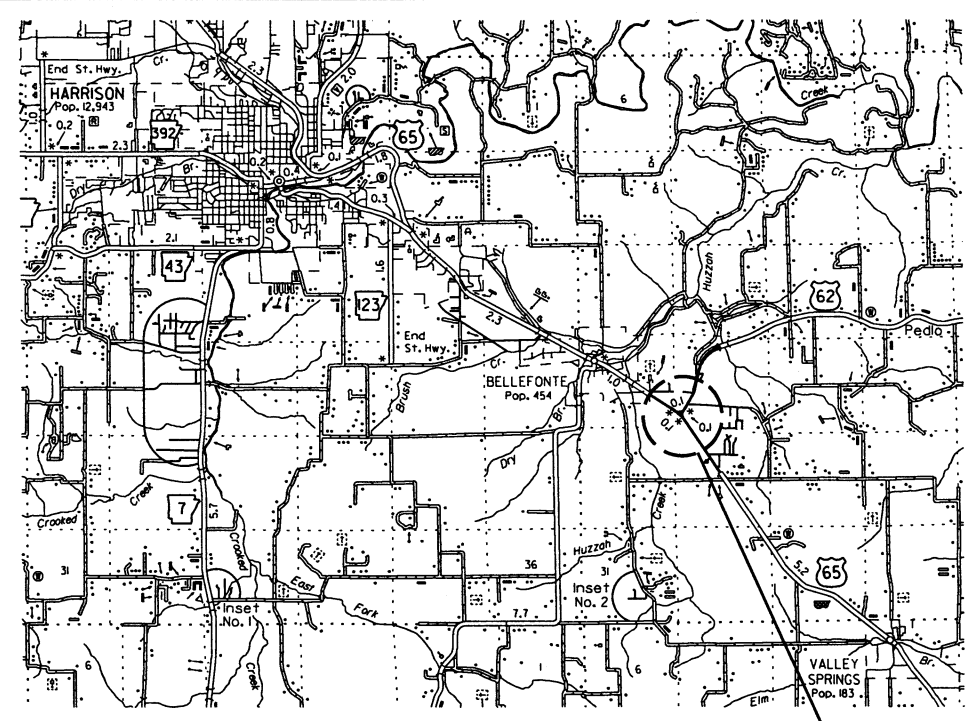


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090519		1	19

② HWY. 65 & HWY. 62 SIGNAL (BOONE CO.) (S)



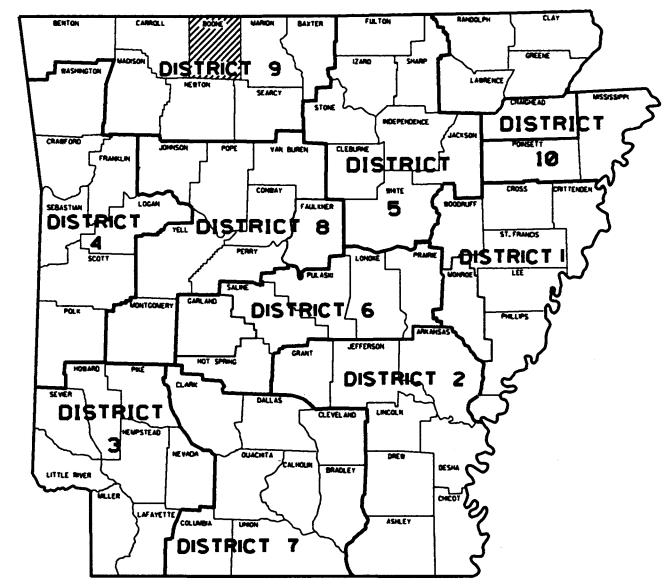
VICINITY MAP

ARKANSAS DEPARTMENT OF TRANSPORTATION  
CONSTRUCTION PLANS FOR STATE HIGHWAY

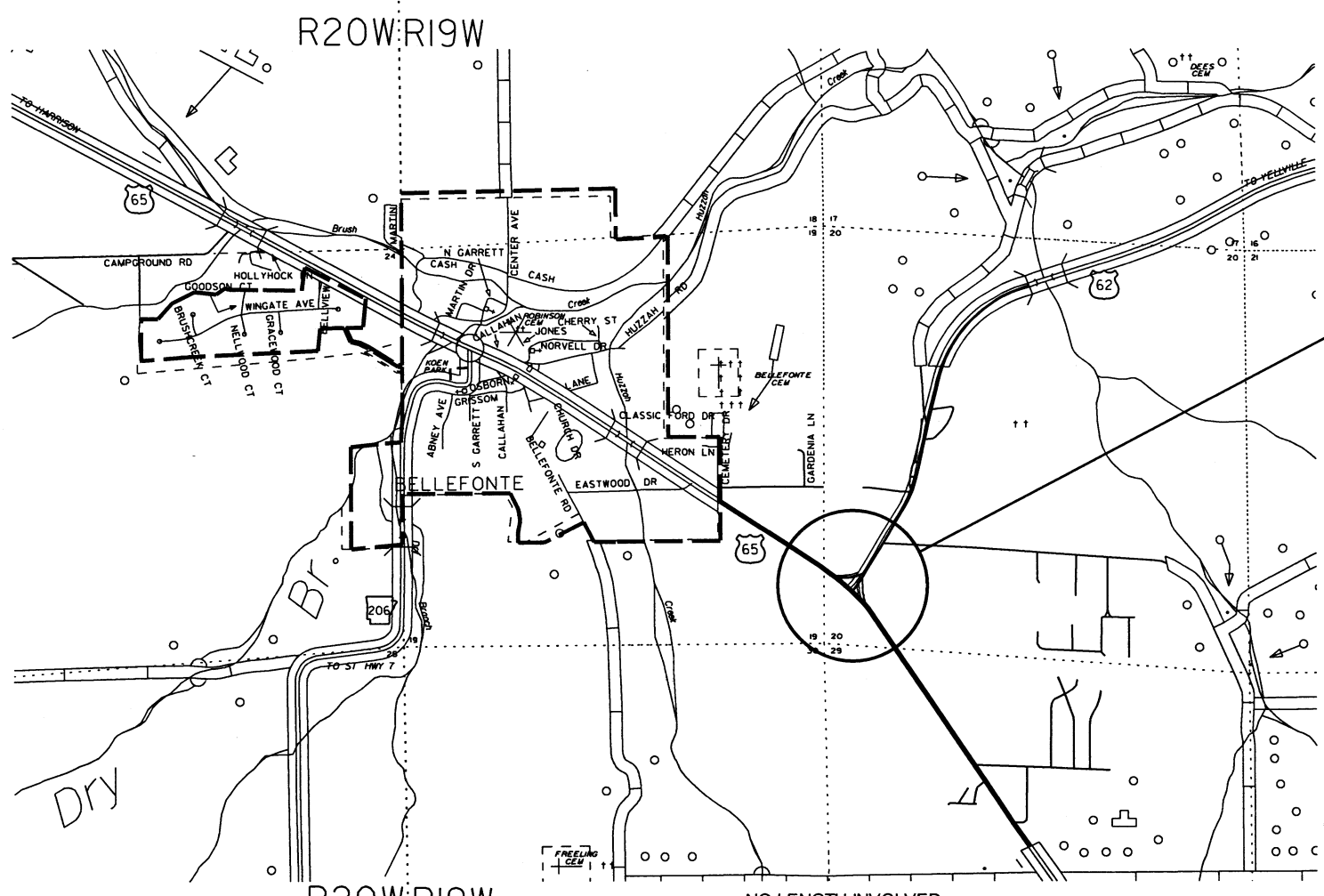
HWY. 65 & HWY. 62 SIGNAL  
(BOONE CO.) (S)

BOONE COUNTY  
ROUTE 65 SECTION 2  
ROUTE 62 SECTION 7  
JOB 090519  
FED. AID PROJ. NO. STPF-0005(46)

NOT TO SCALE



ARKANSAS HWY. DIST. 9



HWY. 65 & HWY. 62  
LOG MILE 5.20  
(HWY. 65)  
LOG MILE 0.00  
(HWY. 62)



APPROVED



7-16-19  
DEPUTY DIRECTOR  
AND CHIEF ENGINEER

PROJECT COORDINATES:

	MID-POINT
LAT.	N36° 11' 31"
LONG.	W93° 01' 56"

NO LENGTH INVOLVED

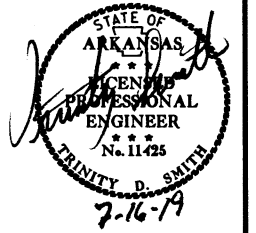
GROSS LENGTH OF PROJECT	0.00 FEET OR	0.00 MILES
NET " " ROADWAY	0.00 " "	0.00 " "
NET " " BRIDGE	0.00 " "	0.00 " "
NET " " PROJECT	0.00 " "	0.00 " "

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DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 090519	2	19

② INDEX OF SHEETS AND STANDARD DRAWINGS



### INDEX OF SHEETS

SHEET NO.	TITLE
1	TITLE SHEET
2	INDEX OF SHEETS AND STANDARD DRAWINGS
3	GOVERNING SPECIFICATIONS AND GENERAL NOTES
4	TEMPORARY EROSION CONTROL DETAILS
5	MAINTENANCE OF TRAFFIC DETAILS
6	PERMANENT PAVEMENT MARKING DETAILS
7 - 8	QUANTITIES
9	SUMMARY OF QUANTITIES AND REVISIONS
10 - 11	SURVEY CONTROL DETAILS
12	TRAFFIC SIGNAL NOTES
13	TRAFFIC SIGNAL QUANTITIES
14 - 17	SIGNALIZATION PLAN SHEETS
18 - 19	CROSS SECTIONS

### ROADWAY STANDARD DRAWINGS

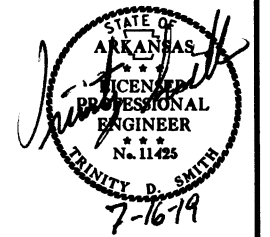
DRWG.NO.	TITLE	DATE
CG-1	CURBING DETAILS	11-29-07
DR-1	DETAILS OF DRIVEWAYS & ISLANDS	02-27-14
PCC-1	CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING	02-27-14
PCM-1	METAL PIPE CULVERT FILL HEIGHTS & BEDDING	02-27-14
PCP-1	PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)	02-27-14
PCP-2	PLASTIC PIPE CULVERT (PVC F949)	02-27-14
PM-1	PAVEMENT MARKING DETAILS	06-01-17
SD-4	LOOP DETECTOR INSTALLATION	11-16-17
SD-5	CONTROLLER CABINET UTILITY DRAWER	09-12-13
SD-6	HEAVY DUTY PULL BOX	11-16-17
SD-8	SIGNAL HEAD PLACEMENT	12-08-16
SD-9	SERVICE POINT	11-16-17
SD-11	STEEL POLE WITH MAST ARM	11-16-17
TC-1	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	04-13-17
TC-2	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	09-02-15
TC-3	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	07-25-19
TEC-1	TEMPORARY EROSION CONTROL DEVICES	11-16-17
WF-4	WIRE FENCE TYPE C AND D	08-22-02

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				6	ARK.			
				JOB NO.	090519		3	19

2 GOVERNING SPECIFICATIONS AND GENERAL NOTES



### GOVERNING SPECIFICATIONS

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

NUMBER	TITLE
ERRATA	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273	REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273	SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273	SUPPLEMENT - WAGE RATE DETERMINATION
100-3	CONTRACTOR'S LICENSE
100-4	DEPARTMENT NAME CHANGE
102-2	ISSUANCE OF PROPOSALS
108-1	LIQUIDATED DAMAGES
108-2	WORK ALLOWED PRIOR TO ISSUANCE OF WORK ORDER
306-1	QUALITY CONTROL AND ACCEPTANCE
505-1	PORTLAND CEMENT CONCRETE DRIVEWAY
604-1	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
606-1	PIPE CULVERTS FOR SIDE DRAINS
620-1	MULCH COVER
634-1	CURBING
700-2	TRAFFIC CONTROL FACILITIES
JOB 090519	ACTUATED CONTROLLER
JOB 090519	BIDDING REQUIREMENTS AND CONDITIONS
JOB 090519	CABINET DRAWER ASSEMBLY
JOB 090519	CARGO PREFERENCE ACT REQUIREMENTS
JOB 090519	DELAY IN RIGHT OF WAY OCCUPANCY
JOB 090519	DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES
JOB 090519	EDGE CARD VIDEO PROCESSOR
JOB 090519	ELECTRICAL CONDUCTORS FOR LUMINAIRES
JOB 090519	ELECTRICAL CONDUCTORS-IN-CONDUIT
JOB 090519	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 090519	LED LUMINAIRE ASSEMBLY (BUG U0 TYPE)
JOB 090519	LED TRAFFIC SIGNAL HEAD
JOB 090519	LOOP WIRING REVISION 1.4
JOB 090519	MANDATORY ELECTRONIC CONTRACT
JOB 090519	MANDATORY ELECTRONIC DOCUMENT SUBMITTAL
JOB 090519	PLASTIC PIPE
JOB 090519	RETROREFLECTIVE BACKPLATES
JOB 090519	SERVICE POINT ASSEMBLY (TRAFFIC CONTROL DEVICES)
JOB 090519	UTILITY ADJUSTMENTS
JOB 090519	VIDEO DETECTOR (COLOR)

