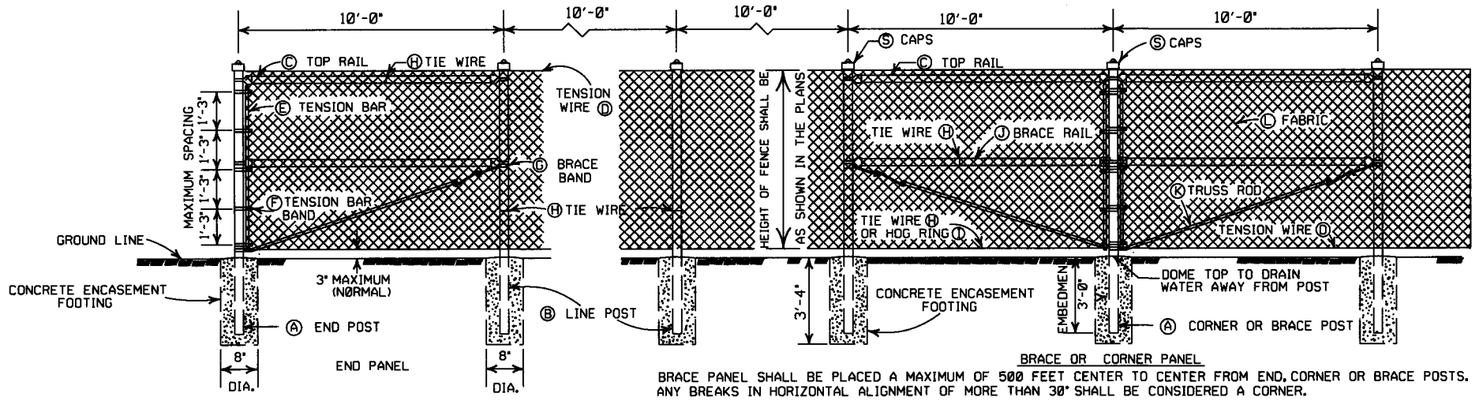
WIRE FENCE WATER GAPS

STANDARD DRAWING WF-2

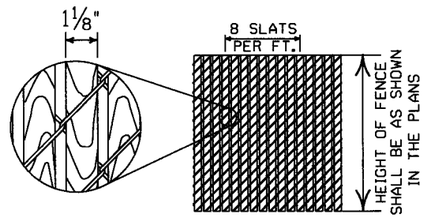


DOUBLE SWING GATE

POST SPACING DETAIL



BRACE PANEL SHALL BE PLACED A MAXIMUM OF 500 FEET CENTER TO CENTER FROM END, CORNER OR BRACE POSTS. ANY BREAKS IN HORIZONTAL ALIGNMENT OF MORE THAN 30° SHALL BE CONSIDERED A CORNER.



1⅛" X ¼" REDWOOD SLATS (LENGTH TO MATCH HEIGHT OF FENCE)

DETAIL OF REDWOOD SLAT INSTALLATION

(WHERE APPLICABLE)

HEIGHT OF FENCE FABRIC	Ⓐ END, PULL CORNER OR BRACE POST	Ⓑ LINE POSTS SIZE	Ⓑ LINE POSTS TIE SPACING	Ⓒ TOP RAIL SIZE	Ⓒ TOP RAIL TIE SPACING	Ⓒ TOP RAIL MIN. LENGTH	Ⓓ TENSION WIRE SIZE	Ⓓ TENSION WIRE TIE SPACING	Ⓔ TENSION BAR SIZE	Ⓔ TENSION BAR LENGTH	Ⓕ TENSION BAR BAND SIZE	Ⓕ TENSION BAR BAND BOLT SIZE	Ⓕ TENSION BAR BAND SPACING	Ⓖ BRACE BAND SIZE	Ⓖ BRACE BAND BOLT SIZE
6' AND LESS	2½" O.D.	2" O.D.	1 TIE EVERY 1'-2" OF FABRIC HEIGHT	1⅝" O.D.	1 TIE EVERY 2'-0"	10'-0"	7 GAUGE COIL SPRING WIRE	1 TIE EVERY 1'-0"	MIN. OF 3/16" x ¾"	MIN. OF 2" LESS THAN FABRIC HEIGHT	MIN. OF ¾" x 0.074	⅝" X 1¼"	1 BAND AT TOP AND BOTTOM 15" MAX. INTERVAL BETWEEN BANDS	MIN. OF ¾" x 0.105	⅝" X 1¼"
OVER 6' TO 12' INCL.	3 " O.D.	2½" O.D.													

