

SHELBY COUNTY  
HIGHWAY DEPARTMENT

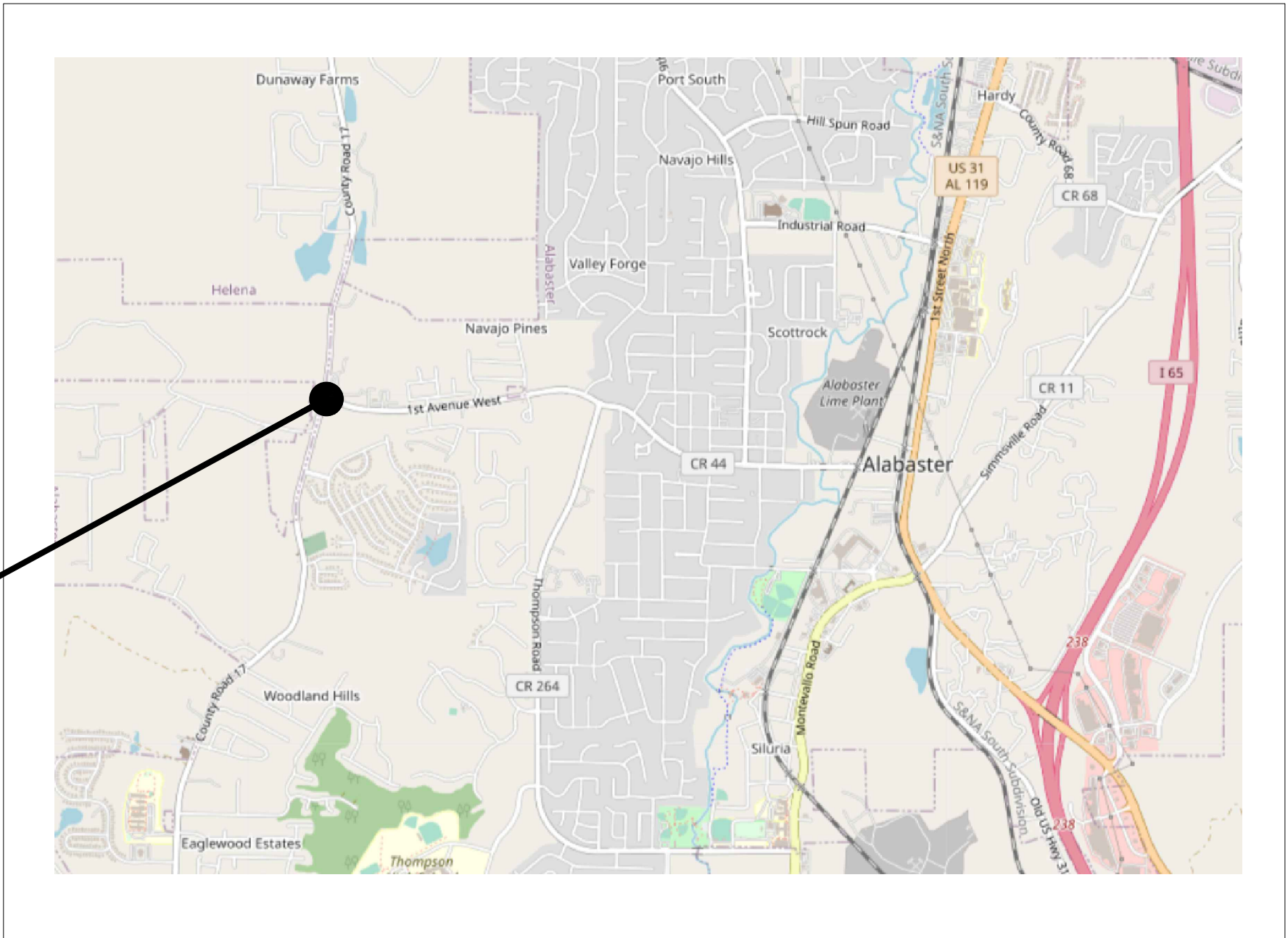
REFERENCE PROJECT NO.	FISCAL YEAR	SHEET NO.	LAST SHEET NO.
SCP-59-942-23	2023	1	8

INDEX TO SHEETS

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PLANS OF PROPOSED  
*PROJECT NO. SCP 59-942-23*  
*TRAFFIC SIGNAL CONSTRUCTION*  
*AT HIGHWAY 17 AND HIGHWAY 44*  
*SHELBY COUNTY*

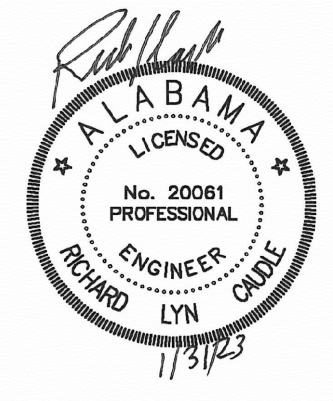
PROJECT LOCATION



VICINITY MAP

2023 ALDOT STANDARD AND SPECIAL DRAWING REFERENCES TO BE APPLIED FOR THIS PROJECT:

INDEX	DRAWING NO.	DESCRIPTION
73001	T.S.D.-730-1	POWER SOURCE DETAIL FOR TRAFFIC SIGNALS AND TRAFFIC SIGNAL POLES WITH LIGHTING
73004	T.S.D.-730-2	METAL TRAFFIC SIGNAL POLE AND LIGHTING INSTALLATION DETAILS
73005	T.S.D.-730-2A	METAL TRAFFIC SIGNAL POLE AND LIGHTING INSTALLATION DETAILS
73009	T.S.D.-730-4	TRAFFIC SIGNAL POLE FOUNDATION
73027	T.S.D.-730-10	BASE AND POLE MOUNTED CONTROLLER CABINET INSTALLATIONS
73033	T.S.D.-730-12	VIDEO DETECTION SYSTEM INSTALLATION
73051	T.S.D.-730-18	FLASHING YELLOW ARROW SIGN
73084	TSOP NO.30	SIGNAL OPERATING PLAN FYA



PLANS PREPARED BY:

