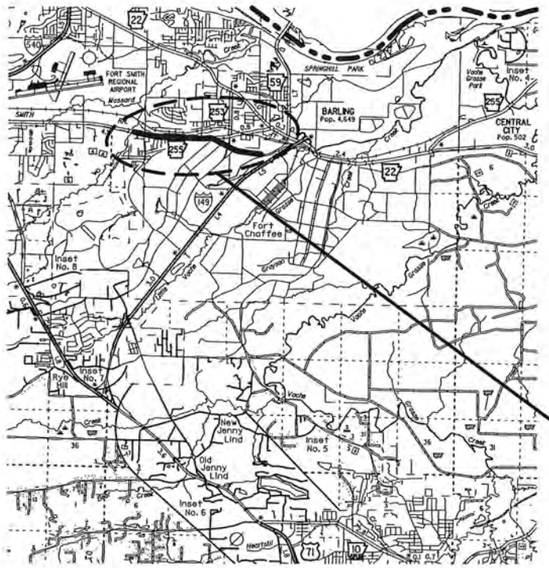
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	1	194

(2) MASSARD CREEK - HWY. 22 (WIDENING & RELOC.) (HWY. 255) (S)



VICINITY MAP

ARKANSAS DEPARTMENT OF TRANSPORTATION
CONSTRUCTION PLANS FOR STATE HIGHWAY

MASSARD CREEK - HWY. 22
(WIDENING & RELOC.) (HWY. 255) (S)

SEBASTIAN COUNTY

ROUTE 255 & 253 SECTION 3 & 1

JOB 040716

FED. AID PROJ. STPF-0065(52)

NOT TO SCALE

ARK. HWY. DIST. NO. 4

STA. 3+93.88 EX. HWY. 255
BEGIN OVERLAY

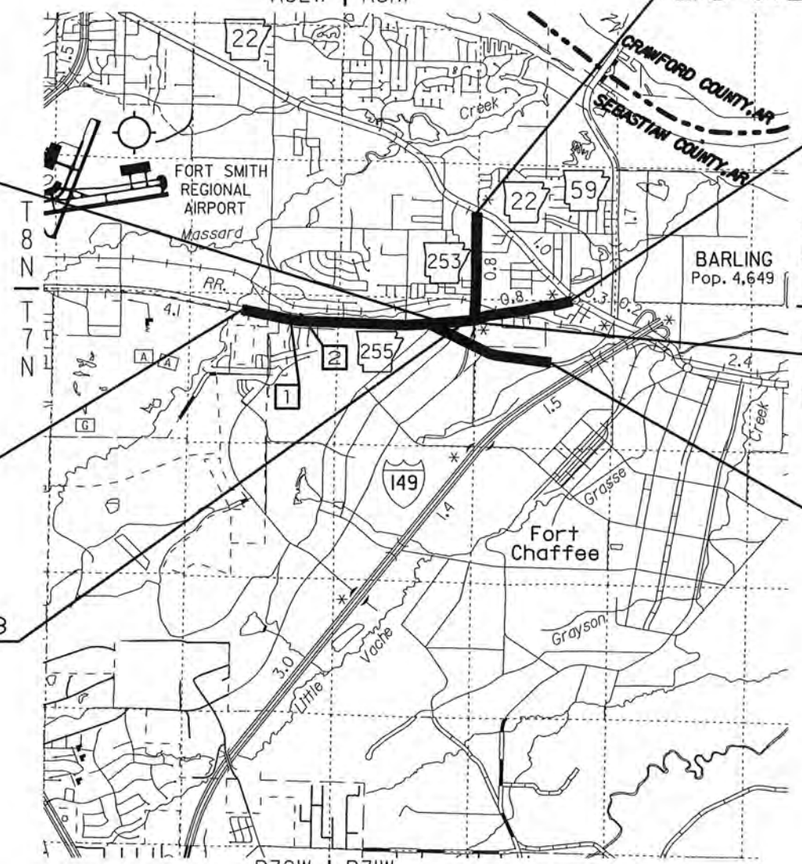
STRUCTURES OVER 20'-0" SPAN

1 STA. 120+00 LT. CONSTRUCT
QUADRUPLE 7'X 7'X 30' BOX CULVERT
W/ 3:1 WINGS LT. & RT.
CONSTRUCT APPR. ON LT. = 400 CU. YD.
Q10 = 1250.77 CFS D.A. = 771.5 ACRES

2 STA. 124+67 LT. CONSTRUCT
QUADRUPLE 7' X 7' X 18' R.C. BOX CULVERT
W/ 3:1 WINGS LT. & RT.
Q50=1785 CFS D.A. =705.4 AC.
CONSTRUCT APPR. ON LT. = 267 CU. YD.

STA. 100+00.00
BEGIN JOB 040716
LOG MILE 2.48

STA. 0+11.00 EX. HWY. 253
BEGIN OVERLAY
LOG MILE 0.82



STA. 43+18.55 EX. HWY. 253
END OVERLAY

STA. 60+35.46 EX. HWY. 255
END OVERLAY

STA. 0+00.00 HWY. 253=
STA. 20+15.74 EX. HWY. 255
Δ = 81°09'40"

STA. 222+99.64
END JOB 040716

DESIGN TRAFFIC DATA

DESIGN YEAR	2040
2020 ADT	9,300
2040 ADT	10,900
2040 DHV	1199
DIRECTIONAL DISTRIBUTION	60%
TRUCKS	6%
DESIGN SPEED	45 MPH

N

CERTIFICATE OF AUTHORIZATION
CRAFTON, TULL & ASSOCIATES, INC.
No. 109
ARKANSAS ENGINEER

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9620
03-25-2020
HUBERT BURNS

P.E. 040716

BEGINNING OF PROJECT
LAT. = N 35°19'28"
LONG. = W 94°20'43"

MID-POINT OF PROJECT
LAT. = N 35°19'22"
LONG. = W 94°19'31"

END OF PROJECT
LAT. = N 35°19'07"
LONG. = W 94°18'20"

LENGTH OF PROJECT CALCULATED ALONG C.L.

GROSS LENGTH OF PROJECT	22,259.77	FEET	OR	4.216	MILES
NET " " ROADWAY	22,259.77	"	"	4.216	"
NET " " BRIDGES	0.00	"	"	0.000	"
NET " " PROJECT	22,259.77	"	"	4.216	"

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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.		040716	2	194

(2) INDEX OF SHEETS & STANDARD DRAWINGS

STATE OF ARKANSAS
★ ★ ★
LICENSED PROFESSIONAL ENGINEER
★ ★ ★
No. 15560
JEROME PAUL DAVIS
3-25-2020

INDEX OF SHEETS

SHEET NO.		TITLE	DRWG.NO.
1		TITLE SHEET	
2		INDEX OF SHEETS AND STANDARD DRAWINGS	
3		GOVERNING SPECIFICATIONS	
4		GENERAL NOTES	
5	- 11	TYPICAL SECTIONS OF IMPROVEMENT	
12	- 28	SPECIAL DETAILS	
29	- 47	TEMPORARY EROSION CONTROL DETAILS	
48	- 59	MAINTENANCE OF TRAFFIC DETAILS	
60	- 62	PERMANENT PAVEMENT MARKING DETAILS	
63	- 73	QUANTITIES	
74	- 75	SUMMARY OF QUANTITIES AND REVISIONS	
76	- 82	SURVEY CONTROL DETAILS	
83	- 108	PLAN AND PROFILE SHEETS	
109		SUMMARY OF TRAFFIC SIGNAL QUANTITIES	
110		TRAFFIC SIGNAL NOTES	
111		TRAFFIC SIGNAL QUANTITIES - MASSARD ROAD	
112	- 123	SIGNALIZATION PLAN SHEETS	
124		TRAFFIC SIGNAL QUANTITIES - CHAD COLLEY	
125	- 128	SIGNALIZATION PLAN SHEETS	
129		TRAFFIC SIGNAL QUANTITIES - FORT SMITH BLVD.	
130	- 133	SIGNALIZATION PLAN SHEETS	
134	- 194	CROSS SECTIONS	

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

ROADWAY STANDARD DRAWINGS

DRWG.NO.	TITLE	DATE
CDP-1	CONCRETE DITCH PAVING	12-08-16
CG-1	CURBING DETAILS	11-29-07
CPTJ-6A	TRANSVERSE & LONGITUDINAL JOINTS FOR CONCRETE PAVEMENT (NON-REINFORCED)	11-07-19
DR-1	DETAILS OF DRIVEWAYS & ISLANDS	11-07-19
FES-1	FLARED END SECTION	10-18-96
FES-2	FLARED END SECTION	10-18-96
FPC-9	DETAILS OF DROP INLETS & JUNCTION BOXES	11-16-01
FPC-9E	DETAILS OF DROP INLETS (TYPE C)	08-22-02
FPC-9M	DETAILS OF DROP INLET (TYPE MO)	08-22-02
FPC-9S	DETAILS OF DROP INLET & JUNCTION BOX (TYPE ST)	07-26-12
MB-1	MAILBOX DETAILS	11-18-04
PBC-1	PRECAST CONCRETE BOX CULVERTS	01-28-15
PCC-1	CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING	02-27-14
PCM-1	METAL PIPE CULVERT FILL HEIGHTS & BEDDING	02-27-14
PCP-1	PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)	02-27-14
PCP-2	PLASTIC PIPE CULVERT (PVC F949)	02-27-14
PCP-3	PLASTIC PIPE CULVERT (POLYPROPYLENE)	02-27-20
PM-1	PAVEMENT MARKING DETAILS	02-27-20
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
RCB-3	METHOD OF EXTENDING EXISTING R.C. BOX CULVERTS	10-12-95
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	11-07-19
SD-11	STEEL POLE WITH MAST ARM	11-16-17
SE-2	TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC	11-07-19
SI-1	DETAILS OF SPECIAL ITEMS	10-25-18
SI-2	REINFORCED CONCRETE RETAINING WALL (WITHOUT LIVE LOAD SURCHARGE)	05-12-16
TC-1	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	11-07-19
TC-2	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	11-07-19
TC-3	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	02-27-20
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
W-X003-1	DETAILS OF STANDARD WINGS FOR REINFORCED CONCRETE BOX CULVERTS	05-10-66
R-100X-0	DETAILS OF STANDARD BARREL SECTIONS FOR REINFORCED CONCRETE BOX CULVERTS	02-08-63

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04-21-20				6	ARK.			
05-05-20				JOB NO.		040716	3	194
				(2)	GOVERNING SPECIFICATIONS			

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13560
05-05-2020
JEROME PAUL DAVIS

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 040716
FHWA-1273__	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273__	SUPPLEMENT - WAGE RATE DETERMINATION
100-3_____	CONTRACTOR'S LICENSE
100-4_____	DEPARTMENT NAME CHANGE
102-2_____	ISSUANCE OF PROPOSALS
108-1_____	LIQUIDATED DAMAGES
108-2_____	WORK ALLOWED PRIOR TO ISSUANCE OF WORK ORDER
110-1_____	PROTECTION OF WATER QUALITY AND WETLANDS
210-1_____	UNCLASSIFIED EXCAVATION
303-1_____	AGGREGATE BASE COURSE
306-1_____	QUALITY CONTROL AND ACCEPTANCE
400-1_____	TACK COATS
400-4_____	DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES
400-5_____	PERCENT AIR VOIDS FOR ACHM MIX DESIGNS
400-6_____	LIQUID ANTI-STRIP ADDITIVE
404-3_____	DESIGN OF ASPHALT MIXTURES
410-1_____	CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
410-2_____	DEVICES FOR MEASURING DENSITY FOR ROLLING PATTERNS
505-1_____	PORTLAND CEMENT CONCRETE DRIVEWAY
600-2_____	INCIDENTAL CONSTRUCTION
603-1_____	LANE CLOSURE NOTIFICATION
604-1_____	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
604-3_____	TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONE (MASH)
605-1_____	CONCRETE DITCH PAVING
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
700-2_____	TRAFFIC CONTROL FACILITIES
800-1_____	STRUCTURES
802-3_____	CONCRETE FOR STRUCTURES
804-2_____	REINFORCING STEEL FOR STRUCTURES
JOB 040716__	ACTUATED CONTROLLER
JOB 040716__	AIRPORT CLEARANCE REQUIREMENTS
JOB 040716__	ARCHITECTURAL FINISH
JOB 040716__	ASSESSMENT OF WORKING DAYS-MAINTENANCE OF TRAFFIC
JOB 040716__	BIDDING REQUIREMENTS AND CONDITIONS
JOB 040716__	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 040716__	CABINET DRAWER ASSEMBLY
JOB 040716__	CARGO PREFERENCE ACT REQUIREMENTS
JOB 040716__	CLASS C FLY ASH IN PORTLAND CEMENT CONCRETE PAVEMENT AND CLASS S(AE) CONCRETE
JOB 040716__	CONCRETE WALKS (TYPE SPECIAL)
JOB 040716__	CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS
JOB 040716__	CONSTRUCTION PROJECT INFORMATION SIGN
JOB 040716__	DELAY IN RIGHT OF WAY OCCUPANCY
JOB 040716__	DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES
JOB 040716__	EDGE CARD VIDEO PROCESSOR
JOB 040716__	ELECTRICAL CONDUCTORS FOR LUMINAIRES

GOVERNING SPECIFICATIONS - CONTINUED

NUMBER	TITLE
JOB 040716__	ELECTRICAL CONDUCTORS IN CONDUIT
JOB 040716__	EXTENSION FOR PIPE CULVERTS
JOB 040716__	FLEXIBLE BEGINNING OF WORK – CALENDAR DAY CONTRACT
JOB 040716__	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 040716__	INSURANCE, CONSTRUCTION, AND FLAGGING REQUIREMENTS ON RAILRAOD PROPERTY (FSR)
JOB 040716__	INSURANCE, CONSTRUCTION, AND FLAGGING REQUIREMENTS ON RAILROAD PROPERTY (KCS)
JOB 040716__	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
JOB 040716__	LED LUMINAIRE ASSEMBLY (BUG U0 TYPE)
JOB 040716__	LED TRAFFIC SIGNAL HEAD
JOB 040716__	MAINTENANCE OF TRAFFIC
JOB 040716__	MANDATORY ELECTRONIC CONTRACT
JOB 040716__	MANDATORY ELECTRONIC DOCUMENT SUBMITTAL
JOB 040716__	NESTING SITES OF MIGRATORY BIRDS
JOB 040716__	OFF-SITE RESTRAINING CONDITIONS FOR AMERICAN BURYING BEETLE
JOB 040716__	OFF-SITE RESTRAINING CONDITIONS FOR NORTHERN LONG-EARED BATS
JOB 040716__	PARTNERING REQUIREMENTS
JOB 040716__	PEDESTRIAN SIGNAL HEAD RELOCATION
JOB 040716__	PERCENT WITHIN LIMITS/PAVEMENT SMOOTHNESS (IRI)
JOB 040716__	PLASTIC PIPE
JOB 040716__	PRICE ADJUSTMENT FOR ASPHALT BINDER
JOB 040716__	PROSECUTION AND PROGRESS WITH BID SCHEDULE
JOB 040716__	RELOCATION OF TRAFFIC SIGNAL HEAD
JOB 040716__	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT
JOB 040716__	RESTRICTIONS ON THE USE OF RECYCLED ASPHALT PAVEMENT MATERIAL
JOB 040716__	SELECT GRANULAR BACKFILL
JOB 040716__	SERVICE POINT ASSEMBLY (TRAFFIC CONTROL DEVICES)
JOB 040716__	SHORING FOR CULVERTS
JOB 040716__	SITE USE (A+C METHOD) - CALENDAR DAY CONTRACT
JOB 040716__	SOIL STABILIZATION
JOB 040716__	STORM WATER POLLUTION PREVENTION PLAN
JOB 040716__	STREET NAME SIGN (MAST ARM MOUNTED)
JOB 040716__	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 040716__	SYSTEM LOCAL CONTROLLER
JOB 040716__	TEXTURED COATING FINISH
JOB 040716__	TRAFFIC SIGNAL CONTROLLER (MODIFICATION)
JOB 040716__	UTILITY ADJUSTMENTS
JOB 040716__	VALUE ENGINEERING
JOB 040716__	VIDEO DETECTOR (COLOR)
JOB 040716__	VIDEO DETECTOR ROTATION
JOB 040716__	WARM MIX ASPHALT

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				6	ARK.			
				JOB NO.		040716	4	194

(2) GENERAL NOTES

STATE OF ARKANSAS
* * *
LICENSED PROFESSIONAL ENGINEER
No. 15560
3-25-2020
JEROME PAUL DAVIS

GENERAL NOTES

1. GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.
2. ALL PIPE LINES, POWER, TELEPHONE, AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
3. ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY OF UTILITY SERVICE ORGANIZATIONS SHALL BE MOVED BY THE OWNERS UNLESS OTHERWISE PROVIDED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING U. S. MAILBOXES WITHIN THE PROJECT LIMITS IN SUCH A MANNER THAT THE PUBLIC MAY RECEIVE CONTINUED MAIL SERVICE. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS BID ITEMS.
5. ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
6. ALL TREES THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE SPARED AS DIRECTED BY THE ENGINEER. CARE AND DISCRETION SHALL BE USED TO ENSURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HARMED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A FENCE TO CONTROL LIVESTOCK IN AREAS WHERE PASTURES ARE SEVERED. WIRE FENCE MAY BE CONSTRUCTED INITIALLY, OR IN LIEU THEREOF, THE CONTRACTOR AT HIS OWN EXPENSE, MAY ELECT TO PROVIDE TEMPORARY FENCING SUITABLE TO CONTAIN LIVESTOCK.
8. THE SEQUENCE AS SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS IS A GENERAL OUTLINE FOR THE CONSTRUCTION OF THIS PROJECT, AND IN NO WAY IS IT INTENDED TO COVER EVERY ITEM IN THE PROJECT. ITEMS NOT CRITICAL TO THE CONSTRUCTION SEQUENCE MAY BE CONSTRUCTED IN ANY STAGE AS APPROVED BY THE RESIDENT ENGINEER.
9. ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 - UNCLASSIFIED EXCAVATION.
10. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
11. THIS PROJECT IS COVERED UNDER A SECTION 404 NATIONWIDE 23 PERMIT. REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS, EDITION OF 2014, FOR PERMIT REQUIREMENTS.

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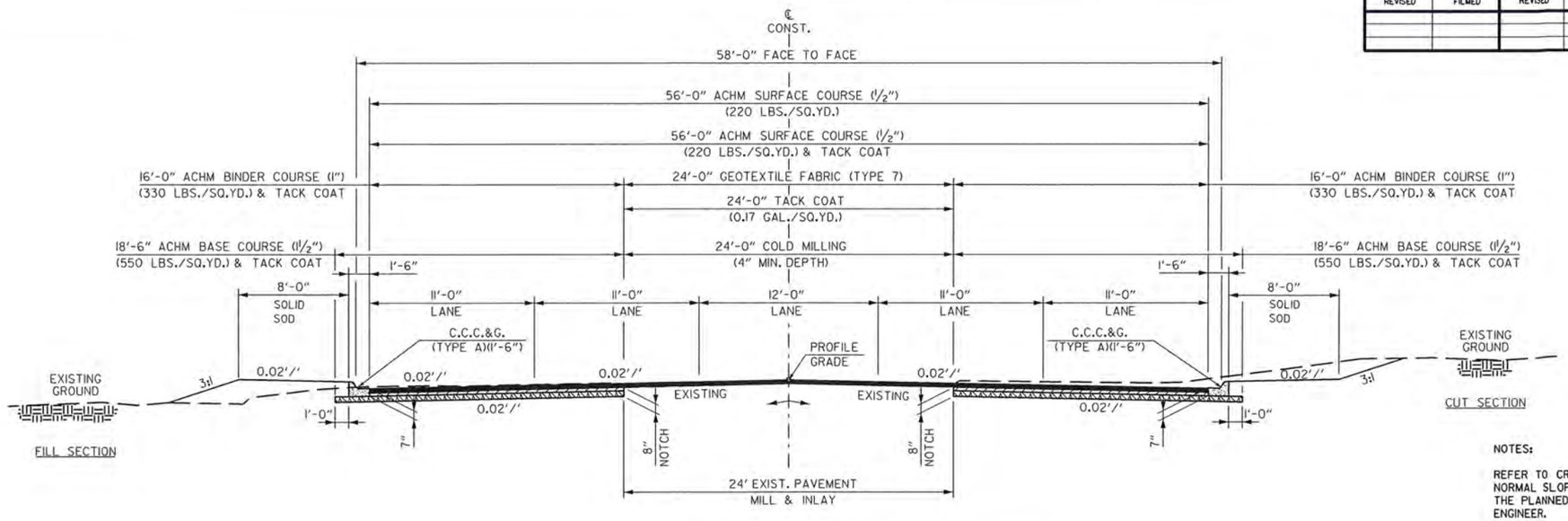
				6	ARK.			
				JOB NO.		040716	5	194

(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020



FIVE LANES - HWY. 255
NOTCH & WIDENING

STA. 100+00.00 TO STA. 112+00.00

NOTES:

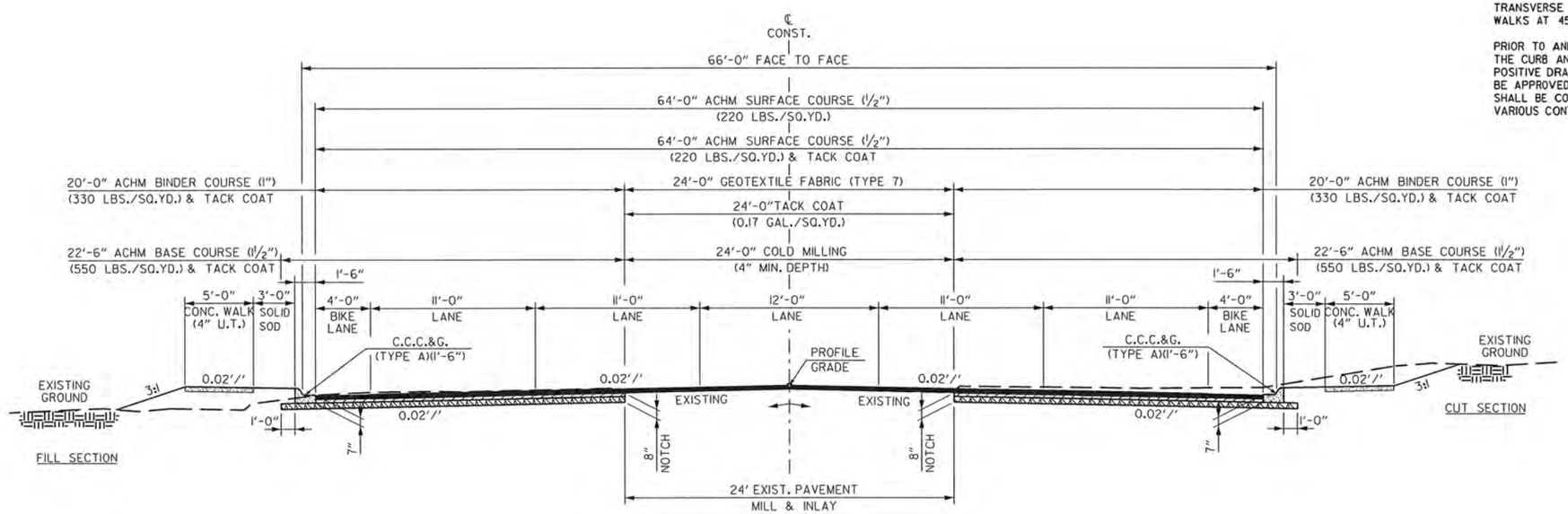
REFER TO CROSS SECTIONS FOR DEVIATIONS FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.

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

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.

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

PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE CURB AND GUTTER, THE CONTRACTOR SHALL MAINTAIN 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.



FIVE LANES - HWY. 255
NOTCH & WIDENING

STA. 112+00.00 TO STA. 125+31.02

TYPICAL SECTIONS OF IMPROVEMENT

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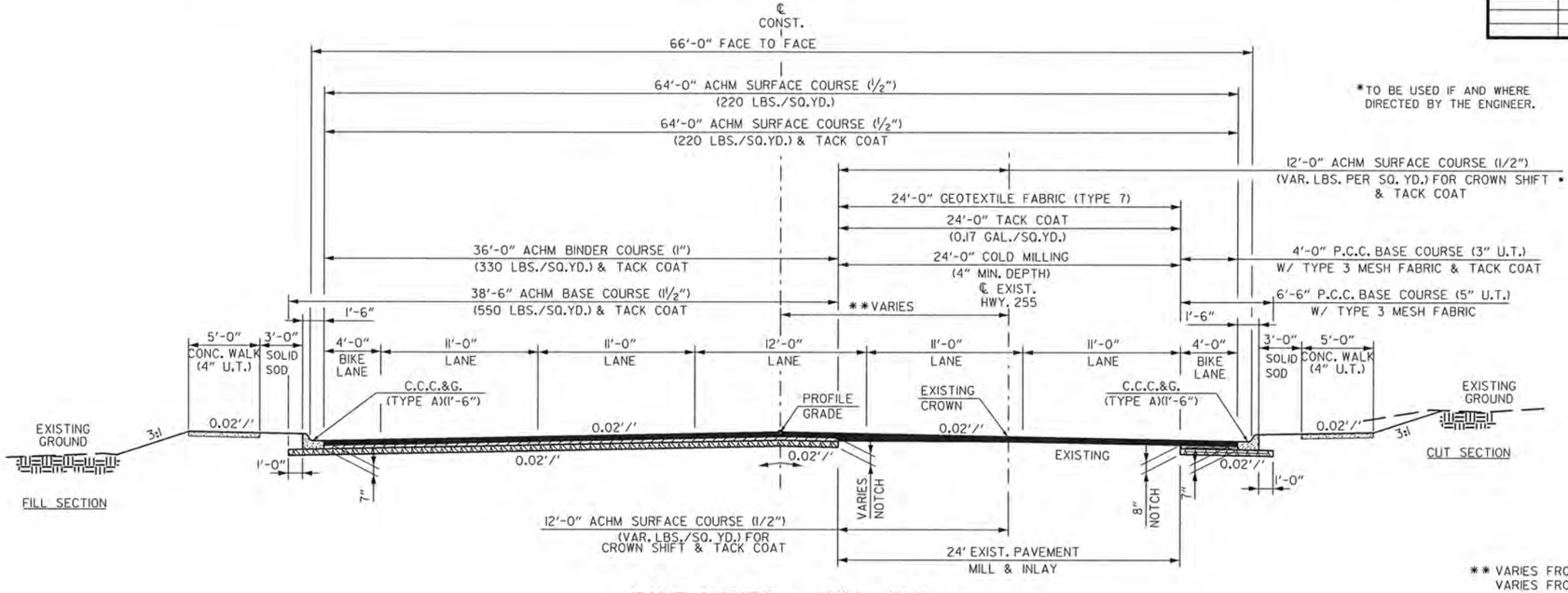
				6	ARK.			
				JOB NO.		040716	6	194

(2) TYPICAL SECTIONS OF IMPROVEMENT

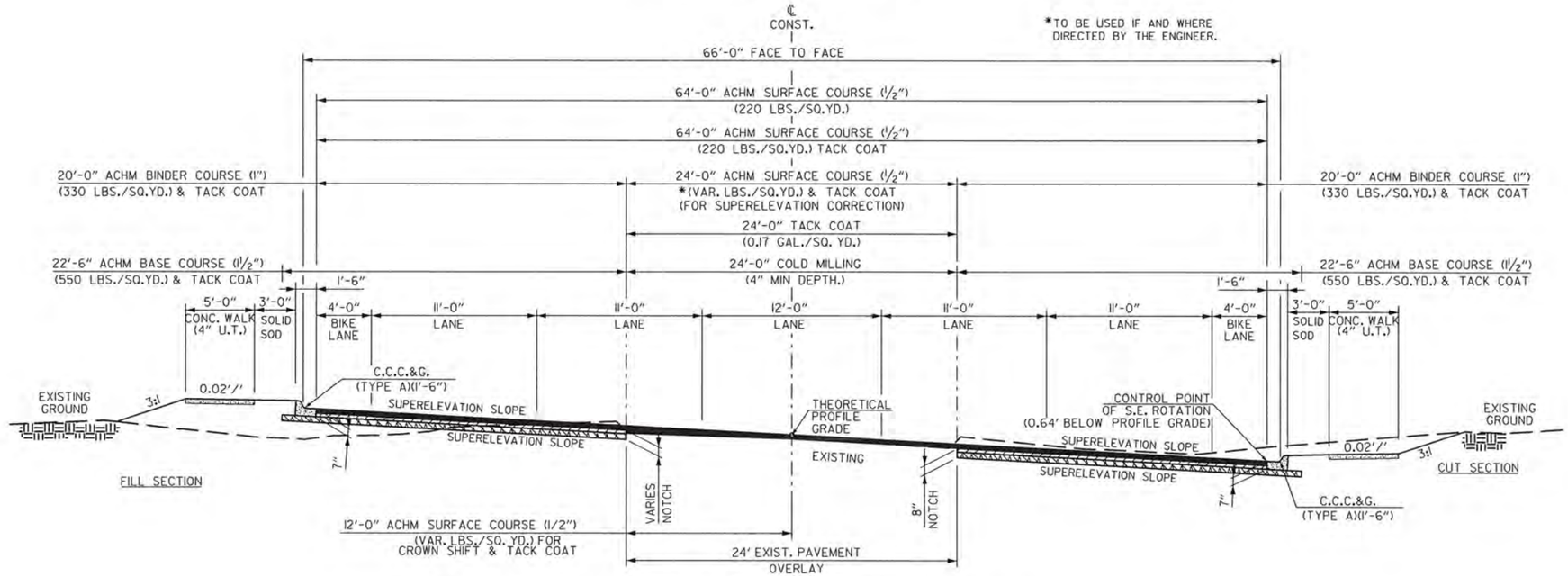


*TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

** VARIES FROM 0'-0" AT STA. 116+27.79 TO 15'-4" AT STA. 125+31.02
VARIES FROM 15'-4' AT STA. 162+78.79 TO 0'-0" AT STA. 168+21.03

FIVE LANES - HWY. 255
NOTCH & WIDENING

STA. 125+31.02 TO STA. 162+78.79



FIVE LANES - HWY. 255
NOTCH & WIDENING - SUPERELEVATION

NOTES:

REFER TO CROSS SECTIONS FOR DEVIATIONS 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 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.

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.

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

PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE CURB AND GUTTER, THE CONTRACTOR SHALL MAINTAIN 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.

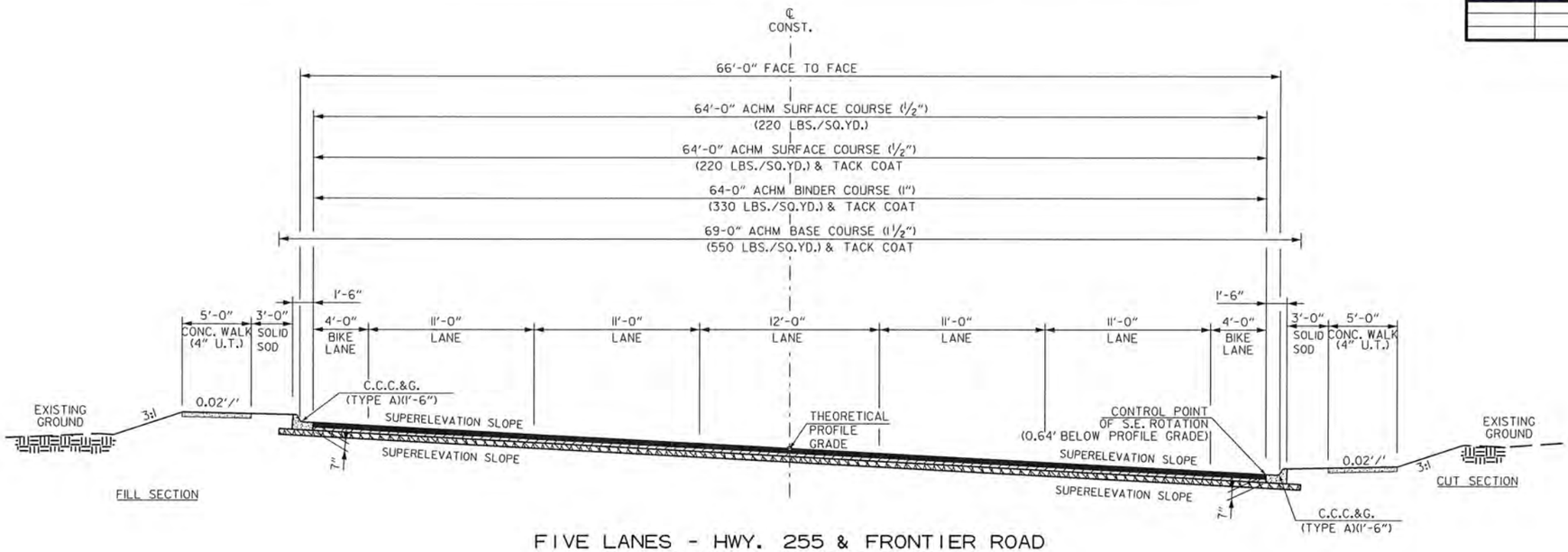
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13560
JEROME PAUL DAVIS
3-25-2020

TYPICAL SECTIONS OF IMPROVEMENT

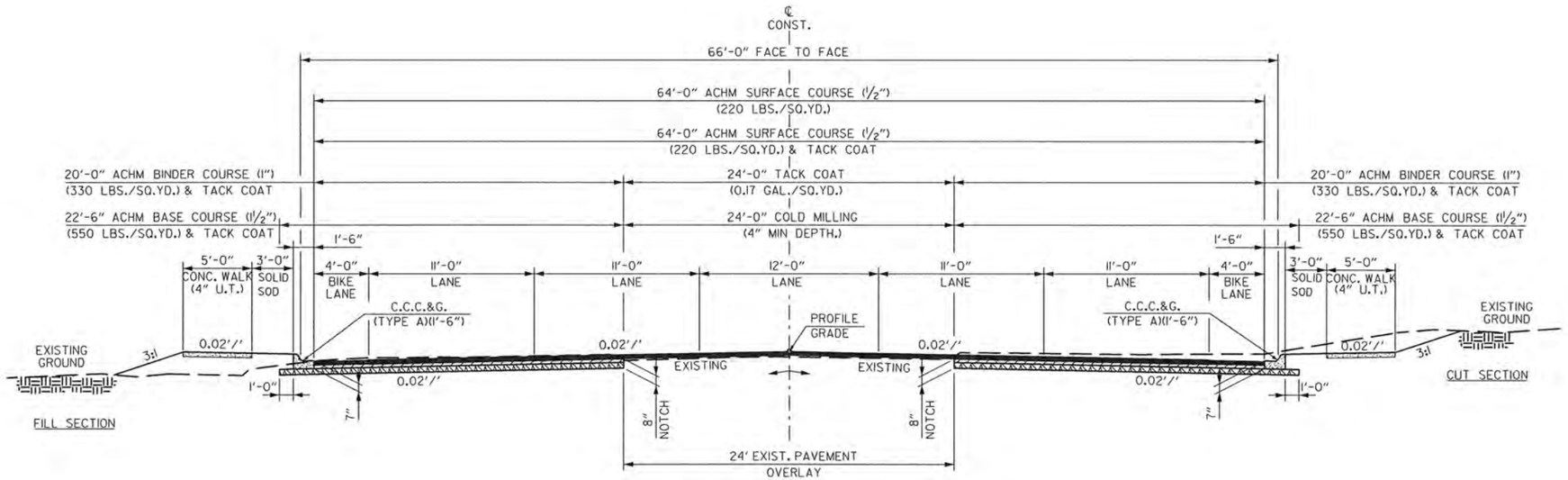
USER: jh595
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\typical\r040716 TYP01.dgn
PLOTTED: 3/25/2020 16:12
SCALE: 1:40

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.		040716	7	194

(2) TYPICAL SECTIONS OF IMPROVEMENT



FIVE LANES - HWY. 255 & FRONTIER ROAD
FULL DEPTH - SUPERELEVATION



FIVE LANES - HWY. 255
NOTCH & WIDENING

STA. 162+78.79 TO STA. 173+00.00

NOTES:

REFER TO CROSS SECTIONS FOR DEVIATIONS 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 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.

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

PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE CURB AND GUTTER, THE CONTRACTOR SHALL MAINTAIN 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.

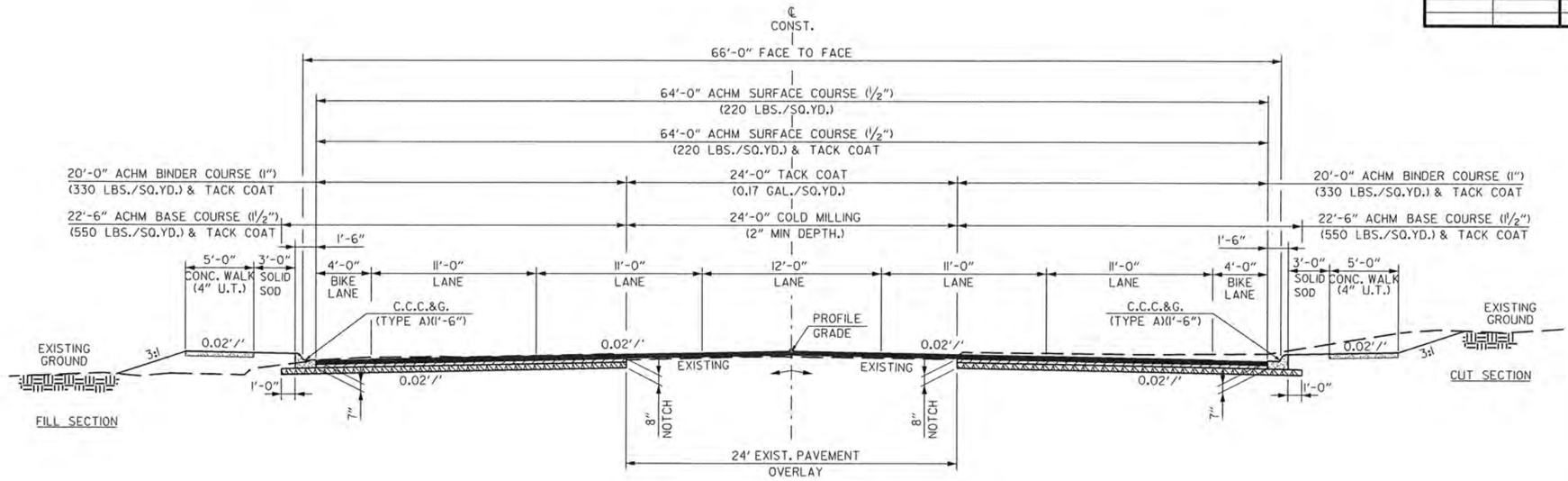
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

USER: jh595
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\typical\r040716 TYP01.dgn
PLOTTED: 3/25/2020 16:12
SCALE: 1:40

TYPICAL SECTIONS OF IMPROVEMENT

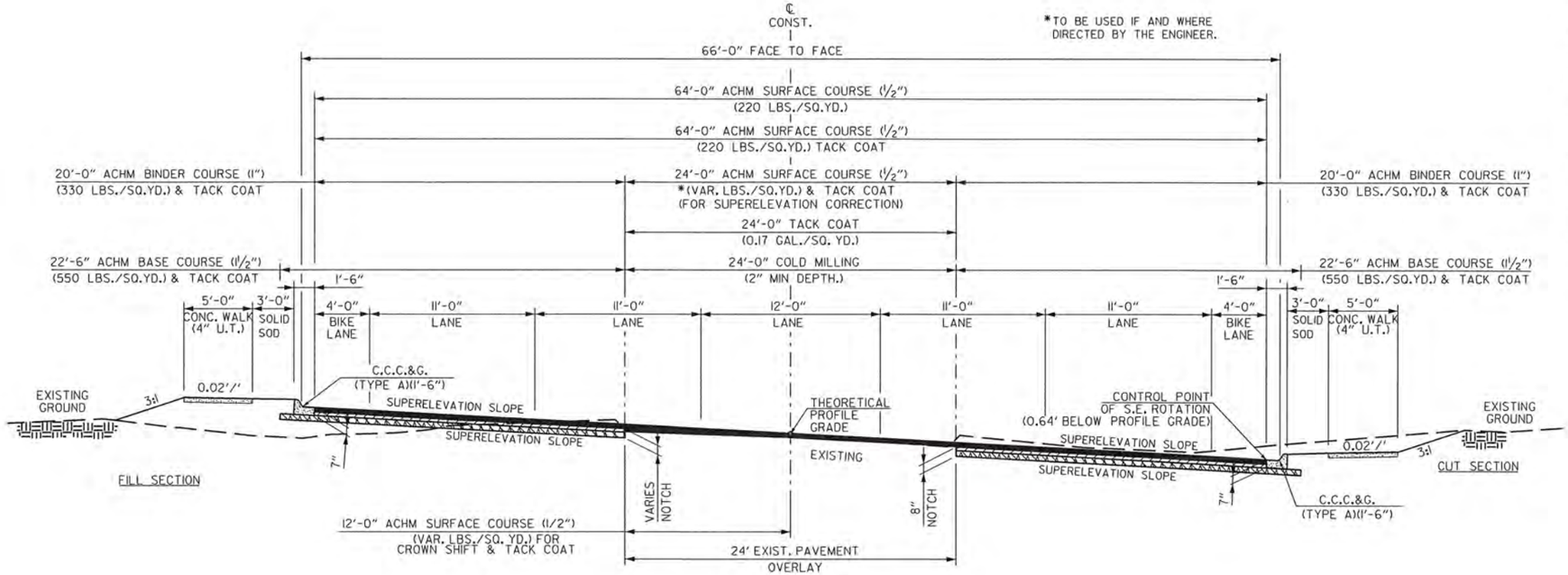
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	8	194

(2) TYPICAL SECTIONS OF IMPROVEMENT



FIVE LANES - FRONTIER ROAD
NOTCH & WIDENING

STA. 173+00.00 TO STA. 222+99.64



FIVE LANES - FRONTIER ROAD
NOTCH & WIDENING - SUPERELEVATION

NOTES:

REFER TO CROSS SECTIONS FOR DEVIATIONS 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 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.

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

PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE CURB AND GUTTER, THE CONTRACTOR SHALL MAINTAIN 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.

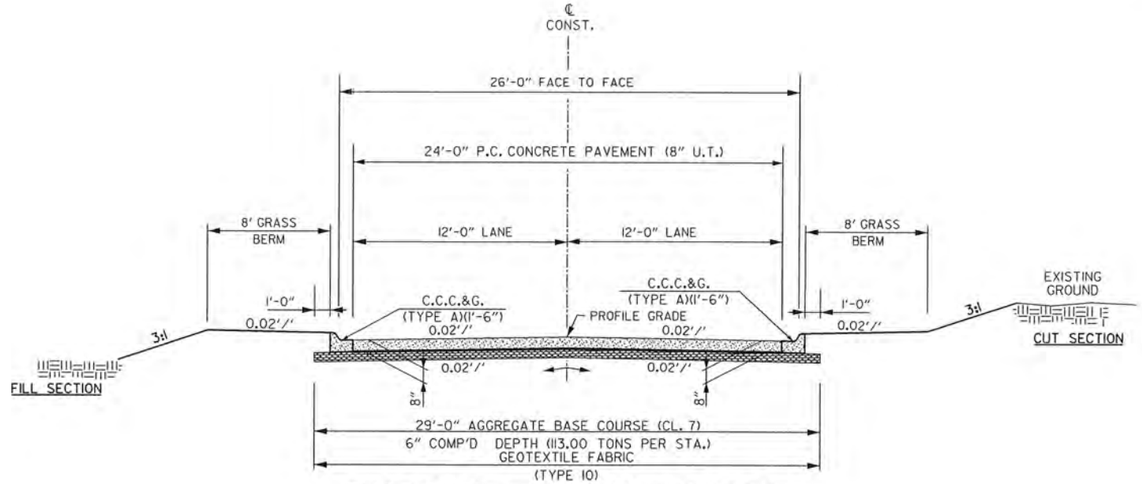
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

TYPICAL SECTIONS OF IMPROVEMENT

USER: jh5195
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\typical\r040716 TYP01.dgn
PLOTTED: 3/25/2020 16:12
SCALE: 1:10

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.		040716	9	194

(2) TYPICAL SECTIONS OF IMPROVEMENT



TWO LANES - CHAD COLLEY BLVD.
FULL DEPTH

STA. 10+00.00 TO STA. 13+32.49

STATE OF ARKANSAS
* * *
LICENSED PROFESSIONAL ENGINEER
* * *
NO. 15660
JEROME PAUL DAVIS
3-25-2020

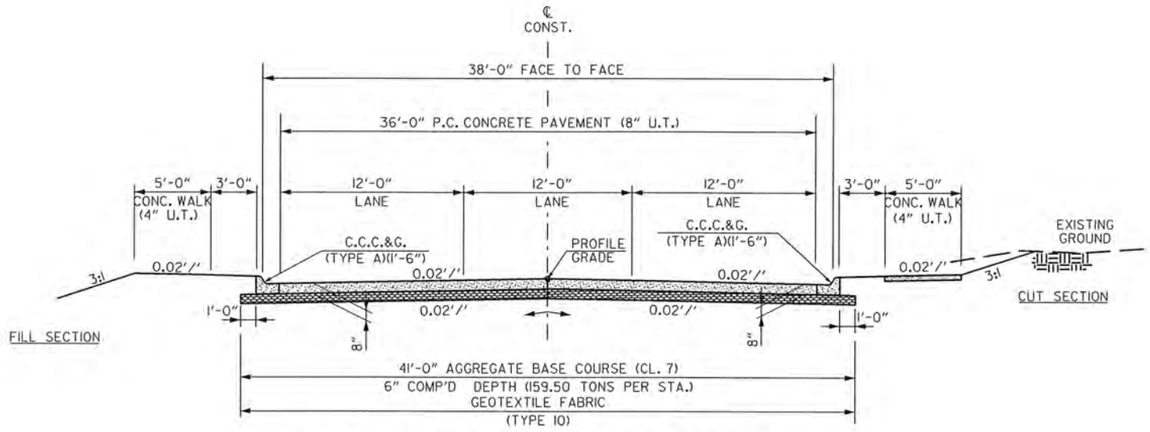
NOTES:

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

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

PRIOR TO AND DURING PLACEMENT OF CONCRETE IN FRONT OF THE CURB AND GUTTER, THE CONTRACTOR SHALL MAINTAIN 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.

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



THREE LANES - CHAD COLLEY BLVD.
FULL DEPTH WITH SIDEWALK

STA. 13+32.49 TO STA. 16+47.56

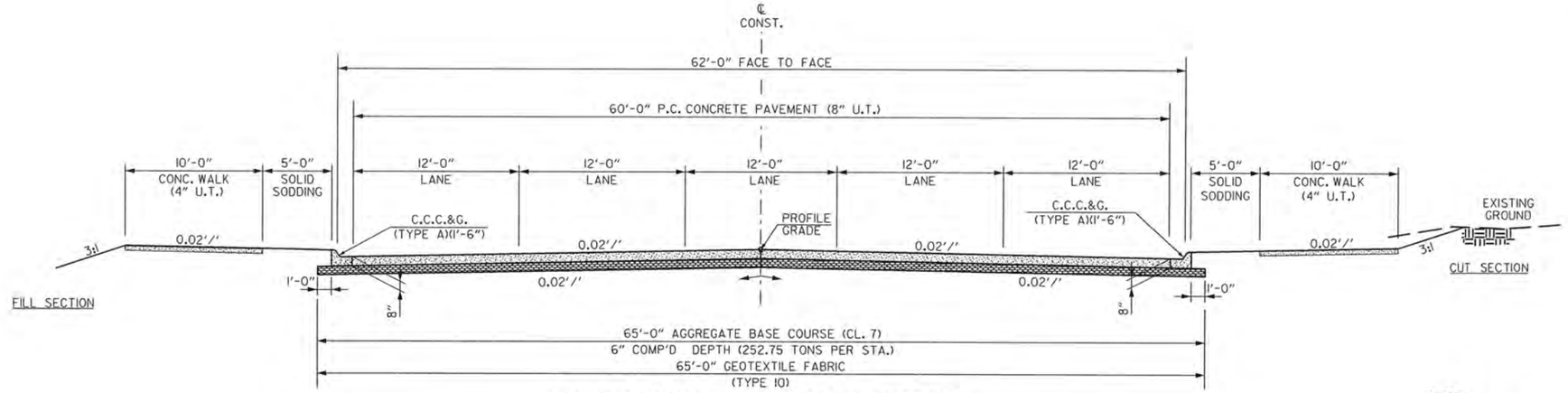
USER: jh595
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\typical\r040716 Chad Colley Typical.dgn
PLOTTED: 3/25/2020 16:12 SCALE: 1:10

TYPICAL SECTIONS OF IMPROVEMENT

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	10	194

(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
3-25-2020
JEROME PAUL DAVIS



FIVE LANES - CHAD COLLEY BLVD.
FULL DEPTH

STA. 17+18.62 TO STA. 22+35.92

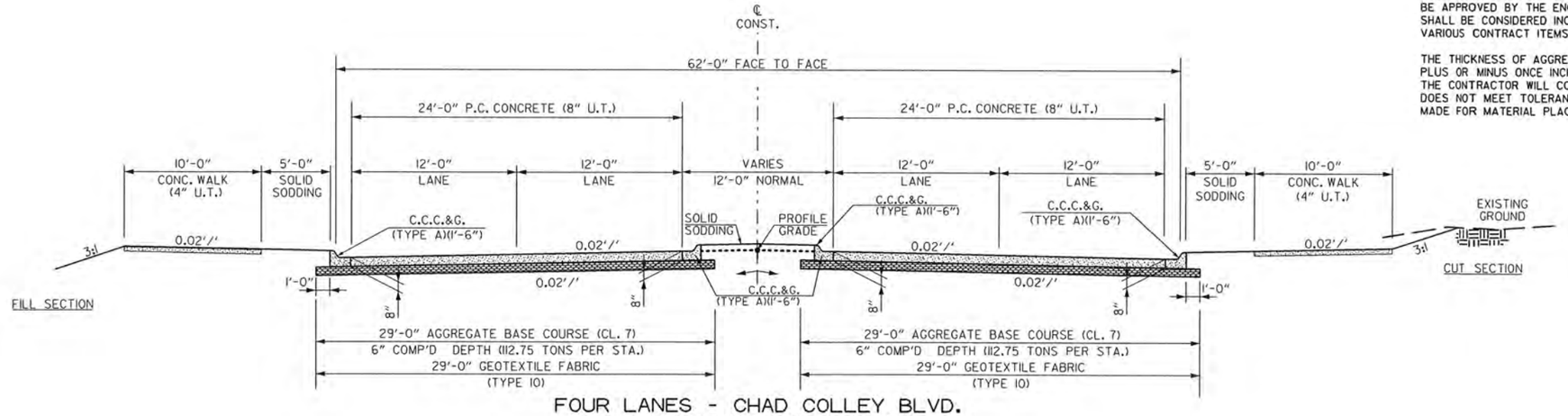
NOTES:

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

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

PRIOR TO AND DURING PLACEMENT OF CONCRETE IN FRONT OF THE CURB AND GUTTER, THE CONTRACTOR SHALL MAINTAIN 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.

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



FOUR LANES - CHAD COLLEY BLVD.
FULL DEPTH WITH MEDIAN

STA. 22+35.92 TO STA. 30+38.27

TYPICAL SECTIONS OF IMPROVEMENT

USER: jh5195
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\typical\r040716 Chad Colley Typical.dgn
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SCALE: 1:10

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.		040716	11	194
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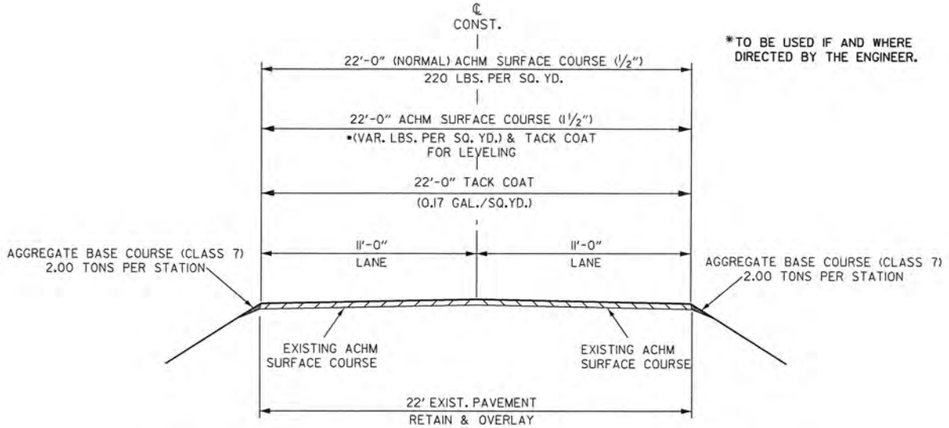
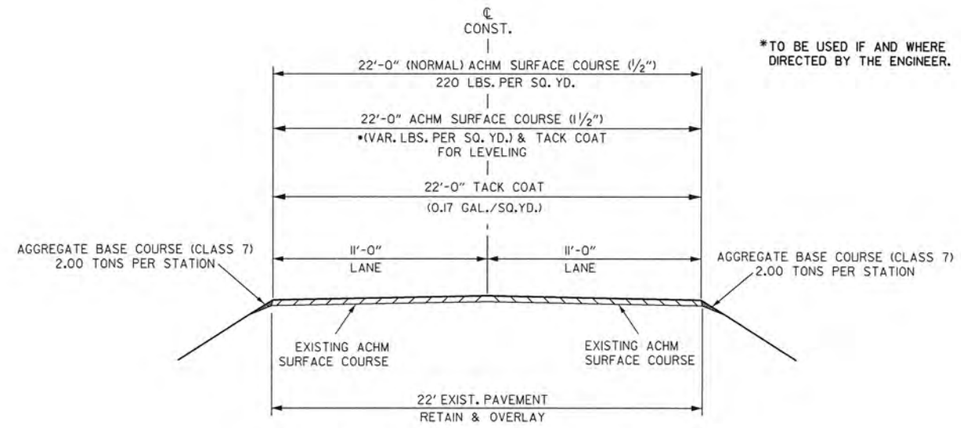


*TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

HWY. 253 OVERLAY

STA. 0+11.00 TO STA. 43+18.55 HWY. 253



*TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

EXISTING HWY. 255 OVERLAY

STA. 3+93.88 TO STA. 60+35.46 HWY. 255

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
4-02-2020

NOTES:

ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND 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.

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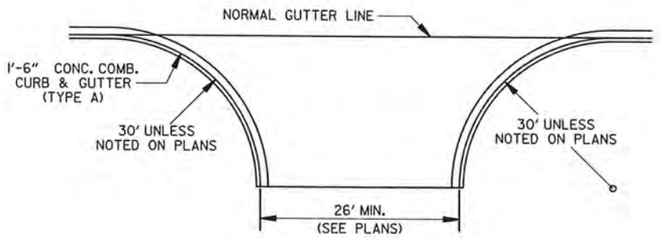
TYPICAL SECTIONS OF IMPROVEMENT

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	12	194

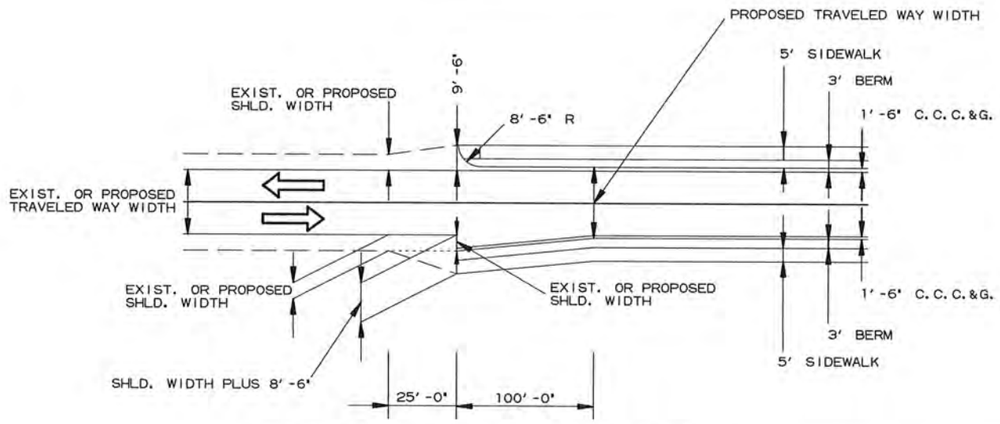
(2) SPECIAL DETAILS



DETAIL OF TURNOUTS ASPHALT STREETS, COUNTY ROADS, & STATE HIGHWAYS

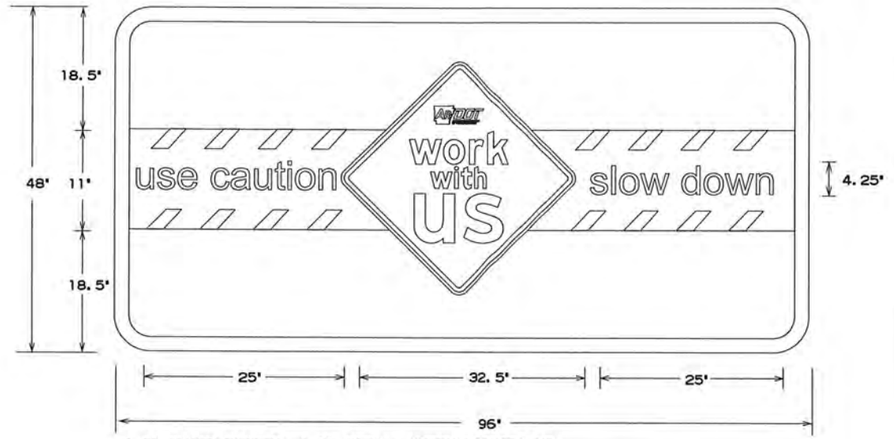
(NOT TO SCALE)

NOTE:
THE TYPICAL SECTION FOR THE CITY STREET CONNECTIONS IN THE CURB & GUTTER SECTION SHALL MATCH THE PROPOSED WIDENING SECTION SHOWN FOR THE MAIN LANES. UNLESS OTHERWISE NOTED ON THE PLANS, ALL CITY STREET RADII WILL BE 30'.



TRANSITION FROM OPEN SHOULDER TO CURB & GUTTER SECTION

(NOT TO SCALE)



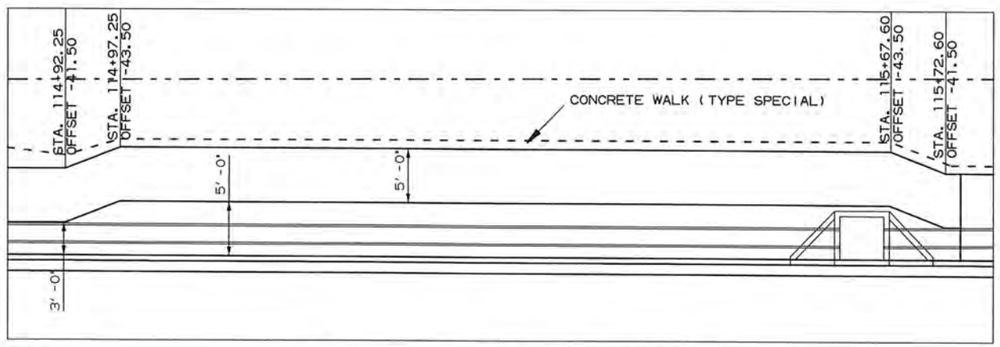
1.5' WHITE BORDER, 1.5' RADII, GREEN BACKGROUND
'use caution/slow down' 4.25' NIVEAU GROTESK, REGULAR FONT
'work with us' FRUTIGER LT 75 BLACK FONT

NOTE: DIGITAL ART WORK FILE AVAILABLE FROM ARDOT MAINTENANCE DIVISION SIGN SHOP 501-569-2665.
THIS SIGN SHALL BE PLACED 500' PRECEDING THE FIRST ADVANCE WARNING SIGN, IN THE DIRECTION OF TRAFFIC.

WORK WITH US SIGN

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

CONSTRUCTION PROJECT INFORMATION SIGN

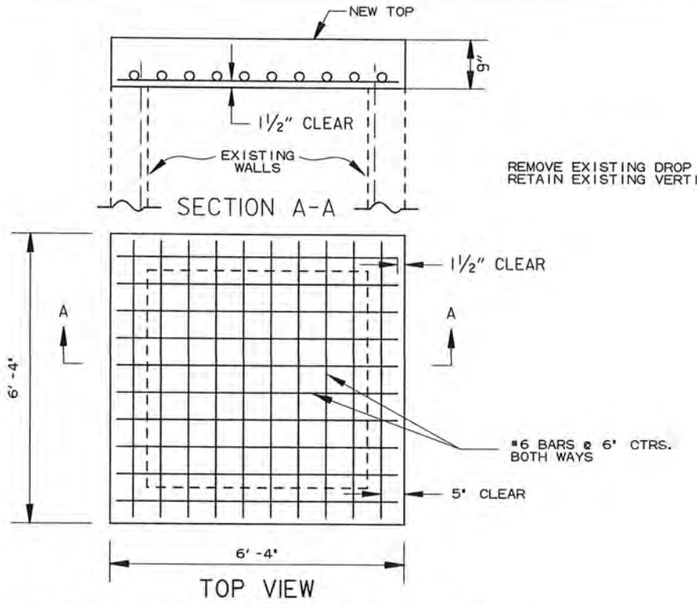


DETAILS OF SIDEWALK TAPER STA. 114+92.25 - STA. 115+72.60 LT.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-20

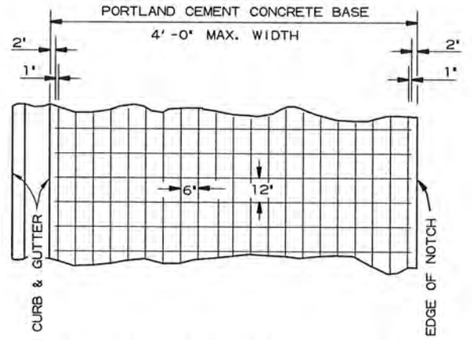
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	13	194

(2) SPECIAL DETAILS



REMOVE EXISTING DROP INLET TOP, RETAIN EXISTING VERTICAL REINFORCING.

DETAILS OF MODIFIED DROP INLET
(NOT TO SCALE)



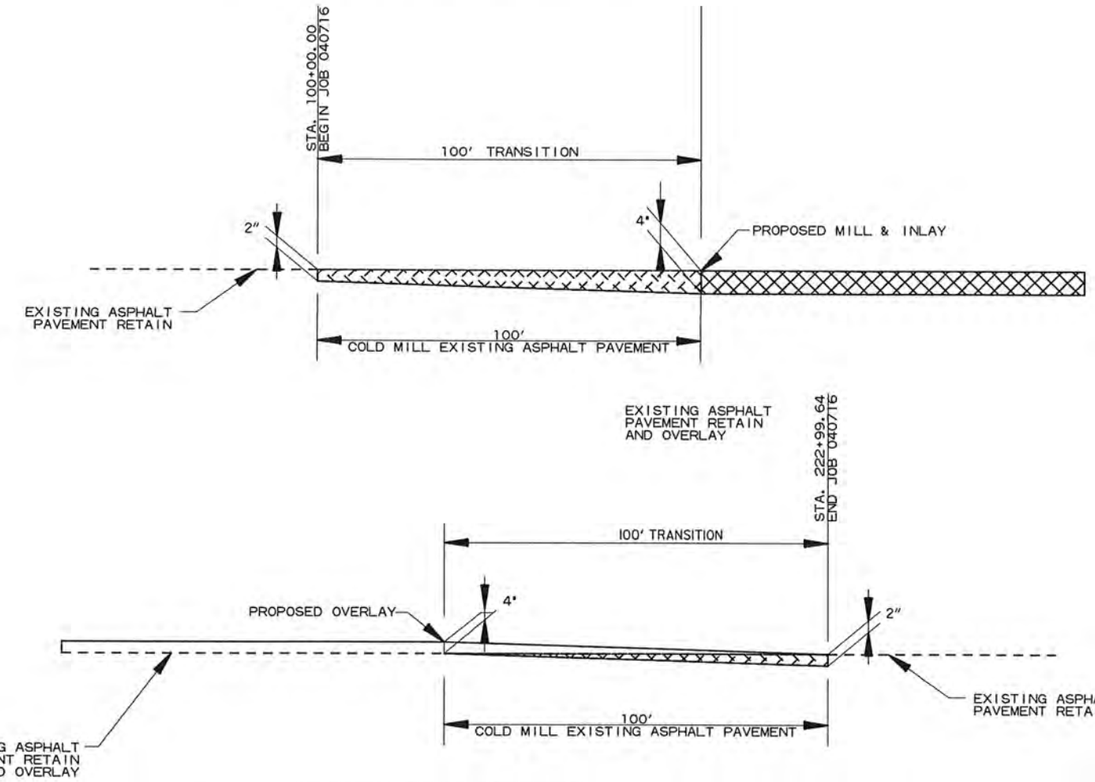
6' X 12' MESH FABRIC (TYPE 3) (W5.5 X W2.9) = 4.26 LBS./SQ.YD.

NOTES:

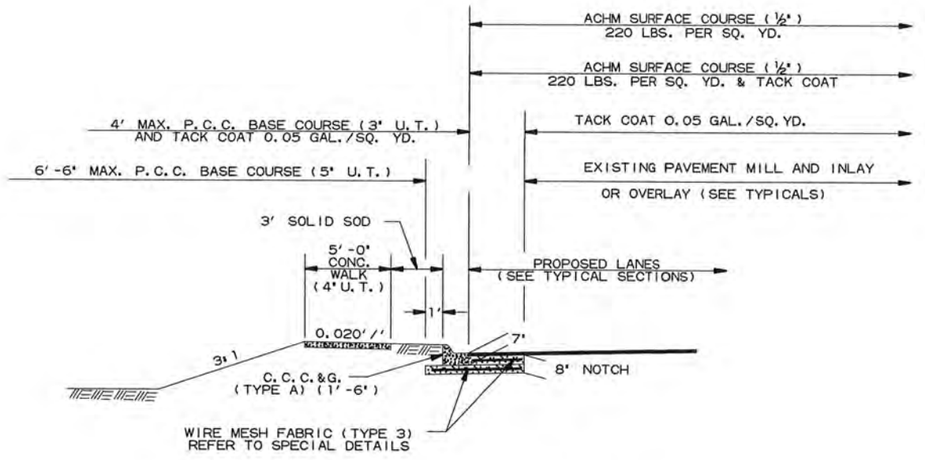
1. LAP MESH FABRIC MIN. 12" LONGITUDINALLY AND MIN. 6" TRANSVERSELY.
2. MESH FABRIC IS NOT REQUIRED WHEN WIDTH OF PORTLAND CEMENT CONCRETE BASE IS LESS THAN 12".
3. MESH FABRIC (TYPE 3) WILL NOT BE PAID FOR DIRECTLY, BUT FULL COMPENSATION THEREFORE WILL BE CONSIDERED INCLUDED IN THE CONTRACT PRICE BID PER SQ. YD. FOR PORTLAND CEMENT CONCRETE BASE (3" U.T. & 5" U.T.)

DETAIL OF REINFORCING STEEL FOR PAVEMENT (MESH FABRIC TYPE 3)

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020



DETAIL FOR TRANSITIONS
(NOT TO SCALE)



P.C.C. BASE WIDENING DETAIL

P.C.C. BASE WIDENING TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

SPECIAL DETAILS

USER: APS181
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\special_details\r040716 SD01.dgn
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SCALE: 1:2

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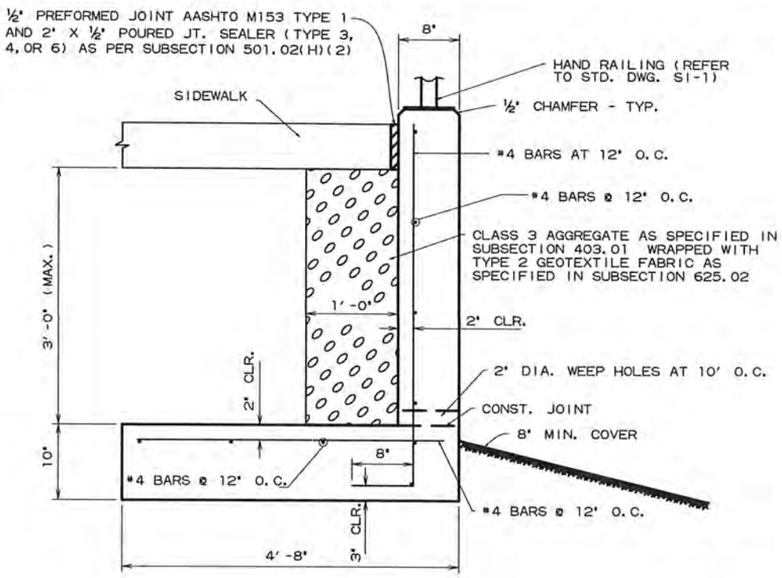
				6	ARK.			
				JOB NO.		040716	14	194

(2) SPECIAL DETAILS



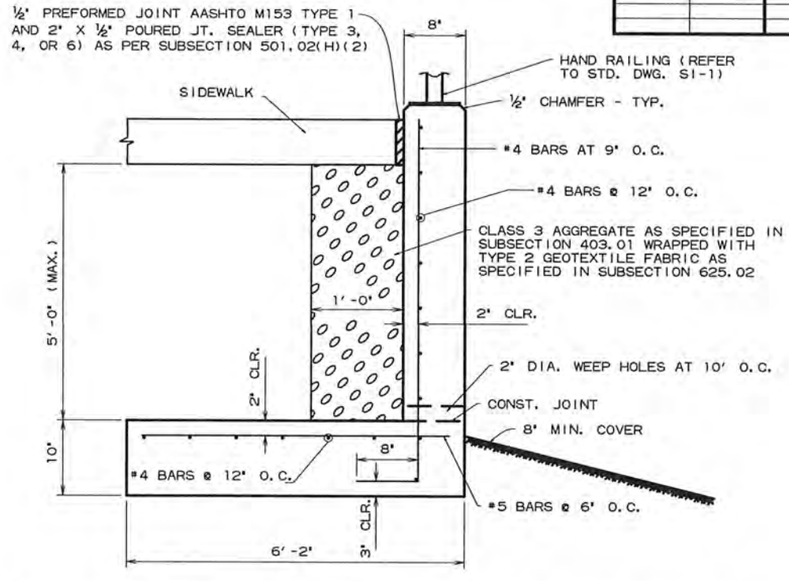
NOTES:
JOINTS IN THE WALL SHALL MATCH THE TYPE AND SPACING OF THE JOINTS IN THE WALK.

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 WALK (TYPE SPECIAL) DETAIL MAX HEIGHT 3'-0"



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.

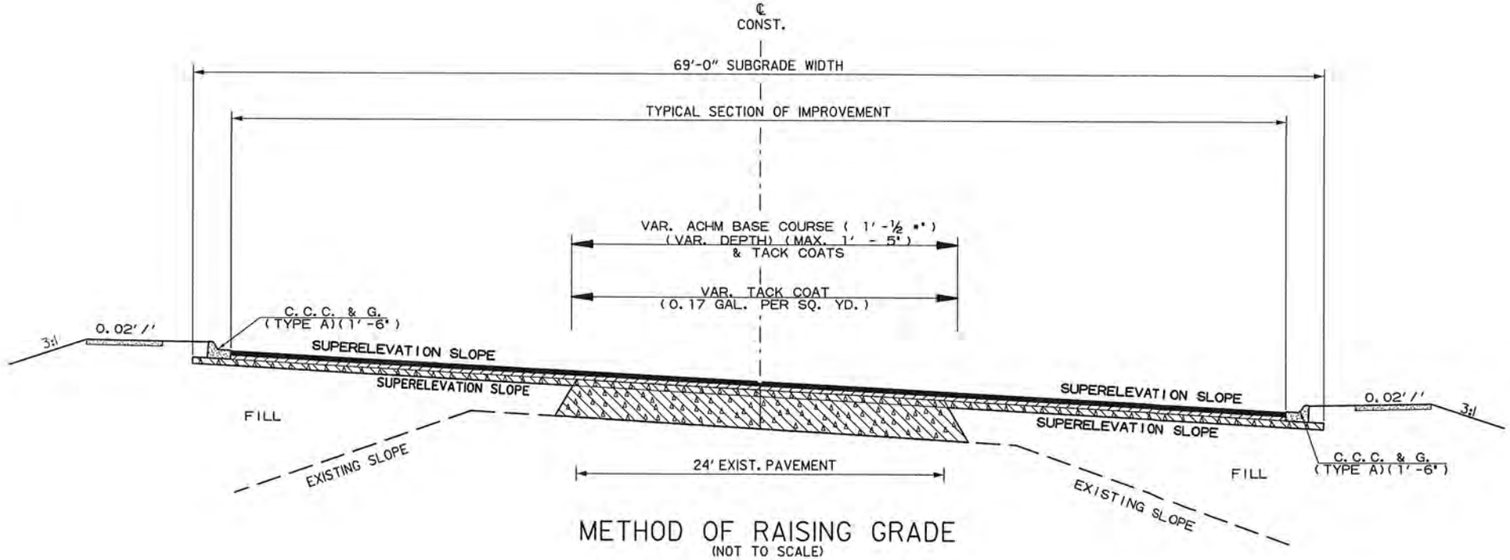
REINFORCING STEEL SHALL BE AASHTO M31 OR M53, GRADE 60 (FY=60,000 PSI).

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 WALK (TYPE SPECIAL) DETAIL MAX HEIGHT 5'-0"

NOTES:

(1) THIS DETAIL TO BE USED ONLY IF AND WHERE DIRECTED BY THE ENGINEER.
(2) QUANTITIES FOR METHOD OF GRADE RAISE USING ASPHALT WERE CALCULATED ON THIS PROJECT AT LOCATIONS WHERE THE DISTANCE BETWEEN THE EXISTING ASPHALT ROADWAY AND THE PROPOSED SUBGRADE WAS ONE FOOT OR LESS.
(3) IN LOCATIONS WHERE THE DISTANCE BETWEEN THE PROPOSED SUBGRADE AND THE EXISTING ASPHALT ROADWAY IS MORE THAN ONE FOOT, SCARIFICATION OF THE EXISTING ASPHALT ROADWAY WILL BE REQUIRED AS STATED IN SECTION 210, SUBSECTION 210.09 OF THE STANDARD SPECIFICATIONS, EDITION OF 2014.



METHOD OF RAISING GRADE
(NOT TO SCALE)

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

SPECIAL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		040716	15	194

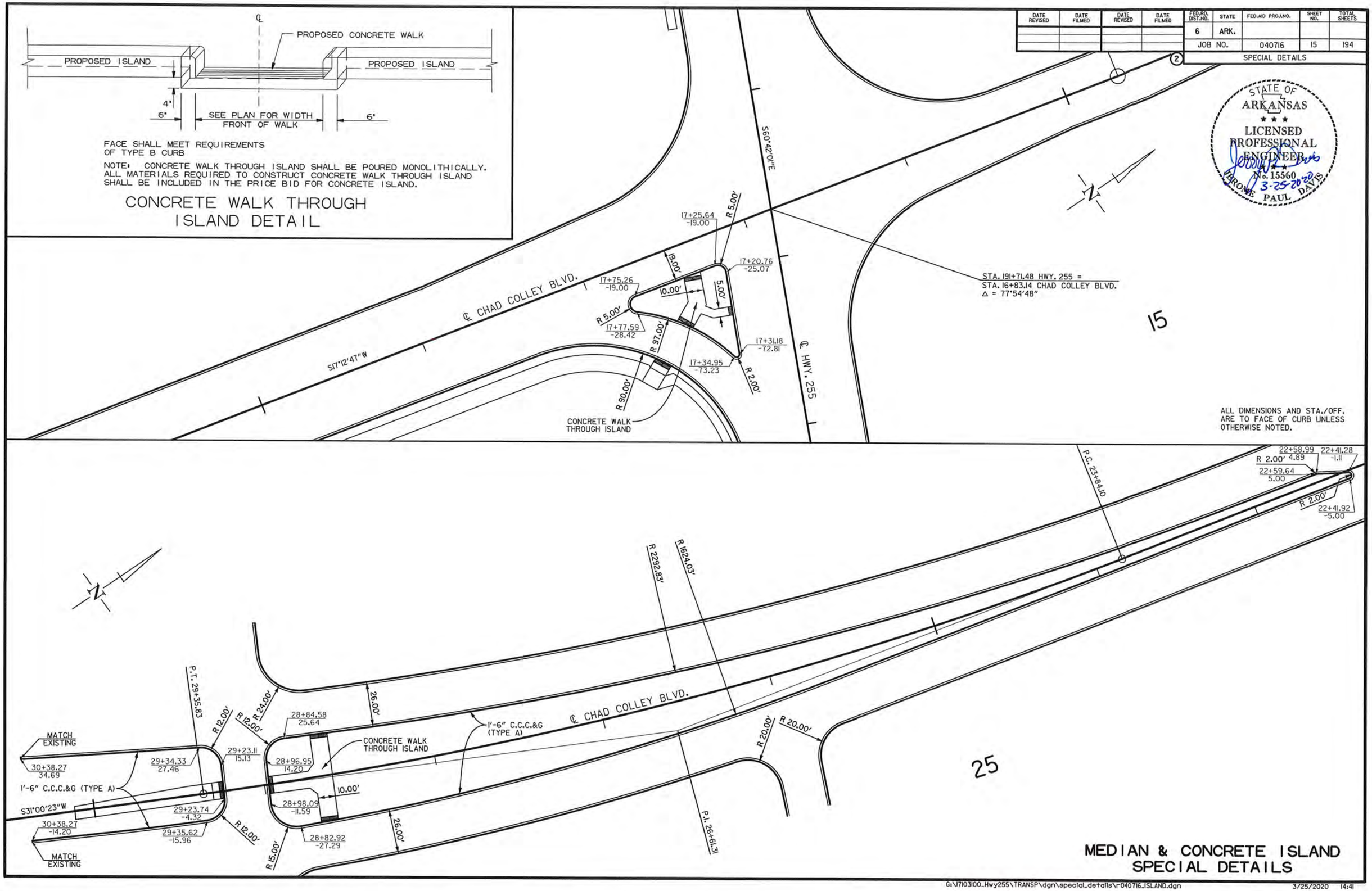
SPECIAL DETAILS

FACE SHALL MEET REQUIREMENTS OF TYPE B CURB

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

CONCRETE WALK THROUGH ISLAND DETAIL

STATE OF ARKANSAS
★ ★ ★
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020



MEDIAN & CONCRETE ISLAND SPECIAL DETAILS

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

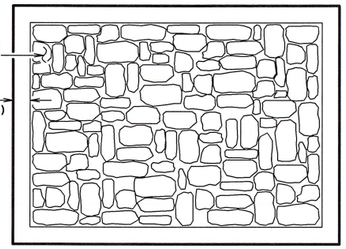
FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		040716	16	194

2 SPECIAL DETAILS

ASHLAR STONE FINISH
SEE ARCHITECTURAL FINISH
SPECIAL PROVISION

6" (TYP.)

NOTE: FOR WALL COLOR
SEE TEXTURED COATING
FINISH SPECIAL PROVISION



NOT TO SCALE

ASHLAR STONE FINISH DETAIL

20 10 0 10 20 40

CONSTRUCT CAST IN PLACE
RETAINING WALL
STA. 155+00 TO 159+50 LT.

CONSTRUCT HANDRAILING
STA. 155+00 TO 159+50 LT.
SEE STD. DWG. NO. SI-1.

STA. 158+16 IN PLACE
10' x 5' x 5' BOX CULV'T.
W/ HDWLS. LT. & RT.
RETAIN AND EXTEND
37' LT. & 7' RT.
COMPLETED LENGTH 95'
W/HDWL. RT. & SPECIAL HDWL. LT.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
JEROME PAUL DAVIS
No. 15560
05-05-2020

155 +00 130'

+00 85'

+50 125'

+75 125'

160

+75 80'

+00 65'

N

STA. 155+00 OFFSET 104.85'

STA. 155+00 OFFSET 98.85'

STA. 155+50 OFFSET 72'

STA. 155+50 OFFSET 54.34'

STA. 156+50 OFFSET 60'

STA. 159+50 OFFSET 96.55'

STA. 159+50 OFFSET 86.55'

STA. 159+00 OFFSET 60'

STA. 159+00 OFFSET 54'

PROPOSED R/W

LIMITS OF CONST.

CONCRETE DITCH PAVING LIMITS

CONCRETE DITCH PAVING LIMITS

6'-0"

17'-8"

6'-0"

10'-0"

3:1

3:1

BEGIN CIP RETAINING WALL
STA. 155+00, 42.50' RT.

END CIP RETAINING WALL
STA. 159+50, 42.50' RT.

5'-0" SDWK | 3'-0" BERM | 1'-6" C&G | 4'-0" BIKE LANE

FRONT FACE OF PROPOSED RETAINING WALL

1'-0" AT TOP OF WALL

FILL FACE OF PROPOSED RETAINING WALL

41'-6"

C.L. CONST.

11'-0" LANE | 11'-0" LANE

12'-0" TURN LANE

BORING LEGEND

A. STIFF BROWN SILTY CLAY W/SOME FINE TO COARSE GRAVEL (FILL)
B. LOOSE BROWN CLAYEY FINE TO COARSE GRAVEL, SANDY, WET
C. MEDIUM DENSE REDDISH TAN SANDY FINE TO COARSE GRAVEL
D. MODERATELY HARD TO HARD DARK GRAY W/TAN SLIGHTLY WEATHERED SHALE, FLAT BEDDED
E. HARD DARK GRAY SHALE, FLAT BEDDED
F. HARD GRAY DOLOSTONE, FLAT BEDDED WITH NUMEROUS CHERT INCLUSIONS
G. MEDIUM DENSE REDDISH BROWN AND BROWN CLAYEY FINE TO COARSE GRAVEL, SANDY
H. DENSE REDDISH TAN SANDY FINE TO COARSE GRAVEL
I. MODERATELY HARD TO HARD GRAY AND DARK GRAY WITH TAN SLIGHTLY WEATHERED SHALE, FLAT BEDDED
J. HARD GRAY DOLOSTONE, FLAT BEDDED, LIMY W/VERY CLOSE MUDSTONE PARTINGS AND SEAMS
K. MEDIUM DENSE BROWN AND RED CLAYEY FINE TO COARSE GRAVEL W/CHERT FRAGMENTS (FILL)

BORING LEGEND (CONT.)

L. MEDIUM DENSE BROWN AND TAN CLAYEY FINE TO COARSE GRAVEL, SANDY
M. MEDIUM DENSE LIGHT TAN, REDDISH TAN AND GRAY SANDY FINE TO COARSE GRAVEL
N. MODERATELY HARD TO HARD DARK GRAY SHALE, FLAT BEDDED
O. HARD GRAY DOLOSTONE, OOLITIC, LIMY, FLAT BEDDED
P. MEDIUM DENSE BROWN CLAYEY FINE TO COARSE GRAVEL W/TRACE ORGANICS (FILL)
Q. MEDIUM DENSE REDDISH BROWN AND TAN CLAYEY FINE TO COARSE GRAVEL
R. MEDIUM DENSE REDDISH TAN SANDY FINE TO COARSE GRAVEL W/A LITTLE COBBLES
S. MODERATELY HARD GRAY AND DARK GRAY WITH TAN SLIGHTLY WEATHERED SHALE, FLAT BEDDED
T. HARD DARK GRAY SHALE, FLAT BEDDED WITH CLOSE PYRITE NODULES AND INCLUSIONS
U. HARD GRAY DOLOSTONE, FLAT BEDDED

BORING R-9
STA. 159+00
50' RT.

480
475
470
465
460
455
450
445

BEGIN CIP RETAINING WALL
STA. 155+00.00
T.O.W. ELEV. =471.94

PROFILE GRADE

STA. 155+60.00
T.O.W. ELEV. =471.07

STA. 156+20.00
T.O.W. ELEV. =470.20

PVC 156+65.00
ELEV. 469.38

STA. 156+66.00
T.O.W. ELEV. =469.54

STA. 157+26.00
T.O.W. ELEV. =468.91

STA. 157+86.00
T.O.W. ELEV. =468.72

STA. 158+21.67
T.O.W. ELEV. =468.83

STA. 158+10.33
T.O.W. ELEV. =468.78

STA. 158+58.00
T.O.W. ELEV. =469.10

520' V.C.
K = 79.42
e=4.26'

PVI 159+25.00
ELEV. 465.62

STA. 159+18.00
T.O.W. ELEV. =469.92

PROFILE GRADE

END CIP RETAINING WALL
STA. 159+50.00
T.O.W. ELEV. =470.54

FIN. GRD. STA.
159+50.00 ELEV. =470.21

-1.45%

5.10%

FIN. GRD. STA.
155+00 ELEV. =471.60

3:1 MAX.

3:1 MAX.

EL. 468

11.33'
SPECIAL HDWL.

60.00' | 60.00' | 46.00' | 60.00' | 60.00' | 24.33' | 36.33' | 60.00' | 32.00'

EXISTING GROUND AT FRONT FACE OF WALL

FIN. GRD. STA.
155+50 ELEV. =455.62

TOP OF FINISH GRADE FRONT FACE OF WALL

1'-0" MIN.

T.O.F. ELEV. =454.62

T.O.F. ELEV. =454.68

T.O.F. ELEV. =455.04

T.O.F. ELEV. =455.15

T.O.F. ELEV. =455.68

T.O.F. ELEV. =456.05

FIN. GRD. STA.
159+00 ELEV. =457.73

T.O.F. ELEV. =456.48

T.O.F. ELEV. =456.29

T.O.F. ELEV. =460.74

0.25% LT. DT. GR.

0.60% LT. DT. GR.

0.60% LT. DT. GR.

+00 LT 452.82 DT.

+50 LT 455.53 DT.

+70 LT 455.58 DT.

STA. 159+00 - 50' RIGHT OF CONST. C.L.

BORING R-9
STA. 159+00
50' RT.

0.5-1.5, N=12
2.5-3.5, N=8
4.5-5.5, N=50/9"
6.0-6.5, N=30/0"
6.5-7.0, N=30/0"
7.5-8.0, N=30/0"
8.0-8.5, N=30/0"

T.O.F. ELEVATIONS AND PANEL LENGTHS ARE APPROXIMATE. THE CONTRACTOR MAY SUBMIT AN ALTERNATE METHOD TO THE ENGINEER FOR APPROVAL. PAYMENT SHALL BE BASED ON PLAN QUANTITIES.

SEE REINFORCED CONCRETE RETAINING WALL DETAILS AND ROADWAY PLANS FOR ADDITIONAL INFORMATION.

SPECIAL DETAILS

155+00 | 156+00 | 157+00 | 158+00 | 159+00 | 160+00

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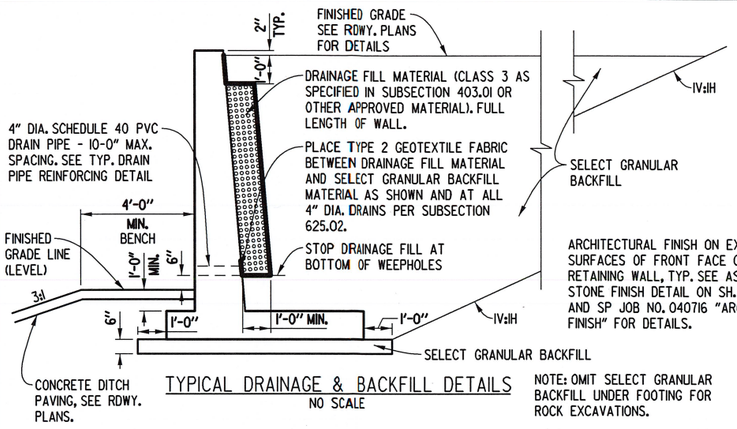
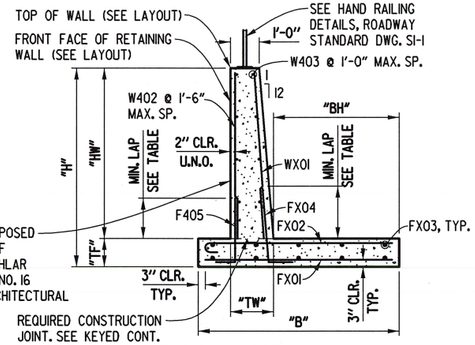


TYPICAL DRAINAGE & BACKFILL DETAILS
NO SCALE

NOTE: OMIT SELECT GRANULAR BACKFILL UNDER FOOTING FOR ROCK EXCAVATIONS.



TYPICAL SECTION
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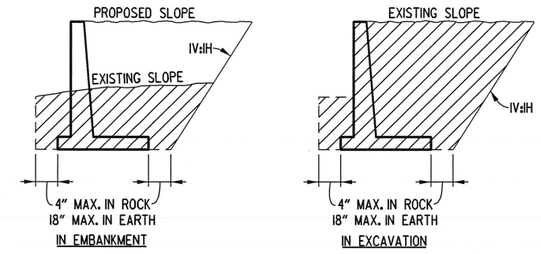
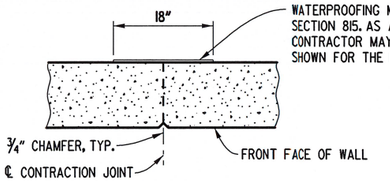


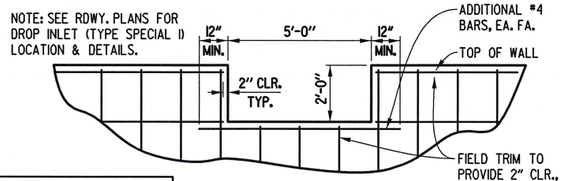
NOTE: HATCHED AREA DENOTES MAXIMUM LIMITS OF PAY EXCAVATION.

DETAILS OF EXCAVATION
NO SCALE



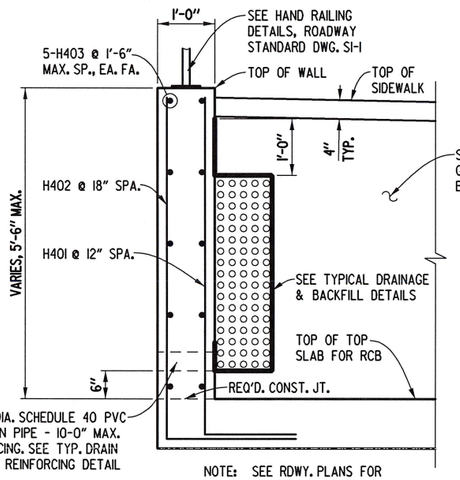
TYPICAL CONTRACTION JOINT DETAIL
NO SCALE

NOTE: 20'-0" MAX. SPACING BETWEEN CONTRACTION JOINTS. HORIZONTAL REINFORCEMENT SHALL BE CONTINUOUS THROUGH CONTRACTION JOINTS.



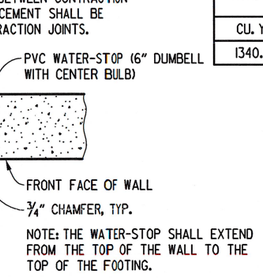
WALL ELEVATION @ DROP INLET (TYPE SPECIAL I)
NO SCALE

QUANTITIES ARE FOR INFORMATION ONLY			
CLASS S CONCRETE ROADWAY	REINFORCING STEEL ROADWAY (GRADE 60)	UNCLASSIFIED EXCAVATION FOR STRUCTURES ROADWAY	SELECT GRANULAR BACKFILL
CU. YD.	POUND	CU. YD.	CU. YD.
1340.50	113459	2589	4811



NOTE: SEE RDWY. PLANS FOR ADDITIONAL INFORMATION

SPECIAL HEADWALL
NO SCALE



NOTE: THE WATER-STOP SHALL EXTEND FROM THE TOP OF THE WALL TO THE TOP OF THE FOOTING.

TYPICAL EXPANSION JOINT DETAIL
NO SCALE

NOTE: 60'-0" MAX. SPACING BETWEEN EXPANSION JOINTS. HORIZONTAL REINFORCING SHALL STOP 2" FROM ℄ EXPANSION JOINT.

BENDING DIAGRAMS

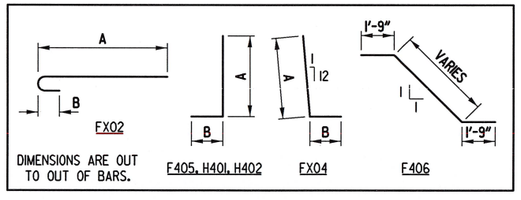


TABLE OF RETAINING WALL VARIABLES (LEVEL BACKFILL WITH LIVE LOAD SURCHARGE)

H	HW	TW	B	BH	TF	FX01	FX02				FX03	FX04				F405				F406 @ 12"		WX01
						SIZE "X" & SPA.	SIZE "X" & SPA.	A	B	P.D.	SIZE "X" & SPA.	SIZE "X" & SPA.	A	B	P.D.	SPA.	A	B	P.D.	A	P.D.	SIZE "X" & SPA.
3'-0"	2'-0"	1'-2"	4'-0"	2'-0"	1'-0"	#4@18"	#4@18"	2'-6"	4½"	3"	#4@18"	#4@18"	2'-7"	8"	3"	18"	2'-7"	8"	3"	VARIES	3"	- -
4'-0"	3'-0"	1'-3"	4'-6"	2'-6"	1'-0"	#4@18"	#4@18"	3'-6"	4½"	3"	#4@18"	#4@18"	3'-7"	8"	3"	18"	3'-7"	8"	3"	VARIES	3"	- -
5'-0"	4'-0"	1'-4"	5'-6"	3'-6"	1'-0"	#4@18"	#4@12"	3'-6"	4½"	3"	#4@18"	#4@18"	4'-7"	8"	3"	18"	4'-7"	8"	3"	VARIES	3"	- -
6'-0"	5'-0"	1'-5"	6'-0"	4'-0"	1'-0"	#4@18"	#4@6"	4'-6"	4½"	3"	#4@18"	#4@18"	5'-7"	8"	3"	18"	5'-7"	8"	3"	VARIES	3"	- -
7'-0"	6'-0"	1'-6"	7'-0"	4'-8"	1'-0"	#4@18"	#5@6"	5'-6"	6"	4½"	#4@18"	#4@12"	6'-7"	8"	3"	18"	6'-7"	8"	3"	VARIES	3"	- -
8'-0"	7'-0"	1'-7"	8'-0"	5'-4"	1'-0"	#4@18"	#5@6"	7'-6"	5"	3¾"	#4@18"	#4@12"	2'-6"	8"	3"	18"	2'-6"	8"	3"	VARIES	3"	#4@18"
9'-0"	6'-6"	1'-6½"	9'-0"	6'-0"	2'-6"	#4@18"	#5@12"	8'-6"	5"	3¾"	#5@12"	#4@12"	4'-0"	8"	3"	18"	4'-0"	8"	3"	VARIES	3"	#4@12"
10'-0"	7'-6"	1'-7½"	10'-0"	6'-8"	2'-6"	#4@18"	#6@12"	9'-6"	6"	4½"	#5@12"	#5@12"	4'-5"	10"	3¾"	18"	4'-0"	8"	3"	VARIES	3"	#4@12"
11'-0"	8'-6"	1'-8½"	11'-0"	7'-4"	2'-6"	#4@18"	#7@12"	10'-6"	7"	5¼"	#5@12"	#6@12"	4'-10"	12"	4½"	18"	4'-0"	8"	3"	VARIES	3"	#4@12"
12'-0"	9'-6"	1'-9½"	12'-0"	8'-0"	2'-6"	#4@18"	#5@6"	11'-6"	5"	3¾"	#5@12"	#4@6"	4'-0"	8"	3"	18"	4'-0"	8"	3"	VARIES	3"	#4@6"
13'-0"	10'-6"	1'-10½"	13'-0"	8'-8"	2'-6"	#4@12"	#6@6"	12'-6"	6"	4½"	#5@12"	#5@6"	4'-5"	10"	3¾"	18"	4'-0"	8"	3"	VARIES	3"	#4@6"
14'-0"	11'-6"	1'-11½"	14'-0"	9'-4"	2'-6"	#4@12"	#6@6"	13'-6"	6"	4½"	#5@12"	#5@6"	4'-5"	10"	3¾"	18"	4'-0"	8"	3"	VARIES	3"	#4@6"
15'-0"	12'-6"	2'-0½"	15'-0"	10'-0"	2'-6"	#5@12"	#7@6"	14'-6"	7"	5¼"	#5@12"	#6@6"	4'-10"	12"	4½"	18"	4'-0"	8"	3"	VARIES	3"	#4@6"
16'-0"	13'-6"	2'-1½"	16'-0"	10'-8"	2'-6"	#5@12"	#8@6"	15'-6"	8"	6"	#5@12"	#6@6"	4'-10"	12"	4½"	12"	4'-0"	8"	3"	VARIES	3"	#5@6"
17'-0"	14'-6"	2'-2½"	17'-0"	11'-4"	2'-6"	#6@12"	#8@6"	16'-6"	8"	6"	#5@12"	#7@6"	5'-9"	14"	5¼"	12"	4'-0"	8"	3"	VARIES	3"	#5@6"
18'-0"	15'-0"	2'-3"	18'-0"	12'-0"	3'-0"	#6@12"	#8@6"	17'-6"	8"	6"	#6@12"	#7@6"	6'-3"	14"	5¼"	12"	4'-6"	8"	3"	VARIES	3"	#5@6"
19'-0"	16'-0"	2'-4"	19'-0"	12'-8"	3'-0"	#6@12"	#9@6"	18'-6"	10"	9"	#6@12"	#8@6"	7'-4"	16"	6"	12"	4'-6"	8"	3"	VARIES	3"	#5@6"
20'-0"	17'-0"	2'-5"	20'-0"	13'-4"	3'-0"	#6@12"	#9@6"	19'-6"	10"	9"	#6@12"	#9@6"	9'-0"	20"	9"	12"	5'-0"	8"	3"	VARIES	3"	#5@6"

BAR LIST - PER SPECIAL HEADWALL

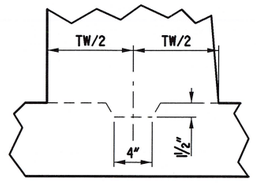
MARK	"A"	"B"	P.D.
H401	8"	6'-0"	3"
H402	8"	6'-0"	3"
H403	---	---	STR.

NOTE: MAXIMUM BAR LENGTHS ARE 40'-0" FOR #4 BARS AND 50'-0" FOR #5 AND LARGER BARS

LAP LENGTHS

BAR SIZE	MIN. LAP LENGTH
#4	1'-9"
#5	2'-2"
#6	2'-7"
#7	3'-6"
#8	4'-7"
#9	5'-9"

NOTE: ANY BAR LAP REQUIRED SHALL BE CONSIDERED SUBSIDIARY TO THE ITEM "REINFORCING STEEL - ROADWAY (GR. 60)."



KEYED CONTRUCTION JOINT DETAIL
NO SCALE

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
05/05/2020

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
05-05-20				6	ARK.			
				JOB NO.		040716	17	194

(2) SPECIAL DETAILS

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, SEVENTH EDITION (2014).

LIVE LOAD: A MAXIMUM LIVE LOAD SURCHARGE OF 250 PSF WAS INCLUDED IN THE DESIGN OF THESE WALLS.

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 EXPOSED SURFACES OF THE CONCRETE UNLESS OTHERWISE NOTED.~~

REINFORCING STEEL: ALL REINFORCING STEEL SHALL CONFORM TO AASHTO M 31 OR M 53, GRADE 60, WITH MILL TEST REPORTS.

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.

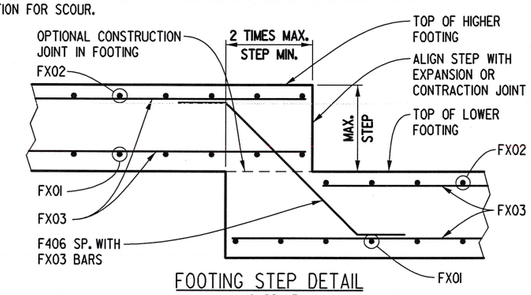
A CLASS 3 TEXTURED COATING FINISH SHALL BE APPLIED TO RETAINING WALL SURFACES AS SPECIFIED IN SP JOB NO. 040716 "TEXTURED COATING FINISH" AND IN ACCORDANCE WITH SUBSECTION 802.19(B)(3).

WALL FINISH: THE EXPOSED FRONT FACE OF THE RETAINING WALL CONCRETE SHALL RECEIVE AN ASHLAR STONE FINISH. SEE WALL DETAILS AND SP JOB NO. 040716 "ARCHITECTURAL FINISH" FOR DETAILS.

SELECT GRANULAR BACKFILL MAY BE AGGREGATE BASE COURSE (CLASS 7), SELECTED MATERIAL (CLASS SM1), OR COARSE AGGREGATE (AASHTO M 43 #57) PER SUBSECTION 802.02(c). THE SAME MATERIAL SHALL BE USED FOR SELECT GRANULAR BACKFILL ALONG THE ENTIRE RETAINING WALL. SEE JOB SP "SELECT GRANULAR BACKFILL" FOR ADDITIONAL INFORMATION.

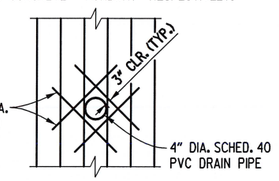
DRAINAGE FILL MATERIAL (CLASS 3) AND SELECT GRANULAR BACKFILL SHALL BE MEASURED AND PAID FOR AS SELECT GRANULAR BACKFILL.

THESE DETAILS ARE NOT INTENDED FOR USE ALONG STREAMS OR DITCHES WITHOUT CONSIDERATION FOR SCOUR.



FOOTING STEP DETAIL
NO SCALE

NOTE: ADDITIONAL REINFORCING AND CONCRETE FOR FOOTING STEPS SHALL BE CONSIDERED SUBSIDIARY TO THE ITEMS "REINFORCING STEEL - ROADWAY (GR. 60)." AND "CLASS S CONCRETE - ROADWAY" RESPECTIVELY.



TYPICAL DRAIN PIPE REINFORCING DETAIL
NO SCALE

REINFORCED CONCRETE RETAINING WALL (WITH LIVE LOAD SURCHARGE)

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CHECKED BY: CAW DATE: 04-05-18
DESIGNED BY: KRM DATE: 03-27-18
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SCALE: NO SCALE

SPECIAL DETAILS

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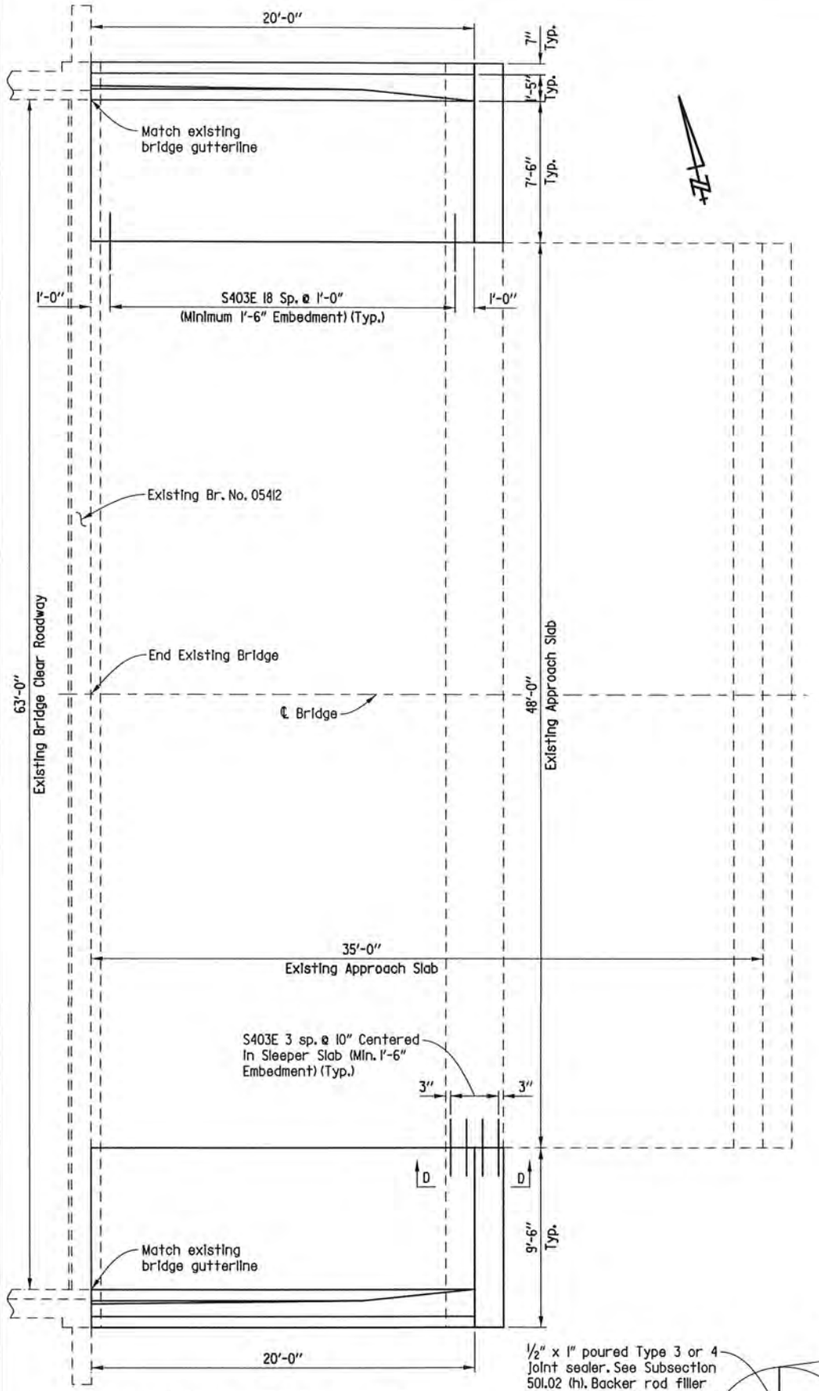
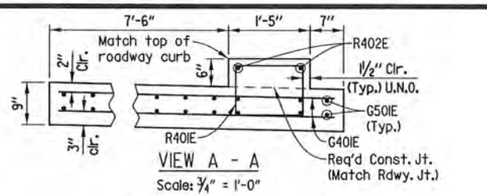
				6	ARK.			
				JOB NO.		040716	18	194

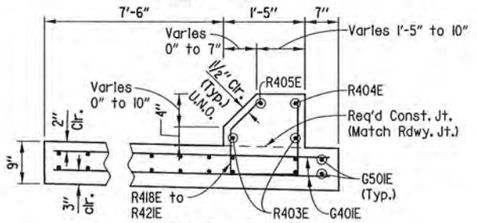
(2) SPECIAL DETAILS



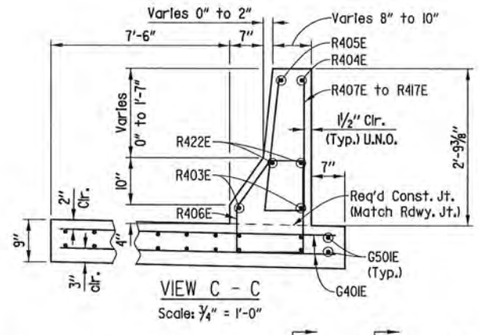
PLAN - APPROACH GUTTERS
(East Side Only)
Scale: 1/4" = 1'-0"



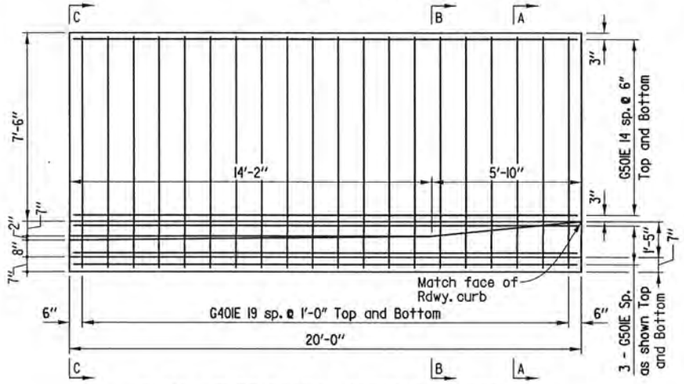
VIEW A - A
Scale: 3/4" = 1'-0"



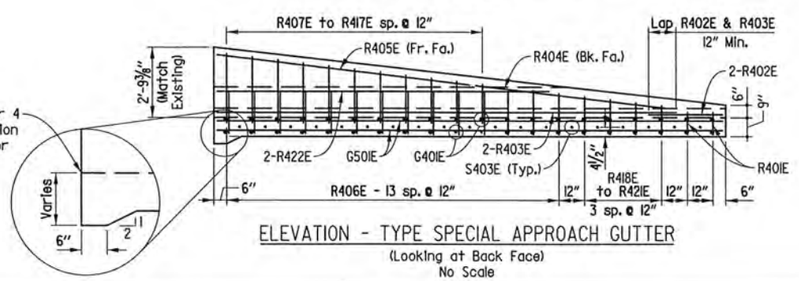
VIEW B - B
Scale: 3/4" = 1'-0"



VIEW C - C
Scale: 3/4" = 1'-0"



PLAN - TYPE SPECIAL APPROACH GUTTER
(Southeast Approach Gutter shown, Northeast Approach Gutter opposite hand)
No Scale

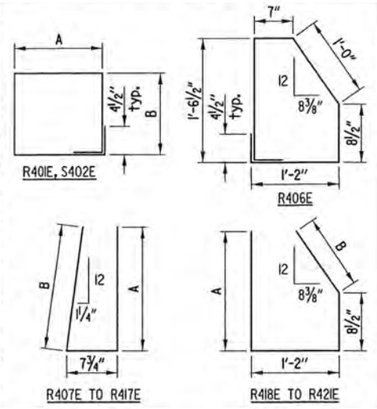


ELEVATION - TYPE SPECIAL APPROACH GUTTER
(Looking at Back Face)
No Scale

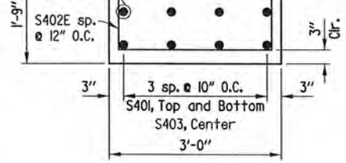
BAR LIST - ONE APPROACH GUTTER

Mark	No. Req'd.	Length	A	B	P.D.
G401E	40	9'-2"			Str.
G501E	36	19'-8"			Str.
R401E	2	4'-5"	1'-2"	10½"	2"
R402E	2	3'-0"			Str.
R403E	2	17'-8"			Str.
R404E	1	18'-0"			Str.
R405E	1	18'-1"			Str.
R406E	14	5'-4"			2"
R407E to R417E	1ea.	2'-7" to 5'-0"	1'-0½" to 2'-3"	1'-0½" to 2'-3"	2"
R418E to R421E	1ea.	3'-3" to 4'-1"	1'-1½" to 1'-6"	4" to 10"	2"
R422E	2	13'-4"			Str.
S401E	8	9'-2"			Str.
S402E	10	8'-4"	2'-8"	1'-4"	2"
S403E	23	3'-0"			Str.

Bending Diagrams (Dimensions are Out to Out of Bars)



Note: All bars designated with an "E" suffix shall be epoxy coated.



SECTION D - D
(South Gutter Shown, North Gutter Opposite Hand)
No Scale

GENERAL NOTES

Type Special Approach Gutters shall be placed at locations as directed by the Engineer.

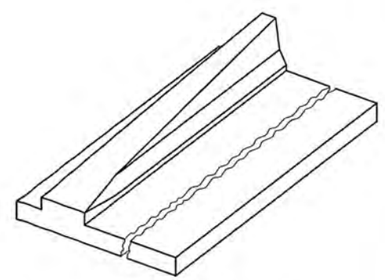
All Concrete shall be Class S with a minimum 28 day compressive strength f'c = 3,500 psi and shall be poured in the dry. All exposed corners are to be chamfered ¾" unless noted otherwise.

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.

Unless otherwise required in the plans, the rail surface finish type and areas of application shall match that used on the adjacent bridge railing or concrete barrier wall. See Subsection 802.19(3) for Class 3 Textured Coating finish or Subsections 803.03(a) or 803.03(b) for Class 1 or 2 Protective Surface Treatment, respectively. Payment for surface finishes shall not be paid for directly, but shall be considered incidental to other items. Approach Gutters will be measured and paid for in accordance with Section 504.

QUANTITIES FOR ONE TYPE SPECIAL APPROACH GUTTER

Reinf. Steel (lbs.)	Concrete (Cu. Yds.)
1300	8.4



PICTORIAL OF
TYPE SPECIAL APPROACH GUTTER
No Scale

DETAILS OF TYPE SPECIAL APPROACH GUTTERS

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CHECKED BY: CAW DATE: 07-25-18
DESIGNED BY: KRM DATE: 07-20-18
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SCALE: SEE DETAILS

SPECIAL DETAILS

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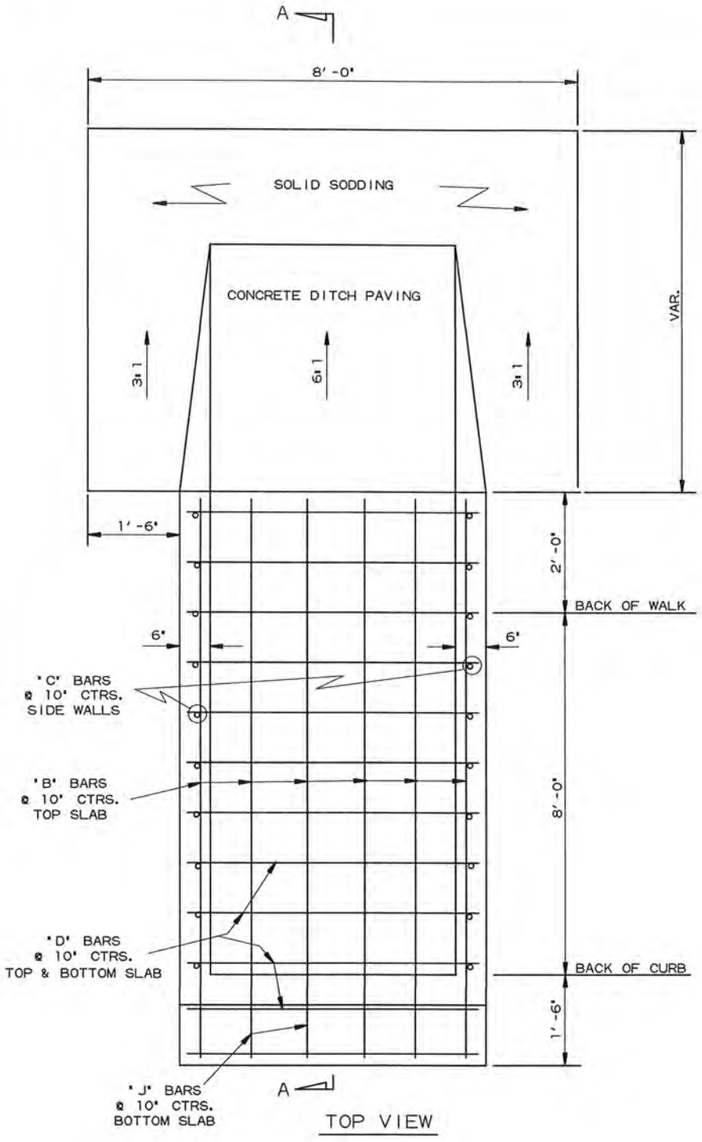
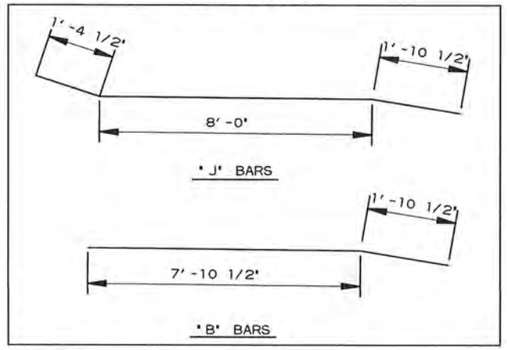
				6	ARK.			
				JOB NO.		040716	19	194

(2) SPECIAL DETAILS



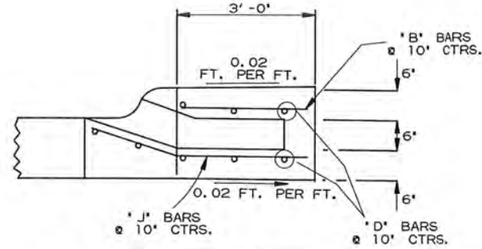
TOP VIEW

BAR DIAGRAM



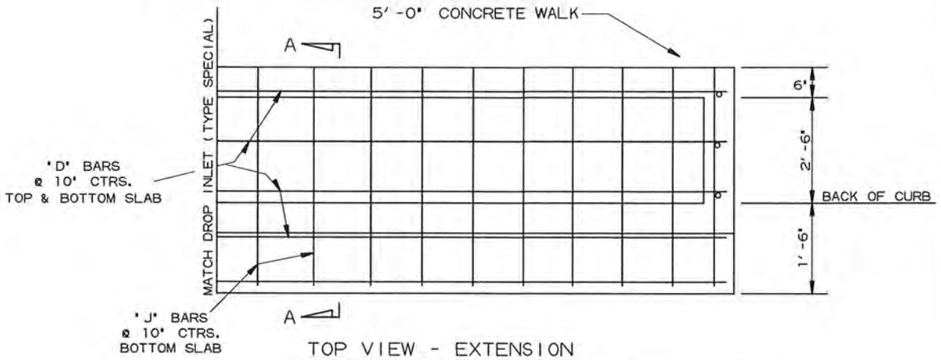
CLASS A CONC.	REINF. STEEL-RDWY. GRADE 60
CU. YDS.	POUND
2.53	207

QUANTITIES FOR INFORMATION ONLY
DROP INLET (TYPE SPECIAL)

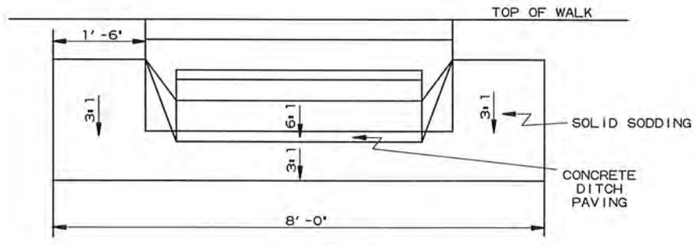


SECTION A-A - EXTENSION

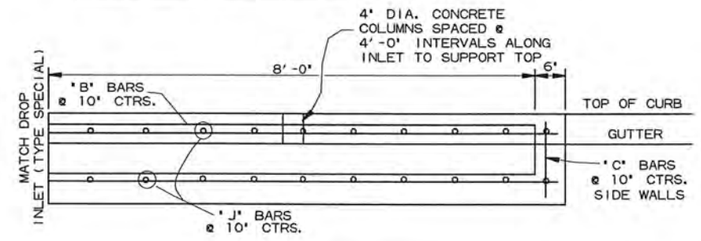
STATE OF ARKANSAS
* * *
LICENSED PROFESSIONAL ENGINEER
* * *
No. 15560
JEROME PAUL DAVIS
3-25-2020



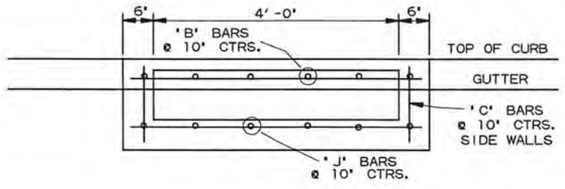
TOP VIEW - EXTENSION



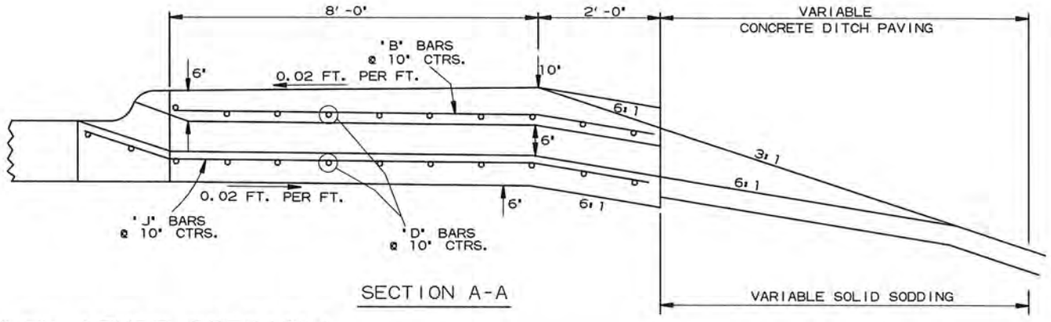
BACK VIEW



FRONT VIEW - EXTENSION



FRONT VIEW



SECTION A-A

GENERAL NOTES:

1. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
2. ALL REINF. BARS SHALL BE #4 AND HAVE 1 1/2" COVER.
3. DROP INLETS AND EXTENSIONS ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
4. DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
5. 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.
6. CONCRETE DITCH PAVING & SOLID SODDING SHALL BE PAID FOR SEPARATELY.
7. CONSTRUCT EXTENSIONS UPSTREAM OF DROP INLET UNLESS OTHERWISE SPECIFIED.

DROP INLET (TYPE SPECIAL)

SPECIAL DETAILS

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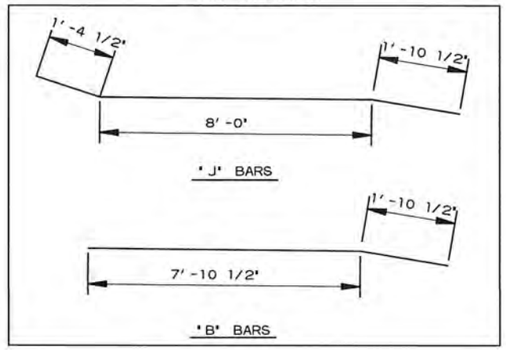
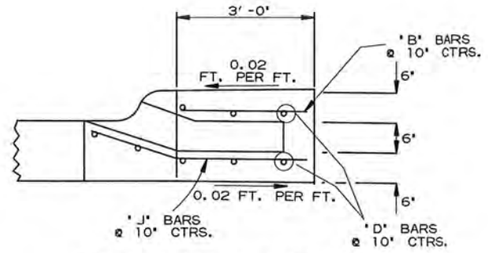
				6	ARK.			
				JOB NO.		040716	20	194

(2) SPECIAL DETAILS

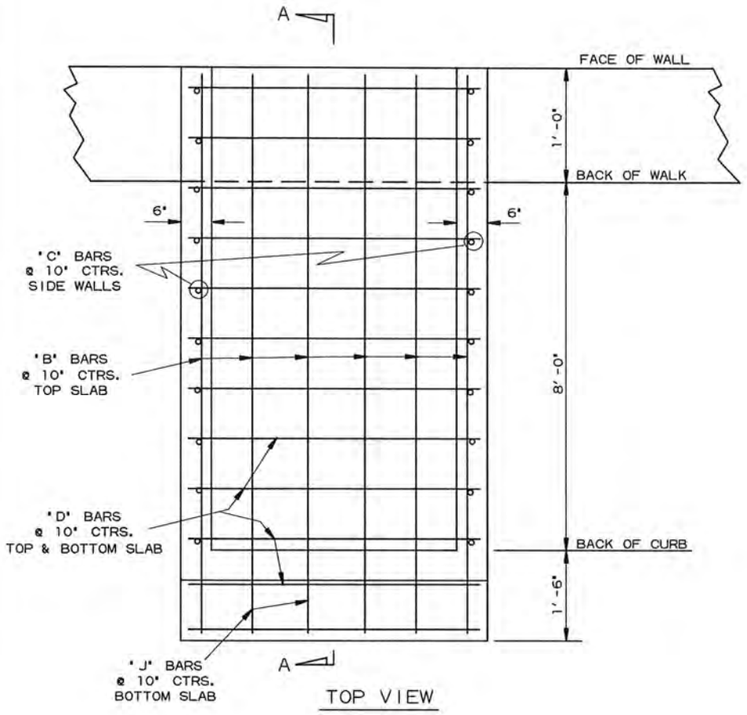
BAR DIAGRAM





SECTION A-A - EXTENSION

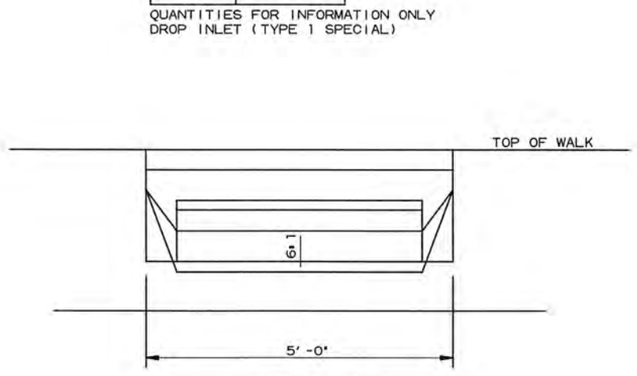
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
JEROME PAUL DAVIS
No. 15560
3-25-2020



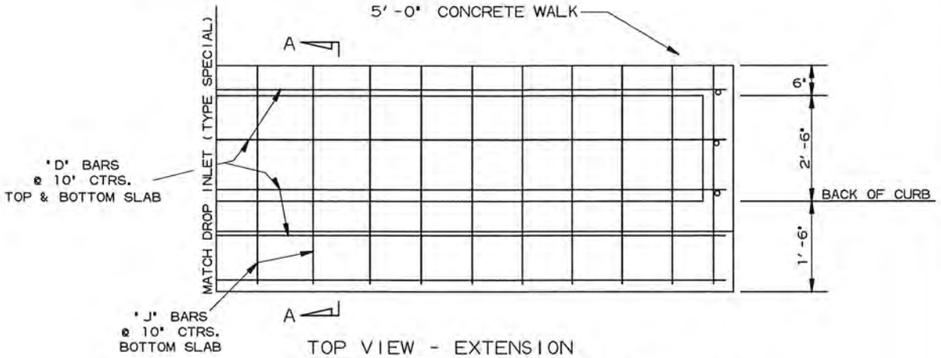
TOP VIEW

CLASS A CONC.	REINF. STEEL-RDWY. GRADE 60
CU. YDS.	POUND
2.53	207

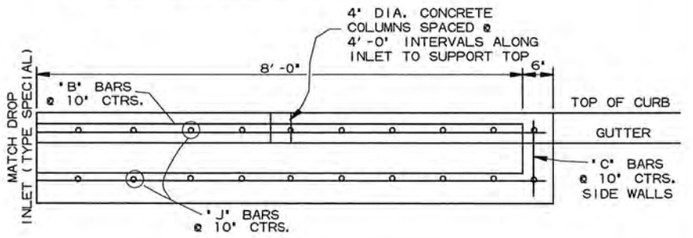
QUANTITIES FOR INFORMATION ONLY
DROP INLET (TYPE 1 SPECIAL)



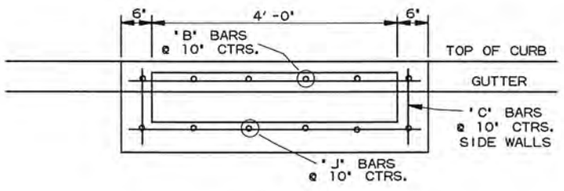
BACK VIEW



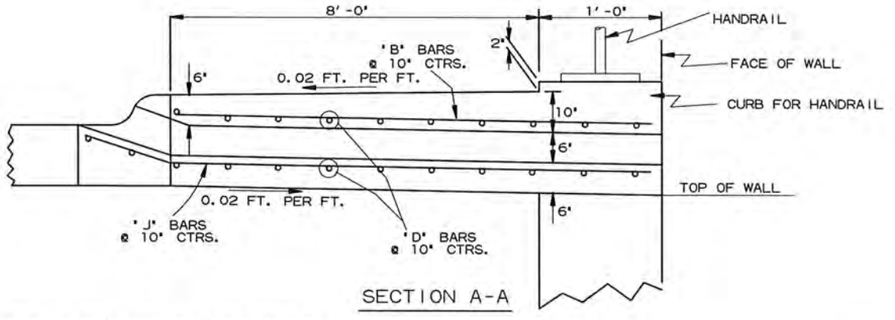
TOP VIEW - EXTENSION



FRONT VIEW - EXTENSION



FRONT VIEW



SECTION A-A

GENERAL NOTES:

1. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
2. ALL REINF. BARS SHALL BE #4 AND HAVE 1 1/2" COVER.
3. DROP INLETS AND EXTENSIONS ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
4. DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
5. 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.
6. CONCRETE DITCH PAVING & SOLID SODDING SHALL BE PAID FOR SEPARATELY.
7. CONSTRUCT EXTENSIONS UPSTREAM OF DROP INLET UNLESS OTHERWISE SPECIFIED.

DROP INLET (TYPE 1 SPECIAL)

SPECIAL DETAILS

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				6	ARK.			
				JOB NO.		040716	21	194

① SPECIAL DETAILS

INLET WINGWALL TABLE

OVER ALL WIDTH	CLEAR HEIGHT	FOOTING THK.	WING WALL THK.	BOX SKEW (DEG.)	SLOPE	HDWL LENGTH	HEEL	WALL HEIGHT AT HDWL	WALL HEIGHT AT WING END	WINGWALL ANGLE (DEGREE) WING A	WINGWALL ANGLE (DEGREE) WING B	FOOTING WIDTH AT WALL END	WIDTH OF WING FOOTINGS AT HDWL WING A	WIDTH OF WING FOOTINGS AT HDWL WING B	FOOTING DIMENSION PARALLEL WITH HDWL WING A	FOOTING DIMENSION PARALLEL WITH HDWL WING B	LENGTH OF WINGWALLS WING A	LENGTH OF WINGWALLS WING B	LENGTH OF FOOTING HEEL WING A	LENGTH OF FOOTING HEEL WING B
OW	H	WB	CW	SK	SL	K	HL	WH1	WH2	AF1	AF2	WE	WF1	WF2	G1	G2	W1	W2	W3	W4
31'-1"	7'-0"	0'-9"	0'-8"	0	3:1	30'-0"	2'-0"	7'-10"	2'-4"	0	0	3'-2"	3'-5 3/4"	3'-5 3/4"	0'-9 3/4"	0'-9 3/4"	16'-6"	16'-6"	16'-6"	16'-6"

CLASS "S" CONCRETE (Includes apron)	REINFORCING STEEL (Includes apron and laps if required)
INLET	INLET
CU.YD	LBS.
9.82	886

WING	F1 BAR SIZE	F1 MAX. SPACING	F1 NO. REQ'D	F1 LENGTHS VARY			F2 BAR SIZE	F2 SPACING	F2 NO. REQ'D	F2 LENGTHS			F3 BAR SIZE	F3 SPACING	F3 NO. REQ'D	F3 LENGTHS			F4 BAR SIZE	F4 SPACING	F4 NO. REQ'D	F4 LENGTHS VARY			F5 BAR SIZE	F5 SPACING	F5 NO. REQ'D	F5 LENGTHS			F6 BAR SIZE	F6 SPACING	F6 NO. REQ'D	F6 LENGTHS VARY			F7 BAR SIZE	F7 NO. REQ'D	F7 LENGTHS	F8 BAR SIZE	F8 SPACING	F8 NO. REQ'D	F8 LENGTHS VARY			F9 BAR SIZE	F9 SPACING	F9 NO. REQ'D	F9 LENGTHS			F10 BAR SIZE	F10 NO. REQ'D	F10 LENGTHS	F11 BAR SIZE	F11 NO. REQ'D	F11 LENGTHS	F12 BAR SIZE	F12 SPACING	F12 NO. REQ'D	F12 LENGTHS		REINF. STEEL QTY. PER WING (LBS)
WING A	4	12	17	L	Min	3'-4"	4	12	3	L	3'-5"				L	-	4	18	6	Min			4	18	4	16'-2"	4	18	11	L	Min	5'-3"	4	8	16'-2"	6	18	11	Min			-	-	-	Min			4	2	16'-11"	4	2	17'-4"	6	12	7	L	3'-4"	443
					Max	9'-0"					10'-3"					-				3'-4"											Max	2'-8"																								
				X	Min	0'-9"				X	2'-4"				X	-				Max										X	Min	2'-4"																						X	1'-8"	
					Max	1'-1"					2'-4"					-				12'-4"										Max	3'-0"																								
				Y	Min	2'-8"				Y	3'-0"				Y	-				Min										Y	Min	3'-0"																								
					Max	8'-0"					8'-0"					-				12'-4"											Max	8'-0"																								
WING B	4	12	17	L	Min	3'-4"	4	12	3	L	3'-5"				L	-	4	18	6	Min			4	18	4	16'-2"	4	18	11	L	Min	5'-3"	4	8	16'-2"	6	18	11	Min			-	-	-	Min			4	2	16'-11"	4	2	17'-4"	6	12	7	L	3'-4"	443
					Max	9'-0"					10'-3"					-				3'-4"											Max	2'-8"																								
				X	Min	0'-9"				X	2'-4"				X	-				Max										X	Min	2'-4"																						X	1'-8"	
					Max	1'-1"					2'-4"					-				12'-4"										Max	3'-0"																								
				Y	Min	2'-8"				Y	3'-0"				Y	-				Min										Y	Min	3'-0"																								
					Max	8'-0"					8'-0"					-				12'-4"											Max	8'-0"																								

MID-SECTION BAR LAP TABLE

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

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

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

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 16720
KENNETH RANDALL MILLER
3/25/2020

TABULAR DATA BY: KRM DATE: 3/19/2020
CHECKED BY: CAW DATE: 3/19/2020

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

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

INLET SKEWED END SECTION

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

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

CLASS "S" CONCRETE (Includes HDWL) CU. YDS.	↑ 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)."

INLET SLOPE SECTION(S)

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

HDWL DEPTH HD	ADDITIONAL REINF. FOR HDWL LBS.	"h" HDWL BARS SIZE	"h" HDWL BARS Y	"h" HDWL BARS LENGTH	"h" HDWL BARS NO. REQ'D
3"	41	4	0'-10"	1'-10"	33

CLASS "S" CONCRETE CU. YDS.	REINFORCING STEEL (GR. 60) LBS.
TOTAL	
0.29	81

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

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

MID-SECTION

R.C. BOX SECTION	DESIGN FILL DEPTH (FT.)	CLEAR SPAN (FT.)	CLEAR HEIGHT (FT.)	TOP SLAB THK.	BOTTOM SLAB THK.	SIDE WALL THK.	INTERIOR WALL THK.	OVER ALL WIDTH	OVER ALL HEIGHT	SECTION LENGTH (FT.)	TOP SLAB REINF. LENGTH = OW - 4" + BENDS "a" SIZE	"a" L	Bent "b" SIZE	Bent "b" L	"c" SIZE	"c" L	"c" SPACING	"c" NO. REQ'D	BOTTOM SLAB REINF. LENGTH = OW - 4" + BENDS "d" SIZE	"d" L	Bent "b1" SIZE	Bent "b1" L	"f" SIZE	"f" L	"f" SPACING	"f" NO. REQ'D	SIDE WALL REINF. "f0" LENGTH = OH - 4" SIZE	"f0" SPACING	"f0" NO. REQ'D	"f0" LENGTH	INTERIOR WALL REINF. "f1" LENGTH = OH - 4" SIZE	"f1" SPACING	"f1" NO. REQ'D	"f1" LENGTH	TOP SLAB DISTRIB. REINF. "g" LENGTH = SL SIZE	"g" SPACING	"g" NO. REQ'D	BOTTOM SLAB DISTRIB. REINF. "e" LENGTH = SL SIZE	"e" SPACING	"e" NO. REQ'D	SIDE WALL DISTRIB. REINF. "d1" LENGTH = SL SIZE	"d1" SPACING	"d1" NO. REQ'D	INTERIOR WALL DISTRIB. REINF. "d2" LENGTH = SL SIZE	"d2" SPACING	"d2" NO. REQ'D
D	S	H	T	B	C	W	OW	OH	SL																																															
A	2	7	7	11.5	11.5	6.5	8	31'-1"	8'-11"	30	4	30'-9"	8	31'-9"	8	30'-9"	18	20	4	30'-9"	5	31'-8"	4	30'-9"	24	15	4	4	180	8'-7"	4	12	180	8'-7"	4	9	87	4	9	87	4	12	14	4	12	42

CLASS "S" CONCRETE CU. YDS.	REINFORCING STEEL (GR. 60) LBS.
90.18	11533

SHEET 1 OF 2
DETAILS OF R.C. BOX CULVERT
QUADRUPLE BARREL BOX CULVERT
Sta. 120+00, LT.

SPECIAL DETAILS

DESIGN FILE: G:\TI03100.Hwy255\TRANSP\dgn\special_details\b040716_01.dgn
PLOTTED: 3/25/2020 14:41
Ver. 1.16
SCALE: 1:2

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.		040716	22	194

① SPECIAL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 16720
KENNETH RANDALL MILLER
3/25/2020

TABULAR DATA BY: KRM DATE: 3/19/2020
CHECKED BY: CAW DATE: 3/19/2020

OUTLET WINGWALL TABLE

OVER ALL WIDTH	CLEAR HEIGHT	FOOTING THK.	WING WALL THK.	BOX SKEW (DEG.)	SLOPE	HDWL LENGTH	HEEL	WALL HEIGHT AT HDWL	WALL HEIGHT AT WING END	WINGWALL ANGLE (DEGREE) WING A	WINGWALL ANGLE (DEGREE) WING B	FOOTING WIDTH AT WALL END	WIDTH OF WING FOOTINGS AT HDWL WING A	WIDTH OF WING FOOTINGS AT HDWL WING B	FOOTING DIMENSION PARALLEL WITH HDWL WING A	FOOTING DIMENSION PARALLEL WITH HDWL WING B	LENGTH OF WINGWALLS WING A	LENGTH OF WINGWALLS WING B	LENGTH OF FOOTING HEEL WING A	LENGTH OF FOOTING HEEL WING B
OW	H	WB	CW	SK	SL	K	HL	WH1	WH2	AF1	AF2	WE	WF1	WF2	G1	G2	W1	W2	W3	W4
31'-1"	7'-0"	0'-9"	0'-8"	0	3:1	30'-0"	2'-0"	7'-10"	2'-4"	0	0	3'-2"	3'-5 3/4"	3'-5 3/4"	0'-9 3/4"	0'-9 3/4"	16'-6"	16'-6"	16'-6"	16'-6"

CLASS "S" CONCRETE (Includes apron)	REINFORCING STEEL (Includes apron and laps if required)
OUTLET	OUTLET
CU.YD	LBS.
10.90	886

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	17	L	Min	3'-4"	4	12	3	L	3'-5"	-	-	-	L	-	4	18	6	Min
					Max	9'-0"														3'-4"
				X	Min	0'-9"				X	1'-0"				X	-				Max
					Max	1'-1"														12'-4"
				Y	Min	2'-8"				Y	2'-6"				Y	-				
					Max	8'-0"														
WING B	4	12	17	L	Min	3'-4"	4	12	3	L	3'-5"	-	-	-	L	-	4	18	6	Min
					Max	9'-0"														3'-4"
				X	Min	0'-9"				X	1'-0"				X	-				Max
					Max	1'-1"														12'-4"
				Y	Min	2'-8"				Y	2'-6"				Y	-				
					Max	8'-0"														

WING	F5 BAR SIZE	F5 SPACING	F5 NO. REQ'D	F5 LENGTHS	F6 BAR SIZE	F6 SPACING	F6 NO. REQ'D	F6 LENGTHS VARY			F7 BAR SIZE	F7 NO. REQ'D	F7 LENGTHS	F8 BAR SIZE	F8 SPACING	F8 NO. REQ'D	F8 LENGTHS VARY		F9 BAR SIZE	F9 SPACING	F9 NO. REQ'D	F9 LENGTHS		F10 BAR SIZE	F10 NO. REQ'D	F10 LENGTHS	F11 BAR SIZE	F11 NO. REQ'D	F11 LENGTHS	F12 BAR SIZE	F12 SPACING	F12 NO. REQ'D	F12 LENGTHS		REINF. STEEL QTY. PER WING (LBS)
WING A	4	18	4	16'-2"	4	18	11	L	Min	5'-3"	4	8	16'-2"	6	18	11	Min		-	-	-	Min		4	2	16'-11"	4	2	17'-4"	6	12	7	L	3'-4"	443
									Max	10'-3"							2'-8"					-											X	1'-8"	
								X	Min	2'-4"							Max					Max												
									Max	2'-4"							3'-0"					-												
								Y	Min	3'-0"																								
									Max	8'-0"																								
WING B	4	18	4	16'-2"	4	18	11	L	Min	5'-3"	4	8	16'-2"	6	18	11	Min		-	-	-	Min		4	2	16'-11"	4	2	17'-4"	6	12	7	L	3'-4"	443
									Max	10'-3"							2'-8"					-										X	1'-8"	
								X	Min	2'-4"							Max					Max												
									Max	2'-4"							3'-0"					-												
								Y	Min	3'-0"																								
									Max	8'-0"																								

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

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

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

OUTLET SKEWED END SECTION

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

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	23	194

SPECIAL DETAILS

INLET WINGWALL TABLE

OVER ALL WIDTH	CLEAR HEIGHT	FOOTING THK.	WING WALL THK.	BOX SKEW (DEG.)	SLOPE	HDWL LENGTH	HEEL	WALL HEIGHT AT HDWL	WALL HEIGHT AT WING END	WINGWALL ANGLE (DEGREE) WING A	WINGWALL ANGLE (DEGREE) WING B	FOOTING WIDTH AT WALL END	WIDTH OF WING FOOTINGS AT HDWL WING A	WIDTH OF WING FOOTINGS AT HDWL WING B	FOOTING DIMENSION PARALLEL WITH HDWL WING A	FOOTING DIMENSION PARALLEL WITH HDWL WING B	LENGTH OF WINGWALLS WING A	LENGTH OF WINGWALLS WING B	LENGTH OF FOOTING HEEL WING A	LENGTH OF FOOTING HEEL WING B
OW	H	WB	CW	SK	SL	K	HL	WH1	WH2	AF1	AF2	WE	WF1	WF2	G1	G2	W1	W2	W3	W4
31'-1"	7'-0"	0'-9"	0'-8"	0	3:1	30'-0"	2'-0"	7'-10"	2'-4"	0	0	3'-2"	3'-5 3/4"	3'-5 3/4"	0'-9 3/4"	0'-9 3/4"	16'-6"	16'-6"	16'-6"	16'-6"

CLASS "S" CONCRETE (Includes apron)	REINFORCING STEEL (Includes apron and laps if required)
INLET	INLET
CU.YD	LBS.
9.82	886

WING	F1 BAR SIZE	F1 MAX. SPACING	F1 NO. REQ'D	F1 LENGTHS VARY	F1	F2 BAR SIZE	F2 SPACING	F2 NO. REQ'D	F2 LENGTHS	F3 BAR SIZE	F3 SPACING	F3 NO. REQ'D	F3 LENGTHS	F4 BAR SIZE	F4 SPACING	F4 NO. REQ'D	F4 LENGTHS VARY	F5 BAR SIZE	F5 SPACING	F5 NO. REQ'D	F5 LENGTHS	F6 BAR SIZE	F6 SPACING	F6 NO. REQ'D	F6 LENGTHS VARY	F6	F7 BAR SIZE	F7 NO. REQ'D	F7 LENGTHS	F8 BAR SIZE	F8 SPACING	F8 NO. REQ'D	F8 LENGTHS VARY	F9 BAR SIZE	F9 SPACING	F9 NO. REQ'D	F9 LENGTHS	F10 BAR SIZE	F10 NO. REQ'D	F10 LENGTHS	F11 BAR SIZE	F11 NO. REQ'D	F11 LENGTHS	F12 BAR SIZE	F12 SPACING	F12 NO. REQ'D	F12 LENGTHS	REINF. STEEL QTY. PER WING (LBS)
WING A	4	12	17	L	Min 3'-4"	4	12	3	L 3'-5"	-	-	-	L -	4	18	6	Min	4	18	4	16'-2"	4	18	11	L Min 5'-3"		4	8	16'-2"	6	18	11	Min	-	-	-	Min	4	2	16'-11"	4	2	17'-4"	6	12	7	L 3'-4"	443
					Max 9'-0"												3'-4"								Max 10'-3"								2'-8"													X 1'-8"	
				X	Min 0'-9"				X 1'-0"				X -				Max								Min 2'-4"								Max				Max									
					Max 1'-1"												12'-4"								Max 2'-4"								3'-0"				-									
				Y	Min 2'-8"				Y 2'-6"				Y -												Min 3'-0"																					
					Max 8'-0"																				Max 8'-0"																					
WING B	4	12	17	L	Min 3'-4"	4	12	3	L 3'-5"	-	-	-	L -	4	18	6	Min	4	18	4	16'-2"	4	18	11	L Min 5'-3"		4	8	16'-2"	6	18	11	Min	-	-	-	Min	4	2	16'-11"	4	2	17'-4"	6	12	7	L 3'-4"	443
					Max 9'-0"												3'-4"								Max 10'-3"								2'-8"													X 1'-8"	
				X	Min 0'-9"				X 1'-0"				X -				Max								Min 2'-4"								Max				Max									
					Max 1'-1"												12'-4"								Max 2'-4"								3'-0"				-									
				Y	Min 2'-8"				Y 2'-6"				Y -												Min 3'-0"																					
					Max 8'-0"																				Max 8'-0"																					

MID-SECTION

BAR LAP TABLE

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

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

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

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 16720
KENNETH RANDALL MILLER
3/25/20

TABULAR DATA BY: KRM DATE: 3/19/2020
CHECKED BY: CAW DATE: 3/19/2020

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

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

INLET SKEWED END SECTION

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

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

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)."

INLET SLOPE SECTION(S)

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

HDWL DEPTH, HD	ADDITIONAL REINF. FOR HDWL LBS.	"h" HDWL BARS SIZE	"h" HDWL BARS Y	"h" HDWL BARS LENGTH	"h" HDWL BARS NO. REQ'D
3"	41	4	0'-10"	1'-10"	33

CLASS "S" CONCRETE CU. YDS.	REINFORCING STEEL (GR. 60) LBS.
TOTAL	
0.29	81

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

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

MID-SECTION

R.C. BOX SECTION	DESIGN FILL DEPTH (FT.)	CLEAR SPAN (FT.)	CLEAR HEIGHT (FT.)	TOP SLAB THK.	BOTTOM SLAB THK.	SIDE WALL THK.	INTERIOR WALL THK.	OVER ALL WIDTH	OVER ALL HEIGHT	SECTION LENGTH (FT.)	TOP SLAB REINF. LENGTH = OW - 4" + BENDS "a" SIZE	"a" L	Bent "b" SIZE	Bent "b" L	"c" SIZE	"c" L	"c" SPACING	"c" NO. REQ'D	BOTTOM SLAB REINF. LENGTH = OW - 4" + BENDS "d" SIZE	"d" L	Bent "b1" SIZE	Bent "b1" L	"f" SIZE	"f" L	"f" SPACING	"f" NO. REQ'D	SIDE WALL REINF. "f0" LENGTH = OH - 4" SIZE	"f0" SPACING	"f0" NO. REQ'D	"f0" LENGTH	INTERIOR WALL REINF. "f1" LENGTH = OH - 4" SIZE	"f1" SPACING	"f1" NO. REQ'D	"f1" LENGTH	TOP SLAB DISTRIB. REINF. "g" LENGTH = SL SIZE	"g" SPACING	"g" NO. REQ'D	BOTTOM SLAB DISTRIB. REINF. "e" LENGTH = SL SIZE	"e" SPACING	"e" NO. REQ'D	SIDE WALL DISTRIB. REINF. "d1" LENGTH = SL SIZE	"d1" SPACING	"d1" NO. REQ'D	INTERIOR WALL DISTRIB. REINF. "d2" LENGTH = SL SIZE	"d2" SPACING	"d2" NO. REQ'D
D	S	H	T	B	C	W	OW	OH	SL																																							
A	2	7	7	11.5	11.5	6.5	8	31'-1"	8'-11"	18	4	30'-9"	8	31'-9"	8	30'-9"	18	12	4	30'-9"	5	31'-8"	4	30'-9"	24	9	4	4	108	8'-7"	4	12	108	8'-7"	4	9	87	4	9	87	4	12	14	4	12	42

CLASS "S" CONCRETE CU. YDS.	REINFORCING STEEL (GR. 60) LBS.
54.11	6920

SHEET 1 OF 2
DETAILS OF R.C. BOX CULVERT
QUADRUPLE BARREL BOX CULVERT
Sta. 124+67, LT.

SPECIAL DETAILS

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Ver. 1.16
SCALE: 1:2

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				6	ARK.			
				JOB NO.		040716	24	194

SPECIAL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 16720
KENNETH RANDALL MILLER
3/19/20

TABULAR DATA BY: KRM DATE: 3/19/2020
CHECKED BY: CAW DATE: 3/19/2020

OUTLET WINGWALL TABLE

OVER ALL WIDTH	CLEAR HEIGHT	FOOTING THK.	WING WALL THK.	BOX SKEW (DEG.)	SLOPE	HDWL LENGTH	HEEL	WALL HEIGHT AT HDWL	WALL HEIGHT AT WING END	WINGWALL ANGLE (DEGREE) WING A	WINGWALL ANGLE (DEGREE) WING B	FOOTING WIDTH AT WALL END	WIDTH OF WING FOOTINGS AT HDWL WING A	WIDTH OF WING FOOTINGS AT HDWL WING B	FOOTING DIMENSION PARALLEL WITH HDWL WING A	FOOTING DIMENSION PARALLEL WITH HDWL WING B	LENGTH OF WINGWALLS WING A	LENGTH OF WINGWALLS WING B	LENGTH OF FOOTING HEEL WING A	LENGTH OF FOOTING HEEL WING B
OW	H	WB	CW	SK	SL	K	HL	WH1	WH2	AF1	AF2	WE	WF1	WF2	G1	G2	W1	W2	W3	W4
31'-1"	7'-0"	0'-9"	0'-8"	0	3:1	30'-0"	2'-0"	7'-10"	2'-4"	0	0	3'-2"	3'-5 3/4"	3'-5 3/4"	0'-9 3/4"	0'-9 3/4"	16'-6"	16'-6"	16'-6"	16'-6"

CLASS "S" CONCRETE (Includes apron)	REINFORCING STEEL (Includes apron and laps if required)
OUTLET	OUTLET
CU.YD	LBS.
10.90	886

WING	F1 BAR SIZE	F1 MAX. SPACING	F1 NO. REQ'D	F1 LENGTHS VARY	F2 BAR SIZE	F2 SPACING	F2 NO. REQ'D	F2 LENGTHS	F3 BAR SIZE	F3 SPACING	F3 NO. REQ'D	F3 LENGTHS	F4 BAR SIZE	F4 SPACING	F4 NO. REQ'D	F4 LENGTHS VARY	F5 BAR SIZE	F5 SPACING	F5 NO. REQ'D	F5 LENGTHS	F6 BAR SIZE	F6 SPACING	F6 NO. REQ'D	F6 LENGTHS VARY	F7 BAR SIZE	F7 NO. REQ'D	F7 LENGTHS	F8 BAR SIZE	F8 SPACING	F8 NO. REQ'D	F8 LENGTHS VARY	F9 BAR SIZE	F9 SPACING	F9 NO. REQ'D	F9 LENGTHS	F10 BAR SIZE	F10 NO. REQ'D	F10 LENGTHS	F11 BAR SIZE	F11 NO. REQ'D	F11 LENGTHS	F12 BAR SIZE	F12 SPACING	F12 NO. REQ'D	F12 LENGTHS	REINF. STEEL QTY. PER WING (LBS)
WING A	4	12	17	L Min 3'-4" / L Max 9'-0" / X Min 0'-9" / X Max 1'-1" / Y Min 2'-8" / Y Max 8'-0"	4	12	3	L 3'-5" / X 1'-0" / Y 2'-6"	-	-	-	L - / X - / Y -	4	18	6	Min 3'-4" / Max 12'-4"	4	18	4	16'-2"	4	18	11	L Min 5'-3" / L Max 10'-3" / X Min 2'-4" / X Max 2'-4" / Y Min 3'-0" / Y Max 8'-0"	4	8	16'-2"	6	18	11	Min 2'-8" / Max 3'-0"	-	-	-	Min - / Max -	4	2	16'-11"	4	2	17'-4"	6	12	7	L 3'-4" / X 1'-8"	443
WING B	4	12	17	L Min 3'-4" / L Max 9'-0" / X Min 0'-9" / X Max 1'-1" / Y Min 2'-8" / Y Max 8'-0"	4	12	3	L 3'-5" / X 1'-0" / Y 2'-6"	-	-	-	L - / X - / Y -	4	18	6	Min 3'-4" / Max 12'-4"	4	18	4	16'-2"	4	18	11	L Min 5'-3" / L Max 10'-3" / X Min 2'-4" / X Max 2'-4" / Y Min 3'-0" / Y Max 8'-0"	4	8	16'-2"	6	18	11	Min 2'-8" / Max 3'-0"	-	-	-	Min - / Max -	4	2	16'-11"	4	2	17'-4"	6	12	7	L 3'-4" / X 1'-8"	443

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

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

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

OUTLET SKEWED END SECTION

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

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

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

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

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

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

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

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

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

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

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

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

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

OUTLET SLOPE SECTION(S)

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

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

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

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

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

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

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

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

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

HDWL DEPTH HD	ADDITIONAL REINF. FOR HDWL LBS.	"h" HDWL BARS SIZE	Y	LENGTH	NO. REQ'D
3"	41	4	0'-10"	1'-10"	33

CLASS "S" CONCRETE CU. YDS.	REINFORCING STEEL (GR. 60) LBS.
TOTAL	
0.29	81

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
QUADRUPLE BARREL BOX CULVERT
Sta. 124+67, LT.

SPECIAL DETAILS

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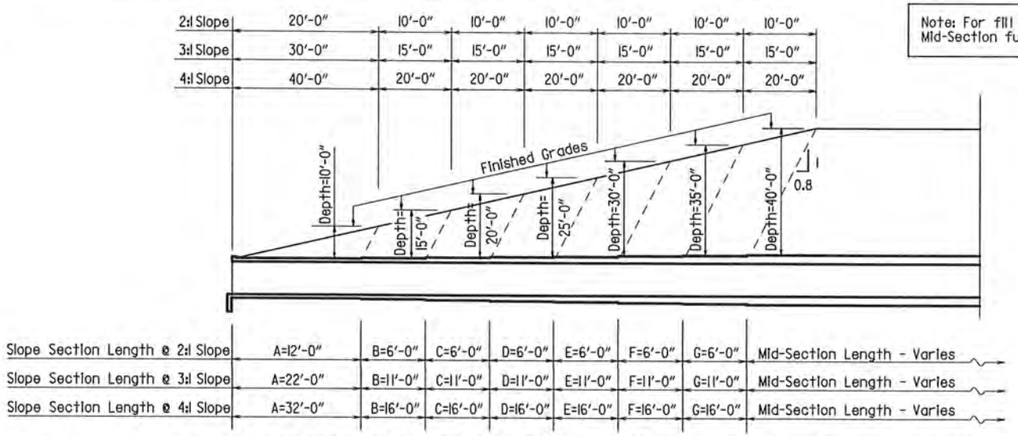
				6	ARK.			
				JOB NO.		040716	25	194

SPECIAL DETAILS

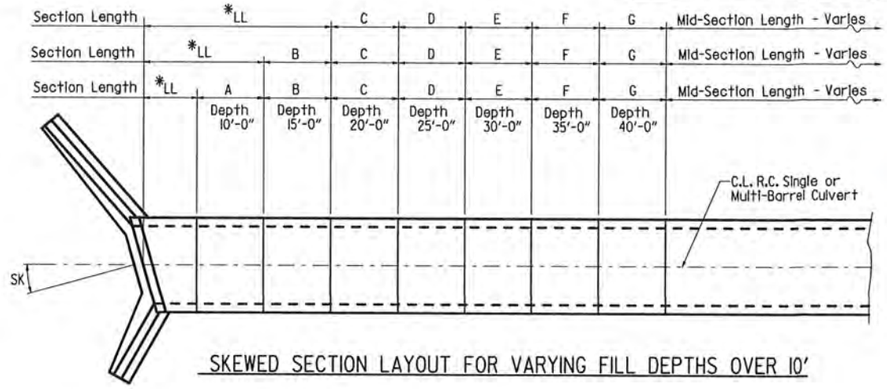
Note: For fill depths 10' and under, use Mid-Section full length of box culvert.

*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.