HEIGHT OF FENCE FABRIC	Ⓗ TIE WIRE	Ⓘ HOG RING	Ⓙ BRACE RAIL SIZE	Ⓙ BRACE RAIL TIE SPACING	Ⓚ TRUSS ROD	Ⓛ FABRIC SIZE	Ⓛ FABRIC MESH	Ⓛ FABRIC SELVAGE	Ⓜ GATE FRAME SIZE	Ⓜ GATE FRAME TIE SPACING	Ⓝ HORIZONTAL SUPPORT SIZE	Ⓝ HORIZONTAL SUPPORT TIE SPACING	Ⓞ HINGE TYPE 180° SWING	Ⓣ GATE POST GATE WIDTH 12' AND LESS	Ⓣ GATE POST GATE WIDTH OVER 12' TO 24' INCL.
6' AND LESS	MIN. OF 12 GA. STEEL OR 9 GA. ALUM.	SAME GAUGE AS FABRIC	1⅝" O.D.	1 TIE EVERY 2'-0"	MIN. OF 5/16" ROUND WITH TIGHTNERS AND FITTINGS	9 GA.	2"	KNUCK-ING AND/OR TWIST-ING	2" O.D.	1 TIE EVERY 1'-0"	2" O.D.	1 TIE EVERY 1'-0"	OFFSET	3" O.D.	4" O.D.
OVER 6' TO 12' INCL.														4" O.D.	

NOTE: POST SIZES SHOWN ARE FOR STEEL. WHERE ALUMINUM IS PROVIDED, LINE POSTS SHALL HAVE AN OUT SIDE DIAMETER OF 2½" FOR FENCE HEIGHT OF 6' AND LESS. AN OUTSIDE DIAMETER OF 3" FOR FENCE HEIGHT OF 6' TO 12'. END, PULL, CORNER OR BRACE POSTS SHALL HAVE AN OUTSIDE DIAMETER OF 3" FOR FENCE HEIGHT OF 6' AND LESS; AN OUTSIDE DIAMETER OF 3½" FOR FENCE HEIGHTS OF 6' TO 12'. GATE POSTS WHERE GATE WIDTH IS 12' AND LESS SHALL HAVE AN OUTSIDE DIAMETER OF 3½" FOR FENCE HEIGHT OF 6' AND LESS. ALUMINUM TENSION WIRE SHALL BE 0.192" IN DIAMETER. MINIMUM THICKNESS OF MATERIAL FROM WHICH EXPANSION SLEEVES SHALL BE MADE WILL BE 0.078". POSTS AND RAILS MAY HAVE ANY CROSS-SECTIONAL SHAPE THAT WILL MEET THE SPECIFICATIONS.

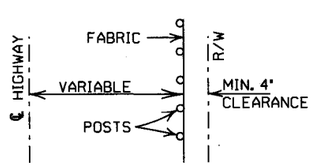
OTHER DETAILS APPLY TO BOTH STEEL AND ALUMINUM FENCE.

ALL MISCELLANEOUS FITTINGS AND HARDWARE SHALL MEET THE REQUIREMENTS AND PRODUCTION TOLERANCES AS SET FORTH IN THE SPECIFICATIONS. 9 GAUGE ALUMINUM WIRE SHALL BE ACCEPTABLE FOR TIEING FABRIC TO TUBULAR AND ROLL FORMED MEMBERS OF STEEL FENCE.

POSTS AND RAILS

SIZE O.D.	GRADE 1 AND ALUMINUM ALLOY O.D. INCHES	WALL THICKNESS	LBS. PER LINEAR FT. STEEL	LBS. PER LINEAR FT. ALUMINUM	GRADE 2 O.D. INCHES	WALL THICKNESS	LBS. PER LINEAR FT.
1⅝	1.660	0.140	2.27	0.786	1.660	0.111	1.84
2	1.900	0.145	2.72	0.940	1.900	0.120	2.28
2½	2.375	0.154	3.65	1.264	2.375	0.130	3.11
3	2.875	0.203	5.79	2.004	2.875	0.160	4.64
3½	3.500	0.216	7.58	2.621	3.500	0.160	5.71
4	4.000	0.226	9.11	3.151	4.000	0.160	6.56

TOLERANCES ON DIMENSIONS AND WEIGHTS ACCORDING TO AASHTO M 181



INSTALLATION MAY BE MODIFIED AS SHOWN IN THE PLANS

TYPICAL INSTALLATION DIAGRAM

GENERAL NOTES:

(C) CHAIN LINK FENCE BEING PLACED ON PRIVATE PROPERTY SHALL INCLUDE A TOP RAIL. ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER LIN. FT. OF CHAIN LINK FENCE.