SKIPPER  
CONSULTING INC

3644 VANN ROAD SUITE 100  
BIRMINGHAM, ALABAMA 35235  
TELEPHONE: (205)655-8855

TRAFFIC SIGNAL AND ITS LEGEND

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
SCP-59-942-23	2023	2

ELECTRICAL BOXES			MISCELLANEOUS EQUIPMENT			ABBREVIATIONS		
	EXISTING	REQUIRED		EXISTING	REQUIRED			
METALLIC PULL BOX			TRAFFIC SIGNAL HEAD			AMERICAN WIRE GUAGE .....	AWG	
FIBER OPTIC COMMBOX TYPE F1			TRAFFIC SIGNAL HEAD WITH BACKPLATE			CLOSED CIRCUIT TELEVISION .....	CCTV	
FIBER OPTIC COMMBOX TYPE F2			PEDESTRIAN SIGNAL HEAD			CONDUIT.....	C	
TRAFFIC SIGNAL JUNCTION BOX			8 FOOT PEDESTAL POLE AND PEDESTRIAN SIGNAL HEAD			CURB AND GUTTER .....	C&G	
CABLE IN CONDUIT			PEDESTAL MOUNTED FLASHING WARNING SIGNAL WITH SIGN			DYNAMIC MESSAGE SIGN .....	DMS	
	EXISTING	REQUIRED	PEDESTAL MOUNTED ILLUMINATED SCHOOL ZONE SIGN			EASTBOUND ROADWAY .....	EBR	
FIBER OPTIC CABLE IN CONDUIT (UNDERGROUND)			PUSH BUTTON ASSEMBLY			EMERGENCY VEHICLE PREEMPTION .....	EVP	
FIBER OPTIC CABLE IN CONDUIT (UNDERGROUND WITH CONCRETE)			SPAN/MASTARM MOUNTED SIGN			END ANCHOR .....	E/A	
FIBER OPTIC CABLE IN CONDUIT (BRIDGE ATTACHED)			OMNI DIRECTIONAL ANTENNA			FLASHING BEACON .....	FB	
FIBER OPTIC CABLE (AERIAL INSTALLATION)			DIRECTIONAL ANTENNA			GALVANIZED RIGID CONDUIT.....	GRC	
INTERCONNECT CABLE IN CONDUIT (UNDERGROUND)			EMERGENCY VEHICLE PREEMPTION SENSOR			GUARDRAIL .....	GR	
INTERCONNECT CABLE (AERIAL INSTALLATION)			BLANKOUT MESSAGE SIGN			HIGH DENSITY POLYETHYLENE .....	HDPE	
CONDUIT			TRAFFIC CONTROL CENTER			HIGHWAY ADVISORY RADIO .....	HAR	
ENCASEMENT			HIGHWAY ADVISORY RADIO			INDIVIDUAL LOWERING DEVICE .....	ILD	
OVERHEAD ELECTRIC			HUB BUILDING			INTELLIGENT TRANSPORTATION SYSTEM(S)...	ITS	
BURIED ELECTRIC			DYNAMIC MESSAGE SIGN (OVERHEAD)			JUNCTION BOX .....	JB	
VEHICULAR DETECTORS			DYNAMIC MESSAGE SIGN (ROADSIDE)			LEFT .....	LT	
	EXISTING	REQUIRED	DYNAMIC MESSAGE SIGN (CANTILEVER)			LIGHT EMITTING DIODE .....	LED	
PRESENCE LOOP DETECTOR			(NOTE: # INDICATES SIGNAL HEAD NUMBER)			LIGHT POLE .....	LP	
QUADRUPOLE LOOP DETECTOR			POLES			LUMINAIRE .....	LUM	
6' x 6' LOOP DETECTOR				EXISTING	REQUIRED	MILEPOST.....	MP	
VEHICLE DETECTION CAMERA			METAL POLE			NORTHBOUND ROADWAY .....	NBR	
VIDEO DETECTION ZONE			CONCRETE POLE			NON-METALLIC CONDUIT .....	NMC	
RADAR DETECTION UNIT			METAL MASTARM POLE			PAN TILT ZOOM.....	PTZ	
CABINETS			CLASS 3 WOOD SERVICE POLE WITH DISCONNECT			PRIMARY FIBER DISTRIBUTION UNIT.....	PFDU	
	EXISTING	REQUIRED	WOOD POLE			PROPERTY LINE .....	PL	
CABINET			DOWN GUY			PUBLIC ACCESS CAMERA.....	PAC	
CAMERAS			LUMINAIRE			PULL BOX.....	PB	
	EXISTING	REQUIRED				RADIUS .....	R	
CCTV CAMERA, FIXED						RAILROAD .....	RR	
CCTV CAMERA, PTZ						RIGHT .....	RT	
						RIGHT OF WAY.....	ROW	
						ROADWAY .....	RDWY	
						SECONDARY FIBER DISTRIBUTION UNIT .....	SFDU	
						SCHOOL.....	SCH	
						SOUTHBOUND ROADWAY .....	SBR	
						STANDARD DRAWING .....	STD-DWG	
						STATION .....	STA	
						TRAFFIC CONTROL CENTER .....	TCC	
						TRAFFIC SIGNAL OPERATING PLAN .....	TSOP	
						TRANSPORTATION MANAGEMENT CENTER .....	TMC	
						TURNOUT .....	TO	
						VEHICLE DETECTION CAMERA .....	VDC	
						WESTBOUND ROADWAY .....	WBR	



RESPONSIBLE PE: Richard L. Caudle, P.E.	SUPERVISOR:	DESIGNER:	PLAN SUBMITTAL	ALABAMA DEPARTMENT OF TRANSPORTATION TRAFFIC DESIGN SECTION	NOT TO SCALE	SHEET TITLE	ROUTE
DATE: January 31, 2023	DATE:	DATE:				TRAFFIC SIGNAL AND ITS LEGEND	CR-17



TRAFFIC SIGNAL PLAN NOTES

IN THE EVENT CONFLICTS OCCUR BETWEEN THE PROJECT TRAFFIC SIGNAL NOTES  
AND THE MUTCD, THE MUTCD WILL GOVERN.

○ NOTES THAT APPLY TO THIS PROJECT.

500.

WHEN THE CONTROLLER IS IN THE FLASHING MODE, THE VEHICULAR SIGNAL HEADS SHALL FLASH YELLOW ON HIGHWAY 17, RED ON ALL CROSS STREETS, AND RED ON PROTECTED LEFT TURNS.
501.

ALL EXISTING TRAFFIC CONTROL EQUIPMENT WHICH IS THE PROPERTY OF THE STATE INCLUDING SIGNAL HEADS, CONTROLLERS, POLES, AND MISCELLANEOUS HARDWARE SHALL BE REMOVED UPON COMPLETION OF THE NEW TRAFFIC CONTROL UNIT (TEMPORARY OR PERMANENT) AND STORED TO COMPLY WITH SECTION 730.03 OF THE STANDARD SPECIFICATIONS. THE SAME SHALL BE DELIVERED TO THE ALABAMA DEPARTMENT OF TRANSPORTATION AS DIRECTED BY THE ENGINEER.
502.

ALL EXISTING TRAFFIC CONTROL EQUIPMENT WHICH IS THE PROPERTY OF SHELBY COUNTY INCLUDING SIGNAL HEADS, CONTROLLERS, POLES, AND MISCELLANEOUS HARDWARE SHALL BE REMOVED UPON COMPLETION OF THE NEW TRAFFIC CONTROL UNIT (TEMPORARY OR PERMANENT) AND STORED TO COMPLY WITH SECTION 730.03 OF THE STANDARD SPECIFICATIONS. THE SAME SHALL BE DELIVERED TO THE SHELBY COUNTY HIGHWAY DEPARTMENT, 506 HWY 70, COLUMBIANA, ALABAMA.
503.

THE LOCATION OF THE POWER SOURCE AS SHOWN IN THE PLANS IS APPROXIMATE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF THE POWER SOURCE AND THE SHORTEST ROUTE TO SERVE THE TRAFFIC SIGNAL CONTROLLER CABINET AND LUMINAIRES.
504.

AS WORK BEGINS RELATED TO OR AFFECTING THE SIGNAL(S) WITHIN THE CONSTRUCTION LIMITS, THE CONTRACTOR SHALL ASSUME RESPONSIBILITY OF ALL EXISTING, TEMPORARY, AND REQUIRED SIGNAL(S). THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTINUAL OPERATION AND MAINTENANCE OF THE SIGNAL(S) UNTIL ALL SIGNAL WORK OR WORK AFFECTING THE SIGNAL(S) IS ACCEPTED BY SHELBY COUNTY.
505.

THE CONTRACTOR SHALL INSTALL TEMPORARY SIGNAL(S) AS REQUIRED BY THE TEMPORARY TRAFFIC SIGNAL PLAN LAYOUT OR THE TRAFFIC CONTROL PLANS. WHEN TEMPORARY SIGNAL(S) ARE NOT REQUIRED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MODIFYING AND ADJUSTING THE EXISTING AND/OR REQUIRED SIGNAL(S) SO THAT ALL LANE SHIFTS, CLOSURES, AND ANY OTHER CHANGES TO THE ROADWAY DURING CONSTRUCTION ARE CONTROLLED BY THE EXISTING AND/OR REQUIRED SIGNAL(S).
506.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES TO LOCATE ALL OVERHEAD AND UNDERGROUND UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT. DAMAGE TO UTILITIES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE UTILITY COMPANY AND THE ENGINEER. THE CONTRACTOR SHALL BEAR ALL COST TO REPAIR ANY AND ALL DAMAGES TO THE UTILITIES CAUSED BY THE CONTRACTOR.
507.

SHELBY COUNTY RESERVES THE RIGHT TO RESPOND TO TRAFFIC CONTROL UNIT(S) MALFUNCTIONS IN AN EMERGENCY OR NATURAL DISASTER. IN DOING SO THE CONTRACTOR'S LIABILITY AND RESPONSIBILITY RELATED TO MAINTAINING THE TRAFFIC UNIT(S) OR SYSTEM REMAINS IN EFFECT.
508.

THE CONTRACTOR SHALL HAVE THE APPROVAL OF THE ENGINEER PRIOR TO THE REMOVAL OF ANY EXISTING TRAFFIC CONTROL UNIT. THE CONTRACTOR SHALL NOT REMOVE AN EXISTING TRAFFIC CONTROL UNIT UNTIL THE REQUIRED TRAFFIC CONTROL UNIT IS INSTALLED AND COMPLETELY OPERATIONAL.
509.

EACH REQUIRED TRAFFIC SIGNAL STRAIN POLE AND MAST ARM POLE MAY VARY IN LENGTH AND SIZE. THE CONTRACTOR SHALL ASCERTAIN THAT THE POLE HEIGHTS ARE SUFFICIENT TO PROVIDE THE REQUIRED VEHICULAR TRAFFIC SIGNAL CLEARANCE. EXTENSIONS FOR MOUNTING SIGNALS SHALL BE PROVIDED WHEN NECESSARY.
510.

