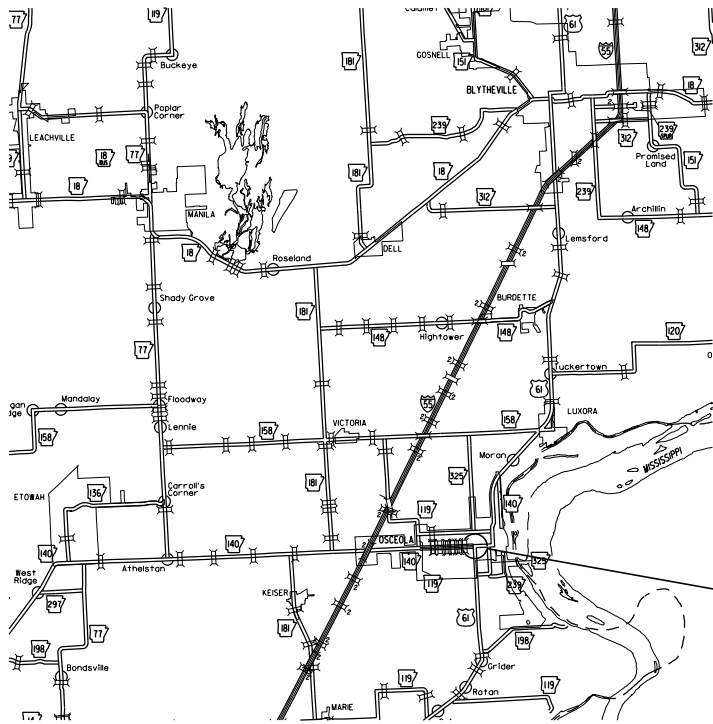


DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	1	73
HWYS. 61/140 INTERS. IMPVTS. (OSCEOLA) (S)						



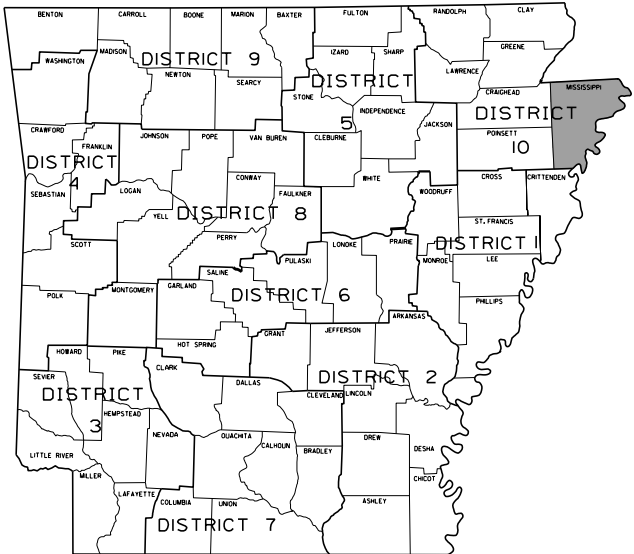
VICINITY MAP

ARKANSAS DEPARTMENT OF TRANSPORTATION
CONSTRUCTION PLANS FOR STATE HIGHWAY
**HWYS. 61/140 INTERS. IMPVTS.
(OSCEOLA) (S)**

MISSISSIPPI COUNTY
ROUTE 61 SECTION 2
ROUTE 140 SECTION 2

JOB 101141
FED. AID PROJ. STPSC-9326(7) & 9030

NOT TO SCALE

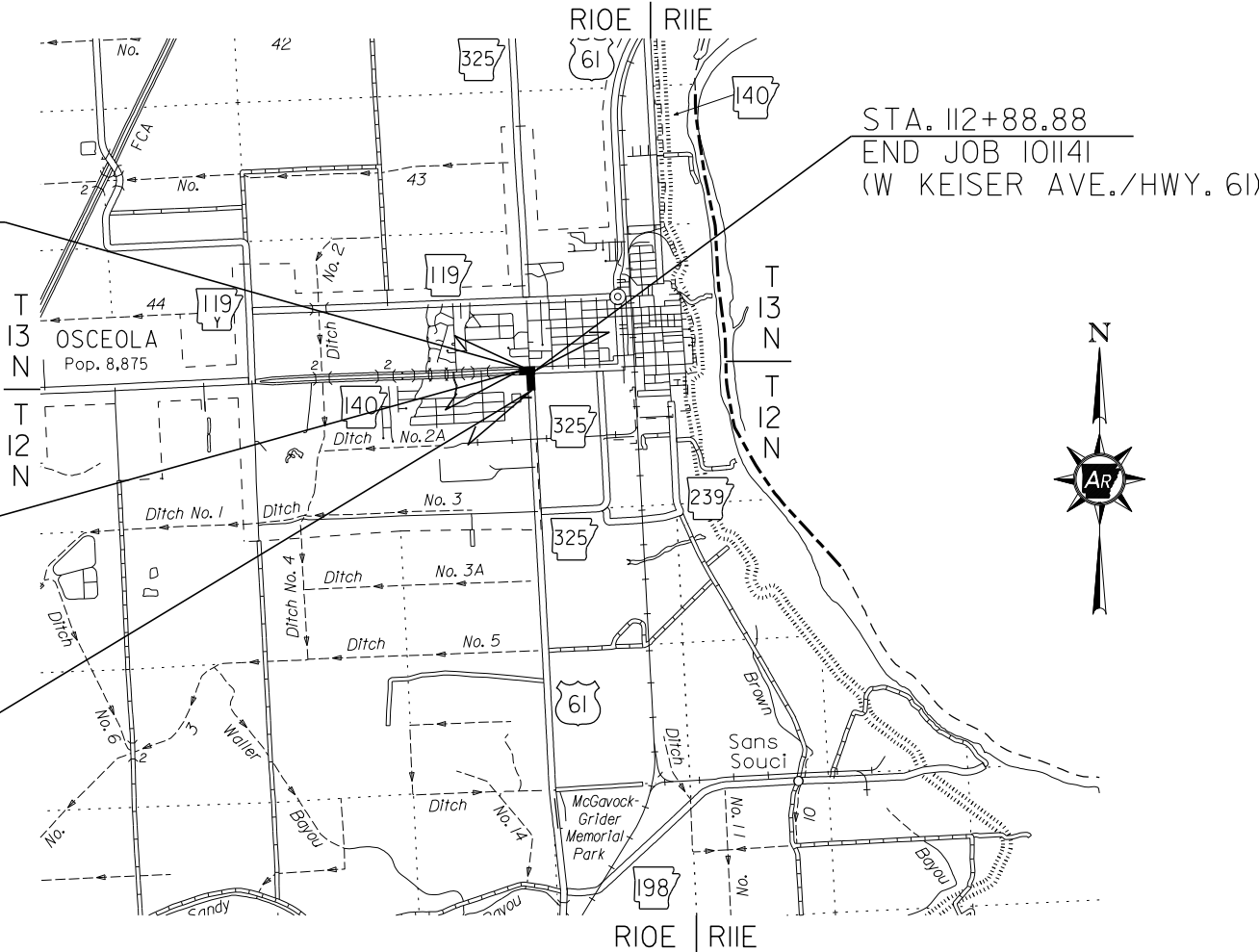


ARKANSAS HIGHWAY DISTRICT 10

STA. 110+63.81 C.L. W. KEISER AVE./HWY. 140 EB =
STA. 110+63.81 C.L. W. KEISER AVE./HWY. 61 =
STA. 310+75.19 C.L. HWY. 61
 $\Delta = 80^{\circ}12'41''$

STA. 106+70.00
BEGIN JOB 101141
(W KEISER AVE./HWY. 140 EB)
LOG MILE 18.40

STA. 303+05.00
BEGIN HWY. 61
LOG MILE 23.54



. DESIGN TRAFFIC DATA.
HWY. 61

DESIGN YEAR-----	2046
2026 ADT-----	7,600
2046 ADT-----	8,300
2046 DHV-----	913
DIRECTIONAL DISTRIBUTION-----	60%
TRUCKS-----	12%
DESIGN SPEED-----	35/45 MPH

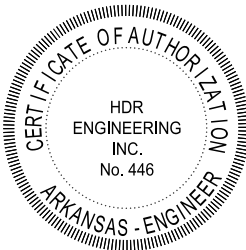
. DESIGN TRAFFIC DATA.
HWY. 140

DESIGN YEAR-----	2046
2026 ADT-----	12,000
2046 ADT-----	14,000
2046 DHV-----	1,540
DIRECTIONAL DISTRIBUTION-----	60%
TRUCKS-----	9%
DESIGN SPEED-----	35 MPH

PROJECT COORDINATES:

	BEGIN	MID-POINT	END
LATITUDE	N35° 41' 52"	N35° 41' 52"	N35° 41' 52"
LONGITUDE	W89° 58' 57"	W89° 58' 54"	W89° 58' 50"

GROSS LENGTH OF PROJECT	1389.07	FEET	OR	0.263	MILES
NET LENGTH OF ROADWAY	1389.07	FEET	OR	0.263	MILES
NET LENGTH OF BRIDGES	0.00	FEET	OR	0.000	MILES
NET LENGTH OF PROJECT	1389.07	FEET	OR	0.263	MILES



DIGITALLY SIGNED 09-09-2026

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	2	73
INDEX OF SHEETS AND STANDARD DRAWINGS						



DIGITALLY SIGNED 09-09-2026

INDEX OF SHEETS

SHEET NO.	TITLE
1	TITLE SHEET
2	INDEX OF SHEETS AND STANDARD DRAWINGS
3	GOVERNING SPECIFICATIONS AND GENERAL NOTES
4	TYPICAL SECTIONS OF IMPROVEMENT
5 - 9	SPECIAL DETAILS
10 - 15	TEMPORARY EROSION CONTROL DETAILS
16 - 26	MAINTENANCE OF TRAFFIC DETAILS
27	PERMANENT PAVEMENT MARKING DETAILS
28 - 31	QUANTITIES
32	SUMMARY OF QUANTITIES AND REVISIONS
33 - 35	SURVEY CONTROL DETAILS
36 - 39	PLAN AND PROFILE SHEETS
40	SUMMARY OF TRAFFIC SIGNAL QUANTITIES
41	TRAFFIC SIGNAL NOTES
42	PEDESTRIAN PUSH BUTTON PEDESTAL DETAIL
43	GROUNDING ARRAY DETAIL
44	PUSH BUTTON PLACEMENT DETAIL
45	TRAFFIC SIGNAL QUANTITIES
46 - 58	SIGNALIZATION PLAN SHEETS
59 - 73	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
DR-1	DETAILS OF DRIVEWAYS & ISLANDS	05-22-25
DR-2	DETAILS OF DRIVEWAYS & STREET TURNOUTS	05-19-22
FES-1	FLARED END SECTION	10-18-96
FES-2	FLARED END SECTION	10-18-96
FPC-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
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	04-09-26
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	02-13-24
SD-7	SPAN WIRE ASSEMBLY WOOD POLE	02-13-24
SD-8	SIGNAL HEAD PLACEMENT	12-08-16
SD-9	SERVICE POINT	11-07-19
SD-11	STEEL POLE WITH MAST ARM	02-13-24
TC-1	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	08-14-25
TC-1A	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	04-09-26
TC-2	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	08-14-25
TC-3	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	08-14-25
TC-4	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-TEMPORARY PRECAST BARRIER	11-07-19
TC-5	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-TEMPORARY PRECAST BARRIER	11-07-19
TC-6	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-TEMPORARY PRECAST BARRIER	04-09-26
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
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

GOVERNING SPECIFICATIONS

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

NUMBER	TITLE
ERRATA	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273	REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273	SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273	SUPPLEMENT - WAGE RATE DETERMINATION
100-3	CONTRACTOR'S LICENSE
100-4	DEPARTMENT NAME CHANGE
102-2	ISSUANCE OF PROPOSALS
102-3	PREQUALIFICATION OF BIDDERS
103-2	CONTACT INFORMATION FOR MOTORIST DAMAGE CLAIMS
105-4	MAINTENANCE DURING CONSTRUCTION
107-2	RESTRAINING CONDITIONS
108-1	LIQUIDATED DAMAGES
108-2	WORK ALLOWED PRIOR TO ISSUANCE OF WORK ORDER
110-1	PROTECTION OF WATER QUALITY AND WETLANDS
210-1	UNCLASSIFIED EXCAVATION
303-1	AGGREGATE BASE COURSE
306-1	QUALITY CONTROL AND ACCEPTANCE
400-1	TACK COATS
400-4	DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES
400-5	PERCENT AIR VOIDS FOR ACHM MIX DESIGNS
400-6	LIQUID ANTI-STRIP ADDITIVE
400-7	TRACKLESS TACK
404-3	DESIGN OF ASPHALT MIXTURES
409-2	ASPHALT LABORATORY FACILITY
410-1	CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
410-2	DEVICES FOR MEASURING DENSITY FOR ROLLING PATTERNS
410-4	EVALUATION OF ACHM SUBLOT REPLACEMENT MATERIAL
416-1	RECYCLED ASPHALT PAVEMENT
501-3	PORTLAND CEMENT CONCRETE PAVEMENT
502-1	WELDED WIRE REINFORCEMENT
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 ZONES (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
802-5	CONCRETE FOR STRUCTURES
804-2	REINFORCING STEEL FOR STRUCTURES
JOB 101141	ACCESSIBLE PEDESTRIAN SIGNAL (APS)
JOB 101141	ACTUATED CONTROLLER
JOB 101141	ASPHALT MIXTURES WITH PG 76-22 BINDER
JOB 101141	BIDDING REQUIREMENTS AND CONDITIONS
JOB 101141	BUY AMERICA - CONSTRUCTION MATERIALS
JOB 101141	CABINET DRAWER ASSEMBLY
JOB 101141	CARGO PREFERENCE ACT REQUIREMENTS
JOB 101141	COLD MILLING – COUNTY PROPERTY
JOB 101141	DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES
JOB 101141	DOCUMENTATION OF PAYMENTS MADE - PROMPT PAYMENT (SIGNET)
JOB 101141	ELECTRICAL CONDUCTORS FOR LUMINAIRES
JOB 101141	ELECTRICAL CONDUCTORS-IN-CONDUIT
JOB 101141	FLEXIBLE BEGINNING OF WORK – CALENDAR DAY CONTRACT
JOB 101141	HYBRID VIDEO/RADAR DETECTION SYSTEM
JOB 101141	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
JOB 101141	LED LUMINAIRE ASSEMBLY (BUG UO TYPE)
JOB 101141	LED TRAFFIC SIGNAL HEAD
JOB 101141	LIQUIDATED DAMAGES PROCEDURE FOR BID LETTINGS
JOB 101141	LONGITUDINAL JOINT DENSITIES FOR ACHM SURFACE COURSES
JOB 101141	MANDATORY ELECTRONIC CONTRACT
JOB 101141	MANDATORY ELECTRONIC DOCUMENT SUBMITTAL
JOB 101141	PARTNERING REQUIREMENTS
JOB 101141	PRICE ADJUSTMENT FOR ASPHALT BINDER
JOB 101141	PRICE ADJUSTMENT FOR FUEL
JOB 101141	PRIME CONTRACTOR PERFORMANCE EVALUATION
JOB 101141	PROHIBITION OF CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT
JOB 101141	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT
JOB 101141	RETROREFLECTIVE BACKPLATES
JOB 101141	SERVICE POINT ASSEMBLY (TRAFFIC CONTROL DEVICES)
JOB 101141	SHORING FOR CULVERTS
JOB 101141	SOIL STABILIZATION
JOB 101141	STORM WATER POLLUTION PREVENTION PLAN
JOB 101141	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 101141	UTILITY ADJUSTMENTS
JOB 101141	UTILITY POLE USED AS TEMPORARY SPAN WIRE POLE
JOB 101141	VALUE ENGINEERING
JOB 101141	VENDOR REGISTRATION REQUIREMENT
JOB 101141	WARM MIX ASPHALT
JOB 101141	WELLHEAD PROTECTION

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	3	73
GOVERNING SPECIFICATIONS AND GENERAL NOTES						

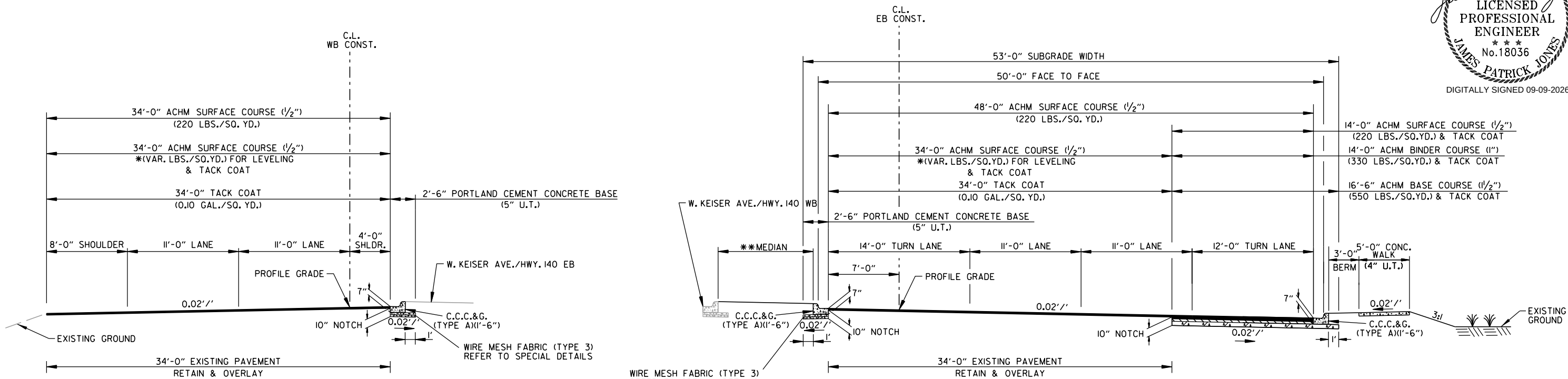


DIGITALLY SIGNED 09-15-2026

GENERAL NOTES

- GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.
- ALL PIPE LINES, POWER, TELEPHONE, AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
- 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.
- 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.
- ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
- 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.
- 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.
- 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.
- ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 - UNCLASSIFIED EXCAVATION.
- 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.
- THIS PROJECT IS COVERED UNDER A SECTION 404 NATIONWIDE 14 PERMIT. REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS, EDITION OF 2014, FOR PERMIT REQUIREMENTS.

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	4	73
TYPICAL SECTIONS OF IMPROVEMENT						

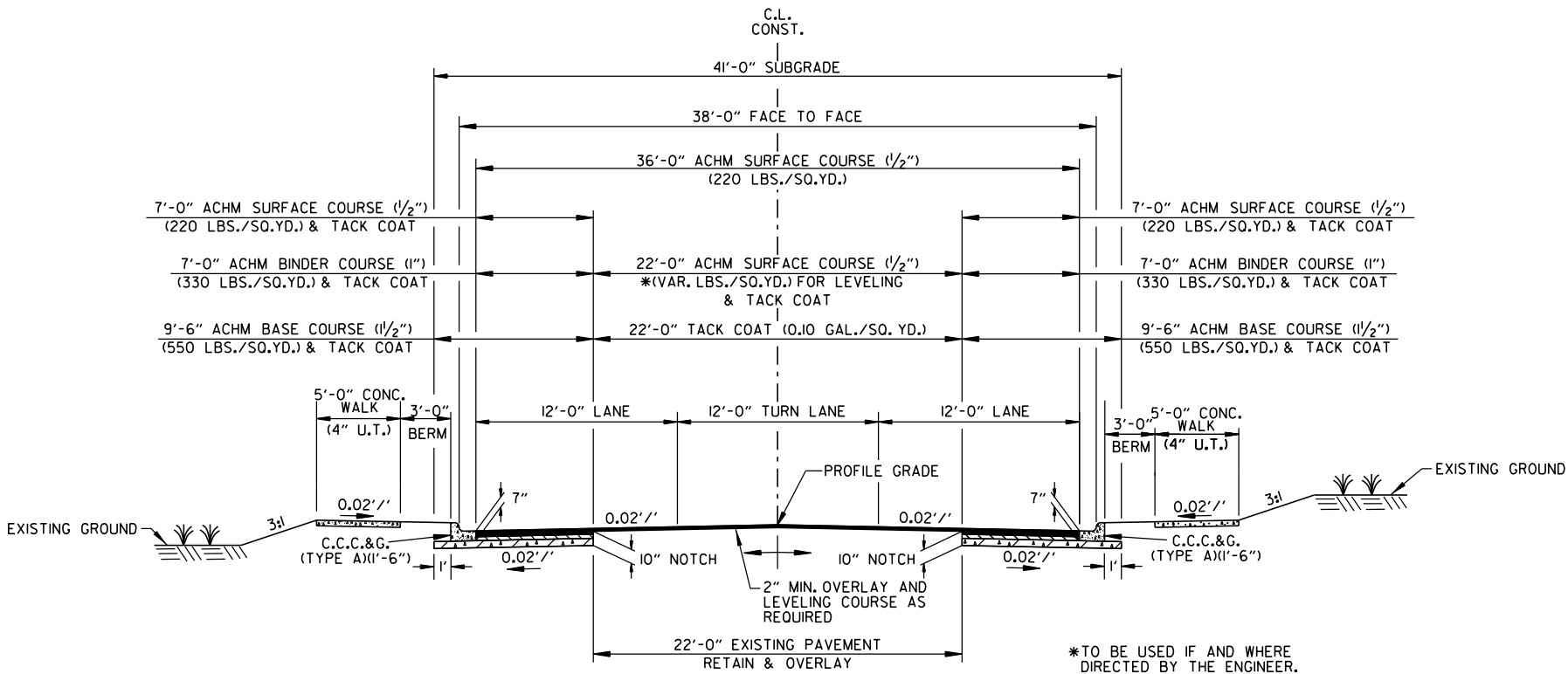


W. KEISER AVE./HWY. 140 WB
STA. 206+50.00 TO STA. 210+20.23

W. KEISER AVE./HWY. 140 EB
NOTCH AND WIDEN
STA. 106+70.00 TO STA. 110+69.34

*TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.
**GRASSED MEDIAN FROM STA. 106+70.00 TO STA. 107+45.00. CONCRETE CAPPED MEDIAN (SEE SPECIAL DETAILS) FROM STA. 107+45.00 TO STA. 108+91.29.

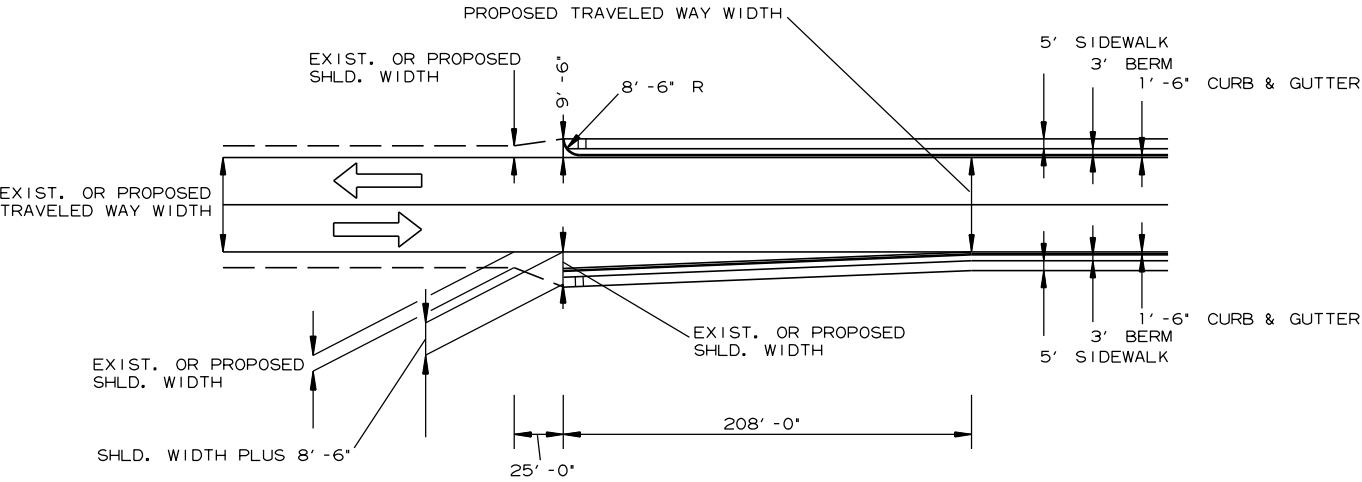
NOTES:
REFER TO CROSS SECTIONS FOR DEVIATIONS FROM NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.
THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT THE LANE LINES.
ASPHALT FOR LEVELING 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 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.
BLEEDER DITCHES - PRIOR TO AND DURING PLACEMENT OF PAVEMENT AT THE NOTCH, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHOD(S) AND SPACING USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.



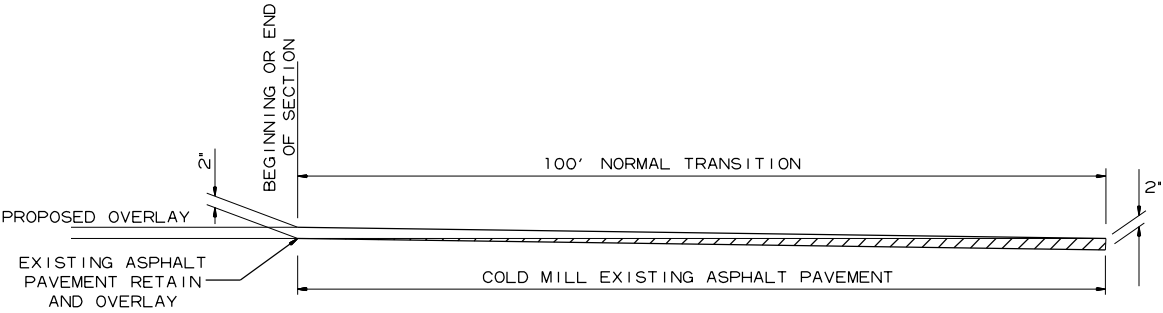
HWY. 61
NOTCH AND WIDEN
STA. 303+05.00 TO STA. 310+42.72

TYPICAL SECTIONS OF IMPROVEMENT

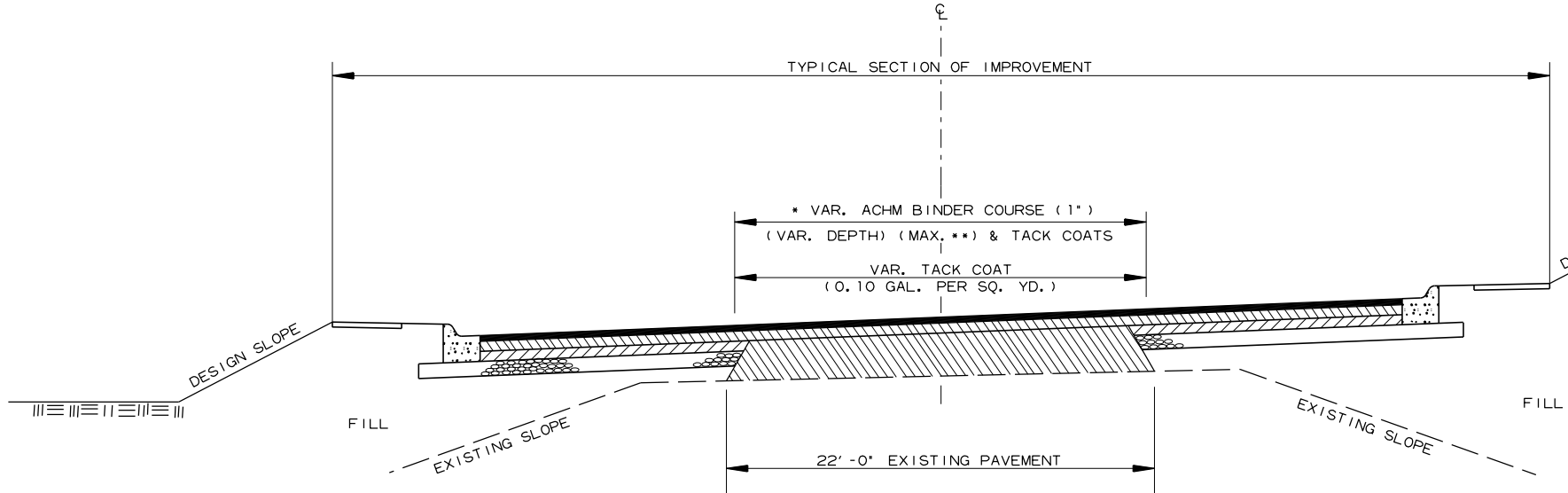
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	6	73
SPECIAL DETAILS						



TRANSITION FROM OPEN SHOULDER
TO CURB & GUTTER SECTION



DETAIL FOR TRANSITIONS

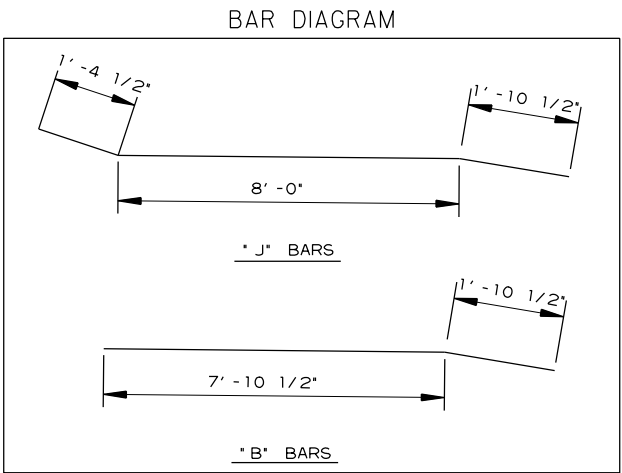
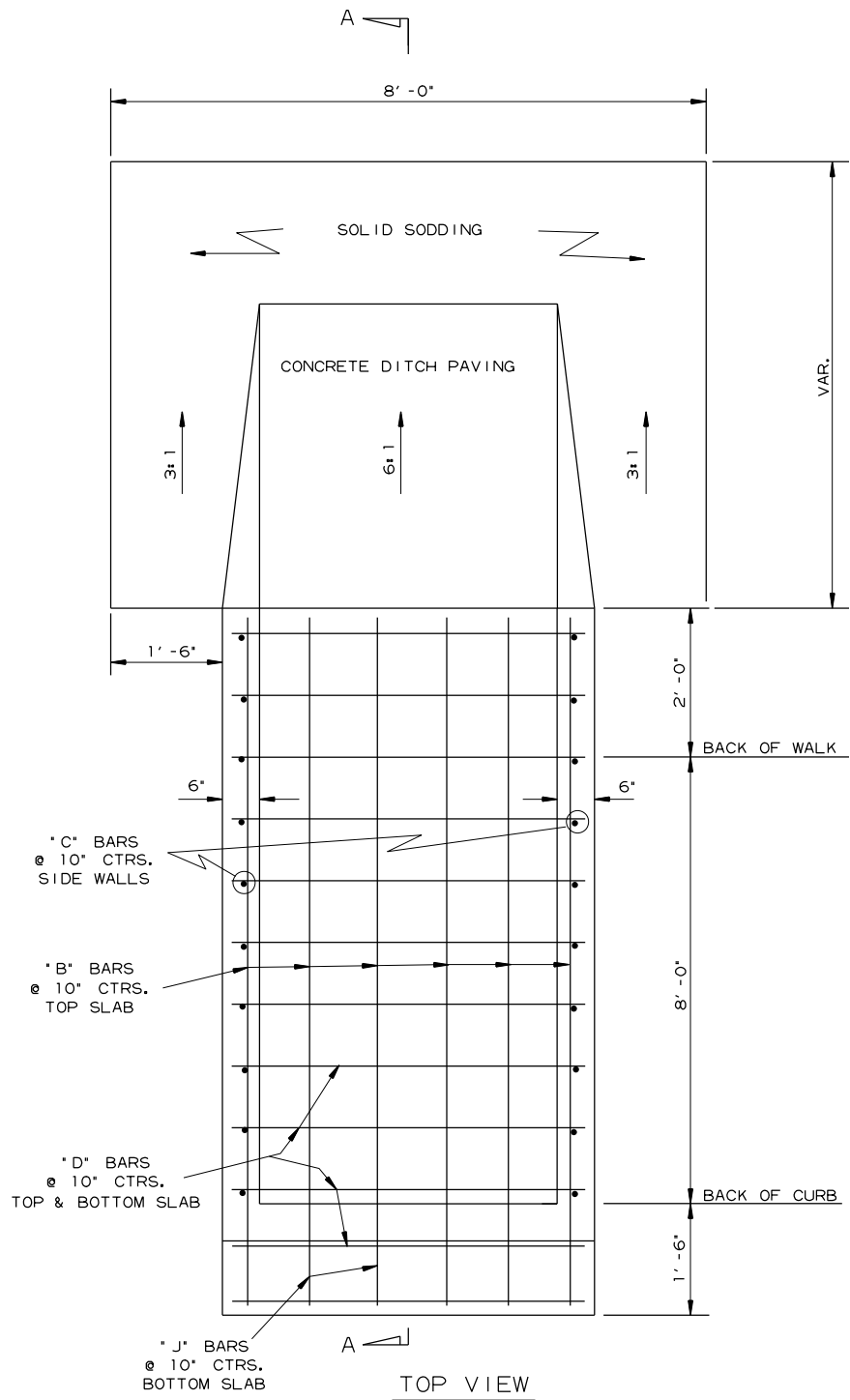


* AGGREGATE BASE COURSE (CLASS 7)
TO BE REPLACED WITH ACHM BINDER COURSE (1")
** MAX. DEPTH 1' - 5"

METHOD OF RAISING GRADE
HWY. 61

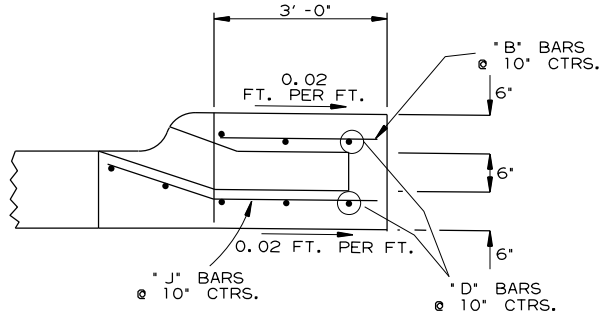
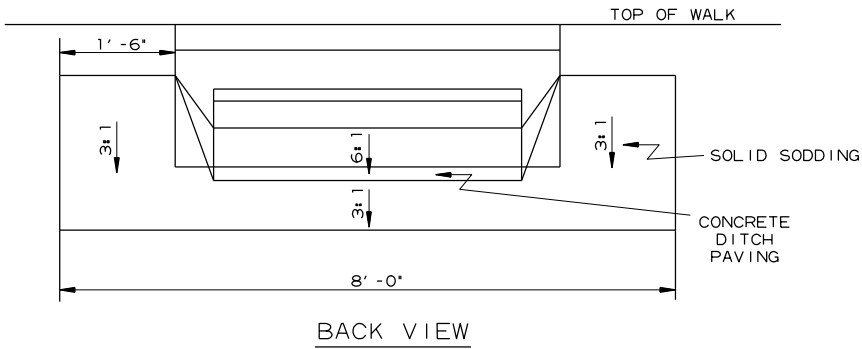
- NOTES:
- (1) THIS DETAIL TO BE USED ONLY IF AND WHERE DIRECTED BY THE ENGINEER.
 - (2) QUANTITIES FOR METHOD OF GRADE RAISE USING ASPHALT WERE CALCULATED ON THIS PROJECT AT LOCATIONS WHERE THE DISTANCE BETWEEN THE EXISTING ASPHALT ROADWAY AND THE PROPOSED SUBGRADE WAS ONE FOOT OR LESS.
 - (3) IN LOCATIONS 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.

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	7	73
SPECIAL DETAILS						

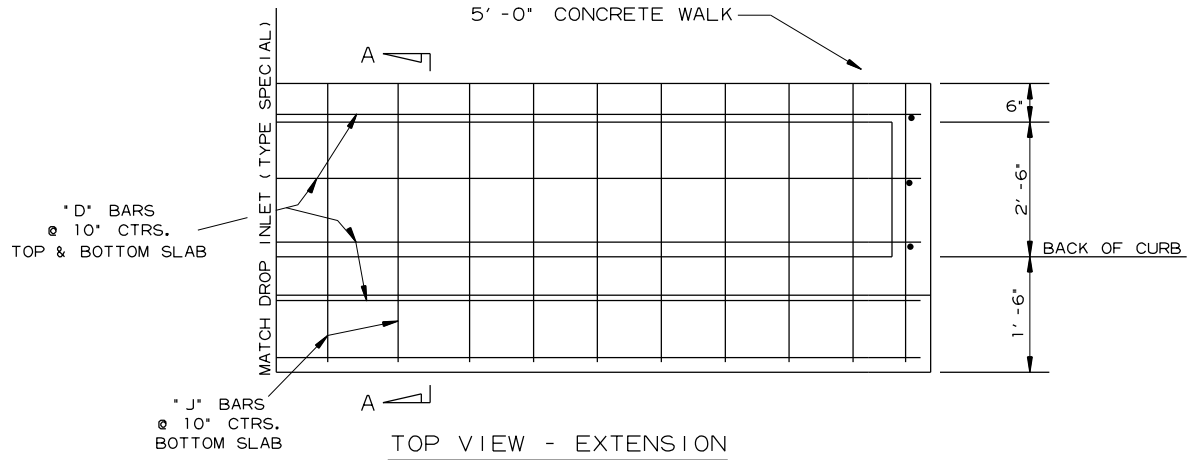


CLASS A	REINF. STEEL-RDWY. GRADE 60
CU. YDS.	POUND
2.53	207

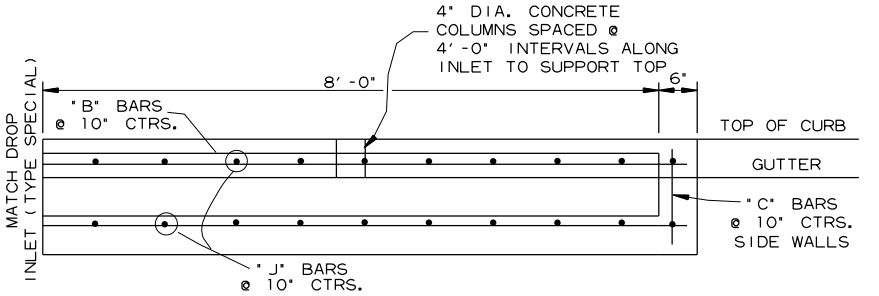
QUANTITIES FOR INFORMATION ONLY
DROP INLET (TYPE SPECIAL)



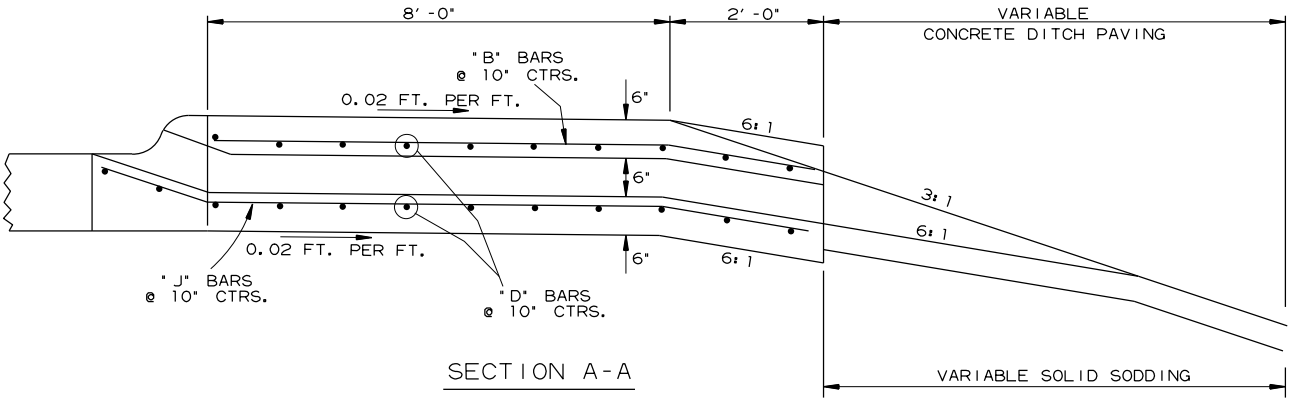
SECTION A-A - EXTENSION



FRONT VIEW - EXTENSION



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



SECTION A-A

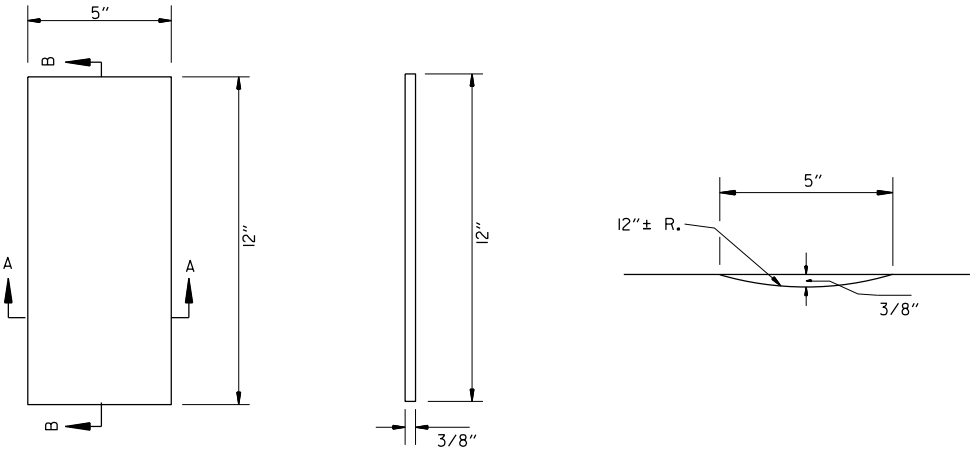
DROP INLET (TYPE SPECIAL)

SPECIAL DETAILS

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	8	73
SPECIAL DETAILS						



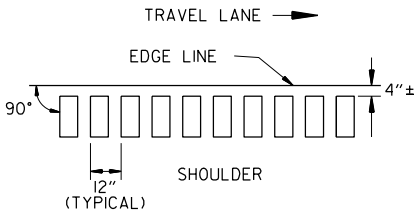
DIGITALLY SIGNED 09-09-2026



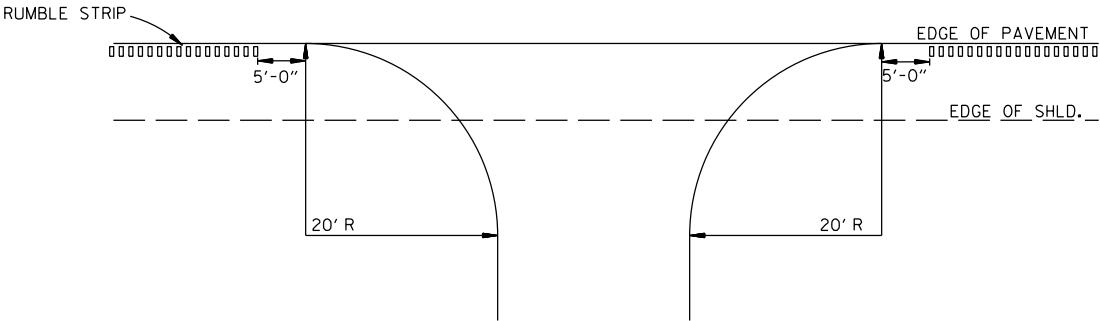
PLAN

SECTION B-B

SECTION A-A



LOCATION PLAN OF RUMBLE STRIPS
LEFT OR RIGHT SHOULDER

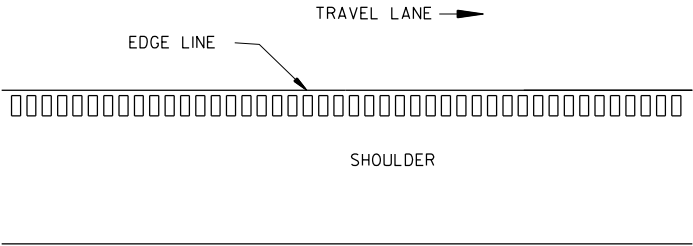
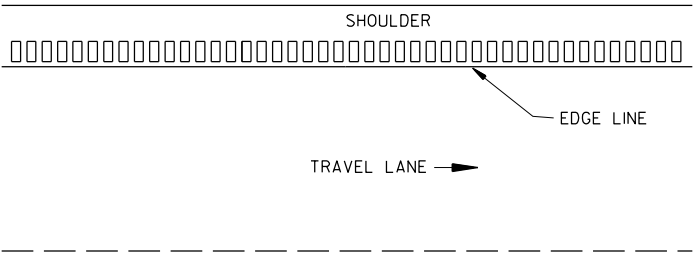


DETAIL FOR RUMBLE STRIP GAP
AT DRIVEWAY TURNOUTS

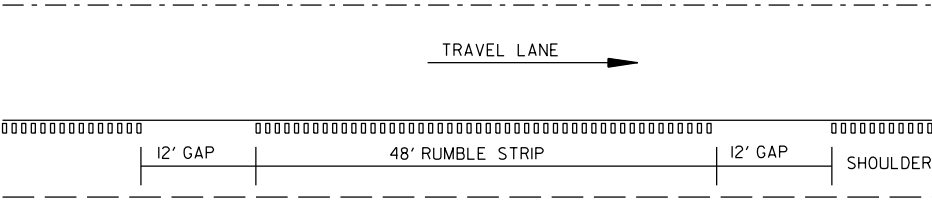
DETAILS OF RUMBLE STRIPS

GENERAL NOTES:

1. RUMBLE STRIPS SHALL NOT BE INSTALLED ON CURB SECTIONS, BRIDGE DECKS, APPROACH SLABS, INTERSECTING STREETS OR ROADWAYS, RESIDENTIAL OR COMMERCIAL DRIVEWAYS OR ACROSS TRANSVERSE JOINTS OF CONCRETE SHOULDERS.
2. RUMBLE STRIPS SHALL NOT BE INSTALLED ON A PAVED SHOULDER THAT IS USED AS A DECELERATION LANE FOR THE LENGTH DEEMED APPROPRIATE BY THE ENGINEER.
3. THE 4" OFFSET FROM THE EDGE LINE MAY BE INCREASED TO AVOID LONGITUDINAL JOINTS. IN ALL CASES, THE LATERAL DEVIATION FROM THE PLANNED OFFSET SHOULD BE KEPT TO A MINIMUM.
4. RUMBLE STRIPS SHALL BE MEASURED BY THE LINEAR FOOT LONGITUDINALLY ALONG THE SHOULDER. PAYMENT SHALL ONLY INCLUDE THAT PORTION OF THE SHOULDER ON WHICH RUMBLE STRIPS HAVE BEEN CONSTRUCTED. NO MEASUREMENT OR PAYMENT WILL BE MADE FOR GAPS, DRIVEWAYS, TURNOUTS, OR OTHER PUBLIC ROAD INTERSECTIONS WHERE RUMBLE STRIPS HAVE NOT BEEN CONSTRUCTED.
5. THE 3/8" DEPTH SHALL GENERALLY APPLY FOR THE ENTIRE 12" LENGTH. SOME VARIATION TO SUIT SHOULDER SLOPE BREAKS MAY BE NECESSARY.



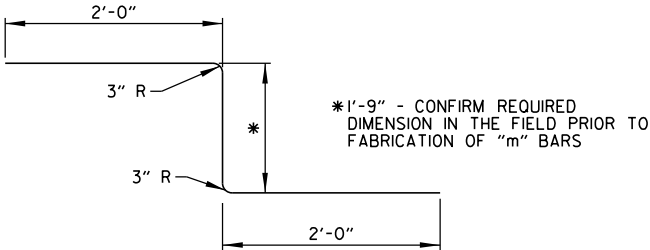
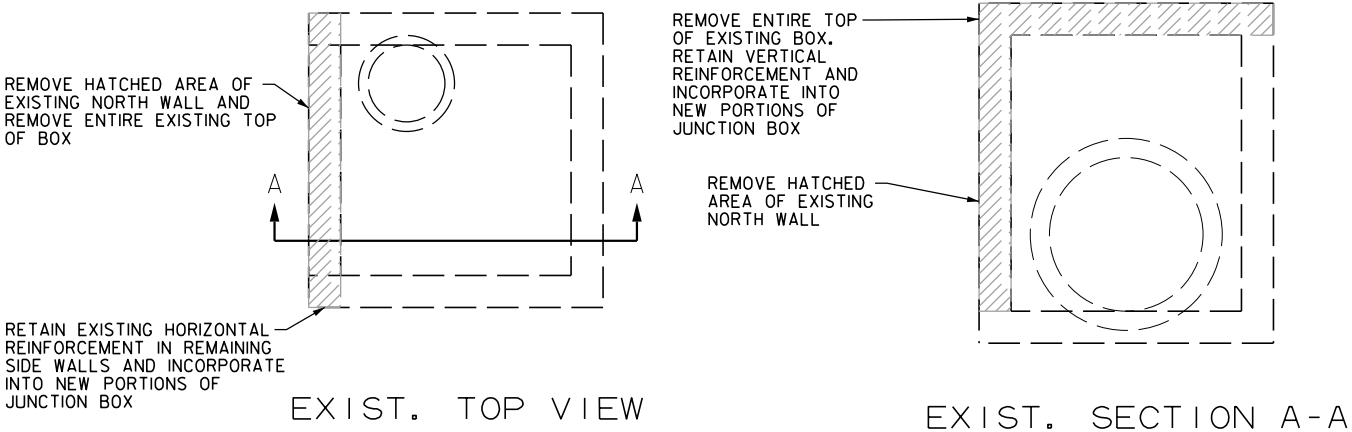
PLAN VIEW



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

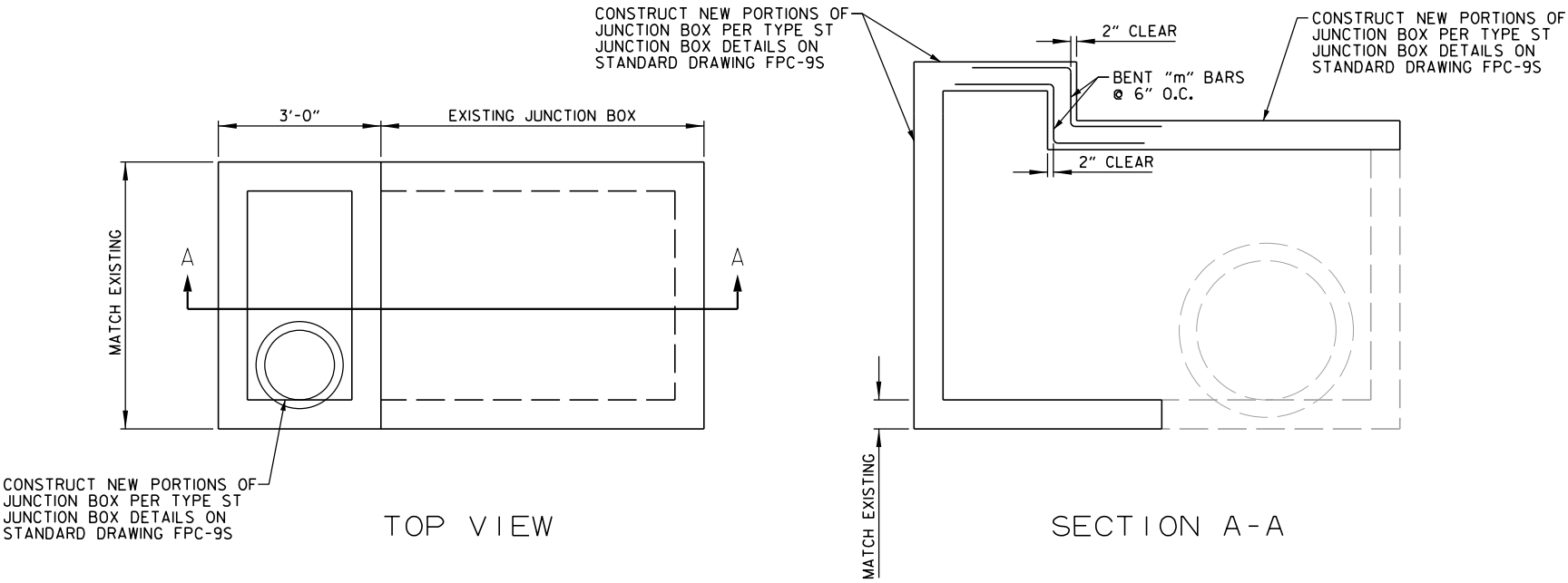
DETAIL FOR GAP PATTERN RUMBLE STRIP

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	9	73
SPECIAL DETAILS						

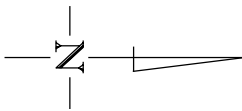


DETAIL OF BENT "m" BAR

NOTE: EXISTING JUNCTION BOX MAY BE REPLACED WITH A NEW TYPE ST JUNCTION BOX WITH EQUIVALENT DIMENSIONS TO THE MODIFIED JUNCTION BOX SHOWN WHICH SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "MODIFYING DROP INLETS" AND SHALL INCLUDE ALL ADDITIONAL COSTS FOR MAINTAINING TRAFFIC, FURNISHING, AND INSTALLING THE NEW JUNCTION BOX.



DETAILS OF MODIFIED JUNCTION BOX



REVISIONS

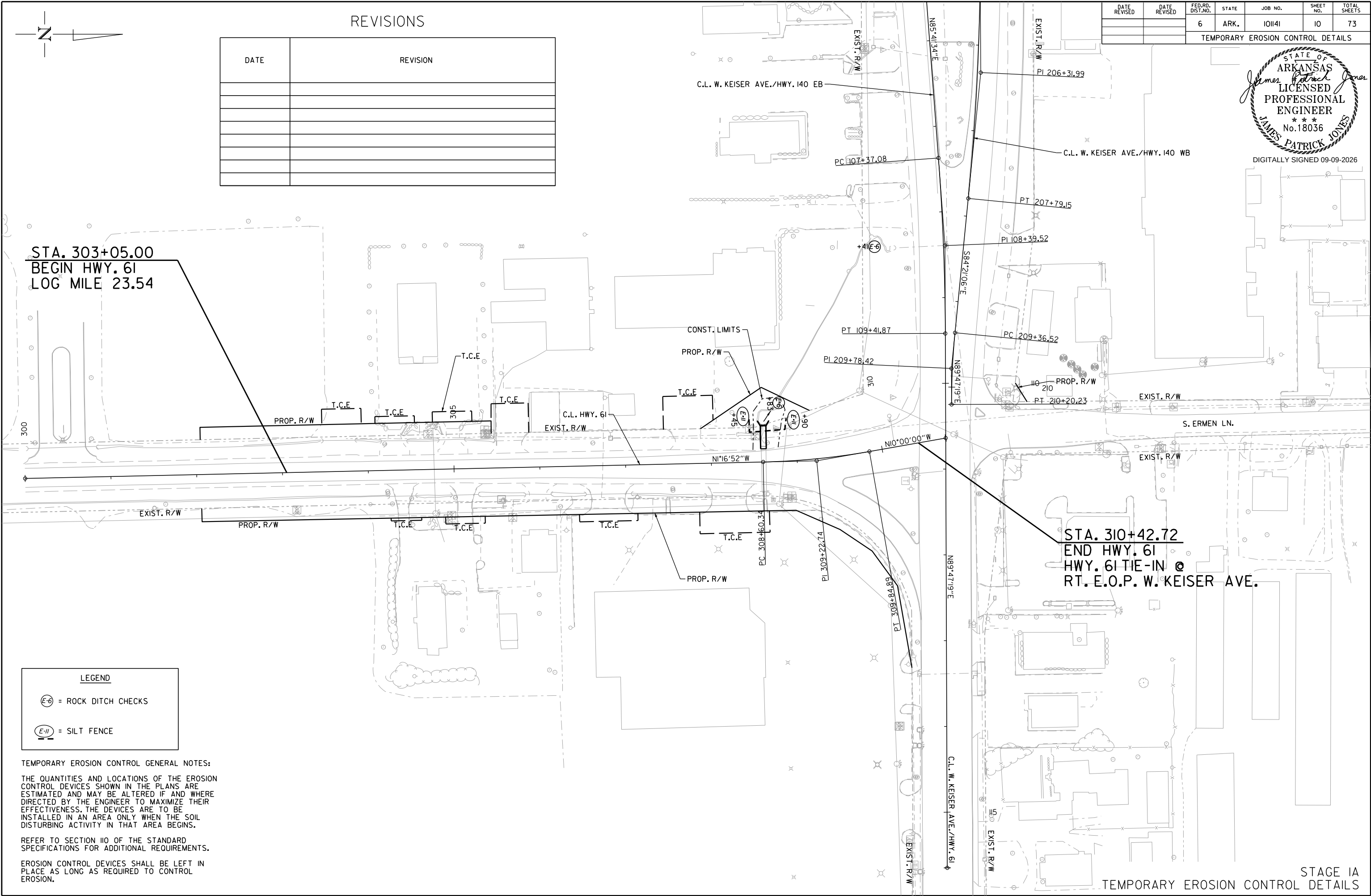
DATE	REVISION

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	10	73
TEMPORARY EROSION CONTROL DETAILS						



DIGITALLY SIGNED 09-09-2026

STA. 303+05.00
BEGIN HWY. 61
LOG MILE 23.54



STA. 310+42.72
END HWY. 61
HWY. 61 TIE-IN @
RT. E.O.P. W. KEISER AVE.

LEGEND

= ROCK DITCH CHECKS

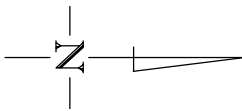
= SILT FENCE

TEMPORARY EROSION CONTROL GENERAL NOTES:

THE QUANTITIES AND LOCATIONS OF THE EROSION CONTROL DEVICES SHOWN IN THE PLANS ARE ESTIMATED AND MAY BE ALTERED IF AND WHERE DIRECTED BY THE ENGINEER TO MAXIMIZE THEIR EFFECTIVENESS. THE DEVICES ARE TO BE INSTALLED IN AN AREA ONLY WHEN THE SOIL DISTURBING ACTIVITY IN THAT AREA BEGINS.

REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

EROSION CONTROL DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.



REVISIONS

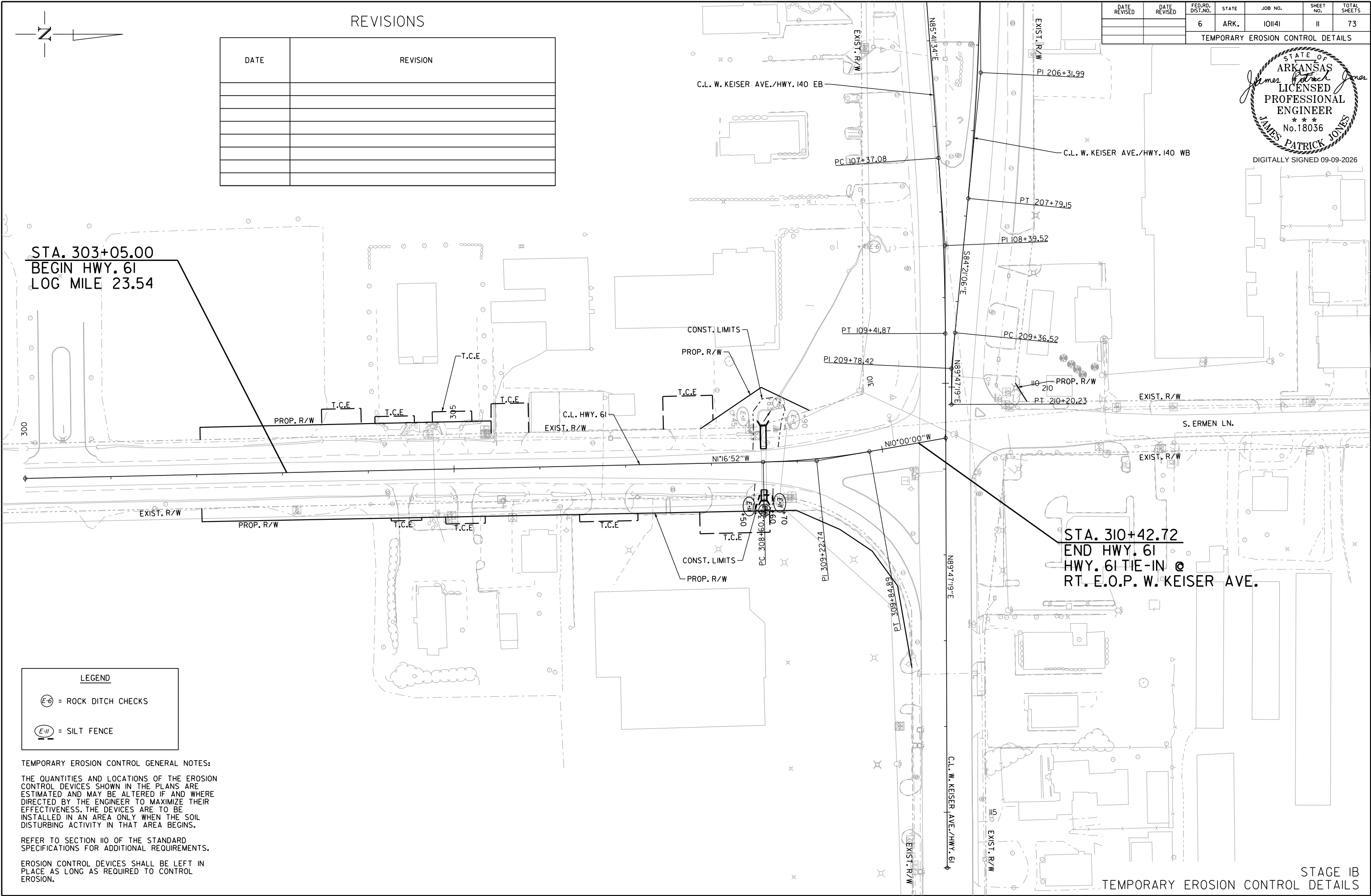
DATE	REVISION

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	II	73
TEMPORARY EROSION CONTROL DETAILS						



DIGITALLY SIGNED 09-09-2026

STA. 303+05.00
BEGIN HWY. 61
LOG MILE 23.54



LEGEND

E-6 = ROCK DITCH CHECKS

E-11 = SILT FENCE

TEMPORARY EROSION CONTROL GENERAL NOTES:

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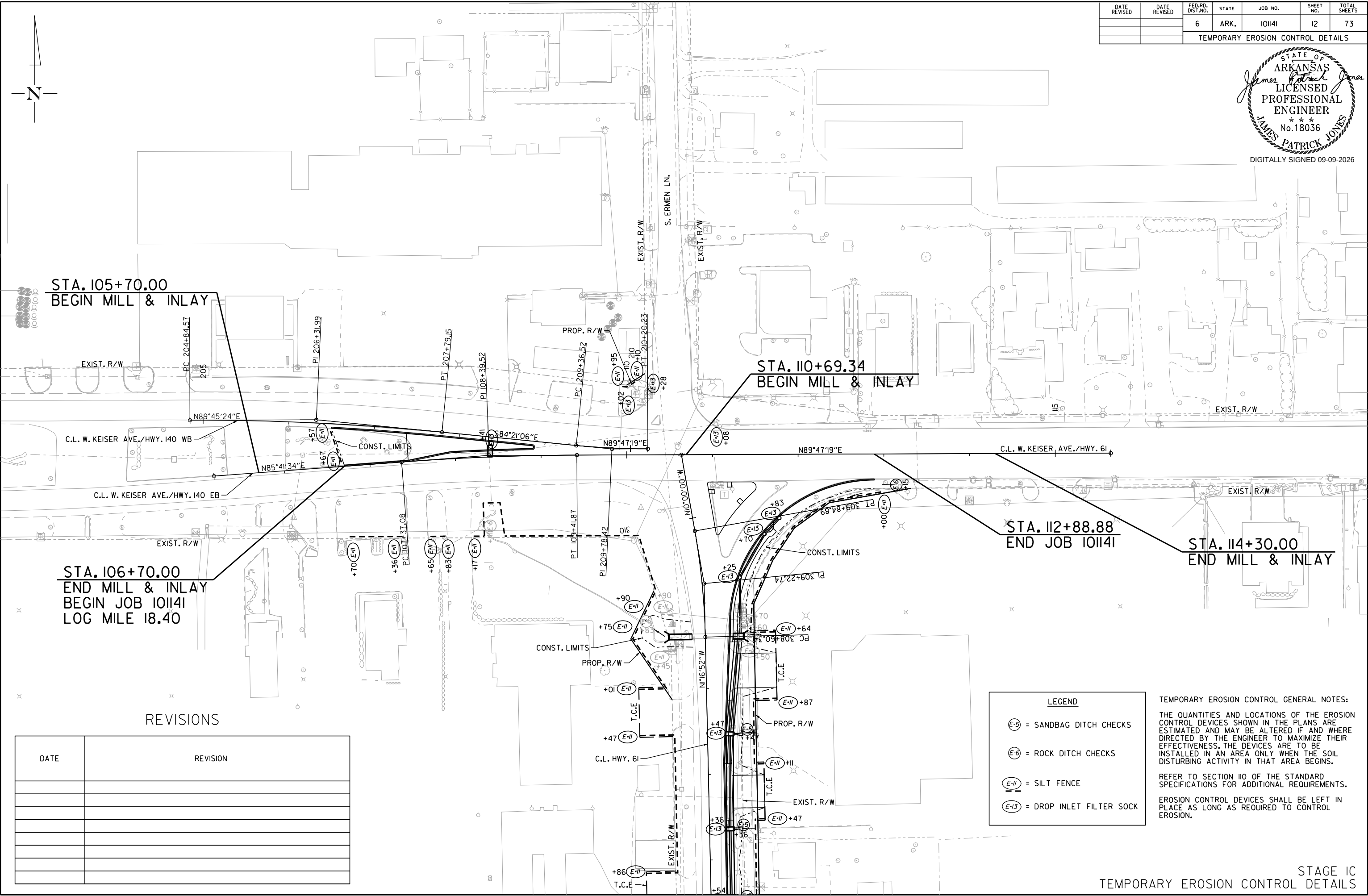
REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

EROSION CONTROL DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	12	73
TEMPORARY EROSION CONTROL DETAILS						



DIGITALLY SIGNED 09-09-2026



LEGEND

E-5

= SANDBAG DITCH CHECKS

E-6

= ROCK DITCH CHECKS

E-11

= SILT FENCE

E-13

= DROP INLET FILTER SOCK

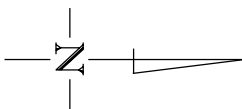
TEMPORARY EROSION CONTROL GENERAL NOTES:

THE QUANTITIES AND LOCATIONS OF THE EROSION CONTROL DEVICES SHOWN IN THE PLANS ARE ESTIMATED AND MAY BE ALTERED IF AND WHERE DIRECTED BY THE ENGINEER TO MAXIMIZE THEIR EFFECTIVENESS. THE DEVICES ARE TO BE INSTALLED IN AN AREA ONLY WHEN THE SOIL DISTURBING ACTIVITY IN THAT AREA BEGINS.

REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

EROSION CONTROL DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

DATE	REVISION



REVISIONS

DATE	REVISION

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	13	73
TEMPORARY EROSION CONTROL DETAILS						



DIGITALLY SIGNED 09-09-2026

STA. 303+05.00
BEGIN HWY. 61
LOG MILE 23.54

STA. 310+42.72
END HWY. 61
HWY. 61 TIE-IN @
RT. E.O.P. W. KEISER AVE.

LEGEND

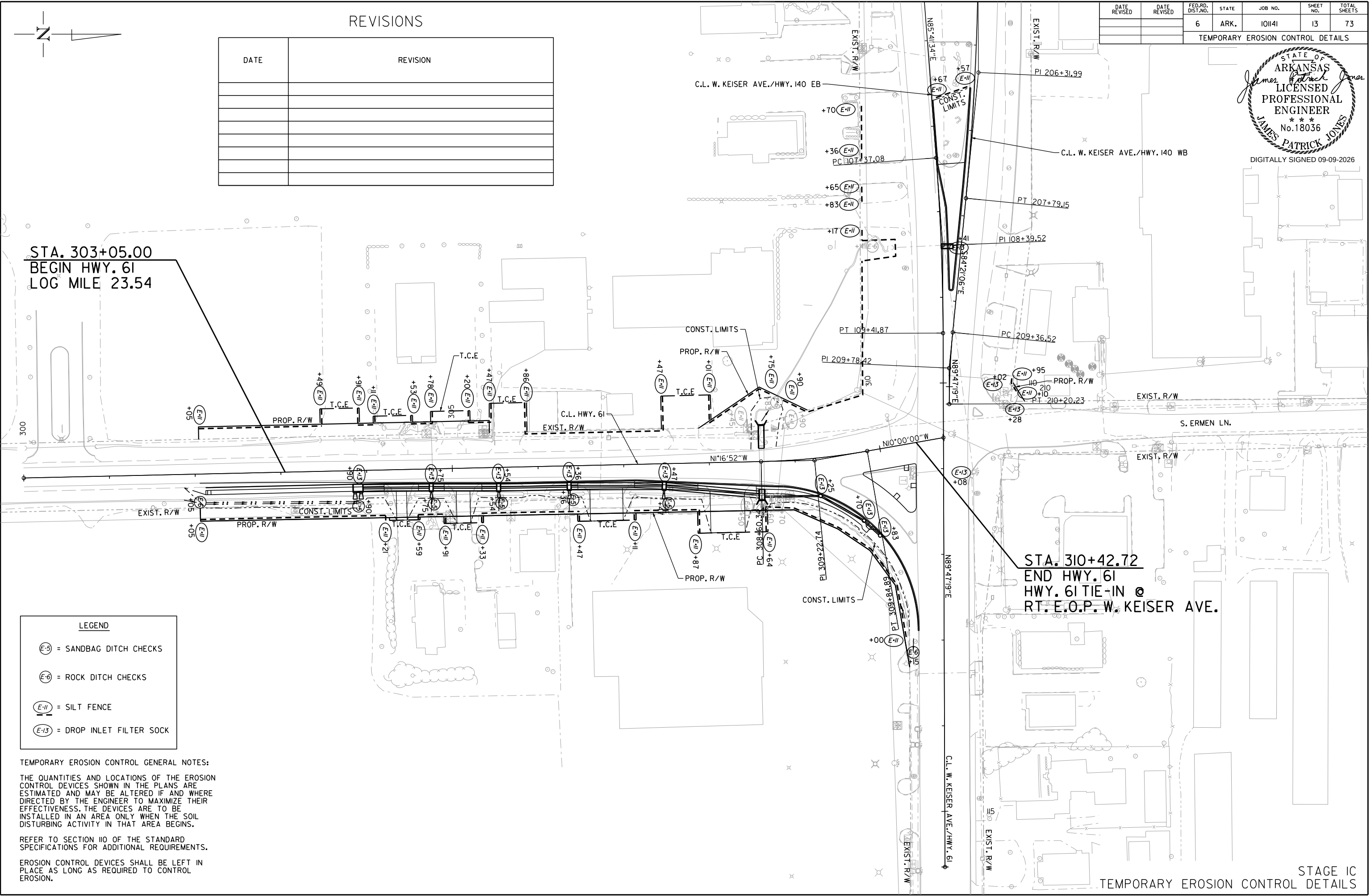
- = SANDBAG DITCH CHECKS
- = ROCK DITCH CHECKS
- = SILT FENCE
- = DROP INLET FILTER SOCK

TEMPORARY EROSION CONTROL GENERAL NOTES:

THE QUANTITIES AND LOCATIONS OF THE EROSION CONTROL DEVICES SHOWN IN THE PLANS ARE ESTIMATED AND MAY BE ALTERED IF AND WHERE DIRECTED BY THE ENGINEER TO MAXIMIZE THEIR EFFECTIVENESS. THE DEVICES ARE TO BE INSTALLED IN AN AREA ONLY WHEN THE SOIL DISTURBING ACTIVITY IN THAT AREA BEGINS.

REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

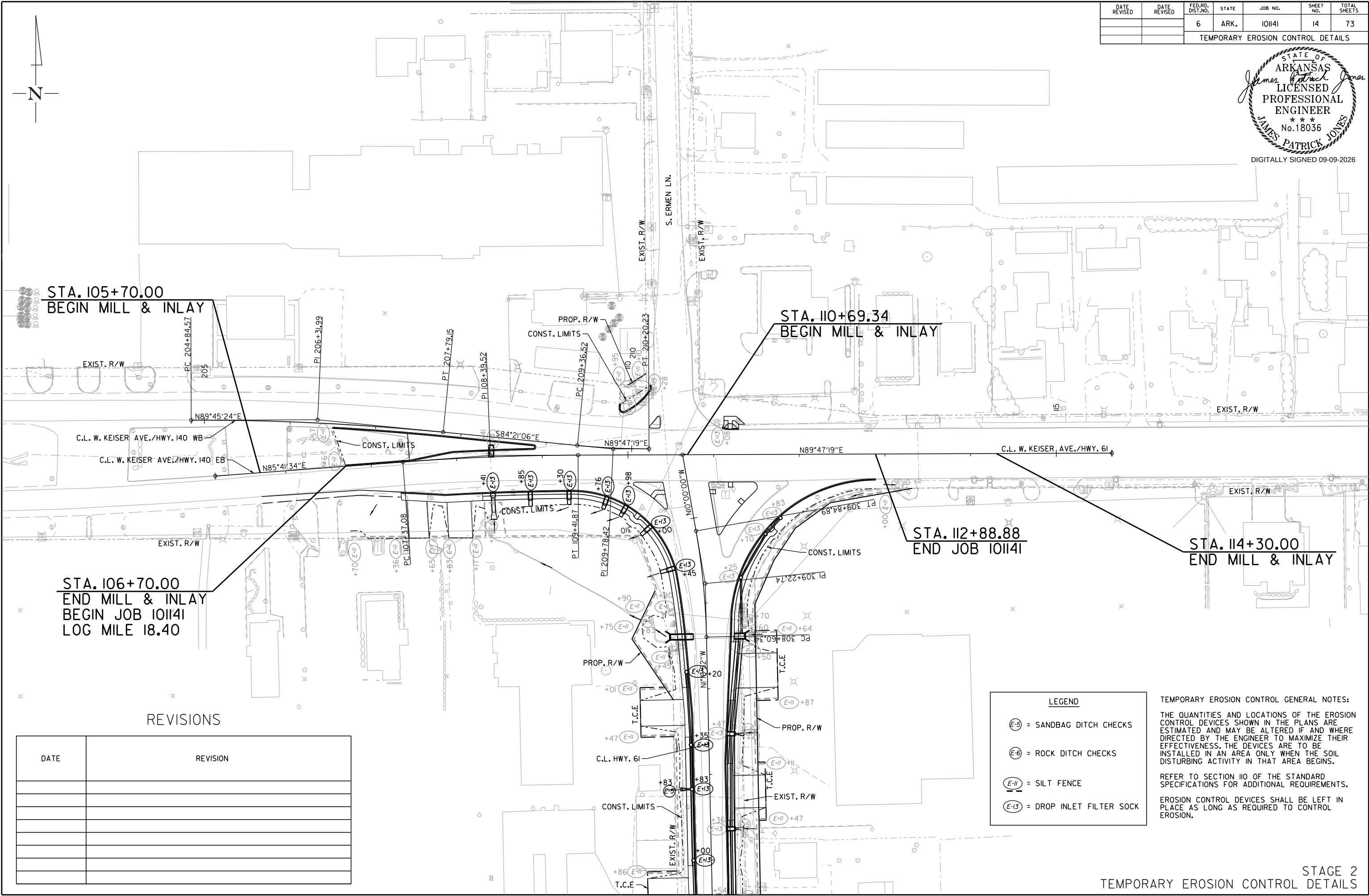
EROSION CONTROL DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.



DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	14	73
TEMPORARY EROSION CONTROL DETAILS						



DIGITALLY SIGNED 09-09-2026



REVISIONS

DATE	REVISION

LEGEND

E-5

= SANDBAG DITCH CHECKS

E-6

= ROCK DITCH CHECKS

E-11

= SILT FENCE

E-13

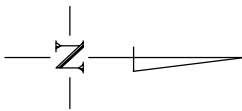
= DROP INLET FILTER SOCK

TEMPORARY EROSION CONTROL GENERAL NOTES:

THE QUANTITIES AND LOCATIONS OF THE EROSION CONTROL DEVICES SHOWN IN THE PLANS ARE ESTIMATED AND MAY BE ALTERED IF AND WHERE DIRECTED BY THE ENGINEER TO MAXIMIZE THEIR EFFECTIVENESS. THE DEVICES ARE TO BE INSTALLED IN AN AREA ONLY WHEN THE SOIL DISTURBING ACTIVITY IN THAT AREA BEGINS.

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EROSION CONTROL DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.



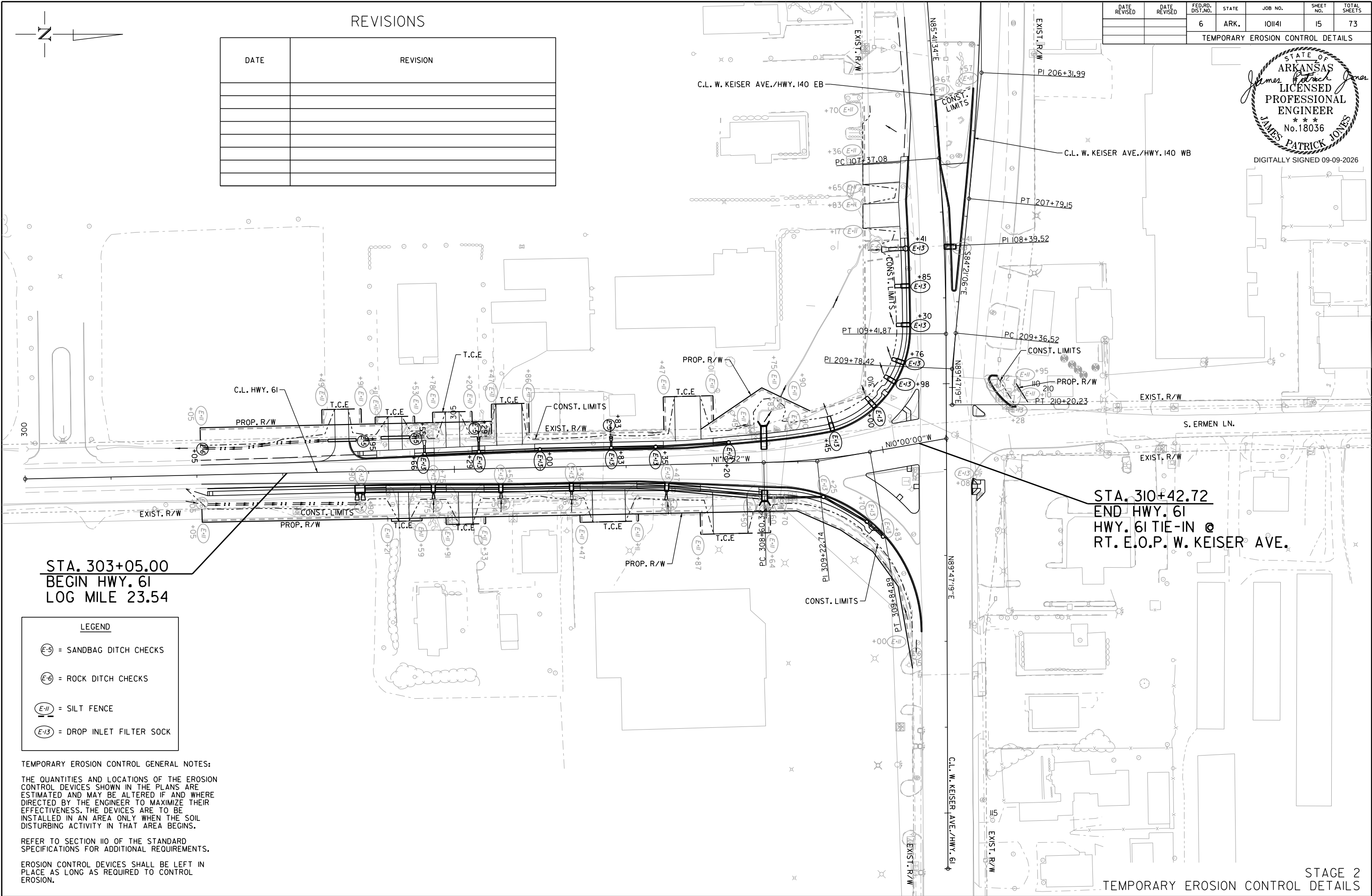
REVISIONS

DATE	REVISION

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	15	73
TEMPORARY EROSION CONTROL DETAILS						



DIGITALLY SIGNED 09-09-2026



STA. 303+05.00
BEGIN HWY. 61
LOG MILE 23.54

STA. 310+42.72
END HWY. 61
HWY. 61 TIE-IN @
RT. E.O.P. W. KEISER AVE.

LEGEND

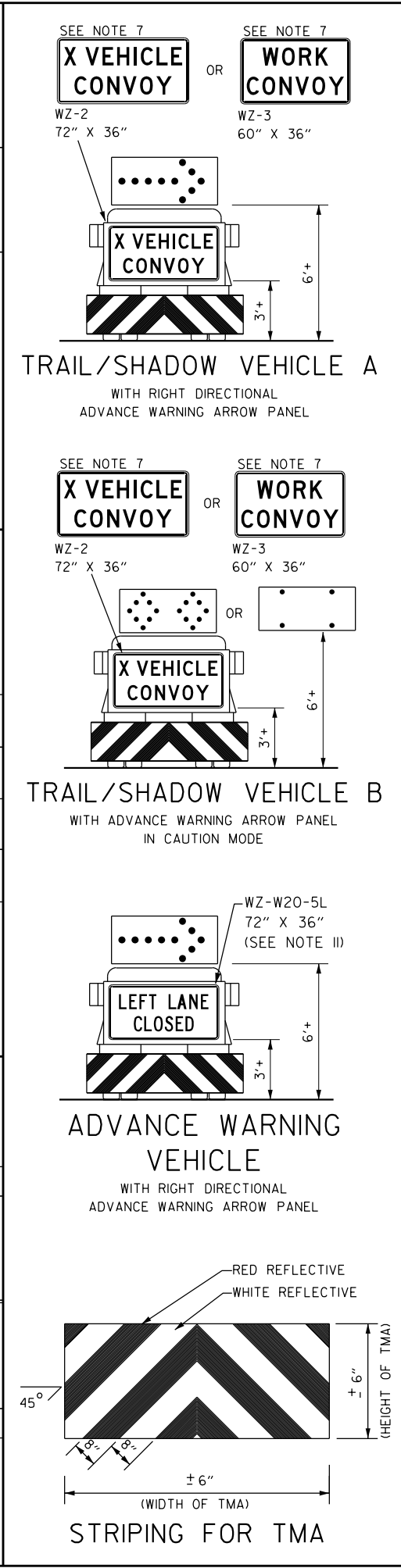
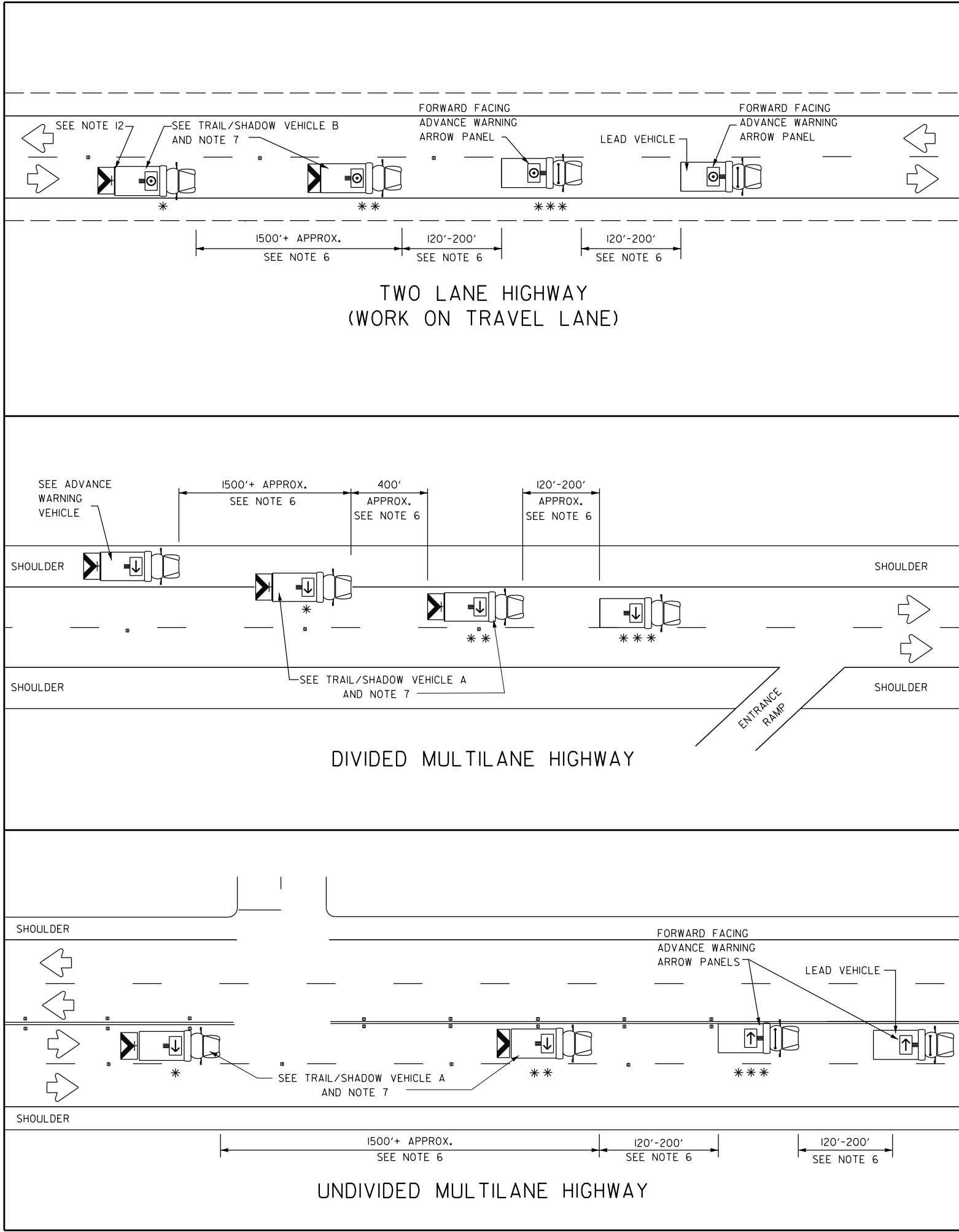
- (E-5) = SANDBAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-11) = SILT FENCE
- (E-13) = DROP INLET FILTER SOCK

TEMPORARY EROSION CONTROL GENERAL NOTES:

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EROSION CONTROL DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.



DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	16	73

MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
JAMES PATRICK JONES
LICENSED PROFESSIONAL ENGINEER
No. 18036
DIGITALLY SIGNED 09-09-2026

LEGEND			
*	TRAIL VEHICLE	ADVANCE WARNING ARROW PANEL DISPLAY	
**	SHADOW VEHICLE		
***	WORK VEHICLE	→	RIGHT DIRECTIONAL
⇐	HEAVY WORK VEHICLE	⇐	LEFT DIRECTIONAL
⬅↔➡	TRUCK MOUNTED ATTENUATOR (TMA)	⬅↔➡	DOUBLE ARROW
⬅↔➡	TRAFFIC FLOW	⬅↔➡	CAUTION (ALTERNATING DIAMOND OR 4 CORNER FLASH)

TYPICAL APPLICATION - MOBILE WORK ZONE

GENERAL NOTES:

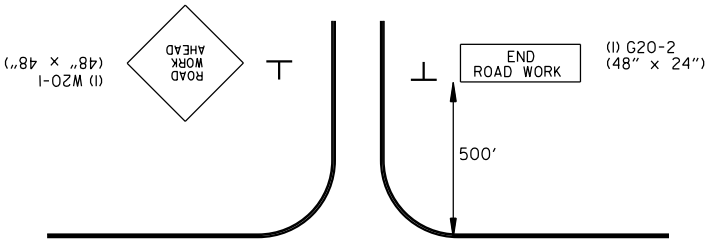
1. TRAIL, SHADOW, AND LEAD VEHICLES SHALL BE EQUIPPED WITH ADVANCE WARNING ARROW PANELS AS ILLUSTRATED.
2. THE USE OF AMBER OR GREEN HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS ON ALL VEHICLES ARE REQUIRED. VEHICLE HAZARD WARNING SIGNALS SHALL NOT BE USED INSTEAD OF THE VEHICLE'S HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS.
3. THE USE OF TRUCK MOUNTED ATTENUATORS (TMA) ON THE SHADOW VEHICLE, ADVANCE WARNING AND TRAIL VEHICLE ARE REQUIRED.
4. EACH VEHICLE SHALL HAVE TWO-WAY RADIO COMMUNICATION CAPABILITY.
5. WHEN WORK CONVOYS MUST CHANGE LANES, THE TRAIL VEHICLE SHOULD CHANGE LANES FIRST TO SHADOW THE OTHER CONVOY VEHICLES. WHEN WORK CONVOY EXITS THE ROADWAY, THE TRAIL VEHICLE SHOULD EXIT LAST.
6. VEHICLE SPACING BETWEEN THE TRAIL VEHICLE AND THE SHADOW VEHICLE WILL VARY DEPENDING ON SIGHT DISTANCE RESTRICTIONS AND QUEUE LENGTHS. MOTORISTS APPROACHING THE CONVOY SHOULD BE ABLE TO SEE THE TRAIL VEHICLE IN TIME TO SLOW DOWN AND/OR CHANGE LANES AS THEY APPROACH THE TRAIL VEHICLE. VEHICLE SPACING BETWEEN THE WORK VEHICLE AND SHADOW VEHICLE AND VEHICLE SPACING BETWEEN THE WORK VEHICLE AND LEAD VEHICLE MAY VARY ACCORDING TO TERRAIN, WORK ACTIVITY AND OTHER FACTORS.
7. X VEHICLE CONVOY (WZ-2) OR WORK CONVOY (WZ-3) SIGNS SHALL BE USED ON TRAIL VEHICLES AND SHADOW VEHICLES AS SHOWN. AS AN OPTION 48" X 48" DIAMOND SHAPED WORK CONVOY (WZ-2A) OR X VEHICLE CONVOY (WZ-3A) SIGNS MAY BE USED WHERE ADEQUATE MOUNTING SPACE EXISTS. WHEN USED, THE X VEHICLE CONVOY SIGN SHALL HAVE THE NUMBER OF THE CONVOY VEHICLES DISPLAYED ON THE SIGN IN THE NUMBER DESIGNATION "X" LOCATION. THE X VEHICLE CONVOY SIGN SHALL NOT BE USED ON THE SHADOW VEHICLE.
8. FOR DIVIDED HIGHWAYS WITH TWO OR THREE LANES IN ONE DIRECTION, THE APPROPRIATE LEFT LANE CLOSED (WZ-W20-5L), RIGHT LANE CLOSED (WZ-W20-5R), OR CENTER LANE CLOSED (WZ-W20-5C) SIGN SHOULD BE USED ON THE ADVANCE WARNING VEHICLE. AS AN OPTION, A PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) OR TRUCK MOUNTED CHANGEABLE MESSAGE SIGN (TMCMS) WITH A MINIMUM CHARACTER HEIGHT OF 12", AND DISPLAYING THE SAME LEGEND MAY BE SUBSTITUTED FOR THESE SIGNS. AN APPROPRIATE DIRECTIONAL ARROW DISPLAY, SIMULATING THE SIZE AND LEGIBILITY OF THE ADVANCE WARNING ARROW PANEL MAY BE USED IN THE SECOND PHASE OF THE PCMS/TMCMS MESSAGE. WHEN THIS IS DONE, THE ARROW BOARD WILL NOT BE REQUIRED ON THE ADVANCE WARNING VEHICLE.
9. A DOUBLE ARROW SHALL NOT BE DISPLAYED ON THE ADVANCE WARNING ARROW PANEL ON THE ADVANCE WARNING VEHICLE.
10. STANDARD DIAMOND SHAPE VERSIONS OF THE WZ SERIES SIGNS MAY BE USED AS AN OPTION IF THE RECTANGULAR SIGNS SHOWN ARE NOT AVAILABLE.
11. THE ADVANCE WARNING VEHICLE MAY STRADDLE THE EDGELINE WHEN SHOULDER WIDTH MAKES IT NECESSARY.
12. ON TWO-LANE TWO-WAY ROADWAYS, THE WORK AND PROTECTION VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW MOTOR VEHICLE TRAFFIC TO PASS. A DO NOT PASS (R4-1) SIGN SHALL BE PLACED ON THE BACK OF THE REARMOST PROTECTION VEHICLE.
13. MOBILE WORK ZONE METHODS AS DEPICTED IN THIS STANDARD DRAWING SHALL BE UTILIZED ON ALL PROJECTS THAT INCLUDE INSTALLATION OR REMOVAL OF RAISED PAVEMENT MARKERS OR PAVEMENT MARKINGS UNLESS APPROVED BY THE ENGINEER ON PROJECTS LESS THAN 0.5 MILE IN LENGTH.
14. NO DIRECT PAYMENT WILL BE MADE FOR COMPLIANCE WITH THE METHODS DEPICTED IN THIS STANDARD DRAWING (WHICH INCLUDES ALL SIGNS, DEVICES, MATERIALS, LABOR, TOOLS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLY) BUT SHALL BE CONSIDERED SUBSIDIARY TO THE MAINTENANCE OF TRAFFIC PAY ITEM.

MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	17	73
MAINTENANCE OF TRAFFIC DETAILS						



DIGITALLY SIGNED 09-09-2026



ADVANCE WARNING - SIDE ROADS
(ALL STAGES)
S. ERMEN LN.

(2) W21-5a
(36" x 36")

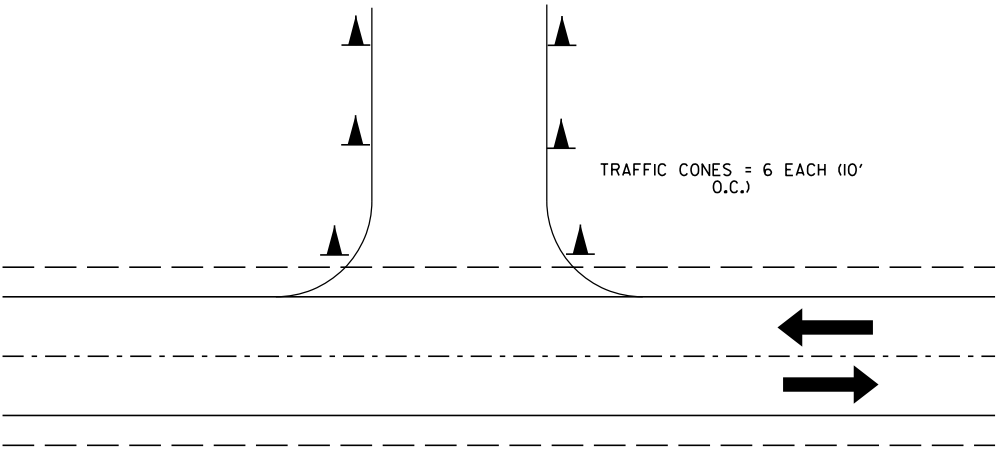
ALL STAGES
TO BE USED IF AND
WHERE DIRECTED BY
THE ENGINEER

(2) R4-1
(24" x 30")

ALL STAGES
TO BE USED IF AND
WHERE DIRECTED BY
THE ENGINEER

(6) W8-1
(36" x 36")

ALL STAGES
TO BE USED IF AND
WHERE DIRECTED BY
THE ENGINEER



DRIVEWAY/TRAFFIC CONE DETAIL

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	18	73
MAINTENANCE OF TRAFFIC DETAILS						



STAGE 1A
CONSTRUCTION SEQUENCE NOTES

1. INSTALL ADVANCE WARNING SIGNS AS SHOWN.
2. INSTALL STAGE 1A TEMP. BARRIER AND MAINTENANCE OF TRAFFIC DEVICES AS SHOWN.
3. CONSTRUCT STAGE 1A PORTIONS OF THE BOX CULVERT EXTENSION AT STA. 308+60 AS SHOWN.
4. REMOVE STAGE 1A TEMP. BARRIER AND MAINTENANCE OF TRAFFIC DEVICES.

STAGE 1B
CONSTRUCTION SEQUENCE NOTES

1. INSTALL STAGE 1B TEMP. BARRIER AND MAINTENANCE OF TRAFFIC DEVICES AS SHOWN.
2. CONSTRUCT REMAINING PORTIONS OF THE BOX CULVERT EXTENSION AT STA. 308+60 AS SHOWN.
3. REMOVE STAGE 1B TEMP. BARRIER AND MAINTENANCE OF TRAFFIC DEVICES.

STAGE 1C
CONSTRUCTION SEQUENCE NOTES

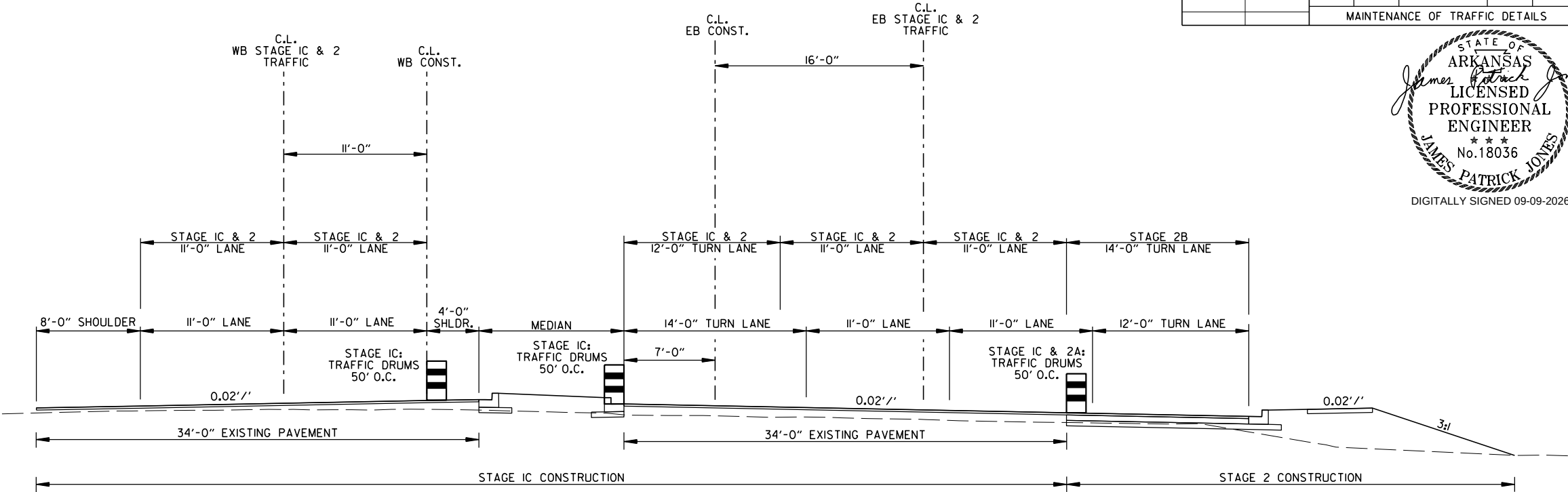
1. INSTALL STAGE 1C MAINTENANCE OF TRAFFIC DEVICES AS SHOWN.
2. REMOVE EXISTING CONCRETE ISLANDS, MILL PAVEMENT, AND CONSTRUCT STAGE 1C PORTIONS OF THE JOB AS SHOWN.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS SHOWN FOR STAGE 2A TRAFFIC CONFIGURATION.

STAGE 2A
CONSTRUCTION SEQUENCE NOTES

1. INSTALL STAGE 2A MAINTENANCE OF TRAFFIC DEVICES AS SHOWN.
2. SHIFT TRAFFIC TO STAGE 2A TRAFFIC CONFIGURATION AS SHOWN.
3. CONSTRUCT STAGE 2A PORTIONS OF THE JOB AS SHOWN.
4. MODIFY CONSTRUCTION PAVEMENT MARKINGS AS SHOWN FOR STAGE 2B TRAFFIC CONFIGURATION.

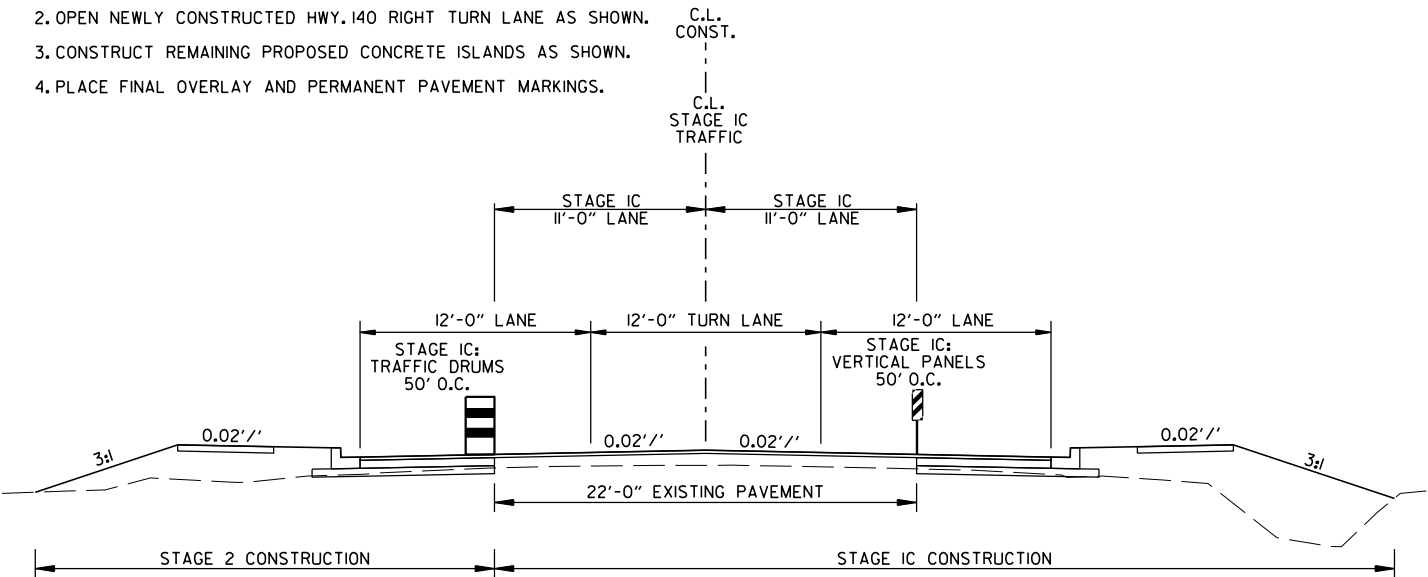
STAGE 2B
CONSTRUCTION SEQUENCE NOTES

1. INSTALL STAGE 2B MAINTENANCE OF TRAFFIC DEVICES AS SHOWN.
2. OPEN NEWLY CONSTRUCTED HWY. 140 RIGHT TURN LANE AS SHOWN.
3. CONSTRUCT REMAINING PROPOSED CONCRETE ISLANDS AS SHOWN.
4. PLACE FINAL OVERLAY AND PERMANENT PAVEMENT MARKINGS.

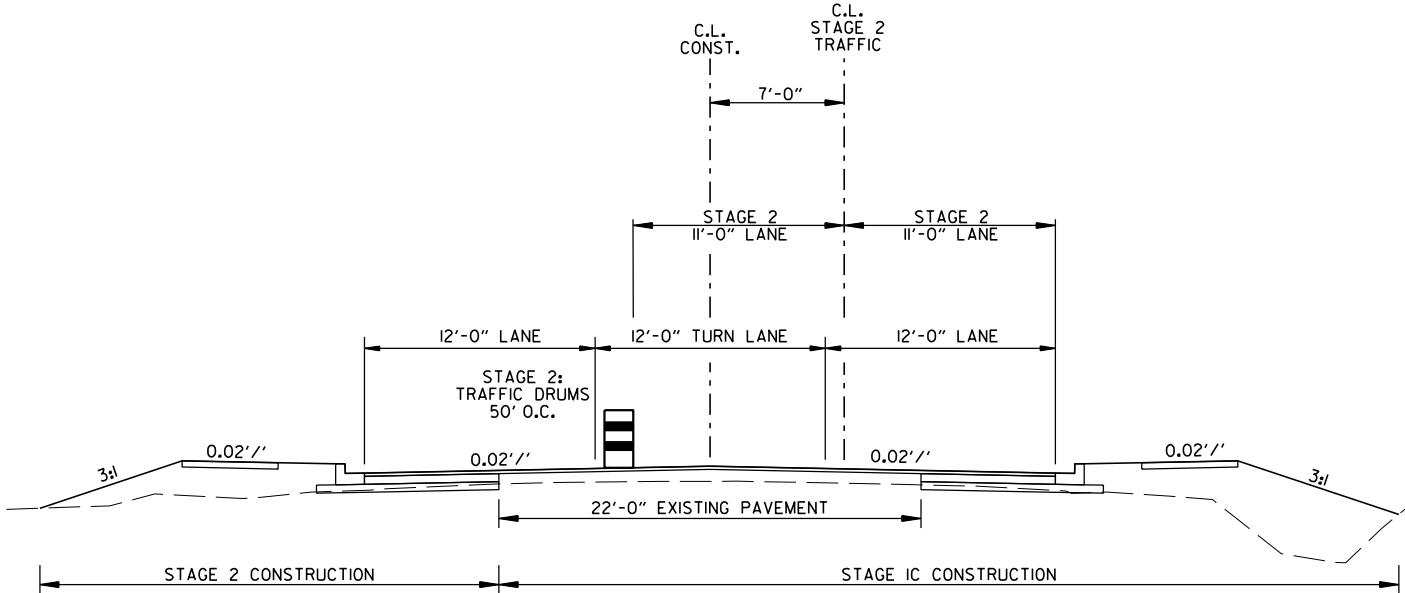


W. KEISER AVE./HWY. 140
STAGE 1C & 2 CONSTRUCTION

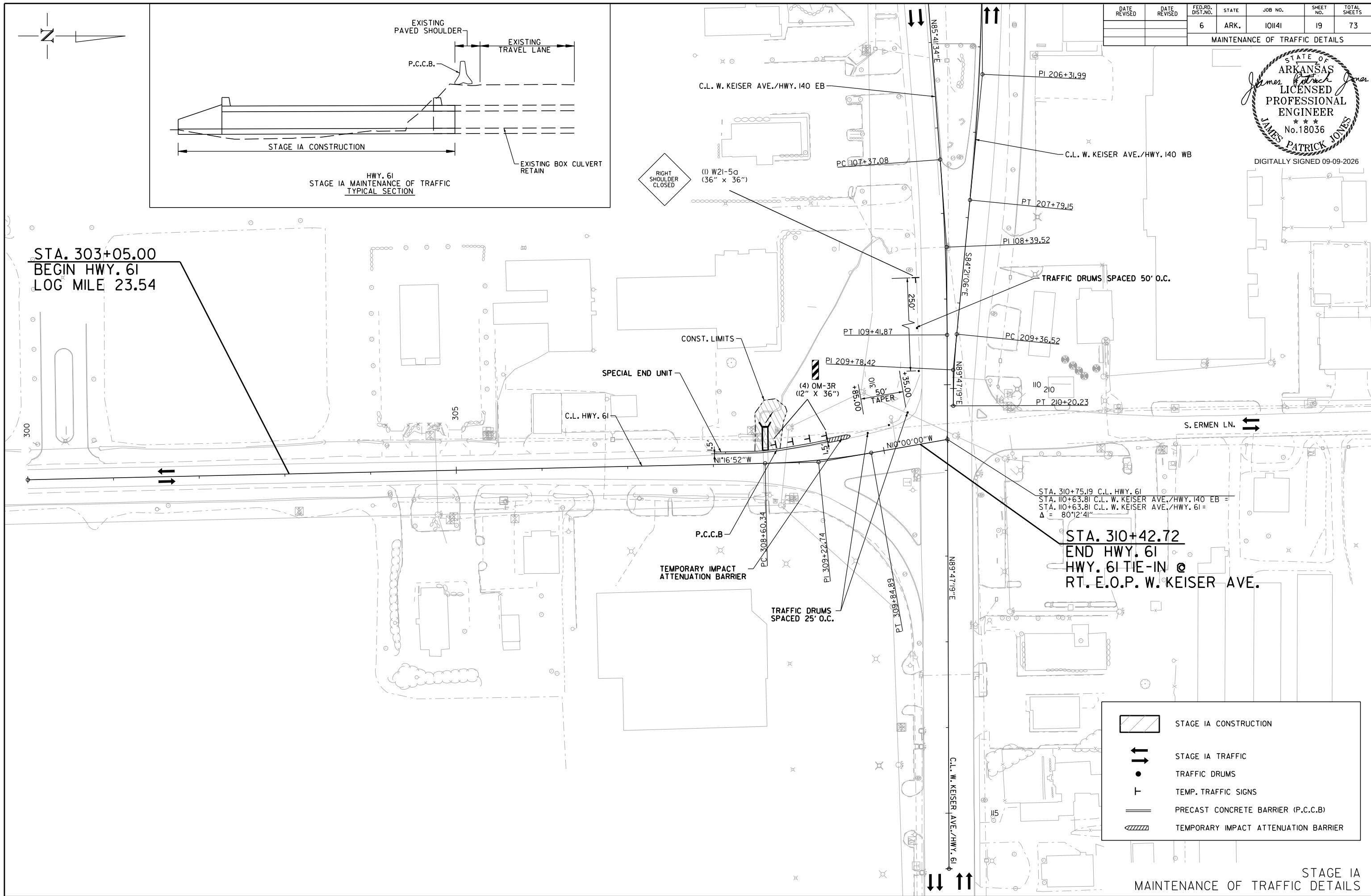
EB: STA. 106+70.00 TO STA. 110+69.34
WB: STA. 206+50.00 TO STA. 210+20.23



HWY. 61
STAGE 1C CONSTRUCTION
STA. 303+05.00 TO STA. 310+42.72



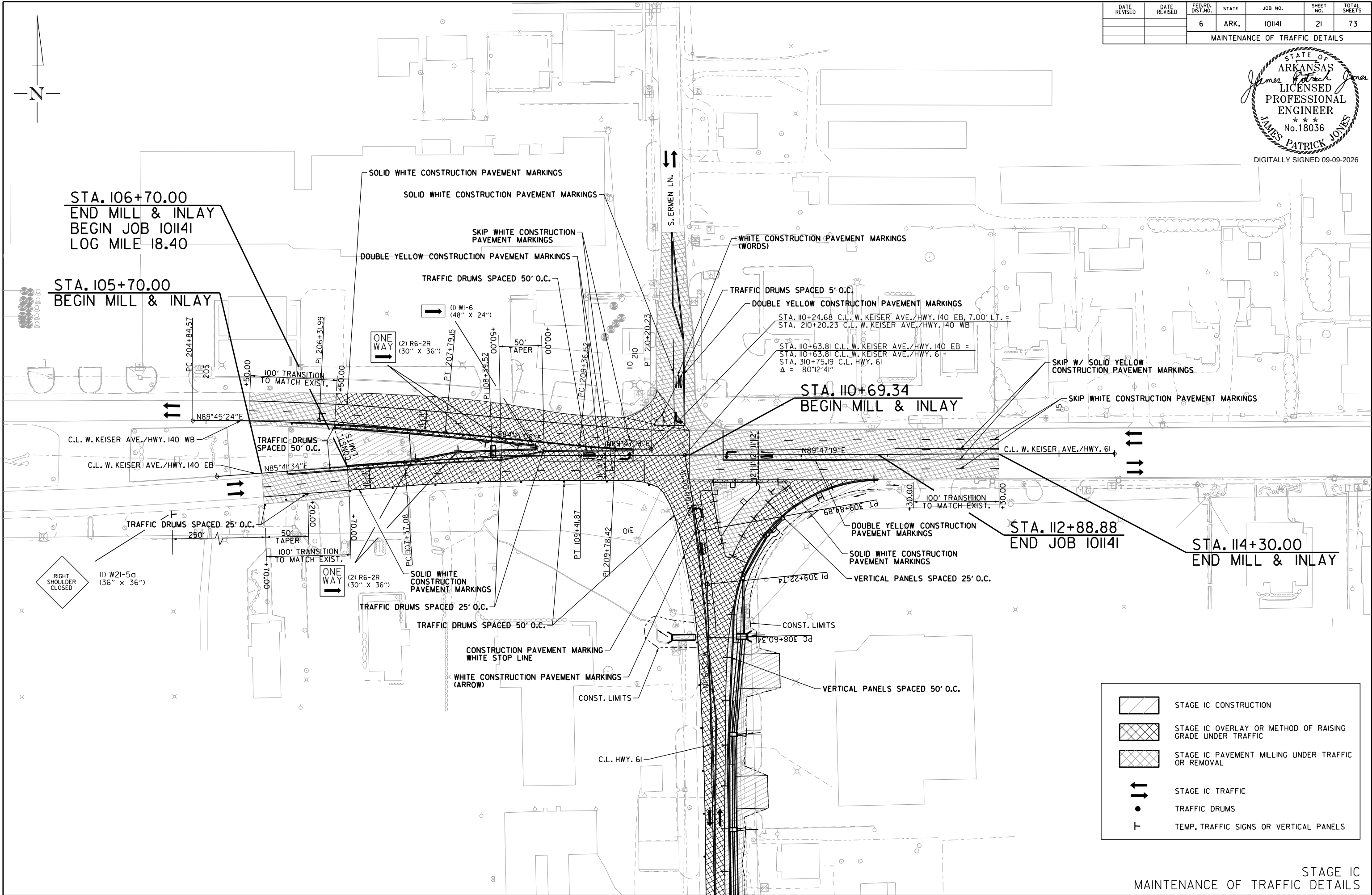
HWY. 61
STAGE 2 CONSTRUCTION
STA. 303+05.00 TO STA. 310+42.72

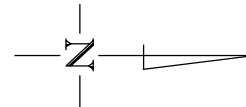


DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	21	73
MAINTENANCE OF TRAFFIC DETAILS						



DIGITALLY SIGNED 09-09-2026



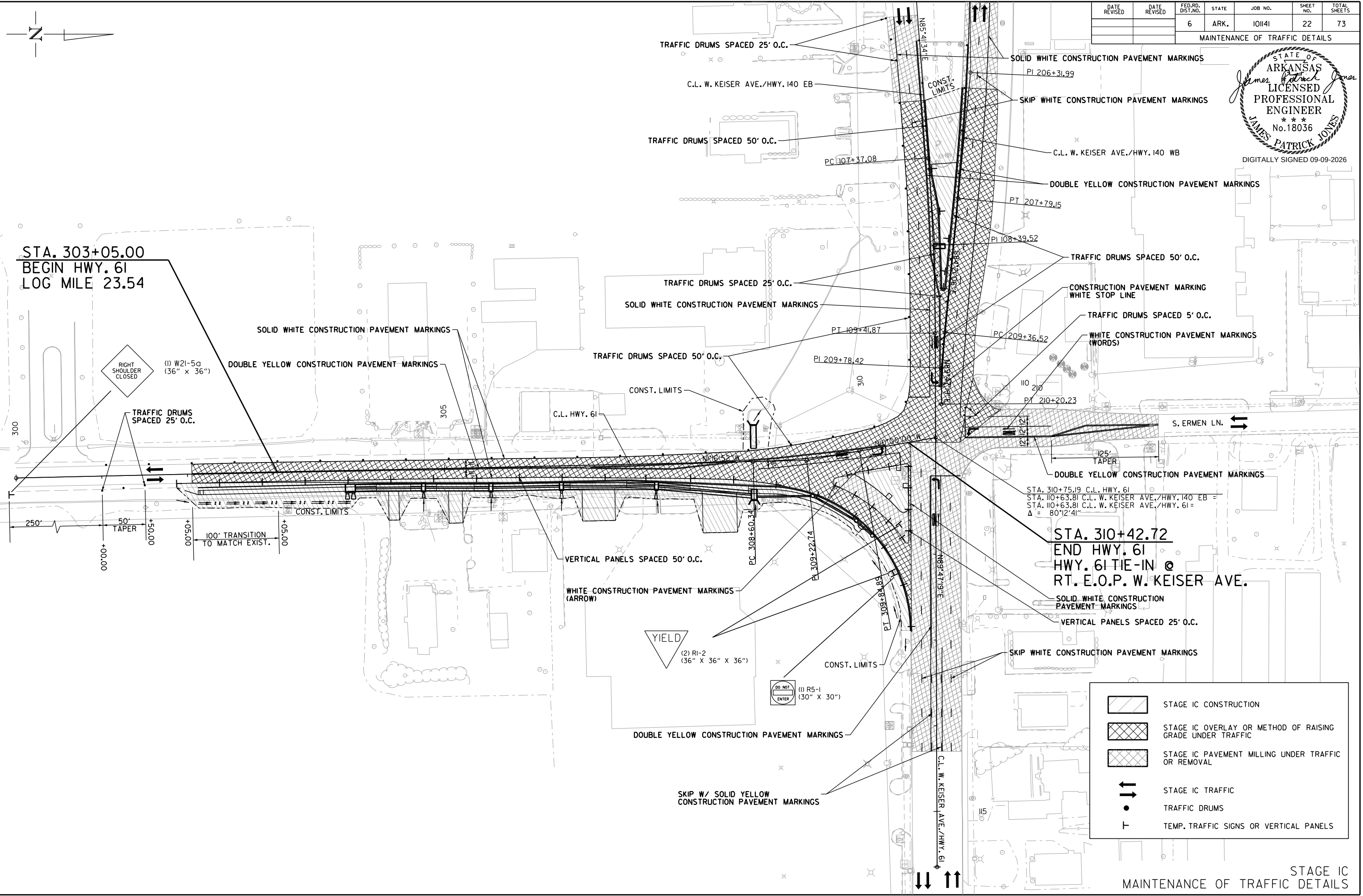


DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	22	73
MAINTENANCE OF TRAFFIC DETAILS						



DIGITALLY SIGNED 09-09-2026

STA. 303+05.00
BEGIN HWY. 61
LOG MILE 23.54



STA. 310+75.19 C.L. HWY. 61
STA. 110+63.81 C.L. W. KEISER AVE./HWY. 140 EB =
STA. 110+63.81 C.L. W. KEISER AVE./HWY. 61 =
 $\Delta = 80'12'41''$

STA. 310+42.72
END HWY. 61
HWY. 61 TIE-IN @
RT. E.O.P. W. KEISER AVE.

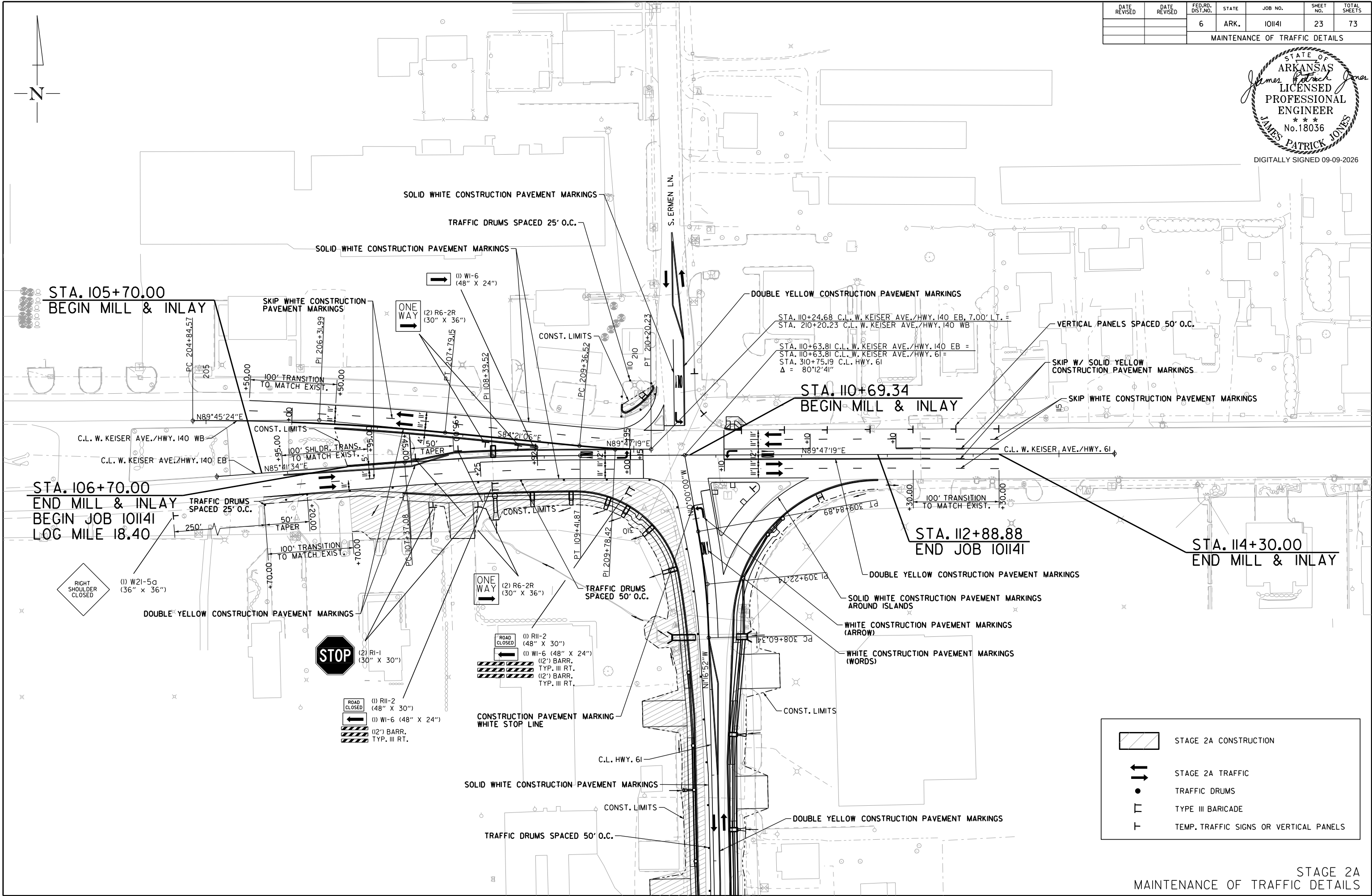
- STAGE IC CONSTRUCTION
- STAGE IC OVERLAY OR METHOD OF RAISING GRADE UNDER TRAFFIC
- STAGE IC PAVEMENT MILLING UNDER TRAFFIC OR REMOVAL
- STAGE IC TRAFFIC
- TRAFFIC DRUMS
- TEMP. TRAFFIC SIGNS OR VERTICAL PANELS

STAGE IC
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	23	73
MAINTENANCE OF TRAFFIC DETAILS						

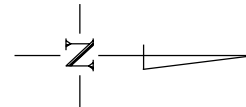


DIGITALLY SIGNED 09-09-2026



	STAGE 2A CONSTRUCTION
	STAGE 2A TRAFFIC
	TRAFFIC DRUMS
	TYPE III BARRICADE
	TEMP. TRAFFIC SIGNS OR VERTICAL PANELS

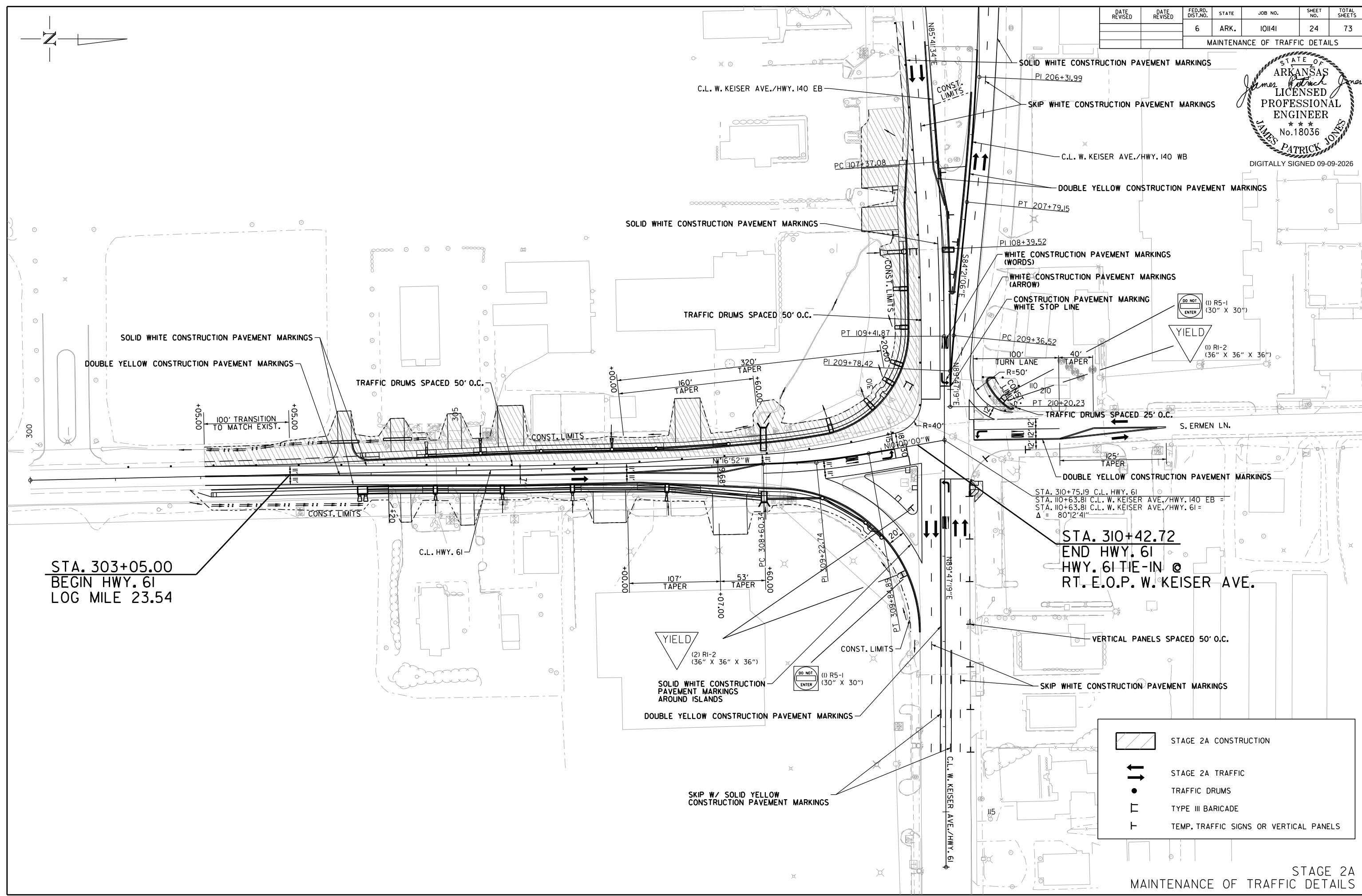
STAGE 2A
MAINTENANCE OF TRAFFIC DETAILS



DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	24	73
MAINTENANCE OF TRAFFIC DETAILS						



DIGITALLY SIGNED 09-09-2026



STA. 303+05.00
BEGIN HWY. 61
LOG MILE 23.54

STA. 310+42.72
END HWY. 61
HWY. 61 TIE-IN @
RT. E.O.P. W. KEISER AVE.

STAGE 2A CONSTRUCTION

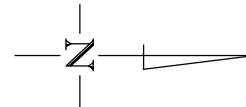
STAGE 2A TRAFFIC

TRAFFIC DRUMS

TYPE III BARICADE

TEMP. TRAFFIC SIGNS OR VERTICAL PANELS

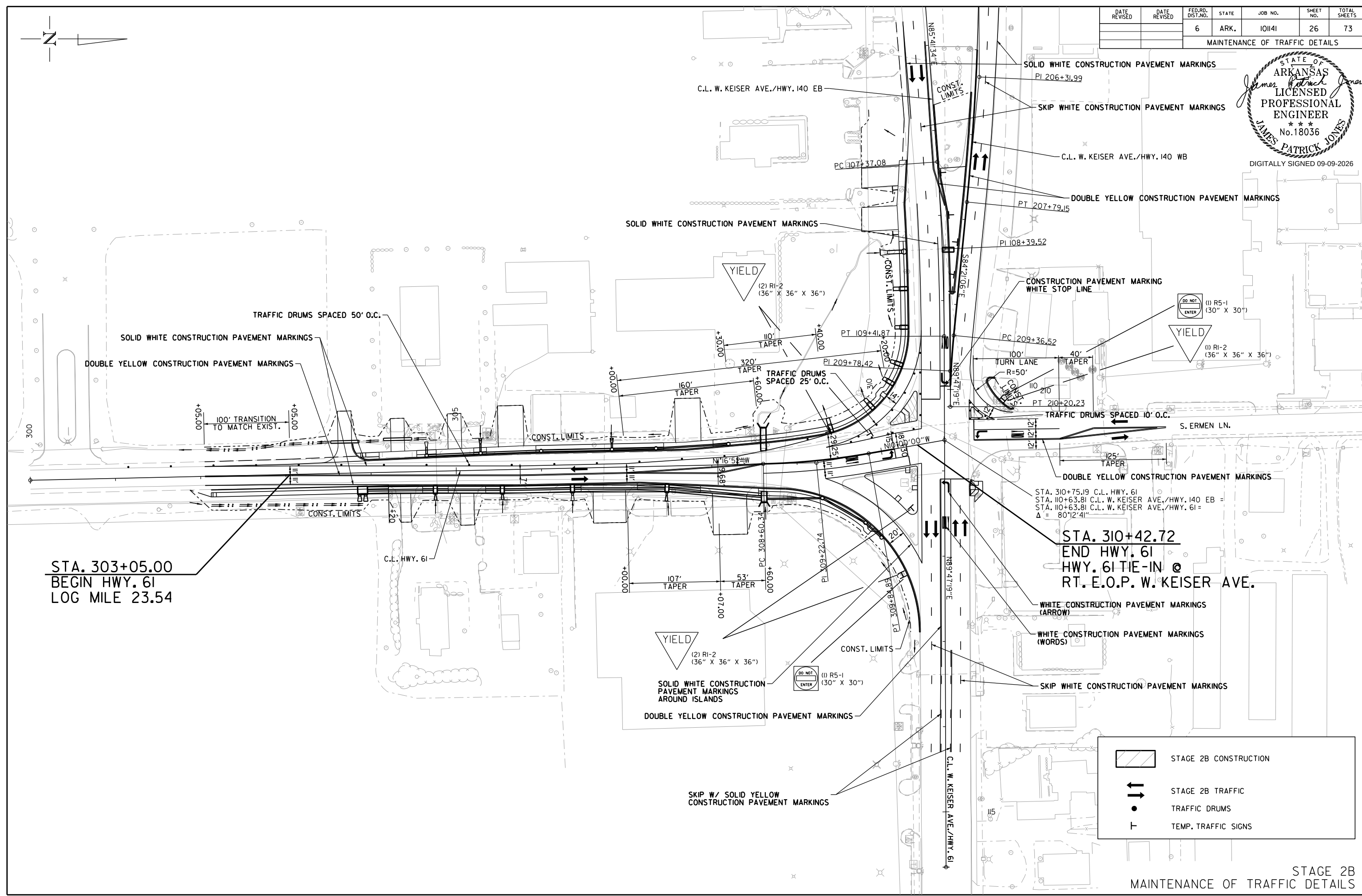
STAGE 2A
MAINTENANCE OF TRAFFIC DETAILS



DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	26	73
MAINTENANCE OF TRAFFIC DETAILS						



DIGITALLY SIGNED 09-09-2026



STA. 303+05.00
BEGIN HWY. 61
LOG MILE 23.54

STA. 310+42.72
END HWY. 61
HWY. 61 TIE-IN @
RT. E.O.P. W. KEISER AVE.

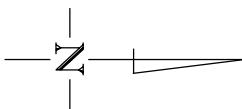
STAGE 2B CONSTRUCTION

STAGE 2B TRAFFIC

TRAFFIC DRUMS

TEMP. TRAFFIC SIGNS

STAGE 2B
MAINTENANCE OF TRAFFIC DETAILS

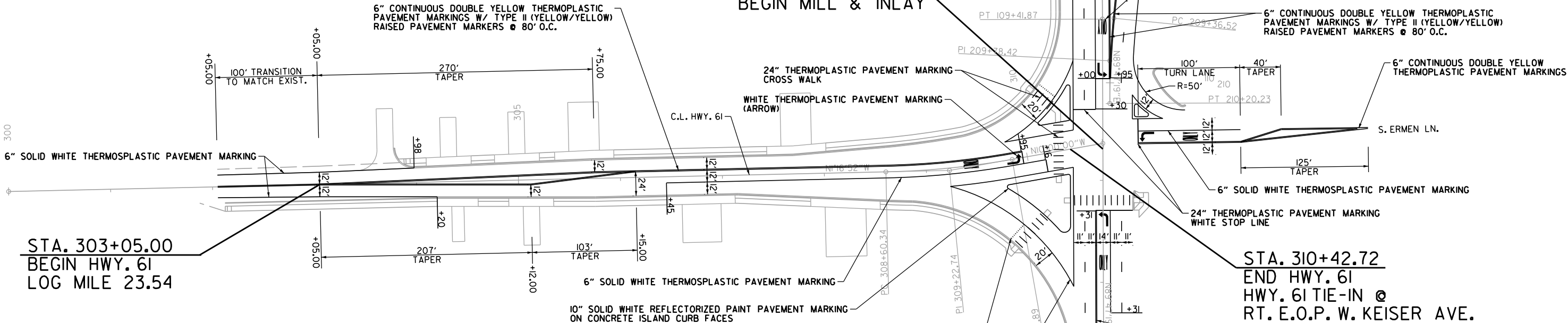


W. KEISER AVE./HWY. 140 WB PERMANENT PAVEMENT MARKINGS
STA. 205+50.00 - STA. 210+20.23

TYPE	EACH	LIN. FT.
6" WHITE THERMOPLASTIC		544
6" YELLOW THERMOPLASTIC		790
10" YELLOW REFLECTORIZED PAINT		317
TYPE II (WHITE/RED) RAISED PAVEMENT MARKERS	6	
TYPE II (YELLOW/YELLOW) RAISED PAVEMENT MARKERS	5	

W. KEISER AVE./HWY. 140 EB PERMANENT PAVEMENT MARKINGS
STA. 105+70.00 - STA. 110+63.81

TYPE	EACH	LIN. FT.
6" WHITE THERMOPLASTIC		752
6" YELLOW THERMOPLASTIC		510
24" WHITE THERMOPLASTIC		37
10" YELLOW REFLECTORIZED PAINT		318
WHITE THERMOPLASTIC (WORDS)	1	
WHITE THERMOPLASTIC (ARROWS)	1	
TYPE II (WHITE/RED) RAISED PAVEMENT MARKERS	6	
TYPE II (YELLOW/YELLOW) RAISED PAVEMENT MARKERS	4	



W. KEISER AVE./HWY. 61 PERMANENT PAVEMENT MARKINGS
STA. 110+63.81 - STA. 114+30.00

TYPE	EACH	LIN. FT.
6" WHITE THERMOPLASTIC		377
6" YELLOW THERMOPLASTIC		661
24" WHITE THERMOPLASTIC		137
WHITE THERMOPLASTIC (WORDS)	1	
WHITE THERMOPLASTIC (ARROWS)	1	
TYPE II (WHITE/RED) RAISED PAVEMENT MARKERS	8	
TYPE II (YELLOW/YELLOW) RAISED PAVEMENT MARKERS	6	

HWY. 61 PERMANENT PAVEMENT MARKINGS
STA. 302+05.00 - STA. 310+42.72

TYPE	EACH	LIN. FT.
6" WHITE THERMOPLASTIC		1239
6" YELLOW THERMOPLASTIC		2177
24" WHITE THERMOPLASTIC		225
WHITE THERMOPLASTIC (YIELD LINE)		41
10" WHITE REFLECTORIZED PAINT		313
WHITE THERMOPLASTIC (WORDS)	1	
WHITE THERMOPLASTIC (ARROWS)	1	
TYPE II (YELLOW/YELLOW) RAISED PAVEMENT MARKERS	14	

S. ERMEN LN.

TYPE	EACH	LIN. FT.
6" WHITE THERMOPLASTIC		274
6" YELLOW THERMOPLASTIC		684
24" WHITE THERMOPLASTIC		25
10" WHITE REFLECTORIZED PAINT		44
WHITE THERMOPLASTIC (WORDS)	1	
WHITE THERMOPLASTIC (ARROWS)	1	

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	27	73
PERMANENT PAVEMENT MARKING DETAILS						



DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	28	73
QUANTITIES						



DIGITALLY SIGNED 09-09-2026

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1A	STAGE 1B	STAGE 1C	STAGE 2A	STAGE 2B	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		VERTICAL PANELS	TRAFFIC DRUMS	TRAFFIC CONE	BARRICADES (TYPE III)	FURNISHING & INSTALLING PRECAST CONC. BARRIER	RELOCATING PRECAST CONCRETE BARRIER	TEMPORARY IMPACT ATTENUATION BARRIER	TEMP. IMPACT ATTEN.BARR. (REPAIR)	TEMP. IMPACT ATTEN.BARR. (RELOCATION)
									RIGHT	LIN. FT.				EACH					
			LIN. FT. - EACH						NO.	SQ. FT.	EACH								
W20-1	ROAD WORK 1500 FT.	48"x48"	3	3	3	3	3	3	3	48.0									
W20-1	ROAD WORK 1000 FT.	48"x48"	3	3	3	3	3	3	3	48.0									
W20-1	ROAD WORK 500 FT.	48"x48"	3	3	3	3	3	3	3	48.0									
W20-1	ROAD WORK AHEAD	48"x48"	1	1	1	1	1	1	1	16.0									
G20-2	END ROAD WORK	48"x24"	3	3	3	3	3	3	3	24.0									
R2-6aP	FINES DOUBLE	48"x36"	3	3	3	3	3	3	3	36.0									
WZ-4	NO HAND-HELD PHONE USE	36"x54"	3	3	3	3	3	3	3	40.5									
R2-11	END HIGHER FINES	36"x48"	3	3	3	3	3	3	3	36.0									
R11-2	ROAD CLOSED	48"x30"				2		2	2	20.0									
OM-3R	OBJECT MARKER	12"x36"	4	4				4	4	12.0									
W1-6	LARGE ARROW	48"x24"			1	3	1	3	3	24.0									
R6-2R	ONE WAY	30"x36"			4	4	4	4	4	30.0									
R5-1	DO NOT ENTER	30"x30"			1	2	2	2	2	12.5									
R4-1	DO NOT PASS	24"x30"	2	2	2	2	2	2	2	10.0									
R1-2	YIELD	36"x36"x36"			2	3	5	5	5	22.5									
R1-1	STOP	30"x30"				2	2	2	2	12.5									
W21-5a	RIGHT SHOULDER CLOSED	36"x36"	3	3	4	3	2	4	4	36.0									
W8-1	BUMP	36"x36"	6	6	6	6	6	6	6	54.0									
	VERTICAL PANELS				32	9		32			32								
	TRAFFIC DRUMS		5	3	55	36	37	55				55							
	TRAFFIC CONES		12	18	180	180		180					180						
	TYPE III BARRICADE-RT. (12')					3		3						36					
	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER		133					133							133				
	RELOCATING PRECAST CONCRETE BARRIER			93				93								93			
	TEMPORARY IMPACT ATTENUATION BARRIER		1					1									1		
	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)		1	1				2										2	
	TEMPORARY IMPACT ATTENUATION BARRIER (RELOCATION)			1				1											1
TOTALS:										530.0	32	55	180	36	133	93	1	2	1

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

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

CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	STAGE 1C	STAGE 2A	STAGE 2B	END OF JOB	CONSTRUCTION PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS		REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS		RAISED PAVEMENT MARKERS		THERMOPLASTIC PAVEMENT MARKING					REFLECTORIZED PAINT PAVEMENT MARKING	
						WORDS	ARROWS		WORDS	ARROWS	TYPE II (WHITE/RED)	TYPE II (YELLOW/YELLOW)	6"		24"	WORDS	ARROWS	10"	
													WHITE	YELLOW				WHITE	WHITE
	LIN. FT. - EACH	LIN. FT.	EACH	LIN. FT.	EACH	EACH	EACH	LIN. FT.	EACH	LIN. FT.	EACH	LIN. FT.							
CONSTRUCTION PAVEMENT MARKINGS	8686	7641	175		16502	7	7	8109	3	3	20	29	3186	4822	424	4	4	357	635
CONSTRUCTION PAVEMENT MARKINGS (WORDS)	4	3																	
CONSTRUCTION PAVEMENT MARKINGS (ARROWS)	4	3																	
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	7851	258																	
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS (WORDS)		3																	
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS (ARROWS)		3																	
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)				20							20								
RAISED PAVEMENT MARKERS TYPE II (YELLOW/YELLOW)				29								29							
THERMOPLASTIC PAVEMENT MARKING WHITE (6")				3186									3186						
THERMOPLASTIC PAVEMENT MARKING YELLOW (6")				4822										4822					
THERMOPLASTIC PAVEMENT MARKING WHITE (24")				424											424				
THERMOPLASTIC PAVEMENT MARKING (WORDS)				4												4			
THERMOPLASTIC PAVEMENT MARKING (ARROWS)				4													4		
REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")				357														357	
REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (10")				635															635
TOTALS:					16502	7	7	8109	3	3	20	29	3186	4822	424	4	4	357	635

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

QUANTITIES

REMOVAL AND DISPOSAL OF ITEMS										
STATION	STATION	LOCATION	CURB	CURB AND GUTTER	CONCRETE DITCH PAVING	CONCRETE PAVEMENT	CONCRETE ISLANDS	CONCRETE DRIVEWAYS	WALKS	HEADWALLS
			LIN. FT.	LIN. FT.	SQ. YD.	SQ. YD.	SQ. YD.	SQ. YD.	SQ. YD.	EACH
106+70	107+49	W. KEISER AVE./HWY. 140 EB LT. - MEDIAN	90							
	107+50	W. KEISER AVE./HWY. 140 EB RT.		120				141		
	108+00	W. KEISER AVE./HWY. 140 EB RT.						199		
109+90	110+31	W. KEISER AVE./HWY. 140 EB LT. - ERMEN LN. RADIUS	55							
110+28	110+40	W. KEISER AVE./HWY. 140 EB LT. - ERMEN LN.	35				6			
111+10	111+29	W. KEISER AVE./HWY. 61 LT. - ERMEN LN. RADIUS		20					11	
206+50	207+44	W. KEISER AVE./HWY. 140 WB RT. - MEDIAN	100							
206+50	208+89	W. KEISER AVE./HWY. 140 WB RT. - MEDIAN				316				
	304+32	HWY. 61 LT.						108		
	304+40	HWY. 61 RT.	80					82		
	304+99	HWY. 61 LT.						119		
	305+12	HWY. 61 RT.	85					104		
	305+65	HWY. 61 LT.	55					208		
	305+97	HWY. 61 RT.						140		
	306+79	HWY. 61 RT.	60					205		
	307+73	HWY. 61 LT.	20					256		
	308+20	HWY. 61 RT.	70					284		
	308+30	HWY. 61 LT.								1
	308+62	HWY. 61 RT.	45		7					
309+41	310+11	HWY. 61 RT.		190						
309+49	310+38	HWY. 61 RT.	295				4'2			
TOTALS:			990	330	7	316	418	1846	11	1

SOIL STABILIZATION			
STATION	STATION	LOCATION / DESCRIPTION	SOIL STABILIZATION TON
ENTIRE	PROJECT	TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	100
TOTAL:			100

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

STONE BACKFILL			
STATION	STATION	LOCATION / DESCRIPTION	STONE BACKFILL TON
306+83	308+67	HWY. 61 - R.C. BOX CULVERT	45
TOTAL:			45

STATION	STATION	LOCATION	LENGTH	"W"	CONC. DITCH PAVING	SOLID SODDING	WATER
			LIN. FT.	FEET	(TYPE B) SQ. YD.	SQ. YD.	M. GAL.
108+85.00	108+85.00	W. KEISER AVE./HWY. 140 EB RT.	7.00	4.00	3.11	3.11	0.04
109+30.00	109+30.00	W. KEISER AVE./HWY. 140 EB RT.	6.00	4.00	2.67	2.67	0.03
109+76.00	109+76.00	W. KEISER AVE./HWY. 140 EB RT.	5.00	4.00	2.22	2.22	0.03
109+98.00	109+98.00	W. KEISER AVE./HWY. 140 EB RT.	5.00	4.00	2.22	2.22	0.03
309+45.00	309+45.00	HWY. 61 LT.	8.00	4.00	3.56	3.56	0.04
310+00.00	310+00.00	HWY. 61 LT.	6.00	4.00	2.67	2.67	0.03
TOTALS:					16.45	16.45	0.20

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

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT
			CU. YD.	CU. YD.
ENTIRE	PROJECT	W. KEISER AVE. - STAGE 1C	48	102
ENTIRE	PROJECT	W. KEISER AVE. - STAGE 2A	194	327
ENTIRE	PROJECT	HWY. 61 - STAGE 1C	142	730
ENTIRE	PROJECT	HWY. 61 - STAGE 2A	265	752
ENTIRE	PROJECT	APPROACHES		735
		CHANNEL CHANGE	20	
TOTALS:			669	2646

NOTE: EARTHWORK QUANTITIES SHALL BE PAID AS PLAN QUANTITY.

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	SILT FENCE	DROP INLET FILTER SOCK (12")	SEDIMENT BASIN	OBLITERATION OF SEDIMENT BASIN	*SEDIMENT REMOVAL & DISPOSAL
												(E-5)	(E-6)	(E-11)	(E-13)	(E-14)		
												BAG	CU.YD.	LIN. FT.	LIN. FT.	CU.YD.		
ENTIRE	PROJECT	STAGE 1A	0.04	0.08	0.04	4.1	0.04		0.04	0.04	0.8		6	70				5
ENTIRE	PROJECT	STAGE 1B	0.01	0.02	0.01	1.0	0.01		0.01	0.01	0.2		3	44				3
ENTIRE	PROJECT	STAGE 1C	0.32	0.64	0.32	35.0	0.32	189	0.34	0.34	6.9	110	6	1991	1800			147
ENTIRE	PROJECT	STAGE 2	0.40	0.80	0.40	43.4	0.40	210	0.44	0.44	9.0	88	3		390			19
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BYTHE ENGINEER.			0.19	0.38	0.19	20.6	0.19	100	0.21	0.21	4.3	66	9	250	300	100	100	126
TOTALS:			0.96	1.92	0.96	104.1	0.96	499	1.04	1.04	21.2	264	27	2355	2490	100	100	300

BASIS OF ESTIMATE:
LIME2 TONS / ACRE OF SEEDING
WATER.....102.0 M.G. / ACRE OF SEEDING
WATER.....20.4 M.G. / ACRE OF TEMPORARY SEEDING
WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING
SAND BAG DITCH CHECKS.....22 BAGS / LOCATION
ROCK DITCH CHECKS.....3 CU.YD./LOCATION
FILTER SOCKS.....23 LIN. FT./4' DIA. INLET
27 LIN. FT. / 5' DIA. INLET
30 LIN. FT. / 6' DIA. INLET

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

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

REMOVAL AND DISPOSAL OF CULVERTS AND DROP INLETS

STATION	DESCRIPTION	PIPE CULVERTS	DROP INLETS
		EACH	EACH
108+40.50	W. KEISER AVE./HWY. 140 EB RT.	1	
303+70	HWY. 61 LT. - SIDE DRAIN	1	
304+32	HWY. 61 LT. - SIDE DRAIN	1	
304+40	HWY. 61 RT. - SIDE DRAIN	1	
304+99	HWY. 61 LT. - SIDE DRAIN	1	
305+12	HWY. 61 RT. - SIDE DRAIN	1	
305+65	HWY. 61 LT. - SIDE DRAIN	1	
305+97	HWY. 61 RT. - SIDE DRAIN	1	
306+79	HWY. 61 RT. - SIDE DRAIN	1	
306+83	HWY. 61 LT. - DROP INLET		1
307+73	HWY. 61 LT. - SIDE DRAIN	1	
308+20	HWY. 61 RT. - SIDE DRAIN	1	
TOTALS:		11	1

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

CONCRETE WALKS

STATION	STATION	LOCATION	LENGTH	CONCRETE WALKS
			LIN. FT.	SQ. YD.
107+45	108+91	W. KEISER AVE./HWY. 140 EB LT. - CONCRETE CAPPED MEDIAN	146	231
108+28	109+35	W. KEISER AVE./HWY. 140 EB RT.	107	59
111+12	111+37	W. KEISER AVE./HWY. 61 LT. - ERMEN LN. RADIUS	27	15
302+18	304+20	HWY. 61 RT.	202	112
303+94	304+10	HWY. 61 LT.	16	9
304+54	304+77	HWY. 61 LT.	23	13
304+60	304+90	HWY. 61 RT.	30	17
305+21	305+36	HWY. 61 LT.	15	8
305+34	306+46	HWY. 61 RT.	112	62
305+94	307+44	HWY. 61 LT.	150	83
307+12	307+86	HWY. 61 RT.	74	41
308+02	310+43	HWY. 61 LT.	294	163
308+54	309+71	HWY. 61 RT.	145	81
TOTAL:				894



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CONCRETE COMBINATION CURB AND GUTTER				
STATION	STATION	LOCATION	TYPE A (1' 6")	
			LIN. FT.	
106+70	108+93	W. KEISER AVE./HWY. 140 EB LT. - MEDIAN	224	
107+32	109+35	W. KEISER AVE./HWY. 140 EB RT.	203	
109+90	110+28	W. KEISER AVE./HWY. 140 EB LT. - ERMEN LN. RADIUS	59	
111+10	111+29	W. KEISER AVE./HWY. 140 EB LT. - ERMEN LN. RADIUS	19	
206+50	208+88	W. KEISER AVE./HWY. 140 WB RT. - MEDIAN	239	
302+12	310+43	HWY. 61 RT.	928	
303+78	310+43	HWY. 61 LT.	736	
TOTAL:			2408	

4" PIPE UNDERDRAIN				
STATION	STATION	LOCATIONS	4" PIPE UNDERDRAINS	UNDERDRAIN OUTLET PROTECTORS
			LIN. FT.	EACH
ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER			750	3
TOTALS:			750	3

* 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.

CONCRETE ISLAND			
STATION	LOCATION	CURB FACE TYPE	CONCRETE ISLAND SQ.YD.
110+33	W. KEISER AVE./HWY. 140 EB LT. - ERMEN LN.	E	13
310+14	HWY. 61 RT.	C	211
310+39	HWY. 61 LT.	C	66
TOTAL:			290

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

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

WHEELCHAIR RAMPS		
STATION	LOCATION	TYPE 3 SQ.YD.
111+20	W. KEISER AVE./HWY. 61 LT. - ERMEN LN. RADIUS	3.4
302+15	HWY. 61 RT.	3.3
303+89	HWY. 61 LT.	5.4
309+74	HWY. 61 RT.	3.4
310+10	HWY. 61 RT. - CONCRETE ISLAND	3.3
310+14	HWY. 61 LT.	3.4
310+27	HWY. 61 RT. - CONCRETE ISLAND	3.7
310+31	HWY. 61 RT. - CONCRETE ISLAND	3.3
TOTALS:		29.2

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	30	73
QUANTITIES						



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STRUCTURES																						
STATION	DESCRIPTION	PIPE CULVERT STORM DRAIN ALTERNATES 1, 2, & 3				FLARED END SECTION ALTERNATES FOR PIPE CULVERT ALTERNATES				DROP INLETS				SPAN	HEIGHT	LENGTH	CLASS S CONCRETE- ROADWAY	REINF. STEEL- ROADWAY (GRADE 60)	UNCL.EXC. FOR STR.- ROADWAY	SOLID SODDING	WATER	STD. DWG. NOS.
										TYPE												
		18"	24"	48"	36"X23"	18"	24"	48"	36"X23"	C	MO	MODIFYING DROP INLETS	SPECIAL									
		LIN. FT.				EACH				LIN. FT.												
108+40.50	W. KEISER AVE./HWY. 140 EB - MODIFY D.I. ON LT.											1									SPECIAL DETAIL, FPC-9S	
108+40.50	W. KEISER AVE./HWY. 140 EB - CONST. D.I. ON RT. W/ PIPE CULVERT & F.E.S.			18				1				1							29	0.37	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1, PCM-1	
108+85	W. KEISER AVE./HWY. 140 EB - CONST. D.I. ON RT.												1								SPECIAL DETAIL	
109+30	W. KEISER AVE./HWY. 140 EB - CONST. D.I. ON RT.												1								SPECIAL DETAIL	
109+76	W. KEISER AVE./HWY. 140 EB - CONST. D.I. ON RT.												1								SPECIAL DETAIL	
109+98	W. KEISER AVE./HWY. 140 EB - CONST. D.I. ON RT.												1								SPECIAL DETAIL	
303+90	HWY. 61 - CONST. D.I. ON RT. W/ DBL. PIPE CULVERTS & F.E.S.				160				2	1									18	0.23	FES-1, FES-2, FPC-9E, PCC-1, PCM-1	
304+66	HWY. 61 - CONST. D.I. ON LT. W/ PIPE CULVERT & F.E.S.		8				1				1								8	0.10	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1, PCM-1	
304+75	HWY. 61 - CONST. D.I. ON RT. W/ PIPE CULVERTS & F.E.S.	2			152	1				1									5	0.06	FES-1, FES-2, FPC-9E, PCC-1, PCM-1	
305+29	HWY. 61 - CONST. D.I. ON LT. W/ PIPE CULVERTS & F.E.S.	8	62			1					1								5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1, PCM-1	
305+54	HWY. 61 - CONST. D.I. ON RT. W/ PIPE CULVERTS & F.E.S.	2			160	1				1									5	0.06	FES-1, FES-2, FPC-9E, PCC-1, PCM-1	
306+00	HWY. 61 - CONST. D.I. ON LT. W/ PIPE CULVERTS		70								1										FPC-9E, FPC-9M, PCC-1, PCM-1	
306+36	HWY. 61 - CONST. D.I. ON RT. W/ PIPE CULVERTS & F.E.S.		4		216		1			1									8	0.10	FES-1, FES-2, FPC-9E, PCC-1, PCM-1	
306+83	HWY. 61 - CONST. D.I. ON LT. W/ PIPE CULVERTS & F.E.S.	8	82			1					1								5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1, PCM-1	
307+35	HWY. 61 - CONST. D.I. ON LT. W/ PIPE CULVERTS	50									1										FPC-9E, FPC-9M, PCC-1, PCM-1	
307+47	HWY. 61 - CONST. D.I. ON RT. W/ PIPE CULVERTS & F.E.S.	6			220	1				1									5	0.06	FES-1, FES-2, FPC-9E, PCC-1, PCM-1	
308+20	HWY. 61 - CONST. D.I. ON LT. W/ PIPE CULVERT	84									1										FPC-9E, FPC-9M, PCC-1, PCM-1	
308+60	HWY. 61 - RETAIN AND EXTEND R.C. BOX CULVERT W/ WNGS LT. & RT.													6	2	35	20.31	2675	13	10	0.13	RCB-1, RCB-2 RCB-3, W-X003-1*, R-100X-0*
309+25	HWY. 61 - CONST. D.I. ON RT. W/ PIPE CULVERTS	64									1										FPC-9E, FPC-9M, PCC-1, PCM-1	
309+45	HWY. 61 - CONST. D.I. ON LT.												1								SPECIAL DETAIL	
309+70	HWY. 61 - CONST. D.I. ON RT. W/ PIPE CULVERT	56									1										FPC-9E, FPC-9M, PCC-1, PCM-1	
309+83	HWY. 61 - CONST. D.I. ON RT. W/ PIPE CULVERT	24									1										FPC-9E, FPC-9M, PCC-1, PCM-1	
310+00	HWY. 61 - CONST. D.I. ON LT.												1								SPECIAL DETAIL	
TOTALS:		304	226	18	908	5	2	1	2	5	10	1	6				20.31	2675	13	98	1.23	

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

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

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

* NOTE: USE 6" CLEAR SPAN, 3' CLEAR HEIGHT R.C. BOX TABLE VARIABLES FOR APRON DIMENSIONS, BARREL DIMENSIONS AND BAR LIST. REDUCE CLEAR HEIGHT H BY 1'-0". REDUCE "F" BAR LENGTH BY 1'-0". USE H = 2'-0" FOR WNG DIMENSION VARIABLES.

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	31	73
		QUANTITIES				



DIGITALLY SIGNED 09-09-2026

CONCRETE BASE					
STATION	STATION	LOCATION	LENGTH	PORTLAND CEMENT CONCRETE BASE	
				AVG. WID.	5" U.T.
			FEET	FEET	SQ. YD.
106+70.00	108+93.00	W. KEISER AVE./HWY. 140 EB LT. - MEDIAN	223.00	2.50	61.94
109+89.00	110+31.00	W. KEISER AVE./HWY. 140 EB LT. - ERMEN LN. RADIUS	42.00	17.67	82.46
111+10.00	111+29.00	W. KEISER AVE./HWY. 140 EB LT. - ERMEN LN. RADIUS	19.00	2.67	5.64
206+50.00	208+88.00	W. KEISER AVE./HWY. 140 WB RT. - MEDIAN	238.00	2.50	66.11
308+85.00	310+43.00	HWY. 61 RT.	158.00	4.75	83.39
TOTALS:					299.54

DRIVEWAYS & TURNOUTS

STATION	SIDE	LOCATION	WIDTH	**MODIFIED CURB		PORTLAND CEMENT CONCRETE DRIVEWAY	ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG 76-22)		AGGREGATE BASE COURSE (CLASS 7)	SIDE DRAINS	STANDARD DRAWINGS
				FEET	STATION		STATION	SQ. YD.			
107+50	RT.	W. KEISER AVE./HWY. 140 EB RT.	23	107+32	107+74	112.44					DR-1
108+00	RT.	W. KEISER AVE./HWY. 140 EB RT.	28	107+74	108+28		133.78	14.72	54.63		DR-1
303+70	LT.	HWY. 61 LT.	16				101.54	11.17	41.46	34	DR-2, PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
304+32	LT.	HWY. 61 LT.	16	304+10	304+54	69.33				34	DR-1, PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
304+40	RT.	HWY. 61 RT.	12	304+20	304+60		46.67	5.13	19.06		DR-1
304+99	LT.	HWY. 61 LT.	16	304+77	305+21	74.67					DR-1
305+12	RT.	HWY. 61 RT.	16	304+90	305+34		67.56	7.43	27.59		DR-1
305+65	LT.	HWY. 61 LT.	30	305+36	305+94	160.00					DR-1
306+79	RT.	HWY. 61 RT.	38	306+46	307+12	160.44					DR-1
307+73	LT.	HWY. 61 LT.	30	307+44	308+02	173.33					DR-1
308+20	RT.	HWY. 61 RT.	40	307+86	308+54	213.33					DR-1
* ENTIRE PROJECT TEMPORARY DRIVES						125.00	75.00	8.25	30.63		
TOTALS:						1088.54	424.55	46.70	173.37	68	

BASIS OF ESTIMATE:

ACHM SURFACE COURSE (1/2").....94.6% MIN. AGGR.....5.4% ASPHALT BINDER

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

* QUANTITY ESTIMATED

SEE SECTION 104.03 OF THE STD. SPECS.

TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

★★ FOR INFORMATION ONLY

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.

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")												
					(0.05 GAL. PER SQ. YD.)			(0.10 GAL. PER SQ. YD.)			TOTAL GALLONS	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 70-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 70-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22	TOTAL PG 76-22			
			TOTAL WID. FEET		SQ.YD.	GALLON	TOTAL WID. FEET	SQ.YD.	GALLON	FEET																			FEET	TON	FEET
MAIN LANES																															
W. KEISER AVE./HWY. 140 EB																															
105+70.00	106+70.00	W. KEISER AVE./HWY. 140 EB - INLAY TRANSITION	100.00						36.00	400.00	40.00	40.00														36.00	400.00	220.00	44.00	44.00	
106+70.00	110+69.34	W. KEISER AVE./HWY. 140 EB - NOTCH AND WIDEN	399.34				44.50	1974.51	98.73			98.73	16.50	732.12	550.00	201.33	14.00	621.20	330.00	102.50	14.00	621.20	220.00	68.33	48.00	2129.81	220.00	234.28	302.61		
W. KEISER AVE./HWY. 140 WB																															
205+50.00	206+50.00	W. KEISER AVE./HWY. 140 WB - INLAY TRANSITION	100.00						40.00	444.44	44.44	44.44														40.00	444.44	220.00	48.89	48.89	
206+50.00	210+20.23	W. KEISER AVE./HWY. 140 WB - OVERLAY	370.23																							34.00	1398.65	220.00	153.85	153.85	
HWY. 61																															
302+05.00	303+05.00	HWY. 61 - TRANSITION	100.00						34.00	377.78	37.78	37.78														34.00	377.78	220.00	41.56	41.56	
303+05.00	310+42.72	HWY. 61 - NOTCH AND WIDEN	737.72				47.00	3852.54	192.63			192.63	19.00	1557.41	550.00	428.29	14.00	1147.56	330.00	189.35	14.00	1147.56	220.00	126.23	36.00	2950.88	220.00	324.60	450.83		
ADDITIONAL FOR INLAY																															
W. KEISER AVE./HWY. 61 & ERMEN LN.																															
110+69.34	114+30.00	W. KEISER AVE./HWY. 61 & ERMEN LN. - INLAY	360.66						VAR.	3267.89	326.79	326.79															VAR.	3267.89	220.00	359.47	359.47
ADDITIONAL FOR LEVELING & RAISING GRADE																															
W. KEISER AVE.																															
107+00.00	110+24.68	W. KEISER AVE. - LEVELING	324.68				133.02	4798.77	239.94	66.51	2399.39	239.94	479.88								66.51	2399.39	VAR.	634.76						634.76	
HWY. 61																															
303+70.00	310+42.72	HWY. 61 - LEVELING	672.72				77.74	5810.81	290.54	38.87	2905.40	290.54	581.08				13.25	181.08	VAR.	78.18	38.87	2905.40	VAR.	896.46						896.46	
308+60.00	309+83.00	HWY. 61 - RAISING GRADE	123.00				13.25	181.08	9.05				9.05																		
ADDITIONAL FOR INTERSECTION WIDENING																															
W. KEISER AVE./HWY. 140/HWY. 61 & ERMEN LN.																															
109+34.57	112+88.88	W. KEISER AVE./HWY. 140/HWY. 61 & ERMEN LN. - INTERSECTION	354.31																								VAR.	1386.33	220.00	152.50	152.50
ADDITIONAL FOR OPEN SHOULDER																															
W. KEISER AVE./HWY. 140 EB																															
106+70.00	107+32.00	W. KEISER AVE./HWY. 140 EB - FULL DEPTH SHLDR. RT.	62.00	17.75	11.01																										
W. KEISER AVE./HWY. 140 WB																															
206+50.00	209+91.00	W. KEISER AVE./HWY. 140 WB - WIDER SHOULDER LT.	341.00																								VAR.	315.22	220.00	34.67	34.67
HWY. 61																															
303+05.00	304+00.00	HWY. 61 - FULL DEPTH SHLDR. LT.	95.00	17.75	16.86	VAR.	16.66	0.83				0.83					VAR.	8.33	330.00	1.37	VAR.	8.33	220.00	0.92	VAR.	8.33	220.00	0.92		1.84	
TOTALS:																															
					27.87	16634.37	831.72		9794.90	979.49	1811.21		2289.53		629.62		1958.17		371.40		7081.88		1726.70		12679.33		1394.74	3121.44			

BASIS OF ESTIMATE:

ACHM SURFACE COURSE (1/2").....94.6% MIN. AGGR.....5.4% ASPHALT BINDER

ACHM BINDER COURSE (1").....95.9% MIN. AGGR.....4.1% ASPHALT BINDER

ACHM BASE COURSE (1 1/2").....96.2% MIN. AGGR.....3.8% ASPHALT BINDER

TACK COAT QUANTITIES WERE CALCULATED USING THE EMULSIFIED ASPHALT RATES. REF

QUANTITIES

9/9/2026

JA-JONES

STATE OF
ARKANSAS
JAMES PATRICK JONES
LICENSED
PROFESSIONAL
ENGINEER

No. 18036
JAMES PATRICK JONES

IA-JONES 9/10/2026

* DENOTES ALTERNATE BID ITEMS

REVISIONS

SUMMARY OF QUANTITIES AND REVISIONS

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	33	73
SURVEY CONTROL DETAILS						



DIGITALLY SIGNED 09-09-2026

SURVEY CONTROL COORDINATES

Project Name: s101141
Date: 11/9/2023
Coordinate System: ARKANSAS STATE PLANE – SOUTH ZONE BASED ON GPS CONTROL, 470036 – 470036A
PROJECTED TO GROUND.
Units: U.S. SURVEY FOOT

Point Name	Northing	Easting	Elev	Feature	Description
1	501268.2798	1911721.7994	240.10	CTL	ARDOT STD. MON. STAMPED PN:1
2	502064.8066	1911746.2319	239.01	CTL	ARDOT STD. MON. STAMPED PN:2
3	502730.6764	1911651.4379	238.44	CTL	ARDOT STD. MON. STAMPED PN:3
4	502760.8936	1912464.3473	242.17	CTL	ARDOT STD. MON. STAMPED PN:4
5	502859.1238	1910152.1159	239.35	CTL	ARDOT STD. MON. STAMPED PN:5
6	502815.9411	1910933.1157	239.67	CTL	ARDOT STD. MON. STAMPED PN:6
7	502844.2223	1911734.5324	241.54	CTL	ARDOT STD. MON. STAMPED PN:7
8	502836.1392	1913138.1325	242.99	CTL	ARDOT STD. MON. STAMPED PN:8
9	503645.3266	1911626.5297	239.13	CTL	ARDOT STD. MON. STAMPED PN:9
10	504343.1216	1911672.4194	240.07	CTL	ARDOT STD. MON. STAMPED PN:10
100	499062.9659	1911165.4535	239.57	GPS	ARDOT GPS #470036
101	500054.3904	1911832.0319	240.14	GPS	ARDOT GPS #470036A
900	500738.8573	1911719.4632	242.00	TBM	2X2 CHISELED SQUARE ON HW
901	502779.8530	1910919.7722	235.70	TBM	2X2 CHISELED ON FLARED CU
902	502865.8138	1911701.6134	240.63	TBM	2X2 CHISELED SQUARE ON CONC PAD
903	502737.5727	1912372.4801	242.25	TBM	2X2 CHISELED SQUARE ON CONC PAD

*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 0.9999256617 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 s101141gi.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

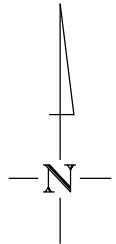
BASIS OF BEARING:
ARKANSAS STATE PLANE GRID BEARINGS – 0301–NORTH ZONE
DETERMINED FROM GPS CONTROL POINTS: 470036 – 470036A
CONVERGENCE ANGLE: 1°10'27.63" RIGHT AT PN:3 LT:N 35°41'51.21" LG:W 89°58'54.77"
GRID AZIMUTH = ASTRONOMICAL AZIMUTH – CONVERGENCE ANGLE.