(D) TENSION WIRE: SHALL BE SECURED TO ALL TERMINAL, PULL, BRACE OR CORNER POSTS WITH TENSION BAR BANDS.

(J) BRACE RAIL: BRACE RAILS SHALL BE PROVIDED AT ALL TERMINAL, PULL, BRACE OR CORNER POSTS HALFWAY BETWEEN THE TOP RAIL AND GROUND LEVEL WHEN TOPRAIL IS SPECIFIED AND TWELVE INCHES (12") DOWN FROM TOP OF FABRIC WHEN TOP TENSION WIRE IS SPECIFIED. BRACE RAIL SHALL EXTEND FROM SUCH POST TO THE FIRST ADJACENT LINE POST.

(L) FABRIC: SHALL CONFORM TO THE SPECIFICATIONS.

(M) GATE FRAMES: SHALL BE CONSTRUCTED OF TUBULAR MEMBERS ASSEMBLED BY USE OF HEAVY PRESSED STEEL, MALLEABLE FITTINGS OR BY WELDING. ALL GATES SHALL HAVE ONE HORIZONTAL SUPPORT EXTENDING THE WIDTH OF THE GATE AT THE MIDPOINTS OF VERTICAL FRAME MEMBERS. THE COMPLETE FRAME SHALL BE RIGID AND HAVE AMPLE STRENGTH TO BE FREE FROM SAG AND TWIST.

(O) HINGES: SHALL BE OF HEAVY PATTERN, OF ADEQUATE STRENGTH FOR GATE, AND WITH LARGE BEARING SURFACES FOR CLAMPING IN POSITION. THE HINGE SHALL BE OF THE PROPER TYPE TO ALLOW FOR THE DESIGNATED DEGREE OF SWING. THE HINGE SHALL NOT TWIST OR TURN UNDER THE ACTION OF THE GATE. THE GATES SHALL BE CAPABLE OF BEING OPENED AND CLOSED EASILY BY ONE PERSON.

(P) LATCHES AND STOPS: SHALL BE PROVIDED FOR ALL GATES. GATES SHALL HAVE A DROP BAR LATCH. LATCHES SHALL BE ARRANGED FOR LOCKING. THE STOP FOR DROP BAR LATCHES SHALL BE SET IN CONCRETE AND ENGAGE THE PLUNGER OF THE BAR LATCH.

(S) CAPS: ALL POSTS, EXCEPT ROLL FORMED POSTS AND "T" POSTS SHALL BE CAPPED OVER THE EXTERIOR OF THE POST, AND SHALL CONFORM TO ASTM F626.

CONCRETE REQUIRED FOR THE EMBEDMENT OF ALL POSTS SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR CHAIN LINK FENCE.

POSTS SHALL BE SPACED EQUIDISTANT ON A MAXIMUM OF 10' CENTERS.