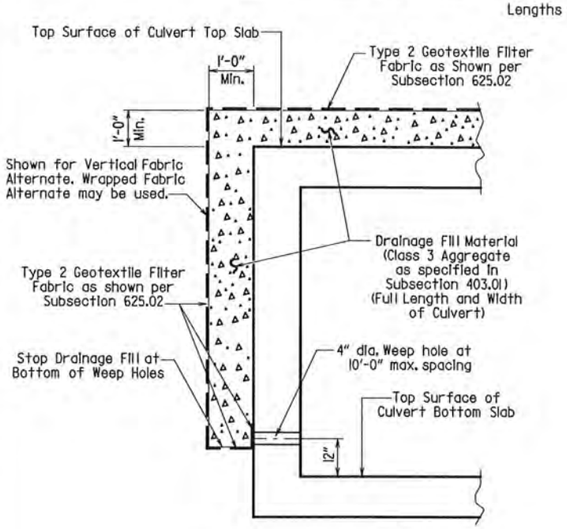


LONGITUDINAL SECTION LENGTH SCHEDULE FOR VARYING FILL DEPTHS OVER 10'

Lengths for Non-Skewed Boxes

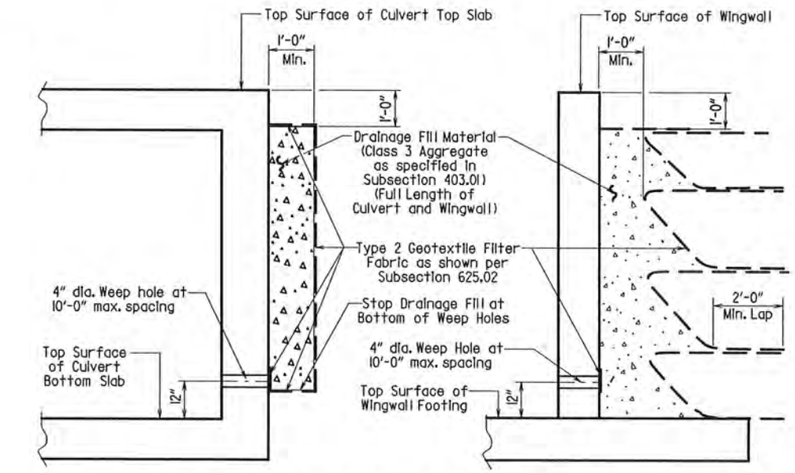


SKEWED SECTION LAYOUT FOR VARYING FILL DEPTHS OVER 10'



CULVERT DRAINAGE DETAIL FOR ROCK FILL

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

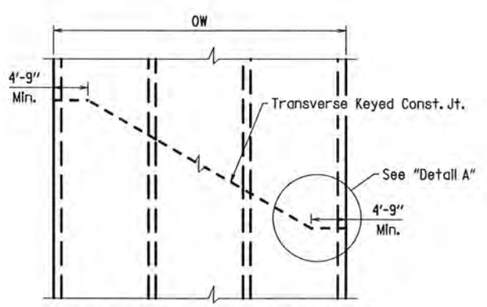


For Details of Excavation and Pay Limits, see Standard Drawing RCB-2.

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

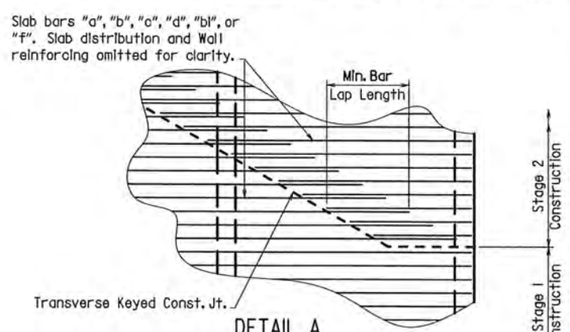
WRAPPED FABRIC ALTERNATE
(Shown for Wingwall, Similar for Culvert)

WINGWALL & CULVERT DRAINAGE DETAIL



SKEWED TRANSVERSE JOINT DETAIL

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



DETAIL A

See Tabular Data Sheets for Minimum Bar Lap Lengths.

Shown for transverse reinforcing, longitudinal reinforcing similar.

GENERAL NOTES:

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

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

LIVE LOADING: HL-93

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

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

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

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

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

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

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

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

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

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

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

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 16720
KENNETH RANDALL MILLER
3/25/2020

SHEET 1 OF 4

GENERAL DETAILS OF R.C. BOX CULVERT

GENERAL NOTES & LONGITUDINAL SECTION LENGTH SCHEDULE

SPECIAL DETAILS

DESIGN FILE: G:\V1703100_Hwy255\TRANSP\dgn\special_details\b040716_culvert.dgn
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V 1.16

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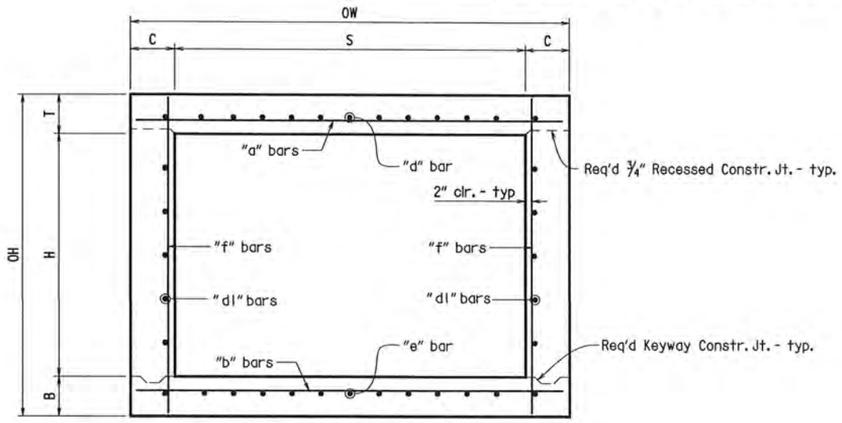
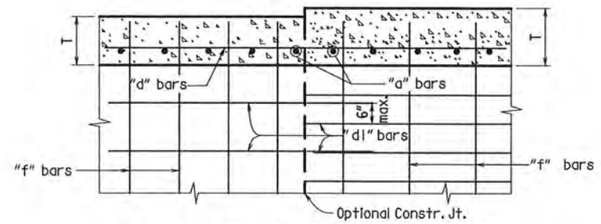
				6	ARK.			
				JOB NO.		040716	26	194
				①		SPECIAL DETAILS		

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



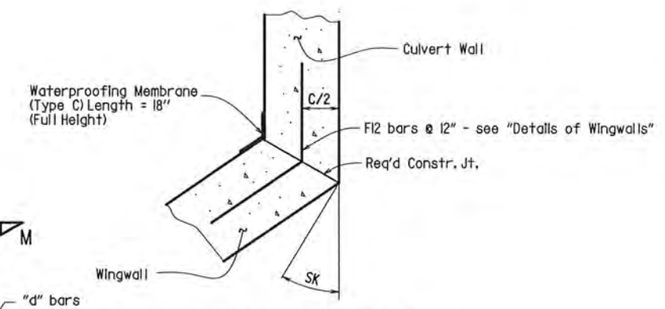
TYPICAL SECTION M-M



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

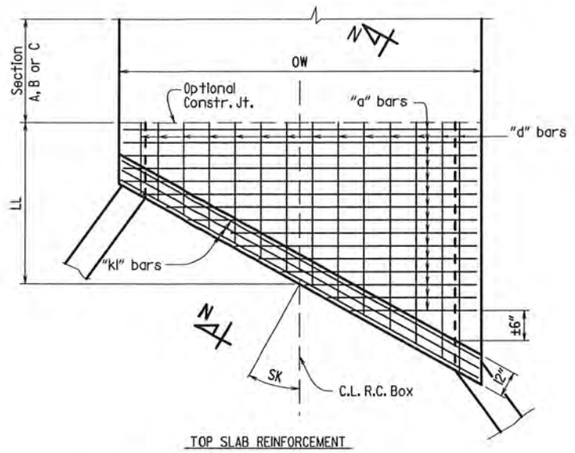
LONGITUDINAL LAP DETAIL AT CHANGE IN SECTIONS

TOP SLAB SHOWN, BOTTOM SLAB SIMILAR

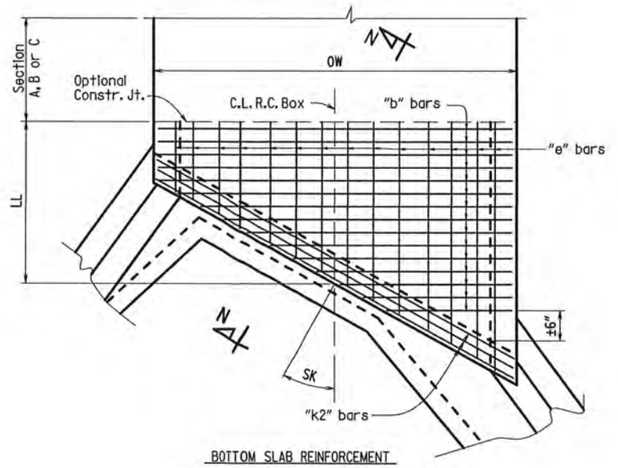


WINGWALL ATTACHMENT

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

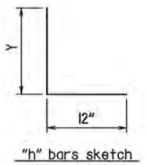


TOP SLAB REINFORCEMENT

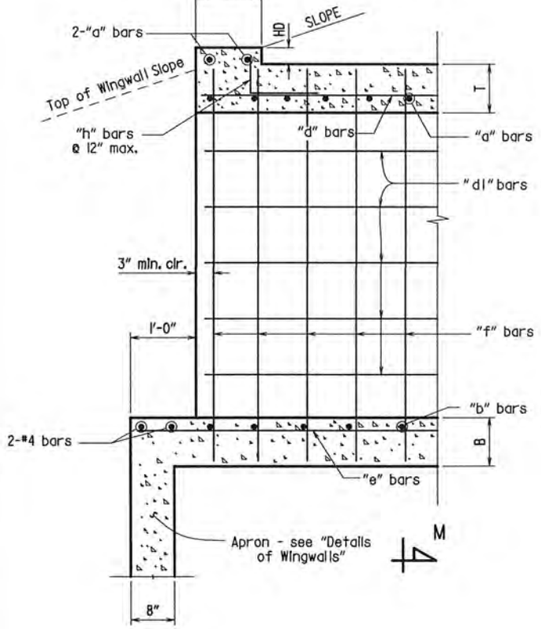


BOTTOM SLAB REINFORCEMENT

SKEWED END SECTION DETAILS

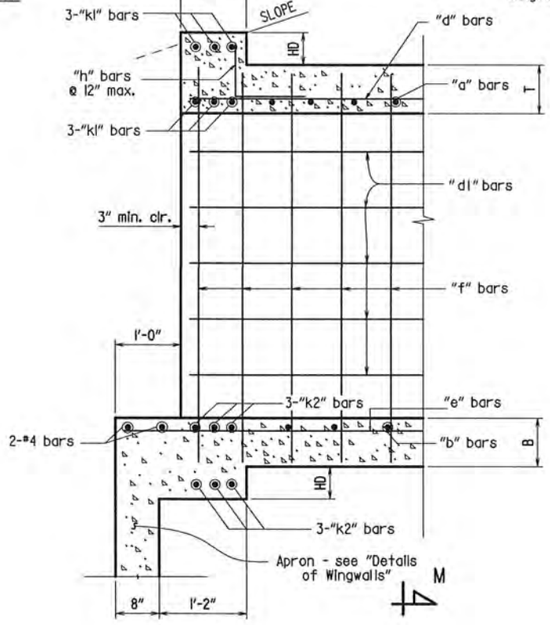


"h" bars sketch



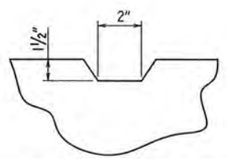
PART LONGITUDINAL SECTION

(Non-Skewed Ends)



PART LONGITUDINAL SECTION N-N

(Skewed Ends)



TYPICAL KEYWAY DETAIL

(All Construction Joints)

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

DETAILS OF SINGLE BARREL R.C. BOX CULVERT

SPECIAL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 16720
KENNETH RANDALL MILLER
3/25/2020

DESIGN FILE: G:\V7\03100_Hwy255\TRANSP\dgn\special_details\b040716_culvert.dgn
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V 1.1.16

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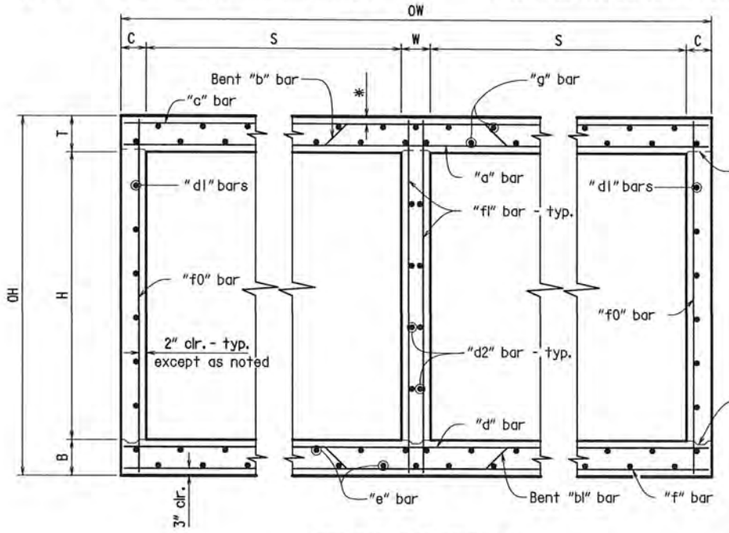
				6	ARK.			
				JOB NO.		040716	27	194

① SPECIAL DETAILS

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

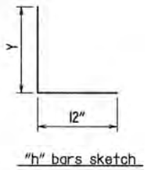
Note: When top slab of culvert serves as finished roadway surface, see General Notes on Sheet 1 of 4.



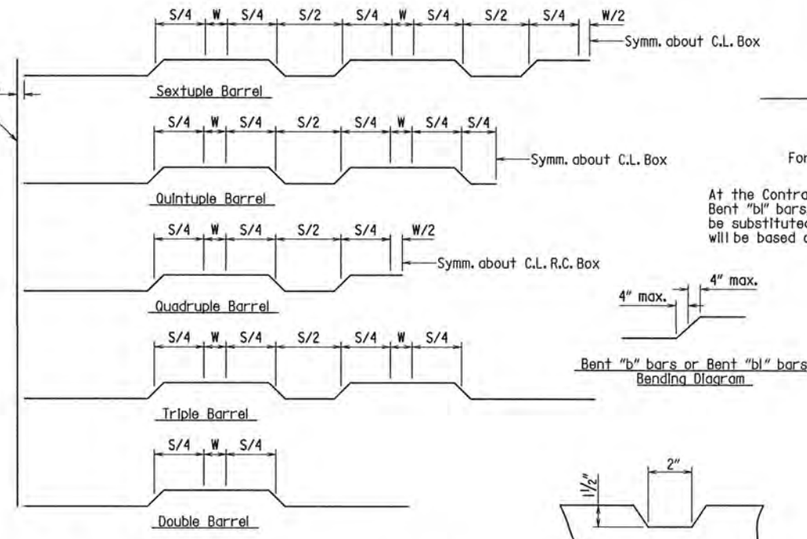
TYPICAL SECTION M-M

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

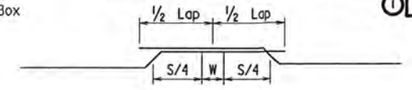
Bottom Slab
Straight "d" bars shall alternate with Bent "b1" bars in top.
Straight "f" bars shall alternate with Bent "b1" bars in bottom.



"h" bars sketch



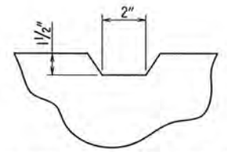
Bent "b" bars or Bent "b1" bars sketch



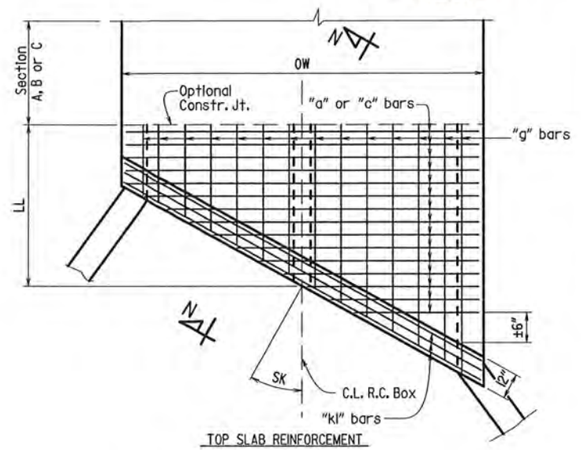
Lap Detail
For Bent "b" bars and Bent "b1" bars

At the Contractor's option in lieu of providing Bent "b" or Bent "b1" 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 "b1" bar.

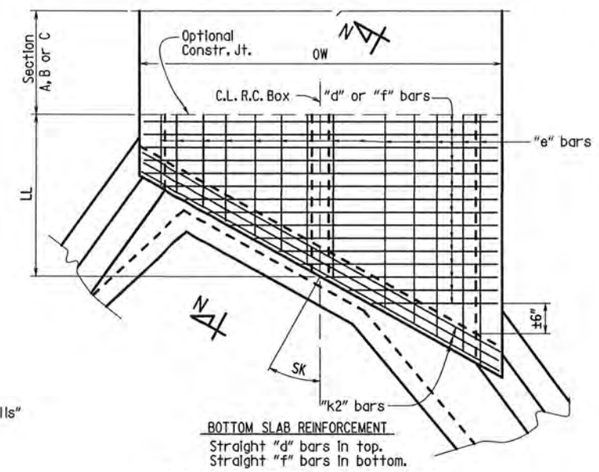
Bent "b" bars or Bent "b1" bars
Bending Diagram



TYPICAL KEYWAY DETAIL
(All Construction Joints)

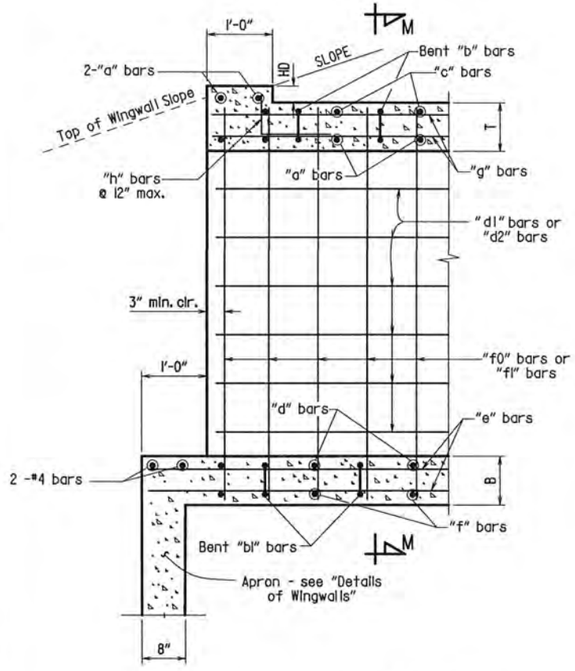


TOP SLAB REINFORCEMENT
Straight "c" bars in top.
Straight "a" bars in bottom.

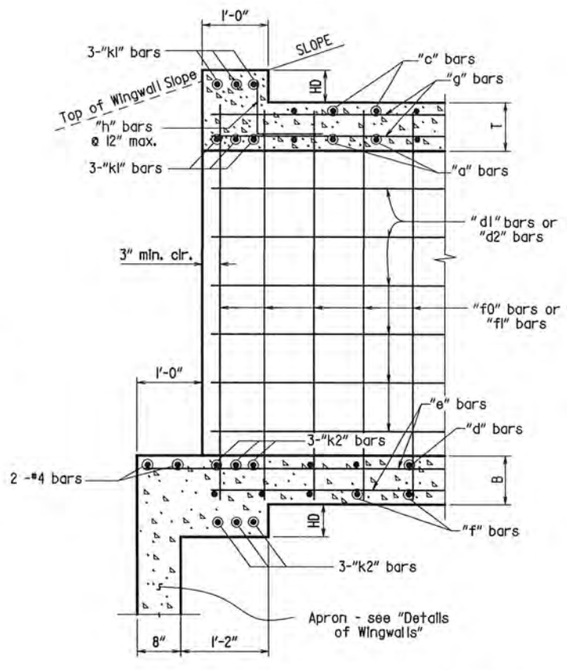


BOTTOM SLAB REINFORCEMENT
Straight "d" bars in top.
Straight "f" bars in bottom.

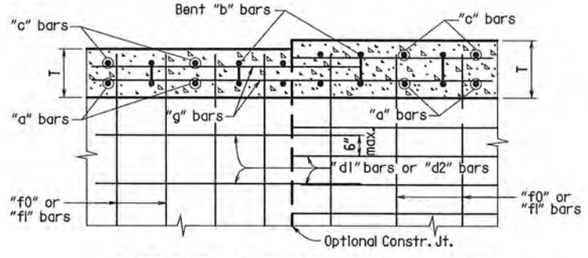
SKEWED END SECTION DETAILS



PART LONGITUDINAL SECTION
(Non-Skewed Ends)

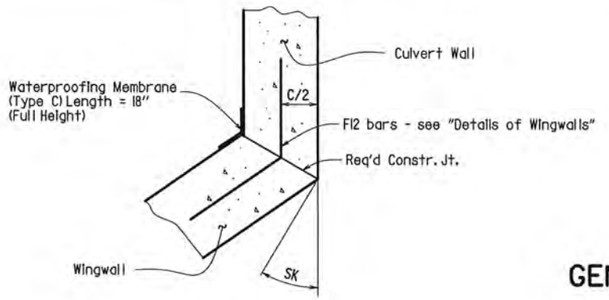


PART LONGITUDINAL SECTION N-N
(Skewed Ends)



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.

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

DETAILS OF MULTI-BARREL R.C. BOX CULVERT

SPECIAL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 16720
3/25/2020
KENNETH RANDALL MILLER

DESIGN FILE: G:\TI103100.Hwy255\TRANSP\dgn\special_details\b040716_culvert.dgn
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V 1.116

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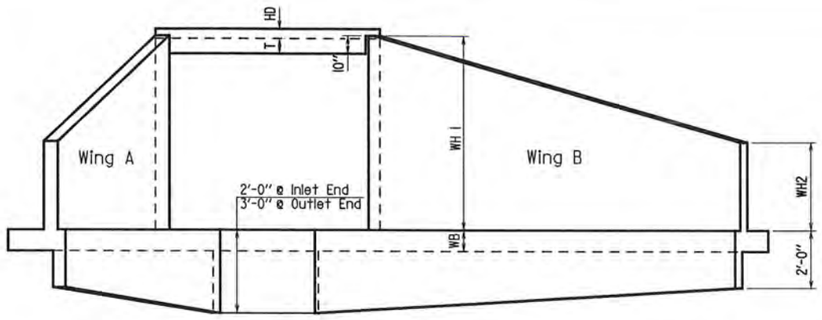
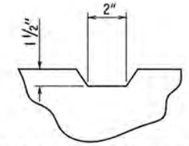
				6	ARK.			
				JOB NO.		040716	28	194

SPECIAL DETAILS



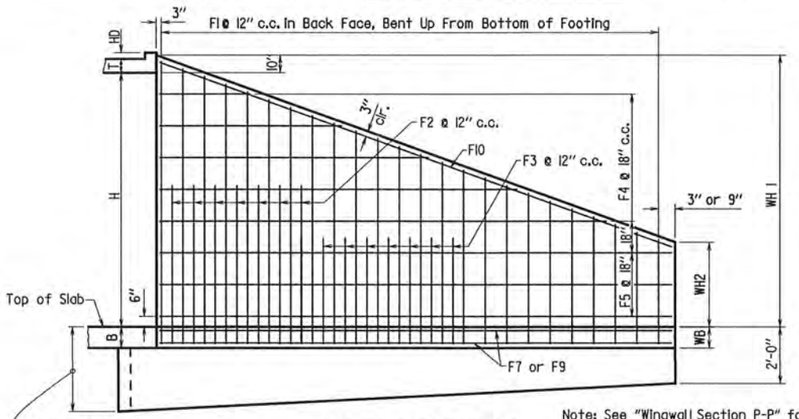
END ELEVATION

Flared Wingwalls Shown



TYPICAL KEYWAY DETAIL

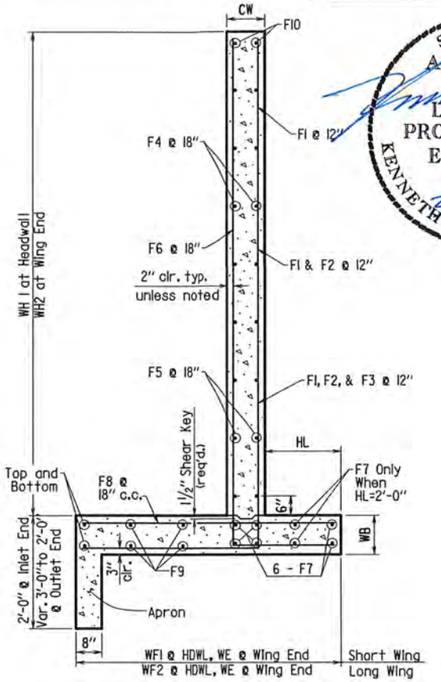
All Construction Joints



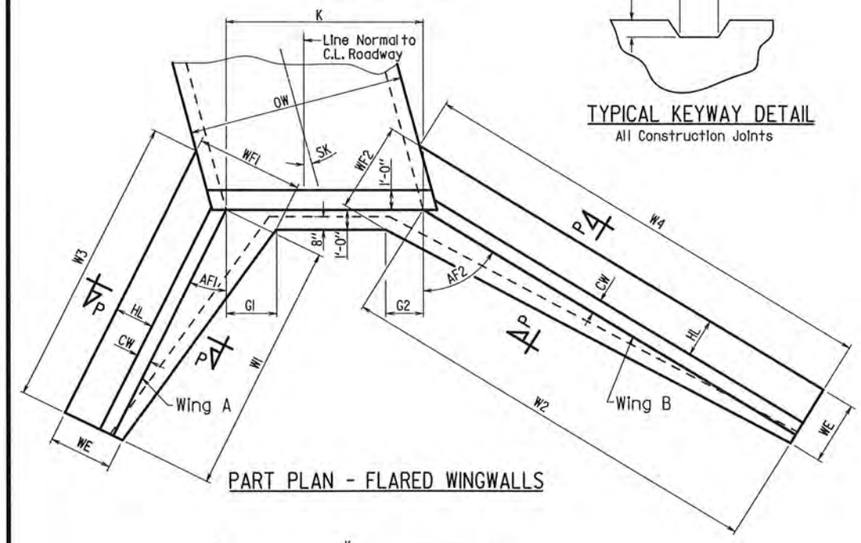
WINGWALL ELEVATION

Showing Back Face Reinforcement

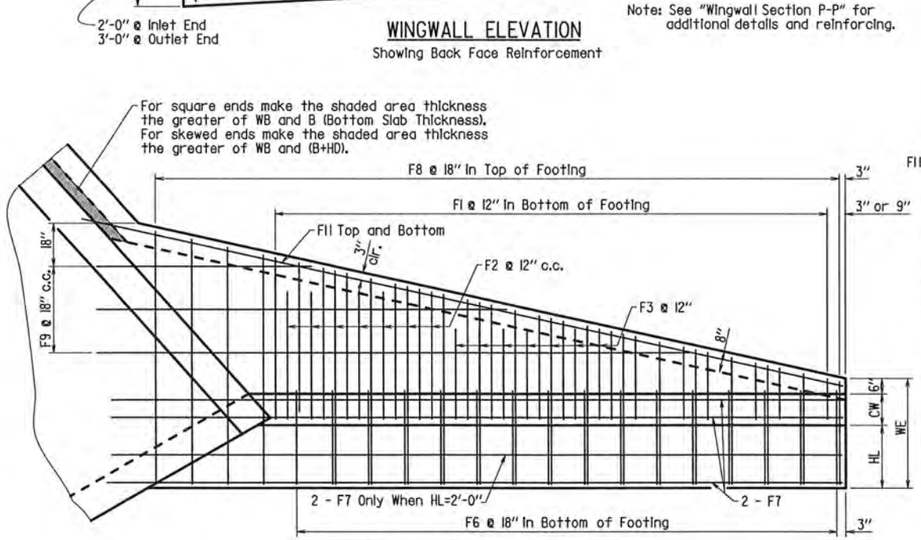
Note: See "Wingwall Section P-P" for additional details and reinforcing.



WINGWALL SECTION P-P

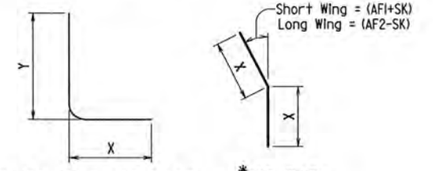


PART PLAN - FLARED WINGWALLS



PLAN - FLARED WINGWALLS

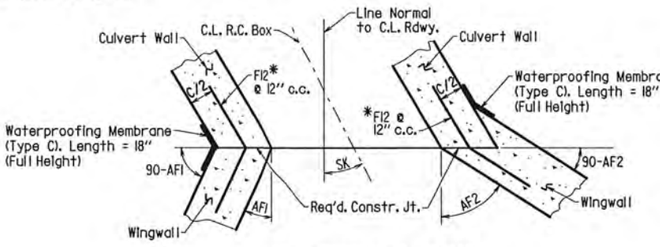
Showing Footing Reinforcement



F1, F2, F3, & F6 BARS

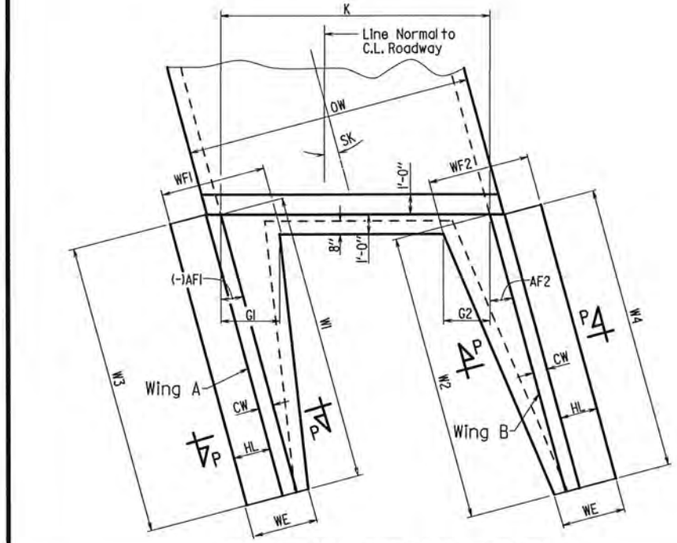
*F12 BAR

*F12 is a straight bar for parallel wingwalls

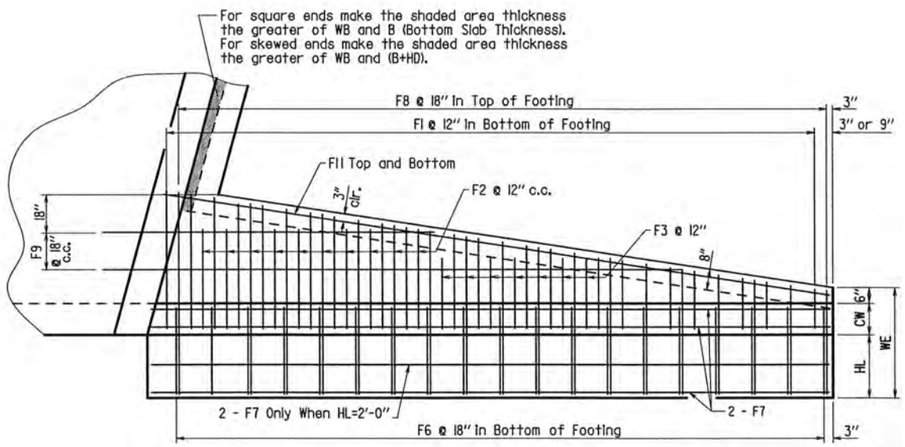


CONSTRUCTION JOINTS

Flared Wingwalls Shown



PART PLAN - PARALLEL WINGWALLS



PLAN - PARALLEL WINGWALLS

Showing Footing Reinforcement

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

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 16720
KENNETH RANDALL MILLER

USER: APSIBI
DESIGN FILE: G:\TI103100_Hwy255\TRANSP\dgn\special_details\b040716_culvert.dgn
PLOTTED: 3/25/2020 14:43
V 1.116
SCALE: 1:16

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				6	ARK.			
				JOB NO.		040716	29	194

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
* * *
LICENSED PROFESSIONAL ENGINEER
* * *
No. 15560
JEROME PAUL DAVIS
3-25-2020

STA. 100+00.00
BEGIN JOB 040716
LOG MILE 2.48

MASSARD CREEK

EXISTING R/W

P.I. 100+00.00
Δ = 0°19'09" RT.

S76°42'18"E

S76°23'09"E

C.L. HWY. 255

PROPOSED R/W

SILT FENCE 94 LIN.FT.

SILT FENCE 112 LIN.FT.

50' VEGETATED BUFFER

T.C.E.

REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-3) = FILTER SOCK
- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-7) = DROP INLET SILT FENCE
- (E-11) = SILT FENCE

FILTER SOCK 2202 LIN.FT.

SILT FENCE 56 LIN.FT.

SILT FENCE 196 LIN.FT.

SILT FENCE 29 LIN.FT.

SILT FENCE 30 LIN.FT.

P.C. 116+27.79

MASSARD RD. S02°13'41"W

S02°30'53"W

STA. 112+00.96 HWY. 255 =
STA. 10+00.00 MASSARD RD.
Δ = 101°05'10"

P.T. 102+12.06

WHITE OAK CIR.

S85°51'59"E

CLEARING AND GRUBBING
TEMPORARY EROSION CONTROL DETAILS

USER: APSIBI
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FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		040716	30	194

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

125 P.T. 125+75.85 FILTER SOCK- 1314 LIN.FT. PROPOSED R/W FILTER SOCK- 345 LIN.FT. 130 T.C.E. 135 T.C.E. SILT FENCE- 141 LIN.FT. T.C.E. SILT FENCE- 336 LIN.FT. 140 T.C.E.

+75 +05 +20 +00 +40 +55

E-3 E-3 E-11 E-11

EXISTING R/W PROPOSED R/W EXISTING R/W

+20 +50 +50 +50 +50 +00 +50 +00 +50 +50 +50 +50 +50 +50 +50 +50 +50 +50 +50

E-6 E-5 E-6 E-5 E-6 E-5 E-6 E-5 E-6 E-5 E-6 E-5 E-6 E-5 E-6

C. L. HWY. 255 S85°51'59"E

EXISTING R/W EXISTING R/W

REVISIONS

DATE OF REVISION	REVISION

EXISTING R/W RED OAK CT. EXISTING R/W

LEGEND

- (E-3) = FILTER SOCK
- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-11) = SILT FENCE

140 EXISTING R/W S 92ND. ST. EXISTING R/W 145 150 PROPOSED R/W 155

T.C.E. PROP. R/W SILT FENCE- 84 LIN.FT.

+88 +30 +15 +50

E-11 E-11

+50 +50 +50 +50 +50 +50 +50 +00 +50

E-5 E-6 E-5 E-6 E-5 E-6 E-5 E-6 E-5 E-6 E-5 E-6

EXISTING R/W EXISTING R/W

S85°51'59"E C. L. HWY. 255

+50 +50 +50 +50 +50 +50 +50 +55 +50 +50 +50 +50 +50

E-6 E-5 E-6 E-5 E-6 E-5 E-6 E-5 E-6 E-5 E-6 E-5 E-6 E-5 E-6

EXISTING R/W EXISTING R/W

CLEARING AND GRUBBING TEMPORARY EROSION CONTROL DETAILS

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FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		040716	31	194

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
JEROME PAUL DAVIS
No. 15560
3-25-2020

155 160 165 170 175 180 185

PROPOSED R/W
SILT FENCE 545 LIN.FT.
EXISTING R/W
C.L. HWY. 255
S85°51'59"E
P.C. 162+78.79
SILT FENCE 154 LIN.FT.
PAINTER LN.
P.T. 167+93.65
T.C.E.
N88°59'06"E
P.I. 165+36.39
25' VEGETATED BUFFER
P.I. 174+68.95
N87°56'48"E
P.C. 175+17.53
P.T. 177+64.82
S60°42'01"E
SILT FENCE 286 LIN.FT.
SILT FENCE 348 LIN.FT.
SILT FENCE 523 LIN.FT.
SILT FENCE 610 LIN.FT.
SILT FENCE 147 LIN.FT.
SILT FENCE 115 LIN.FT.
SILT FENCE 218 LIN.FT.
SILT FENCE 302 LIN.FT.
WELLS LAKE RD.
M.#75.00 JON
PROPOSED WELLS LAKE RD.
VETERANS AVE.

REVISIONS

DATE OF REVISION	REVISION

LEGEND

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

STA. 171+35.00 HWY. 255 =
STA. 15+00.00 WELLS LAKE RD.
Δ = 90°00'00"

CLEARING AND GRUBBING TEMPORARY EROSION CONTROL DETAILS

14

USER: APSIBI
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				6	ARK.			
				JOB NO.		040716	32	194

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
03-25-2020

185 190 195 200

T.C.E.

EXISTING R/W

PROPOSED R/W

P.T. 14+67.52

P.C. 197+99.08

CHAD COLLEY BLVD.

SILT FENCE 563 LIN.FT.

SILT FENCE 331 LIN.FT.

SILT FENCE 222 LIN.FT.

S60°42'01"E

C. L. HWY. 255

VETERANS AVE.

STA. 191+71.48 HWY. 255 =
STA. 16+83.14 CHAD COLLEY BLVD.
△ = 77°54'48"

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

200 205 210 215

P.T. 203+68.19

P.I. 200+86.53

S80°37'09"E

SILT FENCE 96 LIN.FT.

SILT FENCE 51 LIN.FT.

CLEARING AND GRUBBING
TEMPORARY EROSION CONTROL DETAILS

USER: APS181
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				6	ARK.			
				JOB NO.		040716	33	194

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
* * *
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

215 220 225 230

PROPOSED R/W

EXISTING R/W

C.L., HWY. 255

P.C. 222+99.64

STA. 222+99.64
END JOB 040716

S80°37'09"E

P.I. 229+41.19

+00 E-6 +00 E-5 +50 E-6 +00 E-5 +50 E-6 +00 E-5 +65 E-11 +00 +12 E-11 +00 E-11

+30.50 60.07' +43.38 60.06'

SILT FENCE 450 LIN.FT.

SILT FENCE 207 LIN.FT.

REVISIONS

DATE OF REVISION	REVISION

LEGEND

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

15 20

STA. 191+71.48 HWY. 255 =
STA. 16+83.14 CHAD COLLEY BLVD.
Δ = 77°54'48"

10 STA. 10+00.00
BEGIN CONST.
CHAD COLLEY BLVD.

P.I. 12+41.48

SILT FENCE 210 LIN.FT.

SILT FENCE 331 LIN.FT.

PROPOSED R/W +25 59.42' +03.75 19.15' +00

EXISTING R/W +72

C.L. HWY. 255

+20 +00 E-11 +00 E-6 +00 E-5 +00 E-11 +00 100.02' +66.71

EXISTING R/W

PROPOSED R/W +75

EXISTING R/W

+40.31 41.35 84.29 T.C.E. +68.29 115.96 +69.26 84.55

SILT FENCE 785 LIN.FT.

EXISTING R/W

S10°25'25"W

+00 E-11 +00

EXISTING R/W

SILT FENCE 563 LIN.FT.

P.O.B. 10+00.00
P.C. 10+14.91

P.T. 14+67.52

+63 +64.74 15 +40 60.02'

PROPOSED R/W

190

S60°42'01"E

EXISTING R/W +00 E-6

EXISTING R/W

℄ CHAD COLLEY BLVD.

S17°12'47"W

+85

SILT FENCE 222 LIN.FT.

EXISTING R/W

P.C. 23+84.10

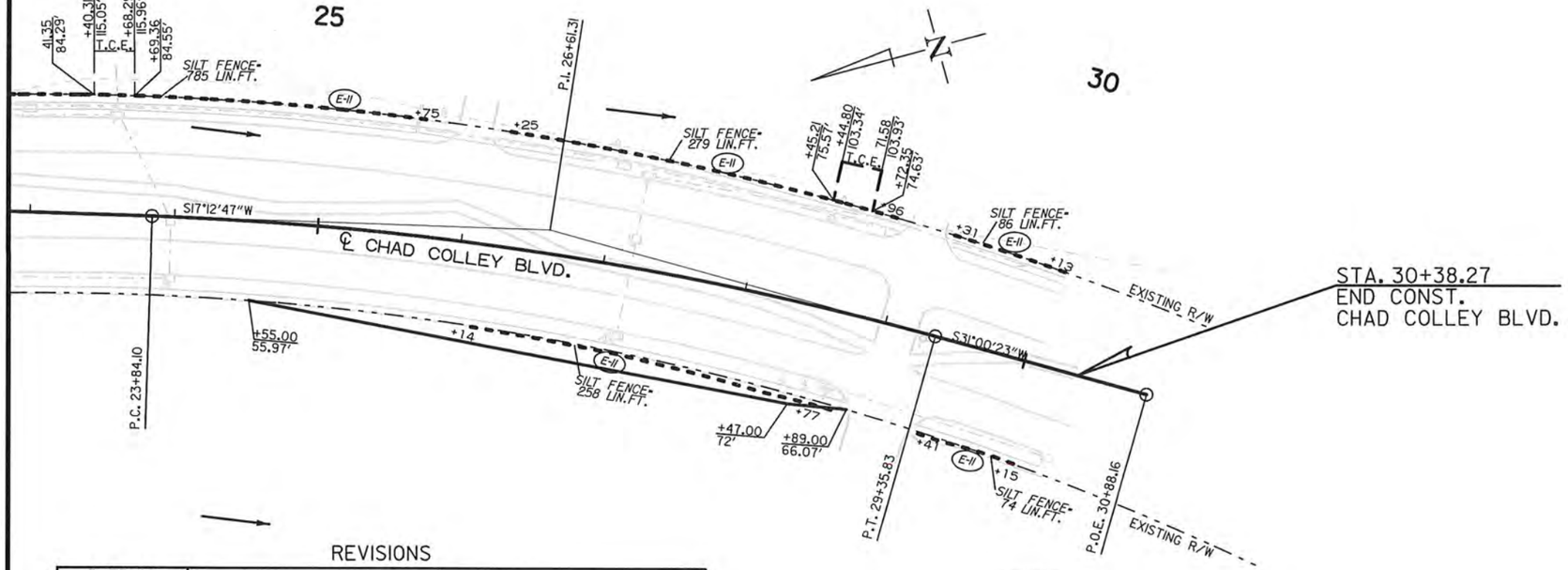
CLEARING AND GRUBBING
TEMPORARY EROSION CONTROL DETAILS

USER: APSIBI
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\erosion\r040716 EC01.dgn
PLOTTED: 3/25/2020 14:43
SCALE: 1:100

G:\17103100_Hwy255\TRANSP\dgn\erosion\r040716 EC01.dgn 3/25/2020 14:43

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.		040716	34	194

(2) TEMPORARY EROSION CONTROL DETAILS



REVISIONS

DATE OF REVISION	REVISION

LEGEND

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

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

CLEARING AND GRUBBING
TEMPORARY EROSION CONTROL DETAILS

USER: AP5181
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\erosion\r040716 EC01.dgn
PLOTTED: 3/25/2020 14:43
SCALE: 1:100

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.		040716	35	194

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
* * *
LICENSED PROFESSIONAL ENGINEER
* * *
No. 15560
3-25-2020
JEROME PAUL DAVIS

STA. 100+00.00
BEGIN JOB 040716
LOG MILE 2.48

MASSARD CREEK

EXISTING R/W

P.I. 100+00.00
Δ = 0°19'09" RT.

CONSTRUCTION LIMITS

PROPOSED R/W

S76°42'18"E

S76°23'09"E

C. L. HWY. 255

T.C.E.

36'

+64

+13

50' VEGETATED BUFFER

REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-3) = FILTER SOCK
- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-11) = SILT FENCE
- (E-13) = COMPOST FILTER SOCK

MASSARD RD. S02°31'41"W

STA. 112+00.96 HWY. 255 =
STA. 10+00.00 MASSARD RD.
Δ = 101°05'10"

P.C. 116+27.79

29'

35'

25'

30'

P.I. 121+02.90

WHITE OAK CIR.

FILTER SOCK-323 LIN.FT.

FILTER SOCK-734 LIN.FT.

S85°51'59"E

STAGE 1
TEMPORARY EROSION CONTROL DETAILS

USER: APSIBI
DESIGN FILE: G:\1710300_Hwy255\TRANSP\dgn\eroslon\r040716 EC01.dgn
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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.		040716	36	194

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

125 130 135 140

P.T. 125+75.85

PROPOSED R/W

T.C.E. 24'

CONSTRUCTION LIMITS

T.C.E. 24'

T.C.E. 16'

PROPOSED R/W

T.C.E.

+67 +00 +79 +20 +00 +00 +25 +00

FILTER SOCK 734 LIN.FT.

C. L. HWY. 255 S85°51'59"E

EXISTING R/W

EXISTING R/W

EXISTING R/W

RED OAK CT.

REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-3) = FILTER SOCK
- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-11) = SILT FENCE
- (E-13) = COMPOST FILTER SOCK
- E-14 XXXX CU.YD. = SEDIMENT BASIN

140 145 150 155

EXISTING R/W S. 92ND. ST. EXISTING R/W

T.C.E. 20' 26'

CONSTRUCTION LIMITS

E-14 280 CU.YD.

PROPOSED R/W

+43 +08 +00 +00 +00 +35 +50 +00 +05

EXISTING R/W S85°51'59"E C. L. HWY. 255 EXISTING R/W

SILT FENCE 308 LIN.FT.

EXISTING R/W EXISTING R/W

USER: APSIBI
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\erosion\r040716 EC01.dgn
PLOTTED: 3/25/2020 14:43
SCALE: 1:100

STAGE 1 TEMPORARY EROSION CONTROL 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.		040716	37	194

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

155 160 165 170 175 180 185

PROPOSED R/W
CONSTRUCTION LIMITS
EXISTING R/W
PAINTER LN.
T.C.E.
P.C. 162+78.79
P.T. 167+93.65
P.I. 165+36.39
C. L. HWY. 255
S85°51'59"E
N88°59'06"E
N87°56'48"E
S60°42'01"E
SILT FENCE 316 LIN.FT.
SILT FENCE 134 LIN.FT.
25' VEGETATED BUFFER
P.C. 171+58.53
P.I. 174+68.95
P.T. 177+64.82
WELLS LAKE RD.
VETERANS AVE.
PROPOSED 54" CMP
E-14 35 CU.YD.

STA. 171+35.00 HWY. 255 =
STA. 15+00.00 WELLS LAKE RD.
△ = 90°00'00"

LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-11) = SILT FENCE
- (E-13) = COMPOST FILTER SOCK
- E-14 XXXX CU.YD. = SEDIMENT BASIN

REVISIONS

DATE OF REVISION	REVISION

14 13

STAGE 1
TEMPORARY EROSION CONTROL DETAILS

USER: APS181
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\erosion\r040716 EC01.dgn
PLOTTED: 3/25/2020 14:43
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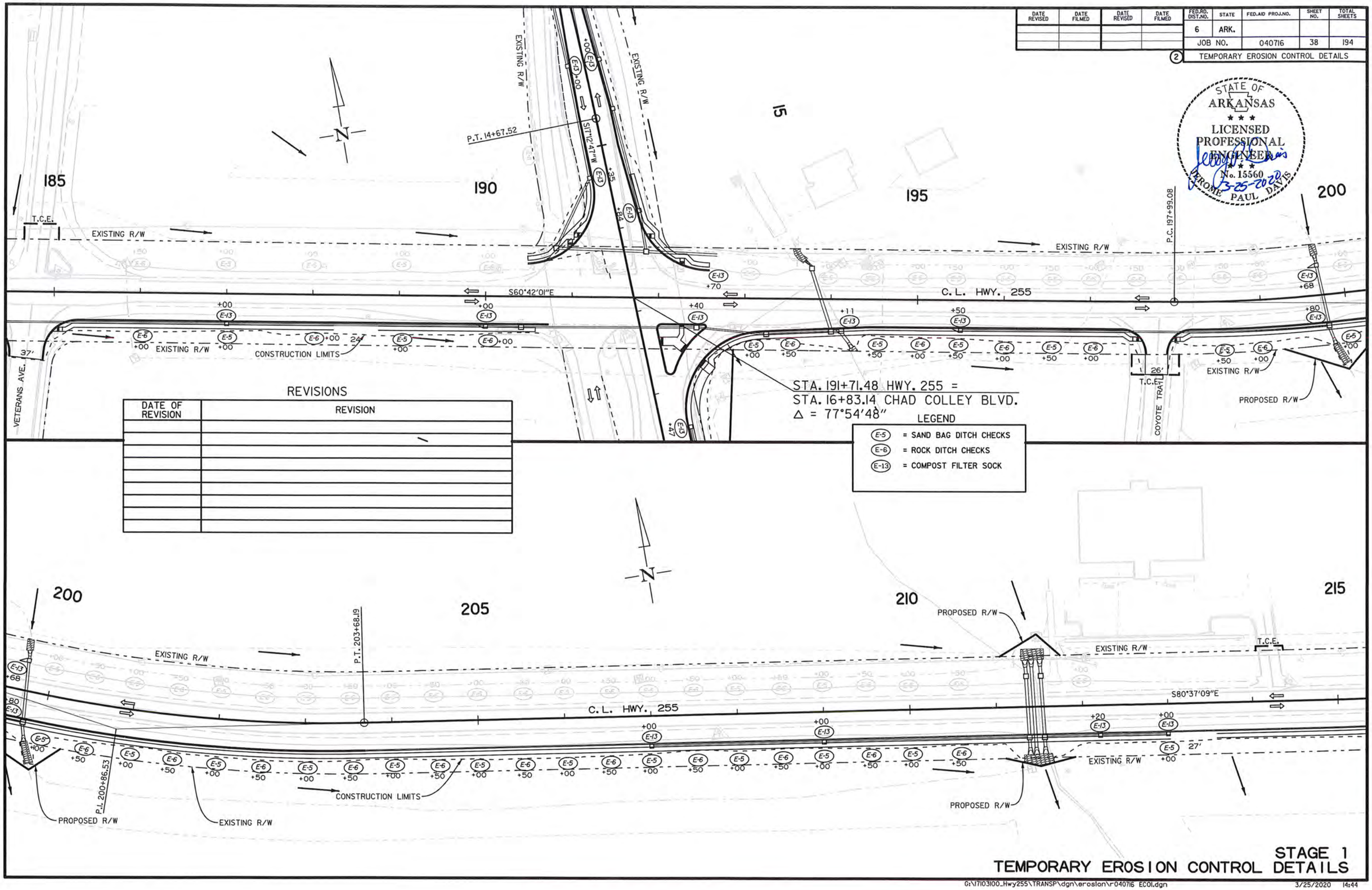
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	38	194

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020



REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-13) = COMPOST FILTER SOCK

STAGE 1
TEMPORARY EROSION CONTROL DETAILS

USER: APSIBI
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\erosion\r040716 EC01.dgn
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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.		040716	39	194
				(2)	TEMPORARY EROSION CONTROL DETAILS			

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

215 220 225 230

PROPOSED R/W
EXISTING R/W
⇦ C. L. HWY., 255
S80°37'09"E
P.C. 222+99.64
STA. 222+99.64
END JOB 040716
P.I. 229+11.19
CONSTRUCTION LIMITS

REVISIONS

DATE OF REVISION	REVISION

LEGEND
- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-13) = COMPOST FILTER SOCK

10 15 190 20

STA. 10+00.00
BEGIN CONST.
CHAD COLLEY BLVD.
P.I. 12+41.48
P.O.B. 10+00.00
P.C. 10+14.91
S10°25'25"W
℄ CHAD COLLEY BLVD.
P.T. 14+67.52
S60°42'01"E
STA. 191+71.48 HWY. 255 =
STA. 16+83.14 CHAD COLLEY BLVD.
Δ = 77°54'48"
S17°12'47"W
T.C.E.
P.C. 23+84.10

STAGE 1
TEMPORARY EROSION CONTROL DETAILS

USER: APSIBI
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\erosion\r040716 EC01.dgn
PLOTTED: 3/25/2020 14:44
SCALE: 1:100

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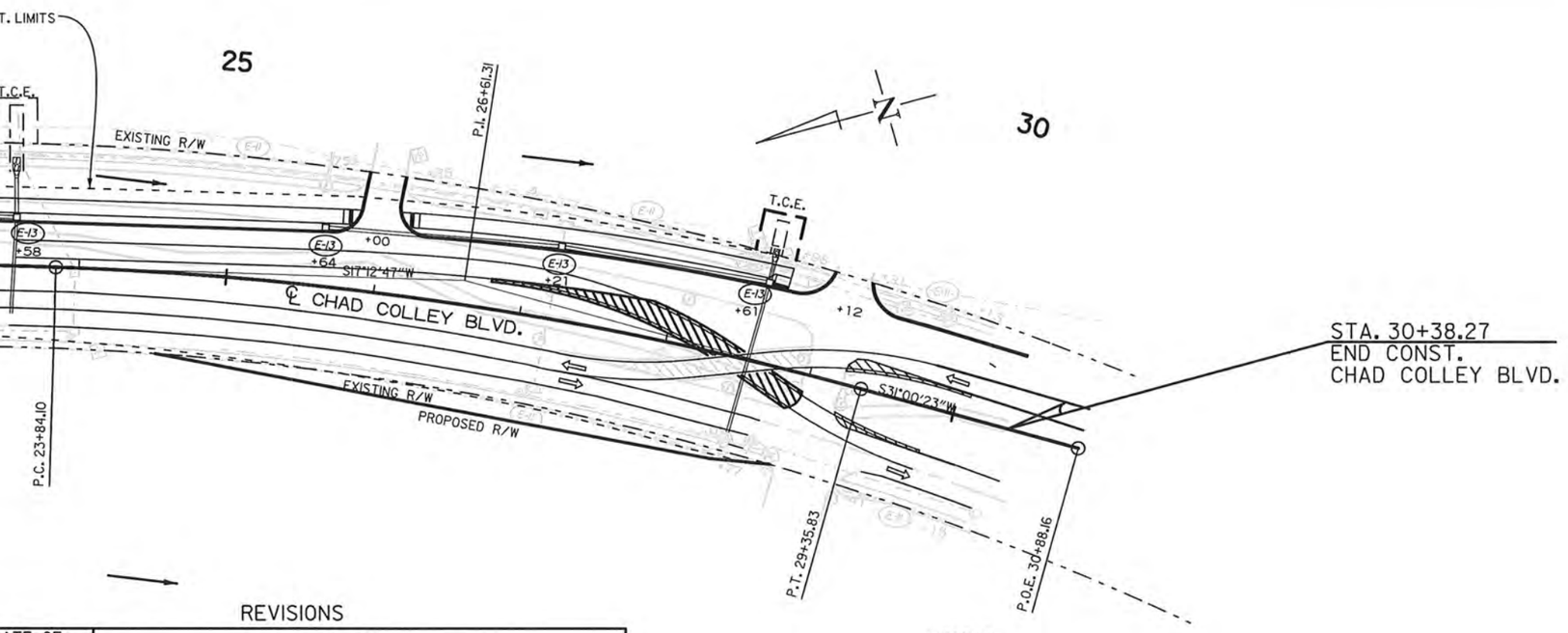
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	40	194
				(2)	TEMPORARY EROSION CONTROL DETAILS			



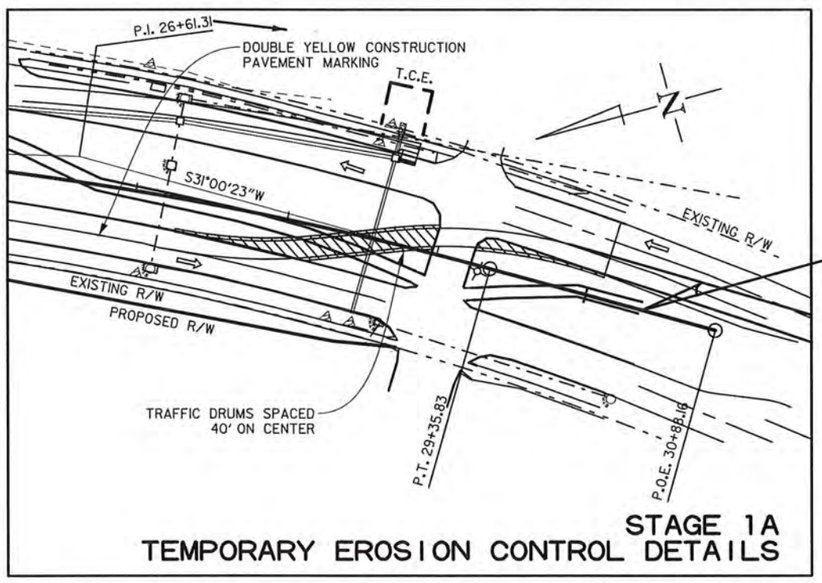
STATE OF ARKANSAS
* * *
LICENSED PROFESSIONAL ENGINEER
* * *
No. 15560
JEROME PAUL DAVIS
3-25-2020

REVISIONS

DATE OF REVISION	REVISION

LEGEND

(E-11) = SILT FENCE
(E-13) = COMPOST FILTER SOCK



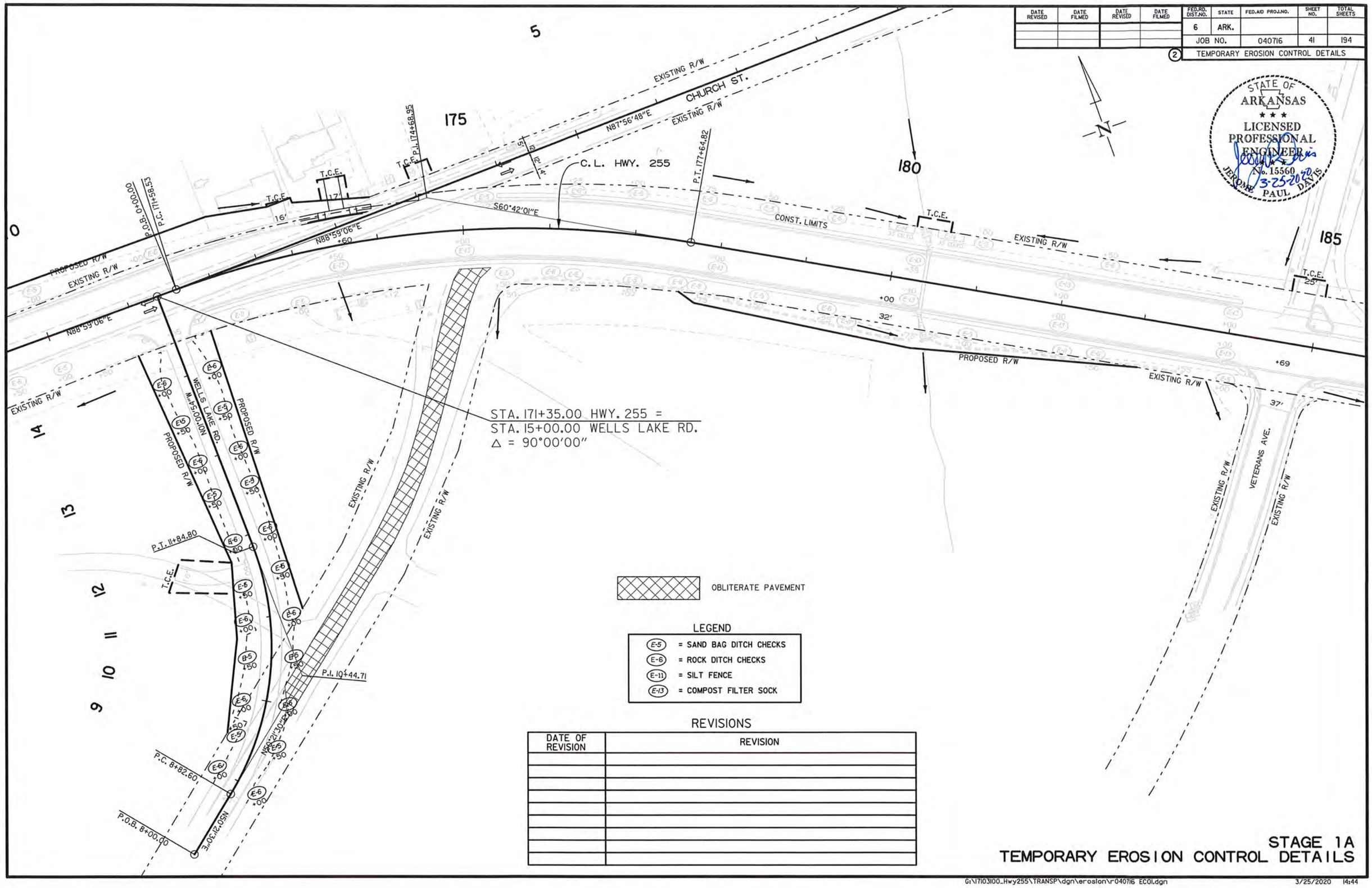
STAGE 1A
TEMPORARY EROSION CONTROL DETAILS

STAGE 1
TEMPORARY EROSION CONTROL DETAILS

USER: APSIBI
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\erosion\r040716 EC01.dgn
PLOTTED: 3/25/2020 14:44
SCALE: 1:100

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.		040716	41	194
				(2)	TEMPORARY EROSION CONTROL DETAILS			

STATE OF ARKANSAS
* * *
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020



OBLITERATE PAVEMENT

LEGEND

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

REVISIONS

DATE OF REVISION	REVISION

STAGE 1A
TEMPORARY EROSION CONTROL DETAILS

USER: APSIBI
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\erosion\r040716 EC01.dgn
PLOTTED: 3/25/2020 14:44
SCALE: 1:100

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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.		040716	42	194

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

STA. 100+00.00
BEGIN JOB 040716
LOG MILE 2.48

MASSARD CREEK

EXISTING R/W

P.I. 100+00.00
Δ = 0°19'09" RT.

95 100 105 110

EXISTING R/W
CONSTRUCTION LIMITS
PROP. R/W
S76°42'18"E
S76°23'09"E
C.L. HWY. 255
+05 +30 +80 +75 +00 +34 +67 +55 +00
E-13 E-6 E-5 E-8 E-13
+50 +00 +50 +50 +50
40' 28' 40'
T.C.E.
EXISTING R/W
CONSTRUCTION LIMITS

50' VEGETATED BUFFER

REVISIONS

DATE OF REVISION	REVISION

LEGEND

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

110 115 120 125

PROPOSED R/W
EXISTING R/W
MASSARD RD. S02°31'41"W
P.C. 116+27.79
T.C.E.
C.L. HWY. 255
S76°23'09"E
S85°51'59"E
+00 +07 +55 +70 +37 +28 +46 +64 +50 +00 +02.90
E-13 E-6 E-5
+50 +00 +50
24' 22' 26'
+89 +97
CONSTRUCTION LIMITS
WHITE OAK CIR.
P.I. 121+02.90

STA. 112+00.96 HWY. 255 =
STA. 10+00.00 MASSARD RD.
Δ = 101°05'10"

MASSARD RD. S02°30'53"W

STAGE 2
TEMPORARY EROSION CONTROL DETAILS

USER: APSIBI
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\erosion\r040716 EC01.dgn
PLOTTED: 3/25/2020 14:44
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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.		040716	43	194

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

125 130 135 140 145 150 155

P.T. 125+75.85

PROPOSED R/W

EXISTING R/W

T.C.E.

CONSTRUCTION LIMITS

C. L. HWY. 255

S85°51'59"E

+36

26'

RED OAK CT.

EXISTING R/W

EXISTING R/W

S 92ND. ST.

PROP. R/W

REVISIONS

DATE OF REVISION	REVISION

LEGEND

E-5	= SAND BAG DITCH CHECKS
E-6	= ROCK DITCH CHECKS
E-11	= SILT FENCE
E-13	= COMPOST FILTER SOCK
E-14 XXXX CU.YD.	= SEDIMENT BASIN

45 CU.YD. E-14

STAGE 2
TEMPORARY EROSION CONTROL DETAILS

USER: APSIBI
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\erosion\r040716 EC01.dgn
PLOTTED: 3/25/2020 14:44
SCALE: 1:100

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.		040716	44	194

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

155 160 165 170 175 180 185

PROPOSED R/W
EXISTING R/W
CONSTRUCTION LIMITS
C.L. HWY. 255
P.C. 162+78.79
P.I. 165+36.39
P.T. 167+93.65
P.I. 174+68.95
P.T. 177+64.82
P.C. 171+58.53
PAINTER LN.
S85°51'59"E
N88°59'06"E
N87°56'48"E
S60°42'01"E
WELLS LAKE RD.
VETERANS AVE.
OBLITERATE PAVEMENT

STA. 171+35.00 HWY. 255 =
STA. 15+00.00 WELLS LAKE RD.
Δ = 90°00'00"

E-14 35 CU.YD.
E-14 40 CU.YD.

REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-11) = SILT FENCE
- (E-13) = COMPOST FILTER SOCK
- E-14 XXXX CU.YD. = SEDIMENT BASIN

STAGE 2
TEMPORARY EROSION CONTROL DETAILS

USER: APSIBI
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\erosion\r040716 EC01.dgn
PLOTTED: 3/25/2020 14:44
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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.		040716	45	194

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

185 190 195 200 205 210 215

EXISTING R/W
PROPOSED R/W
CONSTRUCTION LIMITS
P.T. 14+67.52
CHAD COLLEY BLVD.
T.C.E. 25'
S60°42'01"E
C. L. HWY. 255
P.C. 197+99.08
VETERANS AVE.
COYOTE TRAIL
T.C.E. 24'
P.I. 200+86.53
P.T. 203+68.19
S80°37'09"E
T.C.E. 27'

14 CU.YD. E-14
54 CU.YD. E-14

STA. 191+71.48 HWY. 255 =
STA. 16+83.14 CHAD COLLEY BLVD.
△ = 77°54'48"

REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-13) = COMPOST FILTER SOCK
- E-14 XXXX CU.YD. = SEDIMENT BASIN

STAGE 2
TEMPORARY EROSION CONTROL DETAILS

USER: APSIBI
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\erosion\r040716 EC01.dgn
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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.		040716	46	194

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

215 220 225 230

PROPOSED R/W
CONSTRUCTION LIMITS
EXISTING R/W
C.L., HWY. 255
S80°37'09"E
P.C. 222+99.64
50 CU.YD. E-14
11 CU.YD. E-14
+30.50 60.07
+43.38 60.06
STA. 222+99.64
END JOB 040716
P.I. 229+11.19

REVISIONS

DATE OF REVISION	REVISION

LEGEND
- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-13) = COMPOST FILTER SOCK
- E-14 XXXX CU.YD. = SEDIMENT BASIN

15 20

10 STA. 10+00.00
BEGIN CONST.
CHAD COLLEY BLVD.

STA. 191+71.48 HWY. 255 =
STA. 16+83.14 CHAD COLLEY BLVD.
△ = 77°54'48"

P.I. 12+41.48
S10°25'25"W
P.O.B. 10+00.00
P.C. 10+14.91
P.T. 14+67.52
S60°42'01"E
C.L. HWY. 255
CHAD COLLEY BLVD.
S17°12'47"W
T.C.E.
P.C. 23+84.10
11 CU.YD. E-14

190

STAGE 2
TEMPORARY EROSION CONTROL DETAILS

USER: AP5181
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\erosion\r040716 EC01.dgn
PLOTTED: 3/25/2020 14:44
SCALE: 1:100

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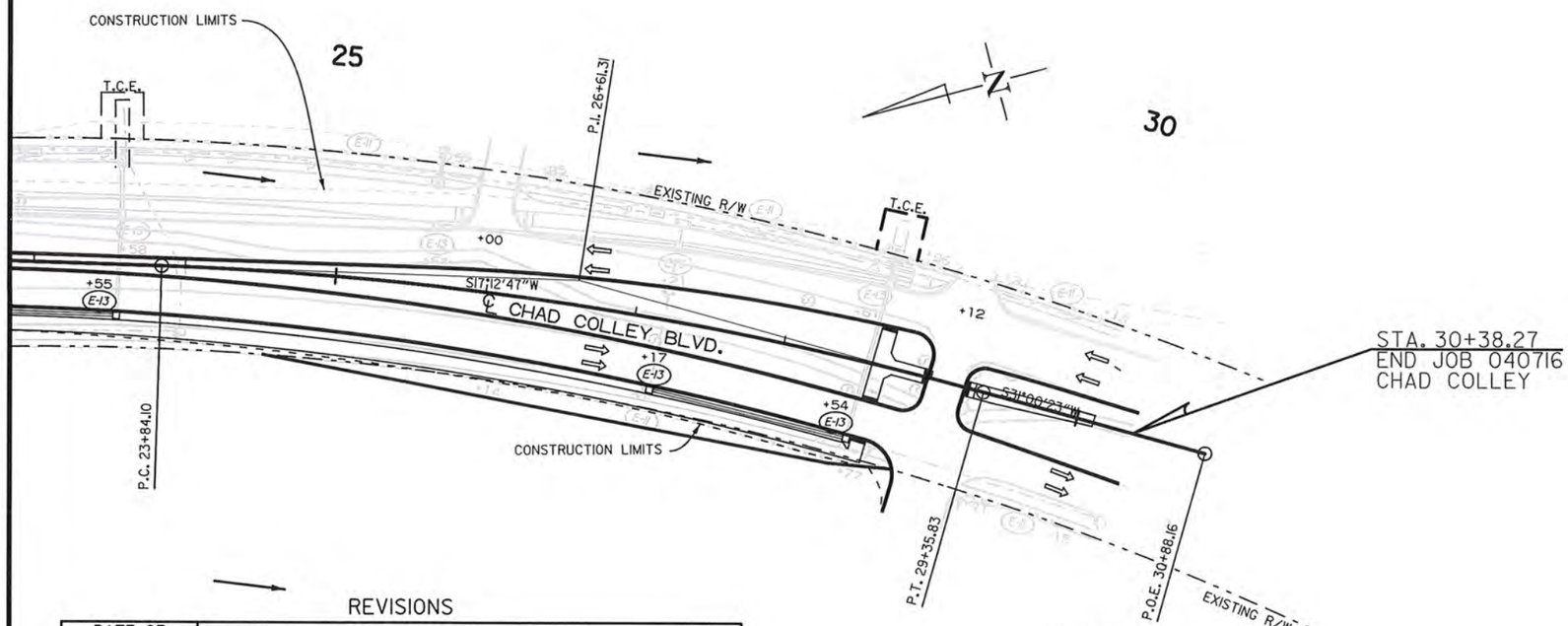
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	47	194
				(2)	TEMPORARY EROSION CONTROL DETAILS			



STATE OF ARKANSAS
* * *
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

REVISIONS

DATE OF REVISION	REVISION

LEGEND

(E-11) = SILT FENCE
(E-13) = COMPOST FILTER SOCK

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STAGE 2 TEMPORARY EROSION CONTROL DETAILS

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				6	ARK.			
				JOB NO.		040716	48	194
				(2)	MAINTENANCE OF TRAFFIC DETAILS			

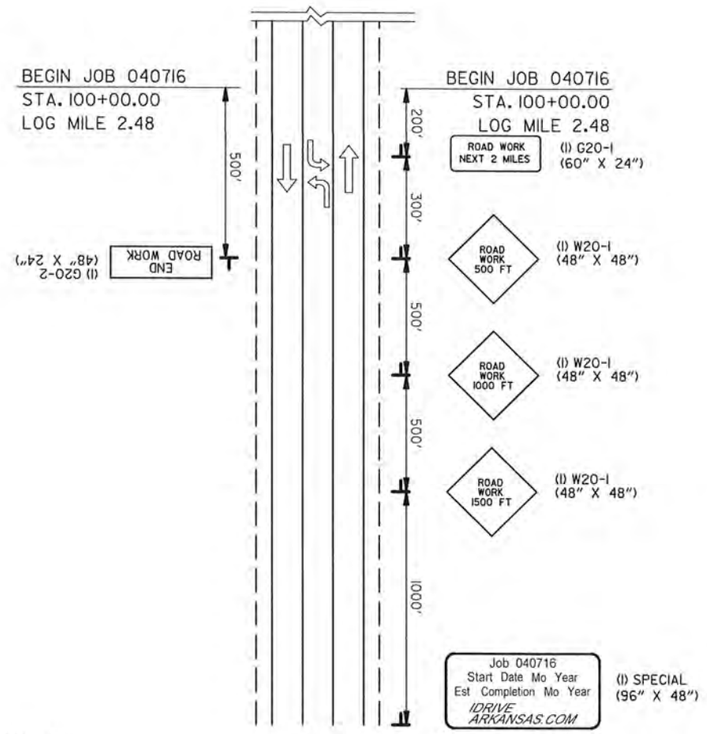
DO NOT PASS (4) R4-1 (24" X 30") ALL STAGES

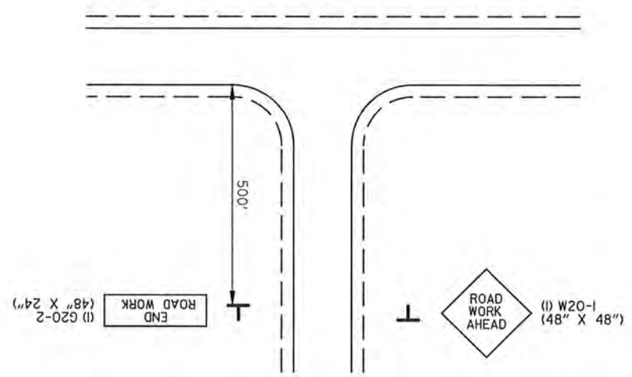
RIGHT SHOULDER CLOSED (5) W21-5a (36" X 36") ALL STAGES

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

R4-1, W8-1, & W21-5a TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

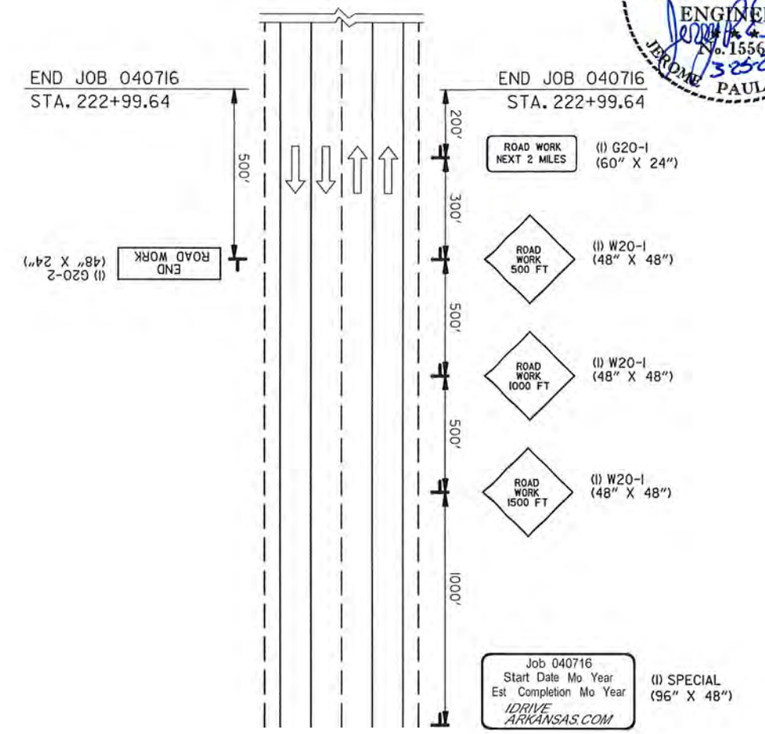
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
JEROME PAUL DAVIS
No. 15560
3-25-2020





ADVANCE WARNING - SIDE ROADS (ALL ROADS)

STA. 112+00.96 MASSARD RD. LT. & RT.
STA. 118+46.18 WHITE OAK CIRCLE RT.
STA. 131+35.79 RED OAK COURT RT.
STA. 141+08.01 S. 92ND. STREET LT.
STA. 165+31.61 PAINTER LANE LT.
STA. 174+93.65 WELLS LAKE ROAD RT.
STA. 184+68.62 VETERANS AVE. RT.
STA. 191+52.67 CHAD COLLEY BLVD. LT. & RT.
STA. 197+78.55 COYOTE TRAIL RT.



STAGE 1:

1) INSTALL ADVANCE WARNING SIGNS.

2) INSTALL PAVEMENT MARKINGS AND TRAFFIC CONTROL DEVICES AS DIRECTED BY THE ENGINEER.

3) CONSTRUCT CROSS ROAD STRUCTURES AT STATIONS 117+18, 180+39, 193+78, 199+70, 211+36, 211+42, & 218+33 IN STAGE 1.

4) EXTEND CROSS ROAD STRUCTURES 122+83, 148+35, 158+16, 211+54, & 218+38 IN STAGE 1.

5) CONSTRUCT NEW WELLS LAKE RD. INTERSECTION & OBLITERATE EXIST. CONNECTION.

6) CONSTRUCT STORM SEWER STA. 100+00 TO STA. 169+00 LT., STA. 173+00 TO STA. 200+00 RT. AND STA. 207+00 TO STA. 223+00 RT.

7) CONSTRUCT PAVEMENT WIDENING ON LEFT SIDE STA. 100+00 TO 173+18.33.

8) CONSTRUCT NEW PAVEMENT AND WIDENING BOTH SIDES STA. 175+14.87 TO STA. 184+09.76

9) CONSTRUCT PAVEMENT WIDENING ON RIGHT SIDE STA. 184+09.76 TO END OF JOB.

10) CONSTRUCT SIDEWALKS & STORM DRAINAGE IN WIDENED AREAS.

11) CONSTRUCT ISLAND AS SHOWN ON PLANS.

12) CONSTRUCT STAGE 1 PORTION OF CHAD COLLEY BLVD. AS SHOWN.

STAGE 1A:

1) MAINTAIN ADVANCE WARNING SIGNS.

2) CONSTRUCT NEW CONNECTION TO NEW ALIGNMENT OF HWY. 255.

3) REMOVE CONFLICTING PAVEMENT MARKINGS.

STAGE 2:

1) MAINTAIN ADVANCE WARNING SIGNS.

2) REMOVE CONFLICTING PAVEMENT MARKINGS AND SHIFT TRAFFIC TO LEFT STA. 100+00 TO STA 173+41.57. SHIFT TRAFFIC TO NEW ALIGNMENT RT. SIDE HWY. 255 STA. 173+41.57 TO END OF JOB.

3) EXTEND CROSS ROAD STRUCTURES STA 211+54, & 218+38 IN STAGE 2.

4) CONSTRUCT STORM SEWER STA. 100+00 TO STA. 169+00 RT. & STA. 184+00 TO STA. 200+00 LT.

5) REMOVE CONNECTION TO OLD ALIGNMENT STA. 174+00.00.

6) WIDEN PAVEMENT ON RT. STA. 100+00.00 TO STA. 174+06.75.

7) WIDEN PAVEMENT ON LT. STA. 183+71.71 TO END OF JOB.

8) CONSTRUCT SIDEWALKS AND STORM DRAINS IN WIDENED AREAS.

9) INSTALL FINAL LIFT OF ASPHALT AND PERMANENT PAVEMENT MARKINGS.

10) RESURFACE OLD HWY. 255.

11) RESURFACE HWY. 253.

12) CONSTRUCT STAGE 2 PORTION OF CHAD COLLEY BLVD. AS SHOWN.

STAGE 3:

1) MAINTAIN ADVANCE WARNING SIGNS.

2) REMOVE CONFLICTING PAVEMENT MARKINGS.

3) CONSTRUCT SIDEWALKS IN WIDENED AREAS.

4) INSTALL FINAL LIFT OF ASPHALT AND PERMANENT PAVEMENT MARKINGS.

5) MOVE TRAFFIC TO NEWLY CONSTRUCTED LANES.

ALL STAGES MAINTENANCE OF TRAFFIC DETAILS

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				6	ARK.			
				JOB NO.		040716	49	194

(2) MAINTENANCE OF TRAFFIC DETAILS

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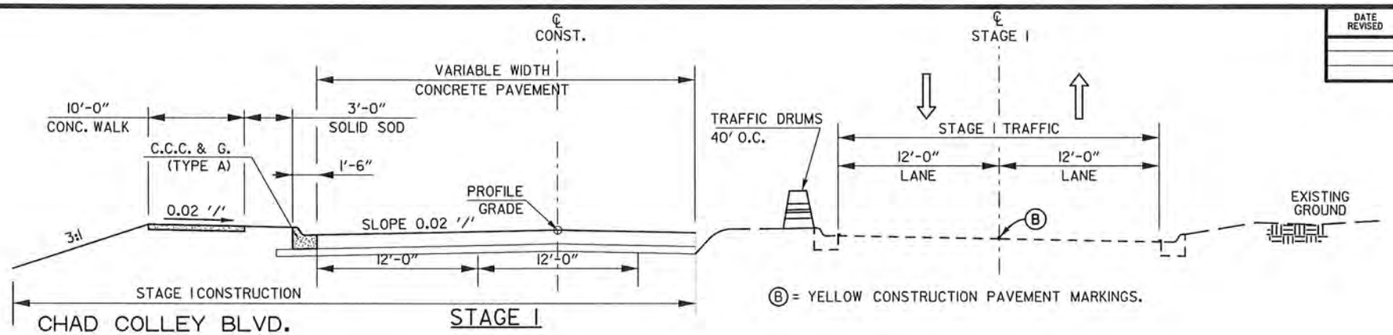
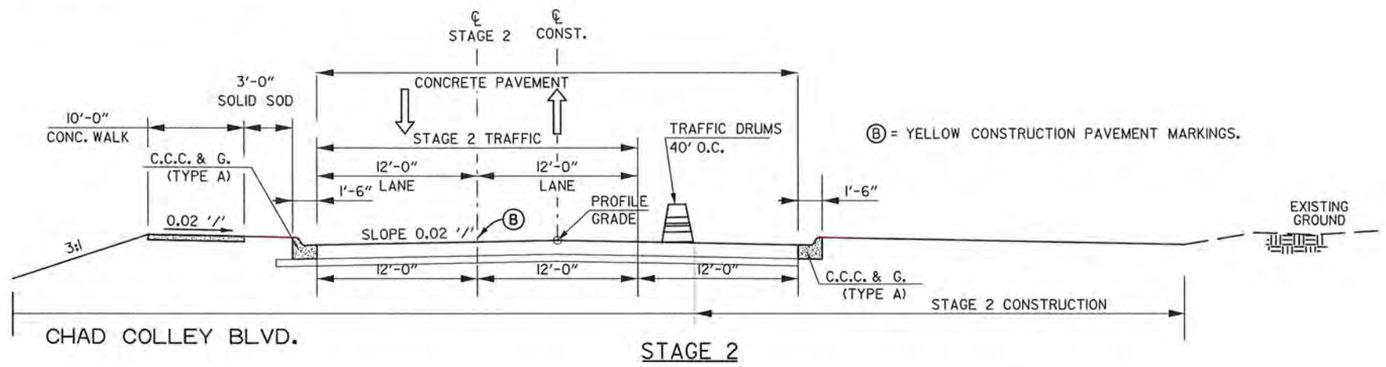
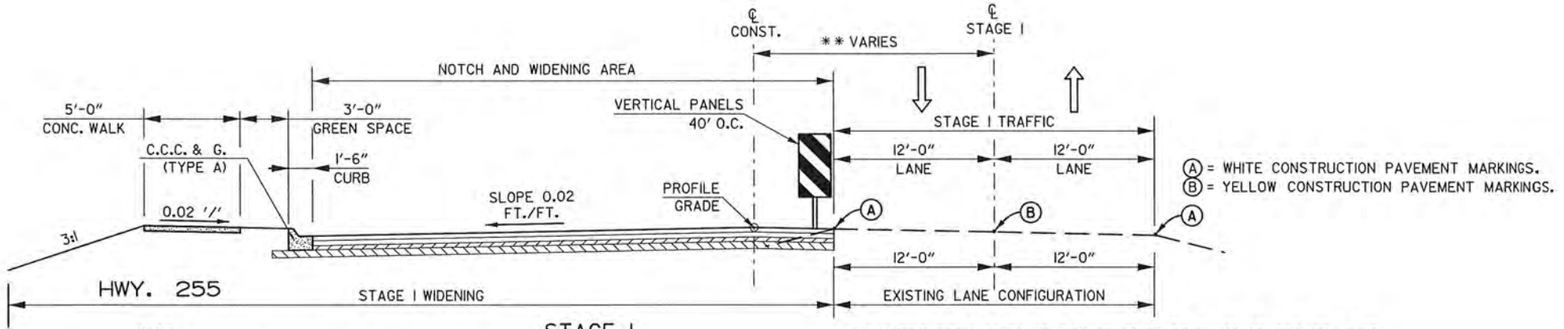
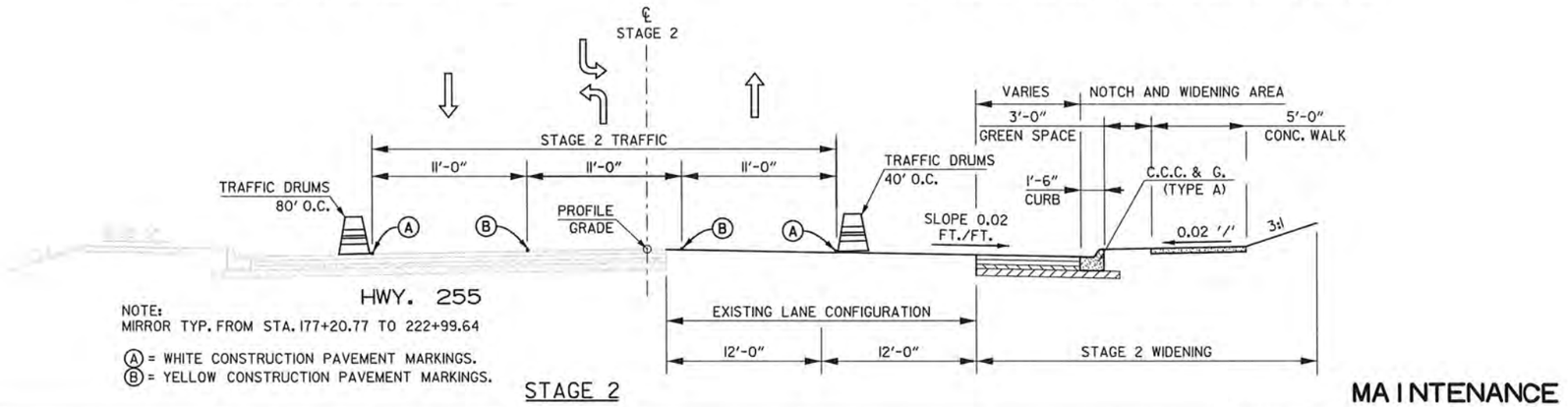
No. 15560
3-25-2020
JEROME PAUL DAVIS









MAINTENANCE OF TRAFFIC DETAILS

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				6	ARK.			
				JOB NO.		040716	50	194

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE I:
1) INSTALL ADVANCE WARNING SIGNS.

2) INSTALL PAVEMENT MARKINGS AND TRAFFIC CONTROL DEVICES AS DIRECTED BY THE ENGINEER.

3) CONSTRUCT CROSS ROAD STRUCTURES AT STATIONS 117+18, 180+39, 193+78, 199+70, 211+36, 211+42, & 218+33 IN STAGE I.

4) EXTEND CROSS ROAD STRUCTURES 122+83, 148+35, 158+16, 211+54, & 218+38 IN STAGE I.

5) CONSTRUCT NEW WELLS LAKE RD. INTERSECTION & OBLITERATE EXIST. CONNECTION.

6) CONSTRUCT STORM SEWER STA. 100+00 TO STA. 169+00 LT., STA. 173+00 TO STA. 200+00 RT. AND STA. 207+00 TO STA. 223+00 RT.

7) CONSTRUCT PAVEMENT WIDENING ON LEFT SIDE STA. 100+00 TO 173+18.33.

8) CONSTRUCT NEW PAVEMENT AND WIDENING BOTH SIDES STA. 175+14.87 TO STA. 184+09.76

9) CONSTRUCT PAVEMENT WIDENING ON RIGHT SIDE STA. 184+09.76 TO END OF JOB.

10) CONSTRUCT SIDEWALKS & STORM DRAINAGE IN WIDENED AREAS.

11) CONSTRUCT ISLAND AS SHOWN ON PLANS.

12) CONSTRUCT STAGE I PORTION OF CHAD COLLEY BLVD. AS SHOWN.

NOTE:
THE QUANTITY OF VERTICAL PANELS PROVIDED IN THE CONTRACT IS FOR ONE SIDE OF THE ROADWAY FOR 2 MILES. THIS IS THE MAXIMUM QUANTITY REQUIRED TO ALLOW THE CONTRACTOR TO NOTCH ONE MILE, BACKFILL TO A POINT WHERE THE VERTICAL DIFFERENTIAL IS 3" 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 603.202 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION REQUIREMENTS.

STAGE I QUANTITIES:
SIGNS = 997 SQ. FT.
TYPE III BARRICADES RT. = 160 LIN. FT.
TYPE III BARRICADES LT. = 256 LIN. FT.
TYPE II BARRICADES RT. = 16 LIN. FT.
TRAFFIC DRUMS = 153 EACH
VERTICAL PANELS = 251 EACH
REMOVAL OF PERMANENT PAVEMENT MARKINGS = 33096 LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS = 45919 LIN. FT.

STATE OF ARKANSAS
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3-25-2020
JEROME PAUL DAVIS

95

STA. 100+00.00
BEGIN JOB 040716
LOG MILE 2.48

100

P.I. 100+00.00
Δ = 019°09" RT.

105

VERTICAL PANELS SPACED 40' ON CENTER

WHITE CONSTRUCTION PAVEMENT MARKING

TRAFFIC DRUMS SPACED 20' ON CENTER

C. L. HWY. 255

EXISTING R/W

CONST. LIMITS

PROP. R/W

36'

+64

+13

S76°42'18"E

S76°23'09"E

12' 11" 11"

STA. 98+00

50' VEGETATED BUFFER

T.C.E.

VERTICAL PANEL

TRAFFIC DRUM

NOTE:
IN ORDER TO KEEP A SIDEWALK OPEN TO PEDESTRIANS CROSSING HWY. 255 THE CONTRACTOR SHALL CONSTRUCT THE WIDENING, CURBS, SIDEWALKS AND RAMPS IN ONE QUADRANT AND OPEN TO PEDESTRIANS BEFORE CLOSING THE SIDEWALK IN THE OTHER QUADRANT. SIDEWALK CLOSED BARRIERS SHALL BE RELOCATED AS WORK PROGRESSES.

STA. 124+76 LT. - INSTALL QUADRUPLE 54" X 18' TEMPORARY PIPE CULVERT

110

(1) R9-9 (24" X 12") 8' BARR. TYP. II RT.

SIDEWALK CLOSED

EXISTING R/W

PROPOSED R/W

MASSARD RD.

S02°13'41"W

115

WHITE CONSTRUCTION PAVEMENT MARKING

CONSTRUCTION LIMITS

P.C. 116+27.79

29'

T.C.E.

35'

25'

+40

+03

+71

S76°23'09"E

12' 11" 11"

EXISTING R/W

PROPOSED R/W

T.C.E.

DOUBLE YELLOW CONSTRUCTION PAVEMENT MARKING

4" YELLOW CONSTRUCTION SKIP LINE W/ YELLOW SOLID LINE

WHITE CONSTRUCTION PAVEMENT MARKING

STA. 112+00.96 HWY. 255 =
STA. 10+00.00 MASSARD RD.
Δ = 101°05'10"

MASSARD RD.

S02°30'53"W

120

C. L. HWY. 255

P.I. 11+96.99

P.I. 11+62.34

PROPOSED R/W

CONST. LIMITS

P.C. 10+53.01

16'

+67

P.O.B. 10+00.00

12' 12"

EXISTING R/W

30'

+20

S76°23'09"E

S85°51'59"E

P.I. 12+02.90

+22

+28

440' TAPER

DOUBLE YELLOW CONSTRUCTION PAVEMENT MARKING

WHITE CONSTRUCTION PAVEMENT MARKING

EXISTING R/W

WHITE OAK CIR.

EXISTING R/W

125

P.C. 11+24.30

P.I. 11+32.17

P.I. 10+90.91

P.T. 125+75.85

STAGE 1
MAINTENANCE OF TRAFFIC DETAILS

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				6	ARK.			
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(2) MAINTENANCE OF TRAFFIC DETAILS

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STA. 171+35.00 HWY. 255 =
STA. 15+00.00 WELLS LAKE RD.
△ = 90°00'00"

DOUBLE YELLOW CONSTRUCTION PAVEMENT MARKING

WHITE CONSTRUCTION PAVEMENT MARKING

VERTICAL PANELS SPACED 40' ON CENTER

N87°56'48"E CHURCH ST.

C.L. HWY. 255

P.C. 171+56.53

P.T. 174+68.95

P.T. 177+64.82

T.C.E.

EXISTING R/W

PROPOSED R/W

CONST. LIMITS

S60°42'01"E

N88°59'06"E

ROAD CLOSED (3) RII-2 (48" X 30")

(3) 16' BARR. TYP. III RT.

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

(1) 16' BARR. TYP. III LT.

(1) 16' BARR. TYP. III RT.

DOUBLE YELLOW CONSTRUCTION PAVEMENT MARKING

WELLS LAKE RD. M.P.50.00 JON

EXISTING R/W

P.T. 184.80

VERTICAL PANEL

BARRIER

TRAFFIC DRUM

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

(2) 16' BARR. TYP. III LT.

(2) 16' BARR. TYP. III RT.

P.T. 14+67.52

CHAD COLLEY BLVD.

S17°12'47"W

TRAFFIC DRUMS SPACED 20' O.C.
10 EACH PER CITY STREET
5 CITY STREET = 50 EACH

STA. 191+71.48 HWY. 255 =
STA. 16+83.14 CHAD COLLEY BLVD.
△ = 77°54'48"

WHITE CONSTRUCTION PAVEMENT MARKING

P.C. 197+99.08

100' TAPER

109' TAPER

TRAFFIC DRUMS SPACED 20' ON CENTER

DOUBLE YELLOW CONSTRUCTION PAVEMENT MARKING

VERTICAL PANELS SPACED 40' ON CENTER

VETERANS AVE.

COYOTE TRAIL

STAGE 1 MAINTENANCE OF TRAFFIC DETAILS

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				6	ARK.			
				JOB NO.		040716	52	194

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
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No. 15560
JEROME PAUL DAVIS
3-25-2020

200 205 210 215 220 225 230

EXISTING R/W
P.T. 203+68.19
WHITE CONSTRUCTION PAVEMENT MARKING
PROPOSED R/W
T.C.E.
S60°42'01"E
S80°37'09"E
PROP. R/W
P.I. 200+86.53
CONSTRUCTION LIMITS
C.L. HWY. 255
DOUBLE YELLOW CONSTRUCTION PAVEMENT MARKING
+30
27'
CONST. LIMITS
VERTICAL PANELS SPACED 40' ON CENTER
VERTICAL PANEL
TRAFFIC DRUM
EXIST. LANE STRIPING RETAIN
P.C. 222+99.64
STA. 222+99.64
END JOB 040716
+30.50 60.07'
+43.38 60.06'
+66 140.42'
+78 140.41'
STA. 225+00
N63°52'11"E
P.I. 229+11.61

STAGE 1
MAINTENANCE OF TRAFFIC DETAILS

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				6	ARK.			
				JOB NO.		040716	53	194

MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
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No. 15560
JEROME PAUL DAVIS
3-25-2020

10

STA. 10+00.00
BEGIN CONST.
CHAD COLLEY BLVD.

15

20

STA. 191+71.48 HWY. 255 =
STA. 16+83.14 CHAD COLLEY BLVD.
Δ = 77°54'48"

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

TRAFFIC DRUMS SPACED 20' ON CENTER

P.I. 12+41.48

EXISTING R/W

CONST. LIMITS

S10°25'25"W

S17°12'47"W

℄ CHAD COLLEY BLVD.

P.O.B. 10+00.00
P.C. 10+14.91

P.T. 14+67.52

190

S60°42'01"E

HWY 255

12'

12'

PROPOSED R/W

(2) 16' BARR. TYP. III LT.

WHITE CONSTRUCTION PAVEMENT MARKING

DOUBLE YELLOW CONSTRUCTION PAVEMENT MARKING

TRAFFIC DRUMS SPACED 40' ON CENTER

P.C. 23+84.10

25

30

P.I. 26+61.31

S31°00'23"W

P.T. 29+35.83

P.O.E. 30+88.16

STA. 30+38.27
END CONST.
CHAD COLLEY BLVD.

500'

(1) W4-2 RT. (48" X 48")

RIGHT LANE CLOSED AHEAD (1) W20-5R (48" X 48")

TEMPORARY PAVEMENT

NOTE: CONSTRUCT TEMPORARY PAVEMENT PRIOR TO STAGE 1

STAGE 1A
MAINTENANCE OF TRAFFIC DETAILS

STAGE 1
MAINTENANCE OF TRAFFIC DETAILS

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				6	ARK.			
				JOB NO.		040716	54	194

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE IA:

1) MAINTAIN ADVANCE WARNING SIGNS.

2) CONSTRUCT NEW CONNECTION TO NEW ALIGNMENT OF HWY. 255.

3) REMOVE CONFLICTING PAVEMENT MARKINGS.

STATE OF ARKANSAS
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3-25-2020

DOUBLE YELLOW CONSTRUCTION PAVEMENT MARKING

TRAFFIC DRUMS SPACED 40' ON CENTER

WHITE CONSTRUCTION PAVEMENT MARKING

CHURCH ST.

N87°56'48"E

P.I. 174+68.95

T.C.E.

P.C. 171+58.53

P.T. 177+64.82

C. L. HWY. 255

S60°42'01"E

N88°59'06"E

PROPOSED R/W

CONST. LIMITS

EXISTING R/W

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

(2) 16' BARR. TYP. III RT.

(1) 16' BARR. TYP. III LT.

(1) 16' BARR. TYP. III RT.

STA. 171+35.00 HWY. 255 =
STA. 15+00.00 WELLS LAKE RD.
△ = 90°00'00"

WELLS LAKE RD.

N0°54'00"W

CONSTRUCTION LIMITS

P.T. 11+84.80

P.I. 10+44.71

N90°21'30"E

P.C. 8+82.60

P.O.B. 8+00.00

N0°21'30"E

VETERANS AVE.

STAGE IA QUANTITIES:
SIGNS = 891 SQ. FT.
TYPE III BARRICADES RT. = 64 LIN. FT.
TYPE III BARRICADES LT. = 32 LIN. FT.
TRAFFIC DRUMS = 27 EACH
REMOVAL OF PERMANENT PAVEMENT MARKINGS = 226 LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS = 4192 LIN. FT.

TEMPORARY PAVEMENT

TRAFFIC DRUM

OBLITERATE PAVEMENT

BARRICADE

STAGE 1A
MAINTENANCE OF TRAFFIC DETAILS

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				6	ARK.			
				JOB NO.		040716	55	194

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 2:

1) MAINTAIN ADVANCE WARNING SIGNS.

2) REMOVE CONFLICTING PAVEMENT MARKINGS AND SHIFT TRAFFIC TO LEFT STA. 100+00 TO STA 173+41.57. SHIFT TRAFFIC TO NEW ALIGNMENT RT. SIDE HWY. 255 STA. 173+41.57 TO END OF JOB.

3) EXTEND CROSS ROAD STRUCTURES STA 211+54, & 218+38 IN STAGE 2.

4) CONSTRUCT STORM SEWER STA. 100+00 TO STA. 169+00 RT. & STA. 184+00 TO STA. 200+00 LT.

5) REMOVE CONNECTION TO OLD ALIGNMENT STA. 174+00.00.

6) WIDEN PAVEMENT ON RT. STA. 100+00.00 TO STA. 174+06.75.

7) WIDEN PAVEMENT ON LT. STA. 183+71.71 TO END OF JOB.

8) CONSTRUCT SIDEWALKS AND STORM DRAINS IN WIDENED AREAS.

9) INSTALL FINAL LIFT OF ASPHALT AND PERMANENT PAVEMENT MARKINGS.

10) RESURFACE OLD HWY. 255.

11) RESURFACE HWY. 253.

12) CONSTRUCT STAGE 2 PORTION OF CHAD COLLEY BLVD. AS SHOWN.

STAGE 2 QUANTITIES:

SIGNS = 955 SQ. FT.
TYPE III BARRICADES RT. = 160 LIN. FT.
TYPE III BARRICADES LT. = 64 LIN. FT.
TRAFFIC DRUMS = 377 EACH
VERTICAL PANELS = 22 EACH
REMOVAL OF PERMANENT PAVEMENT MARKINGS = 6497 LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS = 53987 LIN. FT.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

STA. 100+00.00
BEGIN JOB 040716
LOG MILE 2.48

95 100 105

MASSARD CREEK

P.I. 100+00.00
Δ = 019°09" RT.

200' TAPER

CONSTRUCTION LIMITS

WHITE CONSTRUCTION PAVEMENT MARKING EXISTING R/W

TRAFFIC DRUMS SPACED 80' ON CENTER

C. L. HWY. 255

PROP. R/W

EXISTING R/W

S76°42'18"E

S76°23'09"E

+80 +34 +67 +89 +39

40' 28' 40'

T.C.E.

50' VEGETATED BUFFER

STA. 98+00

320' TAPER

HUTCHENSON COURT

CONSTRUCTION LIMITS

TRAFFIC DRUMS SPACED 20' ON CENTER

TRAFFIC DRUMS SPACED 80' ON CENTER

DOUBLE YELLOW CONSTRUCTION PAVEMENT MARKING

BARRICADE

TRAFFIC DRUM

NOTE:
IN ORDER TO KEEP A SIDEWALK OPEN TO PEDESTRIANS CROSSING HWY. 255 THE CONTRACTOR SHALL CONSTRUCT THE WIDENING, CURBS, SIDEWALKS AND RAMPS IN ONE QUADRANT AND OPEN TO PEDESTRIANS BEFORE CLOSING THE SIDEWALK IN THE OTHER QUADRANT.

110 115 120 125

EXISTING R/W

MASSARD RD.

S02°31'41"W

TRAFFIC DRUMS SPACED 20' ON CENTER

TRAFFIC DRUMS SPACED 80' ON CENTER

P.C. 116+27.79

T.C.E.

PROPOSED R/W

+50 +00

PROP. R/W

S76°23'09"E

+67 +37 +46

EXISTING R/W 24'

22'

CONSTRUCTION LIMITS

WHITE CONSTRUCTION PAVEMENT MARKING

S02°30'53"W

STA. 112+00.96 HWY. 255 =
STA. 10+00.00 MASSARD RD.
Δ = 101°05'10"

WHITE OAK CIR.

P.I. 11+96.99

P.I. 11+62.34

P.C. 10+53.01

P.O.B. 10+00.00

P.C. 11+24.30

P.I. 10+90.91

P.I. 11+23.37

P.T. 125+75.85

S85°51'59"E

P.I. 12I+02.90

DOUBLE YELLOW CONSTRUCTION PAVEMENT MARKING

OBLITERATE PAVEMENT

STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

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				6	ARK.			
				JOB NO.		040716	56	194

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
3-25-2020
JEROME PAUL DAVIS

STA. 171+35.00 HWY. 255 =
STA. 15+00.00 WELLS LAKE RD.
△ = 90°00'00"

ROAD CLOSED (1) R11-2 (48" X 30")
(1) W1-6R (48" X 24")
(2) 16' BARR. TYP. III RT.

(1) 16' BARR. TYP. III LT.
(1) 16' BARR. TYP. III RT.

CHURCH ST.
N87°56'48"E
P.I. 174+68.95
P.C. 171+98.53
P.T. 177+64.82
C.L. HWY. 255
CONSTRUCTION LIMITS
WHITE CONSTRUCTION PAVEMENT MARKING
T.C.E.
TRAFFIC DRUMS SPACED 80' ON CENTER
PROPOSED R/W
EXISTING R/W
S60°42'01"E
N88°59'06"E
653'
16'
25'
32'
+97
+59
+00
+84
+69
14'
DOUBLE YELLOW CONSTRUCTION PAVEMENT MARKING
CONSTRUCTION LIMITS PROPOSED R/W
WELLS LAKE RD. N00°00'54"W
BARRICADE
TRAFFIC DRUM
OBLITERATE OLD PAVEMENT
VETERANS AVE.
37'

P.T. 14+67.52
CHAD COLLEY BLVD.
TRAFFIC DRUMS SPACED 20' ON CENTER

STA. 191+71.48 HWY. 255 =
STA. 16+83.14 CHAD COLLEY BLVD.
△ = 77°54'48"

+88
+38
+35
+48
+79
+65
+15
+50
24'
26'
P.C. 197+99.08
COYOTE TRAIL

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

STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

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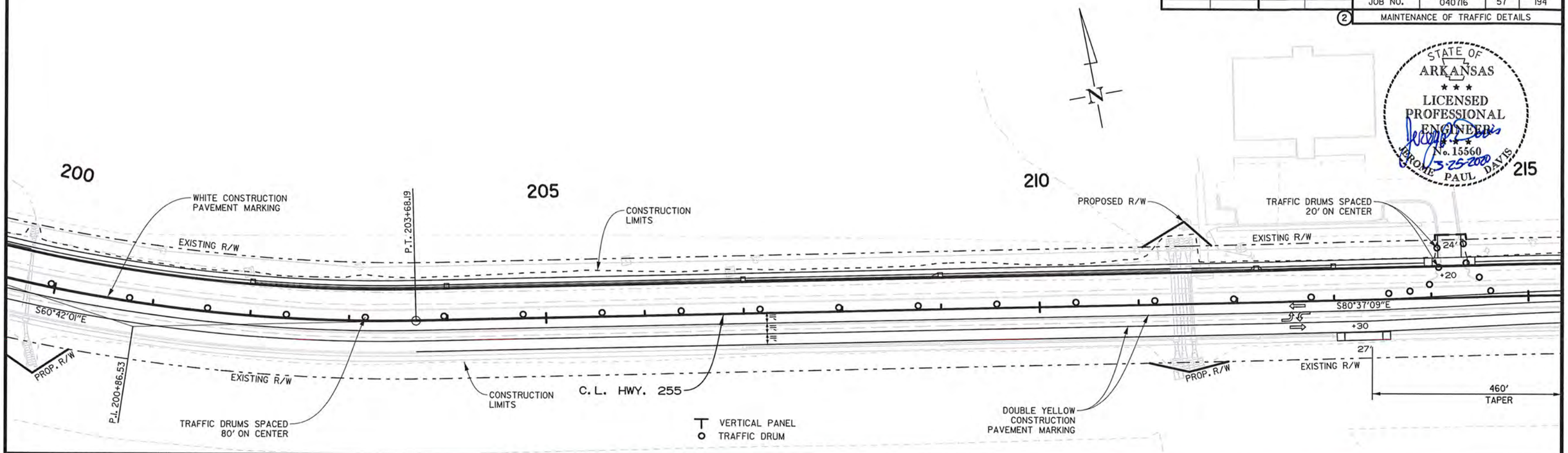
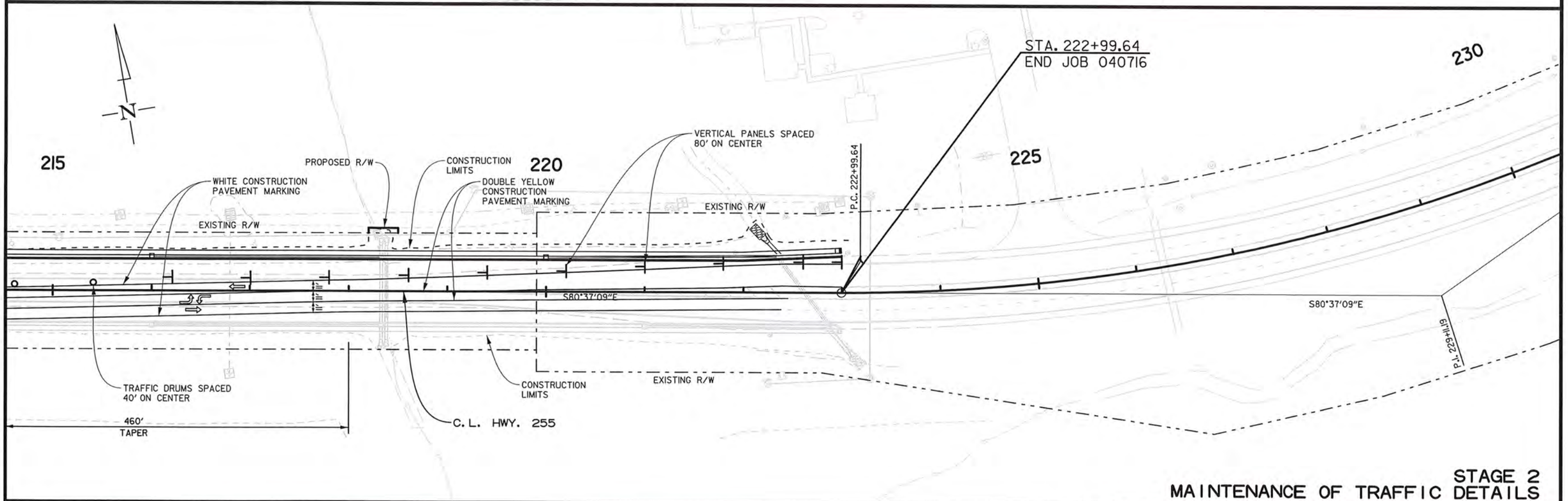
FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		040716	57	194

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
* * *
LICENSED PROFESSIONAL ENGINEER
* * *
No. 15560
JEROME PAUL DAVIS
3-25-2020





STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

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				6	ARK.			
				JOB NO.		040716	58	194

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

10

STA. 10+00.00
BEGIN CONST.
CHAD COLLEY BLVD.

15

DOUBLE YELLOW CONSTRUCTION PAVEMENT MARKING

WHITE CONSTRUCTION PAVEMENT MARKING

P.I. 12+41.48

EXISTING R/W

S10°25'25"W

+33

S17°12'47"W

12'

℄ CHAD COLLEY BLVD.

EXISTING R/W

P.O.B. 10+00.00

P.C. 10+14.91

P.T. 14+67.52

PROPOSED R/W

CONSTRUCTION LIMITS

190

EXISTING R/W

S60°42'01"E

HWY 255

EXISTING R/W

CONSTRUCTION LIMITS

EXISTING R/W

ROAD CLOSED

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

(2) 16' BARR. TYP. III RT.

20

CONSTRUCTION LIMITS

STA. 191+71.48 HWY. 255 =
STA. 16+83.14 CHAD COLLEY BLVD.
△ = 77°54'48"

DOUBLE YELLOW CONSTRUCTION PAVEMENT MARKING

WHITE CONSTRUCTION PAVEMENT MARKING

EXISTING R/W

PROPOSED R/W

CONSTRUCTION L

℄ CHAD COLLEY BLVD.

12'

S17°12'47"W

EXISTING R/W

CONSTRUCTION LIMITS

TRAFFIC DRUMS SPACED 40' ON CENTER

P.C. 23+84.10

25

C.E.

EXISTING R/W

CONSTRUCTION LIMITS

℄ CHAD COLLEY BLVD.

+00

12'

S17°12'47"W

P.I. 26+61.31

DOUBLE YELLOW CONSTRUCTION PAVEMENT MARKING

WHITE CONSTRUCTION PAVEMENT MARKING

CONSTRUCT IN STAGE I

30

S31°00'23"W

+12

EXISTING R/W

EXISTING R/W

CONSTRUCTION LIMITS

TRAFFIC DRUMS SPACED 40' ON CENTER

P.C. 23+84.10

CONSTRUCTION LIMITS

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

ROAD CLOSED

(2) 16' BARR. TYP. III LT.

P.T. 29+35.83

P.O.E. 30+88.16

EXISTING R/W

S31°00'23"W

STA. 30+38.27
END JOB 040716
CHAD COLLEY

500'

(1) W4-2 RT. (48" X 48")

500'

RIGHT LANE CLOSED AHEAD

(1) W20-5R (48" X 48")

TEMPORARY PAVEMENT

STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

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				6	ARK.			
				JOB NO.		040716	59	194

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 3 QUANTITIES:
SIGNS = 573 SQ. FT.
TRAFFIC DRUMS = 22 EACH
CONSTRUCTION PAVEMENT MARKINGS = 3568 LIN. FT.

STAGE 3:

1) MAINTAIN ADVANCE WARNING SIGNS.

2) REMOVE CONFLICTING PAVEMENT MARKINGS.

3) CONSTRUCT SIDEWALKS IN WIDENED AREAS.

4) REMOVE TEMP. PAVEMENT AND CONSTRUCT MEDIAN AS SHOWN ON CHAD COLLEY BLVD.

5) INSTALL FINAL LIFT OF ASPHALT AND PERMANENT PAVEMENT MARKINGS.

6) MOVE TRAFFIC TO NEWLY CONSTRUCTED LANES.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020
T.C.E.

10 15 20 25 30 190

STA. 10+00.00
BEGIN CONST.
CHAD COLLEY BLVD.

P.O.B. 10+00.00
P.C. 10+14.91
P.I. 12+41.48
P.T. 14+67.52
P.C. 23+84.10
P.I. 26+61.31
P.O.E. 30+88.16
P.T. 29+35.83

S10°25'25"W
S17°12'47"W
S60°42'01"E
S31°00'23"W

EXISTING R/W
PROPOSED R/W
CONSTRUCTION LIMITS
WHITE CONSTRUCTION PAVEMENT MARKING
DOUBLE YELLOW CONSTRUCTION PAVEMENT MARKING
YELLOW CONSTRUCTION PAVEMENT MARKING
WHITE SKIP CONSTRUCTION PAVEMENT MARKINGS
YELLOW SKIP W/ SOLID YELLOW CONST. PAVEMENT MARKINGS
TRAFFIC DRUMS SPACED 40' ON CENTER

℄ CHAD COLLEY BLVD.
HWY 255
12'-12'

STA. 191+71.48 HWY. 255 =
STA. 16+83.14 CHAD COLLEY BLVD.
Δ = 77°54'48"

STA. 30+38.27
END CONST.
CHAD COLLEY BLVD.

○ TRAFFIC DRUM

STAGE 3
MAINTENANCE OF TRAFFIC DETAILS

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				6	ARK.			
				JOB NO.		040716	60	194

(2) PERMANENT PAVEMENT MARKING DETAILS

BIKE EMBLEMS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
3-25-2020
JEROME PAUL DAVIS

95 100 105 110

REMOVE EXISTING RIGHT TURN ONLY WORD AND ARROW

STA. 100+00.00
BEGIN JOB 040716
LOG MILE 2.48

P.I. 100+00.00
Δ = 01°19'09" RT.

S76°42'18"E

S76°23'09"E

50' VEGETATED BUFFER

6" YELLOW THERMOPLASTIC SOLID LINE

6" YELLOW THERMOPLASTIC SKIP LINE WITH RAISED PAVEMENT MARKERS (TYPE 11) (80' O.C.)

C. L. HWY. 255

6" WHITE THERMOPLASTIC SKIP LINE WITH RAISED PAVEMENT MARKERS (TYPE 11) (80' O.C.)

6" DBL. YELLOW THERMOPLASTIC SOLID LINE WITH RAISED PAVEMENT MARKERS (TYPE 11) (80' O.C.)

6" WHITE THERMOPLASTIC SOLID LINE

6" DBL. YELLOW THERMOPLASTIC SOLID LINE

6" WHITE THERMOPLASTIC SOLID LINE WITH RAISED PAVEMENT MARKERS (TYPE 11) (80' O.C.)

6" YELLOW THERMOPLASTIC SKIP LINE WITH RAISED PAVEMENT MARKERS (TYPE 11) (80' O.C.)

94' TAPER

93' TAPER

36' 28' 40' 36' 40'

+80 +64 +34 +67 +13 +00 +50 +01.27 +23.92

110 115 120 125

6" DBL. YELLOW THERMOPLASTIC SOLID LINE

6" WHITE THERMOPLASTIC SKIP LINE WITH RAISED PAVEMENT MARKERS (TYPE 11) (80' O.C.)

6" WHITE THERMOPLASTIC SOLID LINE WITH RAISED PAVEMENT MARKERS (TYPE 11) (80' O.C.)

6" WHITE THERMOPLASTIC SOLID LINE

STA. 112+00.96 HWY. 255 =
STA. 10+00.00 MASSARD RD.
Δ = 101°05'10"

6" DOTTED WHITE (3' LINE W/ 9' GAP)

12" WHITE STOP LINE

12" WHITE ⊠ 48" O.C. CROSSWALK

6" DBL. YELLOW THERMOPLASTIC SOLID LINE

6" WHITE THERMOPLASTIC SKIP LINE WITH RAISED PAVEMENT MARKERS (TYPE 11) (80' O.C.)

6" WHITE THERMOPLASTIC SOLID LINE

6" DBL. YELLOW THERMOPLASTIC SOLID LINE WITH RAISED PAVEMENT MARKERS (TYPE 11) (80' O.C.)

BIKE EMBLEMS (300' O.C.)(TYP)

6" YELLOW THERMOPLASTIC SOLID LINE

6" YELLOW THERMOPLASTIC SKIP LINE WITH RAISED PAVEMENT MARKERS (TYPE 11) (80' O.C.)

6" WHITE THERMOPLASTIC SOLID LINE

P.C. 116+27.79

P.T. 121+02.90

P.T. 125+75.85

S02°31'41"W

S02°30'53"W

S76°23'09"E

S85°51'59"E

94' TAPER

93' TAPER

25' 29' 35' 30' 24' 22' 26'

+01.27 +95.18 +40 +03 +71 +20 +67 +37 +46 +00 +50 +23.92 +16.95

PERMANENT PAVEMENT MARKING DETAILS

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				6	ARK.			
				JOB NO.		040716	61	194

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15569
JEROME PAUL DAVIS
3-25-2020

BIKE EMBLEMS

185 190 195 200

P.T. 14+67.52

12" WHITE @ 48" O.C. CROSS WALK

6" WHITE ENHANCED THERMOPLASTIC SOLID LINE W/8" DIAGONALS

STA. 191+71.48 HWY. 255 =
STA. 16+83.14 CHAD COLLEY BLVD.
△ = 77°54'48"

C. L. HWY. 255

6" YELLOW THERMOPLASTIC SKIP LINE WITH RAISED PAVEMENT MARKERS (TYPE 11) (80' O.C.)

6" WHITE THERMOPLASTIC SKIP LINE WITH RAISED PAVEMENT MARKERS (TYPE 11) (80' O.C.)

6" YELLOW THERMOPLASTIC SKIP LINE WITH RAISED PAVEMENT MARKERS (TYPE 11) (80' O.C.)

+22.25 126' TAPER +48.62

12" WHITE STOP LINE

6" DOTTED WHITE (3' LINE W/ 9' GAP)

BIKE EMBLEMS

6" WHITE THERMOPLASTIC SOLID LINE WITH RAISED PAVEMENT MARKERS (TYPE 11) (80' O.C.)

P.C. 197+99.08

+35 +48 +79

25' +84 +69 +50 37' 24' 26'

+22 +72 +96 +46 +18.49 +45.41

S60°42'01"E

12' 11'11' 4'

BIKE EMBLEMS

6" WHITE THERMOPLASTIC SOLID LINE

6" WHITE THERMOPLASTIC SOLID LINE WITH RAISED PAVEMENT MARKERS (TYPE 11) (80' O.C.)

BIKE EMBLEMS (300' O.C.)(TYP)

6" DOTTED WHITE (3' LINE W/ 9' GAP)

12" WHITE STOP LINE

12" WHITE @ 48" O.C. CROSS WALK

10" SOLID WHITE REFLECTORIZED PAINT ON ISLAND WITH 8" SOLID WHITE BORDER (TYPE A CURB FACE)

12" WHITE STOP LINE

127' TAPER

6" DBL. YELLOW THERMOPLASTIC SOLID LINE

6" DOTTED WHITE (3' LINE W/ 9' GAP)

6" YELLOW THERMOPLASTIC SOLID LINE

BIKE EMBLEMS

6" WHITE THERMOPLASTIC SKIP LINE WITH RAISED PAVEMENT MARKERS (TYPE 11) (80' O.C.)

14' 12' 12' 12' 12'

200 205 210 215

C. L. HWY. 255

P.T. 203+68.19

P.I. 200+86.53

6" WHITE THERMOPLASTIC SKIP LINE WITH RAISED PAVEMENT MARKERS (TYPE 11) (80' O.C.)

BIKE EMBLEMS (300' O.C.)(TYP)

6" WHITE THERMOPLASTIC SOLID LINE

6" YELLOW THERMOPLASTIC SKIP LINE WITH RAISED PAVEMENT MARKERS (TYPE 11) (80' O.C.)

24' +20 S80°37'09"E +30 27'

6" YELLOW THERMOPLASTIC SOLID LINE

PERMANENT PAVEMENT MARKING DETAILS

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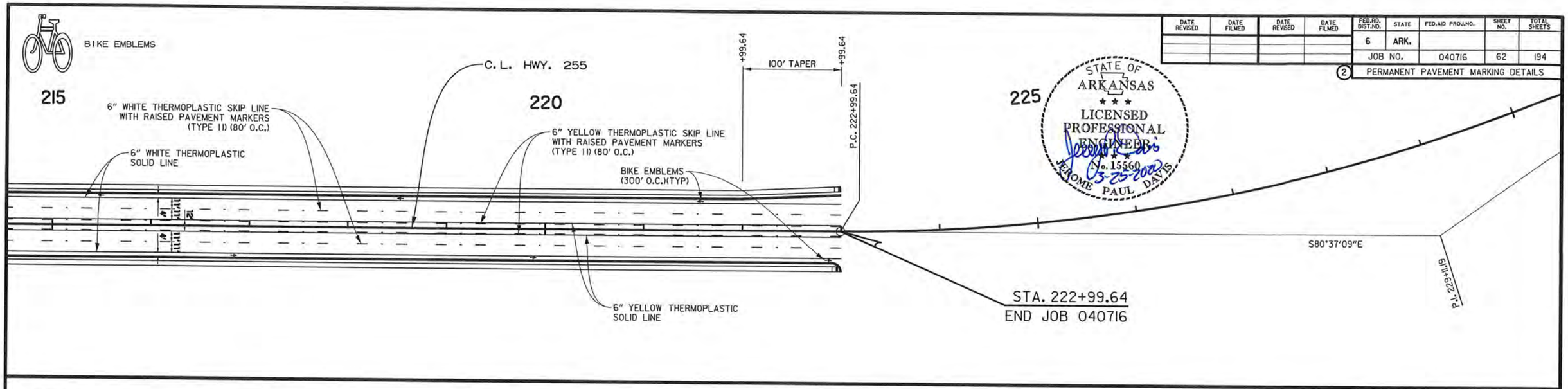
				6	ARK.			
				JOB NO.		040716	62	194

(2) PERMANENT PAVEMENT MARKING DETAILS



HWY. 255
THERMOPLASTIC PAVEMENT MARKING YELLOW SKIP LINE (6")
STA. 100+00 - 101+37 LT. = 34 LIN. FT.
STA. 100+00 - 101+37 RT. = 34 LIN. FT.
STA. 102+37 - 107+75 LT. = 135 LIN. FT.
STA. 102+37 - 107+75 RT. = 135 LIN. FT.
STA. 116+28 - 118+21 LT. = 48 LIN. FT.
STA. 116+28 - 118+21 RT. = 48 LIN. FT.
STA. 118+71 - 131+11 LT. = 310 LIN. FT.
STA. 118+71 - 131+11 RT. = 310 LIN. FT.
STA. 131+61 - 140+83 LT. = 231 LIN. FT.
STA. 131+61 - 140+83 RT. = 231 LIN. FT.
STA. 141+33 - 165+07 LT. = 594 LIN. FT.
STA. 141+33 - 165+07 RT. = 594 LIN. FT.
STA. 165+57 - 170+86 LT. = 132 LIN. FT.
STA. 165+57 - 170+86 RT. = 132 LIN. FT.
STA. 171+85 - 184+44 LT. = 315 LIN. FT.
STA. 171+85 - 184+44 RT. = 315 LIN. FT.
STA. 184+94 - 186+97 LT. = 51 LIN. FT.
STA. 184+94 - 186+97 RT. = 51 LIN. FT.
STA. 195+77 - 197+53 LT. = 44 LIN. FT.
STA. 195+77 - 197+53 RT. = 44 LIN. FT.
STA. 198+03 - 223+00 LT. = 624 LIN. FT.
STA. 198+03 - 223+00 RT. = 624 LIN. FT.

CHAD COLLEY BLVD.
STA. 19+22 - 22+36 LT. = 79 LIN. FT.
STA. 19+22 - 22+36 RT. = 79 LIN. FT.

HWY. 255
THERMOPLASTIC PAVEMENT MARKING WHITE (12")
TOTAL PROJECT = 1936 LIN. FT.

WORDS
TOTAL PROJECT = 5 EACH

ARROWS
TOTAL PROJECT = 16 EACH

BIKE EMBLEMS
TOTAL PROJECT = 21 EACH

HWY. 255
THERMOPLASTIC PAVEMENT MARKING 6" DOTTED WHITE (3' LINE W/ 9' GAP)
STA. 112+73 - 113+78 LT. = 26 LIN. FT.
STA. 117+05 - 118+05 RT. = 25 LIN. FT.
STA. 129+93 - 130+93 RT. = 25 LIN. FT.
STA. 141+50 - 142+50 LT. = 25 LIN. FT.
STA. 165+75 - 166+77 LT. = 26 LIN. FT.
STA. 169+86 - 170+86 RT. = 25 LIN. FT.
STA. 183+10 - 184+10 RT. = 25 LIN. FT.
STA. 189+88 - 190+88 RT. = 25 LIN. FT.
STA. 192+36 - 193+36 LT. = 25 LIN. FT.
STA. 196+38 - 197+38 RT. = 25 LIN. FT.

HWY. 255
THERMOPLASTIC PAVEMENT MARKING YELLOW (6")
STA. 100+00 - 101+37 LT. = 137 LIN. FT.
STA. 100+00 - 101+37 RT. = 137 LIN. FT.
STA. 102+37 - 107+75 LT. = 538 LIN. FT.
STA. 102+37 - 107+75 RT. = 538 LIN. FT.
STA. 116+28 - 118+21 LT. = 193 LIN. FT.
STA. 116+28 - 118+21 RT. = 193 LIN. FT.
STA. 118+71 - 131+11 LT. = 1240 LIN. FT.
STA. 118+71 - 131+11 RT. = 1240 LIN. FT.
STA. 131+61 - 140+83 LT. = 922 LIN. FT.
STA. 131+61 - 140+83 RT. = 922 LIN. FT.
STA. 141+33 - 165+07 LT. = 2374 LIN. FT.
STA. 141+33 - 165+07 RT. = 2374 LIN. FT.
STA. 165+57 - 170+86 LT. = 529 LIN. FT.
STA. 165+57 - 170+86 RT. = 529 LIN. FT.
STA. 171+85 - 184+44 LT. = 1259 LIN. FT.
STA. 171+85 - 184+44 RT. = 1259 LIN. FT.
STA. 184+94 - 186+97 LT. = 203 LIN. FT.
STA. 184+94 - 186+97 RT. = 203 LIN. FT.
STA. 195+77 - 197+53 LT. = 176 LIN. FT.
STA. 195+77 - 197+53 RT. = 176 LIN. FT.
STA. 198+03 - 223+00 LT. = 2497 LIN. FT.
STA. 198+03 - 223+00 RT. = 2497 LIN. FT.

HWY. 255
DOUBLE YELLOW THERMOPLASTIC PAVEMENT MARKING YELLOW (6")
STA. 107+75 - 111+16 LT. = 682 LIN. FT.
STA. 107+75 - 109+00 RT. = 250 LIN. FT.
STA. 112+99 - 116+28 RT. = 658 LIN. FT.
STA. 115+00 - 116+28 LT. = 256 LIN. FT.
STA. 186+97 - 190+88 LT. = 782 LIN. FT.
STA. 186+97 - 188+22 RT. = 250 LIN. FT.
STA. 192+36 - 195+77 RT. = 682 LIN. FT.
STA. 194+46 - 195+77 LT. = 262 LIN. FT.

CHAD COLLEY BLVD.
STA. 19+22 - 22+36 RT. = 314 LIN. FT.
STA. 19+22 - 22+36 LT. = 314 LIN. FT.

MASSARD RD.
DOUBLE YELLOW THERMOPLASTIC PAVEMENT MARKING YELLOW (6")
STA. 5+92 - 7+57 RT. = 330 LIN. FT.
STA. 5+92 - 9+27 LT. = 670 LIN. FT.
STA. 10+71 - 14+20 RT. = 698 LIN. FT.
STA. 12+25 - 14+20 LT. = 390 LIN. FT.

CHAD COLLEY BLVD.
DOUBLE YELLOW THERMOPLASTIC PAVEMENT MARKING YELLOW (6")
STA. 13+33 - 15+85 LT. = 504 LIN. FT.
STA. 13+33 - 14+55 RT. = 244 LIN. FT.

CHAD COLLEY BLVD.
10" SOLID YELLOW REFLECTORIZED PAINT
STA. 17+21 - 17+80 LT. = 189 LIN. FT.

HWY. 255
THERMOPLASTIC PAVEMENT MARKING WHITE (6")
STA. 109+50 - 111+24 LT. = 174 LIN. FT.
STA. 112+73 - 114+50 LT. = 177 LIN. FT.
STA. 113+10 - 117+05 RT. = 395 LIN. FT.
STA. 113+78 - 140+67 LT. = 2689 LIN. FT.
STA. 118+89 - 129+93 RT. = 1104 LIN. FT.
STA. 131+78 - 169+86 RT. = 3799 LIN. FT.
STA. 142+50 - 164+89 LT. = 2239 LIN. FT.
STA. 166+77 - 190+49 LT. = 2372 LIN. FT.
STA. 171+85 - 183+10 RT. = 1125 LIN. FT.
STA. 185+27 - 189+88 RT. = 461 LIN. FT.
STA. 188+72 - 190+88 RT. = 216 LIN. FT.
STA. 192+36 - 193+96 LT. = 160 LIN. FT.
STA. 193+18 - 196+38 RT. = 320 LIN. FT.
STA. 193+36 - 223+00 LT. = 2964 LIN. FT.
STA. 198+21 - 223+00 RT. = 2479 LIN. FT.

HWY. 255 & CHAD COLLEY RADII
STA. 190+53 - 191+24 LT. = 281 LIN. FT.

MASSARD RD.
STA. 5+92 - 9+27 LT. = 335 LIN. FT.
STA. 7+82 - 9+27 LT. = 145 LIN. FT.
STA. 10+63 - 14+20 LT. = 357 LIN. FT.
STA. 10+71 - 11+75 LT. = 104 LIN. FT.
STA. 10+71 - 14+20 RT. = 349 LIN. FT.

CHAD COLLEY BLVD.
STA. 14+85 - 15+85 RT. = 100 LIN. FT.
STA. 17+60 - 18+92 RT. = 132 LIN. FT.

HWY. 255
RAISED PAVEMENT MARKERS (TYPE 11) YELLOW/YELLOW (80' O.C.)
STA. 100+00 - 101+37 LT. = 2 EACH
STA. 100+00 - 101+37 RT. = 2 EACH
STA. 102+37 - 107+75 LT. = 7 EACH
STA. 102+37 - 107+75 RT. = 7 EACH
STA. 116+28 - 118+21 LT. = 2 EACH
STA. 116+28 - 118+21 RT. = 2 EACH
STA. 118+71 - 131+11 LT. = 16 EACH
STA. 118+71 - 131+11 RT. = 16 EACH
STA. 131+61 - 140+83 LT. = 12 EACH
STA. 131+61 - 140+83 RT. = 12 EACH
STA. 141+33 - 165+07 LT. = 30 EACH
STA. 141+33 - 165+07 RT. = 30 EACH
STA. 165+57 - 170+86 LT. = 7 EACH
STA. 165+57 - 170+86 RT. = 7 EACH
STA. 171+85 - 184+44 LT. = 16 EACH
STA. 171+85 - 184+44 RT. = 16 EACH
STA. 184+94 - 186+97 LT. = 3 EACH
STA. 184+94 - 186+97 RT. = 3 EACH
STA. 195+77 - 197+53 LT. = 2 EACH
STA. 195+77 - 197+53 RT. = 2 EACH
STA. 198+03 - 223+00 LT. = 31 EACH
STA. 198+03 - 223+00 RT. = 31 EACH

CHAD COLLEY BLVD.
STA. 19+22 - 22+36 LT. = 4 EACH
STA. 19+22 - 22+36 RT. = 4 EACH

HWY. 255
THERMOPLASTIC PAVEMENT MARKING WHITE SKIP (6")
STA. 100+00 - 111+24 RT. = 281 LIN. FT.
STA. 100+00 - 111+16 LT. = 279 LIN. FT.
STA. 112+73 - 140+83 LT. = 703 LIN. FT.
STA. 112+86 - 118+21 RT. = 134 LIN. FT.
STA. 118+71 - 131+11 RT. = 310 LIN. FT.
STA. 131+61 - 170+86 RT. = 981 LIN. FT.
STA. 141+33 - 165+07 LT. = 594 LIN. FT.
STA. 165+57 - 190+22 LT. = 616 LIN. FT.
STA. 171+85 - 184+44 RT. = 315 LIN. FT.
STA. 184+94 - 190+88 RT. = 149 LIN. FT.
STA. 192+32 - 197+53 RT. = 130 LIN. FT.
STA. 192+36 - 223+00 LT. = 766 LIN. FT.
STA. 198+03 - 223+00 RT. = 624 LIN. FT.

MASSARD RD.
STA. 5+92 - 9+35 LT. = 86 LIN. FT.
STA. 5+92 - 9+27 RT. = 84 LIN. FT.
STA. 10+63 - 14+20 RT. = 89 LIN. FT.
STA. 10+71 - 14+20 LT. = 87 LIN. FT.

CHAD COLLEY BLVD.
STA. 17+50 - 28+93 RT. = 286 LIN. FT.
STA. 17+84 - 25+75 LT. = 198 LIN. FT.
STA. 26+21 - 28+92 LT. = 68 LIN. FT.
STA. 29+36 - 30+13 LT. = 19 LIN. FT.

HWY. 255
RAISED PAVEMENT MARKERS (TYPE 11) RED/WHITE (80' O.C.)
STA. 100+00 - 111+24 RT. = 14 EACH
STA. 100+00 - 111+16 LT. = 14 EACH
STA. 112+73 - 140+83 LT. = 35 EACH
STA. 112+86 - 118+21 RT. = 7 EACH
STA. 118+71 - 131+11 RT. = 16 EACH
STA. 131+61 - 170+86 RT. = 49 EACH
STA. 141+33 - 165+07 LT. = 30 EACH
STA. 165+57 - 190+92 LT. = 32 EACH
STA. 171+85 - 184+44 RT. = 16 EACH
STA. 184+94 - 190+88 RT. = 7 EACH
STA. 192+32 - 197+53 RT. = 7 EACH
STA. 192+36 - 223+00 LT. = 38 EACH
STA. 198+03 - 223+00 RT. = 31 EACH

MASSARD RD.
STA. 5+92 - 9+35 LT. = 4 EACH
STA. 5+92 - 9+27 RT. = 4 EACH
STA. 10+63 - 14+20 RT. = 4 EACH
STA. 10+71 - 14+20 LT. = 4 EACH

CHAD COLLEY BLVD.
STA. 17+50 - 28+93 RT. = 14 EACH
STA. 17+84 - 25+75 LT. = 10 EACH
STA. 26+21 - 28+92 LT. = 3 EACH
STA. 29+36 - 30+13 LT. = 1 EACH

PERMANENT PAVEMENT MARKING DETAILS

USER: APSIBI
DESIGN FILE: G:\1710300_Hwy255\TRANSP\dgn\misc\r040716 PPM01.dgn
PLOTTED: 3/25/2020 14:44
SCALE: 1:100

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	STAGE 1A	STAGE 2	STAGE 3	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		VERTICAL PANELS	TRAFFIC DRUMS	CONSTRUCTION SIGN INFORMATION SIGN UPDATE	BARRICADES (TYPE III)	
													RIGHT	LEFT
			LIN. FT. - EACH					NO.	SQ. FT.	EACH			LIN. FT.	
W20-1	ROAD WORK 1500 FT.	48"x48"	2	2	2	2	2	2	32.0					
W20-1	ROAD WORK 1000 FT.	48"x48"	2	2	2	2	2	2	32.0					
W20-1	ROAD WORK 500 FT.	48"x48"	2	2	2	2	2	2	32.0					
W20-1	ROAD WORK AHEAD	48"x48"	11	11	11	2	11	11	176.0					
G20-2	END ROAD WORK	48"x24"	13	13	13	2	13	13	104.0					
G20-1	ROAD WORK NEXT xx MILES	60"x24"	2	2	2		2	2	20.0					
R9-9	SIDEWALK CLOSED	24"x12"	2				2	2	4.0					
W4-2	MERGE RT.	48"x48"	1		1		1	1	16.0					
W20-5R	RIGHT LANE CLOSED AHEAD	48"x48"	1		1		1	1	16.0					
W1-6R	ARROW	48"x24"			1		1	1	8.0					
R11-2	ROAD CLOSED	48"x30"	10	3	5		10	10	100.0					
R4-1	DO NOT PASS	24"x30"	4	4	4	4	4	4	20.0					
W21-5A	RIGHT SHOULDER CLOSED	36"x36"	4	4	4		4	4	36.0					
W8-1	BUMP	30"x30"	4	4	4	4	4	4	25.0					
SPECIAL	WORK WITH US SIGN (USE CAUTION, SLOW DOWN)	96"x48"	2	2	2	2	2	2	64.0					
SPECIAL	CONSTRUCTION PROJECT INFORMATION	96"x48"	10	10	10	10	10	10	320.0					
SPECIAL	CONSTRUCTION PROJECT INFORMATION UPDATE											10		
	VERTICAL PANELS		251		10		251			251				
	TRAFFIC DRUMS		153	27	377	22	377				377			
	TYPE II BARRICADE-RT. (8')		2				2						16	
	TYPE III BARRICADE-RT. (16')		10	4	10		10						160	
	TYPE III BARRICADE-LT. (16')		16	2	4		16							256
TOTALS:									1005.0	251	377	10	176	256

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.

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

CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	STAGE 1	STAGE 1A	STAGE 2	STAGE 3	END OF JOB	REMOVAL OF PERMANENT PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS		REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS		REFLECTORIZED PAINT PAVEMENT MARKING	THERMOPLASTIC PAVEMENT MARKING					
								WORDS	ARROWS			TYPE II (WHITE/RED)	TYPE II (YELLOW/YELLOW)	10" WHITE	6" WHITE	6" YELLOW	12" WHITE	ARROWS	WORDS	BIKE EMBLEMS
	LIN. FT. - EACH					LIN. FT.		EACH		LIN. FT.		EACH			LIN. FT.			EACH		
REMOVAL OF PERMANENT PAVEMENT MARKINGS	33096	226	6497			39819														
CONSTRUCTION PAVEMENT MARKINGS	45919	4192	53987	3568			107666													
CONSTRUCTION PAVEMENT MARKINGS (WORDS)	4		2	2				8												
CONSTRUCTION PAVEMENT MARKINGS (ARROWS)	9		9	4					22											
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS			23450	1334						24784										
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS			13	11	6						30									
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)					326							326								
RAISED PAVEMENT MARKERS TYPE II (YELLOW/YELLOW)					254								254							
THERMOPLASTIC PAVEMENT MARKING WHITE (6")					34688										34688					
THERMOPLASTIC PAVEMENT MARKING YELLOW (6")					22694											22694				
THERMOPLASTIC PAVEMENT MARKING WHITE (12")					1986												1986			
THERMOPLASTIC PAVEMENT MARKING (WORDS)					5														5	
THERMOPLASTIC PAVEMENT MARKING (ARROWS)					16													16		
THERMOPLASTIC PAVEMENT MARKING (BIKE EMBLEM)					21															21
REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")					189									189						
TOTALS:						39819	107666	8	22	24784	30	326	254	189	34688	22694	1986	16	5	21

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

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

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.		040716	63	194

(2) QUANTITIES

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
3-25-2020
JEROME PAUL DAVIS

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.		040716	64	194
				(2)		QUANTITIES		

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
3-25-2020
JEROME PAUL DAVIS

REMOVAL AND DISPOSAL OF ITEMS

STATION	STATION	LOCATION	CURB	CURB AND GUTTER	ROCK WALLS	CONCRETE DITCH PAVING	CONCRETE PAVEMENT	CONCRETE DRIVEWAYS	WALKS	SIGNS	SIGN FOUNDATION	LUMINAIRE POLES	KEY PAD	RIPRAP	GUARDRAIL	GUARD CABLE	BUILDINGS
			LIN. FT.			SQ. YD.				EACH				CU. YD.	LIN. FT.		EACH
99+95	100+41	HWY. 255 RT.													46		
110+16	110+50	HWY. 255 LT. INCLUDES RADIUS	107														
112+03	112+67	HWY. 255 LT. INCLUDES RADIUS	185														
111+25	111+80	HWY. 255 RT. INCLUDES RADIUS	87														
112+52	113+09	HWY. 255 RT. INCLUDES RADIUS	109														
111+41	111+67	HWY. 255 RT.						32									
112+01	112+28	HWY. 255 RT.						35									
104+64		HWY. 255 LT.						122									
105+67		HWY. 255 RT.						499									
109+13		HWY. 255 LT.						119									
110+85	111+18	HWY. 255 LT.							20								
111+22	111+51	HWY. 255 LT.							19								
111+25		HWY. 255 LT.															
111+43	111+74	HWY. 255 RT.							31								
111+65		HWY. 255 RT.															
112+01	113+27	HWY. 255 LT.							137								
112+30		HWY. 255 LT.															
112+63		HWY. 255 RT.															
112+67	112+84	HWY. 255 RT.							27								
113+52	114+26	HWY. 255 LT.							41								
117+17		HWY. 255 LT.															
116+03		HWY. 255 LT. (INCLUDES CURB)							242								
116+71		HWY. 255 LT. (INCLUDES CURB)							267								
116+94		HWY. 255 LT.								1	1						
117+25		HWY. 255 LT.												17			
118+00		HWY. 255 LT.															1
118+04	118+36	HWY. 255 LT.				27											
118+60	118+87	HWY. 255 LT.				24											
118+34		HWY. 255 RT.		44													
118+60		HWY. 255 RT.		44													
121+61	121+76	HWY. 255 RT.				5											
121+62		HWY. 255 LT.			1			1					1				
124+67		HWY. 255 LT.						133									
125+81	126+01	HWY. 255 RT.				30											
129+90		HWY. 255 LT.								1	3						
130+96	131+24	HWY. 255 RT.				27											
131+54		HWY. 255 LT.						72									
140+70	140+94	HWY. 255 LT.		137													
141+21	141+48	HWY. 255 LT.		137													
154+55	159+95	HWY. 255 LT.													540		
155+90	158+45	HWY. 255 LT.				712											
157+71	160+25	HWY. 255 LT.														292	
159+95		HWY. 255 LT.								1	1						
165+13		HWY. 255 LT.							19								
168+14		HWY. 255 LT.						198									
174+35	175+75	HWY. 255 RT.			110												
184+90	185+21	HWY. 255 LT.		101													
188+52	190+62	HWY. 255 RT.	210														
190+87		HWY. 255 RT.										1					
192+77	194+50	HWY. 255 RT.	174														
214+20		HWY. 255 LT.						134									
214+08		HWY. 255 LT.		8													
214+32		HWY. 255 LT.		5													
9+16		MASSARD RD. LT.										1					
12+45	14+49	CHAD COLLEY BLVD. MEDIAN		631													
16+81	17+27	CHAD COLLEY BLVD. LT.							52								
17+17	30+43	CHAD COLLEY BLVD. LT.					3925										
17+17	30+13	CHAD COLLEY BLVD. RT.					4432										
17+38	19+74	CHAD COLLEY BLVD. RT.							161								
17+42	17+43	CHAD COLLEY BLVD. MEDIAN							47								
24+17	28+68	CHAD COLLEY BLVD. LT.							251								
38+30	38+99	CHAD COLLEY BLVD. LT.							38								
TOTALS:			**872**	**1107**	**111**	**825**	**8357**	**1345**	**1352**	**3**	**5**	**2**	**1**	**17**	**586**	**292**	**1**

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.

USER: jh595
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\quantities\040716 QUANTITIES.dgn
PLOTTED: 3/25/2020 16:53
SCALE: 1:100

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.		040716	65	194
				(2)	QUANTITIES			

REMOVAL AND DISPOSAL OF FENCE

STATION	STATION	LOCATION	CHAIN LINK FENCE	WIRE FENCE	PIPE FENCE	BOARD FENCE	GATES	POSTS
			LIN. FT.				EACH	EACH
111+35	111+70	HWY. 255 RT.	31					
112+08	112+36	HWY. 255 LT.			136			
114+70	115+86	HWY. 255 LT.	151					
115+92		HWY. 255 LT.					1	
116+20		HWY. 255 LT.						1
117+31	119+37	HWY. 255 LT.	240					
117+37		HWY. 255 LT.					1	
124+45	124+59	HWY. 255 LT.	77					
124+62		HWY. 255 LT.						1
124+67		HWY. 255 LT.					1	
124+75	129+03	HWY. 255 LT.	477					
130+84		HWY. 255 LT.					2	
130+97		HWY. 255 LT.				28		
131+40		HWY. 255 LT.						1
131+65		HWY. 255 LT.						1
134+97	139+63	HWY. 255 LT.	466					
138+03		HWY. 255 LT.					1	
139+87		HWY. 255 LT.					1	
140+35	140+83	HWY. 255 LT.	76					
141+33		HWY. 255 LT.						1
141+33	141+42	HWY. 255 LT.	26	16				
141+39		HWY. 255 LT.					2	
141+64	158+00	HWY. 255 LT.		1637				
154+50	159+75	HWY. 255 LT.	579					
154+52	154+60	HWY. 255 LT.						2
156+94		HWY. 255 LT.					1	
156+98	160+13	HWY. 255 LT.						28
157+92		HWY. 255 LT.						1
158+00		HWY. 255 LT.						1
158+40		HWY. 255 LT.						1
158+40	165+09	HWY. 255 LT.		697				
158+48		HWY. 255 LT.						1
165+00	165+11	HWY. 255 LT.						6
168+54	168+64	HWY. 255 LT.			54			
168+64	168+68	HWY. 255 LT.						2
168+64	172+04	HWY. 255 LT.		340				
172+04	172+20	HWY. 255 LT.			16			
172+34		HWY. 255 LT.						1
172+20	173+52	HWY. 255 LT.	205					
172+42		HWY. 255 LT.					2	
172+58		HWY. 255 LT.					1	
172+98		HWY. 255 LT.					2	
173+71	174+02	HWY. 255 LT.	42					
TOTALS:			**2370**	**2690**	**206**	**28**	**15**	**48**

EARTHWORK

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT	*SOIL STABILIZATION
			CU. YD.		TON
ENTIRE	PROJECT	STAGE 1-MAIN LANES	14734	69364	
ENTIRE	PROJECT	STAGE 2-MAIN LANES	1800	10436	
ENTIRE	PROJECT	APPROACHES	45	2390	
ENTIRE	PROJECT	TEMPORARY APPROACHES		50	
		WELLS LAKE RD.	48	1179	
		CHAD COLLEY STAGE 1	956	498	
		CHAD COLLEY STAGE 2	61	273	
* ENTIRE	PROJECT	TO BE USED IF AND WHERE			500
		DIRECTED BY THE ENGINEER			
TOTALS:			**17644**	**84190**	**500**

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

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

REMOVAL AND DISPOSAL OF CULVERTS AND DROP INLETS

STATION	DESCRIPTION	PIPE CULVERTS	BOX CULVERTS	DROP INLETS
		EACH	EACH	EACH
MASSARD RD.				
10+70	DROP INLET WITH 18" X 14' RCP	1		1
10+85	DROP INLET WITH 30" X 47' RCP	1		1
10+97	30" X 16' RCP	1		
HWY. 255				
111+36	DROP INLET WITH 18" X 31' RCP & 18" X 158'	1		1
117+18	20" X 54' RCP	1		1
122+83	4'X5'X52' RCB: REMOVE 3' RT.		1	
148+35	24" X 75' RCP: REMOVE 16' RT.	1		
180+41	DBL. 30" X 53' RCP	2		
190+15	DROP INLET WITH 18" X 12' RCP & 18" X 121' RCP	2		1
191+41	DROP INLET WITH 24" X 91' RCP	1		1
192+25	DROP INLET WITH 30" X 9' & 18" X 46' RCP	2		1
193+95	18" X 66' RCP	1		
211+51	36" X 55' RCP	1		
222+62	36" X 135' RCP: REMOVE FES LT. & RT. & 16' LT. & 32' RT.	1		
CHAD COLLEY BLVD.				
19+78	DROP INLET WITH 24" X 34' RCP	1		1
20+19	DROP INLET WITH 24" X 56' RCP	1		1
20+51	DROP INLET WITH 24" X 176' RCP	1		1
21+12	DROP INLET WITH 24" X 147' RCP	1		1
22+32	DROP INLET WITH 24" X 120' RCP	1		1
23+58	DROP INLET WITH 24" X 78' RCP	1		1
23+98	DROP INLET WITH 24" X 35' RCP	1		1
22+35	DROP INLET WITH 24" X 120' RCP	1		1
22+64	DROP INLET WITH 24" X 129' RCP	1		1
27+18	DROP INLET WITH 24" X 64' RCP	1		1
27+20	DROP INLET WITH 24" X 40' RCP	1		1
27+21	DROP INLET WITH 24" X 363' RCP	1		1
28+73	24' X 20' RCP	1		
28+73	DROP INLET WITH 24" X 153' RCP	1		1
30+34	DROP INLET			1
TOTALS:		**30**	**1**	**21**

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

DUMPED RIPRAP AND FILTER BLANKET

STATION	LOCATION	DUMPED RIPRAP	FILTER BLANKET
		CU. YD.	SQ. YD.
117+22	HWY. 255 LT.	2701	5402
122+83	OUTLET OF PIPE CULVERT HWY 255 LT.	7	13
122+83	OUTLET OF PIPE CULVERT HWY 255 RT.	7	13
148+35	OUTLET OF PIPE CULVERT HWY 255 LT.	4	8
158+16	OUTLET OF PIPE CULVERT HWY 255 LT.	11	22
180+39	OUTLET OF PIPE CULVERT HWY 255 LT.	7	13
180+40	OUTLET OF PIPE CULVERT HWY 255 RT.	5	9
190+72	OUTLET OF PIPE CULVERT HWY 255 LT.	8	15
193+78	OUTLET OF PIPE CULVERT HWY 255 LT.	8	15
194+12	OUTLET OF PIPE CULVERT HWY 255 RT.	4	8
199+71	OUTLET OF PIPE CULVERT HWY 255 RT.	13	26
211+35	OUTLET OF PIPE CULVERT HWY 255 LT.	2	3
211+38	OUTLET OF PIPE CULVERT HWY 255 RT.	2	3
211+44	OUTLET OF PIPE CULVERT HWY 255 LT.	12	23
211+52	OUTLET OF PIPE CULVERT HWY 255 LT.	2	3
211+55	OUTLET OF PIPE CULVERT HWY 255 RT.	2	3
218+33	OUTLET OF PIPE CULVERT HWY 255 LT.	8	15
222+36	OUTLET OF PIPE CULVERT HWY 255 LT.	8	15
222+85	OUTLET OF PIPE CULVERT HWY 255 RT.	8	15
23+57	OUTLET PIPE CHAD COLLEY BLVD. LT.	5	9
28+59	OUTLET OF PIPE CULVERT CHAD COLLEY LT.	5	9
20+13	OUTLET PIPE CULVERT CHAD COLLEY BLVD. RT.	5	9
*	TO BE USED IF AND WHERE	100	200
	DIRECTED BY THE ENGINEER		
TOTALS:		**2934**	**5851**

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

CLEARING AND GRUBBING

STATION	STATION	LOCATION	CLEARING	GRUBBING
			STATION	
99+65	222+99	HWY. 255	124	124
16+83	30+11	CHAD COLLEY BLVD.	14	14
TOTALS:			**138**	**138**

REMOVAL OF EXISTING BRIDGE STRUCTURE

STATION	LOCATION	LUMP SUM
117+22	HWY. 255 LT.	1.00
124+75	HWY. 255 APPROACH LT.	1.00

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
4-08-2020

QUANTITIES

USER: JD5103
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SCALE: NOT

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.		040716	66	194

(2) QUANTITIES

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	ROCK DITCH CHECKS	DROP INLET SILT FENCE	SILT FENCE	FILTER SOCK (18")	COMPOST FILTER SOCK (12")	SEDIMENT BASIN	OBLITERATION OF SEDIMENT BASIN	*SEDIMENT REMOVAL & DISPOSAL
												(E-5)	(E-6)	(E-7)	(E-11)	(E-3)	(E-13)	(E-14)		
			ACRE	TON	ACRE	M.GAL.	ACRE	SQ.YD.	ACRE	ACRE	M.GAL.	BAG	CU.YD.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	CU.YD.	CU.YD.	CU. YD.
ENTIRE	PROJECT	CLEARING AND GRUBBING										2112	288	54	8219	3861				498
ENTIRE	PROJECT	STAGE 1	6.97	13.94	6.97	761.7	6.97	4029	2.31	2.31	47.1	1232	174		450		630	350	350	481
ENTIRE	PROJECT	STAGE 1A	0.81	1.62	0.81	83.3	0.81	51	0.81	0.81	16.5	220	36							167
ENTIRE	PROJECT	STAGE 2	2.72	5.44	2.72	317.5	2.72	3181	2.72	2.72	55.5	1232	333				513	233	233	233
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.			2.63	5.26	2.63	496.5	2.63	18115	2.63	2.63	53.7	1199	208	14	2167	965	286	146	146	227
TOTALS:			13.13	26.26	13.13	1659.0	13.13	25376	8.47	8.47	172.8	5995	1039	68	10836	4826	1429	729	729	1606

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
FILTER SOCK (12").....9 LIN. FT. / LOCATION
DROP INLET SILT FENCE.....18 LIN. FT. / LOCATION
SAND BAG DITCH CHECKS.....22 BAGS / LOCATION
ROCK DITCH CHECKS.....3 CU.YD./LOCATION

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

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

FENCING

STATION	STATION	LOCATION	WIRE FENCE (TYPE D-1)	* 4' CHAIN LINK FENCE	7' CHAIN LINK FENCE	* 4'-0" GATES	* 8'-0" GATES	* 16'-0" GATES
			LIN. FT.			EACH	EACH	EACH
111+35	111+70	HWY. 255 RT.			30			
114+70	115+86	HWY. 255 LT.			151			
115+92		HWY. 255 LT.						1
117+31	119+37	HWY. 255 LT.			240			
124+45	124+59	HWY. 255 LT.		77				
124+75	129+03	HWY. 255 LT.		477				
130+84		HWY. 255 LT.				2		
134+97	139+63	HWY. 255 LT.		466				
138+03		HWY. 255 LT.						1
139+87		HWY. 255 LT.						1
140+35	140+83	HWY. 255 LT.			76			
141+33	141+42	HWY. 255 LT.	26	16				
141+39		HWY. 255 LT.					2	
141+64	158+00	HWY. 255 LT.	1637					
154+50	159+75	HWY. 255 LT.			579			
156+94		HWY. 255 LT.						1
158+40	165+09	HWY. 255 LT.	697					
168+54	172+20	HWY. 255 LT.	410					
172+20	173+52	HWY. 255 LT.		205				
172+42		HWY. 255 LT.				2		
172+58		HWY. 255 LT.				1		
172+98		HWY. 255 LT.				2		
173+71	174+02	HWY. 255 LT.		42				
TOTALS:			2770	1283	1076	7	2	4

* DENOTES ALTERNATE BID ITEM.

CONCRETE DITCH PAVING

STATION	STATION	LOCATION	LENGTH	"W"	"B"	CONC. DITCH PAVING (TYPE A)	SOLID SODDING	WATER
			LIN. FT.	FEET	FEET	SQ. YD.	SQ. YD.	M. GAL.
119+38.00		HWY. 255 LT.	22	6	4	15	10	0.13
121+00.00		HWY. 255 LT.	21	6	4	14	9	0.11
125+00.00		HWY. 255 LT.	19	6	4	13	8	0.10
127+00.00		HWY. 255 LT.	17	6	4	11	8	0.10
129+00.00		HWY. 255 LT.	14	6	4	9	6	0.08
154+00.00		HWY. 255 LT.	20	6	4	13	9	0.11
155+03.00		HWY. 255 LT.	42	6	4	28	19	0.24
155+00.00	159+50.00	HWY. 255 LT.	477	VAR.	4	1718	212	2.67
TOTALS:						1821	281	3.54

BASIS OF ESTIMATE:
WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING.
*QUANTITIES ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.