ALIGNMENT NAME: W. KEISER AVE./HWY. 140 EB/HWY. 61				
POINT	STATION	TYPE	NORTHING	EASTING
8003	105+17.56	POB	502764.6343	1911139.0353
8004	107+37.08	PC	502781.1211	1911357.9339
8006	109+41.87	PT	502789.1927	1911562.5229
8007	115+64.89	POE	502791.4912	1912185.5348

ALIGNMENT NAME: HWY. 61				
POINT	STATION	TYPE	NORTHING	EASTING
8008	300+00.00	POB	501716.7580	1911731.6095
8009	308+60.34	PC	502576.8821	1911712.3743
8011	309+84.89	PT	502700.7150	1911700.1439
8012	310+75.19	POE	502789.6426	1911684.4636

ALIGNMENT NAME: W. KEISER AVE./HWY. 140 WB				
POINT	STATION	TYPE	NORTHING	EASTING
8014	204+84.57	POB/PC	502829.8387	1911110.9900
8016	207+79.15	PT	502815.9552	1911405.1160
8017	209+36.52	PC	502800.4866	1911561.7206
8019	210+20.23	POE/PT	502796.4981	1911645.3002

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	34	73
SURVEY CONTROL DETAILS						



STA. 106+70.00
END MILL & INLAY
BEGIN JOB 101141
LOG MILE 18.40

STA. 105+70.00
BEGIN MILL & INLAY

C.L. W. KEISER AVE./HWY. 140 WB
P.I. = 206+31.99
 Δ = 5°53'30" RT.
D = 2°00'00"
T = 147.42'
L = 294.58'
P.C. = 204+84.57
P.T. = 207+79.15
NO SUPER

C.L. W. KEISER AVE./HWY. 140 WB
P.I. = 209+78.42
 Δ = 5°51'35" LT.
D = 7°00'00"
T = 41.90'
L = 83.71'
P.C. = 209+36.52
P.T. = 210+20.23
NO SUPER

SURVEY BASELINE

STA. 110+24.68 C.L. W. KEISER AVE./HWY. 140 EB, 7.00' LT. =
STA. 210+20.23 C.L. W. KEISER AVE./HWY. 140 WB

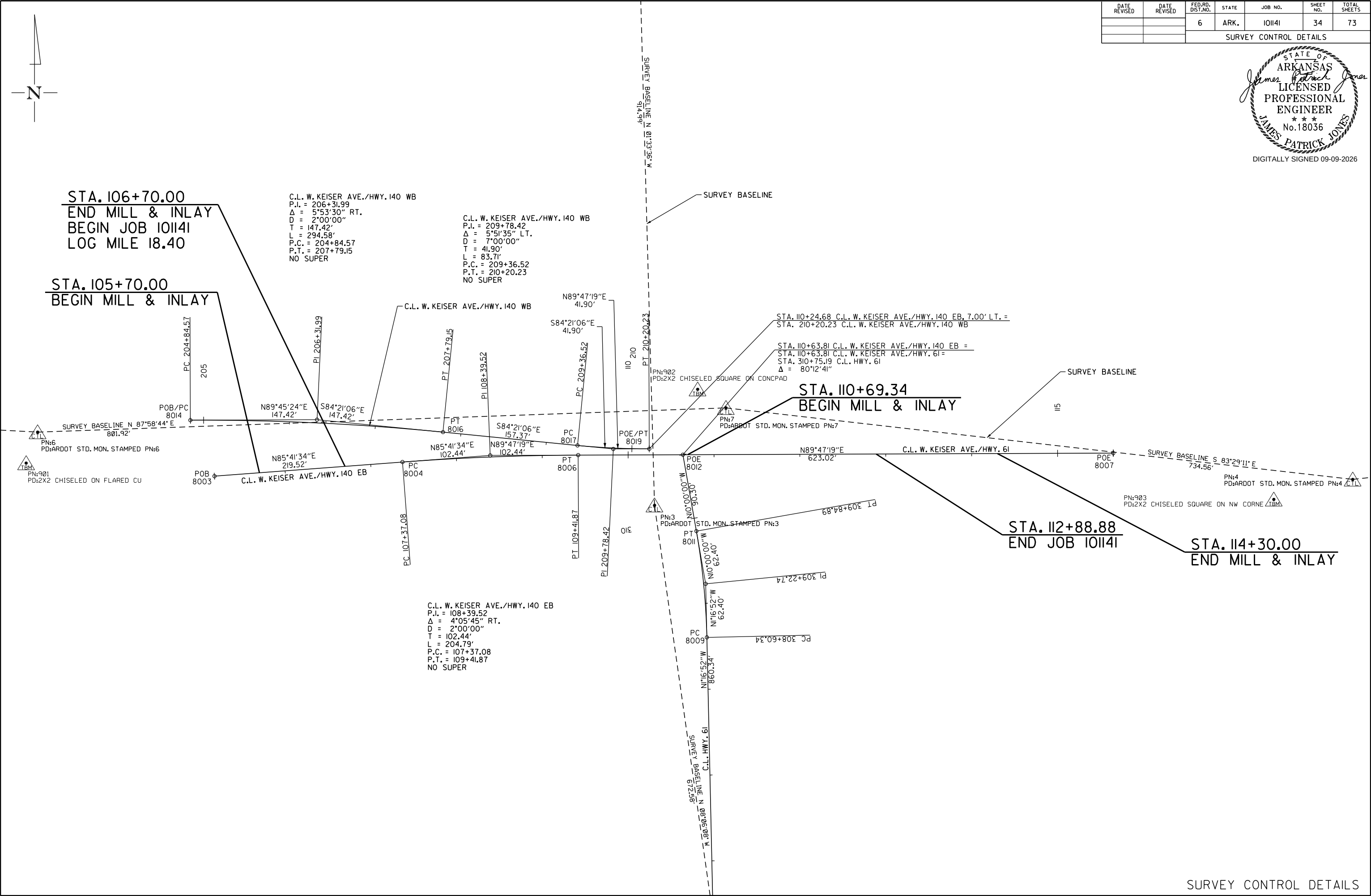
STA. 110+63.81 C.L. W. KEISER AVE./HWY. 140 EB =
STA. 110+63.81 C.L. W. KEISER AVE./HWY. 61 =
STA. 310+75.19 C.L. HWY. 61
 Δ = 80°12'41"

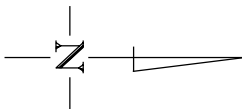
STA. 110+69.34
BEGIN MILL & INLAY

SURVEY BASELINE

STA. 112+88.88
END JOB 101141

STA. 114+30.00
END MILL & INLAY





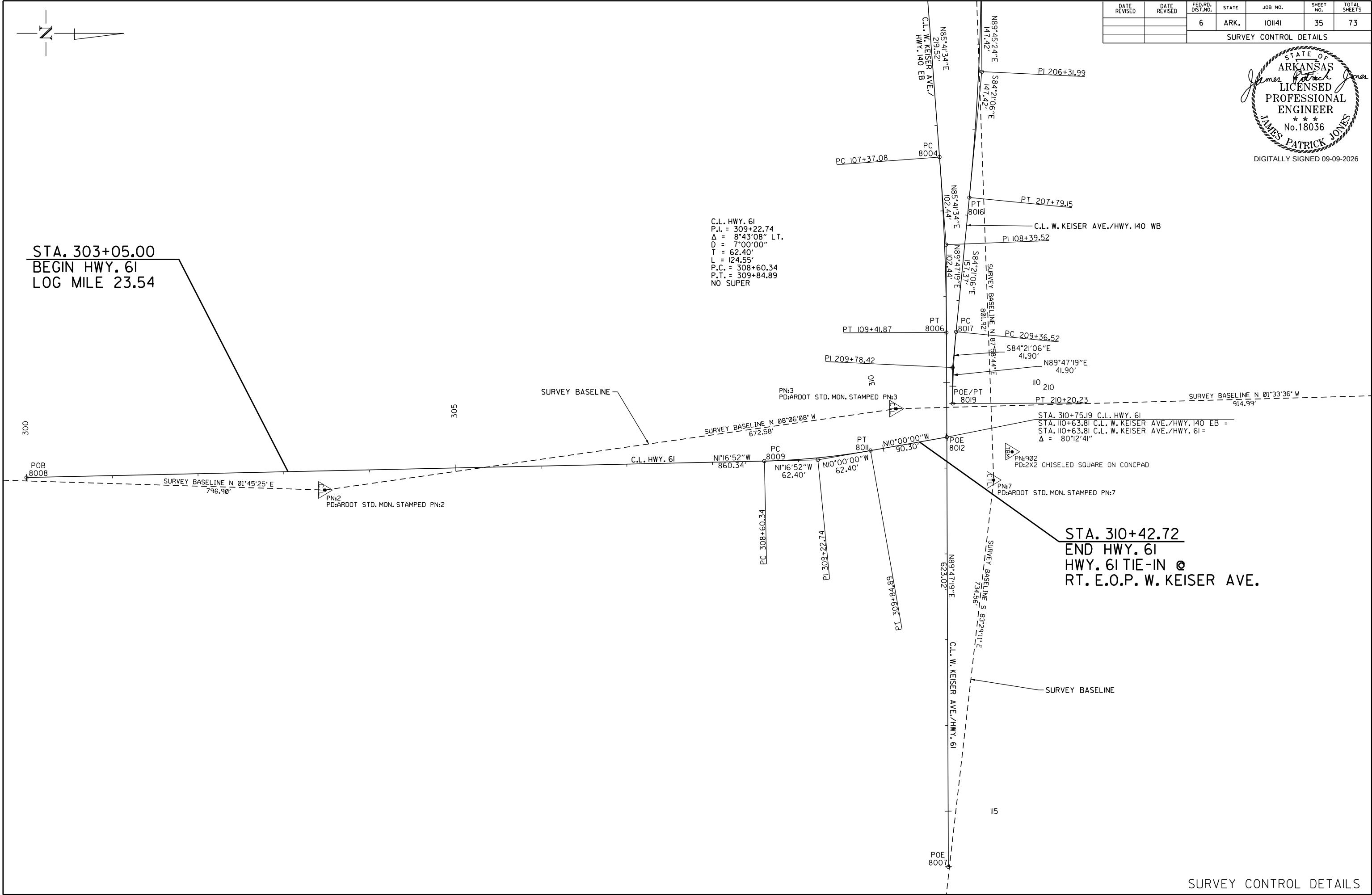
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	35	73
SURVEY CONTROL DETAILS						



DIGITALLY SIGNED 09-09-2026

STA. 303+05.00
BEGIN HWY. 61
LOG MILE 23.54

C.L. HWY. 61
P.I. = 309+22.74
 Δ = 8°43'08" LT.
D = 7°00'00"
T = 62.40'
L = 124.55'
P.C. = 308+60.34
P.T. = 309+84.89
NO SUPER



SURVEY CONTROL DETAILS

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	36	73
PLAN AND PROFILE SHEETS						



DIGITALLY SIGNED 09-09-2026

STA. 108+40.50 IN PLACE
JUNCTION BOX ON LT.
MODIFY JUNCTION BOX (SEE SPECIAL DETAIL)

STA. 110+02 IN PLACE
DROP INLET ON LT.
AND 24" X 28" OUTLET.
RETAIN

STA. 110+28 IN PLACE
DROP INLET ON LT.
AND 24" X 34" OUTLET.
RETAIN

WHEELCHAIR RAMPS
STA. LOCATION TYPE SQ. YDS.
111+20 LT. 3 3.4

CONCRETE ISLAND
STA. LOCATION TYPE SQ. YDS.
110+33 LT. E 13

STA. 111+04 IN PLACE
DROP INLET ON LT.
AND 48" X 3' OUTLET.
RETAIN

STA. 111+09 IN PLACE
DROP INLET ON LT.
AND 48" X 16' OUTLET.
RETAIN

STA. 106+70.00
END MILL & INLAY
BEGIN JOB 101141
LOG MILE 18.40

STA. 105+70.00
BEGIN MILL & INLAY

STA. 110+69.34
BEGIN MILL & INLAY

STA. 112+88.88
END JOB 101141

STA. 114+30.00
END MILL & INLAY

CONCRETE DITCH PAVING (TYPE B)				
STA.	SIDE	LENGTH	"W"	SQ. YDS.
108+85	RT.	7 LIN. FT.	4'-0"	3.11
109+30	RT.	6 LIN. FT.	4'-0"	2.67
109+76	RT.	5 LIN. FT.	4'-0"	2.22
109+98	RT.	5 LIN. FT.	4'-0"	2.22

STA. 107+50 CONSTRUCT
APPROACH ON RT. = 35 CU. YDS. FILL

STA. 108+00 IN PLACE
18" X 51' C.M. PIPE CULVERT W/ F.E.S.
RT. SIDE DRAIN
RETAIN AND CONSTRUCT
APPROACH ON RT. = 65 CU. YDS. FILL

STA. 108+40.50 CONSTRUCT
DROP INLET ON RT.
AND 48" X 18" INLET W/ F.E.S.
CONNECT TO EXIST. 48" R.C. PIPE INLET
DROP INLET H = 8'-0"
TYPE MO DROP INLET = 6' DIA.
TYPE C DROP INLET = 5' X 4'
48" R.C. PIPE (CLASS III)(TYPE 3) = 18 LIN. FT.
48" SLPCCS PIPE (TYPE 2) = 18 LIN. FT.
48" SSRCCS PIPE = 18 LIN. FT.
48" F.E.S. = 1 EACH
050 = 41.4 CFS, D.A. = 61.6 ACRES

STA. 108+85 CONSTRUCT
DROP INLET TYPE SPECIAL ON RT.
DROP INLET H = 1'-0"
TYPE SPECIAL DROP INLET = 4' X 8'

STA. 109+30 CONSTRUCT
DROP INLET TYPE SPECIAL ON RT.
DROP INLET H = 1'-0"
TYPE SPECIAL DROP INLET = 4' X 8'

STA. 109+76 CONSTRUCT
DROP INLET TYPE SPECIAL ON RT.
DROP INLET H = 1'-0"
TYPE SPECIAL DROP INLET = 4' X 8'

STA. 109+98 CONSTRUCT
DROP INLET TYPE SPECIAL ON RT.
DROP INLET H = 1'-0"
TYPE SPECIAL DROP INLET = 4' X 8'

C.L. W. KEISER AVE./HWY. 140 EB
P.I. = 108+39.52
 Δ = 4°05'45" RT.
D = 2°00'00"
T = 102.44'
L = 204.79'
P.C. = 107+37.08
P.T. = 109+41.87
NO SUPER

PROP. R/W
+03 50.04'
+03 50.04'
+88 40.31'
+45 79'
+45 40.32'
T.C.E.

CONST. LIMITS
+88 40.36'
+88 75'
T.C.E.

EXIST. R/W
+45 65'
+45 56.41'
T.C.E.

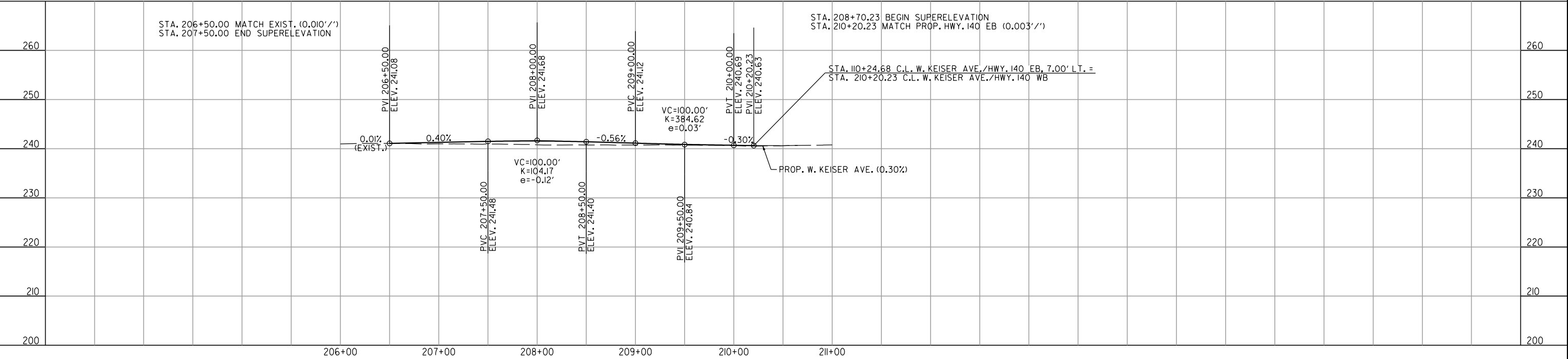
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	37	73
PLAN AND PROFILE SHEETS						



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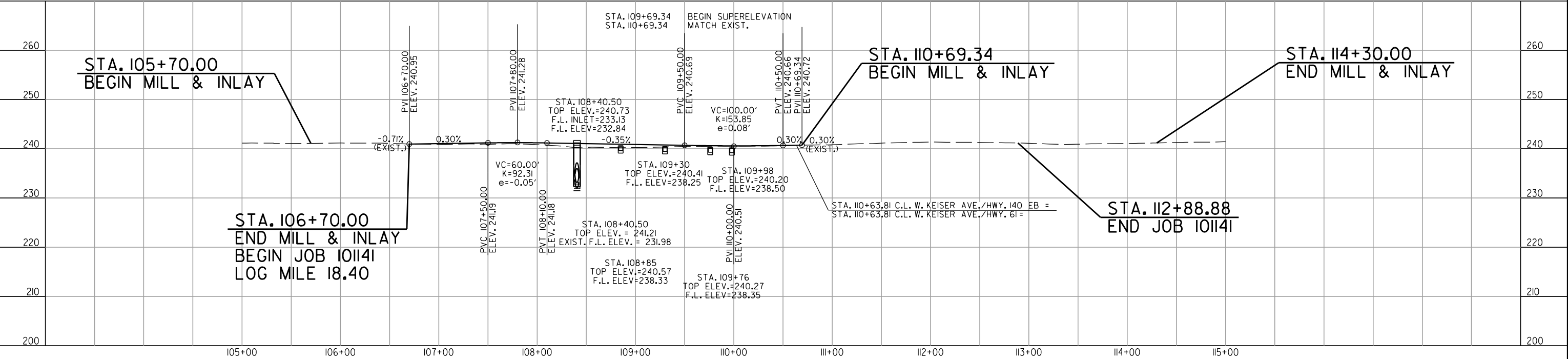
REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA

W. KEISER AVE./HWY. 140 WB



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

W. KEISER AVE./HWY. 140 EB/HWY. 61



STA. 303+05.00
BEGIN HWY. 61
LOG MILE 23.54

STA. 303+90 CONSTRUCT
DROP INLET ON RT.
AND DBL. 36" X 23" X 2' INLET W/F.E.S.
AND DBL. 36" X 23" X 78' OUTLET
CONNECT TO DROP INLET @ STA. 304+75 RT.
DROP INLET H = 3'-6"
TYPE C DROP INLET = 9' X 11'
36" X 23" ARCH R.C. PIPE (CLASS III)(TYPE 3) = 160 LIN. FT.
36" X 23" ARCH SLPCCS PIPE (TYPE 2) = 160 LIN. FT.
36" X 23" ARCH SSRCCS PIPE = 160 LIN. FT.
36" X 23" F.E.S. = 2 EACH

STA. 304+40 IN PLACE
24" X 30' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE & CONSTRUCT
APPROACH = 20 CU. YDS. FILL

STA. 304+75 CONSTRUCT
DROP INLET ON RT.
AND 18" X 2' INLET W/F.E.S.
AND DBL. 36" X 23" X 76' OUTLET
CONNECT TO DROP INLET @ STA. 305+54 RT.
DROP INLET H = 3'-10"
TYPE C DROP INLET = 9' X 4'
36" X 23" ARCH R.C. PIPE (CLASS III)(TYPE 3) = 152 LIN. FT.
36" X 23" ARCH SLPCCS PIPE (TYPE 2) = 152 LIN. FT.
36" X 23" ARCH SSRCCS PIPE = 152 LIN. FT.
18" R.C. PIPE (CLASS III)(TYPE 3) = 2 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 2 LIN. FT.
18" SSRCCS PIPE = 2 LIN. FT.
18" F.E.S. = IEACH

STA. 305+12 IN PLACE
24" X 31' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE & CONSTRUCT
APPROACH = 35 CU. YDS. FILL

STA. 304+99 IN PLACE
21" X 18" X 30' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE & CONSTRUCT
APPROACH = 40 CU. YDS. FILL

STA. 305+29 CONSTRUCT
DROP INLET ON LT.
AND 18" X 8' INLET W/F.E.S.
AND 24" X 62' OUTLET
CONNECT TO DROP INLET @ STA. 304+66 LT.
DROP INLET H = 4'-11"
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 3' X 4'
18" R.C. PIPE (CLASS III)(TYPE 3) = 8 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 8 LIN. FT.
18" SSRCCS PIPE = 8 LIN. FT.
18" F.E.S. = IEACH
24" R.C. PIPE (CLASS III)(TYPE 3) = 62 LIN. FT.
24" SLPCCS PIPE (TYPE 2) = 62 LIN. FT.
24" SSRCCS PIPE = 62 LIN. FT.

STA. 305+65 IN PLACE
24" X 134' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE & CONSTRUCT
APPROACH = 100 CU. YDS. FILL

STA. 306+00 CONSTRUCT
DROP INLET ON LT.
AND 24" X 70' OUTLET
CONNECT TO DROP INLET @ STA. 305+29 LT.
DROP INLET H = 4'-2"
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 3' X 4'
24" R.C. PIPE (CLASS III)(TYPE 3) = 70 LIN. FT.
24" SLPCCS PIPE (TYPE 2) = 70 LIN. FT.
24" SSRCCS PIPE = 70 LIN. FT.

STA. 306+83 CONSTRUCT
DROP INLET ON LT.
AND 18" X 8' INLET W/F.E.S.
AND 24" X 82' OUTLET
CONNECT TO DROP INLET @ STA. 306+00 LT.
DROP INLET H = 4'-4"
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 3' X 4'
18" R.C. PIPE (CLASS III)(TYPE 3) = 8 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 8 LIN. FT.
18" SSRCCS PIPE = 8 LIN. FT.
18" F.E.S. = IEACH
24" R.C. PIPE (CLASS III)(TYPE 3) = 82 LIN. FT.
24" SLPCCS PIPE (TYPE 2) = 82 LIN. FT.
24" SSRCCS PIPE = 82 LIN. FT.

STA. 306+83 IN PLACE
DROP INLET ON LT.
REMOVE

STA. 307+35 CONSTRUCT
DROP INLET ON LT.
AND 18" X 50' OUTLET
CONNECT TO DROP INLET @ STA. 306+83 LT.
DROP INLET H = 3'-11"
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 3' X 4'
18" R.C. PIPE (CLASS III)(TYPE 3) = 50 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 50 LIN. FT.
18" SSRCCS PIPE = 50 LIN. FT.

STA. 307+73 IN PLACE
18" X 146' R.C. PIPE CULVERT
LT. SIDE DRAIN W/ 3' X 2' BOX HDWL. LT.
REMOVE & CONSTRUCT
APPROACH = 145 CU. YDS. FILL

STA. 305+54 CONSTRUCT
DROP INLET ON RT.
AND 18" X 2' INLET W/F.E.S.
AND DBL. 36" X 23" X 80' OUTLET
CONNECT TO DROP INLET @ STA. 306+36 RT.
DROP INLET H = 4'-2"
TYPE C DROP INLET = 9' X 4'
36" X 23" ARCH R.C. PIPE (CLASS III)(TYPE 3) = 160 LIN. FT.
36" X 23" ARCH SLPCCS PIPE (TYPE 2) = 160 LIN. FT.
36" X 23" ARCH SSRCCS PIPE = 160 LIN. FT.
18" R.C. PIPE (CLASS III)(TYPE 3) = 2 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 2 LIN. FT.
18" SSRCCS PIPE = 2 LIN. FT.
18" F.E.S. = IEACH

STA. 305+97 IN PLACE
30" X 31' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 306+36 CONSTRUCT
DROP INLET ON RT.
AND 24" X 4' INLET W/F.E.S.
AND DBL. 36" X 23" X 108' OUTLET
CONNECT TO DROP INLET @ STA. 307+47 RT.
DROP INLET H = 4'-6"
TYPE C DROP INLET = 9' X 4'
36" X 23" ARCH R.C. PIPE (CLASS III)(TYPE 3) = 216 LIN. FT.
36" X 23" ARCH SLPCCS PIPE (TYPE 2) = 216 LIN. FT.
36" X 23" ARCH SSRCCS PIPE = 216 LIN. FT.
24" R.C. PIPE (CLASS III)(TYPE 3) = 4 LIN. FT.
24" SLPCCS PIPE (TYPE 2) = 4 LIN. FT.
24" SSRCCS PIPE = 4 LIN. FT.
24" F.E.S. = IEACH

STA. 306+79 IN PLACE
36" X 53' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE & CONSTRUCT
APPROACH = 80 CU. YDS. FILL

STA. 308+20 CONSTRUCT
DROP INLET ON LT.
AND 18" X 84' OUTLET
CONNECT TO DROP INLET @ STA. 307+35 LT.
DROP INLET H = 4'-0"
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 3' X 4'
18" R.C. PIPE (CLASS III)(TYPE 3) = 84 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 84 LIN. FT.
18" SSRCCS PIPE = 84 LIN. FT.

STA. 309+45 CONSTRUCT
DROP INLET TYPE SPECIAL ON LT.
DROP INLET H = 1'-0"
TYPE SPECIAL DROP INLET = 4' X 8'

STA. 310+00 CONSTRUCT
DROP INLET TYPE SPECIAL ON LT.
DROP INLET H = 1'-0"
TYPE SPECIAL DROP INLET = 4' X 8'

CONCRETE DITCH PAVING (TYPE-B)				
STA.	SIDE	LENGTH	"W"	SO. YDS.
309+45	LT. =	8 LIN. FT.	4'- 0"	3.56
310+00	LT. =	6 LIN. FT.	4'- 0"	2.67

C.L. HWY. 61
P.L. = 309+22.74
D.B. = 8'43'08" LT.
T = 7'00'00"
T = 62.40'
P.C. = 124.55'
P.C. = 308+60.34
P.T. = 309+84.89
NO SUPER

STA. 307+47 CONSTRUCT
DROP INLET ON RT.
AND 18" X 6' INLET W/F.E.S.
AND DBL. 36" X 23" X 110' OUTLET
CONNECT TO R.C. BOX CULVERT @ STA. 308+60 RT.
DROP INLET H = 5'-0"
TYPE C DROP INLET = 9' X 4'
36" X 23" ARCH R.C. PIPE (CLASS III)(TYPE 3) = 220 LIN. FT.
36" X 23" ARCH SLPCCS PIPE (TYPE 2) = 220 LIN. FT.
36" X 23" ARCH SSRCCS PIPE = 220 LIN. FT.
18" R.C. PIPE (CLASS III)(TYPE 3) = 6 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 6 LIN. FT.
18" SSRCCS PIPE = 6 LIN. FT.
18" F.E.S. = IEACH

STA. 308+20 IN PLACE
36" X 54' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE & CONSTRUCT
APPROACH = 135 CU. YDS. FILL

STA. 308+60 IN PLACE
6' X 2' X 53' R.C. BOX CULVERT
WITH HEADWALLS LT. AND RT.
RETAIN AND EXTEND 25' LT. AND 10' RT.
WITH 3:1 WINGS LT. AND RT.
FOR A COMPLETED LENGTH OF 88'
Q50=34.6 CFS, D.A.=59.3 ACRES
CHANNEL CHANGE = 20 CU. YDS.

STA. 309+25 CONSTRUCT
DROP INLET ON RT.
AND 18" X 64' OUTLET
CONNECT TO R.C. BOX CULVERT @ STA. 308+60 RT.
DROP INLET H = 4'-2"
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 3' X 4'
18" R.C. PIPE (CLASS III)(TYPE 3) = 64 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 64 LIN. FT.
18" SSRCCS PIPE = 64 LIN. FT.

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	38	73



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CONCRETE ISLAND			
STA.	LOCATION	TYPE	SO. YDS.
310+14	RT.	C	211
310+39	LT.	C	66

WHEELCHAIR RAMPS			
STA.	LOCATION	TYPE	SO. YDS.
302+15	RT.	3	3.3
303+89	LT.	3	5.4
309+74	RT.	3	3.4
310+10	RT.	3	3.3
310+14	LT.	3	3.4
310+27	RT.	3	3.7
310+31	RT.	3	3.3

STA. 310+42.72
END HWY. 61
HWY. 61 TIE-IN @
RT. E.O.P. W. KEISER AVE.

STA. 309+70 CONSTRUCT
DROP INLET ON RT.
AND 18" X 56' OUTLET
CONNECT TO DROP INLET @ STA. 309+25 RT.
DROP INLET H = 3'-5"
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 3' X 4'
18" R.C. PIPE (CLASS III)(TYPE 3) = 56 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 56 LIN. FT.
18" SSRCCS PIPE = 56 LIN. FT.

STA. 309+83 CONSTRUCT
DROP INLET ON RT.
AND 18" X 24' OUTLET
CONNECT TO DROP INLET @ STA. 309+70 RT.
DROP INLET H = 3'-11"
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 3' X 4'
18" R.C. PIPE (CLASS III)(TYPE 3) = 24 LIN. FT.
18" SLPCCS PIPE (TYPE 2) = 24 LIN. FT.
18" SSRCCS PIPE = 24 LIN. FT.

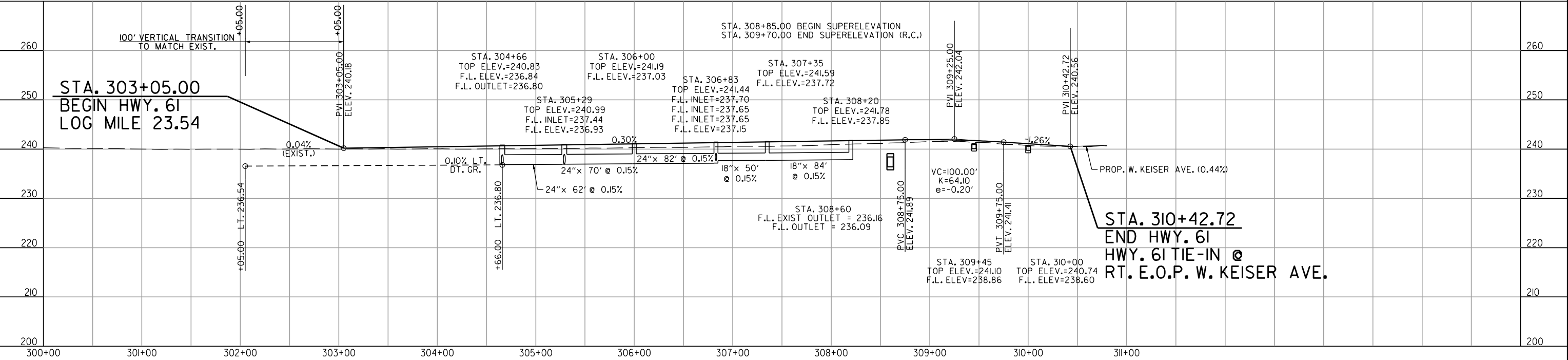
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	39	73
PLAN AND PROFILE SHEETS						



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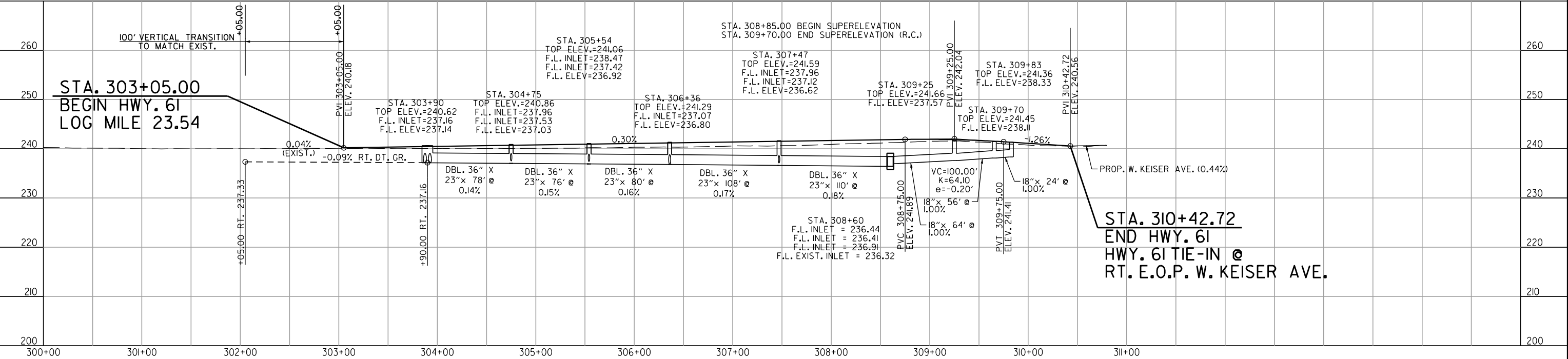
REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA

LEFT SIDE OF HWY. 61



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

RIGHT SIDE OF HWY. 61



DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	40	73
SUMMARY OF TRAFFIC SIGNAL QUANTITIES						



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SUMMARY OF TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP & 701	ACTUATED CONTROLLER TS2-TYPE 2 (8 PHASES)	2	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	18	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	8	EACH
SP & 707	CENTRAL CONTROL UNIT	1	EACH
SP & 707	POLE MOUNTED ASSEMBLY	4	EACH
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	4	EACH
708	TRAFFIC SIGNAL CABLE (5C/12 A.W.G.)	921	LIN. FT.
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	1701	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	1840	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	576	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	682	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)	381	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	103	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	1277	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")	64	LIN. FT.
709	GALVANIZED STEEL CONDUIT (3")	30	LIN. FT.
710	NON-METALLIC CONDUIT (2")	66	LIN. FT.
710	NON-METALLIC CONDUIT (3")	618	LIN. FT.
SS & 711	CONCRETE PULL BOX (TYPE 2)	4	EACH
SS & 711	CONCRETE PULL BOX (TYPE 1 HD)	1	EACH
SS & 711	CONCRETE PULL BOX (TYPE 2 HD)	4	EACH
SP, SS, & 713	SPAN WIRE ASSEMBLY	1	EACH
SP	UTILITY POLE USED AS TEMPORARY SPAN WIRE POLE	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (0')	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (40')	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 (46')	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (66')	1	EACH
SP	LED LUMINAIRE ASSEMBLY	6	EACH
SS & 715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	2	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	1.00	LUMP SUM
716	TREATED WOOD POLE (CLASS 2, 45')	3	EACH
SP & 733	VIDEO DETECTOR (IP)	5	EACH
SP & 733	HYBRID VIDEO/RADAR DETECTOR	3	EACH
SP & 733	VIDEO CABLE (EXTERIOR CAT 5E)	1793	LIN. FT.
SP & 733	VIDEO MONITOR (CLR)	2	EACH
SP & 733	CENTRAL CONTROL UNIT (8 CHANNEL)	2	EACH

LOCATION: HWY. 140 AND HWY. 61
CITY: OSCEOLA
COUNTY: MISSISSIPPI
DISTRICT: 10 SCALE: N/A DRAWN BY: JPJ

9/9/2026
JAJONES

TRAFFIC SIGNAL NOTES:

1. THE TRAFFIC SIGNAL SHALL NOT BE PUT INTO OPERATION OR SWITCHED TO THE NEXT CONSTRUCTION STAGE PRIOR TO THE FOLLOWING:
- A. ALL TRAFFIC SIGNAL EQUIPMENT HAS BEEN INSTALLED ACCORDING TO THE PLANS, SPECIAL PROVISIONS, AND PROPERLY FUNCTIONAL. THIS INCLUDES BUT NOT LIMITED TO: CABINETS, PULL BOXES, JUNCTION BOXES, POLES, MAST ARMS, FOUNDATIONS, LUMINAIRES, SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS, PUSH BUTTONS, DETECTION SYSTEM, CONDUITS, CONDUCTORS, CABLES, TRAFFIC CONTROLLER, CONFLICT MONITOR, COMMUNICATION SYSTEM, SERVICE POINT, AND RAILROAD INTERCONNECT SYSTEM.

B. THE DETECTION SYSTEM SHALL BE INSTALLED, SETUP, AND CONFIGURED BY THE CONTRACTOR OR THEIR SUPPLIER PER PLANS. A TRAFFIC OPERATIONS INSPECTOR SHALL INSPECT AND PROVIDE APPROVAL IN ORDER TO PUT THE TRAFFIC SIGNAL INTO OPERATION.

C. THE TRAFFIC CONTROLLER AND CONFLICT MONITOR SHALL BE PROGRAMMED TO OPERATE AS REQUIRED PER THE PLANS (PHASING DIAGRAM, INTERVAL CHART, AND ANY ADDITIONAL NOTES), SPECIAL PROVISIONS AND ARDOT SPECIFICATIONS.

D. TIMING SETTINGS HAVE BEEN PROGRAMMED AND APPROVED AS REQUIRED BY TSMO DIVISION.

E. THE TRAFFIC SIGNAL HAS BEEN INSPECTED AND APPROVED BY A TRAFFIC OPERATIONS INSPECTOR.

F. ALL REQUIRED DOCUMENTS RELATED TO THE TRAFFIC SIGNAL EQUIPMENT, THIS INCLUDES BUT NOT LIMITED TO: TEST RESULTS, CONFIGURATION/DATA REPORTS, WARRANTIES, AND ANY OTHER DOCUMENTATION REQUIRED PER PLANS AND SPECIAL PROVISIONS.
2. CONTRACTOR SHALL NOTIFY ALL EXISTING UTILITY OWNERS BEFORE BEGINNING WORK ON THIS PROJECT.
3. 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.
4. 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.
5. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE NFPA 70 (CURRENT EDITION) NATIONAL ELECTRICAL CODE, NFPA 101 (CURRENT EDITION) LIFE SAFETY CODE, STATE ELECTRICAL CODE AND LOCAL ELECTRICAL CODE.
6. 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.
7. ELECTRICAL SERVICE SHALL BE PROVIDED BY THE CITY/COUNTY TO A SERVICE POLE WITH EXTERNAL RAIN TIGHT 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.
8. CONTRACTOR SHALL CONNECT A SEPARATE NEUTRAL FOR EACH LOAD SWITCH REPRESENTED ON EACH SIGNAL POLE.
9. 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.
10. CONTROLLER CABINET SHALL BE WIRED SUCH THAT DURING FLASH OPERATIONS POWER TO THE LOAD SWITCHES CANNOT BACKFEED TO LOAD SWITCH POWER BUSS.

11. 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.
12. CONTROLLER CABINET LAYOUT AND ORIENTATION SHALL CONFORM TO MSA STANDARDS.
13. DOOR PANEL TEST PUSH BUTTONS SHALL ACTUATE INDICATED PHASES. DETECTOR ASSIGNMENTS AND/OR SIDE PANEL JUMPERS MAY REQUIRE MODIFICATION.
14. ALL SYSTEM DETECTOR RACKS AND ASSOCIATED EQUIPMENT SHALL BE PROTECTED BY THE MAIN CONTROLLER CABINET POWER SURGE PROTECTION.
15. 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.
16. 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.
17. THE LOCAL RADIO WITH ANTENNA AND TRAFFIC SIGNAL CONTROLLER SHALL BE COMPATIBLE WITH THE EXISTING COORDINATION SYSTEM IN THE CITY/COUNTY.
18. CONDUIT INSTALLED UNDER ROADWAY SURFACES SHALL BE INSTALLED BY PUSHING OR BORING METHOD OR AS DIRECTED BY THE ENGINEER. PVC OR HDPE CONDUIT SHALL BE USED AND SHALL BE UL LISTED. PVC CONDUIT SHALL BE MARKED "DIR. BORING" OR "DIRECTIONAL BORING" PER NEC. IF THE ENGINEER DETERMINES THIS IS NOT FEASIBLE, THEN A TRENCHING METHOD AS SHOWN IN THE STANDARD DRAWINGS MAY BE USED. THE ENGINEER SHALL GRANT A WRITTEN APPROVAL PRIOR TO USING THE TRENCHING METHOD.
19. ALL CONDUIT SHALL BE THREE (3") INCH DIAMETER UNLESS SPECIFIED ON PLANS. ALL CONDUIT UNDER THE ROADWAY, SIDEWALKS, AND DRMEWAYS SHALL HAVE A MINIMUM DEPTH OF 24" FROM THE TOP OF THE CONDUIT TO THE FINISHED GRADE. CONDUIT DEPTH MAY NEED TO INCREASE NEAR DRAINAGE STRUCTURES.
20. CONDUIT BELL END FITTINGS SHALL BE INSTALLED ON ALL TERMINATING ENDS OF NON-METALLIC CONDUIT RUNS. THIS INCLUDES PULL BOXES, POLE BASES, AND TRAFFIC SIGNAL CABINETS. THE COST OF THE FITTINGS SHALL BE CONSIDERED SUBSIDIARY TO THE PAY ITEM. ALL NON-METALLIC CONDUIT SHALL USE LONG SWEEP 90 DEGREE ELBOWS ON ALL CONDUIT BENDS.
21. ALL CONCRETE PULL BOXES SHALL BE (TYPE 2 HD) UNLESS OTHERWISE INDICATED. PULL BOX LIDS SHALL CLOSE FLUSH WITHOUT PINCHING ANY CONDUCTORS. CONDUIT LENGTHS IN PULL BOXES SHALL BE SET ACCORDINGLY. ANY CONDUCTORS THAT HAVE BEEN DAMAGED BY PINCHING SHALL BE COMPLETELY REPLACED AT THE CONTRACTOR'S EXPENSE.
22. 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.
23. CONTRACTOR SHALL ATTACH A PERMANENT TAG OF RIGID PLASTIC OR NON-FERROUS METAL TO EACH CONDUIT AT PULLBOXES, POLE BASES, JUNCTION BOXES AND CONTROLLER CABINETS. 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. EACH TAG SHALL INDICATE THE END LOCATION OF CONDUIT RUN. THE COST OF THE TAGS SHALL BE SUBSIDIARY TO THE CONDUIT PAY ITEM.
EXAMPLES FOR CONDUIT IN SIDE CABINET: "TO POLE A AND B" OR "TO POLE C"
EXAMPLES FOR CONDUIT IN PULL BOX: "TO POLE A" OR "TO TRAFFIC CABINET"
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. ALL TRAFFIC SIGNAL POLES SHALL BE GALVANIZED.
26. 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.

27. 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.
28. 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.
29. 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.
30. 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.
31. LED LUMINAIRE ASSEMBLIES SHALL HAVE A BUG RATING OF U0.
32. BACKPLATES SHALL BE SUPPLIED FOR ALL TRAFFIC SIGNAL HEADS, REFER TO THE RETROREFLECTIVE BACKPLATES SPECIAL PROVISION FOR REQUIREMENTS.
33. PAVEMENT MARKINGS SHOWN FOR REFERENCE ONLY. SEE PERMANENT PAVEMENT MARKING DETAILS.
34. BEFORE FINAL ACCEPTANCE OF THE TRAFFIC SIGNAL, THE CONTRACTOR SHALL PROVIDE TWO (2) SETS OF LEDGER SIZE (11" X 17") AS-BUILT TRAFFIC SIGNAL PLANS TO THE MAINTENANCE AUTHORITY AND ARDOT.
35. ALL SIGNAL HEADS AND SIGNS ON THE TEMPORARY SPAN WIRE SHALL HAVE AN ADDITIONAL TETHER WIRE (NOT SHOWN ON SD-7) AT THE BOTTOM CHORD TO MINIMIZE MOVEMENT DUE TO WIND EFFECTS. THE BOTTOM TETHER, HARDWARE, BRACKETS, AND MATERIALS FOR THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE TEMPORARY SIGNAL. THE BOTTOM TETHER SHALL BE INSTALLED BETWEEN THE MINIMUM AND MAXIMUM HEIGHT CLEARANCE ABOVE THE ROADWAY.

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	41	73
TRAFFIC SIGNAL NOTES						

STATE OF
ARKANSAS
LICENSED
PROFESSIONAL
ENGINEER
No.18036
JAMES PATRICK JONES

DIGITALLY SIGNED 09-09-2026

LOCATION: HWY. 140 AND HWY. 61

CITY: OSCEOLA

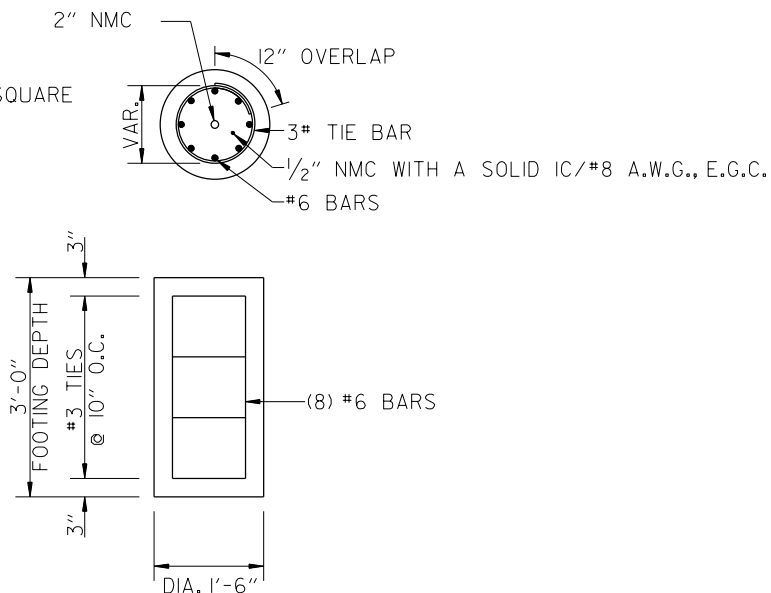
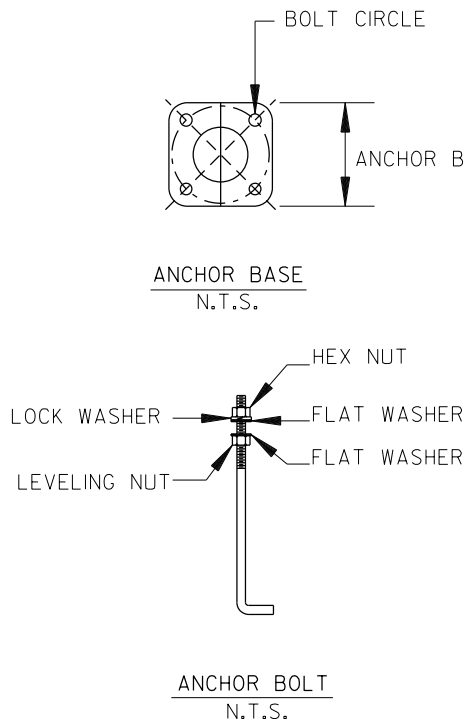
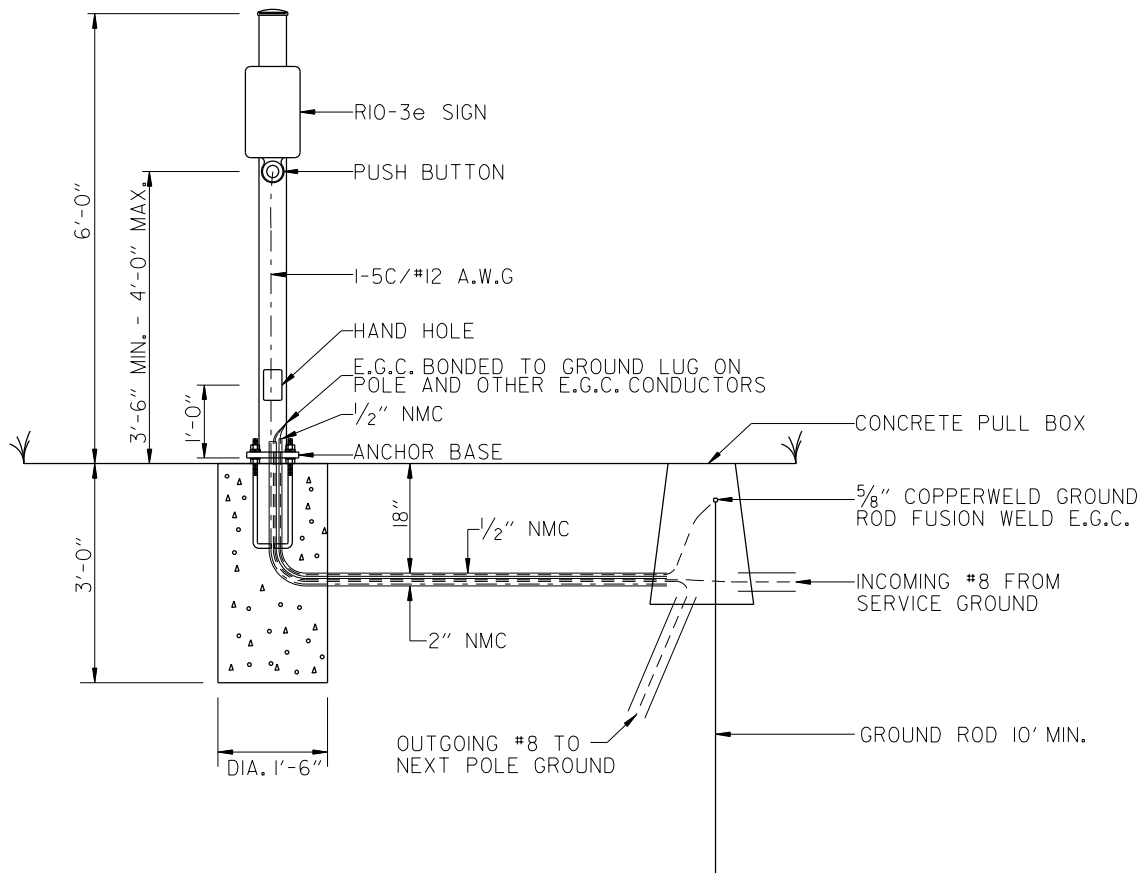
COUNTY: MISSISSIPPI

DISTRICT: 10

SCALE: N/A

DRAWN BY: JPJ

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	42	73
PEDESTRIAN PUSH BUTTON PEDESTAL DETAIL						



PEDESTRIAN PUSH BUTTON PEDESTAL DETAIL

NOTES:

EACH PEDESTRIAN PUSH BUTTON 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.

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.

POLE CAP - POLE CAPS SHALL BE PROVIDED, FABRICATED OF EITHER STEEL OR CAST ALUMINUM.

HAND HOLE - HAND HOLES SHALL BE 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 VACUUM FORMED ABS COVER IS AN ACCEPTABLE ALTERNATE TO STEEL.

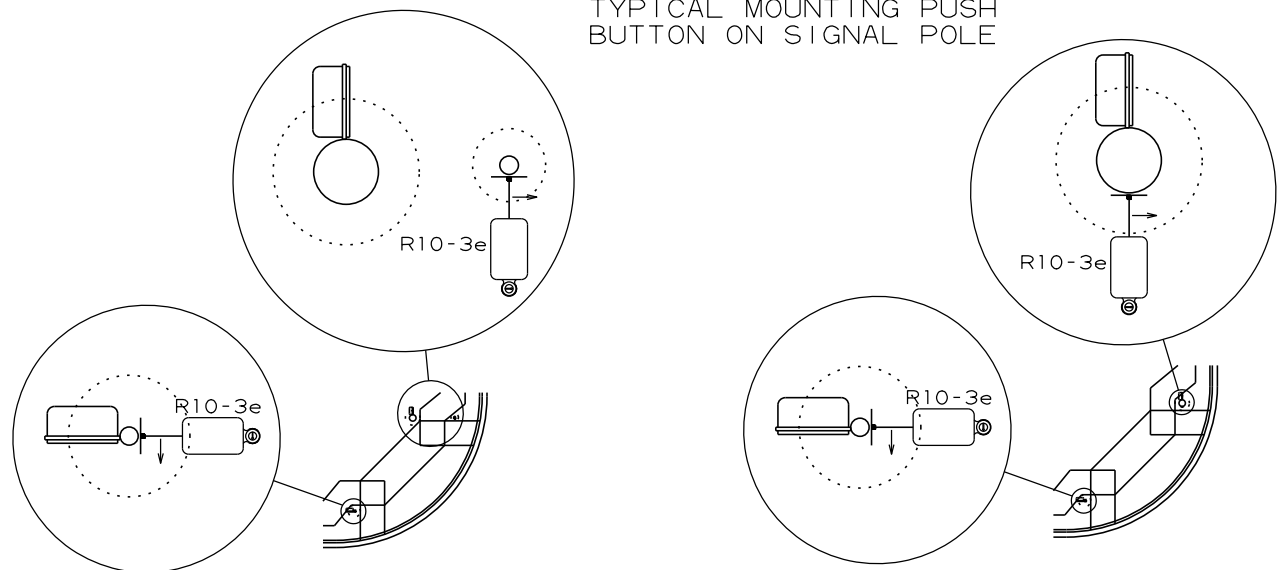
NUT COVERS - EACH POLE SHALL INCLUDE A BOLT DOWN NUT COVER FOR EACH ANCHOR BOLT.

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 714 FOR SIGNAL POLES AND ITEM 701 FOR THE CONTROLLER. THE CONCRETE PULL BOX AND CONDUCTOR BOX SHALL BE PAID SEPARATELY.

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 1/4" WEEP HOLE. ALL CONCRETE SHALL BE CLASS "S" OR GREATER.

CONCRETE - ALL CONCRETE POLE FOUNDATION SHALL BE CLASS "S" OR GREATER.

TYPICAL MOUNTING PUSH BUTTON ON SIGNAL POLE



TYPICAL MOUNTING PUSH BUTTON ON PEDESTRIAN POLE AND PEDESTRIAN PUSH BUTTON POLE

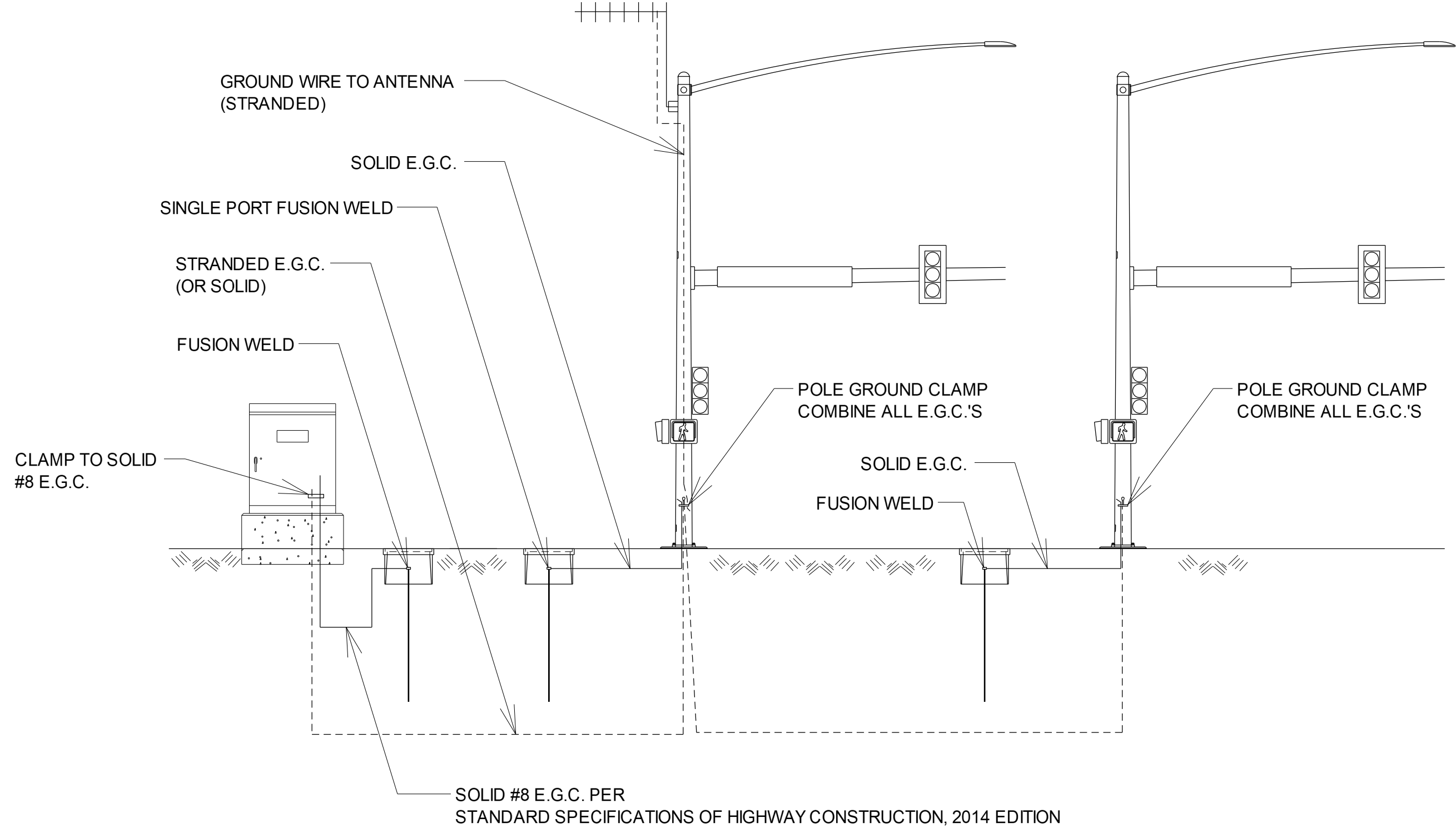
TYPICAL MOUNTING PUSH BUTTON ON PEDESTRIAN POLE AND SIGNAL POLE

LOCATION: HWY. 140 AND HWY. 61
CITY: OSCEOLA
COUNTY: MISSISSIPPI
DISTRICT: 10 SCALE: N/A DRAWN BY: JPJ

DATE: 9/9/2026 FILE NAME: t101141.job.dgn

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	43	73
GROUNDING ARRAY DETAIL						

GROUNDING ARRAY SINGLE-PORT FUSION WELDS



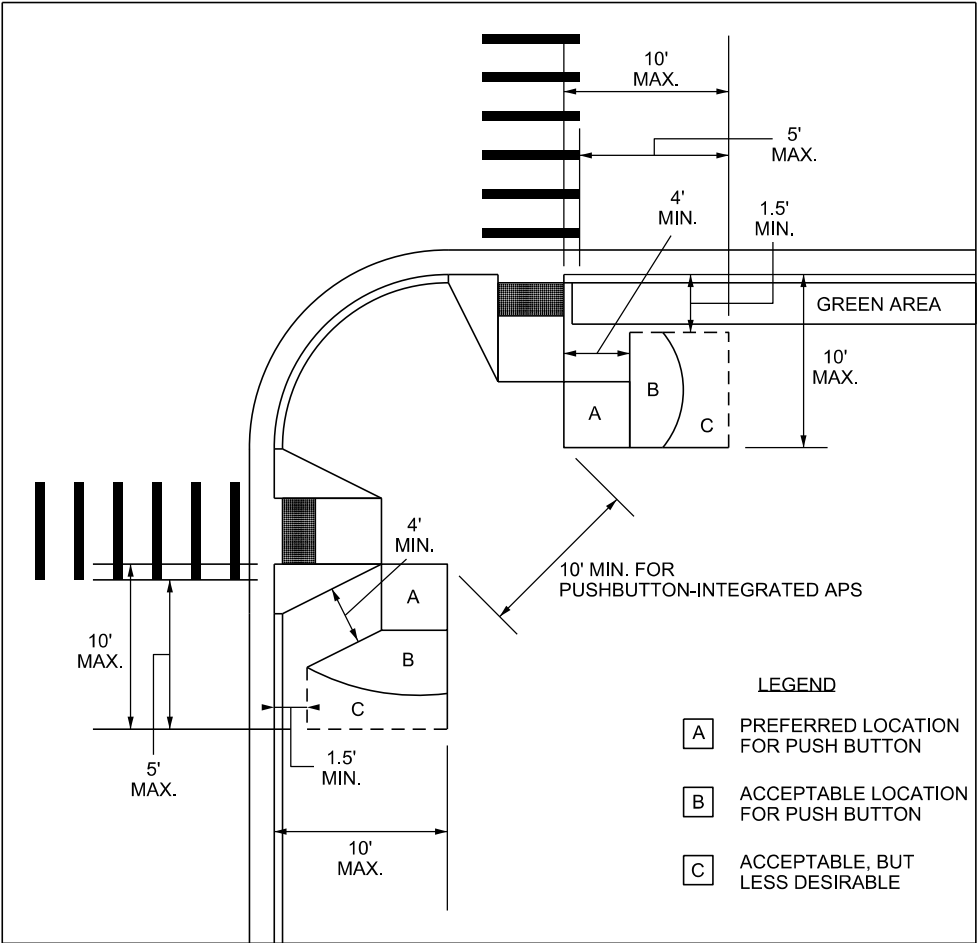
LOCATION: HWY. 140 AND HWY. 61
CITY: OSCEOLA
COUNTY: MISSISSIPPI
DISTRICT: 10 SCALE: N/A DRAWN BY: JPJ

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	44	73
PUSH BUTTON PLACEMENT DETAIL						



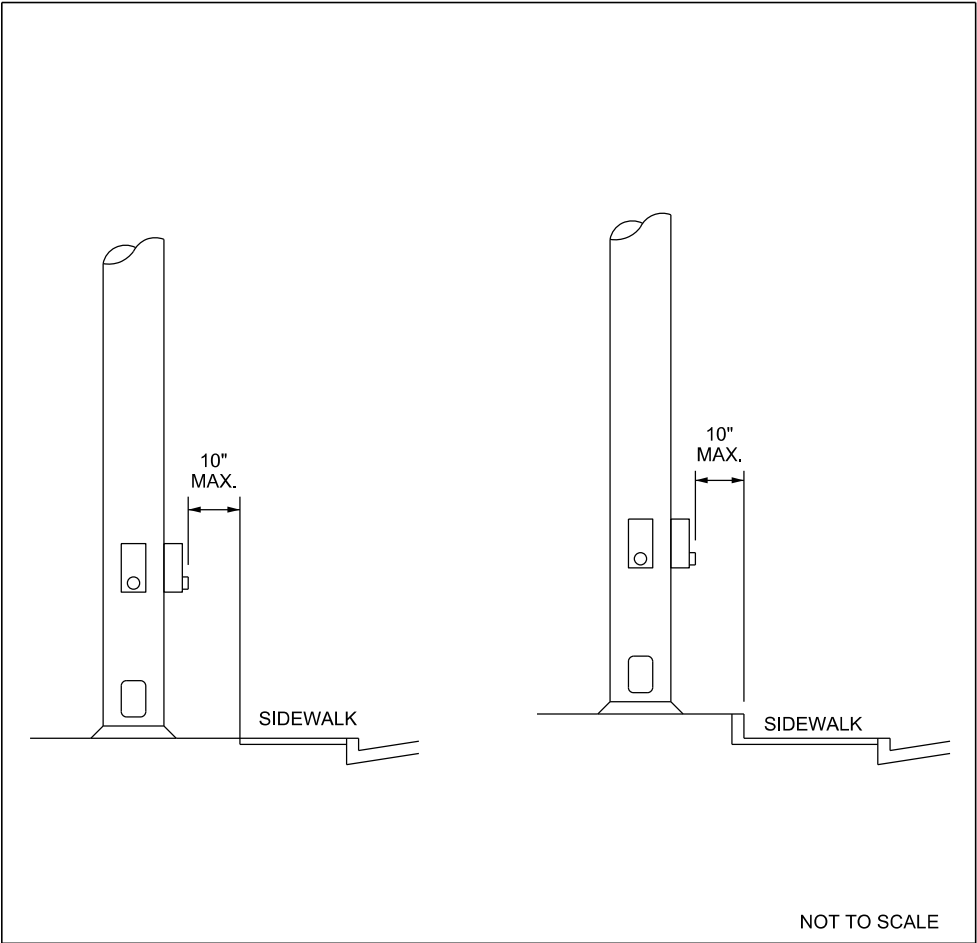
DIGITALLY SIGNED 09-09-2026

PUSH BUTTON LOCATION DETAIL



- NOTES:
1. THE PUSH BUTTON DETECTOR SHOULD BE LOCATED 5 FEET OR LESS FROM THE OUTSIDE EDGE OF THE MARKED CROSSWALK FARTEST FROM THE INTERSECTION.
 2. THE PUSH BUTTON DETECTOR SHOULD BE LOCATED NO FARTHER FROM THE CROSSWALK THAN THE STOP LINE, IF ONE IS PRESENT.
 3. A 4-FOOT MINIMUM UNOBSTRUCTED PEDESTRIAN ACCESS ROUTE SHOULD BE MAINTAINED.
 4. THE MAXIMUM (MAX.) AND MINIMUM (MIN.) DIMENSIONS SHOWN IN THIS FIGURE ARE RECOMMENDATIONS.
 5. TWO PEDESTRAIN PUSH BUTTONS ON THE SAME CORNER SHOULD BE SEPARATED BY AT LEAST 10 FEET. THE 10-FOOT DIMENSION SHOWN IN THIS FIGURE IS IN REFERENCE TO THE PLACEMENT OF THE PUSH BUTTONS WITHIN THEIR RESPECTIVE AREAS.
 6. THE FIGURE SHOWS TYPICAL PUSH BUTTON LOCATIONS.
 7. THIS FIGURE IS NOT DRAWN TO SCALE.

SIDE REACH DETAIL



- NOTES:
- IN THE EVENT THAT A PLAN TRAFFIC SIGNAL POLE LOCATION MUST BE ADJUSTED DUE TO UTILITY CONFLICT, CONSULT WITH PROJECT ENGINEER PRIOR TO MAKING ADJUSTMENTS.

LOCATION: HWY. 140 AND HWY. 61
CITY: OSCEOLA
COUNTY: MISSISSIPPI
DISTRICT: 10 SCALE: N/A DRAWN BY: JPJ

DATE: 9/9/2026 FILE NAME: t101141.job.dgn

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	45	73
TRAFFIC SIGNAL QUANTITIES						



DIGITALLY SIGNED 09-10-2026

STAGE 1C 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)	9	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	4	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	324	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	1493	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	51	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	51	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")	42	LIN. FT.
709	GALVANIZED STEEL CONDUIT (3")	30	LIN. FT.
710	NON-METALLIC CONDUIT (2")	10	LIN. FT.
SS & 711	CONCRETE PULL BOX (TYPE 1 HD)	1	EACH
SP, SS, & 713	SPAN WIRE ASSEMBLY	1	EACH
SP	UTILITY POLE USED AS TEMPORARY SPAN WIRE POLE	1	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.50	LUMP SUM
716	TREATED WOOD POLE (CLASS 2, 45')	3	EACH
SP & 733	VIDEO DETECTOR (IP)	4	EACH
SP & 733	VIDEO CABLE (EXTERIOR CAT 5E)	878	LIN. FT.
SP & 733	VIDEO MONITOR (CLR)	1	EACH
SP & 733	CENTRAL CONTROL UNIT (8 CHANNEL)	1	EACH

STAGE 1C:
INSTALL ALL TEMPORARY TRAFFIC SIGNAL EQUIPMENT WITH ALL ASSOCIATED ITEMS SHOWN ON THE STAGE 1C TEMPORARY SIGNAL PLANS. REMOVE ALL EXISTING TRAFFIC SIGNAL EQUIPMENT.
MAINTAIN THIS TRAFFIC SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 1C TRAFFIC SIGNAL PLANS.
(REFER TO MAINTENANCE OF TRAFFIC DETAILS.)

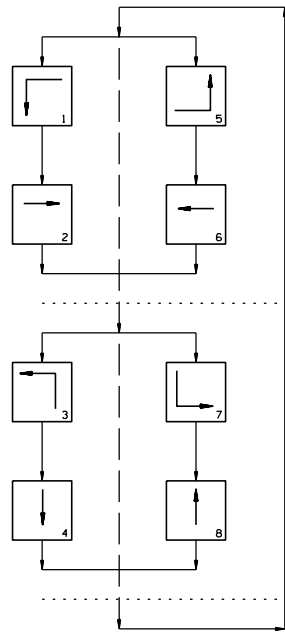
PERMANENT TRAFFIC SIGNAL QUANTITIES

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)	9	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	4	EACH
SP & 707	CENTRAL CONTROL UNIT	1	EACH
SP & 707	POLE MOUNTED ASSEMBLY	4	EACH
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	4	EACH
708	TRAFFIC SIGNAL CABLE (5C/12 A.W.G.)	921	LIN. FT.
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	1377	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	347	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	576	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	631	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)	381	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	52	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	1277	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")	22	LIN. FT.
710	NON-METALLIC CONDUIT (2")	56	LIN. FT.
710	NON-METALLIC CONDUIT (3")	618	LIN. FT.
SS & 711	CONCRETE PULL BOX (TYPE 2)	4	EACH
SS & 711	CONCRETE PULL BOX (TYPE 2 HD)	4	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (0')	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (40')	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 (46')	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (66')	1	EACH
SP	LED LUMINAIRE ASSEMBLY	6	EACH
SS & 715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	2	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.50	LUMP SUM
SP & 733	VIDFO DETECTOR (IP)	1	EACH
SP & 733	HYBRID VIDEO/RADAR DETECTOR	3	EACH
SP & 733	VIDEO CABLE (EXTERIOR CAT 5E)	915	LIN. FT.
SP & 733	VIDEO MONITOR (CLR)	1	EACH
SP & 733	CENTRAL CONTROL UNIT (8 CHANNEL)	1	EACH

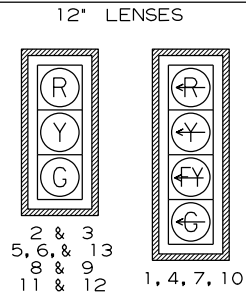
PERMANENT TRAFFIC SIGNAL:
THE TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL REMAIN IN OPERATION UNTIL THE PERMANENT TRAFFIC SIGNAL IS COMPLETED AND OPERATIONAL. INSTALL THE PERMANENT TRAFFIC SIGNAL WITH ALL ASSOCIATED EQUIPMENT AND REMOVE ALL TEMPORARY TRAFFIC SIGNAL COMPONENTS.
(REFER TO PERMANENT TRAFFIC SIGNAL PLANS.)

LOCATION: HWY. 140 AND HWY. 61
CITY: OSCEOLA
COUNTY: MISSISSIPPI
DISTRICT: 10 SCALE: N/A DRAWN BY: JPJ

STAGES 1C & 2 PHASING DIAGRAM



STAGES 1C & 2 SIGNAL FACES



- NOTES:
- ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
 - REFER TO SPECIAL PROVISION "RETROREFLECTIVE BACKPLATES" FOR DETAILS ON REQUIREMENTS FOR BACKPLATES.

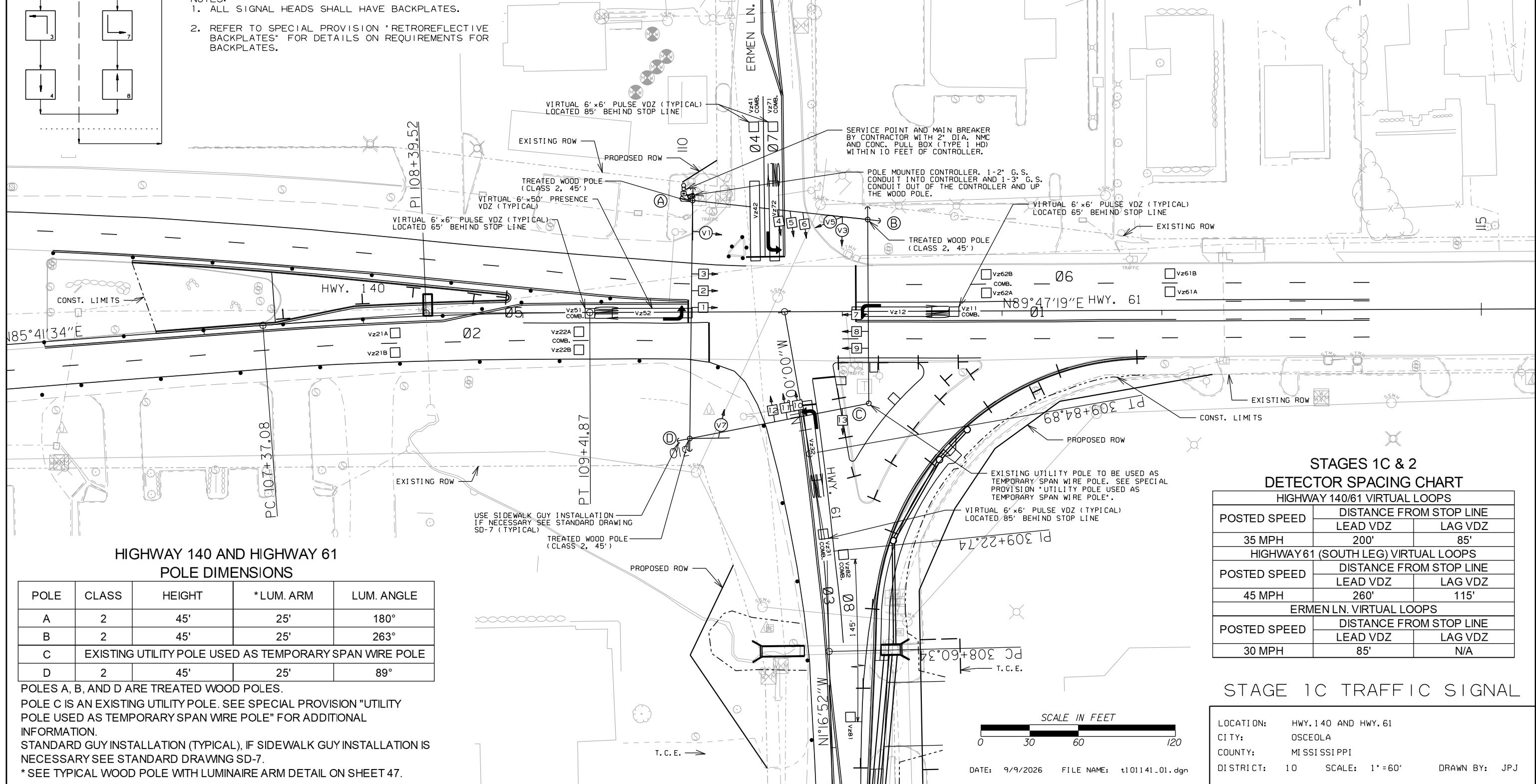
NOTES TO CONTRACTOR:

- V1, V3, V5, AND V7 ARE VIDEO DETECTORS.
- TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT ALL CONSTRUCTION PHASES.

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	46	73



DIGITALLY SIGNED 09-09-2026



HIGHWAY 140 AND HIGHWAY 61 POLE DIMENSIONS

POLE	CLASS	HEIGHT	*LUM. ARM	LUM. ANGLE
A	2	45'	25'	180°
B	2	45'	25'	263°
C	EXISTING UTILITY POLE USED AS TEMPORARY SPAN WIRE POLE			
D	2	45'	25'	89°

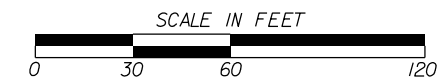
POLES A, B, AND D ARE TREATED WOOD POLES.
POLE C IS AN EXISTING UTILITY POLE. SEE SPECIAL PROVISION "UTILITY POLE USED AS TEMPORARY SPAN WIRE POLE" FOR ADDITIONAL INFORMATION.
STANDARD GUY INSTALLATION (TYPICAL), IF SIDEWALK GUY INSTALLATION IS NECESSARY SEE STANDARD DRAWING SD-7.
* SEE TYPICAL WOOD POLE WITH LUMINAIRE ARM DETAIL ON SHEET 47.

STAGES 1C & 2 DETECTOR SPACING CHART

HIGHWAY 140/61 VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
35 MPH	200'	85'
HIGHWAY 61 (SOUTH LEG) VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
45 MPH	260'	115'
ERMEN LN. VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
30 MPH	85'	N/A

STAGE 1C TRAFFIC SIGNAL

LOCATION:	Hwy. 140 AND Hwy. 61
CITY:	OSCEOLA
COUNTY:	MISSISSIPPI
DISTRICT:	10
SCALE:	1" = 60'
DRAWN BY:	JPJ



DATE: 9/9/2026 FILE NAME: t101141_01.dgn

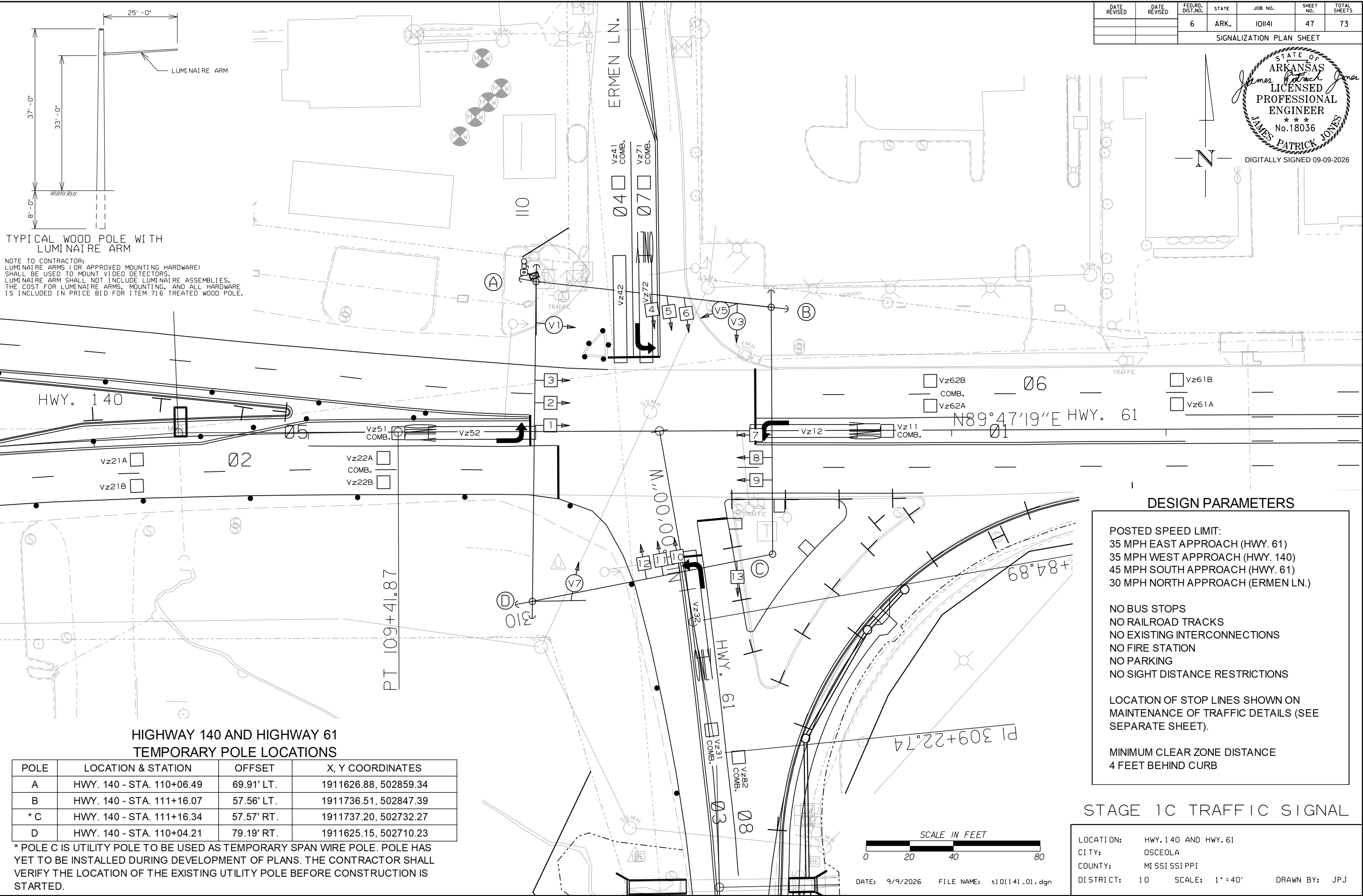
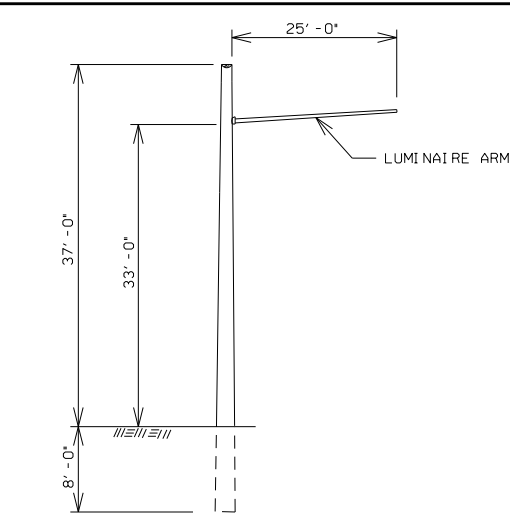
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	47	73
SIGNALIZATION PLAN SHEET						



DIGITALLY SIGNED 09-09-2026

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.



HIGHWAY 140 AND HIGHWAY 61 TEMPORARY POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 140 - STA. 110+06.49	69.91' LT.	1911626.88, 502859.34
B	HWY. 140 - STA. 111+16.07	57.56' LT.	1911736.51, 502847.39
* C	HWY. 140 - STA. 111+16.34	57.57' RT.	1911737.20, 502732.27
D	HWY. 140 - STA. 110+04.21	79.19' RT.	1911625.15, 502710.23

* POLE C IS UTILITY POLE TO BE USED AS TEMPORARY SPAN WIRE POLE. POLE HAS YET TO BE INSTALLED DURING DEVELOPMENT OF PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE EXISTING UTILITY POLE BEFORE CONSTRUCTION IS STARTED.

DESIGN PARAMETERS

POSTED SPEED LIMIT:
35 MPH EAST APPROACH (HWY. 61)
35 MPH WEST APPROACH (HWY. 140)
45 MPH SOUTH APPROACH (HWY. 61)
30 MPH NORTH APPROACH (ERMEN LN.)

NO BUS STOPS
NO RAILROAD TRACKS
NO EXISTING INTERCONNECTIONS
NO FIRE STATION
NO PARKING
NO SIGHT DISTANCE RESTRICTIONS

LOCATION OF STOP LINES SHOWN ON
MAINTENANCE OF TRAFFIC DETAILS (SEE
SEPARATE SHEET).

MINIMUM CLEAR ZONE DISTANCE
4 FEET BEHIND CURB

STAGE 1C TRAFFIC SIGNAL

LOCATION: HWY. 140 AND HWY. 61
CITY: OSCEOLA
COUNTY: MISSISSIPPI
DISTRICT: 10
SCALE: 1" = 40'
DRAWN BY: JPJ



DATE: 9/9/2026 FILE NAME: t101141_01.dgn

STATE OF
ARKANSAS
James Patrick Jones
LICENSED
PROFESSIONAL
ENGINEER

No. 18036
JAMES PATRICK JONES

JA JONES 9/9/2026

12" LENSES

2 & 3
5, 6, & 13
8 & 9
11 & 12

1, 4, 7, 10

- ## STAGES 1C & 2 DETECTOR CHART

DETECTOR SYSTEM DESCRIPTION: JOB 101141												
HIGHWAY 140 AND HIGHWAY 61 DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS			COMMENTS	TUBE LENGTHS	
DET. ID #	LOCATION DIRECTION	TYPE	DET. #	CAB. TRM. #	AMP CHN. #	CON. IMP. #	PHS	SYSTEM DET. #	LOCAL			MASTER SYSTEM DETECTOR NUMBERS
Vz11	WB LEFT TURN FAR	COMB.			1	V9	1	1			CAMERA V1	23"
Vz12	WB LEFT TURN	LOCAL			2	V1	1				CAMERA V1	23"
Vz21 A&B	EB ADVANCE	LOCAL			5	V2	2				CAMERA V5	23"
Vz22 A&B	EB NEAR	COMB.			6	V10	2	2			CAMERA V5	23"
Vz31	NB LEFT TURN FAR	COMB.			9	V11	3	3			CAMERA V3	23"
Vz32	NB LEFT TURN	LOCAL			10	V3	3				CAMERA V3	23"
Vz41	SB ADVANCE	COMB.			13	V12	4	4			CAMERA V7	23"
Vz42	SB NEAR	LOCAL			14	V4	4				CAMERA V7	23"
Vz51	EB LEFT TURN FAR	COMB.			7	V13	5	5			CAMERA V5	23"
Vz52	EB LEFT TURN	LOCAL			8	V5	5				CAMERA V5	23"
Vz61 A&B	WB ADVANCE	LOCAL			3	V6	6				CAMERA V1	23"
Vz62 A&B	WB NEAR	COMB.			4	V14	6	6			CAMERA V1	23"
Vz71	SB LEFT TURN FAR	COMB.			15	V15	7	7			CAMERA V7	23"
Vz72	SB LEFT TURN	LOCAL			16	V7	7				CAMERA V7	23"
Vz81	NB ADVANCE	LOCAL			11	V8	8				CAMERA V3	23"
Vz82	NB NEAR	COMB.			12	V16	8	8			CAMERA V3	23"
					SPARE:							

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

STATE OF
ARKANSAS
JAMES PATRICK JONES
LICENSED
PROFESSIONAL
ENGINEER

No. 18036
JAMES PATRICK JONES

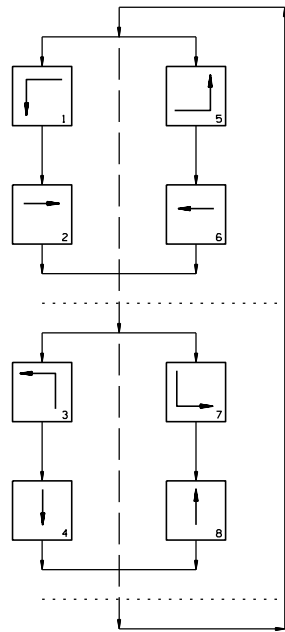
DIGITALLY SIGNED 09-09-2026

SIGNAL FACES	HIGHWAY 140 AND HIGHWAY 61																FLASH SEQUENCE
	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		*		*		***		***									
2 & 3	R	R	G	**	R	R	G	**	R	R	R	R	R	R	R	R	R
4										*		*		***		***	
5, 6, & 13	R	R	R	R	R	R	R	R	R	R	G	**	R	R	G	**	R
7		*		***		*		***									
8 & 9	R	R	R	R	G	**	G	**	R	R	R	R	R	R	R	R	R
10										*		***		*		***	
11 & 12	R	R	R	R	R	R	R	R	R	R	R	R	G	**	G	**	R

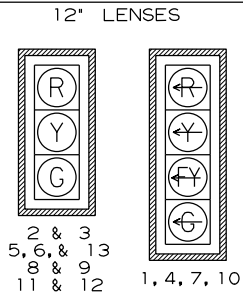
STAGES 1C AND 2 TRAFFIC SIGNAL CHARTS

LOCATION:	HWY. 140 AND HWY. 61		
CITY:	OSCEOLA		
COUNTY:	MISSISSIPPI		
DISTRICT:	10	SCALE:	N/A DRAWN BY: JPJ

STAGES 1C & 2 PHASING DIAGRAM



STAGES 1C & 2 SIGNAL FACES



NOTES:

1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISION "RETROREFLECTIVE BACKPLATES" FOR DETAILS ON REQUIREMENTS FOR BACKPLATES.

NOTES TO CONTRACTOR:

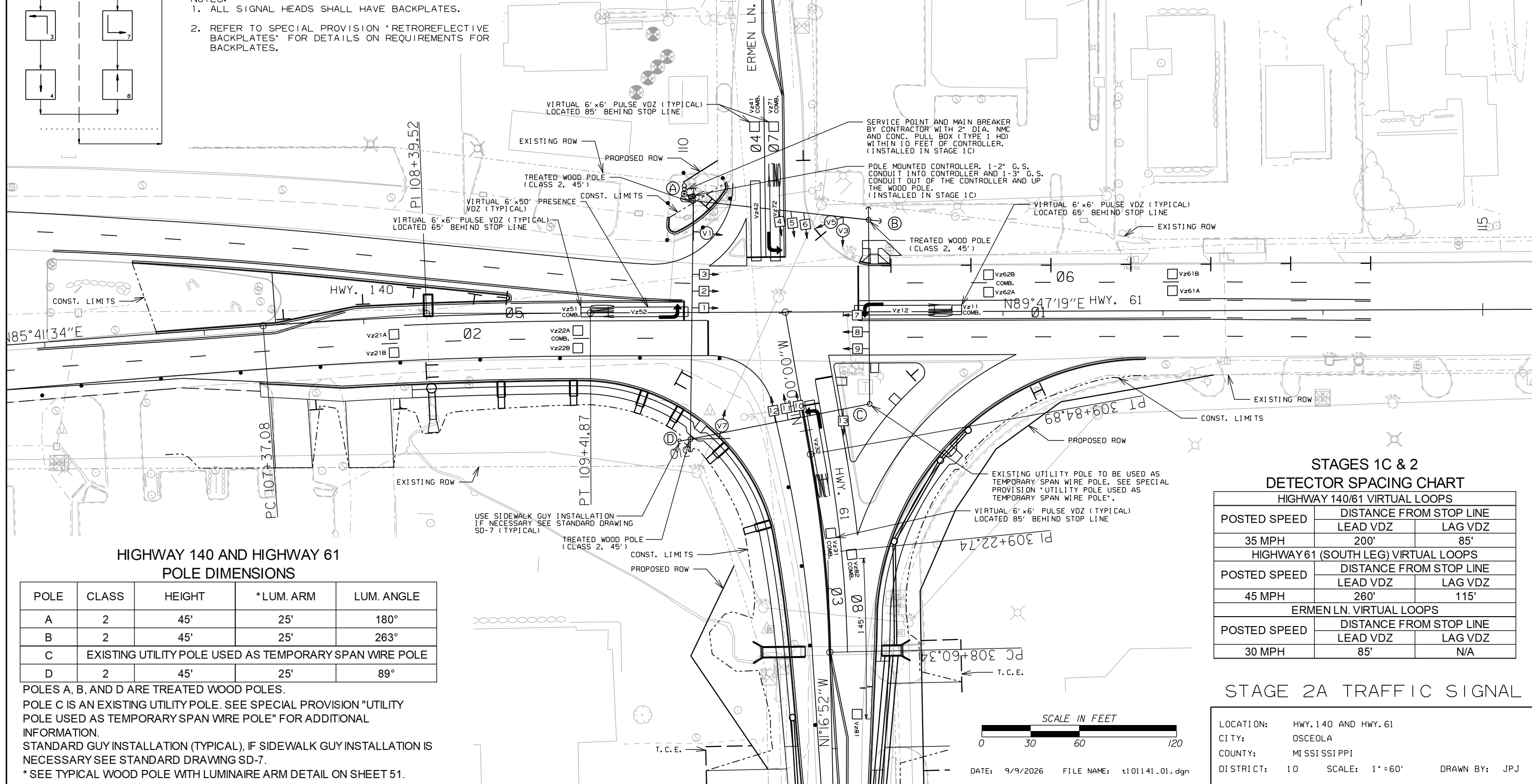
1. V1, V3, V5, AND V7 ARE VIDEO DETECTORS.
2. TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT ALL CONSTRUCTION PHASES.

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	50	73

SIGNALIZATION PLAN SHEET



DIGITALLY SIGNED 09-09-2026



HIGHWAY 140 AND HIGHWAY 61 POLE DIMENSIONS

POLE	CLASS	HEIGHT	*LUM. ARM	LUM. ANGLE
A	2	45'	25'	180°
B	2	45'	25'	263°
C	EXISTING UTILITY POLE USED AS TEMPORARY SPAN WIRE POLE			
D	2	45'	25'	89°

POLES A, B, AND D ARE TREATED WOOD POLES.