### GENERAL NOTES

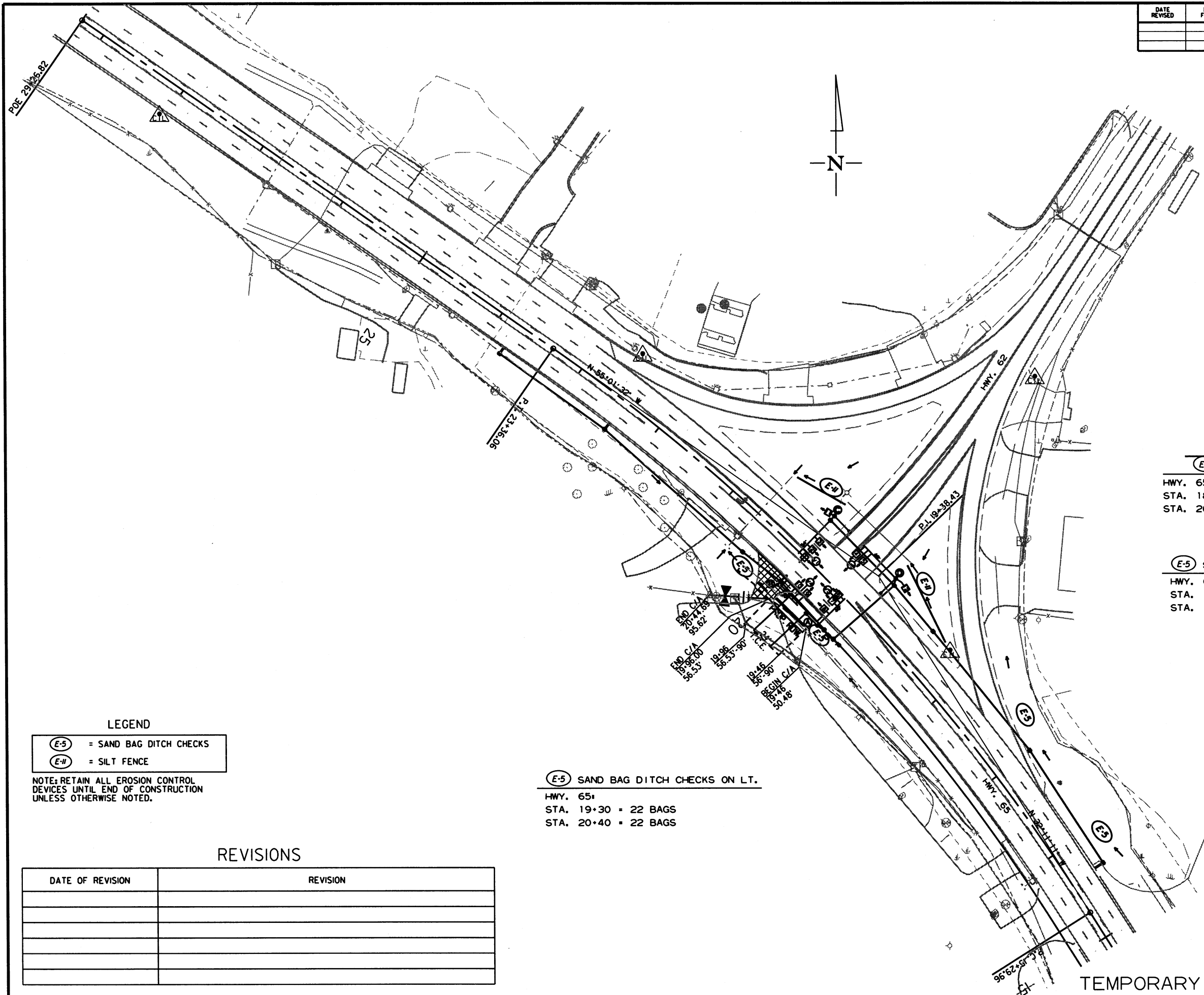
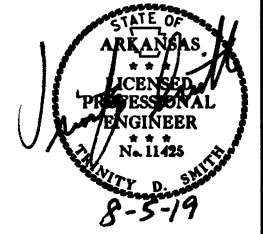
1. ALL PIPE LINES, POWER, TELEPHONE, AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
2. ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY OF UTILITY SERVICE ORGANIZATIONS SHALL BE MOVED BY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

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				6	ARK.			
JOB NO. 090519							4	19

② TEMPORARY EROSION CONTROL DETAILS



**(E-11) SILT FENCE ON RT.**  
 HWY. 65  
 STA. 18+38-19+21 = 90 LIN. FT.  
 STA. 20+07-20+61 = 60 LIN. FT.

**(E-5) SAND BAG DITCH CHECKS ON RT.**  
 HWY. 65  
 STA. 15+92 = 22 BAGS  
 STA. 17+30 = 22 BAGS

**(E-5) SAND BAG DITCH CHECKS ON LT.**  
 HWY. 65  
 STA. 19+30 = 22 BAGS  
 STA. 20+40 = 22 BAGS

**LEGEND**  
 (E-5) = SAND BAG DITCH CHECKS  
 (E-11) = SILT FENCE

NOTE: RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

REVISIONS

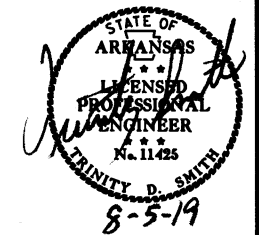
DATE OF REVISION	REVISION

8/2/2019

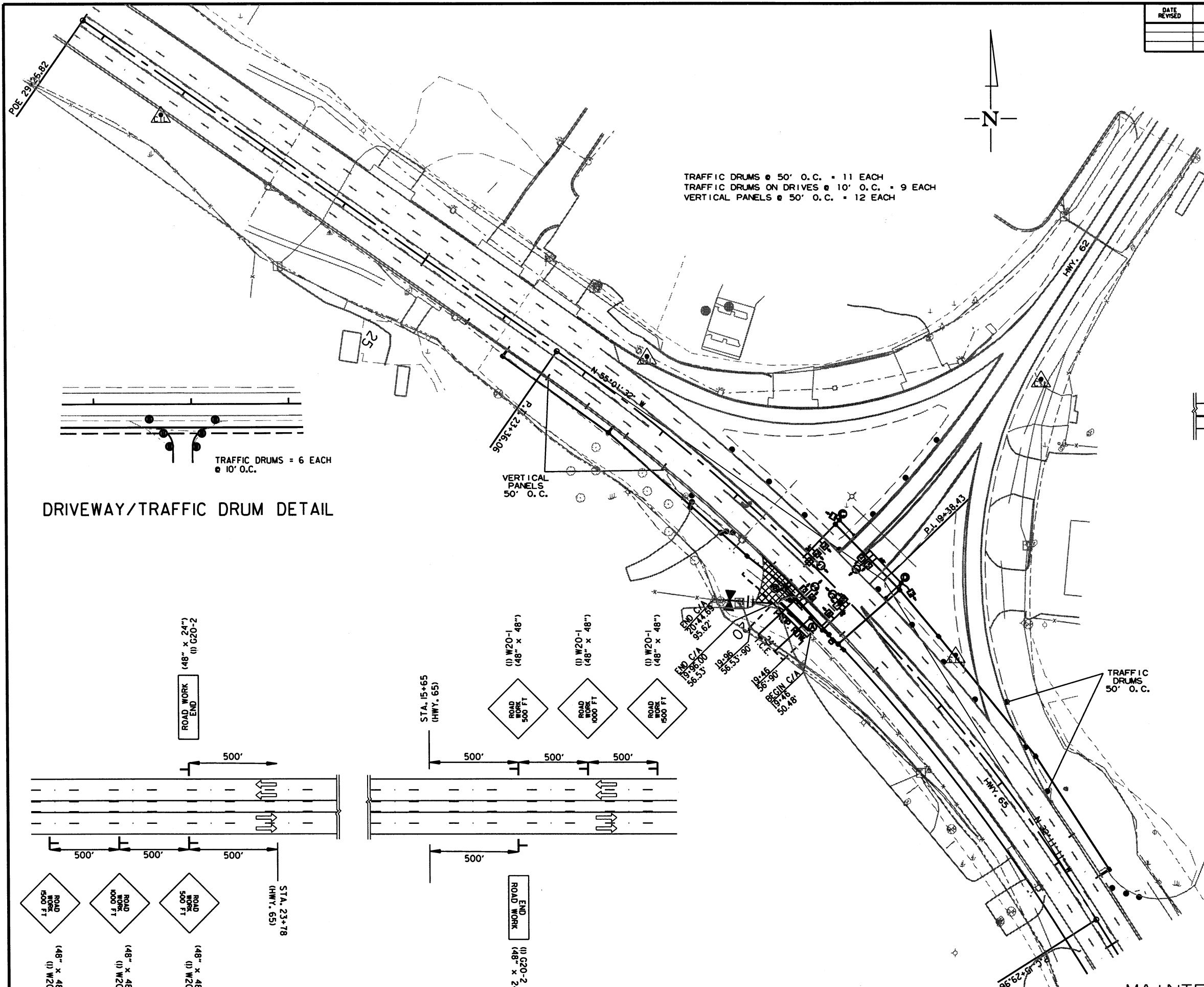
T090519.DGN

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. PROJ. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		5	19
				JOB NO.	090519			

② MAINTENANCE OF TRAFFIC DETAILS

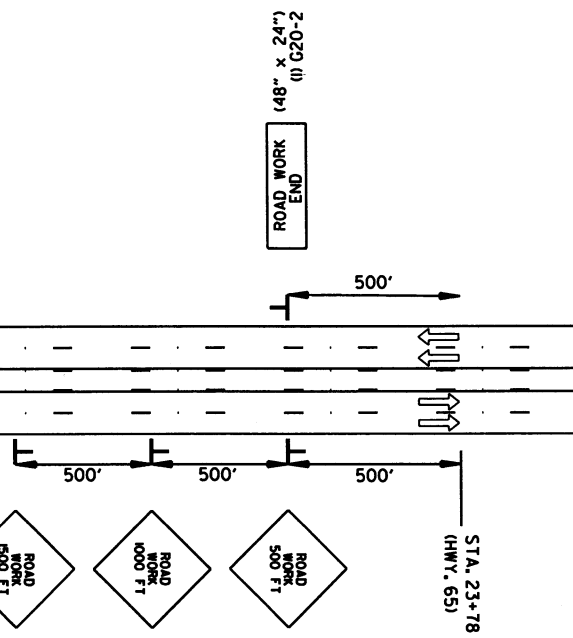


TRAFFIC DRUMS @ 50' O.C. = 11 EACH  
 TRAFFIC DRUMS ON DRIVES @ 10' O.C. = 9 EACH  
 VERTICAL PANELS @ 50' O.C. = 12 EACH

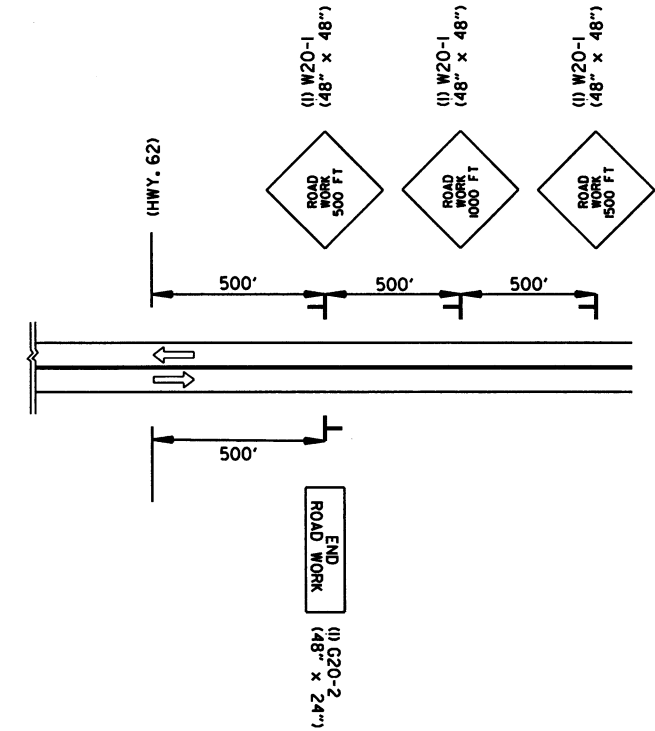


DRIVEWAY/TRAFFIC DRUM DETAIL

TRAFFIC DRUMS = 6 EACH @ 10' O.C.



ADVANCE WARNING HWY. 65



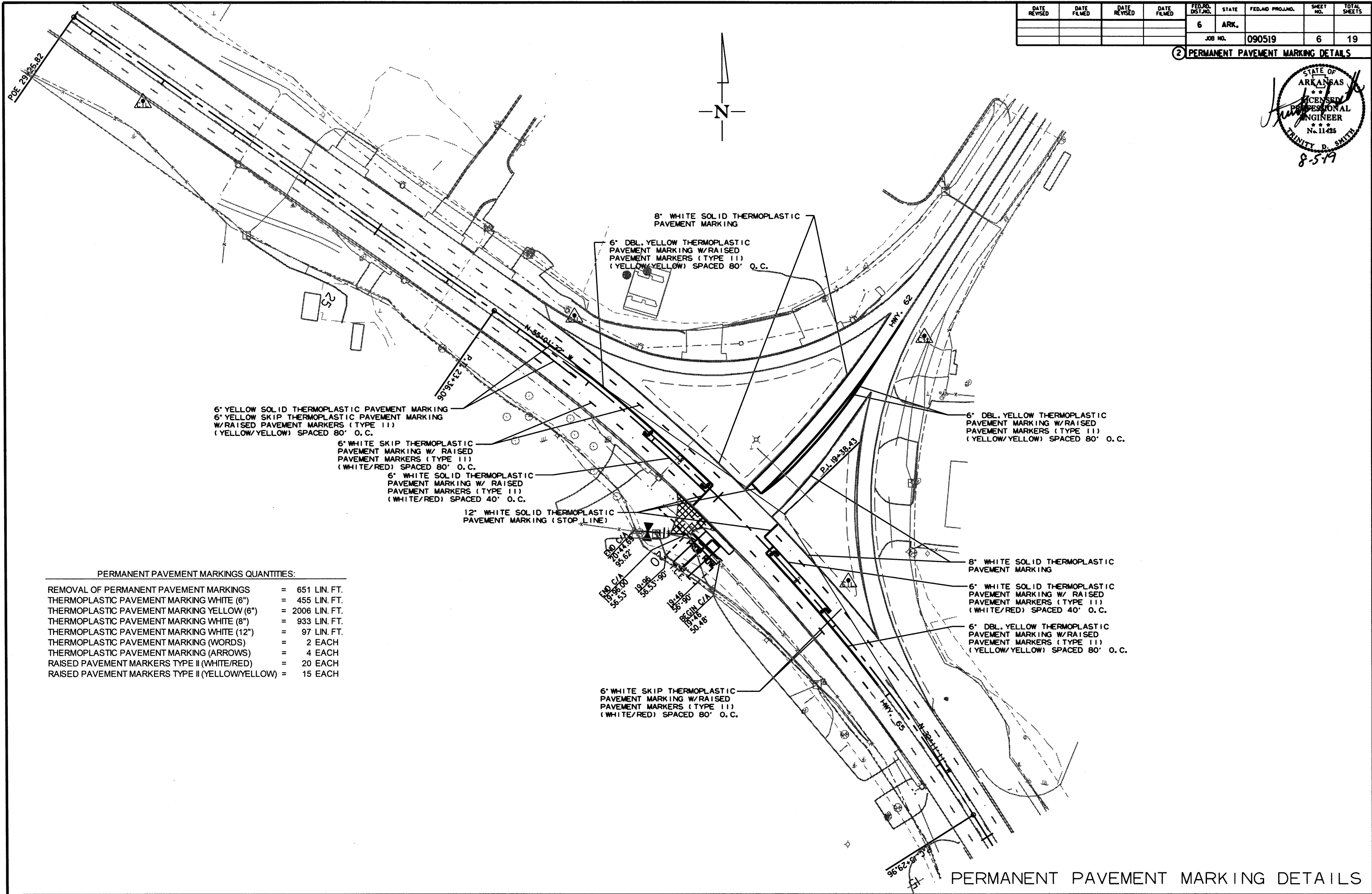
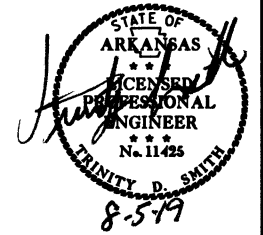
ADVANCE WARNING HWY. 62

RIGHT SHOULDER CLOSED (2) W21-5a (36" x 36") TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

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				6	ARK.		6	19
				JOB NO.		090519		

② PERMANENT PAVEMENT MARKING DETAILS



6" YELLOW SOLID THERMOPLASTIC PAVEMENT MARKING  
 6" YELLOW SKIP THERMOPLASTIC PAVEMENT MARKING  
 W/RAISED PAVEMENT MARKERS (TYPE II)  
 (YELLOW/YELLOW) SPACED 80' O.C.