BENCH MARKS

STATION	LOCATION	BENCH MARKS
		EACH
158+16	HDWL. CULVERT RT.	1
TOTAL:		1

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	5	1	2
TOTALS:	5	1	2

CONCRETE ISLAND

STATION	STATION	LOCATION	CURB FACE TYPE	CONCRETE ISLAND SQ.YD.
17+21	17+80	CHAD COLLEY LT.	A	186
28+60	28+97	CHAD COLLEY	B	83
TOTAL:				269

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

QUANTITIES

USER: jh595
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SCALE: 1:00

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				6	ARK.			
				JOB NO.		040716	67	194
				(2)		QUANTITIES		

SOIL LOG

STATION	LOCATION	DEPTH FEET	LIQUID LIMIT	PLASTICITY INDEX	AASHTO CLASSIFICATION	COLOR
100+40	75' RT.	0.5-1.5	24	3	A-4	GR/TN & TN/DK GR
104+00	18' RT.	1.7-2.7	33	15	A-6	GR/TN
104+00	18' RT.	3.5-4.5	38	14	SHALE	RD/BR & DK GR & TN
107+50	45' LT.	0.5-1.5	31	11	A-6	DR GR
107+50	45' LT.	2.5-3.5	36	12	SHALE	YL/TN
110+50	18' LT.	1.5-2.5	23	7	A-4	
114+60	50' RT.	0.5-1.5	30	11	A-6	DR BR & BR
118+00	18' RT.	1-2	35	17	A-6	RD/TN
118+00	18' RT.	3.5-4.5	21	3	A-4	DK GR & TN
121+70	25' LT.	0.5-1.5	26	8	A-4	BR & RD/BR
121+70	25' LT.	2.5-3.5	27	9	A-4	DR GR
125+00	18' LT.	2-3	30	12	A-6	BR & GR
128+70	25' RT.	0.5-1.5	24	5	A-2-4	DR BR
128+70	25' RT.	2.5-3.5	NP	NP	A-4	YL/BR
131+00	18' RT.	1.8-2.8	41	21	A-7-6	GR/TN/RD
131+00	18' RT.	4.5-5.5	26	9	A-4	GR
135+80	25' LT.	0.5-1.5	29	11	A-2-6	TN & GR
139+00	18' LT.	2-3	47	22	A-7-6	RD/TN
143+00	25' RT.	0.5-1.5	29	12	A-2-6	DR BR
143+00	25' RT.	2.5-3.5	34	12	SHALE	GR/BR
149+90	25' LT.	0.5-1.5	35	17	A-2-6	DR GR
153+00	18' LT.	1.9-2.9	54	27	A-7-6	RD/TN
160+00	18' RT.	2-3	33	13	A-6	RD/TN & TAN
160+00	18' RT.	3.5-4.5	27	9	A-4	GR & TN
164+00	25' LT.	0.5-1.5	30	9	A-2-4	DR BR
164+00	25' LT.	2.5-3.5	54	28	A-7-6	RD & TN
167+00	18' LT.	1.2-2.2	42	18	SHALE	DK GR & RD/TN
175+75	30' RT.	1.5-2.5	-----	-----	A-4	DR GR
178+10	25' LT.	0.5-1.5	-----	-----	A-2-4	DR BR
178+10	25' LT.	2.5-3.5	30	13	A-6	RD/TN
181+70	18' LT.	1-2	NP	NP	A-2-4	TN & GR
181+70	18' LT.	3.5-4.5	-----	-----	A-6	
188+00	18' RT.	1-2	29	10	A-4	GR/TN/RD TN
195+00	18' LT.	1.5-2.5	28	11	A-2-6	GR RD/TN
202+00	18' RT.	1-2	29	11	A-6	GR & RD/TN
209+00	18' LT.	1-2	33	13	A-6	GR & TN
216+00	18' RT.	1-2	-----	-----	A-2-4	DK BR
222+50	CL	2-3	39	15	A-6	RD/TN & TN
222+50	CL	3.5-4.5	40	19	A-6	
Hwy 253 Sta 37+10	7' LT.	1.2-2.2	24	6	A-4	RD/TN & TN
Hwy 253 Sta 12+90	7' RT.	0.6-1.1	-----	-----	A-4	TN & GR
Church St Sta 49+10	7' RT.	1.5-2.5	-----	-----	A-6	BR & GR & TN & RD/TN
Church St Sta 8+70	15' RT.	1.5-2.5	23	4	A-2-4	TN & RD/TN

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.
Z- AUGER REFUSAL
NP - NON-PLASTIC
ND - NOT DETERMINABLE

CONCRETE WALKS & HAND RAILING

STATION	STATION	LOCATION	LENGTH	CONCRETE WALKS	CONCRETE WALKS TYPE SPECIAL	HAND RAILING
			LIN. FT.	SQ.YD.	SQ.YD.	LIN. FT.
110+86	111+26	HWY. 255 LT.	80	89		
111+40	111+76	HWY. 255 RT.	49	54		
112+01	113+14	HWY. 255 LT.	211	117		
112+76	115+14	HWY. 255 RT.	241	134		
113+64	114+70	HWY. 255 LT.	106	59		
114+70	115+89	HYW. 255 LT.	119		66	119
115+62	118+19	HWY. 255 RT.	260	144		
116+23	116+47	HWY. 255 LT.	24		5	24
117+01	119+70	HWY. 255 LT.	269	149		
118+74	131+07	HWY. 255 RT.	1239	688		
120+29	124+47	HWY. 255 LT.	418	232		
124+89	130+53	HWY. 255 LT.	564	313		
131+05	132+74	HWY. 255 LT.	313	174		
131+65	158+81	HWY. 255 RT.	2658	1477		
133+26	138+00	HWY. 255 LT.	474	263		
138+47	140+19	HWY. 255 LT.	172	96		
140+67	140+81	HWY. 255 LT.	14	8		
141+36	165+16	HWY. 255 LT.	2390	1328		
155+00	159+50	HWY. 255 LT.				450
159+49	171+00	HWY. 255 RT.	1156	642		
165+60	167+91	HWY. 255 LT.	231	128		
168+36	172+78	HWY. 255 LT.	444	247		
171+70	184+27	HWY. 255 RT.	1197	665		
173+18	173+39	HWY. 255 LT.	21	12		
173+84	174+38	HWY. 255 LT.	57	32		
174+84	184+58	HWY. 255 LT.	989	549		
185+10	190+60	HWY. 255 RT.	587	326		
185+10	191+20	HWY. 255 LT.	665	369		
191+66	197+16	HWY. 255 LT.	611	339		
192+57	197+51	HWY. 255 RT.	507	282		
197+79	213+94	HWY. 255 LT.	1600	889		
198+06	222+91	HWY. 255 RT.	2425	1347		
214+46	222+93	HWY. 255 LT.	848	471		
17+11	28+56	CHAD COLLEY BLVD. RT.	1167	1297		
17+76	25+72	CHAD COLLEY BLVD. LT.	810	900		
26+21	28+75	CHAD COLLEY BLVD. LT.	260	289		
26+26	30+11	CHAD COLLEY BLVD MEDIAN	385	385		
TOTALS:				14494	71	593

CONCRETE BASE

STATION	STATION	LOCATION	LENGTH	PORTLAND CEMENT CONCRETE BASE			
				3" U.T.		5" U.T.	
				AVG. WID.	SQ. YD.	AVG. WID.	SQ. YD.
			FEET	FEET		FEET	
100+00.00	101+07.34	HWY. 255 NOTCH & WIDEN LT.	107.34	3.05	36.32	5.57	66.38
100+00.00	104+89.82	HWY. 255 NOTCH & WIDEN RT.	489.82	0.22	11.76	2.56	139.17
128+40.39	130+93.33	HWY. 255 NOTCH & WIDEN RT.	252.94	3.51	98.58	6.01	168.84
131+78.33	138+02.76	HWY. 255 NOTCH & WIDEN RT.	624.43	2.37	164.63	4.87	338.08
138+02.76	166+94.81	HWY. 255 NOTCH & WIDEN RT.	2892.05			2.50	804.02
166+94.81	168+13.36	HWY. 255 NOTCH & WIDEN RT.	118.55	1.99	26.27	4.51	59.36
222+02.08	222+91.15	HWY. 255 NOTCH & WIDEN RT.	89.07	2.60	25.75	5.10	50.47
TOTALS:					363.31		1626.32

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
3-25-2020
JEROMIE PAUL DAVIS

WHEELCHAIR RAMPS

STATION	LOCATION	TYPE 3
		SQ.YD.
111+45	HWY. 255 - RT.	11.5
111+52	HWY. 255 - RT.	4.9
111+18	HWY. 255 - LT.	5.0
111+26	HWY. 255 - LT.	4.9
112+46	HWY. 255 - LT.	5.0
112+49	HWY. 255 - LT.	4.9
112+76	HWY. 255 - RT.	4.7
112+81	HWY. 255 - RT.	3.7
118+25	HWY. 255 - RT.	4.6
118+68	HWY. 255 - RT.	3.0
131+07	HWY. 255 - RT.	4.7
131+65	HWY. 255 - RT.	3.1
140+86	HWY. 255 - LT.	4.5
141+30	HWY. 255 - LT.	4.5
165+10	HWY. 255 - LT.	4.5
165+56	HWY. 255 - LT.	4.6
171+06	HWY. 255 - RT.	4.6
171+64	HWY. 255 - RT.	4.6
184+33	HWY. 255 - RT.	4.9
185+05	HWY. 255 - RT.	4.9
190+97	HWY. 255 - LT.	4.6
191+06	HWY. 255 - LT.	4.3
190+97	HWY. 255 - RT.	3.8
191+32	HWY. 255 - RT.	24.0
191+89	HWY. 255 - LT.	4.2
192+27	HWY. 255 - LT.	3.9
192+49	HWY. 255 - RT.	6.5
197+56	HWY. 255 - RT.	4.6
198+01	HWY. 255 - RT.	4.5
25+79	CHAD COLLEY BLVD. - LT.	10.7
26+21	CHAD COLLEY BLVD. - LT.	10.7
28+69	CHAD COLLEY BLVD. - LT.	8.9
28+63	CHAD COLLEY BLVD. - RT.	9.2
30+26	CHAD COLLEY BLVD. - MEDIAN	6.9
TOTAL:		203.9

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QUANTITIES

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04-21-20				6	ARK.			
				JOB NO.		040716	68	194
				(2) QUANTITIES				

CONCRETE COMBINATION CURB AND GUTTER

STATION	STATION	LOCATION	TYPE A (1' 6")
			LIN. FT.
99+85	101+67	HWY. 255 - RT.	200
102+07	105+39	HWY. 255 - RT.	393
105+77	111+83	HWY. 255 - RT.	675
112+51	118+35	HWY. 255 - RT.	671
118+58	131+24	HWY. 255 - RT.	1348
131+47	171+17	HWY. 255 - RT.	4028
171+53	184+50	HWY. 255 - RT.	1324
184+86	191+56	HWY. 255 - RT.	719
192+34	197+67	HWY. 255 - RT.	624
197+90	223+00	HWY. 255 - RT.	2544
99+86	111+51	HWY. 255 - LT.	1214
112+05	140+97	HWY. 255 - LT.	3012
141+20	165+21	HWY. 255 - LT.	2433
165+44	191+24	HWY. 255 - LT.	2678
191+76	223+00	HWY. 255 - LT.	3141
10+00	15+40	CHAD COLLEY BLVD. RT.	539
17+74	29+88	CHAD COLLEY BLVD. RT.	1045
10+00	12+20	CHAD COLLEY BLVD. LT.	241
12+47	16+92	CHAD COLLEY BLVD. LT.	365
18+41	25+95	CHAD COLLEY BLVD. LT.	796
26+13	29+00	CHAD COLLEY BLVD. LT.	357
29+25	30+13	CHAD COLLEY BLVD. LT.	98
22+36	29+00	CHAD COLLEY BLVD. MEDIAN	1376
29+23	30+13	CHAD COLLEY BLVD. MEDIAN	210
TOTAL:			**30031**

RETAINING WALLS

STATION	STATION	LOCATION	CLASS S CONCRETE-ROADWAY	REINF. STEEL-ROADWAY (GRADE 60)	UNCL.EXC. FOR STR.-ROADWAY	SELECT GRANULAR BACKFILL	ARCHITECTURAL FINISH	TEXTURED COATING FINISH
			CU.YDS.	POUNDS	CU.YDS.	CU.YDS.	SQ.FT.	SQ.YD.
155+00	159+50	HWY 255 LT.	1340.50	113459	2589	4811	5198	578
TOTALS:			1340.50	113459	2589	4811	5198	578

APPROACH GUTTERS

STATION	STATION	LOCATION	APPROACH GUTTER (TYPE SPECIAL)	REINFORCING STEEL-RDWY. (GR. 60)
			CU.YD.	POUND
98+00	98+36.14	HWY. 255 LT.	8.40	1300
98+00	98+36.14	HWY. 255 RT.	8.40	1300
TOTALS:			**16.80**	**2600**

NOTE: USE T =12" FOR 8' SHOULDER.

SELECTED PIPE BEDDING

LOCATION	SELECTED PIPE BEDDING
	CU.YD.
ENTIRE PROJECT TO BE USED IF	
AND WHERE DIRECTED BY THE	150
ENGINEER	
TOTAL:	**150**

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

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
4-21-2020

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QUANTITIES

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04-21-20			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		040716	69	194

(2) QUANTITIES

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
4-21-2020

STRUCTURES (BOX 1 OF 3)

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE CULVERT (CLASS III) 18"	24"	30"	36"	48"	42"	(CLASS IV) 30"	36"	42"	48"	44"X27"	(CLASS V) 30"	36"	SIDE DRAIN 12"	PIPE CULVERT STORM DRAIN ALTERNATES 1 & 2 18"	24"	30"	36"	48"	FLARED END SECTIONS FOR R.C. PIPE CULVERTS 18"	24"	30"	36"	42"	48"	DROP INLETS TYPE E	MO	C	SPECIAL	*YARD DRAIN	EXT. 4'	8'	MODIFY DROP INLET	JUNCTION BOXES (TYPE E)	(TYPE ST)	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																	
100+05	DROP INLET ON LT.	10																			1							1																5	0.06	FES-1, FES-2,FPC-9E, FPC-9M, PCC-1
100+05	DROP INLET ON RT.	14																			1							1																5	0.06	FES-1, FES-2,FPC-9E, FPC-9M, PCC-1
101+30	DROP INLET ON LT.															123												1																	FPC-9E, FPC-9M, PCC-1, PCM-1
101+30	DROP INLET ON RT.															121												1																	FPC-9E, FPC-9M, PCC-1, PCM-1
102+75	DROP INLET ON LT.															141												1																	FPC-9E, FPC-9M, PCC-1, PCM-1
102+75	DROP INLET ON RT.															141												1						1											FPC-9E, FPC-9M, PCC-1, PCM-1
104+00	DROP INLET ON LT.															121												1																	FPC-9E, FPC-9M, PCC-1, PCM-1
104+00	DROP INLET ON RT.															121												1																	FPC-9E, FPC-9M, PCC-1, PCM-1
104+57	DROP INLET ON RT.	7																									1																	FPC-9, PCC-1
106+55	DROP INLET ON LT.															251												1																	FPC-9E, FPC-9M, PCC-1, PCM-1
106+55	DROP INLET ON RT.															17												1																	FPC-9E, FPC-9M, PCC-1, PCM-1
108+00	DROP INLET ON LT.															141												1																	FPC-9E, FPC-9M, PCC-1, PCM-1
108+00	DROP INLET ON RT.															141												1																	FPC-9E, FPC-9M, PCC-1, PCM-1
110+75	DROP INLET ON LT.															271												1																	FPC-9E, FPC-9M, PCC-1, PCM-1
111+00	DROP INLET ON RT.															296												1																	FPC-9E, FPC-9M, PCC-1, PCM-1
113+07	DROP INLET ON RT.																	144										1																	FPC-9E, FPC-9M, PCC-1, PCM-1
114+55	DROP INLET ON LT.															106												1																	FPC-9E, FPC-9M, PCC-1, PCM-1
114+56	DROP INLET ON RT.	5																111			1							1																5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1, PCM-1
115+65	DROP INLET ON LT.															149												1					2											FPC-9E, FPC-9M, PCC-1, PCM-1
115+70	DROP INLET ON RT.	9																144			1							1					2										5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1, PCM-1
117+18	DROP INLET ON RT.				2						67													1				1																17	0.21	FPC-9E, FPC-9M, PCC-1
117+19	DROP INLET ON LT.					22																				1		1																29	0.37	FPC-9E, FPC-9M, PCC-1
118+29	DROP INLET ON RT.															108												1																	FPC-9E, FPC-9M, PCC-1, PCM-1
118+64	DROP INLET ON RT.															32												1																	FPC-9E, FPC-9M, PCC-1, PCM-1
119+20	DROP INLET ON LT.																											1			1											7	0.09	SPECIAL DETAILS
119+50	DROP INLET ON RT.	5														84						1						1						1										5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1, PCM-1
121+00	DROP INLET ON LT.																											1			1											7	0.09	SPECIAL DETAILS
121+00	DROP INLET ON RT.															147												1																	FPC-9E, FPC-9M, PCC-1, PCM-1
122+82	DROP INLET ON RT.																												1																	FPC-9E, PCC-1
122+83	EXTEND BOX CULVERT 15' RT. & 35' LT.																																					4	5	54	28.69	3016	40	10	0.12	R-100X-0,W-X002-1,RCB-1,RCB-2,RCB-3
125+00	DROP INET ON LT.																														1											7	0.09	SPECIAL DETAILS
125+00	DROP INLET ON RT.																			214								1																	FPC-9E, FPC-9M, PCC-1, PCM-1
127+00	DROP INLET ON LT.																														1											7	0.09	SPECIAL DETAILS
127+00	DROP INLET ON RT.				7															194				1				1																17	0.21	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1, PCM-1
129+00	DROP INLET ON LT.																														1											7	0.09	SPECIAL DETAILS
129+00	DROP INLET ON RT.																			195								1																	FPC-9E, FPC-9M, PCC-1
130+50	DROP INLET ON LT.	10																			1							1																5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1, PCM-1
130+50	DROP INLET ON RT.																			144								1																	FPC-9E, FPC-9M, PCC-1, PCM-1
131+02	DROP INLET ON RT.																		46									1																	FPC-9E, FPC-9M, PCC-1, PCM-1
131+53	IN PLACE DROP INLET ON RT.-MODIFY																																		1										FPC-9E, FPC-9M, PCC-1
131+71	DROP INLET ON RT.										64																	1																	FPC-9E, FPC-9M, PCC-1
132+00	DROP INLET ON LT.															146												1																	FPC-9E, FPC-9M, PCC-1, PCM-1
132+00	DROP INLET ON RT.																24											1																	FPC-9E, FPC-9M, PCC-1, PCM-1
134+00	DROP INLET ON LT.															196												1																	FPC-9E, FPC-9M, PCC-1, PCM-1
134+00	DROP INLET ON RT.																196											1						1											FPC-9E, FPC-9M, PCC-1, PCM-1
137+00	DROP INLET ON LT.															296												1																	FPC-9E, FPC-9M, PCC-1, PCM-1
137+00	DROP INLET ON RT.															296												1																	FPC-9E, FPC-9M, PCC-1, PCM-1
139+00	DROP INLET ON LT.															196												1																	FPC-9E, FPC-9M, PCC-1, PCM-1
139+00	DROP INLET ON RT.															196												1																	FPC-9E, FPC-9M, PCC-1, PCM-1
142+00	DROP INLET ON LT.															296												1						1											FPC-9E, FPC-9M, PCC-1, PCM-1
142+00	DROP INLET ON RT.															296												1																	FPC-9E, FPC-9M, PCC-1, PCM-1
144+00	DROP INLET ON LT.															196												1																	FPC-9E, FPC-9M, PCC-1, PCM-1
144+00	DROP INLET ON RT.															196												1						1											FPC-9E, FPC-9M, PCC-1, PCM-1
146+00	DROP INLET ON LT.															196												1																	FPC-9E, FPC-9M, PCC-1, PCM-1
146+00	DROP INLET ON RT.															196												1																	FPC-9E, FPC-9M, PCC-1, PCM-1
148+34	DROP INLET ON RT.		15																			1						1																5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
148+35	CROSS ROAD CULVERT		12																																									PCC-1
SUBTOTALS:		**60**	**27**		**9**	**22**					**67**	**64**				**5213**	**220**	**399**	**46**	**747**	**6**	**1**		**2**		**1**	**1**	**47**	**1**	**5**		**4**	**5**	**1**								**28.69**	**3016**	**40**	**143**	**1.78**	

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.

QUANTITIES

USER: jh595
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\quantities\040716 QUANTITIES.dgn
PLOTTED: 4/21/2020 15:18
SCALE: 1:100

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
04-21-20				6	ARK.			
				JOB NO.		040716	70	194
				(2)	QUANTITIES			

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
4-21-2020

STRUCTURES (BOX 2 OF 3)

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE CULVERT (CLASS III) 18"	24"	30"	36"	48"	42"	(CLASS IV) 30"	36"	42"	48"	44"X27"	(CLASS V) 30"	36"	SIDE DRAIN 12"	PIPE CULVERT STORM DRAIN ALTERNATES 1 & 2 18"	24"	30"	36"	48"	FLARED END SECTIONS FOR R.C. PIPE CULVERTS 18"	24"	30"	36"	42"	48"	DROP INLETS TYPE E	MO	C	SPECIAL	*YARD DRAIN	EXT. 4'	8'	MODIFY DROP INLET	JUNCTION BOXES (TYPE E)	(TYPE ST)	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																				LIN. FT.			CU. YD.	POUND	CU. YD.	SQ. YD.	M.GAL.	
148+35	DROP INLET ON LT.		36																		1						1															8	0.21	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
154+00	DROP INLET ON LT.																										1															7	0.09	SPECIAL DETAILS
154+00	DROP INLET ON RT.															96											1																	FPC-9E, FPC-9M, PCC-1, PCM-1
155+00	DROP INLET ON RT.															276											1																	FPC-9E, FPC-9M, PCC-1, PCM-1
155+03	DROP INLET ON LT.																												1													7	0.09	SPECIAL DETAILS
157+80	DROP INLET ON LT.																												1													7	0.09	SPECIAL DETAILS
157+80	DROP INLET ON RT.															16											1					1											FPC-9E, FPC-9M, PCC-1, PCM-1
158+00	DROP INLET ON LT.																												1													7	0.09	SPECIAL DETAILS
158+00	DROP INLET ON RT.															9											1																	FCP-9E, FCP-9M, PCC-1, PCM-1
158+16	EXTEND BOX CULVERT 8' RT. & 37' LT.																																				10	5	49	55.93	6937	20	17	0.21	R-100X-0,W-X002-1,RCB-1,RCB-2,RCB-3
158+50	DROP INLET ON LT.															27											1						1											FPC-9E, FPC-9M, PCC-1, PCM-1
158+50	DROP INLET ON RT.															27											1					1											FPC-9E, FPC-9M, PCC-1, PCM-1
161+00	DROP INLET ON LT.															246											1																	FPC-9E, FPC-9M, PCC-1, PCM-1
161+00	DROP INLET ON RT.															246											1																	FPC-9E, FPC-9M, PCC-1, PCM-1
164+00	DROP INLET ON LT.															295											1																	FPC-9E, FPC-9M, PCC-1, PCM-1
164+00	DROP INLET ON RT.															297											1																	FPC-9E, FPC-9M, PCC-1, PCM-1
166+00	DROP INLET ON LT.															195											1						1											FPC-9E, FPC-9M, PCC-1, PCM-1
166+00	DROP INLET ON RT.															197											1																	FPC-9E, FPC-9M, PCC-1, PCM-1
169+00	DROP INLET ON LT.															295											1																	FPC-9E, FPC-9M, PCC-1, PCM-1
169+00	DROP INLET ON RT.															297											1																	FPC-9E, FPC-9M, PCC-1, PCM-1
173+50	DROP INLET ON RT.															141											1																	FPC-9E, FPC-9M, PCC-1, PCM-1
175+00	DROP INLET ON RT.															288											1																	FPC-9E, FPC-9M, PCC-1, PCM-1
178+00	DROP INLET ON RT.																235										1						1											FPC-9E, FPC-9M, PCC-1, PCM-1
180+39	DROP INLET ON LT.						5		53												1						1															23	0.28	FES-1, FES-2, FCP-9E, FCP-9M, PCC-1
180+40	DROP INLET ON RT.						11														1						1															23	0.28	FES-1, FES-2, FCP-9E, FCP-9M, PCC-1
182+00	DROP INLET ON LT.															196											1																	FPC-9E, FPC-9M, PCC-1, PCM-1
182+00	DROP INLET ON RT.															196											1																	FPC-9E, FPC-9M, PCC-1, PCM-1
184+00	DROP INLET ON LT.															296											1																	FPC-9E, FPC-9M, PCC-1, PCM-1
184+00	DROP INLET ON RT.															296											1						1											FPC-9E, FPC-9M, PCC-1, PCM-1
187+00	DROP INLET ON LT.															296											1						1											FPC-9E, FPC-9M, PCC-1, PCM-1
187+00	DROP INLET ON RT.															296											1																	FPC-9E, FPC-9M, PCC-1, PCM-1
190+00	DROP INLET ON LT.		65																								1						1											FPC-9E, FPC-9M, PCC-1
190+00	DROP INLET ON RT.															37											1						1											FPC-9E, FPC-9M, PCC-1, PCM-1
190+41	DROP INLET ON RT.	198																									1																	FPC-9E, FPC-9M, PCC-1, PCM-1
190+67	JUNC. BOX ON LT.	17																9			1													1								8	0.21	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1, PCM-1
190+81	JUNC. BOX ON LT.			99																														1										FPC-9, PCC-1
191+85	JUNC. BOX ON LT.																	80																	1										FPC-9S, PCC-1, PCM-1
192+44	DROP INLET ON RT.	37																									1																	FPC-9, PCC-1
192+70	DROP INLET ON LT.																	103									1																	FPC-9E, FPC-9M, PCC-1, PCM-1
192+70	JUNC. BOX ON LT.																	11																	1										FPC-9S, PCC-1, PCM-1
193+25	DROP INLET ON RT.															70											1																	FPC-9, FPC-9S, PCC-1, PCM-1
193+78	DROP INLET ON LT.	3							75												1						1															5	0.06	FES-1, FES-2,FPC-9D,FPC-9E, FPC-9M, PCC-1
194+00	JUNC. BOX ON RT.			8																														1										FPC-9E, FPC-9M, PCC-1
194+12	DROP INLET ON RT.			15																		1					1															13	0.16	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1, PCM-1
195+50	DROP INLET ON RT.															428											1						1											FPC-9E, FPC-9M, PCC-1, PCM-1
196+00	DROP INLET ON LT.															196											1																	FPC-9E, FPC-9M, PCC-1, PCM-1
198+00	DROP INLET ON LT.															162											1																	FPC-9D,FPC-9E, FPC-9M, PCC-1, PCM-1
199+70	DROP INLET ON LT.			5									64									1					1						1								13	0.16	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
199+71	JUNC. BOX ON RT.																	20				1												1								13	0.16	FES-1, FES-2, FPC-9, PCC-1, PCM-1
202+00	DROP INLET ON LT.															192											1						1											FPC-9E, FPC-9M, PCC-1, PCM-1
204+00	DROP INLET ON LT.															296											1																	FPC-9E, FPC-9M, PCC-1, PCM-1
207+00	DROP INLET ON LT.																196										1																	FPC-9E, FPC-9M, PCC-1, PCM-1
207+00	DROP INLET ON RT.															196											1																	FPC-9E, FPC-9M, PCC-1, PCM-1
209+00	DROP INLET ON LT.																231										1						1											FPC-9E, FPC-9M, PCC-1, PCM-1
209+00	DROP INLET ON RT.															241											1																	FPC-9E, FPC-9M, PCC-1, PCM-1
211+35	DROP INLET ON LT.				8									67								1					1															6	0.01	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
SUBTOTALS:		**315**	**155**	**127**	**8**		**16**		**75**	**53**			**64**	**67**		**6342**	**662**	**223**			**2**	**1**	**3**	**1**	**2**			**45**		**4**		**2**	**11**		**4**	**2**				**55.93**	**6937**	**20**	**157**	**2**	

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.

USER: jh5195
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\quantities\040716 QUANTITIES.dgn
PLOTTED: 4/21/2020 15:19
SCALE: 1:100

STATE OF ARKANSAS
★ ★ ★
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
4-21-2020

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
04-21-20			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		040716	71	194

(2) QUANTITIES

STRUCTURES (BOX 3 OF 3)

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE CULVERT (CLASS III) 18"	24"	30"	36"	48"	42"	(CLASS IV) 30"	36"	42"	48"	44"X27"	(CLASS V) 30"	36"	SIDE DRAIN 12"	PIPE CULVERT STORM DRAIN ALTERNATES 1 & 2 18"	24"	30"	36"	48"	FLARED END SECTIONS FOR R.C. PIPE CULVERTS 18"	24"	30"	36"	42"	48"	DROP INLETS TYPE E	MO	C	SPECIAL	*YARD DRAIN	EXT. 4'	8'	MODIFY DROP INLET	JUNCTION BOXES (TYPE E)	(TYPE ST)	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											LIN. FT.			CU. YD.	POUND	CU. YD.	SQ.YD.	M.GAL.	
211+38	DROP INLET ON RT.				10																		1			1																6	0.01	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
211+44	PIPE CULVERT												95										2																				14	0.02	FES-1, FES-2, PCC-1
211+51	CROSS ROAD CULVERT												130										2																						FES-1, FES-2, PCC-1
211+52	JUNC. BOX ON LT.				8																		1												1							6	0.01	FES-1, FES-2, FPC-9, PCC-1
211+55	JUNC. BOX ON RT.				10																		1												1							6	0.01	FES-1, FES-2, FPC-9, PCC-1
212+20	DROP INLET ON LT.																63									1						1												FPC-9E, FPC-9M, PCC-1, PCM-1
212+20	DROP INLET ON RT.															63										1																		FPC-9E, FPC-9M, PCC-1, PCM-1
213+00	DROP INLET ON LT.																76									1																		FPC-9E, FPC-9M, PCC-1, PCM-1
213+00	DROP INLET ON RT.															76										1																		FPC-9E, FPC-9M, PCC-1, PCM-1
216+00	DROP INLET ON LT.															229										1																		FPC-9E, FPC-9M, PCC-1, PCM-1
216+00	DROP INLET ON RT.															229										1																		FPC-9E, FPC-9M, PCC-1, PCM-1
218+33	DROP INLET ON LT.			10				67														1				1																9	0.11	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
218+33	DROP INLET ON RT.							24														1				1																9	0.11	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
218+38	PIPE CULVERT							52														2																				18	0.18	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
220+00	DROP INLET ON LT.															232										1																		FPC-9E, FPC-9M, PCC-1, PCM-1
221+00	DROP INLET ON RT.															183										1						1												FPC-9E, FPC-9M, PCC-1, PCM-1
222+36	DROP INLET ON LT.				15																	1				1					2										17	0.21	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
222+85	JUNC. BOX ON RT.																		25			1												1							17	0.21	FES-1, FES-2, FPC-9, PCC-1, PCM-1
MASSARD RD.																																												
10+98	DROP INLET ON LT.																	66								1																		FPC-9E, FPC-9M, PCC-1, PCM-1
10+97	MODIFY D.I. ON LT.			16																														1									FPC-9E, FPC-9M, PCC-1
CHAD COLLEY BLVD.																																												
11+90	DROP INLET ON LT.															207										1					1												FPC-9E, FPC-9M, PCC-1, PCM-1
11+90	DROP INLET ON RT.																205									1																		FPC-9E, FPC-9M, PCC-1, PCM-1
14+00	DROP INLET ON LT.																57									1																		FPC-9E, FPC-9M, PCC-1, PCM-1
14+00	DROP INLET ON RT.																131									1																		FPC-9E, FPC-9M, PCC-1, PCM-1
14+60	DROP INLET ON LT.																120									1																		FPC-9E, FPC-9M, PCC-1, PCM-1
15+35	DROP INLET ON RT.																83									1																		FPC-9E, FPC-9M, PCC-1, PCM-1
15+84	DROP INLET ON LT.															45										1																		FPC-9E, FPC-9M, PCC-1, PCM-1
18+46	DROP INLET ON LT.															250										1																		FPC-9E, FPC-9M, PCC-1, PCM-1
18+46	DROP INLET ON RT.															163										1																		FPC-9E, FPC-9M, PCC-1, PCM-1
20+13	DROP INLET ON RT.	14														83					1					1																5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1, PCM-1
21+00	DROP INLET ON LT.																253									1																		FPC-9E, FPC-9M, PCC-1, PCM-1
21+00	DROP INLET ON RT.																251									1																		FPC-9E, FPC-9M, PCC-1, PCM-1
23+55	DROP INLET ON RT.															64										1																		FPC-9E, FPC-9M, PCC-1, PCM-1
23+57	DROP INLET ON LT.		25																		1					1																5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
25+63	DROP INLET ON LT.																156									1																		FPC-9E, FPC-9M, PCC-1, PCM-1
27+18	DROP INLET ON RT.															130										1																		FPC-9E, FPC-9M, PCC-1, PCM-1
27+20	DROP INLET ON LT.																138									1																		FPC-9E, FPC-9M, PCC-1, PCM-1
28+55	DROP INLET ON RT.															105										1																		FPC-9E, FPC-9M, PCC-1, PCM-1
28+59	DROP INLET ON LT.		11																		1					1																8	0.10	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
	* ENTIRE PROJECT- TO BE USED IF AND WHERE DIRECTED BY ENGINEER.														250															7															FPC-9, PCC-1, PCM-1, PCP-2
SUBTOTALS (BOX 1 OF 3)		60	27		9	22					67	64				5213	220	399	46	747	6	1		2		1	1	47	1	5		4	5	1							28.69	3016	40	143	1.78	
SUBTOTALS (BOX 2 OF 3)		315	155	127	8		16		75	53			64	67		6342	662	223			2	1	3	1	2			45		4		2	11	1		4	2				55.93	6937	20	157	2.00	
SUBTOTALS (BOX 3 OF 3)		14	36	26	43			143						225	250	2059	1533	66	25		1	2	4	9				32			7	3	2	1	3								120	1.09	
SUBTOTALS:		**389**	**218**	**153**	**60**	**22**	**16**	**143**	**75**	**53**	**67**	**64**	**64**	**292**	**250**	**13614**	**2415**	**688**	**71**	**747**	**9**	**4**	**7**	**12**	**2**	**1**	**1**	**124**	**1**	**9**	**7**	**9**	**18**	**2**	**7**	**2**				**84.62**	**9953**	**60**	**420**	**4.87**	

STRUCTURES OVER 20' - 0" SPAN

120+00	CONST. QUAD. BOX CULV. LT.W/WINGS																																		28	7	30	111.46	13360	100	27	0.34	SPECIAL DETAILS,RCB-1,RCB-2,RCB-3
124+67	CONST. QUAD. BOX CULV. LT.W/WINGS																																		28	7	18	75.39	8747	50	27	0.34	SPECIAL DETAILS,RCB-1,RCB-2,RCB-3
SUBTOTALS:																																						**186.85**	**22107**	**150**	**54**	**0.68**	
TOTALS:		**389**	**218**	**153**	**60**	**22**	**16**	**143**	**75**	**53**	**67**	**64**	**64**	**292**	**250**	**13614**	**2415**	**688**	**71**	**747**	**9**	**4**	**7**	**12**	**2**	**1**	**1**	**124**	**1**	**9**	**7**	**9**	**18**	**2**	**7**	**2**				**271.47**	**32060**	**210**	**474**	**5.55**	

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.

QUANTITIES

USER: jh595
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\quantities\040716 QUANTITIES.dgn
PLOTTED: 4/21/2020 15:19
SCALE: 1:100

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
04-21-20				6	ARK.			
				JOB NO.		040716	72	194
				QUANTITIES				

(2)

DRIVEWAYS & TURNOUTS

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 18"	STANDARD DRAWINGS
			FEET	STATION	STATION	SQ. YD.	SQ. YD.	TON	TON	LIN. FT.	
104+34	RT.	HWY. 255	28	104+06	104+62	49.78	155.03	17.05	54.26		
104+64	LT.	HWY. 255	36	104+32	104+96	200.03					
105+67	RT.	HWY. 256	40	105+33	106+01	500.67					
109+13	LT.	HWY. 255	36	108+81	109+45	91.61					
110+67	RT.	HWY. 255	24	110+41	110+93	82.81					
113+40	LT.	HWY. 255	25	113+14	113+67	140.17					
115+37	RT.	HWY. 255	22	115+12	115+62	44.44	40.33	4.44	14.12		
116+03	LT.	HWY. 255	29	115+75	116+32	207.08					
116+71	LT.	HWY. 255	35	116+40	117+03	229.06					
120+20	LT.	HWY. 255	30	119+91	120+49	51.56	345.10	37.96	120.79		
124+67	LT.	HWY. 255	16	124+45	124+89	39.11	184.12	20.25	64.44		
130+79	LT.	HWY. 255	24	130+53	131+05	46.22	129.33	14.23	45.27	44	PCC-1, PCM-1, PCP-1, PCP-2
133+00	LT.	HWY. 255	24	132+74	133+26	46.22	129.33	14.23	45.27	46	PCC-1, PCM-1, PCP-1, PCP-2
138+25	LT.	HWY. 255	16	138+03	138+47	39.11	89.78	9.88	31.42		
140+43	LT.	HWY. 255	20	140+19	140+67	42.67	141.11	15.52	49.39		
155+60	RT.	HWY. 255	32	155+30	155+90	53.33					
159+15	RT.	HWY. 255	40	158+81	159+49	60.44	133.69	14.71	46.79		
168+14	LT.	HWY. 255	16	167+92	168+36	39.11	201.78	22.20	70.62		
172+97	LT.	HWY. 255	16	172+75	173+19	39.11	42.31	4.65	14.81		
173+60	LT.	HWY. 255	17	173+38	173+83	40.00	72.57	7.98	25.40		
174+59	LT.	HWY. 255	17	174+37	174+82	40.00	79.01	8.69	27.65		
184+84	LT.	HWY. 255	25	184+58	185+11	47.11	106.89	11.76	37.41		
188+60	RT.	HWY. 255	24	188+34	188+86	46.22					
197+48	LT.	HWY. 255	35	197+17	197+80	56.00	63.39	6.97	22.19		
213+30	RT.	HWY.255	27	213+03	213+58	48.89					
214+20	LT.	HWY. 255	24	213+94	214+46	46.22					
12+33	LT.	CHAD COLLEY BLVD.	30	12+04	12+62	109.89					
26+00	LT.	CHAD COLLEY BLVD.	24	25+74	26+26	133.43					
29+12	LT.	CHAD COLLEY BLVD.	25	28+86	29+39	85.05					
* ENTIRE PROJECT TEMPORARY DRIVES								54.35	172.94		
TOTALS:						**2655.34**	**1913.77**	**264.87**	**842.77**	**90**	

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.7% MIN. AGGR.....5.3% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22

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

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

** FOR INFORMATION ONLY

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

4" PIPE UNDERDRAIN

STATION	STATION	LOCATIONS	4" PIPE UNDERDRAINS
			LIN. FT.
* ENTIRE PROJECT TO BE USED IF AND			11000
WHERE DIRECTED BY THE ENGINEER			
TOTAL:			**11000**

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

UNDERDRAINS SHALL BE STUBBED INTO THE PROPOSED DROP INLET IF AND WHERE DIRECTED BY THE ENGINEER. PAYMENT FOR THIS TO BE INCLUDED IN THE UNIT PRICE BID FOR 4" PIPE UNDERDRAIN.

COLD MILLING ASPHALT PAVEMENT

STATION	STATION	LOCATION	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT
			FEET	SQ. YD.
100+00.00	116+27.79	HWY 255 *	24.00	4340.77
125+31.02	162+78.79	HWY 255 *	24.00	9994.05
175+00.00	222+99.64	FRONTIER RD. **	24.00	12799.04
TOTAL:				**27133.86**

* AVERAGE MILLING DEPTH 4".
** AVERAGE MILLING DEPTH 2".

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
4-21-2020

ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC

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

ACHM PATCHING OF EXISTING ROADWAY

DESCRIPTION	TON
ENTIRE PROJECT - TO BE USED IF AND WHERE	60
DIRECTED BY THE ENGINEER	
TOTAL:	**60**

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

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	73	194

(2) QUANTITIES

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

BASE AND SURFACING

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT							ACHM BASE COURSE (1 1/2")				ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")								GEOTEXTILE FABRIC (TYPE 7)	
						(0.05 GAL. PER SQ. YD.)			(0.17 GAL. PER SQ. YD.)																				
				TON / STATION	TON	TOTAL WID.	SQ.YD.	GALLON	TOTAL WID.	SQ.YD.	GALLON	TOTAL GALLONS	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 64-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 64-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22	TOTAL PG 76-22	AVG. WID.	SQ. YD.
			FEET			FEET			FEET				FEET			TON	FEET			TON	FEET			TON	FEET			TON	TON	FEET	
MAIN LANES																														
100+00.00	100+45.28	HWY. 255 N & W 5-LANE TRANSITION	45.28			61.05	307.15	15.36				15.36									3.16	15.92	220.00	1.75	57.89	291.25	220.00	32.04	33.79		
100+45.28	110+01.45	HWY. 255 NOTCH & WIDEN 5-LANE	956.17			89.91	9552.14	477.61				477.61	18.59	1974.68	550.00	543.04	15.32	1627.73	330.00	268.58	15.53	1649.49	220.00	181.44	56.00	5949.50	220.00	654.45	835.89		
110+01.45	113+11.40	HWY. 255 N & W 5-LANE MASSARD RD.	309.95			66.69	2296.73	114.84				114.84	12.51	431.00	550.00	118.53	10.60	364.90	330.00	60.21	10.59	364.64	220.00	40.11	43.58	1500.96	220.00	165.11	205.22		
113+11.40	173+00.00	HWY. 255 N & W 5-LANE W/BIKE LANE	5988.60			144.53	96170.26	4808.51				4808.51	41.86	27854.49	550.00	7659.98	38.67	25729.34	330.00	4245.34	39.10	26018.81	220.00	2862.07	64.00	42585.60	220.00	4684.42	7546.49		
173+00.00	176+00.00	HWY. 255 FULL DEPTH 5-LANE W/BIKE LANE	300.00			197.00	6566.67	328.33				328.33	69.00	2300.00	550.00	632.50	64.00	2133.33	330.00	352.00	64.00	2133.33	220.00	234.67	64.00	2133.33	220.00	234.67	469.34		
176+00.00	188+52.48	HWY. 255 N & W 5-LANE W/BIKE LANE	1252.48			146.88	20440.47	1022.02				1022.02	43.82	6098.78	550.00	1677.16	39.06	5435.67	330.00	896.89	39.06	5435.67	220.00	597.92	64.00	8906.52	220.00	979.72	1577.64		
188+52.48	194+49.47	HWY. 255 N & W AT CHAD COLLIE BLVD.	596.99			64.17	4256.54	212.83				212.83	14.15	938.66	550.00	258.13	13.06	866.26	330.00	142.93	13.06	866.26	220.00	95.29	36.96	2451.75	220.00	269.69	364.98		
194+49.47	221+99.64	HWY. 255 N & W 5-LANE W/BIKE LANE	2750.17			145.45	44445.80	2222.29				2222.29	43.19	13197.47	550.00	3629.30	38.26	11692.56	330.00	1929.27	38.26	11692.56	220.00	1286.18	64.00	19556.76	220.00	2151.24	3437.42		
221+99.64	222+99.64	HWY. 255 N & W 5-LANE TRANSITION	100.00			80.42	893.56	44.68				44.68	7.78	86.41	550.00	23.76	5.21	57.92	330.00	9.56	7.86	87.30	220.00	9.60	67.43	749.21	220.00	82.41	92.01		
222+99.64	224+00.00	HWY. 255 TRANSITION	100.36			75.03	836.62	41.83	75.03	836.67	142.23	184.06									75.03	836.62	220.00	92.03	75.03	836.62	220.00	92.03	184.06		
SIDE ROADS																														
101+80.00		HUTCHENSON CT. RT.	60.95			66.24	448.59	22.43				22.43	10.97	74.29	550.00	20.43	8.82	59.71	330.00	9.85	46.45	314.60	220.00	34.61	46.45	314.60	220.00	34.61	69.22		
118+46.00		WHITE OAK CIR. RT.	51.95			49.90	288.03	14.40				14.40	12.73	73.50	550.00	20.21	6.22	35.93	330.00	5.93	30.95	178.63	220.00	19.65	30.95	178.63	220.00	19.65	39.30		
131+36.00		RED OAK CT. RT.	51.29			37.68	214.73	10.74				10.74	6.64	37.83	550.00	10.40			330.00		31.39	178.87	220.00	19.68	31.04	176.87	220.00	19.46	39.14		
141+08.00		92ND STREET	94.29			26.78	280.57	14.03				14.03	31.78	332.95	550.00	91.56	26.78	280.57	330.00	46.29	26.78	280.57	220.00	30.86	26.78	280.57	220.00	30.86	61.72		
165+32.00		PAINTER LN. LT.	106.00			38.87	457.80	22.89				22.89	8.95	105.44	550.00	29.00	3.23	38.10	330.00	6.29	26.69	314.39	220.00	34.58	26.69	314.39	220.00	34.58	69.16		
8+82.60	14+36.85	WELLS LAKE RD.	554.25			73.25	4510.98	225.55				225.55	24.79	1526.65	550.00	419.83	24.46	1506.33	330.00	248.54	24.25	1493.40	220.00	164.27	24.00	1478.00	220.00	162.58	326.85		
14+36.79	14+67.93	WELLS LAKE RD. RETURN	31.14			155.99	539.73	26.99				26.99	57.03	197.34	550.00	54.27	49.48	171.19	330.00	28.25	49.48	171.19	220.00	18.83	49.48	171.19	220.00	18.83	37.66		
184+69.00		VETERANS AVE. RT.	46.21			86.98	446.59	22.33				22.33	20.87	107.16	550.00	29.47	13.59	69.80	330.00	11.52	52.52	269.67	220.00	29.66	52.52	269.67	220.00	29.66	59.32		
197+79.00		COYOTE TRAIL RT.	53.84			38.32	229.24	11.46				11.46	5.30	31.68	550.00	8.71	1.57	9.41	330.00	1.55	31.45	188.15	220.00	20.70	31.45	188.15	220.00	20.70	41.40		
OVERLAY																														
100+00.00	173+00.00	HWY. 255 OVERLAY AT NOTCH & WIDEN	7300.00						27.49	22294.60	3790.08	3790.08									27.49	22294.60	220.00	2452.41				2452.41	27.49	22294.60
176+00.00	222+99.64	HWY. 255 OVERLAY AT NOTCH & WIDEN	4699.64						25.99	13570.83	2307.04	2307.04									25.99	13570.83	220.00	1492.79				1492.79	25.99	13570.83
3+93.88	60+63.25	HWY. 255 OVERLAY (EXIST.)	5669.37	4.00	226.77	22.00	13858.46	692.92				692.92													22.00	13858.46	220.00	1524.43	1524.43		
0+11.00	43+18.55	HWY. 253 OVERLAY (EXIST.)	4307.55	4.00	172.30	22.00	10529.57	526.48				526.48													22.00	10529.57	220.00	1158.25	1158.25		
ADDITIONAL FOR LEVELING																														
100+00.00	173+00.00	HWY. 255 OVERLAY AT NOTCH & WIDEN	7300.00																						27.49	22294.60	220.00	2452.41	2452.41		
176+00.00	222+99.64	HWY. 255 OVERLAY AT NOTCH & WIDEN	4699.64																						25.99	13570.83	220.00	1492.79	1492.79		
3+93.88	60+63.25	HWY. 255 OVERLAY (EXIST.)	5669.37						22.00	13858.46	2355.94	2355.94													22.00	13858.46	220.00	1524.43	1524.43		
0+11.00	43+18.55	HWY. 253 OVERLAY (EXIST.)	4307.55						22.00	10529.57	1790.03	1790.03													22.00	10529.57	220.00	1158.25	1158.25		
TOTALS:					399.07		217570.23	10878.52		61090.13	10385.32	21263.84		55368.33		15226.28		50078.75		8263.00		88355.50		9719.10		172975.06		19027.27	28746.37	53.48	35865.43

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.7% MIN. AGGR.....5.3% ASPHALT BINDER
ACHM BINDER COURSE (1").....95.7% MIN. AGGR.....4.3% ASPHALT BINDER
ACHM BASE COURSE (1 1/2").....95.9% MIN. AGGR.....4.1% 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.

PORTLAND CEMENT CONCRETE PAVEMENT

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		GEOTEXTILE FABRIC (TYPE 10)		PORTLAND CEMENT CONCRETE PAVEMENT (8" UNIFORM THICKNESS)	
				TON / STATION	TON	AVG. WID.	SQ. YD.	AVG. WID.	SQ. YD.
			FEET			FEET		FEET	
SIDE ROADS									
8+24.83	11+11.98	MASSARD ROAD INTERSECTION	287.15	150.45	432.03			24.82	792.01
10+00.00	10+56.00	CHAD COLLEY BLVD.	56.00	157.73	88.33	16.12	158.17	25.42	158.17
10+56.00	13+32.50	CHAD COLLEY BLVD.	276.50	150.37	415.77	15.96	737.33	24.00	737.33
13+32.50	14+55.00	CHAD COLLEY BLVD.	122.50	181.48	222.31	16.53	408.33	30.00	792.01
14+55.00	15+03.00	CHAD COLLEY BLVD.	48.00	212.58	102.04	16.93	192.00	36.00	792.01
15+03.00	16+52.46	CHAD COLLEY BLVD.	149.46	419.12	626.41	17.29	1203.32	72.46	1203.35
17+11.78	29+03.63	CHAD COLLEY BLVD.	1191.85	287.42	3425.58	18.06	6874.33	51.91	6874.01
29+22.48	30+09.14	CHAD COLLEY BLVD.	86.66	69.55	60.27	14.32	95.90	9.96	95.90
TOTALS:					5372.74		9669.38		11444.79

SUMMARY OF QUANTITIES (BOX 1 OF 4)

ITEM NUMBER	ITEM	QUANTITY	UNIT
201	CLEARING	138	STATION
201	GRUBBING	138	STATION
202	REMOVAL AND DISPOSAL OF CURB	872	LIN. FT.
202	REMOVAL AND DISPOSAL OF CURB AND GUTTER	1107	LIN. FT.
202	REMOVAL AND DISPOSAL OF WIRE FENCE	2690	LIN. FT.
202	REMOVAL AND DISPOSAL OF CHAIN LINK FENCE	2370	LIN. FT.
202	REMOVAL AND DISPOSAL OF BOARD FENCE	28	LIN. FT.
202	REMOVAL AND DISPOSAL OF PIPE FENCE	206	LIN. FT.
202	REMOVAL AND DISPOSAL OF GATES	15	EACH
202	REMOVAL AND DISPOSAL OF POSTS	48	EACH
202	REMOVAL AND DISPOSAL OF ROCK WALLS	111	LIN. FT.
202	REMOVAL AND DISPOSAL OF CONCRETE PAVEMENT	8357	SQ. YD.
202	REMOVAL AND DISPOSAL OF CONCRETE DRIVEWAYS	1345	SQ. YD.
202	REMOVAL AND DISPOSAL OF WALKS	1352	SQ. YD.
202	REMOVAL AND DISPOSAL OF SIGN FOUNDATIONS	5	EACH
202	REMOVAL AND DISPOSAL OF DROP INLETS	21	EACH
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS	30	EACH
202	REMOVAL AND DISPOSAL OF BOX CULVERTS	1	EACH
202	REMOVAL AND DISPOSAL OF CONCRETE DITCH PAVING	825	SQ. YD.
202	REMOVAL AND DISPOSAL OF GUARD CABLE	292	LIN. FT.
202	REMOVAL AND DISPOSAL OF GUARDRAIL	586	LIN. FT.
202	REMOVAL AND DISPOSAL OF LUMINAIRE POLES	2	EACH
202	REMOVAL AND DISPOSAL OF BUILDINGS	1	EACH
202	REMOVAL AND DISPOSAL OF SIGNS	3	EACH
202	REMOVAL AND DISPOSAL OF KEY PAD	1	EACH
202	REMOVAL AND DISPOSAL OF RIPRAP	17	CU. YD.
SS & 210	UNCLASSIFIED EXCAVATION	17644	CU. YD.
SP	SELECT GRANULAR BACKFILL	4811	CU. YD.
210	COMPACTED EMBANKMENT	84190	CU. YD.
SP & 210	SOIL STABILIZATION	500	TON
SS & 303	AGGREGATE BASE COURSE (CLASS 7)	6614	TON
309	PORTLAND CEMENT CONCRETE BASE (5" UNIFORM THICKNESS)	1626	SQ. YD.
309	PORTLAND CEMENT CONCRETE BASE (3" UNIFORM THICKNESS)	363	SQ. YD.
SS & 401	TACK COAT	21384	GAL.
SP, SS, & 405	MINERAL AGGREGATE IN ACHM BASE COURSE (1 1/2")	14602	TON
SP, SS, & 405	ASPHALT BINDER (PG 64-22) IN ACHM BASE COURSE (1 1/2")	624	TON
SP, SS, & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")	7908	TON
SP, SS, & 406	ASPHALT BINDER (PG 64-22) IN ACHM BINDER COURSE (1")	355	TON
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	24429	TON
SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	14	TON
SP, SS, & 407	ASPHALT BINDER (PG 76-22) IN ACHM SURFACE COURSE (1/2")	1524	TON
412	COLD MILLING ASPHALT PAVEMENT	27473	SQ. YD.
SP, SS, & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC	60	TON
SP, SS, & 415	ACHM PATCHING OF EXISTING ROADWAY	60	TON
SP & 501	PORTLAND CEMENT CONCRETE PAVEMENT (8" UNIFORM THICKNESS)	11445	SQ. YD.
504	APPROACH GUTTERS	16.80	CU. YD.
SS & 505	PORTLAND CEMENT CONCRETE DRIVEWAY	2655.34	SQ. YD.
601	MOBILIZATION	1.00	LUMP SUM
SP, SS, & 603	MAINTENANCE OF TRAFFIC	1.00	LUMP SUM
SS & 604	SIGNS	1005	SQ. FT.
SP, SS, & 604	CONSTRUCTION PROJECT INFORMATION SIGN UPDATE	10	EACH
SS & 604	BARRICADES	432	LIN. FT.
SS & 604	TRAFFIC DRUMS	377	EACH
SS & 604	TRAFFIC CONE	10	EACH
604	CONSTRUCTION PAVEMENT MARKINGS	107666	LIN. FT.
604	CONSTRUCTION PAVEMENT MARKINGS (WORDS)	8	EACH
604	CONSTRUCTION PAVEMENT MARKINGS (ARROWS)	22	EACH
604	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	30	LIN. FT.
604	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	24784	LIN. FT.
604	REMOVAL OF PERMANENT PAVEMENT MARKINGS	39819	LIN. FT.
SS & 604	VERTICAL PANELS	251	EACH
SS & 605	CONCRETE DITCH PAVING (TYPE A)	1821	SQ. YD.
606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	389	LIN. FT.
* 606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III) (ALTERNATE NO. 1)	13614	LIN. FT.
* 606	18" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE (ALTERNATE NO. 2)	13614	LIN. FT.
606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	218	LIN. FT.
* 606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III) (ALTERNATE NO. 1)	2415	LIN. FT.
* 606	24" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE (ALTERNATE NO. 2)	2415	LIN. FT.
606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	153	LIN. FT.
* 606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS III) (ALTERNATE NO. 1)	688	LIN. FT.
* 606	30" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE (ALTERNATE NO. 2)	688	LIN. FT.
606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)	143	LIN. FT.
606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)	64	LIN. FT.
606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	60	LIN. FT.

* DENOTES ALTERNATE BID ITEMS.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
4-21-2020

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
04-21-20				6	ARK.			
				JOB NO.		040716	74	194
				(2)	SUMMARY OF QUANTITIES			

SUMMARY OF QUANTITIES (BOX 2 OF 4)

ITEM NUMBER	ITEM	QUANTITY	UNIT
* 606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS III) (ALTERNATE NO. 1)	71	LIN. FT.
* 606	36" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE (ALTERNATE NO. 2)	71	LIN. FT.
606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)	75	LIN. FT.
606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)	292	LIN. FT.
606	42" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	16	LIN. FT.
606	42" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)	53	LIN. FT.
606	48" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	22	LIN. FT.
* 606	48" REINFORCED CONCRETE PIPE CULVERTS (CLASS III) (ALTERNATE NO. 1)	747	LIN. FT.
* 606	48" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE (ALTERNATE NO. 2)	747	LIN. FT.
606	48" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)	67	LIN. FT.
606	44" X 27" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS IV)	64	LIN. FT.
SS & 606	12" SIDE DRAIN	250	LIN. FT.
SP, SS, & 606	18" SIDE DRAIN	90	LIN. FT.
606	18" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	9	EACH
606	24" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	4	EACH
606	30" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	7	EACH
606	36" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	12	EACH
606	42" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	2	EACH
606	48" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	1	EACH
606	SELECTED PIPE BEDDING	150	CU. YD.
SS & 609	DROP INLETS (TYPE E)	1	EACH
SS & 609	DROP INLETS (TYPE C)	1	EACH
SS & 609	DROP INLETS (TYPE MO)	124	EACH
SS & 609	DROP INLETS (TYPE SPECIAL)	9	EACH
SS & 609	JUNCTION BOXES (TYPE ST)	2	EACH
SS & 609	JUNCTION BOXES (TYPE E)	7	EACH
SS & 609	DROP INLET EXTENSIONS (4')	9	EACH
SS & 609	DROP INLET EXTENSIONS (8')	18	EACH
SS & 609	YARD DRAINS	7	EACH
SS & 611	4" PIPE UNDERDRAINS	11000	LIN. FT.
615	PAVEMENT REPAIR OVER CULVERTS (ASPHALT)	120	TON
619	WIRE FENCE (TYPE D-1)	2770	LIN. FT.
* 619	4' STEEL CHAIN LINK FENCE (ALTERNATE NO. 1)	1283	LIN. FT.
* 619	4' ALUMINUM CHAIN LINK FENCE (ALTERNATE NO. 2)	1283	LIN. FT.
619	7' STEEL CHAIN LINK FENCE	1076	LIN. FT.
* 619	4' STEEL GATES (ALTERNATE NO. 1)	7	EACH
* 619	4' ALUMINUM GATES (ALTERNATE NO. 2)	7	EACH
* 619	8' STEEL GATES (ALTERNATE NO. 1)	2	EACH
* 619	8' ALUMINUM GATES (ALTERNATE NO. 2)	2	EACH
* 619	16' STEEL GATES (ALTERNATE NO. 1)	4	EACH
* 619	16' ALUMINUM GATES (ALTERNATE NO. 2)	4	EACH
620	LIME	26	TON
620	SEEDING	13.13	ACRE
SS & 620	MULCH COVER	21.60	ACRE
620	WATER	1840.9	M. GAL.
621	TEMPORARY SEEDING	8.47	ACRE
621	SILT FENCE	10836	LIN. FT.
621	SAND BAG DITCH CHECKS	5995	BAG
621	DROP INLET SILT FENCE	68	LIN. FT.
621	SEDIMENT BASIN	729	CU. YD.
621	OBLITERATION OF SEDIMENT BASIN	729	CU. YD.
621	SEDIMENT REMOVAL AND DISPOSAL	1606	CU. YD.
621	ROCK DITCH CHECKS	1039	CU. YD.
SS & 621	FILTER SOCK (12")	1429	LIN. FT.
SS & 621	FILTER SOCK (18")	4826	LIN. FT.
623	SECOND SEEDING APPLICATION	13.13	ACRE
624	SOLID SODDING	26131	SQ. YD.

* DENOTES ALTERNATE BID ITEMS.

SUMMARY OF QUANTITIES

USER: jh595
DESIGN FILE: G:\1710300_Hwy255\TRANSP\dgn\quantities\040716 QUANTITIES.dgn
PLOTTED: 4/21/2020 15:20
SCALE: 1:100

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
04-21-20				6	ARK.			
05-05-20				JOB NO.		040716	75	194
				(2)	SUMMARY OF QUANTITIES AND REVISIONS			

SUMMARY OF QUANTITIES (BOX 3 OF 4)

ITEM NUMBER	ITEM	QUANTITY	UNIT
625	GEOTEXTILE FABRIC (TYPE 7)	35865	SQ. YD.
625	GEOTEXTILE FABRIC (TYPE 10)	9669	SQ. YD.
SS & 632	CONCRETE ISLAND	269	SQ. YD.
SS & 633	CONCRETE WALKS	14494	SQ. YD.
SP, SS, & 633	CONCRETE WALKS (TYPE SPECIAL)	71	SQ. YD.
SS & 633	HAND RAILING	593	LIN. FT.
SS & 634	CONCRETE COMBINATION CURB AND GUTTER (TYPE A) (1' 6")	30031	LIN. FT.
635	ROADWAY CONSTRUCTION CONTROL	1.00	LUMP SUM
637	MAILBOXES	5	EACH
637	MAILBOX SUPPORTS (SINGLE)	1	EACH
637	MAILBOX SUPPORTS (DOUBLE)	2	EACH
640	MODIFYING DROP INLETS	2	EACH
641	WHEELCHAIR RAMPS (TYPE 3)	204	SQ. YD.
SP & 701	ACTUATED CONTROLLER TS2-TYPE 2 (8 PHASES)	1	EACH
SP & 701	SYSTEM LOCAL CONTROLLER TS2-TYPE 2 (8 PHASES)	3	EACH
SP	TRAFFIC SIGNAL CONTROLLER (MODIFICATION)	1	EACH
SP	ANTENNA CABLE (TYPE 6)	235	LIN. FT.
SP	ETHERNET SWITCH, T100 HARDENED (8-PORT)	3	EACH
SP	E-NET CABLE (EXTERIOR CAT 5E)	235	LIN. FT.
SP	LOCAL RADIO (E-NET 5.8) WITH ANTENNA	3	EACH
706	TRAFFIC SIGNAL HEAD (4 SECTION, 1 WAY)	4	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	36	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	16	EACH
SP	RELOCATION OF TRAFFIC SIGNAL HEAD	6	EACH
SP	PEDESTRIAN SIGNAL HEAD RELOCATION	8	EACH
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	16	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	12251	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	1630	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	1740	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	1628	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)	545	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	115	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	2220	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")	100	LIN. FT.
709	GALVANIZED STEEL CONDUIT (3")	70	LIN. FT.
710	NON-METALLIC CONDUIT (2")	60	LIN. FT.
710	NON-METALLIC CONDUIT (3")	1558	LIN. FT.
711	CONCRETE PULL BOX (TYPE 2)	9	EACH
711	CONCRETE PULL BOX (TYPE 1 HD)	3	EACH
711	CONCRETE PULL BOX (TYPE 2 HD)	5	EACH
SS & 713	SPAN WIRE ASSEMBLY	1	EACH
SS & 714	TRAFFIC SIGNAL MASTARM AND POLE WITH FOUNDATION (0')	2	EACH
SS & 714	TRAFFIC SIGNAL MASTARM AND POLE WITH FOUNDATION (36')	1	EACH
SS & 714	TRAFFIC SIGNAL MASTARM AND POLE WITH FOUNDATION (42')	1	EACH
SS & 714	TRAFFIC SIGNAL MASTARM AND POLE WITH FOUNDATION (48')	1	EACH
SS & 714	TRAFFIC SIGNAL MASTARM AND POLE WITH FOUNDATION (56')	1	EACH
SS & 714	TRAFFIC SIGNAL MASTARM AND POLE WITH FOUNDATION (58')	1	EACH
SS & 714	TRAFFIC SIGNAL MASTARM AND POLE WITH FOUNDATION (60')	1	EACH
SS & 714	TRAFFIC SIGNAL MASTARM AND POLE WITH FOUNDATION (62')	1	EACH
SS & 714	TRAFFIC SIGNAL MASTARM AND POLE WITH FOUNDATION (64')	1	EACH
SP	LED LUMINAIRE ASSEMBLY	10	EACH
SP & 715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	8	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	2	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	1.00	LUMP SUM
716	TREATED WOOD POLE (CLASS 2, 40')	4	EACH
716	TREATED WOOD POLE (CLASS 2, 45')	4	EACH
718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")	189	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (6")	34688	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (12")	1986	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (6")	22694	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING (WORDS)	5	EACH
719	THERMOPLASTIC PAVEMENT MARKING (ARROWS)	16	EACH
719	THERMOPLASTIC PAVEMENT MARKING (BIKE EMBLEMS)	21	EACH
721	RAISED PAVEMENT MARKERS (TYPE II)	580	EACH
SP	18" STREET NAME SIGN	8	EACH
SP	VIDEO DETECTOR ROTATION	4	EACH
SP & 733	VIDEO DETECTOR (CLR)	26	EACH
733	VIDEO CABLE	5058	LIN. FT.
733	VIDEO MONITOR (CLR)	3	EACH
SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	14	EACH
SP & 733	VEHICLE DETECTOR RACK (16 CHANNEL)	3	EACH

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
05-05-2020

SUMMARY OF QUANTITIES (BOX 4 OF 4)

ITEM NUMBER	ITEM	QUANTITY	UNIT
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-ROADWAY	2649	CU. YD.
SS & 802	CLASS S CONCRETE-ROADWAY	1425.12	CU. YD.
SP	ARCHITECTURAL FINISH	5198	SQ. FT.
SP	TEXTURED COATING FINISH	578	SQ. YD.
SS & 804	REINFORCING STEEL-ROADWAY (GRADE 60)	126012	POUND
816	FILTER BLANKET	5851	SQ. YD.
816	DUMPED RIPRAP	2934	CU. YD.
	STRUCTURES OVER 20' SPAN		
205	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. 1)	1.00	LUMP SUM
205	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. 2)	1.00	LUMP SUM
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-ROADWAY	150	CU. YD.
SS & 802	CLASS S CONCRETE-ROADWAY	186.85	CU. YD.
SS & 804	REINFORCING STEEL-ROADWAY (GRADE 60)	22107	POUND

REVISIONS

DATE	REVISION	SHEET NUMBER
4/21/2020	REMOVED "FLAGGING REQUIREMENTS (GRADE SEPARATION)" AND " EMPLOYMENT REPORTING" SPECIAL PROVISIONS. ADDED "GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION" AND "INSURANCE, CONSTRUCTION, AND FLAGGING REQUIREMENTS ON RAILROAD PROPERTY (FSR)" SPECIAL PROVISIONS. REVISED "AGGREGATE BASE COURSE (CLASS 7) ", " APPROACH SLAB", "4" PIPE UNDERDRAINS", "UNDERDRAIN OUTLET PROTECTORS", "54" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)", "42" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)", "DROP INLETS (TYPE MO)" , JUNCTION BOXES (TYPE ST)", AND "JUNCTION BOXES (TYPE E)" QUANTITIES. REVISED PLAN AND PROFILE SHEETS. REVISED CROSS SECTION SHEETS.	3,68, 69, 70, 71, 72,74, 75, 85, 95, 96, 168, 169, 170 & 171
5/5/2020	ADDED "ARCHITECTURAL FINISH" AND "TEXTURED COATING FINISH" SPECIAL PROVISIONS, ADDED ASHLAR STONE FINISH DETAIL, ADDED FINISH NOTES, REMOVED SPECIAL PROVISION "SPECIAL CLEARING REQUIREMENTS".	3, 16, 17 & 75

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SUMMARY OF QUANTITIES AND REVISIONS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	76	194

(2) SURVEY CONTROL DETAILS

SURVEY CONTROL COORDINATES

Project Name: 040716
Date: 4/24/2017
Coordinate System: ARKANSAS STATE PLANE - NORTH ZONE BASED ON GPS CONTROL, PROJECTED TO GROUND.
Units: U.S. SURVEY FOOT

Point Name	Northing	Easting	Elev	Feature	Description
1	368244.5994	627295.9149	439.941	CTL	AHTD STD. MON. STAMPED PN: 1
2	367689.5991	627106.9438	427.884	CTL	AHTD STD. MON. STAMPED PN: 2
3	367181.2444	626384.6355	426.253	CTL	AHTD STD. MON. STAMPED PN: 3
4	366899.1654	625825.5489	425.807	CTL	AHTD STD. MON. STAMPED PN: 4
5	366728.4875	625234.0333	425.844	CTL	AHTD STD. MON. STAMPED PN: 5
6	366764.9149	624535.4669	427.956	CTL	AHTD STD. MON. STAMPED PN: 6
7	366862.2196	623865.1441	438.019	CTL	AHTD STD. MON. STAMPED PN: 7
8	366927.8436	623200.5691	443.430	CTL	AHTD STD. MON. STAMPED PN: 8
9	367153.4567	622305.7189	461.056	CTL	AHTD STD. MON. STAMPED PN: 9
10	367478.4044	621688.3161	477.853	CTL	AHTD STD. MON. STAMPED PN: 10
11	367857.3749	621148.6959	492.713	CTL	AHTD STD. MON. STAMPED PN: 11
12	368160.7841	620606.7403	497.850	CTL	AHTD STD. MON. STAMPED PN: 12
13	368310.4871	619960.7462	511.995	CTL	AHTD STD. MON. STAMPED PN: 13
14	368291.5686	619495.7988	505.615	CTL	AHTD STD. MON. STAMPED PN: 14
15	368341.1062	618601.2084	466.246	CTL	AHTD STD. MON. STAMPED PN: 15
16	368439.1759	617831.0464	473.294	CTL	AHTD STD. MON. STAMPED PN: 16
17	368519.6759	616834.6934	455.640	CTL	AHTD STD. MON. STAMPED PN: 17
18	368528.0961	615873.7283	438.706	CTL	AHTD STD. MON. STAMPED PN: 18
19	368668.7167	614984.8050	432.498	CTL	AHTD STD. MON. STAMPED PN: 19
20	368755.5285	614337.5744	429.726	CTL	AHTD STD. MON. STAMPED PN: 20
21	369081.9803	613217.6924	426.133	CTL	AHTD STD. MON. STAMPED PN: 21
22	368357.6588	621042.9640	505.465	CTL	AHTD STD. MON. STAMPED PN: 22
100	369294.8019	612514.1773	423.453	GPS	AHTD GPS *650025A
101	368896.7842	613716.5393	432.821	GPS	AHTD GPS *650025
102	368971.9724	626222.0489	481.633	GPS	AHTD GPS *650016
103	368011.3882	627713.6044	426.350	GPS	AHTD GPS *650016A
994	368809.6383	614078.6485	432.535	BM	AHTD/NGS 1ST ORDER BM R 342
995	368349.4068	618560.4308	465.901	BM	AHTD/NGS 1ST ORDER BM S 342
996	367380.7815	621894.7441	469.540	BM	AHTD/NGS 1ST ORDER BM T 342
997	367010.5463	625260.6716	430.200	BM	AHTD/NGS 1ST ORDER BM KIT CARSON
998	367125.9185	629332.6190	414.875	BM	AHTD/NGS 1ST ORDER BM A CARTER
999	369206.2513	626430.2071	484.720	BM	NGS 1ST ORDER BM B 257

*Note - Rebar and Cap - Standard - 5/8" Rebar with 2" Aluminum Cap stamped
*(standard markings common to all caps), or as indicated
(other markings indicated in the point description of the individual point).
ALL DISTANCES ARE GROUND.
USE CAF = 1.0 FOR STAKEOUT FOR THIS PROJECT.
A PROJECT CAF OF 0.999929431662 HAS BEEN USED TO COMPUTE THE ABOVE GROUND COORDINATES.
THIS CAF IS INTENDED FOR USE WITHIN THE PROJECT LIMITS.
GRID DISTANCE = GROUND DISTANCE X CAF.
GRID COORDINATES ARE STORED UNDER FILE NAME s040716go.CTL
HORIZONTAL DATUM: NAD 83 (2011)
VERTICAL DATUM: NAVD 88 POSITIONAL ACCURACY THIRD ORDER, UNLESS SPECIFIED OTHERWISE AT A SPECIFIC POINT.

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

BASIS OF BEARING:
ARKANSAS STATE PLANE GRID BEARINGS - 0301-NORTH ZONE
DETERMINED FROM GPS CONTROL POINTS: 650016 - 650016A & 650025 - 650025A
CONVERGENCE ANGLE: 1-21-02.93 LEFT AT PN: 13 LT: 35-19-21.8420 LG: 094-19-16.9955
GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

040716 CL - HIGHWAY 255

POINT NO.	TYPE	STATION	NORTHING	EASTING
8000	P.O.B.	92+83.27	369313.1572	612122.1475
8001	P.I.	100+00.00	369148.3330	612819.6700
8002	P.C.	116+27.79	368765.1822	614401.7216
8003	P.T.	125+75.85	368619.1035	615337.3528
8004	P.C.	162+78.79	368352.1834	619030.6773
8005	P.T.	167+93.65	368338.1776	619545.1678
8006	P.C.	171+58.53	368344.6407	619909.9961
8007	P.T.	177+64.82	368198.2260	620491.0782
8008	P.C.	197+99.07	367202.7113	622265.0896
8009	P.T.	203+68.19	367015.1836	622799.3795
8010	P.C.	222+99.63	366700.3601	624705.0043
8011	P.T.	234+83.34	366870.0166	625857.4379

040716 CL - CHAD COLLEY BLVD.

POINT NO.	TYPE	STATION	NORTHING	EASTING
8012	P.O.B.	10+00.00	368169.7242	621892.3293
8013	P.C.	10+14.91	368155.0631	621889.6322
8014	P.T.	14+67.52	367715.8048	621781.5912
8015	P.C.	23+84.10	366840.2797	621510.3545
8016	P.T.	29+35.83	366337.8911	621285.5242
8017	P.O.E.	30+88.16	366207.3312	621207.0565

040716 CL - WELLS LAKE ROAD REALIGNMENT

POINT NO.	TYPE	STATION	NORTHING	EASTING
8019	P.O.B.	8+00.00	367710.8687	619706.4846
8020	P.C.	8+82.60	367763.5659	619770.0904
8021	P.T.	11+84.80	368029.0686	619892.0493
8022	P.O.E.	15+00.00	368344.2238	619886.4662

040716 CL - MASSARD RD.

POINT NO.	TYPE	STATION	NORTHING	EASTING
8025	P.O.B.	6+81.78	369183.5550	614000.9240
8026	P.I.	10+00.00	368865.6491	613986.8883
8027	P.O.E.	13+41.79	368524.1850	613971.8920

040716 CL - TEMPORARY DRIVE

POINT NO.	TYPE	STATION	NORTHING	EASTING
8030	P.O.B.	10+00.00	368622.8824	615288.0271
8031	P.C.	10+53.01	368675.7095	615292.3788
8032	P.T.	11+23.37	368738.8101	615267.2970
8033	P.C.	11+24.30	368739.4311	615266.6058
8034	P.T.	11+96.99	368802.6494	615234.0621

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				6	ARK.			
				JOB NO.		040716	77	194

(2) SURVEY CONTROL DETAILS

95

P.O.B. 92+83.27

PN:100
PD:AHTD GPS *650025A

S76°42'18"E
716.73'

MATCH LINE

8000

100

STA. 100+00.00
BEGIN JOB 040716
LOG MILE 2.48

P.I. 100+00.00
Δ = 01°19'09" RT.

105

W N E S
BEARINGS ARE GRID BASED ON GPS

110

STATE OF ARKANSAS
* * *
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

PN:100
PD:AHTD GPS *650025A

SURVEY BASELINE N73°10'08"W
735.00'

SURVEY BASELINE

PN:21
PD:AHTD STD. MON. STAMPED PN:21

S76°42'18"E
716.73'

8001

S76°23'09"E
1627.79'

℄ HWY. 255

MATCH LINE

SURVEY BASELINE N69°37'57"W
532.11'

PN:101
PD:AHTD GPS *650025

SURVEY BASELINE N77°11'09"W
636.90'

318.22'

C.L. MASSARD RD.

S02°31'41"W

S76°23'09"E

8004

W N E S
BEARINGS ARE GRID BASED ON GPS

115

STA. 112+00.96 HWY. 255 =
STA. 10+00.00 MASSARD RD.
Δ = 78°54'50"

318.22'

S02°31'41"W

10

S76°23'09"E
1627.79'

8026

SURVEY BASELINE N77°11'09"W
636.90'

PN:994
PD:AHTD/NGS IST ORDER BM R 342

PN:20
PD:AHTD STD. MON. STAMPED PN:20

C.L. MASSARD RD.

S02°30'53"W

341.79'

P.C. 116+27.79

8002

120

C.L. HWY. 255
PI = 121+02.90
Δ = 09°28'50" LT.
D = 01°00'00"
T = 475.11'
L = 948.06'
PC = 116+27.79
PT = 125+75.85
NO SUPERELEVATION

SURVEY BASELINE

PN:19
PD:AHTD STD. MON. STAMPED PN:19

S76°23'09"E
475.11'

℄ HWY. 255

S85°51'59"E
475.11'

P.I. 121+02.90

C.L. TEMPORARY DRIVE
PI = 10+90.91
Δ = 52°46'22" LT.
D = 75°00'00"
T = 37.90'
L = 70.36'
PC = 10+53.01
PT = 11+23.37
NO SUPERELEVATION

125

8034

P.T. 11+96.99

N06°24'49"W
38.04'

P.I. 11+62.34

N48°03'49"W
38.04'

8033

8032

N48°03'49"W
37.90

N04°42'33"E
37.90

8031

P.C. 10+53.01

P.C. 11+24.30

P.I. 11+23.37

P.I. 10+90.91

P.T. 125+75.85

C.L. TEMPORARY DRIVE
PI = 11+62.34
Δ = 41°39'00" RT.
D = 57°17'45"
T = 38.04'
L = 72.69'
PC = 11+24.30
PT = 11+96.99
NO SUPERELEVATION

P.O.B. 10+00.00

8030

8003

S85°51'59"E
3702.96

899.98'

SURVEY BASELINE N81°00'39"W

318.22'

C.L. MASSARD RD.

S02°31'41"W

8004

SURVEY CONTROL DETAILS

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				6	ARK.			
				JOB NO.		040716	78	194

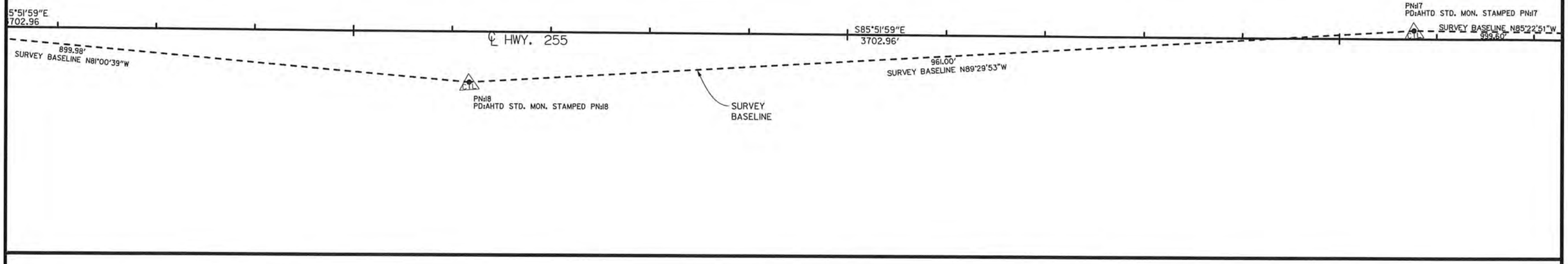
(2) SURVEY CONTROL DETAILS

130 135 140

W–N–E S

BEARINGS ARE GRID BASED ON GPS

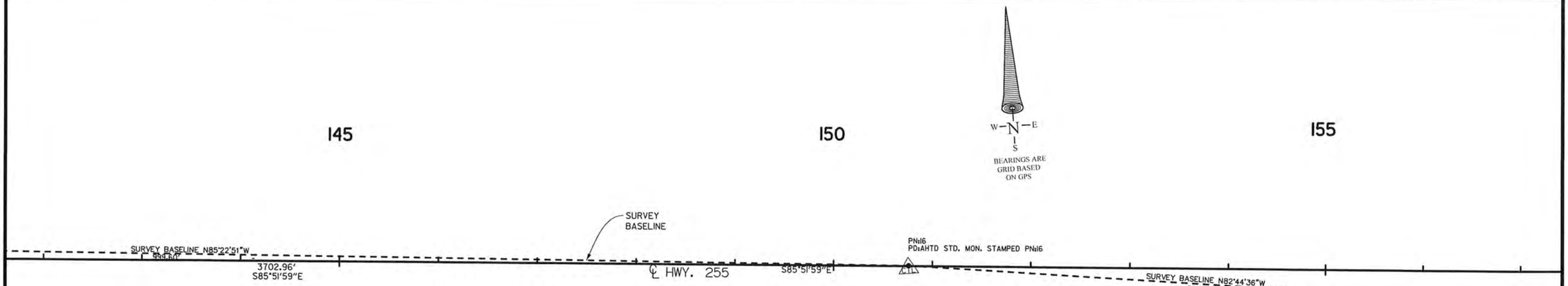
STATE OF ARKANSAS
* * *
LICENSED PROFESSIONAL ENGINEER
No. 15560
3-25-2020
JEROME PAUL DAVIS



145 150 155

W–N–E S

BEARINGS ARE GRID BASED ON GPS



SURVEY CONTROL DETAILS

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				6	ARK.			
				JOB NO.		040716	79	194

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

W-N-E-S
BEARINGS ARE GRID BASED ON GPS

160 | 165 | 170

C.L. HWY. 255
PI = 165+36.39
Δ = 05°08'55" LT.
D = 01°00'00"
T = 257.60'
L = 514.86'
PC = 162+78.79
PT = 167+93.65
NO SUPERELEVATION

P.C. 162+78.79
P.T. 167+93.65
P.O.B. 0+00.00
P.C. 171+58.53

STA. 171+35.00 HWY. 255 =
STA. 15+00.00 WELLS LAKE ROAD
Δ = 90°00'00"

8004 S85°51'59"E 3702.96'
℄ HWY. 255
8005 N88°59'06"E 364.89'
8022 8006
S85°51'59"E 257.60'
N88°59'06"E 257.60'
P.I. 165+36.39

SURVEY BASELINE N82°44'36"W 776.38'
PN:995 PD:AHTD/NGS 1ST ORDER BM S 342
PN:15 PD:AHTD STD. MON. STAMPED PN:15
SURVEY BASELINE N86°49'50"W 895.96'
SURVEY BASELINE
SURVEY BASELINE S87°40'12"W 465.33'
PN:13 PD:AHTD STD. MON. STAMPED PN:13
PN:14 PD:AHTD STD. MON. STAMPED PN:14

14

315.20' N01°00'54"W WELLS LAKE RD.

5

C.L. HWY. 255
PI = 174+68.95
Δ = 30°18'53" RT.
D = 05°00'00"
T = 310.42'
L = 606.29'
PC = 171+58.53
PT = 177+64.82
e = 0.036 '/'
Ls = 450'

BEARINGS ARE GRID BASED ON GPS

175 | 180

P.I. 174+68.95
P.T. 177+64.82
N87°56'48"E 1401.94'
S60°42'01"E 310.42'
N88°59'06"E 310.42'
8007
SURVEY BASELINE N76°57'09"W 663.11'
SURVEY BASELINE
SURVEY BASELINE N65°42'35"E 418.59'
PN:12 PD:AHTD STD. MON. STAMPED PN:12
8006
SURVEY BASELINE S87°40'12"W 465.33'
PN:13 PD:AHTD STD. MON. STAMPED PN:13
℄ WELLS LAKE RD. M.#95,00.10N 315.20'

BEARINGS ARE GRID BASED ON GPS

STA. 8+82.60
BEGIN CONST.
WELLS LAKE RD.

P.I. 10+44.71
℄ WELLS LAKE RD.
8022 8021 N01°00'54"W 162.11' N50°21'30"E 162.11' 8020 82.60' N50°21'30"E 8019
M.#95,00.10N 315.20'

WELLS LAKE ROAD
PI = 10+44.71
Δ = 51°22'24" LT.
D = 17°00'00"
T = 162.11'
L = 302.20'
P.C. = 8+82.60
P.T. = 11+84.80
NO SUPER

P.T. 11+84.80
P.C. 8+82.60
185
P.O.B. 8+00.00

8022 SURVEY BASELINE N60°45'29"W 621.11' ℄ HWY. 255
PN:11 PD:AHTD STD. MON. STAMPED PN:11
SURVEY BASELINE N54°55'12"W 659.40'
S60°42'01"E 2034.25'

STA. 171+35.00 HWY. 255 =
STA. 15+00.00 WELLS LAKE ROAD
Δ = 90°00'00"

℄ WELLS LAKE RD. M.#95,00.10N 315.20'

SURVEY CONTROL DETAILS

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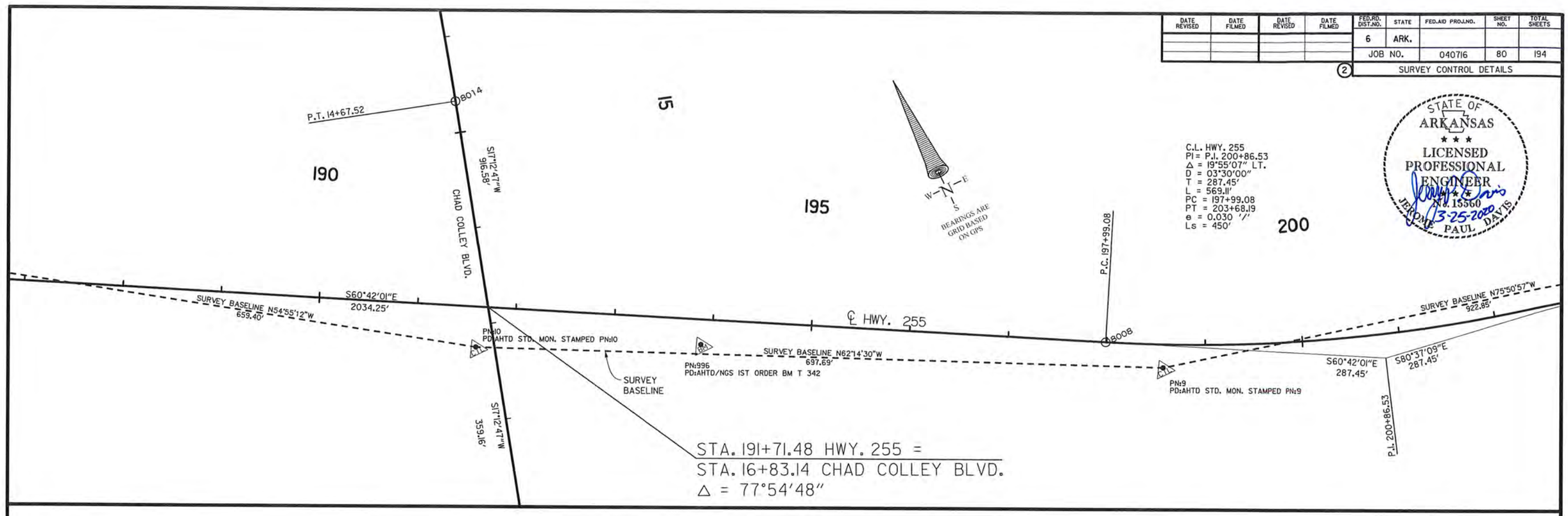
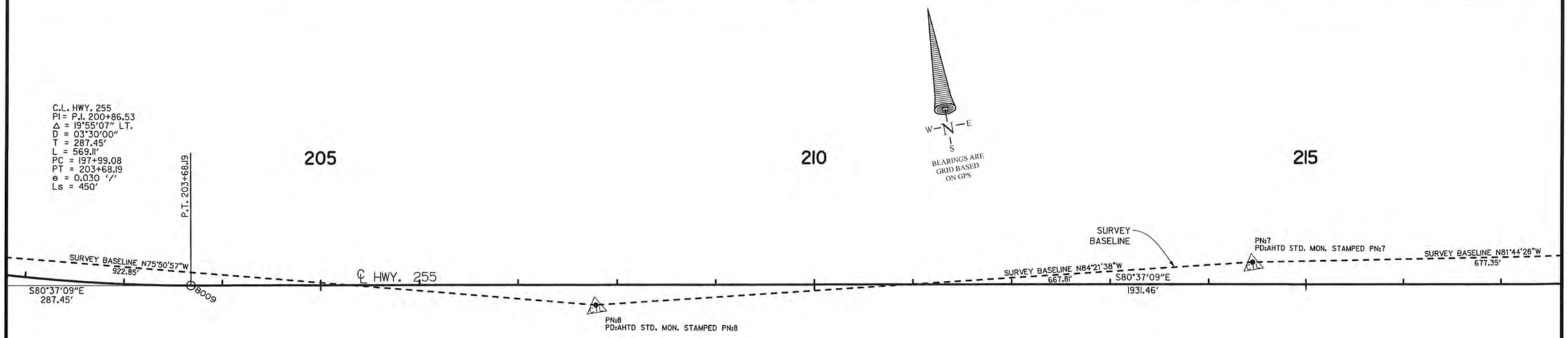
				6	ARK.			
				JOB NO.		040716	80	194

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
* * *
LICENSED PROFESSIONAL ENGINEER
* * *
No. 15560
JEROME PAUL DAVIS
3-25-2020





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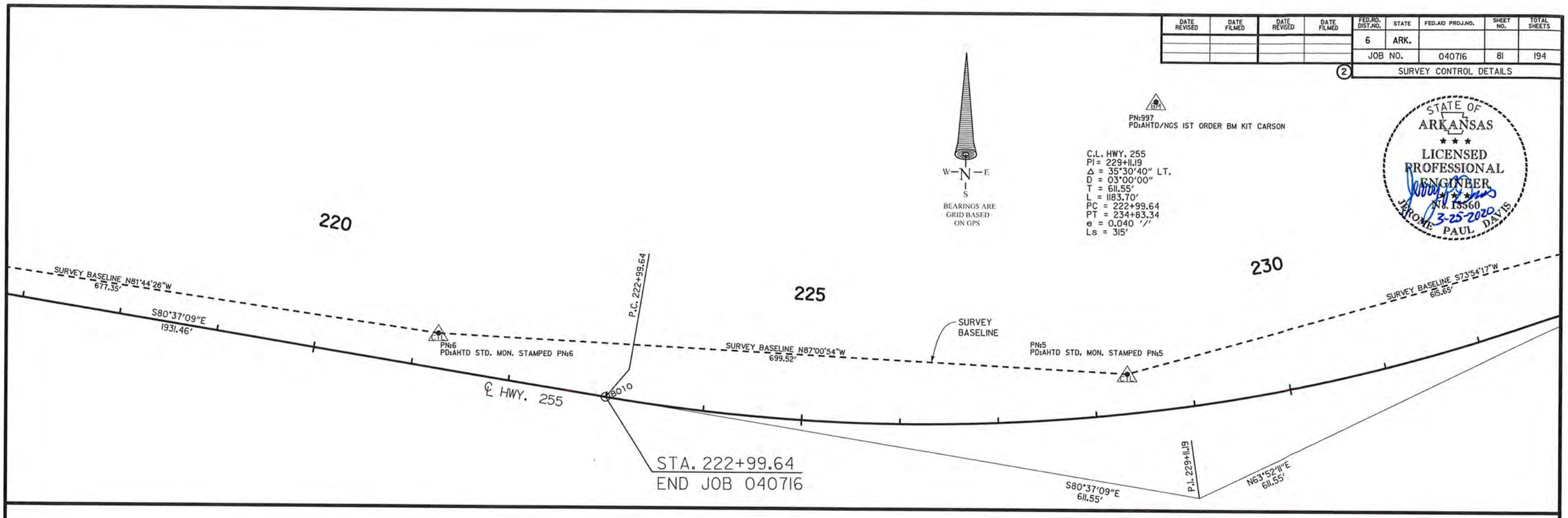
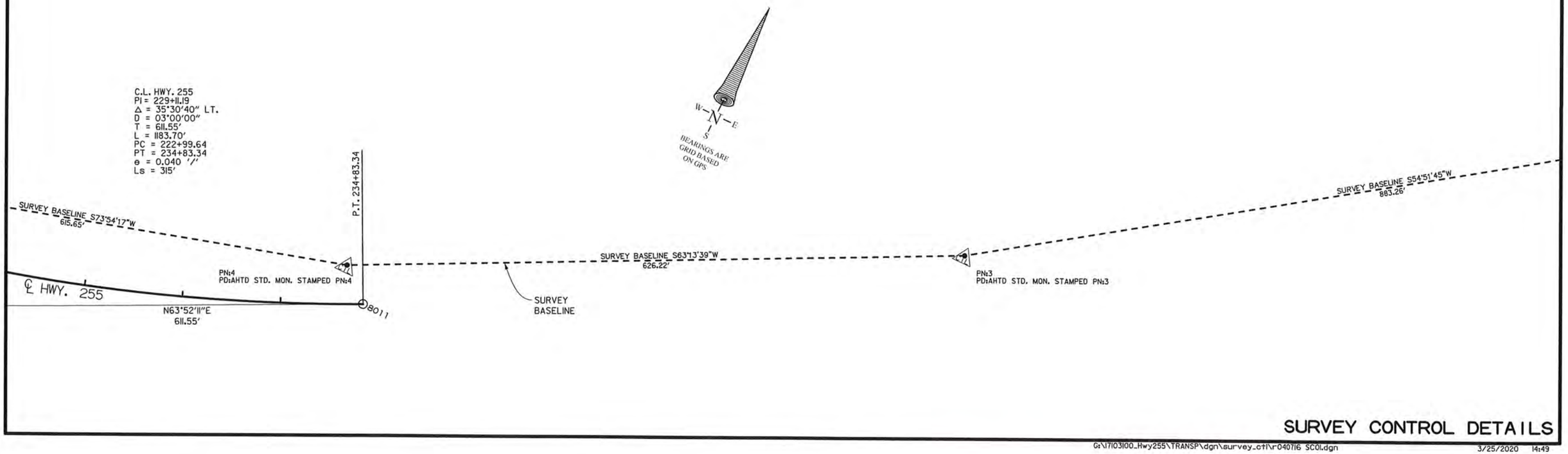
				6	ARK.			
				JOB NO.		040716	81	194

(2) SURVEY CONTROL DETAILS





SURVEY CONTROL DETAILS

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				6	ARK.			
				JOB NO.		040716	82	194

(2) SURVEY CONTROL DETAILS

10

STA. 10+00.00
BEGIN CONST.
CHAD COLLEY BLVD.

S10°25'25"W
14.91'

S10°25'25"W
226.57'

P.I. 12+41.48

S17°12'47"W
226.57'

S17°12'47"W
916.58'

8012

8013

8014

P.O.B. 10+00.00

P.C. 10+14.91

P.T. 14+67.52

HWY. CHAD COLLEY BLVD.
PI = 12+41.48
Δ = 6°47'22" RT.
D = 1°30'00"
T = 226.57'
L = 452.61'
PC = 10+14.91
PT = 14+67.52
NO SUPER

15

190

℄ HWY. 255

PNIO
PDAHTD STD. MON. STAMPED PNIO

PN996
PDAHTD/NGS 1ST ORDER BM T 342

SURVEY BASELINE
S60°42'01"E
2034.25'

SURVEY BASELINE N54°55'12"W
659.40'

20

STA. 191+71.48 HWY. 255 =
STA. 16+83.14 CHAD COLLEY BLVD.
Δ = 77°54'48"

W–N–E–S

BEARINGS ARE GRID BASED ON GPS

STATE OF ARKANSAS
★ ★ ★
LICENSED PROFESSIONAL ENGINEER
★ ★ ★
No. 15566
3-25-2020
JEROME PAUL DAVIS

25

℄ CHAD COLLEY BLVD.

S17°12'47"W
916.58'

8015

S17°12'47"W
277.21'

HWY. CHAD COLLEY BLVD.
PI = 26+61.31
Δ = 13°47'36" RT.
D = 2°30'00"
T = 277.21'
L = 551.73'
PC = 23+84.10
PT = 29+35.83
NO SUPER

P.C. 23+84.10

20

25

W–N–E–S

BEARINGS ARE GRID BASED ON GPS

S17°12'47"W
916.58'

℄ CHAD COLLEY BLVD.

8015

S17°12'47"W
277.21'

P.I. 26+61.31

S31°00'23"W
277.21'

P.C. 23+84.10

30

8016

S31°00'23"W
152.33'

STA. 30+38.27
END CONST.
CHAD COLLEY BLVD.

8017

P.T. 29+35.83

P.O.E. 30+88.16

HWY. CHAD COLLEY BLVD.
PI = 26+61.31
Δ = 13°47'36" RT.
D = 2°30'00"
T = 277.21'
L = 551.73'
PC = 23+84.10
PT = 29+35.83
NO SUPER

SURVEY CONTROL DETAILS

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				6	ARK.			
				JOB NO.		040716	83	194
				(2)	PLAN AND PROFILE SHEETS			

REMOVAL AND DISPOSAL GUARDRAIL

STA.	STA.	SIDE	LIN. FT.
99+95	100+41	RT.	46

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
03-25-2020

STA. 100+00.00
BEGIN JOB 040716
LOG MILE 2.48

MASSARD CREEK

STA. 100+05 CONSTRUCT
DROP INLET ON LT. H= 4'-8"
18" X 10' R.C. PIPE OUTLET
(CLASS III)(TYPE 3 BEDDING)
W/ FES LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 101+30 CONSTRUCT
DROP INLET ON LT. H= 4'-2"
18" X 123' PIPE CULVERT
TO DROP INLET STA. 100+05 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 102+75 CONSTRUCT
DROP INLET ON LT. H= 3'-11"
18" X 141' PIPE CULVERT
TO D.I. STA. 101+30 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 104+00 CONSTRUCT
DROP INLET ON LT. H= 4'-9"
18" X 121' PIPE CULVERT
TO D.I. STA. 102+75 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA 104+64 IN PLACE
18" X 66' PIPE CULV'T.
LT. SIDE DRAIN
REMOVE AND
CONST. APPR. ON LT.
= 5 CU. YD.

STA. 106+55 CONSTRUCT
DROP INLET ON LT. H= 4'-2"
18" X 251' PIPE CULVERT
TO D.I. STA. 104+00 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 108+00 CONSTRUCT
DROP INLET ON LT. H= 4'-9"
18" X 141' PIPE CULVERT
TO D.I. STA. 106+55 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA 109+13
CONST. APPR. ON LT.
= 5 CU. YD.

95 | 100 | 105 | 110

P.I. 100+00.00
Δ = 01°19'09" RT.

+85.62 | 60' TAPER | +45.62

EXIST. R/W | 36' | +38.80 50' | PROPOSED R/W | +00 50' | +00 45.06' | CONSTRUCTION LIMITS | +70 46.21' | PROPOSED R/W +55 50' | 36'

S76°42'18"E | S76°23'09"E | +64 | C.L. HWY. 255 | +13

63' | 58' | 58' | +80 | +34 | R 64' | +67 | R 64' | 2'-11" | 14'-11" | 2'-11"

CONSTRUCTION LIMITS

40' | 28' | EXIST. R/W | 40' | T.C.E. | +20 100.96' | +90.84 107.16' | +94.15 56.34'

50' VEGETATED BUFFER

HUTCHENSON CT.

STA. 100+05 CONSTRUCT
DROP INLET ON RT. H= 5'-6"
18" X 14' R.C. PIPE CULVERT OUTLET
(CLASS III)(TYPE 3 BEDDING)
W/ FES. RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 101+30 CONSTRUCT
DROP INLET ON RT. H= 4'-11"
18" X 121' PIPE CULVERT
TO DROP INLET 100+05 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA 101+80
CONST. TURNOUT ON RT.
=15 CU. YD.

STA. 102+75 CONSTRUCT
DROP INLET ON RT. H= 4'-8"
W/ 8' EXTENSION AND
18" X 141' PIPE CULVERT
TO D.I. STA. 101+30 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 104+00 CONSTRUCT
DROP INLET ON RT. H= 4'-11"
18" X 121' PIPE CULVERT
TO DROP INLET 102+75 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA 104+06 IN PLACE
DROP INLET RT. H = 2'-4"
W/ 18" X 43' R.C. PIPE CULVERT
RETAIN

STA 104+34
CONST. APPR. ON RT.
=5 CU. YD.

STA 104+50 IN PLACE
DROP INLET RT. H = 2'-11"
W/ 18" X 182' R.C. PIPE CULVERT
REMOVE INLET & RETAIN CULVERT

STA 104+57 CONSTRUCT
DROP INLET RT. H = 3'-8"
OVER EXIST. 18" R.C. PIPE CULVERT
AND 18" X 7' R.C. PIPE CULVERT
(CLASS III)(TYPE 3 BEDDING)
TO EXIST. 18" R.C. PIPE CULVERT
TYPE E DROP INLET 4'X4'

STA 105+67
CONST. APPR. ON RT.
=25 CU. YD.

STA 106+35 IN PLACE
JUNC. BOX RT. H = 4'-8"
W/18" X 8' R.C. PIPE CULVERT
RETAIN

STA. 106+55 CONSTRUCT
DROP INLET ON RT. H= 4'-1"
18" X 17' PIPE CULVERT
TO JUNC. BOX STA. 106+35 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 108+00 CONSTRUCT
DROP INLET ON RT. H= 4'-8"
18" X 141' PIPE CULVERT
TO D.I. STA. 106+55 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

ALL R.C. PIPE CULVERTS SHALL BE CLASS III UNLESS OTHERWISE SPECIFIED.

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

HWY. 255

USER: APSIBI
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SCALE: 1:100

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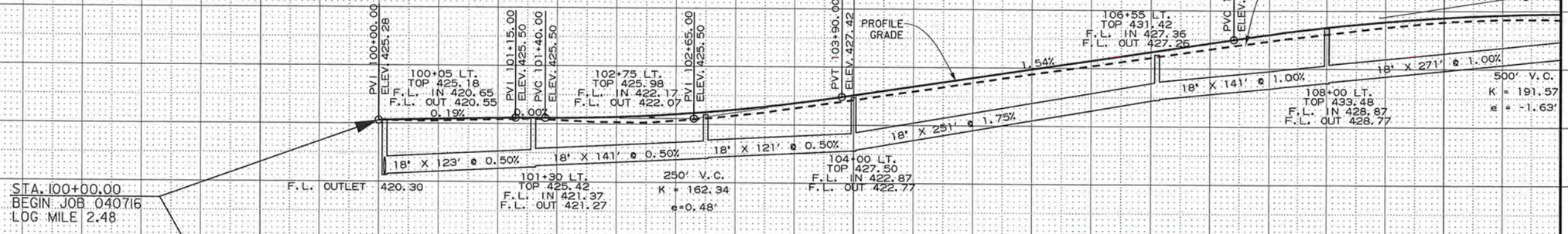
				6	ARK.			
				JOB NO.		040716	84	194

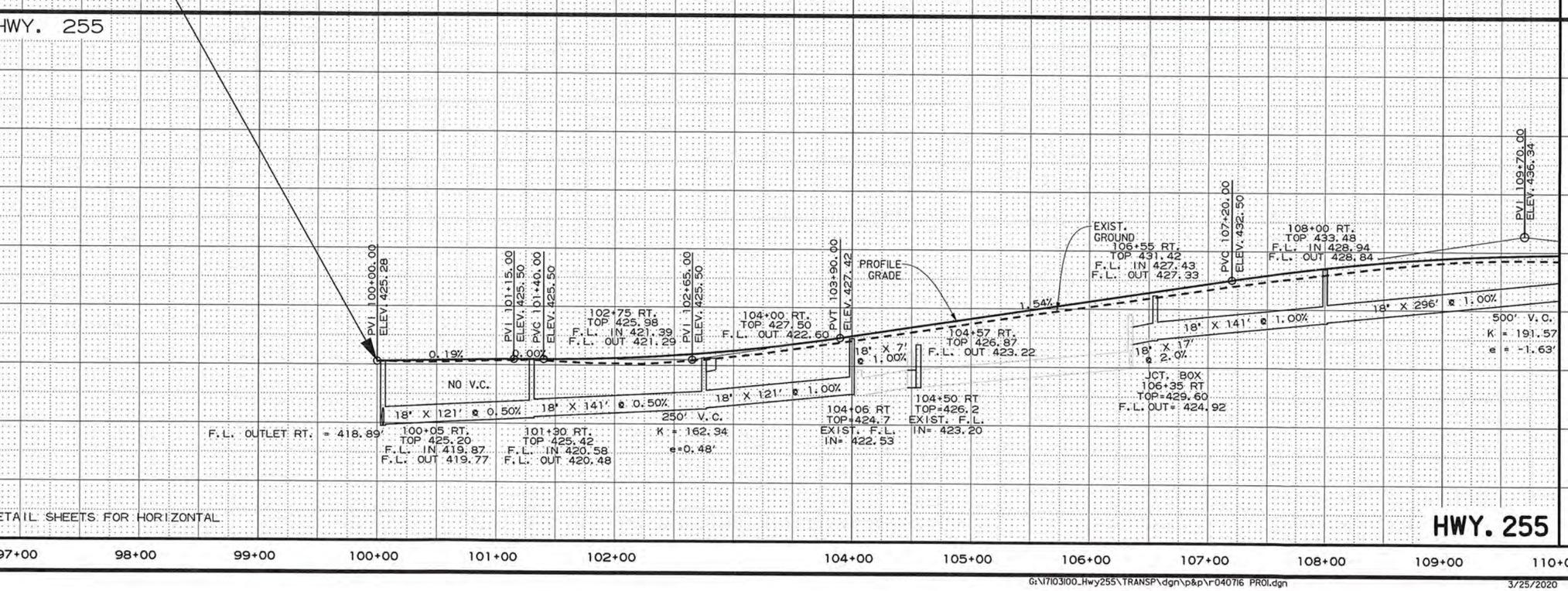
(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
* * *
LICENSED PROFESSIONAL ENGINEER
* * *
NO. 15360
JEROME PAUL DAVIS
3-25-2020

LEFT SIDE OF HWY. 255



RIGHT SIDE OF HWY. 255



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

HWY. 255

95+00 96+00 97+00 98+00 99+00 100+00 101+00 102+00 104+00 105+00 106+00 107+00 108+00 109+00 110+00

USER: APSIBI
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MODEL: Profile

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
4-21-20			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		040716	85	194
PLAN AND PROFILE SHEETS				

(2)

STATE OF ARKANSAS
* * *
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
4-21-2020

STA. 111+18 LT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 5.0 SQ. YD.

STA. 111+26 LT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 4.9 SQ. YD.

STA. 112+46 LT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 5.0 SQ. YD.

STA. 112+49 LT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 4.9 SQ. YD.

CONCRETE DITCH PAVING

STA.	SIDE	"W"	"B"	SQ. YDS.
119+38	LT.	6	4	15
121+00	LT.	6	4	14
125+00	LT.	6	4	13

REMOVAL AND DISPOSAL FENCE

STA.	STA.	SIDE	LIN. FT.	GATE
111+35	111+70	RT.	31	
112+50	113+25	LT.	135	
114+70	115+86	LT.	151	
115+92		LT.		1
117+31	119+37	LT.	240	
117+37		LT.		1
124+45	154+59	LT.	77	
124+67		LT.		1
124+75	129+03	LT.	477	

FENCE

STA.	STA.	SIDE	TYPE	LIN. FT.	16' GATE
111+35	111+70	RT.	7' CHAIN LINK	31	
114+70	115+86	LT.	7' CHAIN LINK	151	
115+92	119+37	LT.	7' CHAIN LINK	240	
117+31		LT.			1
117+37		LT.			1
124+45	119+37	LT.	4' CHAIN LINK	77	
124+67		LT.			1
124+75	129+03	LT.	4' CHAIN LINK	477	

STA. 110+75 CONSTRUCT DROP INLET ON LT. H= 2'-11" 18" X 271' PIPE CULVERT TO D.I. STA. 108+00 LT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X4'

STA. 111+36 IN PLACE DROP INLET ON LT. H= 5'-5" W/18" X 31' R.C. PIPE CULVERT INLET W/18" X 158' R.C. PIPE CULVERT OUTLET REMOVE

STA 113+40 CONST. APPR. ON LT. = 30 CU. YD.

CONCRETE WALK TYPE SPECIAL STA. 114+70 - STA. 115+89 LT. STA. 115+62 - STA. 118+19 LT.

STA. 114+55 CONSTRUCT DROP INLET ON LT. H = 4'-1" 18" X 106' PIPE CULVERT TO D.I. STA. 115+65 LT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X4'

STA. 115+65 - CONSTRUCT DROP INLET ON LT. H = 5'-3" WITH 2 4' EXTENSIONS AND 18" X 149' PIPE CULVERT TO D.I. STA 117+19 LT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X4'

STA 116+03 CONST. APPR. ON LT. = 75 CU. YD.

STA 116+71 CONST. APPR. ON LT. = 75 CU. YD.

STA. 117+19 CONSTRUCT DROP INLET ON LT. H = 10'-6" 48" X 22' R.C. PIPE CULVERT OUTLET (CLASS III)(TYPE 3 BEEDING) W/ FES. LT. TYPE MO DROP INLET = 6' DIA. TYPE C DROP INLET = 5'X4'

STA. 117+22 IN PLACE 14' WIDE 26' LONG BRIDGE LT. W/ HDWLS. LT. & RT. REMOVE AS EXISTING BRIDGE STRUCTURE (SITE NO. 1) = 1.00 LUMP SUM

STA. 117+33 - STA. 130+40 DUMPED RIPRAP = 2701 CU. YD.

STA. 119+20 CONSTRUCT D.I. ON LT. H = 1'-0" D.I. TYPE SPECIAL = 4' X 8'

STA. 120+00 LT. CONSTRUCT QUADRUPLE 7'X7'X30' BOX CULVERT W/ 31 WINGS LT. & RT. CONSTRUCT APPR. ON LT. = 400 CU. YD. QIO = 1250.77 CFS D.A. = 771.5 ACRES

STA 121+00 CONSTRUCT D.I. ON LT. H = 1'-0" D.I. TYPE SPECIAL = 4' X 8'

STA. 122+83 CONSTRUCT DROP INLET ON LT. H= 3'-1" ON 4' X 5' X 101' R.C. BOX CULVERT TYPE C DROP INLET = 4'X4'

STA. 124+67 LT. CONSTRUCT QUADRUPLE 7'X7'X18' BOX CULVERT W/ 31 WINGS LT. & RT. CONSTRUCT APPR. ON LT. = 270 CU. YD. Q50 = 1785 CFS D.A. = 705.4 ACRES

STA. 124+75 IN PLACE 16' WIDE 20' LONG BRIDGE LT. W/ HDWLS. LT. & RT. REMOVE AS EXISTING BRIDGE STRUCTURE (SITE NO. 2) = 1.00 LUMP SUM

STA 125+00 CONSTRUCT D.I. ON LT. H = 1'-0" D.I. TYPE SPECIAL = 4' X 8'

STA. 112+00.96 HWY. 255 = STA. 10+00.00 MASSARD RD. Δ = 78°54'50"

C.L. HWY. 255
PI = 121+02.90
Δ = 09°28'50" LT.
D = 01°00'00"
T = 475.12'
L = 948.06'
PC = 116+27.78
PT = 125+75.84
NO SUPERELEVATION

STA. 110+67 CONST. APPR. ON RT. = 20 CU. YD.

STA. 111+00 CONSTRUCT DROP INLET ON RT. H = 2'-6" 18" X 296' PIPE CULVERT TO D.I. STA. 108+00 RT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X4'

STA. 111+45 RT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 11.5 SQ. YD.

STA. 111+52 RT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 4.9 SQ. YD.

STA. 13+35 IN PLACE DROP INLET ON RT. H = 2'-11" 15" X 60' R.C. PIPE CULVERT TO DROP INLET STA. 13+35 LT. RETAIN

STA. 10+70 IN PLACE DROP INLET ON LT. H= 3'-5" W/ 18" R.C. PIPE CULVERT REMOVE

STA 10+85 IN PLACE DROP INLET LT. H = 4'-5" W/ 30" X 47' R.C. PIPE CULVERT REMOVE

STA. 10+89 CONSTRUCT DROP INLET ON LT. H = 4'-6" 30" X 66' PIPE CULVERT TO D.I. STA. 113+07 RT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X4'

STA. 10+98 IN PLACE DROP INLET ON RT. H = 3'-2" 15" X 65' R.C. PIPE CULVERT TO DROP INLET STA. 10+89 LT. RETAIN

STA 10+97 IN PLACE DROP INLET LT. W/ 24" X 234' R.C. PIPE CULVERT RETAIN & MODIFY TO JUNC. BOX W/ 30" X 16' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING) TO DROP INLET RT. REMOVE TYPE ST = 6'X3'

STA. 13+35 IN PLACE DROP INLET ON LT. H = 4'-0" 24" X 234' R.C. PIPE CULVERT TO DROP INLET STA. 10+97 LT. RETAIN

STA. 112+76 RT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 4.7 SQ. YD.

STA. 112+81 RT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 3.7 SQ. YD.

STA. 112+97 IN PLACE DROP INLET ON RT. H = 3'-6" W/ 30" X 24' R.C. PIPE CULVERT INLET W/18" X 158' R.C. PIPE CULVERT OUTLET REMOVE

STA 113+07 CONSTRUCT DROP INLET RT. H = 4'-11" W/ 30" X 144' PIPE CULVERT TO D.I. STA 114+55 RT. TYPE MO DROP INLET = 5' DIA. TYPE C DROP INLET = 4'X4'

STA 114+56 CONSTRUCT DROP INLET RT. H = 5'-1" 18" X 5' R.C. PIPE CULVERT INLET (CLASS III)(TYPE 3 BEDDING) W/ FES RT. W/ 30" X 111' PIPE CULVERT TO D.I. STA. 115+70 RT. TYPE MO DROP INLET = 5' DIA. TYPE C DROP INLET = 4'X4'

STA 115+37 CONST. APPR. ON RT. = 5 CU. YD.

STA 115+70 CONSTRUCT DROP INLET RT. H = 5'-5" WITH 2 4' EXTENSIONS AND 30" X 144' PIPE CULVERT TO D.I. STA. 117+18 RT. AND W/ 18" X 9' R.C. PIPE CULVERT (CLASS III)(TYPE 3 BEDDING) INLET W/ FES RT. TYPE MO DROP INLET = 5' DIA. TYPE C DROP INLET = 4'X4' Q50 = 12 CFS D.A. = 4.0 ACRES

STA. 117+18 IN PLACE 30"x 54' PIPE CULV'T. W/ HDWLS. LT. & RT. REMOVE

STA. 117+18 CONSTRUCT DROP INLET ON RT. H = 8'-5" 36" X 2' R.C. PIPE CULVERT INLET (CLASS III)(TYPE 3 BEDDING) W/ FES RT. AND 48" X 67' R.C. PIPE CULVERT (CLASS IV)(TYPE 3 BEDDING) TO D.I. STA. 117+19 LT. TYPE MO DROP INLET = 6' DIA. TYPE C DROP INLET = 5'X4' Q50 = 50 CFS D.A. = 13.3 ACRES

STA. 118+25 RT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 4.6 SQ. YD.

STA. 118+29 CONSTRUCT DROP INLET ON RT. H = 6'-0" 18" X 108' PIPE CULVERT TO D.I. STA. 117+18 RT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X4'

STA 118+46 IN PLACE 18" X 81' R.C. PIPE CULVERT RT. SIDE DRAIN - REMOVE CONSTRUCT APPROACH = 5 CU. YD.

STA. 118+64 CONSTRUCT DROP INLET ON RT. H = 5'-8" 18" X 32' PIPE CULVERT TO D.I. STA. 118+29 RT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X4'

STA. 118+68 RT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 3.0 SQ. YD.

STA. 119+50 CONSTRUCT DROP INLET ON RT. H = 5'-5" W/ 8' EXTENSION AND 18" X 5' R.C. PIPE CULVERT INLET (CLASS III)(TYPE 3 BEDDING) W/ FES LT. AND 18" X 84' PIPE CULVERT TO D.I. STA. 118+64 RT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X4'

STA. 121+00 CONSTRUCT DROP INLET ON RT. H = 5'-1" 18" X 147' PIPE CULVERT TO D.I. STA. 119+50 RT. TYPE MO DROP INLET = 4' DIA. TYPE C DROP INLET = 4'X4'

STA. 122+82 CONSTRUCT DROP INLET ON RT. H = 3'-1" ON 4' X 5' X 101' R.C. BOX CULVERT TYPE C DROP INLET = 4'X4'

STA. 122+83 IN PLACE 4' X 5' X 52' BOX CULV'T. W/ HDWLS. LT. & RT. REMOVE HDWLS. LT. & RT. EXTEND 15' RT. AND 35' LT. COMPLETED LENGTH 101' W/ 31 WINGS LT. & RT. Q50 = 122 CFS D.A. = 61.2 ACRES DUMPED RIPRAP = 7 CU. YD.

STA. 125+00 CONSTRUCT DROP INLET ON RT. H = 6'-2" 48" X 214' PIPE CULVERT TO BOX CULVERT STA. 122+83 RT. TYPE MO DROP INLET = 6' DIA. TYPE C DROP INLET = 4'X5'

ALL R.C. PIPE CULVERTS SHALL BE CLASS III UNLESS OTHERWISE SPECIFIED.

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

HWY. 255

USER: jh5195
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SCALE: 1:100

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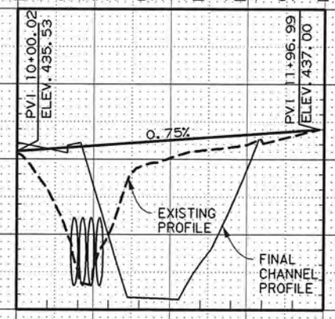
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	86	194

(2) PLAN AND PROFILE SHEETS

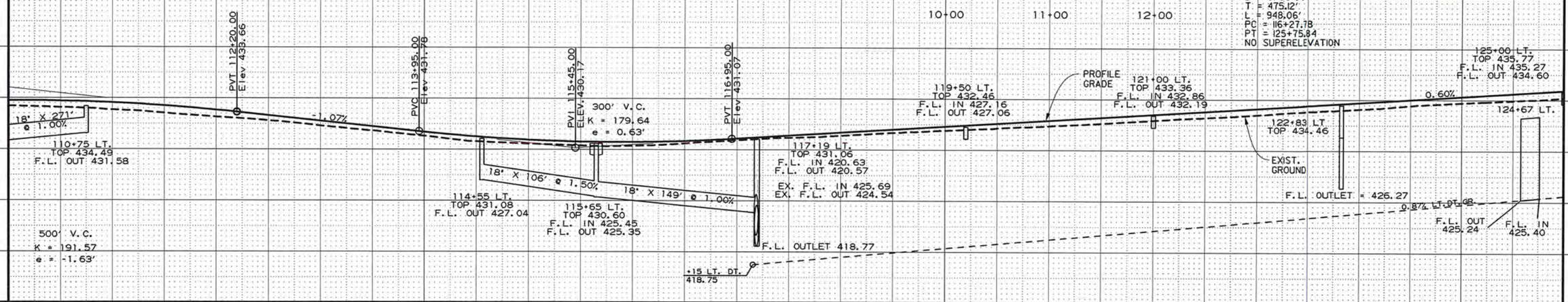
LEFT SIDE OF HWY. 255

TEMPORARY DRIVE 124+67 LT.



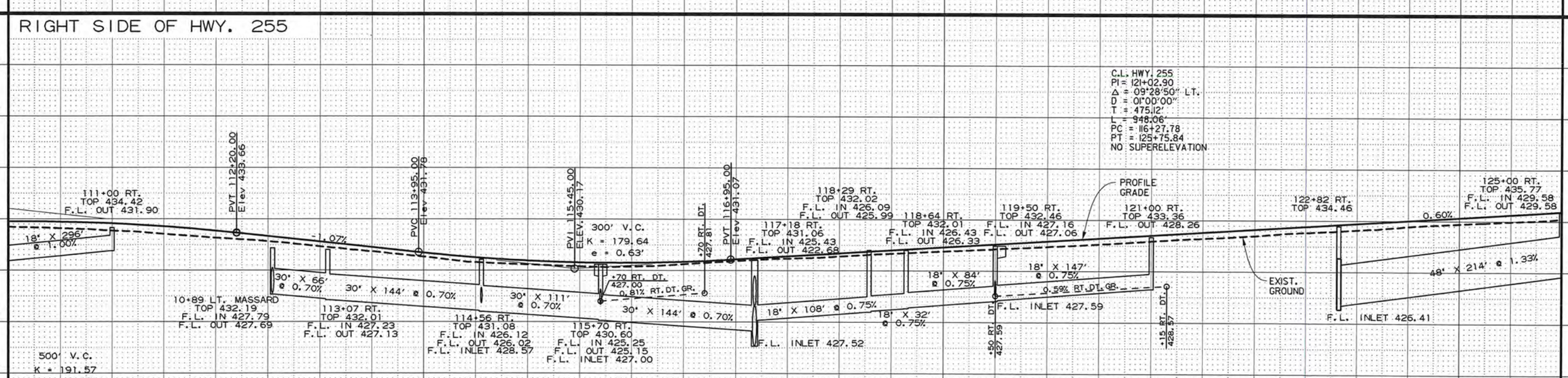
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
JEROME PAUL DAVIS
No. 15560
4-02-2020

C.L. HWY. 255
PI = 121+02.90
Δ = 09°28'50" LT.
D = 01°00'00"
T = 475.12'
L = 948.06'
PC = 116+27.78
PT = 125+75.84
NO SUPERELEVATION



RIGHT SIDE OF HWY. 255

C.L. HWY. 255
PI = 121+02.90
Δ = 09°28'50" LT.
D = 01°00'00"
T = 475.12'
L = 948.06'
PC = 116+27.78
PT = 125+75.84
NO SUPERELEVATION



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

HWY. 255

110+00 111+00 112+00 113+00 114+00 115+00 116+00 117+00 118+00 119+00 120+00 121+00 122+00 123+00 124+00 125+00

USER: jh5195
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PLOTTED: 4/1/2020 15:29 SCALE: 1:100

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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.		040716	87	194
				(2)	PLAN AND PROFILE SHEETS			

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
4-02-2020

CONCRETE DITCH PAVING

STA.	SIDE	"W"	"B"	SQ. YDS.
127+00	LT.	6	4	11
129+00	LT.	6	4	9

REMOVAL AND DISPOSAL FENCE

STA.	STA.	SIDE	LIN. FT.	GATE
130+84		LT.		2
130+97		LT.	28	
134+97	139+63	LT.	466	
138+03		LT.		1
139+87		LT.		1
140+35	140+83	LT.	76	

FENCE

STA.	STA.	SIDE	TYPE	LIN. FT.	GATE
130+84		LT.			(2) 4'-0"
134+97	139+63	LT.	4' CHAIN LINK	466	
138+03		LT.			(1) 16'-0"
139+87		LT.			(1) 16'-0"
140+35	140+83	LT.	7' CHAIN LINK	76	

C.L. HWY. 255
PI = 121+02.90
Δ = 09°28'50" LT.
D = 01°00'00"
T = 475.12'
L = 948.06'
PC = 116+27.78
PT = 125+75.84
NO SUPERELEVATION

STA 127+00 CONSTRUCT
D.I. ON LT. H = 1'-0"
D.I. TYPE SPECIAL = 4' X 8'

STA 129+00 CONSTRUCT
D.I. ON LT. H = 1'-0"
D.I. TYPE SPECIAL = 4' X 8'

STA. 130+50 CONSTRUCT
DROP INLET ON LT. H= 3'-0"
18" X 10' R.C. PIPE CULVERT OUTLET
(CLASS III)(TYPE 3 BEDDING)
W/ FES LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA 130+79 IN PLACE
18" X 24' C.M. PIPE CULV'T.
LT. SIDE DRAIN - REMOVE
INSTALL 18" X 44' PIPE CULV'T.
LT. SIDE DRAIN
CONST. APPR. = 60 CU. YD.

STA 131+52 IN PLACE
18" X 31' R.C. PIPE CULV'T.
LT. SIDE DRAIN - REMOVE

STA. 132+00 CONSTRUCT
DROP INLET ON LT. H= 2'-9"
18" X 146' PIPE CULVERT
TO D.I. STA. 130+50 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA 133+00
INSTALL 18" X 46' PIPE CULV'T.
LT. SIDE DRAIN
CONST. APPR. = 80 CU. YD.

STA. 134+00 CONSTRUCT
DROP INLET ON LT. H= 4'-1"
18" X 196' PIPE CULVERT
TO D.I. STA. 132+00 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 137+00 CONSTRUCT
DROP INLET ON LT. H= 4'-4"
18" X 296' PIPE CULVERT
TO D.I. STA. 134+00 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA 138+25
CONST. APPR. ON LT.
=50 CU. YD.

STA. 139+00 CONSTRUCT
DROP INLET ON LT. H= 4'-6"
18" X 196' PIPE CULVERT
TO D.I. STA. 137+00 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 127+00 CONSTRUCT
DROP INLET ON RT. H= 4'-5"
36" X 7' R.C. PIPE CULVERT INLET
(CLASS III)(TYPE 3 BEDDING)
W/ FES RT.
AND 48" X 194' PIPE CULVERT
TO D.I. STA. 125+00 RT.
TYPE MO DROP INLET = 6' DIA.
TYPE C DROP INLET = 4'X5'

STA. 129+00 CONSTRUCT
DROP INLET ON RT. H= 6'-2"
48" X 195' PIPE CULVERT
TO D.I. STA. 127+00 RT.
TYPE MO DROP INLET = 6' DIA.
TYPE C DROP INLET = 4'X5'

STA. 130+50 CONSTRUCT
DROP INLET ON RT. H= 6'-2"
48" X 144' PIPE CULVERT
TO D.I. STA. 129+00 RT.
TYPE MO DROP INLET = 6' DIA.
TYPE C DROP INLET = 4'X5'

STA. 131+02 CONSTRUCT
DROP INLET ON RT. H= 5'-2"
36" X 46' PIPE CULVERT
TO D.I. STA. 130+50 RT.
TYPE MO DROP INLET = 6' DIA.
TYPE C DROP INLET = 5'X5'

STA. 131+07 RT. CONSTRUCT
TYPE 3 WHEELCHAIR
RAMP = 4.7 SQ.YDS.

STA 131+36
CONST. TURNOUT ON RT.
= 10 CU. YD.

STA 131+53 IN PLACE
DROP INLET RT. H = 4'-6"
MODIFY TO JUNC. BOX (TYPE E)
W/ 24" X 196' R.C. PIPE CULVERT INLET
AND W/ DBL. 24" X 33' R.C. PIPE CULVERT INLETS
AND W/ DBL. 24" X 53' R.C. PIPE CULVERT OUTLETS
RETAIN

STA. 131+65 RT. CONSTRUCT
TYPE 3 WHEELCHAIR
RAMP = 3.1 SQ.YDS.

STA. 131+71 CONSTRUCT
DROP INLET ON RT. H= 4'-8"
44" X 27" X 64' R.C. PIPE CULVERT
(CLASS IV)(TYPE 3 BEDDING)
TO D.I. STA. 131+02 RT.
TYPE MO DROP INLET = 6' DIA.
TYPE C DROP INLET = 6'X6'

STA. 132+00 CONSTRUCT
DROP INLET ON RT. H= 4'-6"
24" X 24' PIPE CULVERT
TO D.I. STA. 131+71 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 134+00 CONSTRUCT
DROP INLET ON RT. H= 4'-11"
W/ 8' EXTENSION AND
24" X 196' PIPE CULVERT
TO D.I. STA. 132+00 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 137+00 CONSTRUCT
DROP INLET ON RT. H= 4'-10"
18" X 296' PIPE CULVERT
TO D.I. STA. 134+00 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 139+00 CONSTRUCT
DROP INLET ON RT. H= 4'-11"
18" X 196' PIPE CULVERT
TO D.I. STA. 137+00 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

ALL R.C. PIPE CULVERTS SHALL BE CLASS III UNLESS OTHERWISE SPECIFIED.

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

HWY. 255

USER: jh595
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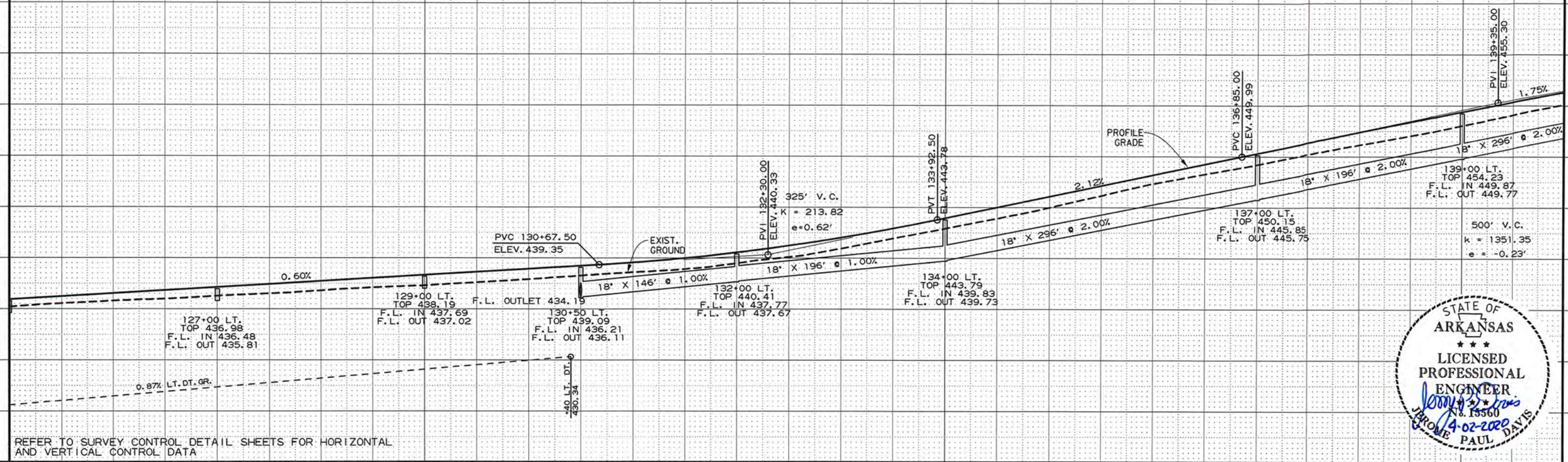
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	88	194

(2) PLAN AND PROFILE SHEETS

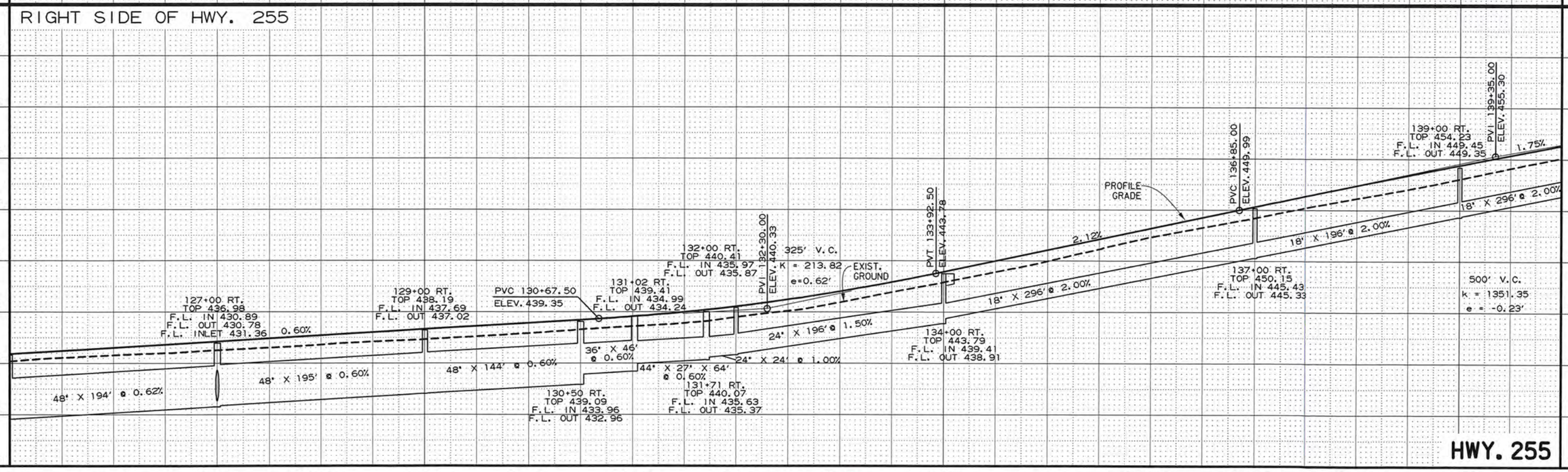
LEFT SIDE OF HWY. 255



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

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13560
JEROME PAUL DAVIS
4-02-2020

RIGHT SIDE OF HWY. 255



HWY. 255

125+00 126+00 127+00 128+00 129+00 130+00 131+00 132+00 133+00 134+00 135+00 136+00 137+00 138+00 139+00 140+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.		040716	89	194
				(2)	PLAN AND PROFILE SHEETS			

STATE OF ARKANSAS
* * *
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

CONCRETE DITCH PAVING

STA.	SIDE	"W"	"B"	SQ. YDS.
154+00	LT.	6	4	13

REMOVAL AND DISPOSAL FENCE

STA.	STA.	SIDE	LIN. FT.	GATE
141+33	141+42	LT.	42	
141+39		LT.		2
141+64	158+00	LT.	1637	
154+50	159+75	LT.	579	

FENCE

STA.	STA.	SIDE	TYPE	LIN. FT.	16' GATE
141+33	141+42	LT.	TYPE D-I WIRE	16	
141+33	141+42	LT.	4' CHAIN LINK	26	
141+39	158+00	LT.			2
141+64	159+75	LT.	TYPE D-I WIRE	1637	
154+50	154+60	LT.	7' CHAIN LINK	579	

STA. 140+86 LT. CONSTRUCT
TYPE 3 WHEELCHAIR
RAMP = 4.5 SQ. YD.

STA 141+08
CONST. TURNOUT ON LT.
= 170 CU. YD.

STA. 141+30 LT. CONSTRUCT
TYPE 3 WHEELCHAIR
RAMP = 4.5 SQ. YD.

STA 140+43
CONST. APPR. ON LT.
=105 CU. YD.

STA. 142+00 CONSTRUCT
DROP INLET ON LT. H= 4'-0"
W/ 8' EXTENSION AND
18" X 296' PIPE CULVERT
TO D.I. STA. 139+00 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

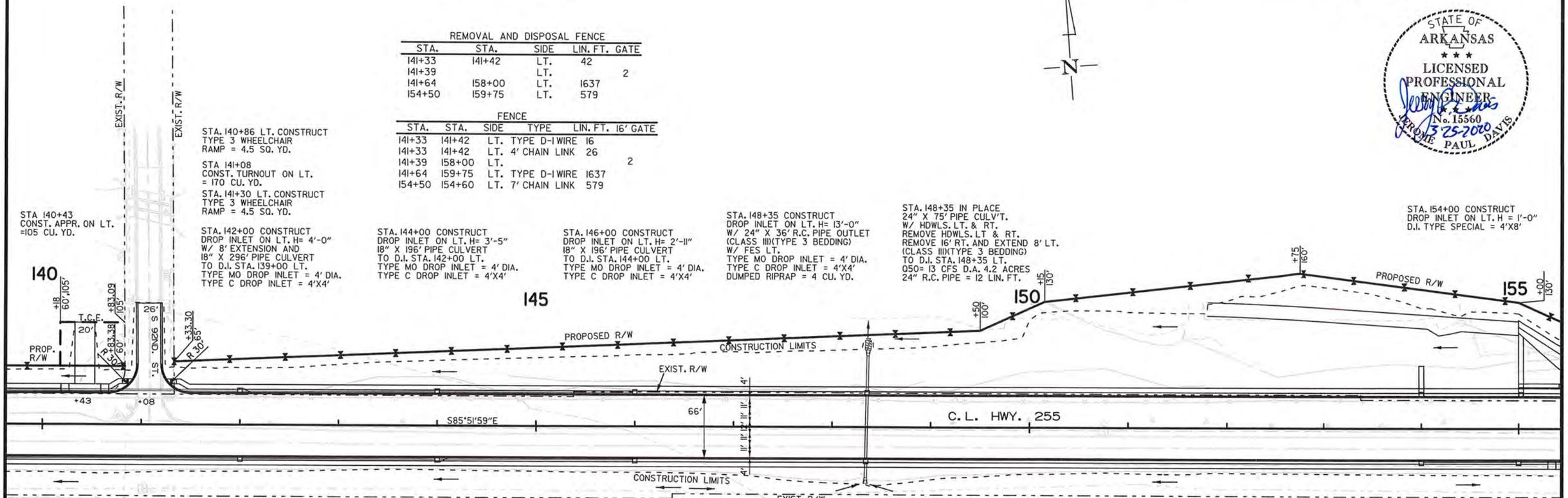
STA. 144+00 CONSTRUCT
DROP INLET ON LT. H= 3'-5"
18" X 196' PIPE CULVERT
TO D.I. STA. 142+00 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 146+00 CONSTRUCT
DROP INLET ON LT. H= 2'-11"
18" X 196' PIPE CULVERT
TO D.I. STA. 144+00 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 148+35 CONSTRUCT
DROP INLET ON LT. H= 13'-0"
W/ 24" X 36' R.C. PIPE OUTLET
(CLASS III)(TYPE 3 BEDDING)
W/ FES LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'
DUMPED RIPRAP = 4 CU. YD.

STA. 148+35 IN PLACE
24" X 75' PIPE CULV'T.
W/ HDWLS. LT. & RT.
REMOVE HDWLS. LT & RT.
REMOVE 16' RT. AND EXTEND 8' LT.
(CLASS III)(TYPE 3 BEDDING)
TO D.I. STA. 148+35 LT.
050= 13 CFS D.A. 4.2 ACRES
24" R.C. PIPE = 12 LIN. FT.

STA. 154+00 CONSTRUCT
DROP INLET ON LT. H = 1'-0"
D.I. TYPE SPECIAL = 4'X8'



STA. 142+00 CONSTRUCT
DROP INLET ON RT. H= 4'-5"
18" X 296' PIPE CULVERT
TO D.I. STA. 139+00 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 144+00 CONSTRUCT
DROP INLET ON RT. H= 3'-10"
W' 8' EXTENSION AND
18" X 196' PIPE CULVERT
TO D.I. STA. 142+00 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 146+00 CONSTRUCT
DROP INLET ON RT. H= 3'-4"
18" X 196' PIPE CULVERT
TO D.I. STA. 144+00 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 148+34 CONSTRUCT
DROP INLET ON RT. H= 8'-11"
OVER EXIST. 24" R.C. PIPE CULVERT
24" X 15' R.C. PIPE CULVERT INLET
(CLASS III)(TYPE 3 BEDDING)
W/ FES RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 154+00 CONSTRUCT
DROP INLET ON RT. H= 3'-5"
18" X 96' PIPE CULVERT
TO DROP INLET STA. 155+00 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

ALL R.C. PIPE CULVERTS SHALL BE CLASS III UNLESS OTHERWISE SPECIFIED.

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

HWY. 255

USER: APSIBI
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\p&p\r040716 PL04.dgn
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				6	ARK.			
				JOB NO.		040716	90	194

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS ★★★ LICENSED PROFESSIONAL ENGINEER ★ No. 15560 JEROME PAUL DAVIS 3-25-2020

LEFT SIDE OF HWY. 255

490 485 480 475 470 465 460 455 450

PROFILE GRADE

500' V.C.
K = 1351.35
e = -0.23'

PVT 141+85.00
ELEV. 459.67

1.75%

18' X 296' @ 2.00%

18' X 196' @ 2.00%

18' X 196' @ 2.00%

142+00 LT.
TOP 459.77
F.L. IN 455.89
F.L. OUT 455.79

144+00 LT.
TOP 463.26
F.L. IN 459.91
F.L. OUT 459.81

146+00 LT.
TOP 466.75
F.L. OUT 463.83

EXIST. GROUND

148+35 LT.
TOP 470.84
F.L. IN 457.84
F.L. OUT 457.84
F.L. OUTLET 457.42

PVC 150+10.00
ELEV. 474.07

PVI 151+60.00
ELEV. 476.68

300' V.C.
K = 93.75
e = -1.20'

PVT 153+10.00
ELEV. 474.51

154+00 LT.
TOP 473.06
F.L. IN 472.56
F.L. OUT 471.89

-1.45%

+58 LT. DT.
449.87

+00 LT. DT.
452.82

0.86% LT. DT. GR.

RIGHT SIDE OF HWY. 255

485 480 475 470 465 460 455 450 445

PROFILE GRADE

500' V.C.
K = 1351.35
e = -0.23'

PVT 141+85.00
ELEV. 459.67

1.75%

18' X 296' @ 2.00%

18' X 196' @ 2.00%

18' X 196' @ 2.00%

142+00 RT.
TOP 459.77
F.L. IN 455.77
F.L. OUT 455.37

144+00 RT.
TOP 463.26
F.L. IN 459.49
F.L. OUT 459.39

146+00 RT.
TOP 466.75
F.L. OUT 463.41

EXIST. GROUND

F.L. INLET 464.82

148+34 RT.
TOP 470.84
F.L. IN 463.54
F.L. OUT 461.96

PVC 150+10.00
ELEV. 474.07

PVI 151+60.00
ELEV. 476.68

300' V.C.
K = 93.75
e = -1.20'

PVT 153+10.00
ELEV. 474.51

154+00 RT.
TOP 473.06
F.L. OUT 469.65

-1.45%

18' X 96' @ 2.00%

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

HWY. 255

140+00 141+00 142+00 143+00 144+00 145+00 146+00 147+00 148+00 149+00 150+00 151+00 152+00 153+00 154+00 155+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.		040716	91	194

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
4-02-2020

REMOVAL AND DISPOSAL GUARDRAIL

STA.	STA.	SIDE	LIN. FT.
155+82	157+70	LT.	73

CONCRETE DITCH PAVING (TYPE A)

STA.	STA.	SIDE	"W"	"B"	SQ. YDS.
155+03		LT.	6	4	28
155+00	159+50	LT.	VARIABLE	4	1718

REMOVAL AND DISPOSAL FENCE

STA.	STA.	SIDE	LIN. FT.	GATE
156+94		LT.		1
158+40	165+09	LT.	697	
168+54	168+64	LT.	54	
168+64	172+04	LT.	340	

FENCE

STA.	STA.	SIDE	TYPE	LIN. FT.	16' GATE
156+94		LT.			1
158+40	165+09	LT.	D-I WIRE	697	
168+54	168+64	LT.	PIPE	54	
168+64	172+04	LT.	D-I WIRE	340	

C.L. HWY. 255
PI = 165+36.39
Δ = 05°08'55" LT.
D = 01°00'00"
T = 257.60'
L = 514.86'
PC = 162+78.79
PT = 167+93.65
NO SUPERELEVATION

STA 155+00 - STA. 159+50 LT.
CONSTRUCT REINFORCED CONCRETE RETAINING WALLW/450 LIN. FT.
HAND RAILING

STA 155+03 CONSTRUCT
D.I. ON LT. H = 1'-0"
D.I. TYPE SPECIAL = 4' X 8'

STA 157+80 CONSTRUCT
D.I. ON LT. H = 1'-0"
D.I. TYPE I SPECIAL = 4' X 8'

STA 158+00 CONSTRUCT
D.I. ON LT. H = 1'-0"
D.I. TYPE I SPECIAL = 4' X 8'

STA. 158+16 IN PLACE
10' x 5' x 51' R.C. BOX CULV'T.
W/ HDWLS. LT. & RT.
REMOVE HDWLS. LT. & RT. AND
EXTEND 37' LT. & 8' RT.
COMPLETED LENGTH 97'
W/ 3:1 WING ON RT.
Q50 = 348 CFS D.A. = 232.9 ACRES
DUMPED RIPRAP = 11 CU. YD.

STA. 158+50 CONSTRUCT
DROP INLET ON LT. H = 7'-8"
W/ 8' EXTENSION AND
18" X 27' PIPE CULVERT
TO R.C. BOX CULVERT STA. 158+16
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 161+00 CONSTRUCT
DROP INLET ON LT. H= 3'-10"
18" X 246' PIPE CULVERT
TO D.I. STA. 158+50 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 164+00 CONSTRUCT
DROP INLET ON LT. H= 3'-10"
18" X 295' PIPE CULVERT
TO D.I. STA. 161+00 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 165+10 LT. CONSTRUCT
TYPE 3 WHEELCHAIR
RAMP = 4.5 SQ. YD.

STA. 165+32
CONST. TURNOUT ON LT.
=160 CU. YD.

STA. 165+56 LT. CONSTRUCT
TYPE 3 WHEELCHAIR
RAMP = 4.6 SQ. YD.

STA. 166+00 CONSTRUCT
DROP INLET ON LT. H=4'-3"
W/ 8' EXTENSION
18" X 195' PIPE CULVERT
TO D.I. STA. 164+00 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA 168+14 IN PLACE
18" X 23' PIPE CULV'T.
LT. SIDE DRAIN
REMOVE AND
CONST. APPR. =75 CU. YD.

STA. 169+00 CONSTRUCT
DROP INLET ON LT. H= 3'-9"
18" X 295' PIPE CULVERT
TO D.I. STA. 166+00 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 155+60 RT.
CONST. CURB CUT

STA. 155+00 CONSTRUCT
DROP INLET ON RT. H= 4'-0"
18" X 276' PIPE CULVERT
TO D.I. STA. 157+80 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 157+80 CONSTRUCT
DROP INLET ON RT. H= 6'-5"
W/ 4' EXTENSION AND
18" X 16' PIPE CULVERT
TO D.I. STA. 158+00 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 158+00 CONSTRUCT
DROP INLET ON RT. H= 6'-10"
18" X 9' PIPE CULVERT
CONNECT TO EXIST. BOX CULVERT STA. 158+16
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 158+50 CONSTRUCT
DROP INLET ON RT. H= 6'-11"
WITH 4' EXTENSION AND
18" X 27' PIPE CULVERT
CONNECT TO EXIST. BOX CULVERT STA. 158+16
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA 159+15 IN PLACE
24" X 60' PIPE CULV'T.
RT. SIDE DRAIN
RETAIN AND
CONST. APPR. =50 CU. YD.

STA. 161+00 CONSTRUCT
DROP INLET ON RT. H= 4'-4"
18" X 246' PIPE CULVERT
TO D.I. STA. 158+50 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 164+00 CONSTRUCT
DROP INLET ON RT. H= 5'-9"
18" X 297' PIPE CULVERT
TO D.I. STA. 161+00 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 166+00 CONSTRUCT
DROP INLET ON RT. H= 6'-0"
18" X 197' PIPE CULVERT
TO D.I. STA. 164+00 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 169+00 CONSTRUCT
DROP INLET ON RT. H= 2'-10"
18" X 297' PIPE CULVERT
TO D.I. STA. 166+00 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

ALL R.C. PIPE CULVERTS SHALL BE CLASS III UNLESS OTHERWISE SPECIFIED.

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

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HWY. 255

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.		040716	92	194

(2) PLAN AND PROFILE SHEETS

LEFT SIDE OF HWY. 255

STA. 168+21.03 BEGIN SUPERELEVATION
STA. 172+71.03 MAX. SUPERELEVATION (0.036'/')
STA. 176+52.32 MAX. SUPERELEVATION (0.036'/')
STA. 181+02.32 END SUPERELEVATION

155+03 LT.
TOP 471.57
F.L. IN 471.07
F.L. OUT 470.40

-1.45%

PVC 156+65.00
ELEV. 469.38

157+80 LT.
TOP 468.39
F.L. IN 467.89
F.L. OUT 467.22

158+50 LT.
TOP 468.70
F.L. IN 461.14
F.L. OUT 461.04

PVI 159+25.00
ELEV. 465.62

520' V.C.
K = 79.39
e=4.26'

PVT 161+85.00
ELEV. 478.89

PROFILE GRADE

18" X 295' @ 5.00%

161+00 LT.
TOP 474.85
F.L. IN 471.08
F.L. OUT 470.98

158+00 LT.
TOP 468.42
F.L. IN 467.92
F.L. OUT 467.25

18" X 246' @ 4.00%

EXIST. GROUND

18" X 27' @ 2.00%

158+16
F.L. OUT 457.82
EX. F.L. OUT 458.72

+50 LT. DT.
455.53

+30.25% LT.
DT. GR.

+00 LT. DT.
452.82

0.50% LT. DT. GR.

+70 LT. DT.
455.58

PVI 169+20.00
ELEV. 516.38

-0.84%

550' V.C.
K = 92.59
e=-4.08'

169+00 LT.
TOP 512.09
F.L. OUT 508.31

PROFILE GRADE

EXIST. GROUND

166+00 LT.
TOP 499.90
F.L. IN 495.78
F.L. OUT 495.68

PVC 166+45.00
ELEV. 502.35

5.10%

18" X 195' @ 5.00%

164+00 LT.
TOP 489.70
F.L. IN 485.94
F.L. OUT 485.84

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

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

RIGHT SIDE OF HWY. 255

155+00 RT.
TOP 471.61
F.L. IN 467.73
F.L. OUT 467.63

PVC 156+65.00
ELEV. 469.38

157+80 RT.
TOP 468.39
F.L. IN 462.11
F.L. OUT 462.01

158+50 RT.
TOP 468.70
F.L. IN 461.87
F.L. OUT 461.77

PVI 159+25.00
ELEV. 465.62

520' V.C.
K = 79.39
e=4.26'

PVT 161+85.00
ELEV. 478.89

PROFILE GRADE

EXIST. GROUND

18" X 276' @ 2.00%

18" X 246' @ 3.50%

18" X 297' @ 4.50%

161+00 RT.
TOP 474.85
F.L. IN 470.58
F.L. OUT 470.48

18" X 16' @ 2.00%
18" X 9' @ 1.00%

158+00 RT.
TOP 468.42
F.L. IN 461.69
F.L. OUT 461.59

18" X 27' @ 1.00%

158+16
F.L. IN 458.98
EX. F.L. IN 958.89

PVI 169+20.00
ELEV. 516.38

-0.84%

550' V.C.
K = 92.59
e=-4.08'

169+00 RT.
TOP 511.69
F.L. OUT 508.85

PROFILE GRADE

EXIST. GROUND

166+00 RT.
TOP 499.90
F.L. IN 493.99
F.L. OUT 493.89

PVC 166+45.00
ELEV. 502.35

5.10%

18" X 297' @ 5.00%

18" X 197' @ 5.00%

164+00 RT.
TOP 489.70
F.L. IN 484.03
F.L. OUT 483.93

HWY. 255

155+00 156+00 157+00 158+00 159+00 160+00 161+00 162+00 163+00 164+00 165+00 166+00 167+00 168+00 169+00 170+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.		040716	93	194

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
* * *
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

REMOVAL AND DISPOSAL FENCE

STA.	STA.	SIDE	LIN. FT.	GATE
172+04	174+20	LT.	16	
172+20	173+52	LT.	205	
172+42		LT.		2
172+58		LT.		1
172+98		LT.		2
173+71	174+02	LT.	42	

FENCE

STA.	STA.	SIDE	TYPE	LIN. FT.	4' GATE
172+20	173+52	LT.	4' CHAIN LINK	205	
172+42		LT.			2
172+58		LT.			1
172+98		LT.			2
173+71	174+02	LT.	4' CHAIN LINK	42	

C.L. HWY. 255
PI = 174+68.95
Δ = 30°18'53" RT.
D = 05°00'00"
T = 310.42'
L = 606.29'
PC = 171+58.53
PT = 177+64.82
e = 0.036 '/'
Ls = 450'

STA 172+97
CONST. APPR. ON LT.
= 10 CU. YD.

STA 173+60
CONST. APPR. ON LT.
= 25 CU. YD.

STA 174+59
CONST. APPR. ON LT.
= 35 CU. YD.

STA. 171+35.00 HWY. 255 =
STA. 15+00.00 WELLS LAKE ROAD
Δ = 90°00'00"

STA. 180+39 CONSTRUCT
DROP INLET ON LT. H= 7'-2"
42" X 5' R.C. PIPE CULVERT INLET
(CLASS III)(TYPE 3 BEDDING)
AT 19° 00' 00" RT. FWD. SKEW
W/ FES LT. AND 42" X 53' R.C. PIPE CULVERT
(CLASS IV)(TYPE 3 BEDDING)
TO DROP INLET 180+40 RT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5'X5'
Q50 = 42 CFS D.A. = 12.0 ACRES
42" FES = 1EA.
DUMPED RIPRAP = 7 CU. YD.

STA. 180+41 IN PLACE
DBL. 30"x 53' PIPE CULVERT
W/ HDWLS. LT. & RT.
REMOVE

STA. 182+00 CONSTRUCT
DROP INLET ON LT. H= 3'-10"
18" X 196' PIPE CULVERT
TO D.I. STA. 184+00 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 184+00 CONSTRUCT
DROP INLET ON LT. H= 4'-1"
18" X 296' PIPE CULVERT
TO D.I. STA. 187+00 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA 184+84
CONST. APPR. ON LT.
=15 CU. YD.

STA. 171+64 RT. CONSTRUCT
TYPE 3 WHEELCHAIR
RAMP = 4.6 SQ. YD.

STA 171+35
CONST. TURNOUT
ON RT. = 420 CU. YD.

STA. 171+06 RT. CONSTRUCT
TYPE 3 WHEELCHAIR
RAMP = 4.6 SQ. YD.

OBLITERATE EXISTING PAVEMENT

STA. 173+50 CONSTRUCT
DROP INLET ON RT. H= 4'-2"
18" X 141' PIPE CULVERT
TO D.I. STA. 175+00 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 175+00 CONSTRUCT
DROP INLET ON RT. H= 4'-6"
18" X 288' PIPE CULVERT
TO D.I. STA. 178+00 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 178+00 CONSTRUCT
DROP INLET ON RT. H= 5'-11"
W/ 8' EXTENSION AND
24" X 235' PIPE CULVERT
TO D.I. STA. 180+40 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 180+40 CONSTRUCT
DROP INLET ON RT. H= 7'-1"
42" X 11' R.C. PIPE CULVERT OUTLET
(CLASS III)(TYPE 3 BEDDING)
AT 20° 00' 00" RT. FWD. SKEW
W/ FES RT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5'X4'
42" R.C. PIPE = 11 LIN. FT.
42" FES = 1EA.
DUMPED RIPRAP = 5 CU. YD.

STA. 180+00 RT.
CONST. CURB CUT

STA. 182+00 CONSTRUCT
DROP INLET ON RT. H= 3'-2"
18" X 196' PIPE CULVERT
TO D.I. STA. 184+00 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 184+00 CONSTRUCT
DROP INLET ON RT. H= 5'-4"
W/ 8' EXTENSION AND
18" X 296' PIPE CULVERT
TO D.I. STA. 187+00 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 184+32.5 RT. CONSTRUCT
TYPE 3 WHEELCHAIR
RAMP = 4.9 SQ. YD.

STA 184+69
CONST. TURNOUT ON RT.
= 15 CU. YD.

STA. 185+05 RT. CONSTRUCT
TYPE 3 WHEELCHAIR
RAMP = 4.9 SQ. YD.

WELLS LAKE ROAD
PI = 10+44.71
Δ = 51°22'24" LT.
D = 17°00'00"
T = 162.11'
L = 302.20'
P.C. = 8+82.60
P.T. = 11+84.80
NO SUPER

STA 11+60
CONST. APPR. ON LT.
=60 CU. YD.

STA. 8+82.60
BEGIN CONST.
WELLS LAKE ROAD

ALL R.C. PIPE CULVERTS SHALL BE CLASS III UNLESS OTHERWISE SPECIFIED.