POLE C IS AN EXISTING UTILITY POLE. SEE SPECIAL PROVISION "UTILITY POLE USED AS TEMPORARY SPAN WIRE POLE" FOR ADDITIONAL INFORMATION.

STANDARD GUY INSTALLATION (TYPICAL), IF SIDEWALK GUY INSTALLATION IS NECESSARY SEE STANDARD DRAWING SD-7.

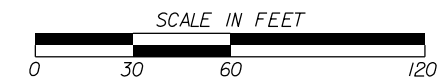
* SEE TYPICAL WOOD POLE WITH LUMINAIRE ARM DETAIL ON SHEET 51.

STAGES 1C & 2 DETECTOR SPACING CHART

HIGHWAY 140/61 VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
35 MPH	200'	85'
HIGHWAY 61 (SOUTH LEG) VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
45 MPH	260'	115'
ERMEN LN. VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
30 MPH	85'	N/A

STAGE 2A TRAFFIC SIGNAL

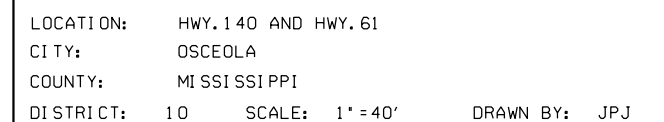
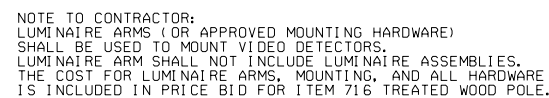
LOCATION:	HWY. 140 AND HWY. 61
CITY:	OSCEOLA
COUNTY:	MISSISSIPPI
DISTRICT:	10
SCALE:	1" = 60'
DRAWN BY:	JPJ



DATE: 9/9/2026 FILE NAME: t101141_01.dgn

STATE OF
ARKANSAS
James Patrick Jones
LICENSED
PROFESSIONAL
ENGINEER

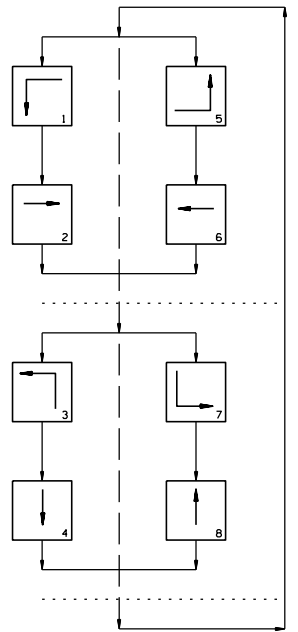
No. 18036
JAMES PATRICK JONES



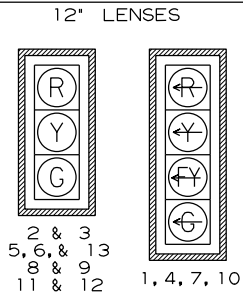
* POLE C IS UTILITY POLE TO BE USED AS TEMPORARY SPAN WIRE POLE. POLE HAS YET TO BE INSTALLED DURING DEVELOPMENT OF PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE EXISTING UTILITY POLE BEFORE CONSTRUCTION IS STARTED.

DATE: 9/9/2026 FILE NAME: t101141_01.dgn

STAGES 1C & 2 PHASING DIAGRAM



STAGES 1C & 2 SIGNAL FACES



NOTES:

1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISION "RETROREFLECTIVE BACKPLATES" FOR DETAILS ON REQUIREMENTS FOR BACKPLATES.

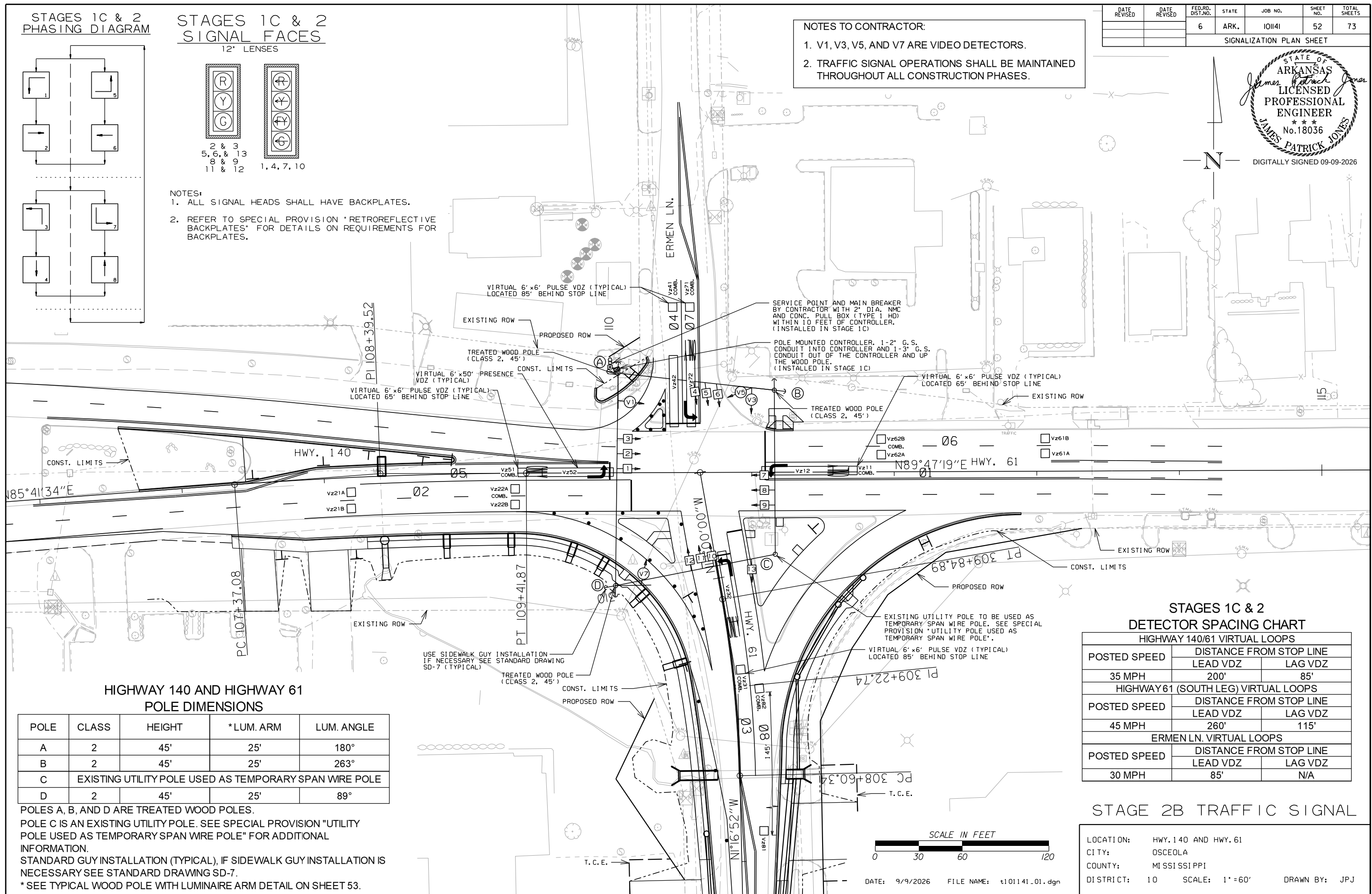
NOTES TO CONTRACTOR:

1. V1, V3, V5, AND V7 ARE VIDEO DETECTORS.
2. TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT ALL CONSTRUCTION PHASES.

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	52	73
SIGNALIZATION PLAN SHEET						



DIGITALLY SIGNED 09-09-2026



HIGHWAY 140 AND HIGHWAY 61 POLE DIMENSIONS

POLE	CLASS	HEIGHT	* LUM. ARM	LUM. ANGLE
A	2	45'	25'	180°
B	2	45'	25'	263°
C	EXISTING UTILITY POLE USED AS TEMPORARY SPAN WIRE POLE			
D	2	45'	25'	89°

POLES A, B, AND D ARE TREATED WOOD POLES.

POLE C IS AN EXISTING UTILITY POLE. SEE SPECIAL PROVISION "UTILITY POLE USED AS TEMPORARY SPAN WIRE POLE" FOR ADDITIONAL INFORMATION.

STANDARD GUY INSTALLATION (TYPICAL), IF SIDEWALK GUY INSTALLATION IS NECESSARY SEE STANDARD DRAWING SD-7.

* SEE TYPICAL WOOD POLE WITH LUMINAIRE ARM DETAIL ON SHEET 53.

STAGES 1C & 2 DETECTOR SPACING CHART

HIGHWAY 140/61 VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
35 MPH	200'	85'
HIGHWAY 61 (SOUTH LEG) VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
45 MPH	260'	115'
ERMEN LN. VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
30 MPH	85'	N/A

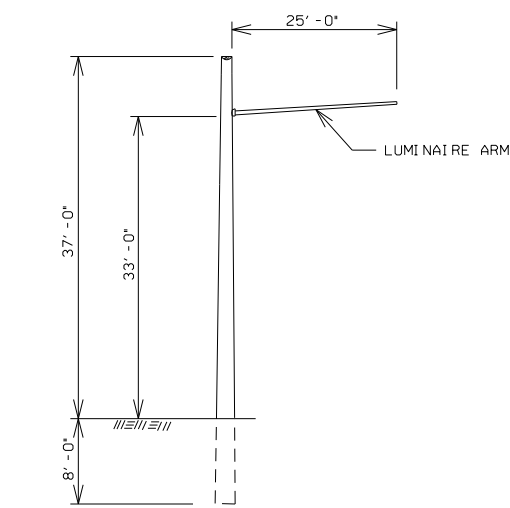
STAGE 2B TRAFFIC SIGNAL

LOCATION:	HWY. 140 AND HWY. 61
CITY:	OSCEOLA
COUNTY:	MISSISSIPPI
DISTRICT:	10
SCALE:	1" = 60'
DRAWN BY:	JPJ

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	53	73
SIGNALIZATION PLAN SHEET						

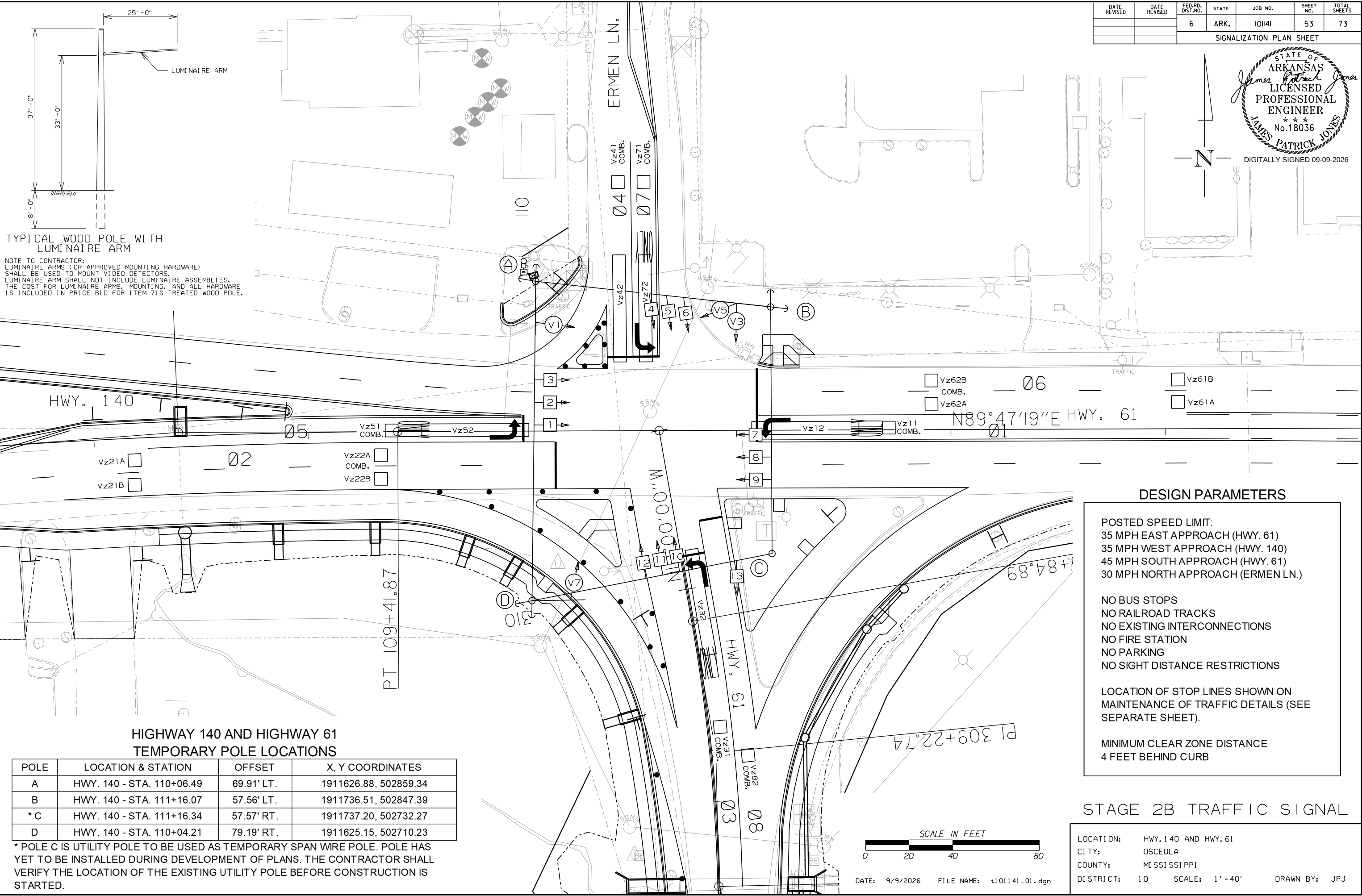


DIGITALLY SIGNED 09-09-2026



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.



DESIGN PARAMETERS

POSTED SPEED LIMIT:
35 MPH EAST APPROACH (HWY. 61)
35 MPH WEST APPROACH (HWY. 140)
45 MPH SOUTH APPROACH (HWY. 61)
30 MPH NORTH APPROACH (ERMEN LN.)

NO BUS STOPS
NO RAILROAD TRACKS
NO EXISTING INTERCONNECTIONS
NO FIRE STATION
NO PARKING
NO SIGHT DISTANCE RESTRICTIONS

LOCATION OF STOP LINES SHOWN ON
MAINTENANCE OF TRAFFIC DETAILS (SEE
SEPARATE SHEET).

MINIMUM CLEAR ZONE DISTANCE
4 FEET BEHIND CURB

STAGE 2B TRAFFIC SIGNAL

LOCATION: HWY. 140 AND HWY. 61
CITY: OSCEOLA
COUNTY: MISSISSIPPI
DISTRICT: 10
SCALE: 1" = 40'
DRAWN BY: JPJ

HIGHWAY 140 AND HIGHWAY 61 TEMPORARY POLE LOCATIONS

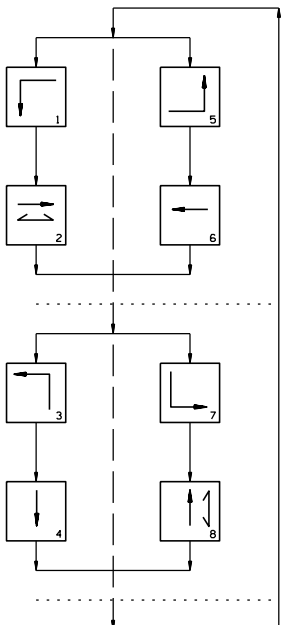
POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 140 - STA. 110+06.49	69.91' LT.	1911626.88, 502859.34
B	HWY. 140 - STA. 111+16.07	57.56' LT.	1911736.51, 502847.39
*C	HWY. 140 - STA. 111+16.34	57.57' RT.	1911737.20, 502732.27
D	HWY. 140 - STA. 110+04.21	79.19' RT.	1911625.15, 502710.23

* POLE C IS UTILITY POLE TO BE USED AS TEMPORARY SPAN WIRE POLE. POLE HAS YET TO BE INSTALLED DURING DEVELOPMENT OF PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE EXISTING UTILITY POLE BEFORE CONSTRUCTION IS STARTED.

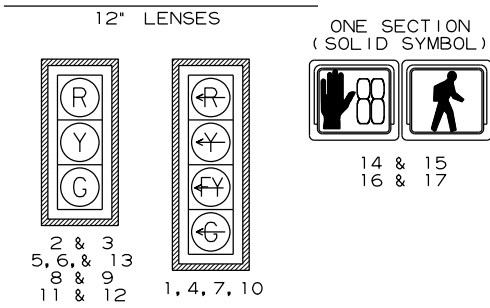


DATE: 9/9/2026 FILE NAME: t101141_01.dgn

PHASING DIAGRAM



SIGNAL FACES



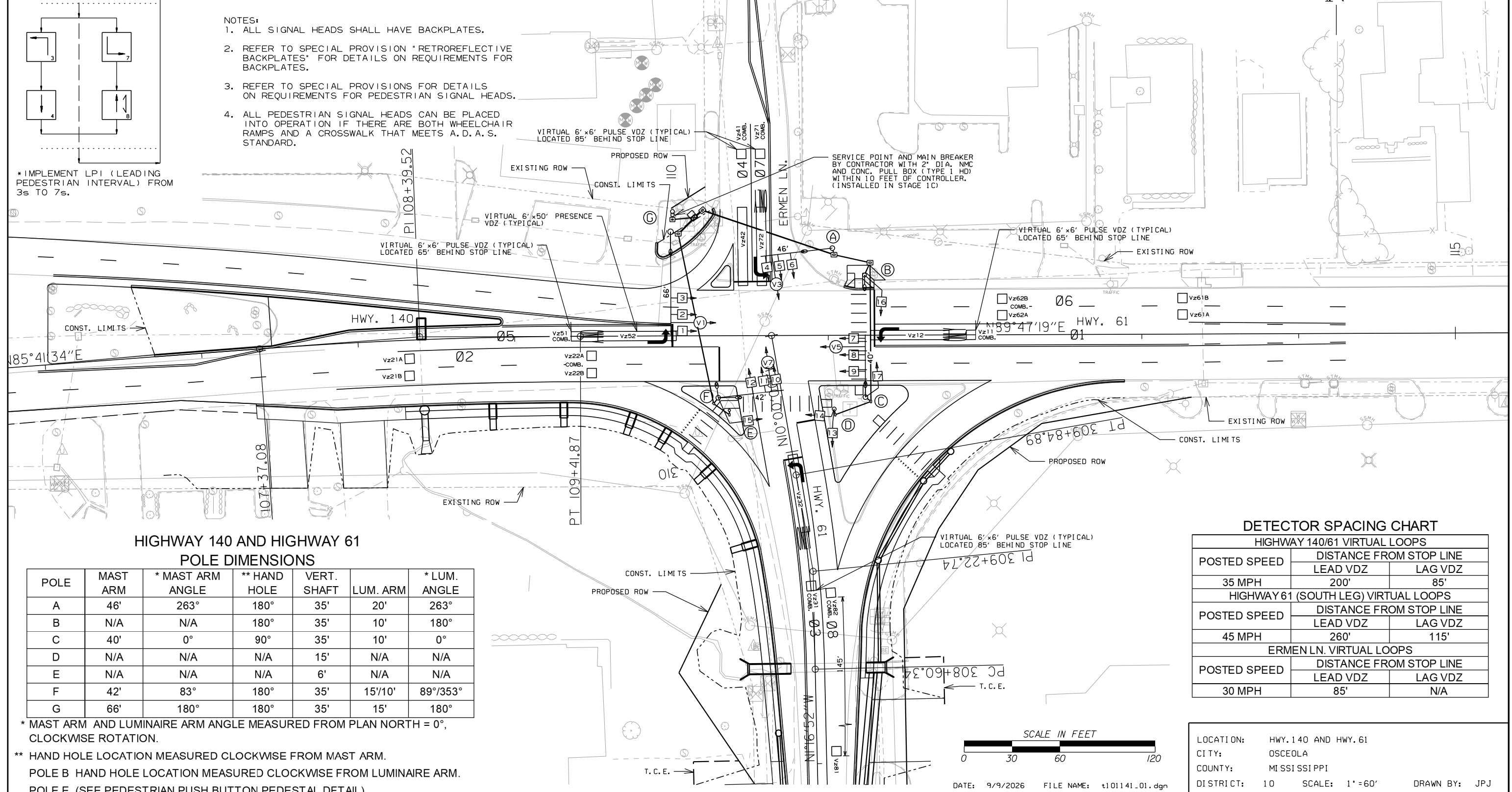
- NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
 2. REFER TO SPECIAL PROVISION "RETROREFLECTIVE BACKPLATES" FOR DETAILS ON REQUIREMENTS FOR BACKPLATES.
 3. REFER TO SPECIAL PROVISIONS FOR DETAILS ON REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.
 4. ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEETS A. D. A. S. STANDARD.

- NOTES TO CONTRACTOR:
1. V1, V3, AND V5 ARE VIDEO/RADAR DETECTORS.
 2. V7 IS A VIDEO DETECTOR.
 3. TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT ALL CONSTRUCTION PHASES.

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	54	73



DIGITALLY SIGNED 09-09-2026



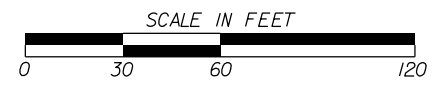
HIGHWAY 140 AND HIGHWAY 61
POLE DIMENSIONS

POLE	MAST ARM	* MAST ARM ANGLE	** HAND HOLE	VERT. SHAFT	LUM. ARM	* LUM. ANGLE
A	46'	263°	180°	35'	20'	263°
B	N/A	N/A	180°	35'	10'	180°
C	40'	0°	90°	35'	10'	0°
D	N/A	N/A	N/A	15'	N/A	N/A
E	N/A	N/A	N/A	6'	N/A	N/A
F	42'	83°	180°	35'	15'/10'	89°/353°
G	66'	180°	180°	35'	15'	180°

- * MAST ARM AND LUMINAIRE ARM ANGLE MEASURED FROM PLAN NORTH = 0°, CLOCKWISE ROTATION.
- ** HAND HOLE LOCATION MEASURED CLOCKWISE FROM MAST ARM.
- POLE B HAND HOLE LOCATION MEASURED CLOCKWISE FROM LUMINAIRE ARM.
- POLE E (SEE PEDESTRIAN PUSH BUTTON PEDESTAL DETAIL).

DETECTOR SPACING CHART

HIGHWAY 140/61 VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
35 MPH	200'	85'
HIGHWAY 61 (SOUTH LEG) VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
45 MPH	260'	115'
ERMEN LN. VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
30 MPH	85'	N/A



DATE: 9/9/2026 FILE NAME: t101141_01.dgn

LOCATION: HWY. 140 AND HWY. 61
CITY: OSCEOLA
COUNTY: MISSISSIPPI
DISTRICT: 10 SCALE: 1" = 60' DRAWN BY: JPJ

DESIGN PARAMETERS

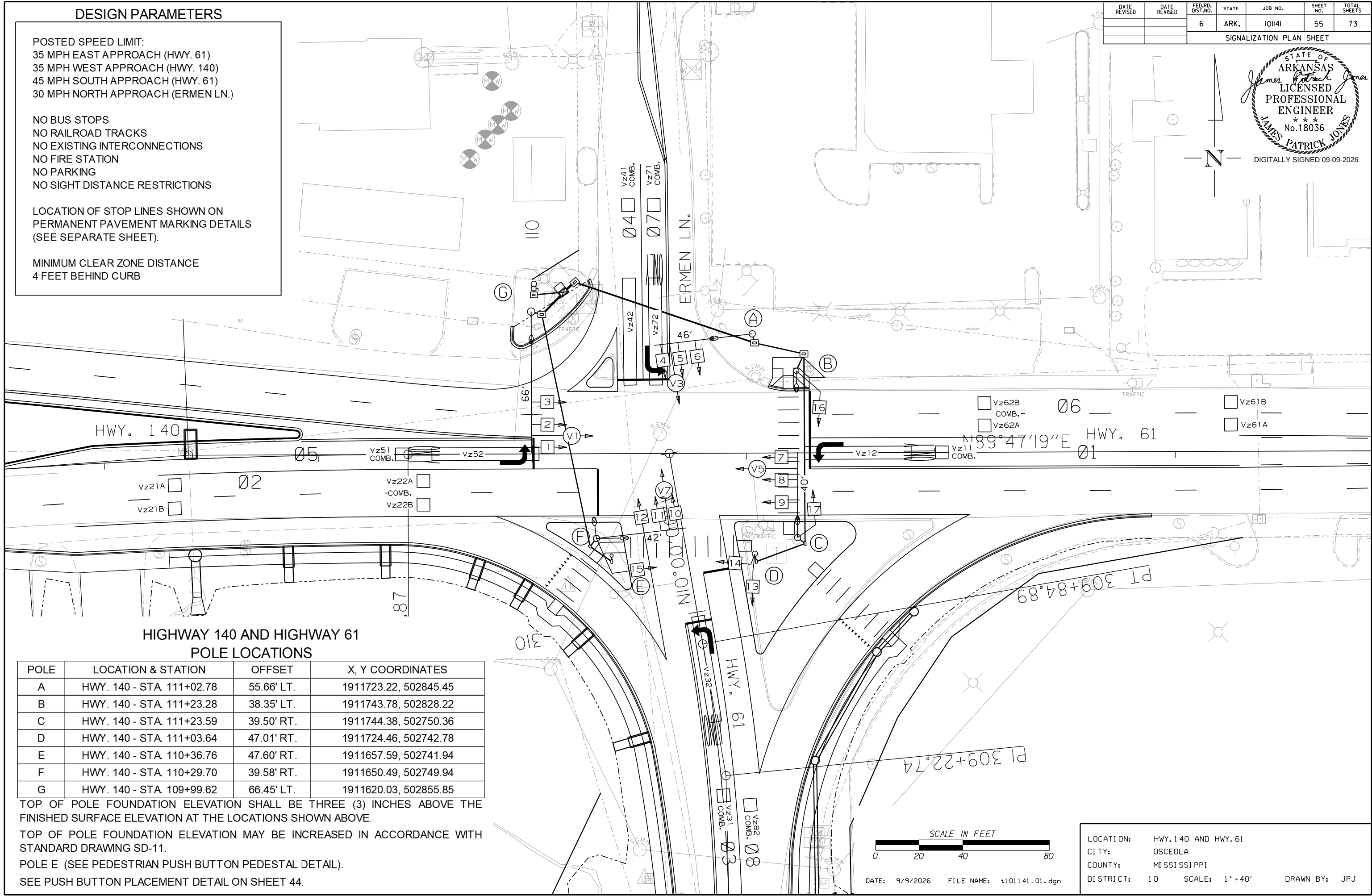
POSTED SPEED LIMIT:
35 MPH EAST APPROACH (HWY. 61)
35 MPH WEST APPROACH (HWY. 140)
45 MPH SOUTH APPROACH (HWY. 61)
30 MPH NORTH APPROACH (ERMEN LN.)

NO BUS STOPS
NO RAILROAD TRACKS
NO EXISTING INTERCONNECTIONS
NO FIRE STATION
NO PARKING
NO SIGHT DISTANCE RESTRICTIONS

LOCATION OF STOP LINES SHOWN ON
PERMANENT PAVEMENT MARKING DETAILS
(SEE SEPARATE SHEET).

MINIMUM CLEAR ZONE DISTANCE
4 FEET BEHIND CURB

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	55	73
SIGNALIZATION PLAN SHEET						



HIGHWAY 140 AND HIGHWAY 61
POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 140 - STA 111+02.78	55.66' LT.	1911723.22, 502845.45
B	HWY. 140 - STA 111+23.28	38.35' LT.	1911743.78, 502828.22
C	HWY. 140 - STA 111+23.59	39.50' RT.	1911744.38, 502750.36
D	HWY. 140 - STA 111+03.64	47.01' RT.	1911724.46, 502742.78
E	HWY. 140 - STA 110+36.76	47.60' RT.	1911657.59, 502741.94
F	HWY. 140 - STA 110+29.70	39.58' RT.	1911650.49, 502749.94
G	HWY. 140 - STA 109+99.62	66.45' LT.	1911620.03, 502855.85

TOP OF POLE FOUNDATION ELEVATION SHALL BE THREE (3) INCHES ABOVE THE FINISHED SURFACE ELEVATION AT THE LOCATIONS SHOWN ABOVE.
TOP OF POLE FOUNDATION ELEVATION MAY BE INCREASED IN ACCORDANCE WITH STANDARD DRAWING SD-11.
POLE E (SEE PEDESTRIAN PUSH BUTTON PEDESTAL DETAIL).
SEE PUSH BUTTON PLACEMENT DETAIL ON SHEET 44.



DATE: 9/9/2026 FILE NAME: t101141_01.dgn

LOCATION: HWY. 140 AND HWY. 61
CITY: OSCEOLA
COUNTY: MISSISSIPPI
DISTRICT: 10 SCALE: 1" = 40' DRAWN BY: JPJ

HIGHWAY 140 AND HIGHWAY 61
PULL BOX LOCATIONS

PULL BOX	TYPE	LOCATION & STATION	* OFFSET	* X, Y COORDINATES
PB1	2 HD	HWY. 140 - STA. 110+19.98	80.08' LT.	1911640.33, 502869.56
PB2	2 HD	HWY. 140 - STA. 111+03.85	51.44' LT.	1911724.31, 502841.23
PB3	2 HD	HWY. 140 - STA. 111+26.85	46.24' LT.	1911747.33, 502836.12
PB4	2	HWY. 140 - STA. 111+27.08	42.30' RT.	1911747.88, 502747.58
PB5	2	HWY. 140 - STA. 111+04.31	50.61' RT.	1911725.14, 502739.18
PB6	2	HWY. 140 - STA. 110+36.80	50.36' RT.	1911657.63, 502739.18
PB7	2	HWY. 140 - STA. 110+26.73	43.30' RT.	1911647.54, 502746.21
PB8	2 HD	HWY. 140 - STA. 110+04.57	65.09' LT.	1911624.97, 502854.52
** PB9	1 HD	HWY. 140 - STA. 110+00.90	74.25' LT.	1911621.28, 502863.66

* CENTER OF PULL BOX

** PB9 INSTALLED DURING STAGE 1C

THE TOP OF ALL PULL BOXES SHALL BE INSTALLED AT THE FINISHED SURFACE ELEVATION.

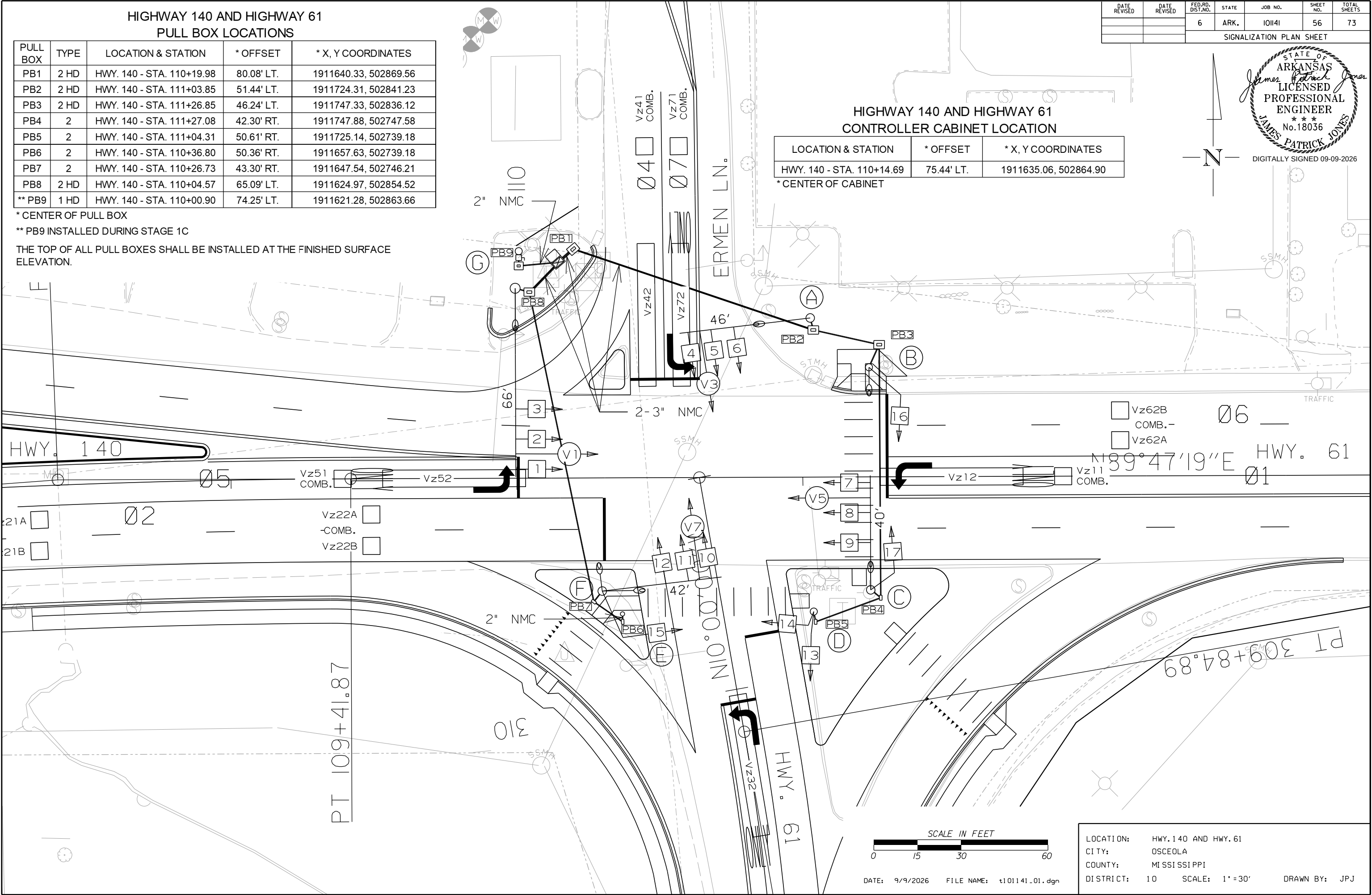
HIGHWAY 140 AND HIGHWAY 61
CONTROLLER CABINET LOCATION

LOCATION & STATION	* OFFSET	* X, Y COORDINATES
HWY. 140 - STA. 110+14.69	75.44' LT.	1911635.06, 502864.90
* CENTER OF CABINET		

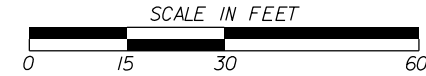
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	56	73
SIGNALIZATION PLAN SHEET						



DIGITALLY SIGNED 09-09-2026

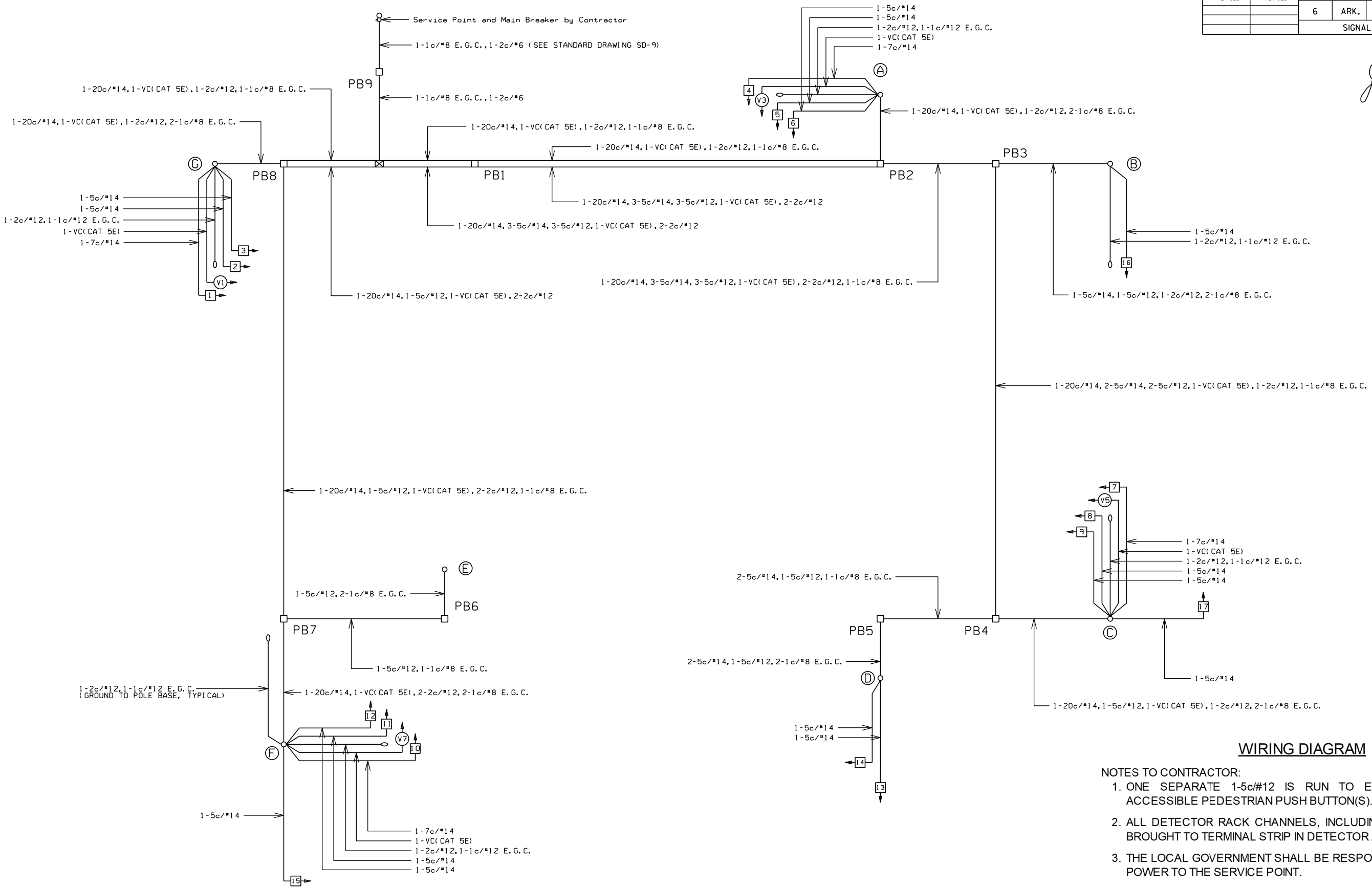


LOCATION:	HWY. 140 AND HWY. 61
CITY:	OSCEOLA
COUNTY:	MISSISSIPPI
DISTRICT:	10
SCALE:	1" = 30'
DRAWN BY:	JPJ



DATE: 9/9/2026 FILE NAME: t101141_01.dgn

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	57	73
SIGNALIZATION PLAN SHEET						



WIRING DIAGRAM

- NOTES TO CONTRACTOR:
- ONE SEPARATE 1-5c/#12 IS RUN TO EACH POLE FOR THE ACCESSIBLE PEDESTRIAN PUSH BUTTON(S).
 - ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA OF CABINET.
 - THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.
 - SEE GROUNDING ARRAY DETAIL ON SHEET 43.

LOCATION:	HWY. 140 AND HWY. 61
CITY:	OSCEOLA
COUNTY:	MISSISSIPPI
DISTRICT:	10
SCALE:	N/A
DRAWN BY:	JPJ

12" LENSES

ONE SECTION
(SOLID SYMBOL)

2 & 3
5, 6, & 13
8 & 9
11 & 12

1, 4, 7, 10

14 & 15
16 & 17

- 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.

*IMPLEMENT LPI (LEADING PEDESTRIAN INTERVAL) FROM 3s TO 7s.

DETECTOR SYSTEM DESCRIPTION: JOB 101141

DETECTOR SYSTEM DESCRIPTION: JOB 101141											
HIGHWAY 140 AND HIGHWAY 61 DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS			COMMENTS	TUBE LENGTHS
DET. ID #	LOCATION DIRECTION	TYPE	DET. #	CAB. TRM. #	AMP CHN. #	CON. IMP. #	PHS	SYSTEM DET. #	MASTER SYSTEM DETECTOR NUMBERS		
Vz11	WB LEFT TURN FAR	COMB.				V9	1	1		CAMERA V1	MAST ARM
Vz12	WB LEFT TURN	LOCAL				V1	1			CAMERA V1	MOUNTED
Vz21 A&B	EB ADVANCE	LOCAL				V2	2			CAMERA V5	MAST ARM
Vz22 A&B	EB NEAR	COMB.				V10	2	2		CAMERA V5	MOUNTED
Vz31	NB LEFT TURN FAR	COMB.				V11	3	3		CAMERA V3	MAST ARM
Vz32	NB LEFT TURN	LOCAL				V3	3			CAMERA V3	MOUNTED
Vz41	SB ADVANCE	COMB.				V12	4	4		CAMERA V7	37"
Vz42	SB NEAR	LOCAL				V4	4			CAMERA V7	37"
Vz51	EB LEFT TURN FAR	COMB.				V13	5	5		CAMERA V5	MAST ARM
Vz52	EB LEFT TURN	LOCAL				V5	5			CAMERA V5	MOUNTED
Vz61 A&B	WB ADVANCE	LOCAL				V6	6			CAMERA V1	MAST ARM
Vz62 A&B	WB NEAR	COMB.				V14	6	6		CAMERA V1	MOUNTED
Vz71	SB LEFT TURN FAR	COMB.				V15	7	7		CAMERA V7	37"
Vz72	SB LEFT TURN	LOCAL				V7	7			CAMERA V7	37"
Vz81	NB ADVANCE	LOCAL				V8	8			CAMERA V3	MAST ARM
Vz82	NB NEAR	COMB.				V16	8	8		CAMERA V3	MOUNTED
PB2 A&B	HIGHWAY 61 S. LEG	PED.				P2	2				
PB8 A&B	HIGHWAY 61 E. LEG	PED.				P8	8				
					SPARE:						

V = VEHICLE INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT

NOTE: 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

SIGNAL FACES	HIGHWAY 140 AND HIGHWAY 61																FLASH SEQUENCE
	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, & 13	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
14 & 15	DW	DW	DW	DW	W	FDW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLK
16 & 17	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	W	FDW	BLK

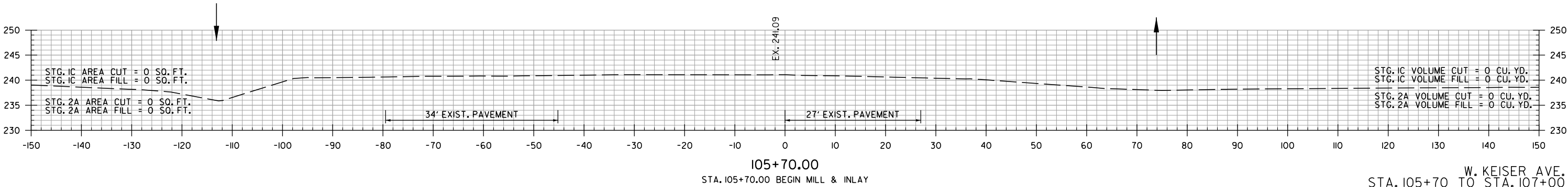
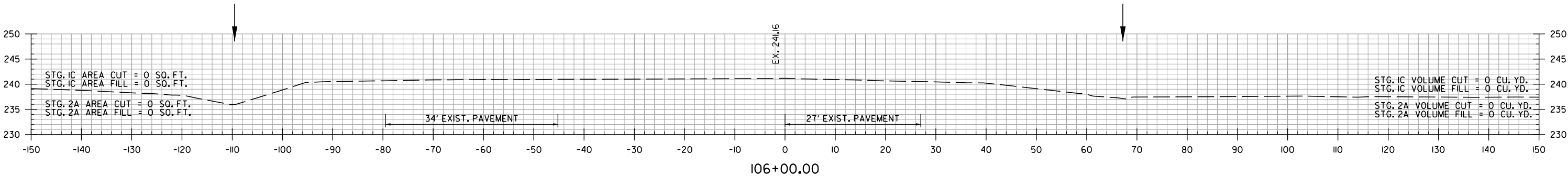
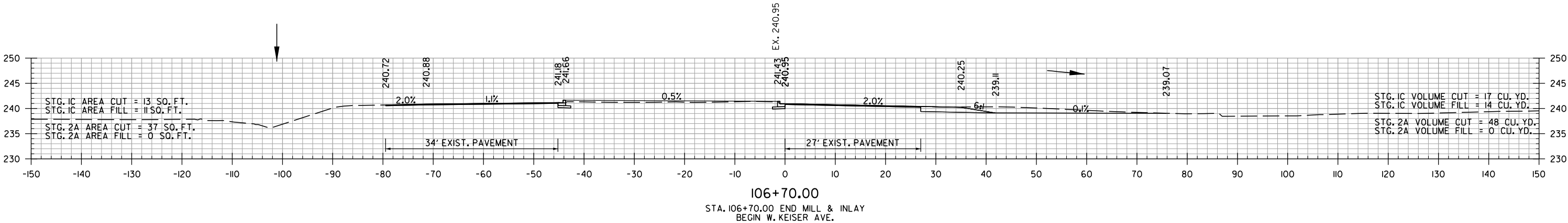
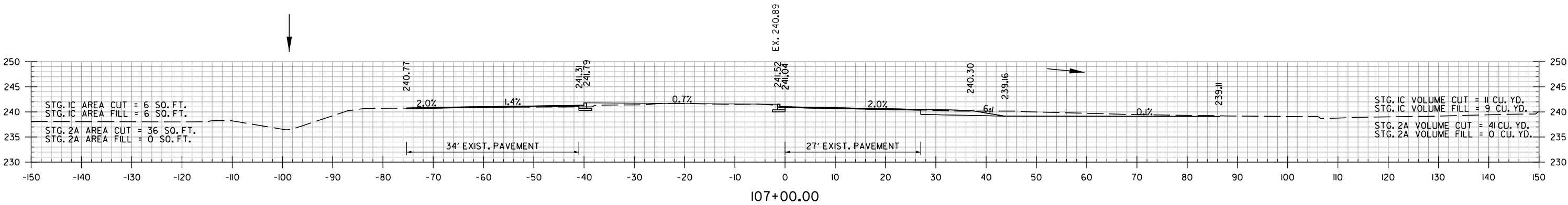
* DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE
 ** DENOTES GREEN OR YELLOW BALL DEPENDING ON NEXT PHASE
 *** DENOTES FLASHING YELLOW ARROW OR YELLOW ARROW DEPENDING ON NEXT PHASE

LOCATION:	HWY. 140 AND HWY. 61		
CITY:	OSCEOLA		
COUNTY:	MISSISSIPPI		
DISTRICT:	10	SCALE:	N/A
		DRAWN BY:	JPJ

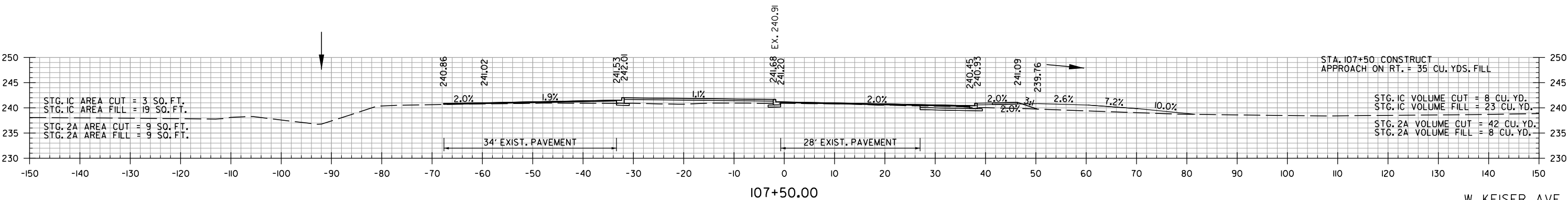
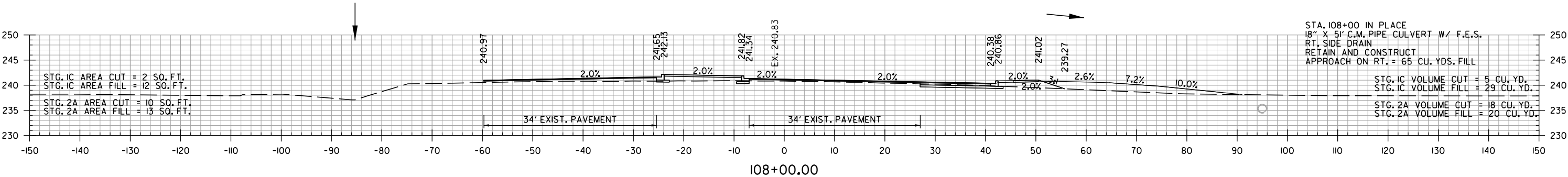
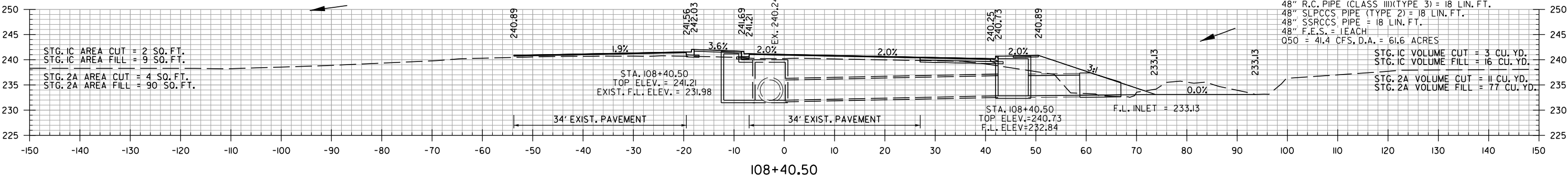
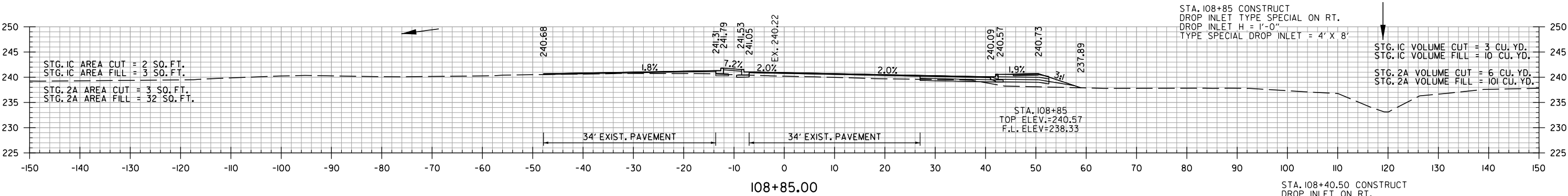
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	58	73
		SIGNALIZATION PLAN SHEET				



DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	59	73
CROSS SECTIONS						

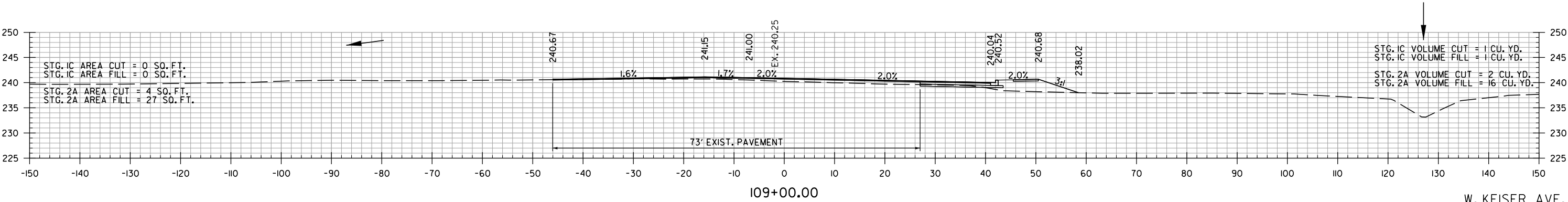
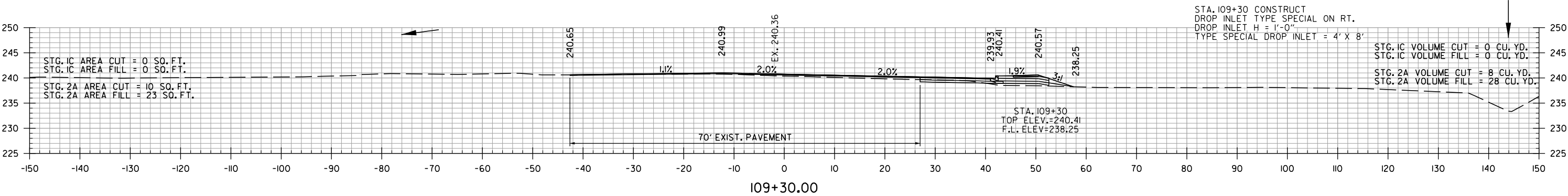
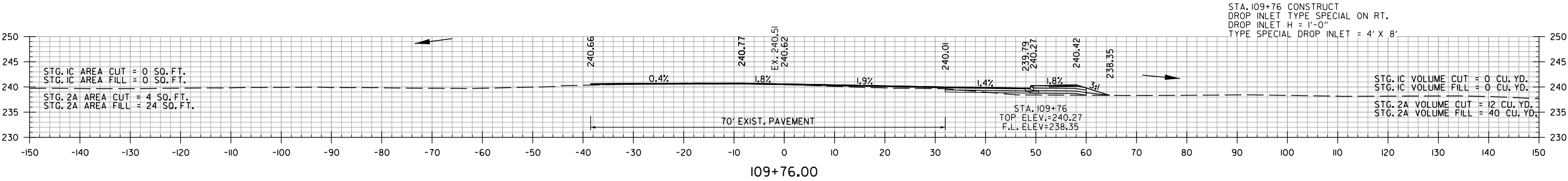
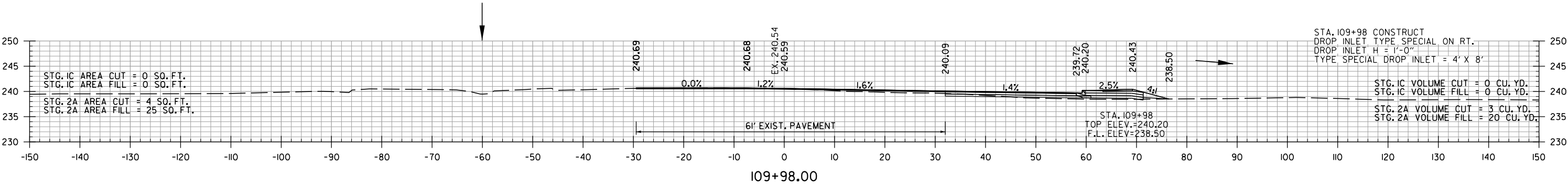


DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	60	73
CROSS SECTIONS						



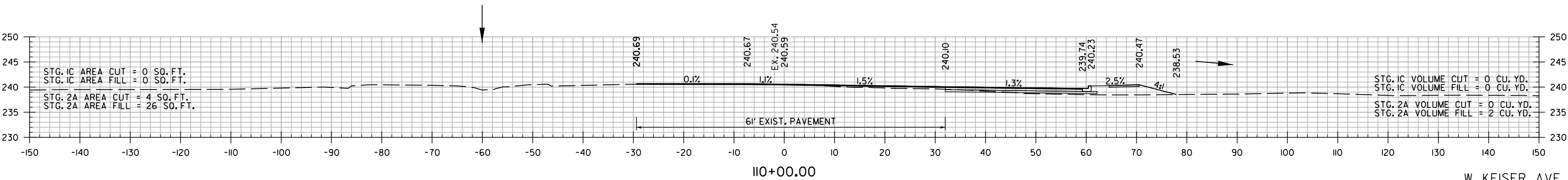
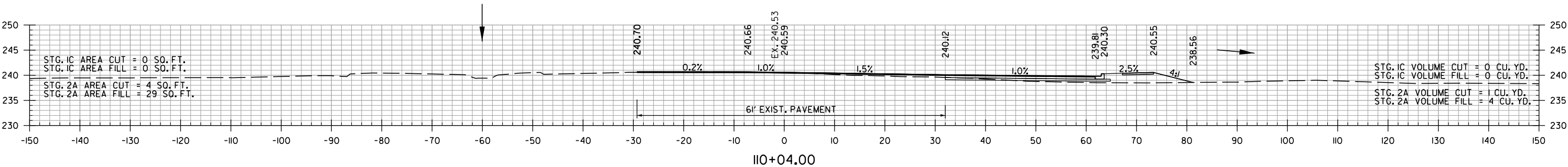
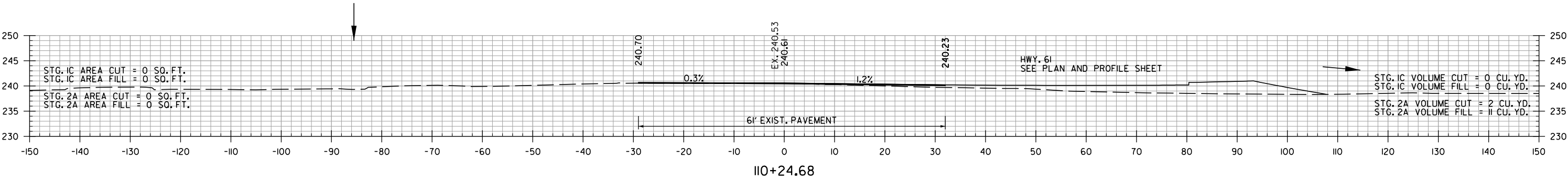
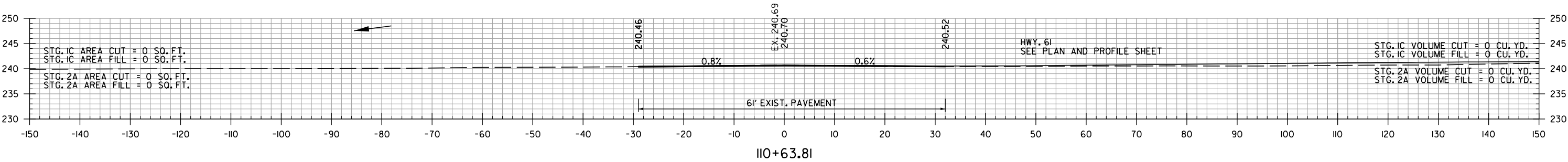
W. KEISER AVE.
STA. 107+50 TO STA. 108+85

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	61	73
CROSS SECTIONS						



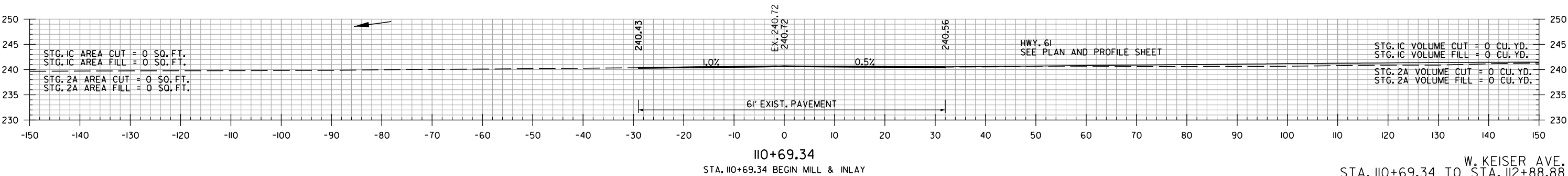
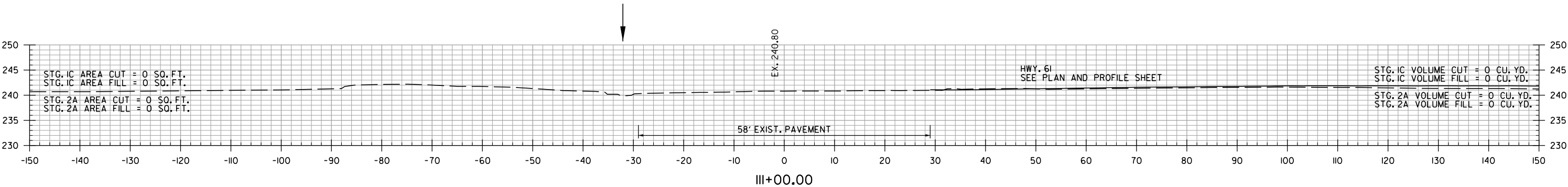
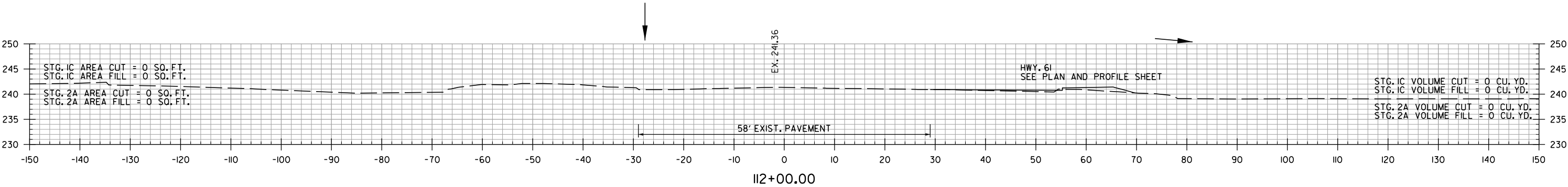
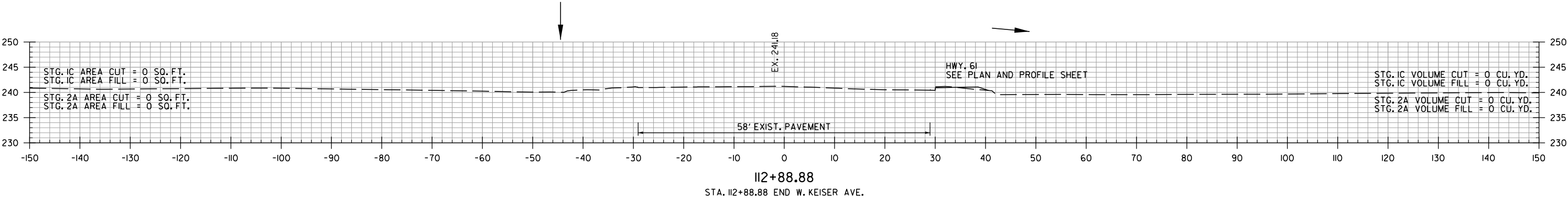
W. KEISER AVE.
STA. 109+00 TO STA. 109+98

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	62	73
CROSS SECTIONS						



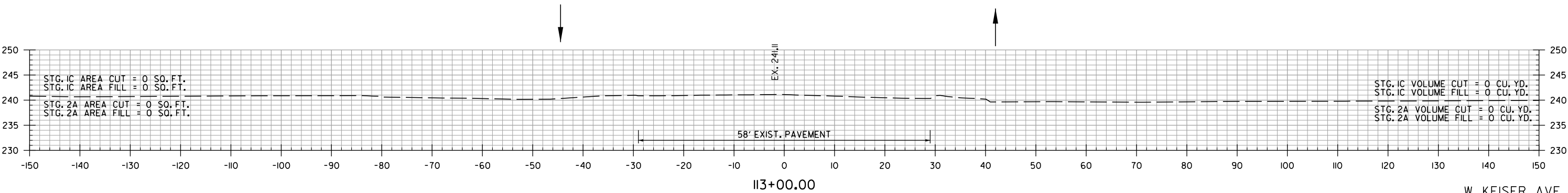
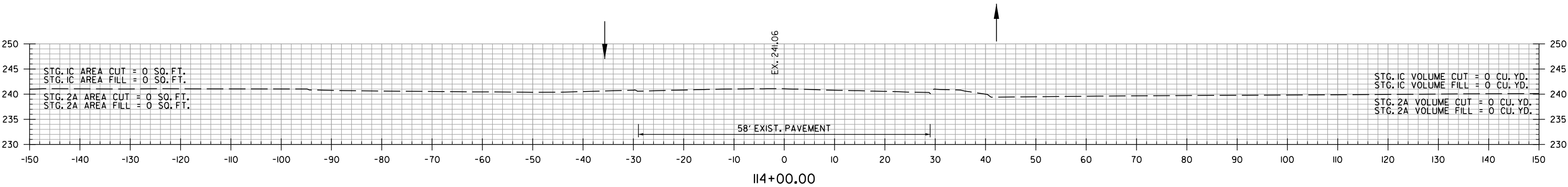
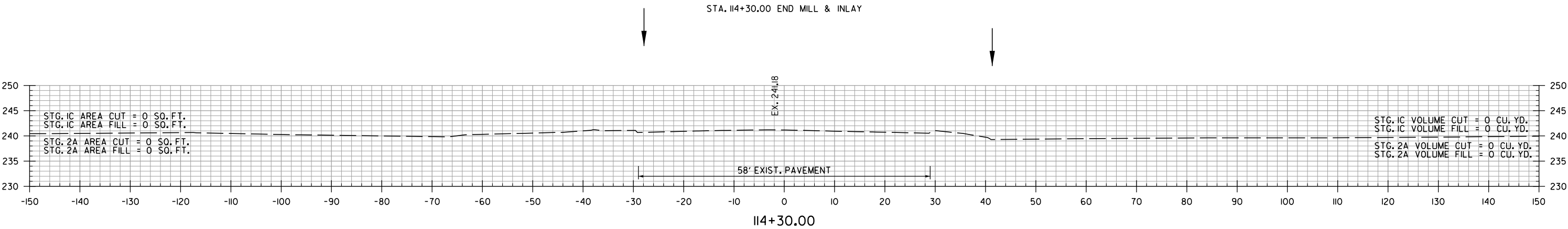
W. KEISER AVE.
STA. 110+00 TO STA. 110+63.81

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	63	73
CROSS SECTIONS						



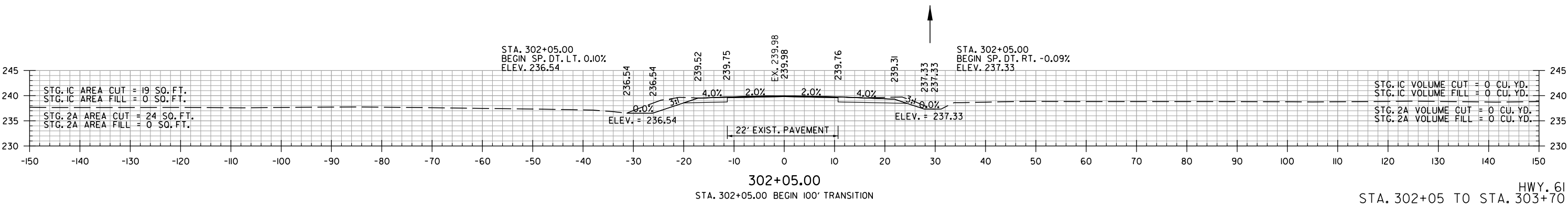
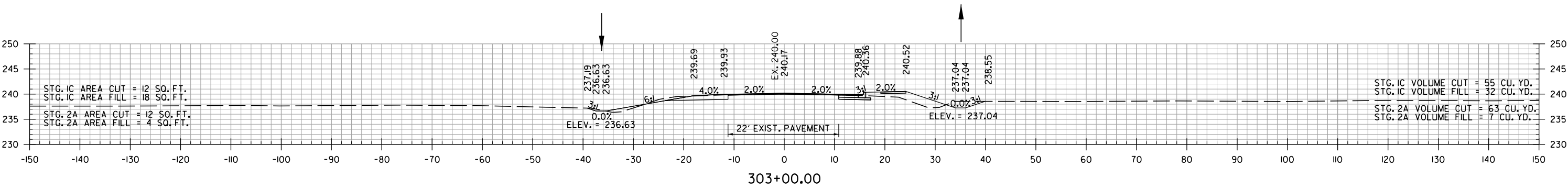
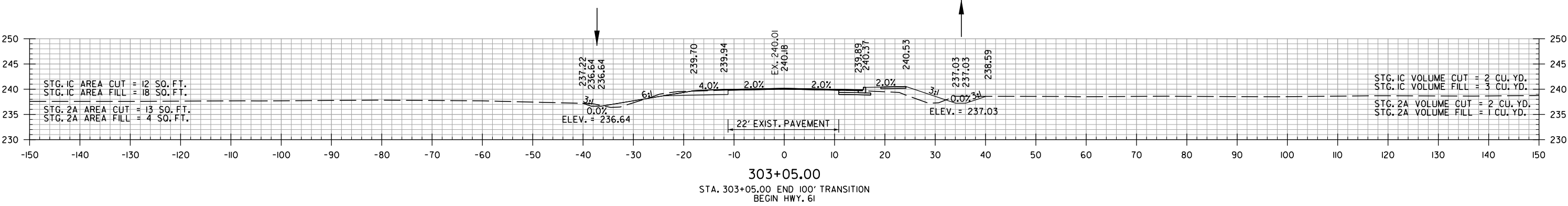
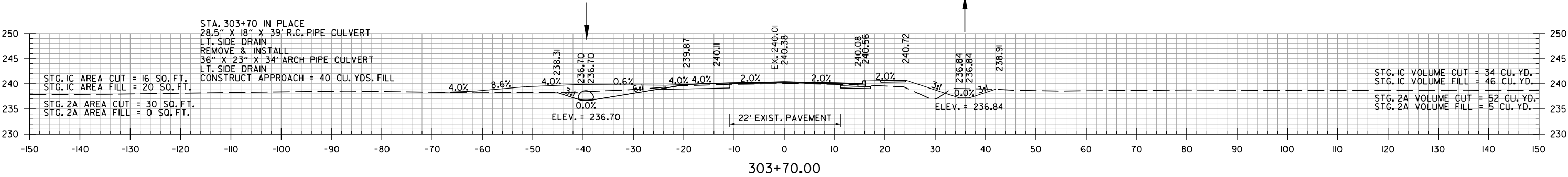
W. KEISER AVE.
STA. 110+69.34 TO STA. 112+88.88

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	64	73
CROSS SECTIONS						

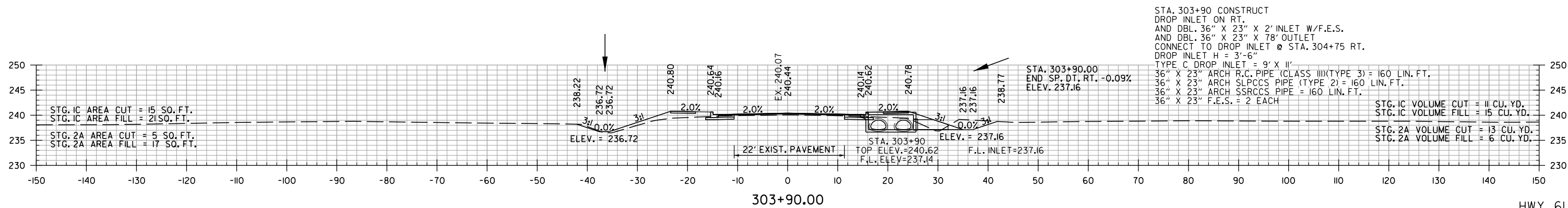
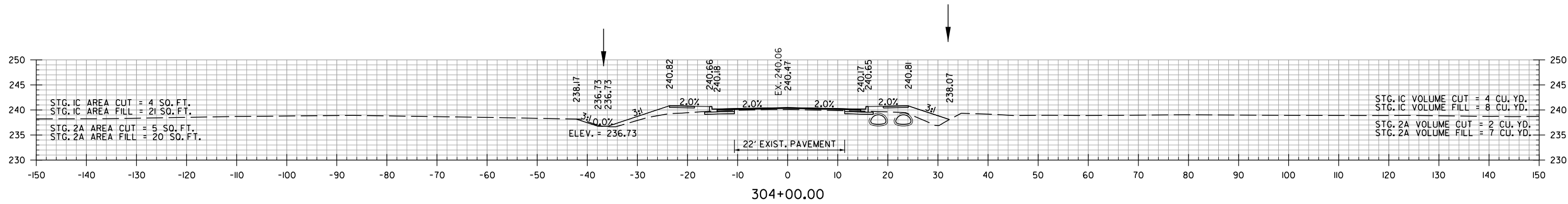
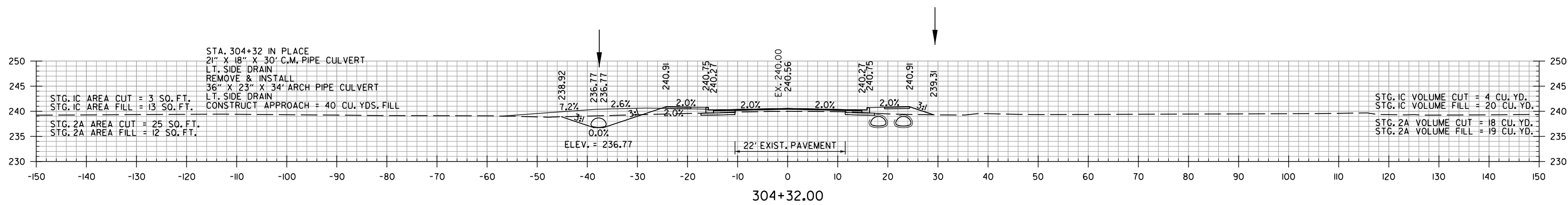
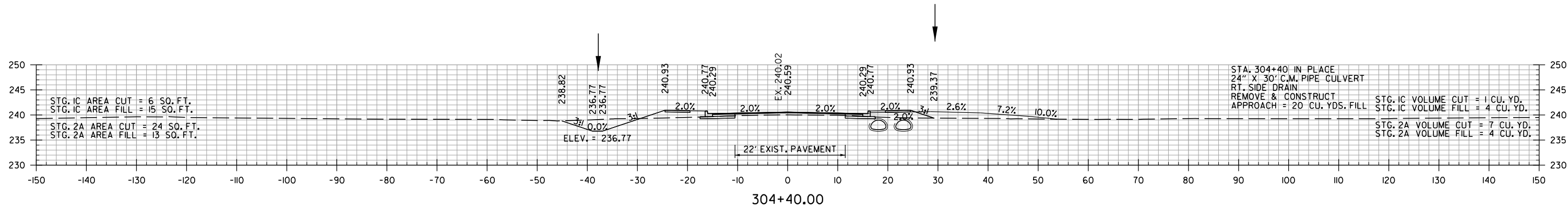


W. KEISER AVE.
STA. 113+00 TO STA. 114+30

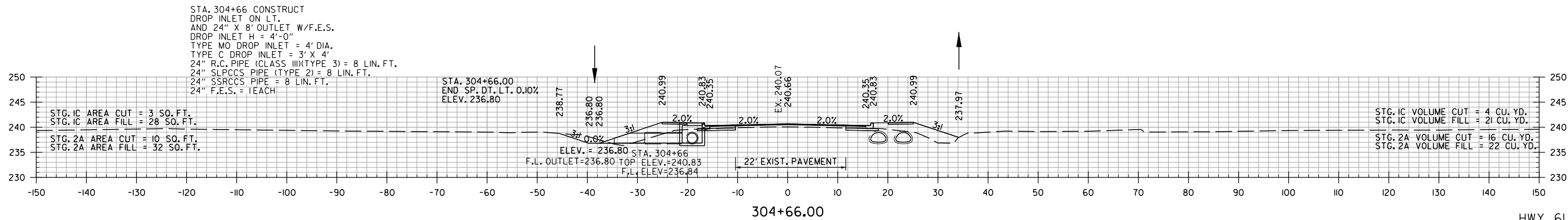
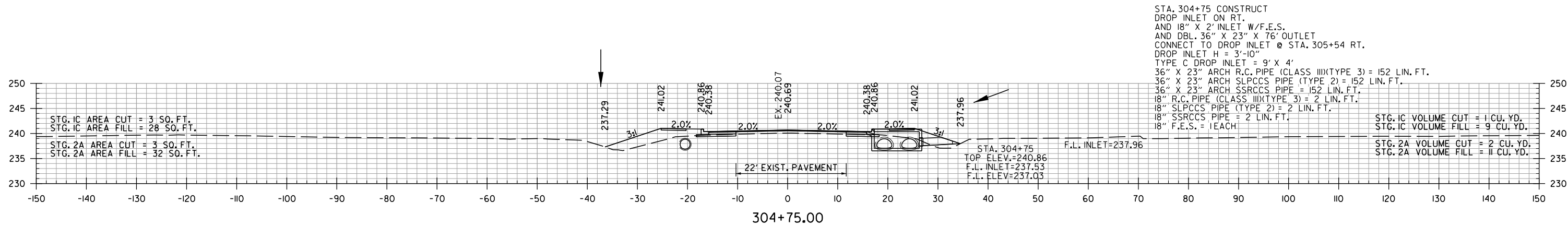
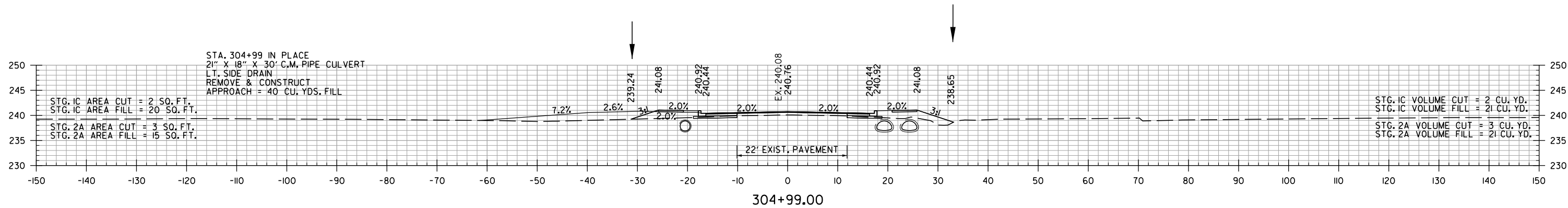
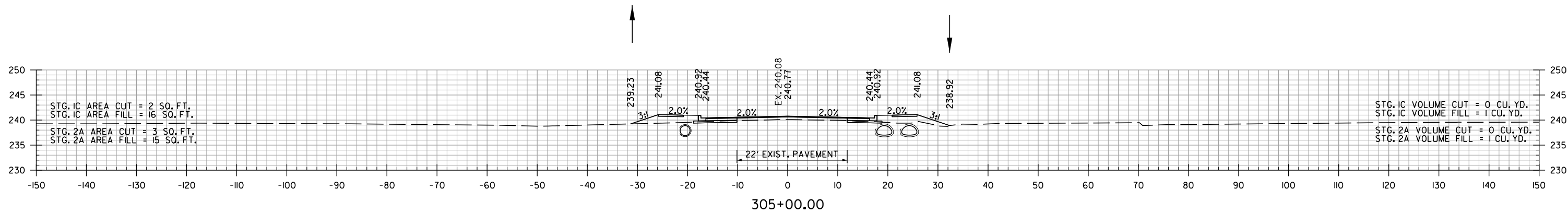
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	65	73
CROSS SECTIONS						



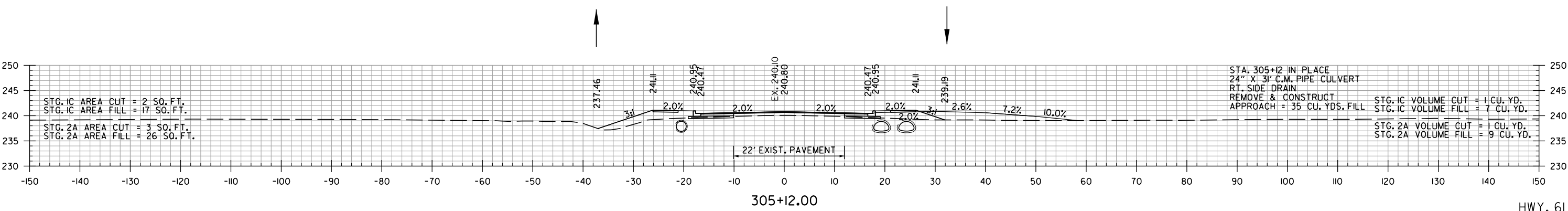
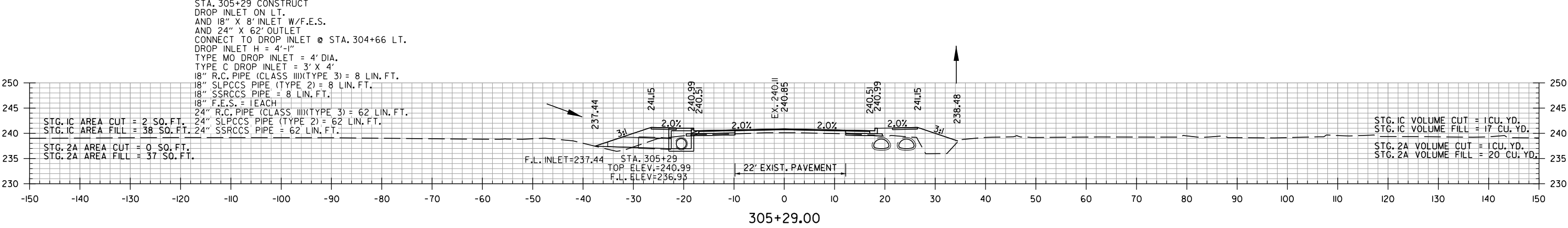
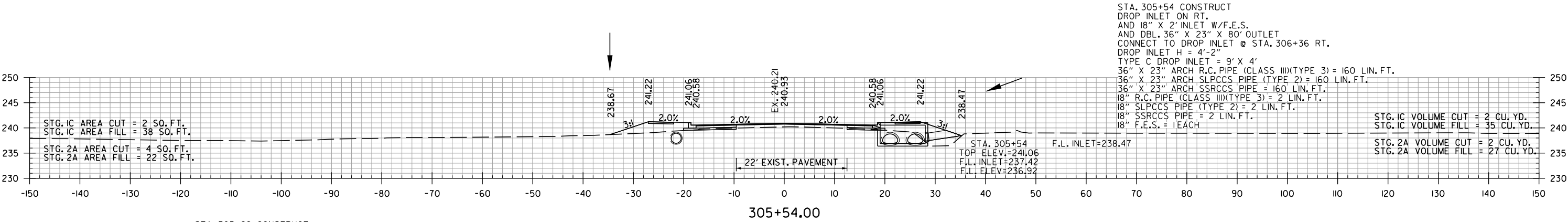
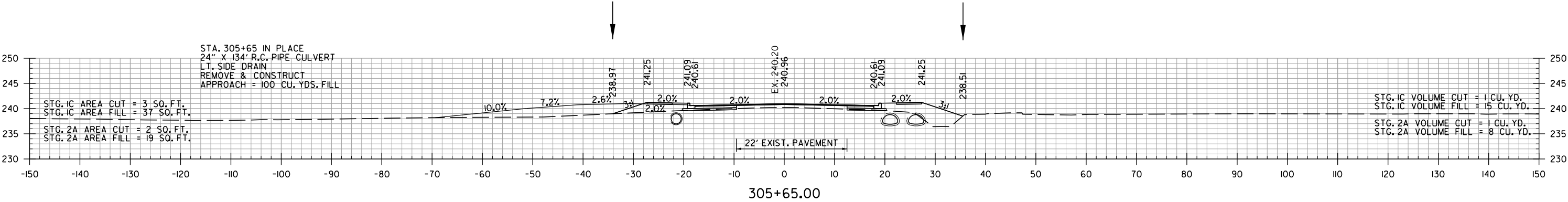
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	66	73
CROSS SECTIONS						



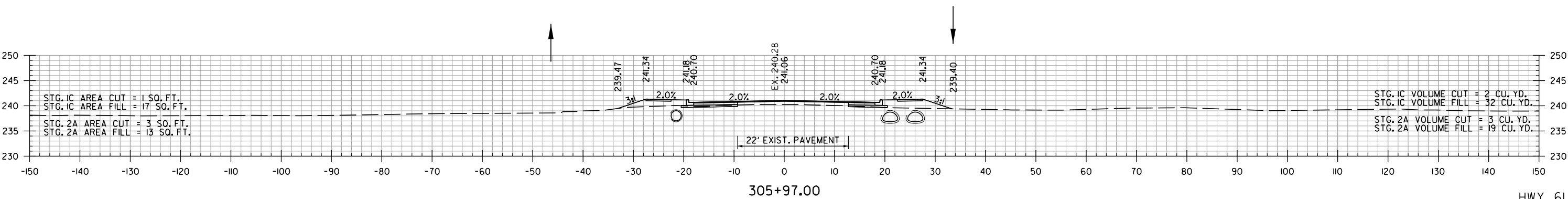
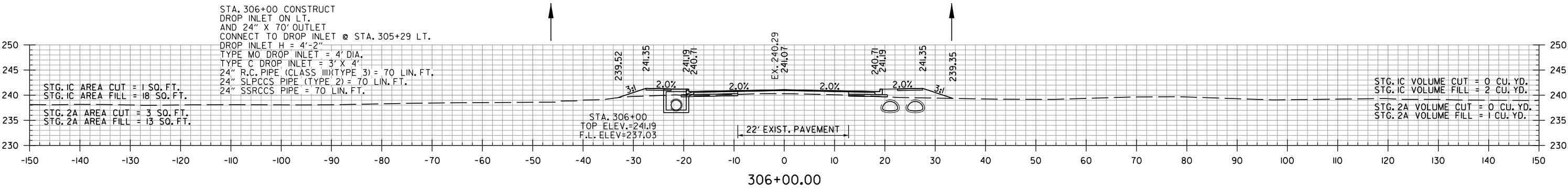
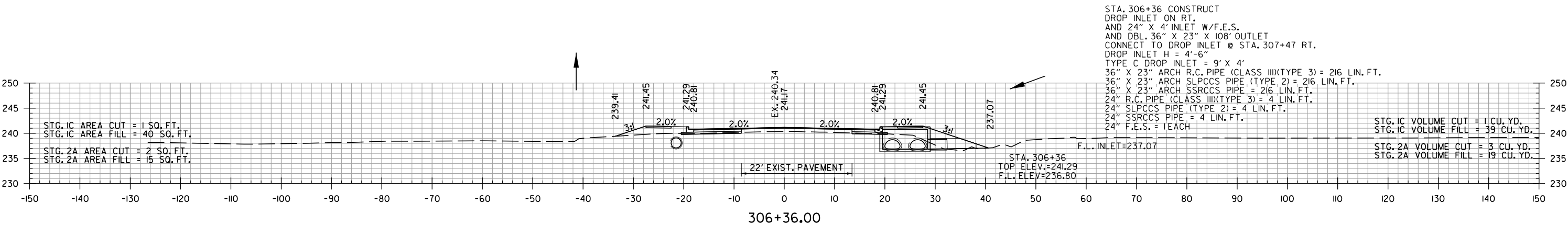
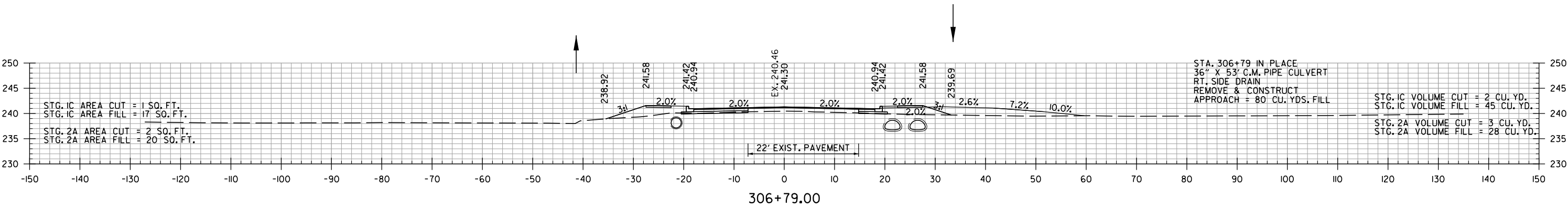
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	67	73
CROSS SECTIONS						