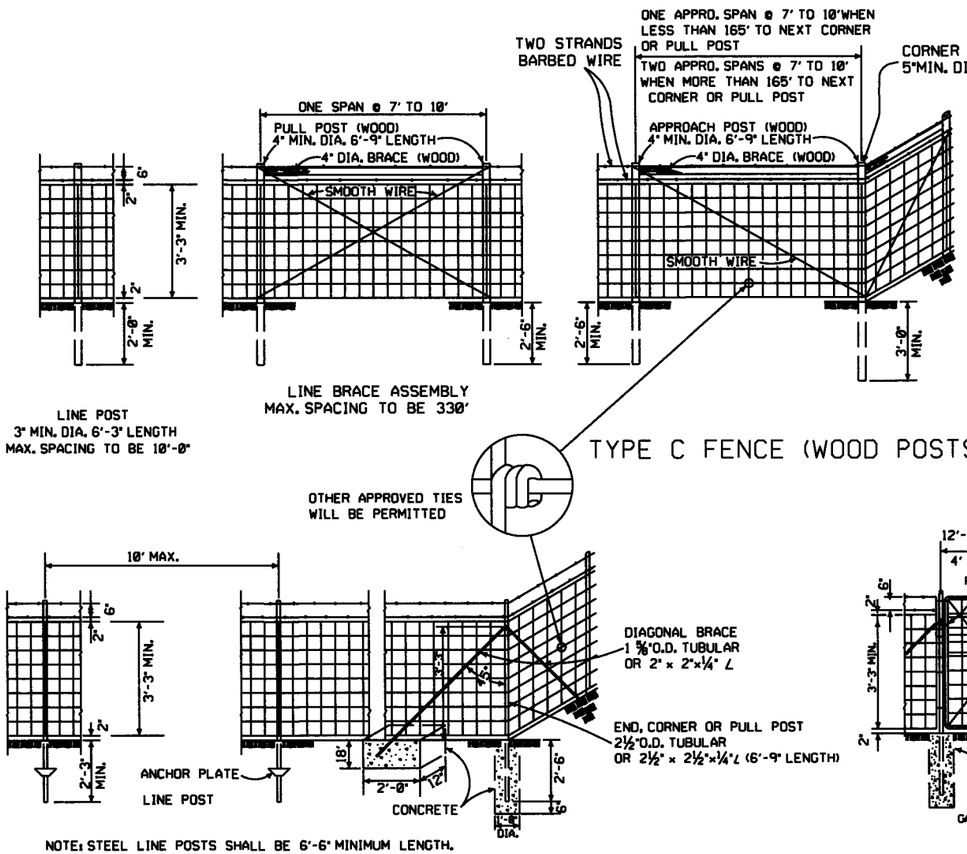
EXCAVATION FOR POSTS: IN OTHER THAN ROCK SHALL BE OF THE DIMENSIONS INDICATED. IF ROCK IS ENCOUNTERED BEFORE REACHING THE REQUIRED DEPTH, THE EXCAVATION SHALL BE CONTINUED TO THE DEPTH INDICATED OR 1'-6" INTO THE ROCK, WHICHEVER IS LESS, AND SHALL BE A MINIMUM OF 8 INCHES IN DIAMETER.

DATE	REVISION	FILMED
11-17-10	REVISED TRUSS ROD	
12-10-09	REVISED POSTS & RAILS TABLE	
5-21-09	ADDED TABLE & GEN. NOTE (C)	
8-22-02	REVISED NOTES, REMOVED TABLE, & REMOVED FENCE ALTERNATE	
4-3-97	REVISED BRACE RAIL NOTE	
10-18-96	REVISED AASHTO & ASTM REF.	
11-3-94	REVISED NOTE (L)	
10-1-92	DELETED ALTERNATE POST	10-1-92
8-15-91	DELETED ROLL FORMED POST DETAIL & ADDED NOTE	8-15-91 8-15-91
11-30-89	DELETED CLASS CONCRETE	11-30-89
11-17-88	REVISED O.D. SIZES	668-11-17-88
10-30-87	GENERAL REVISIONS	548-10-30-87
4-20-79	REVISED TOP RAIL & TENSION WIRE	695-4-20-79
10-2-72	REVISED AND REDRAWN	530-10-2-72

ARKANSAS STATE HIGHWAY COMMISSION

CHAIN LINK FENCE

STANDARD DRAWING WF-3



GENERAL NOTES:

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

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

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

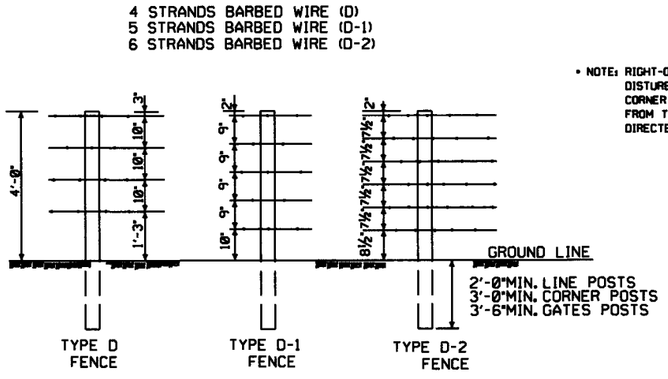
AT STREAM CROSSINGS, THE FENCE SHALL NOT BE CONSTRUCTED ACROSS LARGE STREAMS. WHERE CLEARANCE IS SUFFICIENT FROM THE TOP OF THE BANK TO THE BRIDGE STRUCTURE A CROSS CONNECTION SHALL BE CONSTRUCTED BETWEEN THE FENCE ON EACH SIDE OF THE ROAD. WHERE THE CLEARANCE IS NOT SUFFICIENT, THE FENCE SHALL BE TERMINATED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