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

HWY. 255

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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.		040716	94	194
				(2)	PLAN AND PROFILE SHEETS			

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
4-02-2020

LEFT SIDE OF HWY. 255

STA. 168+21.03 BEGIN SUPERELEVATION
STA. 172+71.03 MAX. SUPERELEVATION (0.036'/')
STA. 176+52.32 MAX. SUPERELEVATION (0.036'/')
STA. 181+02.32 END SUPERELEVATION

PVT 171+95.00 ELEV. 514.07
PVC 172+35.00 ELEV. 513.73
PVI 173+60.00 ELEV. 512.68
PVT 174+85.00 ELEV. 508.60
PVC 175+40.00 ELEV. 506.80
PVI 177+90.00 ELEV. 498.64
PVT 180+40.00 ELEV. 497.41
PVC 182+00.00 ELEV. 496.63
PVI 183+50.00 ELEV. 495.89
PVT 185+00.00 ELEV. 493.20

550' V.C. -0.84%
250' V.C. K = 102.88 e=-0.76'
PROFILE GRADE
EXIST. GROUND
500' V.C. K = 179.86 e=1.74'
-3.27%
180+39 LT. TOP 497.58 F.L. IN 490.47 F.L. OUT 490.41
-0.49%
300' V.C. K = 229.01 e=-0.49'
184+00 LT. TOP 494.62 F.L. IN 490.64 F.L. OUT 490.54
-1.80%
F.L. INLET 492.90
182+00 LT. TOP 496.47 F.L. OUT 492.60
18" X 196' @ 1.00%
18" X 296' @ 2.00%
180+41 EX. F.L. IN 490.40 EX. F.L. OUT 490.21

WELLS LAKE ROAD

PVI 8+82.60 ELEV. 496.63
PVC 9+25.00 Elev 496.86
PVT 10+75.00 Elev 500.06
PVI 14+00.00 ELEV. 512.38
PVC 13+50.00 Elev 510.49
PVT 14+50.00 Elev 513.38
0.50%
150' V.C. K = 45.59 e = 0.62'
PVI 10+00.00 ELEV. 497.22
3.79%
2.00%
100' V.C. K = 55.87 e = -0.22'
EXIST. GROUND
PROFILE GRADE
STA. 171+35.00 HWY. 255, 29.50' RT. =
STA. 14+68.00 WELLS LAKE RD.
ELEV. 513.74

RIGHT SIDE OF HWY. 255

PVT 171+95.00 ELEV. 514.07
PVC 172+35.00 ELEV. 513.73
PVI 173+60.00 ELEV. 512.68
PVT 174+85.00 ELEV. 508.60
PVC 175+40.00 ELEV. 506.80
PVI 177+90.00 ELEV. 498.64
PVT 180+40.00 ELEV. 497.41
PVC 182+00.00 ELEV. 496.63
PVI 183+50.00 ELEV. 495.89
PVT 185+00.00 ELEV. 493.20

550' V.C. -0.84%
250' V.C. K = 102.88 e=-0.76'
-3.27%
EXIST. GROUND
PROFILE GRADE
500' V.C. K = 179.86 e=1.74'
-0.49%
300' V.C. K = 229.01 e=-0.49'
-1.80%
173+50 RT. TOP 511.97 F.L. OUT 507.77
18" X 141' @ 3.00%
175+00 RT. TOP 507.95 F.L. IN 503.53 F.L. OUT 503.43
18" X 288' @ 3.00%
178+00 RT. TOP 500.03 F.L. IN 494.79 F.L. OUT 494.11
24" X 235' @ 1.50%
F.L. OUTLET 490.10
180+41 EX. F.L. IN 490.40 EX. F.L. OUT 490.21
180+40 RT. TOP 497.26 F.L. IN 490.17 F.L. OUT 490.16
182+00 RT. TOP 496.47 F.L. OUT 493.31
18" X 196' @ 2.00%
184+00 RT. TOP 494.62 F.L. IN 489.39 F.L. OUT 489.29
18" X 296' @ 2.00%

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

HWY. 255

170+00 171+00 172+00 173+00 174+00 175+00 176+00 177+00 178+00 179+00 180+00 181+00 182+00 183+00 184+00 185+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
4-21-20			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		040716	95	194

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
4-21-2020

STA. 187+00 CONSTRUCT
DROP INLET ON LT. H= 5'-5"
W/ 8' EXTENSION AND
24" X 296' PIPE CULVERT
TO D.I. STA. 190+00 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 190+00 CONSTRUCT
DROP INLET ON LT. H= 5'-4"
W/ 8' EXTENSION AND
24" X 65' PIPE CULVERT
(CLASS III)(TYPE 3 BEDDING)
TO JUNC. BOX STA. 190+67 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 190+02 - IN PLACE
DROP INLET ON LT.
W/ 18" X 12' R.C. PIPE CULVERT INLET
AND W. 18" X 121' PIPE CULVERT OUTLET
REMOVE

STA. 190+67 CONSTRUCT
JUNC. BOX ON LT. H= 5'-7"
W/ 18" X 17' R.C. PIPE CULVERT
(CLASS III)(TYPE 3 BEDDING)
W/ F.E.S. LT.
30" X 9' PIPE CULVERT
TO JUNC. BOX STA. 190+81 LT.
TYPE E JUNC. BOX = 4'X4'

STA. 190+72 LT.
DUMPED RIPRAP = 8 CU. YD.

STA. 190+81 CONSTRUCT
JUNC. BOX ON LT. H= 5'-10"
30" X 99' R.C. PIPE CULVERT
(CLASS III)(TYPE 3 BEDDING)
TO JUNC. BOX STA. 191+85 LT.
TYPE E = 5'X5'

STA. 191+06 LT. CONSTRUCT
TYPE 3 WHEELCHAIR
RAMP = 4.3 SQ. YD.

STA. 190+97 LT. CONSTRUCT
TYPE 3 WHEELCHAIR
RAMP = 4.6 SQ. YD.

STA. 191+41 - IN PLACE
DROP INLET ON LT.
W/ 24" X 91' R.C. PIPE
CULVERT INLET-REMOVE.

STA. 191+89 LT. CONSTRUCT
TYPE 3 WHEELCHAIR
RAMP = 4.2 SQ. YD.

STA. 191+85 CONSTRUCT
JUNC. BOX ON LT. H= 6'-1"
30" X 80' PIPE CULVERT
TO JUNC. BOX 192+70 LT.
TYPE ST = 5'X5'

STA. 192+70 - CONSTRUCT
DROP INLET ON LT. H = 6'-4"
W/ 30" X 103' PIPE CULVERT
TO DROP INLET 193+78 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 192+70 - CONSTRUCT
JUNC. BOX ON LT. H = 5'-11"
OVER EXIST. 30" PIPE CULVERT
W/ 30" X 11' PIPE CULVERT
TO DROP INLET STA. 192+70 LT.
TYPE E = 5'X5'

STA. 192+27 LT. CONSTRUCT
TYPE 3 WHEELCHAIR
RAMP = 3.9 SQ. YD.

STA. 193+78 CONSTRUCT
DROP INLET ON LT. H= 6'-9"
18" X 3' R.C. PIPE CULVERT INLET
(CLASS III)(TYPE 3 BEDDING)
W/ FES LT.
36" X 75' R.C. PIPE CULVERT
(CLASS IV)(TYPE 3 BEDDING)
TO D.I. STA. 194+00 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'
Q50 = 48 CFS D.A. = 13.3 ACRES
DUMPED RIPRAP = 8 CU. YD.

STA 197+48.00
CONST. APPR. ON RT.
= 25 CU. YD.

STA. 196+00 CONSTRUCT
DROP INLET ON LT. H= 2'-5"
18" X 196' PIPE CULVERT
TO D.I. STA. 198+00 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 198+00 CONSTRUCT
DROP INLET ON LT. H= 3'-1"
18" X 162' PIPE CULVERT
TO D.I. STA. 199+70 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

C.L. HWY. 255
PI= P.I. 200+86.53
Δ = 19°55'08" LT.
D = 03°30'00"
T = 287.46'
L = 569.11'
PC = 197+99.07
PT = 203+68.18
e = 0.030'/'
Ls = 450'

STA. 199+70 CONSTRUCT
DROP INLET ON LT. H= 4'-6"
W/ 8' EXTENSION AND
30" X 5' R.C. PIPE CULVERT INLET
(CLASS III)(TYPE 3 BEDDING)
W/ FES LT.
AND 30" X 64' R.C. PIPE CULVERT
(CLASS V)(TYPE 3 BEDDING)
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 4'X4'
Q50 = 29 CFS D.A. = 10.6 ACRES

STA. 188+50 RT.
CONST. CURB CUT

STA. 187+00 CONSTRUCT
DROP INLET ON RT. H= 6'-2"
18" X 296' PIPE CULVERT
TO D.I. STA. 190+00 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 190+00 CONSTRUCT
DROP INLET ON RT. H= 6'-2"
W/ 8' EXTENSION AND
18" X 37' PIPE CULVERT
TO DROP INLET STA. 190+41 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 190+97 RT. CONSTRUCT
TYPE 3 WHEELCHAIR
RAMP = 4.6 SQ. YD.

STA. 191+32 RT. CONSTRUCT
TYPE 3 WHEELCHAIR
RAMP = 24 SQ. YD.

STA. 190+41 - IN PLACE
DROP INLET ON RT. H= 5'-11"
W/ 24" X 240' R.C. PIPE CULVERT
REMOVE

STA. 190+41 CONSTRUCT
DROP INLET ON RT. H= 6'-0"
18" X 198' R.C. PIPE CULVERT
(CLASS III)(TYPE 3 BEDDING)
TO DROP INLET STA. 192+44 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 192+44 CONSTRUCT
DROP INLET ON RT. H= 6'-8"
18" X 37' R.C. PIPE CULVERT
(CLASS III)(TYPE 3 BEDDING)
TO DROP INLET STA. 193+25 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 192+49 RT. CONSTRUCT
TYPE 3 WHEELCHAIR
RAMP = 6.5 SQ.YDS.

STA. 193+25 CONSTRUCT
DROP INLET ON RT. H= 6'-6"
18" X 70' PIPE CULVERT
TO JUNC. BOX STA. 194+00 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 192+86 - IN PLACE
DROP INLET ON RT. H= 6'-6"
W/ 24" X 110' R.C. PIPE CULVERT
REMOVE

STA. 193+95 IN PLACE
18" X 66' R.C. PIPE CULV'T.
27°01'44" RT. FWD. SKEW
W/ HDWLS. RT.
REMOVE

STA. 194+00 CONSTRUCT
JUNC. BOX ON RT. H= 6'-11"
OVER EXIST. 24" R.C. PIPE CULVERT
W/30" X 8' R.C. PIPE CULVERT
(CLASS III)(TYPE 3 BEDDING)
TO DROP INLET STA. 194+12 RT.
TYPE ST = 5'X5'

STA. 194+12 CONSTRUCT
DROP INLET ON RT. H= 6'-7"
30" X 15' R.C. PIPE CULVERT
OUTLET
(CLASS III)(TYPE 3 BEDDING)
W/ FES RT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 4'X4'
DUMPED RIPRAP = 4 CU. YD.

STA. 195+50 CONSTRUCT
DROP INLET ON RT. H= 5'-0"
W/ 8' EXTENSION AND
18" X 428' PIPE CULVERT
TO JUNC. BOX STA 199+71
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 197+56 RT. CONSTRUCT
TYPE 3 WHEELCHAIR
RAMP = 4.6 SQ.YDS.

STA 197+79
CONST. TURNOUT
ON RT. = 25 CU. YD.

STA. 198+01 RT. CONSTRUCT
TYPE 3 WHEELCHAIR
RAMP = 4.5 SQ.YDS.

STA. 199+71 IN PLACE
18" X 58' R.C. PIPE CULV'T.
REMOVE

STA. 199+71 CONSTRUCT
JUNC. BOX ON RT. H= 6'-9"
30" X 20' PIPE CULVERT OUTLET
W/ FES RT.
TYPE E = 5' X 5'
DUMPED RIPRAP = 13 CU. YD.

ALL R.C. PIPE CULVERTS SHALL BE CLASS III UNLESS OTHERWISE SPECIFIED.

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

C. L. HWY. 255

CONSTRUCTION LIMITS

EXIST. R/W

PROP. R/W

CHAD COLLEY BLVD.

P.I. 12+41.48

P.T. 14+67.52

STA. 191+71.48 HWY. 255
STA. 16+83.14 CHAD COLLEY BLVD.
Δ = 77°54'48"

P.C. 197+99.08

TAPER

COYOTE TRAIL

185 190 195 200 15 20

HWY. 255

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4-21-20			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		040716	96	194

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
4-21-2020

LEFT SIDE OF HWY. 255

STA. 194+61.56 BEGIN SUPERELEVATION
STA. 199+11.56 MAX. SUPERELEVATION (0.030'/')
STA. 202+55.67 MAX. SUPERELEVATION (0.030'/')
STA. 207+05.67 END SUPERELEVATION

PVT 185+00.00
ELEV. 493.20

-1.80%

PVC 188+30.00
ELEV. 487.27

18" X 296' @ 2.00%

187+00 LT.
TOP 489.45
F.L. IN 484.62
F.L. OUT 484.05

24" X 296' @ 1.72%

PVI 190+30.00
ELEV. 483.68

400' V.C.
K = 232.56
e=-0.86'

190+00 LT.
TOP 483.44
F.L. IN 478.95
F.L. OUT 478.11

24" X 65'
@ 1.65%

MH11
190+81 LT.
TOP 481.26
F.L. IN 476.35
F.L. OUT 474.62

30" X 9'
@ 1.22%

190+67 LT.
TOP 482.05
F.L. IN 477.04
F.L. OUT 476.46

30" X 99'
@ 2.89%

PVT 192+30.00
ELEV. 476.65

30" X 80'
@ 1.76%

PVC 192+75.00
ELEV. 475.06

191+85 LT.
TOP 477.55
F.L. IN 471.75
F.L. OUT 471.66

-3.52%

350' V.C.
K = 188.17
e=0.81'

PVI 194+50.00
ELEV. 468.91

30" X 103'
@ 2.82%

192+70 LT.
TOP 476.09
F.L. IN 470.26
F.L. OUT 470.16

F.L. INLET 465.91

36"
@ 0.12%

193+78 LT.
TOP 471.57
F.L. IN 465.81
F.L. OUT 464.81

192+70 LT.
TOP 475.08
F.L. IN 468.81
F.L. OUT 468.91

PROFILE GRADE

PVT 196+25.00
ELEV. 466.01

196+00 LT.
TOP 466.28
F.L. OUT 463.90

EXIST. GROUND

400' V.C.
K = 1212.12
e=0.17'

-1.66%

199+70 LT.
TOP 460.12
F.L. IN 456.64
F.L. OUT 455.64

PVC 199+60.00
ELEV. 460.45

18" X 196' @ 2.00%

198+00 LT.
TOP 462.95
F.L. IN 459.98
F.L. OUT 459.88

18" X 162' @ 2.00%

F.L. INLET 455.64

RIGHT SIDE OF HWY. 255

PVT 185+00.00
ELEV. 493.20

-1.80%

PVC 188+30.00
ELEV. 487.27

18" X 296' @ 2.00%

187+00 RT.
TOP 489.45
F.L. IN 483.37
F.L. OUT 483.27

18" X 296' @ 2.00%

190+00 RT.
TOP 483.44
F.L. IN 477.35
F.L. OUT 477.25

PVI 190+30.00
ELEV. 483.68

400' V.C.
K = 232.56
e=-0.86'

18" X 37' @ 1.97%

190+41 RT.
TOP 482.36
F.L. IN 476.52
F.L. OUT 476.33

PVT 192+30.00
ELEV. 476.65

PVC 192+75.00
ELEV. 475.06

18" X 212' @ 3.19%

18" X 76'
@ 3.41%

192+44 RT.
TOP 476.02
F.L. IN 469.56
F.L. OUT 469.38

-3.52%

350' V.C.
K = 188.17
e=0.81'

PVI 194+50.00
ELEV. 468.91

18" X 76'
@ 2.96%

193+25 RT.
TOP 473.09
F.L. IN 466.79
F.L. OUT 466.60

194+12 RT.
TOP 470.55
F.L. IN 463.96
F.L. OUT 463.96

F.L. OUTLET 463.73
30" X 8' @ 0.63%

194+00 RT.
TOP 470.90
F.L. IN 464.35
F.L. OUT 464.01

PVT 196+25.00
ELEV. 466.01

PROFILE GRADE

EXIST. GROUND

195+50 RT.
TOP 467.62
F.L. OUT 462.72

400' V.C.
K = 1212.12
e=0.17'

-1.66%

199+71 RT.
TOP 462.04
F.L. IN 456.29
F.L. OUT 455.28

PVC 199+60.00
ELEV. 460.45

18" X 428' @ 1.50%

F.L. OUTLET 455.19

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

HWY. 255

185+00 186+00 187+00 188+00 189+00 190+00 191+00 192+00 193+00 194+00 195+00 196+00 197+00 198+00 199+00 200+00

USER: jh5195
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MODEL: Profile

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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.		040716	97	194

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
14-02-2020

N

STA. 202+00 CONSTRUCT
DROP INLET ON LT. H= 3'-7"
W/ 8' EXTENSION AND
18"X 192' PIPE CULVERT
TO D.I. STA 204+00 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 204+00 CONSTRUCT
DROP INLET ON LT. H = 3'-9"
18"X 296' PIPE CULVERT
TO D.I. STA 207+00 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 207+00 CONSTRUCT
DROP INLET ON LT. H = 4'-2"
24" X 196' PIPE CULVERT
TO D.I. STA 209+00 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 209+00 CONSTRUCT
DROP INLET ON LT. H = 4'-2"
W/ 8' EXTENSION AND
24"X 231' PIPE CULVERT
TO D.I. STA 211+35 LT.
TYPE MO DROP INLET = 4' DIA
TYPE C DROP INLET = 4'X4'

STA. 211+35 CONSTRUCT
DROP INLET ON LT. H = 6'-3"
36" X 8' R.C. PIPE CULVERT INLET
(CLASS III)(TYPE 3 BEDDING)
W/ FES LT.
36" X 67' R.C. PIPE CULVERT
(CLASS V)(TYPE 3 BEDDING)
TO DROP INLET 211+38 RT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' X 5'
CHANNEL CHANGE = 1 CU. YD.
DUMPED RIPRAP = 2 CU. YD.

STA. 211+44 CONSTRUCT
36"X 95' R.C. PIPE CULVERT
(CLASS V)(TYPE 3 BEDDING)
W/FES LT. & RT.
DUMPED RIPRAP = 12 CU. YD.

STA. 211+51 IN PLACE
DBL. 36" X 55' R.C. PIPE CULVERT
REMOVE WESTERN MOST CULVERT AND
RETAIN AND EXTEND EASTERN MOST CULVERT
6' LT. TO JUNC. BOX STA. 211+52 LT.
(CLASS V)(TYPE 3 BEDDING)
AND 6' RT. TO JUNC. BOX STA. 211+55 RT.
(CLASS V)(TYPE 3 BEDDING)
Q50 = 110 CFS D.A. = 46.1 ACRES
36" R.C. PIPE = 130 LIN. FT.
36" F.E.S. = 2

STA. 211+52 CONSTRUCT
JUNC. BOX ON LT. H = 6'-2"
36" X 8' R.C. PIPE CULVERT INLET
(CLASS III)(TYPE 3 BEDDING)
W/ FES LT.
TYPE E = 5' X 5'
DUMPED RIPRAP = 2 CU. YD.

STA. 212+20 CONSTRUCT
DROP INLET ON LT. H = 4'-7"
W/ 8' EXTENSION AND
24" X 63' PIPE CULVERT
TO JUNC. BOX 211+52 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 213+00 CONSTRUCT
DROP INLET ON LT. H = 4'-1"
24" X 76' PIPE CULVERT
TO D.I. STA 212+20 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA 214+20
CONST. APPR. ON LT.
=10 CU. YD.

C.L. HWY. 255
PI= P.I. 200+86.53
Δ = 19°55'08" LT.
D = 03°30'00"
T = 287.46'
L = 569.11'
PC = 197+99.07
PT = 203+68.18
e = 0.030'/'
Ls = 450'

200 205 210 215

P.T. 203+68.19

EXIST. R/W
CONSTRUCTION LIMITS
C.L. HWY. 255
S60°42'01"E
S80°37'09"E
CONSTRUCTION LIMITS
EXIST. R/W
P.I. 200+86.53
PROPOSED R/W
PROPOSED R/W
PAVED PARKING
T.C.E.
24'
27'
+30
+20
+05 59.83'
+48 85.00'
+75 59.84'
+05 59.87'
+65 +36.52
+75 +37.10 59.88'
+95 90'
+25 59.09'
+10 60.17'
+50 70'
+90 60.16'
11'
12'
11'
.99

STA. 213+30 RT.
CONST. CURB CUT

STA. 212+20 CONSTRUCT
DROP INLET ON RT. H = 2'-5"
18"X 63' PIPE CULVERT
TO JUNC. BOX 211+55 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

CL 4' WOOD FOOT BR

STA. 213+00 CONSTRUCT
DROP INLET ON RT. H = 2'-4"
18"X 76' PIPE CULVERT
TO D.I. STA 212+20 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 207+00 CONSTRUCT
DROP INLET ON RT. H = 2'-8"
18"X 196' PIPE CULVERT
TO D.I. STA 209+00 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 209+00 CONSTRUCT
DROP INLET ON RT. H = 2'-8"
18"X 241' PIPE CULVERT
TO D.I. STA 211+38 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 211+38 CONSTRUCT
DROP INLET ON RT. H = 6'-4"
36" X 10' R.C. PIPE CULVERT OUTLET
(CLASS III)(TYPE 3 BEDDING)
W/ FES RT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 5' X 5'
DUMPED RIPRAP = 2 CU. YD.

STA. 211+55 CONSTRUCT
JUNC. BOX ON RT. H = 6'-3"
36" X 10' R.C. PIPE CULVERT OUTLET
(CLASS III)(TYPE 3 BEDDING)
W/ FES RT.
TYPE E = 5' X 5'
DUMPED RIPRAP = 2 CU. YD.

ALL R.C. PIPE CULVERTS SHALL BE CLASS III UNLESS OTHERWISE SPECIFIED.

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

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SCALE: 1:100

HWY. 255

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.		040716	98	194

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
* * *
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-20

LEFT SIDE OF HWY. 255

STA. 194+61.56 BEGIN SUPERELEVATION
STA. 199+11.56 MAX. SUPERELEVATION (0.030'/')
STA. 202+55.67 MAX. SUPERELEVATION (0.030'/')
STA. 207+05.67 END SUPERELEVATION

-1.66%
PVI 201+60.00 ELEV. 457.13
400' V.C. K = 1212.12 e=-0.17'
202+00 LT. TOP 456.07 F.L. OUT 452.45
PVT 203+50.00 ELEV. 453.16
204+00 LT. TOP 452.21 F.L. IN 448.60 F.L. OUT 448.50
18" X 192' @ 2.00%
18" X 296' @ 2.00%
1.99%
PROFILE GRADE
EXIST. GROUND
PVC 209+60.00 ELEV. 441.24
207+00 LT. TOP 446.25 F.L. IN 442.58 F.L. OUT 442.08
24" X 196' @ 2.00%
209+00 LT. TOP 442.27 F.L. IN 438.16 F.L. OUT 438.08
24" X 231' @ 2.00%
PVI 211+10.00 ELEV. 438.26
300' V.C. K = 130.43 e=0.86'
211+52 LT. TOP 438.67 F.L. IN 432.54 F.L. OUT 432.53
PVT 212+60.00 ELEV. 438.72
PVC 213+00.00 ELEV. 438.84
0.31%
24" X 63' @ 0.75%
24" X 76' @ 0.75%
211+35 LT. TOP 438.82 F.L. IN 432.54 F.L. OUT 432.53 F.L. INLET 438.08
211+51 F.L. IN 432.55 F.L. OUT 432.47
212+20 LT. TOP 438.50 F.L. IN 434.03 F.L. OUT 433.93
213+00 LT. TOP 438.68 F.L. OUT 434.60
PVI 215+00.00 ELEV. 439.45
400' V.C. K = 210.53 e=-0.95'

RIGHT SIDE OF HWY. 255

-1.66%
PVI 201+60.00 ELEV. 457.13
400' V.C. K = 1212.12 e=-0.17'
PVT 203+50.00 ELEV. 453.16
1.99%
PROFILE GRADE
PVC 209+60.00 ELEV. 441.24
18" X 196' @ 2.00%
207+00 RT. TOP 446.27 F.L. OUT 443.63
18" X 241' @ 1.50%
209+00 RT. TOP 442.27 F.L. IN 439.71 F.L. OUT 439.61
300' V.C. K = 130.43 e=0.86'
PVI 211+10.00 ELEV. 438.26
212+20 RT. TOP 438.50 F.L. IN 436.22 F.L. OUT 436.12
PVT 212+60.00 ELEV. 438.72
PVC 213+00.00 ELEV. 438.84
0.31%
EXIST. GROUND
18' X 63' @ 1.00%
18' X 76' @ 0.75%
F.L. OUTLET 432.47
36' X 95' @ 0.07%
36' X 95' @ 0.07%
211+38 RT. TOP 438.81 F.L. IN 432.49 F.L. OUT 432.48
211+55 RT. TOP 438.71 F.L. IN 432.49 F.L. OUT 432.48
213+00 RT. TOP 438.68 F.L. OUT 436.35
PVI 215+00.00 ELEV. 439.45
400' V.C. K = 210.53 e=-0.95'

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

HWY. 255

200+00 201+00 202+00 203+00 204+00 205+00 206+00 207+00 208+00 209+00 210+00 211+00 212+00 213+00 214+00 215+00

465 460 455 450 445 440 435 430 425

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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.		040716	99	194

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
4-02-2020
JEROME PAUL DAVIS

STA. 216+00 CONSTRUCT
DROP INLET ON LT. H = 4'-5"
18"X 229' PIPE CULVERT
TO D.I. STA 218+33 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 218+33 CONSTRUCT
DROP INLET ON LT. H = 5'-5"
30"X 10' R.C. PIPE CULVERT INLET
(CLASS III)(TYPE 3 BEDDING)
W/FES LT.
AND 30"X67' R.C. PIPE CULVERT
(CLASS IV)(TYPE 3 BEDDING)
TO D.I. 218+33 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'
DUMPED RIPRAP = 8 CU. YD.

STA. 218+38 IN PLACE
30"x 54' PIPE CULV'T.
RETAIN AND EXTEND 21' LT. & 23' RT.
(CLASS IV)(TYPE 3 BEDDING)
W/ FES LT. & RT.
COMPLETED LENGTH 98'
Q50 = 62 CFS D.A. = 28.1 ACRES
30" R.C. PIPE = 52 LIN. FT.
30" FES = 2 EACH

STA. 220+00 CONSTRUCT
DROP INLET ON LT. H = 5'-0"
18"X 232' PIPE CULVERT
TO DROP INLET STA. 222+35 LT.
TYPE MO DROP= 4' DIA.
TYPE C DROP INLET =4'X4'

STA. 222+36 CONSTRUCT
DROP INLET ON LT. H = 7'-1"
W/ 2-4' EXTENSION AND
OVER EXIST. 36" R.C. PIPE CULVERT
36"X 15' R.C. PIPE CULVERT INLET
(CLASS III)(TYPE 3 BEDDING)
W/FES LT.
Q50 = 40 CFS D.A. = 19.6 ACRES
TYPE MO DROP= 5' DIA.
TYPE C DROP INLET = 5'X5'
DUMPED RIPRAP = 8 CU. YD.

STA. 222+93 LT. CONSTRUCT
TYPE 3 WHEELCHAIR
RAMP = 3 SQ.YDS.

C.L. HWY. 255
PI = 229+11.19
Δ = 35°30'40" LT.
D = 03°00'00"
T = 611.55'
L = 1183.70'
PC = 222+99.64
PT = 234+83.34
e = 0.040 '/'
Ls = 315'

215 220 225 230

PROPOSED R/W
EXIST. R/W
CONSTRUCTION LIMITS
C. L. HWY. 255
S80°37'09"E
N63°52'11"E
66'
33'
36.50'
32.00'
+20 59.93'.65'
+50 59.94'.65'
+79.94
100' TAPER
100' TRANSITION
+99.94
P.C. 222+99.64
P.T. 229+11.19
.8
21.21
+30.50 60.07'
+43.38 60.06'
+66 140.42'
+78 140.41'
12.5:E.

STA. 216+00 CONSTRUCT
DROP INLET ON RT. H = 5'-2"
18"X 229' PIPE CULVERT
TO D.I. STA 218+33 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 218+33 CONSTRUCT
DROP INLET ON RT. H = 6'-1"
30"X 24' R.C. PIPE CULVERT OUTLET
(CLASS IV)(TYPE 3 BEDDING)
W/FES RT.
TYPE MO DROP INLET = 5' DIA
TYPE C DROP INLET = 4'X4'
CHANNEL CHANGE = 40 CU. YD.

STA. 221+00 CONSTRUCT
DROP INLET ON RT. H = 4'-2"
W/ 8' EXTENSION AND
18"X 183' PIPE CULVERT
TO JUNC. BOX STA 222+85 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 222+62 IN PLACE
36"x 135' R.C. PIPE CULV'T.
36°42'51" RT. FWD. SKEW
W/ FES LT. & RT.
REMOVE FES LT. & RT.
AND REMOVE 16' LT. AND 32' RT.

STA. 222+85 CONSTRUCT
JUNC. BOX ON RT. H = 8'-0"
OVER EXIST. 36" R.C. PIPE CULVERT
36"X 25' R.C. PIPE CULVERT OUTLET
W/FES RT.
TYPE E JUNC. BOX = 5'X5'
DUMPED RIPRAP = 8 CU. YD.

STA. 222+91 RT. CONSTRUCT
TYPE 3 WHEELCHAIR
RAMP = 4 SQ.YDS.

STA. 222+99.64
END JOB 040716

ALL R.C. PIPE CULVERTS SHALL BE CLASS III UNLESS OTHERWISE SPECIFIED.

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

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DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\p&p\r040716 PL09.dgn
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HWY. 255

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

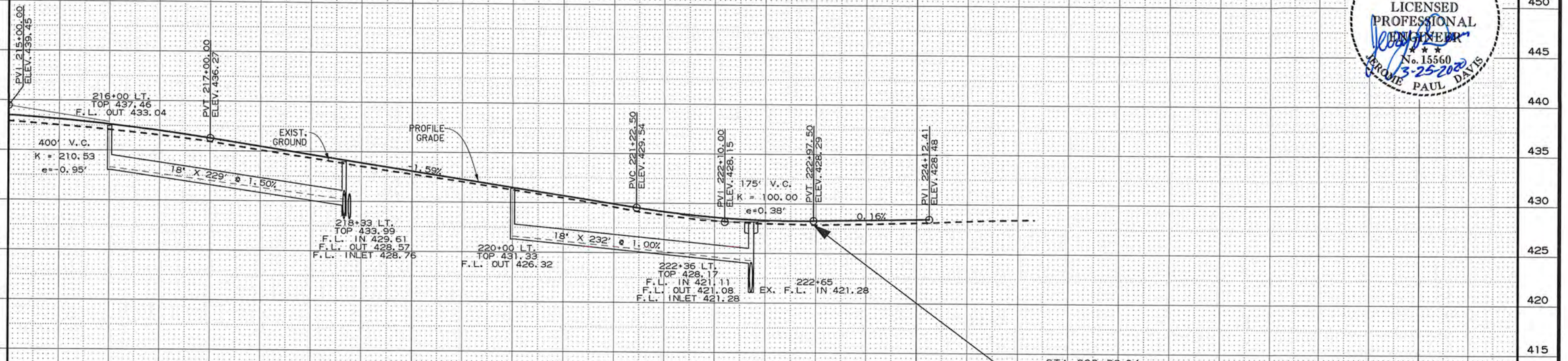
FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		040716	100	194

(2) PLAN AND PROFILE SHEETS

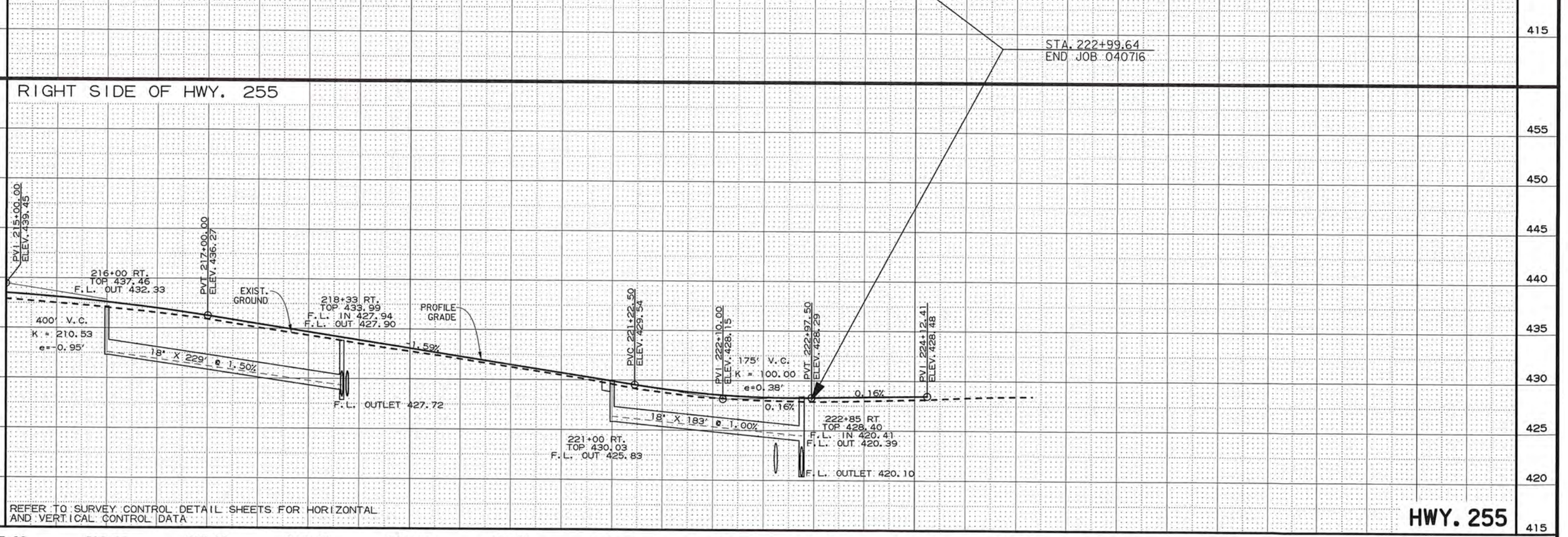
STATE OF ARKANSAS
* * *
LICENSED PROFESSIONAL ENGINEER
* * *
No. 15560
3-25-2020
JEROME PAUL DAVIS

LEFT SIDE OF HWY. 255

STA. 220+63.39 BEGIN SUPERELEVATION
STA. 222+99.64 MATCH EXIST. SUPERELEVATION (0.030'/')



RIGHT SIDE OF HWY. 255



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

HWY. 255

215+00 216+00 217+00 218+00 219+00 220+00 221+00 222+00 223+00 224+00 225+00 226+00 227+00 228+00 229+00 230+00

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MODEL: Profile

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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
				4	ARK.			
				JOB NO.		040716	101	194
				(2)	PLAN AND PROFILE SHEETS			

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
4-02-2020

STA. 11+90 CONSTRUCT
DROP INLET ON LT. H = 5'-0"
W/ 4' EXTENSION AND
18"X 207' PIPE CULVERT
TO D.I. STA 14+00 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 14+60 CONSTRUCT
DROP INLET ON LT. H = 3'-5"
24"X 120' PIPE CULVERT
TO D.I. STA 15+84 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 16+33 = 191+85 (HWY. 255)
CONSTRUCT
JUNC. BOX ON LT. H = 5'-11"
30"X 80' PIPE CULVERT
TO JUNC. BOX STA 192+70 LT.
TYPE ST JUNC. BOX 5'X5'

STA. 14+00 CONSTRUCT
DROP INLET ON LT. H = 4'-7"
24"X 57' PIPE CULVERT
TO JUNC. BOX STA 14+60 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 15+84 CONSTRUCT
DROP INLET ON LT. H = 5'-1"
18"X 45' PIPE CULVERT
TO JUNC. BOX STA 191+85.43 LT. (HWY. 255)
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

10

STA. 10+00
BEGIN CONST.
CHAD COLLEY

15

STA 12+33
CONST. APPR. ON LT.
=35 CU. YD.

P.I. 12+41.48

EXIST. R/W

CONSTRUCTION LIMITS

S10°25'25"W

℄ CHAD COLLEY BLVD.

CONSTRUCTION LIMITS
EXIST. R/W

CHAD COLLEY BLVD.
PI= 12+41.48
Δ = 6°47'22" RT.
D = 1°30'00"
T = 226.57'
L = 452.61'
PC = 10+14.91
PT = 14+67.52
NO SUPER

P.O.B. 10+00.00
P.C. 10+14.91

P.T. 14+67.52

190

+64.74
75'
PROPOSED R/W
+40
60.02'

S60°42'01"E

℄ HWY 255

EXIST. R/W

195

+25
59.42'
+03.75
79.15'
R 80'
R 85'
+50
24'

STA. 11+90 CONSTRUCT
DROP INLET ON RT. H = 3'-0"
24"X 205' PIPE CULVERT
TO D.I. STA 14+00 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 15+35 CONSTRUCT
DROP INLET ON RT. H = 3'-0"
24"X 83' PIPE CULVERT
TO JUNC. BOX STA 190+81 LT. (HWY. 255)
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 14+00 CONSTRUCT
DROP INLET ON RT. H = 3'-8"
24"X 131' PIPE CULVERT
TO D.I. STA 15+31 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 16+08 = 190+81 (HWY.255)
CONSTRUCT
JUNC. BOX ON RT. H = 6'-8"
30"X 99' R.C. PIPE CULVERT
(CLASS III)(TYPE 3 BEDDING)
TO JUNC. BOX STA 16+33 LT.
TYPE E JUNC. BOX

STA. 18+46 CONSTRUCT
DROP INLET ON LT. H = 5'-0"
18"X 250' PIPE CULVERT
TO D.I. STA 21+00 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 21+00 CONSTRUCT
DROP INLET ON LT. H = 5'-11"
24"X 253' PIPE CULVERT
TO D.I. STA 23+57 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 23+57 CONSTRUCT
DROP INLET ON LT. H = 7'-3"
24"X 25' R.C. PIPE CULVERT OUTLET
(CLASS III)(TYPE 3 BEDDING)
W/ FES RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'0
DUMPED RIPRAP = 5 CU. YD.

20

STA. 191+71.48 HWY. 255 =
STA. 16+83.14 CHAD COLLEY BLVD.
Δ = 77°54'48"

+66.71
100.02'
R 90'
CONCRETE ISLAND
TYPE "A" CURB
PROPOSED R/W
+66.00
51.54'

CHANNEL CHANGE
T.G.E.
EXIST. R/W
CONSTRUCTION LIMITS

℄ CHAD COLLEY BLVD.
S17°12'47"W

CONSTRUCTION LIMITS
EXIST. R/W
R 85'

GRASS MEDIAN
TYPE "A" CURB

+55.00
55.97'

P.C. 23+84.10

STA. 18+46 CONSTRUCT
DROP INLET ON RT. H = 5'-0"
18"X 163' PIPE CULVERT
TO D.I. STA 20+13 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 21+00 CONSTRUCT
DROP INLET ON RT. H = 3'-11"
18"X 251' PIPE CULVERT
TO D.I. STA 23+55 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 20+13 CONSTRUCT
DROP INLET ON RT. H = 5'-1"
18"X 14' R.C. PIPE CULVERT INLET
(CLASS III)(TYPE 3 BEDDING)
W/ FES RT.
AND 18"X 83' PIPE CULVERT
TO D.I. STA 21+00 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'
DUMPED RIPRAP = 5 CU. YD.

STA. 23+55 CONSTRUCT
DROP INLET ON RT. H = 4'-1"
18"X 64' PIPE CULVERT
TO D.I. STA 23+57 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

CHAD COLLEY BLVD.
PI= 26+61.31
Δ = 13°47'36" RT.
D = 2°30'00"
T = 277.21'
L = 551.73'
PC = 23+84.10
PT = 29+35.83
NO SUPER

CHAD COLLEY BLVD.

USER: JH5195
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\p&p\r040716 Chad Colley PL01.dgn
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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.		040716	102	194

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

LEFT SIDE OF CHAD COLLEY

PVI 10+00.00
ELEV. 494.66

STA. 10+00
BEGIN JOB 040716
CHAD COLLEY

3.89%

11+90 LT.
TOP 487.51
F.L. OUT 482.51

18" X 207' @ 3.25%

PVC 12+85.00
Elev 483.57

14+00 LT.
TOP 480.24
F.L. IN 475.79
F.L. OUT 475.69

PVI 14+10.00
ELEV. 478.71

24" X 57' @ 2.75%

250' V.C.
K = 69.64
e=1.12'

24" X 120' @ 0.66%

14+60 LT.
TOP 479.09
F.L. IN 474.14
F.L. OUT 474.04

PVT 15+35.00
Elev 478.34

15+84 LT.
TOP 478.20
F.L. IN 473.25
F.L. OUT 473.15

-0.30%

PVI 16+50.4
ELEV. 477.99

24" X 45' @ 3.14%

16+33 LT. =
191+85.43 LT. (HWY. 255)
TOP 477.55
F.L. IN 471.75
F.L. OUT 471.66

PVI 17+15.87
ELEV. 477.99

4.00%

18+46 LT.
TOP 472.63
F.L. OUT 467.63

PVC 19+10.00
Elev 470.22

18" X 250' @ 3.46%

PVI 20+60.00
ELEV. 464.22

21+00 LT.
TOP 464.37
F.L. IN 458.97
F.L. OUT 458.47

300' V.C.
K = 96.77
e=1.16'

24" X 253' @ 0.29%

PVT 22+10.00
Elev 462.88

23+57 RT.
TOP 461.69
F.L. IN 454.56
F.L. OUT 454.46

-0.90%

RIGHT SIDE OF CHAD COLLEY

PVI 10+00.00
ELEV. 494.66

STA. 10+00
BEGIN JOB 040716
CHAD COLLEY

3.89%

11+90 RT.
TOP 487.51
F.L. OUT 484.51

24" X 205' @ 3.83%

PVC 12+85.00
Elev 483.57

14+00 RT.
TOP 480.22
F.L. IN 476.66
F.L. OUT 476.56

PVI 14+10.00
ELEV. 478.71

250' V.C.
K = 69.64
e=1.12'

24" X 131' @ 0.77%

15+35 RT.
TOP 478.46
F.L. IN 475.56
F.L. OUT 475.43

PVT 15+35.00
Elev 478.34

-0.30%

PVI 16+50.4
ELEV. 477.99

24" X 83' @ 0.86%

16+08.12 RT. =
190+81.00 LT. (HWY. 255)
TOP 481.26
F.L. IN 474.72
F.L. OUT 474.63

PVI 17+15.87
ELEV. 477.99

4.00%

18+46 RT.
TOP 472.63
F.L. OUT 467.63

PVC 19+10.00
Elev 470.22

18" X 163' @ 3.71%

PVI 20+60.00
ELEV. 464.22

21+00 RT.
TOP 464.37
F.L. IN 460.57
F.L. OUT 460.47

20+13 RT.
TOP 466.54
F.L. IN 461.59
F.L. OUT 461.49

300' V.C.
K = 96.77
e=1.16'

18" X 83' @ 1.1%

18" X 251' @ 1.11%

PVT 22+10.00
Elev 462.88

23+55 RT.
TOP 461.70
F.L. IN 457.68
F.L. OUT 457.58

-0.90%

505 500 495 490 485 480 475 470 465 460 455

09+00 10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00

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MODEL: PROPOSED DESIGN

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				4	ARK.			
				JOB NO.		040716	103	194
				(2)	PLAN AND PROFILE SHEETS			

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
4-02-2020

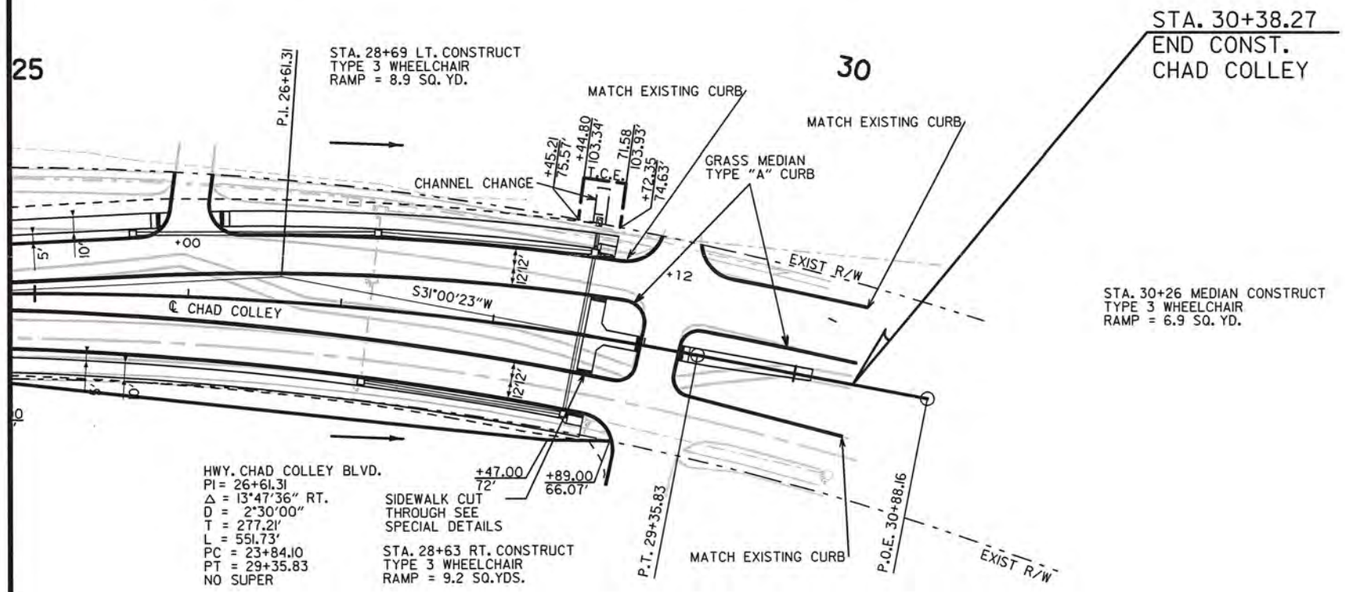
STA. 25+63 CONSTRUCT
DROP INLET ON LT. H = 4'-11"
24"X 156' PIPE CULVERT
TO D.I. STA 27+20 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 27+20 CONSTRUCT
DROP INLET ON LT. H = 4'-1"
24"X 138' PIPE CULVERT
TO D.I. STA 28+59 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 28+59 CONSTRUCT
DROP INLET ON LT. H = 5'-4"
24"X 11' R.C. PIPE CULVERT OUTLET
(CLASS III(TYPE 3 BEDDING)
W/ FES LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'
DUMPED RIPRAP = 5 CU. YD.

STA 26+00
CONST. APPR. ON LT.
=45 CU. YD.

STA 29+12
CONST. APPR. ON LT.
=15 CU. YD.



STA. 27+18 CONSTRUCT
DROP INLET ON RT. H = 4'-10"
18"X 130' PIPE CULVERT
TO D.I. STA 28+55 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 28+55 CONSTRUCT
DROP INLET ON RT. H = 4'-1"
18"X 105' PIPE CULVERT
TO D.I. STA 28+59 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

CHAD COLLEY BLVD.

USER: jh595
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\p&p\r040716 Chad Colley PL02.dgn
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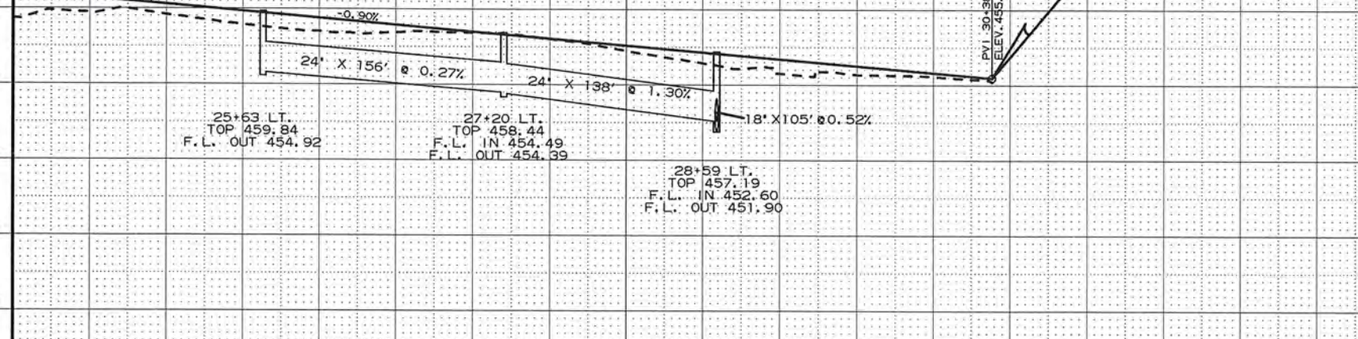
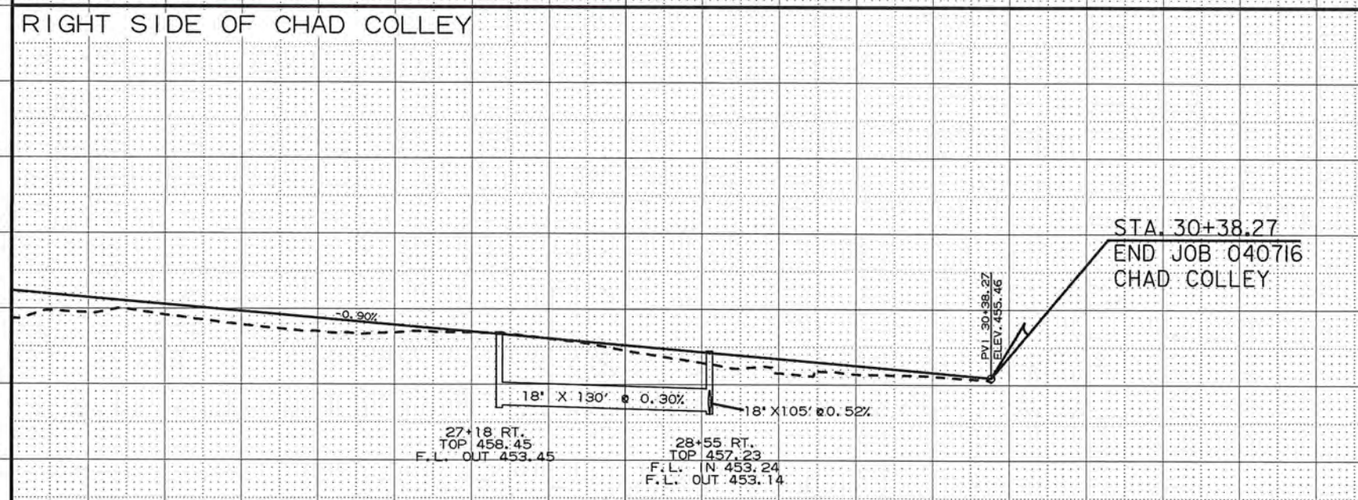
				6	ARK.			
				JOB NO.		040716	104	194
				(2)	PLAN AND PROFILE SHEETS			

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

LEFT SIDE OF CHAD COLLEY



RIGHT SIDE OF CHAD COLLEY



485 480 475 470 465 460 455 450 445 440 435

24+00 25+00 26+00 27+00 28+00 29+00 30+00 31+00 32+00 33+00 34+00 35+00 36+00 37+00 38+00 39+00

USER: APSIBI
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\p&p\r040716 Chad Colley PR02.dgn
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SCALE: 1:100
MODEL: PROPOSED DESIGN

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.		040716	105	194
				(2)	PLAN SHEETS - OVERLAY			

OBLITERATE EXISTING PAVEMENT

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

70 5 10

PROPOSED R/W
EXIST. R/W
P.O.B. 0+00.00
P.C. 171+58.53
+16.77 70'
+85 62.02' 65'
+12.19 66'
+13.08 60'
+45 55.45' 80'
+75 52.04' 80'
+97.98 50'
+45.15 62.12'
+40.56 80'
P.I. 174+68.95
+65.83 87'
+70.66 69.64'
175
STA. 3+93.88 EX. HWY. 254
BEGIN OVERLAY
EXIST. R/W
C.L. EX. HWY. 255
N88°59'06"E
N87°56'48"E
CHURCH ST.
EXIST. R/W
+02.37 20'
P.I. 14+01.94
Δ = 01°15'10" LT.
+01.94 22.20'
+35
+80 59.43'
CONSTRUCTION LIMITS
S60°42'01"E
P.T. 177+64.82
HWY. 255
+90 58.14'
01°00'54"W

15 20 25

P.I. 14+01.94
Δ = 01°15'10" LT.
+02.37 20'
EXIST. R/W
N86°41'38"E
C.L. EX. HWY. 255
EXIST. R/W
+01.94 22.20'
+60.83 20'
P.C. 19+60.83
+00.06 22.05'
P.O.B. 0+00.00
HWY. 253 N05°31'58"E
+42.89 21.82'
+68.64 20'
P.I. 20+69.68
STA. 0+00 HWY. 253 =
STA. 20+15.74 EX. HWY 255
Δ = 81°09'40"
P.T. 21+16.44
+16.44 20'
P.C. 22+70.42
+70.42 20'
N67°17'19"E
+16.44 20'
+70.42 20'
C.L. HWY. 255
PI = 20+69.68
Δ = 19°24'19" LT.
D = 09°00'00"
T = 108.85'
L = 215.61'
PC = 19+60.83
PT = 21+76.44
MATCH EXIST. SUPER
P.I. 24+78.49
+77.17 20'
P.T. 26+83.92
+83.92 20'
EXIST. R/W
N83°05'00"E
C.L. EX. HWY. 255
EXIST. R/W
+77.17 20'
+83.92 20'
C.L. HWY. 255
PI = 24+78.49
Δ = 15°47'41" RT.
D = 03°49'11"
T = 208.07'
L = 413.50'
PC = 22+70.42
PT = 26+83.92
MATCH EXIST. SUPER

EXIST. HWY. 255

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				6	ARK.			
				JOB NO.		040716	106	194
				(2)	PLAN SHEETS - OVERLAY			

STATE OF ARKANSAS
* * *
LICENSED PROFESSIONAL ENGINEER
* * *
No. 15560
3-25-2020
JEROME PAUL DAVIS

30 35 40 45

N

+82.89 20'
+93.31 20'
+61.65 20'
+72.06 20'
FRANK ST.
N83°05'00"E
C. L. EX. HWY. 255
EXIST. R/W
EXIST. R/W
P.C. 40+19.32
+98.53 18.37'
P.T. 41+77.74
N78°19'51"E
C. L. EX. HWY. 255
P.I. 40+98.57
+98.53 21.66'
S. 11TH ST.

C.L. HWY. 255
PI = 40+98.57
Δ = 04°45'09" LT.
D = 03°00'00"
T = 79.25'
L = 158.42'
PC = 40+19.32
PT = 41+77.74
MATCH EXIST. SUPER

5 50 55 60

P.C. 46+47.66
+47.66 20'
P.I. 47+98.44
+98.13 20'
P.T. 49+48.60
+48.60 20'
+00.25 20'
P.C. 51+28.92
P.T. 53+38.29
+40.25 20'
+17.50 20'
P.C. 59+17.50
P.I. 59+32.28
P.T. 59+47.06
+47.06 20'
+63.25 20'
P.O.E. 60+63.25
N78°19'51"E
EXIST. R/W
C. L. EX. HWY. 255
EXIST. R/W
N87°21'33"E
N76°53'25"E
C. L. EX. HWY. 255
EXIST. R/W
N80°26'16"E
+47.66 20'
+98.13 20'
+48.60 20'
+00.25 20'
P.I. 52+33.90
S. 8TH ST.
S. 7TH ST.
+40.25 20',18'
+17.50 20'
+47.06 20'
+63.25 20'
STA. 60+35.46
END OVERLAY

C.L. HWY. 255
PI = 47+98.44
Δ = 09°01'42" RT.
D = 03°00'00"
T = 150.78'
L = 300.94'
PC = 46+47.66
PT = 49+48.60
MATCH EXIST. SUPER

C.L. HWY. 255
PI = 52+33.90
Δ = 10°28'07" LT.
D = 05°00'00"
T = 104.98'
L = 209.37'
PC = 51+28.92
PT = 53+38.29
MATCH EXIST. SUPER

C.L. HWY. 255
PI = 59+32.28
Δ = 03°32'49" RT.
D = 12°00'00"
T = 14.78'
L = 29.56'
PC = 59+17.50
PT = 59+47.06
MATCH EXIST. SUPER

EXIST. HWY. 255

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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.		040716	107	194
				(2)	PLAN SHEETS - OVERLAY			

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

C.L. EX. HWY. 255
N86°41'38"E
P.O.B. 0+00.00
+60.83 20'
P.C. 19+60.83
+60.83 20'
+00.06 22.05'
STA. 0+11.00
BEGIN OVERLAY
EXIST. R/W
N05°31'58"E
+42.69 24.62'
+68.64 20'
EXIST. R/W
STA. 0+00 HWY. 253 =
STA. 20+15.74 EX. HWY 255
Δ = 81°09'40"
P.I. 20+69.68
+68.64 20'
P.T. 21+76.44
+76.44 20'
20

C.L. HWY. 253
PI = 4+36.33
Δ = 00°46'06" RT.
D = 02°51'49"
T = 13.41'
L = 26.82'
PC = 4+22.92
PT = 4+49.74
MATCH EXIST. SUPER

+22.92 20'
P.C. 4+22.92
P.I. 4+36.33
P.T. 4+49.74
+49.73 20'
5
+59.18 20'
+00.35 20'
P.C. 7+04.95
+22.92 20'
+49.73 20'
+49.41 20'
+90.59 20'
N06°18'04"E

C.L. HWY. 253
PI = 8+52.15
Δ = 02°56'36" LT.
D = 01°00'00"
T = 147.20'
L = 294.33'
PC = 7+04.95
PT = 9+99.28
MATCH EXIST. SUPER

+52.12 18.12'
+52.12 21.90'
P.I. 8+52.15
10
YUKON DR.
P.T. 9+99.28
N03°21'28"E
+73.27 20'
P.I. 12+73.27
Δ = 00°50'00" LT.
FAIRBANKS DR.
EXIST. R/W
N03°00'23"E
C.L. HWY. 253
EXIST. R/W
+73.27 20'

15
DENALI WAY
+37.10 20'
P.I. 16+37.10
Δ = 00°07'33" LT.
N03°00'23"E
EXIST. R/W
N02°52'50"E
+37.10 20'
20
P.I. 20+47.18
Δ = 00°07'29" LT.
+47.18 20'
+47.18 20'
D ST.
C.L. HWY. 253
N02°45'21"E
25
+20.18 20'
P.I. 26+20.18
Δ = 00°35'18" LT.
+20.18 20'
STROZIER CT.
EXIST. R/W
N02°10'03"E
EXIST. R/W
30

HWY. 253-OVERLAY

USER: APSIBI
DESIGN FILE: G:\1710300_Hwy255\TRANSP\dgn\p&p\r040716 PPI2.dgn
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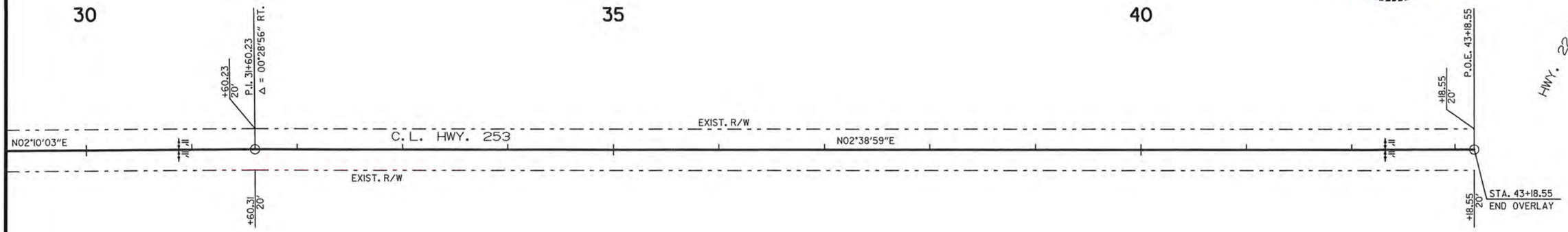
				6	ARK.			
				JOB NO.		040716	108	194
				(2)	PLAN SHEETS - OVERLAY			

STATE OF ARKANSAS
* * *
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020



HWY. 253-OVERLAY

USER: AP518I
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				6	ARK.			
				JOB NO.		040716	109	194

(2) SUMMARY OF TRAFFIC SIGNAL QUANTITIES

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

SUMMARY OF TRAFFIC SIGNAL QUANTITIES

	ITEM NUMBER	ITEM	HWY. 255/ MASSARD RD.	HWY. 255/HWY. 253 CHAD COLLEY BLVD.	HWY. 22/ HWY. 59 FT. SMITH BLVD.	QUANTITY	UNIT
	SP & 701	ACTUATED CONTROLLER TS2-TYPE 2 (8 PHASES)			1	1	EACH
	SP & 701	SYSTEM LOCAL CONTROLLER TS2-TYPE 2 (8 PHASES)	2	1		3	EACH
	SP	TRAFFIC SIGNAL CONTROLLER (MODIFICATION)	1			1	EACH
	SP	ETHERNET SWITCH, T100 HARDENED (8-PORT)	2	1		3	EACH
	SP	E-NET CABLE (EXTERIOR CAT 5E)	135	100		235	LIN. FT.
	SP	LOCAL RADIO (E-NET 5.8) WITH ANTENNA	2	1		3	EACH
	SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	18	10	8	36	EACH
	SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	8	4	4	16	EACH
	SP	RELOCATION OF TRAFFIC SIGNAL HEAD	6			6	EACH
	SP	PEDESTRIAN SIGNAL HEAD RELOCATION	8			8	EACH
	SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	8	8		16	EACH
	708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	9275	2976		12251	LIN. FT.
	708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	1240	320	70	1630	LIN. FT.
	708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	710	670	360	1740	LIN. FT.
	SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	938	690		1628	LIN. FT.
	SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)	325	220		545	LIN. FT.
	SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	75	40		115	LIN. FT.
	SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	1370	850		2220	LIN. FT.
	709	GALVANIZED STEEL CONDUIT (2")	80	20		100	LIN. FT.
	709	GALVANIZED STEEL CONDUIT (3")	70			70	LIN. FT.
	710	NON-METALLIC CONDUIT (2")	40	20		60	LIN. FT.
	710	NON-METALLIC CONDUIT (3")	807	751		1558	LIN. FT.
	711	CONCRETE PULL BOX (TYPE 2)	3	6		9	EACH
	711	CONCRETE PULL BOX (TYPE 1 HD)	2	1		3	EACH
	711	CONCRETE PULL BOX (TYPE 2 HD)	4	1		5	EACH
	SS & 713	SPAN WIRE ASSEMBLY	1			1	EACH
	SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (0')	2			2	EACH
	SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (36')		1		1	EACH
	SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (42')		1		1	EACH
	SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (48')	1			1	EACH
	SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (56')	1			1	EACH
	SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (58')	1			1	EACH
	SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (60')	1			1	EACH
	SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (62')		1		1	EACH
	SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (64')		1		1	EACH
	SP	LED LUMINAIRE ASSEMBLY	6	4		10	EACH
	SS & 715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	4	4		8	EACH
	SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	1		2	EACH
	SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.75		0.25	1.00	LUMP SUM
	716	TREATED WOOD POLE (CLASS 2, 40')	4			4	EACH
	716	TREATED WOOD POLE (CLASS 2, 45')	4			4	EACH
	SP	18" STREET NAME SIGN	4	4		8	EACH
	SP	VIDEO DETECTOR ROTATION	4			4	EACH
*	SP & 733	VIDEO DETECTOR (CLR)	17	9		26	EACH
	733	VIDEO CABLE	3365	1693		5058	LIN. FT.
	733	VIDEO MONITOR (CLR)	2	1		3	EACH
*	SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	9	5		14	EACH
	SP & 733	VEHICLE DETECTOR RACK (16 CHANNEL)	2	1		3	EACH

* ONE SPARE VIDEO DETECTOR AND ONE SPARE VIDEO PROCESSOR SHALL BE SUPPLIED FOR EACH INTERSECTION.

LOCATION: HWY. 255
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 4 SCALE: N/A DRAWN BY: CTA

USER: AP5181
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\signals\T040716.dgn
PLOTTED: 3/25/2020 14:50 SCALE: 1:2

G:\17103100_Hwy255\TRANSP\dgn\signals\T040716.dgn 3/25/2020 14:50

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.		040716	110	194

(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.

29. ALL NON-METALLIC CONDUIT RUNS SHALL HAVE BELL RING FITTINGS INSTALLED ON THE TERMINATING ENDS OF THE CONDUIT. THIS INCLUDES PULL BOXES, POLE BASES, AND TRAFFIC SIGNAL CABINETS.

30. ALL CONCRETE PULL BOXES SHALL BE SET ON A GRAVEL OR CRUSHED STONE BEDDING AS SPECIFIED IN SECTION 711, CONCRETE PULL BOX, OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

LOCATION:	HWY. 255
CITY:	FORT SMITH
COUNTY:	SEBASTIAN
DISTRICT:	4 SCALE: N/A DRAWN BY: CTA

USER: APSIBI
DESIGN FILE: G:\7103100_Hwy255\TRANSP\dgn\signals\T040716.dgn
PLOTTED: 3/25/2020 14:51 SCALE: 1:2

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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.		040716	III	194

(2) TRAFFIC SIGNAL QUANTITIES - MASSARD ROAD

PERMANENT TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP & 701	SYSTEM LOCAL CONTROLLER TS2-TYPE 2 (8 PHASES)	1	EACH
SP	ETHERNET SWITCH, T100 HARDENED (8-PORT)	1	EACH
SP	E-NET CABLE (EXTERIOR CAT 5E)	90	LIN. FT.
SP	LOCAL RADIO (E-NET 5.8) WITH ANTENNA	1	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	10	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	4	EACH
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	8	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	3489	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	310	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	710	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	863	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)	325	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	40	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	1370	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")	20	LIN. FT.
710	NON-METALLIC CONDUIT (2")	20	LIN. FT.
710	NON-METALLIC CONDUIT (3")	807	LIN. FT.
711	CONCRETE PULL BOX (TYPE 2)	3	EACH
711	CONCRETE PULL BOX (TYPE 1 HD)	1	EACH
711	CONCRETE PULL BOX (TYPE 2 HD)	4	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (0')	2	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (48')	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (56')	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (58')	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (60')	1	EACH
SP	LED LUMINAIRE ASSEMBLY	6	EACH
SS & 715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	4	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.25	LUMP SUM
SP	18" STREET NAME SIGN	4	EACH
* SP & 733	VIDEO DETECTOR (CLR)	9	EACH
733	VIDEO CABLE	2010	LIN. FT.
733	VIDEO MONITOR (CLR)	1	EACH
* SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	5	EACH
SP & 733	VEHICLE DETECTOR RACK (16 CHANNEL)	1	EACH

* ONE SPARE VIDEO DETECTOR AND ONE SPARE VIDEO PROCESSOR SHALL BE SUPPLIED

PERMANENT TRAFFIC SIGNAL:

THE STAGE 2 TEMPORARY SIGNAL INSTALLATION SHALL REMAIN IN OPERATION UNTIL THE PERMANENT TRAFFIC SIGNAL IS COMPLETED AND OPERATIONAL.

(REFER TO PERMANENT TRAFFIC SIGNAL PLANS.)

STAGE 1 TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP & 701	SYSTEM LOCAL CONTROLLER TS2-TYPE 2 (8 PHASES)	1	EACH
SP	ETHERNET SWITCH, T100 HARDENED (8-PORT)	1	EACH
SP	E-NET CABLE (EXTERIOR CAT 5E)	45	LIN. FT.
SP	LOCAL RADIO (E-NET 5.8) WITH ANTENNA	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
SP	PEDESTRIAN SIGNAL HEAD RELOCATION	6	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	4560	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	930	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	75	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	35	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")	60	LIN. FT.
709	GALVANIZED STEEL CONDUIT (3")	70	LIN. FT.
710	NON-METALLIC CONDUIT (2")	20	LIN. FT.
711	CONCRETE PULL BOX (TYPE 1 HD)	1	EACH
SS & 713	SPAN WIRE ASSEMBLY	1	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.25	LUMP SUM
716	TREATED WOOD POLE (CLASS 2, 40')	4	EACH
716	TREATED WOOD POLE (CLASS 2, 45')	4	EACH
SP & 733	VIDEO DETECTOR (CLR)	8	EACH
733	VIDEO CABLE	1355	LIN. FT.
733	VIDEO MONITOR (CLR)	1	EACH
SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	4	EACH
SP & 733	VEHICLE DETECTOR RACK (16 CHANNEL)	1	EACH

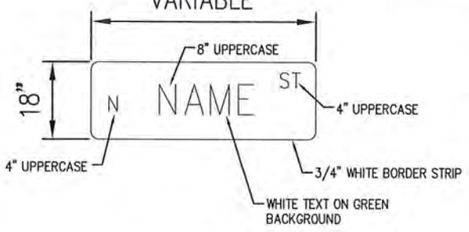
STAGE 1

THE EXISTING PEDESTRIAN SIGNAL HEADS SHALL BE RELOCATED AND UTILIZED ON THE TEMPORARY TRAFFIC SIGNAL INSTALLATION FOR STAGE 1 AND STAGE 2 AS SHOWN ON THE PLANS. INSTALL THE TEMPORARY TRAFFIC SIGNAL EQUIPMENT AND ALL EXISTING PEDESTRIAN TRAFFIC SIGNAL EQUIPMENT NECESSARY TO ESTABLISH TEMPORARY PEDESTRIAN CROSSINGS FOR BOTH LEGS CROSSING HWY. 255 AND THE SOUTH LEG OF MASSARD ROAD. REMOVE ALL UNNECESSARY EXISTING SIGNAL EQUIPMENT.

MAINTAIN THIS TRAFFIC SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 1 TRAFFIC SIGNAL PLANS.

(REFER TO MAINTENANCE OF TRAFFIC DETAILS.)

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 ALSO BE 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 OF THE NEARSIDE LEFT POLE. SEE STD. DRAWING SHEET FOR MORE INFORMATION FOR MOUNTING ON MAST ARM ASSEMBLY.
4. THE C 2000 STANDARD ALPHABET SHALL BE USED FOR ALL LETTERS

STAGE 2 TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP	TRAFFIC SIGNAL CONTROLLER (MODIFICATION)	1	EACH
SP	RELOCATION OF TRAFFIC SIGNAL HEAD	6	EACH
SP	PEDESTRIAN SIGNAL HEAD RELOCATION	2	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	1226	LIN. FT.
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.25	LUMP SUM
SP	VIDEO DETECTOR ROTATION	4	EACH

STAGE 2

INSTALL THE EXISTING PEDESTRIAN SIGNAL EQUIPMENT HELD FROM STAGE 1 CONSTRUCTION. AND RE-ESTABLISH THE MASSARD ROAD NORTH LEG PEDESTRIAN CROSSING AND CLOSE THE SOUTH LEG. RELOCATE PEDESTRIAN SIGNAL HEADS 17 AND 18 FROM THE SOUTH LEG TO THE NORTH LEG OF MASSARD ROAD. REMOVE TRAFFIC SIGNAL CABLE ASSOCIATED WITH THE RELOCATION OF PEDESTRIAN HEAD 17 AND 18. RELOCATE TRAFFIC SIGNAL HEADS 1, 2, 3 AND 7, 8, 9. TO ACCOMMODATE THE LANE SHIFT FOR HWY. 255. ROTATE VIDEO DETECTORS V1, V2, V5, AND V6.

MAINTAIN THIS TRAFFIC SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 2 TRAFFIC SIGNAL PLANS.

(REFER TO MAINTENANCE OF TRAFFIC DETAILS.)

STATE OF ARKANSAS
* * *
LICENSED PROFESSIONAL ENGINEER
No. 15360
3-25-2020
JEROME PAUL DAVIS

LOCATION: 255/MASSARD RD.
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 4 SCALE: N/A DRAWN BY: CTA

USER: APS181
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\signals\T040716.dgn
PLOTTED: 3/25/2020 14:51
SCALE: 1:2

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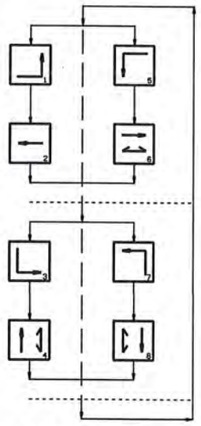
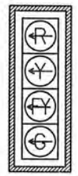
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	112	194
				(2)	SIGNALIZATION PLAN SHEET			

SIGNAL FACES

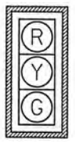
PHASING DIAGRAM



12" LENSES



1, 7, 4, 10



2 & 3
5 & 6
8 & 9
11 & 12

ONE SECTION
(SOLID SYMBOL)

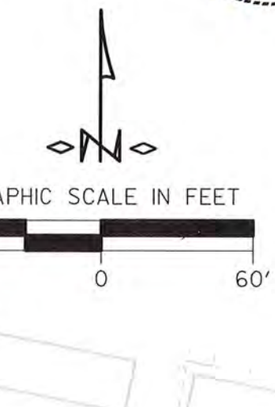
(EXISTING)
13 & 14
15 & 16
17 & 18

NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISION 'RETROREFLECTIVE BACKPLATES' FOR DETAILS ON REQUIREMENTS FOR BACKPLATES.
3. ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEETS A.D.A.S. STANDARD.
4. OPEN AND CLOSE EAST OR WEST PEDESTRIAN LEGS DEPENDING ON STAGE OF CONSTRUCTION.

DETECTOR SPACING CHART

HWY. 255 VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
45 MPH	260'	115'
MASSARD RD. VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
40 MPH	230'	100'

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13560
JEROME PAUL DAVIS
3-25-2020



VIRTUAL 6'X6' PULSE VDZ (TYPICAL) LOCATED 230' BEHIND STOP LINE

VIRTUAL 6'X6' PULSE VDZ (TYPICAL) LOCATED 85' BEHIND STOP LINE

VIRTUAL 6'X50' PRESENCE VDZ (TYPICAL)

TREATED WOOD POLE (CLASS 2, 45') USE SIDEWALK GUY INSTALLATION IF NECESSARY SEE DETAIL (TYPICAL)

TREATED WOOD POLE (CLASS 2, 40') USE FOR PEDESTRIAN POLES (TYPICAL)

VIRTUAL 6'X6' PULSE VDZ (TYPICAL) LOCATED 260' BEHIND STOP LINE

LOCAL RADIO WITH ANTENNA, CAT 5E CABLE, MOUNTED TO POLE A

(FOR POLE MOUNT CONTROLLER) 1-2" G.S. TO CONTROLLER AND 2-3" G.S. CONDUIT UP WOOD POLE

SERVICE POINT AND MAIN BREAKER BY CONTRACTOR WITHIN 10 FEET OF CONTROLLER, 2" NMC INTO CONTROLLER WITH CONCRETE PULL BOX (TYPE 1 HD)

VIDEO DETECTOR (TYPICAL)

VIRTUAL 6'X6' PULSE VDZ (TYPICAL) LOCATED 100' BEHIND STOP LINE

VIRTUAL 6'X6' PULSE VDZ (TYPICAL) LOCATED 230' BEHIND STOP LINE

VIRTUAL 6'X6' PULSE VDZ (TYPICAL) V251 LOCATED 85' BEHIND STOP LINE

VIRTUAL 6'X6' PULSE VDZ (TYPICAL) LOCATED 115' BEHIND STOP LINE

115

S02°31'41"W MASSARD RD.

S76°23'09"E HWY. 255

S02°30'53"W MASSARD RD.

HWY. 255

P.I. 13+41.79

P.O.E. 13+41.79

NOTE TO CONTRACTOR:
TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT ALL CONSTRUCTION PHASES.

ANTENNA ORIENTATION

NOTE TO CONTRACTOR:
CONTACT THE CITY OF FORT SMITH FOR ANTENNA ORIENTATION.

STAGE I TEMPORARY SIGNAL PLAN

LOCATION:	HWY. 255/MASSARD RD.				
CITY:	FORT SMITH				
COUNTY:	SEBASTIAN				
DISTRICT:	4	SCALE:	1" = 60'	DRAWN BY:	CTA

USER: APSIBI
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\signals\MOT_Stage 1_Signals.dgn SCALE: 1:60
PLOTTED: 3/25/2020 14:51

HWY. 255/MASSARD RD.
POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 255 - STA. 111+31.17	52' RT.	613906.82, 368831.56
B	HWY. 255 - STA. 111+36.35	80' LT.	613942.95, 368958.73
C	HWY. 255 - STA. 112+37.99	74' LT.	614040.22, 368928.54
D	HWY. 255 - STA. 112+62.45	85' RT.	614026.66, 368768.65
E	HWY. 255 - STA. 111+23.07	63' LT.	613926.00, 368945.12
F	HWY. 255 - STA. 112+57.97	45' LT.	614052.79, 368895.54
G	HWY. 255 - STA. 112+87.90	43' RT.	614061.36, 368803.78
H	HWY. 255 - STA. 111+64.94	63' RT.	613937.11, 368813.17

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.		040716	113	194
				(2)	SIGNALIZATION PLAN SHEET			

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
JEROME PAUL DAVIS
No. 15560
3-25-2020

GRAPHIC SCALE IN FEET
40′ 0 40′

VIRTUAL 6'X6' PULSE VDZ (TYPICAL) LOCATED 85' BEHIND STOP LINE

VIRTUAL 6'X50' PRESENCE VDZ (TYPICAL)

TREATED WOOD POLE (CLASS 2, 45') USE SIDEWALK GUY INSTALLATION IF NECESSARY SEE DETAIL (TYPICAL)

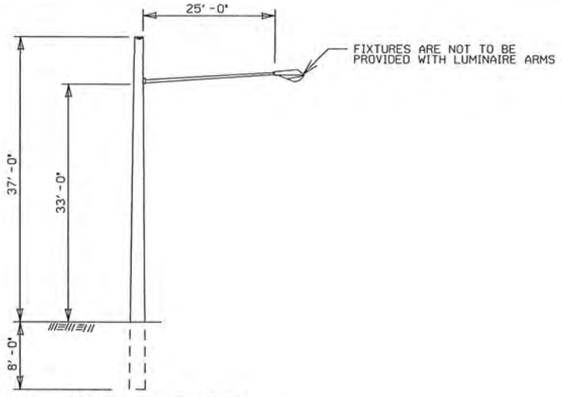
TREATED WOOD POLE (CLASS 2, 40') USE FOR PEDESTRIAN POLES (TYPICAL)

VIRTUAL 6'X6' PULSE VDZ (TYPICAL) Vz51 LOCATED 85' BEHIND STOP LINE

VIRTUAL 6'X6' PULSE VDZ (TYPICAL) LOCATED 115' BEHIND STOP LINE

VIDEO DETECTOR (TYPICAL)

VIRTUAL 6'X6' PULSE VDZ (TYPICAL) LOCATED 100' BEHIND STOP LINE



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. THE COST FOR LUMINAIRE ARMS, MOUNTING, AND ALL HARDWARE IS INCLUDED IN PRICE BID FOR ITEM 716 TREATED WOOD POLE.

STAGE I TEMPORARY SIGNAL PLAN

LOCATION:	HWY. 255/MASSARD RD.				
CITY:	FORT SMITH				
COUNTY:	SEBASTIAN				
DISTRICT:	4	SCALE:	1" = 40'	DRAWN BY:	CTA

USER: AP5181
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\signals\MOT_Stage 1_Signals.dgn
PLOTTED: 3/25/2020 14:52 SCALE: 1:40

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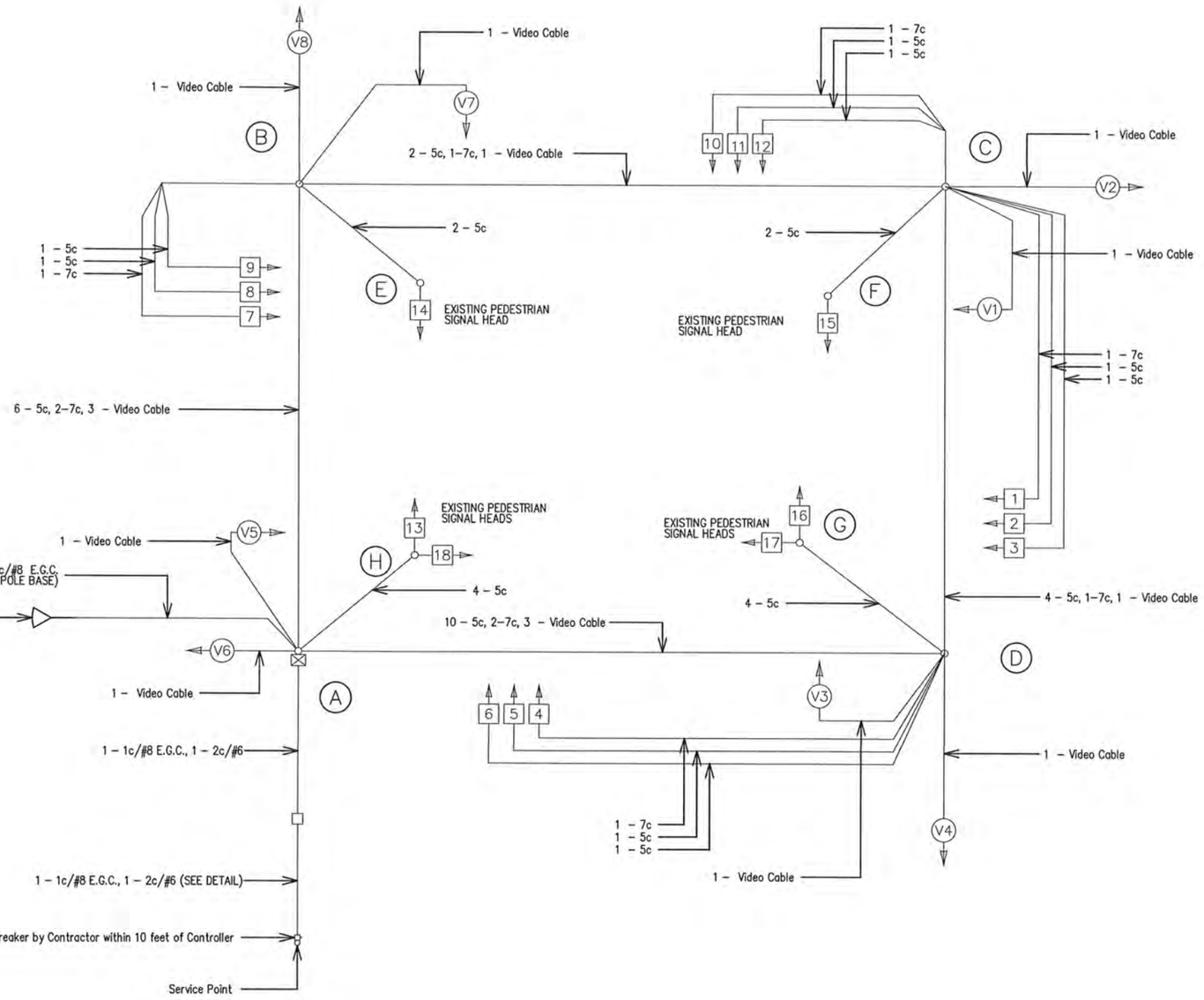
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	114	194
				(2)	SIGNALIZATION PLAN SHEET			

STATE OF ARKANSAS
* * *
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020



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.

STAGE I TEMPORARY SIGNAL PLAN

LOCATION:	HWY. 255/MASSARD RD.				
CITY:	FORT SMITH				
COUNTY:	SEBASTIAN				
DISTRICT:	4	SCALE:	N/A	DRAWN BY:	CTA

USER: APSIBI
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\signals\MOT_Stage I_Signals.dgn
PLOTTED: 3/25/2020 14:52
SCALE: 1:2

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.		040716	115	194

(2) SIGNALIZATION PLAN SHEET

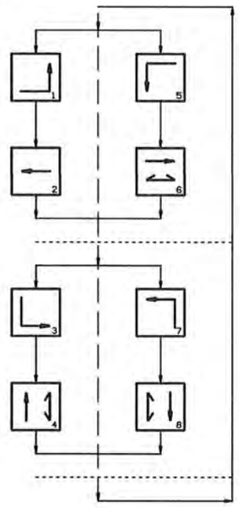
DETECTOR CHART

DETECTOR SYSTEM DESCRIPTION: JOB 040716											
HWY. 255/MASSARD RD. DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS LOCAL			COMMENTS	TUBE LENGTHS
DET. ID #	LOCATION DIRECTION	TPYE	DET. #	CAB. TRM. #	AMP CHN. #	CON. IMP. #	PHS	SYSTEM DET. #	MASTER SYSTEM DETECTOR NUMBERS		
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 A&B	NB ADVANCE	LOCAL			13	V4	4			CAMERA V4	23"
Vz42 A&B	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 A&B	EB ADVANCE	LOCAL			3	V6	6			CAMERA V6	23"
Vz62 A&B	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 A&B	SB ADVANCE	LOCAL			11	V8	8			CAMERA V8	23"
Vz82 A&B	SB NEAR	COMB.			12	V16	8	8		CAMERA V3	23"
PB4 A&B	HWY.255 E. LEG	PED.				P4	4				
PB6 A&B	MASSARD RD. S. LEG	PED.				P6	6				
PB8 A&B	HWY. 255 W. LEG	PED.				P8	8				
					SPARE:						

CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT

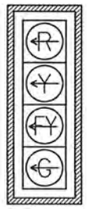
NOTE: "AMP CHN =" REFERS TO THE RACK OUTPUT POSITION.
THIS IS WIRED TO CONTROLLER INPUT DETECTOR NUMBER WHICH IS PROGRAMMED TO ACTUATE THE DESIGNATED PHASE.
EXAMPLE: V9 = SYSTEM DETECTOR 1, V10 = SYSTEM DETECTOR 2

PHASING DIAGRAM

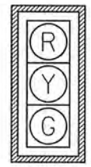


SIGNAL FACES

12" LENSES



1, 7, 4, 10



2 & 3
5 & 6
8 & 9
11 & 12

ONE SECTION (SOLID SYMBOL)

(EXISTING)
13 & 14
15 & 16
17 & 18

NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISION 'RETROREFLECTIVE BACKPLATES' FOR DETAILS ON REQUIREMENTS FOR BACKPLATES.
3. ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEETS A.D.A.S. STANDARD.
4. OPEN AND CLOSE EAST OR WEST PEDESTRIAN LEGS DEPENDING ON STAGE OF CONSTRUCTION.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

INTERVAL CHART

SIGNAL FACES	INTERVALS																	FLASH SEQ.
	1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	3+7	CLR.	3+8	CLR.	4+7	CLR.	4+8	CLR.		
1	← G	*	← G	*	← FY	***	← FY	***	← 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	← R	← R	← R	← R	← R	← R	← R	← R	← G	*	← G	*	← FY	***	← FY	***		← R
5&6	R	R	R	R	R	R	R	R	R	R	G	**	R	R	G	**		R
7	← G	*	← FY	***	← G	*	← FY	***	← R	← R	← R	← R	← R	← R	← R	← R		← R
8&9	R	R	R	R	G	**	G	**	R	R	R	R	R	R	R	R		R
10	← R	← R	← R	← R	← R	← R	← R	← R	← G	*	← FY	***	← G	*	← FY	***		← R
11&12	R	R	R	R	R	R	R	R	R	R	R	R	G	**	G	**		R
13&14	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	W	FDW		BLK
15&16	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	W	FDW		BLK
17&18	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW		BLK

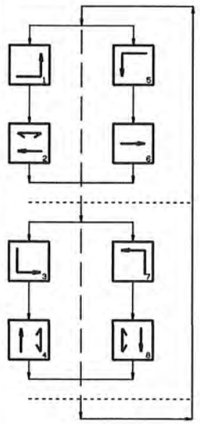
* DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE.
** DENOTES GREEN OR YELLOW BALL DEPENDING ON NEXT PHASE.
*** DENOTES FLASHING YELLOW ARROW OR YELLOW ARROW DEPENDING ON NEXT PHASE.

STAGE I TEMPORARY SIGNAL PLAN

LOCATION: HWY. 255/MASSARD RD.
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 4 SCALE: N/A DRAWN BY: CTA

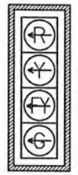
USER: APSIBI
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\signals\MOT_Stage I_Signals.dgn
PLOTTED: 3/25/2020 14:52 SCALE: 1:2

PHASING DIAGRAM

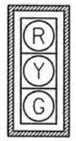


SIGNAL FACES

12" LENSES

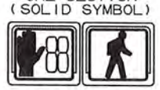


1, 7, 4, 10



2 & 3
5 & 6
8 & 9
11 & 12

ONE SECTION
(SOLID SYMBOL)



(EXISTING)

13 & 14
15 & 16
17 & 18

NOTES:
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2. REFER TO SPECIAL PROVISION "RETROREFLECTIVE BACKPLATES" FOR DETAILS ON REQUIREMENTS FOR BACKPLATES.
3. ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEETS A.D.A.S. STANDARD.
4. OPEN AND CLOSE EAST OR WEST PEDESTRIAN LEGS DEPENDING ON STAGE OF CONSTRUCTION.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		040716	116	194

(2) SIGNALIZATION PLAN SHEET

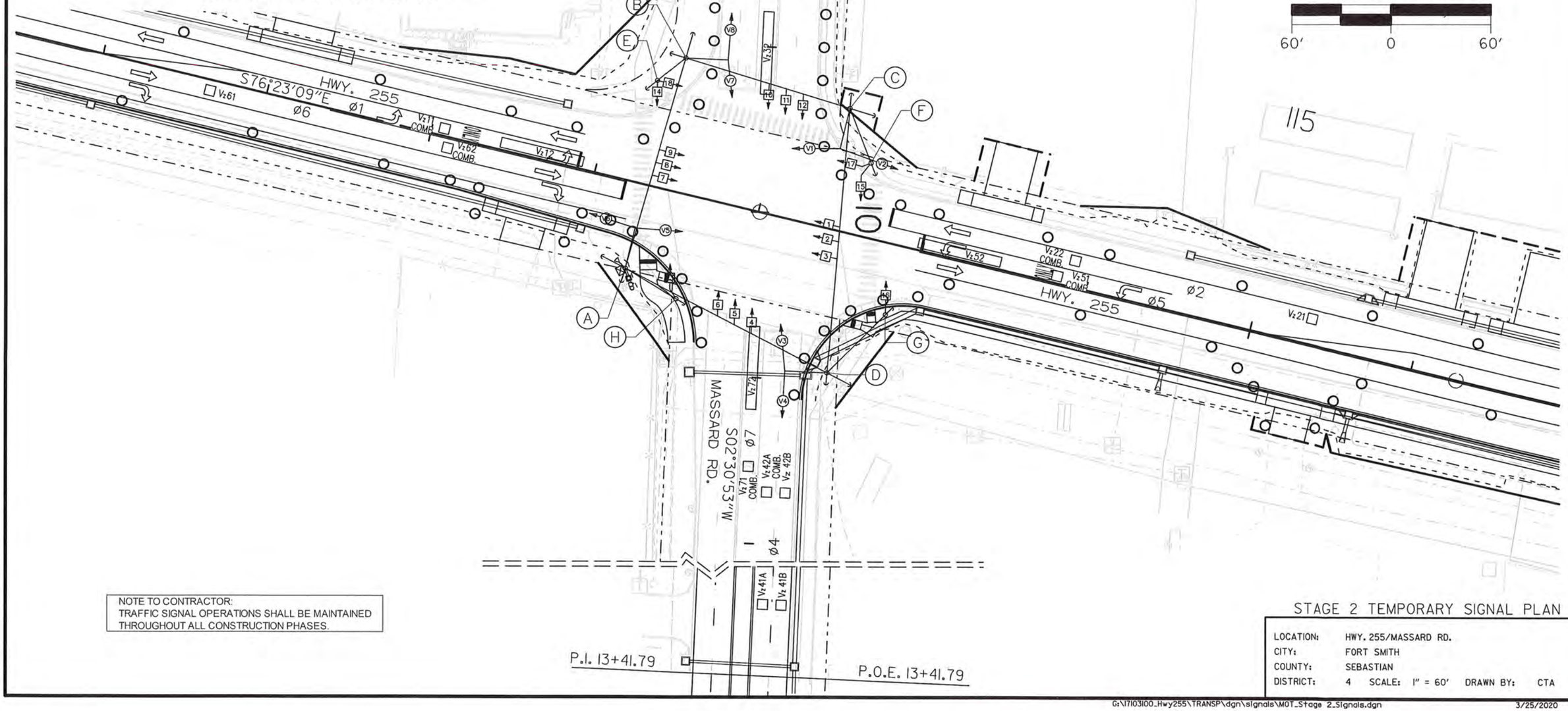
DETECTOR SPACING CHART

HWY. 255 VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
45 MPH	260'	115'
MASSARD RD. VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
40 MPH	230'	100'

STATE OF ARKANSAS
* * *
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

GRAPHIC SCALE IN FEET

60' 0 60'



115

NOTE TO CONTRACTOR:
TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT ALL CONSTRUCTION PHASES.

STAGE 2 TEMPORARY SIGNAL PLAN

LOCATION:	HWY. 255/MASSARD RD.
CITY:	FORT SMITH
COUNTY:	SEBASTIAN
DISTRICT:	4 SCALE: 1" = 60' DRAWN BY: CTA

USER: AP5181
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\signals\MOT_Stage 2_Signals.dgn SCALE: 1:60
PLOTTED: 3/25/2020 14:52

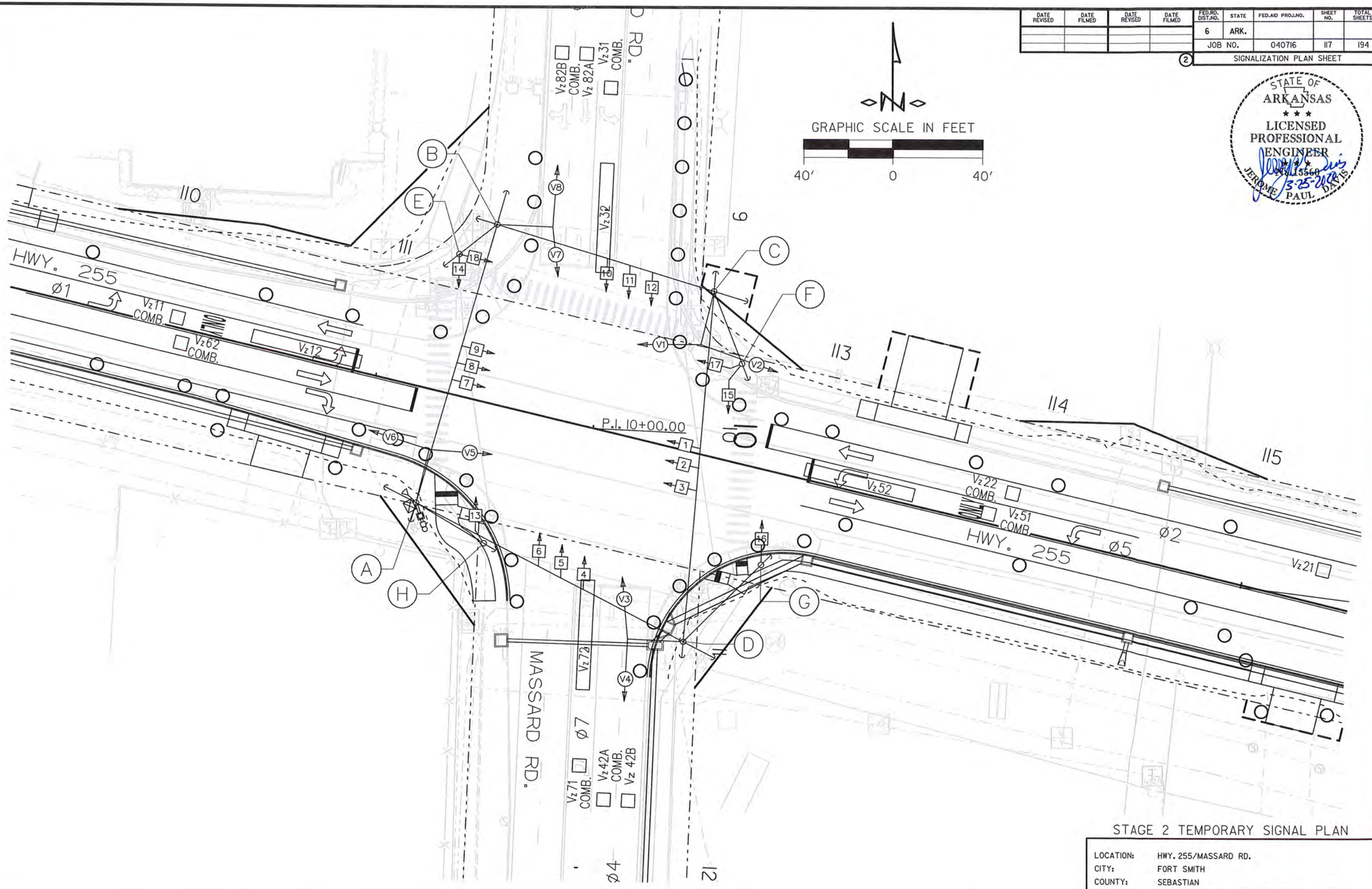
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		040716	117	194

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
* * *
LICENSED PROFESSIONAL ENGINEER
* * *
No. 13560
JEROME PAUL DAVIS
3-25-2020

GRAPHIC SCALE IN FEET
40′ 0 40′



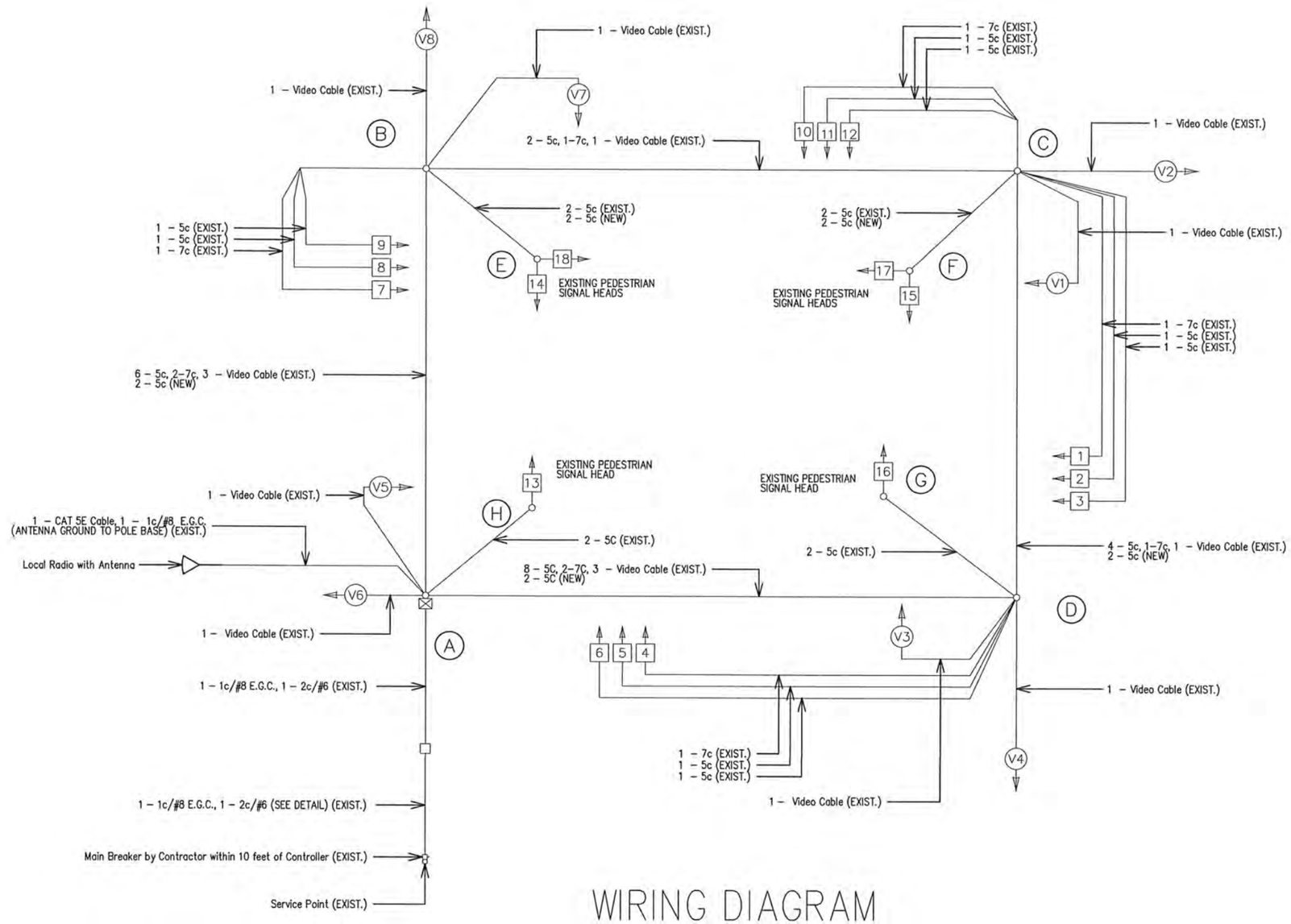
STAGE 2 TEMPORARY SIGNAL PLAN

LOCATION:	HWY. 255/MASSARD RD.
CITY:	FORT SMITH
COUNTY:	SEBASTIAN
DISTRICT:	4 SCALE: 1" = 40′ DRAWN BY: CTA

USER: APSIBI
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\signals\MOT_Stage 2_Signals.dgn
PLOTTED: 3/25/2020 14:52 SCALE: 1:40

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.		040716	118	194
				(2)	SIGNALIZATION PLAN SHEET			

STATE OF ARKANSAS
* * *
LICENSED PROFESSIONAL ENGINEER
* * *
No. 15560
JEROME PAUL DAVIS
3-25-2020



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.
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STAGE 2 TEMPORARY SIGNAL PLAN

LOCATION:	HWY. 255/MASSARD RD.				
CITY:	FORT SMITH				
COUNTY:	SEBASTIAN				
DISTRICT:	4	SCALE:	N/A	DRAWN BY:	CTA

USER: APSIBI
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\signals\MOT_Stage 2_Signals.dgn
PLOTTED: 3/25/2020 14:52
SCALE: 1:2

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.		040716	119	194

(2) SIGNALIZATION PLAN SHEET

DETECTOR CHART

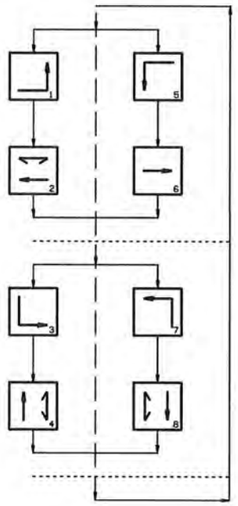
DETECTOR SYSTEM DESCRIPTION: JOB 040716

HWY. 255/MASSARD 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	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 A&B	NB ADVANCE	LOCAL			13	V4	4			CAMERA V4	23"
Vz42 A&B	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	23"
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 A&B	SB ADVANCE	LOCAL			11	V8	8			CAMERA V8	23"
Vz82 A&B	SB NEAR	COMB.			12	V16	8	8		CAMERA V3	23"
PB2 A&B	MASSARD RD. N. LEG	PED.				P2	2				
PB4 A&B	HWY.255 E. LEG	PED.				P4	4				
PB8 A&B	HWY. 255 W. LEG	PED.				P8	8				

CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT

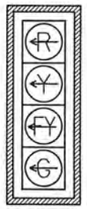
NOTE: "AMP CHN =" REFERS TO THE RACK OUTPUT POSITION.
THIS IS WIRED TO CONTROLLER INPUT DETECTOR NUMBER WHICH IS PROGRAMMED TO ACTUATE THE DESIGNATED PHASE.
EXAMPLE: V9 = SYSTEM DETECTOR 1, V10 = SYSTEM DETECTOR 2

PHASING DIAGRAM

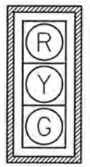


SIGNAL FACES

12" LENSES



1, 7, 4, 10



2 & 3
5 & 6
8 & 9
11 & 12

ONE SECTION
(SOLID SYMBOL)

(EXISTING)
13 & 14
15 & 16
17 & 18

NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
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4. OPEN AND CLOSE EAST OR WEST PEDESTRIAN LEGS DEPENDING ON STAGE OF CONSTRUCTION.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
JEROME PAUL DAVIS
No. 15560
3-25-2020

INTERVAL CHART

SIGNAL FACES	INTERVALS 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	*	← FY	***	← FY	***	← 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	← R	← R	← R	← R	← R	← R	← R	← R	← G	*	← G	*	← FY	***	← FY	***		← R
5&6	R	R	R	R	R	R	R	R	R	R	G	**	R	R	G	**		R
7	← G	*	← FY	***	← G	*	← FY	***	← R	← R	← R	← R	← R	← R	← R	← R		← R
8&9	R	R	R	R	G	**	G	**	R	R	R	R	R	R	R	R		R
10	← R	← R	← R	← R	← R	← R	← R	← R	← G	*	← FY	***	← G	*	← FY	***		← R
11&12	R	R	R	R	R	R	R	R	R	R	R	R	G	**	G	**		R
13&14	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	W	FDW		BLK
15&16	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	W	FDW		BLK
17&18	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.

STAGE 2 TEMPORARY SIGNAL PLAN

LOCATION: HWY. 255/MASSARD RD.
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 4 SCALE: N/A DRAWN BY: CTA

USER: APSIBI
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\signals\MOT_Stage 2_Signals.dgn
PLOTTED: 3/25/2020 14:52 SCALE: 1:2

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.		040716	120	194

(2) SIGNALIZATION PLAN SHEET

PHASING DIAGRAM

SIGNAL FACES

12" LENSES

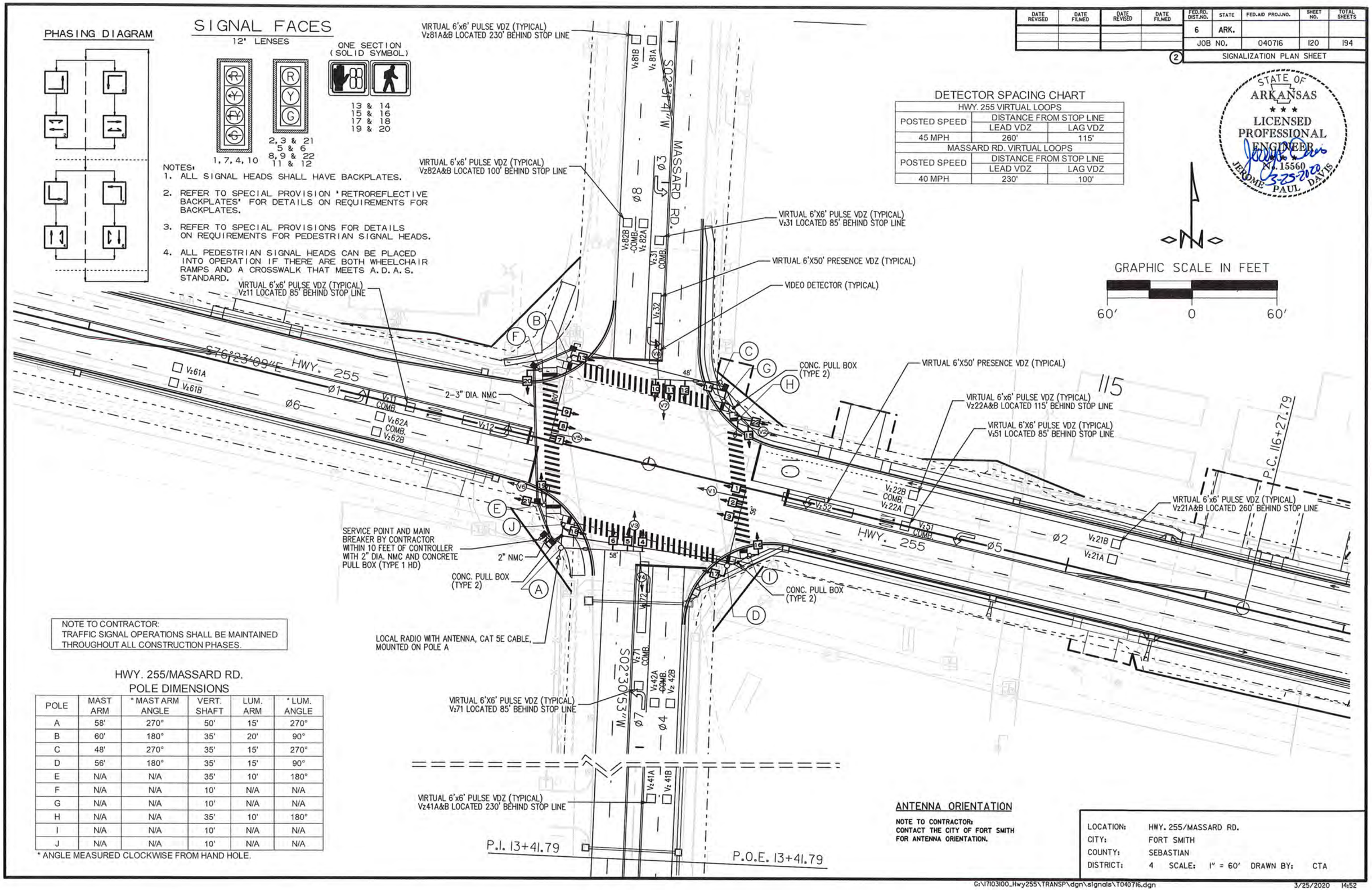
NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISION "RETROREFLECTIVE BACKPLATES" FOR DETAILS ON REQUIREMENTS FOR BACKPLATES.
3. REFER TO SPECIAL PROVISIONS FOR DETAILS ON REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.
4. ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEETS A.D.A.S. STANDARD.

DETECTOR SPACING CHART

HWY. 255 VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
45 MPH	260'	115'
MASSARD RD. VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
40 MPH	230'	100'

STATE OF ARKANSAS
* * *
LICENSED PROFESSIONAL ENGINEER
JEROME PAUL DAVIS
No. 15560
3-25-2020

GRAPHIC SCALE IN FEET
60' 0 60'



NOTE TO CONTRACTOR:
TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT ALL CONSTRUCTION PHASES.

HWY. 255/MASSARD RD. POLE DIMENSIONS

POLE	MAST ARM	* MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	* LUM. ANGLE
A	58'	270°	50'	15'	270°
B	60'	180°	35'	20'	90°
C	48'	270°	35'	15'	270°
D	56'	180°	35'	15'	90°
E	N/A	N/A	35'	10'	180°
F	N/A	N/A	10'	N/A	N/A
G	N/A	N/A	10'	N/A	N/A
H	N/A	N/A	35'	10'	180°
I	N/A	N/A	10'	N/A	N/A
J	N/A	N/A	10'	N/A	N/A

* ANGLE MEASURED CLOCKWISE FROM HAND HOLE.

ANTENNA ORIENTATION

NOTE TO CONTRACTOR:
CONTACT THE CITY OF FORT SMITH FOR ANTENNA ORIENTATION.

LOCATION:	HWY. 255/MASSARD RD.
CITY:	FORT SMITH
COUNTY:	SEBASTIAN
DISTRICT:	4 SCALE: 1" = 60' DRAWN BY: CTA

USER: APSIBI
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\signals\T040716.dgn SCALE: 1:60
PLOTTED: 3/25/2020 14:52

TRAFFIC FLOW DIAGRAM

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.		040716	121	194
				(2)	SIGNALIZATION PLAN SHEET			

DESIGN PARAMETERS

POSTED SPEED LIMIT:
45 MPH EAST AND WEST APPROACH
40 MPH NORTH AND SOUTH APPROACH

RAILROAD TRACKS APPROX. 900 FT.
NORTH OF INTERSECTION

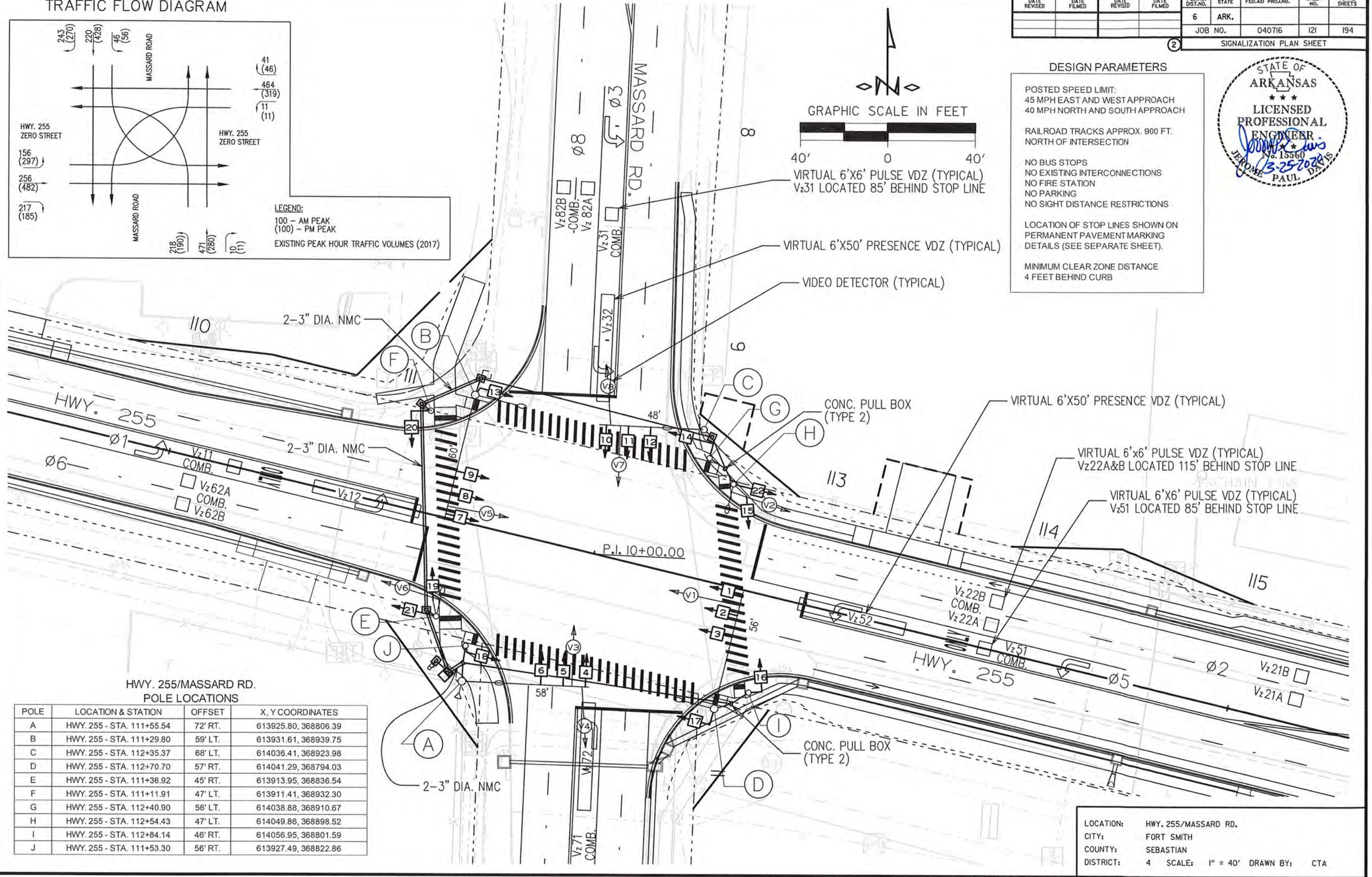
NO BUS STOPS
NO EXISTING INTERCONNECTIONS
NO FIRE STATION
NO PARKING
NO SIGHT DISTANCE RESTRICTIONS

LOCATION OF STOP LINES SHOWN ON PERMANENT PAVEMENT MARKING DETAILS (SEE SEPARATE SHEET).

MINIMUM CLEAR ZONE DISTANCE
4 FEET BEHIND CURB

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

GRAPHIC SCALE IN FEET
40′ 0 40′



HWY. 255/MASSARD RD. POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 255 - STA. 111+55.54	72' RT.	613925.80, 368806.39
B	HWY. 255 - STA. 111+29.80	59' LT.	613931.61, 368939.75
C	HWY. 255 - STA. 112+35.37	68' LT.	614036.41, 368923.98
D	HWY. 255 - STA. 112+70.70	57' RT.	614041.29, 368794.03
E	HWY. 255 - STA. 111+36.92	45' RT.	613913.95, 368836.54
F	HWY. 255 - STA. 111+11.91	47' LT.	613911.41, 368932.30
G	HWY. 255 - STA. 112+40.90	56' LT.	614038.88, 368910.67
H	HWY. 255 - STA. 112+54.43	47' RT.	614049.86, 368898.52
I	HWY. 255 - STA. 112+84.14	46' RT.	614056.95, 368801.59
J	HWY. 255 - STA. 111+53.30	56' RT.	613927.49, 368822.86

LOCATION: HWY. 255/MASSARD RD.
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 4 SCALE: 1" = 40′ DRAWN BY: CTA

USER: APSIBI
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\signals\T040716.dgn
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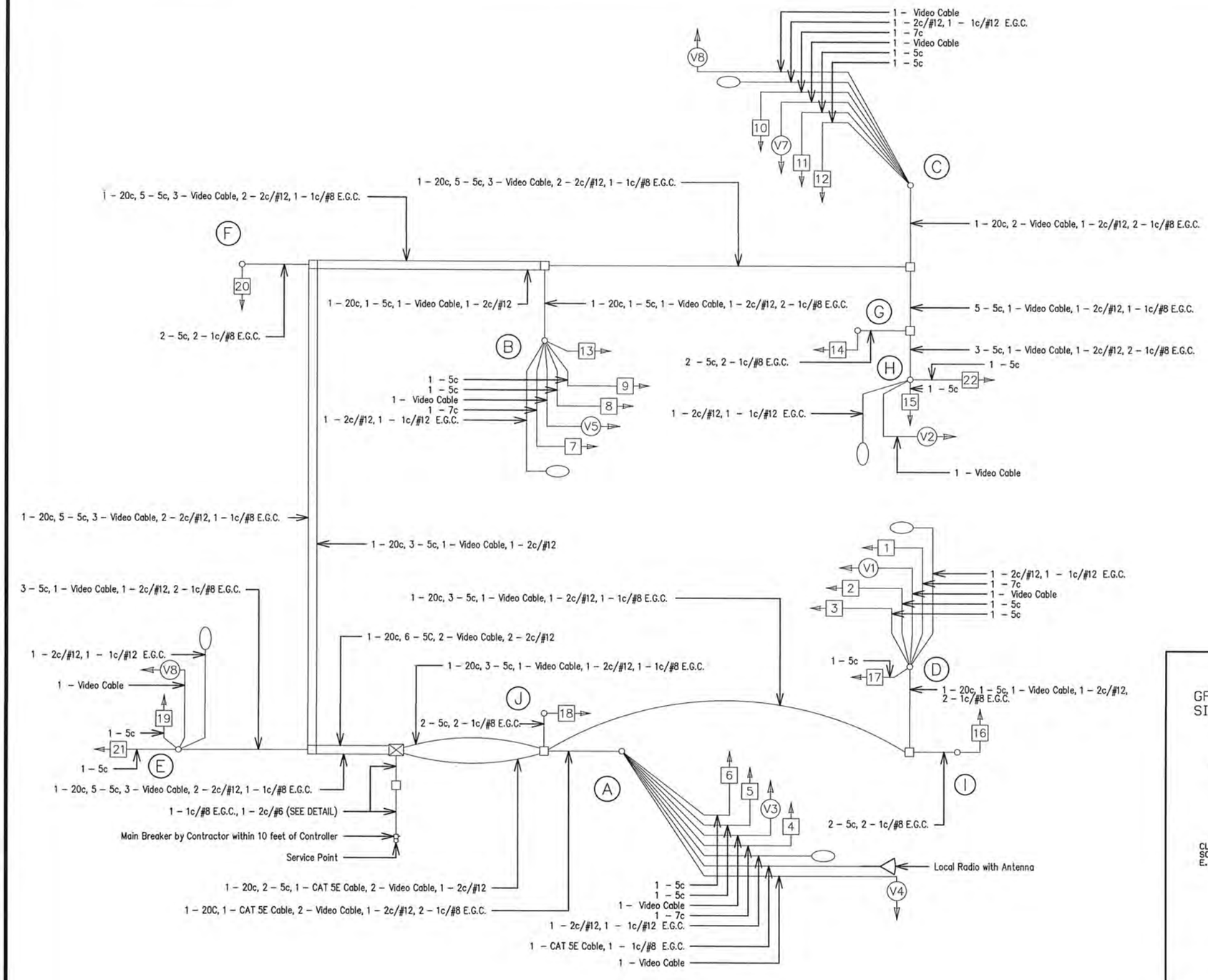
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	I22	I94
				(2)	SIGNALIZATION PLAN SHEET			



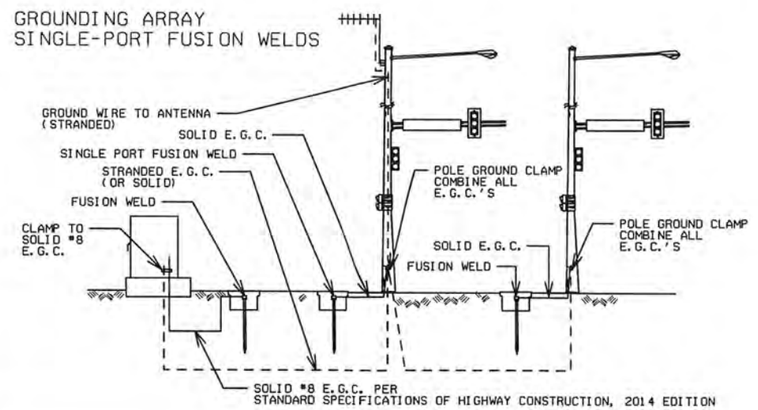
WIRING DIAGRAM

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. 15560
JEROME PAUL DAVIS
3-25-2020

GROUNDING ARRAY
SINGLE-PORT FUSION WELDS



LOCATION:	HWY. 255/MASSARD RD.				
CITY:	FORT SMITH				
COUNTY:	SEBASTIAN				
DISTRICT:	4	SCALE:	N/A	DRAWN BY:	CTA

USER: AP5181
DESIGN FILE: G:\7103100_Hwy255\TRANSP\dgn\signals\T040716.dgn
PLOTTED: 3/25/2020 14:54
SCALE: 1:2

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.		040716	123	194
				(2)	SIGNALIZATION PLAN SHEET			

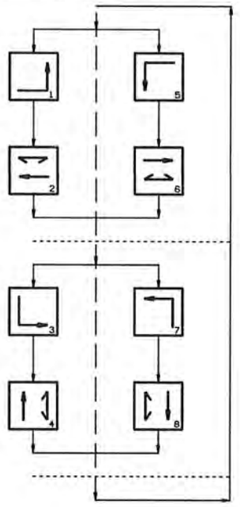
DETECTOR CHART

DETECTOR SYSTEM DESCRIPTION: JOB 040716											
HWY. 255/MASSARD 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. #			
Vz11	EB LEFT TURN FAR	COMB.			1	V9	1	1		CAMERA V1	74"
Vz12	EB LEFT TURN	LOCAL			2	V1	1			CAMERA V1	74"
Vz21 A&B	WB ADVANCE	LOCAL			5	V2	2			CAMERA V2	23"
Vz22 A&B	WB NEAR	COMB.			6	V10	2	2		CAMERA V5	74"
Vz31	SB LEFT TURN FAR	COMB.			9	V11	3	3		CAMERA V3	74"
Vz32	SB LEFT TURN	LOCAL			10	V3	3			CAMERA V3	74"
Vz41 A&B	NB ADVANCE	LOCAL			13	V4	4			CAMERA V4	74"
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	74"
Vz52	WB LEFT TURN	LOCAL			8	V5	5			CAMERA V5	74"
Vz61 A&B	EB ADVANCE	LOCAL			3	V6	6			CAMERA V6	23"
Vz62 A&B	EB NEAR	COMB.			4	V14	6	6		CAMERA V1	74"
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	74"
Vz82 A&B	SB NEAR	COMB.			12	V16	8	8		CAMERA V3	74"
PB2 A&B	MASSARD RD. N. LEG	PED.				P2	2				
PB4 A&B	HWY.255 E. LEG	PED.				P4	4				
PB6 A&B	MASSARD RD. S. LEG	PED.				P6	6				
PB8 A&B	HWY. 255 W. LEG	PED.				P8	8				
					SPARE:						

CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT

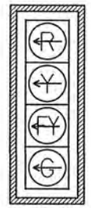
NOTE: "AMP CHN =" REFERS TO THE RACK OUTPUT POSITION.
THIS IS WIRED TO CONTROLLER INPUT DETECTOR NUMBER WHICH IS PROGRAMMED TO ACTUATE THE DESIGNATED PHASE.
EXAMPLE: V9 = SYSTEM DETECTOR 1, V10 = SYSTEM DETECTOR 2

PHASING DIAGRAM

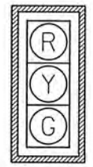


SIGNAL FACES

12" LENSES

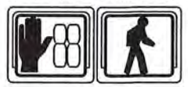


1, 7, 4, 10



2, 3 & 21
5 & 6
8, 9 & 22
11 & 12

ONE SECTION
(SOLID SYMBOL)



13 & 14
15 & 16
17 & 18
19 & 20

NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISION "RETROREFLECTIVE BACKPLATES" FOR DETAILS ON REQUIREMENTS FOR BACKPLATES.
3. REFER TO SPECIAL PROVISIONS FOR DETAILS ON REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.
4. ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEETS A.D.A.S. STANDARD.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
3-25-2020
JEROME PAUL DAVIS

INTERVAL CHART

SIGNAL FACES	INTERVALS																FLASH SEQ.
	1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	3+7	CLR.	3+8	CLR.	4+7	CLR.	4+8	CLR.	
1	← G	*	← G	*	← FY	***	← FY	***	← R	← R	← R	← R	← R	← R	← R	← R	← R
2,3&21	R	R	G	**	R	R	G	**	R	R	R	R	R	R	R	R	R
4	← R	← R	← R	← R	← R	← R	← R	← R	← G	*	← G	*	← FY	***	← FY	***	← R
5&6	R	R	R	R	R	R	R	R	R	R	G	**	R	R	G	**	R
7	← G	*	← FY	***	← G	*	← FY	***	← R	← R	← R	← R	← R	← R	← R	← R	← R
8,9&22	R	R	R	R	G	**	G	**	R	R	R	R	R	R	R	R	R
10	← R	← R	← R	← R	← R	← R	← R	← R	← G	*	← FY	***	← G	*	← FY	***	← R
11&12	R	R	R	R	R	R	R	R	R	R	R	R	G	**	G	**	R
13&14	DW	DW	DW	DW	W	FDW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLK
15&16	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	W	FDW	BLK
17&18	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLK
19&20	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	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.

LOCATION: HWY. 255/MASSARD RD.
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 4 SCALE: N/A DRAWN BY: CTA

USER: APSIBI
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\signals\T040716.dgn
PLOTTED: 3/25/2020 14:54 SCALE: 1:2

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.		040716	124	194

(2) TRAFFIC SIGNAL QUANTITIES - CHAD COLLEY BLVD

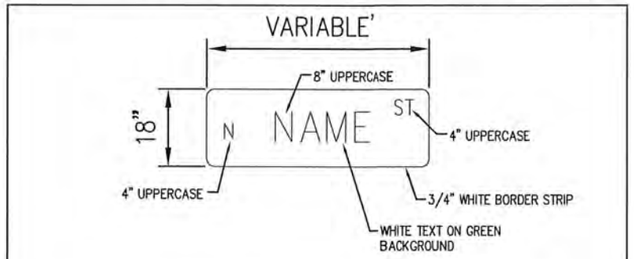
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 13560
3-26-2020
JEROME PAUL DAVIS

PERMANENT TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP & 701	SYSTEM LOCAL CONTROLLER TS2-TYPE 2 (8 PHASES)	1	EACH
SP	ETHERNET SWITCH, T100 HARDENED (8-PORT)	1	EACH
SP	E-NET CABLE (EXTERIOR CAT 5E)	100	LIN. FT.
SP	LOCAL RADIO (E-NET 5.8) WITH ANTENNA	1	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	10	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	4	EACH
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	8	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	2976	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	320	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	670	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	690	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)	220	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	40	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	850	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")	20	LIN. FT.
710	NON-METALLIC CONDUIT (2")	20	LIN. FT.
710	NON-METALLIC CONDUIT (3")	751	LIN. FT.
711	CONCRETE PULL BOX (TYPE 2)	6	EACH
711	CONCRETE PULL BOX (TYPE 1 HD)	1	EACH
711	CONCRETE PULL BOX (TYPE 2 HD)	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (36')	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (42')	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (62')	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (64')	1	EACH
SP	LED LUMINAIRE ASSEMBLY	4	EACH
SS & 715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	4	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH
SP	18" STREET NAME SIGN	4	EACH
* SP & 733	VIDEO DETECTOR (CLR)	9	EACH
733	VIDEO CABLE	1693	LIN. FT.
733	VIDEO MONITOR (CLR)	1	EACH
* SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	5	EACH
SP & 733	VEHICLE DETECTOR RACK (16 CHANNEL)	1	EACH

* ONE SPARE VIDEO DETECTOR AND ONE SPARE VIDEO PROCESSOR SHALL BE SUPPLIED (REFER TO PERMANENT TRAFFIC SIGNAL PLANS.)

OVERHEAD STREET NAME MARKER STANDARD MAST ARM MOUNTED



HWY 255 — 2 SIGNS REQUIRED

S CHAD COLLEY BLVD. N — 1 SIGN REQUIRED
ARROW SHALL LEAD STREET NAME IN DIRECTION OF TRAVEL (TYPICAL)

N CHAD COLLEY BLVD. S — 1 SIGN REQUIRED
ARROW SHALL LEAD STREET NAME IN DIRECTION OF TRAVEL (TYPICAL)

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 ALSO BE 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 OF THE NEARSIDE LEFT POLE. SEE STD. DRAWING SHEET FOR MORE INFORMATION FOR MOUNTING ON MAST ARM ASSEMBLY.
4. THE C 2000 STANDARD ALPHABET SHALL BE USED FOR ALL LETTERS

LOCATION:	HWY. 255/CHAD COLLEY BLVD.			
CITY:	FORT SMITH			
COUNTY:	SEBASTIAN			
DISTRICT:	4	SCALE: N/A	DRAWN BY:	CTA

USER: APS181
DESIGN FILE: G:\1710300_Hwy255\TRANSP\dgn\signals\T040716.dgn
PLOTTED: 3/25/2020 16:26 SCALE: 1:2

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.		040716	125	194
				(2)	SIGNALIZATION PLAN SHEET			

PHASING DIAGRAM

SIGNAL FACES

12" LENSES

1, 7, 4, 10

2, 3 & 21
5 & 6
8, 9 & 22
11 & 12

ONE SECTION
(SOLID SYMBOL)

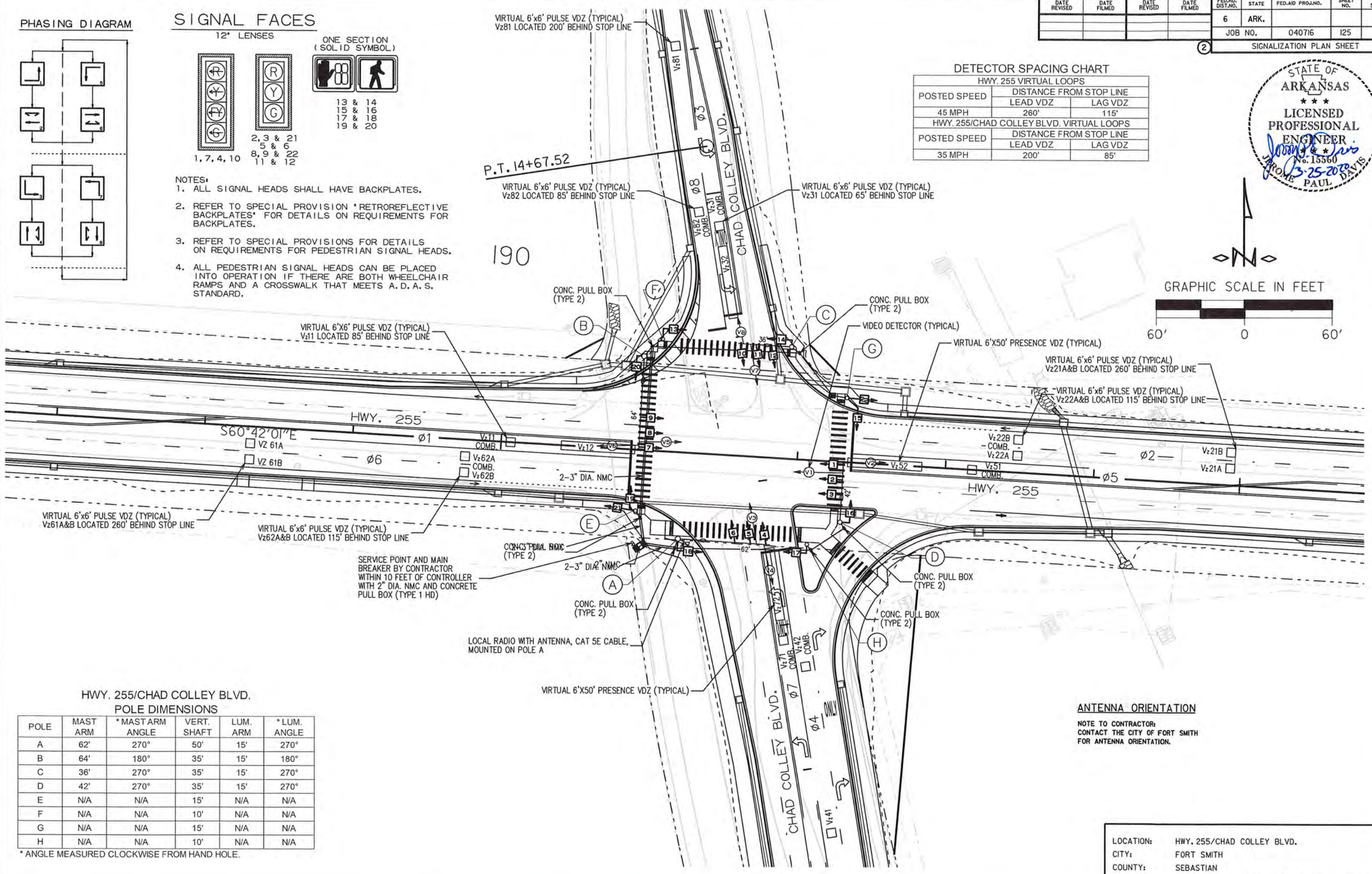
13 & 14
15 & 16
17 & 18
19 & 20

NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISION "RETROREFLECTIVE BACKPLATES" FOR DETAILS ON REQUIREMENTS FOR BACKPLATES.
3. REFER TO SPECIAL PROVISIONS FOR DETAILS ON REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.
4. ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEETS A.D.A.S. STANDARD.

DETECTOR SPACING CHART

HWY. 255 VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
45 MPH	260'	115'
HWY. 255/CHAD COLLEY BLVD. VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
35 MPH	200'	85'

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020



GRAPHIC SCALE IN FEET

60' 0 60'

HWY. 255/CHAD COLLEY BLVD.
POLE DIMENSIONS

POLE	MAST ARM	*MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	*LUM. ANGLE
A	62'	270°	50'	15'	270°
B	64'	180°	35'	15'	180°
C	36'	270°	35'	15'	270°
D	42'	270°	35'	15'	270°
E	N/A	N/A	15'	N/A	N/A
F	N/A	N/A	10'	N/A	N/A
G	N/A	N/A	15'	N/A	N/A
H	N/A	N/A	10'	N/A	N/A

* ANGLE MEASURED CLOCKWISE FROM HAND HOLE.

ANTENNA ORIENTATION

NOTE TO CONTRACTOR:
CONTACT THE CITY OF FORT SMITH FOR ANTENNA ORIENTATION.

LOCATION:	HWY. 255/CHAD COLLEY BLVD.
CITY:	FORT SMITH
COUNTY:	SEBASTIAN
DISTRICT:	4 SCALE: 1" = 60' DRAWN BY: CTA

USER: APSIBI
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\signals\T040716.dgn
PLOTTED: 3/25/2020 14:55
SCALE: 1:60

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.		040716	126	194

(2) SIGNALIZATION PLAN SHEET

DESIGN PARAMETERS

POSTED SPEED LIMIT:
45 MPH EAST AND WEST APPROACH
35 MPH NORTH AND SOUTH APPROACH

NO BUS STOPS
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
4 FEET BEHIND CURB

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

GRAPHIC SCALE IN FEET
40′ 0 40′

P.T. 14+67.52

CHAD COLLEY BL

HWY. 255

CONC. PULL BOX (TYPE 2)

VIRTUAL 6'X6' PULSE VDZ (TYPICAL) Vz11 LOCATED 85' BEHIND STOP LINE

VIDEO DETECTOR (TYPICAL)

VIRTUAL 6'X50' PRESENCE VDZ (TYPICAL)

2-3" DIA. NMC

Vz11 COMB. Vz62A COMB. Vz62B

Vz12

Vz82 COMB. Vz31 COMB. Vz32

Vz22B COMB. Vz22A

Vz52

Vz51 COMB.

Vz71 COMB. Vz42 COMB.

Vz72

HWY. 255/CHAD COLLEY BLVD.
POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 255 - STA. 191+22.75	59' RT.	621646.20, 367481.85
B	HWY. 255 - STA. 190+92.98	64' LT.	621680.84, 367604.43
C	HWY. 255 - STA. 191+91.79	77' LT.	621773.14, 367566.97
D	HWY. 255 - STA. 192+31.21	41' RT.	621749.63, 367444.54
E	HWY. 255 - STA. 190+93.05	42' RT.	621628.91, 367511.73
F	HWY. 255 - STA. 191+04.68	77' LT.	621697.22, 367609.69
G	HWY. 255 - STA. 192+31.00	44' LT.	621791.26, 367519.15
H	HWY. 255 - STA. 192+09.85	58' RT.	621722.87, 367440.51

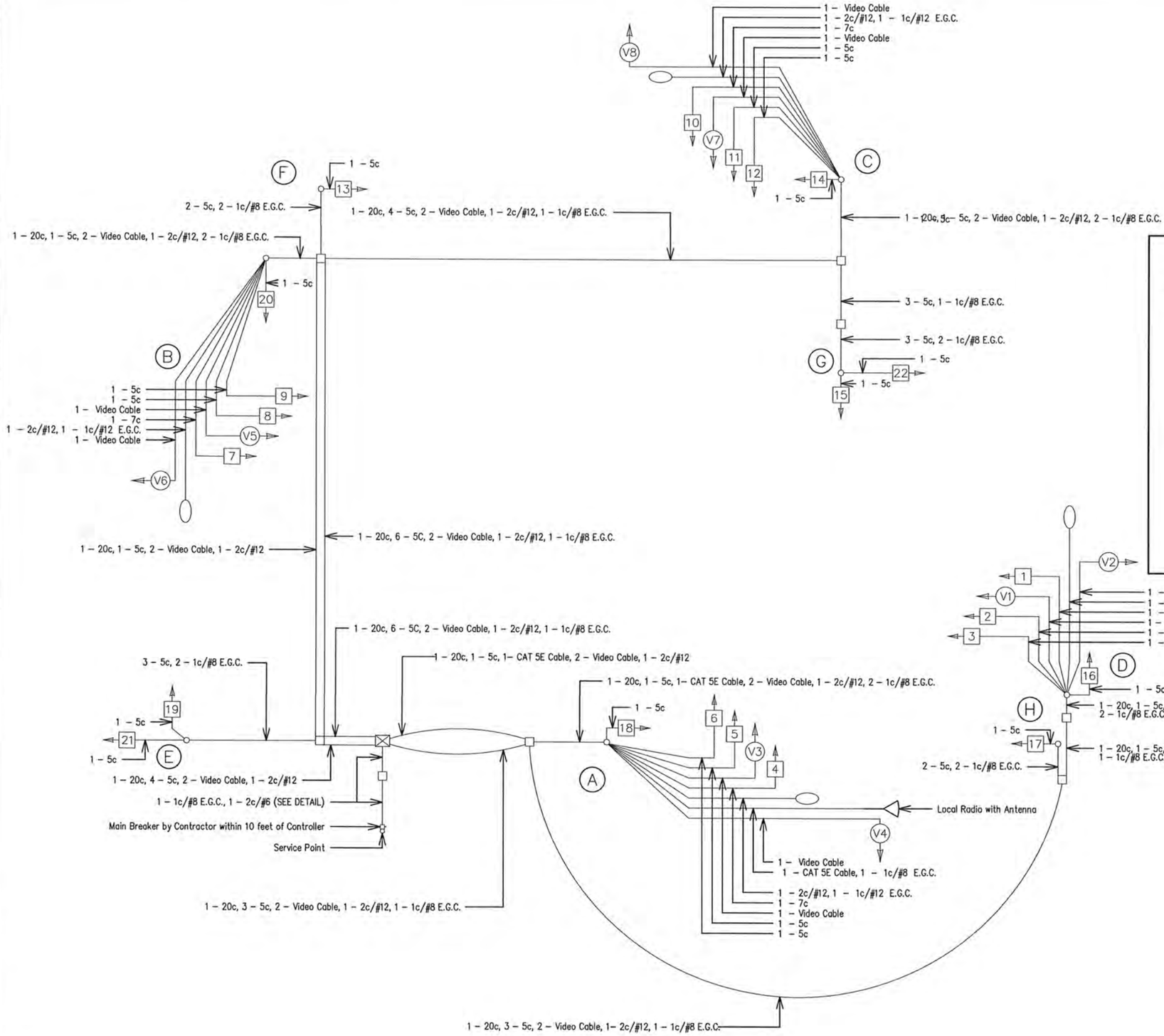
LOCATION:	HWY. 255/CHAD COLLEY BLVD.
CITY:	FORT SMITH
COUNTY:	SEBASTIAN
DISTRICT:	4 SCALE: 1" = 40′ DRAWN BY: CTA

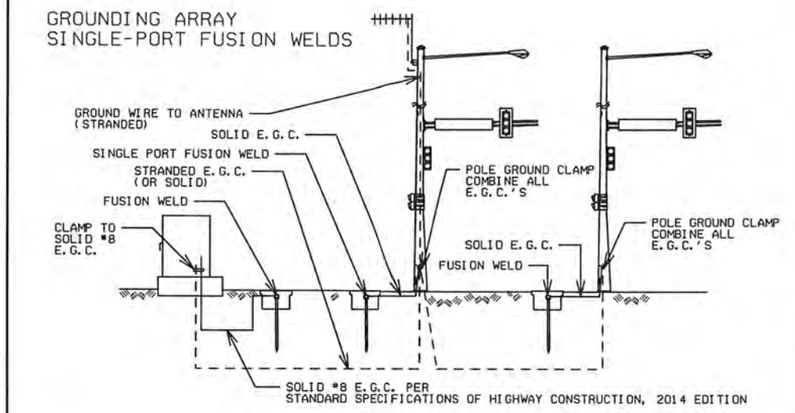
USER: APSIBI
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\signals\T040716.dgn
PLOTTED: 3/25/2020 14:58 SCALE: 1:40

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.		040716	127	194

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
JEROME PAUL DAVIS
No. 15560
3-25-2020





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.

LOCATION:	HWY. 255/CHAD COLLEY BLVD.				
CITY:	FORT SMITH				
COUNTY:	SEBASTIAN				
DISTRICT:	4	SCALE:	N/A	DRAWN BY:	CTA

USER: APS181
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\signals\T040716.dgn
PLOTTED: 3/25/2020 15:00
SCALE: 1:2

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.		040716	128	194

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
JEROME PAUL DAVIS
No. 15560
3-25-2020

DETECTOR CHART

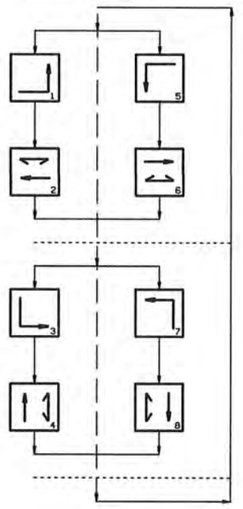
DETECTOR SYSTEM DESCRIPTION: JOB 040716

HWY. 255/HWY. 255/CHAD COLLEY BLVD. 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. #			
Vz11	EB LEFT TURN FAR	COMB.			1	V9	1	1		CAMERA V1	74"
Vz12	EB LEFT TURN	LOCAL			2	V1	1			CAMERA V1	74"
Vz21 A&B	WB ADVANCE	LOCAL			5	V2	2			CAMERA V2	74"
Vz22 A&B	WB NEAR	COMB.			6	V10	2	2		CAMERA V5	74"
Vz31	SB LEFT TURN FAR	COMB.			9	V11	3	3		CAMERA V3	74"
Vz32	SB LEFT TURN	LOCAL			10	V3	3			CAMERA V3	74"
Vz41	NB ADVANCE	LOCAL			13	V4	4			CAMERA V4	37"
Vz42	NB NEAR	COMB.			14	V12	4	4		CAMERA V7	58"
Vz51	WB LEFT TURN FAR	COMB.			7	V13	5	5		CAMERA V5	74"
Vz52	WB LEFT TURN	LOCAL			8	V5	5			CAMERA V5	74"
Vz61 A&B	EB ADVANCE	LOCAL			3	V6	6			CAMERA V6	74"
Vz62 A&B	EB NEAR	COMB.			4	V14	6	6		CAMERA V1	74"
Vz71	NB LEFT TURN FAR	COMB.			15	V15	7	7		CAMERA V7	58"
Vz72	NB LEFT TURN	LOCAL			16	V7	7			CAMERA V7	58"
Vz81	SB ADVANCE	LOCAL			11	V8	8			CAMERA V8	37"
Vz82	SB NEAR	COMB.			12	V16	8	8		CAMERA V3	74"
PB2 A&B	CHAD COLLEY BLVD. N. LEG	PED.				P2	2				
PB4 A&B	HWY.255 E. LEG	PED.				P4	4				
PB6 A&B	CHAD COLLEY BLVD. S. LEG	PED.				P6	6				
PB8 A&B	HWY. 255 W. LEG	PED.				P8	8				
					SPARE:						

CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT

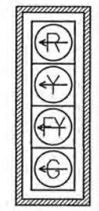
NOTE: "AMP CHN =" REFERS TO THE RACK OUTPUT POSITION.
THIS IS WIRED TO CONTROLLER INPUT DETECTOR NUMBER WHICH IS PROGRAMMED TO ACTUATE THE DESIGNATED PHASE.
EXAMPLE: V9 = SYSTEM DETECTOR 1, V10 = SYSTEM DETECTOR 2

PHASING DIAGRAM

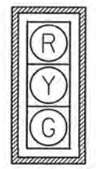


SIGNAL FACES

12" LENSES



1, 7, 4, 10



2, 3 & 21
5 & 6
8, 9 & 22
11 & 12

ONE SECTION (SOLID SYMBOL)

13 & 14
15 & 16
17 & 18
19 & 20

NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISION "RETROREFLECTIVE BACKPLATES" FOR DETAILS ON REQUIREMENTS FOR BACKPLATES.
3. REFER TO SPECIAL PROVISIONS FOR DETAILS ON REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.
4. ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEETS A.D.A.S. STANDARD.

INTERVAL CHART

SIGNAL FACES	INTERVALS																	FLASH SEQ.
	1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	3+7	CLR.	3+8	CLR.	4+7	CLR.	4+8	CLR.		
1	← G	*	← G	*	← FY	***	← FY	***	← R	← R	← R	← R	← R	← R	← R	← R		← R
2,3&21	R	R	G	**	R	R	G	**	R	R	R	R	R	R	R	R		R
4	← R	← R	← R	← R	← R	← R	← R	← R	← G	*	← G	*	← FY	***	← FY	***		← R
5&6	R	R	R	R	R	R	R	R	R	R	G	**	R	R	G	**		R
7	← G	*	← FY	***	← G	*	← FY	***	← R	← R	← R	← R	← R	← R	← R	← R		← R
8,9&22	R	R	R	R	G	**	G	**	R	R	R	R	R	R	R	R		R
10	← R	← R	← R	← R	← R	← R	← R	← R	← G	*	← FY	***	← G	*	← FY	***		← R
11&12	R	R	R	R	R	R	R	R	R	R	R	R	G	**	G	**		R
13&14	DW	DW	DW	DW	W	FDW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW		BLK
15&16	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	W	FDW		BLK
17&18	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW		BLK
19&20	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	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.

LOCATION: HWY. 255/CHAD COLLEY BLVD.
CITY: FORT SMITH
COUNTY: SEBASTIAN
DISTRICT: 4 SCALE: N/A DRAWN BY: CTA

USER: AP5181
DESIGN FILE: G:\7103100_Hwy255\TRANSP\dgn\signals\T040716.dgn
PLOTTED: 3/25/2020 15:00 SCALE: 1:2

G:\7103100_Hwy255\TRANSP\dgn\signals\T040716.dgn 3/25/2020 15:00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	129	194
				(2)	TRAFFIC SIGNAL QUANTITIES - FORT SMITH BLVD.			

STATE OF ARKANSAS
* * *
LICENSED PROFESSIONAL ENGINEER
* * *
No. 15560
JEROME PAUL DAVIS
3-25-2020

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 (7C/14 A.W.G.)	70	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	360	LIN. FT.
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.25	LUMP SUM

(REFER TO PERMANENT TRAFFIC SIGNAL PLANS.)

USER: APSIBI
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\signals\T040716.dgn
PLOTTED: 3/25/2020 15:00 SCALE: 1:2

LOCATION:	HWY. 22/HWY. 59/FT. SMITH BLVD.		
CITY:	BARLING		
COUNTY:	SEBASTIAN		
DISTRICT:	4 SCALE: N/A	DRAWN BY:	CTA

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.		040716	130	194
				(2)	SIGNALIZATION PLAN SHEET			

HWY. 22/HWY. 59/FT. SMITH BLVD.

POLE DIMENSIONS

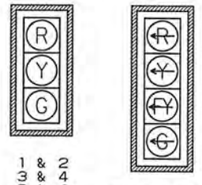
POLE	MAST ARM	* MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	* LUM. ANGLE
A	38'	270°	21'	N/A	N/A
B	48'	270°	21'	15'	270°
C	62'	270°	21'	N/A	N/A
D	48'	270°	21'	15'	270°

* ANGLE MEASURED CLOCKWISE FROM HAND HOLE.

NOTE: POLES A - D ARE EXISTING.

SIGNAL FACES

12" LENSES

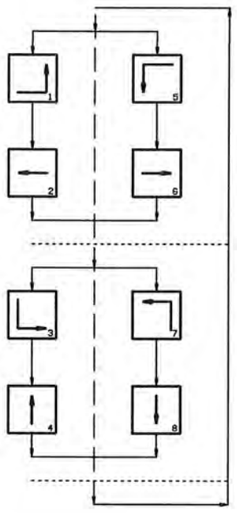


NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISION "RETROREFLECTIVE BACKPLATES" FOR DETAILS ON REQUIREMENTS FOR BACKPLATES.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
NO. 15560
JEROME PAUL DAVIS
3-25-2020

EXISTING TYPE IHD PULL BOX
EXISTING 1" NON-METALLIC CONDUIT
EXISTING PREFORMED (6'x50') QUADRUPOLE DETECTOR (TYP.)
EXISTING 3" NON-METALLIC CONDUIT
EXISTING 2" NON-METALLIC CONDUIT
EXISTING TYPE IHD PULL BOX
EXISTING 1" NON-METALLIC CONDUIT
EXISTING TYPE IHD PULL BOX
EXISTING TYPE IHD PULL BOX
PC 34+91.68
41+04.69
L31 COMB.
L32
L32
110'
S.H. 59
38'
GATE
240'
CURB
130'
48'
S. H. 22
L62 COMB.
L61 COMB.
Φ6
L11 COMB.
L12
L63B
L63A
TYPE IHD PULL BOX
L23A
L23B
L61 COMB.
L52
21 COMB.
L22 COMB.
Φ2
EXISTING TYPE IHD PULL BOX
EXISTING 1" NON-METALLIC CONDUIT
EXISTING 2" NON-METALLIC CONDUIT
CURB
62'
EXISTING LUMINAIRE (TYPICAL)
110'
YIELD
(1) R1-2 (60" X 60" X 60") PROVIDED BY OTHERS
EXISTING 1-2" & 1-3" NON-METALLIC CONDUIT
EXISTING SERVICE POINT & MAIN BREAKER
EXISTING 1.25" GALVANIZED STEEL CONDUIT
REMOVE AND REPLACE EXISTING CABINET
PARKING
EXISTING 3" NON-METALLIC CONDUIT
TRAIL
FT. SMITH BLVD. RELOC.
L72
L42
L41
L71 COMB.
Φ4
EXISTING 2" NON-METALLIC CONDUIT
EXISTING TYPE 1 HD PULL BOX
EXISTING PREFORMED (6'x6') DETECTOR LOOP (TYP.)
PAVED

PHASING DIAGRAM



LEGEND

- EXISTING TYPE IHD PULL BOX
- EXISTING TYPE 2 HD PULL BOX
- EXISTING CONTROLLER CABINET
- NEW SIGNAL HEAD
- EXISTING SIGNAL POLE, MAST ARM AND LUMINAIRE ARM
- EXISTING N.M.C. - NON METALLIC CONDUIT
- EXISTING LOOP DETECTORS

NOTES:
1. EXISTING LOOPS SHALL REMAIN.
2. THE EXISTING CONTROLLER CABINET SHALL BE REMOVED AND A NEW CABINET PLACED ON THE EXISTING CONCRETE BASE. EXTREME CARE SHOULD BE TAKEN TO NOT DISTURB ANY EXISTING WIRING AND CABLES.

SCALE IN FEET
0 30 60 120

LOCATION:	HWY. 22/HWY. 59/FT. SMITH BLVD.
CITY:	BARLING
COUNTY:	SEBASTIAN
DISTRICT:	4 SCALE: 1" = 60' DRAWN BY: CTA

USER: APSIBI
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\signals\T040716.dgn SCALE: 1:60
PLOTTED: 3/25/2020 15:00

G:\17103100_Hwy255\TRANSP\dgn\signals\T040716.dgn 3/25/2020 15:00

DESIGN PARAMETERS

POSTED SPEED LIMIT:
45 MPH ON FT. SMITH BLVD. RELOC.
50 MPH ON S.H. 22
NO BUS STOPS
NO RAILROAD TRACKS
NO EXISTING INTERCONNECTIONS
NO FIRE STATION
NO PARKING
NO SIGHT DISTANCE RESTRICTIONS
NO PEDESTRIANS
SEE SEPARATE DETAIL SHEET FOR PAVEMENT MARKINGS

HWY. 22/HWY. 59/FT. SMITH BLVD.
POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 22 - STA. 38+57.70	57' LT.	627421.16, 368290.50
B	HWY. 22 - STA. 38+94.85	48' RT.	627406.84, 368180.74
C	HWY. 22 - STA. 37+72.52	65' RT.	627289.38, 368222.59
D	HWY. 22 - STA. 37+21.99	47' LT.	627297.97, 368345.24

NOTE: POLES A - D ARE 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.		040716	131	194

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

EXISTING TYPE IHD PULL BOX
EXISTING I" NON-METALLIC CONDUIT
EXISTING 3" NON-METALLIC CONDUIT
EXISTING PREFORMED (6'x50') QUADRUPOLE DETECTOR (TYP.)
EXISTING 3" NON-METALLIC CONDUIT
EXISTING 2" NON-METALLIC CONDUIT
EXISTING TYPE IHD PULL BOX
EXISTING TYPE IHD PULL BOX
GATE
41+04.69
L31 COMB.
Ø8
L32
L82
110'
L81
S.H. 59
38'
7 8 9
A
D
CURB
130'
48'
6
5
12
S. H. 22
L12
11 COMB.
L23A
L23B
L51 COMB.
Ø2
L52
Ø6
L63B
L63A
TYPE IHD PULL BOX
48'
130'
S. H. 22
2
CURB
EXISTING I" NON-METALLIC CONDUIT
EXISTING 2" NON-METALLIC CONDUIT
EXISTING I-2" & I-3" NON-METALLIC CONDUIT
EXISTING SERVICE POINT & MAIN BREAKER
EXISTING 1.25" GALVANIZED STEEL CONDUIT
REMOVE AND REPLACE EXISTING CABINET
EXISTING 3" NON-METALLIC CONDUIT
4
3
10
62'
B
C
EXISTING LUMINAIRE (TYPICAL)
110'
L72
L42
FT. SMITH BLVD. RELOC.
TRAIL
Ø4
L71 COMB.
L41
SCALE IN FEET
0 20 40 80
EXISTING 2" NON-METALLIC CONDUIT
EXISTING TYPE 1 HD PULL BOX
EXISTING PREFORMED (6'x6') DETECTOR LOOP (TYP.)