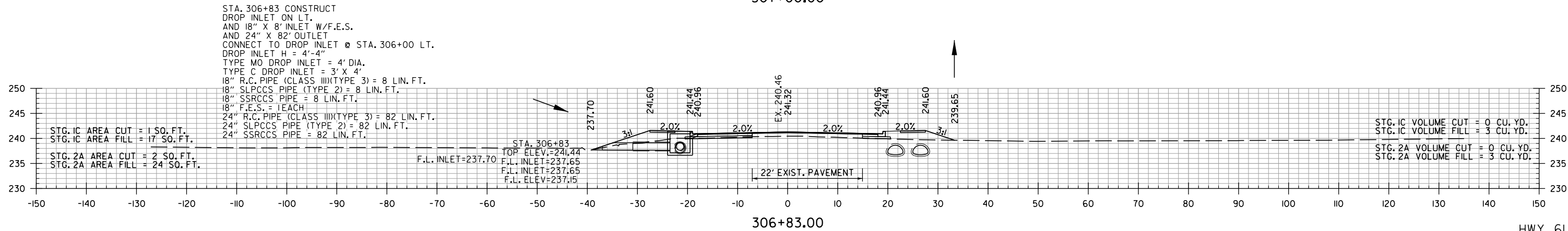
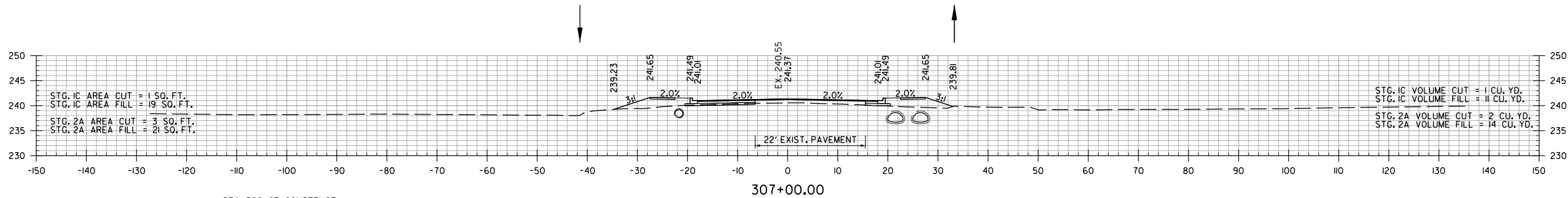
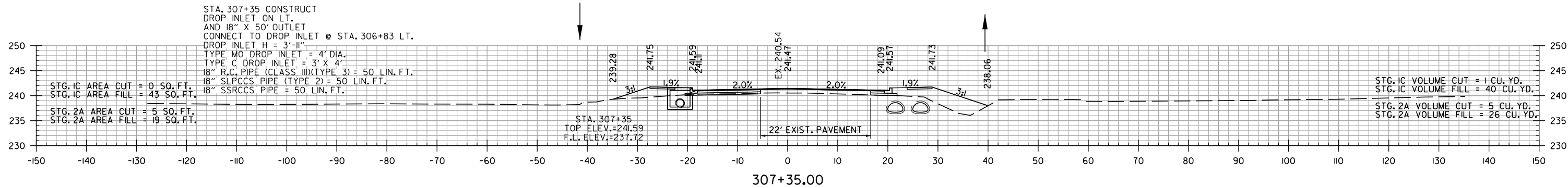
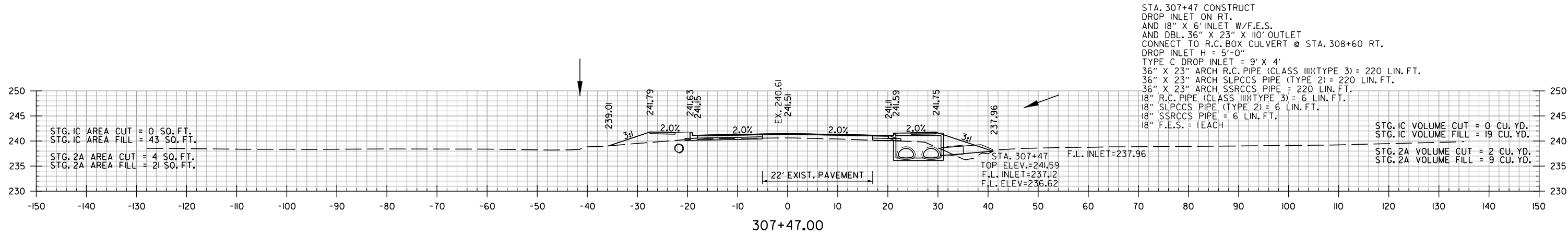
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	68	73
CROSS SECTIONS						



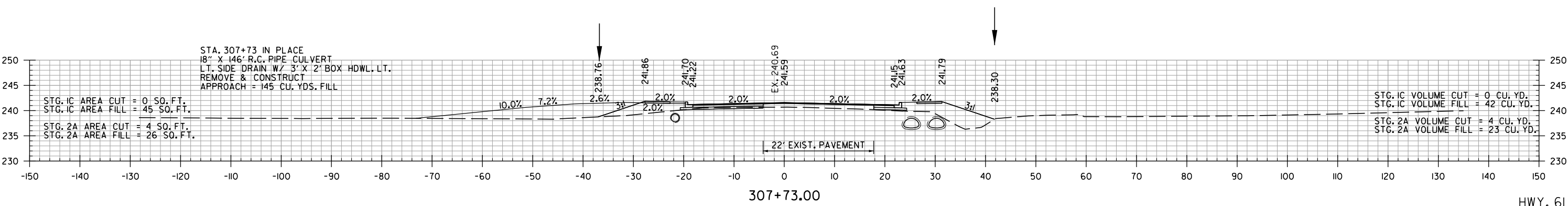
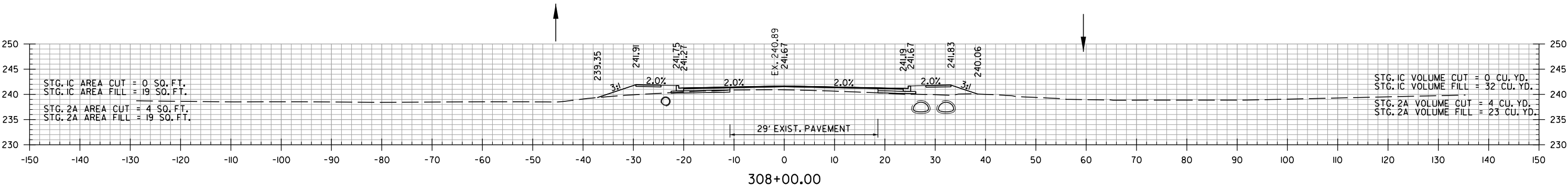
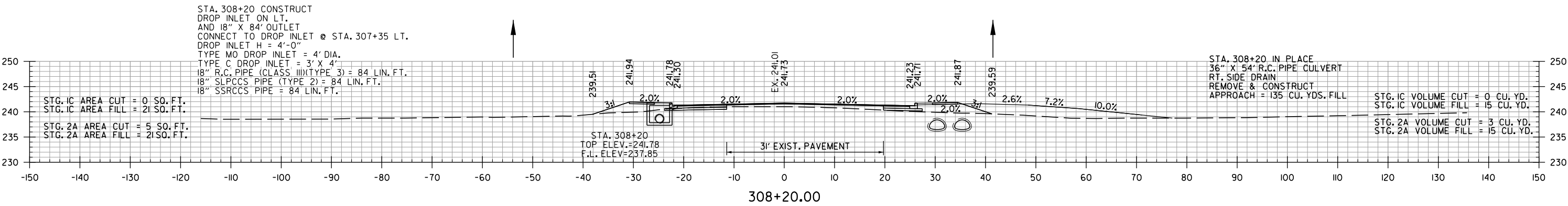
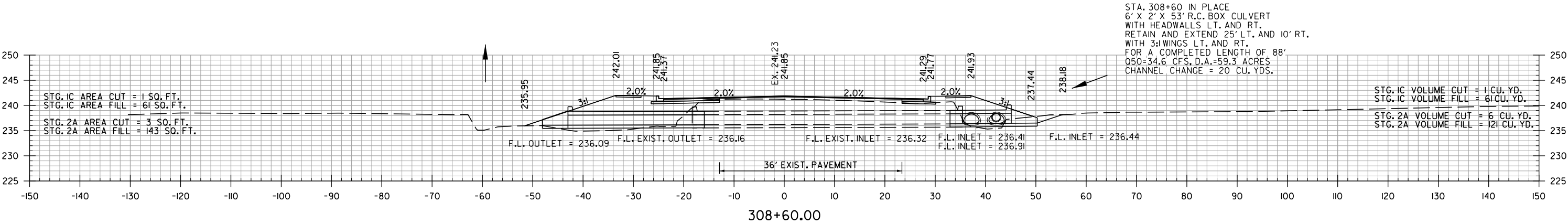
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	69	73
CROSS SECTIONS						



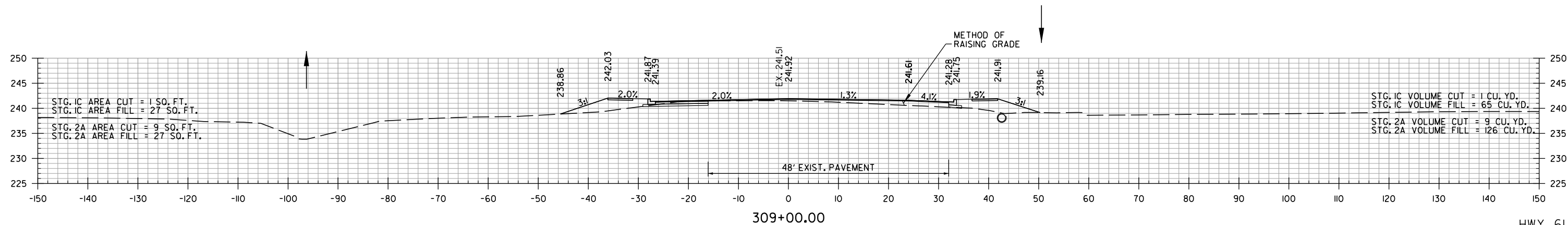
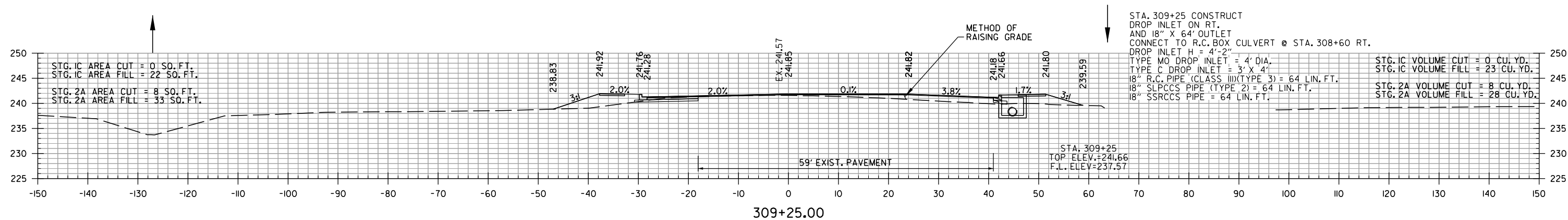
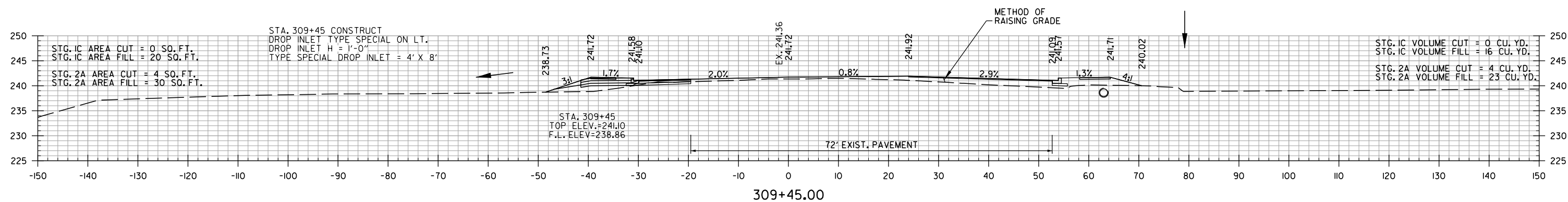
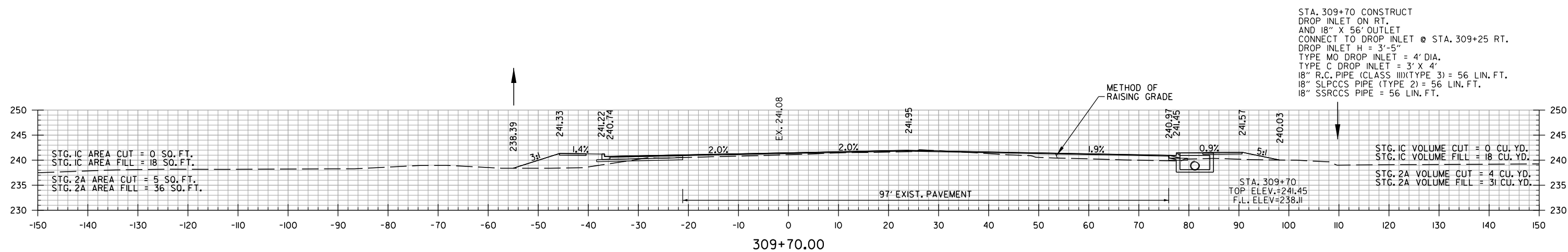
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	70	73
CROSS SECTIONS						



DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	71	73
CROSS SECTIONS						

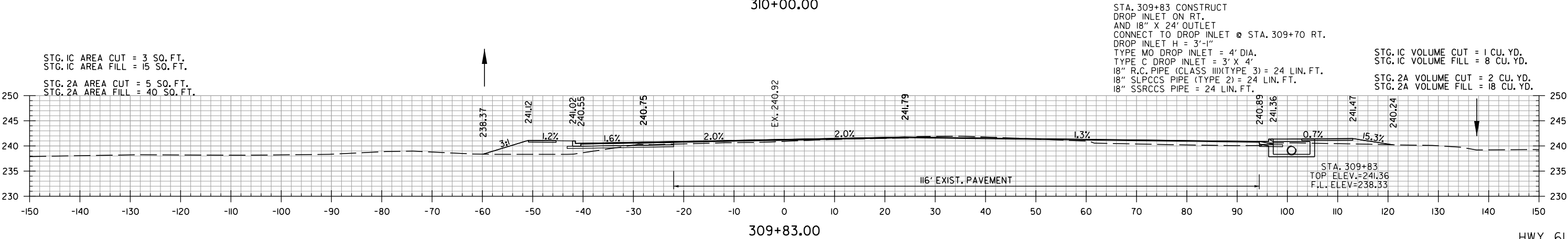
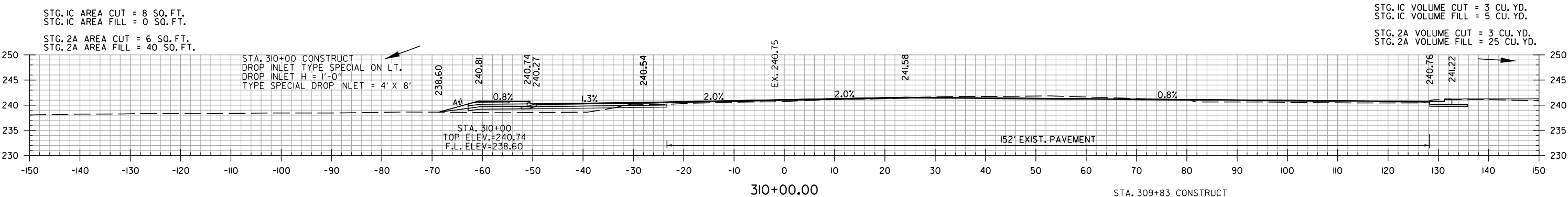
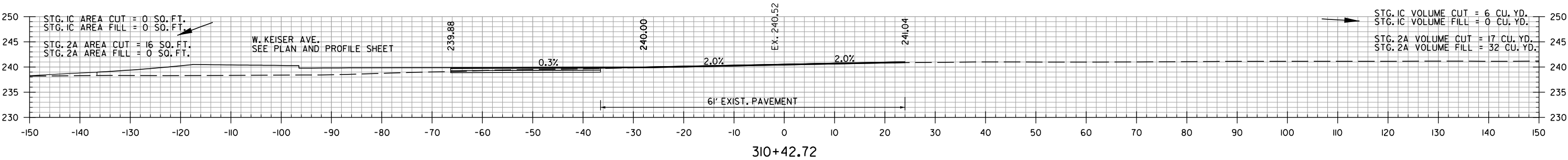


DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	72	73
		CROSS SECTIONS				

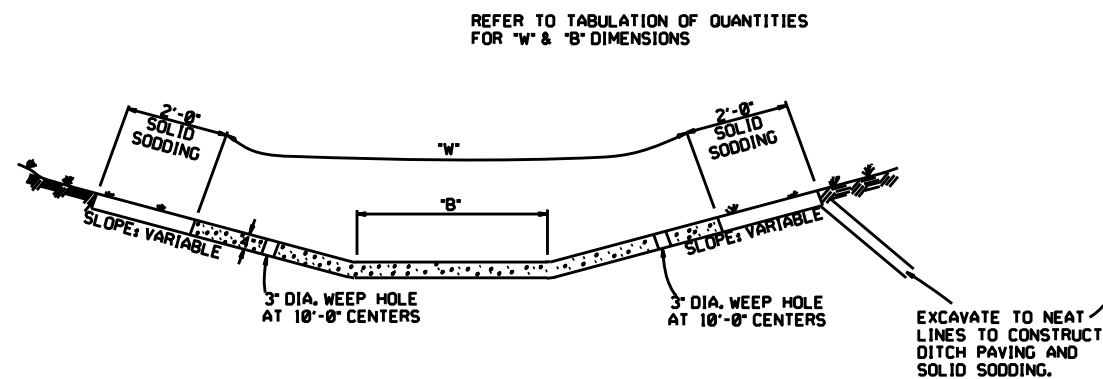


DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	101141	73	73
CROSS SECTIONS						

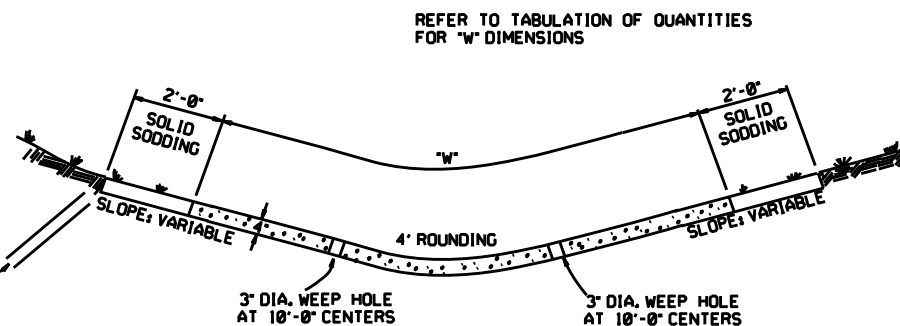
STA. 310+42.72 END HWY. 61



HWY. 61
STA. 309+83 TO STA. 310+42.72

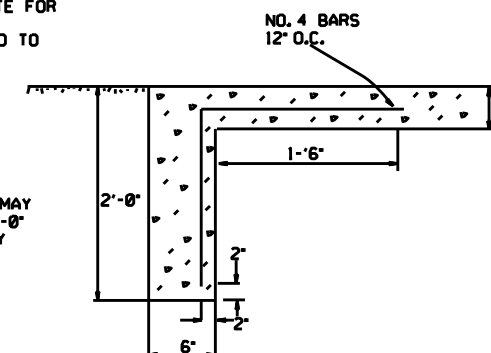


TYPE A



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."



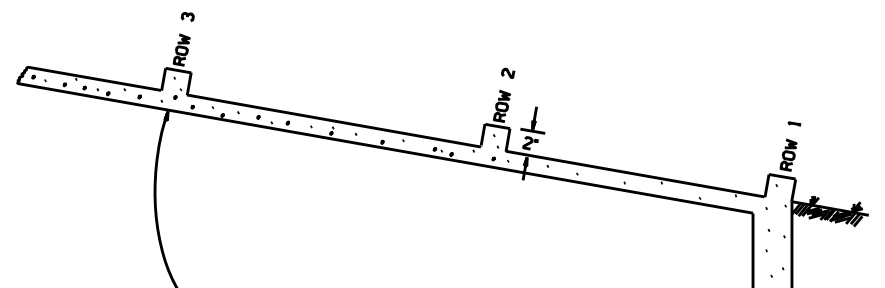
GENERAL NOTES:

THE FULL WIDTH OF EACH SECTION SHALL BE POURED MONOLITHICALLY.

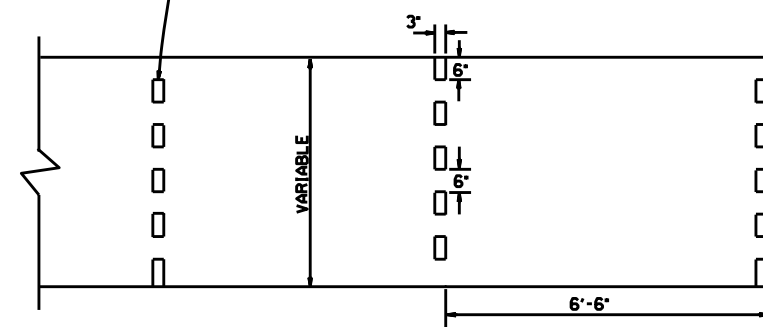
TOE WALLS TO BE CONSTRUCTED FULL WIDTH AT EACH END OF DITCH PAVING, AND POURED MONOLITHICALLY.

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.



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.



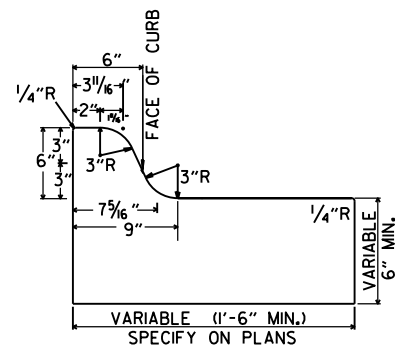
ENERGY DISSIPATORS
(NO SCALE)

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	
11-30-88	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.	632-1-9-87
11-3-86	ADDED NOTE TO ENERGY DISS.	639-12-1-86
11-1-84	ENERGY DISSIPATOR DETAILS ADDED	508-11-1-84
11-1-84	EXCAVATION DETAILS ADDED	
10-2-72	TYPED A & B	
	REVISED AND REDRAWN	508-10-2-72

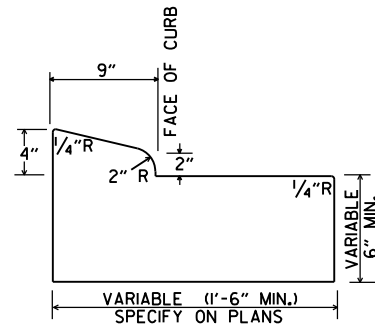
ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE DITCH PAVING

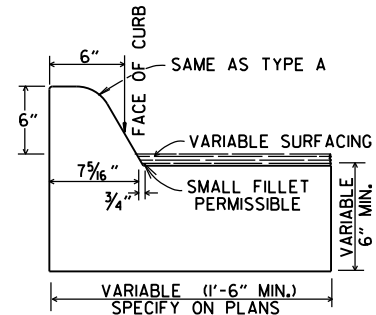
STANDARD DRAWING CDP-1



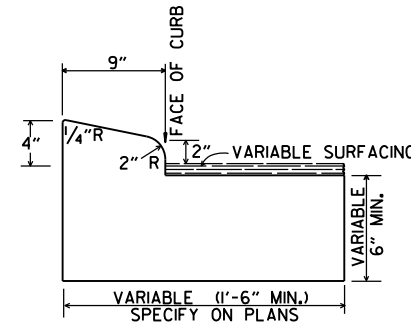
TYPE A



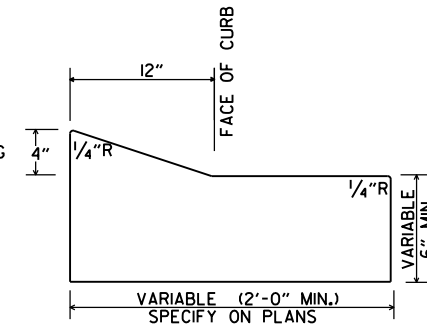
TYPE B-1



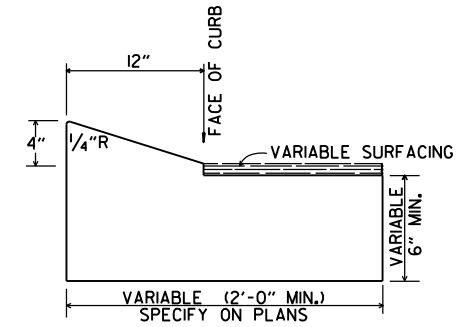
TYPE C



TYPE B-2

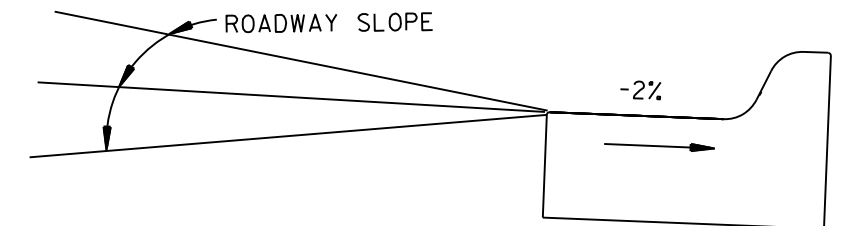


TYPE E-1

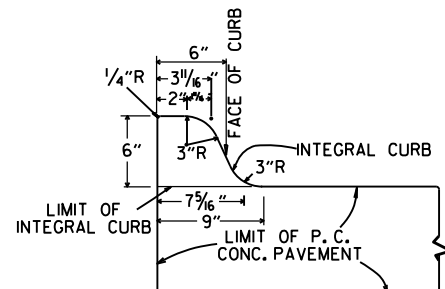


TYPE E-2

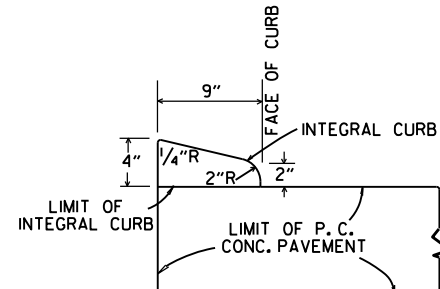
CONCRETE COMBINATION CURB AND GUTTER



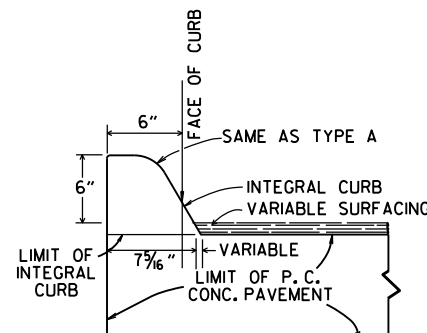
DETAIL OF GUTTER SLOPE
GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.



TYPE A

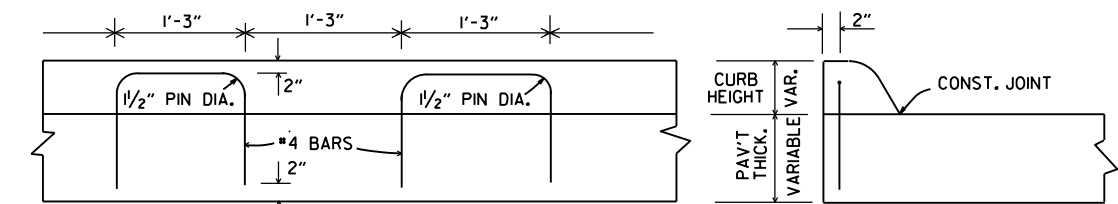


TYPE B



TYPE C

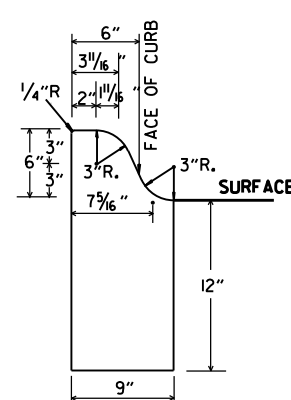
INTEGRAL CURB



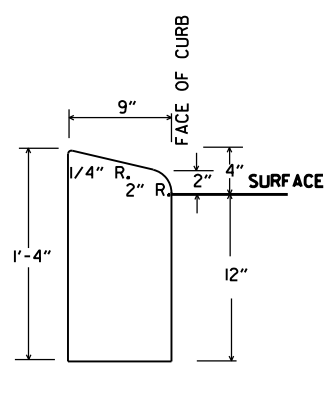
LONGITUDINAL SECTION

ELEVATION

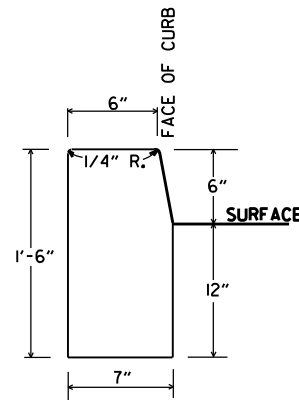
ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



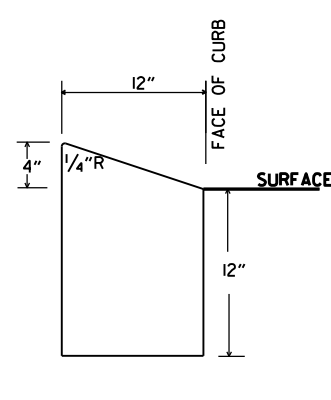
TYPE A



TYPE B

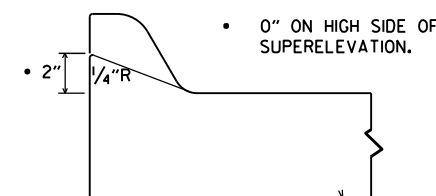


TYPE D



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.

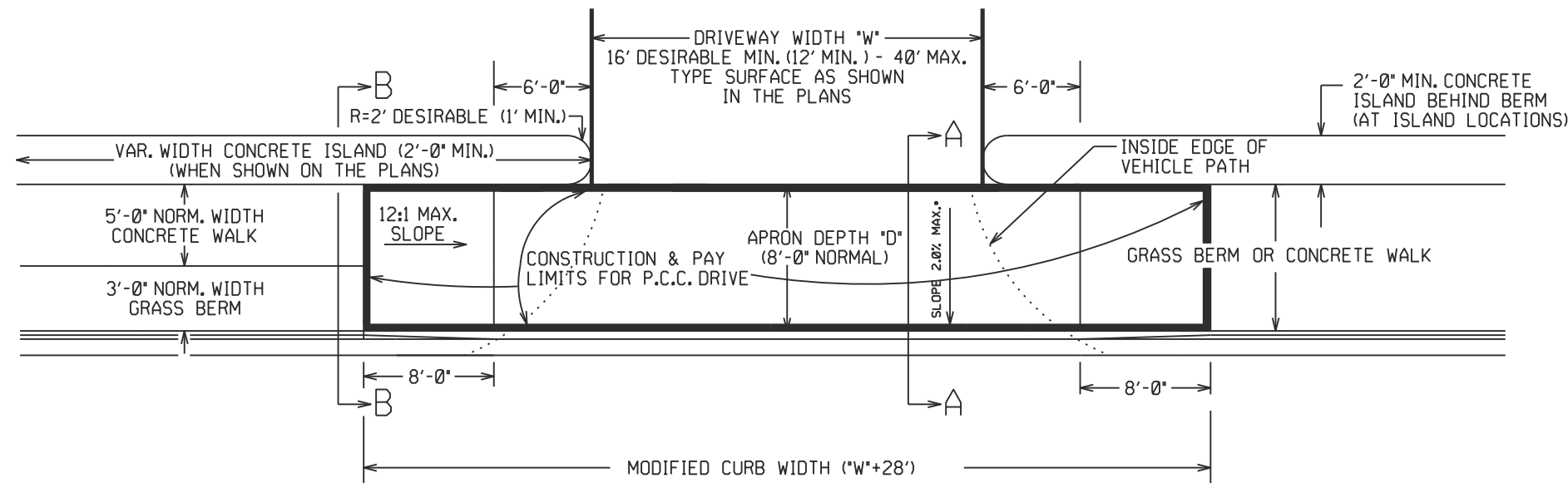
DETAILS OF MODIFIED CURB

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	VARIABLE DEPTH TYPE A & B I	11-30-89
7-15-88	REVISED MODIFIED CURB	630-7-15-88
1-1-73	REVISED MODIFIED CURB	500-1-1-73
10-2-72	REVISED AND REDRAWN	512-10-2-72

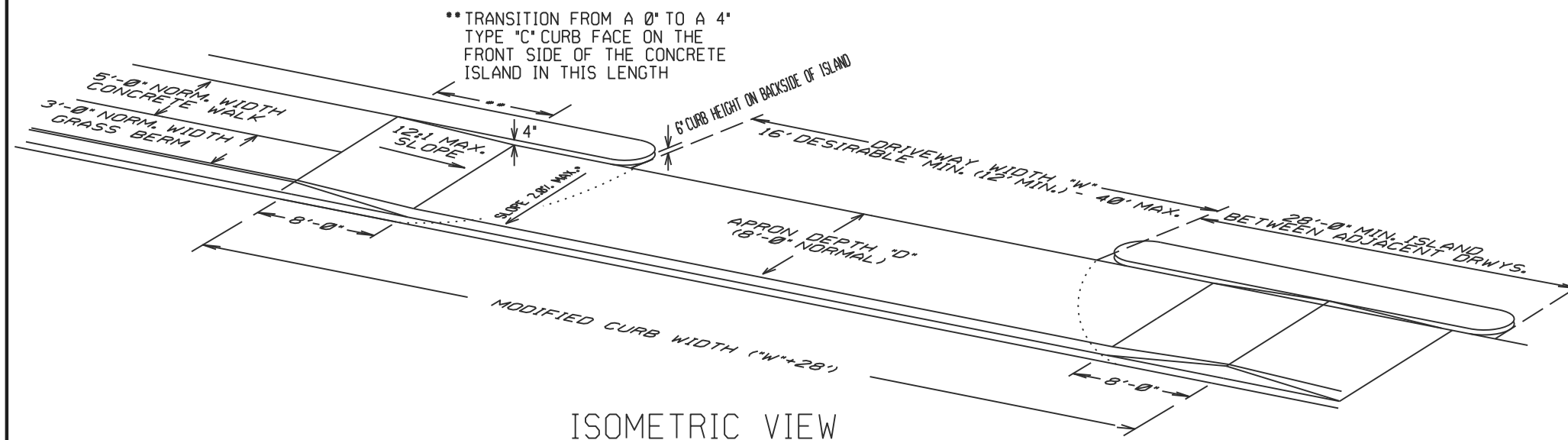
ARKANSAS STATE HIGHWAY COMMISSION

CURBING DETAILS

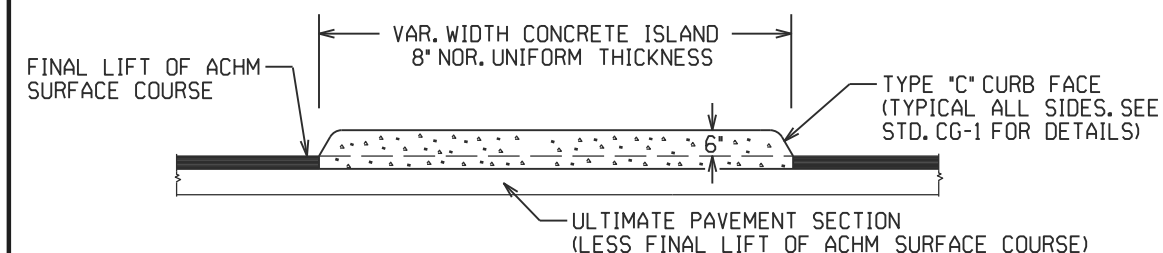
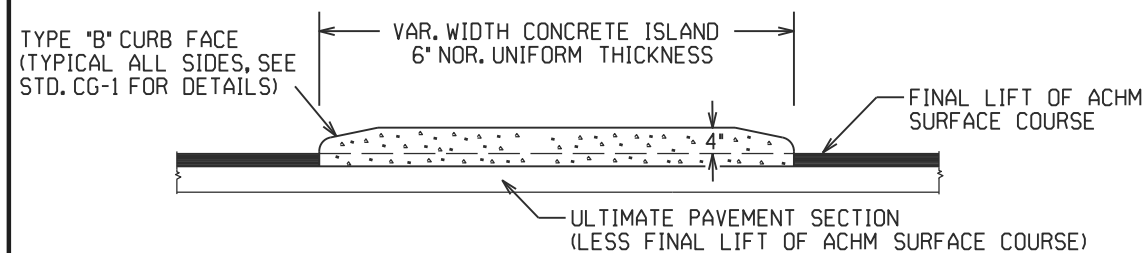
STANDARD DRAWING CG-1



PLAN VIEW



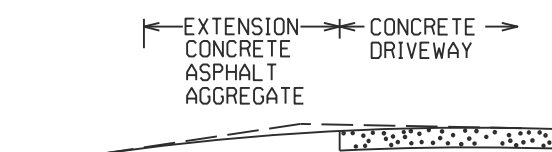
ISOMETRIC VIEW



CURBED ISLANDS FOR CHANNELIZATION

CONCRETE ISLAND NOTES:

1. REFER TO PLANS FOR TYPE OF CURB FACE TO BE USED. NO DIRECT PAYMENT WILL BE MADE FOR THE CURB FACES SHOWN ON THE ISLAND DETAILS. PAYMENT FOR THE CURB FACE WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEM "CONCRETE ISLAND".
2. TRANSVERSE EXPANSION JOINTS, NOT LESS THAN 1/2' WIDE, SHALL BE PLACED AT MINIMUM INTERVAL OF 45'. TRANSVERSE JOINT SHALL BE CONSTRUCTED USING A JOINT FILLER COMPLYING WITH AASHTO M213.

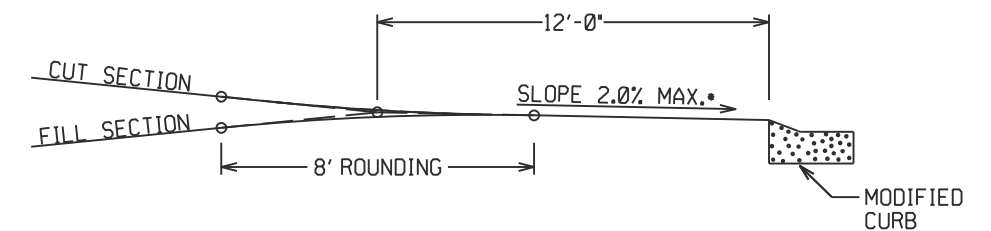


EXTENSION TYPICAL SECTIONS

- 1: CONCRETE - 6" P.C. CONCRETE DRIVEWAY
- 2: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
4" ACHM BINDER COURSE (1") OR
4" ACHM BASE COURSE (1-1/2")
- 3: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
7" AGGREGATE BASE COURSE
- 4: AGGREGATE - 6" AGGREGATE BASE COURSE

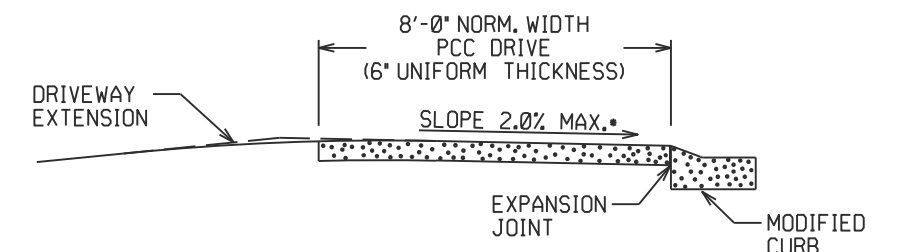
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

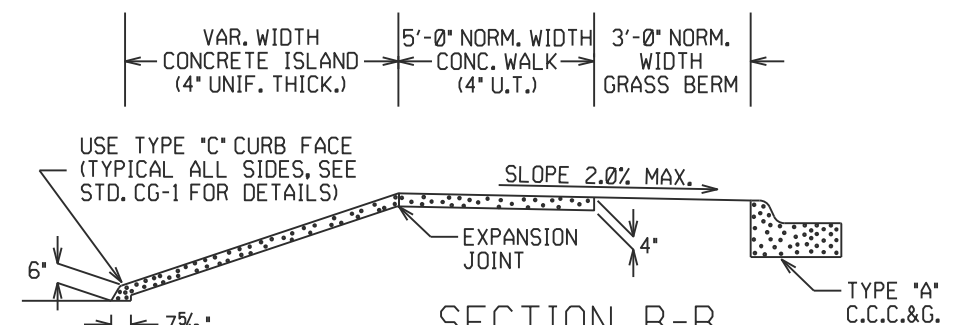


DRIVEWAY VERTICAL ALIGNMENT DETAILS

- NOTE: DRIVEWAYS MAY NOT BE SLOPED AWAY FROM THE ROADWAY UNLESS APPROVED BY THE ENGINEER.

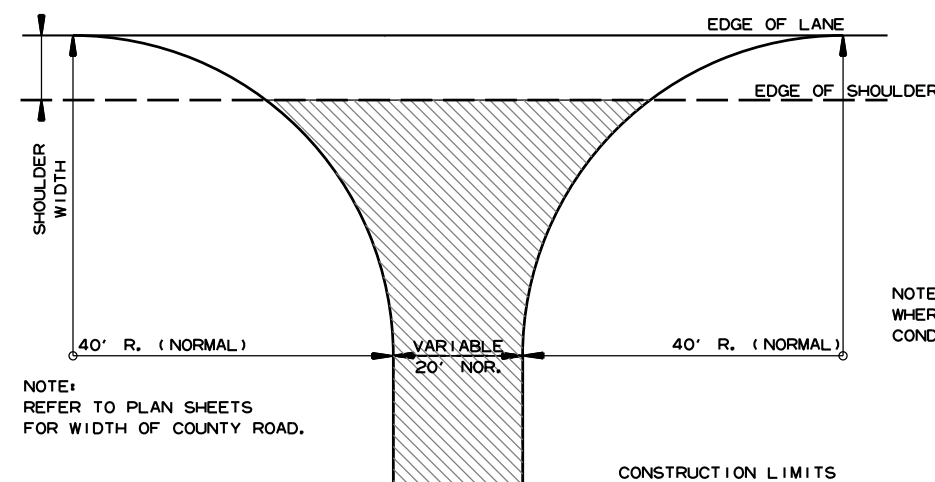


SECTION A-A



SECTION B-B
CURBED ISLAND BEHIND WALK

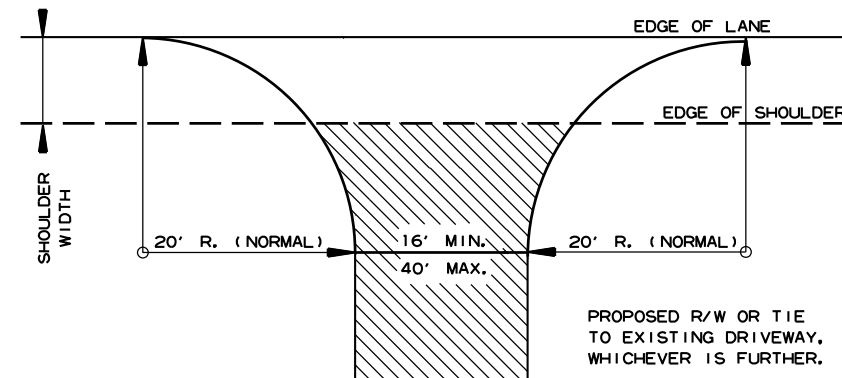
05-22-25	REVISED ISLAND DETAILS & ADDED DESIRABLE MIN. DRIVEWAY WIDTH	05-19-22 REVISED ISLAND NOTES 11-07-19 REVISED WALK DETAILS 02-27-14 REVISED PLAN & ISOMETRIC VIEW ADDED CHANNELIZATION ISLAND WITH TYPE C CURB FACE & REVISED DRIVEWAY SLOPE, NOTE & VERTICAL ALIGNMENT DETAIL	11-29-07	DATE	REV	DESCRIPTION	AR DOT ARKANSAS DEPARTMENT OF TRANSPORTATION ARKANSAS STATE HIGHWAY COMMISSION DETAILS OF DRIVEWAYS & ISLANDS		
DATE EFFECTIVE						STANDARD DRAWING		DR-1	
05-22-2025									



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

ACHM SURFACE COURSE (1/2") (220 LBS. PER SQ. YD.) AND AGGREGATE BASE COURSE (CLASS 7) 7" COMP. DEPTH, UNLESS OTHERWISE SPECIFIED IN PLANS.

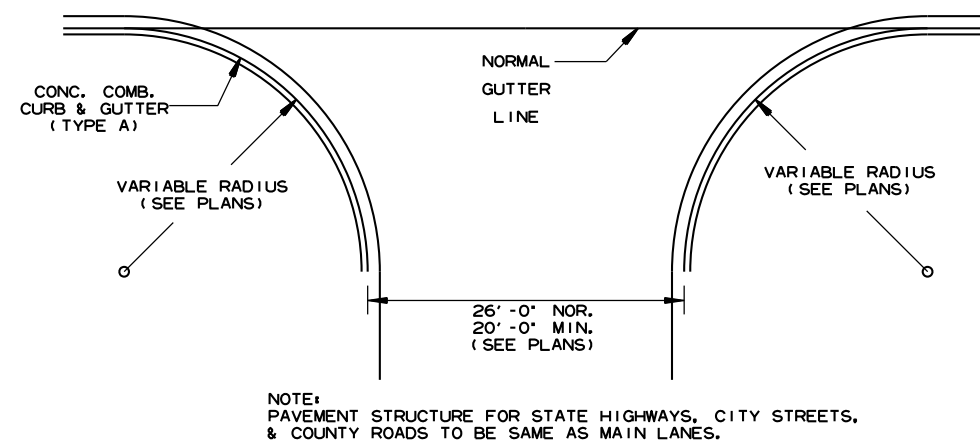
DETAIL FOR COUNTY ROAD TURNOUTS
OPEN SHOULDER SECTION



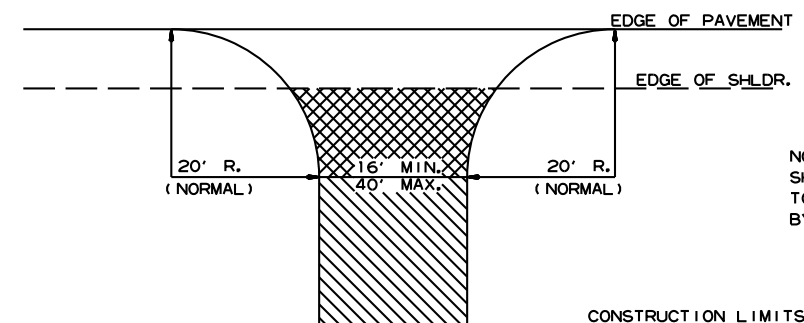
NOTE: TURNOUTS AND PRIVATE DRIVES SHALL BE MODIFIED WHERE NECESSARY TO MEET LOCAL CONDITIONS AS DIRECTED BY THE ENGINEER.

ACHM SURFACE COURSE (1/2") (220 LBS. PER SQ. YD.) AND AGGREGATE BASE COURSE (CLASS 7) 7" COMP. DEPTH IF ASPHALT OR GRAVEL DRIVE EXISTING; OR 6" CONCRETE IF CONCRETE DRIVE EXISTING.

DETAIL FOR DRIVEWAY TURNOUTS
OPEN SHOULDER SECTION
(ARTERIALS)



DETAIL OF TURNOUTS, ASPHALT STREETS,
COUNTY ROADS & STATE HIGHWAYS
CURB & GUTTER SECTION



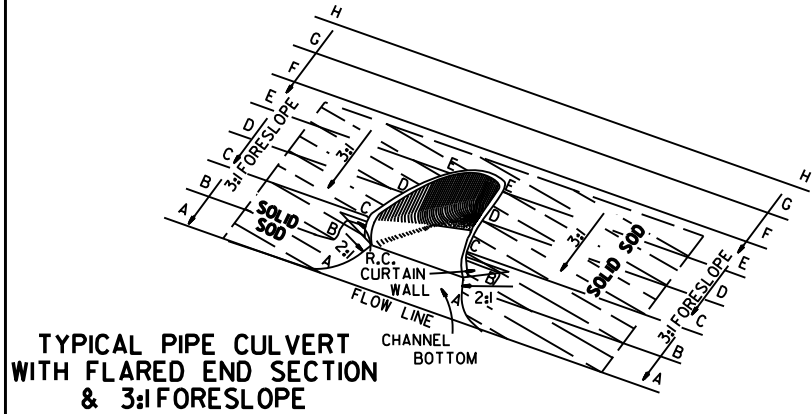
ASPHALT CONCRETE HOT MIX SURFACE COURSE (220 LBS. PER SQ. YD.) AGGREGATE BASE COURSE (CLASS 7) 7" COMP. DEPTH IF ASPHALT DRIVE EXIST OR 6" CONCRETE IF CONCRETE DRIVE EXIST.

AGGREGATE BASE COURSE (CLASS 7) 9" COMP. DEPTH OR CONFORM TO EXISTING DRIVEWAY

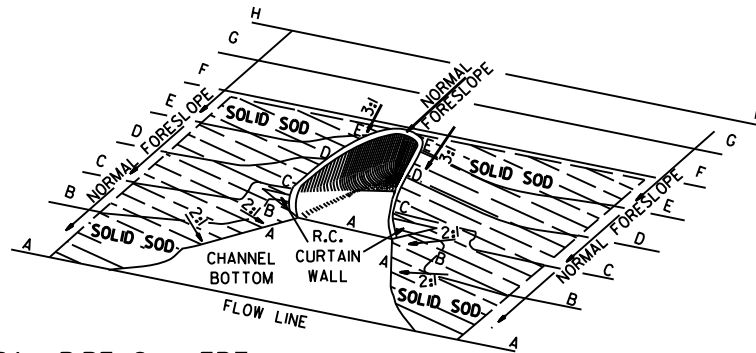
DETAIL FOR DRIVEWAY TURNOUTS
(COLLECTORS)

5-19-22		ISSUED
DATE REV	DATE FILMED	DESCRIPTION

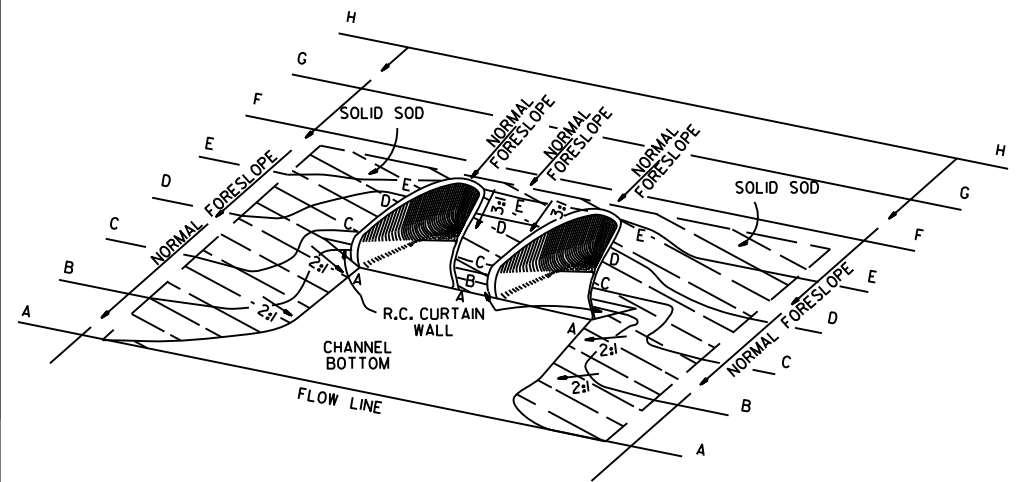
ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF DRIVEWAYS & STREET
TURNOUTS
STANDARD DRAWING DR-2



TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& 3:1 FORESLOPE



TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& FLATTENED ADJACENT SLOPES



TYPICAL MULTIPLE PIPE CULVERT
WITH FLARED END SECTIONS
& FLATTENED ADJACENT SLOPES

R.C. CURTAIN WALL DIMENSIONS & QUANTITIES

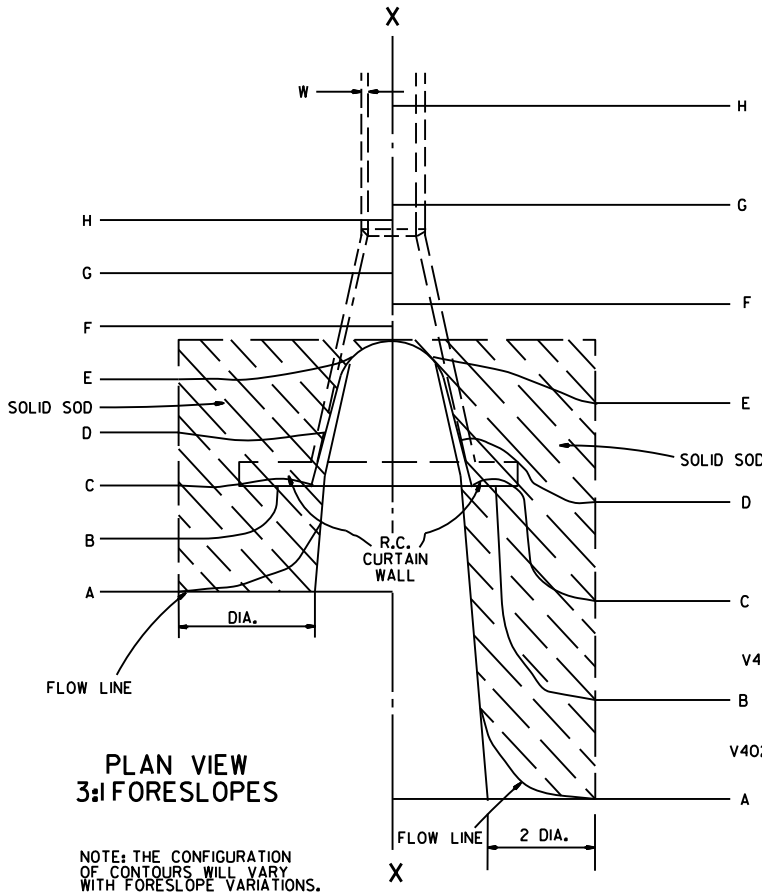
PIPE DIA.	H ₁	L ₁	L	L (DBL.) 2	SINGLE R.C.P.C.		DOUBLE R.C.P.C.	
					CONC.	REINF. STEEL	CONC.	REINF. STEEL
					CU. YDS.	LBS.	CU. YDS.	LBS.
18"	11 1/2"	3'-5"	8'-0"	6'-3"	0.31	27.7	0.45	39.5
24"	1'-0 1/2"	4'-6"	9'-6"	7'-6"	0.37	33.4	0.53	48.0
30"	1'-3 1/2"	5'-7"	11'-0"	9'-0"	0.45	39.0	0.67	59.0
36"	1'-7"	6'-8"	13'-0"	10'-6"	0.58	52.6	0.83	73.9
42"	2'-1 1/2"	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'-9 1/2"	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.

REINFORCING STEEL SCHEDULE

PIPE DIA.	SINGLE R.C. PIPE CULVERT								DOUBLE R.C. PIPE CULVERT									
	H401		H402		V401		V402		H401		H402		H403		V401		V402	
	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.
18"	7'-8"	2	1'-11½"	4	1'-7½"	8	8"	8	12'-2"	2	1'-11½"	4	8"	2	1'-7½"	10	8"	14
24"	9'-2"	2	2'-2"	4	1'-8½"	10	8"	9	14'-8"	2	2'-2"	4	8"	2	1'-8½"	12	8"	18
30"	10'-8"	2	2'-4½"	4	1'-11½"	10	8"	12	17'-8"	2	2'-4½"	4	8"	2	1'-11½"	14	8"	22
36"	12'-8"	2	2'-10"	6	2'-3"	12	8"	14	20'-8"	2	2'-10"	6	8"	3	2'-3"	14	8"	28
42"	15'-2"	2	3'-9½"	8	2'-9½"	16	8"	15	23'-8"	2	3'-9½"	8	8"	4	2'-9½"	18	8"	30
48"	16'-8"	2	4'-3"	10	3'-1"	18	8"	16	25'-8"	2	4'-3"	10	8"	5	3'-1"	20	8"	32
54"	18'-2"	2	4'-8½"	12	3'-5½"	20	8"	17	27'-8"	2	4'-9"	12	8"	6	3'-5½"	22	8"	34
60"	20'-2"	2	5'-5"	14	4'-0"	24	8"	18	30'-8"	2	5'-5"	14	8"	7	4'-0"	26	8"	36
72"	25'-2"	2	7'-4"	18	5'-1"	30	8"	20	36'-8"	2	7'-4"	18	8"	9	5'-1"	33	8"	40

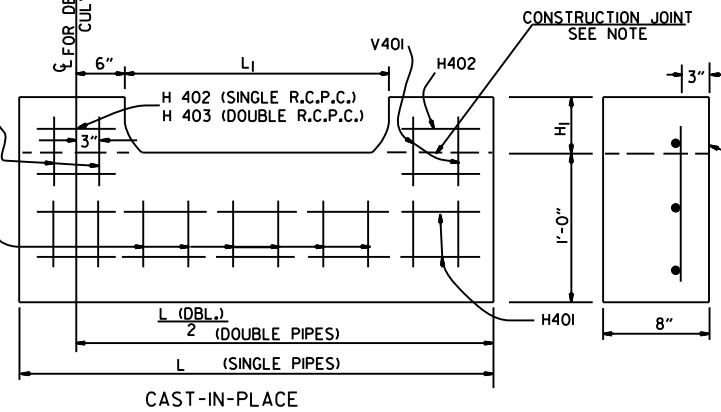
ALL REINFORCING STEEL #4 BARS @ 6" O.C.



PLAN VIEW
3:1 FORESLOPES

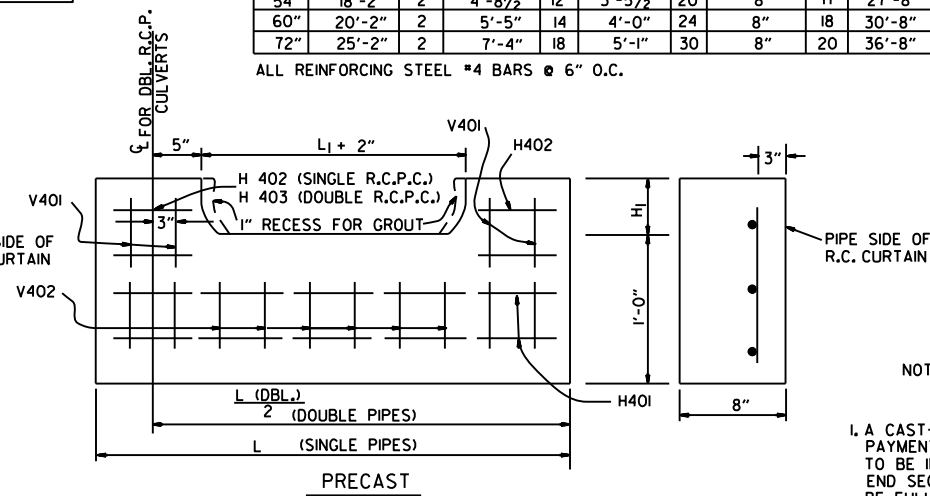
NOTE: THE CONFIGURATION
OF CONTOURS WILL VARY
WITH FORESLOPE VARIATIONS.

PLAN VIEW
FLATTENED FORESLOPES



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.

R.C. CURTAIN WALL DETAILS



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.

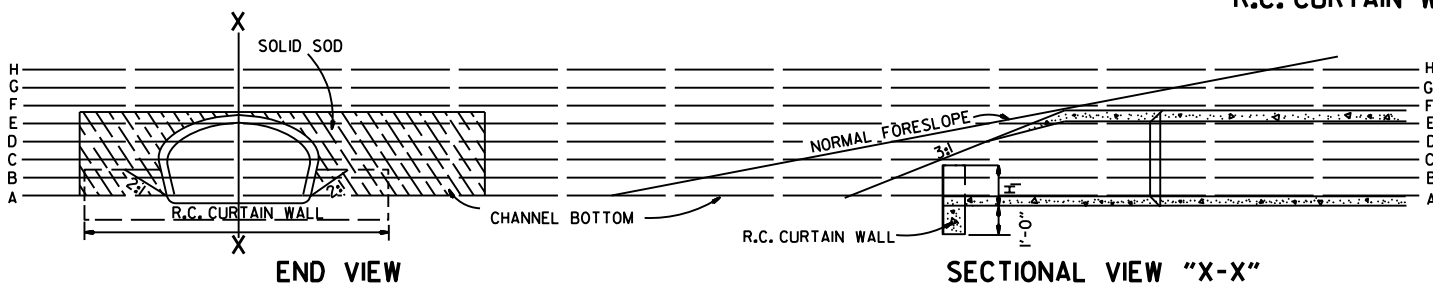
SOLID SODDING

PIPE DIA.	SINGLE R.C.P.C.						DOUBLE R.C.P.C.					
	3:1	4:1	6:1	3:1	4:1	6:1	3:1	4:1	6:1	3:1	4:1	6:1
	SQ. YDS.						SQ. YDS.					
18"	5	7	12	6	8	13	5	7	12	6	8	13
24"	8	12	19	9	13	20	8	12	19	9	13	20
30"	13	18	29	14	19	30	13	18	29	14	19	30
36"	17	26	41	18	28	43	17	26	41	18	28	43
42"	23	35	55	25	37	57	23	35	55	25	37	57
48"	29	46	68	31	48	70	29	46	68	31	48	70
54"	35	57	85	37	59	87	35	57	85	37	59	87
60"	45	62	104	48	65	107	45	62	104	48	65	107
72"	64	92	156	67	95	159	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 3/4".
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 W/10 x W/10 MAY BE USED IN LIEU OF REINFORCING BARS.



END VIEW

SECTIONAL VIEW "X-X"

10-18-96	ADDED NOTE TO SOLID SODDING		ARKANSAS STATE HIGHWAY COMMISSION
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		
DATE	REVISION	FILMED	STANDARD DRAWING FES-1

FLARED END SECTION

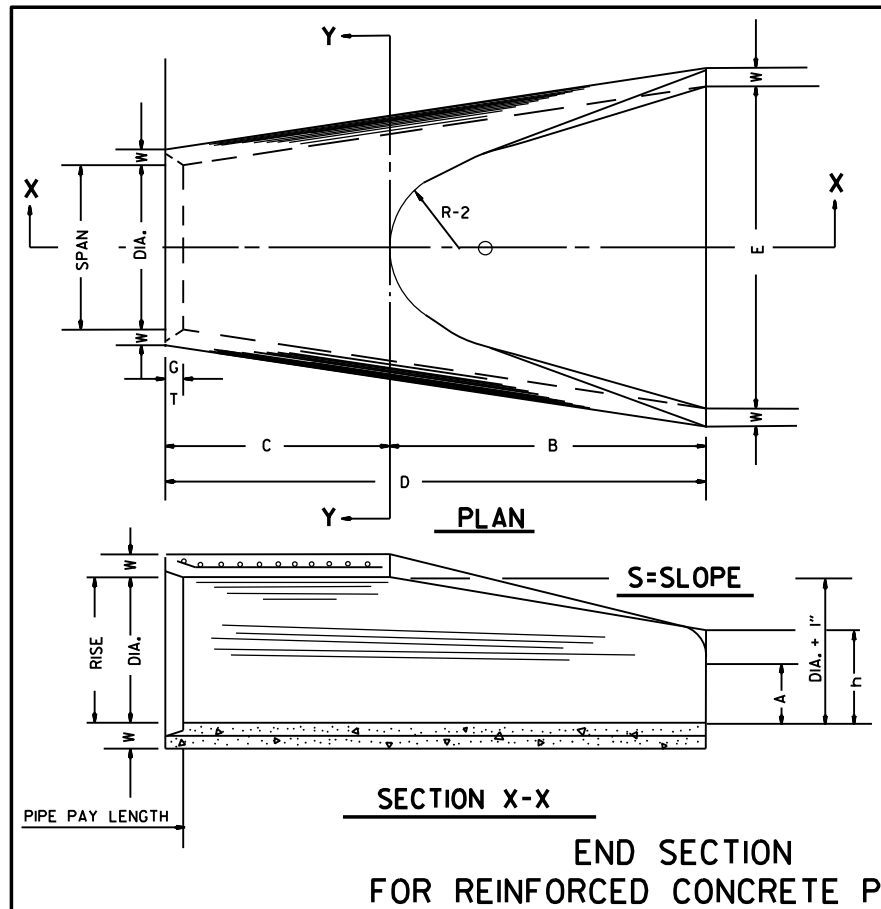
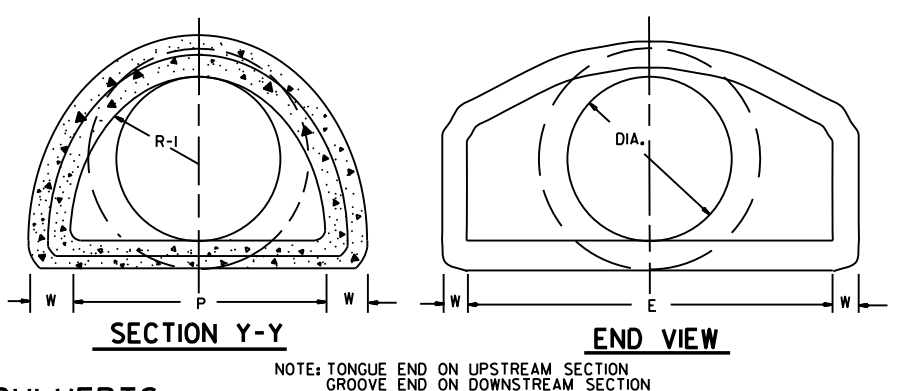
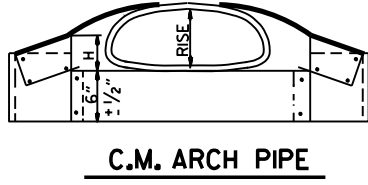
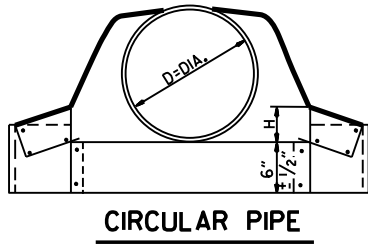
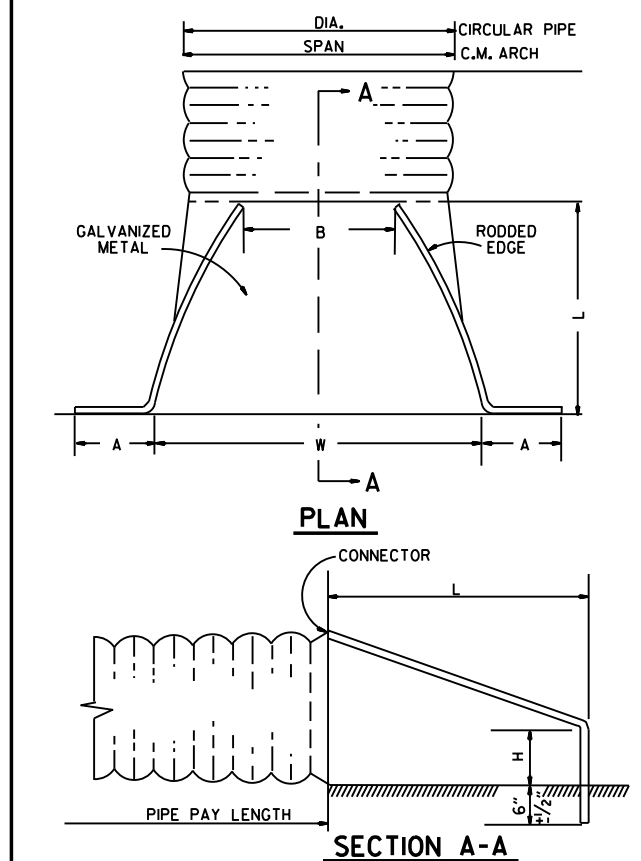
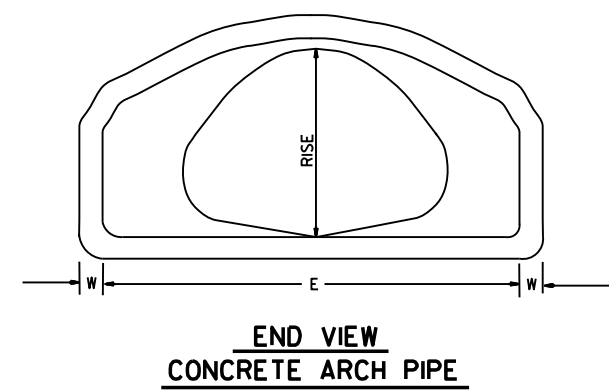


TABLE OF DIMENSIONS														
DIA.	WALL	A	B	C	D	E	S	DIA. + 1"	P	R-1	R-2	G-T	WT.	h
18"	2 1/2"	9"	2'-3"	3'-10"	6'-1"	3'-0"	3:1	19"	29"	15 1/2"	12"	2"	1000	1'-0 1/2"
24"	3"	9 1/2"	3'-7 1/2"	2'-6"	6'-1 1/2"	4'-0"	3:1	25"	33 3/8"	16 1/8"	14"	2 1/2"	1600	1'-1 1/2"
30"	3 1/2"	1'-0"	4'-6"	1'-7 3/4"	6'-1 3/4"	5'-0"	3:1	31"	37"	18 1/2"	15"	3 1/4"	1940	1'-4 5/8"
36"	4"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	6'-0"	3:1	37"	47 1/8"	24 1/8"	20"	3 1/2"	4100	1'-8"
42"	4 1/2"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	3:1	43"	53 1/8"	27 1/2"	22"	3 1/2"	5380	2'-2 1/2"
48"	5"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	3:1	49"	56 1/2"	28 1/2"	22"	3 1/2"	6550	2'-6"
54"	5 1/2"	2'-4"	6'-6"	1'-10"	8'-4"	7'-6"	3:1	55"	65 1/2"	33 1/8"	24"	4"	8750	2'-10 1/2"
60"	6"	2'-10"	6'-6"	1'-10"	8'-4"	8'-0"	3:1	61"	72 1/2"	36 1/8"	24"	4"	9270	3'-5"
72"	7"	3'-10"	6'-6"	1'-10"	8'-4"	9'-0"	3:1	73"	77 1/8"	38 1/8"	24"	5"	13250	4'-6"



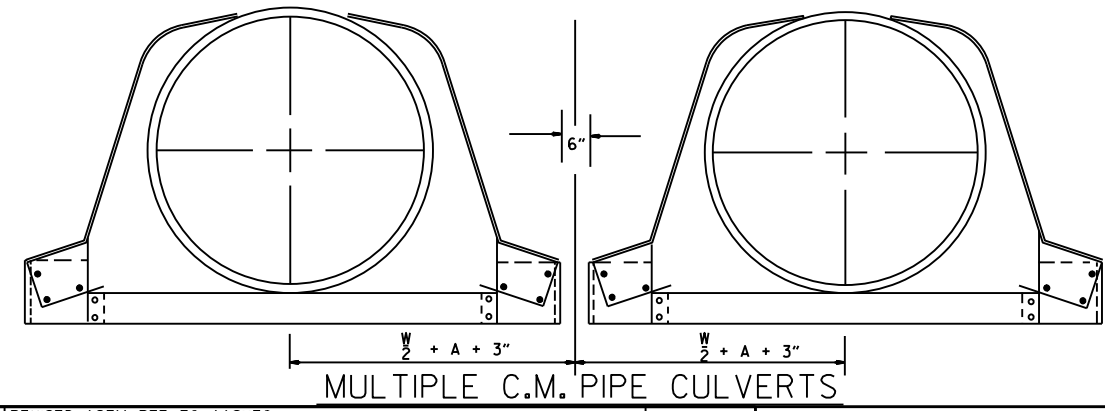
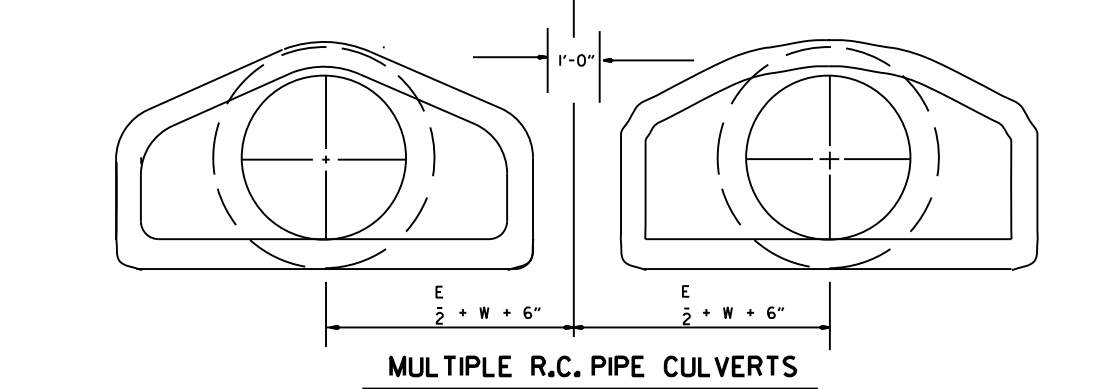
ARCH PIPE														
EQUIV. DIA.	• SPAN		• RISE		W	A	B	C	D	E	P	R2	G-T	S
	AASHTO M 206	AHD NOMINAL	AASHTO M 206	AHD NOMINAL										
INCHES														
15	18	18	11	11	2"	4"	2'-0"	4'-0"	6'-0"	3'-0"	29"	12"	1 1/2"	2 1/2:1
18	22	22	13 1/2	14	2 1/2"	5"	2'-0"	4'-1"	6'-1"	3'-6"	32 1/8"	13"	2 1/2"	2 1/2:1
21	26	26	15 1/2	16	2 3/4"	7"	2'-3"	3'-10"	6'-1"	4'-0"	34 1/8"	14"	2 1/2"	2 1/2:1
24	28 1/2	29	18	18	3"	9"	2'-3"	3'-10"	6'-1"	5'-0"	36 1/8"	15"	2 1/2"	2 1/2:1
30	36 1/4	36	22 1/2	23	3 1/2"	10"	3'-1"	3'-0 1/2"	6'-1 1/2"	6'-0"	47 1/8"	20"	3"	2 1/2:1
36	43 3/4	44	26 3/8	27	4"	10 1/2"	4'-0"	2'-1 1/2"	6'-1 1/2"	6'-6"	54 1/8"	22"	3 1/2"	2 1/2:1
42	51 1/8	51	31 5/8	31	4 1/2"	11 1/2"	4'-7"	1'-10 1/4"	6'-5 1/4"	7'-2"	59 1/2"	23"	3 3/4"	2 1/2:1
48	58 1/2	59	36	36	5"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	7'-10"	70 7/8"	24"	4 1/4"	2 1/2:1
54	65	65	40	40	5 1/2"	1'-7"	5'-3"	2'-11"	8'-2"	8'-6"	72 1/8"	24"	4 3/4"	2 1/4:1
60	73	73	45	45	6"	1'-10"	5'-6"	2'-8"	8'-2"	9'-0"	77 1/8"	24"	5"	2 1/4:1

• THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PER CENT FROM THE VALUES SPECIFIED BY AASHTO M 206.



CIRCULAR PIPE									
D. DIA.	GAUGE	A 1" ±	B. MAX.	H 1" ±	L 1 1/2" ±	W 2" ±	S		
INCHES									
12	16	6	6	6	21	24	2 1/2:1		
15	16	7	8	6	26	30	2 1/2:1		
18	16	8	10	6	31	36	2 1/2:1		
21	16	9	12	6	36	42	2 1/2:1		
24	16	10	13	6	41	48	2 1/2:1		
30	14	12	16	8	51	60	2 1/2:1		
36	14	14	19	9	60	72	2 1/2:1		
42	12	16	22	11	69	84	2 1/2:1		
48	12	18	27	12	78	90	2 1/2:1		
54	12	18	30	12	84	102	2:1		
60	12	18	33	12	87	114	1 3/4:1		
66	12	18	36	12	87	120	1 1/2:1		
72	12	18	39	12	87	126	1 1/3:1		

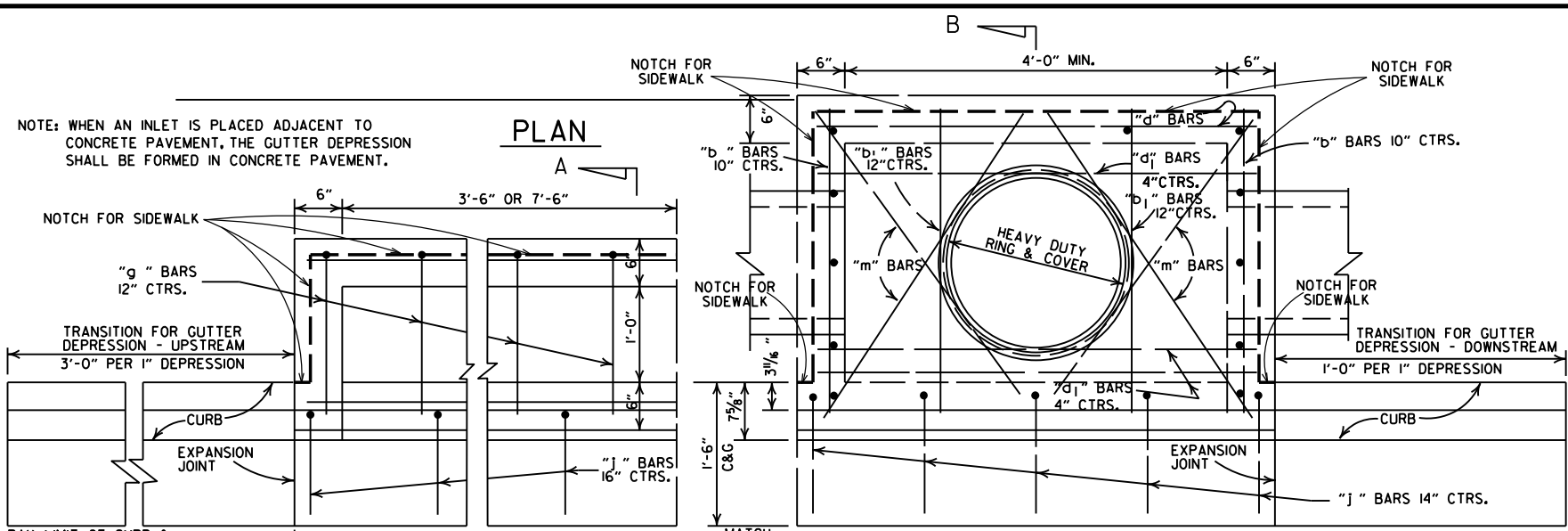
C.M. ARCH PIPE									
EQUIV. DIA.	SPAN	RISE	A 1" $\pm$	B MAX.	H 1" $\pm$	L 1/2" $\pm$	W 2" $\pm$	S	GAUGE
INCHES									
15"	17	13	7	9	6	19	30	2 1/2:1	16
18"	21	15	7	10	6	23	36	2 1/2:1	16
21"	24	18	8	12	6	28	42	2 1/2:1	16
24"	28	20	9	14	6	32	48	2 1/2:1	16
30"	35	24	10	16	6	39	60	2 1/2:1	14
36"	42	29	12	18	8	46	75	2 1/2:1	14
42"	49	33	13	21	9	53	85	2 1/2:1	12
48"	57	38	18	26	12	63	90	2 1/2:1	12
54"	64	43	18	30	12	70	102	2 1/4:1	12
60"	71	47	18	33	12	77	114	2 1/4:1	12



NOTE: ALTERNATE CONNECTIONS TO THE PIPE CULVERTS, IN ACCORDANCE WITH MANUFACTURER'S STANDARD PRACTICES, MAY BE MADE SUBJECT TO THE APPROVAL OF THE ENGINEER.

END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS

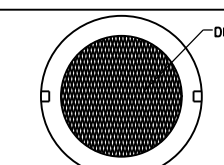
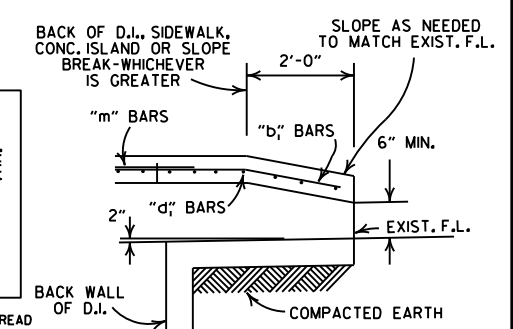
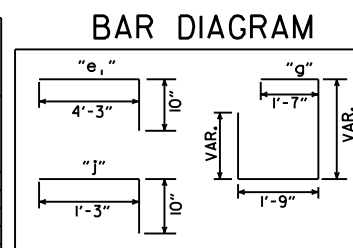
10-18-96	REVISED ASTM REF. TO AASHTO		ARKANSAS STATE HIGHWAY COMMISSION
5-15-80	REVISED DISTANCE BETWEEN MULTIPLE R.C.P. F.E.S.	664-5-15-80	
7-14-78	C.M. ARCH SIZES TO CONFORM WITH AASHTO SIZES	752-7-14-78	
8-22-75	ADDED MULTIPLE PIPE CULVERTS	517-8-22-75	
12-5-74	REMOVED NOTE RE REINF. FOR R.C. F.E.S.	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	
DATE	REVISION	FILMED	STANDARD DRAWING FES-2



4'-0" LENGTH DROP INLET						DROP INLET EXTENSION			
PIPE SIZE	MIN. WIDTH	HEIGHT 5'-0"		PLUS OR MINUS PER LIN. FT. OF HEIGHT		4'-0"		8'-0"	
		CLASS A	REINF. STEEL	CLASS A	REINF. STEEL	CLASS A	REINF. STEEL	CLASS A	REINF. STEEL
		CONC.		CONC.	STEEL	CONC.	STEEL	CONC.	STEEL
		CU. YDS.	POUNDS	CU. YDS.	POUNDS	CU. YDS.	POUNDS	CU. YDS.	POUNDS
18"	2'-6"	1.77	156	0.28	22	0.58	38	0.87	72
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	DEDUCT FROM QUANTITY COMPUTED FOR EACH EXTENSION ADDED.			
42"	4'-4"	2.95	250	0.34	30				
48"	4'-10"	3.21	265	0.36	32				
						0.04	3		

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

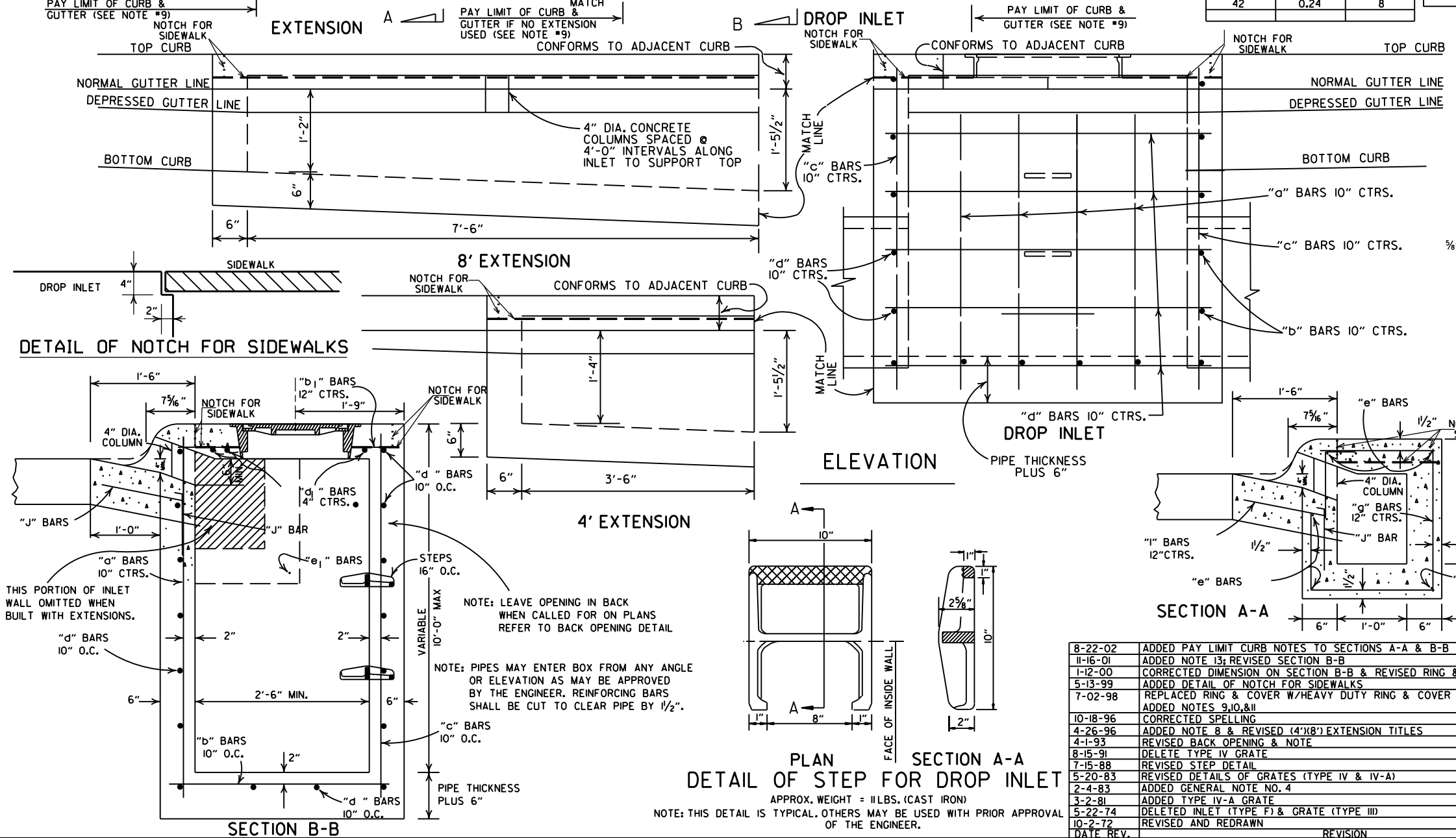
DEDUCT FROM QUANTITY COMPUTED FOR EACH PIPE ENTERING INLET		
INSIDE DIA. PIPE	CLASS A CONC.	REINF. STEEL
INCHES	CU. YDS.	POUNDS
18	0.05	2
24	0.09	3
30	0.13	4
42	0.24	8



APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER

- GENERAL NOTES:
- ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
 - STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER OF AS APPROVED BY THE ENGINEER.
 - ALL REINF. BARS SHALL BE #4 AND HAVE 1/2" COVER.
 - DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
 - THIS DROP INLET MAY BE CONSTRUCTED ON NEW OR EXISTING R.C. BOX CULVERT AS SHOWN ON F.P.C.-9.
 - WHEN PLANS CALL FOR DROP INLET OVER 10'-0" HIGH, FLOOR AND WALLS SHALL BE CONSTRUCTED AS SHOWN FOR TYPE "RM" DROP INLET (FPC-9D).
 - HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
 - DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
 - 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.
 - 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.
 - HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
 - 4"x2" NOTCH SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
 - 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.