6" WHITE SKIP THERMOPLASTIC  
 PAVEMENT MARKING W/ RAISED  
 PAVEMENT MARKERS (TYPE II)  
 (WHITE/RED) SPACED 80' O.C.

6" WHITE SOLID THERMOPLASTIC  
 PAVEMENT MARKING W/ RAISED  
 PAVEMENT MARKERS (TYPE II)  
 (WHITE/RED) SPACED 40' O.C.

12" WHITE SOLID THERMOPLASTIC  
 PAVEMENT MARKING (STOP LINE)

8" WHITE SOLID THERMOPLASTIC  
 PAVEMENT MARKING

6" DBL. YELLOW THERMOPLASTIC  
 PAVEMENT MARKING W/RAISED  
 PAVEMENT MARKERS (TYPE II)  
 (YELLOW/YELLOW) SPACED 80' O.C.

6" DBL. YELLOW THERMOPLASTIC  
 PAVEMENT MARKING W/RAISED  
 PAVEMENT MARKERS (TYPE II)  
 (YELLOW/YELLOW) SPACED 80' O.C.

8" WHITE SOLID THERMOPLASTIC  
 PAVEMENT MARKING

6" WHITE SOLID THERMOPLASTIC  
 PAVEMENT MARKING W/ RAISED  
 PAVEMENT MARKERS (TYPE II)  
 (WHITE/RED) SPACED 40' O.C.

6" DBL. YELLOW THERMOPLASTIC  
 PAVEMENT MARKING W/RAISED  
 PAVEMENT MARKERS (TYPE II)  
 (YELLOW/YELLOW) SPACED 80' O.C.

6" WHITE SKIP THERMOPLASTIC  
 PAVEMENT MARKING W/RAISED  
 PAVEMENT MARKERS (TYPE II)  
 (WHITE/RED) SPACED 80' O.C.

PERMANENT PAVEMENT MARKINGS QUANTITIES:

REMOVAL OF PERMANENT PAVEMENT MARKINGS	=	651 LIN. FT.
THERMOPLASTIC PAVEMENT MARKING WHITE (6")	=	455 LIN. FT.
THERMOPLASTIC PAVEMENT MARKING YELLOW (6")	=	2006 LIN. FT.
THERMOPLASTIC PAVEMENT MARKING WHITE (8")	=	933 LIN. FT.
THERMOPLASTIC PAVEMENT MARKING WHITE (12")	=	97 LIN. FT.
THERMOPLASTIC PAVEMENT MARKING (WORDS)	=	2 EACH
THERMOPLASTIC PAVEMENT MARKING (ARROWS)	=	4 EACH
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)	=	20 EACH
RAISED PAVEMENT MARKERS TYPE II (YELLOW/YELLOW)	=	15 EACH

PERMANENT PAVEMENT MARKING DETAILS

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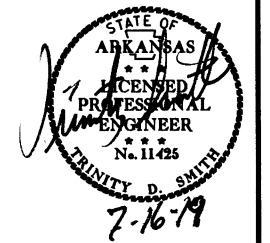
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	090519
								7
								19

**PERMANENT PAVEMENT MARKINGS**

DESCRIPTION	END OF JOB LIN. FT. - EACH	REMOVAL OF PERMANENT PAVEMENT MARKINGS LIN. FT.	RAISED PAVEMENT MARKERS		THERMOPLASTIC PAVEMENT MARKING								
			TYPE II (WHITE/RED)	TYPE II (YELLOW/YELLOW)	6"		8"	12"	WORDS	ARROWS			
			EACH	EACH	WHITE	YELLOW	WHITE	WHITE			LIN. FT.	EACH	
REMOVAL OF PERMANENT PAVEMENT MARKINGS	651	651											
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)	20		20										
RAISED PAVEMENT MARKERS TYPE II (YELLOW/YELLOW)	15			15									
THERMOPLASTIC PAVEMENT MARKING WHITE (6")	455				455								
THERMOPLASTIC PAVEMENT MARKING YELLOW (6")	2006					2006							
THERMOPLASTIC PAVEMENT MARKING WHITE (8")	933						933						
THERMOPLASTIC PAVEMENT MARKING WHITE (12")	97							97					
THERMOPLASTIC PAVEMENT MARKING (WORDS)	2								2				
THERMOPLASTIC PAVEMENT MARKING (ARROWS)	4											4	
<b>TOTALS:</b>		651	20	15	455	2006	933	97	2	4			

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

② QUANTITIES



**ADVANCE WARNING SIGNS AND DEVICES**

SIGN NUMBER	DESCRIPTION	SIGN SIZE	ENTIRE JOB LIN. FT. - EACH	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		VERTICAL PANELS EACH	TRAFFIC DRUMS
					NO.	SQ. FT.		
W20-1	ROAD WORK 1500 FT.	48"x48"	3	3	3	48.0		
W20-1	ROAD WORK 1000 FT.	48"x48"	3	3	3	48.0		
W20-1	ROAD WORK 500 FT.	48"x48"	3	3	3	48.0		
G20-2	END ROAD WORK	48"x24"	3	3	3	24.0		
W21-5a	RIGHT SHOULDER CLOSED	36"x36"	2	2	2	18.0		
	VERTICAL PANELS		12	12			12	
	TRAFFIC DRUMS		20	20				20
<b>TOTALS:</b>					186.0	12		20

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

**EROSION CONTROL**

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL					TEMPORARY EROSION CONTROL						
			SEEDING	LIME	MULCH COVER	WATER	SECOND SEEDING APPLICATION	TEMPORARY SEEDING	MULCH COVER	WATER	SAND BAG DITCH CHECKS (E-5)	ROCK DITCH CHECKS (E-6)	SILT FENCE (E-11)	*SEDIMENT REMOVAL & DISPOSAL
			ACRE	TON	ACRE	M.GAL.	ACRE	ACRE	ACRE	M.GAL.	BAG	CU.YD.	LIN. FT.	CU. YD.
ENTIRE	PROJECT	HWY. 65	0.06	0.12	0.06	6.1	0.06	0.06	0.06	1.2	88		150	10
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.			0.01	0.02	0.01	1.0	0.01	0.01	0.01	0.2	22	12	40	6
<b>TOTALS:</b>			0.07	0.14	0.07	7.1	0.07	0.07	0.07	1.4	110	12	190	16

BASIS OF ESTIMATE:

- LIME ..... 2 TONS / ACRE OF SEEDING
- WATER ..... 102.0 M.G. / ACRE OF SEEDING
- WATER ..... 20.4 M.G. / ACRE OF TEMPORARY SEEDING
- SAND BAG DITCH CHECKS ..... 22 BAGS / LOCATION
- ROCK DITCH CHECKS ..... 3 CU.YD./LOCATION

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

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

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QUANTITIES



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				6	ARK.			
				JOB NO.	090519		8	19

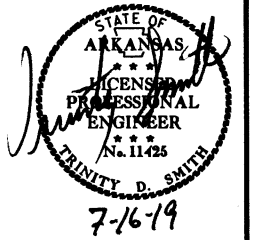
**DRIVEWAYS & TURNOUTS**

STATION	SIDE	LOCATION	WIDTH FEET	**MODIFIED CURB		PORTLAND CEMENT CONCRETE DRIVEWAY SQ. YD.	SIDE DRAINS 18" LIN. FT.	STANDARD DRAWINGS
				STATION	STATION			
19+69	LT.	HWY. 65	24	19+43	19+95	174.67	40	PCC-1, PCM-1, PCP-1, PCP-2
<b>TOTALS:</b>						174.67	40	

\*\* 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.

② QUANTITIES



**EARTHWORK**

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION CU. YD.	COMPACTED EMBANKMENT CU. YD.
19+43	20+42	HWY. 65 ON LT.	27	47
ENTIRE	PROJECT	APPROACHES		85
<b>TOTAL:</b>			27	132

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

**REMOVAL AND DISPOSAL OF CULVERTS**

STATION	DESCRIPTION	PIPE CULVERTS EACH
20+08	HWY. 65 ON LT. - 18" X 53' CMP SIDE DRAIN	1
<b>TOTALS:</b>		1

**REMOVAL AND DISPOSAL OF ITEMS**

STATION	STATION	LOCATION	CURB AND GUTTER	CONCRETE DRIVEWAYS
			LIN. FT.	SQ. YD.
19+43	20+42	HWY. 65 ON LT.	99	
19+75	20+38	HWY. 65 ON LT.		119
<b>TOTALS:</b>			99	119

**FENCING**

STATION	STATION	LOCATION	WIRE FENCE (TYPE D)
			LIN. FT.
19+96.00	20+44.28	HWY. 65 ON LT.	62
<b>TOTAL:</b>			62

**CONCRETE COMBINATION CURB AND GUTTER**

STATION	STATION	LOCATION	TYPE A (1' 6")
			LIN. FT.
19+43	20+42	HWY. 65 ON LT.	99
<b>TOTAL:</b>			99

**SELECTED PIPE BEDDING**

LOCATION	SELECTED PIPE BEDDING CU. YD.
ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	5
<b>TOTAL:</b>	5

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

**REMOVAL AND DISPOSAL OF FENCE**

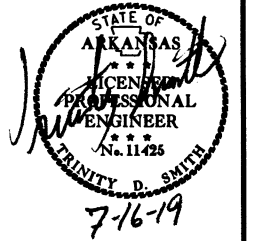
STATION	STATION	LOCATION	FENCE
			LIN. FT.
19+46.00	19+80.00	HWY. 65 ON LT.	34
<b>TOTAL:</b>			34





DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	090519		10	19

② SURVEY CONTROL DETAILS



SURVEY CONTROL COORDINATES

Project Name: s090519  
 Date: 9/12/2018  
 Coordinate System: ARKANSAS STATE PLANE - NORTH ZONE BASED ON PN: 59 & PN: 60 JOB 090371, CAF BASED ON JOB 090371 PROJECTED TO GROUND.  
 Units: U.S. SURVEY FOOT

Point Name	Northing	Easting	Elev	Feature	Description
1	678954.87	1006735.96	1135.07	CTL	ARDOT STD. MON. STAMPED PN: 1
2	678631.46	1007083.35	1144.33	CTL	ARDOT STD. MON. STAMPED PN: 2
3	678384.05	1007580.68	1156.37	CTL	ARDOT STD. MON. STAMPED PN: 3
4	678360.61	1007984.99	1157.07	CTL	ARDOT STD. MON. STAMPED PN: 4
5	678755.81	1008184.30	1158.78	CTL	ARDOT STD. MON. STAMPED PN: 5
6	679047.54	1008371.65	1159.87	CTL	ARDOT STD. MON. STAMPED PN: 6
59	677712.82	1008058.60	1154.83	CTL	ARDOT STD. MON. STAMPED PN: 59
60	678079.08	1007896.52	1157.83	CTL	ARDOT STD. MON. STAMPED PN: 60

HWY. 65

POINT NO.	TYPE	STATION	NORTHING	EASTING
8000	POB	10+00.00	677360.9781	1008322.8168
8001	PC	15+29.96	677809.4981	1008040.5183
8003	PT	23+36.06	678389.3332	1007488.2333
8004	POE	29+26.82	678727.9659	1007004.1543

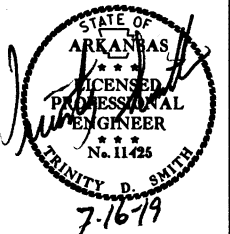
\*Note - Rebar and Cap - Standard - 5/8" Rebar with 2" Aluminum Cap stamped \*(standard markings common to all caps), or as indicated (other markings indicated in the point description of the individual point).  
 ALL DISTANCES ARE GROUND.  
 USE CAF = 1.0 FOR STAKEOUT FOR THIS PROJECT.  
 A PROJECT CAF OF 0.9999295259 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 s090519g.i.CTL  
 HORIZONTAL DATUM: NAD 83 (1997)  
 VERTICAL DATUM: NAVD 88 POSITIONAL ACCURACY THIRD ORDER, UNLESS SPECIFIED OTHERWISE AT A SPECIFIC POINT.