EACH MAST ARM MAY VARY IN LENGTH. THE CONTRACTOR SHALL ASCERTAIN THAT ALL ARM LENGTHS ARE SUFFICIENT SO THAT EACH VEHICULAR SIGNAL HEAD POSITION CONFORMS TO THE MUTCD.
511.

THE TRAFFIC SIGNAL POLE LOCATION(S) AS SHOWN IN THE PLANS IS(ARE) APPROXIMATE. THE CONTRACTOR SHALL COORDINATE THE POLE LOCATION(S) WITH THE ENGINEER. THE CONTRACTOR SHALL ASCERTAIN THAT THE FINAL POLE LOCATION(S) PROVIDE FOR THE VEHICULAR TRAFFIC SIGNAL HEADS TO MEET THE DISTANCE REQUIREMENTS TO THE STOP LINE AS REQUIRED BY THE MUTCD. WHEN PEDESTRIAN SIGNAL HEADS AND/OR PEDESTRIAN CROSSWALKS ARE INVOLVED THE SAME SAID POLE LOCATION(S) SHALL ALSO CONFORM TO THE RELATIVE SECTIONS OF THE MUTCD.
512.

THE CONTRACTOR SHALL LOCATE EACH REQUIRED AND RELOCATED VEHICULAR TRAFFIC SIGNAL HEAD ON THE SPAN WIRE OR MAST ARM SO THAT EACH HEAD IS LOCATED IN THE APPROACH LANE FOR WHICH IT APPLIES. LOCATION OF SIGNAL HEADS SHALL CONFORM TO THE MUTCD.
513.

THE TRAFFIC SIGNAL STRAIN POLE LOCATION(S) AS SHOWN IN THE PLANS IS (ARE) APPROXIMATE. THE ENGINEER SHALL APPROVE ALL FOUNDATION LOCATIONS PRIOR TO THE CONTRACTOR EXCAVATING FOR EACH FOUNDATION.
514.

BALANCE ADJUSTERS SHALL BE INSTALLED ON TRAFFIC SIGNAL HEADS FOR PROPER AIM. THE CONTRACTOR SHALL ALIGN THE SIGNAL HEADS IN ACCORDANCE WITH THE MUTCD AND TO THE SATISFACTION OF THE ENGINEER.
515.

A 12 INCH DRIP COIL WITH 3 LOOPS SHALL BE PROVIDED TO THE RIGHTS OF EACH VEHICULAR TRAFFIC SIGNAL HEAD. A DRIP LOOP SHALL BE FORMED SO THAT WATER CANNOT ENTER THE ENTRANCE CLAMP. THE WIRE SHALL ENTER THE CLAMP FROM THE BOTTOM OF THE DRIP LOOP.
516.

WHEN PVC CONDUIT IS USED FROM THE CONTROLLER TO THE STEEL STRAIN POLE OR MAST ARM POLE, THE CONTRACTOR SHALL BOND THE CONTROLLER TO THE POLE WITH A #6-1C BONDING CABLE.
517.

MARKING/WARNING TAPE SHALL BE BURIED OVER CONDUIT. THE TAPE SHALL BE 4 INCH POLYETHYLENE, RED IN COLOR WITH BLACK LETTERING.
518.

WHEN EXISTING LOOP WIRE AND VEHICLE LOOP DETECTORS ARE TO BE RETAINED AND REUSED, OR RELOCATED IN A NEW CONTROLLER CABINET, THE CONTRACTOR SHALL ASCERTAIN THE MANUFACTURER AND MODEL NUMBER OF EACH EXISTING DETECTOR AMPLIFIER AND PROVIDE A NEW WIRING HARNESS COMPLETELY WIRED IN THE CONTROLLER CABINET FOR EACH EXISTING DETECTOR AMPLIFIER.
519.

WHEN SYSTEM TIMINGS ARE NOT INCLUDED IN THE PLANS FOR TIME BASE OR CLOSED LOOP SYSTEMS, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HIRE A LICENSED PROFESSIONAL ENGINEER TO CALCULATE SYSTEM TIMINGS. THE COST OF CALCULATING SYSTEM TIMINGS SHALL BE A SUBSIDIARY OBLIGATION OF 730C.
520.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HIRE A LICENSED PROFESSIONAL ENGINEER TO INPUT THE TIMINGS AND FINE TUNE THE TIMINGS. THE COST OF INPUTTING AND FINE TUNING TIMINGS SHALL BE A SUBSIDIARY OBLIGATION OF 730C.
521.

THE { AREA TRAFFIC ENGINEER / CITY TRAFFIC ENGINEER / COUNTY TRAFFIC ENGINEER } SHALL BE RESPONSIBLE FOR INPUTTING AND FINE TUNING THE TIMINGS.
522.

WHEN EXISTING SPAN WIRE THAT IS TO BE RETAINED HAS SAGGED, THE CONTRACTOR SHALL ADJUST THE SPAN WIRE SO THAT SIGNAL HEADS COMPLY WITH THE CLEARANCE SHOWN ON THE STANDARD DETAIL DRAWING.
523.

A NOTICE OF INTENT FOR NPDES PERMIT COVERAGE HAS BEEN FILED WITH ADEM FOR THIS PROJECT. A COPY OF THE CONSTRUCTION BEST MANAGEMENT PRACTICES PLAN (CBMPP) IS AVAILABLE THROUGH OFFICE ENGINEER PRIOR TO BIDDING.
524.

THE CONTRACTOR SHALL PROVIDE A SET OF AS-BUILT PLANS TO SHELBY COUNTY.
525.

THE CONTRACTOR SHALL INSTALL BACKPLATES WITH A 2 INCH FLUORESCENT YELLOW REFLECTIVE BORDER ON ALL EXISTING AND REQUIRED SIGNAL HEADS AS SHOWN ON PLANS. BACKPLATES ON REQUIRED SIGNAL HEADS SHALL BE PAID FOR AS A SUBSIDIARY OF 730P. BACKPLATES ON EXISTING SIGNAL HEADS SHALL BE PAID FOR AS A SUBSIDIARY OF 730Q.
526.

WHEN LUMINAIRES PAID FOR AS A SUBSIDIARY OF 730N ARE INCLUDED, THE RELATED PHOTODETECTORS MAY BE MOUNTED ON THE TOP OR SIDE OF THE SIGNAL CABINET WHERE NO SHADOWS ARE EXPECTED TO BE CAST ON THE CABINET THAT WOULD IMPAIR THE FUNCTION OF THE PHOTOCCELL WHEN COMPARED TO MOUNTING ON THE DISCONNECT POLE IN ITS TRADITIONAL LOCATION. WHERE THE EFFECT OF SHADOWS IS UNCERTAIN, THE CONTRACTOR SHALL MOUNT THE PHOTODETECTOR IN ITS STANDARD LOCATION.
527.

WHEN IMSA SIGNAL CABLE 20-1 IS USED THAT IS 7C OR LARGER, THE CONTRACTOR SHALL CLEARLY TAG AND MARK IN THE CONTROLLER CABINET THE SIGNAL INDICATION EACH CONDUCTOR CONNECTS TO WHERE THE CONDUCTOR JACKET DOES NOT MATCH IN COLOR THE ASSOCIATED SIGNAL HEAD COLOR.
528.

ON ALL LOOPS, THE CONTRACTOR SHALL BE REQUIRED TO PERFORM A LEAKAGE TO GROUND TEST USING A MEG-OHM METER WITH 500 VOLTS APPLIED. THE LOOPS SHALL ALSO BE TESTED AFTER THE LEADS (HOME RUN) ARE PULLED TO THE AMPLIFIER TO BY A STATE INSPECTOR CHECKING FOR LEAKAGE. ANY LOOP FAILING TO READ 100 MEGS OR BETTER WILL NOT BE ACCEPTED AND SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE PROJECT.
529.

TRAFFIC SIGNAL CONTROLLER SHALL BE AN 8 PHASE ECONOLITE COBALT WITH EOS OPERATING SYSTEM OR ALTERNATE APPROVED BY THE SHELBY COUNTY HIGHWAY DEPARTMENT.
530.

TRAFFIC SIGNAL CONTROLLER CABINET SHALL BE A BASE MOUNTED ECONOLITE TS2-TYPE 1, 16 POS (CAB #16497), OR ALTERNATE APPROVED BY THE SHELBY COUNTY HIGHWAY DEPARTMENT.
531.