PLAN DETAIL OF STEP FOR DROP INLET

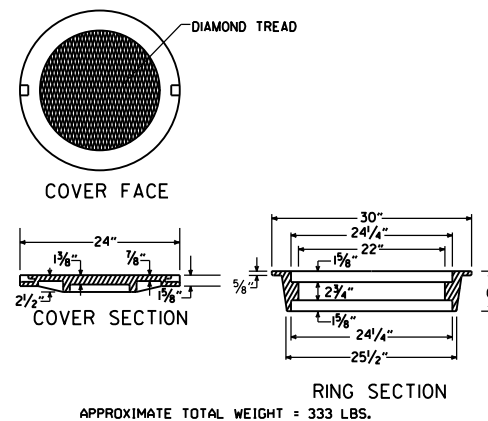
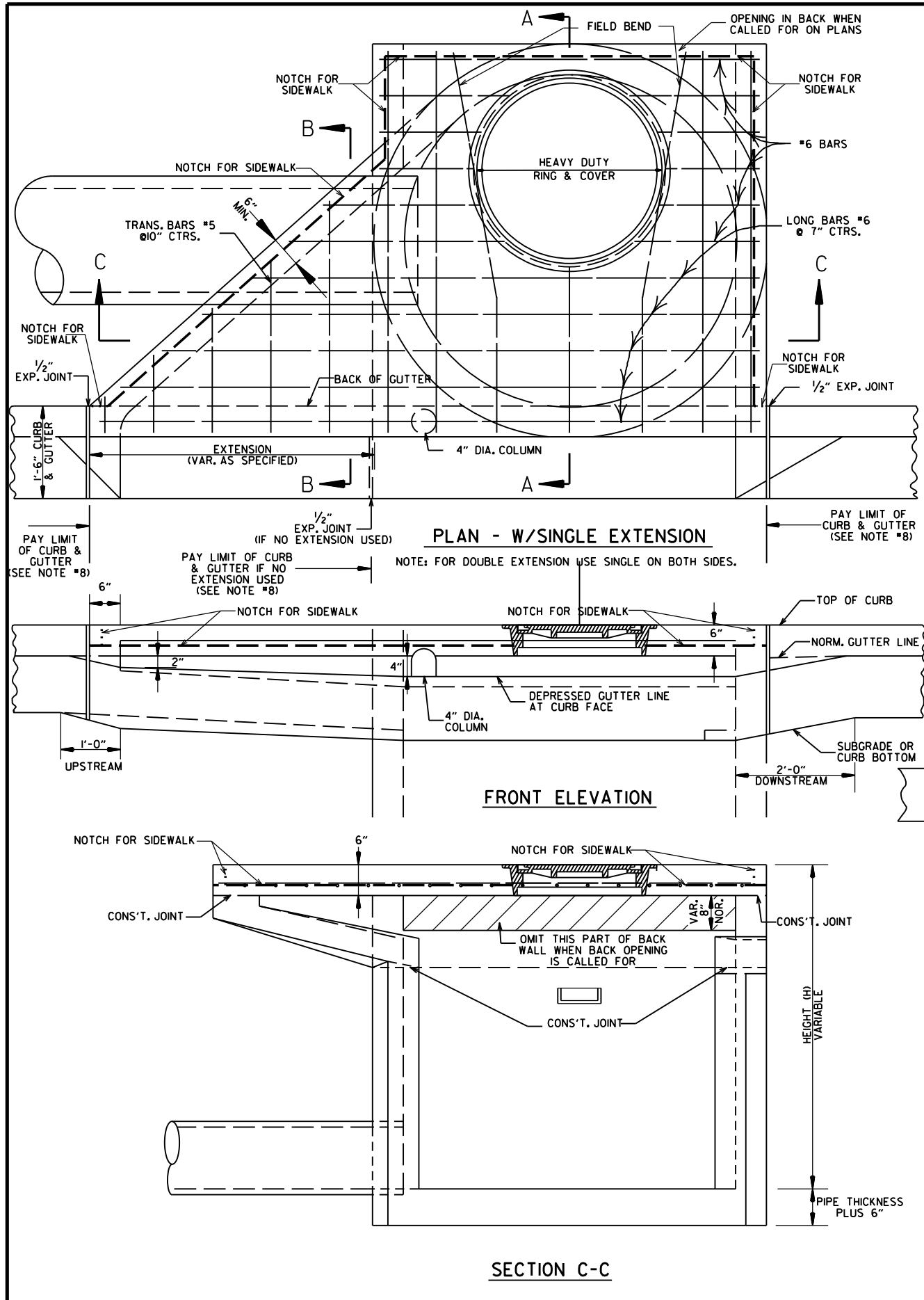
APPROX. WEIGHT = 11 LBS. (CAST IRON)
NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.

DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION
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'x8') EXTENSION TITLES			
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

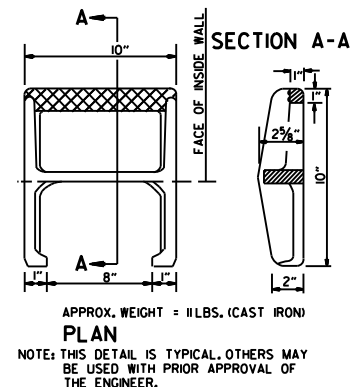
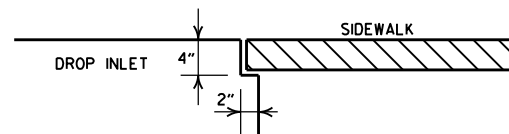
DETAILS OF DROP INLETS
(TYPE C)

STANDARD DRAWING FPC-9E



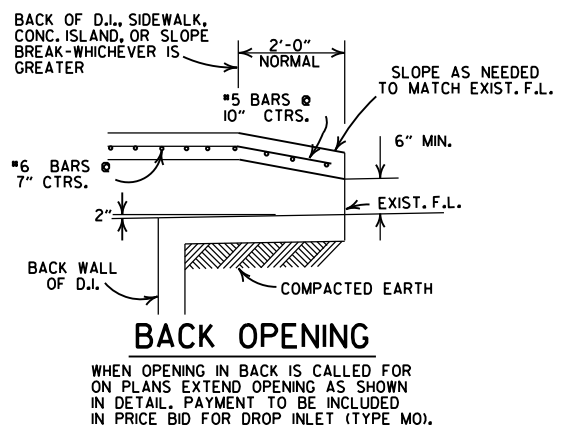
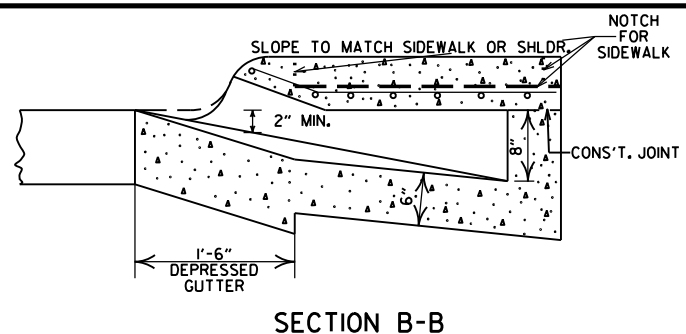
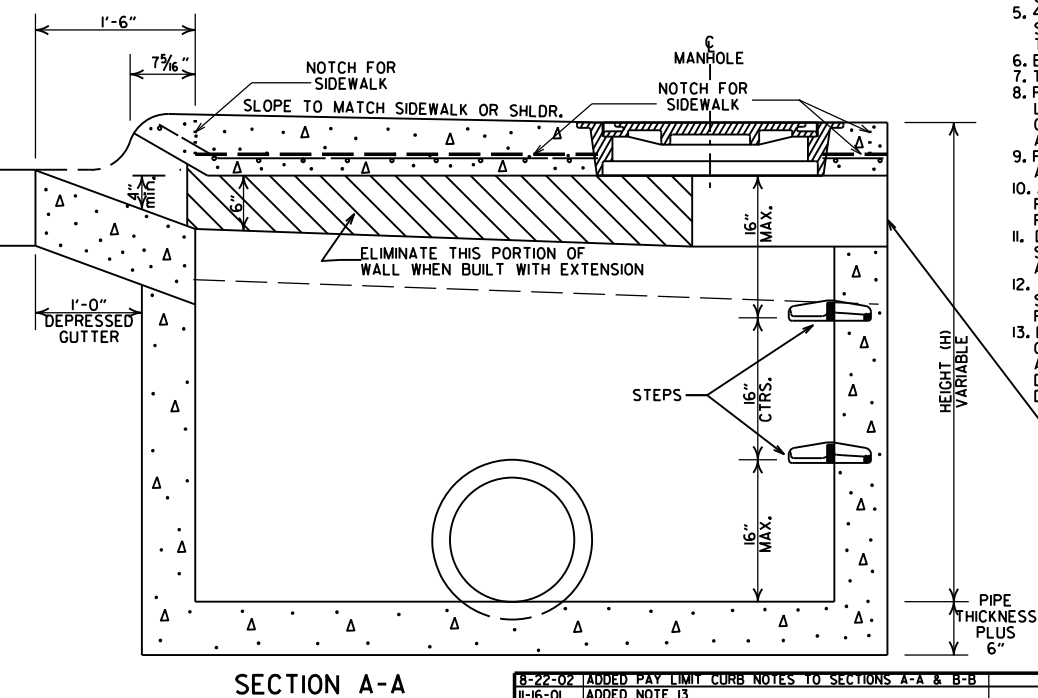
HEAVY DUTY RING & COVER

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 STEP FOR DROP INLET

DETAIL OF NOTCH FOR SIDEWALKS



- GENERAL NOTES:**
1. ALL EXPOSED CORNERS TO HAVE $\frac{3}{4}$ " 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. $\frac{1}{2}$ " 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

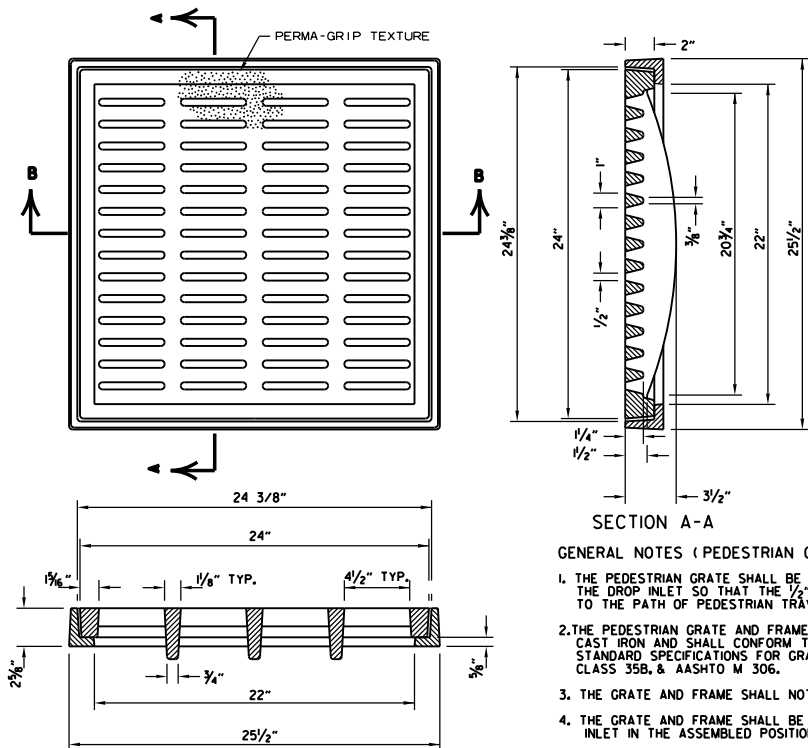
MINIMUM WALL THICKNESS			
DIA. OF D.I.	DIA. OF OUTLET PIPE	CAST IN PLACE	PRECAST
4" I.D.	12" THRU 27"	6"	5"
5" I.D.	30" THRU 42"	8"	6"
6" I.D.	48" THRU 54"	8"	7"

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 11, ADJ. OPENING DIMENSION	
10-12-95	CORRECTED #6 BAR SPACING	
7-20-95	CORRECTED DIAMETER OF D.I. IN BOX	
7-2-95	TYPE C TO MO (OPEN BACK DETAIL)	
11-3-94	REVISED GENERAL NOTES	11-3-94
4-1-93	REV. BACK OPEN DETAIL & NOTE	4-1-93
8-15-91	REVISED NOTES 11/2" & ADDED BK. OPEN DETAIL	8-15-91
11-10-89	ADDED NOTE NO. 12	11-10-89
5-23-89	ADDED NOTE 1 & MINIMUM WALL THICKNESS	5-23-89
7-15-88	ADDED EXTEND NOTE TO SECTION A-A	6-15-88
11-14-87	MODIFIED WALL THICKNESS	7-15-88
6-22-87	ISSUED	7-15-88
DATE	REVISIONS	DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLET (TYPE MO)

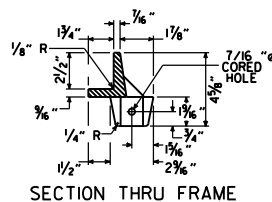
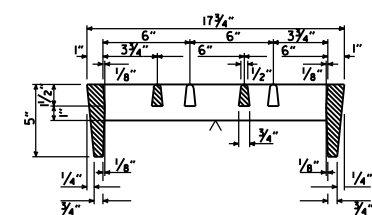
STANDARD DRAWING FPC-9M



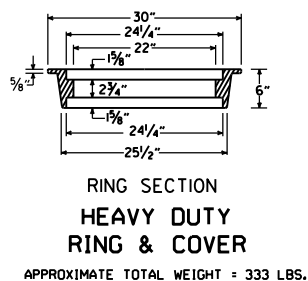
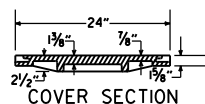
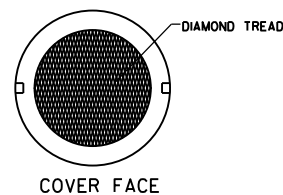
SECTION B-B
DETAILS OF PEDESTRIAN GRATE AND FRAME

GENERAL NOTES (PEDESTRIAN GRATE & FRAME)

1. THE PEDESTRIAN GRATE SHALL BE ORIENTED IN THE TOP OF THE DROP INLET SO THAT THE 1/2\"
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 21 LBS.
6. THE MINIMUM WATERWAY OPENING SHALL BE 122 SQ. IN.

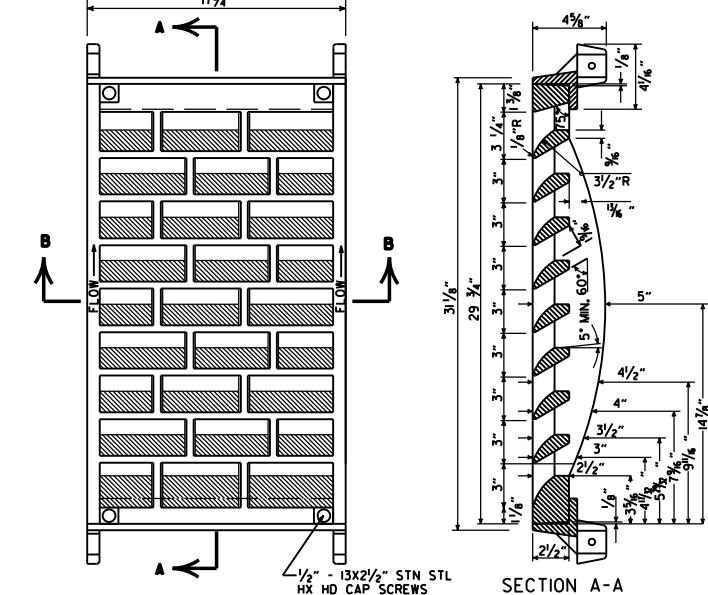


SECTION A-A
DETAILS OF DROP INLET
(TYPE ST)

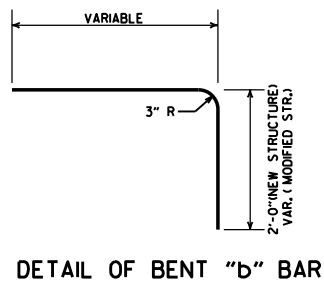


GENERAL NOTES (RIBBED VANE GRATE & FRAME)

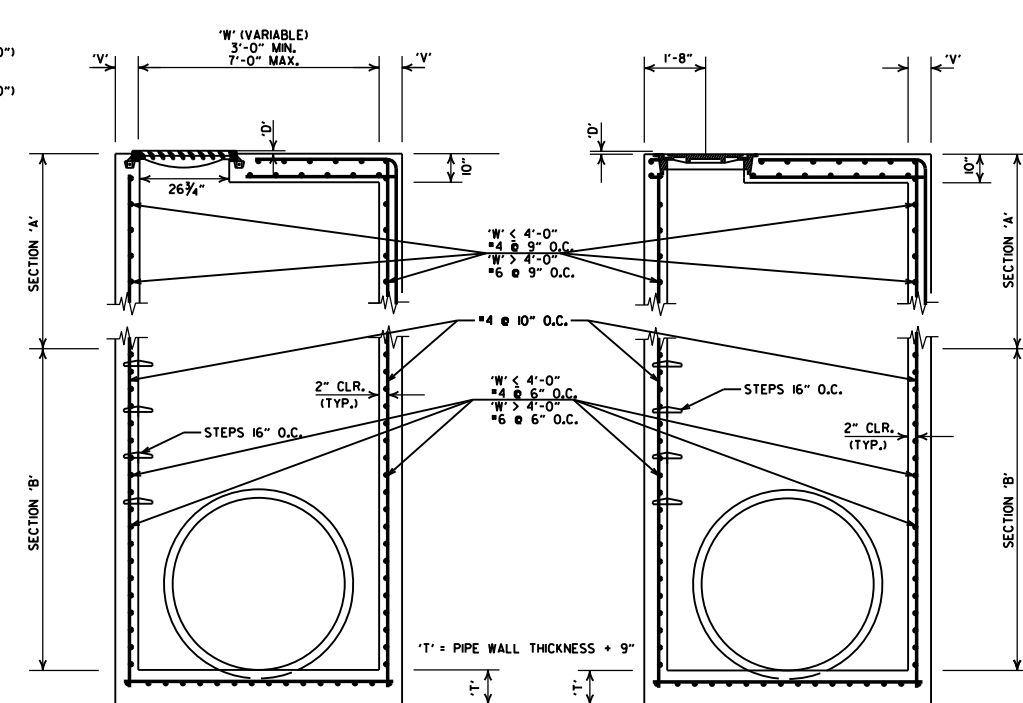
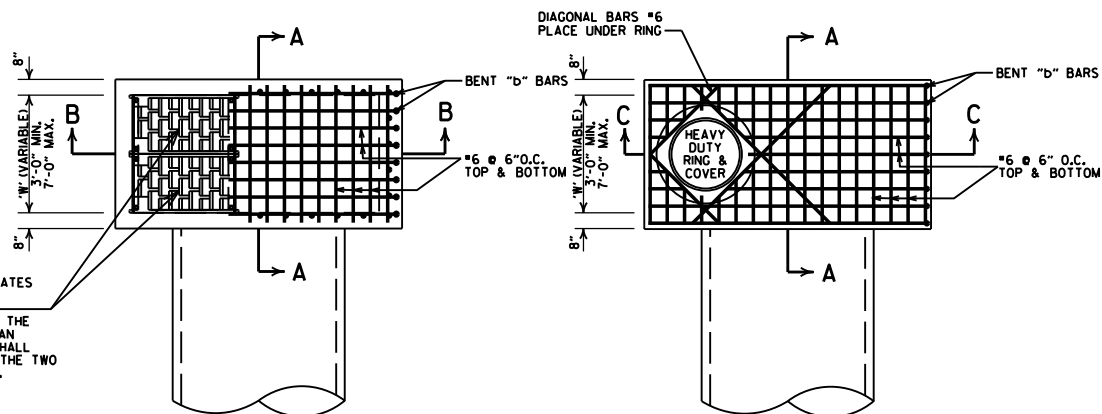
1. RIBBED VANE GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105, CLASS 35B, & AASHTO M 306.
2. GRATE AND FRAME SHALL NOT BE PAINTED.
3. GRATE AND FRAME SHALL BE INSTALLED IN DROP INLET IN ASSEMBLED POSITION.
4. APPROXIMATE WEIGHT OF GRATE SHALL BE 170 LBS.



DETAILS OF RIBBED VANE GRATE AND FRAME



TWO RIBBED VANE GRATES WITH FRAME NORMAL.
WHEN CALLED FOR IN THE PLANS, ONE PEDESTRIAN GRATE WITH FRAME SHALL BE USED IN LIEU OF THE TWO RIBBED VANE GRATES.



SECTION C-C
DETAILS OF JUNCTION BOX
(TYPE ST)

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\"
2. THE STEPS SHALL BE OMITTED WHERE 'H' IS LESS THAN 4'-0\"
3. ALL EXPOSED CORNERS ARE TO HAVE A 3/4\"

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.

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
DATE REVISED	DATE FILMED	DESCRIPTION

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	43¾	44	26¾	27
42	51½	51	31¾	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	87½	87
120	154	154	96¾	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.

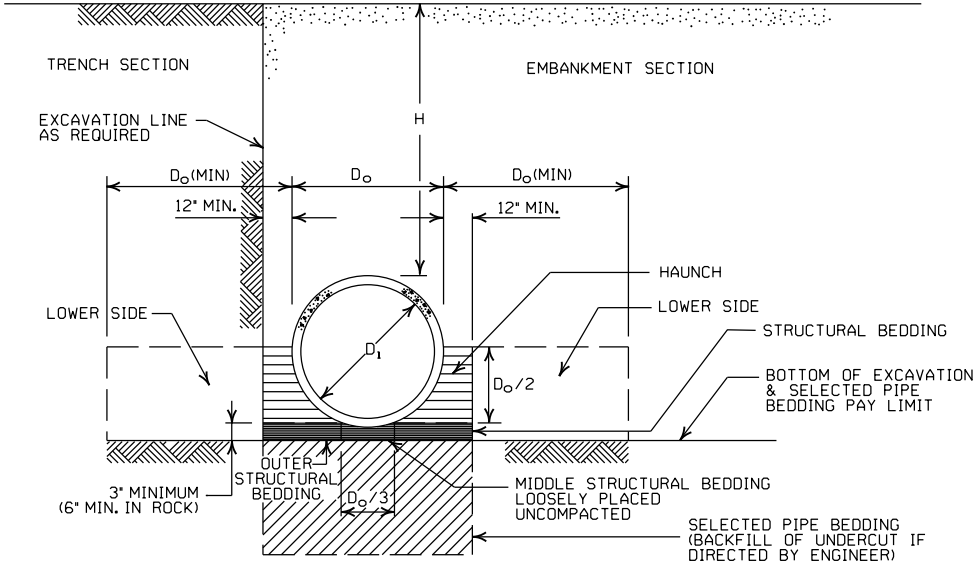
- LEGEND -

D_i = NORMAL INSIDE DIAMETER OF PIPE
D_o = OUTSIDE DIAMETER OF PIPE
H = FILL COVER HEIGHT OVER PIPE (FEET)
MIN. = MINIMUM
= UNDISTURBED SOIL

INSTALLATION TYPE	MATERIAL REQUIREMENTS FOR HAUNCH AND STRUCTURAL BEDDING
TYPE 1	AGGREGATE BASE COURSE (CLASS 5 OR CLASS 7)
TYPE 2	SELECTED MATERIALS (CLASS SM-1, SM-2, OR SM-4) OR TYPE 1 INSTALLATION MATERIAL*
TYPE 3**	AASHTO CLASSIFICATION A-1 THRU A-6 SOIL OR TYPE 1 OR 2 INSTALLATION MATERIAL

* SM-3 WILL NOT BE ALLOWED.

** MATERIALS SHALL NOT INCLUDE ORGANIC MATERIALS
OR STONES LARGER THAN 3 INCHES.



EMBANKMENT AND TRENCH INSTALLATIONS

1. MATERIAL IN THE HAUNCH AND OUTER STRUCTURAL BEDDING SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.
2. FOR TRENCHES WITH WALLS OF NATURAL SOIL, THE DENSITY OF THE SOIL IN THE LOWER SIDE ZONE SHALL BE AS FIRM AS THE 95% DENSITY REQUIRED FOR THE HAUNCH. IF THE EXISTING SOIL DOES NOT MEET THIS CRITERIA, IT SHALL BE REMOVED AND RECOMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OF MATERIAL USED.
3. FOR EMBANKMENTS, THE MATERIAL IN THE LOWER SIDE ZONE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

GENERAL NOTES

1. CONCRETE PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS 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.

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 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.

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.

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	
DATE	REVISION	DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE PIPE CULVERT
FILL HEIGHTS & BEDDING

STANDARD DRAWING PCC-1



CORRUGATED STEEL PIPE (ROUND)

PIPE DIAMETER (INCHES)	① MINIMUM 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
2 3/4 INCH BY 1/2 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 MINIMUM 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 3/4 INCH BY 1/2 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

CORRUGATED METAL PIPE ARCHES

EQUIV. DIA. (INCHES)	PIPE DIMENSION SPAN X RISE (INCHES)	MINIMUM CORNER RADIUS (INCHES)	STEEL				ALUMINUM		
			MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)	MAX. HEIGHT OF FILL, "H" (FT.)	MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)	MAX. HEIGHT OF FILL, "H" (FT.)	
				INSTALLATION	INSTALLATION		INSTALLATION	INSTALLATION	
				TYPE 1	TYPE 1		TYPE 1	TYPE 1	
			2 3/4 INCH BY 1/2 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM				2 3/4 INCH BY 1/2 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	3 1/2	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	0.135	3	15	
66	77x52	8	0.168	3	15	0.164	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				① FOR MINIMUM COVER VALUES, "H" SHALL ② WHERE THE STANDARD 2 2/3" x 1/2" COR WITH A 3' x 1' OR 5' x 1' CORRUGATION OR GREATER THAN THE MAXIMUM FILL		
			INSTALLATION		INSTALLATION				
			TYPE 2	TYPE 1	TYPE 2	TYPE 1			
36	40x31	5	0.079	3	2	12	15		
42	46x36	6	0.079	3	2	13	15		
48	53x41	7	0.079	3	2	13	15		
54	60x46	8	0.079	3	2	13	15		
60	66x51	9	0.079	3	2	13	15		
66	73x55	12	0.079	3	2	15	15		
72	81x59	14	0.079	3	2	15	15		
78	87x63	14	0.079	3	2	15	15		
84	95x67	16	0.109	3	2	15	15		
90	103x71	16	0.109	3	2	15	15		
96	112x75	18	0.109	3	2	15	15		
102	117x79	18	0.109	3	2	15	15		
108	128x83	18	0.138	3	2	15	15		

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.

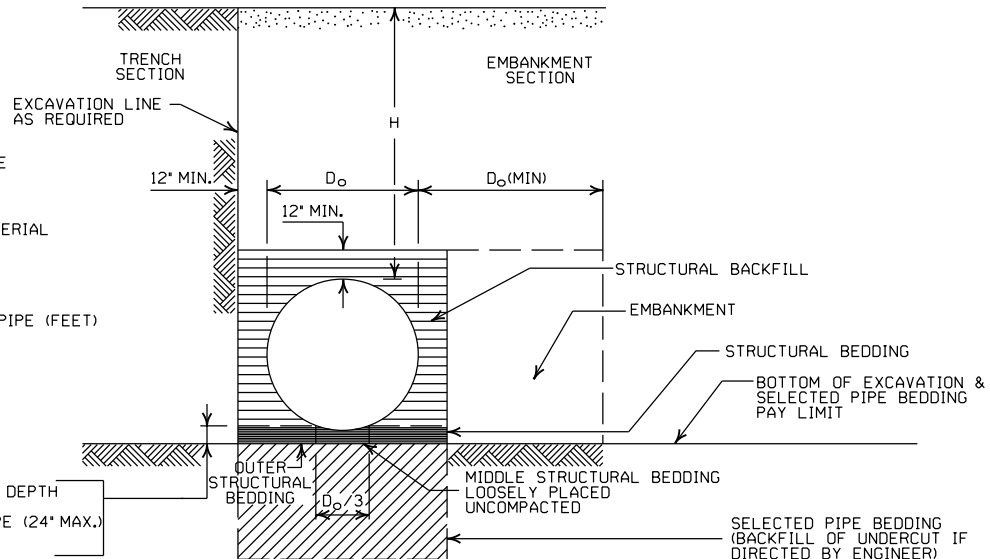
EQUIVALENT METAL THICKNESSES AND GAUGES

METAL THICKNESS IN INCHES			GAUGE NUMBER
STEEL		ALUMINUM	
ZINC COATED	UNCOATED		
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

- 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)

IN SOIL-MIN. EQUALS TWICE CORRUGATION DEPTH
IN ROCK-MIN. EQUALS GREATER OF:
1/2" PER FOOT OF FILL OVER PIPE (24" MAX.)
TWICE CORRUGATION DEPTH



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. INSTALLATION TYPE 1 SHALL BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE ARCHES WITH 2 3/4" X 1/2" 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."

① FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.

② WHERE THE STANDARD 2 2/3" X 1/2" 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.

2-27-14	REVISED GENERAL NOTE 1	
12-15-11	REVISED FOR LRFD DESIGN SPECS	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	
DATE	REVISION	DATE FILMED

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 1/2 INCH. 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.

MINIMUM TRENCH WIDTH
BASED ON FILL HEIGHT "H"

PIPE DIAMETER	TRENCH WIDTH (FEET)	
	"H" < 10'-0"	"H" ≥ 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"

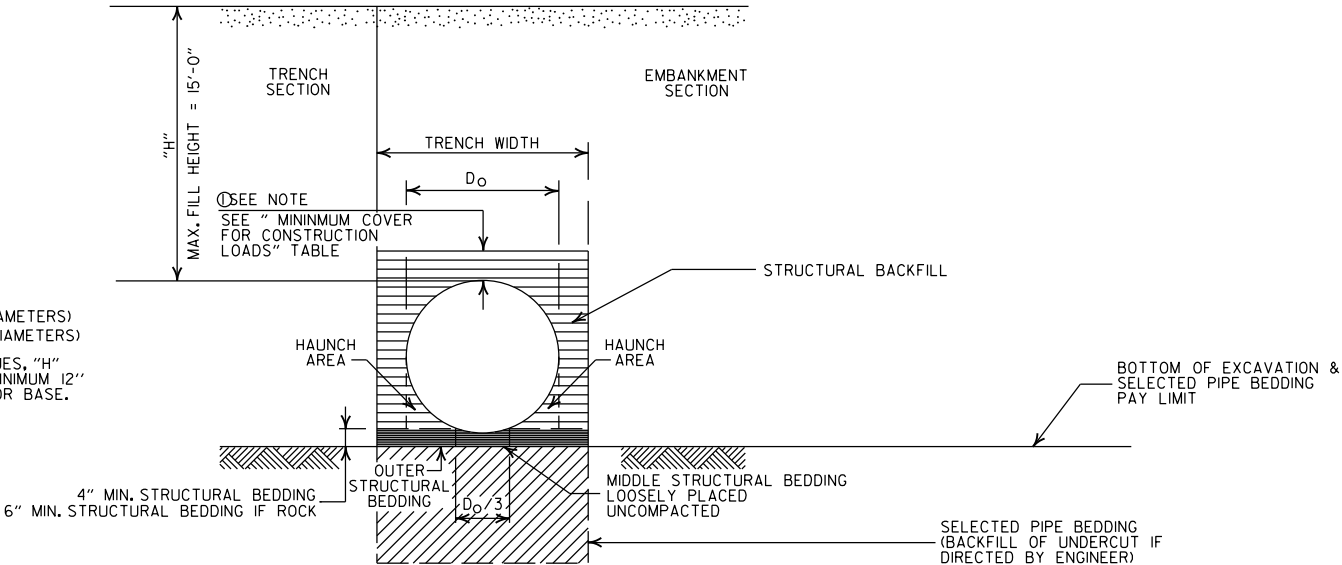
NOTE:
18" MIN. (18" - 30" DIAMETERS)
24" MIN. (36" - 48" DIAMETERS)
MINIMUM COVER VALUES, "H"
SHALL INCLUDE A MINIMUM 12"
OF PAVEMENT AND/OR BASE.

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"

PIPE DIAMETER	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"

MINIMUM 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

- 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

- PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
- INSTALL PIPE TO GRADE.
- COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
- 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.
- PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING OR OTHER APPROVED METHODS IN ORDER TO HELP MAINTAIN GRADE AND ALIGNMENT.

- LEGEND -

- H = FILL HEIGHT (FT.)
Do = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM
- ===== = STRUCTURAL BACKFILL MATERIAL
===== = UNDISTURBED SOIL

GENERAL NOTES

- PIPE SHALL CONFORM TO AASHTO M294, TYPE S. INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
- PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
- 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.
- 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.
- 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."
- 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."
- 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.
- HIGH DENSITY POLYETHYLENE PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
- 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.

			ARKANSAS STATE HIGHWAY COMMISSION
			PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)
			STANDARD DRAWING PCP-1
2-27-14	REVISED GENERAL NOTE 1.		
12-15-11	REVISED GENERAL NOTES & MINIMUM COVER NOTE		
11-17-10	ISSUED		
DATE	REVISION	DATE FILMED	

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 1/4 INCH. 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" ≥ 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"

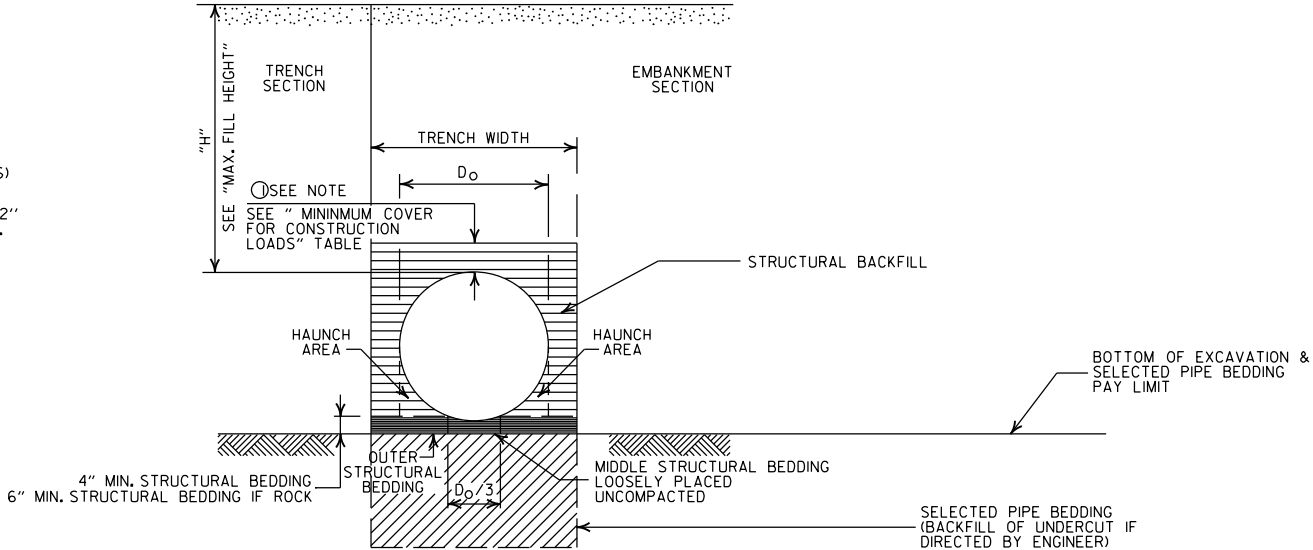
MULTIPLE INSTALLATION OF
PVC PIPES

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.



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.

- LEGEND -

H = FILL HEIGHT (FT.)
Do = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM

===== = STRUCTURAL BACKFILL MATERIAL
XXXXXX = UNDISTURBED SOIL

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 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.

2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REV GENERAL NOTES & MINIMUM COVER NOTE; DELETED SM3 MATERIAL	
11-17-10	ISSUED	
DATE	REVISION	DATE FILMED

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 1 INCH. 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"

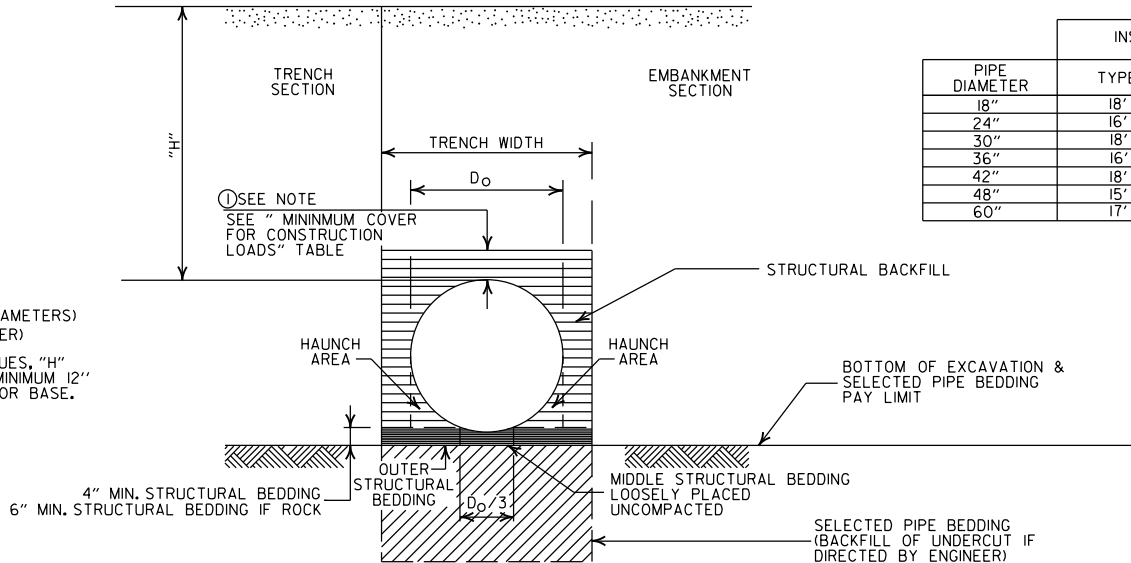
PIPE DIAMETER	TRENCH WIDTH (FEET)	
	"H" < 10'-0"	"H" >OR= 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"
42"	7'-0"	10'-6"
48"	8'-0"	12'-0"
60"	10'-0"	15'-0"

① NOTE:
12" MIN. (18" - 42" DIAMETERS)
24" MIN. (60" DIAMETER)
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)	110.0-150.0 (KIPS)
36" OR LESS	2'-0"	2'-6"	3'-0"	3'-0"
42" OR GREATER	3'-0"	3'-0"	3'-6"	4'-0"

② MINIMUM COVER SHALL BE MEASURED FROM TOP OF PIPE TO TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE. THE SURFACE SHALL BE MAINTAINED.



EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. THE STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8". THE LAYERS SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.
5. PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING OR OTHER APPROVED METHODS IN ORDER TO HELP MAINTAIN GRADE AND ALIGNMENT.

GENERAL NOTES

1. PIPE SHALL CONFORM TO AASHTO M330, TYPE S. INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICATIONS 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
XXXXXXXXXX UNDISTURBED SOIL

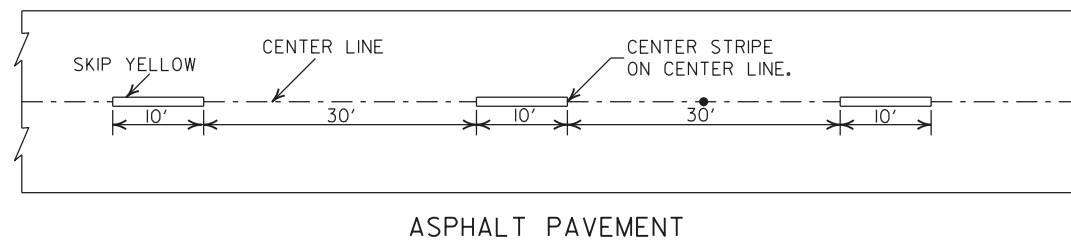
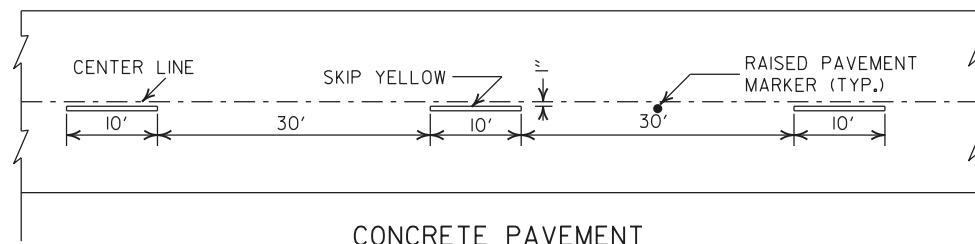
02-27-20	REVISED	
11-07-19	ISSUED	
DATE	REVISION	DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION

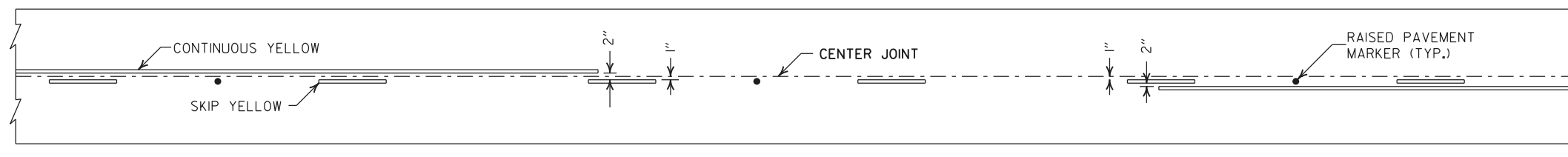
PLASTIC PIPE CULVERT
(POLYPROPYLENE)

STANDARD DRAWING PCP-3

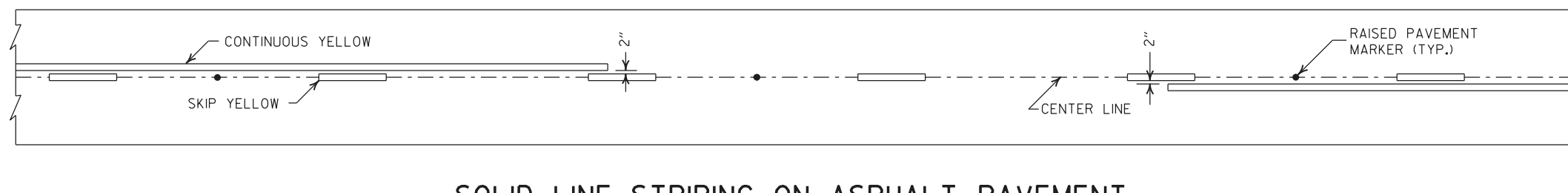




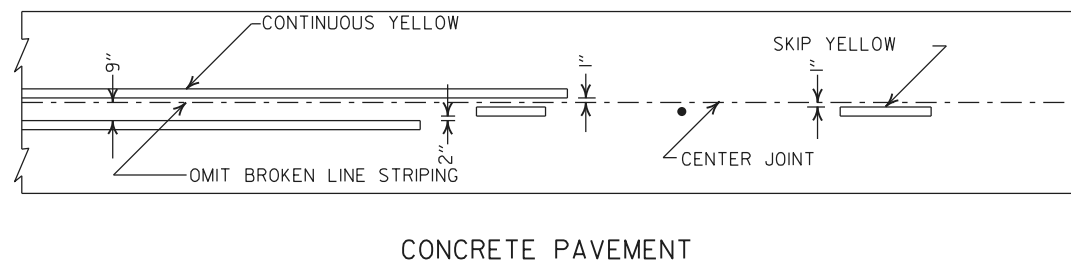
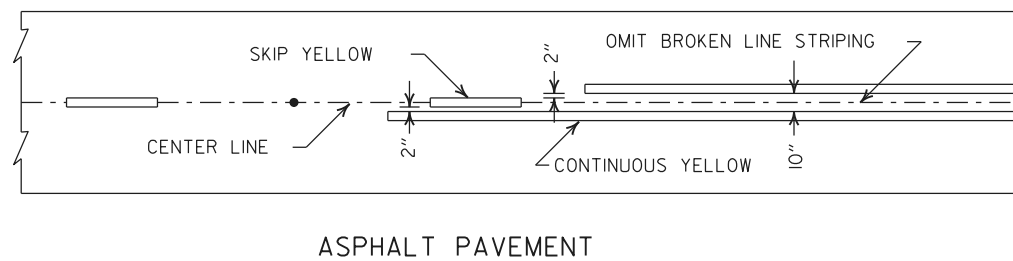
BROKEN LINE STRIPING



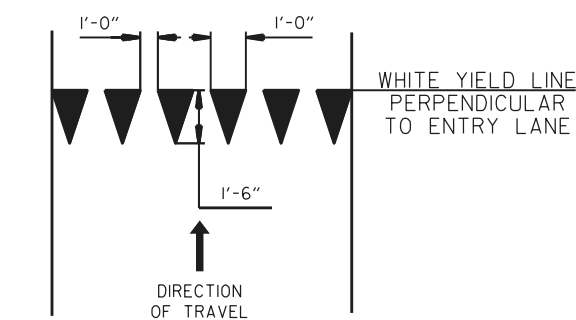
SOLID LINE STRIPING ON CONCRETE PAVEMENT



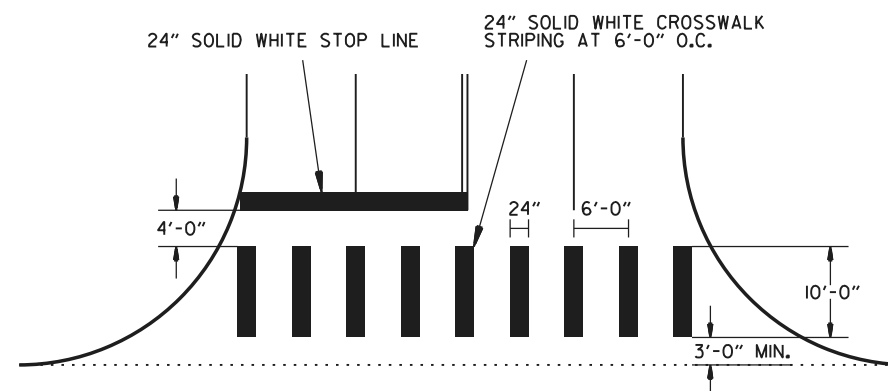
SOLID LINE STRIPING ON ASPHALT PAVEMENT



STRIPING AT ADJACENT NO PASSING LANES



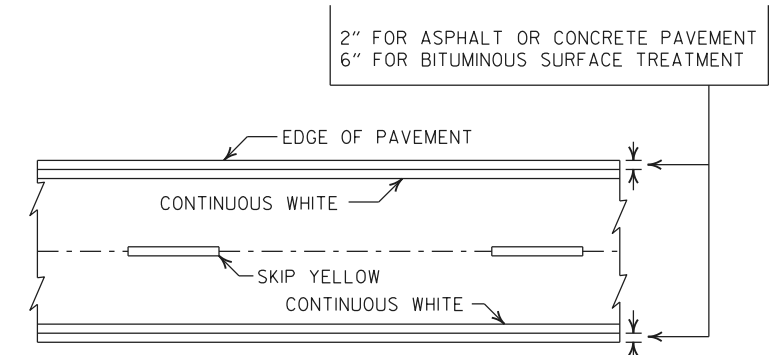
YIELD LINE DETAIL



CROSSWALK AND STOP LINE DETAILS

NOTES:

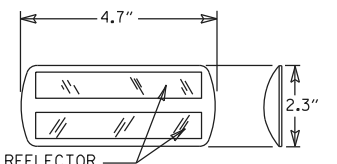
1. REFER TO THE STRIPING DETAILS FOR PAVEMENT MARKING LINE WIDTHS.
2. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
3. RAISED PAVEMENT MARKERS SHALL BE PLACED ON AN 80 FEET SPACING UNLESS OTHERWISE SHOWN IN THE PLANS.



PAVEMENT EDGE LINE MARKING

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

TYPE II
RED/CLEAR OR
YELLOW/YELLOW



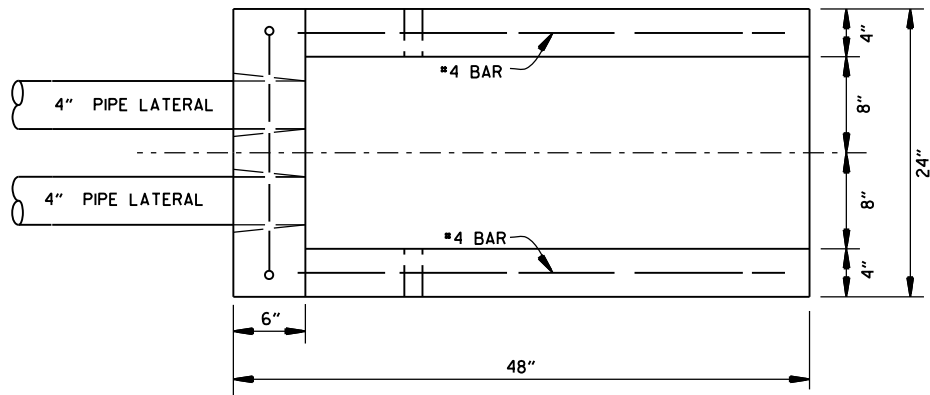
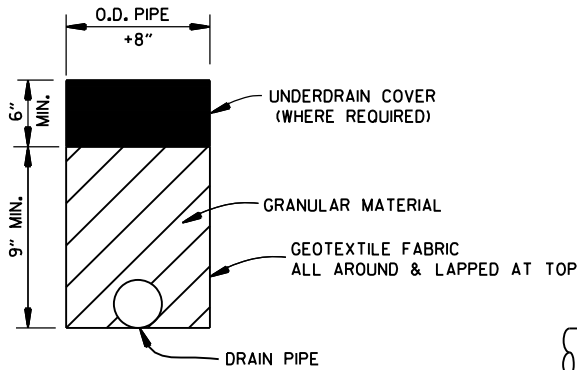
NOTE:
DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER, REQUESTING APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING TO THE ARDOT QUALIFIED PRODUCTS LIST.



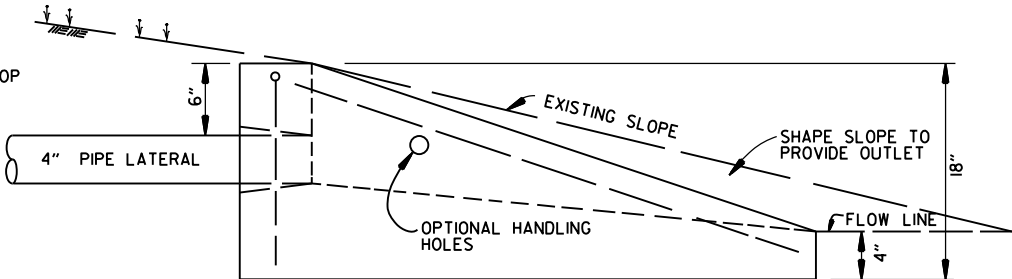
DETAIL OF STANDARD RAISED PAVEMENT MARKERS

04-09-26	REV. CROSSWALK & STOP LINE DETAILS	 ARKANSAS STATE HIGHWAY COMMISSION	
02-27-20	REV. STOP LINE DETAILS		
06-01-17	ADDED YIELD LINE DETAIL		
05-12-16	REVISED LINE WIDTHS, SPACING, & NOTES		
09-12-13	REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS		
DATE REV	DESCRIPTION	PAVEMENT MARKING DETAILS	
DATE EFFECTIVE			
04-09-2026		STANDARD DRAWING	PM-1

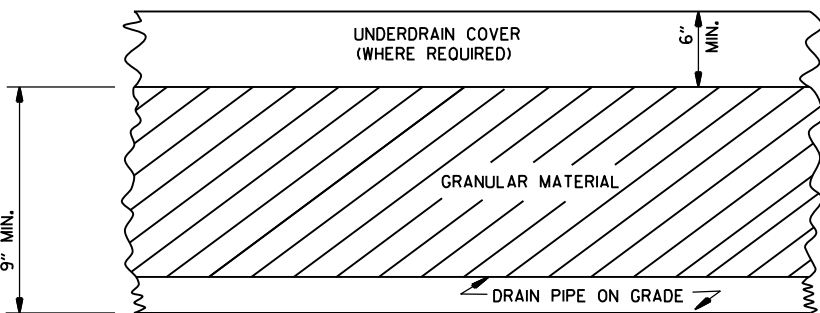
NOTE:
1. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THOROUGHLY COMPACTED EARTH AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.
2. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC, LAP FABRIC 12" OR THE WIDTH OF THE TRENCH AT THE TOP.



PLAN VIEW



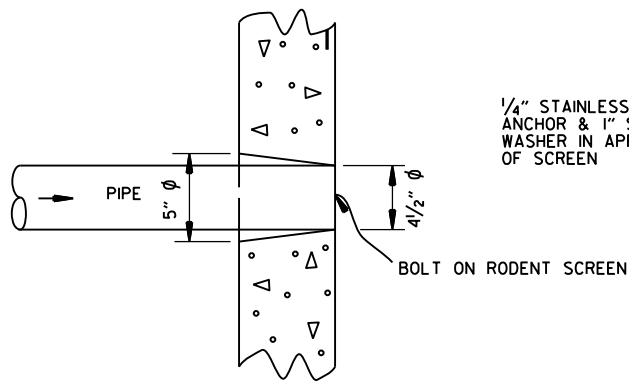
SIDE VIEW



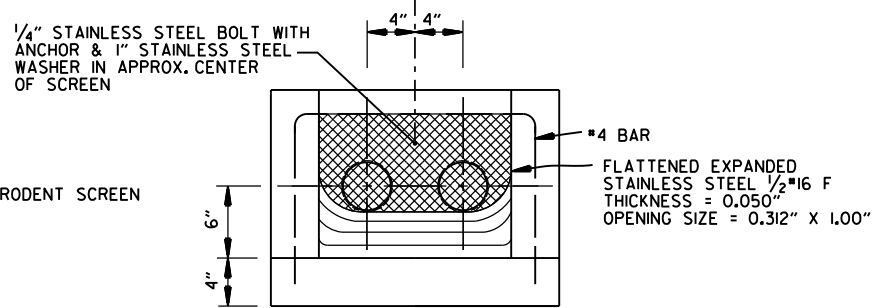
DETAILS OF PIPE UNDERDRAIN

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.



DETAIL OF HOLE FOR 4" PIPE

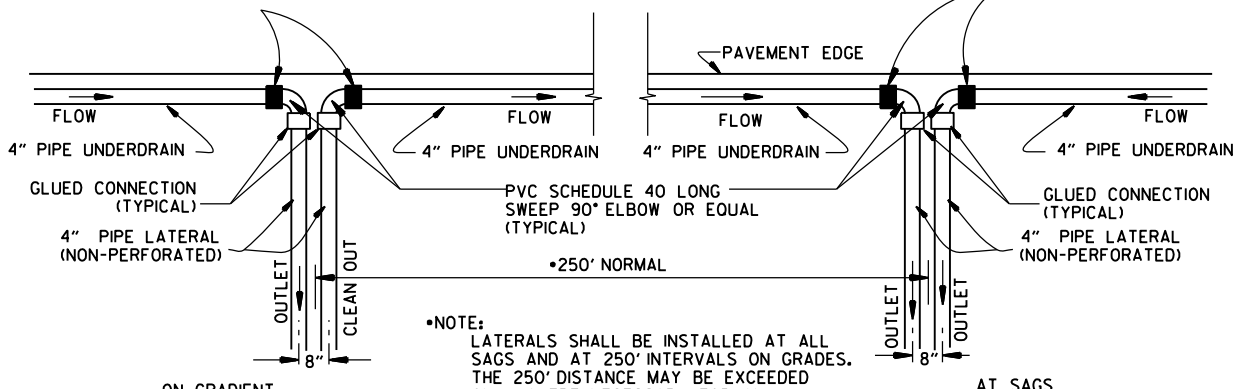


FRONT VIEW
(DETAIL OF RODENT SCREEN)

FERNCO 1056-44 (4" CI/PLASTIC) OR
FERNCO 1051-44 (4" AC/DI OR 4" CI/PLASTIC)
COUPLING OR EQUAL WITH 2 CLAMPS (TYPICAL)

UNDERDRAIN OUTLET PROTECTORS

FERNCO 1056-44 (4" CI/PLASTIC) OR
FERNCO 1051-44 (4" AC/DI OR 4" CI/PLASTIC)
COUPLING OR EQUAL WITH 2 CLAMPS (TYPICAL)



NOTE:
LATERALS SHALL BE INSTALLED AT ALL SAGS AND AT 250' INTERVALS ON GRADES. THE 250' DISTANCE MAY BE EXCEEDED ONLY WHERE NECESSARY FOR AN ACCEPTABLE OUTLET.

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.

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: 5 1/2" 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 POLYETHYLENE 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
DATE	REVISION	DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION

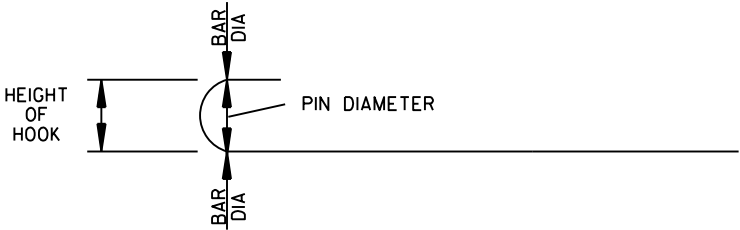
DETAILS OF PIPE UNDERDRAIN

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	2 1/4"	4"
4	3 "	4 1/2"
5	3 3/4"	5"
6	4 1/2"	6"
7	5 1/4"	7"
8	6"	8"

IF THE OVERALL HEIGHT OF THE HOOK (SEE DIAGRAM BELOW) FOR A "b", "bl", "b2" or "b3" BENT BAR IS GREATER THAN THE CORRESPONDING TOP OR BOTTOM SLAB THICKNESS, LESS 2 3/4 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", "bl", "b2" OR "b3" BENT BARS THEY REPLACE.



NOTE: DIMENSIONS OF BARS ARE MEASURED OUT TO OUT OF BARS.

OVERALL HEIGHT OF HOOKED BAR DIAGRAM

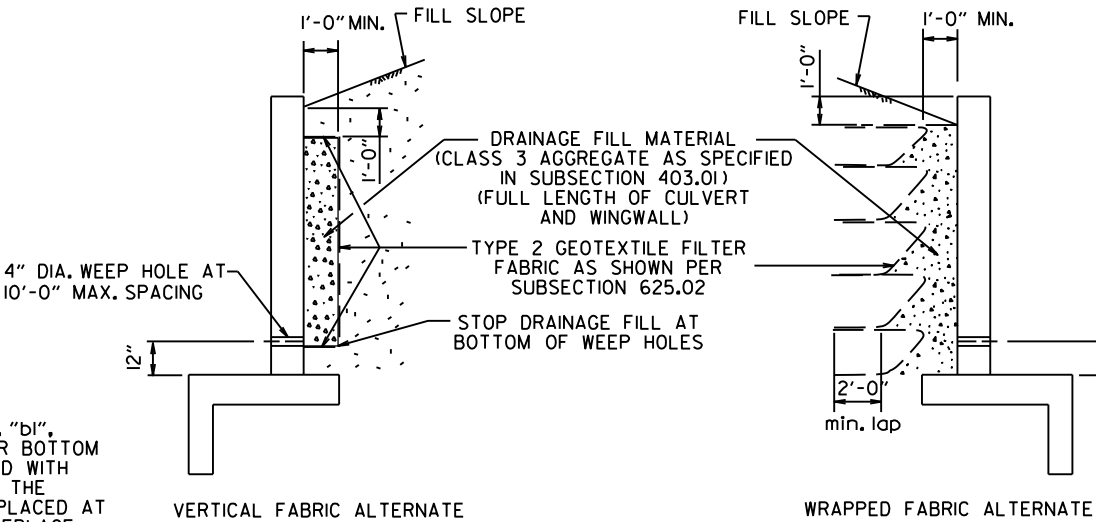
THE HOOKED BARS SHALL BE PLACED IN THE BOTTOM OF THE TOP SLAB AND THE TOP OF THE BOTTOM SLAB. THE STRAIGHT BARS SHALL BE PLACED IN THE TOP OF THE TOP SLAB AND THE BOTTOM OF THE BOTTOM SLAB. SEE TABLE BELOW FOR LENGTHS OF REPLACEMENT HOOKED AND STRAIGHT BARS.

FOR SKEWED CULVERTS, THE REPLACEMENT STRAIGHT BAR MAY HAVE TO BE CUT IN FIELD TO FIT.

REPLACEMENT BAR LENGTHS TABLE

BAR SIZE: "b", "bl", "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 31OR 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.

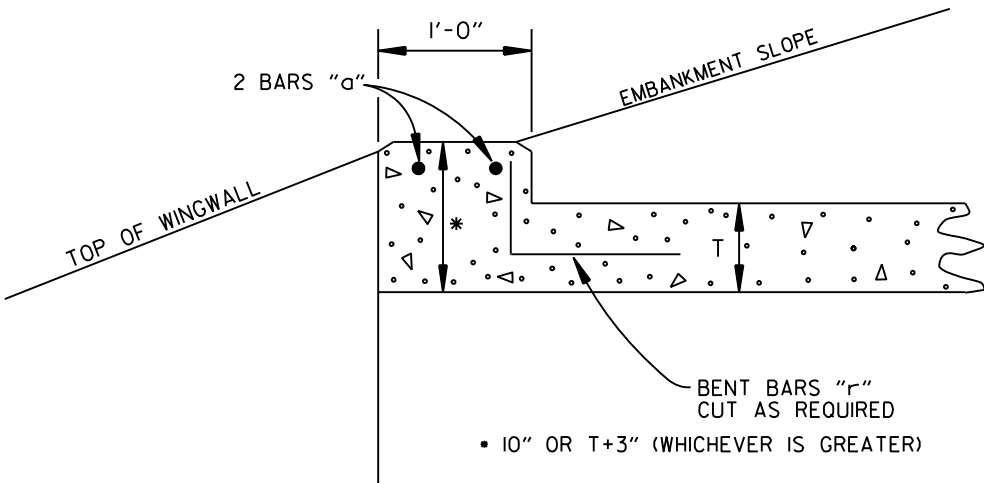
MEMBRANE WATERPROOFING SHALL BE APPLIED TO ALL CONSTRUCTION JOINTS IN THE TOP SLAB AND THE SIDEWALLS OF R.C. BOX CULVERTS AS DIRECTED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FOR THIS ITEM, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS BID FOR THE R.C. BOX CULVERT.

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 1/2 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.

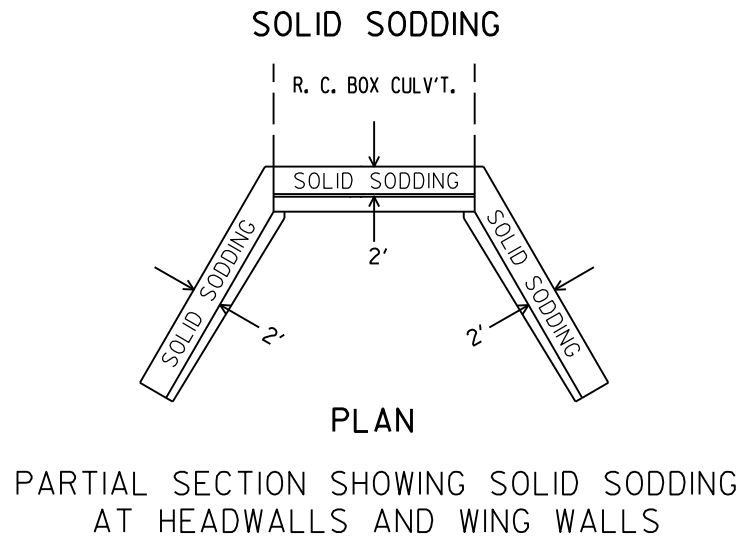
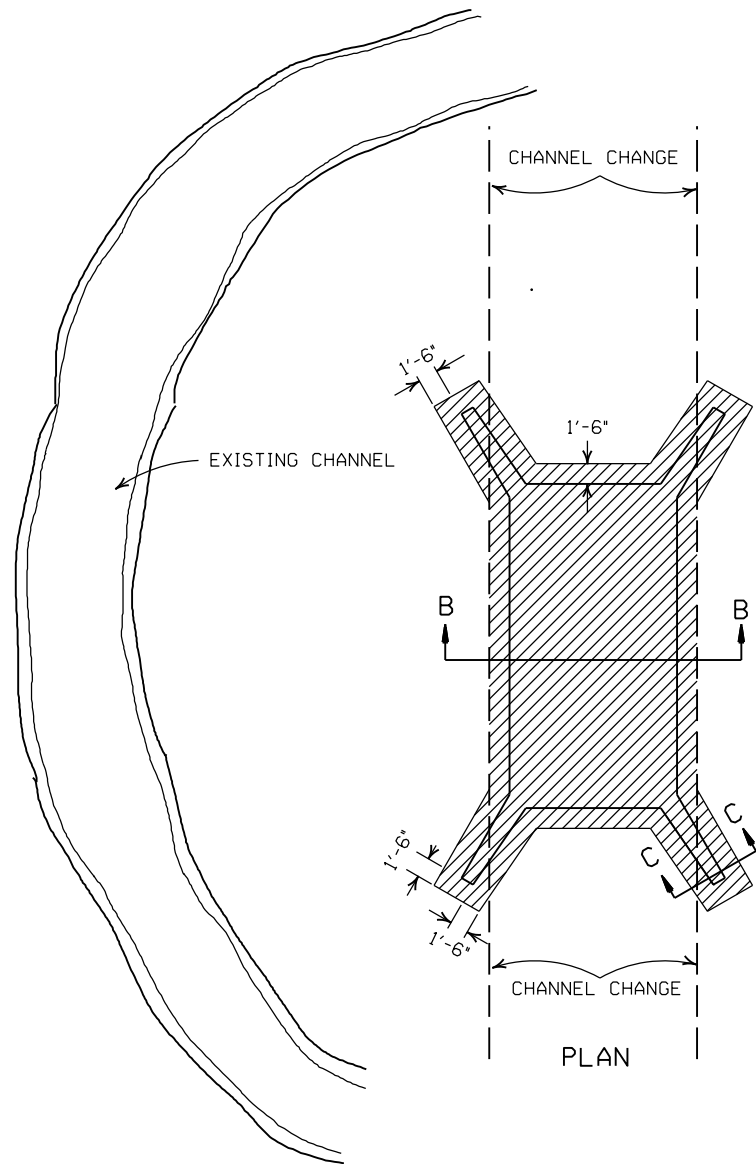
R.C. BOX CULVERT HEADWALL MODIFICATIONS

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	

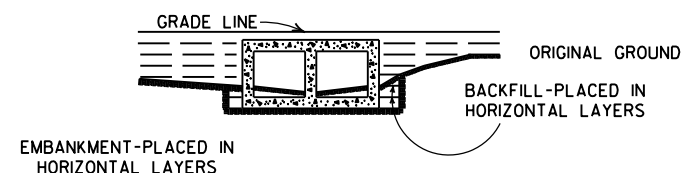
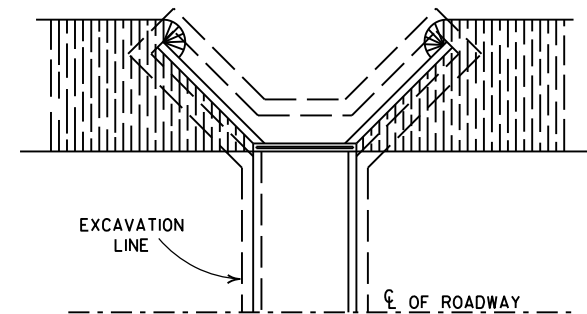
ARKANSAS STATE HIGHWAY COMMISSION

REINFORCED CONCRETE BOX
CULVERT DETAILS

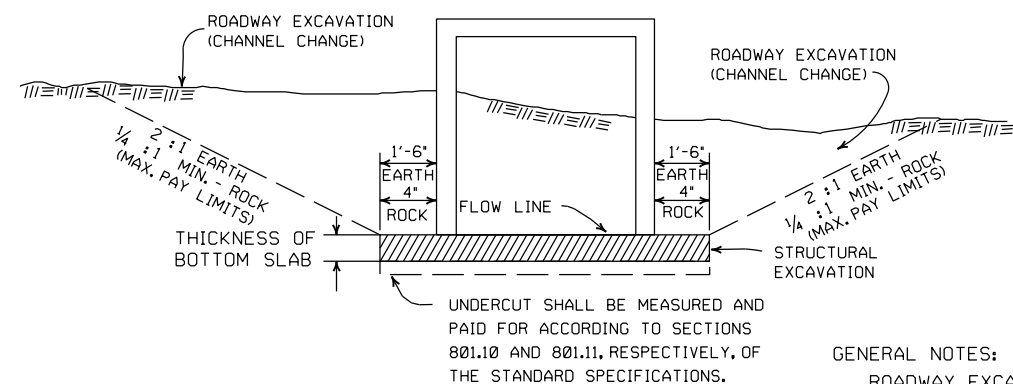
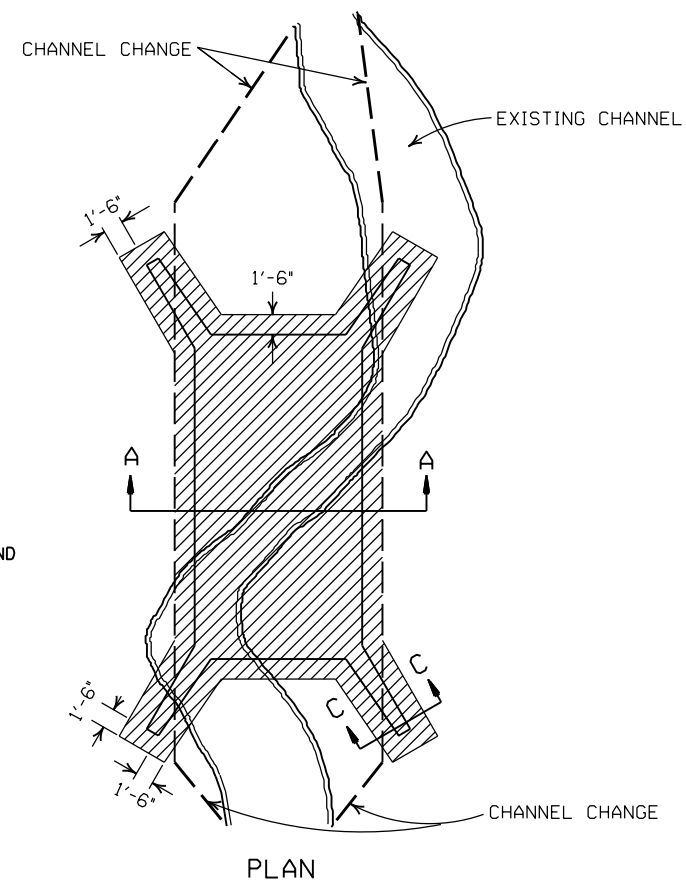
STANDARD DRAWING RCB-1



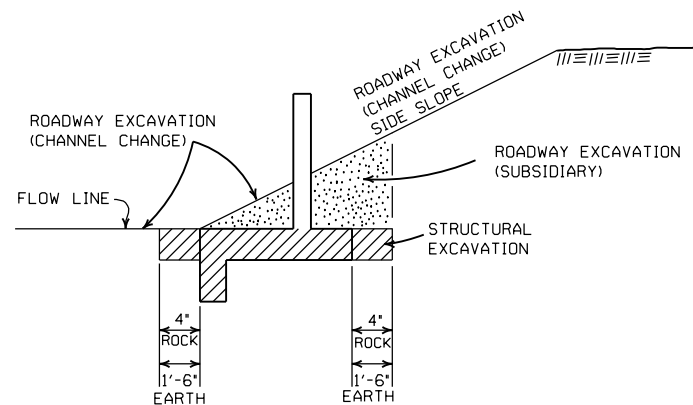
NOTE: LENGTH MEASURED ALONG THE CENTER OF 2' STRIP OF SOLID SODDING.



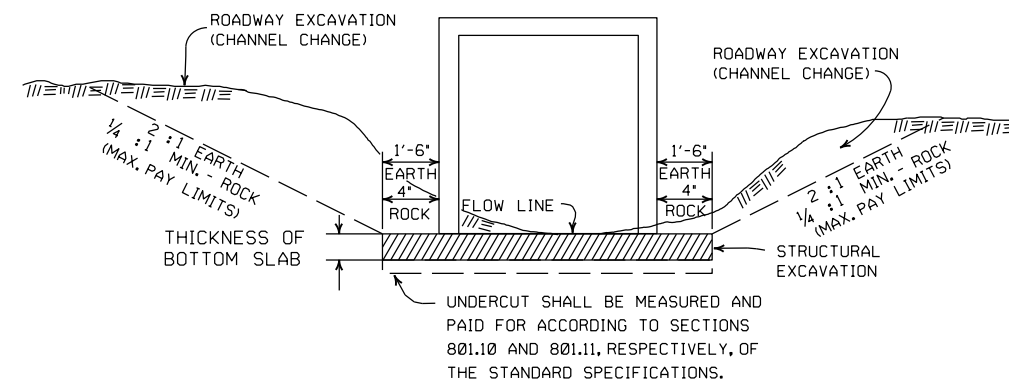
BACKFILL DETAILS FOR BOX CULVERT



DETAILS FOR NEW CHANNELS



SECTION C-C



DETAILS THROUGH EXISTING CHANNELS

GENERAL NOTES:

ROADWAY EXCAVATION (CHANNEL CHANGE) WILL BE PAID FOR AT R.C. BOX CULVERT LOCATIONS. IT WILL BE PAID TO THE LIMITS ACTUALLY CUT AND WILL BE CONFINED TO THAT PORTION OF THE INDICATED AREA THAT IS ABOVE THE FLOW LINE. ROADWAY EXCAVATION (CHANNEL CHANGE) SHALL BE MEASURED BY CROSS SECTIONS AND VOLUMES COMPUTED BY AVERAGE END AREA METHOD. ALL CHANNEL CHANGES SHALL BE BROUGHT TO GRADE PRIOR TO MAKING ANY EXCAVATION FOR STRUCTURES.

EXCAVATION FOR STRUCTURES WILL BE PAID FOR AT ALL R.C. BOX CULVERT LOCATIONS. IT WILL BE PAID TO THE LIMITS SHOWN AND SHALL BE CONFINED TO THAT PORTION OF THE INDICATED AREA THAT IS BELOW THE CHANNEL FLOW LINE.

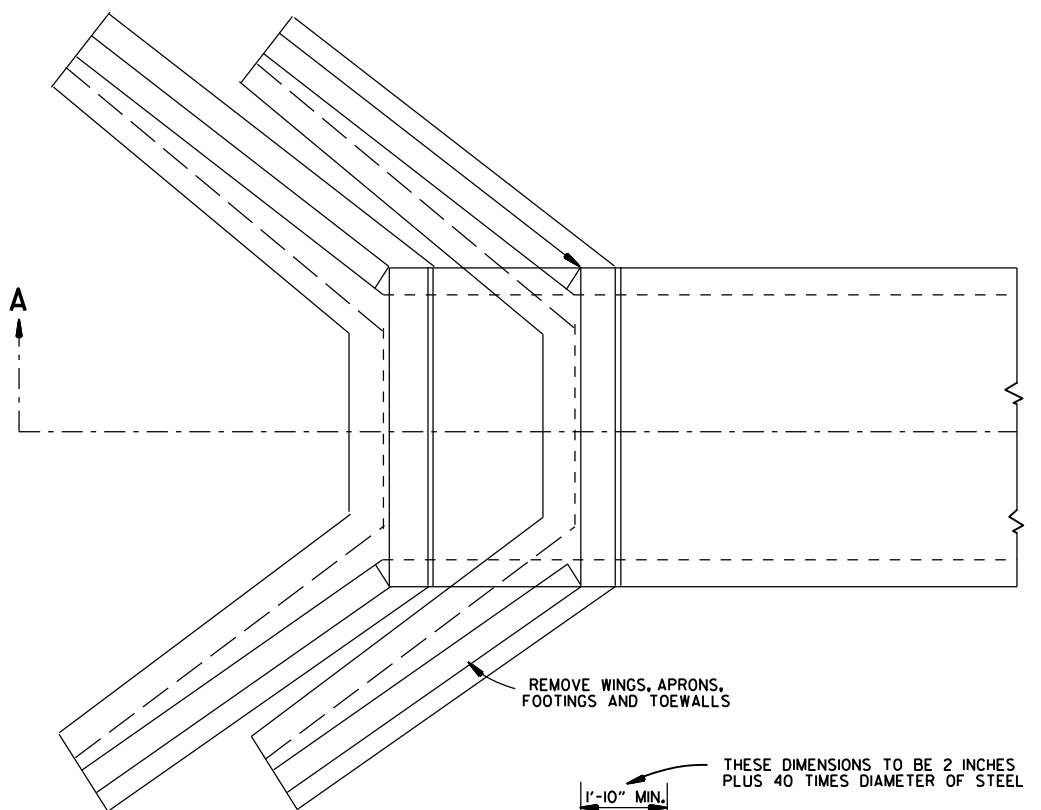
ROADWAY EXCAVATION SHOWN IN SECTION C-C ABOVE AS SUBSIDIARY WILL NOT BE MEASURED OR PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION.

DATE	REVISION	FILMED
11-20-03	REVISED SECTION A-A NOTE	
8-22-02	REVISED SECTION B-B NOTE	
10-12-95	COMBINED 1891B AND 1888A	
1-4-83	REVISED GENERAL NOTES AND ADDED MAXIMUM PAY LIMIT NOTES.	674-1-4-83
2-2-76	EXCAV. PAY LIMITS	917-2-2-76
10-2-72	REVISED AND REDRAWN	564-10-16-72

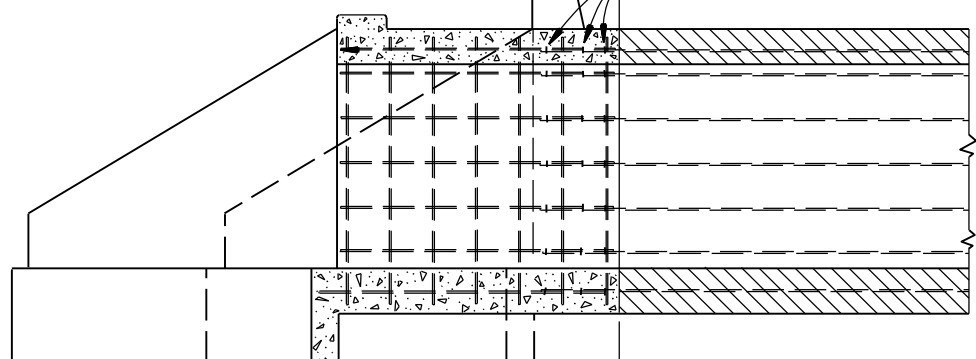
ARKANSAS STATE HIGHWAY COMMISSION

EXCAVATION PAY LIMITS, BACKFILL, & SOLID SODDING FOR BOX CULVERTS

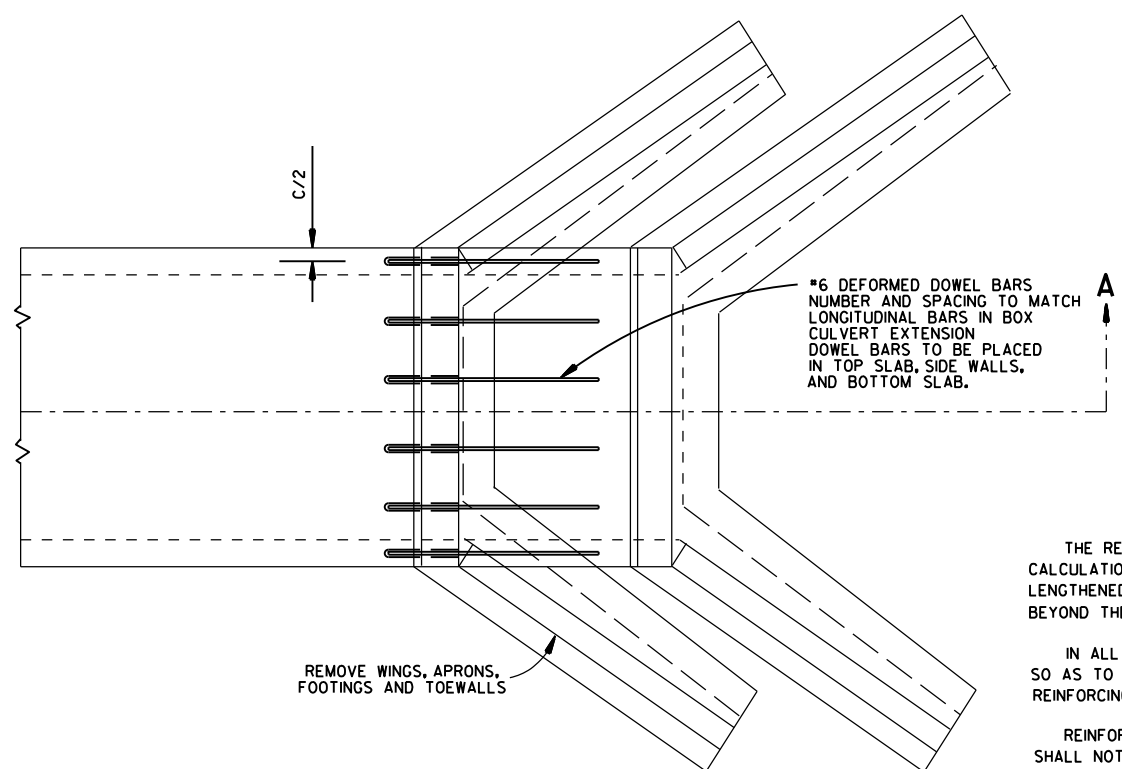
STANDARD DRAWING RCB-2



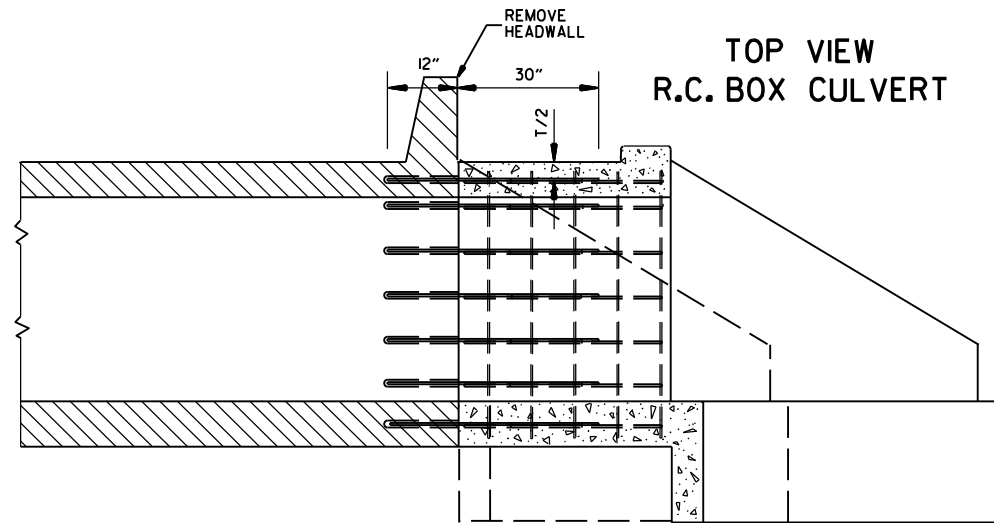
TOP VIEW
R.C. BOX CULVERT



SECTION A-A
METHOD 1



TOP VIEW
R.C. BOX CULVERT



SECTION A-A
METHOD 2

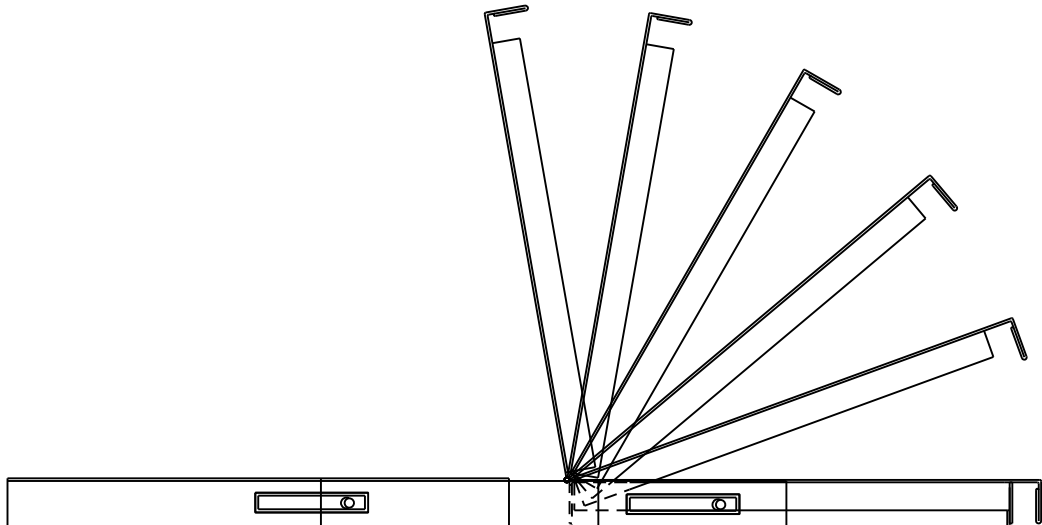
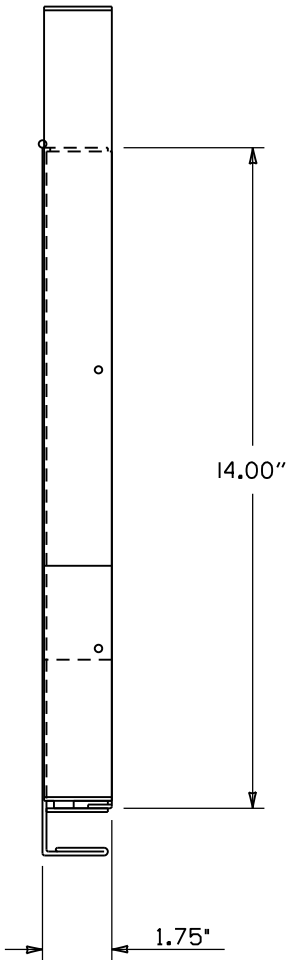
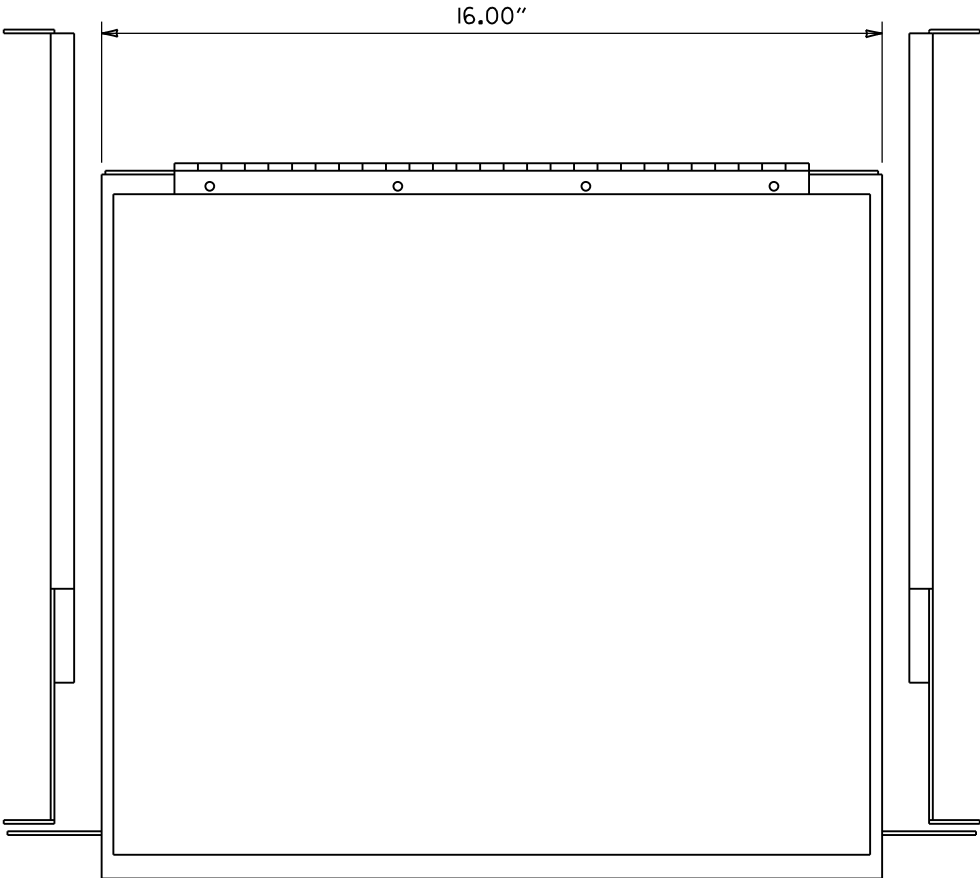
- GENERAL NOTES
- THE RESIDENT ENGINEER WILL MAKE INDIVIDUAL CALCULATIONS OF QUANTITIES FOR EACH STRUCTURE LENGTHENED, MAKING NO ALLOWANCE FOR OVERBREAKAGE BEYOND THE LINES INDICATED.
- IN ALL INSTANCES CONCRETE SHALL BE REMOVED SO AS TO PERMIT FULL 40 DIAMETER SPLICE OF REINFORCING STEEL.
- REINFORCING STEEL REMOVED FROM EXISTING STRUCTURE SHALL NOT BE REUSED IN CONSTRUCTING EXTENSION.
- 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.
- MATERIALS FOR SECURING DOWEL BARS SHALL MEET THE REQUIREMENTS OF SECTION 507.02 OF THE STANDARD SPECIFICATIONS.
- 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.
- 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.