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

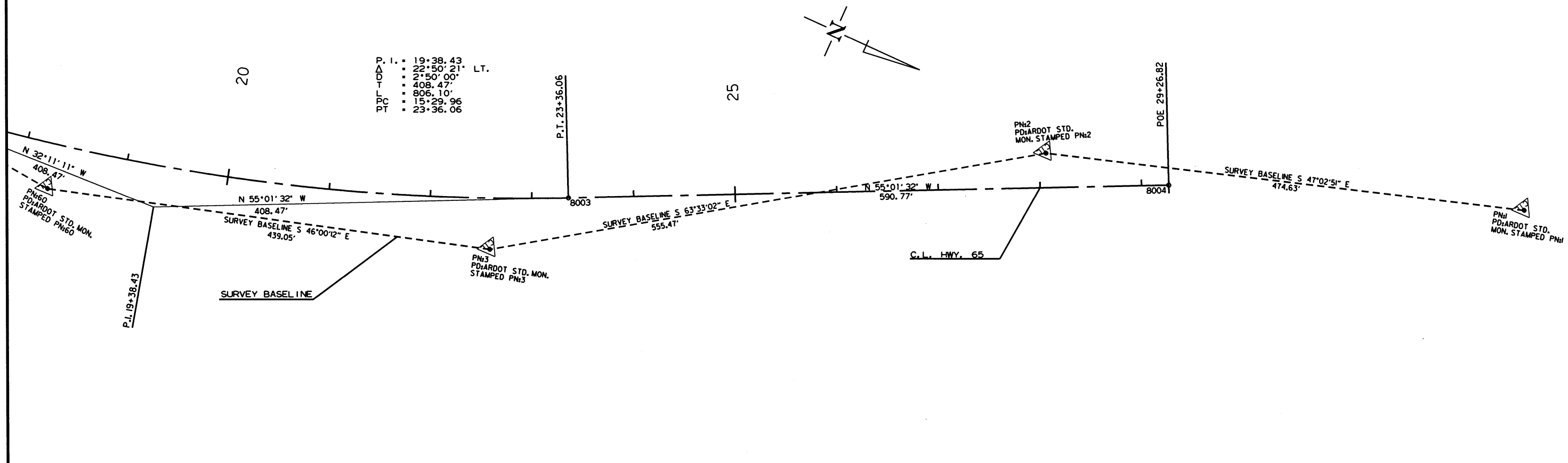
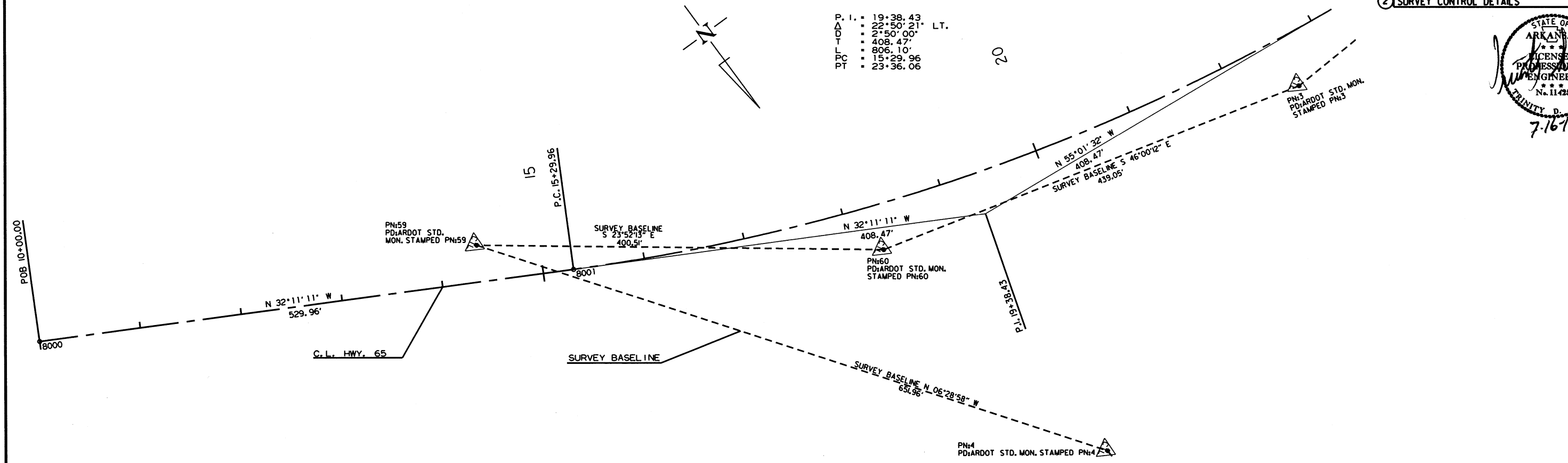
BASIS OF BEARING:  
 ARKANSAS STATE PLANE GRID BEARINGS - 0301-NORTH ZONE  
 DETERMINED FROM GPS CONTROL POINTS: BASED ON PN: 59 & PN: 60 JOB 090371  
 CONVERGENCE ANGLE: 0-36-04 LEFT AT LT: N 36 11 32 LG: W093 11 57  
 GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	090519	11 19

2 SURVEY CONTROL DETAILS



P. I. = 19+38.43  
 Δ = 22°50'21" LT.  
 D = 2°50'00"  
 L = 408.47'  
 F = 806.10'  
 PC = 15+29.96  
 PT = 23+36.06



P. I. = 19+38.43  
 Δ = 22°50'21" LT.  
 D = 2°50'00"  
 L = 408.47'  
 F = 806.10'  
 PC = 15+29.96  
 PT = 23+36.06

7/11/2019  
 T090519.DGN

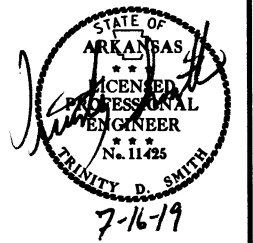
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. PROJ. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	090519	12 19

2 TRAFFIC SIGNAL NOTES

**TRAFFIC SIGNAL NOTES:**

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE NFPA 70 (2017) NATIONAL ELECTRICAL CODE, NFPA 101 (CURRENT EDITION) LIFE SAFETY CODE, STATE ELECTRICAL CODE AND LOCAL ELECTRICAL CODE.
2. EXTEND GREEN EQUIPMENT GROUNDING CONDUCTOR (E.G.C.) FROM GROUND BAR AT MAIN BREAKER TO CONTROL PANEL AND TO FIRST POLE. SOLIDLY BOND E.G.C. TO GROUND LUG OF CONTROL CABINET AND TO POLE GROUND. ENSURE THAT ONLY ONE NEUTRAL-TO-GROUND BOND EXISTS IN THE SYSTEM AND THAT IT IS AT THE MAIN BREAKER.
3. ELECTRICAL SERVICE SHALL BE PROVIDED BY THE CITY/COUNTY TO A SERVICE POLE WITH EXTERNAL 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.
4. CONTRACTOR SHALL CONNECT A SEPARATE NEUTRAL FOR EACH LOAD SWITCH REPRESENTED ON EACH SIGNAL POLE.
5. TRAFFIC CONTROLLER CABINET AND LAYOUT SHALL BE SUCH THAT IT IS NOT NECESSARY TO SHUT DOWN POWER OR REMOVE LOAD SWITCHES IN ORDER TO EASILY TEST OR MODIFY DETECTOR INPUTS TO THE CONTROLLER.
6. CONTROLLER CABINET SHALL BE WIRED SUCH THAT DURING FLASH OPERATIONS POWER TO THE LOAD SWITCHES CANNOT BACKFEED TO LOAD SWITCH POWER BUSS.
7. ALL PARTS OF THIS INSTALLATION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, STANDARD DRAWINGS AND WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION.
8. CONDUIT INSTALLED UNDER ROADWAY SURFACES SHALL BE INSTALLED BY PUSHING OR BORING METHODS. IF THE ENGINEER DETERMINES THIS IS NOT FEASIBLE, THEN A TRENCHING METHOD AS SHOWN IN THE STANDARD DRAWINGS MAY BE USED.
9. TRAFFIC SIGNAL POLES SHALL BE GALVANIZED. BACKPLATES SHALL BE SUPPLIED FOR ALL SIGNAL HEADS.
10. PAVEMENT MARKING SHOWN FOR REFERENCE ONLY. SEE PERMANENT PAVEMENT MARKING DETAILS.
11. FOUNDATION FOR ALL POLES SHALL BE EXTENDED IF NECESSARY TO ACCOMMODATE THE REQUIREMENTS FOR SIGNAL HEAD CLEARANCE ABOVE ROADWAY ONLY AT LOCATIONS WHERE THE GROUND ELEVATION AT THE POLE IS BELOW THE ELEVATION OF THE ROADWAY (SEE NOTES ON STANDARD DRAWING). PAYMENT WILL BE INCLUDED IN SECTION 714 TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, CURRENT EDITION.
12. ALL CONCRETE PULL BOXES SHALL BE (TYPE 2 HD) UNLESS OTHERWISE INDICATED. ALL CONDUIT SHALL BE THREE (3") INCH DIAMETER UNLESS SPECIFIED ON PLANS.
13. CONTRACTOR SHALL NOTIFY ALL EXISTING UTILITY OWNERS BEFORE BEGINNING WORK ON THIS PROJECT.
14. LUMINAIRE ASSEMBLIES SHALL BE OF THE FULL CUTOFF TYPE.
15. HARDWARE INPUTS MAY BE DETERMINED BY SUPPLIER. EACH DETECTOR OUTPUT SHALL INPUT THE CONTROLLER THROUGH A SEPARATE INPUT UNLESS OTHERWISE NOTED AND BE PROGRAMMED TO ACTUATE THE ASSOCIATED PHASE. COMBINATION (COMB.) DETECTORS SHALL ALSO BE PROGRAMMED TO PROVIDE VEHICLE COUNT/OCCUPANCY DATA.
16. THE LOCAL RADIO WITH ANTENNA SHALL BE COMPATIBLE WITH THE EXISTING CLOSED LOOP COORDINATION SYSTEM IN THE CITY/COUNTY.
17. TO DETERMINE UTILITY CLEARANCES ABOVE THE TRAFFIC SIGNAL POLE, REFER TO THE POLE SCHEDULE FOR VERTICAL SHAFT HEIGHT. WHERE THE POLE SCHEDULE INDICATES THAT A LUMINAIRE ARM WILL BE USED, THIRTY-EIGHT (38') FEET SHOULD BE USED TO DETERMINE UTILITY CLEARANCE ABOVE THE LUMINAIRE ARM. WHERE THE POLE SCHEDULE INDICATES A TRAFFIC SIGNAL POLE WITHOUT A LUMINAIRE ARM, A HEIGHT OF TWENTY-ONE (21') FEET SHOULD BE USED TO DETERMINE UTILITY CLEARANCE ABOVE THE TRAFFIC SIGNAL MAST ARM. AN ADDITIONAL SIX (6') FEET SHOULD BE USED DIRECTLY ABOVE "VIDEO DETECTOR" AT LOCATIONS SHOWN ON THE SIGNAL PLANS.

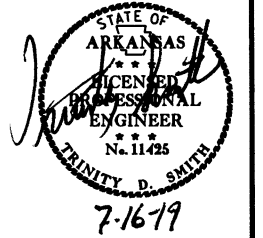
18. THE DESIRABLE MINIMUM DISTANCE FROM THE FACE OF ROADWAY CURB OR SHOULDER EDGE TO THE FACE OF NON-BREAKAWAY POLE OR OBSTRUCTION IS SIX (6') FEET. REFER TO TRAFFIC SIGNAL PLANS FOR SPECIFIC LOCATION OF POLES, CONTROLLER AND ANY OTHER NON-BREAKAWAY OBSTRUCTIONS. REFER TO "DESIGN PARAMETERS, MINIMUM CLEAR ZONE DISTANCE" FOR MINIMUM DISTANCE FROM THE EDGE OF TRAVELED WAY TO THE FACE OF A NON-BREAKAWAY POLE OR OBSTRUCTION. TRAFFIC SIGNAL POLES OR ANY OTHER NON-BREAKAWAY OBSTRUCTION SHALL NOT BE INSTALLED WITHIN THE CLEAR ZONE.
19. AS DETERMINED BY THE ENGINEER, FOUNDATION EMBEDMENT MAY BE DECREASED BY A MAXIMUM OF TWO FEET IF COMPETENT ROCK IS ENCOUNTERED PRIOR TO ACHIEVING PLAN EMBEDMENT AND AT LEAST HALF OF THE REMAINING PLAN EMBEDMENT LENGTH IS KEYED INTO COMPETENT ROCK.
20. CONNECTION OF TRAFFIC SIGNAL DISPLAY TO FIELD WIRING SHALL UTILIZE AN APPROVED TERMINAL STRIP BEHIND HAND-HOLE COVER AT BASE OF POLE. TERMINAL STRIP SHALL PROVIDE PROTECTION TO PREVENT EXPOSURE TO THE PUBLIC IN THE EVENT THAT POLE COVER IS MISSING. PAYMENT FOR TERMINAL STRIPS SHALL BE INCLUDED IN ITEM 714 TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, CURRENT EDITION.
21. CONTROLLER CABINET LAYOUT AND ORIENTATION SHALL CONFORM TO IMSA STANDARDS.
22. ONE VIDEO PROGRAMMING MODULE SHALL BE PROVIDED FOR AIMING AND SETUP OF DETECTORS IF THE VIDEO SYSTEM CANNOT BE ADJUSTED THROUGH HARDWARE AND SOFTWARE PROVIDED BY ITEMS WITHIN THE JOB.
23. TRAFFIC SIGNAL CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER OR ASSIGNED DEPARTMENT PROJECT INSPECTOR EACH DAY PRIOR TO SIGNAL RELATED WORK. NO WORK ON TRAFFIC SIGNALS WILL BE ALLOWED OR APPROVED WITHOUT THIS PRIOR NOTIFICATION.
24. ALL STEEL POLES SHALL BE DESIGNED TO MEET THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 4th EDITION (2001) WITH 2003 AND 2006 INTERIMS.
25. DOOR PANEL TEST PUSH BUTTONS SHALL ACTUATE INDICATED PHASES. DETECTOR ASSIGNMENTS AND/OR SIDE PANEL JUMPERS MAY REQUIRE MODIFICATION.
26. ALL SYSTEM DETECTOR RACKS AND ASSOCIATED EQUIPMENT SHALL BE PROTECTED BY THE MAIN CONTROLLER CABINET POWER SURGE PROTECTION.
27. IN PULL BOXES, POLE BASES, JUNCTION BOXES AND CONTROLLER CABINETS, THE DIRECTION OF EACH CABLE RUN SHALL BE INDICATED BY ATTACHING A PERMANENT TAG OF RIGID PLASTIC OR NON-FERROUS METAL TO THE CONDUIT. TAGS SHALL BE EMBOSSED, STAMPED OR ENGRAVED WITH LETTERS 1/4" OR GREATER IN HEIGHT AND SECURED TO THE CONDUIT WITH NYLON OR PLASTIC TIES. IN INSTANCES WHERE THE CONDUIT OR CONDUIT ENTRANCES ARE NOT VISIBLE OR ACCESSIBLE, A DIRECTION TAG SHALL BE ATTACHED TO EACH CABLE.
28. THE CONTRACTOR SHALL PERFORM ALL WORK POSSIBLE THAT WILL MINIMIZE THE TIME THAT THE TRAFFIC SIGNAL IS OUT OF OPERATION. IF, IN THE OPINION OF THE ENGINEER, TRAFFIC CONDITIONS WARRANT THE CONTRACTOR SHALL PROVIDE FLAGMEN TO DIRECT TRAFFIC WHILE THE TRAFFIC SIGNAL IS OUT OF OPERATION.