PRIOR TO CONSTRUCTION, THE INSTALLER SHALL CONTACT CODY LONG WITH THE SHELBY COUNTY HIGHWAY DEPARTMENT (205) 669-3880 TO SET INSPECTION SCHEDULES AND REQUIREMENTS.
532.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM GEOTECHNICAL INVESTIGATIONS (SOIL BORINGS) AND PROVIDE POLE FOUNDATION DESIGNS. GEOTECHNICAL INVESTIGATIONS AND POLE FOUNDATION DESIGN SHALL BE PERFORMED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF ALABAMA. GEOTECHNICAL INVESTIGATIONS AND POLE FOUNDATION DESIGN SHALL BE PROVIDED TO THE ENGINEER FOR APPROVAL AS A PART OF THE EQUIPMENT SUBMITTALS.
533.

THE INSTALLER IS REQUIRED TO CONSTRUCT AND PROVIDE A COMPLETE TRAFFIC SIGNAL THE INTERSECTION THAT FUNCTIONS PROPERLY AND MEETS SHELBY COUNTY REQUIREMENTS AND STANDARDS.
534.

LUMINAIRES USED AS A PART OF THIS PROJECT SHALL BE APPROVED FOR USE BY ALDOT AND SHALL BE LED TYPE FIXTURES.
535.

VIDEO DETECTION USED ON THIS PROJECT SHALL BE GRIDSMART OR ALTERNATE APPROVED BY THE SHELBY COUNTY HIGHWAY DEPARTMENT.
536.

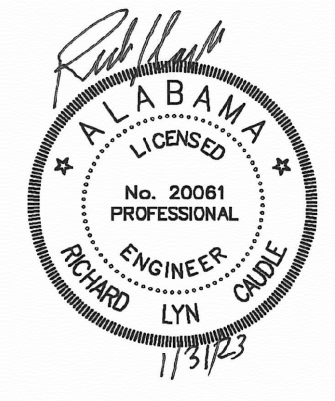
ALTERNATE ENTRY INTO EXISTING STEEL TRAFFIC SIGNAL POLES SHALL BE MADE THROUGH EXISTING CONDUIT ENTRY POINTS IN THE FOUNDATION. NO CONDUIT ENTRIES SHALL BE ALLOWED DIRECTLY INTO THE TRAFFIC SIGNAL POLE OR BETWEEN THE POLE BASE AND FOUNDATION.



# SUMMARY OF QUANTITIES

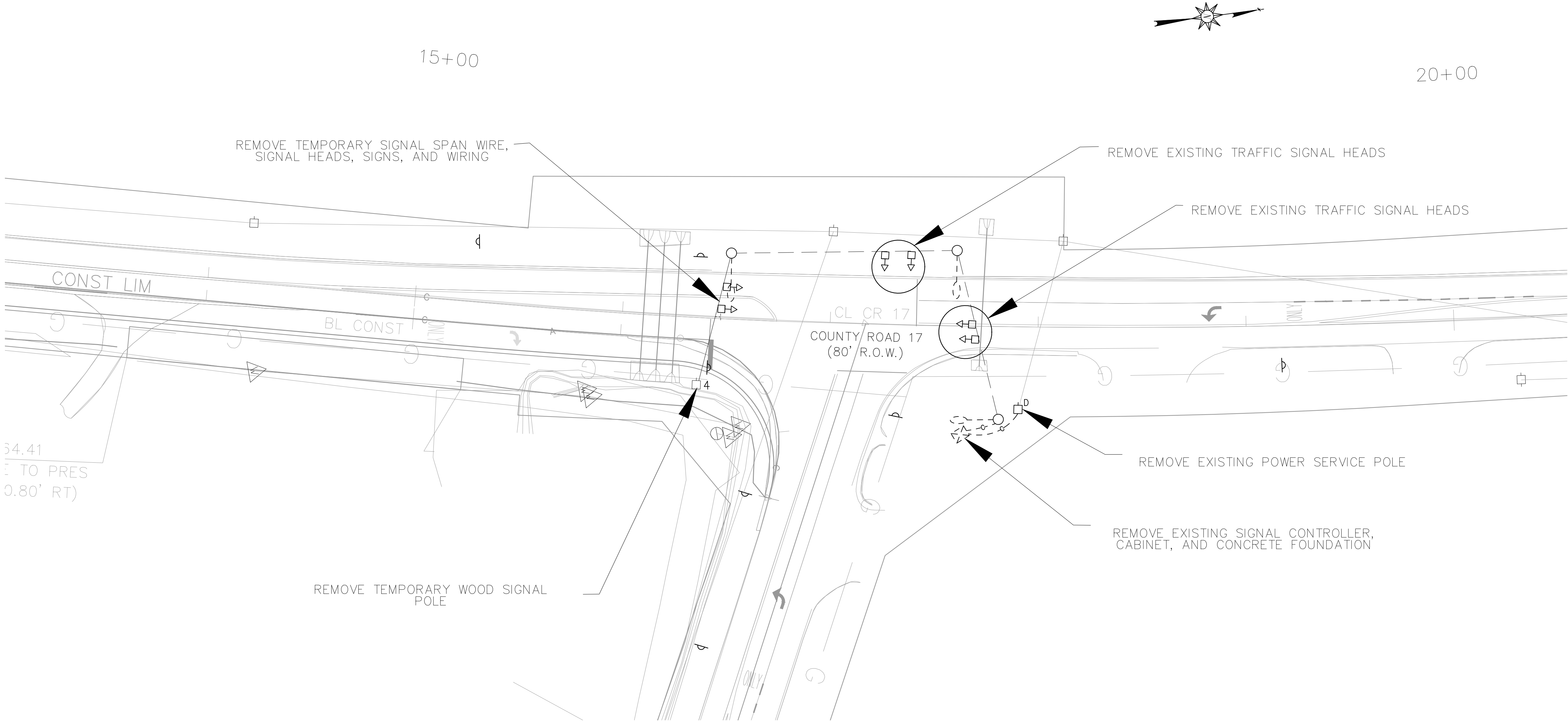
REFERENCE PROJECT NO.	FISCAL YEAR	SHEET NO.
SCP-59-942-23	2023	4

TOTAL	ITEM NO.	UNITS	DESCRIPTION
1	730A-012	LUMP SUM	REMOVAL OF EXISTING TRAFFIC CONTROL UNIT (PARTIAL) (CR17 AT CR44)
1	730C-000	LUMP SUM	FURNISHING AND INSTALLING TRAFFIC CONTROL UNIT (CR17 AT CR44)
1	730E-000	EACH	METAL TRAFFIC SIGNAL POLE FOUNDATION
1	730G-001	EACH	METAL TRAFFIC SIGNAL STRAIN POLE
50	730L-003	LINEAR FOOT	1", NON-METALLIC, CONDUIT
60	730L-005	LINEAR FOOT	2", NON-METALLIC, CONDUIT
1	730N-000	EACH	LUMINAIRE EXTENSION ASSEMBLY, 12 FOOT
6	730P-022	EACH	VEHICULAR SIGNAL HEAD, 12 INCH, 3 SECTION, TYPE LED
1	730P-023	EACH	VEHICULAR SIGNAL HEAD, 12 INCH, 4 SECTION, TYPE LED
1	730R-041	EACH	CONTROLLER ASSEMBLY, TYPE NEMA, 16 CHANNELS
1	730T-010	EACH	ELECTRICAL POWER SERVICE ASSEMBLY WITH WOOD POLE
1	730U-015	LUMP SUM	VIDEO DETECTION SYSTEM



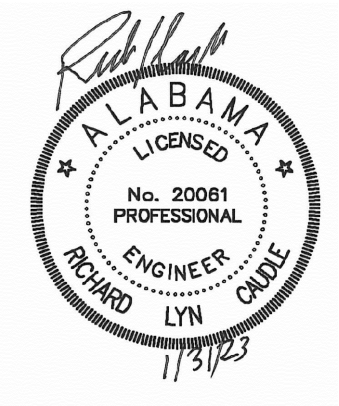
**SKIPPER**  
CONSULTING INC  
3644 VANN ROAD SUITE 100  
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TELEPHONE: (205)655-8855

RESPONSIBLE PE: Richard L. Caudle, P.E.	SUPERVISOR:	DESIGNER:	PLAN SUBMITTAL	SHELBY COUNTY HIGHWAY DEPARTMENT		SHEET TITLE	ROUTE
DATE: January 31, 2023	DATE:	DATE:				SUMMARY OF QUANTITIES	CR-17



NOTES:

1. THE CONTRACTOR, WITHOUT EXTRA COMPENSATION, SHALL BE RESPONSIBLE TO INSURE THE CONTINUAL OPERATION AND MAINTENANCE OF THE EXISTING TEMPORARY TRAFFIC CONTROL UNIT(S) DURING THE PERIOD OF CONSTRUCTION. MAINTAINING CONTINUAL OPERATION SHALL INCLUDE THE RELOCATION OF VEHICULAR SIGNAL HEADS DURING CONSTRUCTION AND THE MATERIALS AND LABOR NECESSARY TO INSURE THE CONTINUAL OPERATION OF THE TRAFFIC CONTROL UNIT(S) EQUIPMENT AT ALL TIMES.
2. CONTRACTOR SHALL COMPLETELY REMOVE EXISTING CONTROLLER CABINET AND CONCRETE FOUNDATION. CONTRACTOR SHALL RE-ESTABLISH GRADE AND SOD OVER THE DISTURBED AREA.