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

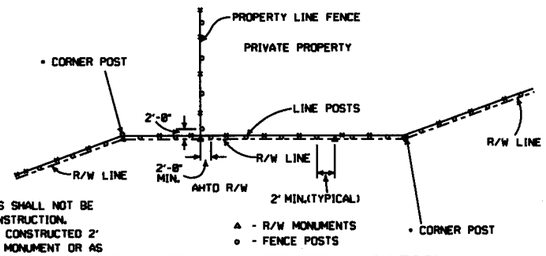
SPLICE FOR WOVEN WIRE BETWEEN PULL POST SHALL BE BY THE "WESTERN UNION METHOD" AS DESCRIBED AS FOLLOWS: THE VERTICAL WIRES FOR EACH END OF THE FENCE FABRIC SHALL BE PLACED SIDE BY SIDE AND THE PROJECTING HORIZONTAL WIRES SHALL BE WRAPPED A MINIMUM OF 4 TIMES AROUND THE HORIZONTAL WIRES OF THE FIRST WEB.

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

TYPE C FENCE (STEEL POSTS)

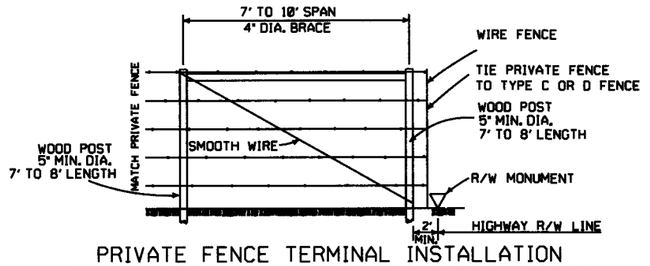


NOTE: SPACING AND SIZE (EXCEPT LENGTH) OF POSTS, APPROACH SPANS, PULL POST ASSEMBLIES, AND CORNER BRACING FOR TYPE D FENCE SHALL CONFORM TO TYPE C FENCE. USE GALVANIZED STAPLES ON WOOD POSTS AND APPROVED FASTENERS ON STEEL POSTS.



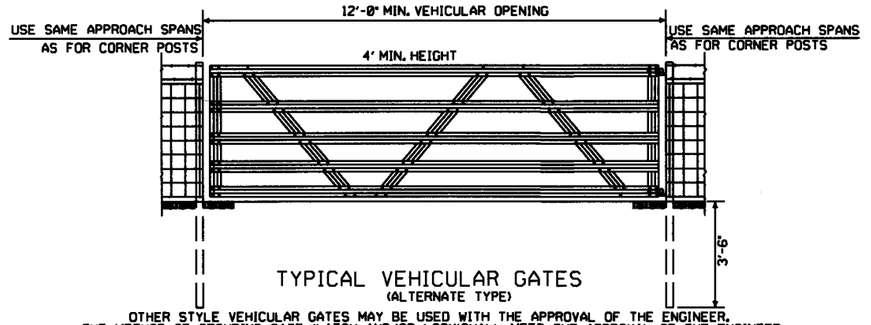
• NOTE: RIGHT-OF-WAY MONUMENTS SHALL NOT BE DISTURBED BY FENCE CONSTRUCTION. CORNER POSTS SHALL BE CONSTRUCTED 2' FROM THE RIGHT-OF-WAY MONUMENT OR AS DIRECTED BY THE ENGINEER.

RIGHT-OF-WAY FENCE LOCATION



PRIVATE FENCE TERMINAL INSTALLATION

WHERE EXISTING FENCE CONSISTS OF STEEL POSTS, USE END POST ASSEMBLY AS SHOWN IN TYPE C FENCE OR OTHER END POST ASSEMBLY AS APPROVED BY THE ENGINEER.



TYPICAL VEHICULAR GATES
(ALTERNATE TYPE)

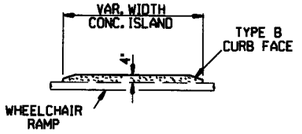
OTHER STYLE VEHICULAR GATES MAY BE USED WITH THE APPROVAL OF THE ENGINEER. THE METHOD OF SECURING GATE (LATCH AND/OR LOCK) SHALL MEET THE APPROVAL OF THE ENGINEER.