LOCATION:	HIGHWAY 65 AND HIGHWAY 62
CITY:	N/A
COUNTY:	BOONE
DISTRICT:	9
SCALE:	N/A
DRAWN BY:	BRB

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	090519	13 19

② TRAFFIC SIGNAL QUANTITIES



### TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP & 701	ACTUATED CONTROLLER TS2-TYPE 2 (8 PHASES)	1	EACH
704	VEHICLE DETECTOR-RACK MOUNT	4	EACH
SP	LOOP WIRING CLASS III (1C/16 A.W.G.)	888	LIN. FT.
704	FEEDER WIRE	1616	LIN. FT.
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	11	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	1	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	511	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	150	LIN. FT.
708	TRAFFIC SIGNAL CABLE (12C/14 A.W.G.)	101	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	371	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	454	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)	225	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	40	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	695	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")	20	LIN. FT.
710	NON-METALLIC CONDUIT (1")	288	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	90	LIN. FT.
710	NON-METALLIC CONDUIT (2")	427	LIN. FT.
710	NON-METALLIC CONDUIT (3")	354	LIN. FT.
711	CONCRETE PULL BOX (TYPE 1 HD)	6	EACH
711	CONCRETE PULL BOX (TYPE 2 HD)	5	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (30')	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 (48')	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (54')	1	EACH
SP	LED LUMINAIRE ASSEMBLY	4	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH
* SP & 733	VIDEO DETECTOR (CLR)	5	EACH
733	VIDEO CABLE	738	LIN. FT.
733	VIDEO MONITOR (CLR)	1	EACH
* SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	4	EACH
SP & 733	VEHICLE DETECTOR RACK (16 CHANNEL)	1	EACH

\* ONE SPARE VIDEO DETECTOR AND ONE SPARE VIDEO PROCESSOR SHALL BE SUPPLIED.

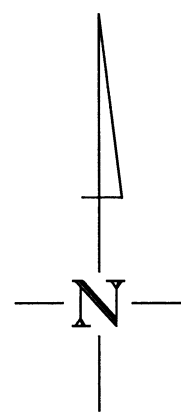
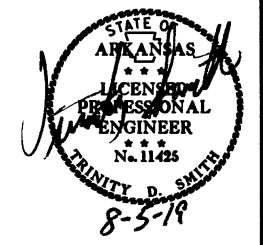
T090519.DGN 7/11/2019

DATE: 07-11-19 FILENAME: t090519.dgn

LOCATION: HIGHWAY 65 AND HIGHWAY 62  
 CITY: N/A  
 COUNTY: BOONE  
 DISTRICT: 9 SCALE: N/A DRAWN BY: BRB

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		14	19
JOB NO. 090519								

2 SIGNALIZATION PLAN SHEET



**DETECTOR SPACING CHART**  
 ARDOT HWY. 65 MAIN LANE LOOPS & VIRTUAL LOOPS

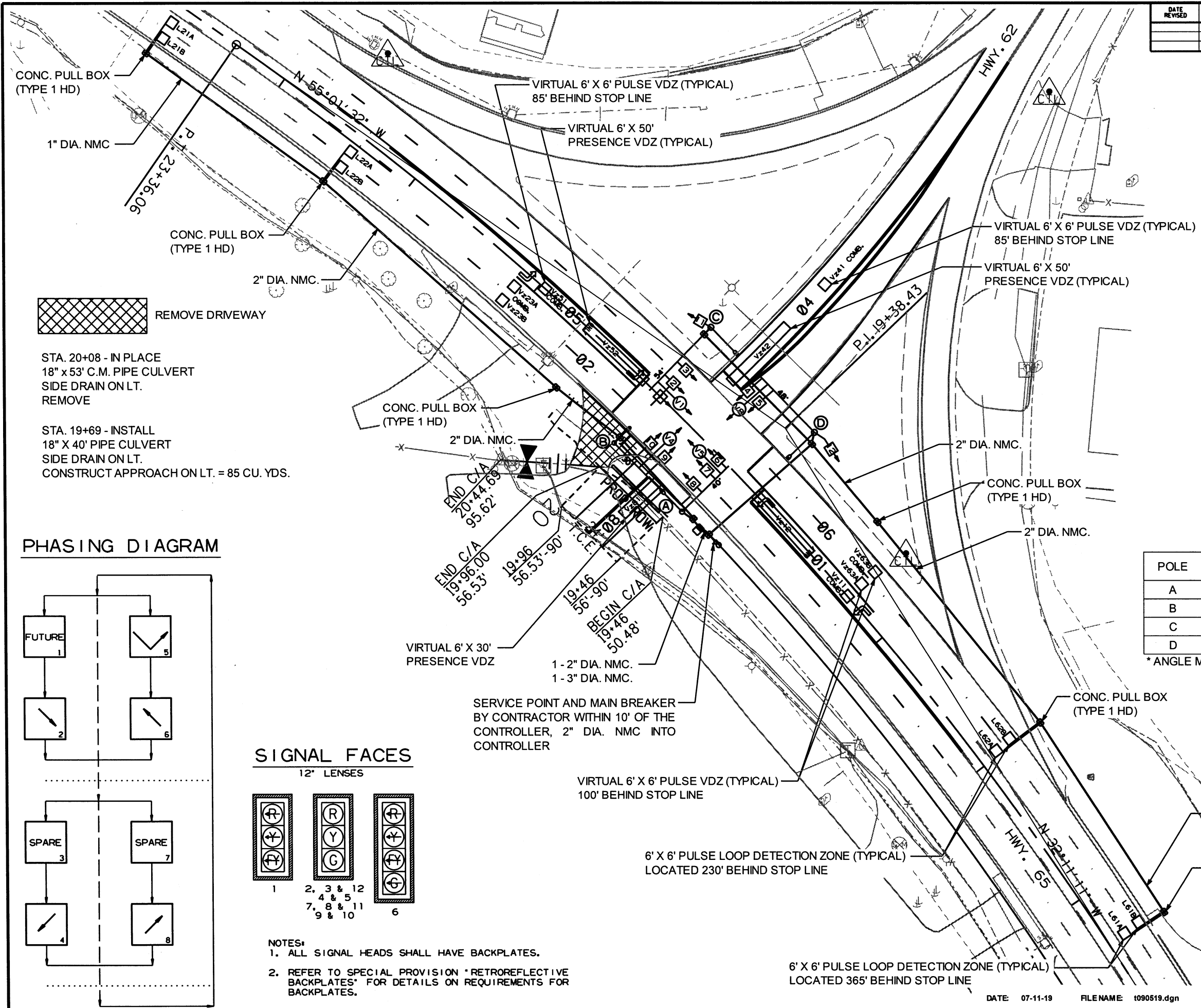
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD LOOP	LAG VDZ*
50 MPH	365/230'	100'
HWY. 62 MAIN LANE VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
45 MPH	LAG VDZ*	85'

\*VDZ = VIDEO DETECTION ZONE

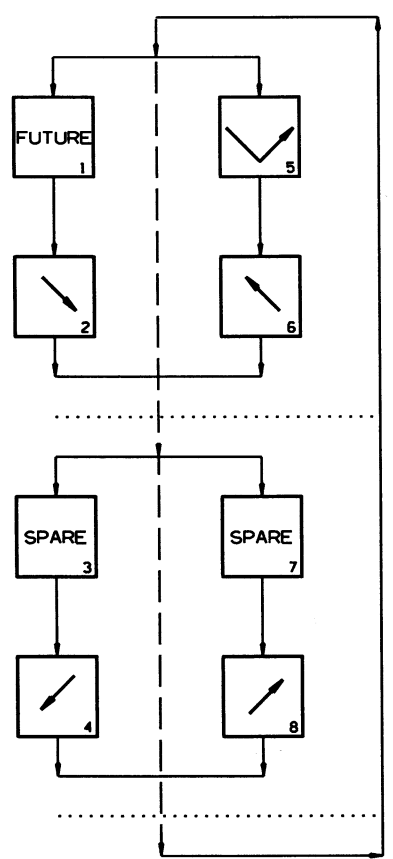
**HIGHWAY 65 AND HIGHWAY 62 POLE DIMENSIONS**

POLE	MAST ARM	*MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	*LUM. ANGLE
A	40'	180°	35'	15'	90°
B	30'	180°	35'	10'	90°
C	54'	180°	35'	20'	90°
D	48'	270°	35'	20'	180°

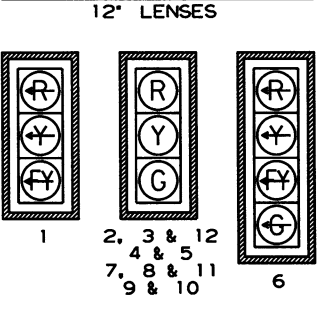
\* ANGLE MEASURED CLOCKWISE FROM HAND HOLE.



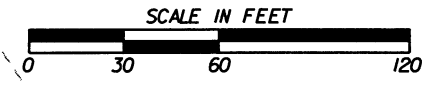
**PHASING DIAGRAM**



**SIGNAL FACES**



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



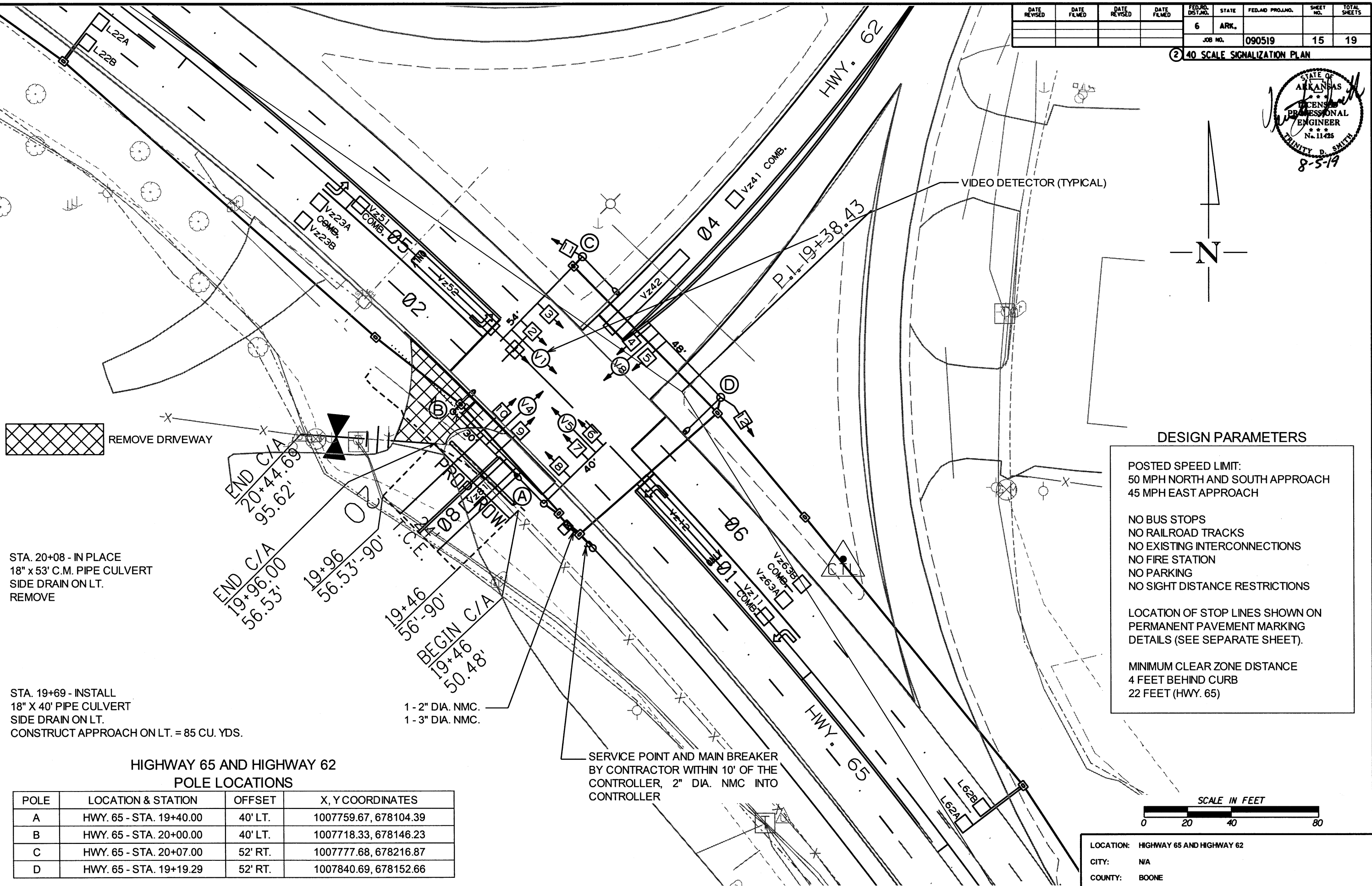
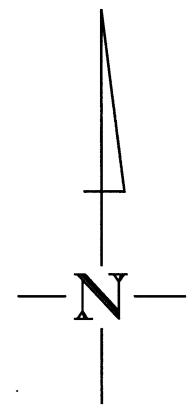
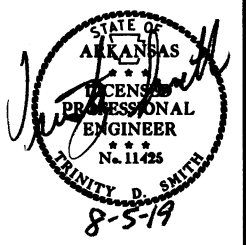
LOCATION: HIGHWAY 65 AND HIGHWAY 62  
 CITY: N/A  
 COUNTY: BOONE  
 DISTRICT: 9  
 SCALE: 1" = 60'  
 DRAWN BY: BRB

T090519.DGN 8/2/2019



DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		15	19

② 40 SCALE SIGNALIZATION PLAN



REMOVE DRIVEWAY

STA. 20+08 - IN PLACE  
18" x 53' C.M. PIPE CULVERT  
SIDE DRAIN ON LT.  
REMOVE

STA. 19+69 - INSTALL  
18" X 40' PIPE CULVERT  
SIDE DRAIN ON LT.  
CONSTRUCT APPROACH ON LT. = 85 CU. YDS.