**SKIPPER**  
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# TRAFFIC SIGNAL PLAN LAYOUT

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
SCP-59-942-23	2023	6

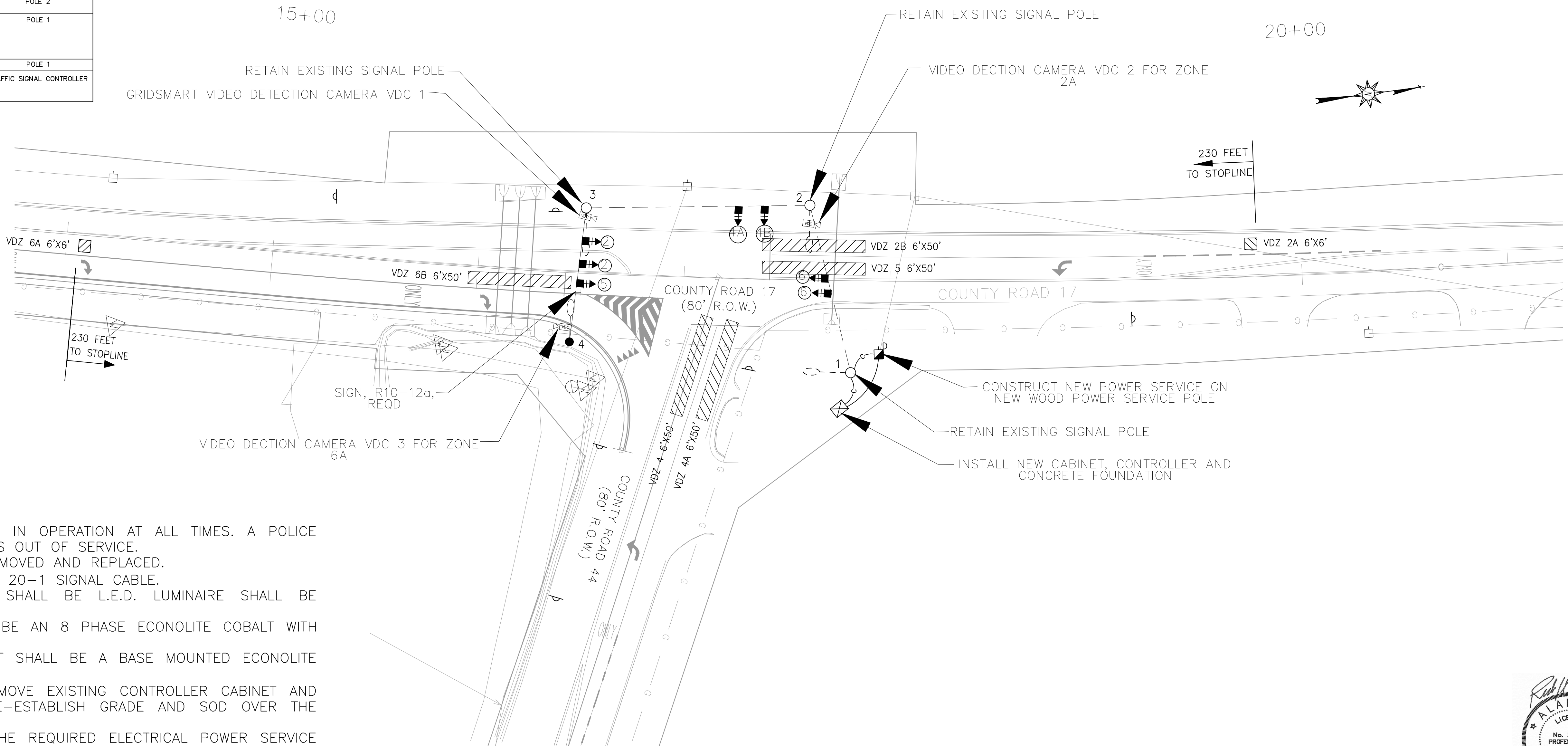
CONDUIT AND CONDUCTOR SCHEDULE			
CONDUIT	CONDUCTOR	FROM	TO
1-1" PVC	CONTROLLER POWER CABLE	DISCONNECT SWITCH	TRAFFIC SIGNAL CONTROLLER
1-1" PVC	LUMINAIRE POWER CABLE	VDC 3 LUMINAIRE	POLE 1
-	VIDEO DETECTION CABLE	POLE 4	POLE 4
-	LUMINAIRE POWER CABLE	POLE 4	POLE 3
-	10C SIGNAL CABLE	SIGNAL HEADS	POLE 3
-	4C SIGNAL CABLE	SIGNAL HEADS 2	POLE 2
-	10C SIGNAL CABLE	POLE 3	POLE 2
-	4C SIGNAL CABLE	POLE 3	POLE 2
-	VIDEO DETECTION CABLE	VDC 1 LUMINAIRE	POLE 3
-	LUMINAIRE POWER CABLE	SIGNAL HEADS 4, 4A	POLE 2
-	4C SIGNAL CABLE	POLE 2	POLE 2
-	VIDEO DETECTION CABLE	POLE 2	POLE 1
-	LUMINAIRE POWER CABLE	POLE 2	POLE 1
-	10C SIGNAL CABLE	POLE 2	POLE 1
-	4C SIGNAL CABLE	POLE 2	POLE 1
-	4C SIGNAL CABLE	SIGNAL HEADS 6	POLE 1
3-2" PVC	VIDEO DETECTION CABLE	POLE 1	TRAFFIC SIGNAL CONTROLLER
	10C SIGNAL CABLE		
	4C SIGNAL CABLE		

LOCAL CONTROLLER PROGRAMMING CHART													
PHASE	MIN INITIAL	DENSITY ACTIVE	PASSAGE	YELLOW	ALL RED	MAX 1	MAX 2	WALK	FDW	PED OMIT	MIN RECALL	PHASE OMIT	NON-LOCK
1		N								Y	N	Y	Y
2	10	N	3.8	4.3	1.9	60	60			Y	Y	N	Y
3		N								Y	N	Y	Y
4	8	N	3.0	4.0	2.7	40	40			Y	N	N	Y
5	6	N	3.0	4.3	1.4	25	25			Y	N	N	Y
6	10	N	3.8	4.3	1.9	60	60			Y	Y	N	Y
7		N								Y	N	Y	Y
8		N								Y	N	Y	Y

REQUIRED SIGNAL HEADS			
5	2,6	4A	4B

REQUIRED SIGNS
<b>SIGN A R10-12a</b>
30" X 36"

PHASING DIAGRAM			
1 OMIT	2 	3 OMIT	4 
5 	6 	7 OMIT	8 OMIT



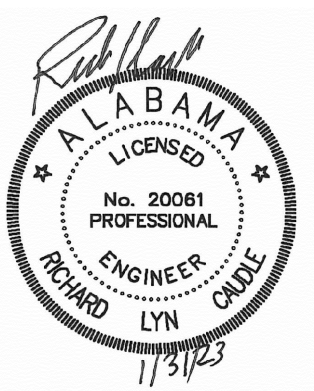
## NOTES:

- CONTRACTOR SHALL MAINTAIN SIGNAL IN OPERATION AT ALL TIMES. A POLICE OFFICER IS REQUIRED WHEN SIGNAL IS OUT OF SERVICE.
- EXISTING SIGNAL HEADS SHALL BE REMOVED AND REPLACED.
- REPLACE ALL EXISTING #14 AWG IMSA 20-1 SIGNAL CABLE.
- REQUIRED LUMINAIRE ON POLE 4 SHALL BE L.E.D. LUMINAIRE SHALL BE EQUIPPED WITH PHOTOCELL.
- TRAFFIC SIGNAL CONTROLLER SHALL BE AN 8 PHASE ECONOLITE COBALT WITH EOS OPERATING SOFTWARE.
- TRAFFIC SIGNAL CONTROLLER CABINET SHALL BE A BASE MOUNTED ECONOLITE TS2-TYPE 1, 16 POS (CAB #16497).
- CONTRACTOR SHALL COMPLETELY REMOVE EXISTING CONTROLLER CABINET AND FOUNDATION. CONTRACTOR SHALL RE-ESTABLISH GRADE AND SOD OVER THE DISTURBED AREA.
- NO PHOTOCELL IS REQUIRED FOR THE REQUIRED ELECTRICAL POWER SERVICE ASSEMBLY.