LEGEND

- EXISTING TYPE IHD PULL BOX
- EXISTING TYPE 2 HD PULL BOX
- EXISTING CONTROLLER CABINET
- NEW SIGNAL HEAD
- EXISTING SIGNAL POLE, MAST ARM AND LUMINAIRE ARM
- EXISTING N.M.C. - NON METALLIC CONDUIT
- EXISTING LOOP DETECTORS

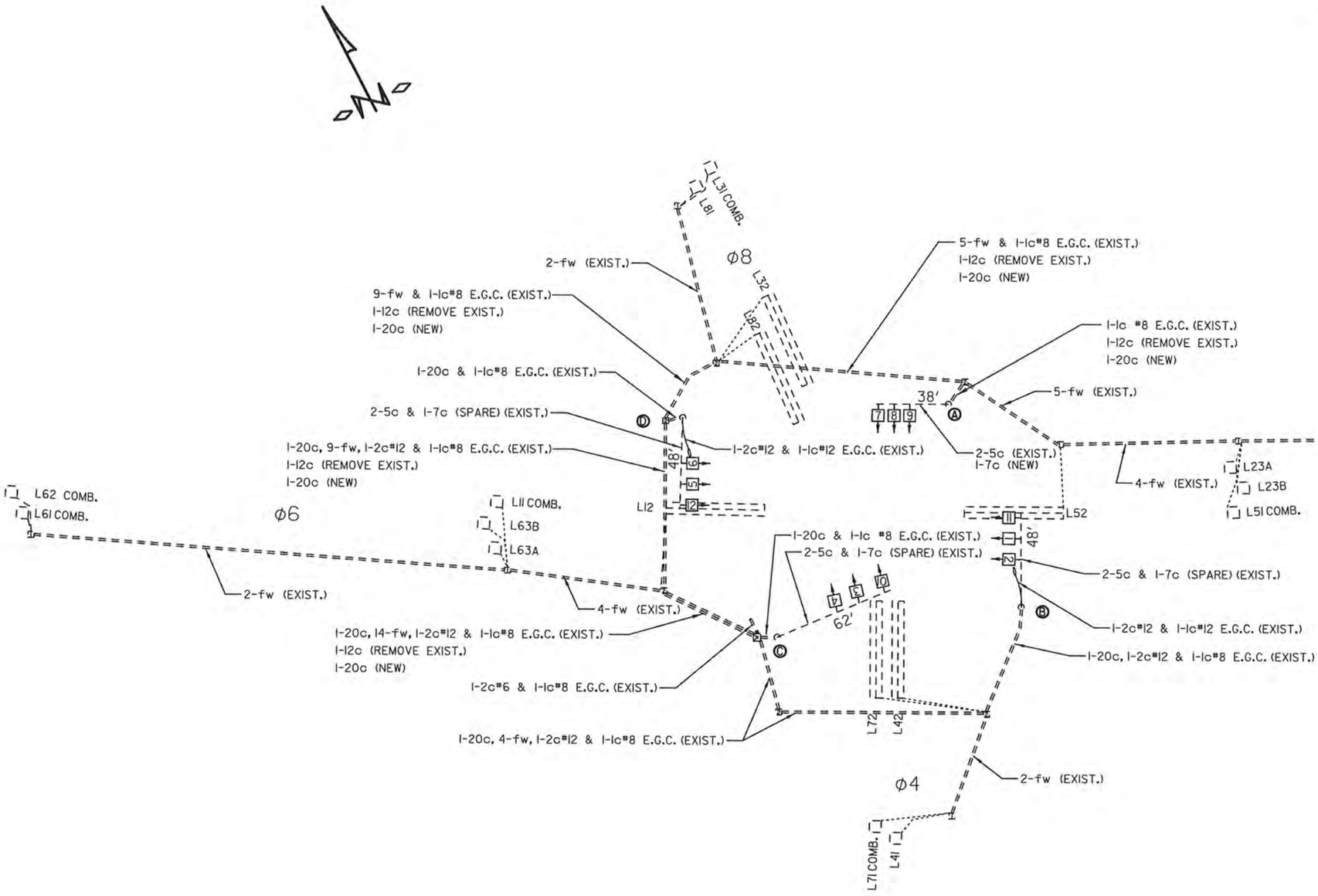
LOCATION:	HWY. 22/HWY. 59/FT. SMITH BLVD.
CITY:	BARLING
COUNTY:	SEBASTIAN
DISTRICT:	4 SCALE: 1" = 40' DRAWN BY: CTA

USER: APSIBI
DESIGN FILE: G:\1710300_Hwy255\TRANSP\dgn\signals\T040716.dgn
PLOTTED: 3/25/2020 16:31
SCALE: 1:40

G:\1710300_Hwy255\TRANSP\dgn\signals\T040716.dgn 3/25/2020 16:31

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.		040716	132	194
				(2)	SIGNALIZATION PLAN SHEET			

STATE OF ARKANSAS
* * *
LICENSED PROFESSIONAL ENGINEER
* * *
No. 15560
JEROME PAUL DAVIS
3-25-2020



WIRING DIAGRAM

NOTE TO CONTRACTOR:

1. REMOVE EXISTING 1-12c AND REPLACE WITH NEW 1-20c.

LOCATION:	HWY. 22/HWY. 59/FT. SMITH BLVD.				
CITY:	BARLING				
COUNTY:	SEBASTIAN				
DISTRICT:	4	SCALE:	N/A	DRAWN BY:	CTA

USER: AP5181
DESIGN FILE: G:\T7103100_Hwy255\TRANSP\dgn\signals\T040716.dgn
PLOTTED: 3/25/2020 15:00
SCALE: 1:60.0001

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.		040716	133	194
				(2)	SIGNALIZATION PLAN SHEET			

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
3-25-2020

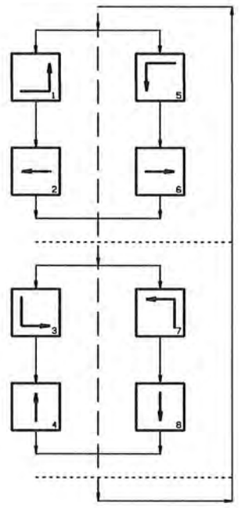
DETECTOR CHART

DETECTOR SYSTEM DESCRIPTION: JOB 040716											
HWY. 22/HWY. 59/FT. SMITH BLVD. DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS			COMMENTS	TUBE LENGTHS
							LOCAL		MASTER SYSTEM		
DET. ID #	LOCATION DIRECTION	TPYE	DET. #	CAB. TRM. #	AMP CHN. #	CON. IMP. #	PHS	SYSTEM DET. #	DETECTOR NUMBERS		
L11	EB LEFT TURN FAR	COMB.	9			D1	1	1			
L12	EB LEFT TURN	LOCAL	1			V1	1				
L21	WB ADVANCE IN	COMB.	10			D2	2				
L22	WB ADVANCE OUT	COMB.	16			D8	2				
L23 A&B	WB NEAR	LOCAL	2			V2	2	2			
L31	SB LEFT TURN FAR	COMB.	11			D3	3	3			
L32	SB LEFT TURN	LOCAL	3			V3	3				
L41	NB ADVANCE	LOCAL	4			V4	4				
L42	NB NEAR	LOCAL	23			P3	4	4			
L51	WB LEFT TURN FAR	COMB.	13			D5	5	5			
L52	WB LEFT TURN	LOCAL	5			V5	5				
L61	EB ADVANCE OUT	COMB.	14			D6	6				
L62	EB ADVANCE IN	COMB.	12			D4	6				
L63 A&B	EB NEAR	LOCAL	6			V6	6	6			
L71	NB LEFT TURN FAR	COMB.	15			D7	7	7			
L72	NB LEFT TURN	LOCAL	7			V7	7				
L81	SB ADVANCE	LOCAL				V8	8				
L82	SB NEAR	LOCAL				P1	8	8			
					SPARE:						

CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT

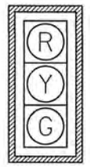
NOTE: "AMP CHN =" REFERS TO THE RACK OUTPUT POSITION.
THIS IS WIRED TO CONTROLLER INPUT DETECTOR NUMBER WHICH IS PROGRAMMED TO ACTUATE THE DESIGNATED PHASE.
EXAMPLE: V9 = SYSTEM DETECTOR 1, V10 = SYSTEM DETECTOR 2

PHASING DIAGRAM

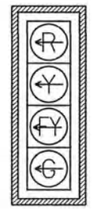


SIGNAL FACES

12" LENSES



1 & 2
3 & 4
5 & 6
8 & 9



7, 10, 11, 12

NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISION "RETROREFLECTIVE BACKPLATES" FOR DETAILS ON REQUIREMENTS FOR BACKPLATES.

INTERVAL CHART

SIGNAL FACES	INTERVALS																	FLASH SEQ.
	1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	3+7	CLR.	3+8	CLR.	4+7	CLR.	4+8	CLR.		
11	←G	*	←G	*	←FY	***	←FY	***	←R	←R	←R	←R	←R	←R	←R	←R		←R
1&2	R	R	G	**	R	R	G	**	R	R	R	R	R	R	R	R		R
10	←R	←R	←R	←R	←R	←R	←R	←R	←G	*	←G	*	←FY	***	←FY	***		←R
3&4	R	R	R	R	R	R	R	R	R	R	G	**	R	R	G	**		R
12	←G	*	←FY	***	←G	*	←FY	***	←R	←R	←R	←R	←R	←R	←R	←R		←R
5&6	R	R	R	R	G	**	G	**	R	R	R	R	R	R	R	R		R
7	←R	←R	←R	←R	←R	←R	←R	←R	←G	*	←FY	***	←G	*	←FY	***		←R
8&9	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.

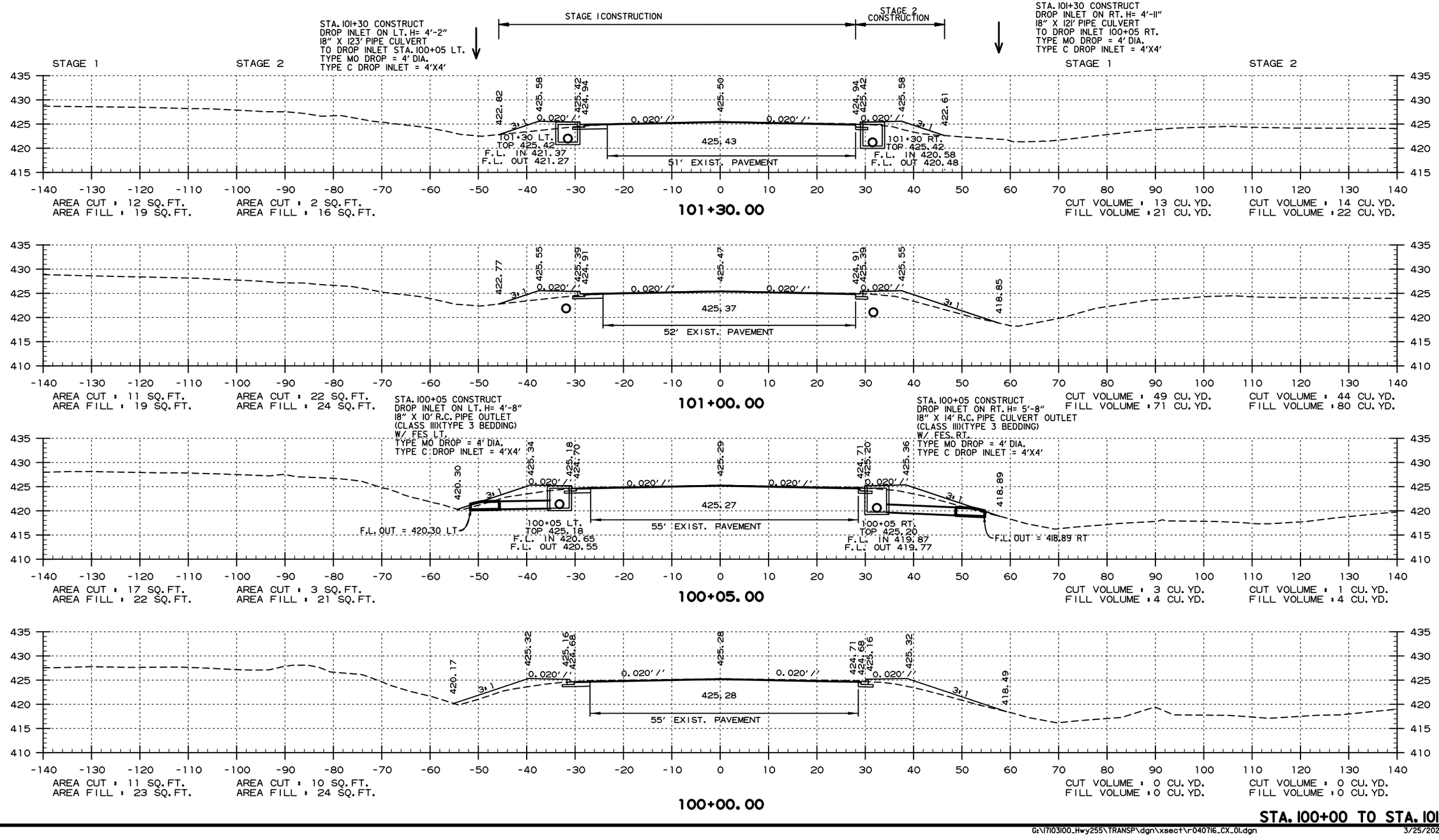
LOCATION:	HWY. 22/HWY. 59/FT. SMITH BLVD.
CITY:	BARLING
COUNTY:	SEBASTIAN
DISTRICT:	4 SCALE: N/A DRAWN BY: CTA

USER: APS181
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\signals\T040716.dgn
PLOTTED: 3/25/2020 15:00 SCALE: 1:2

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.		040716	134	194

(2) CROSS SECTIONS



STA. 100+00 TO STA. 101+30

USER: APS181
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PLOTTED: 3/25/2020 15:01
SCALE: 1:20

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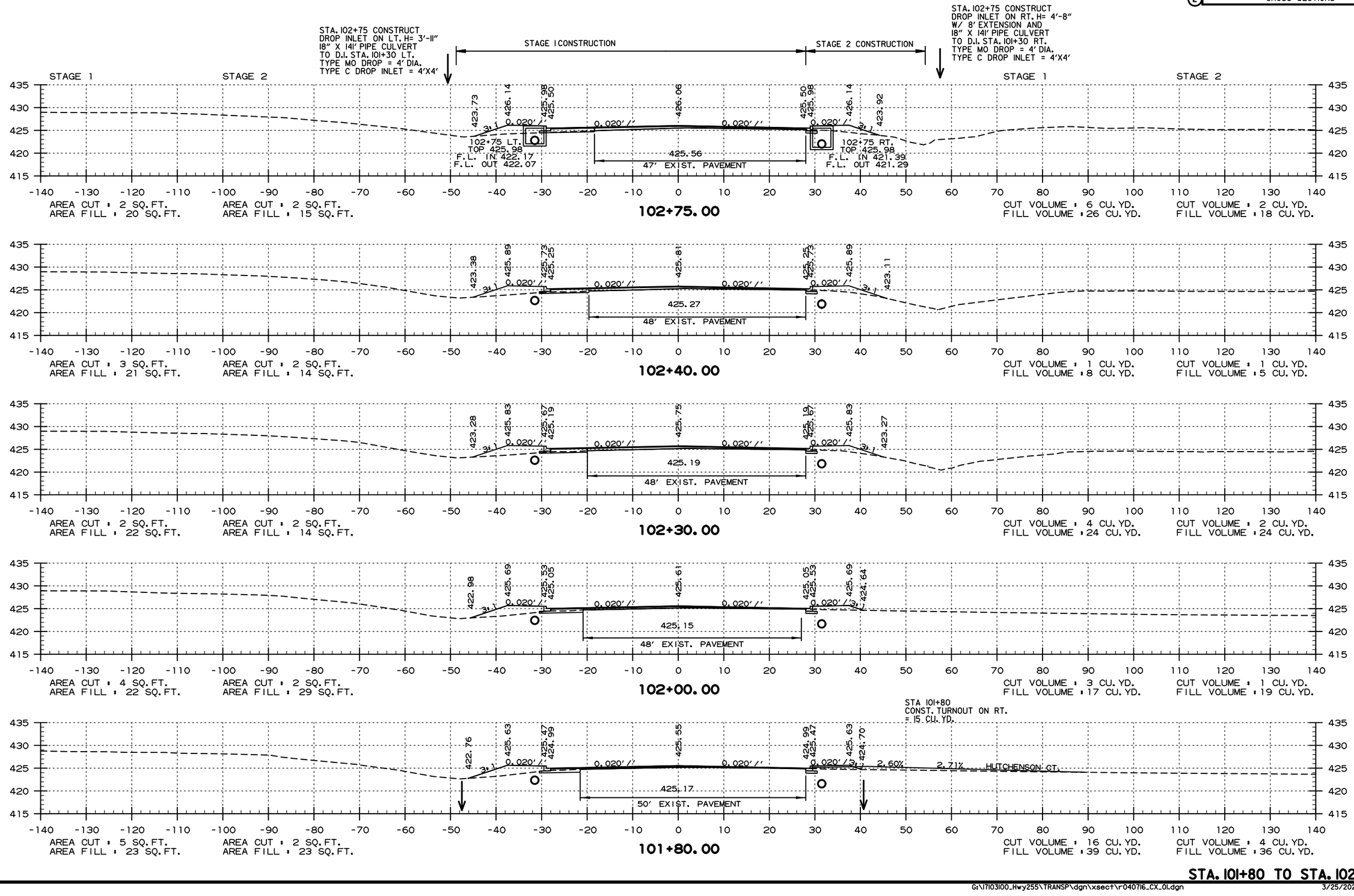
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	135	194

(2) CROSS SECTIONS



STA. 101+80 TO STA. 102+75

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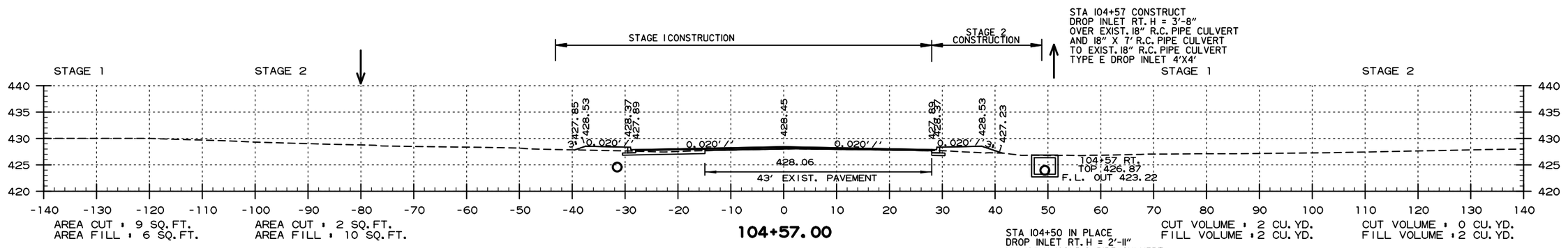
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	136	194

(2) CROSS SECTIONS



STA. 103+00 TO STA. 104+57

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
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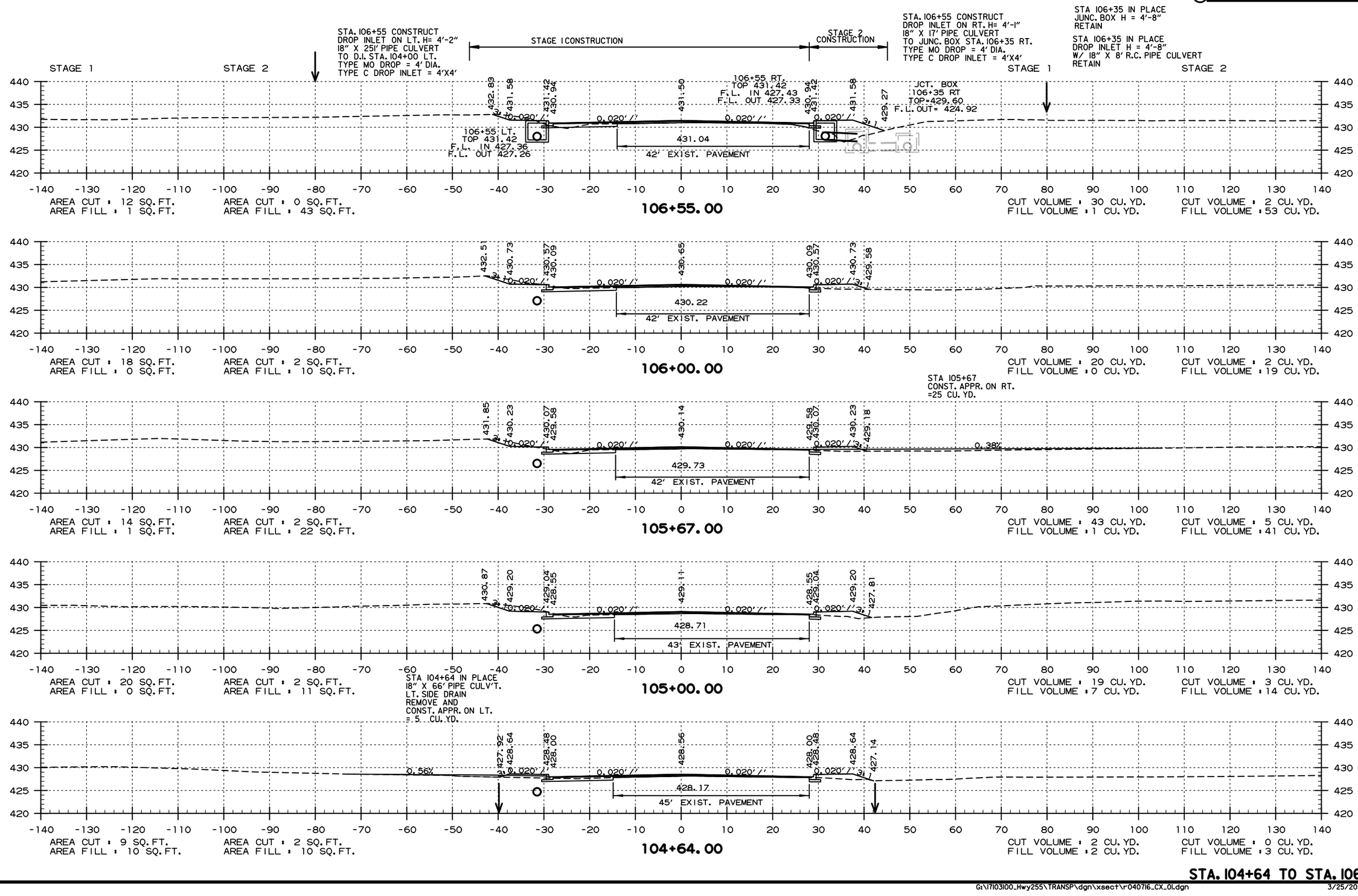
				JOB NO.		040716	137	194

(2) CROSS SECTIONS



STA. 104+64 TO STA. 106+55

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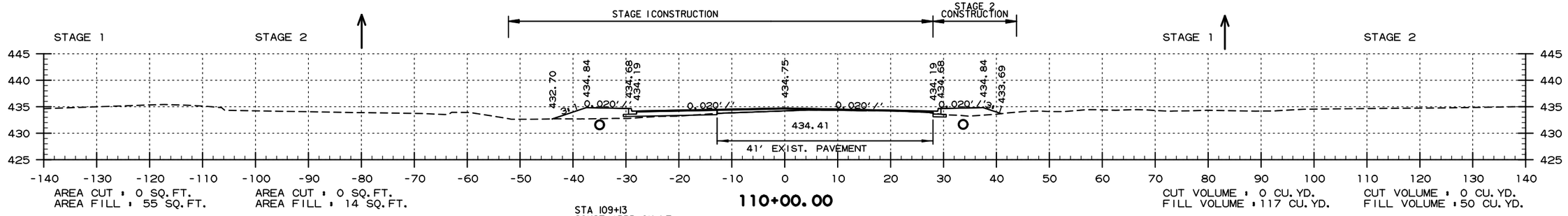
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	138	194
				(2)	CROSS SECTIONS			



STA. 107+00 TO STA. 110+00

USER: AP5181
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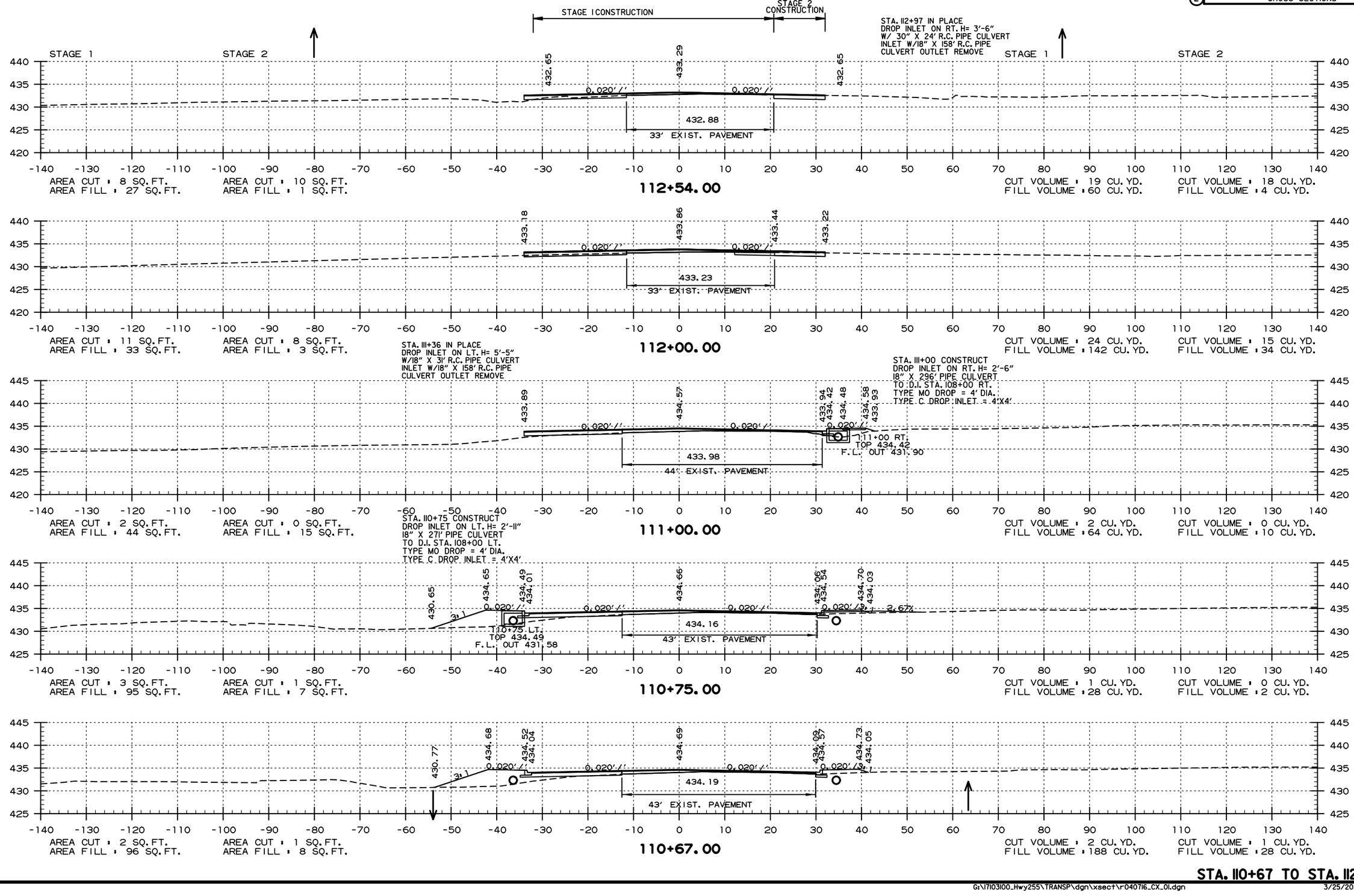
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	139	194

(2) CROSS SECTIONS



STA. 110+67 TO STA. 112+54

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SCALE: 1:20

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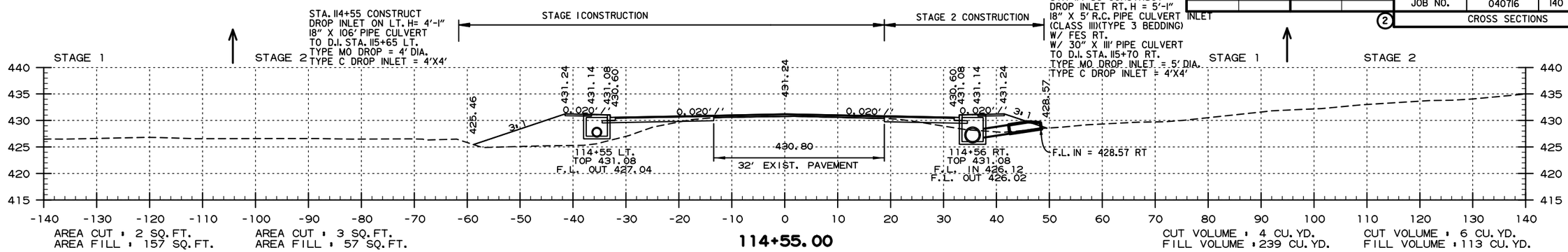
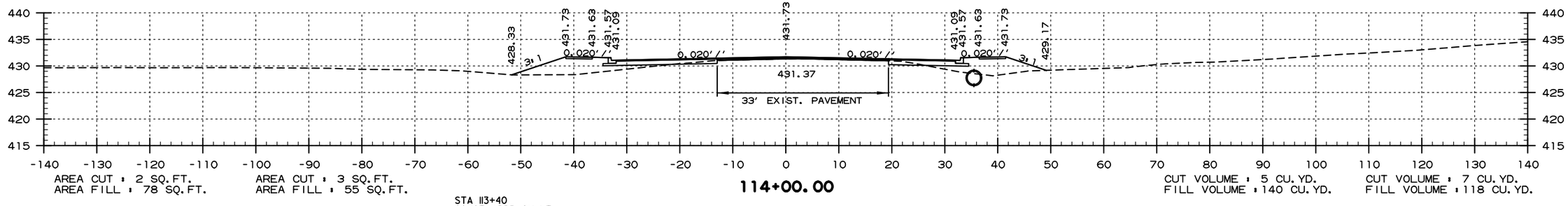
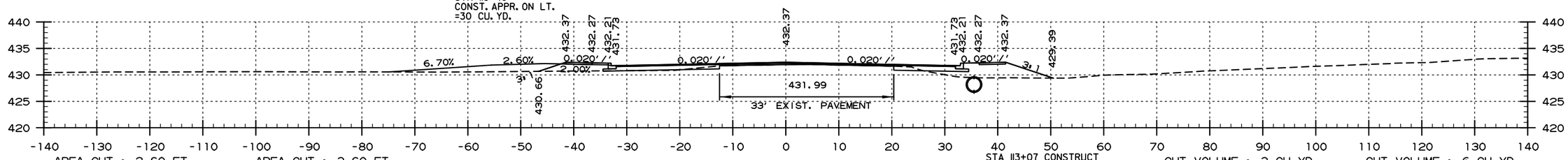
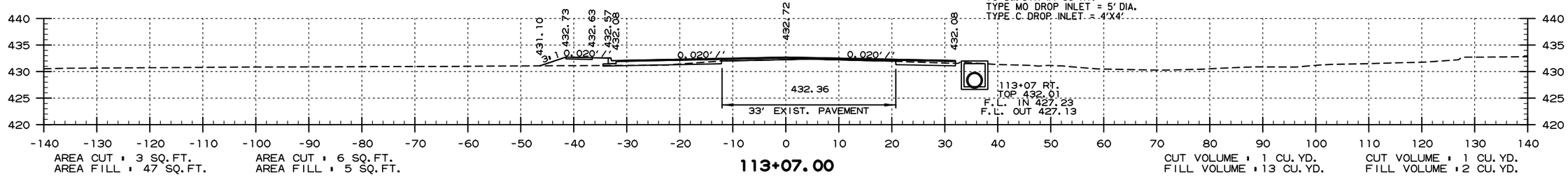
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	140	194

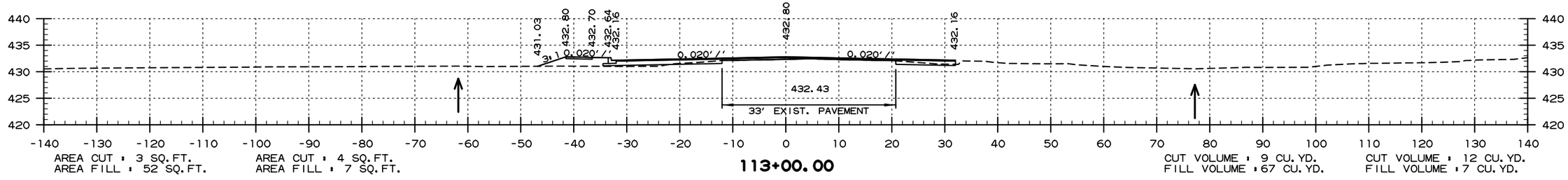
(2) CROSS SECTIONS











STA. 113+00 TO STA. 114+55

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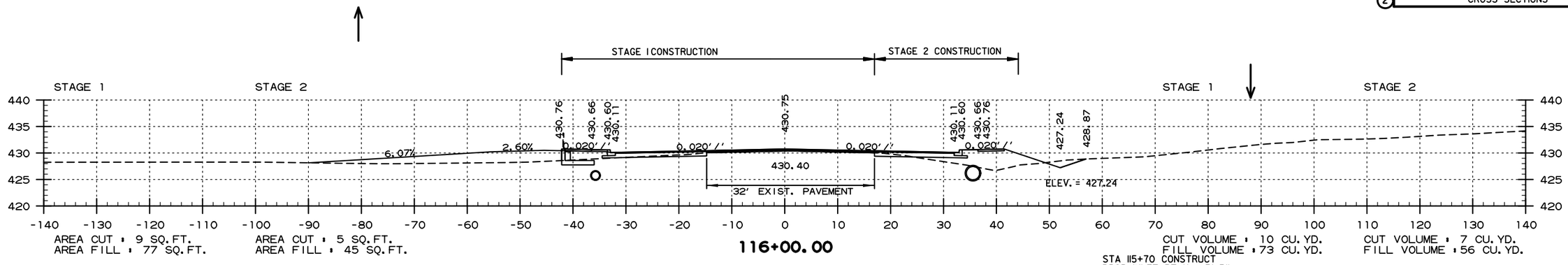
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	141	194
				(2)	CROSS SECTIONS			



STA. 115+00 TO STA. 116+00

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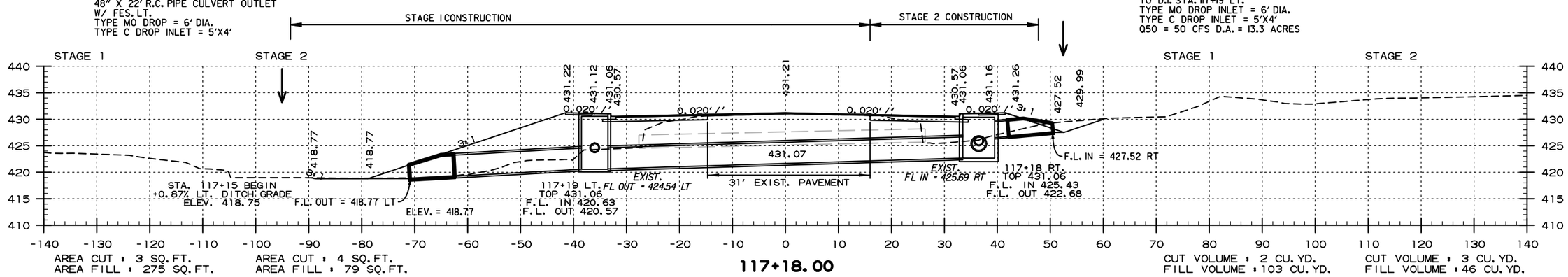
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	142	194
				(2)	CROSS SECTIONS			

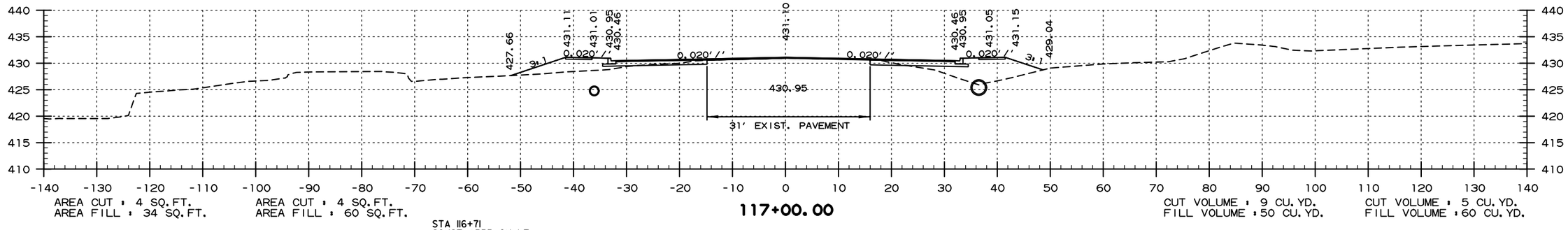
STA. 117+22 IN PLACE
14' WIDE 26' LONG BRIDGE LT.
W. HDWALS. LT. & RT.
REMOVE AS EXISTING BRIDGE
STRUCTURE (SITE NO. 1) =
1.00 LUMP SUM

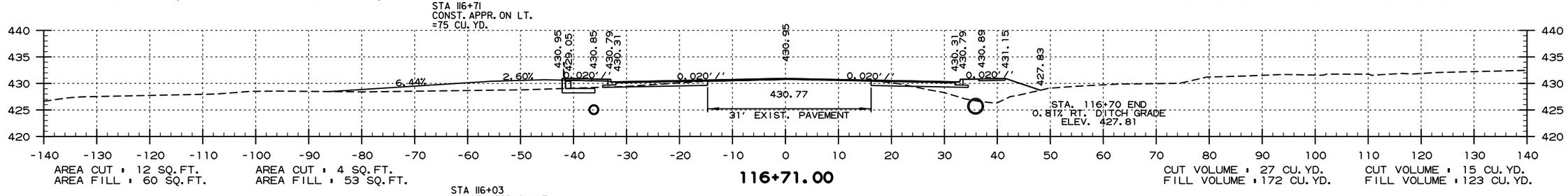
STA. 117+19 CONSTRUCT
DROP INLET ON LT. H= 10'-6"
48" X 22' R.C. PIPE CULVERT OUTLET
W/ FES. LT.
TYPE MO DROP = 6' DIA.
TYPE C DROP INLET = 5'X4'

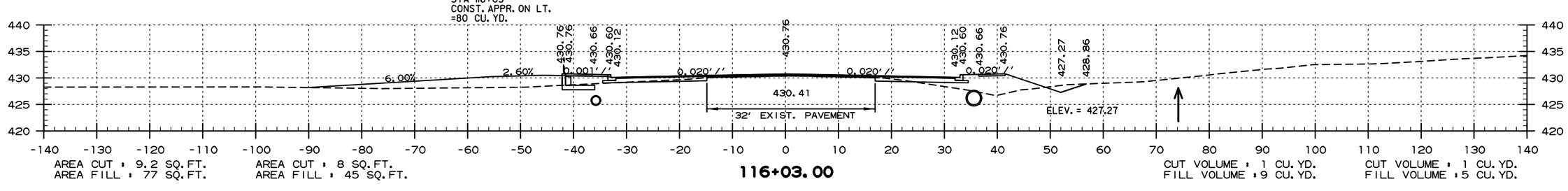
STA. 117+18 IN PLACE
30"x 54' PIPE CULV'T.
W/ HDWLS. LT. & RT.
REMOVE

STA. 117+18 CONSTRUCT
DROP INLET ON RT. H= 8'-5"
TYPE MO DROP INLET = 6' DIA.
TYPE C DROP INLET = 5'X4'
36" X 2' R.C. PIPE CULVERT INLET
(CLASS III)(TYPE 3 BEDDING)
W/ FES RT.
AND 48" X 67' R.C. PIPE CULVERT OUTLET
(CLASS IV)(TYPE 3 BEDDING)
TO D.I. STA. 117+19 LT.
TYPE MO DROP INLET = 6' DIA.
TYPE C DROP INLET = 5'X4'
Q50 = 50 CFS D.A. = 13.3 ACRES









STA. 116+03 TO STA. 117+18

USER: AP5181
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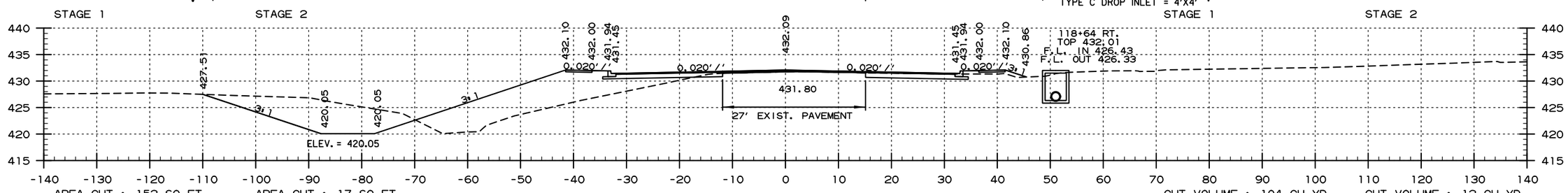
SCALE: 1:20

G:\1710300_Hwy255\TRANSP\dgn\xsect\r040716_CX_01.dgn 3/25/2020 15:01

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.		040716	143	194

(2) CROSS SECTIONS

STAGE 1 CONSTRUCTION — STAGE 2 CONSTRUCTION



AREA CUT = 152 SQ.FT.
AREA FILL = 207 SQ.FT.

AREA CUT = 17 SQ.FT.
AREA FILL = 6 SQ.FT.

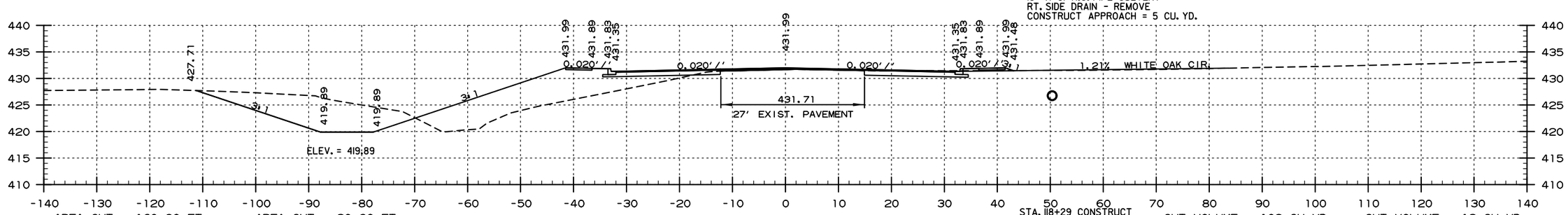
118+64.00

STA 118+64 CONSTRUCT
DROP INLET ON RT. H= 5'-8"
18" X 32' PIPE CULVERT
TO D.I. STA. 118+29 RT.
TYPE MO DROP = 4' DIA.
TYPE C DROP INLET = 4'X4'

CUT VOLUME = 104 CU.YD.
FILL VOLUME = 137 CU.YD.

CUT VOLUME = 12 CU.YD.
FILL VOLUME = 3 CU.YD.

STA 118+46 IN PLACE
18" X 81' R.C. PIPE CULVERT
RT. SIDE DRAIN - REMOVE
CONSTRUCT APPROACH = 5 CU.YD.



AREA CUT = 160 SQ.FT.
AREA FILL = 202 SQ.FT.

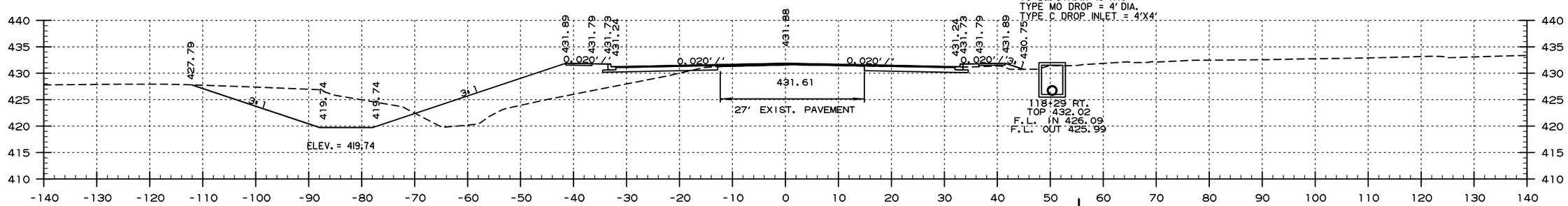
AREA CUT = 20 SQ.FT.
AREA FILL = 2 SQ.FT.

118+46.00

STA. 118+29 CONSTRUCT
DROP INLET ON RT. H= 6'-0"
18" X 108' PIPE CULVERT
TO D.I. STA. 117+18 RT.
TYPE MO DROP = 4' DIA.
TYPE C DROP INLET = 4'X4'

CUT VOLUME = 103 CU.YD.
FILL VOLUME = 126 CU.YD.

CUT VOLUME = 12 CU.YD.
FILL VOLUME = 2 CU.YD.



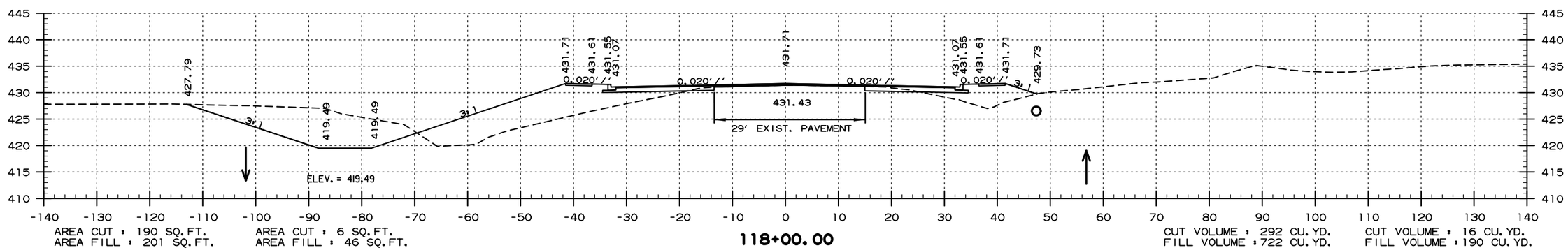
AREA CUT = 169 SQ.FT.
AREA FILL = 199 SQ.FT.

AREA CUT = 18 SQ.FT.
AREA FILL = 5 SQ.FT.

118+29.00

CUT VOLUME = 192 CU.YD.
FILL VOLUME = 215 CU.YD.

CUT VOLUME = 13 CU.YD.
FILL VOLUME = 27 CU.YD.



AREA CUT = 190 SQ.FT.
AREA FILL = 201 SQ.FT.

AREA CUT = 6 SQ.FT.
AREA FILL = 46 SQ.FT.

118+00.00

CUT VOLUME = 292 CU.YD.
FILL VOLUME = 722 CU.YD.

CUT VOLUME = 16 CU.YD.
FILL VOLUME = 190 CU.YD.

STA. 118+00 TO STA. 118+64

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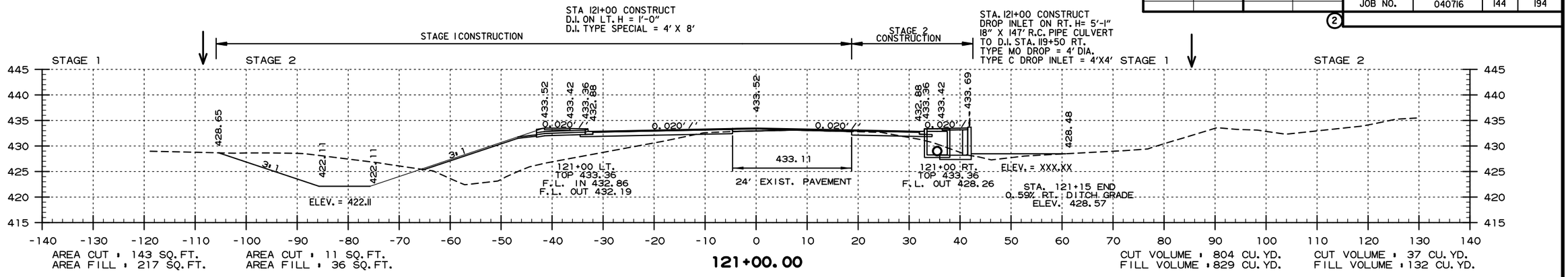
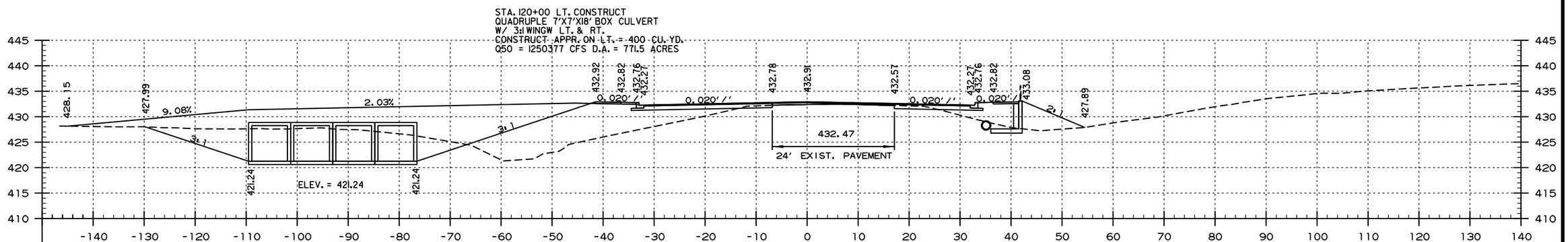
				6	ARK.			
				JOB NO.		040716	144	194

(2)





STA. 119+00 TO STA. 121+00

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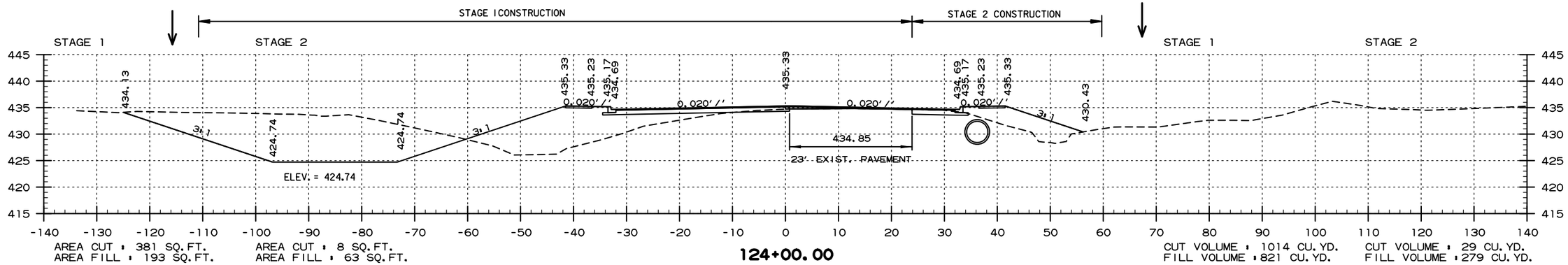
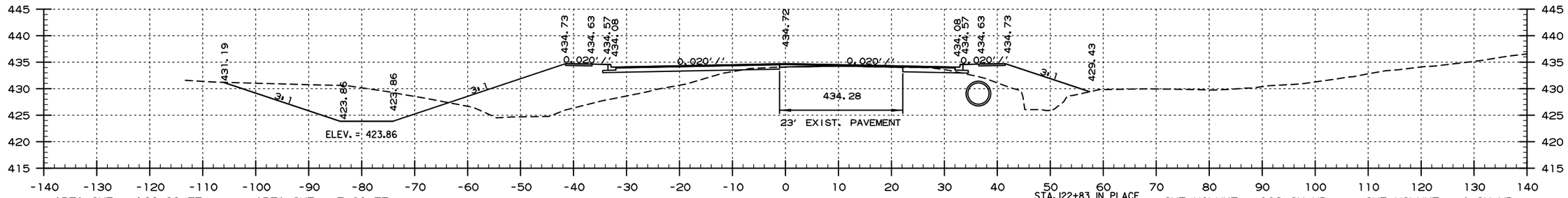
				6	ARK.			
				JOB NO.		040716	145	194

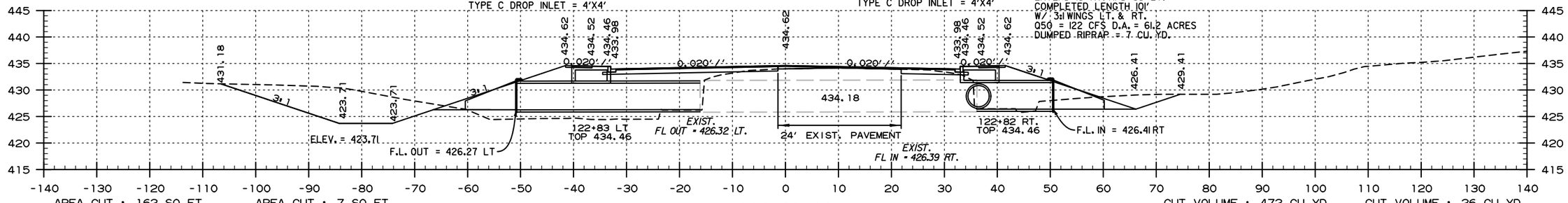
(2) CROSS SECTIONS

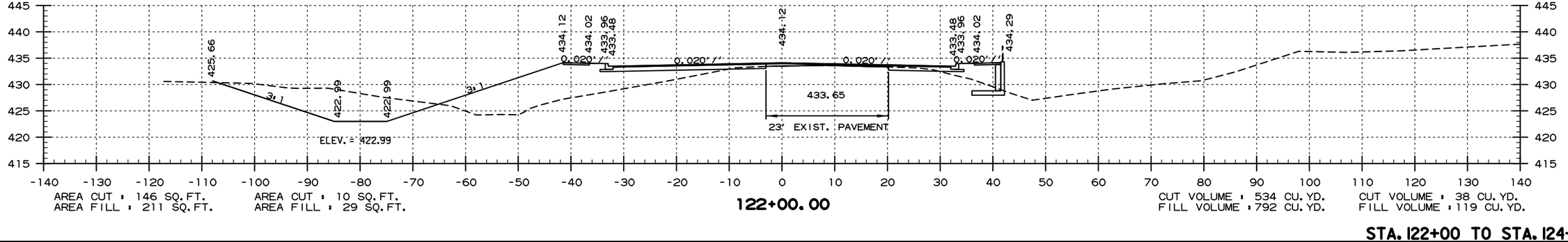




STA. 122+83 CONSTRUCT
DROP INLET ON LT. H= 3'-1"
ON 4' X 5' X 101' R.C. BOX CULVERT
TYPE C DROP INLET = 4'X4'

STA. 122+82 CONSTRUCT
DROP INLET ON RT. H = 3'-1"
ON 4' X 5' X 101' R.C. BOX CULVERT
TYPE C DROP INLET = 4'X4'





STA. 122+00 TO STA. 124+00

USER: AP5181
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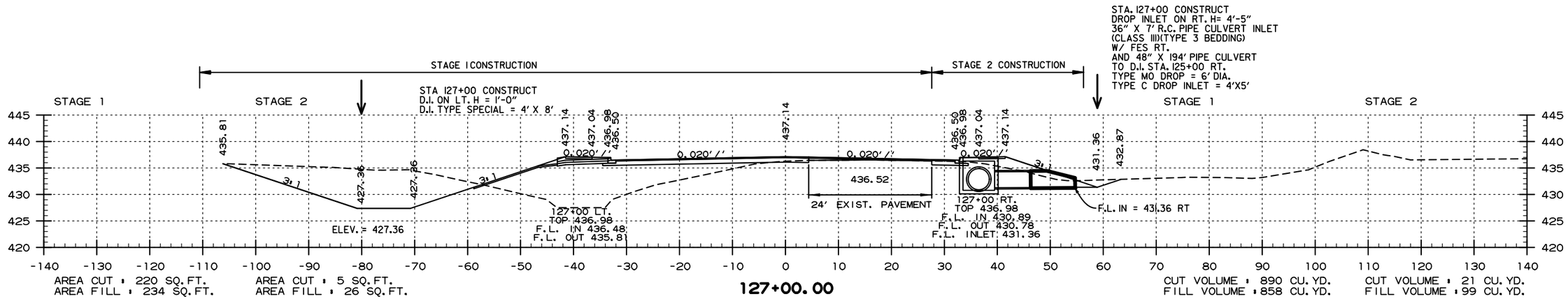
				6	ARK.			
				JOB NO.		040716	146	194

(2) CROSS SECTIONS



STA. 124+69 TO STA. 127+00

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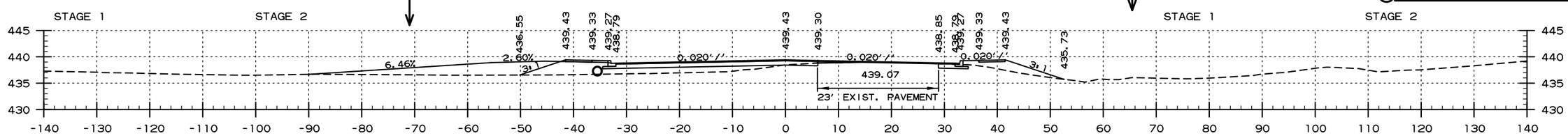
				6	ARK.			
				JOB NO.		040716	147	194

(2) CROSS SECTIONS

STA 130+79 IN PLACE
18" X 24' C.M. PIPE CULV'T.
LT. SIDE DRAIN - REMOVE
INSTALL 18" X 44' PIPE CULV'T.
LT. SIDE DRAIN
CONST. APPR. = 60 CU. YD.

STAGE 1 CONSTRUCTION

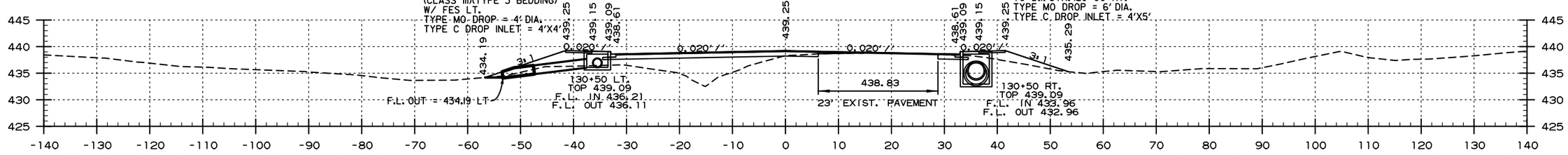
STAGE 2 CONSTRUCTION



AREA CUT = 2 SQ. FT.
AREA FILL = 125 SQ. FT.

AREA CUT = 5 SQ. FT.
AREA FILL = 20 SQ. FT.

STA. 130+50 CONSTRUCT
DROP INLET ON LT. H= 3'-0"
18" X 10' R.C. PIPE CULVERT OUTLET
(CLASS III)(TYPE 3 BEDDING)
W/ FES LT.
TYPE MO DROP = 4' DIA.
TYPE C DROP INLET = 4'X4'



130+79.00

STA. 130+50 CONSTRUCT
DROP INLET ON RT. H= 6'-2"
48" X 144' PIPE CULVERT
TO D.I. STA. 129+00 RT.
TYPE MO DROP = 6' DIA.
TYPE C DROP INLET = 4'X5'

CUT VOLUME = 2 CU. YD.
FILL VOLUME = 130 CU. YD.

CUT VOLUME = 6 CU. YD.
FILL VOLUME = 21 CU. YD.

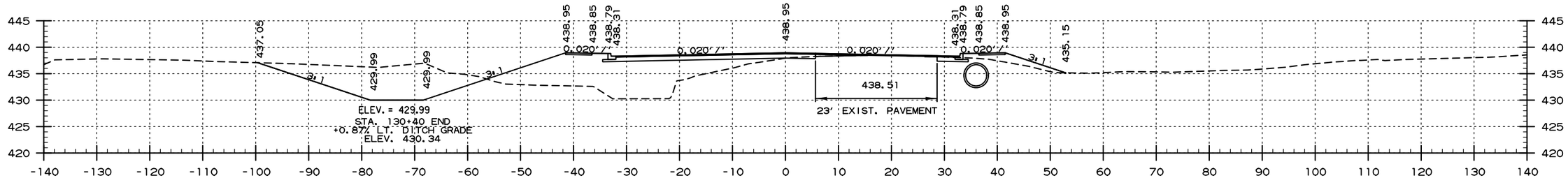
AREA CUT = 2 SQ. FT.
AREA FILL = 118 SQ. FT.

AREA CUT = 5 SQ. FT.
AREA FILL = 20 SQ. FT.

130+50.00

CUT VOLUME = 161 CU. YD.
FILL VOLUME = 321 CU. YD.

CUT VOLUME = 9 CU. YD.
FILL VOLUME = 36 CU. YD.



AREA CUT = 173 SQ. FT.
AREA FILL = 229 SQ. FT.

AREA CUT = 4 SQ. FT.
AREA FILL = 19 SQ. FT.

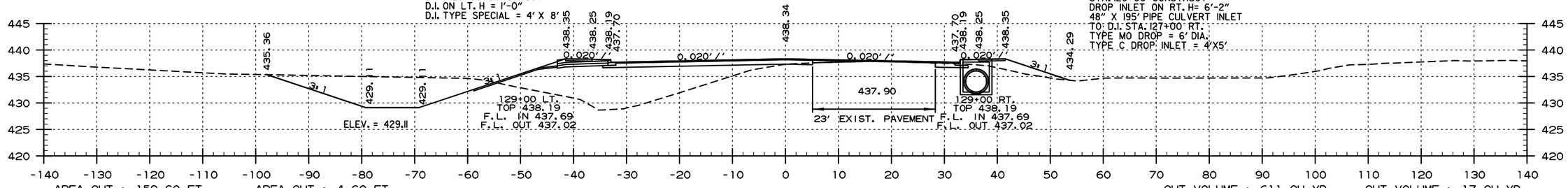
130+00.00

CUT VOLUME = 614 CU. YD.
FILL VOLUME = 883 CU. YD.

CUT VOLUME = 16 CU. YD.
FILL VOLUME = 77 CU. YD.

STA 129+00 CONSTRUCT
D.I. ON LT. H = 1'-0"
D.I. TYPE SPECIAL = 4' X 8'

STA. 129+00 CONSTRUCT
DROP INLET ON RT. H= 6'-2"
48" X 195' PIPE CULVERT INLET
TO D.I. STA. 127+00 RT.
TYPE MO DROP = 6' DIA.
TYPE C DROP INLET = 4'X5'



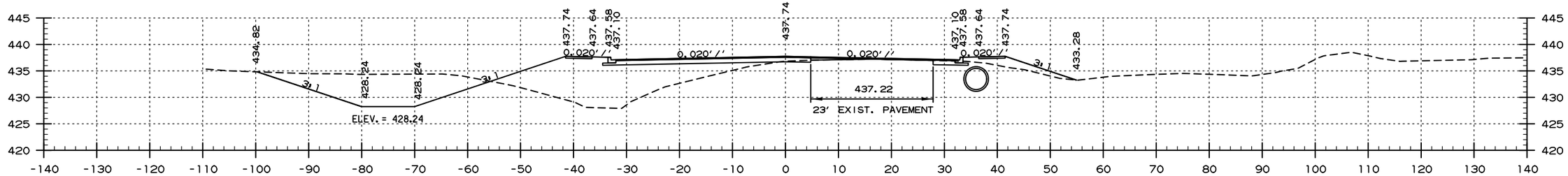
AREA CUT = 159 SQ. FT.
AREA FILL = 248 SQ. FT.

AREA CUT = 4 SQ. FT.
AREA FILL = 23 SQ. FT.

129+00.00

CUT VOLUME = 611 CU. YD.
FILL VOLUME = 904 CU. YD.

CUT VOLUME = 17 CU. YD.
FILL VOLUME = 83 CU. YD.



AREA CUT = 171 SQ. FT.
AREA FILL = 241 SQ. FT.

AREA CUT = 5 SQ. FT.
AREA FILL = 22 SQ. FT.

128+00.00

CUT VOLUME = 723 CU. YD.
FILL VOLUME = 878 CU. YD.

CUT VOLUME = 18 CU. YD.
FILL VOLUME = 89 CU. YD.

STA. 128+00 TO STA. 130+84

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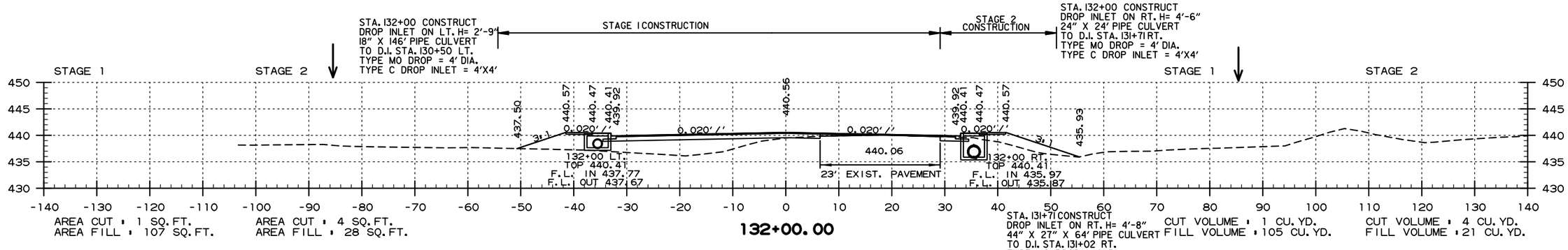
				6	ARK.			
				JOB NO.		040716	148	194

2 CROSS SECTIONS



STA. 131+00 TO STA. 132+00

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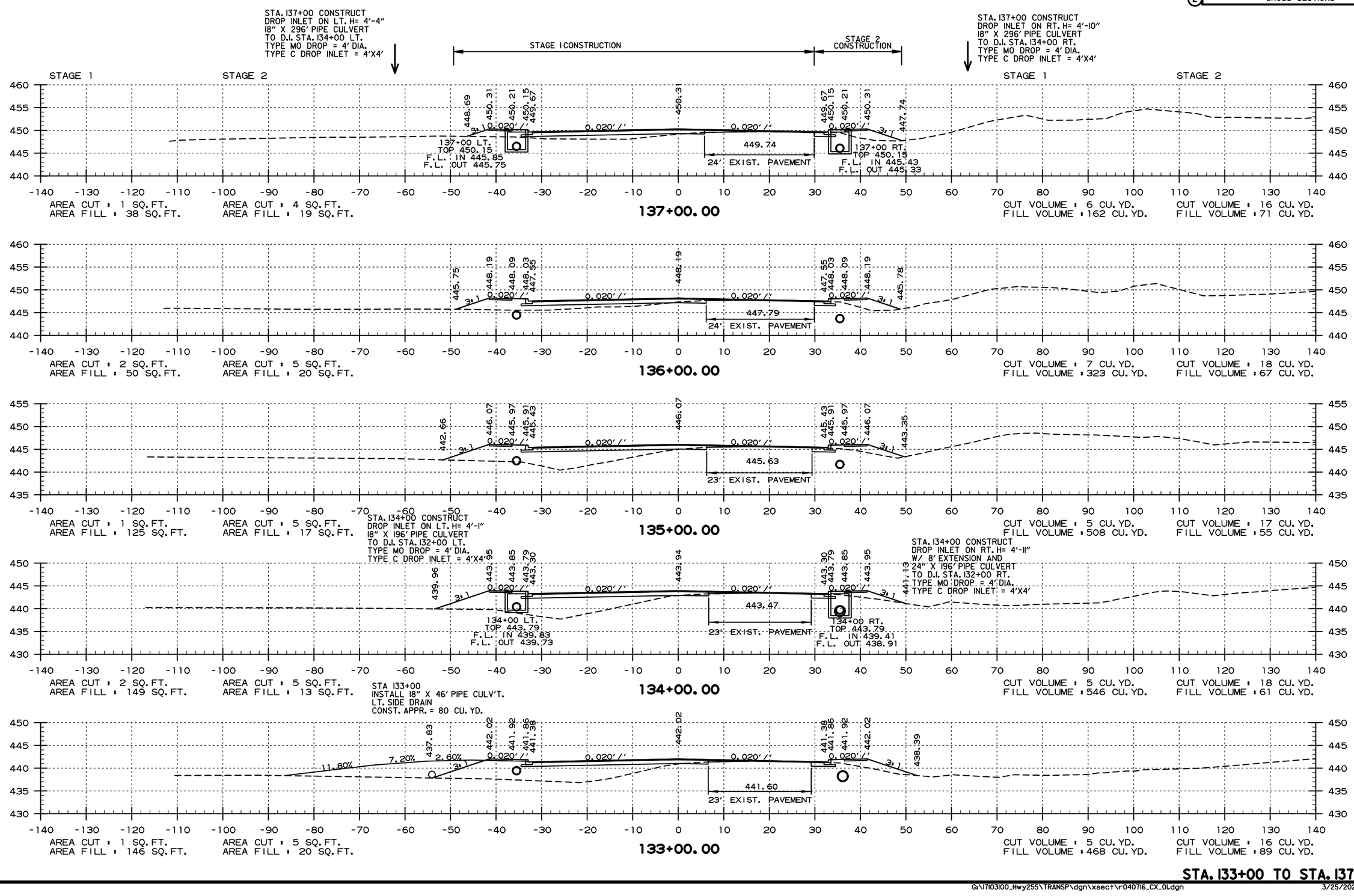
				6	ARK.			
				JOB NO.		040716	149	194

(2) CROSS SECTIONS



STA. 133+00 TO STA. 137+00

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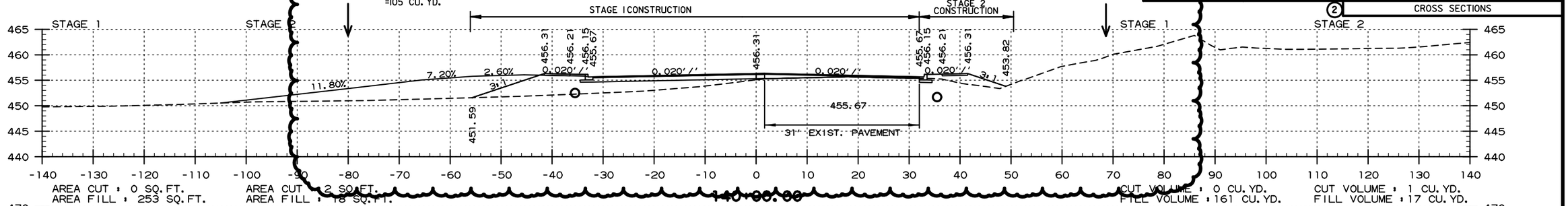
				6	ARK.			
				JOB NO.		040716	150	194

(2) CROSS SECTIONS

STA 140+05
CONST. APPR. ON LT.
=105 CU. YD.



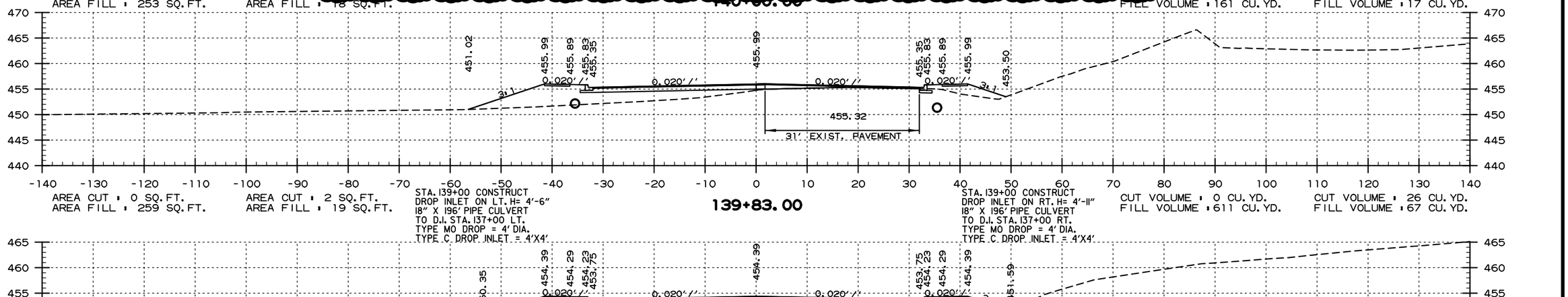
AREA CUT = 0 SQ. FT.
AREA FILL = 253 SQ. FT.

AREA CUT = 2 SQ. FT.
AREA FILL = 18 SQ. FT.

140+00.00

CUT VOLUME = 0 CU. YD.
FILL VOLUME = 161 CU. YD.

CUT VOLUME = 1 CU. YD.
FILL VOLUME = 17 CU. YD.



AREA CUT = 0 SQ. FT.
AREA FILL = 259 SQ. FT.

AREA CUT = 2 SQ. FT.
AREA FILL = 19 SQ. FT.

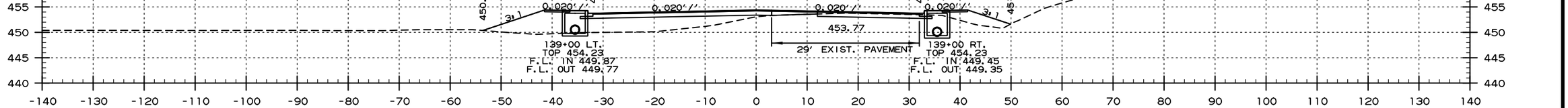
STA. 139+00 CONSTRUCT
DROP INLET ON LT. H= 4'-6"
18" X 196' PIPE CULVERT
TO D.I. STA. 137+00 LT.
TYPE MO DROP = 4' DIA.
TYPE C DROP INLET = 4'X4'

139+83.00

STA. 139+00 CONSTRUCT
DROP INLET ON RT. H= 4'-11"
18" X 196' PIPE CULVERT
TO D.I. STA. 137+00 RT.
TYPE MO DROP = 4' DIA.
TYPE C DROP INLET = 4'X4'

CUT VOLUME = 0 CU. YD.
FILL VOLUME = 611 CU. YD.

CUT VOLUME = 26 CU. YD.
FILL VOLUME = 67 CU. YD.



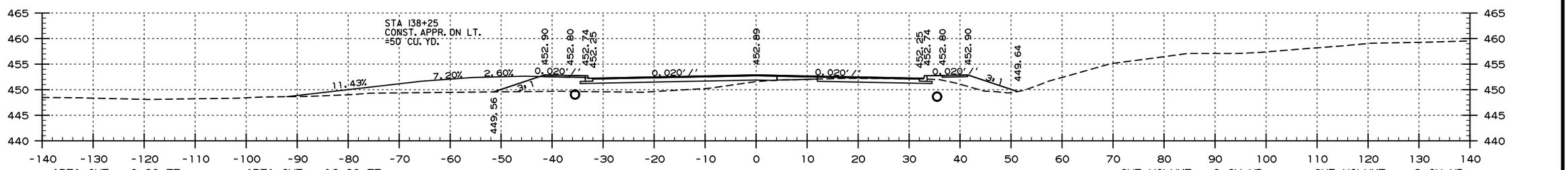
AREA CUT = 0 SQ. FT.
AREA FILL = 139 SQ. FT.

AREA CUT = 15 SQ. FT.
AREA FILL = 24 SQ. FT.

139+00.00

CUT VOLUME = 0 CU. YD.
FILL VOLUME = 315 CU. YD.

CUT VOLUME = 43 CU. YD.
FILL VOLUME = 66 CU. YD.



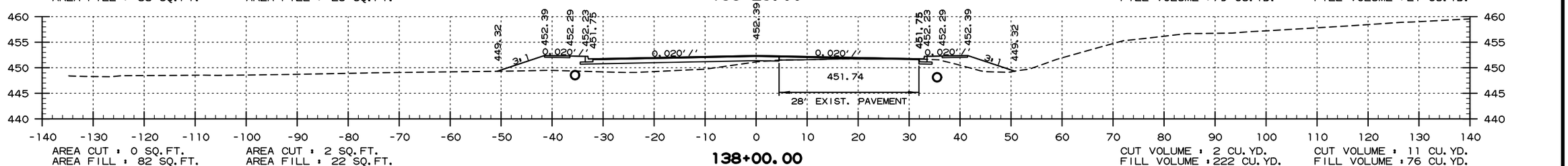
AREA CUT = 0 SQ. FT.
AREA FILL = 88 SQ. FT.

AREA CUT = 16 SQ. FT.
AREA FILL = 23 SQ. FT.

138+25.00

CUT VOLUME = 0 CU. YD.
FILL VOLUME = 79 CU. YD.

CUT VOLUME = 8 CU. YD.
FILL VOLUME = 21 CU. YD.



AREA CUT = 0 SQ. FT.
AREA FILL = 82 SQ. FT.

AREA CUT = 2 SQ. FT.
AREA FILL = 22 SQ. FT.

138+00.00

CUT VOLUME = 2 CU. YD.
FILL VOLUME = 222 CU. YD.

CUT VOLUME = 11 CU. YD.
FILL VOLUME = 76 CU. YD.

STA. 138+00 TO STA. 140+00

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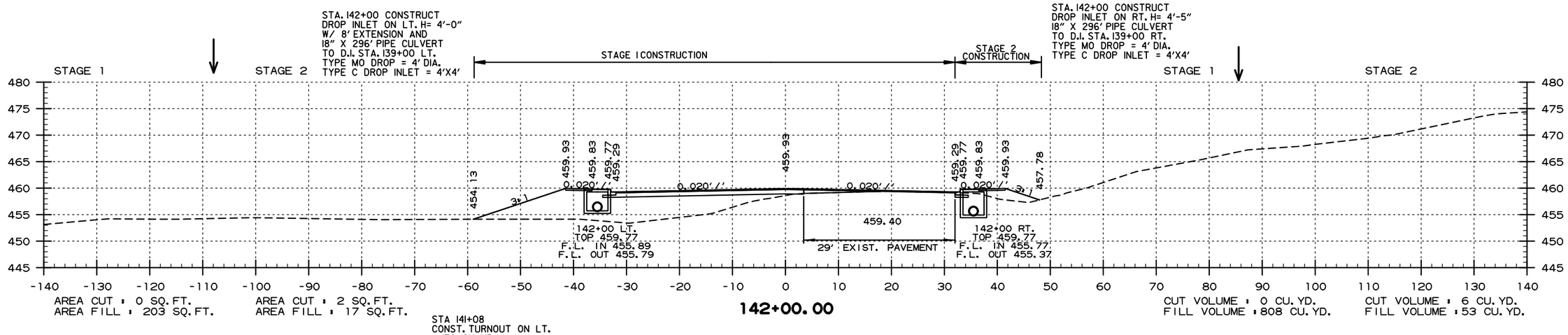
6	ARK.			
JOB NO.		040716	151	194

(2) CROSS SECTIONS



STA. 141+00 TO STA. 142+00

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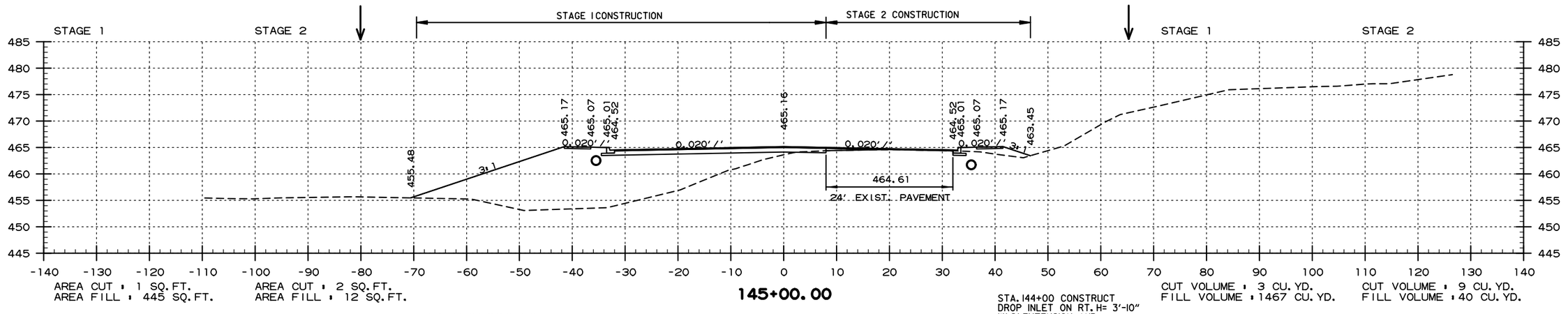
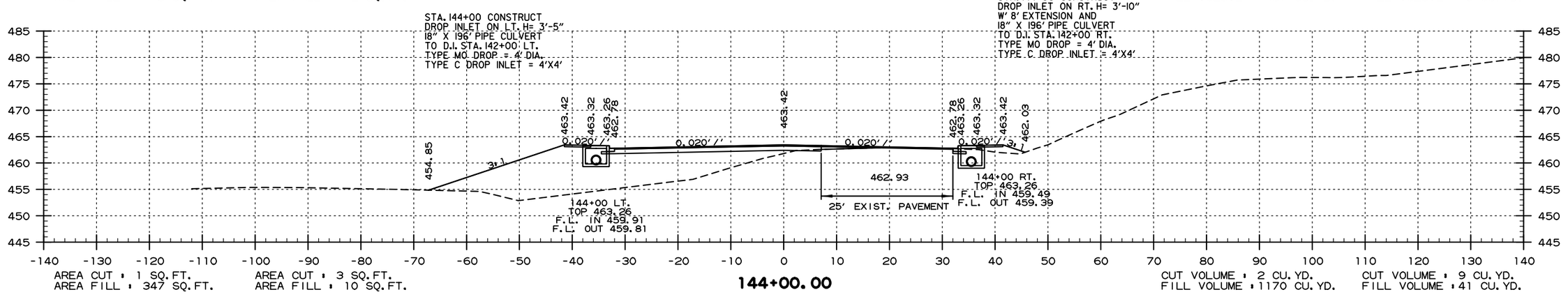
6	ARK.			
JOB NO.		040716	152	194

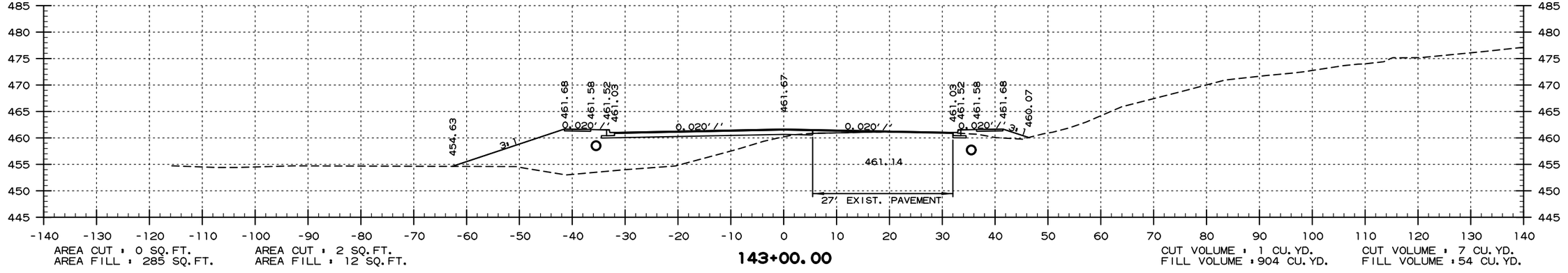
(2) CROSS SECTIONS



STA. 144+00 CONSTRUCT
DROP INLET ON LT. H= 3'-5"
18" X 196' PIPE CULVERT
TO D.I. STA. 142+00 LT.
TYPE MO DROP = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 144+00 CONSTRUCT
DROP INLET ON RT. H= 3'-10"
W 8' EXTENSION AND
18" X 196' PIPE CULVERT
TO D.I. STA. 142+00 RT.
TYPE MO DROP = 4' DIA.
TYPE C DROP INLET = 4'X4'





STA. 143+00 TO STA. 145+00

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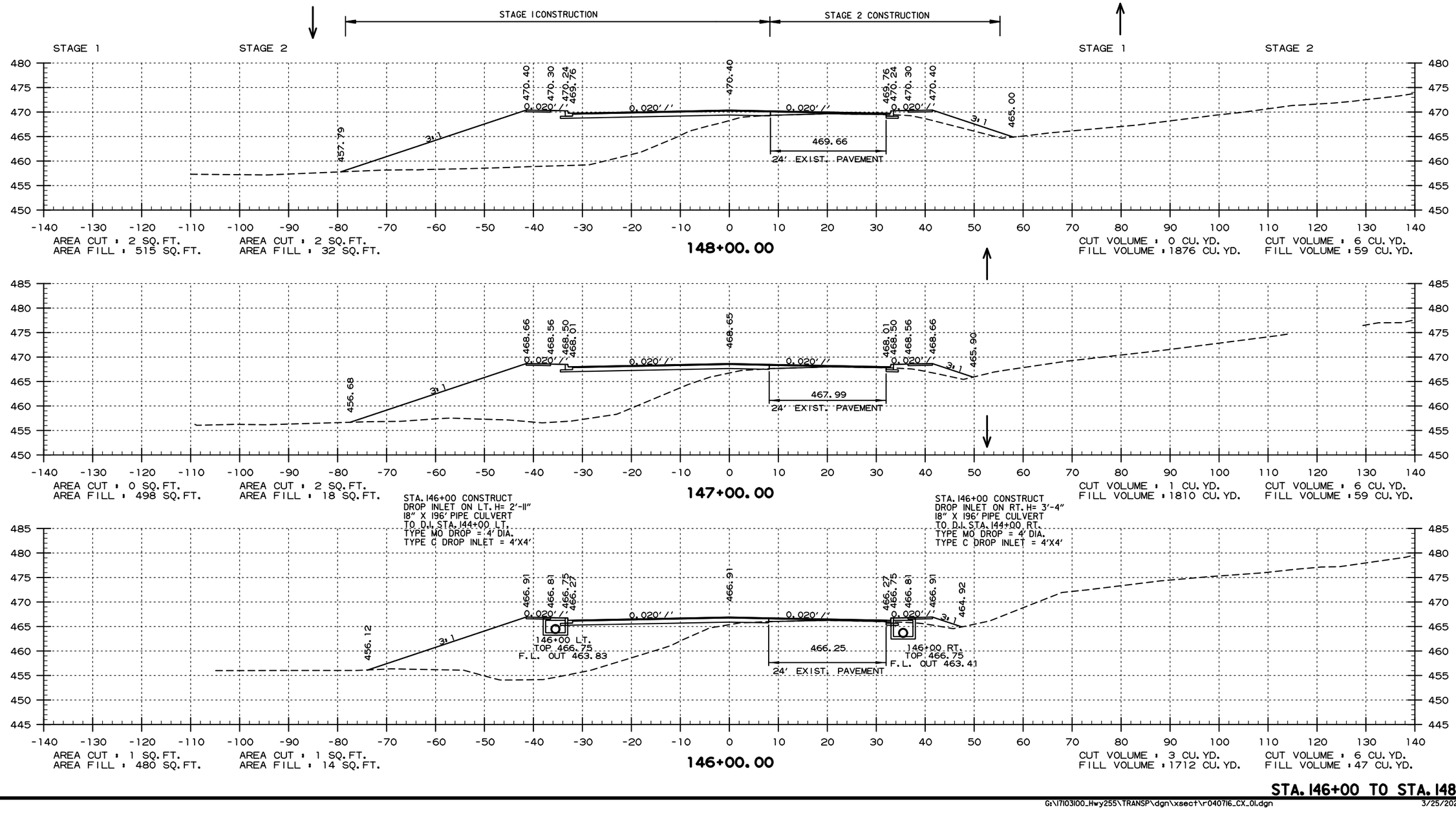
				JOB NO.		040716	153	194

(2) CROSS SECTIONS



STA. 146+00 TO STA. 148+00

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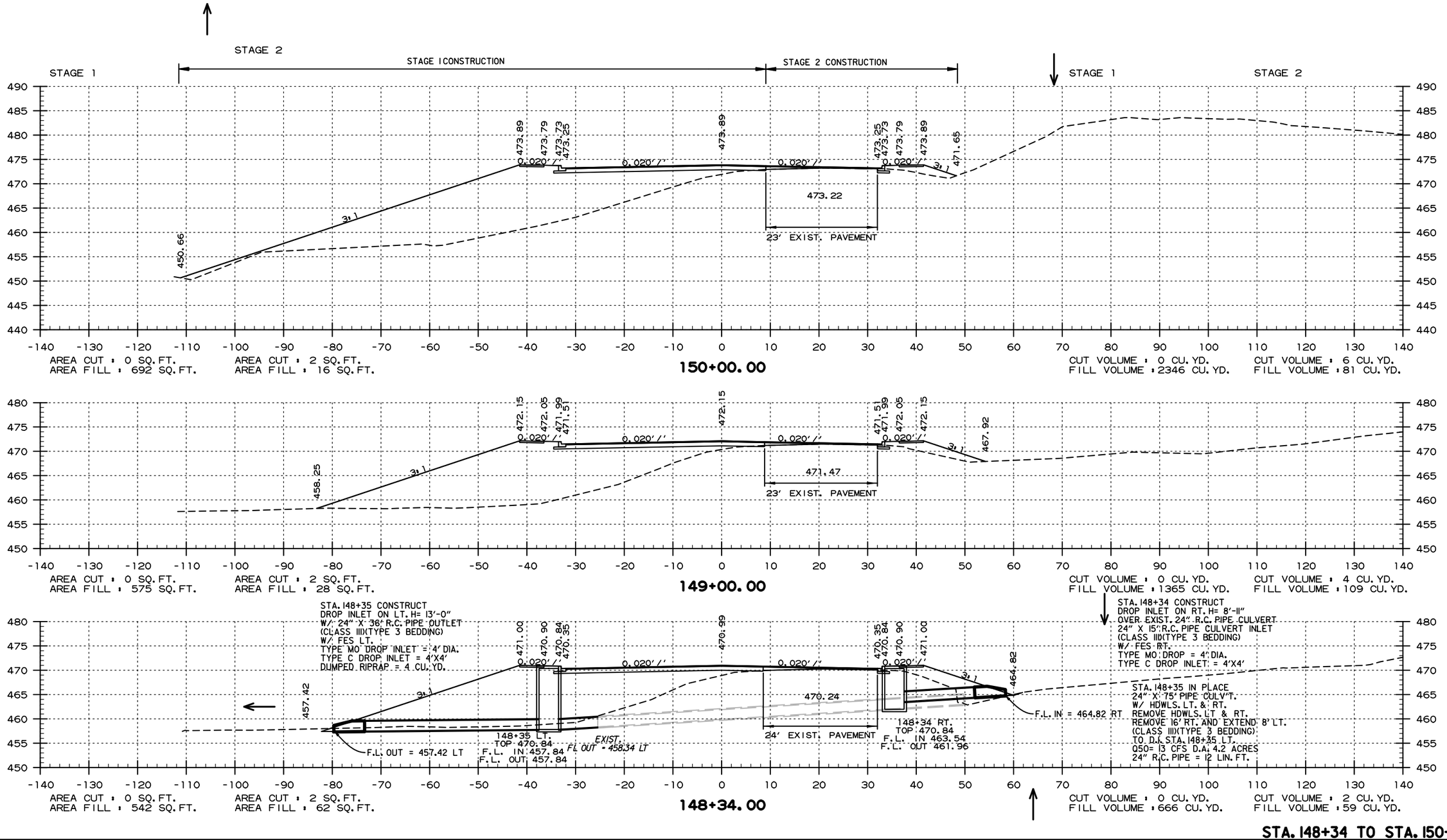
				6	ARK.			
				JOB NO.		040716	154	194
				(2)	CROSS SECTIONS			



STA. 148+34 TO STA. 150+00

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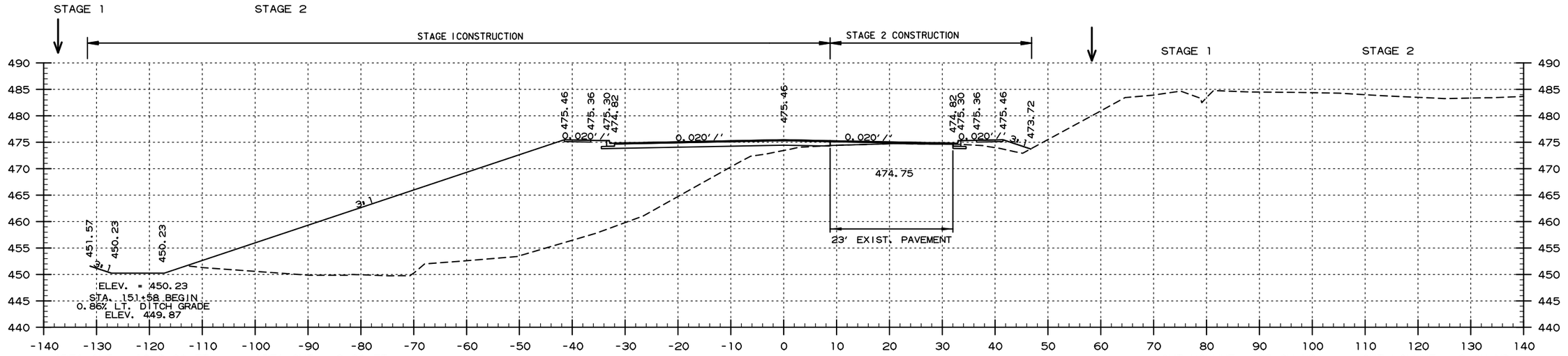
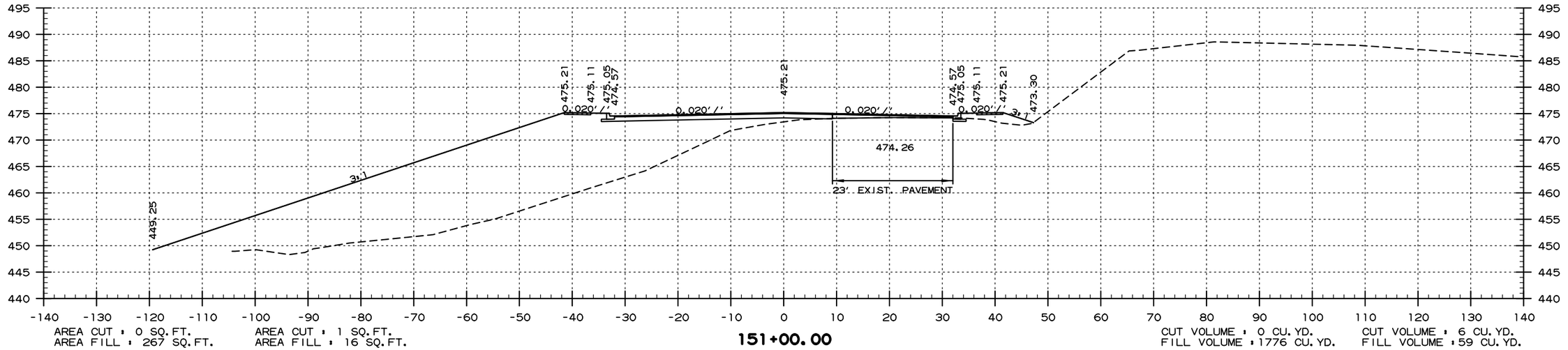
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	155	194

(2) CROSS SECTIONS





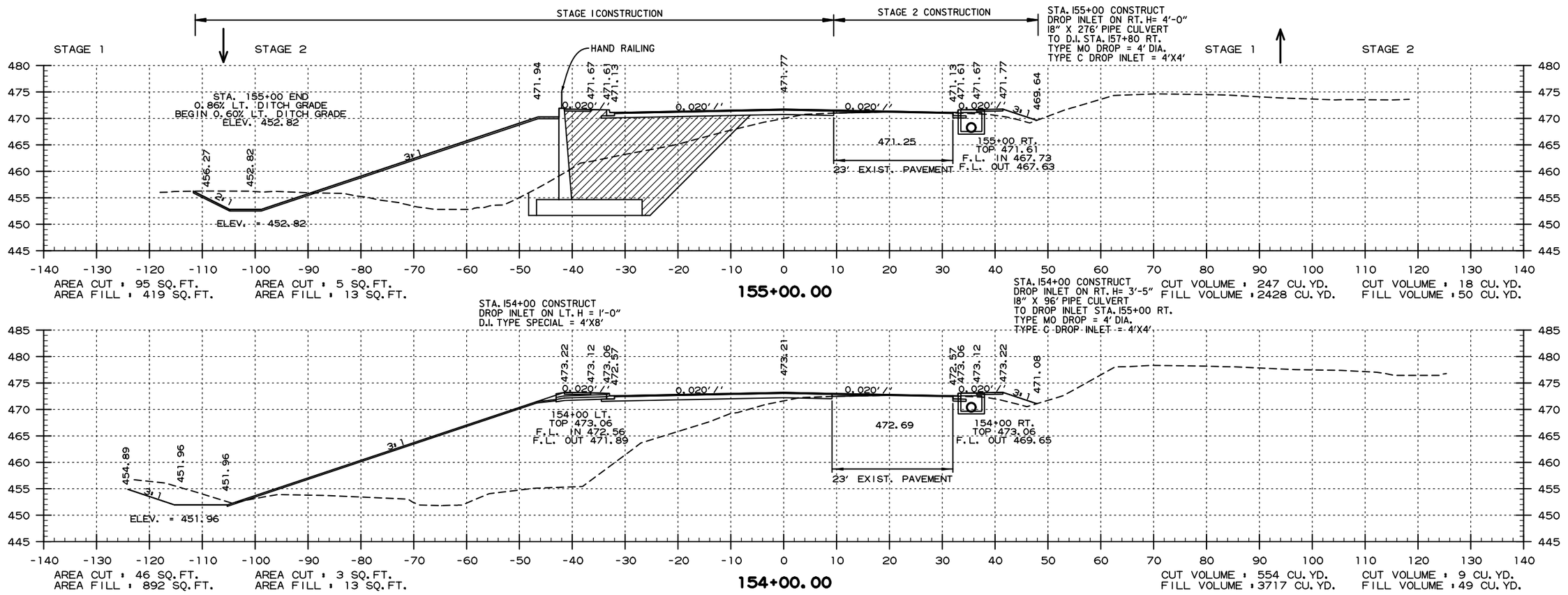
STA. 151+00 TO STA. 152+00

USER: APSIBI
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\xsect\r040716_CX_01.dgn
PLOTTED: 3/25/2020 15:01
SCALE: 1:20

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.		040716	156	194

(2) CROSS SECTIONS

SELECT GRANULAR BACKFILL



STA. 153+00 TO STA. 155+00

USER: APSIBI
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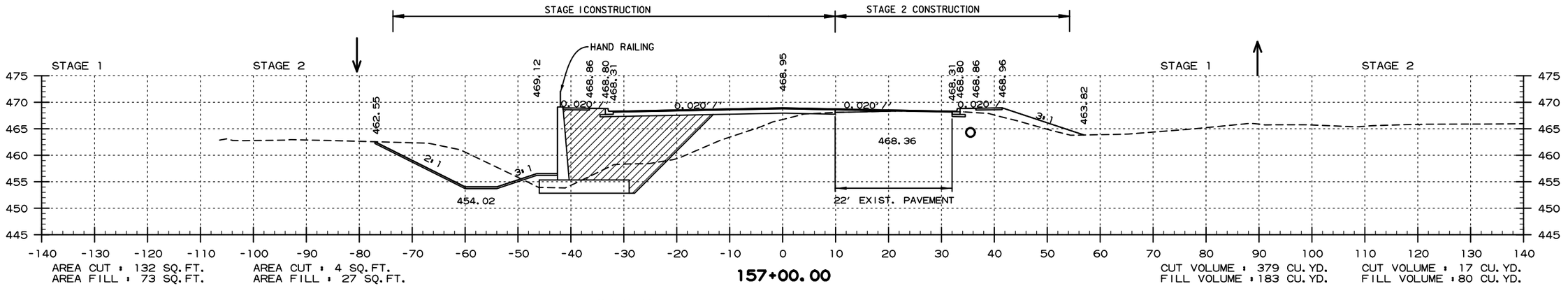
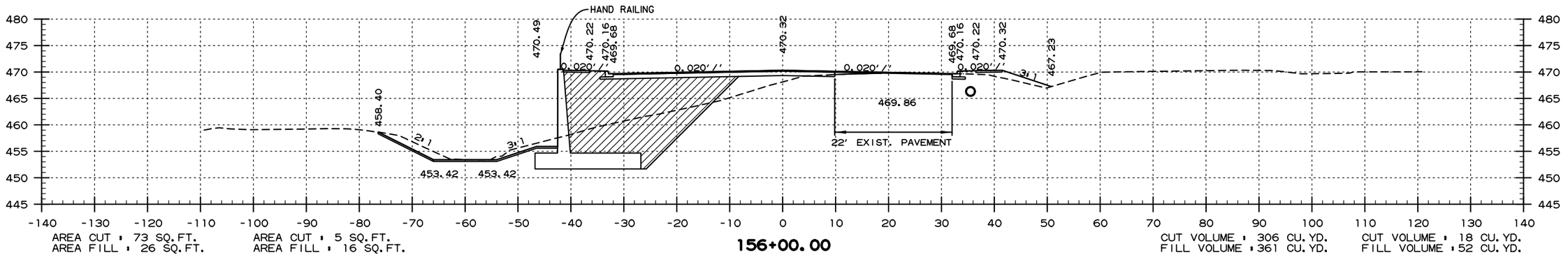
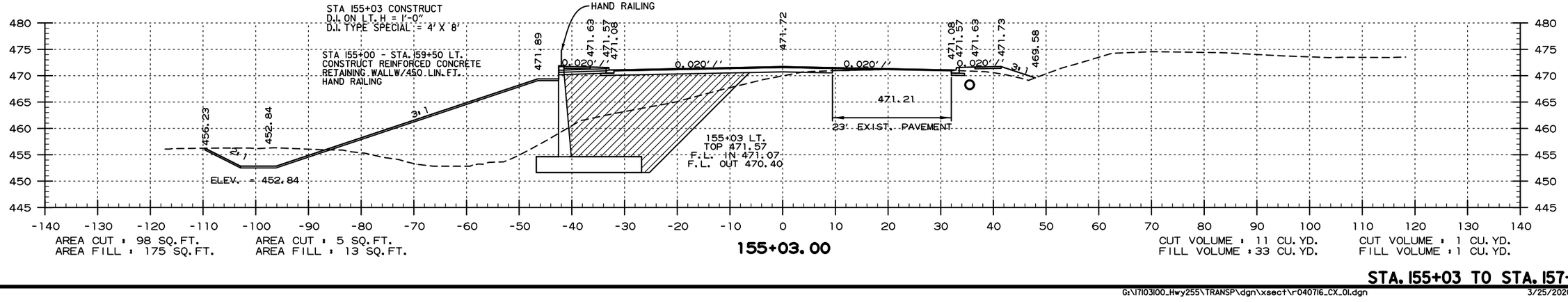
G:\17103100_Hwy255\TRANSP\dgn\xsect\r040716_CX_01.dgn 3/25/2020 15:01

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.		040716	157	194
				(2)	CROSS SECTIONS			

SELECT GRANULAR BACKFILL







STA. 155+03 TO STA. 157+00

USER: AP5181
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\xsect\r040716_CX_01.dgn
PLOTTED: 3/25/2020 15:01
SCALE: 1:20

G:\17103100_Hwy255\TRANSP\dgn\xsect\r040716_CX_01.dgn 3/25/2020 15:01

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.		040716	158	194
				(2)	CROSS SECTIONS			

SELECT GRANULAR BACKFILL

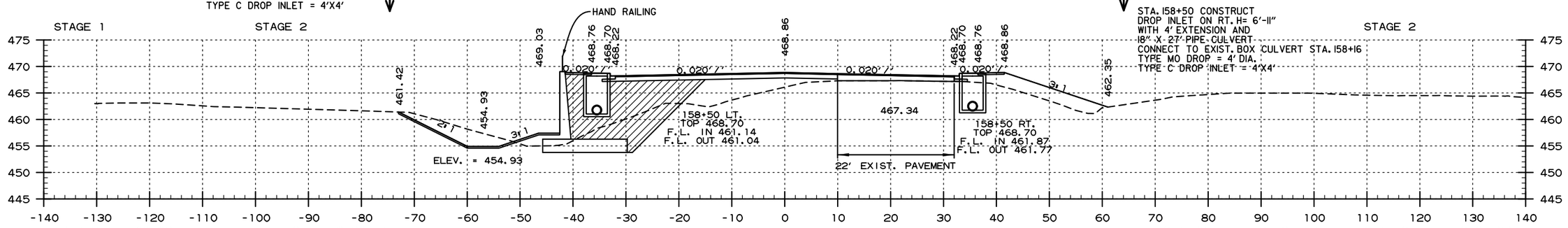
STA. 158+50 CONSTRUCT
DROP INLET ON LT. H = 7'-8"
W/ 8' EXTENSION AND
18" X 27' PIPE CULVERT
TO R.C. BOX CULVERT STA. 158+16
TYPE MO DROP = 4' DIA.
TYPE C DROP INLET = 4'X4'

STAGE 1 CONSTRUCTION

STAGE 2 CONSTRUCTION

STAGE 1

STA. 158+50 CONSTRUCT
DROP INLET ON RT. H= 6'-11"
WITH 4' EXTENSION AND
18" X 27' PIPE CULVERT
CONNECT TO EXIST. BOX CULVERT STA. 158+16
TYPE MO DROP = 4' DIA.
TYPE C DROP INLET = 4'X4'



AREA CUT = 68 SQ.FT.
AREA FILL = 76 SQ.FT.

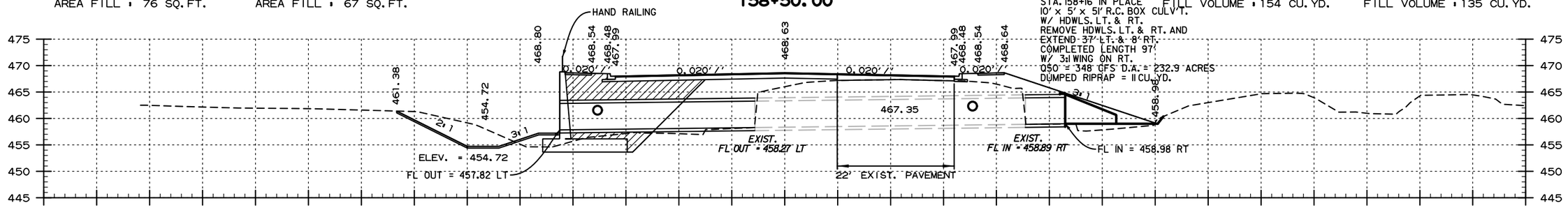
AREA CUT = 0 SQ.FT.
AREA FILL = 67 SQ.FT.

CUT VOLUME = 95 CU.YD.
FILL VOLUME = 154 CU.YD.

CUT VOLUME = 0 CU.YD.
FILL VOLUME = 135 CU.YD.

158+50.00

STA. 158+16 IN PLACE
10' x 5' x 5' R.C. BOX CULV'T.
W/ HDWLS. LT. & RT.
REMOVE HDWLS. LT. & RT. AND
EXTEND 37' LT. & 8' RT.
COMPLETED LENGTH 97'
W/ 3:1 WING ON RT.
Q50 = 348 CFS D.A. = 232.9 ACRES
DUMPED RIPRAP = 11 CU.YD.



AREA CUT = 83 SQ.FT.
AREA FILL = 168 SQ.FT.

AREA CUT = 0 SQ.FT.
AREA FILL = 148 SQ.FT.

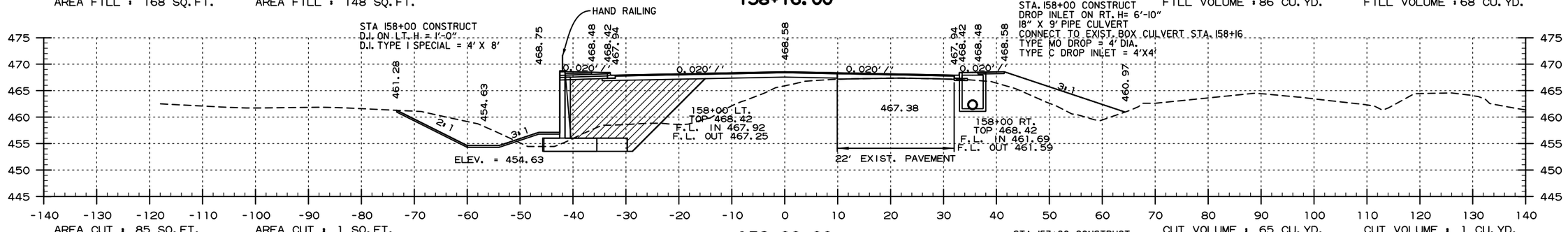
CUT VOLUME = 50 CU.YD.
FILL VOLUME = 86 CU.YD.

CUT VOLUME = 0 CU.YD.
FILL VOLUME = 68 CU.YD.

158+16.00

STA 158+00 CONSTRUCT
D.I. ON LT. H = 1'-0"
D.I. TYPE I SPECIAL = 4' X 8'

STA. 158+00 CONSTRUCT
DROP INLET ON RT. H= 6'-10"
18" X 9' PIPE CULVERT
CONNECT TO EXIST. BOX CULVERT STA. 158+16
TYPE MO DROP = 4' DIA.
TYPE C DROP INLET = 4'X4'



AREA CUT = 85 SQ.FT.
AREA FILL = 123 SQ.FT.

AREA CUT = 1 SQ.FT.
AREA FILL = 83 SQ.FT.

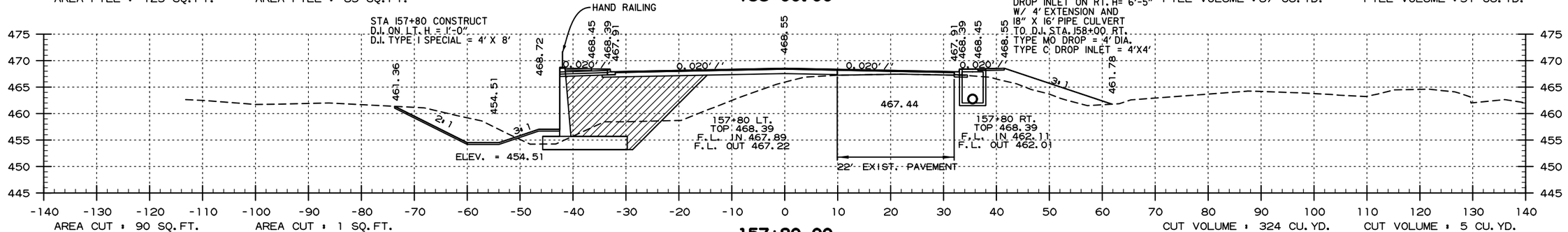
CUT VOLUME = 65 CU.YD.
FILL VOLUME = 87 CU.YD.

CUT VOLUME = 1 CU.YD.
FILL VOLUME = 51 CU.YD.

158+00.00

STA. 157+80 CONSTRUCT
DROP INLET ON RT. H= 6'-5"
W/ 4' EXTENSION AND
18" X 16' PIPE CULVERT
TO D.I. STA. 158+00 RT.
TYPE MO DROP = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA 157+80 CONSTRUCT
D.I. ON LT. H = 1'-0"
D.I. TYPE I SPECIAL = 4' X 8'



AREA CUT = 90 SQ.FT.
AREA FILL = 111 SQ.FT.

AREA CUT = 1 SQ.FT.
AREA FILL = 55 SQ.FT.

CUT VOLUME = 324 CU.YD.
FILL VOLUME = 273 CU.YD.

CUT VOLUME = 5 CU.YD.
FILL VOLUME = 121 CU.YD.

157+80.00

STA. 157+80 TO STA. 158+50

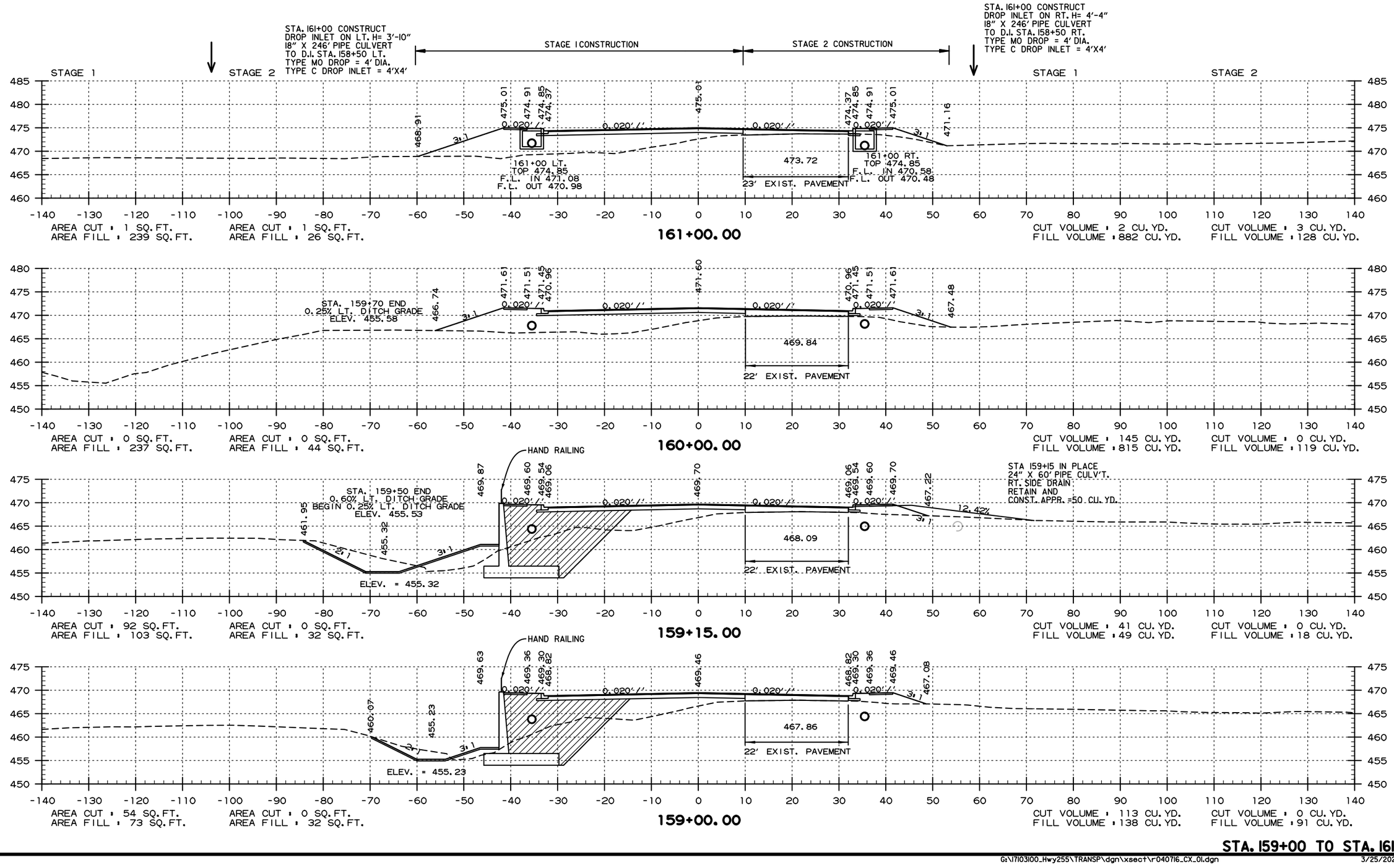
USER: AP5181
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\xsect\r040716_CX_01.dgn
PLOTTED: 3/25/2020 15:01
SCALE: 1:20

G:\17103100_Hwy255\TRANSP\dgn\xsect\r040716_CX_01.dgn 3/25/2020 15:01

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.		040716	159	194

(2) CROSS SECTIONS

SELECT GRANULAR BACKFILL



STA. 159+00 TO STA. 161+00

USER: AP5181
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PLOTTED: 3/25/2020 15:01
SCALE: 1:20

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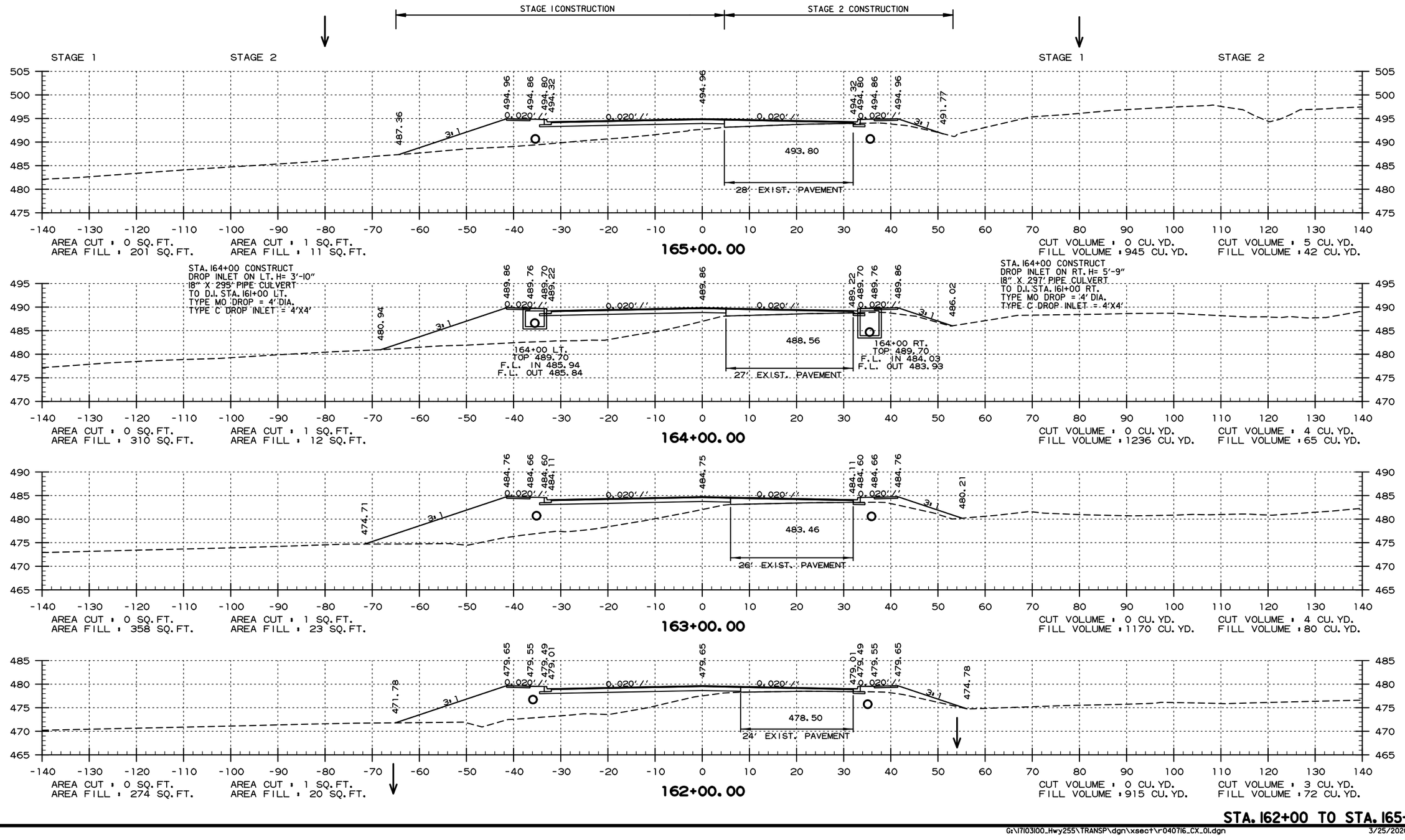
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		040716	160	194

(2) CROSS SECTIONS



STA. 162+00 TO STA. 165+00

USER: APSIBI
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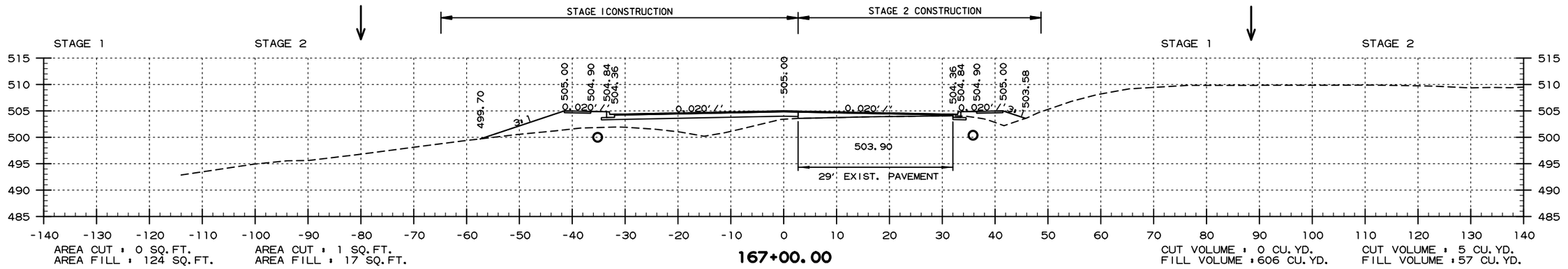
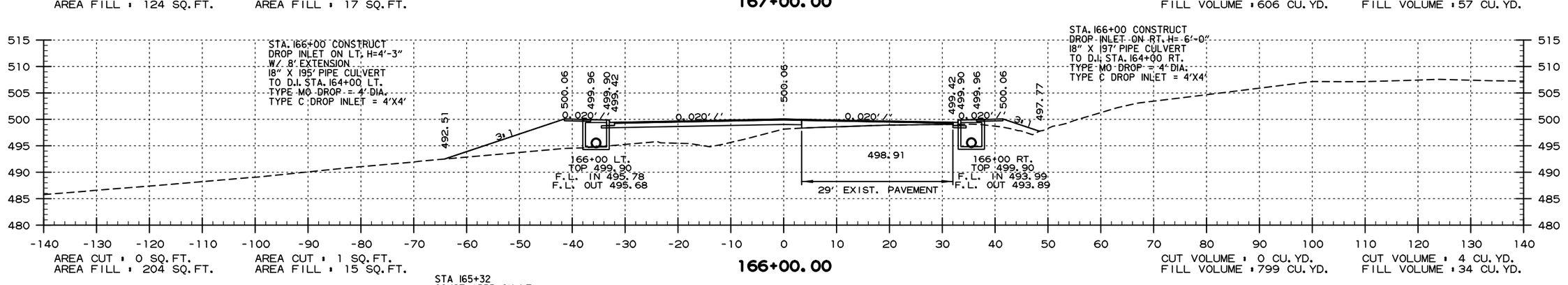
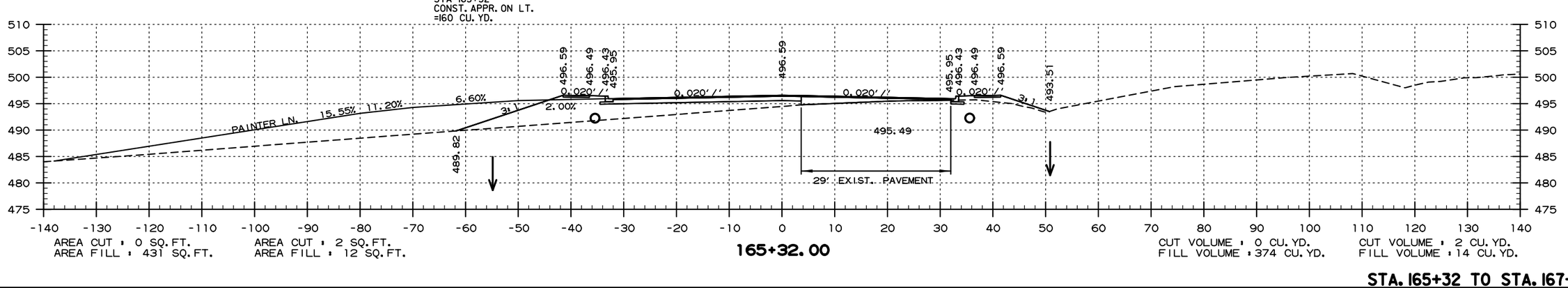
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	161	194
				(2)	CROSS SECTIONS			







STA. 165+32 TO STA. 167+00

USER: APS181
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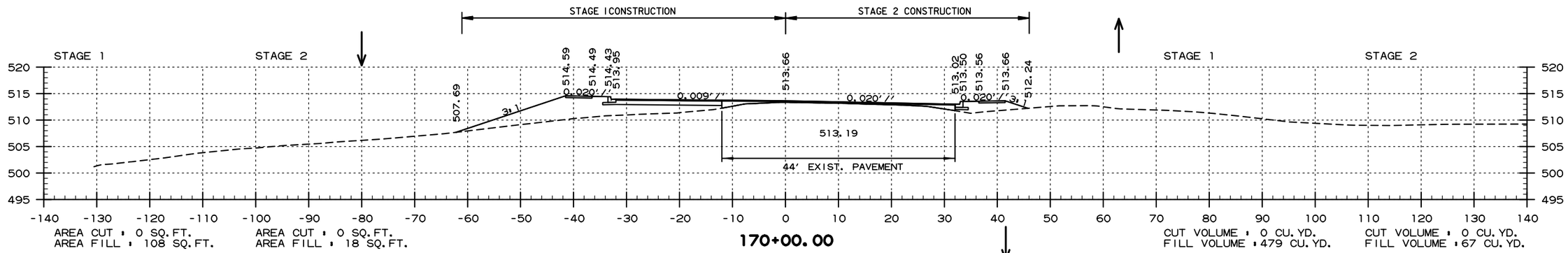
SCALE: 1:20

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.		040716	162	194

(2) CROSS SECTIONS



STA. 168+00 TO STA. 170+00

USER: AP5181
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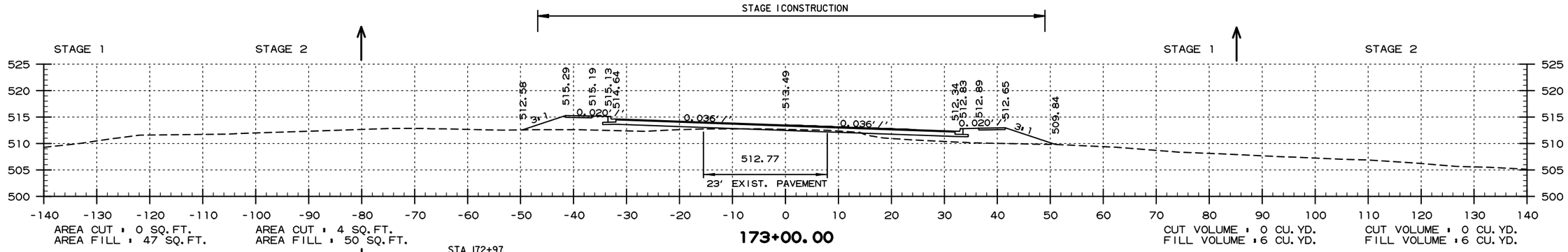
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	163	194
				(2)	CROSS SECTIONS			



STA. 171+00 TO STA. 173+00

USER: AP5181
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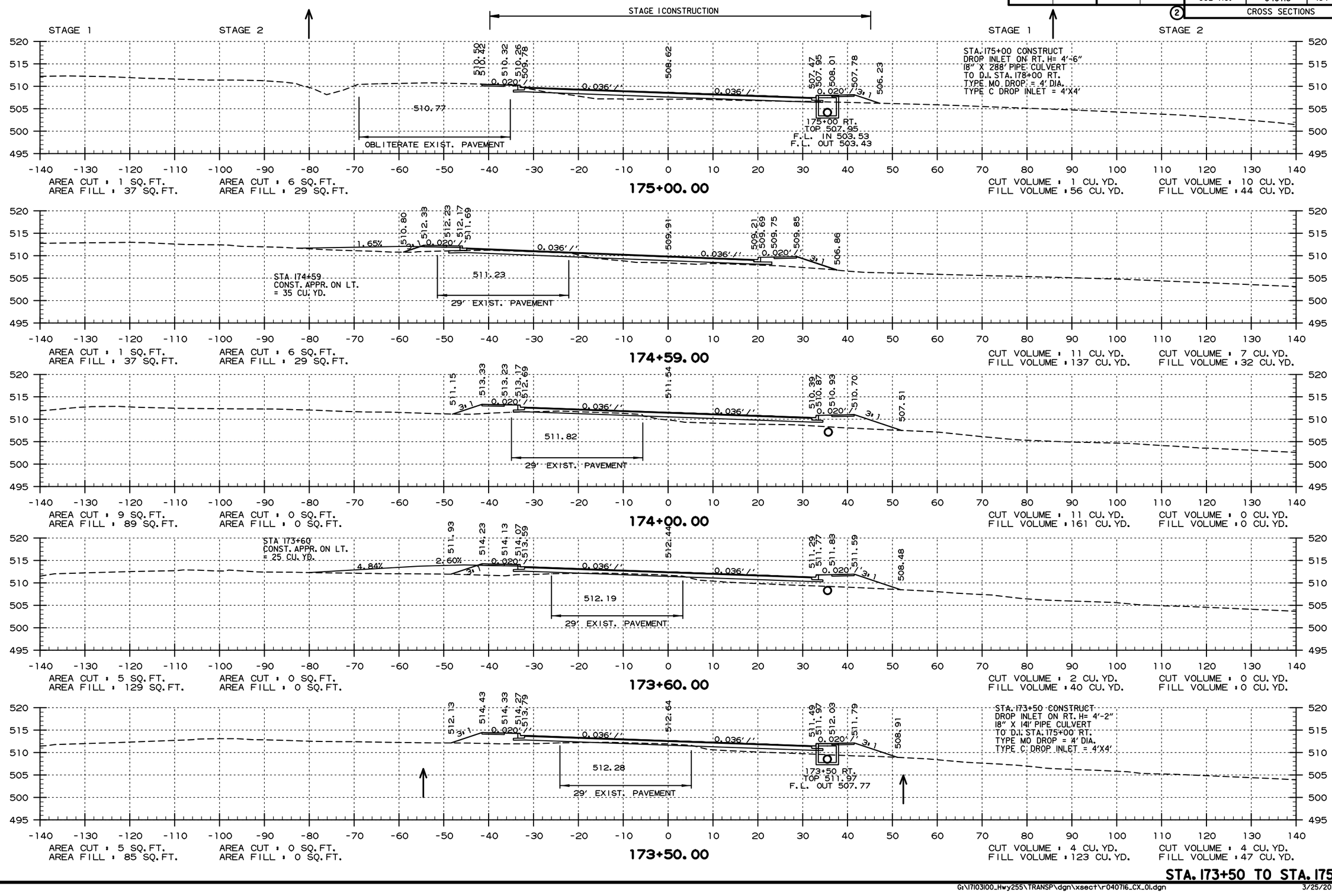
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	164	194

(2) CROSS SECTIONS



STA. 173+50 TO STA. 175+00

USER: APSIBI
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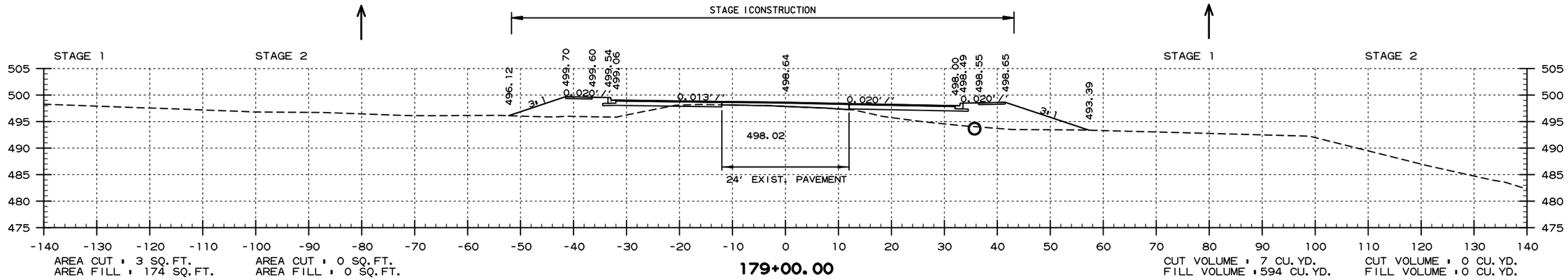
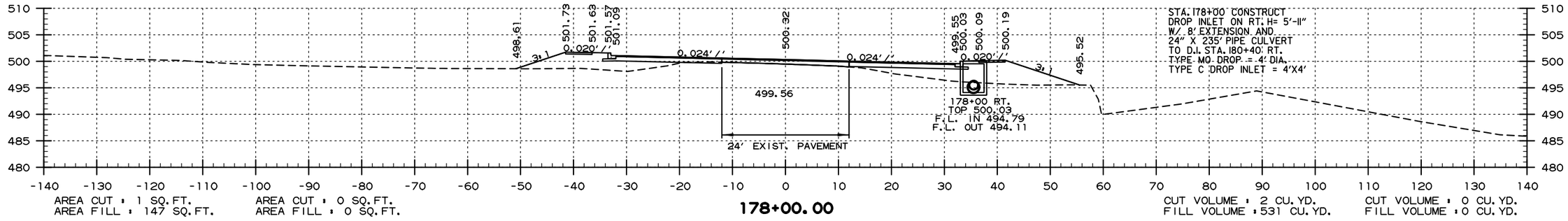
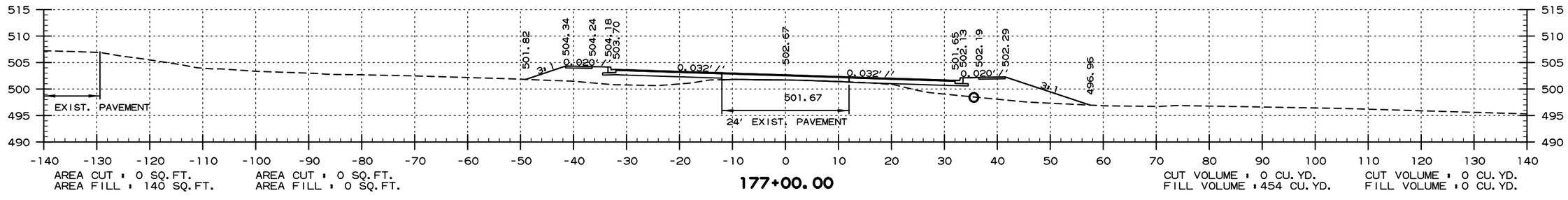
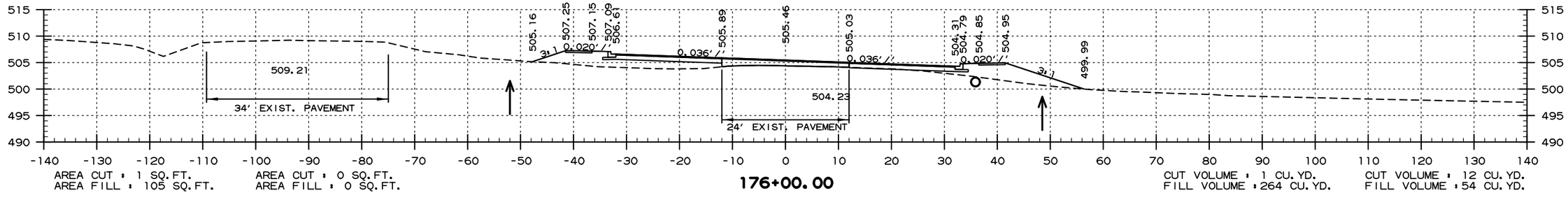
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	165	194
				(2)	CROSS SECTIONS			









STA.176+00 TO STA.179+00

USER: AP5181
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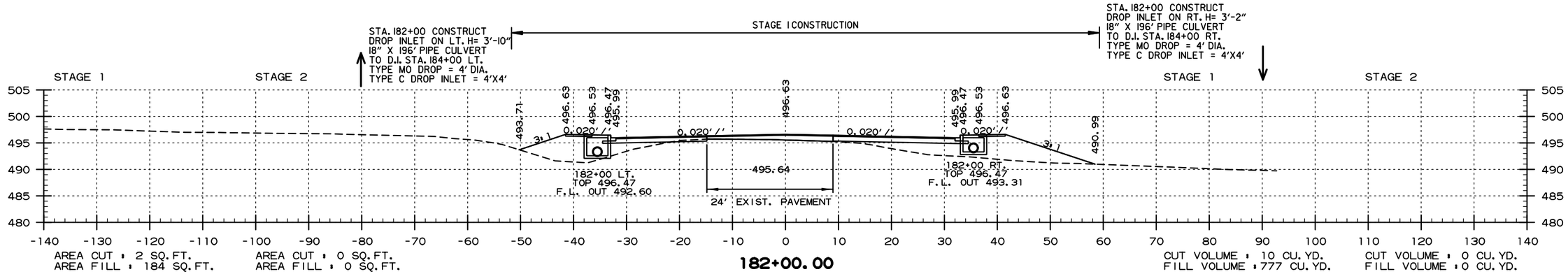
PLOTTED: 3/25/2020 15:01

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.		040716	166	194
				(2)	CROSS SECTIONS			



STA. 180+00 TO STA. 182+00

USER: APSIBI
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PLOTTED: 3/25/2020 15:01

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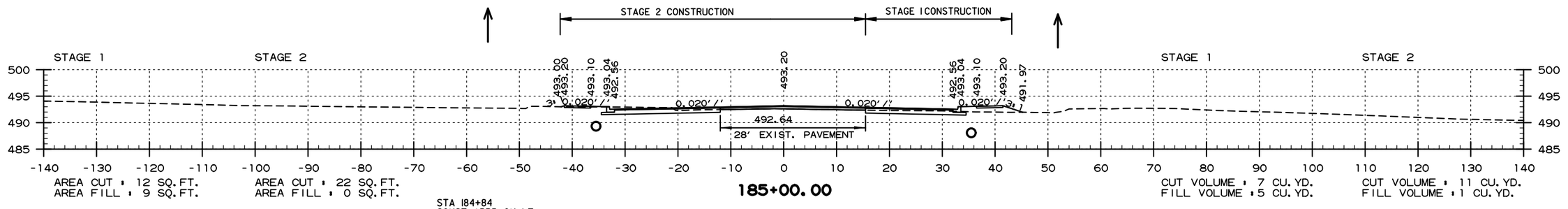
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	167	194

(2) CROSS SECTIONS



STA. 183+00 TO STA. 185+00

USER: AP5181
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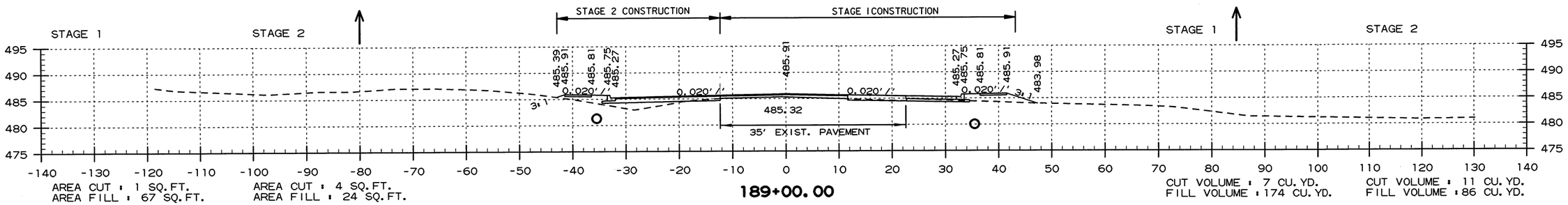
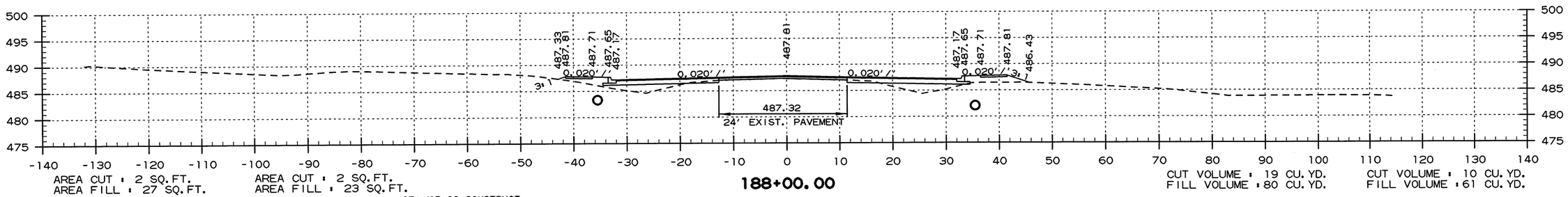
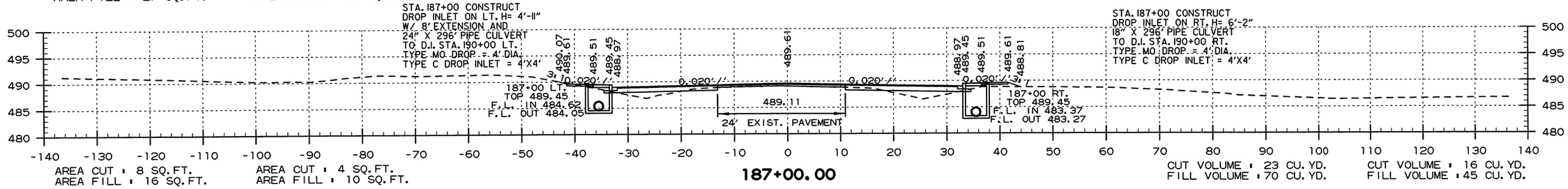
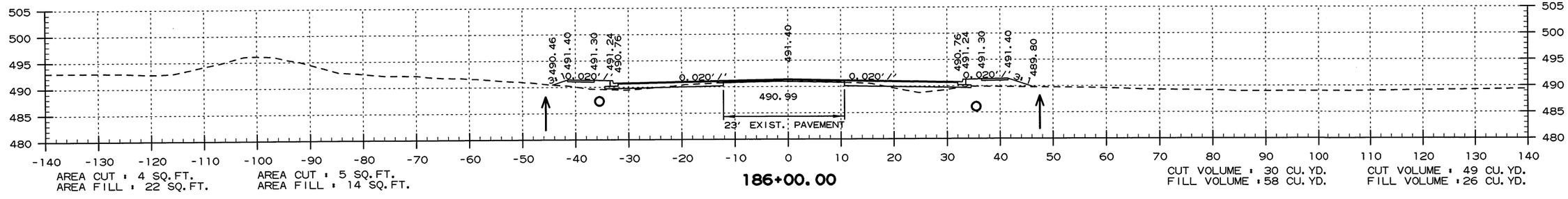
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
4-21-20				6	ARK.			
				JOB NO.		040716	168	194
				(2)	CROSS SECTIONS			









STA. 186+00 TO STA. 189+00

USER: jh5195
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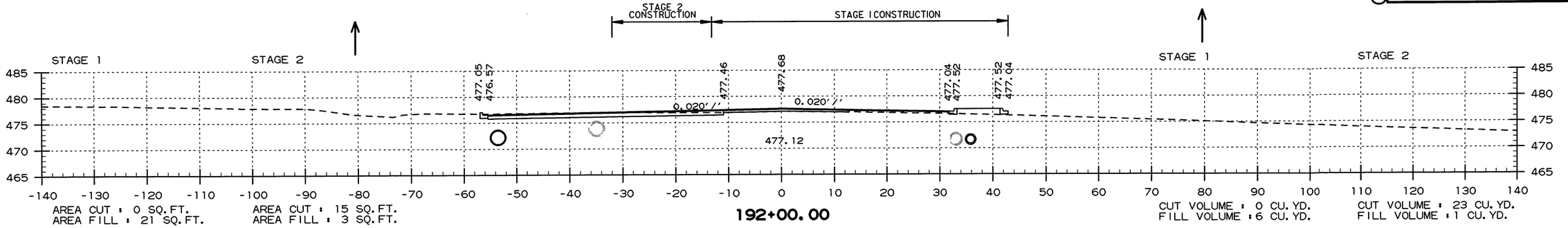
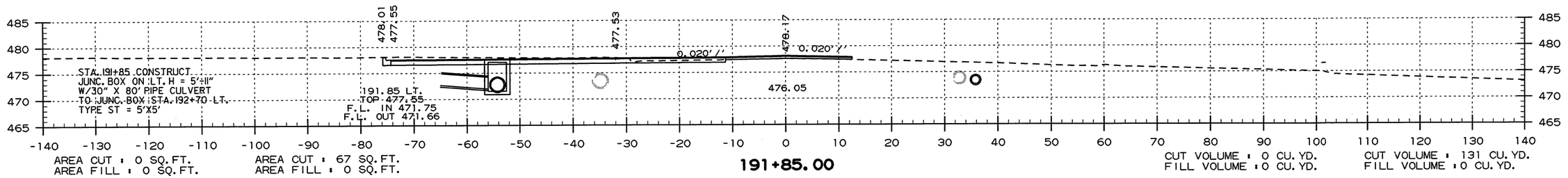
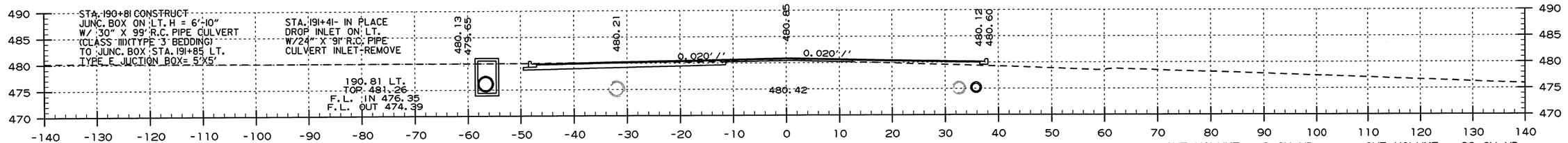
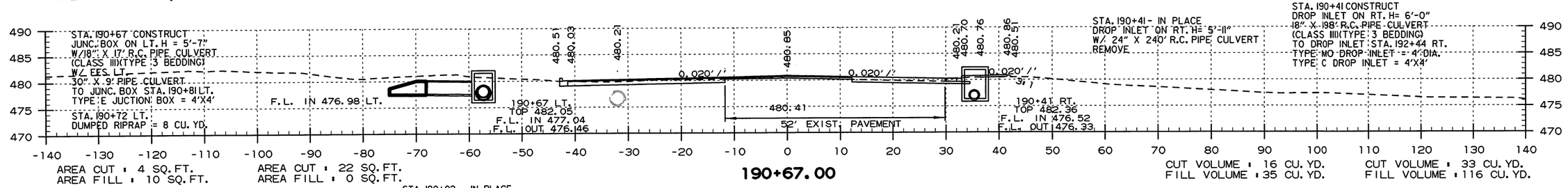
SCALE: 1:20

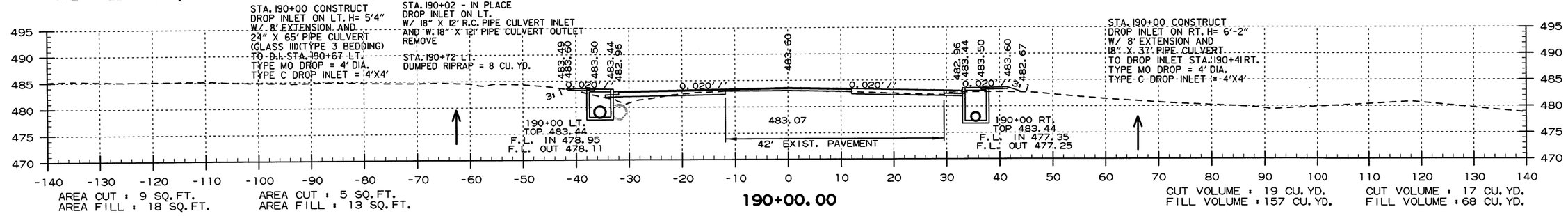
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
4-21-20				6	ARK.			
				JOB NO.		040716	169	194
				(2)	CROSS SECTIONS			











STA. 190+00 TO STA. 192+00

USER: JN595
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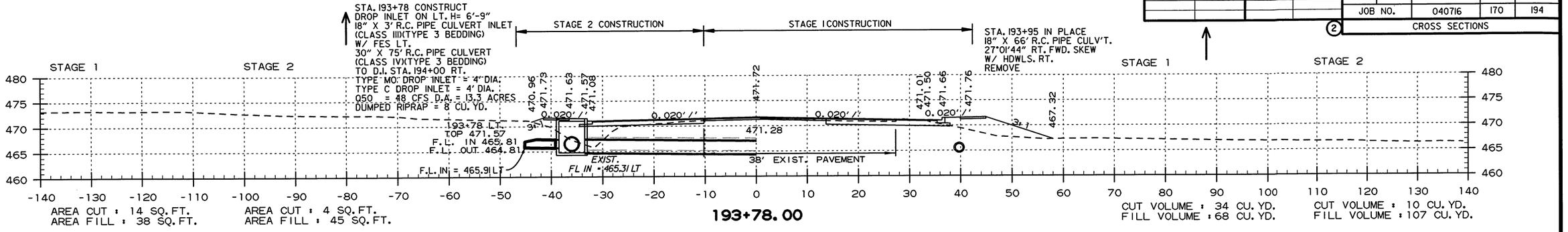
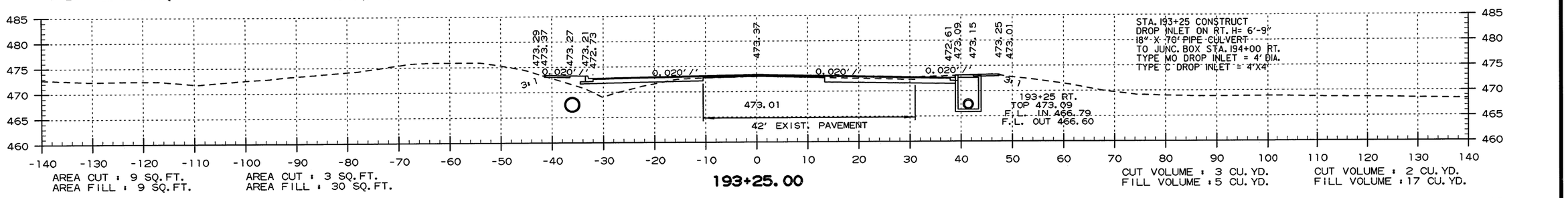
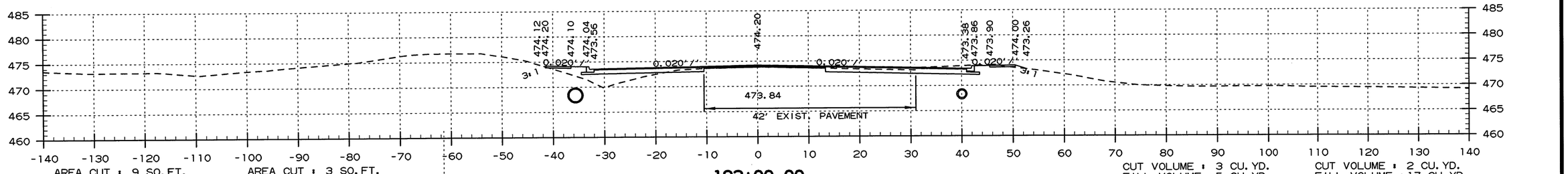
PLOTTED: 4/21/2020 15:14

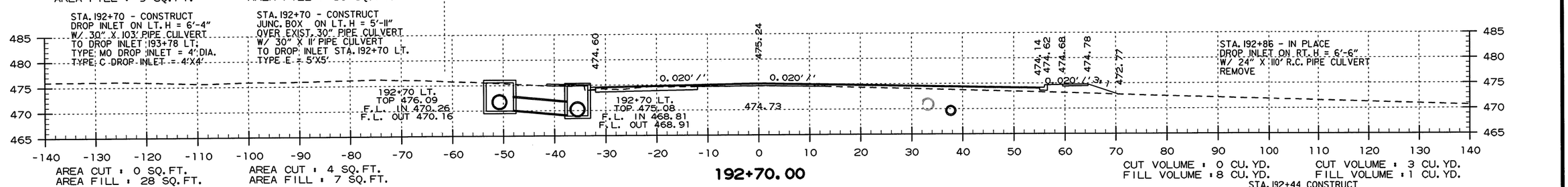
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
4-21-20				6	ARK.			
				JOB NO.		040716	170	194

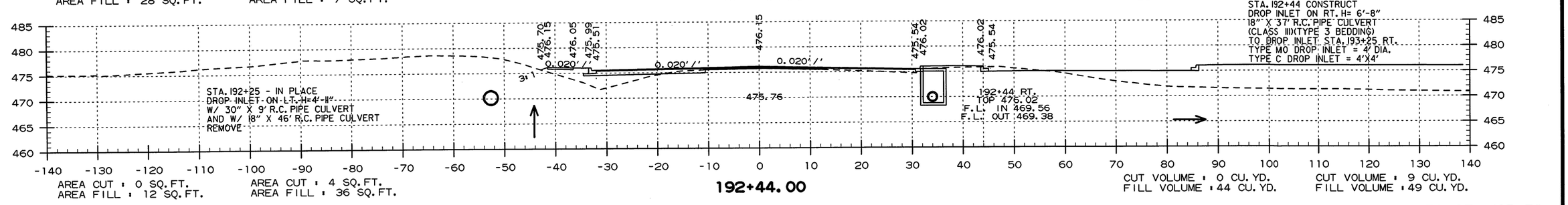
(2) CROSS SECTIONS











STA. 192+17 TO STA. 193+78

USER: jh5195
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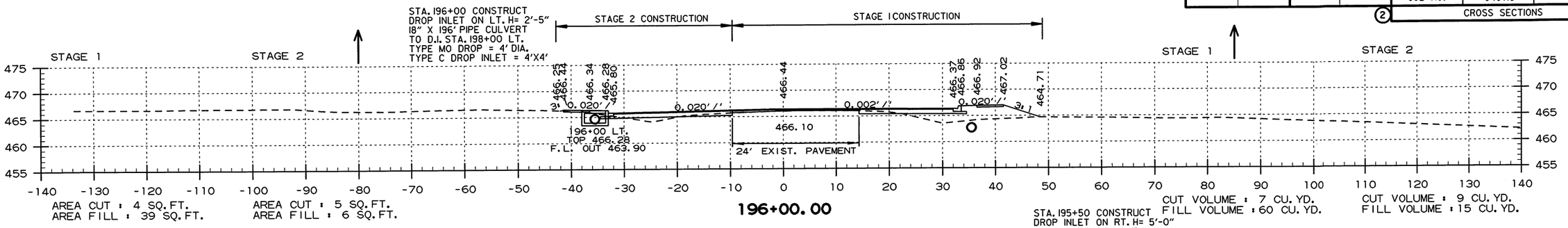
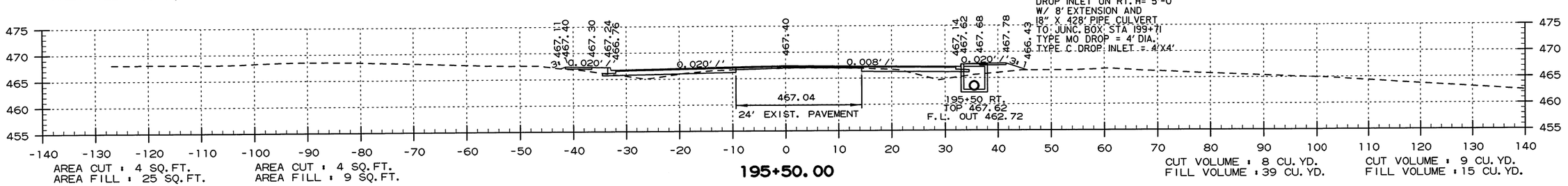
PLOTTED: 4/21/2020 15:14

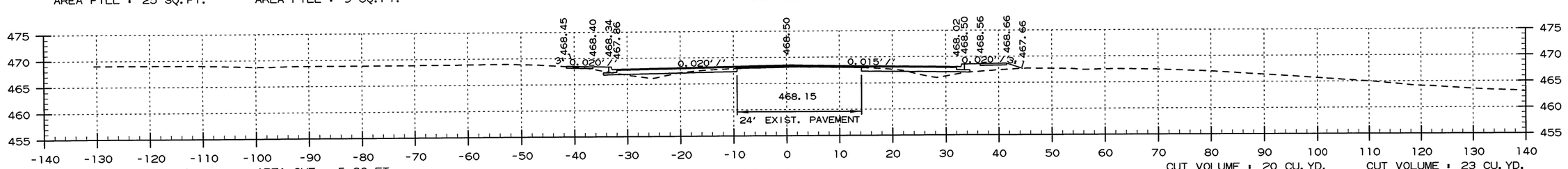
G:\17103100_Hwy255\TRANSP\dgn\xsect\r040716_CX_01.dgn 4/21/2020 15:14

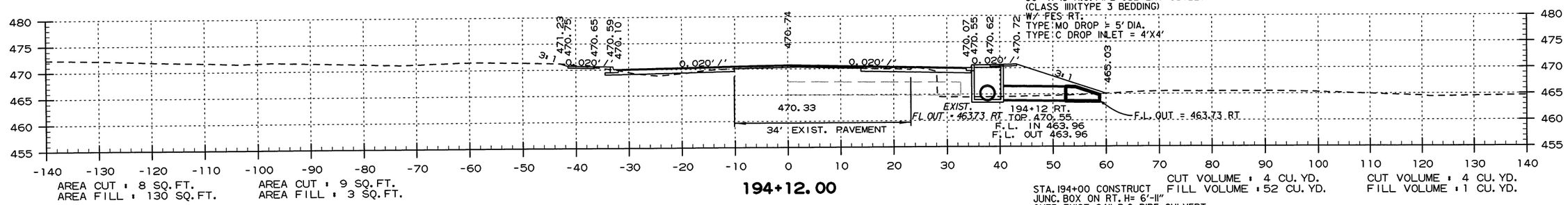
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
4-21-20				6	ARK.			
				JOB NO.		040716	171	194

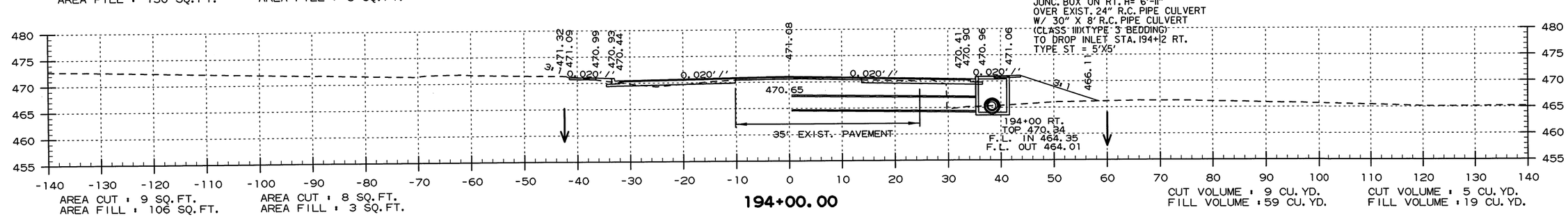
(2) CROSS SECTIONS











STA. 194+00 TO STA. 196+00

USER: jh5195
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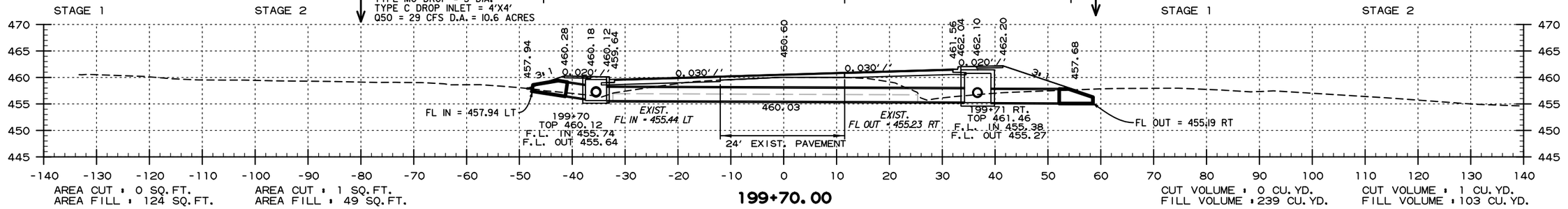
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	172	194

(2) CROSS SECTIONS

STA. 199+71 IN PLACE
18" X 58' R.C. PIPE CULV'T. REMOVE

STA. 199+71 CONSTRUCT
JUNC. BOX ON RT. H= 6'-2"
30" X 20' PIPE CULVERT OUTLET W/ FES RT.
TYPE E = 5' X 5'
DUMPED RIPRAP = 13 CU. YD.