**HIGHWAY 65 AND HIGHWAY 62  
POLE LOCATIONS**

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 65 - STA. 19+40.00	40' LT.	1007759.67, 678104.39
B	HWY. 65 - STA. 20+00.00	40' LT.	1007718.33, 678146.23
C	HWY. 65 - STA. 20+07.00	52' RT.	1007777.68, 678216.87
D	HWY. 65 - STA. 19+19.29	52' RT.	1007840.69, 678152.66

**DESIGN PARAMETERS**

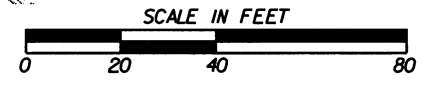
POSTED SPEED LIMIT:  
50 MPH NORTH AND SOUTH APPROACH  
45 MPH EAST APPROACH

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

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

MINIMUM CLEAR ZONE DISTANCE  
4 FEET BEHIND CURB  
22 FEET (HWY. 65)

SERVICE POINT AND MAIN BREAKER  
BY CONTRACTOR WITHIN 10' OF THE  
CONTROLLER, 2" DIA. NMC INTO  
CONTROLLER



LOCATION: HIGHWAY 65 AND HIGHWAY 62  
CITY: N/A  
COUNTY: BOONE  
DISTRICT: 9  
SCALE: 1" = 40'  
DRAWN BY: BRB

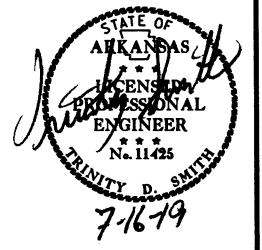
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T090519.DGN 8/2/2019



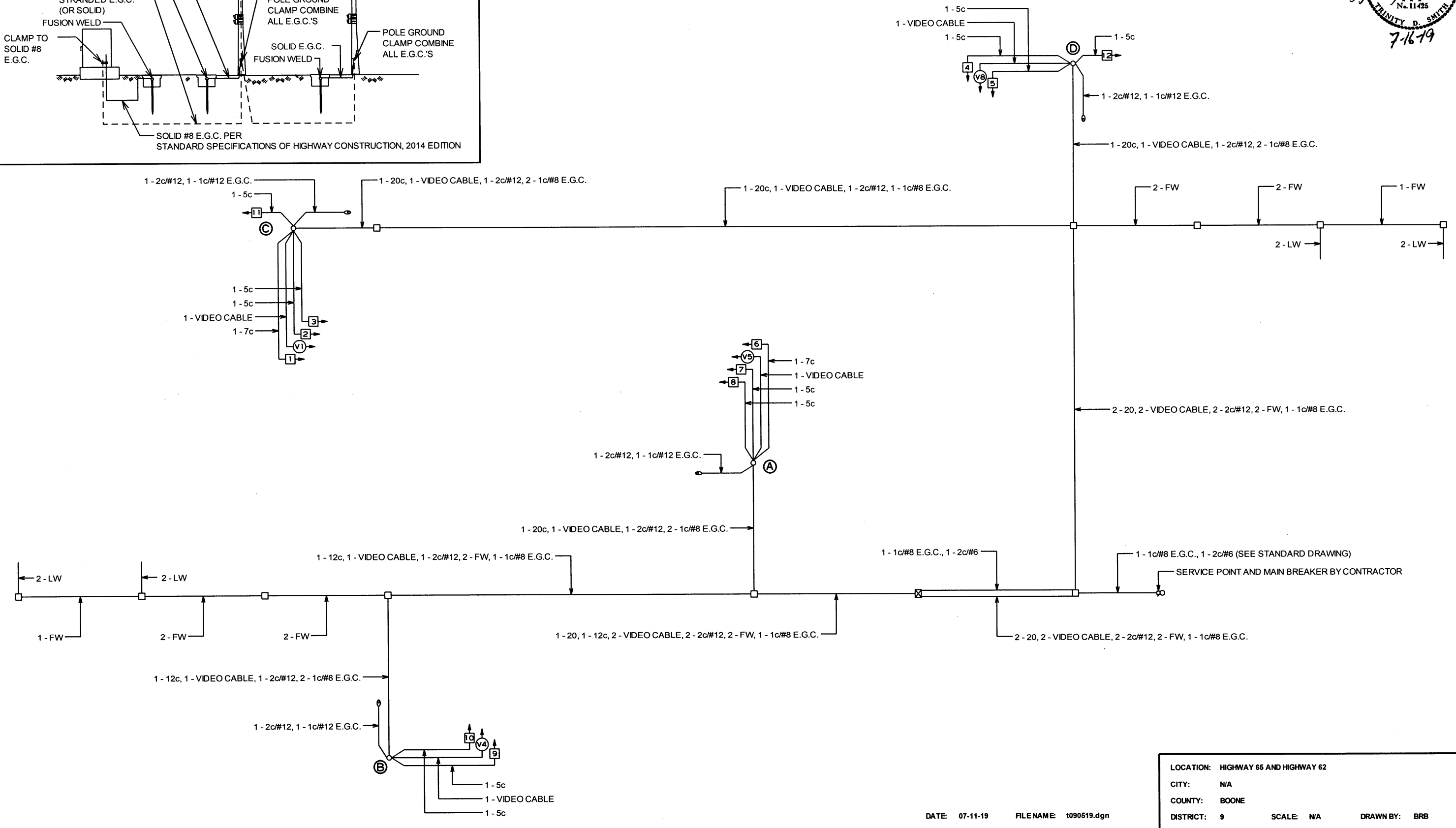
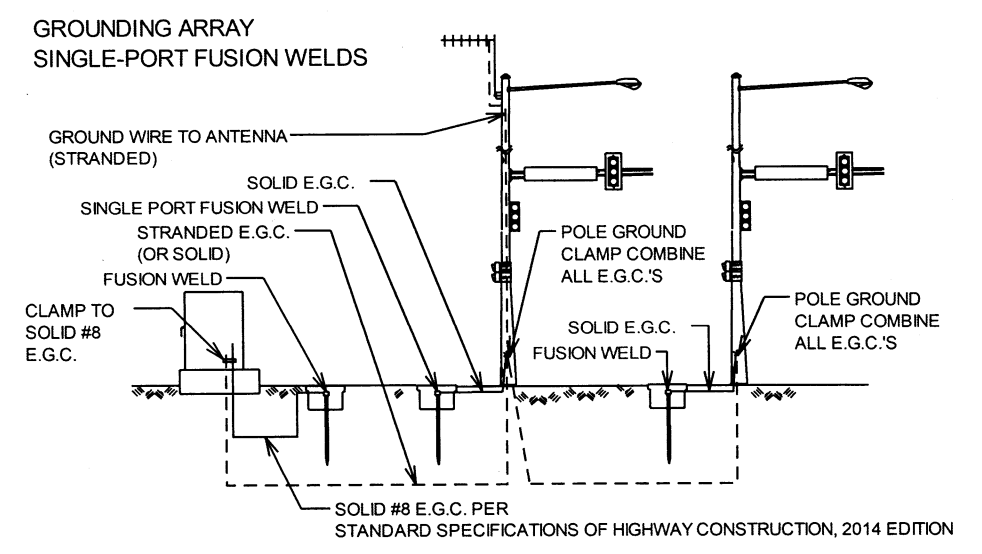
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. NO. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 090519	16	19

2 SIGNALIZATION PLAN SHEET



### WIRING DIAGRAM

- NOTES TO CONTRACTOR:
1. ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA OF CABINET.
  2. THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.



LOCATION:	HIGHWAY 65 AND HIGHWAY 62
CITY:	N/A
COUNTY:	BOONE
DISTRICT:	9
SCALE:	N/A
DRAWN BY:	BRB

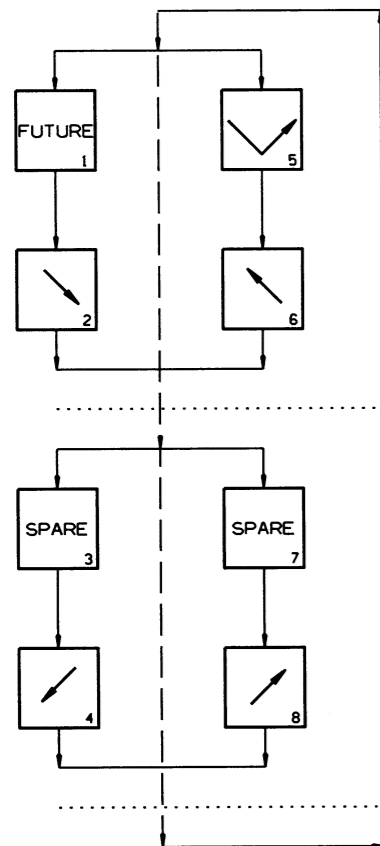
T090519.DGN 7/11/2019

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JOB NO. 090519							17	19

2 SIGNALIZATION PLAN SHEET

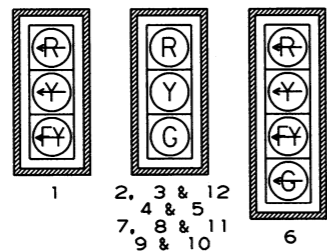


### PHASING DIAGRAM



### SIGNAL FACES

12" LENSES



**NOTES:**

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

### CONTROLLER

### INTERVAL CHART

SIGNAL FACES	HIGHWAY 65 AND HIGHWAY 62						FLASH SEQUENCE
	2+5	CLR.	2+6	CLR.	4+8	CLR.	
1	<R	<R	<FY	***	<R	<R	<R-
2, 3, & 12	R	R	G	**	R	R	R
4 & 5	R	R	R	R	G	**	R
6	<G	*	<FY	***	<R	<R	<R-
7, 8, & 11	G	**	G	**	R	R	R
9 & 10	R	R	R	R	G	**	R

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

### DETECTOR CHART

DETECTOR SYSTEM DESCRIPTION: JOB 090519

HIGHWAY 65 AND HIGHWAY 62 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	NB LEFT TURN FAR	COMB.			1	V9	1	1		CAMERA V1	37"
Vz12	NB LEFT TURN	LOCAL			2	V1	1			CAMERA V1	37"
L21 A&B	SB ADVANCE	LOCAL	2			V2	2			LOOP	
L22 A&B	SB INTERMEDIATE	LOCAL	26			V2	2			LOOP	
Vz23 A&B	SB NEAR	COMB.			6	V10	2	2		CAMERA V5	37"
Vz41	WB ADVANCE	COMB.			9	V4	4			CAMERA V4	37"
Vz42	WB NEAR	LOCAL			10	V12	4	4		CAMERA V4	37"
Vz51	SB LEFT TURN FAR	COMB.			7	V13	5	5		CAMERA V5	37"
Vz52	SB LEFT TURN	LOCAL			8	V5	5			CAMERA V5	37"
L61 A&B	NB ADVANCE	LOCAL	6			V6	6			LOOP	
L62 A&B	NB INTERMEDIATE	LOCAL	30			V6	6			LOOP	
Vz63 A&B	NB NEAR	COMB.			4	V14	6	6		CAMERA V1	37"
Vz81	SB NEAR	LOCAL			11	V8	8			CAMERA V8	37"
SPARE: 3, 5, 12 - 16											

**CONTROLLER INPUT ABBREVIATIONS:**

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

NOTE: "AMP CHN =" REFERS TO THE RACK OUTPUT POSITION. THIS IS WIRED TO CONTROLLER INPUT DETECTOR NUMBER WHICH IS PROGRAMMED TO ACTUATE THE DESIGNATED PHASE. EXAMPLE: V9 = SYSTEM DETECTOR 1, V10 = SYSTEM DETECTOR 2

LOCATION: HIGHWAY 65 AND HIGHWAY 62

CITY: N/A

COUNTY: BOONE

DISTRICT: 9

SCALE: N/A

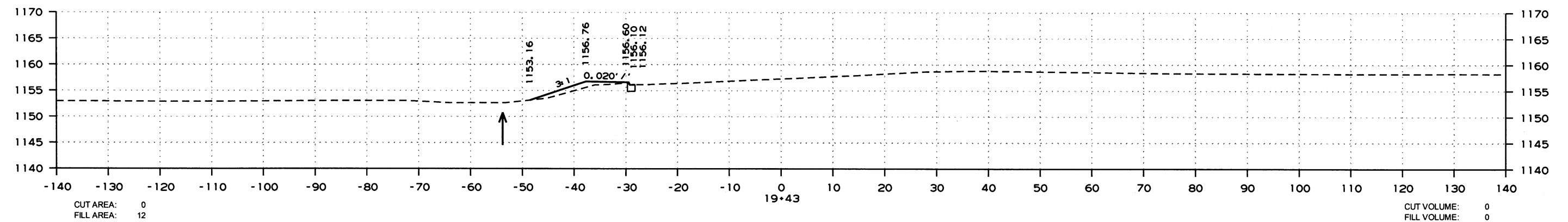
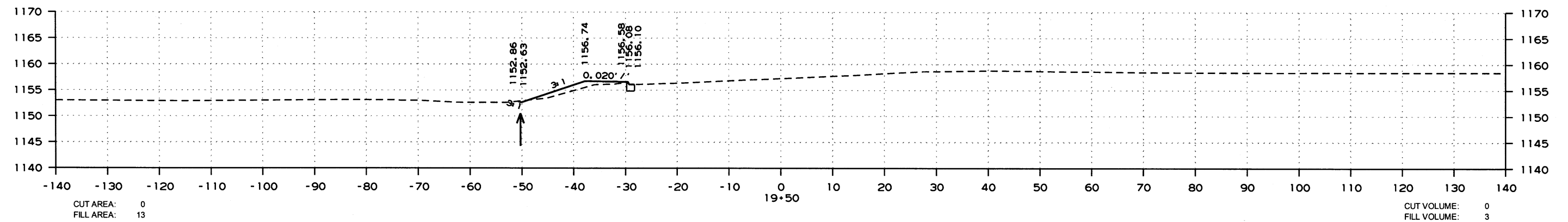
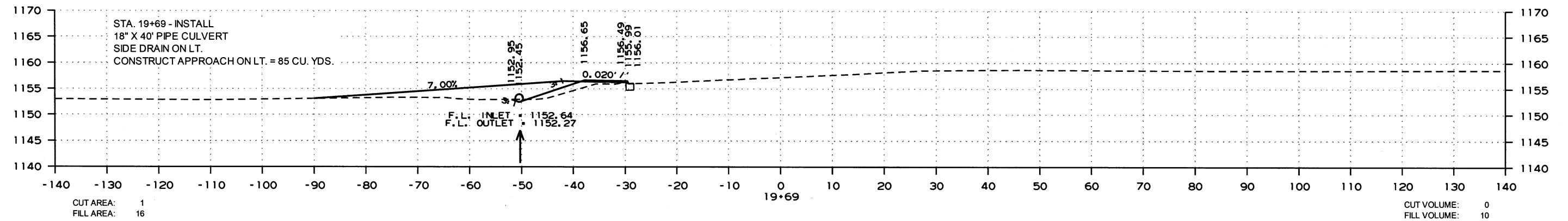
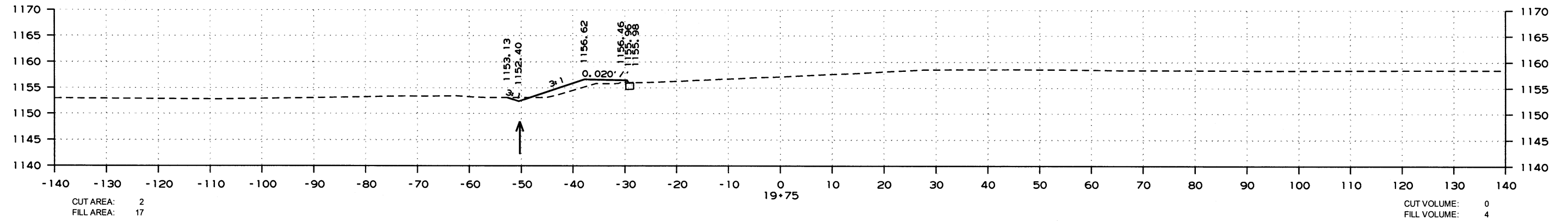
DRAWN BY: BRB