USE FOR METHOD
1
1
1&2
1&2
2
2
1&2

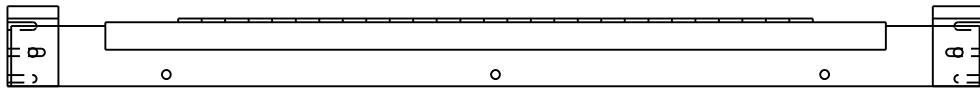
NOTE:
NO PART OF THIS STANDARD IS TO BE USED FOR ANY DETAILS RELATIVE TO NEW CONSTRUCTION.
SEE STANDARD DRAWING LISTED IN TABULATION OF STRUCTURES FOR ALL NEW CONSTRUCTION DETAILS.

			ARKANSAS STATE HIGHWAY COMMISSION
			METHOD OF EXTENDING EXISTING R.C. BOX CULVERTS
			STANDARD DRAWING RCB-3
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		
DATE	REVISION	DATE	FILM

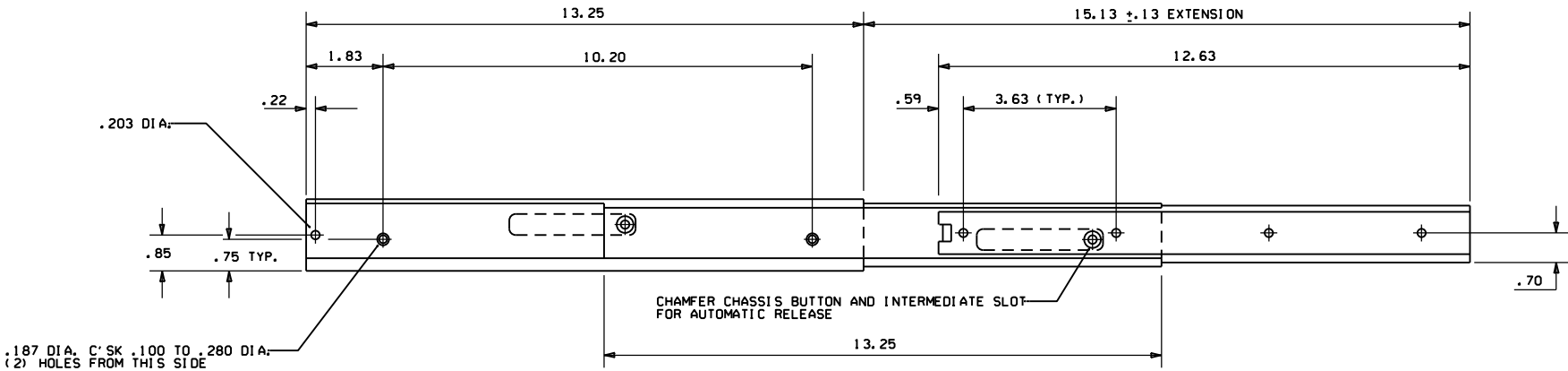
DRAWER PLAN VIEW



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.



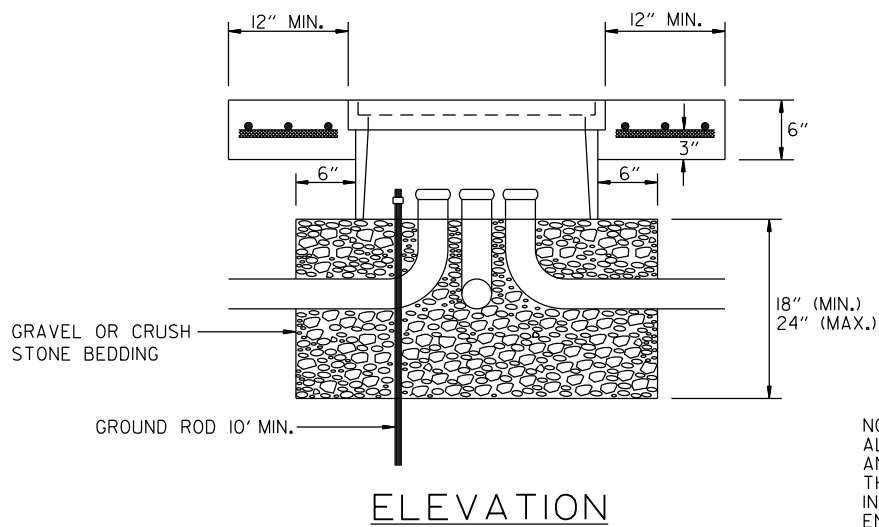
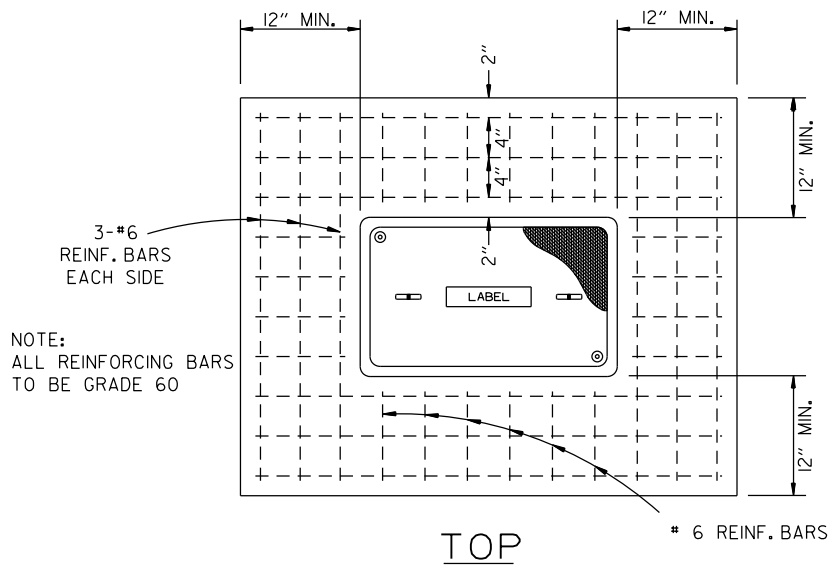
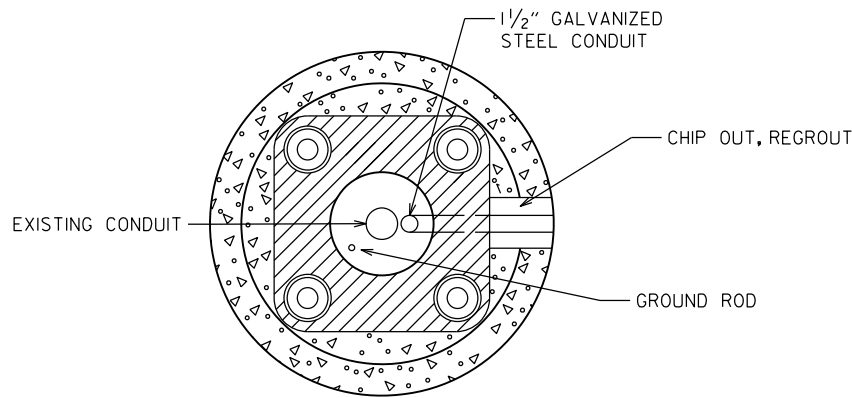
FRONT VIEW



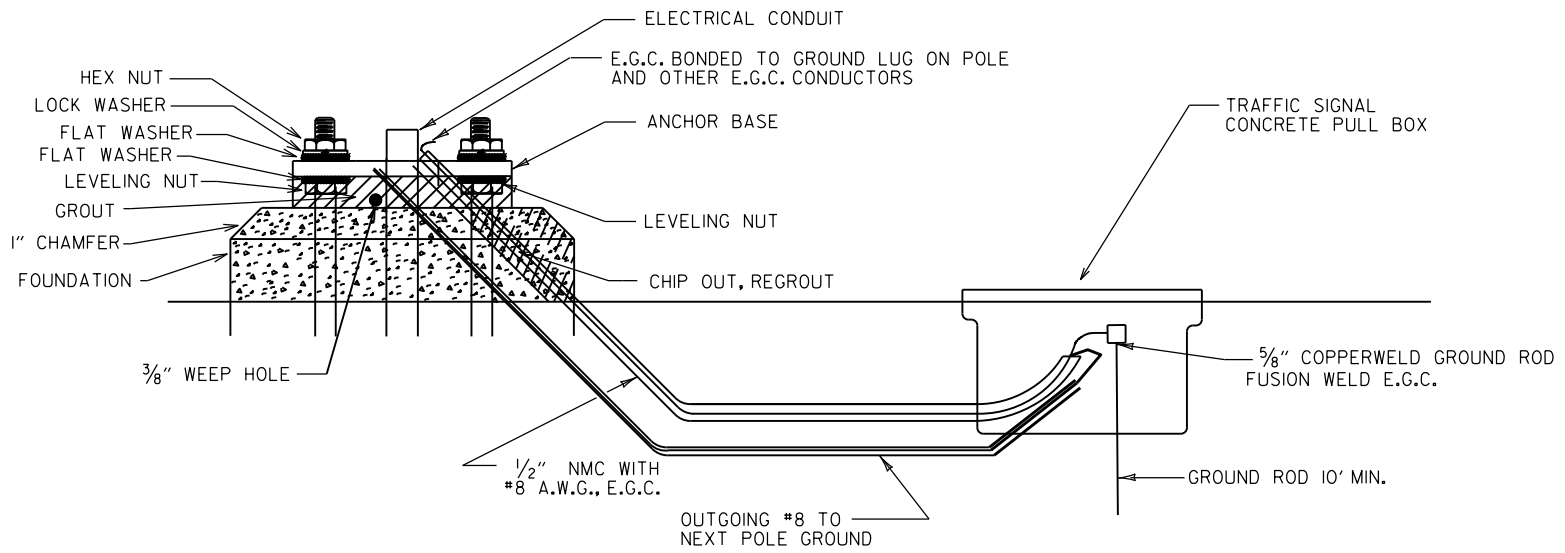
RIGHT SIDE ASSEMBLY

			ARKANSAS STATE HIGHWAY COMMISSION
			CONTROLLER CABINET UTILITY DRAWER
9-12-13	ISSUED AS STANDARD DRAWING		
6-15-05	ISSUED		
DATE	REVISION	DATE	FILM
			STANDARD DRAWING SD-5

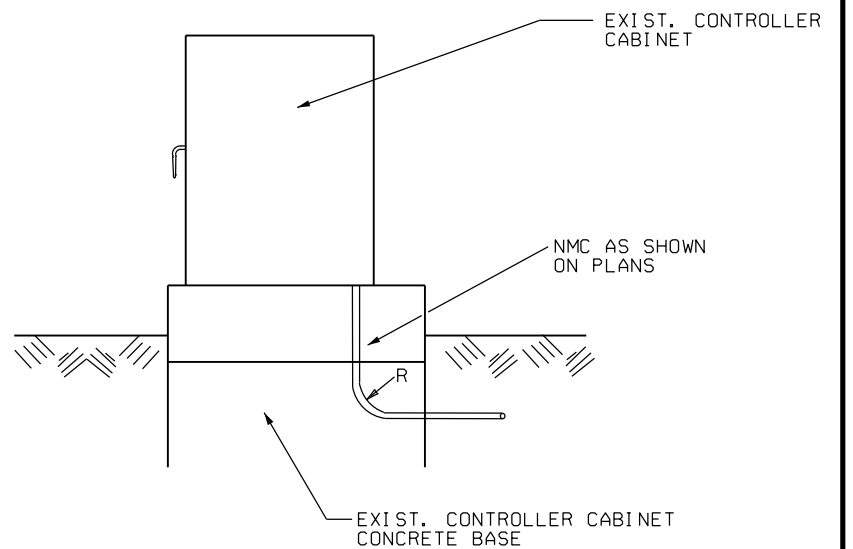
CONDUIT ENTRY TO EXISTING POLE BASE



ANCHOR BASE

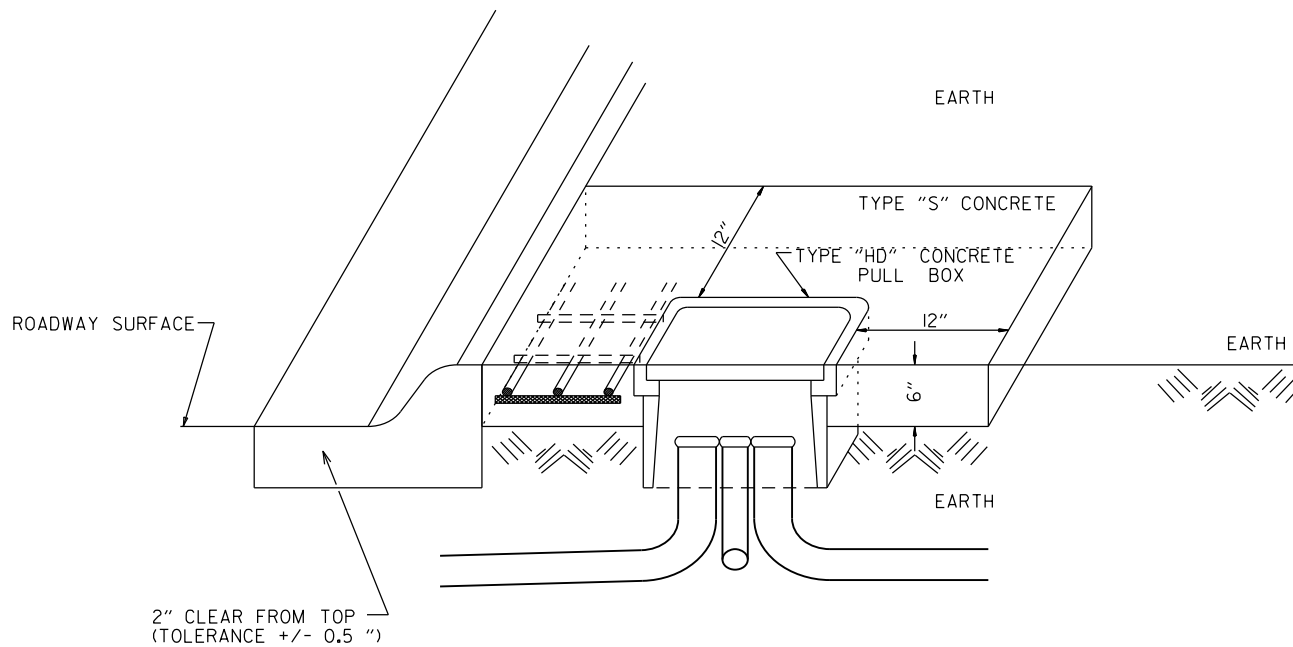


CONDUIT ENTRY TO EXISTING
CONTROLLER CABINET



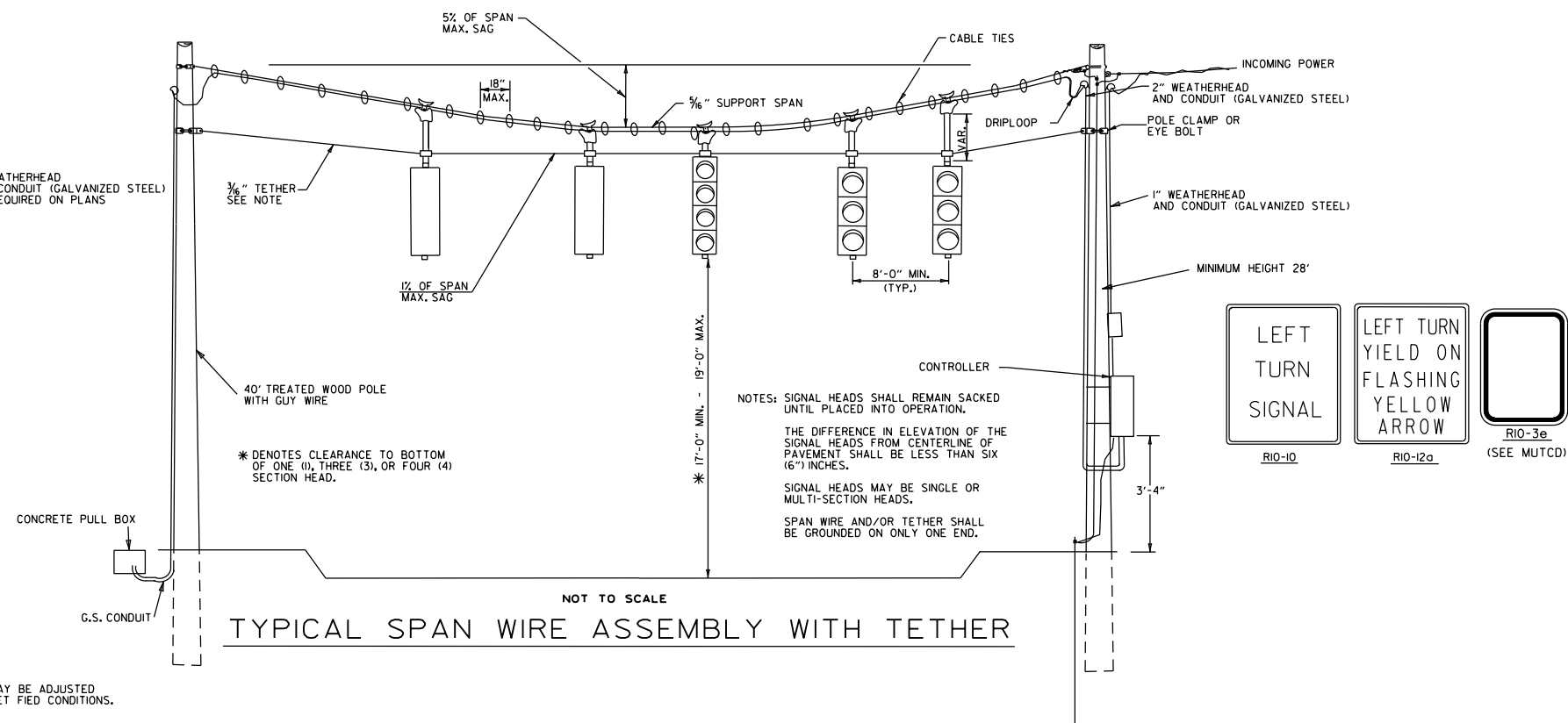
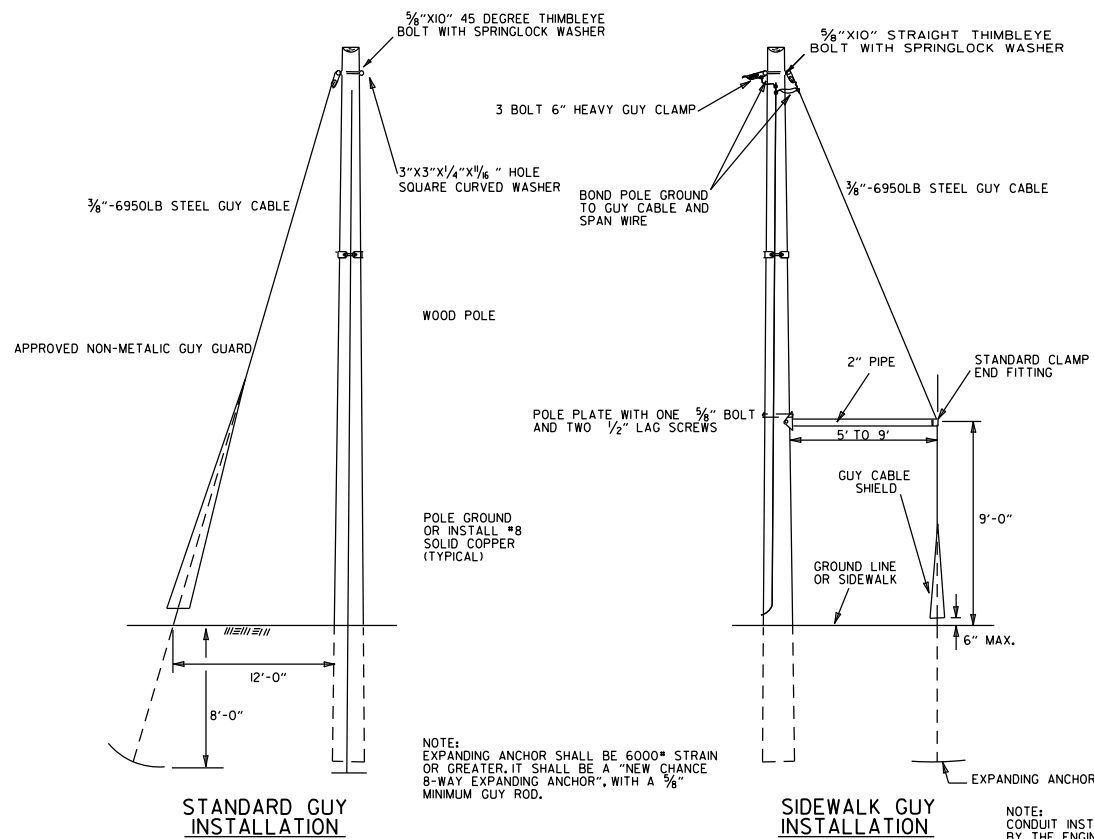
NOTE: ENTRY TO CABINET SHALL BE THROUGH
A CUT IN THE BASE SUFFICIENT TO PROVIDE
ADEQUATE CONDUIT RADIUS FOR ITEM.

TYPE "HD" CONCRETE PULL BOX DETAIL

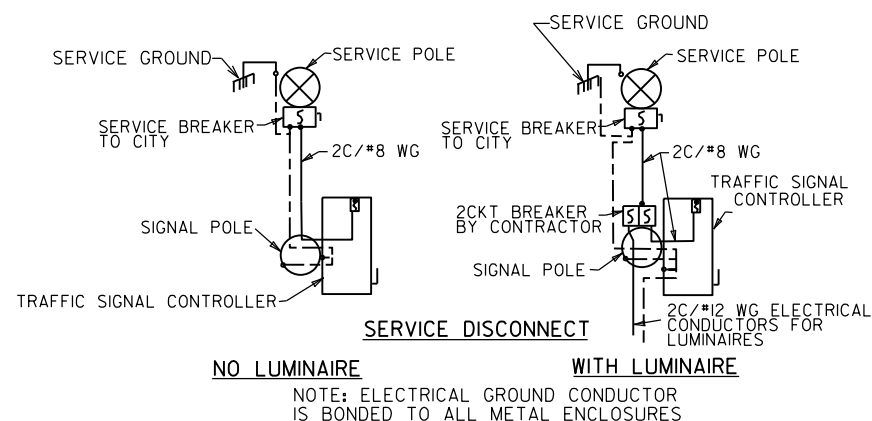
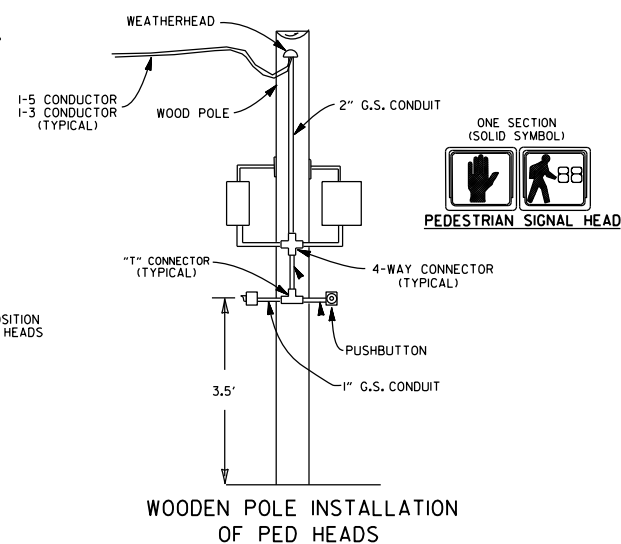
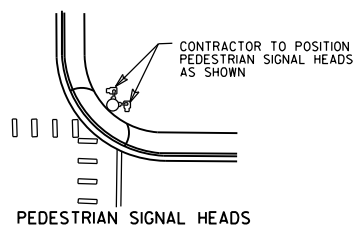
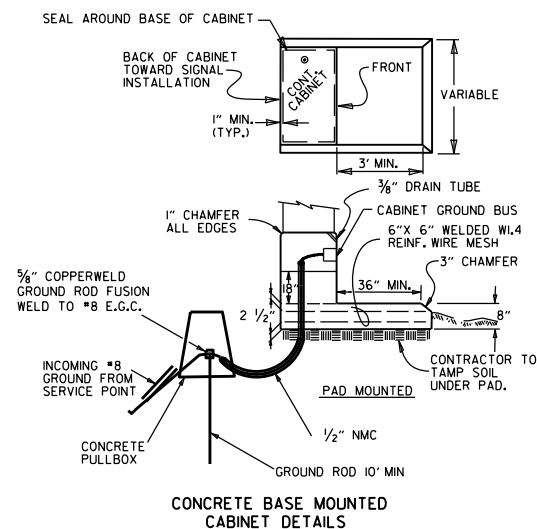


NOTE:
ALL TYPE 1 HD, TYPE 2 HD, AND TYPE 3 HD CONCRETE PULL BOXES ARE INSTALLED WITH AN APRON OF CONCRETE 12" WIDE AND 6" IN DEPTH. ALL PAYMENT SHALL BE INCLUDED IN THE PRICE OF THE TYPE HD CONCRETE PULL BOX. THE CONCRETE PULL BOX SHALL BE INSTALLED FLUSH TO SURROUNDING GRADE UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER. THE CONCRETE SHALL BE CLASS "S". THREE #6 REINFORCING BARS IN THE APRON ON ALL SIDES OF THE CONCRETE PULL BOX IS REQUIRED IN CONCRETE.

02-13-24	REVISED NOTES AND TYPE "HD" CONCRETE PULL BOX DETAILS		ARKANSAS STATE HIGHWAY COMMISSION HEAVY DUTY PULL BOX STANDARD DRAWING SD-6
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		
DATE	REVISION	FILMED	

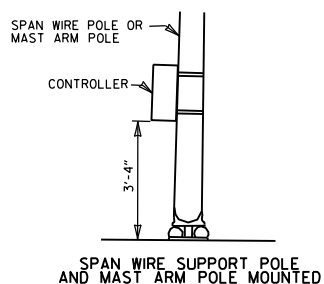


NOTES:
SPAN WIRE POLES SHALL BE MOUNTED A MINIMUM OF FOUR (4) FEET BEHIND CURB OR SHOULDER.
SPAN WIRE ASSEMBLIES WILL REQUIRE TETHER UNLESS OTHERWISE NOTED ON PLAN SHEETS.
CABLE TIES SHALL BE SUITABLE FOR OUTSIDE USE (BLACK).
THE CONTROLLER POWER SUPPLY GROUND BUSS SHALL BE BONDED TO THE FOUNDATION GROUND 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.



NOTES:
EACH ITEM "TRAFFIC SIGNAL HEAD (4 SEC., 1-WAY)" SHALL INCLUDE A SIGN (RIO-12a) 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 BLANKS SHALL BE CONSTRUCTED OF ALUMINUM ALLOY (ASTM DESIGNATION B-209, ALLOY 5052-H38) WITH A THICKNESS OF 0.100 INCH.
ALL SIGN FACES SHALL BE CONSTRUCTED OF HIGH INTENSITY SHEETING (TYPE III) WITH SILKSCREEN LEGEND AND BORDER.
SIGNAL OPERATION NOTES:
FLASHING OPERATION - PRIOR TO NORMAL OPERATION, SIGNAL SHALL BE FLASHED FOR A PERIOD OF 3 TO 5 WORK DAYS. SIGNAL SHALL BE PLACED IN OPERATION ONLY ON A REGULAR WORK DAY, EXCEPT FRIDAY.
THE CONTRACTOR MAY BE REQUIRED TO ALTER THE FLASHING DISPLAY DURING THE TEMPORARY FLASH PERIOD. AT THE TIME THE INTERSECTION IS PLACED IN PERMANENT OPERATION, THE FLASH SEQUENCE SHALL THEN BE RETURNED TO THAT INDICATED ON THE PLAN SHEETS. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR THESE ALTERATIONS IN FLASH SEQUENCE.

CABINET NOTE:
UNLESS OTHERWISE DIRECTED BY THE ENGINEER, CABINET ORIENTATION SHALL BE SUCH THAT THE BACK OF THE CABINET IS PARALLEL TO THE STREET AND POSITIONED TO ALLOW VISIBILITY OF THE SIGNAL DISPLAY WHILE OBSERVING THE CONTROLLER FRONT PANEL.



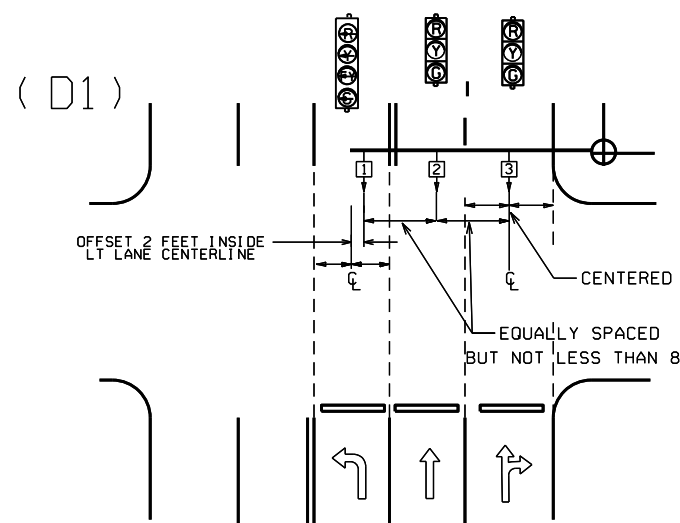
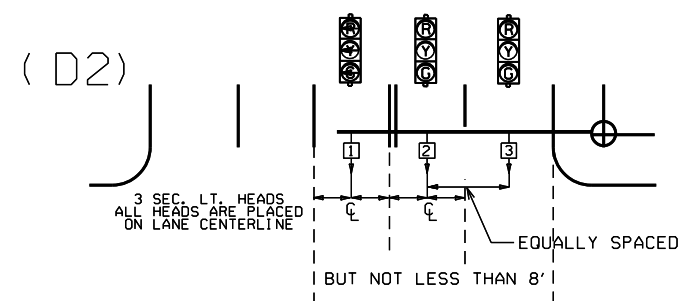
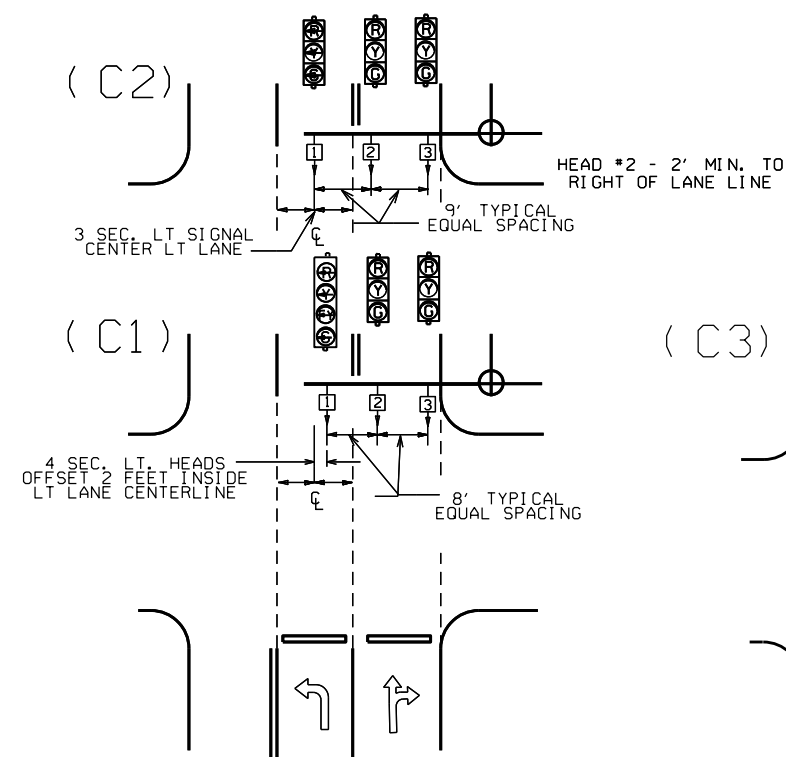
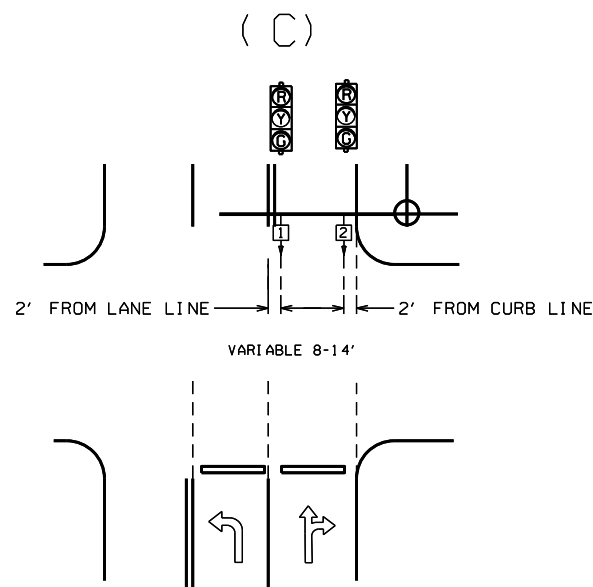
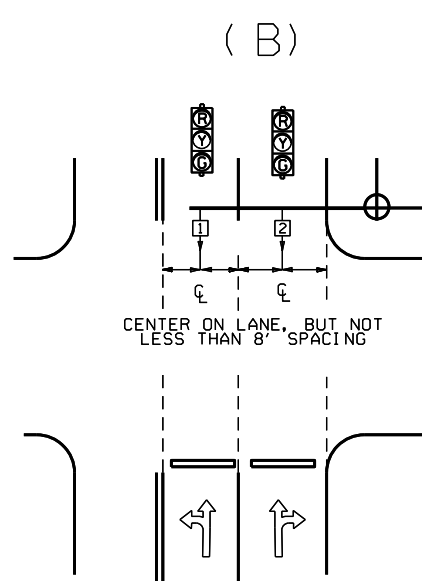
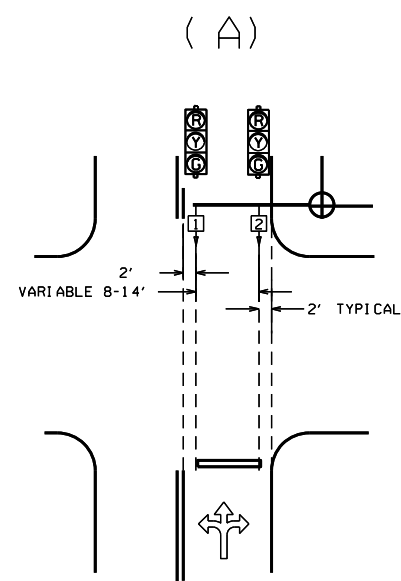
MINIMUM STRUCTURAL REQUIREMENTS:
DESIGN SPECIFICATIONS: AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 4TH EDITION (2001) WITH 2003 AND 2006 INTERIMS.
CONSTRUCTION SPECIFICATIONS: STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION) WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.
BASE WIND SPEED: 90 MPH
STEEL MEMBERS CONSIDERED MAIN LOAD CARRYING MEMBERS WITH THICKNESS GREATER THAN 1/2" SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TEST SPECIFIED IN SUBSECTION 807.05 OF THE STANDARD SPECIFICATIONS.

02-13-24	REVISED SPECIAL SIGN TO RIO-12a SIGN	
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	
DATE	REVISION	FILMED

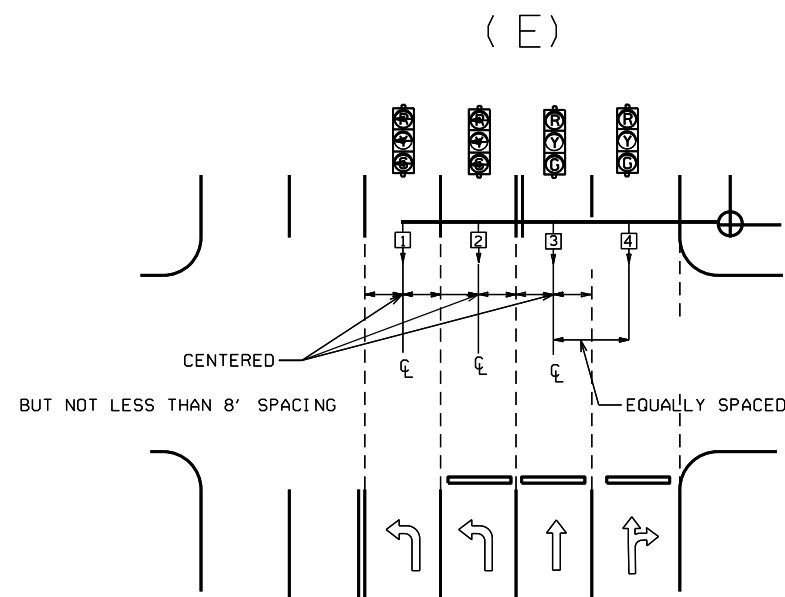
ARKANSAS STATE HIGHWAY COMMISSION

**SPAN WIRE ASSEMBLY
WOOD POLE**

STANDARD DRAWING SD-7



NOTE: WHERE LEFT TURN HEAD (HEAD 1 ON D1 AND D2) IS NOT CALLED FOR ON PLANS, MAST ARM LENGTH MAY STILL BE ALLOWED FOR FUTURE INSTALLATION. HEADS FOR THROUGH MOVEMENTS SHALL STILL BE ALIGNED WITH THROUGH LANES AS SHOWN ON DETAILS.



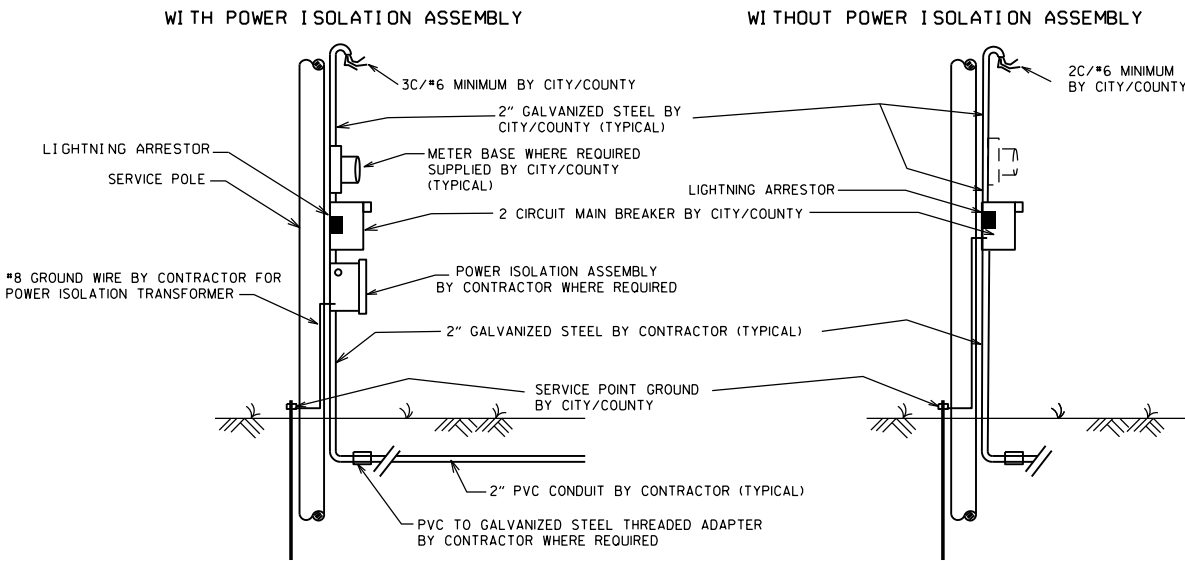
GENERAL NOTES:

- 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.
- THREE SECTION "PROTECTED" LEFT TURN HEADS SHOULD BE PLACED ON THE CENTERLINE OF THE APPROACHING LEFT TURN LANE.
- 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.
- SIGNAL HEAD SPACING SHALL, IN NO CASE, BE LESS THAN EIGHT (8') FEET BETWEEN HEADS ON CENTER, MEASURED HORIZONTALLY PERPENDICULAR TO THE APPROACH.
- 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.
- 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.

CL = CENTER OF LANE FROM APPROACH SIDE

			ARKANSAS STATE HIGHWAY COMMISSION
12-8-16	REVISED NOTE 6		SIGNAL HEAD PLACEMENT
9-12-13	ISSUED AS STANDARD DRAWING		
3-11-10	2009 MUTCD		
12-9-99	ISSUED		STANDARD DRAWING SD-8
DATE	REVISION	DATE FILM	

MAIN BREAKER NOT NEAR CONTROLLER CABINET
SECONDARY REQUIRED



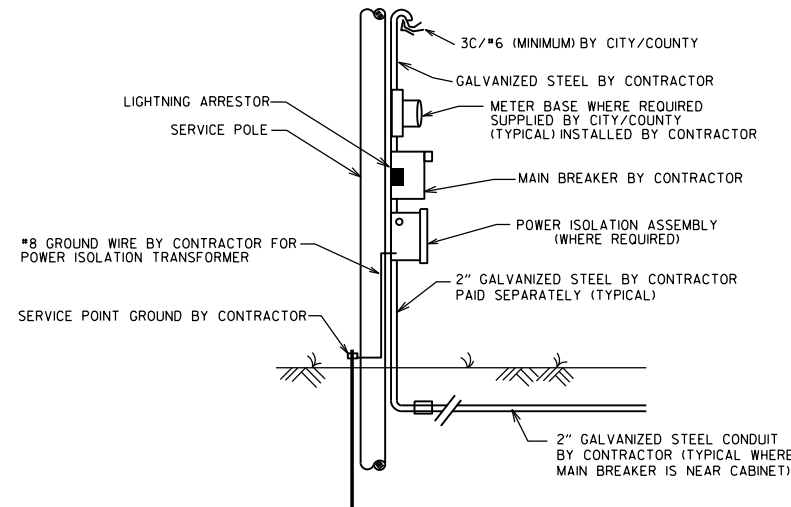
NOTES TO CONTRACTOR AND AGENCY RESPONSIBLE FOR MAINTENANCE OF THE INTERSECTION (CITY/COUNTY):

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.

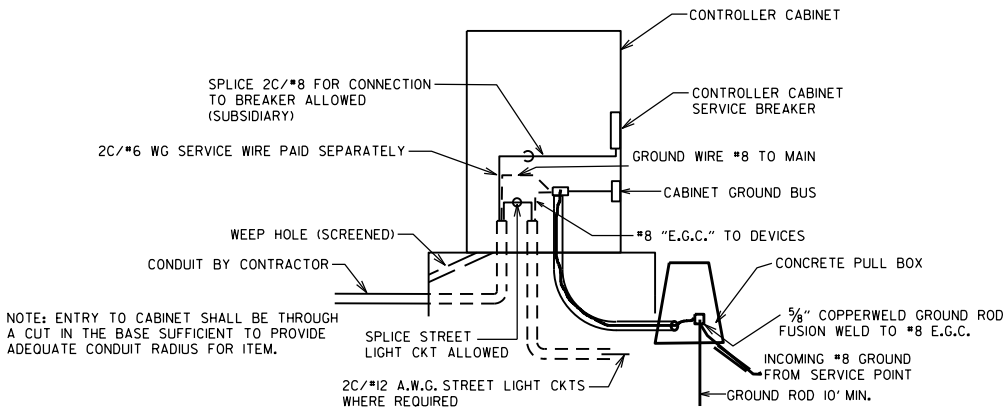
ALL SITUATIONS:
ELECTRICAL SERVICE SHALL BE PROVIDED BY THE CITY/COUNTY TO A SERVICE POLE WITH EXTERNAL RAINLIGHT BREAKER (MAIN BREAKER) AT A MUTUALLY ACCEPTABLE POINT WITHIN THE RIGHT-OF-WAY. SERVICE POINT INCLUDES GALVANIZED STEEL CONDUIT TO A POINT 18" BELOW GROUND LINE, TWO CIRCUIT MAIN BREAKER, 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.

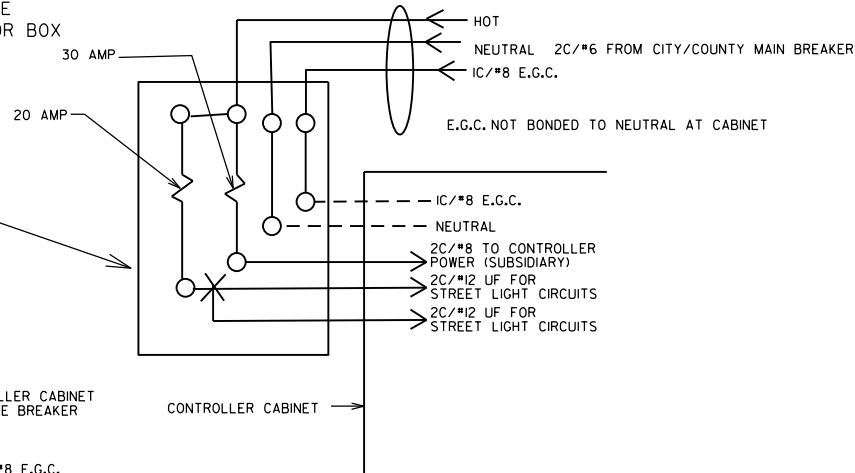
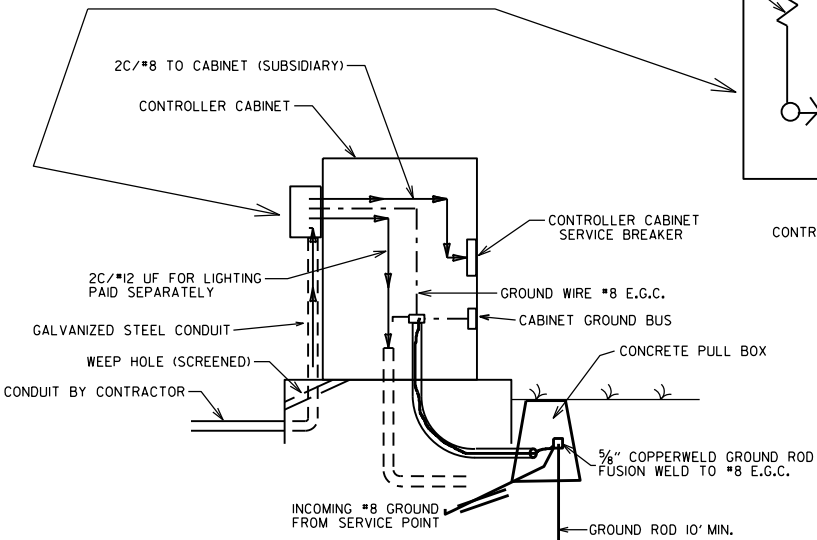


MAIN BREAKER NEAR CONTROLLER CABINET
SECONDARY NOT REQUIRED



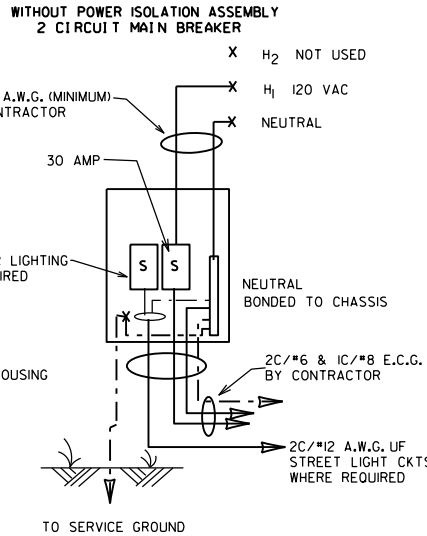
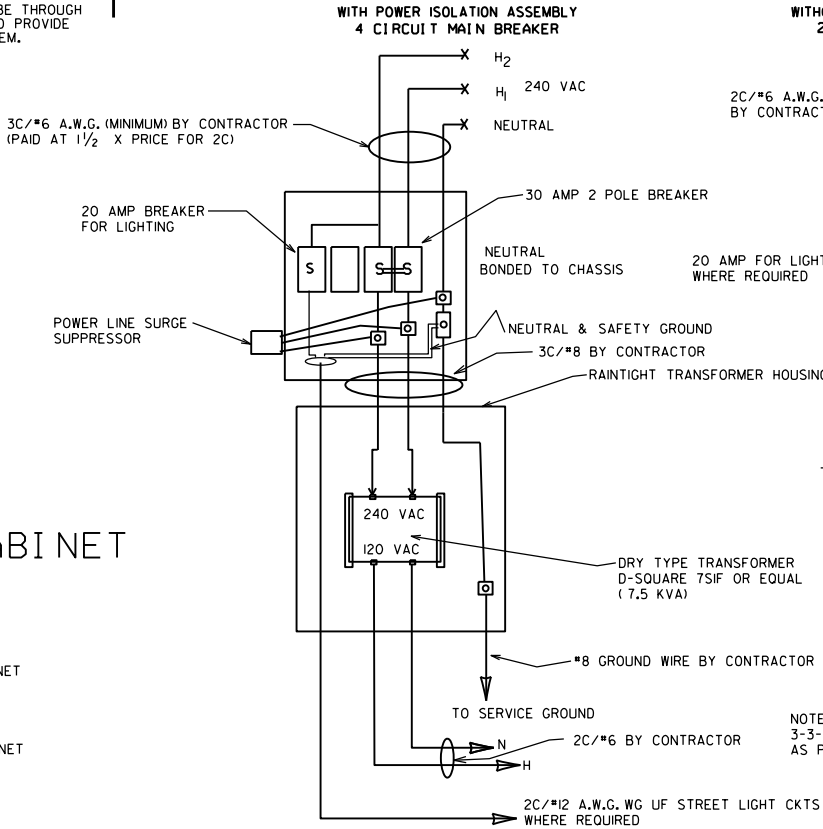
GROUND ROD - A 10' X 5/8" GROUND ROD SHALL BE INSTALLED IN THE CONCRETE PULL BOX FOR EACH POLE AND THE CONTROLLER. PAYMENT FOR THE GROUND ROD AND 1/2" NMC SHALL BE INCLUDED IN ITEM 701. THE CONCRETE PULL BOX AND CONDUCTOR BOX SHALL BE PAID FOR SEPARATELY.

SECONDARY BREAKER BY CONTRACTOR
(SUBSIDIARY)



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.



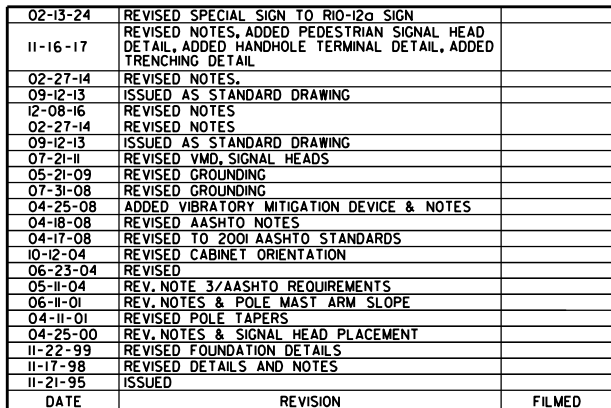
NOTE: ELECTRICAL GROUND CONDUCTOR (E.G.C.) ADDED 3-3-2003, CONSISTING OF A IC/#8 A.W.G. CU GREEN WIRE AS PER NATIONAL ELECT. CODES.

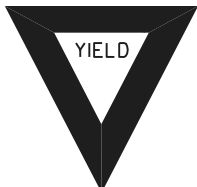
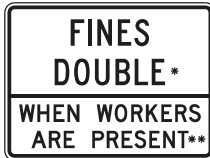
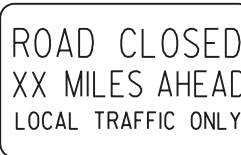
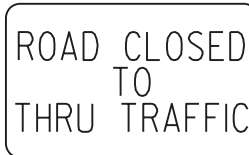
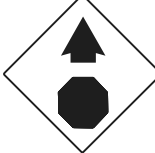
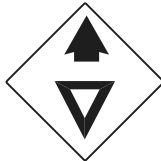
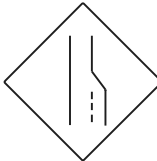
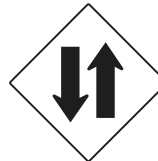
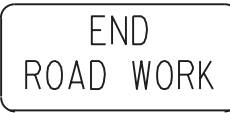
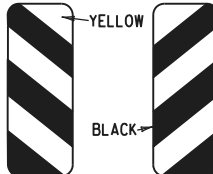
11-07-19	REVISED	
11-16-17	REVISED NOTES	
09-12-13	ISSUED AS STANDARD DRAWING	
04-18-13	ADDED LIGHTNING ARRESTOR	
05-21-09	REVISED GROUNDING	
07-31-08	REVISED GROUNDING	
03-03-03	ADDED EGC NOTE	
09-26-01	REVISED	
12-27-99	REVISED	
07-28-99	REVISED	
02-05-99	ISSUED	
DATE	REVISION	FILMED

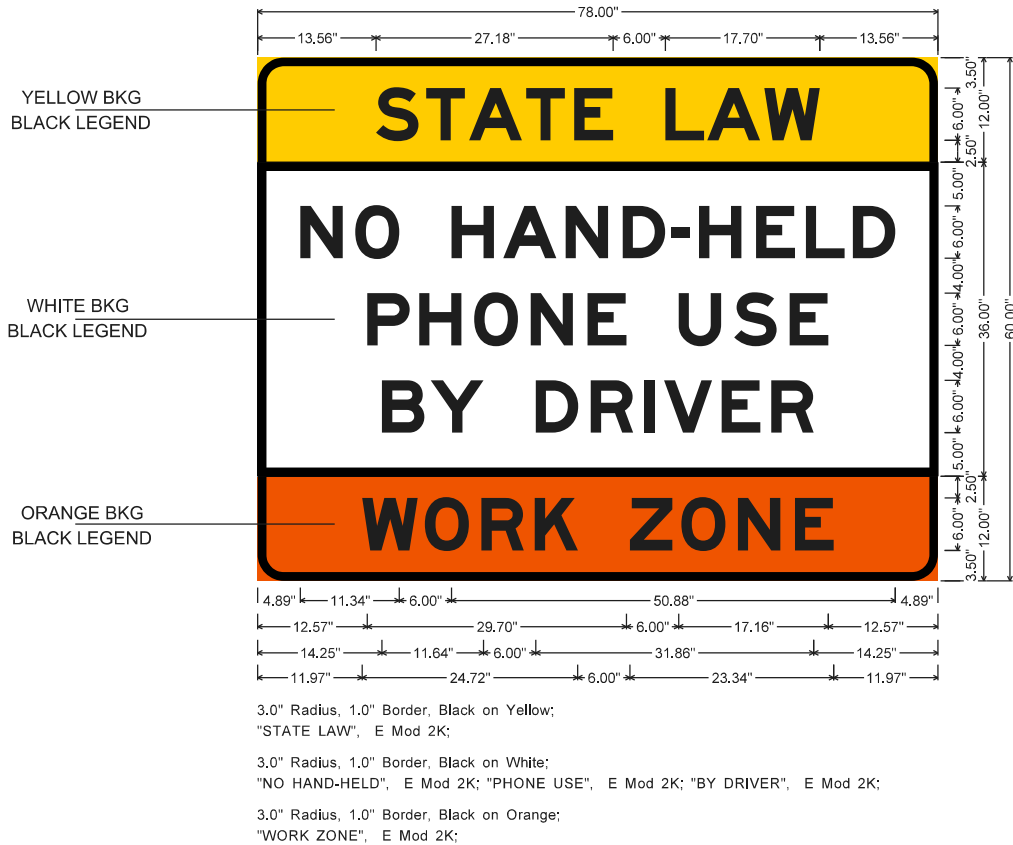
ARKANSAS STATE HIGHWAY COMMISSION

SERVICE POINT

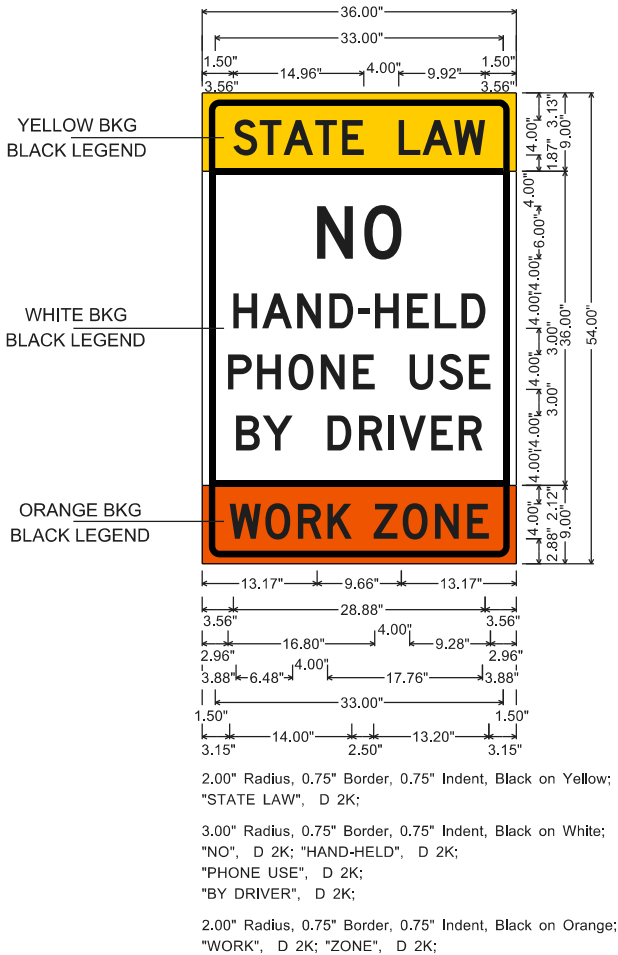
STANDARD DRAWING SD-9



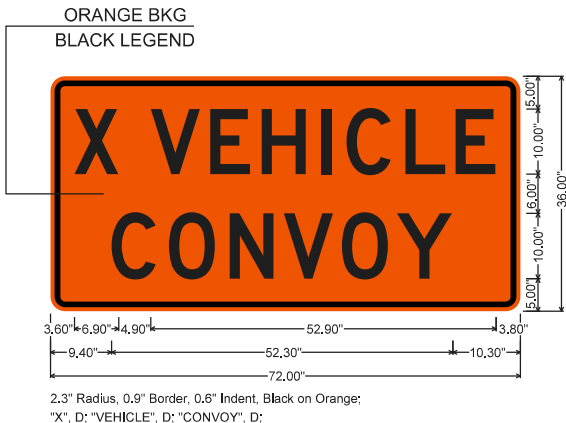
RI-I  STANDARD 30"x30" EXPRESSWAY 36"x36" SPECIAL 48"x48"	RI-2  STD. 36"x36"x36" EXPWY. 48"x48"x48" FWY. 60"x60"x60"	R2-I  STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"	W3-5  STD. 36"x36" EXPWY. 48"x48" FWY. 48"x48"	W3-5a  STD. 36"x36" EXPWY. 48"x48" FWY. 48"x48"	R4-I  STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"	R4-2  STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"	R2-6aP  48"x36" *USE 6" C LETTERS **USE 4" D LETTERS	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. R2-6aP PLAQUES SHALL BE MOUNTED BELOW AN APPLICABLE ADVANCE WARNING SIGN THAT IS LOCATED AT LEAST 1500' BUT NOT MORE THAN 1MILE IN ADVANCE OF THE WORK ZONE. IF A SPEED LIMIT REDUCTION IS IN EFFECT, THE PLAQUE SHALL BE PLACED A MINIMUM OF 500' IN ADVANCE OF THE W3-5 "REDUCED SPEED AHEAD" SIGN. R2-II SIGNS SHALL BE INSTALLED AT OR NEAR THE DOWNSTREAM END OF THE WORK ZONE. SEE STANDARD DRAWINGS TC-2, TC-3, AND TC-6 FOR TYPICAL PLACEMENT LOCATIONS. • 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.																					
R5-I  STD. 30"x30" EXPWY. 36"x36" SPECIAL 48"x48"	RII-2  48"x30"	RII-3A  60"x30"	RII-4  60"x30"	W2I-5a  STD. 36"x36" FWY. 48"x48"	WI-I  STD. 36"x36" FWY. 48"x48"	WI-2  STD. 36"x36" FWY. 48"x48"	R2-II  36"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-I  STD. 36"x36" SPECIAL 48"x48"	W3-2  STD. 36"x36" SPECIAL 48"x48"	W4-2  STD. 36"x36" FWY. 48"x48"	R56-I  STD. 18"x18"																						
W5-I  STD. 36"x36" SPECIAL 48"x48"	W6-3  EXPWY. 36"x36" SPECIAL 48"x48"	W8-7  EXPWY. 36"x36" FWY. 48"x48"	W9-2  STD. 36"x36" FWY. 48"x48"	W13-I  STD. 24"x24"	W20-I  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  18" 500 FEET W16-2 24" STD. 36"x36" FWY. 48"x48"	W2I-2  STD. 30"x30" SPECIAL 36"x36"	W2I-5  STD. 30"x30" SPECIAL 36"x36"	W24-I  STD. 36"x36"	WI-4b  STD. 48"x48"																							
W8-II  STD. 36"x36" FWY. 48"x48"	W8-9  STD. 36"x36" FWY. 48"x48"	G20-I  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"																							
<table><tr><td rowspan="3">REPLACED R55-1 WITH R2-6aP, ADDED R2-11 & REVISED NOTE 10</td><td>11-07-19</td><td>REVISED FOR MASH</td><td>DELETED RSP-1 & ADDED W21-5a</td><td>REVISED REDUCED SPEED AHEAD SIGNS NEXT SIX MILES</td><td>09-02-15</td><td>REVISED W24-1</td><td>12-15-11</td><td>DATE</td><td>REV</td><td>DESCRIPTION</td></tr><tr><td>08-14-25</td><td>11-07-19</td><td>04-13-17</td><td>09-02-15</td><td>12-15-11</td><td>DATE</td><td>REV</td><td>DESCRIPTION</td><td>DATE EFFECTIVE</td><td>08-14-2025</td><td>STANDARD DRAWING</td><td>TC-1</td></tr></table>							REPLACED R55-1 WITH R2-6aP, ADDED R2-11 & REVISED NOTE 10	11-07-19	REVISED FOR MASH	DELETED RSP-1 & ADDED W21-5a	REVISED REDUCED SPEED AHEAD SIGNS NEXT SIX MILES	09-02-15	REVISED W24-1	12-15-11	DATE	REV	DESCRIPTION	08-14-25	11-07-19	04-13-17	09-02-15	12-15-11	DATE	REV	DESCRIPTION	DATE EFFECTIVE	08-14-2025	STANDARD DRAWING	TC-1
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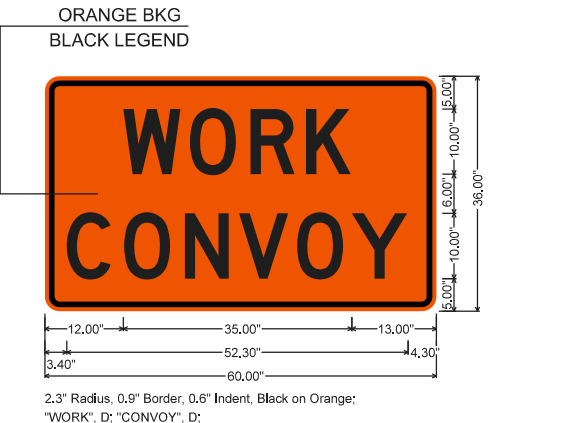
WZ-4 (INTERSTATE) SIGN



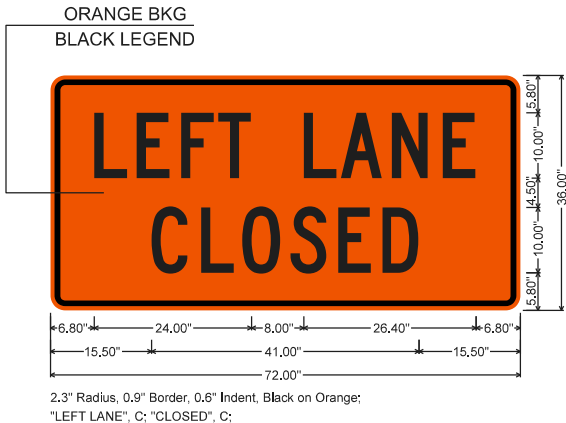
WZ-4 (NON-INTERSTATE) SIGN



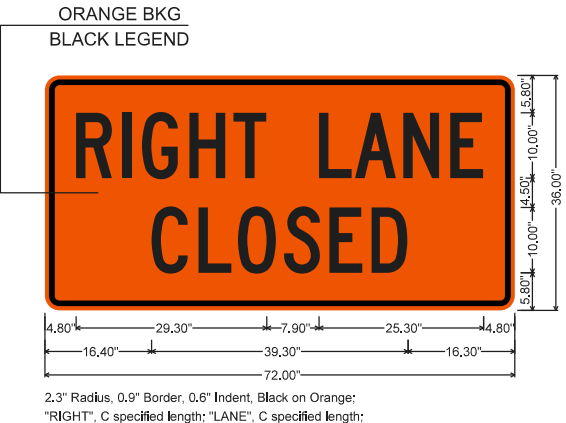
WZ-2 SIGN



WZ-3 SIGN



WZ-W20-5L SIGN



WZ-W20-5R SIGN

NOTE: REFER TO STANDARD DRAWING TC-1 FOR GENERAL NOTES.

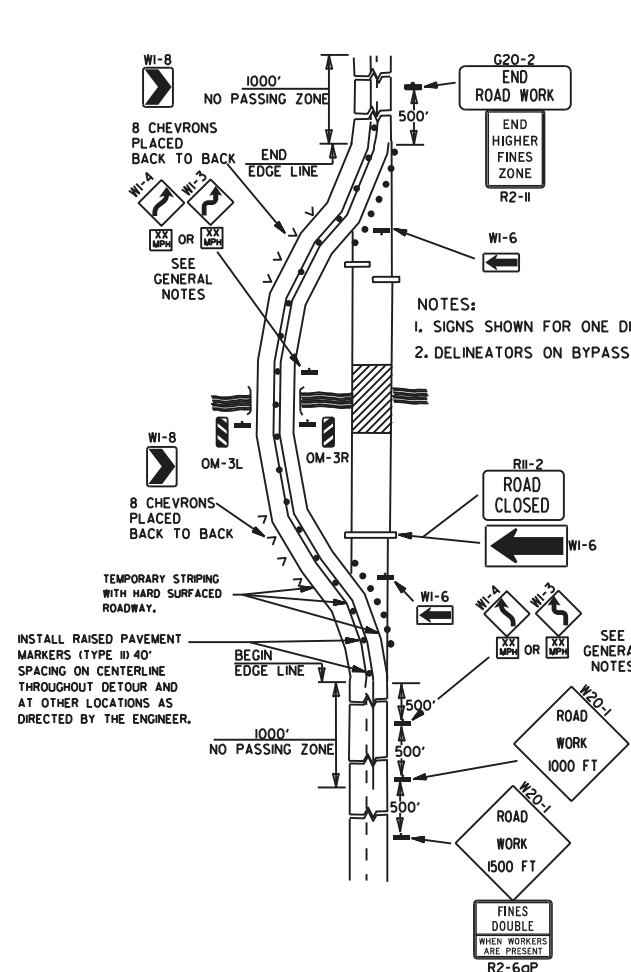


CONSTRUCTION PROJECT INFORMATION SIGN

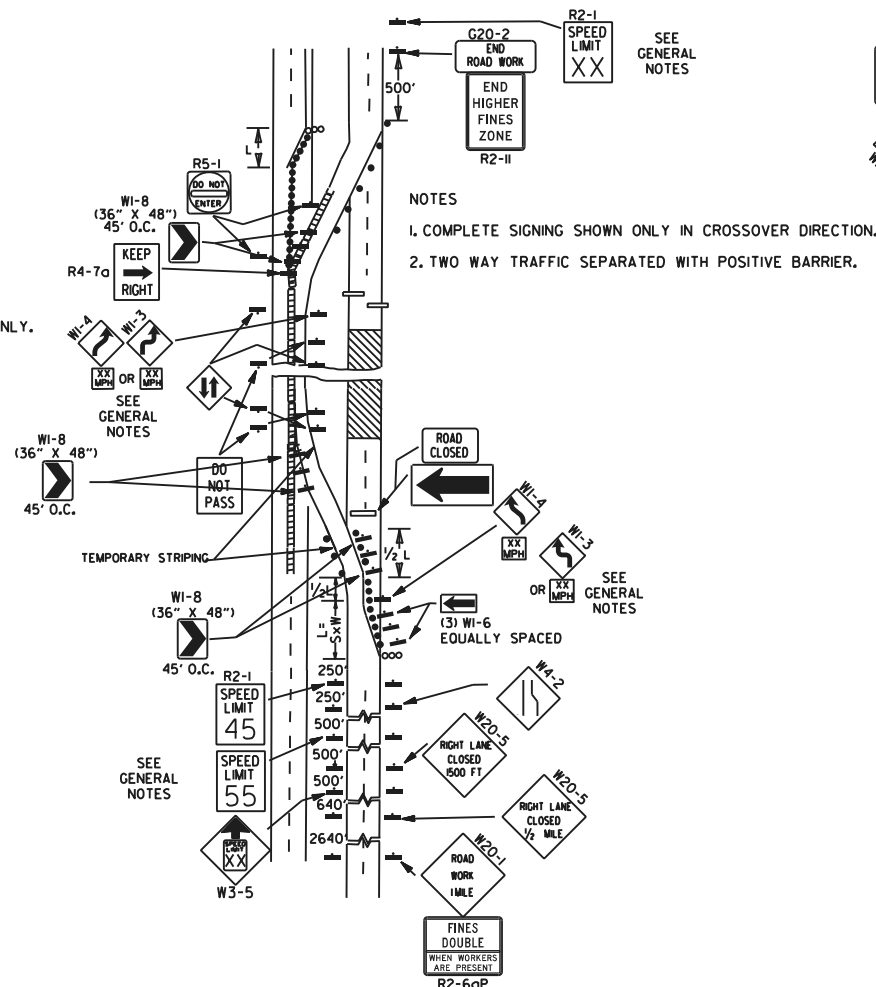


WZ-1 (INTERSTATE) SIGN

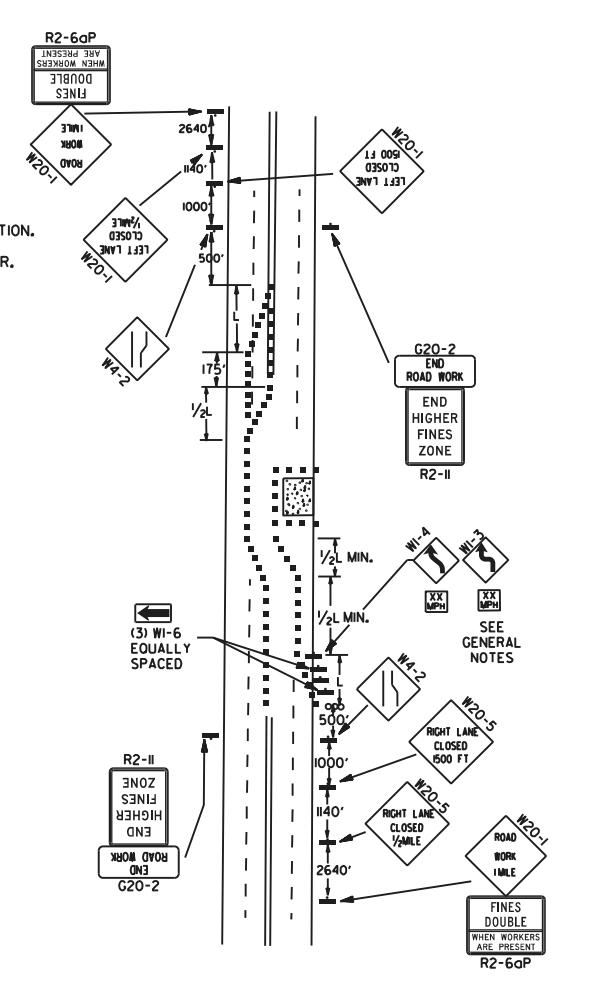
				 ARKANSAS STATE HIGHWAY COMMISSION	
				STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	
04-09-26	ISSUED	DATE REV	DESCRIPTION	DATE EFFECTIVE	STANDARD DRAWING
				04-09-2026	TC-1A



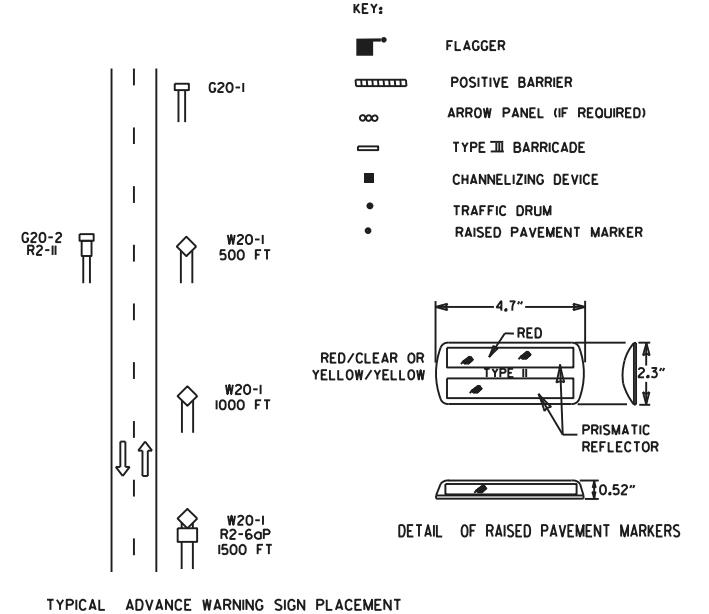
(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.



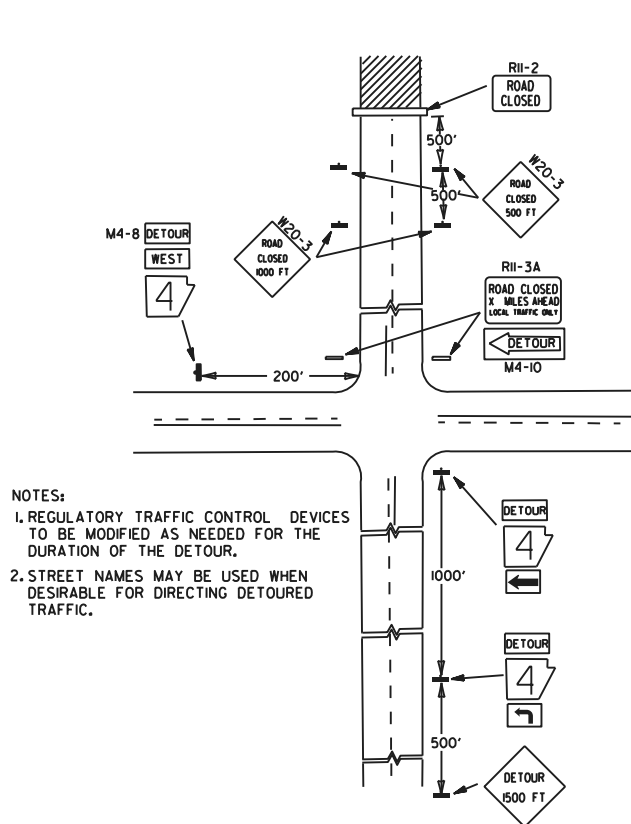
(B) TYPICAL APPLICATION - 4-LANE DIVIDED ROADWAY WHERE ONE ROADWAY IS CLOSED.



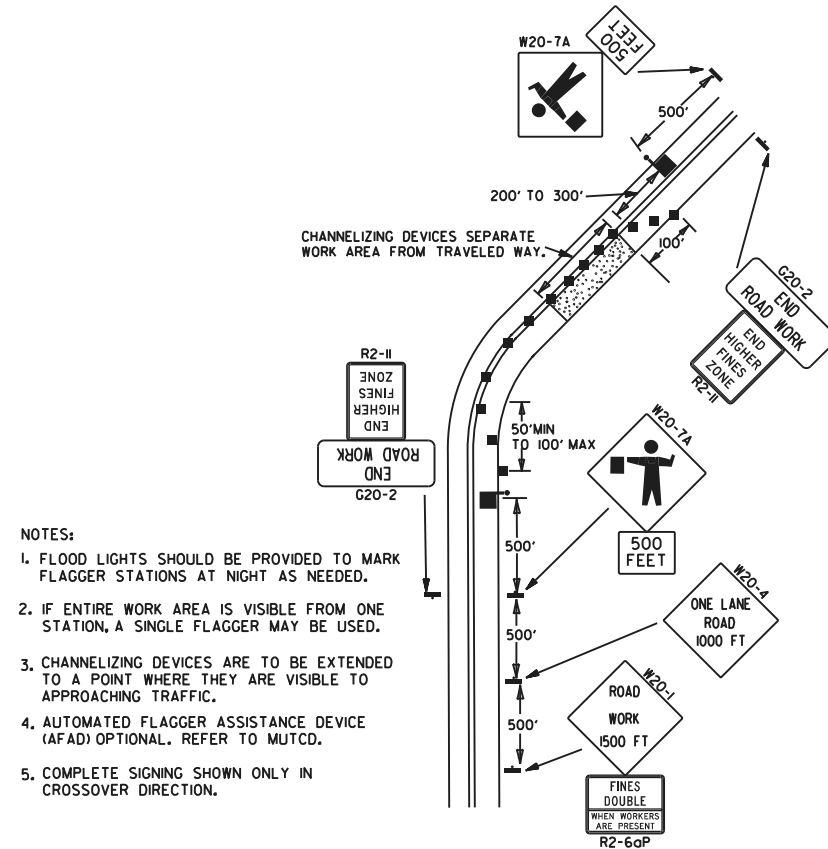
(C) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



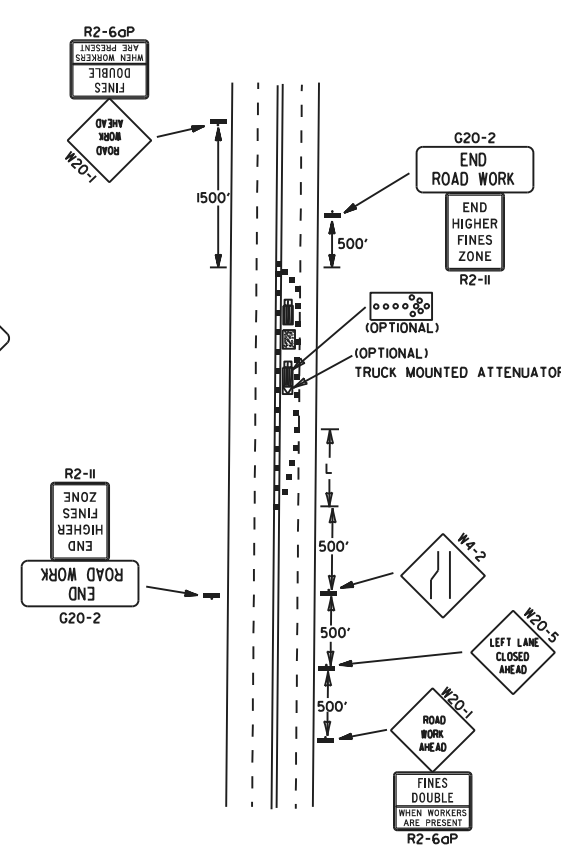
- GENERAL NOTES:
1. THE MAINTENANCE DIVISION SHALL CONDUCT A BALL BANK STUDY TO DETERMINE THE ADVISORY SPEED LIMIT PRIOR TO OPENING TO TRAFFIC. THE ADVISORY SPEED WILL BE POSTED ON W1-3 OR W1-4 CURVE WARNING SIGNS. USE W1-4 WHEN SPEED IS GREATER THAN 30MPH AND W1-3 WHEN 30MPH OR LESS.
 2. WHEN THE EXISTING 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 1/2 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
 3. WHEN THE EXISTING SPEED LIMIT IS 65MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 55MPH, THE R2-1(65) SHALL BE OMITTED. ADDITIONAL R2-155MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1/2 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
 4. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT. BEYOND THE TAPER, MAXIMUM SPACING SHALL BE TWO TIMES THE SPEED LIMIT, OR AS DIRECTED BY THE ENGINEER.
 5. WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
 6. PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICABLE.
 7. TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE DELINEATED BY AFFIXING CONSPICUITY MATERIAL IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER. WHEN PLACED ON OR ADJACENT TO THE SHOULDER AND NOT BEHIND A POSITIVE BARRIER, THESE DEVICES SHALL BE DELINEATED BY PLACING FIVE (5) TRAFFIC DRUMS, EQUALLY SPACED ALONG THE TRAFFIC SIDE OF THE DEVICE. PAYMENT FOR TRAFFIC DRUMS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR VARIOUS TRAILER MOUNTED DEVICES.
 8. DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING TO THE ARDOT QUALIFIED PRODUCTS LIST.
 9. ALL TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).