STA. 199+70 CONSTRUCT
DROP INLET ON LT. H= 4'-6"
W/ 8' EXTENSION AND
30" X 5' R.C. PIPE CULVERT INLET
(CLASS III)(TYPE 3 BEDDING)
W/ FES LT.
AND 30" X 64' R.C. PIPE CULVERT
(CLASS V)(TYPE 3 BEDDING)
TYPE MO DROP = 5' DIA.
TYPE C DROP INLET = 4'X4'
Q50 = 29 CFS D.A. = 10.6 ACRES



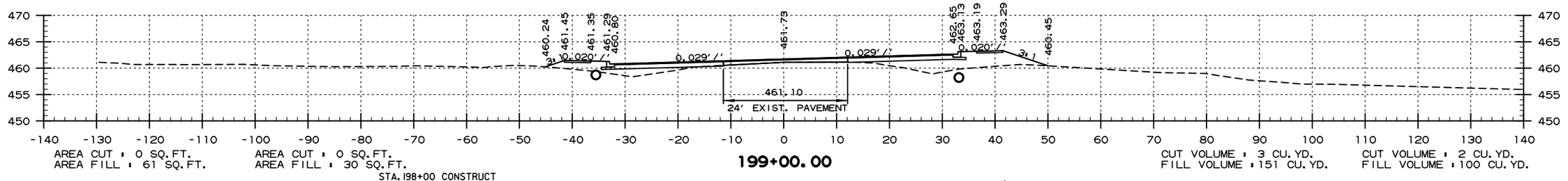
AREA CUT = 0 SQ.FT.
AREA FILL = 124 SQ.FT.

AREA CUT = 1 SQ.FT.
AREA FILL = 49 SQ.FT.

199+70.00

CUT VOLUME = 0 CU.YD.
FILL VOLUME = 239 CU.YD.

CUT VOLUME = 1 CU.YD.
FILL VOLUME = 103 CU.YD.



AREA CUT = 0 SQ.FT.
AREA FILL = 61 SQ.FT.

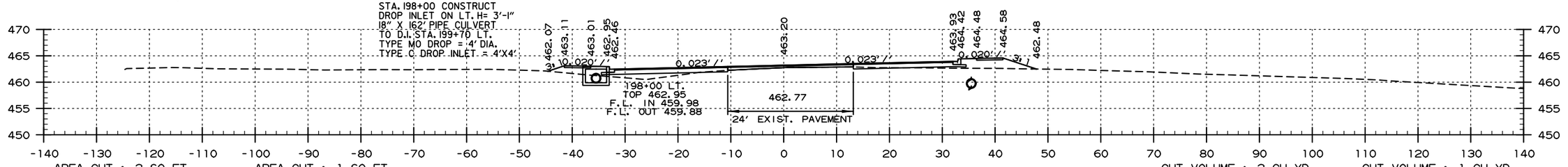
AREA CUT = 0 SQ.FT.
AREA FILL = 30 SQ.FT.

199+00.00

CUT VOLUME = 3 CU.YD.
FILL VOLUME = 151 CU.YD.

CUT VOLUME = 2 CU.YD.
FILL VOLUME = 100 CU.YD.

STA. 198+00 CONSTRUCT
DROP INLET ON LT. H= 3'-1"
18" X 162' PIPE CULVERT
TO D.I. STA. 199+70 LT.
TYPE MO DROP = 4' DIA.
TYPE C DROP INLET = 4'X4'



AREA CUT = 2 SQ.FT.
AREA FILL = 21 SQ.FT.

AREA CUT = 1 SQ.FT.
AREA FILL = 24 SQ.FT.

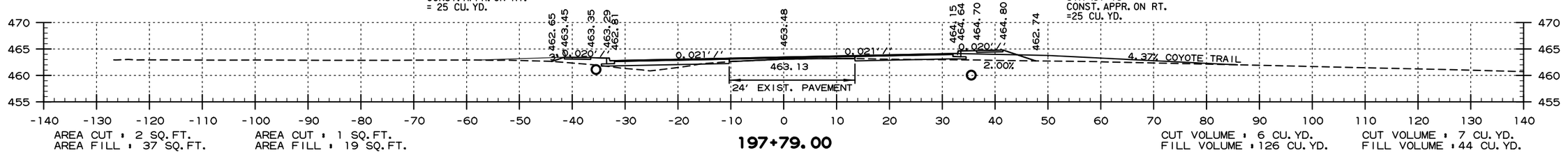
198+00.00

CUT VOLUME = 2 CU.YD.
FILL VOLUME = 23 CU.YD.

CUT VOLUME = 1 CU.YD.
FILL VOLUME = 17 CU.YD.

STA 197+48.00
CONST. APPR. ON RT.
= 25 CU.YD.

STA 197+79
CONST. APPR. ON RT.
=25 CU.YD.



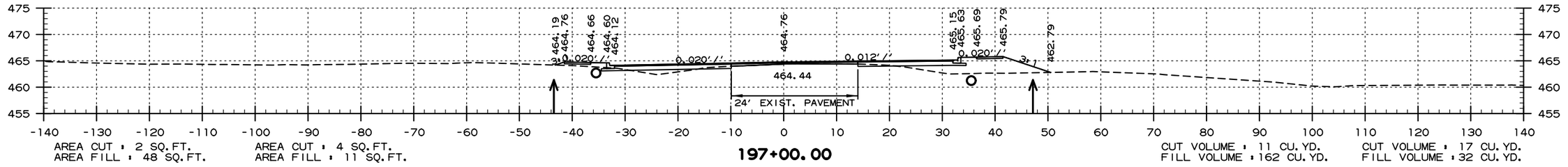
AREA CUT = 2 SQ.FT.
AREA FILL = 37 SQ.FT.

AREA CUT = 1 SQ.FT.
AREA FILL = 19 SQ.FT.

197+79.00

CUT VOLUME = 6 CU.YD.
FILL VOLUME = 126 CU.YD.

CUT VOLUME = 7 CU.YD.
FILL VOLUME = 44 CU.YD.



AREA CUT = 2 SQ.FT.
AREA FILL = 48 SQ.FT.

AREA CUT = 4 SQ.FT.
AREA FILL = 11 SQ.FT.

197+00.00

CUT VOLUME = 11 CU.YD.
FILL VOLUME = 162 CU.YD.

CUT VOLUME = 17 CU.YD.
FILL VOLUME = 32 CU.YD.

STA. 197+00 TO STA. 199+70

USER: APSIBI
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PLOTTED: 3/25/2020 15:01
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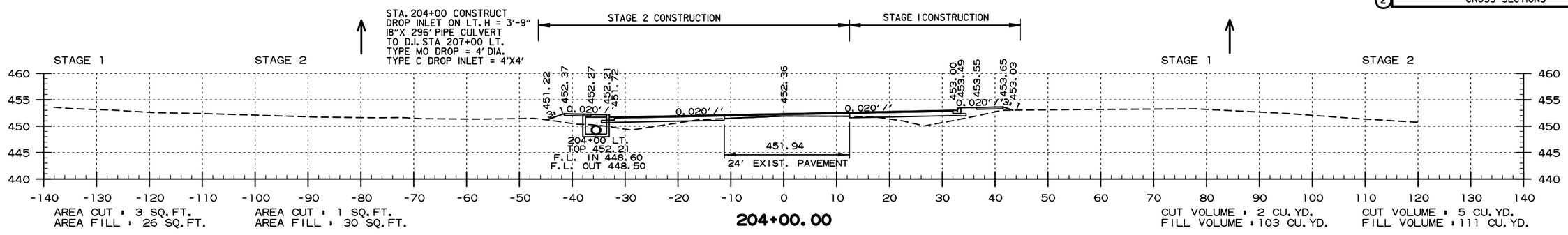
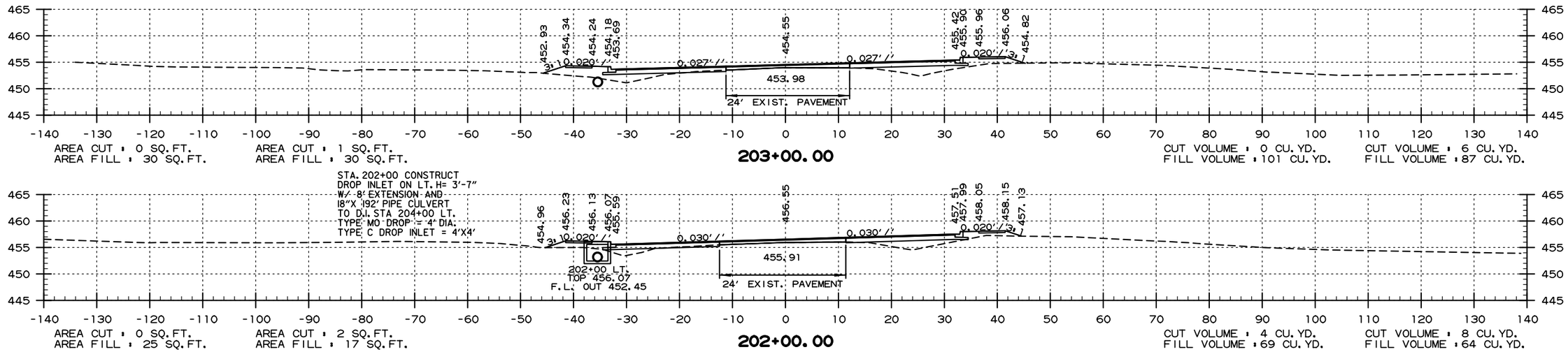
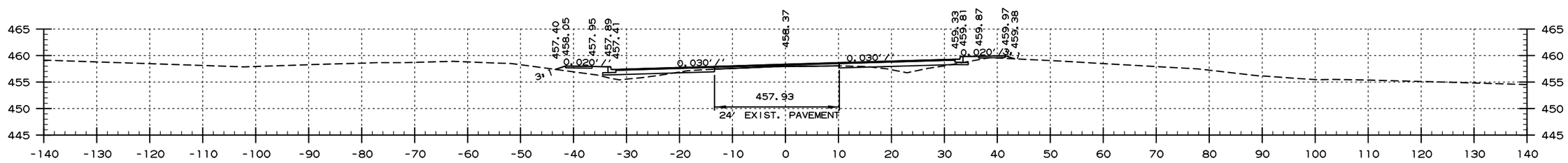
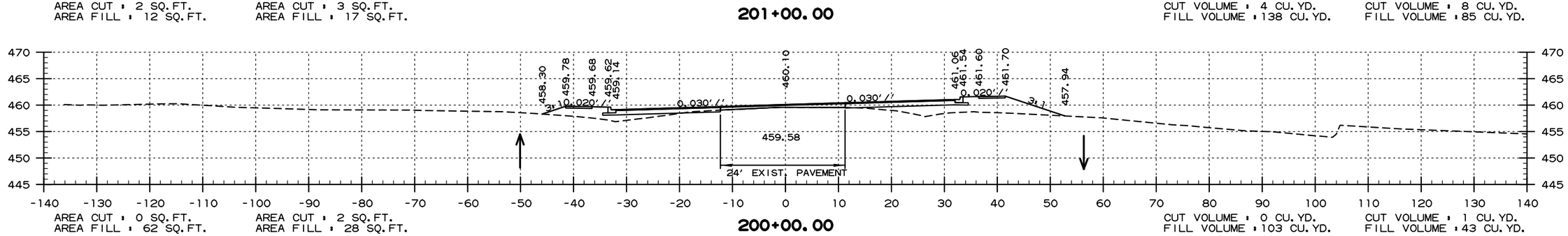
G:\17103100_Hwy255\TRANSP\dgn\xsect\r040716_CX_01.dgn 3/25/2020 15:01

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.		040716	173	194
				(2)	CROSS SECTIONS			









STA. 200+00 TO STA. 204+00

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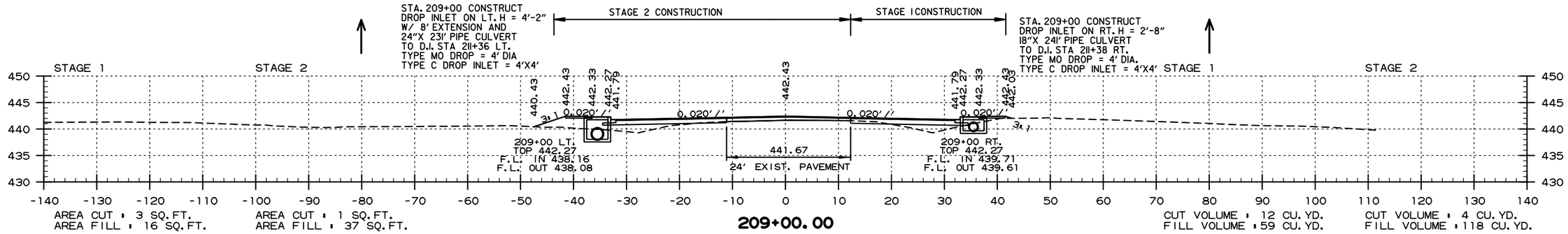
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	174	194

(2) CROSS SECTIONS



STA. 205+00 TO STA. 209+00

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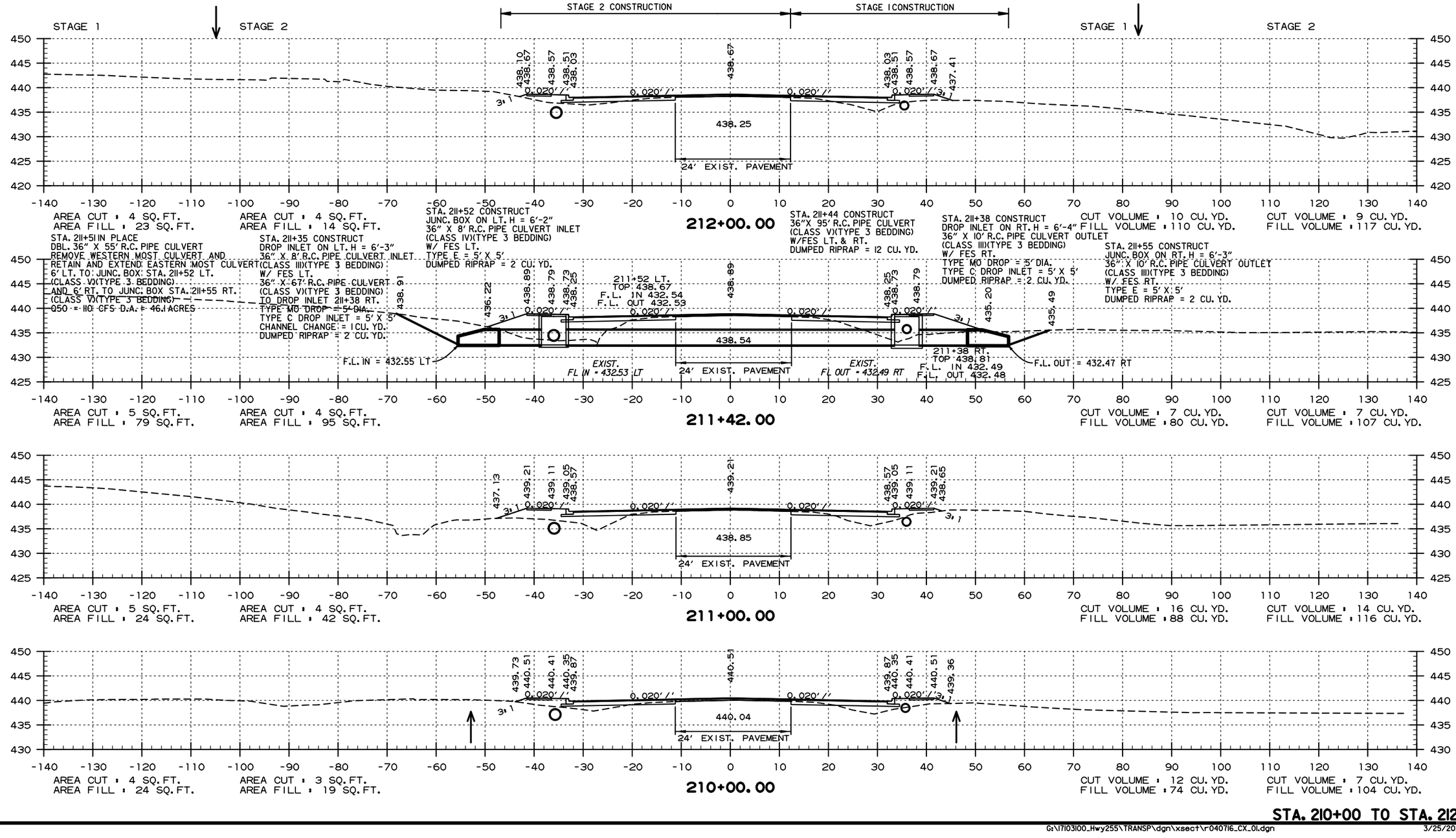
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	175	194
				(2)	CROSS SECTIONS			



STA. 210+00 TO STA. 212+00

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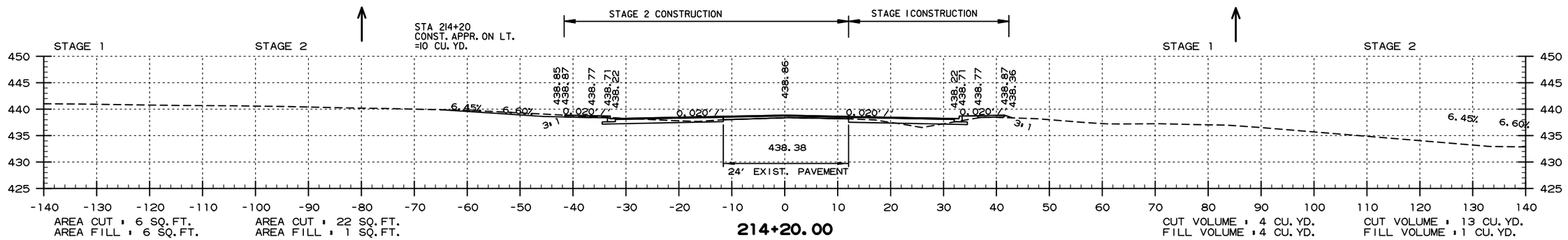
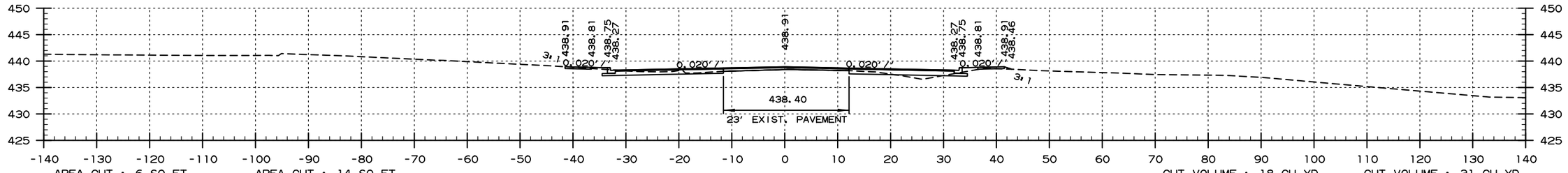
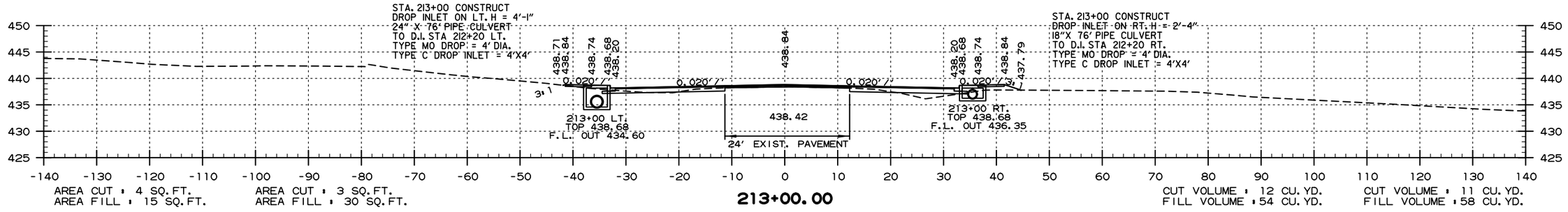
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

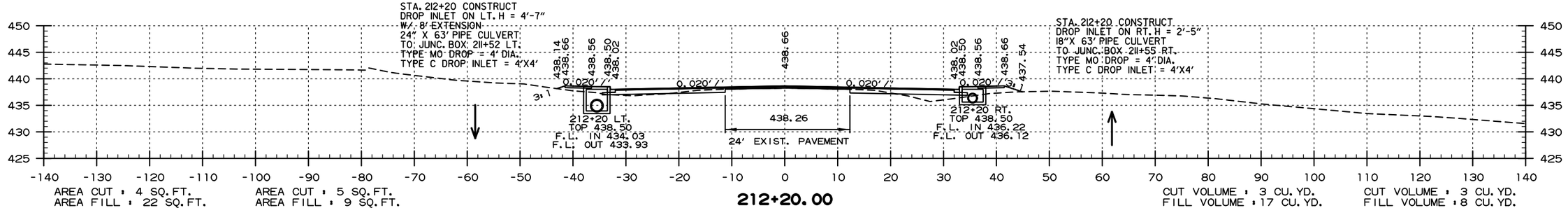
FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		040716	176	194

(2) CROSS SECTIONS









STA. 212+20 TO STA. 214+20

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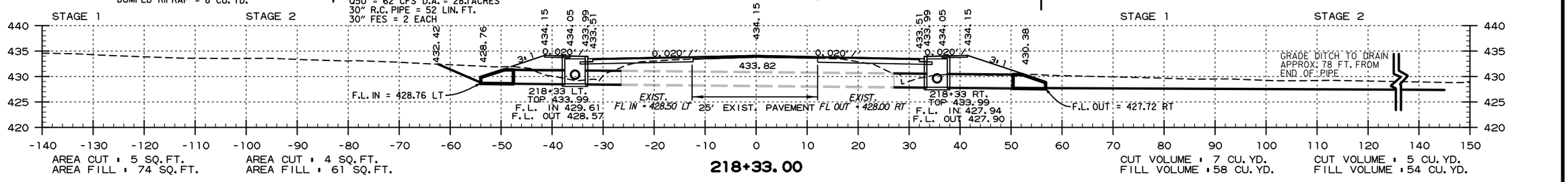
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	177	194

(2) CROSS SECTIONS

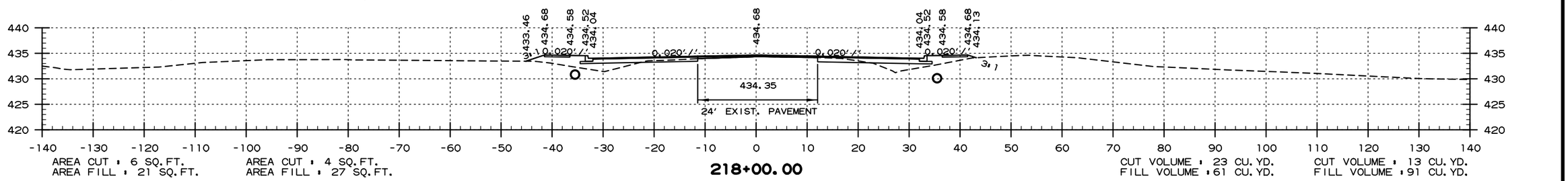
STA. 218+33 CONSTRUCT
DROP INLET ON LT. H = 5'-5"
30"X 10' R.C. PIPE CULVERT INLET
(CLASS III)(TYPE 3 BEDDING)
W/FES LT.
AND 30"X67' R.C. PIPE CULVERT
(CLASS IV)(TYPE 3 BEDDING)
TO D.I. 218+33 RT.
TYPE MO DROP = 4' DIA.
TYPE C DROP INLET = 4'X4'
DUMPED RIPRAP = 8 CU. YD.

STA. 218+38 IN PLACE
30"x 54' PIPE CULV'T.
RETAIN AND EXTEND 21' LT. & 23' RT.
(CLASS IV)(TYPE 3 BEDDING)
W/ FES LT. & RT.
COMPLETED LENGTH 98'
Q50 = 62 CFS D.A. = 28.1 ACRES
30" R.C. PIPE = 52 LIN. FT.
30" FES = 2 EACH

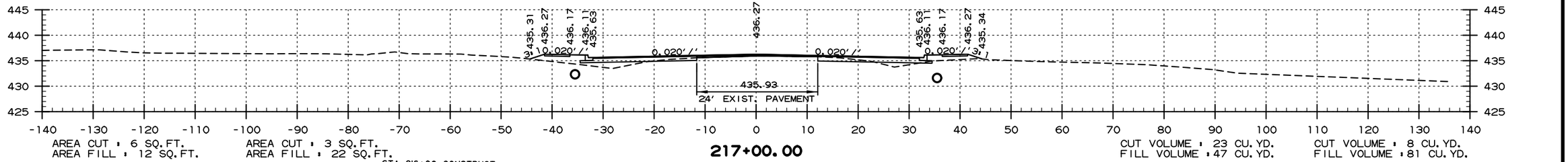
STA. 218+33 CONSTRUCT
DROP INLET ON RT. H = 6'-1"
30"X 24' PIPE CULVERT OUTLET
W/FES RT.
TYPE MO DROP = 5' DIA
TYPE C DROP INLET = 4'X4'
CHANNEL CHANGE = 40 CU. YD.



AREA CUT = 5 SQ.FT. AREA FILL = 74 SQ.FT.
AREA CUT = 4 SQ.FT. AREA FILL = 61 SQ.FT.
218+33.00
CUT VOLUME = 7 CU.YD. FILL VOLUME = 58 CU.YD.
CUT VOLUME = 5 CU.YD. FILL VOLUME = 54 CU.YD.



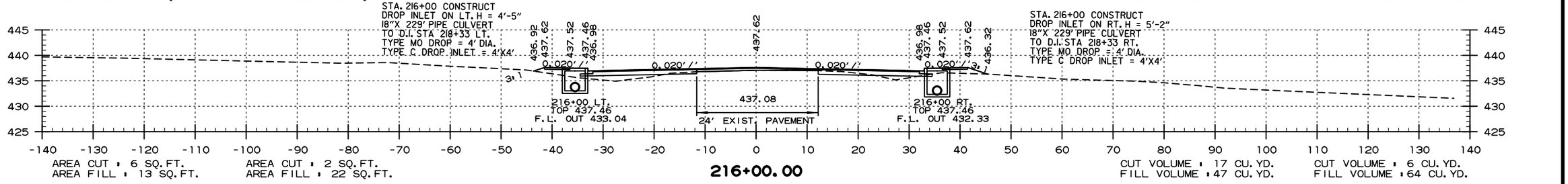
AREA CUT = 6 SQ.FT. AREA FILL = 21 SQ.FT.
AREA CUT = 4 SQ.FT. AREA FILL = 27 SQ.FT.
218+00.00
CUT VOLUME = 23 CU.YD. FILL VOLUME = 61 CU.YD.
CUT VOLUME = 13 CU.YD. FILL VOLUME = 91 CU.YD.



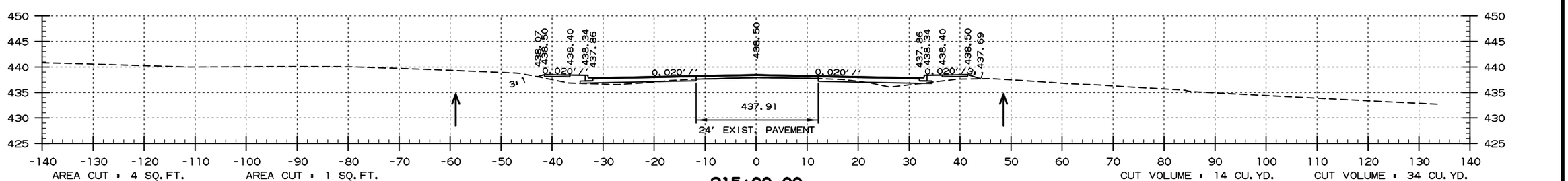
AREA CUT = 6 SQ.FT. AREA FILL = 12 SQ.FT.
AREA CUT = 3 SQ.FT. AREA FILL = 22 SQ.FT.
217+00.00
CUT VOLUME = 23 CU.YD. FILL VOLUME = 47 CU.YD.
CUT VOLUME = 8 CU.YD. FILL VOLUME = 81 CU.YD.

STA. 216+00 CONSTRUCT
DROP INLET ON LT. H = 4'-5"
18"X 229' PIPE CULVERT
TO D.I. STA 218+33 LT.
TYPE MO DROP = 4' DIA.
TYPE C DROP INLET = 4'X4'

STA. 216+00 CONSTRUCT
DROP INLET ON RT. H = 5'-2"
18"X 229' PIPE CULVERT
TO D.I. STA 218+33 RT.
TYPE MO DROP = 4' DIA.
TYPE C DROP INLET = 4'X4'



AREA CUT = 6 SQ.FT. AREA FILL = 13 SQ.FT.
AREA CUT = 2 SQ.FT. AREA FILL = 22 SQ.FT.
216+00.00
CUT VOLUME = 17 CU.YD. FILL VOLUME = 47 CU.YD.
CUT VOLUME = 6 CU.YD. FILL VOLUME = 64 CU.YD.



AREA CUT = 4 SQ.FT. AREA FILL = 12 SQ.FT.
AREA CUT = 1 SQ.FT. AREA FILL = 11 SQ.FT.
215+00.00
CUT VOLUME = 14 CU.YD. FILL VOLUME = 27 CU.YD.
CUT VOLUME = 34 CU.YD. FILL VOLUME = 19 CU.YD.

STA. 215+00 TO STA. 218+33

USER: AP5181
DESIGN FILE: G:\1710300_Hwy255\TRANSP\dgn\xsect\r040716_CX_01.dgn
PLOTTED: 3/25/2020 15:01
SCALE: 1:20

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.		040716	178	194

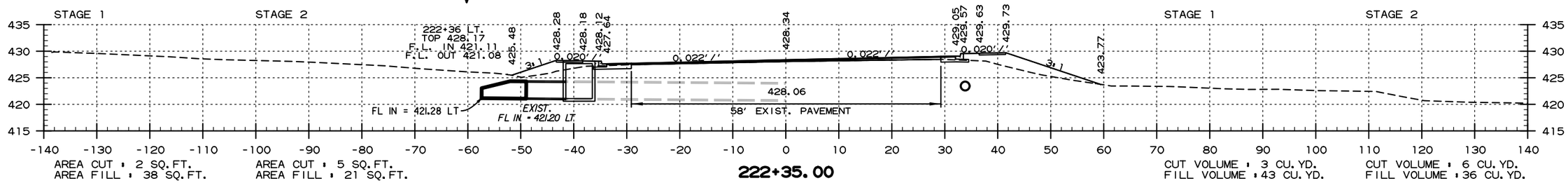
(2) CROSS SECTIONS

STA. 222+36 CONSTRUCT
DROP INLET ON LT. H = 7'-1"
OVER EXIST. 36" R.C. PIPE CULVERT
36"X 15' R.C. PIPE CULVERT INLET
(CLASS III)(TYPE 3 BEDDING)
W/FES LT.
Q50 = 40 CFS D.A. = 19.6 ACRES
TYPE MO DROP= 5' DIA.
TYPE C DROP INLET = 5'X5'
DUMPED RIPRAP = 8 CU. YD.

STA. 222+62 IN PLACE
36"x 135' R.C. PIPE CULV'T.
36°42'51" RT. FWD. SKEW
W/ FES LT. & RT.
REMOVE FES LT. & RT.
AND REMOVE 16' LT. AND 32' RT.

STAGE 2 CONSTRUCTION

STAGE 1 CONSTRUCTION



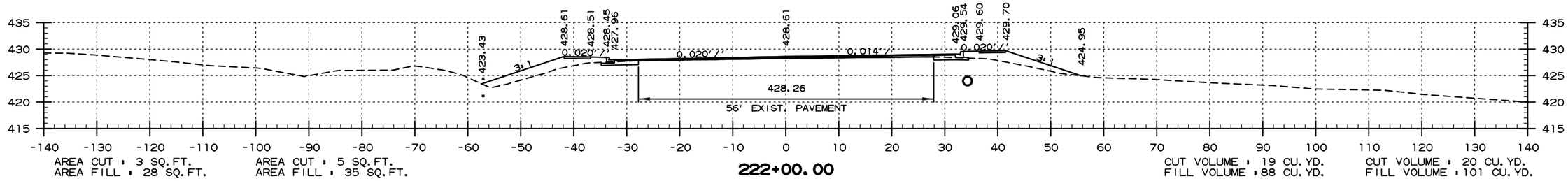
AREA CUT = 2 SQ. FT.
AREA FILL = 38 SQ. FT.

AREA CUT = 5 SQ. FT.
AREA FILL = 21 SQ. FT.

222+35.00

CUT VOLUME = 3 CU. YD.
FILL VOLUME = 43 CU. YD.

CUT VOLUME = 6 CU. YD.
FILL VOLUME = 36 CU. YD.



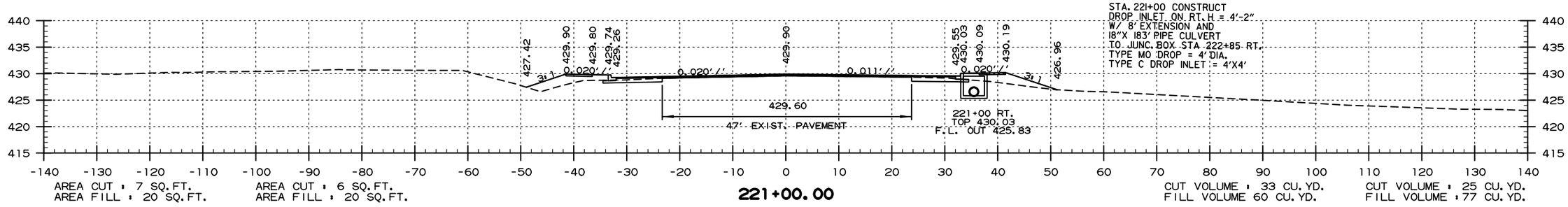
AREA CUT = 3 SQ. FT.
AREA FILL = 28 SQ. FT.

AREA CUT = 5 SQ. FT.
AREA FILL = 35 SQ. FT.

222+00.00

CUT VOLUME = 19 CU. YD.
FILL VOLUME = 88 CU. YD.

CUT VOLUME = 20 CU. YD.
FILL VOLUME = 101 CU. YD.



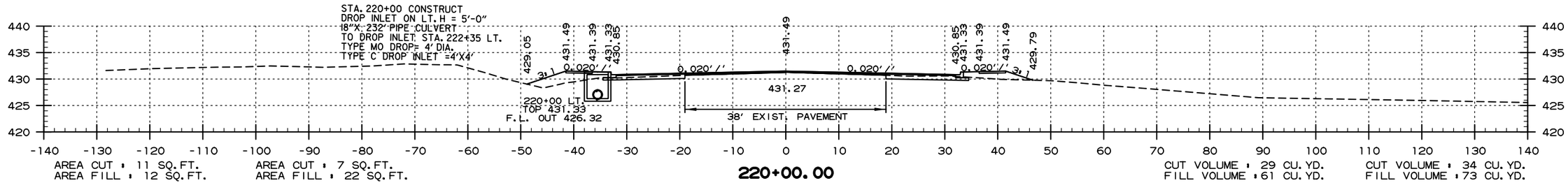
AREA CUT = 7 SQ. FT.
AREA FILL = 20 SQ. FT.

AREA CUT = 6 SQ. FT.
AREA FILL = 20 SQ. FT.

221+00.00

CUT VOLUME = 33 CU. YD.
FILL VOLUME 60 CU. YD.

CUT VOLUME = 25 CU. YD.
FILL VOLUME = 77 CU. YD.



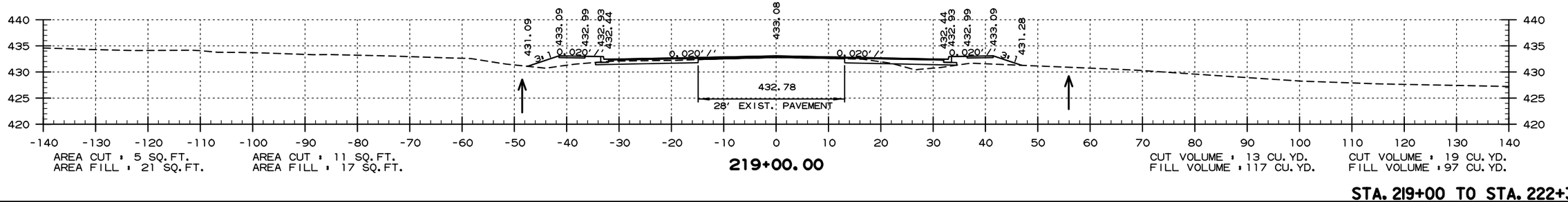
AREA CUT = 11 SQ. FT.
AREA FILL = 12 SQ. FT.

AREA CUT = 7 SQ. FT.
AREA FILL = 22 SQ. FT.

220+00.00

CUT VOLUME = 29 CU. YD.
FILL VOLUME = 61 CU. YD.

CUT VOLUME = 34 CU. YD.
FILL VOLUME = 73 CU. YD.



AREA CUT = 5 SQ. FT.
AREA FILL = 21 SQ. FT.

AREA CUT = 11 SQ. FT.
AREA FILL = 17 SQ. FT.

219+00.00

CUT VOLUME = 13 CU. YD.
FILL VOLUME = 117 CU. YD.

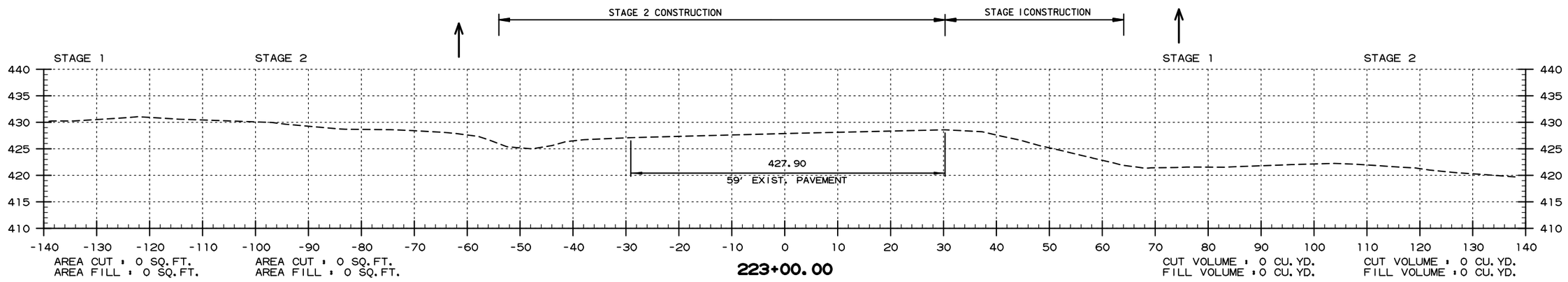
CUT VOLUME = 19 CU. YD.
FILL VOLUME = 97 CU. YD.

STA. 219+00 TO STA. 222+35

USER: AP5181
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\xsect\r040716_CX_01.dgn
PLOTTED: 3/25/2020 15:01
SCALE: 1:20

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.		040716	179	194
				(2)	CROSS SECTIONS			

223+99.64
END 100' TRANSITION



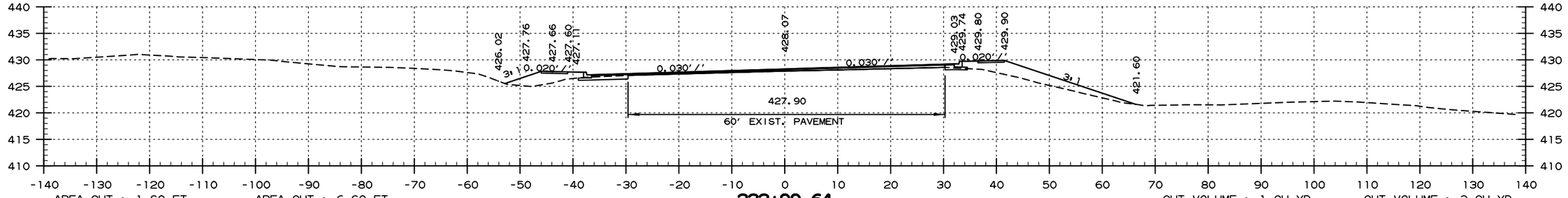
AREA CUT = 0 SQ.FT.
AREA FILL = 0 SQ.FT.

AREA CUT = 0 SQ.FT.
AREA FILL = 0 SQ.FT.

CUT VOLUME = 0 CU.YD.
FILL VOLUME = 0 CU.YD.

CUT VOLUME = 0 CU.YD.
FILL VOLUME = 0 CU.YD.

223+00.00



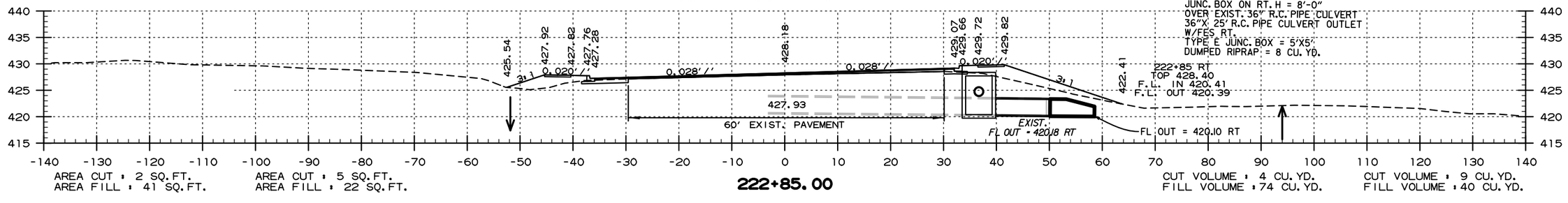
AREA CUT = 1 SQ.FT.
AREA FILL = 49 SQ.FT.

AREA CUT = 6 SQ.FT.
AREA FILL = 22 SQ.FT.

CUT VOLUME = 1 CU.YD.
FILL VOLUME = 24 CU.YD.

CUT VOLUME = 3 CU.YD.
FILL VOLUME = 12 CU.YD.

222+99.64
END JOB 040716 &
BEGIN 100' TRANSITION



AREA CUT = 2 SQ.FT.
AREA FILL = 41 SQ.FT.

AREA CUT = 5 SQ.FT.
AREA FILL = 22 SQ.FT.

CUT VOLUME = 4 CU.YD.
FILL VOLUME = 74 CU.YD.

CUT VOLUME = 9 CU.YD.
FILL VOLUME = 40 CU.YD.

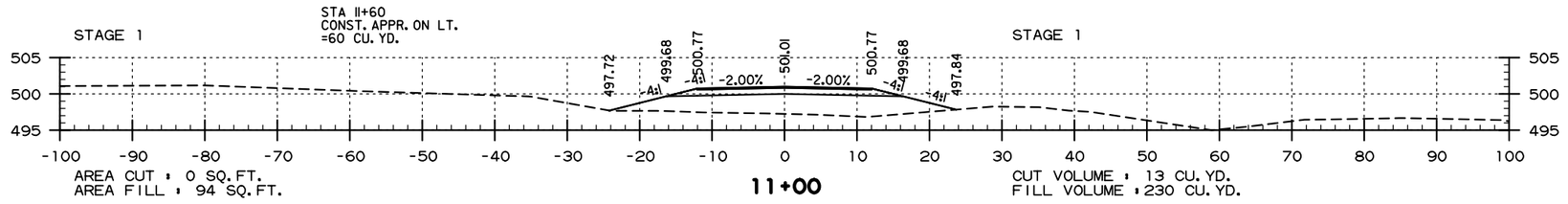
222+85.00

STA. 222+85 TO STA. 223+00

USER: AP518I
DESIGN FILE: G:\I7103100_Hwy255\TRANSP\dgn\xsect\r040716_CX_01.dgn
PLOTTED: 3/25/2020 15:01
SCALE: 1:20

G:\I7103100_Hwy255\TRANSP\dgn\xsect\r040716_CX_01.dgn 3/25/2020 15:01

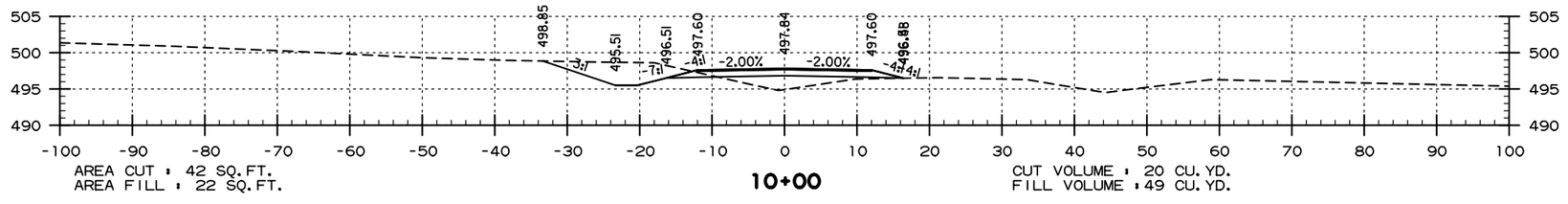
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	180	194
				(2)	CROSS SECTIONS			



AREA CUT : 0 SQ.FT.
AREA FILL : 94 SQ.FT.

11+00

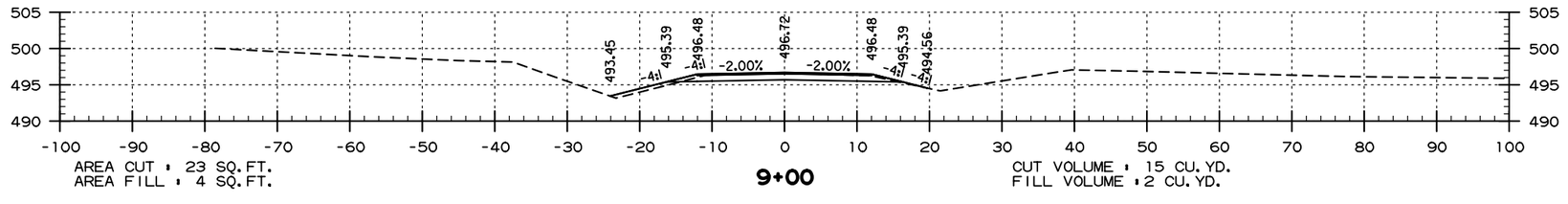
CUT VOLUME : 13 CU.YD.
FILL VOLUME : 230 CU.YD.



AREA CUT : 42 SQ.FT.
AREA FILL : 22 SQ.FT.

10+00

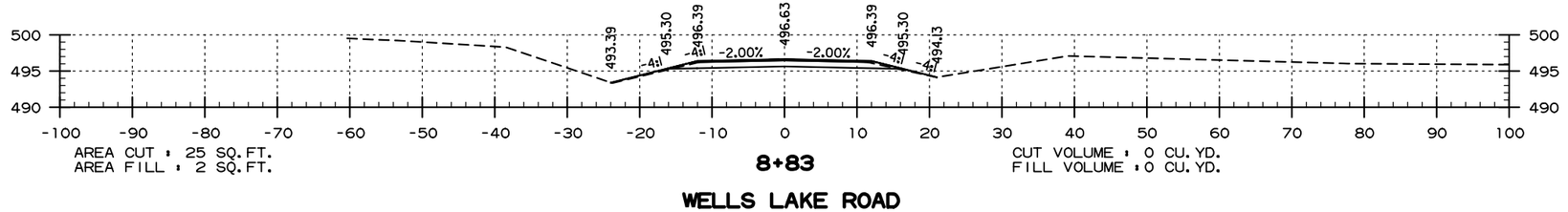
CUT VOLUME : 20 CU.YD.
FILL VOLUME : 49 CU.YD.



AREA CUT : 23 SQ.FT.
AREA FILL : 4 SQ.FT.

9+00

CUT VOLUME : 15 CU.YD.
FILL VOLUME : 2 CU.YD.



AREA CUT : 25 SQ.FT.
AREA FILL : 2 SQ.FT.

8+83

CUT VOLUME : 0 CU.YD.
FILL VOLUME : 0 CU.YD.

WELLS LAKE ROAD

CROSS SECTION STA. 8+83 TO STA. 11+00

USER: AP5181
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\xsect\r040716_CX_01.dgn
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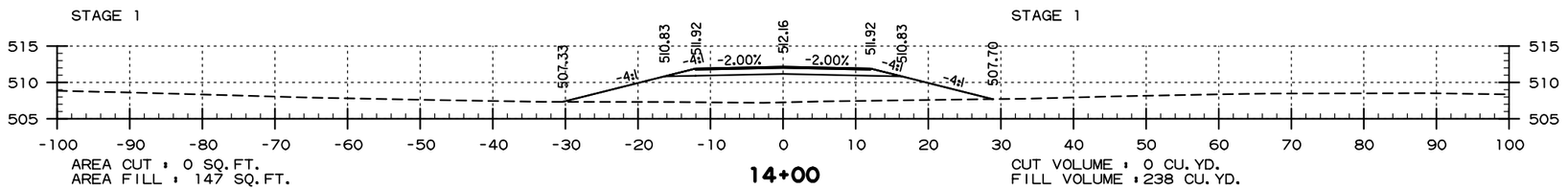
SCALE: 1:20

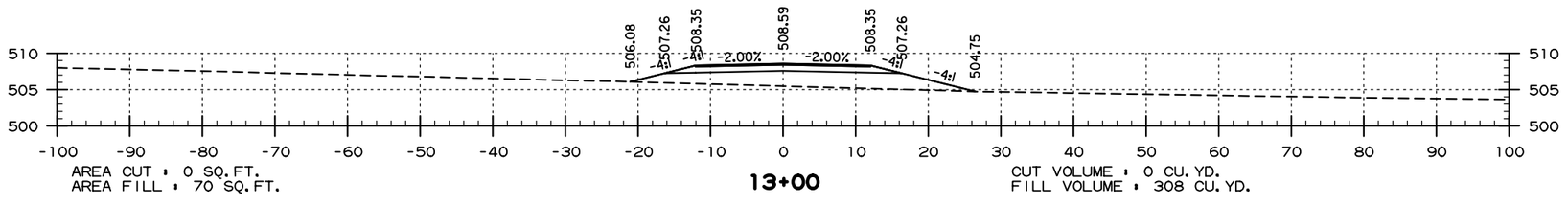
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040716	181	194
				(2)	CROSS SECTIONS			



AREA CUT : 0 SQ.FT.
AREA FILL : 147 SQ.FT.

14+00

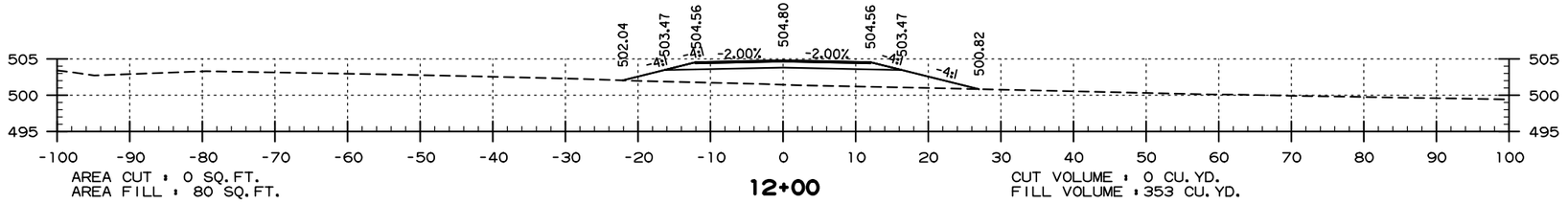
CUT VOLUME : 0 CU.YD.
FILL VOLUME : 238 CU.YD.



AREA CUT : 0 SQ.FT.
AREA FILL : 70 SQ.FT.

13+00

CUT VOLUME : 0 CU.YD.
FILL VOLUME : 308 CU.YD.



AREA CUT : 0 SQ.FT.
AREA FILL : 80 SQ.FT.

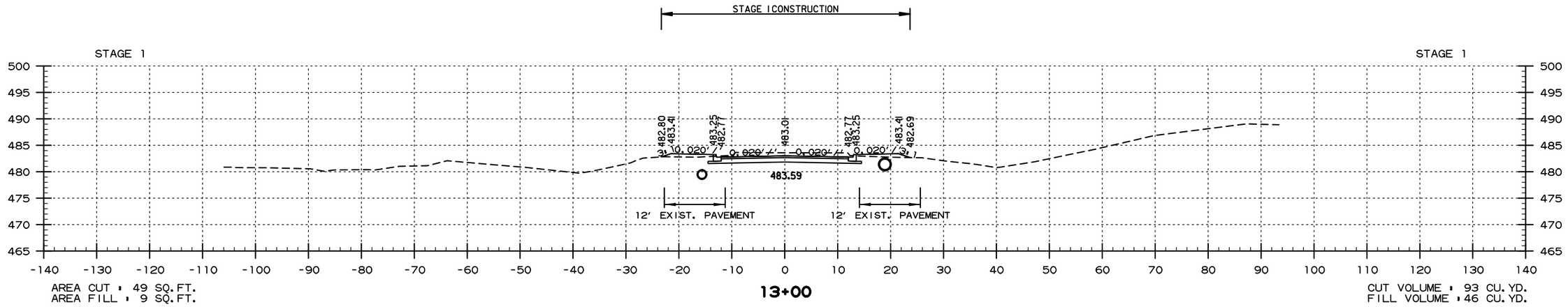
12+00

CUT VOLUME : 0 CU.YD.
FILL VOLUME : 353 CU.YD.

CROSS SECTION STA. 12+00 TO STA. 15+00

USER: AP5181
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\xsect\r040716_CX_01.dgn
PLOTTED: 3/25/2020 15:01
SCALE: 1:20

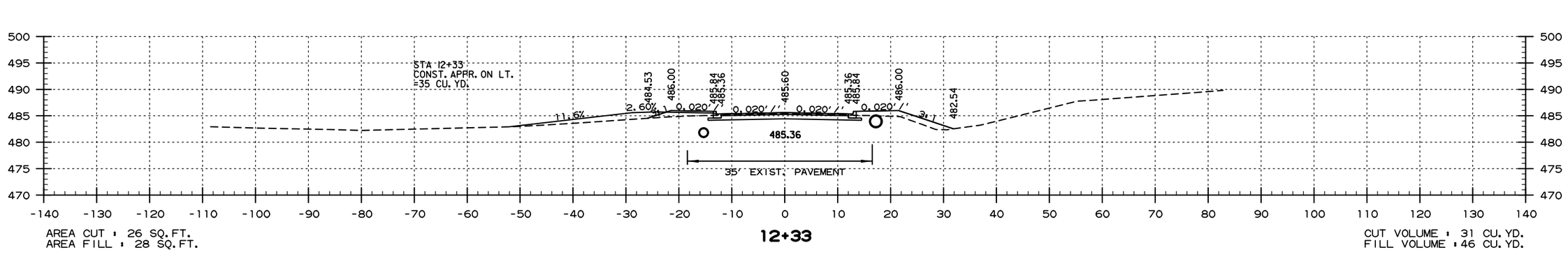
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				4	ARK.			
				JOB NO.		040716	182	194
				(2)	CROSS-SECTIONS			



AREA CUT = 49 SQ.FT.
AREA FILL = 9 SQ.FT.

13+00

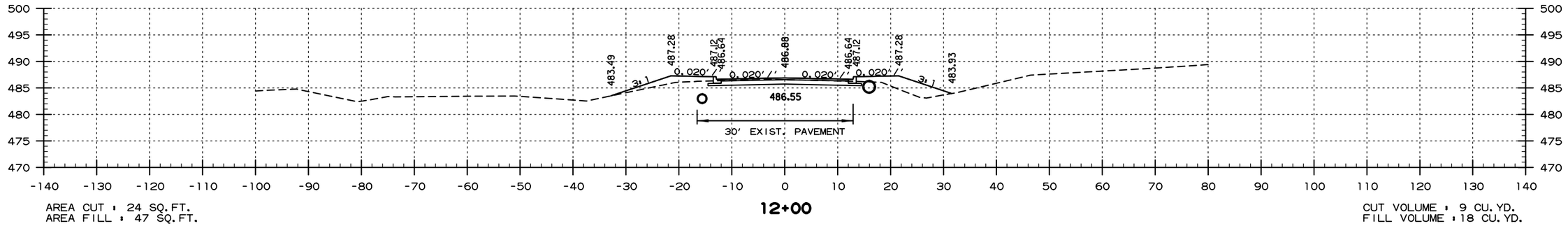
CUT VOLUME = 93 CU.YD.
FILL VOLUME = 46 CU.YD.



AREA CUT = 26 SQ.FT.
AREA FILL = 28 SQ.FT.

12+33

CUT VOLUME = 31 CU.YD.
FILL VOLUME = 46 CU.YD.



AREA CUT = 24 SQ.FT.
AREA FILL = 47 SQ.FT.

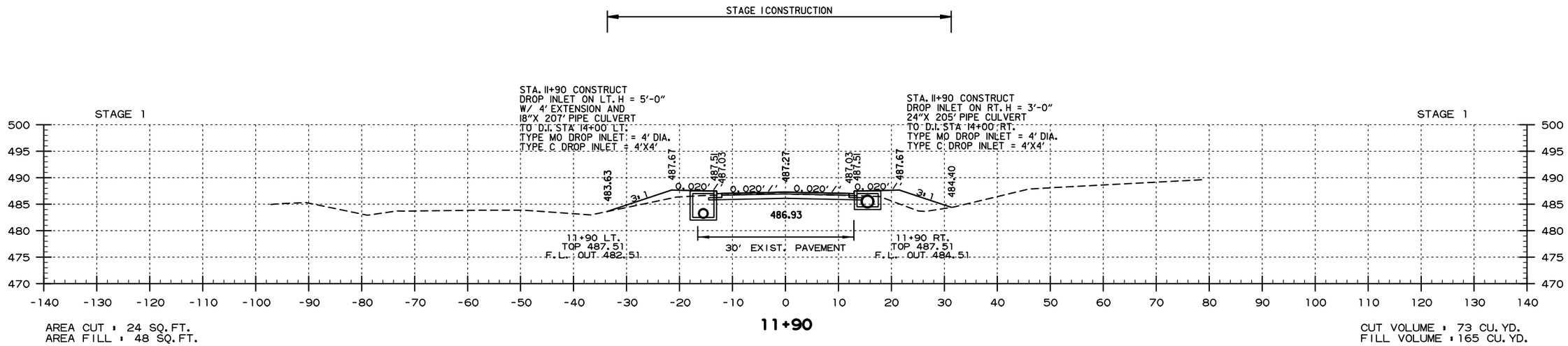
12+00

CUT VOLUME = 9 CU.YD.
FILL VOLUME = 18 CU.YD.

CHAD COLLEY BLVD. STA. 12+00 TO STA. 13+00

USER: AP5181
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\xsect\r040716 X-Sect Chad Colley New.dgn
PLOTTED: 3/25/2020 15:23
SCALE: 1:20

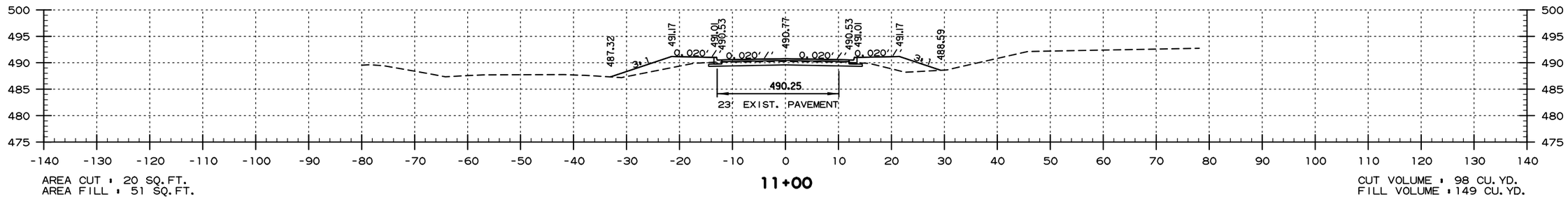
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				4	ARK.			
				JOB NO.		040716	183	194
				(2)	CROSS-SECTIONS			



AREA CUT : 24 SQ.FT.
AREA FILL : 48 SQ.FT.

11+90

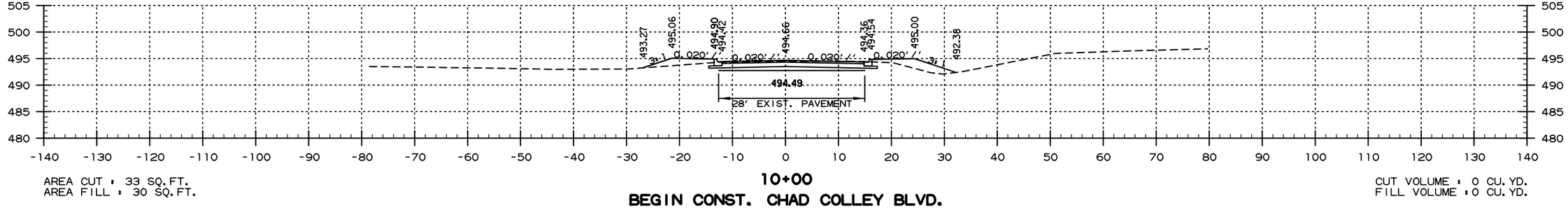
CUT VOLUME : 73 CU.YD.
FILL VOLUME : 165 CU.YD.



AREA CUT : 20 SQ.FT.
AREA FILL : 51 SQ.FT.

11+00

CUT VOLUME : 98 CU.YD.
FILL VOLUME : 149 CU.YD.



AREA CUT : 33 SQ.FT.
AREA FILL : 30 SQ.FT.

10+00

BEGIN CONST. CHAD COLLEY BLVD.

CUT VOLUME : 0 CU.YD.
FILL VOLUME : 0 CU.YD.

CHAD COLLEY BLVD. STA. 10+00 TO STA. 11+90

USER: AP5181
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\xsect\r040716 X-Sect Chad Colley New.dgn
PLOTTED: 3/25/2020 15:23
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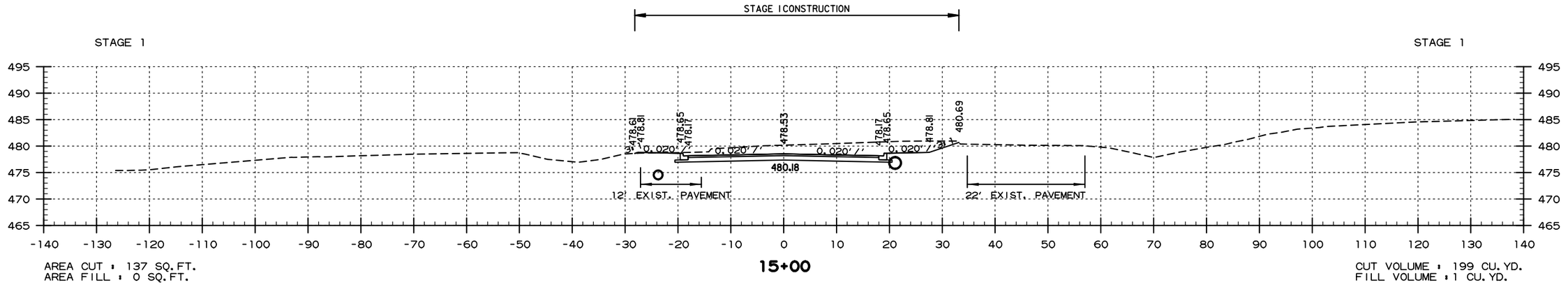
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

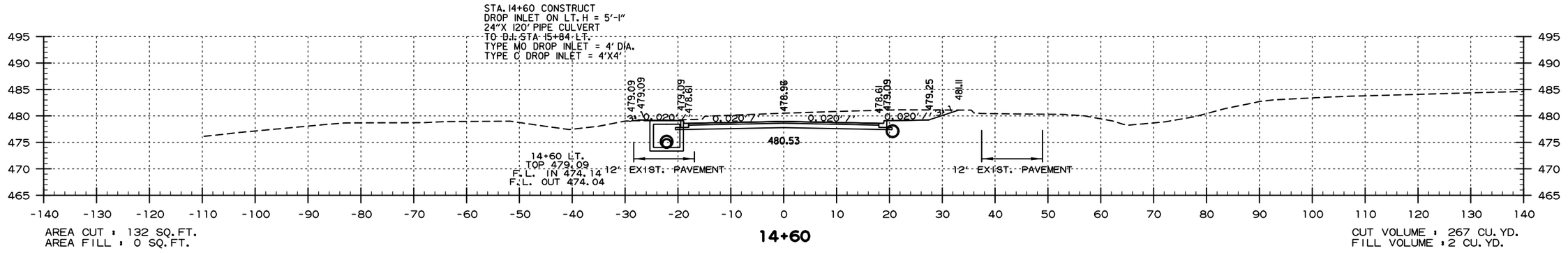
FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
4	ARK.			
JOB NO.		040716	184	194
(2)	CROSS-SECTIONS			



AREA CUT = 137 SQ.FT.
AREA FILL = 0 SQ.FT.

15+00

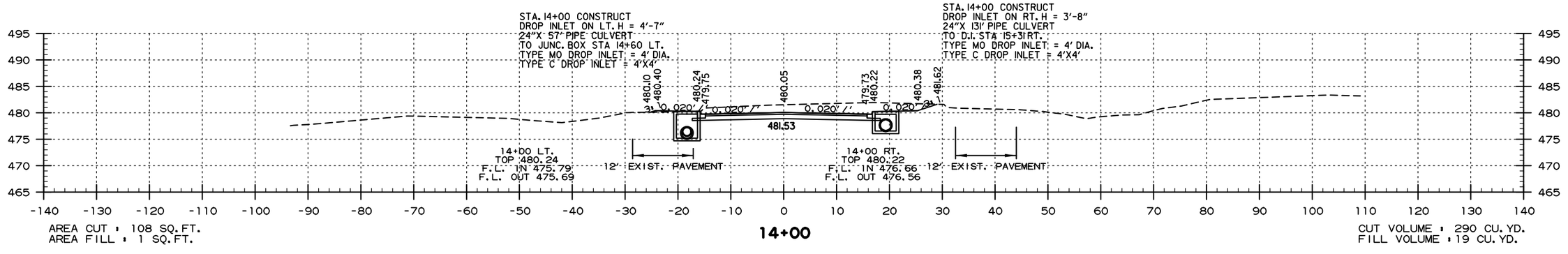
CUT VOLUME = 199 CU.YD.
FILL VOLUME = 1 CU.YD.



AREA CUT = 132 SQ.FT.
AREA FILL = 0 SQ.FT.

14+60

CUT VOLUME = 267 CU.YD.
FILL VOLUME = 2 CU.YD.



AREA CUT = 108 SQ.FT.
AREA FILL = 1 SQ.FT.

14+00

CUT VOLUME = 290 CU.YD.
FILL VOLUME = 19 CU.YD.

CHAD COLLEY BLVD. STA. 14+00 TO STA. 15+00

USER: AP5181
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\xsect\r040716 X-Sect Chad Colley New.dgn
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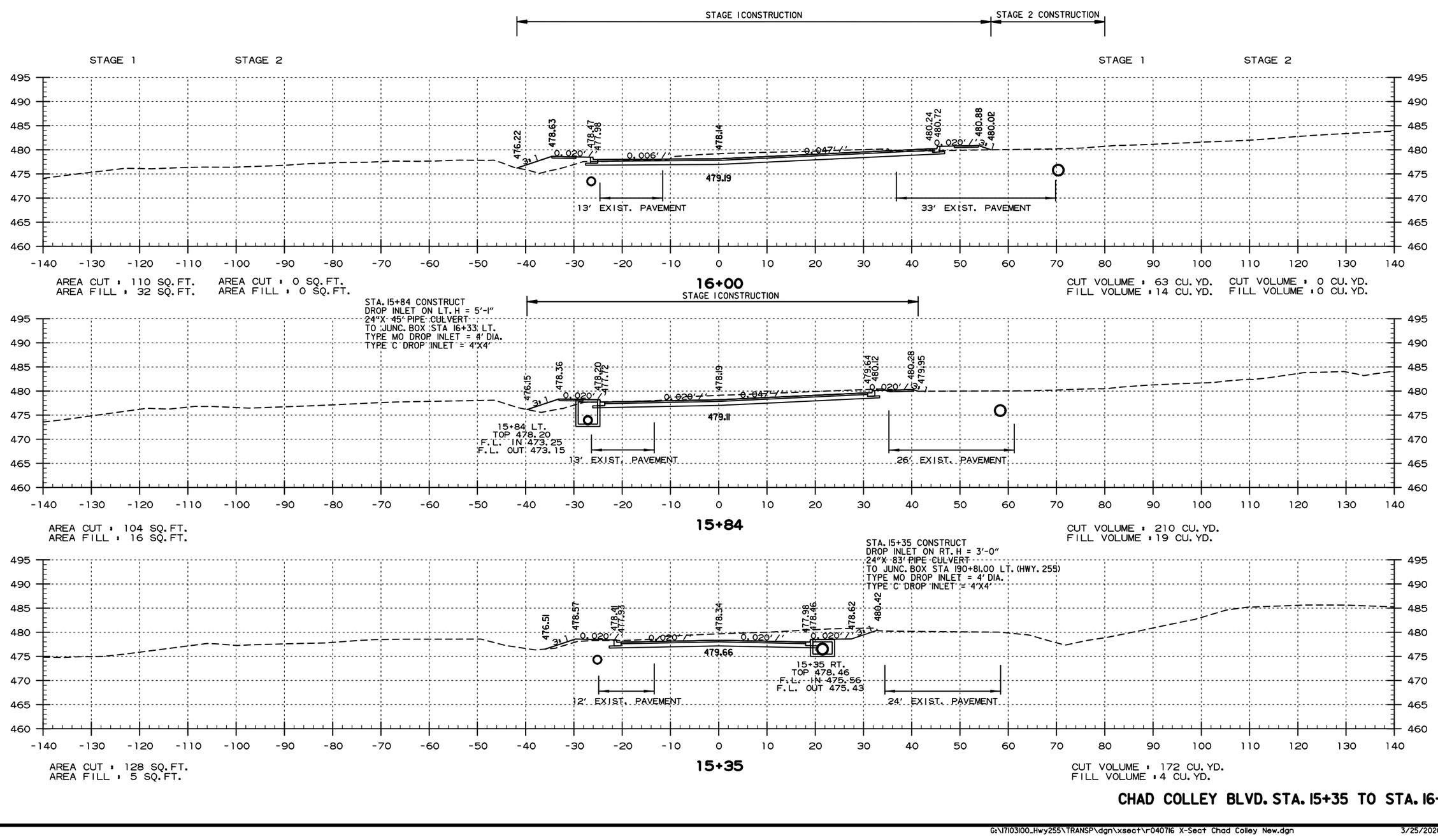
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
4	ARK.			
JOB NO.		040716	185	194
(2)	CROSS-SECTIONS			



CHAD COLLEY BLVD. STA. 15+35 TO STA. 16+00

USER: AP5181
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\xsect\r040716 X-Sect Chad Colley New.dgn
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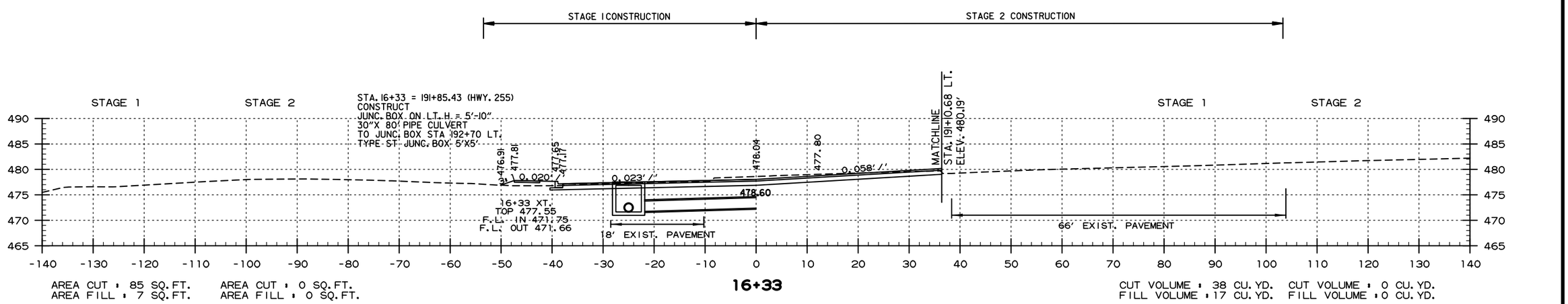
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
4	ARK.			
JOB NO.		040716	186	194
(2)	CROSS-SECTIONS			

C.L. HWY. 255 STA. 191+71.48 =
C.L. CHAD COLLEY BLVD. STA. 16+83.14
Δ = 77°54'48"



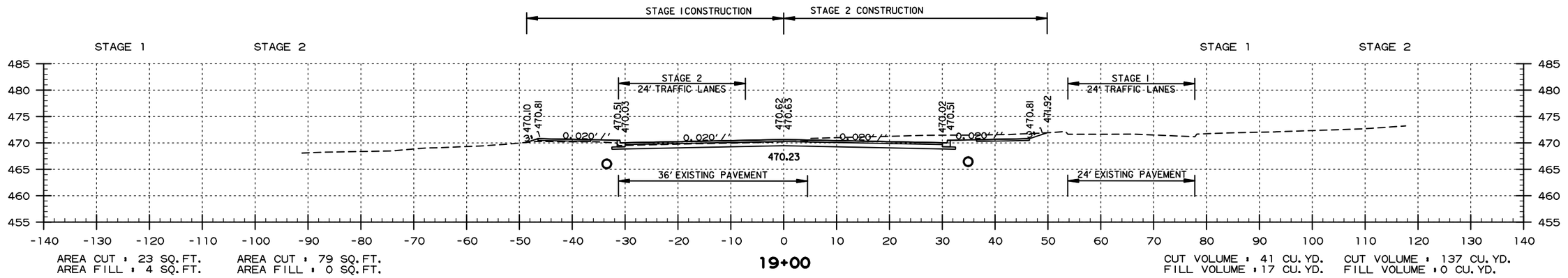
CHAD COLLEY BLVD. STA. 16+08 TO STA. 17+00

USER: AP5181
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\xsect\r040716 X-Sect Chad Colley New.dgn
PLOTTED: 3/25/2020 15:23
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
4	ARK.			
JOB NO.		040716	187	194

(2) CROSS-SECTIONS



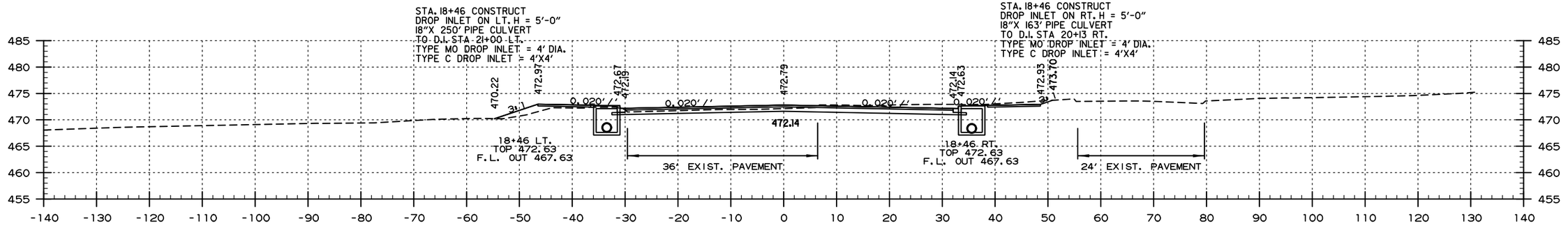
AREA CUT = 23 SQ.FT. AREA FILL = 4 SQ.FT.

AREA CUT = 79 SQ.FT. AREA FILL = 0 SQ.FT.

19+00

CUT VOLUME = 41 CU.YD. FILL VOLUME = 17 CU.YD.

CUT VOLUME = 137 CU.YD. FILL VOLUME = 0 CU.YD.



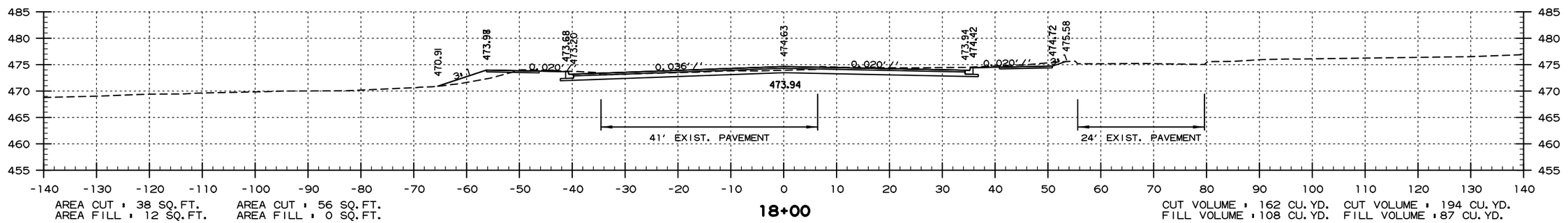
AREA CUT = 18 SQ.FT. AREA FILL = 13 SQ.FT.

AREA CUT = 58 SQ.FT. AREA FILL = 0 SQ.FT.

18+46

CUT VOLUME = 48 CU.YD. FILL VOLUME = 21 CU.YD.

CUT VOLUME = 96 CU.YD. FILL VOLUME = 0 CU.YD.



AREA CUT = 38 SQ.FT. AREA FILL = 12 SQ.FT.

AREA CUT = 56 SQ.FT. AREA FILL = 0 SQ.FT.

18+00

CUT VOLUME = 162 CU.YD. FILL VOLUME = 108 CU.YD.

CUT VOLUME = 194 CU.YD. FILL VOLUME = 87 CU.YD.

CHAD COLLEY BLVD. STA. 18+00 TO STA. 19+00

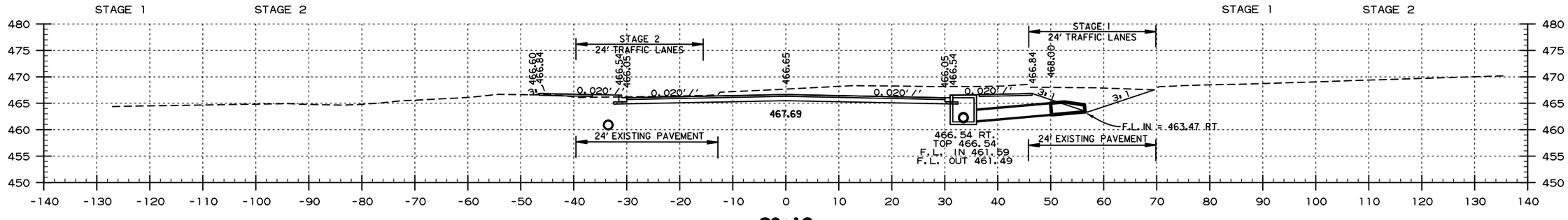
USER: APSIBI
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\xsect\r040716 X-Sect Chad Colley New.dgn
PLOTTED: 3/25/2020 15:23
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
4	ARK.			
JOB NO.		040716	188	194
(2)	CROSS-SECTIONS			

STA. 20+13 CONSTRUCT
DROP INLET ON RT. H = 5'-1"
18"X 14' R.C. PIPE CULVERT INLET
(CLASS III)(TYPE 3 BEDDING)
W/ FES RT.
AND 18"X 83' PIPE CULVERT
TO D.I. STA 21+00 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'

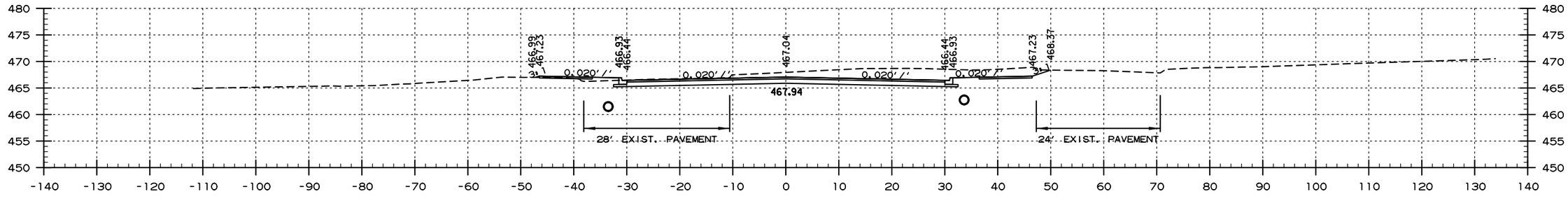
STAGE 1 CONSTRUCTION — STAGE 2 CONSTRUCTION



AREA CUT = 51 SQ.FT. AREA CUT = 123 SQ.FT.
AREA FILL = 3 SQ.FT. AREA FILL = 0 SQ.FT.

20+13

CUT VOLUME = 24 CU.YD. CUT VOLUME = 59 CU.YD.
FILL VOLUME = 2 CU.YD. FILL VOLUME = 0 CU.YD.



AREA CUT = 48 SQ.FT. AREA CUT = 120 SQ.FT.
AREA FILL = 4 SQ.FT. AREA FILL = 0 SQ.FT.

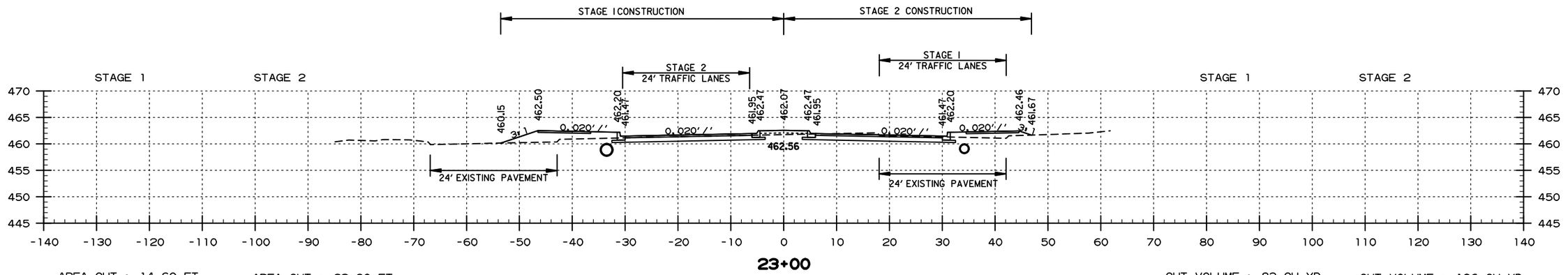
20+00

CUT VOLUME = 130 CU.YD. CUT VOLUME = 370 CU.YD.
FILL VOLUME = 15 CU.YD. FILL VOLUME = 0 CU.YD.

CHAD COLLEY BLVD. STA. 20+00 TO STA. 20+50

USER: APSIBI
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\xsect\r040716 X-Sect Chad Colley New.dgn SCALE: 1:20
PLOTTED: 3/25/2020 15:23

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				4	ARK.			
				JOB NO.		040716	189	194
				(2)	CROSS-SECTIONS			



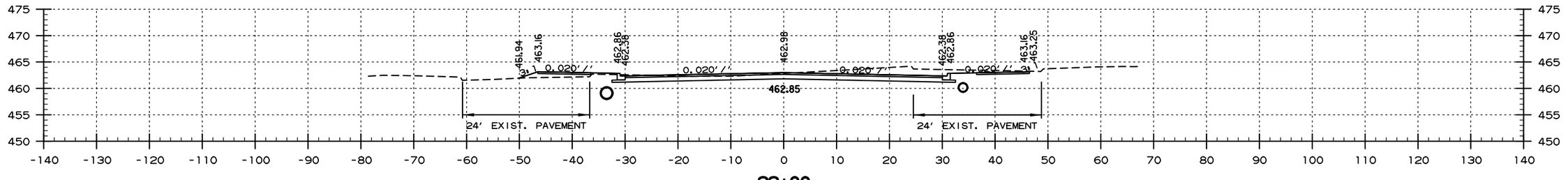
23+00

AREA CUT : 14 SQ.FT.
AREA FILL : 37 SQ.FT.

AREA CUT : 32 SQ.FT.
AREA FILL : 18 SQ.FT.

CUT VOLUME : 83 CU.YD.
FILL VOLUME : 68 CU.YD.

CUT VOLUME : 196 CU.YD.
FILL VOLUME : 33 CU.YD.



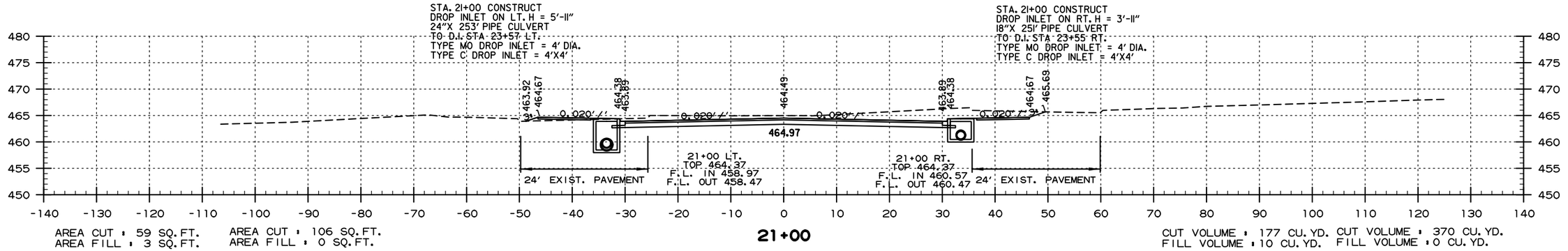
22+00

AREA CUT : 31 SQ.FT.
AREA FILL : 9 SQ.FT.

AREA CUT : 74 SQ.FT.
AREA FILL : 0 SQ.FT.

CUT VOLUME : 167 CU.YD.
FILL VOLUME : 22 CU.YD.

CUT VOLUME : 334 CU.YD.
FILL VOLUME : 0 CU.YD.



21+00

AREA CUT : 59 SQ.FT.
AREA FILL : 3 SQ.FT.

AREA CUT : 106 SQ.FT.
AREA FILL : 0 SQ.FT.

CUT VOLUME : 177 CU.YD.
FILL VOLUME : 10 CU.YD.

CUT VOLUME : 370 CU.YD.
FILL VOLUME : 0 CU.YD.

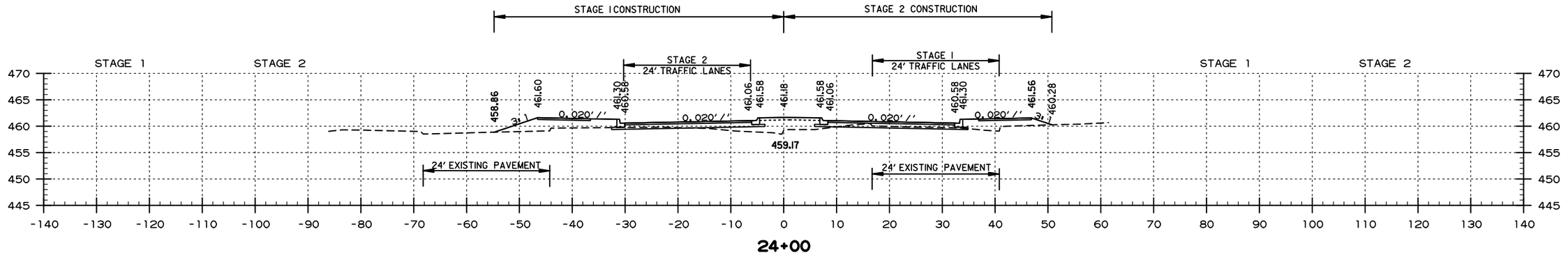
CHAD COLLEY BLVD. STA. 21+00 TO STA. 23+00

USER: AP5181
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\xsect\r040716 X-Sect Chad Colley New.dgn
PLOTTED: 3/25/2020 15:23
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
4	ARK.			
JOB NO.		040716	190	194

(2) CROSS-SECTIONS



24+00

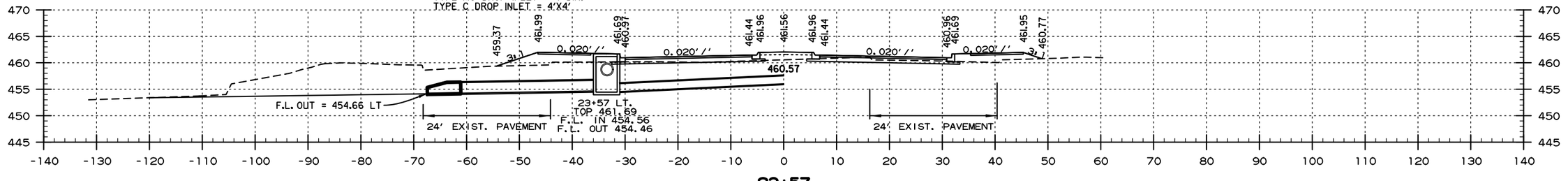
AREA CUT = 4 SQ.FT.
AREA FILL = 44 SQ.FT.

AREA CUT = 8 SQ.FT.
AREA FILL = 48 SQ.FT.

CUT VOLUME = 7 CU.YD.
FILL VOLUME = 63 CU.YD.

CUT VOLUME = 20 CU.YD.
FILL VOLUME = 63 CU.YD.

STA. 23+57 CONSTRUCT
DROP INLET ON LT. H = 7'-3"
24"X 25' R.C. PIPE CULVERT OUTLET
(CLASS III)(TYPE 3 BEDDING)
W/ FES RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'



23+57

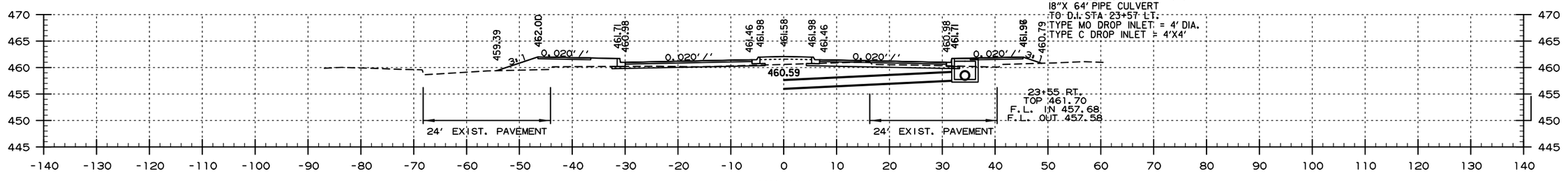
AREA CUT = 5 SQ.FT.
AREA FILL = 34 SQ.FT.

AREA CUT = 17 SQ.FT.
AREA FILL = 31 SQ.FT.

CUT VOLUME = 0 CU.YD.
FILL VOLUME = 3 CU.YD.

CUT VOLUME = 1 CU.YD.
FILL VOLUME = 2 CU.YD.

STA. 23+55 CONSTRUCT
DROP INLET ON RT. H = 4'-1"
18"X 64' PIPE CULVERT
TO D.I. STA. 23+57 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'



23+55

AREA CUT = 5 SQ.FT.
AREA FILL = 34 SQ.FT.

AREA CUT = 17 SQ.FT.
AREA FILL = 31 SQ.FT.

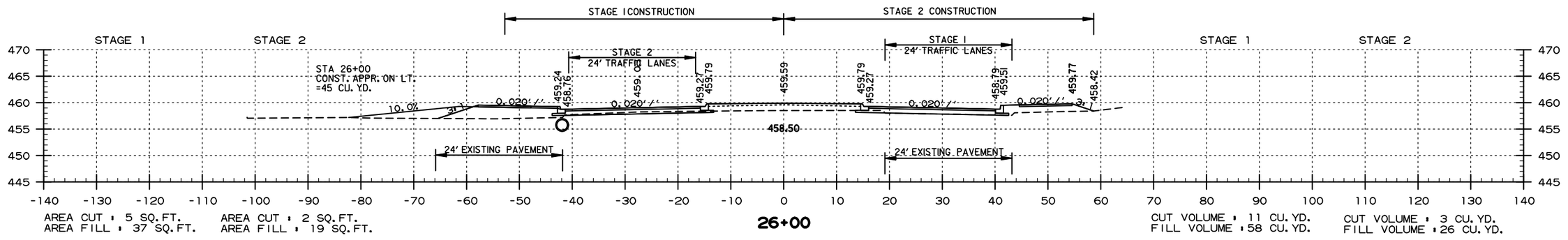
CUT VOLUME = 20 CU.YD.
FILL VOLUME = 63 CU.YD.

CUT VOLUME = 50 CU.YD.
FILL VOLUME = 50 CU.YD.

CHAD COLLEY BLVD. STA. 23+55 TO STA. 24+00

USER: AP5181
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\xsect\r040716 X-Sect Chad Colley New.dgn
PLOTTED: 3/25/2020 15:23
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				4	ARK.			
				JOB NO.		040716	191	194
				(2)	CROSS-SECTIONS			



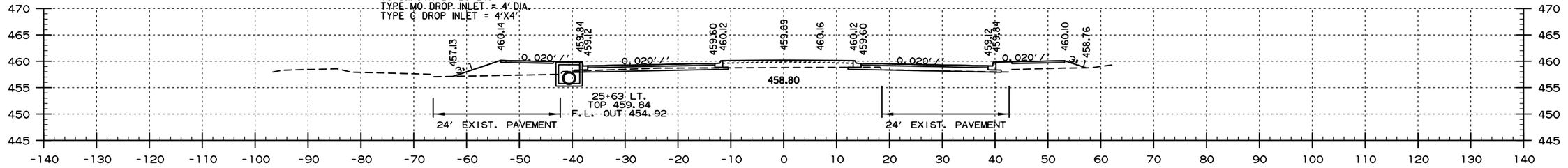
AREA CUT = 5 SQ. FT.
AREA FILL = 37 SQ. FT.

AREA CUT = 2 SQ. FT.
AREA FILL = 19 SQ. FT.

26+00

CUT VOLUME = 11 CU. YD.
FILL VOLUME = 58 CU. YD.

CUT VOLUME = 3 CU. YD.
FILL VOLUME = 26 CU. YD.



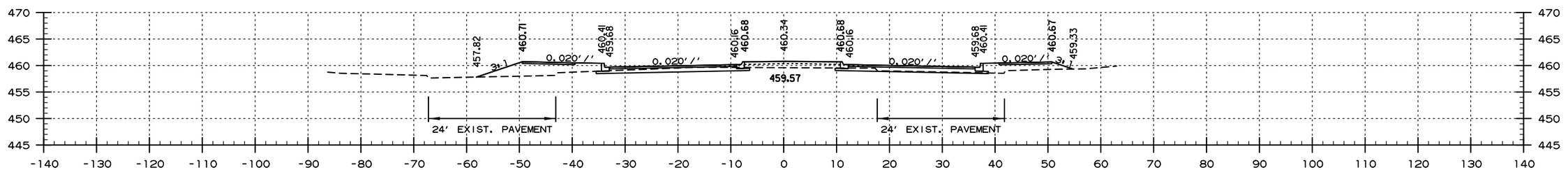
AREA CUT = 10 SQ. FT.
AREA FILL = 47 SQ. FT.

AREA CUT = 3 SQ. FT.
AREA FILL = 19 SQ. FT.

25+63

CUT VOLUME = 34 CU. YD.
FILL VOLUME = 102 CU. YD.

CUT VOLUME = 11 CU. YD.
FILL VOLUME = 68 CU. YD.



AREA CUT = 19 SQ. FT.
AREA FILL = 41 SQ. FT.

AREA CUT = 7 SQ. FT.
AREA FILL = 40 SQ. FT.

25+00

CUT VOLUME = 42 CU. YD.
FILL VOLUME = 157 CU. YD.

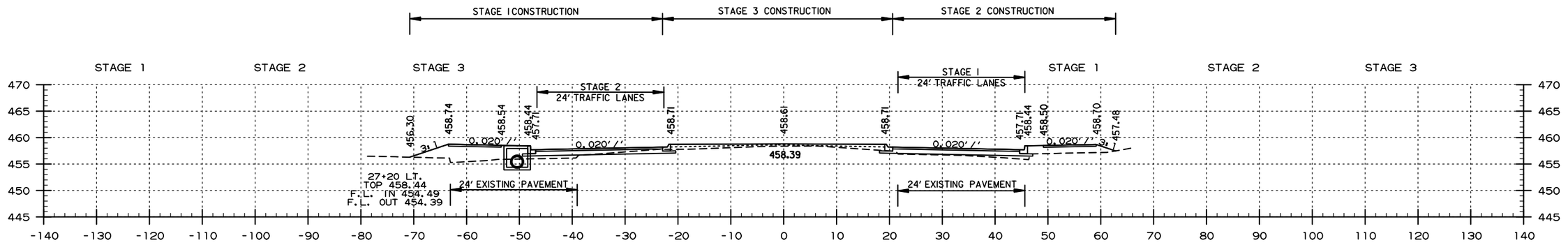
CUT VOLUME = 28 CU. YD.
FILL VOLUME = 163 CU. YD.

CHAD COLLEY BLVD. STA. 25+00 TO STA. 26+00

USER: APSIBI
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\xsect\r040716 X-Sect Chad Colley New.dgn
PLOTTED: 3/25/2020 15:23
SCALE: h20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				4	ARK.			
				JOB NO.		040716	192	194
				(2)	CROSS-SECTIONS			

STA. 27+20 CONSTRUCT
DROP INLET ON LT. H = 4'-1"
24"X 138' PIPE CULVERT
TO D.I. STA 28+59 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'



AREA CUT = 6 SQ.FT.
AREA FILL = 55 SQ.FT.

AREA CUT = 1 SQ.FT.
AREA FILL = 26 SQ.FT.

AREA CUT = 3 SQ.FT.
AREA FILL = 27 SQ.FT.

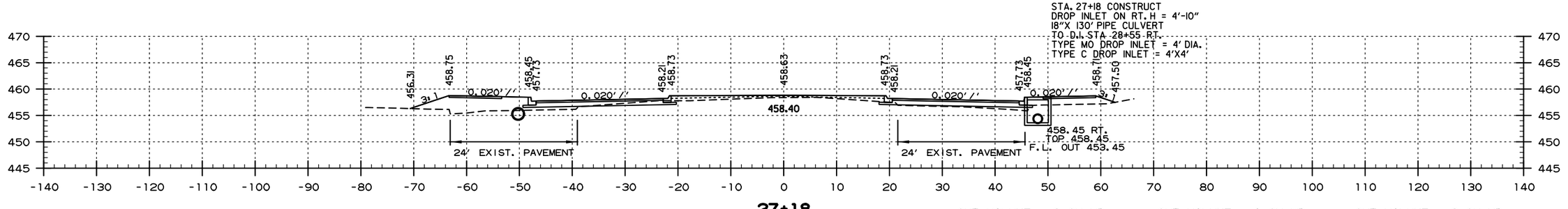
27+20

CUT VOLUME = 0 CU.YD.
FILL VOLUME = 4 CU.YD.

CUT VOLUME = 0 CU.YD.
FILL VOLUME = 2 CU.YD.

CUT VOLUME = 0 CU.YD.
FILL VOLUME = 2 CU.YD.

STA. 27+18 CONSTRUCT
DROP INLET ON RT. H = 4'-10"
18"X 130' PIPE CULVERT
TO D.I. STA 28+55 RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'



AREA CUT = 6 SQ.FT.
AREA FILL = 54 SQ.FT.

AREA CUT = 1 SQ.FT.
AREA FILL = 26 SQ.FT.

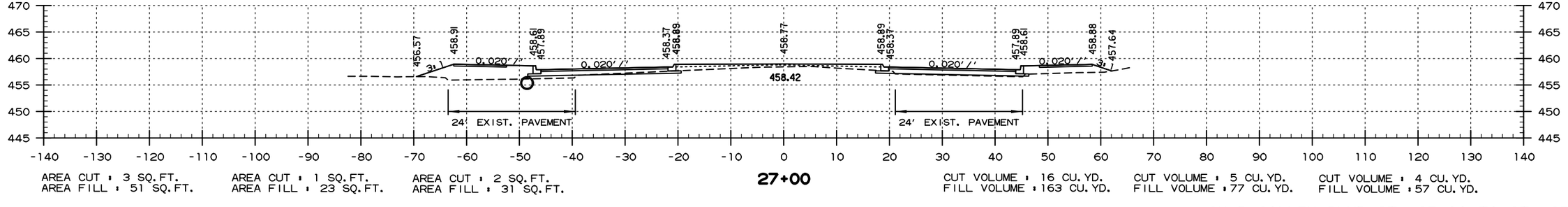
AREA CUT = 3 SQ.FT.
AREA FILL = 27 SQ.FT.

27+18

CUT VOLUME = 3 CU.YD.
FILL VOLUME = 35 CU.YD.

CUT VOLUME = 0 CU.YD.
FILL VOLUME = 16 CU.YD.

CUT VOLUME = 2 CU.YD.
FILL VOLUME = 19 CU.YD.



AREA CUT = 3 SQ.FT.
AREA FILL = 51 SQ.FT.

AREA CUT = 1 SQ.FT.
AREA FILL = 23 SQ.FT.

AREA CUT = 2 SQ.FT.
AREA FILL = 31 SQ.FT.

27+00

CUT VOLUME = 16 CU.YD.
FILL VOLUME = 163 CU.YD.

CUT VOLUME = 5 CU.YD.
FILL VOLUME = 77 CU.YD.

CUT VOLUME = 4 CU.YD.
FILL VOLUME = 57 CU.YD.

CHAD COLLEY BLVD. STA. 27+00 TO STA. 27+20

USER: AP5181
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\xsect\r040716 X-Sect Chad Colley New.dgn
PLOTTED: 3/25/2020 15:23
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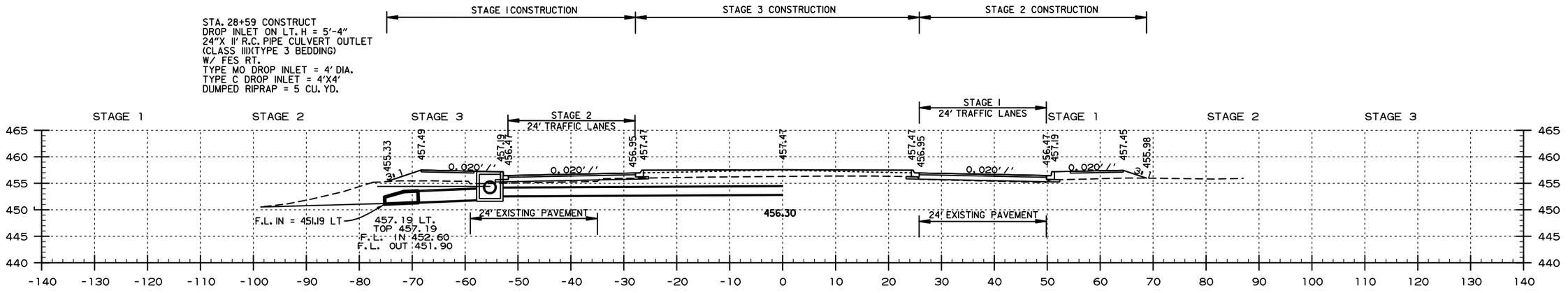
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				4	ARK.			
				JOB NO.		040716	193	194
				(2)	CROSS-SECTIONS			

STA. 28+59 CONSTRUCT
DROP INLET ON LT. H = 5'-4"
24"X 11' R.C. PIPE CULVERT OUTLET
(CLASS III)(TYPE 3 BEDDING)
W/ FES RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'
DUMPED RIPRAP = 5 CU. YD.



28+59

AREA CUT = 1 SQ. FT.
AREA FILL = 39 SQ. FT.

AREA CUT = 10 SQ. FT.
AREA FILL = 22 SQ. FT.

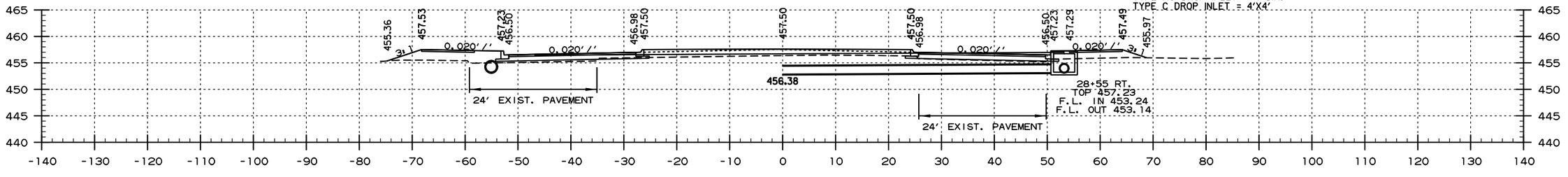
AREA CUT = 1 SQ. FT.
AREA FILL = 64 SQ. FT.

CUT VOLUME = 0 CU. YD.
FILL VOLUME = 6 CU. YD.

CUT VOLUME = 0 CU. YD.
FILL VOLUME = 3 CU. YD.

CUT VOLUME = 0 CU. YD.
FILL VOLUME = 9 CU. YD.

STA. 28+55 CONSTRUCT
DROP INLET ON RT. H = 4'-1"
18"X 105' R.C. PIPE CULVERT
(CLASS III)(TYPE 3 BEDDING)
TO D.I. STA 28+59 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4'X4'



28+55

AREA CUT = 1 SQ. FT.
AREA FILL = 40 SQ. FT.

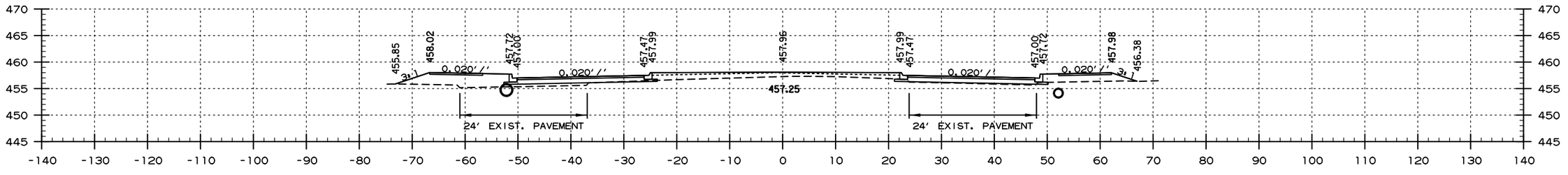
AREA CUT = 10 SQ. FT.
AREA FILL = 22 SQ. FT.

AREA CUT = 1 SQ. FT.
AREA FILL = 63 SQ. FT.

CUT VOLUME = 2 CU. YD.
FILL VOLUME = 89 CU. YD.

CUT VOLUME = 3 CU. YD.
FILL VOLUME = 46 CU. YD.

CUT VOLUME = 3 CU. YD.
FILL VOLUME = 113 CU. YD.



28+00

AREA CUT = 1 SQ. FT.
AREA FILL = 48 SQ. FT.

AREA CUT = 1 SQ. FT.
AREA FILL = 24 SQ. FT.

AREA CUT = 1 SQ. FT.
AREA FILL = 48 SQ. FT.

CUT VOLUME = 10 CU. YD.
FILL VOLUME = 151 CU. YD.

CUT VOLUME = 2 CU. YD.
FILL VOLUME = 73 CU. YD.

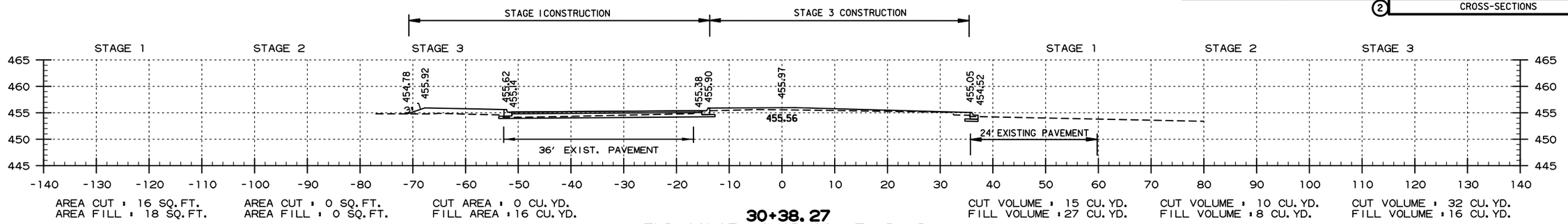
CUT VOLUME = 6 CU. YD.
FILL VOLUME = 111 CU. YD.

CHAD COLLEY BLVD. STA. 28+00 TO STA. 28+59

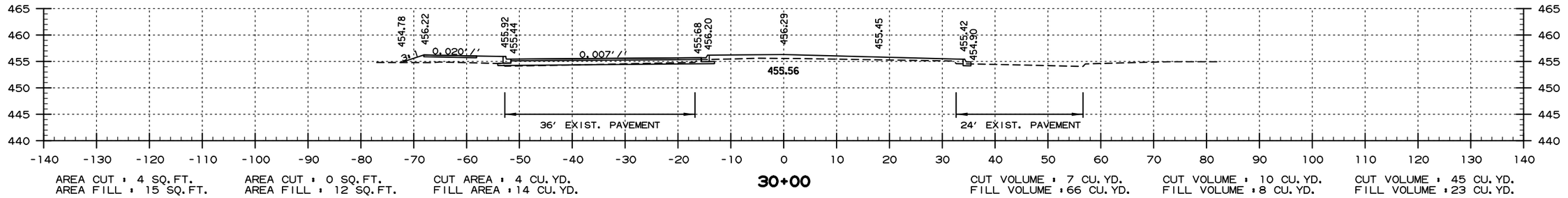
USER: AP518I
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\xsect\r040716 X-Sect Chad Colley New.dgn
PLOTTED: 3/25/2020 15:23
SCALE: 1:20

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				4	ARK.			
				JOB NO.		040716	194	194

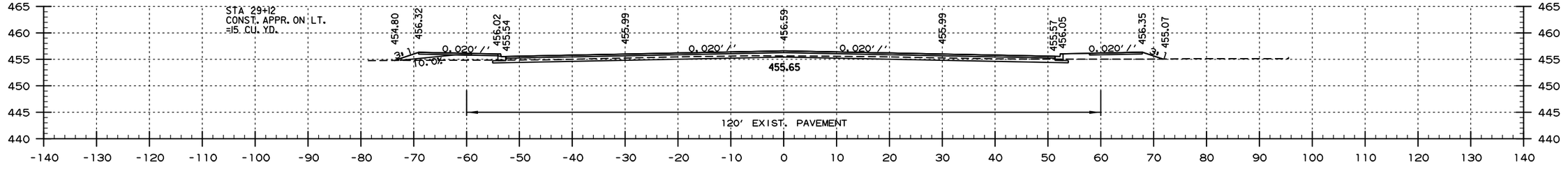
(2) CROSS-SECTIONS



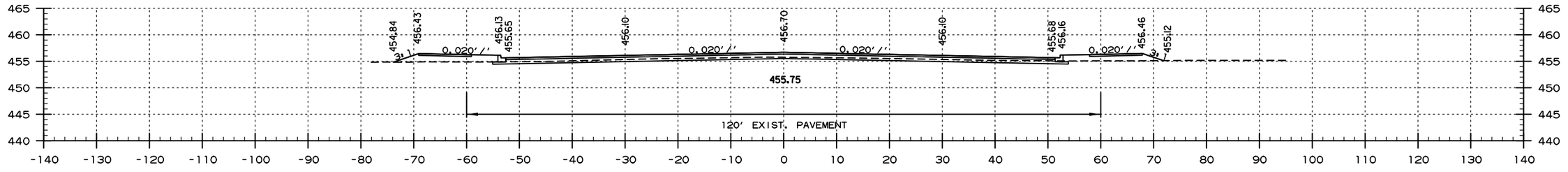
30+38.27
END CONST. CHAD COLLEY BLVD.



30+00



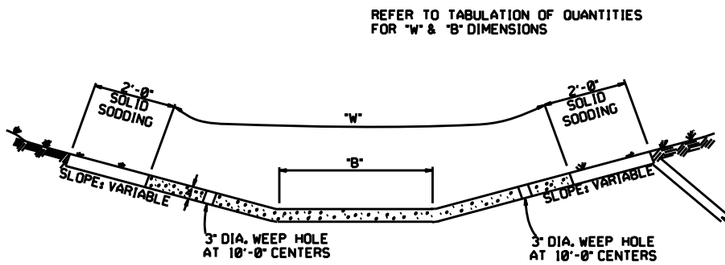
29+12



29+00

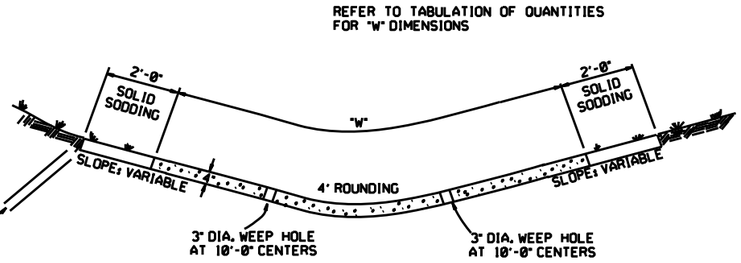
CHAD COLLEY BLVD. STA. 29+00 TO STA. 30+00

USER: AP5181
DESIGN FILE: G:\17103100_Hwy255\TRANSP\dgn\xsect\r040716 X-Sect Chad Colley New.dgn
PLOTTED: 3/25/2020 15:23
SCALE: 1:20



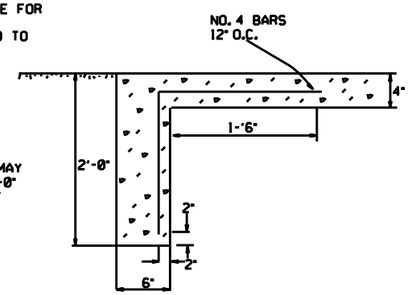
TYPE A

EXCAVATE TO NEAT LINES TO CONSTRUCT DITCH PAVING AND SOLID SODDING.



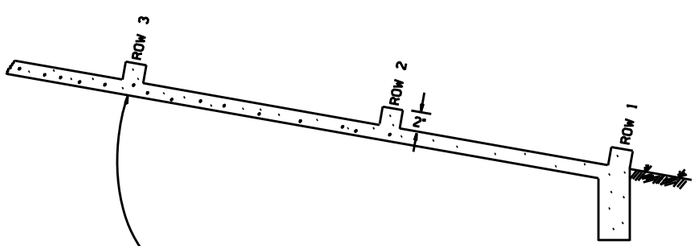
TYPE B

THE STEEL AND ADDITIONAL CONCRETE FOR THE WALLS SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID FOR "CONCRETE DITCH PAVING."



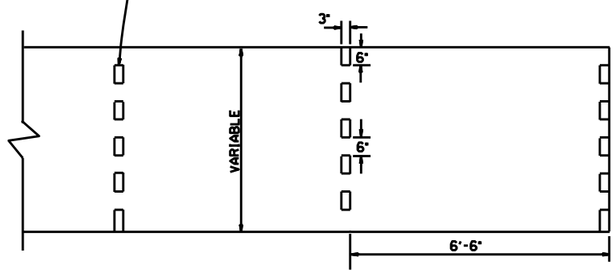
TOE WALL DEPTH MAY BE ALTERED TO 1'-0" WHEN DIRECTED BY THE ENGINEER IN ROCK EXCAVATION

TOE WALL DETAIL FOR CONCRETE DITCH PAVING



NUMBER OF ELEMENTS PER ROW VARIES WITH WIDTH OF PAVING SPECIFIED

ENERGY DISSIPATORS TO BE USED FOR THE ENTIRE LENGTH OF DITCH WHEN SLOPE OF DITCH PAVING EXCEEDS 7%. THE DISSIPATORS WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID FOR CONCRETE DITCH PAVING.



ENERGY DISSIPATORS
(NO SCALE)

GENERAL NOTES:

THE FULL WIDTH OF EACH SECTION SHALL BE POURED MONOLITHICALLY.

TOE WALLS TO BE CONSTRUCTED FULL WIDTH AT EACH END OF DITCH PAVING, AND POURED MONOLITHICALLY.

SOLID SOD ALONG DITCH PAVING TO BE PLACED WITHIN 14 DAYS OF DITCH PAVING CONSTRUCTION.

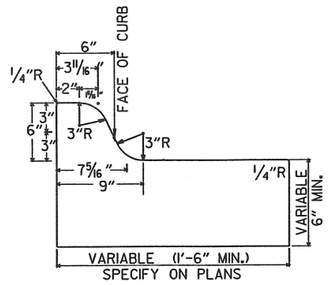
1" WIDE TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE DITCH PAVING AT 45° INTERVALS. THE SPACE SHALL BE FILLED WITH APPROVED JOINT FILLER COMPLYING WITH AASHTO M213.

DATE	REVISION	DATE FILM'D
12-8-16	CORRECTED ENERGY DISSIPATOR DRAWING AND NOTE	
11-17-10	ADDED GENERAL NOTE	
6-2-94	ADDED GENERAL NOTE ABOUT SOLID SODDING	
11-30-8	ELIMINATED MIN. ROWS OF ELEMENTS	111-30-89
7-15-88	REVISED DISSIPATOR NOTE	653-7-15-88
4-3-87	REVISED ENERGY DISSIPATOR	671-4-3-87
1-9-87	MODIFIED NOTE ON ENERGY DISS.	532-1-9-87
11-3-86	ADDED NOTE TO ENERGY DISS.	599-12-1-86
11-1-84	ENERGY DISSIPATOR DETAILS ADDED	508-11-1-84
11-1-84	EXCAVATION DETAILS ADDED TYPED A & B	
10-2-72	REVISED AND REDRAWN	508-10-2-72

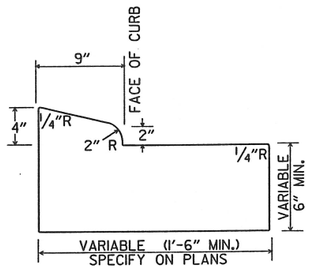
ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE DITCH PAVING

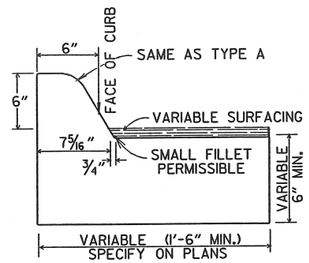
STANDARD DRAWING CDP-1



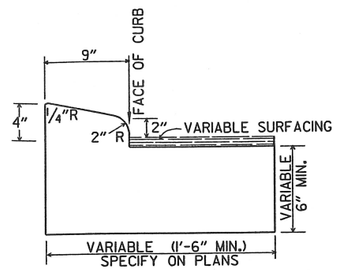
TYPE A



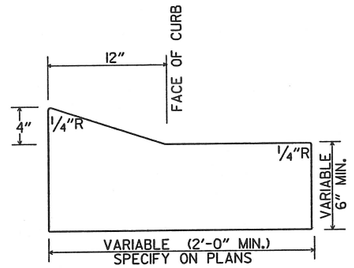
TYPE B-I



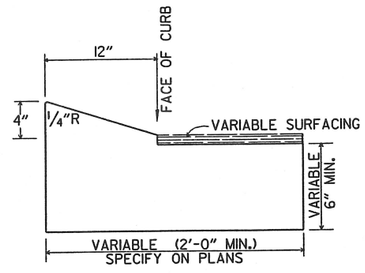
TYPE C



TYPE B-2

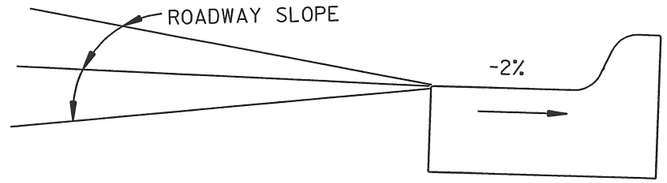


TYPE E-I



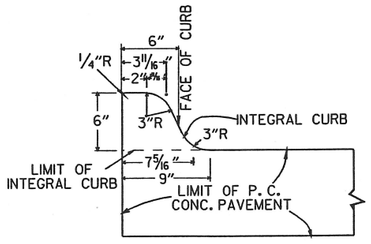
TYPE E-2

CONCRETE COMBINATION CURB AND GUTTER

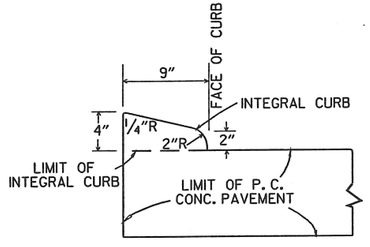


DETAIL OF GUTTER SLOPE

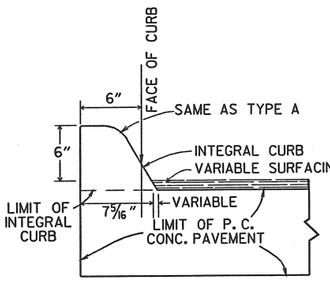
GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.



TYPE A

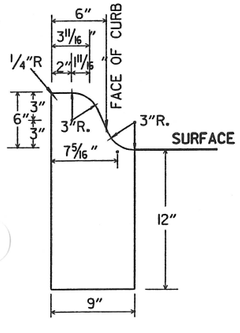


TYPE B

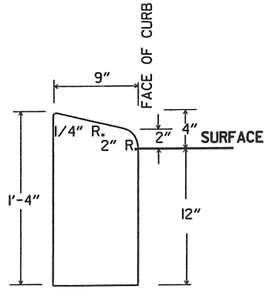


TYPE C

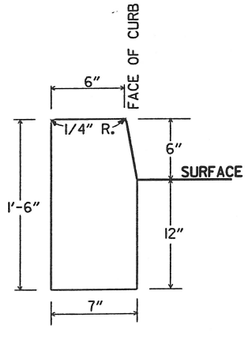
INTEGRAL CURB



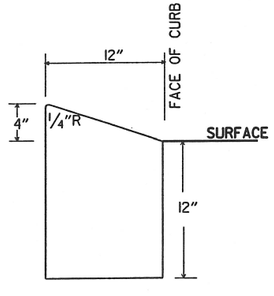
TYPE A



TYPE B

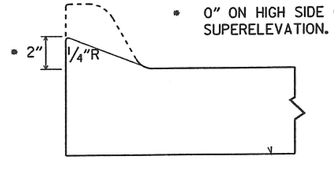


TYPE D



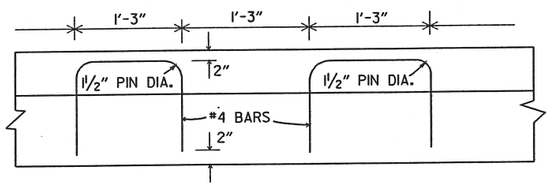
TYPE E

CONCRETE CURB

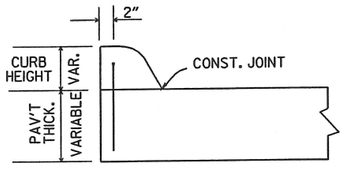


NOTE: USE MODIFIED CURB AS SPECIFIED ON STD. DR-1. COMPENSATION FOR MODIFIED CURB WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE TYPE OF CURB OR CURB AND GUTTER SPECIFIED.

DETAILS OF MODIFIED CURB



LONGITUDINAL SECTION



ELEVATION

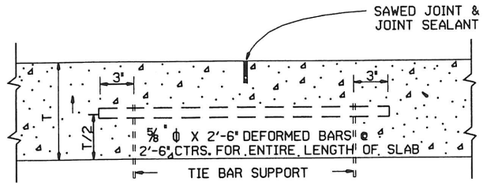
ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB

DATE	REVISION	DATE FILMED
11-29-07	REVISED GUTTER SLOPE & MODIFIED CURB DETAILS	
11-10-05	ADDED DETAILS OF TYPE E CURBS	
11-16-01	REVISED CONCRETE CURB TYPE B	
11-18-98	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	VARIBLE DEPTH TYPE A & B I	11-30-89
7-15-88	REVISED MODIFIED CURB	630-7-15-88
11-1-73	REVISED MODIFIED CURB	500-11-1-73
10-2-72	REVISED AND REDRAWN	512-10-2-72

ARKANSAS STATE HIGHWAY COMMISSION

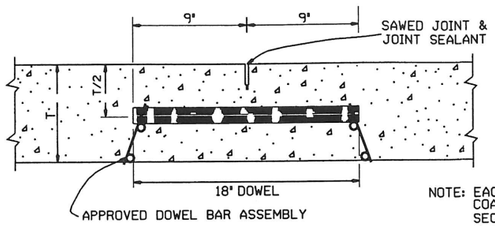
CURBING DETAILS

STANDARD DRAWING CG-1



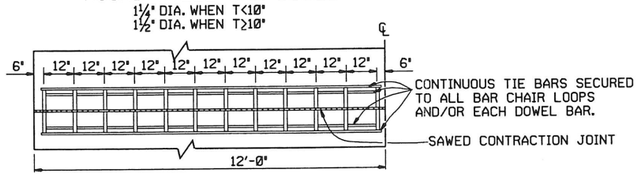
LONGITUDINAL JOINT

NOTE: THE TIE BAR SUPPORT SHOWN ABOVE MAY BE ELIMINATED IF OTHER APPROVED METHODS FOR PLACING AND SUPPORTING THE TIE BARS ARE PROVIDED.
TIE BARS SHALL BE 15" FROM TRANSVERSE JOINTS.



NOTE: EACH DOWEL TO BE COATED ACCORDING TO SECTION 502 OF THE STANDARD SPECIFICATIONS.

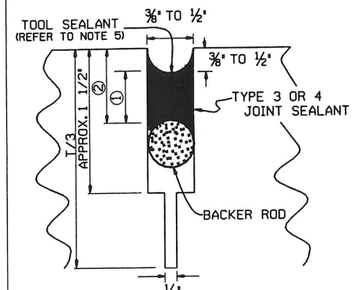
ROUND STEEL BAR DOWEL
1¼" DIA. WHEN T<10"
1½" DIA. WHEN T≥10"



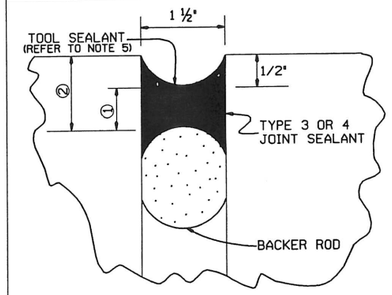
ONE-HALF 24' PAVEMENT
12 DOWELS
PLAN

NOTE: FOR 20' PAVEMENT USE 20 DOWELS @ 12" CTRS. WITH 6" SPACING FROM C.L. AND EDGE OF SLAB TO FIRST BAR. FOR 15' PAVEMENT USE 15 DOWELS @ 12" CTRS. WITH 6" SPACING FROM C.L. AND EDGE OF SLAB TO FIRST BAR. FOR 26' PAVEMENT USE 26 DOWELS @ 12" CTRS. WITH 6" SPACING FROM C.L. AND EDGE OF SLAB TO FIRST BAR. FOR PAVEMENT WIDTHS OTHER THAN THOSE SHOWN ABOVE, USE DOWELS AT 12" CTRS. WITH 6" MAX. SPACING FROM C.L. TO FIRST BAR. DISTANCE FROM EDGE OF SLAB TO FIRST BAR SHALL BE ADJUSTED TO MAINTAIN 12" DOWEL BAR SPACING

CONTRACTION JOINT DETAILS



DETAIL OF SAWED CONTRACTION JOINT



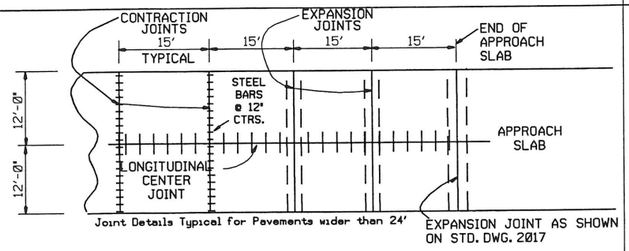
DETAIL OF EXPANSION JOINT

JOINT CONFIGURATION FOR TYPE 3 OR 4 JOINT SEALANT

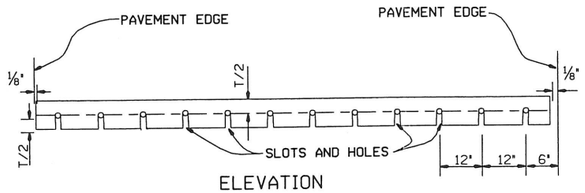
JOINT WIDTH	SEALANT THICKNESS ①	BACKER ROD DIAMETER	BACKER ROD PLACEMENT DEPTH ②
INCHES			
½	¼	⅜	½
⅜	¼	½	½
½	¼	⅝	½
⅝	⅜	¾	⅝
¾	⅜	⅞	⅞
1 ½	¾	2	1 ¼

JOINT CONFIGURATION FOR TYPE 5 JOINT SEALANT

JOINT WIDTH	SEALANT THICKNESS ①	BACKER ROD DIAMETER	BACKER ROD PLACEMENT DEPTH ②
INCHES			
¼	½	⅜	¾
¾	¾	½	1

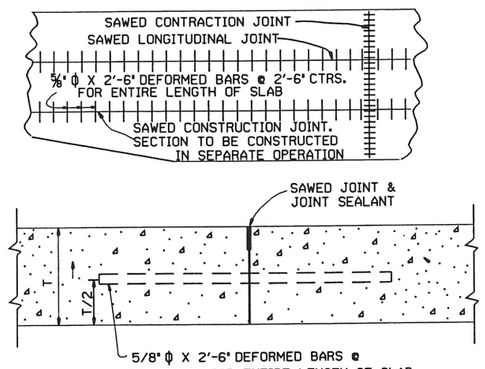


PLAN SHOWING EXPANSION JOINTS AT BRIDGE APPROACH SLABS



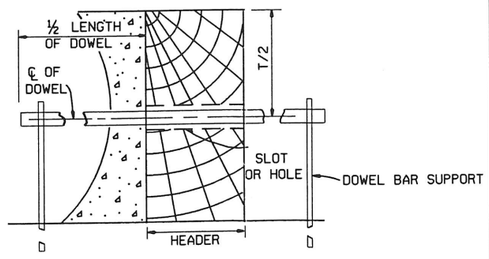
ELEVATION

NOTE: ALL DOWEL BARS SHALL CONFORM TO THE DETAILS FOR CONTRACTION JOINTS.



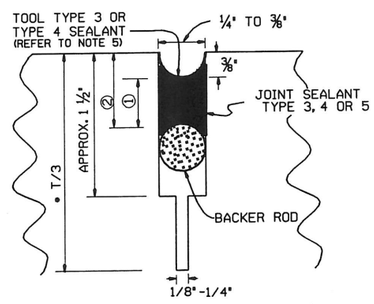
NOTE: TIE BARS SHALL BE 15" FROM TRANSVERSE JOINTS.

LONGITUDINAL CONSTRUCTION JOINT



SECTION

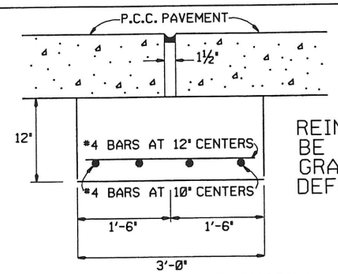
TRANSVERSE CONSTRUCTION JOINT



•NOTE: T/3 SAW CUT NOT REQUIRED FOR LONGITUDINAL CONSTRUCTION JOINT.

DETAIL OF SAWED LONGITUDINAL JOINT AND LONGITUDINAL CONSTRUCTION JOINT

DATE	REVISION	DATE FILMED
5-25-06	ADDED GENERAL NOTE 7	
10-9-03	REMOVED TIE BAR COATING & REVISED GENERAL NOTES	
11-16-01	ADDED TOOL SEALANT AND NOTE 5; REVISED NOTE 3	
4-26-96	REVISED CONTRACTION JOINT NOTE	
11- 3-94	ADDED NOTE RE: REINF. BARS	
4- 1-93	REVISED DOWEL BARS & GEN. NOTES	4- 1-93
10- 1-92	REVISED DOWEL SPACING	10- 1-92
8- 15-91	ADDED SPAC FOR CONTR JTS & DEL KEYWAY	
05-24-90	REVISED TIE BAR, DOWEL & JOINT SIZE	
01-25-90	ADDED EXPANSION JOINT	01-25-90
11-30-89	CHANGED T/4+1 TO T/3+1	11-30-89
03-23-89	ALTERED SAWED JOINT & ADDED NOTE	512-03-23-89
07-15-88	REVISED AND REDRAWN	632-07-15-88



REINFORCING SHALL BE GRADE 40 OR GRADE 60 DEFORMED BARS.

DETAIL OF JOINT SUPPORT FOR EXPANSION JOINTS

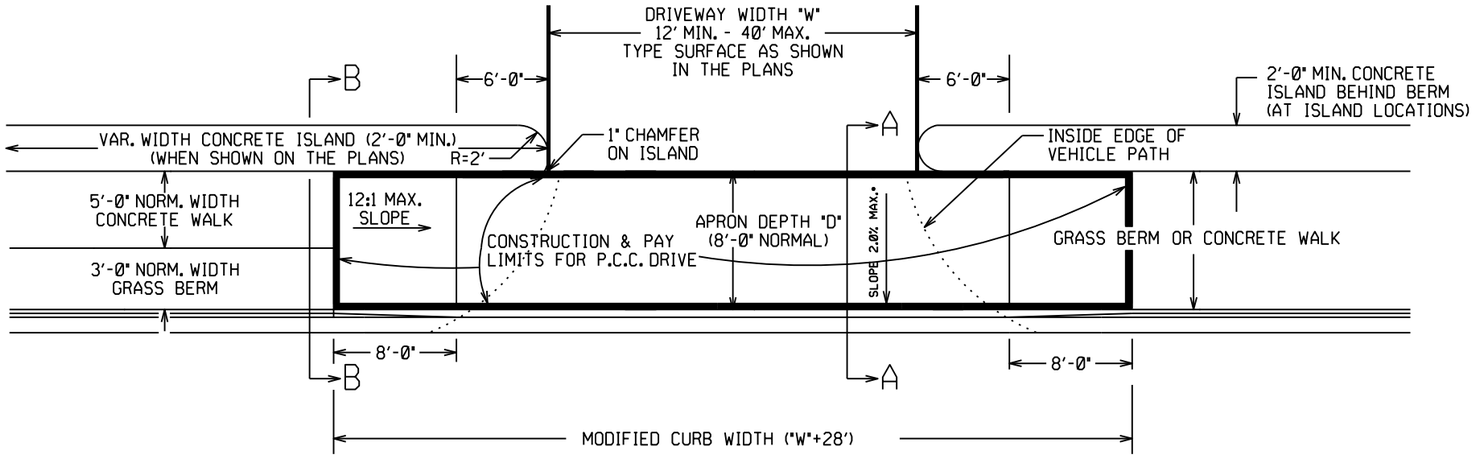
GENERAL NOTES

1. "T" DENOTES THICKNESS OF SLAB.
2. DOWEL BARS SHALL BE PLACED IN ACCORDANCE WITH THE DIMENSIONS SHOWN. A TOLERANCE OF PLUS OR MINUS ONE INCH WILL BE ALLOWED FOR THE VERTICAL AND LATERAL PLACEMENT AND A TOLERANCE OF PLUS OR MINUS ¼" WILL BE ALLOWED FOR THE TILT AND SKEW. DOWEL BARS SHALL BE FIELD COATED FOR A MINIMUM DISTANCE OF 2" GREATER THAN HALF THE LENGTH OF THE BAR WITH AN APPROVED GREASE AS A BOND BREAKER JUST PRIOR TO PLACEMENT OF CONCRETE.
3. THE EXPANSION JOINT SUPPORT MAY BE CONSTRUCTED WITH CLASS 'A', 'S' OR PAVING CONCRETE. PAYMENT FOR THE JOINT SUPPORT SHALL BE FOR THE CONTRACT UNIT PRICE BID FOR THE CLASS OF CONCRETE SPECIFIED IN THE PLANS. PAYMENT FOR ALL OTHER WORK AND MATERIALS REQUIRED FOR THE CONSTRUCTION OF THE JOINT SUPPORT SHALL BE INCLUDED IN THE PRICE BID FOR THE ABOVE ITEMS.
4. CONTRACTION JOINTS SHALL BE CONSTRUCTED ON 15' CENTERS.
5. TOOLING NOT REQUIRED FOR SELF-LEVELING SILICONE.
6. UNLESS OTHERWISE SPECIFIED IN THE PLANS, CONCRETE SHOULDERS SHALL BE CONSTRUCTED ACCORDING TO THE DETAILS SHOWN HEREON. CONTRACTION JOINTS SHALL MATCH CONTRACTION JOINTS IN THE LANES.
7. TIE WIRES IN DOWEL BAR ASSEMBLIES SHALL NOT BE CUT PRIOR TO PLACEMENT OF PAVING CONCRETE.

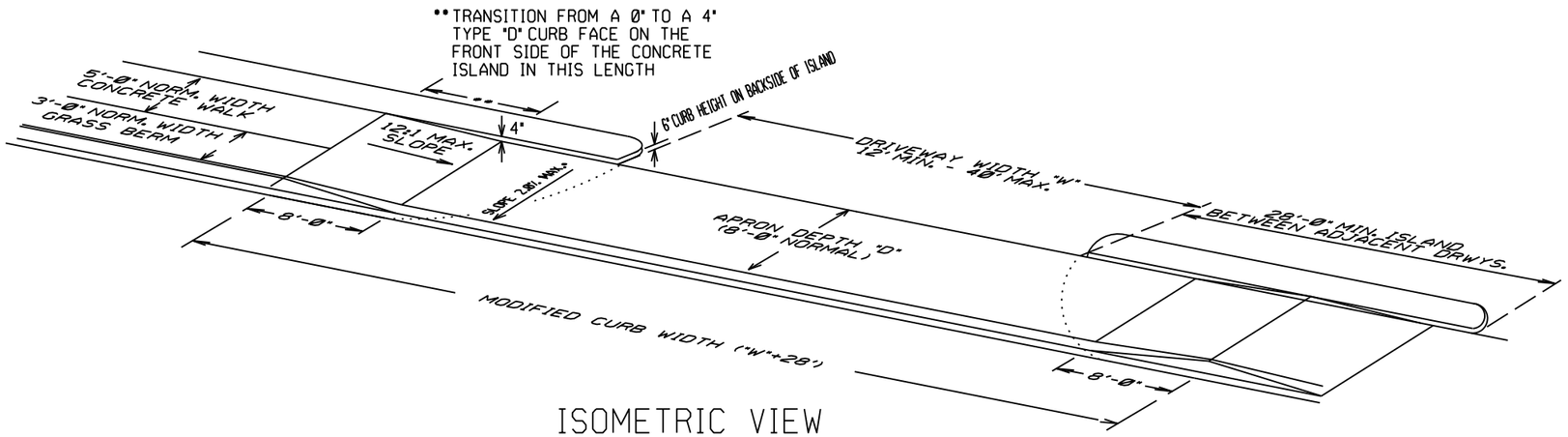
ARKANSAS STATE HIGHWAY COMMISSION

TRANSVERSE & LONGITUDINAL JOINTS FOR CONCRETE PAVEMENT (NON-REINFORCED)

STANDARD DRAWING CPTJ - 6A

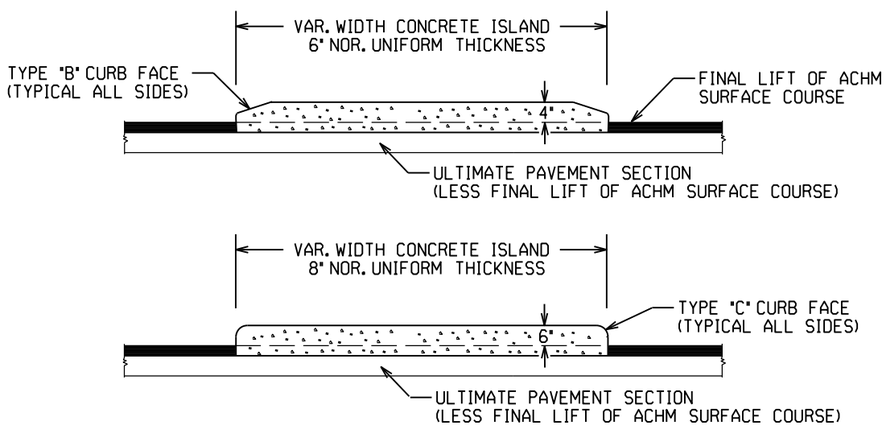


PLAN VIEW

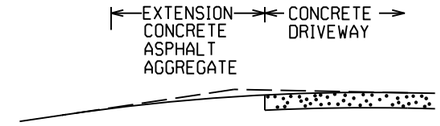


ISOMETRIC VIEW

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".



CURBED ISLANDS FOR CHANNELIZATION



EXTENSION TYPICAL SECTIONS

1: CONCRETE - 6" P.C. CONCRETE DRIVEWAY

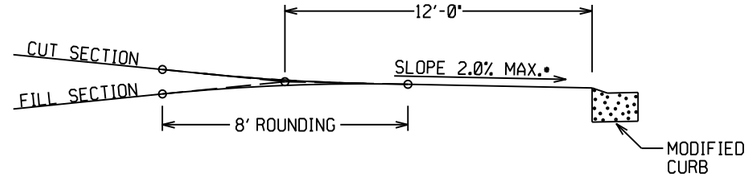
2: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
4" ACHM BINDER COURSE (1") OR
4" ACHM BASE COURSE (1-1/2")

3: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
7" AGGREGATE BASE COURSE

4: AGGREGATE - 6" AGGREGATE BASE COURSE

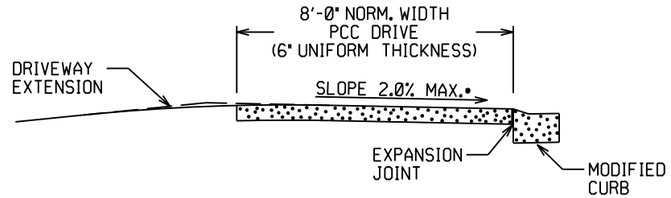
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

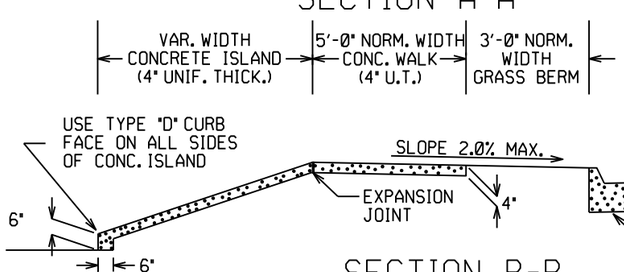


DRIVEWAY VERTICAL ALIGNMENT DETAILS

• NOTE: DRIVEWAYS MAY NOT BE SLOPED AWAY FROM THE ROADWAY UNLESS APPROVED BY THE ENGINEER.



SECTION A-A



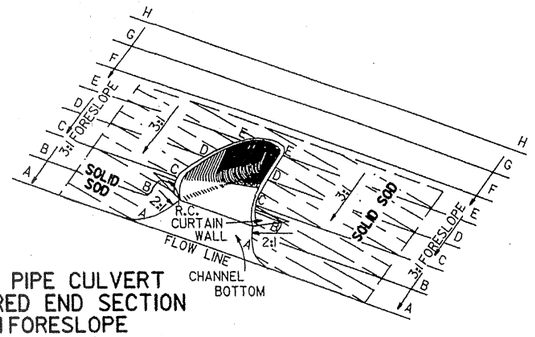
SECTION B-B
CURBED ISLAND BEHIND WALK

DATE REV	DATE FILMED	DESCRIPTION
11-07-19		REVISED WALK DETAILS
2-27-14		REVISED PLAN & ISOMETRIC VIEW
11-29-07		ADDED CHANNELIZATION ISLAND WITH TYPE C CURB FACE & REVISED DRIVEWAY SLOPE NOTE & VERTICAL ALIGNMENT DETAIL
11-10-05		REV. APRON SLOPE & DEPTH OF AGG. BASE.
8-22-02		ADDED ISLAND DETAILS & NOTES
3-30-00		REV. MOD. CURB WIDTH & TRANS. NOTE
11-19-98		REVISED NOTES
11-18-98		REDRAWN AND REISSUED

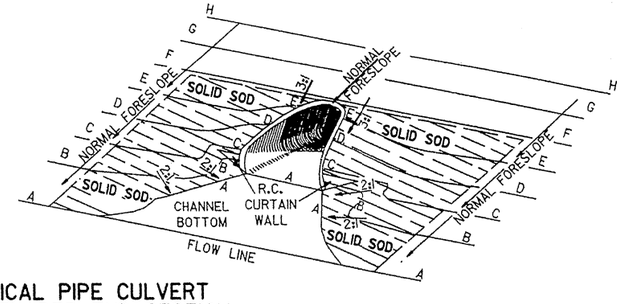
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DRIVEWAYS & ISLANDS

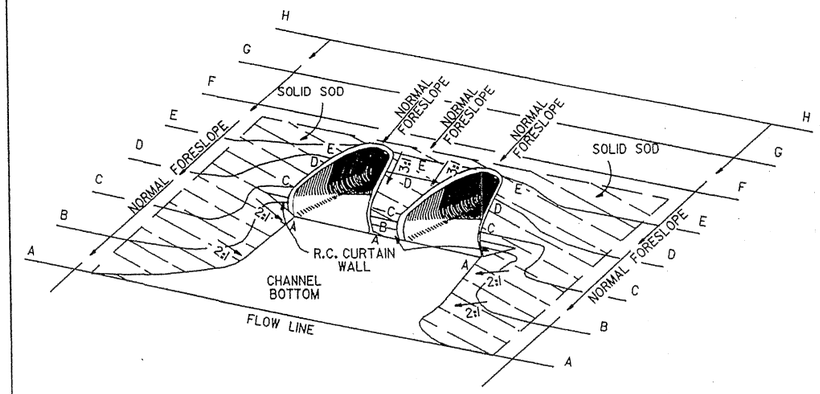
STANDARD DRAWING DR-1



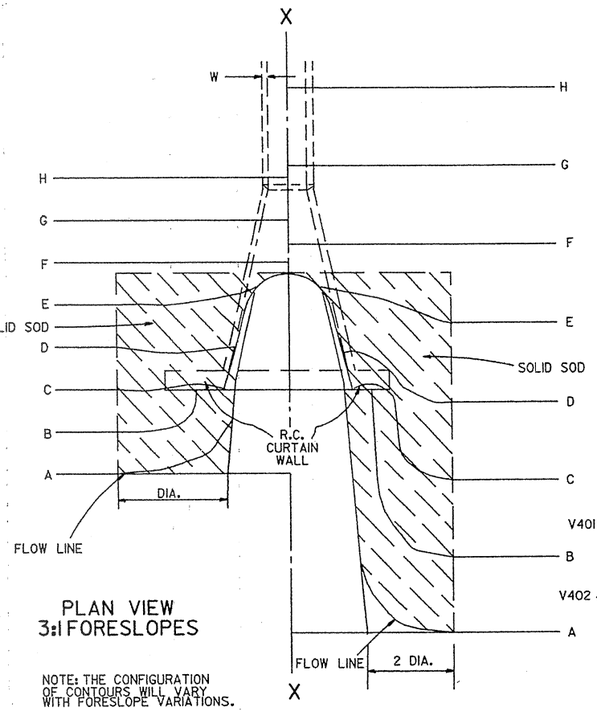
TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& 3:1 FORESLOPE



TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& FLATTENED ADJACENT SLOPES



TYPICAL MULTIPLE PIPE CULVERT
WITH FLARED END SECTIONS
& FLATTENED ADJACENT SLOPES



PLAN VIEW
3:1 FORESLOPES

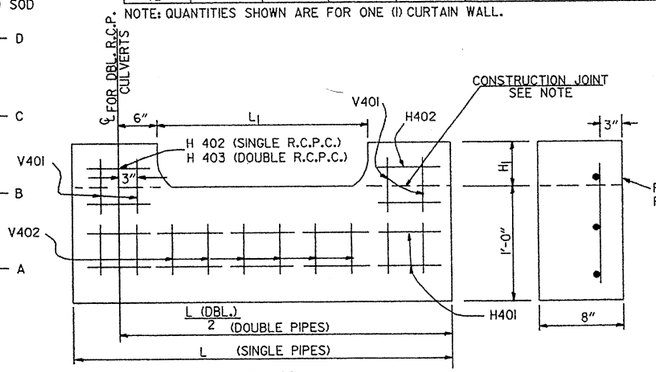
NOTE: THE CONFIGURATION OF CONTOURS WILL VARY WITH FORESLOPE VARIATIONS.

PLAN VIEW
FLATTENED FORESLOPES

R.C. CURTAIN WALL DIMENSIONS & QUANTITIES

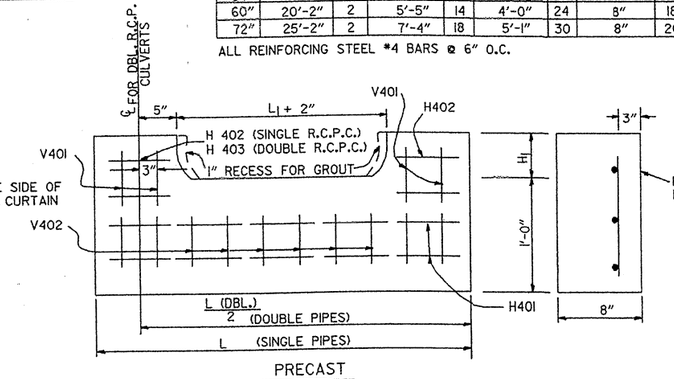
PIPE DIA.	H_1	L_1	L	L (DBL.) / 2	SINGLE R.C.P.C. CONC. CU. YDS.	SINGLE R.C.P.C. REINF. STEEL LBS.	DOUBLE R.C.P.C. CONC. CU. YDS.	DOUBLE R.C.P.C. REINF. STEEL LBS.
18"	11½"	3'-5"	8'-0"	6'-3"	0.31	27.7	0.45	39.5
24"	1'-0½"	4'-6"	9'-6"	7'-6"	0.37	33.4	0.53	48.0
30"	1'-3½"	5'-7"	11'-0"	9'-0"	0.45	39.0	0.67	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

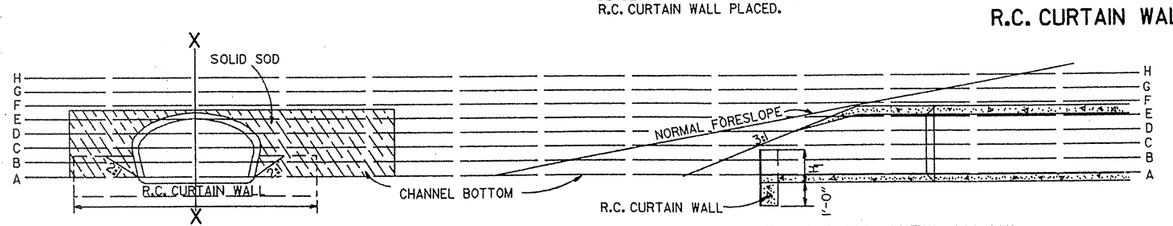
NOTE: THE PORTION OF THE R.C. CURTAIN WALL BENEATH THE FLARED END SECTION (LOWER 1'-0") SHALL BE PLACED MONOLITHICALLY. THE FLARED END SECTION SHALL THEN BE SET IN PLACE & THE REMAINING PORTIONS OF THE R.C. CURTAIN WALL PLACED.



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



END VIEW

SECTIONAL VIEW "X-X"

REINFORCING STEEL SCHEDULE

PIPE DIA.	SINGLE R.C. PIPE CULVERT H401 L	H401 NO.	H402 L	H402 NO.	V401 L	V401 NO.	V402 L	V402 NO.	DOUBLE R.C. PIPE CULVERT H401 L	H401 NO.	H402 L	H402 NO.	H403 L	H403 NO.	V401 L	V401 NO.	V402 L	V402 NO.
18"	7'-8"	2	1'-11½"	4	1'-7½"	8	8"	8	12'-2"	2	1'-11½"	4	8"	2	1'-7½"	10	8"	14
24"	9'-2"	2	2'-2"	4	1'-8½"	10	8"	9	14'-8"	2	2'-2"	4	8"	2	1'-8½"	12	8"	18
30"	10'-8"	2	2'-4½"	4	1'-11½"	10	8"	12	17'-8"	2	2'-4½"	4	8"	2	1'-11½"	14	8"	22
36"	12'-8"	2	2'-10"	6	2'-3"	12	8"	14	20'-8"	2	2'-10"	6	8"	3	2'-3"	14	8"	28
42"	15'-2"	2	3'-9½"	8	2'-9½"	16	8"	15	23'-8"	2	3'-9½"	8	8"	4	2'-9½"	18	8"	30
48"	16'-8"	2	4'-3"	10	3'-1"	18	8"	16	25'-8"	2	4'-3"	10	8"	5	3'-1"	20	8"	32
54"	18'-2"	2	4'-8½"	12	3'-5½"	20	8"	17	27'-8"	2	4'-9"	12	8"	6	3'-5½"	22	8"	34
60"	20'-2"	2	5'-5"	14	4'-0"	24	8"	18	30'-8"	2	5'-5"	14	8"	7	4'-0"	26	8"	36
72"	25'-2"	2	7'-4"	18	5'-1"	30	8"	20	36'-8"	2	7'-4"	18	8"	9	5'-1"	33	8"	40

ALL REINFORCING STEEL #4 BARS @ 6" O.C.