DATE: 07-11-19

FILENAME: t090519.dgn

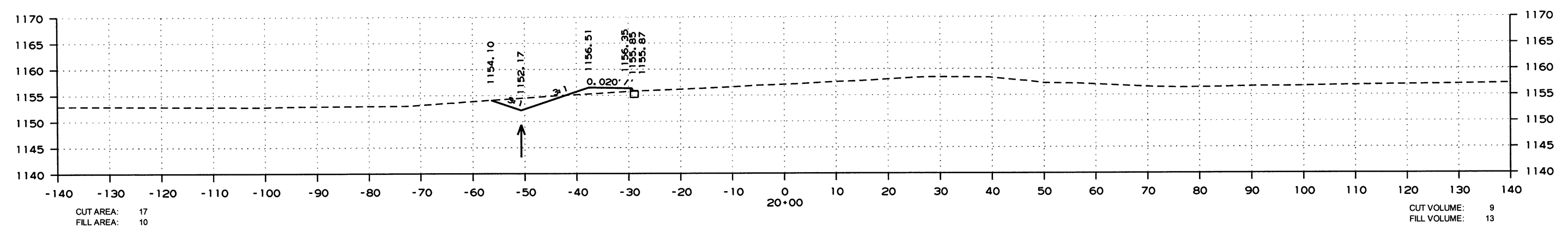
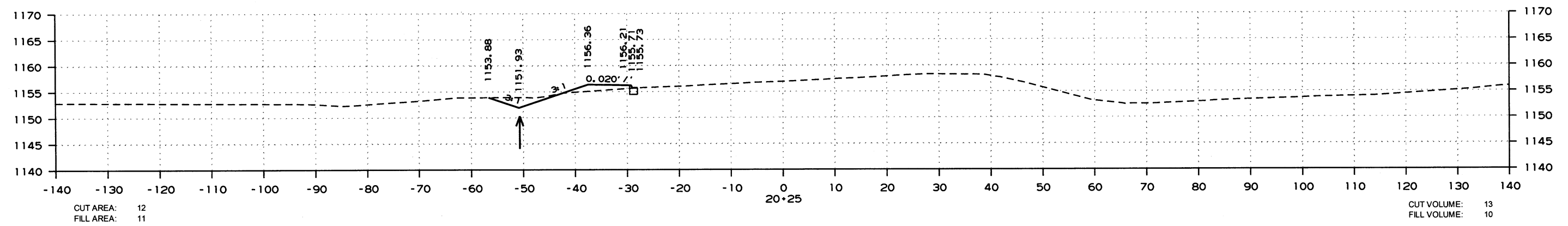
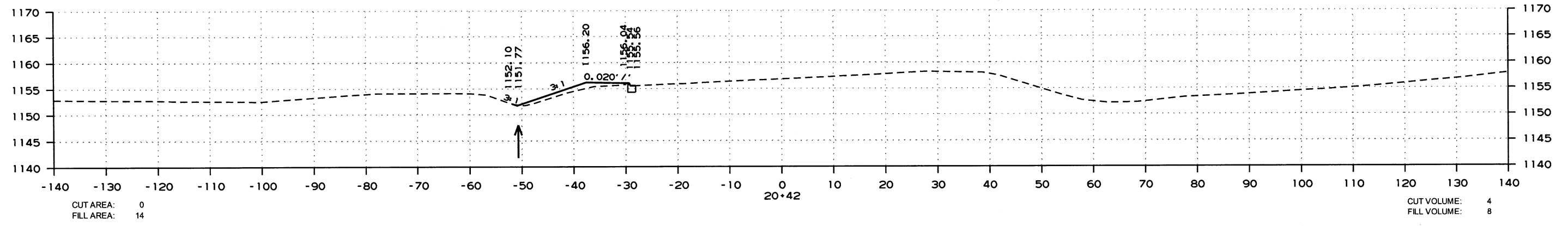
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 090519							18	19

2 CROSS SECTIONS



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 090519	19	19

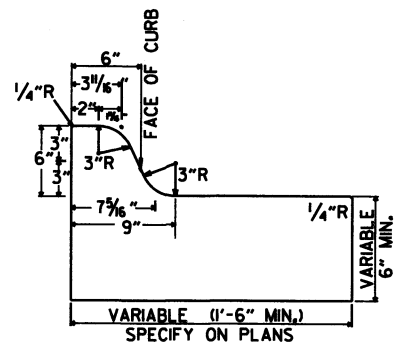
2 CROSS SECTIONS



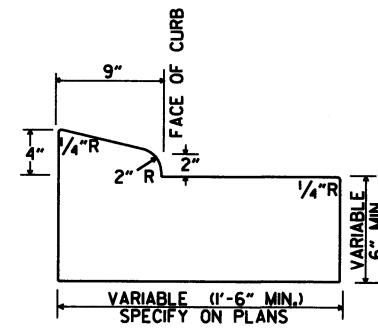
CROSS SECTION STA. 20+00 TO STA. 20+42

7/11/2019

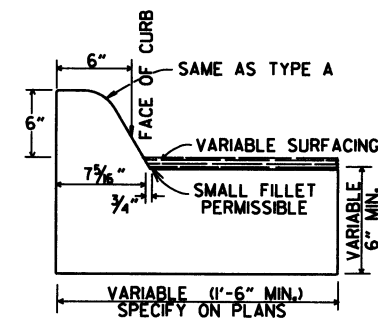
T090519.DGN



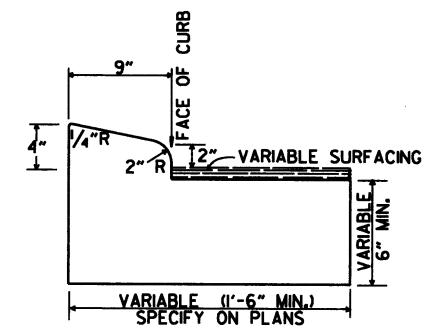
TYPE A



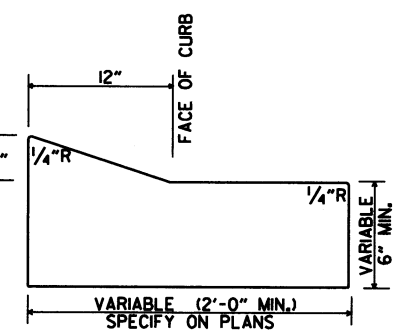
TYPE B-1



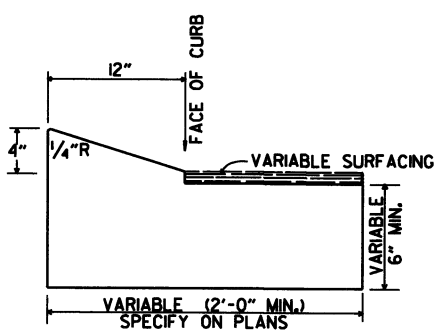
TYPE C



TYPE B-2

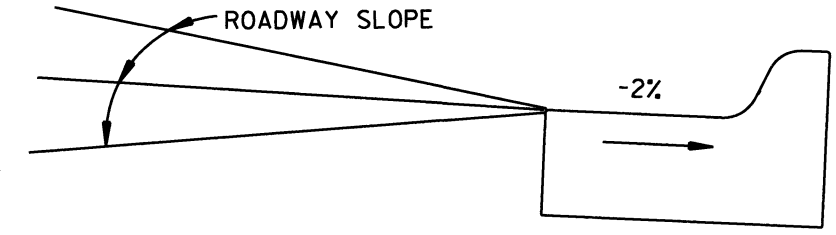


TYPE E-1

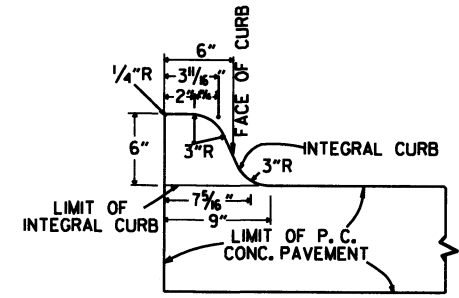


TYPE E-2

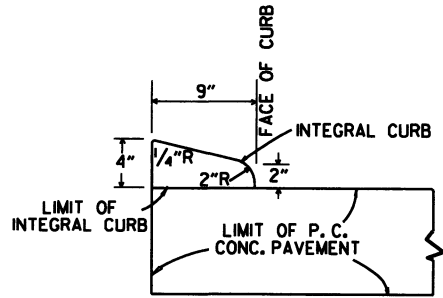
CONCRETE COMBINATION CURB AND GUTTER



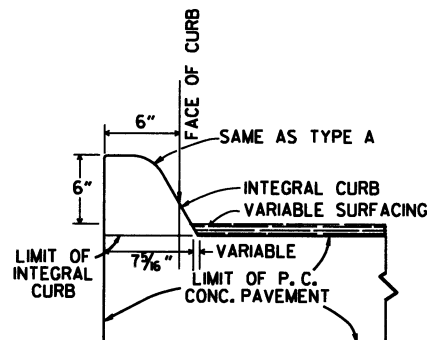
DETAIL OF GUTTER SLOPE  
GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.



TYPE A

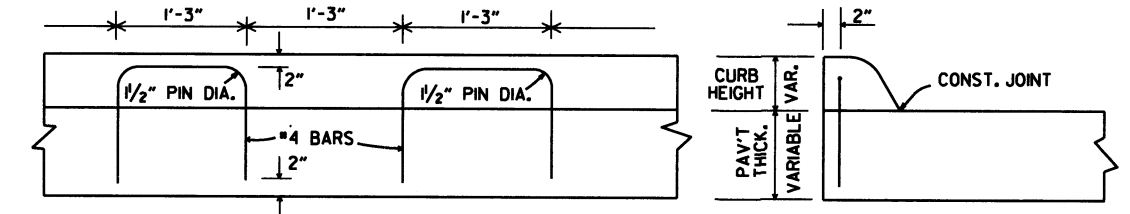


TYPE B



TYPE C

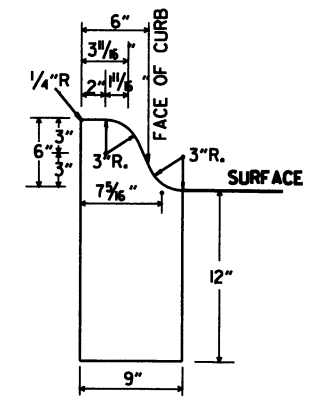
INTEGRAL CURB



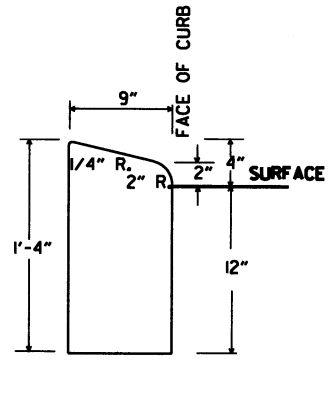
LONGITUDINAL SECTION

ELEVATION

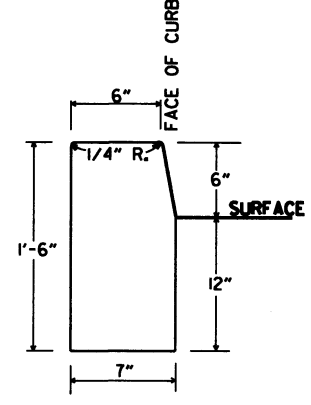
ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



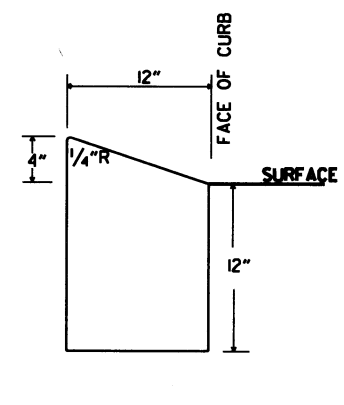
TYPE A



TYPE B

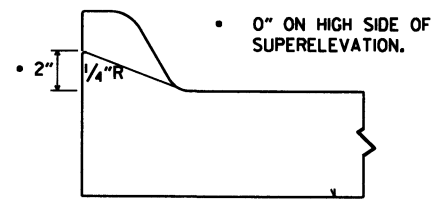


TYPE D



TYPE E

CONCRETE CURB



NOTE: USE MODIFIED CURB AS SPECIFIED ON STD. DR-L. COMPENSATION FOR MODIFIED CURB WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE TYPE OF CURB OR CURB AND GUTTER SPECIFIED.