ESTIMATED EQUIPMENT AND MATERIAL SCHEDULE
DESCRIPTION
MISC. HARDWARE
#14 SIGNAL CABLE, IMSA 20-1
SIGN R10-12a, WITH MOUNTING HARDWARE

SUPPORTING STRUCTURES				
POLE NO.	POLE LENGTH (APPROX.)	POLE LOCATION (APPROX.)	LUMINAIRE ARM EXT. LENGTH (APPROX.)	COMMENTS
1.	37FT	STA 17+79.47 RT45	12 FT	EXISTING POLE, RETAIN
2.	37FT	STA 17+59.92 LT36	12 FT	EXISTING POLE, RETAIN
3.	37FT	STA 16+50.59 LT31	12 FT	EXISTING POLE, RETAIN
4.	37FT	STA 16+46.37 RT45	12 FT	REQUIRED POLE

VIDEO DETECTION ZONE CHART					
ZONE	CAMERA	PHASE	SIZE	TYPE	COMMENTS
2A	VDC 2	2	6'x6'	PULSE	230' TO STOPLINE/EXTEND ONLY
2B	VDC 1	2	6'x50'	PRESENCE	CALL ONLY/NO EXTEND
4	VDC 1	4	6'x50'	PRESENCE	
4A	VDC 1	4	6'x50'	PRESENCE	5 SEC DELAY
5	VDC 1	5	6'x50'	PRESENCE	
6A	VDC 3	6	6'x6'	PULSE	230' TO STOPLINE/EXTEND ONLY
6B	VDC 1	6	6'x6'	PRESENCE	CALL ONLY/NO EXTEND



**SKIPPER**  
CONSULTING INC  
3644 VANN ROAD SUITE 100  
BIRMINGHAM, ALABAMA 35235  
TELEPHONE: (205)655-8855

RESPONSIBLE PE: Richard L. Caudle, P.E.

SUPERVISOR:

DESIGNER:

PLAN SUBMITTAL

SHELBY COUNTY  
HIGHWAY DEPARTMENT



SCALE  
(FEET)