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



(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.

REVISIONS		DESCRIPTION
DATE	REV	
08-14-25	ADDED R2-6aP AND R2-11	
05-20-21	REVISED NOTE 7	
11-07-19	ADDED NOTE 1, 9	
09-02-15	REVISED NOTE 2, ADDED NOTE 8, REVISED DRAWING (A) & REPLACED R2-5A WITH W3-5	
09-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKERS	
DATE EFFECTIVE		08-14-2025
STANDARD DRAWING		TC-2

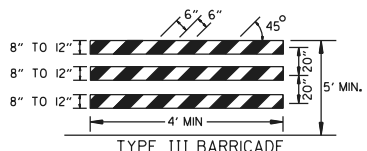
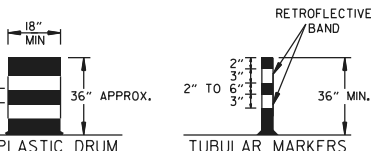
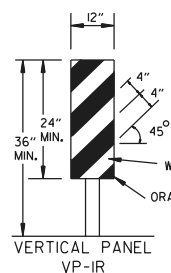
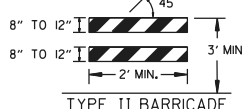
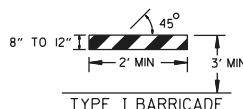
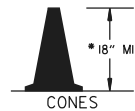
(A) TYPICAL APPLICATION - DAYTIME MAINTENANCE OPERATIONS OF SHORT DURATION ON A 4-LANE DIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.

(C) TYPICAL APPLICATION - CONSTRUCTION OPERATIONS OF INTERMEDIATE TO LONG TERM DURATION ON A 4-LANE DIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.

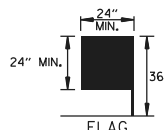
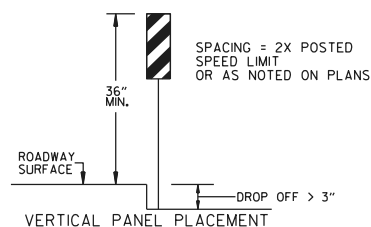
(B) TYPICAL APPLICATION - 3-LANE ONEWAY ROADWAY WHERE CENTER LANE IS CLOSED.

CHANNELIZING DEVICES

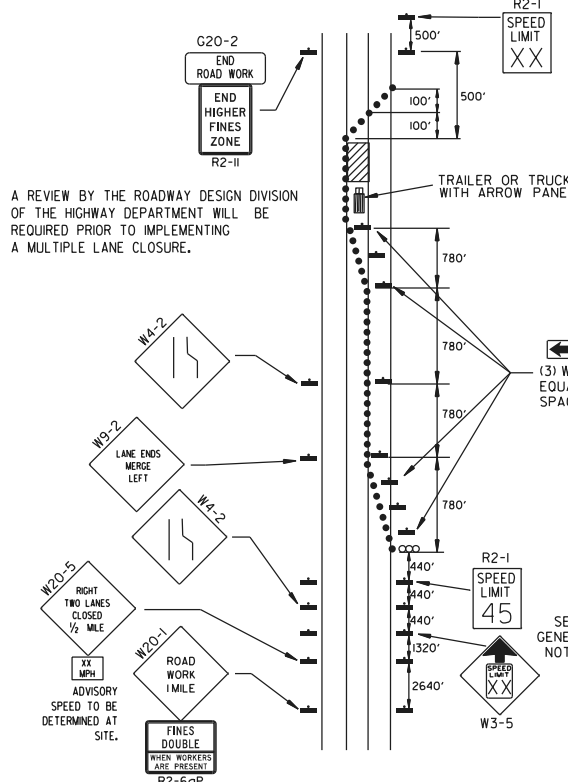
* WHEN CONES ARE USED ON FREEWAYS AND MULTI-LANE HIGHWAYS, THEY SHALL BE 28" MIN. DURING HOURS OF DARKNESS, 28" CONES SHALL BE USED ON ALL ROADWAYS, AND SHALL BE REFLECTORIZED IN ACCORDANCE WITH THE M.U.T.C.D.



NOTE: FOR ALL ROAD CLOSURES, THE TYPE III BARRICADES SHALL BE OF SUFFICIENT LENGTH TO EXTEND ACROSS ENTIRE ROADWAY.



FLAG SHALL BE OF GOOD GRADE RED MATERIAL



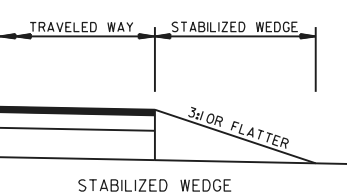
(D) TYPICAL APPLICATION - CLOSING MULTIPLE LANES OF A MULTILANE HIGHWAY.

TRAFFIC CONTROL DEVICES

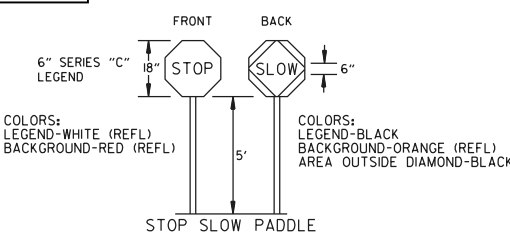
VERTICAL DIFFERENTIAL	LOCATION	NON-INTERSTATE	
		TRAFFIC CONTROL	
		≤ 45 MPH	> 45 MPH
≤ 1"	CENTERLINE	W8-11	W8-11
> 1"	CENTERLINE	W8-11 AND CENTERLINE LANE STRIPING	W8-11 AND CENTERLINE LANE STRIPING
> 3"	CENTERLINE	STANDARD LANE CLOSURE ⁽⁶⁾	STANDARD LANE CLOSURE ⁽⁶⁾
≤ 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-9 AND TRAFFIC DRUMS ⁽¹⁾	W8-9 AND TRAFFIC DRUMS ⁽¹⁾
> 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽¹⁾	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽¹⁾
> 6"	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"	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 ⁽²⁾
> 24"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	PRECAST CONCRETE BARRIER ⁽⁴⁾ & EDGE LINES	PRECAST CONCRETE BARRIER ⁽⁴⁾ & EDGE LINES

VERTICAL DIFFERENTIAL	LOCATION	INTERSTATE	
		TRAFFIC CONTROL	
		≤ 3"	> 3"
≤ 3"	CENTERLINE	W8-11 AND LANE STRIPING	W8-11 AND LANE STRIPING
≤ 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-9, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽²⁾	W8-9, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽²⁾
> 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽²⁾	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS ⁽²⁾
> 6"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	PRECAST CONCRETE BARRIER & EDGE LINES	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



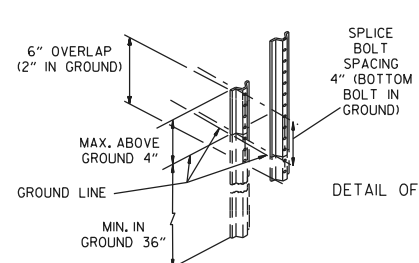
NOTE: MATERIALS FOR THE STABILIZED WEDGE SHALL MEET THE REQUIREMENTS PROVIDED IN SECTION 603.02 OF THE STANDARD SPECIFICATIONS.



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

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

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



REVISIONS		DESCRIPTION	
08-14-25	ADDED R2-6aP AND R2-11	REVISED TRAFFIC CONTROL DEVICES AND NOTES, ADDED NOTE 12	
05-22-25		REVISED TRAFFIC CONTROL DEVICES AND NOTES	
08-12-21		REVISED NOTE 10	
05-20-21		REVISED TRAFFIC CONTROL DEVICES DETAILS	
02-27-20			
DATE	REV		
		DATE EFFECTIVE	08-14-2025
		STANDARD DRAWING	TC-3



ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

3/8"

3" DIA. PLATE 3/8" THICK

BAR 1 1/4" DIA. x 26" LONG

CONNECTING PIN

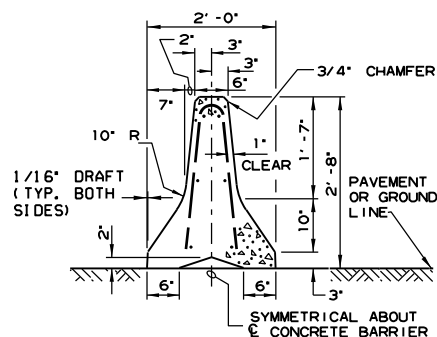
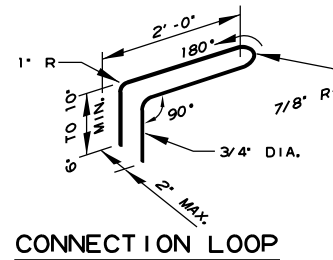
3/4" DIA. STEEL BAR

1 1/2" x 4" GROOVE

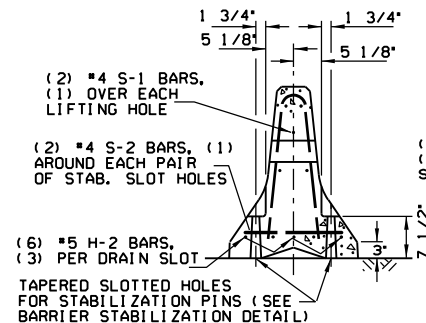
END OF UNIT

SECTION E-E

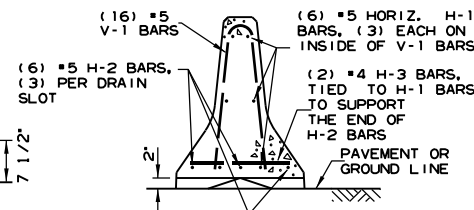
CONNECTION DETAILS



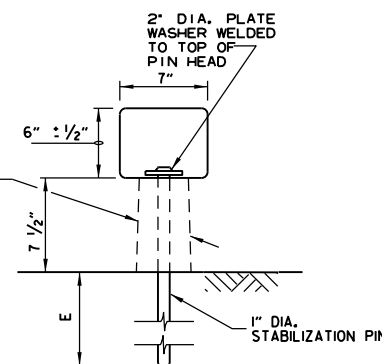
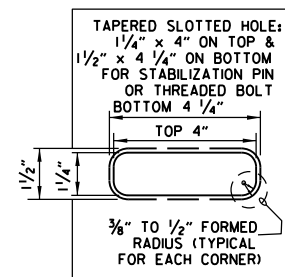
SECTION A-A



SECTION B-B



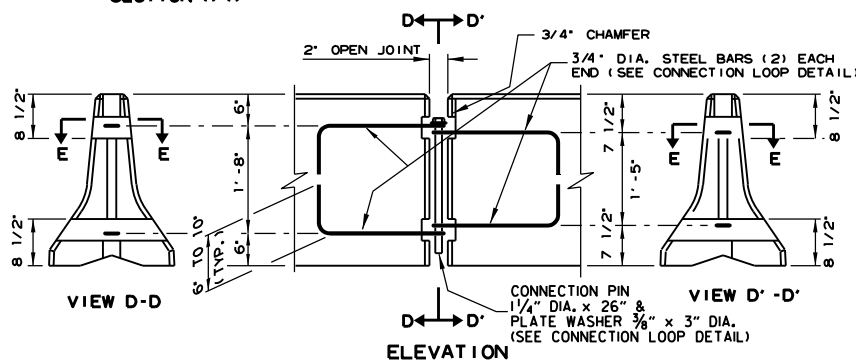
SECTION C-C



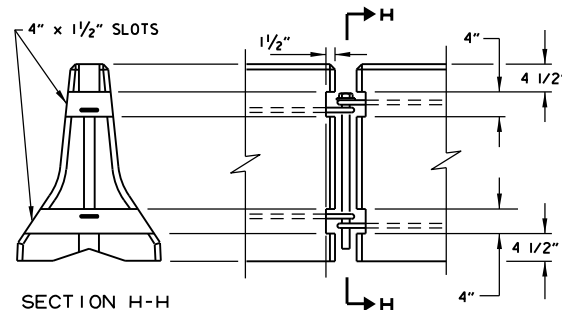
BARRIER STABILIZATION DETAIL

ROADWAY SECTION

(E) 4" - CONCRETE PAVEMENT
8" - ASPHALT PAVEMENT
12" - SHOULDER AREAS



ELEVATION

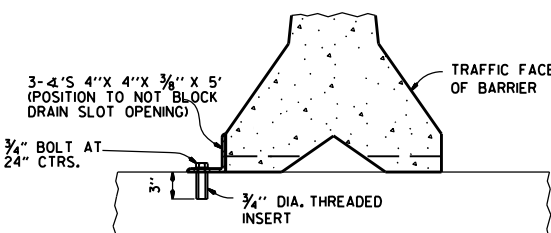


SECTION H-H

ELEVATION

BARRIER REMOVAL SLOT DETAILS

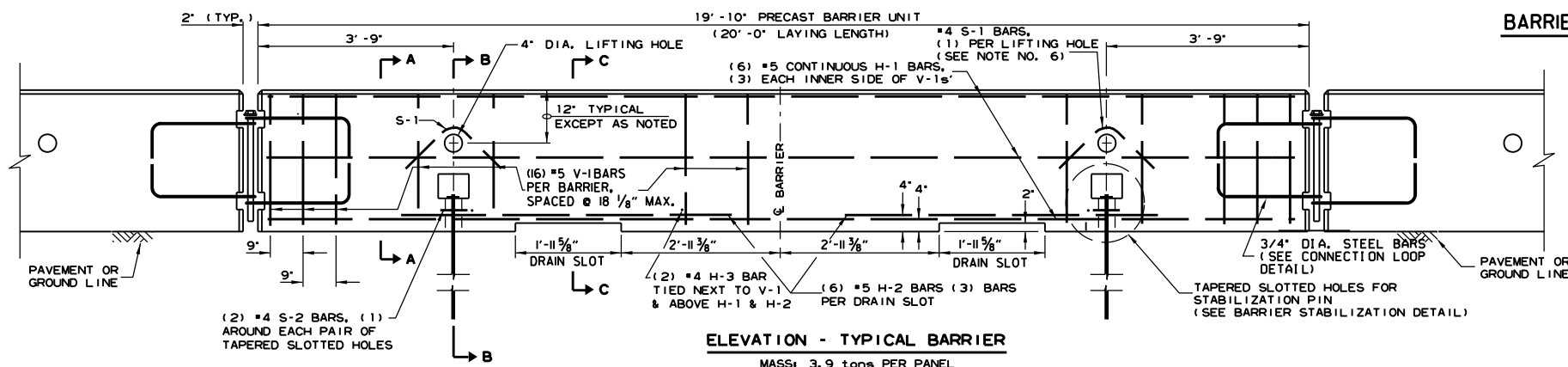
4"



NOTE: " THREADED INSERTS SHALL BE CAST IN PLACE FOR ALL NEW BRIDGE DECKS AND DRILLED AND GROUTED FOR EXISTING BRIDGE DECKS. INSERTS SHALL HAVE A MINIMUM ULTIMATE LOAD CAPACITY OF 8000 LBS. IN TENSION. AFTER REMOVAL OF BARRIER, BOLTS, AND ANGLES, THE INSERTS SHALL BE FILLED WITH APPROVED NON-SHRINK EPOXY.

BARRIER STABILIZATION DETAIL

BRIDGE DECKS



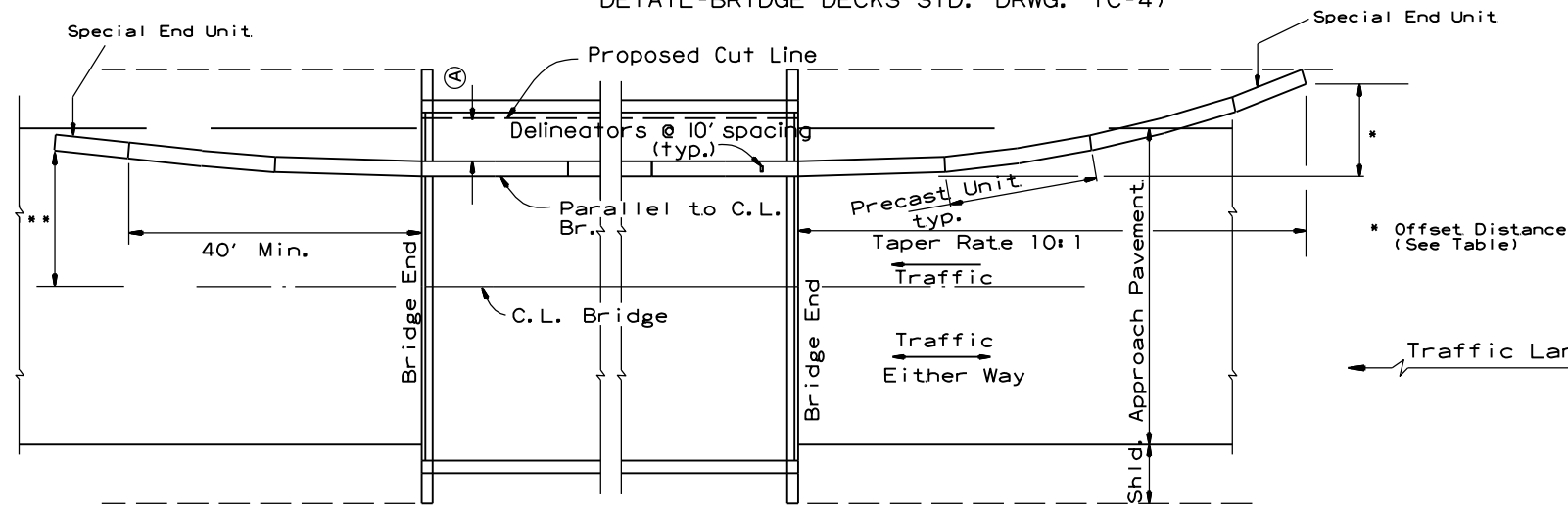
11-07-19	REVISED NOTE 3	
2-27-14	REVISED BARRIER STABILIZATION DETAIL	
10-15-09	ADDED REFERENCE TO MASH	
8-5-09	REV. NOTE 3 CONCERNING DRAIN SLOTS	
11-29-07	REVISED NOTE 3	
5-25-06	DELETED GENERAL NOTE 7	
11-18-04	REVISED BARRIER STABILIZATION DETAIL BRIDGE DECKS	
4-10-03	REVISED GENERAL NOTE 2	
8-22-02	ISSUED NEW DRAWING	
DATE	REVISION	FILE #

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

STANDARD DRAWING TC-4

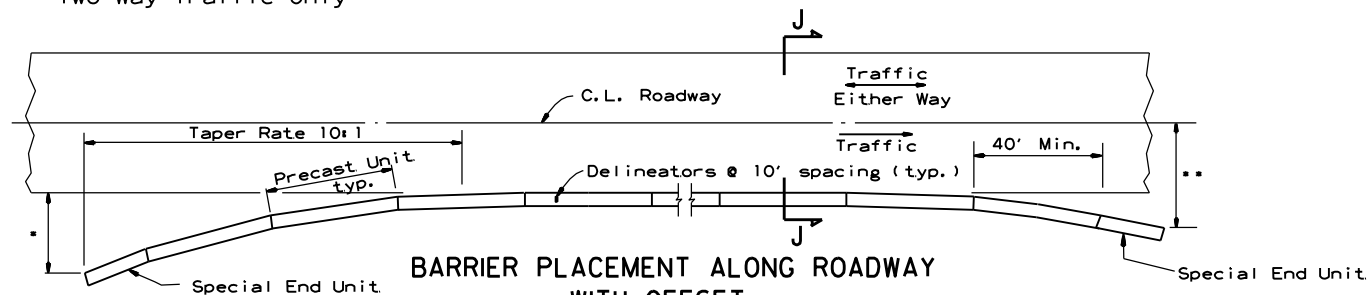
- (A) 4 feet or greater preferred. If less than 4 feet, Precast Units shall be connected to slab (SEE BARRIER STABILIZATION DETAIL-BRIDGE DECKS STD. DRWG. TC-4)



BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET

No Scale

** Offset Distance for Two Way Traffic Only



BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET

No Scale

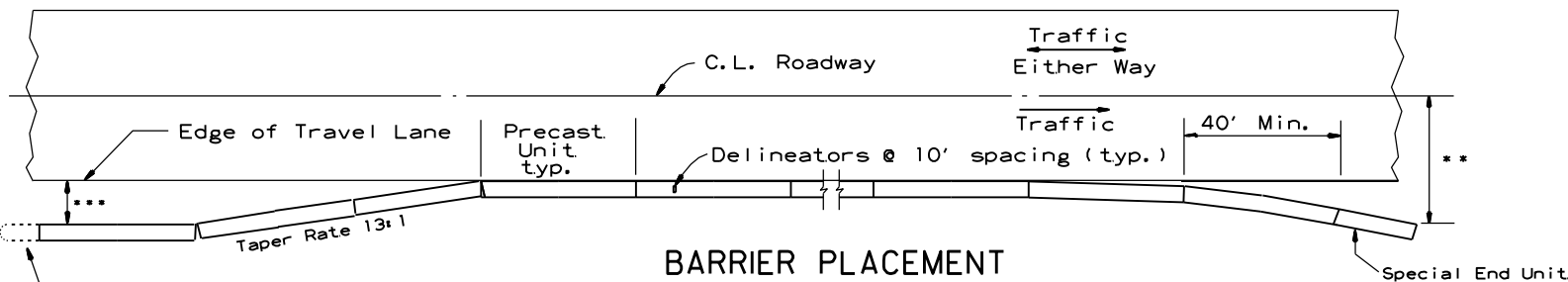
* Offset Distance (See Table)

** Offset Distance For Two Way Traffic Only

Offset Distance Table

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

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

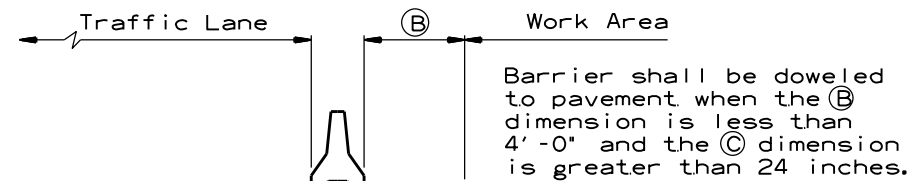


BARRIER PLACEMENT WITH ATTENUATOR

No Scale

** Offset Distance For Two Way Traffic Only

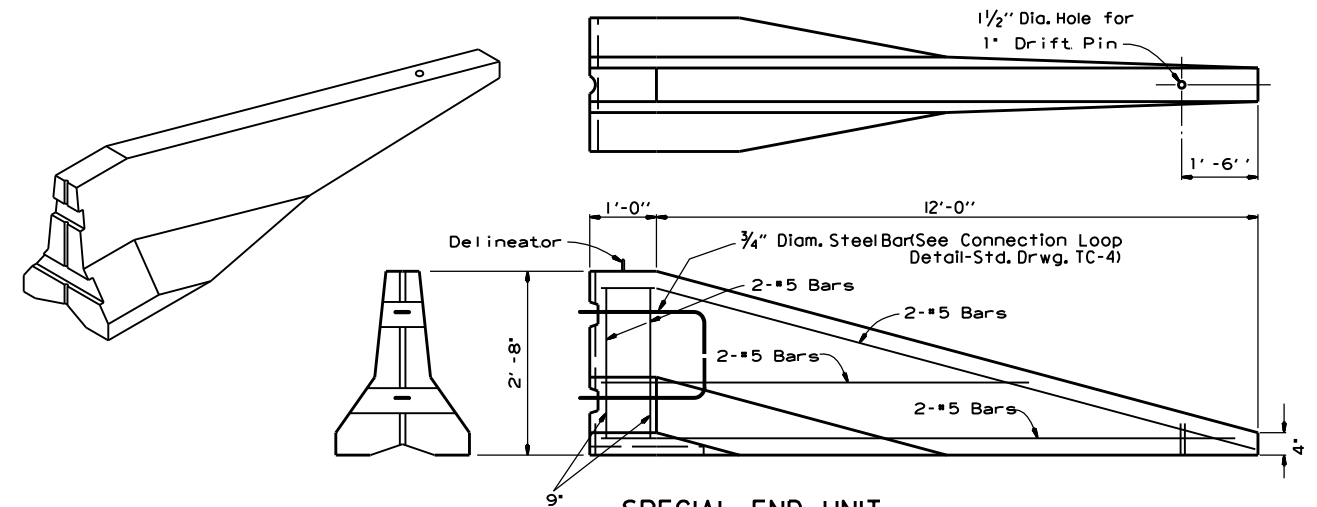
***Min. 3'-0" From Edge of Travel Lane to Nearest Edge of Attenuator



SECTION J-J

No Scale

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



SPECIAL END UNIT

No Scale

General Notes

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

			ARKANSAS STATE HIGHWAY COMMISSION	
			STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER	
11-07-19	REVISED NOTE		STANDARD DRAWING TC-5	
10-15-09	ADDED REFERENCE TO MASH			
5-25-06	REVISED BARRIER PLACEMENT			
8-22-02	ISSUED NEW DRAWING			
DATE	REVISION	FILMED		

Diagram illustrating the placement of signs for a road closure setup, including dimensions and sign types.

Signs and Dimensions:

- ROAD WORK** (R2-60P) (36" X 48")
- ROAD CLOSED** (R2-60P) (36" X 48")
- SHOULDER CLOSED** (R2-60P) (36" X 48")
- END ROAD WORK** (G20-2) (48" X 24")
- END HIGHER FINES ZONE** (R2-II) (36" X 48")

Dimensions and Distances:

- Distance between signs: 880'
- Distance between signs: 880'
- Distance between signs: 880'
- Distance between signs: 1140'
- Distance between signs: 1375'
- Distance between signs: 500'
- Distance between signs: 500'

General Note 2:

END WORK AREA

Diagram illustrating the placement of signs for a road closure setup, including dimensions and sign types.

Diagram illustrating the placement of traffic signs for a road construction zone on a two-lane road. The diagram shows the sequence of signs and their dimensions relative to the work area.

Signs and Dimensions:

- FINES DOUBLE WHEN WORKERS ARE PRESENT** (R2-6aP, 48" x 36")
- NOTICE** (WZ-1, 84" x 60")
- ROAD WORK 1 MILE** (W20-1, 48" x 48")
- STATE LAW NO HAND-HELD PHONE USE BY DRIVER WORK ZONE** (WZ-4, 78" x 60")
- ROAD WORK 1/2 MILE** (W20-1, 48" x 48")
- ROAD WORK 1500 FT** (W20-1, 48" x 48")
- ROAD WORK NEXT XX MILES** (G20-1, 60" x 24")
- SHOULDER CLOSED** (W21-5a, 48" x 48")
- END ROAD WORK** (G20-2, 48" x 24")
- END FINEZ HIGHER** (R2-II, 36" x 48")

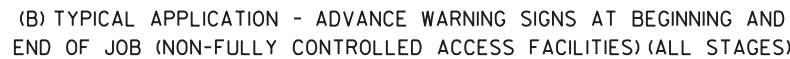
Dimensions and Placement:

- Distance from **FINES DOUBLE** to **NOTICE**: 880'
- Distance from **NOTICE** to **ROAD WORK 1 MILE**: 880'
- Distance from **ROAD WORK 1 MILE** to **STATE LAW**: 880'
- Distance from **STATE LAW** to **ROAD WORK 1/2 MILE**: 880'
- Distance from **ROAD WORK 1/2 MILE** to **ROAD WORK 1500 FT**: 1375'
- Distance from **ROAD WORK 1500 FT** to **ROAD WORK NEXT XX MILES**: 1140'
- Distance from **ROAD WORK NEXT XX MILES** to **SHOULDER CLOSED**: 2640'
- Distance from **SHOULDER CLOSED** to **END ROAD WORK**: 500'
- Distance from **END ROAD WORK** to **END FINEZ HIGHER**: 500'

Other Labels:

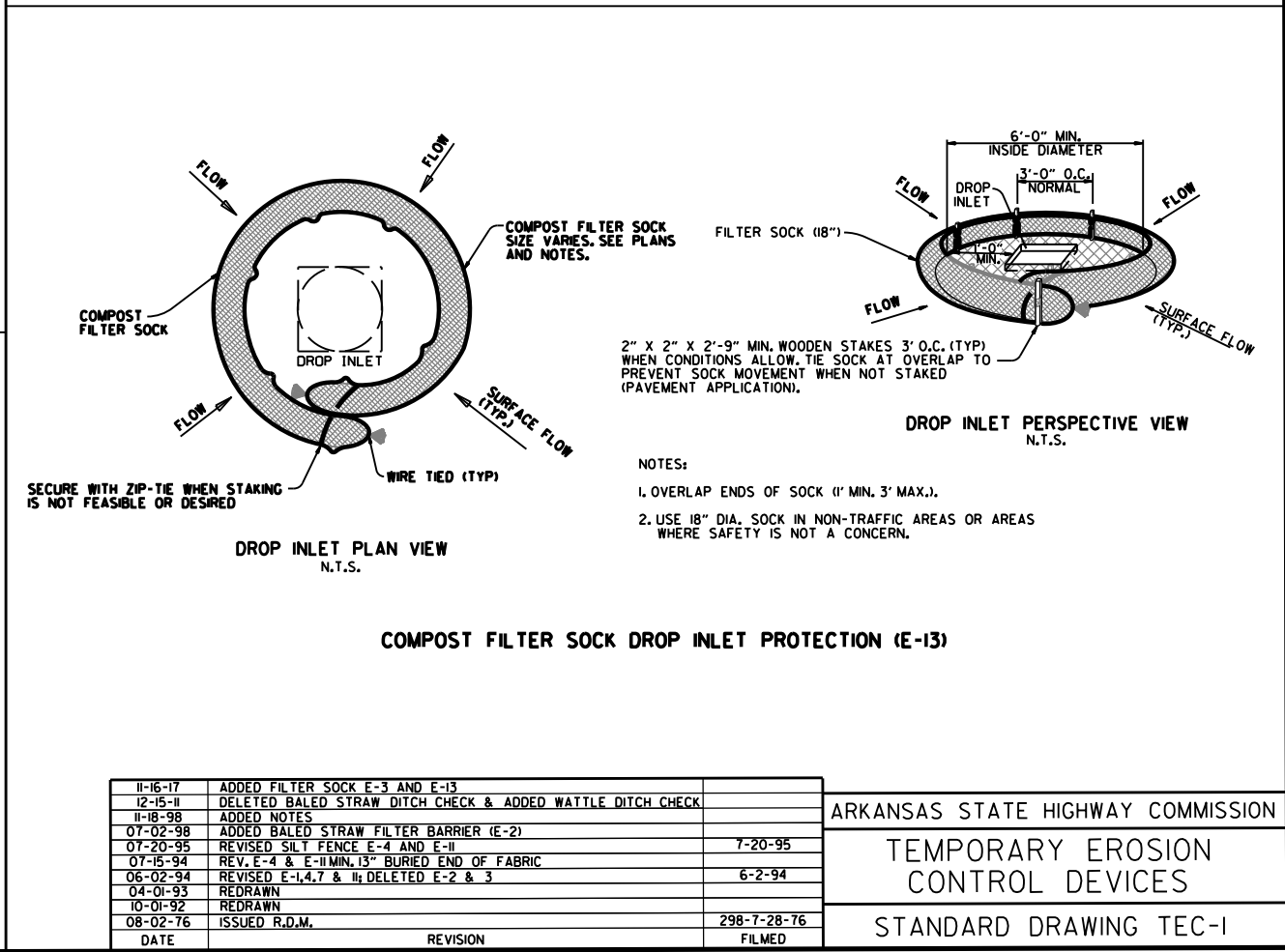
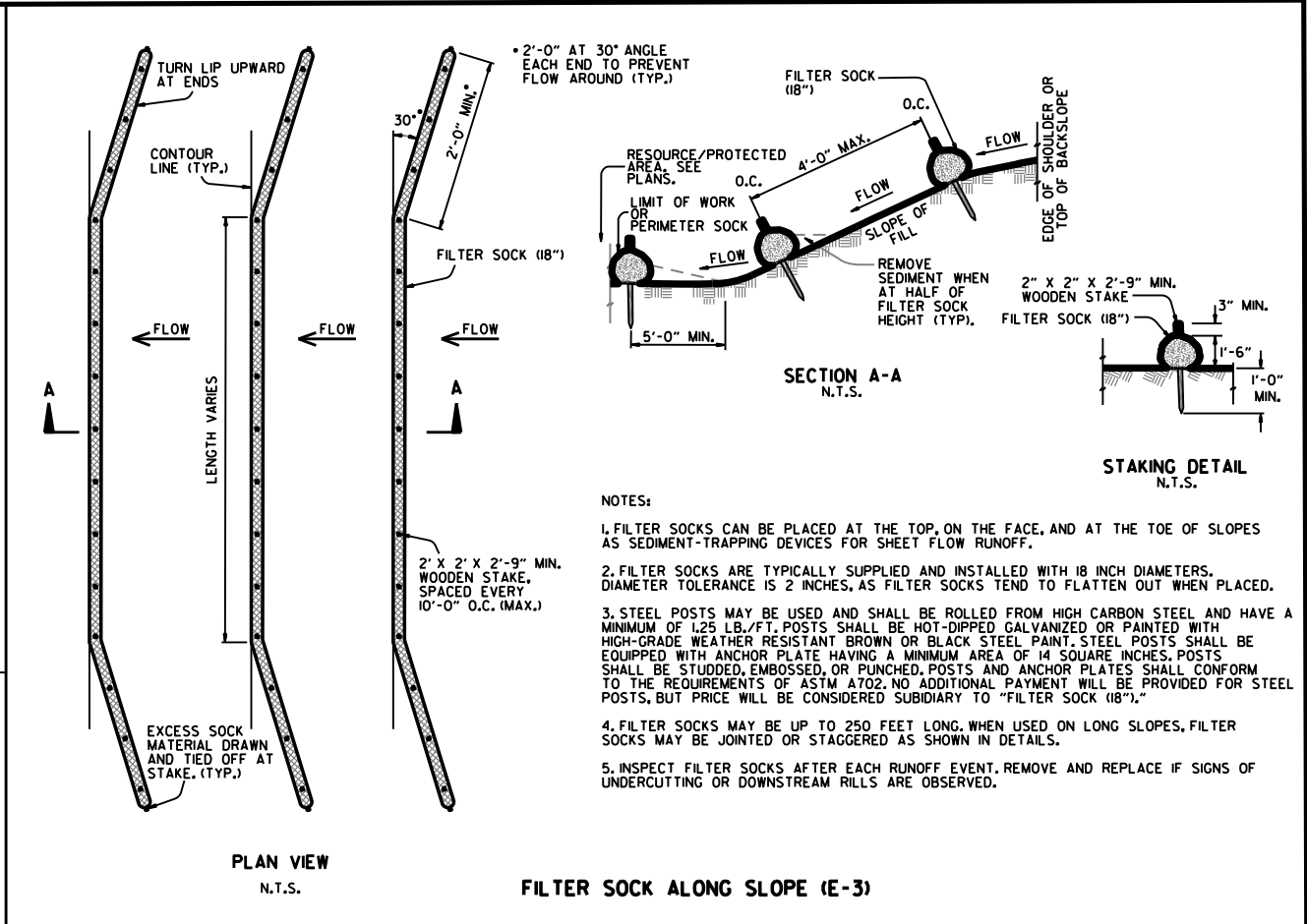
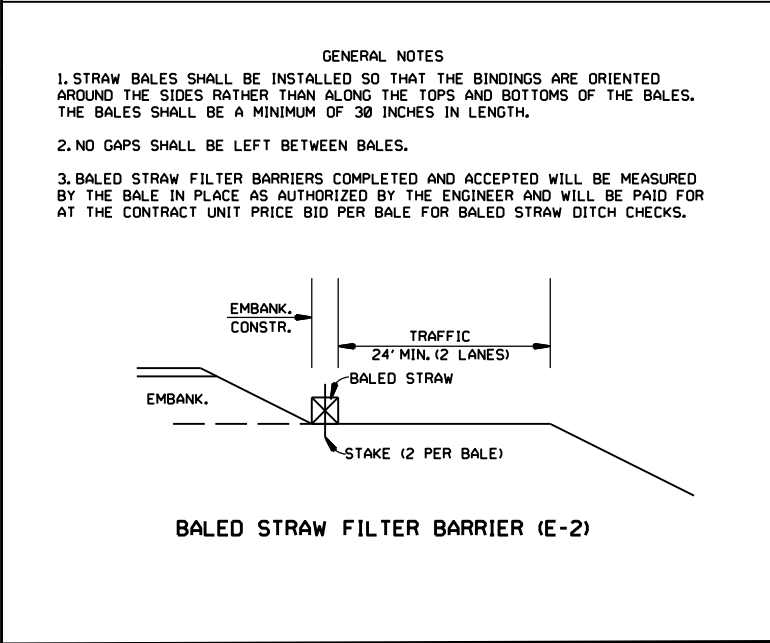
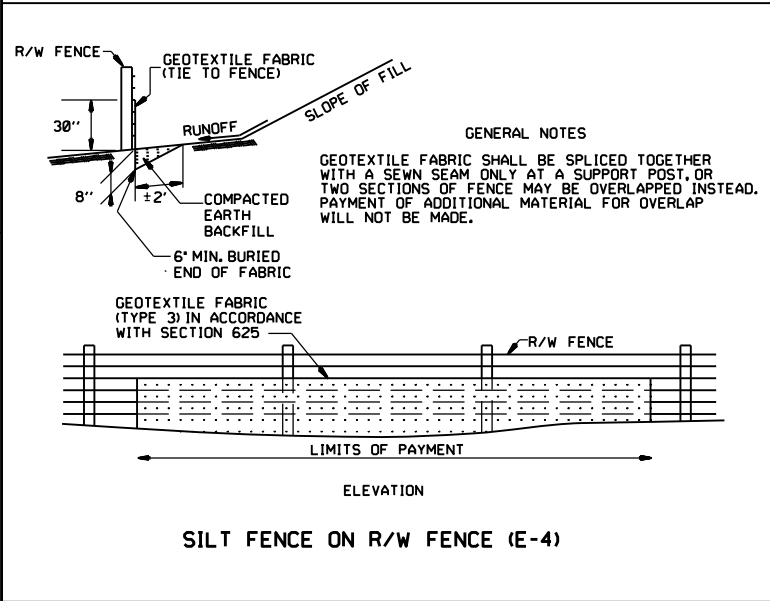
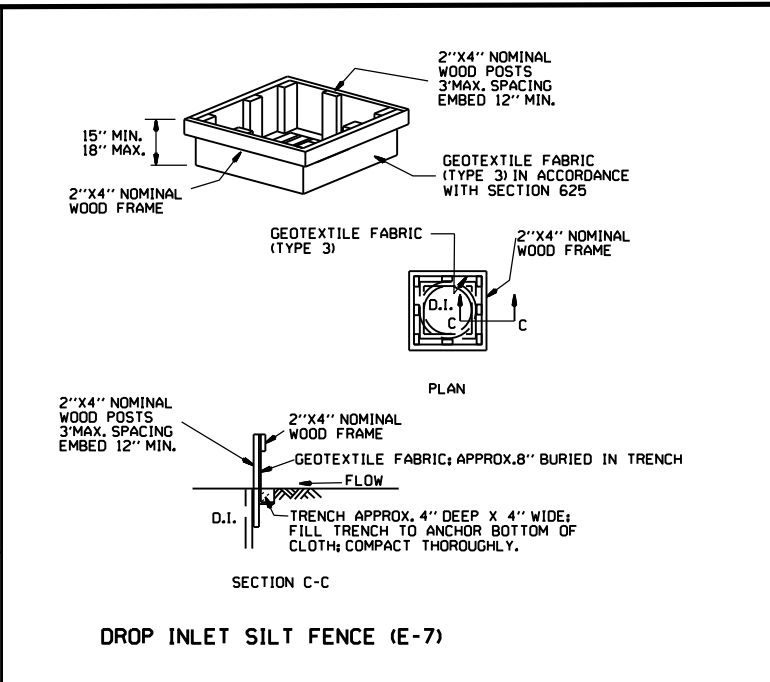
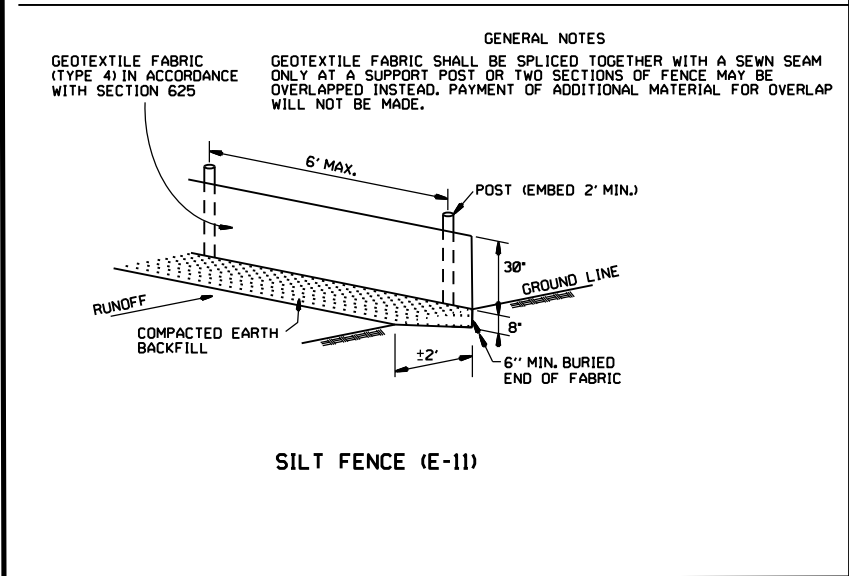
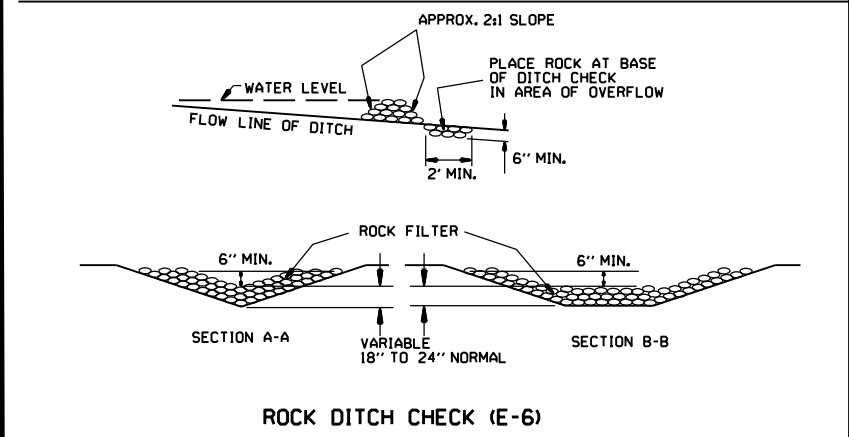
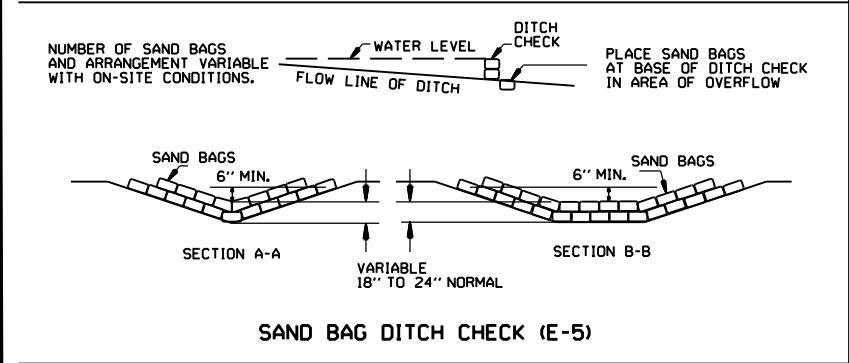
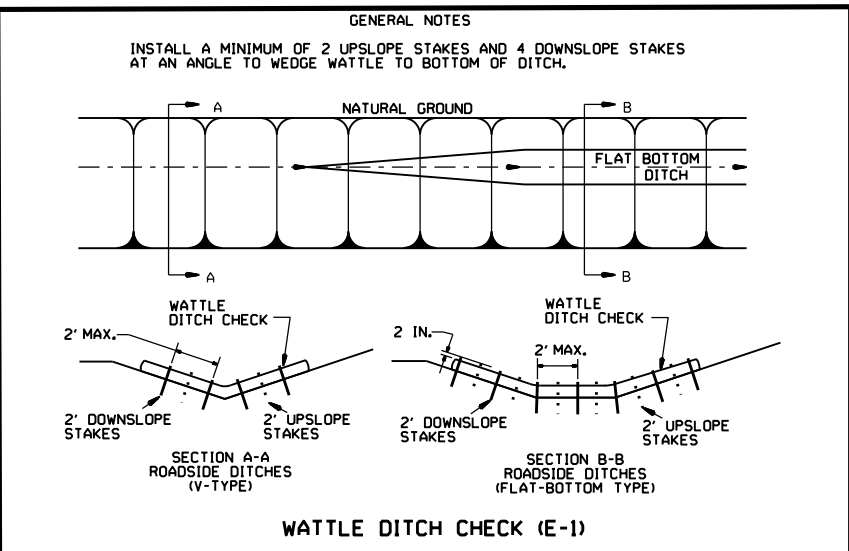
- BEGIN WORK AREA
- MAXIMUM EXTENT OF LANE CLOSURE
- PORTABLE CHANGEABLE MESSAGE SIGN TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER
- *SEE GENERAL NOTE 2

(A) TYPICAL APPLICATION - ADVANCE WARNING SIGNS AT BEGINNING AND
END OF JOB (FULLY CONTROLLED ACCESS FACILITIES) (ALL STAGES)



1. FLAGS MAY BE MOUNTED TO SIGNS AT NIGHT AS NEEDED.
2. THE G20-1 SIGN SHOULD BE INSTALLED 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 OR 1500 FT) SIGNS ARE NOT REQUIRED IN ADVANCE OF LANE CLOSURES THAT BEGIN INSIDE THE PROJECT LIMITS. THE DISTANCE DISPLAYED ON THE G20-1 SIGN SHALL BE STATED TO THE NEAREST WHOLE MILE.
3. 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, THIS DEVICE SHALL BE DELINEATED BY PLACING FIVE (5) TRAFFIC DRUMS, EQUALLY SPACED ALONG THE TRAFFIC SIDE OF THE DEVICE. PAYMENT FOR TRAFFIC DRUMS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR PORTABLE CHANGEABLE MESSAGE SIGNS.
4. PORTABLE CHANGEABLE MESSAGE SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).

04-09-26	CORRECTED WZ-4 SIGN DIMENSIONS	 ARKANSAS STATE HIGHWAY COMMISSION
01-22-26	ADDED WZ-4 AND REVISED GENERAL NOTE 1	
11-06-25	REPLACED "SPEED" WITH "TRAFFIC LAWS" ON WZ-1	
08-14-25	ISSUED	
DATE REV	DESCRIPTION	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION
04-09-2026	DATE EFFECTIVE	STANDARD DRAWING
		TC-6

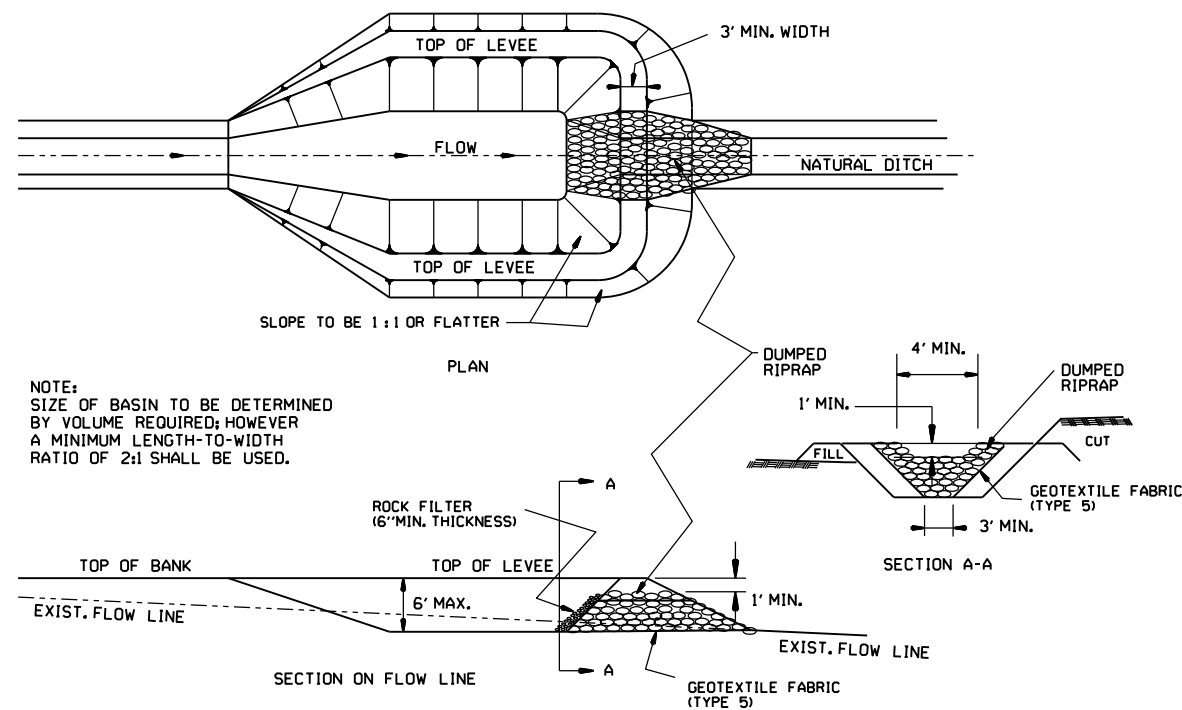


11-16-17	ADDED FILTER SOCK E-3 AND E-13		
12-15-11	DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK		
11-18-98	ADDED NOTES		
07-02-98	ADDED BALED STRAW FILTER BARRIER (E-2)		
07-20-95	REVISED SILT FENCE E-4 AND E-11	7-20-95	
07-15-94	REV. E-4 & E-11 MIN. 13" BURIED END OF FABRIC		
06-02-94	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	
DATE	REVISION	FILMED	

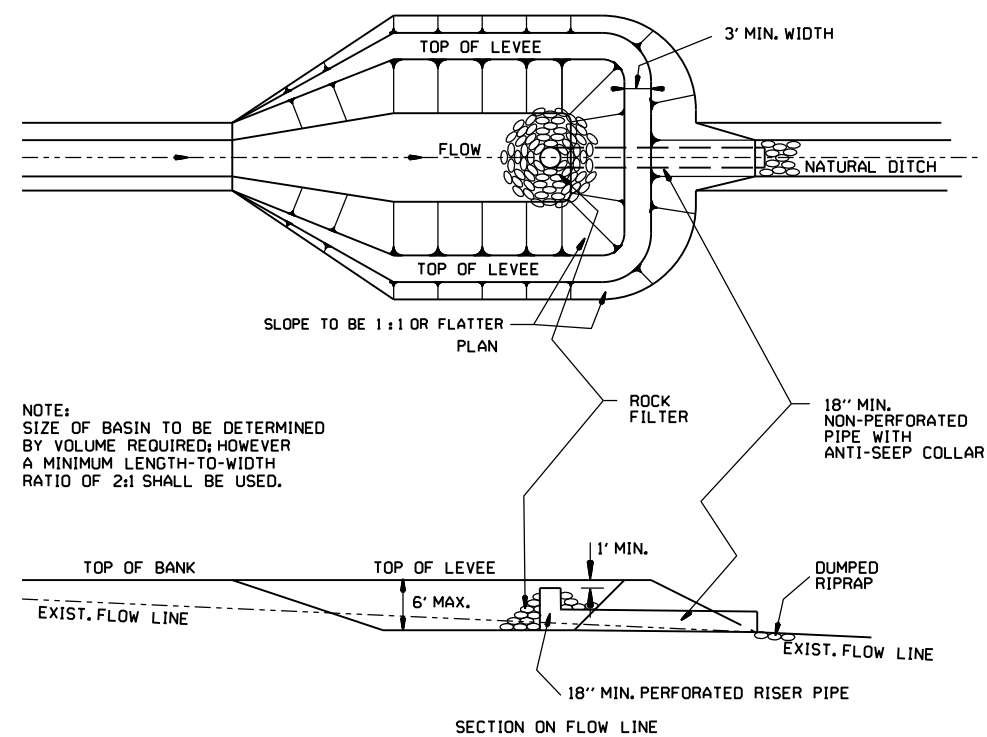
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

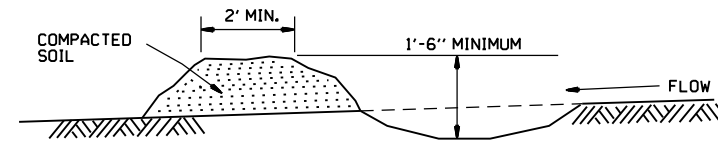
STANDARD DRAWING TEC-1



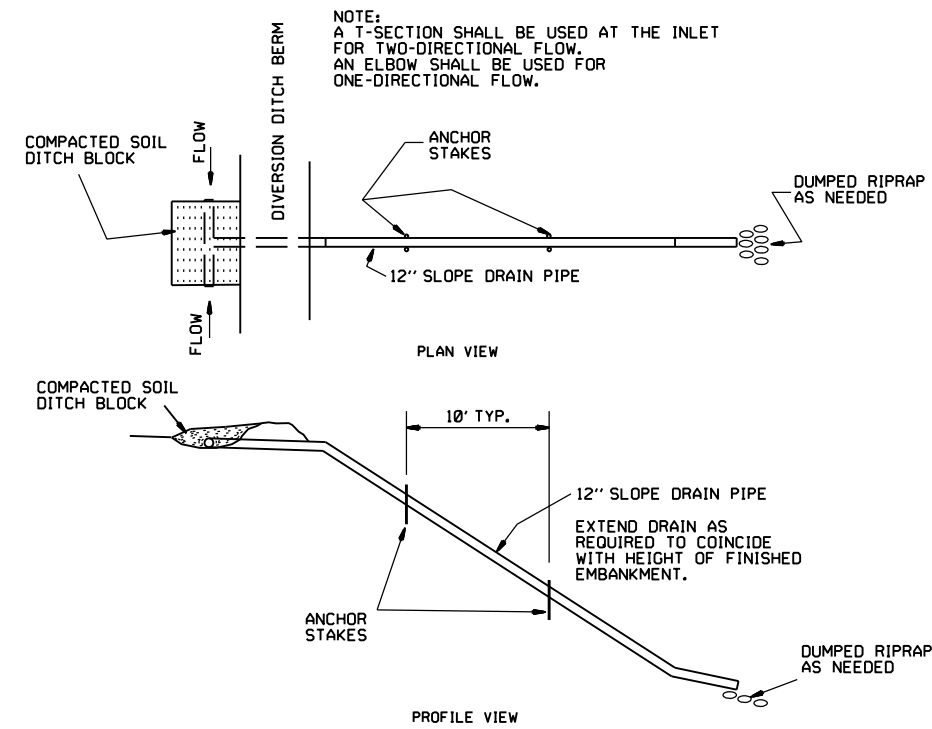
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



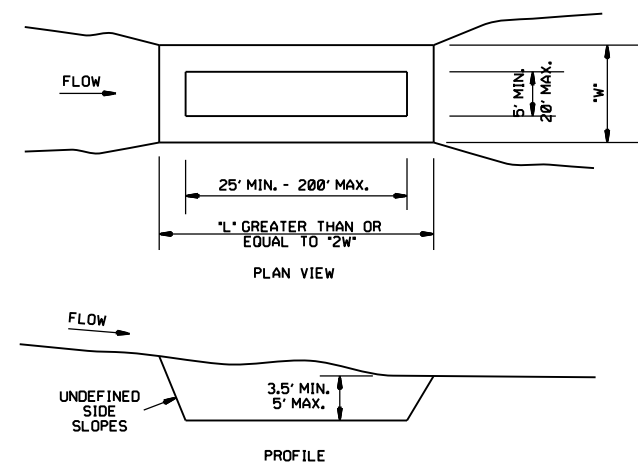
SEDIMENT BASIN WITH PIPE OUTLET (E-10)



DIVERSION DITCH (E-8)



SLOPE DRAIN (E-12)



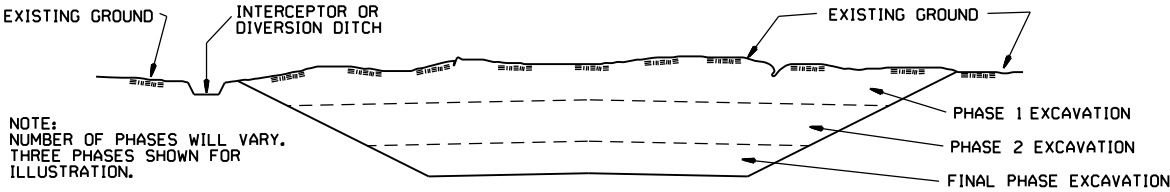
SEDIMENT BASIN (E-14)

			ARKANSAS STATE HIGHWAY COMMISSION
			TEMPORARY EROSION CONTROL DEVICES
			STANDARD DRAWING TEC-2
6-2-94	Revised E-8 & E-12; Added E-14 & Deleted E-13		
4-1-93	ISSUED		
DATE	REVISION	FILMED	

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

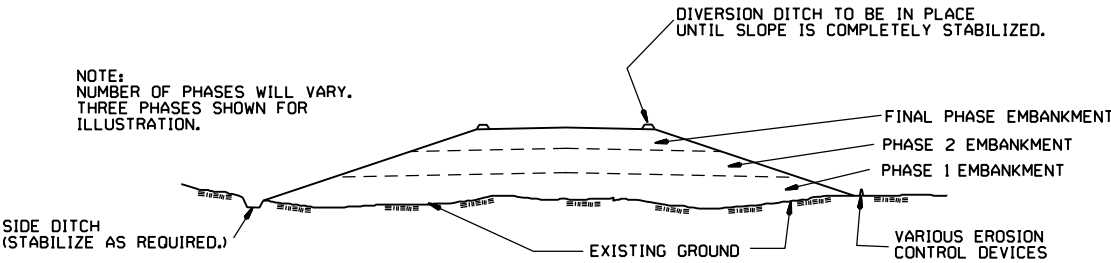


GENERAL NOTE

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

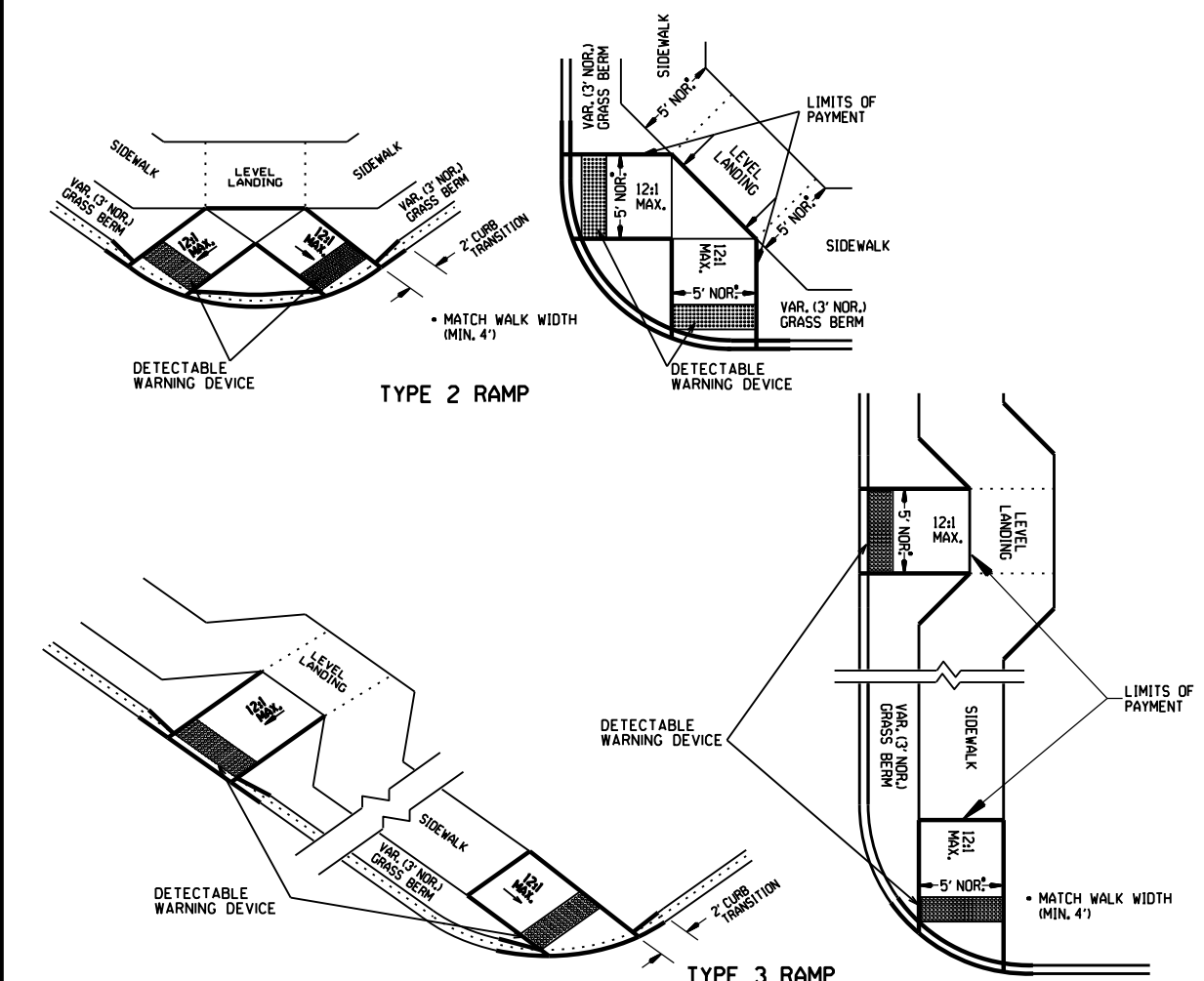
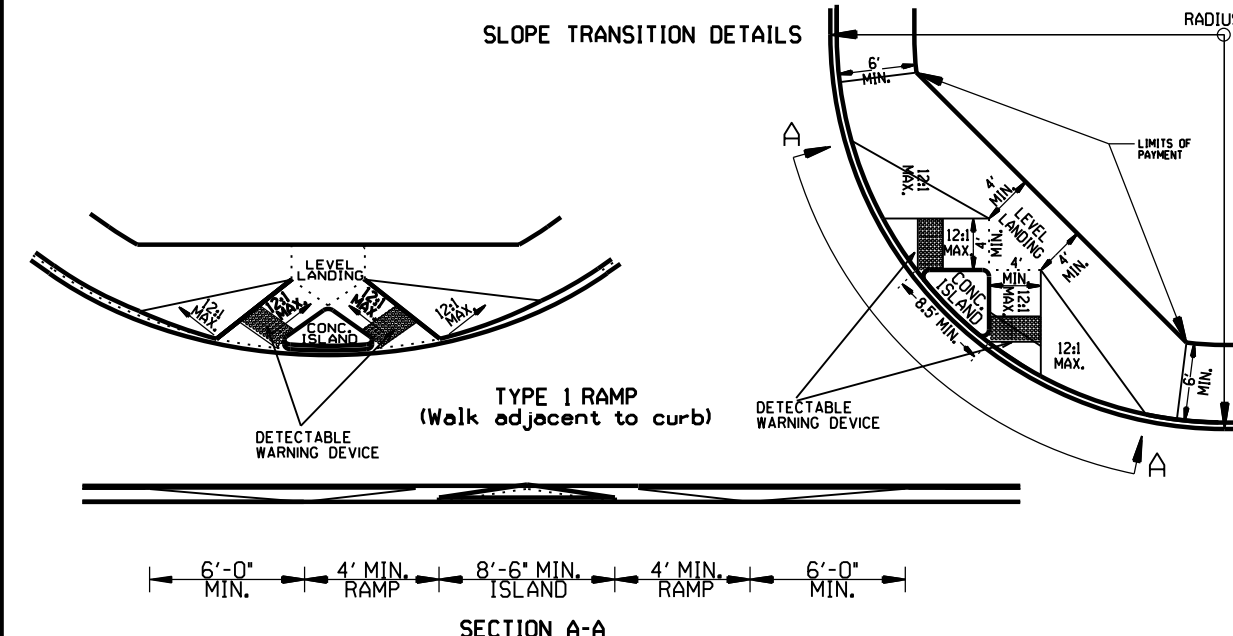
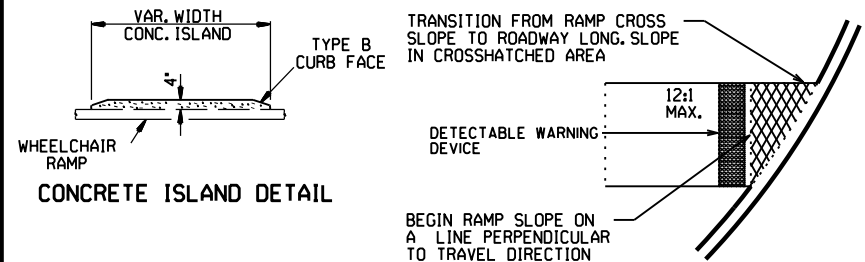


GENERAL NOTE

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.

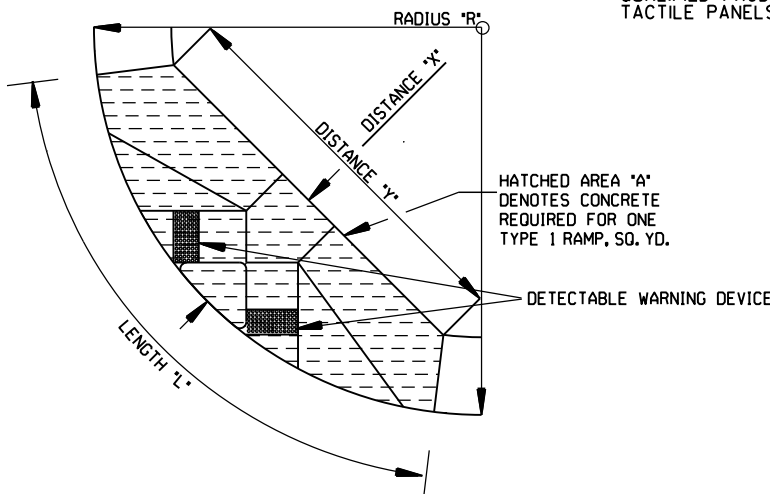
- CONSTRUCTION SEQUENCE
- 1. CONSTRUCT DIVERSION DITCHES, DITCH CHECKS, SEDIMENT BASINS, SILT FENCES, OR OTHER EROSION CONTROL DEVICES AS SPECIFIED.
 - 2. PLACE PHASE 1 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY 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.

			ARKANSAS STATE HIGHWAY COMMISSION
			TEMPORARY EROSION CONTROL DEVICES
11-03-94	CORRECTED SPELLING		STANDARD DRAWING TEC-3
6-2-94	Drawn & Issued	6-2-94	
DATE	REVISION	FILMED	

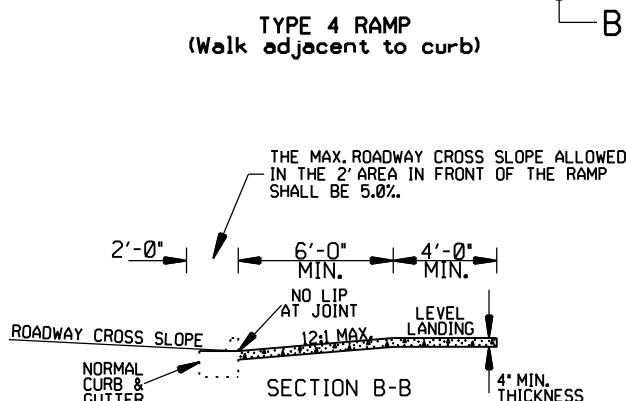
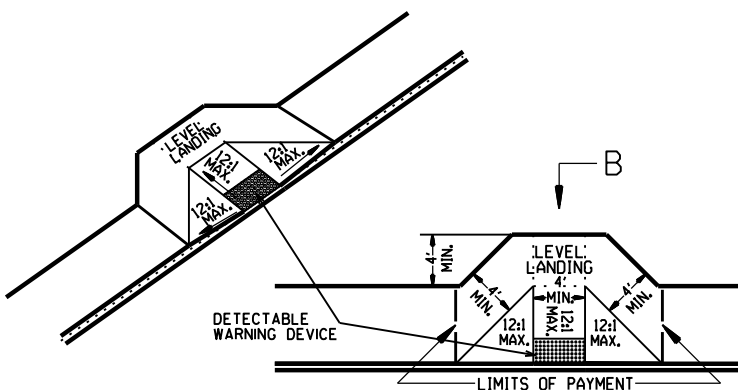


TYPE 1 RAMP DIMENSIONS AND QUANTITIES

RADIUS "R"	DISTANCE "X"	DISTANCE "Y"	LENGTH "L"	RAMP AREA "A"
FEET	FEET	FEET	FEET	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



NOTE: THE CROSS SLOPE OF THE RAMPS, LEVEL LANDINGS, AND SIDEWALKS SHALL NOT EXCEED 2.0% UNLESS REQUIRED TO MATCH STREET LONGITUDINAL GRADE.



GENERAL NOTES FOR DETECTABLE WARNING DEVICES

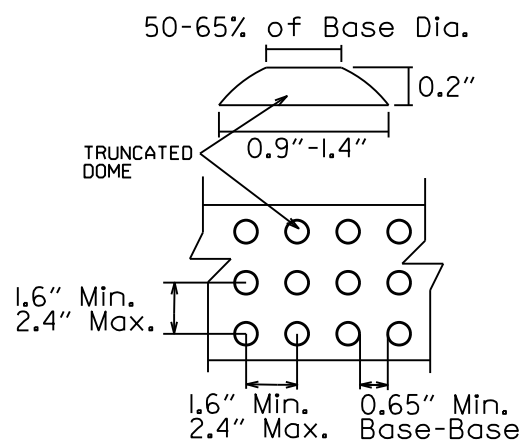
THE DETECTABLE WARNING DEVICE SHALL BE LOCATED SO THAT THE NEAREST EDGE OF THE DEVICE IS 6 TO 8 INCHES FROM THE FACE OF THE CURB.

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 PAYEMENT 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.

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).
SECOND CHOICE	TYPE 4	TANGENT LOCATIONS (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	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.

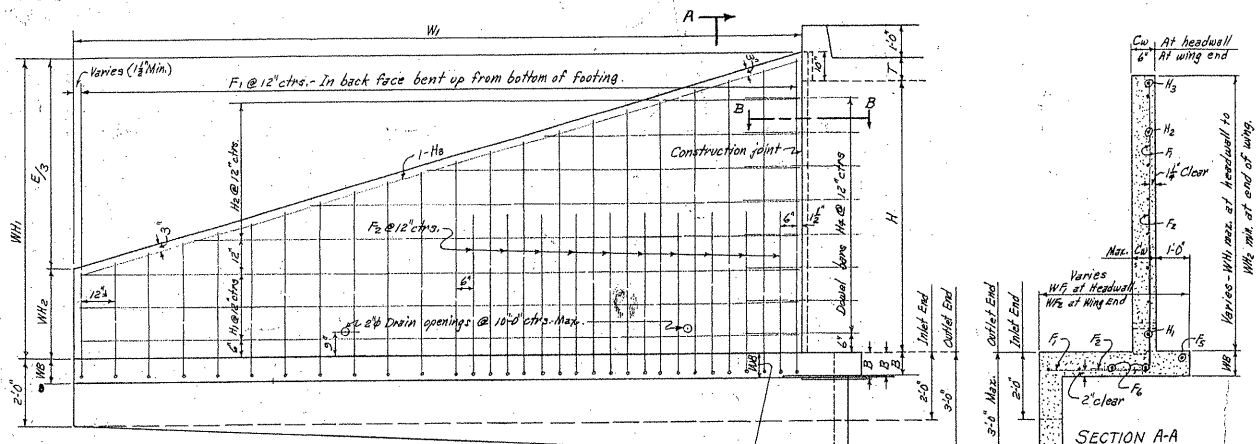
NOTE: IN ALTERATIONS, THE SELECTION OF THE TYPE OF WHEELCHAIR RAMP TO BE CONSTRUCTED SHALL BE BASED ON THE AMOUNT OF RIGHT-OF-WAY AVAILABLE, AND ON THE PRESENCE OF OTHER SITE CONSTRAINTS (UTILITIES, BUILDINGS, ETC.).

THE TABLE ABOVE LISTS THE ORDER IN WHICH THE RAMPS ARE TO BE CONSIDERED.

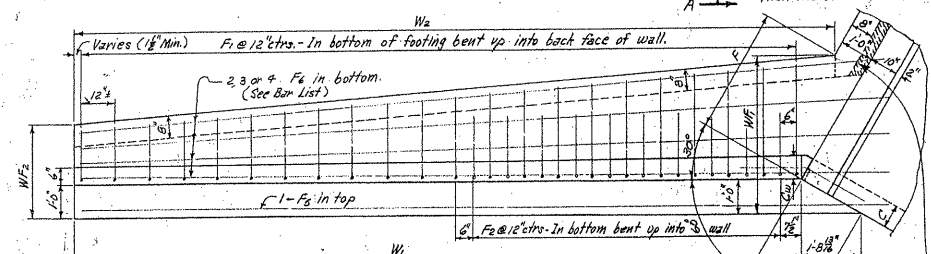
AN ALTERATION IS DEFINED AS A PROJECT THAT CHANGES OR AFFECTS THE USE OF A PEDESTRIAN PATHWAY (OVERLAYS, SIGNALIZATION PROJECTS, ETC.) BUT DOES NOT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY. ALL PROJECTS THAT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY WILL USUALLY BE CONSIDERED NEW CONSTRUCTION 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.	
11-8-98	REVISED NOTES	
8-12-98	REVISED TEXTURE	
7-02-98	REDRAWN & REISSUED	
10-18-96	CORRECTED DIMENSIONS	10-18-96
5-24-90	FROM 8:1 TO 12:1 MAX. SLOPES	5-24-90
7-15-88	ADJUSTED MAX. SLOPE	652-7-15-88
7-14-88	INCLUD. "CONC. ISLD." IN PAY ITEM	-----
6-02-76	ISSUED-P.H.D.	299-7-28-76

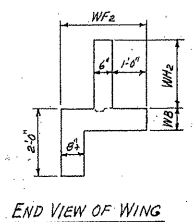
FED. ROAD DIST.	STATE	FED. AID PROJECT	FISCAL YEAR	DIST. NO.	TOTAL SHEETS
6	ARK.				
JOB NO.					



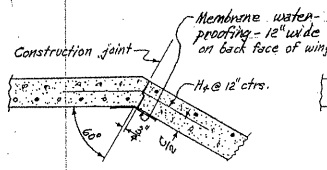
REAR ELEVATION OF WING - SHOWING BACK FACE REIN.



PLAN OF WING - SHOWING FOOTING REIN.



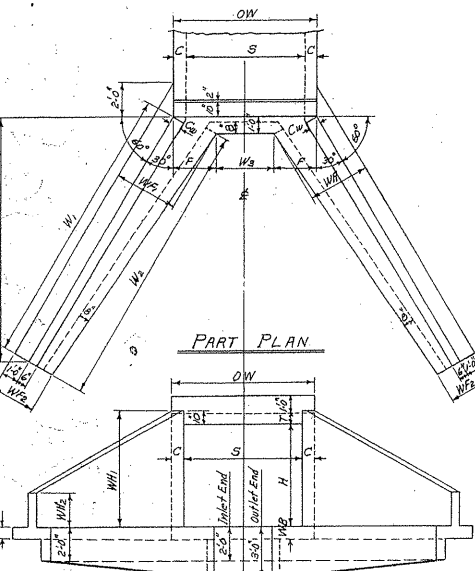
END VIEW OF WING



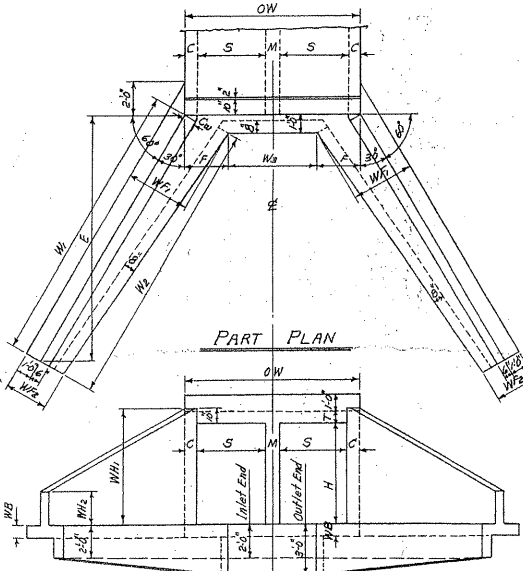
SECTION B-B THRU CONSTRUCTION JOINT

DETAIL AT TOP OF WING

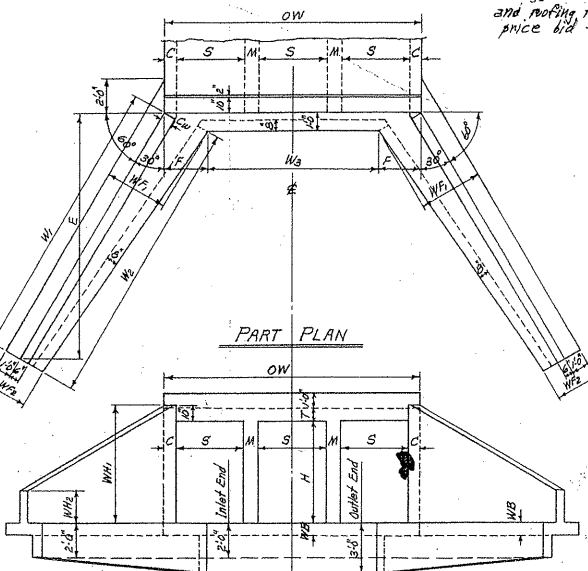
NOTE: Payment for membrane waterproofing and nailing felt to be included in the price bid for Class S Concrete.



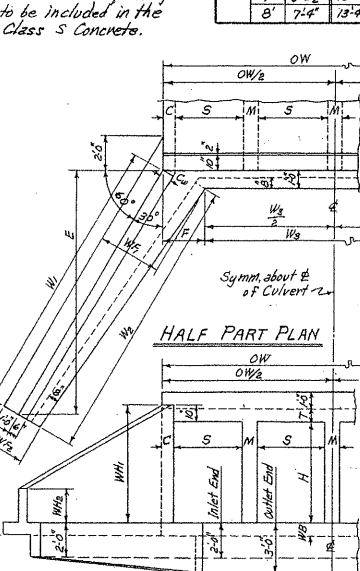
END ELEVATION SINGLE BARREL CULVERT



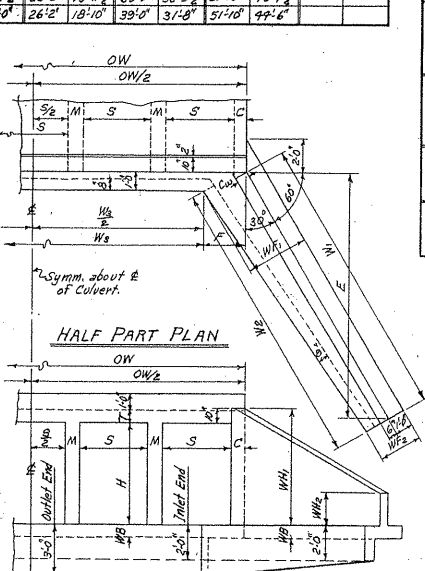
END ELEVATION DOUBLE BARREL CULVERT



END ELEVATION TRIPLE BARREL CULVERT



HALF END ELEVATION QUADRUPLE BARREL CULVERT



HALF END ELEVATION QUINTUPLE BARREL CULVERT

WING DIMENSIONS														
W3 = (OW - 2F)														
CLASS S CONCRETE														
QUANTITY PER WING														
INLET END OUTLET END														
H	WB	CU	WH	WH2	WF	WF2	F	E	W1	W2	CU.YD.	CU.YD.		
2'	7"	6"	2'-0"	0'-8"	2'-4"	2'-0"	0'-11 1/2"	6'-6"	7'-6"	7'-1 1/2"	0.889	0.986		
3'	7"	6"	3'-0"	1'-0"	2'-8"	2'-1 1/2"	1'-1 1/2"	8'-6"	9'-9 3/4"	9'-5 3/4"	1.338	1.466		
4'	7"	6"	4'-0"	1'-4"	3'-0"	2'-3"	1'-9"	10'-6"	12'-1 1/2"	12'-1 1/2"	1.668	2.027		
5'	7"	6"	5'-0"	1'-8"	3'-4"	2'-4"	2'-1 1/2"	12'-6"	14'-5 1/2"	14'-7 1/2"	2.478	2.648		
6'	7"	6"	6'-0"	2'-0"	3'-8"	2'-6"	2'-6"	14'-6"	16'-9"	17'-1 1/2"	3.440	3.661		
7'	7"	6"	7'-0"	2'-4"	4'-2"	2'-7 1/2"	3'-1 1/4"	16'-6"	19'-0"	19'-8 3/4"	4.505	4.758		
8'	7"	6"	8'-0"	2'-8"	4'-6"	2'-9"	3'-8"	18'-6"	21'-4 1/2"	22'-4"	5.761	6.047		

* Quantity per wing does not include headwall or that portion of apron or toe wall for the length W3.

APRON DIMENSION W3														
W3 = (OW - 2F)														
QUANTITY PER WING														
INLET END OUTLET END														
H	WB	CU	WH	WH2	WF	WF2	F	E	W1	W2	CU.YD.	CU.YD.		
2'	7"	6"	2'-0"	0'-8"	2'-4"	2'-0"	0'-11 1/2"	6'-6"	7'-6"	7'-1 1/2"	0.889	0.986		
3'	7"	6"	3'-0"	1'-0"	2'-8"	2'-1 1/2"	1'-1 1/2"	8'-6"	9'-9 3/4"	9'-5 3/4"	1.338	1.466		
4'	7"	6"	4'-0"	1'-4"	3'-0"	2'-3"	1'-9"	10'-6"	12'-1 1/2"	12'-1 1/2"	1.668	2.027		
5'	7"	6"	5'-0"	1'-8"	3'-4"	2'-4"	2'-1 1/2"	12'-6"	14'-5 1/2"	14'-7 1/2"	2.478	2.648		
6'	7"	6"	6'-0"	2'-0"	3'-8"	2'-6"	2'-6"	14'-6"	16'-9"	17'-1 1/2"	3.440	3.661		
7'	7"	6"	7'-0"	2'-4"	4'-2"	2'-7 1/2"	3'-1 1/4"	16'-6"	19'-0"	19'-8 3/4"	4.505	4.758		
8'	7"	6"	8'-0"	2'-8"	4'-6"	2'-9"	3'-8"	18'-6"	21'-4 1/2"	22'-4"	5.761	6.047		

QUANTITIES

CLASS S CONCRETE - 4 WINGS														
HEADWALLS, WINGWALLS, FOOTINGS, TOEWALLS AND APRONS														
QUANTITY PER WING														
INLET END OUTLET END														
H	WB	CU	WH	WH2	WF	WF2	F	E	W1	W2	CU.YD.	CU.YD.		
2'	7"	6"	2'-0"	0'-8"	2'-4"	2'-0"	0'-11 1/2"	6'-6"	7'-6"	7'-1 1/2"	0.889	0.986		
3'	7"	6"	3'-0"	1'-0"	2'-8"	2'-1 1/2"	1'-1 1/2"	8'-6"	9'-9 3/4"	9'-5 3/4"	1.338	1.466		
4'	7"	6"	4'-0"	1'-4"	3'-0"	2'-3"	1'-9"	10'-6"	12'-1 1/2"	12'-1 1/2"	1.668	2.027		
5'	7"	6"	5'-0"	1'-8"	3'-4"	2'-4"	2'-1 1/2"	12'-6"	14'-5 1/2"	14'-7 1/2"	2.478	2.648		
6'	7"	6"	6'-0"	2'-0"	3'-8"	2'-6"	2'-6"	14'-6"	16'-9"	17'-1 1/2"	3.440	3.661		
7'	7"	6"	7'-0"	2'-4"	4'-2"	2'-7 1/2"	3'-1 1/4"	16'-6"	19'-0"	19'-8 3/4"	4.505	4.758		
8'	7"	6"	8'-0"	2'-8"	4'-6"	2'-9"	3'-8"	18'-6"	21'-4 1/2"	22'-4"	5.761	6.047		

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 3/4" chamfers.
REINFORCING STEEL:- Reinforcing steel to be deformed bars of intermediate or hard grade.
CONSTRUCTION JOINTS:- Construction joints between wingwall, footings and side walls 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 (n=10) 1200 psi
Reinforcing Steel 20,000 psi

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

ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF STANDARD WINGS
FOR
REINFORCED CONCRETE BOX CULVERTS
4', 5', 6', 7', 8', 9', 10', 11' & 12' SPANS
SINGLES, DOUBLES, TRIPLES, ALL DEPTHS OF COVER
QUADRUPLES & QUINTUPLES. FOR H = 8'-0" OR LESS
STANDARD DRAWING NO. W-X003-1

Designed By: M.C.H. 8-20-62. Checked By: RWS. 1-9-63
Drawn By: M.C.H. 12-14-62. Checked By: RWS. 1-31-63
Quantity: By: M.C.H. 12-14-62. Checked By: RWS. 1-31-63
Revised By: RWS. 3-23-63

REVISIONS:- Membrane added. 5-10-66 W.C.H.