SOLID SODDING

PIPE DIA.	SINGLE R.C.P.C. 3:1	4:1	6:1	DOUBLE R.C.P.C. 3:1	4:1	6:1
	SQ. YDS.			SQ. YDS.		
18"	5	7	12	6	8	13
24"	8	12	19	9	13	20
30"	13	18	29	14	19	30
36"	17	26	41	18	28	43
42"	23	35	55	25	37	57
48"	29	46	68	31	48	70
54"	35	57	85	37	59	87
60"	45	62	104	48	65	107
72"	64	92	156	67	95	159

NOTE: QUANTITIES SHOWN ABOVE ARE FOR ONE (1) END OF F.E.S.

GENERAL NOTES

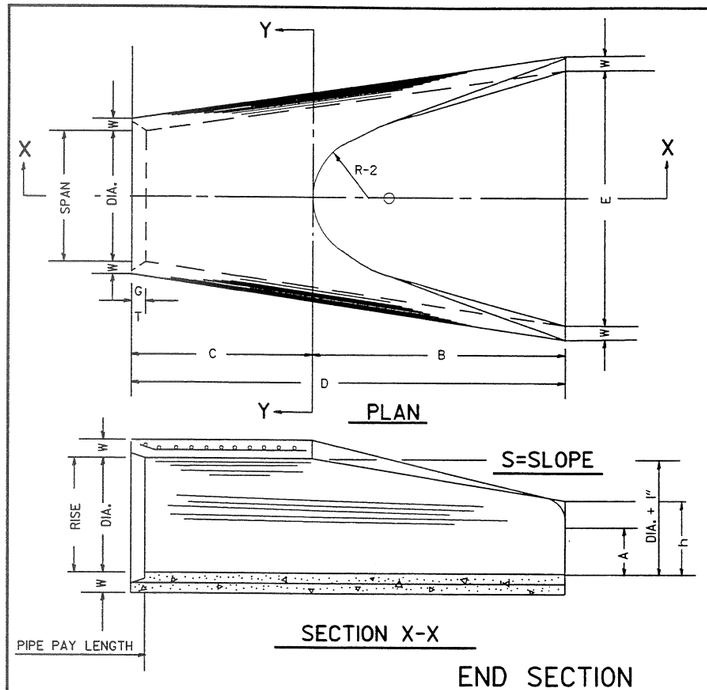
1. A CAST-IN-PLACE OR PRECAST CURTAIN WALL MAY BE USED. PAYMENT FOR THE CURTAIN WALL SHALL BE CONSIDERED TO BE INCLUDED IN THE UNIT PRICE BID EACH FOR FLARED END SECTIONS OF THE SEVERAL SIZES, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS INCLUDING REINFORCING STEEL AND CONCRETE; FOR FORMS, MIXING AND PLACING; FOR EXCAVATION AND BACKFILL, AND FOR ALL LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.
2. ALL EXPOSED EDGES SHALL BE CHAMFERED ¾".
3. CONCRETE FOR CURTAIN WALL SHALL MEET THE REQUIREMENTS FOR CLASS A OR S CONCRETE AS PROVIDED IN SECTION 802 OF THE STANDARD SPECIFICATIONS OR FOR PAVING CONCRETE AS PROVIDED IN SECTION 501 OF THE STANDARD SPECIFICATIONS.
4. WELDED WIRE MESH 3 x 3 W10 x W10 MAY BE USED IN LIEU OF REINFORCING BARS.

DATE	REVISION	FILMED
10-18-96	ADDED NOTE TO SOLID SODDING	
10-12-95	CORRECTED SPELLING	
11- 3-94	ADDED GENERAL NOTE NO. 4	
8-15-91	REV. CURTAIN WALL QUANT. STEEL SCH. & SOLID SOD QUANT.	
3-2-81	ALLOW PRECAST IN 2 OR MORE PIECES CHAMFER EDGES	
5-15-80	ADDED PRECAST WALL & GENERAL NOTES	
10-2-72	REVISED AND REDRAWN	

ARKANSAS STATE HIGHWAY COMMISSION

FLARED END SECTION

STANDARD DRAWING FES-1

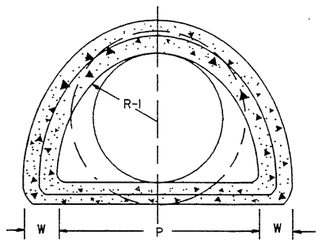


SECTION X-X

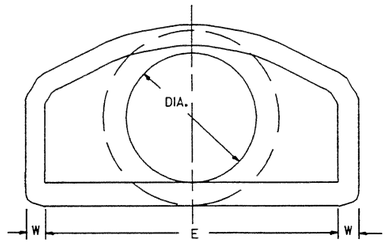
END SECTION
FOR REINFORCED CONCRETE PIPE CULVERTS

TABLE OF DIMENSIONS

DIA.	WALL	A	B	C	D	E	S	DIA. + 1"	P	R-1	R-2	G-T	WT.	h
18"	2½"	9"	2'-3"	3'-10"	6'-1"	3'-0"	3:1	19"	29"	15½"	12"	2"	1000	1'-0½"
24"	3"	9½"	3'-7½"	2'-6"	6'-1½"	4'-0"	3:1	25"	33 3/16"	16 15/16"	14"	2½"	1600	1'-1½"
30"	3½"	1'-0"	4'-6"	1'-7¾"	6'-1¾"	5'-0"	3:1	31"	37"	18½"	15"	3¼"	1940	1'-4⅝"
36"	4"	1'-3"	5'-3"	2'-10¾"	8'-1¾"	6'-0"	3:1	37"	47 15/16"	24 5/16"	20"	3½"	4100	1'-8"
42"	4½"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	3:1	43"	53 1/16"	27½"	22"	3½"	5380	2'-2½"
48"	5"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	3:1	49"	56½"	28½"	22"	3½"	6550	2'-6"
54"	5½"	2'-4"	6'-6"	1'-10"	8'-4"	7'-6"	3:1	55"	65½"	33⅛"	24"	4"	8750	2'-10½"
60"	6"	2'-10"	6'-6"	1'-10"	8'-4"	8'-0"	3:1	61"	72½"	36 11/16"	24"	4"	9270	3'-5"
72"	7"	3'-10"	6'-6"	1'-10"	8'-4"	9'-0"	3:1	73"	77 13/16"	38 15/16"	24"	5"	13250	4'-6"



SECTION Y-Y



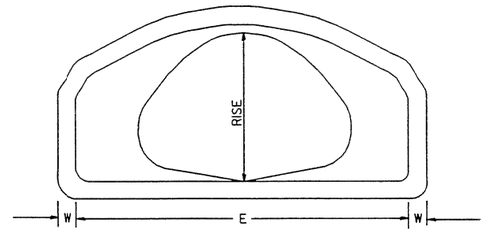
END VIEW

NOTE: TONGUE END ON UPSTREAM SECTION
GROOVE END ON DOWNSTREAM SECTION

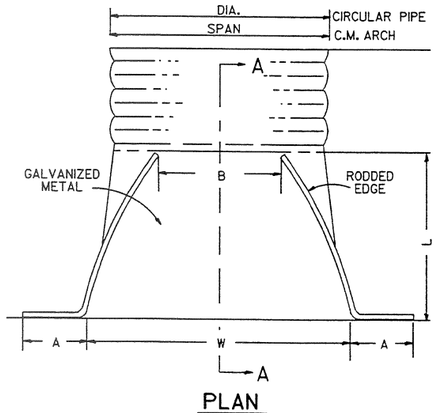
ARCH PIPE

EQUIV. DIA.	• SPAN AASHTO M 206	• SPAN AHD NOMINAL	• RISE AASHTO M 206	• RISE AHD NOMINAL	W	A	B	C	D	E	P	R2	G-T	S
	INCHES													
15	18	18	11	11	2"	4"	2'-0"	4'-0"	6'-0"	3'-0"	29"	12"	1½"	2½:1
18	22	22	13½	14	2½"	5"	2'-0"	4'-1"	6'-1"	3'-6"	32⅛"	13"	2½"	2½:1
21	26	26	15½	16	2¾"	7"	2'-3"	3'-10"	6'-1"	4'-0"	34⅛"	14"	2½"	2½:1
24	28½	29	18	18	3"	9"	2'-3"	3'-10"	6'-1"	5'-0"	36 13/16"	15"	2½"	2½:1
30	36¼	36	22½	23	3½"	10"	3'-1"	3'-0½"	6'-1½"	6'-0"	47 15/16"	20"	3"	2½:1
36	43¾	44	26⅝	27	4"	10½"	4'-0"	2'-1½"	6'-1½"	6'-6"	54 5/16"	22"	3½"	2½:1
42	51⅛	51	31 7/16	31	4½"	11½"	4'-7"	1-10¼"	6'-5¼"	7'-2"	59½"	23"	3¾"	2½:1
48	58½	59	36	36	5"	1'-3"	5'-3"	2'-10¾"	8'-1¼"	7'-10"	70 5/16"	24"	4¼"	2½:1
54	65	65	40	40	5½"	1'-7"	5'-3"	2'-11"	8'-2"	8'-6"	72 1/16"	24"	4¾"	2¼:1
60	73	73	45	45	6"	1'-10"	5'-6"	2'-8"	8'-2"	9'-0"	77 13/16"	24"	5"	2¼:1

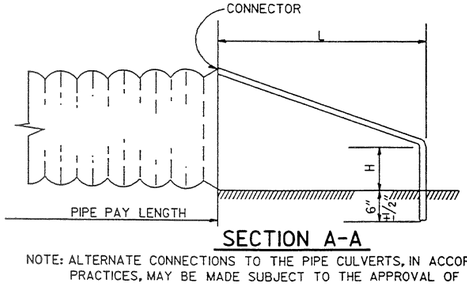
• THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PER CENT FROM THE VALUES SPECIFIED BY AASHTO M 206.



END VIEW
CONCRETE ARCH PIPE

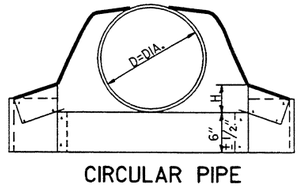


PLAN

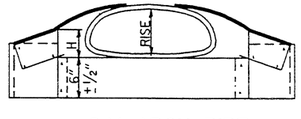


SECTION A-A

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



C.M. ARCH PIPE

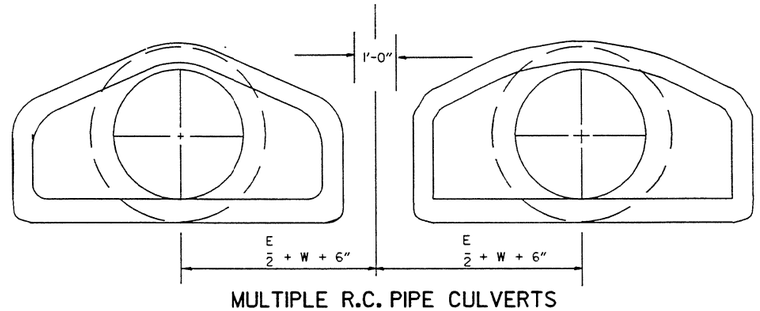
CIRCULAR PIPE

D. DIA.	GAUGE	A 1" ±	B. MAX.	H 1" ±	L 1½" ±	W 2" ±	S
		INCHES					
12	16	6	6	6	21	24	2½:1
15	16	7	8	6	26	30	2½:1
18	16	8	10	6	31	36	2½:1
21	16	9	12	6	36	42	2½:1
24	16	10	13	6	41	48	2½:1
30	14	12	16	8	51	60	2½:1
36	14	14	19	9	60	72	2½:1
42	12	16	22	11	69	84	2½:1
48	12	18	27	12	78	90	2½:1
54	12	18	30	12	84	102	2:1
60	12	18	33	12	87	114	1¾:1
66	12	18	36	12	87	120	1½:1
72	12	18	39	12	87	126	1 1/3:1

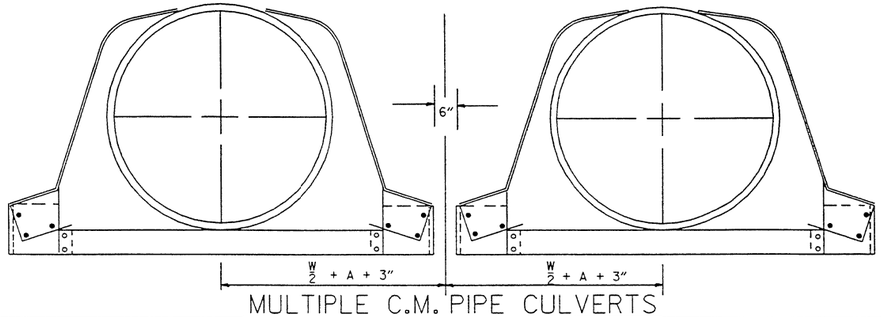
C.M. ARCH PIPE

EQUIV. DIA.	SPAN	RISE	A 1" ±	B MAX.	H 1" ±	L 1½" ±	W 2" ±	S	GAUGE
	INCHES								
15"	17	13	7	9	6	19	30	2½:1	16
18"	21	15	7	10	6	23	36	2½:1	16
21"	24	18	8	12	6	28	42	2½:1	16
24"	28	20	9	14	6	32	48	2½:1	16
30"	35	24	10	16	6	39	60	2½:1	14
36"	42	29	12	18	8	46	75	2½:1	14
42"	49	33	13	21	9	53	85	2½:1	12
48"	57	38	18	26	12	63	90	2½:1	12
54"	64	43	18	30	12	70	102	2¼:1	12
60"	71	47	18	33	12	77	114	2¼:1	12

END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS



MULTIPLE R.C. PIPE CULVERTS



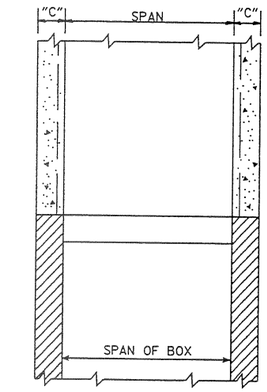
MULTIPLE C.M. PIPE CULVERTS

DATE	REVISION	FILMED
10-18-96	REVISED ASTM REF. TO AASHTO	
5-15-80	REVISED DISTANCE BETWEEN MULTIPLE R.C.P. F.E.S.	664-5-15-80
7-14-78	C.M. ARCH SIZES TO CONFORM WITH AASHTO SIZES	752-7-14-78
8-22-75	ADDED MULTIPLE PIPE CULVERTS	517-8-22-75
12-5-74	REMOVED NOTE RE REINF. FOR R.C. F.E.S.	500-12-5-74
5-24-73	CMP END SECTION, SHOW PIPE PAY LENGTH	627-5-24-73
10-2-72	REVISED AND REDRAWN	760-10-2-72

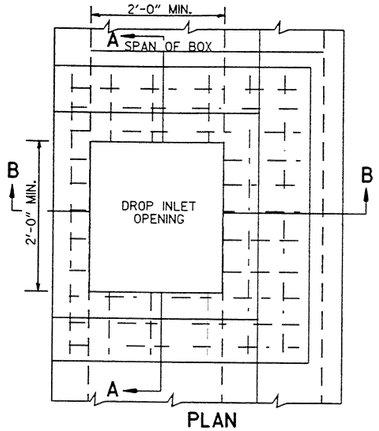
ARKANSAS STATE HIGHWAY COMMISSION

FLARED END SECTION

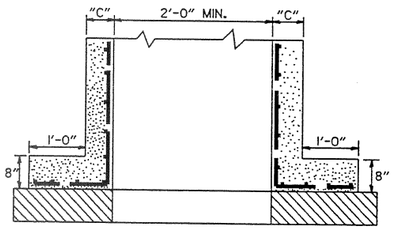
STANDARD DRAWING FES-2



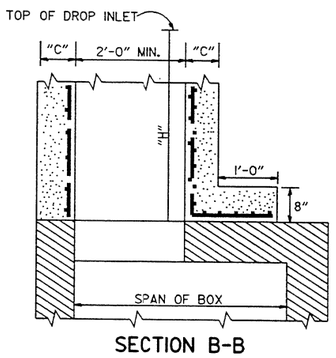
SECTION B-B



PLAN

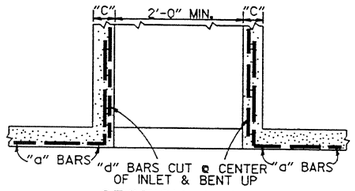


SECTION A-A

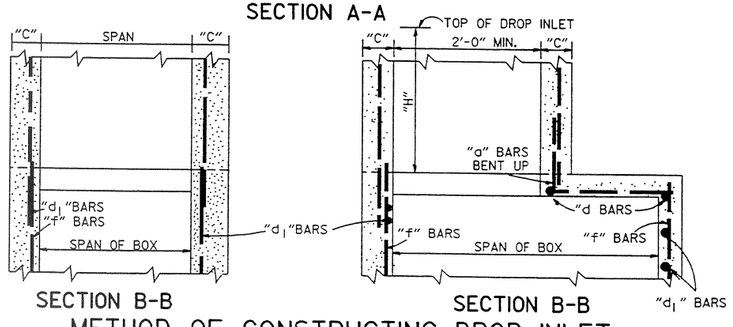


SECTION B-B

METHOD OF CONSTRUCTING DROP INLET ON EXISTING R.C. BOX CULVERT



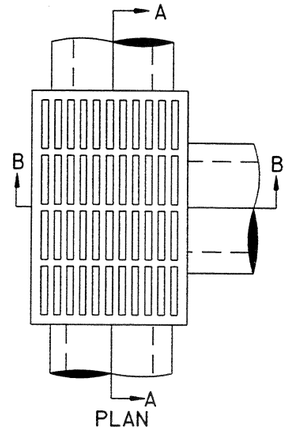
SECTION A-A



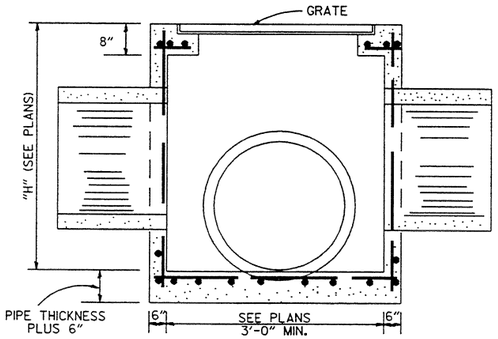
SECTION B-B SECTION B-B

METHOD OF CONSTRUCTING DROP INLET ON NEW R.C. BOX CULVERT

NOTE: "C" DIMENSIONS AND REINFORCING BAR SIZES, SHALL CONFORM TO THOSE SHOWN ON STANDARD DRAWING FOR DROP INLET.

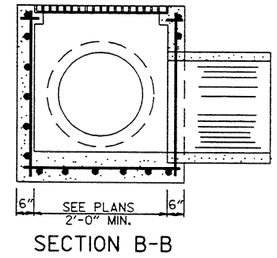


PLAN



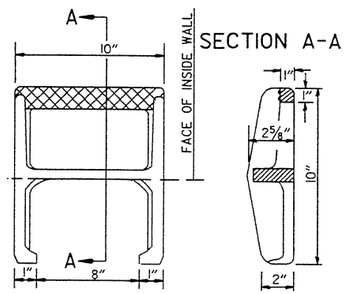
SECTION A-A

NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1½" MIN. COVER. THIS TYPE DROP INLET TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.



SECTION B-B

DROP INLET (TYPE E)

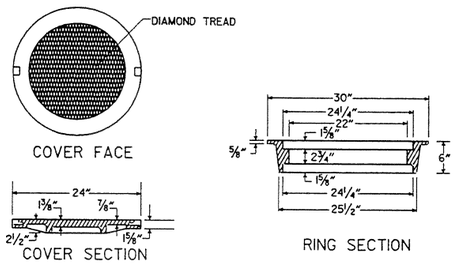


APPROX. WEIGHT = 11 LBS. (CAST IRON)

PLAN

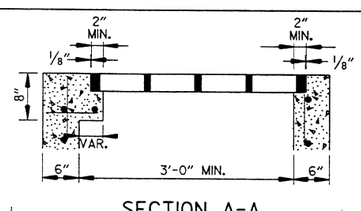
NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.

DETAIL OF STEP FOR DROP INLET

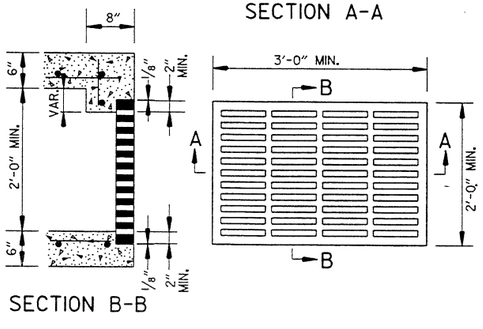


APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER



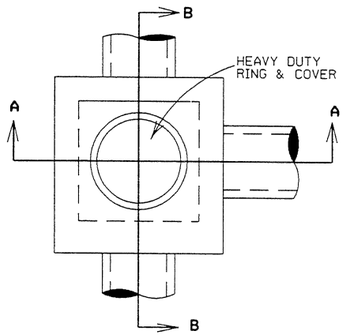
SECTION A-A



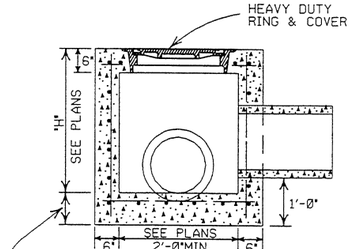
SECTION B-B

APPROXIMATE MINIMUM WATERWAY OPENING = 260 SQ. IN.

GRATE FOR TYPE E DROP INLET

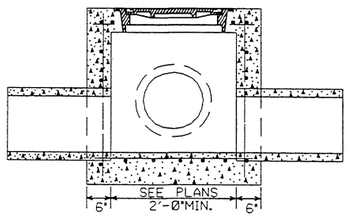


PLAN



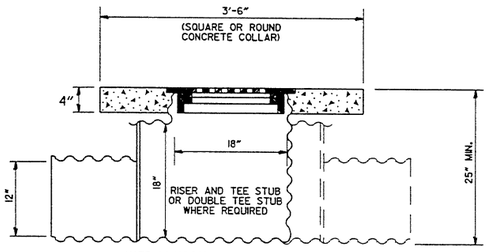
SECTION A-A

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.

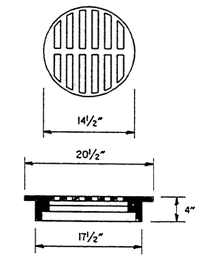


SECTION B-B

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

DROP INLET EXTENSION

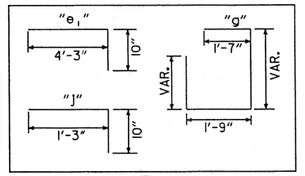
4′-0″ CLASS A CONC.	4′-0″ REINF. STEEL	8′-0″ CLASS A CONC.	8′-0″ REINF. STEEL
CU. YDS.	POUNDS	CU. YDS.	POUNDS
0.58	38	0.87	72
DEDUCT FROM QUANTITY COMPUTED FOR EACH EXTENSION ADDED.			
0.04	3		

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

DEDUCT FROM QUANTITY COMPUTED FOR EACH PIPE ENTERING INLET

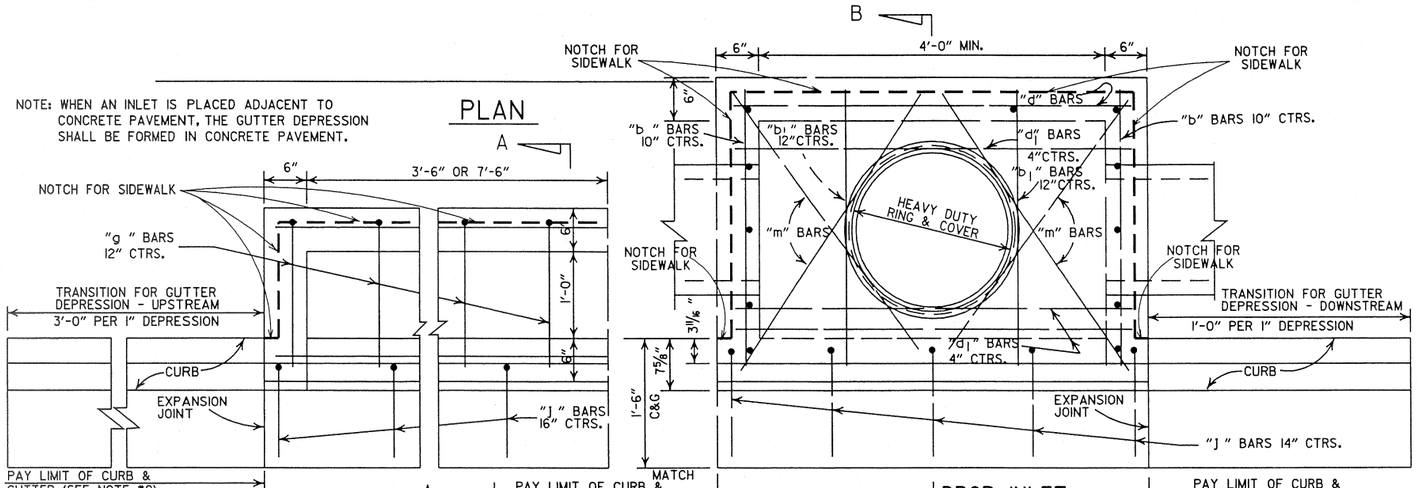
INSIDE DIA. PIPE	CLASS A CONC.	REINF. STEEL
INCHES	CU. YDS.	POUNDS
18	0.05	2
24	0.09	3
30	0.13	4
42	0.24	8

BAR DIAGRAM

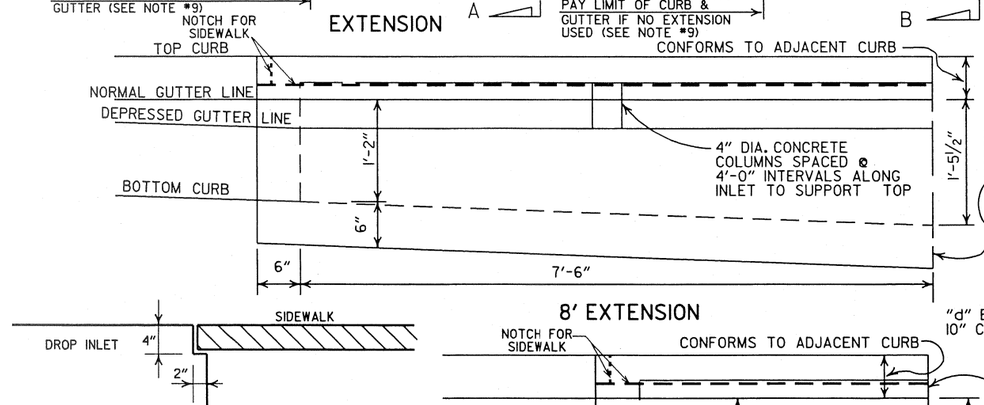


NOTE: WHEN AN INLET IS PLACED ADJACENT TO CONCRETE PAVEMENT, THE GUTTER DEPRESSION SHALL BE FORMED IN CONCRETE PAVEMENT.

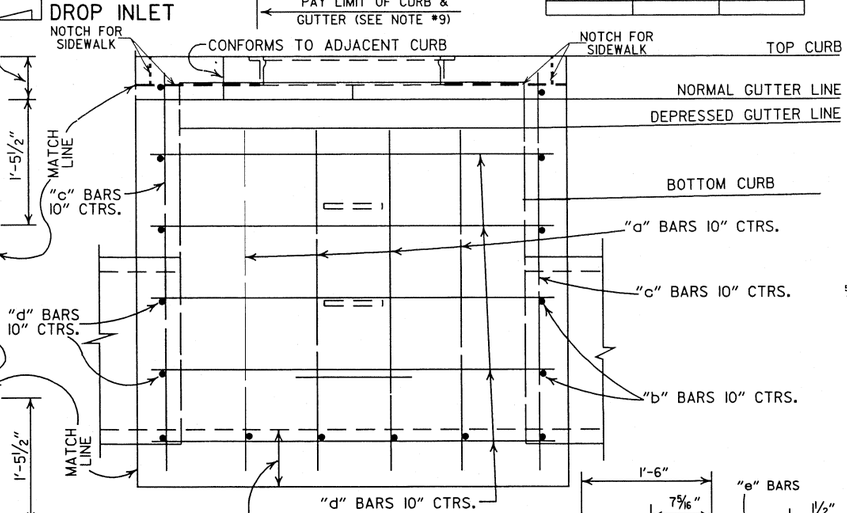
PLAN

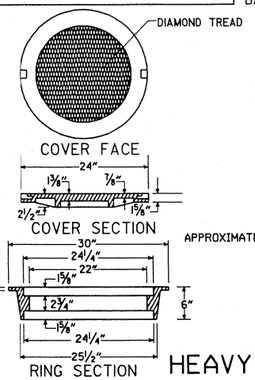


EXTENSION



DROP INLET

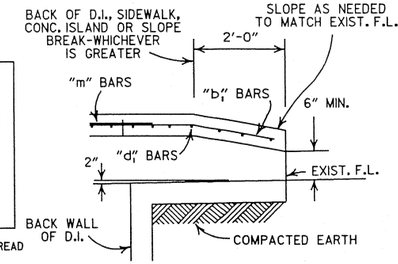




APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER

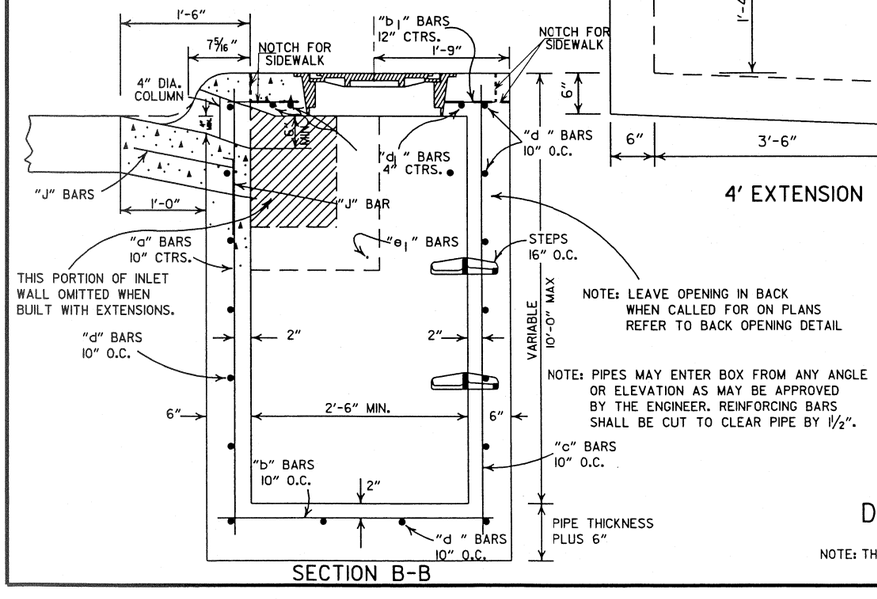
BACK OPENING



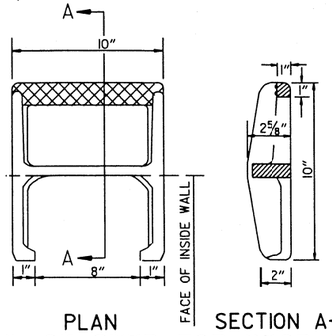
WHEN OPENING IN BACK IS CALLED FOR ON PLANS EXTEND OPENING AS SHOWN IN DETAIL. PAYMENT TO BE INCLUDED IN PRICE BID FOR DROP INLET (TYPE C).

DETAIL OF NOTCH FOR SIDEWALKS

SECTION B-B



ELEVATION

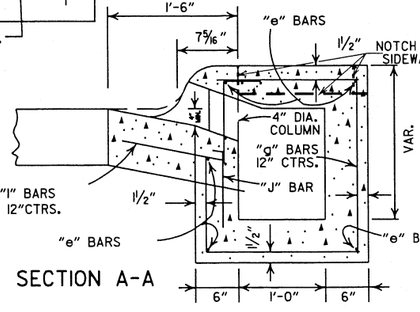


PLAN SECTION A-A

DETAIL OF STEP FOR DROP INLET

APPROX. WEIGHT = 11 LBS. (CAST IRON)

NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.



SECTION A-A

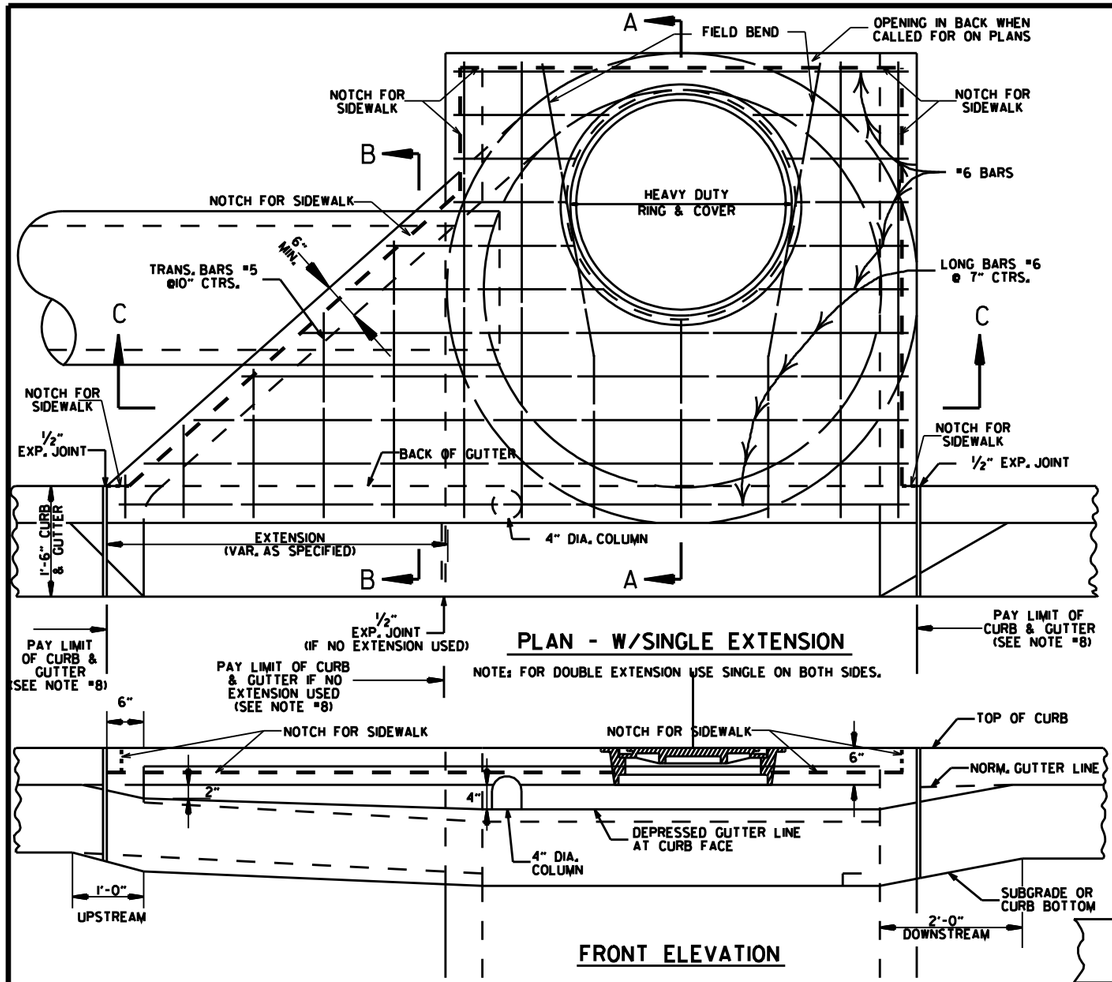
GENERAL NOTES:
1. ALL EXPOSED CORNERS TO HAVE ¾″ CHAMFER.
2. STEPS SHALL BE INSTALLED IN ALL INLETS 4′-0″ HIGH AND OVER OF AS APPROVED BY THE ENGINEER.
3. ALL REINF. BARS SHALL BE #4 AND HAVE 1½″ COVER.
4. DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
5. THIS 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.

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)

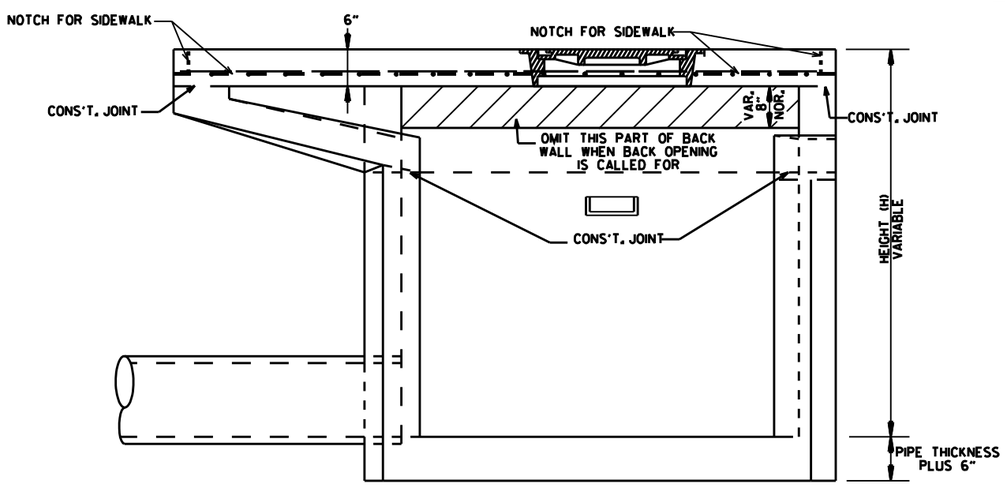
STANDARD DRAWING FPC-9E



PLAN - W/SINGLE EXTENSION

NOTE: FOR DOUBLE EXTENSION USE SINGLE ON BOTH SIDES.

FRONT ELEVATION



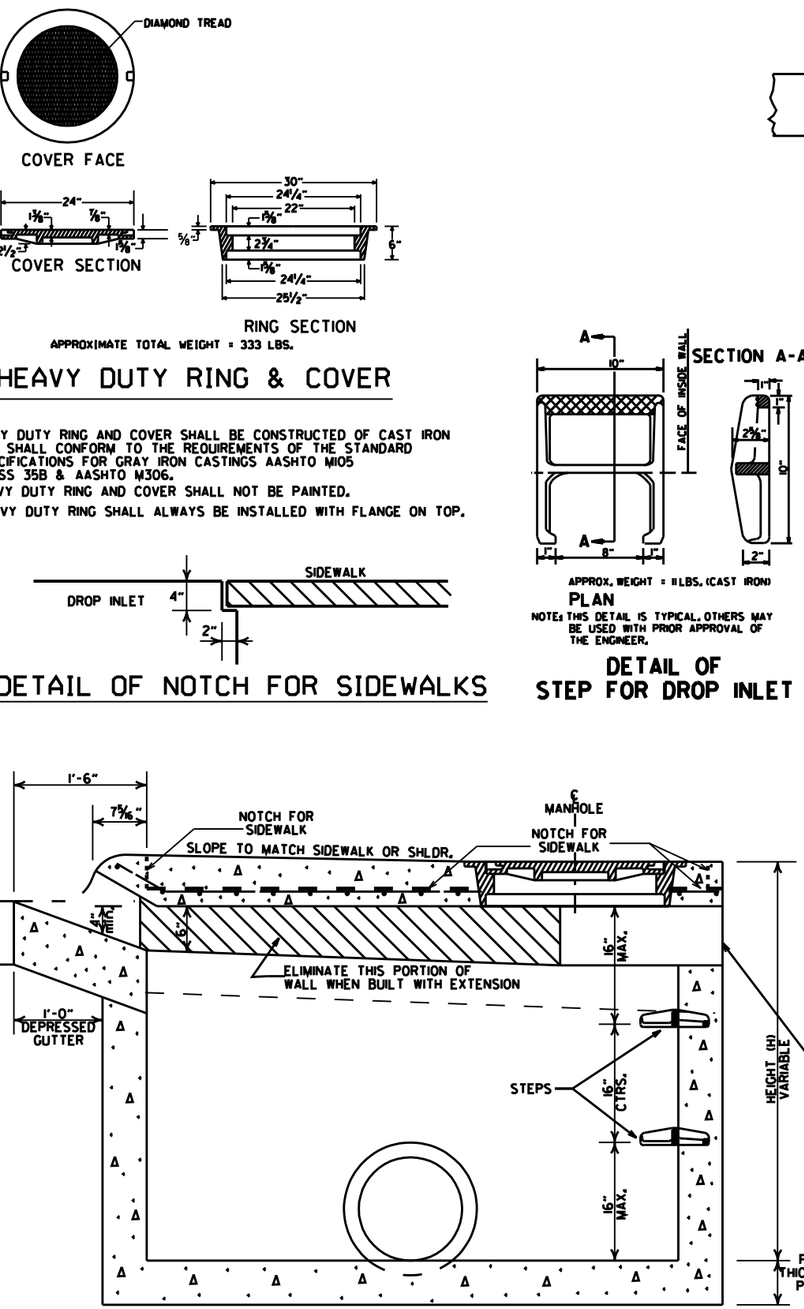
SECTION C-C

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



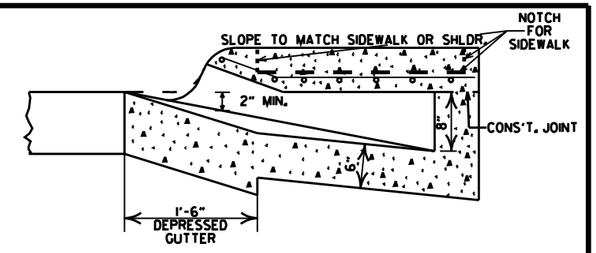
SECTION A-A

APPROX. WEIGHT = 11 LBS. (CAST IRON)

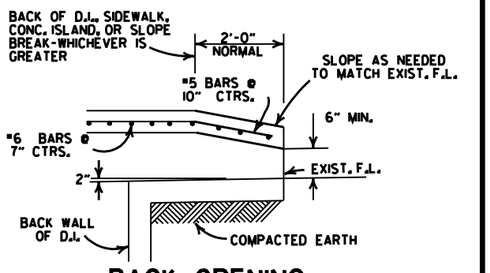
PLAN

NOTE: THIS DETAIL IS TYPICAL, OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.

DETAIL OF STEP FOR DROP INLET



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 3/4" 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. 1 1/2" 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.

LEAVE OPENING IN BACK WHEN CALLED FOR ON PLANS REFER TO BACK OPENING DETAIL

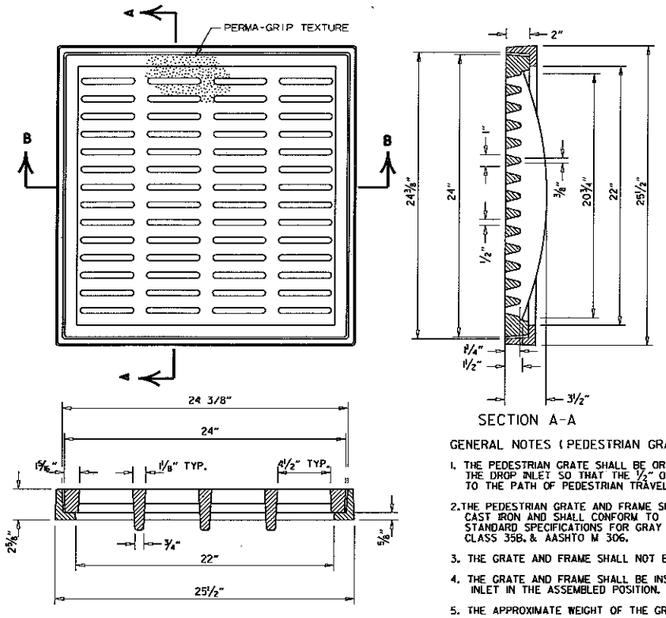
DIA. OF D.I.	DIA. OF OUTLET PIPE	MINIMUM WALL THICKNESS	
		CAST IN PLACE	PRECAST
4' I.D.	12" THRU 27"	6"	5"
5' I.D.	30" THRU 42"	8"	6"
6' I.D.	48" THRU 54"	8"	7"

DATE	REVISIONS	DATE FILMED
8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01	ADDED NOTE 13	
1-12-00	REVISED HEAVY DUTY RING & COVER	
5-13-99	ADDED NOTCH DETAIL FOR SIDEWALKS	
7-02-98	REP. NOTE 8, REV. 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 & ADJ. OPENING DIMENSION	
10-12-95	CORRECTED *5 BAR SPACING	
7-20-95	CORRECTED DIAMETER OF D.I. IN BOX	
2-2-95	TYPE C TO MO (OPEN BACK DETAIL)	
11-1-94	REVISED GENERAL NOTES	11-1-94
4-1-93	REV BACK OPEN DETAIL & NOTE	4-1-93
8-14-91	REVISED NOTES 11,12 & ADDED BK.OPEN DETAIL	8-14-91
11-30-89	ADDED NOTE NO.12	11-30-89
4-21-89	ADDED NOTE 4 & MINIMUM WALL THICKNESS	AVL-4-21-89
7-25-88	ADDED EXTEND NOTE TO SECTION A-A	639-7-25-88
1-14-87	MODIFIED WALL THICKNESS	783-1-14-87
6-12-87	ISSUED	4-6-12-87

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLET (TYPE MO)

STANDARD DRAWING FPC-9M



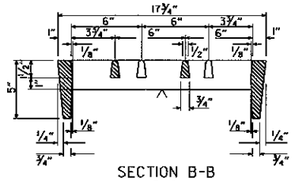
SECTION B-B

SECTION A-A

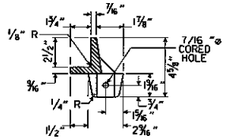
DETAILS OF PEDESTRIAN GRATE AND FRAME

GENERAL NOTES (PEDESTRIAN GRATE & FRAME)

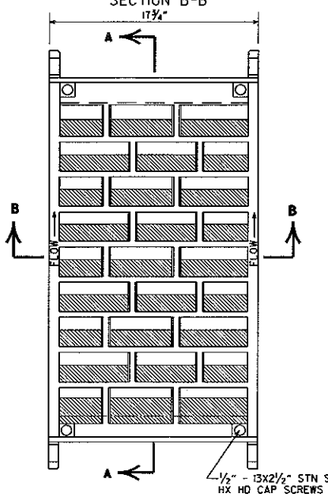
1. THE PEDESTRIAN GRATE SHALL BE ORIENTED IN THE TOP OF THE DROP INLET SO THAT THE ½" OPENINGS ARE PERPENDICULAR TO THE PATH OF PEDESTRIAN TRAVEL.
2. THE PEDESTRIAN GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105, CLASS 35B, & AASHTO M 306.
3. THE GRATE AND FRAME SHALL NOT BE PAINTED.
4. THE GRATE AND FRAME SHALL BE INSTALLED IN THE DROP INLET IN THE ASSEMBLED POSITION.
5. THE APPROXIMATE WEIGHT OF THE GRATE AND FRAME SHALL BE 211LBS.
6. THE MINIMUM WATERWAY OPENING SHALL BE 122 SQ. IN.

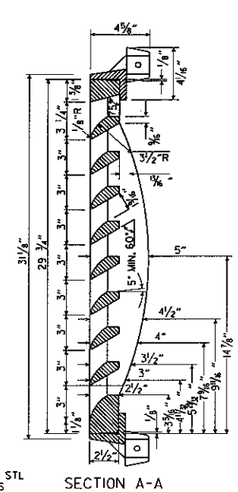


SECTION B-B



SECTION THRU FRAME



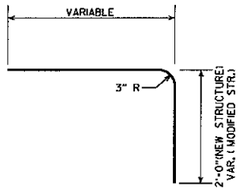


SECTION A-A

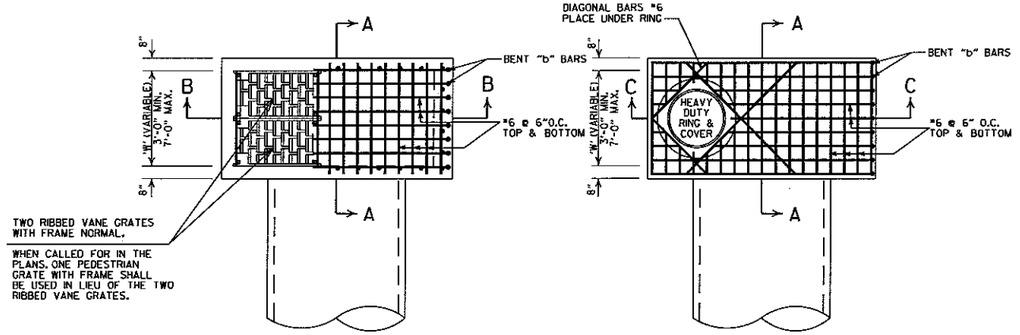
DETAILS OF RIBBED VANE GRATE AND FRAME

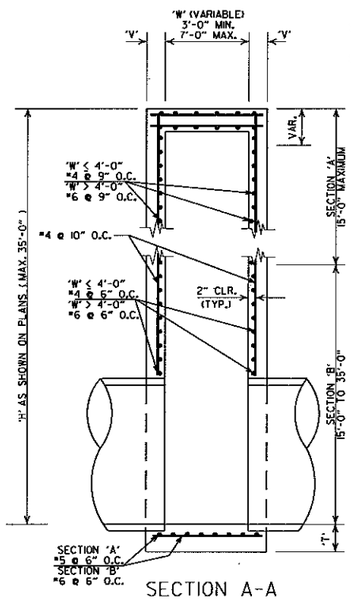
GENERAL NOTES (RIBBED VANE GRATE & FRAME)

1. RIBBED VANE GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105, CLASS 35B, & AASHTO M 306.
2. GRATE AND FRAME SHALL NOT BE PAINTED.
3. GRATE AND FRAME SHALL BE INSTALLED IN DROP INLET IN ASSEMBLED POSITION.
4. APPROXIMATE WEIGHT OF GRATE SHALL BE 170 LBS.

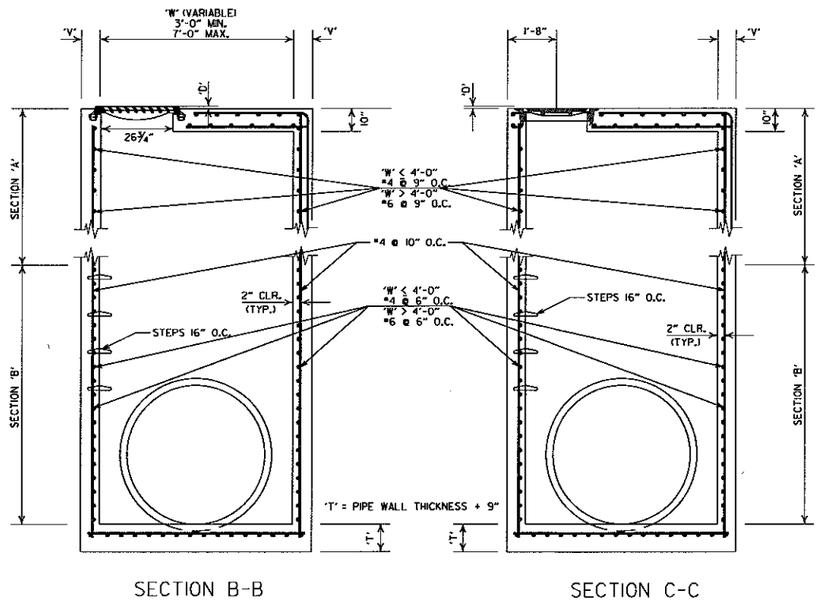


DETAIL OF BENT "b" BAR





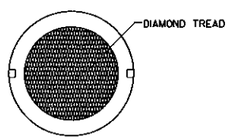
SECTION A-A



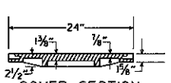
SECTION B-B SECTION C-C

DETAILS OF DROP INLET (TYPE ST)

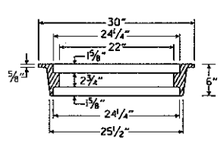
DETAILS OF JUNCTION BOX (TYPE ST)



COVER FACE



COVER SECTION



RING SECTION

HEAVY DUTY RING & COVER

APPROXIMATE TOTAL WEIGHT = 333 LBS.

GENERAL NOTES (TYPE ST DROP INLET & JUNCTION BOX)

1. THE 'D' DIMENSION SHALL MATCH THE FINAL LIFT OF ACHM SURFACE COURSE SHOWN IN THE PLANS WHEN ASPHALT PAVING SURROUNDS THE GRATE OR RING COVER, AND SHALL BE 0" AT OTHER INSTALLATIONS.
2. THE STEPS SHALL BE OMITTED WHERE 'H' IS LESS THAN 4'-0".
3. ALL EXPOSED CORNERS ARE TO HAVE A ¾" CHAMFER.

GENERAL NOTES (HEAVY DUTY RING & COVER):

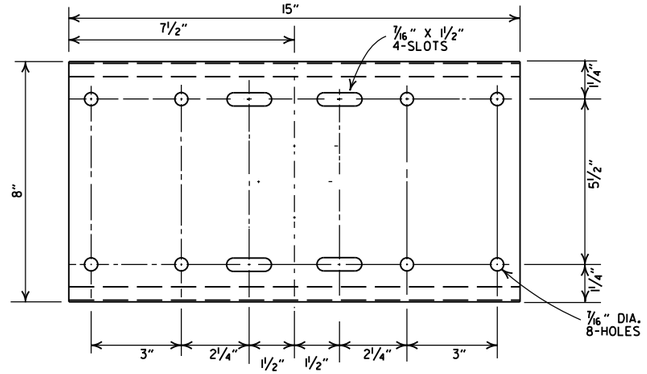
1. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105, CLASS 35B, & AASHTO M 306.
2. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
3. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
4. 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 REVISED	DATE FILMED	DESCRIPTION
7-26-12		REMOVED NOTE 4, REVISED 'T', REVISED BOTTOM SLAB REBAR FOR SECTION 'A', SHOWED REBAR CLEARANCE IN SECTIONS
11-16-01		ADDED NOTE 4
1-12-00		REVISED HEAVY DUTY RING & COVER
5-13-99		ADDED PEDESTRIAN FRAME & GRATE
7-02-98		REMOVED NOTE 5, REV. DIMENSIONS, ADDED HEAVY DUTY RING & COVER ADDED AASHTO REF. REVISED GRATE
10-18-96		REVISED ASTM REF. TO AASHTO
10-1-92		REVISED & REISSUED
8-15-91	8-15-91	REVISED & REISSUED

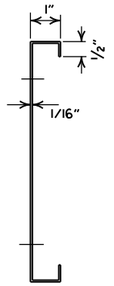
ARKANSAS STATE HIGHWAY COMMISSION

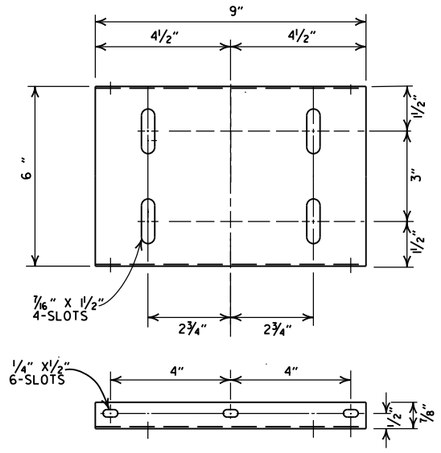
DETAILS OF DROP INLET & JUNCTION BOX (TYPE ST)

STANDARD DRAWING FPC-9S

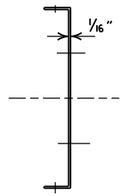


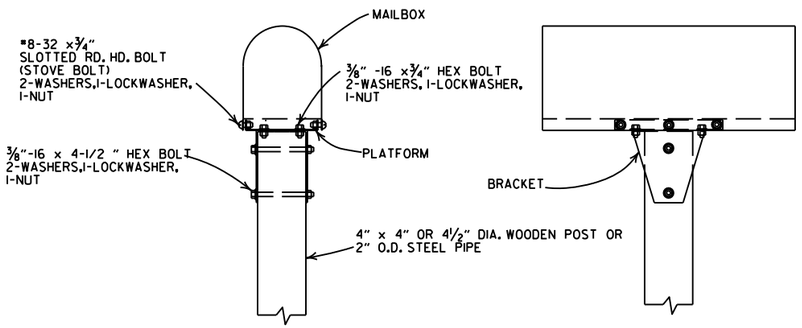
SHELF



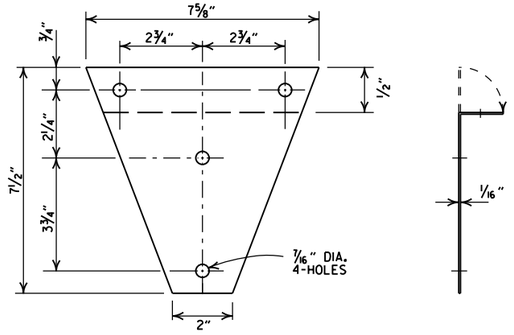


PLATFORM





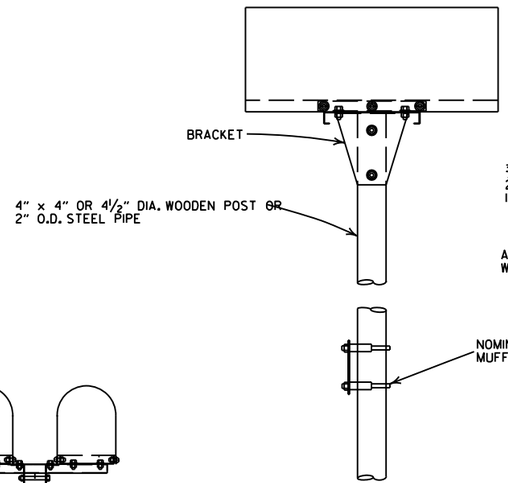
SINGLE INSTALLATION



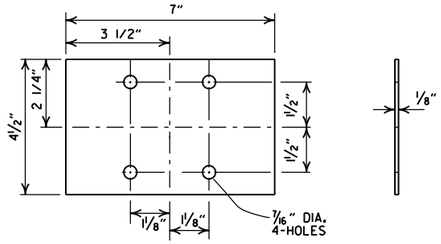
BRACKET

GENERAL NOTES

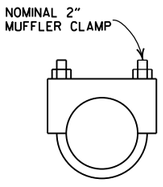
1. MAILBOX POSTS MAY BE WOOD OR METAL. WOOD POSTS SHALL BE PRESSURE TREATED FOR GROUND CONTACT IN ACCORDANCE WITH SECTION 637.02 OF THE STANDARD SPECIFICATIONS.
2. ANTI-TWIST PLATES SHALL BE USED ONLY ON METAL POSTS.
3. MAILBOX SHELF, BRACKET & PLATFORM SHALL BE GALVANIZED OR PAINTED STEEL, HOWEVER TREATED WOOD MAY BE USED WITH WOODEN POSTS. THE WOODEN SHELF, BRACKET & PLATFORM SHALL BE A MINIMUM OF ¾" THICK AND SHALL BE ASSEMBLED WITH BOLTS OF THE APPROPRIATE LENGTH WITH SIX 8 X¾" FLATHEAD WOOD SCREWS USED TO ATTACH THE MAILBOX TO THE PLATFORM.
4. THE MAILBOX SHELF AND PLATFORM THAT IS SHOWN IS FOR STANDARD SIZE MAILBOXES. THE SHELF AND PLATFORM SIZE SHALL BE MODIFIED TO FIT MAILBOXES OF A DIFFERENT SIZE.
5. METAL PIPE FOR MAILBOX SUPPORT SHALL BE 2" OUTSIDE DIAMETER STEEL WITH A WALL THICKNESS OF 0.145" AND A WEIGHT OF 2.72 LBS PER FT. OUTSIDE DIAMETER AND WEIGHT SHALL HAVE A TOLERANCE OF +/- 5% ACCORDING TO AASHTO M 181.
6. MAILBOX SUPPORT SYSTEM DIFFERING FROM THOSE SHOWN MAY BE USED, PROVIDED THEY ARE ON THE ARDOT QUALIFIED PRODUCTS LIST FOR MAILBOX SUPPORTS.



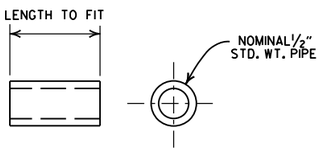
DOUBLE INSTALLATION



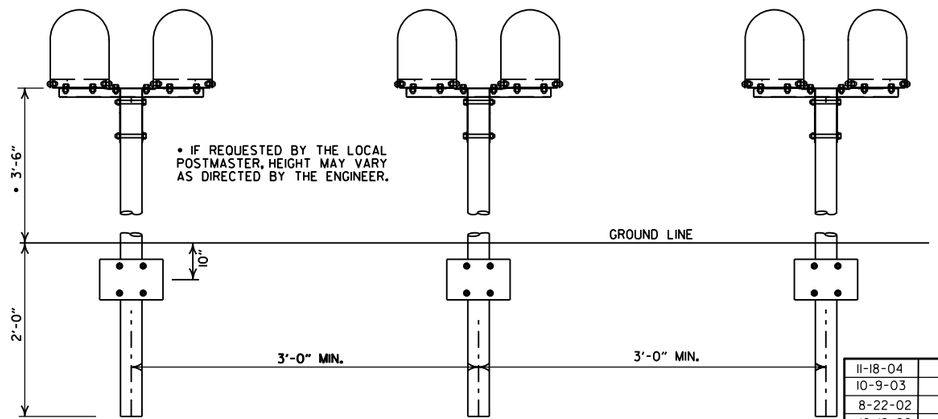
ANTI-TWIST PLATE



CLAMP



SPACER



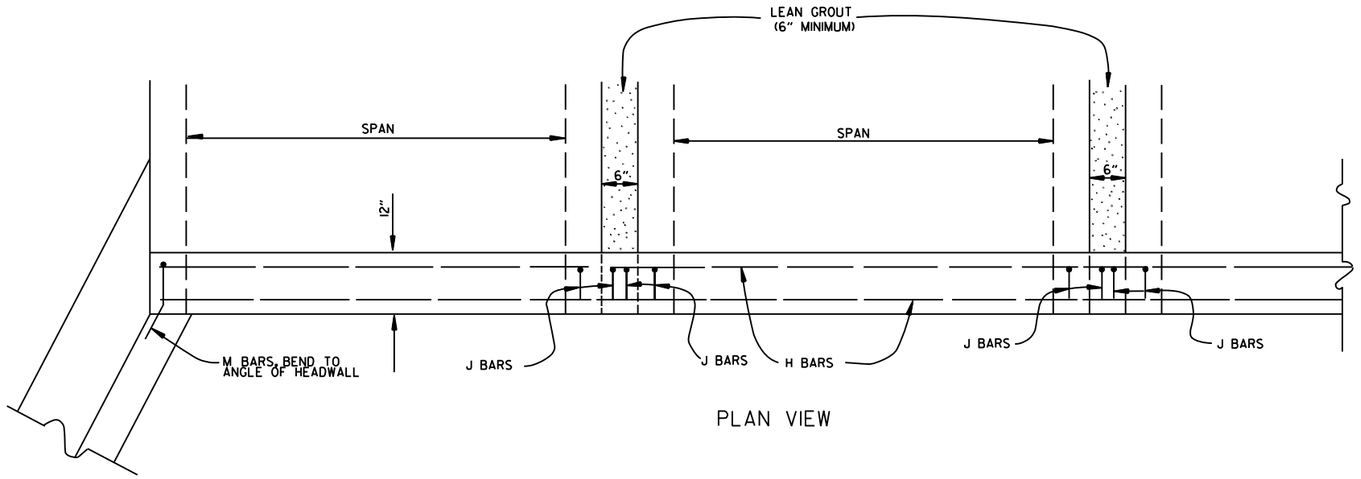
SPACING FOR MULTIPLE POST INSTALLATION

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

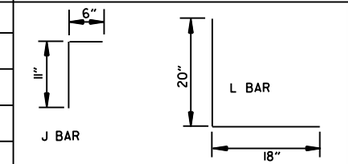
STANDARD DRAWING MB-1



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.

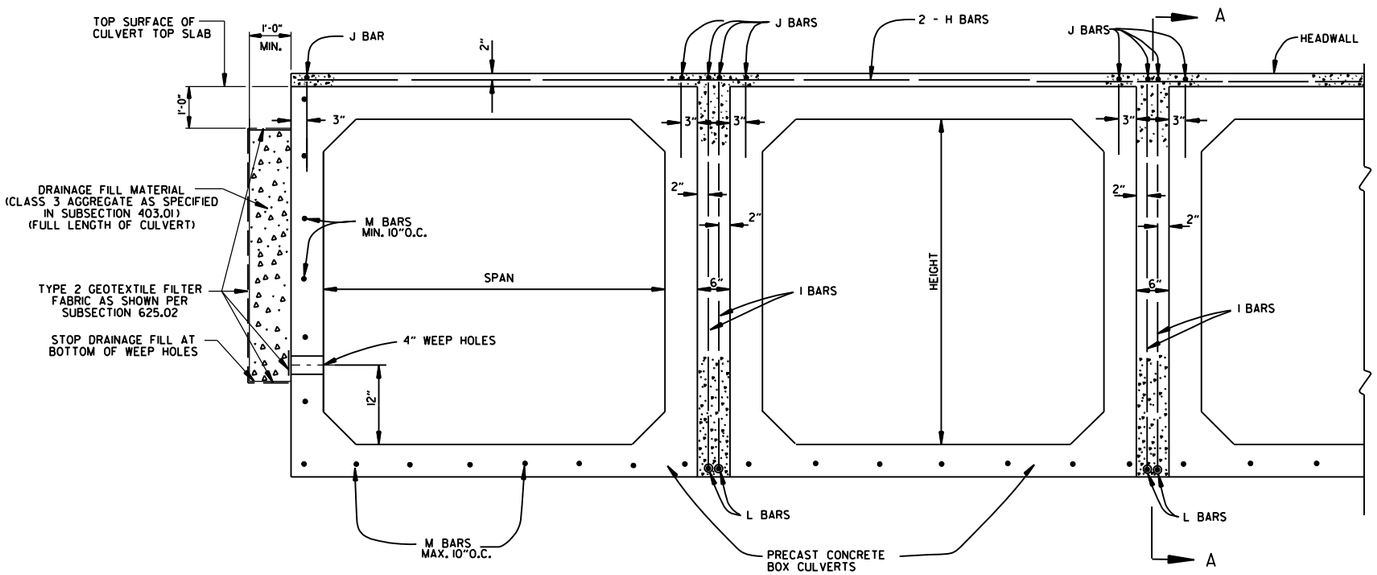
THE MEMBRANE WATERPROOFING WILL BE REQUIRED ON THE TOP EXTERNAL JOINT AND SHALL EXTEND 1 FOOT DOWN THE SIDES OF THE CULVERT.

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.

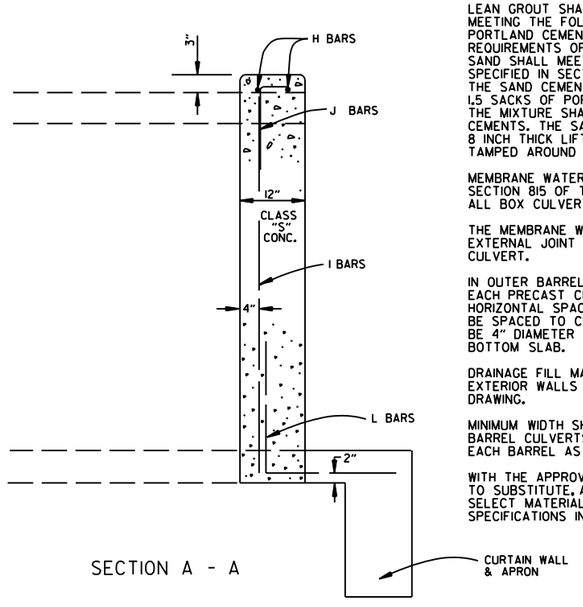
DRAINAGE FILL MATERIAL WITH GEOTEXTILE FABRIC IS REQUIRED AT THE EXTERIOR WALLS OF THE ASSEMBLED CULVERT, SEE DETAILS ON THIS DRAWING.

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	
11-10-05	REVISED SPACING OF "M" BARS	
4-10-03	REVISED GENERAL NOTES	
10-18-96	CORRECTED AASHTO REF.	
10-1-92	ADDED NOTE FOR MEMBRANE WATERPROOFING	
8-15-91	ADDED NOTE FOR LEAN GROUT	
11- 8-90	REVISED FOR 1991 SPECS	
11-30-89	ISSUED; JABE	

ARKANSAS STATE HIGHWAY COMMISSION

PRECAST CONCRETE BOX CULVERTS

STANDARD DRAWING PBC-1

REINFORCED CONCRETE ARCH PIPE DIMENSIONS

EQUIV. DIA.	SPAN		RISE	
	AASHTO M 206	ARDOT NOMINAL	AASHTO M 206	ARDOT NOMINAL
INCHES	INCHES			
15	18	18	11	11
18	22	22	13½	14
21	26	26	15½	16
24	28½	29	18	18
30	36¼	36	22½	23
36	43⅜	44	26⅝	27
42	51⅛	51	31⅜	31
48	58½	59	36	36
54	65	65	40	40
60	73	73	45	45
72	88	88	54	54
84	102	102	62	62
90	115	115	72	72
96	122	122	77½	77
108	138	138	87⅛	87
120	154	154	96⅞	97
132	168¾	169	106½	107

THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PERCENT FROM THE VALUES SPECIFIED BY AASHTO M206.

REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE DIMENSIONS

EQUIV. DIA.	AASHTO M 207	
	SPAN	RISE
INCHES	INCHES	
18	23	14
24	30	19
27	34	22
30	38	24
33	42	27
36	45	29
39	49	32
42	53	34
48	60	38
54	68	43
60	76	48
66	83	53
72	91	58
78	98	63
84	106	68

THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PERCENT FROM THE VALUES SPECIFIED BY AASHTO M207.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. PLACE AND COMPACT THE HAUNCH AREA UP TO THE MIDDLE OF THE PIPE.
5. COMPLETE BACKFILL ACCORDING TO SUBSECTION 606.03.(f)(1).

NOTE: HAUNCH AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF CONCRETE PIPE.

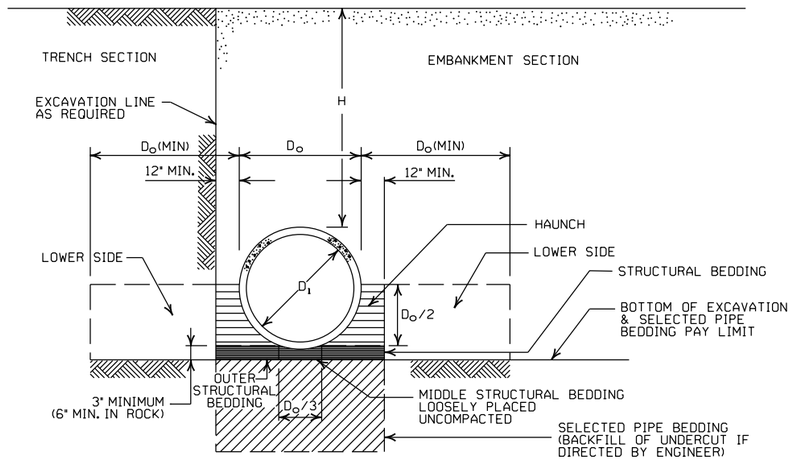
- LEGEND -

D_1 = NORMAL INSIDE DIAMETER OF PIPE
D_O = OUTSIDE DIAMETER OF PIPE
H = FILL COVER HEIGHT OVER PIPE (FEET)
MIN. = MINIMUM
▨ = UNDISTURBED SOIL

INSTALLATION TYPE	MATERIAL REQUIREMENTS FOR HAUNCH AND STRUCTURAL BEDDING
TYPE 1	AGGREGATE BASE COURSE (CLASS 5 OR CLASS 7)
TYPE 2	SELECTED MATERIALS (CLASS SM-1, SM-2, OR SM-4) OR TYPE 1 INSTALLATION MATERIAL*
TYPE 3**	AASHTO CLASSIFICATION A-1 THRU A-6 SOIL OR TYPE 1 OR 2 INSTALLATION MATERIAL

* SM-3 WILL NOT BE ALLOWED.

** MATERIALS SHALL NOT INCLUDE ORGANIC MATERIALS OR STONES LARGER THAN 3 INCHES.



EMBANKMENT AND TRENCH INSTALLATIONS

1. MATERIAL IN THE HAUNCH AND OUTER STRUCTURAL BEDDING SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.
2. FOR TRENCHES WITH WALLS OF NATURAL SOIL, THE DENSITY OF THE SOIL IN THE LOWER SIDE ZONE SHALL BE AS FIRM AS THE 95% DENSITY REQUIRED FOR THE HAUNCH. IF THE EXISTING SOIL DOES NOT MEET THIS CRITERIA, IT SHALL BE REMOVED AND RECOMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OF MATERIAL USED.
3. FOR EMBANKMENTS, THE MATERIAL IN THE LOWER SIDE ZONE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

GENERAL NOTES

1. CONCRETE PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS. UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER TO THE STANDARD CONSTRUCTION SPECIFICATIONS.
2. CONCRETE PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. ALL PIPE SHALL CONFORM TO SECTION 606. CIRCULAR R.C. PIPE CULVERTS SHALL CONFORM TO AASHTO M170, R.C. ARCH PIPE CULVERTS SHALL CONFORM TO AASHTO M206 AND HORIZONTAL ELLIPTICAL PIPE CULVERTS SHALL CONFORM TO AASHTO M207.
4. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
5. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PRACTICABLE FOR WORKING CONDITIONS.
6. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE. REFER TO STD. DWG. FES-2 FOR MINIMUM CLEARANCE WHERE FLARED END SECTIONS ARE USED.
7. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
8. NOT MORE THAN ONE LIFTING HOLE MAY BE PROVIDED IN CONCRETE PIPE TO FACILITATE HANDLING. HOLE MAY BE CAST IN PLACE, CUT INTO THE FRESH CONCRETE AFTER FORMS ARE REMOVED, OR DRILLED. THE HOLE SHALL NOT BE MORE THAN TWO INCHES IN DIAMETER OR TWO INCHES SQUARE. CUTTING OR DISPLACEMENT OF REINFORCEMENT WILL NOT BE PERMITTED. SPALLED AREAS AROUND THE HOLE SHALL BE REPAIRED IN A WORKMANLIKE MANNER. LIFTING HOLE SHALL BE FILLED WITH MORTAR, CONCRETE, OR OTHER METHOD AS APPROVED BY THE ENGINEER.
9. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
10. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS THE HAUNCH), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."

MINIMUM HEIGHT OF FILL "H" OVER CIRCULAR R.C. PIPE CULVERTS

	CLASS OF PIPE			
	CLASS III		CLASS IV	CLASS V
INSTALLATION TYPE	TYPE 1 OR 2	TYPE 3	ALL	ALL
PIPE ID (IN.)	FEET			
12-15	2	2.5	2	1
18-24	2.5	3	2	1
27-33	3	4	2	1
36-42	3.5	5	2	1
48	4.5	5.5	2	1
54-60	5	7	2	1
66-78	6	8	2	1
84-108	7.5	8	2	1

NOTE: FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM OF 12" OF PAVEMENT AND/OR BASE.

MAXIMUM HEIGHT OF FILL "H" OVER CIRCULAR R.C. PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE		
	CLASS III	CLASS IV	CLASS V
	FEET		
TYPE 1	21	32	50
TYPE 2	16	25	39
TYPE 3	12	20	30

NOTE: IF FILL HEIGHT EXCEEDS 50 FEET, A SPECIAL DESIGN CONCRETE PIPE WILL BE REQUIRED USING TYPE 1 INSTALLATION.

MINIMUM HEIGHT OF FILL "H" OVER R.C. ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE	
	CLASS III	CLASS IV
	FEET	
TYPE 2 OR TYPE 3	2.5	1.5

NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

NOTE: FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM OF 12" OF PAVEMENT AND/OR BASE.

MAXIMUM HEIGHT OF FILL "H" OVER R.C. ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE	
	CLASS III	CLASS IV
	FEET	
TYPE 2	13	21
TYPE 3	10	16

NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REVISED FOR LRFD DESIGN SPECIFICATIONS	
5-18-00	REVISED TYPE 3 BEDDING & ADDED NOTE	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCC-1

CORRUGATED STEEL PIPE (ROUND)

PIPE DIAMETER (INCHES)	① MINUMUM COVER TOP OF PIPE TO TOP OF GROUND "H" (FEET)	MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET)				
		METAL THICKNESS (INCHES)				
		0.064	0.079	0.109	0.138	0.168
2⅔ INCH BY ½ INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM						
12	1	84	91			
15	1	67	73			
18	1	56	61			
24	1	42	46	59		
30	2	34	36	47		
36	2		30	39	41	
42	2		43	67	70	73
48	2		37	58	61	64
② 3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION RIVETED, WELDED, BOLTED, OR HELICAL LOCK-SEAM						
36	1	48	60	88	111	118
42	1	41	51	72	90	102
48	1	36	45	64	77	85
54	2	32	40	59	71	79
60	2	29	36	53	64	71
66	2	26	33	47	58	64
72	2	24	30	44	53	59
78	2		28	41	49	54
84	2		26	38	45	51
90	2		24	35	43	45
96	2		22	33	40	44
102	2			31	38	42
108	2			30	35	39
114	2			28	34	37
120	2			27	32	35

CORRUGATED ALUMINUM PIPE (ROUND)

PIPE DIAMETER (INCHES)	① MINUMUM COVER TOP OF PIPE TO TOP OF GROUND "H" (FEET)	MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET)				
		METAL THICKNESS IN INCHES				
		0.060	0.075	0.105	0.135	0.164
		2 ⅔ INCH BY ½ INCH CORRUGATION RIVETED OR HELICAL LOCK-SEAM				
12	1	45	45			
18	2	30	30	52		
24	2	22	22	39	41	
30	2		18	31	32	34
36	2.5		15	26	27	28
42	2			43	43	44
48	2			40	41	43
54	2			35	37	38
60	2				33	34
66	2					31
72	2					29

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. COMPLETE STRUCTURAL BACKFILL OPERATION BY WORKING FROM SIDE TO SIDE OF THE PIPE. THE SIDE TO SIDE STRUCTURAL BACKFILL DIFFERENTIAL SHALL NOT EXCEED 24 INCHES OR 1/3 THE SIZE OF THE PIPE, WHICHEVER IS LESS.

NOTE: STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF METAL PIPE.

INSTALLATION TYPE	MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 1	AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7)
TYPE 2	SELECTED MATERIALS (CLASS SM-1, SM-2, OR SM-4) OR TYPE 1 INSTALLATION MATERIAL ③

③ SM-3 WILL NOT BE ALLOWED.

EQUIVALENT METAL THICKNESSES AND GAUGES

METAL THICKNESS IN INCHES			GAUGE NUMBER
STEEL			
ZINC COATED	UNCOATED	ALUMINUM	
0.064	0.0598	0.060	16
0.079	0.0747	0.075	14
0.109	0.1046	0.105	12
0.138	0.1345	0.135	10
0.168	0.1644	0.164	8

CORRUGATED METAL PIPE ARCHES

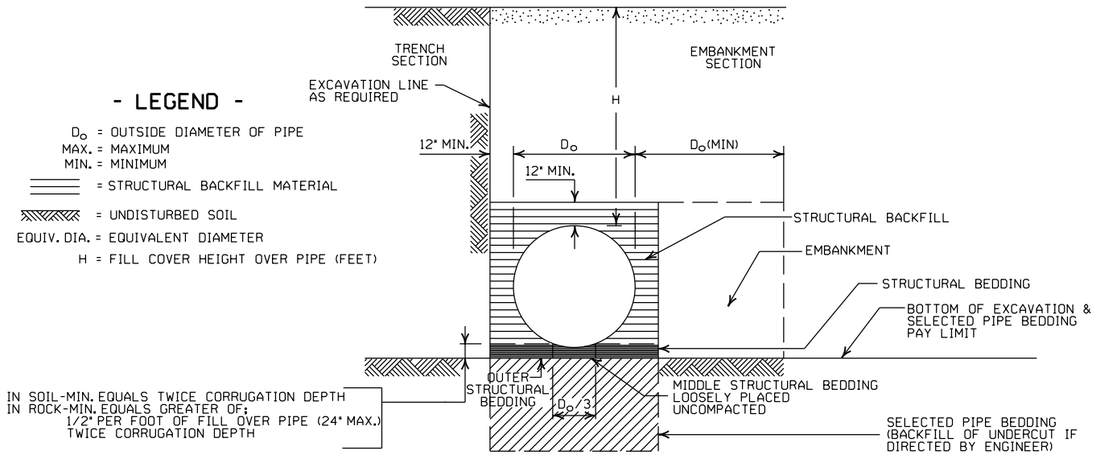
EQUIV. DIA. (INCHES)	PIPE DIMENSION SPAN X RISE (INCHES)	MINUMUM CORNER RADIUS (INCHES)	STEEL			ALUMINUM		
			MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)	MAX. HEIGHT OF FILL, "H" (FT.)	MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)	MAX. HEIGHT OF FILL, "H" (FT.)
				INSTALLATION TYPE 1	INSTALLATION TYPE 1		INSTALLATION TYPE 1	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 TYPE 2	INSTALLATION TYPE 1		INSTALLATION TYPE 2	INSTALLATION TYPE 1
36	40x31	5	0.079	3	2		12	15
42	46x36	6	0.079	3	2		13	15
48	53x41	7	0.079	3	2		13	15
54	60x46	8	0.079	3	2		13	15
60	66x51	9	0.079	3	2		13	15
66	73x55	12	0.079	3	2		15	15
72	81x59	14	0.079	3	2		15	15
78	87x63	14	0.079	3	2		15	15
84	95x67	16	0.109	3	2		15	15
90	103x71	16	0.109	3	2		15	15
96	112x75	18	0.109	3	2		15	15
102	117x79	18	0.109	3	2		15	15
108	128x83	18	0.138	3	2		15	15

① FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.

② WHERE THE STANDARD 2 2/3"x ½" CORRUGATION AND GAUGE IS SPECIFIED FOR A GIVEN DIAMETER, A PIPE OF THE SAME DIAMETER WITH A 3" x 1" OR 5" x 1" CORRUGATION MAY BE SUBSTITUTED, PROVIDING IT IS GAUGED FOR A FILL HEIGHT CONDITION EQUAL TO OR GREATER THAN THE MAXIMUM FILL HEIGHT CONDITION FOR THE SPECIFIED GAUGE AND CORRUGATION.

- LEGEND -

D_o = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM
= STRUCTURAL BACKFILL MATERIAL
= UNDISTURBED SOIL
EQUIV. DIA. = EQUIVALENT DIAMETER
H = FILL COVER HEIGHT OVER PIPE (FEET)



EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.
2. INSTALLATION TYPE 1 OR 2 MAY BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE (ROUND).
3. INSTALALTION TYPE 1 SHALL BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE ARCHES WITH 2⅔" X ½" CORRUGATION.
4. INSTALLATION TYPE 1 OR 2 MAY BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE ARCHES WITH 3" X 1" OR 5" X 1" CORRUGATION.

GENERAL NOTES

1. METAL PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS. UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER TO THE STANDARD CONSTRUCTION SPECIFICATIONS.
2. METAL PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. METAL PIPE CULVERT MATERIALS AND INSTALLATIONS SHALL CONFORM TO SECTION 606 AND JOB SPECIAL PROVISION "METAL PIPE".
4. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
5. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PRACTICABLE FOR WORKING CONDITIONS.
6. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE. REFER TO STD. DWG. FES-2 FOR MINIMUM CLEARANCE WHERE FLARED END SECTIONS ARE USED.
7. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
8. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
9. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REVISED FOR LRFD DESIGN SPECS	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

METAL PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCM-1

INSTALLATION TYPE	•• MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 2	•SELECTED MATERIALS (CLASS SM-1, SM-2 OR SM-4)

• AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7) MAY BE USED IN LIEU OF SELECTED MATERIAL.

SM3 WILL NOT BE ALLOWED.

•• STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1INCH. STRUCTURAL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, STONES LARGER THAN 1.50 INCH IN GREATEST DIMENSION, OR FROZEN LUMPS.

STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF HDPE PIPE.

MULTIPLE INSTALLATION OF HIGH DENSITY POLYETHYLENE PIPES

PIPE DIAMETER	CLEAR DISTANCE BETWEEN PIPES
18"	1'-6"
24"	2'-0"
30"	2'-6"
36"	3'-0"
42"	3'-6"
48"	4'-0"

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

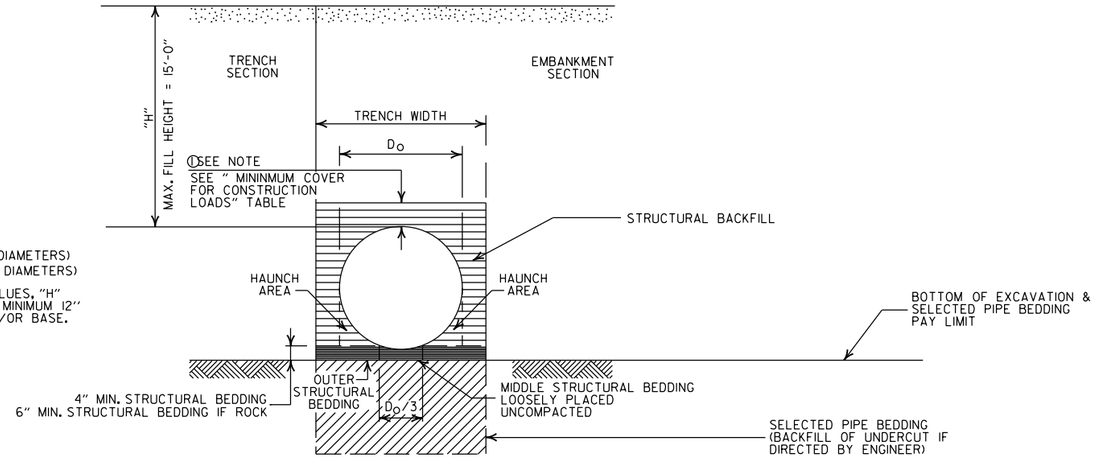
PIPE DIAMETER	TRENCH WIDTH (FEET)	
	"H" < 10'-0"	"H" >OR= 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"
42"	7'-0"	10'-6"
48"	8'-0"	12'-0"

①NOTE:
18" MIN. (18" - 30" DIAMETERS)
24" MIN. (36" - 48" DIAMETERS)
MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.

MINIMUM COVER FOR CONSTRUCTION LOADS

PIPE DIAMETER	② MIN. COVER (FEET) FOR INDICATED CONSTRUCTION LOADS			
	18.0-50.0 (KIPS)	50.0-75.0 (KIPS)	75.0-110.0 (KIPS)	110.0-175.0 (KIPS)
36" OR LESS	2'-0"	2'-6"	3'-0"	3'-0"
42" OR GREATER	3'-0"	3'-0"	3'-6"	4'-0"

②MINIMUM COVER SHALL BE MEASURED FROM TOP OF PIPE TO TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE. THE SURFACE SHALL BE MAINTAINED.



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. THE STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8". THE LAYERS SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.
5. PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING OR OTHER APPROVED METHODS IN ORDER TO HELP MAINTAIN GRADE AND ALIGNMENT.

GENERAL NOTES

1. PIPE SHALL CONFORM TO AASHTO M294, TYPE S. INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICIATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
2. PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
4. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
5. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
6. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
7. FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
8. HIGH DENSITY POLYETHYLENE PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
9. JOINTS FOR HDPE PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN AASHTO SECTION 26.4.2.4 AND 30.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

- LEGEND -

H = FILL HEIGHT (FT.)
D_O = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM

= STRUCTURAL BACKFILL MATERIAL

= UNDISTURBED SOIL

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REVISED GENERAL NOTES & MINIMUM COVER NOTE	
11-17-10	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)

STANDARD DRAWING PCP-1

INSTALLATION TYPE	•• MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 2	•SELECTED MATERIALS (CLASS SM-1, SM-2, OR SM-4)

• AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7) MAY BE USED IN LIEU OF SELECTED MATERIAL.

SM3 WILL NOT BE ALLOWED.

•• STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1INCH. STRUCTURAL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, STONES LARGER THAN 1.50 INCH IN GREATEST DIMENSION, OR FROZEN LUMPS.

STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF PVC PIPE.

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

PIPE DIAMETER	TRENCH WIDTH (FEET)	
	"H" < 10'-0"	"H" >OR= 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"

MULTIPLE INSTALLATION OF PVC PIPES

PIPE DIAMETER	CLEAR DISTANCE BETWEEN PIPES
18"	1'-6"
24"	2'-0"
30"	2'-6"
36"	3'-0"

MAXIMUM FILL HEIGHT BASED ON STRUCTURAL BACKFILL

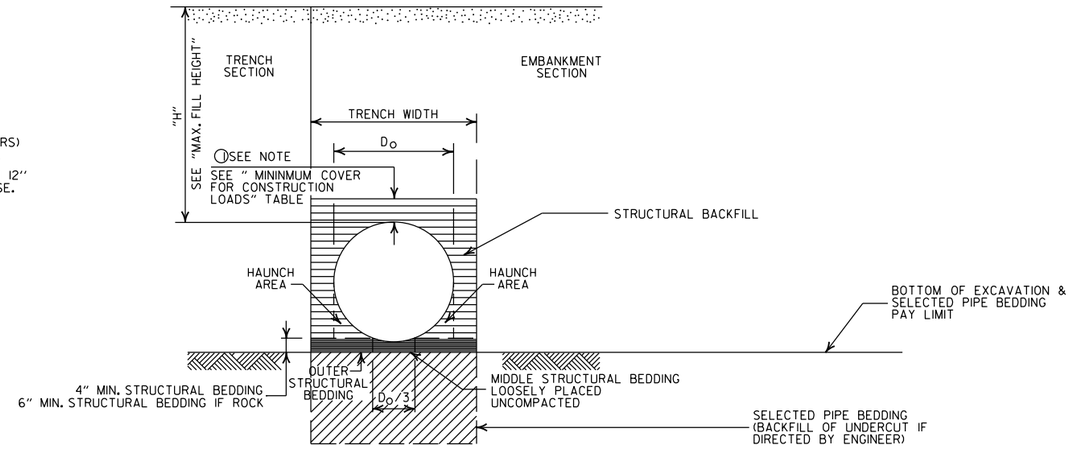
PIPE DIAMETER	"H"
18"	45'-0"
24"	45'-0"
30"	40'-0"
36"	40'-0"

① NOTE:
12" MIN. (18" - 36" DIAMETERS)
MINIMUM COVER VALUE, "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.

MINIMUM COVER FOR CONSTRUCTION LOADS

PIPE DIAMETER	② MIN. COVER (FEET) FOR INDICATED CONSTRUCTION LOADS			
	18.0-50.0 (KIPS)	50.0-75.0 (KIPS)	75.0-110.0 (KIPS)	110.0-175.0 (KIPS)
18" THRU 36"	2'-0"	2'-6"	3'-0"	3'-0"

②MINIMUM COVER SHALL BE MEASURED FROM TOP OF PIPE TO TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE. THE SURFACE SHALL BE MAINTAINED.



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. THE STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8". THE LAYERS SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.
5. PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING OR OTHER APPROVED METHODS IN ORDER TO HELP MAINTAIN GRADE AND ALIGNMENT.

GENERAL NOTES

1. PIPE SHALL CONFORM TO ASTM F949, CELL CLASS 12454. INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
2. PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
4. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
5. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
6. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
7. FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
8. PVC PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
9. JOINTS FOR PVC PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN AASHTO SECTION 26.4.2.4 AND 30.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

- LEGEND -

H = FILL HEIGHT (FT.)
D_O = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM

= STRUCTURAL BACKFILL MATERIAL

= UNDISTURBED SOIL

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REV GENERAL NOTES & MINIMUM COVER NOTE; DELETED SM3 MATERIAL	
11-17-10	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

PLASTIC PIPE CULVERT (PVC F949)

STANDARD DRAWING PCP-2

INSTALLATION TYPE	**MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 1	AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7)
TYPE 2	*SELECTED MATERIALS (CLASS SM-1, SM-2 OR SM-4) OR TYPE 1 INSTALLATION MATERIAL

*SM3 WILL NOT BE ALLOWED.

** STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1INCH. STRUCTURAL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, STONES LARGER THAN 1.50 INCH IN GREATEST DIMENSION, OR FROZEN LUMPS.

STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF POLYPROPYLENE PIPE.

MULTIPLE INSTALLATION OF POLYPROPYLENE PIPES

PIPE DIAMETER	CLEAR DISTANCE BETWEEN PIPES
18"	1'-6"
24"	2'-0"
30"	2'-6"
36"	3'-0"
42"	3'-6"
48"	4'-0"
60"	5'-0"

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

PIPE DIAMETER	TRENCH WIDTH (FEET)	
	"H" < 10'-0"	"H" >OR= 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"
42"	7'-0"	10'-6"
48"	8'-0"	12'-0"
60"	10'-0"	15'-0"

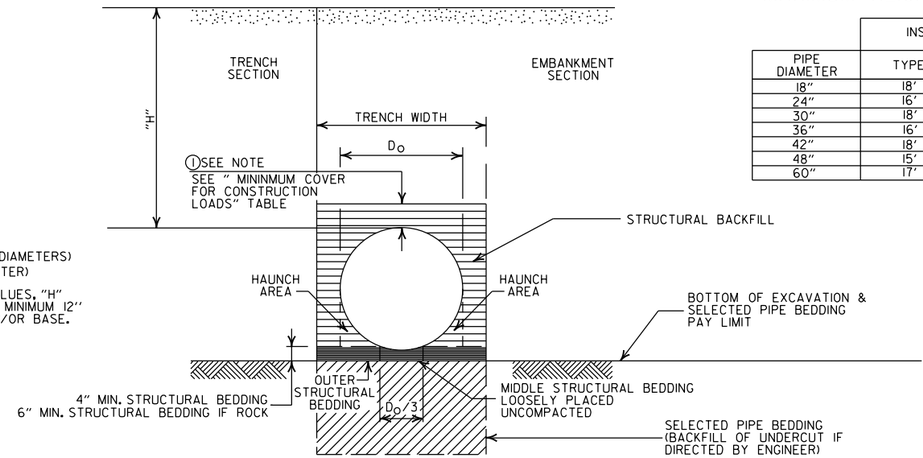
MINIMUM COVER FOR CONSTRUCTION LOADS

PIPE DIAMETER	② MIN. COVER (FEET) FOR INDICATED CONSTRUCTION LOADS			
	18.0-50.0 (KIPS)	50.0-75.0 (KIPS)	75.0-110.0 (KIPS)	110.0-150.0 (KIPS)
36" OR LESS	2'-0"	2'-6"	3'-0"	3'-0"
42" OR GREATER	3'-0"	3'-0"	3'-6"	4'-0"

②MINIMUM COVER SHALL BE MEASURED FROM TOP OF PIPE TO TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE. THE SURFACE SHALL BE MAINTAINED.

①NOTE:
12" MIN. (18" - 42" DIAMETERS)
24" MIN. (60" DIAMETER)

MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.



MAXIMUM HEIGHT OF FILL "H"

PIPE DIAMETER	INSTALLATION TYPE	
	TYPE 1	TYPE 2
18"	18'	14'
24"	16'	12'
30"	18'	14'
36"	16'	12'
42"	18'	13'
48"	15'	11'
60"	17'	12'

EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. THE STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8". THE LAYERS SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.
5. PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING OR OTHER APPROVED METHODS IN ORDER TO HELP MAINTAIN GRADE AND ALIGNMENT.

GENERAL NOTES

1. PIPE SHALL CONFORM TO AASHTO M330, TYPE S, INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICIATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
2. PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SIXTH EDITION (2012) WITH 2013 INTERIMS.
3. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
4. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
5. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
6. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
7. FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
8. POLYPROPYLENE PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
9. JOINTS FOR POLYPROPYLENE PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN SECTION 26.4.2.4 AND 30.4.2 OF THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS 3RD EDITION (2010) WITH 2012 INTERIMS. JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

- LEGEND -

H = FILL HEIGHT (FT.)
D_O = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM

= STRUCTURAL BACKFILL MATERIAL

= UNDISTURBED SOIL

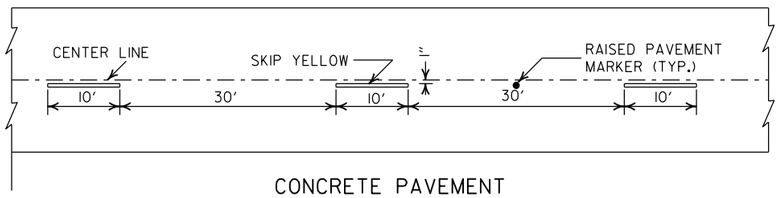
DATE	REVISION	DATE FILMED
02-27-20	REVISED	
11-07-19	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

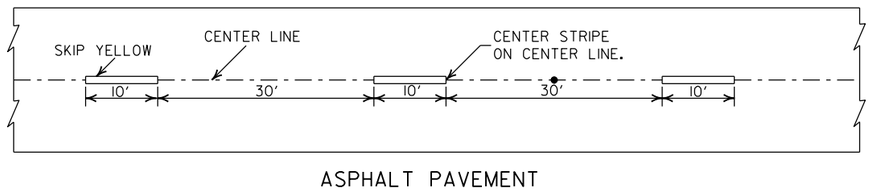
PLASTIC PIPE CULVERT (POLYPROPYLENE)

STANDARD DRAWING PCP-3

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.

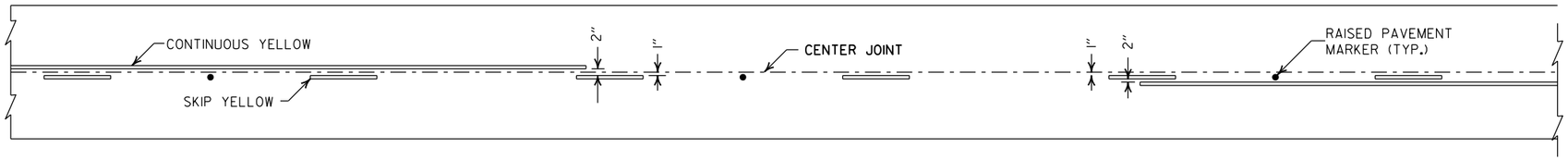


CONCRETE PAVEMENT

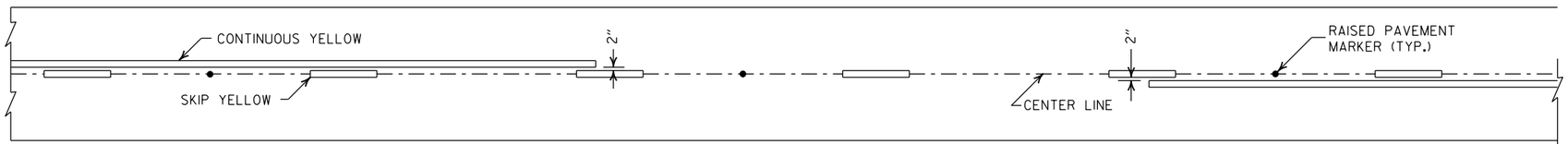


ASPHALT PAVEMENT

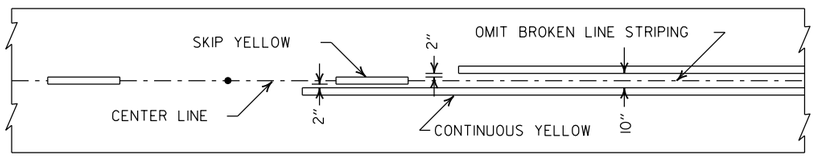
BROKEN LINE STRIPING



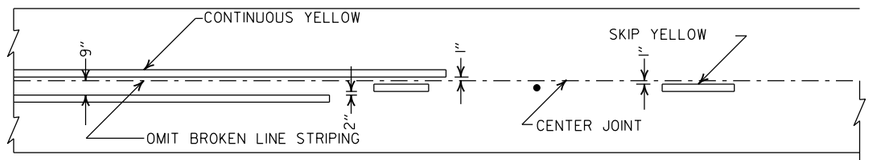
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

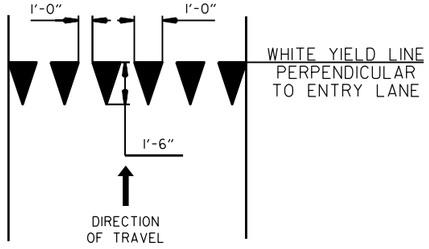


ASPHALT PAVEMENT

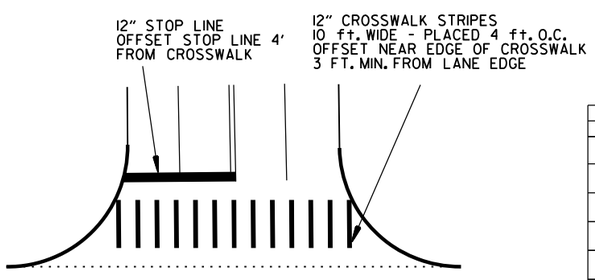


CONCRETE PAVEMENT

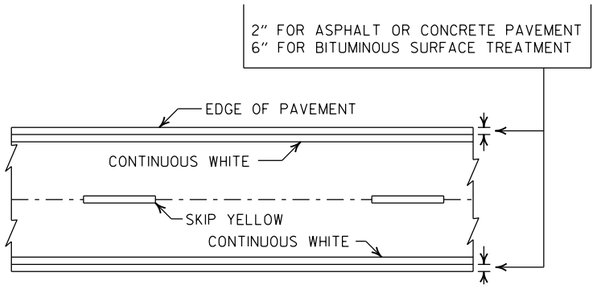
STRIPING AT ADJACENT NO PASSING LANES



YIELD LINE DETAIL



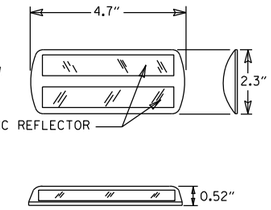
CROSSWALK AND STOP LINE DETAILS



PAVEMENT EDGE LINE MARKING

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

TYPE II
RED/CLEAR OR YELLOW/YELLOW



NOTE:
DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING TO THE ARDOT QUALIFIED PRODUCTS LIST.

DETAIL OF STANDARD RAISED PAVEMENT MARKERS

DATE	REVISION	FILMED
2-27-20	REVISED STOP LINE DETAILS	
6-1-17	ADDED YIELD LINE DETAIL	
5-12-16	REVISED LINE WIDTHS, SPACING, & NOTES	
9-12-13	REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS	
11-17-10	REVISED GENERAL NOTES & REMOVED PLOWABLE PVMT MRKRS	
11-18-04	REVISED NOTE 2 & GENERAL NOTES	
8-22-02	ADDED CROSSWALK & STOPBAR DTLS.	
7-02-98	ADDED DETAILS OF STD. RAISED PAV'T. MARKERS	
4-26-96	REV. NOTES 3&4; ADDED R.P.M.	
9-30-80	DRAWN	1-9-30-80

ARKANSAS STATE HIGHWAY COMMISSION

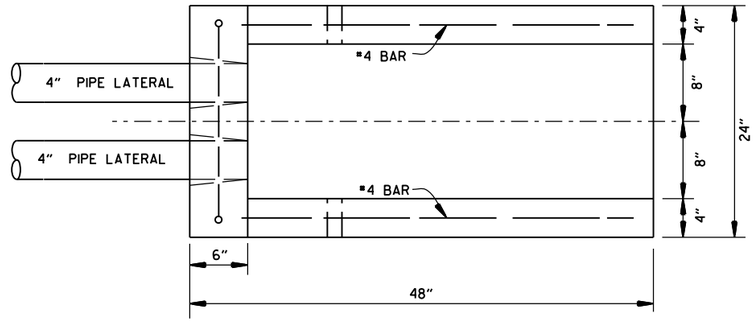
PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1

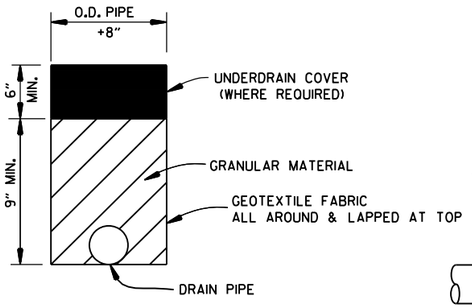
NOTE:

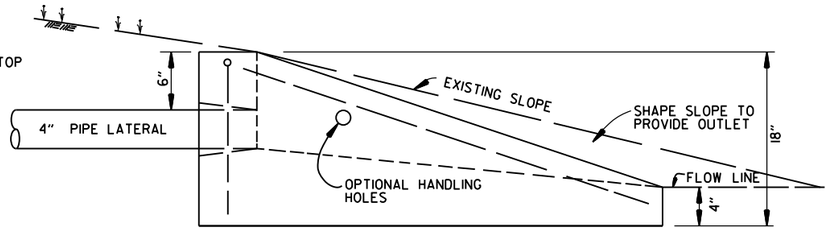
1. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THOROUGHLY COMPACTED EARTH AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.

2. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC. LAP FABRIC 12" OR THE WIDTH OF THE TRENCH AT THE TOP.

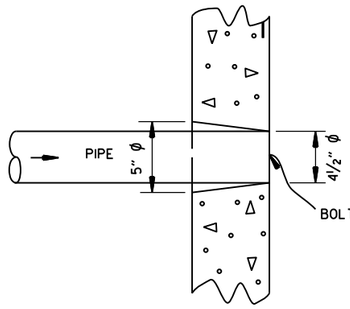


PLAN VIEW

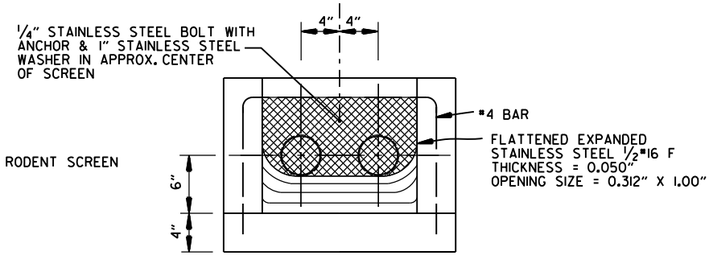




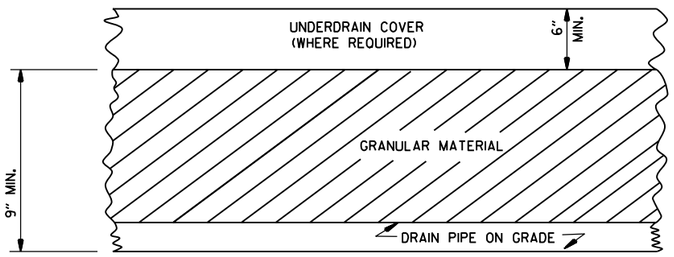
SIDE VIEW



DETAIL OF HOLE FOR 4" PIPE

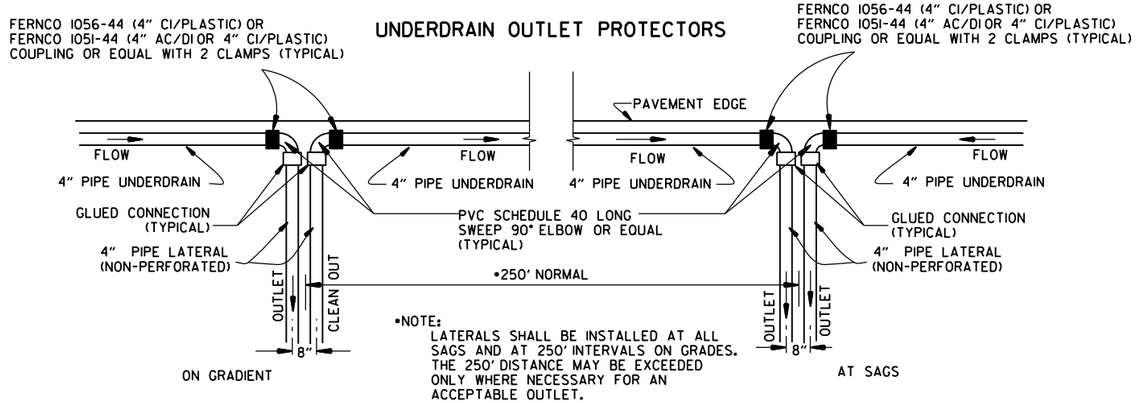


FRONT VIEW
(DETAIL OF RODENT SCREEN)



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

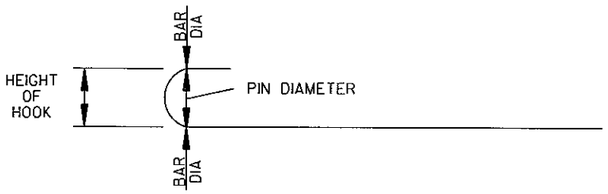
DETAILS OF PIPE UNDERDRAIN

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

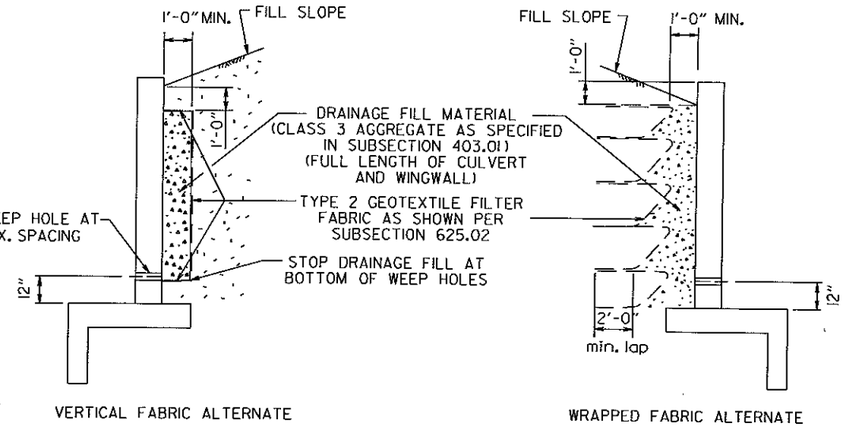
THE HOOKED BARS SHALL BE PLACED IN THE BOTTOM OF THE TOP SLAB AND THE TOP OF THE BOTTOM SLAB. THE STRAIGHT BARS SHALL BE PLACED IN THE TOP OF THE TOP SLAB AND THE BOTTOM OF THE BOTTOM SLAB. SEE TABLE BELOW FOR LENGTHS OF REPLACEMENT HOOKED AND STRAIGHT BARS.

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.

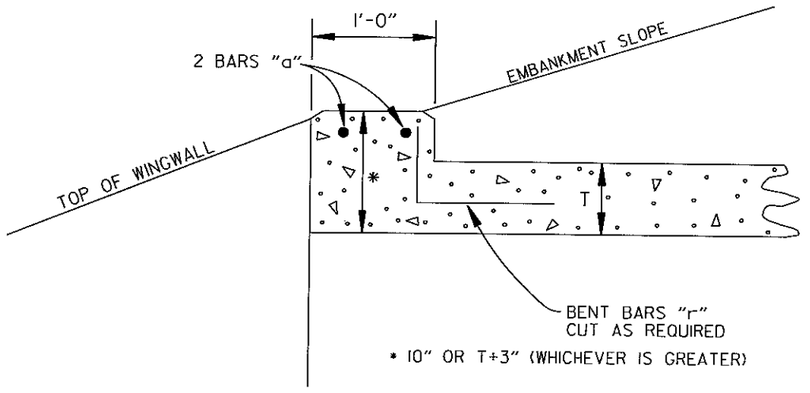
MEMBRANE WATERPROOFING SHALL BE APPLIED TO ALL CONSTRUCTION JOINTS IN THE TOP SLAB AND THE SIDEWALLS OF R.C. BOX CULVERTS AS DIRECTED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FOR THIS ITEM, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS BID FOR THE R.C. BOX CULVERT.

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.

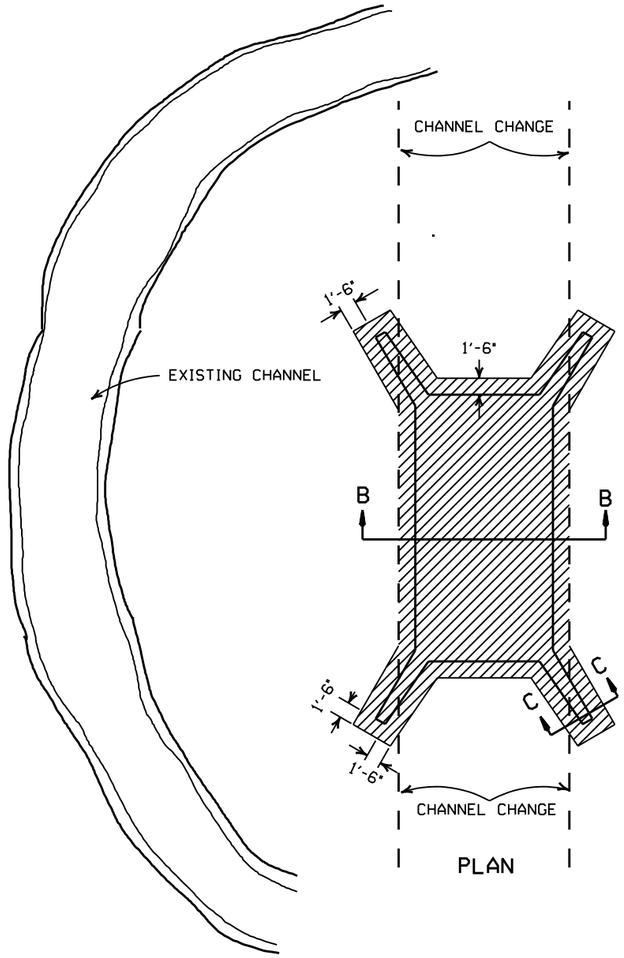
R.C. BOX CULVERT HEADWALL MODIFICATIONS

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	

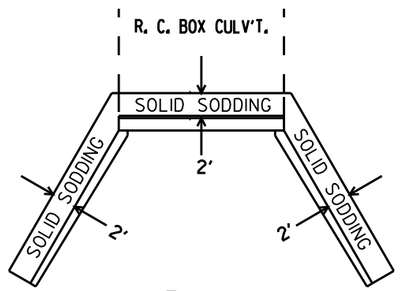
ARKANSAS STATE HIGHWAY COMMISSION

REINFORCED CONCRETE BOX CULVERT DETAILS

STANDARD DRAWING RCB-1



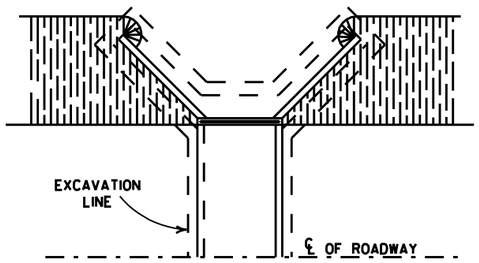
PLAN



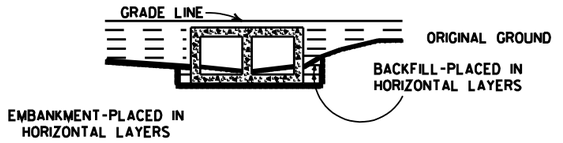
PLAN

PARTIAL SECTION SHOWING SOLID SODDING AT HEADWALLS AND WING WALLS

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

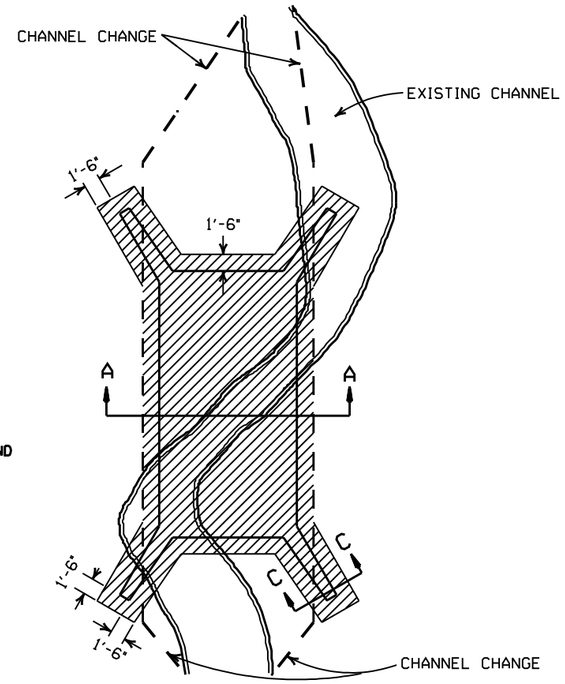


PLAN

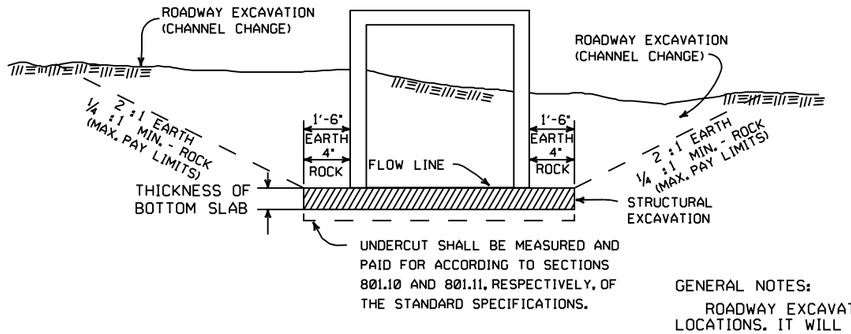


LONGITUDINAL SECTION

BACKFILL DETAILS FOR BOX CULVERT

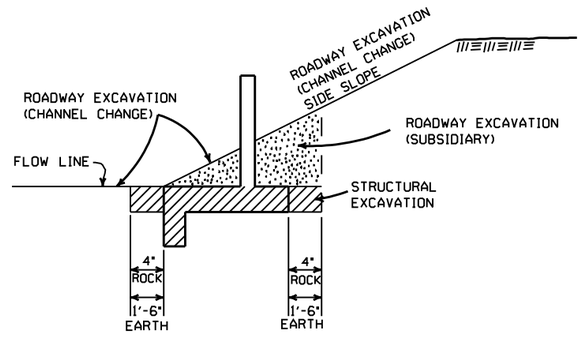


PLAN

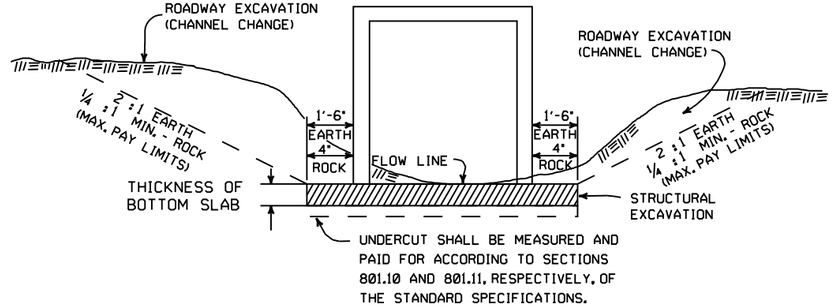


SECTION B-B

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.

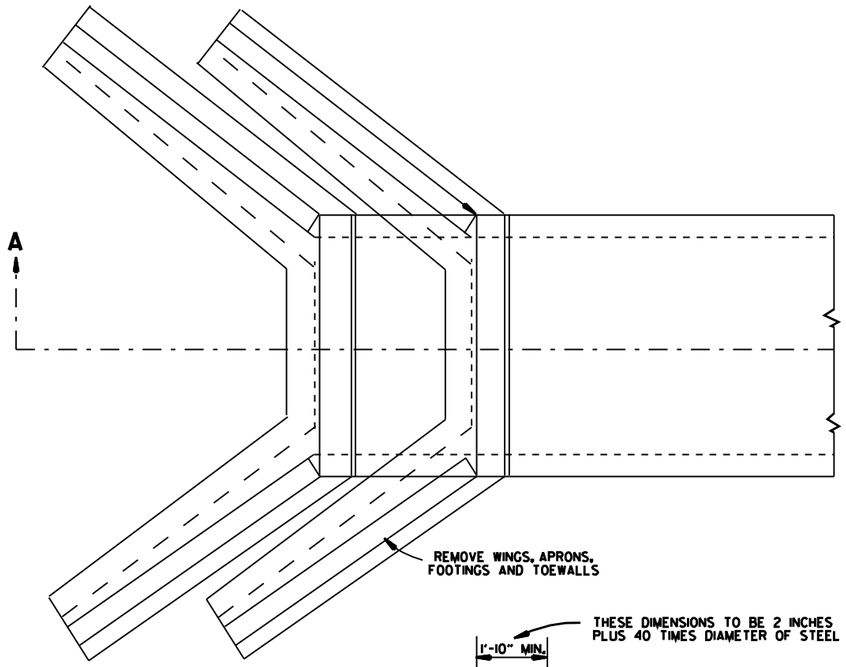
ROADWAY EXCAVATION SHOWN IN SECTION C-C ABOVE AS SUBSIDIARY WILL NOT BE MEASURED OR PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION.

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

ARKANSAS STATE HIGHWAY COMMISSION

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

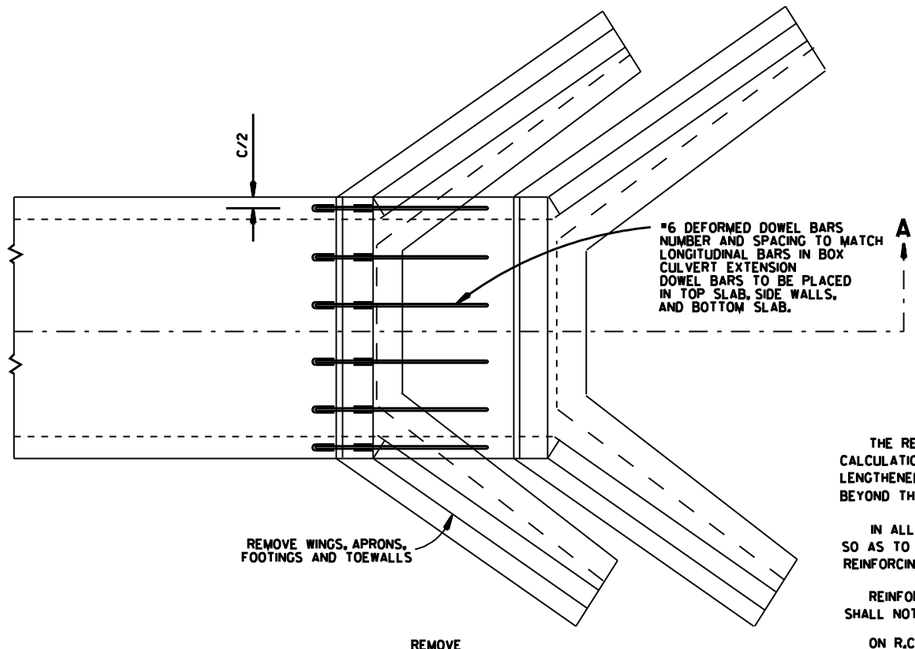
STANDARD DRAWING RCB-2



TOP VIEW
R.C. BOX CULVERT

SECTION A-A

METHOD 1



TOP VIEW
R.C. BOX CULVERT

SECTION A-A

METHOD 2

GENERAL NOTES

	USE FOR METHOD
THE RESIDENT ENGINEER WILL MAKE INDIVIDUAL CALCULATIONS OF QUANTITIES FOR EACH STRUCTURE LENGTHENED, MAKING NO ALLOWANCE FOR OVERBREAKAGE BEYOND THE LINES INDICATED.	1
IN ALL INSTANCES CONCRETE SHALL BE REMOVED SO AS TO PERMIT FULL 40 DIAMETER SPLICE OF REINFORCING STEEL.	1
REINFORCING STEEL REMOVED FROM EXISTING STRUCTURE SHALL NOT BE REUSED IN CONSTRUCTING EXTENSION.	1&2
ON R.C. BOX CULVERTS THAT HAVE AN EXISTING CONCRETE APRON, THE CONCRETE APRON SHALL BE REMOVED WITH THE WINGS. THE COST OF REMOVING ALL OLD CONCRETE WILL BE INCLUDED IN THE PRICE BID PER CUBIC YARD FOR NEW CONCRETE OF THE CLASS SPECIFIED AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.	1&2
MATERIALS FOR SECURING DOWEL BARS SHALL MEET THE REQUIREMENTS OF SECTION 507.02 OF THE STANDARD SPECIFICATIONS.	2
DOWEL BARS SHALL BE INSTALLED AS FOLLOWS: THE DRILLING PROCEDURE SHALL BE APPROVED BY THE ENGINEER. THE FILLING SYSTEM SHALL BE APPROVED BY THE ENGINEER, AND SHALL BE AN INJECTION-TYPE SYSTEM WHICH WILL INSURE THAT SUFFICIENT MATERIAL IS INJECTED SO IT COMPLETELY SURROUNDS THE BARS AND FILLS THE HOLES.	2
THE CONTRACTOR SHALL HAVE THE OPTION OF USING EITHER METHOD 1 OR METHOD 2, REGARDLESS OF WHICH METHOD IS USED, PAY QUANTITIES WILL BE CALCULATED BASED ON METHOD 1.	1&2

NOTE:
NO PART OF THIS STANDARD IS TO BE USED FOR ANY DETAILS RELATIVE TO NEW CONSTRUCTION.

SEE STANDARD DRAWING LISTED IN TABULATION OF STRUCTURES FOR ALL NEW CONSTRUCTION DETAILS.

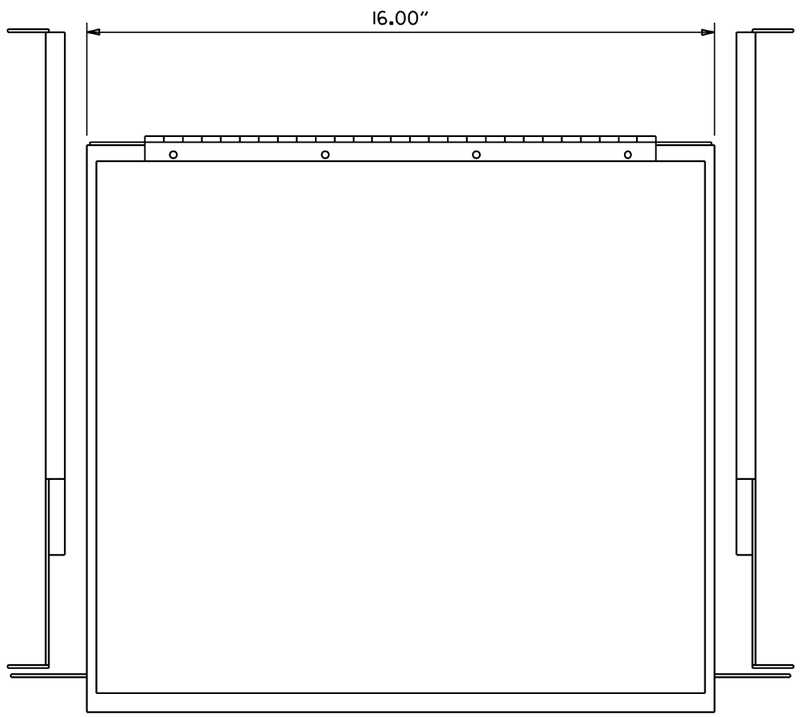
DATE	REVISION	DATE FILM
10-12-95	CHANGED DRAWING # FROM 144-A	
4-1-93	ADDED GENERAL NOTE	
10-1-92	ADDED ALT. METHOD OF EXTENSION	
11-30-89	REDRAWN	
1-4-83	ELIMINATED CONCRETE CLASS	
12-20-56	RETRACED	

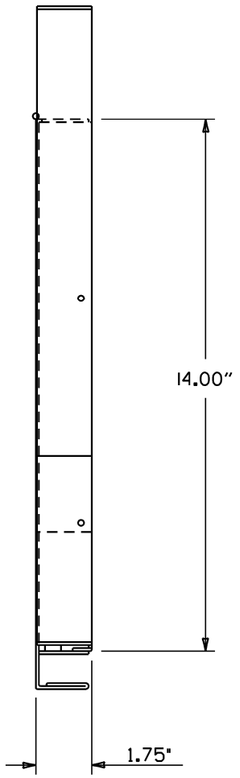
ARKANSAS STATE HIGHWAY COMMISSION

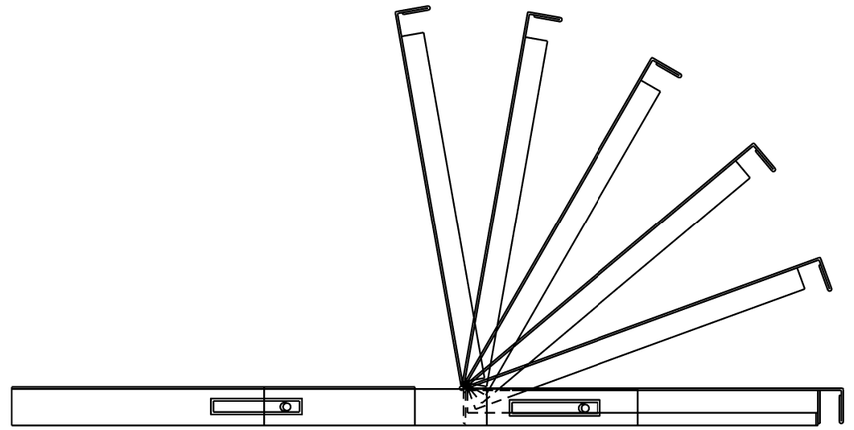
METHOD OF EXTENDING EXISTING R.C. BOX CULVERTS

STANDARD DRAWING RCB-3

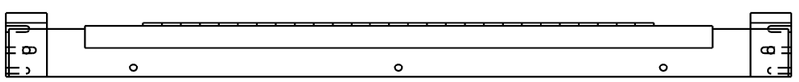
DRAWER PLAN VIEW



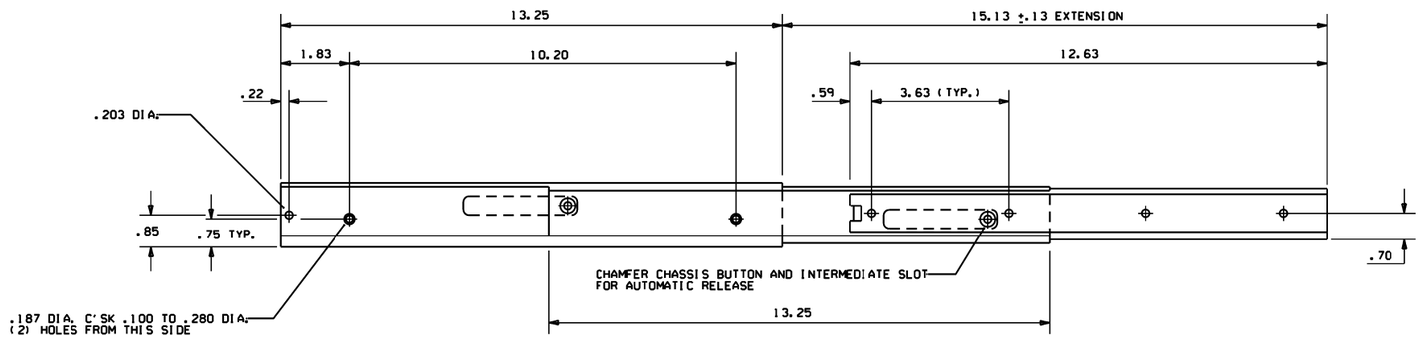




NOTES:
1. RIGHT HAND SLIDE SHOWN, LEFT SLIDE OPPOSITE.
2. GENERAL DEVICES (CC3002-99-0102) OR EQUAL AND CONTAINS (1) RIGHT HAND SLIDE ASSEMBLY, (1) LEFT HAND SLIDE ASSEMBLY.
3. ALL HARDWARE NECESSARY TO FASTEN SLIDE ASSEMBLY TO UNDERSIDE OF CONTROLLER SHELF SHALL BE INCLUDED.



FRONT VIEW



RIGHT SIDE ASSEMBLY

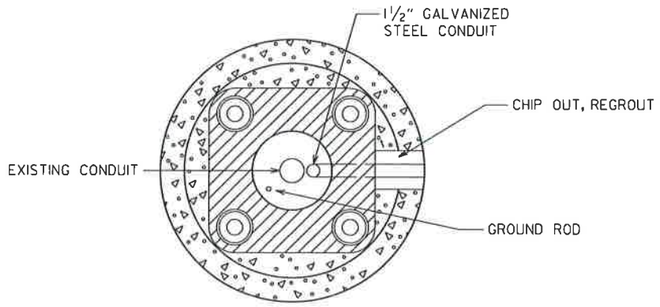
DATE	REVISION	DATE FILM
9-12-13	ISSUED AS STANDARD DRAWING	
6-15-05	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

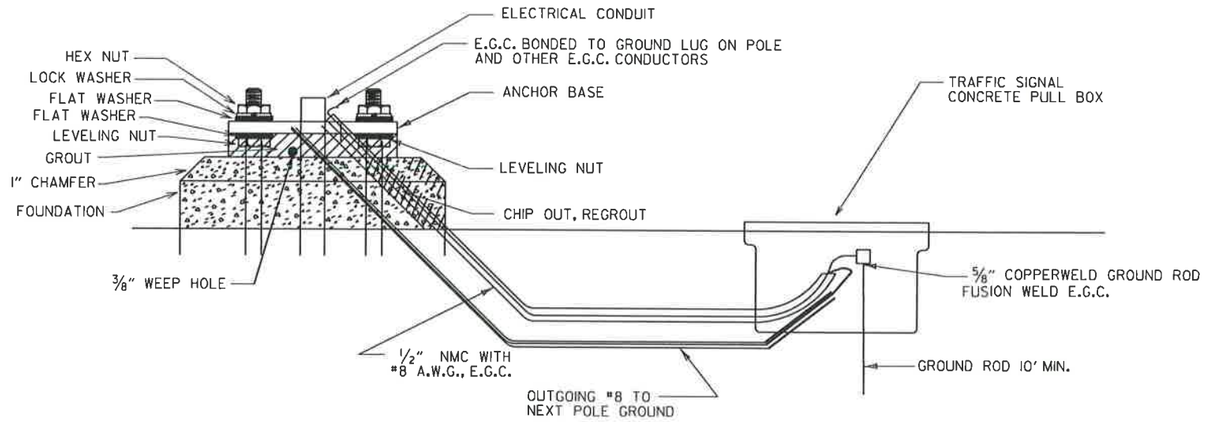
CONTROLLER CABINET UTILITY DRAWER

STANDARD DRAWING SD-5

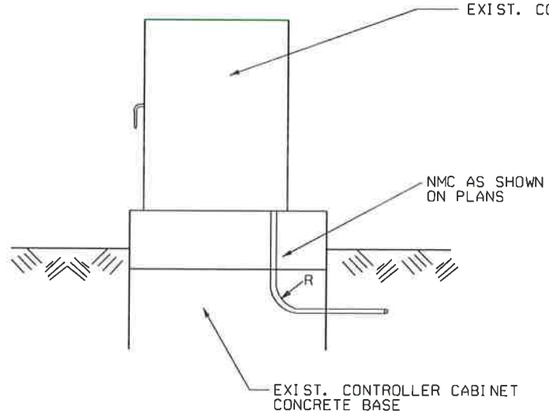
CONDUIT ENTRY TO EXISTING POLE BASE



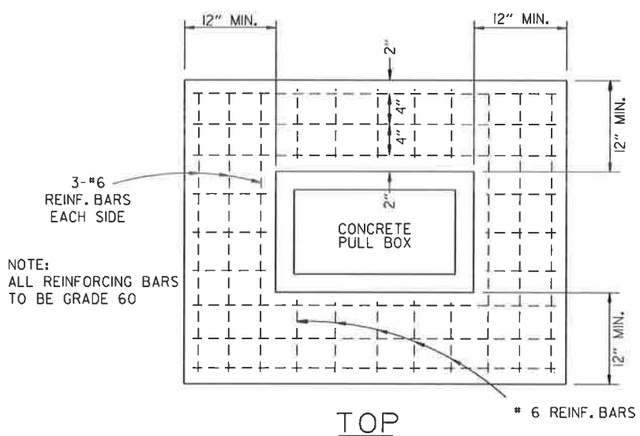
ANCHOR BASE



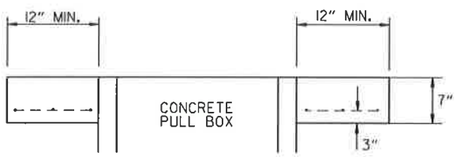
CONDUIT ENTRY TO EXISTING CONTROLLER CABINET



NOTE: ENTRY TO CABINET SHALL BE THROUGH A CUT IN THE BASE SUFFICIENT TO PROVIDE ADEQUATE CONDUIT RADIUS FOR ITEM.

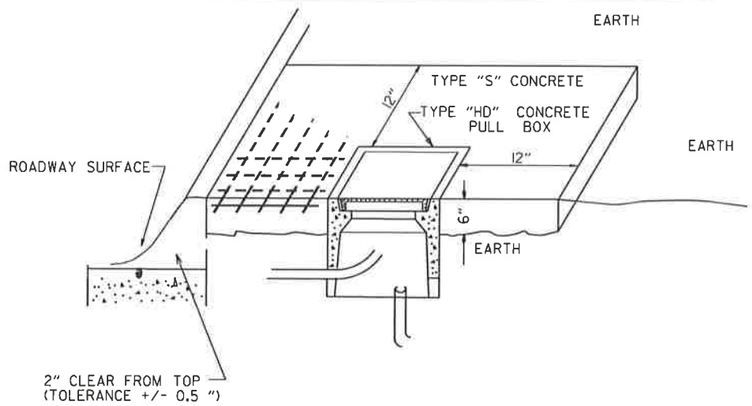


TOP



ELEVATION

TYPE "HD" CONCRETE PULL BOX DETAIL



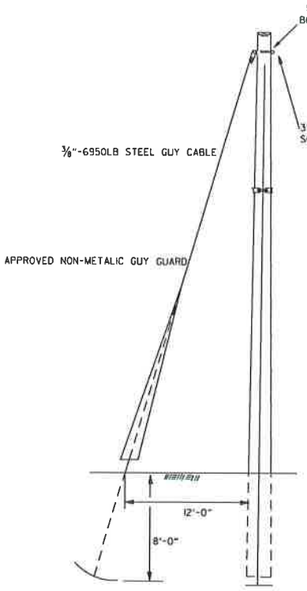
NOTE:
ALL TYPE 1 AND TYPE 2 HD CONCRETE PULL BOXES ARE INSTALLED WITH AN APRON OF CONCRETE 12" WIDE AND 7" IN DEPTH. ALL PAYMENT SHALL BE INCLUDED IN THE PRICE OF THE TYPE HD CONCRETE PULL BOX. THE CONCRETE PULL BOX SHALL BE INSTALLED FLUSH TO SURROUNDING GRADE UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER. 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	
01-04-02	ADDED REINFORCING TO BOX APRON	
07-02-01	REVISED	
12-27-99	REVISED NOTES	
11-18-98	ISSUED	

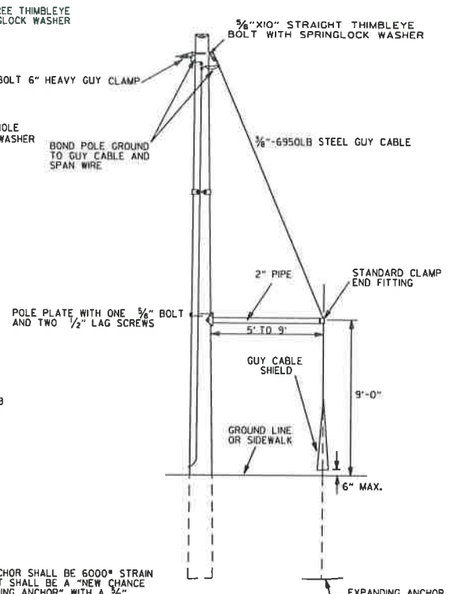
ARKANSAS STATE HIGHWAY COMMISSION

HEAVY DUTY PULL BOX

STANDARD DRAWING SD-6



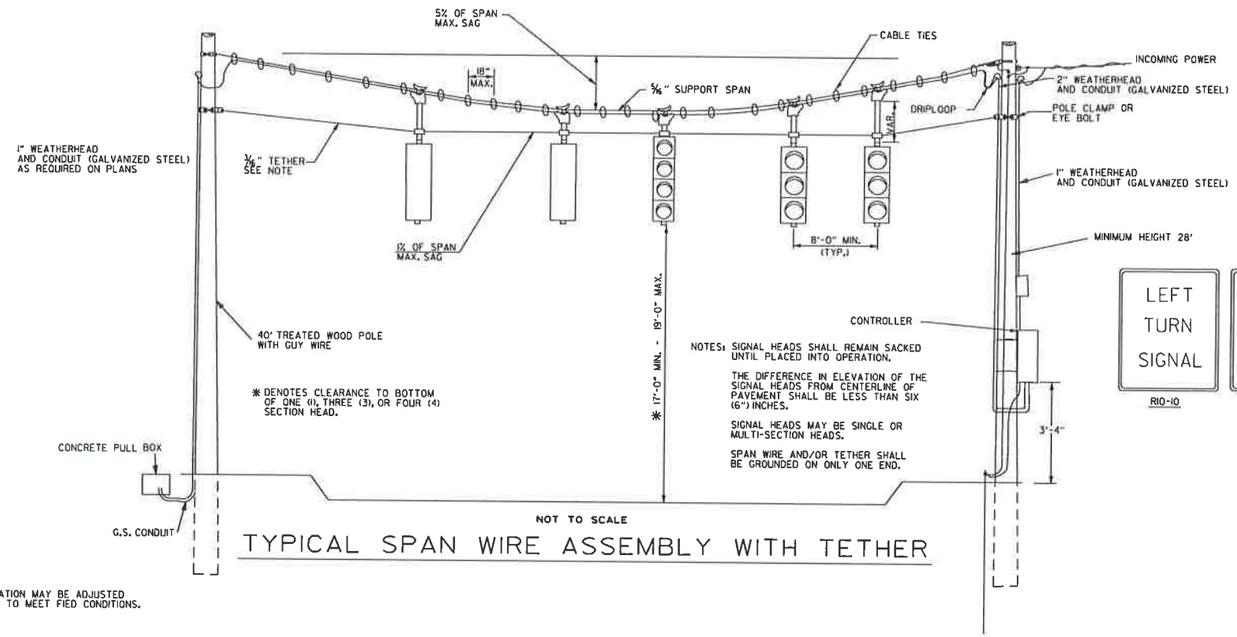
STANDARD GUY INSTALLATION



SIDEWALK GUY INSTALLATION

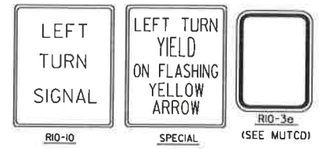
NOTE:
EXPANDING ANCHOR SHALL BE 6000# STRAIN OR GREATER. IT SHALL BE A "NEW CHANCE 8-WAY EXPANDING ANCHOR", WITH A 5/8" MINIMUM GUY ROD.

NOTE:
CONDUIT INSTALLATION MAY BE ADJUSTED BY THE ENGINEER TO MEET FIED CONDITIONS.



NOT TO SCALE

TYPICAL SPAN WIRE ASSEMBLY WITH TETHER

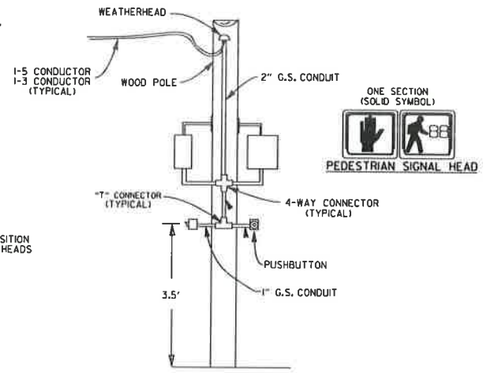


NOTES:
SPAN WIRE POLES SHALL BE MOUNTED A MINIMUM OF FOUR (4') FEET BEHIND CURB OR SHOULDER.

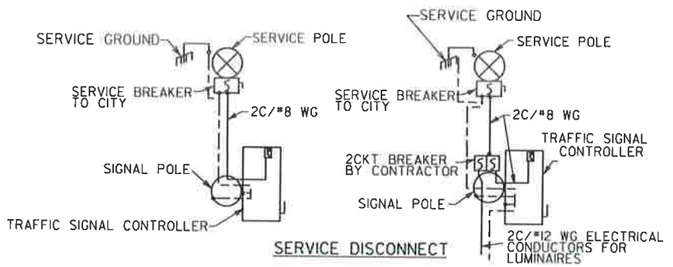
SPAN WIRE ASSEMBLIES WILL REQUIRE TETHER UNLESS OTHERWISE NOTED ON PLAN SHEETS.

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 5/8" COPPERWELD GROUND ROD.



WOODEN POLE INSTALLATION OF PED HEADS



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 (RIO-10) AS SHOWN, ATTACHED TO THE MAST ARM OR SPAN ASSEMBLY 12" TO THE RIGHT OF THE SIGNAL HEAD.

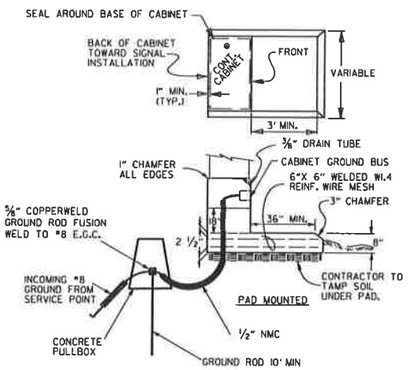
ALL SIGN BLANK SHALL BE CONSTRUCTED OF ALUMINUM ALLOY (ASTM DESIGNATION B-209, ALLOY 5052-H38) WITH A THICKNESS OF 0.100 INCH.

ALL SIGN FACE SHALL BE CONSTRUCTED OF HIGH INTENSITY SHEETING (TYPE III) WITH SILKSCREEN LEGEND AND BORDER.

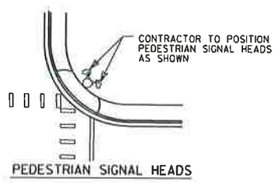
SIGNAL OPERATION NOTES:

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.

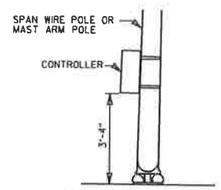
THE CONTRACTOR MAY BE REQUIRED TO ALTER THE FLASHING DISPLAY DURING THE TEMPORARY FLASH PERIOD, AT THE TIME THE INTERSECTION IS PLACED IN PERMANENT OPERATION, THE FLASH SEQUENCE SHALL THEN BE RETURNED TO THAT INDICATED ON THE PLAN SHEETS. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR THESE ALTERATIONS IN FLASH SEQUENCE.



CONCRETE BASE MOUNTED CABINET DETAILS



PEDESTRIAN SIGNAL HEADS



SPAN WIRE SUPPORT POLE AND MAST ARM POLE MOUNTED

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 1/2" SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TEST SPECIFIED IN SUBSECTION 807.05 OF THE STANDARD SPECIFICATIONS.

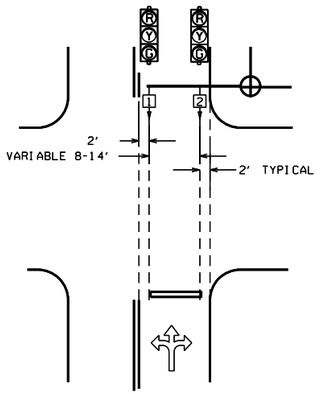
DATE	REVISION	FILMED
11-16-17	REVISED NOTES, ADDED SPAN WIRE SUPPORT POLE DETAIL, ADDED PEDESTRIAN SIGNAL HEAD DETAIL	
02-27-14	REVISED NOTES.	
09-12-13	ISSUED AS STANDARD DRAWING	
07-21-11	REVISED PEDESTRIAN SIGN & GROUNDING	
04-17-08	REVISED TO 2001 AASHTO STANDARDS	
10-12-04	REV. CABINET ORIENTATION & 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

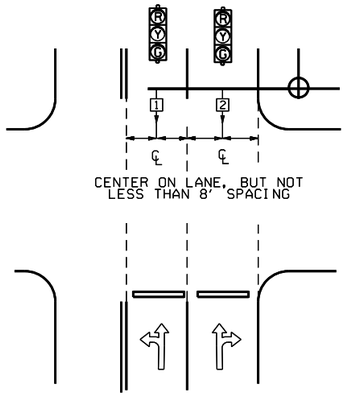
SPAN WIRE ASSEMBLY WOOD POLE

STANDARD DRAWING SD-7

(A)



(B)



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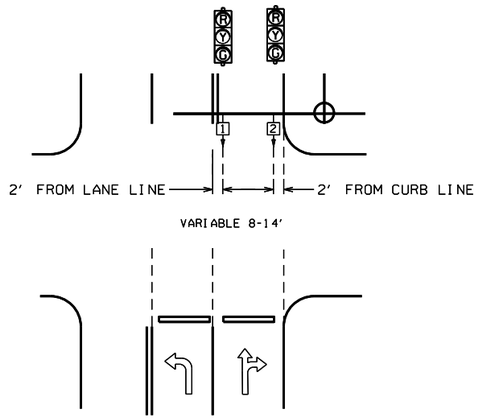

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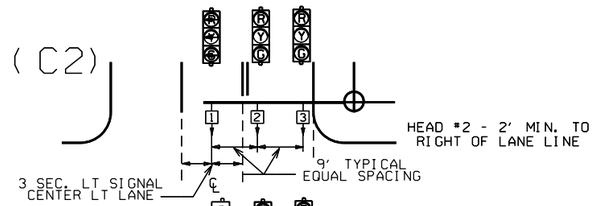

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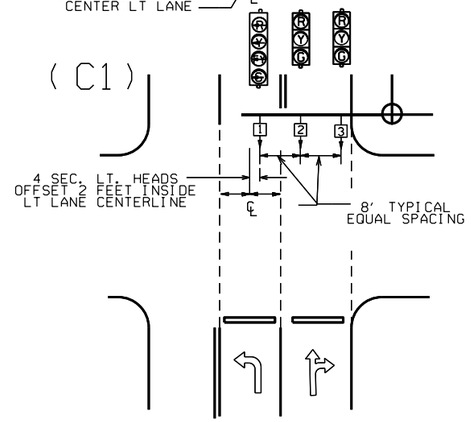

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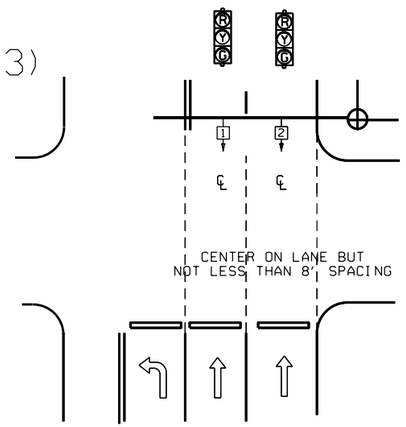

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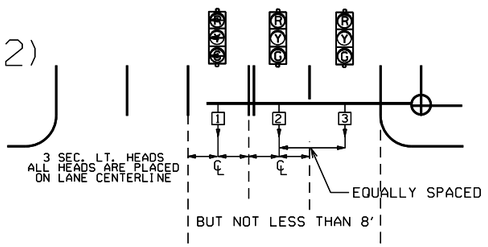

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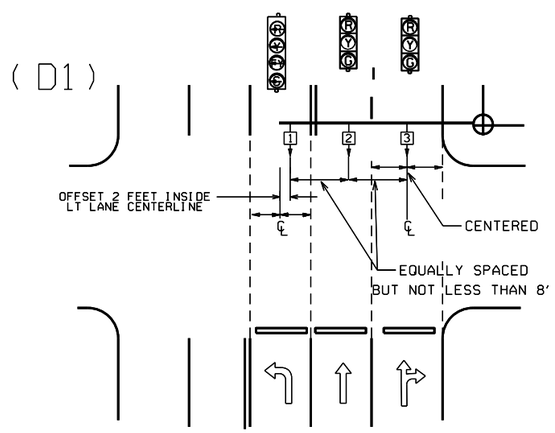
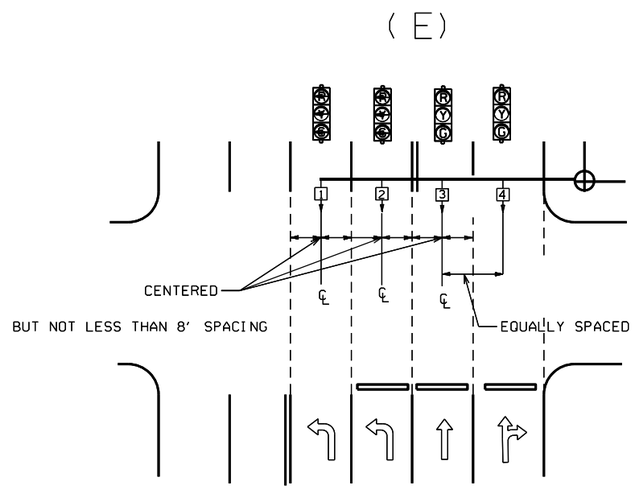


NOTE: WHERE LEFT TURN HEAD (HEAD 1 ON D1 AND D2) IS NOT CALLED FOR ON PLANS, MAST ARM LENGTH MAY STILL BE ALLOWED FOR FUTURE INSTALLATION. HEADS FOR THROUGH MOVEMENTS SHALL STILL BE ALIGNED WITH THROUGH LANES AS SHOWN ON DETAILS.

(E)



℄ = 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.

12-8-16	REVISED NOTE 6	
9-12-13	ISSUED AS STANDARD DRAWING	
3-11-10	2009 MUTCD	
12-9-99	ISSUED	
DATE	REVISION	DATE FILM

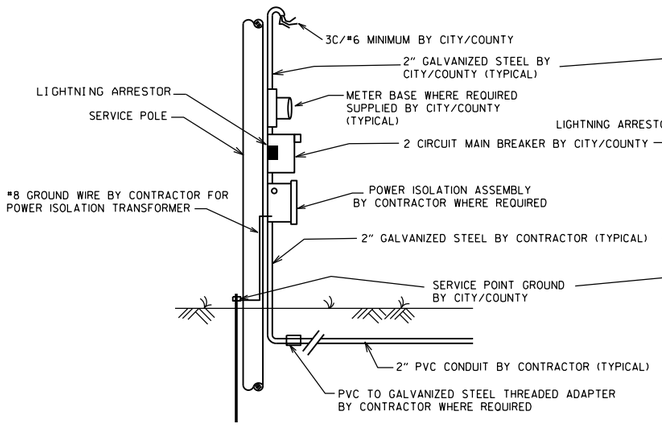
ARKANSAS STATE HIGHWAY COMMISSION

SIGNAL HEAD PLACEMENT

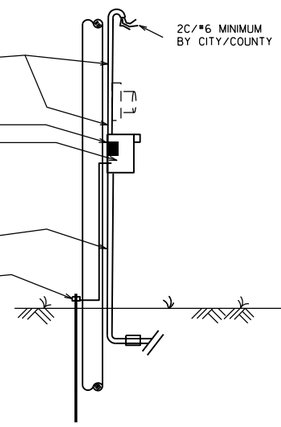
STANDARD DRAWING SD-8

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.

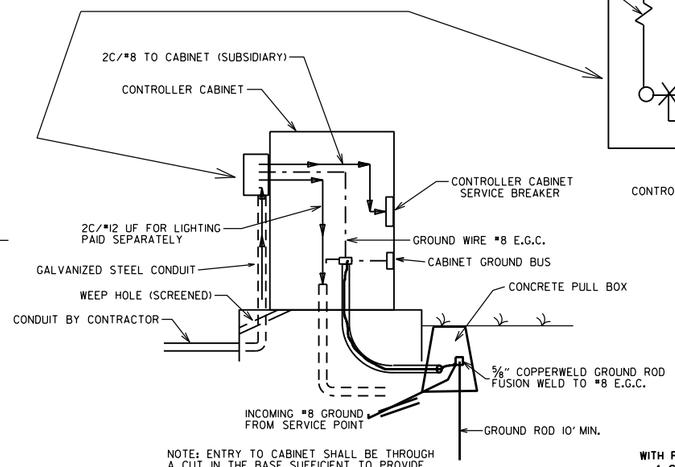
ALL SITUATIONS:
ELECTRICAL SERVICE SHALL BE PROVIDED BY THE CITY/COUNTY TO A SERVICE POLE WITH EXTERNAL RAINTIGHT BREAKER (MAIN BREAKER) AT A MUTUALLY ACCEPTABLE POINT WITHIN THE RIGHT-OF-WAY. SERVICE POINT INCLUDES GALVANIZED STEEL CONDUIT TO A POINT 18" BELOW GROUND LINE, TWO CIRCUIT MAIN BREAKER, 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.