SHEET TITLE

TRAFFIC SIGNAL PLAN  
LAYOUT

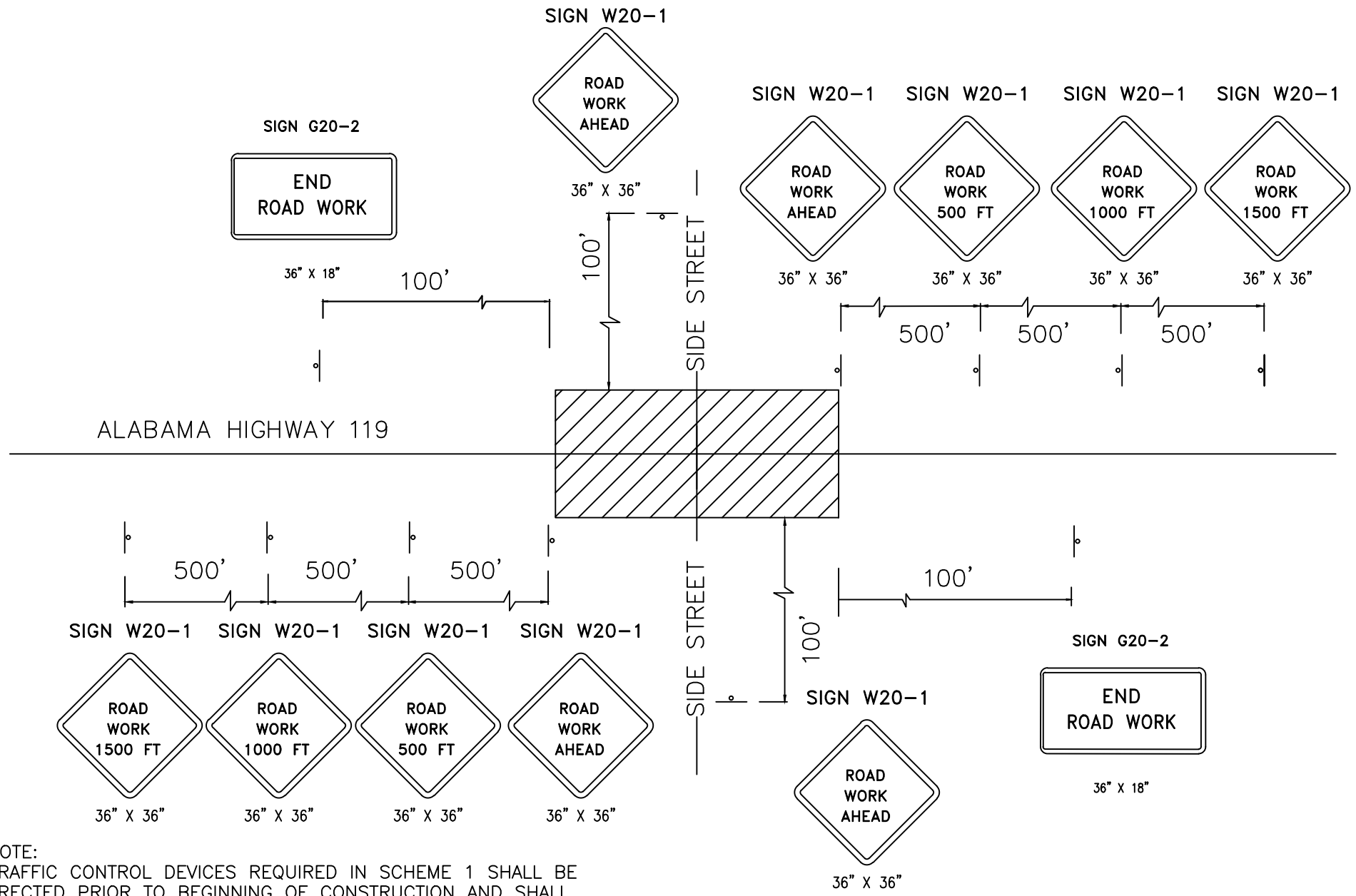
ROUTE

CR 17

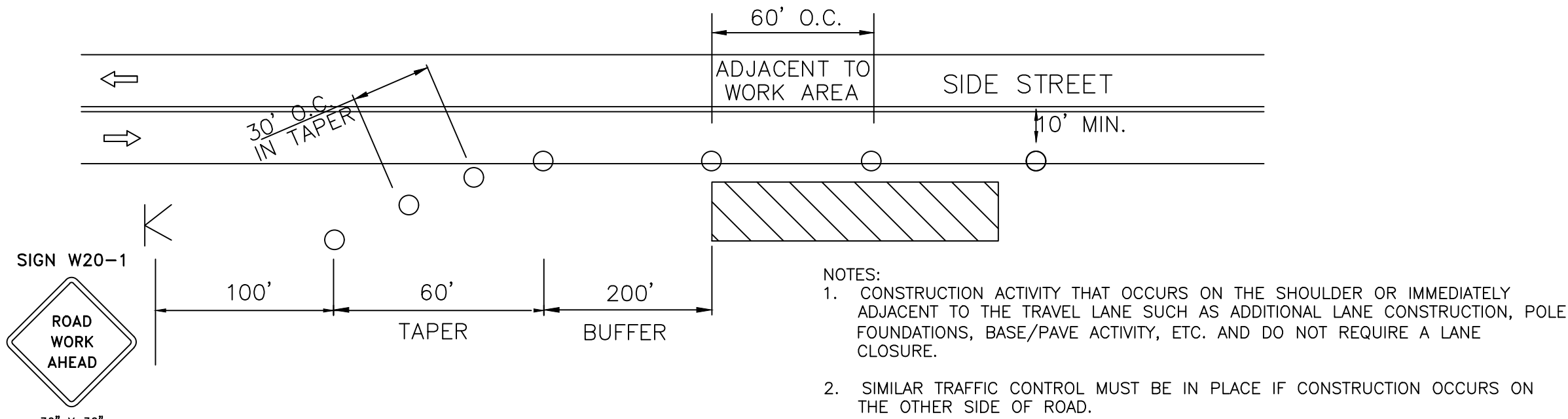


TRAFFIC CONTROL PLAN

REFERENCE PROJECT NO.	FISCAL YEAR	SHEET NO.
SCP-59-942-23	2023	7



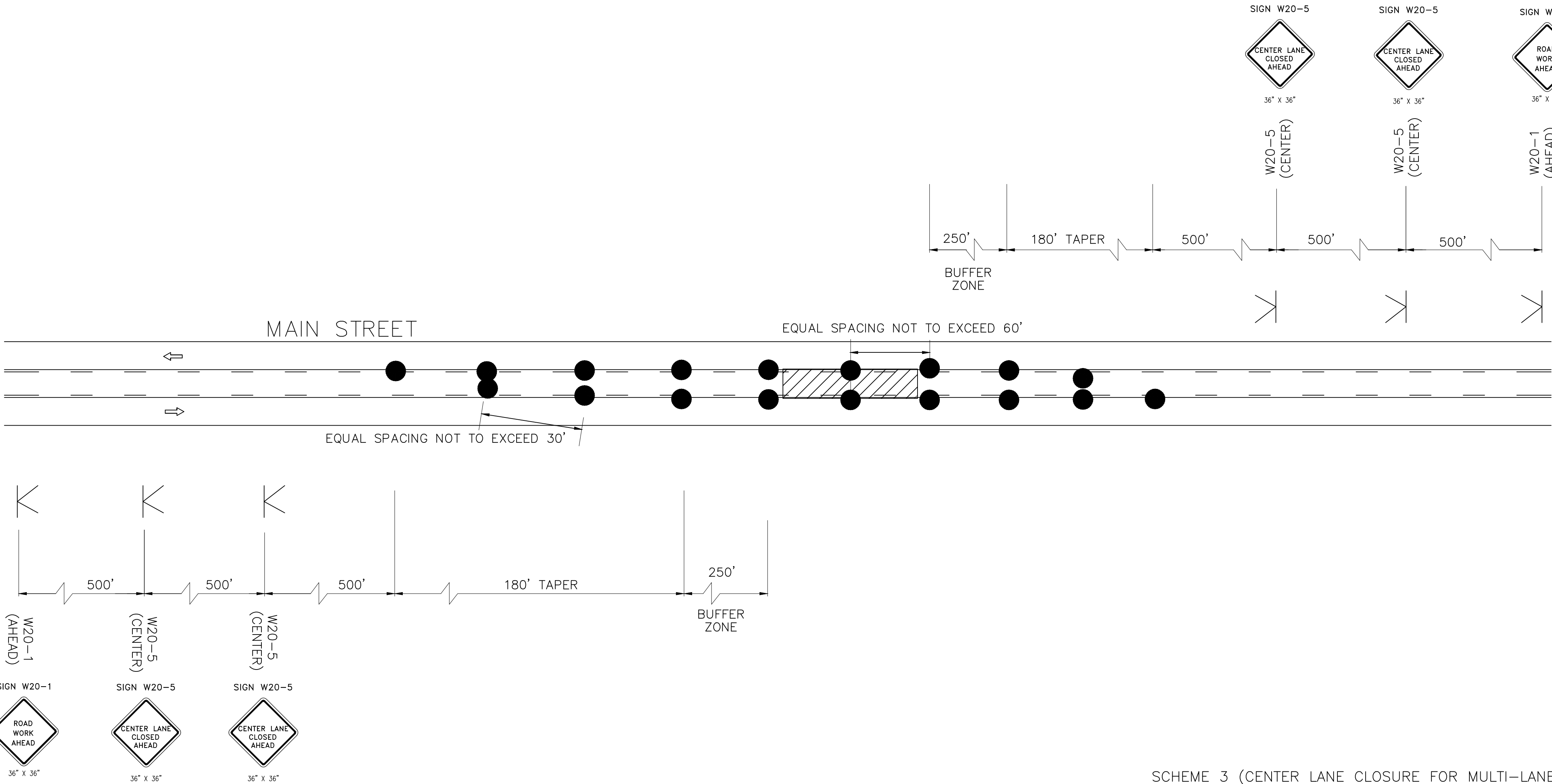
SCHEME 1 – ADVANCE WARNING TRAFFIC CONTROL SCHEME



SCHEME 2 – SHOULDER CLOSURE ON UNDIVIDED ROADWAY (NO LANE CLOSURE REQUIRED)

TRAFFIC CONTROL PLAN NOTES:

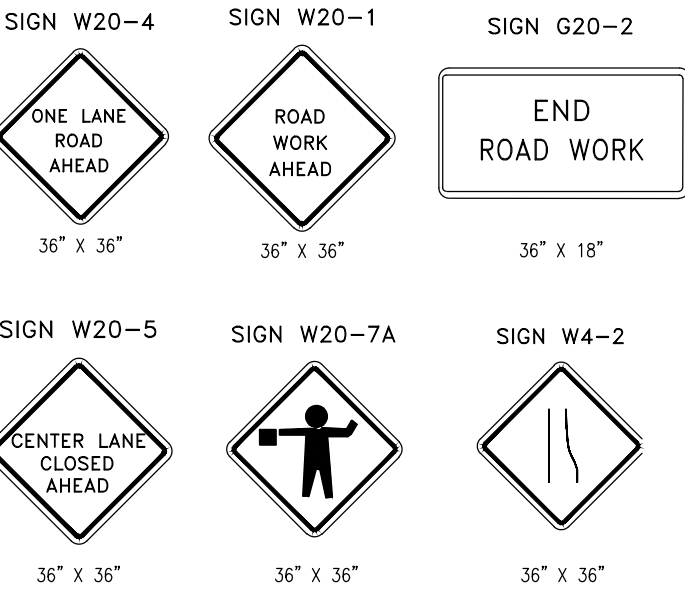
- ALL TRAFFIC CONTROL DEVICES SHOWN IN SCHEME #1 SHALL REMAIN IN PLACE DURING ALL CONSTRUCTION ACTIVITIES FOR THE GIVEN INTERSECTION.
- ALL TRAFFIC CONTROL DEVICES SHALL BE IN CONFORMANCE WITH THE MANUAL ON UNIFORM TRAFFIC DEVICES (MUTCD).
- THE TRAFFIC CONTROL SCHEMES SHOWN HAVE BEEN DEVELOPED IN CONFORMANCE WITH THE MUTCD. THE DEVICES SHOWN REPRESENT CONDITIONS KNOWN DURING PLAN DEVELOPMENT. IN THE EVENT ACTUAL PHYSICAL CONDITIONS WARRANT ADDITIONAL CONTROL DEVICES, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL SAME AS OUTLINED IN THE MUTCD, PART IV.
- ALL TRAFFIC CONTROL DEVICES REQUIRED FOR WORK WITHIN THE ROADWAY SHALL BE IN PLACE PRIOR TO THE CONTRACTOR BEGINNING WORK.
- WORK AREAS COVERED BY TRAFFIC CONTROL SCHEME #2 SHALL NOT ENCROACH INTO THE TRAVEL WAY. ANY WORK THAT REQUIRES ENCROACHMENT INTO THE TRAVEL WAY REQUIRES CLOSURE OF THE APPROPRIATE LANE.
- ALL PORTABLE SIGNS SHALL BE REMOVED WHEN NOT IN USE OR AT THE END OF THE WORK DAY.
- IN THOSE WORK AREAS IMMEDIATELY ADJACENT TO A TRAVEL LANE WHERE CONSTRUCTION ACTIVITIES LAST MORE THAN ONE DAY AND A DROP EXIST AT THE PAVEMENT EDGE, CHANNELIZING DRUMS WITH TYPE A LOW INTENSITY FLASHING WARNING LIGHTS SHALL BE PLACED AT 50 FEET CENTERS.
- A POSTED SPEED OF 40 MILES PER HOUR WAS USED TO DEVELOP TRAFFIC CONTROL SCHEMES FOR COUNTY ROAD 17 AND 30 MILES PER HOUR FOR COUNTY ROAD 44.