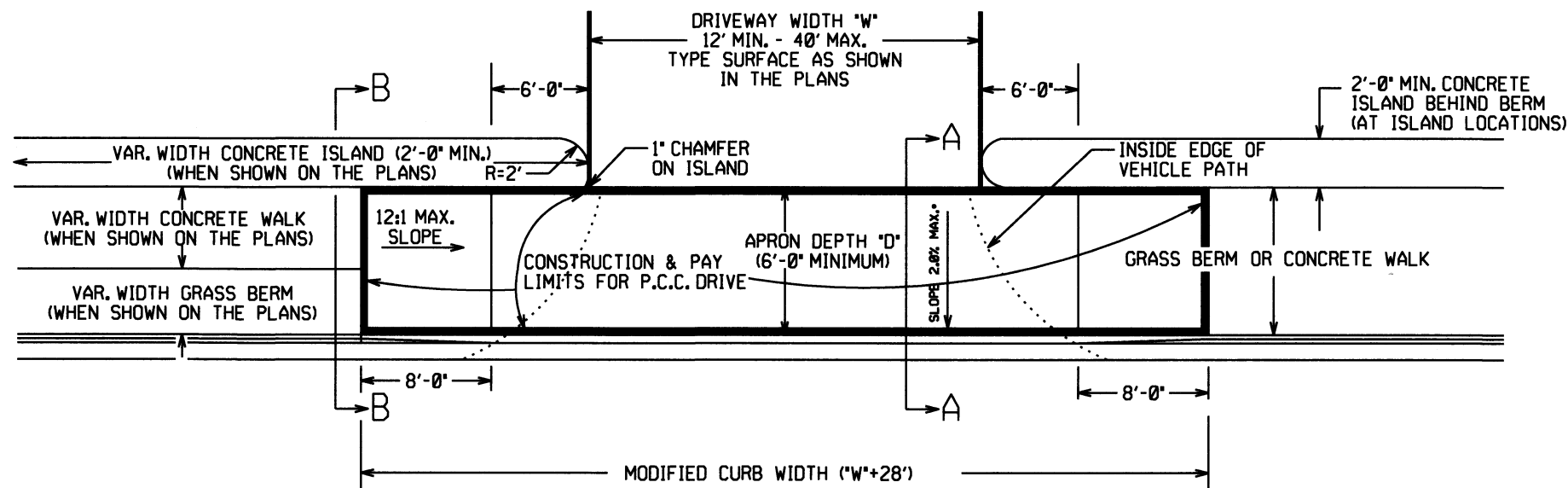
DETAILS OF MODIFIED CURB

DATE	REVISION	DATE FILMED
8-29-07	REVISED GUTTER SLOPE & MODIFIED CURB DETAILS	
1-10-05	ADDED DETAILS OF TYPE E CURBS	
1-16-01	REVISED CONCRETE CURB TYPE B	
1-18-98	REVISED MODIFIED CURB	
6-2-94	ADDED NOTE TO SPECIAL MODIFIED CURB	
8-1-93	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
1-10-89	ADDED DETAIL TYPE A & B 1	1-30-89
1-16-88	REVISED MODIFIED CURB	630-7-88
1-1-73	REVISED MODIFIED CURB	500-11-73
10-2-72	REVISED AND REDRAWN	52-10-2-72

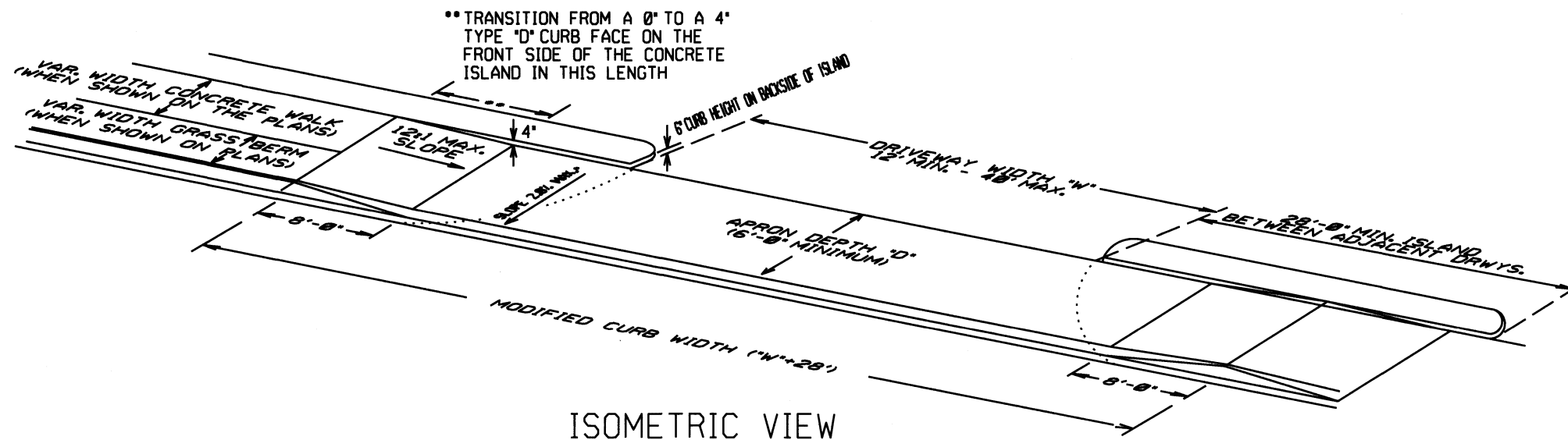
ARKANSAS STATE HIGHWAY COMMISSION

CURBING DETAILS

STANDARD DRAWING CG-1

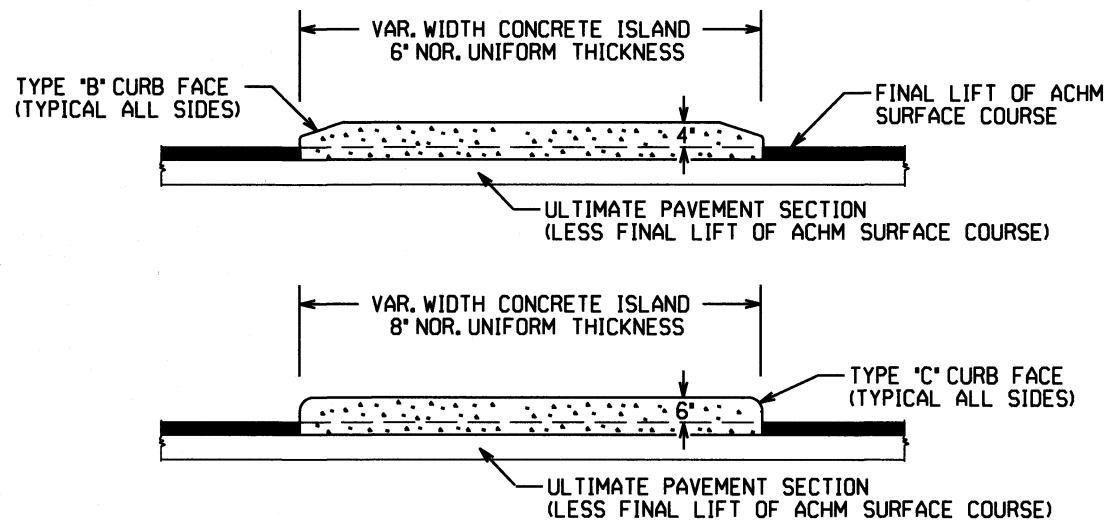


PLAN VIEW

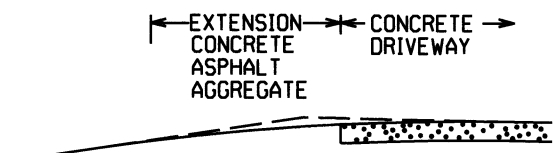


ISOMETRIC VIEW

REFER TO PLANS FOR TYPE OF CURB FACE TO BE USED. NO DIRECT PAYMENT WILL BE MADE FOR THE CURB FACES SHOWN ON THE ISLAND DETAILS. PAYMENT FOR THE CURB FACE WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEM 'CONCRETE ISLAND'.



CURBED ISLANDS FOR CHANNELIZATION

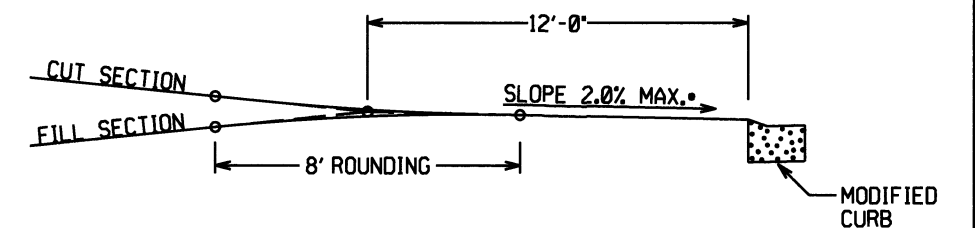


EXTENSION TYPICAL SECTIONS

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

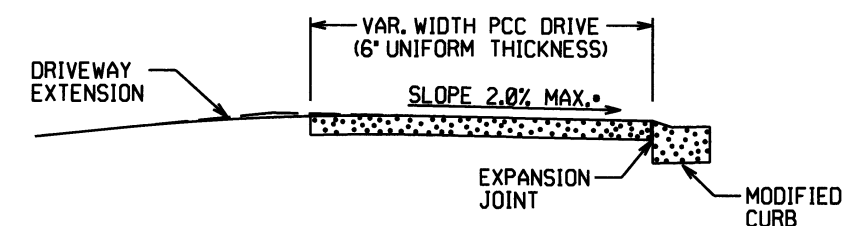
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

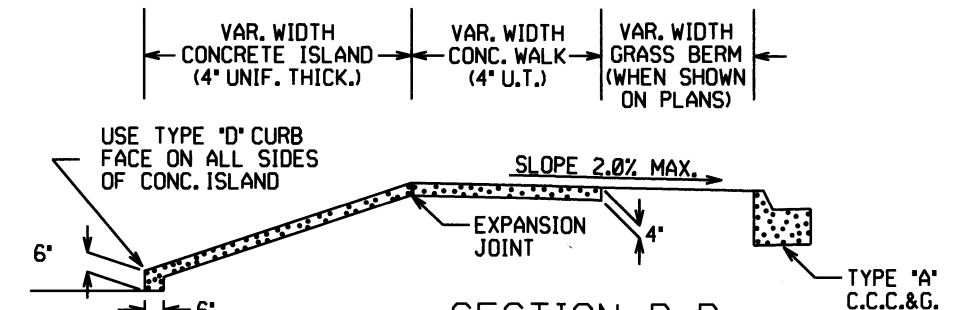


DRIVEWAY VERTICAL ALIGNMENT DETAILS

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



SECTION A-A



SECTION B-B  
CURBED ISLAND BEHIND WALK

DATE	REV	DATE FILMED	DESCRIPTION
2-27-14			REVISED PLAN & ISOMETRIC VIEW
11-29-07			ADDED CHANNELIZATION ISLAND WITH TYPE C CURB FACE & REVISED DRIVEWAY SLOPE NOTE & VERTICAL ALIGNMENT DETAIL
11-10-05			REV. APRON SLOPE & DEPTH OF AGG. BASE.
8-22-02			ADDED ISLAND DETAILS & NOTES
3-30-00			REV. MOD. CURB WIDTH & TRANS. NOTE
11-19-98			REVISED NOTES
11-18-98			REDRAWN AND REISSUED

ARKANSAS STATE HIGHWAY COMMISSION  
DETAILS OF DRIVEWAYS & ISLANDS  
STANDARD DRAWING DR-1

**REINFORCED CONCRETE ARCH PIPE DIMENSIONS**

EQUIV. DIA. INCHES	SPAN INCHES		RISE INCHES	
	AASHTO M 206	AHTD NOMINAL	AASHTO M 206	AHTD NOMINAL
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	31½	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. INCHES	AASHTO M 207 INCHES	
	SPAN	RISE
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).

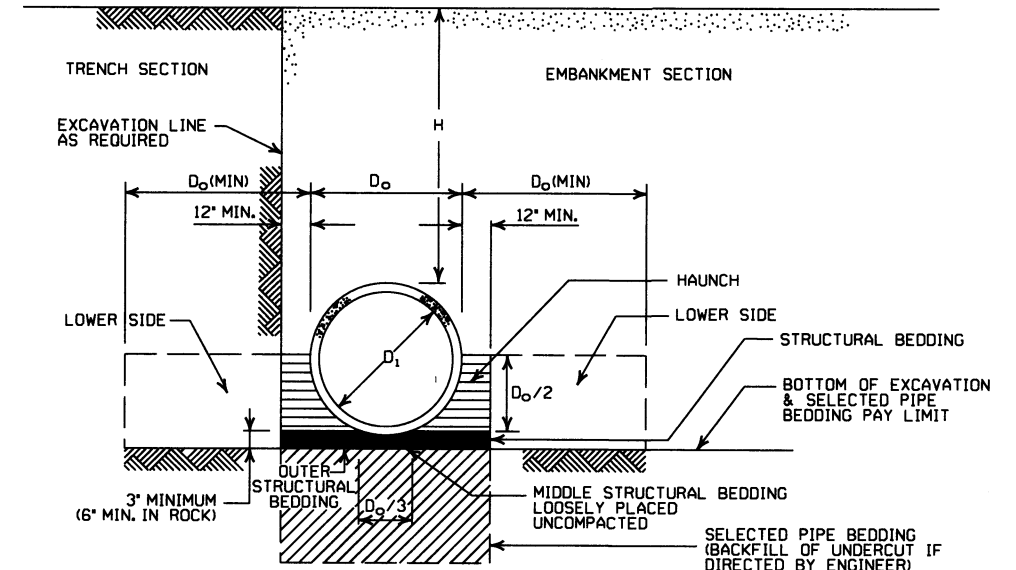
NOTE: HAUNCH AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF CONCRETE PIPE.

**- LEGEND -**

- D<sub>1</sub> = NORMAL INSIDE DIAMETER OF PIPE
- D<sub>o</sub> = OUTSIDE DIAMETER OF PIPE
- H = FILL COVER HEIGHT OVER PIPE (FEET)
- MIN. = MINIMUM
- UNDISTURBED SOIL

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

- \* SM-3 WILL NOT BE ALLOWED.
- \*\* MATERIALS SHALL NOT INCLUDE ORGANIC MATERIALS OR STONES LARGER THAN 3 INCHES.



**EMBANKMENT AND TRENCH INSTALLATIONS**

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

**GENERAL NOTES**

1. CONCRETE PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS, UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER TO THE STANDARD CONSTRUCTION SPECIFICATIONS.
2. CONCRETE PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. ALL PIPE SHALL CONFORM TO SECTION 606. CIRCULAR R.C. PIPE CULVERTS SHALL CONFORM TO AASHTO M10, 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**

INSTALLATION TYPE	CLASS OF PIPE			
	TYPE 1 OR 2	TYPE 3	ALL	ALL
PIPE ID (IN.)	FEET			
12-15	2	2.5	2	1
18-24	2.5	3	2	1
27-33	3	4	2	1
36-42	3.5	5	2	1
48	4.5	5.5	2	1
54-60	5	7	2	1
66-78	6	8	2	1
84-108	7.5	8	2	1

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

**MAXIMUM HEIGHT OF FILL "H" OVER CIRCULAR R.C. PIPE CULVERTS**

INSTALLATION TYPE	CLASS OF PIPE		
	CLASS III	CLASS IV	CLASS V
TYPE 1	21	32	50
TYPE 2	16	25	39
TYPE 3	12	20	30

NOTE: IF FILL HEIGHT EXCEEDS 50 FEET, A SPECIAL DESIGN CONCRETE PIPE WILL BE REQUIRED USING TYPE 1 INSTALLATION.

**MINIMUM HEIGHT OF FILL "H" OVER R.C. ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS**

INSTALLATION TYPE	CLASS OF PIPE	
	CLASS III	CLASS IV
TYPE 2 OR TYPE 3	2.5	1.5

NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

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

**MAXIMUM HEIGHT OF FILL "H" OVER R.C. ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS**

INSTALLATION TYPE	CLASS OF PIPE	
	CLASS III	CLASS IV
TYPE 2	13	21
TYPE 3	10	16

NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

DATE	ISSUED	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.		
12-15-11	REVISED FOR LRFD DESIGN SPECIFICATIONS		
5-18-00	REVISED TYPE 3 BEDDING & ADDED NOTE		
3-30-00	REVISED INSTALLATIONS		
11-06-97	ISSUED		

ARKANSAS STATE HIGHWAY COMMISSION

**CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING**

STANDARD DRAWING PCC-1