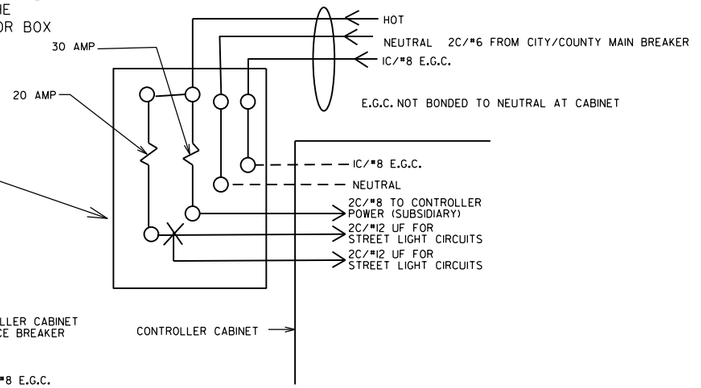
MAIN BREAKER NEAR CONTROLLER CABINET:
ALL COMPONENTS OF THE SERVICE POINT WITH THE EXCEPTION OF THE WIRE AND WIRING ABOVE THE MAIN BREAKER IS FURNISHED AND INSTALLED BY THE CONTRACTOR. WIRING FROM MAIN BREAKER INCLUDING CONNECTION TO THE UTILITY, IS THE RESPONSIBILITY OF THE CITY/COUNTY. IF METER LOOP 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)



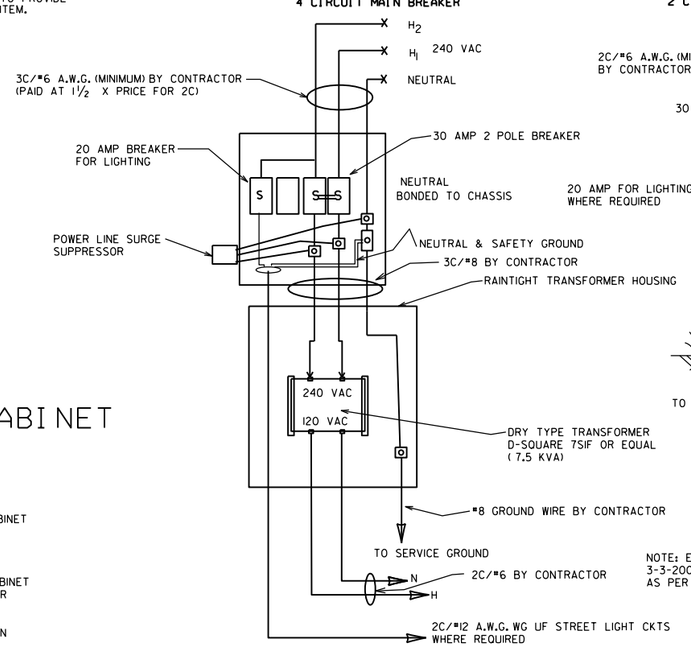
NOTE: ENTRY TO CABINET SHALL BE THROUGH A CUT IN THE BASE SUFFICIENT TO PROVIDE ADEQUATE CONDUIT RADIUS FOR ITEM.



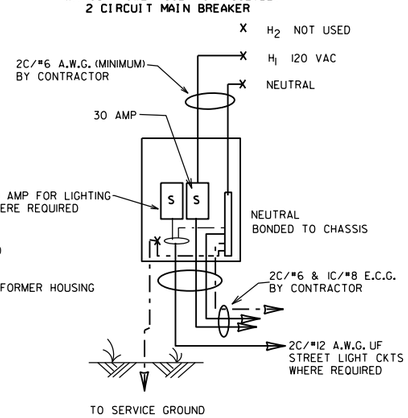
MAIN BREAKER WIRING (TYPICAL)

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

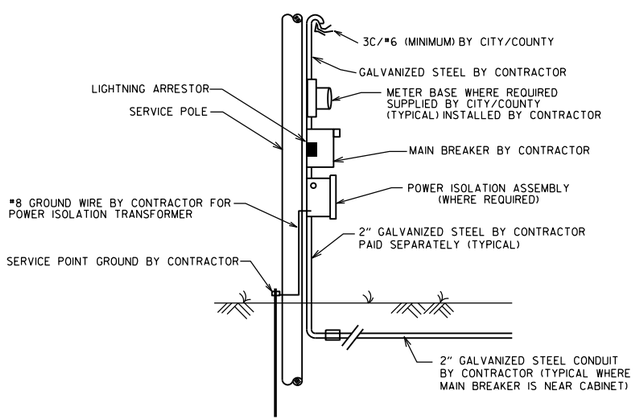


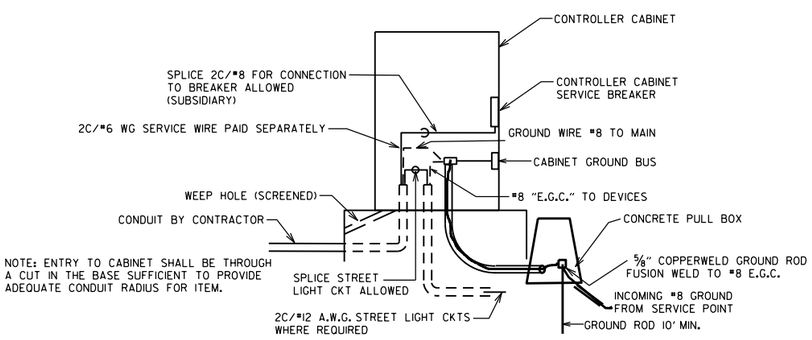
WITHOUT POWER ISOLATION ASSEMBLY
2 CIRCUIT MAIN BREAKER



NOTE: ELECTRICAL GROUND CONDUCTOR (E.C.G.) ADDED 3-3-2003, CONSISTING OF A IC/#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
11-07-19	REVISED	
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., I-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., I-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.

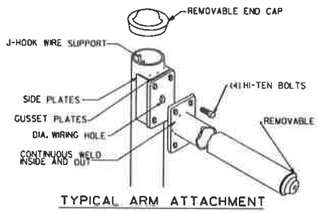
4. POLE/MAST ARM CAP - POLE AND MAST ARM CAPS SHALL BE PROVIDED, FABRICATED OF EITHER STEEL OR CAST ALUMINUM.

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 21FT. IN HEIGHT (FOR ROADWAY LUMINAIRE ATTACHMENT) SHALL INCLUDED A HAND HOLE WITHIN 12 INCHES OF MAST ARM(S) ATTACHMENT(S).

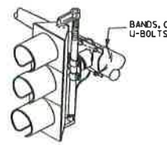
6. POLE/MAST ARM TAPER SLOPE - AVERAGE TAPER OF SIGNAL MAST ARMS AND POLE SHAFT SHALL BE 0.125 TO 0.15 INCHES PER FOOT.

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.

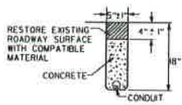
7. NUT COVERS - EACH POLE SHALL INCLUDE A BOLT DOWN NUT COVER FOR EACH ANCHOR BOLT.



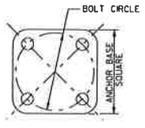
TYPICAL ARM ATTACHMENT



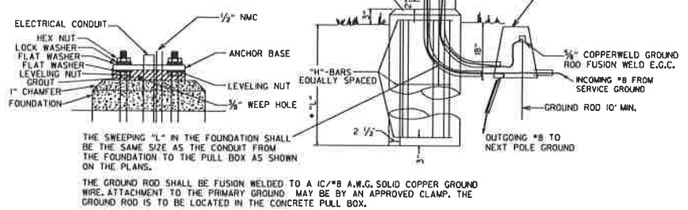
NOTE: THE SIGNAL SHALL BE CONNECTED TO THE MAST ARM BY BRACKETING AS DIRECTED BY THE ENGINEER.



TRENCHING DETAIL
(FOR SAW CUT TRENCH IN ROADWAY)



ANCHOR BASE



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	STEEL 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"

* 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.

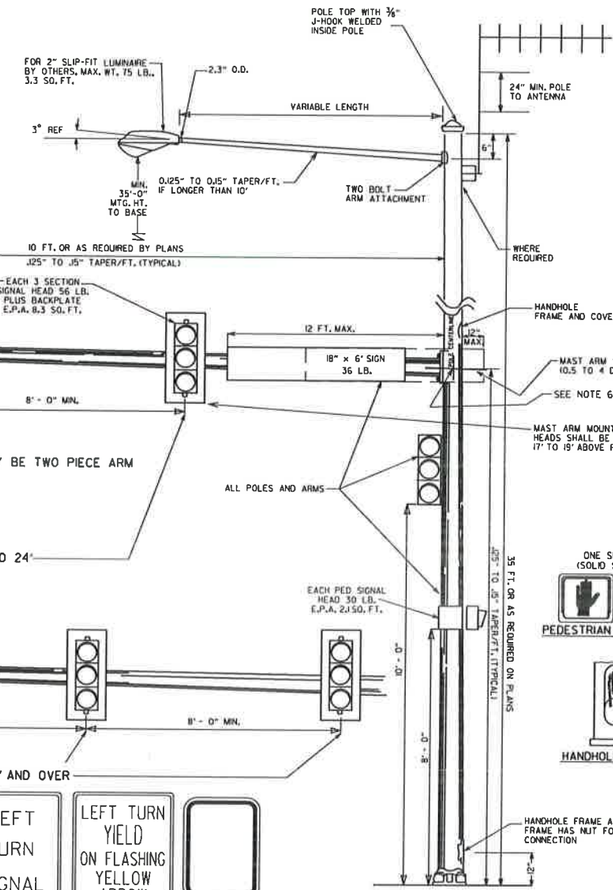
TRUCK-INDUCED GUST LOADS SHALL BE EXCLUDED FOR FATIGUE DESIGN FOR ALL STRUCTURES EXCEPT MAST ARMS MOUNTED OVER FACILITIES WITH POSTED SPEEDS OF 65 MPH OR GREATER AT THE LOCATION OF THE STRUCTURE.

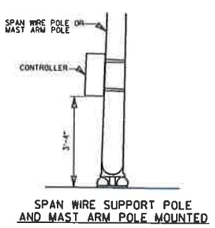
SIGNAL OPERATION NOTES:

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.

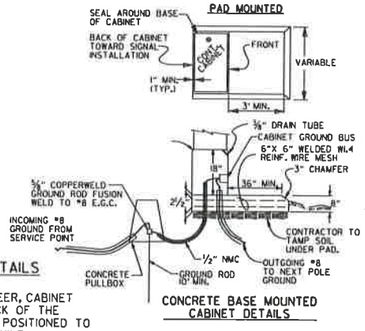
THE CONTRACTOR MAY BE REQUIRED TO ALTER THE FLASHING DISPLAY DURING THE TEMPORARY FLASH PERIOD. AT THE TIME THE INTERSECTION IS PLACED IN PERMANENT OPERATION, THE FLASH SEQUENCE SHALL THEN BE RETURNED TO THAT INDICATED ON THE PLAN SHEETS. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR THESE ALTERATION IN FLASH SEQUENCE.

SPECIAL NOTE: 90 MPH WIND ZONE DESIGN, SEE NOTE 3. MINIMUM STRUCTURAL REQUIREMENTS.





SPAN WIRE SUPPORT POLE AND MAST ARM POLE MOUNTED



CONCRETE BASE MOUNTED CABINET DETAILS

CONTROLLER CABINET MOUNTING DETAILS

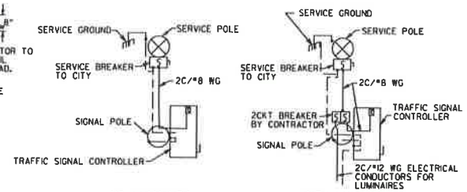
NOTE:
UNLESS OTHERWISE DIRECTED BY THE ENGINEER, CABINET ORIENTATION SHALL BE SUCH THAT THE BACK OF THE CABINET IS PARALLEL TO THE STREET AND POSITIONED TO ALLOW VISIBILITY OF THE SIGNAL DISPLAY WHILE OBSERVING THE CONTROLLER FRONT PANEL.

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 701FOR THE CONTROLLER. THE CONCRETE PULL BOX AND CONDUCTOR BOX SHALL BE PAID SEPERATELY.

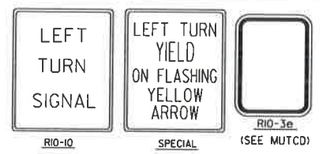
9. POLE BASE/FOUNDATION - ANCHOR BOLTS SHALL INCLUDE AS A MINIMUM, ONE LEVELING NUT, TWO FLAT WASHERS, ONE LOCK WASHER, AND ONE HEX NUT. PERIMETER OF ANCHOR BASE SHALL BE GROUTED WITH A ¼" WEEP HOLE. ALL CONCRETE SHALL BE CLASS "S" OR GREATER.

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.



SERVICE DISCONNECT
NOTE: ELECTRICAL GROUND CONDUCTOR IS BONDED TO ALL METAL ENCLOSURES



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	
12-08-16	REVISED NOTES	
02-27-14	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	
06-11-01	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			35 MPH			40 MPH			45 MPH			50 MPH			55 MPH			60 MPH			65 MPH			70 MPH			75 MPH		
	e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)	
		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE
0° 15'	NC			NC			NC			NC			NC			NC			NC			NC			NC			NC		
0° 30'	NC			NC			NC			NC			NC			NC			RC	96		RC	96		RC	96		0.022	101	
0° 45'	NC			NC			NC			NC			RC	96		RC	96		0.024	106		0.026	110		0.030	120		0.032	125	
1° 00'	NC			NC			NC			RC	90		0.022	101		0.026	110		0.030	120		0.034	130		0.038	139	300	0.042	149	300
1° 15'	NC			NC			RC	84		0.022	95		0.028	115		0.032	125		0.038	139		0.042	149		0.046	158		0.052	173	
1° 30'	NC			RC	78		0.022	88		0.028	108		0.032	125		0.038	139		0.044	154		0.050	168	300	0.056	182		0.062	197	
1° 45'	RC	72		RC	78		0.026	97		0.030	113		0.036	134		0.044	154		0.050	168	300	0.056	182		0.064	202		0.070	216	
2° 00'	RC	72		0.024	86		0.028	101		0.034	122		0.042	149		0.048	163		0.056	182		0.064	202		0.070	216		0.080	240	
2° 15'	RC	72		0.026	90		0.032	109		0.038	131		0.046	158		0.054	178	300	0.062	197		0.070	216		0.078	235	350	0.088	259	350
2° 30'	0.022	75		0.028	94		0.034	113		0.042	140		0.050	168		0.058	187		0.068	211		0.076	230		0.086	254		0.096	278	
2° 45'	0.024	79		0.030	98		0.038	122		0.046	149	200	0.054	178		0.064	202		0.072	221		0.082	245		0.092	269		0.100	288	400
3° 00'	0.026	83		0.034	105		0.040	126		0.050	158		0.058	187	250	0.068	211		0.078	235		0.088	259		0.098	283	400	D MAX = 2° 45'		
3° 15'	0.028	86		0.036	109		0.044	134		0.052	162		0.062	197		0.072	221		0.082	245		0.092	269		0.100	288				
3° 30'	0.030	90		0.038	113		0.046	139	200	0.056	171		0.066	206		0.076	230		0.086	254		0.096	278	350	D MAX = 3° 30'					
3° 45'	0.032	93		0.040	117		0.050	147		0.058	176		0.070	216		0.080	240		0.090	264		0.098	283							
4° 00'	0.034	97		0.042	121	200	0.052	151		0.062	185		0.072	221		0.084	250		0.094	274	350	0.100	288							
4° 15'	0.036	100		0.044	125		0.054	155		0.064	189		0.076	230		0.086	254	350	0.096	278		D MAX = 4° 15'								
4° 30'	0.036	100	200	0.046	129		0.056	160		0.068	198		0.078	235		0.090	264		0.098	283										
4° 45'	0.038	104		0.048	133		0.060	168		0.070	203		0.082	245		0.092	269		0.100	288										
5° 00'	0.040	108		0.050	137		0.062	172		0.072	207		0.084	250		0.094	274		D MAX = 5° 15'										
5° 30'	0.044	115		0.054	144		0.066	181		0.078	221	250	0.088	259	300	0.098	283												
6° 00'	0.046	119		0.058	152		0.070	189		0.082	230		0.092	269		0.100	288												
6° 30'	0.050	126		0.062	160		0.074	198	250	0.086	239		0.096	278		D MAX = 6° 30'														
7° 00'	0.052	130		0.064	164		0.078	206		0.090	248		0.098	283																
7° 30'	0.054	133		0.068	172		0.080	210		0.092	252	300	0.100	288																
8° 00'	0.058	140		0.070	176		0.084	219		0.094	257		D MAX = 8° 25'																	
8° 30'	0.060	144		0.072	179		0.086	223	250	0.096	261																			
9° 00'	0.062	148		0.076	187		0.088	227		0.098	266																			
9° 30'	0.064	151		0.078	191		0.092	235		0.100	270																			
10° 00'	0.066	155		0.080	195		0.094	240		D MAX = 10° 30'																				
11° 00'	0.070	162		0.084	203		0.096	244																						
12° 00'	0.074	169		0.088	211	250	0.098	248																						
13° 00'	0.076	173		0.090	215		0.100	252	300																					
14° 00'	0.080	180		0.094	222		D MAX = 13° 45'																							
15° 00'	0.082	184		0.096	226																									
16° 00'	0.086	191		0.098	230																									
17° 00'	0.088	194		0.100	234																									
18° 00'	0.090	198	250	D MAX = 19° 30'																										
19° 00'	0.092	202																												
20° 00'	0.094	205																												
21° 00'	0.096	209																												
22° 00'	0.096	209																												
23° 00'	0.098	212																												
24° 00'	0.098	212																												
25° 00'	0.100	216																												

D MAX = 28° 30'

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%

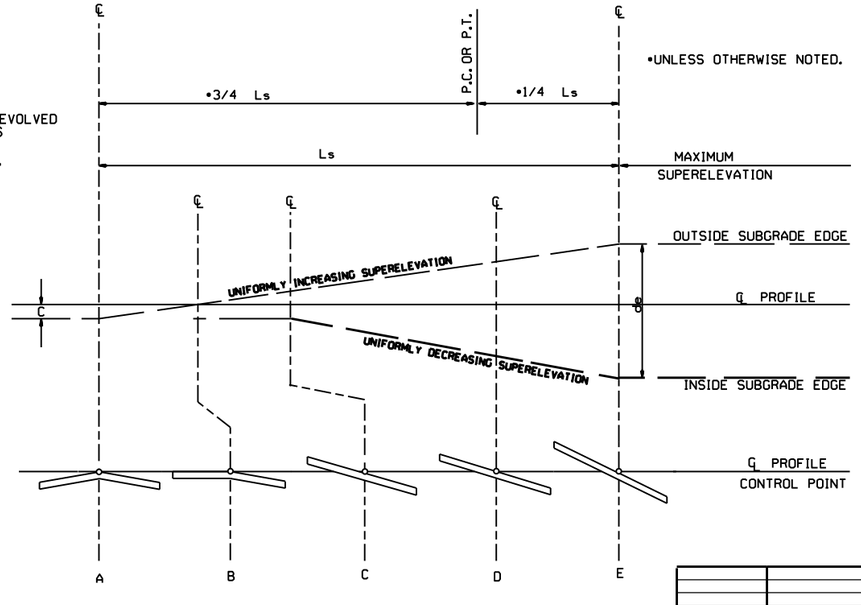
NOTE: MAINTAIN NORMAL CROWN ON INSIDE UNTIL SUPERELEVATION EXCEEDS 2C.

RATE OF SUPERELEVATION SHALL BE COMPUTED ON STRAIGHT LINE METHOD USING APPLICABLE Ls.

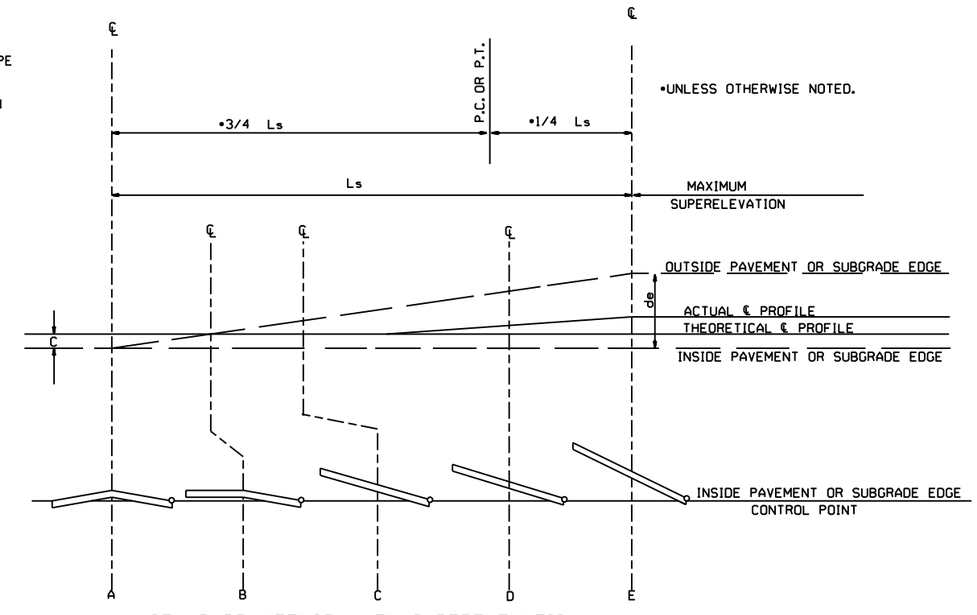
SUPERELEVATION FORMULA = $\frac{Lde}{Ls}$

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 CENTER LINE



STANDARD METHOD WHEN SUPERELEVATION REVOLVES AROUND INNER SUBGRADE POINT OR INNER PAVEMENT EDGE

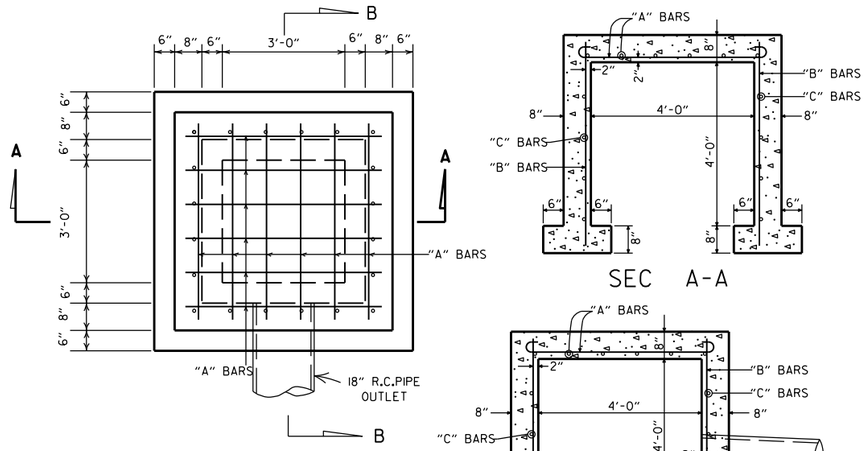
NOTE: MAINTAIN NORMAL CROWN ON INSIDE UNTIL SUPERELEVATION EXCEEDS 2C.

DATE	REVISION	DATE FILMED
11-07-19	REVISED SUPERELEVATION TABLE	
10-18-96	ADDED FORMULA	
01-09-87	ISSUED	534-1-9-87

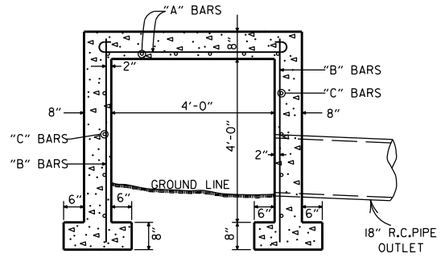
ARKANSAS STATE HIGHWAY COMMISSION

TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC

STANDARD DRAWING SE-2



SEC A-A



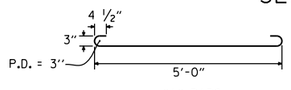
SEC B-B

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



"A" BARS

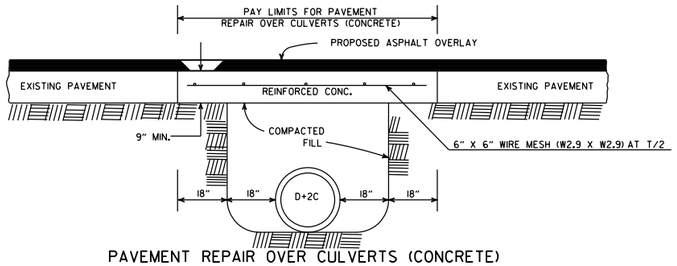
QUANTITIES

CONCRETE 3.31 CU. YDS.
REINFORCING STEEL 168 LB.

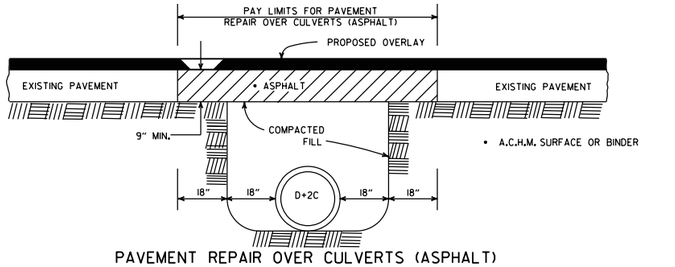
GENERAL NOTE:

THE PAY ITEMS FOR REINFORCED CONCRETE SPRING BOXES SHALL BE FOR THE QUANTITIES OF CONCRETE OF THE CLASS SPECIFIED, REINFORCING STEEL, EXCAVATION FOR STRUCTURES AND 18" R.C. PIPE CULVERT.

REINFORCED CONCRETE SPRING BOX



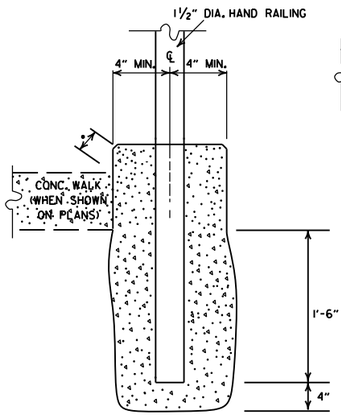
PAVEMENT REPAIR OVER CULVERTS (CONCRETE)



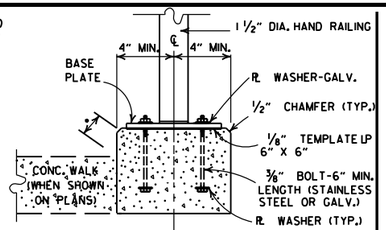
PAVEMENT REPAIR OVER CULVERTS (ASPHALT)

DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS

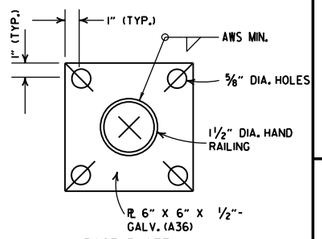
• A 2" MIN. HIGH CURB IS REQUIRED WHEN CONCRETE WALK IS ADJACENT TO THE HAND RAILING. PAYMENT FOR CURB SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR CONCRETE WALKS.



DETAIL OF HAND RAILING SET IN CONCRETE

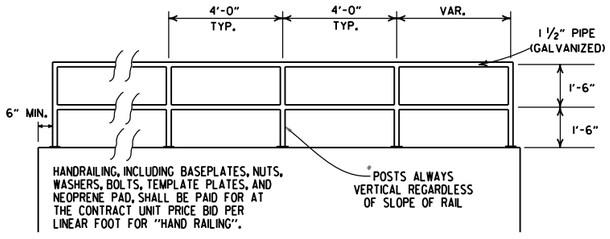


POST CONNECTION TO WALL

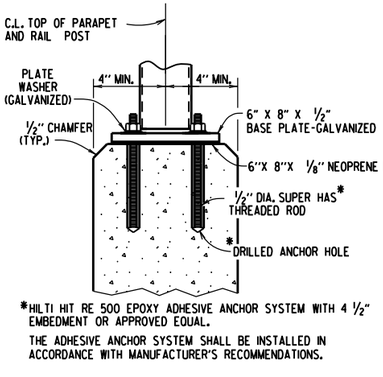


BASE PLATE

POST CONNECTION DETAILS



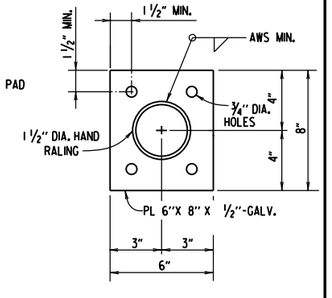
HAND RAILING SHALL CONFORM TO SECTION 633.



*HILTI HIT RE 500 EPOXY ADHESIVE ANCHOR SYSTEM WITH 4 ½" EMBEDMENT OR APPROVED EQUAL.

THE ADHESIVE ANCHOR SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

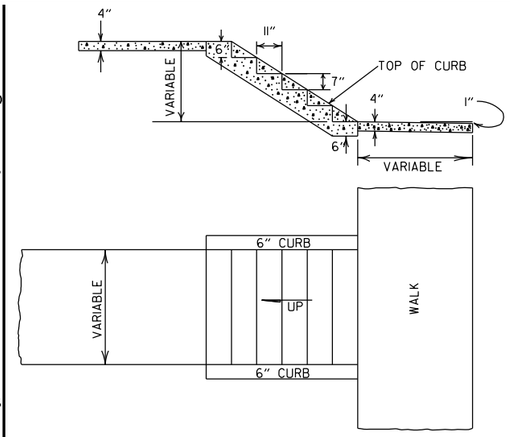
POST CONNECTION TO WALL



BASE PLATE

DETAILS OF ALTERNATE POST ANCHOR SYSTEM (EPOXY ADHESIVE ANCHORS)

HAND RAILING DETAILS



GENERAL NOTES

1. RISE AND TREAD DIMENSIONS OF STEPS MAY BE VARIED AS DIRECTED BY THE ENGINEER, HOWEVER, TREAD WIDTHS SHALL BE 11" MIN. ALL STEPS IN A FLIGHT SHALL HAVE CONSISTENT TREAD & RISER DIMENSIONS.
2. 1" TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE WALKS AT 45' INTERVALS.

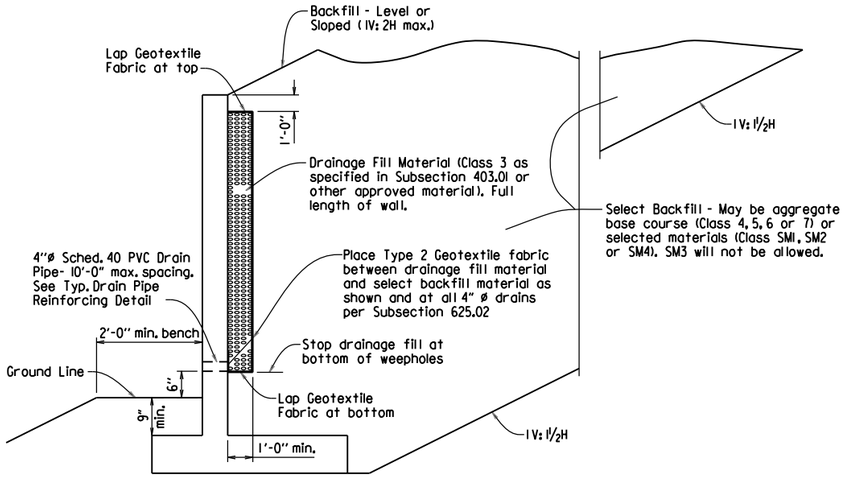
DETAILS OF CONCRETE STEPS & WALKS

DATE	REVISION	DATE FILMED
10-25-18	REVISED DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS	
9-12-13	REVISED REINFORCED CONCRETE SPRING BOX	
7-26-12	REMOVED RETAINING WALL DETAILS & REVISED HAND RAILING DETAILS	
4-17-08	REV. JOINT & FOOTING STEP DETAILS	
11-29-07	REVISED RETAINING WALL DRAINAGE	
5-25-06	REVISED PVMT REPAIR OVER CULVERTS (CONC); REVISED REINFORCED CONC SPRING BOX	
10-9-03	REVISED PIPE RAILING DETAILS TO HAND RAILING DETAILS	
4-10-03	REVISED RETAINING WALL DRAWING	
8-22-02	ADDED HAND RAILING DETAIL	
11-16-01	REVISED PVMT REPAIR OVER CULVERTS (CONC); CORRECTED SPELLING IN GENERAL NOTES	
11-18-98	ADDED GENERAL NOTES TO CONCRETE STEPS & WALKS	
7-02-98	ENLARGED PIPE	
4-03-97	ADDED NOTE TO STEEL BAR SCHED.	
10-18-96	CORRECTED SPELLING	
4-26-94	ADD WEEP HOLE;REV. JOINT SPACING IN RET. WALL	
6-2-94	CHANGED CONST. TO CONTRACTION JOINT	
10-1-92	CHANGED MESH FABRIC TO WIRE MESH	10-1-92
8-15-91	DELETED HDWL MODIFICATION DETAIL	8-15-91
11-8-90	DELETED COLD MIX FROM CULV'T. REPAIR	11-8-90
11-30-89	REV. RETAINING WALL STEEL SCHEDULE	11-30-89
11-17-88	V. BARS BEHIND ARROW	665-11-17-88
7-15-88	REV. PAVEMENT REPAIR ADDED HDWL. MODS, DEL. PIPE UNDERDRAINS	649-7-15-88
11-1-84	REV. TRENCH FOR PIPE UNDERDRAIN	510-11-1-84
1-4-83	ELIMINATED CONC. CLASS & ADDED CHAMFER NOTE	682-1-4-83
3-2-81	SPELLING OF "UNDERDRAIN"	721-3-2-81
4-20-79	REV. UNDERDRAIN DET& PAVEMENT REPAIR	674-4-20-79
2-2-76	12"MIN. GRAN. MAT'L. OVER PIPE	919-2-2-76
4-10-75	REM. SPECS. FOR GRAN. MAT'L.	568-4-10-75-853
5-22-74	GRANULAR MAT'L. TO BE SB-3	567-5-22-74-740
10-2-72	REVISED AND REDRAWN	564-10-16-72

ARKANSAS STATE HIGHWAY COMMISSION

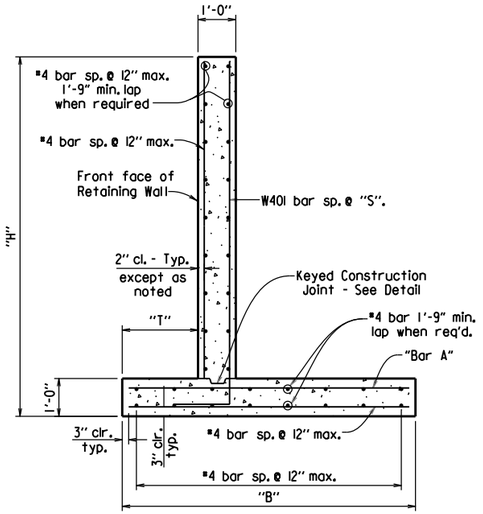
DETAILS OF SPECIAL ITEMS

STANDARD DRAWING SI - 1



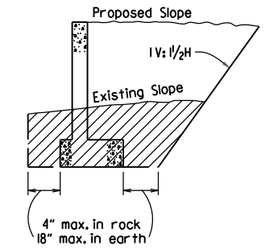
TYPICAL DRAINAGE & BACKFILL DETAILS

N.T.S

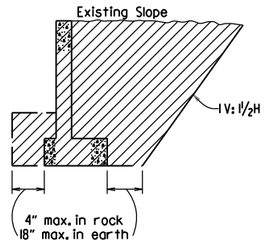


TYPICAL SECTION

N.T.S



In Embankment



In Excavation

NOTE: Hatched area denotes maximum limits of pay excavation.

DETAILS OF EXCAVATION

N.T.S

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS: Arkansas Department of Transportation Standard Specifications for Highway Construction (Current Edition) with applicable supplemental specifications and special provisions. Unless otherwise noted in the plans, Section and Subsection refer to the Standard Construction Specifications.

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.

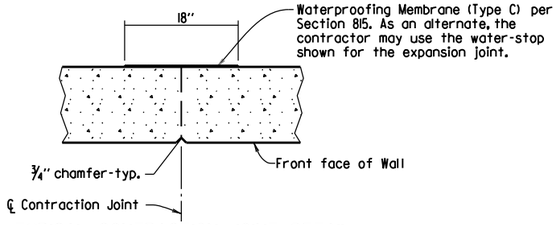
REINFORCING STEEL: All reinforcing steel shall conform to AASHTO M31 orM53, Grade 60.

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.

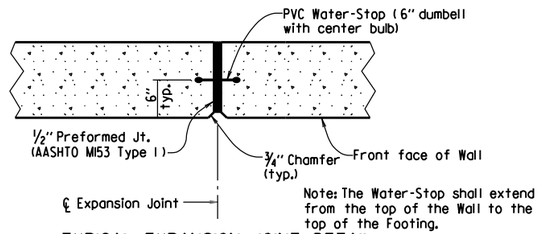
These details are not intended for use along streams or ditches without consideration for scour.



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.

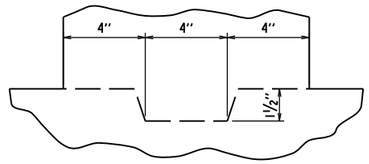
TYPICAL EXPANSION JOINT DETAIL

N.T.S.

Note: 60'-0" Max. Spacing between Expansion Joints. Horizontal reinforcing shall stop 2" from ℄ Expansion Joint.

TYPICAL DRAIN PIPE REINFORCING DETAIL

N.T.S



KEYED CONSTRUCTION JOINT 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)

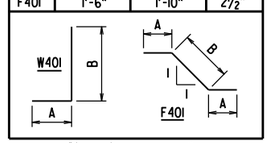
"H"	"T"	"B"	"S"	"Bar A" Size @ Spacing
3'-0"	9"	2'-6"	12"	#4 @ 12"
4'-0"	9"	3'-6"	12"	#4 @ 12"
5'-0"	9"	4'-0"	12"	#4 @ 12"
6'-0"	9"	4'-6"	12"	#4 @ 12"
7'-0"	9"	5'-6"	12"	#4 @ 10"
8'-0"	9"	6'-0"	12"	#5 @ 10"
9'-0"	1'-0"	7'-0"	12"	#5 @ 6½"

TABLE OF RETAINING WALL VARIABLES (SLOPED BACKFILL) (1V: 2H MAX.)

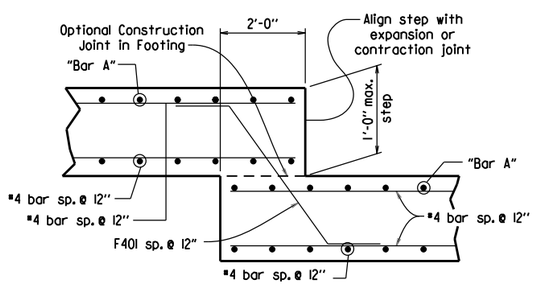
"H"	"T"	"B"	"S"	"Bar A" Size @ Spacing
3'-0"	9"	2'-6"	12"	#4 @ 12"
4'-0"	9"	3'-6"	12"	#4 @ 12"
5'-0"	9"	4'-6"	12"	#4 @ 12"
6'-0"	9"	5'-6"	12"	#4 @ 6"
7'-0"	9"	6'-6"	12"	#5 @ 6½"
8'-0"	1'-6"	8'-0"	7½"	#6 @ 6"
9'-0"	1'-11"	9'-6"	5"	#8 @ 6"

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
5-12-16	REVISED SLOPES FOR SELECT BACKFILL
2-27-14	REVISED GENERAL NOTES
7-26-12	DRAWING ISSUED

ARKANSAS STATE HIGHWAY COMMISSION

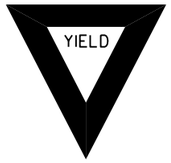
REINFORCED CONCRETE RETAINING WALL (WITHOUT LIVE LOAD SURCHARGE)

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"

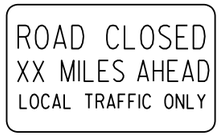
R5-1

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"

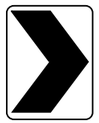
WI-4

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"

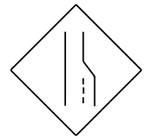
W3-1

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"

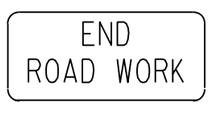
W8-9

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

G20-1

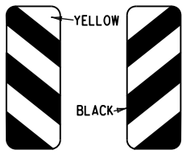
60"X24"

G20-2



48"X24"

OM-3L OM-3R



12"X36"

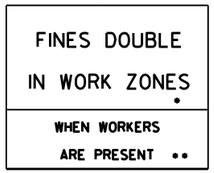
M4-9

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.

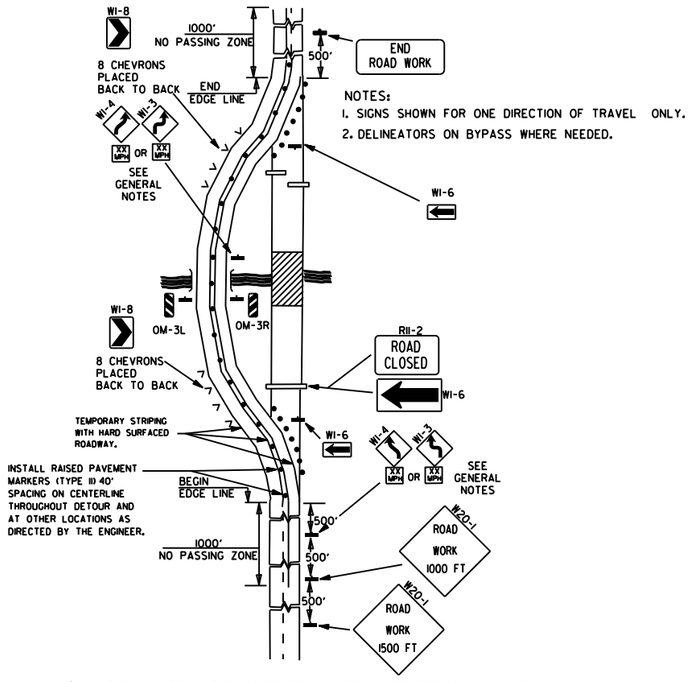
• NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) IS REQUIRED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

DATE	REVISION	FILMED
11-07-19	REVISED FOR MASH	
4-13-17	DELETED RSP-1 & ADDED W21-5a	
9-2-15	REVISED REDUCED SPEED LIMIT AHEAD SIGNS REVISED ROAD WORK NEXT XX MILES	
12-15-11	REVISED W24-1	
11-17-10	DELETED W8-9a & ADDED W8-9	
10-15-09	ADDED REFERENCE TO MASH & ADDED SIGN W24-1	
4-17-08	REVISED SIGN DESIGNATIONS	
11-18-04	REVISED NOTES	
10-9-03	REVISED NOTE 1	
11-16-01	REVISED NOTE 7	
9-28-00	REVISED NOTE	
11-18-98	ADDED NOTE	
6-26-97	REVISED NOTE 5	
4-03-97	REVISED NOTE 5	
10-18-96	ADDED CONTROLLED ACCESS HWY. SIGN & TO NOTE 7	
10-12-95	ADDED R55-1	
6-8-95	REVISED TO CORRECT SIGN ILLUSTRATIONS	6-8-95
2-2-95	REVISED PER PART VI, MUTCD SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

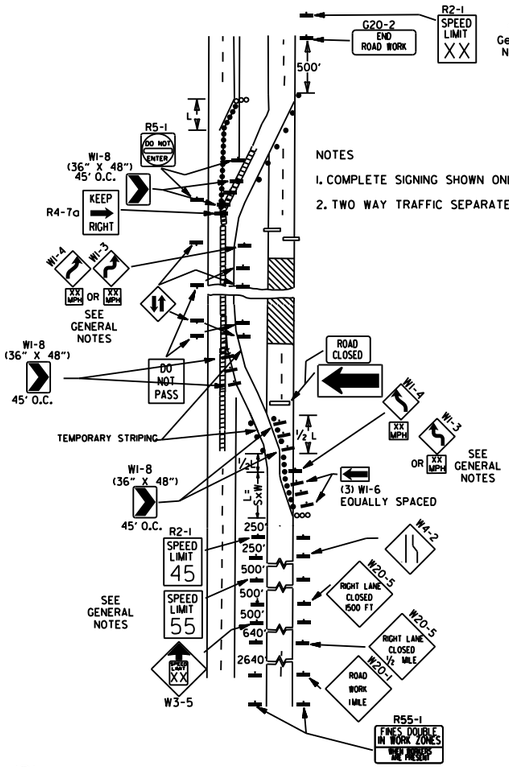
STANDARD DRAWING TC-1



(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:

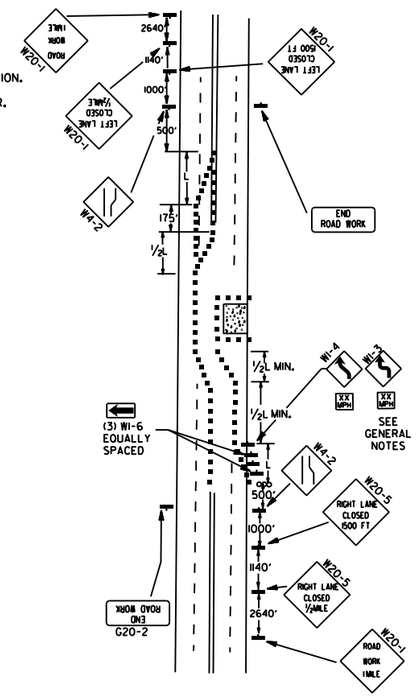
1. SIGNS SHOWN FOR ONE DIRECTION OF TRAVEL ONLY.
2. DELINEATORS ON BYPASS WHERE NEEDED.



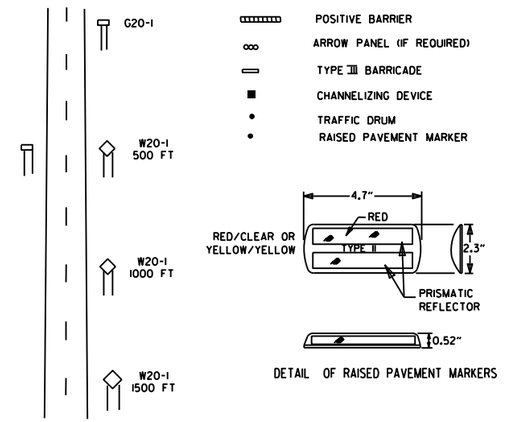
(B) TYPICAL APPLICATION - 4-LANE DIVIDED ROADWAY WHERE ONE ROADWAY IS CLOSED.

NOTES

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



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



TYPICAL ADVANCE WARNING SIGN PLACEMENT

TAPER FORMULAE:

L=SXW FOR SPEEDS OF 45MPH OR MORE.

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

WHERE:

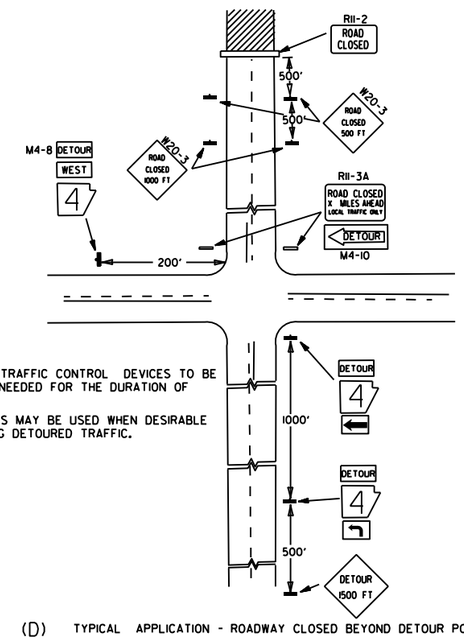
L= MINIMUM LENGTH OF TAPER.

S= NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85TH PERCENTILE SPEED.

W= WIDTH OF OFFSET.

GENERAL NOTES:

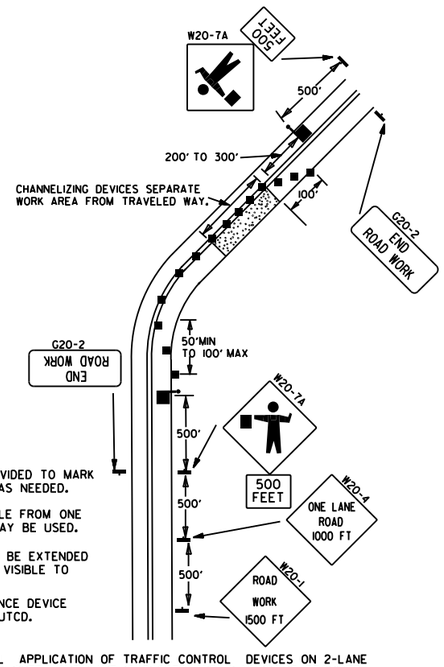
1. THE MAINTENANCE DIVISION SHALL CONDUCT A BALL BANK STUDY TO DETERMINE THE ADVISORY SPEED LIMIT PRIOR TO OPENING TO TRAFFIC. THE ADVISORY SPEED WILL BE POSTED ON W1-3 OR W1-4 CURVE WARNING SIGNS. USE W1-4 WHEN SPEED IS GREATER THAN 30MPH AND W1-3 WHEN 30MPH OR LESS
2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-1(55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-145MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
3. WHEN THE EXISTING SPEED LIMIT IS 65MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 55MPH, THE R2-1(45) SHALL BE OMITTED. ADDITIONAL R2-155MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
4. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT. BEYOND THE TAPER, MAXIMUM SPACING SHALL BE TWO TIMES THE SPEED LIMIT, OR AS DIRECTED BY THE ENGINEER.
5. WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
6. PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICABLE.
7. TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE DELINEATED BY AFFIXING CONSPICUITY MATERIAL IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER. WHEN PLACED ON OR ADJACENT TO THE SHOULDER AND NOT BEHIND A POSITIVE BARRIER, THESE DEVICES SHALL BE DELINEATED BY PLACING FIVE (5) TRAFFIC DRUMS, EQUALLY SPACED ALONG THE TRAFFIC SIDE OF THE DEVICE.
8. DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING TO THE ARDOT QUALIFIED PRODUCTS LIST.
9. ALL TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).



NOTES:

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

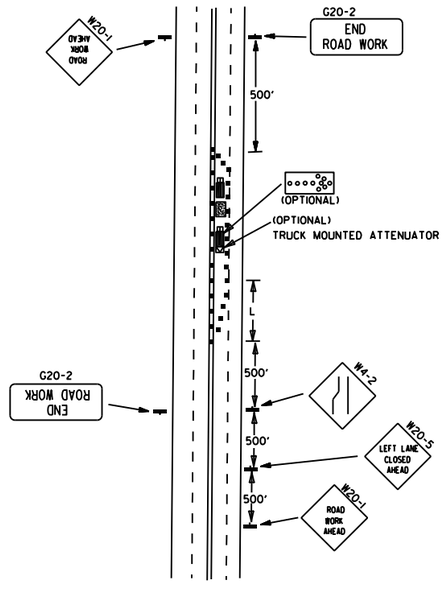
(D) TYPICAL APPLICATION - ROADWAY CLOSED BEYOND DETOUR POINT.



NOTES:

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

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



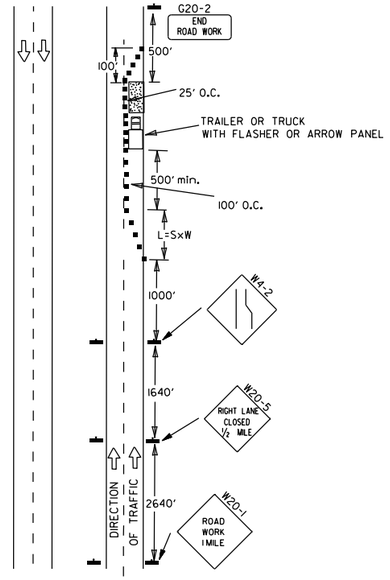
(F) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WITH INSIDE LANE CLOSED.

11-07-19	REVISED NOTE 1, ADDED NOTE 9	
9-2-15	REVISED NOTE 2, ADDED NOTE 8, REVISED DRAWING (A) & REPLACED R2-5A WITH W3-5	
9-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKERS	
3-11-10	ADDED (AFAD)	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED GENERAL NOTE	
10-18-96	ADDED R55-1	
4-26-96	CORRECTED (a) BEHIND G20-2	
6-8-95	CORRECTED SIGN IDENT. ON W1-4A	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	
DATE	REVISION	FILMED

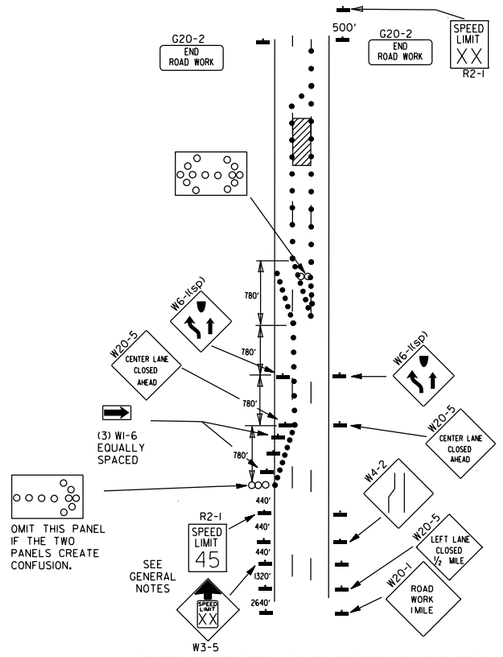
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

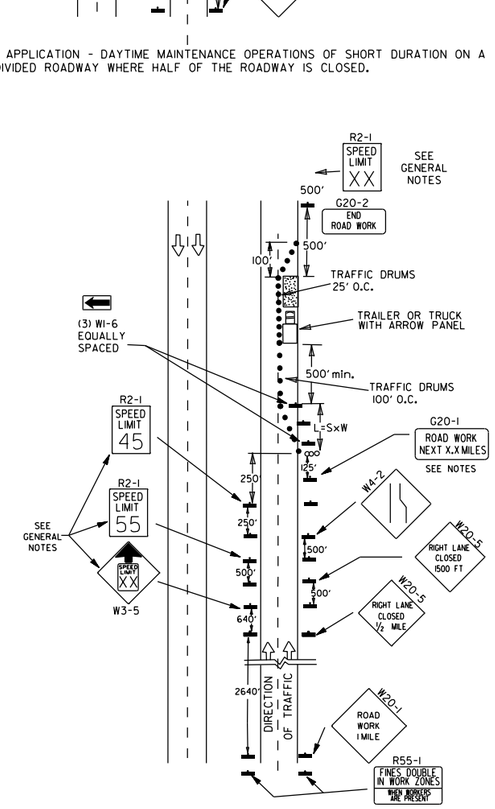
STANDARD DRAWING TC-2



(A) TYPICAL APPLICATION - DAYTIME MAINTENANCE OPERATIONS OF SHORT DURATION ON A 4-LANE DIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



(B) TYPICAL APPLICATION - 3-LANE ONEWAY ROADWAY WHERE CENTER LANE IS CLOSED.



(C) TYPICAL APPLICATION - CONSTRUCTION OPERATIONS OF INTERMEDIATE TO LONG TERM DURATION ON A 4-LANE DIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.

KEY:

ooo ARROW PANEL (IF REQUIRED)

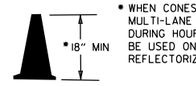
■ CHANNELIZING DEVICE

● TRAFFIC DRUM

GENERAL NOTES:

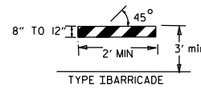
1. A SPEED LIMIT REDUCTION MAY BE IMPLEMENTED ONLY WHEN DESIGNATED IN THE PLAN OR WHEN RECOMMENDED BY THE ROADWAY DESIGN DIVISION.
2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-1(55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-1 45MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
3. WHEN THE EXISTING SPEED LIMIT IS 65MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 55MPH, THE R2-1(45) SHALL BE OMITTED. ADDITIONAL R2-155MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
4. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT. BEYOND THE TAPER, MAXIMUM SPACING SHALL BE TWO TIMES THE SPEED LIMIT OR AS DIRECTED BY THE ENGINEER.
5. WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
6. PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICABLE.
7. THE G20-1 SIGN WILL BE REQUIRED ON JOBS OF OVER TWO MILES IN LENGTH. WHEN THE LANE CLOSURE IS NOT AT THE BEGINNING OF THE PROJECT, THE G20-1 SIGN SHALL BE ERECTED 125' IN ADVANCE OF THE JOB LIMIT. ADDITIONAL W20-1 (1 MILE) SIGNS ARE NOT REQUIRED IN ADVANCE OF LANE CLOSURES THAT BEGIN INSIDE THE PROJECT LIMITS.
8. FLAGGERS SHALL USE STOP/SLOW PADDLES FOR CONTROLLING TRAFFIC THROUGH WORK ZONES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.
9. ALL PLASTIC DRUMS AND CONES SHALL MEET THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).
10. TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE DELINEATED BY AFFIXING CONSPICUITY MATERIAL IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER. WHEN PLACED ON OR ADJACENT TO THE SHOULDER AND NOT BEHIND A POSITIVE BARRIER, THESE DEVICES SHALL BE DELINEATED BY PLACING FIVE (5) TRAFFIC DRUMS, EQUALLY SPACED ALONG THE TRAFFIC SIDE OF THE DEVICE.
11. ALL TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).

CHANNELIZING DEVICES

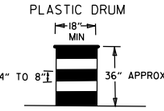


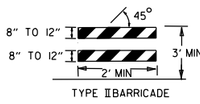
* WHEN CONES ARE USED ON FREEWAYS AND MULTI-LANE HIGHWAYS, THEY SHALL BE 28" MIN. DURING HOURS OF DARKNESS, 28" CONES SHALL BE USED ON ALL ROADWAYS, AND SHALL BE REFLECTORIZED IN ACCORDANCE WITH THE M.U.T.C.D.

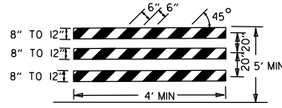
CONES



PLASTIC DRUM

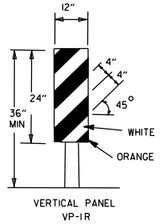




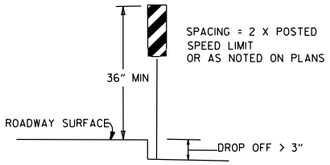


TYPE III BARRICADE

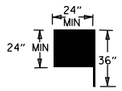
NOTE:
FOR ALL ROAD CLOSURES, THE TYPE III BARRICADES SHALL BE OF SUFFICIENT LENGTH TO EXTEND ACROSS ENTIRE ROADWAY.



VERTICAL PANEL PLACEMENT



FLAG



FLAG SHALL BE OF GOOD GRADE RED MATERIAL

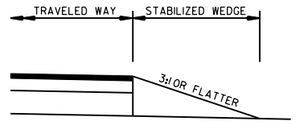
TRAFFIC CONTROL DEVICES

NON-INTERSTATE			
VERTICAL DIFFERENTIAL	LOCATION	TRAFFIC CONTROL	
		≤ 45 MPH	> 45 MPH
≤ 2"	CENTERLINE	W8-11 AND LANE STRIPING	W8-11 AND LANE STRIPING
> 2"	CENTERLINE	STANDARD LANE CLOSURE	STANDARD LANE CLOSURE
≤ 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-9, EDGE LINE STRIPING, AND VERTICAL PANELS	W8-9, EDGE LINE STRIPING, AND VERTICAL PANELS
> 3" ≤ 6"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND VERTICAL PANELS	W8-17, EDGE LINE STRIPING, AND VERTICAL PANELS
> 6" ≤ 18"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS(1)	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS(2)
> 18" ≤ 24"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS(1)	A STABILIZED WEDGE, W8-17, EDGE LINE STRIPING AND TRAFFIC DRUMS(3)
> 24"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	PRECAST CONCRETE BARRIER(4) & EDGE LINES	PRECAST CONCRETE BARRIER(4) & EDGE LINES

INTERSTATE		
VERTICAL DIFFERENTIAL	LOCATION	TRAFFIC CONTROL
≤ 2"	CENTERLINE	W8-11 AND LANE STRIPING
≤ 2"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-9, EDGE LINE STRIPING, AND TRAFFIC DRUMS(2)
> 2" ≤ 6"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS(2)
> 6"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	PRECAST CONCRETE BARRIER & EDGE LINES

INTERSTATE AND NON-INTERSTATE		
FORESLOPE	HEIGHT	TRAFFIC CONTROL
1:1	> 2 FT	PRECAST CONCRETE BARRIER
2:1	≤ 5 FT	TRAFFIC DRUMS
2:1	> 5 FT	PRECAST CONCRETE BARRIER
Flatter than 2:1	N/A	TRAFFIC DRUMS

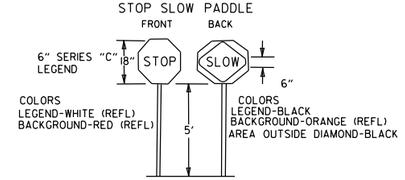
GENERAL NOTES:
1. WHEN THE SHOULDER AREA IS USED AS PART OF THE TRAVELED LANE AND THERE IS INSUFFICIENT WIDTH TO PLACE TRAFFIC DRUMS ON THE REMAINING SHOULDER WIDTH, THEN VERTICAL PANELS SHALL BE USED.
2. WHEN THERE IS INSUFFICIENT WIDTH TO PLACE TRAFFIC DRUMS ON THE REMAINING SHOULDER WIDTH, A STABILIZED WEDGE SHALL BE USED.
3. PRECAST CONCRETE BARRIER WALL CAN BE USED IN LIEU OF A STABILIZED WEDGE, W8-17 SIGN, EDGE LINE STRIPING, AND TRAFFIC DRUMS, IF AND WHERE DIRECTED BY THE ENGINEER.
4. A STABILIZED WEDGE, W8-17 SIGN, EDGE LINE STRIPING, AND TRAFFIC DRUMS CAN BE USED IN LIEU OF PRECAST CONCRETE BARRIER WALL, IF AND WHERE DIRECTED BY THE ENGINEER.
5. W21-5, W21-5a, AND/OR W21-5b SIGNS SHALL BE USED WHERE THE ROADWAY IS UNOBSTRUCTED IF AND WHERE DIRECTED BY THE ENGINEER.



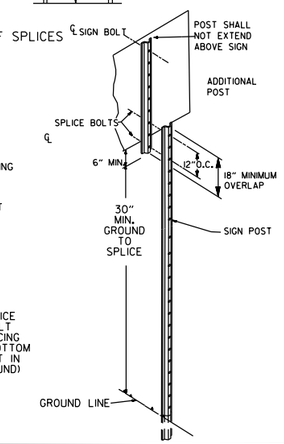
STABILIZED WEDGE

NOTE:
MATERIALS FOR THE STABILIZED WEDGE SHALL MEET THE REQUIREMENTS PROVIDED IN SECTION 603.02 OF THE STANDARD SPECIFICATIONS.

STOP SLOW PADDLE



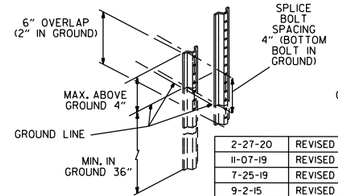
DETAIL OF SPLICES

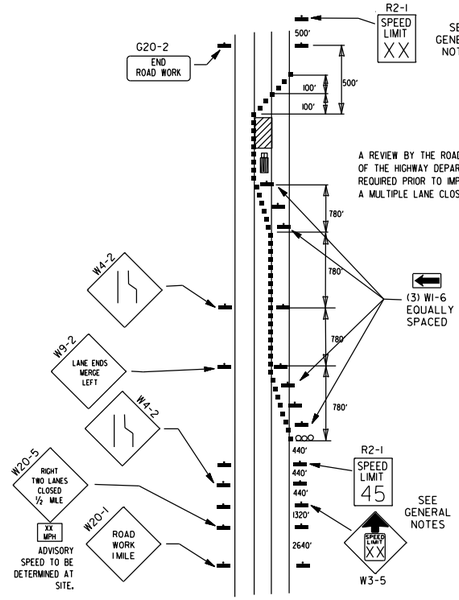


NOTES: USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-21)

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

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





(D) TYPICAL APPLICATION - CLOSING MULTIPLE LANES OF A MULTILANE HIGHWAY.

DATE	REVISION	FILMED
2-27-20	REVISED TRAFFIC CONTROL DEVICES DETAILS	
11-07-19	REVISED NOTE 9, ADDED NOTE 11	
7-25-19	REVISED TRAFFIC CONTROL DEVICES DETAILS	
9-2-15	REVISED NOTE 2 & REPLACED R2-5A WITH W3-5	
10-15-09	ADDED REFERENCE TO MASH	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED NOTE	
10-1-98	ADDED NOTE	
4-03-97	ADDED (SP) TO W6-1& REVISED TRAFFIC CONTROL DEVICES NOTE	
10-18-96	ADDED R55-1	
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL, TEXT	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

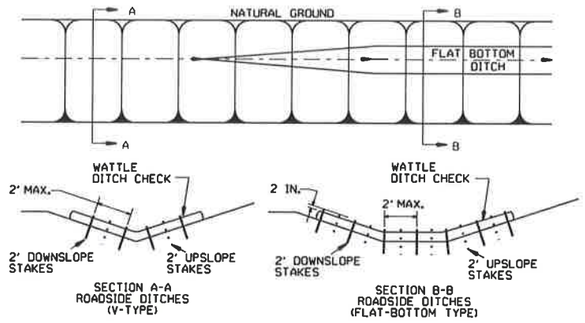
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

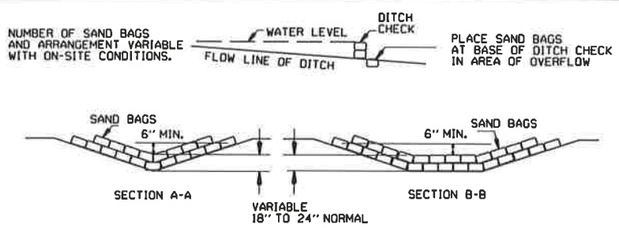
STANDARD DRAWING TC-3

GENERAL NOTES

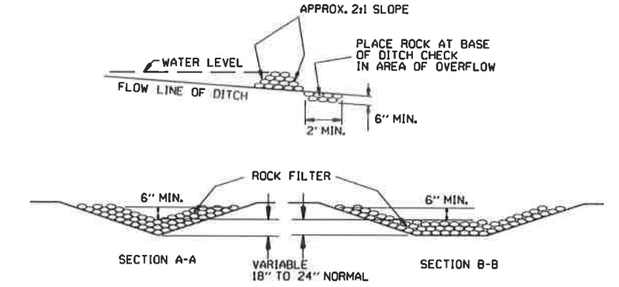
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



SAND BAG DITCH CHECK (E-5)

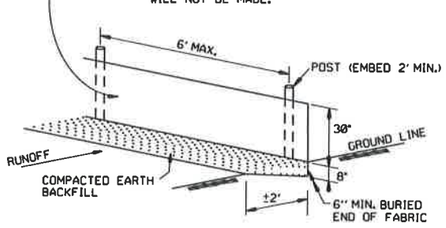


ROCK DITCH CHECK (E-6)

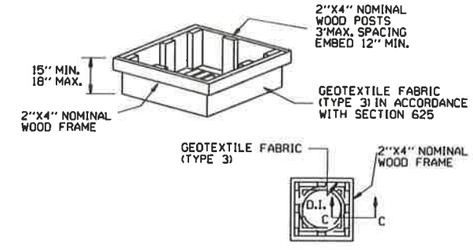
GENERAL NOTES

GEOTEXTILE FABRIC (TYPE 4) IN ACCORDANCE WITH SECTION 625

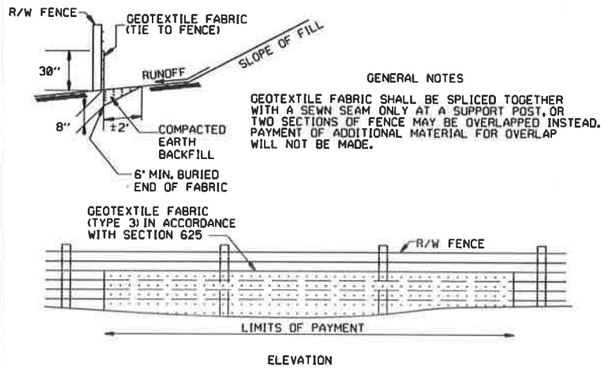
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.



SILT FENCE (E-11)



DROP INLET SILT FENCE (E-7)



GENERAL NOTES

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

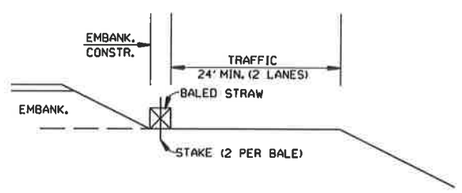
SILT FENCE ON R/W FENCE (E-4)

GENERAL NOTES

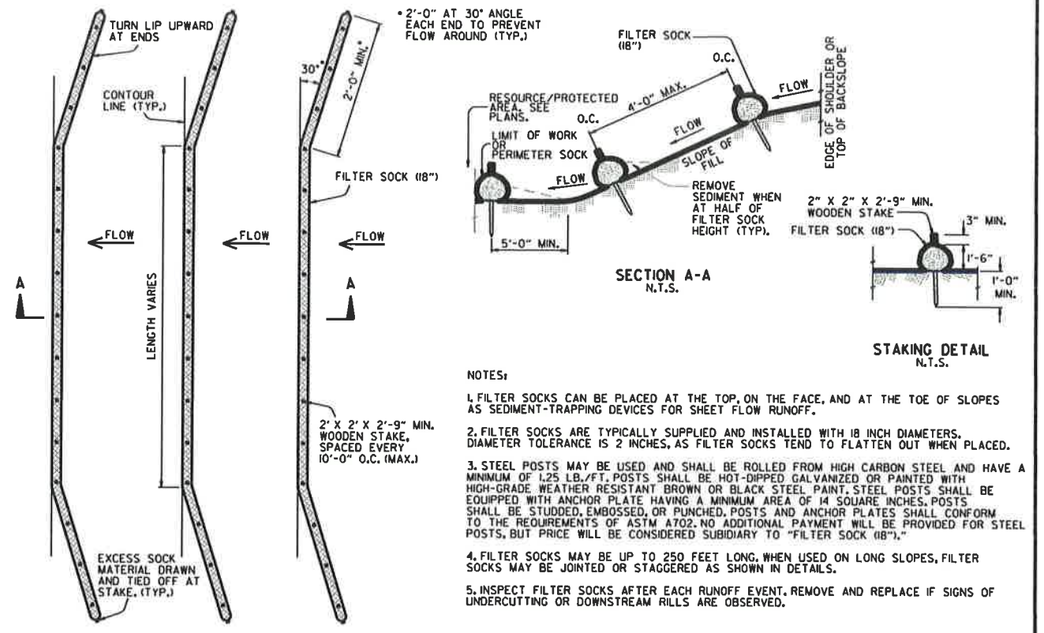
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.

2. NO GAPS SHALL BE LEFT BETWEEN BALES.

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



BALED STRAW FILTER BARRIER (E-2)



NOTES:

1. FILTER SOCKS CAN BE PLACED AT THE TOP, ON THE FACE, AND AT THE TOE OF SLOPES AS SEDIMENT-TRAPPING DEVICES FOR SHEET FLOW RUNOFF.

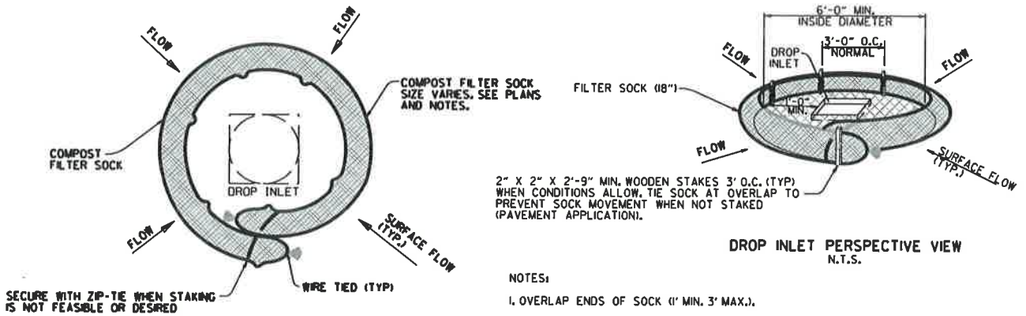
2. FILTER SOCKS ARE TYPICALLY SUPPLIED AND INSTALLED WITH 18 INCH DIAMETERS. DIAMETER TOLERANCE IS 2 INCHES, AS FILTER SOCKS TEND TO FLATTEN OUT WHEN PLACED.

3. STEEL POSTS MAY BE USED AND SHALL BE ROLLED FROM HIGH CARBON STEEL AND HAVE A MINIMUM OF 1.25 LB./FT. POSTS SHALL BE HOT-DIPPED GALVANIZED OR PAINTED WITH HIGH-GRADE WEATHER RESISTANT BROWN OR BLACK STEEL PAINT. STEEL POSTS SHALL BE EQUIPPED WITH ANCHOR PLATE HAVING A MINIMUM AREA OF 14 SQUARE INCHES. POSTS SHALL BE STUDDED, EMBOSSED, OR PUNCHED. POSTS AND ANCHOR PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A702. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR STEEL POSTS, BUT PRICE WILL BE CONSIDERED SUBIDIARY TO "FILTER SOCK (18")."

4. FILTER SOCKS MAY BE UP TO 250 FEET LONG. WHEN USED ON LONG SLOPES, FILTER SOCKS MAY BE JOINTED OR STAGGERED AS SHOWN IN DETAILS.

5. INSPECT FILTER SOCKS AFTER EACH RUNOFF EVENT. REMOVE AND REPLACE IF SIGNS OF UNDERCUTTING OR DOWNSTREAM RILLS ARE OBSERVED.

FILTER SOCK ALONG SLOPE (E-3)



NOTES:

1. OVERLAP ENDS OF SOCK (1' MIN. 3' MAX.).

2. USE 18" DIA. SOCK IN NON-TRAFFIC AREAS OR AREAS WHERE SAFETY IS NOT A CONCERN.

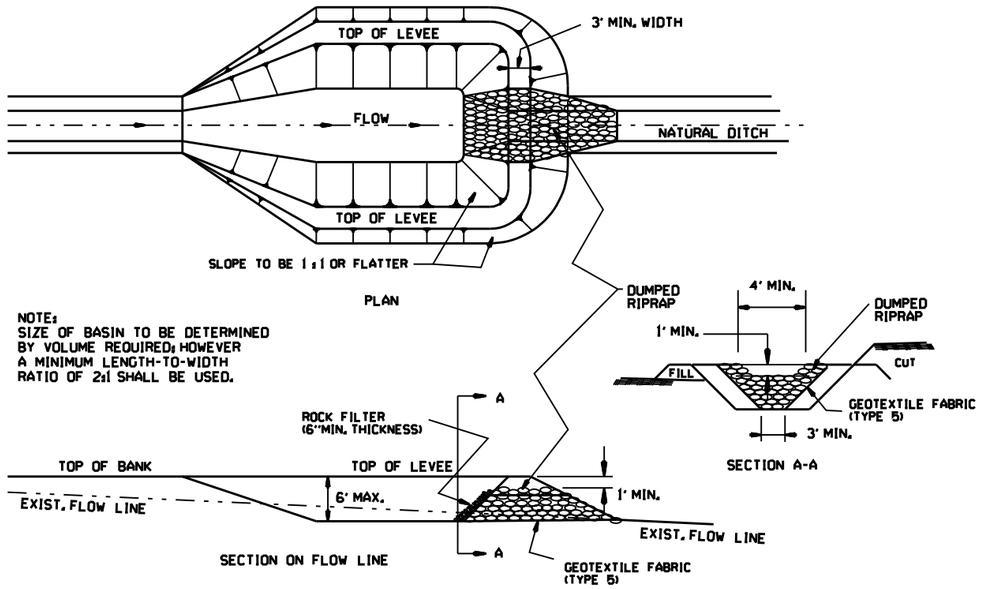
COMPOST FILTER SOCK DROP INLET PROTECTION (E-13)

DATE	REVISION	FILMED
11-16-17	ADDED FILTER SOCK E-3 AND E-13	
12-15-11	DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK	
11-18-98	ADDED NOTES	
07-02-98	ADDED BALED STRAW FILTER BARRIER (E-2)	
07-20-95	REVISED SILT FENCE E-4 AND E-11	7-20-95
07-15-94	REV. E-4 & E-11 MIN. 13" BURIED END OF FABRIC	
06-02-94	REVISED E-1,4,7 & 11; DELETED E-2 & 3	6-2-94
04-01-93	REDRAWN	
10-01-92	REDRAWN	
08-02-76	ISSUED R.D.M.	298-7-28-76

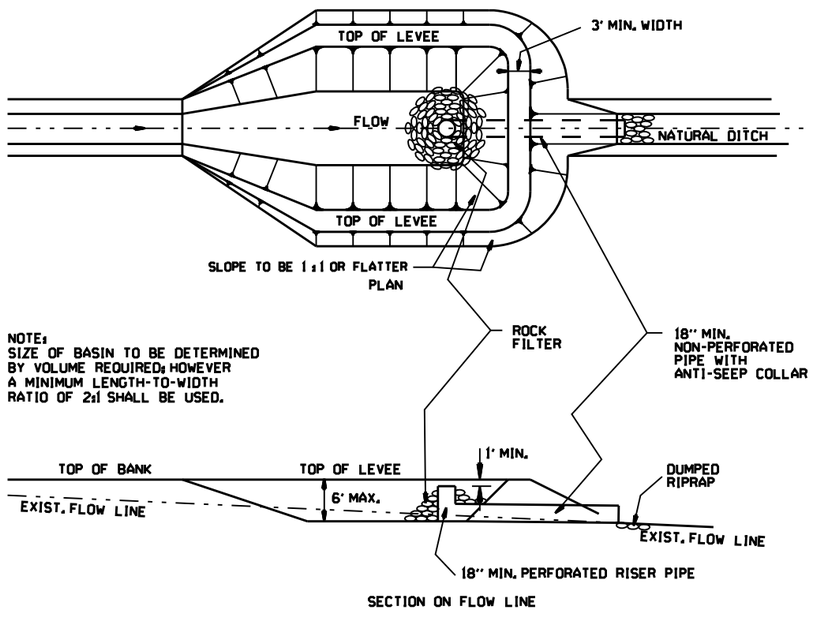
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

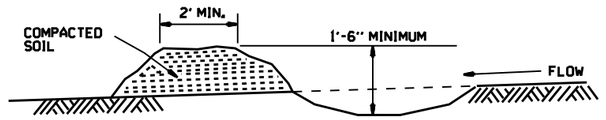
STANDARD DRAWING TEC-1



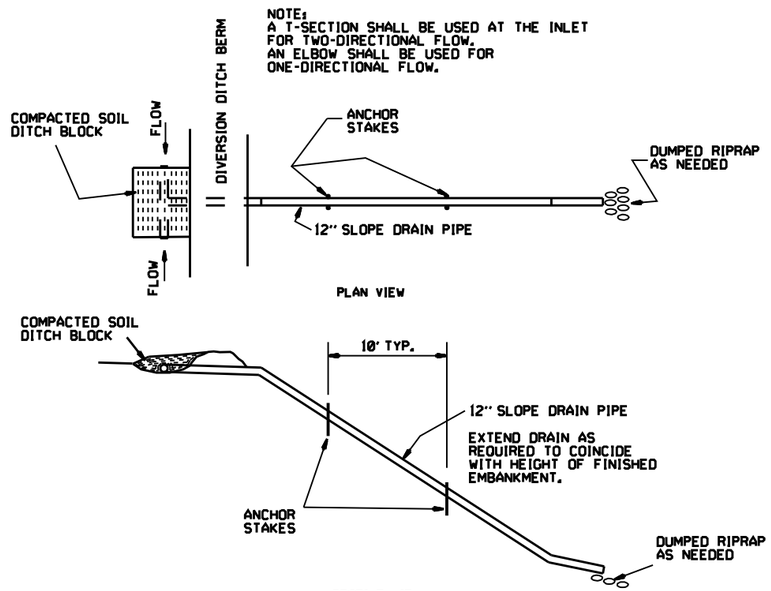
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



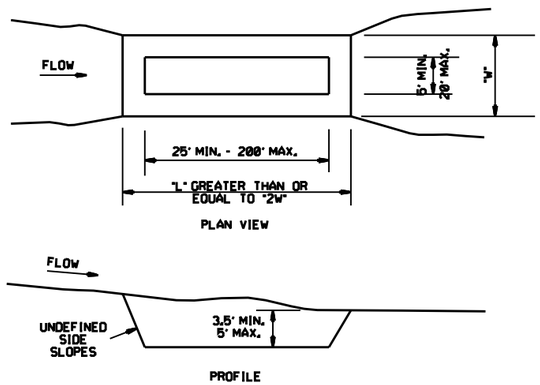
SEDIMENT BASIN WITH PIPE OUTLET (E-10)



DIVERSION DITCH (E-8)



SLOPE DRAIN (E-12)



SEDIMENT BASIN (E-14)

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

ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

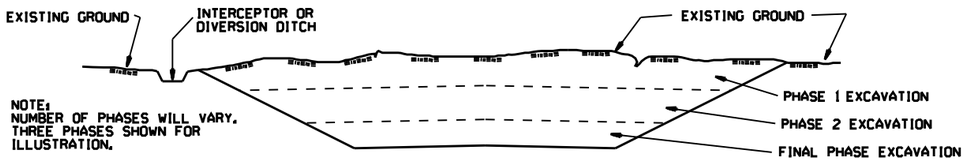
STANDARD DRAWING TEC-2

CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE

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

EXCAVATION



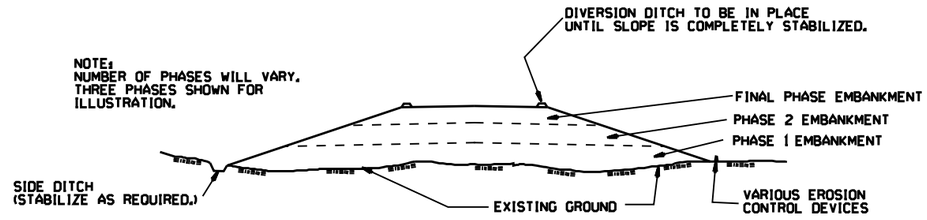
GENERAL NOTE

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

CONSTRUCTION SEQUENCE

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

EMBANKMENT



GENERAL NOTE

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

CONSTRUCTION SEQUENCE

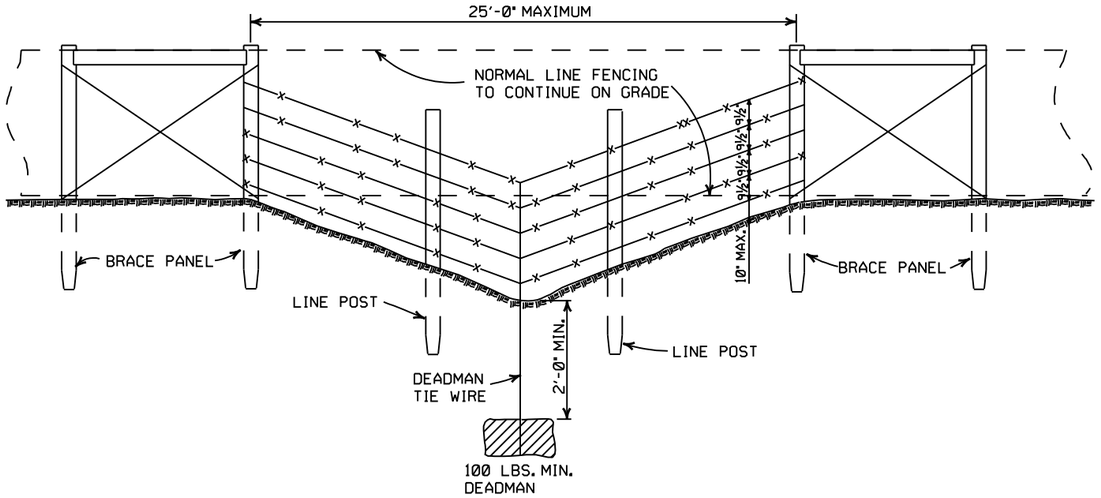
1. CONSTRUCT DIVERSION DITCHES, DITCH CHECKS, SEDIMENT BASINS, SILT FENCES, OR OTHER EROSION CONTROL DEVICES AS SPECIFIED.
2. PLACE PHASE 1 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD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

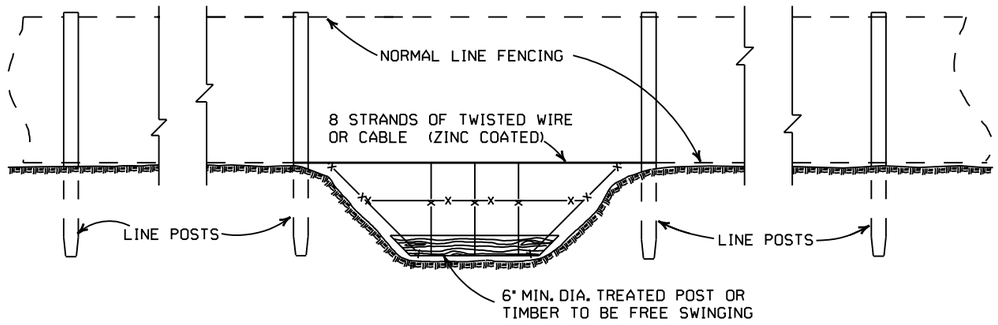
DATE	REVISION	FILMED
11-03-94	CORRECTED SPELLING	
6-2-94	Drawn & Issued	6-2-94

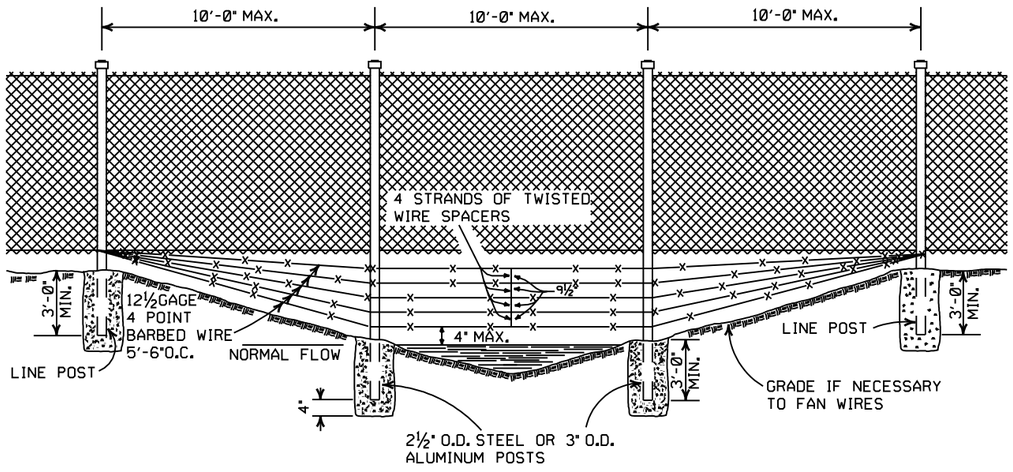
ARKANSAS STATE HIGHWAY COMMISSION

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.

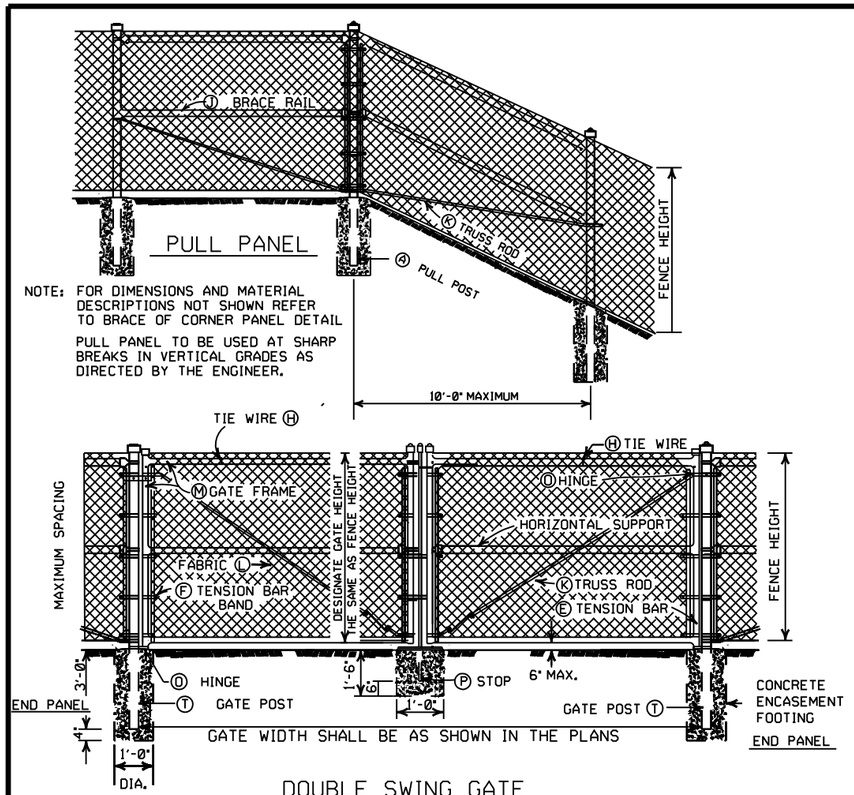
PAYMENT FOR THE TYPE INSTALLATION USED WILL NOT BE MADE DIRECTLY BUT WILL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR WIRE FENCE OR CHAIN LINK FENCE.

4-20-79	REVISED TOP RAIL & TENSION WIRE	696-4-20-79
10-2-72	REVISED AND REDRAWN	529-10-2-72
DATE	REVISION	FILMED

ARKANSAS STATE HIGHWAY COMMISSION

WIRE FENCE WATER GAPS

STANDARD DRAWING WF-2

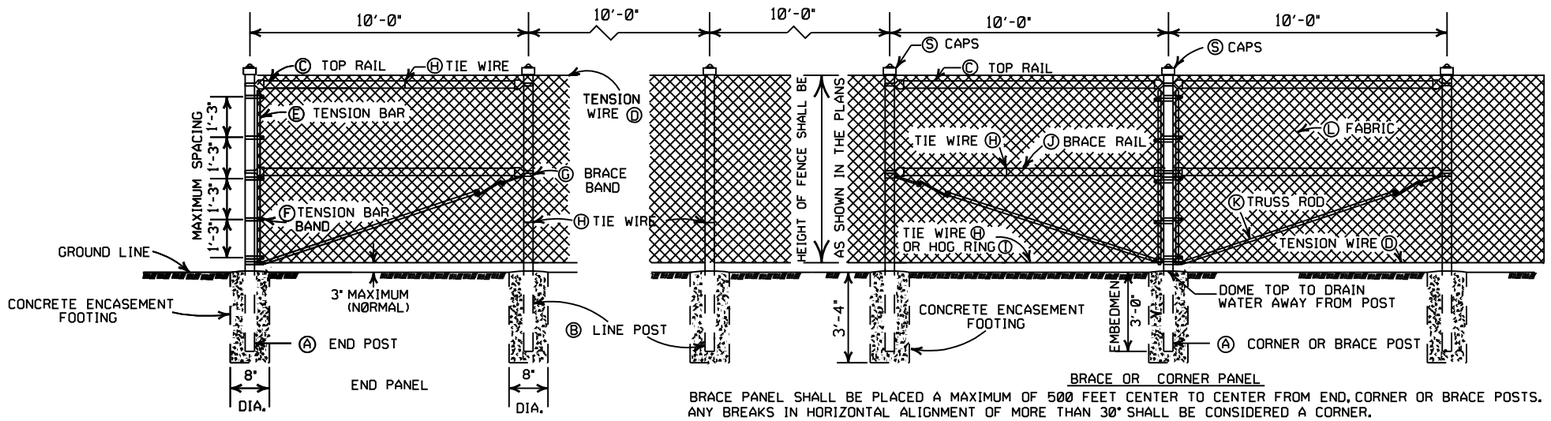


NOTE: FOR DIMENSIONS AND MATERIAL DESCRIPTIONS NOT SHOWN REFER TO BRACE OF CORNER PANEL DETAIL

PULL PANEL TO BE USED AT SHARP BREAKS IN VERTICAL GRADES AS DIRECTED BY THE ENGINEER.

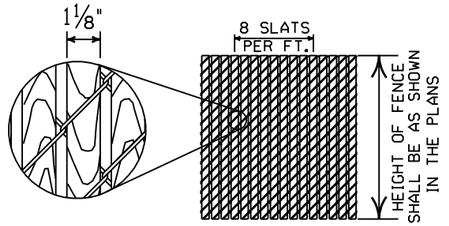
DOUBLE SWING GATE

POST SPACING DETAIL



BRACE OR CORNER PANEL

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)

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.

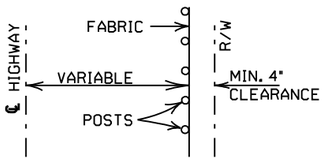
HEIGHT OF FENCE FABRIC	(A) END, PULL CORNER OR BRACE POST	(B) LINE POSTS SIZE	(B) LINE POSTS TIE SPACING	(C) TOP RAIL SIZE	(C) TOP RAIL TIE SPACING	(C) TOP RAIL MIN. LENGTH	(D) TENSION WIRE SIZE	(D) TENSION WIRE TIE SPACING	(E) TENSION BAR SIZE	(E) TENSION BAR LENGTH	(F) TENSION BAR BAND SIZE	(F) TENSION BAR BAND BOLT SIZE	(F) TENSION BAR BAND SPACING	(G) BRACE BAND SIZE	(G) 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 ⅜" 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	(H) TIE WIRE	(I) HOG RING	(J) BRACE RAIL SIZE	(J) BRACE RAIL TIE SPACING	(K) TRUSS ROD	(L) FABRIC SIZE	(L) FABRIC MESH	(L) FABRIC SELVAGE	(M) GATE FRAME SIZE	(M) GATE FRAME TIE SPACING	(N) HORIZONTAL SUPPORT SIZE	(N) HORIZONTAL SUPPORT TIE SPACING	(O) HINGE TYPE 180° SWING	(T) GATE POST GATE WIDTH 12' AND LESS	(T) 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 ⅝" 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.



INSTALLATION MAY BE MODIFIED AS SHOWN IN THE PLANS

TYPICAL INSTALLATION DIAGRAM

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

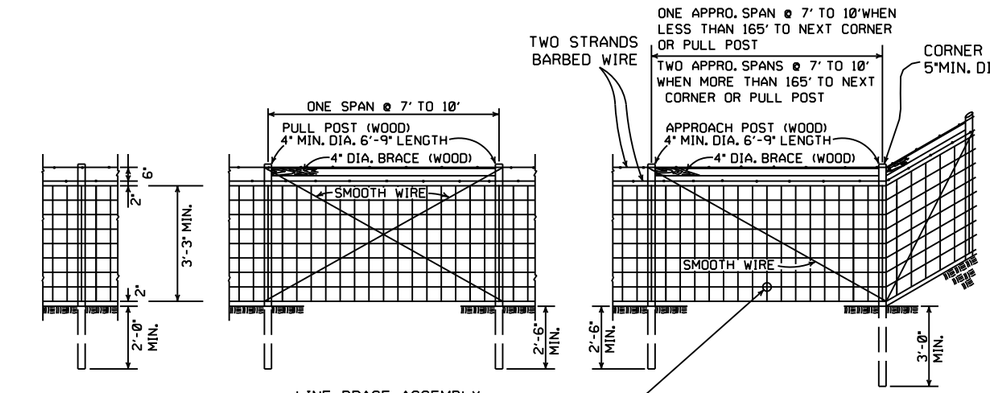
TOLERANCES ON DIMENSIONS AND WEIGHTS ACCORDING TO AASHTO M 181

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
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

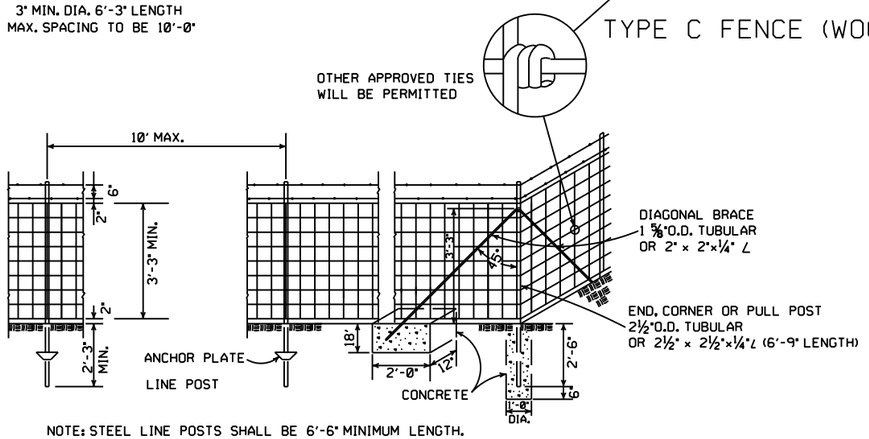
ARKANSAS STATE HIGHWAY COMMISSION

CHAIN LINK FENCE

STANDARD DRAWING WF-3

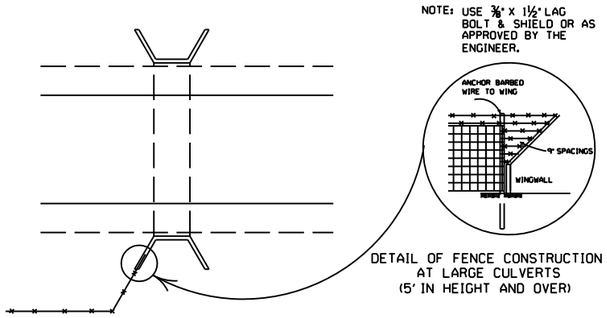


TYPE C FENCE (WOOD POSTS)



NOTE: STEEL LINE POSTS SHALL BE 6'-6" MINIMUM LENGTH.

TYPE C FENCE (STEEL POSTS)



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

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.

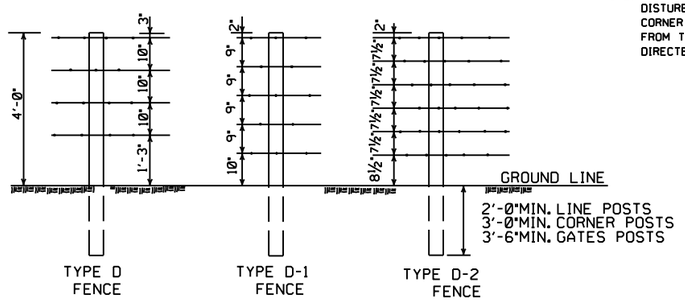
AT STREAM CROSSINGS, THE FENCE SHALL NOT BE CONSTRUCTED ACROSS LARGE STREAMS. WHERE CLEARANCE IS SUFFICIENT FROM THE TOP OF THE BANK TO THE BRIDGE STRUCTURE A CROSS CONNECTION SHALL BE CONSTRUCTED BETWEEN THE FENCE ON EACH SIDE OF THE ROAD. WHERE THE CLEARANCE IS NOT SUFFICIENT, THE FENCE SHALL BE TERMINATED 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.

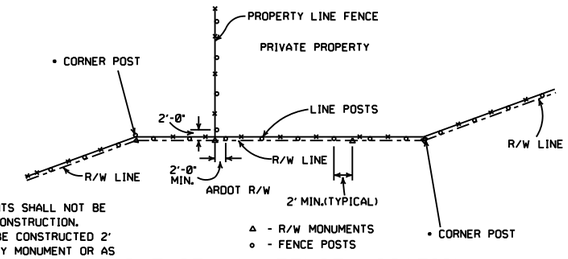
SPLICE FOR WOVEN WIRE BETWEEN PULL POST SHALL BE BY THE "WESTERN UNION METHOD" AS DESCRIBED AS FOLLOWS: THE VERTICAL WIRES FOR EACH END OF THE FENCE FABRIC SHALL BE PLACED SIDE BY SIDE AND THE PROJECTING HORIZONTAL WIRES SHALL BE WRAPPED A MINIMUM OF 4 TIMES AROUND THE HORIZONTAL WIRES OF THE FIRST WEB.

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

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

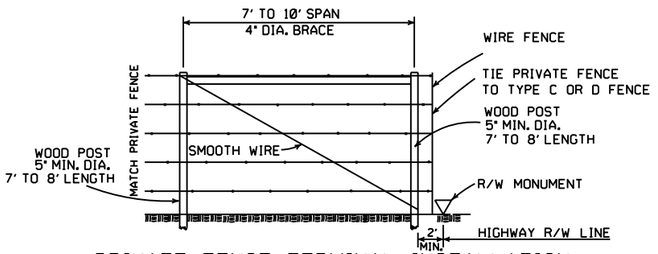


NOTE: SPACING AND SIZE (EXCEPT LENGTH) OF POSTS, APPROACH SPANS, PULL POST ASSEMBLIES, AND CORNER BRACING FOR TYPE D FENCE SHALL CONFORM TO TYPE C FENCE. USE GALVANIZED STAPLES ON WOOD POSTS AND APPROVED FASTENERS ON STEEL POSTS.



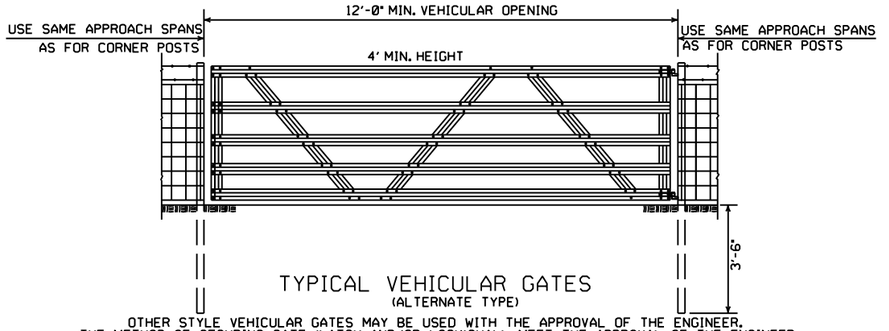
• NOTE: RIGHT-OF-WAY MONUMENTS SHALL NOT BE DISTURBED BY FENCE CONSTRUCTION. CORNER POSTS SHALL BE CONSTRUCTED 2' FROM THE RIGHT-OF-WAY MONUMENT OR AS DIRECTED BY THE ENGINEER.

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)

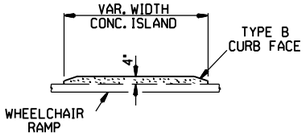
OTHER STYLE VEHICULAR GATES MAY BE USED WITH THE APPROVAL OF THE ENGINEER.
THE METHOD OF SECURING GATE (LATCH AND/OR LOCK) SHALL MEET THE APPROVAL OF THE ENGINEER.

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

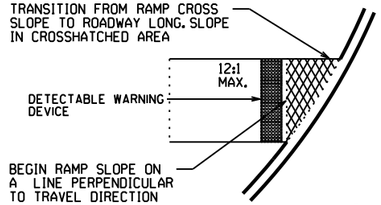
ARKANSAS STATE HIGHWAY COMMISSION

WIRE FENCE TYPE C AND D

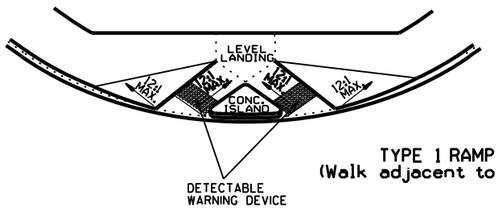
STANDARD DRAWING WF-4



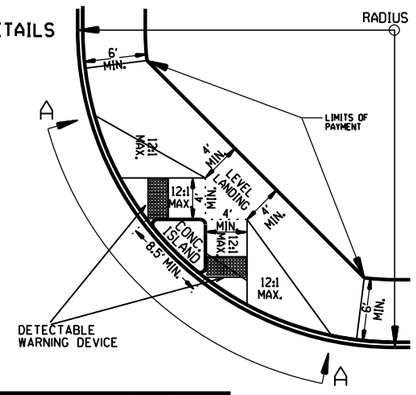
CONCRETE ISLAND DETAIL

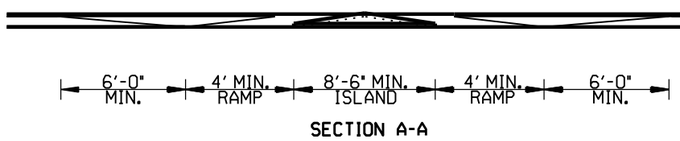


SLOPE TRANSITION DETAILS



TYPE 1 RAMP
(Walk adjacent to curb)

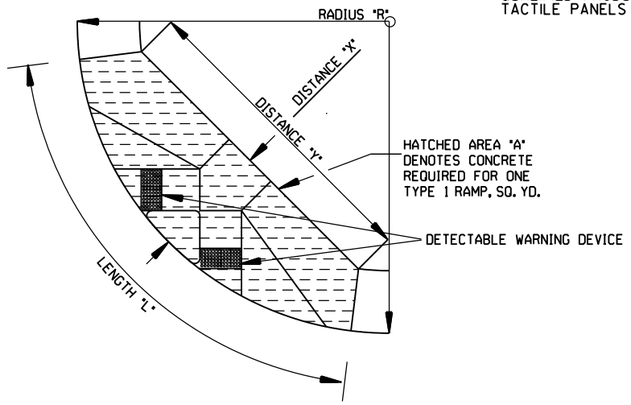




SECTION A-A

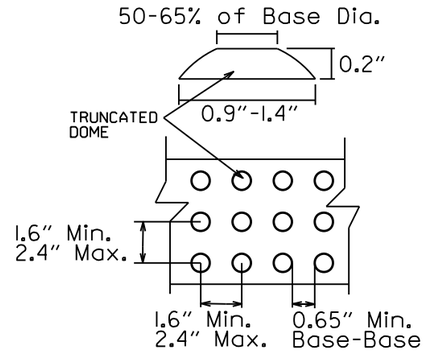
TYPE 1 RAMP DIMENSIONS AND QUANTITIES

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

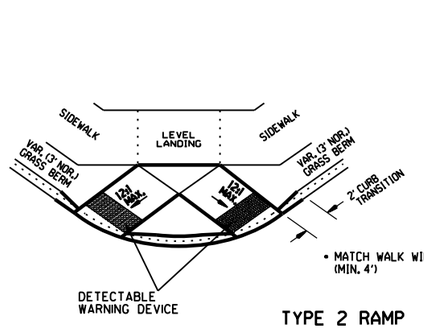
THE DETECTABLE WARNING DEVICE SHALL BE LOCATED SO THAT THE NEAREST EDGE OF THE DEVICE IS 6 TO 8 INCHES FROM THE FACE OF THE CURB.
TRUNCATED DOMES IN THE DETECTABLE WARNING SURFACE SHALL MEET THE REQUIREMENTS OF THE GEOMETRIC CONFIGURATION SHOWN.
DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT 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 ARDOT QUALIFIED PRODUCTS LIST FOR CAST-IN-PLACE TACTILE PANELS (ADA DETECTABLE WARNING).



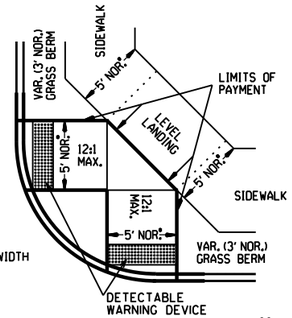
DETECTABLE WARNING DEVICE DETAIL

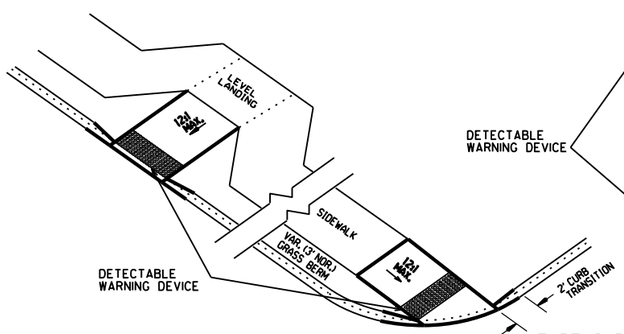
GENERAL NOTES:

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.

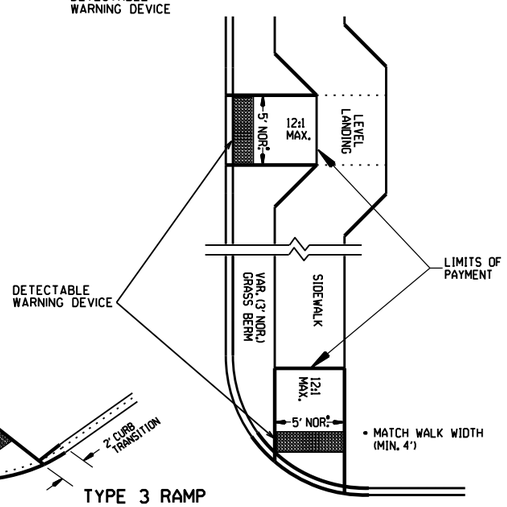


TYPE 2 RAMP

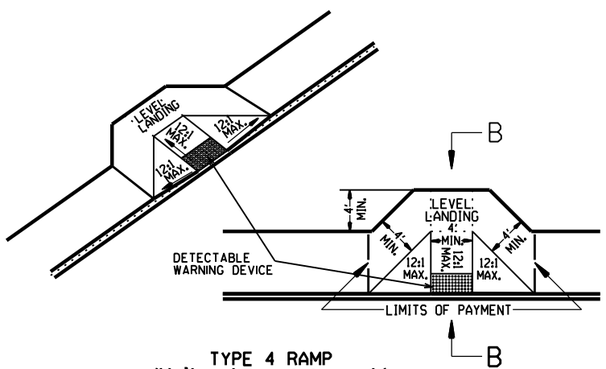




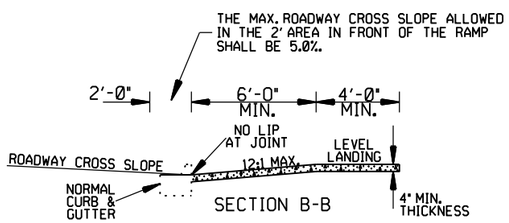
TYPE 3 RAMP



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)



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.

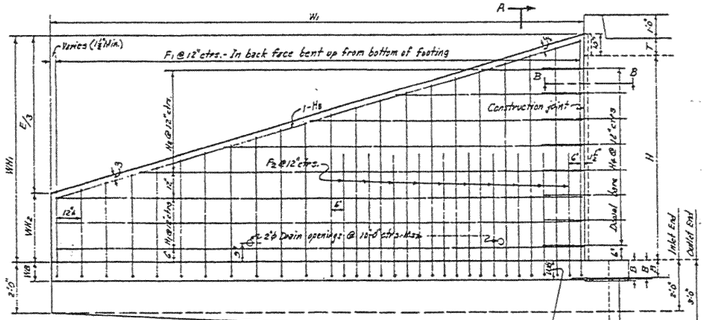
DATE	REVISION	DATE FILM
11-10-05	REVISED TO NEW SIDEWALK POLICY	
10-9-03	REVISED GEN. NOTES & ADDED NOTE	
4-10-03	REV. DETECTABLE WARNING DEVICES	
8-22-02	ADD DETECTABLE WARNING DEVICES	
3-30-00	ADD.SLOPE TRANS. & REV. ISL. DIMS.	
11-18-98	REVISED NOTES	
8-12-98	REVISED TEXTURE	
7-02-98	REDRAWN & REISSUED	
10-18-96	CORRECTED DIMENSIONS	10-18-96
5-24-90	FROM8#TO12#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.M.D.	299-7-28-76

ARKANSAS STATE HIGHWAY COMMISSION

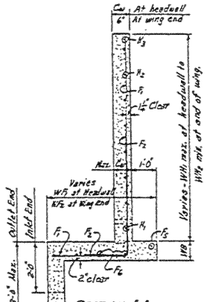
WHEELCHAIR RAMPS NEW CONSTRUCTION AND ALTERATIONS

STANDARD DRAWING WR-1

JOB No.

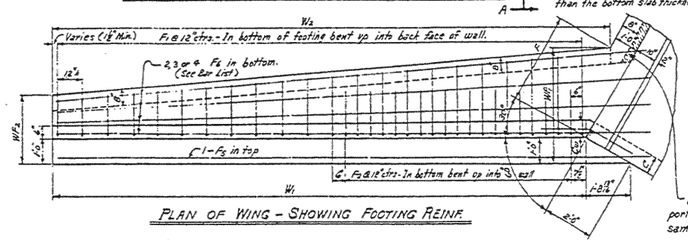


REAR ELEVATION OF WING - SHOWING BACK FACE REINF.

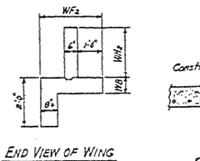


SECTION A-A

W3 may be more, equal to, or less than the bottom slab thickness B.

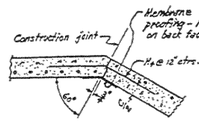


PLAN OF WING - SHOWING FOOTING REINF.

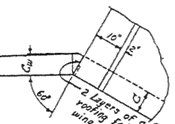


END VIEW OF WING

When B is more than W2 the shaded portion of the apron shall be made the same thickness as the barrel base B.



SECTION B-B THRU CONSTRUCTION JOINT



DETAIL AT TOP OF WING

Note:- Payment for membrane waterproofing and roofing felt to be included in the price bid for Class S Concrete.

WING DIMENSIONS

Clear Height of Box H	Thickness of Wing Footing WB	Thickness of Wing at Headwall = C Cw	Wingwall Heights At Headwall W1	At End of Wing W2	Widths of Wing Footings At Headwall W5	At End of Wing W6	Perpendicular Footing Dimension F	Perpendicular Dist. from Headwall to End of Wing E	Length of Wingwalls W1	Inside Footing Dimension W3	* Quantity per Wing Class S Concrete Inlet End	Outlet End
											CU.YD.	CU.YD.
2'	7"	6"	2'-10"	0'-8"	2'-6"	2'-0"	0'-11 1/2"	6'-6"	7'-6"	7'-1 1/2"	0.889	0.986
3'	7"	6"	3'-10"	1'-0"	2'-8"	2'-1 1/2"	1'-4 3/8"	8'-6"	9'-3 1/2"	9'-3 1/2"	1.338	1.466
4'	7"	6"	4'-10"	1'-0"	3'-0"	2'-3"	1'-8"	10'-6"	12'-1 1/2"	12'-1 1/2"	1.868	2.027
5'	7"	6"	5'-10"	1'-0"	3'-6"	2'-4 1/2"	2'-1 1/2"	12'-6"	14'-9 1/2"	14'-7 1/2"	2.478	2.668
		7"	5'-10"	1'-0"	3'-6"	2'-4 1/2"	2'-1 1/2"	12'-6"	14'-10 1/2"	14'-7 1/2"	2.582	2.772
6'	8"	7"	6'-10"	2'-0"	3'-8"	2'-6"	2'-2 1/2"	14'-6"	16'-5"	17'-1 1/2"	3.440	3.641
		7 1/2"	6'-10"	2'-0"	3'-8"	2'-6"	2'-2 1/2"	14'-6"	16'-3"	17'-1 1/2"	3.511	3.732
		8"	6'-10"	2'-0"	3'-8"	2'-6"	2'-2 1/2"	14'-6"	16'-0"	17'-1 1/2"	3.582	3.803
7'	8 1/2"	7 1/2"	7'-10"	2'-0"	4'-2"	2'-7 1/2"	2'-3 1/4"	16'-6"	18'-0 1/2"	19'-8 1/2"	4.505	4.753
		8"	7'-10"	2'-0"	4'-2"	2'-7 1/2"	2'-3 1/4"	16'-6"	19'-0 1/2"	19'-8 1/2"	4.597	4.851
8'	9"	8"	8'-10"	2'-0"	4'-8"	2'-9"	3'-0"	18'-6"	21'-0 1/2"	22'-6"	5.761	6.097

* Quantity per wing does not include headwall or that portion of apron or toewall for the length W3.

APRON DIMENSION W3 = (CW - 2F)

Clear Span S	Clear Height H	Footing Dimension 2F	Single Barrel Culvert OW	W3	Double Barrel Culvert OW	W3	Triple Barrel Culvert OW	W3	Quadruple Barrel Culvert OW	W3	Quintuple Barrel Culvert OW	W3
4'	2'	1'-11 1/2"	5'-0"	3'-0 1/2"	9'-8"	7'-8 1/2"	14'-4"	12'-4 1/2"	19'-0"	17'-0 1/2"	23'-8"	21'-8 1/2"
	3'	2'-0 1/2"	5'-0"	2'-3 1/4"	9'-8"	6'-11 1/4"	14'-4"	11'-7 1/4"	19'-0"	16'-3 1/4"	23'-8"	20'-11 1/2"
	4'	2'-1"	5'-0"	1'-10"	9'-8"	6'-6"	14'-4"	10'-10"	19'-0"	15'-6"	23'-8"	20'-2"
	5'	4'-3 3/4"	5'-0"	0'-8 3/4"	9'-8"	5'-4 3/4"	14'-0"	10'-0 3/4"	19'-0"	14'-0 3/4"	23'-8"	19'-0 3/4"
	6'	5'-6 1/2"	5'-2"	0'-1 1/4"	9'-11"	4'-10 3/4"	14'-8"	9'-7 1/2"	19'-5"	14'-0 3/4"	24'-2"	19'-1 1/2"
5'	3'	2'-0 3/4"	6'-0"	3'-3 3/4"	11'-8"	8'-11 1/2"	17'-4"	14'-7 1/2"	23'-0"	20'-3 1/4"	28'-8"	25'-11 1/2"
	4'	3'-6"	6'-0"	2'-6"	11'-8"	8'-1 1/2"	17'-4"	13'-10"	23'-0"	19'-6"	28'-8"	25'-2"
	5'	4'-3 1/2"	6'-0"	1'-8 3/4"	11'-8"	7'-4 3/4"	17'-4"	13'-0 3/4"	23'-0"	18'-8 1/2"	28'-8"	24'-4 3/4"
	6'	5'-1 1/2"	6'-2"	1'-1 1/4"	11'-11"	6'-10 3/4"	17'-8"	12'-7 1/2"	23'-5"	18'-4 3/4"	29'-2"	24'-1 1/2"
	7'	6'-2 3/4"	6'-3"	0'-0 3/4"	12'-1"	5'-4 3/4"	17'-11"	11'-8 1/2"	23'-8"	17'-4 3/4"	29'-7"	23'-4 1/2"
6'	3'	2'-0 1/2"	7'-0"	4'-3 3/4"	13'-8"	10'-11 1/2"	20'-4"	17'-7 1/2"	27'-0"	24'-3 1/4"	33'-8"	30'-11 1/2"
	4'	3'-6"	7'-0"	3'-6"	13'-8"	10'-1 1/2"	20'-4"	16'-10"	27'-0"	23'-6"	33'-8"	30'-2"
	5'	4'-3 1/2"	7'-0"	2'-8 3/4"	13'-8"	9'-4 3/4"	20'-4"	16'-0 3/4"	27'-0"	22'-8 1/2"	33'-8"	29'-4 3/4"
	6'	5'-0 3/4"	7'-2"	2'-1 1/4"	13'-11"	8'-10 3/4"	20'-8"	15'-7 1/2"	27'-5"	22'-0 3/4"	34'-2"	29'-1 1/2"
	7'	6'-2 1/2"	7'-3"	1'-0 3/4"	14'-1"	7'-10 3/4"	20'-11"	14'-8 1/2"	27'-8"	21'-0 3/4"	34'-7"	28'-0 1/2"
	8'	7'-2 3/4"	7'-4"	0'-0"	14'-4"	6'-10"	21'-0"	13'-8"	27'-11"	20'-6"	34'-8"	27'-6"
8'	4'	3'-6"	8'-0"	4'-6"	15'-8"	12'-1"	23'-4"	19'-9"	31'-0"	27'-6"	38'-8"	35'-2"
	5'	4'-3 1/2"	8'-2"	3'-8 3/4"	15'-11"	11'-3 3/4"	23'-8"	19'-0 3/4"	31'-5"	26'-8 1/2"	39'-2"	34'-4 3/4"
	6'	5'-0 1/2"	8'-2"	3'-1 1/4"	15'-11"	10'-5 3/4"	23'-8"	18'-3 1/2"	31'-5"	25'-10 1/2"	39'-2"	33'-7 1/4"
	7'	6'-2 3/4"	8'-3"	2'-0 3/4"	16'-1"	9'-5 3/4"	23'-11"	17'-3 1/2"	31'-8"	24'-8 1/2"	39'-7"	32'-6 1/2"
	8'	7'-2"	8'-4"	1'-0"	16'-2"	8'-10"	24'-0"	16'-8"	31'-10"	24'-6"	39'-8"	32'-4"
9'	4'	3'-6"	9'-0"	5'-6"	17'-8"	14'-2"	26'-0"	22'-10"	35'-0"	31'-6"	43'-8"	40'-2"
	5'	4'-3 1/2"	9'-2"	4'-8 3/4"	17'-11"	13'-3 3/4"	26'-8"	22'-0 3/4"	35'-5"	31'-1 1/2"	44'-2"	39'-4 3/4"
	6'	5'-0 1/2"	9'-2"	4'-1 1/4"	17'-11"	12'-5 3/4"	26'-8"	21'-2 1/2"	35'-5"	30'-1 1/2"	44'-2"	39'-1 1/4"
	7'	6'-2 3/4"	9'-3"	3'-0 3/4"	18'-1"	11'-5 3/4"	26'-11"	20'-3 1/2"	35'-8"	29'-1 1/2"	44'-7"	38'-0 1/2"
	8'	7'-2"	9'-4"	2'-0"	18'-2"	10'-10"	27'-0"	19'-8"	35'-10"	28'-6"	44'-8"	37'-6"
10'	5'	4'-3 3/4"	10'-2"	5'-8 3/4"	19'-11"	15'-7 3/4"	29'-8"	25'-4 1/2"	39'-5"	35'-1 1/2"	49'-2"	44'-10 1/2"
	6'	5'-0 3/4"	10'-3"	5'-2 1/4"	20'-1"	15'-0 3/4"	29'-11"	24'-6 1/2"	39'-8"	34'-6 1/2"	49'-7"	44'-1 1/2"
	7'	6'-2 3/4"	10'-3"	4'-0 3/4"	20'-1"	13'-10 3/4"	29'-11"	23'-3 1/2"	39'-8"	33'-3 1/2"	49'-7"	43'-0 1/2"
	8'	7'-2"	10'-4"	3'-0"	20'-2"	12'-10"	30'-0"	22'-2"	39'-10"	32'-2"	49'-8"	41'-8"
11'	5'	4'-3 3/4"	11'-2"	6'-10 3/4"	21'-11"	17'-7 3/4"	32'-8"	28'-4 1/2"	43'-5"	39'-1 1/2"	54'-2"	49'-10 1/2"
	6'	5'-0 3/4"	11'-3"	6'-2 1/4"	22'-1"	17'-0 3/4"	32'-11"	27'-6 1/2"	43'-8"	38'-6 1/2"	54'-7"	48'-1 1/2"
	7'	6'-2 3/4"	11'-3"	5'-0 3/4"	22'-1"	15'-10 3/4"	32'-11"	26'-3 1/2"	43'-8"	37'-3 1/2"	54'-7"	46'-0 1/2"
	8'	7'-2"	11'-4"	4'-0"	22'-2"	14'-10"	33'-0"	25'-2"	43'-10"	36'-2"	54'-8"	47'-4"
12'	6'	5'-0 3/4"	12'-5"	7'-3 3/4"	24'-2"	19'-1 3/4"	36'-0"	30'-11 1/2"	47'-11"	42'-10 1/2"		
	7'	6'-2 3/4"	12'-6"	6'-1 1/4"	24'-2"	17'-11 3/4"	36'-0"	29'-3 1/2"	47'-11"	41'-1 1/2"		
	8'	7'-2"	12'-6"	5'-0"	24'-3"	16'-11"	36'-0"	28'-2"	47'-11"	40'-0"		
	6'	5'-0 3/4"	13'-6"	8'-3 3/4"	26'-2"	21'-1 3/4"	39'-0"	33'-11 1/2"	51'-10"	46'-8 1/2"		
	7'	6'-2 3/4"	13'-6"	7'-1 1/4"	26'-2"	19'-11 3/4"	39'-0"	32'-3 1/2"	51'-10"	45'-1 1/2"		
	8'	7'-2"	13'-6"	6'-0"	26'-2"	18'-11"	39'-0"	31'-2"	51'-10"	44'-0"		

QUANTITIES

Clear Span S	Clear Height H	Thickness of Wing at Headwall Cw	Thickness of Wing Footing WB	Reinforcing Steel - For 4 Wings LB.	Class S Concrete - 4 Wings. Headwalls, Wingwalls, Footings, Toewalls and Aprons. Single Barrel Culvert CU.YD.	Double Barrel Culvert CU.YD.	Triple Barrel Culvert CU.YD.	Quadruple Barrel Culvert CU.YD.	Quintuple Barrel Culvert CU.YD.
4'	2'	6"	7"	1080	4.50	5.96	6.92	7.38	8.34
	3'	6"	7"	1690	6.26	7.21	8.17	9.13	10.09
	4'	6"	7"	2596	8.33	9.28	10.26	11.20	12.16
	5'	6"	7"	3828	10.72	11.68	12.69	13.60	14.56
	6'	7"	8"	5831	14.55	15.53	16.52	17.51	18.49
5'	3'	6"	7"	1649	6.97	7.63	8.79	9.86	11.12
	4'	6"	7"	2596	8.56	9.70	10.87	12.03	13.20
	5'	6"	7"	3828	10.96	12.10	13.26	14.43	15.59
	6'	7"	8"	5831	14.77	15.96	17.15	18.34	19.56
	7'	7½	8½	11396	18.96	20.15	21.37	22.59	23.80
6'	3'	6"	7"	1644	6.68	8.06	9.42	10.80	12.18
	4'	6"	7"	2596	8.75	10.16	11.49	12.87	14.25
	5'	6"	7"	3828	11.15	12.53	13.93	15.27	16.65
	6'	7"	8"	5831	14.98	16.39	17.78	19.18	20.59
	7'	7½	8½	11396	19.15	20.58	22.00	23.93	24.86
	8'	8"	9"	19425.6	23.99	25.53	26.96	28.39	29.83
7'	4'	6"	7"	2596.6	8.97	10.58	12.15	13.76	15.35
	5'	6"	7"	3828	11.36	12.97	14.54	16.15	17.75
	6'	7"	8"	5831	15.20	16.38	13.42	22.06	21.66
	7'	7½	8½	11396.6	19.38	21.02	22.47	24.28	25.92
	8'	8"	9"	19425.6	24.32	25.97	27.60	29.25	30.89
8'	5'	7"	7"	2596.6	9.19	11.03	12.82	14.65	16.45
	6'	7"	7"	3828	12.03	13.89	15.70	17.55	19.36
	7'	7"	8"	5831	15.93	17.27	19.03	20.93	22.75
	8'	8"	9"	19425.6	24.98	27.31	29.58	31.81	34.10
9'	6'	8"	8"	5831	16.69	19.27	21.76	24.23	
	7'	8"	8½	11396.6	20.64	23.22	25.71	28.18	
	8'	8"	9"	19425.6	25.19	27.77	30.27	32.76	
10'	6'	8"	8"	5831	16.92	19.75	22.95	25.78	
	7'	8"	8½	11396	20.87	23.69	26.90	29.73	
	8'	8"	9"	19425.6	25.92	28.25	30.96	33.69	
11'	7'	8"	8½	11396.6	21.09	24.16	27.36	30.43	
	8'	8"	9"	19425.6	26.64	29.72	32.81	35.89	
12'	7'	8"	8½	11396.6	21.32	24.63	27.83	31.14	
	8'	8"	9"	19425.6	27.38	30.46	33.55	36.63	

* For reinforcing steel in Headwalls and Aprons, See Details of Standard Barrel Sections for R.C. Box Culverts for the desired Span and Height.

GENERAL NOTES:-

CONCRETE:- All concrete to be Class S, and shall be poured in the dry. All exposed corners to have ¾ chamfers.

REINFORCING STEEL:- Reinforcing steel to be deformed bars of intermediate or hard grade.

CONSTRUCTION JOINTS:- Construction joints between wingwall, footings and sidewalls shall be only where shown on plans.

SPECIFICATIONS:- Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.

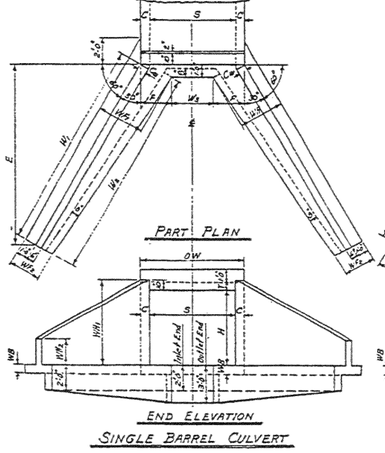
UNIT STRESSES:-

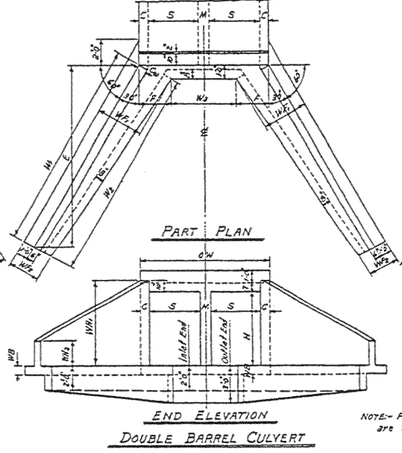
Class S Concrete (max) 1200 lb/sq in
Reinforcing Steel 20000 lb/sq in

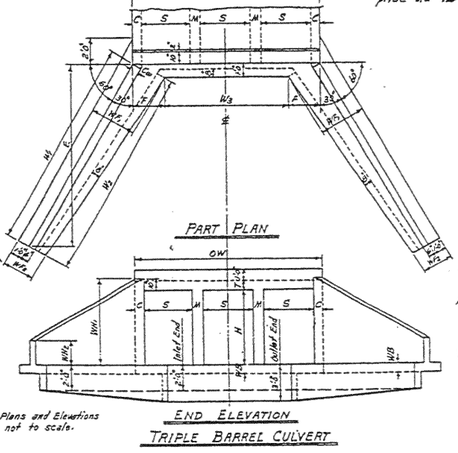
NOTE:- This drawing to be used in conjunction with Standard Barrel Sections, Drawing Nos. as listed below.

Singles	Doubles	Triples	Quadruples	Quintuples
R-100X-0	R-200X-0	R-300X-0	R-400X-0	R-500X-0
R-100X-X1	R-200X-X1	R-300X-X1	R-400X-X1	R-500X-X1
R-100X-X2	R-200X-X2	R-300X-X2	R-400X-X2	
	R-200X-X3	R-300X-X3		

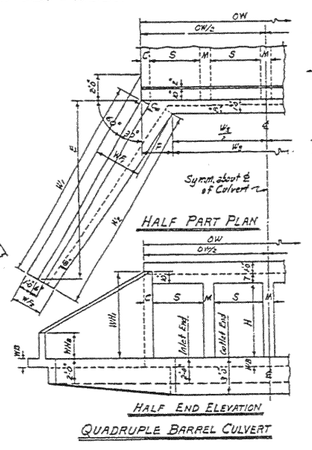
CLASS S CONCRETE

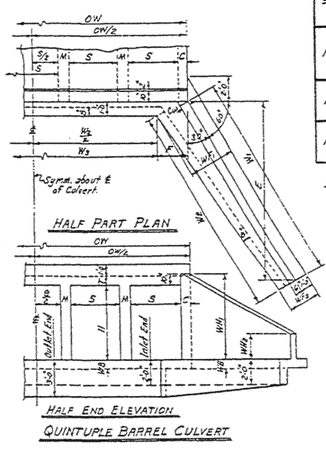






NOTE:- Plans and Elevations are not to scale.





MEMBRANE:- A membrane waterproofing 12" wide, consisting of three mopings of waterproofing asphalt and two alternate layers of treated cotton fabric shall be applied to the back face of wing to cover the construction joints in wings.

BAR LIST FOR ONE WING - 4 REQUIRED

Clear Height H	F1 Bent: In bottom of footing, bent up into back face of wing. One bar of each length. Size	Spacing	No. Reqd	Lengths Vary Min.	Max.	X Min.	X Max.	Y Min.	Y Max.	F2 Bent: To be bent up into back face of wing. Alt. with F1 bars. Size	Spacing	No. Reqd	Length	X	Y	F3 Straight: Longitudinal in top of wing footing heel. Size	No. Reqd	Length	F4 Straight: Longitudinal in bottom of wing footing toe. Size	No. Reqd	Length	H1 Horizontal in back face of wing. Size	Spacing	No. Reqd	Length	H2 Straight: Horizontal in back face of wing. One bar of each length. Size	Spacing	No. Reqd	Lengths Vary Max.	Min.	H3 In back face of wing at top-on slope. Size	No. Reqd	Length	H4 Bent: Dowels thru construction joint at headwall. Size	Spacing	No. Reqd	Length	X	Quantity Reinforcing Steel per Wing LB.
2'	#3	18"	8	1'-6"	3'-10"	0'-8"	1'-0"	0'-1"	2'-11"	—	—	—	—	—	—	#3	1	9'-8"	#3	2	8'-6"	#3	12"	1	7'-8"	#3	12"	1	9'-6"	#3	12"	1	——	9'-0"	#3	1	7'-6"	#3	12"	2	2'-8"	1'-0"	27.0
3'	#3	12"	10	2'-2"	5'-2"	0'-8"	1'-9"	1'-5"	4'-0"	—	—	—	—	—	—	#3	1	12'-0"	#3	2	11'-0"	#3	12"	1	9'-6"	#3	12"	2	11'-6"	#3	12"	2	7'-6"	9'-0"	#3	1	9'-9"	#3	12"	3	2'-8"	1'-9"	41.1
4'	#3	12"	13	2'-8"	6'-6"	0'-11"	1'-9"	1'-6"	5'-0"	—	—	—	—	—	—	#3	1	14'-4"	#3	3	13'-6"	#3	12"	1	11'-11"	#3	12"	2	10'-11"	#3	12"	3	10'-11"	6'-0"	#3	1	12'-2"	#3	12"	4	2'-8"	1'-6"	63.7
5'	#3	12"	15	2'-11"	7'-10"	1'-1"	1'-11"	1'-11"	6'-0"	#3	12"	4	3'-6"	1'-1"	2'-6"	#3	1	16'-8"	#3	3	16'-0"	#3	12"	2	14'-2"	#3	12"	3	10'-11"	6'-0"	#3	1	14'-3"	#3	12"	5	2'-8"	1'-6"	89.5
6'	#4	12"	17	3'-6"	9'-3"	1'-2"	2'-3"	2'-5"	7'-1"	#3	12"	4	4'-5"	1'-6"	3'-3"	#3	1	19'-5"	#3	3	18'-6"	#3	12"	2	16'-5"	#3	12"	3	14'-6"	6'-0"	#3	1	17'-0"	#3	12"	6	2'-8"	1'-6"	145.8
7'	#4	12"	20	3'-9"	10'-5"	1'-3"	2'-9"	2'-7"	8'-1"	#4	12"	7	5'-6"	1'-7"	4'-0"	#4	1	21'-6"	#4	4	21'-0"	#4	12"	2	18'-8"	#4	12"	5	17'-9"	6'-0"	#4	1	19'-5"	#4	12"	7	3'-6"	1'-9"	283.7
8'	#4	12"	22	4'-6"	12'-3"	1'-5"	3'-2"	3'-0"	9'-2"	#4	12"	10	6'-6"	1'-10"	4'-9"	#4	1	23'-8"	#4	4	23'-3"	#4	12"	3	21'-1"	#4	12"	5	17'-9"	9'-0"	#4	1	21'-5"	#4	12"	8	3'-6"	1'-9"	356.4

Bar Bending Diagrams

NOTE:- Dimensions are to bar centers.

Designed By:- J.A. Checked
Drawn By:- W.C.H. 12-9-62 Checked By:- Rec'd-Checked By:-
Quantities By:- W.C.H. 12-14-62

REVISIONS:- Membrane added. 5-10-66 W.C.H.

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF STANDARD WINGS FOR REINFORCED CONCRETE BOX CULVERTS

4', 5', 6', 7', 8', 9', 10', 11' & 12' SPANS — 3:1 SLOPES

SINGLES, DOUBLES, TRIPLES, QUADRUPLES & QUINTUPLES. — ALL DEPTHS OF COVER FOR H = 8'-0" OR LESS

STANDARD DRAWING NO. W-X003-1

FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.				
JOB No.					

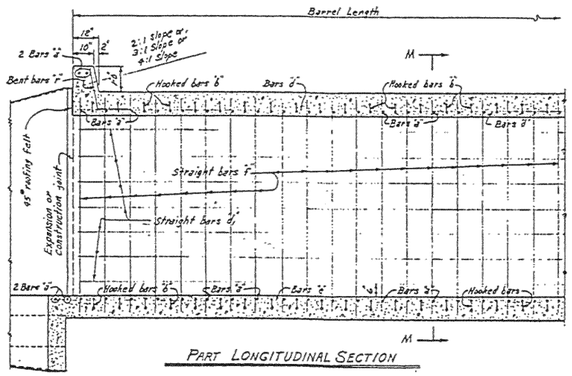
BAR LIST FOR BARREL SECTION 60'-0" IN LENGTH

DEPTH OF COVER	CLEAR SPAN	CLEAR HEIGHT	'a' bars. STRAIGHT. In Top and Bottom Slabs of Barrel. 2 Add'l. in Apron and Headwall- Each. SIZE	SPACING	NUMBER REQ'D 3:1	NUMBER REQ'D 4:1	LENGTH	'b' bars. BENT - See Diagram below. In Top and Bottom Slabs of Barrel. Alternate with 'a' bars. SIZE	SPACING	NUMBER REQ'D 3:1	NUMBER REQ'D 4:1	LENGTH	X	'd' bars. STRAIGHT. Longitudinal in Top Slab of Barrel. SIZE	SPACING	NO. PER BAR	LENGTH	'e' bars. STRAIGHT. Longitudinal in Sidewalls. SIZE	SPACING	NO. PER BAR	LENGTH	'f' bars. STRAIGHT. Longitudinal in Bottom Slab of Barrel. SIZE	SPACING	NO. PER BAR	LENGTH	'g' bars. STRAIGHT. Verticals in Side walls. SIZE	SPACING	NUMBER REQ'D 3:1	NUMBER REQ'D 4:1	LENGTH
D	S	H																													
0'-0" TO 5'-0" MAXIMUM	1 @ 6.0	2'	#5	13"	120	120	4'-9"	#6	13"	110	110	5'-10"	4'-9"	#5	10½"	6	4'-6"	5	120	110	2'-11"
		3'			120	120	4'-9"			110	110	5'-10"	4'-8"			6		5	120	120	3'-11"
		4'			120	120	4'-9"			110	110	5'-10"	4'-8"	#4	12"	6	4'-6"	5	120	120	4'-8"
		5'			120	120	4'-9"			110	110	5'-10"	4'-8"			6		5	120	120	5'-11"
		6'			120	120	4'-11"			110	110	6'-0"	4'-10"			6		5	120	120	6'-10"
	1 @ 8.0	3'	#6	13"	120	120	5'-9"	#6	13"	110	110	6'-10"	5'-8"	#5	10½"	7	5'-6"	6	120	120	6'-6"
		4'			120	120	5'-9"			110	110	6'-10"	5'-8"			7		6	120	120	6'-10"
		5'			120	120	5'-9"			110	110	6'-10"	5'-8"	#4	12"	7	5'-4"	6	120	120	6'-2"
		6'			120	120	5'-11"			113	110	7'-0"	5'-10"			7		6	120	120	7'-0"
		7'			120	120	6'-0"			110	110	7'-1"	5'-11"			7		6	120	120	8'-0"
	1 @ 9.0	3'	#6	12"	128	128	6'-9"	#6	12"	118	113	7'-10"	6'-8"	#5	10½"	8	6'-6"	7	120	120	4'-1"
		4'			128	128	6'-9"			118	115	7'-10"	6'-8"			8		7	120	120	5'-1"
		5'			128	128	6'-9"			118	118	7'-10"	6'-8"	#4	12"	8	6'-4"	7	120	120	6'-1"
		6'			128	128	6'-11"			118	118	8'-0"	6'-10"			8		7	120	120	7'-1"
		7'			128	128	7'-0"			118	118	8'-1"	6'-11"			8		7	123	123	8'-1"
		8'			128	128	7'-1"			118	118	8'-2"	7'-0"			8		7	123	123	9'-1"
	1 @ 10.0	4'	#6	11"	140	140	7'-9"	#6	11"	130	130	8'-10"	7'-8"	#5	10½"	9	7'-6"	8	120	120	5'-2"
		5'			140	140	7'-9"			130	130	8'-10"	7'-8"			9		8	120	120	6'-2"
		6'			140	140	7'-11"			130	130	9'-0"	7'-10"	#4	12"	9	7'-4"	8	120	120	7'-2"
		7'			140	140	8'-0"			130	130	9'-1"	7'-11"			9		8	123	123	8'-2"
		8'			140	140	8'-1"			130	130	9'-2"	8'-0"			9		8	10"	144	144	9'-2"
		9'			140	140	8'-3"			130	130	9'-4"	8'-2"			9		8	#5	12"	120	120	10'-2"
	1 @ 11.0	4'	#7	12"	128	128	8'-9"	#6	12"	118	118	9'-10"	8'-8"	#5	10"	11	8'-6"	9	120	120	5'-8"
		5'			128	128	8'-11"			118	118	10'-0"	8'-10"			11		9	120	120	6'-8"
		6'			128	128	8'-11"			118	118	10'-0"	8'-10"	#4	12"	11	8'-2"	9	120	120	7'-8"
		7'			128	128	9'-0"			118	118	10'-1"	8'-11"			11		9	120	120	8'-8"
		8'			128	128	9'-1"			118	118	10'-2"	9'-0"			11		9	10"	144	144	9'-8"
		9'			128	128	9'-3"			118	118	10'-4"	9'-2"			11		9	#5	12"	120	120	10'-8"
		10'			128	128	9'-5"			118	118	10'-6"	9'-4"			11		9	11"	132	132	11'-9"
	1 @ 12.0	5'	#7	12"	140	140	9'-11"	#6	11"	130	130	11'-0"	9'-10"	#5	10"	12	9'-8"	10	120	120	6'-5"
		6'			140	140	10'-0"			130	130	11'-1"	9'-11"			12		10	120	120	7'-5"
		7'			140	140	10'-0"			130	130	11'-1"	9'-11"	#4	12"	12	9'-2"	10	120	120	8'-5"
		8'			140	140	10'-1"			130	130	11'-2"	10'-0"			12		10	10"	144	144	9'-5"
		9'			140	140	10'-3"			130	130	11'-4"	10'-2"			12		10	12"	120	120	10'-5"
		10'			140	140	10'-5"			130	130	11'-6"	10'-4"			12		10	#5	11"	132	132	11'-5"
		11'			140	140	10'-7"			130	130	11'-8"	10'-6"			12		10	10"	144	144	12'-5"
	1 @ 13.0	5'	#7	12"	128	128	10'-11"	#7	12"	118	118	12'-2"	10'-10"	#5	10"	13	10'-8"	10	120	120	6'-6"
		6'			128	128	11'-0"			118	118	12'-3"	10'-11"			13		12	120	120	7'-6"
		7'			128	128	11'-0"			118	118	12'-3"	10'-11"	#4	12"	13	10'-0"	12	120	120	8'-6"
		8'			128	128	11'-1"			118	118	12'-4"	11'-0"			13		12	10"	144	144	9'-6"
		9'			128	128	11'-3"			118	118	12'-6"	11'-2"			13		12	12"	120	120	10'-6"
		10'			128	128	11'-5"			118	118	12'-8"	11'-4"			13		12	#5	11"	132	132	11'-6"
		11'			128	128	11'-7"			118	118	12'-10"	11'-6"			13		12	10"	144	144	12'-6"
		12'			128	128	11'-9"			118	118	13'-0"	11'-8"			13		12	#6	12"	120	120	13'-6"
	1 @ 14.0	6'	#7	11"	140	140	12'-1"	#7	11"	130	130	13'-4"	12'-0"			15		14	#4	12"	120	120	7'-7"
		7'			140	140	12'-1"			130	130	13'-4"	12'-0"			15		14			120	120	8'-7"
		8'			140	140	12'-2"			130	130	13'-5"	12'-0"			15		14			10"	144	144	9'-7"
		9'			140	140	12'-3"			130	130	13'-6"	12'-1"	#5	9½"	15	12'-0"	14	#5	12"	120	120	10'-7"
		10'			140	140	12'-5"			130	130	13'-8"	12'-3"			15		14		11"	132	132	11'-7"
		11'			140	140	12'-7"			130	130	13'-10"	12'-5"			15		14		10"	144	144	12'-7"
		12'			140	140	12'-9"			130	130	14'-0"	12'-8"			15		14	#6	12"	120	120	13'-7"
	1 @ 15.0	6'	#8	12"	128	128	13'-1"	#7	12"	118	118	14'-8"	13'-6"			16		15	#4	12"	120	120	7'-9"
		7'			128	128	13'-1"			118	118	14'-8"	13'-6"			16		15			120	120	8'-9"
		8'			128	128	13'-1"			118	118	14'-8"	13'-6"			16		15			10"	144	144	9'-9"
		9'			128	128	13'-3"			118	118	14'-6"	13'-2"	#5	9½"	16	13'-0"	15	#5	12"	120	120	10'-9"
		10'			128	128	13'-5"			118	118	14'-8"	13'-4"			16		15		11"	132	132	11'-9"
		11'			128	128	13'-7"			118	118	14'-10"	13'-6"			16		15		10"	144	144	13'-9"
		12'			128	128	13'-9"			118	118	15'-0"	13'-8"			16		15	#6	12"	120	120	13'-9"

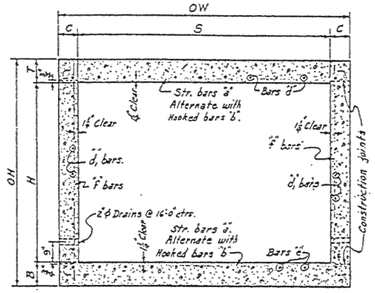
Note:- For details of wings and bar lists, see Drawing Nos. W-X002-1, W-X003-2 and W-X004-1 or W-X002-2, W-X003-1 and W-X004-2.

DIMENSIONS AND QUANTITIES

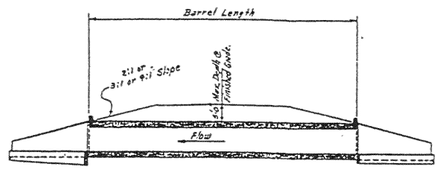
MAX. DESIGN DEPTH OF COVER	CLEAR SPAN	CLEAR HEIGHT	BARREL DIMENSIONS: Sq. Ft. Opening	Overall Width	Thickness of Top Slab	Thickness of Sidewalls	Thickness of Bottom Slab	Overall Height	UNIT QUANTITIES: Class S Conc. per Lin. Ft. of Barrel	Reinforcing Steel per Lin. Ft. of Barrel	Reinforcing Steel Additional per Lap	Reinforcing Steel Additional per Two Headwalls & Aprons
D	S	H	A	OW	T	C	B	OH	CU.YD.	LB.	LB.	LB.
5'-0"	1 @ 6.0	2'	8	5'-0"	7"	6"	6½"	3'-1½"	0.282	91.89	17.95	66.35
		3'	12	5'-0"		6"		3'-7½"	0.319	99.16	19.42	66.35
		4'	16	5'-0"		6"		4'-1½"	0.356	96.83	21.29	66.35
		5'	20	5'-0"		6"		4'-7½"	0.394	99.50	22.96	66.35
		6'	24	5'-2"		7"		5'-1½"	0.479	52.96	24.63	67.25
	1 @ 8.0	3'	15	6'-0"	7"	6"	7"	4'-2½"	0.380	55.55	22.19	101.27
		4'	20	6'-0"		6"		4'-8½"	0.417	58.23	23.86	101.27
		5'	25	6'-0"	7½"	6"		5'-2½"	0.454	60.90	25.53	101.27
		6'	30	6'-2"		7"		5'-8½"	0.535	64.93	27.20	103.27
		7'	35	6'-3"		7½"		6'-2½"	0.609	67.63	28.87	106.27
	1 @ 9.0	3'	18	7'-0"	8"	6"	8"	4'-3½"	0.496	66.29	29.76	118.94
		4'	24	7'-0"		6"		5'-3½"	0.983	68.96	26.93	118.94
		5'	30	7'-0"		6"		6'-3½"	0.520	71.64	28.10	118.94
		6'	36	7'-2"		7"		7'-3½"	0.602	75.31	29.77	120.94
		7'	42	7'-3"		7½"		8'-3½"	0.671	78.98	31.98	121.97
		8'	48	7'-4"		8"		9'-3½"	0.746	88.97	33.11	122.97
	1 @ 10.0	4'	28	8'-6"	8½"	6"	8½"	5'-5"	0.568	81.32	29.01	136.88
		5'	35	8'-6"		6"		6'-5"	0.605	84.00	30.68	136.88
		6'	42	8'-7"		7"		7'-5"	0.688	87.76	32.35	138.88
		7'	49	8'-7"		7½"		8'-5"	0.757	90.93	34.02	139.83
		8'	56	8'-8"		8"		9'-5"	0.832	94.65	35.69	140.83
		9'	63	8'-8"		9"		10'-5"	0.996	105.59	37.36	142.99
	1 @ 11.0	4'	32	9'-0"	9"	6"	9½"	5'-7"	0.676	85.26	38.32	194.07
		5'	40	9'-2"		7"		6'-7"	0.759	99.12	39.99	196.80
		6'	48	9'-2"		7"		7'-7"	0.787	101.79	36.66	196.83
		7'	56	9'-3"	9½"	7½"	9½"	8'-7"	0.867	105.65	38.33	198.16
		8'	64	9'-4"		8"		9'-7"	0.992	110.81	40.00	199.52
		9'	72	9'-6"		9"		10'-7"	1.057	119.92	41.67	202.25
		10'	80	9'-8"		10"		11'-7"	1.169	126.67	43.34	204.97
	1 @ 12.0	5'	95	10'-2"	10"	7"	10"	6'-8"	0.864	119.72	37.56	219.41
		6'	54	10'-3"		7½"		7'-8"	0.910	118.09	39.23	220.97
		7'	63	10'-3"		7½"		8'-8"	0.957	120.71	40.90	220.97
		8'	72	10'-4"		8"		9'-8"	1.033	126.58	42.57	222.33
		9'	81	10'-6"		9"		10'-8"	1.148	135.80	44.24	225.02
		10'	90	10'-8"		10"		11'-8"	1.276	192.68	45.91	227.78
		11'	99	10'-10"		11"		12'-8"	1.916	150.90	97.58	230.51
	1 @ 13.0	5'	50	11'-2"	10½"	7"	11"	6'-9½"	0.957	130.64	40.13	292.64
		6'	60	11'-3"		7½"		7'-9½"	1.024	133.39	41.80	294.00
		7'	70	11'-3"		7½"		8'-9½"	1.071	136.66	43.47	294.00
		8'	80	11'-4"		8"		9'-9½"	1.147	142.55	45.14	295.36
		9'	90	11'-6"		9"		10'-9½"	1.263	151.92	96.81	248.09
		10'	100	11'-8"		10"		11'-9½"	1.391	158.89	46.98	250.81
		11'	110	11'-10"		11"		12'-9½"	1.532	164.71	50.15	253.54
		12'	120	12'-0"		12"		13'-9½"	1.685	178.47	51.82	256.26
	1 @ 14.0	6'	66	12'-9"	11½"	8"	11½"	7'-10½"	1.153	155.16	96.12	268.62
		7'	77	12'-9"		8"		8'-10½"	1.202	157.83	47.79	268.62
		8'	88	12'-10"		8"		9'-10½"	1.252	163.26	49.46	268.62
		9'	99	12'-6"		9"		10'-10½"	1.368	172.60	51.13	271.39
		10'	110	12'-8"		10"		11'-10½"	1.497	179.70	52.80	274.07
		11'	121	12'-10"		11"		12'-10½"	1.638	187.67	54.47	276.79
		12'	132	13'-0"		12"		13'-10½"	1.792	197.79	56.14	279.52
	1 @ 15.0	6'	72	13'-9"	12"	8"	12"	8'-0"	1.256	172.20	98.69	357.62
		7'	84	13'-9"		8"		9'-0"	1.333	174.87	50.36	357.62
		8'	96	13'-9"		8"		10'-0"	1.383	180.15	52.033	357.62
		9'	108	13'-6"		9"		11'-0"	1.500	188.85	53.70	361.13
		10'	120	13'-8"		10"		12'-0"	1.630	197.27	55.37	364.74
		11'	132	13'-10"		11"		13'-0"	1.772	205.16	57.04	368.30
		12'	144	14'-0"		12"		14'-0"	1.926	217.95	58.71	371.86



PART LONGITUDINAL SECTION



TYPICAL SECTION M-M



LONGITUDINAL SECTION

GENERAL NOTES:-

CONCRETE:- All concrete to be Class S, and shall be poured in the dry.. All exposed corners to have ¾" chamfers.

REINFORCING STEEL:- Reinforcing to be deformed bars of intermediate or hard grade.

BAR LAPS:- In computing the quantities of steel from the tables add one lap for each additional 33'-8" length of barrel over 32'-0". Lap longitudinal bars 30 diameters.

CONSTRUCTION JOINTS:- Construction joints between wingwalls, sidewalls and slabs shall be only where shown on plans.

SPECIFICATIONS:- Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.

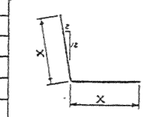
BAR SIZE	PIN DIAM.	K	ADD FOR 2 HOOKS	BENDING DIAGRAM Bars 'b'.
#6	3"	5"	1'-2"	K, Pin Diam., X
#7	3½"	5⅝"	1'-4"	

NOTE:- Dimensions are to centers of bars.

DOWEL BARS FOR TWO HEADWALLS

SPAN	SIZE	SPACING	NO. REQ'D	LENGTH	X
6'	#5	11"±	12	2'-6"	1'-3"
5'	#5	11"±	14	2'-7"	1'-3½"
6'	#5	11"±	16	2'-8"	1'-4"
7'	#5	11"±	18	2'-9"	1'-4½"
8'	#5	11½"±	20	2'-11"	1'-5½"
9'	#5	11½"±	22	3'-0"	1'-6"
10'	#5	11½"±	24	3'-1"	1'-6½"
11'	#5	12"±	26	3'-2"	1'-7"
12'	#5	12"±	28	3'-3"	1'-7½"

Bars 'f' Dowel bars in Headwalls.



Note:- This drawing to be used in conjunction with Standard Drawing Nos. W-X003-1 or W-X003-2 and W-X004-1 or W-X004-2. Also Drawing Nos. W-X002-1 or W-X002-2.

DESIGN LIVE LOAD

H20-S16 LOADING A.A.S.H.O. 1961
AND
SPECIAL MILITARY LOADING
Two 24,000 Lb. Axles @ 9'-0" ctrs.

UNIT STRESSES:-
Class S Concrete (n=10) 1200 #/□"
Reinforcing Steel 20,000 #/□"

CLASS S CONCRETE

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF STANDARD BARREL SECTIONS FOR REINFORCED CONCRETE BOX CULVERTS

4,5,6,7,8,9,10,11&12' SPANS SINGLES — 3:1 OR 4:1 SLOPES UNDER 5'-0" COVER

STANDARD DRAWING NO. R-100X-0

Designed By: W.C.H. 1-23-63. Checked By: Ch
Drawn By: W 2nd 2nd. Ch
Quantities By: A. CA