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

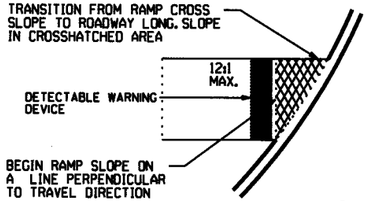
ARKANSAS STATE HIGHWAY COMMISSION

WIRE FENCE TYPE C AND D

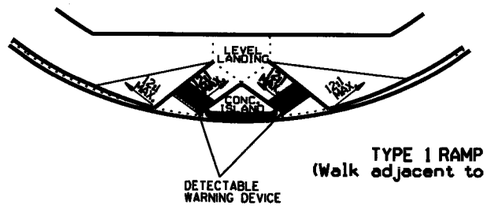
STANDARD DRAWING WF-4



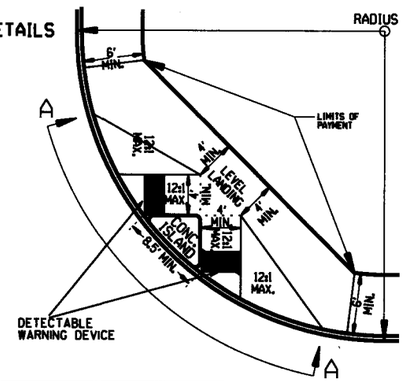
CONCRETE ISLAND DETAIL

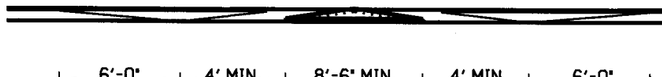


SLOPE TRANSITION DETAILS



TYPE 1 RAMP
(Walk adjacent to curb)

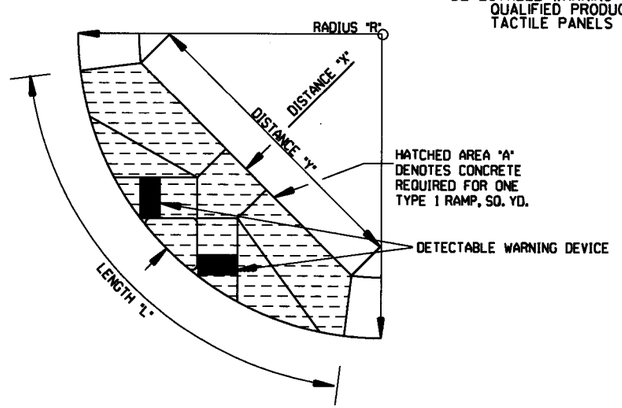




SECTION A-A

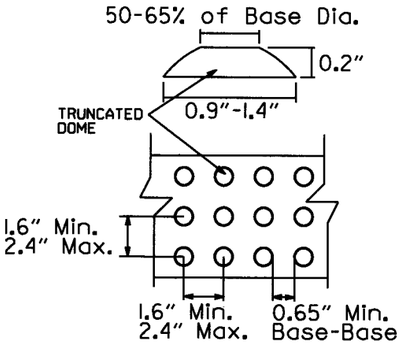
TYPE 1 RAMP DIMENSIONS AND QUANTITIES

RADIUS "R" FEET	DISTANCE "X" FEET	DISTANCE "Y" FEET	LENGTH "L" FEET	RAMP AREA "A" SQ. YD.
15	11.67	18.82	32.18	26.21
20	11.52	22.28	35.46	30.07
25	11.43	26.60	38.77	33.80
30	11.37	30.26	40.93	36.90
35	11.33	33.51	43.11	39.77
40	11.30	36.45	45.26	42.45
45	11.27	39.16	47.34	44.97
50	11.25	41.69	49.36	47.35
55	11.24	44.07	51.31	49.63
60	11.22	46.33	53.21	51.80



GENERAL NOTES FOR DETECTABLE WARNING DEVICES

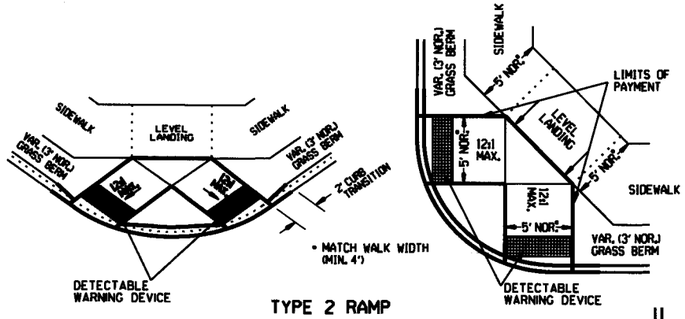
THE DETECTABLE WARNING DEVICE SHALL BE LOCATED SO THAT THE NEAREST EDGE OF THE DEVICE IS 6 TO 8 INCHES FROM THE FACE OF THE CURB.
TRUNCATED DOMES IN THE DETECTABLE WARNING SURFACE SHALL MEET THE REQUIREMENTS OF THE GEOMETRIC CONFIGURATION SHOWN.
DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.
DETECTABLE WARNING DEVICE SHALL BE 24 INCHES IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE.
DETECTABLE WARNING DEVICE SHALL BE ON THE AHTD QUALIFIED PRODUCTS LIST FOR CAST-IN-PLACE TACTILE PANELS (ADA DETECTABLE WARNING).