LEGEND:

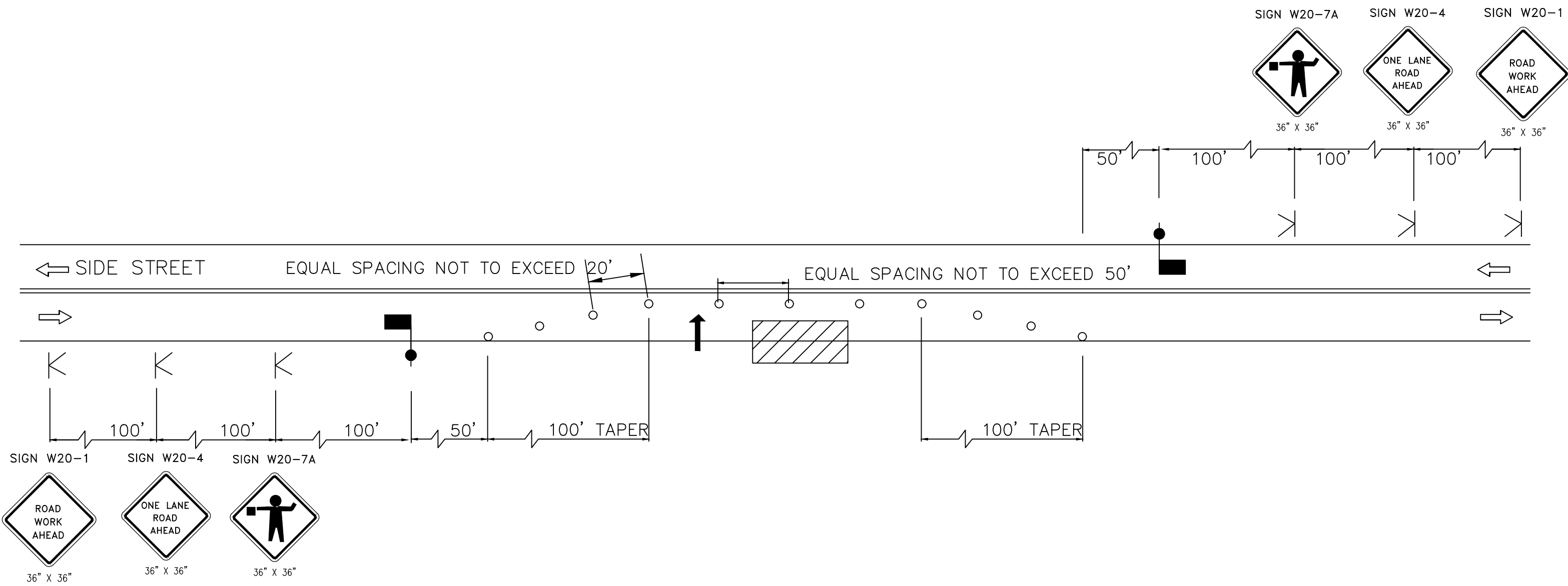
- POST MOUNTED SIGN
- REQUIRED SIGN (PORTABLE)
- CHANNELIZING DRUMS
- FLAGGER STATION
- WORK AREA
- TRAFFIC FLOW
- PORTABLE ARROW PANEL

SIGNS:

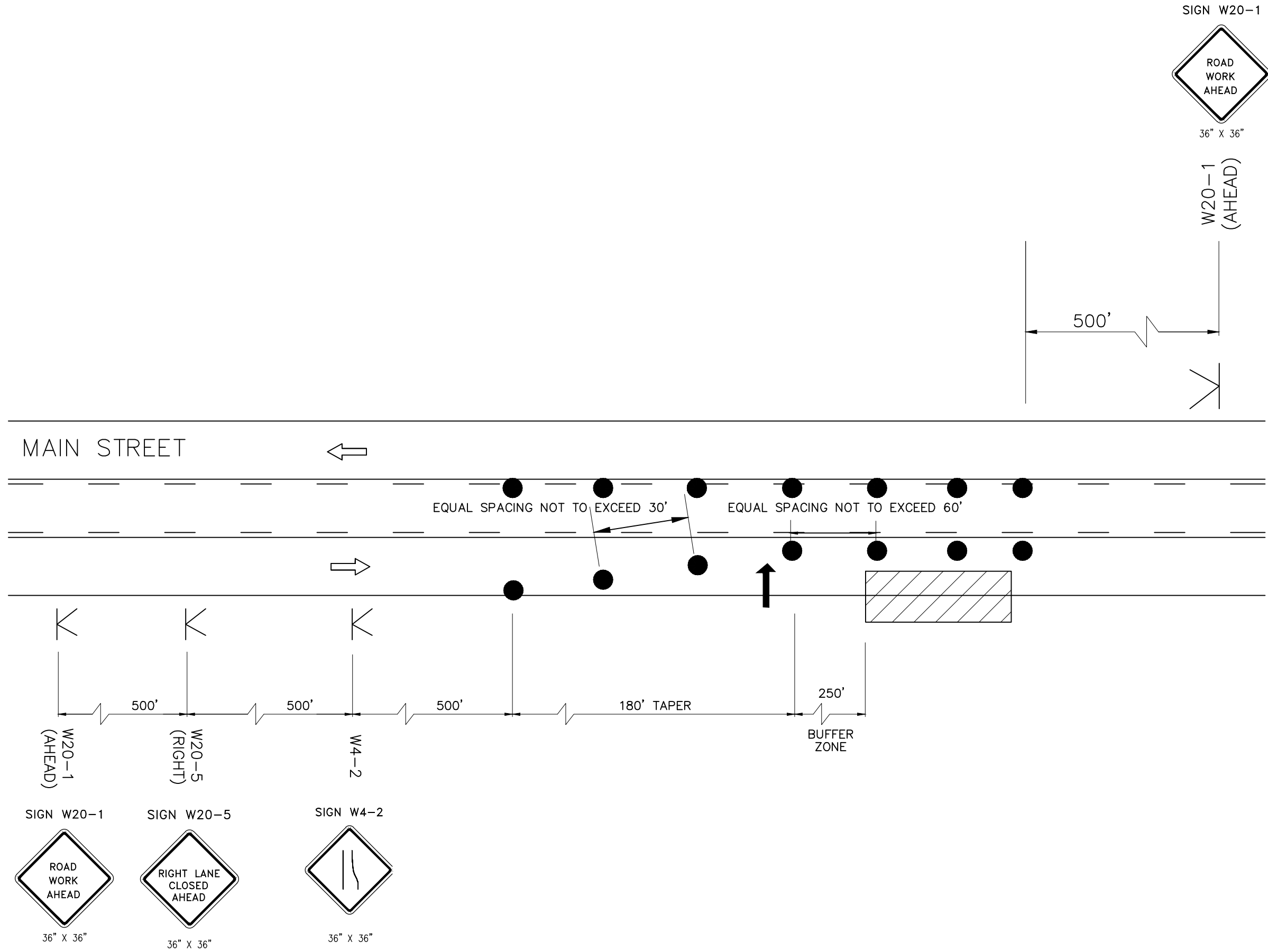


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RESPONSIBLE PE: Richard L. Caudle, P.E.	SUPERVISOR:	DESIGNER:	PLAN SUBMITTAL	SHELBY COUNTY HIGHWAY DEPARTMENT			SHEET TITLE	ROUTE
DATE: January 31, 2023	DATE:	DATE:					TRAFFIC CONTROL PLAN	CR-17



SCHEME 4 – LANE CLOSURE ON TWO LANE ROADWAY

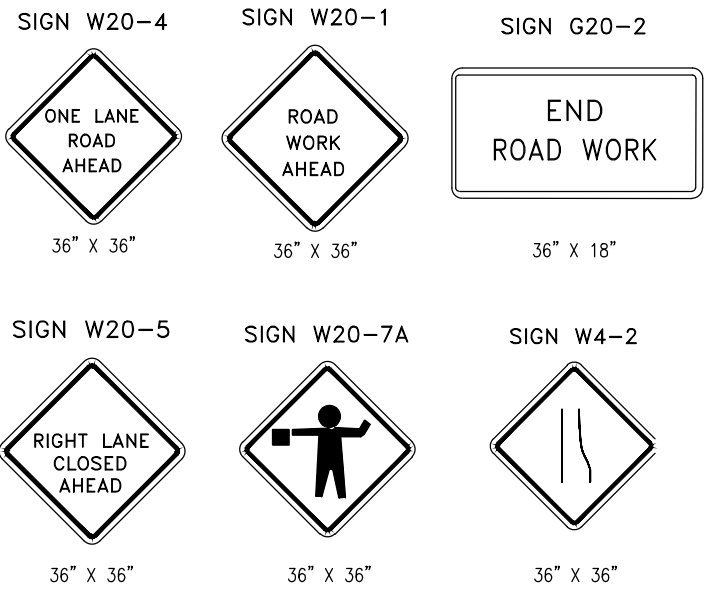


SCHEME 5 OUTSIDE LANE CLOSURE ON THREE LANE ROADWAY

LEGEND:

- POST MOUNTED SIGN
- REQUIRED SIGN (PORTABLE)
- CHANNELIZING DRUMS
- FLAGGER STATION
- WORK AREA
- TRAFFIC FLOW
- PORTABLE ARROW PANEL

SIGNS:



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