DETECTABLE WARNING DEVICE DETAIL

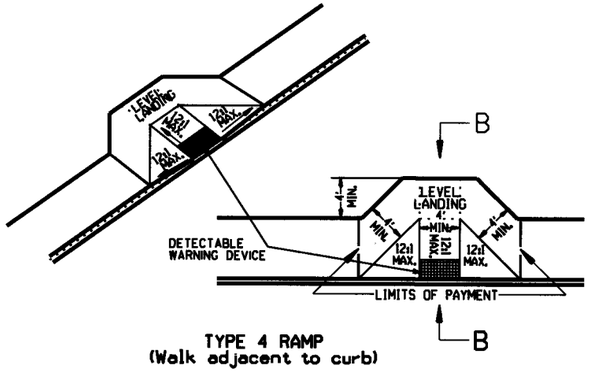
GENERAL NOTES:

IN NEW CONSTRUCTION, UNLESS OTHERWISE INDICATED ON THE PLANS, WHEELCHAIR RAMPS ARE TO BE PROVIDED AT ALL CORNERS OF CURBED STREET INTERSECTIONS AND MID-BLOCK CROSSWALK LOCATIONS.
IN ALTERATIONS WHEELCHAIR RAMPS ARE TO BE PROVIDED AT CURBED STREET INTERSECTIONS WITH PEDESTRIAN TRAFFIC AND MID-BLOCK CROSSWALK LOCATIONS.
THE LENGTH OF THE RAMP SHALL BE SUCH THAT THE SLOPE DOES NOT EXCEED 12:1. THE SURFACE TEXTURE OF THE RAMP SHALL CONFORM TO A CLASS 6 FINISH ACCORDING TO SECTION 802.19.
THE NORMAL GUTTER GRADE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP.
ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION.
THE MINIMUM THICKNESS OF THE RAMP, WALK, & LANDING SHALL BE 4".
THE MINIMUM WIDTH OF THE RAMPS SHALL BE THE WALK WIDTH OR 36", WHICHEVER IS GREATER.
RAMPS SHALL BE MODIFIED AS NECESSARY TO INSURE THAT THEY ARE PARALLEL TO A LINE DRAWN FROM THE CENTER OF ONE RAMP TO THE CENTER OF THE RAMP ON THE OPPOSITE SIDE OF THE INTERSECTION.
THE DIMENSIONS AND QUANTITIES SHOWN ON THIS DRAWING ARE FOR A 90° INTERSECTION ONLY. DIMENSIONS AND QUANTITIES FOR SKEWED INTERSECTIONS WILL VARY, AND ARE TO BE DETERMINED BY THE ENGINEER.

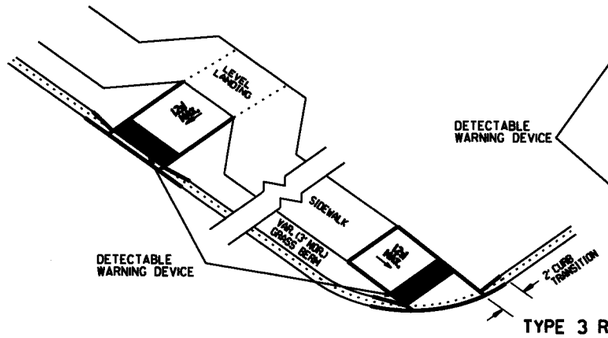


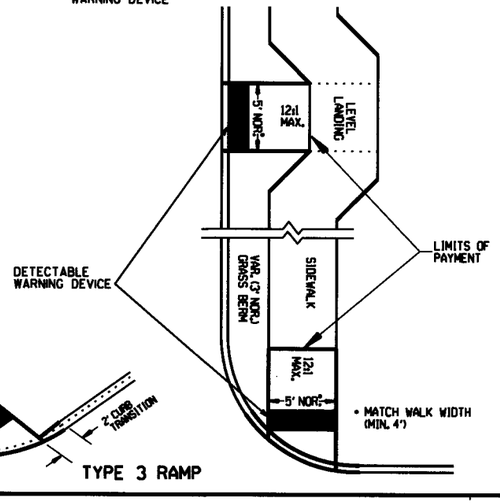
TYPE 2 RAMP

NOTE:
THE CROSS SLOPE OF THE RAMPS, LEVEL LANDINGS, AND SIDEWALKS SHALL NOT EXCEED 2.0% UNLESS REQUIRED TO MATCH STREET LONGTITUDINAL GRADE.

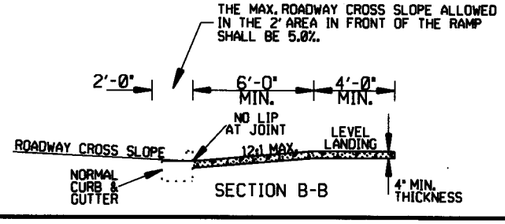


TYPE 4 RAMP
(Walk adjacent to curb)





TYPE 3 RAMP



SECTION B-B

RAMP SELECTION CRITERIA

FIRST CHOICE	TYPE 1	CORNER LOCATIONS WITH THE WALK ADJACENT TO THE CURB (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 2	CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE INSUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 3	CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE SUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 4	TANGENT LOCATIONS (BOTH NEW CONSTRUCTION AND ALTERATIONS).
SECOND CHOICE	TYPE 5	TANGENT LOCATIONS (ALTERATIONS ONLY).
THIRD CHOICE	TYPE 6	CORNER LOCATIONS (ALTERATIONS ONLY). THIS RAMP MAY BE USED ONLY IF THE TYPE 5 RAMPS CANNOT BE PLACED AT THE ENDS OF THE RADIUS.
FOURTH CHOICE		IF SITE CONSTRAINTS PREVENT THE CONSTRUCTION OF ANY OF THE TYPES LISTED, THEN AND ONLY THEN CAN THE 12:1 MAX. SLOPE ON THE RAMP BE EXCEEDED TO PROVIDE ACCESS TO THE STREET LEVEL (ALTERATIONS ONLY). THE SLOPE CAN BE STEEPENED TO A 10:1 MAX. FOR A MAX. LENGTH OF 5' OR A 8:1 MAX. FOR A MAX. LENGTH OF 2'. SLOPES STEEPER THAN 8:1 ARE NOT ALLOWED UNDER ANY CIRCUMSTANCES.

NOTE: IN ALTERATIONS, THE SELECTION OF THE TYPE OF WHEELCHAIR RAMP TO BE CONSTRUCTED SHALL BE BASED ON THE AMOUNT OF RIGHT-OF-WAY AVAILABLE, AND ON THE PRESENCE OF OTHER SITE CONSTRAINTS (UTILITIES, BUILDINGS, ETC.). THE TABLE ABOVE LISTS THE ORDER IN WHICH THE RAMPS ARE TO BE CONSIDERED.

AN ALTERATION IS DEFINED AS A PROJECT THAT CHANGES OR AFFECTS THE USE OF A PEDESTRIAN PATHWAY (OVERLAYS, SIGNALIZATION PROJECTS, ETC.) BUT DOES NOT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY. ALL PROJECTS THAT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY WILL USUALLY BE CONSIDERED NEW CONSTRUCTION FOR THE PURPOSES OF THE CHART ABOVE.

DATE	REVISION	DATE FILM
8-10-05	REVISED TO NEW SIDEWALK POLICY	
10-9-03	REVISED GEN. NOTES & ADDED NOTE	
4-10-03	REV. DETECTABLE WARNING DEVICES	
8-22-02	ADD DETECTABLE WARNING DEVICES	
5-30-00	ADD.SLOPE TRANS. & REV. ISL. DIMS.	
8-18-98	REVISED NOTES	
8-12-98	REVISED TEXTURE	
7-02-98	REDRAWN & REISSUED	
10-18-96	CORRECTED DIMENSIONS	10-18-96
5-24-90	FROM#TOG#MAX.SLOPES	5-24-90
7-15-88	ADJUSTED MAX. SLOPE	652-7-15-88
7-14-88	INCLUD."CONC. ISLD."IN PAY ITEM	------
6-02-76	ISSUED-P.H.D.	299-7-26-76

ARKANSAS STATE HIGHWAY COMMISSION

WHEELCHAIR RAMPS NEW CONSTRUCTION AND ALTERATIONS

STANDARD DRAWING WR-1